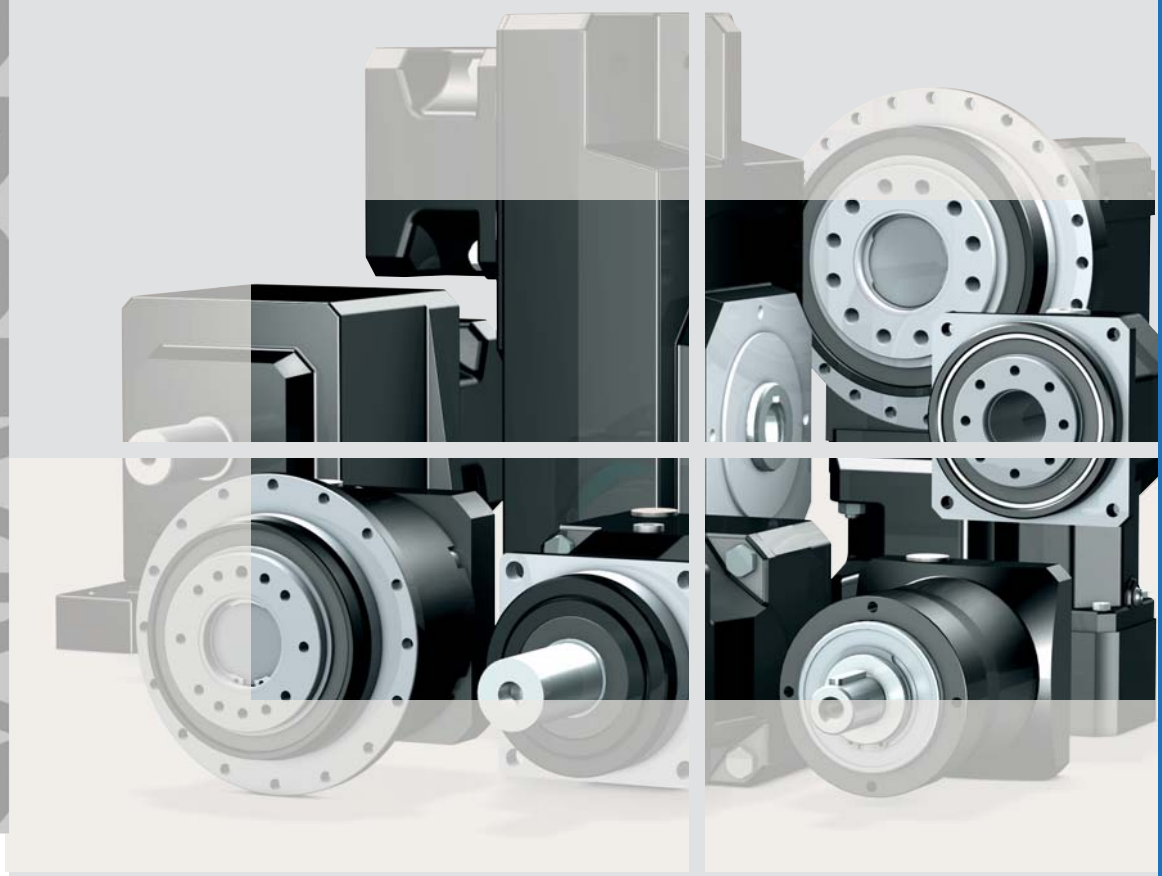
STÖBER

ServoFit®

Servo Gear Units
Reductores servo
Servoriduttori

- PE / P / PA
- PH / PHA
- PHQ / PHQA
- KS
- C / F / KL / K / S
- PKX / PK
- PHKX / PHK
- PHQK



CATALOGO CATÁLOGO

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- General
- *Generalidades*
- Generalità

A

ServoFit® PE
- Planetary Gear Units
- *Reductores planetarios*
- Riduttori planetari

PE

ServoFit® P
- Planetary Gear Units
- *Reductores planetarios*
- Riduttori planetari

P

ServoFit® PA
- Planetary Gear Units with low backlash
- *Reductores planetarios de juego reducido*
- Riduttori planetari a gioco ridotto

PA

ServoFit® PKX + PK
- Right-Angle Planetary Gear Units
- *Reductores planetarios ortogonales*
- Riduttori planetari-rinvio angolo / -coppia conica

PK

ServoFit® PH + PHV
- Planetary Gear Units
- *Reductores planetarios*
- Riduttori planetari

PH

ServoFit® PHA + PHVA
- Planetary Gear Units with low backlash
- *Reductores planetarios de juego reducido*
- Riduttori planetari a gioco ridotto

PHA

ServoFit® PHKX + PHK
- Right-Angle Planetary Gear Units
- *Reductores planetarios ortogonales*
- Riduttori planetari-rinvio angolo / -coppia conica

PHK

ServoFit® PHQ
- Planetary Gear Units
- *Reductores planetarios*
- Riduttori planetari

PHQ

ServoFit® PHQA
- Planetary Gear Units with low backlash
- *Reductores planetarios de juego reducido*
- Riduttori planetari a gioco ridotto

PHQA

ServoFit® PHQK
- Right-Angle Planetary Gear Units
- *Reductores planetarios ortogonales*
- Riduttori planetari-rinvio angolo / -coppia conica

PHQK

ServoFit® KS
- Right-Angle Servo Gear Units
- *Reductores servo ortogonales*
- Servoriduttori ortogonali

KS

ServoFit® C
- Helical Gear Units
- *Reductores coaxiales*
- Riduttori coassiali

C

ServoFit® F
- Offset Helical Gear Units with low backlash
- *Reductores de ejes paralelos de juego reducido*
- Riduttori pendolari a gioco ridotto

F

ServoFit® KL
- Helical Bevel Gear Units
- *Reductores cónicos*
- Riduttori coppia conica

KL

ServoFit® K
- Helical Bevel Gear Units with low backlash
- *Reductores cónicos de juego reducido*
- Riduttori coppia conica a gioco ridotto

K

ServoFit® S
- Helical Worm Gear Units
- *Reductores corona vis sin fin*
- Riduttori vite senza fine

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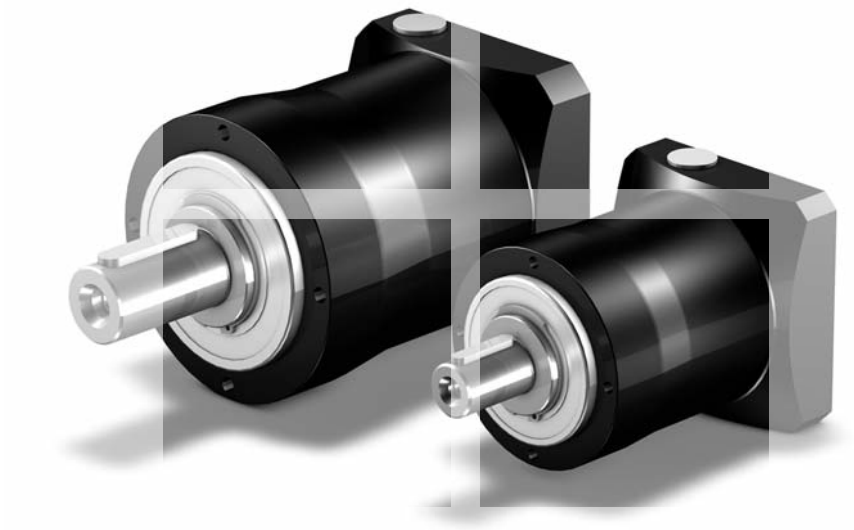
ServoFit® PE
Acceleration torque M_{2B} = 13 – 310 Nm
Ratio i = 3 – 100
Backlash $\Lambda\varphi_2 \leq$ 8 – 13 arcmin

ServoFit® PE
Par de aceleración M_{2B} = 13 – 310 Nm
Relación de reducción i = 3 – 100
Juego de giro $\Lambda\varphi_2 \leq$ 8 – 13 arcmin

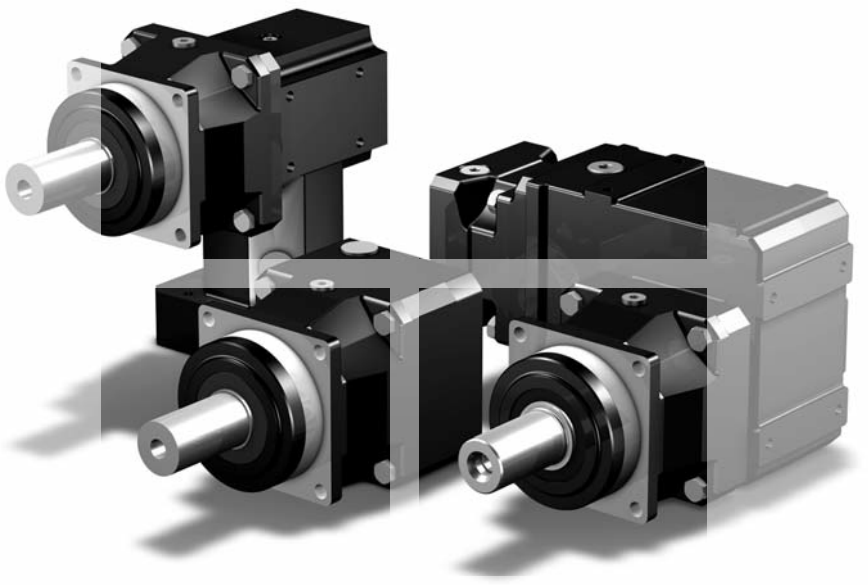
ServoFit® PE
Coppia di accelerazione M_{2B} = 13 – 310 Nm
Rapporto di riduzione i = 3 – 100
Gioco $\Lambda\varphi_2 \leq$ 8 – 13 arcmin



ServoFit® P + PKX + PK
Acceleration torque M_{2B} = 18 – 3000 Nm
Ratio i = 3 – 561
Backlash $\Lambda\varphi_2 \leq$ 3 – 8,5 arcmin

ServoFit® P + PKX + PK
Par de aceleración M_{2B} = 18 – 3000 Nm
Relación de reducción i = 3 – 561
Juego de giro $\Lambda\varphi_2 \leq$ 3 – 8.5 arcmin

ServoFit® P + PKX + PK
Coppia di accelerazione M_{2B} = 18 – 3000 Nm
Rapporto di riduzione i = 3 – 561
Gioco $\Lambda\varphi_2 \leq$ 3 – 8,5 arcmin



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ServoFit® PA

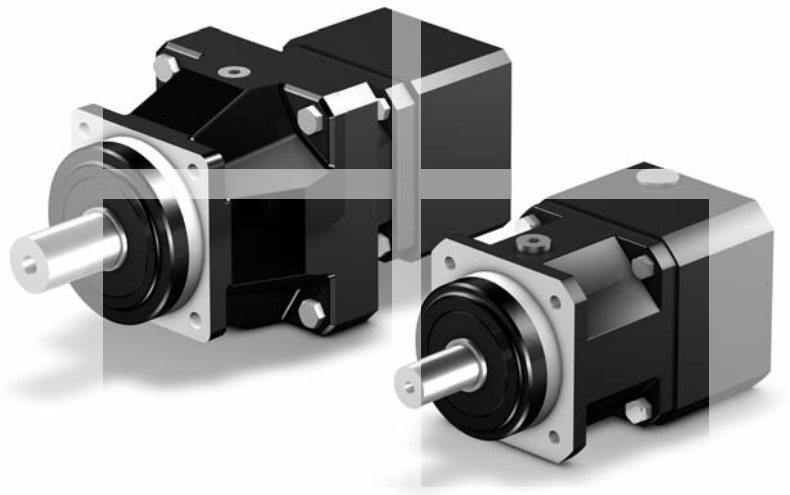
Acceleration torque M_{2B} = 50 – 1600 Nm
Ratio i = 3 – 100
Backlash $\Lambda\varphi_2 \leq$ 1 – 3 arcmin

ServoFit® PA

Par de aceleración M_{2B} = 50 – 1600 Nm
Relación de reducción i = 3 – 100
Juego de giro $\Lambda\varphi_2 \leq$ 1 – 3 arcmin

ServoFit® PA

Coppia di accelerazione M_{2B} = 50 – 1600 Nm
Rapporto di riduzione i = 3 – 100
Gioco $\Lambda\varphi_2 \leq$ 1 – 3 arcmin



ServoFit® PH + PHV + PHKX + PHK

Acceleration torque M_{2B} = 50 – 7500 Nm
Ratio i = 4 – 561
Backlash $\Lambda\varphi_2 \leq$ 3 – 6 arcmin

ServoFit® PH + PHV + PHKX + PHK

Par de aceleración M_{2B} = 50 – 7500 Nm
Relación de reducción i = 4 – 561
Juego de giro $\Lambda\varphi_2 \leq$ 3 – 6 arcmin

ServoFit® PH + PHV + PHKX + PHK

Coppia di accelerazione M_{2B} = 50 – 7500 Nm
Rapporto di riduzione i = 4 – 561
Gioco $\Lambda\varphi_2 \leq$ 3 – 6 arcmin

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ServoFit® PHA + PHVA
Acceleration torque M_{2B} = 50 – 5000 Nm
Ratio i = 4 – 121
Backlash $\Lambda\varphi_2$ ≤ 1 – 2 arcmin

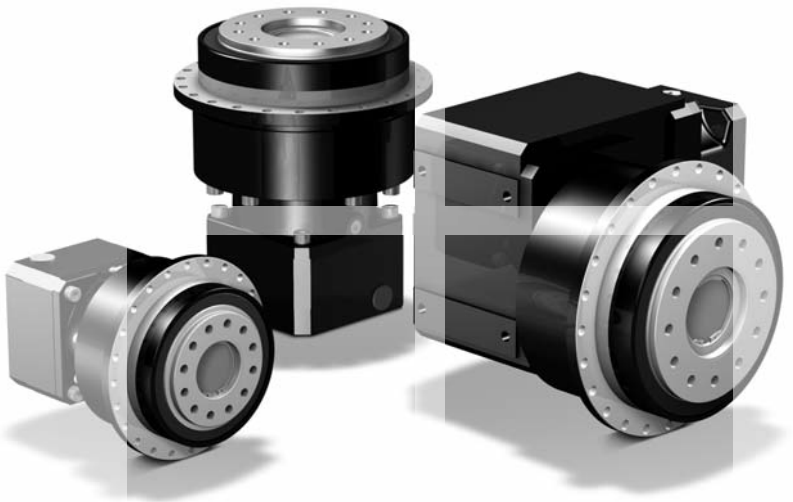
ServoFit® PHA + PHVA
Coppia di accelerazione M_{2B} = 50 – 5000 Nm
Rapporto di riduzione i = 4 – 121
Gioco $\Lambda\varphi_2$ ≤ 1 – 2 arcmin

ServoFit® PHA + PHVA
Par de aceleración M_{2B} = 50 – 5000 Nm
Relación de reducción i = 4 – 121
Juego de giro $\Lambda\varphi_2$ ≤ 1 – 2 arcmin

ServoFit® PHQ + PHQK
Acceleration torque M_{2B} = 170 - 43000 Nm
Ratio i = 5.5 - 600
Backlash $\Lambda\varphi_2$ ≤ 3 - 4 arcmin

ServoFit® PHQ + PHQK
Coppia di accelerazione M_{2B} = 170 – 43000 Nm
Rapporto di riduzione i = 5,5 – 600
Gioco $\Lambda\varphi_2$ ≤ 3 - 4 arcmin

ServoFit® PHQ + PHQK
Par de aceleración M_{2B} = 170 – 43000 Nm
Relación de reducción i = 5,5 – 600
Juego de giro $\Lambda\varphi_2$ ≤ 3 - 4 arcmin



STÖBER

ServoFit® PHQA

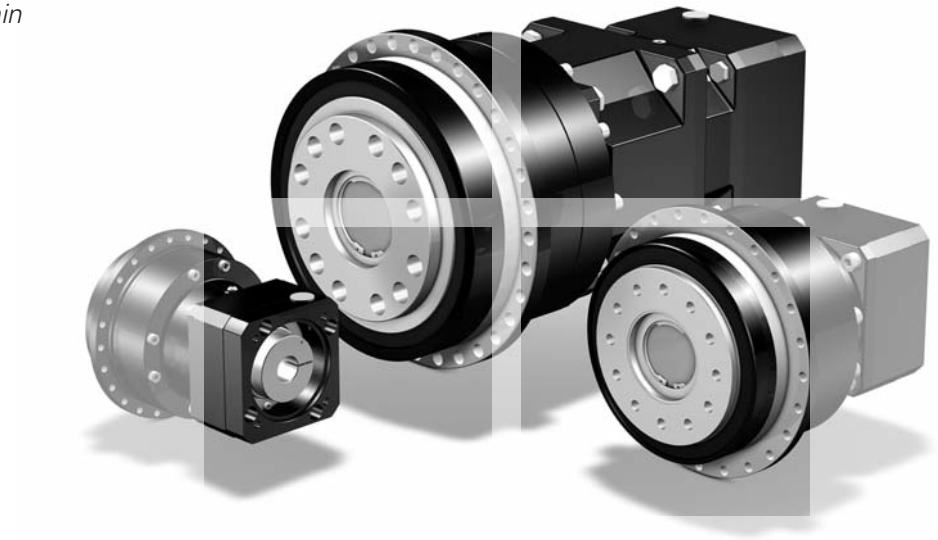
Acceleration torque M_{2B} = 170 - 6000 Nm
Ratio i = 5.5 - 600
Backlash $\Lambda\varphi 2 \leq$ 1 - 1.5 arcmin

ServoFit® PHQA

Par de aceleración M_{2B} = 170 – 6000 Nm
Relación de reducción i = 5,5 – 600
Juego de giro $\Lambda\varphi 2 \leq$ 1 – 1,5 arcmin

ServoFit® PHQA

Coppia di accelerazione M_{2B} = 170 – 6000 Nm
Rapporto di riduzione i = 5,5 – 600
Gioco $\Lambda\varphi 2 \leq$ 1 – 1,5 arcmin



ServoFit® KS

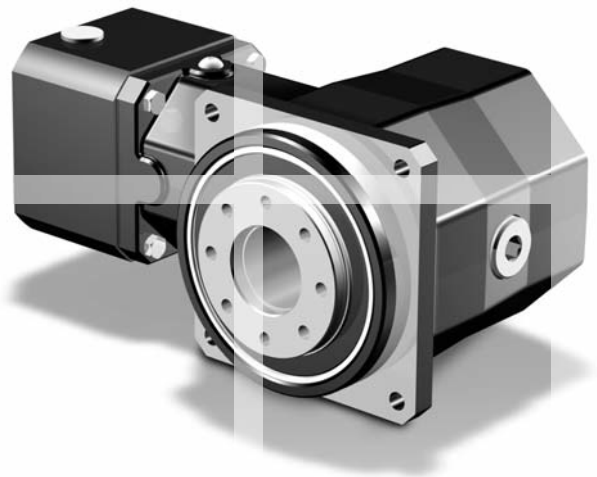
Acceleration torque M_{2B} = 90 - 400 Nm
Ratio i = 6 - 200
Backlash $\Lambda\varphi 2 \leq$ 4 - 6 arcmin

ServoFit® KS

Par de aceleración M_{2B} = 90 - 400 Nm
Relación de reducción i = 6 - 200
Juego de giro $\Lambda\varphi 2 \leq$ 4 - 6 arcmin

ServoFit® KS

Coppia di accelerazione M_{2B} = 90 - 400 Nm
Rapporto di riduzione i = 6 - 200
Gioco $\Lambda\varphi 2 \leq$ 4 - 6 arcmin



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ServoFit® C

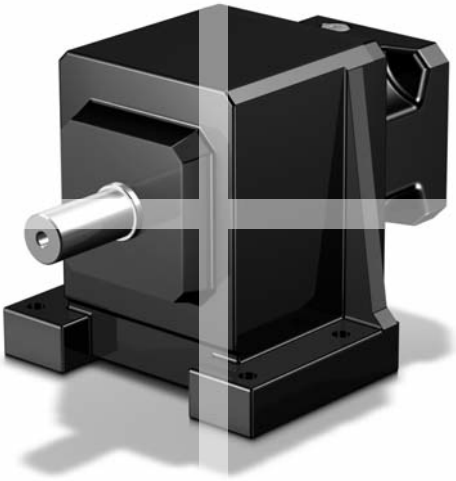
Acceleration torque M_{2B} = 43 - 8000 Nm
Ratio i = 2 - 276
Backlash $\Delta\varphi$ 10 - 20 arcmin

ServoFit® C

Coppia di accelerazione M_{2B} = 43 - 8000 Nm
Rapporto di riduzione i = 2 - 276
Gioco $\Delta\varphi$ 10 - 20 arcmin

ServoFit® C

Par de aceleración M_{2B} = 43 - 8000 Nm
Relación de reducción i = 2 - 276
Juego de giro $\Delta\varphi$ 10 - 20 arcmin



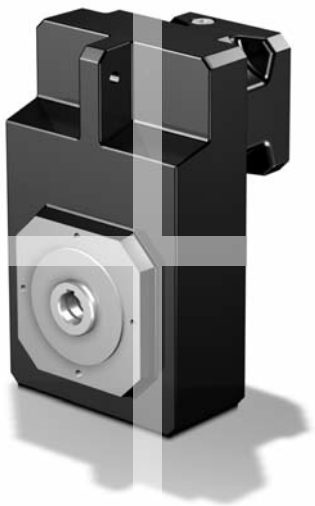
ServoFit® F

Acceleration torque M_{2B} = 92 - 1100 Nm
Ratio i = 4.3 - 552
Backlash standard $\Delta\varphi$ 10 - 11 arcmin
reduced $\Delta\varphi$ 5 - 8 arcmin

Coppia di accelerazione M_{2B} = 92 - 1100 Nm
Rapporto di riduzione i = 4,3 - 552
Gioco standard $\Delta\varphi$ 10 - 11 arcmin
ridotto $\Delta\varphi$ 5 - 8 arcmin

ServoFit® F

Par de aceleración M_{2B} = 92 - 1100 Nm
Relación de reducción i = 4,3 - 552
Juego de giro standard $\Delta\varphi$ 10 - 11 arcmin
reducido $\Delta\varphi$ 5 - 8 arcmin



STÖBER

ServoFit® KL

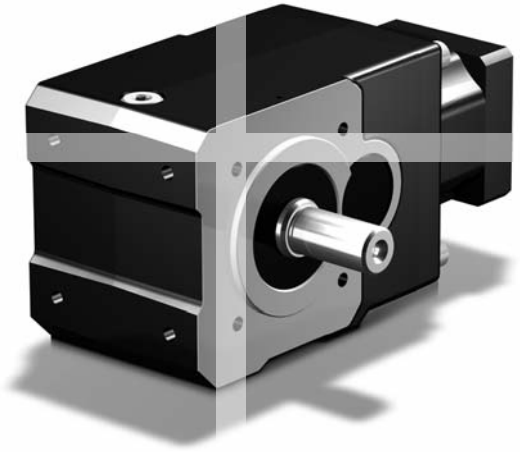
Acceleration torque M_{2B} = 22 - 65 Nm
Ratio i = 4 - 32
Backlash standard $\Lambda\varphi$ 16 - 25 arcmin

ServoFit® KL

Coppia di accelerazione M_{2B} = 22 - 65 Nm
Rapporto di riduzione i = 4 - 32
Gioco standard $\Lambda\varphi$ 16 - 25 arcmin

ServoFit® KL

Par de aceleración M_{2B} = 22 - 65 Nm
Relación de reducción i = 4 - 32
Juego de giro standard $\Lambda\varphi$ 16 - 25 arcmin



ServoFit® K

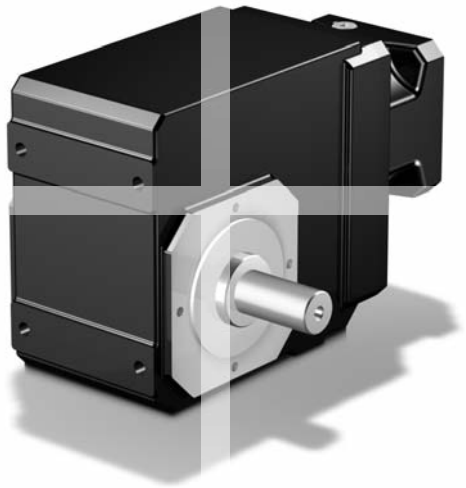
Acceleration torque M_{2B} = 47 - 13200 Nm
Ratio i = 4 - 381
Backlash standard $\Lambda\varphi$ 10 - 12 arcmin
reduced class II $\Delta\varphi$ 4 - 6 arcmin
reduced class I $\Delta\varphi$ 1.5 - 3 arcmin

ServoFit® K

Coppia di accelerazione M_{2B} = 47 - 13200 Nm
Rapporto di riduzione i = 4 - 381
Gioco standard $\Lambda\varphi$ 10 - 12 arcmin
ridotto classe II $\Delta\varphi$ 4 - 6 arcmin
ridotto classe I $\Delta\varphi$ 1,5 - 3 arcmin

ServoFit® K

Par de aceleración M_{2B} = 47 - 13200 Nm
Relación de reducción i = 4 - 381
Juego de giro standard $\Lambda\varphi$ 10 - 12 arcmin
reducido clase II $\Delta\varphi$ 4 - 6 arcmin
reducido clase I $\Delta\varphi$ 1.5 - 3 arcmin



STÖBER

ServoFit® S

Acceleration torque M_{2B} = 55 - 960 Nm
Ratio i = 6 - 683

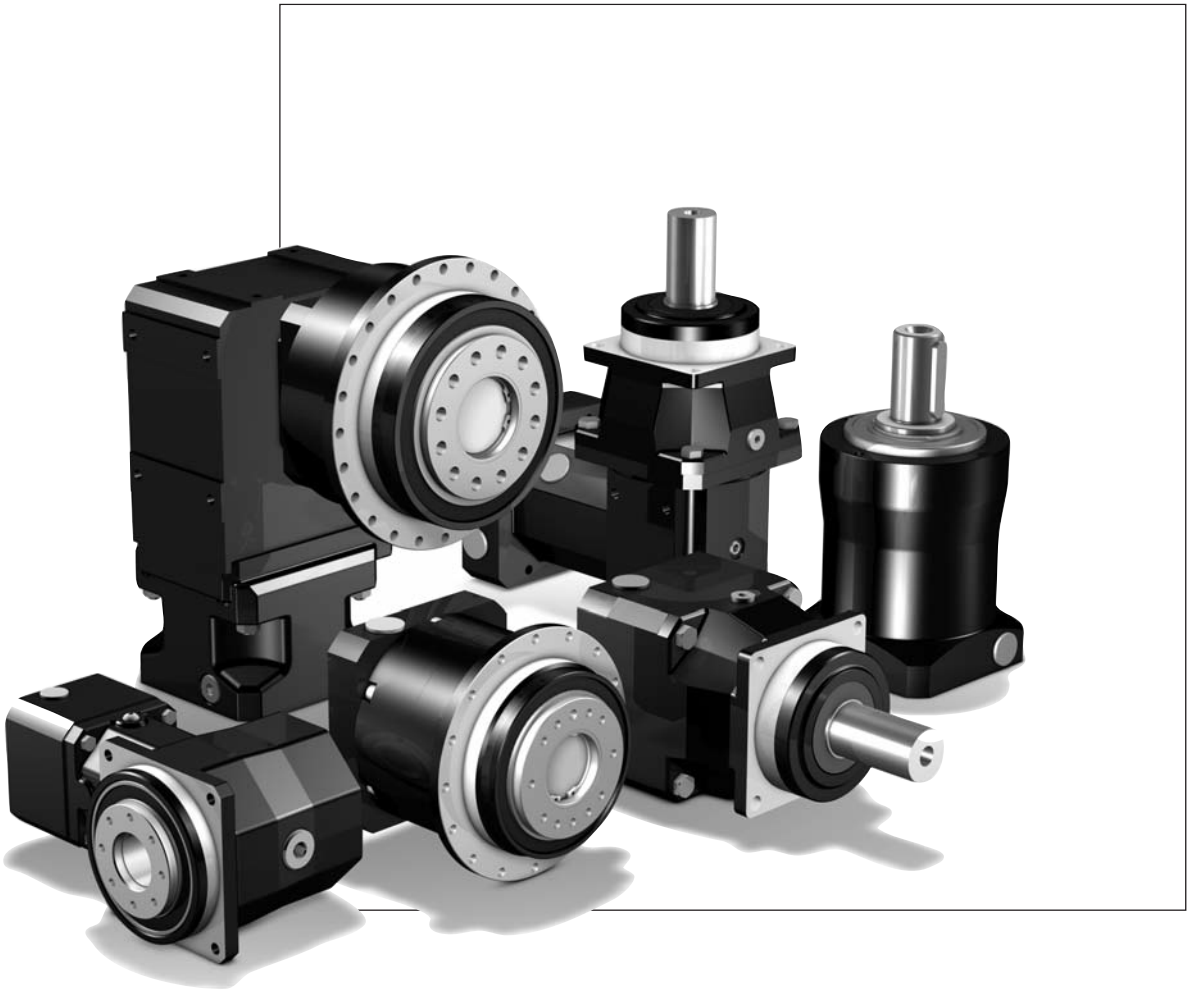
ServoFit® S

Par de aceleración M_{2B} = 55 - 960 Nm
Relación de reducción i = 6 - 683

ServoFit® S

Coppia di accelerazione M_{2B} = 55 - 960 Nm
Rapporto di riduzione i = 6 - 683

STÖBER



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STOBER
ServoFit®
Servo Gear Units

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STOBER
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Servo gear units

The modular ServoFit® gear unit system provides a particularly large degree of flexibility for a very wide range of applications.
The motor mounting system makes it possible to fit all common synchronous servo motors. All gear units are maintenance-free and lubricated for life under normal conditions.

Other STOBER components such as the ServoStop (ID441904) motor adapter MB (with brake) or the ServoCool (ID441851) motor adapter MEC/MFC with radial fan complete the flexibility.

Various shaft designs are available for the output.

Due to their high efficiency the ServoFit® servo gear units are suitable for energy-optimized drives.

With our recently developed gear rack modules for various series of gear units we are able to provide perfectly optimized gear rack modules for machine tools and automation systems.
For details see rack and pinion drives catalogs ZTRS/ZTR/ZR ID 442225 and ZV ID 442506.

Servoreductores

El sistema modular de reductores ServoFit® ofrece una capacidad de adaptación especialmente variada para las aplicaciones más distintas.
El sistema de montaje del motor permite la instalación en todos los motores servo síncronos habituales del mercado. Todos los reductores están exentos de mantenimiento y disponen de lubricación de por vida bajo condiciones normales.

Otros componentes STOBER, como por ejemplo el adaptador de motor MB (con freno) ServoStop (ID 441904) y el adaptador de motor MEC/MFC ServoCool (ID 441851) con ventilador radial completan esta gran variedad de aplicaciones.

Hay disponibles distintos ejes de salida.

Gracias a su rendimiento excepcional, los reductores ServoFit® resultan ideales para los accionamientos con optimización energética.

Los nuevos módulos de cremallera desarrollados para varias series de reductores nos permiten proporcionar cremalleras perfectamente optimizadas para máquinas herramienta y dispositivos de automatización. Encontrará información detallada en los catálogos de cremalleras ZTRS/ZTR/ZR ID 442225 y ZV ID 442506.

Servoriduttori

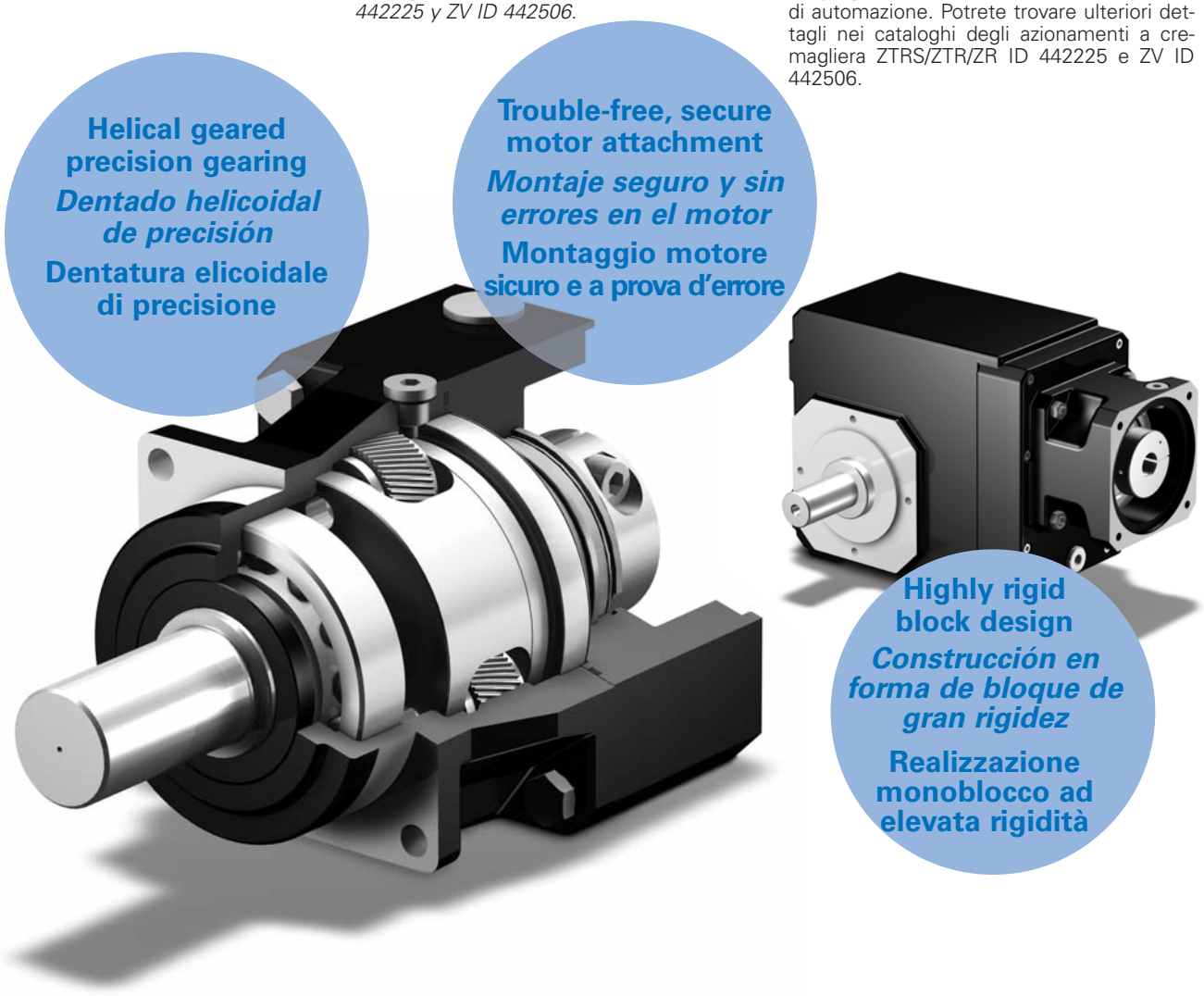
Il sistema modulare di riduttori ServoFit® offre una notevole varietà, e garantisce una vastissima capacità di adattamento alle applicazioni più diverse.
Lo speciale sistema di montaggio al motore permette di applicare tutti i servomotori sincroni comunemente in commercio. Per quanto riguarda le normali condizioni di utilizzo e di funzionamento, i riduttori non necessitano di manutenzione, in quanto sono tutti lubrificati in modo permanente.

La grande varietà di impiego è completata dagli altri preziosi componenti STOBER, come l'adattatore motore ServoStop (ID 441904) MB (dotato di freno), oppure l'adattatore motore ServoCool (ID 441851) MEC/MFC con ventilatore radiale.

Per quanto concerne l'uscita, sono disponibili alberi in diverse realizzazioni.

Grazie al loro elevato rendimento, i riduttori ServoFit® sono il prodotto ideale per ottimizzare il consumo energetico dei sistemi di azionamento.

Grazie al nuovo sviluppo di speciali moduli a cremagliera per svariate serie di riduttori, siamo in grado di fornire degli azionamenti a cremagliera perfettamente ottimizzati per l'impiego in macchine utensili e in dispositivi di automazione. Potrete trovare ulteriori dettagli nei cataloghi degli azionamenti a cremagliera ZTRS/ZTR/ZR ID 442225 e ZV ID 442506.



ServoFit® Modular System

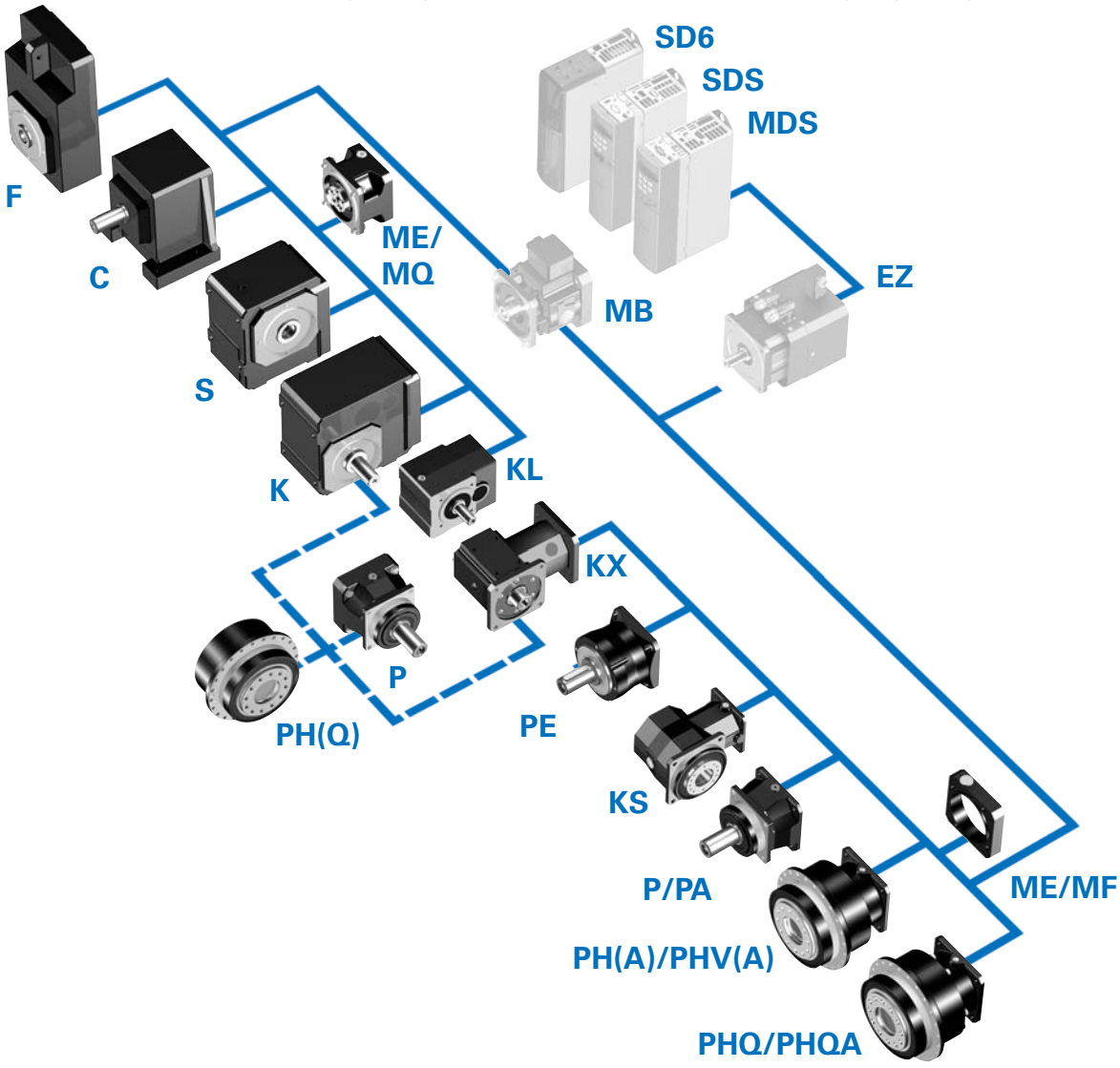
The uniform modularity and the wide variety of ServoFit® components offer maximum opportunities for individually optimized and, at the same time, super compact servo gear units.

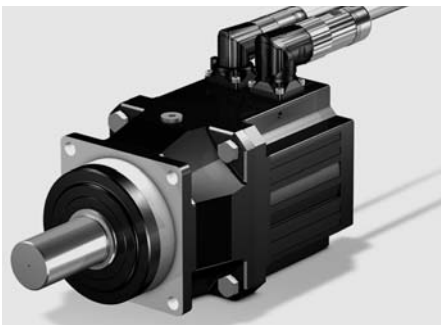
Sistema modular ServoFit®

La uniformidad modular y la variedad de componentes ServoFit® ofrecen todo tipo de opciones para los reductores servo optimizados de forma individual y, al mismo tiempo, súper compactos.

Sistema modulare ServoFit®

La notevole modularità e la grande varietà dei componenti ServoFit® offrono la migliore possibilità di realizzare dei riduttori personalizzati, ottimizzati secondo le esigenze del caso, e nel contempo super-compatti.





S6 – Drive controller / *Regulador de accionamiento* / Azionamento

SDS/MDS 5000 – Servo inverters
POSIDYN® SDS 5000 /
POSIDRIVE® MDS 5000
Convertidores POSIDYN® SDS 5000 /
POSIDRIVE® MDS 5000
Azionamenti POSIDYN® SDS 5000 /
POSIDRIVE® MDS 5000

EZ – STOBER Synchronous servo motor EZ
Motores servo síncronos STOBER EZ
Servomotori sincroni STOBER EZ

MB – Motor adapter square with brake
Adaptador de motor cuadrada con freno
Adattatore motore quadrato con freno

The STOBER SMS ServoModulSystem make it possible to directly attach STOBER EZ synchronous servo motors to the complete product range. As a motor adapter and coupling are not required, the design is compact with very high dynamic performance and very low weight. For details see Synchronous Servo Geared Motors catalog ID 442437.

El sistema servomodular SMS de STOBER permite instalar los motores servo síncronos EZ de STOBER directamente en toda la gama de productos. Gracias a la supresión del adaptador de motor y el acoplamiento, se obtiene una estructura compacta con una mayor dinámica y un peso más reducido. Información en el catálogo Motorreductores servo síncronos, ID 442437.

Il sistema modulare servo STOBER SMS permette inoltre il montaggio diretto dei servomotori sincroni STOBER EZ all'intera gamma di prodotti dell'azienda. Eliminando la necessità di impiegare adattatori motore e giunti vari, è possibile creare una realizzazione compatta, dotata nel contempo della maggiore dinamicità e del minor peso possibile. Tutti i dettagli sul catalogo Servomotoriduttori sincroni ID 442437.

STOBER **ServoFit®** Servo Gear Units

*Servoreductores STOBER **ServoFit®***

Servoriduttori STOBER **ServoFit®**

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ServoFit® Motor Mounting System

The synchronous servo motors are mounted with a backlash-free clamp coupling (EasyAdapt®) on series PE, P, PK, PH, PHV, PHK, PHQ, PHQK, KS, C, F, K and S. On series KL with a backlash-free plug-in-coupling. With PA, PHA, PHVA, PHQA and the right-angle planetary gear units PKX and PHKX, the motors are mounted with backlash-free clamp couplings and thermal offset (FlexiAdapt®). With motor shafts with adjustment spring, this is removed and attachment is then performed as with a plain motor shaft.

Lubricants and Maintenance

The gear units come filled with high-grade lubricant, ready for use.
Under normal operating conditions for gear unit types C6 to C9 and K5 to K10 a lubricant change is recommended after 10000 hours of operation. S0 to S4 always need a lubricant change after 5000 hours.
No lubricant change will be required under normal operating conditions for all other gear unit types.
The filling quantity is dependent on the mounting and is given on the rating plate.
Please visit our web site for more detailed information about lubricant grades and quantities (ID 441871).
For detailed operating and maintenance instructions see the respective Operating Instructions on our website.
www.stober.com

Oil-tightness

STOBER gear units come with top quality radial oil seals and are tested for their oil-tightness by the manufacturer.
Since radial shaft sealing rings are parts which are subject to wear, leakage cannot be totally excluded over the life of the gearbox.
Therefore, for operation with oil-incompatible goods, measures on the machine side should be taken to avoid direct contact with the gear oil in case of leakage.

Paint finish

black RAL 9005

Enclosure type

IP65, PE gear units: IP64
The coupling area becomes the inside area as a result of the attachment of the motor by the customer. The enclosure type of the drive can differ from the specified enclosure type.

Sistema de opciones para motor ServoFit®

En los series PE, P, PK, PH, PHV, PHK, PHQ, PHQK, KS, C, F, K y S son montados los motores servo síncronos con un acoplamiento de anillo de apriete sin juego (EasyAdapt®), en los series KL con un acoplamiento por enchufe sin juego, en PA, PHA, PHVA, PHQA así como en los reductores planetarios ortogonales PKX y PHKX con acoplamiento de anillo de apriete sin juego y compensación térmica de longitudes (FlexiAdapt®). En ejes de motor con chaveta, ésta es retirada, el montaje se efectúa entonces como en el caso de un eje liso de motor.

Lubricantes y mantenimiento

Los reductores son suministrados con lubricante de alta calidad listos para la operación.
Bajo condiciones normales de operación en los engranajes C6 a C9, K5 a K10 debiera efectuarse un cambio de lubricante después de 10000 horas de operación. S0 a S4 un cambio de lubricante después de 5000 horas.
En todos otros reductores no es necesario ningún cambio de lubricante bajo condiciones normales de operación.
La cantidad de lubricante necesaria en función de la instalación está indicada sobre la placa de características.
Ud. puede tomar del Internet informaciones detalladas con respecto a las clases y cantidades de lubricante (ID 441871).
Instrucciones detalladas de operación y de mantenimiento se obtienen de las respectivas instrucciones de operación en Internet.
www.stober.com

Hermeticidad de aceite

Los reductores STOBER están equipados con anillos retén de alta calidad y comprobados en fábrica a la hermeticidad de aceite. Anillos retén son piezas de desgaste, por eso no pueden ser excluidas totalmente fugas a lo largo del tiempo de uso del reductor.
De ser necesario, durante el uso del reductor en relación con bienes incompatibles con aceite, deberán ser adoptadas medidas por el lado de la máquina, que eviten en el caso de una fuga, un contacto directo con el aceite del reductor.

Color

negro RAL 9005

Tipo de protección

IP65, reductores PE: IP64
Cuando el cliente adosa el motor, la zona del acoplamiento se convierte en el interior. El tipo de protección del accionamiento podría diferir de la especificada.

Sistema di montaggio del motore ServoFit®

Per le serie PE, P, PK, PH, PHV, PHK, PHQ, PHQK, KS, C, F, K e S i servomotori sincroni vengono montati mediante un giunto di bloccaggio senza gioco (EasyAdapt®) per KL un giunto ad innesto senza gioco, mentre per PA, PHA, PHVA, PHQA nonché per i riduttori planetari-rinvio angolo PKX e PHKX mediante un giunto di bloccaggio senza gioco e con compensazione longitudinale termica (FlexiAdapt®). Per gli alberi motore con chiavetta questa viene rimossa ed il montaggio si effettua quindi come per un albero motore liscio.

Lubrificanti e manutenzione

I riduttori consegnati sono pronti all'uso, riempiti con lubrificante di qualità.
In condizioni di funzionamento normali per i riduttori da C6 a C9, da K5 a K10 è opportuno un cambio de lubrificante dopo 10000 ore di funzionamento. Da S0 a S4 è opportuno un cambio de lubrificante dopo 5000 ore.
Non si rende necessario nessun cambio de lubrificante per tutti gli altri riduttori in condizioni di funzionamento normali.
La quantità de lubrificante, dipendente dal montaggio, è indicata sulla targhetta di identificazione.
Informazioni dettagliate sulle specie e quantità di lubrificante si possono reperire su Internet (ID 441871).
Per istruzioni d'uso e di manutenzione esaurienti si rimanda ai manuali corrispondenti su Internet.
www.stober.com

Tenuta olio

I riduttori STOBER sono dotati di anelli di tenuta radiali di alta qualità e la tenua è controllata in fabbrica. Gli anelli di tenuta radiali sono componenti soggetti ad usura, pertanto non si può escludere completamente il verificarsi di perdite durante la vita del riduttore.
Se i riduttori sono impiegati in combinazione con materiali incompatibili con l'olio, sulla macchina si devono eventualmente adottare misure che – in caso di perdita – escludano contatti diretti con l'olio del riduttore.

Verniciatura

nero RAL 9005

Tipo di protezione

IP65, riduttori PE: IP64
Grazie all'installazione del motore a cura del cliente, la zona del giunto diventa area interna. Il tipo di protezione dell'azionamento può differire dal tipo di protezione indicato.

Permissible shaft loads
Output shaft

Carga admisible sobre el eje
Eje de salida

Carico sull'albero ammesso
Albero d'uscita

The permissible shaft loads (F_{2A}, F_{2R}, M_{2K}) are valid for shaft dimensions given in the catalogue and output speed

PE, P(A), PK(X), PH(A), PHV(A), PHK(X), PHQ(A), PHQK, KS, KL: $n_{2X} \leq 100$ rpm

C, F, K, S: $n_{2X} \leq 20$ rpm

The formulas below are valid for higher speeds.

$$F_{2A} = \frac{F_{2A}(n_2 \leq n_{2X})}{\sqrt[3]{\frac{n_2(min^{-1})}{n_{2X}}}}$$

For solid shafts (G, P, V) the quoted values for F_{2R} and F_{2RB} apply to the middle of the output shaft:

PE, P(A), PK(X), KS: x2=l2/2

C, F, KL, K, S: x2=l/2

If the load incidence is excentric and generally on hollow shafts (A, F, S) the permissible shearing forces can be determined from the permissible tilting torque M_{2K} and M_{2KB} acc. to the formulas. However, these are not allowed to excess the stated perm. shearing forces. The shearing forces stated refer to the end of the hollow shaft (x2=0).

In the case of helical geared pinion, the circumferential and radial forces must be added geometrically.

During EMERGENCY OFF operation (max. 1000 load change), the permissible values in the table for F_{2A}, F_{2R} and M_{2K}, can be multiplied by a factor of 2.

Las cargas admisibles sobre el eje (F_{2A}, F_{2R}, M_{2K}) valen para dimensiones del eje según catálogo y velocidades de salida de

PE, P(A), PK(X), PH(A), PHV(A), PHK(X), PHQ(A), PHQK, KS, KL: *$n_{2X} \leq 100$ rpm*

C, F, K, S: *$n_{2X} \leq 20$ rpm*

Para velocidades mayores valen las fórmulas indicadas más abajo.

$$F_{2R} = \frac{F_{2R}(n_2 \leq n_{2X})}{\sqrt[3]{\frac{n_2(min^{-1})}{n_{2X}}}}$$

Los valores especificados para F_{2R} y F_{2RB} hacen referencia a ejes macizos (G, P, V) en el centro del eje de salida:

PE, P(A), PK(X), KS: *x2=l2/2*

C, F, KL, K, S: *x2=l/2*

Con ataque excéntrico de la fuerza y, por regla general, en los ejes huecos (A, F, S), las fuerzas transversales admisibles se pueden calcular a partir de los pares de vuelco admisibles M_{2K} y M_{2KB} utilizando las fórmulas pertinentes. No obstante, no pueden sobrepasar las fuerzas radiales admisibles especificadas. Las fuerzas transversales expuestas están basadas en los extremos del eje hueco (x2=0).

En el caso del piñón de dentado helicoidal deben sumarse geométricamente las fuerzas radiales y tangenciales.

En el modo de PARADA DE EMERGENCIA (cambio de carga máx. 1.000), los valores admisibles de la tabla para F_{2A}, F_{2R} y M_{2K} se pueden multiplicar por el factor 2.

I carichi albero consentiti (F_{2A}, F_{2R}, M_{2K}) valgono per dimensioni albero come da catalogo e numero di giri dell'albero d'uscita pari a

PE, P(A), PK(X), PH(A), PHV(A), PHK(X), PHQ(A), PHQK, KS, KL: $n_{2X} \leq 100$ rpm

C, F, K, S: $n_{2X} \leq 20$ rpm

Per numero di giri superiore si applicano le formule di seguito riportate.

$$M_{2K} = \frac{M_{2K}(n_2 \leq n_{2X})}{\sqrt[3]{\frac{n_2(min^{-1})}{n_{2X}}}}$$

I valori indicati per F_{2R} e F_{2RB} fanno riferimento, in caso di alberi pieni (G, P, V), alla mezzeria dell'albero d'uscita:

PE, P(A), PK(X), KS: x2=l2/2

C, F, KL, K, S: x2=l/2

In caso di incidenza eccentrica del carico, nonché, più in generale, in caso di alberi cavi (A, F, S), è possibile determinare le forze trasversali ammesse in base alla coppia di ribaltamento consentita M_{2K} e M_{2KB}, utilizzando le apposite formule. Ad ogni modo, queste non possono superare le forze trasversali comprovate e consentite. Le forze trasversali rilevate fanno riferimento alla estremitá dell'albero cavo (x2=0).

In caso di pignone a dentatura elicoidale occorre sommare geometricamente le forze radiali e tangenziali.

In caso di arresto di emergenza (variazioni di carico max. 1000) è possibile moltiplicare per il fattore 2 i valori consentiti riportati nella tabella, relativi a F_{2A}, F_{2R} e M_{2K}.

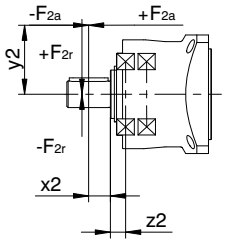
Permissible shaft loads
Output shaft

Carga admisible sobre el eje
Eje de salida

Carico sull'albero ammesso
Albero d'uscita

STÖBER

PE

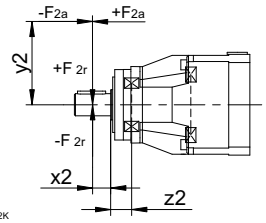


$$M_{2kb} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2rb} \cdot (x_2 + z_2)}{1000} \leq M_{2KB}$$

$$M_{2kä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |M_{2kb1}^{\ 3}| + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |M_{2kbn}^{\ 3}|}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \leq M_{2K}$$

$$F_{2rä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |F_{2rb1}^{\ 3}| + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |F_{2rbn}^{\ 3}|}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \leq F_{2R}$$

P(A), PKX, PK

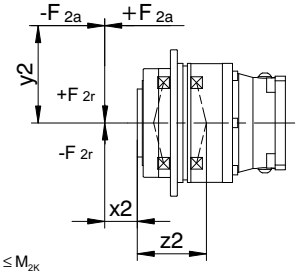


$$M_{2kb} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2rb} \cdot (x_2 + z_2)}{1000} \leq M_{2KB}$$

$$M_{2kä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |M_{2kb1}^{\ 3}| + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |M_{2kbn}^{\ 3}|}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \leq M_{2K}$$

$$F_{2rä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |F_{2rb1}^{\ 3}| + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |F_{2rbn}^{\ 3}|}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \leq F_{2R}$$

PH(A), PHV(A), PHQ(A) PHKX, PHK, PHQK



$$M_{2kb} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2rb} \cdot (x_2 + z_2)}{1000} \leq M_{2KB}$$

$$M_{2kä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |M_{2kb1}^{\ 3}| + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |M_{2kbn}^{\ 3}|}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \leq M_{2K}$$

R **Normal bearings**
Apoyo normal
Supporto normale

Typ	z2 [mm]	F2A [N]	F2R [N]	F2RB [N]	M2K [Nm]	M2KB [Nm]	C2K [Nm/arcmin]
PE2	8,0	400	800	800	13	13	-
PE3	11,0	800	1600	1600	40	40	-
PE4	13,0	1900	2400	2400	73	73	-
PE5	16,0	4000	4600	4600	206	206	-
P2	17,0	500	1200	1300	34	36	-
P3	21,0	1000	2500	2500	88	88	-
P4	22,0	1500	4000	4500	160	180	-
P5	23,0	2300	6500	7000	338	364	-
P7	26,0	2900	8000	9000	536	603	-
P8	28,0	4700	13000	18000	897	1242	-
P9	40,0	6000	18000	27000	1665	2498	-
PH3	62,0	1650	1613	1613	100	100	53
PH4	84,0	2150	3095	3571	260	300	160
PH5	97,0	4150	4536	4897	440	475	380
PH7	88,0	6150	17045	17045	1500	1500	500
PH8	126,0	10050	27778	27778	3500	3500	1550
PH9	155,0	33000	48387	70968	7500	11000	7500
PH10	171,0	50000	51462	73099	8800	12500	9500
PHA3	62,0	1650	1613	1613	100	100	53
PHA4	84,0	2150	3095	3571	260	300	160
PHA5	97,0	4150	4536	4897	440	475	380
PHA7	88,0	6150	17045	17045	1500	1500	500
PHA8	126,0	10050	27778	27778	3500	3500	1550
PHA9	155,0	33000	48387	70968	7500	11000	7500
PHQ4	84,0	2150	3095	3929	260	330	160
PHQ5	97,0	4150	4536	4897	440	475	380
PHQ7	88,0	6150	17045	17045	1500	1500	500
PHQ8	126,0	10050	27778	33333	3500	4200	1550
PHQ9	155,0	33000	48387	70968	7500	11000	7500
PHQ10	171,0	50000	51462	73099	8800	12500	9500
PHQ11	231,0	60000	47619	60606	11000	14000	11500
PHQ12	281,0	70000	53380	71040	15000	20000	14000
PHQA4	84,0	2150	3095	3929	260	330	160
PHQA5	97,0	4150	4536	4897	440	475	380
PHQA7	88,0	6150	17045	17045	1500	1500	500
PHQA8	126,0	10050	27778	33333	3500	4200	1550
PHQA9	155,0	33000	48387	70968	7500	11000	7500
PHV9	155,0	33000	48387	70968	7500	11000	7500
PHV10	171,0	50000	51462	73099	8800	12500	9500
PHVA9	155,0	33000	48387	70968	7500	11000	7500

D **Reinforced bearings (axial)**
Apoyo reforzado (axial)
Supporto rinforzato (assiale)

Typ	z2 [mm]	F2A [N]	F2R [N]	F2RB [N]	M2K [Nm]	M2KB [Nm]
P3	24,0	1400	2750	2750	105	105
P4	25,0	2250	4500	5000	194	215
P5	29,0	3500	7000	8000	406	464
P7	31,0	4500	9000	10000	648	720
P8	35,0	7500	15000	18000	1140	1368
P9	51,0	10000	20000	30000	2070	3105
PA3	24,0	1400	2750	2750	105	105
PA4	25,0	2250	4500	5000	194	215
PA5	29,0	3500	7000	8000	406	464
PA7	31,0	4500	9000	10000	648	720
PA8	35,0	7500	15000	18000	1140	1368

Z **Reinforced bearings (radial)**
Apoyo reforzado (radial)
Supporto rinforzato (radiale)

Typ	z2 [mm]	F2A [N]	F2R [N]	F2RB [N]	M2K [Nm]	M2KB [Nm]
P3	21,0	600	3000	3000	105	105
P4	22,0	1000	5000	5000	200	200
P5	23,0	1600	8000	8000	416	416
P7	26,0	2000	10000	10000	670	670
P8	28,0	3600	18000	18000	1242	1242
P9	40,0	5000	27000	35000	2500	3238

Permissible shaft loads
Output shaft

Carga admisible sobre el eje
Eje de salida

Carico sull'albero ammesso
Albero d'uscita

For the bearing lifetime L_{10h} is valid (ED ≤ 40%):
if $1 < M_{2K}/M_{2k} < 1.25$: $L_{10h} > 10000$ h
if $1.25 < M_{2K}/M_{2k} < 1.5$: $L_{10h} > 20000$ h
if $1.5 < M_{2K}/M_{2k}$: $L_{10h} > 30000$ h

For other duty ratio is valid:

$$L_{10h} > L_{10h(ED=40\%)} \cdot \frac{40\%}{ED}$$

The permissible loads and torques are only valid when using the pilot diameters (housing, flange shaft).

Para la vida útil L_{10h} de los rodamientos vale (ED ≤ 40%):
para $1 < M_{2K}/M_{2k} < 1,25$: $L_{10h} > 10000$ h
para $1,25 < M_{2K}/M_{2k} < 1,5$: $L_{10h} > 20000$ h
para $1,5 < M_{2K}/M_{2k}$: $L_{10h} > 30000$ h
Para otra duración de funcionamiento vale:

$$L_{10h} > L_{10h(ED=40\%)} \cdot \frac{40\%}{ED}$$

Las fuerzas y los pares admisibles únicamente son válidos si se utilizan los bordes de ajuste (carcasa, eje con brida).

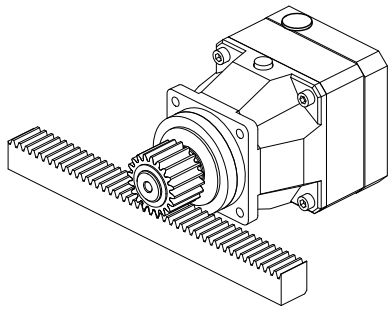
Per la vita dei cuscinetti L_{10h} si ha (ED ≤ 40%):
per $1 < M_{2K}/M_{2k} < 1,25$: $L_{10h} > 10000$ h
per $1,25 < M_{2K}/M_{2k} < 1,5$: $L_{10h} > 20000$ h
per $1,5 < M_{2K}/M_{2k}$: $L_{10h} > 30000$ h

Per una durata d'inserzione diversa si ha:

$$L_{10h} > L_{10h(ED=40\%)} \cdot \frac{40\%}{ED}$$

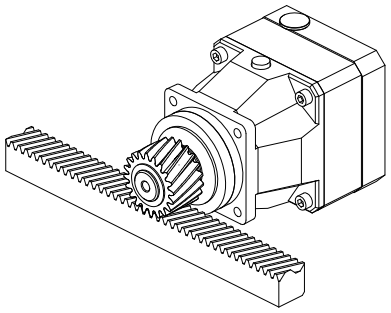
Le forze, le coppie e i momenti ammessi sono validi solo in caso di utilizzo delle superfici di accoppiamento (carcassa, albero flangiato).

Recommendation bearing allocation P, PA, PKX, PK:



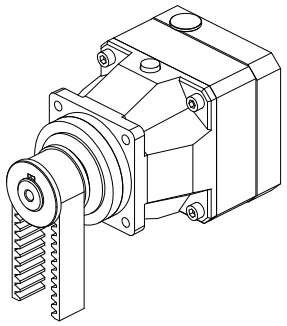
Normal bearings / *Apoyo normal* / Supporto normale **R** (radial)

Asignación recomendada de los rodamientos P, PA, PKX, PK:



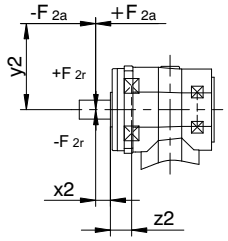
Axial reinforced bearings / *Apoyo axial reforzado* / *Supporto assiale rinforzato* ***D***

Cuscinetti consigliat P, PA, PKX, PK:



Radial reinforced bearings / *Apoyo radial reforzado* / *Supporto radiale rinforzato* ***Z***

KS **Solid shaft · *Eje macizo* · Albero pieno**

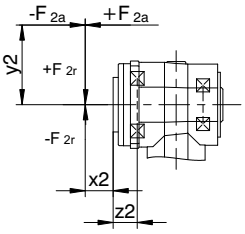


$$M_{2kb} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2rb} \cdot (x_2 + z_2)}{1000} \le M_{2KB}$$

$$M_{2kä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |M_{2kb1}|^3 + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |M_{2kbn}|^3}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \le M_{2K}$$

$$F_{2rä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |F_{2rb1}|^3 + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |F_{2rbn}|^3}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \le F_{2R}$$

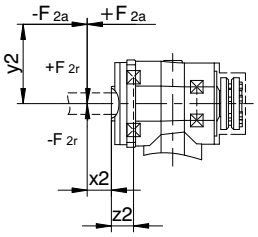
KS **Flange hollow shaft · *Eje hueco con brida* · Albero cavo flangiato**



$$M_{2kb} = \frac{F_{2a} \cdot y_2 + F_{2rb} \cdot (x_2 + z_2)}{1000} \le M_{2KB}$$

$$M_{2kä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |M_{2kb1}|^3 + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |M_{2kbn}|^3}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \le M_{2K}$$

KS **Hollow shaft · *Eje hueco* · Albero cavo**



$$M_{2kb} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2rb} \cdot (x_2 + z_2)}{1000} \le M_{2KB}$$

$$M_{2kä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |M_{2kb1}|^3 + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |M_{2kbn}|^3}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \le M_{2K}$$

$$F_{2rä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |F_{2rb1}|^3 + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |F_{2rbn}|^3}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}} \le F_{2R}$$

G/P Solid shaft · *Eje macizo* · Albero pieno

Typ	z2 [mm]	F2A [N]	F2R [N]	F2RB [N]	M2K [Nm]	M2KB [Nm]
KS4	34,0	4000	5000	5000	260	260
KS5	40,0	6000	8000	8000	550	550
KS7	51,0	10000	10000	10000	920	920

F Flange hollow shaft · *Eje hueco con brida* · Albero cavo flangiato

Typ	z2 [mm]	F2A [N]	F2R [N]	F2RB [N]	M2K [Nm]	M2KB [Nm]
KS4	38,0	4000	6842	10263	260	390
KS5	45,0	6000	12222	18333	550	825
KS7	55,0	10000	16727	25091	920	1380

S Hollow shaft with shrink disk · *Eje hueco con disco de contracción* · Albero cavo con disco di serraggio

Typ	z2 [mm]	F2A [N]	F2R [N]	F2RB [N]	M2K [Nm]	M2KB [Nm]
KS4	36,0	4000	5000	5000	260	260
KS5	42,0	6000	8000	8000	550	550
KS7	52,0	10000	10000	10000	920	920

Permissible shaft loads
Output shaft

Carga admisible sobre el eje
Eje de salida

Carico sull'albero ammesso
Albero d'uscita

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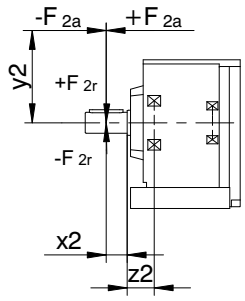
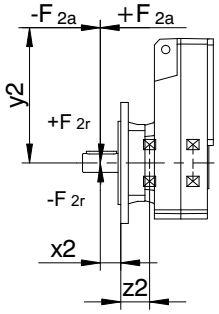
C **solid shaft · *Eje macizo* · Albero pieno**



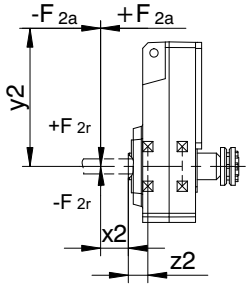
$$M_{2k} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq M_{2K}$$

F **solid shaft · *Eje macizo* · Albero pieno**



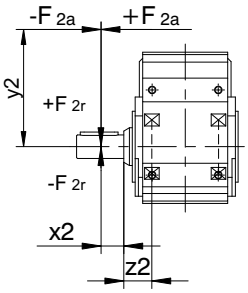
$$M_{2k} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq M_{2K}$$

F **hollow shaft · *Eje hueco* · Albero cavo**



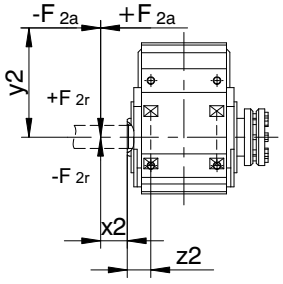
$$M_{2k} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq M_{2K}$$

KL/K/S **solid shaft · *Eje macizo* · Albero pieno**



$$M_{2k} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq M_{2K}$$

KL/K/S **hollow shaft · *Eje hueco* · Albero cavo**



$$M_{2k} = \frac{2 \cdot F_{2a} \cdot y_2 + F_{2r} \cdot (x_2 + z_2)}{1000} \leq M_{2K}$$

A **Hollow shaft**
Eje hueco
Albero cavo

Typ	z2 [mm]	F2A [N]	F2R [N]	M2K [Nm]
F1	30,0	900	4200	175
F2	33,0	1200	5400	250
F3	33,0	1350	7500	375
F4	39,0	1900	9250	550
F6	45,0	2200	12500	800
KL1	18,5	250	1250	43
KL2	22,0	560	2800	118
K1	40,0	1900	5000	240
K2	42,0	2100	6000	310
K3	45,0	2400	7000	380
K4	52,0	3500	11200	740
K5	39,0	2500	13450	1000
K6	42,0	3000	16000	1300
K7	45,0	4100	22000	2100
K8	50,0	5300	29000	2600
K9	56,0	7000	65000	3600
K10	56,0	9000	80000	5000
S0	25,0	1050	3500	150
S1	32,0	1650	5000	200
S2	35,0	1700	7000	350
S3	39,0	2100	10000	600
S4	40,0	2800	13000	800

S **Hollow shaft with shrink disk**
Eje hueco con disco de contracción
Albero cavo con disco di serraggio

Typ	z2 [mm]	F2A [N]	F2R [N]	M2K [Nm]
F1	30,0	900	4200	175
F2	33,0	1200	5400	250
F3	33,0	1350	7500	375
F4	39,0	1900	9250	550
F6	45,0	2200	12500	800
KL1	18,5	250	1250	43
KL2	22,0	560	2800	118
K1	40,0	1900	5000	240
K2	42,0	2100	6000	310
K3	45,0	2400	7000	380
K4	52,0	3500	11200	740
K5	39,0	2500	13450	1000
K6	42,0	3000	16000	1300
K7	45,0	4100	22000	2100
K8	50,0	5300	29000	2600
K9	56,0	7000	65000	3600
K10	56,0	9000	80000	5000
S0	25,0	1050	3500	150
S1	32,0	1650	5000	200
S2	35,0	1700	7000	350
S3	39,0	2100	10000	600
S4	40,0	2800	13000	800

Attention! No lateral forces are allowed on the shrink disc side!
Atencion! *En el lado del disco de contraccion las fuerzas transversales no estan permitidas.*
Attenzione! Sul lato del disco restringente non sono concessi forze di trazione radiale.

Permissible shaft loads
Output shaft

Carga admisible sobre el eje
Eje de salida

Carico sull'albero ammesso
Albero d'uscita

V_ Solid shaft
Eje macizo
Albero pieno

Typ	z2 [mm]	F2A [N]	F2R [N]	M2K [Nm]
C0	20,0	500	1900	80
C1	30,0	850	3400	190
C2	30,0	1050	4200	260
C3	30,0	1400	5650	350
C4	35,0	2400	9700	750
C5	42,0	3000	11000	900
C6	40,0	4000	16000	1500
C7	45,0	5500	22000	2400
C8	50,0	7500	30000	3700
C9	55,0	9500	37000	5200
F1	35,0	1100	4200	260
F2	41,0	1400	5400	400
F3	43,0	1900	7500	600
F4	44,0	2350	9250	800
F6	44,0	3100	12500	1200
KL1	20,0	380	1900	68
KL2	22,0	560	2800	118
K1	40,0	1900	5000	360
K2	42,0	2100	6000	430
K3	45,0	2400	7000	525
K4	52,0	3500	11200	1050
K5	72,0	3500	13450	1580
K6	72,0	4000	16000	1960
K7	85,0	5500	22000	3200
K8	60,0	7250	29000	3800
K9	87,0	16500	65000	11200
K10	84,0	25000	80000	15200
S0	31,0	1050	3500	180
S1	37,0	1650	5000	350
S2	38,0	2400	7000	550
S3	46,0	3000	10000	900
S4	47,0	3900	13000	1200

VNF solid shaft + foot + flange
Eje macizo + pie + brida
Albero pieno + piede + flangia

Typ	z2 [mm]	F2A [N]	F2R [N]	M2K [Nm]
K10	132,0	25000	64000	15200
S0	46,0	1050	2700	180

Permissible motor attachments

Opciones admitidas para motor

Attachi motore ammessi

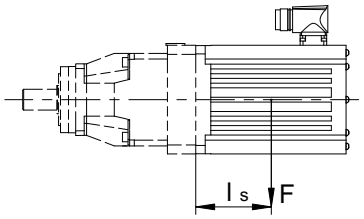
The permissible tilting torque of the motor screwed to the gear unit contains the static and dynamic loads **F** from motor weight, mass acceleration and vibration, multiplied by the distance from the center of gravity **ls** of the motor: **$M_{1K} = F \cdot l_s \leq M_{1K}$**

*Los pares de vuelco admisibles del motor atornillado al reductor contienen los esfuerzos estáticos y dinámicos **F** del peso del motor, aceleraciones de masas y vibraciones, multiplicadas por la distancia al centro de gravedad **ls** del motor: **$M_{1K} = F \cdot l_s \leq M_{1K}$***

Le coppie di ribaltamento ammesse per il motore accoppiato al riduttore comprendono i carichi statici e dinamici **F** del peso del motore, le accelerazioni di massa e le vibrazioni, moltiplicate per la distanza del baricentro **ls** del motore: **$M_{1K} = F \cdot l_s \leq M_{1K}$**

Typ	M_{1K} [Nm]
P221_ME_	10
P222_ME_	10
P321_ME_	20
P322_ME_	10
P421_ME_	40
P422_ME_	20
P521_ME_	80
P522_ME_	40
P721_ME_	200
P722_ME_	80
P821_ME_	400
P822_ME_	200
P921_ME_	800
P922_ME_	400
PE211_ME_	10
PE212_ME_	10
PE311_ME_	20
PE312_ME_	20
PE411_ME_	40
PE412_ME_	40
PE511_ME_	80
PE512_ME_	80
PH321_ME_	20
PH322_ME_	10
PH421_ME_	40
PH422_ME_	20
PH521_ME_	80
PH522_ME_	40
PH721_ME_	200
PH722_ME_	80
PH821_ME_	400
PH822_ME_	200
PH932_ME_	400
PH1032_ME_	400
PHQ421_ME_	40
PHQ422_ME_	20
PHQ521_ME_	80
PHQ522_ME_	40
PHQ721_ME_	200
PHQ722_ME_	80
PHQ723_ME_	40
PHQ822_ME_	200
PHQ823_ME_	80
PHQ932_ME_	400
PHQ933_ME_	200
PHQ1032_ME_	800
PHQ1033_ME_	400
PHQ1133_ME_	400
PHQ1233_ME_	800
PHV933_ME_	200
PHV1033_ME_	400

Typ	M_{1K} [Nm]
PA321_MF_	20
PA322_MF_	10
PA421_MF_	40
PA422_MF_	20
PA521_MF_	80
PA522_MF_	40
PA721_MF_	200
PA722_MF_	80
PA821_MF_	400
PA822_MF_	200
PHA321_MF_	20
PHA322_MF_	10
PHA421_MF_	40
PHA422_MF_	20
PHA521_MF_	80
PHA522_MF_	40
PHA721_MF_	200
PHA722_MF_	80
PHA821_MF_	400
PHA822_MF_	200
PHA932_MF_	400
PHQA421_MF_	40
PHQA422_MF_	20
PHQA521_MF_	80
PHQA522_MF_	40
PHQA721_MF_	200
PHQA722_MF_	80
PHQA723_MF_	40
PHQA822_MF_	200
PHQA823_MF_	80
PHQA932_MF_	400
PHQA933_MF_	200
PHVA933_MF_	200



Typ	M_{1K} [Nm]
ME10	25
ME20	60
ME30	125
ME40	250
ME50	600

Typ	M_{1K} [Nm]
KS402_ME_	20
KS403_ME_	10
KS502_ME_	40
KS503_ME_	20
KS702_ME_	80
KS703_ME_	40

Typ	M_{1K} [Nm]
KL1_MQ	15
KL2_MQ	20

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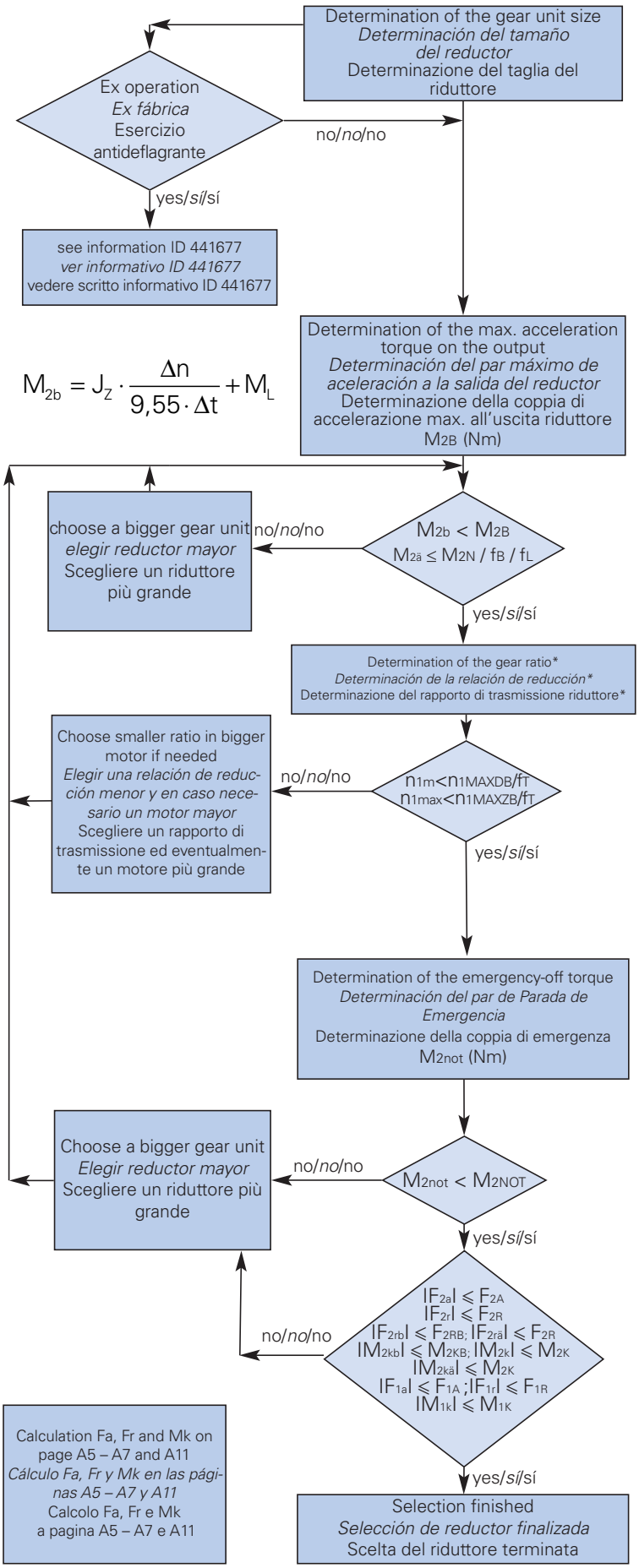
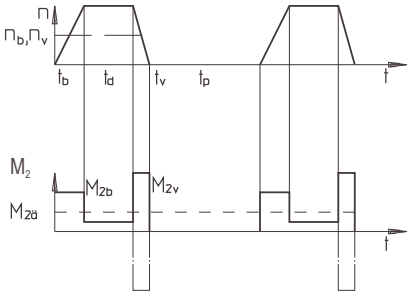


Cycle Operation / *Operación cíclica* / Funzionamento ciclico:



$$M_{2ä} = \sqrt[3]{\frac{|n_{2b1}| \cdot t_{b1} \cdot |M_{2b1}^{\ 3}| + \ldots + |n_{2bn}| \cdot t_{bn} \cdot |M_{2bn}^{\ 3}|}{|n_{2b1}| \cdot t_{b1} + \ldots + |n_{2bn}| \cdot t_{bn}}}$$

$$n_{1m} = \frac{|n_{1b1}| \cdot t_{b1} + \ldots + |n_{1bn}| \cdot t_{bn}}{t_{b1} + \ldots + t_{bn}}$$

If tb + td + tv ≥ 20 min -> determination of n1m without tp
Si tb + td + tv ≥ 20 min -> determinar n1m sin tp
Se tb + td + tv ≥ 20 min -> rilevamento di n1m senza tp

* see next page
* *ver página siguiente*
* vedere pagina successiva

Load factor ***Factor de carga*** **Fattore di sollecitazione**	**fB**		
	PE	**P(A), PH(A), PHV(A), PHQ(A), KS**	**C, F, KL, K, S PK(X), PHK(X), PHQK**
Uniformly permanent operation *Operación permanente uniforme* Funzionamento continuo regolare	1,0	1,0	1,0
Cycle operation *Operación cíclica* Funzionamento ciclico	1,0	1,0	1,25
Cycle operation reversing load *Trabajo cíclico invertido carga* Ciclo di funzion. revers. carico	⩽1000 Z/h 1,0* 2000 Z/h 1,2* 3000 Z/h 1,4* 4000 Z/h 1,6* ⩾5000 Z/h 1,8*	1,0	1,4

*Values between 1000 and 5000 cycles per hour can be interpolated.
**Los valores comprendidos entre 1000 y 5000 ciclos por hora pueden interpolarse.*
*I valori compresi tra i 1000 e i 5000 cicli all'ora possono essere interpolati.

Running time factor ***Factor de tiempo de marcha*** **Fattore di durata del funzionamento**		**fL**
Daily running time *Tiempo de marcha diaria* Durata del funzionamento quotidiana	⩽ 8 h	1,0
	⩽ 16 h	1,15
	⩽ 24 h	1,20

Temperature factor fT ***Factor de temperatura fT*** **Fattore di temperatura fT**	**UT**	**fT**
Ventilated drive *Accionamiento ventilado* Azionamento ventilato	⩽ 20°C	0,90
	⩽ 30°C	1,00
	⩽ 40°C	1,15
Unventilated drive *Accionamiento no ventilado* Azionamento non ventilato	⩽ 20°C	1,00
	⩽ 30°C	1,10
	⩽ 40°C	1,25

Drive Selection
Formulas

Proyección del accionamiento
Lista de fórmulas

Selezione azionamento
Formule

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*** Determining the gear ratio**
i from cycle parameters n, t
- max. possible input speed
- max. possible acceleration (area below n, t characteristic ≙ distance in radian measure)

Recommended (for cyclic operation):
Ratio of external inertia to drive inertia

$$\frac{J_Z}{i^2} \leq 4 \cdot J_D$$

Optimum drive selection is given for

$$\frac{J_Z}{i^2} = J_D$$

This inertia ratio results in the lowest motor torque demand.

Formulas:
F_r = Radial load
F_{2RB} = Acceleration radial load
f_B = Load factor
f_L = Running time factor
f_T = Temperature factor
i = Gear ratio
J_D = Drive inertia (reduced to the input)
J_Z = Total inertia
Δn = Difference in speed
Δt = Difference in time
M = Torque
M_2 = Output torque
$M_{2ä}$ = Equivalent torque
M_{2B} = Max. perm. acceleration torque
M_K = Perm. tilting moment
M_{2KB} = Acceleration tilting torque
M_L = Load torque
M_{2N} = Rated torque
M_{2NOT} = Emergency-off torque
M_{2v} = Deceleration torque
n = Speed
n_b = Mean speed (acceleration)
n_v = Mean speed (deceleration)
n_{1m} = Mean input speed
n_{1max} = Max. input speed
n_{1ZB} = input speed cycle operation
n_{1DB} = input speed continuous operation
t = Time
t_b = Acceleration time
t_d = Constant speed time portion
t_p = Brake time
t_v = Deceleration time
U_T = Ambient temperature

Index:
Big letters are permissible figures, small letters are existing figures.

Ambient temperature: 0°C to +40°C, for use with other temperatures please contact us (max. permissible gear unit temperature P, PA, PKX, PK, PH, PHV, PHA, PHVA, PHKX, PHK, PHQ, PHQA PHQK, KS ≤ 90°C; PE, C, F, KL, K, S ≤ 80°C).

**** Determinación de la relación de reducción del reductor***
i de secuencia de pasos n, t
- *velocidad de accionamiento máx. posible*
- *aceleración máx. posible*
(Superficie bajo línea n, t ≙ recorrido en radianes)

Recomendación (en operación cíclica):
Relación de los momentos de inercia de masa, masa externa respecto a masa de accionamiento según

$$\frac{J_Z}{i^2} \leq 4 \cdot J_D$$

El cálculo óptimo del accionamiento está dado para

$$\frac{J_Z}{i^2} = J_D$$

Para esta relación de momentos de inercia de masa se da la demanda mínima de par para el motor.

Signos de fórmulas:
F_r = *Fuerza radial*
F_{2RB} = *Fuerza radial de aceleración*
f_B = *Factor de carga*
f_L = *Factor de tiempo de marcha*
f_T = *Factor de temperatura*
i = *Relación de reducción del reductor*
J_D = *Momento de inercia de masa del accionamiento (referido a la entrada)*
J_Z = *Momento de inercia de masa total*
Δn = *Diferencia de velocidades*
Δt = *Diferencia de tiempo*
M = *Par*
M_2 = *Par del eje de salida*
$M_{2ä}$ = *Par equivalente*
M_{2B} = *Par máx. de aceleración*
M_K = *Par de vuelco admisible*
M_{2KB} = *Par de vuelco de aceleración*
M_L = *Par de carga*
M_{2N} = *Par nominal*
M_{2NOT} = *Par de PARADA DE EMERGENCIA*
M_{2v} = *Par de deceleración*
n = *Velocidad*
n_b = *Valor medio de velocidad (aceleración)*
n_v = *Valor medio de velocidad (deceleración)*
n_{1m} = *Velocidad media de entrada*
n_{1max} = *Velocidad máx. de entrada*
n_{1ZB} = *Velocidad de entrada operación cíclica*
n_{1DB} = *Velocidad de entrada operación continua*
t = *Tiempo*
t_b = *Tiempo de aceleración*
t_d = *Parte de tiempo con velocidad constante*
t_p = *Tiempo de pausa*
t_v = *Tiempo de deceleración*
U_T = *Temperatura ambiente*

Índices:
Mayúsculas son valores admisibles, minúsculas son valores existentes.
Temperatura ambiente: *0°C a +40°C, uso con otra temperatura, por favor consultar (temperatura máx. adm. de reductor P, PA, PKX, PK, PH, PHV, PHA, PHVA, PHKX, PHK, PHQ, PHQA PHQK, KS ≤ 90°C; PE, C, F, KL, K, S ≤ 80°C).*

*** Determinazione del rapporto di riduzione del riduttore**
i da esecuzione ciclo n, t
- max. num. di giri di azionamento possibile
- max. accelerazione possibile
(area sotto n, caratteristica t – ≙ distanza quale misura in radianti)

Raccomandazione (per ciclo di funzionamento):
Rapporto dei momenti di inerzia massa esterna / inerzia azionamento secondo

$$\frac{J_Z}{i^2} \leq 4 \cdot J_D$$

La progettazione ottimale dell'azionamento si ha per

$$\frac{J_Z}{i^2} = J_D$$

Per questo rapporto dei momento di inerzia si determina infatti il minor fabbisogno di coppia per il motore.

Simboli delle formule:
F_r = Forza radiale
F_{2RB} = Forza radiale di accelerazione
f_B = Fattore di sollecitazione
f_L = Fattore di servizio
f_T = Fattore di temperatura
i = Rapporto di riduzione
J_D = Momento di inerzia dell'azionamento (riferito all'ingresso)
J_Z = Momento di inerzia complessivo
Δn = Differenza di numero di giri
Δt = Differenza di tempo
M = Coppia
M_2 = Coppia dell'albero uscita
$M_{2ä}$ = Coppia equivalente
M_{2B} = Coppia di accelerazione max. am messa
M_K = Coppia di ribaltamento ammessa
M_{2KB} = Coppia di ribaltamento di accelerazione
M_L = Coppia di carico
M_{2N} = Coppia nominale
M_{2NOT} = Coppia emergenza
M_{2v} = Coppia di decelerazione
n = Numero di giri
n_b = Valore medio del numero di giri (accelerazione)
n_v = Valore medio del num. di giri (decelerazione)
n_{1m} = Numero di giri medio in ingresso
n_{1max} = Max. numero di giri in ingresso
n_{1ZB} = Numero di giri in ingresso ciclo di funzionamento
n_{1DB} = Numero di giri in ingresso funzionamento continuo
t = Tempo
t_b = Tempo di accelerazione
t_d = Quota di tempo con numero di giri costante
t_p = Tempo di pausa
t_v = Tempo di decelerazione
U_T = Temperatura ambientale

Indici:
Le lettere maiuscole sono i valori ammessi, quelle minuscole i valori disponibili.
Temperatura ambientale: da 0°C a +40°C, per l'impiego con altre temperature si raccomanda di chiedere (max. temperatura ammessa per il riduttore P, PA, PKX, PK, PH, PHV, PHA, PHVA, PHKX, PHK, PHQ, PHQA PHQK, KS ≤ 90°C; PE, C, F, KL, K, S ≤ 80°C).

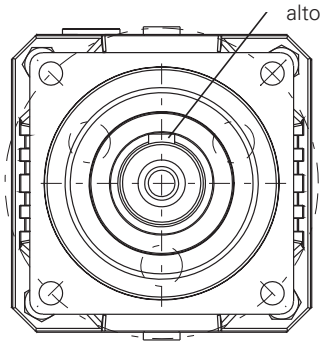
The position of the output shaft according to the pictures below must be followed to guarantee the lubrication of the rotating toothed parts when the output shaft works in reversing operation (from ± 20 to ± 90 degrees) and is mounted in a horizontal position (pictures show the center position of the reversing operation).
Does not apply for PE gear units (grease lubrication).
Cyclic reversing operation < ± 20 degrees on request.

Para que pueda ser garantizada la lubricación de las piezas dentadas en rotación con instalación horizontal y operación cíclica reversible del eje de salida de ± 20 hasta ± 90 grados, deberá ser observada la posición del eje de salida durante la instalación de los reductores, de acuerdo a las indicaciones mostradas abajo (ilustraciones muestran la posición media de la operación reversible).
No es válido para los reductores PE (lubricación con grasa).
Operación cíclica reversible < ± 20 grados sobre pedido.

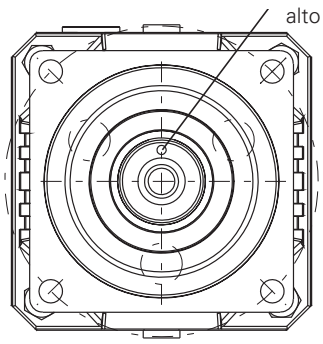
Per garantire la corretta lubrificazione delle parti dentate in rotazione, in caso di esercizio reversibile (da 20 a 90 gradi) con riduttore montato in posizione orizzontale, è necessario che la posizione dell'albero di uscita sia conforme alle illustrazioni sotto riportate.
Non valido per riduttori PE (lubrificazione con grasso).
Funzionamento reversibile ciclico < ± 20 gradi su richiesta.

Series / *serie constructiva* / serie P + PA:

Shaft design / *Ejecución del eje* / Esecuzione albero **P**

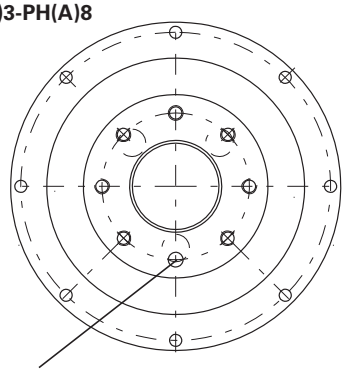


Shaft design / *Ejecución del eje* / Esecuzione albero **G**



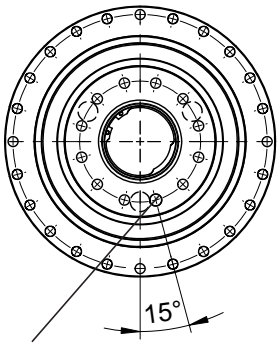
Series / *serie constructiva* / serie PH, PHA, PHV, PHVA:

PH(A)3-PH(A)8



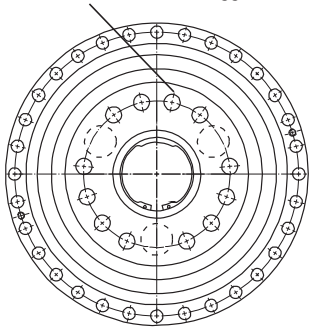
Fixing hole downwards / *Agujero de fijación abajo* / Foro di fissaggio sottostante

PH(A)7



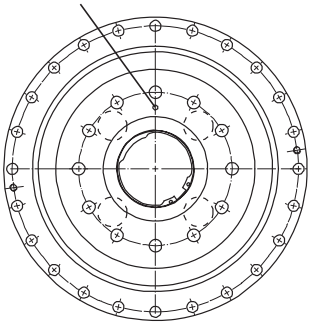
Position of the fixing hole / *Posición de la agujero de fijación* / Posizione della foro di fissaggio

PH(A)9-PH(A)10, PHV(A)9-PHV(A)10
Position of the fastening threads
Posición de la rosca de fijación
Posizione della filettatura di fissaggio

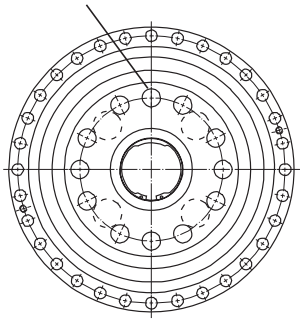


Series / *serie constructiva* / serie PHQ + PHQA:

PHQ(A)7-PHQ(A)8, PHQ11, PHQ12
Position of the marker upwards
Posición de la marca arriba
Posizione della marcatura alto



PHQ(A)9-PHQ(A)10
Position of the fastening threads
Posición de la rosca de fijación
Posizione della filettatura di fissaggio



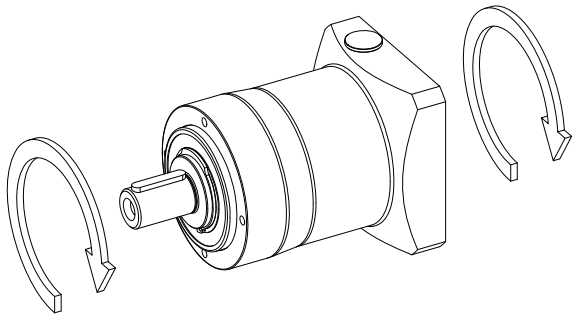
Rotating directions
PE, P(A), PKX, PK

Sentido de giro
PE, P(A), PKX, PK

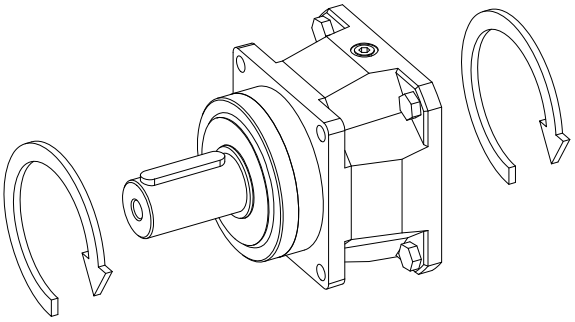
Senso di rotazione
PE, P(A), PKX, PK

STÖBER

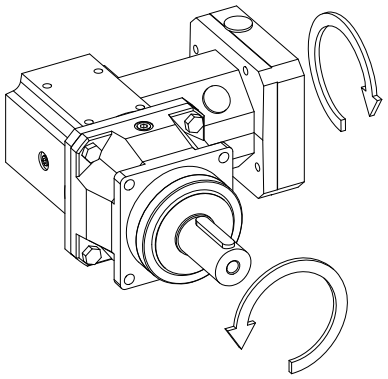
PE



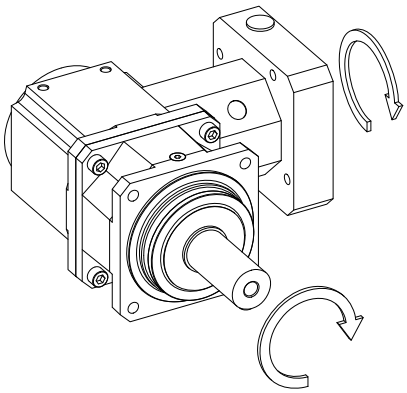
P, PA



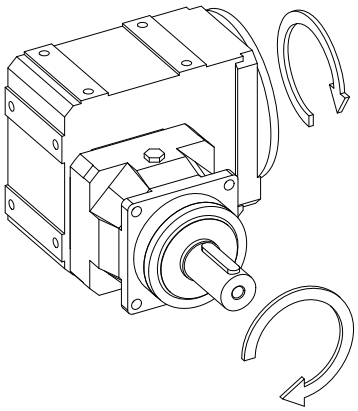
P221KX301 - P521KX501
P222KX301 - P522KX401

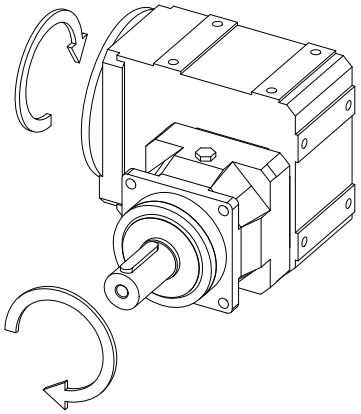


P721KX701 - P821KX801
P722KX501 - P922KX801

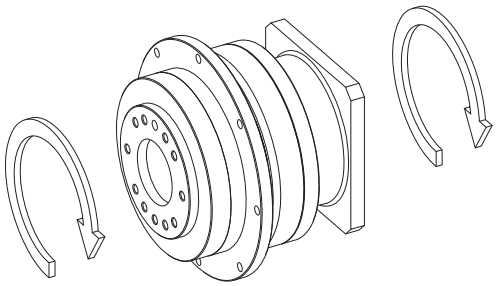


PK

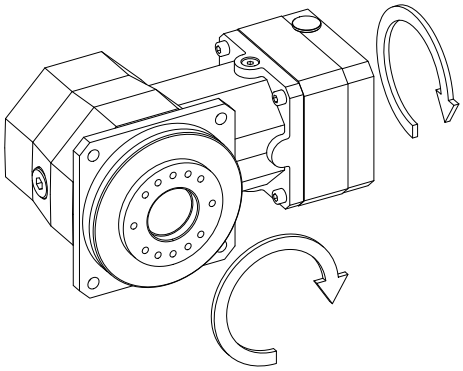




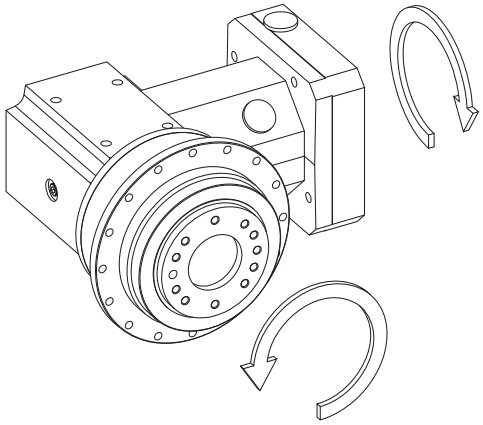
PH, PHA, PHV, PHVA, PHQ, PHQA



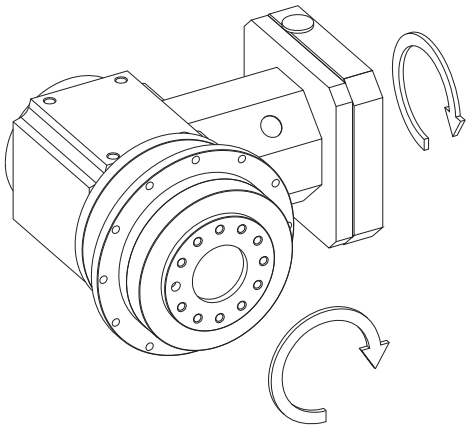
KS



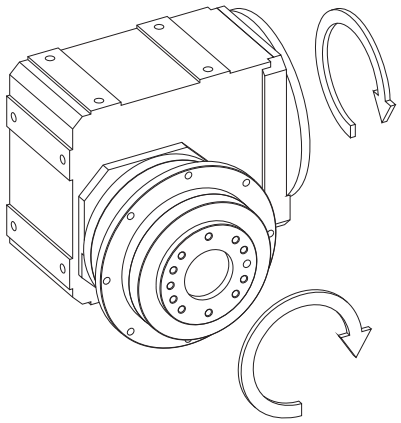
PH321KX3 - PH521KX5
PH322KX3 - PH522KX4

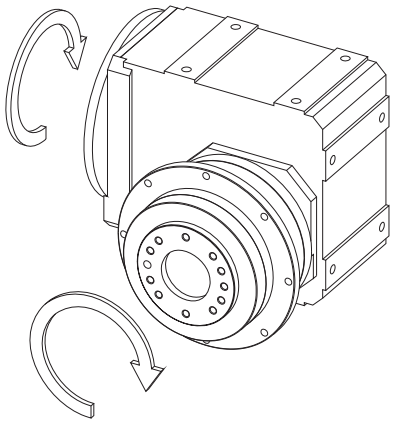


PH721KX7 - PH821KX8
PH722KX5 - PH1032KX8



PHK, PHQK





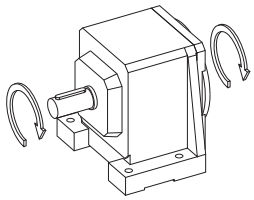
Rotating directions
C, F, KL, K, S

Sentido de giro
C, F, KL, K, S

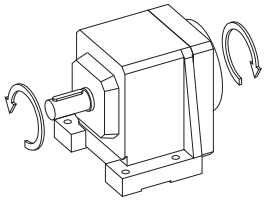
Senso di rotazione
C, F, KL, K, S

STÖBER

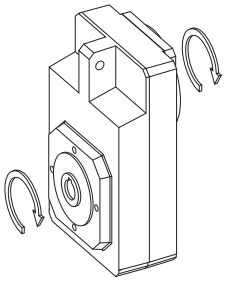
C002 - C912



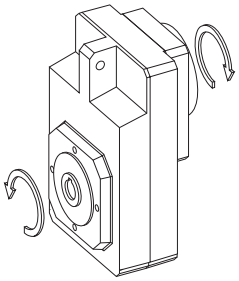
C103 - C913



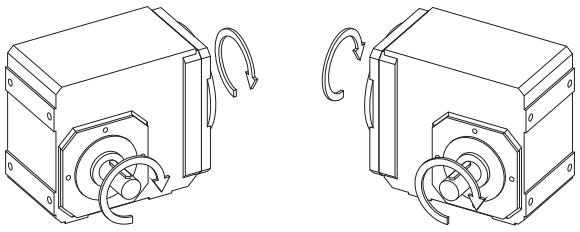
F102 - F602



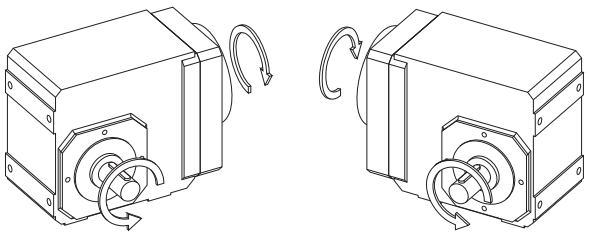
F203 - F603



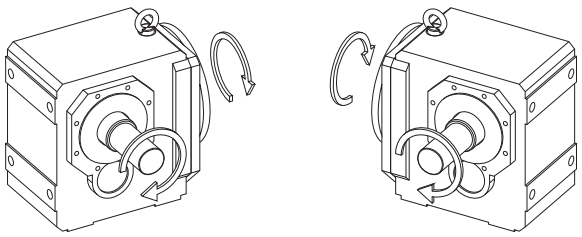
K102 - K402



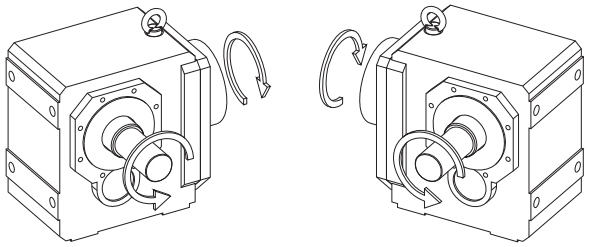
KL102 - KL202, K203 - K403



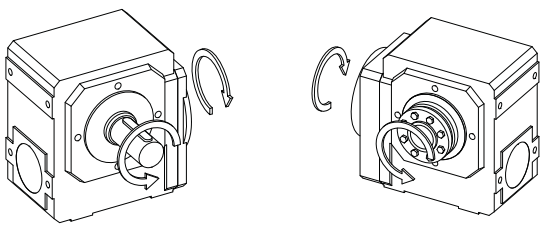
K513 - K1013



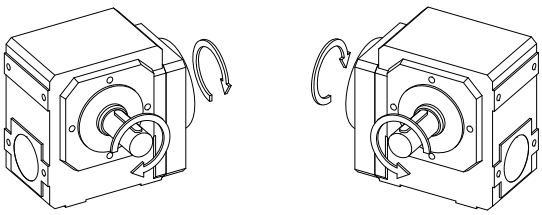
K514 - K1014



S002 - S402



S203 - S403



The indicated rotating directions are also valid for hollow shafts as long as the entry side of the machine shaft corresponds with the side of the solid shafts showed above. **Rotating directions of gear units with shrink disk see next page.**

Los sentidos de giro indicados valen también para reductores con eje hueco, en tanto el lado de enchufe del eje de la máquina corresponda al lado de los ejes macizos mostrados arriba. ***Sentido de giro para reductor con disco de contracción ver página siguiente.***

I sensi di rotazione indicati valgono anche per i riduttori con albero cavo, purché il lato innesto dell'albero macchina corrisponda al lato degli alberi pieni mostrati sopra. **Senso di rotazione per riduttori con disco di serraggio: vedere la pagina successiva.**

Rotating directions

F, KL, K, S Hollow shaft for shrink ring connection

Sentido de giro

F, KL, K, S *Eje hueco con disco de contracción*

Senso di rotazione

F, KL, K, S

Albero cavo con disco di serraggio

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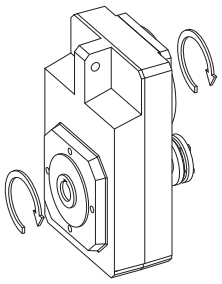
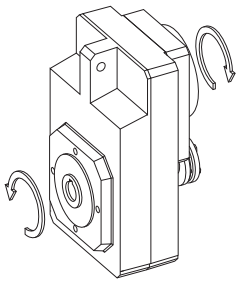
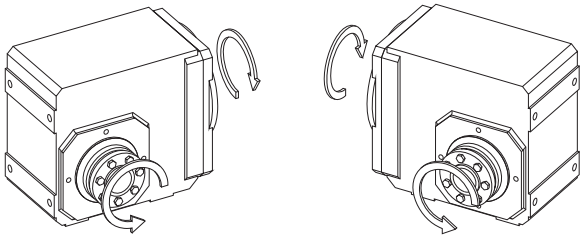
F102 - F602



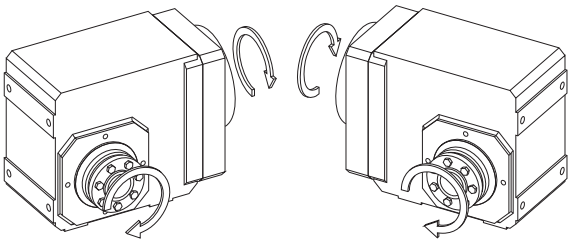
F203 - F603



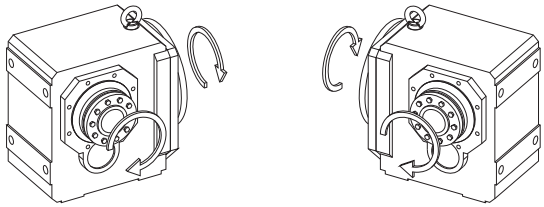
KL102 - KL202, K102 - K402



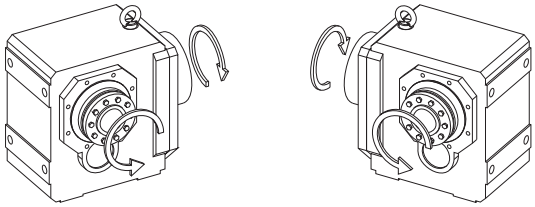
K203 - K403



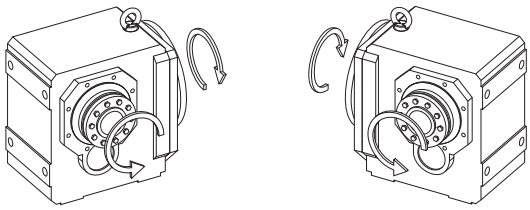
K513 - K813



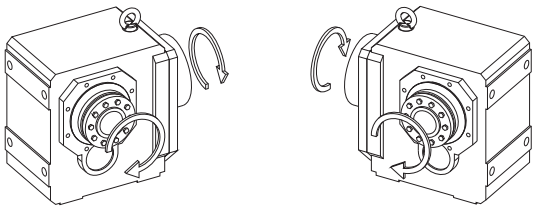
K514 - K814



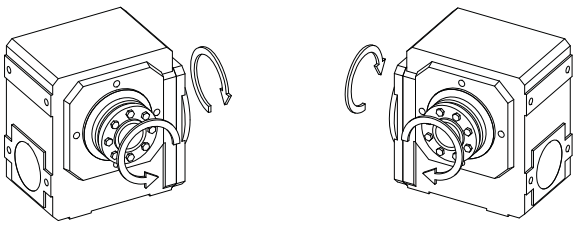
K913 - K1013



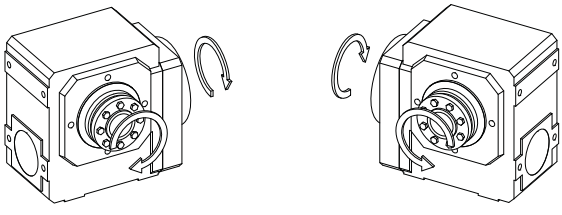
K914 - K1014



S002 - S402



S203 - S403



The indicated rotating directions are valid for gear units with hollow shaft for shrink ring connection.

Los sentidos de giro indicados valen para reductores de eje hueco con disco de contracción.

I sensi di rotazione indicati valgono per riduttori con albero cavo per collegamento mediante disco di serraggio.

Oil equalizing tank | *Recipiente compensador de aceite* | Serbatoio di compensazione olio

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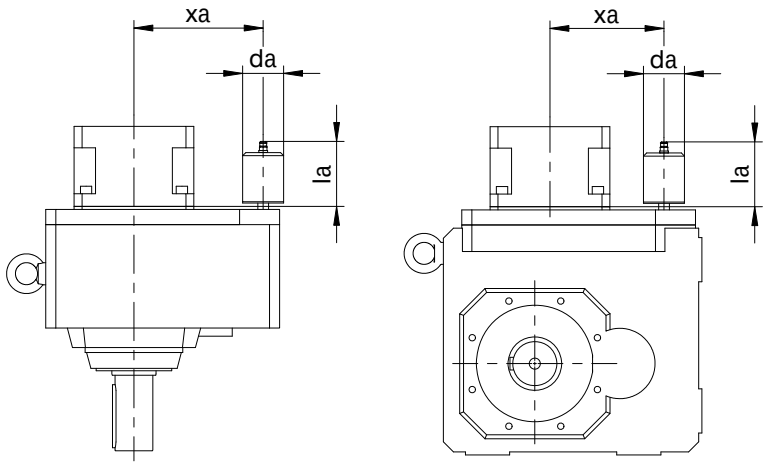
C612 - C912

K513 - K1013
S202 - S402



In mounting positions EL5 the gearboxes have a higher filling level. Optional use of an oil equalizing tank with bleeding valve prevents any oil from escaping on the otherwise standardly positioned bleeding valve.
Because of this, an oil equalizing tank (additional charge) is particularly recommended for high-speed gearboxes with n > 1750 rpm and gear ratios of i < 20.

Los reductores tienen un nivel de llenado más elevado en las posiciones de instalación EL5. El uso opcional de un recipiente compensador de aceite con válvula de aireación evita una eventual salida de aceite por la válvula de aireación normalmente ubicada de modo estándar.
Por ello se recomienda especialmente para reductores rápidos con n > 1750 1/min y relaciones de transmisión i < 20 un recipiente compensador de aceite (sobreprecio).

Nella posizione di montaggio EL5 i riduttori hanno un livello di olio maggiore. L'impiego opzionale di un serbatoio di compensazione olio con valvola di sfiato impedisce l'eventuale perdita d'olio della valvola di sfiato, montata di serie.
Un serbatoio di compensazione olio (sovrapprezzo) si raccomanda, dunque, soprattutto per i riduttori ad alta velocità con n > 1750 1/min e rapporti di riduzione i < 20.

Typ	ME30			ME40			ME50		
	da	xa	la	da	xa	la	da	xa	la
C612	65	170,0	112,0	65	170,0	112,0	-	-	-
C712	73	205,0	126,0	73	205,0	126,0	73	205,0	113,0
C812	-	-	-	73	255,0	126,0	73	255,0	125,0
C912	-	-	-	-	-	-	73	305,0	126,0

Typ	ME20			ME30			ME40			ME50		
	da	xa	la	da	xa	la	da	xa	la	da	xa	la
K513	65	122,0	113,5	65	122,0	113,5	65	170,0	157,5	-	-	-
K613	65	149,0	114,0	65	149,0	114,0	65	150,5	111,5	-	-	-
K713	-	-	-	65	170,0	112,0	65	170,0	112,0	-	-	-
K813	-	-	-	73	205,0	126,0	73	205,0	126,0	73	205,0	113,0
K913	-	-	-	-	-	-	73	255,0	126,0	73	255,0	125,0
K1013	-	-	-	-	-	-	-	-	-	73	305,0	126,0

Typ	ME10			ME20			ME30			ME40		
	da	xa	la	da	xa	la	da	xa	la	da	xa	la
S102	65	113,0	161,0	65	130,0	156,5	-	-	-	-	-	-
S202	65	134,0	161,0	65	134,0	160,5	65	134,0	161,0	-	-	-
S302	65	145,5	162,0	65	97,5	113,5	65	145,5	161,0	-	-	-
S402	-	-	-	65	110,0	161,5	65	111,0	113,5	65	158,0	163,0

Notes to the dimensioned drawings
C, F, KL, K, S, KS

Indicaciones sobre las páginas de dibujos acotados C, F, KL, K, S, KS

Note sulle pagine con i disegni quotati
C, F, KL, K, S, KS

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Shaft height:
The shaft height tolerance of STOBER drives complies with DIN 747 requirements.
Shaft height tolerances are
up to shaft height 50 mm -0.4 mm
up to shaft height 250 mm -0.5 mm
up to 630 mm shaft height -0.6 mm

Solid shaft specifications:
The shaft end fit corresponds to DIN 748; i.e. diameter d ≤ 50 = tolerance ISO k6
diameter d >50 = tolerance ISO m6
(diameter d >50 = tolerance ISO k6 when P8, PA8, P9, PA9)
Centre holes in shafts with or without key acc. to DIN 332 T2 shape DR.
The keys are in accordance with DIN 6885 Sheet 1 (tall shape A).
In helical bevel and helical worm gear units solid shafts are available with an output on both sides. Keys are aligned to 0.03 mm.

Specifications for hollow shafts (A, F, S):
The alignment of the machine shaft to the hollow shaft has to be taken into consideration (max. alignment ≤ 0.03 mm).

Specifications for hollow shafts with key groove (A): Hollow shaft bore tolerance is ISO H7 (KL: ISO G7), the machine shaft must be ISO k6. The hollow shafts are equipped with a spiral groove (as grease depot) to make installing and removing the machine shaft easier. A hardened threaded forcing disc is included in the scope of delivery (also possible without threaded forcing disc as an option). The face centre hole of the machine shaft is given in the table.
* S1/K1 ø30: key in accordance with DIN 6885 Sheet 3.

Altura de eje:
La tolerancia de altura de eje de los accionamientos STOBER está dentro de la DIN 747.
La desviación admisible de la altura de eje es
hasta 50 mm de altura de eje -0,4 mm
hasta 250 mm de altura de eje-0,5 mm
hasta 630 mm de altura de eje-0,6 mm

Para ejes macizos vale:
El ajuste de los extremos de eje responde a la DIN 748; es decir
diámetro d ≤ 50 = tolerancia ISO k6
diámetro d > 50 = tolerancia ISO m6
(diámetro d > 50 = tolerancia ISO k6 para P8, PA8, P9, PA9)
Agujeros de centrado para ejes sin / con chaveta según DIN 332-T2, forma DR.
Las chavetas responden a la DIN 6885, hoja 1 (forma elevada A).
Para reductores de ruedas cónicas y de tornillos sinfín existen ejes macizos con salida a ambos lados. Alineación de chavetas 0,03 mm.

Para ejes huecos (A, F, S) vale: *Deberá observarse en la fijación del reductor la alineación del eje de la máquina respecto al eje hueco del reductor (desviación máx. ≤ 0,03 mm).*

Para ejes huecos con chavetero (A) vale: *La tolerancia de taladro de eje hueco es ISO H7 (KL: ISO G7), el eje de máquina debe ser ISO k6. Los ejes huecos están dotados de una ranura espiral (como depósito de grasa) para un montaje o desmontaje más fácil del eje de la máquina. En el suministro está incluido un disco de extracción templado con rosca (opcional también disponible sin disco de extracción). El taladro frontal de centrado del eje de máquina debe ser tomado de la tabla. *S1/K1 ø30: Chaveta según DIN 6885, hoja 3.*

Altezza asse:
La tolleranza altezza asse degli azionamenti STOBER rientra nei limiti previsti da DIN 747.
Lo scostamento ammesso dell'altezza asse è il seguente:
fino a 50 mm di altezza asse -0,4 mm
fino a 250 mm di altezza asse -0,5 mm
fino a 630 mm di altezza asse -0,6 mm

Per gli alberi pieni vale:
L'accoppiamento delle estremità albero corrisponde a DIN 748, cioè
diametro d ≤ 50 = tolleranza ISO k6
diametro d > 50 = tolleranza ISO m6
(diametro d > 50 = tolleranza ISO k6 in caso di P8, PA8, P9, PA9)
Per quanto riguarda i fori di centraggio, per gli alberi senza / con chiavetta accordo a norma DIN 332-T2, forma DR.
Le chiavette corrispondono a DIN 6885, foglio 1 (forma alta A).
Per riduttori a coppia conica ed a vite senza fine sono disponibili alberi pieni con uscita su entrambi i lati. Le chiavette sono allineate su 0,03 mm.

Per alberi cavi (A, F, S) vale:
In fase di fissaggio riduttore si deve fare attenzione all'allineamento dell'albero macchina con l'albero cavo riduttore (scostamento massimo ≤ 0,03 mm).

Per alberi cavi con sede chiavetta (A) vale:
La tolleranza foro albero cavo è ISO H7 (KL: ISO G7), l'albero macchina deve essere ISO k6. Per un semplice montaggio e smontaggio dell'albero della macchina, gli alberi cavi sono dotati di una scanalatura a spirale (quale deposito per il grasso). Un disco di estrazione temprato con filettatura è compreso nel corredo di fornitura (a scelta disponibile anche senza disco di estrazione). Per il foro di centraggio frontale dell'albero macchina, fare riferimento alla tabella. * S1/K1 ø30: chiavetta come da DIN 6885, foglio 3.
La lunghezza necessaria dell'albero macchina è 2,2 x diametro "d", la lunghezza della chiavetta 2 x diametro "d".

Hollow shaft ø (A) *ø de eje hueco (A)* ø albero cavo (A)	Forcing disc width *Ancho de disco de extracción* Larghezza disco di estrazione	1) Forcing screw *1) tornillo de extracción* 1) Vite di estrazione	2) Machine shaft *2) Eje de máquina* 2) Albero macchina	Gear unit type *Tipo de reductor* Tipo di riduttore
16	12	M6	M5	KL1
20	12	M8	M6	F1 KL2 S0
25	12	M12	M10	F2 K1 S0/S1
30	12	M12	M10	F3 K1*/K2 S1*/S2
35	12	M16	M12	K3 S2
40	12	M20	M16	F4 K4 S3
50	12	M20	M16	F6 K5, K6 S4
60	12	M24	M20	K7
70	20	M24	M20	K8
90	26	M30	M24	K9
100	26	M30	M24	K10

Per alberi cavi con disco di serraggio (S) vale:
La tolleranza foro albero cavo è ISO H7, l'albero macchina – per garantire una trasmissione sicura della coppia – deve avere la seguente esecuzione:
– F1 - F6, KL1 - KL2, K1 - K6, S0 - S4: ISO h9
– KS4 - KS7, K7 - K10: ISO h6

Attenzione: Pressione superficiale p ≤ 325 N/mm² (tenerne conto in sede di determinazione del materiale per l'albero macchina!)

Per la flangia vale quanto segue:
La tolleranza delle superfici di accoppiamento per flange sino alla taglia A300 (superficiedi accoppiamento 230 mm) è ISO j6 e dalla taglia A350 (superficie di accoppiamento 250 mm) è ISO h6. Nel caso dei riduttori a ruota dentata cilindrica, a coppia conica ed a vite senza fine, sono disponibili fino a tre diverse dimensioni flangia per ciascuna taglia riduttore. Fare attenzione alle relative pagine con i disegni quotati dell'esecuzione flangia.

A fronte delle tolleranze di fusione e del sommarsi delle singole tolleranze, le misure possono superare le prescrizioni della norma DIN 7168-m!
Qualora si verificassero miglioramenti tecnici ci riserviamo di modificare le dimensioni. Valori precisi su richiesta.

The required length of the machine shaft is 2.2 x diameter "d", length of the feather key 2 x diameter "d".

Specifications for hollow shafts with shrink disk (S):
Hollow shaft bore tolerance is ISO H7, the machine shaft must be
- F1 - F6, KL1 - KL2, K1 - K6, S0 - S4: ISO h9
- KS4 - KS7, K7 - K10: ISO h6
for a safe torque transmission.

Caution: Surface pressure p ≤ 325 N/mm² (consider when specifying the material for the machine shaft!)

Flange specifications:
Up to flange size A300 (fitting shoulder 230mm) the fitting shoulder fit is ISO j6 and from A350 (fitting shoulder 250 mm) ISO h6. For helical, helical bevel and helical worm gear units up to three different flange dimensions can be supplied for each gear unit size. Please refer to the dimension drawing pages of the flange-mounted gear units.

The dimensions may exceed the guidelines of the DIN 7168-m because of the cast tolerances resp. as parts tolerances add up !
We reserve the right to dimensional changes in the interest of technical progress. Precise values on request.

La longitud necesaria del eje de la máquina es 2,2 x diámetro "d", longitud de la chaveta 2 x diámetro "d".

Para ejes huecos con disco de contracción (S) vale: *La tolerancia de taladro del eje hueco es ISO H7, para garantizar una transmisión segura del par, el eje de la máquina debe estar ejecutado como sigue:*
– F1 - F6, KL1 - KL2, K1 - K6, S0 - S4: ISO h9
– KS4 - KS7, K7 - K10: ISO h6

Atención: *Aparición de presión superficial p ≤ 325 N/mm² (¡observar al determinar el material del eje de la máquina!)*

Para bridas vale:
El asiento del borde de ajuste hasta tamaño de brida A300 (borde de ajuste 230 mm) debe ser ISO j6 y a partir de A350 (borde de ajuste 250 mm) ISO h6. Para reductores coaxiales, cónicas y corona vis sin fín pueden ser suministradas hasta tres diferentes medidas de bridas por cada tamaño de reductor. Observe los respectivos dibujos acotados de la ejecución de brida.
¡Debido a tolerancias de fundición, o bien por la suma de las tolerancias de las piezas individuales, las medidas pueden exceder las especificaciones de la DIN 7168-m!
Reservado el derecho de efectuar modificaciones a las medidas por desarrollo técnico. Valores exactos a pedido.

ServoFit® PE Planetary Gear Units
Reductores planetarios ***ServoFit® PE***
ServoFit® Riduttori planetari **PE**

STÖBER

Economical helical geared Planetary Gear Units

- Acceleration torque: 13 – 310 Nm
- Low backlash: 8 – 13 arcmin
- high torsional stiffness
- life-long lubrication with high performance grease, suitable for all mounting positions
- friction-optimized output bearings
- advanced gear technology
- low mass moments of inertia
- Unique! Helical geared economical planetary gear unit
  - unsurpassed level of smoothness
  - high power density
  - high wear resistance
  - low losses due to contactless sealing at input
- the clamp coupling with spreading function in the clamping hub makes it easy to mount the motor
- readily attaches any synchronous servo motor
- easy and secure motor attachment in any mounting position
- efficiency:
  1 stage ≥ 97 %
  2 stage ≥ 95 %

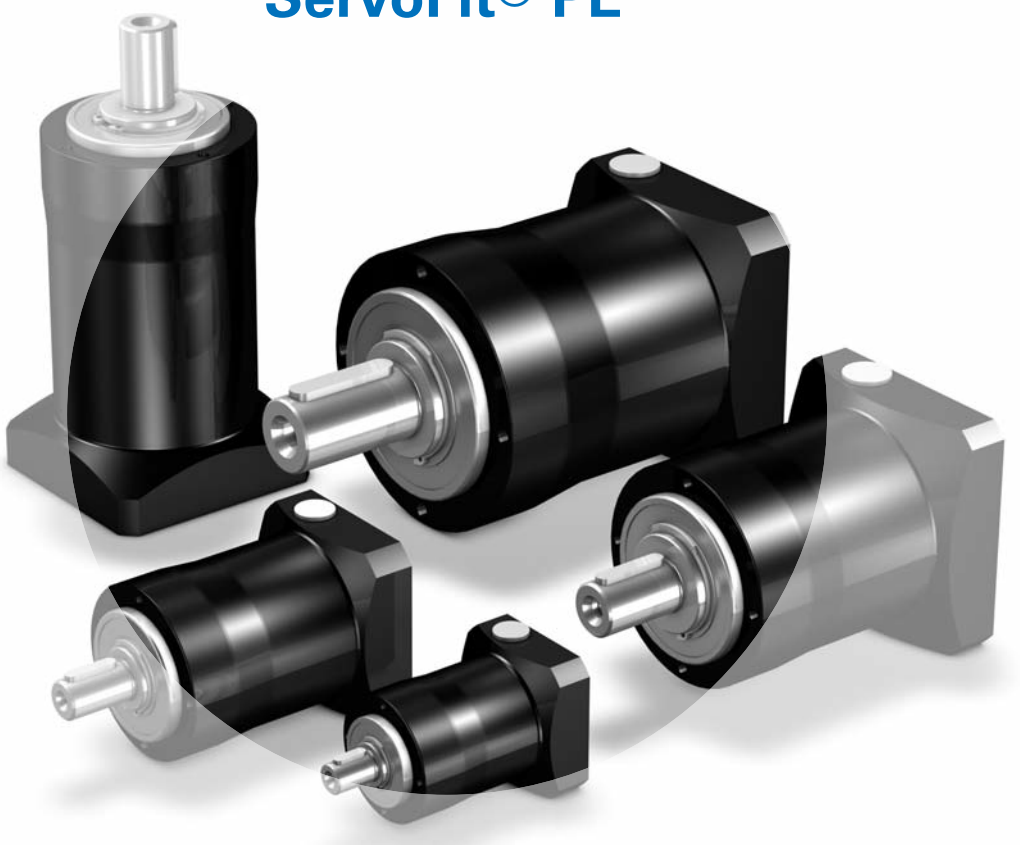
Reductores planetarios de dentado helicoidal económicos

- *Par de aceleración: 13 – 310 Nm*
- *Bajo juego de giro: 8 – 13 arcmin*
- *Alta rigidez a la torsión*
- *Lubricación de por vida con grasa de alto rendimiento - Apto para todas las posiciones de instalación*
- *Apoyo de salida optimizado a la fricción*
- *Tecnología superior de dentado*
- *Reducidos momentos de inercia de masas*
- *¡Único! Reductor planetario de dentado helicoidal económico*
  - *Suavidad de funcionamiento inigualable*
  - *Gran densidad de potencia*
  - *Gran resistencia al desgaste*
  - *Pocas pérdidas gracias al sellado sin contacto en la entrada*
- *El motor puede montarse fácilmente mediante un acoplamiento a presión con función de expansión en el buje de fijación*
- *Equipable a cualquier servomotore síncrono*
- *Adaptación sencilla y segura de motor en cualquier posición de instalación*
- *Rendimiento:*
  1 tren ≥ 97 %
  2 trenes ≥ 95 %

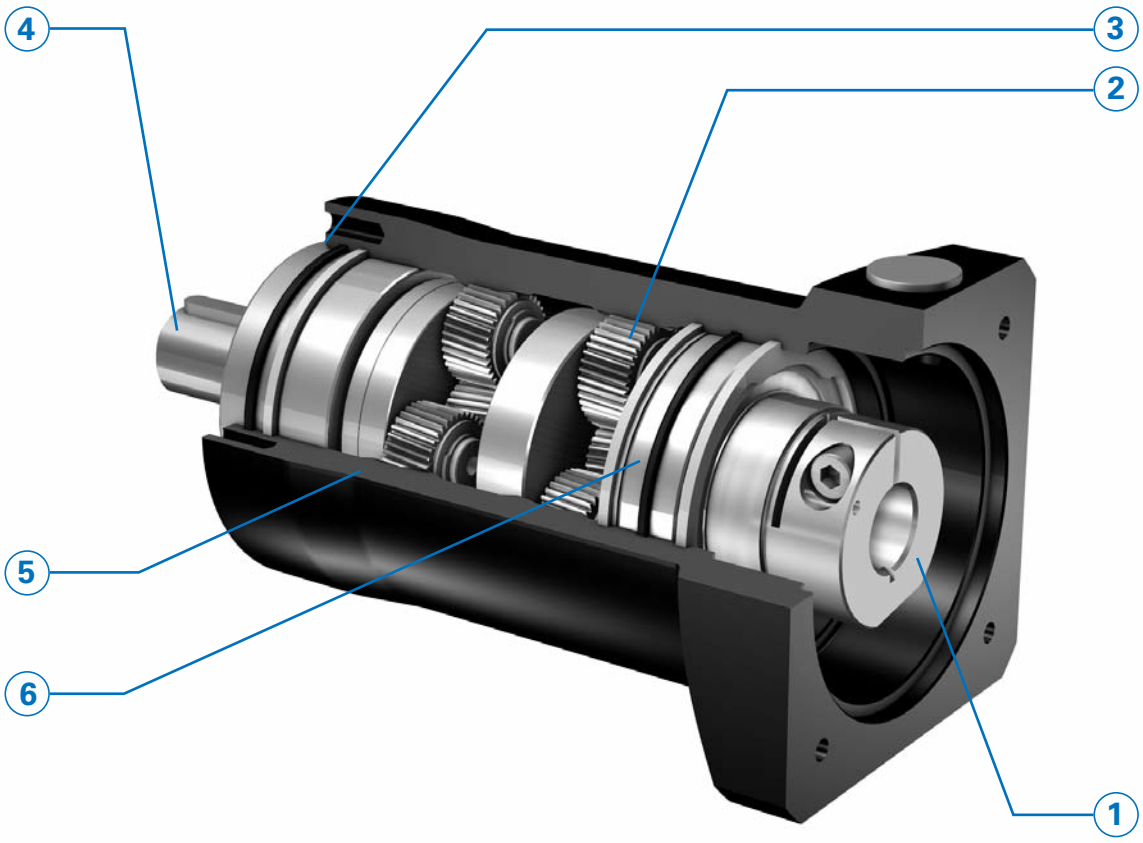
Convenienti riduttori planetari con dentatura elicoidale

- Coppia di accelerazione: 13 – 310 Nm
- Gioco ridotto: 8 – 13 arcmin
- Rigidità torsionale elevata
- Elevata rigidità torsionale
- Lubrificazione permanente a vita con grasso ad alte prestazioni Idoneo per tutte le posizioni di montaggio
- Supporto uscita ad attrito ottimizzato
- Tecnologia della dentatura avanzata
- Momenti di inerzia ridotti
- Unico ! Conveniente riduttore planetario a dentatura elicoidale
  - Insuperabile silenziosità di funzionamento
  - Elevata densità di potenza
  - Elevata resistenza all'usura
  - Perdite ridotte grazie alla guarnizione senza contatto presso l'albero di entrata
- Semplice montaggio del motore grazie al giunto di bloccaggio con funzione di divaricazione nel mozzo di bloccaggio
- Montabili su qualsiasi servomotore sincrono
- Adattamento del motore semplice e sicuro in qualsiasi posizione di montaggio
- Rendimento:
  1 stadio ≥ 97 %
  2 stadi ≥ 95 %

ServoFit® PE



ServoFit® PE Planetary Gear Units
Reductores planetarios ***ServoFit® PE***
ServoFit® Riduttori planetari **PE**



- **Highest running smoothness achieved by proven helical gearing and optimized microgeometry.**
On-hands experience gained over the past decades has consistently been put to practice. This has resulted mainly in optimized gear tooth microgeometry, ensuring highest backlash stability, low backlash and extremely quiet gear operation.

- **Friction-optimized output bearings**

- The **STOBER EasyAdapt® motor adapter system** allows easy and accurate motor installation in minutes with no special tools required.

- **Wide selection** of IEC and NEMA motor adapters for all common brands of motors.

- ***Máxima suavidad de marcha por probado dentado helicoidal y microgeometría optimizada***
Los conocimientos prácticos de los últimos décadas han sido aplicados consecuentemente. Los resultados son ante todo, optimizaciones en la microgeometría del dentado.
Esto asegura máxima estabilidad de juego, mínimo juego de giro y ruido de marcha extremadamente bajo.

- ***Apoyo de salida optimizado a la fricción***

- *El* ***sistema STOBER EasyAdapt®, de opciones para motores*** *permite el montaje sencillo y sin errores en pocos minutos. No se requieren herramientas especiales.*

- ***Gran selección*** *de adaptadores de motor (IEC y NEMA) para todos los tipos usuales de motores.*

- **Massima silenziosità grazie alla dentatura elicoidale collaudata ed alla microgeometria ottimizzata**
Le conoscenze empiriche degli ultimi decenni sono state trasposte in maniera coerente. Il risultato é soprattutto a perfezionamento della microgeometria della dentatura. Questo consente di ottenere una stabilità di gioco elevatissima abbinata ad una rumorosità estremamente bassa.

- **Supporto uscita ad attrito ottimizzato**

- Il **sistema di montaggio del motore EasyAdapt® STOBER** consente un montaggio del motore semplice e senza errori nel giro di pochi minuti. Non sono richiesti utensili speciali.

- **Ampia scelta** di adattatori motore (CEI e NEMA) per tutti i comuni tipi di motori.

ServoFit® PE Planetary Gear Units
Reductores planetarios ***ServoFit® PE***
ServoFit® Riduttori planetari **PE**

STÖBER

① **EasyAdapt® coupling**
Accurate and precise motor installation by clamping screw. Designed for **large motor shaft diameters**.
The single-piece design and optimized features to accommodate the motor shaft diameter help **minimize inertia** and ensure superior dynamic performance.
The **balanced** clamp coupling ensures quiet, vibration-free operation, also at high speeds.
Spacer bushes to accommodate custom motor shaft diameters.

② **High gearing quality** provided by case-hardened and finish-ground sun gear and planet gears.

③ **IP64** enclosure

④ **Highest torsional stiffness and ultimate tensile strength** provided by oversized single-piece planet carriers made of high-tensile material.

⑤ **Highest running accuracy and precision** ensured by single-piece housing design. Housing material: High-tensile tempered ductile iron.

⑥ **Low losses** due to contactless sealing at input.

⑦ **Lubricated for life** with high performance grease.

① ***Acoplamiento EasyAdapt®***
Acoplamiento de motor ***sin errores*** *mediante un tornillo de apriete. Concebido para* ***grandes diámetros de ejes de motor****.*
La ***estructura de una pieza*** *y la óptima adaptación al diámetro del eje del motor se encargan* ***de bajísimos momentos de inercia de masa*** *y así de alta dinámica.*
El acoplamiento ***equilibrado*** *de anillo de apriete se encarga de una marcha suave, libre de vibraciones, aún a altas velocidades.*
Manguitos distanciadores para la adaptación de diámetros no usuales de motor.

② ***Alta calidad de dentado*** *por piñones solares y ruedas planetarias templados por cementación y rectificados.*

③ *Tipo de protección* ***IP64***

④ ***Máxima rigidez a la torsión y resistencia a la rotura*** *por portaplanetas generosamente dimensionados, de una sola pieza, fabricados de material de alta resistencia.*

⑤ ***Máxima exactitud y precisión de marcha*** *por diseño de carcasa de una pieza. Material de la carcasa: Fundición nodular de alta resistencia.*

⑥ ***Pocas pérdidas*** *gracias al sellado sin contacto en la entrada.*

⑦ ***Lubricación de por vida*** *con grasa de alto rendimiento.*

① **Giunto EasyAdapt®**
Montaggio del motore **senza errori** grazie alla vite di arresto. Concepito per **motori con grandi diametri dell'albero**.
La **struttura monopezzo** e l'adattamento ottimizzato al diametro dell'albero motore assicurano **momenti di inerzia bassissimi** e pertanto la massima dinamica.
Il giunto di montaggio **equilibrato** garantisce un funzionamento silenzioso e senza vibrazioni anche a alto numero di giri.
Bussole per l'adattamento ai diametri degli alberi motore non comuni.

② **Alta qualità della dentatura** grazie a solare e satelliti cementati e lucidati, nonché corona dentata nitrurata e levigata.

③ Classe di protezione **IP64**

④ **Rigidità torsionale e resistenza a rottura** elevatissime grazie a porta planetari monoblocco in materiale ad alta resistenza sovradimensionati.

⑤ **Massima esattezza di funzionamento e precisione** grazie al design monoblocco della carcassa. Ghisa sferoidale ad alta resistenza.

⑥ **Perdite ridotte** grazie alla guarnizione senza contatto presso l'albero di entrata.

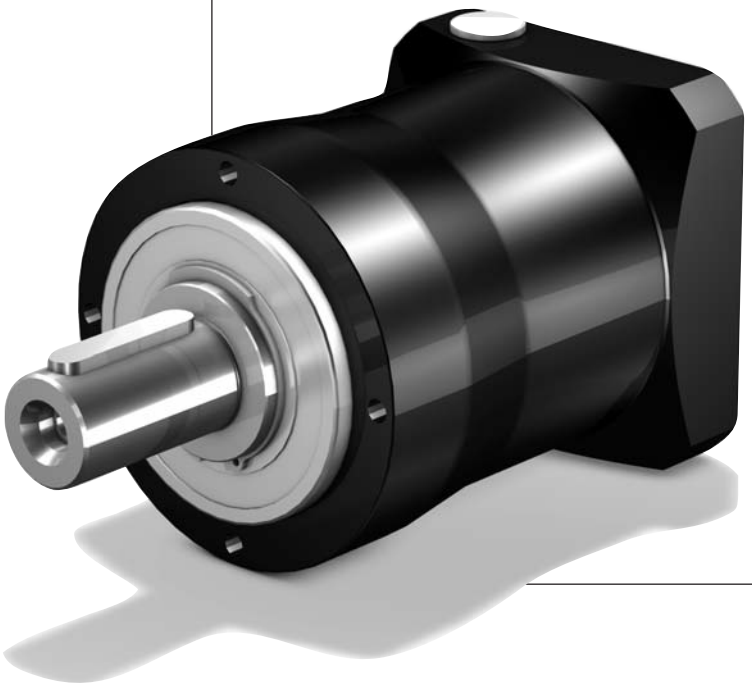
⑦ **Lubrificazione a vita** con grasso ad alte prestazioni.

ServoFit® PE
Planetary Gear Units

Reductores planetarios
ServoFit® PE

ServoFit®
Riduttori planetari **PE**

STÖBER



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Resumen del contenido PE

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Indice PE

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Type designation / *Tipificación* / Identificazione dei modelli

STÖBER

PE 4 1 2 S P R 0350 ME

1 2 3 4 5 6 7 8 9

1 Gear unit type
PE – Planetary gear unit
2 Gear unit size
3 Generation number
4 Stages
1 – 1 stage
2 – 2 stage
5 Housing design
S – Standard design
6 Shaft design
G – shaft without key
P – shaft with key
7 Bearing design
R – normal bearings
8 Transmission ratio i x 10
9 Mounting series
ME – Motor adapter with EasyAdapt® coupling
MEL – Motor adapter with EasyAdapt® coupling and large motor plate
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page PE11, please observe the max. dimensions).

Ordering data according to the type designation above.

ATTENTION! The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

1 *Tipo de reductor*
PE *– Reductor planetario*
2 *Tamaño del reductor*
3 *Cifra de generación*
4 *Número de trenes*
1 *– 1 tren*
2 *– 2 trenes*
5 *Tipo constructivo de la carcasa*
S *– Ejecución estándar*
6 *Ejecución del eje*
G *– eje sin chaveta*
P *– eje con chaveta*
7 *Ejecución de apoyos*
R *– apoyo normal*
8 *Número característico de la relación de reducción i x 10*
9 *Grupos de opciones*
ME *– Adaptador de motor con acoplamiento EasyAdapt®*
MEL *– Adaptador de motor con acoplamiento EasyAdapt® y placa grande de motor*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página PE11, por favor observar dimensiones máximas).

Datos de pedido de acuerdo a la tipificación indicada arriba.

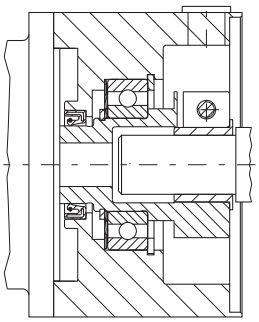
¡ATENCIÓN! *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

1 Modello di riduttore
PE – Riduttore planetario
2 Taglia del riduttore
3 Numero di generazione
4 Numero di stadi
1 – 1-stadio
2 – 2-stadi
5 Tipo di carcassa
S – Esecuzione standard
6 Esecuzione albero
G – albero senza chiavetta
P – albero con chiavetta
7 Esecuzione supporto
R – supporto normale
8 Rapporto di riduzione i x 10
9 Opzioni annessi
ME – adattatore motore con giunto EasyAdapt®
MEL – Adattatore motore con giunto EasyAdapt® e flangia motore grande
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accoppiamento motore da pagina PE11, si prega di rispettare le misure max.).

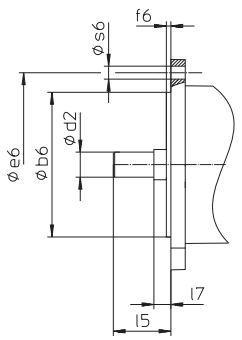
Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.

ATTENZIONE! Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

PE412 SPR 0350 ME



EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



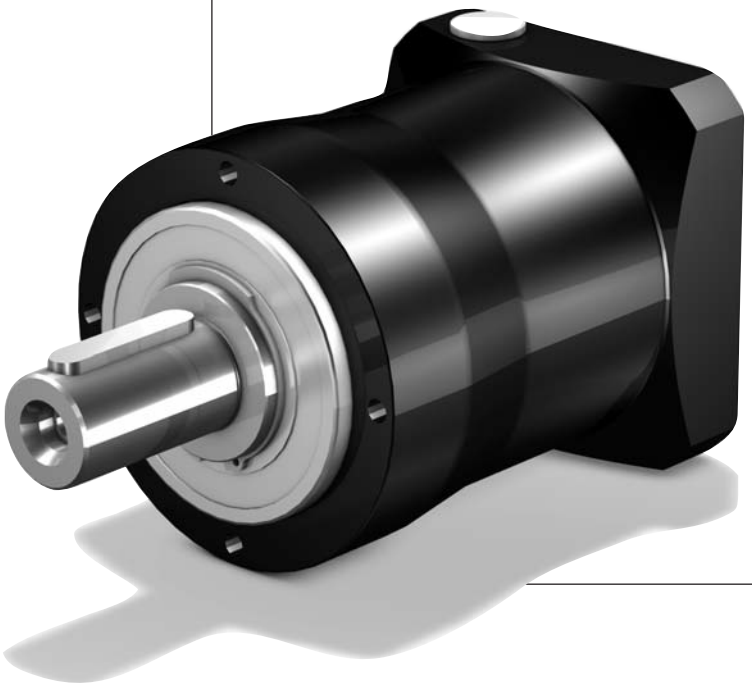
Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Selection table
ServoFit® PE
Planetary Gear Units

Tabla de selección
Reductores planetarios
ServoFit® PE

Tabella di selezione
ServoFit®
Riduttori planetari **PE**

STÖBER



Selection table **ServoFit® PE** Planetary Gear Units

Tabla de selección Reductores planetarios ***ServoFit® PE***

Tabella di selezione **ServoFit®** Riduttori planetari **PE**

STÖBER

Symbols:

i – Gear unit ratio
n_{1MAX} – Max. input speed
DB – Continuous operation
ZB – Cycle operation (at ambient temperature 20°C, also see page A11/A12)
MWø – Motor shaft diameter
J_1 – Mass mom. of inertia (related to input)
G – Weight
$\Lambda\varphi_2$ – Backlash
C_2 – Gear unit rigidity (related to output at M_{2B})
L_{PA} – Max. noise level (n_1 = 2000 rpm)
M_{2N} – Rated torque [1)]
M_{2B} – Max. perm. acceleration torque
Attention: Values for M_{2B} are valid for gear units with shaft design "G". Therefore we generally recommend this shaft design for cycle operation.
M_{2NOT} – Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12 !

Denominaciones:

i – *Relación de reducción*
n_{1MAX} – *Velocidad máx. de entrada*
DB – Trabajo continuo
ZB – Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
MWø – *Diámetro de eje del motor*
J_1 – *Momento de inercia de masa (referido a la entrada)*
G – *Peso*
$\Lambda\varphi_2$ – *Juego de giro*
C_2 – *Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} – *Ruido máx. de marcha (n_1 = 2000 min^{-1})*
M_{2N} – *Par nominal [1)]*
M_{2B} – *Par máx. admisible de aceleración*
Atención: *Datos respecto a M_{2B} se refieren al reductor en ejecución de eje "G". Por ello, esta ejecución de eje es recomendada en general para trabajo cíclico.*
M_{2NOT} – *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

Simboli:

i – Rapporto di riduzione
n_{1MAX} – Max. numero di giri in ingresso
DB – funzionamento continuo
ZB – funzionamento ciclico (a temperatura ambiente di 20°C, vedere anche pag. A11/A12)
MWø – Diametro dell'albero motore
J_1 – Momento di inerzia (riferito all'ingresso)
G – Peso
$\Lambda\varphi_2$ – Gioco
C_2 – Rigidità del riduttore (riferito all'uscita per M_{2B})
L_{PA} – Rumorosità max. (n_1 = 2000 min^{-1})
M_{2N} – Coppia nominale [1)]
M_{2B} – Coppia di accelerazione max. ammessa
Attenzione: I dati relativi a M_{2B} si riferiscono al riduttore nell'esecuzione albero "G". Quest'esecuzione albero è generalmente raccomandata per funzionamento ciclico.
M_{2NOT} – Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

[1)] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

[1)] Los valores se refieren a la velocidad de entrada n_1 = 1500 min^{-1}

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

[1)] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

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Please take notice of the indications on page PE4! ***¡Por favor observe las indicaciones en la página PE4!*** **Si raccomanda di rispettare le avvertenze a pagina PE4!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PE211 (M_{2BMAX}=15 Nm)												
4,000	**PE211_0040 ME**	4000	8000	**≤9**	0,07	0,9	10	1,4	60	7,0	14	26
4,000	**PE211_0040 ME**	4000	8000	**>9≤11**	0,09	0,9	10	1,4	60	7,0	14	26
4,000	**PE211_0040 ME**	4000	8000	**>11≤14**	0,11	0,9	10	1,4	60	7,0	14	26
4,000	**PE211_0040 MEL**	4000	8000	**>14≤19**	0,39	1,3	10	1,4	60	7,0	14	26
5,000	**PE211_0050 ME**	4000	8000	**≤9**	0,07	0,9	10	1,3	58	7,5	15	26
5,000	**PE211_0050 ME**	4000	8000	**>9≤11**	0,08	0,9	10	1,3	58	7,5	15	26
5,000	**PE211_0050 ME**	4000	8000	**>11≤14**	0,10	0,9	10	1,3	58	7,5	15	26
5,000	**PE211_0050 MEL**	4000	8000	**>14≤19**	0,39	1,3	10	1,4	58	7,5	15	26
7,000	**PE211_0070 ME**	4000	8000	**≤9**	0,07	0,9	10	1,3	56	7,5	15	26
7,000	**PE211_0070 ME**	4000	8000	**>9≤11**	0,08	0,9	10	1,3	56	7,5	15	26
7,000	**PE211_0070 ME**	4000	8000	**>11≤14**	0,10	0,9	10	1,3	56	7,5	15	26
7,000	**PE211_0070 MEL**	4000	8000	**>14≤19**	0,39	1,3	10	1,3	56	7,5	15	26
10,00	**PE211_0100 ME**	4000	8000	**≤9**	0,06	0,9	10	1,1	54	7,0	13	22
10,00	**PE211_0100 ME**	4000	8000	**>9≤11**	0,07	0,9	10	1,1	54	7,0	13	22
10,00	**PE211_0100 ME**	4000	8000	**>11≤14**	0,09	0,9	10	1,1	54	7,0	13	22
10,00	**PE211_0100 MEL**	4000	8000	**>14≤19**	0,39	1,3	10	1,1	54	7,0	13	22
PE212 (M_{2BMAX}=15 Nm)												
16,00	**PE212_0160 ME**	4000	8000	**≤9**	0,07	1,2	13	1,4	60	7,0	14	26
16,00	**PE212_0160 ME**	4000	8000	**>9≤11**	0,08	1,2	13	1,4	60	7,0	14	26
16,00	**PE212_0160 ME**	4000	8000	**>11≤14**	0,10	1,2	13	1,4	60	7,0	14	26
20,00	**PE212_0200 ME**	4000	8000	**≤9**	0,07	1,2	13	1,3	60	7,5	15	26
20,00	**PE212_0200 ME**	4000	8000	**>9≤11**	0,08	1,2	13	1,3	60	7,5	15	26
20,00	**PE212_0200 ME**	4000	8000	**>11≤14**	0,10	1,2	13	1,3	60	7,5	15	26
25,00	**PE212_0250 ME**	4000	8000	**≤9**	0,07	1,2	13	1,3	59	7,5	15	26
25,00	**PE212_0250 ME**	4000	8000	**>9≤11**	0,08	1,2	13	1,3	59	7,5	15	26
25,00	**PE212_0250 ME**	4000	8000	**>11≤14**	0,10	1,2	13	1,3	59	7,5	15	26
28,00	**PE212_0280 ME**	4000	8000	**≤9**	0,06	1,2	13	1,3	59	7,0	14	26
28,00	**PE212_0280 ME**	4000	8000	**>9≤11**	0,07	1,2	13	1,3	59	7,0	14	26
28,00	**PE212_0280 ME**	4000	8000	**>11≤14**	0,09	1,2	13	1,3	59	7,0	14	26
35,00	**PE212_0350 ME**	4000	8000	**≤9**	0,06	1,2	13	1,3	58	7,5	15	26
35,00	**PE212_0350 ME**	4000	8000	**>9≤11**	0,07	1,2	13	1,3	58	7,5	15	26
35,00	**PE212_0350 ME**	4000	8000	**>11≤14**	0,09	1,2	13	1,3	58	7,5	15	26
40,00	**PE212_0400 ME**	4000	8000	**≤9**	0,06	1,2	13	1,3	58	7,0	14	26
40,00	**PE212_0400 ME**	4000	8000	**>9≤11**	0,07	1,2	13	1,3	58	7,0	14	26
40,00	**PE212_0400 ME**	4000	8000	**>11≤14**	0,09	1,2	13	1,3	58	7,0	14	26
50,00	**PE212_0500 ME**	4000	8000	**≤9**	0,06	1,2	13	1,3	57	7,5	15	26
50,00	**PE212_0500 ME**	4000	8000	**>9≤11**	0,07	1,2	13	1,3	57	7,5	15	26
50,00	**PE212_0500 ME**	4000	8000	**>11≤14**	0,09	1,2	13	1,3	57	7,5	15	26
70,00	**PE212_0700 ME**	4000	8000	**≤9**	0,06	1,2	13	1,3	56	7,5	15	26
70,00	**PE212_0700 ME**	4000	8000	**>9≤11**	0,07	1,2	13	1,3	56	7,5	15	26
70,00	**PE212_0700 ME**	4000	8000	**>11≤14**	0,09	1,2	13	1,3	56	7,5	15	26
100,0	**PE212_1000 ME**	4000	8000	**≤9**	0,06	1,2	13	1,1	55	7,0	13	22
100,0	**PE212_1000 ME**	4000	8000	**>9≤11**	0,07	1,2	13	1,1	55	7,0	13	22
100,0	**PE212_1000 ME**	4000	8000	**>11≤14**	0,09	1,2	13	1,1	55	7,0	13	22

Planetary Gear Units **PE**
*Reductores planetarios **PE***
Riduttori planetari **PE**

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Please take notice of the indications on page PE4! ***¡Por favor observe las indicaciones en la página PE4!*** **Si raccomanda di rispettare le avvertenze a pagina PE4!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PE311 (M_{2BMAX}=42 Nm)												
3,000	**PE311_0030 ME**	3500	6000	**≤11**	0,36	2,3	8	3,2	62	21	40	64
3,000	**PE311_0030 ME**	3500	6000	**>11≤14**	0,39	2,3	8	3,3	62	21	40	65
3,000	**PE311_0030 ME**	3500	6000	**>14≤19**	0,50	2,3	8	3,3	62	21	40	65
3,000	**PE311_0030 MEL**	3500	6000	**>19≤24**	0,99	3,0	8	3,5	62	21	40	65
4,000	**PE311_0040 ME**	3700	6000	**≤11**	0,30	2,3	8	3,9	61	22	42	75
4,000	**PE311_0040 ME**	3700	6000	**>11≤14**	0,33	2,3	8	4,0	61	22	42	75
4,000	**PE311_0040 ME**	3700	6000	**>14≤19**	0,45	2,3	8	4,0	61	22	42	75
4,000	**PE311_0040 MEL**	3700	6000	**>19≤24**	0,93	3,0	8	4,1	61	22	42	75
5,000	**PE311_0050 ME**	3700	6000	**≤11**	0,30	2,3	8	3,9	59	23	40	75
5,000	**PE311_0050 ME**	3700	6000	**>11≤14**	0,33	2,3	8	3,9	59	23	40	75
5,000	**PE311_0050 ME**	3700	6000	**>14≤19**	0,45	2,3	8	3,9	59	23	40	75
5,000	**PE311_0050 MEL**	3700	6000	**>19≤24**	0,93	3,0	8	4,0	59	23	40	75
7,000	**PE311_0070 ME**	4000	6000	**≤11**	0,25	2,3	8	3,8	57	23	40	75
7,000	**PE311_0070 ME**	4000	6000	**>11≤14**	0,28	2,3	8	3,8	57	23	40	75
7,000	**PE311_0070 ME**	4000	6000	**>14≤19**	0,40	2,3	8	3,8	57	23	40	75
7,000	**PE311_0070 MEL**	4000	6000	**>19≤24**	0,88	3,0	8	3,8	57	23	40	75
10,00	**PE311_0100 ME**	4000	6000	**≤11**	0,24	2,3	8	3,4	55	19	37	75
10,00	**PE311_0100 ME**	4000	6000	**>11≤14**	0,27	2,3	8	3,4	55	19	37	75
10,00	**PE311_0100 ME**	4000	6000	**>14≤19**	0,39	2,3	8	3,4	55	19	37	75
10,00	**PE311_0100 MEL**	4000	6000	**>19≤24**	0,88	3,0	8	3,4	55	19	37	75
PE312 (M_{2BMAX}=55 Nm)												
12,00	**PE312_0120 ME**	3700	6000	**≤11**	0,34	2,9	10	4,1	61	30	55	75
12,00	**PE312_0120 ME**	3700	6000	**>11≤14**	0,37	2,9	10	4,1	61	30	55	75
12,00	**PE312_0120 ME**	3700	6000	**>14≤19**	0,48	2,9	10	4,1	61	30	55	75
15,00	**PE312_0150 ME**	3700	6000	**≤11**	0,33	2,9	10	4,0	60	23	40	75
15,00	**PE312_0150 ME**	3700	6000	**>11≤14**	0,37	2,9	10	4,0	60	23	40	75
15,00	**PE312_0150 ME**	3700	6000	**>14≤19**	0,48	2,9	10	4,0	60	23	40	75
16,00	**PE312_0160 ME**	3700	6000	**≤11**	0,28	2,9	10	4,2	61	30	55	75
16,00	**PE312_0160 ME**	3700	6000	**>11≤14**	0,31	2,9	10	4,2	61	30	55	75
16,00	**PE312_0160 ME**	3700	6000	**>14≤19**	0,43	2,9	10	4,2	61	30	55	75
20,00	**PE312_0200 ME**	3700	6000	**≤11**	0,29	2,9	10	4,2	61	30	55	75
20,00	**PE312_0200 ME**	3700	6000	**>11≤14**	0,32	2,9	10	4,2	61	30	55	75
20,00	**PE312_0200 ME**	3700	6000	**>14≤19**	0,44	2,9	10	4,2	61	30	55	75
25,00	**PE312_0250 ME**	3700	6000	**≤11**	0,29	2,9	10	4,0	60	23	40	75
25,00	**PE312_0250 ME**	3700	6000	**>11≤14**	0,32	2,9	10	4,0	60	23	40	75
25,00	**PE312_0250 ME**	3700	6000	**>14≤19**	0,43	2,9	10	4,0	60	23	40	75
28,00	**PE312_0280 ME**	4000	6000	**≤11**	0,24	2,9	10	4,2	60	30	55	75
28,00	**PE312_0280 ME**	4000	6000	**>11≤14**	0,28	2,9	10	4,2	60	30	55	75
28,00	**PE312_0280 ME**	4000	6000	**>14≤19**	0,39	2,9	10	4,2	60	30	55	75
35,00	**PE312_0350 ME**	4000	6000	**≤11**	0,24	2,9	10	4,0	59	23	40	75
35,00	**PE312_0350 ME**	4000	6000	**>11≤14**	0,28	2,9	10	4,0	59	23	40	75
35,00	**PE312_0350 ME**	4000	6000	**>14≤19**	0,39	2,9	10	4,0	59	23	40	75
40,00	**PE312_0400 ME**	4000	6000	**≤11**	0,24	2,9	10	4,1	59	30	55	75
40,00	**PE312_0400 ME**	4000	6000	**>11≤14**	0,27	2,9	10	4,1	59	30	55	75
40,00	**PE312_0400 ME**	4000	6000	**>14≤19**	0,39	2,9	10	4,1	59	30	55	75
50,00	**PE312_0500 ME**	4000	6000	**≤11**	0,24	2,9	10	4,0	58	23	40	75
50,00	**PE312_0500 ME**	4000	6000	**>11≤14**	0,27	2,9	10	4,0	58	23	40	75
50,00	**PE312_0500 ME**	4000	6000	**>14≤19**	0,39	2,9	10	4,0	58	23	40	75
70,00	**PE312_0700 ME**	4000	6000	**≤11**	0,24	2,9	10	3,8	57	23	40	75
70,00	**PE312_0700 ME**	4000	6000	**>11≤14**	0,27	2,9	10	3,8	57	23	40	75
70,00	**PE312_0700 ME**	4000	6000	**>14≤19**	0,39	2,9	10	3,8	57	23	40	75
100,0	**PE312_1000 ME**	4000	6000	**≤11**	0,24	2,9	10	3,4	56	20	37	75
100,0	**PE312_1000 ME**	4000	6000	**>11≤14**	0,27	2,9	10	3,4	56	20	37	75
100,0	**PE312_1000 ME**	4000	6000	**>14≤19**	0,39	2,9	10	3,4	56	20	37	75

Planetary Gear Units **PE**
Reductores planetarios ***PE***
Riduttori planetari **PE**

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Please take notice of the indications on page PE4! ***¡Por favor observe las indicaciones en la página PE4!*** **Si raccomanda di rispettare le avvertenze a pagina PE4!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PE411 (M_{2BMAX}=100 Nm)												
3,000	**PE411_0030 ME**	3000	5500	**≤14**	1,1	4,5	8	11	64	45	90	120
3,000	**PE411_0030 ME**	3000	5500	**>14≤19**	1,3	4,5	8	12	64	45	90	170
3,000	**PE411_0030 ME**	3000	5500	**>19≤24**	1,4	4,5	8	12	64	45	90	180
3,000	**PE411_0030 MEL**	3000	5500	**>24≤32**	3,0	5,2	8	12	64	45	90	180
4,000	**PE411_0040 ME**	3400	6000	**≤14**	0,88	4,5	8	13	63	50	100	160
4,000	**PE411_0040 ME**	3400	6000	**>14≤19**	1,0	4,5	8	13	63	50	100	190
4,000	**PE411_0040 ME**	3400	6000	**>19≤24**	1,2	4,5	8	13	63	50	100	190
4,000	**PE411_0040 MEL**	3400	6000	**>24≤32**	2,8	5,2	8	13	63	50	100	190
5,000	**PE411_0050 ME**	3400	6000	**≤14**	0,89	4,5	8	12	61	50	100	190
5,000	**PE411_0050 ME**	3400	6000	**>14≤19**	1,0	4,5	8	12	61	50	100	190
5,000	**PE411_0050 ME**	3400	6000	**>19≤24**	1,2	4,5	8	12	61	50	100	190
5,000	**PE411_0050 MEL**	3400	6000	**>24≤32**	2,8	5,2	8	12	61	50	100	190
7,000	**PE411_0070 ME**	3600	6000	**≤14**	0,68	4,5	8	11	59	50	100	190
7,000	**PE411_0070 ME**	3600	6000	**>14≤19**	0,84	4,5	8	12	59	50	100	190
7,000	**PE411_0070 ME**	3600	6000	**>19≤24**	0,96	4,5	8	12	59	50	100	190
7,000	**PE411_0070 MEL**	3600	6000	**>24≤32**	2,6	5,2	8	12	59	50	100	190
10,00	**PE411_0100 ME**	3600	6000	**≤14**	0,64	4,5	8	10	57	45	90	190
10,00	**PE411_0100 ME**	3600	6000	**>14≤19**	0,80	4,5	8	10	57	45	90	190
10,00	**PE411_0100 ME**	3600	6000	**>19≤24**	0,92	4,5	8	10	57	45	90	190
10,00	**PE411_0100 MEL**	3600	6000	**>24≤32**	2,5	5,2	8	10	57	45	90	190
PE412 (M_{2BMAX}=120 Nm)												
12,00	**PE412_0120 ME**	3400	5500	**≤14**	1,00	5,7	10	13	63	65	120	190
12,00	**PE412_0120 ME**	3400	5500	**>14≤19**	1,2	5,7	10	13	63	65	120	190
12,00	**PE412_0120 ME**	3400	5500	**>19≤24**	1,3	5,7	10	13	63	65	120	190
15,00	**PE412_0150 ME**	3400	6000	**≤14**	1,00	5,7	10	12	62	50	100	190
15,00	**PE412_0150 ME**	3400	6000	**>14≤19**	1,2	5,7	10	12	62	50	100	190
15,00	**PE412_0150 ME**	3400	6000	**>19≤24**	1,3	5,7	10	12	62	50	100	190
16,00	**PE412_0160 ME**	3400	6000	**≤14**	0,80	5,7	10	14	63	65	120	190
16,00	**PE412_0160 ME**	3400	6000	**>14≤19**	0,95	5,7	10	14	63	65	120	190
16,00	**PE412_0160 ME**	3400	6000	**>19≤24**	1,1	5,7	10	14	63	65	120	190
20,00	**PE412_0200 ME**	3400	6000	**≤14**	0,84	5,7	10	13	63	65	120	190
20,00	**PE412_0200 ME**	3400	6000	**>14≤19**	1,00	5,7	10	13	63	65	120	190
20,00	**PE412_0200 ME**	3400	6000	**>19≤24**	1,1	5,7	10	13	63	65	120	190
25,00	**PE412_0250 ME**	3400	6000	**≤14**	0,84	5,7	10	12	62	50	100	190
25,00	**PE412_0250 ME**	3400	6000	**>14≤19**	1,00	5,7	10	12	62	50	100	190
25,00	**PE412_0250 ME**	3400	6000	**>19≤24**	1,1	5,7	10	12	62	50	100	190
28,00	**PE412_0280 ME**	3600	6000	**≤14**	0,66	5,7	10	13	62	65	120	190
28,00	**PE412_0280 ME**	3600	6000	**>14≤19**	0,82	5,7	10	13	62	65	120	190
28,00	**PE412_0280 ME**	3600	6000	**>19≤24**	0,93	5,7	10	13	62	65	120	190
35,00	**PE412_0350 ME**	3600	6000	**≤14**	0,66	5,7	10	12	61	50	100	190
35,00	**PE412_0350 ME**	3600	6000	**>14≤19**	0,82	5,7	10	12	61	50	100	190
35,00	**PE412_0350 ME**	3600	6000	**>19≤24**	0,93	5,7	10	12	61	50	100	190
40,00	**PE412_0400 ME**	3600	6000	**≤14**	0,63	5,7	10	13	61	65	120	190
40,00	**PE412_0400 ME**	3600	6000	**>14≤19**	0,79	5,7	10	13	61	65	120	190
40,00	**PE412_0400 ME**	3600	6000	**>19≤24**	0,91	5,7	10	13	61	65	120	190
50,00	**PE412_0500 ME**	3600	6000	**≤14**	0,63	5,7	10	12	60	50	100	190
50,00	**PE412_0500 ME**	3600	6000	**>14≤19**	0,79	5,7	10	12	60	50	100	190
50,00	**PE412_0500 ME**	3600	6000	**>19≤24**	0,91	5,7	10	12	60	50	100	190
70,00	**PE412_0700 ME**	3600	6000	**≤14**	0,63	5,7	10	12	59	50	100	190
70,00	**PE412_0700 ME**	3600	6000	**>14≤19**	0,79	5,7	10	12	59	50	100	190
70,00	**PE412_0700 ME**	3600	6000	**>19≤24**	0,90	5,7	10	12	59	50	100	190
100,0	**PE412_1000 ME**	3600	6000	**≤14**	0,63	5,7	10	10	58	45	90	190
100,0	**PE412_1000 ME**	3600	6000	**>14≤19**	0,79	5,7	10	10	58	45	90	190
100,0	**PE412_1000 ME**	3600	6000	**>19≤24**	0,90	5,7	10	10	58	45	90	190

Planetary Gear Units **PE**
*Reductores planetarios **PE***
Riduttori planetari **PE**

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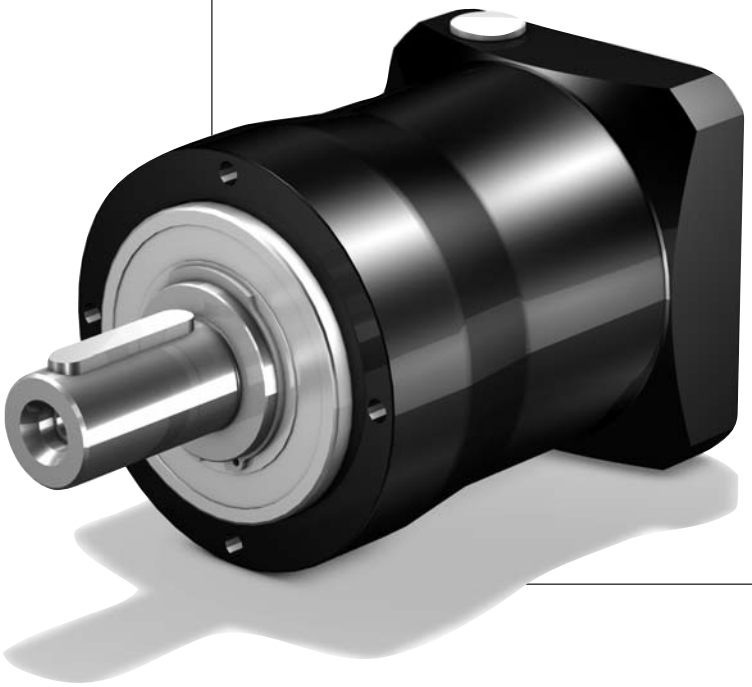
Please take notice of the indications on page PE4! ***¡Por favor observe las indicaciones en la página PE4!*** **Si raccomanda di rispettare le avvertenze a pagina PE4!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PE511 (M_{2BMAX}=250 Nm)												
3,000	**PE511_0030 ME**	2500	4500	**≤19**	2,0	8,2	8	29	65	90	180	240
3,000	**PE511_0030 ME**	2500	4500	**>19≤24**	2,4	8,2	8	29	65	90	180	390
3,000	**PE511_0030 ME**	2500	4500	**>24≤32**	2,7	8,2	8	29	65	90	180	390
3,000	**PE511_0030 MEL**	2500	4500	**>32≤38**	6,5	9,9	8	32	65	90	180	390
4,000	**PE511_0040 ME**	2600	5000	**≤19**	2,4	8,2	8	31	64	130	250	310
4,000	**PE511_0040 ME**	2600	5000	**>19≤24**	2,8	8,2	8	32	64	130	250	400
4,000	**PE511_0040 ME**	2600	5000	**>24≤32**	3,1	8,2	8	32	64	130	250	400
4,000	**PE511_0040 MEL**	2600	5000	**>32≤38**	6,9	9,9	8	33	64	130	250	400
5,000	**PE511_0050 ME**	2600	5000	**≤19**	2,2	8,2	8	31	62	130	250	390
5,000	**PE511_0050 ME**	2600	5000	**>19≤24**	2,6	8,2	8	32	62	130	250	400
5,000	**PE511_0050 ME**	2600	5000	**>24≤32**	2,9	8,2	8	32	62	130	250	400
5,000	**PE511_0050 MEL**	2600	5000	**>32≤38**	6,7	9,9	8	32	62	130	250	400
7,000	**PE511_0070 ME**	2800	5000	**≤19**	2,1	8,2	8	30	60	130	250	400
7,000	**PE511_0070 ME**	2800	5000	**>19≤24**	2,3	8,2	8	30	60	130	250	400
7,000	**PE511_0070 ME**	2800	5000	**>24≤32**	2,6	8,2	8	30	60	130	250	400
7,000	**PE511_0070 MEL**	2800	5000	**>32≤38**	6,4	9,9	8	30	60	130	250	400
10,00	**PE511_0100 ME**	3000	5000	**≤19**	2,0	8,2	8	27	58	110	220	400
10,00	**PE511_0100 ME**	3000	5000	**>19≤24**	2,3	8,2	8	27	58	110	220	400
10,00	**PE511_0100 ME**	3000	5000	**>24≤32**	2,6	8,2	8	27	58	110	220	400
10,00	**PE511_0100 MEL**	3000	5000	**>32≤38**	6,3	9,9	8	27	58	110	220	400
PE512 (M_{2BMAX}=310 Nm)												
12,00	**PE512_0120 ME**	2500	4500	**≤19**	3,2	10,6	10	34	64	160	310	480
12,00	**PE512_0120 ME**	2500	4500	**>19≤24**	3,6	10,6	10	34	64	160	310	480
12,00	**PE512_0120 ME**	2500	4500	**>24≤32**	3,9	10,6	10	34	64	160	310	480
15,00	**PE512_0150 ME**	2500	4500	**≤19**	3,2	10,6	10	33	63	130	250	480
15,00	**PE512_0150 ME**	2500	4500	**>19≤24**	3,5	10,6	10	33	63	130	250	480
15,00	**PE512_0150 ME**	2500	4500	**>24≤32**	3,8	10,6	10	33	63	130	250	480
16,00	**PE512_0160 ME**	2600	5000	**≤19**	2,6	10,6	10	35	64	160	310	480
16,00	**PE512_0160 ME**	2600	5000	**>19≤24**	2,9	10,6	10	35	64	160	310	480
16,00	**PE512_0160 ME**	2600	5000	**>24≤32**	3,2	10,6	10	35	64	160	310	480
20,00	**PE512_0200 ME**	2600	5000	**≤19**	2,3	10,6	10	35	64	160	310	480
20,00	**PE512_0200 ME**	2600	5000	**>19≤24**	2,7	10,6	10	35	64	160	310	480
20,00	**PE512_0200 ME**	2600	5000	**>24≤32**	3,0	10,6	10	35	64	160	310	480
25,00	**PE512_0250 ME**	2600	5000	**≤19**	2,3	10,6	10	33	63	130	250	480
25,00	**PE512_0250 ME**	2600	5000	**>19≤24**	2,7	10,6	10	33	63	130	250	480
25,00	**PE512_0250 ME**	2600	5000	**>24≤32**	3,0	10,6	10	33	63	130	250	480
28,00	**PE512_0280 ME**	2800	5000	**≤19**	2,1	10,6	10	35	63	160	310	480
28,00	**PE512_0280 ME**	2800	5000	**>19≤24**	2,4	10,6	10	35	63	160	310	480
28,00	**PE512_0280 ME**	2800	5000	**>24≤32**	2,7	10,6	10	35	63	160	310	480
35,00	**PE512_0350 ME**	2800	5000	**≤19**	2,1	10,6	10	33	62	130	250	480
35,00	**PE512_0350 ME**	2800	5000	**>19≤24**	2,4	10,6	10	33	62	130	250	480
35,00	**PE512_0350 ME**	2800	5000	**>24≤32**	2,7	10,6	10	33	62	130	250	480
40,00	**PE512_0400 ME**	3000	5000	**≤19**	2,0	10,6	10	34	62	160	310	480
40,00	**PE512_0400 ME**	3000	5000	**>19≤24**	2,3	10,6	10	34	62	160	310	480
40,00	**PE512_0400 ME**	3000	5000	**>24≤32**	2,6	10,6	10	34	62	160	310	480
50,00	**PE512_0500 ME**	3000	5000	**≤19**	2,0	10,6	10	33	61	130	250	480
50,00	**PE512_0500 ME**	3000	5000	**>19≤24**	2,3	10,6	10	33	61	130	250	480
50,00	**PE512_0500 ME**	3000	5000	**>24≤32**	2,6	10,6	10	33	61	130	250	480
70,00	**PE512_0700 ME**	3000	5000	**≤19**	2,0	10,6	10	31	60	130	250	480
70,00	**PE512_0700 ME**	3000	5000	**>19≤24**	2,3	10,6	10	31	60	130	250	480
70,00	**PE512_0700 ME**	3000	5000	**>24≤32**	2,6	10,6	10	31	60	130	250	480
100,0	**PE512_1000 ME**	3000	5000	**≤19**	2,0	10,6	10	27	59	110	220	480
100,0	**PE512_1000 ME**	3000	5000	**>19≤24**	2,3	10,6	10	27	59	110	220	480
100,0	**PE512_1000 ME**	3000	5000	**>24≤32**	2,6	10,6	10	27	59	110	220	480



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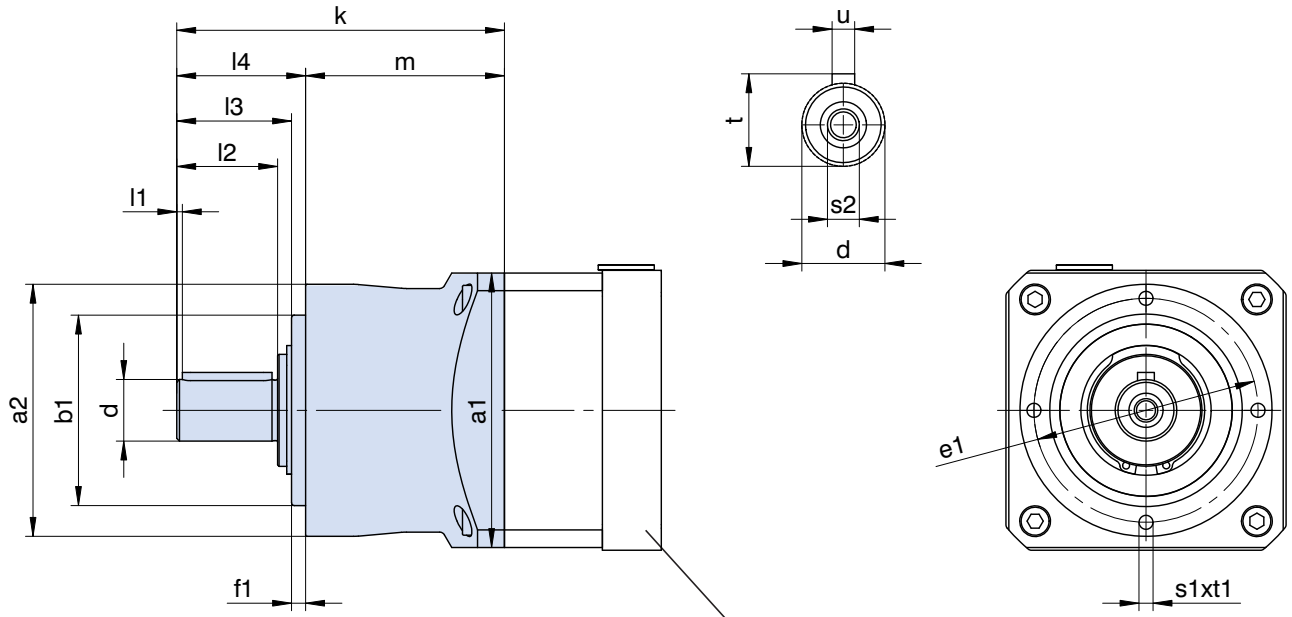
PE2_ME - PE5_ME



Motor connection from page PE11
Conexión de motor a partir de página PE11
Accopiamento motore da pagina PE11

Output shaft can also be delivered without key.
Please refer to the notes on page A19!

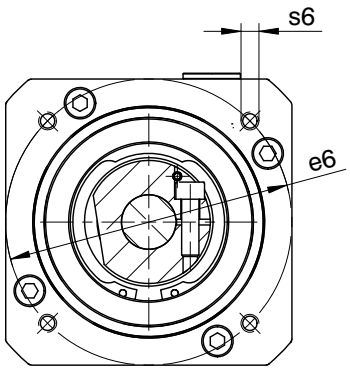
¡Eje de salida también disponible sin chaveta!
¡Por favor observe las indicaciones en la página A19!

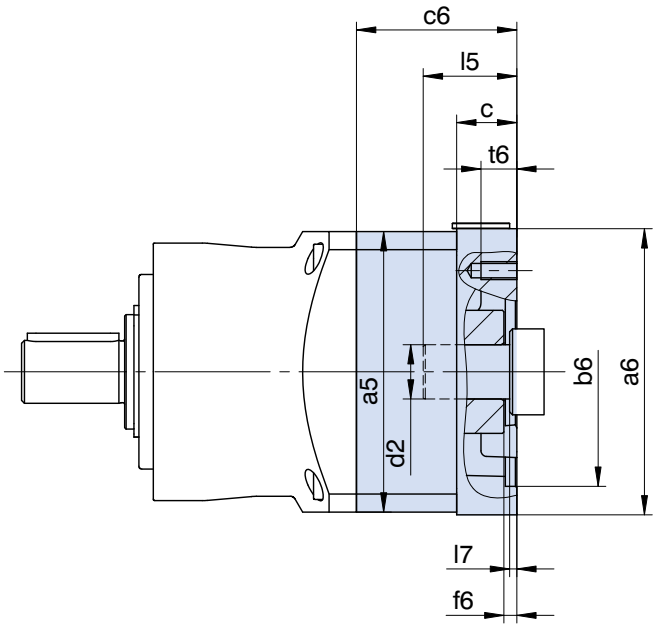
Albero uscita disponibile anche senza chiavetta!
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	□a1	øa2	øb1	ød	øe1	f1	k	l1	l2	l3	l4	m	øs1	s2	t	t1	u
PE211	55	50	35h6	12k6	44	4	77,0	2	18	20,5	24,5	52,5	M4	M4	13,5	8	A4x4x14
PE212	55	50	35h6	12k6	44	4	104,5	2	18	20,5	24,5	80,0	M4	M4	13,5	8	A4x4x14
PE311	72	70	52h6	16k6	62	5	102,0	2	28	31,0	36,0	66,0	M5	M5	18,0	10	A5x5x22
PE312	72	70	52h6	16k6	62	5	134,5	2	28	31,0	36,0	98,5	M5	M5	18,0	10	A5x5x22
PE411	98	90	68h6	22k6	80	5	117,0	2	36	41,0	46,0	71,0	M6	M8	24,5	13	A6x6x32
PE412	98	90	68h6	22k6	80	5	155,0	2	36	41,0	46,0	109,0	M6	M8	24,5	13	A6x6x32
PE511	115	120	90h6	32k6	108	6	159,5	4	58	64,0	70,0	89,5	M8	M12	35,0	16	A10x8x50
PE512	115	120	90h6	32k6	108	6	205,0	4	58	64,0	70,0	135,0	M8	M12	35,0	16	A10x8x50

STÖBER

PE2_ME - PE5_ME





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	□a5	□a6	c	c6	f6	l7max	s6	t6
PE211/PE212	40,0H7	63	14	30	55	55	-	32,0	3,5	3,0	M4	6
PE211/PE212	40,0H7	63	14	30	55	55	15	32,0	3,5	3,0	M5	10
PE211/PE212	40,0H7	63	14	30	55	55	-	32,0	3,5	3,0	M5	11
PE211/PE212	50,0H7	70	14	30	60	60	-	32,0	3,5	3,0	M4	9
PE211/PE212	50,0H7	95	14	30	55	90	15	32,0	3,5	3,0	M6	15
PE211/PE212	60,0H7	75	14	30	75	75	-	32,0	3,5	3,0	M5	11
PE311/PE312	40,0H7	63	19	40	72	75	18	51,5	3,0	3,0	M5	10
PE311/PE312	50,0H7	70	19	40	72	75	18	51,5	3,0	3,0	M4	8
PE311/PE312	50,0H7	95	19	40	72	80	18	51,5	3,0	3,0	M6	12
PE311/PE312	60,0H7	75	19	40	75	72	-	51,5	3,5	3,0	M5	11
PE311/PE312	60,0H7	90	19	40	72	75	18	51,5	3,5	3,0	M5	9
PE311/PE312	70,0H7	90	19	40	72	80	18	51,5	3,5	3,0	M5	10
PE311/PE312	80,0H7	100	19	40	90	90	-	51,5	3,5	3,0	M6	13
PE311/PE312	95,0H7	115	19	40	72	100	18	51,5	4,0	3,0	M8	18
PE311/PE312	95,0H7	130	19	40	72	115	18	51,5	4,0	3,0	M8	18
PE411/PE412	50,0H7	70	24	42	98	100	21	56,0	4,0	3,0	M4	10
PE411/PE412	50,0H7	95	24	42	98	100	21	56,0	2,5	3,0	M6	12
PE411/PE412	60,0H7	75	24	42	98	100	21	56,0	3,5	3,0	M5	10
PE411/PE412	80,0H7	100	24	42	100	98	-	56,0	4,0	3,0	M6	13
PE411/PE412	95,0H7	115	24	42	100	98	-	56,0	4,0	3,0	M8	16
PE411/PE412	95,0H7	115	24	51	98	100	30	65,0	4,0	12,0	M8	16
PE411/PE412	95,0H7	130	24	42	98	115	21	56,0	4,0	3,0	M8	16
PE411/PE412	95,0H7	130	24	51	98	115	30	65,0	4,0	12,0	M8	16
PE411/PE412	110,0H7	130	24	51	98	115	30	65,0	4,0	12,0	M8	16
PE411/PE412	110,0H7	145	24	59	98	130	38	73,0	7,0	20,0	M8	16
PE411/PE412	130,0H7	165	24	51	98	140	30	65,0	7,0	12,0	M10	20
PE511/PE512	80,0H7	100	32	50	115	120	24	64,0	4,0	3,5	M6	12
PE511/PE512	95,0H7	115	32	50	115	115	-	64,0	4,0	3,5	M8	16
PE511/PE512	95,0H7	130	32	50	115	115	-	64,0	4,0	3,5	M8	16
PE511/PE512	110,0H7	130	32	50	115	115	-	64,0	4,0	3,5	M8	16
PE511/PE512	110,0H7	145	32	58	115	140	32	72,0	6,5	11,5	M8	16
PE511/PE512	110,0H7	145	32	68	115	140	42	82,0	7,0	21,5	M8	16
PE511/PE512	110,0H7	165	32	50	115	140	24	64,0	5,0	3,5	M10	24
PE511/PE512	130,0H7	165	32	58	115	140	32	72,0	5,0	11,5	M10	20

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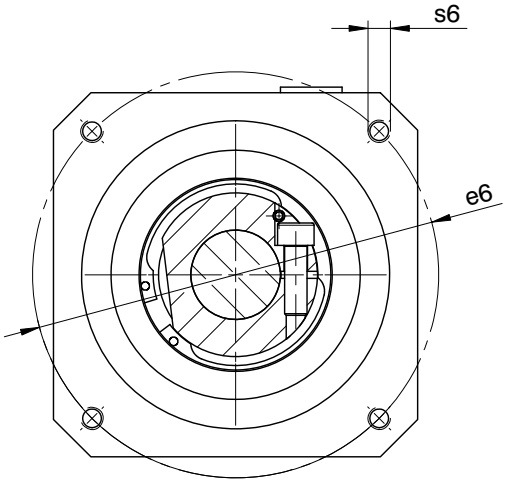
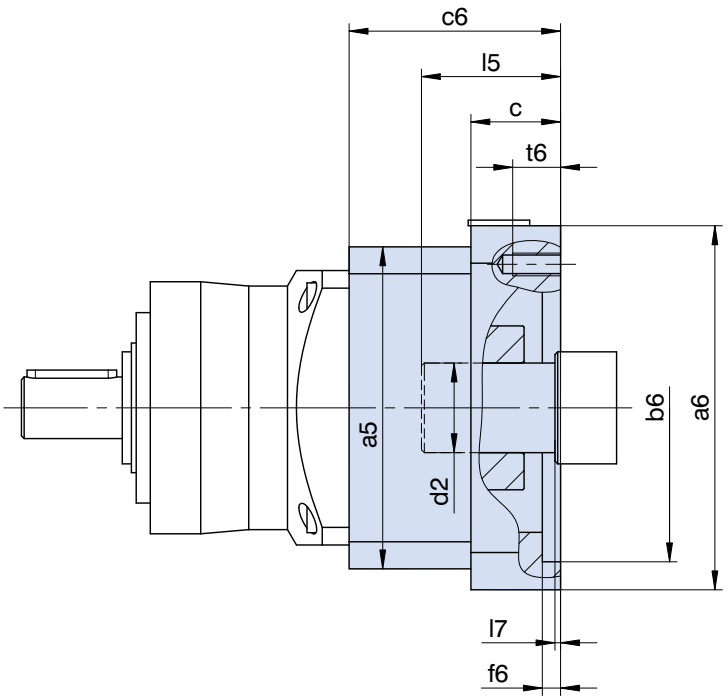
PE2_MEL - PE5_MEL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	□a5	□a6	c	c6	f6	l7max	s6	t6
PE211	60,0H7	75	19	40	75	75	18	51,5	3,5	3,0	M5	10
PE211	60,0H7	90	19	40	75	75	18	51,5	3,5	3,0	M5	9
PE211	70,0H7	90	19	40	75	80	18	51,5	3,5	3,0	M5	10
PE211	80,0H7	100	19	40	75	90	18	51,5	3,5	3,0	M6	12
PE211	95,0H7	115	19	40	75	100	18	51,5	4,0	3,0	M8	18
PE211	95,0H7	130	19	40	75	115	18	51,5	4,0	3,0	M8	18
PE311	50,0H7	70	24	42	100	100	21	57,8	4,0	3,0	M4	10
PE311	60,0H7	75	24	42	100	100	21	57,8	3,5	3,0	M5	10
PE311	80,0H7	100	24	42	100	100	21	57,8	4,0	3,0	M6	12
PE311	95,0H7	115	24	51	100	100	30	66,8	4,0	12,0	M8	16
PE311	95,0H7	115	24	42	100	100	21	57,8	4,0	3,0	M8	21
PE311	95,0H7	130	24	42	100	115	21	57,8	4,0	3,0	M8	16
PE311	95,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
PE311	110,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
PE311	110,0H7	145	24	59	100	130	38	74,8	7,0	20,0	M8	16
PE311	130,0H7	165	24	51	100	140	30	66,8	7,0	12,0	M10	20
PE411	80,0H7	100	32	50	115	120	24	67,5	4,0	3,5	M6	12
PE411	110,0H7	130	32	50	115	120	24	67,5	4,0	3,5	M8	16
PE411	110,0H7	145	32	58	115	140	32	75,5	6,5	11,5	M8	16
PE411	110,0H7	145	32	68	115	140	42	85,5	7,0	21,5	M8	16
PE411	110,0H7	165	32	50	115	140	24	67,5	5,0	3,5	M10	24
PE411	130,0H7	165	32	58	115	140	32	75,5	5,0	11,5	M10	20
PE511	110,0H7	130	38	61	145	150	26	80,0	5,5	4,5	M8	16
PE511	110,0H7	165	38	61	145	150	26	80,0	5,5	4,5	M10	26
PE511	114,3H7	200	38	80	145	180	45	99,0	5,5	23,5	M12	24
PE511	130,0H7	165	38	61	145	150	26	80,0	5,5	4,5	M10	26
PE511	130,0H7	215	38	61	145	190	26	80,0	5,5	4,5	M12	26
PE511	180,0H7	215	38	80	145	190	45	99,0	5,5	23,5	M12	24

ServoFit® P Planetary Gear Units
Reductores planetarios ***ServoFit® P***
ServoFit® Riduttori planetari **P**

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Helical geared Precision Planetary Gear Units

- Acceleration torque:
  18 – 3000 Nm
- Low backlash:
  3 – 8 arcmin
- high torsional stiffness
- consistent oil quantity, suitable for every mounting position
- FKM seal at input, continuous operation without cooling
- easy to assemble due to spreading function in the clamping hub
- symmetrically friction-optimized output bearings (as option in reinforced bearing version)
- advanced gear technology
- low mass moments of inertia
- readily attaches any synchronous servo motor
- easy and secure motor attachment in any mounting position
- quiet running
- efficiency:
  1 stage ≥ 97 %
  2 stage ≥ 95 %

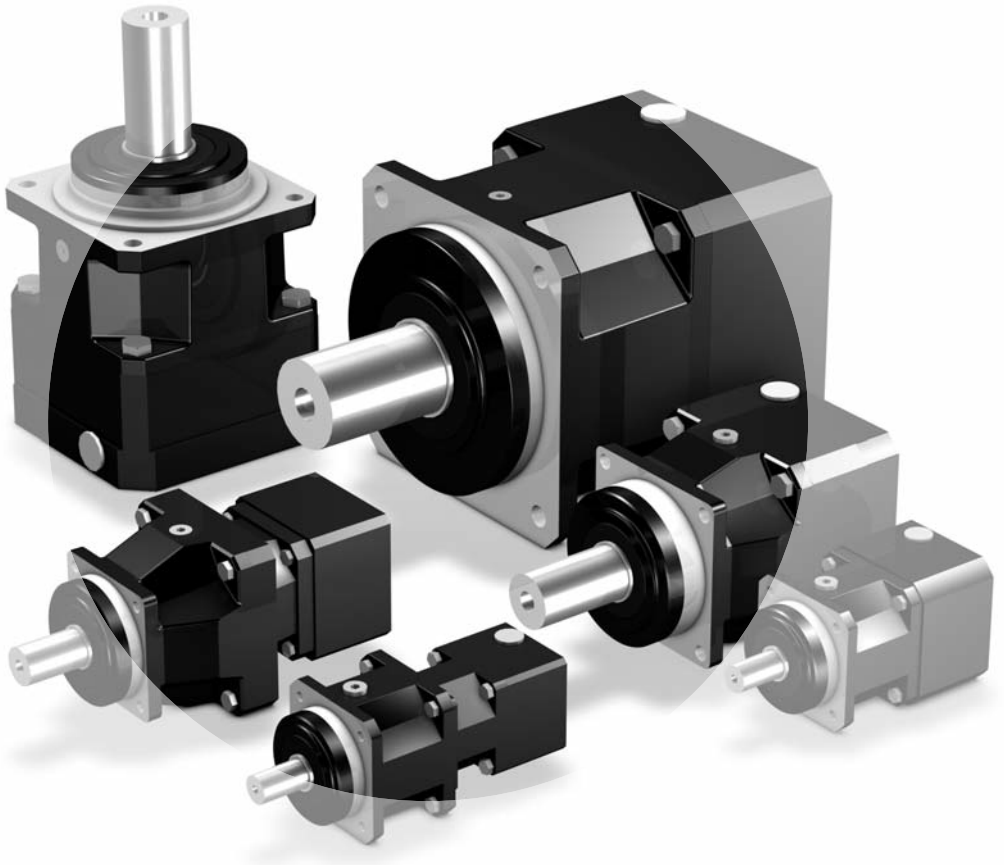
Reductores planetarios de precisión con dentado helicoidal

- *Par de aceleración:*
  18 – 3000 Nm
- *Bajo juego de giro:*
  3 – 8 arcmin
- *Alta rigidez a la torsión*
- *Cantidad de aceite consistente, apto para cualquier posición de montaje*
- *Anillo retén de FKM en la entrada, trabajo continuo sin enfriamiento*
- *Fácil de montar gracias a la función de expansión en el cojinete de apriete*
- *Apoyo simétrico de salida optimizado a la fricción (opcional en ejecución reforzada)*
- *Tecnología superior de dentado*
- *Bajos momentos de inercia de masa*
- *Equipable a cualquier motor servo síncrono*
- *Adaptación sencilla y segura de motor en cualquier posición de instalación*
- *Marcha extremadamente suave*
- *Rendimiento:*
  1 tren ≥ 97 %
  2 trenes ≥ 95 %

Riduttori planetari di precisione con dentatura elicoidale

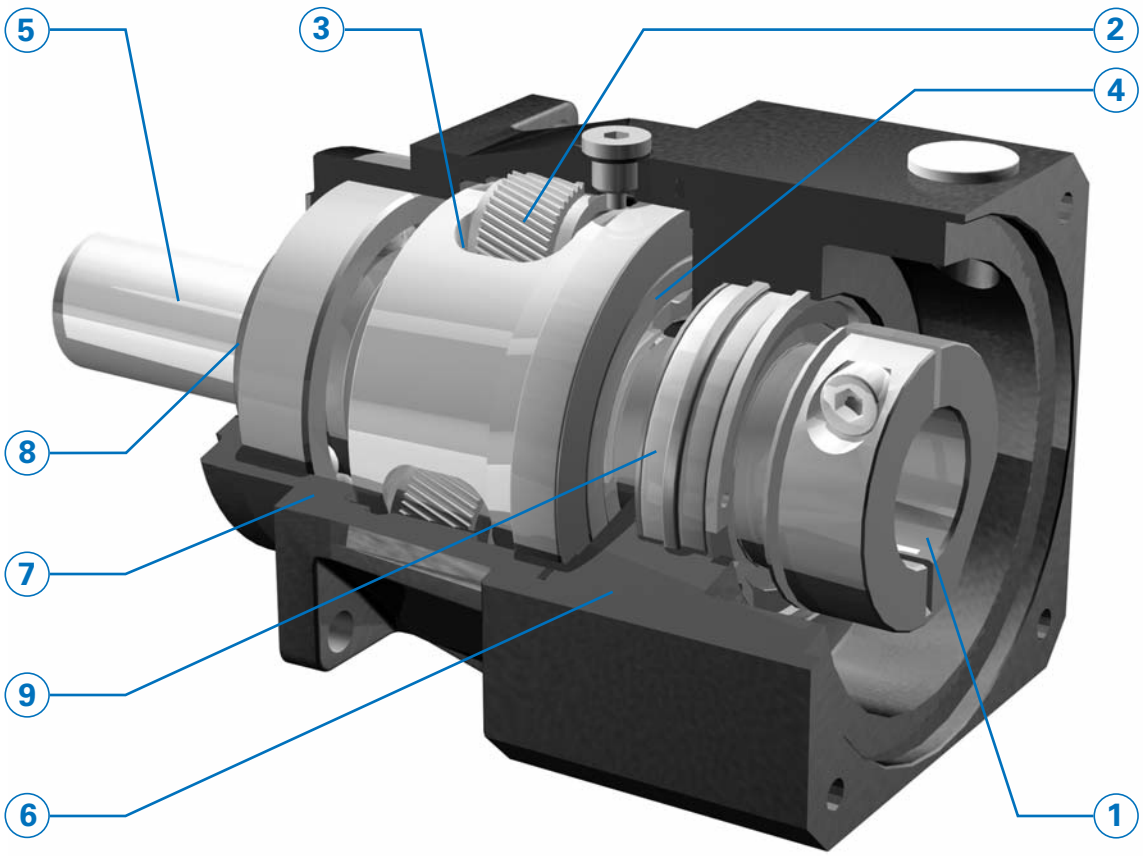
- Coppia di accelerazione:
  18 – 3000 Nm
- Gioco ridotto:
  3 – 8 arcmin
- Rigidità torsionale elevata
- Quantità di olio uniforme, possibilità di impiego in tutte le posizioni
- Anello di tenuta in FKM sull'ingresso, funzionamento continuo senza raffreddamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Supporto uscita simmetrico ad attrito ottimizzato (opzionale con esecuzione rinforzata)
- Tecnologia della dentatura avanzata
- Momenti di inerzia ridotti
- Montabili su qualsiasi servomotore sincrono
- Adattamento del motore semplice e sicuro in qualsiasi posizione di montaggio
- Estremamente silenziosi
- Rendimento:
  1 stadio ≥ 97 %
  2 stadi ≥ 95 %

ServoFit® P



ServoFit® P Planetary Gear Units
Reductores planetarios ***ServoFit® P***
ServoFit® Riduttori planetari **P**

STÖBER



• Highest running smoothness achieved by proven helical gearing and optimized microgeometry.
On-hands experience gained over the past decades has consistently been put to practice. This has resulted mainly in optimized gear tooth microgeometry, ensuring highest backlash stability, minimum circumferential backlash and extremely quiet gear operation.

• Symmetrically arranged output bearings for high load capacity and high tilting rigidity of the output shaft.
Standard units come **friction-optimized** with deep-groove ball bearings, and two reinforced bearing versions are available as an option. For particularly **high axial and radial loads** double-row angular-contact ball bearings are available and cylindrical roller bearings for particularly **high radial loads and long service life**.

• The **STOBER EasyAdapt® motor adapter system** allows easy and accurate motor installation in minutes with no special tools required.

• Wide selection of IEC and NEMA motor adapters for all common brands of motors.

• Máxima suavidad de marcha por probado dentado helicoidal y microgeometría optimizada
Los conocimientos prácticos de los últimos décadas han sido aplicados consecuentemente. Los resultados son ante todo, optimizaciones en la microgeometría del dentado.
Esto asegura máxima estabilidad de juego, mínimo juego de giro y ruido de marcha extremadamente bajo.

***• Apoyo de salida simétrico** para alta carga y alta rigidez al vuelco del eje de salida.*
*Como estándar **optimizados a la fricción** mediante rodamientos ranurados de bolas y opcionalmente en dos ejecuciones reforzadas. Para **cargas axiales y radiales especialmente altas** están disponibles rodamientos dobles de bolas de contacto angular y para **carga radial especialmente alta y para una larga vida útil** rodamientos de rodillos cilíndricos.*
*• El **sistema STOBER EasyAdapt®, de opciones para motores** permite el montaje sencillo y sin errores en pocos minutos. No se requieren herramientas especiales.*
*• **Gran selección** de adaptadores de motor (IEC y NEMA) para todos los tipos usuales de motores.*

• Massima silenziosità grazie alla dentatura elicoidale collaudata ed alla microgeometria ottimizzata
Le conoscenze empiriche degli ultimi decenni sono state trasposte in maniera coerente. Il risultato é soprattutto a perfezionamento della microgeometria della dentatura. Questo consente di ottenere una stabilità di gioco elevatissima abbinata ad una rumorosità estremamente bassa.

• Supporto uscita simmetrico per un carico ed una rigidità al ribaltamento elevati dell'albero uscita.
Di serie **con attrito ottimizzato** grazie ai cuscinetti a sfere a gola profonda ed in via opzionale in due esecuzioni rinforzate. Sono disponibili cuscinetti a sfere obliqui doppi per **carichi assiali e radiali particolarmente elevati** e cuscinetti a rulli cilindrici per **carichi radiali particolarmente elevati nonché lunga vita di servizio**.
• Il **sistema di montaggio del motore EasyAdapt® STOBER** consente un montaggio del motore semplice e senza errori nel giro di pochi minuti. Non sono richiesti utensili speciali.
• Ampia scelta di adattatori motore (CEI e NEMA) per tutti i comuni tipi di motori.

ServoFit® P Planetary Gear Units
Reductores planetarios ***ServoFit® P***
ServoFit® Riduttori planetari **P**

STÖBER

① **EasyAdapt® coupling**
Accurate and precise motor installation by clamping screw. Designed for **large motor shaft diameters**.
The single-piece design and optimized features to accommodate the motor shaft diameter help **minimize inertia** and ensure superior dynamic performance.
The **balanced** clamp coupling ensures quiet, vibration-free operation, also at high speeds.
Spacer bushes to accommodate custom motor shaft diameters.

② **High gearing quality** provided by case-hardened and finish-ground sun gear and planet gears.

③ **Load capacity of the planet gear bearings** increased by about 100 %.

④ **IP65** enclosure. Sealed with a **FKM** radial oil seal for the smallest possible shaft diameter. Reduces friction, thus preventing internal heat build-up. Increases efficiency. **Continuous duty operation** possible without addition cooling.

⑤ **Highest torsional stiffness and ultimate tensile strength** provided by oversized single-piece planet carriers made of high-tensile material.

⑥ Motor adapter made of aluminium for **low gear unit weight**.

⑦ **Highest running accuracy and precision** ensured by single-piece housing design. Housing material: High-tensile tempered ductile iron.

⑧ **NBR double-lip radial oil seals**. For continuous duty applications and superior chemical resistance requirements **FKM** oil seals are available as an **option**.

⑨ Input shaft bearings with shields and high-temperature grease for maintenance-free operation.

⑩ **Lubricated for life** with high-quality hydrophobic synthetic gear oil.

① ***Acoplamiento EasyAdapt®***
*Acoplamiento de motor **sin errores** mediante un tornillo de apriete. Concebido para **grandes diámetros de ejes de motor**.*
*La **estructura de una pieza** y la óptima adaptación al diámetro del eje del motor se encargan **de bajísimos momentos de inercia de masa** y así de alta dinámica.*
*El acoplamiento **equilibrado** de anillo de apriete se encarga de una marcha suave, libre de vibraciones, aún a altas velocidades.*
Manguitos distanciadores para la adaptación de diámetros no usuales de motor.

② ***Alta calidad de dentado** por piñones solares y ruedas planetarias templados por cementación y rectificados.*

③ ***Capacidad de carga de los apoyos de los planetas** incrementada en aproximadamente 100 %.*

④ *Tipo de protección **IP65**. Sellado con anillo retén **FKM** sobre mínimo diámetro posible del eje. Reduce la fricción y así también el calentamiento. Aumenta el rendimiento.*
***Trabajo continuo** posible sin enfriamiento adicional.*

⑤ ***Máxima rigidez a la torsión y resistencia a la rotura** por portaplanetas generosamente dimensionados, de una sola pieza, fabricados de material de alta resistencia.*

⑥ *Adaptador de motor de aluminio para **peso reducido del reductor**.*

⑦ ***Máxima exactitud y precisión de marcha** por diseño de carcasa de una pieza. Material de la carcasa: Fundición nodular de alta resistencia.*

⑧ ***Anillos retén de doble labio de NBR**. Para el uso en trabajo continuo así como para muy buena resistencia química, es ofrecida adicionalmente la **opción FKM.***

⑨ *Apoyos del eje de accionamiento con discos de cubierta y grasa para alta temperatura para trabajo libre de mantenimiento.*

⑩ ***Lubricación de por vida** con aceite sintético, hidrófobo, de alta calidad, para reductores.*

① **Giunto EasyAdapt®**
Montaggio del motore **senza errori** grazie alla vite di arresto. Concepito per **motori con grandi diametri dell'albero**.
La **struttura monopezzo** e l'adattamento ottimizzato al diametro dell'albero motore assicurano **momenti di inerzia bassissimi** e pertanto la massima dinamica.
Il giunto di montaggio **equilibrato** garantisce un funzionamento silenzioso e senza vibrazioni anche a alto numero di giri.
Bussole per l'adattamento ai diametri degli alberi motore non comuni.

② **Alta qualità della dentatura** grazie a solare e satelliti cementati e lucidati, nonché corona dentata nitrurata e levigata.

③ **Capacitá di carico del supporto planetario** aumentata del 100 % circa.

④ Classe di protezione **IP65**. Ermetizzazione con anello di tenuta radiale per alberi FKM sul diametro albero più piccolo. Riduce l'attrito e conseguentemente il riscaldamento. Aumenta il rendimento.
Il **funzionamento continuo** è possibile senza raffreddamento aggiuntivo.

⑤ **Rigidità torsionale e resistenza a rottura** elevatissime grazie a porta planetari monoblocco in materiale ad alta resistenza sovradimensionati.

⑥ Adattatore per motore in alluminio per un **peso del riduttore contenuto**.

⑦ **Massima esattezza di funzionamento e precisione** grazie al design monoblocco della carcassa. Ghisa sferoidale ad alta resistenza.

⑧ **Anelli di tenuta radiali per alberi a doppio labbro** in **FKM.** Per l'impiego in funzionamento continuo, nonché per una resistenza chimica ottimale, è inoltre offerta **l'opzione FKM**.

⑨ Cuscinetto albero ingresso con schermato con grasso per alte temperature per un esercizio privo di richiede manutenzione.

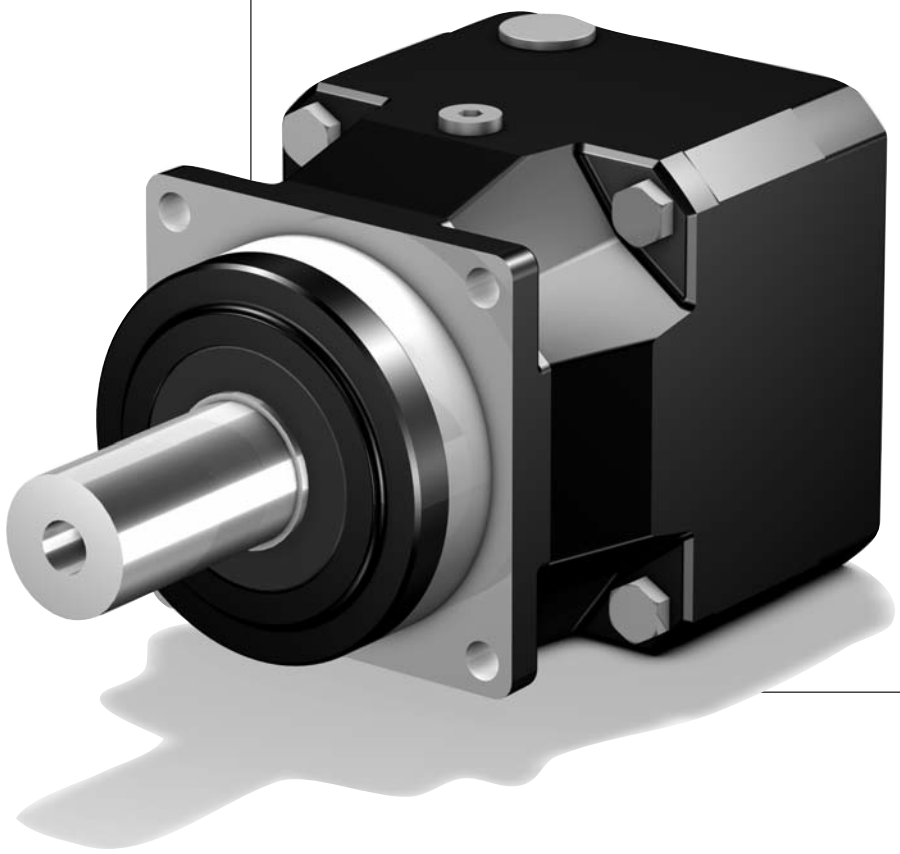
⑩ **Lubrificazione a vita** con olio per riduttori sintetico idrofobico di alta qualità.

ServoFit® P
Planetary Gear Units

Reductores planetarios
ServoFit® P

ServoFit®
Riduttori planetari **P**

STÖBER



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ServoFit® P Planetary Gear Units	P17

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Tabla de selección	
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Dibujos acotados	
Reductores planetarios ServoFit® P	*P17*

Indice P

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Type designation / *Tipificación* / Identificazione dei modelli

STÖBER

P 4 2 1 S G R 0050 ME C

1 2 3 4 5 6 7 8 9 10

1 Gear unit type
P – Planetary gear unit
2 Gear unit size
3 Generation number
4 Stages
1 – 1 stage
2 – 2 stage
5 Housing design
S – Standard design
6 Shaft design
G – shaft without key
P – shaft with key
7 Bearing design
R – normal bearings
D – reinforced bearings (axial)
Z – reinforced bearings (radial)
8 Transmission ratio i x 10
9 Mounting series
ME – Motor adapter with EasyAdapt® coupling
MEL – Motor adapter with EasyAdapt® coupling and large motor plate
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page P19, please observe the
MB – Motor adapter square with brake (option) (see brochure ID 441904)
10 Ventilator module
C – ServoCool (option) (see brochure ID 441851)

Ordering data according to the type designation above.

Further ordering details:
– information as to whether the radial shaft seals on the output are made from FKM or NBR. Recommendation: FKM for an operating time ≥ 60%
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

ATTENTION! The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

1 *Tipo de reductor*
P *– Reductor planetario*
2 *Tamaño del reductor*
3 *Cifra de generación*
4 *Número de trenes*
1 *– 1 tren*
2 *– 2 trenes*
5 *Tipo constructivo de la carcasa*
S *– Ejecución estándar*
6 *Ejecución del eje*
G *– eje sin chaveta*
P *– eje con chaveta*
7 *Ejecución de apoyos*
R *– apoyo normal*
D *– apoyo reforzado (axial)*
Z *– apoyo reforzado (radial)*
8 *Número característico de la relación de reducción i x 10*
9 *Grupos de opciones*
ME *– Adaptador de motor con acoplamiento EasyAdapt®*
MEL *– Adaptador de motor con acoplamiento EasyAdapt® y placa grande de motor*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página P19, por favor observar dimensiones máximas).
MB *– Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*
10 *Módulo de ventilador*
C *– ServoCool (opción) (ver folleto ID 441851)*

Datos de pedido de acuerdo a la tipificación indicada arriba.
Otros datos de pedido:
– *Indicación si anillos retén en la salida de FKM o de NBR. Recomendación: FKM para duración de conexión ≥ 60%.*
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

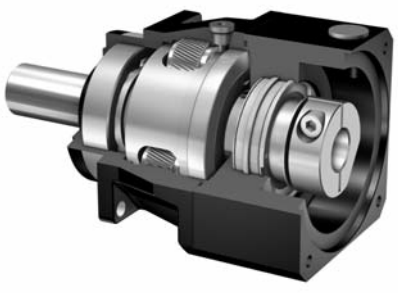
¡ATENCIÓN! *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

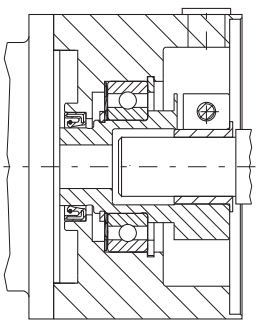
1 Modello di riduttore
P – Riduttore planetario
2 Taglia del riduttore
3 Numero di generazione
4 Numero di stadi
1 – 1-stadio
2 – 2-stadi
5 Tipo di carcassa
S – Esecuzione standard
6 Esecuzione albero
G – albero senza chiavetta
P – albero con chiavetta
7 Esecuzione supporto
R – supporto normale
D – supporto rinforzato (assiale)
Z – supporto rinforzato (radiale)
8 Rapporto di riduzione i x 10
9 Opzioni annessi
ME – adattatore motore con giunto EasyAdapt®
MEL – Adattatore motore con giunto EasyAdapt® e flangia motore grande
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accoppiamento motore da pagina P19, si prega di rispettare le misure max.).
MB – Adattatore motore quadro con freno (opzione) (vedere prospetto ID 441904)
10 Modulo ventilatore
C – ServoCool (opzione) (vedere prospetto ID 441851)

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.
Altri dati dell'ordine:
– Indicare se gli anelli di tenuta radiali dell'albero uscita sono in FKM o NBR. Raccomandazione: FKM per fattore di servizio ≥ 60%.
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

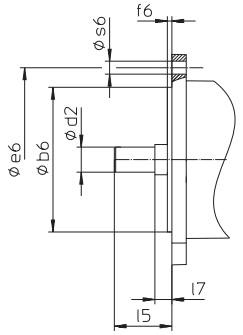
ATTENZIONE! Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

P421 SGR 0050 ME





EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



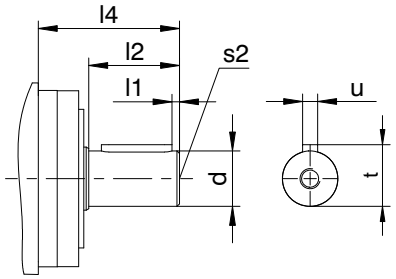
Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Shaft design
Output shaft **P**

Ejecución del eje
*Eje de salida **P***

Esecuzione albero
Albero d'uscita **P**

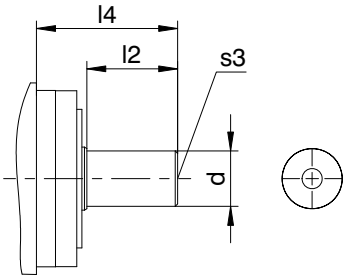
Shaft with key / *eje con chaveta* / albero con chiavetta



Shaft design "P" / *Ejecución del eje "P"*/ Esecuzione albero "P"

Typ	ød	l1	l2	l4	s2[1)]	t	u[2)]
P2	12k6	2	22	36	M4	13,5	A4x4x18
P3	16k6	2	28	48	M5	18,0	A5x5x22
P4	22k6	3	36	56	M8	24,5	A6x6x28
P5	32k6	3	58	88	M12	35,0	A10x8x50
P7	40k6	4	82	112	M16	43,0	A12x8x70
P8	55k6	6	82	112	M20	59,0	A16x10x70
P9	75k6	7	105	143	M20	79,5	A20x12x90

Shaft without key / *eje sin chaveta* / albero senza chiavetta



Shaft design "G" / *Ejecución del eje "G"*/ Esecuzione albero "G"

Typ	ød	l2	l4	s3[1)]
P2	12k6	22	36	M4
P3	16k6	28	48	M5
P4	22k6	36	56	M8
P5	32k6	58	88	M12
P7	40k6	82	112	M16
P8	55k6	82	112	M20
P9	75k6	105	143	M20

[1)] Centre holes acc. to DIN 332 T2 shape DR.

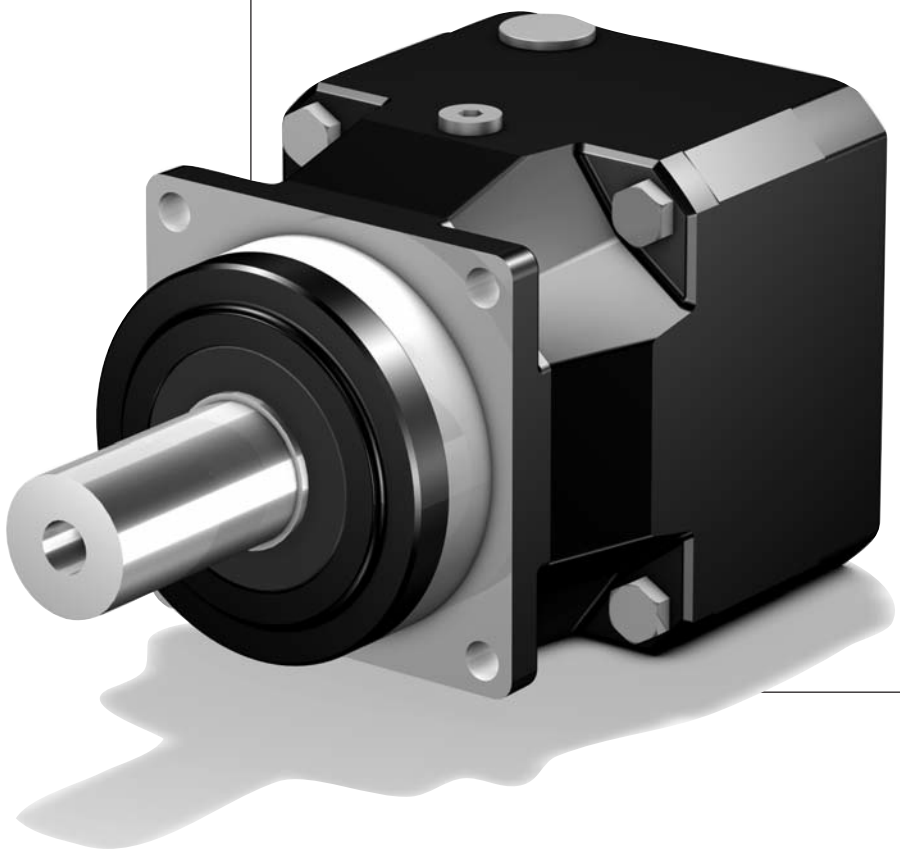
[2)] Feather keys: The width tolerance of the feather key to DIN 6885 is h9 according.

[1)] Agujeros de centrado según DIN 332-T2, forma DR.

[2)] Chavetas: Para el ancho de la chaveta según DIN 6885 vale la tolerancia h9.

[1)] Fori di centraggio accordo a norma DIN 332-T2, forma DR.

[2)] Chiavette: Per la larghezza della chiavetta a norma DIN 6885 vale la tolleranza h9.



Selection table **ServoFit® P** Planetary Gear Units

Tabla de selección Reductores planetarios ***ServoFit® P***

Tabella di selezione **ServoFit®** Riduttori planetari **P**

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Symbols:

i – Gear unit ratio
n_{1MAX} – Max. input speed
DB – Continuous operation
ZB – Cycle operation (at ambient temperature 20°C, also see page A11/A12)
MWø – Motor shaft diameter
J_1 – Mass mom. of inertia (related to input)
G – Weight
$\Lambda\varphi_2$ – Backlash
C_2 – Gear unit rigidity (related to output at M_{2B})
L_{PA} – Max. noise level (n_1 = 2000 rpm)
M_{2N} – Rated torque [1]
M_{2B} – Max. perm. acceleration torque
Attention: Values for M_{2B} are valid for gear units with shaft design "G". Therefore we generally recommend this shaft design for cycle operation.
M_{2NOT} – Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

[1] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

Denominaciones:

i – *Relación de reducción*
n_{1MAX} – *Velocidad máx. de entrada*
DB – Trabajo continuo
ZB – Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
MWø – *Diámetro de eje del motor*
J_1 – *Momento de inercia de masa (referido a la entrada)*
G – *Peso*
$\Lambda\varphi_2$ – *Juego de giro*
C_2 – *Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} – *Ruido máx. de marcha (n_1 = 2000 min^{-1})*
M_{2N} – *Par nominal [1]*
M_{2B} – *Par máx. admisible de aceleración*
Atención: *Datos respecto a M_{2B} se refieren al reductor en ejecución de eje "G". Por ello, esta ejecución de eje es recomendada en general para trabajo cíclico.*
M_{2NOT} – *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

[1] Los valores se refieren a la velocidad de entrada n_1 = 1500 min^{-1}

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

Simboli:

i – Rapporto di riduzione
n_{1MAX} – Max. numero di giri in ingresso
DB – funzionamento continuo
ZB – funzionamento ciclico (a temperatura ambiente di 20°C, vedere anche pag. A11/A12)
MWø – Diametro dell'albero motore
J_1 – Momento di inerzia (riferito all'ingresso)
G – Peso
$\Lambda\varphi_2$ – Gioco
C_2 – Rigidità del riduttore (riferito all'uscita per M_{2B})
L_{PA} – Rumorosità max. (n_1 = 2000 min^{-1})
M_{2N} – Coppia nominale [1]
M_{2B} – Coppia di accelerazione max. ammessa
Attenzione: I dati relativi a M_{2B} si riferiscono al riduttore nell'esecuzione albero "G". Quest'esecuzione albero è generalmente raccomandata per funzionamento ciclico.
M_{2NOT} – Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

[1] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min^{-1}.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P221 (M_{2BMAX}=22 Nm)												
4,000	**P221_0040 ME**	4500	8000	**≤9**	0,11	1,1	6	1,8	59	16	22	43
4,000	**P221_0040 ME**	4500	8000	**>9≤11**	0,12	1,1	6	1,8	59	16	22	44
4,000	**P221_0040 ME**	4500	8000	**>11≤14**	0,14	1,1	6	1,8	59	16	22	44
4,000	**P221_0040 MEL**	4500	8000	**>14≤19**	0,43	1,5	6	1,9	59	16	22	44
5,000	**P221_0050 ME**	4500	8000	**≤9**	0,09	1,1	6	1,8	57	16	22	44
5,000	**P221_0050 ME**	4500	8000	**>9≤11**	0,10	1,1	6	1,9	57	16	22	44
5,000	**P221_0050 ME**	4500	8000	**>11≤14**	0,12	1,1	6	1,9	57	16	22	44
5,000	**P221_0050 MEL**	4500	8000	**>14≤19**	0,41	1,5	6	1,9	57	16	22	44
7,000	**P221_0070 ME**	4500	8000	**≤9**	0,08	1,1	6	1,8	56	16	22	44
7,000	**P221_0070 ME**	4500	8000	**>9≤11**	0,09	1,1	6	1,8	56	16	22	44
7,000	**P221_0070 ME**	4500	8000	**>11≤14**	0,11	1,1	6	1,8	56	16	22	44
7,000	**P221_0070 MEL**	4500	8000	**>14≤19**	0,40	1,5	6	1,8	56	16	22	44
8,000	**P221_0080 ME**	4500	8000	**≤9**	0,07	1,1	6	1,7	55	14	18	36
8,000	**P221_0080 ME**	4500	8000	**>9≤11**	0,08	1,1	6	1,7	55	14	18	36
8,000	**P221_0080 ME**	4500	8000	**>11≤14**	0,10	1,1	6	1,7	55	14	18	36
8,000	**P221_0080 MEL**	4500	8000	**>14≤19**	0,40	1,5	6	1,7	55	14	18	36
10,00	**P221_0100 ME**	4500	8000	**≤9**	0,07	1,1	6	1,6	54	12	18	36
10,00	**P221_0100 ME**	4500	8000	**>9≤11**	0,08	1,1	6	1,6	54	12	18	36
10,00	**P221_0100 ME**	4500	8000	**>11≤14**	0,10	1,1	6	1,6	54	12	18	36
10,00	**P221_0100 MEL**	4500	8000	**>14≤19**	0,39	1,5	6	1,6	54	12	18	36
P222 (M_{2BMAX}=22 Nm)												
16,00	**P222_0160 ME**	4500	8000	**≤9**	0,11	1,7	8	1,8	59	16	22	44
16,00	**P222_0160 ME**	4500	8000	**>9≤11**	0,12	1,7	8	1,8	59	16	22	44
16,00	**P222_0160 ME**	4500	8000	**>11≤14**	0,14	1,7	8	1,8	59	16	22	44
16,00	**P222_0160 MEL**	4500	8000	**>14≤19**	0,42	2,1	8	1,8	59	16	22	44
20,00	**P222_0200 ME**	4500	8000	**≤9**	0,10	1,7	8	1,8	59	16	22	44
20,00	**P222_0200 ME**	4500	8000	**>9≤11**	0,12	1,7	8	1,8	59	16	22	44
20,00	**P222_0200 ME**	4500	8000	**>11≤14**	0,14	1,7	8	1,8	59	16	22	44
20,00	**P222_0200 MEL**	4500	8000	**>14≤19**	0,42	2,1	8	1,8	59	16	22	44
25,00	**P222_0250 ME**	4500	8000	**≤9**	0,09	1,7	8	1,8	57	16	22	44
25,00	**P222_0250 ME**	4500	8000	**>9≤11**	0,10	1,7	8	1,8	57	16	22	44
25,00	**P222_0250 ME**	4500	8000	**>11≤14**	0,12	1,7	8	1,8	57	16	22	44
25,00	**P222_0250 MEL**	4500	8000	**>14≤19**	0,40	2,1	8	1,8	57	16	22	44
28,00	**P222_0280 ME**	4500	8000	**≤9**	0,08	1,7	8	1,8	56	16	22	44
28,00	**P222_0280 ME**	4500	8000	**>9≤11**	0,09	1,7	8	1,8	56	16	22	44
28,00	**P222_0280 ME**	4500	8000	**>11≤14**	0,11	1,7	8	1,8	56	16	22	44
28,00	**P222_0280 MEL**	4500	8000	**>14≤19**	0,40	2,1	8	1,8	56	16	22	44
32,00	**P222_0320 ME**	4500	8000	**≤9**	0,10	1,7	8	1,7	59	14	18	36
32,00	**P222_0320 ME**	4500	8000	**>9≤11**	0,11	1,7	8	1,7	59	14	18	36
32,00	**P222_0320 ME**	4500	8000	**>11≤14**	0,13	1,7	8	1,7	59	14	18	36
32,00	**P222_0320 MEL**	4500	8000	**>14≤19**	0,43	2,1	8	1,7	59	14	18	36
35,00	**P222_0350 ME**	4500	8000	**≤9**	0,08	1,7	8	1,8	56	16	22	44
35,00	**P222_0350 ME**	4500	8000	**>9≤11**	0,09	1,7	8	1,8	56	16	22	44
35,00	**P222_0350 ME**	4500	8000	**>11≤14**	0,11	1,7	8	1,8	56	16	22	44
35,00	**P222_0350 MEL**	4500	8000	**>14≤19**	0,40	2,1	8	1,8	56	16	22	44
40,00	**P222_0400 ME**	4500	8000	**≤9**	0,07	1,7	8	1,8	54	16	22	44
40,00	**P222_0400 ME**	4500	8000	**>9≤11**	0,08	1,7	8	1,8	54	16	22	44
40,00	**P222_0400 ME**	4500	8000	**>11≤14**	0,10	1,7	8	1,8	54	16	22	44
40,00	**P222_0400 MEL**	4500	8000	**>14≤19**	0,39	2,1	8	1,8	54	16	22	44
50,00	**P222_0500 ME**	4500	8000	**≤9**	0,07	1,7	8	1,8	54	16	22	44
50,00	**P222_0500 ME**	4500	8000	**>9≤11**	0,08	1,7	8	1,8	54	16	22	44
50,00	**P222_0500 ME**	4500	8000	**>11≤14**	0,10	1,7	8	1,8	54	16	22	44
50,00	**P222_0500 MEL**	4500	8000	**>14≤19**	0,39	2,1	8	1,8	54	16	22	44
56,00	**P222_0560 ME**	4500	8000	**≤9**	0,08	1,7	8	1,7	56	14	18	36
56,00	**P222_0560 ME**	4500	8000	**>9≤11**	0,09	1,7	8	1,7	56	14	18	36
56,00	**P222_0560 ME**	4500	8000	**>11≤14**	0,11	1,7	8	1,7	56	14	18	36
56,00	**P222_0560 MEL**	4500	8000	**>14≤19**	0,40	2,1	8	1,7	56	14	18	36
70,00	**P222_0700 ME**	4500	8000	**≤9**	0,07	1,7	8	1,8	54	16	22	44
70,00	**P222_0700 ME**	4500	8000	**>9≤11**	0,08	1,7	8	1,8	54	16	22	44

Planetary Gear Units **P**
*Reductores planetarios **P***
Riduttori planetari **P**

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P222 (M_{2BMAX}=22 Nm)												
70,00	**P222_0700 ME**	4500	8000	**>11≤14**	0,10	1,7	8	1,8	54	16	22	44
70,00	**P222_0700 MEL**	4500	8000	**>14≤19**	0,39	2,1	8	1,8	54	16	22	44
80,00	**P222_0800 ME**	4500	8000	**≤9**	0,07	1,7	8	1,7	54	14	18	36
80,00	**P222_0800 ME**	4500	8000	**>9≤11**	0,08	1,7	8	1,7	54	14	18	36
80,00	**P222_0800 ME**	4500	8000	**>11≤14**	0,10	1,7	8	1,7	54	14	18	36
80,00	**P222_0800 MEL**	4500	8000	**>14≤19**	0,39	2,1	8	1,7	54	14	18	36
100,0	**P222_1000 ME**	4500	8000	**≤9**	0,07	1,7	8	1,6	54	12	18	36
100,0	**P222_1000 ME**	4500	8000	**>9≤11**	0,08	1,7	8	1,6	54	12	18	36
100,0	**P222_1000 ME**	4500	8000	**>11≤14**	0,10	1,7	8	1,6	54	12	18	36
100,0	**P222_1000 MEL**	4500	8000	**>14≤19**	0,39	2,1	8	1,6	54	12	18	36
P321 (M_{2BMAX}=65 Nm)												
3,000	**P321_0030 ME**	3500	6000	**≤11**	0,44	2,2	4	4,9	62	30	50	64
3,000	**P321_0030 ME**	3500	6000	**>11≤14**	0,47	2,2	4	5,0	62	30	50	96
3,000	**P321_0030 ME**	3500	6000	**>14≤19**	0,58	2,2	4	5,0	62	30	50	120
3,000	**P321_0030 MEL**	3500	6000	**>19≤24**	1,1	2,9	4	5,5	62	30	50	120
4,000	**P321_0040 ME**	3700	6500	**≤11**	0,35	2,2	4	4,9	60	45	65	85
4,000	**P321_0040 ME**	3700	6500	**>11≤14**	0,39	2,2	4	4,9	60	45	65	130
4,000	**P321_0040 ME**	3700	6500	**>14≤19**	0,50	2,2	4	4,9	60	45	65	130
4,000	**P321_0040 MEL**	3700	6500	**>19≤24**	0,99	2,9	4	5,2	60	45	65	130
5,000	**P321_0050 ME**	4000	7000	**≤11**	0,31	2,2	4	4,8	58	45	65	110
5,000	**P321_0050 ME**	4000	7000	**>11≤14**	0,34	2,2	4	4,9	58	45	65	130
5,000	**P321_0050 ME**	4000	7000	**>14≤19**	0,45	2,2	4	4,9	58	45	65	130
5,000	**P321_0050 MEL**	4000	7000	**>19≤24**	0,94	2,9	4	5,0	58	45	65	130
7,000	**P321_0070 ME**	4500	8000	**≤11**	0,26	2,2	4	4,3	57	45	60	130
7,000	**P321_0070 ME**	4500	8000	**>11≤14**	0,30	2,2	4	4,3	57	45	60	130
7,000	**P321_0070 ME**	4500	8000	**>14≤19**	0,41	2,2	4	4,3	57	45	60	130
7,000	**P321_0070 MEL**	4500	8000	**>19≤24**	0,90	2,9	4	4,4	57	45	60	130
8,000	**P321_0080 ME**	4500	8000	**≤11**	0,26	2,2	4	4,1	56	40	50	100
8,000	**P321_0080 ME**	4500	8000	**>11≤14**	0,29	2,2	4	4,1	56	40	50	100
8,000	**P321_0080 ME**	4500	8000	**>14≤19**	0,40	2,2	4	4,1	56	40	50	100
8,000	**P321_0080 MEL**	4500	8000	**>19≤24**	0,89	2,9	4	4,2	56	40	50	100
10,00	**P321_0100 ME**	4500	8000	**≤11**	0,25	2,2	4	4,0	55	30	50	100
10,00	**P321_0100 ME**	4500	8000	**>11≤14**	0,28	2,2	4	4,0	55	30	50	100
10,00	**P321_0100 ME**	4500	8000	**>14≤19**	0,40	2,2	4	4,0	55	30	50	100
10,00	**P321_0100 MEL**	4500	8000	**>19≤24**	0,88	2,9	4	4,0	55	30	50	100
P322 (M_{2BMAX}=65 Nm)												
12,00	**P322_0120 ME**	4000	8000	**≤9**	0,12	2,4	5	4,2	59	30	50	120
12,00	**P322_0120 ME**	4000	8000	**>9≤11**	0,13	2,4	5	4,2	59	30	50	120
12,00	**P322_0120 ME**	4000	8000	**>11≤14**	0,15	2,4	5	4,2	59	30	50	120
12,00	**P322_0120 MEL**	4000	8000	**>14≤19**	0,43	2,8	5	4,2	59	30	50	120
16,00	**P322_0160 ME**	4500	8000	**≤9**	0,11	2,4	5	4,5	59	45	65	130
16,00	**P322_0160 ME**	4500	8000	**>9≤11**	0,12	2,4	5	4,5	59	45	65	130
16,00	**P322_0160 ME**	4500	8000	**>11≤14**	0,14	2,4	5	4,5	59	45	65	130
16,00	**P322_0160 MEL**	4500	8000	**>14≤19**	0,43	2,8	5	4,5	59	45	65	130
20,00	**P322_0200 ME**	4500	8000	**≤9**	0,11	2,4	5	4,6	59	45	65	130
20,00	**P322_0200 ME**	4500	8000	**>9≤11**	0,12	2,4	5	4,6	59	45	65	130
20,00	**P322_0200 ME**	4500	8000	**>11≤14**	0,14	2,4	5	4,6	59	45	65	130
20,00	**P322_0200 MEL**	4500	8000	**>14≤19**	0,43	2,8	5	4,6	59	45	65	130
25,00	**P322_0250 ME**	4500	8000	**≤9**	0,09	2,4	5	4,6	57	45	65	130
25,00	**P322_0250 ME**	4500	8000	**>9≤11**	0,10	2,4	5	4,6	57	45	65	130
25,00	**P322_0250 ME**	4500	8000	**>11≤14**	0,12	2,4	5	4,6	57	45	65	130
25,00	**P322_0250 MEL**	4500	8000	**>14≤19**	0,41	2,8	5	4,6	57	45	65	130
28,00	**P322_0280 ME**	4500	8000	**≤9**	0,08	2,4	5	4,5	56	45	65	130
28,00	**P322_0280 ME**	4500	8000	**>9≤11**	0,09	2,4	5	4,5	56	45	65	130
28,00	**P322_0280 ME**	4500	8000	**>11≤14**	0,11	2,4	5	4,5	56	45	65	130
28,00	**P322_0280 MEL**	4500	8000	**>14≤19**	0,40	2,8	5	4,5	56	45	65	130

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P322 (M_{2BMAX}=65 Nm)												
32,00	**P322_0320 ME**	4500	8000	**≤9**	0,10	2,4	5	4,1	59	40	50	100
32,00	**P322_0320 ME**	4500	8000	**>9≤11**	0,12	2,4	5	4,1	59	40	50	100
32,00	**P322_0320 ME**	4500	8000	**>11≤14**	0,14	2,4	5	4,1	59	40	50	100
32,00	**P322_0320 MEL**	4500	8000	**>14≤19**	0,42	2,8	5	4,1	59	40	50	100
35,00	**P322_0350 ME**	4500	8000	**≤9**	0,08	2,4	5	4,6	56	45	65	130
35,00	**P322_0350 ME**	4500	8000	**>9≤11**	0,09	2,4	5	4,6	56	45	65	130
35,00	**P322_0350 ME**	4500	8000	**>11≤14**	0,11	2,4	5	4,6	56	45	65	130
35,00	**P322_0350 MEL**	4500	8000	**>14≤19**	0,40	2,8	5	4,6	56	45	65	130
40,00	**P322_0400 ME**	4500	8000	**≤9**	0,07	2,4	5	4,4	54	45	65	130
40,00	**P322_0400 ME**	4500	8000	**>9≤11**	0,08	2,4	5	4,4	54	45	65	130
40,00	**P322_0400 ME**	4500	8000	**>11≤14**	0,10	2,4	5	4,4	54	45	65	130
40,00	**P322_0400 MEL**	4500	8000	**>14≤19**	0,39	2,8	5	4,4	54	45	65	130
50,00	**P322_0500 ME**	4500	8000	**≤9**	0,07	2,4	5	4,5	54	45	65	130
50,00	**P322_0500 ME**	4500	8000	**>9≤11**	0,08	2,4	5	4,5	54	45	65	130
50,00	**P322_0500 ME**	4500	8000	**>11≤14**	0,10	2,4	5	4,5	54	45	65	130
50,00	**P322_0500 MEL**	4500	8000	**>14≤19**	0,39	2,8	5	4,5	54	45	65	130
56,00	**P322_0560 ME**	4500	8000	**≤9**	0,08	2,4	5	4,1	56	40	50	100
56,00	**P322_0560 ME**	4500	8000	**>9≤11**	0,09	2,4	5	4,1	56	40	50	100
56,00	**P322_0560 ME**	4500	8000	**>11≤14**	0,11	2,4	5	4,1	56	40	50	100
56,00	**P322_0560 MEL**	4500	8000	**>14≤19**	0,40	2,8	5	4,1	56	40	50	100
70,00	**P322_0700 ME**	4500	8000	**≤9**	0,07	2,4	5	4,2	54	45	60	130
70,00	**P322_0700 ME**	4500	8000	**>9≤11**	0,08	2,4	5	4,2	54	45	60	130
70,00	**P322_0700 ME**	4500	8000	**>11≤14**	0,10	2,4	5	4,2	54	45	60	130
70,00	**P322_0700 MEL**	4500	8000	**>14≤19**	0,39	2,8	5	4,2	54	45	60	130
80,00	**P322_0800 ME**	4500	8000	**≤9**	0,07	2,4	5	4,1	54	40	50	100
80,00	**P322_0800 ME**	4500	8000	**>9≤11**	0,08	2,4	5	4,1	54	40	50	100
80,00	**P322_0800 ME**	4500	8000	**>11≤14**	0,10	2,4	5	4,1	54	40	50	100
80,00	**P322_0800 MEL**	4500	8000	**>14≤19**	0,39	2,8	5	4,1	54	40	50	100
100,0	**P322_1000 ME**	4500	8000	**≤9**	0,07	2,4	5	3,9	54	30	50	100
100,0	**P322_1000 ME**	4500	8000	**>9≤11**	0,08	2,4	5	3,9	54	30	50	100
100,0	**P322_1000 ME**	4500	8000	**>11≤14**	0,10	2,4	5	3,9	54	30	50	100
100,0	**P322_1000 MEL**	4500	8000	**>14≤19**	0,39	2,8	5	3,9	54	30	50	100
P421 (M_{2BMAX}=120 Nm)												
3,000	**P421_0030 ME**	3000	5500	**≤14**	1,3	4,0	4	11	63	50	100	130
3,000	**P421_0030 ME**	3000	5500	**>14≤19**	1,4	4,0	4	11	63	50	100	170
3,000	**P421_0030 ME**	3000	5500	**>19≤24**	1,6	4,0	4	11	63	50	100	210
3,000	**P421_0030 MEL**	3000	5500	**>24≤32**	3,2	4,7	4	12	63	50	100	240
4,000	**P421_0040 ME**	3300	6000	**≤14**	0,90	4,0	4	11	61	85	120	180
4,000	**P421_0040 ME**	3300	6000	**>14≤19**	1,1	4,0	4	11	61	85	120	230
4,000	**P421_0040 ME**	3300	6000	**>19≤24**	1,2	4,0	4	11	61	85	120	240
4,000	**P421_0040 MEL**	3300	6000	**>24≤32**	2,8	4,7	4	12	61	85	120	240
5,000	**P421_0050 ME**	3700	6500	**≤14**	0,79	4,0	4	11	59	85	120	220
5,000	**P421_0050 ME**	3700	6500	**>14≤19**	0,95	4,0	4	11	59	85	120	240
5,000	**P421_0050 ME**	3700	6500	**>19≤24**	1,1	4,0	4	11	59	85	120	240
5,000	**P421_0050 MEL**	3700	6500	**>24≤32**	2,7	4,7	4	11	59	85	120	240
7,000	**P421_0070 ME**	4000	7000	**≤14**	0,68	4,0	4	9,9	58	85	110	240
7,000	**P421_0070 ME**	4000	7000	**>14≤19**	0,82	4,0	4	9,9	58	85	110	240
7,000	**P421_0070 ME**	4000	7000	**>19≤24**	0,93	4,0	4	9,9	58	85	110	240
7,000	**P421_0070 MEL**	4000	7000	**>24≤32**	2,6	4,7	4	10,0	58	85	110	240
8,000	**P421_0080 ME**	4000	7000	**≤14**	0,66	4,0	4	9,4	57	80	100	200
8,000	**P421_0080 ME**	4000	7000	**>14≤19**	0,80	4,0	4	9,4	57	80	100	200
8,000	**P421_0080 ME**	4000	7000	**>19≤24**	0,91	4,0	4	9,4	57	80	100	200
8,000	**P421_0080 MEL**	4000	7000	**>24≤32**	2,6	4,7	4	9,4	57	80	100	200
10,00	**P421_0100 ME**	4000	7000	**≤14**	0,64	4,0	4	8,9	56	60	100	200
10,00	**P421_0100 ME**	4000	7000	**>14≤19**	0,78	4,0	4	8,9	56	60	100	200
10,00	**P421_0100 ME**	4000	7000	**>19≤24**	0,89	4,0	4	8,9	56	60	100	200
10,00	**P421_0100 MEL**	4000	7000	**>24≤32**	2,5	4,7	4	9,0	56	60	100	200

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P422 (M_{2BMAX}=120 Nm)												
12,00	**P422_0120 ME**	3500	6500	**≤11**	0,40	5,2	5	9,7	60	50	100	240
12,00	**P422_0120 ME**	3500	6500	**>11≤14**	0,43	5,2	5	9,8	60	50	100	240
12,00	**P422_0120 ME**	3500	6500	**>14≤19**	0,54	5,2	5	9,8	60	50	100	240
12,00	**P422_0120 MEL**	3500	6500	**>19≤24**	1,0	5,9	5	9,9	60	50	100	240
16,00	**P422_0160 ME**	3700	6500	**≤11**	0,37	5,2	5	10	60	85	120	240
16,00	**P422_0160 ME**	3700	6500	**>11≤14**	0,40	5,2	5	10	60	85	120	240
16,00	**P422_0160 ME**	3700	6500	**>14≤19**	0,52	5,2	5	10	60	85	120	240
16,00	**P422_0160 MEL**	3700	6500	**>19≤24**	1,0	5,9	5	10	60	85	120	240
20,00	**P422_0200 ME**	3700	6500	**≤11**	0,37	5,2	5	11	60	85	120	240
20,00	**P422_0200 ME**	3700	6500	**>11≤14**	0,40	5,2	5	11	60	85	120	240
20,00	**P422_0200 ME**	3700	6500	**>14≤19**	0,51	5,2	5	11	60	85	120	240
20,00	**P422_0200 MEL**	3700	6500	**>19≤24**	1,0	5,9	5	11	60	85	120	240
25,00	**P422_0250 ME**	4000	7000	**≤11**	0,32	5,2	5	11	58	85	120	240
25,00	**P422_0250 ME**	4000	7000	**>11≤14**	0,35	5,2	5	11	58	85	120	240
25,00	**P422_0250 ME**	4000	7000	**>14≤19**	0,46	5,2	5	11	58	85	120	240
25,00	**P422_0250 MEL**	4000	7000	**>19≤24**	0,95	5,9	5	11	58	85	120	240
28,00	**P422_0280 ME**	4500	8000	**≤11**	0,27	5,2	5	10	57	85	120	240
28,00	**P422_0280 ME**	4500	8000	**>11≤14**	0,31	5,2	5	10	57	85	120	240
28,00	**P422_0280 ME**	4500	8000	**>14≤19**	0,42	5,2	5	10	57	85	120	240
28,00	**P422_0280 MEL**	4500	8000	**>19≤24**	0,91	5,9	5	10	57	85	120	240
32,00	**P422_0320 ME**	3700	6500	**≤11**	0,36	5,2	5	9,2	60	80	100	200
32,00	**P422_0320 ME**	3700	6500	**>11≤14**	0,39	5,2	5	9,2	60	80	100	200
32,00	**P422_0320 ME**	3700	6500	**>14≤19**	0,51	5,2	5	9,2	60	80	100	200
32,00	**P422_0320 MEL**	3700	6500	**>19≤24**	0,99	5,9	5	9,2	60	80	100	200
35,00	**P422_0350 ME**	4500	8000	**≤11**	0,27	5,2	5	11	57	85	120	240
35,00	**P422_0350 ME**	4500	8000	**>11≤14**	0,30	5,2	5	11	57	85	120	240
35,00	**P422_0350 ME**	4500	8000	**>14≤19**	0,42	5,2	5	11	57	85	120	240
35,00	**P422_0350 MEL**	4500	8000	**>19≤24**	0,91	5,9	5	11	57	85	120	240
40,00	**P422_0400 ME**	4500	8000	**≤11**	0,25	5,2	5	10	55	85	120	240
40,00	**P422_0400 ME**	4500	8000	**>11≤14**	0,29	5,2	5	10	55	85	120	240
40,00	**P422_0400 ME**	4500	8000	**>14≤19**	0,40	5,2	5	10	55	85	120	240
40,00	**P422_0400 MEL**	4500	8000	**>19≤24**	0,89	5,9	5	10	55	85	120	240
50,00	**P422_0500 ME**	4500	8000	**≤11**	0,25	5,2	5	10	55	85	120	240
50,00	**P422_0500 ME**	4500	8000	**>11≤14**	0,28	5,2	5	10	55	85	120	240
50,00	**P422_0500 ME**	4500	8000	**>14≤19**	0,40	5,2	5	10	55	85	120	240
50,00	**P422_0500 MEL**	4500	8000	**>19≤24**	0,89	5,9	5	10	55	85	120	240
56,00	**P422_0560 ME**	4500	8000	**≤11**	0,27	5,2	5	9,2	57	80	100	200
56,00	**P422_0560 ME**	4500	8000	**>11≤14**	0,30	5,2	5	9,2	57	80	100	200
56,00	**P422_0560 ME**	4500	8000	**>14≤19**	0,42	5,2	5	9,2	57	80	100	200
56,00	**P422_0560 MEL**	4500	8000	**>19≤24**	0,91	5,9	5	9,2	57	80	100	200
70,00	**P422_0700 ME**	4500	8000	**≤11**	0,25	5,2	5	9,6	55	85	110	240
70,00	**P422_0700 ME**	4500	8000	**>11≤14**	0,28	5,2	5	9,6	55	85	110	240
70,00	**P422_0700 ME**	4500	8000	**>14≤19**	0,40	5,2	5	9,6	55	85	110	240
70,00	**P422_0700 MEL**	4500	8000	**>19≤24**	0,89	5,9	5	9,6	55	85	110	240
80,00	**P422_0800 ME**	4500	8000	**≤11**	0,25	5,2	5	9,2	55	80	100	200
80,00	**P422_0800 ME**	4500	8000	**>11≤14**	0,28	5,2	5	9,2	55	80	100	200
80,00	**P422_0800 ME**	4500	8000	**>14≤19**	0,40	5,2	5	9,2	55	80	100	200
80,00	**P422_0800 MEL**	4500	8000	**>19≤24**	0,89	5,9	5	9,2	55	80	100	200
100,0	**P422_1000 ME**	4500	8000	**≤11**	0,25	5,2	5	8,8	55	60	100	200
100,0	**P422_1000 ME**	4500	8000	**>11≤14**	0,28	5,2	5	8,8	55	60	100	200
100,0	**P422_1000 ME**	4500	8000	**>14≤19**	0,40	5,2	5	8,8	55	60	100	200
100,0	**P422_1000 MEL**	4500	8000	**>19≤24**	0,89	5,9	5	8,8	55	60	100	200

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P521 (M_{2BMAX}=300 Nm)												
3,000	**P521_0030 ME**	2500	4500	**≤19**	4,7	6,5	3	30	64	120	200	260
3,000	**P521_0030 ME**	2500	4500	**>19≤24**	5,0	6,5	3	31	64	120	200	430
3,000	**P521_0030 ME**	2500	4500	**>24≤32**	5,3	6,5	3	31	64	120	200	460
3,000	**P521_0030 MEL**	2500	4500	**>32≤38**	9,1	8,2	3	33	64	120	200	460
4,000	**P521_0040 ME**	3000	5000	**≤19**	2,9	6,5	3	29	62	210	280	350
4,000	**P521_0040 ME**	3000	5000	**>19≤24**	3,3	6,5	3	29	62	210	300	580
4,000	**P521_0040 ME**	3000	5000	**>24≤32**	3,6	6,5	3	29	62	210	300	600
4,000	**P521_0040 MEL**	3000	5000	**>32≤38**	7,4	8,2	3	31	62	210	300	600
5,000	**P521_0050 ME**	3500	6000	**≤19**	2,5	6,5	3	29	60	210	300	430
5,000	**P521_0050 ME**	3500	6000	**>19≤24**	2,9	6,5	3	29	60	210	300	600
5,000	**P521_0050 ME**	3500	6000	**>24≤32**	3,2	6,5	3	29	60	210	300	600
5,000	**P521_0050 MEL**	3500	6000	**>32≤38**	7,0	8,2	3	30	60	210	300	600
7,000	**P521_0070 ME**	3700	6500	**≤19**	2,2	6,5	3	27	59	210	270	600
7,000	**P521_0070 ME**	3700	6500	**>19≤24**	2,4	6,5	3	27	59	210	270	600
7,000	**P521_0070 ME**	3700	6500	**>24≤32**	2,8	6,5	3	27	59	210	270	600
7,000	**P521_0070 MEL**	3700	6500	**>32≤38**	6,5	8,2	3	28	59	210	270	600
8,000	**P521_0080 ME**	3700	6500	**≤19**	2,1	6,5	3	25	58	200	250	500
8,000	**P521_0080 ME**	3700	6500	**>19≤24**	2,4	6,5	3	25	58	200	250	500
8,000	**P521_0080 ME**	3700	6500	**>24≤32**	2,7	6,5	3	25	58	200	250	500
8,000	**P521_0080 MEL**	3700	6500	**>32≤38**	6,5	8,2	3	26	58	200	250	500
10,00	**P521_0100 ME**	3700	6500	**≤19**	2,0	6,5	3	25	57	140	250	500
10,00	**P521_0100 ME**	3700	6500	**>19≤24**	2,3	6,5	3	25	57	140	250	500
10,00	**P521_0100 ME**	3700	6500	**>24≤32**	2,6	6,5	3	25	57	140	250	500
10,00	**P521_0100 MEL**	3700	6500	**>32≤38**	6,4	8,2	3	25	57	140	250	500
P522 (M_{2BMAX}=300 Nm)												
12,00	**P522_0120 ME**	3000	6000	**≤14**	0,96	8,5	4	27	61	120	200	460
12,00	**P522_0120 ME**	3000	6000	**>14≤19**	1,1	8,5	4	27	61	120	200	460
12,00	**P522_0120 ME**	3000	6000	**>19≤24**	1,2	8,5	4	27	61	120	200	460
12,00	**P522_0120 MEL**	3000	6000	**>24≤32**	2,8	9,2	4	27	61	120	200	460
16,00	**P522_0160 ME**	3300	6000	**≤14**	0,95	8,5	4	27	61	210	300	600
16,00	**P522_0160 ME**	3300	6000	**>14≤19**	1,1	8,5	4	27	61	210	300	600
16,00	**P522_0160 ME**	3300	6000	**>19≤24**	1,2	8,5	4	27	61	210	300	600
16,00	**P522_0160 MEL**	3300	6000	**>24≤32**	2,8	9,2	4	27	61	210	300	600
20,00	**P522_0200 ME**	3300	6000	**≤14**	0,92	8,5	4	28	61	210	300	600
20,00	**P522_0200 ME**	3300	6000	**>14≤19**	1,1	8,5	4	28	61	210	300	600
20,00	**P522_0200 ME**	3300	6000	**>19≤24**	1,2	8,5	4	28	61	210	300	600
20,00	**P522_0200 MEL**	3300	6000	**>24≤32**	2,8	9,2	4	28	61	210	300	600
25,00	**P522_0250 ME**	3700	6500	**≤14**	0,81	8,5	4	28	59	210	300	600
25,00	**P522_0250 ME**	3700	6500	**>14≤19**	0,97	8,5	4	28	59	210	300	600
25,00	**P522_0250 ME**	3700	6500	**>19≤24**	1,1	8,5	4	28	59	210	300	600
25,00	**P522_0250 MEL**	3700	6500	**>24≤32**	2,7	9,2	4	28	59	210	300	600
28,00	**P522_0280 ME**	4000	7000	**≤14**	0,71	8,5	4	27	58	210	300	600
28,00	**P522_0280 ME**	4000	7000	**>14≤19**	0,85	8,5	4	27	58	210	300	600
28,00	**P522_0280 ME**	4000	7000	**>19≤24**	0,96	8,5	4	27	58	210	300	600
28,00	**P522_0280 MEL**	4000	7000	**>24≤32**	2,6	9,2	4	27	58	210	300	600
32,00	**P522_0320 ME**	3300	6000	**≤14**	0,90	8,5	4	25	61	200	250	500
32,00	**P522_0320 ME**	3300	6000	**>14≤19**	1,1	8,5	4	25	61	200	250	500
32,00	**P522_0320 ME**	3300	6000	**>19≤24**	1,2	8,5	4	25	61	200	250	500
32,00	**P522_0320 MEL**	3300	6000	**>24≤32**	2,8	9,2	4	25	61	200	250	500
35,00	**P522_0350 ME**	4000	7000	**≤14**	0,70	8,5	4	28	58	210	300	600
35,00	**P522_0350 ME**	4000	7000	**>14≤19**	0,84	8,5	4	28	58	210	300	600
35,00	**P522_0350 ME**	4000	7000	**>19≤24**	0,95	8,5	4	28	58	210	300	600
35,00	**P522_0350 MEL**	4000	7000	**>24≤32**	2,6	9,2	4	28	58	210	300	600
40,00	**P522_0400 ME**	4000	7000	**≤14**	0,66	8,5	4	26	56	210	300	600
40,00	**P522_0400 ME**	4000	7000	**>14≤19**	0,79	8,5	4	26	56	210	300	600
40,00	**P522_0400 ME**	4000	7000	**>19≤24**	0,91	8,5	4	26	56	210	300	600
40,00	**P522_0400 MEL**	4000	7000	**>24≤32**	2,5	9,2	4	26	56	210	300	600
50,00	**P522_0500 ME**	4000	7000	**≤14**	0,65	8,5	4	27	56	210	300	600
50,00	**P522_0500 ME**	4000	7000	**>14≤19**	0,79	8,5	4	27	56	210	300	600

Planetary Gear Units **P**
Reductores planetarios ***P***
Riduttori planetari **P**

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P522 (M_{2BMAX}=300 Nm)												
50,00	**P522_0500 ME**	4000	7000	**>19≤24**	0,90	8,5	4	27	56	210	300	600
50,00	**P522_0500 MEL**	4000	7000	**>24≤32**	2,5	9,2	4	27	56	210	300	600
56,00	**P522_0560 ME**	4000	7000	**≤14**	0,70	8,5	4	25	58	200	250	500
56,00	**P522_0560 ME**	4000	7000	**>14≤19**	0,83	8,5	4	25	58	200	250	500
56,00	**P522_0560 ME**	4000	7000	**>19≤24**	0,95	8,5	4	25	58	200	250	500
56,00	**P522_0560 MEL**	4000	7000	**>24≤32**	2,6	9,2	4	25	58	200	250	500
70,00	**P522_0700 ME**	4000	7000	**≤14**	0,65	8,5	4	26	56	210	270	600
70,00	**P522_0700 ME**	4000	7000	**>14≤19**	0,78	8,5	4	26	56	210	270	600
70,00	**P522_0700 ME**	4000	7000	**>19≤24**	0,90	8,5	4	26	56	210	270	600
70,00	**P522_0700 MEL**	4000	7000	**>24≤32**	2,5	9,2	4	26	56	210	270	600
80,00	**P522_0800 ME**	4000	7000	**≤14**	0,65	8,5	4	25	56	200	250	500
80,00	**P522_0800 ME**	4000	7000	**>14≤19**	0,78	8,5	4	25	56	200	250	500
80,00	**P522_0800 ME**	4000	7000	**>19≤24**	0,90	8,5	4	25	56	200	250	500
80,00	**P522_0800 MEL**	4000	7000	**>24≤32**	2,5	9,2	4	25	56	200	250	500
100,0	**P522_1000 ME**	4000	7000	**≤14**	0,65	8,5	4	24	56	140	250	500
100,0	**P522_1000 ME**	4000	7000	**>14≤19**	0,78	8,5	4	24	56	140	250	500
100,0	**P522_1000 ME**	4000	7000	**>19≤24**	0,90	8,5	4	24	56	140	250	500
100,0	**P522_1000 MEL**	4000	7000	**>24≤32**	2,5	9,2	4	24	56	140	250	500
P721 (M_{2BMAX}=700 Nm)												
3,000	**P721_0030 ME**	2200	3700	**≤24**	11	12,0	3	53	65	280	430	540
3,000	**P721_0030 ME**	2200	3700	**>24≤32**	12	12,0	3	55	65	280	500	870
3,000	**P721_0030 ME**	2200	3700	**>32≤38**	15	12,0	3	55	65	280	500	1000
3,000	**P721_0030 MEL**	2200	3700	**>38≤48**	25	15,8	3	59	65	280	500	1040
4,000	**P721_0040 ME**	2500	4500	**≤24**	6,5	12,0	3	54	63	440	570	720
4,000	**P721_0040 ME**	2500	4500	**>24≤32**	7,4	12,0	3	55	63	440	700	1160
4,000	**P721_0040 ME**	2500	4500	**>32≤38**	10,0	12,0	3	55	63	440	700	1330
4,000	**P721_0040 MEL**	2500	4500	**>38≤48**	20	15,8	3	57	63	440	700	1380
5,000	**P721_0050 ME**	3000	5500	**≤24**	4,9	12,0	3	54	61	440	700	900
5,000	**P721_0050 ME**	3000	5500	**>24≤32**	5,9	12,0	3	54	61	440	700	1400
5,000	**P721_0050 ME**	3000	5500	**>32≤38**	8,5	12,0	3	54	61	440	700	1400
5,000	**P721_0050 MEL**	3000	5500	**>38≤48**	18	15,8	3	56	61	440	700	1400
7,000	**P721_0070 ME**	3300	6000	**≤24**	3,9	12,0	3	53	60	440	650	1250
7,000	**P721_0070 ME**	3300	6000	**>24≤32**	5,8	12,0	3	53	60	440	650	1250
7,000	**P721_0070 ME**	3300	6000	**>32≤38**	5,8	12,0	3	53	60	440	650	1250
7,000	**P721_0070 MEL**	3300	6000	**>38≤48**	17	15,8	3	54	60	440	650	1250
8,000	**P721_0080 ME**	3300	6000	**≤24**	3,7	12,0	3	52	59	400	500	1000
8,000	**P721_0080 ME**	3300	6000	**>24≤32**	5,5	12,0	3	52	59	400	500	1000
8,000	**P721_0080 ME**	3300	6000	**>32≤38**	5,5	12,0	3	52	59	400	500	1000
8,000	**P721_0080 MEL**	3300	6000	**>38≤48**	17	15,8	3	52	59	400	500	1000
10,00	**P721_0100 ME**	3300	6000	**≤24**	3,4	12,0	3	49	58	300	500	1000
10,00	**P721_0100 ME**	3300	6000	**>24≤32**	5,3	12,0	3	49	58	300	500	1000
10,00	**P721_0100 ME**	3300	6000	**>32≤38**	5,3	12,0	3	49	58	300	500	1000
10,00	**P721_0100 MEL**	3300	6000	**>38≤48**	16	15,8	3	49	58	300	500	1000

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P722 (M_{2BMAX}=700 Nm)												
12,00	**P722_0120 ME**	2500	5000	**≤19**	3,3	15,0	4	52	62	280	500	1000
12,00	**P722_0120 ME**	2500	5000	**>19≤24**	3,7	15,0	4	52	62	280	500	1040
12,00	**P722_0120 ME**	2500	5000	**>24≤32**	4,0	15,0	4	52	62	280	500	1040
12,00	**P722_0120 MEL**	2500	5000	**>32≤38**	7,8	16,7	4	52	62	280	500	1040
16,00	**P722_0160 ME**	3000	5000	**≤19**	3,0	15,0	4	53	62	440	700	1340
16,00	**P722_0160 ME**	3000	5000	**>19≤24**	3,4	15,0	4	53	62	440	700	1380
16,00	**P722_0160 ME**	3000	5000	**>24≤32**	3,7	15,0	4	53	62	440	700	1380
16,00	**P722_0160 MEL**	3000	5000	**>32≤38**	7,5	16,7	4	53	62	440	700	1380
20,00	**P722_0200 ME**	3000	5000	**≤19**	2,9	15,0	4	53	62	440	700	1400
20,00	**P722_0200 ME**	3000	5000	**>19≤24**	3,3	15,0	4	53	62	440	700	1400
20,00	**P722_0200 ME**	3000	5000	**>24≤32**	3,6	15,0	4	53	62	440	700	1400
20,00	**P722_0200 MEL**	3000	5000	**>32≤38**	7,4	16,7	4	53	62	440	700	1400
25,00	**P722_0250 ME**	3500	6000	**≤19**	2,5	15,0	4	53	60	440	700	1400
25,00	**P722_0250 ME**	3500	6000	**>19≤24**	2,9	15,0	4	53	60	440	700	1400
25,00	**P722_0250 ME**	3500	6000	**>24≤32**	3,2	15,0	4	53	60	440	700	1400
25,00	**P722_0250 MEL**	3500	6000	**>32≤38**	7,0	16,7	4	53	60	440	700	1400
28,00	**P722_0280 ME**	3700	6500	**≤19**	2,3	15,0	4	53	59	440	700	1380
28,00	**P722_0280 ME**	3700	6500	**>19≤24**	2,5	15,0	4	53	59	440	700	1380
28,00	**P722_0280 ME**	3700	6500	**>24≤32**	2,9	15,0	4	53	59	440	700	1380
28,00	**P722_0280 MEL**	3700	6500	**>32≤38**	6,6	16,7	4	53	59	440	700	1380
32,00	**P722_0320 ME**	3000	5000	**≤19**	2,9	15,0	4	52	62	400	500	1000
32,00	**P722_0320 ME**	3000	5000	**>19≤24**	3,2	15,0	4	52	62	400	500	1000
32,00	**P722_0320 ME**	3000	5000	**>24≤32**	3,5	15,0	4	52	62	400	500	1000
32,00	**P722_0320 MEL**	3000	5000	**>32≤38**	7,3	16,7	4	52	62	400	500	1000
35,00	**P722_0350 ME**	3700	6500	**≤19**	2,2	15,0	4	53	59	440	700	1400
35,00	**P722_0350 ME**	3700	6500	**>19≤24**	2,5	15,0	4	53	59	440	700	1400
35,00	**P722_0350 ME**	3700	6500	**>24≤32**	2,8	15,0	4	53	59	440	700	1400
35,00	**P722_0350 MEL**	3700	6500	**>32≤38**	6,6	16,7	4	53	59	440	700	1400
40,00	**P722_0400 ME**	3700	6500	**≤19**	2,1	15,0	4	52	57	440	700	1380
40,00	**P722_0400 ME**	3700	6500	**>19≤24**	2,4	15,0	4	52	57	440	700	1380
40,00	**P722_0400 ME**	3700	6500	**>24≤32**	2,7	15,0	4	52	57	440	700	1380
40,00	**P722_0400 MEL**	3700	6500	**>32≤38**	6,4	16,7	4	52	57	440	700	1380
50,00	**P722_0500 ME**	3700	6500	**≤19**	2,1	15,0	4	53	57	440	700	1400
50,00	**P722_0500 ME**	3700	6500	**>19≤24**	2,3	15,0	4	53	57	440	700	1400
50,00	**P722_0500 ME**	3700	6500	**>24≤32**	2,7	15,0	4	53	57	440	700	1400
50,00	**P722_0500 MEL**	3700	6500	**>32≤38**	6,4	16,7	4	53	57	440	700	1400
56,00	**P722_0560 ME**	3700	6500	**≤19**	2,2	15,0	4	52	59	400	500	1000
56,00	**P722_0560 ME**	3700	6500	**>19≤24**	2,5	15,0	4	52	59	400	500	1000
56,00	**P722_0560 ME**	3700	6500	**>24≤32**	2,8	15,0	4	52	59	400	500	1000
56,00	**P722_0560 MEL**	3700	6500	**>32≤38**	6,6	16,7	4	52	59	400	500	1000
70,00	**P722_0700 ME**	3700	6500	**≤19**	2,1	15,0	4	53	57	440	650	1250
70,00	**P722_0700 ME**	3700	6500	**>19≤24**	2,3	15,0	4	53	57	440	650	1250
70,00	**P722_0700 ME**	3700	6500	**>24≤32**	2,6	15,0	4	53	57	440	650	1250
70,00	**P722_0700 MEL**	3700	6500	**>32≤38**	6,4	16,7	4	53	57	440	650	1250
80,00	**P722_0800 ME**	3700	6500	**≤19**	2,0	15,0	4	52	57	400	500	1000
80,00	**P722_0800 ME**	3700	6500	**>19≤24**	2,3	15,0	4	52	57	400	500	1000
80,00	**P722_0800 ME**	3700	6500	**>24≤32**	2,6	15,0	4	52	57	400	500	1000
80,00	**P722_0800 MEL**	3700	6500	**>32≤38**	6,4	16,7	4	52	57	400	500	1000
100,0	**P722_1000 ME**	3700	6500	**≤19**	2,0	15,0	4	49	57	300	500	1000
100,0	**P722_1000 ME**	3700	6500	**>19≤24**	2,3	15,0	4	49	57	300	500	1000
100,0	**P722_1000 ME**	3700	6500	**>24≤32**	2,6	15,0	4	49	57	300	500	1000
100,0	**P722_1000 MEL**	3700	6500	**>32≤38**	6,4	16,7	4	49	57	300	500	1000

Planetary Gear Units **P**
Reductores planetarios ***P***
Riduttori planetari **P**

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P821 (M_{2BMAX}=1600 Nm)												
3,000	**P821_0030 ME**	1800	3000	**≤32**	50	26,0	3	159	66	800	960	1200
3,000	**P821_0030 ME**	1800	3000	**>32≤38**	54	26,0	3	165	66	800	1200	1520
3,000	**P821_0030 ME**	1800	3000	**>38≤48**	57	26,0	3	165	66	800	1200	1760
3,000	**P821_0030 MEL**	1800	3000	**>48≤55**	89	30,6	3	202	66	800	1200	1760
3,000	**P821_0030 MEL**	1800	3000	**>55≤60**	94	30,6	3	202	66	800	1200	1760
4,000	**P821_0040 ME**	2200	3500	**≤32**	26	26,0	3	170	64	800	1290	1610
4,000	**P821_0040 ME**	2200	3500	**>32≤38**	30	26,0	3	175	64	800	1600	2020
4,000	**P821_0040 ME**	2200	3500	**>38≤48**	33	26,0	3	175	64	800	1600	2330
4,000	**P821_0040 MEL**	2200	3500	**>48≤55**	65	30,6	3	196	64	800	1600	2330
4,000	**P821_0040 MEL**	2200	3500	**>55≤60**	70	30,6	3	196	64	800	1600	2330
5,000	**P821_0050 ME**	2500	4000	**≤32**	19	26,0	3	173	62	1000	1600	2010
5,000	**P821_0050 ME**	2500	4000	**>32≤38**	23	26,0	3	176	62	1000	1600	2530
5,000	**P821_0050 ME**	2500	4000	**>38≤48**	27	26,0	3	176	62	1000	1600	2900
5,000	**P821_0050 MEL**	2500	4000	**>48≤55**	58	30,6	3	189	62	1000	1600	2900
5,000	**P821_0050 MEL**	2500	4000	**>55≤60**	63	30,6	3	189	62	1000	1600	2900
7,000	**P821_0070 ME**	2800	4500	**≤32**	14	26,0	3	167	61	1000	1400	2800
7,000	**P821_0070 ME**	2800	4500	**>32≤38**	17	26,0	3	167	61	1000	1400	2800
7,000	**P821_0070 ME**	2800	4500	**>38≤48**	20	26,0	3	167	61	1000	1400	2800
7,000	**P821_0070 MEL**	2800	4500	**>48≤55**	52	30,6	3	174	61	1000	1400	2800
8,000	**P821_0080 ME**	2800	4500	**≤32**	13	26,0	3	160	60	800	1200	2400
8,000	**P821_0080 ME**	2800	4500	**>32≤38**	15	26,0	3	160	60	800	1200	2400
8,000	**P821_0080 ME**	2800	4500	**>38≤48**	19	26,0	3	160	60	800	1200	2400
8,000	**P821_0080 MEL**	2800	4500	**>48≤55**	51	30,6	3	165	60	800	1200	2400
10,00	**P821_0100 ME**	2800	4500	**≤32**	12	26,0	3	149	59	700	1200	2400
10,00	**P821_0100 ME**	2800	4500	**>32≤38**	14	26,0	3	149	59	700	1200	2400
10,00	**P821_0100 ME**	2800	4500	**>38≤48**	17	26,0	3	149	59	700	1200	2400
10,00	**P821_0100 MEL**	2800	4500	**>48≤55**	50	30,6	3	152	59	700	1200	2400
P822 (M_{2BMAX}=1600 Nm)												
12,00	**P822_0120 ME**	2200	4500	**≤24**	8,5	32,0	4	151	63	800	1200	2090
12,00	**P822_0120 ME**	2200	4500	**>24≤32**	9,5	32,0	4	152	63	800	1200	2400
12,00	**P822_0120 ME**	2200	4500	**>32≤38**	12	32,0	4	152	63	800	1200	2400
12,00	**P822_0120 MEL**	2200	4500	**>38≤48**	22	35,8	4	154	63	800	1200	2400
16,00	**P822_0160 ME**	2500	4500	**≤24**	7,0	32,0	4	166	63	800	1600	2790
16,00	**P822_0160 ME**	2500	4500	**>24≤32**	8,0	32,0	4	166	63	800	1600	3180
16,00	**P822_0160 ME**	2500	4500	**>32≤38**	11	32,0	4	166	63	800	1600	3180
16,00	**P822_0160 MEL**	2500	4500	**>38≤48**	21	35,8	4	167	63	800	1600	3180
20,00	**P822_0200 ME**	2500	4500	**≤24**	6,6	32,0	4	170	63	1000	1600	3200
20,00	**P822_0200 ME**	2500	4500	**>24≤32**	7,6	32,0	4	170	63	1000	1600	3200
20,00	**P822_0200 ME**	2500	4500	**>32≤38**	10	32,0	4	170	63	1000	1600	3200
20,00	**P822_0200 MEL**	2500	4500	**>38≤48**	20	35,8	4	171	63	1000	1600	3200
25,00	**P822_0250 ME**	3000	5500	**≤24**	5,2	32,0	4	169	61	1000	1600	3200
25,00	**P822_0250 ME**	3000	5500	**>24≤32**	6,2	32,0	4	170	61	1000	1600	3200
25,00	**P822_0250 ME**	3000	5500	**>32≤38**	8,7	32,0	4	170	61	1000	1600	3200
25,00	**P822_0250 MEL**	3000	5500	**>38≤48**	19	35,8	4	170	61	1000	1600	3200
28,00	**P822_0280 ME**	3300	6000	**≤24**	4,2	32,0	4	165	60	800	1600	3180
28,00	**P822_0280 ME**	3300	6000	**>24≤32**	6,0	32,0	4	165	60	800	1600	3180
28,00	**P822_0280 ME**	3300	6000	**>32≤38**	6,0	32,0	4	165	60	800	1600	3180
28,00	**P822_0280 MEL**	3300	6000	**>38≤48**	17	35,8	4	166	60	800	1600	3180
32,00	**P822_0320 ME**	2500	4500	**≤24**	6,2	32,0	4	159	63	800	1200	2400
32,00	**P822_0320 ME**	2500	4500	**>24≤32**	7,2	32,0	4	159	63	800	1200	2400
32,00	**P822_0320 ME**	2500	4500	**>32≤38**	9,8	32,0	4	159	63	800	1200	2400
32,00	**P822_0320 MEL**	2500	4500	**>38≤48**	20	35,8	4	159	63	800	1200	2400
35,00	**P822_0350 ME**	3300	6000	**≤24**	4,0	32,0	4	169	60	1000	1600	3200
35,00	**P822_0350 ME**	3300	6000	**>24≤32**	5,9	32,0	4	169	60	1000	1600	3200
35,00	**P822_0350 ME**	3300	6000	**>32≤38**	5,9	32,0	4	169	60	1000	1600	3200
35,00	**P822_0350 MEL**	3300	6000	**>38≤48**	17	35,8	4	170	60	1000	1600	3200
40,00	**P822_0400 ME**	3300	6000	**≤24**	3,5	32,0	4	162	58	800	1600	3180
40,00	**P822_0400 ME**	3300	6000	**>24≤32**	5,4	32,0	4	162	58	800	1600	3180
40,00	**P822_0400 ME**	3300	6000	**>32≤38**	5,4	32,0	4	162	58	800	1600	3180

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Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P822 (M_{2BMAX}=1600 Nm)												
40,00	**P822_0400 MEL**	3300	6000	**>38≤48**	17	35,8	4	163	58	800	1600	3180
50,00	**P822_0500 ME**	3300	6000	**≤24**	3,5	32,0	4	167	58	1000	1600	3200
50,00	**P822_0500 ME**	3300	6000	**>24≤32**	5,3	32,0	4	167	58	1000	1600	3200
50,00	**P822_0500 ME**	3300	6000	**>32≤38**	5,3	32,0	4	167	58	1000	1600	3200
50,00	**P822_0500 MEL**	3300	6000	**>38≤48**	17	35,8	4	168	58	1000	1600	3200
56,00	**P822_0560 ME**	3300	6000	**≤24**	4,0	32,0	4	159	60	800	1200	2400
56,00	**P822_0560 ME**	3300	6000	**>24≤32**	5,9	32,0	4	159	60	800	1200	2400
56,00	**P822_0560 ME**	3300	6000	**>32≤38**	5,9	32,0	4	159	60	800	1200	2400
56,00	**P822_0560 MEL**	3300	6000	**>38≤48**	17	35,8	4	159	60	800	1200	2400
70,00	**P822_0700 ME**	3300	6000	**≤24**	3,4	32,0	4	164	58	1000	1400	2800
70,00	**P822_0700 ME**	3300	6000	**>24≤32**	5,3	32,0	4	164	58	1000	1400	2800
70,00	**P822_0700 ME**	3300	6000	**>32≤38**	5,3	32,0	4	164	58	1000	1400	2800
70,00	**P822_0700 MEL**	3300	6000	**>38≤48**	16	35,8	4	164	58	1000	1400	2800
80,00	**P822_0800 ME**	3300	6000	**≤24**	3,4	32,0	4	159	58	800	1200	2400
80,00	**P822_0800 ME**	3300	6000	**>24≤32**	5,3	32,0	4	159	58	800	1200	2400
80,00	**P822_0800 ME**	3300	6000	**>32≤38**	5,3	32,0	4	159	58	800	1200	2400
80,00	**P822_0800 MEL**	3300	6000	**>38≤48**	16	35,8	4	159	58	800	1200	2400
100,0	**P822_1000 ME**	3300	6000	**≤24**	3,4	32,0	4	148	58	700	1200	2400
100,0	**P822_1000 ME**	3300	6000	**>24≤32**	5,2	32,0	4	148	58	700	1200	2400
100,0	**P822_1000 ME**	3300	6000	**>32≤38**	5,2	32,0	4	148	58	700	1200	2400
100,0	**P822_1000 MEL**	3300	6000	**>38≤48**	16	35,8	4	148	58	700	1200	2400
P921 (M_{2BMAX}=3000 Nm)												
4,000	**P921_0040 ME**	2000	3000	**≤48**	89	50,0	3	349	65	2000	3000	4630
4,000	**P921_0040 ME**	2000	3000	**>48≤55**	94	50,0	3	349	65	2000	3000	5140
4,000	**P921_0040 ME**	2000	3000	**>55≤60**	98	50,0	3	349	65	2000	3000	5530
5,000	**P921_0050 ME**	2200	3500	**≤48**	71	50,0	3	342	63	2000	3000	5790
5,000	**P921_0050 ME**	2200	3500	**>48≤55**	76	50,0	3	342	63	2000	3000	6000
5,000	**P921_0050 ME**	2200	3500	**>55≤60**	80	50,0	3	342	63	2000	3000	6000
7,000	**P921_0070 ME**	2500	4000	**≤48**	57	50,0	3	322	62	2000	2700	5400
7,000	**P921_0070 ME**	2500	4000	**>48≤55**	62	50,0	3	322	62	2000	2700	5400
7,000	**P921_0070 ME**	2500	4000	**>55≤60**	67	50,0	3	322	62	2000	2700	5400
10,00	**P921_0100 ME**	2500	4000	**≤48**	50	50,0	3	258	60	1400	2000	4000
10,00	**P921_0100 ME**	2500	4000	**>48≤55**	55	50,0	3	258	60	1400	2000	4000
10,00	**P921_0100 ME**	2500	4000	**>55≤60**	59	50,0	3	258	60	1400	2000	4000
P922 (M_{2BMAX}=3000 Nm)												
16,00	**P922_0160 ME**	2200	3500	**≤32**	27	60,6	4	334	64	2000	3000	5530
16,00	**P922_0160 ME**	2200	3500	**>32≤38**	31	60,6	4	335	64	2000	3000	5530
16,00	**P922_0160 ME**	2200	3500	**>38≤48**	34	60,6	4	335	64	2000	3000	5530
16,00	**P922_0160 MEL**	2200	3500	**>48≤55**	66	65,2	4	339	64	2000	3000	5530
16,00	**P922_0160 MEL**	2200	3500	**>55≤60**	71	65,2	4	339	64	2000	3000	5530
20,00	**P922_0200 ME**	2200	3500	**≤32**	26	60,6	4	332	64	2000	3000	6000
20,00	**P922_0200 ME**	2200	3500	**>32≤38**	30	60,6	4	333	64	2000	3000	6000
20,00	**P922_0200 ME**	2200	3500	**>38≤48**	33	60,6	4	333	64	2000	3000	6000
20,00	**P922_0200 MEL**	2200	3500	**>48≤55**	65	65,2	4	335	64	2000	3000	6000
20,00	**P922_0200 MEL**	2200	3500	**>55≤60**	70	65,2	4	335	64	2000	3000	6000
25,00	**P922_0250 ME**	2500	4000	**≤32**	19	60,6	4	332	62	2000	3000	6000
25,00	**P922_0250 ME**	2500	4000	**>32≤38**	23	60,6	4	333	62	2000	3000	6000
25,00	**P922_0250 ME**	2500	4000	**>38≤48**	27	60,6	4	333	62	2000	3000	6000
25,00	**P922_0250 MEL**	2500	4000	**>48≤55**	58	65,2	4	334	62	2000	3000	6000
25,00	**P922_0250 MEL**	2500	4000	**>55≤60**	63	65,2	4	334	62	2000	3000	6000
28,00	**P922_0280 ME**	2800	4500	**≤32**	15	60,6	4	333	61	2000	3000	5530
28,00	**P922_0280 ME**	2800	4500	**>32≤38**	17	60,6	4	333	61	2000	3000	5530
28,00	**P922_0280 ME**	2800	4500	**>38≤48**	20	60,6	4	333	61	2000	3000	5530
28,00	**P922_0280 MEL**	2800	4500	**>48≤55**	53	65,2	4	334	61	2000	3000	5530
35,00	**P922_0350 ME**	2800	4500	**≤32**	15	60,6	4	331	61	2000	3000	6000
35,00	**P922_0350 ME**	2800	4500	**>32≤38**	17	60,6	4	331	61	2000	3000	6000

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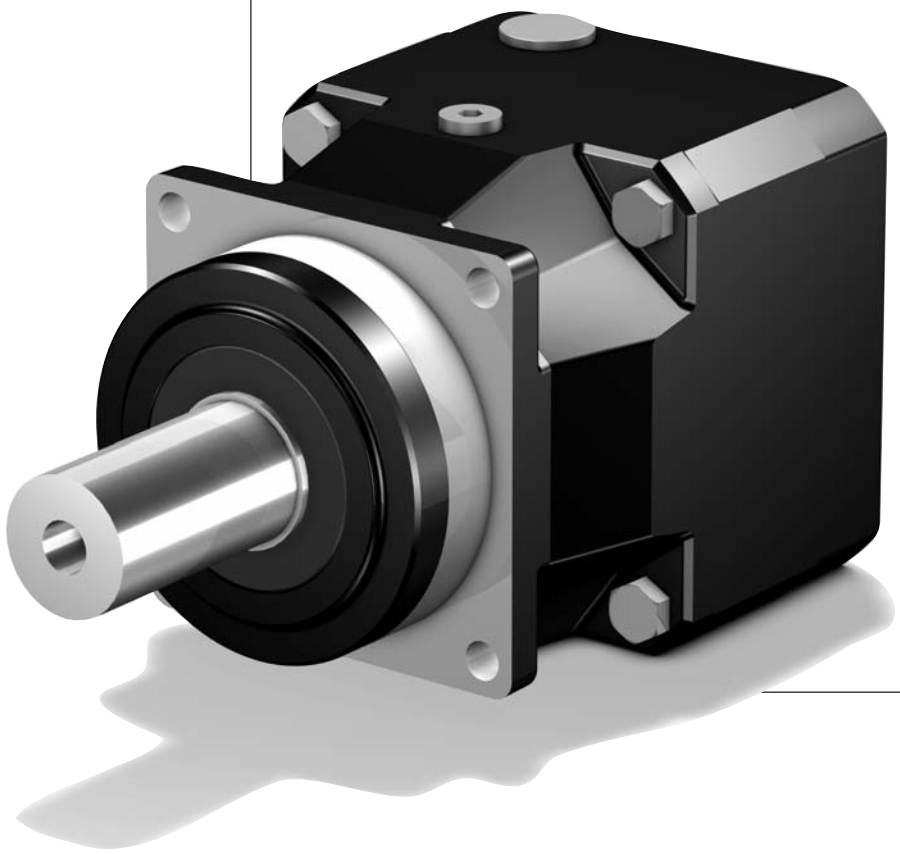
Please take notice of the indications on page P6! ***¡Por favor observe las indicaciones en la página P6!*** **Si raccomanda di rispettare le avvertenze a pagina P6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P922 (M_{2BMAX}=3000 Nm)												
35,00	**P922_0350 ME**	2800	4500	**>38≤48**	20	60,6	4	331	61	2000	3000	6000
35,00	**P922_0350 MEL**	2800	4500	**>48≤55**	53	65,2	4	333	61	2000	3000	6000
40,00	**P922_0400 ME**	2800	4500	**≤32**	12	60,6	4	328	59	2000	3000	5530
40,00	**P922_0400 ME**	2800	4500	**>32≤38**	14	60,6	4	328	59	2000	3000	5530
40,00	**P922_0400 ME**	2800	4500	**>38≤48**	17	60,6	4	328	59	2000	3000	5530
40,00	**P922_0400 MEL**	2800	4500	**>48≤55**	50	65,2	4	329	59	2000	3000	5530
50,00	**P922_0500 ME**	2800	4500	**≤32**	12	60,6	4	328	59	2000	3000	6000
50,00	**P922_0500 ME**	2800	4500	**>32≤38**	14	60,6	4	328	59	2000	3000	6000
50,00	**P922_0500 ME**	2800	4500	**>38≤48**	17	60,6	4	328	59	2000	3000	6000
50,00	**P922_0500 MEL**	2800	4500	**>48≤55**	50	65,2	4	329	59	2000	3000	6000
70,00	**P922_0700 ME**	2800	4500	**≤32**	12	60,6	4	316	59	2000	2700	5400
70,00	**P922_0700 ME**	2800	4500	**>32≤38**	14	60,6	4	316	59	2000	2700	5400
70,00	**P922_0700 ME**	2800	4500	**>38≤48**	17	60,6	4	316	59	2000	2700	5400
70,00	**P922_0700 MEL**	2800	4500	**>48≤55**	50	65,2	4	316	59	2000	2700	5400
100,0	**P922_1000 ME**	2800	4500	**≤32**	11	60,6	4	256	59	1400	2000	4000
100,0	**P922_1000 ME**	2800	4500	**>32≤38**	14	60,6	4	256	59	1400	2000	4000
100,0	**P922_1000 ME**	2800	4500	**>38≤48**	17	60,6	4	256	59	1400	2000	4000
100,0	**P922_1000 MEL**	2800	4500	**>48≤55**	50	65,2	4	256	59	1400	2000	4000



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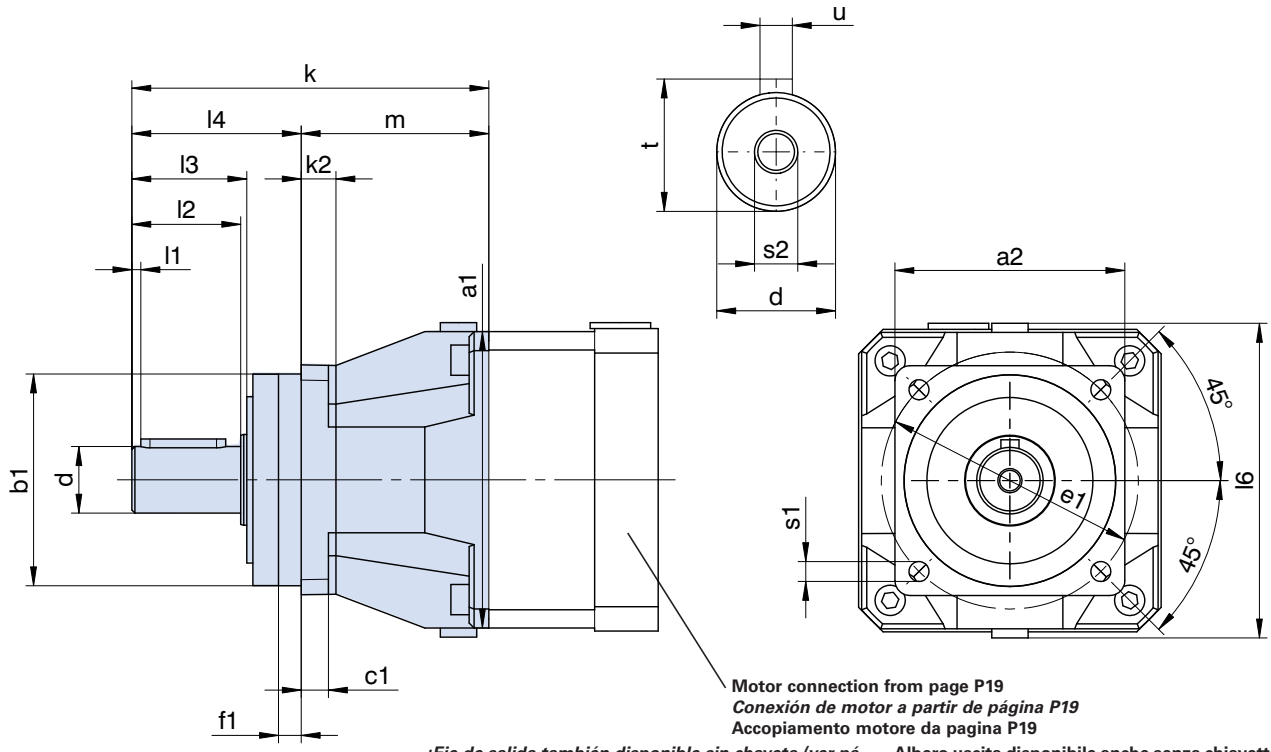
P2_ME - P9_ME



Motor connection from page P19
Conexión de motor a partir de página P19
Accopiamento motore da pagina P19

Output shaft can also be delivered without key (see page P3). Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta (ver página P3)! ¡Por favor observe las indicaciones en la página A19!

Albero uscita disponibile anche senza chiavetta (vedere a pagina P3)! Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	□a1	□a2	øb1	c1	ød	øe1	f1	k	k2	l1	l2	l3	l4	l6	m	øs1	s2	t	u
P221	55	55	50h6	6	12k6	63	7,0	77,5	-	2	22	24	36	62	41,5	5,5	M4	13,5	A4x4x18
P222	55	55	50h6	6	12k6	63	7,0	109,5	-	2	22	24	36	62	73,5	5,5	M4	13,5	A4x4x18
P321	72	72	60h6	7	16k6	75	7,5	101,5	-	2	28	30	48	79	53,5	5,5	M5	18,0	A5x5x22
P322	72	72	60h6	7	16k6	75	7,5	141,5	-	2	28	30	48	79	93,5	5,5	M5	18,0	A5x5x22
P421	98	76	70h6	9	22k6	85	7,5	118,0	12	3	36	38	56	98	62,0	6,6	M8	24,5	A6x6x28
P422	98	76	70h6	9	22k6	85	7,5	167,0	12	3	36	38	56	98	111,0	6,6	M8	24,5	A6x6x28
P521	114	101	90h6	10	32k6	120	15,0	153,0	14	3	58	60	88	121	65,0	9,0	M12	35,0	A10x8x50
P522	114	101	90h6	10	32k6	120	15,0	207,5	14	3	58	60	88	121	119,5	9,0	M12	35,0	A10x8x50
P721	145	144	130h6	15	40k6	165	3,5	192,0	-	4	82	85	112	145	80,0	11,0	M16	43,0	A12x8x70
P722	145	144	130h6	15	40k6	165	3,5	254,0	-	4	82	85	112	145	142,0	11,0	M16	43,0	A12x8x70
P821	190	190	160h6	15	55k6	215	10,0	224,0	-	6	82	85	112	190	112,0	13,5	M20	59,0	A16x10x70
P822	190	190	160h6	15	55k6	215	10,0	300,5	-	6	82	85	112	190	188,5	13,5	M20	59,0	A16x10x70
P921	225	212	180h6	17	75k6	250	10,0	288,0	22	7	105	109	143	225	145,0	17,5	M20	79,5	A20x12x90
P922	225	212	180h6	17	75k6	250	10,0	382,0	22	7	105	109	143	225	239,0	17,5	M20	79,5	A20x12x90

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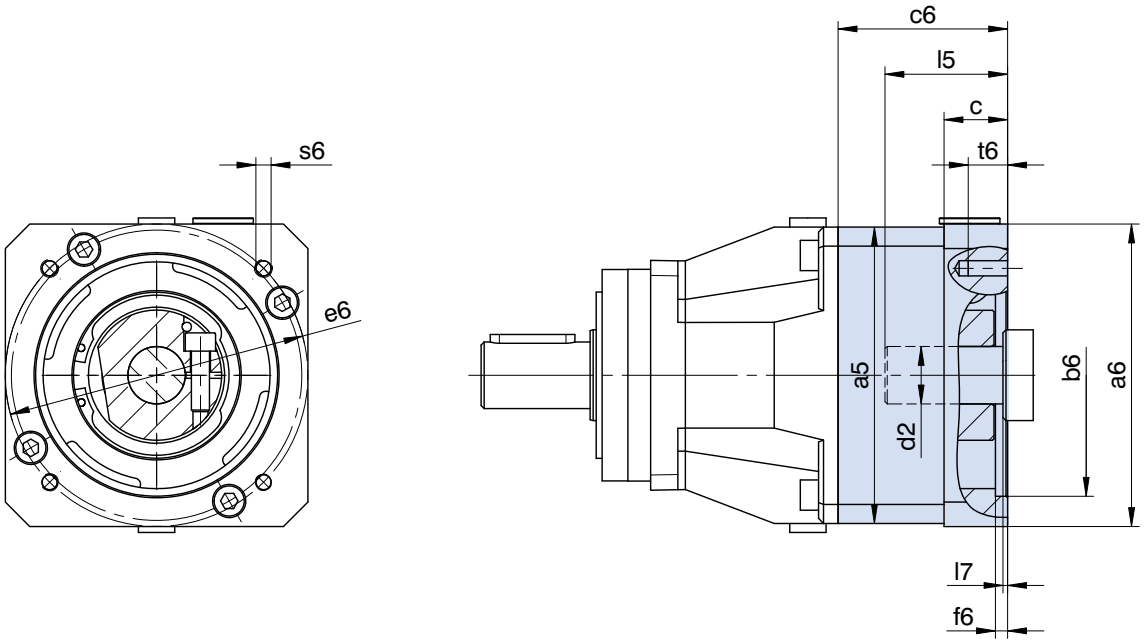
P2_ME - P9_ME



Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	□a5	□a6	c	c6	f6	l7max	s6	t6
P221/P222/P322	40,0H7	63	14	30	55	55	-	32,0	3,5	3,0	M4	6
P221/P222/P322	40,0H7	63	14	30	55	55	-	32,0	3,5	3,0	M5	11
P221/P222/P322	50,0H7	70	14	30	60	60	-	32,0	3,5	3,0	M4	9
P221/P222/P322	50,0H7	95	14	30	55	90	15	32,0	3,5	3,0	M6	15
P221/P222/P322	60,0H7	75	14	30	75	75	-	32,0	3,5	3,0	M5	11
P321/P422	40,0H7	63	19	40	72	75	18	51,5	3,0	3,0	M5	10
P321/P422	50,0H7	70	19	40	72	75	18	51,5	3,0	3,0	M4	8
P321/P422	50,0H7	95	19	40	72	80	18	51,5	3,0	3,0	M6	12
P321/P422	60,0H7	75	19	40	75	72	-	51,5	3,5	3,0	M5	11
P321/P422	60,0H7	90	19	40	72	75	18	51,5	3,5	3,0	M5	9
P321/P422	70,0H7	90	19	40	72	80	18	51,5	3,5	3,0	M5	10
P321/P422	80,0H7	100	19	40	90	90	-	51,5	3,5	3,0	M6	13
P321/P422	95,0H7	115	19	40	72	100	18	51,5	4,0	3,0	M8	18
P321/P422	95,0H7	130	19	40	72	115	18	51,5	4,0	3,0	M8	18
P421/P522	50,0H7	70	24	42	98	100	21	56,0	4,0	3,0	M4	10
P421/P522	50,0H7	95	24	42	98	100	21	56,0	2,5	3,0	M6	12
P421/P522	60,0H7	75	24	48	100	100	28	56,0	3,5	3,0	M5	10
P421/P522	60,0H7	75	24	42	98	100	21	56,0	3,5	3,0	M5	10
P421/P522	80,0H7	100	24	42	100	98	-	56,0	4,0	3,0	M6	13
P421/P522	95,0H7	115	24	42	100	98	-	56,0	4,0	3,0	M8	16
P421/P522	95,0H7	115	24	51	98	100	30	65,0	4,0	12,0	M8	16
P421/P522	95,0H7	130	24	42	98	115	21	56,0	4,0	3,0	M8	16
P421/P522	95,0H7	130	24	51	98	115	30	65,0	4,0	12,0	M8	16
P421/P522	110,0H7	130	24	51	98	115	30	65,0	4,0	12,0	M8	16
P421/P522	110,0H7	145	24	59	98	130	38	73,0	7,0	20,0	M8	16
P421/P522	130,0H7	165	24	51	98	140	30	65,0	7,0	12,0	M10	20
P521/P722	80,0H7	100	32	50	115	120	24	64,0	4,0	3,5	M6	12
P521/P722	95,0H7	115	32	50	115	115	-	64,0	4,0	3,5	M8	16
P521/P722	95,0H7	130	32	50	115	115	-	64,0	4,0	3,5	M8	16
P521/P722	110,0H7	130	32	50	115	115	-	64,0	4,0	3,5	M8	16
P521/P722	110,0H7	145	32	58	115	140	32	72,0	6,5	11,5	M8	16
P521/P722	110,0H7	145	32	68	115	140	42	82,0	7,0	21,5	M8	16
P521/P722	110,0H7	165	32	50	115	140	24	64,0	5,0	3,5	M10	24
P521/P722	130,0H7	165	32	58	115	140	32	72,0	5,0	11,5	M10	20
P721/P822	110,0H7	130	38	61	145	150	26	76,0	5,5	4,5	M8	16
P721/P822	110,0H7	145	38	72	145	150	37	87,0	5,5	15,5	M8	16
P721/P822	110,0H7	165	38	61	145	150	26	76,0	5,5	4,5	M10	26
P721/P822	114,3H7	200	38	80	145	180	45	95,0	5,5	23,5	M12	24
P721/P822	130,0H7	165	38	61	145	145	-	76,0	5,0	4,5	M10	20
P721/P822	130,0H7	165	38	61	145	150	45	45,0	5,5	4,5	M10	20
P721/P822	130,0H7	215	38	61	145	190	26	76,0	5,5	4,5	M12	26
P721/P822	180,0H7	215	38	61	145	190	26	76,0	5,5	4,5	M12	26
P721/P822	180,0H7	215	38	80	145	190	45	95,0	5,5	23,5	M12	24
P821/P922	114,3H7	200	48	81	190	204	35	94,0	4,0	4,5	M12	35
P821/P922	130,0H7	165	48	81	190	204	35	94,0	5,0	4,5	M10	20
P821/P922	130,0H7	215	48	81	190	204	35	94,0	5,0	4,5	M12	35
P821/P922	180,0H7	215	48	81	190	190	-	93,0	5,0	4,5	M12	25
P821/P922	180,0H7	215	48	82	190	204	35	94,0	5,5	5,5	M12	35
P821/P922	250,0H7	300	48	85	190	260	38	97,0	6,0	8,5	M16	38
P921	180,0H7	215	60	85	225	230	43	43,0	6,0	5,0	M12	24
P921	250,0H7	300	60	111	225	260	69	134,0	6,0	5,0	M16	32
P921	250,0H7	300	60	85	225	260	43	108,0	6,0	5,0	M16	32
P921	300,0H7	350	60	111	225	314	69	134,0	6,0	31,0	M16	32

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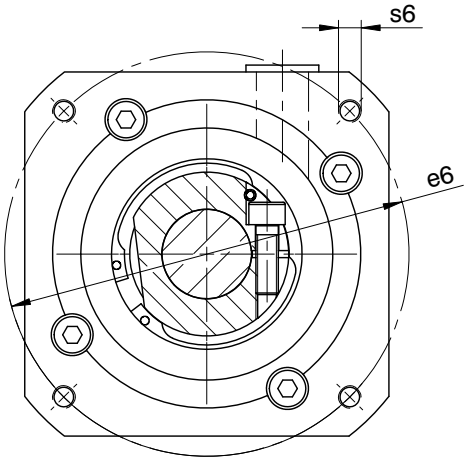
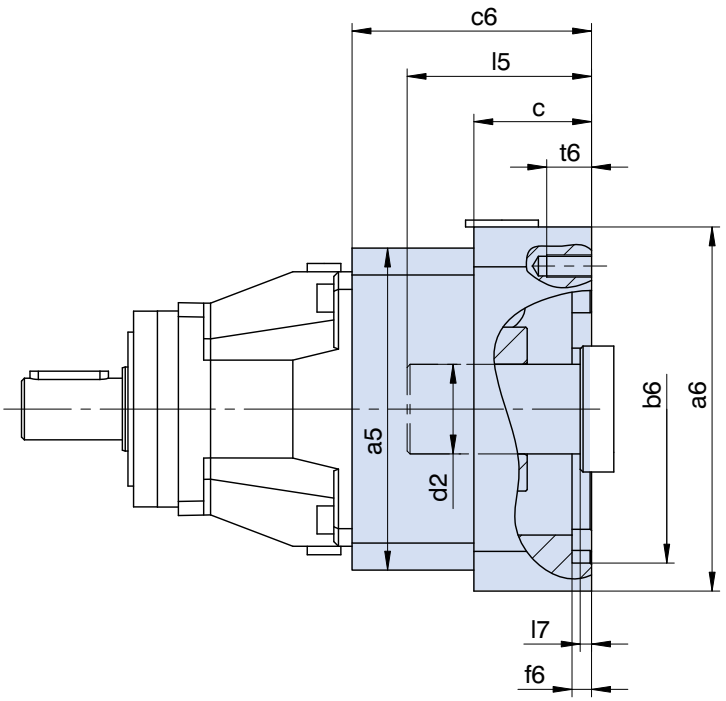
P2_MEL - P9_MEL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	□a5	□a6	c	c6	f6	l7max	s6	t6
P221/P222/P322	60,0H7	75	19	40	75	75	18	51,5	3,5	3,0	M5	10
P221/P222/P322	60,0H7	90	19	40	75	75	18	51,5	3,5	3,0	M5	9
P221/P222/P322	70,0H7	90	19	40	75	80	18	51,5	3,5	3,0	M5	10
P221/P222/P322	80,0H7	100	19	40	75	90	18	51,5	3,5	3,0	M6	12
P221/P222/P322	95,0H7	115	19	40	75	100	18	51,5	4,0	3,0	M8	18
P221/P222/P322	95,0H7	130	19	40	75	115	18	51,5	4,0	3,0	M8	18
P321/P422	50,0H7	70	24	42	100	100	21	57,8	4,0	3,0	M4	10
P321/P422	60,0H7	75	24	42	100	100	21	57,8	3,5	3,0	M5	10
P321/P422	80,0H7	100	24	42	100	100	21	57,8	4,0	3,0	M6	12
P321/P422	95,0H7	115	24	51	100	100	30	66,8	4,0	12,0	M8	16
P321/P422	95,0H7	115	24	42	100	100	21	57,8	4,0	3,0	M8	21
P321/P422	95,0H7	130	24	42	100	115	21	57,8	4,0	3,0	M8	16
P321/P422	95,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
P321/P422	110,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
P321/P422	110,0H7	145	24	59	100	130	38	74,8	7,0	20,0	M8	16
P321/P422	130,0H7	165	24	51	100	140	30	66,8	7,0	12,0	M10	20
P421/P522	80,0H7	100	32	50	115	120	24	67,5	4,0	3,5	M6	12
P421/P522	110,0H7	130	32	50	115	120	24	67,5	4,0	3,5	M8	16
P421/P522	110,0H7	145	32	58	115	140	32	75,5	6,5	11,5	M8	16
P421/P522	110,0H7	145	32	68	115	140	42	85,5	7,0	21,5	M8	16
P421/P522	110,0H7	165	32	50	115	140	24	67,5	5,0	3,5	M10	24
P421/P522	130,0H7	165	32	58	115	140	32	75,5	5,0	11,5	M10	20
P521/P722	110,0H7	130	38	61	145	150	26	80,0	5,5	4,5	M8	16
P521/P722	110,0H7	165	38	61	145	150	26	80,0	5,5	4,5	M10	26
P521/P722	114,3H7	200	38	80	145	180	45	99,0	5,5	23,5	M12	24
P521/P722	130,0H7	165	38	61	145	150	26	80,0	5,5	4,5	M10	26
P521/P722	130,0H7	215	38	61	145	190	26	80,0	5,5	4,5	M12	26
P521/P722	180,0H7	215	38	80	145	190	45	99,0	5,5	23,5	M12	24
P721/P822	114,3H7	200	48	81	190	204	35	102,0	4,0	4,5	M12	35
P721/P822	130,0H7	165	48	81	190	204	35	102,0	5,0	4,5	M10	20
P721/P822	180,0H7	215	48	82	190	204	35	102,0	5,5	5,5	M12	35
P721/P822	250,0H7	300	48	85	190	260	38	105,0	6,0	8,5	M16	38
P821/P922	250,0H7	300	60	85	225	260	43	110,0	6,0	5,0	M16	32
P821/P922	300,0H7	350	60	111	225	314	69	136,0	6,0	31,0	M16	32

ServoFit® PA Planetary Gear Units
Reductores planetarios ***ServoFit® PA***
ServoFit® Riduttori planetari **PA**

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Low backlash helical geared Precision Planetary Gear Units

- Acceleration torque: 50 – 1600 Nm
- Lowest backlash: 1 – 3 arcmin
- High torsional and axial stiffness
- Consistent oil quantity, suitable for every mounting position
- Best for helical geared rack and pinion drives
- FKM seal at input and output, continuous operation without cooling
- easy to assemble due to spreading function in the clamping hub
- Symmetrically friction-optimized output bearings
- Advanced gear technology
- Input with thermal length compensation
- Readily attaches any synchronous servo motor
- Easy and secure motor attachment in any mounting position
- Quiet running
- Efficiency:
  1 stage ≥ 97 %
  2 stage ≥ 95 %

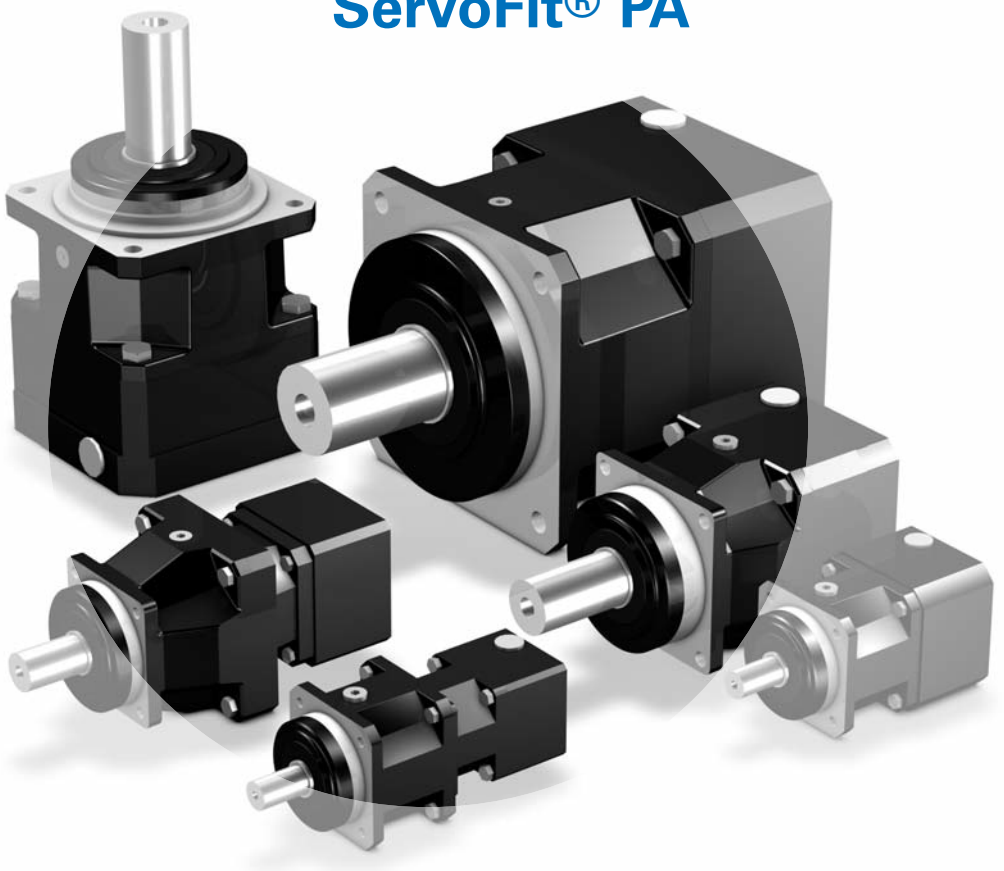
Reductores planetarios de precisión con dentado helicoidal de juego reducido

- *Par de aceleración: 50 – 1600 Nm*
- *Mínimo juego de giro: 1 – 3 arcmin*
- *Alta rigidez a la torsión y rigidez axial*
- *Cantidad de aceite consistente, apto para cualquier posición de montaje*
- *Perfectamente adecuados para accionamientos piñón-cremallera de dentado helicoidal*
- *Anillo retén de FKM a la entrada y a la salida, operación permanente sin enfriamiento*
- *Fácil de montar gracias a la función de expansión en el cojinete de apriete*
- *Apoyo de salida simétrico optimizado a la fricción*
- *Tecnología superior de dentado*
- *Entrada con compensación térmica de longitudes*
- *Equipable a cualquier motor servo síncono*
- *Adaptación sencilla y segura de motor en cualquier posición de instalación*
- *Marcha extremadamente suave*
- *Rendimiento:*
  1 tren ≥ 97 %
  2 trenes ≥ 95 %

Riduttori planetari di precisione con dentatura elicoidale e gioco ridotto

- Coppia di accelerazione: 50 – 1600 Nm
- Gioco minimo: 1 – 3 arcmin
- Rigidità torsionale e rigidità assiale elevate
- Quantità di olio uniforme, possibilità di impiego in tutte le posizioni
- Ottimamente indicati per azionamenti a a pignone / cremagliera con dentatura elicoidale
- Anello di tenuta in FKM in ingresso e uscita, funzionamento continuo senza raffreddamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Supporto albero uscita simmetrico ad attrito ottimizzato
- Tecnologia della dentatura avanzata
- Ingresso con compensazione longitudinale termica
- Montabili su qualsiasi servomotore sincorno
- Adattamento del motore semplice e sicuro in qualsiasi posizione di montaggio
- Estremamente silienziosi
- Rendimento:
  1 stadio ≥ 97 %
  2 stadi ≥ 95 %

ServoFit® PA



ServoFit® PA Planetary Gear Units
Reductores planetarios ***ServoFit® PA***
ServoFit® Riduttori planetari **PA**

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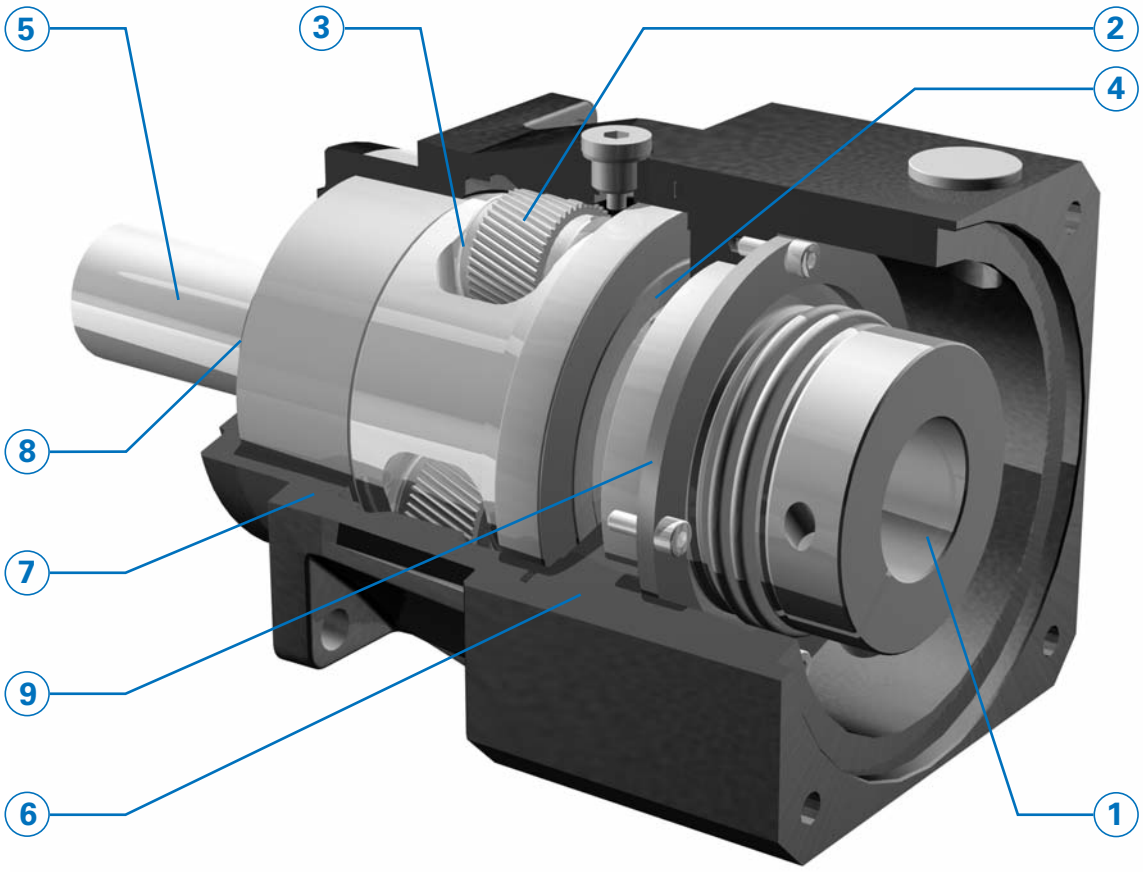


• **Highest running smoothness achieved by proven helical gearing and optimized microgeometry.**
On-hands experience gained over the past decades has consistently been put to practice. This has resulted mainly in optimized gear tooth microgeometry, ensuring highest backlash stability and extremely quiet gear operation.

• **Precision selection** of the gearing parts ensures backlash of less than **one arc minute**.

• **Symmetrically arranged output bearings** for high load capacity and high tilting rigidity of the output shaft. Already the standard version is suitable for **high axial and radial loads**.

• **The STOBER FlexiAdapt® motor adapter system** with its integrated thermal expansion compensation feature allows easy and accurate motor installation in minutes with no special tools required.

• **Wide selection** of IEC and NEMA motor adapters for all common brands of motors.

• ***Máxima suavidad de marcha por probado dentado helicoidal y microgeometría optimizada***
Los conocimientos prácticos de los últimos décadas han sido aplicados consecuentemente. Los resultados son ante todo, optimizaciones en la microgeometría del dentado. Ello garantiza máxima estabilidad de juego y un ruido de marcha extremadamente bajo.

• *Por **Precision Selection** de las piezas dentadas son realizados juegos de torsión menores que **1 minuto arco**.*

• ***Apoyo de salida simétrico** para alta carga y alta rigidez al vuelco del eje de salida. Ya en el estándar adecuados para **altas cargas axiales y radiales**.*

• *El **sistema STOBER FlexiAdapt®, de opciones para motor** con compensación térmica de longitudes integrada, permite el montaje sencillo y sin errores en pocos minutos. No se requieren herramientas especiales.*

• ***Gran selección** de adaptadores de motor (IEC y NEMA) para todos los tipos usuales de motores.*

• **Massima silenziosità grazie alla dentatura elicoidale collaudata ed alla microgeometria ottimizzata**
Le conoscenze empiriche degli ultimi decenni sono state trasposte in maniera coerente. Il risultato é soprattutto a perfezionamento della microgeometria della dentatura. Questo consente di ottenere una stabilità di gioco elevatissima abbinata ad una rumorosità estremamente bassa.

• Grazie alla **Precision Selection** delle parti dentate si realizzano giochi inferiori a **1 arco minuto**.

• **Supporto uscita simmetrico** per un carico ed una rigidità al ribaltamento elevati dell'albero uscita. Idoneo già a livello di standard per **carichi assiali e radiali elevati**.

• Il **sistema di montaggio motore FlexiAdapt® STOBER** , con compensazione longitudinale termica integrata, consente un montaggio del motore semplice e senza errori in pochi minuti. Non sono richiesti utensili speciali.

• **Ampia scelta** di adattatori motore (CEI e NEMA) per tutti i comuni tipi di motori.

ServoFit® PA Planetary Gear Units
Reductores planetarios ***ServoFit® PA***
ServoFit® Riduttori planetari **PA**

STÖBER

① **FlexiAdapt® coupling**
Accurate and precise motor installation by clamping screw. Designed **for large motor shaft diameters**.
The integrated **thermal expansion compensation** feature in the shape of a bellows coupling compensates linear expansion of the motor shaft.
Balanced clamp coupling for smooth operation, also at high speeds.
Spacer bushes to accommodate custom motor shaft diameters.

② **High gearing quality** provided by case-hardened and finish-ground sun gear, planet gears and honed ring gear.

③ **Load capacity of the planet gear bearings** increased by about 100 %.

④ **IP65** enclosure. Sealed with a **FKM** radial oil seal for the smallest possible shaft diameter. Reduces friction, thus preventing internal heat build-up. Increases efficiency. **Continuous duty** operation possible without addition cooling.

⑤ **Highest torsional stiffness and ultimate tensile strength** provided by oversized single-piece planet carriers made of high-tensile material.

⑥ Motor adapter made of aluminium for **low gear unit weight.**

⑦ **Highest running accuracy and precision** ensured by single-piece housing design. Housing material: High-tensile tempered ductile iron.

⑧ **FKM double-lip radial oil seals**. For continuous duty applications, with very good chemical resistance.

⑨ Input shaft bearings with shields and high-temperature grease for maintenance-free operation.

⑩ **Lubricated for life** with high-quality hydrophobic synthetic gear oil.

① ***Acoplamiento FlexiAdapt®***
Acoplamiento de motor ***sin errores*** *mediante un tornillo de apriete. Concebido para* ***grandes diámetros de ejes de motor****.*
La ***compensación térmica de longitudes*** *integrada, en forma de un acoplamiento tipo fuelle, compensa dilataciones longitudinales del eje del motor****.***
Acoplamiento ***equilibrado*** *de anillo de apriete para una marcha suave, también a alta velocidad.*
Manguitos distanciadores para la adaptación de diámetros no usuales de motor.

② ***Alta calidad de dentado*** *por piñones solares y ruedas planetarias templados por cementación y rectificados y dentado de rueda hueca bruñido.*

③ ***Capacidad de carga de los apoyos de los planetas*** *incrementada en aproximadamente 100 %.*

④ *Tipo de protección* ***IP65****. Sellado con anillo retén* ***FKM*** *sobre mínimo diámetro posible del eje. Reduce la fricción y así también el calentamiento. Aumenta el rendimiento.* ***Operación continua*** *posible sin enfriamiento adicional.*

⑤ ***Máxima rigidez a la torsión y resistencia a la rotura*** *por portaplanetas generosamente dimensionados, de una sola pieza, fabricados de material de alta resistencia.*

⑥ *Adaptador de motor de aluminio para* ***peso reducido del reductor****.*

⑦ ***Máxima exactitud y precisión de marcha*** *por diseño de carcasa de una pieza.*
Material de la carcasa: Fundición nodular de alta resistencia.

⑧ ***Anillos retén de doble labio de FKM****. Para el uso en operación continua así como para muy buena resistencia química.*

⑨ *Apoyos del eje de accionamiento con discos de cubierta y grasa para alta temperatura para operación libre de mantenimiento.*

⑩ ***Lubricación de por vida*** *con aceite sintético hidrófobo de alta calidad para reductores.*

① **Giunto FlexiAdapt®**
Montaggio del motore **senza errori** grazie alla vite di arresto. Concepito per **motori con grandi diametri dell'albero**.
La **compensazione longitudinale termica** integrata, avente forma di giunto a soffietto, compensa gli allungamenti longitudinali dell'albero motore.
Giunto di bloccaggio **equilibrato** per un funzionamento silenzioso, anche a altro numero di giri.
Bussole per l'adattamento ai diametri degli alberi motore non comuni.

② **Alta qualità della dentatura** grazie al solare cementato e lucidato, ai planetari e corona dentata levigati.

③ **Capacitá di carico del supporto planetario** aumentata del 100 % circa.

④ Classe di protezione **IP65**. Ermetizzazione con anello di tenuta radiale per alberi **FKM** sul diametro albero più piccolo. Riduce l'attrito e conseguentemente il riscaldamento. Aumenta il rendimento. Il **funzionamento continuo** è possibile senza raffreddamento aggiuntivo.

⑤ **Rigidità torsionale e resistenza a rottura** elevatissime grazie a porta planetari monoblocco in materiale ad alta resistenza sovradimensionati.

⑥ Adattatore per motore in alluminio per un **peso del riduttore contenuto**.

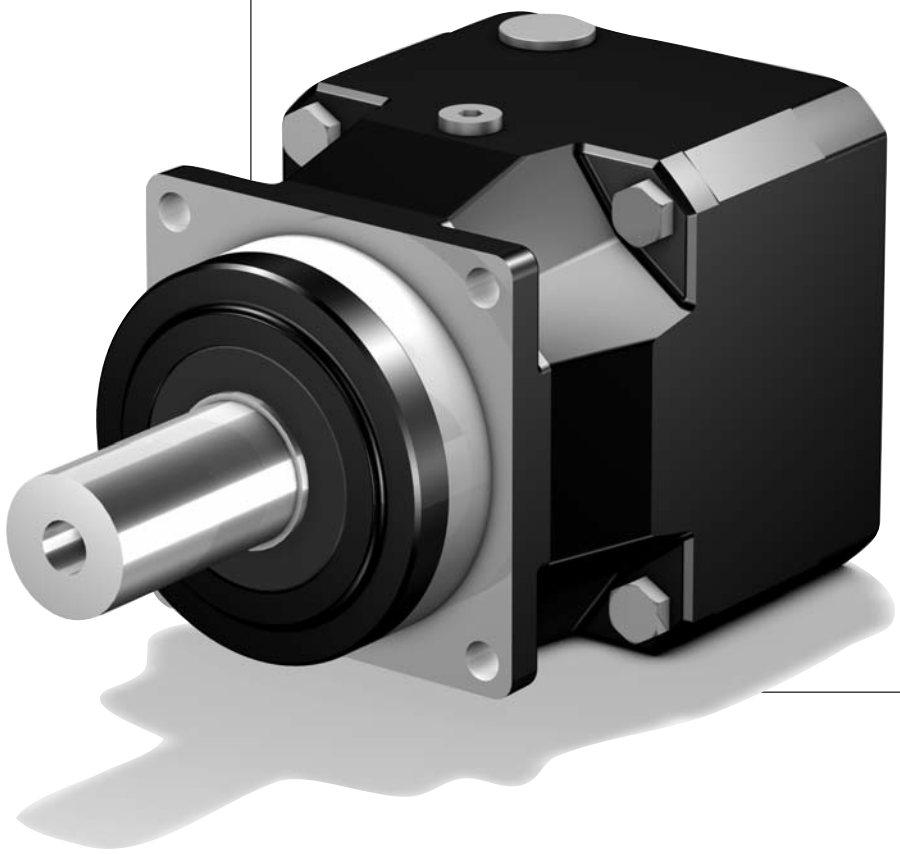
⑦ **Massima esattezza di funzionamento e precisione** grazie al design monoblocco della carcassa.
Materiale della carcassa: Ghisa sferoidale ad alta resistenza.

⑧ **Anelli di tenuta radiali per alberi a doppio labbro** in **FKM**. Per l'impiego in funzionamento continuo, nonché per una resistenza chimica ottimale.

⑨ Cuscinetto albero ingresso con schermato con grasso per alte temperature per un esercizio privo di richiede manutenzione.

⑩ **Lubrificazione a vita** con olio per riduttori sintetico idrofobico di alta qualità.

STÖBER



PA

Contents PA

Type designation	PA2
Shaft design Output shaft PA	PA3
Selection table	
ServoFit® PA Planetary Gear Units	PA5
Dimension drawings	
ServoFit® PA Planetary Gear Units	PA15

Resumen del contenido PA

Tipificación	*PA2*
Ejecución del eje Eje de salida PA	*PA3*
Tabla de selección	
Reductores planetarios ServoFit® PA	*PA5*
Dibujos acotados	
Reductores planetarios ServoFit® PA	*PA15*

Indice PA

Identificazione dei modelli	PA2
Esecuzione albero d'uscita PA	PA3
Tabella di selezione	
ServoFit® Riduttori planetari PA	PA5
Disegni quotati:	
ServoFit® Riduttori planetari PA	PA15

Type designation / *Tipificación* / Identificazione dei modelli

STÖBER

PA 4 2 1 S G D 0050 MF C

1 2 3 4 5 6 7 8 9 10

1 Gear unit type
PA – Planetary gear unit

2 Gear unit size

3 Generation number

4 Stages
1 – 1 stage
2 – 2 stage

5 Housing design
S – Standard design

6 Shaft design
G – shaft without key
P – shaft with key

7 Bearing design
D – reinforced bearings (axial)

8 Transmission ratio i x 10

9 Mounting series
MF – Motor adapter with FlexiAdapt® coupling
MFL – Motor adapter with FlexiAdapt® coupling and large motor plate
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page PA17, please observe the max. dimensions).
MB – Motor adapter square with brake (option) (see brochure ID 441904)

10 Ventilator module
C – ServoCool (option) (see brochure ID 441851)

Ordering data according to the type designation above.

Further ordering details:
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

ATTENTION! The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

1 *Tipo de reductor*
PA *– Reductor planetario*

2 *Tamaño del reductor*

3 *Cifra de generación*

4 *Número de trenes*
1 *– 1 tren*
2 *– 2 trenes*

5 *Tipo constructivo de la carcasa*
S *– Ejecución estándar*

6 *Ejecución del eje*
G *– eje sin chaveta*
P *– eje con chaveta*

7 *Ejecución de apoyos*
D *– apoyo reforzado (axial)*

8 *Número característico de la relación de reducción i x 10*

9 *Grupos de opciones*
MF *– Adaptador de motor con acoplamiento FlexiAdapt®*
MFL *– Adaptador de motor con acoplamiento FlexiAdapt® y placa grande de motor*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página PA17, por favor observar dimensiones máximas).
MB *– Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

10 *Módulo de ventilador*
C *– ServoCool (opción) (ver folleto ID 441851)*

Datos de pedido de acuerdo a la tipificación indicada arriba.

Otros datos de pedido:
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

¡ATENCIÓN! *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

1 Modello di riduttore
PA – Riduttore planetario

2 Taglia del riduttore

3 Numero di generazione

4 Numero di stadi
1 – 1-stadio
2 – 2-stadi

5 Tipo di carcassa
S – Esecuzione standard

6 Esecuzione albero
G – albero senza chiavetta
P – albero con chiavetta

7 Esecuzione supporto
D – supporto rinforzato (assiale)

8 Rapporto di riduzione i x 10

9 Opzioni annessi
MF – adattatore motore con giunto FlexiAdapt®
MFL – adattatore motore con FlexiAdapt® giunto e flangia motore grande
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore da pagina PA17, si prega di rispettare le misure max.).
MB – Adattatore motore quadro con freno (opzione) (vedere prospetto ID 441904)

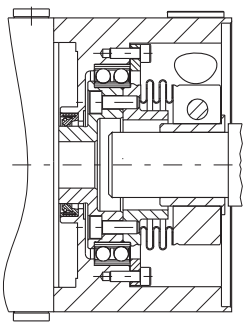
10 Modulo ventilatore
C – ServoCool (opzione) (vedere prospetto ID 441851)

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.

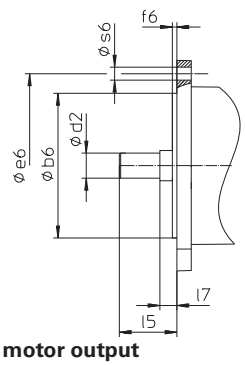
Altri dati dell'ordine:
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

ATTENZIONE! Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

PA421SGD 0050 MF



FlexiAdapt® Coupling MF
FlexiAdapt® Acoplamiento MF
Giunto FlexiAdapt® MF



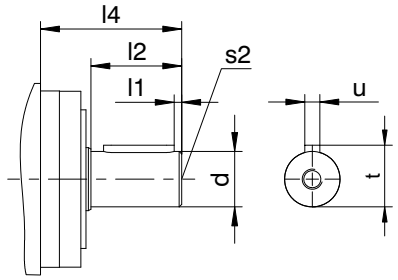
Picture: motor output
Fig. salida de motor
Fig. Uscita motore

Shaft design
Output shaft **PA**

Ejecución del eje
*Eje de salida **PA***

Esecuzione albero
Albero d'uscita **PA**

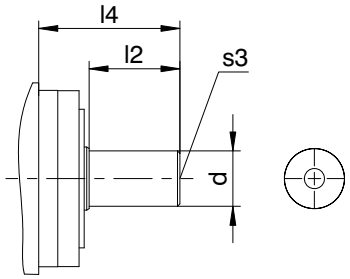
Shaft with key / *eje con chaveta* / albero con chiavetta



Shaft design "P" / *Ejecución del eje "P"*/ Esecuzione albero "P"

Typ	ød	l1	l2	l4	s2[1)]	t	u[2)]
PA3	16k6	2	28	48	M5	18,0	A5x5x22
PA4	22k6	3	36	56	M8	24,5	A6x6x28
PA5	32k6	3	58	88	M12	35,0	A10x8x50
PA7	40k6	4	82	112	M16	43,0	A12x8x70
PA8	55k6	6	82	112	M20	59,0	A16x10x70

Shaft without key / *eje sin chaveta* / albero senza chiavetta



Shaft design "G" / *Ejecución del eje "G"*/ Esecuzione albero "G"

Typ	ød	l2	l4	s3[1)]
PA3	16k6	28	48	M5
PA4	22k6	36	56	M8
PA5	32k6	58	88	M12
PA7	40k6	82	112	M16
PA8	55k6	82	112	M20

1) Centre holes acc. to DIN 332 T2 shape DR.

2) Feather keys: The width tolerance of the feather key to DIN 6885 is h9 according.

1) Agujeros de centrado según DIN 332-T2, forma DR.

2) Chavetas: Para el ancho de la chaveta según DIN 6885 vale la tolerancia h9.

1) Fori di centraggio accordo a norma DIN 332-T2, forma DR.

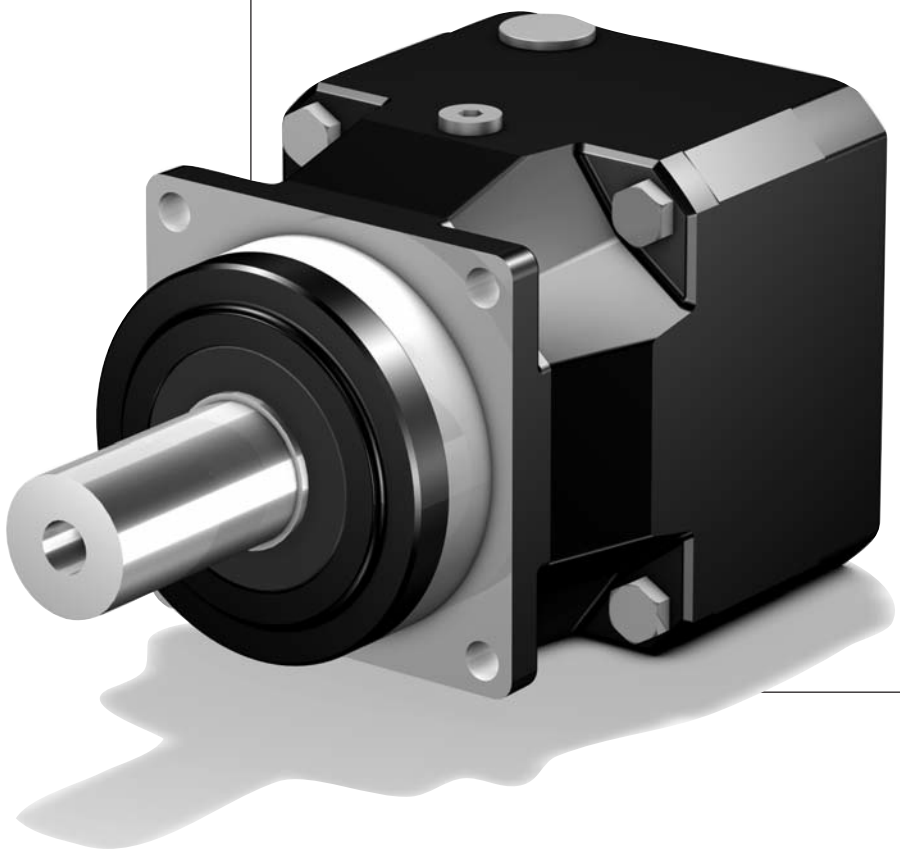
2) Chiavette: Per la larghezza della chiavetta a norma DIN 6885 vale la tolleranza h9.

Selection table
ServoFit® PA
Planetary Gear Units

Tabla de selección
Reductores planetarios
ServoFit® PA

Tabella di selezione
ServoFit®
Riduttori planetari **PA**

STÖBER



Selection table **ServoFit® PA** Planetary Gear Units

*Tabla de selección Reductores planetarios **ServoFit® PA***

Tabella di selezione **ServoFit®** Riduttori planetari **PA**

STÖBER

Symbols:

i – Gear unit ratio
n_{1MAX} – Max. input speed
DB – Continuous operation
ZB – Cycle operation (at ambient temperature 20°C, also see page A11/A12)
$M_{W\varnothing}$ – Motor shaft diameter
J_1 – Mass mom. of inertia (related to input)
G – Weight
$\Lambda\varphi_2$ – Backlash
C_2 – Gear unit rigidity (related to output at M_{2B})
L_{PA} – Max. noise level (n_1 = 2000 rpm)
M_{2N} – Rated torque 1)
M_{2B} – Max. perm. acceleration torque
Attention: Values for M_{2B} are valid for gear units with shaft design "G". Therefore we generally recommend this shaft design for cycle operation.
M_{2NOT} – Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

1) Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

Denominaciones:

i – *Relación de reducción*
n_{1MAX} – *Velocidad máx. de entrada*
DB – Trabajo continuo
ZB – Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
$M_{W\varnothing}$ – *Diámetro de eje del motor*
J_1 – *Momento de inercia de masa (referido a la entrada)*
G – *Peso*
$\Lambda\varphi_2$ – *Juego de giro*
C_2 – *Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} – *Ruido máx. de marcha (n_1 = 2000 min-1)*
M_{2N} – *Par nominal 1)*
M_{2B} – *Par máx. admisible de aceleración*
Atención: *Datos respecto a M_{2B} se refieren al reductor en ejecución de eje "G". Por ello, esta ejecución de eje es recomendada en general para trabajo cíclico.*
M_{2NOT} – *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

1) Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

Simboli:

i – Rapporto di riduzione
n_{1MAX} – max. numero di giri in ingresso
DB – funzionamento continuo
ZB – funzionamento ciclico (a temperatura ambiente di 20°C, vedere anche pag. A11/A12)
MW$\varnothing$ – Diametro dell'albero motore
J_1 – Momento di inerzia (riferito all'ingresso)
G – Peso
$\Lambda\varphi_2$ – Gioco
C_2 – Rigidità del riduttore (riferito all'albero uscita per M_{2B})
L_{PA} – Rumorosità max. (n_1 = 2000 min-1)
M_{2N} – Coppia nominale 1)
M_{2B} – Coppia di accelerazione max. ammessa
Attenzione: I dati relativi a M_{2B} si riferiscono al riduttore nell'esecuzione albero "G". Quest'esecuzione albero è generalmente raccomandata per funzionamento ciclico.
M_{2NOT} – Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

1) I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

STÖBER

Please take notice of the indications on page PA6! ***¡Por favor observe las indicaciones en la página PA6!*** **Si raccomanda di rispettare le avvertenze a pagina PA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PA321 (M_{2BMAX}=65 Nm)												
3,000	**PA321_0030 MF**	3500	6000	**≤14**	0,69	2,1	2	5,0	62	30	50	96
3,000	**PA321_0030 MF**	3500	6000	**>14≤19**	0,69	2,1	2	5,0	62	30	50	120
3,000	**PA321_0030 MFL**	3500	6000	**>19≤24**	1,7	2,9	2	5,5	62	30	50	120
4,000	**PA321_0040 MF**	3700	6500	**≤14**	0,61	2,1	2	4,9	59	45	65	130
4,000	**PA321_0040 MF**	3700	6500	**>14≤19**	0,61	2,1	2	4,9	59	45	65	130
4,000	**PA321_0040 MFL**	3700	6500	**>19≤24**	1,7	2,9	2	5,2	59	45	65	130
5,000	**PA321_0050 MF**	4000	7000	**≤14**	0,57	2,1	2	4,9	58	45	65	130
5,000	**PA321_0050 MF**	4000	7000	**>14≤19**	0,57	2,1	2	4,9	58	45	65	130
5,000	**PA321_0050 MFL**	4000	7000	**>19≤24**	1,6	2,9	2	5,0	58	45	65	130
7,000	**PA321_0070 MF**	4500	8000	**≤14**	0,51	2,1	2	4,3	57	45	60	130
7,000	**PA321_0070 MF**	4500	8000	**>14≤19**	0,51	2,1	2	4,3	57	45	60	130
7,000	**PA321_0070 MFL**	4500	8000	**>19≤24**	1,6	2,9	2	4,4	57	45	60	130
8,000	**PA321_0080 MF**	4500	8000	**≤14**	0,50	2,1	2	4,1	56	40	50	100
8,000	**PA321_0080 MF**	4500	8000	**>14≤19**	0,50	2,1	2	4,1	56	40	50	100
8,000	**PA321_0080 MFL**	4500	8000	**>19≤24**	1,6	2,9	2	4,2	56	40	50	100
10,00	**PA321_0100 MF**	4500	8000	**≤14**	0,50	2,1	2	4,0	55	30	50	100
10,00	**PA321_0100 MF**	4500	8000	**>14≤19**	0,50	2,1	2	4,0	55	30	50	100
10,00	**PA321_0100 MFL**	4500	8000	**>19≤24**	1,6	2,9	2	4,0	55	30	50	100
PA322 (M_{2BMAX}=65 Nm)												
12,00	**PA322_0120 MF**	4500	8000	**≤14**	0,15	2,4	3	4,2	59	30	50	120
16,00	**PA322_0160 MF**	4500	8000	**≤14**	0,14	2,4	3	4,5	59	45	65	130
20,00	**PA322_0200 MF**	4500	8000	**≤14**	0,14	2,4	3	4,6	59	45	65	130
25,00	**PA322_0250 MF**	4500	8000	**≤14**	0,12	2,4	3	4,6	57	45	65	130
28,00	**PA322_0280 MF**	4500	8000	**≤14**	0,11	2,4	3	4,5	56	45	65	130
32,00	**PA322_0320 MF**	4500	8000	**≤14**	0,14	2,4	3	4,1	59	40	50	100
35,00	**PA322_0350 MF**	4500	8000	**≤14**	0,11	2,4	3	4,6	56	45	65	130
40,00	**PA322_0400 MF**	4500	8000	**≤14**	0,10	2,4	3	4,4	54	45	65	130
50,00	**PA322_0500 MF**	4500	8000	**≤14**	0,10	2,4	3	4,5	54	45	65	130
56,00	**PA322_0560 MF**	4500	8000	**≤14**	0,11	2,4	3	4,1	56	40	50	100
70,00	**PA322_0700 MF**	4500	8000	**≤14**	0,10	2,4	3	4,2	54	45	60	130
80,00	**PA322_0800 MF**	4500	8000	**≤14**	0,10	2,4	3	4,1	54	40	50	100
100,0	**PA322_1000 MF**	4500	8000	**≤14**	0,10	2,4	3	3,9	54	30	50	100
PA421 (M_{2BMAX}=120 Nm)												
3,000	**PA421_0030 MF**	3000	5500	**≤14**	2,3	4,0	2	11	63	50	100	130
3,000	**PA421_0030 MF**	3000	5500	**>14≤19**	2,4	4,0	2	11	63	50	100	170
3,000	**PA421_0030 MF**	3000	5500	**>19≤24**	2,3	4,0	2	11	63	50	100	210
3,000	**PA421_0030 MFL**	3000	5500	**>24≤32**	5,4	4,7	2	12	63	50	100	240
4,000	**PA421_0040 MF**	3300	6000	**≤14**	1,9	4,0	2	11	60	85	120	180
4,000	**PA421_0040 MF**	3300	6000	**>14≤19**	2,0	4,0	2	11	60	85	120	230
4,000	**PA421_0040 MF**	3300	6000	**>19≤24**	1,9	4,0	2	11	60	85	120	240
4,000	**PA421_0040 MFL**	3300	6000	**>24≤32**	5,0	4,7	2	12	60	85	120	240
5,000	**PA421_0050 MF**	3700	6500	**≤14**	1,8	4,0	2	11	59	85	120	220
5,000	**PA421_0050 MF**	3700	6500	**>14≤19**	1,9	4,0	2	11	59	85	120	240
5,000	**PA421_0050 MF**	3700	6500	**>19≤24**	1,8	4,0	2	11	59	85	120	240
5,000	**PA421_0050 MFL**	3700	6500	**>24≤32**	4,9	4,7	2	11	59	85	120	240
7,000	**PA421_0070 MF**	4000	7000	**≤14**	1,7	4,0	2	9,9	58	85	110	240
7,000	**PA421_0070 MF**	4000	7000	**>14≤19**	1,7	4,0	2	9,9	58	85	110	240
7,000	**PA421_0070 MF**	4000	7000	**>19≤24**	1,6	4,0	2	9,9	58	85	110	240
7,000	**PA421_0070 MFL**	4000	7000	**>24≤32**	4,8	4,7	2	10,0	58	85	110	240
8,000	**PA421_0080 MF**	4000	7000	**≤14**	1,7	4,0	2	9,4	57	80	100	200
8,000	**PA421_0080 MF**	4000	7000	**>14≤19**	1,7	4,0	2	9,4	57	80	100	200
8,000	**PA421_0080 MF**	4000	7000	**>19≤24**	1,6	4,0	2	9,4	57	80	100	200
8,000	**PA421_0080 MFL**	4000	7000	**>24≤32**	4,8	4,7	2	9,4	57	80	100	200
10,00	**PA421_0100 MF**	4000	7000	**≤14**	1,7	4,0	2	8,9	56	60	100	200
10,00	**PA421_0100 MF**	4000	7000	**>14≤19**	1,7	4,0	2	8,9	56	60	100	200
10,00	**PA421_0100 MF**	4000	7000	**>19≤24**	1,6	4,0	2	8,9	56	60	100	200

Planetary Gear Units **PA**
Reductores planetarios ***PA***
Riduttori planetari **PA**

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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PA421 (M_{2BMAX}=120 Nm)												
10,00	**PA421_0100 MFL**	4000	7000	**>24≤32**	4,7	4,7	2	9,0	56	60	100	200
PA422 (M_{2BMAX}=120 Nm)												
12,00	**PA422_0120 MF**	3700	6500	**≤14**	0,65	5,2	3	9,8	60	50	100	240
12,00	**PA422_0120 MF**	3700	6500	**>14≤19**	0,65	5,2	3	9,8	60	50	100	240
12,00	**PA422_0120 MFL**	3700	6500	**>19≤24**	1,7	5,9	3	9,9	60	50	100	240
16,00	**PA422_0160 MF**	3700	6500	**≤14**	0,63	5,2	3	10	60	85	120	240
16,00	**PA422_0160 MF**	3700	6500	**>14≤19**	0,63	5,2	3	10	60	85	120	240
16,00	**PA422_0160 MFL**	3700	6500	**>19≤24**	1,7	5,9	3	10	60	85	120	240
20,00	**PA422_0200 MF**	3700	6500	**≤14**	0,62	5,2	3	11	60	85	120	240
20,00	**PA422_0200 MF**	3700	6500	**>14≤19**	0,62	5,2	3	11	60	85	120	240
20,00	**PA422_0200 MFL**	3700	6500	**>19≤24**	1,7	5,9	3	11	60	85	120	240
25,00	**PA422_0250 MF**	4000	7000	**≤14**	0,57	5,2	3	11	58	85	120	240
25,00	**PA422_0250 MF**	4000	7000	**>14≤19**	0,57	5,2	3	11	58	85	120	240
25,00	**PA422_0250 MFL**	4000	7000	**>19≤24**	1,6	5,9	3	11	58	85	120	240
28,00	**PA422_0280 MF**	4500	8000	**≤14**	0,52	5,2	3	10	57	85	120	240
28,00	**PA422_0280 MF**	4500	8000	**>14≤19**	0,52	5,2	3	10	57	85	120	240
28,00	**PA422_0280 MFL**	4500	8000	**>19≤24**	1,6	5,9	3	10	57	85	120	240
32,00	**PA422_0320 MF**	3700	6500	**≤14**	0,62	5,2	3	9,2	60	80	100	200
32,00	**PA422_0320 MF**	3700	6500	**>14≤19**	0,62	5,2	3	9,2	60	80	100	200
32,00	**PA422_0320 MFL**	3700	6500	**>19≤24**	1,7	5,9	3	9,2	60	80	100	200
35,00	**PA422_0350 MF**	4500	8000	**≤14**	0,52	5,2	3	11	57	85	120	240
35,00	**PA422_0350 MF**	4500	8000	**>14≤19**	0,52	5,2	3	11	57	85	120	240
35,00	**PA422_0350 MFL**	4500	8000	**>19≤24**	1,6	5,9	3	11	57	85	120	240
40,00	**PA422_0400 MF**	4500	8000	**≤14**	0,50	5,2	3	10	55	85	120	240
40,00	**PA422_0400 MF**	4500	8000	**>14≤19**	0,50	5,2	3	10	55	85	120	240
40,00	**PA422_0400 MFL**	4500	8000	**>19≤24**	1,6	5,9	3	10	55	85	120	240
50,00	**PA422_0500 MF**	4500	8000	**≤14**	0,50	5,2	3	10	55	85	120	240
50,00	**PA422_0500 MF**	4500	8000	**>14≤19**	0,50	5,2	3	10	55	85	120	240
50,00	**PA422_0500 MFL**	4500	8000	**>19≤24**	1,6	5,9	3	10	55	85	120	240
56,00	**PA422_0560 MF**	4500	8000	**≤14**	0,52	5,2	3	9,2	57	80	100	200
56,00	**PA422_0560 MF**	4500	8000	**>14≤19**	0,52	5,2	3	9,2	57	80	100	200
56,00	**PA422_0560 MFL**	4500	8000	**>19≤24**	1,6	5,9	3	9,2	57	80	100	200
70,00	**PA422_0700 MF**	4500	8000	**≤14**	0,50	5,2	3	9,6	55	85	110	240
70,00	**PA422_0700 MF**	4500	8000	**>14≤19**	0,50	5,2	3	9,6	55	85	110	240
70,00	**PA422_0700 MFL**	4500	8000	**>19≤24**	1,6	5,9	3	9,6	55	85	110	240
80,00	**PA422_0800 MF**	4500	8000	**≤14**	0,50	5,2	3	9,2	55	80	100	200
80,00	**PA422_0800 MF**	4500	8000	**>14≤19**	0,50	5,2	3	9,2	55	80	100	200
80,00	**PA422_0800 MFL**	4500	8000	**>19≤24**	1,6	5,9	3	9,2	55	80	100	200
100,0	**PA422_1000 MF**	4500	8000	**≤14**	0,50	5,2	3	8,8	55	60	100	200
100,0	**PA422_1000 MF**	4500	8000	**>14≤19**	0,50	5,2	3	8,8	55	60	100	200
100,0	**PA422_1000 MFL**	4500	8000	**>19≤24**	1,6	5,9	3	8,8	55	60	100	200

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Please take notice of the indications on page PA6! ***¡Por favor observe las indicaciones en la página PA6!*** **Si raccomanda di rispettare le avvertenze a pagina PA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PA521 (M_{2BMAX}=300 Nm)												
3,000	**PA521_0030 MF**	2500	4500	**≤19**	7,6	6,5	1	30	64	120	200	260
3,000	**PA521_0030 MF**	2500	4500	**>19≤24**	7,7	6,5	1	31	64	120	200	430
3,000	**PA521_0030 MF**	2500	4500	**>24≤32**	7,6	6,5	1	31	64	120	200	460
3,000	**PA521_0030 MFL**	2500	4500	**>32≤38**	14	8,2	1	33	64	120	200	460
4,000	**PA521_0040 MF**	3000	5000	**≤19**	5,9	6,5	1	29	61	210	280	350
4,000	**PA521_0040 MF**	3000	5000	**>19≤24**	5,9	6,5	1	29	61	210	300	580
4,000	**PA521_0040 MF**	3000	5000	**>24≤32**	5,8	6,5	1	29	61	210	300	600
4,000	**PA521_0040 MFL**	3000	5000	**>32≤38**	13	8,2	1	31	61	210	300	600
5,000	**PA521_0050 MF**	3500	6000	**≤19**	5,4	6,5	1	29	60	210	300	430
5,000	**PA521_0050 MF**	3500	6000	**>19≤24**	5,5	6,5	1	29	60	210	300	600
5,000	**PA521_0050 MF**	3500	6000	**>24≤32**	5,4	6,5	1	29	60	210	300	600
5,000	**PA521_0050 MFL**	3500	6000	**>32≤38**	12	8,2	1	30	60	210	300	600
7,000	**PA521_0070 MF**	3700	6500	**≤19**	5,1	6,5	1	27	59	210	270	600
7,000	**PA521_0070 MF**	3700	6500	**>19≤24**	5,1	6,5	1	27	59	210	270	600
7,000	**PA521_0070 MF**	3700	6500	**>24≤32**	5,0	6,5	1	27	59	210	270	600
7,000	**PA521_0070 MFL**	3700	6500	**>32≤38**	12	8,2	1	28	59	210	270	600
8,000	**PA521_0080 MF**	3700	6500	**≤19**	5,0	6,5	1	25	58	200	250	500
8,000	**PA521_0080 MF**	3700	6500	**>19≤24**	5,0	6,5	1	25	58	200	250	500
8,000	**PA521_0080 MF**	3700	6500	**>24≤32**	4,9	6,5	1	25	58	200	250	500
8,000	**PA521_0080 MFL**	3700	6500	**>32≤38**	12	8,2	1	26	58	200	250	500
10,00	**PA521_0100 MF**	3700	6500	**≤19**	4,9	6,5	1	25	57	140	250	500
10,00	**PA521_0100 MF**	3700	6500	**>19≤24**	4,9	6,5	1	25	57	140	250	500
10,00	**PA521_0100 MF**	3700	6500	**>24≤32**	4,8	6,5	1	25	57	140	250	500
10,00	**PA521_0100 MFL**	3700	6500	**>32≤38**	12	8,2	1	25	57	140	250	500
PA522 (M_{2BMAX}=300 Nm)												
12,00	**PA522_0120 MF**	3300	6000	**≤14**	2,0	8,5	2	27	61	120	200	460
12,00	**PA522_0120 MF**	3300	6000	**>14≤19**	2,0	8,5	2	27	61	120	200	460
12,00	**PA522_0120 MF**	3300	6000	**>19≤24**	1,9	8,5	2	27	61	120	200	460
12,00	**PA522_0120 MFL**	3300	6000	**>24≤32**	5,1	9,2	2	27	61	120	200	460
16,00	**PA522_0160 MF**	3300	6000	**≤14**	2,0	8,5	2	27	61	210	300	600
16,00	**PA522_0160 MF**	3300	6000	**>14≤19**	2,0	8,5	2	27	61	210	300	600
16,00	**PA522_0160 MF**	3300	6000	**>19≤24**	1,9	8,5	2	27	61	210	300	600
16,00	**PA522_0160 MFL**	3300	6000	**>24≤32**	5,0	9,2	2	27	61	210	300	600
20,00	**PA522_0200 MF**	3300	6000	**≤14**	2,0	8,5	2	28	61	210	300	600
20,00	**PA522_0200 MF**	3300	6000	**>14≤19**	2,0	8,5	2	28	61	210	300	600
20,00	**PA522_0200 MF**	3300	6000	**>19≤24**	1,9	8,5	2	28	61	210	300	600
20,00	**PA522_0200 MFL**	3300	6000	**>24≤32**	5,0	9,2	2	28	61	210	300	600
25,00	**PA522_0250 MF**	3700	6500	**≤14**	1,8	8,5	2	28	59	210	300	600
25,00	**PA522_0250 MF**	3700	6500	**>14≤19**	1,9	8,5	2	28	59	210	300	600
25,00	**PA522_0250 MF**	3700	6500	**>19≤24**	1,8	8,5	2	28	59	210	300	600
25,00	**PA522_0250 MFL**	3700	6500	**>24≤32**	4,9	9,2	2	28	59	210	300	600
28,00	**PA522_0280 MF**	4000	7000	**≤14**	1,7	8,5	2	27	58	210	300	600
28,00	**PA522_0280 MF**	4000	7000	**>14≤19**	1,7	8,5	2	27	58	210	300	600
28,00	**PA522_0280 MF**	4000	7000	**>19≤24**	1,6	8,5	2	27	58	210	300	600
28,00	**PA522_0280 MFL**	4000	7000	**>24≤32**	4,8	9,2	2	27	58	210	300	600
32,00	**PA522_0320 MF**	3300	6000	**≤14**	1,9	8,5	2	25	61	200	250	500
32,00	**PA522_0320 MF**	3300	6000	**>14≤19**	2,0	8,5	2	25	61	200	250	500
32,00	**PA522_0320 MF**	3300	6000	**>19≤24**	1,9	8,5	2	25	61	200	250	500
32,00	**PA522_0320 MFL**	3300	6000	**>24≤32**	5,0	9,2	2	25	61	200	250	500
35,00	**PA522_0350 MF**	4000	7000	**≤14**	1,7	8,5	2	28	58	210	300	600
35,00	**PA522_0350 MF**	4000	7000	**>14≤19**	1,7	8,5	2	28	58	210	300	600
35,00	**PA522_0350 MF**	4000	7000	**>19≤24**	1,6	8,5	2	28	58	210	300	600
35,00	**PA522_0350 MFL**	4000	7000	**>24≤32**	4,8	9,2	2	28	58	210	300	600
40,00	**PA522_0400 MF**	4000	7000	**≤14**	1,7	8,5	2	26	56	210	300	600
40,00	**PA522_0400 MF**	4000	7000	**>14≤19**	1,7	8,5	2	26	56	210	300	600
40,00	**PA522_0400 MF**	4000	7000	**>19≤24**	1,6	8,5	2	26	56	210	300	600
40,00	**PA522_0400 MFL**	4000	7000	**>24≤32**	4,8	9,2	2	26	56	210	300	600
50,00	**PA522_0500 MF**	4000	7000	**≤14**	1,7	8,5	2	27	56	210	300	600
50,00	**PA522_0500 MF**	4000	7000	**>14≤19**	1,7	8,5	2	27	56	210	300	600

Planetary Gear Units **PA**
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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PA522 (M_{2BMAX}=300 Nm)												
50,00	**PA522_0500 MF**	4000	7000	**>19≤24**	1,6	8,5	2	27	56	210	300	600
50,00	**PA522_0500 MFL**	4000	7000	**>24≤32**	4,8	9,2	2	27	56	210	300	600
56,00	**PA522_0560 MF**	4000	7000	**≤14**	1,7	8,5	2	25	58	200	250	500
56,00	**PA522_0560 MF**	4000	7000	**>14≤19**	1,7	8,5	2	25	58	200	250	500
56,00	**PA522_0560 MF**	4000	7000	**>19≤24**	1,6	8,5	2	25	58	200	250	500
56,00	**PA522_0560 MFL**	4000	7000	**>24≤32**	4,8	9,2	2	25	58	200	250	500
70,00	**PA522_0700 MF**	4000	7000	**≤14**	1,7	8,5	2	26	56	210	270	600
70,00	**PA522_0700 MF**	4000	7000	**>14≤19**	1,7	8,5	2	26	56	210	270	600
70,00	**PA522_0700 MF**	4000	7000	**>19≤24**	1,6	8,5	2	26	56	210	270	600
70,00	**PA522_0700 MFL**	4000	7000	**>24≤32**	4,7	9,2	2	26	56	210	270	600
80,00	**PA522_0800 MF**	4000	7000	**≤14**	1,7	8,5	2	25	56	200	250	500
80,00	**PA522_0800 MF**	4000	7000	**>14≤19**	1,7	8,5	2	25	56	200	250	500
80,00	**PA522_0800 MF**	4000	7000	**>19≤24**	1,6	8,5	2	25	56	200	250	500
80,00	**PA522_0800 MFL**	4000	7000	**>24≤32**	4,7	9,2	2	25	56	200	250	500
100,0	**PA522_1000 MF**	4000	7000	**≤14**	1,7	8,5	2	24	56	140	250	500
100,0	**PA522_1000 MF**	4000	7000	**>14≤19**	1,7	8,5	2	24	56	140	250	500
100,0	**PA522_1000 MF**	4000	7000	**>19≤24**	1,6	8,5	2	24	56	140	250	500
100,0	**PA522_1000 MFL**	4000	7000	**>24≤32**	4,7	9,2	2	24	56	140	250	500
PA721 (M_{2BMAX}=700 Nm)												
3,000	**PA721_0030 MF**	2200	3700	**≤24**	20	12,0	1	53	65	280	430	540
3,000	**PA721_0030 MF**	2200	3700	**>24≤32**	20	12,0	1	55	65	280	500	870
3,000	**PA721_0030 MF**	2200	3700	**>32≤38**	20	12,0	1	55	65	280	500	1000
3,000	**PA721_0030 MFL**	2200	3700	**>38≤48**	39	15,8	1	59	65	280	500	1040
4,000	**PA721_0040 MF**	2500	4500	**≤24**	15	12,0	1	54	62	440	570	720
4,000	**PA721_0040 MF**	2500	4500	**>24≤32**	16	12,0	1	55	62	440	700	1160
4,000	**PA721_0040 MF**	2500	4500	**>32≤38**	16	12,0	1	55	62	440	700	1330
4,000	**PA721_0040 MFL**	2500	4500	**>38≤48**	34	15,8	1	57	62	440	700	1380
5,000	**PA721_0050 MF**	3000	5500	**≤24**	14	12,0	1	54	61	440	700	900
5,000	**PA721_0050 MF**	3000	5500	**>24≤32**	14	12,0	1	54	61	440	700	1400
5,000	**PA721_0050 MF**	3000	5500	**>32≤38**	14	12,0	1	54	61	440	700	1400
5,000	**PA721_0050 MFL**	3000	5500	**>38≤48**	33	15,8	1	56	61	440	700	1400
7,000	**PA721_0070 MF**	3300	6000	**≤24**	13	12,0	1	53	60	440	650	1250
7,000	**PA721_0070 MF**	3300	6000	**>24≤32**	13	12,0	1	53	60	440	650	1250
7,000	**PA721_0070 MF**	3300	6000	**>32≤38**	13	12,0	1	53	60	440	650	1250
7,000	**PA721_0070 MFL**	3300	6000	**>38≤48**	32	15,8	1	54	60	440	650	1250
8,000	**PA721_0080 MF**	3300	6000	**≤24**	12	12,0	1	52	59	400	500	1000
8,000	**PA721_0080 MF**	3300	6000	**>24≤32**	12	12,0	1	52	59	400	500	1000
8,000	**PA721_0080 MF**	3300	6000	**>32≤38**	12	12,0	1	52	59	400	500	1000
8,000	**PA721_0080 MFL**	3300	6000	**>38≤48**	32	15,8	1	52	59	400	500	1000
10,00	**PA721_0100 MF**	3300	6000	**≤24**	12	12,0	1	49	58	300	500	1000
10,00	**PA721_0100 MF**	3300	6000	**>24≤32**	12	12,0	1	49	58	300	500	1000
10,00	**PA721_0100 MF**	3300	6000	**>32≤38**	12	12,0	1	49	58	300	500	1000
10,00	**PA721_0100 MFL**	3300	6000	**>38≤48**	31	15,8	1	49	58	300	500	1000

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Please take notice of the indications on page PA6! ***¡Por favor observe las indicaciones en la página PA6!*** **Si raccomanda di rispettare le avvertenze a pagina PA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PA722 (M_{2BMAX}=700 Nm)												
12,00	**PA722_0120 MF**	3000	5000	**≤19**	6,2	15,0	2	52	62	280	500	1000
12,00	**PA722_0120 MF**	3000	5000	**>19≤24**	6,3	15,0	2	52	62	280	500	1040
12,00	**PA722_0120 MF**	3000	5000	**>24≤32**	6,2	15,0	2	52	62	280	500	1040
12,00	**PA722_0120 MFL**	3000	5000	**>32≤38**	13	16,7	2	52	62	280	500	1040
16,00	**PA722_0160 MF**	3000	5000	**≤19**	5,9	15,0	2	53	62	440	700	1340
16,00	**PA722_0160 MF**	3000	5000	**>19≤24**	6,0	15,0	2	53	62	440	700	1380
16,00	**PA722_0160 MF**	3000	5000	**>24≤32**	5,9	15,0	2	53	62	440	700	1380
16,00	**PA722_0160 MFL**	3000	5000	**>32≤38**	13	16,7	2	53	62	440	700	1380
20,00	**PA722_0200 MF**	3000	5000	**≤19**	5,8	15,0	2	53	62	440	700	1400
20,00	**PA722_0200 MF**	3000	5000	**>19≤24**	5,9	15,0	2	53	62	440	700	1400
20,00	**PA722_0200 MF**	3000	5000	**>24≤32**	5,8	15,0	2	53	62	440	700	1400
20,00	**PA722_0200 MFL**	3000	5000	**>32≤38**	13	16,7	2	53	62	440	700	1400
25,00	**PA722_0250 MF**	3500	6000	**≤19**	5,5	15,0	2	53	60	440	700	1400
25,00	**PA722_0250 MF**	3500	6000	**>19≤24**	5,5	15,0	2	53	60	440	700	1400
25,00	**PA722_0250 MF**	3500	6000	**>24≤32**	5,4	15,0	2	53	60	440	700	1400
25,00	**PA722_0250 MFL**	3500	6000	**>32≤38**	12	16,7	2	53	60	440	700	1400
28,00	**PA722_0280 MF**	3700	6500	**≤19**	5,2	15,0	2	53	59	440	700	1380
28,00	**PA722_0280 MF**	3700	6500	**>19≤24**	5,2	15,0	2	53	59	440	700	1380
28,00	**PA722_0280 MF**	3700	6500	**>24≤32**	5,1	15,0	2	53	59	440	700	1380
28,00	**PA722_0280 MFL**	3700	6500	**>32≤38**	12	16,7	2	53	59	440	700	1380
32,00	**PA722_0320 MF**	3000	5000	**≤19**	5,8	15,0	2	52	62	400	500	1000
32,00	**PA722_0320 MF**	3000	5000	**>19≤24**	5,8	15,0	2	52	62	400	500	1000
32,00	**PA722_0320 MF**	3000	5000	**>24≤32**	5,7	15,0	2	52	62	400	500	1000
32,00	**PA722_0320 MFL**	3000	5000	**>32≤38**	13	16,7	2	52	62	400	500	1000
35,00	**PA722_0350 MF**	3700	6500	**≤19**	5,1	15,0	2	53	59	440	700	1400
35,00	**PA722_0350 MF**	3700	6500	**>19≤24**	5,1	15,0	2	53	59	440	700	1400
35,00	**PA722_0350 MF**	3700	6500	**>24≤32**	5,0	15,0	2	53	59	440	700	1400
35,00	**PA722_0350 MFL**	3700	6500	**>32≤38**	12	16,7	2	53	59	440	700	1400
40,00	**PA722_0400 MF**	3700	6500	**≤19**	5,0	15,0	2	52	57	440	700	1380
40,00	**PA722_0400 MF**	3700	6500	**>19≤24**	5,0	15,0	2	52	57	440	700	1380
40,00	**PA722_0400 MF**	3700	6500	**>24≤32**	4,9	15,0	2	52	57	440	700	1380
40,00	**PA722_0400 MFL**	3700	6500	**>32≤38**	12	16,7	2	52	57	440	700	1380
50,00	**PA722_0500 MF**	3700	6500	**≤19**	5,0	15,0	2	53	57	440	700	1400
50,00	**PA722_0500 MF**	3700	6500	**>19≤24**	5,0	15,0	2	53	57	440	700	1400
50,00	**PA722_0500 MF**	3700	6500	**>24≤32**	4,9	15,0	2	53	57	440	700	1400
50,00	**PA722_0500 MFL**	3700	6500	**>32≤38**	12	16,7	2	53	57	440	700	1400
56,00	**PA722_0560 MF**	3700	6500	**≤19**	5,1	15,0	2	52	59	400	500	1000
56,00	**PA722_0560 MF**	3700	6500	**>19≤24**	5,1	15,0	2	52	59	400	500	1000
56,00	**PA722_0560 MF**	3700	6500	**>24≤32**	5,0	15,0	2	52	59	400	500	1000
56,00	**PA722_0560 MFL**	3700	6500	**>32≤38**	12	16,7	2	52	59	400	500	1000
70,00	**PA722_0700 MF**	3700	6500	**≤19**	5,0	15,0	2	53	57	440	650	1250
70,00	**PA722_0700 MF**	3700	6500	**>19≤24**	5,0	15,0	2	53	57	440	650	1250
70,00	**PA722_0700 MF**	3700	6500	**>24≤32**	4,9	15,0	2	53	57	440	650	1250
70,00	**PA722_0700 MFL**	3700	6500	**>32≤38**	12	16,7	2	53	57	440	650	1250
80,00	**PA722_0800 MF**	3700	6500	**≤19**	5,0	15,0	2	52	57	400	500	1000
80,00	**PA722_0800 MF**	3700	6500	**>19≤24**	5,0	15,0	2	52	57	400	500	1000
80,00	**PA722_0800 MF**	3700	6500	**>24≤32**	4,9	15,0	2	52	57	400	500	1000
80,00	**PA722_0800 MFL**	3700	6500	**>32≤38**	12	16,7	2	52	57	400	500	1000
100,0	**PA722_1000 MF**	3700	6500	**≤19**	5,0	15,0	2	49	57	300	500	1000
100,0	**PA722_1000 MF**	3700	6500	**>19≤24**	5,0	15,0	2	49	57	300	500	1000
100,0	**PA722_1000 MF**	3700	6500	**>24≤32**	4,9	15,0	2	49	57	300	500	1000
100,0	**PA722_1000 MFL**	3700	6500	**>32≤38**	12	16,7	2	49	57	300	500	1000

Planetary Gear Units **PA**
Reductores planetarios ***PA***
Riduttori planetari **PA**

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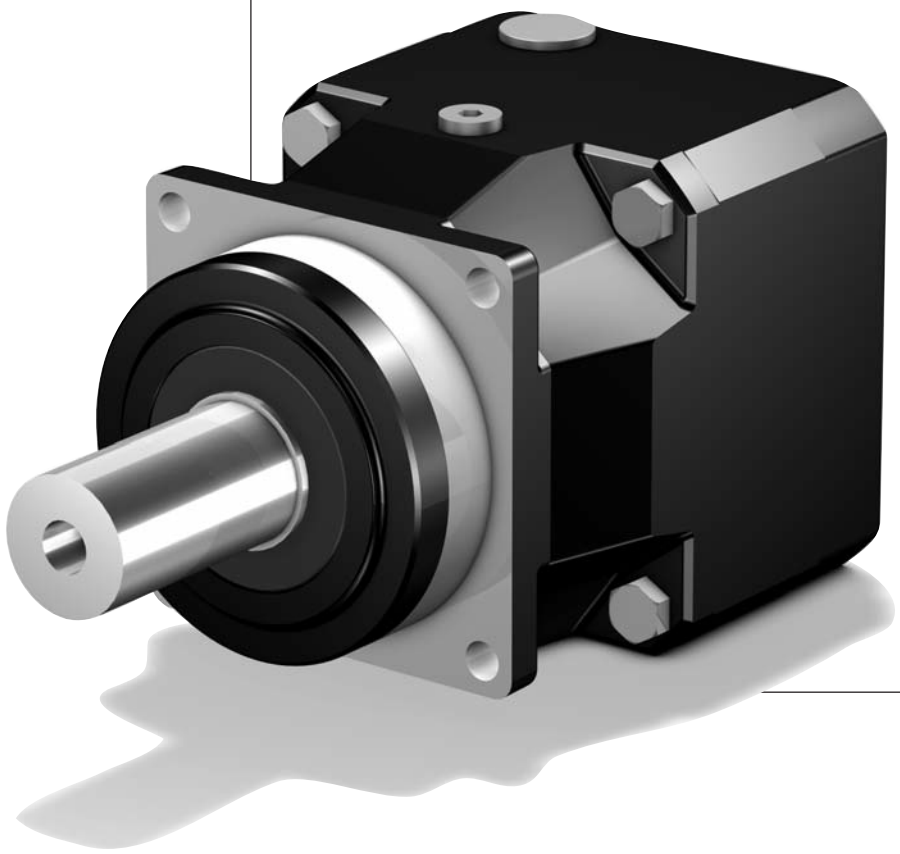
Please take notice of the indications on page PA6! ***¡Por favor observe las indicaciones en la página PA6!*** **Si raccomanda di rispettare le avvertenze a pagina PA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PA821 (M_{2BMAX}=1600 Nm)												
3,000	**PA821_0030 MF**	1800	3000	**≤32**	72	26,0	1	159	66	800	960	1200
3,000	**PA821_0030 MF**	1800	3000	**>32≤38**	72	26,0	1	165	66	800	1200	1520
3,000	**PA821_0030 MF**	1800	3000	**>38≤48**	71	26,0	1	165	66	800	1200	1760
4,000	**PA821_0040 MF**	2200	3500	**≤32**	48	26,0	1	170	63	800	1290	1610
4,000	**PA821_0040 MF**	2200	3500	**>32≤38**	48	26,0	1	175	63	800	1600	2020
4,000	**PA821_0040 MF**	2200	3500	**>38≤48**	47	26,0	1	175	63	800	1600	2330
5,000	**PA821_0050 MF**	2500	4000	**≤32**	41	26,0	1	173	62	1000	1600	2010
5,000	**PA821_0050 MF**	2500	4000	**>32≤38**	41	26,0	1	176	62	1000	1600	2530
5,000	**PA821_0050 MF**	2500	4000	**>38≤48**	40	26,0	1	176	62	1000	1600	2900
7,000	**PA821_0070 MF**	2800	4500	**≤32**	36	26,0	1	167	61	1000	1400	2800
7,000	**PA821_0070 MF**	2800	4500	**>32≤38**	36	26,0	1	167	61	1000	1400	2800
7,000	**PA821_0070 MF**	2800	4500	**>38≤48**	36	26,0	1	167	61	1000	1400	2800
8,000	**PA821_0080 MF**	2800	4500	**≤32**	35	26,0	1	160	60	800	1200	2400
8,000	**PA821_0080 MF**	2800	4500	**>32≤38**	35	26,0	1	160	60	800	1200	2400
8,000	**PA821_0080 MF**	2800	4500	**>38≤48**	34	26,0	1	160	60	800	1200	2400
10,00	**PA821_0100 MF**	2800	4500	**≤32**	34	26,0	1	149	59	700	1200	2400
10,00	**PA821_0100 MF**	2800	4500	**>32≤38**	34	26,0	1	149	59	700	1200	2400
10,00	**PA821_0100 MF**	2800	4500	**>38≤48**	33	26,0	1	149	59	700	1200	2400
PA822 (M_{2BMAX}=1600 Nm)												
12,00	**PA822_0120 MF**	2500	4500	**≤24**	17	32,0	2	151	63	800	1200	2090
12,00	**PA822_0120 MF**	2500	4500	**>24≤32**	18	32,0	2	152	63	800	1200	2400
12,00	**PA822_0120 MF**	2500	4500	**>32≤38**	18	32,0	2	152	63	800	1200	2400
12,00	**PA822_0120 MFL**	2500	4500	**>38≤48**	36	35,8	2	154	63	800	1200	2400
16,00	**PA822_0160 MF**	2500	4500	**≤24**	16	32,0	2	166	63	800	1600	2790
16,00	**PA822_0160 MF**	2500	4500	**>24≤32**	16	32,0	2	166	63	800	1600	3180
16,00	**PA822_0160 MF**	2500	4500	**>32≤38**	16	32,0	2	166	63	800	1600	3180
16,00	**PA822_0160 MFL**	2500	4500	**>38≤48**	35	35,8	2	167	63	800	1600	3180
20,00	**PA822_0200 MF**	2500	4500	**≤24**	15	32,0	2	170	63	1000	1600	3200
20,00	**PA822_0200 MF**	2500	4500	**>24≤32**	16	32,0	2	170	63	1000	1600	3200
20,00	**PA822_0200 MF**	2500	4500	**>32≤38**	16	32,0	2	170	63	1000	1600	3200
20,00	**PA822_0200 MFL**	2500	4500	**>38≤48**	34	35,8	2	171	63	1000	1600	3200
25,00	**PA822_0250 MF**	3000	5500	**≤24**	14	32,0	2	169	61	1000	1600	3200
25,00	**PA822_0250 MF**	3000	5500	**>24≤32**	14	32,0	2	170	61	1000	1600	3200
25,00	**PA822_0250 MF**	3000	5500	**>32≤38**	14	32,0	2	170	61	1000	1600	3200
25,00	**PA822_0250 MFL**	3000	5500	**>38≤48**	33	35,8	2	170	61	1000	1600	3200
28,00	**PA822_0280 MF**	3300	6000	**≤24**	13	32,0	2	165	60	800	1600	3180
28,00	**PA822_0280 MF**	3300	6000	**>24≤32**	13	32,0	2	165	60	800	1600	3180
28,00	**PA822_0280 MF**	3300	6000	**>32≤38**	13	32,0	2	165	60	800	1600	3180
28,00	**PA822_0280 MFL**	3300	6000	**>38≤48**	32	35,8	2	166	60	800	1600	3180
32,00	**PA822_0320 MF**	2500	4500	**≤24**	15	32,0	2	159	63	800	1200	2400
32,00	**PA822_0320 MF**	2500	4500	**>24≤32**	15	32,0	2	159	63	800	1200	2400
32,00	**PA822_0320 MF**	2500	4500	**>32≤38**	15	32,0	2	159	63	800	1200	2400
32,00	**PA822_0320 MFL**	2500	4500	**>38≤48**	34	35,8	2	159	63	800	1200	2400
35,00	**PA822_0350 MF**	3300	6000	**≤24**	13	32,0	2	169	60	1000	1600	3200
35,00	**PA822_0350 MF**	3300	6000	**>24≤32**	13	32,0	2	169	60	1000	1600	3200
35,00	**PA822_0350 MF**	3300	6000	**>32≤38**	13	32,0	2	169	60	1000	1600	3200
35,00	**PA822_0350 MFL**	3300	6000	**>38≤48**	32	35,8	2	170	60	1000	1600	3200
40,00	**PA822_0400 MF**	3300	6000	**≤24**	12	32,0	2	162	58	800	1600	3180
40,00	**PA822_0400 MF**	3300	6000	**>24≤32**	12	32,0	2	162	58	800	1600	3180
40,00	**PA822_0400 MF**	3300	6000	**>32≤38**	12	32,0	2	162	58	800	1600	3180
40,00	**PA822_0400 MFL**	3300	6000	**>38≤48**	31	35,8	2	163	58	800	1600	3180
50,00	**PA822_0500 MF**	3300	6000	**≤24**	12	32,0	2	167	58	1000	1600	3200
50,00	**PA822_0500 MF**	3300	6000	**>24≤32**	12	32,0	2	167	58	1000	1600	3200
50,00	**PA822_0500 MF**	3300	6000	**>32≤38**	12	32,0	2	167	58	1000	1600	3200
50,00	**PA822_0500 MFL**	3300	6000	**>38≤48**	31	35,8	2	168	58	1000	1600	3200
56,00	**PA822_0560 MF**	3300	6000	**≤24**	13	32,0	2	159	60	800	1200	2400
56,00	**PA822_0560 MF**	3300	6000	**>24≤32**	13	32,0	2	159	60	800	1200	2400
56,00	**PA822_0560 MF**	3300	6000	**>32≤38**	13	32,0	2	159	60	800	1200	2400
56,00	**PA822_0560 MFL**	3300	6000	**>38≤48**	32	35,8	2	159	60	800	1200	2400

STÖBER

Please take notice of the indications on page PA6! ***¡Por favor observe las indicaciones en la página PA6!*** **Si raccomanda di rispettare le avvertenze a pagina PA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PA822 (M_{2BMAX}=1600 Nm)												
70,00	**PA822_0700 MF**	3300	6000	**≤24**	12	32,0	2	164	58	1000	1400	2800
70,00	**PA822_0700 MF**	3300	6000	**>24≤32**	12	32,0	2	164	58	1000	1400	2800
70,00	**PA822_0700 MF**	3300	6000	**>32≤38**	12	32,0	2	164	58	1000	1400	2800
70,00	**PA822_0700 MFL**	3300	6000	**>38≤48**	31	35,8	2	164	58	1000	1400	2800
80,00	**PA822_0800 MF**	3300	6000	**≤24**	12	32,0	2	159	58	800	1200	2400
80,00	**PA822_0800 MF**	3300	6000	**>24≤32**	12	32,0	2	159	58	800	1200	2400
80,00	**PA822_0800 MF**	3300	6000	**>32≤38**	12	32,0	2	159	58	800	1200	2400
80,00	**PA822_0800 MFL**	3300	6000	**>38≤48**	31	35,8	2	159	58	800	1200	2400
100,0	**PA822_1000 MF**	3300	6000	**≤24**	12	32,0	2	148	58	700	1200	2400
100,0	**PA822_1000 MF**	3300	6000	**>24≤32**	12	32,0	2	148	58	700	1200	2400
100,0	**PA822_1000 MF**	3300	6000	**>32≤38**	12	32,0	2	148	58	700	1200	2400
100,0	**PA822_1000 MFL**	3300	6000	**>38≤48**	31	35,8	2	148	58	700	1200	2400



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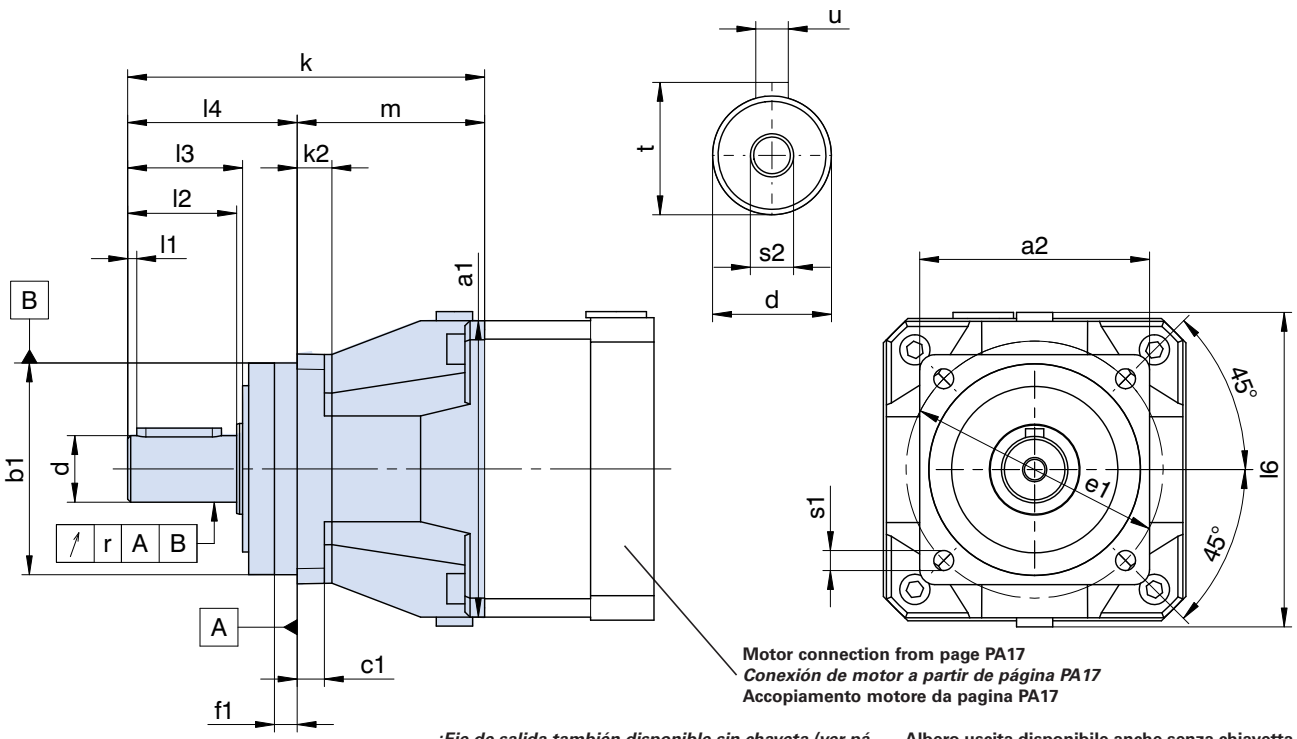
PA3_MF - PA8_MF



Motor connection from page PA17
Conexión de motor a partir de página PA17
Accopiamento motore da pagina PA17

Output shaft can also be delivered without key (see page PA3). Please refer to the notes on page A19!

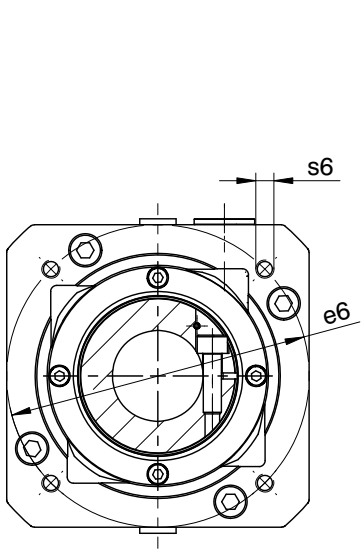
¡Eje de salida también disponible sin chaveta (ver página PA3)! ¡Por favor observe las indicaciones en la página A19!

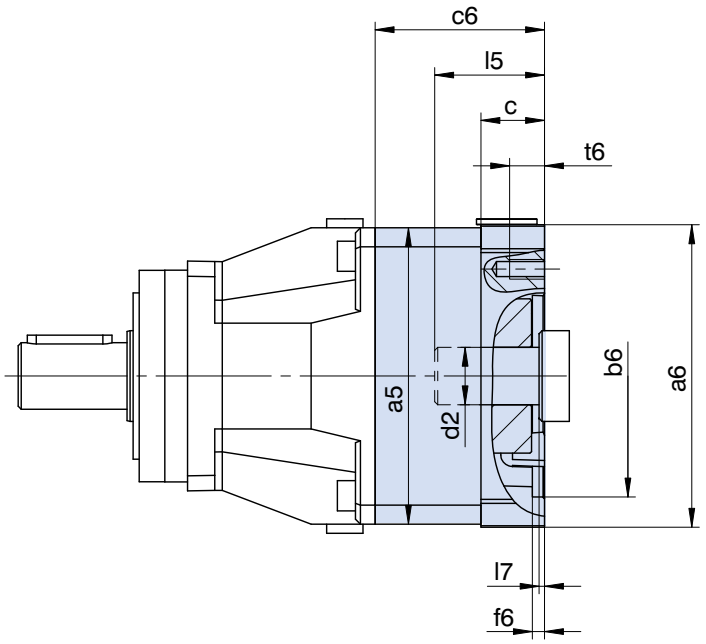
Albero uscita disponibile anche senza chiavetta (vedere a pagina PA3)! Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	□a1	□a2	øb1	c1	ød	øe1	f1	k	k2	l1	l2	l3	l4	l6	m	r	øs1	s2	t	u
PA321	72	72	60h6	7	16k6	75	7,5	101,5	-	2	28	30	48	79	53,5	0,025	5,5	M5	18,0	A5x5x22
PA322	72	72	60h6	7	16k6	75	7,5	141,5	-	2	28	30	48	79	93,5	0,025	5,5	M5	18,0	A5x5x22
PA421	98	76	70h6	9	22k6	85	7,5	118,0	12	3	36	38	56	98	62,0	0,025	6,6	M8	24,5	A6x6x28
PA422	98	76	70h6	9	22k6	85	7,5	167,0	12	3	36	38	56	98	111,0	0,025	6,6	M8	24,5	A6x6x28
PA521	114	101	90h6	10	32k6	120	15,0	153,0	14	3	58	60	88	121	65,0	0,030	9,0	M12	35,0	A10x8x50
PA522	114	101	90h6	10	32k6	120	15,0	207,5	14	3	58	60	88	121	119,5	0,030	9,0	M12	35,0	A10x8x50
PA721	145	144	130h6	15	40k6	165	3,5	192,0	-	4	82	85	112	145	80,0	0,035	11,0	M16	43,0	A12x8x70
PA722	145	144	130h6	15	40k6	165	3,5	254,0	-	4	82	85	112	145	142,0	0,035	11,0	M16	43,0	A12x8x70
PA821	190	190	160h6	15	55k6	215	10,0	224,0	-	6	82	85	112	190	112,0	0,035	13,5	M20	59,0	A16x10x70
PA822	190	190	160h6	15	55k6	215	10,0	300,5	-	6	82	85	112	190	188,5	0,035	13,5	M20	59,0	A16x10x70

STÖBER

PA3_MF - PA8_MF





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	□a5	□a6	c	c6	f6	l7max	s6	t6
PA321/PA422	40,0H7	63	19	40	72	75	18	51,5	3,0	3,0	M5	10
PA321/PA422	50,0H7	70	19	40	72	75	18	51,5	3,0	3,0	M4	8
PA321/PA422	50,0H7	95	19	40	72	80	18	51,5	3,0	3,0	M6	12
PA321/PA422	60,0H7	75	19	40	75	72	-	51,5	3,5	3,0	M5	11
PA321/PA422	60,0H7	90	19	40	72	75	18	51,5	3,5	3,0	M5	9
PA321/PA422	70,0H7	90	19	40	72	80	18	51,5	3,5	3,0	M5	10
PA321/PA422	80,0H7	100	19	40	90	90	-	51,5	3,5	3,0	M6	13
PA321/PA422	95,0H7	115	19	40	72	100	18	51,5	4,0	3,0	M8	18
PA321/PA422	95,0H7	130	19	40	72	115	18	51,5	4,0	3,0	M8	18
PA322	40,0H7	63	14	32	55	55	15	36,0	3,5	2,5	M5	10
PA322	50,0H7	70	14	32	55	60	15	36,0	3,5	2,5	M4	9
PA322	50,0H7	95	14	32	55	90	15	36,0	3,5	2,5	M6	15
PA322	60,0H7	75	14	32	55	75	15	36,0	3,5	2,5	M5	10
PA421/PA522	50,0H7	70	24	41	98	100	21	56,0	4,0	2,5	M4	10
PA421/PA522	50,0H7	95	24	41	98	100	21	56,0	2,5	2,5	M6	12
PA421/PA522	60,0H7	75	24	41	98	100	21	56,0	3,5	2,5	M5	10
PA421/PA522	80,0H7	100	24	41	100	98	-	56,0	4,0	2,5	M6	13
PA421/PA522	95,0H7	115	24	41	100	98	-	56,0	4,0	2,5	M8	16
PA421/PA522	95,0H7	115	24	50	98	100	30	65,0	4,0	11,5	M8	16
PA421/PA522	95,0H7	130	24	41	98	115	21	56,0	4,0	2,5	M8	16
PA421/PA522	95,0H7	130	24	50	98	115	30	65,0	4,0	11,5	M8	16
PA421/PA522	110,0H7	130	24	50	98	115	30	65,0	4,0	11,5	M8	16
PA421/PA522	110,0H7	145	24	58	98	130	38	73,0	7,0	19,5	M8	16
PA421/PA522	130,0H7	165	24	50	98	140	30	65,0	7,0	11,5	M10	20
PA521/PA722	80,0H7	100	35	51	115	120	24	64,0	4,0	3,0	M6	12
PA521/PA722	95,0H7	115	35	51	115	115	-	64,0	4,0	3,0	M8	16
PA521/PA722	95,0H7	130	35	51	115	120	24	64,0	4,0	3,0	M8	16
PA521/PA722	110,0H7	130	35	51	115	115	-	64,0	4,0	3,0	M8	16
PA521/PA722	110,0H7	145	35	59	115	140	32	72,0	6,5	11,0	M8	16
PA521/PA722	110,0H7	145	35	69	115	140	42	82,0	7,0	21,0	M8	16
PA521/PA722	110,0H7	165	35	51	115	140	24	64,0	5,0	3,0	M10	24
PA521/PA722	130,0H7	165	35	59	115	140	32	72,0	5,0	11,0	M10	20
PA721/PA822	110,0H7	130	38	63	145	150	26	78,0	5,5	4,5	M8	16
PA721/PA822	110,0H7	145	38	74	145	150	37	89,0	5,5	15,5	M8	16
PA721/PA822	110,0H7	165	38	63	145	150	26	78,0	5,5	4,5	M10	26
PA721/PA822	114,3H7	200	38	82	145	180	45	97,0	5,5	23,5	M12	24
PA721/PA822	130,0H7	165	38	63	145	150	26	78,0	5,5	4,5	M10	26
PA721/PA822	130,0H7	215	38	63	145	190	26	78,0	5,5	4,5	M12	26
PA721/PA822	180,0H7	215	38	82	145	190	45	97,0	5,5	23,5	M12	24
PA821	114,3H7	200	48	82	190	204	35	95,0	4,0	3,5	M12	35
PA821	130,0H7	165	48	82	190	204	35	95,0	5,0	3,5	M10	20
PA821	130,0H7	215	48	82	190	204	35	95,0	5,0	3,5	M12	35
PA821	180,0H7	215	48	83	190	204	35	95,0	5,5	4,5	M12	35
PA821	250,0H7	300	48	86	190	260	38	98,0	6,0	7,5	M16	38

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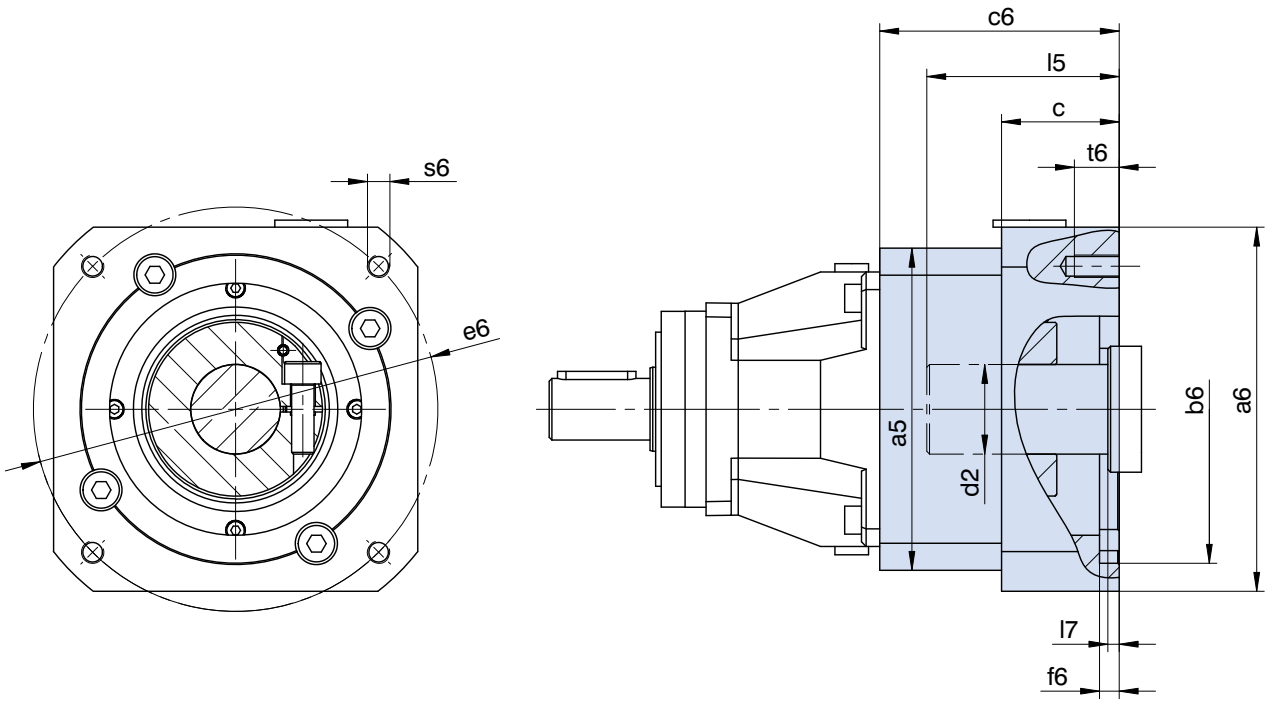
PA3_MFL - PA8_MFL



Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	□a5	□a6	c	c6	f6	l7max	s6	t6
PA321/PA422	50,0H7	70	24	41	100	100	21	55,5	4,0	2,5	M4	10
PA321/PA422	60,0H7	75	24	41	100	100	21	55,5	3,5	2,5	M5	10
PA321/PA422	95,0H7	115	24	50	100	100	30	64,5	4,0	11,5	M8	16
PA321/PA422	95,0H7	115	24	41	100	100	21	55,5	4,0	2,5	M8	21
PA321/PA422	95,0H7	130	24	41	100	115	21	55,5	4,0	2,5	M8	16
PA321/PA422	95,0H7	130	24	50	100	115	30	64,5	4,0	11,5	M8	16
PA321/PA422	110,0H7	130	24	50	100	115	30	64,5	4,0	11,5	M8	16
PA321/PA422	110,0H7	145	24	58	100	130	38	72,5	7,0	19,5	M8	16
PA321/PA422	130,0H7	165	24	50	100	140	30	64,5	7,0	11,5	M10	20
PA421/PA522	80,0H7	100	32	50	115	120	24	67,5	4,0	2,5	M6	12
PA421/PA522	110,0H7	145	32	58	115	140	32	75,5	6,5	10,5	M8	16
PA421/PA522	110,0H7	165	32	50	115	140	24	67,5	5,0	2,5	M10	24
PA421/PA522	130,0H7	165	32	58	115	140	32	75,5	5,0	10,5	M10	20
PA521/PA722	110,0H7	130	38	63	145	150	26	82,0	5,5	4,5	M8	16
PA521/PA722	110,0H7	165	38	63	145	150	26	82,0	5,5	4,5	M10	26
PA521/PA722	114,3H7	200	38	82	145	180	45	101,0	5,5	23,5	M12	24
PA521/PA722	130,0H7	165	38	63	145	150	26	82,0	5,5	4,5	M10	26
PA521/PA722	130,0H7	215	38	63	145	190	26	82,0	5,5	4,5	M12	26
PA521/PA722	180,0H7	215	38	82	145	190	45	101,0	5,5	23,5	M12	24
PA721/PA822	114,3H7	200	48	82	190	204	35	103,0	4,0	3,5	M12	35
PA721/PA822	130,0H7	165	48	82	190	204	35	103,0	5,0	3,5	M10	20
PA721/PA822	180,0H7	215	48	83	190	204	35	103,0	5,5	4,5	M12	35
PA721/PA822	250,0H7	300	48	86	190	260	38	106,0	6,0	7,5	M16	38

ServoFit® PKX Right-Angle Planetary Gear Units
Reductores planetarios ortogonales ***ServoFit® PKX***
ServoFit® Riduttori planetari-rinvio angolo **PKX**

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Helical geared Angular Precision Planetary Gear Units

- Acceleration torque:
  18 – 3000 Nm
- Backlash:
  4 – 8.5 arcmin
- High torsional stiffness
- FKM seal at input, continuous operation without cooling
- Minimized mounting space
- Readily attaches any synchronous servo motor
- Efficiency:
  2 stage ≥ 96 %
  3 stage ≥ 94 %

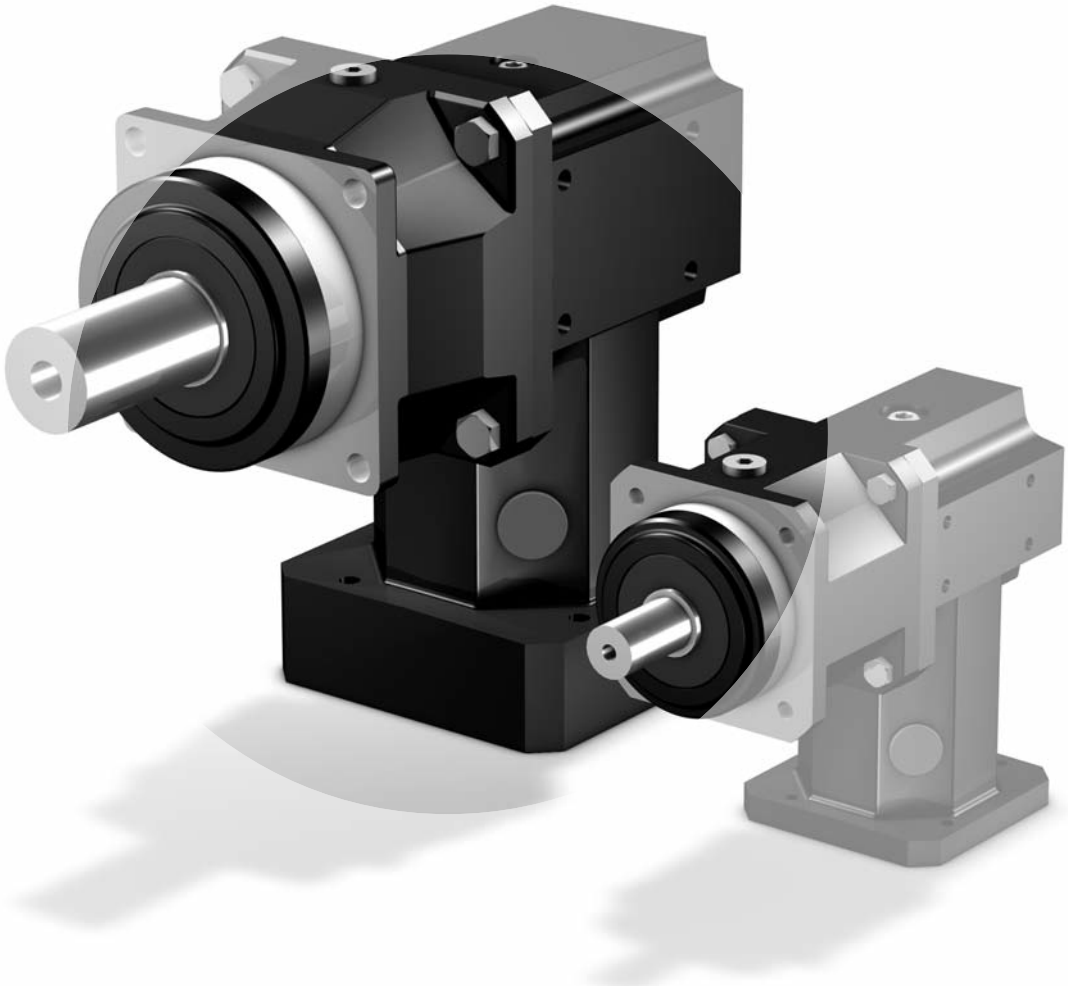
Reductores planetarios ortogonales de precisión con dentado helicoidal

- *Par de aceleración:*
  18 – 3000 Nm
- *Juego de giro:*
  4 – 8,5 arcmin
- *Alta rigidez a la torsión*
- *Anillo retén de FKM en la entrada, trabajo permanente sin enfriamiento*
- *Pequeño espacio de instalación*
- *Equipable a cualquier motor servo síncrono*
- *Rendimiento:*
  2 trenes ≥ 96 %
  3 trenes ≥ 94 %

Riduttori planetari angolari di precisione con dentatura elicoidale

- Coppia di accelerazione:
  18 – 3000 Nm
- Gioco:
  4 – 8,5 arcmin
- Rigidità torsionale elevata
- Anello di tenuta in FKM all'ingresso, funzionamento continuo senza raffreddamento
- Ingombro ridotto
- Montabili su qualsiasi servomotore sincrono
- Rendimento:
  2 stadi ≥ 96 %
  3 stadi ≥ 94 %

ServoFit® PKX

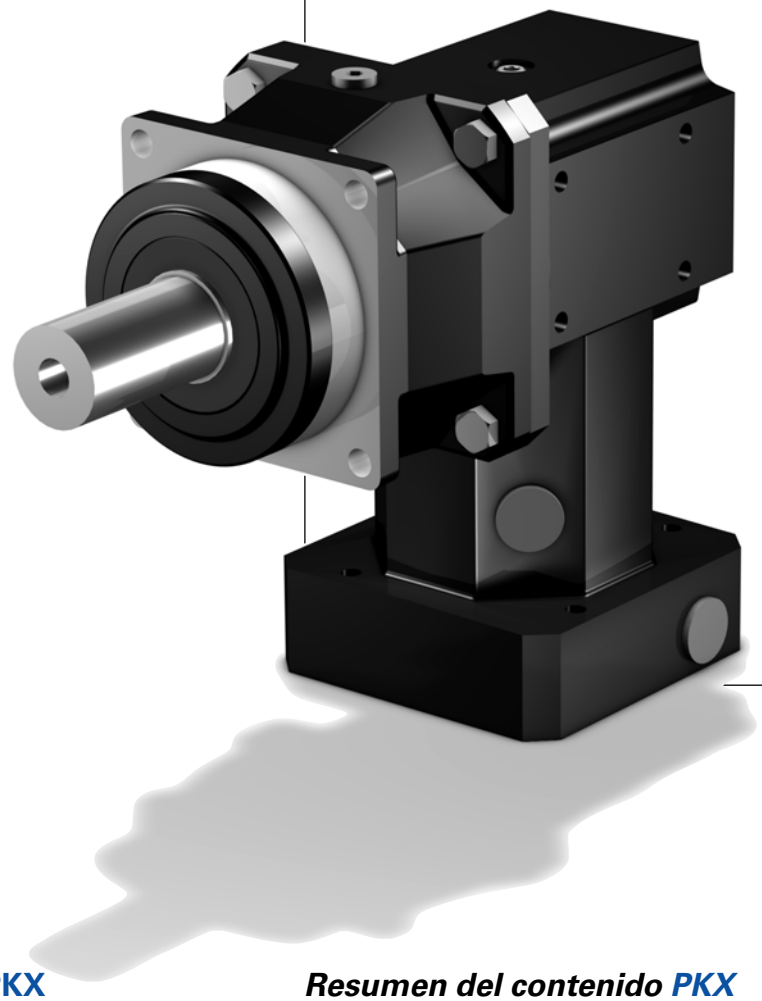


ServoFit® PKX
Right-Angle Planetary Gear Units

Reductores planetarios ortogonales ***ServoFit® PKX***

ServoFit®
Riduttori planetari -rinvio angolo **PKX**

STÖBER



PK

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Dimension drawings ServoFit® PKX Right-Angle Planetary Gear Units	PK15

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Posiciones de instalación	*PK5*
Tabla de selección Reductores planetarios ortogonales ServoFit® PKX	*PK7*
Dibujos acotados Reductores planetarios ortogonales ServoFit® PKX	*PK15*

Indice PKX

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Posizioni di montaggio	PK5
Tabella di selezione ServoFit® Riduttori planetari-rinvio angolo PKX	PK7
Disegni quotati ServoFit® Riduttori planetari-rinvio angolo PKX	PK15

Type designation / *Tipificación* / Identificazione dei modelli

STÖBER

P 5 2 2 S G R 0250 KX401VF 0020 MF

1 2 3 4 5 6 7 8 9 10 11

1 Gear unit type
P – Planetary gear unit

2 Planetary gear unit size

3 Generation number

4 Stages P gear unit
1 – 1 stage
2 – 2 stage

5 Housing design
S – Standard design

6 Shaft design P gear unit
G – shaft without key
P – shaft with key

7 Bearing design P gear unit
R – normal bearings
D - reinforced bearings (axial)
Z – reinforced bearings (radial)

8 Transmission ratio P gear unit i x 10

9 Angular gear input 1 stage **KX**

10 Transmission ratio KX gear unit i x 10

11 Mounting series
MF – Motor adapter with FlexiAdapt® coupling
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connectiom page PK17, please observe the max. dimensions).

Ordering data according to the type designation above.

Further ordering details:
– mounting position
– access clamping screw motor coupling
– information as to whether the radial shaft seals on the output are made from FKM or NBR.
Recommendation: FKM for an operating time ≥ 60%
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

ATTENTION! The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

1 *Tipo de reductor*
P *– Reductor planetario*

2 *Tamaño del reductor planetario*

3 *Cifra de generación*

4 *Número de trenes engranaje P*
1 *– 1 tren*
2 *– 2 trenes*

5 *Tipo constructivo de la carcasa*
S *– Ejecución estándar*

6 *Ejecución del eje reductor P*
G *– eje sin chaveta*
P *– eje con chaveta*

7 *Ejecución de apoyos reductor P*
R *– Apoyo normal*
D *– apoyo reforzado (axial)*
Z *– apoyo reforzado (radial)*

8 *Número característico de la relación de reducción reductor P i x 10*

9 *Entrada ortogonal*
KX *– Reductor ortogonal 1 tren*

10 *Número característico de la relación de reducción reductor KX i x 10*

11 *Grupos de opciones*
MF *– Adaptador de motor con acoplamiento FlexiAdapt®*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor página PK17, por favor observar dimensiones máximas).

Datos de pedido de acuerdo a la tipificación indicada arriba.

Otros datos de pedido:
– *Posición de instalación*
– *Acceso al tornillo de apriete del acoplamiento de motor*
– *Indicación si anillos retén en la salida de FKM o de NBR. Recomendación: FKM para duración de conexión ≥ 60%*
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

¡ATENCIÓN! *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

1 Modello di riduttore
P – Riduttore planetario

2 Taglia del riduttore angolare

3 Numero di generazione

4 Numero di stadi del riduttore P
1 – 1-stadio
2 – 2-stadi

5 Tipo di carcassa
S – Esecuzione standard

6 Esecuzione albero del riduttore P
G – albero senza chiavetta
P – albero con chiavetta

7 Esecuzione supporto del riduttore P
R – supporto normale
D – supporto rinforzato (assiale)
Z – supporto rinforzato (radiale)

8 Rapporto di riduzione riduttore P i x 10

9 Ingresso angolare
KX – Riduttore angolare 1-stadio

10 Rapporto di riduzione riduttore KX i x 10

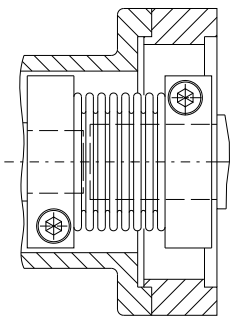
11 Opzioni annessi
MF – adattatore motore con giunto FlexiAdapt®
Come da richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore pagina PK17, si prega di rispettare le misure max.).

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.

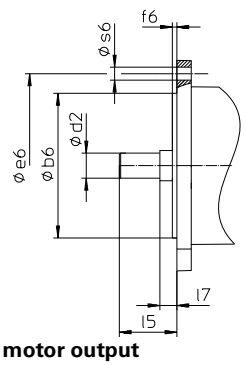
Altri dati dell'ordine:
– Posizione di montaggio
– Accesso al giunto di accoppiamonto motore
– Indicare se gli anelli di tenuta radiali dell'albero uscita sono in FKM o NBR.
Raccomandazione:
FKM per fattore di servizio ≥ 60%
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

ATTENZIONE! Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

P522SGR 0250 KX401 VF 0020 MF



FlexiAdapt® Coupling MF
FlexiAdapt® Acoplamiento MF
Giunto FlexiAdapt® MF



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Mounting positions / *Posiciones de instalación* / Posizioni di montaggio

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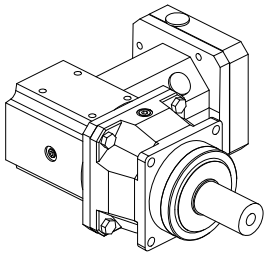
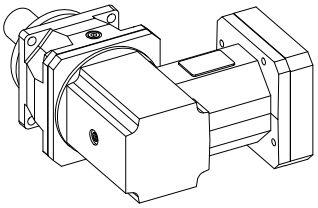
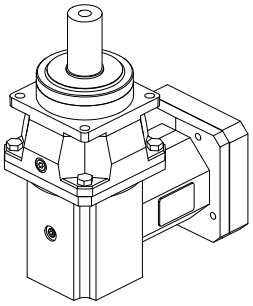
EL1



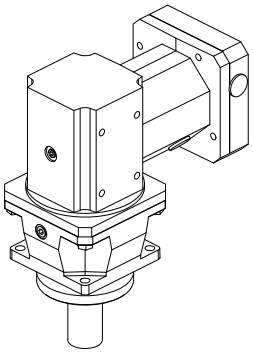
EL2



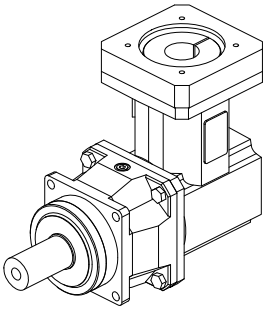
EL3



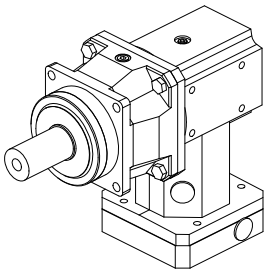
EL4



EL5



EL6



The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

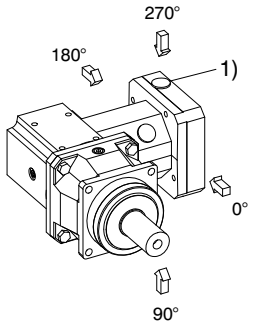
Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).



1) access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamento motore

Selection table **ServoFit®** **PKX** Right-Angle Planetary Gear Units

Tabla de selección Red. planetarios ortogonales ***ServoFit® PKX***

Tabella di selezione **ServoFit®** Riduttori planetari -rinvio angolo **PKX**

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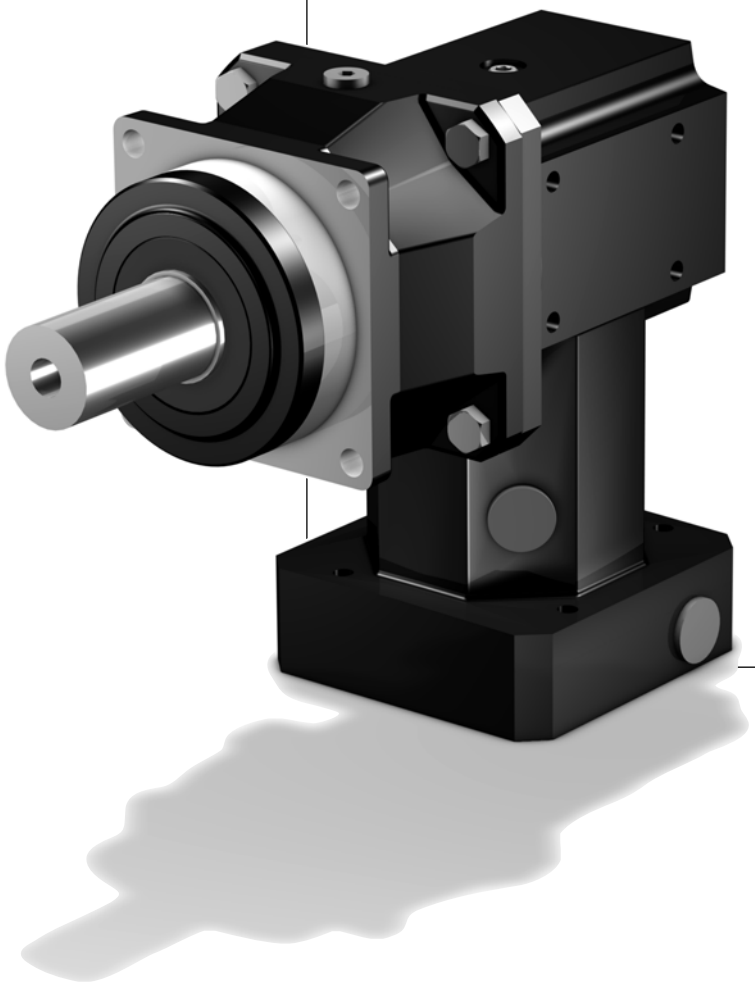

Right-Angle Planetary Gear Units **PKX**
*Reductores planetarios ortogonales **PKX***
Riduttori planetari-rinvio angolo **PKX**

STÖBER

Please take notice of the indications on page PK8! ***¡Por favor observe las indicaciones en la página PK8!*** **Si raccomanda di rispettare le avvertenze a pagina PK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P221KX3 (M2BMAX=22 Nm)													
4,000	4/1	**P221_0040 KX301VF0010 MF**	3000	2500	4500	1,1	3,3	8,5	1,5	70	16	22	44
5,000	5/1	**P221_0050 KX301VF0010 MF**	3000	2500	4500	1,0	3,3	8	1,6	70	16	22	44
7,000	7/1	**P221_0070 KX301VF0010 MF**	3000	2500	4500	1,0	3,3	7,5	1,7	70	16	22	44
8,000	8/1	**P221_0040 KX301VF0020 MF**	3500	3000	5500	0,81	3,3	8,5	1,5	66	16	22	44
10,00	10/1	**P221_0050 KX301VF0020 MF**	3500	3000	5500	0,81	3,3	8	1,6	66	16	22	44
12,00	12/1	**P221_0040 KX301VF0030 MF**	3500	3500	6000	0,75	3,3	8,5	1,5	64	16	22	44
14,00	14/1	**P221_0070 KX301VF0020 MF**	3500	3000	5500	0,81	3,3	7,5	1,7	66	16	22	44
15,00	15/1	**P221_0050 KX301VF0030 MF**	3500	3500	6000	0,75	3,3	8	1,6	64	16	22	44
16,00	16/1	**P221_0080 KX301VF0020 MF**	3500	3000	5500	0,80	3,3	7,5	1,6	66	14	18	36
20,00	20/1	**P221_0100 KX301VF0020 MF**	3500	3000	5500	0,80	3,3	7	1,6	66	12	18	36
21,00	21/1	**P221_0070 KX301VF0030 MF**	3500	3500	6000	0,75	3,3	7,5	1,7	64	16	22	44
24,00	24/1	**P221_0080 KX301VF0030 MF**	3500	3500	6000	0,75	3,3	7,5	1,6	64	14	18	36
30,00	30/1	**P221_0100 KX301VF0030 MF**	3500	3500	6000	0,75	3,3	7	1,6	64	12	18	36
P222KX3 (M2BMAX=22 Nm)													
32,00	32/1	**P222_0160 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	8,5	1,8	66	16	22	44
35,00	35/1	**P222_0350 KX301VF0010 MF**	3000	2500	4500	1,0	3,9	8,5	1,8	70	16	22	44
40,00	40/1	**P222_0200 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	8,5	1,8	66	16	22	44
50,00	50/1	**P222_0250 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	8,5	1,8	66	16	22	44
56,00	56/1	**P222_0280 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	8,5	1,8	66	16	22	44
60,00	60/1	**P222_0200 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	8,5	1,8	64	16	22	44
64,00	64/1	**P222_0320 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	8,5	1,7	66	14	18	36
70,00	70/1	**P222_0350 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	8,5	1,8	66	16	22	44
75,00	75/1	**P222_0250 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	8,5	1,8	64	16	22	44
80,00	80/1	**P222_0400 KX301VF0020 MF**	3500	3000	5500	0,80	3,9	8,5	1,8	66	16	22	44
84,00	84/1	**P222_0280 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	8,5	1,8	64	16	22	44
100,0	100/1	**P222_0500 KX301VF0020 MF**	3500	3000	5500	0,80	3,9	8	1,8	66	16	22	44
105,0	105/1	**P222_0350 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	8,5	1,8	64	16	22	44
120,0	120/1	**P222_0400 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	8,5	1,8	64	16	22	44
140,0	140/1	**P222_0700 KX301VF0020 MF**	3500	3000	5500	0,80	3,9	8	1,8	66	16	22	44
150,0	150/1	**P222_0500 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	8	1,8	64	16	22	44
200,0	200/1	**P222_1000 KX301VF0020 MF**	3500	3000	5500	0,80	3,9	8	1,6	66	12	18	36
210,0	210/1	**P222_0700 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	8	1,8	64	16	22	44
300,0	300/1	**P222_1000 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	8	1,6	64	12	18	36
P321KX3 (M2BMAX=63 Nm)													
3,000	3/1	**P321_0030 KX301VF0010 MF**	3000	2500	4500	1,2	4,0	7,5	2,5	70	29	38	68
4,000	4/1	**P321_0040 KX301VF0010 MF**	3000	2500	4500	1,1	4,0	6,5	3,2	70	39	50	91
5,000	5/1	**P321_0050 KX301VF0010 MF**	3000	2500	4500	1,1	4,0	6	3,6	70	45	63	110
6,000	6/1	**P321_0030 KX301VF0020 MF**	3500	3000	5500	0,85	4,0	7,5	2,5	66	29	38	77
7,000	7/1	**P321_0070 KX301VF0010 MF**	3000	2500	4500	1,0	4,0	5,5	3,7	70	45	60	130
8,000	8/1	**P321_0040 KX301VF0020 MF**	3500	3000	5500	0,83	4,0	6,5	3,2	66	39	50	100
10,00	10/1	**P321_0050 KX301VF0020 MF**	3500	3000	5500	0,82	4,0	6	3,6	66	45	63	130
12,00	12/1	**P321_0040 KX301VF0030 MF**	3500	3500	6000	0,76	4,0	6,5	3,2	64	39	50	100
14,00	14/1	**P321_0070 KX301VF0020 MF**	3500	3000	5500	0,81	4,0	5,5	3,7	66	45	60	130
15,00	15/1	**P321_0050 KX301VF0030 MF**	3500	3500	6000	0,75	4,0	6	3,6	64	45	63	130
16,00	16/1	**P321_0080 KX301VF0020 MF**	3500	3000	5500	0,81	4,0	5,5	3,7	66	40	50	100
20,00	20/1	**P321_0100 KX301VF0020 MF**	3500	3000	5500	0,81	4,0	5	3,7	66	30	50	100
21,00	21/1	**P321_0070 KX301VF0030 MF**	3500	3500	6000	0,75	4,0	5,5	3,7	64	45	60	130
24,00	24/1	**P321_0080 KX301VF0030 MF**	3500	3500	6000	0,75	4,0	5,5	3,7	64	40	50	100
30,00	30/1	**P321_0100 KX301VF0030 MF**	3500	3500	6000	0,75	4,0	5	3,7	64	30	50	100

PK

Right-Angle Planetary Gear Units **PKX**
*Reductores planetarios ortogonales **PKX***
Riduttori planetari-rinvio angolo **PKX**

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Please take notice of the indications on page PK8! ***¡Por favor observe las indicaciones en la página PK8!*** **Si raccomanda di rispettare le avvertenze a pagina PK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P322KX3 (M2BMAX=65 Nm)													
32,00	32/1	**P322_0160 KX301VF0020 MF**	3500	3000	5500	0,81	4,6	5,5	4,4	66	45	65	130
35,00	35/1	**P322_0350 KX301VF0010 MF**	3000	2500	4500	1,0	4,6	5,5	4,5	70	45	65	130
40,00	40/1	**P322_0200 KX301VF0020 MF**	3500	3000	5500	0,81	4,6	5,5	4,5	66	45	65	130
50,00	50/1	**P322_0250 KX301VF0020 MF**	3500	3000	5500	0,81	4,6	5,5	4,5	66	45	65	130
56,00	56/1	**P322_0280 KX301VF0020 MF**	3500	3000	5500	0,81	4,6	5,5	4,4	66	45	65	130
60,00	60/1	**P322_0200 KX301VF0030 MF**	3500	3500	6000	0,75	4,6	5,5	4,5	64	45	65	130
64,00	64/1	**P322_0320 KX301VF0020 MF**	3500	3000	5500	0,81	4,6	5,5	4,0	66	40	50	100
70,00	70/1	**P322_0350 KX301VF0020 MF**	3500	3000	5500	0,81	4,6	5,5	4,5	66	45	65	130
75,00	75/1	**P322_0250 KX301VF0030 MF**	3500	3500	6000	0,75	4,6	5,5	4,5	64	45	65	130
80,00	80/1	**P322_0400 KX301VF0020 MF**	3500	3000	5500	0,80	4,6	5,5	4,4	66	45	65	130
84,00	84/1	**P322_0280 KX301VF0030 MF**	3500	3500	6000	0,75	4,6	5,5	4,4	64	45	65	130
100,0	100/1	**P322_0500 KX301VF0020 MF**	3500	3000	5500	0,80	4,6	5	4,5	66	45	65	130
105,0	105/1	**P322_0350 KX301VF0030 MF**	3500	3500	6000	0,75	4,6	5,5	4,5	64	45	65	130
120,0	120/1	**P322_0400 KX301VF0030 MF**	3500	3500	6000	0,75	4,6	5,5	4,4	64	45	65	130
140,0	140/1	**P322_0700 KX301VF0020 MF**	3500	3000	5500	0,80	4,6	5	4,2	66	45	60	130
150,0	150/1	**P322_0500 KX301VF0030 MF**	3500	3500	6000	0,75	4,6	5	4,5	64	45	65	130
200,0	200/1	**P322_1000 KX301VF0020 MF**	3500	3000	5500	0,80	4,6	5	3,9	66	30	50	100
210,0	210/1	**P322_0700 KX301VF0030 MF**	3500	3500	6000	0,75	4,6	5	4,2	64	45	60	130
300,0	300/1	**P322_1000 KX301VF0030 MF**	3500	3500	6000	0,75	4,6	5	3,9	64	30	50	100
P421KX4 (M2BMAX=120 Nm)													
3,000	3/1	**P421_0030 KX401VF0010 MF**	2500	2000	4000	3,0	6,8	7,5	5,2	72	50	73	150
4,000	4/1	**P421_0040 KX401VF0010 MF**	2500	2000	4000	2,7	6,8	6,5	6,9	72	78	97	210
5,000	5/1	**P421_0050 KX401VF0010 MF**	2500	2000	4000	2,5	6,8	6	8,0	72	85	120	240
6,000	6/1	**P421_0030 KX401VF0020 MF**	2500	2500	5000	1,8	6,8	7,5	5,2	68	50	73	150
7,000	7/1	**P421_0070 KX401VF0010 MF**	2500	2000	4000	2,4	6,8	5,5	8,4	72	85	110	240
8,000	8/1	**P421_0040 KX401VF0020 MF**	2500	2500	5000	1,7	6,8	6,5	6,9	68	78	97	210
10,00	10/1	**P421_0050 KX401VF0020 MF**	2500	2500	5000	1,7	6,8	6	8,0	68	85	120	240
12,00	12/1	**P421_0040 KX401VF0030 MF**	3000	3000	5500	1,5	6,8	6,5	6,9	66	78	97	210
14,00	14/1	**P421_0070 KX401VF0020 MF**	2500	2500	5000	1,6	6,8	5,5	8,4	68	85	110	240
15,00	15/1	**P421_0050 KX401VF0030 MF**	3000	3000	5500	1,5	6,8	6	8,0	66	85	120	240
16,00	16/1	**P421_0080 KX401VF0020 MF**	2500	2500	5000	1,6	6,8	5,5	8,3	68	80	100	200
20,00	20/1	**P421_0100 KX401VF0020 MF**	2500	2500	5000	1,6	6,8	5	8,3	68	60	100	200
21,00	21/1	**P421_0070 KX401VF0030 MF**	3000	3000	5500	1,4	6,8	5,5	8,4	66	85	110	240
24,00	24/1	**P421_0080 KX401VF0030 MF**	3000	3000	5500	1,4	6,8	5,5	8,3	66	80	100	200
30,00	30/1	**P421_0100 KX401VF0030 MF**	3000	3000	5500	1,4	6,8	5	8,3	66	60	100	200
P422KX3 (M2BMAX=120 Nm)													
32,00	32/1	**P422_0160 KX301VF0020 MF**	3500	3000	5500	0,84	7,0	5,5	9,7	66	85	120	240
35,00	35/1	**P422_0350 KX301VF0010 MF**	3000	2500	4500	1,0	7,0	5,5	10	70	85	120	240
40,00	40/1	**P422_0200 KX301VF0020 MF**	3500	3000	5500	0,84	7,0	5,5	10	66	85	120	240
50,00	50/1	**P422_0250 KX301VF0020 MF**	3500	3000	5500	0,82	7,0	5,5	10	66	85	120	240
56,00	56/1	**P422_0280 KX301VF0020 MF**	3500	3000	5500	0,81	7,0	5,5	10,0	66	85	120	240
60,00	60/1	**P422_0200 KX301VF0030 MF**	3500	3500	6000	0,76	7,0	5,5	10	64	85	120	240
64,00	64/1	**P422_0320 KX301VF0020 MF**	3500	3000	5500	0,83	7,0	5,5	9,1	66	80	100	200
70,00	70/1	**P422_0350 KX301VF0020 MF**	3500	3000	5500	0,81	7,0	5,5	10	66	85	120	240
75,00	75/1	**P422_0250 KX301VF0030 MF**	3500	3500	6000	0,75	7,0	5,5	10	64	85	120	240
80,00	80/1	**P422_0400 KX301VF0020 MF**	3500	3000	5500	0,81	7,0	5,5	10,0	66	85	120	240
84,00	84/1	**P422_0280 KX301VF0030 MF**	3500	3500	6000	0,75	7,0	5,5	10,0	64	85	120	240
100,0	100/1	**P422_0500 KX301VF0020 MF**	3500	3000	5500	0,81	7,0	5	10	66	85	120	240
105,0	105/1	**P422_0350 KX301VF0030 MF**	3500	3500	6000	0,75	7,0	5,5	10	64	85	120	240
120,0	120/1	**P422_0400 KX301VF0030 MF**	3500	3500	6000	0,75	7,0	5,5	10,0	64	85	120	240
140,0	140/1	**P422_0700 KX301VF0020 MF**	3500	3000	5500	0,81	7,0	5	9,6	66	85	110	240
150,0	150/1	**P422_0500 KX301VF0030 MF**	3500	3500	6000	0,75	7,0	5	10	64	85	120	240
200,0	200/1	**P422_1000 KX301VF0020 MF**	3500	3000	5500	0,81	7,0	5	8,8	66	60	100	200
210,0	210/1	**P422_0700 KX301VF0030 MF**	3500	3500	6000	0,75	7,0	5	9,6	64	85	110	240
300,0	300/1	**P422_1000 KX301VF0030 MF**	3500	3500	6000	0,75	7,0	5	8,8	64	60	100	200

Right-Angle Planetary Gear Units **PKX**
*Reductores planetarios ortogonales **PKX***
Riduttori planetari-rinvio angolo **PKX**

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Please take notice of the indications on page PK8! ***¡Por favor observe las indicaciones en la página PK8!*** **Si raccomanda di rispettare le avvertenze a pagina PK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P521KX5 (M2BMAX=300 Nm)													
3,000	3/1	**P521_0030 KX501VF0010 MF**	2500	2000	3500	10	12,8	6,5	14	74	120	180	390
4,000	4/1	**P521_0040 KX501VF0010 MF**	2500	2000	3500	8,5	12,8	5,5	17	74	190	240	520
5,000	5/1	**P521_0050 KX501VF0010 MF**	2500	2000	3500	8,1	12,8	5	20	74	210	300	600
6,000	6/1	**P521_0030 KX501VF0020 MF**	2500	2500	4500	6,0	12,8	6,5	14	70	120	180	390
7,000	7/1	**P521_0070 KX501VF0010 MF**	2500	2000	3500	7,7	12,8	4,5	23	74	210	270	600
8,000	8/1	**P521_0040 KX501VF0020 MF**	2500	2500	4500	5,5	12,8	5,5	17	70	190	240	520
10,00	10/1	**P521_0050 KX501VF0020 MF**	2500	2500	4500	5,4	12,8	5	20	70	210	300	600
12,00	12/1	**P521_0040 KX501VF0030 MF**	3000	3000	5000	4,9	12,8	5,5	17	68	190	240	520
14,00	14/1	**P521_0070 KX501VF0020 MF**	2500	2500	4500	5,3	12,8	4,5	23	70	210	270	600
15,00	15/1	**P521_0050 KX501VF0030 MF**	3000	3000	5000	4,8	12,8	5	20	68	210	300	600
16,00	16/1	**P521_0080 KX501VF0020 MF**	2500	2500	4500	5,3	12,8	4,5	22	70	200	250	500
20,00	20/1	**P521_0100 KX501VF0020 MF**	2500	2500	4500	5,3	12,8	4	23	70	140	250	500
21,00	21/1	**P521_0070 KX501VF0030 MF**	3000	3000	5000	4,8	12,8	4,5	23	68	210	270	600
24,00	24/1	**P521_0080 KX501VF0030 MF**	3000	3000	5000	4,8	12,8	4,5	22	68	200	250	500
30,00	30/1	**P521_0100 KX501VF0030 MF**	3000	3000	5000	4,8	12,8	4	23	68	140	250	500
P522KX4 (M2BMAX=300 Nm)													
32,00	32/1	**P522_0160 KX401VF0020 MF**	2500	2500	5000	1,7	11,3	4,5	25	68	210	300	600
35,00	35/1	**P522_0350 KX401VF0010 MF**	2500	2000	4000	2,5	11,3	4,5	27	72	210	300	600
40,00	40/1	**P522_0200 KX401VF0020 MF**	2500	2500	5000	1,7	11,3	4,5	26	68	210	300	600
50,00	50/1	**P522_0250 KX401VF0020 MF**	2500	2500	5000	1,7	11,3	4,5	27	68	210	300	600
56,00	56/1	**P522_0280 KX401VF0020 MF**	2500	2500	5000	1,6	11,3	4,5	26	68	210	300	600
60,00	60/1	**P522_0200 KX401VF0030 MF**	3000	3000	5500	1,5	11,3	4,5	26	66	210	300	600
64,00	64/1	**P522_0320 KX401VF0020 MF**	2500	2500	5000	1,7	11,3	4,5	25	68	200	250	500
70,00	70/1	**P522_0350 KX401VF0020 MF**	2500	2500	5000	1,6	11,3	4,5	27	68	210	300	600
75,00	75/1	**P522_0250 KX401VF0030 MF**	3000	3000	5500	1,5	11,3	4,5	27	66	210	300	600
80,00	80/1	**P522_0400 KX401VF0020 MF**	2500	2500	5000	1,6	11,3	4,5	26	68	210	300	600
84,00	84/1	**P522_0280 KX401VF0030 MF**	3000	3000	5500	1,4	11,3	4,5	26	66	210	300	600
100,0	100/1	**P522_0500 KX401VF0020 MF**	2500	2500	5000	1,6	11,3	4	27	68	210	300	600
105,0	105/1	**P522_0350 KX401VF0030 MF**	3000	3000	5500	1,4	11,3	4,5	27	66	210	300	600
120,0	120/1	**P522_0400 KX401VF0030 MF**	3000	3000	5500	1,4	11,3	4,5	26	66	210	300	600
140,0	140/1	**P522_0700 KX401VF0020 MF**	2500	2500	5000	1,6	11,3	4	26	68	210	270	600
150,0	150/1	**P522_0500 KX401VF0030 MF**	3000	3000	5500	1,4	11,3	4	27	66	210	300	600
200,0	200/1	**P522_1000 KX401VF0020 MF**	2500	2500	5000	1,6	11,3	4	24	68	140	250	500
210,0	210/1	**P522_0700 KX401VF0030 MF**	3000	3000	5500	1,4	11,3	4	26	66	210	270	600
300,0	300/1	**P522_1000 KX401VF0030 MF**	3000	3000	5500	1,4	11,3	4	24	66	140	250	500
P721KX7 (M2BMAX=650 Nm)													
3,000	3/1	**P721_0030 KX701VF0010 MF**	1800	1600	3000	33	23,2	6,5	37	76	280	360	680
4,000	4/1	**P721_0040 KX701VF0010 MF**	1800	1600	3000	28	23,2	5,5	43	76	390	490	910
5,000	5/1	**P721_0050 KX701VF0010 MF**	1800	1600	3000	27	23,2	5	46	76	440	610	1130
6,000	6/1	**P721_0030 KX701VF0020 MF**	1800	1800	3500	17	23,2	6,5	37	72	280	360	770
7,000	7/1	**P721_0070 KX701VF0010 MF**	1800	1600	3000	26	23,2	4,5	49	76	440	650	1250
8,000	8/1	**P721_0040 KX701VF0020 MF**	1800	1800	3500	16	23,2	5,5	43	72	390	490	1030
10,00	10/1	**P721_0050 KX701VF0020 MF**	1800	1800	3500	15	23,2	5	46	72	440	610	1290
12,00	12/1	**P721_0040 KX701VF0030 MF**	2100	2100	4000	13	23,2	5,5	43	70	390	490	1030
14,00	14/1	**P721_0070 KX701VF0020 MF**	1800	1800	3500	15	23,2	4,5	49	72	440	650	1250
15,00	15/1	**P721_0050 KX701VF0030 MF**	2100	2100	4000	13	23,2	5	46	70	440	610	1290
16,00	16/1	**P721_0080 KX701VF0020 MF**	1800	1800	3500	15	23,2	4,5	49	72	400	500	1000
20,00	20/1	**P721_0100 KX701VF0020 MF**	1800	1800	3500	15	23,2	4	47	72	300	500	1000
21,00	21/1	**P721_0070 KX701VF0030 MF**	2100	2100	4000	13	23,2	4,5	49	70	440	650	1250
24,00	24/1	**P721_0080 KX701VF0030 MF**	2100	2100	4000	13	23,2	4,5	49	70	400	500	1000
30,00	30/1	**P721_0100 KX701VF0030 MF**	2100	2100	4000	12	23,2	4	47	70	300	500	1000

Right-Angle Planetary Gear Units **PKX**
*Reductores planetarios ortogonales **PKX***
Riduttori planetari-rinvio angolo **PKX**

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Please take notice of the indications on page PK8! ***¡Por favor observe las indicaciones en la página PK8!*** **Si raccomanda di rispettare le avvertenze a pagina PK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P722KX5 (M2BMAX=700 Nm)													
32,00	32/1	**P722_0160 KX501VF0020 MF**	2500	2500	4500	5,6	21,3	4,5	49	70	440	700	1380
35,00	35/1	**P722_0350 KX501VF0010 MF**	2500	2000	3500	7,8	21,3	4,5	52	74	440	700	1400
40,00	40/1	**P722_0200 KX501VF0020 MF**	2500	2500	4500	5,5	21,3	4,5	51	70	440	700	1400
50,00	50/1	**P722_0250 KX501VF0020 MF**	2500	2500	4500	5,4	21,3	4,5	52	70	440	700	1400
56,00	56/1	**P722_0280 KX501VF0020 MF**	2500	2500	4500	5,4	21,3	4,5	51	70	440	700	1380
60,00	60/1	**P722_0200 KX501VF0030 MF**	3000	3000	5000	4,9	21,3	4,5	51	68	440	700	1400
64,00	64/1	**P722_0320 KX501VF0020 MF**	2500	2500	4500	5,5	21,3	4,5	51	70	400	500	1000
70,00	70/1	**P722_0350 KX501VF0020 MF**	2500	2500	4500	5,4	21,3	4,5	52	70	440	700	1400
75,00	75/1	**P722_0250 KX501VF0030 MF**	3000	3000	5000	4,8	21,3	4,5	52	68	440	700	1400
80,00	80/1	**P722_0400 KX501VF0020 MF**	2500	2500	4500	5,3	21,3	4,5	51	70	440	700	1380
84,00	84/1	**P722_0280 KX501VF0030 MF**	3000	3000	5000	4,8	21,3	4,5	51	68	440	700	1380
100,0	100/1	**P722_0500 KX501VF0020 MF**	2500	2500	4500	5,3	21,3	4	52	70	440	700	1400
105,0	105/1	**P722_0350 KX501VF0030 MF**	3000	3000	5000	4,8	21,3	4,5	52	68	440	700	1400
120,0	120/1	**P722_0400 KX501VF0030 MF**	3000	3000	5000	4,8	21,3	4,5	51	68	440	700	1380
140,0	140/1	**P722_0700 KX501VF0020 MF**	2500	2500	4500	5,3	21,3	4	52	70	440	650	1250
150,0	150/1	**P722_0500 KX501VF0030 MF**	3000	3000	5000	4,8	21,3	4	52	68	440	700	1400
200,0	200/1	**P722_1000 KX501VF0020 MF**	2500	2500	4500	5,3	21,3	4	48	70	300	500	1000
210,0	210/1	**P722_0700 KX501VF0030 MF**	3000	3000	5000	4,8	21,3	4	52	68	440	650	1250
300,0	300/1	**P722_1000 KX501VF0030 MF**	3000	3000	5000	4,8	21,3	4	48	68	300	500	1000
P821KX8 (M2BMAX=1400 Nm)													
3,000	3/1	**P821_0030 KX801VF0010 MF**	1000	750	2000	118	47,4	6,5	84	80	580	800	1300
4,000	4/1	**P821_0040 KX801VF0010 MF**	1000	750	2000	94	47,4	5,5	111	80	780	1070	1730
5,000	5/1	**P821_0050 KX801VF0010 MF**	1000	750	2000	87	47,4	5	128	80	970	1330	2160
6,000	6/1	**P821_0030 KX801VF0020 MF**	1100	1100	2500	59	47,4	6,5	84	76	580	800	1550
7,000	7/1	**P821_0070 KX801VF0010 MF**	1000	750	2000	82	47,4	4,5	142	80	1000	1400	2800
8,000	8/1	**P821_0040 KX801VF0020 MF**	1100	1100	2500	53	47,4	5,5	111	76	780	1070	2060
10,00	10/1	**P821_0050 KX801VF0020 MF**	1100	1100	2500	51	47,4	5	128	76	970	1330	2580
12,00	12/1	**P821_0040 KX801VF0030 MF**	1300	1300	3000	45	47,4	5,5	111	74	780	1070	2060
14,00	14/1	**P821_0070 KX801VF0020 MF**	1100	1100	2500	50	47,4	4,5	142	76	1000	1400	2800
15,00	15/1	**P821_0050 KX801VF0030 MF**	1300	1300	3000	44	47,4	5	128	74	970	1330	2580
16,00	16/1	**P821_0080 KX801VF0020 MF**	1100	1100	2500	50	47,4	4,5	142	76	800	1200	2400
20,00	20/1	**P821_0100 KX801VF0020 MF**	1100	1100	2500	50	47,4	4	139	76	700	1200	2400
21,00	21/1	**P821_0070 KX801VF0030 MF**	1300	1300	3000	44	47,4	4,5	142	74	1000	1400	2800
24,00	24/1	**P821_0080 KX801VF0030 MF**	1300	1300	3000	44	47,4	4,5	142	74	800	1200	2400
30,00	30/1	**P821_0100 KX801VF0030 MF**	1300	1300	3000	44	47,4	4	139	74	700	1200	2400
P822KX7 (M2BMAX=1600 Nm)													
32,00	32/1	**P822_0160 KX701VF0020 MF**	1800	1800	3500	16	43,2	4,5	158	72	800	1600	3180
35,00	35/1	**P822_0350 KX701VF0010 MF**	1800	1600	3000	26	43,2	4,5	168	76	1000	1600	3200
40,00	40/1	**P822_0200 KX701VF0020 MF**	1800	1800	3500	16	43,2	4,5	164	72	1000	1600	3200
50,00	50/1	**P822_0250 KX701VF0020 MF**	1800	1800	3500	15	43,2	4,5	166	72	1000	1600	3200
56,00	56/1	**P822_0280 KX701VF0020 MF**	1800	1800	3500	15	43,2	4,5	163	72	800	1600	3180
60,00	60/1	**P822_0200 KX701VF0030 MF**	2100	2100	4000	13	43,2	4,5	164	70	1000	1600	3200
64,00	64/1	**P822_0320 KX701VF0020 MF**	1800	1800	3500	16	43,2	4,5	157	72	800	1200	2400
70,00	70/1	**P822_0350 KX701VF0020 MF**	1800	1800	3500	15	43,2	4,5	168	72	1000	1600	3200
75,00	75/1	**P822_0250 KX701VF0030 MF**	2100	2100	4000	13	43,2	4,5	166	70	1000	1600	3200
80,00	80/1	**P822_0400 KX701VF0020 MF**	1800	1800	3500	15	43,2	4,5	161	72	800	1600	3180
84,00	84/1	**P822_0280 KX701VF0030 MF**	2100	2100	4000	13	43,2	4,5	163	70	800	1600	3180
100,0	100/1	**P822_0500 KX701VF0020 MF**	1800	1800	3500	15	43,2	4	167	72	1000	1600	3200
105,0	105/1	**P822_0350 KX701VF0030 MF**	2100	2100	4000	13	43,2	4,5	168	70	1000	1600	3200
120,0	120/1	**P822_0400 KX701VF0030 MF**	2100	2100	4000	12	43,2	4,5	161	70	800	1600	3180
140,0	140/1	**P822_0700 KX701VF0020 MF**	1800	1800	3500	15	43,2	4	164	72	1000	1400	2800
150,0	150/1	**P822_0500 KX701VF0030 MF**	2100	2100	4000	12	43,2	4	167	70	1000	1600	3200
200,0	200/1	**P822_1000 KX701VF0020 MF**	1800	1800	3500	15	43,2	4	148	72	700	1200	2400
210,0	210/1	**P822_0700 KX701VF0030 MF**	2100	2100	4000	12	43,2	4	164	70	1000	1400	2800
300,0	300/1	**P822_1000 KX701VF0030 MF**	2100	2100	4000	12	43,2	4	148	70	700	1200	2400

Right-Angle Planetary Gear Units **PKX**
*Reductores planetarios ortogonales **PKX***
Riduttori planetari-rinvio angolo **PKX**

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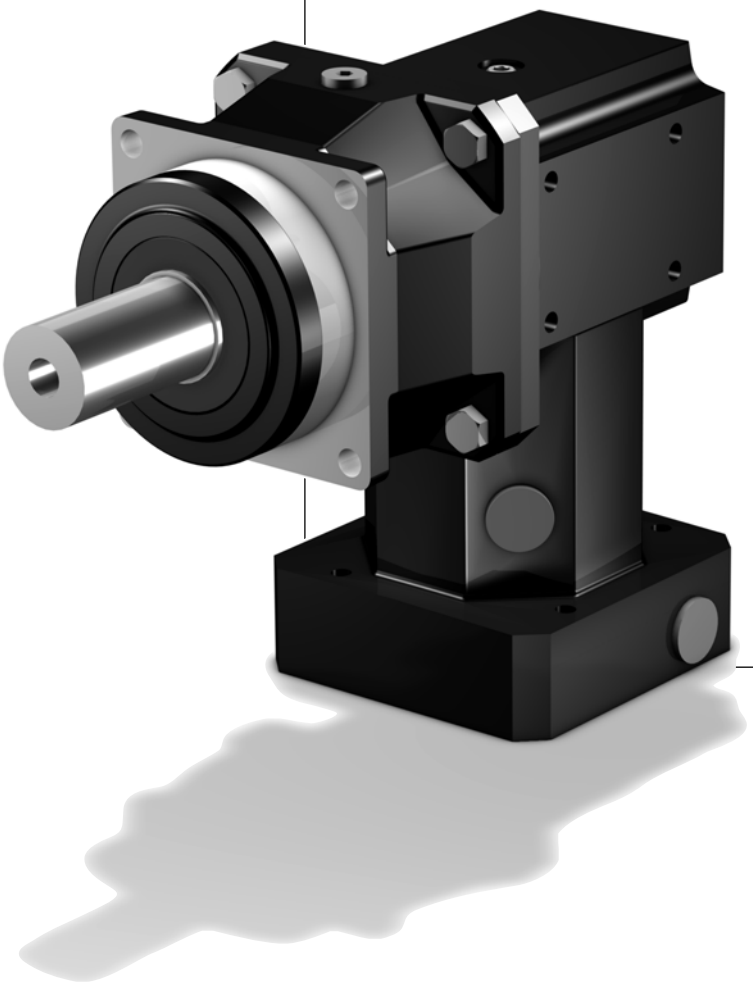
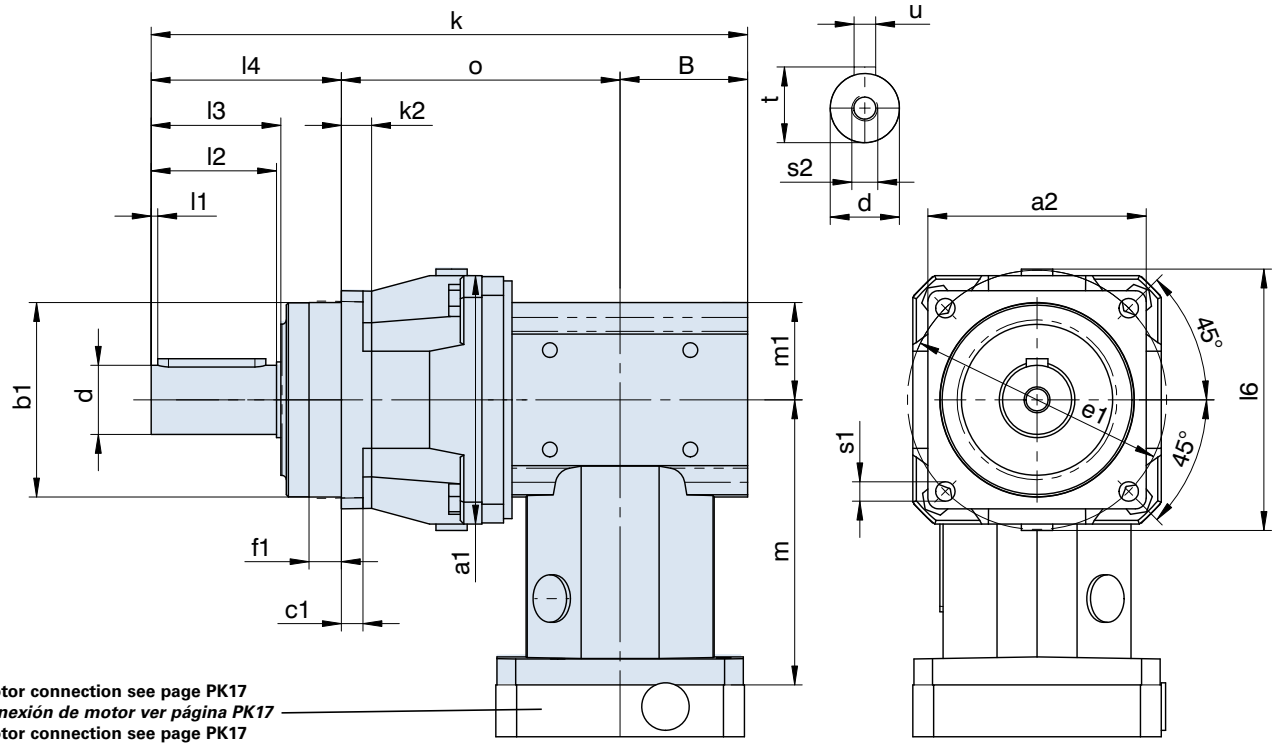
Please take notice of the indications on page PK8! ***¡Por favor observe las indicaciones en la página PK8!*** **Si raccomanda di rispettare le avvertenze a pagina PK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P922KX8 (M2BMAX=3000 Nm)													
32,00	32/1	**P922_0160 KX801VF0020 MF**	1100	1100	2500	53	82,0	4,5	313	76	2000	3000	5530
35,00	35/1	**P922_0350 KX801VF0010 MF**	1000	750	2000	82	82,0	4,5	327	80	2000	3000	6000
40,00	40/1	**P922_0200 KX801VF0020 MF**	1100	1100	2500	53	82,0	4,5	319	76	2000	3000	6000
50,00	50/1	**P922_0250 KX801VF0020 MF**	1100	1100	2500	51	82,0	4,5	324	76	2000	3000	6000
56,00	56/1	**P922_0280 KX801VF0020 MF**	1100	1100	2500	50	82,0	4,5	326	76	2000	3000	5530
60,00	60/1	**P922_0200 KX801VF0030 MF**	1300	1300	3000	45	82,0	4,5	319	74	2000	3000	6000
70,00	70/1	**P922_0350 KX801VF0020 MF**	1100	1100	2500	50	82,0	4,5	327	76	2000	3000	6000
75,00	75/1	**P922_0250 KX801VF0030 MF**	1300	1300	3000	44	82,0	4,5	324	74	2000	3000	6000
80,00	80/1	**P922_0400 KX801VF0020 MF**	1100	1100	2500	50	82,0	4,5	324	76	2000	3000	5530
84,00	84/1	**P922_0280 KX801VF0030 MF**	1300	1300	3000	44	82,0	4,5	326	74	2000	3000	5530
100,0	100/1	**P922_0500 KX801VF0020 MF**	1100	1100	2500	49	82,0	4	326	76	2000	3000	6000
105,0	105/1	**P922_0350 KX801VF0030 MF**	1300	1300	3000	44	82,0	4,5	327	74	2000	3000	6000
120,0	120/1	**P922_0400 KX801VF0030 MF**	1300	1300	3000	44	82,0	4,5	324	74	2000	3000	5530
140,0	140/1	**P922_0700 KX801VF0020 MF**	1100	1100	2500	49	82,0	4	315	76	2000	2700	5400
150,0	150/1	**P922_0500 KX801VF0030 MF**	1300	1300	3000	43	82,0	4	326	74	2000	3000	6000
200,0	200/1	**P922_1000 KX801VF0020 MF**	1100	1100	2500	49	82,0	4	255	76	1400	2000	4000
210,0	210/1	**P922_0700 KX801VF0030 MF**	1300	1300	3000	43	82,0	4	315	74	2000	2700	5400
300,0	300/1	**P922_1000 KX801VF0030 MF**	1300	1300	3000	43	82,0	4	255	74	1400	2000	4000



P2KX3_MF - P9KX8_MF



Motor connection see page PK17
Conexión de motor ver página PK17
Motor connection see page PK17

Output shaft can also be delivered without key (see page P3). Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta (ver página P3)! ¡Por favor observe las indicaciones en la página A19!

Albero uscita disponibile anche senza chiavetta (vedere a pagina P3)! Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	□a1	□a2	øb1	B	c1	ød	øe1	f1	k	k2	l1
P221_....KX3	55	55	50h6	40	6	12k6	63	7,0	160,0	-	2
P222_....KX3	55	55	50h6	40	6	12k6	63	7,0	192,0	-	2
P321_....KX3	72	72	60h6	40	7	16k6	75	7,5	184,0	-	2
P322_....KX3	72	72	60h6	40	7	16k6	75	7,5	224,0	-	2
P421_....KX4	98	76	70h6	49	9	22k6	85	7,5	220,0	12	3
P422_....KX3	98	76	70h6	40	9	22k6	85	7,5	249,5	12	3
P521_....KX5	114	101	90h6	60	10	32k6	120	15,0	277,0	14	3
P522_....KX4	114	101	90h6	49	10	32k6	120	15,0	309,5	14	3
P721_....KX7	145	145	130h6	74	15	40k6	165	3,5	343,0	-	4
P722_....KX5	145	145	130h6	60	15	40k6	165	3,5	378,0	-	4
P821_....KX8	190	190	160h6	92	15	55k6	215	10,0	417,0	-	6
P822_....KX7	190	190	160h6	74	15	55k6	215	10,0	451,5	-	6
P922_....KX8	225	212	180h6	92	17	75k6	250	10,0	575,0	22	7

Typ	l2	l3	l4	l6	m	m1	o	øs1	s2	t	u
P221_....KX3	22	24	36	62	95,5	31,0	84,0	5,5	M4	13,5	A4x4x18
P222_....KX3	22	24	36	62	95,5	31,0	116,0	5,5	M4	13,5	A4x4x18
P321_....KX3	28	30	48	79	95,5	31,0	96,0	5,5	M5	18,0	A5x5x22
P322_....KX3	28	30	48	79	95,5	31,0	136,0	5,5	M5	18,0	A5x5x22
P421_....KX4	36	38	56	98	104,0	37,5	115,0	6,6	M8	24,5	A6x6x28
P422_....KX3	36	38	56	98	95,5	31,0	153,5	6,6	M8	24,5	A6x6x28
P521_....KX5	58	60	88	121	132,0	45,0	129,0	9,0	M12	35,0	A10x8x50
P522_....KX4	58	60	88	121	104,0	37,5	172,5	9,0	M12	35,0	A10x8x50
P721_....KX7	82	85	112	145	172,5	60,0	157,0	11,0	M16	43,0	A12x8x70
P722_....KX5	82	85	112	145	132,0	45,0	206,0	11,0	M16	43,0	A12x8x70
P821_....KX8	82	85	112	190	210,0	75,0	213,0	13,5	M20	59,0	A16x10x70
P822_....KX7	82	85	112	190	172,5	60,0	265,5	13,5	M20	59,0	A16x10x70
P922_....KX8	105	109	143	225	210,0	75,0	340,0	17,5	M20	79,5	A20x12x90

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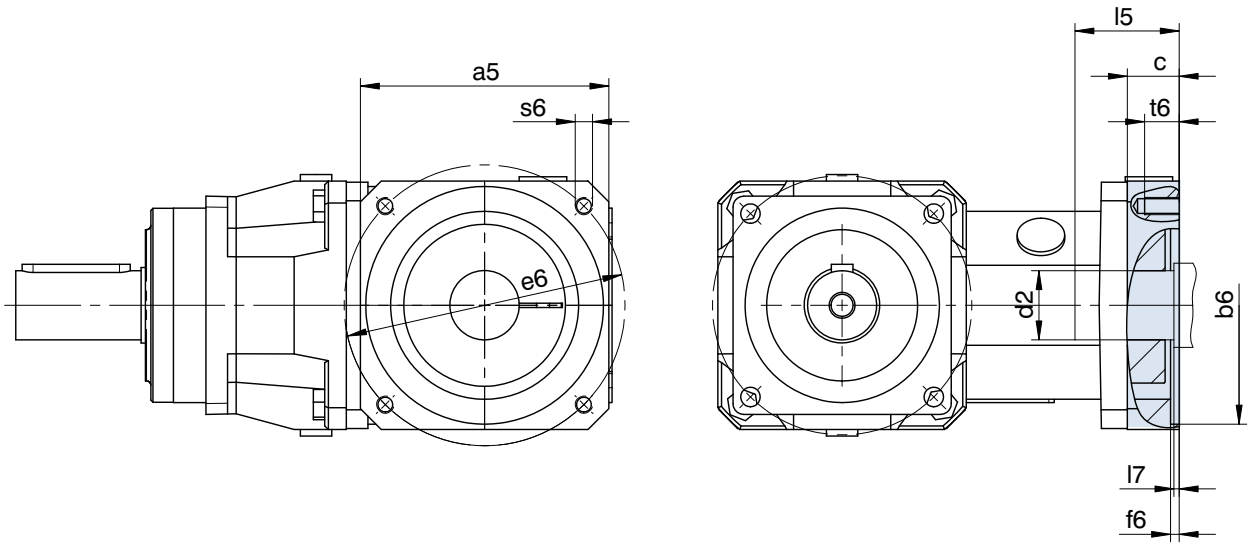
P2KX3_MF - P9KX8_MF



Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ		øb6	øe6	ød2max	l5max	□a5	c	f6	l7max	s6	t6
P221/P222/P321/P322/P422	**KX3**	40,0H7	63	19	40	75	18	3,0	5,5	M5	11
P221/P222/P321/P322/P422	**KX3**	50,0H7	70	19	40	75	18	3,0	5,5	M4	9
P221/P222/P321/P322/P422	**KX3**	50,0H7	95	19	40	80	18	3,0	5,5	M6	13
P221/P222/P321/P322/P422	**KX3**	60,0H7	75	19	40	75	18	3,5	5,5	M5	11
P221/P222/P321/P322/P422	**KX3**	60,0H7	90	19	40	75	18	3,5	5,5	M5	9
P221/P222/P321/P322/P422	**KX3**	70,0H7	90	19	40	80	18	3,5	5,5	M5	9
P221/P222/P321/P322/P422	**KX3**	80,0H7	100	19	40	90	18	3,5	5,5	M6	13
P221/P222/P321/P322/P422	**KX3**	95,0H7	115	19	40	100	18	4,0	5,5	M8	18
P221/P222/P321/P322/P422	**KX3**	95,0H7	130	19	40	115	18	4,0	5,5	M8	18
P421/P522	**KX4**	50,0H7	70	24	42	100	21	4,0	4,5	M4	10
P421/P522	**KX4**	50,0H7	95	24	42	100	21	2,5	4,5	M6	13
P421/P522	**KX4**	60,0H7	75	24	42	100	21	3,5	4,5	M5	9
P421/P522	**KX4**	80,0H7	100	24	42	100	21	4,0	4,5	M6	13
P421/P522	**KX4**	95,0H7	115	24	51	100	30	4,0	13,5	M6	13
P421/P522	**KX4**	95,0H7	115	24	42	100	21	4,0	4,5	M8	21
P421/P522	**KX4**	95,0H7	115	24	51	100	30	4,0	13,5	M8	16
P421/P522	**KX4**	95,0H7	130	24	42	115	21	4,0	4,5	M8	16
P421/P522	**KX4**	95,0H7	130	24	51	115	30	4,0	13,5	M8	16
P421/P522	**KX4**	110,0H7	130	24	51	115	30	4,0	13,5	M8	16
P421/P522	**KX4**	110,0H7	145	24	59	130	38	7,0	21,5	M8	16
P421/P522	**KX4**	130,0H7	165	24	51	140	30	7,0	13,5	M10	20
P521/P722	**KX5**	80,0H7	100	32	53	120	24	4,0	5,0	M6	13
P521/P722	**KX5**	95,0H7	115	32	53	120	24	5,0	5,0	M8	16
P521/P722	**KX5**	95,0H7	130	32	53	120	24	4,0	5,0	M8	16
P521/P722	**KX5**	110,0H7	130	32	53	120	24	4,0	5,0	M8	16
P521/P722	**KX5**	110,0H7	145	32	61	140	32	6,5	13,0	M8	16
P521/P722	**KX5**	110,0H7	145	32	71	140	42	7,0	23,0	M8	16
P521/P722	**KX5**	110,0H7	165	32	53	140	24	5,0	5,0	M10	24
P521/P722	**KX5**	130,0H7	165	32	61	140	32	5,0	13,0	M10	20
P721/P822	**KX7**	110,0H7	130	38	64	145	26	5,0	8,0	M8	14
P721/P822	**KX7**	110,0H7	145	38	75	145	37	5,0	19,0	M8	16
P721/P822	**KX7**	110,0H7	165	38	64	145	26	5,0	8,0	M10	26
P721/P822	**KX7**	114,3H7	200	38	83	180	45	5,0	27,0	M12	25
P721/P822	**KX7**	130,0H7	165	38	64	145	26	5,0	8,0	M10	26
P721/P822	**KX7**	130,0H7	215	38	64	190	26	5,0	8,0	M12	26
P721/P822	**KX7**	180,0H7	215	38	83	190	45	5,0	27,0	M12	25
P821/P922	**KX8**	110,0H7	165	48	83	190	34	5,0	11,0	M10	18
P821/P922	**KX8**	114,3H7	200	48	83	190	34	4,0	11,0	M12	34
P821/P922	**KX8**	130,0H7	165	48	83	190	34	5,0	11,0	M10	18
P821/P922	**KX8**	130,0H7	215	48	83	190	34	5,0	11,0	M12	34
P821/P922	**KX8**	180,0H7	215	48	84	190	35	5,0	12,0	M12	35
P821/P922	**KX8**	250,0H7	300	48	87	260	38	6,0	15,0	M16	38

ServoFit® PK Right-Angle Planetary Gear Units
Reductores planetarios ortogonales ***ServoFit® PK***
ServoFit® Riduttori planetari-coppia conica **PK**

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Helical geared Angular Precision Planetary Gear Units

- Acceleration torque: 140 – 2700 Nm
- Backlash: 3.5 – 5 arcmin
- FKM seal at input
- EasyAdapt® motor adapter with clamp coupling:
  - easy to assemble due to spreading function
  - aluminium lightweight construction
  - low construction length
  - high torsional stiffness
  - optionally with clamping set for increased safety
  - optionally with double seal
- Continuous operation without cooling
- high ratio range from 12 to 561
- quiet running due to advanced gear technology
- efficiency: ≥ 94 %

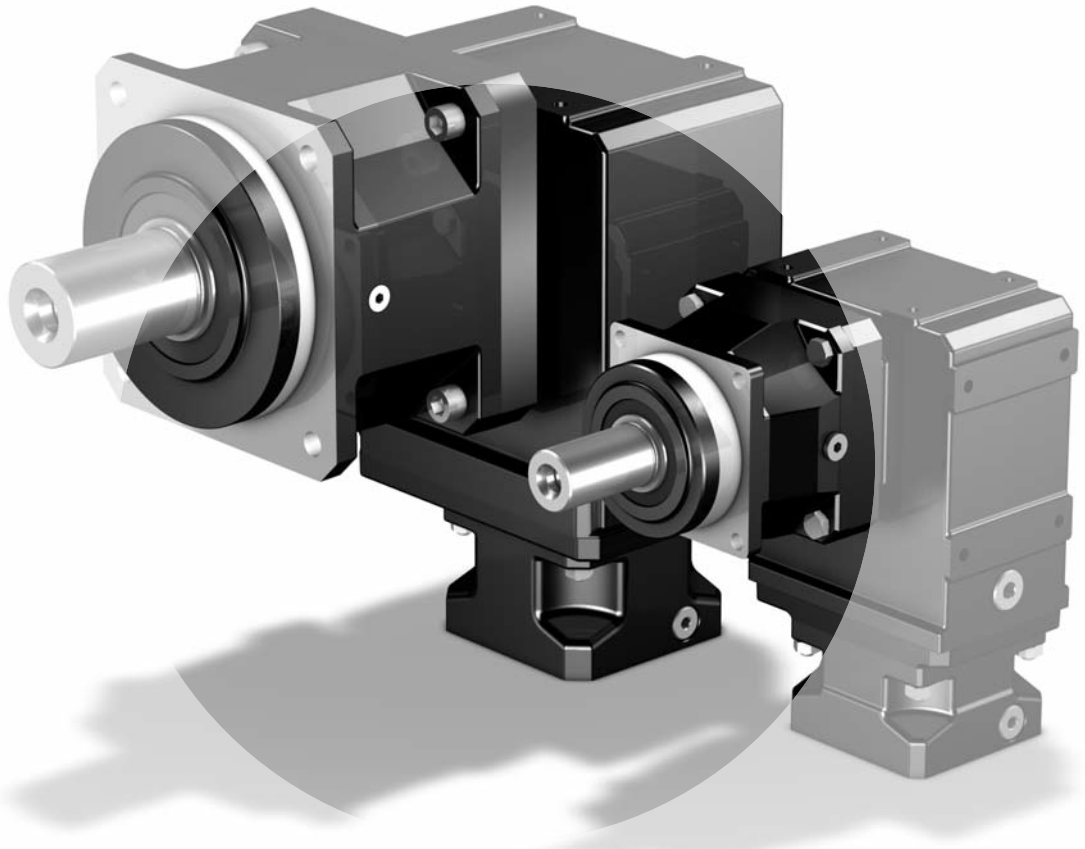
Reductores planetarios ortogonales de precisión con dentado helicoidal

- *Par de aceleración: 140 – 2700 Nm*
- *Juego de giro: 3,5 – 5 arcmin*
- *Adaptador de motor EasyAdapt® con acoplamiento de anillo de apriete*
  - *Fácil de montar gracias a la función de expansión*
  - *Construcción ligera de aluminio*
  - *Longitud constructiva corta*
  - *Gran resistencia a la torsión*
  - *Opcionalmente con kit de sujeción para una mayor seguridad*
  - *Opcionalmente con sellado doble*
- *Alta rigidez a la torsión*
- *Trabajo permanente sin enfriamiento*
- *Rango grande de relaciones de reducción 12 – 561*
- *Marcha extremadamente suave por tecnología superior de dentado*
- *Rendimiento: ≥ 94 %*

Riduttori planetari angolari di precisione con dentatura elicoidale

- Coppia di accelerazione: 140 – 2700 Nm
- Gioco: 3,5 – 5 arcmin
- Anello di tenuta in FKM in ingresso
- Adattatore motore con giunto di bloccaggio EasyAdapt®:
  - Montaggio più facile grazie alla funzione di divaricazione
  - Struttura leggera in alluminio
  - Lunghezza contenuta
  - Elevata resistenza alla torsione
  - Kit di serraggio opzionale per una maggiore sicurezza
  - Doppio isolamento opzionale
- Rigidità torsionale elevata
- Funzionamento continuo senza raffreddamento
- Grande intervallo di rapporti di trasmissione 12 – 561
- Estremamente silenziosi grazie alla tecnologia della dentatura avanzata
- Rendimento: ≥ 94 %

ServoFit® PK

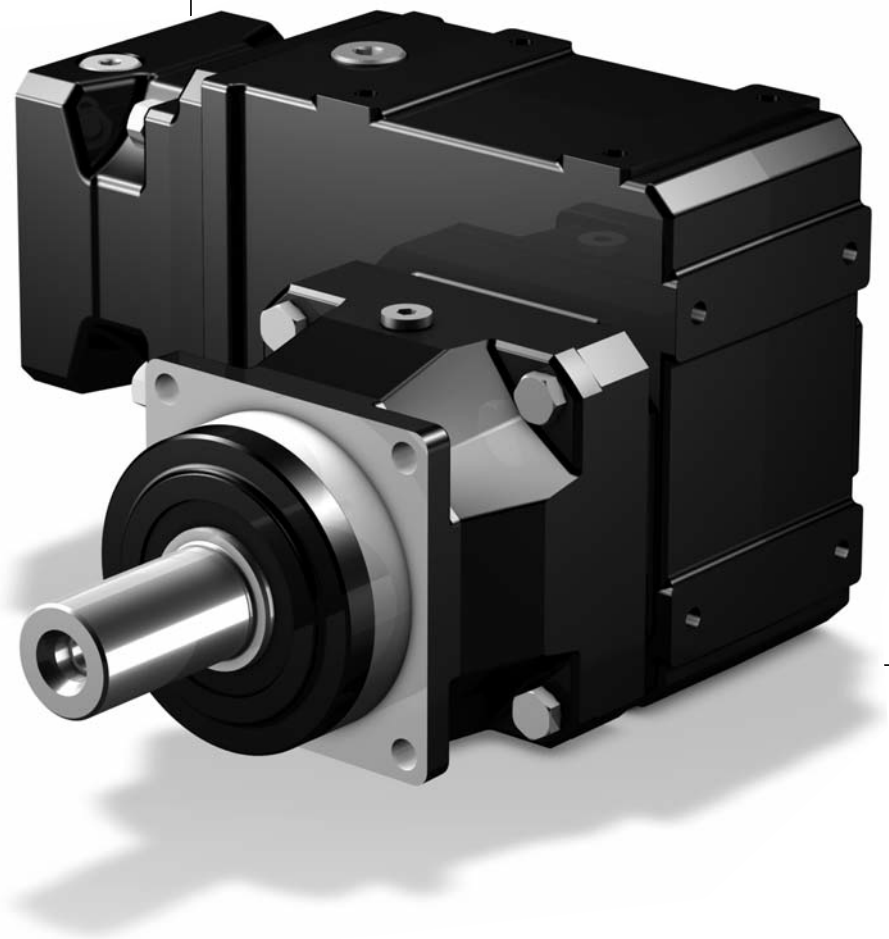


ServoFit® PK
Right-Angle
Planetary Gear Units

Reductores planetarios ortogonales ***ServoFit® PK***

ServoFit®
Riduttori planetari -coppia conica **PK**

STÖBER



PK

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Posiciones de instalación	*PK21*
Tabla de selección Reductores planetarios ortogonales ServoFit® PK	*PK23*
Dibujos acotados Reductores planetarios ortogonales ServoFit® PK	*PK39*

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Tabella di selezione ServoFit® Riduttori planetari-coppia conica PK	PK23
Disegni quotati ServoFit® Riduttori planetari-coppia conica PK	PK39

Type designation / *Tipificación* / Identificazione dei modelli

P 5 2 1 S G R 0050 K102VF 0060 ME10

1 2 3 4 5 6 7 8 9 10 11

1 Gear unit type
P – Planetary gear unit

2 Planetary gear unit size

3 Generation number

4 Stages P gear unit
1 – 1 stage
2 – 2 stage

5 Housing design
S – Standard design

6 Shaft design P gear unit
G – plain shaft
P – shaft with key

7 Bearing design P gear unit
R – normal bearings
D – reinforced bearings (axial)
Z - reinforced bearings (radial)

8 Transmission ratio P gear unit i x 10

9 Angular gear input
K – helical bevel gear units 2 stage
Please indicate mounting side (3 or 4) with your order.

10 Transmission ratio K gear unit i x 10

11 Mounting series
ME – Motor adapter with EasyAdapt® coupling
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page PK41, please observe the
MB – Motor adapter square with brake (option) (see brochure ID 441904)

Ordering data acc. to the type designation above.
Further ordering details:
– mounting position
– access clamping screw motor coupling
– information as whether the output is on page 3 or 4
– information as to whether the radial shaft seals on the output are made from FKM or NBR.
Recommendation:
FKM for an operating time ≥ 60%
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

ATTENTION! The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

1 *Tipo de reductor*
P *– Reductor planetario*

2 *Tamaño del reductor planetario*

3 *Cifra de generación*

4 *Número de trenes engranaje P*
1 *– 1 tren*
2 *– 2 trenes*

5 *Tipo constructivo de la carcasa*
S *– Ejecución estándar*

6 *Ejecución del eje reductor P*
G *– eje liso*
P *– eje con chaveta*

7 *Ejecución de apoyos reductor P*
R *– Apoyo normal*
D *– apoyo reforzado (axial)*
Z *– apoyo reforzado (radial)*

8 *Número característico de la relación de reducción reductor P i x 10*

9 *Entrada ortogonal*
K *– Reductor cónico de 2 trenes*
Indicar lado de la opción (3 ó 4) para el pedido.

10 *Número característico de la relación de reducción reductor K i x 10*

11 *Grupos de opciones*
ME *– Adaptador de motor con acoplamiento EasyAdapt®*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página PK41, por favor observar dimensiones máximas).
MB *– Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

Datos de pedido de acuerdo a la tipificación indicada arriba.
Otros datos de pedido:
– *Posición de instalación*
– *Acceso al tornillo de apriete del acoplamiento de motor*
– *Indicación si sobre lado 3 o lado 4*
– *Indicación si anillos retén en la salida de FKM o de NBR.*
Recomendación:
FKM para duración de conexión ≥ 60%
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

¡ATENCIÓN! *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

1 Modello di riduttore
P – Riduttore planetario

2 Taglia del riduttore angolare

3 Numero di generazione

4 Numero di stadi del riduttore P
1 – 1-stadio
2 – 2-stadi

5 Tipo di carcassa
S – esecuzione standard

6 Esecuzione albero del riduttore P
G – albero liscio
P – albero con chiavetta

7 Esecuzione supporto del riduttore P
R – supporto normale
D – supporto rinforzato (assiale)
Z – supporto rinforzato (radiale)

8 Rapporto di riduzione riduttore P i x 10

9 Ingresso angolare
K – Riduttori a coppia conica a 2-stadi
Al momento dell'ordine indicare il lato di montaggio.

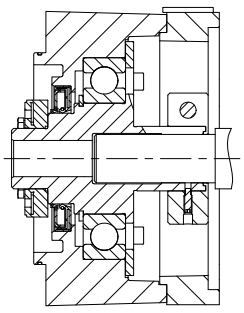
10 Rapporto di riduzione riduttore K i x 10

11 Opzioni annessi
ME – adattatore motore con giunto EasyAdapt®
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore da pagina PK41, si prega di rispettare le misure max.).
MB – Adattatore motore quadro con freno (opzione) (vedere prospetto ID 441904)

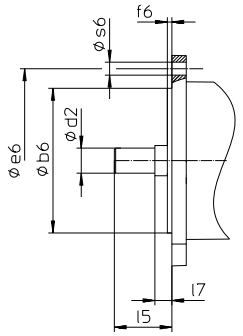
Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.
Altri dati dell'ordine:
– Posizione di montaggio
– Accesso al giunto di accoppiamento motore
– Indicare se l'albero uscita sul lato 3 o 4
– Indicare se gli anelli di tenuta radiali dell'albero uscita sono in FKM o NBR.
Raccomandazione: FKM per fattore di servizio ≥ 60%
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

ATTENZIONE! Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

P521SGR 0050 K102 VF 0060 ME10



EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Mounting positions

Posiciones de instalación

Posizioni di montaggio

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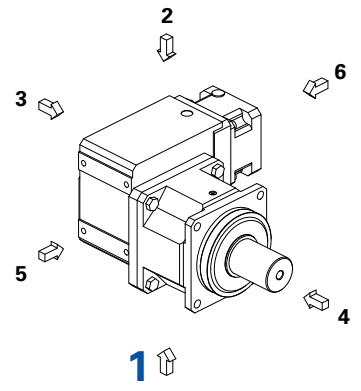
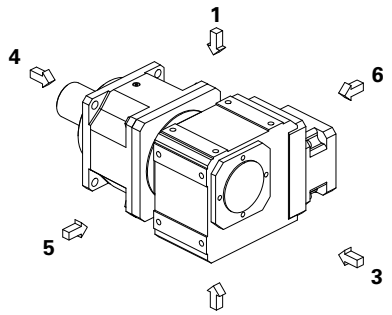
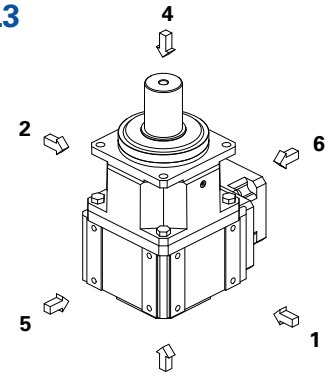
EL1



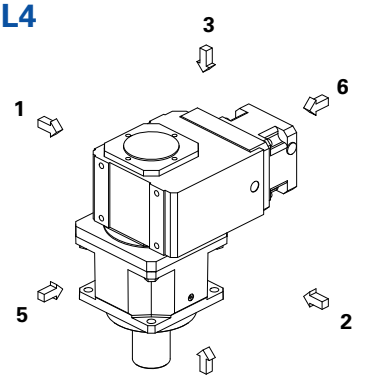
EL2



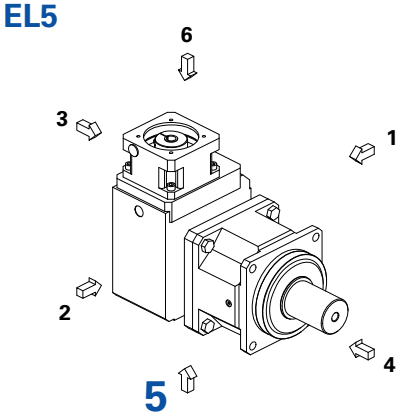
EL3



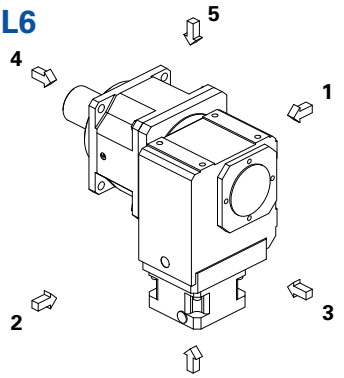
EL4



EL5



EL6



The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

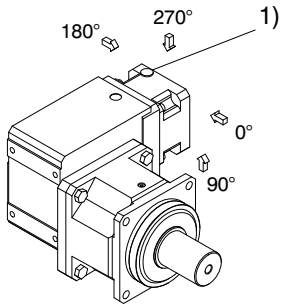
Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).



1) access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamonto motore

Selection table **ServoFit® PK** Right-Angle Planetary Gear Units

Tabla de selección Red. planetarios ortogonales ***ServoFit® PK***

Tabella di selezione **ServoFit®** Riduttori planetari -coppia conica **PK**

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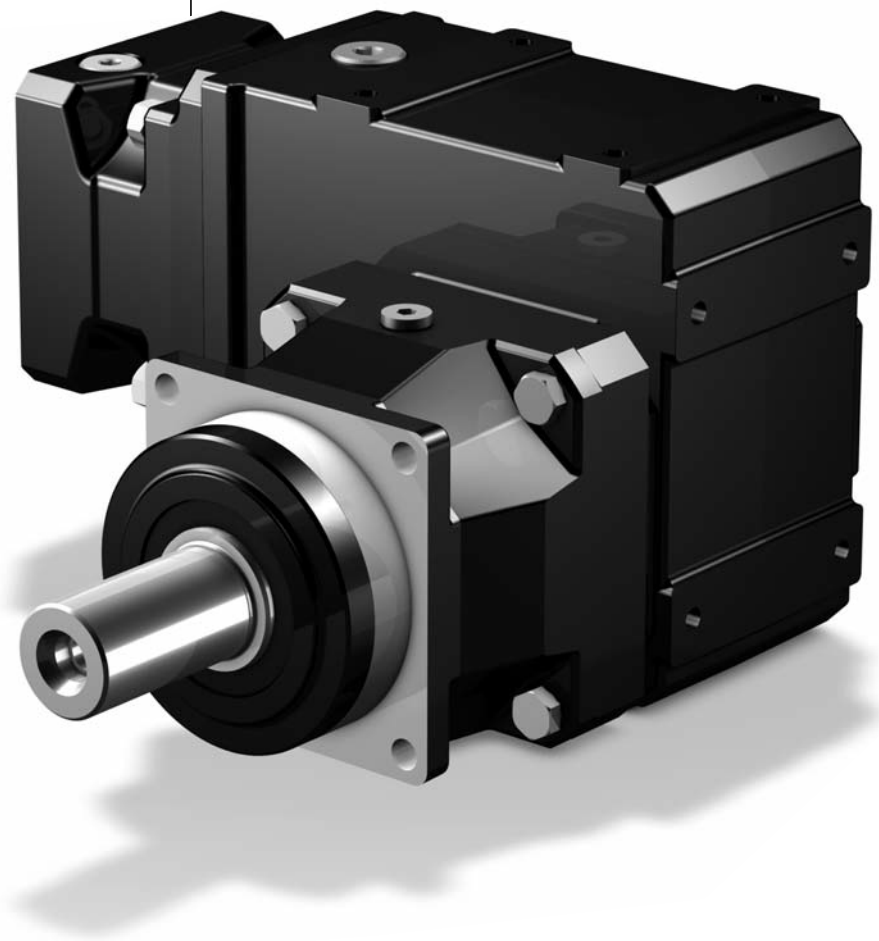

Selection table **ServoFit® PK** Right-Angle Planetary Gear Units

*Tabla de selección Red. planetarios ortogonales **ServoFit® PK***

Tabella di selezione **ServoFit®** Riduttori planetari -coppia conica **PK**

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Symbols:

i – Gear unit ratio
i_{exakt} – Exact math. ratio
n_{1MAX} – Max. input speed
DBH – Continuous operation – input and output horizontal (EL1, EL2)
DBV – Continuous operation – input or output vertical (EL3, EL4, EL5, EL6)
ZB – Cycle operation (at ambient temperature 20°C, also see page A11/A12)
J_1 – Mass moment of inertia 2) (related to input)
G – Weight
$\Lambda\varphi_2$ – Backlash
C_2 – Gear unit rigidity (related to output at M_{2B})
M_{2N} – Rated torque 1) 2)
M_{2B} – Max. perm. acceleration torque 2)
Attention: Values for M_{2B} are valid for gear units with shaft design "G". Therefore, we generally recommend this shaft design for cycle operation.
M_{2NOT} – Emergency-Off moment 2) (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

1) Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

2) If you use a pinion securing element (option), the torque values can be partly increased. This also results in higher mass moments of inertia.
Values on request or using the EASY Online product catalog (configurator) on our website
http://products.stoeber.de/

Denominaciones:

i – *Relación de reducción*
i_{exakt} – *Relación de reducción matem. exacta*
n_{1MAX} – *Velocidad máx. de entrada*
DBH – Trabajo continuo - entrada y salida horizontal (EL1, EL2)
DBV – Trabajo continuo - entrada o salida vertical (EL3, EL4, EL5, EL6)
ZB – Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
J_1 – *Momento de inercia de masa 2) (referido a la entrada)*
G – *Peso*
$\Lambda\varphi_2$ – *Juego de giro*
C_2 – *Rigidez del reductor (referido a la salida para M_{2B})*
M_{2N} – *Par nominal 1) 2)*
M_{2B} – *Par máx. admisible de aceleración 2)*
Atención: *Datos respecto a M_{2B} se refieren al reductor en ejecución de eje "G". Por ello, esta ejecución de eje es recomendada en general para trabajo cíclico.*
M_{2NOT} – *Par de PARADA DE EMERGENCIA 2) (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

1) Los valores se refieren a la velocidad de entrada n_1 = 1500 min^{-1}

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

2) Con el kit de sujeción opcional, valores parcialmente superiores. Con esto aumentan los pares de inercia de masa.
Valores disponibles bajo petición o en el catálogo de productos EASY Online (configurador).
http://products.stoeber.de/

Simboli:

i – Rapporto di riduzione
i_{exakt} – Rapporto di riduzione mat. preciso
n_{1MAX} – Max. numero di giri in ingresso
DBH – Funzionamento continuo - ingresso e uscita orizzontale (EL1, EL2)
DBV – Funzionamento continuo - ingresso o uscita verticale (EL3, EL4, EL5, EL6)
ZB – Funzionamento ciclico (a temperatura ambiente di 20°C, vedere anche pagina A11/A12)
J_1 – Momento di inerzia 2) (riferito all'ingresso)
G – Peso
$\Lambda\varphi_2$ – Gioco
C_2 - Rigidità del riduttore (riferito all'uscita per M_{2B})
M_{2N} – Coppia nominale 1) 2)
M_{2B} – Coppia di accelerazione max. amm. 2)
Attenzione: I dati relativi a M_{2B} si riferiscono al riduttore nell'esecuzione albero "G". Quest'esecuzione albero è generalmente raccomandata per il funzionamento ciclico.
M_{2NOT} – Coppia di emergenza 2) (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

1) I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min^{-1}.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

2) In caso di impiego di kit di serraggio opzionale possono essere rilevati valori in parte più elevati. *In questo modo risultano dei momenti d'inerzia di massa più elevati.*
Indicazione dei valori su richiesta oppure tramite catalogo prodotti EASY Online (configuratore).
http://products.stoeber.de/

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P5K1 (M2BMAX=300 Nm)													
12,00	12/1	**P521_0030 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,4	16,6	5	22	120	200	300
12,00	12/1	**P521_0030 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,7	16,7	5	22	120	200	360
12,00	12/1	**P521_0030 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,8	17,6	5	22	120	200	360
12,00	12/1	**P521_0030 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,6	17,7	5	22	120	200	360
16,00	16/1	**P521_0040 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	16,6	4,5	24	210	300	410
16,00	16/1	**P521_0040 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,6	16,7	4,5	24	210	300	480
16,00	16/1	**P521_0040 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,7	17,6	4,5	24	210	300	480
16,00	16/1	**P521_0040 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,5	17,7	4,5	25	210	300	480
20,00	20/1	**P521_0050 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	16,6	4	26	210	300	510
20,00	20/1	**P521_0050 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,5	16,7	4	26	210	300	600
20,00	20/1	**P521_0050 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,7	17,6	4	26	210	300	600
20,00	20/1	**P521_0050 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,4	17,7	4	26	210	300	600
27,84	7600/273	**P521_0050 K102VF0056 ME10**	3300	2800	4500	**≤14**	1,1	16,6	4	26	210	300	600
27,84	7600/273	**P521_0050 K102VF0056 ME10**	3300	2800	4500	**>14≤19**	1,3	16,7	4	26	210	300	600
27,84	7600/273	**P521_0050 K102VF0056 ME20**	3300	2800	4500	**≤19**	2,5	17,6	4	26	210	300	600
27,84	7600/273	**P521_0050 K102VF0056 ME20**	3300	2800	4500	**>19≤24**	3,2	17,7	4	26	210	300	600
30,00	30/1	**P521_0050 K102VF0060 ME10**	3300	2800	4500	**≤14**	0,87	16,6	4	26	210	300	600
30,00	30/1	**P521_0050 K102VF0060 ME10**	3300	2800	4500	**>14≤19**	1,1	16,7	4	26	210	300	600
30,00	30/1	**P521_0050 K102VF0060 ME20**	3300	2800	4500	**≤19**	2,3	17,6	4	26	210	300	600
30,00	30/1	**P521_0050 K102VF0060 ME20**	3300	2800	4500	**>19≤24**	3,0	17,7	4	26	210	300	600
33,22	299/9	**P521_0050 K102VF0066 ME10**	3600	3300	5000	**≤14**	0,80	16,6	4	26	210	300	600
33,22	299/9	**P521_0050 K102VF0066 ME10**	3600	3300	5000	**>14≤19**	1,0	16,7	4	26	210	300	600
33,22	299/9	**P521_0050 K102VF0066 ME20**	3500	3300	5000	**≤19**	2,2	17,6	4	26	210	300	600
33,22	299/9	**P521_0050 K102VF0066 ME20**	3500	3300	5000	**>19≤24**	2,9	17,7	4	26	210	300	600
41,55	1911/46	**P521_0050 K102VF0083 ME10**	3600	3300	5000	**≤14**	0,68	16,6	4	26	210	300	600
41,55	1911/46	**P521_0050 K102VF0083 ME10**	3600	3300	5000	**>14≤19**	0,93	16,7	4	26	210	300	600
41,55	1911/46	**P521_0050 K102VF0083 ME20**	3500	3300	5000	**≤19**	2,1	17,6	4	26	210	300	600
41,55	1911/46	**P521_0050 K102VF0083 ME20**	3500	3300	5000	**>19≤24**	2,8	17,7	4	26	210	300	600
46,25	8740/189	**P521_0050 K102VF0092 ME10**	3600	3300	5000	**≤14**	0,71	16,6	4	26	210	300	600
46,25	8740/189	**P521_0050 K102VF0092 ME10**	3600	3300	5000	**>14≤19**	0,97	16,7	4	26	210	300	600
46,25	8740/189	**P521_0050 K102VF0092 ME20**	3500	3300	5000	**≤19**	2,1	17,6	4	26	210	300	600
46,25	8740/189	**P521_0050 K102VF0092 ME20**	3500	3300	5000	**>19≤24**	2,9	17,7	4	26	210	300	600
57,83	1330/23	**P521_0050 K102VF0115 ME10**	3600	3300	5000	**≤14**	0,62	16,6	4	26	210	300	600
57,83	1330/23	**P521_0050 K102VF0115 ME10**	3600	3300	5000	**>14≤19**	0,87	16,7	4	26	210	300	600
57,83	1330/23	**P521_0050 K102VF0115 ME20**	3500	3300	5000	**≤19**	2,0	17,6	4	26	210	300	600
57,83	1330/23	**P521_0050 K102VF0115 ME20**	3500	3300	5000	**>19≤24**	2,8	17,7	4	26	210	300	600
70,57	494/7	**P521_0050 K102VF0140 ME10**	4000	3800	5500	**≤14**	0,56	16,6	4	26	210	300	600
70,57	494/7	**P521_0050 K102VF0140 ME10**	4000	3800	5500	**>14≤19**	0,81	16,7	4	26	210	300	600
70,57	494/7	**P521_0050 K102VF0140 ME20**	3500	3500	5000	**≤19**	2,0	17,6	4	26	210	300	600
70,57	494/7	**P521_0050 K102VF0140 ME20**	3500	3500	5000	**>19≤24**	2,7	17,7	4	26	210	300	600
87,82	10450/119	**P521_0050 K102VF0175 ME10**	4000	3800	5500	**≤14**	0,51	16,6	4	26	210	300	600
87,82	10450/119	**P521_0050 K102VF0175 ME10**	4000	3800	5500	**>14≤19**	0,77	16,7	4	26	210	300	600
87,82	10450/119	**P521_0050 K102VF0175 ME20**	3500	3500	5000	**≤19**	1,9	17,6	4	26	210	300	600
87,82	10450/119	**P521_0050 K102VF0175 ME20**	3500	3500	5000	**>19≤24**	2,7	17,7	4	26	210	300	600
116,3	5700/49	**P521_0050 K102VF0230 ME10**	4000	4000	6000	**≤14**	0,47	16,6	4	26	210	300	600
116,3	5700/49	**P521_0050 K102VF0230 ME10**	4000	4000	6000	**>14≤19**	0,72	16,7	4	26	210	300	600
116,3	5700/49	**P521_0050 K102VF0230 ME20**	3500	3500	5000	**≤19**	1,9	17,6	4	26	210	300	600
116,3	5700/49	**P521_0050 K102VF0230 ME20**	3500	3500	5000	**>19≤24**	2,6	17,7	4	26	210	300	600
140,2	2945/21	**P521_0050 K102VF0280 ME10**	4000	4000	6000	**≤14**	0,45	16,6	4	26	210	300	600
140,2	2945/21	**P521_0050 K102VF0280 ME10**	4000	4000	6000	**>14≤19**	0,70	16,7	4	26	210	300	600
140,2	2945/21	**P521_0050 K102VF0280 ME20**	3500	3500	5000	**≤19**	1,9	17,6	4	26	210	300	600
140,2	2945/21	**P521_0050 K102VF0280 ME20**	3500	3500	5000	**>19≤24**	2,6	17,7	4	26	210	300	600
175,5	3686/21	**P521_0050 K102VF0350 ME10**	4000	4000	6000	**≤14**	0,43	16,6	4	26	210	300	600
175,5	3686/21	**P521_0050 K102VF0350 ME10**	4000	4000	6000	**>14≤19**	0,68	16,7	4	26	210	300	600
175,5	3686/21	**P521_0050 K102VF0350 ME20**	3500	3500	5000	**≤19**	1,8	17,6	4	26	210	300	600
175,5	3686/21	**P521_0050 K102VF0350 ME20**	3500	3500	5000	**>19≤24**	2,6	17,7	4	26	210	300	600
234,6	11495/49	**P521_0050 K102VF0470 ME10**	4000	4000	6000	**≤14**	0,38	16,6	4	26	210	300	600
234,6	11495/49	**P521_0050 K102VF0470 ME10**	4000	4000	6000	**>14≤19**	0,63	16,7	4	26	210	300	600
280,5	5890/21	**P521_0050 K102VF0560 ME10**	4000	4000	6000	**≤14**	0,37	16,6	4	26	210	300	600
280,5	5890/21	**P521_0050 K102VF0560 ME10**	4000	4000	6000	**>14≤19**	0,62	16,7	4	26	210	300	600

Right-Angle Planetary Gear Units **PK**
*Reductores planetarios ortogonales **PK***
Riduttori planetari-coppia conica **PK**

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P7K1 (M2BMAX=650 Nm)													
28,00	28/1	**P721_0070 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	20,7	4	46	440	580	710
28,00	28/1	**P721_0070 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,6	20,8	4	47	440	630	840
28,00	28/1	**P721_0070 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,7	21,7	4	47	440	630	840
28,00	28/1	**P721_0070 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,5	21,8	4	47	440	630	840
38,98	1520/39	**P721_0070 K102VF0056 ME10**	3300	2800	4500	**≤14**	1,1	20,7	4	47	440	650	990
38,98	1520/39	**P721_0070 K102VF0056 ME10**	3300	2800	4500	**>14≤19**	1,3	20,8	4	47	440	650	1170
38,98	1520/39	**P721_0070 K102VF0056 ME20**	3300	2800	4500	**≤19**	2,5	21,7	4	47	440	650	1170
38,98	1520/39	**P721_0070 K102VF0056 ME20**	3300	2800	4500	**>19≤24**	3,2	21,8	4	47	440	650	1170
40,00	40/1	**P721_0100 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	20,7	3,5	46	300	500	1000
40,00	40/1	**P721_0100 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,5	20,8	3,5	46	300	500	1000
40,00	40/1	**P721_0100 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,7	21,7	3,5	46	300	500	1000
40,00	40/1	**P721_0100 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,4	21,8	3,5	46	300	500	1000
42,00	42/1	**P721_0070 K102VF0060 ME10**	3300	2800	4500	**≤14**	0,88	20,7	4	47	440	650	1070
42,00	42/1	**P721_0070 K102VF0060 ME10**	3300	2800	4500	**>14≤19**	1,1	20,8	4	47	440	650	1250
42,00	42/1	**P721_0070 K102VF0060 ME20**	3300	2800	4500	**≤19**	2,3	21,7	4	47	440	650	1250
42,00	42/1	**P721_0070 K102VF0060 ME20**	3300	2800	4500	**>19≤24**	3,0	21,8	4	47	440	650	1250
46,51	2093/45	**P721_0070 K102VF0066 ME10**	3600	3300	5000	**≤14**	0,81	20,7	4	47	440	650	1180
46,51	2093/45	**P721_0070 K102VF0066 ME10**	3600	3300	5000	**>14≤19**	1,1	20,8	4	47	440	650	1250
46,51	2093/45	**P721_0070 K102VF0066 ME20**	3500	3300	5000	**≤19**	2,2	21,7	4	47	440	650	1250
46,51	2093/45	**P721_0070 K102VF0066 ME20**	3500	3300	5000	**>19≤24**	3,0	21,8	4	47	440	650	1250
55,68	15200/273	**P721_0100 K102VF0056 ME10**	3300	2800	4500	**≤14**	1,1	20,7	3,5	46	300	500	1000
55,68	15200/273	**P721_0100 K102VF0056 ME10**	3300	2800	4500	**>14≤19**	1,3	20,8	3,5	46	300	500	1000
55,68	15200/273	**P721_0100 K102VF0056 ME20**	3300	2800	4500	**≤19**	2,5	21,7	3,5	46	300	500	1000
55,68	15200/273	**P721_0100 K102VF0056 ME20**	3300	2800	4500	**>19≤24**	3,2	21,8	3,5	46	300	500	1000
58,16	13377/230	**P721_0070 K102VF0083 ME10**	3600	3300	5000	**≤14**	0,68	20,7	4	47	440	650	1250
58,16	13377/230	**P721_0070 K102VF0083 ME10**	3600	3300	5000	**>14≤19**	0,93	20,8	4	47	440	650	1250
58,16	13377/230	**P721_0070 K102VF0083 ME20**	3500	3300	5000	**≤19**	2,1	21,7	4	47	440	650	1250
58,16	13377/230	**P721_0070 K102VF0083 ME20**	3500	3300	5000	**>19≤24**	2,8	21,8	4	47	440	650	1250
60,00	60/1	**P721_0100 K102VF0060 ME10**	3300	2800	4500	**≤14**	0,87	20,7	3,5	46	300	500	1000
60,00	60/1	**P721_0100 K102VF0060 ME10**	3300	2800	4500	**>14≤19**	1,1	20,8	3,5	46	300	500	1000
60,00	60/1	**P721_0100 K102VF0060 ME20**	3300	2800	4500	**≤19**	2,3	21,7	3,5	46	300	500	1000
60,00	60/1	**P721_0100 K102VF0060 ME20**	3300	2800	4500	**>19≤24**	3,0	21,8	3,5	46	300	500	1000
64,74	1748/27	**P721_0070 K102VF0092 ME10**	3600	3300	5000	**≤14**	0,72	20,7	4	47	440	650	1250
64,74	1748/27	**P721_0070 K102VF0092 ME10**	3600	3300	5000	**>14≤19**	0,97	20,8	4	47	440	650	1250
64,74	1748/27	**P721_0070 K102VF0092 ME20**	3500	3300	5000	**≤19**	2,1	21,7	4	47	440	650	1250
64,74	1748/27	**P721_0070 K102VF0092 ME20**	3500	3300	5000	**>19≤24**	2,9	21,8	4	47	440	650	1250
66,44	598/9	**P721_0100 K102VF0066 ME10**	3600	3300	5000	**≤14**	0,79	20,7	3,5	46	300	500	1000
66,44	598/9	**P721_0100 K102VF0066 ME10**	3600	3300	5000	**>14≤19**	1,0	20,8	3,5	46	300	500	1000
66,44	598/9	**P721_0100 K102VF0066 ME20**	3500	3300	5000	**≤19**	2,2	21,7	3,5	46	300	500	1000
66,44	598/9	**P721_0100 K102VF0066 ME20**	3500	3300	5000	**>19≤24**	2,9	21,8	3,5	46	300	500	1000
70,98	3549/50	**P721_0070 K102VF0100 ME10**	4000	3800	5500	**≤14**	0,60	20,7	4	47	440	650	1250
70,98	3549/50	**P721_0070 K102VF0100 ME10**	4000	3800	5500	**>14≤19**	0,85	20,8	4	47	440	650	1250
70,98	3549/50	**P721_0070 K102VF0100 ME20**	3500	3500	5000	**≤19**	2,0	21,7	4	47	440	650	1250
70,98	3549/50	**P721_0070 K102VF0100 ME20**	3500	3500	5000	**>19≤24**	2,8	21,8	4	47	440	650	1250
80,96	1862/23	**P721_0070 K102VF0115 ME10**	3600	3300	5000	**≤14**	0,63	20,7	4	47	440	650	1250
80,96	1862/23	**P721_0070 K102VF0115 ME10**	3600	3300	5000	**>14≤19**	0,88	20,8	4	47	440	650	1250
80,96	1862/23	**P721_0070 K102VF0115 ME20**	3500	3300	5000	**≤19**	2,0	21,7	4	47	440	650	1250
80,96	1862/23	**P721_0070 K102VF0115 ME20**	3500	3300	5000	**>19≤24**	2,8	21,8	4	47	440	650	1250
83,09	1911/23	**P721_0100 K102VF0083 ME10**	3600	3300	5000	**≤14**	0,68	20,7	3,5	46	300	500	1000
83,09	1911/23	**P721_0100 K102VF0083 ME10**	3600	3300	5000	**>14≤19**	0,93	20,8	3,5	46	300	500	1000
83,09	1911/23	**P721_0100 K102VF0083 ME20**	3500	3300	5000	**≤19**	2,1	21,7	3,5	46	300	500	1000
83,09	1911/23	**P721_0100 K102VF0083 ME20**	3500	3300	5000	**>19≤24**	2,8	21,8	3,5	46	300	500	1000
88,33	3003/34	**P721_0070 K102VF0125 ME10**	4000	3800	5500	**≤14**	0,54	20,7	4	47	440	650	1250
88,33	3003/34	**P721_0070 K102VF0125 ME10**	4000	3800	5500	**>14≤19**	0,79	20,8	4	47	440	650	1250
88,33	3003/34	**P721_0070 K102VF0125 ME20**	3500	3500	5000	**≤19**	2,0	21,7	4	47	440	650	1250
88,33	3003/34	**P721_0070 K102VF0125 ME20**	3500	3500	5000	**>19≤24**	2,7	21,8	4	47	440	650	1250
92,49	17480/189	**P721_0100 K102VF0092 ME10**	3600	3300	5000	**≤14**	0,71	20,7	3,5	46	300	500	1000
92,49	17480/189	**P721_0100 K102VF0092 ME10**	3600	3300	5000	**>14≤19**	0,96	20,8	3,5	46	300	500	1000
92,49	17480/189	**P721_0100 K102VF0092 ME20**	3500	3300	5000	**≤19**	2,1	21,7	3,5	46	300	500	1000
92,49	17480/189	**P721_0100 K102VF0092 ME20**	3500	3300	5000	**>19≤24**	2,9	21,8	3,5	46	300	500	1000
98,80	494/5	**P721_0070 K102VF0140 ME10**	4000	3800	5500	**≤14**	0,57	20,7	4	47	440	650	1250
98,80	494/5	**P721_0070 K102VF0140 ME10**	4000	3800	5500	**>14≤19**	0,82	20,8	4	47	440	650	1250

Right-Angle Planetary Gear Units **PK**
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P7K1 (M2BMAX=650 Nm)													
98,80	494/5	**P721_0070 K102VF0140 ME20**	3500	3500	5000	**≤19**	2,0	21,7	4	47	440	650	1250
98,80	494/5	**P721_0070 K102VF0140 ME20**	3500	3500	5000	**>19≤24**	2,7	21,8	4	47	440	650	1250
115,7	2660/23	**P721_0100 K102VF0115 ME10**	3600	3300	5000	**≤14**	0,62	20,7	3,5	46	300	500	1000
115,7	2660/23	**P721_0100 K102VF0115 ME10**	3600	3300	5000	**>14≤19**	0,87	20,8	3,5	46	300	500	1000
115,7	2660/23	**P721_0100 K102VF0115 ME20**	3500	3300	5000	**≤19**	2,0	21,7	3,5	46	300	500	1000
115,7	2660/23	**P721_0100 K102VF0115 ME20**	3500	3300	5000	**>19≤24**	2,8	21,8	3,5	46	300	500	1000
117,0	117/1	**P721_0070 K102VF0165 ME10**	4000	4000	6000	**≤14**	0,48	20,7	4	47	440	650	1250
117,0	117/1	**P721_0070 K102VF0165 ME10**	4000	4000	6000	**>14≤19**	0,73	20,8	4	47	440	650	1250
117,0	117/1	**P721_0070 K102VF0165 ME20**	3500	3500	5000	**≤19**	1,9	21,7	4	47	440	650	1250
117,0	117/1	**P721_0070 K102VF0165 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	4	47	440	650	1250
122,9	2090/17	**P721_0070 K102VF0175 ME10**	4000	3800	5500	**≤14**	0,52	20,7	4	47	440	650	1250
122,9	2090/17	**P721_0070 K102VF0175 ME10**	4000	3800	5500	**>14≤19**	0,77	20,8	4	47	440	650	1250
122,9	2090/17	**P721_0070 K102VF0175 ME20**	3500	3500	5000	**≤19**	1,9	21,7	4	47	440	650	1250
122,9	2090/17	**P721_0070 K102VF0175 ME20**	3500	3500	5000	**>19≤24**	2,7	21,8	4	47	440	650	1250
141,1	2821/20	**P721_0070 K102VF0200 ME10**	4000	4000	6000	**≤14**	0,46	20,7	4	47	440	650	1250
141,1	2821/20	**P721_0070 K102VF0200 ME10**	4000	4000	6000	**>14≤19**	0,71	20,8	4	47	440	650	1250
141,1	2821/20	**P721_0070 K102VF0200 ME20**	3500	3500	5000	**≤19**	1,9	21,7	4	47	440	650	1250
141,1	2821/20	**P721_0070 K102VF0200 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	4	47	440	650	1250
162,9	1140/7	**P721_0070 K102VF0230 ME10**	4000	4000	6000	**≤14**	0,47	20,7	4	47	440	650	1250
162,9	1140/7	**P721_0070 K102VF0230 ME10**	4000	4000	6000	**>14≤19**	0,72	20,8	4	47	440	650	1250
162,9	1140/7	**P721_0070 K102VF0230 ME20**	3500	3500	5000	**≤19**	1,9	21,7	4	47	440	650	1250
162,9	1140/7	**P721_0070 K102VF0230 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	4	47	440	650	1250
176,5	8827/50	**P721_0070 K102VF0250 ME10**	4000	4000	6000	**≤14**	0,43	20,7	4	47	440	650	1250
176,5	8827/50	**P721_0070 K102VF0250 ME10**	4000	4000	6000	**>14≤19**	0,68	20,8	4	47	440	650	1250
176,5	8827/50	**P721_0070 K102VF0250 ME20**	3500	3500	5000	**≤19**	1,8	21,7	4	47	440	650	1250
176,5	8827/50	**P721_0070 K102VF0250 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	4	47	440	650	1250
196,3	589/3	**P721_0070 K102VF0280 ME10**	4000	4000	6000	**≤14**	0,45	20,7	4	47	440	650	1250
196,3	589/3	**P721_0070 K102VF0280 ME10**	4000	4000	6000	**>14≤19**	0,70	20,8	4	47	440	650	1250
196,3	589/3	**P721_0070 K102VF0280 ME20**	3500	3500	5000	**≤19**	1,9	21,7	4	47	440	650	1250
196,3	589/3	**P721_0070 K102VF0280 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	4	47	440	650	1250
232,7	11400/49	**P721_0100 K102VF0230 ME10**	4000	4000	6000	**≤14**	0,47	20,7	3,5	46	300	500	1000
232,7	11400/49	**P721_0100 K102VF0230 ME10**	4000	4000	6000	**>14≤19**	0,72	20,8	3,5	46	300	500	1000
232,7	11400/49	**P721_0100 K102VF0230 ME20**	3500	3500	5000	**≤19**	1,9	21,7	3,5	46	300	500	1000
232,7	11400/49	**P721_0100 K102VF0230 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	3,5	46	300	500	1000
235,9	4719/20	**P721_0070 K102VF0340 ME10**	4000	4000	6000	**≤14**	0,38	20,7	4	47	440	590	1050
235,9	4719/20	**P721_0070 K102VF0340 ME10**	4000	4000	6000	**>14≤19**	0,63	20,8	4	47	440	590	1050
245,7	3686/15	**P721_0070 K102VF0350 ME10**	4000	4000	6000	**≤14**	0,43	20,7	4	47	440	650	1250
245,7	3686/15	**P721_0070 K102VF0350 ME10**	4000	4000	6000	**>14≤19**	0,68	20,8	4	47	440	650	1250
245,7	3686/15	**P721_0070 K102VF0350 ME20**	3500	3500	5000	**≤19**	1,8	21,7	4	47	440	650	1250
245,7	3686/15	**P721_0070 K102VF0350 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	4	47	440	650	1250
280,5	5890/21	**P721_0100 K102VF0280 ME10**	4000	4000	6000	**≤14**	0,45	20,7	3,5	46	300	500	1000
280,5	5890/21	**P721_0100 K102VF0280 ME10**	4000	4000	6000	**>14≤19**	0,70	20,8	3,5	46	300	500	1000
280,5	5890/21	**P721_0100 K102VF0280 ME20**	3500	3500	5000	**≤19**	1,9	21,7	3,5	46	300	500	1000
280,5	5890/21	**P721_0100 K102VF0280 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	3,5	46	300	500	1000
282,1	2821/10	**P721_0070 K102VF0400 ME10**	4000	4000	6000	**≤14**	0,37	20,7	4	47	420	500	890
282,1	2821/10	**P721_0070 K102VF0400 ME10**	4000	4000	6000	**>14≤19**	0,62	20,8	4	47	420	500	890
328,4	2299/7	**P721_0070 K102VF0470 ME10**	4000	4000	6000	**≤14**	0,38	20,7	4	47	440	650	1250
328,4	2299/7	**P721_0070 K102VF0470 ME10**	4000	4000	6000	**>14≤19**	0,63	20,8	4	47	440	650	1250
351,1	7372/21	**P721_0100 K102VF0350 ME10**	4000	4000	6000	**≤14**	0,42	20,7	3,5	46	300	500	1000
351,1	7372/21	**P721_0100 K102VF0350 ME10**	4000	4000	6000	**>14≤19**	0,68	20,8	3,5	46	300	500	1000
351,1	7372/21	**P721_0100 K102VF0350 ME20**	3500	3500	5000	**≤19**	1,8	21,7	3,5	46	300	500	1000
351,1	7372/21	**P721_0100 K102VF0350 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	3,5	46	300	500	1000
352,2	35217/100	**P721_0070 K102VF0500 ME10**	4000	4000	6000	**≤14**	0,37	20,7	4	47	340	410	720
352,2	35217/100	**P721_0070 K102VF0500 ME10**	4000	4000	6000	**>14≤19**	0,62	20,8	4	47	340	410	720
392,7	1178/3	**P721_0070 K102VF0560 ME10**	4000	4000	6000	**≤14**	0,37	20,7	4	47	440	650	1230
392,7	1178/3	**P721_0070 K102VF0560 ME10**	4000	4000	6000	**>14≤19**	0,62	20,8	4	47	440	650	1230
469,2	22990/49	**P721_0100 K102VF0470 ME10**	4000	4000	6000	**≤14**	0,38	20,7	3,5	46	300	500	1000
469,2	22990/49	**P721_0100 K102VF0470 ME10**	4000	4000	6000	**>14≤19**	0,63	20,8	3,5	46	300	500	1000
490,2	2451/5	**P721_0070 K102VF0700 ME10**	4000	4000	6000	**≤14**	0,36	20,7	4	47	440	570	1000
490,2	2451/5	**P721_0070 K102VF0700 ME10**	4000	4000	6000	**>14≤19**	0,62	20,8	4	47	440	570	1000
561,0	11780/21	**P721_0100 K102VF0560 ME10**	4000	4000	6000	**≤14**	0,37	20,7	3,5	46	300	500	1000
561,0	11780/21	**P721_0100 K102VF0560 ME10**	4000	4000	6000	**>14≤19**	0,62	20,8	3,5	46	300	500	1000

Right-Angle Planetary Gear Units **PK**
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i	i_{exakt}	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P7K2 (M_{2BMAX}=700 Nm)													
12,00	12/1	**P721_0030 K202VF0040 ME10**	3000	2600	4000	**≤14**	3,3	28,2	4,5	35	140	140	180
12,00	12/1	**P721_0030 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,5	28,3	4,5	37	140	140	180
12,00	12/1	**P721_0030 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,8	29,2	4,5	37	280	460	580
12,00	12/1	**P721_0030 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,5	29,3	4,5	38	280	500	900
12,00	12/1	**P721_0030 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	7,0	29,3	4,5	38	280	500	900
12,00	12/1	**P721_0030 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	31,1	4,5	38	280	500	900
12,00	12/1	**P721_0030 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	11	31,1	4,5	38	280	500	900
12,00	12/1	**P721_0030 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	31,2	4,5	38	280	500	900
16,00	16/1	**P721_0040 K202VF0040 ME10**	3000	2600	4000	**≤14**	3,0	28,2	4,5	42	180	180	240
16,00	16/1	**P721_0040 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,2	28,3	4,5	43	180	180	240
16,00	16/1	**P721_0040 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,5	29,2	4,5	43	440	620	770
16,00	16/1	**P721_0040 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,2	29,3	4,5	44	440	680	1200
16,00	16/1	**P721_0040 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,7	29,3	4,5	44	440	680	1200
16,00	16/1	**P721_0040 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	31,1	4,5	44	440	680	1200
16,00	16/1	**P721_0040 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	31,1	4,5	44	440	680	1200
16,00	16/1	**P721_0040 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	31,2	4,5	44	440	680	1200
20,00	20/1	**P721_0050 K202VF0040 ME10**	3000	2600	4000	**≤14**	2,9	28,2	4	45	230	230	300
20,00	20/1	**P721_0050 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,1	28,3	4	46	230	230	300
20,00	20/1	**P721_0050 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,4	29,2	4	46	440	700	960
20,00	20/1	**P721_0050 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,1	29,3	4	47	440	700	1400
20,00	20/1	**P721_0050 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,6	29,3	4	47	440	700	1400
20,00	20/1	**P721_0050 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	31,1	4	47	440	700	1400
20,00	20/1	**P721_0050 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	31,1	4	47	440	700	1400
20,00	20/1	**P721_0050 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	31,2	4	47	440	700	1400
25,89	10535/407	**P721_0050 K202VF0052 ME20**	3000	2600	4000	**≤19**	3,5	29,2	4	47	440	700	1240
25,89	10535/407	**P721_0050 K202VF0052 ME20**	3000	2600	4000	**>19≤24**	4,3	29,3	4	47	440	700	1400
25,89	10535/407	**P721_0050 K202VF0052 ME20**	3000	2600	4000	**>24≤32**	5,7	29,3	4	47	440	700	1400
25,89	10535/407	**P721_0050 K202VF0052 ME30**	3000	2600	4000	**≤24**	9,2	31,1	4	47	440	700	1400
25,89	10535/407	**P721_0050 K202VF0052 ME30**	3000	2600	4000	**>24≤32**	9,3	31,1	4	47	440	700	1400
25,89	10535/407	**P721_0050 K202VF0052 ME30**	3000	2600	4000	**>32≤38**	11	31,2	4	47	440	700	1400
30,00	30/1	**P721_0050 K202VF0060 ME10**	3000	2600	4000	**≤14**	2,1	28,2	4	46	440	620	760
30,00	30/1	**P721_0050 K202VF0060 ME10**	3000	2600	4000	**>14≤19**	2,4	28,3	4	47	440	680	900
30,00	30/1	**P721_0050 K202VF0060 ME20**	3000	2600	4000	**≤19**	3,6	29,2	4	47	440	700	1400
30,00	30/1	**P721_0050 K202VF0060 ME20**	3000	2600	4000	**>19≤24**	4,3	29,3	4	47	440	700	1400
30,00	30/1	**P721_0050 K202VF0060 ME20**	3000	2600	4000	**>24≤32**	5,8	29,3	4	47	440	700	1400
30,00	30/1	**P721_0050 K202VF0060 ME30**	3000	2600	4000	**≤24**	9,2	31,1	4	47	440	700	1400
30,00	30/1	**P721_0050 K202VF0060 ME30**	3000	2600	4000	**>24≤32**	9,4	31,1	4	47	440	700	1400
30,00	30/1	**P721_0050 K202VF0060 ME30**	3000	2600	4000	**>32≤38**	11	31,2	4	47	440	700	1400
33,42	11395/341	**P721_0050 K202VF0067 ME10**	3500	3100	4500	**≤14**	1,5	28,2	4	47	440	690	850
33,42	11395/341	**P721_0050 K202VF0067 ME10**	3500	3100	4500	**>14≤19**	1,8	28,3	4	47	440	700	1000
33,42	11395/341	**P721_0050 K202VF0067 ME20**	3500	3100	4500	**≤19**	3,0	29,2	4	47	440	700	1400
33,42	11395/341	**P721_0050 K202VF0067 ME20**	3500	3100	4500	**>19≤24**	3,7	29,3	4	47	440	700	1400
33,42	11395/341	**P721_0050 K202VF0067 ME20**	3500	3100	4500	**>24≤32**	5,2	29,3	4	47	440	700	1400
33,42	11395/341	**P721_0050 K202VF0067 ME30**	3500	3100	4000	**≤24**	8,6	31,1	4	47	440	700	1400
33,42	11395/341	**P721_0050 K202VF0067 ME30**	3500	3100	4000	**>24≤32**	8,8	31,1	4	47	440	700	1400
33,42	11395/341	**P721_0050 K202VF0067 ME30**	3500	3100	4000	**>32≤38**	10	31,2	4	47	440	700	1400
41,99	12470/297	**P721_0050 K202VF0084 ME10**	3500	3100	4500	**≤14**	1,2	28,2	4	47	440	700	1070
41,99	12470/297	**P721_0050 K202VF0084 ME10**	3500	3100	4500	**>14≤19**	1,4	28,3	4	47	440	700	1260
41,99	12470/297	**P721_0050 K202VF0084 ME20**	3500	3100	4500	**≤19**	2,6	29,2	4	47	440	700	1400
41,99	12470/297	**P721_0050 K202VF0084 ME20**	3500	3100	4500	**>19≤24**	3,4	29,3	4	47	440	700	1400
41,99	12470/297	**P721_0050 K202VF0084 ME20**	3500	3100	4500	**>24≤32**	4,8	29,3	4	47	440	700	1400
41,99	12470/297	**P721_0050 K202VF0084 ME30**	3500	3100	4000	**≤24**	8,3	31,1	4	47	440	700	1400
41,99	12470/297	**P721_0050 K202VF0084 ME30**	3500	3100	4000	**>24≤32**	8,4	31,1	4	47	440	700	1400
41,99	12470/297	**P721_0050 K202VF0084 ME30**	3500	3100	4000	**>32≤38**	10	31,2	4	47	440	700	1400
45,95	11395/248	**P721_0050 K202VF0092 ME10**	3500	3100	4500	**≤14**	1,3	28,2	4	47	440	700	1170
45,95	11395/248	**P721_0050 K202VF0092 ME10**	3500	3100	4500	**>14≤19**	1,6	28,3	4	47	440	700	1380
45,95	11395/248	**P721_0050 K202VF0092 ME20**	3500	3100	4500	**≤19**	2,8	29,2	4	47	440	700	1400
45,95	11395/248	**P721_0050 K202VF0092 ME20**	3500	3100	4500	**>19≤24**	3,5	29,3	4	47	440	700	1400
45,95	11395/248	**P721_0050 K202VF0092 ME20**	3500	3100	4500	**>24≤32**	5,0	29,3	4	47	440	700	1400
45,95	11395/248	**P721_0050 K202VF0092 ME30**	3500	3100	4000	**≤24**	8,4	31,1	4	47	440	700	1400
45,95	11395/248	**P721_0050 K202VF0092 ME30**	3500	3100	4000	**>24≤32**	8,6	31,1	4	47	440	700	1400
45,95	11395/248	**P721_0050 K202VF0092 ME30**	3500	3100	4000	**>32≤38**	10	31,2	4	47	440	700	1400

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i	i_{exakt}	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P7K2 (M_{2BMAX}=700 Nm)													
57,73	6235/108	**P721_0050 K202VF0115 ME10**	3500	3100	4500	**≤14**	1,1	28,2	4	47	440	700	1400
57,73	6235/108	**P721_0050 K202VF0115 ME10**	3500	3100	4500	**>14≤19**	1,3	28,3	4	47	440	700	1400
57,73	6235/108	**P721_0050 K202VF0115 ME20**	3500	3100	4500	**≤19**	2,5	29,2	4	47	440	700	1400
57,73	6235/108	**P721_0050 K202VF0115 ME20**	3500	3100	4500	**>19≤24**	3,2	29,3	4	47	440	700	1400
57,73	6235/108	**P721_0050 K202VF0115 ME20**	3500	3100	4500	**>24≤32**	4,7	29,3	4	47	440	700	1400
57,73	6235/108	**P721_0050 K202VF0115 ME30**	3500	3100	4000	**≤24**	8,2	31,1	4	47	440	700	1400
57,73	6235/108	**P721_0050 K202VF0115 ME30**	3500	3100	4000	**>24≤32**	8,3	31,1	4	47	440	700	1400
57,73	6235/108	**P721_0050 K202VF0115 ME30**	3500	3100	4000	**>32≤38**	10	31,2	4	47	440	700	1400
69,26	14405/208	**P721_0050 K202VF0140 ME10**	3900	3500	5000	**≤14**	0,89	28,2	4	47	440	700	1400
69,26	14405/208	**P721_0050 K202VF0140 ME10**	3900	3500	5000	**>14≤19**	1,1	28,3	4	47	440	700	1400
69,26	14405/208	**P721_0050 K202VF0140 ME20**	3500	3500	5000	**≤19**	2,3	29,2	4	47	440	700	1400
69,26	14405/208	**P721_0050 K202VF0140 ME20**	3500	3500	5000	**>19≤24**	3,1	29,3	4	47	440	700	1400
69,26	14405/208	**P721_0050 K202VF0140 ME20**	3500	3500	5000	**>24≤32**	4,5	29,3	4	47	440	700	1400
69,26	14405/208	**P721_0050 K202VF0140 ME30**	3500	3500	4000	**≤24**	8,0	31,1	4	47	440	700	1400
69,26	14405/208	**P721_0050 K202VF0140 ME30**	3500	3500	4000	**>24≤32**	8,1	31,1	4	47	440	700	1400
69,26	14405/208	**P721_0050 K202VF0140 ME30**	3500	3500	4000	**>32≤38**	9,9	31,2	4	47	440	700	1400
87,35	2795/32	**P721_0050 K202VF0175 ME10**	3900	3500	5000	**≤14**	0,75	28,2	4	47	440	700	1400
87,35	2795/32	**P721_0050 K202VF0175 ME10**	3900	3500	5000	**>14≤19**	1,00	28,3	4	47	440	700	1400
87,35	2795/32	**P721_0050 K202VF0175 ME20**	3500	3500	5000	**≤19**	2,2	29,2	4	47	440	700	1400
87,35	2795/32	**P721_0050 K202VF0175 ME20**	3500	3500	5000	**>19≤24**	2,9	29,3	4	47	440	700	1400
87,35	2795/32	**P721_0050 K202VF0175 ME20**	3500	3500	5000	**>24≤32**	4,4	29,3	4	47	440	700	1400
87,35	2795/32	**P721_0050 K202VF0175 ME30**	3500	3500	4000	**≤24**	7,9	31,1	4	47	440	700	1400
87,35	2795/32	**P721_0050 K202VF0175 ME30**	3500	3500	4000	**>24≤32**	8,0	31,1	4	47	440	700	1400
87,35	2795/32	**P721_0050 K202VF0175 ME30**	3500	3500	4000	**>32≤38**	9,7	31,2	4	47	440	700	1400
115,9	14835/128	**P721_0050 K202VF0230 ME10**	4000	3900	5500	**≤14**	0,62	28,2	4	47	440	700	1400
115,9	14835/128	**P721_0050 K202VF0230 ME10**	4000	3900	5500	**>14≤19**	0,87	28,3	4	47	440	700	1400
115,9	14835/128	**P721_0050 K202VF0230 ME20**	3500	3500	5000	**≤19**	2,1	29,2	4	47	440	700	1400
115,9	14835/128	**P721_0050 K202VF0230 ME20**	3500	3500	5000	**>19≤24**	2,8	29,3	4	47	440	700	1400
115,9	14835/128	**P721_0050 K202VF0230 ME20**	3500	3500	5000	**>24≤32**	4,3	29,3	4	47	440	700	1400
115,9	14835/128	**P721_0050 K202VF0230 ME30**	3500	3500	4000	**≤24**	7,7	31,1	4	47	440	700	1400
115,9	14835/128	**P721_0050 K202VF0230 ME30**	3500	3500	4000	**>24≤32**	7,9	31,1	4	47	440	700	1400
115,9	14835/128	**P721_0050 K202VF0230 ME30**	3500	3500	4000	**>32≤38**	9,6	31,2	4	47	440	700	1400
139,8	559/4	**P721_0050 K202VF0280 ME10**	4000	3900	5500	**≤14**	0,56	28,2	4	47	440	700	1400
139,8	559/4	**P721_0050 K202VF0280 ME10**	4000	3900	5500	**>14≤19**	0,81	28,3	4	47	440	700	1400
139,8	559/4	**P721_0050 K202VF0280 ME20**	3500	3500	5000	**≤19**	2,0	29,2	4	47	440	700	1400
139,8	559/4	**P721_0050 K202VF0280 ME20**	3500	3500	5000	**>19≤24**	2,7	29,3	4	47	440	700	1400
172,8	9675/56	**P721_0050 K202VF0350 ME10**	4000	3900	5500	**≤14**	0,51	28,2	4	47	440	700	1400
172,8	9675/56	**P721_0050 K202VF0350 ME10**	4000	3900	5500	**>14≤19**	0,76	28,3	4	47	440	700	1400
172,8	9675/56	**P721_0050 K202VF0350 ME20**	3500	3500	5000	**≤19**	1,9	29,2	4	47	440	700	1400
172,8	9675/56	**P721_0050 K202VF0350 ME20**	3500	3500	5000	**>19≤24**	2,7	29,3	4	47	440	700	1400
231,1	1849/8	**P721_0050 K202VF0460 ME10**	4000	3900	5500	**≤14**	0,46	28,2	4	47	440	700	1400
231,1	1849/8	**P721_0050 K202VF0460 ME10**	4000	3900	5500	**>14≤19**	0,71	28,3	4	47	440	700	1400
231,1	1849/8	**P721_0050 K202VF0460 ME20**	3500	3500	5000	**≤19**	1,9	29,2	4	47	440	700	1400
231,1	1849/8	**P721_0050 K202VF0460 ME20**	3500	3500	5000	**>19≤24**	2,6	29,3	4	47	440	700	1400
277,7	6665/24	**P721_0050 K202VF0560 ME10**	4000	3900	5500	**≤14**	0,41	28,2	4	47	440	700	1400
277,7	6665/24	**P721_0050 K202VF0560 ME10**	4000	3900	5500	**>14≤19**	0,66	28,3	4	47	440	700	1400
P8K2 (M_{2BMAX}=1400 Nm)													
28,00	28/1	**P821_0070 K202VF0040 ME10**	3000	2600	4000	**≤14**	3,1	41,2	3,5	124	320	320	420
28,00	28/1	**P821_0070 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,3	41,3	3,5	128	320	320	420
28,00	28/1	**P821_0070 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,5	42,2	3,5	128	790	1080	1340
28,00	28/1	**P821_0070 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,3	42,3	3,5	130	790	1180	2100
28,00	28/1	**P821_0070 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,7	42,3	3,5	131	790	1180	2100
28,00	28/1	**P821_0070 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	44,1	3,5	130	790	1180	2100
28,00	28/1	**P821_0070 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	44,1	3,5	131	790	1180	2100
28,00	28/1	**P821_0070 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	44,2	3,5	131	790	1180	2100
30,55	336/11	**P821_0070 K202VF0044 ME10**	3000	2600	4000	**≤14**	2,7	41,2	3,5	126	630	630	780
30,55	336/11	**P821_0070 K202VF0044 ME10**	3000	2600	4000	**>14≤19**	3,0	41,3	3,5	129	690	690	920
30,55	336/11	**P821_0070 K202VF0044 ME20**	3000	2600	4000	**≤19**	4,2	42,2	3,5	128	810	1180	1470
30,55	336/11	**P821_0070 K202VF0044 ME20**	3000	2600	4000	**>19≤24**	4,9	42,3	3,5	131	810	1220	2290

Right-Angle Planetary Gear Units **PK**
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Riduttori planetari-coppia conica **PK**

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	i_{exakt}	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P8K2 (M_{2BMAX}=1400 Nm)													
30,55	336/11	**P821_0070 K202VF0044 ME20**	3000	2600	4000	**>24≤32**	6,4	42,3	3,5	131	810	1220	2290
30,55	336/11	**P821_0070 K202VF0044 ME30**	3000	2600	4000	**≤24**	9,8	44,1	3,5	130	810	1220	2290
30,55	336/11	**P821_0070 K202VF0044 ME30**	3000	2600	4000	**>24≤32**	10,0	44,1	3,5	131	810	1220	2290
30,55	336/11	**P821_0070 K202VF0044 ME30**	3000	2600	4000	**>32≤38**	12	44,2	3,5	131	810	1220	2290
36,24	14749/407	**P821_0070 K202VF0052 ME20**	3000	2600	4000	**≤19**	3,6	42,2	3,5	129	860	1290	1740
36,24	14749/407	**P821_0070 K202VF0052 ME20**	3000	2600	4000	**>19≤24**	4,4	42,3	3,5	131	860	1290	2720
36,24	14749/407	**P821_0070 K202VF0052 ME20**	3000	2600	4000	**>24≤32**	5,8	42,3	3,5	131	860	1290	2720
36,24	14749/407	**P821_0070 K202VF0052 ME30**	3000	2600	4000	**≤24**	9,3	44,1	3,5	131	860	1290	2720
36,24	14749/407	**P821_0070 K202VF0052 ME30**	3000	2600	4000	**>24≤32**	9,4	44,1	3,5	131	860	1290	2720
36,24	14749/407	**P821_0070 K202VF0052 ME30**	3000	2600	4000	**>32≤38**	11	44,2	3,5	132	860	1290	2720
40,00	40/1	**P821_0100 K202VF0040 ME10**	3000	2600	4000	**≤14**	2,9	41,2	3,5	130	450	450	600
40,00	40/1	**P821_0100 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,2	41,3	3,5	132	450	450	600
40,00	40/1	**P821_0100 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,4	42,2	3,5	132	700	1200	1920
40,00	40/1	**P821_0100 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,1	42,3	3,5	133	700	1200	2400
40,00	40/1	**P821_0100 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,6	42,3	3,5	133	700	1200	2400
40,00	40/1	**P821_0100 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	44,1	3,5	133	700	1200	2400
40,00	40/1	**P821_0100 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	44,1	3,5	133	700	1200	2400
40,00	40/1	**P821_0100 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	44,2	3,5	134	700	1200	2400
42,00	42/1	**P821_0070 K202VF0060 ME10**	3000	2600	4000	**≤14**	2,2	41,2	3,5	129	870	870	1070
42,00	42/1	**P821_0070 K202VF0060 ME10**	3000	2600	4000	**>14≤19**	2,4	41,3	3,5	130	900	950	1260
42,00	42/1	**P821_0070 K202VF0060 ME20**	3000	2600	4000	**≤19**	3,7	42,2	3,5	130	900	1360	2020
42,00	42/1	**P821_0070 K202VF0060 ME20**	3000	2600	4000	**>19≤24**	4,4	42,3	3,5	131	900	1360	2800
42,00	42/1	**P821_0070 K202VF0060 ME20**	3000	2600	4000	**>24≤32**	5,9	42,3	3,5	131	900	1360	2800
42,00	42/1	**P821_0070 K202VF0060 ME30**	3000	2600	4000	**≤24**	9,3	44,1	3,5	131	900	1360	2800
42,00	42/1	**P821_0070 K202VF0060 ME30**	3000	2600	4000	**>24≤32**	9,4	44,1	3,5	132	900	1360	2800
42,00	42/1	**P821_0070 K202VF0060 ME30**	3000	2600	4000	**>32≤38**	11	44,2	3,5	132	900	1360	2800
46,78	15953/341	**P821_0070 K202VF0067 ME10**	3500	3100	4500	**≤14**	1,6	41,2	3,5	129	920	970	1190
46,78	15953/341	**P821_0070 K202VF0067 ME10**	3500	3100	4500	**>14≤19**	1,8	41,3	3,5	131	920	1060	1400
46,78	15953/341	**P821_0070 K202VF0067 ME20**	3500	3100	4500	**≤19**	3,0	42,2	3,5	130	940	1400	2240
46,78	15953/341	**P821_0070 K202VF0067 ME20**	3500	3100	4500	**>19≤24**	3,8	42,3	3,5	131	940	1400	2800
46,78	15953/341	**P821_0070 K202VF0067 ME20**	3500	3100	4500	**>24≤32**	5,2	42,3	3,5	132	940	1400	2800
46,78	15953/341	**P821_0070 K202VF0067 ME30**	3500	3100	4000	**≤24**	8,7	44,1	3,5	131	940	1400	2800
46,78	15953/341	**P821_0070 K202VF0067 ME30**	3500	3100	4000	**>24≤32**	8,8	44,1	3,5	132	940	1400	2800
46,78	15953/341	**P821_0070 K202VF0067 ME30**	3500	3100	4000	**>32≤38**	11	44,2	3,5	132	940	1400	2800
49,83	14749/296	**P821_0070 K202VF0071 ME20**	3000	2600	4000	**≤19**	3,3	42,2	3,5	131	960	1400	2390
49,83	14749/296	**P821_0070 K202VF0071 ME20**	3000	2600	4000	**>19≤24**	4,0	42,3	3,5	131	960	1400	2800
49,83	14749/296	**P821_0070 K202VF0071 ME20**	3000	2600	4000	**>24≤32**	5,5	42,3	3,5	132	960	1400	2800
49,83	14749/296	**P821_0070 K202VF0071 ME30**	3000	2600	4000	**≤24**	8,9	44,1	3,5	131	960	1400	2800
49,83	14749/296	**P821_0070 K202VF0071 ME30**	3000	2600	4000	**>24≤32**	9,1	44,1	3,5	132	960	1400	2800
49,83	14749/296	**P821_0070 K202VF0071 ME30**	3000	2600	4000	**>32≤38**	11	44,2	3,5	132	960	1400	2800
51,77	21070/407	**P821_0100 K202VF0052 ME20**	3000	2600	4000	**≤19**	3,5	42,2	3,5	132	700	1200	2400
51,77	21070/407	**P821_0100 K202VF0052 ME20**	3000	2600	4000	**>19≤24**	4,3	42,3	3,5	133	700	1200	2400
51,77	21070/407	**P821_0100 K202VF0052 ME20**	3000	2600	4000	**>24≤32**	5,7	42,3	3,5	134	700	1200	2400
51,77	21070/407	**P821_0100 K202VF0052 ME30**	3000	2600	4000	**≤24**	9,2	44,1	3,5	133	700	1200	2400
51,77	21070/407	**P821_0100 K202VF0052 ME30**	3000	2600	4000	**>24≤32**	9,3	44,1	3,5	134	700	1200	2400
51,77	21070/407	**P821_0100 K202VF0052 ME30**	3000	2600	4000	**>32≤38**	11	44,2	3,5	134	700	1200	2400
58,78	17458/297	**P821_0070 K202VF0084 ME10**	3500	3100	4500	**≤14**	1,2	41,2	3,5	130	1000	1220	1490
58,78	17458/297	**P821_0070 K202VF0084 ME10**	3500	3100	4500	**>14≤19**	1,5	41,3	3,5	131	1000	1330	1760
58,78	17458/297	**P821_0070 K202VF0084 ME20**	3500	3100	4500	**≤19**	2,7	42,2	3,5	131	1000	1400	2800
58,78	17458/297	**P821_0070 K202VF0084 ME20**	3500	3100	4500	**>19≤24**	3,4	42,3	3,5	132	1000	1400	2800
58,78	17458/297	**P821_0070 K202VF0084 ME20**	3500	3100	4500	**>24≤32**	4,9	42,3	3,5	132	1000	1400	2800
58,78	17458/297	**P821_0070 K202VF0084 ME30**	3500	3100	4000	**≤24**	8,3	44,1	3,5	131	1000	1400	2800
58,78	17458/297	**P821_0070 K202VF0084 ME30**	3500	3100	4000	**>24≤32**	8,5	44,1	3,5	132	1000	1400	2800
58,78	17458/297	**P821_0070 K202VF0084 ME30**	3500	3100	4000	**>32≤38**	10	44,2	3,5	132	1000	1400	2800
60,00	60/1	**P821_0100 K202VF0060 ME10**	3000	2600	4000	**≤14**	2,1	41,2	3,5	132	700	1200	1520
60,00	60/1	**P821_0100 K202VF0060 ME10**	3000	2600	4000	**>14≤19**	2,4	41,3	3,5	133	700	1200	1800
60,00	60/1	**P821_0100 K202VF0060 ME20**	3000	2600	4000	**≤19**	3,6	42,2	3,5	133	700	1200	2400
60,00	60/1	**P821_0100 K202VF0060 ME20**	3000	2600	4000	**>19≤24**	4,3	42,3	3,5	133	700	1200	2400
60,00	60/1	**P821_0100 K202VF0060 ME20**	3000	2600	4000	**>24≤32**	5,8	42,3	3,5	134	700	1200	2400
60,00	60/1	**P821_0100 K202VF0060 ME30**	3000	2600	4000	**≤24**	9,2	44,1	3,5	133	700	1200	2400
60,00	60/1	**P821_0100 K202VF0060 ME30**	3000	2600	4000	**>24≤32**	9,4	44,1	3,5	134	700	1200	2400
60,00	60/1	**P821_0100 K202VF0060 ME30**	3000	2600	4000	**>32≤38**	11	44,2	3,5	134	700	1200	2400

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P8K2 (M2BMAX=1400 Nm)													
64,33	15953/248	**P821_0070 K202VF0092 ME10**	3500	3100	4500	**≤14**	1,4	41,2	3,5	130	1000	1330	1630
64,33	15953/248	**P821_0070 K202VF0092 ME10**	3500	3100	4500	**>14≤19**	1,6	41,3	3,5	131	1000	1400	1930
64,33	15953/248	**P821_0070 K202VF0092 ME20**	3500	3100	4500	**≤19**	2,8	42,2	3,5	131	1000	1400	2800
64,33	15953/248	**P821_0070 K202VF0092 ME20**	3500	3100	4500	**>19≤24**	3,5	42,3	3,5	132	1000	1400	2800
64,33	15953/248	**P821_0070 K202VF0092 ME20**	3500	3100	4500	**>24≤32**	5,0	42,3	3,5	132	1000	1400	2800
64,33	15953/248	**P821_0070 K202VF0092 ME30**	3500	3100	4000	**≤24**	8,5	44,1	3,5	132	1000	1400	2800
64,33	15953/248	**P821_0070 K202VF0092 ME30**	3500	3100	4000	**>24≤32**	8,6	44,1	3,5	132	1000	1400	2800
64,33	15953/248	**P821_0070 K202VF0092 ME30**	3500	3100	4000	**>32≤38**	10	44,2	3,5	132	1000	1400	2800
66,83	22790/341	**P821_0100 K202VF0067 ME10**	3500	3100	4500	**≤14**	1,5	41,2	3,5	132	700	1200	1700
66,83	22790/341	**P821_0100 K202VF0067 ME10**	3500	3100	4500	**>14≤19**	1,8	41,3	3,5	133	700	1200	2000
66,83	22790/341	**P821_0100 K202VF0067 ME20**	3500	3100	4500	**≤19**	3,0	42,2	3,5	133	700	1200	2400
66,83	22790/341	**P821_0100 K202VF0067 ME20**	3500	3100	4500	**>19≤24**	3,7	42,3	3,5	133	700	1200	2400
66,83	22790/341	**P821_0100 K202VF0067 ME20**	3500	3100	4500	**>24≤32**	5,2	42,3	3,5	134	700	1200	2400
66,83	22790/341	**P821_0100 K202VF0067 ME30**	3500	3100	4000	**≤24**	8,6	44,1	3,5	133	700	1200	2400
66,83	22790/341	**P821_0100 K202VF0067 ME30**	3500	3100	4000	**>24≤32**	8,8	44,1	3,5	134	700	1200	2400
66,83	22790/341	**P821_0100 K202VF0067 ME30**	3500	3100	4000	**>32≤38**	10	44,2	3,5	134	700	1200	2400
70,51	20167/286	**P821_0070 K202VF0100 ME10**	3900	3500	5000	**≤14**	1,0	41,2	3,5	131	1000	1400	1790
70,51	20167/286	**P821_0070 K202VF0100 ME10**	3900	3500	5000	**>14≤19**	1,3	41,3	3,5	131	1000	1400	2120
70,51	20167/286	**P821_0070 K202VF0100 ME20**	3500	3500	5000	**≤19**	2,5	42,2	3,5	131	1000	1400	2800
70,51	20167/286	**P821_0070 K202VF0100 ME20**	3500	3500	5000	**>19≤24**	3,2	42,3	3,5	132	1000	1400	2800
70,51	20167/286	**P821_0070 K202VF0100 ME20**	3500	3500	5000	**>24≤32**	4,7	42,3	3,5	132	1000	1400	2800
70,51	20167/286	**P821_0070 K202VF0100 ME30**	3500	3500	4000	**≤24**	8,1	44,1	3,5	132	1000	1400	2800
70,51	20167/286	**P821_0070 K202VF0100 ME30**	3500	3500	4000	**>24≤32**	8,2	44,1	3,5	132	1000	1400	2800
70,51	20167/286	**P821_0070 K202VF0100 ME30**	3500	3500	4000	**>32≤38**	10,0	44,2	3,5	132	1000	1400	2800
80,82	8729/108	**P821_0070 K202VF0115 ME10**	3500	3100	4500	**≤14**	1,1	41,2	3,5	131	1000	1400	2050
80,82	8729/108	**P821_0070 K202VF0115 ME10**	3500	3100	4500	**>14≤19**	1,3	41,3	3,5	131	1000	1400	2420
80,82	8729/108	**P821_0070 K202VF0115 ME20**	3500	3100	4500	**≤19**	2,5	42,2	3,5	131	1000	1400	2800
80,82	8729/108	**P821_0070 K202VF0115 ME20**	3500	3100	4500	**>19≤24**	3,3	42,3	3,5	132	1000	1400	2800
80,82	8729/108	**P821_0070 K202VF0115 ME20**	3500	3100	4500	**>24≤32**	4,7	42,3	3,5	132	1000	1400	2800
80,82	8729/108	**P821_0070 K202VF0115 ME30**	3500	3100	4000	**≤24**	8,2	44,1	3,5	132	1000	1400	2800
80,82	8729/108	**P821_0070 K202VF0115 ME30**	3500	3100	4000	**>24≤32**	8,3	44,1	3,5	132	1000	1400	2800
80,82	8729/108	**P821_0070 K202VF0115 ME30**	3500	3100	4000	**>32≤38**	10	44,2	3,5	132	1000	1400	2800
83,97	24940/297	**P821_0100 K202VF0084 ME10**	3500	3100	4500	**≤14**	1,2	41,2	3,5	133	700	1200	2130
83,97	24940/297	**P821_0100 K202VF0084 ME10**	3500	3100	4500	**>14≤19**	1,4	41,3	3,5	133	700	1200	2400
83,97	24940/297	**P821_0100 K202VF0084 ME20**	3500	3100	4500	**≤19**	2,6	42,2	3,5	133	700	1200	2400
83,97	24940/297	**P821_0100 K202VF0084 ME20**	3500	3100	4500	**>19≤24**	3,4	42,3	3,5	134	700	1200	2400
83,97	24940/297	**P821_0100 K202VF0084 ME20**	3500	3100	4500	**>24≤32**	4,8	42,3	3,5	134	700	1200	2400
83,97	24940/297	**P821_0100 K202VF0084 ME30**	3500	3100	4000	**≤24**	8,3	44,1	3,5	134	700	1200	2400
83,97	24940/297	**P821_0100 K202VF0084 ME30**	3500	3100	4000	**>24≤32**	8,4	44,1	3,5	134	700	1200	2400
83,97	24940/297	**P821_0100 K202VF0084 ME30**	3500	3100	4000	**>32≤38**	10	44,2	3,5	134	700	1200	2400
88,94	3913/44	**P821_0070 K202VF0125 ME10**	3900	3500	5000	**≤14**	0,82	41,2	3,5	131	1000	1400	2260
88,94	3913/44	**P821_0070 K202VF0125 ME10**	3900	3500	5000	**>14≤19**	1,1	41,3	3,5	131	1000	1400	2670
88,94	3913/44	**P821_0070 K202VF0125 ME20**	3500	3500	5000	**≤19**	2,3	42,2	3,5	131	1000	1400	2800
88,94	3913/44	**P821_0070 K202VF0125 ME20**	3500	3500	5000	**>19≤24**	3,0	42,3	3,5	132	1000	1400	2800
88,94	3913/44	**P821_0070 K202VF0125 ME20**	3500	3500	5000	**>24≤32**	4,5	42,3	3,5	132	1000	1400	2800
88,94	3913/44	**P821_0070 K202VF0125 ME30**	3500	3500	4000	**≤24**	7,9	44,1	3,5	132	1000	1400	2800
88,94	3913/44	**P821_0070 K202VF0125 ME30**	3500	3500	4000	**>24≤32**	8,1	44,1	3,5	132	1000	1400	2800
88,94	3913/44	**P821_0070 K202VF0125 ME30**	3500	3500	4000	**>32≤38**	9,8	44,2	3,5	132	1000	1400	2800
91,90	11395/124	**P821_0100 K202VF0092 ME10**	3500	3100	4500	**≤14**	1,3	41,2	3,5	133	700	1200	2330
91,90	11395/124	**P821_0100 K202VF0092 ME10**	3500	3100	4500	**>14≤19**	1,6	41,3	3,5	133	700	1200	2400
91,90	11395/124	**P821_0100 K202VF0092 ME20**	3500	3100	4500	**≤19**	2,8	42,2	3,5	133	700	1200	2400
91,90	11395/124	**P821_0100 K202VF0092 ME20**	3500	3100	4500	**>19≤24**	3,5	42,3	3,5	134	700	1200	2400
91,90	11395/124	**P821_0100 K202VF0092 ME20**	3500	3100	4500	**>24≤32**	5,0	42,3	3,5	134	700	1200	2400
91,90	11395/124	**P821_0100 K202VF0092 ME30**	3500	3100	4000	**≤24**	8,4	44,1	3,5	134	700	1200	2400
91,90	11395/124	**P821_0100 K202VF0092 ME30**	3500	3100	4000	**>24≤32**	8,6	44,1	3,5	134	700	1200	2400
91,90	11395/124	**P821_0100 K202VF0092 ME30**	3500	3100	4000	**>32≤38**	10	44,2	3,5	134	700	1200	2400
96,96	20167/208	**P821_0070 K202VF0140 ME10**	3900	3500	5000	**≤14**	0,91	41,2	3,5	131	1000	1400	2460
96,96	20167/208	**P821_0070 K202VF0140 ME10**	3900	3500	5000	**>14≤19**	1,2	41,3	3,5	132	1000	1400	2800
96,96	20167/208	**P821_0070 K202VF0140 ME20**	3500	3500	5000	**≤19**	2,4	42,2	3,5	132	1000	1400	2800
96,96	20167/208	**P821_0070 K202VF0140 ME20**	3500	3500	5000	**>19≤24**	3,1	42,3	3,5	132	1000	1400	2800
96,96	20167/208	**P821_0070 K202VF0140 ME20**	3500	3500	5000	**>24≤32**	4,6	42,3	3,5	132	1000	1400	2800
96,96	20167/208	**P821_0070 K202VF0140 ME30**	3500	3500	4000	**≤24**	8,0	44,1	3,5	132	1000	1400	2800

Right-Angle Planetary Gear Units **PK**
*Reductores planetarios ortogonales **PK***
Riduttori planetari-coppia conica **PK**

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P8K2 (M2BMAX=1400 Nm)													
96,96	20167/208	**P821_0070 K202VF0140 ME30**	3500	3500	4000	**>24≤32**	8,1	44,1	3,5	132	1000	1400	2800
96,96	20167/208	**P821_0070 K202VF0140 ME30**	3500	3500	4000	**>32≤38**	9,9	44,2	3,5	132	1000	1400	2800
115,5	6235/54	**P821_0100 K202VF0115 ME10**	3500	3100	4500	**≤14**	1,1	41,2	3,5	133	700	1200	2400
115,5	6235/54	**P821_0100 K202VF0115 ME10**	3500	3100	4500	**>14≤19**	1,3	41,3	3,5	134	700	1200	2400
115,5	6235/54	**P821_0100 K202VF0115 ME20**	3500	3100	4500	**≤19**	2,5	42,2	3,5	134	700	1200	2400
115,5	6235/54	**P821_0100 K202VF0115 ME20**	3500	3100	4500	**>19≤24**	3,2	42,3	3,5	134	700	1200	2400
115,5	6235/54	**P821_0100 K202VF0115 ME20**	3500	3100	4500	**>24≤32**	4,7	42,3	3,5	134	700	1200	2400
115,5	6235/54	**P821_0100 K202VF0115 ME30**	3500	3100	4000	**≤24**	8,2	44,1	3,5	134	700	1200	2400
115,5	6235/54	**P821_0100 K202VF0115 ME30**	3500	3100	4000	**>24≤32**	8,3	44,1	3,5	134	700	1200	2400
115,5	6235/54	**P821_0100 K202VF0115 ME30**	3500	3100	4000	**>32≤38**	10	44,2	3,5	134	700	1200	2400
118,0	20769/176	**P821_0070 K202VF0170 ME10**	4000	3900	5500	**≤14**	0,66	41,2	3,5	131	1000	1400	2800
118,0	20769/176	**P821_0070 K202VF0170 ME10**	4000	3900	5500	**>14≤19**	0,91	41,3	3,5	132	1000	1400	2800
118,0	20769/176	**P821_0070 K202VF0170 ME20**	3500	3500	5000	**≤19**	2,1	42,2	3,5	132	1000	1400	2800
118,0	20769/176	**P821_0070 K202VF0170 ME20**	3500	3500	5000	**>19≤24**	2,8	42,3	3,5	132	1000	1400	2800
118,0	20769/176	**P821_0070 K202VF0170 ME20**	3500	3500	5000	**>24≤32**	4,3	42,3	3,5	132	1000	1400	2800
118,0	20769/176	**P821_0070 K202VF0170 ME30**	3500	3500	4000	**≤24**	7,8	44,1	3,5	132	1000	1400	2800
118,0	20769/176	**P821_0070 K202VF0170 ME30**	3500	3500	4000	**>24≤32**	7,9	44,1	3,5	132	1000	1400	2800
118,0	20769/176	**P821_0070 K202VF0170 ME30**	3500	3500	4000	**>32≤38**	9,6	44,2	3,5	132	1000	1400	2800
122,3	3913/32	**P821_0070 K202VF0175 ME10**	3900	3500	5000	**≤14**	0,76	41,2	3,5	131	1000	1400	2800
122,3	3913/32	**P821_0070 K202VF0175 ME10**	3900	3500	5000	**>14≤19**	1,0	41,3	3,5	132	1000	1400	2800
122,3	3913/32	**P821_0070 K202VF0175 ME20**	3500	3500	5000	**≤19**	2,2	42,2	3,5	132	1000	1400	2800
122,3	3913/32	**P821_0070 K202VF0175 ME20**	3500	3500	5000	**>19≤24**	2,9	42,3	3,5	132	1000	1400	2800
122,3	3913/32	**P821_0070 K202VF0175 ME20**	3500	3500	5000	**>24≤32**	4,4	42,3	3,5	132	1000	1400	2800
122,3	3913/32	**P821_0070 K202VF0175 ME30**	3500	3500	4000	**≤24**	7,9	44,1	3,5	132	1000	1400	2800
122,3	3913/32	**P821_0070 K202VF0175 ME30**	3500	3500	4000	**>24≤32**	8,0	44,1	3,5	132	1000	1400	2800
122,3	3913/32	**P821_0070 K202VF0175 ME30**	3500	3500	4000	**>32≤38**	9,7	44,2	3,5	132	1000	1400	2800
138,5	14405/104	**P821_0100 K202VF0140 ME10**	3900	3500	5000	**≤14**	0,90	41,2	3,5	133	700	1200	2400
138,5	14405/104	**P821_0100 K202VF0140 ME10**	3900	3500	5000	**>14≤19**	1,1	41,3	3,5	134	700	1200	2400
138,5	14405/104	**P821_0100 K202VF0140 ME20**	3500	3500	5000	**≤19**	2,3	42,2	3,5	134	700	1200	2400
138,5	14405/104	**P821_0100 K202VF0140 ME20**	3500	3500	5000	**>19≤24**	3,1	42,3	3,5	134	700	1200	2400
138,5	14405/104	**P821_0100 K202VF0140 ME20**	3500	3500	5000	**>24≤32**	4,5	42,3	3,5	134	700	1200	2400
138,5	14405/104	**P821_0100 K202VF0140 ME30**	3500	3500	4000	**≤24**	8,0	44,1	3,5	134	700	1200	2400
138,5	14405/104	**P821_0100 K202VF0140 ME30**	3500	3500	4000	**>24≤32**	8,1	44,1	3,5	134	700	1200	2400
138,5	14405/104	**P821_0100 K202VF0140 ME30**	3500	3500	4000	**>32≤38**	9,9	44,2	3,5	134	700	1200	2400
142,3	7826/55	**P821_0070 K202VF0200 ME10**	4000	3900	5500	**≤14**	0,58	41,2	3,5	132	1000	1400	2800
142,3	7826/55	**P821_0070 K202VF0200 ME10**	4000	3900	5500	**>14≤19**	0,84	41,3	3,5	132	1000	1400	2800
142,3	7826/55	**P821_0070 K202VF0200 ME20**	3500	3500	5000	**≤19**	2,0	42,2	3,5	132	1000	1400	2800
142,3	7826/55	**P821_0070 K202VF0200 ME20**	3500	3500	5000	**>19≤24**	2,7	42,3	3,5	132	1000	1400	2800
162,3	20769/128	**P821_0070 K202VF0230 ME10**	4000	3900	5500	**≤14**	0,62	41,2	3,5	132	1000	1400	2800
162,3	20769/128	**P821_0070 K202VF0230 ME10**	4000	3900	5500	**>14≤19**	0,88	41,3	3,5	132	1000	1400	2800
162,3	20769/128	**P821_0070 K202VF0230 ME20**	3500	3500	5000	**≤19**	2,1	42,2	3,5	132	1000	1400	2800
162,3	20769/128	**P821_0070 K202VF0230 ME20**	3500	3500	5000	**>19≤24**	2,8	42,3	3,5	132	1000	1400	2800
162,3	20769/128	**P821_0070 K202VF0230 ME20**	3500	3500	5000	**>24≤32**	4,3	42,3	3,5	132	1000	1400	2800
162,3	20769/128	**P821_0070 K202VF0230 ME30**	3500	3500	4000	**≤24**	7,7	44,1	3,5	132	1000	1400	2800
162,3	20769/128	**P821_0070 K202VF0230 ME30**	3500	3500	4000	**>24≤32**	7,9	44,1	3,5	132	1000	1400	2800
162,3	20769/128	**P821_0070 K202VF0230 ME30**	3500	3500	4000	**>32≤38**	9,6	44,2	3,5	132	1000	1400	2800
174,7	2795/16	**P821_0100 K202VF0175 ME10**	3900	3500	5000	**≤14**	0,75	41,2	3,5	134	700	1200	2400
174,7	2795/16	**P821_0100 K202VF0175 ME10**	3900	3500	5000	**>14≤19**	1,00	41,3	3,5	134	700	1200	2400
174,7	2795/16	**P821_0100 K202VF0175 ME20**	3500	3500	5000	**≤19**	2,2	42,2	3,5	134	700	1200	2400
174,7	2795/16	**P821_0100 K202VF0175 ME20**	3500	3500	5000	**>19≤24**	2,9	42,3	3,5	134	700	1200	2400
174,7	2795/16	**P821_0100 K202VF0175 ME20**	3500	3500	5000	**>24≤32**	4,4	42,3	3,5	134	700	1200	2400
174,7	2795/16	**P821_0100 K202VF0175 ME30**	3500	3500	4000	**≤24**	7,9	44,1	3,5	134	700	1200	2400
174,7	2795/16	**P821_0100 K202VF0175 ME30**	3500	3500	4000	**>24≤32**	8,0	44,1	3,5	134	700	1200	2400
174,7	2795/16	**P821_0100 K202VF0175 ME30**	3500	3500	4000	**>32≤38**	9,7	44,2	3,5	134	700	1200	2400
175,9	1935/11	**P821_0070 K202VF0250 ME10**	4000	3900	5500	**≤14**	0,52	41,2	3,5	132	1000	1400	2800
175,9	1935/11	**P821_0070 K202VF0250 ME10**	4000	3900	5500	**>14≤19**	0,77	41,3	3,5	132	1000	1400	2800
175,9	1935/11	**P821_0070 K202VF0250 ME20**	3500	3500	5000	**≤19**	1,9	42,2	3,5	132	1000	1400	2800
175,9	1935/11	**P821_0070 K202VF0250 ME20**	3500	3500	5000	**>19≤24**	2,7	42,3	3,5	132	1000	1400	2800
195,7	3913/20	**P821_0070 K202VF0280 ME10**	4000	3900	5500	**≤14**	0,56	41,2	3,5	132	1000	1400	2800
195,7	3913/20	**P821_0070 K202VF0280 ME10**	4000	3900	5500	**>14≤19**	0,81	41,3	3,5	132	1000	1400	2800
195,7	3913/20	**P821_0070 K202VF0280 ME20**	3500	3500	5000	**≤19**	2,0	42,2	3,5	132	1000	1400	2800
195,7	3913/20	**P821_0070 K202VF0280 ME20**	3500	3500	5000	**>19≤24**	2,7	42,3	3,5	132	1000	1400	2800

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P8K2 (M2BMAX=1400 Nm)													
231,8	14835/64	**P821_0100 K202VF0230 ME10**	4000	3900	5500	**≤14**	0,62	41,2	3,5	134	700	1200	2400
231,8	14835/64	**P821_0100 K202VF0230 ME10**	4000	3900	5500	**>14≤19**	0,87	41,3	3,5	134	700	1200	2400
231,8	14835/64	**P821_0100 K202VF0230 ME20**	3500	3500	5000	**≤19**	2,1	42,2	3,5	134	700	1200	2400
231,8	14835/64	**P821_0100 K202VF0230 ME20**	3500	3500	5000	**>19≤24**	2,8	42,3	3,5	134	700	1200	2400
231,8	14835/64	**P821_0100 K202VF0230 ME20**	3500	3500	5000	**>24≤32**	4,3	42,3	3,5	134	700	1200	2400
231,8	14835/64	**P821_0100 K202VF0230 ME30**	3500	3500	4000	**≤24**	7,7	44,1	3,5	134	700	1200	2400
231,8	14835/64	**P821_0100 K202VF0230 ME30**	3500	3500	4000	**>24≤32**	7,9	44,1	3,5	134	700	1200	2400
231,8	14835/64	**P821_0100 K202VF0230 ME30**	3500	3500	4000	**>32≤38**	9,6	44,2	3,5	134	700	1200	2400
235,3	12943/55	**P821_0070 K202VF0340 ME10**	4000	3900	5500	**≤14**	0,47	41,2	3,5	132	1000	1250	2220
235,3	12943/55	**P821_0070 K202VF0340 ME10**	4000	3900	5500	**>14≤19**	0,72	41,3	3,5	132	1000	1250	2220
235,3	12943/55	**P821_0070 K202VF0340 ME20**	3500	3500	5000	**≤19**	1,9	42,2	3,5	132	1000	1250	2220
235,3	12943/55	**P821_0070 K202VF0340 ME20**	3500	3500	5000	**>19≤24**	2,6	42,3	3,5	132	1000	1250	2220
241,9	1935/8	**P821_0070 K202VF0350 ME10**	4000	3900	5500	**≤14**	0,51	41,2	3,5	132	1000	1400	2800
241,9	1935/8	**P821_0070 K202VF0350 ME10**	4000	3900	5500	**>14≤19**	0,76	41,3	3,5	132	1000	1400	2800
241,9	1935/8	**P821_0070 K202VF0350 ME20**	3500	3500	5000	**≤19**	1,9	42,2	3,5	132	1000	1400	2800
241,9	1935/8	**P821_0070 K202VF0350 ME20**	3500	3500	5000	**>19≤24**	2,7	42,3	3,5	132	1000	1400	2800
279,5	559/2	**P821_0100 K202VF0280 ME10**	4000	3900	5500	**≤14**	0,56	41,2	3,5	134	700	1200	2400
279,5	559/2	**P821_0100 K202VF0280 ME10**	4000	3900	5500	**>14≤19**	0,81	41,3	3,5	134	700	1200	2400
279,5	559/2	**P821_0100 K202VF0280 ME20**	3500	3500	5000	**≤19**	2,0	42,2	3,5	134	700	1200	2400
279,5	559/2	**P821_0100 K202VF0280 ME20**	3500	3500	5000	**>19≤24**	2,7	42,3	3,5	134	700	1200	2400
282,8	9331/33	**P821_0070 K202VF0400 ME10**	4000	3900	5500	**≤14**	0,41	41,2	3,5	132	780	940	1440
282,8	9331/33	**P821_0070 K202VF0400 ME10**	4000	3900	5500	**>14≤19**	0,66	41,3	3,5	132	780	940	1440
323,6	12943/40	**P821_0070 K202VF0460 ME10**	4000	3900	5500	**≤14**	0,46	41,2	3,5	132	1000	1400	2800
323,6	12943/40	**P821_0070 K202VF0460 ME10**	4000	3900	5500	**>14≤19**	0,71	41,3	3,5	132	1000	1400	2800
323,6	12943/40	**P821_0070 K202VF0460 ME20**	3500	3500	5000	**≤19**	1,9	42,2	3,5	132	1000	1400	2800
323,6	12943/40	**P821_0070 K202VF0460 ME20**	3500	3500	5000	**>19≤24**	2,6	42,3	3,5	132	1000	1400	2800
345,5	9675/28	**P821_0100 K202VF0350 ME10**	4000	3900	5500	**≤14**	0,51	41,2	3,5	134	700	1200	2400
345,5	9675/28	**P821_0100 K202VF0350 ME10**	4000	3900	5500	**>14≤19**	0,76	41,3	3,5	134	700	1200	2400
345,5	9675/28	**P821_0100 K202VF0350 ME20**	3500	3500	5000	**≤19**	1,9	42,2	3,5	134	700	1200	2400
345,5	9675/28	**P821_0100 K202VF0350 ME20**	3500	3500	5000	**>19≤24**	2,7	42,3	3,5	134	700	1200	2400
353,4	46655/132	**P821_0070 K202VF0500 ME10**	4000	3900	5500	**≤14**	0,39	41,2	3,5	132	650	780	1390
353,4	46655/132	**P821_0070 K202VF0500 ME10**	4000	3900	5500	**>14≤19**	0,64	41,3	3,5	132	650	780	1390
388,8	9331/24	**P821_0070 K202VF0560 ME10**	4000	3900	5500	**≤14**	0,41	41,2	3,5	132	1000	1290	1980
388,8	9331/24	**P821_0070 K202VF0560 ME10**	4000	3900	5500	**>14≤19**	0,66	41,3	3,5	132	1000	1290	1980
462,3	1849/4	**P821_0100 K202VF0460 ME10**	4000	3900	5500	**≤14**	0,46	41,2	3,5	134	700	1200	2400
462,3	1849/4	**P821_0100 K202VF0460 ME10**	4000	3900	5500	**>14≤19**	0,71	41,3	3,5	134	700	1200	2400
462,3	1849/4	**P821_0100 K202VF0460 ME20**	3500	3500	5000	**≤19**	1,9	42,2	3,5	134	700	1200	2400
462,3	1849/4	**P821_0100 K202VF0460 ME20**	3500	3500	5000	**>19≤24**	2,6	42,3	3,5	134	700	1200	2400
486,0	46655/96	**P821_0070 K202VF0690 ME10**	4000	3900	5500	**≤14**	0,39	41,2	3,5	132	900	1080	1910
486,0	46655/96	**P821_0070 K202VF0690 ME10**	4000	3900	5500	**>14≤19**	0,64	41,3	3,5	132	900	1080	1910
555,4	6665/12	**P821_0100 K202VF0560 ME10**	4000	3900	5500	**≤14**	0,41	41,2	3,5	134	700	1200	2400
555,4	6665/12	**P821_0100 K202VF0560 ME10**	4000	3900	5500	**>14≤19**	0,66	41,3	3,5	134	700	1200	2400
P8K3 (M2BMAX=1600 Nm)													
12,00	12/1	**P821_0030 K302VF0040 ME20**	2700	2300	3800	**≤19**	9,3	47,2	4,5	79	460	460	580
12,00	12/1	**P821_0030 K302VF0040 ME20**	2700	2300	3800	**>19≤24**	10	47,3	4,5	85	590	680	900
12,00	12/1	**P821_0030 K302VF0040 ME20**	2700	2300	3800	**>24≤32**	12	47,3	4,5	87	590	680	900
12,00	12/1	**P821_0030 K302VF0040 ME30**	2700	2300	3800	**≤24**	15	49,0	4,5	85	590	890	1340
12,00	12/1	**P821_0030 K302VF0040 ME30**	2700	2300	3800	**>24≤32**	15	49,1	4,5	87	590	890	1760
12,00	12/1	**P821_0030 K302VF0040 ME30**	2700	2300	3800	**>32≤38**	17	49,2	4,5	88	590	890	1760
16,00	16/1	**P821_0040 K302VF0040 ME20**	2700	2300	3800	**≤19**	7,8	47,2	4	106	620	620	770
16,00	16/1	**P821_0040 K302VF0040 ME20**	2700	2300	3800	**>19≤24**	8,6	47,3	4	112	790	900	1200
16,00	16/1	**P821_0040 K302VF0040 ME20**	2700	2300	3800	**>24≤32**	10	47,3	4	113	790	900	1200
16,00	16/1	**P821_0040 K302VF0040 ME30**	2700	2300	3800	**≤24**	14	49,0	4	111	790	1190	1790
16,00	16/1	**P821_0040 K302VF0040 ME30**	2700	2300	3800	**>24≤32**	14	49,1	4	114	790	1190	2330
16,00	16/1	**P821_0040 K302VF0040 ME30**	2700	2300	3800	**>32≤38**	16	49,2	4	115	790	1190	2330
20,00	20/1	**P821_0050 K302VF0040 ME20**	2700	2300	3800	**≤19**	7,4	47,2	4	124	770	770	960
20,00	20/1	**P821_0050 K302VF0040 ME20**	2700	2300	3800	**>19≤24**	8,1	47,3	4	129	990	1130	1500
20,00	20/1	**P821_0050 K302VF0040 ME20**	2700	2300	3800	**>24≤32**	9,6	47,3	4	130	990	1130	1500
20,00	20/1	**P821_0050 K302VF0040 ME30**	2700	2300	3800	**≤24**	13	49,0	4	129	990	1480	2240

Right-Angle Planetary Gear Units **PK**
*Reductores planetarios ortogonales **PK***
Riduttori planetari-coppia conica **PK**

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P8K3 (M2BMAX=1600 Nm)													
20,00	20/1	**P821_0050 K302VF0040 ME30**	2700	2300	3800	**>24≤32**	13	49,1	4	131	990	1480	2900
20,00	20/1	**P821_0050 K302VF0040 ME30**	2700	2300	3800	**>32≤38**	15	49,2	4	131	990	1480	2900
26,88	215/8	**P821_0050 K302VF0054 ME20**	2700	2300	3800	**≤19**	5,4	47,2	4	127	1000	1040	1290
26,88	215/8	**P821_0050 K302VF0054 ME20**	2700	2300	3800	**>19≤24**	6,1	47,3	4	130	1000	1520	2020
26,88	215/8	**P821_0050 K302VF0054 ME20**	2700	2300	3800	**>24≤32**	7,6	47,3	4	131	1000	1520	2020
26,88	215/8	**P821_0050 K302VF0054 ME30**	2700	2300	3800	**≤24**	11	49,1	4	130	1000	1520	2020
26,88	215/8	**P821_0050 K302VF0054 ME30**	2700	2300	3800	**>24≤32**	11	49,1	4	131	1000	1520	2020
26,88	215/8	**P821_0050 K302VF0054 ME30**	2700	2300	3800	**>32≤38**	13	49,2	4	131	1000	1520	2020
30,00	30/1	**P821_0050 K302VF0060 ME20**	2700	2300	3800	**≤19**	5,6	47,2	4	128	1000	1160	1440
30,00	30/1	**P821_0050 K302VF0060 ME20**	2700	2300	3800	**>19≤24**	6,3	47,3	4	131	1000	1600	2250
30,00	30/1	**P821_0050 K302VF0060 ME20**	2700	2300	3800	**>24≤32**	7,8	47,3	4	131	1000	1600	2250
30,00	30/1	**P821_0050 K302VF0060 ME30**	2700	2300	3800	**≤24**	11	49,0	4	130	1000	1600	2900
30,00	30/1	**P821_0050 K302VF0060 ME30**	2700	2300	3800	**>24≤32**	12	49,1	4	131	1000	1600	2900
30,00	30/1	**P821_0050 K302VF0060 ME30**	2700	2300	3800	**>32≤38**	13	49,2	4	132	1000	1600	2900
36,96	2365/64	**P821_0050 K302VF0074 ME20**	2700	2300	3800	**≤19**	4,6	47,2	4	130	1000	1430	1770
36,96	2365/64	**P821_0050 K302VF0074 ME20**	2700	2300	3800	**>19≤24**	5,4	47,3	4	131	1000	1600	2770
36,96	2365/64	**P821_0050 K302VF0074 ME20**	2700	2300	3800	**>24≤32**	6,8	47,3	4	131	1000	1600	2770
36,96	2365/64	**P821_0050 K302VF0074 ME30**	2700	2300	3800	**≤24**	10	49,1	4	131	1000	1600	2770
36,96	2365/64	**P821_0050 K302VF0074 ME30**	2700	2300	3800	**>24≤32**	10	49,1	4	131	1000	1600	2770
36,96	2365/64	**P821_0050 K302VF0074 ME30**	2700	2300	3800	**>32≤38**	12	49,2	4	132	1000	1600	2770
46,34	5375/116	**P821_0050 K302VF0093 ME20**	3200	2800	4200	**≤19**	3,8	47,2	4	130	1000	1600	2220
46,34	5375/116	**P821_0050 K302VF0093 ME20**	3200	2800	4200	**>19≤24**	4,6	47,3	4	131	1000	1600	2900
46,34	5375/116	**P821_0050 K302VF0093 ME20**	3200	2800	4200	**>24≤32**	6,0	47,3	4	132	1000	1600	2900
46,34	5375/116	**P821_0050 K302VF0093 ME30**	3200	2800	4000	**≤24**	9,5	49,1	4	131	1000	1600	2900
46,34	5375/116	**P821_0050 K302VF0093 ME30**	3200	2800	4000	**>24≤32**	9,6	49,1	4	132	1000	1600	2900
46,34	5375/116	**P821_0050 K302VF0093 ME30**	3200	2800	4000	**>32≤38**	11	49,2	4	132	1000	1600	2900
58,05	1161/20	**P821_0050 K302VF0115 ME10**	3200	2800	4200	**≤14**	1,8	46,4	4	130	1000	1200	1470
58,05	1161/20	**P821_0050 K302VF0115 ME10**	3200	2800	4200	**>14≤19**	2,1	46,4	4	131	1000	1310	1740
58,05	1161/20	**P821_0050 K302VF0115 ME20**	3200	2800	4200	**≤19**	3,3	47,2	4	131	1000	1600	2790
58,05	1161/20	**P821_0050 K302VF0115 ME20**	3200	2800	4200	**>19≤24**	4,0	47,3	4	132	1000	1600	2900
58,05	1161/20	**P821_0050 K302VF0115 ME20**	3200	2800	4200	**>24≤32**	5,5	47,3	4	132	1000	1600	2900
58,05	1161/20	**P821_0050 K302VF0115 ME30**	3200	2800	4000	**≤24**	8,9	49,1	4	132	1000	1600	2900
58,05	1161/20	**P821_0050 K302VF0115 ME30**	3200	2800	4000	**>24≤32**	9,1	49,1	4	132	1000	1600	2900
58,05	1161/20	**P821_0050 K302VF0115 ME30**	3200	2800	4000	**>32≤38**	11	49,2	4	132	1000	1600	2900
69,68	7525/108	**P821_0050 K302VF0140 ME10**	3500	3100	5000	**≤14**	1,5	46,4	4	131	1000	1440	1770
69,68	7525/108	**P821_0050 K302VF0140 ME10**	3500	3100	5000	**>14≤19**	1,7	46,4	4	131	1000	1570	2090
69,68	7525/108	**P821_0050 K302VF0140 ME20**	3500	3100	5000	**≤19**	2,9	47,2	4	131	1000	1600	2900
69,68	7525/108	**P821_0050 K302VF0140 ME20**	3500	3100	5000	**>19≤24**	3,6	47,3	4	132	1000	1600	2900
69,68	7525/108	**P821_0050 K302VF0140 ME20**	3500	3100	5000	**>24≤32**	5,1	47,3	4	132	1000	1600	2900
69,68	7525/108	**P821_0050 K302VF0140 ME30**	3500	3100	4000	**≤24**	8,6	49,1	4	132	1000	1600	2900
69,68	7525/108	**P821_0050 K302VF0140 ME30**	3500	3100	4000	**>24≤32**	8,7	49,1	4	132	1000	1600	2900
69,68	7525/108	**P821_0050 K302VF0140 ME30**	3500	3100	4000	**>32≤38**	10	49,2	4	132	1000	1600	2900
86,47	7955/92	**P821_0050 K302VF0175 ME10**	3500	3100	5000	**≤14**	1,2	46,4	4	131	1000	1600	2200
86,47	7955/92	**P821_0050 K302VF0175 ME10**	3500	3100	5000	**>14≤19**	1,4	46,4	4	132	1000	1600	2590
86,47	7955/92	**P821_0050 K302VF0175 ME20**	3500	3100	5000	**≤19**	2,6	47,2	4	131	1000	1600	2900
86,47	7955/92	**P821_0050 K302VF0175 ME20**	3500	3100	5000	**>19≤24**	3,4	47,3	4	132	1000	1600	2900
86,47	7955/92	**P821_0050 K302VF0175 ME20**	3500	3100	5000	**>24≤32**	4,8	47,3	4	132	1000	1600	2900
86,47	7955/92	**P821_0050 K302VF0175 ME30**	3500	3100	4000	**≤24**	8,3	49,1	4	132	1000	1600	2900
86,47	7955/92	**P821_0050 K302VF0175 ME30**	3500	3100	4000	**>24≤32**	8,4	49,1	4	132	1000	1600	2900
86,47	7955/92	**P821_0050 K302VF0175 ME30**	3500	3100	4000	**>32≤38**	10	49,2	4	132	1000	1600	2900
116,5	2795/24	**P821_0050 K302VF0230 ME10**	3800	3500	5000	**≤14**	0,88	46,4	4	131	1000	1600	2900
116,5	2795/24	**P821_0050 K302VF0230 ME10**	3800	3500	5000	**>14≤19**	1,1	46,4	4	132	1000	1600	2900
116,5	2795/24	**P821_0050 K302VF0230 ME20**	3500	3500	5000	**≤19**	2,3	47,2	4	132	1000	1600	2900
116,5	2795/24	**P821_0050 K302VF0230 ME20**	3500	3500	5000	**>19≤24**	3,1	47,3	4	132	1000	1600	2900
116,5	2795/24	**P821_0050 K302VF0230 ME20**	3500	3500	5000	**>24≤32**	4,5	47,3	4	132	1000	1600	2900
116,5	2795/24	**P821_0050 K302VF0230 ME30**	3500	3500	4000	**≤24**	8,0	49,1	4	132	1000	1600	2900
116,5	2795/24	**P821_0050 K302VF0230 ME30**	3500	3500	4000	**>24≤32**	8,1	49,1	4	132	1000	1600	2900
116,5	2795/24	**P821_0050 K302VF0230 ME30**	3500	3500	4000	**>32≤38**	9,9	49,2	4	132	1000	1600	2900
139,4	17845/128	**P821_0050 K302VF0280 ME10**	3800	3500	5000	**≤14**	0,75	46,4	4	132	1000	1600	2900
139,4	17845/128	**P821_0050 K302VF0280 ME10**	3800	3500	5000	**>14≤19**	1,0	46,4	4	132	1000	1600	2900
139,4	17845/128	**P821_0050 K302VF0280 ME20**	3500	3500	5000	**≤19**	2,2	47,2	4	132	1000	1600	2900
139,4	17845/128	**P821_0050 K302VF0280 ME20**	3500	3500	5000	**>19≤24**	2,9	47,3	4	132	1000	1600	2900

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P8K3 (M2BMAX=1600 Nm)													
139,4	17845/128	**P821_0050 K302VF0280 ME20**	3500	3500	5000	**>24≤32**	4,4	47,3	4	132	1000	1600	2900
139,4	17845/128	**P821_0050 K302VF0280 ME30**	3500	3500	4000	**≤24**	7,9	49,1	4	132	1000	1600	2900
139,4	17845/128	**P821_0050 K302VF0280 ME30**	3500	3500	4000	**>24≤32**	8,0	49,1	4	132	1000	1600	2900
139,4	17845/128	**P821_0050 K302VF0280 ME30**	3500	3500	4000	**>32≤38**	9,7	49,2	4	132	1000	1600	2900
173,7	4515/26	**P821_0050 K302VF0350 ME10**	3800	3500	5000	**≤14**	0,64	46,4	4	132	1000	1600	2900
173,7	4515/26	**P821_0050 K302VF0350 ME10**	3800	3500	5000	**>14≤19**	0,89	46,4	4	132	1000	1600	2900
173,7	4515/26	**P821_0050 K302VF0350 ME20**	3500	3500	5000	**≤19**	2,1	47,2	4	132	1000	1600	2900
173,7	4515/26	**P821_0050 K302VF0350 ME20**	3500	3500	5000	**>19≤24**	2,8	47,3	4	132	1000	1600	2900
231,1	1849/8	**P821_0050 K302VF0460 ME10**	3800	3500	5000	**≤14**	0,54	46,4	4	132	1000	1600	2900
231,1	1849/8	**P821_0050 K302VF0460 ME10**	3800	3500	5000	**>14≤19**	0,79	46,4	4	132	1000	1600	2900
231,1	1849/8	**P821_0050 K302VF0460 ME20**	3500	3500	5000	**≤19**	2,0	47,2	4	132	1000	1600	2900
231,1	1849/8	**P821_0050 K302VF0460 ME20**	3500	3500	5000	**>19≤24**	2,7	47,3	4	132	1000	1600	2900
278,5	12255/44	**P821_0050 K302VF0560 ME10**	3800	3500	5000	**≤14**	0,50	46,4	4	132	1000	1540	2730
278,5	12255/44	**P821_0050 K302VF0560 ME10**	3800	3500	5000	**>14≤19**	0,75	46,4	4	132	1000	1540	2730
278,5	12255/44	**P821_0050 K302VF0560 ME20**	3500	3500	5000	**≤19**	1,9	47,2	4	132	1000	1540	2730
278,5	12255/44	**P821_0050 K302VF0560 ME20**	3500	3500	5000	**>19≤24**	2,6	47,3	4	132	1000	1540	2730
P9K4 (M2BMAX=2700 Nm)													
28,00	28/1	**P921_0070 K402VF0040 ME30**	2600	2200	3500	**≤24**	18	84,4	3,5	264	2000	2500	3140
28,00	28/1	**P921_0070 K402VF0040 ME30**	2600	2200	3500	**>24≤32**	18	84,5	3,5	268	2000	2700	4160
28,00	28/1	**P921_0070 K402VF0040 ME30**	2600	2200	3500	**>32≤38**	20	84,6	3,5	269	2000	2700	5400
28,00	28/1	**P921_0070 K402VF0040 ME40**	2600	2200	3500	**≤38**	28	89,2	3,5	268	2000	2700	5400
28,00	28/1	**P921_0070 K402VF0040 ME40**	2600	2200	3500	**>38≤48**	42	89,6	3,5	269	2000	2700	5400
30,55	336/11	**P921_0070 K402VF0044 ME30**	2600	2200	3500	**≤24**	17	84,4	3,5	265	2000	2700	3420
30,55	336/11	**P921_0070 K402VF0044 ME30**	2600	2200	3500	**>24≤32**	17	84,5	3,5	269	2000	2700	4540
30,55	336/11	**P921_0070 K402VF0044 ME30**	2600	2200	3500	**>32≤38**	19	84,6	3,5	270	2000	2700	5400
30,55	336/11	**P921_0070 K402VF0044 ME40**	2600	2200	3500	**≤38**	27	89,2	3,5	269	2000	2700	5400
30,55	336/11	**P921_0070 K402VF0044 ME40**	2600	2200	3500	**>38≤48**	41	89,6	3,5	270	2000	2700	5400
37,95	12943/341	**P921_0070 K402VF0054 ME30**	2600	2200	3500	**≤24**	14	84,4	3,5	267	2000	2700	4250
37,95	12943/341	**P921_0070 K402VF0054 ME30**	2600	2200	3500	**>24≤32**	14	84,5	3,5	270	2000	2700	5400
37,95	12943/341	**P921_0070 K402VF0054 ME30**	2600	2200	3500	**>32≤38**	16	84,6	3,5	270	2000	2700	5400
37,95	12943/341	**P921_0070 K402VF0054 ME40**	2600	2200	3500	**≤38**	24	89,2	3,5	269	2000	2700	5400
37,95	12943/341	**P921_0070 K402VF0054 ME40**	2600	2200	3500	**>38≤48**	38	89,6	3,5	270	2000	2700	5400
42,00	42/1	**P921_0070 K402VF0060 ME30**	2600	2200	3500	**≤24**	15	84,4	3,5	268	2000	2700	4700
42,00	42/1	**P921_0070 K402VF0060 ME30**	2600	2200	3500	**>24≤32**	15	84,5	3,5	270	2000	2700	5400
42,00	42/1	**P921_0070 K402VF0060 ME30**	2600	2200	3500	**>32≤38**	17	84,6	3,5	270	2000	2700	5400
42,00	42/1	**P921_0070 K402VF0060 ME40**	2600	2200	3500	**≤38**	25	89,2	3,5	270	2000	2700	5400
42,00	42/1	**P921_0070 K402VF0060 ME40**	2600	2200	3500	**>38≤48**	39	89,6	3,5	270	2000	2700	5400
47,03	1505/32	**P921_0070 K402VF0067 ME20**	3000	2600	4000	**≤19**	6,4	82,8	3,5	265	1810	1810	2260
47,03	1505/32	**P921_0070 K402VF0067 ME20**	3000	2600	4000	**>19≤24**	7,1	82,9	3,5	269	2000	2660	3530
47,03	1505/32	**P921_0070 K402VF0067 ME20**	3000	2600	4000	**>24≤32**	8,6	82,9	3,5	270	2000	2660	3530
47,03	1505/32	**P921_0070 K402VF0067 ME30**	3000	2600	4000	**≤24**	12	84,4	3,5	268	2000	2700	5270
47,03	1505/32	**P921_0070 K402VF0067 ME30**	3000	2600	4000	**>24≤32**	12	84,5	3,5	270	2000	2700	5400
47,03	1505/32	**P921_0070 K402VF0067 ME30**	3000	2600	4000	**>32≤38**	14	84,6	3,5	270	2000	2700	5400
47,03	1505/32	**P921_0070 K402VF0067 ME40**	3000	2600	3500	**≤38**	22	89,2	3,5	270	2000	2700	5400
47,03	1505/32	**P921_0070 K402VF0067 ME40**	3000	2600	3500	**>38≤48**	36	89,6	3,5	270	2000	2700	5400
52,19	12943/248	**P921_0070 K402VF0075 ME30**	2600	2200	3500	**≤24**	13	84,4	3,5	269	2000	2700	5400
52,19	12943/248	**P921_0070 K402VF0075 ME30**	2600	2200	3500	**>24≤32**	13	84,5	3,5	270	2000	2700	5400
52,19	12943/248	**P921_0070 K402VF0075 ME30**	2600	2200	3500	**>32≤38**	15	84,6	3,5	270	2000	2700	5400
52,19	12943/248	**P921_0070 K402VF0075 ME40**	2600	2200	3500	**≤38**	23	89,2	3,5	270	2000	2700	5400
52,19	12943/248	**P921_0070 K402VF0075 ME40**	2600	2200	3500	**>38≤48**	37	89,6	3,5	270	2000	2700	5400
58,64	645/11	**P921_0070 K402VF0084 ME20**	3000	2600	4000	**≤19**	5,0	82,8	3,5	267	2000	2260	2810
58,64	645/11	**P921_0070 K402VF0084 ME20**	3000	2600	4000	**>19≤24**	5,8	82,9	3,5	269	2000	2700	4400
58,64	645/11	**P921_0070 K402VF0084 ME20**	3000	2600	4000	**>24≤32**	7,2	82,9	3,5	270	2000	2700	4400
58,64	645/11	**P921_0070 K402VF0084 ME30**	3000	2600	4000	**≤24**	11	84,4	3,5	269	2000	2700	5400
58,64	645/11	**P921_0070 K402VF0084 ME30**	3000	2600	4000	**>24≤32**	11	84,5	3,5	270	2000	2700	5400
58,64	645/11	**P921_0070 K402VF0084 ME30**	3000	2600	4000	**>32≤38**	13	84,6	3,5	271	2000	2700	5400
58,64	645/11	**P921_0070 K402VF0084 ME40**	3000	2600	3500	**≤38**	21	89,2	3,5	270	2000	2700	5400
58,64	645/11	**P921_0070 K402VF0084 ME40**	3000	2600	3500	**>38≤48**	35	89,6	3,5	270	2000	2700	5400
64,67	16555/256	**P921_0070 K402VF0092 ME20**	3000	2600	4000	**≤19**	5,6	82,8	3,5	268	2000	2490	3100

Right-Angle Planetary Gear Units **PK**
Reductores planetarios ortogonales ***PK***
Riduttori planetari-coppia conica **PK**

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Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	i_{exakt}	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
P9K4 (M_{2BMAX}=2700 Nm)													
64,67	16555/256	**P921_0070 K402VF0092 ME20**	3000	2600	4000	**>19≤24**	6,3	82,9	3,5	270	2000	2700	4850
64,67	16555/256	**P921_0070 K402VF0092 ME20**	3000	2600	4000	**>24≤32**	7,8	82,9	3,5	270	2000	2700	4850
64,67	16555/256	**P921_0070 K402VF0092 ME30**	3000	2600	4000	**≤24**	11	84,4	3,5	269	2000	2700	5400
64,67	16555/256	**P921_0070 K402VF0092 ME30**	3000	2600	4000	**>24≤32**	12	84,5	3,5	270	2000	2700	5400
64,67	16555/256	**P921_0070 K402VF0092 ME30**	3000	2600	4000	**>32≤38**	13	84,6	3,5	271	2000	2700	5400
64,67	16555/256	**P921_0070 K402VF0092 ME40**	3000	2600	3500	**≤38**	22	89,2	3,5	270	2000	2700	5400
64,67	16555/256	**P921_0070 K402VF0092 ME40**	3000	2600	3500	**>38≤48**	35	89,6	3,5	271	2000	2700	5400
70,69	9331/132	**P921_0070 K402VF0100 ME20**	3400	3000	4500	**≤19**	4,2	82,8	3,5	268	2000	2700	3390
70,69	9331/132	**P921_0070 K402VF0100 ME20**	3400	3000	4500	**>19≤24**	5,0	82,9	3,5	270	2000	2700	5300
70,69	9331/132	**P921_0070 K402VF0100 ME20**	3400	3000	4500	**>24≤32**	6,4	82,9	3,5	270	2000	2700	5300
70,69	9331/132	**P921_0070 K402VF0100 ME30**	3400	3000	4000	**≤24**	10	84,4	3,5	270	2000	2700	5400
70,69	9331/132	**P921_0070 K402VF0100 ME30**	3400	3000	4000	**>24≤32**	10	84,5	3,5	270	2000	2700	5400
70,69	9331/132	**P921_0070 K402VF0100 ME30**	3400	3000	4000	**>32≤38**	12	84,6	3,5	271	2000	2700	5400
70,69	9331/132	**P921_0070 K402VF0100 ME40**	3000	3000	3500	**≤38**	20	89,2	3,5	270	2000	2700	5400
70,69	9331/132	**P921_0070 K402VF0100 ME40**	3000	3000	3500	**>38≤48**	34	89,6	3,5	271	2000	2700	5400
80,63	645/8	**P921_0070 K402VF0115 ME20**	3000	2600	4000	**≤19**	4,5	82,8	3,5	269	2000	2700	3870
80,63	645/8	**P921_0070 K402VF0115 ME20**	3000	2600	4000	**>19≤24**	5,2	82,9	3,5	270	2000	2700	5400
80,63	645/8	**P921_0070 K402VF0115 ME20**	3000	2600	4000	**>24≤32**	6,7	82,9	3,5	270	2000	2700	5400
80,63	645/8	**P921_0070 K402VF0115 ME30**	3000	2600	4000	**≤24**	10	84,4	3,5	270	2000	2700	5400
80,63	645/8	**P921_0070 K402VF0115 ME30**	3000	2600	4000	**>24≤32**	10	84,5	3,5	271	2000	2700	5400
80,63	645/8	**P921_0070 K402VF0115 ME30**	3000	2600	4000	**>32≤38**	12	84,6	3,5	271	2000	2700	5400
80,63	645/8	**P921_0070 K402VF0115 ME40**	3000	2600	3500	**≤38**	20	89,2	3,5	271	2000	2700	5400
80,63	645/8	**P921_0070 K402VF0115 ME40**	3000	2600	3500	**>38≤48**	34	89,6	3,5	271	2000	2700	5400
88,61	2924/33	**P921_0070 K402VF0125 ME20**	3400	3000	4500	**≤19**	3,5	82,8	3,5	269	2000	2700	4250
88,61	2924/33	**P921_0070 K402VF0125 ME20**	3400	3000	4500	**>19≤24**	4,2	82,9	3,5	270	2000	2700	5400
88,61	2924/33	**P921_0070 K402VF0125 ME20**	3400	3000	4500	**>24≤32**	5,7	82,9	3,5	270	2000	2700	5400
88,61	2924/33	**P921_0070 K402VF0125 ME30**	3400	3000	4000	**≤24**	9,3	84,4	3,5	270	2000	2700	5400
88,61	2924/33	**P921_0070 K402VF0125 ME30**	3400	3000	4000	**>24≤32**	9,4	84,5	3,5	271	2000	2700	5400
88,61	2924/33	**P921_0070 K402VF0125 ME30**	3400	3000	4000	**>32≤38**	11	84,6	3,5	271	2000	2700	5400
88,61	2924/33	**P921_0070 K402VF0125 ME40**	3000	3000	3500	**≤38**	19	89,2	3,5	271	2000	2700	5400
88,61	2924/33	**P921_0070 K402VF0125 ME40**	3000	3000	3500	**>38≤48**	33	89,6	3,5	271	2000	2700	5400
97,20	9331/96	**P921_0070 K402VF0140 ME20**	3400	3000	4500	**≤19**	3,9	82,8	3,5	269	2000	2700	4660
97,20	9331/96	**P921_0070 K402VF0140 ME20**	3400	3000	4500	**>19≤24**	4,6	82,9	3,5	270	2000	2700	5400
97,20	9331/96	**P921_0070 K402VF0140 ME20**	3400	3000	4500	**>24≤32**	6,1	82,9	3,5	271	2000	2700	5400
97,20	9331/96	**P921_0070 K402VF0140 ME30**	3400	3000	4000	**≤24**	9,7	84,4	3,5	270	2000	2700	5400
97,20	9331/96	**P921_0070 K402VF0140 ME30**	3400	3000	4000	**>24≤32**	9,8	84,5	3,5	271	2000	2700	5400
97,20	9331/96	**P921_0070 K402VF0140 ME30**	3400	3000	4000	**>32≤38**	12	84,6	3,5	271	2000	2700	5400
97,20	9331/96	**P921_0070 K402VF0140 ME40**	3000	3000	3500	**≤38**	20	89,2	3,5	271	2000	2700	5400
97,20	9331/96	**P921_0070 K402VF0140 ME40**	3000	3000	3500	**>38≤48**	33	89,6	3,5	271	2000	2700	5400
118,6	3913/33	**P921_0070 K402VF0170 ME20**	3500	3300	5000	**≤19**	2,9	82,8	3,5	270	2000	2700	5400
118,6	3913/33	**P921_0070 K402VF0170 ME20**	3500	3300	5000	**>19≤24**	3,6	82,9	3,5	271	2000	2700	5400
118,6	3913/33	**P921_0070 K402VF0170 ME20**	3500	3300	5000	**>24≤32**	5,1	82,9	3,5	271	2000	2700	5400
118,6	3913/33	**P921_0070 K402VF0170 ME30**	3500	3300	4000	**≤24**	8,6	84,4	3,5	270	2000	2700	5400
118,6	3913/33	**P921_0070 K402VF0170 ME30**	3500	3300	4000	**>24≤32**	8,8	84,5	3,5	271	2000	2700	5400
118,6	3913/33	**P921_0070 K402VF0170 ME30**	3500	3300	4000	**>32≤38**	11	84,6	3,5	271	2000	2700	5400
118,6	3913/33	**P921_0070 K402VF0170 ME40**	3000	3000	3500	**≤38**	19	89,2	3,5	271	2000	2700	5400
118,6	3913/33	**P921_0070 K402VF0170 ME40**	3000	3000	3500	**>38≤48**	32	89,6	3,5	271	2000	2700	5400
121,8	731/6	**P921_0070 K402VF0175 ME20**	3400	3000	4500	**≤19**	3,3	82,8	3,5	270	2000	2700	5400
121,8	731/6	**P921_0070 K402VF0175 ME20**	3400	3000	4500	**>19≤24**	4,0	82,9	3,5	271	2000	2700	5400
121,8	731/6	**P921_0070 K402VF0175 ME20**	3400	3000	4500	**>24≤32**	5,5	82,9	3,5	271	2000	2700	5400
121,8	731/6	**P921_0070 K402VF0175 ME30**	3400	3000	4000	**≤24**	9,1	84,4	3,5	270	2000	2700	5400
121,8	731/6	**P921_0070 K402VF0175 ME30**	3400	3000	4000	**>24≤32**	9,2	84,5	3,5	271	2000	2700	5400
121,8	731/6	**P921_0070 K402VF0175 ME30**	3400	3000	4000	**>32≤38**	11	84,6	3,5	271	2000	2700	5400
121,8	731/6	**P921_0070 K402VF0175 ME40**	3000	3000	3500	**≤38**	19	89,2	3,5	271	2000	2700	5400
121,8	731/6	**P921_0070 K402VF0175 ME40**	3000	3000	3500	**>38≤48**	33	89,6	3,5	271	2000	2700	5400
141,4	9331/66	**P921_0070 K402VF0200 ME20**	3500	3300	5000	**≤19**	2,6	82,8	3,5	270	2000	2700	5400
141,4	9331/66	**P921_0070 K402VF0200 ME20**	3500	3300	5000	**>19≤24**	3,3	82,9	3,5	271	2000	2700	5400
141,4	9331/66	**P921_0070 K402VF0200 ME20**	3500	3300	5000	**>24≤32**	4,8	82,9	3,5	271	2000	2700	5400
141,4	9331/66	**P921_0070 K402VF0200 ME30**	3500	3300	4000	**≤24**	8,3	84,5	3,5	271	2000	2700	5400
141,4	9331/66	**P921_0070 K402VF0200 ME30**	3500	3300	4000	**>24≤32**	8,4	84,5	3,5	271	2000	2700	5400
141,4	9331/66	**P921_0070 K402VF0200 ME30**	3500	3300	4000	**>32≤38**	10	84,6	3,5	271	2000	2700	5400
163,0	3913/24	**P921_0070 K402VF0230 ME20**	3500	3300	5000	**≤19**	2,7	82,8	3,5	270	2000	2700	5400

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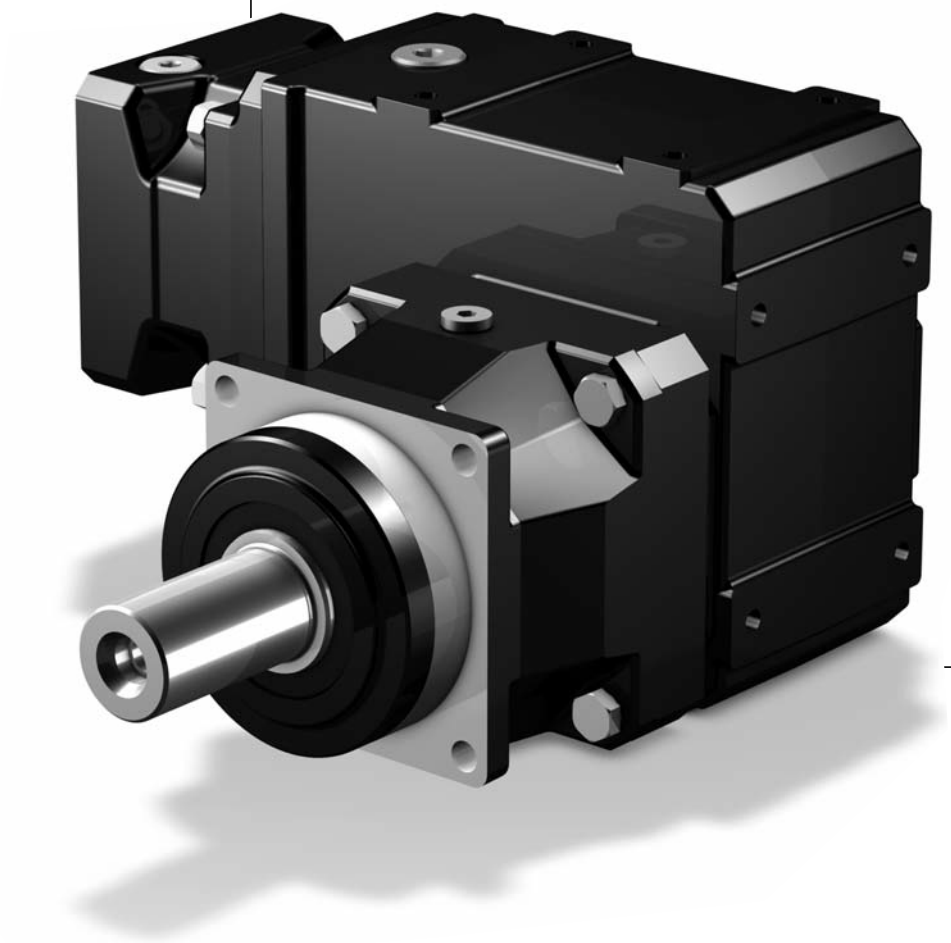
Please take notice of the indications on page PK24! ***¡Por favor observe las indicaciones en la página PK24!*** **Si raccomanda di rispettare le avvertenze a pagina PK24!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
P9K4 (M2BMAX=2700 Nm)													
163,0	3913/24	**P921_0070 K402VF0230 ME20**	3500	3300	5000	**>19≤24**	3,5	82,9	3,5	271	2000	2700	5400
163,0	3913/24	**P921_0070 K402VF0230 ME20**	3500	3300	5000	**>24≤32**	4,9	82,9	3,5	271	2000	2700	5400
163,0	3913/24	**P921_0070 K402VF0230 ME30**	3500	3300	4000	**≤24**	8,5	84,4	3,5	271	2000	2700	5400
163,0	3913/24	**P921_0070 K402VF0230 ME30**	3500	3300	4000	**>24≤32**	8,7	84,5	3,5	271	2000	2700	5400
163,0	3913/24	**P921_0070 K402VF0230 ME30**	3500	3300	4000	**>32≤38**	10	84,6	3,5	271	2000	2700	5400
163,0	3913/24	**P921_0070 K402VF0230 ME40**	3000	3000	3500	**≤38**	19	89,2	3,5	271	2000	2700	5400
163,0	3913/24	**P921_0070 K402VF0230 ME40**	3000	3000	3500	**>38≤48**	32	89,6	3,5	271	2000	2700	5400
177,0	29197/165	**P921_0070 K402VF0250 ME20**	3500	3300	5000	**≤19**	2,4	82,8	3,5	270	2000	2700	5400
177,0	29197/165	**P921_0070 K402VF0250 ME20**	3500	3300	5000	**>19≤24**	3,1	82,9	3,5	271	2000	2700	5400
177,0	29197/165	**P921_0070 K402VF0250 ME20**	3500	3300	5000	**>24≤32**	4,6	82,9	3,5	271	2000	2700	5400
177,0	29197/165	**P921_0070 K402VF0250 ME30**	3500	3300	4000	**≤24**	8,0	84,5	3,5	271	2000	2700	5400
177,0	29197/165	**P921_0070 K402VF0250 ME30**	3500	3300	4000	**>24≤32**	8,1	84,5	3,5	271	2000	2700	5400
177,0	29197/165	**P921_0070 K402VF0250 ME30**	3500	3300	4000	**>32≤38**	9,9	84,6	3,5	271	2000	2700	5400
194,4	9331/48	**P921_0070 K402VF0280 ME20**	3500	3300	5000	**≤19**	2,5	82,8	3,5	270	2000	2700	5400
194,4	9331/48	**P921_0070 K402VF0280 ME20**	3500	3300	5000	**>19≤24**	3,2	82,9	3,5	271	2000	2700	5400
194,4	9331/48	**P921_0070 K402VF0280 ME20**	3500	3300	5000	**>24≤32**	4,7	82,9	3,5	271	2000	2700	5400
194,4	9331/48	**P921_0070 K402VF0280 ME30**	3500	3300	4000	**≤24**	8,2	84,5	3,5	271	2000	2700	5400
194,4	9331/48	**P921_0070 K402VF0280 ME30**	3500	3300	4000	**>24≤32**	8,3	84,5	3,5	271	2000	2700	5400
194,4	9331/48	**P921_0070 K402VF0280 ME30**	3500	3300	4000	**>32≤38**	10	84,6	3,5	271	2000	2700	5400
235,7	33712/143	**P921_0070 K402VF0340 ME20**	3500	3300	5000	**≤19**	2,1	82,8	3,5	271	2000	2700	5160
235,7	33712/143	**P921_0070 K402VF0340 ME20**	3500	3300	5000	**>19≤24**	2,8	82,8	3,5	271	2000	2700	5160
243,3	29197/120	**P921_0070 K402VF0350 ME20**	3500	3300	5000	**≤19**	2,3	82,8	3,5	271	2000	2700	5400
243,3	29197/120	**P921_0070 K402VF0350 ME20**	3500	3300	5000	**>19≤24**	3,0	82,9	3,5	271	2000	2700	5400
243,3	29197/120	**P921_0070 K402VF0350 ME20**	3500	3300	5000	**>24≤32**	4,5	82,9	3,5	271	2000	2700	5400
243,3	29197/120	**P921_0070 K402VF0350 ME30**	3500	3300	4000	**≤24**	8,0	84,5	3,5	271	2000	2700	5400
243,3	29197/120	**P921_0070 K402VF0350 ME30**	3500	3300	4000	**>24≤32**	8,1	84,5	3,5	271	2000	2700	5400
243,3	29197/120	**P921_0070 K402VF0350 ME30**	3500	3300	4000	**>32≤38**	9,8	84,6	3,5	271	2000	2700	5400
283,6	34314/121	**P921_0070 K402VF0410 ME20**	3500	3300	5000	**≤19**	2,0	82,8	3,5	271	2000	2510	4450
283,6	34314/121	**P921_0070 K402VF0410 ME20**	3500	3300	5000	**>19≤24**	2,8	82,8	3,5	271	2000	2510	4450
324,2	4214/13	**P921_0070 K402VF0460 ME20**	3500	3300	5000	**≤19**	2,1	82,8	3,5	271	2000	2700	5400
324,2	4214/13	**P921_0070 K402VF0460 ME20**	3500	3300	5000	**>19≤24**	2,8	82,8	3,5	271	2000	2700	5400
353,0	38829/110	**P921_0070 K402VF0500 ME20**	3500	3300	5000	**≤19**	2,0	82,8	3,5	271	1830	2200	3890
353,0	38829/110	**P921_0070 K402VF0500 ME20**	3500	3300	5000	**>19≤24**	2,7	82,8	3,5	271	1830	2200	3890
389,9	17157/44	**P921_0070 K402VF0560 ME20**	3500	3300	5000	**≤19**	2,0	82,8	3,5	271	2000	2700	5400
389,9	17157/44	**P921_0070 K402VF0560 ME20**	3500	3300	5000	**>19≤24**	2,7	82,8	3,5	271	2000	2700	5400
485,4	38829/80	**P921_0070 K402VF0690 ME20**	3500	3300	5000	**≤19**	1,9	82,8	3,5	271	2000	2700	5350
485,4	38829/80	**P921_0070 K402VF0690 ME20**	3500	3300	5000	**>19≤24**	2,7	82,8	3,5	271	2000	2700	5350



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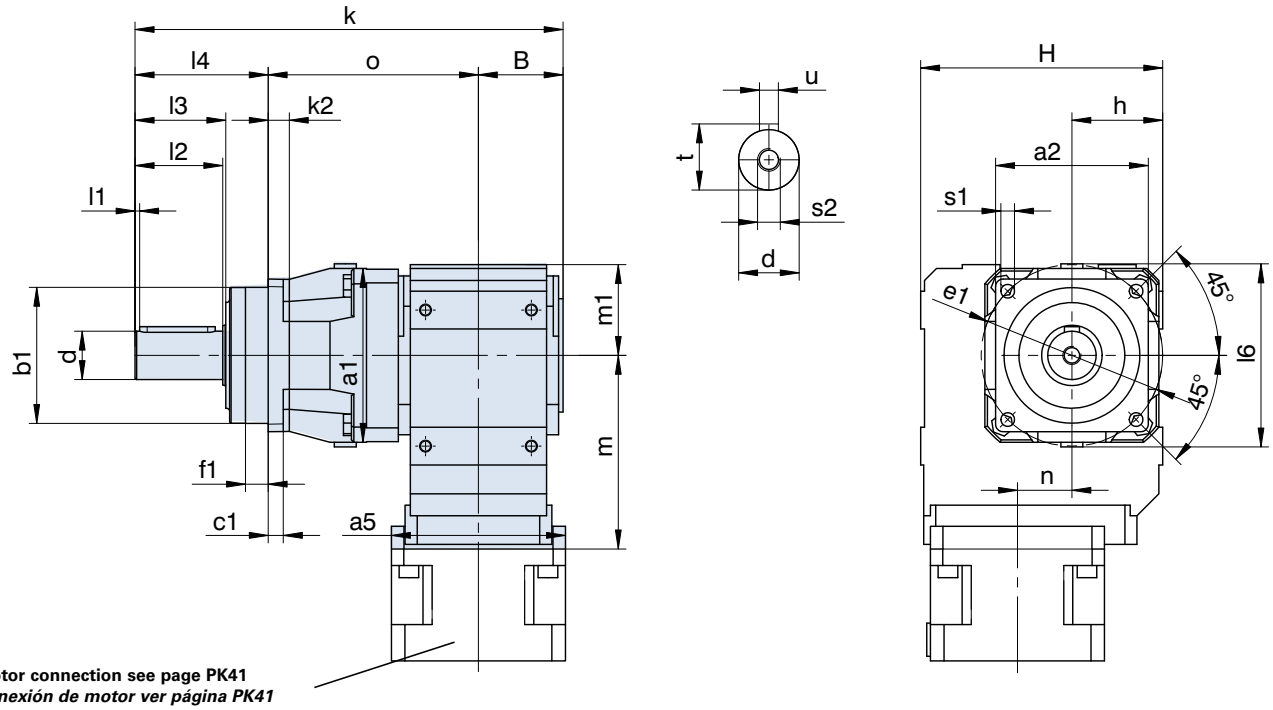
P5K1_ME_ - P9K4_ME_



Motor connection see page PK41
Conexión de motor ver página PK41
Accopiamento motore vedere pagina PK41

Output shaft can also be delivered without key (see page P3). Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta (ver página P3)! ¡Por favor observe las indicaciones en la página A19!

Albero uscita disponibile anche senza chiavetta (vedere a pagina P3)! Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	□a1	□a2	øb1	B	c1	ød	øe1	f1	h	H	k
P521_....K102	114	101	90h6	56	10	32k6	120	15,0	60	160	283,0
P721_....K102	145	145	130h6	56	15	40k6	165	3,5	60	160	318,0
P721_....K202	145	145	130h6	70	15	40k6	165	3,5	65	190	346,0
P821_....K202	190	190	160h6	70	15	55k6	215	10,0	65	190	384,5
P821_....K302	190	190	160h6	76	15	55k6	215	10,0	75	213	398,0
P921_....K402	225	212	180h6	90	17	75k6	250	10,0	90	240	490,5

Typ	k2	l1	l2	l3	l4	l6	m1	o	øs1	s2	t	u
P521_....K102	14	3	58	60	88	121	60	139,0	9,0	M12	35	A10x8x50
P721_....K102	-	4	82	85	112	145	60	150,0	11,0	M16	43	A12x8x70
P721_....K202	-	4	82	85	112	145	65	164,0	11,0	M16	43	A12x8x70
P821_....K202	-	6	82	85	112	190	65	202,5	13,5	M20	59	A16x10x70
P821_....K302	-	6	82	85	112	190	75	210,0	13,5	M20	59	A16x10x70
P921_....K402	22	7	105	109	143	225	90	257,5	17,5	M20	80	A20x12x90

Typ	ME10			ME20			ME30			ME40		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n
P5K1	□98	124,0	36,0	□115	128,0	36,0	-	-	-	-	-	-
P7K1	□98	124,0	36,0	□115	128,0	36,0	-	-	-	-	-	-
P7K2	□98	143,0	46,0	□115	147,0	46,0	□145	149,0	46,0	-	-	-
P8K2	□98	143,0	46,0	□115	147,0	46,0	□145	149,0	46,0	-	-	-
P8K3	ø140	163,0	52,5	□115	167,0	52,5	□145	169,0	52,5	-	-	-
P9K4	-	-	-	ø160	187,0	60,0	□145	189,0	60,0	□190	192,0	60,0

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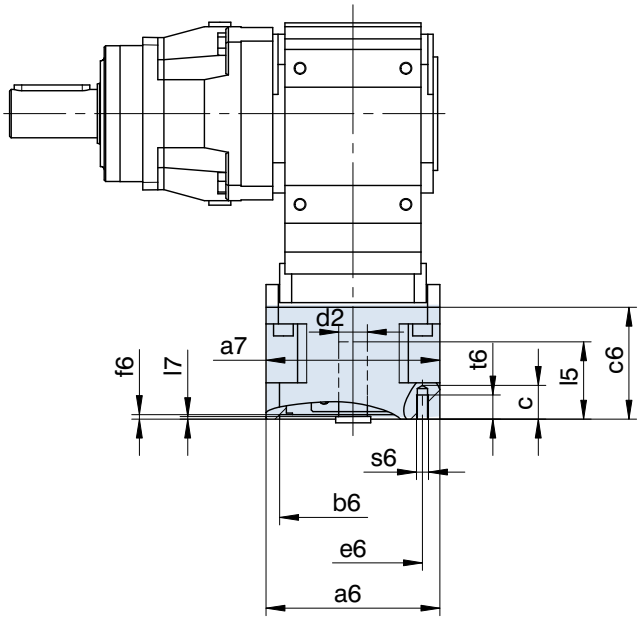
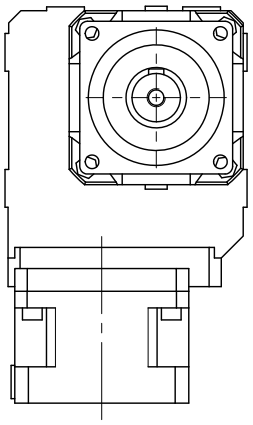
P5K1_ME_ - P9K4_ME_





Planetary gear unit mounted on side 3. ***Red. planetarios montados sobre lado 3.*** **Riduttore angolare montato sul lato 3.**

Typ	øb6	øe6	ød2max	l5max	□a6	□a7	c	c6	f6	l7max	s6	t6
ME10	50,0H7	70	19	41	100	98	21	61	4,0	3,0	M4	10
ME10	50,0H7	95	19	41	100	98	21	61	2,5	3,0	M6	13
ME10	60,0H7	75	19	41	100	98	21	61	3,5	3,0	M5	9
ME10	80,0H7	100	19	41	100	98	21	61	4,0	3,0	M6	13
ME10	95,0H7	115	19	41	100	98	21	61	4,0	3,0	M8	21
ME10	95,0H7	115	19	50	100	98	30	70	4,0	12,0	M8	16
ME10	95,0H7	130	19	41	115	98	21	61	4,0	3,0	M8	16
ME10	95,0H7	130	19	50	115	98	30	70	4,0	12,0	M8	16
ME10	110,0H7	130	19	50	115	98	30	70	4,0	12,0	M8	16
ME10	110,0H7	145	19	58	130	98	38	78	7,0	20,0	M8	16
ME10	130,0H7	165	19	50	140	98	30	70	7,0	12,0	M10	20
ME20	80,0H7	100	32	53	120	115	24	74	4,0	3,5	M6	13
ME20	95,0H7	115	32	53	120	115	24	74	5,0	3,5	M8	16
ME20	95,0H7	130	32	53	120	115	24	74	4,0	3,5	M8	16
ME20	110,0H7	130	32	53	120	115	24	74	4,0	3,5	M8	16
ME20	110,0H7	145	32	61	140	115	32	82	6,5	11,5	M8	16
ME20	110,0H7	145	32	71	140	115	42	92	7,0	21,5	M8	16
ME20	110,0H7	165	32	53	140	115	24	74	5,0	3,5	M10	24
ME20	130,0H7	165	32	53	140	116	38	112	5,0	3,0	M10	20
ME20	130,0H7	165	32	61	140	115	32	82	5,0	11,5	M10	20
ME30	110,0H7	130	38	62	145	145	26	86	5,0	4,5	M8	14
ME30	110,0H7	145	38	73	145	145	37	97	5,0	15,5	M8	16
ME30	110,0H7	165	38	62	145	145	26	86	5,0	4,5	M10	26
ME30	114,3H7	200	38	81	180	145	45	105	5,0	23,5	M12	25
ME30	130,0H7	165	38	62	145	145	26	86	5,0	4,5	M10	26
ME30	130,0H7	215	38	62	190	145	26	86	5,0	4,5	M12	26
ME30	130,0H7	215	38	62	190	116	26	112	5,0	3,0	M12	25
ME30	180,0H7	215	38	62	190	145	26	86	5,0	4,5	M12	26
ME30	180,0H7	215	38	81	190	145	45	105	5,0	23,5	M12	25
ME30	180,0H7	215	38	62	190	116	55	160	5,0	3,0	M12	25
ME40	110,0H7	165	48	81	190	190	34	122	5,0	4,5	M10	18
ME40	114,3H7	200	48	81	190	190	34	122	4,0	4,5	M12	34
ME40	130,0H7	165	48	81	190	190	34	122	5,0	4,5	M10	18
ME40	130,0H7	215	48	81	190	190	34	122	5,0	4,5	M12	34
ME40	180,0H7	215	48	82	190	190	35	123	5,0	5,5	M12	35
ME40	250,0H7	300	48	85	260	190	38	126	6,0	8,5	M16	38

ServoFit® PH Planetary Gear Units
Reductores planetarios ***ServoFit® PH***
ServoFit® Riduttori planetari **PH**

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High Performance Precision Planetary Gear Units

- Acceleration torque: 50 – 7500 Nm
- Low backlash: 3 arcmin (PH3 = 4 arcmin)
- Extremely high torsional and tilting stiffness
- Consistent oil quantity, suitable for every mounting position
- FKM seal at input, continuous operation without cooling
- easy to assemble due to spreading function in the clamping hub
- Advanced gear technology
- Low mass moments of inertia
- Readily attaches any synchronous servo motor
- Quiet running
- Efficiency:
  1 stage ≥ 96 %
  2 stage ≥ 93 %

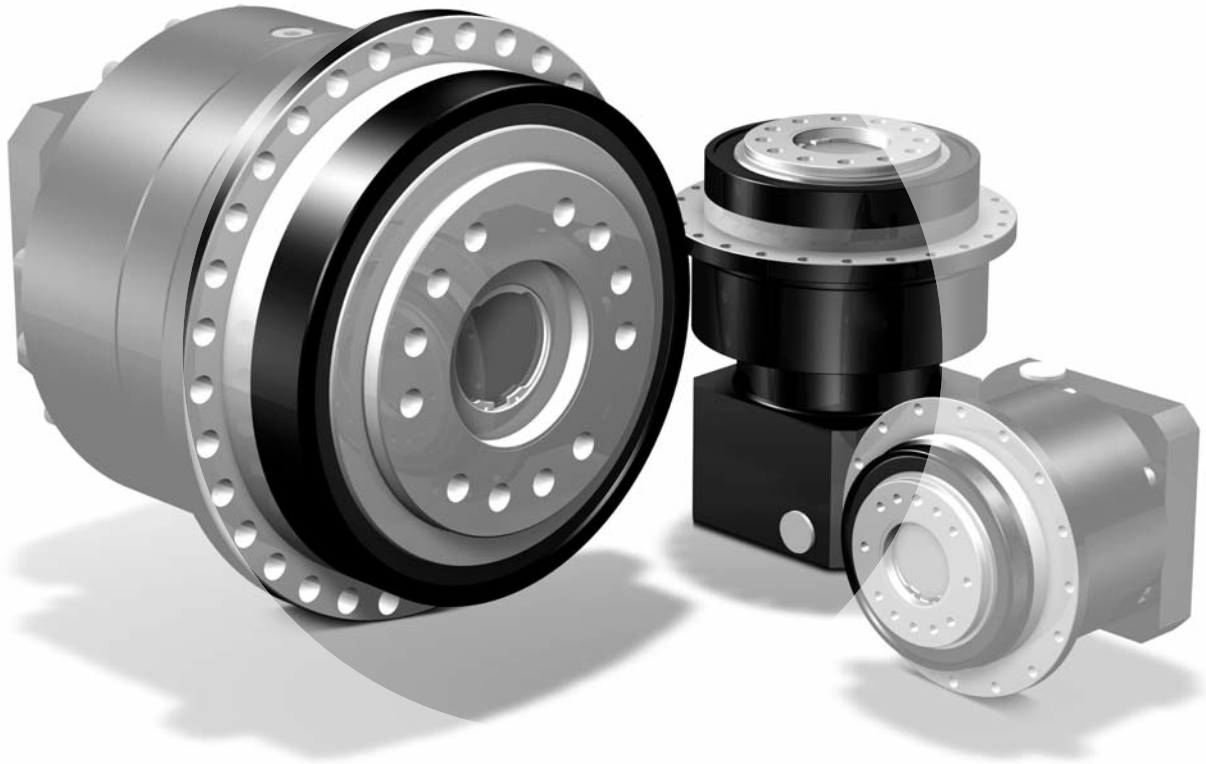
Reductores planetarios de precisión de alto rendimiento

- *Par de aceleración: 50 – 7500 Nm*
- *Bajo juego de giro: 3 arcmin (PH3 = 4 arcmin)*
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Cantidad de aceite consistente, apto para cualquier posición de montaje*
- *Anillo retén de FKM en la entrada, trabajo permanente sin enfriamiento*
- *Fácil de montar gracias a la función de expansión en el cojinete de apriete*
- *Tecnología superior de dentado*
- *Bajos momentos de inercia de masa*
- *Equipable a cualquier motor servo síncrono*
- *Marcha extremadamente suave*
- *Rendimiento:*
  1 tren ≥ 96 %
  2 trenes ≥ 93 %

Riduttori planetari di precisione High-Performance

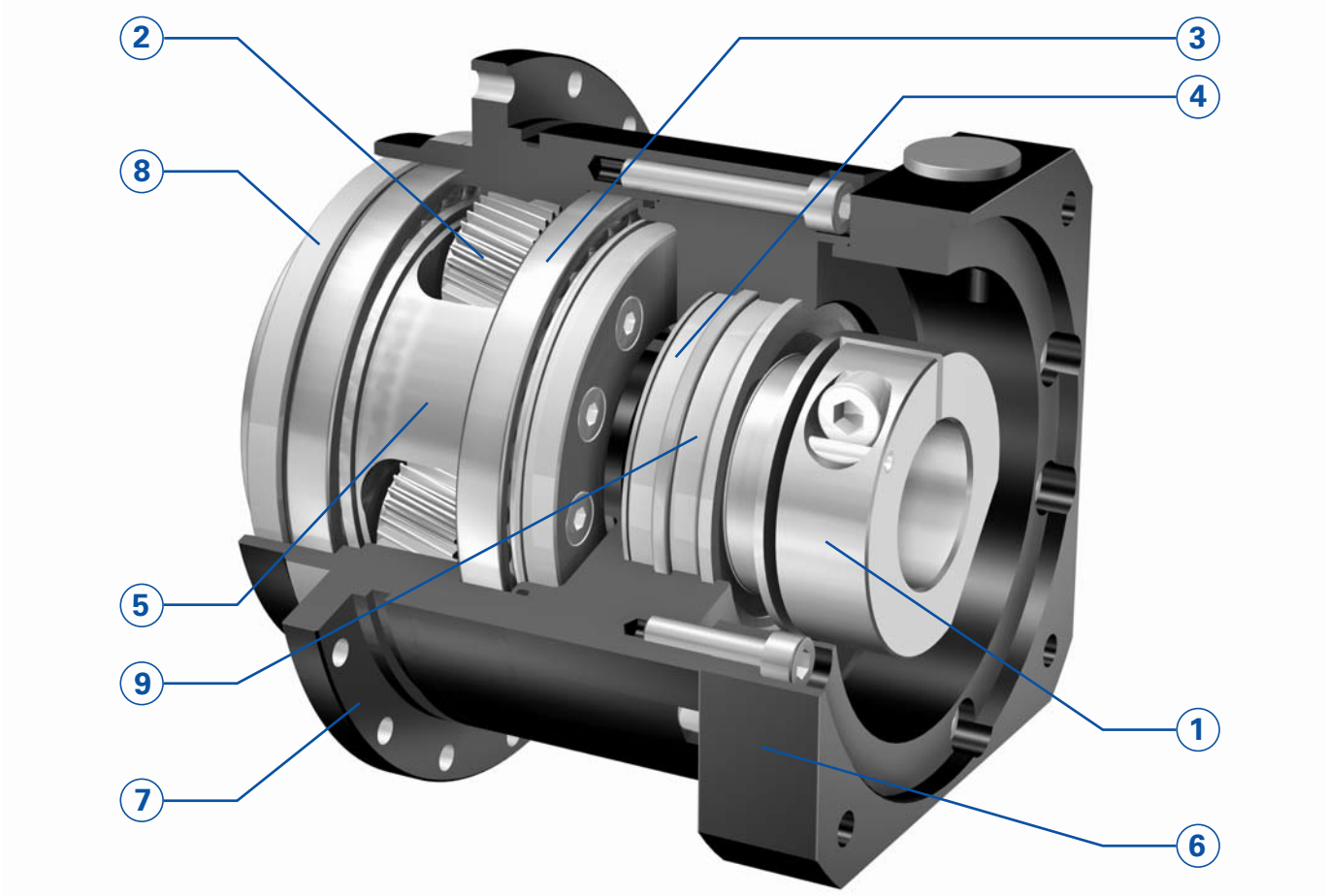
- Coppia di accelerazione: 50 – 7500 Nm
- Gioco minimo: 3 arcmin (PH3 = 4 arcmin)
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Quantità di olio uniforme, possibilità di impiego in tutte le posizioni
- Anello di tenuta in FKM all'ingresso, funzionamento continuo senza raffreddamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Tecnologia della dentatura avanzata
- Momenti di inerzia contenuti
- Accoppiabili a qualsiasi servomotore sincrono
- Estremamente silenziosi
- Rendimento:
  1 stadio ≥ 96 %
  2 stadi ≥ 93 %

ServoFit® PH



ServoFit® PH Planetary Gear Units
Reductores planetarios ***ServoFit® PH***
ServoFit® Riduttori planetari **PH**

STÖBER



• **Highest running smoothness achieved by proven helical gearing and optimized microgeometry.**
On-hands experience gained over the past decades has consistently been put to practice. This has resulted mainly in optimized gear tooth microgeometry, ensuring highest backlash stability and extremely quiet gear operation.

• ***Máxima suavidad de marcha por probado dentado helicoidal y microgeometría optimizada***
Los conocimientos prácticos de los últimos décadas han sido aplicados consecuentemente. Los resultados son ante todo, optimizaciones en la microgeometría del dentado. Ello garantiza máxima estabilidad de juego y un ruido de marcha extremadamente bajo.

• **Massima silenziosità grazie alla dentatura elicoidale collaudata ed alla microgeometria ottimizzata**
Le conoscenze empiriche degli ultimi decenni sono state trasposte in maniera coerente. Il risultato é soprattutto a perfezionamento della microgeometria della dentatura. Questo consente di ottenere una stabilità di gioco elevatissima abbinata ad una rumorosità estremamente bassa.

• **Symmetrically arranged output bearings** for highest load capacity and highest tilting rigidity of the flange shaft. Due to pretensioned angular bearings in O alignment already the standard version is suitable for **high axial and radial loads**.

• ***Apoyo de salida simétrico*** *para máxima carga y máxima rigidez al vuelco del eje con brida. Por apoyos inclinados pretensados dispuestos en O, ya en el estándar adecuados para* ***altas cargas axiales y radiales****.*

• **Supporto uscita simmetrico** per un carico ed una rigidità al ribaltamento elevatissimi dell'albero flangiato. Grazie ai cuscinetti a rulli conici precaricati con disposizione a O già nella versione standard sono idonei per **carichi assiali e radiali elevati**.

• The **STOBER EasyAdapt® motor adapter system** allows easy and accurate motor installation in minutes with no special tools required.

• *El* ***sistema STOBER EasyAdapt®, de opciones para motores*** *permite el montaje sencillo y sin errores en pocos minutos. No se requieren herramientas especiales.*

• Il **sistema di montaggio del motore EasyAdapt® STOBER** consente un montaggio del motore semplice e senza errori nel giro di pochi minuti. Non sono richiesti utensili speciali.

• **Wide selection** of IEC and NEMA motor adapters for all common brands of motors.

• ***Gran selección*** *de adaptadores de motor (IEC y NEMA) para todos los tipos usuales de motores.*

• **Ampia scelta** di adattatori motore (CEI e NEMA) per tutti i comuni tipi di motori.

ServoFit® PH Planetary Gear Units
Reductores planetarios ***ServoFit® PH***
ServoFit® Riduttori planetari **PH**

STÖBER

① **EasyAdapt® coupling**
Accurate and precise motor installation by clamping screw. Designed for **large motor shaft diameters**.
The single-piece design and optimized features to accommodate the motor shaft diameter help **minimize inertia** and ensure superior dynamic performance.
The **balanced** clamp coupling ensures quiet, vibration-free operation, also at high speeds.
Spacer bushes to accommodate custom motor shaft diameters.

② **High gearing quality** provided by case-hardened and finish-ground sun gear and planet gears.

③ **Load capacity of the planet gear bearings** increased by about 100 %.

④ **IP65** enclosure. Sealed with a **FKM** radial oil seal for the smallest possible shaft diameter. Reduces friction, thus preventing internal heat build-up. Increases efficiency. **Continuous duty** operation possible without addition cooling.

⑤ **Highest torsional stiffness and ultimate tensile strength** provided by oversized single-piece planet carriers made of high-tensile material.

⑥ Motor adapter made of aluminium for **low gear unit weight.**

⑦ **Highest running accuracy and precision** ensured by single-piece housing design. Housing material: High-tensile tempered steel.

⑧ **NBR double-lip radial oil seals**. For continuous duty applications, with very good chemical resistance **FKM oil seals** are available as an **option**.

⑨ Input shaft bearings with shields and high-temperature grease for maintenance-free operation.

⑩ **Lubricated for life** with high-quality hydrophobic synthetic gear oil.

① ***Acoplamiento EasyAdapt®***
*Acoplamiento de motor **sin errores** mediante un tornillo de apriete. Concebido para **grandes diámetros de ejes de motor**.*
*La **estructura de una pieza** y la óptima adaptación al diámetro del eje del motor se encargan **de bajísimos momentos de inercia de masa** y así de alta dinámica.*
*El acoplamiento **equilibrado** de anillo de apriete se encarga de una marcha suave, libre de vibraciones, aún a altas velocidades.*
Manguitos distanciadores para la adaptación de diámetros no usuales de motor.

② ***Alta calidad de dentado** por piñones solares y ruedas planetarias templados por cementación y rectificados.*

③ ***Capacidad de carga de los apoyos de los planetas** incrementada en aproximadamente 100 %.*

④ *Tipo de protección **IP65**. Sellado con anillo retén **FKM** sobre mínimo diámetro posible del eje. Reduce la fricción y así también el calentamiento. Aumenta el rendimiento.*
***Trabajo continuo** posible sin enfriamiento adicional.*

⑤ ***Máxima rigidez a la torsión y resistencia a la rotura** por portaplanetas generosamente dimensionados, de una sola pieza, fabricados de material de alta resistencia.*

⑥ *Adaptador de motor de aluminio para **peso reducido del reductor**.*

⑦ ***Máxima exactitud y precisión de marcha** por diseño de carcasa de una pieza. Material de la carcasa:*
Acero bonificado de alta resistencia .

⑧ ***Anillos retén de doble labio de NBR**. Para el uso en trabajo continuo así como para muy buena resistencia química, es ofrecida adicionalmente la **opción FKM**.*

⑨ *Apoyos del eje de accionamiento con discos de cubierta y grasa para alta temperatura para trabajo libre de mantenimiento.*

⑩ ***Lubricación de por vida** con aceite sintético hidrófobo de alta calidad para reductores.*

① **Giunto EasyAdapt®**
Montaggio del motore **senza errori** grazie alla vite di arresto. Concepito per **motori con grandi diametri dell'albero**.
La **struttura monopezzo** e l'adattamento ottimizzato al diametro dell'albero motore assicurano **momenti di inerzia bassissimi** e pertanto la massima dinamica.
Il giunto di montaggio **equilibrato** garantisce un funzionamento silenzioso e senza vibrazioni anche a alto numero di giri.
Bussole per l'adattamento ai diametri degli alberi motore non comuni.

② **Alta qualità della dentatura** grazie a solare e planetari cementati e lucidati, nonché alla corona dentata nitrurata e levigata.

③ **Capacitá di carico del supporto planetario** aumentata del 100 % circa.

④ Classe di protezione **IP65**. Ermetizzazione con anello di tenuta radiale per alberi **FKM** sul diametro albero più piccolo. Riduce l'attrito e conseguentemente il riscaldamento. Aumenta il rendimento.
Il **funzionamento continuo** è possibile senza raffreddamento aggiuntivo.

⑤ **Rigidità torsionale e resistenza a rottura** elevatissime grazie a porta planetari monoblocco in materiale ad alta resistenza sovradimensionati.

⑥ Adattatore per motore in alluminio per un **peso del riduttore contenuto.**

⑦ **Massima esattezza di funzionamento e precisione** grazie al design monoblocco della carcassa. Materiale della carcassa: Acciaio da bonifica ad alta resistenza.

⑧ **Anelli di tenuta radiali per alberi a doppio labbro** in **FKM.** Per l'impiego in funzionamento continuo, nonché per una resistenza chimica ottimale, è inoltre offerta **l'opzione FKM**.

⑨ Cuscinetto albero ingresso con schermato con grasso per alte temperature per un esercizio privo di richiede manutenzione.

⑩ **Lubrificazione a vita** con olio per riduttori sintetico idrofobico di alta qualità.

ServoFit® PHV Planetary Gear Units
Reductores planetarios ***ServoFit® PHV***
ServoFit® Riduttori planetari **PHV**

STÖBER

High Performance Precision Planetary Gear Units

- Acceleration torque:
  PHV933: 4250 Nm
  PHV1033: 7500 Nm
- Low backlash:
  3 arcmin
- High ratios (> 60) in compact design with power-branched transmission gear steps
- Extremely high torsional and tilting stiffness
- Consistent oil quantity, suitable for every mounting position
- FKM seal at input, continuous operation without cooling
- easy to assemble due to spreading function in the clamping hub
- Advanced gear technology
- Low mass moments of inertia
- Readily attaches any synchronous servo motor
- Quiet running
- Efficiency: ≥ 90 %

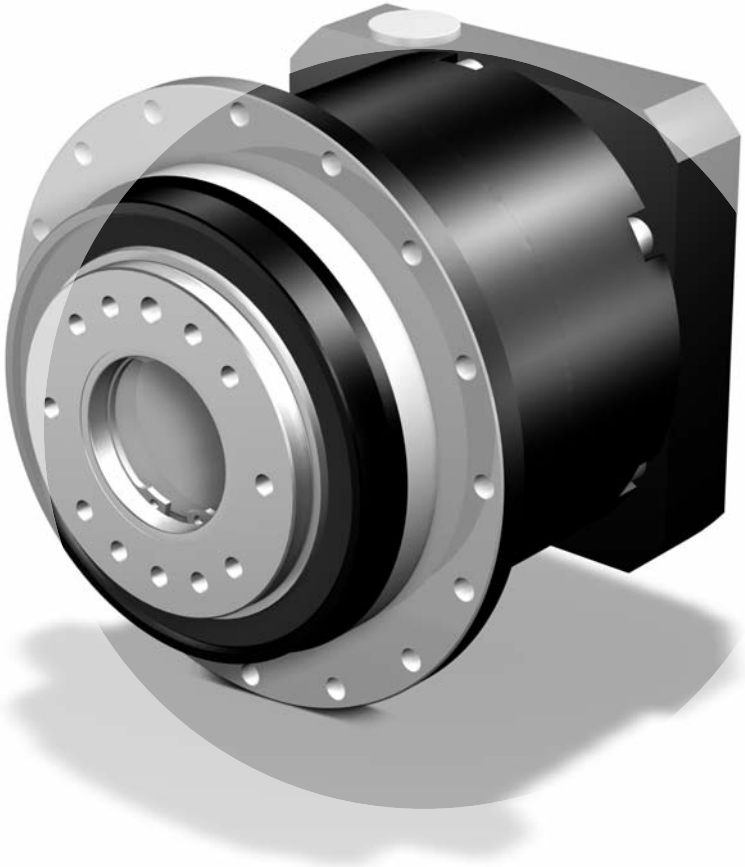
Reductores planetarios de precisión de alto rendimiento

- *Par de aceleración:*
  PHV933: 4250 Nm
  PHV1033: 7500 Nm
- *Bajo juego de giro:*
  3 arcmin
- *Altas relaciones de transmisión (> 60) en ejecución compacta por trenes de transmisión de potencia distribuida*
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Cantidad de aceite consistente, apto para cualquier posición de montaje*
- *Anillo retén de FKM en la entrada, trabajo permanente sin enfriamiento*
- *Fácil de montar gracias a la función de expansión en el cojinete de apriete*
- *Tecnología superior de dentado*
- *Bajos momentos de inercia de masa*
- *Equipable a cualquier motor servo síncrono*
  Marcha extremadamente suave
- *Rendimiento: ≥ 90 %*

Riduttori planetari di precisione High-Performance

- Coppia di accelerazione:
  PHV933: 4250 Nm
  PHV1033: 7500 Nm
- Gioco minimo:
  3 arcmin
- Rapporti di riduzione elevati (> 60) in struttura compatta grazie a stadi intermedi a potenza ramificata
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Quantità di olio uniforme, possibilità di impiego in tutte le posizioni
- Anello di tenuta in FKM all'ingresso, funzionamento continuo senza raffreddamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Tecnologia della dentatura avanzata
- Momenti di inerzia contenuti
- Accoppiabili a qualsiasi servomotore sincrono
- Estremamente silenziosi
- Rendimento: ≥ 90 %

ServoFit® PHV



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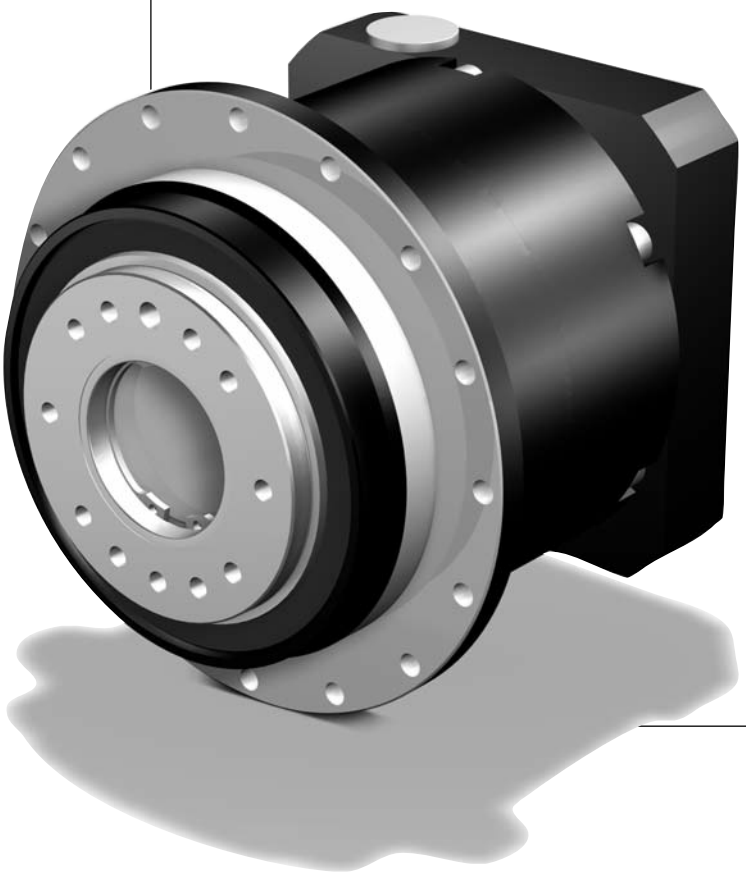

PH

Contents PH

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Shaft / housing design	
Output PH	PH3
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Resumen del contenido PH

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Ejecución de eje / de carcasa	
Salida PH	*PH3*
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Indice PH

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Uscita PH	PH3
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ServoFit® Riduttori planetari PH	PH5
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ServoFit® Riduttori planetari PH	PH15

Type designation / *Tipificación* / Identificazione dei modelli

STÖBER

PH 4 2 1 F 0050 ME C

1 2 3 4 5 6 7 8

1 Gear unit type
PH – Planetary gear unit
PHV – Planetary gear unit

2 Gear unit size

3 Generation number

4 Stages
1 – 1 stage
2 – 2 stage
3 – 3 stage

5 Design
F – flange shaft

6 Transmission ratio i x 10

7 Mounting series
ME – Motor adapter with EasyAdapt® coupling
MEL – Motor adapter with EasyAdapt® coupling and large motor plate
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page PH17, please observe the max. dimensions).
MB – Motor adapter square with brake (option) (see brochure ID 441904)

8 Ventilator module
C – ServoCool (option) (see brochure ID 441851)

Ordering data according to the type designation above.
Further ordering details:
– information as to whether the radial shaft seals on the output are made from FKM or NBR.
Recommendation:
FKM for an operating time ≥ 60%
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

The torques and forces specified in this catalog only apply under the following conditions:
- For the attachment of the flange shaft and the gear unit housing on the machine side using screws of quality 12.9
- If the gear unit housings are adjusted at the pilot øb1 or øb2 (H7)
- If the flange shaft is adjusted with the connecting element at the pilot ød or øv

1 *Tipo de reductor*
PH *– Reductor planetario*
PHV *– Reductor planetario*

2 *Tamaño del reductor*

3 *Cifra de generación*

4 *Número de trenes*
1 *– 1 tren*
2 *– 2 trenes*
3 *– 3 trenes*

5 *Ejecución*
F *– Eje con brida*

6 *Número característico de la relación de reducción i x 10*

7 *Grupos de opciones*
ME *– Adaptador de motor con acoplamiento EasyAdapt®*
MEL *– Adaptador de motor con acoplamiento EasyAdapt® y placa grande de motor*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página PH17, por favor observar dimensiones máximas).
MB *– Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

8 *Módulo de ventilador*
C *– ServoCool (opción) (ver folleto ID 441851)*

Datos de pedido de acuerdo a la tipificación indicada arriba.
Otros datos de pedido:
– *Indicación si anillos retén en la salida de FKM o de NBR.*
Recomendación:
FKM para duración de conexión ≥ 60%.
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

Los pares y fuerzas indicados en este catálogo se aplican bajo las siguientes condiciones:
- *Al fijar el eje de brida y la carcasa del reductor en el lado de la máquina con tornillos de la calidad 12.9*
- *Si las carcasas del reductor están ajustadas en el borde de ajuste øb1 o øb2 (H7)*
- *Si el eje de brida está ajustada con el elemento de unión en el borde de ajuste ød o øv.*

1 Modello di riduttore
PH – Riduttore planetario
PHV – Riduttore planetario

2 Taglia del riduttore

3 Numero di generazione

4 Numero di stadi
1 – 1-stadio
2 – 2-stadi
3 – 3-stadi

5 Esecuzione
F – Albero flangiato

6 Rapporto di riduzione i x 10

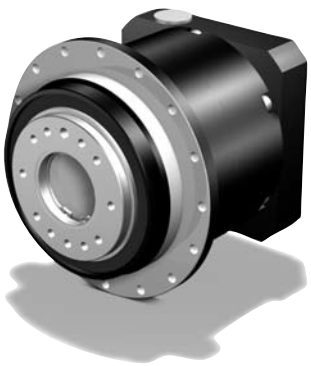
7 Opzioni annessi
ME – adattatore motore con giunto EasyAdapt®
MEL – adattatore motore con giunto EasyAdapt® e flangia motore grande
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore da pagina PH17, si prega di rispettare le misure max.).
MB – Adattatore motore quadro con freno (opzione) (vedere prospetto ID 441904)

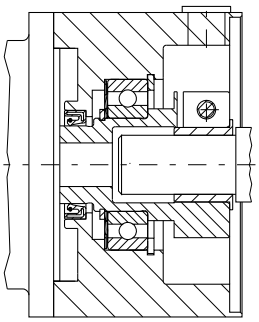
8 Modulo ventilatore
C – ServoCool (opzione) (vedere prospetto ID 441851)

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.
Altri dati dell'ordine:
– Indicare se gli anelli di tenuta radiali dell'albero uscita sono in FKM o NBR.
Raccomandazione:
FKM per fattore di servizio ≥ 60%.
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

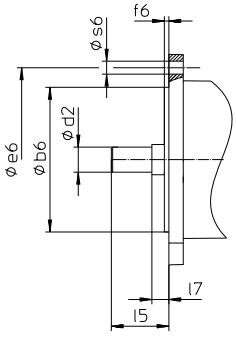
Le coppie e le forze indicate in questo catalogo si applicano alle seguenti condizioni:
- Per il fissaggio dell' albero flangiato e dell' scatola del riduttore sul lato macchina con viti di qualità 12.9
- Se le scatole del riduttore sono adattate sul bordo di accoppiamento øb1 o øb2 (H7)
- Se l' albero flangiato è adattato dell' elemento di collegamento sul bordo di accoppiamento ød o øv

PH421 F 0050 ME





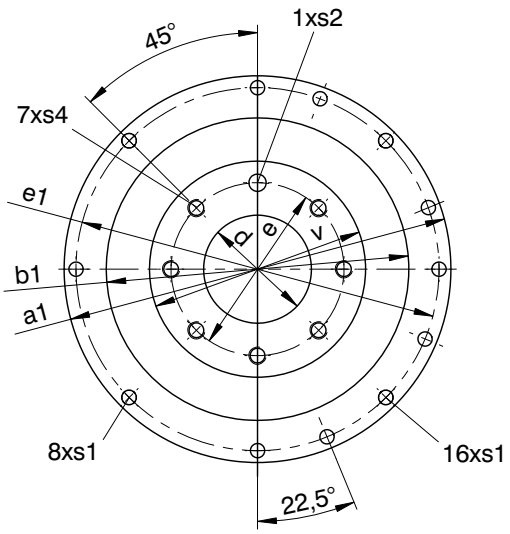
EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
***Giunto* EasyAdapt® ME**



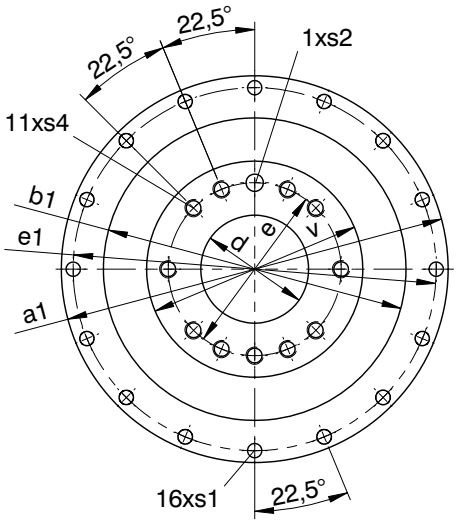
Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Flange shaft | ***Eje con brida*** | **Albero flangiato**

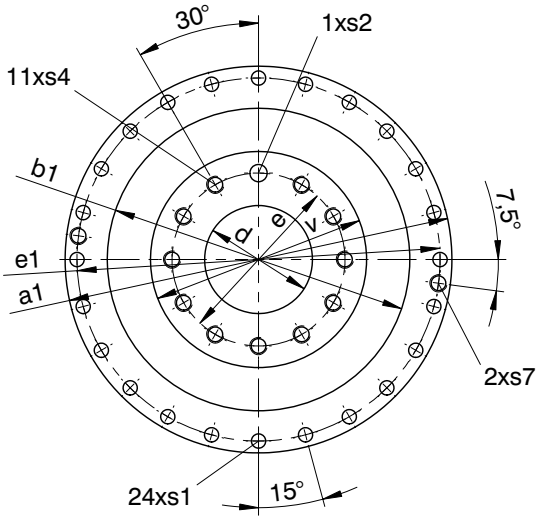
PH3 | PH4



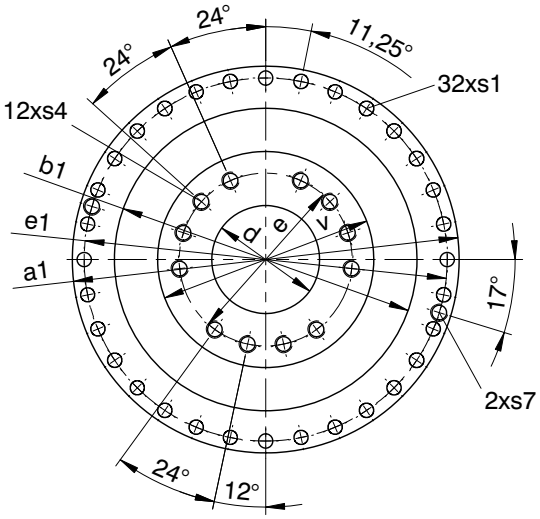
PH5



PH7 + PH8



PH9 + PH10
PHV9 + PHV10



Shaft design “F” | ***Ejecución de eje “F”*** | **Esecuzione albero “F”**

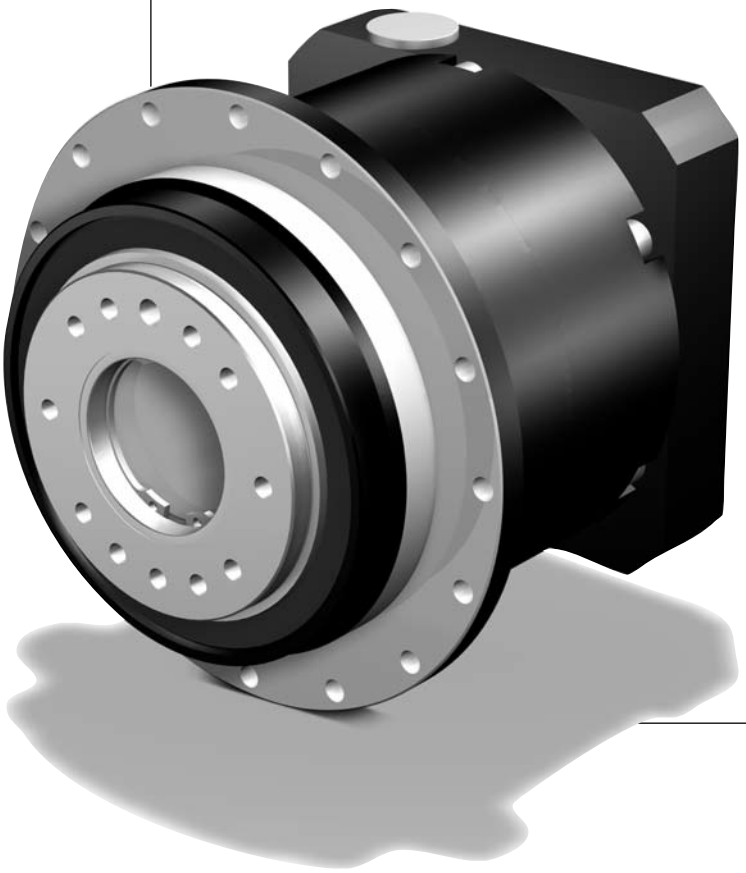
Typ	øa1	øb1	ød	øe	øe1	øs1	øs2	s4	s7	v
PH3	86h7	64h7	20,0H6	31,5	79	4,5	5H7	M5	-	40h7
PH4	118h7	90h7	31,5H6	50,0	109	5,5	6H7	M6	-	63h7
PH5	145h7	110h7	40,0H6	63,0	135	5,5	6H7	M6	-	80h7
PH7	179h7	140h7	50,0H6	80,0	168	6,6	8H7	M8	-	100h7
PH8	247h7	200h7	80,0H6	125,0	233	9,0	10H7	M10	M10	160h7
PH9/PHV9	300	255h7	90,0H6	140,0	280	13,5	-	M16	M8	180h7
PH10/PHV10	330	285h7	95,0H6	160,0	310	13,5	-	M20	M10	200h7

Selection table
ServoFit® PH
Planetary Gear Units

Tabla de selección
Reductores planetarios
ServoFit® PH

Tabella di selezione
ServoFit®
Riduttori planetari **PH**

STÖBER



Selection table **ServoFit® PH** Planetary Gear Units

Tabla de selección Reductores planetarios ***ServoFit® PH***

Tabella di selezione **ServoFit®** Riduttori planetari **PH**

STÖBER

Symbols:

i - Gear unit ratio
n_{1MAX} - Max. input speed
DB - Continuous operation
ZB - Cycle operation (at ambient temperature 20°C, also see page A11/A12)
MWø - Motor shaft diameter
J_1 - Mass mom. of inertia (related to input)
G - Weight
$\Delta\varphi_2$ - Backlash
C_2 - Gear unit rigidity (related to output at M_{2B})
L_{PA} - Max. noise level (n_1 = 2000 rpm)
M_{2N} - Rated torque 1)
M_{2B} - Max. perm. acceleration torque
M_{2NOT} - Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

1) Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

Denominaciones:

i - *Relación de reducción*
n_{1MAX} - *Velocidad máx. de entrada*
DB - Trabajo continuo
ZB - Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
MWø - *Diámetro de eje del motor*
J_1 - *Momento de inercia de masa (referido a la entrada)*
G - *Peso*
$\Delta\varphi_2$ - *Juego de giro*
C_2 - *Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} - *Ruido máx. de marcha (n_1 = 2000 min-1)*
M_{2N} - *Par nominal 1)*
M_{2B} - *Par máx. admisible de aceleración*
M_{2NOT} - *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

1) Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

Simboli:

i - Rapporto di riduzione
n_{1MAX} - Max. numero di giri in ingresso
DB - funzionamento continuo
ZB - funzionamento ciclico (a temperatura ambiente di 20°C, vedere anche pagina A11/A12)
MWø - Diametro dell'albero motore
J_1 - Momento di inerzia (riferito all'ingresso)
G - Peso
$\Delta\varphi_2$ - Gioco
C_2 - Rigidità del riduttore (riferito all'uscita per M_{2B})
L_{PA} - Rumorosità max. (n_1 = 2000 min-1)
M_{2N} - Coppia nominale 1)
M_{2B} - Coppia di accelerazione max. ammessa
M_{2NOT} - Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

1) I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

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Please take notice of the indications on page PH6! ***¡Por favor observe las indicaciones en la página PH6!*** **Si raccomanda di rispettare le avvertenze a pagina PH6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PH321 (M_{2BMAX}=65 Nm)												
5,000	**PH321F0050 ME**	3000	6000	**≤11**	0,30	1,4	4	14	58	45	65	110
5,000	**PH321F0050 ME**	3000	6000	**>11≤14**	0,34	1,4	4	14	58	45	65	130
5,000	**PH321F0050 ME**	3000	6000	**>14≤19**	0,45	1,4	4	14	58	45	65	130
5,000	**PH321F0050 MEL**	3000	6000	**>19≤24**	0,94	2,3	4	15	58	45	65	130
7,000	**PH321F0070 ME**	3500	6000	**≤11**	0,27	1,4	4	13	57	45	60	130
7,000	**PH321F0070 ME**	3500	6000	**>11≤14**	0,30	1,4	4	13	57	45	60	130
7,000	**PH321F0070 ME**	3500	6000	**>14≤19**	0,42	1,4	4	13	57	45	60	130
7,000	**PH321F0070 MEL**	3500	6000	**>19≤24**	0,90	2,3	4	14	57	45	60	130
10,00	**PH321F0100 ME**	3800	6000	**≤11**	0,25	1,4	4	11	55	30	50	100
10,00	**PH321F0100 ME**	3800	6000	**>11≤14**	0,28	1,4	4	11	55	30	50	100
10,00	**PH321F0100 ME**	3800	6000	**>14≤19**	0,40	1,4	4	11	55	30	50	100
10,00	**PH321F0100 MEL**	3800	6000	**>19≤24**	0,88	2,3	4	11	55	30	50	100
PH322 (M_{2BMAX}=65 Nm)												
20,00	**PH322F0200 ME**	4500	8000	**≤9**	0,11	1,7	4	15	59	45	65	130
20,00	**PH322F0200 ME**	4500	8000	**>9≤11**	0,12	1,7	4	15	59	45	65	130
20,00	**PH322F0200 ME**	4500	8000	**>11≤14**	0,14	1,7	4	15	59	45	65	130
20,00	**PH322F0200 MEL**	4500	8000	**>14≤19**	0,43	2,1	4	15	59	45	65	130
25,00	**PH322F0250 ME**	4500	8000	**≤9**	0,09	1,7	4	15	57	45	65	130
25,00	**PH322F0250 ME**	4500	8000	**>9≤11**	0,10	1,7	4	15	57	45	65	130
25,00	**PH322F0250 ME**	4500	8000	**>11≤14**	0,12	1,7	4	15	57	45	65	130
25,00	**PH322F0250 MEL**	4500	8000	**>14≤19**	0,41	2,1	4	15	57	45	65	130
28,00	**PH322F0280 ME**	4500	8000	**≤9**	0,10	1,7	4	15	59	45	60	130
28,00	**PH322F0280 ME**	4500	8000	**>9≤11**	0,12	1,7	4	15	59	45	60	130
28,00	**PH322F0280 ME**	4500	8000	**>11≤14**	0,14	1,7	4	15	59	45	60	130
28,00	**PH322F0280 MEL**	4500	8000	**>14≤19**	0,42	2,1	4	15	59	45	60	130
35,00	**PH322F0350 ME**	4500	8000	**≤9**	0,08	1,7	4	15	56	45	65	130
35,00	**PH322F0350 ME**	4500	8000	**>9≤11**	0,09	1,7	4	15	56	45	65	130
35,00	**PH322F0350 ME**	4500	8000	**>11≤14**	0,11	1,7	4	15	56	45	65	130
35,00	**PH322F0350 MEL**	4500	8000	**>14≤19**	0,40	2,1	4	15	56	45	65	130
40,00	**PH322F0400 ME**	4500	8000	**≤9**	0,10	1,7	4	12	59	30	50	100
40,00	**PH322F0400 ME**	4500	8000	**>9≤11**	0,11	1,7	4	12	59	30	50	100
40,00	**PH322F0400 ME**	4500	8000	**>11≤14**	0,14	1,7	4	12	59	30	50	100
40,00	**PH322F0400 MEL**	4500	8000	**>14≤19**	0,42	2,1	4	12	59	30	50	100
50,00	**PH322F0500 ME**	4500	8000	**≤9**	0,07	1,7	4	14	54	45	65	130
50,00	**PH322F0500 ME**	4500	8000	**>9≤11**	0,08	1,7	4	14	54	45	65	130
50,00	**PH322F0500 ME**	4500	8000	**>11≤14**	0,10	1,7	4	14	54	45	65	130
50,00	**PH322F0500 MEL**	4500	8000	**>14≤19**	0,39	2,1	4	14	54	45	65	130
70,00	**PH322F0700 ME**	4500	8000	**≤9**	0,07	1,7	4	15	54	45	60	130
70,00	**PH322F0700 ME**	4500	8000	**>9≤11**	0,08	1,7	4	15	54	45	60	130
70,00	**PH322F0700 ME**	4500	8000	**>11≤14**	0,10	1,7	4	15	54	45	60	130
70,00	**PH322F0700 MEL**	4500	8000	**>14≤19**	0,39	2,1	4	15	54	45	60	130
100,0	**PH322F1000 ME**	4500	8000	**≤9**	0,07	1,7	4	12	54	30	50	100
100,0	**PH322F1000 ME**	4500	8000	**>9≤11**	0,08	1,7	4	12	54	30	50	100
100,0	**PH322F1000 ME**	4500	8000	**>11≤14**	0,10	1,7	4	12	54	30	50	100
100,0	**PH322F1000 MEL**	4500	8000	**>14≤19**	0,39	2,1	4	12	54	30	50	100

Planetary Gear Units **PH**
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Please take notice of the indications on page PH6! ***¡Por favor observe las indicaciones en la página PH6!*** **Si raccomanda di rispettare le avvertenze a pagina PH6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PH421 (M_{2BMAX}=130 Nm)												
4,000	**PH421F0040 ME**	2300	5000	**≤14**	1,1	3,9	3	32	61	90	130	180
4,000	**PH421F0040 ME**	2300	5000	**>14≤19**	1,2	3,9	3	33	61	90	130	230
4,000	**PH421F0040 ME**	2300	5000	**>19≤24**	1,4	3,9	3	33	61	90	130	240
4,000	**PH421F0040 MEL**	2300	5000	**>24≤32**	3,0	4,6	3	35	61	90	130	240
5,000	**PH421F0050 ME**	2700	6000	**≤14**	0,91	3,9	3	33	59	90	130	220
5,000	**PH421F0050 ME**	2700	6000	**>14≤19**	1,1	3,9	3	33	59	90	130	240
5,000	**PH421F0050 ME**	2700	6000	**>19≤24**	1,2	3,9	3	33	59	90	130	240
5,000	**PH421F0050 MEL**	2700	6000	**>24≤32**	2,8	4,6	3	35	59	90	130	240
7,000	**PH421F0070 ME**	3200	6000	**≤14**	0,76	3,9	3	29	58	90	110	240
7,000	**PH421F0070 ME**	3200	6000	**>14≤19**	0,89	3,9	3	29	58	90	110	240
7,000	**PH421F0070 ME**	3200	6000	**>19≤24**	1,0	3,9	3	29	58	90	110	240
7,000	**PH421F0070 MEL**	3200	6000	**>24≤32**	2,6	4,6	3	30	58	90	110	240
10,00	**PH421F0100 ME**	3500	6000	**≤14**	0,68	3,9	3	21	56	60	100	200
10,00	**PH421F0100 ME**	3500	6000	**>14≤19**	0,81	3,9	3	21	56	60	100	200
10,00	**PH421F0100 ME**	3500	6000	**>19≤24**	0,93	3,9	3	21	56	60	100	200
10,00	**PH421F0100 MEL**	3500	6000	**>24≤32**	2,6	4,6	3	21	56	60	100	200
PH422 (M_{2BMAX}=130 Nm)												
16,00	**PH422F0160 ME**	3700	6500	**≤11**	0,38	4,5	3	26	60	90	130	240
16,00	**PH422F0160 ME**	3700	6500	**>11≤14**	0,42	4,5	3	26	60	90	130	240
16,00	**PH422F0160 ME**	3700	6500	**>14≤19**	0,53	4,5	3	26	60	90	130	240
16,00	**PH422F0160 MEL**	3700	6500	**>19≤24**	1,0	5,2	3	27	60	90	130	240
20,00	**PH422F0200 ME**	3700	6500	**≤11**	0,37	4,5	3	28	60	90	130	240
20,00	**PH422F0200 ME**	3700	6500	**>11≤14**	0,40	4,5	3	28	60	90	130	240
20,00	**PH422F0200 ME**	3700	6500	**>14≤19**	0,52	4,5	3	28	60	90	130	240
20,00	**PH422F0200 MEL**	3700	6500	**>19≤24**	1,0	5,2	3	29	60	90	130	240
25,00	**PH422F0250 ME**	4000	7000	**≤11**	0,32	4,5	3	28	58	90	130	240
25,00	**PH422F0250 ME**	4000	7000	**>11≤14**	0,35	4,5	3	28	58	90	130	240
25,00	**PH422F0250 ME**	4000	7000	**>14≤19**	0,47	4,5	3	28	58	90	130	240
25,00	**PH422F0250 MEL**	4000	7000	**>19≤24**	0,96	5,2	3	29	58	90	130	240
28,00	**PH422F0280 ME**	4500	8000	**≤11**	0,28	4,5	3	25	57	90	130	240
28,00	**PH422F0280 ME**	4500	8000	**>11≤14**	0,31	4,5	3	25	57	90	130	240
28,00	**PH422F0280 ME**	4500	8000	**>14≤19**	0,43	4,5	3	25	57	90	130	240
28,00	**PH422F0280 MEL**	4500	8000	**>19≤24**	0,91	5,2	3	25	57	90	130	240
35,00	**PH422F0350 ME**	4500	8000	**≤11**	0,27	4,5	3	28	57	90	130	240
35,00	**PH422F0350 ME**	4500	8000	**>11≤14**	0,31	4,5	3	28	57	90	130	240
35,00	**PH422F0350 ME**	4500	8000	**>14≤19**	0,42	4,5	3	28	57	90	130	240
35,00	**PH422F0350 MEL**	4500	8000	**>19≤24**	0,91	5,2	3	28	57	90	130	240
40,00	**PH422F0400 ME**	4500	8000	**≤11**	0,26	4,5	3	24	55	90	130	240
40,00	**PH422F0400 ME**	4500	8000	**>11≤14**	0,29	4,5	3	24	55	90	130	240
40,00	**PH422F0400 ME**	4500	8000	**>14≤19**	0,40	4,5	3	24	55	90	130	240
40,00	**PH422F0400 MEL**	4500	8000	**>19≤24**	0,89	5,2	3	24	55	90	130	240
50,00	**PH422F0500 ME**	4500	8000	**≤11**	0,25	4,5	3	27	55	90	130	240
50,00	**PH422F0500 ME**	4500	8000	**>11≤14**	0,29	4,5	3	27	55	90	130	240
50,00	**PH422F0500 ME**	4500	8000	**>14≤19**	0,40	4,5	3	27	55	90	130	240
50,00	**PH422F0500 MEL**	4500	8000	**>19≤24**	0,89	5,2	3	27	55	90	130	240
70,00	**PH422F0700 ME**	4500	8000	**≤11**	0,25	4,5	3	27	55	90	110	240
70,00	**PH422F0700 ME**	4500	8000	**>11≤14**	0,28	4,5	3	27	55	90	110	240
70,00	**PH422F0700 ME**	4500	8000	**>14≤19**	0,40	4,5	3	27	55	90	110	240
70,00	**PH422F0700 MEL**	4500	8000	**>19≤24**	0,89	5,2	3	27	55	90	110	240
100,0	**PH422F1000 ME**	4500	8000	**≤11**	0,25	4,5	3	20	55	60	100	200
100,0	**PH422F1000 ME**	4500	8000	**>11≤14**	0,28	4,5	3	20	55	60	100	200
100,0	**PH422F1000 ME**	4500	8000	**>14≤19**	0,40	4,5	3	20	55	60	100	200
100,0	**PH422F1000 MEL**	4500	8000	**>19≤24**	0,89	5,2	3	20	55	60	100	200

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Please take notice of the indications on page PH6! ***¡Por favor observe las indicaciones en la página PH6!*** **Si raccomanda di rispettare le avvertenze a pagina PH6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PH521 (M_{2BMAX}=320 Nm)												
4,000	**PH521F0040 ME**	2200	5000	**≤19**	3,5	6,6	3	73	62	210	270	340
4,000	**PH521F0040 ME**	2200	5000	**>19≤24**	3,8	6,6	3	77	62	210	320	570
4,000	**PH521F0040 ME**	2200	5000	**>24≤32**	4,0	6,6	3	77	62	210	320	600
4,000	**PH521F0040 MEL**	2200	5000	**>32≤38**	7,9	8,3	3	85	62	210	320	600
5,000	**PH521F0050 ME**	2500	5500	**≤19**	2,9	6,6	3	77	60	220	320	430
5,000	**PH521F0050 ME**	2500	5500	**>19≤24**	3,2	6,6	3	80	60	220	320	600
5,000	**PH521F0050 ME**	2500	5500	**>24≤32**	3,5	6,6	3	80	60	220	320	600
5,000	**PH521F0050 MEL**	2500	5500	**>32≤38**	7,3	8,3	3	85	60	220	320	600
7,000	**PH521F0070 ME**	3000	6000	**≤19**	2,4	6,6	3	71	59	210	270	600
7,000	**PH521F0070 ME**	3000	6000	**>19≤24**	2,7	6,6	3	71	59	210	270	600
7,000	**PH521F0070 ME**	3000	6000	**>24≤32**	3,1	6,6	3	71	59	210	270	600
7,000	**PH521F0070 MEL**	3000	6000	**>32≤38**	6,8	8,3	3	73	59	210	270	600
10,00	**PH521F0100 ME**	3300	6000	**≤19**	2,1	6,6	3	53	57	140	250	500
10,00	**PH521F0100 ME**	3300	6000	**>19≤24**	2,4	6,6	3	53	57	140	250	500
10,00	**PH521F0100 ME**	3300	6000	**>24≤32**	2,8	6,6	3	53	57	140	250	500
10,00	**PH521F0100 MEL**	3300	6000	**>32≤38**	6,5	8,3	3	54	57	140	250	500
PH522 (M_{2BMAX}=320 Nm)												
16,00	**PH522F0160 ME**	3300	6000	**≤14**	0,89	8,1	3	63	61	210	320	600
16,00	**PH522F0160 ME**	3300	6000	**>14≤19**	1,0	8,1	3	64	61	210	320	600
16,00	**PH522F0160 ME**	3300	6000	**>19≤24**	1,2	8,1	3	64	61	210	320	600
16,00	**PH522F0160 MEL**	3300	6000	**>24≤32**	2,8	8,8	3	64	61	210	320	600
20,00	**PH522F0200 ME**	3300	6000	**≤14**	0,94	8,1	3	70	61	220	320	600
20,00	**PH522F0200 ME**	3300	6000	**>14≤19**	1,1	8,1	3	70	61	220	320	600
20,00	**PH522F0200 ME**	3300	6000	**>19≤24**	1,2	8,1	3	70	61	220	320	600
20,00	**PH522F0200 MEL**	3300	6000	**>24≤32**	2,8	8,8	3	70	61	220	320	600
25,00	**PH522F0250 ME**	3700	6500	**≤14**	0,82	8,1	3	70	59	220	320	600
25,00	**PH522F0250 ME**	3700	6500	**>14≤19**	0,98	8,1	3	70	59	220	320	600
25,00	**PH522F0250 ME**	3700	6500	**>19≤24**	1,1	8,1	3	70	59	220	320	600
25,00	**PH522F0250 MEL**	3700	6500	**>24≤32**	2,7	8,8	3	70	59	220	320	600
28,00	**PH522F0280 ME**	4000	7000	**≤14**	0,69	8,1	3	61	58	210	320	600
28,00	**PH522F0280 ME**	4000	7000	**>14≤19**	0,83	8,1	3	61	58	210	320	600
28,00	**PH522F0280 ME**	4000	7000	**>19≤24**	0,94	8,1	3	61	58	210	320	600
28,00	**PH522F0280 MEL**	4000	7000	**>24≤32**	2,6	8,8	3	61	58	210	320	600
35,00	**PH522F0350 ME**	4000	7000	**≤14**	0,71	8,1	3	68	58	220	320	600
35,00	**PH522F0350 ME**	4000	7000	**>14≤19**	0,84	8,1	3	68	58	220	320	600
35,00	**PH522F0350 ME**	4000	7000	**>19≤24**	0,96	8,1	3	68	58	220	320	600
35,00	**PH522F0350 MEL**	4000	7000	**>24≤32**	2,6	8,8	3	68	58	220	320	600
40,00	**PH522F0400 ME**	4000	7000	**≤14**	0,65	8,1	3	58	56	210	320	600
40,00	**PH522F0400 ME**	4000	7000	**>14≤19**	0,78	8,1	3	58	56	210	320	600
40,00	**PH522F0400 ME**	4000	7000	**>19≤24**	0,90	8,1	3	58	56	210	320	600
40,00	**PH522F0400 MEL**	4000	7000	**>24≤32**	2,5	8,8	3	58	56	210	320	600
50,00	**PH522F0500 ME**	4000	7000	**≤14**	0,66	8,1	3	66	56	220	320	600
50,00	**PH522F0500 ME**	4000	7000	**>14≤19**	0,79	8,1	3	66	56	220	320	600
50,00	**PH522F0500 ME**	4000	7000	**>19≤24**	0,91	8,1	3	66	56	220	320	600
50,00	**PH522F0500 MEL**	4000	7000	**>24≤32**	2,5	8,8	3	66	56	220	320	600
70,00	**PH522F0700 ME**	4000	7000	**≤14**	0,65	8,1	3	65	56	210	270	600
70,00	**PH522F0700 ME**	4000	7000	**>14≤19**	0,79	8,1	3	65	56	210	270	600
70,00	**PH522F0700 ME**	4000	7000	**>19≤24**	0,90	8,1	3	65	56	210	270	600
70,00	**PH522F0700 MEL**	4000	7000	**>24≤32**	2,5	8,8	3	66	56	210	270	600
100,0	**PH522F1000 ME**	4000	7000	**≤14**	0,65	8,1	3	52	56	140	250	500
100,0	**PH522F1000 ME**	4000	7000	**>14≤19**	0,78	8,1	3	52	56	140	250	500
100,0	**PH522F1000 ME**	4000	7000	**>19≤24**	0,90	8,1	3	52	56	140	250	500
100,0	**PH522F1000 MEL**	4000	7000	**>24≤32**	2,5	8,8	3	52	56	140	250	500

Planetary Gear Units **PH**
*Reductores planetarios **PH***
Riduttori planetari **PH**

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Please take notice of the indications on page PH6! ***¡Por favor observe las indicaciones en la página PH6!*** **Si raccomanda di rispettare le avvertenze a pagina PH6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PH721 (M_{2BMAX}=700 Nm)												
4,000	**PH721F0040 ME**	1900	4000	**≤24**	7,6	12,3	3	136	63	440	570	710
4,000	**PH721F0040 ME**	1900	4000	**>24≤32**	8,5	12,3	3	144	63	440	700	1150
4,000	**PH721F0040 ME**	1900	4000	**>32≤38**	9,4	12,3	3	144	63	440	700	1320
4,000	**PH721F0040 MEL**	1900	4000	**>38≤48**	21	16,1	3	160	63	440	700	1370
5,000	**PH721F0050 ME**	2200	5000	**≤24**	5,7	12,3	3	150	61	440	700	890
5,000	**PH721F0050 ME**	2200	5000	**>24≤32**	6,7	12,3	3	155	61	440	700	1400
5,000	**PH721F0050 ME**	2200	5000	**>32≤38**	7,5	12,3	3	155	61	440	700	1400
5,000	**PH721F0050 MEL**	2200	5000	**>38≤48**	19	16,1	3	167	61	440	700	1400
7,000	**PH721F0070 ME**	2500	5000	**≤24**	4,3	12,3	3	145	60	440	650	1240
7,000	**PH721F0070 ME**	2500	5000	**>24≤32**	6,4	12,3	3	145	60	440	650	1240
7,000	**PH721F0070 ME**	2500	5000	**>32≤38**	7,8	12,3	3	145	60	440	650	1240
7,000	**PH721F0070 MEL**	2500	5000	**>38≤48**	17	16,1	3	152	60	440	650	1240
10,00	**PH721F0100 ME**	3000	5000	**≤24**	3,6	12,3	3	113	58	300	500	1000
10,00	**PH721F0100 ME**	3000	5000	**>24≤32**	5,8	12,3	3	113	58	300	500	1000
10,00	**PH721F0100 ME**	3000	5000	**>32≤38**	7,1	12,3	3	113	58	300	500	1000
10,00	**PH721F0100 MEL**	3000	5000	**>38≤48**	17	16,1	3	115	58	300	500	1000
PH722 (M_{2BMAX}=700 Nm)												
16,00	**PH722F0160 ME**	3000	5000	**≤19**	3,1	14,6	3	132	62	440	700	1330
16,00	**PH722F0160 ME**	3000	5000	**>19≤24**	3,5	14,6	3	133	62	440	700	1370
16,00	**PH722F0160 ME**	3000	5000	**>24≤32**	3,8	14,6	3	133	62	440	700	1370
16,00	**PH722F0160 MEL**	3000	5000	**>32≤38**	7,5	16,3	3	134	62	440	700	1370
20,00	**PH722F0200 ME**	3000	5000	**≤19**	3,0	14,6	3	147	62	440	700	1400
20,00	**PH722F0200 ME**	3000	5000	**>19≤24**	3,3	14,6	3	147	62	440	700	1400
20,00	**PH722F0200 ME**	3000	5000	**>24≤32**	3,7	14,6	3	147	62	440	700	1400
20,00	**PH722F0200 MEL**	3000	5000	**>32≤38**	7,4	16,3	3	148	62	440	700	1400
25,00	**PH722F0250 ME**	3500	6000	**≤19**	2,6	14,6	3	147	60	440	700	1400
25,00	**PH722F0250 ME**	3500	6000	**>19≤24**	2,9	14,6	3	147	60	440	700	1400
25,00	**PH722F0250 ME**	3500	6000	**>24≤32**	3,2	14,6	3	147	60	440	700	1400
25,00	**PH722F0250 MEL**	3500	6000	**>32≤38**	7,0	16,3	3	148	60	440	700	1400
28,00	**PH722F0280 ME**	3700	6500	**≤19**	2,3	14,6	3	130	59	440	700	1370
28,00	**PH722F0280 ME**	3700	6500	**>19≤24**	2,6	14,6	3	130	59	440	700	1370
28,00	**PH722F0280 ME**	3700	6500	**>24≤32**	2,9	14,6	3	130	59	440	700	1370
28,00	**PH722F0280 MEL**	3700	6500	**>32≤38**	6,6	16,3	3	130	59	440	700	1370
35,00	**PH722F0350 ME**	3700	6500	**≤19**	2,2	14,6	3	145	59	440	700	1400
35,00	**PH722F0350 ME**	3700	6500	**>19≤24**	2,5	14,6	3	145	59	440	700	1400
35,00	**PH722F0350 ME**	3700	6500	**>24≤32**	2,8	14,6	3	145	59	440	700	1400
35,00	**PH722F0350 MEL**	3700	6500	**>32≤38**	6,6	16,3	3	145	59	440	700	1400
40,00	**PH722F0400 ME**	3700	6500	**≤19**	2,1	14,6	3	126	57	440	700	1370
40,00	**PH722F0400 ME**	3700	6500	**>19≤24**	2,4	14,6	3	126	57	440	700	1370
40,00	**PH722F0400 ME**	3700	6500	**>24≤32**	2,7	14,6	3	126	57	440	700	1370
40,00	**PH722F0400 MEL**	3700	6500	**>32≤38**	6,5	16,3	3	126	57	440	700	1370
50,00	**PH722F0500 ME**	3700	6500	**≤19**	2,1	14,6	3	142	57	440	700	1400
50,00	**PH722F0500 ME**	3700	6500	**>19≤24**	2,4	14,6	3	142	57	440	700	1400
50,00	**PH722F0500 ME**	3700	6500	**>24≤32**	2,7	14,6	3	142	57	440	700	1400
50,00	**PH722F0500 MEL**	3700	6500	**>32≤38**	6,4	16,3	3	142	57	440	700	1400
70,00	**PH722F0700 ME**	3700	6500	**≤19**	2,1	14,6	3	141	57	440	650	1240
70,00	**PH722F0700 ME**	3700	6500	**>19≤24**	2,3	14,6	3	141	57	440	650	1240
70,00	**PH722F0700 ME**	3700	6500	**>24≤32**	2,7	14,6	3	141	57	440	650	1240
70,00	**PH722F0700 MEL**	3700	6500	**>32≤38**	6,4	16,3	3	141	57	440	650	1240
100,0	**PH722F1000 ME**	3700	6500	**≤19**	2,0	14,6	3	112	57	300	500	1000
100,0	**PH722F1000 ME**	3700	6500	**>19≤24**	2,3	14,6	3	112	57	300	500	1000
100,0	**PH722F1000 ME**	3700	6500	**>24≤32**	2,6	14,6	3	112	57	300	500	1000
100,0	**PH722F1000 MEL**	3700	6500	**>32≤38**	6,4	16,3	3	112	57	300	500	1000

Planetary Gear Units **PH**
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Please take notice of the indications on page PH6! ***¡Por favor observe las indicaciones en la página PH6!*** **Si raccomanda di rispettare le avvertenze a pagina PH6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PH821 (M_{2BMAX}=1700 Nm)												
4,000	**PH821F0040 ME**	1500	3500	**≤32**	33	34,6	3	389	64	880	1270	1590
4,000	**PH821F0040 ME**	1500	3500	**>32≤38**	36	34,6	3	413	64	880	1600	2000
4,000	**PH821F0040 ME**	1500	3500	**>38≤48**	41	34,6	3	413	64	880	1600	2310
4,000	**PH821F0040 MEL**	1500	3500	**>48≤55**	73	39,2	3	553	64	880	1600	2310
4,000	**PH821F0040 MEL**	1500	3500	**>55≤60**	77	39,2	3	553	64	880	1600	2310
5,000	**PH821F0050 ME**	1700	4000	**≤32**	24	34,6	3	416	62	1100	1590	1990
5,000	**PH821F0050 ME**	1700	4000	**>32≤38**	27	34,6	3	433	62	1100	1700	2500
5,000	**PH821F0050 ME**	1700	4000	**>38≤48**	32	34,6	3	433	62	1100	1700	2870
5,000	**PH821F0050 MEL**	1700	4000	**>48≤55**	64	39,2	3	522	62	1100	1700	2870
5,000	**PH821F0050 MEL**	1700	4000	**>55≤60**	68	39,2	3	522	62	1100	1700	2870
7,000	**PH821F0070 ME**	2000	4000	**≤32**	17	34,6	3	411	61	1000	1600	2770
7,000	**PH821F0070 ME**	2000	4000	**>32≤38**	21	34,6	3	411	61	1000	1600	2770
7,000	**PH821F0070 ME**	2000	4000	**>38≤48**	23	34,6	3	411	61	1000	1600	2770
7,000	**PH821F0070 MEL**	2000	4000	**>48≤55**	55	39,2	3	458	61	1000	1600	2770
10,00	**PH821F0100 ME**	2500	4000	**≤32**	13	34,6	3	302	59	800	1200	2400
10,00	**PH821F0100 ME**	2500	4000	**>32≤38**	17	34,6	3	302	59	800	1200	2400
10,00	**PH821F0100 ME**	2500	4000	**>38≤48**	19	34,6	3	302	59	800	1200	2400
10,00	**PH821F0100 MEL**	2500	4000	**>48≤55**	51	39,2	3	313	59	800	1200	2400
PH822 (M_{2BMAX}=2000 Nm)												
16,00	**PH822F0160 ME**	2500	4500	**≤24**	7,5	39,8	3	428	63	1100	2000	2760
16,00	**PH822F0160 ME**	2500	4500	**>24≤32**	8,5	39,8	3	433	63	1100	2000	3150
16,00	**PH822F0160 ME**	2500	4500	**>32≤38**	11	39,8	3	433	63	1100	2000	3150
16,00	**PH822F0160 MEL**	2500	4500	**>38≤48**	21	43,6	3	441	63	1100	2000	3150
20,00	**PH822F0200 ME**	2500	4500	**≤24**	6,9	39,8	3	444	63	1250	2000	3200
20,00	**PH822F0200 ME**	2500	4500	**>24≤32**	7,9	39,8	3	447	63	1250	2000	3200
20,00	**PH822F0200 ME**	2500	4500	**>32≤38**	10	39,8	3	447	63	1250	2000	3200
20,00	**PH822F0200 MEL**	2500	4500	**>38≤48**	20	43,6	3	452	63	1250	2000	3200
25,00	**PH822F0250 ME**	3000	5500	**≤24**	5,4	39,8	3	473	61	1250	2000	3200
25,00	**PH822F0250 ME**	3000	5500	**>24≤32**	6,4	39,8	3	475	61	1250	2000	3200
25,00	**PH822F0250 ME**	3000	5500	**>32≤38**	9,0	39,8	3	475	61	1250	2000	3200
25,00	**PH822F0250 MEL**	3000	5500	**>38≤48**	19	43,6	3	479	61	1250	2000	3200
28,00	**PH822F0280 ME**	3300	6000	**≤24**	4,3	39,8	3	427	60	1100	2000	3150
28,00	**PH822F0280 ME**	3300	6000	**>24≤32**	6,2	39,8	3	427	60	1100	2000	3150
28,00	**PH822F0280 ME**	3300	6000	**>32≤38**	6,2	39,8	3	427	60	1100	2000	3150
28,00	**PH822F0280 MEL**	3300	6000	**>38≤48**	17	43,6	3	431	60	1100	2000	3150
35,00	**PH822F0350 ME**	3300	6000	**≤24**	4,2	39,8	3	443	60	1250	2000	3200
35,00	**PH822F0350 ME**	3300	6000	**>24≤32**	6,0	39,8	3	443	60	1250	2000	3200
35,00	**PH822F0350 ME**	3300	6000	**>32≤38**	6,0	39,8	3	443	60	1250	2000	3200
35,00	**PH822F0350 MEL**	3300	6000	**>38≤48**	17	43,6	3	446	60	1250	2000	3200
40,00	**PH822F0400 ME**	3300	6000	**≤24**	3,6	39,8	3	414	58	1100	1920	3150
40,00	**PH822F0400 ME**	3300	6000	**>24≤32**	5,5	39,8	3	414	58	1100	1920	3150
40,00	**PH822F0400 ME**	3300	6000	**>32≤38**	5,5	39,8	3	414	58	1100	1920	3150
40,00	**PH822F0400 MEL**	3300	6000	**>38≤48**	17	43,6	3	416	58	1100	1920	3150
50,00	**PH822F0500 ME**	3300	6000	**≤24**	3,5	39,8	3	434	58	1250	2000	3200
50,00	**PH822F0500 ME**	3300	6000	**>24≤32**	5,4	39,8	3	434	58	1250	2000	3200
50,00	**PH822F0500 ME**	3300	6000	**>32≤38**	5,4	39,8	3	434	58	1250	2000	3200
50,00	**PH822F0500 MEL**	3300	6000	**>38≤48**	17	43,6	3	435	58	1250	2000	3200
70,00	**PH822F0700 ME**	3300	6000	**≤24**	3,5	39,8	3	420	58	1000	1600	2770
70,00	**PH822F0700 ME**	3300	6000	**>24≤32**	5,3	39,8	3	420	58	1000	1600	2770
70,00	**PH822F0700 ME**	3300	6000	**>32≤38**	5,3	39,8	3	420	58	1000	1600	2770
70,00	**PH822F0700 MEL**	3300	6000	**>38≤48**	17	43,6	3	420	58	1000	1600	2770
100,0	**PH822F1000 ME**	3300	6000	**≤24**	3,4	39,8	3	304	58	800	1200	2400
100,0	**PH822F1000 ME**	3300	6000	**>24≤32**	5,3	39,8	3	304	58	800	1200	2400
100,0	**PH822F1000 ME**	3300	6000	**>32≤38**	5,3	39,8	3	304	58	800	1200	2400
100,0	**PH822F1000 MEL**	3300	6000	**>38≤48**	16	43,6	3	304	58	800	1200	2400

Planetary Gear Units **PH**
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Please take notice of the indications on page PH6! ***¡Por favor observe las indicaciones en la página PH6!*** **Si raccomanda di rispettare le avvertenze a pagina PH6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PH932 (M_{2BMAX}=5000 Nm)												
12,00	**PH932F0120 ME**	1800	3000	**≤32**	60	70,6	3	1091	66	3000	3700	4630
12,00	**PH932F0120 ME**	1800	3000	**>32≤38**	63	70,6	3	1110	66	3000	4610	5810
12,00	**PH932F0120 ME**	1800	3000	**>38≤48**	67	70,6	3	1110	66	3000	4610	6740
12,00	**PH932F0120 MEL**	1800	3000	**>48≤55**	99	75,2	3	1201	66	3000	4610	6740
12,00	**PH932F0120 MEL**	1800	3000	**>55≤60**	103	75,2	3	1201	66	3000	4610	6740
16,00	**PH932F0160 ME**	2200	3500	**≤32**	29	70,6	3	1127	64	3000	4930	6170
16,00	**PH932F0160 ME**	2200	3500	**>32≤38**	33	70,6	3	1139	64	3000	5000	7750
16,00	**PH932F0160 ME**	2200	3500	**>38≤48**	37	70,6	3	1139	64	3000	5000	8960
16,00	**PH932F0160 MEL**	2200	3500	**>48≤55**	69	75,2	3	1191	64	3000	5000	8960
16,00	**PH932F0160 MEL**	2200	3500	**>55≤60**	73	75,2	3	1191	64	3000	5000	8960
18,00	**PH932F0180 ME**	1800	3000	**≤32**	53	70,6	3	1075	66	3000	4500	6940
18,00	**PH932F0180 ME**	1800	3000	**>32≤38**	57	70,6	3	1084	66	3000	4500	8720
18,00	**PH932F0180 ME**	1800	3000	**>38≤48**	61	70,6	3	1084	66	3000	4500	9000
18,00	**PH932F0180 MEL**	1800	3000	**>48≤55**	93	75,2	3	1120	66	3000	4500	9000
18,00	**PH932F0180 MEL**	1800	3000	**>55≤60**	97	75,2	3	1120	66	3000	4500	9000
20,00	**PH932F0200 ME**	2500	4000	**≤32**	22	70,6	3	1134	62	3000	5000	7710
20,00	**PH932F0200 ME**	2500	4000	**>32≤38**	26	70,6	3	1142	62	3000	5000	9690
20,00	**PH932F0200 ME**	2500	4000	**>38≤48**	29	70,6	3	1142	62	3000	5000	10000
20,00	**PH932F0200 MEL**	2500	4000	**>48≤55**	61	75,2	3	1175	62	3000	5000	10000
20,00	**PH932F0200 MEL**	2500	4000	**>55≤60**	66	75,2	3	1175	62	3000	5000	10000
24,00	**PH932F0240 ME**	2200	3500	**≤32**	26	70,6	3	1091	64	3000	4500	9000
24,00	**PH932F0240 ME**	2200	3500	**>32≤38**	30	70,6	3	1096	64	3000	4500	9000
24,00	**PH932F0240 ME**	2200	3500	**>38≤48**	34	70,6	3	1096	64	3000	4500	9000
24,00	**PH932F0240 MEL**	2200	3500	**>48≤55**	65	75,2	3	1116	64	3000	4500	9000
24,00	**PH932F0240 MEL**	2200	3500	**>55≤60**	70	75,2	3	1116	64	3000	4500	9000
28,00	**PH932F0280 ME**	2800	4500	**≤32**	16	70,6	3	1121	61	3000	5000	10000
28,00	**PH932F0280 ME**	2800	4500	**>32≤38**	18	70,6	3	1121	61	3000	5000	10000
28,00	**PH932F0280 ME**	2800	4500	**>38≤48**	21	70,6	3	1121	61	3000	5000	10000
28,00	**PH932F0280 MEL**	2800	4500	**>48≤55**	54	75,2	3	1140	61	3000	5000	10000
30,00	**PH932F0300 ME**	2500	4000	**≤32**	20	70,6	3	1094	62	3000	4500	9000
30,00	**PH932F0300 ME**	2500	4000	**>32≤38**	24	70,6	3	1097	62	3000	4500	9000
30,00	**PH932F0300 ME**	2500	4000	**>38≤48**	27	70,6	3	1097	62	3000	4500	9000
30,00	**PH932F0300 MEL**	2500	4000	**>48≤55**	59	75,2	3	1110	62	3000	4500	9000
30,00	**PH932F0300 MEL**	2500	4000	**>55≤60**	64	75,2	3	1110	62	3000	4500	9000
32,00	**PH932F0320 ME**	2800	4500	**≤32**	14	70,6	3	1093	60	3000	4610	9220
32,00	**PH932F0320 ME**	2800	4500	**>32≤38**	17	70,6	3	1093	60	3000	4610	9220
32,00	**PH932F0320 ME**	2800	4500	**>38≤48**	20	70,6	3	1093	60	3000	4610	9220
32,00	**PH932F0320 MEL**	2800	4500	**>48≤55**	53	75,2	3	1107	60	3000	4610	9220
40,00	**PH932F0400 ME**	2800	4500	**≤32**	12	70,6	3	1046	59	2690	4610	9220
40,00	**PH932F0400 ME**	2800	4500	**>32≤38**	15	70,6	3	1046	59	2690	4610	9220
40,00	**PH932F0400 ME**	2800	4500	**>38≤48**	18	70,6	3	1046	59	2690	4610	9220
40,00	**PH932F0400 MEL**	2800	4500	**>48≤55**	50	75,2	3	1054	59	2690	4610	9220
42,00	**PH932F0420 ME**	2800	4500	**≤32**	15	70,6	3	1088	61	3000	4500	9000
42,00	**PH932F0420 ME**	2800	4500	**>32≤38**	17	70,6	3	1088	61	3000	4500	9000
42,00	**PH932F0420 ME**	2800	4500	**>38≤48**	20	70,6	3	1088	61	3000	4500	9000
42,00	**PH932F0420 MEL**	2800	4500	**>48≤55**	53	75,2	3	1096	61	3000	4500	9000
48,00	**PH932F0480 ME**	2800	4500	**≤32**	14	70,6	3	1076	60	3000	4500	9000
48,00	**PH932F0480 ME**	2800	4500	**>32≤38**	16	70,6	3	1076	60	3000	4500	9000
48,00	**PH932F0480 ME**	2800	4500	**>38≤48**	19	70,6	3	1076	60	3000	4500	9000
48,00	**PH932F0480 MEL**	2800	4500	**>48≤55**	52	75,2	3	1082	60	3000	4500	9000
60,00	**PH932F0600 ME**	2800	4500	**≤32**	12	70,6	3	1055	59	3000	4500	9000
60,00	**PH932F0600 ME**	2800	4500	**>32≤38**	14	70,6	3	1055	59	3000	4500	9000
60,00	**PH932F0600 ME**	2800	4500	**>38≤48**	17	70,6	3	1055	59	3000	4500	9000
60,00	**PH932F0600 MEL**	2800	4500	**>48≤55**	50	75,2	3	1059	59	3000	4500	9000

Higher ratios see PHV gear units. ***Altas relaciónes de reducción ver reductores PHV.*** **Rapporti di trasmissione elevati vedere riduttori PHV.**

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Please take notice of the indications on page PH6! ***¡Por favor observe las indicaciones en la página PH6!*** **Si raccomanda di rispettare le avvertenze a pagina PH6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PH1032 (M_{2BMAX}=7500 Nm)												
18,00	**PH1032F0180 ME**	1800	3000	**≤32**	57	86,0	3	1636	66	4610	5550	6940
18,00	**PH1032F0180 ME**	1800	3000	**>32≤38**	61	86,0	3	1656	66	4610	6910	8720
18,00	**PH1032F0180 ME**	1800	3000	**>38≤48**	64	86,0	3	1656	66	4610	6910	10120
18,00	**PH1032F0180 MEL**	1800	3000	**>48≤55**	96	90,6	3	1743	66	4610	6910	10120
18,00	**PH1032F0180 MEL**	1800	3000	**>55≤60**	101	90,6	3	1743	66	4610	6910	10120
24,00	**PH1032F0240 ME**	2200	3500	**≤32**	28	86,0	3	1672	64	4610	7400	9250
24,00	**PH1032F0240 ME**	2200	3500	**>32≤38**	32	86,0	3	1684	64	4610	7500	11630
24,00	**PH1032F0240 ME**	2200	3500	**>38≤48**	36	86,0	3	1684	64	4610	7500	13430
24,00	**PH1032F0240 MEL**	2200	3500	**>48≤55**	67	90,6	3	1733	64	4610	7500	13430
24,00	**PH1032F0240 MEL**	2200	3500	**>55≤60**	72	90,6	3	1733	64	4610	7500	13430
30,00	**PH1032F0300 ME**	2500	4000	**≤32**	21	86,0	3	1679	62	5000	7500	11570
30,00	**PH1032F0300 ME**	2500	4000	**>32≤38**	25	86,0	3	1686	62	5000	7500	14540
30,00	**PH1032F0300 ME**	2500	4000	**>38≤48**	28	86,0	3	1686	62	5000	7500	15000
30,00	**PH1032F0300 MEL**	2500	4000	**>48≤55**	60	90,6	3	1718	62	5000	7500	15000
30,00	**PH1032F0300 MEL**	2500	4000	**>55≤60**	65	90,6	3	1718	62	5000	7500	15000
42,00	**PH1032F0420 ME**	2800	4500	**≤32**	15	86,0	3	1666	61	5000	7500	15000
42,00	**PH1032F0420 ME**	2800	4500	**>32≤38**	17	86,0	3	1666	61	5000	7500	15000
42,00	**PH1032F0420 ME**	2800	4500	**>38≤48**	21	86,0	3	1666	61	5000	7500	15000
42,00	**PH1032F0420 MEL**	2800	4500	**>48≤55**	53	90,6	3	1685	61	5000	7500	15000
48,00	**PH1032F0480 ME**	2800	4500	**≤32**	14	86,0	3	1638	60	4610	6910	13820
48,00	**PH1032F0480 ME**	2800	4500	**>32≤38**	16	86,0	3	1638	60	4610	6910	13820
48,00	**PH1032F0480 ME**	2800	4500	**>38≤48**	20	86,0	3	1638	60	4610	6910	13820
48,00	**PH1032F0480 MEL**	2800	4500	**>48≤55**	52	90,6	3	1652	60	4610	6910	13820
60,00	**PH1032F0600 ME**	2800	4500	**≤32**	12	86,0	3	1591	59	4030	6910	13820
60,00	**PH1032F0600 ME**	2800	4500	**>32≤38**	14	86,0	3	1591	59	4030	6910	13820
60,00	**PH1032F0600 ME**	2800	4500	**>38≤48**	18	86,0	3	1591	59	4030	6910	13820
60,00	**PH1032F0600 MEL**	2800	4500	**>48≤55**	50	90,6	3	1599	59	4030	6910	13820

Higher ratios see PHV gear units. ***Altas relaciónes de reducción ver reductores PHV.*** **Rapporti di trasmissione elevati vedere riduttori PHV.**

Planetengetriebe **PHV**
*Planetary Gear Units **PHV***
Réducteurs planétaires **PHV**

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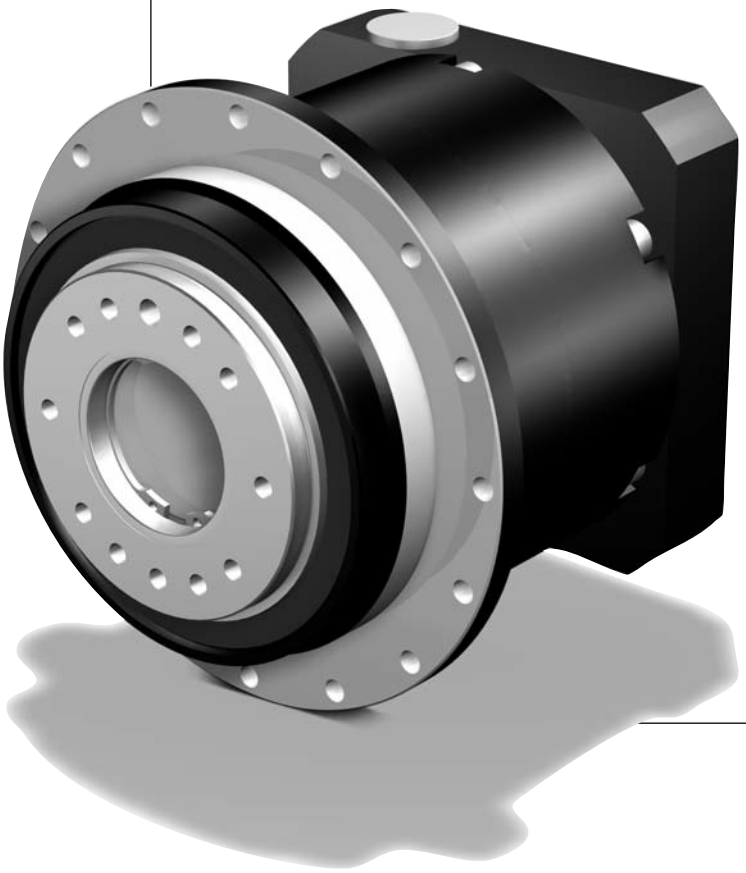
Please take notice of the indications on page PH6! ***¡Por favor observe las indicaciones en la página PH6!*** **Si raccomanda di rispettare le avvertenze a pagina PH6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHV933 (M_{2BMAX}=4250 Nm)												
61,00	**PHV933_0610 ME**	2500	4500	**>24≤32**	9,5	62,8	3	845	62	2500	4250	9000
61,00	**PHV933_0610 ME**	2500	4500	**>32≤38**	10	62,8	3	845	62	2500	4250	9000
61,00	**PHV933_0610 MEL**	2500	4500	**>38≤48**	22	66,6	3	848	62	2500	4250	9000
91,00	**PHV933_0910 ME**	2500	4500	**≤24**	5,2	62,8	3	836	62	2500	4250	9000
91,00	**PHV933_0910 ME**	2500	4500	**>24≤32**	7,4	62,8	3	836	62	2500	4250	9000
91,00	**PHV933_0910 ME**	2500	4500	**>32≤38**	8,7	62,8	3	836	62	2500	4250	9000
91,00	**PHV933_0910 MEL**	2500	4500	**>38≤48**	18	66,6	3	837	62	2500	4250	9000
121,0	**PHV933_1210 ME**	2500	4500	**≤24**	4,2	62,8	3	804	62	2500	4250	9000
121,0	**PHV933_1210 ME**	2500	4500	**>24≤32**	6,4	62,8	3	804	62	2500	4250	9000
121,0	**PHV933_1210 ME**	2500	4500	**>32≤38**	7,7	62,8	3	804	62	2500	4250	9000
121,0	**PHV933_1210 MEL**	2500	4500	**>38≤48**	17	66,6	3	804	62	2500	4250	9000
PHV1033 (M_{2BMAX}=7500 Nm)												
61,00	**PHV1033_0610 ME**	2500	4500	**>32≤38**	19	90,0	3	1364	63	4000	7500	15000
61,00	**PHV1033_0610 ME**	2500	4500	**>38≤48**	24	90,0	3	1364	63	4000	7500	15000
61,00	**PHV1033_0610 MEL**	2500	4500	**>48≤55**	55	94,6	3	1368	63	4000	7500	15000
61,00	**PHV1033_0610 MEL**	2500	4500	**>55≤60**	60	94,6	3	1368	63	4000	7500	15000
91,00	**PHV1033_0910 ME**	2500	4500	**≤32**	13	90,0	3	1339	63	4000	7500	15000
91,00	**PHV1033_0910 ME**	2500	4500	**>32≤38**	17	90,0	3	1339	63	4000	7500	15000
91,00	**PHV1033_0910 ME**	2500	4500	**>38≤48**	19	90,0	3	1339	63	4000	7500	15000
91,00	**PHV1033_0910 MEL**	2500	4500	**>48≤55**	51	94,6	3	1341	63	4000	7500	15000



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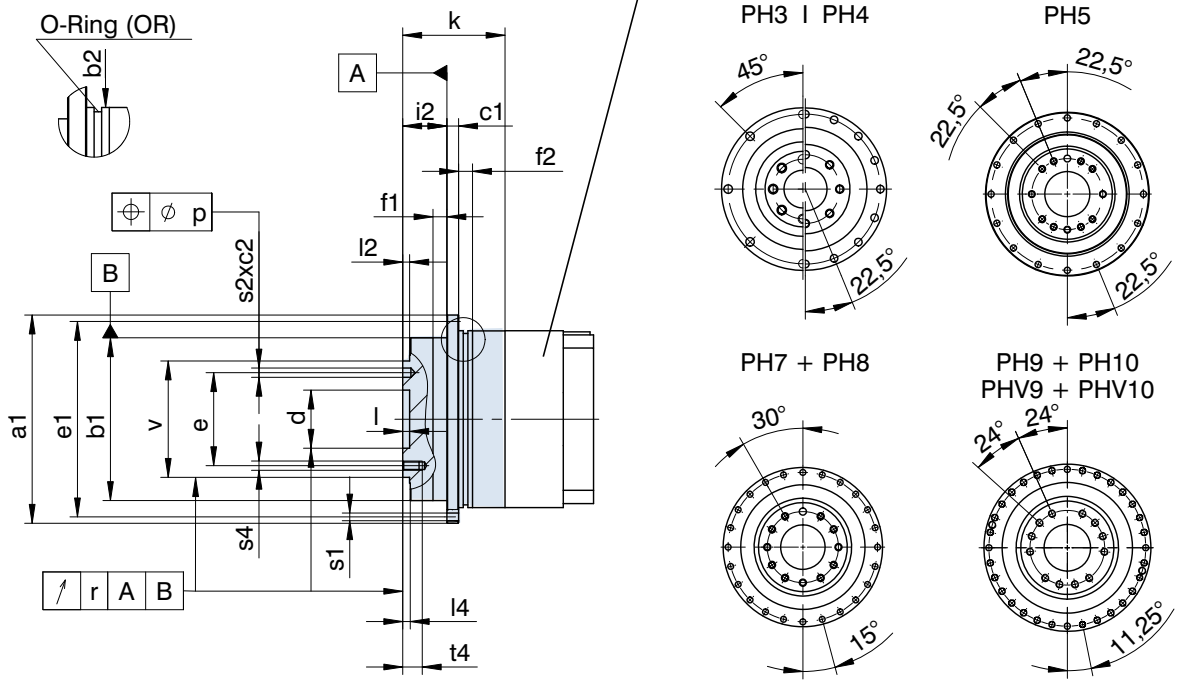
PH3_ME - PH10_ME
PHV9_ME - PHV10_ME

Motor connection from page PH17
Conexión de motor a partir de página PH17
Accopiamento motore da pagina PH17



Typ	øa1	øb1	øb2	c1	c2	ød	øe	øe1	f1	f2	i2
PH321	86h7	64h7	70h7	4	3	20,0H6	31,5	79	7	8	19,5
PH322	86h7	64h7	70h7	4	3	20,0H6	31,5	79	7	8	19,5
PH421	118h7	90h7	95h7	7	7	31,5H6	50,0	109	10	10	30,0
PH422	118h7	90h7	95h7	7	7	31,5H6	50,0	109	10	10	30,0
PH521	145h7	110h7	120h7	8	7	40,0H6	63,0	135	10	12	29,0
PH522	145h7	110h7	120h7	8	7	40,0H6	63,0	135	10	12	29,0
PH721	179h7	140h7	152h7	10	7	50,0H6	80,0	168	12	12	38,0
PH722	179h7	140h7	152h7	10	7	50,0H6	80,0	168	12	12	38,0
PH821	247h7	200h7	212h7	12	10	80,0H6	125,0	233	15	15	50,0
PH822	247h7	200h7	212h7	12	10	80,0H6	125,0	233	15	15	50,0
PH932	300	255h7	255h7	18	-	90,0H6	140,0	280	20	33	66,0
PHV933	300	255h7	255h7	18	-	90,0H6	140,0	280	20	33	66,0
PH1032	330	285h7	285h7	20	-	95,0H6	160,0	310	20	20	75,0
PHV1033	330	285h7	285h7	20	-	95,0H6	160,0	310	20	20	75,0

Typ	k	l	l2	l4	OR	øp	r	øs1	øs2	s4	t4	øv
PH321	50,0	4	3	3,5	65x2	0,02	0,020	4,5	5H7	M5	7	40h7
PH322	87,0	4	3	3,5	65x2	0,02	0,020	4,5	5H7	M5	7	40h7
PH421	66,0	6	6	6,5	90x3	0,02	0,020	5,5	6H7	M6	11	63h7
PH422	113,0	6	6	6,5	90x3	0,02	0,020	5,5	6H7	M6	11	63h7
PH521	70,0	6	6	6,5	110x3	0,02	0,020	5,5	6H7	M6	11	80h7
PH522	124,5	6	6	6,5	110x3	0,02	0,020	5,5	6H7	M6	11	80h7
PH721	88,0	6	6	6,5	145x3	0,02	0,025	6,6	8H7	M8	14	100h7
PH722	150,0	6	6	6,5	145x3	0,02	0,025	6,6	8H7	M8	14	100h7
PH821	126,0	8	8	8,5	200x5	0,02	0,030	9,0	10H7	M10	18	160h7
PH822	201,0	8	8	8,5	200x5	0,02	0,030	9,0	10H7	M10	18	160h7
PH932	290,5	12	11	12,0	238x5	-	0,030	13,5	-	M16	24	180h7
PHV933	219,5	12	11	12,0	238x5	-	0,030	13,5	-	M16	24	180h7
PH1032	307,0	10	15	15,0	270x6	-	0,040	13,5	-	M20	30	200h7
PHV1033	250,0	10	15	15,0	270x6	-	0,040	13,5	-	M20	30	200h7

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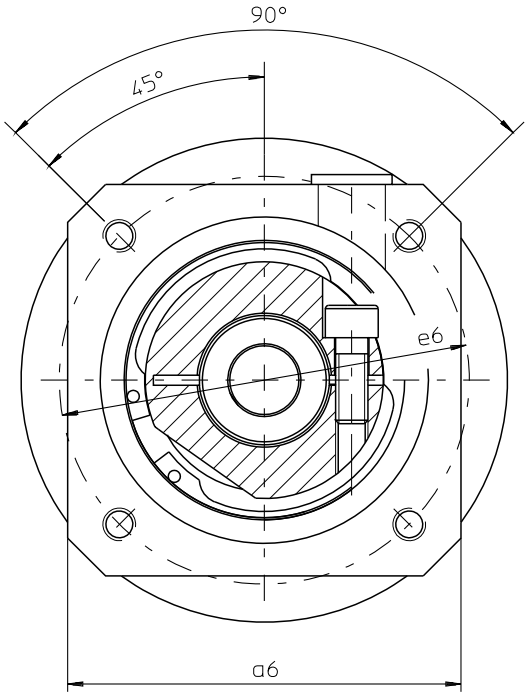
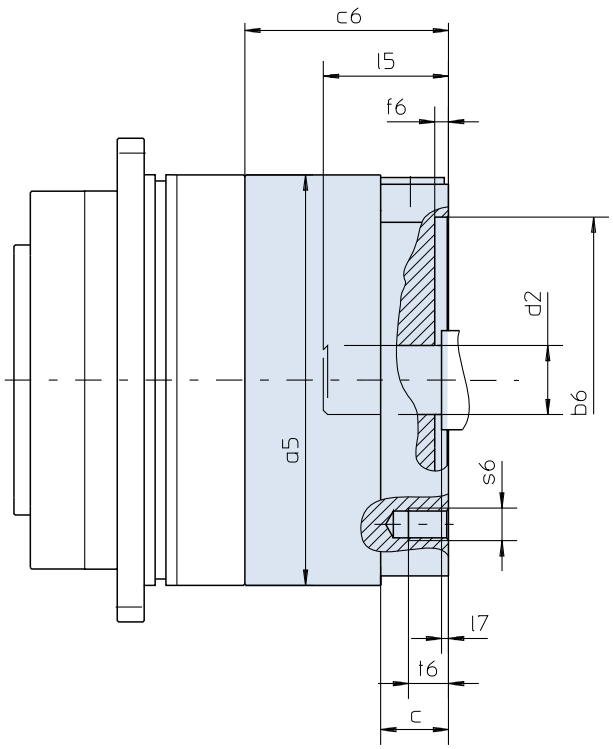
PH321_ME - PH821_ME
PHV933_ME - PHV1033_ME





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PH321	40,0H7	63	19	40	70	75	22	52,5	3,5	3,0	M5	11
PH321	50,0H7	70	19	40	70	75	22	52,5	3,5	3,0	M4	9
PH321	50,0H7	95	19	40	70	80	22	52,5	3,5	3,0	M6	13
PH321	60,0H7	75	19	40	70	75	22	52,5	3,5	3,0	M5	11
PH321	60,0H7	90	19	40	70	75	22	52,5	3,5	3,0	M5	11
PH321	70,0H7	90	19	40	70	80	22	52,5	3,5	3,0	M5	11
PH321	80,0H7	100	19	40	70	90	22	52,5	3,5	3,0	M6	13
PH321	95,0H7	115	19	40	70	100	22	52,5	4,0	3,0	M8	22
PH321	95,0H7	130	19	40	70	115	22	52,5	4,0	3,0	M8	18
PH421	50,0H7	95	24	42	95	100	21	54,0	2,5	3,0	M6	13
PH421	80,0H7	100	24	42	95	100	21	54,0	4,0	3,0	M6	13
PH421	95,0H7	115	24	51	95	100	30	63,0	4,0	12,0	M8	16
PH421	95,0H7	115	24	42	95	100	21	54,0	4,0	3,0	M8	21
PH421	95,0H7	130	24	42	95	115	21	54,0	4,0	3,0	M8	21
PH421	110,0H7	130	24	51	95	115	30	63,0	4,0	12,0	M8	16
PH421	110,0H7	145	24	59	95	130	38	71,0	7,0	20,0	M8	16
PH421	130,0H7	165	24	51	95	140	30	63,0	5,0	12,0	M10	20
PH521	80,0H7	100	32	50	120	115	24	64,0	4,0	3,5	M6	13
PH521	95,0H7	115	32	50	120	115	24	64,0	4,0	3,5	M8	16
PH521	95,0H7	130	32	50	120	115	24	64,0	4,0	3,5	M8	16
PH521	110,0H7	130	32	50	120	115	24	64,0	4,0	3,5	M8	16
PH521	110,0H7	145	32	63	120	130	37	77,0	7,0	16,5	M8	14
PH521	110,0H7	145	32	50	120	140	42	82,0	7,0	3,5	M8	16
PH521	110,0H7	165	32	50	120	140	24	64,0	5,0	3,5	M10	24
PH521	130,0H7	165	32	58	120	140	32	72,0	5,0	11,5	M10	20
PH521	130,0H7	165	32	50	120	140	24	64,0	5,0	3,5	M10	24
PH721/PHV933	110,0H7	130	38	61	152	145	26	76,0	5,0	4,5	M8	14
PH721/PHV933	110,0H7	145	38	72	152	145	37	87,0	5,0	15,5	M8	16
PH721/PHV933	110,0H7	165	38	61	152	145	26	76,0	5,0	4,5	M10	26
PH721/PHV933	114,3H7	200	38	80	152	180	45	95,0	5,0	23,5	M12	25
PH721/PHV933	130,0H7	165	38	61	152	145	26	76,0	5,0	4,5	M10	26
PH721/PHV933	130,0H7	215	38	61	152	190	26	76,0	5,0	4,5	M12	26
PH721/PHV933	180,0H7	215	38	80	152	190	45	95,0	5,0	23,5	M12	25
PH821/PHV1033	114,3H7	200	48	80	212	190	34	91,0	4,0	4,0	M12	34
PH821/PHV1033	130,0H7	165	48	80	212	190	34	91,0	5,0	4,0	M10	18
PH821/PHV1033	130,0H7	215	48	80	212	190	34	91,0	5,0	4,0	M12	34
PH821/PHV1033	180,0H7	215	48	81	212	190	35	92,0	5,0	5,0	M12	35
PH821/PHV1033	250,0H7	300	48	84	212	260	38	95,0	6,0	8,0	M16	38

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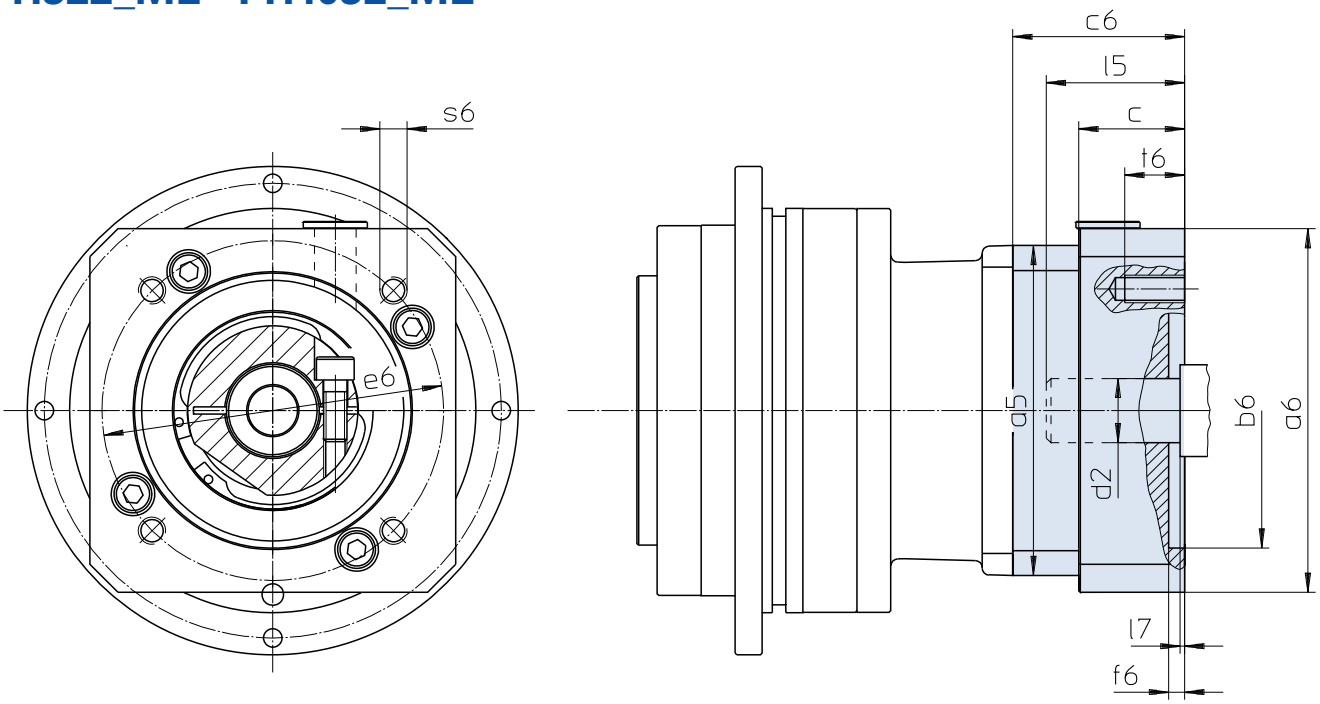
PH322_ME - PH1032_ME



Further motor connection dimensions on request.

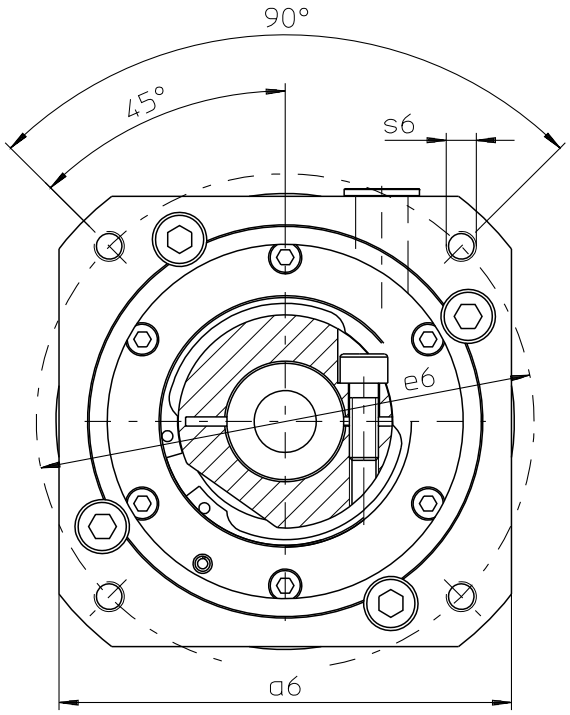
Otras medidas de conexión a consultar.

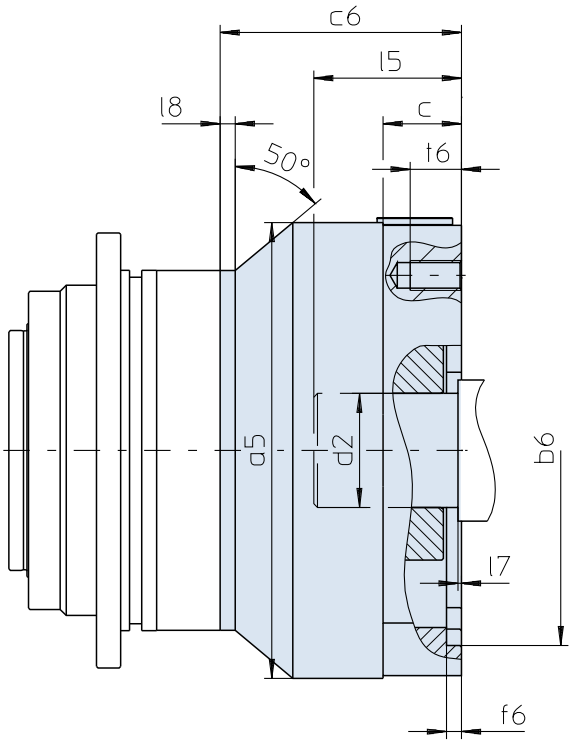
Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PH322	40,0H7	63	14	30	55	55	-	32,0	3,5	3,0	M4	6
PH322	40,0H7	63	14	30	55	55	-	32,0	3,5	3,0	M5	11
PH322	50,0H7	70	14	30	60	60	-	32,0	3,5	3,0	M4	9
PH322	50,0H7	95	14	30	55	90	15	32,0	3,5	3,0	M6	15
PH322	60,0H7	75	14	30	75	75	-	32,0	3,5	3,0	M5	11
PH422	40,0H7	63	19	40	72	75	18	51,5	3,0	3,0	M5	11
PH422	50,0H7	70	19	40	72	75	18	51,5	3,0	3,0	M4	9
PH422	50,0H7	95	19	40	72	80	18	51,5	3,0	3,0	M6	13
PH422	60,0H7	75	19	40	75	72	-	51,5	3,5	3,0	M5	11
PH422	60,0H7	90	19	40	72	75	18	51,5	3,5	3,0	M5	9
PH422	70,0H7	90	19	40	72	80	18	51,5	3,5	3,0	M5	9
PH422	80,0H7	100	19	40	90	90	-	51,5	3,5	3,0	M6	13
PH422	95,0H7	115	19	40	72	100	18	51,5	4,0	3,0	M8	18
PH422	95,0H7	130	19	40	72	115	18	51,5	4,0	3,0	M8	18
PH522	50,0H7	70	24	42	98	100	21	56,0	4,0	3,0	M4	10
PH522	50,0H7	95	24	42	98	100	21	56,0	2,5	3,0	M6	13
PH522	60,0H7	75	24	42	98	100	21	56,0	3,5	3,0	M5	9
PH522	60,0H7	75	24	48	100	100	28	56,0	3,5	3,0	M5	11
PH522	80,0H7	100	24	42	100	98	-	56,0	4,0	3,0	M6	13
PH522	95,0H7	115	24	42	100	98	-	56,0	4,0	3,0	M8	16
PH522	95,0H7	115	24	51	98	100	30	65,0	4,0	12,0	M8	16
PH522	95,0H7	130	24	42	98	115	21	56,0	4,0	3,0	M8	16
PH522	95,0H7	130	24	51	98	115	30	65,0	4,0	12,0	M8	16
PH522	110,0H7	130	24	51	98	115	30	65,0	4,0	12,0	M8	16
PH522	110,0H7	145	24	59	98	130	38	73,0	7,0	20,0	M8	16
PH522	130,0H7	165	24	51	98	140	30	65,0	7,0	12,0	M10	20
PH722	80,0H7	100	32	50	115	120	24	64,0	4,0	3,5	M6	13
PH722	95,0H7	115	32	50	115	115	-	64,0	4,0	3,5	M8	16
PH722	95,0H7	130	32	50	115	115	-	64,0	4,0	3,5	M8	16
PH722	110,0H7	130	32	50	115	115	-	64,0	4,0	3,5	M8	16
PH722	110,0H7	145	32	58	115	140	32	72,0	6,5	11,5	M8	16
PH722	110,0H7	145	32	68	115	140	42	82,0	7,0	21,5	M8	16
PH722	110,0H7	165	32	50	115	140	24	64,0	5,0	3,5	M10	24
PH722	130,0H7	165	32	58	115	140	32	72,0	5,0	11,5	M10	20
PH822	110,0H7	130	38	61	145	145	26	76,0	5,0	4,5	M8	14
PH822	110,0H7	145	38	72	145	145	37	87,0	5,0	15,5	M8	16
PH822	110,0H7	165	38	61	145	145	26	76,0	5,0	4,5	M10	26
PH822	114,3H7	200	38	80	145	180	45	95,0	5,0	23,5	M12	25
PH822	130,0H7	165	38	61	145	145	45	-	5,0	4,5	M10	18
PH822	130,0H7	165	38	61	145	145	-	76,0	5,0	4,5	M10	20
PH822	130,0H7	215	38	61	145	190	26	76,0	5,0	4,5	M12	26
PH822	180,0H7	215	38	61	145	190	26	76,0	5,0	4,5	M12	26
PH822	180,0H7	215	38	80	145	190	45	95,0	5,0	23,5	M12	25
PH932/PH1032	110,0H7	165	48	81	190	190	34	93,0	5,0	4,5	M10	18
PH932/PH1032	114,3H7	200	48	81	190	190	34	93,0	4,0	4,5	M12	34
PH932/PH1032	130,0H7	165	48	81	190	190	34	93,0	5,0	4,5	M10	18
PH932/PH1032	130,0H7	215	48	81	190	190	34	93,0	5,0	4,5	M12	34
PH932/PH1032	180,0H7	215	48	82	190	190	35	94,0	5,0	5,5	M12	35
PH932/PH1032	180,0H7	215	48	81	190	190	-	93,0	5,0	4,5	M12	25
PH932/PH1032	250,0H7	300	48	85	190	260	38	97,0	6,0	8,5	M16	38

STÖBER

PH321_MEL - PH821_MEL
PHV933_MEL - PHV1033_MEL





Further motor connection dimensions on request.

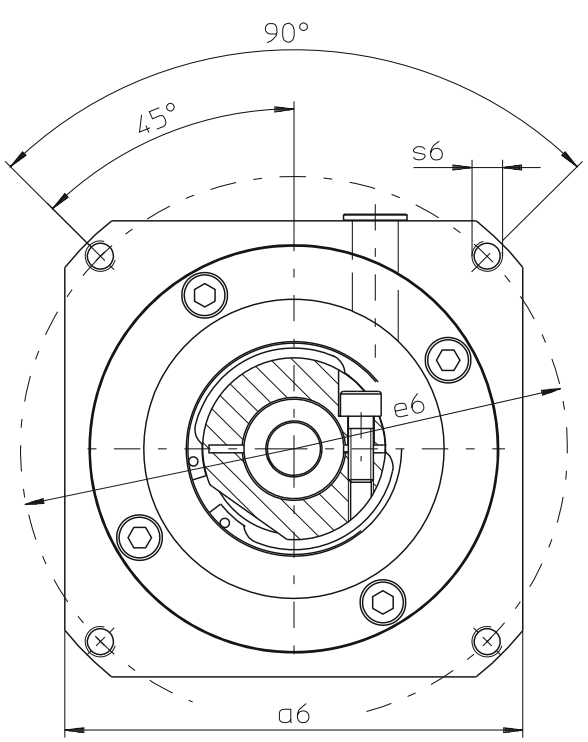
Otras medidas de conexión a consultar.

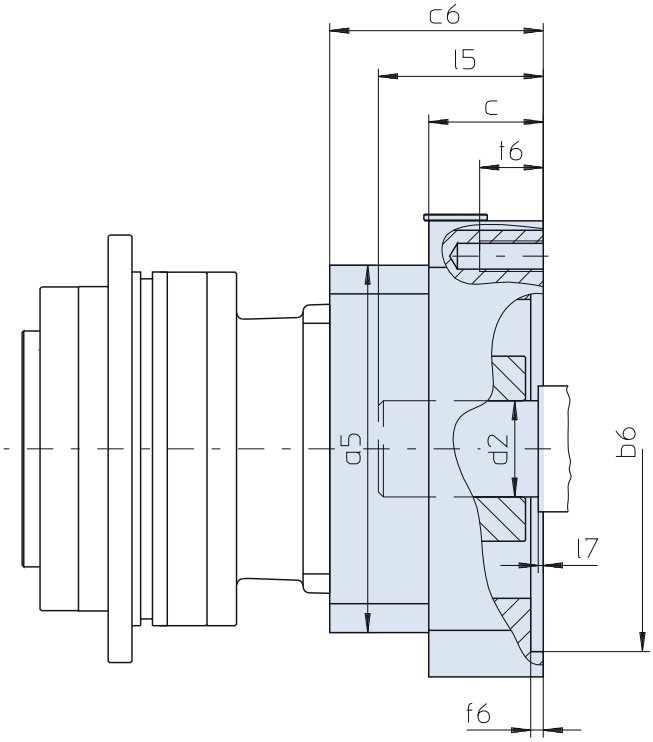
Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	l8	s6	t6
PH321	95,0H7	115	24	51	95	100	30	67,8	4,0	12,0	5	M8	16
PH321	95,0H7	115	24	42	95	100	21	58,8	4,0	3,0	5	M8	21
PH321	95,0H7	130	24	42	95	115	21	58,8	4,0	3,0	5	M8	21
PH321	110,0H7	130	24	51	95	115	30	67,8	4,0	12,0	5	M8	16
PH321	110,0H7	145	24	59	95	130	38	75,8	7,0	20,0	5	M8	16
PH321	130,0H7	165	24	51	95	140	30	67,8	5,0	12,0	5	M10	20
PH421	80,0H7	100	32	50	114	115	24	65,5	4,0	3,5	-	M6	13
PH421	110,0H7	145	32	63	114	130	37	78,5	7,0	16,5	5	M8	14
PH421	110,0H7	145	32	50	114	140	42	83,5	7,0	3,5	5	M8	16
PH421	130,0H7	165	32	58	114	140	32	73,5	5,0	11,5	5	M10	20
PH521	110,0H7	165	38	61	152	145	26	80,0	5,0	4,5	-	M10	26
PH521	110,0H7	130	38	61	152	145	26	80,0	5,0	4,5	5	M8	14
PH521	114,3H7	200	38	80	152	180	45	99,0	5,0	23,5	5	M12	25
PH521	130,0H7	215	38	61	152	190	26	80,0	5,0	4,5	5	M12	26
PH521	130,0H7	165	38	61	152	145	26	80,0	5,0	4,5	5	M10	26
PH521	180,0H7	215	38	80	152	190	45	99,0	5,0	23,5	5	M12	25
PH721/PHV933	180,0H7	215	48	81	208	190	35	101,5	5,0	5,0	3	M12	35
PH721/PHV933	250,0H7	300	48	84	208	260	38	104,5	6,0	8,0	3	M16	38
PH821/PHV1033	250,0H7	300	60	85	225	260	43	108,0	6,0	5,0	-	M16	32
PH821/PHV1033	300,0H7	350	60	111	225	314	69	134,0	6,0	31,0	-	M16	34

STÖBER

PH322_MEL - PH1032_MEL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PH322	60,0H7	75	19	40	75	75	18	51,5	3,5	3,0	M5	11
PH322	60,0H7	90	19	40	75	75	18	51,5	3,5	3,0	M5	9
PH322	70,0H7	90	19	40	75	80	18	51,5	3,5	3,0	M5	9
PH322	80,0H7	100	19	40	75	90	18	51,5	3,5	3,0	M6	13
PH322	95,0H7	115	19	40	75	100	18	51,5	4,0	3,0	M8	18
PH322	95,0H7	130	19	40	75	115	18	51,5	4,0	3,0	M8	18
PH422	50,0H7	70	24	42	100	100	21	57,8	4,0	3,0	M4	10
PH422	60,0H7	75	24	42	100	100	21	57,8	3,5	3,0	M5	9
PH422	80,0H7	100	24	42	100	100	21	57,8	4,0	3,0	M6	13
PH422	95,0H7	115	24	42	100	100	21	57,8	4,0	3,0	M8	21
PH422	95,0H7	115	24	51	100	100	30	66,8	4,0	12,0	M8	16
PH422	95,0H7	130	24	42	100	115	21	57,8	4,0	3,0	M8	16
PH422	95,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
PH422	110,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
PH422	110,0H7	145	24	59	100	130	38	74,8	7,0	20,0	M8	16
PH422	130,0H7	165	24	51	100	140	30	66,8	7,0	12,0	M10	20
PH522	80,0H7	100	32	50	115	120	24	67,5	4,0	3,5	M6	13
PH522	110,0H7	130	32	50	115	120	24	67,5	4,0	3,5	M8	16
PH522	110,0H7	145	32	58	115	140	32	75,5	6,5	11,5	M8	16
PH522	110,0H7	145	32	68	115	140	42	85,5	7,0	21,5	M8	16
PH522	110,0H7	165	32	50	115	140	24	67,5	5,0	3,5	M10	24
PH522	130,0H7	165	32	58	115	140	32	75,5	5,0	11,5	M10	20
PH722	110,0H7	130	38	61	145	145	26	80,0	5,0	4,5	M8	14
PH722	110,0H7	165	38	61	145	145	26	80,0	5,0	4,5	M10	26
PH722	114,3H7	200	38	80	145	180	45	99,0	5,0	23,5	M12	25
PH722	130,0H7	165	38	61	145	145	26	80,0	5,0	4,5	M10	26
PH722	130,0H7	215	38	61	145	190	26	80,0	5,0	4,5	M12	26
PH722	180,0H7	215	38	80	145	190	45	99,0	5,0	23,5	M12	25
PH822	114,3H7	200	48	81	190	190	34	101,0	4,0	4,5	M12	34
PH822	130,0H7	165	48	81	190	190	34	101,0	5,0	4,5	M10	18
PH822	180,0H7	215	48	82	190	190	35	102,0	5,0	5,5	M12	35
PH822	250,0H7	300	48	85	190	260	38	105,0	6,0	8,5	M16	38
PH932/PH1032	250,0H7	300	60	85	225	260	43	110,0	6,0	5,0	M16	32
PH932/PH1032	300,0H7	350	60	111	225	314	69	136,0	6,0	31,0	M16	34

ServoFit® PHA Planetary Gear Units
Reductores planetarios ***ServoFit® PHA***
ServoFit® Riduttori planetari **PHA**

STÖBER

High Performance Precision Planetary Gear Units

- Acceleration torque:
  50 – 7500 Nm
- Lowest backlash:
  1 - 2 arcmin
- Extremely high torsional and tilting stiffness
- Consistent oil quantity, suitable for every mounting position
- FKM seal at input and output, continuous operation without cooling
- easy to assemble due to spreading function in the clamping hub
- Advanced gear technology
- Input with thermal expansion compensation
- Readily attaches any synchronous servo motor
- Easy and secure motor attachment in any mounting position
- Quiet running
- Efficiency:
  1 stage ≥ 96 %
  2 stage ≥ 93 %

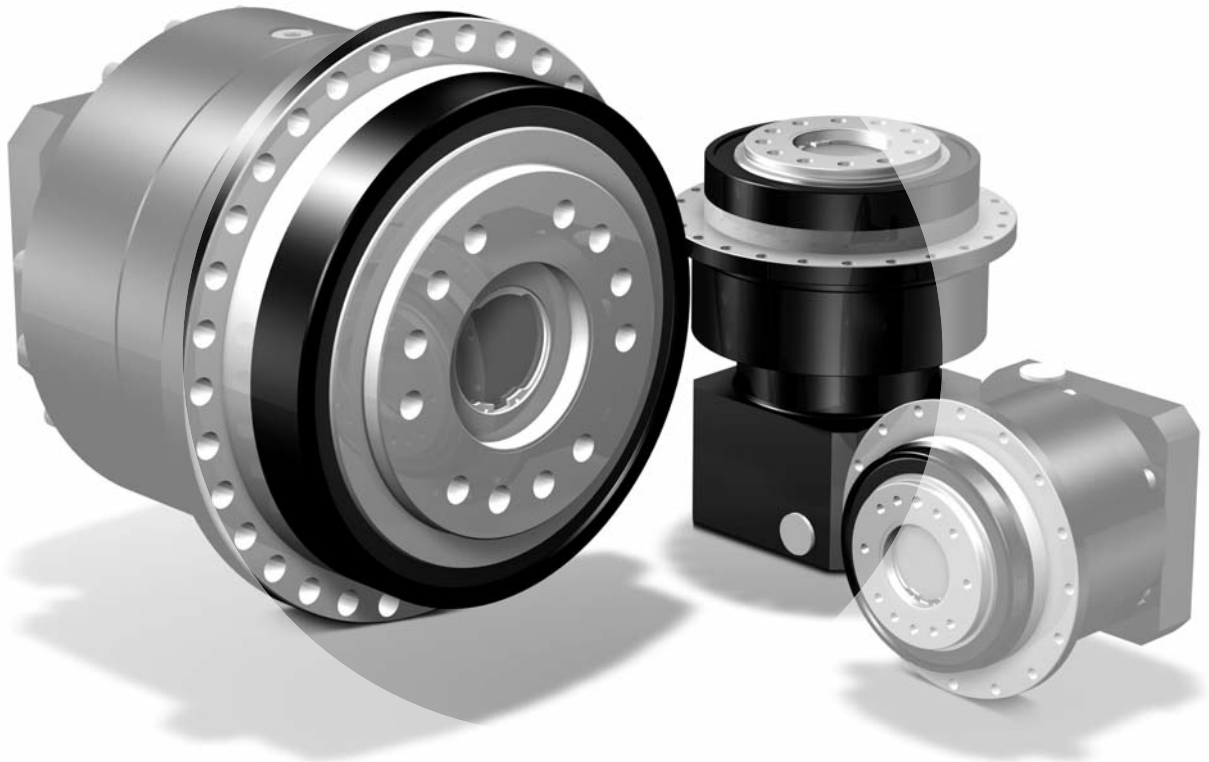
Reductores planetarios de precisión de alto rendimiento

- *Par de aceleración:*
  50 – 7500 Nm
- *Mínimo juego de giro:*
  1 - 2 arcmin
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Cantidad de aceite consistente, apto para cualquier posición de montaje*
- *Anillo retén de FKM a la entrada y a la salida, trabajo permanente sin enfriamiento*
- *Fácil de montar gracias a la función de expansión en el cojinete de apriete*
- *Tecnología superior de dentado*
- *Entrada con compensación térmica de longitudes*
- *Equipable a cualquier motor servo síncrono*
- *Adaptación sencilla y segura de motor en cualquier posición de instalación*
- *Marcha extremadamente suave*
- *Rendimiento:*
  1 tren ≥ 96 %
  2 trenes ≥ 93 %

Riduttori planetari di precisione High-Performance

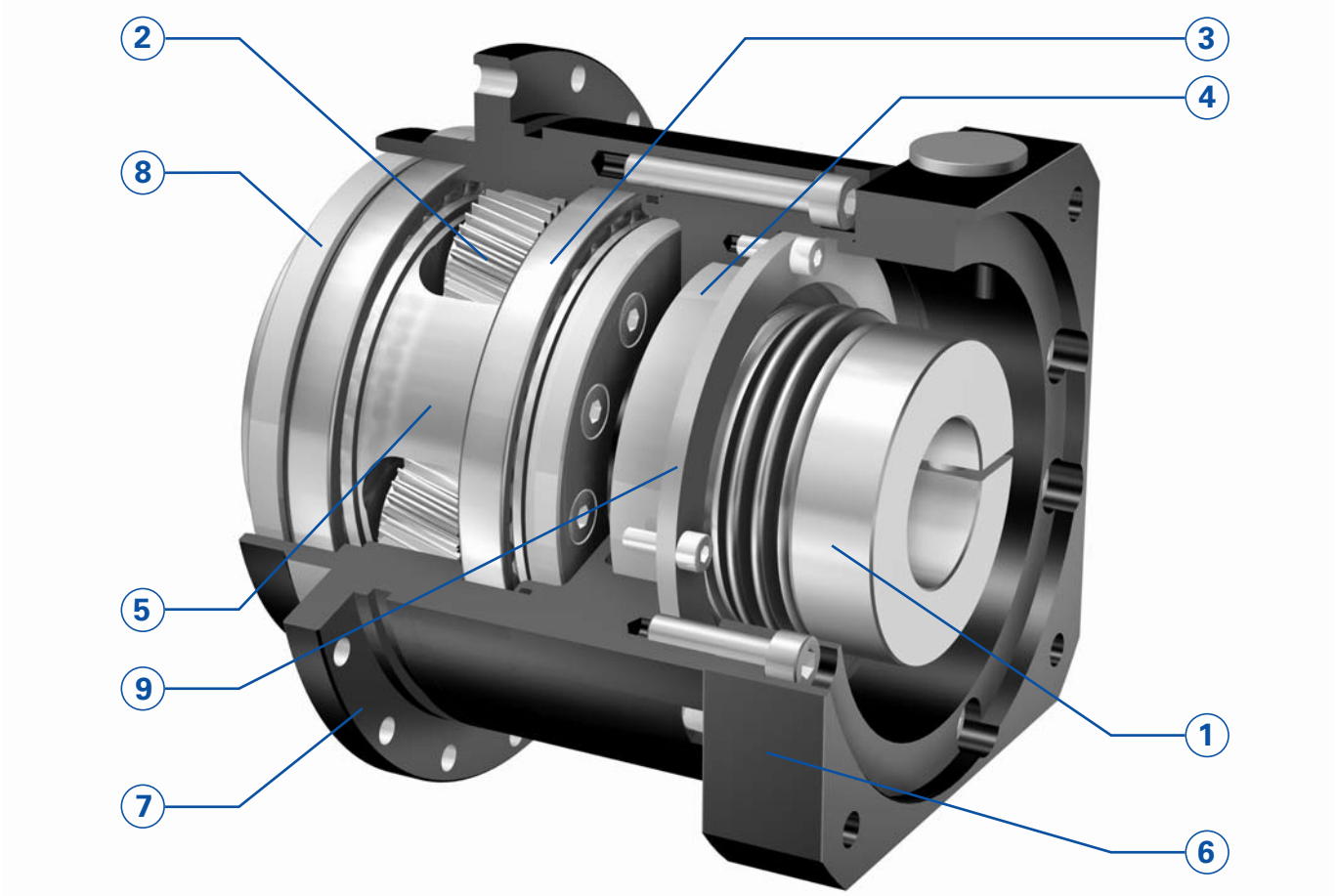
- Coppia di accelerazione:
  50 – 7500 Nm
- Gioco minimo:
  1- 2 arcmin
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Quantità di olio uniforme, possibilità di impiego in tutte le posizioni
- Anello di tenuta in FKM su ingresso e uscita, funzionamento continuo senza raffreddamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Tecnologia della dentatura avanzata
- Ingresso con compensazione longitudinale termica
- Montabili su qualsiasi servomotore sincrono
- Adattamento del motore semplice e sicuro in qualsiasi posizione di montaggio
- Estremamente silenziosi
- Rendimento:
  1 stadio ≥ 96 %
  2 stadi ≥ 93 %

ServoFit® PHA



ServoFit® PHA Planetary Gear Units
Reductores planetarios ***ServoFit® PHA***
ServoFit® Riduttori planetari **PHA**

STÖBER



• **Highest running smoothness achieved by proven helical gearing and optimized microgeometry.**
On-hands experience gained over the past decades has consistently been put to practice. This has resulted mainly in optimized gear tooth microgeometry, ensuring highest backlash stability and extremely quiet gear operation.

• ***Máxima suavidad de marcha por probado dentado helicoidal y microgeometría optimizada***
Los conocimientos prácticos de los últimos décadas han sido aplicados consecuentemente. Los resultados son ante todo, optimizaciones en la microgeometría del dentado. Ello garantiza máxima estabilidad de juego y un ruido de marcha extremadamente bajo.

• **Massima silenziosità grazie alla dentatura elicoidale collaudata ed alla microgeometria ottimizzata**
Le conoscenze empiriche degli ultimi decenni sono state trasposte in maniera coerente. Il risultato é soprattutto a perfezionamento della microgeometria della dentatura. Questo consente di ottenere una stabilità di gioco elevatissima abbinata ad una rumorosità estremamente bassa.

• **Precision selection** of the gearing parts ensures backlash of less than **one arc minute**.

• *Por* ***Precision Selection*** *de las piezas dentadas son realizados juegos de torsión menores que* ***1 minuto arco***.

• Grazie alla **Precision Selection** delle parti dentate si realizzano giochi inferiori a **1 arco minuto**.

• **Symmetrically arranged output bearings** for highest load capacity and highest tilting rigidity of the flange shaft. Due to angular bearings in O alignment already the standard version is suitable for **high axial and radial loads**.

• ***Apoyo de salida simétrico*** *para máxima carga y máxima rigidez al vuelco del eje con brida. Por apoyos inclinados dispuestos en O, ya en el estándar adecuados para* ***altas cargas axiales y radiales***.

• **Supporto uscita simmetrico** per un carico ed una rigidità al ribaltamento elevatissimi dell'albero flangiato. Grazie ai cuscinetti a rulli conici precaricati con disposizione a O già nella versione standard sono idonei per **carichi assiali e radiali elevati**.

• **The STOBER FlexiAdapt® motor adapter system** with its integrated thermal expansion compensation feature allows easy and accurate motor installation in minutes with no special tools required.

• *El* ***sistema STOBER FlexiAdapt®, de opciones para motor*** *con compensación térmica de longitudes integrada, permite el montaje sencillo y sin errores en pocos minutos. No se requieren herramientas especiales.*

• Il **sistema di montaggio motore FlexiAdapt® STOBER** , con compensazione longitudinale termica integrata, consente un montaggio del motore semplice e senza errori in pochi minuti. Non sono richiesti utensili speciali.

• **Wide selection** of IEC and NEMA motor adapters for all common brands of motors.

• ***Gran selección*** *de adaptadores de motor (IEC y NEMA) para todos los tipos usuales de motores.*

• **Ampia scelta** di adattatori motore (CEI e NEMA) per tutti i comuni tipi di motori.

ServoFit® PHA Planetary Gear Units
Reductores planetarios ***ServoFit® PHA***
ServoFit® Riduttori planetari **PHA**

STÖBER

① **FlexiAdapt® coupling**
Accurate and precise motor installation by clamping screw. Designed **for large motor shaft diameters**.
The integrated thermal expansion compensation feature in the shape of a bellows coupling compensates linear expansion of the motor shaft.
Balanced clamp coupling for smooth operation, also at high speeds.
Spacer bushes to accommodate custom motor shaft diameters.

② **High gearing quality** provided by case-hardened and finish-ground sun gear and planet gears as well as nitrided and honed internal gearing.

③ **Load capacity of the planet gear bearings** increased by about 100 %.

④ **IP65** enclosure. Sealed with a **FKM** radial oil seal for the smallest possible shaft diameter. Reduces friction, thus preventing internal heat build-up. Increases efficiency. **Continuous duty** operation possible without addition cooling.

⑤ **Highest torsional stiffness and ultimate tensile strength** provided by oversized single-piece planet carriers made of high-tensile material.

⑥ Motor adapter made of aluminium for **low gear unit weight.**

⑦ **Highest running accuracy and precision** ensured by single-piece housing design. Housing material: High-tensile tempered steel.

⑧ **FKM double-lip radial oil seals**. For continuous duty applications, with very good chemical resistance.

⑨ Input shaft bearings with shields and high-temperature grease for maintenance-free operation.

⑩ **Lubricated for life** with high-quality hydrophobic synthetic gear oil.

① ***Acoplamiento FlexiAdapt®***
Acoplamiento de motor ***sin errores*** *mediante un tornillo de apriete. Concebido para* ***grandes diámetros de ejes de motor****.*
La ***compensación térmica de longitudes*** *integrada, en forma de un acoplamiento tipo fuelle, compensa dilataciones longitudinales del eje del motor.*
Acoplamiento ***equilibrado*** *de anillo de apriete para una marcha suave, también a alta velocidad.*
Manguitos distanciadores para la adaptación de diámetros no usuales de motor.

② ***Alta calidad de dentado*** *por piñones solares y ruedas planetarias templados por cementación y rectificados así como dentado de rueda hueca nitrurado y bruñido.*

③ ***Capacidad de carga de los apoyos de los planetas*** *incrementada en aproximadamente 100 %.*

④ *Tipo de protección* ***IP65****. Sellado con anillo retén* ***FKM*** *sobre mínimo diámetro posible del eje. Reduce la fricción y así también el calentamiento. Aumenta el rendimiento.* ***Trabajo continuo*** *posible sin enfriamiento adicional.*

⑤ ***Máxima rigidez a la torsión y resistencia a la rotura*** *por portaplanetas generosamente dimensionados, de una sola pieza, fabricados de material de alta resistencia.*

⑥ *Adaptador de motor de aluminio para* ***peso reducido del reductor****.*

⑦ ***Máxima exactitud y precisión de marcha*** *por diseño de carcasa de una pieza. Material de la carcasa: Acero bonificado de alta resistencia.*

⑧ ***Anillos retén de doble labio de FKM****. Para el uso en trabajo continuo así como para muy buena resistencia química.*

⑨ *Apoyos del eje de accionamiento con discos de cubierta y grasa para alta temperatura para trabajo libre de mantenimiento.*

⑩ ***Lubricación de por vida*** *con aceite sintético hidrófobo de alta calidad para reductores.*

① **Giunto FlexiAdapt®**
Montaggio del motore senza errori grazie alla vite di arresto. Concepito per **motori con grandi diametri dell'albero**.
La **compensazione longitudinale termica** integrata, avente forma di giunto a soffietto, compensa gli allungamenti longitudinali dell'albero motore.
Giunto di bloccaggio **equilibrato** per un funzionamento silenzioso, anche a alto numero di giri.
Bussole per l'adattamento ai diametri degli alberi motore non comuni.

② **Alta qualità della dentatura** grazie a solare e planetari cementati e lucidati, nonché alla corona dentata nitrurata e levigata.

③ **Capacitá di carico del supporto planetare** aumentata del 100 % circa.

④ Classe di protezione **IP65**. Ermetizzazione con anello di tenuta radiale per alberi **FKM** sul diametro albero più piccolo. Riduce l'attrito e conseguentemente il riscaldamento. Aumenta il rendimento. Il **funzionamento continuo** è possibile senza raffreddamento aggiuntivo.

⑤ **Rigidità torsionale e resistenza a rottura** elevatissime grazie a porta planetari monoblocco in materiale altamente resistenza sovradimensionati.

⑥ Adattatore per motore in alluminio per un **peso del riduttore contenuto**.

⑦ **Massima esattezza di funzionamento e precisione** grazie al design monoblocco della carcassa. Materiale della carcassa: Acciaio da bonifica ad alta resistenza.

⑧ **Anelli di tenuta radiali per alberi a doppio labbro** in **FKM**. Per l'impiego in funzionamento continuo, nonché per una resistenza chimica ottimale.

⑨ Cuscinetto albero ingresso con schermato con grasso per alte temperature per un esercizio privo di richiede manutenzione.

⑩ **Lubrificazione a vita** con olio per riduttori sintetico idrofobico di alta qualità.

ServoFit® PHVA Planetary Gear Units
Reductores planetarios ***ServoFit® PHVA***
ServoFit® Riduttori planetari **PHVA**

STÖBER

High Performance Precision Planetary Gear Units

- Acceleration torque:
  PHVA933: 4250 Nm
  PHVA1033: 7500 Nm
- Lowest backlash: 1 arcmin
- High ratios (> 60) in compact design with power-branched transmission gear steps
- extremely high torsional and tilting stiffness
- consistent oil quantity, suitable for every mounting position
- FKM seal at input and output, continuous operation without cooling
- easy to assemble due to spreading function in the clamping hub
- advanced gear technology
- low mass moments of inertia
- input with thermal expansion compensation
- readily attaches any synchronous servo motor
- quiet running
- efficiency: ≥ 90 %

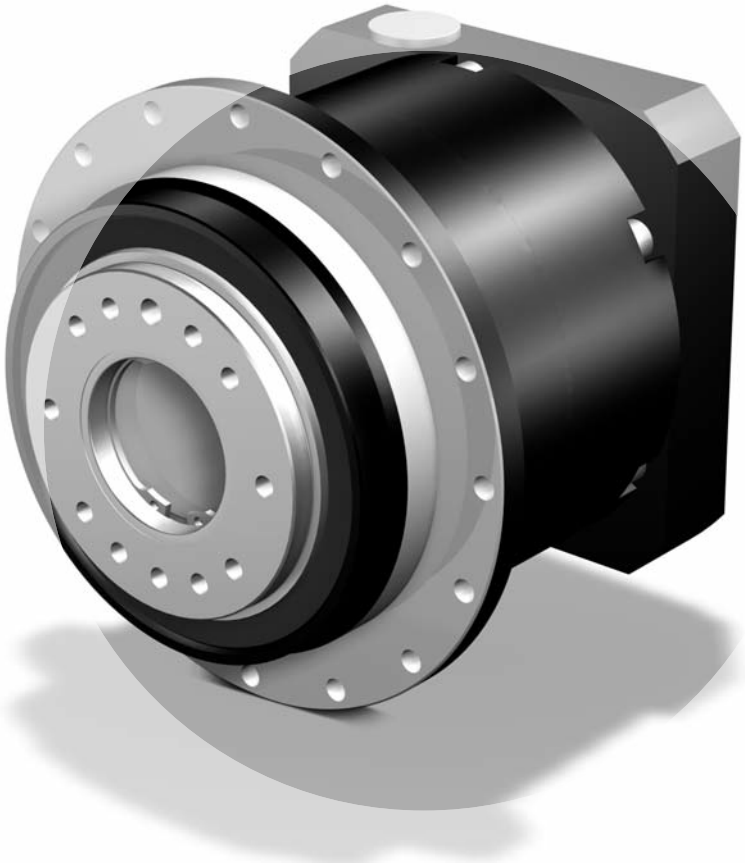
Reductores planetarios de precisión de alto rendimiento

- *Par de aceleración:*
  PHVA933: 4250 Nm
  PHVA1033: 7500 Nm
- *Mínimo juego de giro: 1 arcmin*
- *Altas relaciones de transmisión (> 60) en ejecución compacta por trenes de transmisión de potencia distribuida*
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Cantidad de aceite consistente, apto para cualquier posición de montaje*
- *Anillo retén de FKM a la entrada y a la salida, trabajo permanente sin enfriamiento*
- *Fácil de montar gracias a la función de expansión en el cojinete de apriete*
- *Tecnología superior de dentado*
- *Entrada con compensación térmica de longitudes*
- *Equipable a cualquier motor servo síncrono*
- *Adaptación sencilla y segura de motor en cualquier posición de instalación*
- *Marcha extremadamente suave*
- *Rendimiento: ≥ 90 %*

Riduttori planetari di precisione High-Performance

- Coppia di accelerazione:
  PHVA933: 4250 Nm
  PHVA1033: 7500 Nm
- Gioco minimo: 1 arcmin
- Rapporti di riduzione elevati (> 60) in struttura compatta grazie a stadi intermedi a potenza ramificata
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Quantità di olio uniforme, possibilità di impiego in tutte le posizioni
- Anello di tenuta in FKM su ingresso e uscita, funzionamento continuo senza raffreddamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Tecnologia della dentatura avanzata
- Ingresso con compensazione longitudinale termica
- Montabili su qualsiasi servomotore
- Adattamento del motore semplice e sicuro in qualsiasi posizione di montaggio
- Estremamente silenziosi
- Rendimento: ≥ 90 %

ServoFit® PHVA



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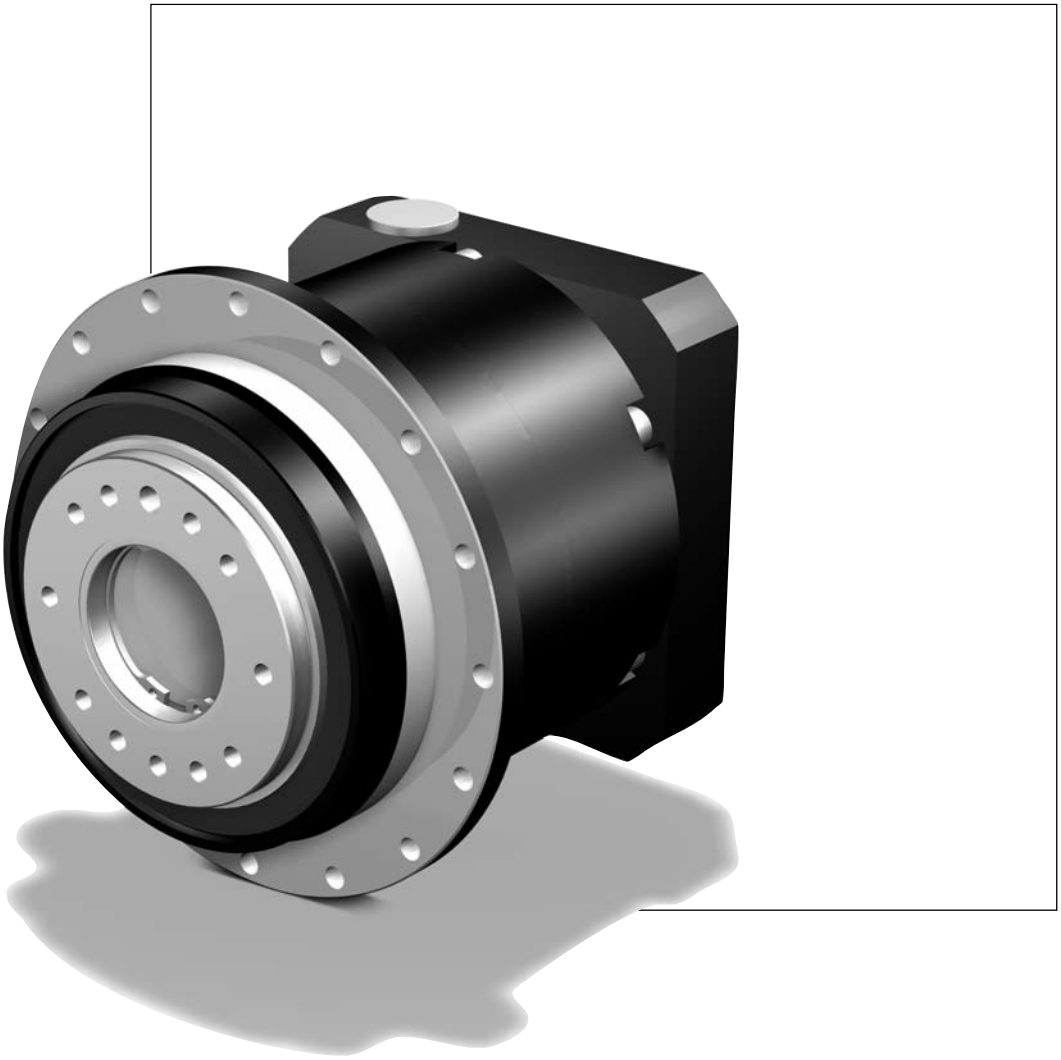

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Disegni quotati	
Riduttori planetari ServoFit® PHA	PHA15

Type designation / *Tipificación* / Indentificazione dei modelli

STÖBER

PHA 4 2 1 F 0050 MF C

1 2 3 4 5 6 7 8

1 Gear unit type
PHA - Planetary gear unit
PHVA - Planetary gear unit

2 Gear unit size

3 Generation number

4 Stages
1 - 1 stage
2 - 2 stage
3 - 3 stage

5 Design
F - flange shaft

6 Transmission ratio i x 10

7 Mounting series
MF - Motor adapter with FlexiAdapt® coupling
MFL - Motor adapter with FlexiAdapt® coupling and large motor plate
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page PHA17, please observe the max. dimensions).
MB – Motor adapter square with brake (option) (see brochure ID 441904)

8 Ventilator module
C - ServoCool (option) (see brochure ID 441851)

Ordering data according to the type designation above.

Further ordering details:
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

The torques and forces specified in this catalog only apply under the following conditions:
- For the attachment of the flange shaft and the gear unit housing on the machine side using screws of quality 12.9
- If the gear unit housings are adjusted at the pilot øb1 or øb2 (H7)
- If the flange shaft is adjusted with the connecting element at the pilot ød or øv

1 *Tipo de reductor*
PHA *- Reductor planetario*
PHVA *- Reductor planetario*

2 *Tamaño del reductor*

3 *Cifra de generación*

4 *Número de trenes*
1 *- 1 tren*
2 *- 2 trenes*
3 *- 3 trenes*

5 *Ejecución*
F *- Eje con brida*

6 *Número característico de la relación de reducción i x 10*

7 *Grupos de opciones*
MF *- Adaptador de motor con acoplamiento FlexiAdapt®*
MFL *- Adaptador de motor con acoplamiento FlexiAdapt® y placa grande de motor*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página PHA17, por favor observar dimensiones máximas).
MB *– Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

8 *Módulo de ventilador*
C *- ServoCool (opción) (ver folleto ID 441851)*

Datos de pedido de acuerdo a la tipificación indicada arriba.

Otros datos de pedido:
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

Los pares y fuerzas indicados en este catálogo se aplican bajo las siguientes condiciones:
- *Al fijar el eje de brida y la carcasa del reductor en el lado de la máquina con tornillos de la calidad 12.9*
- *Si las carcasas del reductor están ajustadas en el borde de ajuste øb1 o øb2 (H7)*
- *Si el eje de brida está ajustada con el elemento de unión en el borde de ajuste ød o øv*

1 Modello di riduttore
PHA - Riduttore planetario
PHVA - Riduttore planetario

2 Taglia del riduttore

3 Numero di generazione

4 Numero di stadi
1 - 1-stadio
2 - 2-stadi
3 - 3-stadi

5 Esecuzione
F - Albero flangiato

6 Rapporto di riduzione i x 10

7 Gruppi annessi
MF - adattatore motore con giunto FlexiAdapt®
MFL - adattatore motore con giunto FlexiAdapt® e flangia motore grande
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore da pagina PHA17, si prega di rispettare le misure max.).
MB – Adattatore motore quadro con freno (opzione) (vedere prospetto ID 441904)

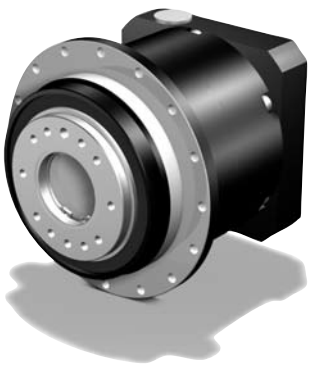
8 Modulo ventilatore
C - ServoCool (opzione) (vedere prospetto ID 441851)

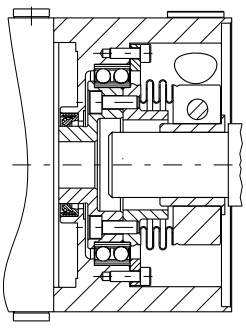
Dati dell'ordine conformi alla indentificazione dei modelli di cui sopra.

Altri dati dell'ordine:
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

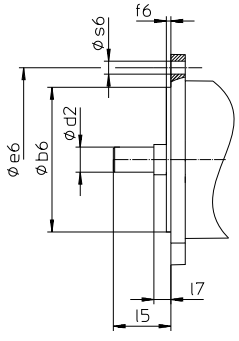
Le coppie e le forze indicate in questo catalogo si applicano alle seguenti condizioni:
- Per il fissaggio dell' albero flangiato e dell' scatola del riduttore sul lato macchina con viti di qualità 12.9
- Se le scatole del riduttore sono adattate sul bordo di accoppiamento øb1 o øb2 (H7)
- Se l' albero flangiato è adattato dell' elemento di collegamento sul bordo di accoppiamento ød o øv

PHA421 F 0050 MF





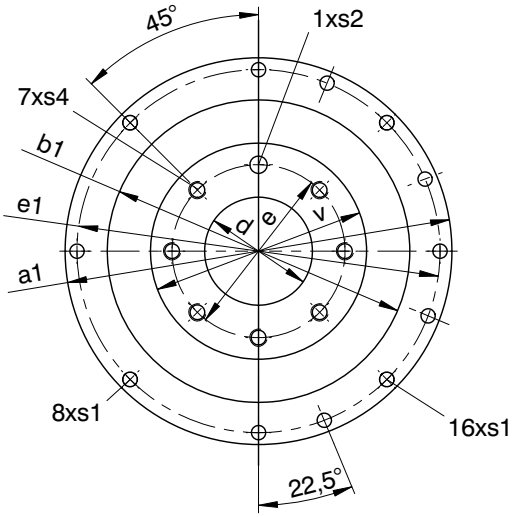
FlexiAdapt® Coupling MF
FlexiAdapt® Acoplamiento MF
Giunto FlexiAdapt® MF



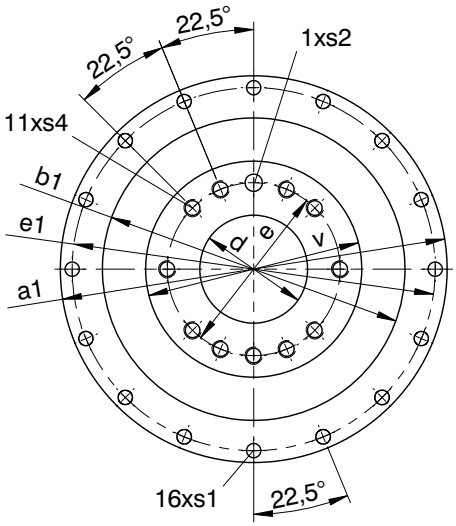
Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Flange shaft | ***Eje con brida*** | **Albero flangiato**

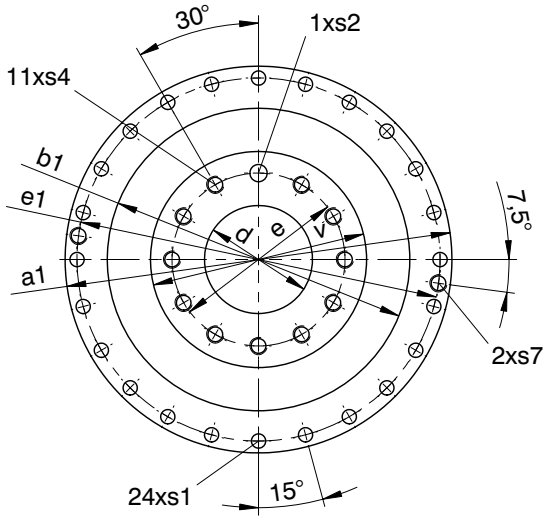
PHA3 | PHA4



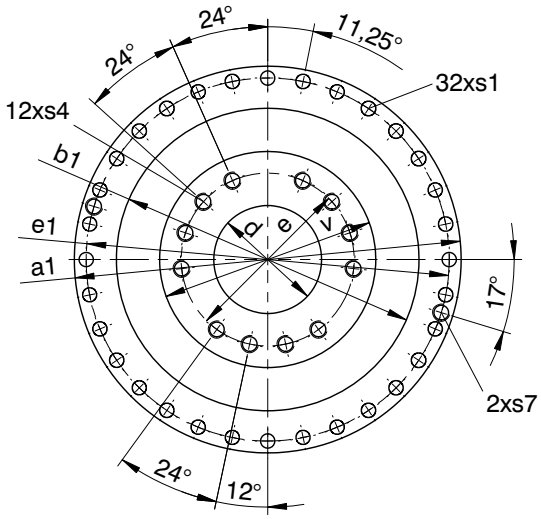
PHA5



PHA7 + PHA8



PHA9 + PHA10
PHVA9 + PHVA10



Shaft design “F” | ***Ejecución de eje “F”*** | **Esecuzione albero “F”**

Typ	øa1	øb1	ød	øe	øe1	øs1	øs2	s4	s7	v
PHA3	86h7	64h7	20,0H6	31,5	79	4,5	5H7	M5	-	40h7
PHA4	118h7	90h7	31,5H6	50,0	109	5,5	6H7	M6	-	63h7
PHA5	145h7	110h7	40,0H6	63,0	135	5,5	6H7	M6	-	80h7
PHA7	179h7	140h7	50,0H6	80,0	168	6,6	8H7	M8	-	100h7
PHA8	247h7	200h7	80,0H6	125,0	233	9,0	10H7	M10	M10	160h7
PHA9/PHVA9	300	255h7	90,0H6	140,0	280	13,5	-	M16	M8	180h7
PHA10/PHVA10	330	285h7	95,0H6	160,0	310	13,5	-	M20	M10	200h7

Selection table
ServoFit® PHA
Planetary Gear Units

Tabla de selección
Reductores planetarios
ServoFit® PHA

Tabella di selezione
ServoFit®
Riduttori planetari **PHA**

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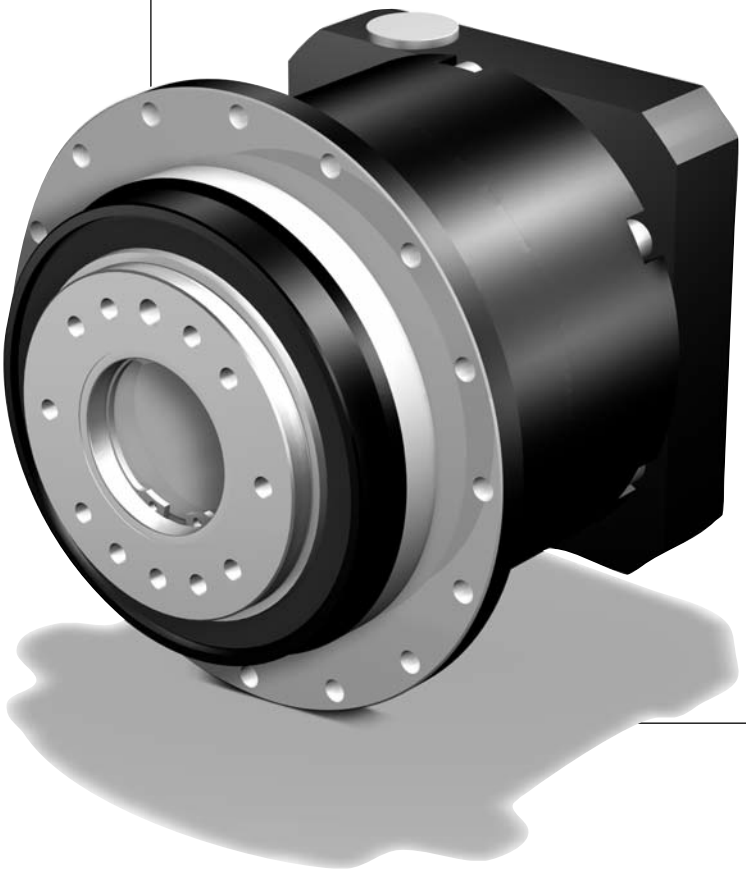

Selection table **ServoFit® PHA** Planetary Gear Units

Tabla de selección Reductores planetarios ***ServoFit® PHA***

Tabella di selezione **ServoFit®** Riduttori planetari **PHA**

STÖBER

Symbols:

i – Gear unit ratio
n_{1MAX} – Max. input speed
DB – Continuous operation
ZB – Cycle operation
(at ambient temperature 20 °C, also see page A11/A12)
MWø – Motor shaft diameter
J_1 – Mass mom. of inertia (related to input)
G – Weight
$\Lambda\varphi_2$ – Backlash
C_2 – Gear unit rigidity (related to output at M_{2B})
L_{PA} – Max. noise level (n_1 = 2000 rpm)
M_{2N} – Rated torque [1]
M_{2B} – Max. perm. acceleration torque
M_{2NOT} – Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

[1] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

Denominaciones:

i – *Relación de reducción*
n_{1MAX} – *Velocidad máx. de entrada*
DB – Trabajo continuo
ZB – Trabajo cíclico
(a temperatura ambiente 20 °C, ver también página A11/A12)
MWø – *Diámetro de eje del motor*
J_1 – *Momento de inercia de masa (referido a la entrada)*
G – *Peso*
$\Lambda\varphi_2$ – *Juego de giro*
C_2 – *Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} – *Ruido máx. de marcha (n_1 = 2000 min-1)*
M_{2N} – *Par nominal [1]*
M_{2B} – *Par máx. admisible de aceleración*
M_{2NOT} – *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

[1] Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

Simboli:

i – Rapporto di riduzione
n_{1MAX} – Max. numero di giri in ingresso
DB – funzionamento continuo
ZB – funzionamento ciclico
(a temperatura ambiente di 20 °C, vedere anche pagina A11/A12)
MWø – Diametro dell'albero motore
J_1 – Momento di inerzia (riferito all'ingresso)
G – Peso
L_{W2} – Gioco
C_2 – Rigidità del riduttore (riferito all'uscita per M_{2B})
L_{PA} – Rumorosità max. (n_1 = 2000 min-1)
M_{2N} – Coppia nominale [1]
M_{2B} – Coppia di accelerazione max. ammessa
M_{2NOT} – Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

[1] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

Planetary Gear Units **PHA**
Reductores planetarios ***PHA***
Riduttori planetari **PHA**

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Please take notice of the indications on page PHA6! ***¡Por favor observe las indicaciones en la página PHA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHA321 (M_{2BMAX}=65 Nm)												
5,000	**PHA321_0050 MF**	3000	6000	**≤11**	0,55	1,4	2	14	58	45	65	130
5,000	**PHA321_0050 MF**	3000	6000	**>11≤14**	0,56	1,4	2	14	58	45	65	130
5,000	**PHA321_0050 MF**	3000	6000	**>14≤19**	0,56	1,4	2	14	58	45	65	130
5,000	**PHA321_0050 MFL**	3000	6000	**>19≤24**	1,6	2,3	2	15	58	45	65	130
7,000	**PHA321_0070 MF**	3500	6000	**≤11**	0,52	1,4	2	13	57	45	60	130
7,000	**PHA321_0070 MF**	3500	6000	**>11≤14**	0,52	1,4	2	13	57	45	60	130
7,000	**PHA321_0070 MF**	3500	6000	**>14≤19**	0,52	1,4	2	13	57	45	60	130
7,000	**PHA321_0070 MFL**	3500	6000	**>19≤24**	1,6	2,3	2	14	57	45	60	130
10,00	**PHA321_0100 MF**	3800	6000	**≤11**	0,50	1,4	2	11	55	30	50	100
10,00	**PHA321_0100 MF**	3800	6000	**>11≤14**	0,50	1,4	2	11	55	30	50	100
10,00	**PHA321_0100 MF**	3800	6000	**>14≤19**	0,50	1,4	2	11	55	30	50	100
10,00	**PHA321_0100 MFL**	3800	6000	**>19≤24**	1,6	2,3	2	11	55	30	50	100
PHA322 (M_{2BMAX}=65 Nm)												
20,00	**PHA322_0200 MF**	4500	8000	**≤9**	0,11	1,7	2	15	59	45	65	130
20,00	**PHA322_0200 MF**	4500	8000	**>9≤11**	0,12	1,7	2	15	59	45	65	130
20,00	**PHA322_0200 MF**	4500	8000	**>11≤14**	0,14	1,7	2	15	59	45	65	130
25,00	**PHA322_0250 MF**	4500	8000	**≤9**	0,09	1,7	2	15	57	45	65	130
25,00	**PHA322_0250 MF**	4500	8000	**>9≤11**	0,10	1,7	2	15	57	45	65	130
25,00	**PHA322_0250 MF**	4500	8000	**>11≤14**	0,12	1,7	2	15	57	45	65	130
28,00	**PHA322_0280 MF**	4500	8000	**≤9**	0,10	1,7	2	15	59	45	60	130
28,00	**PHA322_0280 MF**	4500	8000	**>9≤11**	0,12	1,7	2	15	59	45	60	130
28,00	**PHA322_0280 MF**	4500	8000	**>11≤14**	0,14	1,7	2	15	59	45	60	130
35,00	**PHA322_0350 MF**	4500	8000	**≤9**	0,08	1,7	2	15	56	45	65	130
35,00	**PHA322_0350 MF**	4500	8000	**>9≤11**	0,09	1,7	2	15	56	45	65	130
35,00	**PHA322_0350 MF**	4500	8000	**>11≤14**	0,11	1,7	2	15	56	45	65	130
40,00	**PHA322_0400 MF**	4500	8000	**≤9**	0,10	1,7	2	12	59	30	50	100
40,00	**PHA322_0400 MF**	4500	8000	**>9≤11**	0,11	1,7	2	12	59	30	50	100
40,00	**PHA322_0400 MF**	4500	8000	**>11≤14**	0,14	1,7	2	12	59	30	50	100
50,00	**PHA322_0500 MF**	4500	8000	**≤9**	0,07	1,7	2	14	54	45	65	130
50,00	**PHA322_0500 MF**	4500	8000	**>9≤11**	0,08	1,7	2	14	54	45	65	130
50,00	**PHA322_0500 MF**	4500	8000	**>11≤14**	0,10	1,7	2	14	54	45	65	130
70,00	**PHA322_0700 MF**	4500	8000	**≤9**	0,07	1,7	2	15	54	45	60	130
70,00	**PHA322_0700 MF**	4500	8000	**>9≤11**	0,08	1,7	2	15	54	45	60	130
70,00	**PHA322_0700 MF**	4500	8000	**>11≤14**	0,10	1,7	2	15	54	45	60	130
100,0	**PHA322_1000 MF**	4500	8000	**≤9**	0,07	1,7	2	12	54	30	50	100
100,0	**PHA322_1000 MF**	4500	8000	**>9≤11**	0,08	1,7	2	12	54	30	50	100
100,0	**PHA322_1000 MF**	4500	8000	**>11≤14**	0,10	1,7	2	12	54	30	50	100
PHA421 (M_{2BMAX}=130 Nm)												
4,000	**PHA421_0040 MF**	2300	5000	**≤14**	2,1	3,9	1	32	61	90	130	180
4,000	**PHA421_0040 MF**	2300	5000	**>14≤19**	2,1	3,9	1	33	61	90	130	230
4,000	**PHA421_0040 MF**	2300	5000	**>19≤24**	2,0	3,9	1	33	61	90	130	240
4,000	**PHA421_0040 MFL**	2300	5000	**>24≤32**	5,2	4,6	1	35	61	90	130	240
5,000	**PHA421_0050 MF**	2700	6000	**≤14**	1,9	3,9	1	33	59	90	130	220
5,000	**PHA421_0050 MF**	2700	6000	**>14≤19**	2,0	3,9	1	33	59	90	130	240
5,000	**PHA421_0050 MF**	2700	6000	**>19≤24**	1,9	3,9	1	33	59	90	130	240
5,000	**PHA421_0050 MFL**	2700	6000	**>24≤32**	5,0	4,6	1	35	59	90	130	240
7,000	**PHA421_0070 MF**	3200	6000	**≤14**	1,8	3,9	1	29	58	90	110	240
7,000	**PHA421_0070 MF**	3200	6000	**>14≤19**	1,8	3,9	1	30	58	90	110	240
7,000	**PHA421_0070 MF**	3200	6000	**>19≤24**	1,7	3,9	1	30	58	90	110	240
7,000	**PHA421_0070 MFL**	3200	6000	**>24≤32**	4,9	4,6	1	30	58	90	110	240
10,00	**PHA421_0100 MF**	3500	6000	**≤14**	1,7	3,9	1	21	56	60	100	200
10,00	**PHA421_0100 MF**	3500	6000	**>14≤19**	1,7	3,9	1	21	56	60	100	200
10,00	**PHA421_0100 MF**	3500	6000	**>19≤24**	1,6	3,9	1	21	56	60	100	200
10,00	**PHA421_0100 MFL**	3500	6000	**>24≤32**	4,8	4,6	1	21	56	60	100	200

Planetary Gear Units **PHA**
Reductores planetarios ***PHA***
Riduttori planetari **PHA**

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Please take notice of the indications on page PHA6! ***¡Por favor observe las indicaciones en la página PHA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHA422 (M_{2BMAX}=130 Nm)												
16,00	**PHA422_0160 MF**	3700	6500	**≤11**	0,63	4,5	1	26	60	90	130	240
16,00	**PHA422_0160 MF**	3700	6500	**>11≤14**	0,64	4,5	1	26	60	90	130	240
16,00	**PHA422_0160 MF**	3700	6500	**>14≤19**	0,64	4,5	1	26	60	90	130	240
16,00	**PHA422_0160 MFL**	3700	6500	**>19≤24**	1,7	5,2	1	27	60	90	130	240
20,00	**PHA422_0200 MF**	3700	6500	**≤11**	0,62	4,5	1	28	60	90	130	240
20,00	**PHA422_0200 MF**	3700	6500	**>11≤14**	0,63	4,5	1	28	60	90	130	240
20,00	**PHA422_0200 MF**	3700	6500	**>14≤19**	0,63	4,5	1	28	60	90	130	240
20,00	**PHA422_0200 MFL**	3700	6500	**>19≤24**	1,7	5,2	1	29	60	90	130	240
25,00	**PHA422_0250 MF**	4000	7000	**≤11**	0,57	4,5	1	28	58	90	130	240
25,00	**PHA422_0250 MF**	4000	7000	**>11≤14**	0,58	4,5	1	28	58	90	130	240
25,00	**PHA422_0250 MF**	4000	7000	**>14≤19**	0,58	4,5	1	28	58	90	130	240
25,00	**PHA422_0250 MFL**	4000	7000	**>19≤24**	1,6	5,2	1	29	58	90	130	240
28,00	**PHA422_0280 MF**	4500	8000	**≤11**	0,53	4,5	1	25	57	90	130	240
28,00	**PHA422_0280 MF**	4500	8000	**>11≤14**	0,53	4,5	1	25	57	90	130	240
28,00	**PHA422_0280 MF**	4500	8000	**>14≤19**	0,53	4,5	1	25	57	90	130	240
28,00	**PHA422_0280 MFL**	4500	8000	**>19≤24**	1,6	5,2	1	25	57	90	130	240
35,00	**PHA422_0350 MF**	4500	8000	**≤11**	0,52	4,5	1	28	57	90	130	240
35,00	**PHA422_0350 MF**	4500	8000	**>11≤14**	0,52	4,5	1	28	57	90	130	240
35,00	**PHA422_0350 MF**	4500	8000	**>14≤19**	0,52	4,5	1	28	57	90	130	240
35,00	**PHA422_0350 MFL**	4500	8000	**>19≤24**	1,6	5,2	1	28	57	90	130	240
40,00	**PHA422_0400 MF**	4500	8000	**≤11**	0,50	4,5	1	24	55	90	130	240
40,00	**PHA422_0400 MF**	4500	8000	**>11≤14**	0,50	4,5	1	24	55	90	130	240
40,00	**PHA422_0400 MF**	4500	8000	**>14≤19**	0,50	4,5	1	24	55	90	130	240
40,00	**PHA422_0400 MFL**	4500	8000	**>19≤24**	1,6	5,2	1	24	55	90	130	240
50,00	**PHA422_0500 MF**	4500	8000	**≤11**	0,50	4,5	1	27	55	90	130	240
50,00	**PHA422_0500 MF**	4500	8000	**>11≤14**	0,50	4,5	1	27	55	90	130	240
50,00	**PHA422_0500 MF**	4500	8000	**>14≤19**	0,50	4,5	1	27	55	90	130	240
50,00	**PHA422_0500 MFL**	4500	8000	**>19≤24**	1,6	5,2	1	27	55	90	130	240
70,00	**PHA422_0700 MF**	4500	8000	**≤11**	0,50	4,5	1	27	55	90	110	240
70,00	**PHA422_0700 MF**	4500	8000	**>11≤14**	0,50	4,5	1	27	55	90	110	240
70,00	**PHA422_0700 MF**	4500	8000	**>14≤19**	0,50	4,5	1	27	55	90	110	240
70,00	**PHA422_0700 MFL**	4500	8000	**>19≤24**	1,6	5,2	1	27	55	90	110	240
100,0	**PHA422_1000 MF**	4500	8000	**≤11**	0,50	4,5	1	20	55	60	100	200
100,0	**PHA422_1000 MF**	4500	8000	**>11≤14**	0,50	4,5	1	20	55	60	100	200
100,0	**PHA422_1000 MF**	4500	8000	**>14≤19**	0,50	4,5	1	20	55	60	100	200
100,0	**PHA422_1000 MFL**	4500	8000	**>19≤24**	1,6	5,2	1	20	55	60	100	200
PHA521 (M_{2BMAX}=320 Nm)												
4,000	**PHA521_0040 MF**	2200	5000	**≤19**	6,4	6,6	1	73	62	210	320	460
4,000	**PHA521_0040 MF**	2200	5000	**>19≤24**	6,4	6,6	1	77	62	210	320	570
4,000	**PHA521_0040 MF**	2200	5000	**>24≤32**	6,3	6,6	1	77	62	210	320	600
4,000	**PHA521_0040 MF**	2200	5000	**>32≤35**	6,3	6,6	1	77	62	210	320	600
4,000	**PHA521_0040 MFL**	2200	5000	**>32≤38**	13	8,3	1	85	62	210	320	600
5,000	**PHA521_0050 MF**	2500	5500	**≤19**	5,8	6,6	1	77	60	220	320	580
5,000	**PHA521_0050 MF**	2500	5500	**>19≤24**	5,8	6,6	1	80	60	220	320	600
5,000	**PHA521_0050 MF**	2500	5500	**>24≤32**	5,7	6,6	1	80	60	220	320	600
5,000	**PHA521_0050 MF**	2500	5500	**>32≤35**	5,7	6,6	1	80	60	220	320	600
5,000	**PHA521_0050 MFL**	2500	5500	**>32≤38**	13	8,3	1	85	60	220	320	600
7,000	**PHA521_0070 MF**	3000	6000	**≤19**	5,3	6,6	1	71	59	210	270	600
7,000	**PHA521_0070 MF**	3000	6000	**>19≤24**	5,3	6,6	1	71	59	210	270	600
7,000	**PHA521_0070 MF**	3000	6000	**>24≤32**	5,2	6,6	1	71	59	210	270	600
7,000	**PHA521_0070 MF**	3000	6000	**>32≤35**	5,2	6,6	1	71	59	210	270	600
7,000	**PHA521_0070 MFL**	3000	6000	**>32≤38**	12	8,3	1	73	59	210	270	600
10,00	**PHA521_0100 MF**	3300	6000	**≤19**	5,0	6,6	1	53	57	140	250	500
10,00	**PHA521_0100 MF**	3300	6000	**>19≤24**	5,0	6,6	1	53	57	140	250	500
10,00	**PHA521_0100 MF**	3300	6000	**>24≤32**	4,9	6,6	1	53	57	140	250	500
10,00	**PHA521_0100 MF**	3300	6000	**>32≤35**	4,9	6,6	1	53	57	140	250	500
10,00	**PHA521_0100 MFL**	3300	6000	**>32≤38**	12	8,3	1	54	57	140	250	500

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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHA522 (M_{2BMAX}=320 Nm)												
16,00	**PHA522_0160 MF**	3300	6000	**≤14**	1,9	8,1	1	63	61	210	320	600
16,00	**PHA522_0160 MF**	3300	6000	**>14≤19**	2,0	8,1	1	64	61	210	320	600
16,00	**PHA522_0160 MF**	3300	6000	**>19≤24**	1,9	8,1	1	64	61	210	320	600
16,00	**PHA522_0160 MFL**	3300	6000	**≤24**	5,0	8,8	1	64	61	210	320	600
16,00	**PHA522_0160 MFL**	3300	6000	**>24≤32**	5,0	8,8	1	64	61	210	320	600
20,00	**PHA522_0200 MF**	3300	6000	**≤14**	2,0	8,1	1	70	61	220	320	600
20,00	**PHA522_0200 MF**	3300	6000	**>14≤19**	2,0	8,1	1	70	61	220	320	600
20,00	**PHA522_0200 MF**	3300	6000	**>19≤24**	1,9	8,1	1	70	61	220	320	600
20,00	**PHA522_0200 MFL**	3300	6000	**≤24**	5,0	8,8	1	70	61	220	320	600
20,00	**PHA522_0200 MFL**	3300	6000	**>24≤32**	5,0	8,8	1	70	61	220	320	600
25,00	**PHA522_0250 MF**	3700	6500	**≤14**	1,9	8,1	1	70	59	220	320	600
25,00	**PHA522_0250 MF**	3700	6500	**>14≤19**	1,9	8,1	1	70	59	220	320	600
25,00	**PHA522_0250 MF**	3700	6500	**>19≤24**	1,8	8,1	1	70	59	220	320	600
25,00	**PHA522_0250 MFL**	3700	6500	**≤24**	4,9	8,8	1	70	59	220	320	600
25,00	**PHA522_0250 MFL**	3700	6500	**>24≤32**	4,9	8,8	1	70	59	220	320	600
28,00	**PHA522_0280 MF**	4000	7000	**≤14**	1,7	8,1	1	61	58	210	320	600
28,00	**PHA522_0280 MF**	4000	7000	**>14≤19**	1,8	8,1	1	61	58	210	320	600
28,00	**PHA522_0280 MF**	4000	7000	**>19≤24**	1,7	8,1	1	61	58	210	320	600
28,00	**PHA522_0280 MFL**	4000	7000	**≤24**	4,8	8,8	1	61	58	210	320	600
28,00	**PHA522_0280 MFL**	4000	7000	**>24≤32**	4,8	8,8	1	61	58	210	320	600
35,00	**PHA522_0350 MF**	4000	7000	**≤14**	1,7	8,1	1	68	58	220	320	600
35,00	**PHA522_0350 MF**	4000	7000	**>14≤19**	1,8	8,1	1	68	58	220	320	600
35,00	**PHA522_0350 MF**	4000	7000	**>19≤24**	1,7	8,1	1	68	58	220	320	600
35,00	**PHA522_0350 MFL**	4000	7000	**≤24**	4,8	8,8	1	68	58	220	320	600
35,00	**PHA522_0350 MFL**	4000	7000	**>24≤32**	4,8	8,8	1	68	58	220	320	600
40,00	**PHA522_0400 MF**	4000	7000	**≤14**	1,7	8,1	1	58	56	210	320	600
40,00	**PHA522_0400 MF**	4000	7000	**>14≤19**	1,7	8,1	1	58	56	210	320	600
40,00	**PHA522_0400 MF**	4000	7000	**>19≤24**	1,6	8,1	1	58	56	210	320	600
40,00	**PHA522_0400 MFL**	4000	7000	**≤24**	4,7	8,8	1	58	56	210	320	600
40,00	**PHA522_0400 MFL**	4000	7000	**>24≤32**	4,7	8,8	1	58	56	210	320	600
50,00	**PHA522_0500 MF**	4000	7000	**≤14**	1,7	8,1	1	66	56	220	320	600
50,00	**PHA522_0500 MF**	4000	7000	**>14≤19**	1,7	8,1	1	66	56	220	320	600
50,00	**PHA522_0500 MF**	4000	7000	**>19≤24**	1,6	8,1	1	66	56	220	320	600
50,00	**PHA522_0500 MFL**	4000	7000	**≤24**	4,8	8,8	1	66	56	220	320	600
50,00	**PHA522_0500 MFL**	4000	7000	**>24≤32**	4,8	8,8	1	66	56	220	320	600
70,00	**PHA522_0700 MF**	4000	7000	**≤14**	1,7	8,1	1	65	56	210	270	600
70,00	**PHA522_0700 MF**	4000	7000	**>14≤19**	1,7	8,1	1	65	56	210	270	600
70,00	**PHA522_0700 MF**	4000	7000	**>19≤24**	1,6	8,1	1	65	56	210	270	600
70,00	**PHA522_0700 MFL**	4000	7000	**≤24**	4,7	8,8	1	66	56	210	270	600
70,00	**PHA522_0700 MFL**	4000	7000	**>24≤32**	4,7	8,8	1	66	56	210	270	600
100,0	**PHA522_1000 MF**	4000	7000	**≤14**	1,7	8,1	1	52	56	140	250	500
100,0	**PHA522_1000 MF**	4000	7000	**>14≤19**	1,7	8,1	1	52	56	140	250	500
100,0	**PHA522_1000 MF**	4000	7000	**>19≤24**	1,6	8,1	1	52	56	140	250	500
100,0	**PHA522_1000 MFL**	4000	7000	**≤24**	4,7	8,8	1	52	56	140	250	500
100,0	**PHA522_1000 MFL**	4000	7000	**>24≤32**	4,7	8,8	1	52	56	140	250	500

Planetary Gear Units **PHA**
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Please take notice of the indications on page PHA6! ***¡Por favor observe las indicaciones en la página PHA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHA721 (M_{2BMAX}=700 Nm)												
4,000	**PHA721_0040 MF**	1900	4000	**≤24**	16	12,3	1	136	63	440	700	910
4,000	**PHA721_0040 MF**	1900	4000	**>24≤32**	17	12,3	1	144	63	440	700	1150
4,000	**PHA721_0040 MF**	1900	4000	**>32≤38**	17	12,3	1	144	63	440	700	1320
4,000	**PHA721_0040 MFL**	1900	4000	**>38≤48**	35	16,1	1	160	63	440	700	1370
5,000	**PHA721_0050 MF**	2200	5000	**≤24**	14	12,3	1	150	61	440	700	1140
5,000	**PHA721_0050 MF**	2200	5000	**>24≤32**	15	12,3	1	155	61	440	700	1400
5,000	**PHA721_0050 MF**	2200	5000	**>32≤38**	15	12,3	1	155	61	440	700	1400
5,000	**PHA721_0050 MFL**	2200	5000	**>38≤48**	34	16,1	1	167	61	440	700	1400
7,000	**PHA721_0070 MF**	2500	5000	**≤24**	13	12,3	1	145	60	440	650	1240
7,000	**PHA721_0070 MF**	2500	5000	**>24≤32**	13	12,3	1	145	60	440	650	1240
7,000	**PHA721_0070 MF**	2500	5000	**>32≤38**	13	12,3	1	145	60	440	650	1240
7,000	**PHA721_0070 MFL**	2500	5000	**>38≤48**	32	16,1	1	152	60	440	650	1240
10,00	**PHA721_0100 MF**	3000	5000	**≤24**	12	12,3	1	113	58	300	500	1000
10,00	**PHA721_0100 MF**	3000	5000	**>24≤32**	12	12,3	1	113	58	300	500	1000
10,00	**PHA721_0100 MF**	3000	5000	**>32≤38**	12	12,3	1	113	58	300	500	1000
10,00	**PHA721_0100 MFL**	3000	5000	**>38≤48**	31	16,1	1	115	58	300	500	1000
PHA722 (M_{2BMAX}=700 Nm)												
16,00	**PHA722_0160 MF**	3000	5000	**≤19**	6,0	14,6	1	132	62	440	700	1330
16,00	**PHA722_0160 MF**	3000	5000	**>19≤24**	6,1	14,6	1	133	62	440	700	1370
16,00	**PHA722_0160 MF**	3000	5000	**>24≤32**	6,0	14,6	1	133	62	440	700	1370
16,00	**PHA722_0160 MF**	3000	5000	**>32≤35**	6,0	14,6	1	133	62	440	700	1370
16,00	**PHA722_0160 MFL**	3000	5000	**>32≤38**	13	16,3	1	134	62	440	700	1370
20,00	**PHA722_0200 MF**	3000	5000	**≤19**	5,9	14,6	1	147	62	440	700	1400
20,00	**PHA722_0200 MF**	3000	5000	**>19≤24**	6,0	14,6	1	147	62	440	700	1400
20,00	**PHA722_0200 MF**	3000	5000	**>24≤32**	5,9	14,6	1	147	62	440	700	1400
20,00	**PHA722_0200 MF**	3000	5000	**>32≤35**	5,9	14,6	1	147	62	440	700	1400
20,00	**PHA722_0200 MFL**	3000	5000	**>32≤38**	13	16,3	1	148	62	440	700	1400
25,00	**PHA722_0250 MF**	3500	6000	**≤19**	5,5	14,6	1	147	60	440	700	1400
25,00	**PHA722_0250 MF**	3500	6000	**>19≤24**	5,6	14,6	1	147	60	440	700	1400
25,00	**PHA722_0250 MF**	3500	6000	**>24≤32**	5,5	14,6	1	147	60	440	700	1400
25,00	**PHA722_0250 MF**	3500	6000	**>32≤35**	5,5	14,6	1	147	60	440	700	1400
25,00	**PHA722_0250 MFL**	3500	6000	**>32≤38**	12	16,3	1	148	60	440	700	1400
28,00	**PHA722_0280 MF**	3700	6500	**≤19**	5,2	14,6	1	130	59	440	700	1370
28,00	**PHA722_0280 MF**	3700	6500	**>19≤24**	5,2	14,6	1	130	59	440	700	1370
28,00	**PHA722_0280 MF**	3700	6500	**>24≤32**	5,1	14,6	1	130	59	440	700	1370
28,00	**PHA722_0280 MF**	3700	6500	**>32≤35**	5,1	14,6	1	130	59	440	700	1370
28,00	**PHA722_0280 MFL**	3700	6500	**>32≤38**	12	16,3	1	130	59	440	700	1370
35,00	**PHA722_0350 MF**	3700	6500	**≤19**	5,1	14,6	1	145	59	440	700	1400
35,00	**PHA722_0350 MF**	3700	6500	**>19≤24**	5,1	14,6	1	145	59	440	700	1400
35,00	**PHA722_0350 MF**	3700	6500	**>24≤32**	5,0	14,6	1	145	59	440	700	1400
35,00	**PHA722_0350 MF**	3700	6500	**>32≤35**	5,0	14,6	1	145	59	440	700	1400
35,00	**PHA722_0350 MFL**	3700	6500	**>32≤38**	12	16,3	1	145	59	440	700	1400
40,00	**PHA722_0400 MF**	3700	6500	**≤19**	5,0	14,6	1	126	57	440	700	1370
40,00	**PHA722_0400 MF**	3700	6500	**>19≤24**	5,0	14,6	1	126	57	440	700	1370
40,00	**PHA722_0400 MF**	3700	6500	**>24≤32**	4,9	14,6	1	126	57	440	700	1370
40,00	**PHA722_0400 MF**	3700	6500	**>32≤35**	4,9	14,6	1	126	57	440	700	1370
40,00	**PHA722_0400 MFL**	3700	6500	**>32≤38**	12	16,3	1	126	57	440	700	1370
50,00	**PHA722_0500 MF**	3700	6500	**≤19**	5,0	14,6	1	142	57	440	700	1400
50,00	**PHA722_0500 MF**	3700	6500	**>19≤24**	5,0	14,6	1	142	57	440	700	1400
50,00	**PHA722_0500 MF**	3700	6500	**>24≤32**	4,9	14,6	1	142	57	440	700	1400
50,00	**PHA722_0500 MF**	3700	6500	**>32≤35**	4,9	14,6	1	142	57	440	700	1400
50,00	**PHA722_0500 MFL**	3700	6500	**>32≤38**	12	16,3	1	142	57	440	700	1400
70,00	**PHA722_0700 MF**	3700	6500	**≤19**	5,0	14,6	1	141	57	440	650	1240
70,00	**PHA722_0700 MF**	3700	6500	**>19≤24**	5,0	14,6	1	141	57	440	650	1240
70,00	**PHA722_0700 MF**	3700	6500	**>24≤32**	4,9	14,6	1	141	57	440	650	1240
70,00	**PHA722_0700 MF**	3700	6500	**>32≤35**	4,9	14,6	1	141	57	440	650	1240
70,00	**PHA722_0700 MFL**	3700	6500	**>32≤38**	12	16,3	1	141	57	440	650	1240
100,0	**PHA722_1000 MF**	3700	6500	**≤19**	5,0	14,6	1	112	57	300	500	1000
100,0	**PHA722_1000 MF**	3700	6500	**>19≤24**	5,0	14,6	1	112	57	300	500	1000

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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHA722 (M_{2BMAX}=700 Nm)												
100,0	**PHA722_1000 MF**	3700	6500	**>24≤32**	4,9	14,6	1	112	57	300	500	1000
100,0	**PHA722_1000 MF**	3700	6500	**>32≤35**	4,9	14,6	1	112	57	300	500	1000
100,0	**PHA722_1000 MFL**	3700	6500	**>32≤38**	12	16,3	1	112	57	300	500	1000
PHA821 (M_{2BMAX}=1700 Nm)												
4,000	**PHA821_0040 MF**	1500	3500	**≤32**	56	34,6	1	389	64	880	1600	1720
4,000	**PHA821_0040 MF**	1500	3500	**>32≤38**	55	34,6	1	413	64	880	1600	2000
4,000	**PHA821_0040 MF**	1500	3500	**>38≤48**	55	34,6	1	413	64	880	1600	2310
5,000	**PHA821_0050 MF**	1700	4000	**≤32**	47	34,6	1	416	62	1100	1700	2160
5,000	**PHA821_0050 MF**	1700	4000	**>32≤38**	46	34,6	1	433	62	1100	1700	2500
5,000	**PHA821_0050 MF**	1700	4000	**>38≤48**	46	34,6	1	433	62	1100	1700	2870
7,000	**PHA821_0070 MF**	2000	4000	**≤32**	39	34,6	1	411	61	1000	1600	2770
7,000	**PHA821_0070 MF**	2000	4000	**>32≤38**	39	34,6	1	411	61	1000	1600	2770
7,000	**PHA821_0070 MF**	2000	4000	**>38≤48**	38	34,6	1	411	61	1000	1600	2770
10,00	**PHA821_0100 MF**	2500	4000	**≤32**	35	34,6	1	302	59	800	1200	2400
10,00	**PHA821_0100 MF**	2500	4000	**>32≤38**	35	34,6	1	302	59	800	1200	2400
10,00	**PHA821_0100 MF**	2500	4000	**>38≤48**	35	34,6	1	302	59	800	1200	2400
PHA822 (M_{2BMAX}=2000 Nm)												
16,00	**PHA822_0160 MF**	2500	4500	**≤24**	16	39,8	1	428	63	1100	2000	2760
16,00	**PHA822_0160 MF**	2500	4500	**>24≤32**	17	39,8	1	433	63	1100	2000	3150
16,00	**PHA822_0160 MF**	2500	4500	**>32≤38**	17	39,8	1	433	63	1100	2000	3150
16,00	**PHA822_0160 MFL**	2500	4500	**>38≤48**	35	43,6	1	441	63	1100	2000	3150
20,00	**PHA822_0200 MF**	2500	4500	**≤24**	16	39,8	1	444	63	1250	2000	3200
20,00	**PHA822_0200 MF**	2500	4500	**>24≤32**	16	39,8	1	447	63	1250	2000	3200
20,00	**PHA822_0200 MF**	2500	4500	**>32≤38**	16	39,8	1	447	63	1250	2000	3200
20,00	**PHA822_0200 MFL**	2500	4500	**>38≤48**	35	43,6	1	452	63	1250	2000	3200
25,00	**PHA822_0250 MF**	3000	5500	**≤24**	14	39,8	1	473	61	1250	2000	3200
25,00	**PHA822_0250 MF**	3000	5500	**>24≤32**	14	39,8	1	475	61	1250	2000	3200
25,00	**PHA822_0250 MF**	3000	5500	**>32≤38**	14	39,8	1	475	61	1250	2000	3200
25,00	**PHA822_0250 MFL**	3000	5500	**>38≤48**	33	43,6	1	479	61	1250	2000	3200
28,00	**PHA822_0280 MF**	3300	6000	**≤24**	13	39,8	1	427	60	1100	2000	3150
28,00	**PHA822_0280 MF**	3300	6000	**>24≤32**	13	39,8	1	427	60	1100	2000	3150
28,00	**PHA822_0280 MF**	3300	6000	**>32≤38**	13	39,8	1	427	60	1100	2000	3150
28,00	**PHA822_0280 MFL**	3300	6000	**>38≤48**	32	43,6	1	431	60	1100	2000	3150
35,00	**PHA822_0350 MF**	3300	6000	**≤24**	13	39,8	1	443	60	1250	2000	3200
35,00	**PHA822_0350 MF**	3300	6000	**>24≤32**	13	39,8	1	443	60	1250	2000	3200
35,00	**PHA822_0350 MF**	3300	6000	**>32≤38**	13	39,8	1	443	60	1250	2000	3200
35,00	**PHA822_0350 MFL**	3300	6000	**>38≤48**	32	43,6	1	446	60	1250	2000	3200
40,00	**PHA822_0400 MF**	3300	6000	**≤24**	12	39,8	1	414	58	1100	1920	3150
40,00	**PHA822_0400 MF**	3300	6000	**>24≤32**	12	39,8	1	414	58	1100	1920	3150
40,00	**PHA822_0400 MF**	3300	6000	**>32≤38**	12	39,8	1	414	58	1100	1920	3150
40,00	**PHA822_0400 MFL**	3300	6000	**>38≤48**	32	43,6	1	416	58	1100	1920	3150
50,00	**PHA822_0500 MF**	3300	6000	**≤24**	12	39,8	1	434	58	1250	2000	3200
50,00	**PHA822_0500 MF**	3300	6000	**>24≤32**	12	39,8	1	434	58	1250	2000	3200
50,00	**PHA822_0500 MF**	3300	6000	**>32≤38**	12	39,8	1	434	58	1250	2000	3200
50,00	**PHA822_0500 MFL**	3300	6000	**>38≤48**	31	43,6	1	435	58	1250	2000	3200
70,00	**PHA822_0700 MF**	3300	6000	**≤24**	12	39,8	1	420	58	1000	1600	2770
70,00	**PHA822_0700 MF**	3300	6000	**>24≤32**	12	39,8	1	420	58	1000	1600	2770
70,00	**PHA822_0700 MF**	3300	6000	**>32≤38**	12	39,8	1	420	58	1000	1600	2770
70,00	**PHA822_0700 MFL**	3300	6000	**>38≤48**	31	43,6	1	420	58	1000	1600	2770
100,0	**PHA822_1000 MF**	3300	6000	**≤24**	12	39,8	1	304	58	800	1200	2400
100,0	**PHA822_1000 MF**	3300	6000	**>24≤32**	12	39,8	1	304	58	800	1200	2400
100,0	**PHA822_1000 MF**	3300	6000	**>32≤38**	12	39,8	1	304	58	800	1200	2400
100,0	**PHA822_1000 MFL**	3300	6000	**>38≤48**	31	43,6	1	304	58	800	1200	2400

Planetary Gear Units **PHA**
Reductores planetarios ***PHA***
Riduttori planetari **PHA**

STÖBER

Please take notice of the indications on page PHA6! ***¡Por favor observe las indicaciones en la página PHA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHA6!**

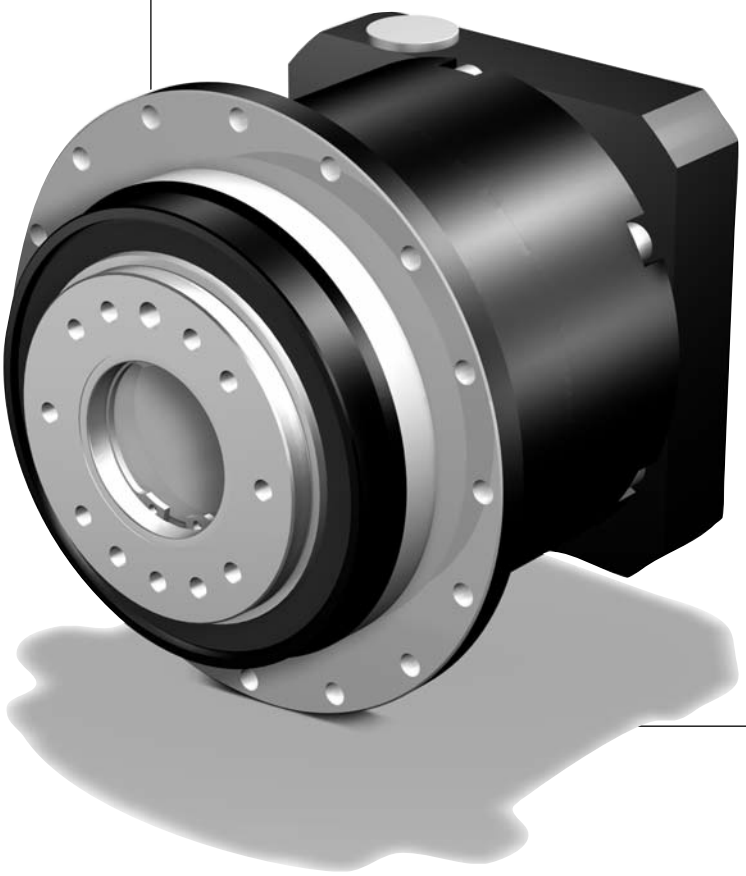
i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHA932 (M_{2BMAX}=5000 Nm)												
12,00	**PHA932_0120 MF**	1800	3000	**≤32**	82	70,6	1	1091	66	3000	3700	4630
12,00	**PHA932_0120 MF**	1800	3000	**>32≤38**	82	70,6	1	1110	66	3000	4610	5810
12,00	**PHA932_0120 MF**	1800	3000	**>38≤48**	81	70,6	1	1110	66	3000	4610	6740
16,00	**PHA932_0160 MF**	2200	3500	**≤32**	54	70,6	1	1127	64	3000	4930	6170
16,00	**PHA932_0160 MF**	2200	3500	**>32≤38**	53	70,6	1	1139	64	3000	5000	7750
16,00	**PHA932_0160 MF**	2200	3500	**>38≤48**	53	70,6	1	1139	64	3000	5000	8960
18,00	**PHA932_0180 MF**	1800	3000	**≤32**	76	70,6	1	1075	66	3000	4500	6940
18,00	**PHA932_0180 MF**	1800	3000	**>32≤38**	75	70,6	1	1084	66	3000	4500	8720
18,00	**PHA932_0180 MF**	1800	3000	**>38≤48**	75	70,6	1	1084	66	3000	4500	9000
20,00	**PHA932_0200 MF**	2500	4000	**≤32**	45	70,6	1	1134	62	3000	5000	7710
20,00	**PHA932_0200 MF**	2500	4000	**>32≤38**	45	70,6	1	1142	62	3000	5000	9690
20,00	**PHA932_0200 MF**	2500	4000	**>38≤48**	44	70,6	1	1142	62	3000	5000	10000
24,00	**PHA932_0240 MF**	2200	3500	**≤32**	50	70,6	1	1091	64	3000	4500	9000
24,00	**PHA932_0240 MF**	2200	3500	**>32≤38**	50	70,6	1	1096	64	3000	4500	9000
24,00	**PHA932_0240 MF**	2200	3500	**>38≤48**	49	70,6	1	1096	64	3000	4500	9000
28,00	**PHA932_0280 MF**	2800	4500	**≤32**	38	70,6	1	1121	61	3000	5000	10000
28,00	**PHA932_0280 MF**	2800	4500	**>32≤38**	38	70,6	1	1121	61	3000	5000	10000
28,00	**PHA932_0280 MF**	2800	4500	**>38≤48**	37	70,6	1	1121	61	3000	5000	10000
30,00	**PHA932_0300 MF**	2500	4000	**≤32**	43	70,6	1	1094	62	3000	4500	9000
30,00	**PHA932_0300 MF**	2500	4000	**>32≤38**	42	70,6	1	1097	62	3000	4500	9000
30,00	**PHA932_0300 MF**	2500	4000	**>38≤48**	42	70,6	1	1097	62	3000	4500	9000
32,00	**PHA932_0320 MF**	2800	4500	**≤32**	37	70,6	1	1093	60	3000	4610	9220
32,00	**PHA932_0320 MF**	2800	4500	**>32≤38**	36	70,6	1	1093	60	3000	4610	9220
32,00	**PHA932_0320 MF**	2800	4500	**>38≤48**	36	70,6	1	1093	60	3000	4610	9220
40,00	**PHA932_0400 MF**	2800	4500	**≤32**	35	70,6	1	1046	59	2690	4610	9220
40,00	**PHA932_0400 MF**	2800	4500	**>32≤38**	35	70,6	1	1046	59	2690	4610	9220
40,00	**PHA932_0400 MF**	2800	4500	**>38≤48**	34	70,6	1	1046	59	2690	4610	9220
42,00	**PHA932_0420 MF**	2800	4500	**≤32**	37	70,6	1	1088	61	3000	4500	9000
42,00	**PHA932_0420 MF**	2800	4500	**>32≤38**	37	70,6	1	1088	61	3000	4500	9000
42,00	**PHA932_0420 MF**	2800	4500	**>38≤48**	36	70,6	1	1088	61	3000	4500	9000
48,00	**PHA932_0480 MF**	2800	4500	**≤32**	36	70,6	1	1076	60	3000	4500	9000
48,00	**PHA932_0480 MF**	2800	4500	**>32≤38**	36	70,6	1	1076	60	3000	4500	9000
48,00	**PHA932_0480 MF**	2800	4500	**>38≤48**	35	70,6	1	1076	60	3000	4500	9000
60,00	**PHA932_0600 MF**	2800	4500	**≤32**	34	70,6	1	1055	59	3000	4500	9000
60,00	**PHA932_0600 MF**	2800	4500	**>32≤38**	34	70,6	1	1055	59	3000	4500	9000
60,00	**PHA932_0600 MF**	2800	4500	**>38≤48**	34	70,6	1	1055	59	3000	4500	9000
PHA1032 (M_{2BMAX}=7500 Nm)												
18,00	**PHA1032_0180 MF**	1800	3000	**≤32**	79	86,0	1	1636	66	4610	5550	6940
18,00	**PHA1032_0180 MF**	1800	3000	**>32≤38**	79	86,0	1	1656	66	4610	6910	8720
18,00	**PHA1032_0180 MF**	1800	3000	**>38≤48**	78	86,0	1	1656	66	4610	6910	10120
24,00	**PHA1032_0240 MF**	2200	3500	**≤32**	52	86,0	1	1672	64	4610	7400	9250
24,00	**PHA1032_0240 MF**	2200	3500	**>32≤38**	52	86,0	1	1684	64	4610	7500	11630
24,00	**PHA1032_0240 MF**	2200	3500	**>38≤48**	51	86,0	1	1684	64	4610	7500	13430
30,00	**PHA1032_0300 MF**	2500	4000	**≤32**	44	86,0	1	1679	62	5000	7500	11570
30,00	**PHA1032_0300 MF**	2500	4000	**>32≤38**	43	86,0	1	1686	62	5000	7500	14540
30,00	**PHA1032_0300 MF**	2500	4000	**>38≤48**	43	86,0	1	1686	62	5000	7500	15000
42,00	**PHA1032_0420 MF**	2800	4500	**≤32**	38	86,0	1	1666	61	5000	7500	15000
42,00	**PHA1032_0420 MF**	2800	4500	**>32≤38**	38	86,0	1	1666	61	5000	7500	15000
42,00	**PHA1032_0420 MF**	2800	4500	**>38≤48**	37	86,0	1	1666	61	5000	7500	15000
48,00	**PHA1032_0480 MF**	2800	4500	**≤32**	36	86,0	1	1638	60	4610	6910	13820
48,00	**PHA1032_0480 MF**	2800	4500	**>32≤38**	36	86,0	1	1638	60	4610	6910	13820
48,00	**PHA1032_0480 MF**	2800	4500	**>38≤48**	35	86,0	1	1638	60	4610	6910	13820
60,00	**PHA1032_0600 MF**	2800	4500	**≤32**	35	86,0	1	1591	59	4030	6910	13820
60,00	**PHA1032_0600 MF**	2800	4500	**>32≤38**	35	86,0	1	1591	59	4030	6910	13820
60,00	**PHA1032_0600 MF**	2800	4500	**>38≤48**	34	86,0	1	1591	59	4030	6910	13820

Higher ratios see PHVA gear units. ***Altas relaciónes de reducción ver reductores PHVA.*** **Rapporti di trasmissione elevati vedere riduttori PHVA.**

STÖBER

Please take notice of the indications on page PHA6! ***¡Por favor observe las indicaciones en la página PHA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHA6!**

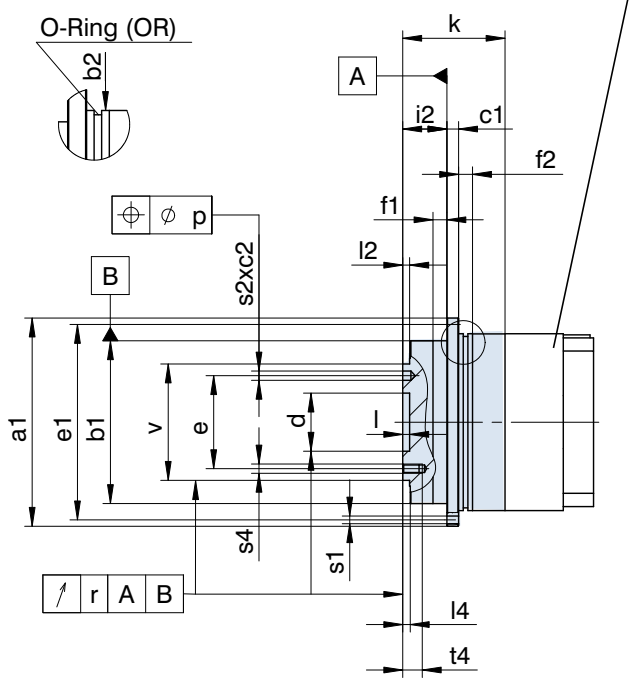
i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHVA933 (M_{2BMAX}=4250 Nm)												
61,00	**PHVA933_0610 MF**	2500	4500	**≤24**	17	62,8	1	844	62	2500	4250	9000
61,00	**PHVA933_0610 MF**	2500	4500	**>24≤32**	18	62,8	1	845	62	2500	4250	9000
61,00	**PHVA933_0610 MF**	2500	4500	**>32≤38**	18	62,8	1	845	62	2500	4250	9000
61,00	**PHVA933_0610 MFL**	2500	4500	**>38≤48**	36	66,6	1	848	62	2500	4250	9000
91,00	**PHVA933_0910 MF**	2500	4500	**≤24**	14	62,8	1	836	62	2500	4250	9000
91,00	**PHVA933_0910 MF**	2500	4500	**>24≤32**	14	62,8	1	836	62	2500	4250	9000
91,00	**PHVA933_0910 MF**	2500	4500	**>32≤38**	14	62,8	1	836	62	2500	4250	9000
91,00	**PHVA933_0910 MFL**	2500	4500	**>38≤48**	33	66,6	1	837	62	2500	4250	9000
121,0	**PHVA933_1210 MF**	2500	4500	**≤24**	13	62,8	1	804	62	2500	4250	9000
121,0	**PHVA933_1210 MF**	2500	4500	**>24≤32**	13	62,8	1	804	62	2500	4250	9000
121,0	**PHVA933_1210 MF**	2500	4500	**>32≤38**	13	62,8	1	804	62	2500	4250	9000
121,0	**PHVA933_1210 MFL**	2500	4500	**>38≤48**	32	66,6	1	804	62	2500	4250	9000
PHVA1033 (M_{2BMAX}=7500 Nm)												
61,00	**PHVA1033_0610 MF**	2500	4500	**≤32**	39	90,0	1	1362	63	4000	7500	15000
61,00	**PHVA1033_0610 MF**	2500	4500	**>32≤38**	38	90,0	1	1364	63	4000	7500	15000
61,00	**PHVA1033_0610 MF**	2500	4500	**>38≤48**	38	90,0	1	1364	63	4000	7500	15000
91,00	**PHVA1033_0910 MF**	2500	4500	**≤32**	36	90,0	1	1339	63	4000	7500	15000
91,00	**PHVA1033_0910 MF**	2500	4500	**>32≤38**	35	90,0	1	1339	63	4000	7500	15000
91,00	**PHVA1033_0910 MF**	2500	4500	**>38≤48**	35	90,0	1	1339	63	4000	7500	15000

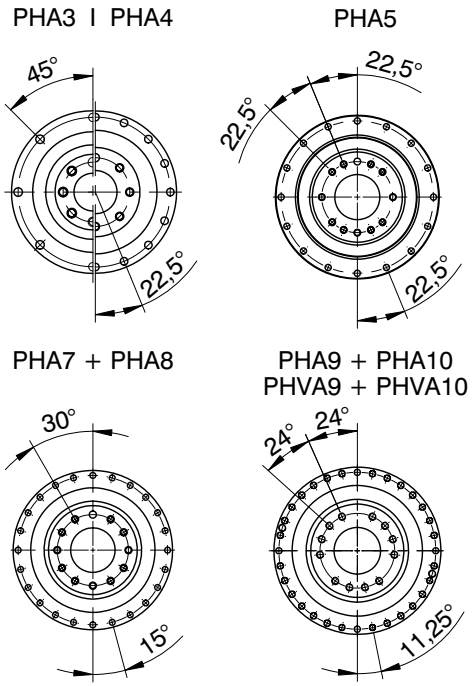


STÖBER

PHA3_MF - PHA10_MF
PHVA9_MF - PHVA10_MF

Motor connection from page PHA17
Conexión de motor a partir de página PHA17
accopiamento motore da pagina PHA17





Typ	øa1	øb1	øb2	c1	c2	ød	øe	øe1	f1	f2	i2
PHA321	86h7	64h7	70h7	4	3	20,0H6	31,5	79	7	8	19,5
PHA322	86h7	64h7	70h7	4	3	20,0H6	31,5	79	7	8	19,5
PHA421	118h7	90h7	95h7	7	7	31,5H6	50,0	109	10	10	30,0
PHA422	118h7	90h7	95h7	7	7	31,5H6	50,0	109	10	10	30,0
PHA521	145h7	110h7	120h7	8	7	40,0H6	63,0	135	10	12	29,0
PHA522	145h7	110h7	120h7	8	7	40,0H6	63,0	135	10	12	29,0
PHA721	179h7	140h7	152h7	10	7	50,0H6	80,0	168	12	12	38,0
PHA722	179h7	140h7	152h7	10	7	50,0H6	80,0	168	12	12	38,0
PHA821	247h7	200h7	212h7	12	10	80,0H6	125,0	233	15	15	50,0
PHA822	247h7	200h7	212h7	12	10	80,0H6	125,0	233	15	15	50,0
PHA932	300	255h7	255h7	18	-	90,0H6	140,0	280	20	33	66,0
PHVA933	300	255h7	255h7	18	-	90,0H6	140,0	280	20	33	66,0
PHA1032	330	285h7	285h7	20	-	95,0H6	160,0	310	20	20	75,0
PHVA1033	330	285h7	285h7	20	-	95,0H6	160,0	310	20	20	75,0

Typ	k	l	l2	l4	OR	øp	r	øs1	øs2	s4	t4	øv
PHA321	50,0	4	3	3,5	65x2	0,02	0,020	4,5	5H7	M5	7	40h7
PHA322	87,0	4	3	3,5	65x2	0,02	0,020	4,5	5H7	M5	7	40h7
PHA421	66,0	6	6	6,5	90x3	0,02	0,020	5,5	6H7	M6	11	63h7
PHA422	113,0	6	6	6,5	90x3	0,02	0,020	5,5	6H7	M6	11	63h7
PHA521	70,0	6	6	6,5	110x3	0,02	0,020	5,5	6H7	M6	11	80h7
PHA522	124,5	6	6	6,5	110x3	0,02	0,020	5,5	6H7	M6	11	80h7
PHA721	88,0	6	6	6,5	145x3	0,02	0,025	6,6	8H7	M8	14	100h7
PHA722	150,0	6	6	6,5	145x3	0,02	0,025	6,6	8H7	M8	14	100h7
PHA821	126,0	8	8	8,5	200x5	0,02	0,030	9,0	10H7	M10	18	160h7
PHA822	201,0	8	8	8,5	200x5	0,02	0,030	9,0	10H7	M10	18	160h7
PHA932	290,5	12	11	12,0	238x5	-	0,030	13,5	-	M16	24	180h7
PHVA933	219,5	12	11	12,0	238x5	-	0,030	13,5	-	M16	24	180h7
PHA1032	307,0	10	15	15,0	270x6	-	0,040	13,5	-	M20	30	200h7
PHVA1033	250,0	10	15	15,0	270x6	-	0,040	13,5	-	M20	30	200h7

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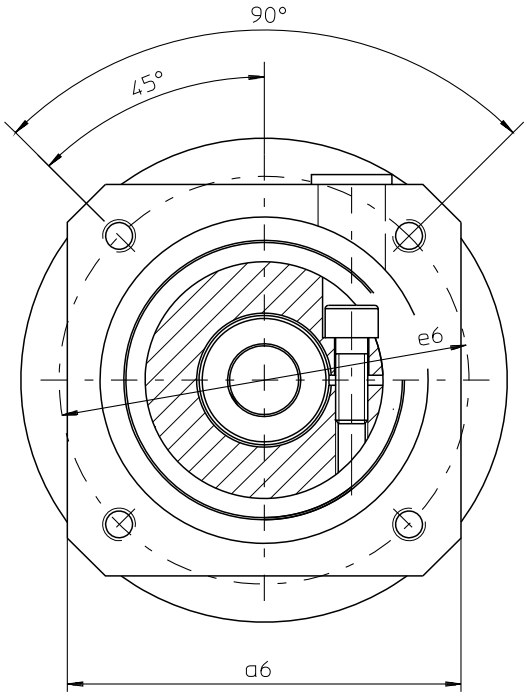
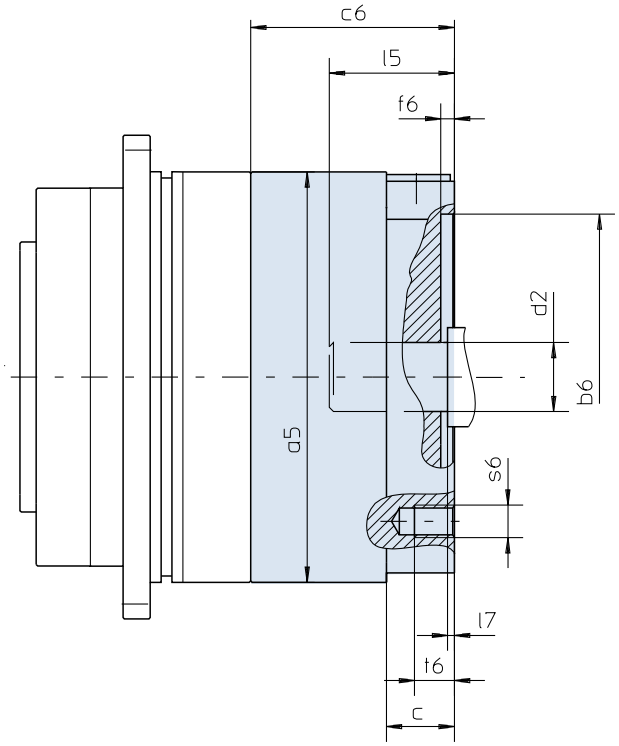
PHA321_MF - PHA821_MF
PHVA933_MF - PHVA1033_MF





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHA321	40,0H7	63	19	40	70	75	22	52,5	3,5	3,0	M5	11
PHA321	50,0H7	70	19	40	70	75	22	52,5	3,5	3,0	M4	9
PHA321	50,0H7	95	19	40	70	80	22	52,5	3,5	3,0	M6	13
PHA321	60,0H7	75	19	40	70	75	22	52,5	3,5	3,0	M5	11
PHA321	60,0H7	90	19	40	70	75	22	52,5	3,5	3,0	M5	11
PHA321	70,0H7	90	19	40	70	80	22	52,5	3,5	3,0	M5	11
PHA321	80,0H7	100	19	40	70	90	22	52,5	3,5	3,0	M6	13
PHA321	95,0H7	115	19	40	70	100	22	52,5	4,0	3,0	M8	22
PHA321	95,0H7	130	19	40	70	115	22	52,5	4,0	3,0	M8	18
PHA421	50,0H7	95	24	41	95	100	21	54,0	2,5	2,5	M6	13
PHA421	80,0H7	100	24	41	95	100	21	54,0	4,0	2,5	M6	13
PHA421	95,0H7	115	24	50	95	100	30	63,0	4,0	11,5	M8	16
PHA421	95,0H7	115	24	41	95	100	21	54,0	4,0	2,5	M8	21
PHA421	95,0H7	130	24	41	95	115	21	54,0	4,0	2,5	M8	21
PHA421	110,0H7	130	24	50	95	115	30	63,0	4,0	11,5	M8	16
PHA421	110,0H7	145	24	58	95	130	38	71,0	7,0	19,5	M8	16
PHA421	130,0H7	165	24	50	95	140	30	63,0	5,0	11,5	M10	20
PHA521	80,0H7	100	35	51	120	115	24	64,0	4,0	2,5	M6	13
PHA521	95,0H7	115	35	51	120	115	24	64,0	4,0	2,5	M8	16
PHA521	95,0H7	130	35	51	120	115	24	64,0	4,0	2,5	M8	16
PHA521	110,0H7	130	35	51	120	115	24	64,0	4,0	2,5	M8	16
PHA521	110,0H7	145	35	64	120	130	37	77,0	7,0	15,5	M8	14
PHA521	110,0H7	145	35	51	120	140	42	82,0	7,0	2,5	M8	16
PHA521	130,0H7	165	35	59	120	140	32	72,0	5,0	10,5	M10	20
PHA721/PHVA933	110,0H7	130	38	63	152	145	26	78,0	5,0	4,5	M8	14
PHA721/PHVA933	110,0H7	145	38	74	152	145	37	89,0	5,0	15,5	M8	16
PHA721/PHVA933	110,0H7	165	38	63	152	145	26	78,0	5,0	4,5	M10	26
PHA721/PHVA933	114,3H7	200	38	82	152	180	45	97,0	5,0	23,5	M12	25
PHA721/PHVA933	130,0H7	165	38	63	152	145	26	78,0	5,0	4,5	M10	26
PHA721/PHVA933	130,0H7	215	38	63	152	190	26	78,0	5,0	4,5	M12	26
PHA721/PHVA933	180,0H7	215	38	63	152	190	26	78,0	5,0	4,5	M12	26
PHA721/PHVA933	180,0H7	215	38	82	152	190	45	97,0	5,0	23,5	M12	25
PHA821/PHVA1033	114,3H7	200	48	82	212	190	34	92,5	4,0	3,5	M12	34
PHA821/PHVA1033	130,0H7	165	48	82	212	190	34	92,5	5,0	3,5	M10	18
PHA821/PHVA1033	130,0H7	215	48	82	212	190	34	92,5	5,0	3,5	M12	34
PHA821/PHVA1033	180,0H7	215	48	83	212	190	35	93,5	5,0	4,5	M12	35
PHA821/PHVA1033	250,0H7	300	48	86	212	260	38	96,5	6,0	7,5	M16	38

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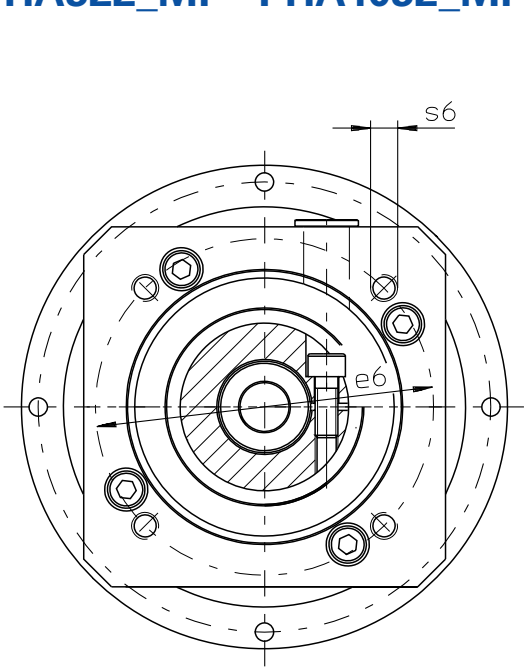
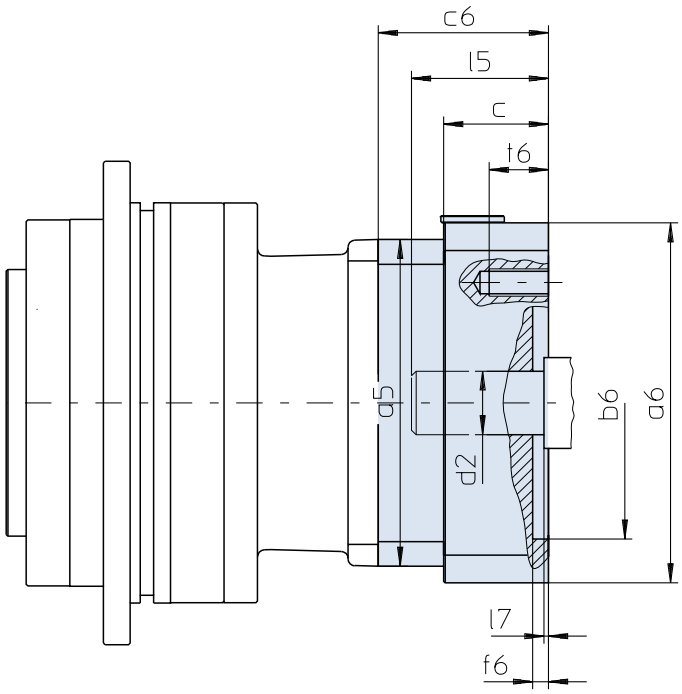
PHA322_MF - PHA1032_MF





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHA322	40,0H7	63	14	32	55	55	15	36,0	3,5	2,5	M5	10
PHA322	50,0H7	70	14	32	55	60	15	36,0	3,5	2,5	M4	9
PHA322	50,0H7	95	14	32	55	90	15	36,0	3,5	2,5	M6	15
PHA322	60,0H7	75	14	32	55	75	15	36,0	3,5	2,5	M5	10
PHA422	40,0H7	63	19	40	72	75	18	51,5	3,0	3,0	M5	11
PHA422	50,0H7	70	19	40	72	75	18	51,5	3,0	3,0	M4	9
PHA422	50,0H7	95	19	40	72	80	18	51,5	3,0	3,0	M6	13
PHA422	60,0H7	75	19	40	75	72	-	51,5	3,5	3,0	M5	11
PHA422	60,0H7	90	19	40	72	75	18	51,5	3,5	3,0	M5	9
PHA422	70,0H7	90	19	40	72	80	18	51,5	3,5	3,0	M5	9
PHA422	80,0H7	100	19	40	90	90	-	51,5	3,5	3,0	M6	13
PHA422	95,0H7	115	19	40	72	100	18	51,5	4,0	3,0	M8	18
PHA422	95,0H7	130	19	40	72	115	18	51,5	4,0	3,0	M8	18
PHA522	50,0H7	70	24	41	98	100	21	56,0	4,0	2,5	M4	10
PHA522	50,0H7	95	24	41	98	100	21	56,0	2,5	2,5	M6	13
PHA522	60,0H7	75	24	41	98	100	21	56,0	3,5	2,5	M5	9
PHA522	80,0H7	100	24	41	100	98	-	56,0	4,0	2,5	M6	13
PHA522	95,0H7	115	24	41	100	98	-	56,0	4,0	2,5	M8	16
PHA522	95,0H7	115	24	50	98	100	30	65,0	4,0	11,5	M8	16
PHA522	95,0H7	130	24	41	98	115	21	56,0	4,0	2,5	M8	16
PHA522	95,0H7	130	24	50	98	115	30	65,0	4,0	11,5	M8	16
PHA522	110,0H7	130	24	50	98	115	30	65,0	4,0	11,5	M8	16
PHA522	110,0H7	145	24	58	98	130	38	73,0	7,0	19,5	M8	16
PHA522	130,0H7	165	24	50	98	140	30	65,0	7,0	11,5	M10	20
PHA722	80,0H7	100	35	51	115	120	24	64,0	4,0	3,0	M6	13
PHA722	95,0H7	115	35	51	115	115	-	64,0	4,0	3,0	M8	16
PHA722	95,0H7	130	35	51	115	120	24	64,0	4,0	3,0	M8	16
PHA722	110,0H7	130	35	51	115	115	-	64,0	4,0	3,0	M8	16
PHA722	110,0H7	145	35	59	115	140	32	72,0	6,5	11,0	M8	16
PHA722	110,0H7	145	35	69	115	140	42	82,0	7,0	21,0	M8	16
PHA722	110,0H7	165	35	51	115	140	24	64,0	5,0	3,0	M10	24
PHA722	130,0H7	165	35	59	115	140	32	72,0	5,0	11,0	M10	20
PHA822	110,0H7	130	38	63	145	145	26	78,0	5,0	4,5	M8	14
PHA822	110,0H7	145	38	74	145	145	37	89,0	5,0	15,5	M8	16
PHA822	110,0H7	165	38	63	145	145	26	78,0	5,0	4,5	M10	26
PHA822	114,3H7	200	38	82	145	180	45	97,0	5,0	23,5	M12	25
PHA822	130,0H7	165	38	63	145	145	26	78,0	5,0	4,5	M10	26
PHA822	130,0H7	215	38	63	145	190	26	78,0	5,0	4,5	M12	26
PHA822	180,0H7	215	38	82	145	190	45	97,0	5,0	23,5	M12	25
PHA932/PHA1032	114,3H7	200	48	82	190	190	34	94,0	4,0	3,5	M12	34
PHA932/PHA1032	130,0H7	165	48	82	190	190	34	94,0	5,0	3,5	M10	18
PHA932/PHA1032	130,0H7	215	48	82	190	190	34	94,0	5,0	3,5	M12	34
PHA932/PHA1032	180,0H7	215	48	83	190	190	35	95,0	5,0	4,5	M12	35
PHA932/PHA1032	250,0H7	300	48	86	190	260	38	98,0	6,0	7,5	M16	38

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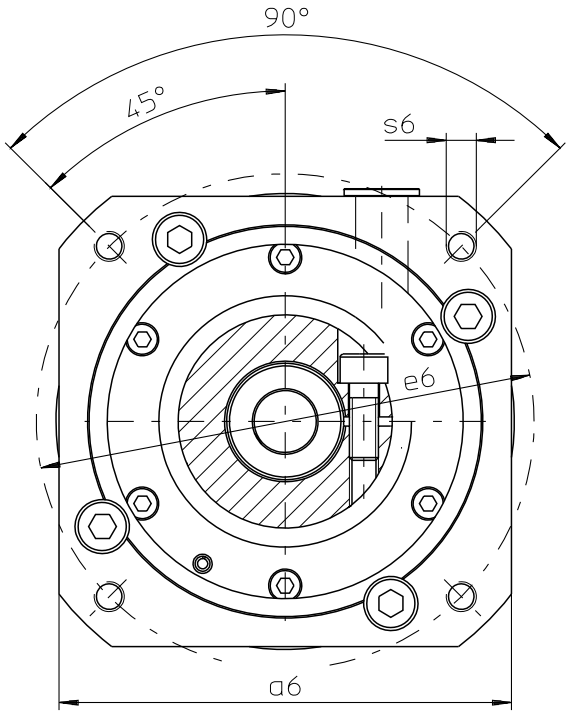
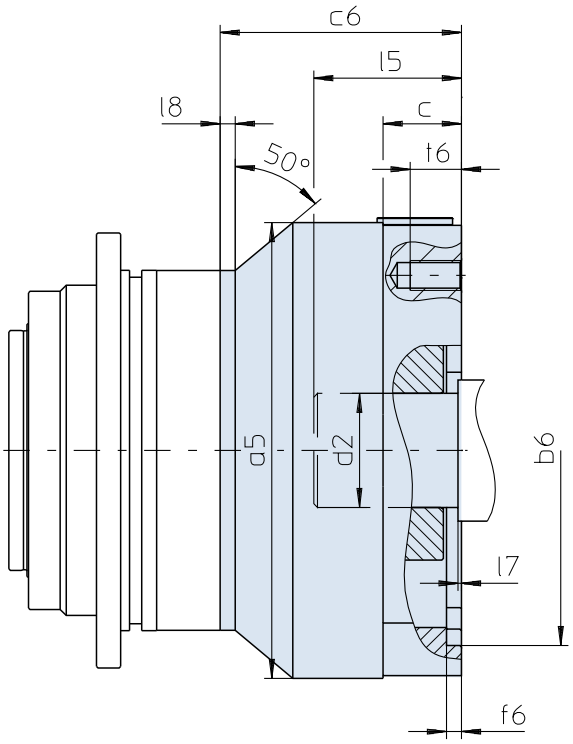
PHA321_MFL - PHA721_MFL
PHVA933_MFL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	l8	s6	t6
PHA321	95,0H7	115	24	50	95	100	30	65,5	4,0	11,5	-	M8	16
PHA321	95,0H7	115	24	41	95	100	21	56,5	4,0	2,5	5	M8	21
PHA321	95,0H7	130	24	41	95	115	21	56,5	4,0	2,5	5	M8	21
PHA321	110,0H7	130	24	50	95	115	30	65,5	4,0	11,5	5	M8	16
PHA321	110,0H7	145	24	58	95	130	38	73,5	7,0	19,5	5	M8	16
PHA321	130,0H7	165	24	50	95	140	30	65,5	5,0	11,5	5	M10	20
PHA421	80,0H7	100	32	51	114	115	24	65,5	4,0	2,5	-	M6	13
PHA421	110,0H7	145	32	64	114	130	37	78,5	7,0	15,5	5	M8	14
PHA421	110,0H7	145	32	51	114	140	42	83,5	7,0	2,5	5	M8	16
PHA421	130,0H7	165	32	59	114	140	32	73,5	5,0	10,5	5	M10	20
PHA521	110,0H7	130	38	63	152	145	26	82,0	5,0	4,5	5	M8	14
PHA521	110,0H7	165	38	63	152	145	26	82,0	5,0	4,5	-	M10	26
PHA521	114,3H7	200	38	82	152	180	45	101,0	5,0	23,5	5	M12	25
PHA521	130,0H7	165	38	63	152	145	26	82,0	5,0	4,5	5	M10	26
PHA521	130,0H7	215	38	63	152	190	26	82,0	5,0	4,5	5	M12	26
PHA521	180,0H7	215	38	63	152	190	26	82,0	5,0	4,5	5	M12	26
PHA521	180,0H7	215	38	82	152	190	45	101,0	5,0	23,5	5	M12	25
PHA721/PHVA933	180,0H7	215	48	83	208	190	35	103,0	5,0	4,5	5	M12	35
PHA721/PHVA933	250,0H7	300	48	86	208	260	38	106,0	6,0	7,5	5	M16	38

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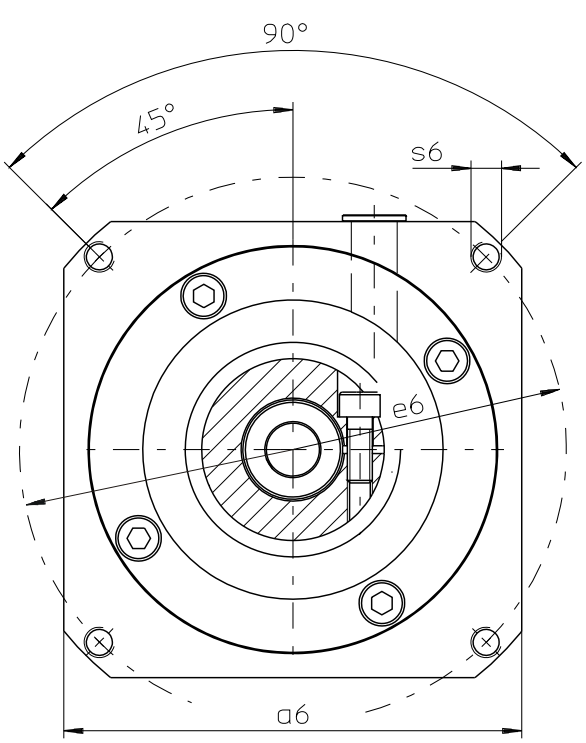
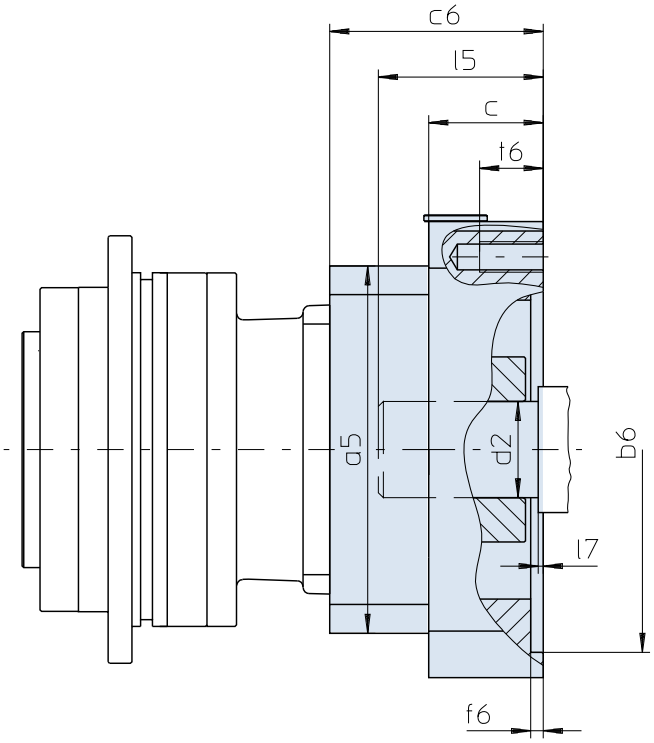
PHA422_MFL - PHA822_MFL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHA422	50,0H7	70	24	41	100	100	21	55,5	4,0	2,5	M4	10
PHA422	60,0H7	75	24	41	100	100	21	55,5	3,5	2,5	M5	9
PHA422	95,0H7	115	24	41	100	100	21	55,5	4,0	2,5	M8	21
PHA422	95,0H7	115	24	50	100	100	30	64,5	4,0	11,5	M8	16
PHA422	95,0H7	130	24	41	100	115	21	55,5	4,0	2,5	M8	16
PHA422	95,0H7	130	24	50	100	115	30	64,5	4,0	11,5	M8	16
PHA422	110,0H7	130	24	50	100	115	30	64,5	4,0	11,5	M8	16
PHA422	110,0H7	145	24	58	100	130	38	72,5	7,0	19,5	M8	16
PHA422	130,0H7	165	24	50	100	140	30	64,5	7,0	11,5	M10	20
PHA522	80,0H7	100	32	50	115	120	24	67,5	4,0	2,5	M6	13
PHA522	110,0H7	145	32	58	115	140	32	75,5	6,5	10,5	M8	16
PHA522	110,0H7	165	32	50	115	140	24	67,5	5,0	2,5	M10	24
PHA522	130,0H7	165	32	58	115	140	32	75,5	5,0	10,5	M10	20
PHA722	110,0H7	130	38	63	145	145	26	82,0	5,0	4,5	M8	14
PHA722	110,0H7	165	38	63	145	145	26	82,0	5,0	4,5	M10	26
PHA722	114,3H7	200	38	82	145	180	45	101,0	5,0	23,5	M12	25
PHA722	130,0H7	165	38	63	145	145	26	82,0	5,0	4,5	M10	26
PHA722	130,0H7	215	38	63	145	190	26	82,0	5,0	4,5	M12	26
PHA722	180,0H7	215	38	82	145	190	45	101,0	5,0	23,5	M12	25
PHA822	114,3H7	200	48	82	190	190	34	102,0	4,0	3,5	M12	34
PHA822	130,0H7	165	48	82	190	190	34	102,0	5,0	3,5	M10	18
PHA822	180,0H7	215	48	83	190	190	35	103,0	5,0	4,5	M12	35
PHA822	250,0H7	300	48	86	190	260	38	106,0	6,0	7,5	M16	38

ServoFit® PHKX Right-Angle Planetary Gear Units
Reductores planetarios ortogonales ***ServoFit® PHKX***
ServoFit® Riduttori planetari-rinvio angolo **PHKX**

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High Performance Precision Angular Planetary Gear Units

- Acceleration torque: 50 – 7500 Nm
- Low backlash: 3 – 6 arcmin
- Extremely high torsional and tilting stiffness
- Minimized mounting space
- FKM seal at input, continuous operation without cooling
- Advanced gear technology
- Low mass moments of inertia
- Readily attaches any synchronous servo motor
- Efficiency:
  2 stage ≥ 95 %
  3 stage ≥ 92 %

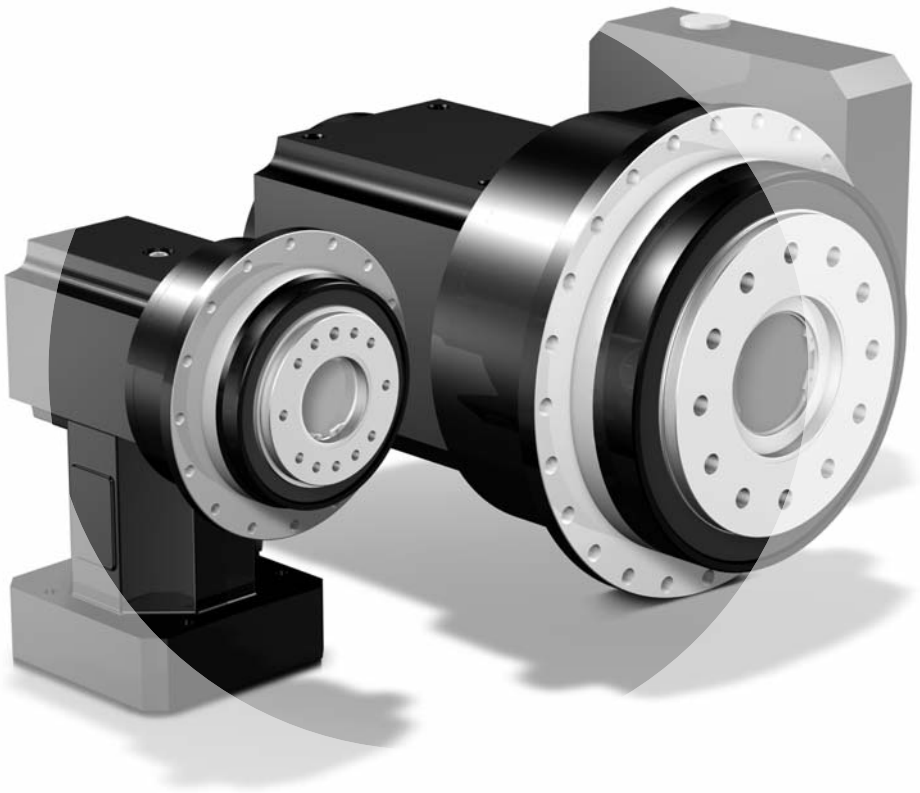
Reductores planetarios ortogonales de precisión de alto rendimiento

- *Par de aceleración: 50 – 7500 Nm*
- *Bajo juego de giro: 3 – 6 arcmin*
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Pequeño espacio de instalación*
- *Anillo retén de FKM a la entrada, trabajo permanente sin enfriamiento*
- *Tecnología superior de dentado*
- *Bajos momentos de inercia de masa*
- *Equipable a cualquier motor servo síncrono*
- *Rendimiento:*
  2 trenes ≥ 95 %
  3 trenes ≥ 92 %

Riduttori planetari angolari di precisione High-Performance

- Coppia di accelerazione: 50 – 7500 Nm
- Gioco minimo: 3 – 6 arcmin
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Ingombro ridotto
- Anello di tenuta in FKM in ingresso, funzionamento continuo senza raffreddamento
- Tecnologia della dentatura avanzata
- Momenti di inerzia ridotti
- Montabili su qualsiasi servomotore sincrono
- Rendimento:
  2 stadi ≥ 95 %
  3 stadi ≥ 92 %

ServoFit® PHKX



ServoFit® PHKX
Right-Angle Planetary Gear Units

*Reductores planetarios ortogonales **ServoFit® PHKX***

ServoFit® Riduttori planetari - rinvio angolo **PHKX**

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PHK

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Resumen del contenido PHKX

Tipificación	*PHK4*
Posiciones de instalación	*PHK5*
Ejecución de eje / de carcasa Salida PH	*PHK6*
Tabla de selección Reductores planetarios ortogonales ServoFit® PHKX	*PHK7*
Dibujos acotados Reductores planetarios ortogonales ServoFit® PHKX	*PHK13*

Indice PHKX

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Disegni quotati ServoFit®Riduttori planetari-rinvio angolo PHKX	PHK13

Type designation / *Tipificación* / Identificazione dei modelli

PH 7 2 1 F 0050 KX701VF 0010 MF

1 2 3 4 5 6 7 8 9

1 Gear unit type
PH – Planetary gear unit

2 Planetary gear unit size

3 Generation number

4 Stages PH gear unit
1 – 1 stage
2 – 2 stage

5 Design PH gear unit
F – flange shaft

6 Transmission ratio PH gear unit i x 10

7 Angular gear input
KX – right-angle gear units 1-stage

8 Transmission ratio KX gear unit i x 10

9 Mounting series
MF – Motor adapter with FlexiAdapt® coupling
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page PHK15, please observe the max. dimensions).

Ordering data according to the type designation above.
Further ordering details:
– Mounting position
– Access clamping screw motor coupling
– Information as to whether the radial shaft seals on the output are made from FKM or NBR. Recommendation: FKM for an operating time ≥ 60%
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

The torques and forces specified in this catalog only apply under the following conditions:
- For the attachment of the flange shaft and the gear unit housing on the machine side using screws of quality 12.9
- If the gear unit housings are adjusted at the pilot øb1 or øb2 (H7)
- If the flange shaft is adjusted with the connecting element at the pilot ød or øv

1 Tipo de reductor
PH *– Reductor planetario*

2 Tamaño del reductor planetario

3 Cifra de generación

4 Número de trenes reductor PH
1 *– 1 tren*
2 *– 2 trenes*

5 Ejecución reductor PH
F *– Eje con brida*

6 Número característico de la relación de reducción reductor PH i x 10

7 Entrada angular
KX *– Reductor ortogonal 1 tren*

8 Número característico de la relación de reducción reductor KX i x 10

9 Grupos de opciones
MF *– Adaptador de motor con acoplamiento FlexiAdapt®*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. Salida de motor y conexión de motor a partir de la página PHK15, por favor observar las dimensiones máximas).

Datos de pedido de acuerdo a la tipificación indicada arriba.
Otros datos de pedido:
– *Posición de instalación*
– *Acceso al tornillo de apriete del acoplamiento de motor*
– *Indicación si anillos retén en la salida de FKM o de NBR.*
Recomendación:
FKM para duración de conexión ≥ 60%.
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

Los pares y fuerzas indicados en este catálogo se aplican bajo las siguientes condiciones:
- *Al fijar el eje de brida y la carcasa del reductor en el lado de la máquina con tornillos de la calidad 12.9*
- *Si las carcasas del reductor están ajustadas en el borde de ajuste øb1 o øb2 (H7)*
- *Si el eje de brida está ajustada con el elemento de unión en el borde de ajuste ød o øv.*

1 Modello di riduttore
PH – Riduttore planetario

2 Taglia del riduttore angolare

3 Numero di generazione

4 Numero di stadi riduttore PH
1 – 1-stadio
2 – 2-stadi

5 Esecuzione del riduttore PH
F – Albero flangiato

6 Rapporto di riduzione riduttore PH i x 10

7 Ingresso angolare
KX – Riduttore angolare 1-stadio

8 Rapporto di riduzione riduttore KX i x 10

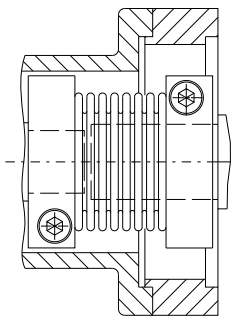
9 Opzioni annessi
MF – adattatore motore con giunto FlexiAdapt®
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento del motore da pagina PHK15, si raccomanda di rispettare le misure massime).

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.

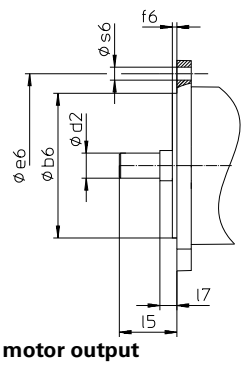
Altri dati dell'ordine:
– Posizione di montaggio
– Accesso al giunto di accoppiamonto motore
– Indicare se gli anelli di tenuta radiali dell'albero uscita sono in FKM o NBR. Raccomandazione: FKM per fattore di servizio ≥ 60%.
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

Le coppie e le forze indicate in questo catalogo si applicano alle seguenti condizioni:
- Per il fissaggio dell' albero flangiato e dell' scatola del riduttore sul lato macchina con viti di qualità 12.9
- Se le scatole del riduttore sono adattate sul bordo di accoppiamento øb1 o øb2 (H7)
- Se l' albero flangiato è adattato dell' elemento di collegamento sul bordo di accoppiamento ød o øv

PH721F 0050 KX701VF 0010 MF



FlexiAdapt® Coupling MF
FlexiAdapt® Acoplamiento MF
Giunto FlexiAdapt® MF



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Mounting positions / *Posiciones de instalación* / Posizioni di montaggio

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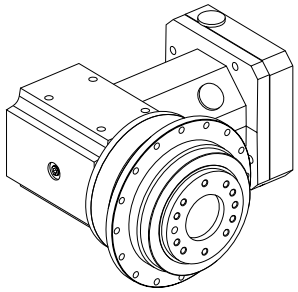
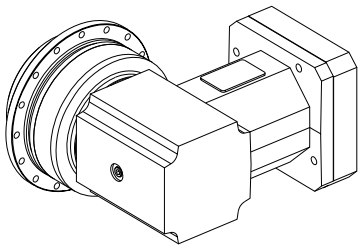
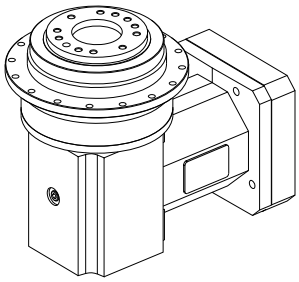
EL1



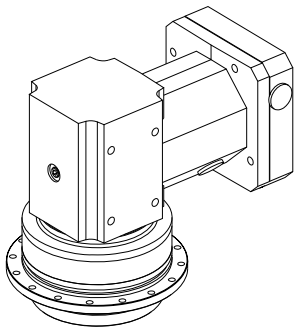
EL2



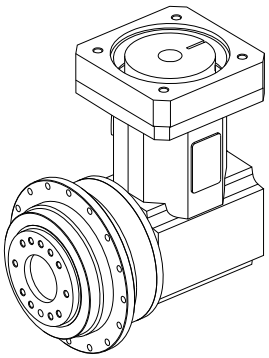
EL3



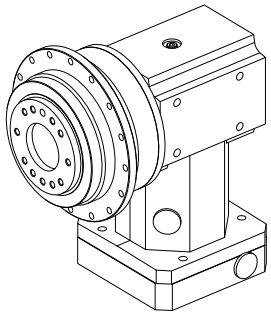
EL4



EL5



EL6



The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

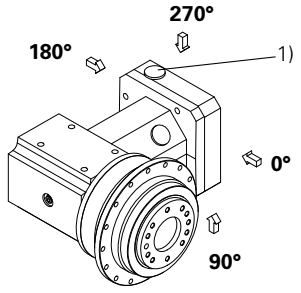
Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).



1) access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamonto motore

Shaft / housing design Output **PH**
ISO 9409 (PH3 - PH8)

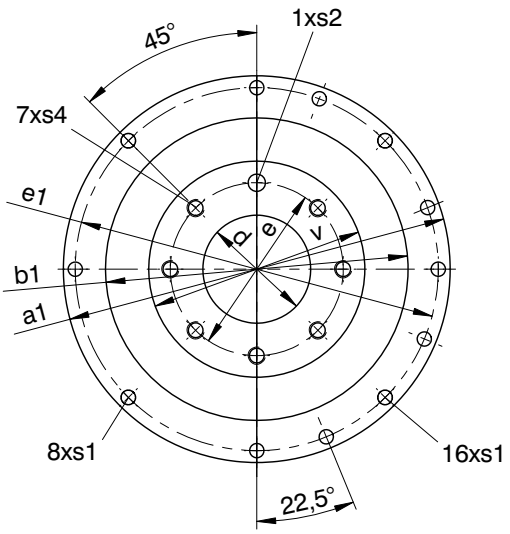
*Ejecución de eje / de carcasa salida **PH***
ISO 9409 (PH3 - PH8)

Esecuzione albero / carcassa Uscita **PH**
ISO 9409 (PH3 - PH8)

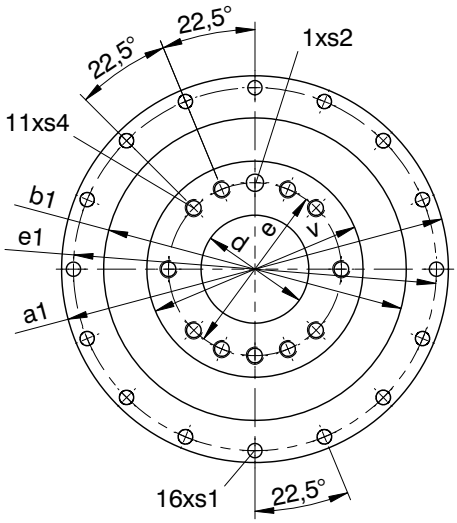
STÖBER

Flange shaft | ***Eje con brida*** | **Albero flangiato**

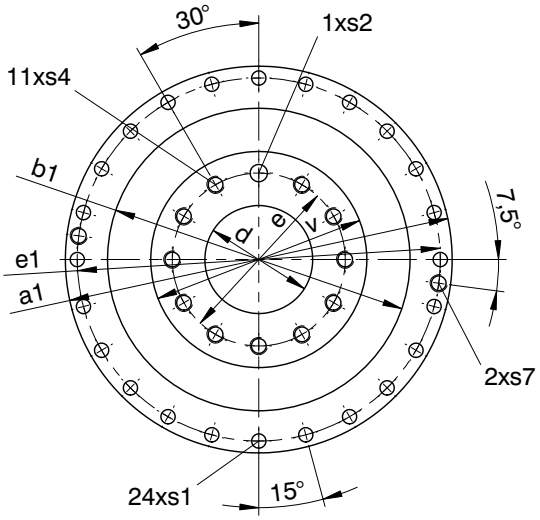
PH3 | PH4



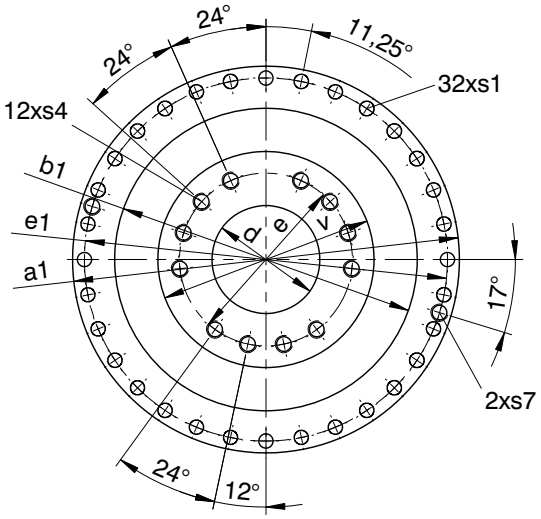
PH5



PH7 + PH8



PH9 + PH10



Shaft design “F” | ***Ejecución de eje “F”*** | **Esecuzione albero “F”**

Typ	øa1	øb1	ød	øe	øe1	øs1	øs2	s4	s7	v
PH3	86h7	64h7	20,0H6	31,5	79	4,5	5H7	M5	-	40h7
PH4	118h7	90h7	31,5H6	50,0	109	5,5	6H7	M6	-	63h7
PH5	145h7	110h7	40,0H6	63,0	135	5,5	6H7	M6	-	80h7
PH7	179h7	140h7	50,0H6	80,0	168	6,6	8H7	M8	-	100h7
PH8	247h7	200h7	80,0H6	125,0	233	9,0	10H7	M10	M10	160h7
PH9	300	255h7	90,0H6	140,0	280	13,5	-	M16	M8	180h7
PH10	330	285h7	95,0H6	160,0	310	13,5	-	M20	M10	200h7

Selection table
ServoFit® PHKX
Right-Angle Planetary Gear Units

Tabla de selección
Red. planetarios ortogonales ***ServoFit® PHKX***

Tabella di selezione
ServoFit® Riduttori planetari - rinvio angolo
PHKX

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Selection table **ServoFit® PHKX** Right-Angle Planetary Gear Units

*Tabla de selección Red. planetarios ortogonales **ServoFit® PHKX***

Tabella di selezione **ServoFit®** Riduttori planetari - rinvio angolo **PHKX**

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Symbols:

i – Gear unit ratio
i_{exakt} – Exact math. ratio
n_{1MAX} – Max. input speed
DB – Continuous operation (see mounting pos. page PHK5)
ZB – Cycle operation (at ambient temperature 20°C, also see page A11/A12)
J_1 – Mass momemts of inertia (related to input)
G – Weight
$\Lambda\varphi_2$ – Backlash
C_2 – Gear unit rigidity (related to output at M_{2B})
L_{PA} – Max. noise level (n_1 = 2000 rpm)
M_{2N} – Rated torque [1)]
M_{2B} – Max. perm. acceleration torque
M_{2NOT} – Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

[1)] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

Denominaciones:

i – *Relación de reducción*
i_{exakt} – *Relación de reducción matem. exacta*
n_{1MAX} – *Velocidad máx. de entrada*
DB – Trabajo continuo (ver posiciones de instalación página PHK5)
ZB – Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
J_1 – *Momento de inercia de masa (referido a la entrada)*
G – *Peso*
$\Lambda\varphi_2$ – *Juego de giro*
C_2 – *Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} – *Ruido máx. de marcha (n_1 = 2000 min^{-1})*
M_{2N} – *Par nominal [1)]*
M_{2B} – *Par máx. admisible de aceleración*
M_{2NOT} – *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

[1)] Los valores se refieren a la velocidad de entrada n_1 = 1500 min^{-1}

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

Simboli:

i – Rapporto di riduzione
i_{exakt} – Rapporto di riduzione mat. preciso
n_{1MAX} – Max. numero di giri in ingresso
DB – funzionamento continuo (vedere posizioni di montaggio pagina PHK5)
ZB – funzionamento ciclico (a temperatura ambiente di 20°C, vedere anche pagina A11/A12)
J_1 – Momento di inerzia (riferito all'ingresso)
G – Peso
$\Lambda\varphi_2$ – Gioco
C_2 – Rigidità del riduttore (riferito all'uscita per M_{2B})
L_{PA} – Rumorosità max. (n_1 = 2000 min^{-1})
M_{2N} – Coppia nominale [1)]
M_{2B} – Coppia di accelerazione max. ammessa
M_{2NOT} – Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

[1)] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min^{-1}.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

Right-Angle Planetary Gear Units **PHKX**
*Reductores planetarios ortogonales **PHKX***
Riduttori planetari-rinvio angolo **PHKX**

STÖBER

Please take notice of the indications on page PHK8! ***¡Por favor observe las indicaciones en la página PHK8!*** **Si raccomanda di rispettare le avvertenze a pagina PHK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH321KX3 (M2BMAX=62 Nm)													
5,000	5/1	**PH321F0050 KX301VF0010 MF**	3000	2500	4500	1,1	3,4	6	7,0	70	45	62	110
7,000	7/1	**PH321F0070 KX301VF0010 MF**	3000	2500	4500	1,0	3,4	5,5	8,9	70	45	60	130
10,00	10/1	**PH321F0050 KX301VF0020 MF**	3500	3000	5500	0,82	3,4	6	7,0	66	45	62	130
14,00	14/1	**PH321F0070 KX301VF0020 MF**	3500	3000	5500	0,81	3,4	5,5	8,9	66	45	60	130
15,00	15/1	**PH321F0050 KX301VF0030 MF**	3500	3500	6000	0,75	3,4	6	7,0	64	45	62	130
20,00	20/1	**PH321F0100 KX301VF0020 MF**	3500	3000	5500	0,81	3,4	5	9,0	66	30	50	100
21,00	21/1	**PH321F0070 KX301VF0030 MF**	3500	3500	6000	0,75	3,4	5,5	8,9	64	45	60	130
30,00	30/1	**PH321F0100 KX301VF0030 MF**	3500	3500	6000	0,75	3,4	5	9,0	64	30	50	100
PH322KX3 (M2BMAX=65 Nm)													
35,00	35/1	**PH322F0350 KX301VF0010 MF**	3000	2500	4500	1,0	3,9	4,5	14	70	45	65	130
40,00	40/1	**PH322F0200 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	4,5	14	66	45	65	130
50,00	50/1	**PH322F0250 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	4,5	14	66	45	65	130
56,00	56/1	**PH322F0280 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	4,5	14	66	45	60	130
60,00	60/1	**PH322F0200 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	4,5	14	64	45	65	130
70,00	70/1	**PH322F0350 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	4,5	14	66	45	65	130
75,00	75/1	**PH322F0250 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	4,5	14	64	45	65	130
80,00	80/1	**PH322F0400 KX301VF0020 MF**	3500	3000	5500	0,81	3,9	4,5	12	66	30	50	100
84,00	84/1	**PH322F0280 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	4,5	14	64	45	60	130
100,0	100/1	**PH322F0500 KX301VF0020 MF**	3500	3000	5500	0,80	3,9	4	14	66	45	65	130
105,0	105/1	**PH322F0350 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	4,5	14	64	45	65	130
120,0	120/1	**PH322F0400 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	4,5	12	64	30	50	100
140,0	140/1	**PH322F0700 KX301VF0020 MF**	3500	3000	5500	0,80	3,9	4	15	66	45	60	130
150,0	150/1	**PH322F0500 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	4	14	64	45	65	130
200,0	200/1	**PH322F1000 KX301VF0020 MF**	3500	3000	5500	0,80	3,9	4	12	66	30	50	100
210,0	210/1	**PH322F0700 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	4	15	64	45	60	130
300,0	300/1	**PH322F1000 KX301VF0030 MF**	3500	3500	6000	0,75	3,9	4	12	64	30	50	100
PH421KX4 (M2BMAX=120 Nm)													
4,000	4/1	**PH421F0040 KX401VF0010 MF**	2500	2000	4000	2,8	6,7	5,5	11	72	77	96	210
5,000	5/1	**PH421F0050 KX401VF0010 MF**	2500	2000	4000	2,7	6,7	5	15	72	90	120	240
7,000	7/1	**PH421F0070 KX401VF0010 MF**	2500	2000	4000	2,5	6,7	4,5	19	72	90	110	240
8,000	8/1	**PH421F0040 KX401VF0020 MF**	2500	2500	5000	1,7	6,7	5,5	11	68	77	96	210
10,00	10/1	**PH421F0050 KX401VF0020 MF**	2500	2500	5000	1,7	6,7	5	15	68	90	120	240
12,00	12/1	**PH421F0040 KX401VF0030 MF**	3000	3000	5500	1,5	6,7	5,5	11	66	77	96	210
14,00	14/1	**PH421F0070 KX401VF0020 MF**	2500	2500	5000	1,7	6,7	4,5	19	68	90	110	240
15,00	15/1	**PH421F0050 KX401VF0030 MF**	3000	3000	5500	1,5	6,7	5	15	66	90	120	240
20,00	20/1	**PH421F0100 KX401VF0020 MF**	2500	2500	5000	1,6	6,7	4	17	68	60	100	200
21,00	21/1	**PH421F0070 KX401VF0030 MF**	3000	3000	5500	1,4	6,7	4,5	19	66	90	110	240
30,00	30/1	**PH421F0100 KX401VF0030 MF**	3000	3000	5500	1,4	6,7	4	17	66	60	100	200
PH422KX3 (M2BMAX=130 Nm)													
32,00	32/1	**PH422F0160 KX301VF0020 MF**	3500	3000	5500	0,84	6,3	3,5	22	66	90	130	240
35,00	35/1	**PH422F0350 KX301VF0010 MF**	3000	2500	4500	1,0	6,3	3,5	26	70	90	130	240
40,00	40/1	**PH422F0200 KX301VF0020 MF**	3500	3000	5500	0,84	6,3	3,5	25	66	90	130	240
48,00	48/1	**PH422F0160 KX301VF0030 MF**	3500	3500	6000	0,76	6,3	3,5	22	64	90	130	240
50,00	50/1	**PH422F0250 KX301VF0020 MF**	3500	3000	5500	0,82	6,3	3,5	26	66	90	130	240
56,00	56/1	**PH422F0280 KX301VF0020 MF**	3500	3000	5500	0,81	6,3	3,5	24	66	90	130	240
60,00	60/1	**PH422F0200 KX301VF0030 MF**	3500	3500	6000	0,76	6,3	3,5	25	64	90	130	240
70,00	70/1	**PH422F0350 KX301VF0020 MF**	3500	3000	5500	0,81	6,3	3,5	26	66	90	130	240
75,00	75/1	**PH422F0250 KX301VF0030 MF**	3500	3500	6000	0,76	6,3	3,5	26	64	90	130	240
80,00	80/1	**PH422F0400 KX301VF0020 MF**	3500	3000	5500	0,81	6,3	3,5	24	66	90	130	240
84,00	84/1	**PH422F0280 KX301VF0030 MF**	3500	3500	6000	0,75	6,3	3,5	24	64	90	130	240
100,0	100/1	**PH422F0500 KX301VF0020 MF**	3500	3000	5500	0,81	6,3	3	26	66	90	130	240
105,0	105/1	**PH422F0350 KX301VF0030 MF**	3500	3500	6000	0,75	6,3	3,5	26	64	90	130	240
120,0	120/1	**PH422F0400 KX301VF0030 MF**	3500	3500	6000	0,75	6,3	3,5	24	64	90	130	240

PHK

Right-Angle Planetary Gear Units **PHKX**
Reductores planetarios ortogonales ***PHKX***
Riduttori planetari-rinvio angolo **PHKX**

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Please take notice of the indications on page PHK8! ***¡Por favor observe las indicaciones en la página PHK8!*** **Si raccomanda di rispettare le avvertenze a pagina PHK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH422KX3 (M2BMAX=130 Nm)													
140,0	140/1	**PH422F0700 KX301VF0020 MF**	3500	3000	5500	0,81	6,3	3	26	66	90	110	240
150,0	150/1	**PH422F0500 KX301VF0030 MF**	3500	3500	6000	0,75	6,3	3	26	64	90	130	240
200,0	200/1	**PH422F1000 KX301VF0020 MF**	3500	3000	5500	0,81	6,3	3	20	66	60	100	200
210,0	210/1	**PH422F0700 KX301VF0030 MF**	3500	3500	6000	0,75	6,3	3	26	64	90	110	240
300,0	300/1	**PH422F1000 KX301VF0030 MF**	3500	3500	6000	0,75	6,3	3	20	64	60	100	200
PH521KX5 (M2BMAX=300 Nm)													
4,000	4/1	**PH521F0040 KX501VF0010 MF**	2500	2000	3500	9,0	12,9	5,5	28	74	190	240	520
5,000	5/1	**PH521F0050 KX501VF0010 MF**	2500	2000	3500	8,4	12,9	5	36	74	220	300	600
7,000	7/1	**PH521F0070 KX501VF0010 MF**	2500	2000	3500	8,0	12,9	4,5	47	74	210	270	600
8,000	8/1	**PH521F0040 KX501VF0020 MF**	2500	2500	4500	5,7	12,9	5,5	28	70	190	240	520
10,00	10/1	**PH521F0050 KX501VF0020 MF**	2500	2500	4500	5,5	12,9	5	36	70	220	300	600
12,00	12/1	**PH521F0040 KX501VF0030 MF**	3000	3000	5000	4,9	12,9	5,5	28	68	190	240	520
14,00	14/1	**PH521F0070 KX501VF0020 MF**	2500	2500	4500	5,4	12,9	4,5	47	70	210	270	600
15,00	15/1	**PH521F0050 KX501VF0030 MF**	3000	3000	5000	4,9	12,9	5	36	68	220	300	600
20,00	20/1	**PH521F0100 KX501VF0020 MF**	2500	2500	4500	5,3	12,9	4	45	70	140	250	500
21,00	21/1	**PH521F0070 KX501VF0030 MF**	3000	3000	5000	4,8	12,9	4,5	47	68	210	270	600
30,00	30/1	**PH521F0100 KX501VF0030 MF**	3000	3000	5000	4,8	12,9	4	45	68	140	250	500
PH522KX4 (M2BMAX=320 Nm)													
32,00	32/1	**PH522F0160 KX401VF0020 MF**	2500	2500	5000	1,7	10,9	3,5	52	68	210	320	600
35,00	35/1	**PH522F0350 KX401VF0010 MF**	2500	2000	4000	2,5	10,9	3,5	64	72	220	320	600
40,00	40/1	**PH522F0200 KX401VF0020 MF**	2500	2500	5000	1,7	10,9	3,5	60	68	220	320	600
48,00	48/1	**PH522F0160 KX401VF0030 MF**	3000	3000	5500	1,5	10,9	3,5	52	66	210	320	600
50,00	50/1	**PH522F0250 KX401VF0020 MF**	2500	2500	5000	1,7	10,9	3,5	63	68	220	320	600
56,00	56/1	**PH522F0280 KX401VF0020 MF**	2500	2500	5000	1,6	10,9	3,5	57	68	210	320	600
60,00	60/1	**PH522F0200 KX401VF0030 MF**	3000	3000	5500	1,5	10,9	3,5	60	66	220	320	600
70,00	70/1	**PH522F0350 KX401VF0020 MF**	2500	2500	5000	1,6	10,9	3,5	64	68	220	320	600
75,00	75/1	**PH522F0250 KX401VF0030 MF**	3000	3000	5500	1,5	10,9	3,5	63	66	220	320	600
80,00	80/1	**PH522F0400 KX401VF0020 MF**	2500	2500	5000	1,6	10,9	3,5	56	68	210	320	600
84,00	84/1	**PH522F0280 KX401VF0030 MF**	3000	3000	5500	1,4	10,9	3,5	57	66	210	320	600
100,0	100/1	**PH522F0500 KX401VF0020 MF**	2500	2500	5000	1,6	10,9	3	64	68	220	320	600
105,0	105/1	**PH522F0350 KX401VF0030 MF**	3000	3000	5500	1,4	10,9	3,5	64	66	220	320	600
120,0	120/1	**PH522F0400 KX401VF0030 MF**	3000	3000	5500	1,4	10,9	3,5	56	66	210	320	600
140,0	140/1	**PH522F0700 KX401VF0020 MF**	2500	2500	5000	1,6	10,9	3	65	68	210	270	600
150,0	150/1	**PH522F0500 KX401VF0030 MF**	3000	3000	5500	1,4	10,9	3	64	66	220	320	600
200,0	200/1	**PH522F1000 KX401VF0020 MF**	2500	2500	5000	1,6	10,9	3	52	68	140	250	500
210,0	210/1	**PH522F0700 KX401VF0030 MF**	3000	3000	5500	1,4	10,9	3	65	66	210	270	600
300,0	300/1	**PH522F1000 KX401VF0030 MF**	3000	3000	5500	1,4	10,9	3	52	66	140	250	500
PH721KX7 (M2BMAX=650 Nm)													
4,000	4/1	**PH721F0040 KX701VF0010 MF**	1800	1600	3000	30	23,5	5,5	83	76	380	480	920
5,000	5/1	**PH721F0050 KX701VF0010 MF**	1800	1600	3000	28	23,5	5	104	76	440	600	1150
7,000	7/1	**PH721F0070 KX701VF0010 MF**	1800	1600	3000	26	23,5	4,5	119	76	440	650	1240
8,000	8/1	**PH721F0040 KX701VF0020 MF**	1800	1800	3500	16	23,5	5,5	83	72	380	480	1040
10,00	10/1	**PH721F0050 KX701VF0020 MF**	1800	1800	3500	15	23,5	5	104	72	440	600	1300
12,00	12/1	**PH721F0040 KX701VF0030 MF**	2100	2100	4000	13	23,5	5,5	83	70	380	480	1040
14,00	14/1	**PH721F0070 KX701VF0020 MF**	1800	1800	3500	15	23,5	4,5	119	72	440	650	1240
15,00	15/1	**PH721F0050 KX701VF0030 MF**	2100	2100	4000	13	23,5	5	104	70	440	600	1300
20,00	20/1	**PH721F0100 KX701VF0020 MF**	1800	1800	3500	15	23,5	4	104	72	300	500	1000
21,00	21/1	**PH721F0070 KX701VF0030 MF**	2100	2100	4000	13	23,5	4,5	119	70	440	650	1240
30,00	30/1	**PH721F0100 KX701VF0030 MF**	2100	2100	4000	13	23,5	4	104	70	300	500	1000

Right-Angle Planetary Gear Units **PHKX**
*Reductores planetarios ortogonales **PHKX***
Riduttori planetari-rinvio angolo **PHKX**

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Please take notice of the indications on page PHK8! ***¡Por favor observe las indicaciones en la página PHK8!*** **Si raccomanda di rispettare le avvertenze a pagina PHK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH722KX5 (M2BMAX=700 Nm)													
32,00	32/1	**PH722F0160 KX501VF0020 MF**	2500	2500	4500	5,6	20,9	3,5	111	70	440	700	1370
35,00	35/1	**PH722F0350 KX501VF0010 MF**	2500	2000	3500	7,8	20,9	3,5	139	74	440	700	1400
40,00	40/1	**PH722F0200 KX501VF0020 MF**	2500	2500	4500	5,5	20,9	3,5	129	70	440	700	1400
48,00	48/1	**PH722F0160 KX501VF0030 MF**	3000	3000	5000	4,9	20,9	3,5	111	68	440	700	1370
50,00	50/1	**PH722F0250 KX501VF0020 MF**	2500	2500	4500	5,4	20,9	3,5	135	70	440	700	1400
56,00	56/1	**PH722F0280 KX501VF0020 MF**	2500	2500	4500	5,4	20,9	3,5	122	70	440	700	1370
60,00	60/1	**PH722F0200 KX501VF0030 MF**	3000	3000	5000	4,9	20,9	3,5	129	68	440	700	1400
70,00	70/1	**PH722F0350 KX501VF0020 MF**	2500	2500	4500	5,4	20,9	3,5	139	70	440	700	1400
75,00	75/1	**PH722F0250 KX501VF0030 MF**	3000	3000	5000	4,9	20,9	3,5	135	68	440	700	1400
80,00	80/1	**PH722F0400 KX501VF0020 MF**	2500	2500	4500	5,3	20,9	3,5	122	70	440	700	1370
84,00	84/1	**PH722F0280 KX501VF0030 MF**	3000	3000	5000	4,8	20,9	3,5	122	68	440	700	1370
100,0	100/1	**PH722F0500 KX501VF0020 MF**	2500	2500	4500	5,3	20,9	3	139	70	440	700	1400
105,0	105/1	**PH722F0350 KX501VF0030 MF**	3000	3000	5000	4,8	20,9	3,5	139	68	440	700	1400
120,0	120/1	**PH722F0400 KX501VF0030 MF**	3000	3000	5000	4,8	20,9	3,5	122	68	440	700	1370
140,0	140/1	**PH722F0700 KX501VF0020 MF**	2500	2500	4500	5,3	20,9	3	140	70	440	650	1240
150,0	150/1	**PH722F0500 KX501VF0030 MF**	3000	3000	5000	4,8	20,9	3	139	68	440	700	1400
200,0	200/1	**PH722F1000 KX501VF0020 MF**	2500	2500	4500	5,3	20,9	3	111	70	300	500	1000
210,0	210/1	**PH722F0700 KX501VF0030 MF**	3000	3000	5000	4,8	20,9	3	140	68	440	650	1240
300,0	300/1	**PH722F1000 KX501VF0030 MF**	3000	3000	5000	4,8	20,9	3	111	68	300	500	1000
PH821KX8 (M2BMAX=1600 Nm)													
4,000	4/1	**PH821F0040 KX801VF0010 MF**	1000	750	2000	101	56,0	5,5	174	80	770	1060	1750
5,000	5/1	**PH821F0050 KX801VF0010 MF**	1000	750	2000	92	56,0	5	226	80	960	1320	2190
7,000	7/1	**PH821F0070 KX801VF0010 MF**	1000	750	2000	85	56,0	4,5	288	80	1000	1600	2770
8,000	8/1	**PH821F0040 KX801VF0020 MF**	1100	1100	2500	55	56,0	5,5	174	76	770	1060	2080
10,00	10/1	**PH821F0050 KX801VF0020 MF**	1100	1100	2500	53	56,0	5	226	76	960	1320	2600
12,00	12/1	**PH821F0040 KX801VF0030 MF**	1300	1300	3000	46	56,0	5,5	174	74	770	1060	2080
14,00	14/1	**PH821F0070 KX801VF0020 MF**	1100	1100	2500	51	56,0	4,5	288	76	1000	1600	2770
15,00	15/1	**PH821F0050 KX801VF0030 MF**	1300	1300	3000	45	56,0	5	226	74	960	1320	2600
20,00	20/1	**PH821F0100 KX801VF0020 MF**	1100	1100	2500	50	56,0	4	262	76	800	1200	2400
21,00	21/1	**PH821F0070 KX801VF0030 MF**	1300	1300	3000	44	56,0	4,5	288	74	1000	1600	2770
30,00	30/1	**PH821F0100 KX801VF0030 MF**	1300	1300	3000	44	56,0	4	262	74	800	1200	2400
PH822KX7 (M2BMAX=2000 Nm)													
32,00	32/1	**PH822F0160 KX701VF0020 MF**	1800	1800	3500	16	51,0	3,5	381	72	1100	1860	3150
35,00	35/1	**PH822F0350 KX701VF0010 MF**	1800	1600	3000	26	51,0	3,5	432	76	1250	2000	3200
40,00	40/1	**PH822F0200 KX701VF0020 MF**	1800	1800	3500	16	51,0	3,5	410	72	1250	2000	3200
48,00	48/1	**PH822F0160 KX701VF0030 MF**	2100	2100	4000	13	51,0	3,5	381	70	1100	1860	3150
50,00	50/1	**PH822F0250 KX701VF0020 MF**	1800	1800	3500	15	51,0	3,5	448	72	1250	2000	3200
56,00	56/1	**PH822F0280 KX701VF0020 MF**	1800	1800	3500	15	51,0	3,5	411	72	1100	2000	3150
60,00	60/1	**PH822F0200 KX701VF0030 MF**	2100	2100	4000	13	51,0	3,5	410	70	1250	2000	3200
70,00	70/1	**PH822F0350 KX701VF0020 MF**	1800	1800	3500	15	51,0	3,5	432	72	1250	2000	3200
75,00	75/1	**PH822F0250 KX701VF0030 MF**	2100	2100	4000	13	51,0	3,5	448	70	1250	2000	3200
80,00	80/1	**PH822F0400 KX701VF0020 MF**	1800	1800	3500	15	51,0	3,5	406	72	1100	1920	3150
84,00	84/1	**PH822F0280 KX701VF0030 MF**	2100	2100	4000	13	51,0	3,5	411	70	1100	2000	3150
100,0	100/1	**PH822F0500 KX701VF0020 MF**	1800	1800	3500	15	51,0	3	428	72	1250	2000	3200
105,0	105/1	**PH822F0350 KX701VF0030 MF**	2100	2100	4000	13	51,0	3,5	432	70	1250	2000	3200
120,0	120/1	**PH822F0400 KX701VF0030 MF**	2100	2100	4000	13	51,0	3,5	406	70	1100	1920	3150
140,0	140/1	**PH822F0700 KX701VF0020 MF**	1800	1800	3500	15	51,0	3	417	72	1000	1600	2770
150,0	150/1	**PH822F0500 KX701VF0030 MF**	2100	2100	4000	12	51,0	3	428	70	1250	2000	3200
200,0	200/1	**PH822F1000 KX701VF0020 MF**	1800	1800	3500	15	51,0	3	304	72	800	1200	2400
210,0	210/1	**PH822F0700 KX701VF0030 MF**	2100	2100	4000	12	51,0	3	417	70	1000	1600	2770
300,0	300/1	**PH822F1000 KX701VF0030 MF**	2100	2100	4000	12	51,0	3	304	70	800	1200	2400

Right-Angle Planetary Gear Units **PHKX**
*Reductores planetarios ortogonales **PHKX***
Riduttori planetari-rinvio angolo **PHKX**

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Please take notice of the indications on page PHK8! ***¡Por favor observe las indicaciones en la página PHK8!*** **Si raccomanda di rispettare le avvertenze a pagina PHK8!**

i	iexakt	Typ	n1MAX DB EL1,2,5,6 [min-1]	n1MAX DB EL3,4 [min-1]	n1MAX ZB [min-1]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	LPA [dB(A)]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH932KX8 (M2BMAX=5000 Nm)													
12,00	12/1	**PH932F0120 KX801VF0010 MF**	1000	750	2000	127	92,0	4	788	80	2230	3070	5420
16,00	16/1	**PH932F0160 KX801VF0010 MF**	1000	750	2000	97	92,0	3,5	921	80	2980	4090	7230
18,00	18/1	**PH932F0180 KX801VF0010 MF**	1000	750	2000	121	92,0	3,5	920	80	3000	4500	8130
20,00	20/1	**PH932F0200 KX801VF0010 MF**	1000	750	2000	90	92,0	3,5	991	80	3000	5000	9030
24,00	24/1	**PH932F0120 KX801VF0020 MF**	1100	1100	2500	61	92,0	4	788	76	2230	3070	6450
30,00	30/1	**PH932F0300 KX801VF0010 MF**	1000	750	2000	88	92,0	3,5	1030	80	3000	4500	9000
32,00	32/1	**PH932F0160 KX801VF0020 MF**	1100	1100	2500	54	92,0	3,5	921	76	2980	4090	8600
36,00	36/1	**PH932F0180 KX801VF0020 MF**	1100	1100	2500	60	92,0	3,5	920	76	3000	4500	9000
40,00	40/1	**PH932F0200 KX801VF0020 MF**	1100	1100	2500	52	92,0	3,5	991	76	3000	5000	10000
42,00	42/1	**PH932F0420 KX801VF0010 MF**	1000	750	2000	83	92,0	3	1055	80	3000	4500	9000
48,00	48/1	**PH932F0240 KX801VF0020 MF**	1100	1100	2500	53	92,0	3,5	995	76	3000	4500	9000
54,00	54/1	**PH932F0180 KX801VF0030 MF**	1300	1300	3000	48	92,0	3,5	920	74	3000	4500	9000
60,00	60/1	**PH932F0300 KX801VF0020 MF**	1100	1100	2500	51	92,0	3,5	1030	76	3000	4500	9000
72,00	72/1	**PH932F0240 KX801VF0030 MF**	1300	1300	3000	45	92,0	3,5	995	74	3000	4500	9000
80,00	80/1	**PH932F0400 KX801VF0020 MF**	1100	1100	2500	50	92,0	3,5	1012	76	2690	4610	9220
84,00	84/1	**PH932F0420 KX801VF0020 MF**	1100	1100	2500	50	92,0	3	1055	76	3000	4500	9000
90,00	90/1	**PH932F0300 KX801VF0030 MF**	1300	1300	3000	44	92,0	3,5	1030	74	3000	4500	9000
96,00	96/1	**PH932F0480 KX801VF0020 MF**	1100	1100	2500	50	92,0	3	1051	76	3000	4500	9000
120,0	120/1	**PH932F0600 KX801VF0020 MF**	1100	1100	2500	49	92,0	3	1040	76	3000	4500	9000
126,0	126/1	**PH932F0420 KX801VF0030 MF**	1300	1300	3000	44	92,0	3	1055	74	3000	4500	9000
144,0	144/1	**PH932F0480 KX801VF0030 MF**	1300	1300	3000	44	92,0	3	1051	74	3000	4500	9000
180,0	180/1	**PH932F0600 KX801VF0030 MF**	1300	1300	3000	44	92,0	3	1040	74	3000	4500	9000
PH1032KX8 (M2BMAX=7500 Nm)													
18,00	18/1	**PH1032F0180 KX801VF0010 MF**	1000	750	2000	125	107,4	3,5	1302	80	3350	4600	8130
24,00	24/1	**PH1032F0240 KX801VF0010 MF**	1000	750	2000	96	107,4	3,5	1457	80	4460	6140	10840
30,00	30/1	**PH1032F0300 KX801VF0010 MF**	1000	750	2000	89	107,4	3,5	1534	80	5000	7500	13550
36,00	36/1	**PH1032F0180 KX801VF0020 MF**	1100	1100	2500	61	107,4	3,5	1302	76	3350	4600	9680
42,00	42/1	**PH1032F0420 KX801VF0010 MF**	1000	750	2000	83	107,4	3	1589	80	5000	7500	15000
48,00	48/1	**PH1032F0240 KX801VF0020 MF**	1100	1100	2500	54	107,4	3,5	1457	76	4460	6140	12900
54,00	54/1	**PH1032F0180 KX801VF0030 MF**	1300	1300	3000	48	107,4	3,5	1302	74	3350	4600	9680
60,00	60/1	**PH1032F0300 KX801VF0020 MF**	1100	1100	2500	52	107,4	3,5	1534	76	5000	7500	15000
72,00	72/1	**PH1032F0240 KX801VF0030 MF**	1300	1300	3000	45	107,4	3,5	1457	74	4460	6140	12900
84,00	84/1	**PH1032F0420 KX801VF0020 MF**	1100	1100	2500	50	107,4	3	1589	76	5000	7500	15000
90,00	90/1	**PH1032F0300 KX801VF0030 MF**	1300	1300	3000	45	107,4	3,5	1534	74	5000	7500	15000
96,00	96/1	**PH1032F0480 KX801VF0020 MF**	1100	1100	2500	50	107,4	3	1581	76	4610	6910	13820
120,0	120/1	**PH1032F0600 KX801VF0020 MF**	1100	1100	2500	50	107,4	3	1556	76	4030	6910	13820
126,0	126/1	**PH1032F0420 KX801VF0030 MF**	1300	1300	3000	44	107,4	3	1589	74	5000	7500	15000
144,0	144/1	**PH1032F0480 KX801VF0030 MF**	1300	1300	3000	44	107,4	3	1581	74	4610	6910	13820
180,0	180/1	**PH1032F0600 KX801VF0030 MF**	1300	1300	3000	44	107,4	3	1556	74	4030	6910	13820

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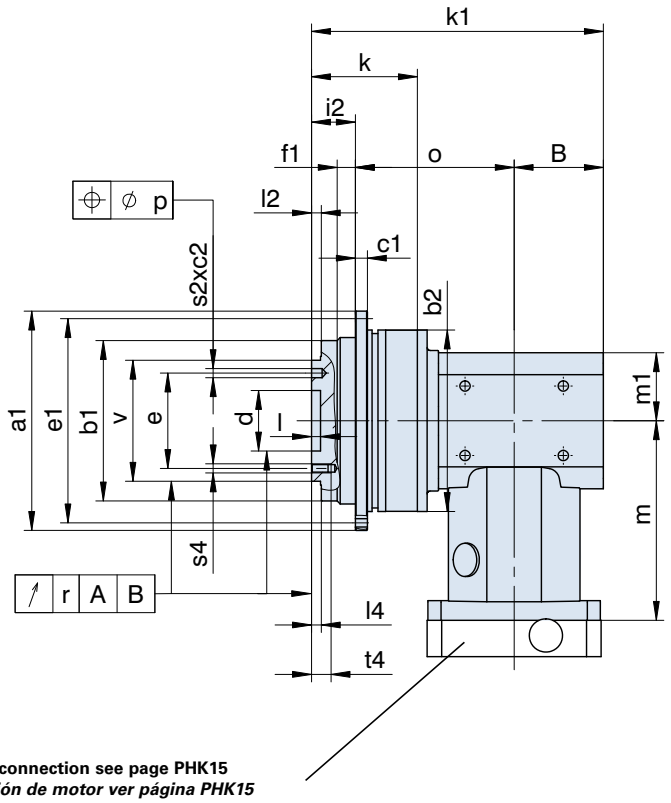
PH3KX3_MF - PH10KX8_MF



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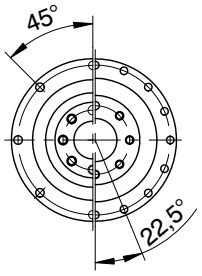

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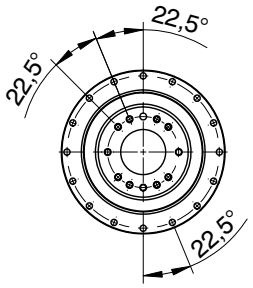

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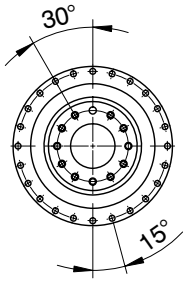

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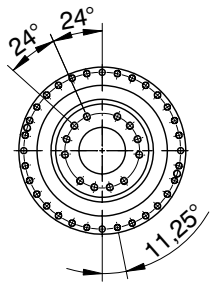


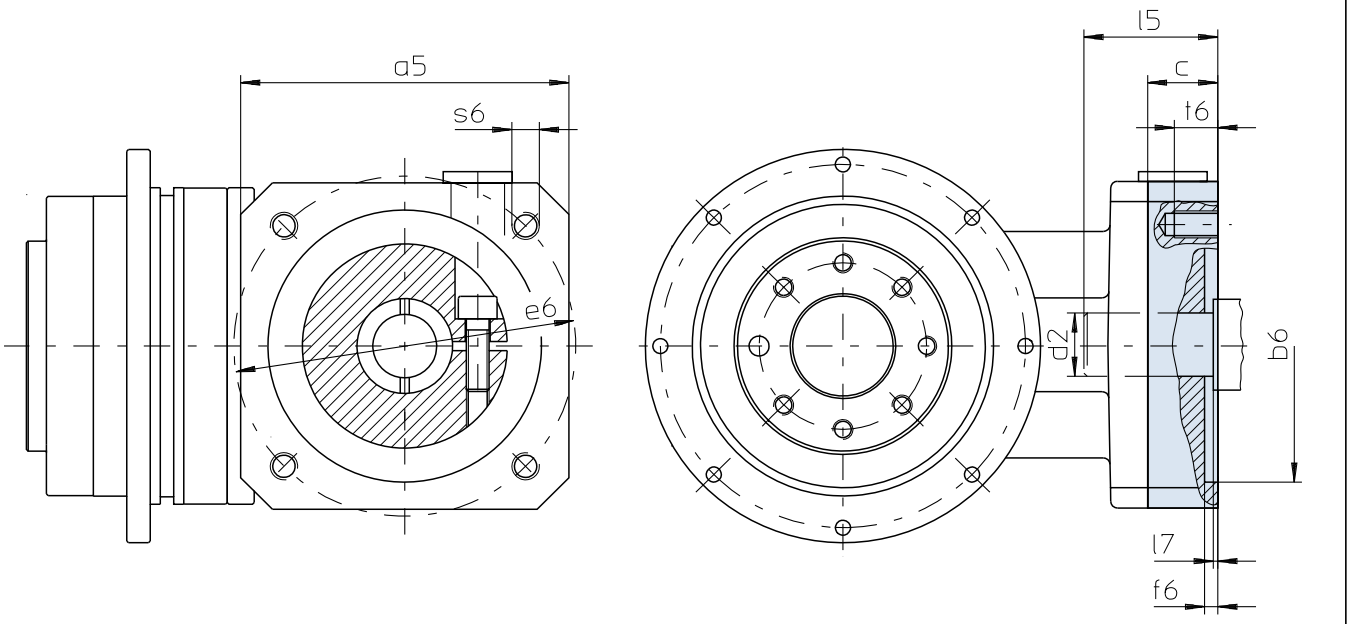
Motor connection see page PHK15
Conexión de motor ver página PHK15
Accopiamento motore vedere pagina PHK15

Typ	øa1	øb1	øb2	B	c1	c2	ød	øe	øe1	f1	i2	k	k1
PH321_....KX3	86h7	64h7	70	40	4	3	20,0H6	31,5	79	7	19,5	50,0	133,5
PH322_....KX3	86h7	64h7	70	40	4	3	20,0H6	31,5	79	7	19,5	87,0	169,5
PH421_....KX4	118h7	90h7	95	50	7	7	31,5H6	50,0	109	10	30,0	66,0	167,0
PH422_....KX3	118h7	90h7	95	40	7	7	31,5H6	50,0	109	10	30,0	113,0	195,5
PH521_....KX5	145h7	110h7	120	59	8	7	40,0H6	63,0	135	10	29,0	70,0	193,0
PH522_....KX4	145h7	110h7	120	50	8	7	40,0H6	63,0	135	10	29,0	124,5	227,5
PH721_....KX7	179h7	140h7	152	74	10	7	50,0H6	80,0	168	12	38,0	88,0	239,0
PH722_....KX5	179h7	140h7	152	59	10	7	50,0H6	80,0	168	12	38,0	150,0	273,0
PH821_....KX8	247h7	200h7	212	92	12	10	80,0H6	125,0	233	15	50,0	126,0	317,5
PH822_....KX7	247h7	200h7	212	74	12	10	80,0H6	125,0	233	15	50,0	201,0	352,0
PH932_....KX8	300	255h7	255	92	18	-	90,0H6	140,0	280	20	66,0	290,5	483,5
PH1032_....KX8	330	285h7	285	92	20	-	95,0H6	160,0	310	20	75,0	307,0	500,0

Typ	l	l2	l4	m	m1	o	øp	r	øs1	øs2	s4	t4	øv
PH321_....KX3	4	3	3,5	95,5	31,0	74,0	0,02	0,020	4,5	5H7	M5	7	40h7
PH322_....KX3	4	3	3,5	95,5	31,0	110,0	0,02	0,020	4,5	5H7	M5	7	40h7
PH421_....KX4	6	6	6,5	104,0	37,5	87,0	0,02	0,020	5,5	6H7	M6	11	63h7
PH422_....KX3	6	6	6,5	95,5	31,0	125,5	0,02	0,020	5,5	6H7	M6	11	63h7
PH521_....KX5	6	6	6,5	132,0	45,0	105,0	0,02	0,020	5,5	6H7	M6	11	80h7
PH522_....KX4	6	6	6,5	104,0	37,5	148,5	0,02	0,020	5,5	6H7	M6	11	80h7
PH721_....KX7	6	6	6,5	172,5	60,0	127,0	0,02	0,025	6,6	8H7	M8	14	100h7
PH722_....KX5	6	6	6,5	132,0	45,0	176,0	0,02	0,025	6,6	8H7	M8	14	100h7
PH821_....KX8	8	8	8,5	210,0	75,0	175,5	0,02	0,030	9,0	10H7	M10	18	160h7
PH822_....KX7	8	8	8,5	172,5	60,0	228,0	0,02	0,030	9,0	10H7	M10	18	160h7
PH932_....KX8	12	11	12,0	210,0	75,0	325,5	-	0,030	13,5	-	M16	24	180h7
PH1032_....KX8	10	15	15,0	210,0	75,0	333,0	-	0,040	13,5	-	M20	30	200h7

STÖBER

PH3KX3_MF - PH10KX8_MF



Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ		øb6	øe6	ød2max	l5max	□a5	c	f6	l7max	s6	t6
PH321/PH322/PH422	**KX3**	40,0H7	63	19	40	75	18	3,0	5,5	M5	11
PH321/PH322/PH422	**KX3**	50,0H7	70	19	40	75	18	3,0	5,5	M4	9
PH321/PH322/PH422	**KX3**	50,0H7	95	19	40	80	18	3,0	5,5	M6	13
PH321/PH322/PH422	**KX3**	60,0H7	90	19	40	75	18	3,5	5,5	M5	9
PH321/PH322/PH422	**KX3**	60,0H7	75	19	40	75	18	3,5	5,5	M5	11
PH321/PH322/PH422	**KX3**	70,0H7	90	19	40	80	18	3,5	5,5	M5	9
PH321/PH322/PH422	**KX3**	80,0H7	100	19	40	90	18	3,5	5,5	M6	13
PH321/PH322/PH422	**KX3**	95,0H7	115	19	40	100	18	4,0	5,5	M8	18
PH321/PH322/PH422	**KX3**	95,0H7	130	19	40	115	18	4,0	5,5	M8	18
PH421/PH522	**KX4**	50,0H7	70	24	42	100	21	4,0	4,5	M4	10
PH421/PH522	**KX4**	50,0H7	95	24	42	100	21	2,5	4,5	M6	13
PH421/PH522	**KX4**	60,0H7	75	24	42	100	21	3,5	4,5	M5	9
PH421/PH522	**KX4**	80,0H7	100	24	42	100	21	4,0	4,5	M6	13
PH421/PH522	**KX4**	95,0H7	115	24	51	100	30	4,0	13,5	M6	13
PH421/PH522	**KX4**	95,0H7	115	24	42	100	21	4,0	4,5	M8	21
PH421/PH522	**KX4**	95,0H7	130	24	42	115	21	4,0	4,5	M8	16
PH421/PH522	**KX4**	95,0H7	115	24	51	100	30	4,0	13,5	M8	16
PH421/PH522	**KX4**	95,0H7	130	24	51	115	30	4,0	13,5	M8	16
PH421/PH522	**KX4**	110,0H7	130	24	51	115	30	4,0	13,5	M8	16
PH421/PH522	**KX4**	110,0H7	145	24	59	130	38	7,0	21,5	M8	16
PH421/PH522	**KX4**	130,0H7	165	24	51	140	30	7,0	13,5	M10	20
PH521/PH722	**KX5**	80,0H7	100	32	53	120	24	4,0	5,0	M6	13
PH521/PH722	**KX5**	95,0H7	115	32	53	120	24	5,0	5,0	M8	16
PH521/PH722	**KX5**	95,0H7	130	32	53	120	24	4,0	5,0	M8	16
PH521/PH722	**KX5**	110,0H7	130	32	53	120	24	4,0	5,0	M8	16
PH521/PH722	**KX5**	110,0H7	145	32	61	140	32	6,5	13,0	M8	16
PH521/PH722	**KX5**	110,0H7	145	32	71	140	42	7,0	23,0	M8	16
PH521/PH722	**KX5**	110,0H7	165	32	53	140	24	5,0	5,0	M10	24
PH521/PH722	**KX5**	130,0H7	165	32	61	140	32	5,0	13,0	M10	20
PH721/PH822	**KX7**	110,0H7	145	38	75	145	37	5,0	19,0	M8	16
PH721/PH822	**KX7**	110,0H7	165	38	64	145	26	5,0	8,0	M10	26
PH721/PH822	**KX7**	110,0H7	130	38	64	145	26	5,0	8,0	M8	14
PH721/PH822	**KX7**	114,3H7	200	38	83	180	45	5,0	27,0	M12	25
PH721/PH822	**KX7**	130,0H7	215	38	64	190	26	5,0	8,0	M12	26
PH721/PH822	**KX7**	130,0H7	165	38	64	145	26	5,0	8,0	M10	26
PH721/PH822	**KX7**	180,0H7	215	38	83	190	45	5,0	27,0	M12	25
PH821/PH932/PH1032	**KX8**	110,0H7	165	48	83	190	34	5,0	11,0	M10	18
PH821/PH932/PH1032	**KX8**	114,3H7	200	48	83	190	34	4,0	11,0	M12	34
PH821/PH932/PH1032	**KX8**	130,0H7	165	48	83	190	34	5,0	11,0	M10	18
PH821/PH932/PH1032	**KX8**	130,0H7	215	48	83	190	34	5,0	11,0	M12	34
PH821/PH932/PH1032	**KX8**	180,0H7	215	48	84	190	35	5,0	12,0	M12	35
PH821/PH932/PH1032	**KX8**	250,0H7	300	48	87	260	38	6,0	15,0	M16	38

ServoFit® PHK Right-Angle Planetary Gear Units
Reductores planetarios ortogonales ***ServoFit® PHK***
ServoFit® Riduttori planetari-coppia conica **PHK**

STÖBER

High Performance Precision Angular Planetary Gear Units

- Acceleration torque: 320 - 7500 Nm
- Low backlash: 3,5 - 4,5 arcmin extremely high torsional and tilting stiffness
- FKM seal at input
- EasyAdapt® motor adapter with clamp coupling:
  - easy to assemble due to spreading function
  - aluminium lightweight construction
  - low construction length
  - high torsional stiffness
  - optionally with clamping set for increased safety
  - optionally with double seal
- continuous operation without cooling
- advanced gear technology
- low mass moments of inertia
- quiet running
- efficiency:
  3 stage ≥ 93 %
  4 stage ≥ 92 %

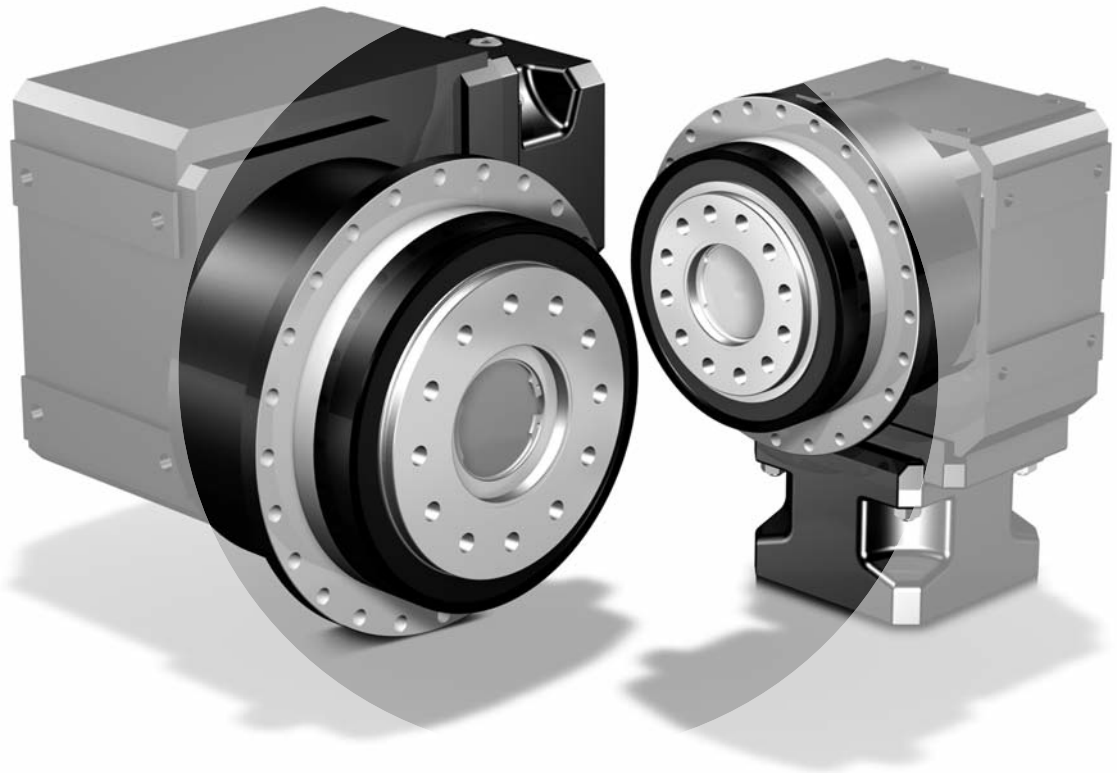
Reductores planetarios ortogonales de precisión de alto rendimiento

- *Par de aceleración: 320 – 7500 Nm*
- *Bajo juego de giro: 3,5 – 4,5 arcmin*
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Adaptador de motor EasyAdapt® con acoplamiento de anillo de apriete*
  - *Fácil de montar gracias a la función de expansión*
  - *Construcción ligera de aluminio*
  - *Longitud constructiva corta*
  - *Gran resistencia a la torsión*
  - *Opcionalmente con kit de sujeción para una mayor seguridad*
  - *Opcionalmente con sellado doble*
- *Trabajo permanente sin enfriamiento*
- *Tecnología superior de dentado*
- *Bajos momentos de inercia de masa*
- *Marcha extremadamente suave*
- *Rendimiento:*
  3 trenes ≥ 93 %
  4 trenes ≥ 92 %

Riduttori planetari angolari di precisione High-Performance

- Coppia di accelerazione: 320 – 7500 Nm
- Gioco minimo: 3,5 – 4,5 arcmin
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Anello di tenuta in FKM in ingresso
- Adattatore motore EasyAdapt® con giunto di bloccaggio:
  - Montaggio più facile grazie alla funzione di divaricazione
  - Struttura leggera in alluminio
  - Lunghezza contenuta
  - Elevata resistenza alla torsione
  - Kit di serraggio opzionale per una maggiore sicurezza
  - Doppio isolamento opzionale
- Funzionamento continuo senza raffreddamento
- Tecnologia della dentatura avanzata
- Momenti di inerzia ridotti
- Estremamente silenziosi
- Rendimento:
  3 stadi ≥ 93 %
  4 stadi ≥ 92 %

ServoFit® PHK

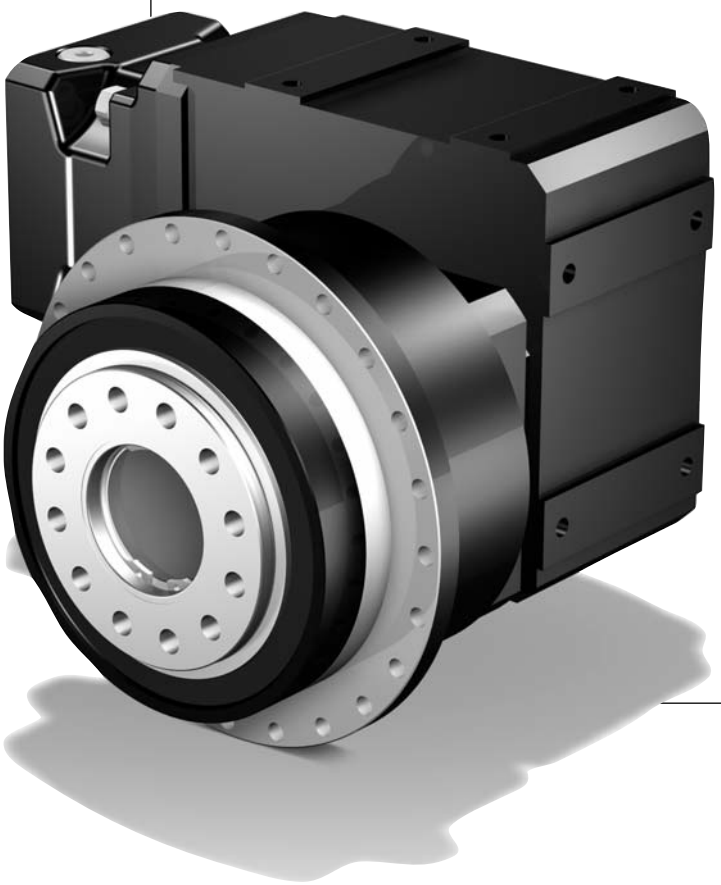


ServoFit® PHK
Right-Angle Planetary Gear Units

Reductores planetarios ortogonales ***ServoFit® PHK***

ServoFit® Riduttori planetari - coppia conica **PHK**

STÖBER



PHK

Contents PHK

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Mounting positions	PHK19
Shaft / housing design Output PH	PHK20
Selection table ServoFit® PHK Right-Angle Planetary Gear Units	PHK21
Dimension drawings ServoFit® PHK Right-Angle Planetary Gear Units	PHK37

Resumen del contenido PHK

Tipificación	*PHK18*
Posiciones de instalación	*PHK19*
Ejecución de eje / de carcasa Salida PH	*PHK20*
Tabla de selección Reductores planetarios ortogonales ServoFit® PHK	*PHK21*
Dibujos acotados Reductores planetarios ortogonales ServoFit® PHK	*PHK37*

Indice PHK

Identificazione dei modelli	PHK18
Posizioni di montaggio	PHK19
Esecuzione albero / carcassa Uscita PH	PHK20
Tabella di selezione ServoFit®Riduttori planetari-coppia conica PHK	PHK21
Disegni quotati ServoFit® Riduttori planetari-coppia conica PHK	PHK37

Type designation / *Tipificación* / Identificazione dei modelli

PH 8 2 1 F 0050 K302VF 0040 ME20

1 2 3 4 5 6 7 8 9

1 Gear unit type
PH – Planetary gear unit

2 Planetary gear unit size

3 Generation number

4 Stages PH gear unit
1 – 1 stage

5 Design PH gear unit
F – flange shaft

6 Transmission ratio PH gear unit i x 10

7 Angular gear input
K – helical bevel gear units 2-stage
Please indicate mounting side (3 or 4) with your order.

8 Transmission ratio K gear unit i x 10

9 Mounting series
ME – Motor adapter K gear unit with EasyAdapt® coupling
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection page PHK39, please observe the max. dimensions).
MB – Motor adapter square with brake (option) (see brochure ID 441904)

Ordering data acc. to the type designation above.
Further ordering details:
– mounting position
– access clamping screw motor coupling
– information as whether the output is on page 3 or 4
– information as to whether the radial shaft seals on the output are made from FKM or NBR. Recommendation: FKM for an operating time ≥ 60%
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

The torques and forces specified in this catalog only apply under the following conditions:
- For the attachment of the flange shaft and the gear unit housing on the machine side using screws of quality 12.9
- If the gear unit housings are adjusted at the pilot øb1 or øb2 (H7)
- If the flange shaft is adjusted with the connecting element at the pilot ød or øv

1 *Tipo de reductor*
PH *– Reductor planetario*

2 *Tamaño del reductor planetario*

3 *Cifra de generación*

4 *Número de trenes reductor PH*
1 *– 1 tren*

5 *Ejecución reductor PH*
F *– Eje con brida*

6 *Número característico de la relación de reducción reductor PH i x 10*

7 *Entrada angular*
K *– Reductor cónico 2 trenes*
Indicar lado de la opción (3 ó 4) para el pedido.

8 *Número característico de la relación de reducción reductor K i x 10*

9 *Grupos de opciones*
ME *– Adaptador de motor reductor K con acoplamiento EasyAdapt®*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor página PHK39, por favor observar dimensiones máximas).
MB *– Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

Datos de pedido de acuerdo a la tipificación indicada arriba.
Otros datos de pedido:
– *Posición de instalación*
– *Acceso al tornillo de apriete del acoplamiento de motor*
– *Indicación si sobre lado 3 o lado 4*
– *Indicación si anillos retén en la salida de FKM o de NBR. Recomendación: FKM para duración de conexión ≥ 60%*
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

Los pares y fuerzas indicados en este catálogo se aplican bajo las siguientes condiciones:
- *Al fijar el eje de brida y la carcasa del reductor en el lado de la máquina con tornillos de la calidad 12.9*
- *Si las carcasas del reductor están ajustadas en el borde de ajuste øb1 o øb2 (H7)*
- *Si el eje de brida está ajustada con el elemento de unión en el borde de ajuste ød o øv.*

1 Modello di riduttore
PH – Riduttore planetario

2 Taglia del riduttore angolare

3 Numero di generazione

4 Numero di stadi riduttore PH
1 – 1-stadio

5 Esecuzione del riduttore PH
F – Albero flangiato

6 Rapporto di trasmissione del riduttore PH i x 10

7 Ingresso angolare
K – Riduttori a coppia conica a 2-stadi
Al momento dell'ordine indicare il lato di montaggio (3 o 4).

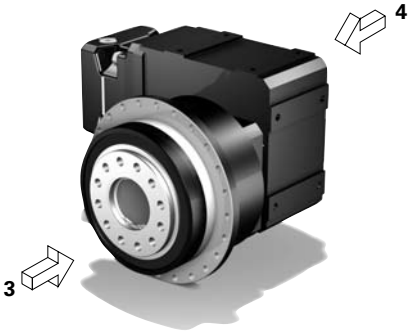
8 Rapporto di riduzione riduttore K i x 10

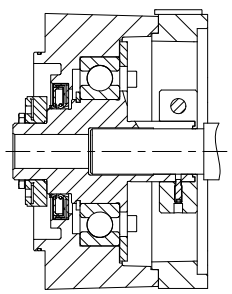
9 Opzioni annessi
ME - Adattatore motore riduttore K con giunto EasyAdapt®
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore pagina PHK39, si prega di rispettare le misure max.).
MB – Adattatore motore quadro con freno (opzione) (vedere prospetto ID 441904)

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.
Altri dati dell'ordine:
– Posizione di montaggio
– Accesso al giunto di accoppiamonto motore
– Indicare se l'albero uscita sul lato 3 o 4
– Indicare se gli anelli di tenuta radiali dell'albero uscita sono in FKM o NBR. Raccomandazione: FKM per fattore di servizio ≥ 60%
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

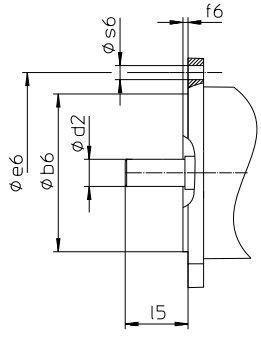
Le coppie e le forze indicate in questo catalogo si applicano alle seguenti condizioni:
- Per il fissaggio dell' albero flangiato e dell' scatola del riduttore sul lato macchina con viti di qualità 12.9
- Se le scatole del riduttore sono adattate sul bordo di accoppiamento øb1 o øb2 (H7)
- Se l' albero flangiato è adattato dell' elemento di collegamento sul bordo di accoppiamento ød o øv

PH821F 0050 K302VF 0040 ME20





EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Mounting positions

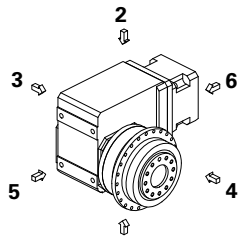
Posiciones de instalación

Posizioni di montaggio

STÖBER

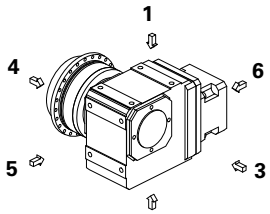
PH5K1 - PH8K3

EL1



1

EL2



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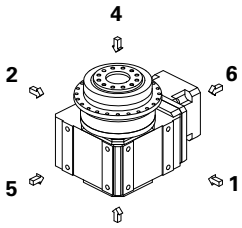
EL3



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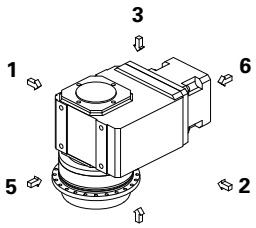
EL4



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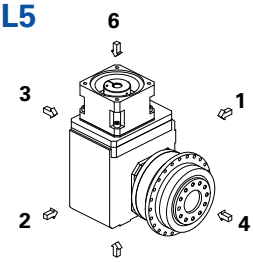
EL5



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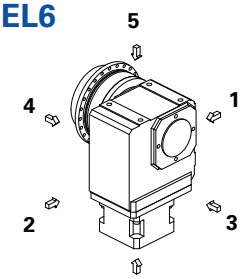
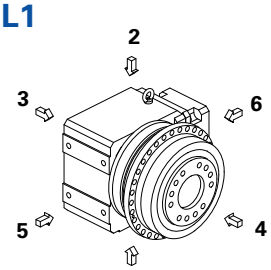
EL6



6

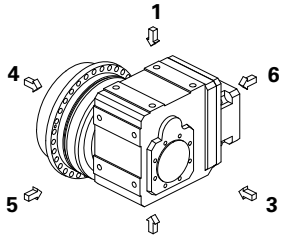
PH9K5 - PH10K6

EL1



1

EL2



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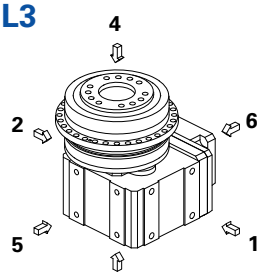
EL3



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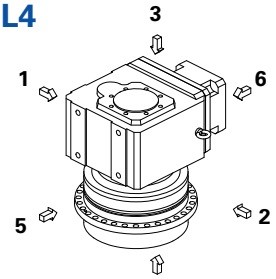
EL4



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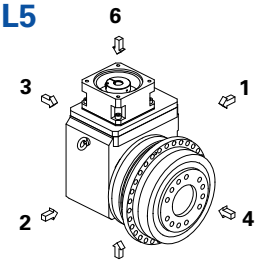
EL5



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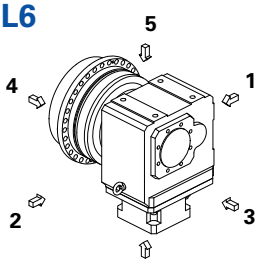
EL6



6

PHK

The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

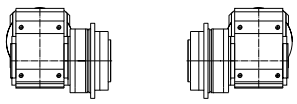
Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).

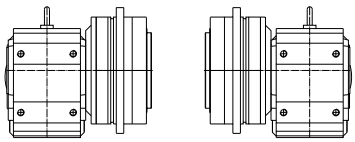
Mounting / *Montaje* / Montaggio PH

PH5K1 - PH8K3

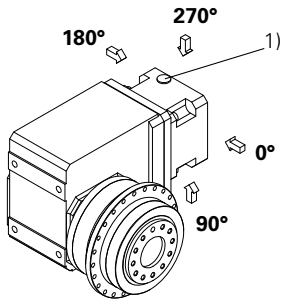


PH Side/*lado*/faccia 4 **PH Side/*lado*/faccia 3**

PH9K5 - PH10K6



PH Side/*lado*/faccia 4 **PH Side/*lado*/faccia 3**



1) access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamento motore

Shaft / housing design output **PH**
ISO 9409 (PH3 – PH8)

*Ejecución de eje / de carcasa salida **PH***
ISO 9409 (PH3 – PH8)

Esecuzione albero / carcassa Uscita **PH**
ISO 9409 (PH3 – PH8)

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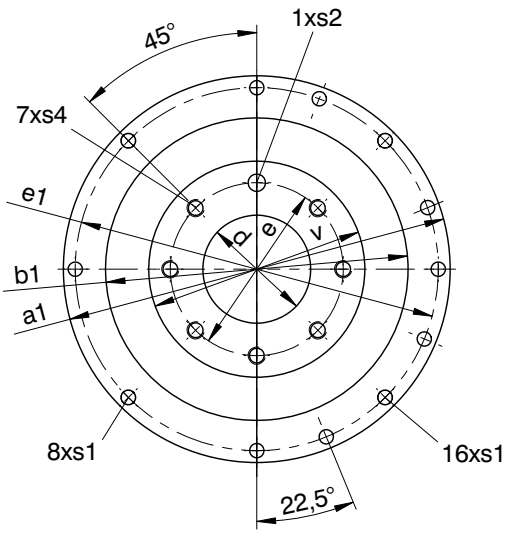
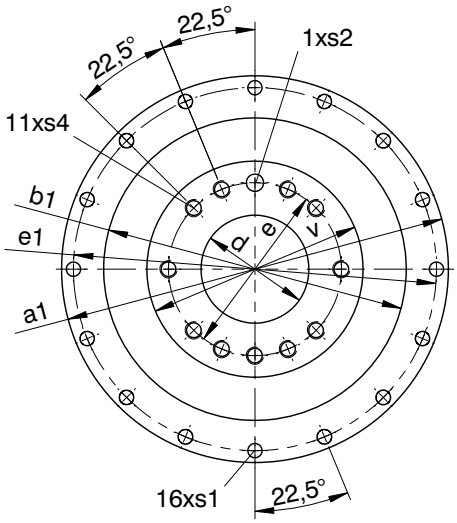
Flange shaft | ***Eje con brida*** | **Albero flangiato**

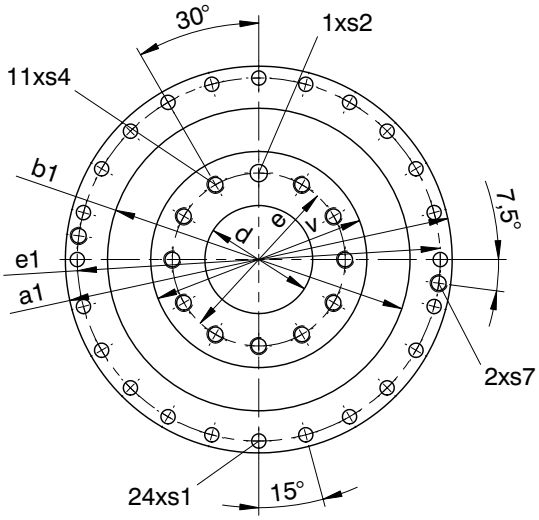
PH3 | PH4



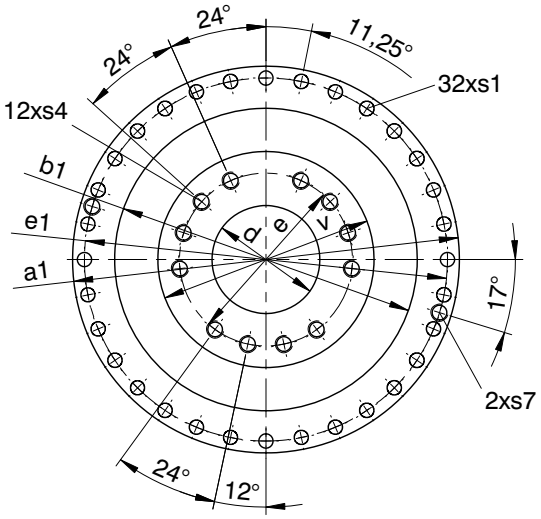
PH5



PH7 + PH8



PH9 + PH10



Shaft design “F” | ***Ejecución de eje “F”*** | **Esecuzione albero “F”**

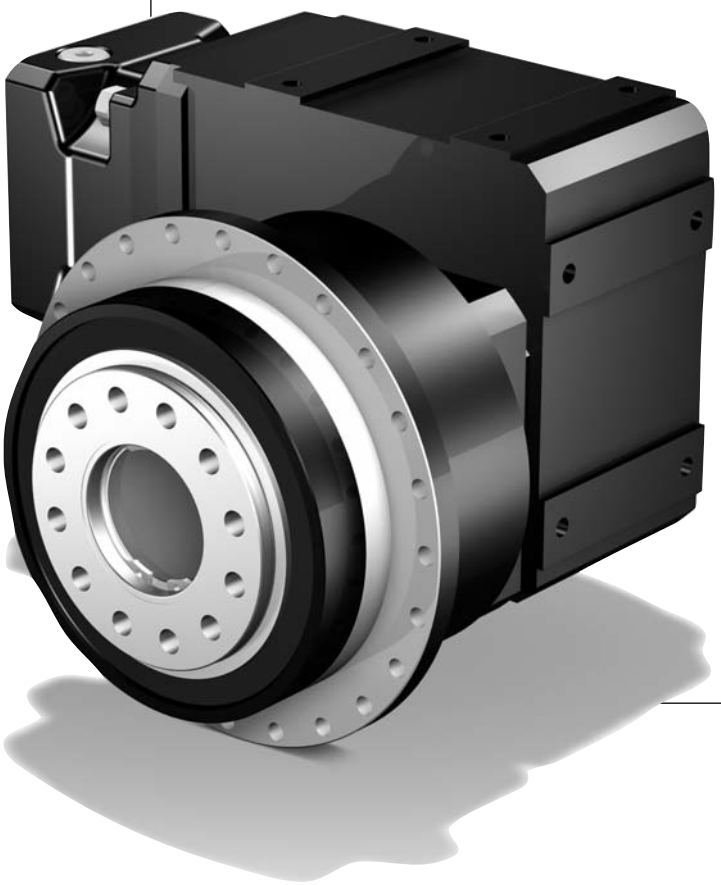
Typ	øa1	øb1	ød	øe	øe1	øs1	øs2	s4	s7	v
PH3	86h7	64h7	20,0H6	31,5	79	4,5	5H7	M5	-	40h7
PH4	118h7	90h7	31,5H6	50,0	109	5,5	6H7	M6	-	63h7
PH5	145h7	110h7	40,0H6	63,0	135	5,5	6H7	M6	-	80h7
PH7	179h7	140h7	50,0H6	80,0	168	6,6	8H7	M8	-	100h7
PH8	247h7	200h7	80,0H6	125,0	233	9,0	10H7	M10	M10	160h7
PH9	300	255h7	90,0H6	140,0	280	13,5	-	M16	M8	180h7
PH10	330	285h7	95,0H6	160,0	310	13,5	-	M20	M10	200h7

Selection table **ServoFit® PHK** Right-Angle Planetary Gear Units

Tabla de selección Red. planetarios ortogonales ***ServoFit® PHK***

Tabella di selezione **ServoFit®** Rid. planetari coppia conica **PHK**

STÖBER



Selection table **ServoFit® PHK** Right-Angle Planetary Gear Units

*Tabla de selección Red. planetarios ortogonales **ServoFit® PHK***

Tabella di selezione **ServoFit®** Rid. planetari coppia conica **PHK**

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Symbols:

i - Gear unit ratio
i_{exakt} - Exact math. ratio
n_{1MAX} - Max. input speed
DBH - Continuous operation - input and output horizontal (EL1, EL2)
DBV - Continuous operation - input and output vertical (EL3, EL4, EL5, EL6)
ZB - Cycle operation (at ambient temperature 20°C, also see page A11/A12)
J_1 - Mass moment of inertia 2) (related to input)
G - Weight
$\Lambda\varphi_2$ - Backlash
C_2 - Gear unit rigidity (related to output at M_{2B})
M_{2N} - Rated torque 1) 2)
M_{2B} - Max. perm. acceleration torque 2)
M_{2NOT} - Emergency-Off moment 2) (10^3 load changes)

Please take notice of the operating factors on page A11/A12 !

Denominaciones:

i - *Relación de reducción*
i_{exakt} - *Relación de reducción matem. exacta*
n_{1MAX} - *Velocidad máx. de entrada*
DBH - Trabajo continuo - entrada y salida horizontal (EL1, EL2)
DBV - Trabajo continuo - entrada y salida vertical (EL3, EL4, EL5, EL6)
ZB - Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
J_1 - *Momento de inercia de masa 2) (referido a la entrada)*
G - *Peso*
$\Lambda\varphi_2$ - *Juego de giro*
C_2 - *Rigidez del reductor (referido a la salida para M_{2B})*
M_{2N} - *Par nominal 1) 2)*
M_{2B} - *Par máx. admisible de aceleración 2)*
M_{2NOT} - *Par de PARADA DE EMERGENCIA 2) (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

Simboli:

i - Rapporto di riduzione
i_{exakt} - Rapporto di riduzione mat. preciso
n_{1MAX} - Max. numero di giri in ingresso
DBH - Funzionamento continuo - ingresso e uscita orizzontale (EL1, EL2)
DBV - Funzionamento continuo - ingresso e uscita verticale (EL3, EL4, EL5, EL6)
ZB - Funzionamento ciclico (a temperatura ambiente di 20°C, vedere anche pagina A11/A12)
J_1 - Momento di inerzia 2) (riferito all'ingresso)
G - Peso
$\Lambda\varphi_2$ - Gioco
C_2 - Rigidità del riduttore (riferito all'uscita per M_{2B})
M_{2N} - Coppia nominale 1) 2)
M_{2B} - Coppia di accelerazione max. ammessa 2)
M_{2NOT} - Coppia di emergenza 2) (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

1) Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

2) If you use a pinion securing element (option), the torque values can be partly increased. This also results in higher mass moments of inertia.
Values on request or using the EASY Online product catalog (configurator) on our website
http://products.stoeber.de/

1) Los valores se refieren a la velocidad de entrada n_1 = 1500 min^{-1}

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

2) Con el kit de sujeción opcional, valores parcialmente superiores. Con esto aumentan los pares de inercia de masa.
Valores disponibles bajo petición o en el catálogo de productos EASY Online (configurador).
http://products.stoeber.de/

1) I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

2) In caso di impiego di kit di serraggio opzionale possono essere rilevati valori in parte più elevati. *In questo modo risultano dei momenti d'inerzia di massa più elevati.*
Indicazione dei valori su richiesta oppure tramite catalogo prodotti EASY Online (configuratore).
http://products.stoeber.de/

Right-Angle Planetary Gear Units **PHK**
*Reductores planetarios ortogonales **PHK***
Riduttori planetari-coppia conica **PHK**

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Please take notice of the indications on page PHK22! ***¡Por favor observe las indicaciones en la página PHK22!*** **Si raccomanda di rispettare le avvertenze a pagina PHK22!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH5K1 (M2BMAX=320 Nm)													
16,00	16/1	**PH521F0040 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	16,7	4,5	48	210	320	400
16,00	16/1	**PH521F0040 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,6	16,8	4,5	50	210	320	490
16,00	16/1	**PH521F0040 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,8	17,7	4,5	50	210	320	490
16,00	16/1	**PH521F0040 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,5	17,8	4,5	51	210	320	490
20,00	20/1	**PH521F0050 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	16,7	4	57	220	320	500
20,00	20/1	**PH521F0050 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,6	16,8	4	59	220	320	600
20,00	20/1	**PH521F0050 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,7	17,7	4	58	220	320	600
20,00	20/1	**PH521F0050 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,5	17,8	4	59	220	320	600
27,84	7600/273	**PH521F0050 K102VF0056 ME10**	3300	2800	4500	**≤14**	1,1	16,7	4	59	220	320	600
27,84	7600/273	**PH521F0050 K102VF0056 ME10**	3300	2800	4500	**>14≤19**	1,3	16,8	4	59	220	320	600
27,84	7600/273	**PH521F0050 K102VF0056 ME20**	3300	2800	4500	**≤19**	2,5	17,7	4	59	220	320	600
27,84	7600/273	**PH521F0050 K102VF0056 ME20**	3300	2800	4500	**>19≤24**	3,2	17,8	4	60	220	320	600
30,00	30/1	**PH521F0050 K102VF0060 ME10**	3300	2800	4500	**≤14**	0,88	16,7	4	59	220	320	600
30,00	30/1	**PH521F0050 K102VF0060 ME10**	3300	2800	4500	**>14≤19**	1,1	16,8	4	59	220	320	600
30,00	30/1	**PH521F0050 K102VF0060 ME20**	3300	2800	4500	**≤19**	2,3	17,7	4	59	220	320	600
30,00	30/1	**PH521F0050 K102VF0060 ME20**	3300	2800	4500	**>19≤24**	3,0	17,8	4	60	220	320	600
33,22	299/9	**PH521F0050 K102VF0066 ME10**	3600	3300	5000	**≤14**	0,80	16,7	4	59	220	320	600
33,22	299/9	**PH521F0050 K102VF0066 ME10**	3600	3300	5000	**>14≤19**	1,1	16,8	4	60	220	320	600
33,22	299/9	**PH521F0050 K102VF0066 ME20**	3500	3300	5000	**≤19**	2,2	17,7	4	59	220	320	600
33,22	299/9	**PH521F0050 K102VF0066 ME20**	3500	3300	5000	**>19≤24**	3,0	17,8	4	60	220	320	600
41,55	1911/46	**PH521F0050 K102VF0083 ME10**	3600	3300	5000	**≤14**	0,68	16,7	4	59	220	320	600
41,55	1911/46	**PH521F0050 K102VF0083 ME10**	3600	3300	5000	**>14≤19**	0,93	16,8	4	60	220	320	600
41,55	1911/46	**PH521F0050 K102VF0083 ME20**	3500	3300	5000	**≤19**	2,1	17,7	4	60	220	320	600
41,55	1911/46	**PH521F0050 K102VF0083 ME20**	3500	3300	5000	**>19≤24**	2,8	17,8	4	60	220	320	600
46,25	8740/189	**PH521F0050 K102VF0092 ME10**	3600	3300	5000	**≤14**	0,72	16,7	4	60	220	320	600
46,25	8740/189	**PH521F0050 K102VF0092 ME10**	3600	3300	5000	**>14≤19**	0,97	16,8	4	60	220	320	600
46,25	8740/189	**PH521F0050 K102VF0092 ME20**	3500	3300	5000	**≤19**	2,1	17,7	4	60	220	320	600
46,25	8740/189	**PH521F0050 K102VF0092 ME20**	3500	3300	5000	**>19≤24**	2,9	17,8	4	60	220	320	600
57,83	1330/23	**PH521F0050 K102VF0115 ME10**	3600	3300	5000	**≤14**	0,63	16,7	4	60	220	320	600
57,83	1330/23	**PH521F0050 K102VF0115 ME10**	3600	3300	5000	**>14≤19**	0,88	16,8	4	60	220	320	600
57,83	1330/23	**PH521F0050 K102VF0115 ME20**	3500	3300	5000	**≤19**	2,0	17,7	4	60	220	320	600
57,83	1330/23	**PH521F0050 K102VF0115 ME20**	3500	3300	5000	**>19≤24**	2,8	17,8	4	60	220	320	600
70,57	494/7	**PH521F0050 K102VF0140 ME10**	4000	3800	5500	**≤14**	0,57	16,7	4	60	220	320	600
70,57	494/7	**PH521F0050 K102VF0140 ME10**	4000	3800	5500	**>14≤19**	0,82	16,8	4	60	220	320	600
70,57	494/7	**PH521F0050 K102VF0140 ME20**	3500	3500	5000	**≤19**	2,0	17,7	4	60	220	320	600
70,57	494/7	**PH521F0050 K102VF0140 ME20**	3500	3500	5000	**>19≤24**	2,7	17,8	4	60	220	320	600
87,82	10450/119	**PH521F0050 K102VF0175 ME10**	4000	3800	5500	**≤14**	0,52	16,7	4	60	220	320	600
87,82	10450/119	**PH521F0050 K102VF0175 ME10**	4000	3800	5500	**>14≤19**	0,77	16,8	4	60	220	320	600
87,82	10450/119	**PH521F0050 K102VF0175 ME20**	3500	3500	5000	**≤19**	1,9	17,7	4	60	220	320	600
87,82	10450/119	**PH521F0050 K102VF0175 ME20**	3500	3500	5000	**>19≤24**	2,7	17,8	4	60	220	320	600
116,3	5700/49	**PH521F0050 K102VF0230 ME10**	4000	4000	6000	**≤14**	0,47	16,7	4	60	220	320	600
116,3	5700/49	**PH521F0050 K102VF0230 ME10**	4000	4000	6000	**>14≤19**	0,72	16,8	4	60	220	320	600
116,3	5700/49	**PH521F0050 K102VF0230 ME20**	3500	3500	5000	**≤19**	1,9	17,7	4	60	220	320	600
116,3	5700/49	**PH521F0050 K102VF0230 ME20**	3500	3500	5000	**>19≤24**	2,6	17,8	4	60	220	320	600
140,2	2945/21	**PH521F0050 K102VF0280 ME10**	4000	4000	6000	**≤14**	0,45	16,7	4	60	220	320	600
140,2	2945/21	**PH521F0050 K102VF0280 ME10**	4000	4000	6000	**>14≤19**	0,70	16,8	4	60	220	320	600
140,2	2945/21	**PH521F0050 K102VF0280 ME20**	3500	3500	5000	**≤19**	1,9	17,7	4	60	220	320	600
140,2	2945/21	**PH521F0050 K102VF0280 ME20**	3500	3500	5000	**>19≤24**	2,6	17,8	4	60	220	320	600
175,5	3686/21	**PH521F0050 K102VF0350 ME10**	4000	4000	6000	**≤14**	0,43	16,7	4	60	220	320	600
175,5	3686/21	**PH521F0050 K102VF0350 ME10**	4000	4000	6000	**>14≤19**	0,68	16,8	4	60	220	320	600
175,5	3686/21	**PH521F0050 K102VF0350 ME20**	3500	3500	5000	**≤19**	1,8	17,7	4	60	220	320	600
175,5	3686/21	**PH521F0050 K102VF0350 ME20**	3500	3500	5000	**>19≤24**	2,6	17,8	4	60	220	320	600
234,6	11495/49	**PH521F0050 K102VF0470 ME10**	4000	4000	6000	**≤14**	0,38	16,7	4	60	220	320	600
234,6	11495/49	**PH521F0050 K102VF0470 ME10**	4000	4000	6000	**>14≤19**	0,63	16,8	4	60	220	320	600
280,5	5890/21	**PH521F0050 K102VF0560 ME10**	4000	4000	6000	**≤14**	0,37	16,7	4	60	220	320	600
280,5	5890/21	**PH521F0050 K102VF0560 ME10**	4000	4000	6000	**>14≤19**	0,62	16,8	4	60	220	320	600

Right-Angle Planetary Gear Units **PHK**
*Reductores planetarios ortogonales **PHK***
Riduttori planetari-coppia conica **PHK**

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Please take notice of the indications on page PHK22! ***¡Por favor observe las indicaciones en la página PHK22!*** **Si raccomanda di rispettare le avvertenze a pagina PHK22!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH7K1 (M2BMAX=650 Nm)													
28,00	28/1	**PH721F0070 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	21,0	4	103	440	570	700
28,00	28/1	**PH721F0070 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,6	21,1	4	106	440	630	850
28,00	28/1	**PH721F0070 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,7	22,0	4	105	440	630	850
28,00	28/1	**PH721F0070 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,5	22,1	4	107	440	630	850
38,98	1520/39	**PH721F0070 K102VF0056 ME10**	3300	2800	4500	**≤14**	1,1	21,0	4	105	440	650	980
38,98	1520/39	**PH721F0070 K102VF0056 ME10**	3300	2800	4500	**>14≤19**	1,3	21,1	4	107	440	650	1180
38,98	1520/39	**PH721F0070 K102VF0056 ME20**	3300	2800	4500	**≤19**	2,5	22,0	4	107	440	650	1180
38,98	1520/39	**PH721F0070 K102VF0056 ME20**	3300	2800	4500	**>19≤24**	3,2	22,1	4	107	440	650	1180
40,00	40/1	**PH721F0100 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	21,0	3,5	98	300	500	1000
40,00	40/1	**PH721F0100 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,5	21,1	3,5	99	300	500	1000
40,00	40/1	**PH721F0100 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,7	22,0	3,5	99	300	500	1000
40,00	40/1	**PH721F0100 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,4	22,1	3,5	99	300	500	1000
42,00	42/1	**PH721F0070 K102VF0060 ME10**	3300	2800	4500	**≤14**	0,89	21,0	4	106	440	650	1060
42,00	42/1	**PH721F0070 K102VF0060 ME10**	3300	2800	4500	**>14≤19**	1,1	21,1	4	107	440	650	1240
42,00	42/1	**PH721F0070 K102VF0060 ME20**	3300	2800	4500	**≤19**	2,3	22,0	4	107	440	650	1240
42,00	42/1	**PH721F0070 K102VF0060 ME20**	3300	2800	4500	**>19≤24**	3,0	22,1	4	108	440	650	1240
46,51	2093/45	**PH721F0070 K102VF0066 ME10**	3600	3300	5000	**≤14**	0,81	21,0	4	106	440	650	1170
46,51	2093/45	**PH721F0070 K102VF0066 ME10**	3600	3300	5000	**>14≤19**	1,1	21,1	4	107	440	650	1240
46,51	2093/45	**PH721F0070 K102VF0066 ME20**	3500	3300	5000	**≤19**	2,2	22,0	4	107	440	650	1240
46,51	2093/45	**PH721F0070 K102VF0066 ME20**	3500	3300	5000	**>19≤24**	3,0	22,1	4	108	440	650	1240
55,68	15200/273	**PH721F0100 K102VF0056 ME10**	3300	2800	4500	**≤14**	1,1	21,0	3,5	99	300	500	1000
55,68	15200/273	**PH721F0100 K102VF0056 ME10**	3300	2800	4500	**>14≤19**	1,3	21,1	3,5	99	300	500	1000
55,68	15200/273	**PH721F0100 K102VF0056 ME20**	3300	2800	4500	**≤19**	2,5	22,0	3,5	99	300	500	1000
55,68	15200/273	**PH721F0100 K102VF0056 ME20**	3300	2800	4500	**>19≤24**	3,2	22,1	3,5	100	300	500	1000
58,16	13377/230	**PH721F0070 K102VF0083 ME10**	3600	3300	5000	**≤14**	0,69	21,0	4	107	440	650	1240
58,16	13377/230	**PH721F0070 K102VF0083 ME10**	3600	3300	5000	**>14≤19**	0,94	21,1	4	107	440	650	1240
58,16	13377/230	**PH721F0070 K102VF0083 ME20**	3500	3300	5000	**≤19**	2,1	22,0	4	107	440	650	1240
58,16	13377/230	**PH721F0070 K102VF0083 ME20**	3500	3300	5000	**>19≤24**	2,8	22,1	4	108	440	650	1240
60,00	60/1	**PH721F0100 K102VF0060 ME10**	3300	2800	4500	**≤14**	0,87	21,0	3,5	99	300	500	1000
60,00	60/1	**PH721F0100 K102VF0060 ME10**	3300	2800	4500	**>14≤19**	1,1	21,1	3,5	99	300	500	1000
60,00	60/1	**PH721F0100 K102VF0060 ME20**	3300	2800	4500	**≤19**	2,3	22,0	3,5	99	300	500	1000
60,00	60/1	**PH721F0100 K102VF0060 ME20**	3300	2800	4500	**>19≤24**	3,0	22,1	3,5	100	300	500	1000
64,74	1748/27	**PH721F0070 K102VF0092 ME10**	3600	3300	5000	**≤14**	0,72	21,0	4	107	440	650	1240
64,74	1748/27	**PH721F0070 K102VF0092 ME10**	3600	3300	5000	**>14≤19**	0,97	21,1	4	108	440	650	1240
64,74	1748/27	**PH721F0070 K102VF0092 ME20**	3500	3300	5000	**≤19**	2,1	22,0	4	107	440	650	1240
64,74	1748/27	**PH721F0070 K102VF0092 ME20**	3500	3300	5000	**>19≤24**	2,9	22,1	4	108	440	650	1240
66,44	598/9	**PH721F0100 K102VF0066 ME10**	3600	3300	5000	**≤14**	0,80	21,0	3,5	99	300	500	1000
66,44	598/9	**PH721F0100 K102VF0066 ME10**	3600	3300	5000	**>14≤19**	1,0	21,1	3,5	99	300	500	1000
66,44	598/9	**PH721F0100 K102VF0066 ME20**	3500	3300	5000	**≤19**	2,2	22,0	3,5	99	300	500	1000
66,44	598/9	**PH721F0100 K102VF0066 ME20**	3500	3300	5000	**>19≤24**	2,9	22,1	3,5	100	300	500	1000
70,98	3549/50	**PH721F0070 K102VF0100 ME10**	4000	3800	5500	**≤14**	0,61	21,0	4	107	440	650	1240
70,98	3549/50	**PH721F0070 K102VF0100 ME10**	4000	3800	5500	**>14≤19**	0,86	21,1	4	108	440	650	1240
70,98	3549/50	**PH721F0070 K102VF0100 ME20**	3500	3500	5000	**≤19**	2,0	22,0	4	108	440	650	1240
70,98	3549/50	**PH721F0070 K102VF0100 ME20**	3500	3500	5000	**>19≤24**	2,8	22,1	4	108	440	650	1240
80,96	1862/23	**PH721F0070 K102VF0115 ME10**	3600	3300	5000	**≤14**	0,63	21,0	4	107	440	650	1240
80,96	1862/23	**PH721F0070 K102VF0115 ME10**	3600	3300	5000	**>14≤19**	0,88	21,1	4	108	440	650	1240
80,96	1862/23	**PH721F0070 K102VF0115 ME20**	3500	3300	5000	**≤19**	2,0	22,0	4	108	440	650	1240
80,96	1862/23	**PH721F0070 K102VF0115 ME20**	3500	3300	5000	**>19≤24**	2,8	22,1	4	108	440	650	1240
83,09	1911/23	**PH721F0100 K102VF0083 ME10**	3600	3300	5000	**≤14**	0,68	21,0	3,5	99	300	500	1000
83,09	1911/23	**PH721F0100 K102VF0083 ME10**	3600	3300	5000	**>14≤19**	0,93	21,1	3,5	100	300	500	1000
83,09	1911/23	**PH721F0100 K102VF0083 ME20**	3500	3300	5000	**≤19**	2,1	22,0	3,5	100	300	500	1000
83,09	1911/23	**PH721F0100 K102VF0083 ME20**	3500	3300	5000	**>19≤24**	2,8	22,1	3,5	100	300	500	1000
88,33	3003/34	**PH721F0070 K102VF0125 ME10**	4000	3800	5500	**≤14**	0,54	21,0	4	108	440	650	1240
88,33	3003/34	**PH721F0070 K102VF0125 ME10**	4000	3800	5500	**>14≤19**	0,79	21,1	4	108	440	650	1240
88,33	3003/34	**PH721F0070 K102VF0125 ME20**	3500	3500	5000	**≤19**	2,0	22,0	4	108	440	650	1240
88,33	3003/34	**PH721F0070 K102VF0125 ME20**	3500	3500	5000	**>19≤24**	2,7	22,1	4	108	440	650	1240
92,49	17480/189	**PH721F0100 K102VF0092 ME10**	3600	3300	5000	**≤14**	0,71	21,0	3,5	99	300	500	1000
92,49	17480/189	**PH721F0100 K102VF0092 ME10**	3600	3300	5000	**>14≤19**	0,97	21,1	3,5	100	300	500	1000
92,49	17480/189	**PH721F0100 K102VF0092 ME20**	3500	3300	5000	**≤19**	2,1	22,0	3,5	100	300	500	1000
92,49	17480/189	**PH721F0100 K102VF0092 ME20**	3500	3300	5000	**>19≤24**	2,9	22,1	3,5	100	300	500	1000
98,80	494/5	**PH721F0070 K102VF0140 ME10**	4000	3800	5500	**≤14**	0,57	21,0	4	108	440	650	1240
98,80	494/5	**PH721F0070 K102VF0140 ME10**	4000	3800	5500	**>14≤19**	0,82	21,1	4	108	440	650	1240

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Please take notice of the indications on page PHK22! ***¡Por favor observe las indicaciones en la página PHK22!*** **Si raccomanda di rispettare le avvertenze a pagina PHK22!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH7K1 (M2BMAX=650 Nm)													
98,80	494/5	**PH721F0070 K102VF0140 ME20**	3500	3500	5000	**≤19**	2,0	22,0	4	108	440	650	1240
98,80	494/5	**PH721F0070 K102VF0140 ME20**	3500	3500	5000	**>19≤24**	2,7	22,1	4	108	440	650	1240
115,7	2660/23	**PH721F0100 K102VF0115 ME10**	3600	3300	5000	**≤14**	0,62	21,0	3,5	100	300	500	1000
115,7	2660/23	**PH721F0100 K102VF0115 ME10**	3600	3300	5000	**>14≤19**	0,87	21,1	3,5	100	300	500	1000
115,7	2660/23	**PH721F0100 K102VF0115 ME20**	3500	3300	5000	**≤19**	2,0	22,0	3,5	100	300	500	1000
115,7	2660/23	**PH721F0100 K102VF0115 ME20**	3500	3300	5000	**>19≤24**	2,8	22,1	3,5	100	300	500	1000
117,0	117/1	**PH721F0070 K102VF0165 ME10**	4000	4000	6000	**≤14**	0,48	21,0	4	108	440	650	1240
117,0	117/1	**PH721F0070 K102VF0165 ME10**	4000	4000	6000	**>14≤19**	0,73	21,1	4	108	440	650	1240
117,0	117/1	**PH721F0070 K102VF0165 ME20**	3500	3500	5000	**≤19**	1,9	22,0	4	108	440	650	1240
117,0	117/1	**PH721F0070 K102VF0165 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	4	108	440	650	1240
122,9	2090/17	**PH721F0070 K102VF0175 ME10**	4000	3800	5500	**≤14**	0,52	21,0	4	108	440	650	1240
122,9	2090/17	**PH721F0070 K102VF0175 ME10**	4000	3800	5500	**>14≤19**	0,77	21,1	4	108	440	650	1240
122,9	2090/17	**PH721F0070 K102VF0175 ME20**	3500	3500	5000	**≤19**	1,9	22,0	4	108	440	650	1240
122,9	2090/17	**PH721F0070 K102VF0175 ME20**	3500	3500	5000	**>19≤24**	2,7	22,1	4	108	440	650	1240
141,1	2821/20	**PH721F0070 K102VF0200 ME10**	4000	4000	6000	**≤14**	0,46	21,0	4	108	440	650	1240
141,1	2821/20	**PH721F0070 K102VF0200 ME10**	4000	4000	6000	**>14≤19**	0,71	21,1	4	108	440	650	1240
141,1	2821/20	**PH721F0070 K102VF0200 ME20**	3500	3500	5000	**≤19**	1,9	22,0	4	108	440	650	1240
141,1	2821/20	**PH721F0070 K102VF0200 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	4	108	440	650	1240
162,9	1140/7	**PH721F0070 K102VF0230 ME10**	4000	4000	6000	**≤14**	0,47	21,0	4	108	440	650	1240
162,9	1140/7	**PH721F0070 K102VF0230 ME10**	4000	4000	6000	**>14≤19**	0,72	21,1	4	108	440	650	1240
162,9	1140/7	**PH721F0070 K102VF0230 ME20**	3500	3500	5000	**≤19**	1,9	22,0	4	108	440	650	1240
162,9	1140/7	**PH721F0070 K102VF0230 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	4	108	440	650	1240
176,5	8827/50	**PH721F0070 K102VF0250 ME10**	4000	4000	6000	**≤14**	0,43	21,0	4	108	440	650	1240
176,5	8827/50	**PH721F0070 K102VF0250 ME10**	4000	4000	6000	**>14≤19**	0,68	21,1	4	108	440	650	1240
176,5	8827/50	**PH721F0070 K102VF0250 ME20**	3500	3500	5000	**≤19**	1,8	22,0	4	108	440	650	1240
176,5	8827/50	**PH721F0070 K102VF0250 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	4	108	440	650	1240
196,3	589/3	**PH721F0070 K102VF0280 ME10**	4000	4000	6000	**≤14**	0,45	21,0	4	108	440	650	1240
196,3	589/3	**PH721F0070 K102VF0280 ME10**	4000	4000	6000	**>14≤19**	0,70	21,1	4	108	440	650	1240
196,3	589/3	**PH721F0070 K102VF0280 ME20**	3500	3500	5000	**≤19**	1,9	22,0	4	108	440	650	1240
196,3	589/3	**PH721F0070 K102VF0280 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	4	108	440	650	1240
232,7	11400/49	**PH721F0100 K102VF0230 ME10**	4000	4000	6000	**≤14**	0,47	21,0	3,5	100	300	500	1000
232,7	11400/49	**PH721F0100 K102VF0230 ME10**	4000	4000	6000	**>14≤19**	0,72	21,1	3,5	100	300	500	1000
232,7	11400/49	**PH721F0100 K102VF0230 ME20**	3500	3500	5000	**≤19**	1,9	22,0	3,5	100	300	500	1000
232,7	11400/49	**PH721F0100 K102VF0230 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	3,5	100	300	500	1000
235,9	4719/20	**PH721F0070 K102VF0340 ME10**	4000	4000	6000	**≤14**	0,38	21,0	4	108	440	590	1060
235,9	4719/20	**PH721F0070 K102VF0340 ME10**	4000	4000	6000	**>14≤19**	0,63	21,1	4	108	440	590	1060
245,7	3686/15	**PH721F0070 K102VF0350 ME10**	4000	4000	6000	**≤14**	0,43	21,0	4	108	440	650	1240
245,7	3686/15	**PH721F0070 K102VF0350 ME10**	4000	4000	6000	**>14≤19**	0,68	21,1	4	108	440	650	1240
245,7	3686/15	**PH721F0070 K102VF0350 ME20**	3500	3500	5000	**≤19**	1,8	22,0	4	108	440	650	1240
245,7	3686/15	**PH721F0070 K102VF0350 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	4	108	440	650	1240
280,5	5890/21	**PH721F0100 K102VF0280 ME10**	4000	4000	6000	**≤14**	0,45	21,0	3,5	100	300	500	1000
280,5	5890/21	**PH721F0100 K102VF0280 ME10**	4000	4000	6000	**>14≤19**	0,70	21,1	3,5	100	300	500	1000
280,5	5890/21	**PH721F0100 K102VF0280 ME20**	3500	3500	5000	**≤19**	1,9	22,0	3,5	100	300	500	1000
280,5	5890/21	**PH721F0100 K102VF0280 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	3,5	100	300	500	1000
282,1	2821/10	**PH721F0070 K102VF0400 ME10**	4000	4000	6000	**≤14**	0,37	21,0	4	108	410	500	900
282,1	2821/10	**PH721F0070 K102VF0400 ME10**	4000	4000	6000	**>14≤19**	0,62	21,1	4	108	410	500	900
328,4	2299/7	**PH721F0070 K102VF0470 ME10**	4000	4000	6000	**≤14**	0,38	21,0	4	108	440	650	1240
328,4	2299/7	**PH721F0070 K102VF0470 ME10**	4000	4000	6000	**>14≤19**	0,63	21,1	4	108	440	650	1240
351,1	7372/21	**PH721F0100 K102VF0350 ME10**	4000	4000	6000	**≤14**	0,43	21,0	3,5	100	300	500	1000
351,1	7372/21	**PH721F0100 K102VF0350 ME10**	4000	4000	6000	**>14≤19**	0,68	21,1	3,5	100	300	500	1000
351,1	7372/21	**PH721F0100 K102VF0350 ME20**	3500	3500	5000	**≤19**	1,8	22,0	3,5	100	300	500	1000
351,1	7372/21	**PH721F0100 K102VF0350 ME20**	3500	3500	5000	**>19≤24**	2,6	22,1	3,5	100	300	500	1000
352,2	35217/100	**PH721F0070 K102VF0500 ME10**	4000	4000	6000	**≤14**	0,37	21,0	4	108	340	400	730
352,2	35217/100	**PH721F0070 K102VF0500 ME10**	4000	4000	6000	**>14≤19**	0,62	21,1	4	108	340	400	730
392,7	1178/3	**PH721F0070 K102VF0560 ME10**	4000	4000	6000	**≤14**	0,37	21,0	4	108	440	650	1240
392,7	1178/3	**PH721F0070 K102VF0560 ME10**	4000	4000	6000	**>14≤19**	0,62	21,1	4	108	440	650	1240
469,2	22990/49	**PH721F0100 K102VF0470 ME10**	4000	4000	6000	**≤14**	0,38	21,0	3,5	100	300	500	1000
469,2	22990/49	**PH721F0100 K102VF0470 ME10**	4000	4000	6000	**>14≤19**	0,63	21,1	3,5	100	300	500	1000
490,2	2451/5	**PH721F0070 K102VF0700 ME10**	4000	4000	6000	**≤14**	0,36	21,0	4	108	440	560	1010
490,2	2451/5	**PH721F0070 K102VF0700 ME10**	4000	4000	6000	**>14≤19**	0,62	21,1	4	108	440	560	1010
561,0	11780/21	**PH721F0100 K102VF0560 ME10**	4000	4000	6000	**≤14**	0,37	21,0	3,5	100	300	500	1000
561,0	11780/21	**PH721F0100 K102VF0560 ME10**	4000	4000	6000	**>14≤19**	0,62	21,1	3,5	100	300	500	1000

Right-Angle Planetary Gear Units **PHK**
Reductores planetarios ortogonales ***PHK***
Riduttori planetari-coppia conica **PHK**

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Please take notice of the indications on page PHK22! ***¡Por favor observe las indicaciones en la página PHK22!*** **Si raccomanda di rispettare le avvertenze a pagina PHK22!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH7K2 (M2BMAX=700 Nm)													
16,00	16/1	**PH721F0040 K202VF0040 ME10**	3000	2600	4000	**≤14**	3,0	28,5	4,5	79	180	180	240
16,00	16/1	**PH721F0040 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,3	28,6	4,5	83	180	180	240
16,00	16/1	**PH721F0040 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,5	29,5	4,5	83	440	610	760
16,00	16/1	**PH721F0040 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,3	29,6	4,5	87	440	670	1210
16,00	16/1	**PH721F0040 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,7	29,6	4,5	87	440	670	1210
16,00	16/1	**PH721F0040 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	31,4	4,5	86	440	670	1210
16,00	16/1	**PH721F0040 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	31,4	4,5	88	440	670	1210
16,00	16/1	**PH721F0040 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	31,5	4,5	88	440	670	1210
20,00	20/1	**PH721F0050 K202VF0040 ME10**	3000	2600	4000	**≤14**	2,9	28,5	4	99	220	220	300
20,00	20/1	**PH721F0050 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,2	28,6	4	103	220	220	300
20,00	20/1	**PH721F0050 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,4	29,5	4	103	440	700	950
20,00	20/1	**PH721F0050 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,1	29,6	4	107	440	700	1400
20,00	20/1	**PH721F0050 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,6	29,6	4	108	440	700	1400
20,00	20/1	**PH721F0050 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	31,4	4	107	440	700	1400
20,00	20/1	**PH721F0050 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	31,4	4	108	440	700	1400
20,00	20/1	**PH721F0050 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	31,5	4	108	440	700	1400
25,89	10535/407	**PH721F0050 K202VF0052 ME20**	3000	2600	4000	**≤19**	3,6	29,5	4	105	440	700	1230
25,89	10535/407	**PH721F0050 K202VF0052 ME20**	3000	2600	4000	**>19≤24**	4,3	29,6	4	108	440	700	1400
25,89	10535/407	**PH721F0050 K202VF0052 ME20**	3000	2600	4000	**>24≤32**	5,8	29,6	4	108	440	700	1400
25,89	10535/407	**PH721F0050 K202VF0052 ME30**	3000	2600	4000	**≤24**	9,2	31,4	4	107	440	700	1400
25,89	10535/407	**PH721F0050 K202VF0052 ME30**	3000	2600	4000	**>24≤32**	9,3	31,4	4	108	440	700	1400
25,89	10535/407	**PH721F0050 K202VF0052 ME30**	3000	2600	4000	**>32≤38**	11	31,5	4	108	440	700	1400
30,00	30/1	**PH721F0050 K202VF0060 ME10**	3000	2600	4000	**≤14**	2,1	28,5	4	104	440	610	750
30,00	30/1	**PH721F0050 K202VF0060 ME10**	3000	2600	4000	**>14≤19**	2,4	28,6	4	107	440	670	910
30,00	30/1	**PH721F0050 K202VF0060 ME20**	3000	2600	4000	**≤19**	3,6	29,5	4	106	440	700	1400
30,00	30/1	**PH721F0050 K202VF0060 ME20**	3000	2600	4000	**>19≤24**	4,3	29,6	4	108	440	700	1400
30,00	30/1	**PH721F0050 K202VF0060 ME20**	3000	2600	4000	**>24≤32**	5,8	29,6	4	108	440	700	1400
30,00	30/1	**PH721F0050 K202VF0060 ME30**	3000	2600	4000	**≤24**	9,3	31,4	4	108	440	700	1400
30,00	30/1	**PH721F0050 K202VF0060 ME30**	3000	2600	4000	**>24≤32**	9,4	31,4	4	108	440	700	1400
30,00	30/1	**PH721F0050 K202VF0060 ME30**	3000	2600	4000	**>32≤38**	11	31,5	4	108	440	700	1400
33,42	11395/341	**PH721F0050 K202VF0067 ME10**	3500	3100	4500	**≤14**	1,5	28,5	4	105	440	680	840
33,42	11395/341	**PH721F0050 K202VF0067 ME10**	3500	3100	4500	**>14≤19**	1,8	28,6	4	107	440	700	1010
33,42	11395/341	**PH721F0050 K202VF0067 ME20**	3500	3100	4500	**≤19**	3,0	29,5	4	107	440	700	1400
33,42	11395/341	**PH721F0050 K202VF0067 ME20**	3500	3100	4500	**>19≤24**	3,7	29,6	4	108	440	700	1400
33,42	11395/341	**PH721F0050 K202VF0067 ME20**	3500	3100	4500	**>24≤32**	5,2	29,6	4	108	440	700	1400
33,42	11395/341	**PH721F0050 K202VF0067 ME30**	3500	3100	4000	**≤24**	8,6	31,4	4	108	440	700	1400
33,42	11395/341	**PH721F0050 K202VF0067 ME30**	3500	3100	4000	**>24≤32**	8,8	31,4	4	108	440	700	1400
33,42	11395/341	**PH721F0050 K202VF0067 ME30**	3500	3100	4000	**>32≤38**	11	31,5	4	109	440	700	1400
41,99	12470/297	**PH721F0050 K202VF0084 ME10**	3500	3100	4500	**≤14**	1,2	28,5	4	106	440	700	1060
41,99	12470/297	**PH721F0050 K202VF0084 ME10**	3500	3100	4500	**>14≤19**	1,4	28,6	4	108	440	700	1270
41,99	12470/297	**PH721F0050 K202VF0084 ME20**	3500	3100	4500	**≤19**	2,6	29,5	4	107	440	700	1400
41,99	12470/297	**PH721F0050 K202VF0084 ME20**	3500	3100	4500	**>19≤24**	3,4	29,6	4	108	440	700	1400
41,99	12470/297	**PH721F0050 K202VF0084 ME20**	3500	3100	4500	**>24≤32**	4,8	29,6	4	108	440	700	1400
41,99	12470/297	**PH721F0050 K202VF0084 ME30**	3500	3100	4000	**≤24**	8,3	31,4	4	108	440	700	1400
41,99	12470/297	**PH721F0050 K202VF0084 ME30**	3500	3100	4000	**>24≤32**	8,4	31,4	4	109	440	700	1400
41,99	12470/297	**PH721F0050 K202VF0084 ME30**	3500	3100	4000	**>32≤38**	10	31,5	4	109	440	700	1400
45,95	11395/248	**PH721F0050 K202VF0092 ME10**	3500	3100	4500	**≤14**	1,3	28,5	4	107	440	700	1160
45,95	11395/248	**PH721F0050 K202VF0092 ME10**	3500	3100	4500	**>14≤19**	1,6	28,6	4	108	440	700	1390
45,95	11395/248	**PH721F0050 K202VF0092 ME20**	3500	3100	4500	**≤19**	2,8	29,5	4	108	440	700	1400
45,95	11395/248	**PH721F0050 K202VF0092 ME20**	3500	3100	4500	**>19≤24**	3,5	29,6	4	108	440	700	1400
45,95	11395/248	**PH721F0050 K202VF0092 ME20**	3500	3100	4500	**>24≤32**	5,0	29,6	4	109	440	700	1400
45,95	11395/248	**PH721F0050 K202VF0092 ME30**	3500	3100	4000	**≤24**	8,4	31,4	4	108	440	700	1400
45,95	11395/248	**PH721F0050 K202VF0092 ME30**	3500	3100	4000	**>24≤32**	8,6	31,4	4	109	440	700	1400
45,95	11395/248	**PH721F0050 K202VF0092 ME30**	3500	3100	4000	**>32≤38**	10	31,5	4	109	440	700	1400
57,73	6235/108	**PH721F0050 K202VF0115 ME10**	3500	3100	4500	**≤14**	1,1	28,5	4	108	440	700	1400
57,73	6235/108	**PH721F0050 K202VF0115 ME10**	3500	3100	4500	**>14≤19**	1,3	28,6	4	108	440	700	1400
57,73	6235/108	**PH721F0050 K202VF0115 ME20**	3500	3100	4500	**≤19**	2,5	29,5	4	108	440	700	1400
57,73	6235/108	**PH721F0050 K202VF0115 ME20**	3500	3100	4500	**>19≤24**	3,3	29,6	4	109	440	700	1400
57,73	6235/108	**PH721F0050 K202VF0115 ME20**	3500	3100	4500	**>24≤32**	4,7	29,6	4	109	440	700	1400
57,73	6235/108	**PH721F0050 K202VF0115 ME30**	3500	3100	4000	**≤24**	8,2	31,4	4	108	440	700	1400
57,73	6235/108	**PH721F0050 K202VF0115 ME30**	3500	3100	4000	**>24≤32**	8,3	31,4	4	109	440	700	1400
57,73	6235/108	**PH721F0050 K202VF0115 ME30**	3500	3100	4000	**>32≤38**	10	31,5	4	109	440	700	1400

Right-Angle Planetary Gear Units **PHK**
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Riduttori planetari-coppia conica **PHK**

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Please take notice of the indications on page PHK22! ***¡Por favor observe las indicaciones en la página PHK22!*** **Si raccomanda di rispettare le avvertenze a pagina PHK22!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH7K2 (M2BMAX=700 Nm)													
69,26	14405/208	**PH721F0050 K202VF0140 ME10**	3900	3500	5000	**≤14**	0,90	28,5	4	108	440	700	1400
69,26	14405/208	**PH721F0050 K202VF0140 ME10**	3900	3500	5000	**>14≤19**	1,1	28,6	4	108	440	700	1400
69,26	14405/208	**PH721F0050 K202VF0140 ME20**	3500	3500	5000	**≤19**	2,4	29,5	4	108	440	700	1400
69,26	14405/208	**PH721F0050 K202VF0140 ME20**	3500	3500	5000	**>19≤24**	3,1	29,6	4	109	440	700	1400
69,26	14405/208	**PH721F0050 K202VF0140 ME20**	3500	3500	5000	**>24≤32**	4,6	29,6	4	109	440	700	1400
69,26	14405/208	**PH721F0050 K202VF0140 ME30**	3500	3500	4000	**≤24**	8,0	31,4	4	109	440	700	1400
69,26	14405/208	**PH721F0050 K202VF0140 ME30**	3500	3500	4000	**>24≤32**	8,1	31,4	4	109	440	700	1400
69,26	14405/208	**PH721F0050 K202VF0140 ME30**	3500	3500	4000	**>32≤38**	9,9	31,5	4	109	440	700	1400
87,35	2795/32	**PH721F0050 K202VF0175 ME10**	3900	3500	5000	**≤14**	0,75	28,5	4	108	440	700	1400
87,35	2795/32	**PH721F0050 K202VF0175 ME10**	3900	3500	5000	**>14≤19**	1,0	28,6	4	109	440	700	1400
87,35	2795/32	**PH721F0050 K202VF0175 ME20**	3500	3500	5000	**≤19**	2,2	29,5	4	108	440	700	1400
87,35	2795/32	**PH721F0050 K202VF0175 ME20**	3500	3500	5000	**>19≤24**	2,9	29,6	4	109	440	700	1400
87,35	2795/32	**PH721F0050 K202VF0175 ME20**	3500	3500	5000	**>24≤32**	4,4	29,6	4	109	440	700	1400
87,35	2795/32	**PH721F0050 K202VF0175 ME30**	3500	3500	4000	**≤24**	7,9	31,4	4	109	440	700	1400
87,35	2795/32	**PH721F0050 K202VF0175 ME30**	3500	3500	4000	**>24≤32**	8,0	31,4	4	109	440	700	1400
87,35	2795/32	**PH721F0050 K202VF0175 ME30**	3500	3500	4000	**>32≤38**	9,7	31,5	4	109	440	700	1400
115,9	14835/128	**PH721F0050 K202VF0230 ME10**	4000	3900	5500	**≤14**	0,62	28,5	4	108	440	700	1400
115,9	14835/128	**PH721F0050 K202VF0230 ME10**	4000	3900	5500	**>14≤19**	0,87	28,6	4	109	440	700	1400
115,9	14835/128	**PH721F0050 K202VF0230 ME20**	3500	3500	5000	**≤19**	2,1	29,5	4	109	440	700	1400
115,9	14835/128	**PH721F0050 K202VF0230 ME20**	3500	3500	5000	**>19≤24**	2,8	29,6	4	109	440	700	1400
115,9	14835/128	**PH721F0050 K202VF0230 ME20**	3500	3500	5000	**>24≤32**	4,3	29,6	4	109	440	700	1400
115,9	14835/128	**PH721F0050 K202VF0230 ME30**	3500	3500	4000	**≤24**	7,7	31,4	4	109	440	700	1400
115,9	14835/128	**PH721F0050 K202VF0230 ME30**	3500	3500	4000	**>24≤32**	7,9	31,4	4	109	440	700	1400
115,9	14835/128	**PH721F0050 K202VF0230 ME30**	3500	3500	4000	**>32≤38**	9,6	31,5	4	109	440	700	1400
139,8	559/4	**PH721F0050 K202VF0280 ME10**	4000	3900	5500	**≤14**	0,56	28,5	4	109	440	700	1400
139,8	559/4	**PH721F0050 K202VF0280 ME10**	4000	3900	5500	**>14≤19**	0,81	28,6	4	109	440	700	1400
139,8	559/4	**PH721F0050 K202VF0280 ME20**	3500	3500	5000	**≤19**	2,0	29,5	4	109	440	700	1400
139,8	559/4	**PH721F0050 K202VF0280 ME20**	3500	3500	5000	**>19≤24**	2,7	29,6	4	109	440	700	1400
172,8	9675/56	**PH721F0050 K202VF0350 ME10**	4000	3900	5500	**≤14**	0,51	28,5	4	109	440	700	1400
172,8	9675/56	**PH721F0050 K202VF0350 ME10**	4000	3900	5500	**>14≤19**	0,76	28,6	4	109	440	700	1400
172,8	9675/56	**PH721F0050 K202VF0350 ME20**	3500	3500	5000	**≤19**	1,9	29,5	4	109	440	700	1400
172,8	9675/56	**PH721F0050 K202VF0350 ME20**	3500	3500	5000	**>19≤24**	2,7	29,6	4	109	440	700	1400
231,1	1849/8	**PH721F0050 K202VF0460 ME10**	4000	3900	5500	**≤14**	0,46	28,5	4	109	440	700	1400
231,1	1849/8	**PH721F0050 K202VF0460 ME10**	4000	3900	5500	**>14≤19**	0,71	28,6	4	109	440	700	1400
231,1	1849/8	**PH721F0050 K202VF0460 ME20**	3500	3500	5000	**≤19**	1,9	29,5	4	109	440	700	1400
231,1	1849/8	**PH721F0050 K202VF0460 ME20**	3500	3500	5000	**>19≤24**	2,6	29,6	4	109	440	700	1400
277,7	6665/24	**PH721F0050 K202VF0560 ME10**	4000	3900	5500	**≤14**	0,41	28,5	4	109	440	700	1400
277,7	6665/24	**PH721F0050 K202VF0560 ME10**	4000	3900	5500	**>14≤19**	0,66	28,6	4	109	440	700	1400
PH8K2 (M2BMAX=1480 Nm)													
28,00	28/1	**PH821F0070 K202VF0040 ME10**	3000	2600	4000	**≤14**	3,2	49,8	3,5	222	310	310	420
28,00	28/1	**PH821F0070 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,5	49,9	3,5	234	310	310	420
28,00	28/1	**PH821F0070 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,7	50,8	3,5	234	780	1070	1330
28,00	28/1	**PH821F0070 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,4	50,9	3,5	243	780	1170	2120
28,00	28/1	**PH821F0070 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,9	50,9	3,5	245	780	1170	2120
28,00	28/1	**PH821F0070 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	52,7	3,5	242	780	1170	2120
28,00	28/1	**PH821F0070 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	52,7	3,5	246	780	1170	2120
28,00	28/1	**PH821F0070 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	52,8	3,5	246	780	1170	2120
30,55	336/11	**PH821F0070 K202VF0044 ME10**	3000	2600	4000	**≤14**	2,9	49,8	3,5	227	630	630	770
30,55	336/11	**PH821F0070 K202VF0044 ME10**	3000	2600	4000	**>14≤19**	3,1	49,9	3,5	238	680	680	930
30,55	336/11	**PH821F0070 K202VF0044 ME20**	3000	2600	4000	**≤19**	4,3	50,8	3,5	236	800	1170	1450
30,55	336/11	**PH821F0070 K202VF0044 ME20**	3000	2600	4000	**>19≤24**	5,0	50,9	3,5	244	800	1210	2310
30,55	336/11	**PH821F0070 K202VF0044 ME20**	3000	2600	4000	**>24≤32**	6,5	50,9	3,5	246	800	1210	2310
30,55	336/11	**PH821F0070 K202VF0044 ME30**	3000	2600	4000	**≤24**	10,0	52,7	3,5	243	800	1210	2310
30,55	336/11	**PH821F0070 K202VF0044 ME30**	3000	2600	4000	**>24≤32**	10	52,7	3,5	246	800	1210	2310
30,55	336/11	**PH821F0070 K202VF0044 ME30**	3000	2600	4000	**>32≤38**	12	52,8	3,5	247	800	1210	2310
36,24	14749/407	**PH821F0070 K202VF0052 ME20**	3000	2600	4000	**≤19**	3,7	50,8	3,5	240	850	1280	1720
36,24	14749/407	**PH821F0070 K202VF0052 ME20**	3000	2600	4000	**>19≤24**	4,5	50,9	3,5	245	850	1280	2750
36,24	14749/407	**PH821F0070 K202VF0052 ME20**	3000	2600	4000	**>24≤32**	5,9	50,9	3,5	246	850	1280	2750
36,24	14749/407	**PH821F0070 K202VF0052 ME30**	3000	2600	4000	**≤24**	9,4	52,7	3,5	245	850	1280	2750

Right-Angle Planetary Gear Units **PHK**
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH8K2 (M2BMAX=1480 Nm)													
36,24	14749/407	**PH821F0070 K202VF0052 ME30**	3000	2600	4000	**>24≤32**	9,5	52,7	3,5	247	850	1280	2750
36,24	14749/407	**PH821F0070 K202VF0052 ME30**	3000	2600	4000	**>32≤38**	11	52,8	3,5	247	850	1280	2750
40,00	40/1	**PH821F0100 K202VF0040 ME10**	3000	2600	4000	**≤14**	3,0	49,8	3,5	231	450	450	610
40,00	40/1	**PH821F0100 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,2	49,9	3,5	237	450	450	610
40,00	40/1	**PH821F0100 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,5	50,8	3,5	237	800	1200	1900
40,00	40/1	**PH821F0100 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,2	50,9	3,5	242	800	1200	2400
40,00	40/1	**PH821F0100 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,7	50,9	3,5	243	800	1200	2400
40,00	40/1	**PH821F0100 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	52,7	3,5	241	800	1200	2400
40,00	40/1	**PH821F0100 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	52,7	3,5	243	800	1200	2400
40,00	40/1	**PH821F0100 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	52,8	3,5	243	800	1200	2400
42,00	42/1	**PH821F0070 K202VF0060 ME10**	3000	2600	4000	**≤14**	2,3	49,8	3,5	237	860	860	1060
42,00	42/1	**PH821F0070 K202VF0060 ME10**	3000	2600	4000	**>14≤19**	2,5	49,9	3,5	243	890	940	1270
42,00	42/1	**PH821F0070 K202VF0060 ME20**	3000	2600	4000	**≤19**	3,7	50,8	3,5	242	890	1340	1990
42,00	42/1	**PH821F0070 K202VF0060 ME20**	3000	2600	4000	**>19≤24**	4,5	50,9	3,5	246	890	1340	2770
42,00	42/1	**PH821F0070 K202VF0060 ME20**	3000	2600	4000	**>24≤32**	5,9	50,9	3,5	247	890	1340	2770
42,00	42/1	**PH821F0070 K202VF0060 ME30**	3000	2600	4000	**≤24**	9,4	52,7	3,5	246	890	1340	2770
42,00	42/1	**PH821F0070 K202VF0060 ME30**	3000	2600	4000	**>24≤32**	9,5	52,7	3,5	247	890	1340	2770
42,00	42/1	**PH821F0070 K202VF0060 ME30**	3000	2600	4000	**>32≤38**	11	52,8	3,5	247	890	1340	2770
46,78	15953/341	**PH821F0070 K202VF0067 ME10**	3500	3100	4500	**≤14**	1,6	49,8	3,5	239	910	960	1180
46,78	15953/341	**PH821F0070 K202VF0067 ME10**	3500	3100	4500	**>14≤19**	1,9	49,9	3,5	244	910	1050	1420
46,78	15953/341	**PH821F0070 K202VF0067 ME20**	3500	3100	4500	**≤19**	3,1	50,8	3,5	243	930	1390	2220
46,78	15953/341	**PH821F0070 K202VF0067 ME20**	3500	3100	4500	**>19≤24**	3,8	50,9	3,5	246	930	1390	2770
46,78	15953/341	**PH821F0070 K202VF0067 ME20**	3500	3100	4500	**>24≤32**	5,3	50,9	3,5	247	930	1390	2770
46,78	15953/341	**PH821F0070 K202VF0067 ME30**	3500	3100	4000	**≤24**	8,8	52,7	3,5	246	930	1390	2770
46,78	15953/341	**PH821F0070 K202VF0067 ME30**	3500	3100	4000	**>24≤32**	8,9	52,7	3,5	247	930	1390	2770
46,78	15953/341	**PH821F0070 K202VF0067 ME30**	3500	3100	4000	**>32≤38**	11	52,8	3,5	248	930	1390	2770
49,83	14749/296	**PH821F0070 K202VF0071 ME20**	3000	2600	4000	**≤19**	3,3	50,8	3,5	244	950	1420	2370
49,83	14749/296	**PH821F0070 K202VF0071 ME20**	3000	2600	4000	**>19≤24**	4,1	50,9	3,5	247	950	1420	2770
49,83	14749/296	**PH821F0070 K202VF0071 ME20**	3000	2600	4000	**>24≤32**	5,5	50,9	3,5	247	950	1420	2770
49,83	14749/296	**PH821F0070 K202VF0071 ME30**	3000	2600	4000	**≤24**	9,0	52,7	3,5	246	950	1420	2770
49,83	14749/296	**PH821F0070 K202VF0071 ME30**	3000	2600	4000	**>24≤32**	9,1	52,7	3,5	247	950	1420	2770
49,83	14749/296	**PH821F0070 K202VF0071 ME30**	3000	2600	4000	**>32≤38**	11	52,8	3,5	248	950	1420	2770
51,77	21070/407	**PH821F0100 K202VF0052 ME20**	3000	2600	4000	**≤19**	3,6	50,8	3,5	240	800	1200	2400
51,77	21070/407	**PH821F0100 K202VF0052 ME20**	3000	2600	4000	**>19≤24**	4,3	50,9	3,5	243	800	1200	2400
51,77	21070/407	**PH821F0100 K202VF0052 ME20**	3000	2600	4000	**>24≤32**	5,8	50,9	3,5	243	800	1200	2400
51,77	21070/407	**PH821F0100 K202VF0052 ME30**	3000	2600	4000	**≤24**	9,3	52,7	3,5	243	800	1200	2400
51,77	21070/407	**PH821F0100 K202VF0052 ME30**	3000	2600	4000	**>24≤32**	9,4	52,7	3,5	244	800	1200	2400
51,77	21070/407	**PH821F0100 K202VF0052 ME30**	3000	2600	4000	**>32≤38**	11	52,8	3,5	244	800	1200	2400
58,78	17458/297	**PH821F0070 K202VF0084 ME10**	3500	3100	4500	**≤14**	1,3	49,8	3,5	242	1000	1200	1480
58,78	17458/297	**PH821F0070 K202VF0084 ME10**	3500	3100	4500	**>14≤19**	1,5	49,9	3,5	245	1000	1310	1780
58,78	17458/297	**PH821F0070 K202VF0084 ME20**	3500	3100	4500	**≤19**	2,7	50,8	3,5	245	1000	1480	2770
58,78	17458/297	**PH821F0070 K202VF0084 ME20**	3500	3100	4500	**>19≤24**	3,4	50,9	3,5	247	1000	1480	2770
58,78	17458/297	**PH821F0070 K202VF0084 ME20**	3500	3100	4500	**>24≤32**	4,9	50,9	3,5	248	1000	1480	2770
58,78	17458/297	**PH821F0070 K202VF0084 ME30**	3500	3100	4000	**≤24**	8,4	52,7	3,5	247	1000	1480	2770
58,78	17458/297	**PH821F0070 K202VF0084 ME30**	3500	3100	4000	**>24≤32**	8,5	52,7	3,5	248	1000	1480	2770
58,78	17458/297	**PH821F0070 K202VF0084 ME30**	3500	3100	4000	**>32≤38**	10	52,8	3,5	248	1000	1480	2770
60,00	60/1	**PH821F0100 K202VF0060 ME10**	3000	2600	4000	**≤14**	2,2	49,8	3,5	239	800	1200	1510
60,00	60/1	**PH821F0100 K202VF0060 ME10**	3000	2600	4000	**>14≤19**	2,4	49,9	3,5	242	800	1200	1820
60,00	60/1	**PH821F0100 K202VF0060 ME20**	3000	2600	4000	**≤19**	3,6	50,8	3,5	241	800	1200	2400
60,00	60/1	**PH821F0100 K202VF0060 ME20**	3000	2600	4000	**>19≤24**	4,4	50,9	3,5	243	800	1200	2400
60,00	60/1	**PH821F0100 K202VF0060 ME20**	3000	2600	4000	**>24≤32**	5,8	50,9	3,5	244	800	1200	2400
60,00	60/1	**PH821F0100 K202VF0060 ME30**	3000	2600	4000	**≤24**	9,3	52,7	3,5	243	800	1200	2400
60,00	60/1	**PH821F0100 K202VF0060 ME30**	3000	2600	4000	**>24≤32**	9,4	52,7	3,5	244	800	1200	2400
60,00	60/1	**PH821F0100 K202VF0060 ME30**	3000	2600	4000	**>32≤38**	11	52,8	3,5	244	800	1200	2400
64,33	15953/248	**PH821F0070 K202VF0092 ME10**	3500	3100	4500	**≤14**	1,4	49,8	3,5	243	1000	1320	1620
64,33	15953/248	**PH821F0070 K202VF0092 ME10**	3500	3100	4500	**>14≤19**	1,6	49,9	3,5	246	1000	1440	1950
64,33	15953/248	**PH821F0070 K202VF0092 ME20**	3500	3100	4500	**≤19**	2,8	50,8	3,5	245	1000	1480	2770
64,33	15953/248	**PH821F0070 K202VF0092 ME20**	3500	3100	4500	**>19≤24**	3,6	50,9	3,5	247	1000	1480	2770
64,33	15953/248	**PH821F0070 K202VF0092 ME20**	3500	3100	4500	**>24≤32**	5,0	50,9	3,5	248	1000	1480	2770
64,33	15953/248	**PH821F0070 K202VF0092 ME30**	3500	3100	4000	**≤24**	8,5	52,7	3,5	247	1000	1480	2770
64,33	15953/248	**PH821F0070 K202VF0092 ME30**	3500	3100	4000	**>24≤32**	8,6	52,7	3,5	248	1000	1480	2770
64,33	15953/248	**PH821F0070 K202VF0092 ME30**	3500	3100	4000	**>32≤38**	10	52,8	3,5	248	1000	1480	2770

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Please take notice of the indications on page PHK22! ***¡Por favor observe las indicaciones en la página PHK22!*** **Si raccomanda di rispettare le avvertenze a pagina PHK22!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH8K2 (M2BMAX=1480 Nm)													
66,83	22790/341	**PH821F0100 K202VF0067 ME10**	3500	3100	4500	**≤14**	1,6	49,8	3,5	240	800	1200	1680
66,83	22790/341	**PH821F0100 K202VF0067 ME10**	3500	3100	4500	**>14≤19**	1,8	49,9	3,5	242	800	1200	2030
66,83	22790/341	**PH821F0100 K202VF0067 ME20**	3500	3100	4500	**≤19**	3,0	50,8	3,5	242	800	1200	2400
66,83	22790/341	**PH821F0100 K202VF0067 ME20**	3500	3100	4500	**>19≤24**	3,7	50,9	3,5	243	800	1200	2400
66,83	22790/341	**PH821F0100 K202VF0067 ME20**	3500	3100	4500	**>24≤32**	5,2	50,9	3,5	244	800	1200	2400
66,83	22790/341	**PH821F0100 K202VF0067 ME30**	3500	3100	4000	**≤24**	8,7	52,7	3,5	243	800	1200	2400
66,83	22790/341	**PH821F0100 K202VF0067 ME30**	3500	3100	4000	**>24≤32**	8,8	52,7	3,5	244	800	1200	2400
66,83	22790/341	**PH821F0100 K202VF0067 ME30**	3500	3100	4000	**>32≤38**	11	52,8	3,5	244	800	1200	2400
70,51	20167/286	**PH821F0070 K202VF0100 ME10**	3900	3500	5000	**≤14**	1,0	49,8	3,5	244	1000	1440	1770
70,51	20167/286	**PH821F0070 K202VF0100 ME10**	3900	3500	5000	**>14≤19**	1,3	49,9	3,5	246	1000	1480	2140
70,51	20167/286	**PH821F0070 K202VF0100 ME20**	3500	3500	5000	**≤19**	2,5	50,8	3,5	246	1000	1480	2770
70,51	20167/286	**PH821F0070 K202VF0100 ME20**	3500	3500	5000	**>19≤24**	3,2	50,9	3,5	247	1000	1480	2770
70,51	20167/286	**PH821F0070 K202VF0100 ME20**	3500	3500	5000	**>24≤32**	4,7	50,9	3,5	248	1000	1480	2770
70,51	20167/286	**PH821F0070 K202VF0100 ME30**	3500	3500	4000	**≤24**	8,1	52,7	3,5	247	1000	1480	2770
70,51	20167/286	**PH821F0070 K202VF0100 ME30**	3500	3500	4000	**>24≤32**	8,3	52,7	3,5	248	1000	1480	2770
70,51	20167/286	**PH821F0070 K202VF0100 ME30**	3500	3500	4000	**>32≤38**	10	52,8	3,5	248	1000	1480	2770
80,82	8729/108	**PH821F0070 K202VF0115 ME10**	3500	3100	4500	**≤14**	1,1	49,8	3,5	245	1000	1480	2030
80,82	8729/108	**PH821F0070 K202VF0115 ME10**	3500	3100	4500	**>14≤19**	1,3	49,9	3,5	247	1000	1480	2450
80,82	8729/108	**PH821F0070 K202VF0115 ME20**	3500	3100	4500	**≤19**	2,6	50,8	3,5	246	1000	1480	2770
80,82	8729/108	**PH821F0070 K202VF0115 ME20**	3500	3100	4500	**>19≤24**	3,3	50,9	3,5	248	1000	1480	2770
80,82	8729/108	**PH821F0070 K202VF0115 ME20**	3500	3100	4500	**>24≤32**	4,8	50,9	3,5	248	1000	1480	2770
80,82	8729/108	**PH821F0070 K202VF0115 ME30**	3500	3100	4000	**≤24**	8,2	52,7	3,5	248	1000	1480	2770
80,82	8729/108	**PH821F0070 K202VF0115 ME30**	3500	3100	4000	**>24≤32**	8,3	52,7	3,5	248	1000	1480	2770
80,82	8729/108	**PH821F0070 K202VF0115 ME30**	3500	3100	4000	**>32≤38**	10	52,8	3,5	248	1000	1480	2770
83,97	24940/297	**PH821F0100 K202VF0084 ME10**	3500	3100	4500	**≤14**	1,2	49,8	3,5	241	800	1200	2110
83,97	24940/297	**PH821F0100 K202VF0084 ME10**	3500	3100	4500	**>14≤19**	1,5	49,9	3,5	243	800	1200	2400
83,97	24940/297	**PH821F0100 K202VF0084 ME20**	3500	3100	4500	**≤19**	2,7	50,8	3,5	243	800	1200	2400
83,97	24940/297	**PH821F0100 K202VF0084 ME20**	3500	3100	4500	**>19≤24**	3,4	50,9	3,5	244	800	1200	2400
83,97	24940/297	**PH821F0100 K202VF0084 ME20**	3500	3100	4500	**>24≤32**	4,9	50,9	3,5	244	800	1200	2400
83,97	24940/297	**PH821F0100 K202VF0084 ME30**	3500	3100	4000	**≤24**	8,3	52,7	3,5	244	800	1200	2400
83,97	24940/297	**PH821F0100 K202VF0084 ME30**	3500	3100	4000	**>24≤32**	8,4	52,7	3,5	244	800	1200	2400
83,97	24940/297	**PH821F0100 K202VF0084 ME30**	3500	3100	4000	**>32≤38**	10	52,8	3,5	244	800	1200	2400
88,94	3913/44	**PH821F0070 K202VF0125 ME10**	3900	3500	5000	**≤14**	0,83	49,8	3,5	246	1000	1480	2240
88,94	3913/44	**PH821F0070 K202VF0125 ME10**	3900	3500	5000	**>14≤19**	1,1	49,9	3,5	247	1000	1480	2700
88,94	3913/44	**PH821F0070 K202VF0125 ME20**	3500	3500	5000	**≤19**	2,3	50,8	3,5	247	1000	1480	2770
88,94	3913/44	**PH821F0070 K202VF0125 ME20**	3500	3500	5000	**>19≤24**	3,0	50,9	3,5	248	1000	1480	2770
88,94	3913/44	**PH821F0070 K202VF0125 ME20**	3500	3500	5000	**>24≤32**	4,5	50,9	3,5	248	1000	1480	2770
88,94	3913/44	**PH821F0070 K202VF0125 ME30**	3500	3500	4000	**≤24**	7,9	52,7	3,5	248	1000	1480	2770
88,94	3913/44	**PH821F0070 K202VF0125 ME30**	3500	3500	4000	**>24≤32**	8,1	52,7	3,5	248	1000	1480	2770
88,94	3913/44	**PH821F0070 K202VF0125 ME30**	3500	3500	4000	**>32≤38**	9,8	52,8	3,5	248	1000	1480	2770
91,90	11395/124	**PH821F0100 K202VF0092 ME10**	3500	3100	4500	**≤14**	1,3	49,8	3,5	242	800	1200	2310
91,90	11395/124	**PH821F0100 K202VF0092 ME10**	3500	3100	4500	**>14≤19**	1,6	49,9	3,5	243	800	1200	2400
91,90	11395/124	**PH821F0100 K202VF0092 ME20**	3500	3100	4500	**≤19**	2,8	50,8	3,5	243	800	1200	2400
91,90	11395/124	**PH821F0100 K202VF0092 ME20**	3500	3100	4500	**>19≤24**	3,5	50,9	3,5	244	800	1200	2400
91,90	11395/124	**PH821F0100 K202VF0092 ME20**	3500	3100	4500	**>24≤32**	5,0	50,9	3,5	244	800	1200	2400
91,90	11395/124	**PH821F0100 K202VF0092 ME30**	3500	3100	4000	**≤24**	8,5	52,7	3,5	244	800	1200	2400
91,90	11395/124	**PH821F0100 K202VF0092 ME30**	3500	3100	4000	**>24≤32**	8,6	52,7	3,5	244	800	1200	2400
91,90	11395/124	**PH821F0100 K202VF0092 ME30**	3500	3100	4000	**>32≤38**	10	52,8	3,5	244	800	1200	2400
96,96	20167/208	**PH821F0070 K202VF0140 ME10**	3900	3500	5000	**≤14**	0,92	49,8	3,5	246	1000	1480	2440
96,96	20167/208	**PH821F0070 K202VF0140 ME10**	3900	3500	5000	**>14≤19**	1,2	49,9	3,5	247	1000	1480	2770
96,96	20167/208	**PH821F0070 K202VF0140 ME20**	3500	3500	5000	**≤19**	2,4	50,8	3,5	247	1000	1480	2770
96,96	20167/208	**PH821F0070 K202VF0140 ME20**	3500	3500	5000	**>19≤24**	3,1	50,9	3,5	248	1000	1480	2770
96,96	20167/208	**PH821F0070 K202VF0140 ME20**	3500	3500	5000	**>24≤32**	4,6	50,9	3,5	248	1000	1480	2770
96,96	20167/208	**PH821F0070 K202VF0140 ME30**	3500	3500	4000	**≤24**	8,0	52,7	3,5	248	1000	1480	2770
96,96	20167/208	**PH821F0070 K202VF0140 ME30**	3500	3500	4000	**>24≤32**	8,2	52,7	3,5	248	1000	1480	2770
96,96	20167/208	**PH821F0070 K202VF0140 ME30**	3500	3500	4000	**>32≤38**	9,9	52,8	3,5	248	1000	1480	2770
115,5	6235/54	**PH821F0100 K202VF0115 ME10**	3500	3100	4500	**≤14**	1,1	49,8	3,5	243	800	1200	2400
115,5	6235/54	**PH821F0100 K202VF0115 ME10**	3500	3100	4500	**>14≤19**	1,3	49,9	3,5	243	800	1200	2400
115,5	6235/54	**PH821F0100 K202VF0115 ME20**	3500	3100	4500	**≤19**	2,5	50,8	3,5	243	800	1200	2400
115,5	6235/54	**PH821F0100 K202VF0115 ME20**	3500	3100	4500	**>19≤24**	3,3	50,9	3,5	244	800	1200	2400
115,5	6235/54	**PH821F0100 K202VF0115 ME20**	3500	3100	4500	**>24≤32**	4,7	50,9	3,5	244	800	1200	2400
115,5	6235/54	**PH821F0100 K202VF0115 ME30**	3500	3100	4000	**≤24**	8,2	52,7	3,5	244	800	1200	2400

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Please take notice of the indications on page PHK22! ***¡Por favor observe las indicaciones en la página PHK22!*** **Si raccomanda di rispettare le avvertenze a pagina PHK22!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH8K2 (M2BMAX=1480 Nm)													
115,5	6235/54	**PH821F0100 K202VF0115 ME30**	3500	3100	4000	**>24≤32**	8,3	52,7	3,5	244	800	1200	2400
115,5	6235/54	**PH821F0100 K202VF0115 ME30**	3500	3100	4000	**>32≤38**	10	52,8	3,5	244	800	1200	2400
118,0	20769/176	**PH821F0070 K202VF0170 ME10**	4000	3900	5500	**≤14**	0,67	49,8	3,5	247	1000	1480	2770
118,0	20769/176	**PH821F0070 K202VF0170 ME10**	4000	3900	5500	**>14≤19**	0,92	49,9	3,5	248	1000	1480	2770
118,0	20769/176	**PH821F0070 K202VF0170 ME20**	3500	3500	5000	**≤19**	2,1	50,8	3,5	247	1000	1480	2770
118,0	20769/176	**PH821F0070 K202VF0170 ME20**	3500	3500	5000	**>19≤24**	2,9	50,9	3,5	248	1000	1480	2770
118,0	20769/176	**PH821F0070 K202VF0170 ME20**	3500	3500	5000	**>24≤32**	4,3	50,9	3,5	248	1000	1480	2770
118,0	20769/176	**PH821F0070 K202VF0170 ME30**	3500	3500	4000	**≤24**	7,8	52,7	3,5	248	1000	1480	2770
118,0	20769/176	**PH821F0070 K202VF0170 ME30**	3500	3500	4000	**>24≤32**	7,9	52,7	3,5	248	1000	1480	2770
118,0	20769/176	**PH821F0070 K202VF0170 ME30**	3500	3500	4000	**>32≤38**	9,6	52,8	3,5	248	1000	1480	2770
122,3	3913/32	**PH821F0070 K202VF0175 ME10**	3900	3500	5000	**≤14**	0,77	49,8	3,5	247	1000	1480	2770
122,3	3913/32	**PH821F0070 K202VF0175 ME10**	3900	3500	5000	**>14≤19**	1,0	49,9	3,5	248	1000	1480	2770
122,3	3913/32	**PH821F0070 K202VF0175 ME20**	3500	3500	5000	**≤19**	2,2	50,8	3,5	247	1000	1480	2770
122,3	3913/32	**PH821F0070 K202VF0175 ME20**	3500	3500	5000	**>19≤24**	3,0	50,9	3,5	248	1000	1480	2770
122,3	3913/32	**PH821F0070 K202VF0175 ME20**	3500	3500	5000	**>24≤32**	4,4	50,9	3,5	248	1000	1480	2770
122,3	3913/32	**PH821F0070 K202VF0175 ME30**	3500	3500	4000	**≤24**	7,9	52,7	3,5	248	1000	1480	2770
122,3	3913/32	**PH821F0070 K202VF0175 ME30**	3500	3500	4000	**>24≤32**	8,0	52,7	3,5	248	1000	1480	2770
122,3	3913/32	**PH821F0070 K202VF0175 ME30**	3500	3500	4000	**>32≤38**	9,7	52,8	3,5	248	1000	1480	2770
138,5	14405/104	**PH821F0100 K202VF0140 ME10**	3900	3500	5000	**≤14**	0,90	49,8	3,5	243	800	1200	2400
138,5	14405/104	**PH821F0100 K202VF0140 ME10**	3900	3500	5000	**>14≤19**	1,2	49,9	3,5	244	800	1200	2400
138,5	14405/104	**PH821F0100 K202VF0140 ME20**	3500	3500	5000	**≤19**	2,4	50,8	3,5	244	800	1200	2400
138,5	14405/104	**PH821F0100 K202VF0140 ME20**	3500	3500	5000	**>19≤24**	3,1	50,9	3,5	244	800	1200	2400
138,5	14405/104	**PH821F0100 K202VF0140 ME20**	3500	3500	5000	**>24≤32**	4,6	50,9	3,5	244	800	1200	2400
138,5	14405/104	**PH821F0100 K202VF0140 ME30**	3500	3500	4000	**≤24**	8,0	52,7	3,5	244	800	1200	2400
138,5	14405/104	**PH821F0100 K202VF0140 ME30**	3500	3500	4000	**>24≤32**	8,1	52,7	3,5	244	800	1200	2400
138,5	14405/104	**PH821F0100 K202VF0140 ME30**	3500	3500	4000	**>32≤38**	9,9	52,8	3,5	244	800	1200	2400
142,3	7826/55	**PH821F0070 K202VF0200 ME10**	4000	3900	5500	**≤14**	0,59	49,8	3,5	247	1000	1480	2770
142,3	7826/55	**PH821F0070 K202VF0200 ME10**	4000	3900	5500	**>14≤19**	0,84	49,9	3,5	248	1000	1480	2770
142,3	7826/55	**PH821F0070 K202VF0200 ME20**	3500	3500	5000	**≤19**	2,0	50,8	3,5	248	1000	1480	2770
142,3	7826/55	**PH821F0070 K202VF0200 ME20**	3500	3500	5000	**>19≤24**	2,7	50,9	3,5	248	1000	1480	2770
162,3	20769/128	**PH821F0070 K202VF0230 ME10**	4000	3900	5500	**≤14**	0,63	49,8	3,5	247	1000	1480	2770
162,3	20769/128	**PH821F0070 K202VF0230 ME10**	4000	3900	5500	**>14≤19**	0,88	49,9	3,5	248	1000	1480	2770
162,3	20769/128	**PH821F0070 K202VF0230 ME20**	3500	3500	5000	**≤19**	2,1	50,8	3,5	248	1000	1480	2770
162,3	20769/128	**PH821F0070 K202VF0230 ME20**	3500	3500	5000	**>19≤24**	2,8	50,9	3,5	248	1000	1480	2770
162,3	20769/128	**PH821F0070 K202VF0230 ME20**	3500	3500	5000	**>24≤32**	4,3	50,9	3,5	248	1000	1480	2770
162,3	20769/128	**PH821F0070 K202VF0230 ME30**	3500	3500	4000	**≤24**	7,7	52,7	3,5	248	1000	1480	2770
162,3	20769/128	**PH821F0070 K202VF0230 ME30**	3500	3500	4000	**>24≤32**	7,9	52,7	3,5	248	1000	1480	2770
162,3	20769/128	**PH821F0070 K202VF0230 ME30**	3500	3500	4000	**>32≤38**	9,6	52,8	3,5	248	1000	1480	2770
174,7	2795/16	**PH821F0100 K202VF0175 ME10**	3900	3500	5000	**≤14**	0,75	49,8	3,5	244	800	1200	2400
174,7	2795/16	**PH821F0100 K202VF0175 ME10**	3900	3500	5000	**>14≤19**	1,0	49,9	3,5	244	800	1200	2400
174,7	2795/16	**PH821F0100 K202VF0175 ME20**	3500	3500	5000	**≤19**	2,2	50,8	3,5	244	800	1200	2400
174,7	2795/16	**PH821F0100 K202VF0175 ME20**	3500	3500	5000	**>19≤24**	2,9	50,9	3,5	244	800	1200	2400
174,7	2795/16	**PH821F0100 K202VF0175 ME20**	3500	3500	5000	**>24≤32**	4,4	50,9	3,5	244	800	1200	2400
174,7	2795/16	**PH821F0100 K202VF0175 ME30**	3500	3500	4000	**≤24**	7,9	52,7	3,5	244	800	1200	2400
174,7	2795/16	**PH821F0100 K202VF0175 ME30**	3500	3500	4000	**>24≤32**	8,0	52,7	3,5	244	800	1200	2400
174,7	2795/16	**PH821F0100 K202VF0175 ME30**	3500	3500	4000	**>32≤38**	9,7	52,8	3,5	244	800	1200	2400
175,9	1935/11	**PH821F0070 K202VF0250 ME10**	4000	3900	5500	**≤14**	0,53	49,8	3,5	248	1000	1480	2770
175,9	1935/11	**PH821F0070 K202VF0250 ME10**	4000	3900	5500	**>14≤19**	0,78	49,9	3,5	248	1000	1480	2770
175,9	1935/11	**PH821F0070 K202VF0250 ME20**	3500	3500	5000	**≤19**	1,9	50,8	3,5	248	1000	1480	2770
175,9	1935/11	**PH821F0070 K202VF0250 ME20**	3500	3500	5000	**>19≤24**	2,7	50,9	3,5	248	1000	1480	2770
195,7	3913/20	**PH821F0070 K202VF0280 ME10**	4000	3900	5500	**≤14**	0,56	49,8	3,5	248	1000	1480	2770
195,7	3913/20	**PH821F0070 K202VF0280 ME10**	4000	3900	5500	**>14≤19**	0,81	49,9	3,5	248	1000	1480	2770
195,7	3913/20	**PH821F0070 K202VF0280 ME20**	3500	3500	5000	**≤19**	2,0	50,8	3,5	248	1000	1480	2770
195,7	3913/20	**PH821F0070 K202VF0280 ME20**	3500	3500	5000	**>19≤24**	2,7	50,9	3,5	248	1000	1480	2770
231,8	14835/64	**PH821F0100 K202VF0230 ME10**	4000	3900	5500	**≤14**	0,62	49,8	3,5	244	800	1200	2400
231,8	14835/64	**PH821F0100 K202VF0230 ME10**	4000	3900	5500	**>14≤19**	0,87	49,9	3,5	244	800	1200	2400
231,8	14835/64	**PH821F0100 K202VF0230 ME20**	3500	3500	5000	**≤19**	2,1	50,8	3,5	244	800	1200	2400
231,8	14835/64	**PH821F0100 K202VF0230 ME20**	3500	3500	5000	**>19≤24**	2,8	50,9	3,5	244	800	1200	2400
231,8	14835/64	**PH821F0100 K202VF0230 ME20**	3500	3500	5000	**>24≤32**	4,3	50,9	3,5	244	800	1200	2400
231,8	14835/64	**PH821F0100 K202VF0230 ME30**	3500	3500	4000	**≤24**	7,7	52,7	3,5	244	800	1200	2400
231,8	14835/64	**PH821F0100 K202VF0230 ME30**	3500	3500	4000	**>24≤32**	7,9	52,7	3,5	244	800	1200	2400
231,8	14835/64	**PH821F0100 K202VF0230 ME30**	3500	3500	4000	**>32≤38**	9,6	52,8	3,5	244	800	1200	2400

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH8K2 (M2BMAX=1480 Nm)													
235,3	12943/55	**PH821F0070 K202VF0340 ME10**	4000	3900	5500	**≤14**	0,47	49,8	3,5	248	1000	1240	2250
235,3	12943/55	**PH821F0070 K202VF0340 ME10**	4000	3900	5500	**>14≤19**	0,72	49,9	3,5	248	1000	1240	2250
235,3	12943/55	**PH821F0070 K202VF0340 ME20**	3500	3500	5000	**≤19**	1,9	50,8	3,5	248	1000	1240	2250
235,3	12943/55	**PH821F0070 K202VF0340 ME20**	3500	3500	5000	**>19≤24**	2,6	50,9	3,5	248	1000	1240	2250
241,9	1935/8	**PH821F0070 K202VF0350 ME10**	4000	3900	5500	**≤14**	0,51	49,8	3,5	248	1000	1480	2770
241,9	1935/8	**PH821F0070 K202VF0350 ME10**	4000	3900	5500	**>14≤19**	0,76	49,9	3,5	248	1000	1480	2770
241,9	1935/8	**PH821F0070 K202VF0350 ME20**	3500	3500	5000	**≤19**	1,9	50,8	3,5	248	1000	1480	2770
241,9	1935/8	**PH821F0070 K202VF0350 ME20**	3500	3500	5000	**>19≤24**	2,7	50,9	3,5	248	1000	1480	2770
279,5	559/2	**PH821F0100 K202VF0280 ME10**	4000	3900	5500	**≤14**	0,56	49,8	3,5	244	800	1200	2400
279,5	559/2	**PH821F0100 K202VF0280 ME10**	4000	3900	5500	**>14≤19**	0,81	49,9	3,5	244	800	1200	2400
279,5	559/2	**PH821F0100 K202VF0280 ME20**	3500	3500	5000	**≤19**	2,0	50,8	3,5	244	800	1200	2400
279,5	559/2	**PH821F0100 K202VF0280 ME20**	3500	3500	5000	**>19≤24**	2,7	50,9	3,5	244	800	1200	2400
282,8	9331/33	**PH821F0070 K202VF0400 ME10**	4000	3900	5500	**≤14**	0,41	49,8	3,5	248	780	930	1460
282,8	9331/33	**PH821F0070 K202VF0400 ME10**	4000	3900	5500	**>14≤19**	0,67	49,9	3,5	248	780	930	1460
323,6	12943/40	**PH821F0070 K202VF0460 ME10**	4000	3900	5500	**≤14**	0,46	49,8	3,5	248	1000	1480	2770
323,6	12943/40	**PH821F0070 K202VF0460 ME10**	4000	3900	5500	**>14≤19**	0,71	49,9	3,5	248	1000	1480	2770
323,6	12943/40	**PH821F0070 K202VF0460 ME20**	3500	3500	5000	**≤19**	1,9	50,8	3,5	248	1000	1480	2770
323,6	12943/40	**PH821F0070 K202VF0460 ME20**	3500	3500	5000	**>19≤24**	2,6	50,9	3,5	248	1000	1480	2770
345,5	9675/28	**PH821F0100 K202VF0350 ME10**	4000	3900	5500	**≤14**	0,51	49,8	3,5	244	800	1200	2400
345,5	9675/28	**PH821F0100 K202VF0350 ME10**	4000	3900	5500	**>14≤19**	0,76	49,9	3,5	244	800	1200	2400
345,5	9675/28	**PH821F0100 K202VF0350 ME20**	3500	3500	5000	**≤19**	1,9	50,8	3,5	244	800	1200	2400
345,5	9675/28	**PH821F0100 K202VF0350 ME20**	3500	3500	5000	**>19≤24**	2,7	50,9	3,5	244	800	1200	2400
353,4	46655/132	**PH821F0070 K202VF0500 ME10**	4000	3900	5500	**≤14**	0,39	49,8	3,5	248	650	780	1400
353,4	46655/132	**PH821F0070 K202VF0500 ME10**	4000	3900	5500	**>14≤19**	0,64	49,9	3,5	248	650	780	1400
388,8	9331/24	**PH821F0070 K202VF0560 ME10**	4000	3900	5500	**≤14**	0,41	49,8	3,5	248	1000	1280	2010
388,8	9331/24	**PH821F0070 K202VF0560 ME10**	4000	3900	5500	**>14≤19**	0,66	49,9	3,5	248	1000	1280	2010
462,3	1849/4	**PH821F0100 K202VF0460 ME10**	4000	3900	5500	**≤14**	0,46	49,8	3,5	244	800	1200	2400
462,3	1849/4	**PH821F0100 K202VF0460 ME10**	4000	3900	5500	**>14≤19**	0,71	49,9	3,5	244	800	1200	2400
462,3	1849/4	**PH821F0100 K202VF0460 ME20**	3500	3500	5000	**≤19**	1,9	50,8	3,5	244	800	1200	2400
462,3	1849/4	**PH821F0100 K202VF0460 ME20**	3500	3500	5000	**>19≤24**	2,6	50,9	3,5	244	800	1200	2400
486,0	46655/96	**PH821F0070 K202VF0690 ME10**	4000	3900	5500	**≤14**	0,39	49,8	3,5	248	890	1070	1930
486,0	46655/96	**PH821F0070 K202VF0690 ME10**	4000	3900	5500	**>14≤19**	0,64	49,9	3,5	248	890	1070	1930
555,4	6665/12	**PH821F0100 K202VF0560 ME10**	4000	3900	5500	**≤14**	0,41	49,8	3,5	244	800	1200	2400
555,4	6665/12	**PH821F0100 K202VF0560 ME10**	4000	3900	5500	**>14≤19**	0,66	49,9	3,5	244	800	1200	2400
PH8K3 (M2BMAX=1850 Nm)													
16,00	16/1	**PH821F0040 K302VF0040 ME20**	2700	2300	3800	**≤19**	8,3	55,8	4	163	610	610	760
16,00	16/1	**PH821F0040 K302VF0040 ME20**	2700	2300	3800	**>19≤24**	9,0	55,9	4	178	780	890	1210
16,00	16/1	**PH821F0040 K302VF0040 ME20**	2700	2300	3800	**>24≤32**	11	55,9	4	181	780	890	1210
16,00	16/1	**PH821F0040 K302VF0040 ME30**	2700	2300	3800	**≤24**	14	57,6	4	176	780	1170	1770
16,00	16/1	**PH821F0040 K302VF0040 ME30**	2700	2300	3800	**>24≤32**	14	57,7	4	183	780	1170	2310
16,00	16/1	**PH821F0040 K302VF0040 ME30**	2700	2300	3800	**>32≤38**	16	57,8	4	184	780	1170	2310
20,00	20/1	**PH821F0050 K302VF0040 ME20**	2700	2300	3800	**≤19**	7,7	55,8	4	214	760	760	950
20,00	20/1	**PH821F0050 K302VF0040 ME20**	2700	2300	3800	**>19≤24**	8,5	55,9	4	229	980	1120	1520
20,00	20/1	**PH821F0050 K302VF0040 ME20**	2700	2300	3800	**>24≤32**	9,9	55,9	4	233	980	1120	1520
20,00	20/1	**PH821F0050 K302VF0040 ME30**	2700	2300	3800	**≤24**	14	57,6	4	228	980	1470	2220
20,00	20/1	**PH821F0050 K302VF0040 ME30**	2700	2300	3800	**>24≤32**	14	57,7	4	235	980	1470	2870
20,00	20/1	**PH821F0050 K302VF0040 ME30**	2700	2300	3800	**>32≤38**	15	57,8	4	236	980	1470	2870
26,88	215/8	**PH821F0050 K302VF0054 ME20**	2700	2300	3800	**≤19**	5,5	55,8	4	224	1030	1030	1280
26,88	215/8	**PH821F0050 K302VF0054 ME20**	2700	2300	3800	**>19≤24**	6,3	55,9	4	233	1080	1500	2040
26,88	215/8	**PH821F0050 K302VF0054 ME20**	2700	2300	3800	**>24≤32**	7,7	55,9	4	235	1080	1500	2040
26,88	215/8	**PH821F0050 K302VF0054 ME30**	2700	2300	3800	**≤24**	11	57,7	4	233	1080	1500	2040
26,88	215/8	**PH821F0050 K302VF0054 ME30**	2700	2300	3800	**>24≤32**	11	57,7	4	236	1080	1500	2040
26,88	215/8	**PH821F0050 K302VF0054 ME30**	2700	2300	3800	**>32≤38**	13	57,8	4	237	1080	1500	2040
30,00	30/1	**PH821F0050 K302VF0060 ME20**	2700	2300	3800	**≤19**	5,7	55,8	4	227	1100	1150	1420
30,00	30/1	**PH821F0050 K302VF0060 ME20**	2700	2300	3800	**>19≤24**	6,5	55,9	4	234	1100	1680	2270
30,00	30/1	**PH821F0050 K302VF0060 ME20**	2700	2300	3800	**>24≤32**	7,9	55,9	4	236	1100	1680	2270
30,00	30/1	**PH821F0050 K302VF0060 ME30**	2700	2300	3800	**≤24**	12	57,6	4	234	1100	1680	2870
30,00	30/1	**PH821F0050 K302VF0060 ME30**	2700	2300	3800	**>24≤32**	12	57,7	4	237	1100	1680	2870
30,00	30/1	**PH821F0050 K302VF0060 ME30**	2700	2300	3800	**>32≤38**	13	57,8	4	238	1100	1680	2870

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH8K3 (M2BMAX=1850 Nm)													
36,96	2365/64	**PH821F0050 K302VF0074 ME20**	2700	2300	3800	**≤19**	4,7	55,8	4	231	1100	1410	1760
36,96	2365/64	**PH821F0050 K302VF0074 ME20**	2700	2300	3800	**>19≤24**	5,5	55,9	4	236	1100	1800	2800
36,96	2365/64	**PH821F0050 K302VF0074 ME20**	2700	2300	3800	**>24≤32**	6,9	55,9	4	237	1100	1800	2800
36,96	2365/64	**PH821F0050 K302VF0074 ME30**	2700	2300	3800	**≤24**	10	57,7	4	235	1100	1800	2800
36,96	2365/64	**PH821F0050 K302VF0074 ME30**	2700	2300	3800	**>24≤32**	11	57,7	4	237	1100	1800	2800
36,96	2365/64	**PH821F0050 K302VF0074 ME30**	2700	2300	3800	**>32≤38**	12	57,8	4	238	1100	1800	2800
46,34	5375/116	**PH821F0050 K302VF0093 ME20**	3200	2800	4200	**≤19**	3,9	55,8	4	234	1100	1770	2200
46,34	5375/116	**PH821F0050 K302VF0093 ME20**	3200	2800	4200	**>19≤24**	4,6	55,9	4	237	1100	1850	2870
46,34	5375/116	**PH821F0050 K302VF0093 ME20**	3200	2800	4200	**>24≤32**	6,1	55,9	4	237	1100	1850	2870
46,34	5375/116	**PH821F0050 K302VF0093 ME30**	3200	2800	4000	**≤24**	9,6	57,7	4	237	1100	1850	2870
46,34	5375/116	**PH821F0050 K302VF0093 ME30**	3200	2800	4000	**>24≤32**	9,7	57,7	4	238	1100	1850	2870
46,34	5375/116	**PH821F0050 K302VF0093 ME30**	3200	2800	4000	**>32≤38**	11	57,8	4	238	1100	1850	2870
58,05	1161/20	**PH821F0050 K302VF0115 ME10**	3200	2800	4200	**≤14**	1,9	55,0	4	233	1100	1190	1460
58,05	1161/20	**PH821F0050 K302VF0115 ME10**	3200	2800	4200	**>14≤19**	2,1	55,0	4	236	1100	1300	1760
58,05	1161/20	**PH821F0050 K302VF0115 ME20**	3200	2800	4200	**≤19**	3,3	55,8	4	235	1100	1850	2760
58,05	1161/20	**PH821F0050 K302VF0115 ME20**	3200	2800	4200	**>19≤24**	4,1	55,9	4	237	1100	1850	2870
58,05	1161/20	**PH821F0050 K302VF0115 ME20**	3200	2800	4200	**>24≤32**	5,5	55,9	4	238	1100	1850	2870
58,05	1161/20	**PH821F0050 K302VF0115 ME30**	3200	2800	4000	**≤24**	9,0	57,7	4	237	1100	1850	2870
58,05	1161/20	**PH821F0050 K302VF0115 ME30**	3200	2800	4000	**>24≤32**	9,1	57,7	4	238	1100	1850	2870
58,05	1161/20	**PH821F0050 K302VF0115 ME30**	3200	2800	4000	**>32≤38**	11	57,8	4	238	1100	1850	2870
69,68	7525/108	**PH821F0050 K302VF0140 ME10**	3500	3100	5000	**≤14**	1,5	55,0	4	235	1100	1430	1750
69,68	7525/108	**PH821F0050 K302VF0140 ME10**	3500	3100	5000	**>14≤19**	1,7	55,0	4	237	1100	1560	2110
69,68	7525/108	**PH821F0050 K302VF0140 ME20**	3500	3100	5000	**≤19**	2,9	55,8	4	236	1100	1850	2870
69,68	7525/108	**PH821F0050 K302VF0140 ME20**	3500	3100	5000	**>19≤24**	3,7	55,9	4	238	1100	1850	2870
69,68	7525/108	**PH821F0050 K302VF0140 ME20**	3500	3100	5000	**>24≤32**	5,1	55,9	4	238	1100	1850	2870
69,68	7525/108	**PH821F0050 K302VF0140 ME30**	3500	3100	4000	**≤24**	8,6	57,7	4	238	1100	1850	2870
69,68	7525/108	**PH821F0050 K302VF0140 ME30**	3500	3100	4000	**>24≤32**	8,7	57,7	4	238	1100	1850	2870
69,68	7525/108	**PH821F0050 K302VF0140 ME30**	3500	3100	4000	**>32≤38**	10	57,8	4	238	1100	1850	2870
86,47	7955/92	**PH821F0050 K302VF0175 ME10**	3500	3100	5000	**≤14**	1,2	55,0	4	236	1100	1770	2170
86,47	7955/92	**PH821F0050 K302VF0175 ME10**	3500	3100	5000	**>14≤19**	1,4	55,0	4	237	1100	1850	2620
86,47	7955/92	**PH821F0050 K302VF0175 ME20**	3500	3100	5000	**≤19**	2,6	55,8	4	237	1100	1850	2870
86,47	7955/92	**PH821F0050 K302VF0175 ME20**	3500	3100	5000	**>19≤24**	3,4	55,9	4	238	1100	1850	2870
86,47	7955/92	**PH821F0050 K302VF0175 ME20**	3500	3100	5000	**>24≤32**	4,8	55,9	4	238	1100	1850	2870
86,47	7955/92	**PH821F0050 K302VF0175 ME30**	3500	3100	4000	**≤24**	8,3	57,7	4	238	1100	1850	2870
86,47	7955/92	**PH821F0050 K302VF0175 ME30**	3500	3100	4000	**>24≤32**	8,4	57,7	4	238	1100	1850	2870
86,47	7955/92	**PH821F0050 K302VF0175 ME30**	3500	3100	4000	**>32≤38**	10	57,8	4	238	1100	1850	2870
116,5	2795/24	**PH821F0050 K302VF0230 ME10**	3800	3500	5000	**≤14**	0,89	55,0	4	237	1100	1850	2870
116,5	2795/24	**PH821F0050 K302VF0230 ME10**	3800	3500	5000	**>14≤19**	1,1	55,0	4	238	1100	1850	2870
116,5	2795/24	**PH821F0050 K302VF0230 ME20**	3500	3500	5000	**≤19**	2,3	55,8	4	238	1100	1850	2870
116,5	2795/24	**PH821F0050 K302VF0230 ME20**	3500	3500	5000	**>19≤24**	3,1	55,9	4	238	1100	1850	2870
116,5	2795/24	**PH821F0050 K302VF0230 ME20**	3500	3500	5000	**>24≤32**	4,5	55,9	4	238	1100	1850	2870
116,5	2795/24	**PH821F0050 K302VF0230 ME30**	3500	3500	4000	**≤24**	8,0	57,7	4	238	1100	1850	2870
116,5	2795/24	**PH821F0050 K302VF0230 ME30**	3500	3500	4000	**>24≤32**	8,1	57,7	4	238	1100	1850	2870
116,5	2795/24	**PH821F0050 K302VF0230 ME30**	3500	3500	4000	**>32≤38**	9,9	57,8	4	238	1100	1850	2870
139,4	17845/128	**PH821F0050 K302VF0280 ME10**	3800	3500	5000	**≤14**	0,76	55,0	4	238	1100	1850	2870
139,4	17845/128	**PH821F0050 K302VF0280 ME10**	3800	3500	5000	**>14≤19**	1,0	55,0	4	238	1100	1850	2870
139,4	17845/128	**PH821F0050 K302VF0280 ME20**	3500	3500	5000	**≤19**	2,2	55,8	4	238	1100	1850	2870
139,4	17845/128	**PH821F0050 K302VF0280 ME20**	3500	3500	5000	**>19≤24**	2,9	55,9	4	238	1100	1850	2870
139,4	17845/128	**PH821F0050 K302VF0280 ME20**	3500	3500	5000	**>24≤32**	4,4	55,9	4	238	1100	1850	2870
139,4	17845/128	**PH821F0050 K302VF0280 ME30**	3500	3500	4000	**≤24**	7,9	57,7	4	238	1100	1850	2870
139,4	17845/128	**PH821F0050 K302VF0280 ME30**	3500	3500	4000	**>24≤32**	8,0	57,7	4	238	1100	1850	2870
139,4	17845/128	**PH821F0050 K302VF0280 ME30**	3500	3500	4000	**>32≤38**	9,7	57,8	4	238	1100	1850	2870
173,7	4515/26	**PH821F0050 K302VF0350 ME10**	3800	3500	5000	**≤14**	0,65	55,0	4	238	1100	1850	2870
173,7	4515/26	**PH821F0050 K302VF0350 ME10**	3800	3500	5000	**>14≤19**	0,90	55,0	4	238	1100	1850	2870
173,7	4515/26	**PH821F0050 K302VF0350 ME20**	3500	3500	5000	**≤19**	2,1	55,8	4	238	1100	1850	2870
173,7	4515/26	**PH821F0050 K302VF0350 ME20**	3500	3500	5000	**>19≤24**	2,8	55,9	4	238	1100	1850	2870
231,1	1849/8	**PH821F0050 K302VF0460 ME10**	3800	3500	5000	**≤14**	0,55	55,0	4	238	1100	1850	2870
231,1	1849/8	**PH821F0050 K302VF0460 ME10**	3800	3500	5000	**>14≤19**	0,80	55,0	4	238	1100	1850	2870
231,1	1849/8	**PH821F0050 K302VF0460 ME20**	3500	3500	5000	**≤19**	2,0	55,8	4	238	1100	1850	2870
231,1	1849/8	**PH821F0050 K302VF0460 ME20**	3500	3500	5000	**>19≤24**	2,7	55,9	4	238	1100	1850	2870
278,5	12255/44	**PH821F0050 K302VF0560 ME10**	3800	3500	5000	**≤14**	0,50	55,0	4	238	1100	1520	2760
278,5	12255/44	**PH821F0050 K302VF0560 ME10**	3800	3500	5000	**>14≤19**	0,75	55,0	4	238	1100	1520	2760

Right-Angle Planetary Gear Units **PHK**
Reductores planetarios ortogonales ***PHK***
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH8K3 (M2BMAX=1850 Nm)													
278,5	12255/44	**PH821F0050 K302VF0560 ME20**	3500	3500	5000	**≤19**	1,9	55,8	4	238	1100	1520	2760
278,5	12255/44	**PH821F0050 K302VF0560 ME20**	3500	3500	5000	**>19≤24**	2,6	55,9	4	238	1100	1520	2760
PH9K5 (M2BMAX=4500 Nm)													
32,54	17081/525	**PH931F0040 K513VF0081 ME30**	1900	1800	3000	**≤24**	23	90,4	4,5	505	2760	2840	3550
32,54	17081/525	**PH931F0040 K513VF0081 ME30**	1900	1800	3000	**>24≤32**	23	90,5	4,5	518	2760	3790	4720
32,54	17081/525	**PH931F0040 K513VF0081 ME30**	1900	1800	3000	**>32≤38**	25	90,6	4,5	521	2760	3840	6480
32,54	17081/525	**PH931F0040 K513VF0081 ME40**	1900	1800	3000	**≤38**	33	95,2	4,5	517	2760	3840	6480
32,54	17081/525	**PH931F0040 K513VF0081 ME40**	1900	1800	3000	**>38≤48**	47	95,6	4,5	520	2760	3840	6480
40,60	203/5	**PH931F0040 K513VF0100 ME30**	1900	1800	3000	**≤24**	19	90,4	4,5	512	2880	3540	4430
40,60	203/5	**PH931F0040 K513VF0100 ME30**	1900	1800	3000	**>24≤32**	19	90,5	4,5	520	2880	3840	5890
40,60	203/5	**PH931F0040 K513VF0100 ME30**	1900	1800	3000	**>32≤38**	21	90,6	4,5	522	2880	3840	7500
40,60	203/5	**PH931F0040 K513VF0100 ME40**	1900	1800	3000	**≤38**	29	95,2	4,5	520	2880	3840	7500
40,60	203/5	**PH931F0040 K513VF0100 ME40**	1900	1800	3000	**>38≤48**	43	95,6	4,5	522	2880	3840	7500
48,80	17081/350	**PH931F0060 K513VF0081 ME30**	1900	1800	3000	**≤24**	22	90,4	4	713	3000	4260	5330
48,80	17081/350	**PH931F0060 K513VF0081 ME30**	1900	1800	3000	**>24≤32**	22	90,5	4	724	3000	4500	7080
48,80	17081/350	**PH931F0060 K513VF0081 ME30**	1900	1800	3000	**>32≤38**	24	90,6	4	727	3000	4500	9000
48,80	17081/350	**PH931F0060 K513VF0081 ME40**	1900	1800	3000	**≤38**	33	95,2	4	724	3000	4500	9000
48,80	17081/350	**PH931F0060 K513VF0081 ME40**	1900	1800	3000	**>38≤48**	46	95,6	4	726	3000	4500	9000
60,90	609/10	**PH931F0060 K513VF0100 ME30**	1900	1800	3000	**≤24**	18	90,4	4	719	3000	4500	6650
60,90	609/10	**PH931F0060 K513VF0100 ME30**	1900	1800	3000	**>24≤32**	18	90,5	4	726	3000	4500	8830
60,90	609/10	**PH931F0060 K513VF0100 ME30**	1900	1800	3000	**>32≤38**	20	90,6	4	728	3000	4500	9000
60,90	609/10	**PH931F0060 K513VF0100 ME40**	1900	1800	3000	**≤38**	28	95,2	4	726	3000	4500	9000
60,90	609/10	**PH931F0060 K513VF0100 ME40**	1900	1800	3000	**>38≤48**	42	95,6	4	728	3000	4500	9000
76,85	1537/20	**PH931F0060 K513VF0130 ME30**	2300	2200	3600	**≤24**	15	90,4	4	723	3000	4500	8390
76,85	1537/20	**PH931F0060 K513VF0130 ME30**	2300	2200	3600	**>24≤32**	15	90,5	4	728	3000	4500	9000
76,85	1537/20	**PH931F0060 K513VF0130 ME30**	2300	2200	3600	**>32≤38**	17	90,6	4	729	3000	4500	9000
76,85	1537/20	**PH931F0060 K513VF0130 ME40**	2300	2200	3500	**≤38**	25	95,2	4	727	3000	4500	9000
76,85	1537/20	**PH931F0060 K513VF0130 ME40**	2300	2200	3500	**>38≤48**	39	95,6	4	728	3000	4500	9000
96,56	26071/270	**PH931F0060 K513VF0160 ME20**	2300	2200	3600	**≤19**	7,2	88,8	4	719	3000	3630	4520
96,56	26071/270	**PH931F0060 K513VF0160 ME20**	2300	2200	3600	**>19≤24**	8,0	88,9	4	726	3000	4500	7210
96,56	26071/270	**PH931F0060 K513VF0160 ME20**	2300	2200	3600	**>24≤32**	9,4	88,9	4	728	3000	4500	7210
96,56	26071/270	**PH931F0060 K513VF0160 ME30**	2300	2200	3600	**≤24**	13	90,4	4	725	3000	4500	9000
96,56	26071/270	**PH931F0060 K513VF0160 ME30**	2300	2200	3600	**>24≤32**	13	90,5	4	728	3000	4500	9000
96,56	26071/270	**PH931F0060 K513VF0160 ME30**	2300	2200	3600	**>32≤38**	15	90,6	4	729	3000	4500	9000
96,56	26071/270	**PH931F0060 K513VF0160 ME40**	2300	2200	3500	**≤38**	23	95,2	4	728	3000	4500	9000
96,56	26071/270	**PH931F0060 K513VF0160 ME40**	2300	2200	3500	**>38≤48**	37	95,6	4	729	3000	4500	9000
116,1	27869/240	**PH931F0060 K513VF0195 ME20**	2800	2500	4000	**≤19**	6,0	88,8	4	722	3000	4370	5430
116,1	27869/240	**PH931F0060 K513VF0195 ME20**	2800	2500	4000	**>19≤24**	6,7	88,9	4	727	3000	4500	8670
116,1	27869/240	**PH931F0060 K513VF0195 ME20**	2800	2500	4000	**>24≤32**	8,2	88,9	4	728	3000	4500	8670
116,1	27869/240	**PH931F0060 K513VF0195 ME30**	2800	2500	4000	**≤24**	12	90,4	4	727	3000	4500	9000
116,1	27869/240	**PH931F0060 K513VF0195 ME30**	2800	2500	4000	**>24≤32**	12	90,5	4	729	3000	4500	9000
116,1	27869/240	**PH931F0060 K513VF0195 ME30**	2800	2500	4000	**>32≤38**	14	90,6	4	729	3000	4500	9000
116,1	27869/240	**PH931F0060 K513VF0195 ME40**	2800	2500	3500	**≤38**	22	95,2	4	729	3000	4500	9000
116,1	27869/240	**PH931F0060 K513VF0195 ME40**	2800	2500	3500	**>38≤48**	36	95,6	4	729	3000	4500	9000
146,1	11687/80	**PH931F0060 K513VF0240 ME20**	2800	2500	4000	**≤19**	4,8	88,8	4	725	3000	4500	6840
146,1	11687/80	**PH931F0060 K513VF0240 ME20**	2800	2500	4000	**>19≤24**	5,5	88,9	4	728	3000	4500	9000
146,1	11687/80	**PH931F0060 K513VF0240 ME20**	2800	2500	4000	**>24≤32**	7,0	88,9	4	729	3000	4500	9000
146,1	11687/80	**PH931F0060 K513VF0240 ME30**	2800	2500	4000	**≤24**	11	90,4	4	728	3000	4500	9000
146,1	11687/80	**PH931F0060 K513VF0240 ME30**	2800	2500	4000	**>24≤32**	11	90,5	4	729	3000	4500	9000
146,1	11687/80	**PH931F0060 K513VF0240 ME30**	2800	2500	4000	**>32≤38**	12	90,6	4	730	3000	4500	9000
146,1	11687/80	**PH931F0060 K513VF0240 ME40**	2800	2500	3500	**≤38**	21	95,2	4	729	3000	4500	9000
146,1	11687/80	**PH931F0060 K513VF0240 ME40**	2800	2500	3500	**>38≤48**	34	95,6	4	730	3000	4500	9000
193,8	62031/320	**PH931F0060 K513VF0320 ME20**	3400	3000	4500	**≤19**	3,8	88,8	4	727	3000	4500	9000
193,8	62031/320	**PH931F0060 K513VF0320 ME20**	3400	3000	4500	**>19≤24**	4,5	88,9	4	729	3000	4500	9000
193,8	62031/320	**PH931F0060 K513VF0320 ME20**	3400	3000	4500	**>24≤32**	6,0	88,9	4	729	3000	4500	9000
193,8	62031/320	**PH931F0060 K513VF0320 ME30**	3400	3000	4000	**≤24**	9,6	90,4	4	729	3000	4500	9000
193,8	62031/320	**PH931F0060 K513VF0320 ME30**	3400	3000	4000	**>24≤32**	9,7	90,5	4	730	3000	4500	9000
193,8	62031/320	**PH931F0060 K513VF0320 ME30**	3400	3000	4000	**>32≤38**	11	90,6	4	730	3000	4500	9000
193,8	62031/320	**PH931F0060 K513VF0320 ME40**	3000	3000	3500	**≤38**	20	95,2	4	730	3000	4500	9000

Right-Angle Planetary Gear Units **PHK**
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH9K5 (M2BMAX=4500 Nm)													
193,8	62031/320	**PH931F0060 K513VF0320 ME40**	3000	3000	3500	**>38≤48**	33	95,6	4	730	3000	4500	9000
231,2	8091/35	**PH931F0060 K513VF0390 ME20**	3400	3000	4500	**≤19**	3,3	88,8	4	728	3000	4500	9000
231,2	8091/35	**PH931F0060 K513VF0390 ME20**	3400	3000	4500	**>19≤24**	4,0	88,9	4	729	3000	4500	9000
231,2	8091/35	**PH931F0060 K513VF0390 ME20**	3400	3000	4500	**>24≤32**	5,5	88,9	4	730	3000	4500	9000
231,2	8091/35	**PH931F0060 K513VF0390 ME30**	3400	3000	4000	**≤24**	9,0	90,5	4	729	3000	4500	9000
231,2	8091/35	**PH931F0060 K513VF0390 ME30**	3400	3000	4000	**>24≤32**	9,1	90,5	4	730	3000	4500	9000
231,2	8091/35	**PH931F0060 K513VF0390 ME30**	3400	3000	4000	**>32≤38**	11	90,6	4	730	3000	4500	9000
289,0	8091/28	**PH931F0060 K513VF0480 ME20**	3400	3000	4500	**≤19**	2,8	88,8	4	729	3000	4500	9000
289,0	8091/28	**PH931F0060 K513VF0480 ME20**	3400	3000	4500	**>19≤24**	3,6	88,9	4	730	3000	4500	9000
289,0	8091/28	**PH931F0060 K513VF0480 ME20**	3400	3000	4500	**>24≤32**	5,0	88,9	4	730	3000	4500	9000
289,0	8091/28	**PH931F0060 K513VF0480 ME30**	3400	3000	4000	**≤24**	8,5	90,5	4	729	3000	4500	9000
289,0	8091/28	**PH931F0060 K513VF0480 ME30**	3400	3000	4000	**>24≤32**	8,6	90,5	4	730	3000	4500	9000
289,0	8091/28	**PH931F0060 K513VF0480 ME30**	3400	3000	4000	**>32≤38**	10	90,6	4	730	3000	4500	9000
387,3	25172/65	**PH931F0060 K513VF0650 ME20**	3400	3000	4500	**≤19**	2,5	88,8	4	729	3000	4500	9000
387,3	25172/65	**PH931F0060 K513VF0650 ME20**	3400	3000	4500	**>19≤24**	3,2	88,9	4	730	3000	4500	9000
387,3	25172/65	**PH931F0060 K513VF0650 ME20**	3400	3000	4500	**>24≤32**	4,7	88,9	4	730	3000	4500	9000
387,3	25172/65	**PH931F0060 K513VF0650 ME30**	3400	3000	4000	**≤24**	8,1	90,5	4	730	3000	4500	9000
387,3	25172/65	**PH931F0060 K513VF0650 ME30**	3400	3000	4000	**>24≤32**	8,2	90,5	4	730	3000	4500	9000
387,3	25172/65	**PH931F0060 K513VF0650 ME30**	3400	3000	4000	**>32≤38**	10,0	90,6	4	730	3000	4500	9000
465,6	26071/56	**PH931F0060 K513VF0780 ME20**	3400	3000	4500	**≤19**	2,2	88,8	4	729	3000	4500	8840
465,6	26071/56	**PH931F0060 K513VF0780 ME20**	3400	3000	4500	**>19≤24**	3,0	88,8	4	730	3000	4500	8840
PH10K6 (M2BMAX=7500 Nm)													
48,64	255285/5248	**PH1031F0060 K613VF0081 ME30**	1800	1700	2900	**≤24**	36	135,1	4	1163	4240	4240	5310
48,64	255285/5248	**PH1031F0060 K613VF0081 ME30**	1800	1700	2900	**>24≤32**	36	135,2	4	1194	5000	5670	7050
48,64	255285/5248	**PH1031F0060 K613VF0081 ME30**	1800	1700	2900	**>32≤38**	37	135,3	4	1201	5000	7140	9690
48,64	255285/5248	**PH1031F0060 K613VF0081 ME40**	1800	1700	2900	**≤38**	46	139,7	4	1192	5000	7500	13390
48,64	255285/5248	**PH1031F0060 K613VF0081 ME40**	1800	1700	2900	**>38≤48**	60	140,1	4	1202	5000	7500	15000
48,64	255285/5248	**PH1031F0060 K613VF0081 ME50**	1800	1700	2900	**≤55**	84	147,6	4	1203	5000	7140	9690
48,64	255285/5248	**PH1031F0060 K613VF0081 ME50**	1800	1700	2900	**>55≤60**	88	147,7	4	1205	5000	7500	15000
75,77	9699/128	**PH1031F0060 K613VF0125 ME30**	2200	2000	3200	**≤24**	22	135,1	4	1190	5000	6610	8280
75,77	9699/128	**PH1031F0060 K613VF0125 ME30**	2200	2000	3200	**>24≤32**	22	135,2	4	1203	5000	7500	10990
75,77	9699/128	**PH1031F0060 K613VF0125 ME30**	2200	2000	3200	**>32≤38**	24	135,3	4	1206	5000	7500	15000
75,77	9699/128	**PH1031F0060 K613VF0125 ME40**	2200	2000	3200	**≤38**	32	139,6	4	1203	5000	7500	15000
75,77	9699/128	**PH1031F0060 K613VF0125 ME40**	2200	2000	3200	**>38≤48**	46	140,0	4	1206	5000	7500	15000
75,77	9699/128	**PH1031F0060 K613VF0125 ME50**	2200	2000	3000	**≤55**	70	147,6	4	1207	5000	7500	15000
75,77	9699/128	**PH1031F0060 K613VF0125 ME50**	2200	2000	3000	**>55≤60**	75	147,6	4	1207	5000	7500	15000
95,21	54839/576	**PH1031F0060 K613VF0160 ME30**	2200	2000	3200	**≤24**	18	135,1	4	1197	5000	7500	10400
95,21	54839/576	**PH1031F0060 K613VF0160 ME30**	2200	2000	3200	**>24≤32**	18	135,2	4	1206	5000	7500	13810
95,21	54839/576	**PH1031F0060 K613VF0160 ME30**	2200	2000	3200	**>32≤38**	20	135,3	4	1207	5000	7500	15000
95,21	54839/576	**PH1031F0060 K613VF0160 ME40**	2200	2000	3200	**≤38**	28	139,6	4	1205	5000	7500	15000
95,21	54839/576	**PH1031F0060 K613VF0160 ME40**	2200	2000	3200	**>38≤48**	42	140,0	4	1207	5000	7500	15000
95,21	54839/576	**PH1031F0060 K613VF0160 ME50**	2200	2000	3000	**≤55**	66	147,6	4	1208	5000	7500	15000
95,21	54839/576	**PH1031F0060 K613VF0160 ME50**	2200	2000	3000	**>55≤60**	71	147,6	4	1208	5000	7500	15000
114,0	51057/448	**PH1031F0060 K613VF0190 ME20**	2600	2300	3600	**≤19**	9,6	133,2	4	1189	4290	4290	5330
114,0	51057/448	**PH1031F0060 K613VF0190 ME20**	2600	2300	3600	**>19≤24**	10	133,3	4	1202	5000	6280	8510
114,0	51057/448	**PH1031F0060 K613VF0190 ME20**	2600	2300	3600	**>24≤32**	12	133,3	4	1205	5000	6280	8510
114,0	51057/448	**PH1031F0060 K613VF0190 ME30**	2600	2300	3600	**≤24**	15	135,1	4	1201	5000	7500	12450
114,0	51057/448	**PH1031F0060 K613VF0190 ME30**	2600	2300	3600	**>24≤32**	16	135,2	4	1207	5000	7500	15000
114,0	51057/448	**PH1031F0060 K613VF0190 ME30**	2600	2300	3600	**>32≤38**	17	135,3	4	1208	5000	7500	15000
114,0	51057/448	**PH1031F0060 K613VF0190 ME40**	2600	2300	3500	**≤38**	26	139,6	4	1207	5000	7500	15000
114,0	51057/448	**PH1031F0060 K613VF0190 ME40**	2600	2300	3500	**>38≤48**	39	140,0	4	1208	5000	7500	15000
114,0	51057/448	**PH1031F0060 K613VF0190 ME50**	2500	2300	3000	**≤55**	64	147,6	4	1209	5000	7500	15000
114,0	51057/448	**PH1031F0060 K613VF0190 ME50**	2500	2300	3000	**>55≤60**	68	147,6	4	1209	5000	7500	15000
144,0	73749/512	**PH1031F0060 K613VF0240 ME30**	2600	2300	3600	**≤24**	13	135,1	4	1204	5000	7500	15000
144,0	73749/512	**PH1031F0060 K613VF0240 ME30**	2600	2300	3600	**>24≤32**	13	135,2	4	1208	5000	7500	15000
144,0	73749/512	**PH1031F0060 K613VF0240 ME30**	2600	2300	3600	**>32≤38**	15	135,3	4	1209	5000	7500	15000
144,0	73749/512	**PH1031F0060 K613VF0240 ME40**	2600	2300	3500	**≤38**	23	139,6	4	1208	5000	7500	15000
144,0	73749/512	**PH1031F0060 K613VF0240 ME40**	2600	2300	3500	**>38≤48**	37	140,0	4	1209	5000	7500	15000
144,0	73749/512	**PH1031F0060 K613VF0240 ME50**	2500	2300	3000	**≤55**	62	147,6	4	1209	5000	7500	15000

Right-Angle Planetary Gear Units **PHK**
Reductores planetarios ortogonales ***PHK***
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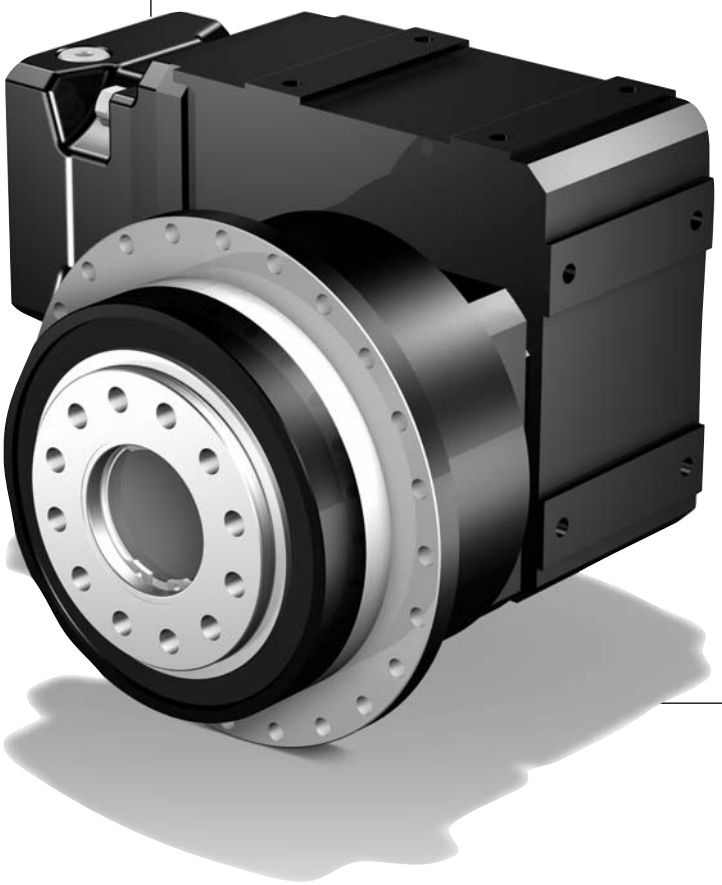
i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PH10K6 (M2BMAX=7500 Nm)													
144,0	73749/512	**PH1031F0060 K613VF0240 ME50**	2500	2300	3000	**>55≤60**	66	147,6	4	1209	5000	7500	15000
191,1	391437/2048	**PH1031F0060 K613VF0320 ME20**	3100	2800	4000	**≤19**	5,5	133,2	4	1202	5000	7190	8950
191,1	391437/2048	**PH1031F0060 K613VF0320 ME20**	3100	2800	4000	**>19≤24**	6,2	133,3	4	1207	5000	7500	12520
191,1	391437/2048	**PH1031F0060 K613VF0320 ME20**	3100	2800	4000	**>24≤32**	7,7	133,3	4	1208	5000	7500	12520
191,1	391437/2048	**PH1031F0060 K613VF0320 ME30**	3100	2800	4000	**≤24**	11	135,1	4	1207	5000	7500	15000
191,1	391437/2048	**PH1031F0060 K613VF0320 ME30**	3100	2800	4000	**>24≤32**	11	135,2	4	1209	5000	7500	15000
191,1	391437/2048	**PH1031F0060 K613VF0320 ME30**	3100	2800	4000	**>32≤38**	13	135,3	4	1209	5000	7500	15000
191,1	391437/2048	**PH1031F0060 K613VF0320 ME40**	3000	2800	3500	**≤38**	21	139,6	4	1209	5000	7500	15000
191,1	391437/2048	**PH1031F0060 K613VF0320 ME40**	3000	2800	3500	**>38≤48**	35	140,0	4	1209	5000	7500	15000
191,1	391437/2048	**PH1031F0060 K613VF0320 ME50**	2500	2500	3000	**≤55**	60	147,6	4	1209	5000	7500	15000
191,1	391437/2048	**PH1031F0060 K613VF0320 ME50**	2500	2500	3000	**>55≤60**	64	147,6	4	1209	5000	7500	15000
229,9	470859/2048	**PH1031F0060 K613VF0380 ME20**	3100	2800	4000	**≤19**	4,5	133,2	4	1205	5000	7500	10760
229,9	470859/2048	**PH1031F0060 K613VF0380 ME20**	3100	2800	4000	**>19≤24**	5,2	133,3	4	1208	5000	7500	13590
229,9	470859/2048	**PH1031F0060 K613VF0380 ME20**	3100	2800	4000	**>24≤32**	6,7	133,3	4	1209	5000	7500	13590
229,9	470859/2048	**PH1031F0060 K613VF0380 ME30**	3100	2800	4000	**≤24**	10	135,1	4	1208	5000	7500	15000
229,9	470859/2048	**PH1031F0060 K613VF0380 ME30**	3100	2800	4000	**>24≤32**	10	135,2	4	1209	5000	7500	15000
229,9	470859/2048	**PH1031F0060 K613VF0380 ME30**	3100	2800	4000	**>32≤38**	12	135,3	4	1209	5000	7500	15000
229,9	470859/2048	**PH1031F0060 K613VF0380 ME40**	3000	2800	3500	**≤38**	20	139,6	4	1209	5000	7500	15000
229,9	470859/2048	**PH1031F0060 K613VF0380 ME40**	3000	2800	3500	**>38≤48**	34	140,0	4	1209	5000	7500	15000
229,9	470859/2048	**PH1031F0060 K613VF0380 ME50**	2500	2500	3000	**≤55**	59	147,6	4	1209	5000	7500	15000
229,9	470859/2048	**PH1031F0060 K613VF0380 ME50**	2500	2500	3000	**>55≤60**	63	147,6	4	1209	5000	7500	15000
286,4	119133/416	**PH1031F0060 K613VF0480 ME20**	3100	2800	4000	**≤19**	3,7	133,2	4	1206	5000	7500	13400
286,4	119133/416	**PH1031F0060 K613VF0480 ME20**	3100	2800	4000	**>19≤24**	4,5	133,3	4	1209	5000	7500	14340
286,4	119133/416	**PH1031F0060 K613VF0480 ME20**	3100	2800	4000	**>24≤32**	5,9	133,3	4	1209	5000	7500	14340
286,4	119133/416	**PH1031F0060 K613VF0480 ME30**	3100	2800	4000	**≤24**	9,4	135,1	4	1208	5000	7500	14340
286,4	119133/416	**PH1031F0060 K613VF0480 ME30**	3100	2800	4000	**>24≤32**	9,5	135,2	4	1209	5000	7500	14340
286,4	119133/416	**PH1031F0060 K613VF0480 ME30**	3100	2800	4000	**>32≤38**	11	135,3	4	1209	5000	7500	14340
382,3	391437/1024	**PH1031F0060 K613VF0640 ME20**	3100	2800	4000	**≤19**	3,0	133,2	4	1208	5000	7500	15000
382,3	391437/1024	**PH1031F0060 K613VF0640 ME20**	3100	2800	4000	**>19≤24**	3,7	133,3	4	1209	5000	7500	15000
382,3	391437/1024	**PH1031F0060 K613VF0640 ME20**	3100	2800	4000	**>24≤32**	5,2	133,3	4	1209	5000	7500	15000
382,3	391437/1024	**PH1031F0060 K613VF0640 ME30**	3100	2800	4000	**≤24**	8,6	135,1	4	1209	5000	7500	15000
382,3	391437/1024	**PH1031F0060 K613VF0640 ME30**	3100	2800	4000	**>24≤32**	8,8	135,2	4	1209	5000	7500	15000
382,3	391437/1024	**PH1031F0060 K613VF0640 ME30**	3100	2800	4000	**>32≤38**	10	135,3	4	1210	5000	7500	15000
456,8	380091/832	**PH1031F0060 K613VF0760 ME20**	3100	2800	4000	**≤19**	2,7	133,2	4	1208	5000	7500	15000
456,8	380091/832	**PH1031F0060 K613VF0760 ME20**	3100	2800	4000	**>19≤24**	3,4	133,3	4	1209	5000	7500	15000
456,8	380091/832	**PH1031F0060 K613VF0760 ME20**	3100	2800	4000	**>24≤32**	4,9	133,3	4	1210	5000	7500	15000
456,8	380091/832	**PH1031F0060 K613VF0760 ME30**	3100	2800	4000	**≤24**	8,3	135,1	4	1209	5000	7500	15000
456,8	380091/832	**PH1031F0060 K613VF0760 ME30**	3100	2800	4000	**>24≤32**	8,5	135,2	4	1210	5000	7500	15000
456,8	380091/832	**PH1031F0060 K613VF0760 ME30**	3100	2800	4000	**>32≤38**	10	135,3	4	1210	5000	7500	15000



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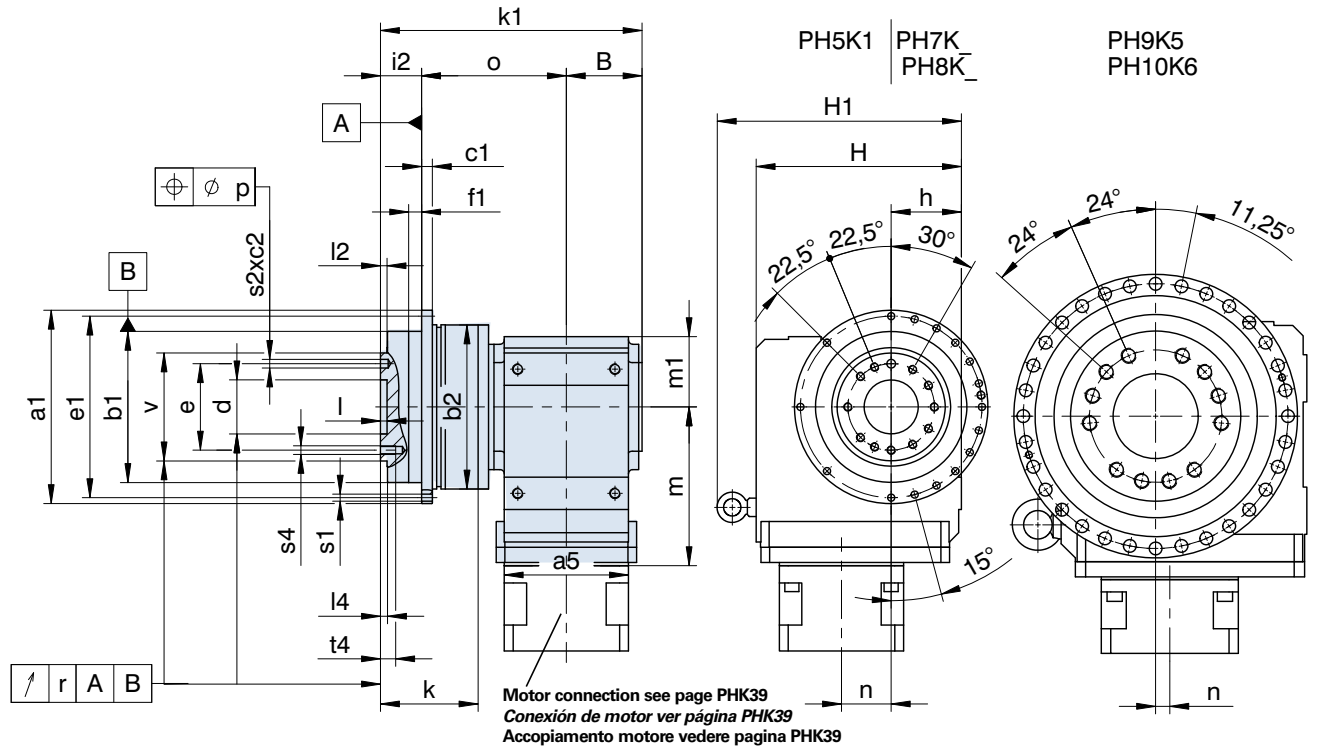
PH5K1_ME_ - PH10K6_ME_



Motor connection see page PHK39
Conexión de motor ver página PHK39
Accopiamento motore vedere pagina PHK39

Planetary gear unit mounted on side 3. ***Reductore planetario montado sobre lado 3.*** **Riduttore angolare montato sul lato 3.**

Typ	øa1	øb1	øb2	B	c1	c2	ød	øe	øe1	f1	h	H	H1
PH521_....K102	145h7	110h7	120	56,0	8	7	40H6	63	135	10	60	160	-
PH721_....K102	179h7	140h7	152	56,0	10	7	50H6	80	168	12	60	160	-
PH721_....K202	179h7	140h7	152	70,0	10	7	50H6	80	168	12	65	190	-
PH821_....K202	247h7	200h7	212	70,0	12	10	80H6	125	233	15	65	190	-
PH821_....K302	247h7	200h7	212	76,0	12	10	80H6	125	233	15	75	213	-
PH931_....K513	300	255h7	255	96,0	18	-	90H6	140	280	20	160	260	312
PH1031_....K613	330	285h7	285	103,5	20	-	95H6	160	310	20	190	310	362

Typ	i2	k	k1	l	l2	l4	m1	o	øp	r	øs1	øs2	s4	t4	øv
PH521_....K102	29	70,0	201,0	6	6	6,5	60	116,0	0,02	0,020	5,5	6H7	M6	11	80h7
PH721_....K102	38	88,0	214,0	6	6	6,5	60	120,0	0,02	0,025	6,6	8H7	M8	14	100h7
PH721_....K202	38	88,0	242,0	6	6	6,5	65	134,0	0,02	0,025	6,6	8H7	M8	14	100h7
PH821_....K202	50	126,0	284,5	8	8	8,5	65	164,5	0,02	0,030	9,0	10H7	M10	18	160h7
PH821_....K302	50	126,0	298,0	8	8	8,5	75	172,0	0,02	0,030	9,0	10H7	M10	18	160h7
PH931_....K513	66	145,0	358,5	12	11	12,0	100	196,5	-	0,030	13,5	-	M16	24	180h7
PH1031_....K613	75	160,0	393,5	10	15	15,0	120	215,0	-	0,040	13,5	-	M20	30	200h7

Typ	ME10			ME20			ME30			ME40			ME50		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n	a5	m	n
PH5K1	□98	124,0	36,0	□115	128,0	36,0	-	-	-	-	-	-	-	-	-
PH7K1	□98	124,0	36,0	□115	128,0	36,0	-	-	-	-	-	-	-	-	-
PH7K2	□98	143,0	46,0	□115	147,0	46,0	□145	149,0	46,0	-	-	-	-	-	-
PH8K2	□98	143,0	46,0	□115	147,0	46,0	□145	149,0	46,0	-	-	-	-	-	-
PH8K3	ø140	163,0	52,5	□115	167,0	52,5	□145	169,0	52,5	-	-	-	-	-	-
PH9K5	-	-	-	ø160	172,0	15,0	□145	174,0	15,0	□190	177,0	15,0	-	-	-
PH10K6	-	-	-	ø160	191,0	18,0	ø200	193,0	18,0	□190	196,0	18,0	ø300	210,0	18,0

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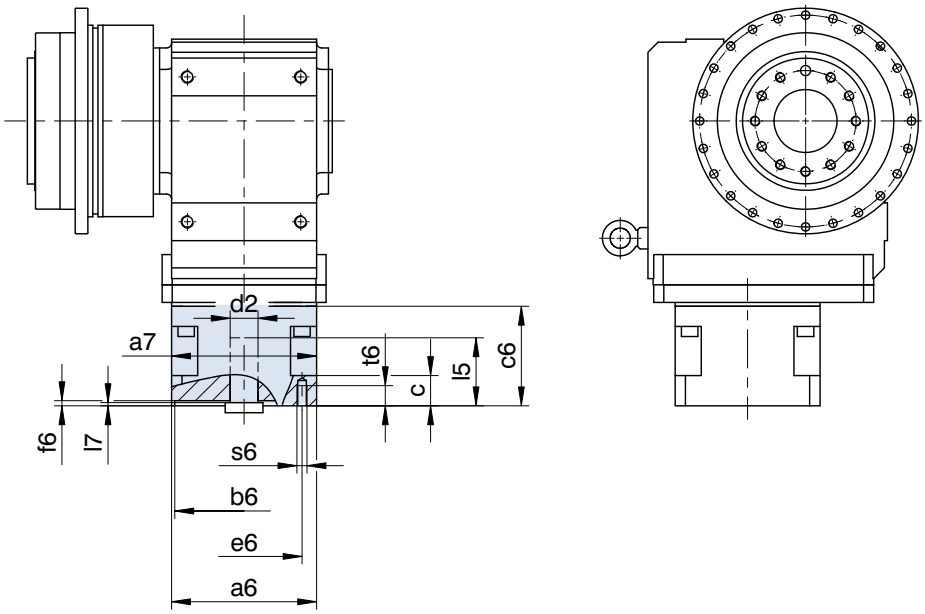
PH5K1_ME_ - PH10K6_ME_



Planetary gear unit mounted on side 3. ***Reductore planetario montado sobre lado 3.*** **Riduttore angolare montato sul lato 3.**

Typ	øb6	øe6	ød2max	l5max	□a6	□a7	c	c6	f6	l7max	s6	t6
ME10	50,0H7	70	19	41	100	98	21	61,0	4,0	3,0	M4	10
ME10	50,0H7	95	19	41	100	98	21	61,0	2,5	3,0	M6	13
ME10	60,0H7	75	19	41	100	98	21	61,0	3,5	3,0	M5	9
ME10	80,0H7	100	19	41	100	98	21	61,0	4,0	3,0	M6	13
ME10	95,0H7	115	19	41	100	98	21	61,0	4,0	3,0	M8	21
ME10	95,0H7	115	19	50	100	98	30	70,0	4,0	12,0	M8	16
ME10	95,0H7	130	19	41	115	98	21	61,0	4,0	3,0	M8	16
ME10	95,0H7	130	19	50	115	98	30	70,0	4,0	12,0	M8	16
ME10	110,0H7	130	19	50	115	98	30	70,0	4,0	12,0	M8	16
ME10	110,0H7	145	19	58	130	98	38	78,0	7,0	20,0	M8	16
ME10	130,0H7	165	19	50	140	98	30	70,0	7,0	12,0	M10	20
ME20	80,0H7	100	32	53	120	115	24	74,0	4,0	3,5	M6	13
ME20	95,0H7	115	32	53	120	115	24	74,0	5,0	3,5	M8	16
ME20	95,0H7	130	32	53	120	115	24	74,0	4,0	3,5	M8	16
ME20	110,0H7	130	32	53	120	115	24	74,0	4,0	3,5	M8	16
ME20	110,0H7	145	32	61	140	115	32	82,0	6,5	11,5	M8	16
ME20	110,0H7	145	32	71	140	115	42	92,0	7,0	21,5	M8	16
ME20	110,0H7	165	32	53	140	115	24	74,0	5,0	3,5	M10	24
ME20	130,0H7	165	32	53	140	116	38	111,5	5,0	3,0	M10	20
ME20	130,0H7	165	32	61	140	115	32	82,0	5,0	11,5	M10	20
ME30	110,0H7	130	38	62	145	145	26	86,0	5,0	4,5	M8	14
ME30	110,0H7	145	38	73	145	145	37	97,0	5,0	15,5	M8	16
ME30	110,0H7	165	38	62	145	145	26	86,0	5,0	4,5	M10	26
ME30	114,3H7	200	38	81	180	145	45	105,0	5,0	23,5	M12	25
ME30	130,0H7	165	38	62	145	145	26	86,0	5,0	4,5	M10	26
ME30	130,0H7	215	38	62	190	145	26	86,0	5,0	4,5	M12	26
ME30	130,0H7	215	38	62	190	116	26	112,0	5,0	3,0	M12	25
ME30	180,0H7	215	38	62	190	145	26	86,0	5,0	4,5	M12	26
ME30	180,0H7	215	38	81	190	145	45	105,0	5,0	23,5	M12	25
ME30	180,0H7	215	38	62	190	116	55	160,0	5,0	3,0	M12	25
ME40	110,0H7	165	48	81	190	190	34	122,0	5,0	4,5	M10	18
ME40	114,3H7	200	48	81	190	190	34	122,0	4,0	4,5	M12	34
ME40	130,0H7	165	48	81	190	190	34	122,0	5,0	4,5	M10	18
ME40	130,0H7	215	48	81	190	190	34	122,0	5,0	4,5	M12	34
ME40	180,0H7	215	48	82	190	190	35	123,0	5,0	5,5	M12	35
ME40	250,0H7	300	48	85	260	190	38	126,0	6,0	8,5	M16	38
ME50	250,0H7	300	60	86	260	254	43	124,5	6,0	5,5	M16	32
ME50	300,0H7	350	60	112	314	254	69	150,5	6,0	31,5	M16	34

ServoFit® PHQ Planetary Gear Units
Reductores planetarios ***ServoFit® PHQ***
ServoFit® Riduttori planetari **PHQ**

STÖBER

Quattro Power for maximum power density

- Acceleration torque: 170 – 43000 Nm
- Low backlash: 3 arcmin
- High power density due to 4-fold (Quattro) planet system
- extremely high torsional and tilting stiffness
- FKM seal at input, continuous operation without cooling
- easy to assemble due to spreading function in the clamping hub
- advanced gear technology
- low mass moments of inertia
- readily attaches any synchronous servo motor
- quiet running
- efficiency:
  1 stage ≥ 96 %
  2 stage ≥ 93 %
  3 stage ≥ 90 %

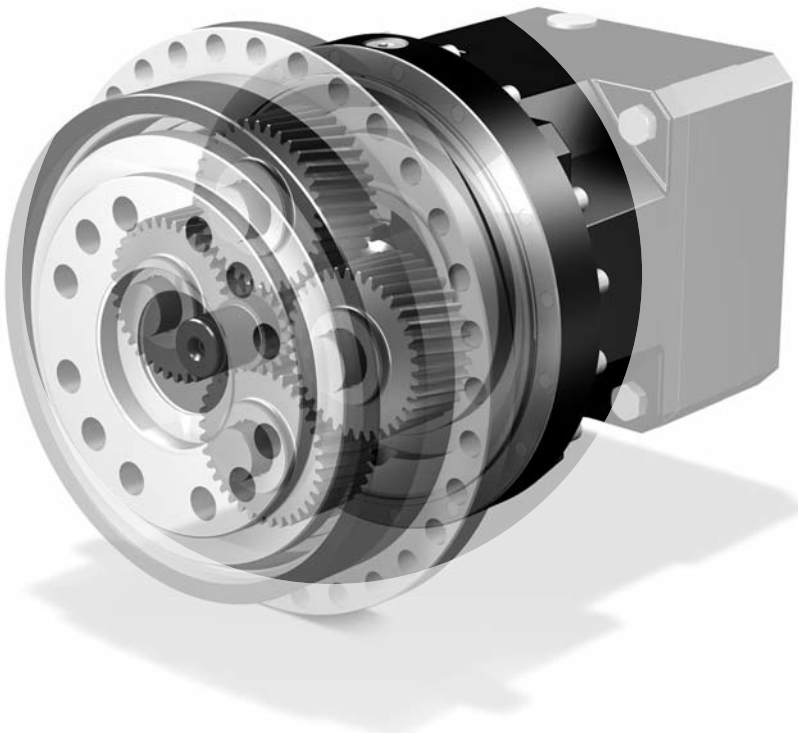
Quattro-Power para máxima densidad de potencia

- *Par de aceleración: 170 – 43000 Nm*
- *Bajo juego de giro: 3 arcmin*
- *Alta densidad de potencia por sistema planetario cuádruplo (Quattro)*
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Anillo retén de FKM en la entrada, trabajo permanente sin enfriamiento*
- *Fácil de montar gracias a la función de expansión en el cojinete de apriete*
- *Tecnología superior de dentado*
- *Bajos momentos de inercia de masa*
- *Equipable a cualquier motor servo síncrono*
- *Marcha extremadamente suave*
- *Rendimiento:*
  1 tren ≥ 96%
  2 trenes ≥ 93 %
  3 trenes ≥ 90 %

Quattro-Power per massima densità di potenza

- Coppia di accelerazione: 170 – 43000 Nm
- Gioco minimo: 3 arcmin
- Densità di potenza elevata grazie al sistema planetario quadruplo (Quattro)
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Anello di tenuta in FKM all'ingresso, funzionamento continuo senza raffreddamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Tecnologia della dentatura avanzata
- Momenti di inerzia contenuti
- Montabili su qualsiasi servomotore sincrono
- Estremamente silenziosi
- Rendimento:
  1 stadio ≥ 96 %
  2 stadi ≥ 93 %
  3 stadi ≥ 90 %

ServoFit® PHQ



ServoFit® PHQ Planetary Gear Units
Reductores planetarios ***ServoFit® PHQ***
ServoFit® Riduttori planetari **PHQ**

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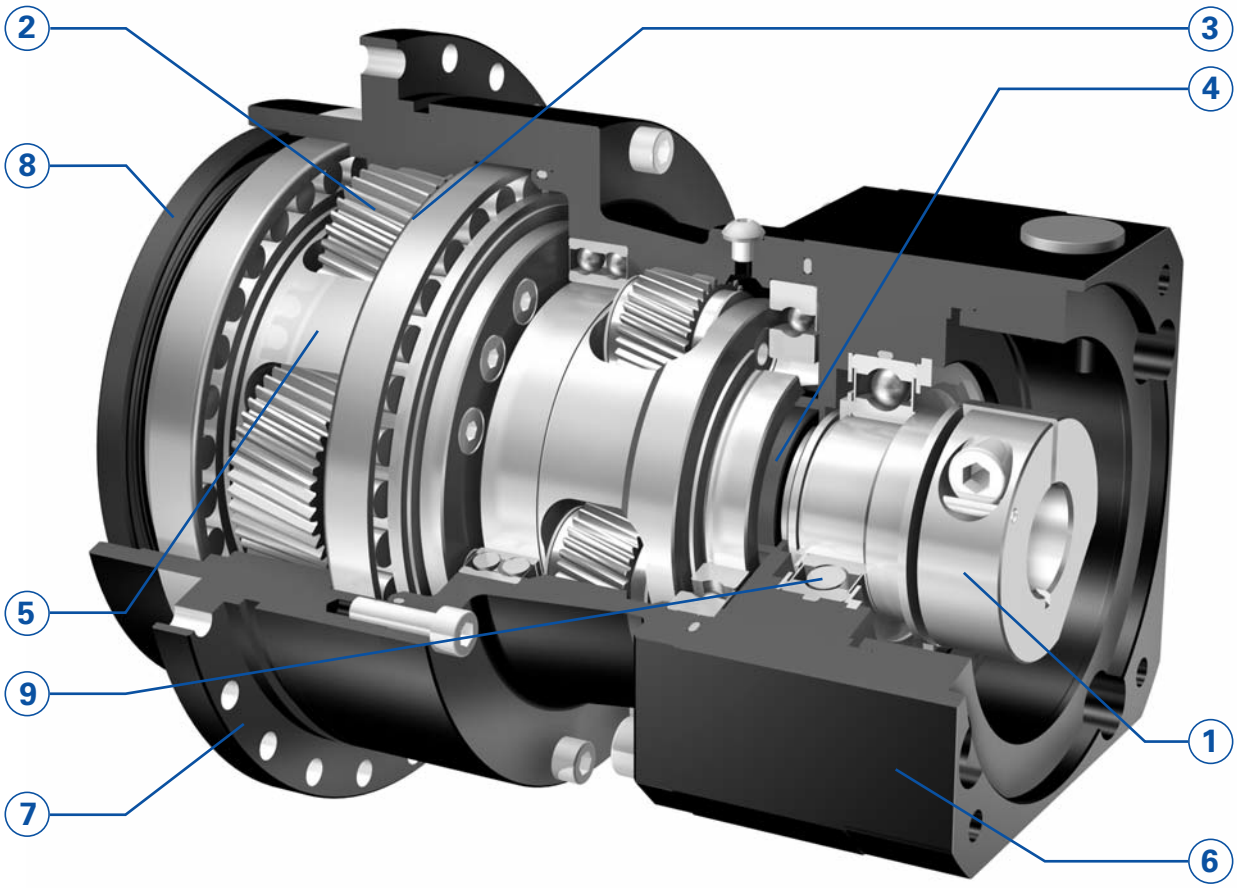


• **Quattro Power for maximum power density and rotation rigidity**
An optimized four-planet system (Quattro) permits torque to be distributed over 4 planets instead of 3. The result: increases in torque of up to 35% and increases in rotation rigidity of up to 80%.

• **Symmetrically arranged output bearings** for highest load capacity and highest tilting rigidity of the flange shaft. Due to pretensioned angular bearings in O alignment already the standard version is suitable for **high axial and radial loads**.

• The **STOBER EasyAdapt® motor adapter system** allows easy and accurate motor installation in minutes with no special tools required.

• **Wide selection** of IEC and NEMA motor adapters for all common brands of motors.

• ***Quattro Power para máxima densidad de potencia y rigidez a la torsión***
Mediante una sistema planetario cuádruplo optimizado (Quattro) los pares son distribuidos ahora sobre 4 en vez de 3 planetas. El resultado son incrementos de pares de hasta 35% y aumentos de la rigidez a la torsión de hasta 80%.

• ***Apoyo de salida simétrico*** *para máxima carga y máxima rigidez al vuelco del eje con brida. Por apoyos inclinados pretensados dispuestos en O, ya en el estándar adecuados para* ***altas cargas axiales y radiales****.*

• *El* ***sistema STOBER EasyAdapt®, de opciones para motores*** *permite el montaje sencillo y sin errores en pocos minutos. No se requieren herramientas especiales.*

• ***Gran selección*** *de adaptadores de motor (IEC y NEMA) para todos los tipos usuales de motores.*

• **Quattro Power per massima densità di potenza e rigidità torsionale**
Grazie al sistema planetario quadruplo (Quattro) le coppie sono ora distribuite su 4 invece che su 3 planetari. Il risultato sono incrementi di coppia fino al 35% ed aumenti della rigidità torsionale fino all'80%.

• **Supporto uscita simmetrico** per un carico ed una rigidità al ribaltamento elevatissimi dell'albero flangiato. Grazie ai cuscinetti a rulli conici precaricati con disposizione a O già nella versione standard sono idonei per **carichi assiali e radiali elevati**.

• Il **sistema di montaggio del motore EasyAdapt® STOBER** consente un montaggio del motore semplice e senza errori nel giro di pochi minuti. Non sono richiesti utensili speciali.

• **Ampia scelta** di adattatori motore (CEI e NEMA) per tutti i comuni tipi di motori.

ServoFit® PHQ Planetary Gear Units
Reductores planetarios ***ServoFit® PHQ***
ServoFit® Riduttori planetari **PHQ**

STÖBER

① **EasyAdapt® coupling**
Accurate and precise motor installation by clamping screw. Designed for **large motor shaft diameters**.
The single-piece design and optimized features to accommodate the motor shaft diameter help **minimize inertia** and ensure superior dynamic performance.
The **balanced** clamp coupling ensures quiet, vibration-free operation, also at high speeds.
Spacer bushes to accommodate custom motor shaft diameters.

② **High gearing quality** provided by case-hardened and finish-ground sun gear and planet gears.

③ **Load capacity of the planet gear bearings** increased by about 100 %.

④ **IP65** enclosure. Sealed with a **FKM** radial oil seal for the smallest possible shaft diameter. Reduces friction, thus preventing internal heat build-up. Increases efficiency. **Continuous duty** operation possible without addition cooling.

⑤ **Highest torsional stiffness and ultimate tensile strength** provided by oversized single-piece planet carriers made of high-tensile material.

⑥ Motor adapter made of aluminium for **low gear unit weight.**

⑦ **Highest running accuracy and precision** ensured by single-piece housing design. Housing material: High-tensile tempered steel.

⑧ **NBR double-lip radial oil seals**. For continuous duty applications, with very good chemical resistance **FKM oil seals** are available as an **option**.

⑨ Input shaft bearings with shields and high-temperature grease for maintenance-free operation.

⑩ **Lubricated for life** with high-quality hydrophobic synthetic gear oil.

① ***Acoplamiento EasyAdapt®***
*Acoplamiento de motor **sin errores** mediante un tornillo de apriete. Concebido para **grandes diámetros de ejes de motor**.*
*La **estructura de una pieza** y la óptima adaptación al diámetro del eje del motor se encargan **de bajísimos momentos de inercia de masa** y así de alta dinámica.*
*El acoplamiento **equilibrado** de anillo de apriete se encarga de una marcha suave, libre de vibraciones, aún a altas velocidades.*
Manguitos distanciadores para la adaptación de diámetros no usuales de motor.

② ***Alta calidad de dentado** por piñones solares y ruedas planetarias templados por cementación y rectificados.*

③ ***Capacidad de carga de los apoyos de los planetas** incrementada en aproximadamente 100 %.*

④ *Tipo de protección **IP65**. Sellado con anillo retén **FKM** sobre mínimo diámetro posible del eje. Reduce la fricción y así también el calentamiento. Aumenta el rendimiento.*
***Trabajo continuo** posible sin enfriamiento adicional.*

⑤ ***Máxima rigidez a la torsión y resistencia a la rotura** por portaplanetas generosamente dimensionados, de una sola pieza, fabricados de material de alta resistencia.*

⑥ *Adaptador de motor de aluminio para **peso reducido del reductor**.*

⑦ ***Máxima exactitud y precisión de marcha** por diseño de carcasa de una pieza. Material de la carcasa:*
Acero bonificado de alta resistencia .

⑧ ***Anillos retén de doble labio de NBR**. Para el uso en trabajo continuo así como para muy buena resistencia química, es ofrecida adicionalmente la **opción FKM**.*

⑨ *Apoyos del eje de accionamiento con discos de cubierta y grasa para alta temperatura para trabajo libre de mantenimiento.*

⑩ ***Lubricación de por vida** con aceite sintético hidrófobo de alta calidad para reductores.*

① **Giunto EasyAdapt®**
Montaggio del motore **senza errori** grazie alla vite di arresto. Concepito per **motori con grandi diametri dell'albero**.
La **struttura monoblocco** e l'adattamento ottimizzato al diametro dell'albero motore assicurano **momenti di inerzia bassissimi** e pertanto la massima dinamica.
Il giunto di montaggio **equilibrato** garantisce un funzionamento silenzioso e senza vibrazioni anche a alto numero di giri.
Bussole per l'adattamento ai diametri degli alberi motore non comuni.

② **Alta qualità della dentatura** grazie a solare e planetari cementati e lucidati, nonché alla corona dentata nitrurata e levigata.

③ **Capacitá di carico del supporto planetario** aumentata del 100 % circa.

④ Classe di protezione **IP65**. Ermetizzazione con anello di tenuta radiale per alberi **FKM** sul diametro albero più piccolo. Riduce l'attrito e conseguentemente il riscaldamento. Aumenta il rendimento.
Il **funzionamento continuo** è possibile senza raffreddamento aggiuntivo.

⑤ **Rigidità torsionale e resistenza a rottura** elevatissime grazie a porta planetari monoblocco in materiale altamente resistenza sovradimensionati.

⑥ Adattatore per motore in alluminio per un **peso del riduttore contenuto.**

⑦ **Massima esattezza di funzionamento e precisione** grazie al design monoblocco della carcassa. Materiale della carcassa: Acciaio da bonifica ad alta resistenza.

⑧ **Anelli di tenuta radiali per alberi a doppio labbro** in **FKM.** Per l'impiego in funzionamento continuo, nonché per una resistenza chimica ottimale, è inoltre offerta **l'opzione FKM**.

⑨ Cuscinetto albero ingresso con schermato con grasso per alte temperature per un esercizio privo di richiede manutenzione.

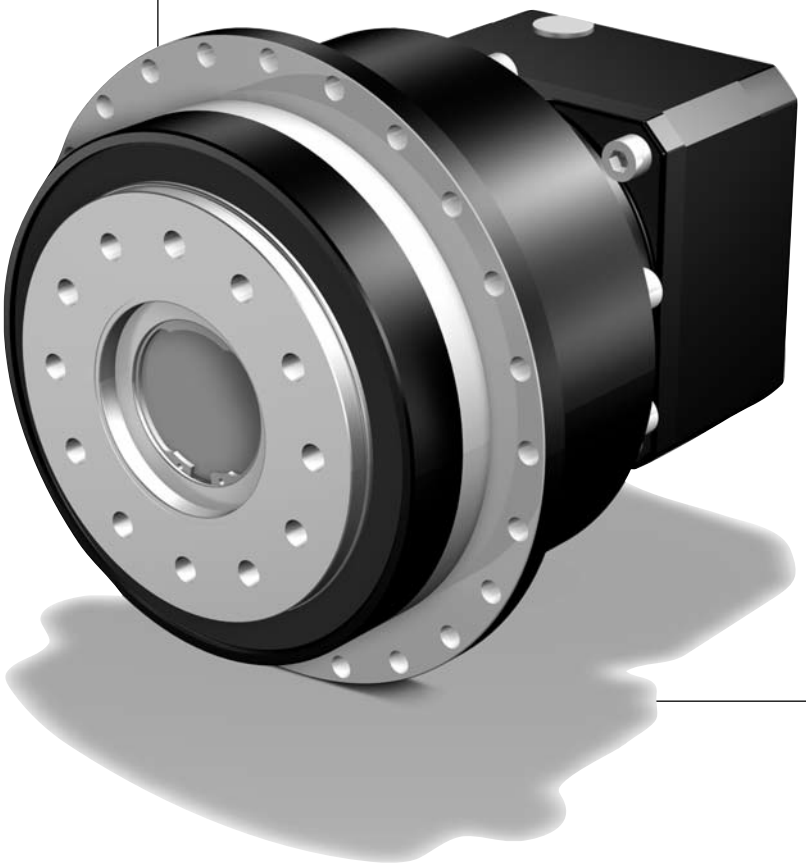
⑩ **Lubrificazione a vita** con olio per riduttori sintetico idrofobico di alta qualità.

ServoFit® PHQ
Planetary Gear Units

Reductores planetarios
ServoFit® PHQ

ServoFit®
Riduttori planetari
PHQ

STÖBER



PHQ

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Type designation — *Tipificación* — Identificazione dei modelli

PHQ 7 2 2 F 0220 ME

1 2 3 4 5 6 7

1 Gear unit type
PHQ - Planetary gear unit

2 Gear unit size

3 Generation number

4 Stages
1 - 1 stage
2 - 2 stage
3 - 3 stage

5 Design
F - flange shaft

6 Transmission ratio i x 10

7 Mounting series
ME - Motor adapter with EasyAdapt® coupling
MEL - Motor adapter with EasyAdapt® coupling and large motor plate
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page PHQ17, please observe the max. dimensions).

Ordering data according to the type designation above.

Further ordering details:
- Mounting position for 3 stage gear units
- information as to whether the radial shaft seals on the output are made from FKM or NBR. Recommendation: FKM for an operating time ≥ 60%
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

The torques and forces specified in this catalog only apply under the following conditions:
- For the attachment of the flange shaft and the gear unit housing on the machine side using screws of quality 12.9
- If the gear unit housings are adjusted at the pilot (H7)
PHQ4-PHQ10: ø**b**1 or ø**b**2
PHQ11-PHQ12: ø**b**1 and ø**b**3
- If the flange shaft is adjusted with the connecting element at the pilot ød or øv

1 *Tipo de reductor*
PHQ *- Reductor planetario*

2 *Tamaño del reductor*

3 *Cifra de generación*

4 *Número de trenes*
1 *- 1 tren*
2 *- 2 trenes*
3 *- 3 trenes*

5 *Ejecución*
F *- Eje con brida*

6 *Número característico de la relación de reducción i x 10*

7 *Grupos de opciones*
ME *– Adaptador de motor con acoplamiento EasyAdapt®*
MEL *– Adaptador de motor con acoplamiento EasyAdapt® y placa grande de motor*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página PHQ17, por favor observar dimensiones máximas).

Datos de pedido de acuerdo a la tipificación indicada arriba.
Otros datos de pedido:
– *Posicion de instalación para reductores a 3 trenes*
– *Indicación si anillos retén en la salida de FKM o de NBR. Recomendación: FKM para duración de conexión ≥ 60%.*
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

Los pares y fuerzas indicados en este catálogo se aplican bajo las siguientes condiciones:
- *Al fijar el eje de brida y la carcasa del reductor en el lado de la máquina con tornillos de la calidad 12.9*
- *Si las carcasas del reductor están ajustadas en el borde de ajuste ø**b**1 o ø**b**2 (H7)*
*PHQ4-PHQ10: ø**b**1 o ø**b**2*
*PHQ11-PHQ12: ø**b**1 y ø**b**3*
- *Si el eje de brida está ajustada con el elemento de unión en el borde de ajuste ød o øv.*

1 Modello di riduttore
PHQ – Riduttore planetario

2 Taglia del riduttore

3 Numero di generazione

4 Numero di stadi
1 - 1-stadio
2 - 2-stadi
3 - 3-stadi

5 Esecuzione
F – Albero flangiato

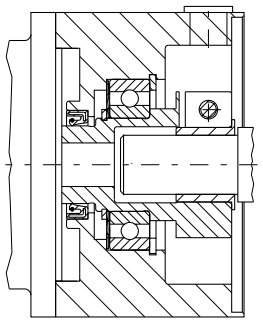
6 Rapporto di riduzione i x 10

7 Opzioni annessi
ME – adattatore motore con giunto EasyAdapt®
MEL – adattatore motore con giunto EasyAdapt® e flangia motore grande
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore da pagina PHQ17, si prega di rispettare le misure max.).

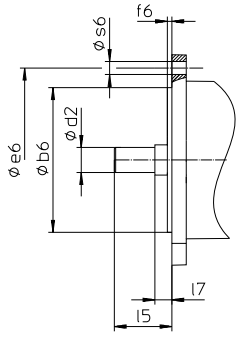
Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.
Altri dati dell'ordine:
– Posizione di montaggio per riduttori a 3 stadi
– Indicare se gli anelli di tenuta radiali dell'albero uscita sono in FKM o NBR. Raccomandazione: FKM per fattore di servizio ≥ 60%.
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

Le coppie e le forze indicate in questo catalogo si applicano alle seguenti condizioni:
- Per il fissaggio dell' albero flangiato e dell' scatola del riduttore sul lato macchina con viti di qualità 12.9
- Se le scatole del riduttore sono adattate sul bordo di accoppiamento ø**b**1 o ø**b**2 (H7)
PHQ4-PHQ10: ø**b**1 o ø**b**2
PHQ11-PHQ12: ø**b**1 e ø**b**3
- Se l' albero flangiato è adattato dell' elemento di collegamento sul bordo di accoppiamento ød o øv

PHQ722 F 0220 ME



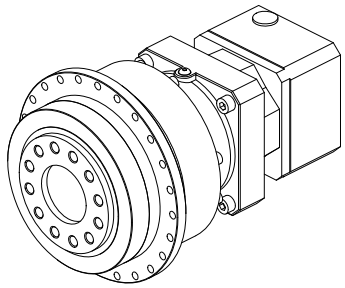
EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
***Giunto* EasyAdapt® ME**



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Mounting positions | *Posiciones de instalación* | Posizioni di montaggio

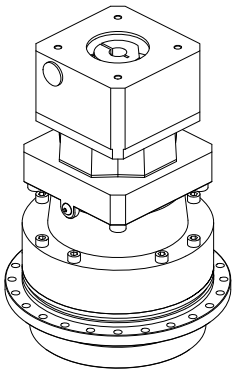
EL1



The gear units are filled with the quantity and type of lubricant specified on the rating plate. For 3 stage gear units the lubricant fill level and the setup of the gear units depend on the mounting position .
Therefore, any modification of the gear units is permitted only after consulting STOBER.

Please visit our web site for more detailed information about oil grades and quantities (ID 441871).

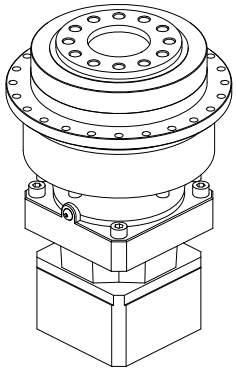
EL5



***Los reductores** están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores de 3 trenes dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

EL6



I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori a 3 stadi dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza averne prima consultato STOBER.

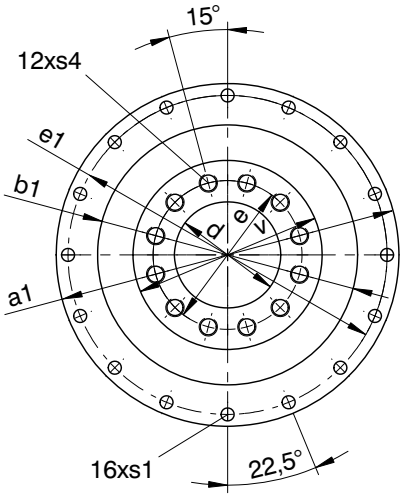
Informazioni dettagliate sulle tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).

Shaft / housing design Output **PHQ**	*Ejecución de eje / de carcasa Salida **PHQ***	Esecuzione albero / carcassa Uscita **PHQ**

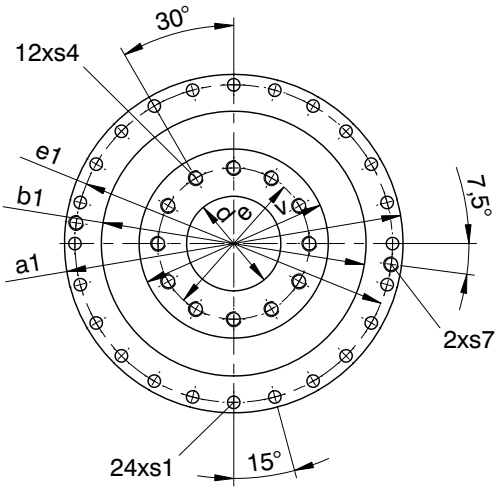
STÖBER

Flange shaft | ***Eje con brida*** | **Albero flangiato**

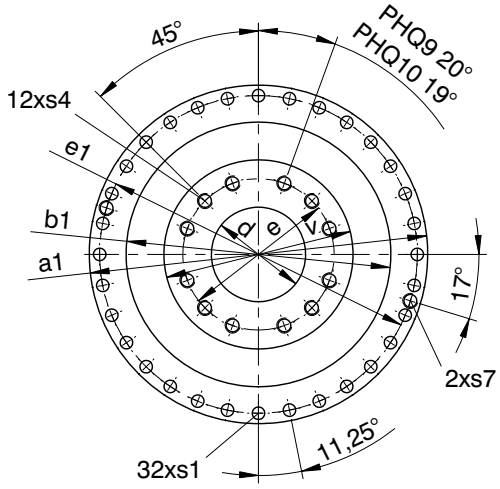
PHQ4 + PHQ5



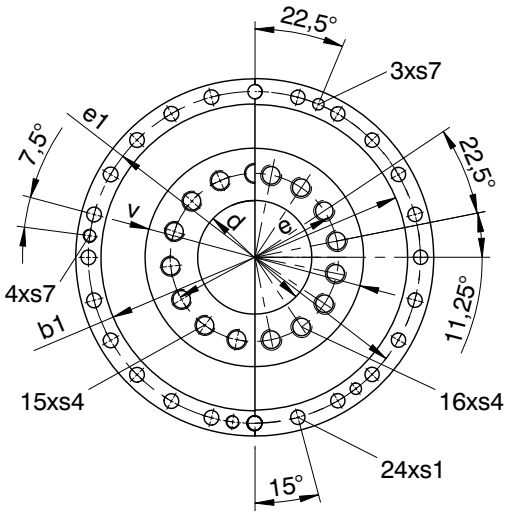
PHQ7 + PHQ8



PHQ9 + PHQ10



PHQ11 | PHQ12



Shaft design “F” | ***Ejecución de eje “F”*** | **Esecuzione albero “F”**

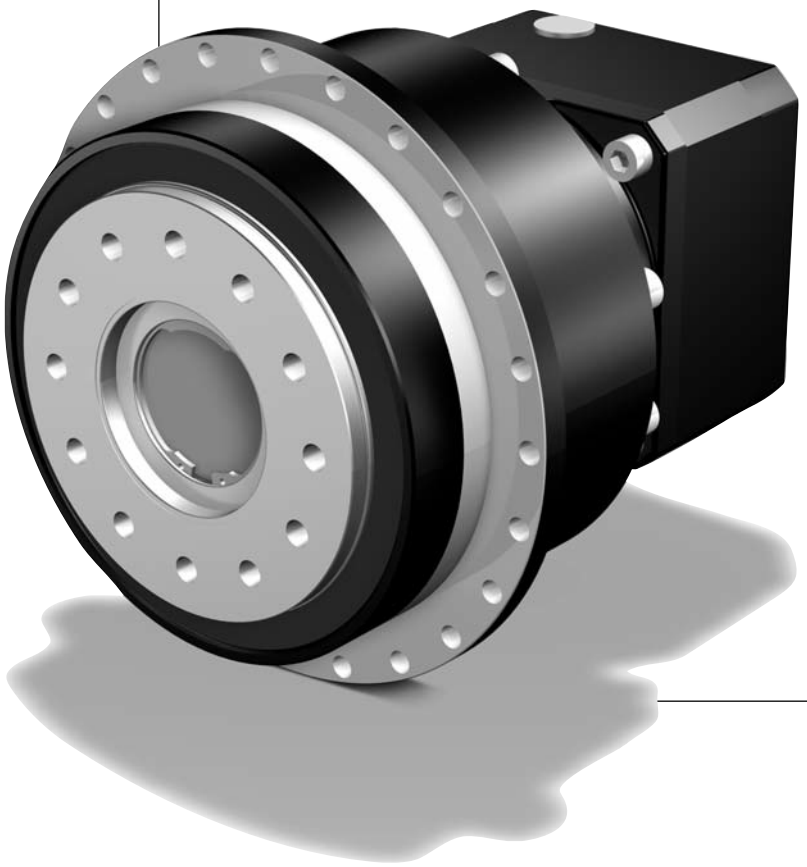
Typ	øa1	øb1	ød	øe	øe1	øs1	s4	s7	v
PHQ4	118h7	90h7	31,5H6	50	109	5,5	M6	-	63h7
PHQ5	145h7	110h7	40,0H6	63	135	5,5	M8	-	80h7
PHQ7	179h7	140h7	50,0H6	80	168	6,6	M10	-	100h7
PHQ8	247h7	200h7	80,0H6	125	233	9,0	M12	M10	160h7
PHQ9	300h7	255h7	90,0H6	145	280	13,5	M20	M8	180h7
PHQ10	330h7	285h7	95,0H6	166	310	13,5	M24	M10	200h7
PHQ11	425	365h6	120,0H6	200	395	17,5	M24	M16	260h7
PHQ12	550	470h6	180,0H7	280	510	22,0	M30	M16	330h7

Selection table
ServoFit® PHQ
Planetary Gear Units

Tabla de selección
Reductores planetarios
ServoFit® PHQ

Tabella di selezione
ServoFit® Riduttori
planetari **PHQ**

STÖBER



PHQ

Selection table **ServoFit® PHQ** Planetary Gear Units

Tabla de selección Reductores planetarios ***ServoFit® PHQ***

Tabella di selezione **ServoFit®** Riduttori planetari **PHQ**

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Symbols:

i - Gear unit ratio
n_{1MAX} - Max. input speed
DB - Continuous operation
ZB - Cycle operation
(at ambient temperature 20°C, also see page A11/A12)
MWø - Motor shaft diameter
J_1 - Mass mom. of inertia (related to input)
G - Weight
$\Delta\varphi_2$ - Backlash
C_2 - Gear unit rigidity (related to output at M_{2B})
L_{PA} - Max. noise level (n_1 = 2000 rpm)
M_{2N} - Rated torque [1)]
M_{2B} - Max. perm. acceleration torque
M_{2NOT} - Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

1) Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

Denominaciones:

i - *Relación de reducción*
n_{1MAX} - *Velocidad máx. de entrada*
DB - Trabajo continuo
ZB - Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
MWø - *Diámetro de eje del motor*
J_1 - *Momento de inercia de masa (referido a la entrada)*
G - *Peso*
$\Delta\varphi_2$ - *Juego de giro*
C_2 - *Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} - *Ruido máx. de marcha (n_1 = 2000 min-1)*
M_{2N} - *Par nominal [1)]*
M_{2B} - *Par máx. admisible de aceleración*
M_{2NOT} - *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

1) Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

Simboli:

i - Rapporto di riduzione
n_{1MAX} - Max. numero di giri in ingresso
DB - funzionamento continuo
ZB - funzionamento ciclico
(a temperatura ambiente di 20°C, vedere anche pagina A11/A12)
MWø - Diametro dell'albero motore
J_1 - Momento di inerzia (riferito all'ingresso)
G - Peso
$\Delta\varphi_2$ - Gioco
C_2 - Rigidità del riduttore (riferito all'uscita per M_{2B})
L_{PA} - Rumorosità max. (n_1 = 2000 min-1)
M_{2N} - Coppia nominale [1)]
M_{2B} - Coppia di accelerazione max. ammessa
M_{2NOT} - Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

1) I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

Planetary Gear Units **PHQ**
Reductores planetarios ***PHQ***
Riduttori planetari **PHQ**

STÖBER

Please take notice of the indications on page PHQ6! ***¡Por favor observe las indicaciones en la página PHQ6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQ6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ421 (M_{2BMAX}=170 Nm)												
5,500	**PHQ421_0055 ME**	2000	6000	**>14≤19**	1,0	3,9	3	38	59	120	170	300
5,500	**PHQ421_0055 ME**	2000	6000	**>19≤24**	1,1	3,9	3	38	59	120	170	300
5,500	**PHQ421_0055 MEL**	2000	6000	**>24≤32**	2,8	4,6	3	39	59	120	170	300
PHQ422 (M_{2BMAX}=170 Nm)												
22,00	**PHQ422_0220 ME**	3700	6500	**≤11**	0,38	4,5	3	37	60	120	170	300
22,00	**PHQ422_0220 ME**	3700	6500	**>11≤14**	0,42	4,5	3	37	60	120	170	300
22,00	**PHQ422_0220 ME**	3700	6500	**>14≤19**	0,53	4,5	3	37	60	120	170	300
22,00	**PHQ422_0220 MEL**	3700	6500	**>19≤24**	1,0	5,2	3	37	60	120	170	300
27,50	**PHQ422_0280 ME**	4000	7000	**≤11**	0,33	4,5	3	37	58	120	170	300
27,50	**PHQ422_0280 ME**	4000	7000	**>11≤14**	0,36	4,5	3	37	58	120	170	300
27,50	**PHQ422_0280 ME**	4000	7000	**>14≤19**	0,47	4,5	3	37	58	120	170	300
27,50	**PHQ422_0280 MEL**	4000	7000	**>19≤24**	0,96	5,2	3	37	58	120	170	300
38,50	**PHQ422_0390 ME**	4500	8000	**≤11**	0,28	4,5	3	36	57	120	170	300
38,50	**PHQ422_0390 ME**	4500	8000	**>11≤14**	0,31	4,5	3	36	57	120	170	300
38,50	**PHQ422_0390 ME**	4500	8000	**>14≤19**	0,42	4,5	3	36	57	120	170	300
38,50	**PHQ422_0390 MEL**	4500	8000	**>19≤24**	0,91	5,2	3	37	57	120	170	300
55,00	**PHQ422_0550 ME**	4500	8000	**≤11**	0,25	4,5	3	35	55	120	170	300
55,00	**PHQ422_0550 ME**	4500	8000	**>11≤14**	0,29	4,5	3	35	55	120	170	300
55,00	**PHQ422_0550 ME**	4500	8000	**>14≤19**	0,40	4,5	3	35	55	120	170	300
55,00	**PHQ422_0550 MEL**	4500	8000	**>19≤24**	0,89	5,2	3	35	55	120	170	300
PHQ521 (M_{2BMAX}=430 Nm)												
5,500	**PHQ521_0055 ME**	2500	5500	**>19≤24**	3,1	6,6	3	92	60	280	430	790
5,500	**PHQ521_0055 ME**	2500	5500	**>24≤32**	3,4	6,6	3	92	60	280	430	800
5,500	**PHQ521_0055 MEL**	2500	5500	**>32≤38**	7,2	8,3	3	99	60	280	430	800
PHQ522 (M_{2BMAX}=430 Nm)												
22,00	**PHQ522_0220 ME**	3300	6000	**≤14**	0,92	8,1	3	93	61	280	430	800
22,00	**PHQ522_0220 ME**	3300	6000	**>14≤19**	1,1	8,1	3	93	61	280	430	800
22,00	**PHQ522_0220 ME**	3300	6000	**>19≤24**	1,2	8,1	3	93	61	280	430	800
22,00	**PHQ522_0220 MEL**	3300	6000	**>24≤32**	2,8	8,8	3	94	61	280	430	800
27,50	**PHQ522_0280 ME**	3700	6500	**≤14**	0,78	8,1	3	93	59	280	430	800
27,50	**PHQ522_0280 ME**	3700	6500	**>14≤19**	0,94	8,1	3	93	59	280	430	800
27,50	**PHQ522_0280 ME**	3700	6500	**>19≤24**	1,1	8,1	3	93	59	280	430	800
27,50	**PHQ522_0280 MEL**	3700	6500	**>24≤32**	2,7	8,8	3	93	59	280	430	800
38,50	**PHQ522_0390 ME**	4000	7000	**≤14**	0,69	8,1	3	91	58	280	430	800
38,50	**PHQ522_0390 ME**	4000	7000	**>14≤19**	0,85	8,1	3	91	58	280	430	800
38,50	**PHQ522_0390 ME**	4000	7000	**>19≤24**	0,97	8,1	3	91	58	280	430	800
38,50	**PHQ522_0390 MEL**	4000	7000	**>24≤32**	2,6	8,8	3	91	58	280	430	800
55,00	**PHQ522_0550 ME**	4000	7000	**≤14**	0,65	8,1	3	87	56	280	430	800
55,00	**PHQ522_0550 ME**	4000	7000	**>14≤19**	0,80	8,1	3	87	56	280	430	800
55,00	**PHQ522_0550 ME**	4000	7000	**>19≤24**	0,92	8,1	3	87	56	280	430	800
55,00	**PHQ522_0550 MEL**	4000	7000	**>24≤32**	2,5	8,8	3	87	56	280	430	800
PHQ721 (M_{2BMAX}=950 Nm)												
5,500	**PHQ721_0055 ME**	2200	5000	**>24≤32**	6,4	12,9	3	197	61	650	950	1580
5,500	**PHQ721_0055 ME**	2200	5000	**>32≤38**	7,3	12,9	3	197	61	650	950	1700
5,500	**PHQ721_0055 MEL**	2200	5000	**>38≤48**	19	16,7	3	213	61	650	950	1700

Planetary Gear Units **PHQ**
Reductores planetarios ***PHQ***
Riduttori planetari **PHQ**

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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ722 (M_{2BMAX}=950 Nm)												
22,00	**PHQ722_0220 ME**	3000	5000	**≤19**	3,1	14,6	3	203	62	650	950	1700
22,00	**PHQ722_0220 ME**	3000	5000	**>19≤24**	3,4	14,6	3	203	62	650	950	1700
22,00	**PHQ722_0220 ME**	3000	5000	**>24≤32**	3,8	14,6	3	203	62	650	950	1700
22,00	**PHQ722_0220 MEL**	3000	5000	**>32≤38**	7,5	16,3	3	205	62	650	950	1700
27,50	**PHQ722_0280 ME**	3500	6000	**≤19**	2,6	14,6	3	203	60	650	950	1700
27,50	**PHQ722_0280 ME**	3500	6000	**>19≤24**	3,0	14,6	3	203	60	650	950	1700
27,50	**PHQ722_0280 ME**	3500	6000	**>24≤32**	3,3	14,6	3	203	60	650	950	1700
27,50	**PHQ722_0280 MEL**	3500	6000	**>32≤38**	7,1	16,3	3	204	60	650	950	1700
38,50	**PHQ722_0390 ME**	3700	6500	**≤19**	2,3	14,6	3	201	59	650	950	1700
38,50	**PHQ722_0390 ME**	3700	6500	**>19≤24**	2,6	14,6	3	201	59	650	950	1700
38,50	**PHQ722_0390 ME**	3700	6500	**>24≤32**	2,9	14,6	3	201	59	650	950	1700
38,50	**PHQ722_0390 MEL**	3700	6500	**>32≤38**	6,6	16,3	3	202	59	650	950	1700
55,00	**PHQ722_0550 ME**	3700	6500	**≤19**	2,1	14,6	3	195	57	650	950	1700
55,00	**PHQ722_0550 ME**	3700	6500	**>19≤24**	2,4	14,6	3	195	57	650	950	1700
55,00	**PHQ722_0550 ME**	3700	6500	**>24≤32**	2,7	14,6	3	195	57	650	950	1700
55,00	**PHQ722_0550 MEL**	3700	6500	**>32≤38**	6,4	16,3	3	195	57	650	950	1700
PHQ723 (M_{2BMAX}=950 Nm)												
88,00	**PHQ723_0880 ME**	3300	6000	**≤14**	0,99	16,4	3	204	61	650	950	1700
88,00	**PHQ723_0880 ME**	3300	6000	**>14≤19**	1,1	16,4	3	204	61	650	950	1700
88,00	**PHQ723_0880 ME**	3300	6000	**>19≤24**	1,3	16,4	3	204	61	650	950	1700
88,00	**PHQ723_0880 MEL**	3300	6000	**>24≤32**	2,9	17,1	3	204	61	650	950	1700
110,0	**PHQ723_1100 ME**	3300	6000	**≤14**	0,96	16,4	3	203	61	650	950	1700
110,0	**PHQ723_1100 ME**	3300	6000	**>14≤19**	1,1	16,4	3	203	61	650	950	1700
110,0	**PHQ723_1100 ME**	3300	6000	**>19≤24**	1,2	16,4	3	203	61	650	950	1700
110,0	**PHQ723_1100 MEL**	3300	6000	**>24≤32**	2,8	17,1	3	204	61	650	950	1700
137,5	**PHQ723_1380 ME**	3700	6500	**≤14**	0,83	16,4	3	203	59	650	950	1700
137,5	**PHQ723_1380 ME**	3700	6500	**>14≤19**	0,99	16,4	3	203	59	650	950	1700
137,5	**PHQ723_1380 ME**	3700	6500	**>19≤24**	1,1	16,4	3	203	59	650	950	1700
137,5	**PHQ723_1380 MEL**	3700	6500	**>24≤32**	2,7	17,1	3	203	59	650	950	1700
154,0	**PHQ723_1540 ME**	4000	7000	**≤14**	0,72	16,4	3	203	58	650	950	1700
154,0	**PHQ723_1540 ME**	4000	7000	**>14≤19**	0,88	16,4	3	203	58	650	950	1700
154,0	**PHQ723_1540 ME**	4000	7000	**>19≤24**	1,00	16,4	3	203	58	650	950	1700
154,0	**PHQ723_1540 MEL**	4000	7000	**>24≤32**	2,6	17,1	3	203	58	650	950	1700
192,5	**PHQ723_1930 ME**	4000	7000	**≤14**	0,71	16,4	3	203	58	650	950	1700
192,5	**PHQ723_1930 ME**	4000	7000	**>14≤19**	0,87	16,4	3	203	58	650	950	1700
192,5	**PHQ723_1930 ME**	4000	7000	**>19≤24**	0,99	16,4	3	203	58	650	950	1700
192,5	**PHQ723_1930 MEL**	4000	7000	**>24≤32**	2,6	17,1	3	203	58	650	950	1700
220,0	**PHQ723_2200 ME**	4000	7000	**≤14**	0,66	16,4	3	202	56	650	950	1700
220,0	**PHQ723_2200 ME**	4000	7000	**>14≤19**	0,82	16,4	3	202	56	650	950	1700
220,0	**PHQ723_2200 ME**	4000	7000	**>19≤24**	0,94	16,4	3	202	56	650	950	1700
220,0	**PHQ723_2200 MEL**	4000	7000	**>24≤32**	2,6	17,1	3	202	56	650	950	1700
275,0	**PHQ723_2750 ME**	4000	7000	**≤14**	0,66	16,4	3	202	56	650	950	1700
275,0	**PHQ723_2750 ME**	4000	7000	**>14≤19**	0,81	16,4	3	202	56	650	950	1700
275,0	**PHQ723_2750 ME**	4000	7000	**>19≤24**	0,93	16,4	3	202	56	650	950	1700
275,0	**PHQ723_2750 MEL**	4000	7000	**>24≤32**	2,5	17,1	3	202	56	650	950	1700
385,0	**PHQ723_3850 ME**	4000	7000	**≤14**	0,66	16,4	3	201	56	650	950	1700
385,0	**PHQ723_3850 ME**	4000	7000	**>14≤19**	0,79	16,4	3	201	56	650	950	1700
385,0	**PHQ723_3850 ME**	4000	7000	**>19≤24**	0,91	16,4	3	201	56	650	950	1700
385,0	**PHQ723_3850 MEL**	4000	7000	**>24≤32**	2,5	17,1	3	201	56	650	950	1700
550,0	**PHQ723_5500 ME**	4000	7000	**≤14**	0,65	16,4	3	195	56	650	950	1700
550,0	**PHQ723_5500 ME**	4000	7000	**>14≤19**	0,79	16,4	3	195	56	650	950	1700
550,0	**PHQ723_5500 ME**	4000	7000	**>19≤24**	0,90	16,4	3	195	56	650	950	1700
550,0	**PHQ723_5500 MEL**	4000	7000	**>24≤32**	2,5	17,1	3	195	56	650	950	1700

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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ822 (M_{2BMAX}=2600 Nm)												
22,00	**PHQ822_0220 ME**	2500	4500	**≤24**	7,4	39,8	3	634	63	1700	2600	4000
22,00	**PHQ822_0220 ME**	2500	4500	**>24≤32**	8,4	39,8	3	639	63	1700	2600	4000
22,00	**PHQ822_0220 ME**	2500	4500	**>32≤38**	11	39,8	3	639	63	1700	2600	4000
22,00	**PHQ822_0220 MEL**	2500	4500	**>38≤48**	21	43,6	3	649	63	1700	2600	4000
27,50	**PHQ822_0280 ME**	3000	5500	**≤24**	5,6	39,8	3	639	61	1700	2600	4000
27,50	**PHQ822_0280 ME**	3000	5500	**>24≤32**	6,6	39,8	3	642	61	1700	2600	4000
27,50	**PHQ822_0280 ME**	3000	5500	**>32≤38**	9,2	39,8	3	642	61	1700	2600	4000
27,50	**PHQ822_0280 MEL**	3000	5500	**>38≤48**	19	43,6	3	648	61	1700	2600	4000
38,50	**PHQ822_0390 ME**	3300	6000	**≤24**	4,2	39,8	3	634	60	1700	2600	4000
38,50	**PHQ822_0390 ME**	3300	6000	**>24≤32**	6,1	39,8	3	634	60	1700	2600	4000
38,50	**PHQ822_0390 ME**	3300	6000	**>32≤38**	6,1	39,8	3	634	60	1700	2600	4000
38,50	**PHQ822_0390 MEL**	3300	6000	**>38≤48**	17	43,6	3	639	60	1700	2600	4000
55,00	**PHQ822_0550 ME**	3300	6000	**≤24**	3,6	39,8	3	611	58	1580	2600	4000
55,00	**PHQ822_0550 ME**	3300	6000	**>24≤32**	5,4	39,8	3	611	58	1580	2600	4000
55,00	**PHQ822_0550 ME**	3300	6000	**>32≤38**	5,4	39,8	3	611	58	1580	2600	4000
55,00	**PHQ822_0550 MEL**	3300	6000	**>38≤48**	17	43,6	3	613	58	1580	2600	4000
PHQ823 (M_{2BMAX}=2600 Nm)												
88,00	**PHQ823_0880 ME**	3000	5000	**≤19**	3,2	42,6	3	644	62	1700	2600	4000
88,00	**PHQ823_0880 ME**	3000	5000	**>19≤24**	3,6	42,6	3	645	62	1700	2600	4000
88,00	**PHQ823_0880 ME**	3000	5000	**>24≤32**	3,9	42,6	3	645	62	1700	2600	4000
88,00	**PHQ823_0880 MEL**	3000	5000	**>32≤38**	7,7	44,3	3	646	62	1700	2600	4000
110,0	**PHQ823_1100 ME**	3000	5000	**≤19**	3,1	42,6	3	645	62	1700	2600	4000
110,0	**PHQ823_1100 ME**	3000	5000	**>19≤24**	3,5	42,6	3	645	62	1700	2600	4000
110,0	**PHQ823_1100 ME**	3000	5000	**>24≤32**	3,8	42,6	3	645	62	1700	2600	4000
110,0	**PHQ823_1100 MEL**	3000	5000	**>32≤38**	7,5	44,3	3	646	62	1700	2600	4000
137,5	**PHQ823_1380 ME**	3500	6000	**≤19**	2,6	42,6	3	645	60	1700	2600	4000
137,5	**PHQ823_1380 ME**	3500	6000	**>19≤24**	3,0	42,6	3	645	60	1700	2600	4000
137,5	**PHQ823_1380 ME**	3500	6000	**>24≤32**	3,3	42,6	3	645	60	1700	2600	4000
137,5	**PHQ823_1380 MEL**	3500	6000	**>32≤38**	7,1	44,3	3	645	60	1700	2600	4000
154,0	**PHQ823_1540 ME**	3700	6500	**≤19**	2,3	42,6	3	644	59	1700	2600	4000
154,0	**PHQ823_1540 ME**	3700	6500	**>19≤24**	2,6	42,6	3	644	59	1700	2600	4000
154,0	**PHQ823_1540 ME**	3700	6500	**>24≤32**	2,9	42,6	3	644	59	1700	2600	4000
154,0	**PHQ823_1540 MEL**	3700	6500	**>32≤38**	6,7	44,3	3	644	59	1700	2600	4000
192,5	**PHQ823_1930 ME**	3700	6500	**≤19**	2,3	42,6	3	644	59	1700	2600	4000
192,5	**PHQ823_1930 ME**	3700	6500	**>19≤24**	2,6	42,6	3	644	59	1700	2600	4000
192,5	**PHQ823_1930 ME**	3700	6500	**>24≤32**	2,9	42,6	3	644	59	1700	2600	4000
192,5	**PHQ823_1930 MEL**	3700	6500	**>32≤38**	6,6	44,3	3	645	59	1700	2600	4000
220,0	**PHQ823_2200 ME**	3700	6500	**≤19**	2,1	42,6	3	641	57	1700	2600	4000
220,0	**PHQ823_2200 ME**	3700	6500	**>19≤24**	2,4	42,6	3	641	57	1700	2600	4000
220,0	**PHQ823_2200 ME**	3700	6500	**>24≤32**	2,7	42,6	3	641	57	1700	2600	4000
220,0	**PHQ823_2200 MEL**	3700	6500	**>32≤38**	6,5	44,3	3	641	57	1700	2600	4000
275,0	**PHQ823_2750 ME**	3700	6500	**≤19**	2,1	42,6	3	643	57	1700	2600	4000
275,0	**PHQ823_2750 ME**	3700	6500	**>19≤24**	2,4	42,6	3	643	57	1700	2600	4000
275,0	**PHQ823_2750 ME**	3700	6500	**>24≤32**	2,7	42,6	3	643	57	1700	2600	4000
275,0	**PHQ823_2750 MEL**	3700	6500	**>32≤38**	6,4	44,3	3	643	57	1700	2600	4000
385,0	**PHQ823_3850 ME**	3700	6500	**≤19**	2,1	42,6	3	635	57	1700	2600	4000
385,0	**PHQ823_3850 ME**	3700	6500	**>19≤24**	2,4	42,6	3	635	57	1700	2600	4000
385,0	**PHQ823_3850 ME**	3700	6500	**>24≤32**	2,7	42,6	3	635	57	1700	2600	4000
385,0	**PHQ823_3850 MEL**	3700	6500	**>32≤38**	6,4	44,3	3	635	57	1700	2600	4000
550,0	**PHQ823_5500 ME**	3700	6500	**≤19**	2,1	42,6	3	611	57	1580	2600	4000
550,0	**PHQ823_5500 ME**	3700	6500	**>19≤24**	2,3	42,6	3	611	57	1580	2600	4000
550,0	**PHQ823_5500 ME**	3700	6500	**>24≤32**	2,7	42,6	3	611	57	1580	2600	4000
550,0	**PHQ823_5500 MEL**	3700	6500	**>32≤38**	6,4	44,3	3	611	57	1580	2600	4000

Planetary Gear Units **PHQ**
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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ932 (M_{2BMAX}=6000 Nm)												
18,00	**PHQ932_0180 ME**	1800	3000	**≤32**	56	81,0	3	1167	66	3800	6000	7520
18,00	**PHQ932_0180 ME**	1800	3000	**>32≤38**	60	81,0	3	1177	66	3800	6000	8720
18,00	**PHQ932_0180 ME**	1800	3000	**>38≤48**	64	81,0	3	1177	66	3800	6000	10500
18,00	**PHQ932_0180 MEL**	1800	3000	**>48≤55**	95	85,6	3	1220	66	3800	6000	12000
18,00	**PHQ932_0180 MEL**	1800	3000	**>55≤60**	100	85,6	3	1220	66	3800	6000	12000
24,00	**PHQ932_0240 ME**	2200	3500	**≤32**	27	81,0	3	1185	64	3800	6000	10020
24,00	**PHQ932_0240 ME**	2200	3500	**>32≤38**	31	81,0	3	1191	64	3800	6000	11630
24,00	**PHQ932_0240 ME**	2200	3500	**>38≤48**	35	81,0	3	1191	64	3800	6000	12000
24,00	**PHQ932_0240 MEL**	2200	3500	**>48≤55**	66	85,6	3	1215	64	3800	6000	12000
24,00	**PHQ932_0240 MEL**	2200	3500	**>55≤60**	71	85,6	3	1215	64	3800	6000	12000
30,00	**PHQ932_0300 ME**	2500	4000	**≤32**	20	81,0	3	1188	62	3800	6000	12000
30,00	**PHQ932_0300 ME**	2500	4000	**>32≤38**	24	81,0	3	1192	62	3800	6000	12000
30,00	**PHQ932_0300 ME**	2500	4000	**>38≤48**	28	81,0	3	1192	62	3800	6000	12000
30,00	**PHQ932_0300 MEL**	2500	4000	**>48≤55**	59	85,6	3	1208	62	3800	6000	12000
30,00	**PHQ932_0300 MEL**	2500	4000	**>55≤60**	64	85,6	3	1208	62	3800	6000	12000
42,00	**PHQ932_0420 ME**	2800	4500	**≤32**	15	81,0	3	1182	61	3800	6000	12000
42,00	**PHQ932_0420 ME**	2800	4500	**>32≤38**	17	81,0	3	1182	61	3800	6000	12000
42,00	**PHQ932_0420 ME**	2800	4500	**>38≤48**	20	81,0	3	1182	61	3800	6000	12000
42,00	**PHQ932_0420 MEL**	2800	4500	**>48≤55**	53	85,6	3	1192	61	3800	6000	12000
60,00	**PHQ932_0600 ME**	2800	4500	**≤32**	12	81,0	3	1144	59	3800	6000	12000
60,00	**PHQ932_0600 ME**	2800	4500	**>32≤38**	14	81,0	3	1144	59	3800	6000	12000
60,00	**PHQ932_0600 ME**	2800	4500	**>38≤48**	18	81,0	3	1144	59	3800	6000	12000
60,00	**PHQ932_0600 MEL**	2800	4500	**>48≤55**	50	85,6	3	1148	59	3800	6000	12000
PHQ933 (M_{2BMAX}=6000 Nm)												
72,00	**PHQ933_0720 ME**	2200	4500	**≤24**	9,4	85,1	3	1197	63	3800	6000	12000
72,00	**PHQ933_0720 ME**	2200	4500	**>24≤32**	10	85,1	3	1198	63	3800	6000	12000
72,00	**PHQ933_0720 ME**	2200	4500	**>32≤38**	13	85,1	3	1198	63	3800	6000	12000
72,00	**PHQ933_0720 MEL**	2200	4500	**>38≤48**	23	88,9	3	1202	63	3800	6000	12000
96,00	**PHQ933_0960 ME**	2500	4500	**≤24**	7,6	85,1	3	1202	63	3800	6000	12000
96,00	**PHQ933_0960 ME**	2500	4500	**>24≤32**	8,6	85,1	3	1203	63	3800	6000	12000
96,00	**PHQ933_0960 ME**	2500	4500	**>32≤38**	11	85,1	3	1203	63	3800	6000	12000
96,00	**PHQ933_0960 MEL**	2500	4500	**>38≤48**	21	88,9	3	1205	63	3800	6000	12000
120,0	**PHQ933_1200 ME**	2500	4500	**≤24**	7,2	85,1	3	1199	63	3800	6000	12000
120,0	**PHQ933_1200 ME**	2500	4500	**>24≤32**	8,2	85,1	3	1200	63	3800	6000	12000
120,0	**PHQ933_1200 ME**	2500	4500	**>32≤38**	11	85,1	3	1200	63	3800	6000	12000
120,0	**PHQ933_1200 MEL**	2500	4500	**>38≤48**	21	88,9	3	1201	63	3800	6000	12000
150,0	**PHQ933_1500 ME**	3000	5500	**≤24**	5,5	85,1	3	1200	61	3800	6000	12000
150,0	**PHQ933_1500 ME**	3000	5500	**>24≤32**	6,5	85,1	3	1200	61	3800	6000	12000
150,0	**PHQ933_1500 ME**	3000	5500	**>32≤38**	9,0	85,1	3	1200	61	3800	6000	12000
150,0	**PHQ933_1500 MEL**	3000	5500	**>38≤48**	19	88,9	3	1201	61	3800	6000	12000
168,0	**PHQ933_1680 ME**	3300	6000	**≤24**	4,3	85,1	3	1202	60	3800	6000	12000
168,0	**PHQ933_1680 ME**	3300	6000	**>24≤32**	6,2	85,1	3	1202	60	3800	6000	12000
168,0	**PHQ933_1680 ME**	3300	6000	**>32≤38**	6,2	85,1	3	1202	60	3800	6000	12000
168,0	**PHQ933_1680 MEL**	3300	6000	**>38≤48**	17	88,9	3	1203	60	3800	6000	12000
210,0	**PHQ933_2100 ME**	3300	6000	**≤24**	4,2	85,1	3	1199	60	3800	6000	12000
210,0	**PHQ933_2100 ME**	3300	6000	**>24≤32**	6,0	85,1	3	1199	60	3800	6000	12000
210,0	**PHQ933_2100 ME**	3300	6000	**>32≤38**	6,0	85,1	3	1199	60	3800	6000	12000
210,0	**PHQ933_2100 MEL**	3300	6000	**>38≤48**	17	88,9	3	1200	60	3800	6000	12000
240,0	**PHQ933_2400 ME**	3300	6000	**≤24**	3,6	85,1	3	1197	58	3800	6000	12000
240,0	**PHQ933_2400 ME**	3300	6000	**>24≤32**	5,4	85,1	3	1197	58	3800	6000	12000
240,0	**PHQ933_2400 ME**	3300	6000	**>32≤38**	5,4	85,1	3	1197	58	3800	6000	12000
240,0	**PHQ933_2400 MEL**	3300	6000	**>38≤48**	17	88,9	3	1197	58	3800	6000	12000
300,0	**PHQ933_3000 ME**	3300	6000	**≤24**	3,5	85,1	3	1196	58	3800	6000	12000
300,0	**PHQ933_3000 ME**	3300	6000	**>24≤32**	5,4	85,1	3	1196	58	3800	6000	12000
300,0	**PHQ933_3000 ME**	3300	6000	**>32≤38**	5,4	85,1	3	1196	58	3800	6000	12000
300,0	**PHQ933_3000 MEL**	3300	6000	**>38≤48**	17	88,9	3	1196	58	3800	6000	12000
420,0	**PHQ933_4200 ME**	3300	6000	**≤24**	3,5	85,1	3	1184	58	3800	6000	12000
420,0	**PHQ933_4200 ME**	3300	6000	**>24≤32**	5,3	85,1	3	1184	58	3800	6000	12000
420,0	**PHQ933_4200 ME**	3300	6000	**>32≤38**	5,3	85,1	3	1184	58	3800	6000	12000

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Please take notice of the indications on page PHQ6! ***¡Por favor observe las indicaciones en la página PHQ6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQ6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ933 (M_{2BMAX}=6000 Nm)												
420,0	**PHQ933_4200 MEL**	3300	6000	**>38≤48**	17	88,9	3	1184	58	3800	6000	12000
600,0	**PHQ933_6000 ME**	3300	6000	**≤24**	3,5	85,1	3	1144	58	3800	6000	12000
600,0	**PHQ933_6000 ME**	3300	6000	**>24≤32**	5,3	85,1	3	1144	58	3800	6000	12000
600,0	**PHQ933_6000 ME**	3300	6000	**>32≤38**	5,3	85,1	3	1144	58	3800	6000	12000
600,0	**PHQ933_6000 MEL**	3300	6000	**>38≤48**	17	88,9	3	1144	58	3800	6000	12000
PHQ1032 (M_{2BMAX}=10000 Nm)												
24,00	**PHQ1032_0240 ME**	2000	3000	**≤48**	91	118,2	3	2062	65	6500	10000	20000
24,00	**PHQ1032_0240 ME**	2000	3000	**>48≤55**	96	118,2	3	2062	65	6500	10000	20000
24,00	**PHQ1032_0240 ME**	2000	3000	**>55≤60**	100	118,2	3	2062	65	6500	10000	20000
30,00	**PHQ1032_0300 ME**	2200	3500	**≤48**	72	118,2	3	2058	63	6500	10000	20000
30,00	**PHQ1032_0300 ME**	2200	3500	**>48≤55**	77	118,2	3	2058	63	6500	10000	20000
30,00	**PHQ1032_0300 ME**	2200	3500	**>55≤60**	82	118,2	3	2058	63	6500	10000	20000
42,00	**PHQ1032_0420 ME**	2500	4000	**≤48**	57	118,2	3	2040	62	6500	10000	20000
42,00	**PHQ1032_0420 ME**	2500	4000	**>48≤55**	62	118,2	3	2040	62	6500	10000	20000
42,00	**PHQ1032_0420 ME**	2500	4000	**>55≤60**	67	118,2	3	2040	62	6500	10000	20000
60,00	**PHQ1032_0600 ME**	2500	4000	**≤48**	50	118,2	3	1970	60	6500	10000	20000
60,00	**PHQ1032_0600 ME**	2500	4000	**>48≤55**	55	118,2	3	1970	60	6500	10000	20000
60,00	**PHQ1032_0600 ME**	2500	4000	**>55≤60**	60	118,2	3	1970	60	6500	10000	20000
PHQ1033 (M_{2BMAX}=10000 Nm)												
96,00	**PHQ1033_0960 ME**	2200	3500	**≤32**	28	128,1	3	2061	64	6500	10000	20000
96,00	**PHQ1033_0960 ME**	2200	3500	**>32≤38**	32	128,1	3	2062	64	6500	10000	20000
96,00	**PHQ1033_0960 ME**	2200	3500	**>38≤48**	36	128,1	3	2062	64	6500	10000	20000
96,00	**PHQ1033_0960 MEL**	2200	3500	**>48≤55**	67	132,7	3	2067	64	6500	10000	20000
96,00	**PHQ1033_0960 MEL**	2200	3500	**>55≤60**	72	132,7	3	2067	64	6500	10000	20000
120,0	**PHQ1033_1200 ME**	2200	3500	**≤32**	27	128,1	3	2057	64	6500	10000	20000
120,0	**PHQ1033_1200 ME**	2200	3500	**>32≤38**	31	128,1	3	2058	64	6500	10000	20000
120,0	**PHQ1033_1200 ME**	2200	3500	**>38≤48**	35	128,1	3	2058	64	6500	10000	20000
120,0	**PHQ1033_1200 MEL**	2200	3500	**>48≤55**	66	132,7	3	2061	64	6500	10000	20000
120,0	**PHQ1033_1200 MEL**	2200	3500	**>55≤60**	71	132,7	3	2061	64	6500	10000	20000
150,0	**PHQ1033_1500 ME**	2500	4000	**≤32**	20	128,1	3	2058	62	6500	10000	20000
150,0	**PHQ1033_1500 ME**	2500	4000	**>32≤38**	24	128,1	3	2058	62	6500	10000	20000
150,0	**PHQ1033_1500 ME**	2500	4000	**>38≤48**	28	128,1	3	2058	62	6500	10000	20000
150,0	**PHQ1033_1500 MEL**	2500	4000	**>48≤55**	59	132,7	3	2060	62	6500	10000	20000
150,0	**PHQ1033_1500 MEL**	2500	4000	**>55≤60**	64	132,7	3	2060	62	6500	10000	20000
168,0	**PHQ1033_1680 ME**	2800	4500	**≤32**	15	128,1	3	2062	61	6500	10000	20000
168,0	**PHQ1033_1680 ME**	2800	4500	**>32≤38**	18	128,1	3	2062	61	6500	10000	20000
168,0	**PHQ1033_1680 ME**	2800	4500	**>38≤48**	21	128,1	3	2062	61	6500	10000	20000
168,0	**PHQ1033_1680 MEL**	2800	4500	**>48≤55**	53	132,7	3	2063	61	6500	10000	20000
210,0	**PHQ1033_2100 ME**	2800	4500	**≤32**	15	128,1	3	2058	61	6500	10000	20000
210,0	**PHQ1033_2100 ME**	2800	4500	**>32≤38**	17	128,1	3	2058	61	6500	10000	20000
210,0	**PHQ1033_2100 ME**	2800	4500	**>38≤48**	20	128,1	3	2058	61	6500	10000	20000
210,0	**PHQ1033_2100 MEL**	2800	4500	**>48≤55**	53	132,7	3	2059	61	6500	10000	20000
240,0	**PHQ1033_2400 ME**	2800	4500	**≤32**	12	128,1	3	2054	59	6500	10000	20000
240,0	**PHQ1033_2400 ME**	2800	4500	**>32≤38**	15	128,1	3	2054	59	6500	10000	20000
240,0	**PHQ1033_2400 ME**	2800	4500	**>38≤48**	18	128,1	3	2054	59	6500	10000	20000
240,0	**PHQ1033_2400 MEL**	2800	4500	**>48≤55**	50	132,7	3	2055	59	6500	10000	20000
300,0	**PHQ1033_3000 ME**	2800	4500	**≤32**	12	128,1	3	2053	59	6500	10000	20000
300,0	**PHQ1033_3000 ME**	2800	4500	**>32≤38**	14	128,1	3	2053	59	6500	10000	20000
300,0	**PHQ1033_3000 ME**	2800	4500	**>38≤48**	18	128,1	3	2053	59	6500	10000	20000
300,0	**PHQ1033_3000 MEL**	2800	4500	**>48≤55**	50	132,7	3	2054	59	6500	10000	20000
420,0	**PHQ1033_4200 ME**	2800	4500	**≤32**	12	128,1	3	2036	62	6500	10000	20000
420,0	**PHQ1033_4200 ME**	2800	4500	**>32≤38**	14	128,1	3	2036	62	6500	10000	20000
420,0	**PHQ1033_4200 ME**	2800	4500	**>38≤48**	18	128,1	3	2036	62	6500	10000	20000
420,0	**PHQ1033_4200 MEL**	2800	4500	**>48≤55**	50	132,7	3	2036	62	6500	10000	20000
600,0	**PHQ1033_6000 ME**	2800	4500	**≤32**	12	128,1	3	1969	59	6500	10000	20000
600,0	**PHQ1033_6000 ME**	2800	4500	**>32≤38**	14	128,1	3	1969	59	6500	10000	20000

Planetary Gear Units **PHQ**
Reductores planetarios ***PHQ***
Riduttori planetari **PHQ**

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Please take notice of the indications on page PHQ6! ***¡Por favor observe las indicaciones en la página PHQ6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQ6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ1033 (M_{2BMAX}=10000 Nm)												
600,0	**PHQ1033_6000 ME**	2800	4500	**>38≤48**	17	128,1	3	1969	59	6500	10000	20000
600,0	**PHQ1033_6000 MEL**	2800	4500	**>48≤55**	50	132,7	3	1969	59	6500	10000	20000
PHQ1132 (M_{2BMAX}=22000 Nm)												
24,00	**PHQ1132_0240 ME**	1800	3800	**>48≤55**	170	242,2	3	3533	68	13000	22000	29550
24,00	**PHQ1132_0240 ME**	1800	3800	**>55≤60**	175	242,2	3	3533	68	13000	22000	32210
30,00	**PHQ1132_0300 ME**	2000	3300	**>48≤55**	123	242,2	3	3538	66	13000	22000	36940
30,00	**PHQ1132_0300 ME**	2000	3300	**>55≤60**	128	242,2	3	3538	66	13000	22000	40000
42,00	**PHQ1132_0420 ME**	2300	3800	**>48≤55**	84	242,2	3	3515	65	13000	22000	40000
42,00	**PHQ1132_0420 ME**	2300	3800	**>55≤60**	89	242,2	3	3515	65	13000	22000	40000
60,00	**PHQ1132_0600 ME**	2300	2800	**>48≤55**	66	242,2	3	3460	63	13000	22000	40000
60,00	**PHQ1132_0600 ME**	2300	2800	**>55≤60**	71	242,2	3	3460	63	13000	22000	40000
PHQ1133 (M_{2BMAX}=22000 Nm)												
96,00	**PHQ1133_0960 ME**	2200	3500	**≤32**	33	237,6	3	3512	64	13000	22000	38790
96,00	**PHQ1133_0960 ME**	2200	3500	**>32≤38**	37	237,6	3	3515	64	13000	22000	40000
96,00	**PHQ1133_0960 ME**	2200	3500	**>38≤48**	41	237,6	3	3515	64	13000	22000	40000
96,00	**PHQ1133_0960 MEL**	2200	3500	**>48≤55**	72	242,2	3	3528	64	13000	22000	40000
96,00	**PHQ1133_0960 MEL**	2200	3500	**>55≤60**	77	242,2	3	3528	64	13000	22000	40000
120,0	**PHQ1133_1200 ME**	2200	3500	**≤32**	30	237,6	3	3500	62	13000	22000	40000
120,0	**PHQ1133_1200 ME**	2200	3500	**>32≤38**	34	237,6	3	3502	62	13000	22000	40000
120,0	**PHQ1133_1200 ME**	2200	3500	**>38≤48**	37	237,6	3	3502	62	13000	22000	40000
120,0	**PHQ1133_1200 MEL**	2200	3500	**>48≤55**	69	242,2	3	3511	62	13000	22000	40000
120,0	**PHQ1133_1200 MEL**	2200	3500	**>55≤60**	74	242,2	3	3511	62	13000	22000	40000
150,0	**PHQ1133_1500 ME**	2500	4000	**≤32**	22	237,6	3	3501	62	13000	22000	40000
150,0	**PHQ1133_1500 ME**	2500	4000	**>32≤38**	26	237,6	3	3503	62	13000	22000	40000
150,0	**PHQ1133_1500 ME**	2500	4000	**>38≤48**	30	237,6	3	3503	62	13000	22000	40000
150,0	**PHQ1133_1500 MEL**	2500	4000	**>48≤55**	61	242,2	3	3508	62	13000	22000	40000
150,0	**PHQ1133_1500 MEL**	2500	4000	**>55≤60**	66	242,2	3	3508	62	13000	22000	40000
168,0	**PHQ1133_1680 ME**	2800	4500	**≤32**	17	237,6	3	3513	61	13000	22000	40000
168,0	**PHQ1133_1680 ME**	2800	4500	**>32≤38**	19	237,6	3	3513	61	13000	22000	40000
168,0	**PHQ1133_1680 ME**	2800	4500	**>38≤48**	22	237,6	3	3513	61	13000	22000	40000
168,0	**PHQ1133_1680 MEL**	2800	4500	**>48≤55**	55	242,2	3	3518	61	13000	22000	40000
210,0	**PHQ1133_2100 ME**	2800	4500	**≤32**	16	237,6	3	3502	61	13000	22000	40000
210,0	**PHQ1133_2100 ME**	2800	4500	**>32≤38**	18	237,6	3	3502	61	13000	22000	40000
210,0	**PHQ1133_2100 ME**	2800	4500	**>38≤48**	21	237,6	3	3502	61	13000	22000	40000
210,0	**PHQ1133_2100 MEL**	2800	4500	**>48≤55**	54	242,2	3	3505	61	13000	22000	40000
240,0	**PHQ1133_2400 ME**	2800	4500	**≤32**	13	237,6	3	3494	59	13000	22000	40000
240,0	**PHQ1133_2400 ME**	2800	4500	**>32≤38**	15	237,6	3	3494	59	13000	22000	40000
240,0	**PHQ1133_2400 ME**	2800	4500	**>38≤48**	19	237,6	3	3494	59	13000	22000	40000
240,0	**PHQ1133_2400 MEL**	2800	4500	**>48≤55**	51	242,2	3	3496	59	13000	22000	40000
300,0	**PHQ1133_3000 ME**	2800	4500	**≤32**	13	237,6	3	3489	59	13000	22000	40000
300,0	**PHQ1133_3000 ME**	2800	4500	**>32≤38**	15	237,6	3	3489	59	13000	22000	40000
300,0	**PHQ1133_3000 ME**	2800	4500	**>38≤48**	18	237,6	3	3489	59	13000	22000	40000
300,0	**PHQ1133_3000 MEL**	2800	4500	**>48≤55**	51	242,2	3	3490	59	13000	22000	40000
PHQ1232 (M_{2BMAX}=43000 Nm)												
24,00	**PHQ1232_0240 ME**	1200	3000	**>55≤60**	537	438,6	3	6248	72	25000	43000	53840
42,00	**PHQ1232_0420 ME**	1700	3500	**>55≤60**	371	438,6	3	6236	69	25000	43000	80000

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Please take notice of the indications on page PHQ6! ***¡Por favor observe las indicaciones en la página PHQ6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQ6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ1233 (M_{2BMAX}=43000 Nm)												
96,00	**PHQ1233_0960 ME**	2000	3000	**≤48**	106	451,7	3	6271	65	25000	43000	80000
96,00	**PHQ1233_0960 ME**	2000	3000	**>48≤55**	111	451,7	3	6271	65	25000	43000	80000
96,00	**PHQ1233_0960 ME**	2000	3000	**>55≤60**	116	451,7	3	6271	65	25000	43000	80000
120,0	**PHQ1233_1200 ME**	2200	3500	**≤48**	82	451,7	3	6269	63	25000	43000	80000
120,0	**PHQ1233_1200 ME**	2200	3500	**>48≤55**	87	451,7	3	6269	63	25000	43000	80000
120,0	**PHQ1233_1200 ME**	2200	3500	**>55≤60**	92	451,7	3	6269	63	25000	43000	80000
168,0	**PHQ1233_1680 ME**	2500	4000	**≤48**	63	451,7	3	6258	62	25000	43000	80000
168,0	**PHQ1233_1680 ME**	2500	4000	**>48≤55**	68	451,7	3	6258	62	25000	43000	80000
168,0	**PHQ1233_1680 ME**	2500	4000	**>55≤60**	72	451,7	3	6258	62	25000	43000	80000
210,0	**PHQ1233_2100 ME**	2200	3500	**≤48**	74	451,7	3	6153	63	25000	43000	80000
210,0	**PHQ1233_2100 ME**	2200	3500	**>48≤55**	79	451,7	3	6153	63	25000	43000	80000
210,0	**PHQ1233_2100 ME**	2200	3500	**>55≤60**	83	451,7	3	6153	63	25000	43000	80000
240,0	**PHQ1233_2400 ME**	2500	4000	**≤48**	53	451,7	3	6216	60	25000	43000	80000
240,0	**PHQ1233_2400 ME**	2500	4000	**>48≤55**	58	451,7	3	6216	60	25000	43000	80000
240,0	**PHQ1233_2400 ME**	2500	4000	**>55≤60**	62	451,7	3	6216	60	25000	43000	80000
294,0	**PHQ1233_2940 ME**	2500	4000	**≤48**	58	451,7	3	6149	62	25000	43000	80000
294,0	**PHQ1233_2940 ME**	2500	4000	**>48≤55**	63	451,7	3	6149	62	25000	43000	80000
294,0	**PHQ1233_2940 ME**	2500	4000	**>55≤60**	68	451,7	3	6149	62	25000	43000	80000
420,0	**PHQ1233_4200 ME**	2500	4000	**≤48**	51	451,7	3	6136	60	25000	43000	80000
420,0	**PHQ1233_4200 ME**	2500	4000	**>48≤55**	56	451,7	3	6136	60	25000	43000	80000
420,0	**PHQ1233_4200 ME**	2500	4000	**>55≤60**	60	451,7	3	6136	60	25000	43000	80000

Dimension drawings
ServoFit® PHQ
Planetary Gear Units

Dibujos acotados
Reductores planetarios
ServoFit® PHQ

Disegni quotati
ServoFit® Riduttori
planetari **PHQ**

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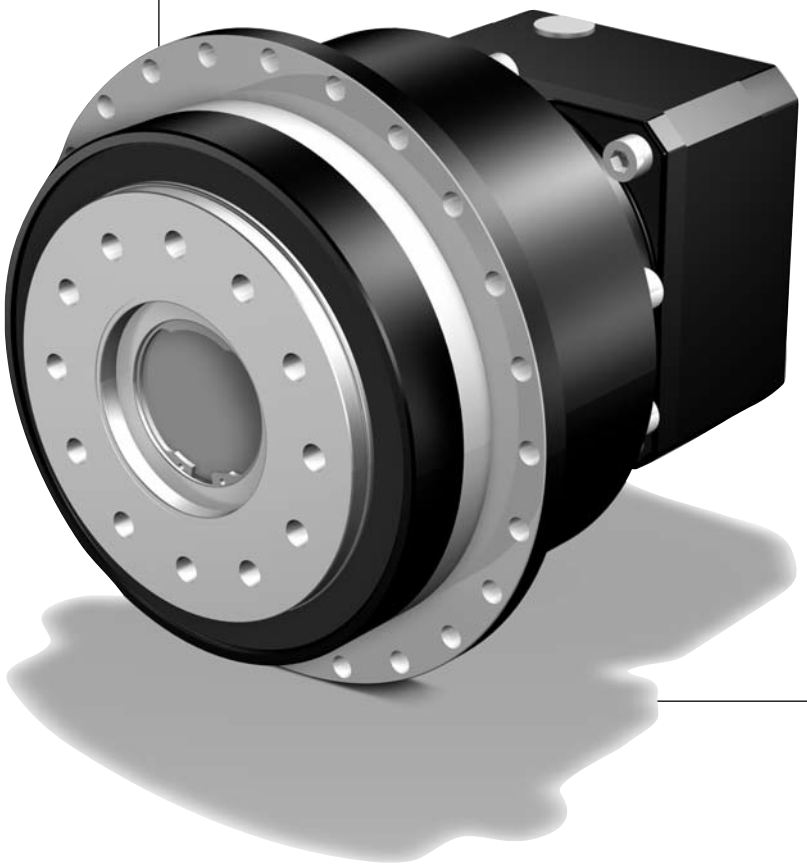

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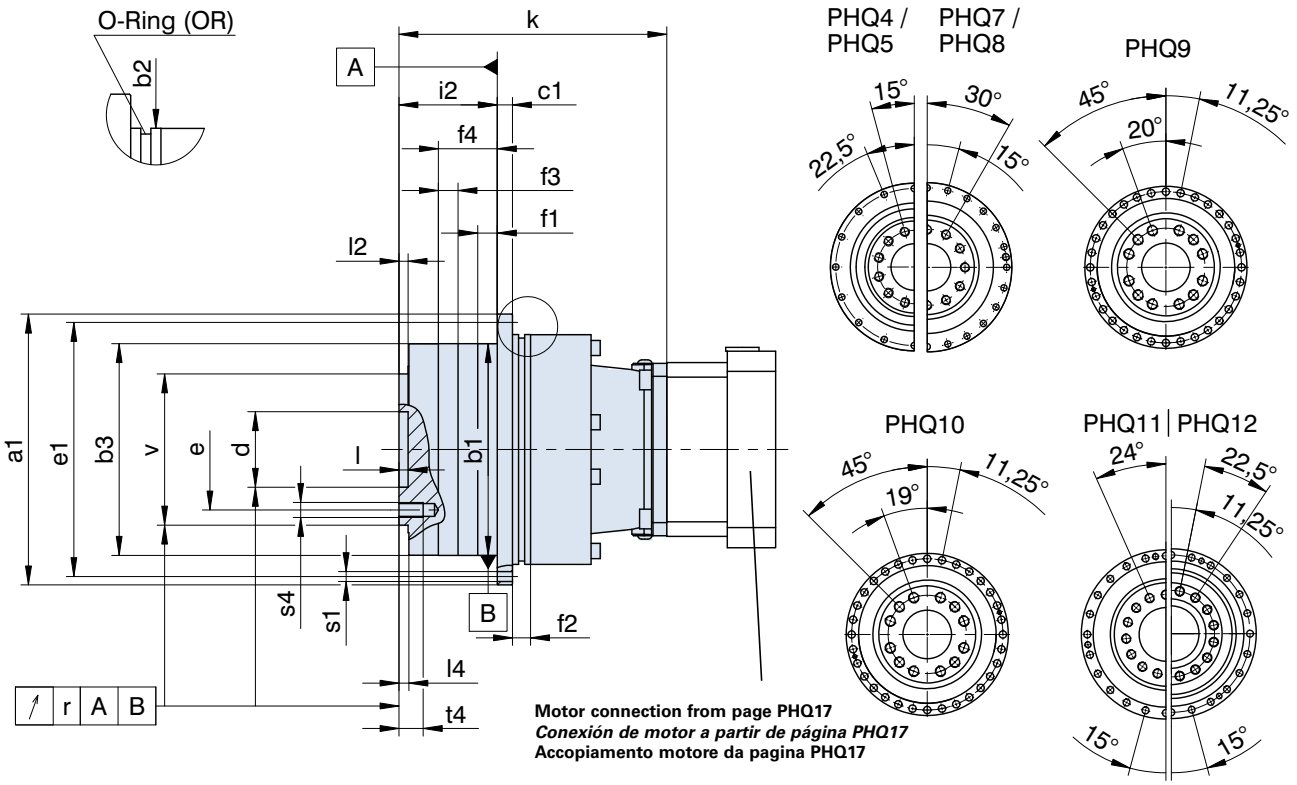
PHQ4_ME - PHQ12_ME



Motor connection from page PHQ17
Conexión de motor a partir de página PHQ17
Accopiamento motore da pagina PHQ17

Typ	øa1	øb1	øb2	øb3	c1	ød	øe	øe1	f1	f2	f3
PHQ421	118h7	90h7	95h7	-	7	31,5H6	50	109	10	10	-
PHQ422	118h7	90h7	95h7	-	7	31,5H6	50	109	10	10	-
PHQ521	145h7	110h7	120h7	-	8	40,0H6	63	135	10	12	-
PHQ522	145h7	110h7	120h7	-	8	40,0H6	63	135	10	12	-
PHQ721	179h7	140h7	152h7	-	10	50,0H6	80	168	12	12	-
PHQ722	179h7	140h7	152h7	-	10	50,0H6	80	168	12	12	-
PHQ723	179h7	140h7	152h7	-	10	50,0H6	80	168	12	12	-
PHQ822	247h7	200h7	212h7	-	12	80,0H6	125	233	15	15	-
PHQ823	247h7	200h7	212h7	-	12	80,0H6	125	233	15	15	-
PHQ932	300h7	255h7	255h7	-	18	90,0H6	145	280	20	33	-
PHQ933	300h7	255h7	255h7	-	18	90,0H6	145	280	20	33	-
PHQ1032	330h7	285h7	-	-	20	95,0H6	166	310	20	20	-
PHQ1033	330h7	285h7	-	-	20	95,0H6	166	310	20	20	-
PHQ1132	425	365h6	-	365g6	32	120,0H6	200	395	30	30	30
PHQ1133	425	365h6	-	365g6	32	120,0H6	200	395	30	30	30
PHQ1232	550	470h6	-	470g6	45	180,0H7	280	510	30	-	30
PHQ1233	550	470h6	-	470g6	45	180,0H7	280	510	30	-	30

Typ	f4	i2	k	l	l2	l4	OR	r	øs1	s4	t4	øv
PHQ421	-	30,0	66,0	6	6	6,5	90x3	0,020	5,5	M6	11	63h7
PHQ422	-	30,0	113,0	6	6	6,5	90x3	0,020	5,5	M6	11	63h7
PHQ521	-	29,0	70,0	6	6	6,5	110x3	0,020	5,5	M8	11	80h7
PHQ522	-	29,0	124,5	6	6	6,5	110x3	0,020	5,5	M8	11	80h7
PHQ721	-	38,0	88,0	6	6	6,5	145x3	0,025	6,6	M10	16	100h7
PHQ722	-	38,0	150,0	6	6	6,5	145x3	0,025	6,6	M10	16	100h7
PHQ723	-	38,0	204,5	6	6	6,5	145x3	0,025	6,6	M10	16	100h7
PHQ822	-	50,0	201,0	8	8	8,5	200x5	0,030	9,0	M12	17	160h7
PHQ823	-	50,0	263,0	8	8	8,5	200x5	0,030	9,0	M12	17	160h7
PHQ932	-	66,0	290,5	12	11	12,0	238x5	0,030	13,5	M20	28	180h7
PHQ933	-	66,0	367,0	12	11	12,0	238x5	0,030	13,5	M20	28	180h7
PHQ1032	-	75,0	350,0	10	15	15,0	270x6	0,040	13,5	M24	35	200h7
PHQ1033	-	75,0	444,0	10	15	15,0	270x6	0,040	13,5	M24	35	200h7
PHQ1132	120	190,0	342,0	10	10	10,0	-	0,040	17,5	M24	36	260h7
PHQ1133	120	190,0	494,5	10	10	10,0	-	0,040	17,5	M24	36	260h7
PHQ1232	145	206,5	434,5	10	11	11,0	-	0,040	22,0	M30	48	330h7
PHQ1233	145	206,5	629,0	10	11	11,0	-	0,040	22,0	M30	48	330h7

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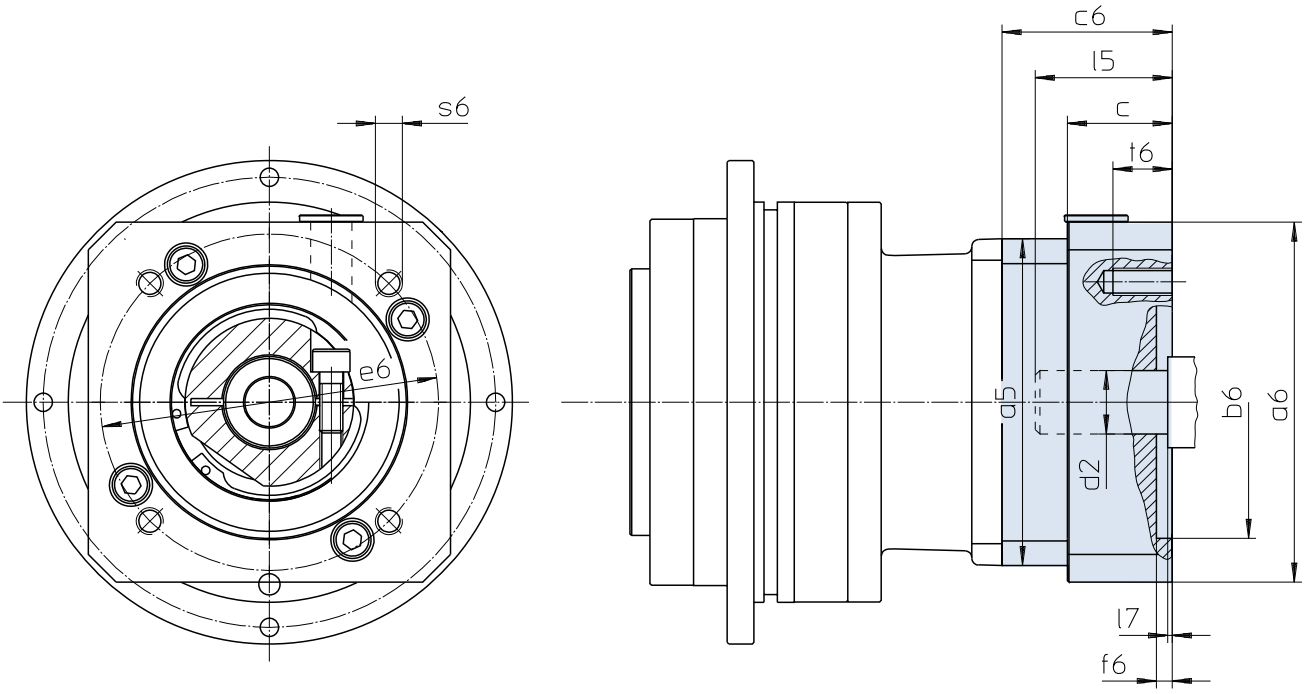
PHQ421_ME - PHQ723_ME



Further motor connection dimensions on request. ***Otras medidas de conexión a consultar.*** **Altre misure di accopiamentomotore su richiesta.**

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHQ421	50,0H7	95	24	42	95	100	21	54,0	2,5	3,0	M6	13
PHQ421	80,0H7	100	24	42	95	100	21	54,0	4,0	3,0	M6	13
PHQ421	95,0H7	115	24	51	95	100	30	63,0	4,0	12,0	M8	16
PHQ421	95,0H7	115	24	42	95	100	21	54,0	4,0	3,0	M8	21
PHQ421	95,0H7	130	24	42	95	115	21	54,0	4,0	3,0	M8	21
PHQ421	110,0H7	130	24	51	95	115	30	63,0	4,0	12,0	M8	16
PHQ421	110,0H7	145	24	59	95	130	38	71,0	7,0	20,0	M8	16
PHQ421	130,0H7	165	24	51	95	140	30	63,0	5,0	12,0	M10	20
PHQ422	40,0H7	63	19	40	72	75	18	51,5	3,0	3,0	M5	11
PHQ422	50,0H7	70	19	40	72	75	18	51,5	3,0	3,0	M4	9
PHQ422	50,0H7	95	19	40	72	80	18	51,5	3,0	3,0	M6	13
PHQ422	60,0H7	75	19	40	75	72	-	51,5	3,5	3,0	M5	11
PHQ422	60,0H7	90	19	40	72	75	18	51,5	3,5	3,0	M5	9
PHQ422	70,0H7	90	19	40	72	80	18	51,5	3,5	3,0	M5	9
PHQ422	80,0H7	100	19	40	90	90	-	51,5	3,5	3,0	M6	13
PHQ422	95,0H7	115	19	40	72	100	18	51,5	4,0	3,0	M8	18
PHQ422	95,0H7	130	19	40	72	115	18	51,5	4,0	3,0	M8	18
PHQ521	80,0H7	100	32	50	120	115	24	64,0	4,0	3,5	M6	13
PHQ521	95,0H7	115	32	50	120	115	24	64,0	4,0	3,5	M8	16
PHQ521	95,0H7	130	32	50	120	115	24	64,0	4,0	3,5	M8	16
PHQ521	110,0H7	130	32	50	120	115	24	64,0	4,0	3,5	M8	16
PHQ521	110,0H7	145	32	63	120	130	37	77,0	7,0	16,5	M8	14
PHQ521	110,0H7	145	32	50	120	140	42	82,0	7,0	3,5	M8	16
PHQ521	130,0H7	165	32	58	120	140	32	72,0	5,0	11,5	M10	20
PHQ521	130,0H7	165	32	50	120	140	24	64,0	5,0	3,5	M10	24
PHQ522/PHQ723	50,0H7	70	24	42	98	100	21	56,0	4,0	3,0	M4	10
PHQ522/PHQ723	50,0H7	95	24	42	98	100	21	56,0	2,5	3,0	M6	13
PHQ522/PHQ723	60,0H7	75	24	42	98	100	21	56,0	3,5	3,0	M5	9
PHQ522/PHQ723	60,0H7	75	24	48	100	100	28	56,0	3,5	3,0	M5	11
PHQ522/PHQ723	80,0H7	100	24	42	100	98	-	56,0	4,0	3,0	M6	13
PHQ522/PHQ723	95,0H7	115	24	42	100	98	-	56,0	4,0	3,0	M8	16
PHQ522/PHQ723	95,0H7	115	24	51	98	100	30	65,0	4,0	12,0	M8	16
PHQ522/PHQ723	95,0H7	130	24	42	98	115	21	56,0	4,0	3,0	M8	16
PHQ522/PHQ723	95,0H7	130	24	51	98	115	30	65,0	4,0	12,0	M8	16
PHQ522/PHQ723	110,0H7	130	24	51	98	115	30	65,0	4,0	12,0	M8	16
PHQ522/PHQ723	110,0H7	145	24	59	98	130	38	73,0	7,0	20,0	M8	16
PHQ522/PHQ723	130,0H7	165	24	51	98	140	30	65,0	7,0	12,0	M10	20

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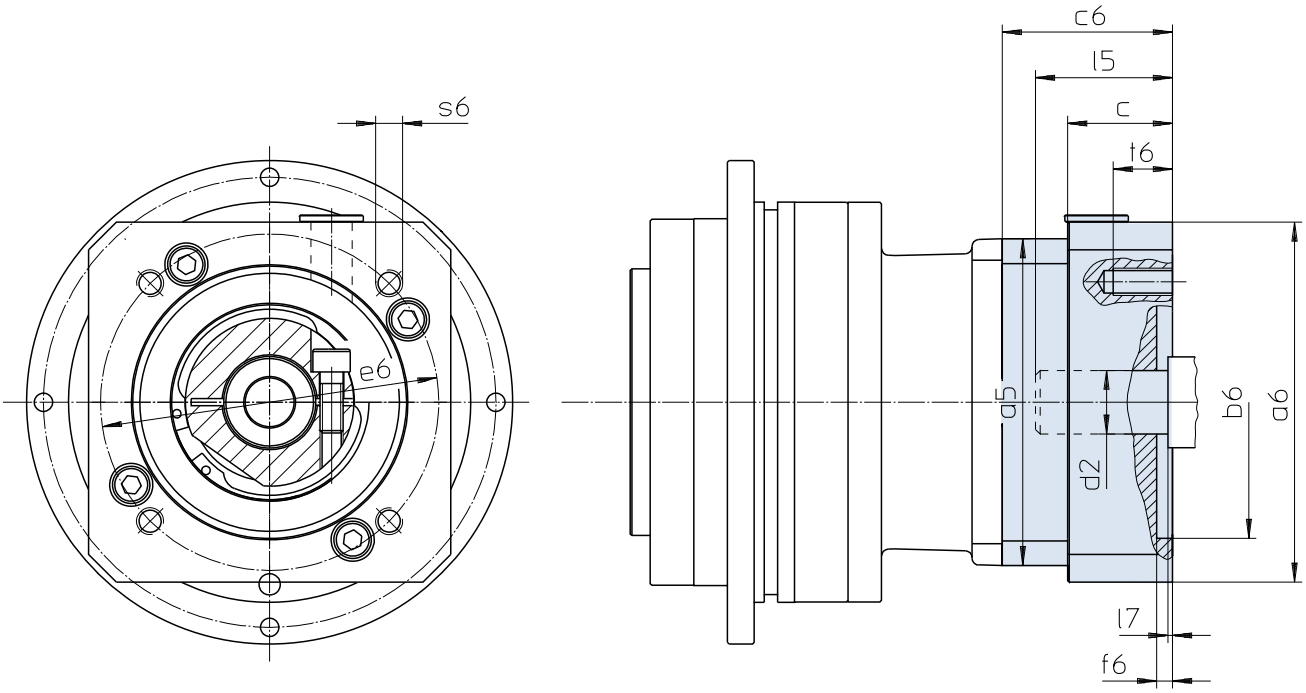
PHQ721_ME - PHQ1233_ME



Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamentomotore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHQ721	110,0H7	130	38	61	152	145	26	76	5,0	4,5	M8	14
PHQ721	110,0H7	145	38	72	152	145	37	87	5,0	15,5	M8	16
PHQ721	110,0H7	165	38	61	152	145	26	76	5,0	4,5	M10	26
PHQ721	114,3H7	200	38	80	152	180	45	95	5,0	23,5	M12	25
PHQ721	130,0H7	165	38	61	152	145	26	76	5,0	4,5	M10	26
PHQ721	130,0H7	215	38	61	152	190	26	76	5,0	4,5	M12	26
PHQ721	180,0H7	215	38	80	152	190	45	95	5,0	23,5	M12	25
PHQ722/PHQ823	80,0H7	100	32	50	115	120	24	64	4,0	3,5	M6	13
PHQ722/PHQ823	95,0H7	115	32	50	115	115	-	64	4,0	3,5	M8	16
PHQ722/PHQ823	95,0H7	130	32	50	115	115	-	64	4,0	3,5	M8	16
PHQ722/PHQ823	110,0H7	130	32	50	115	115	-	64	4,0	3,5	M8	16
PHQ722/PHQ823	110,0H7	145	32	58	115	140	32	72	6,5	11,5	M8	16
PHQ722/PHQ823	110,0H7	145	32	68	115	140	42	82	7,0	21,5	M8	16
PHQ722/PHQ823	110,0H7	165	32	50	115	140	24	64	5,0	3,5	M10	24
PHQ722/PHQ823	130,0H7	165	32	58	115	140	32	72	5,0	11,5	M10	20
PHQ822/PHQ933	110,0H7	130	38	61	145	145	26	76	5,0	4,5	M8	14
PHQ822/PHQ933	110,0H7	145	38	72	145	145	37	87	5,0	15,5	M8	16
PHQ822/PHQ933	110,0H7	165	38	61	145	145	26	76	5,0	4,5	M10	26
PHQ822/PHQ933	114,3H7	200	38	80	145	180	45	95	5,0	23,5	M12	25
PHQ822/PHQ933	130,0H7	165	38	61	145	145	45	-	5,0	4,5	M10	18
PHQ822/PHQ933	130,0H7	165	38	61	145	145	-	76	5,0	4,5	M10	20
PHQ822/PHQ933	130,0H7	215	38	61	145	190	26	76	5,0	4,5	M12	26
PHQ822/PHQ933	180,0H7	215	38	61	145	190	26	76	5,0	4,5	M12	26
PHQ822/PHQ933	180,0H7	215	38	80	145	190	45	95	5,0	23,5	M12	25
PHQ932/PHQ1033/PHQ1133	110,0H7	165	48	81	190	190	34	93	5,0	4,5	M10	18
PHQ932/PHQ1033/PHQ1133	114,3H7	200	48	81	190	190	34	93	4,0	4,5	M12	34
PHQ932/PHQ1033/PHQ1133	130,0H7	165	48	81	190	190	34	93	5,0	4,5	M10	18
PHQ932/PHQ1033/PHQ1133	130,0H7	215	48	81	190	190	34	93	5,0	4,5	M12	34
PHQ932/PHQ1033/PHQ1133	180,0H7	215	48	82	190	190	35	94	5,0	5,5	M12	35
PHQ932/PHQ1033/PHQ1133	180,0H7	215	48	81	190	190	-	93	5,0	4,5	M12	25
PHQ932/PHQ1033/PHQ1133	250,0H7	300	48	85	190	260	38	97	6,0	8,5	M16	38
PHQ1032/PHQ1233	180,0H7	215	60	85	225	190	43	-	6,0	5,0	M12	25
PHQ1032/PHQ1233	250,0H7	300	60	111	225	260	69	134	6,0	31,0	M16	32
PHQ1032/PHQ1233	250,0H7	300	60	85	225	260	43	108	6,0	5,0	M16	32
PHQ1032/PHQ1233	300,0H7	350	60	111	225	314	69	134	6,0	31,0	M16	34
PHQ1132	250,0H7	300	60	110	310	315	-	131	6,0	14,5	M16	34
PHQ1232	300,0H7	350	60	141	345	355	-	139	6,0	14,0	M16	34
PHQ1232	350,0H7	400	65	141	345	400	85	139	6,0	14,0	M16	34

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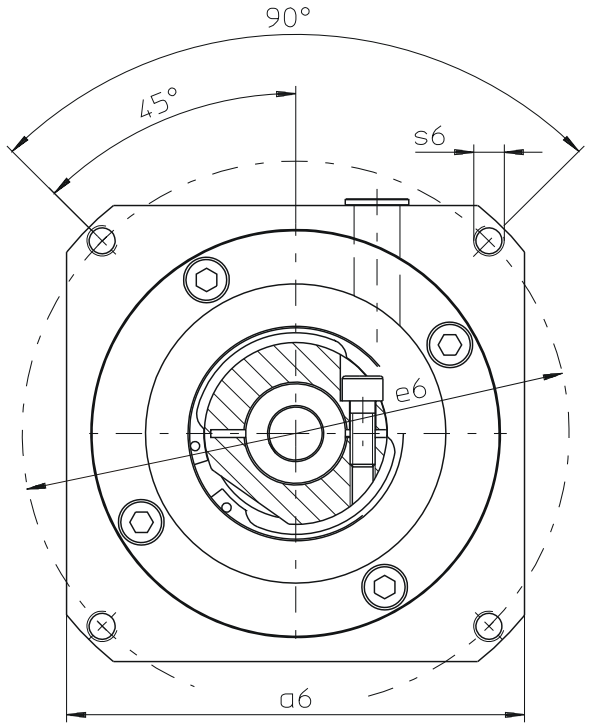
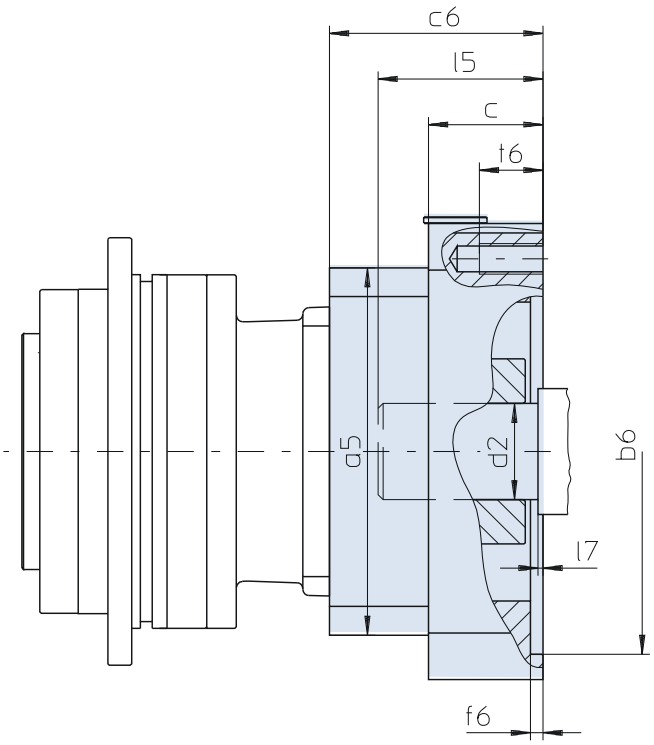
PHQ421_MEL - PHQ723_MEL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHQ421	80,0H7	100	32	50	114	115	24	65,5	4,0	3,5	M6	13
PHQ421	110,0H7	145	32	63	114	130	37	78,5	7,0	16,5	M8	14
PHQ421	110,0H7	145	32	50	114	140	42	83,5	7,0	3,5	M8	16
PHQ421	130,0H7	165	32	58	114	140	32	73,5	5,0	11,5	M10	20
PHQ422	50,0H7	70	24	42	100	100	21	57,8	4,0	3,0	M4	10
PHQ422	60,0H7	75	24	42	100	100	21	57,8	3,5	3,0	M5	9
PHQ422	80,0H7	100	24	42	100	100	21	57,8	4,0	3,0	M6	13
PHQ422	95,0H7	115	24	42	100	100	21	57,8	4,0	3,0	M8	21
PHQ422	95,0H7	115	24	51	100	100	30	66,8	4,0	12,0	M8	16
PHQ422	95,0H7	130	24	42	100	115	21	57,8	4,0	3,0	M8	16
PHQ422	95,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
PHQ422	110,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
PHQ422	110,0H7	145	24	59	100	130	38	74,8	7,0	20,0	M8	16
PHQ422	130,0H7	165	24	51	100	140	30	66,8	7,0	12,0	M10	20
PHQ521	110,0H7	130	38	61	152	145	26	80,0	5,0	4,5	M8	14
PHQ521	110,0H7	165	38	61	152	145	26	80,0	5,0	4,5	M10	26
PHQ521	114,3H7	200	38	80	152	180	45	99,0	5,0	23,5	M12	25
PHQ521	130,0H7	165	38	61	152	145	26	80,0	5,0	4,5	M10	26
PHQ521	130,0H7	215	38	61	152	190	26	80,0	5,0	4,5	M12	26
PHQ521	180,0H7	215	38	80	152	190	45	99,0	5,0	23,5	M12	25
PHQ522/PHQ723	80,0H7	100	32	50	115	120	24	67,5	4,0	3,5	M6	13
PHQ522/PHQ723	110,0H7	130	32	50	115	120	24	67,5	4,0	3,5	M8	16
PHQ522/PHQ723	110,0H7	145	32	58	115	140	32	75,5	6,5	11,5	M8	16
PHQ522/PHQ723	110,0H7	145	32	68	115	140	42	85,5	7,0	21,5	M8	16
PHQ522/PHQ723	110,0H7	165	32	50	115	140	24	67,5	5,0	3,5	M10	24
PHQ522/PHQ723	130,0H7	165	32	58	115	140	32	75,5	5,0	11,5	M10	20

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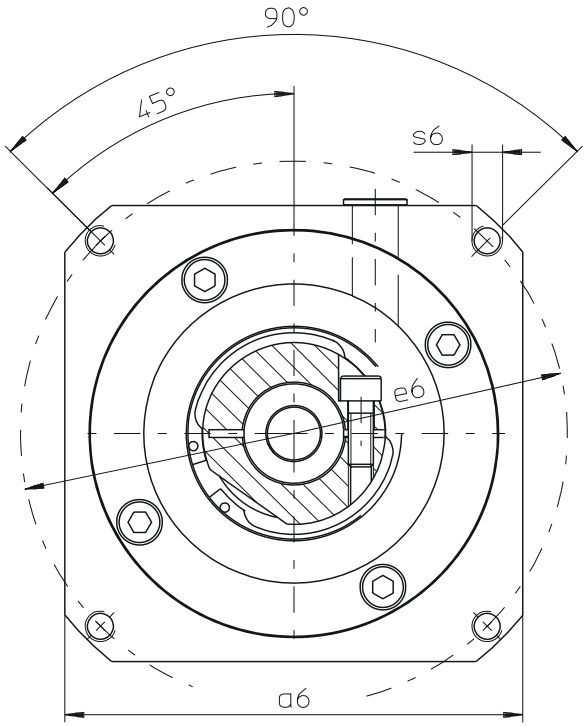
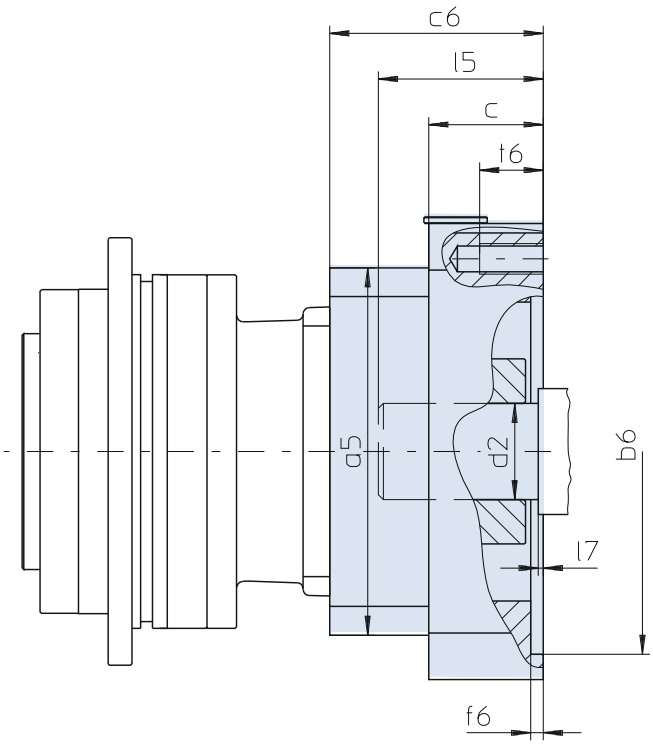
PHQ721_MEL - PHQ1133_MEL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHQ721	180,0H7	215	48	81	208	190	35	101,5	5,0	5,0	M12	35
PHQ721	250,0H7	300	48	84	208	260	38	104,5	6,0	8,0	M16	38
PHQ722/PHQ823	110,0H7	130	38	61	145	145	26	80,0	5,0	4,5	M8	14
PHQ722/PHQ823	110,0H7	165	38	61	145	145	26	80,0	5,0	4,5	M10	26
PHQ722/PHQ823	114,3H7	200	38	80	145	180	45	99,0	5,0	23,5	M12	25
PHQ722/PHQ823	130,0H7	165	38	61	145	145	26	80,0	5,0	4,5	M10	26
PHQ722/PHQ823	130,0H7	215	38	61	145	190	26	80,0	5,0	4,5	M12	26
PHQ722/PHQ823	180,0H7	215	38	80	145	190	45	99,0	5,0	23,5	M12	25
PHQ822/PHQ933	114,3H7	200	48	81	190	190	34	101,0	4,0	4,5	M12	34
PHQ822/PHQ933	130,0H7	165	48	81	190	190	34	101,0	5,0	4,5	M10	18
PHQ822/PHQ933	180,0H7	215	48	82	190	190	35	102,0	5,0	5,5	M12	35
PHQ822/PHQ933	250,0H7	300	48	85	190	260	38	105,0	6,0	8,5	M16	38
PHQ932/PHQ1033/PHQ1133	250,0H7	300	60	85	225	260	43	110,0	6,0	5,0	M16	32
PHQ932/PHQ1033/PHQ1133	300,0H7	350	60	111	225	314	69	136,0	6,0	31,0	M16	34

ServoFit® PHQA Planetary Gear Units
Reductores planetarios ***ServoFit® PHQA***
ServoFit® Riduttori planetari **PHQA**

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Quattro Power for maximum power density

- Acceleration torque: 170 – 10000 Nm
- Lowest backlash: 1 - 1.5 arcmin
- High power density due to 4-fold (Quattro) planet system
- extremely high torsional and tilting stiffness
- FKM seal at input and output, continuous operation without cooling
- easy to assemble due to spreading function in the clamping hub
- advanced gear technology
- input with thermal expansion compensation
- readily attaches any synchronous servo motor
- easy and secure motor attachment in any mounting position
- quiet running
- efficiency:
  1 stage ≥ 96 %
  2 stage ≥ 93 %
  3 stage ≥ 90 %

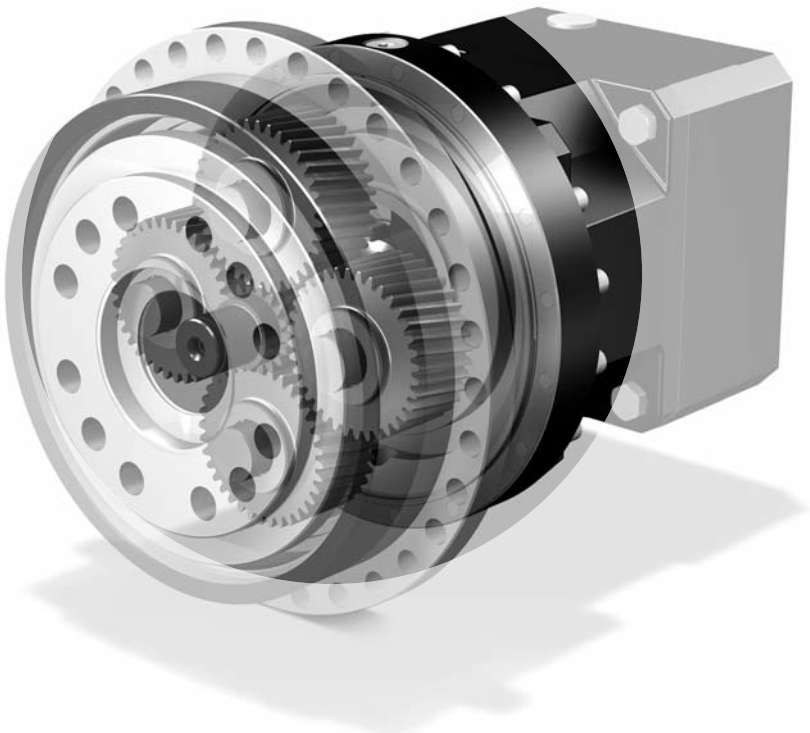
Quattro-Power para máxima densidad de potencia

- *Par de aceleración: 170 – 10000 Nm*
- *Mínimo juego de giro: 1 - 1,5 arcmin*
- *Alta densidad de potencia por sistema planetario cuádruplo (Quattro)*
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Anillo retén de FKM a la entrada y a la salida, trabajo permanente sin enfriamiento*
- *Fácil de montar gracias a la función de expansión en el cojinete de apriete*
- *Tecnología superior de dentado*
- *Entrada con compensación térmica de longitudes*
- *Equipable a cualquier motor servo síncrono*
- *Adaptación sencilla y segura de motor en cualquier posición de instalación*
- *Marcha extremadamente suave*
- *Rendimiento:*
  1 tren ≥ 96 %
  2 trenes ≥ 93 %
  3 trenes ≥ 90 %

Quattro-Power per massima densità di potenza

- Coppia di accelerazione: 170 – 10000 Nm
- Gioco minimo: 1 - 1,5 arcmin
- Densità di potenza elevata grazie al sistema planetario quadruplo (Quattro)
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Anello di tenuta in FKM su ingresso e uscita, funzionamento continuo senza raffreddamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Tecnologia della dentatura avanzata
- Ingresso con compensazione longitudinale termica
- Montabili su qualsiasi servomotore sincrono
- Adattamento del motore semplice e sicuro in qualsiasi posizione di montaggio
- Estremamente silenziosi
- Rendimento:
  1 stadio ≥ 96 %
  2 stadi ≥ 93 %
  3 stadi ≥ 90 %

ServoFit® PHQA



ServoFit® PHQA Planetary Gear Units
Reductores planetarios ***ServoFit® PHQA***
ServoFit® Riduttori planetari **PHQA**

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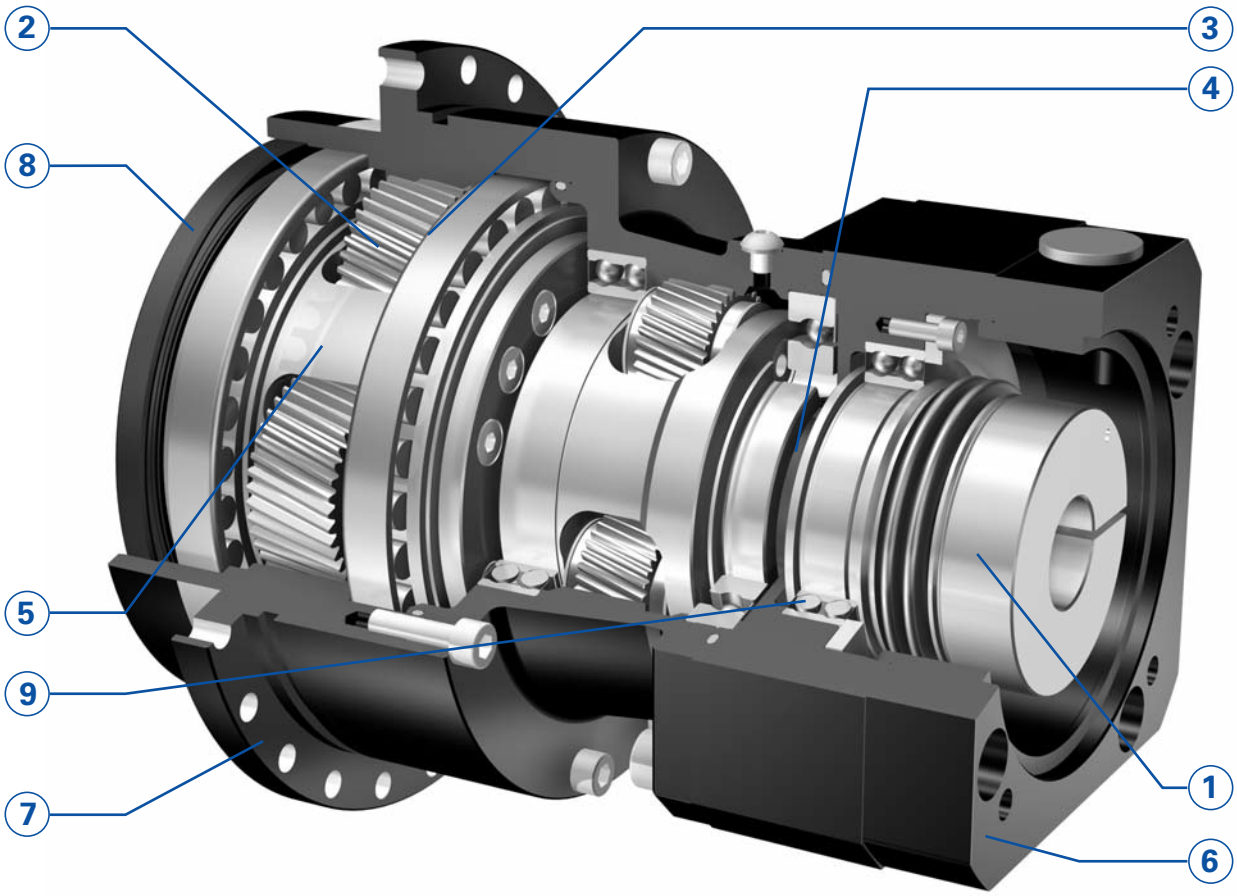

• **Quattro Power for maximum power density and rotation rigidity**
An optimized four-planet system (Quattro) permits torque to be distributed over 4 planets instead of 3. The result: increases in torque of up to 35% and increases in rotation rigidity of up to 80%.

• **Precision selection** of the gearing parts ensures backlash of less than **one arc minute**.

• **Symmetrically arranged output bearings** for highest load capacity and highest tilting rigidity of the flange shaft. Due to angular bearings in O alignment already the standard version is suitable for **high axial and radial loads**.

• **The STOBER FlexiAdapt® motor adapter system** with its integrated thermal expansion compensation feature allows easy and accurate motor installation in minutes with no special tools required.

• **Wide selection** of IEC and NEMA motor adapters for all common brands of motors.

• ***Quattro Power para máxima densidad de potencia y rigidez a la torsión***
Mediante una sistema planetario cuádruplo optimizado (Quattro) los pares son distribuidos ahora sobre 4 en vez de 3 planetas. El resultado son incrementos de pares de hasta 35% y aumentos de la rigidez a la torsión de hasta 80%.

• *Por* ***Precision Selection*** *de las piezas dentadas son realizados juegos de torsión menores que* ***1 minuto arco****.*

• ***Apoyo de salida simétrico*** *para máxima carga y máxima rigidez al vuelco del eje con brida. Por apoyos inclinados dispuestos en O, ya en el estándar adecuados para* ***altas cargas axiales y radiales****.*

• *El* ***sistema STOBER FlexiAdapt®, de opciones para motor*** *con compensación térmica de longitudes integrada, permite el montaje sencillo y sin errores en pocos minutos. No se requieren herramientas especiales.*

• ***Gran selección*** *de adaptadores de motor (IEC y NEMA) para todos los tipos usuales de motores.*

• **Quattro Power per massima densità di potenza e rigidità torsionale**
Grazie al sistema planetario quadruplo (Quattro) le coppie sono ora distribuite su 4 invece che su 3 pianetari. Il risultato sono incrementi di coppia fino al 35% ed aumenti della rigidità torsionale fino all'80%.

• Grazie alla **Precision Selection** delle parti dentate si realizzano giochi inferiori a **1 arco minuto**.

• **Supporto uscita simmetrico** per un carico ed una rigidità al ribaltamento elevatissimi dell'albero flangiato. Grazie ai cuscinetti a rulli conici precaricati con disposizione a O già nella versione standard sono idonei per **carichi assiali e radiali elevati**.

• Il **sistema di montaggio motore FlexiAdapt® STOBER** , con compensazione longitudinale termica integrata, consente un montaggio del motore semplice e senza errori in pochi minuti. Non sono richiesti utensili speciali.

• **Ampia scelta** di adattatori motore (CEI e NEMA) per tutti i comuni tipi di motori.

ServoFit® PHQA Planetary Gear Units
Reductores planetarios ***ServoFit® PHQA***
ServoFit® Riduttori planetari **PHQA**

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① **FlexiAdapt® coupling**
Accurate and precise motor installation by clamping screw. Designed **for large motor shaft diameters**.
The integrated thermal expansion compensation feature in the shape of a bellows coupling compensates linear expansion of the motor shaft.
Balanced clamp coupling for smooth operation, also at high speeds.
Spacer bushes to accommodate custom motor shaft diameters.

② **High gearing quality** provided by case-hardened and finish-ground sun gear and planet gears as well as nitrided and honed internal gearing.

③ **Load capacity of the planet gear bearings** increased by about 100 %.

④ **IP65** enclosure. Sealed with a **FKM** radial oil seal for the smallest possible shaft diameter. Reduces friction, thus preventing internal heat build-up. Increases efficiency. **Continuous duty** operation possible without addition cooling.

⑤ **Highest torsional stiffness and ultimate tensile strength** provided by oversized single-piece planet carriers made of high-tensile material.

⑥ Motor adapter made of aluminium for **low gear unit weight.**

⑦ **Highest running accuracy and precision** ensured by single-piece housing design. Housing material: High-tensile tempered steel.

⑧ **FKM double-lip radial oil seals**. For continuous duty applications, with very good chemical resistance.

⑨ Input shaft bearings with shields and high-temperature grease for maintenance-free operation.

⑩ **Lubricated for life** with high-quality hydrophobic synthetic gear oil.

① ***Acoplamiento FlexiAdapt®***
Acoplamiento de motor ***sin errores*** *mediante un tornillo de apriete. Concebido para* ***grandes diámetros de ejes de motor****.*
La ***compensación térmica de longitudes*** *integrada, en forma de un acoplamiento tipo fuelle, compensa dilataciones longitudinales del eje del motor.*
Acoplamiento ***equilibrado*** *de anillo de apriete para una marcha suave, también a alta velocidad.*
Manguitos distanciadores para la adaptación de diámetros no usuales de motor.

② ***Alta calidad de dentado*** *por piñones solares y ruedas planetarias templados por cementación y rectificados así como dentado de rueda hueca nitrurado y bruñido.*

③ ***Capacidad de carga de los apoyos de los planetas*** *incrementada en aproximadamente 100 %.*

④ *Tipo de protección* ***IP65****. Sellado con anillo retén* ***FKM*** *sobre mínimo diámetro posible del eje. Reduce la fricción y así también el calentamiento. Aumenta el rendimiento.* ***Trabajo continuo*** *posible sin enfriamiento adicional.*

⑤ ***Máxima rigidez a la torsión y resistencia a la rotura*** *por portaplanetas generosamente dimensionados, de una sola pieza, fabricados de material de alta resistencia.*

⑥ *Adaptador de motor de aluminio para* ***peso reducido del reductor****.*

⑦ ***Máxima exactitud y precisión de marcha*** *por diseño de carcasa de una pieza. Material de la carcasa: Acero bonificado de alta resistencia.*

⑧ ***Anillos retén de doble labio de FKM****. Para el uso en trabajo continuo así como para muy buena resistencia química.*

⑨ *Apoyos del eje de accionamiento con discos de cubierta y grasa para alta temperatura para trabajo libre de mantenimiento.*

⑩ ***Lubricación de por vida*** *con aceite sintético hidrófobo de alta calidad para reductores.*

① **Giunto FlexiAdapt®**
Montaggio del motore senza errori grazie alla vite di arresto. Concepito per **motori con grandi diametri dell'albero**.
La **compensazione longitudinale termica** integrata, avente forma di giunto a soffietto, compensa gli allungamenti longitudinali dell'albero motore.
Il giunto di montaggio **equilibrato** garantisce un funzionamento silenzioso e senza vibrazioni anche a alto numero di giri.
Bussole distanziatrici per l'adattamento ai diametri degli alberi motore non comuni.

② **Alta qualità della dentatura** grazie a solare e satelliti cementati e lucidati, nonché alla corona dentata nitrurata e levigata.

③ **Capacitá di carico del supporto planetario** aumentata del 100 % circa.

④ Classe di protezione **IP65**. Ermetizzazione con anello di tenuta radiale per alberi **FKM** sul diametro albero più piccolo. Riduce l'attrito e conseguentemente il riscaldamento. Aumenta il rendimento. Il **funzionamento continuo** è possibile senza raffreddamento aggiuntivo.

⑤ **Rigidità torsionale e resistenza a rottura** elevatissime grazie a porta planetari monoblocco in materiale altamente resistenza sovradimensionati.

⑥ Adattatore per motore in alluminio per un **peso del riduttore contenuto**.

⑦ **Massima esattezza di funzionamento e precisione** grazie al design monoblocco della carcassa. Materiale della carcassa: Acciaio da bonifica ad alta resistenza.

⑧ **Anelli di tenuta radiali per alberi a doppio labbro** in **FKM**. Per l'impiego in funzionamento continuo, nonché per una resistenza chimica ottimale.

⑨ Cuscinetto albero ingresso con schermato con grasso per alte temperature per un esercizio privo di richiede manutenzione.

⑩ **Lubrificazione a vita** con olio per riduttori sintetico idrofobico di alta qualità.

ServoFit® PHQA
Planetary Gear Units

Reductores planetarios
ServoFit® PHQA

ServoFit®
Riduttori planetari
PHQA

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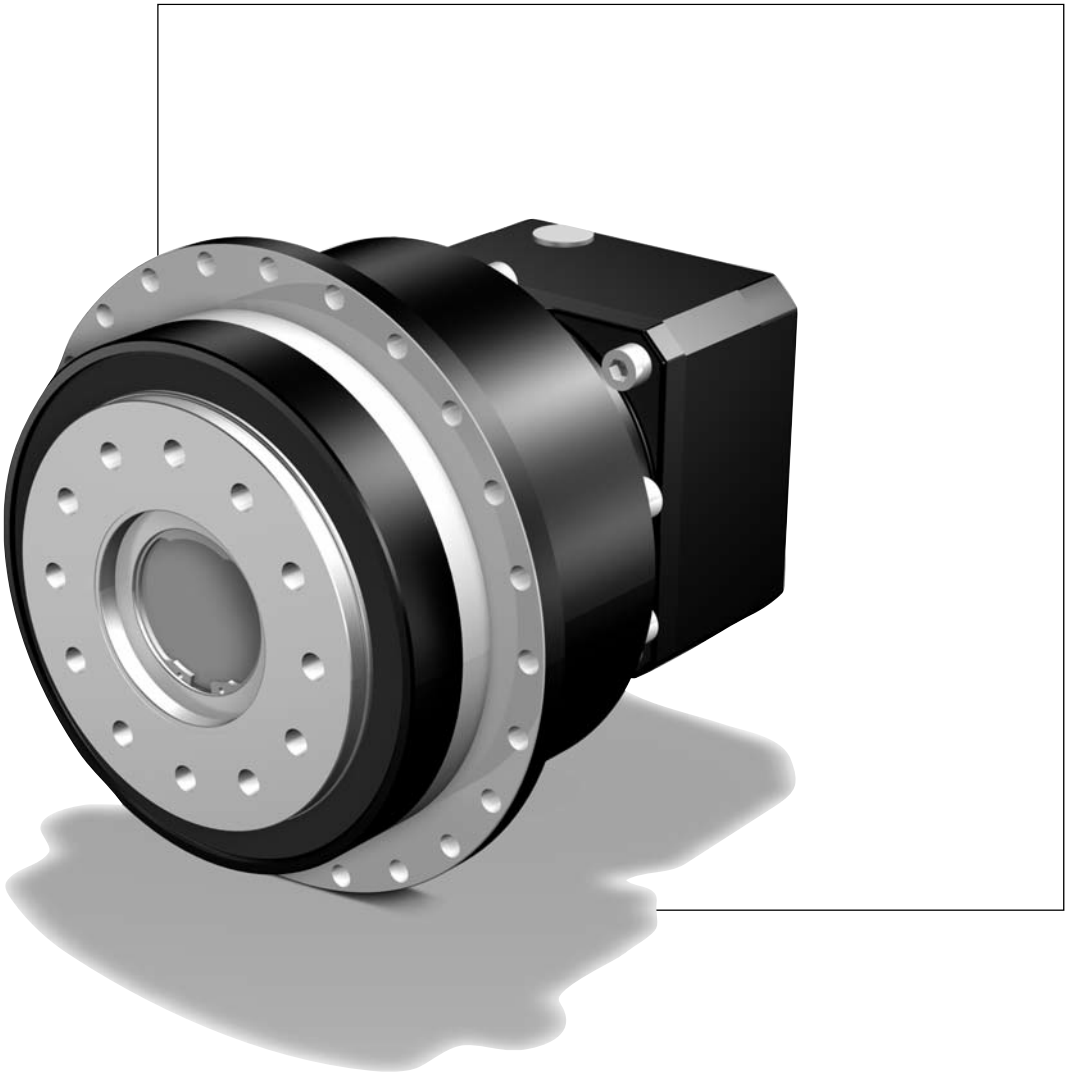

PHQA

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Type designation / *Tipificación* / Indentificazione dei modelli

STÖBER

PHQA 7 2 2 F 0220 MF

1 2 3 4 5 6 7

1 Gear unit type
PHQA - Planetary gear unit

2 Gear unit size

3 Generation number

4 Stages
1 - 1 stage
2 - 2 stage
3 - 3 stage

5 Design
F - flange shaft

6 Transmission ratio i x 10

7 Mounting series
ME - Motor adapter with EasyAdapt® coupling
MEL - Motor adapter with EasyAdapt® coupling and large motor plate
MF - Motor adapter with FlexiAdapt® coupling
MFL - Motor adapter with FlexiAdapt® coupling and large motor plate
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page PHQA17, please observe the max. dimensions).

Ordering data according to the type designation above.

Further ordering details:
– Mounting position for 3 stage gear units
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

The torques and forces specified in this catalog only apply under the following conditions:
- For the attachment of the flange shaft and the gear unit housing on the machine side using screws of quality 12.9
- If the gear unit housings are adjusted at the pilot øb1 or øb2 (H7)
- If the flange shaft is adjusted with the connecting element at the pilot ød or øv

1 *Tipo de reductor*
PHQA - *Reductor planetario*

2 *Tamaño del reductor*

3 *Cifra de generación*

4 *Número de trenes*
1 - *1 trenes*
2 - *2 trenes*
3 - *3 trenes*

5 *Ejecución*
F - *Eje con brida*

6 *Número característico de la relación de reducción i x 10*

7 *Grupos de opciones*
ME – *Adaptador de motor con acoplamiento EasyAdapt®*
MEL – *Adaptador de motor con acoplamiento EasyAdapt® y placa grande de motor*
MF - *Adaptador de motor con acoplamiento FlexiAdapt®*
MFL - *Adaptador de motor con acoplamiento FlexiAdapt® y placa grande de motor*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página PHQA17, por favor observar dimensiones máximas).

Datos de pedido de acuerdo a la tipificación indicada arriba.

Otros datos de pedido:
– *Posicion de instalación para reductores a 3 trenes*
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

Los pares y fuerzas indicados en este catálogo se aplican bajo las siguientes condiciones:
- *Al fijar el eje de brida y la carcasa del reductor en el lado de la máquina con tornillos de la calidad 12.9*
- *Si las carcasas del reductor están ajustadas en el borde de ajuste øb1 o øb2 (H7)*
- *Si el eje de brida está ajustada con el elemento de unión en el borde de ajuste ød o øv.*

1 Modello di riduttore
PHQA – Riduttore planetario

2 Taglia del riduttore

3 Numero di generazione

4 Numero di stadi
1 - 1-stadi
2 - 2-stadi
3 - 3-stadi

5 Esecuzione
F – Albero flangiato

6 Rapporto di riduzione i x 10

7 Opzioni annessi
ME – adattatore motore con giunto EasyAdapt®
MEL – adattatore motore con giunto EasyAdapt® e flangia motore grande
MF - adattatore motore con giunto FlexiAdapt®
MFL - adattatore motore con giunto FlexiAdapt® e flangia motore grande
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore da pagina PHQA17, si prega di rispettare le misure max.).

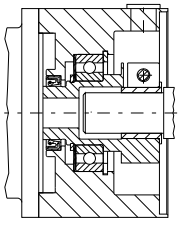
Dati dell'ordine conformi alla indentificazione dei modelli di cui sopra.

Altri dati dell'ordine:
– Posizione di montaggio per riduttori a 3 stadi
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

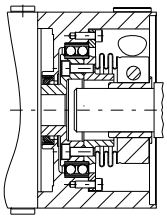
Le coppie e le forze indicate in questo catalogo si applicano alle seguenti condizioni:
- Per il fissaggio dell' albero flangiato e dell' scatola del riduttore sul lato macchina con viti di qualità 12.9
- Se le scatole del riduttore sono adattate sul bordo di accoppiamento øb1 o øb2 (H7)
- Se l' albero flangiato è adattato dell' elemento di collegamento sul bordo di accoppiamento ød o øv

PHQA722 F 0220 MF

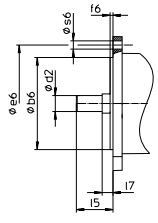
EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
***Giunto* EasyAdapt® ME**



FlexiAdapt® Coupling MF
FlexiAdapt® Acoplamiento MF
***Giunto* FlexiAdapt® MF**

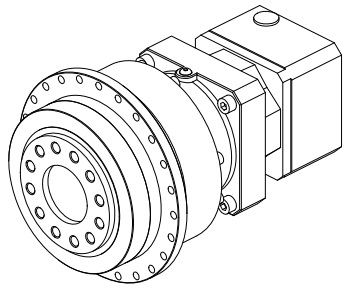


Picture: motor output
Fig. Salida de motor
Fig. Uscita motore



Mounting positions | *Posiciones de instalación* | Posizioni di montaggio

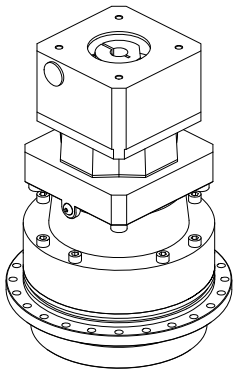
EL1



The gear units are filled with the quantity and type of lubricant specified on the rating plate. For 3 stage gear units the lubricant fill level and the setup of the gear units depend on the mounting position .
Therefore, any modification of the gear units is permitted only after consulting STOBER.

Please visit our web site for more detailed information about oil grades and quantities (ID 441871).

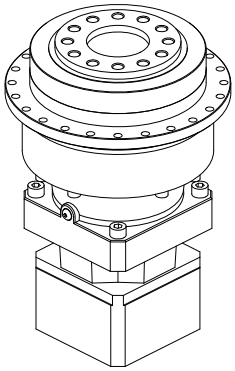
EL5



***Los reductores** están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores de 3 trenes dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

EL6

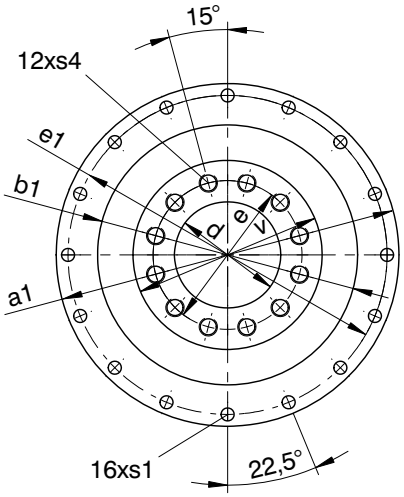


I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori a 3 stadi dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza averne prima consultato STOBER.

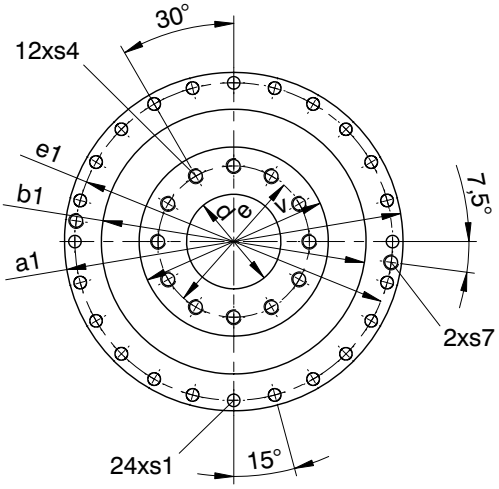
Informazioni dettagliate sulle tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).

Flange shaft | ***Eje con brida*** | **Albero flangiato**

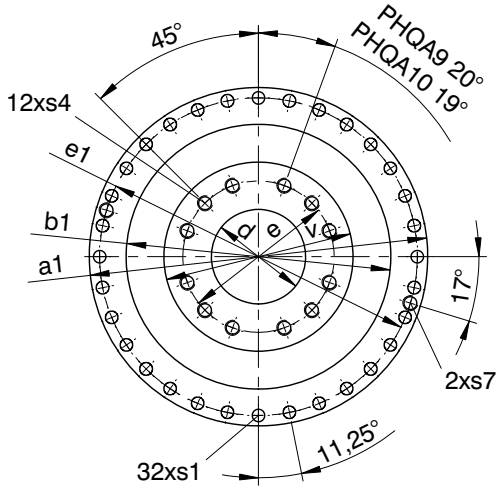
PHQA4 + PHQA5



PHQA7 + PHQA8



PHQA9 + PHQA10



Shaft design “F” | ***Ejecución de eje “F”*** | **Esecuzione albero “F”**

Typ	øa1	øb1	ød	øe	øe1	øs1	s4	s7	v
PHQA4	118h7	90h7	31,5H6	50	109	5,5	M6	-	63h7
PHQA5	145h7	110h7	40,0H6	63	135	5,5	M8	-	80h7
PHQA7	179h7	140h7	50,0H6	80	168	6,6	M10	-	100h7
PHQA8	247h7	200h7	80,0H6	125	233	9,0	M12	M10	160h7
PHQA9	300	255h7	90,0H6	145	280	13,5	M20	M8	180h7
PHQA10	330	285h7	95,0H6	166	310	13,5	M24	M10	200h7

Selection table
ServoFit® PHQA
Planetary Gear Units

Tabla de selección
Reductores planetarios
ServoFit® PHQA

Tabella di selezione
ServoFit® Riduttori
planetari **PHQA**

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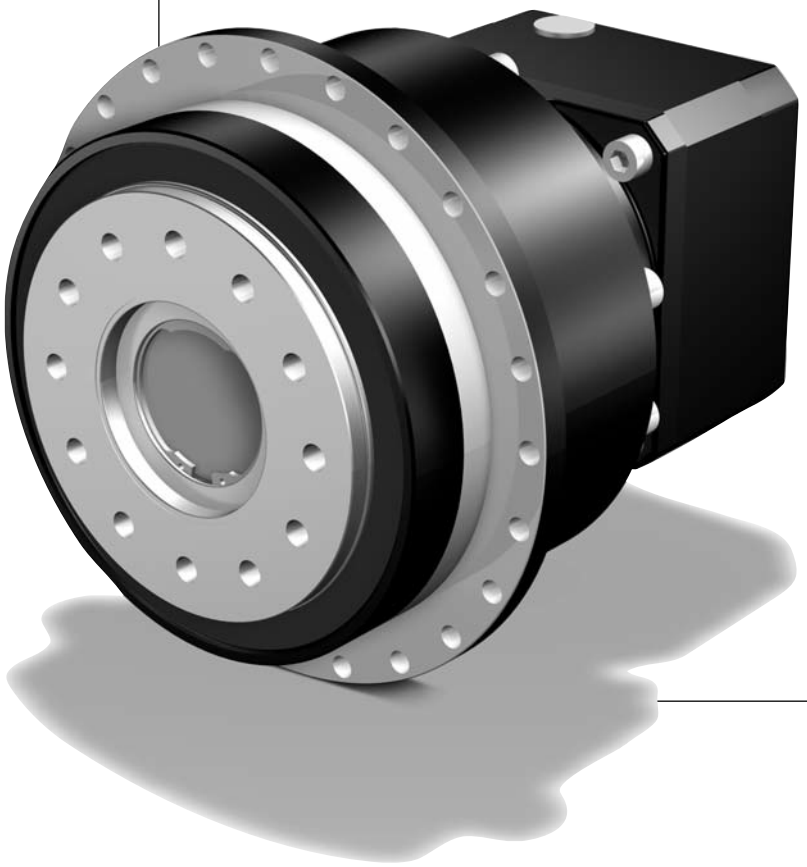

Selection table **ServoFit® PHQA** Planetary Gear Units

Tabla de selección Reductores planetarios ***ServoFit® PHQA***

Tabella di selezione **ServoFit®** Riduttori planetari **PHQA**

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Symbols:

i - Gear unit ratio
n_{1MAX} - Max. input speed
DB - Continuous operation
ZB - Cycle operation
(at ambient temperature 20°C, also see page A11/A12)
MWø - Motor shaft diameter
J_1 - Mass mom. of inertia (related to input)
G - Weight
$\Delta\varphi_2$ - Backlash
C_2 - Gear unit rigidity (related to output at M_{2B})
L_{PA} - Max. noise level (n_1 = 2000 rpm)
M_{2N} - Rated torque 1)
M_{2B} - Max. perm. acceleration torque
M_{2NOT} - Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

1) Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

Denominaciones:

i - *Relación de reducción*
n_{1MAX} - *Velocidad máx. de entrada*
DB - Trabajo continuo
ZB - Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)
MWø - *Diámetro de eje del motor*
J_1 - *Momento de inercia de masa (referido a la entrada)*
G - *Peso*
$\Delta\varphi_2$ - *Juego de giro*
C_2 - *Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} - *Ruido máx. de marcha (n_1 = 2000 min-1)*
M_{2N} - *Par nominal 1)*
M_{2B} - *Par máx. admisible de aceleración*
M_{2NOT} - *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

1) Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

Simboli:

i - Rapporto di riduzione
n_{1MAX} - Max. numero di giri in ingresso
DB - funzionamento continuo
ZB - funzionamento ciclico
(a temperatura ambiente di 20°C, vedere anche pagina A11/A12)
MWø - Diametro dell'albero motore
J_1 - Momento di inerzia (riferito all'ingresso)
G - Peso
$\Delta\varphi_2$ - Gioco
C_2 - Rigidità del riduttore (riferito all'uscita per M_{2B})
L_{PA} - Rumorosità max. (n_1 = 2000 min-1)
M_{2N} - Coppia nominale 1)
M_{2B} - Coppia di accelerazione max. ammessa
M_{2NOT} - Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

1) I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

Planetary Gear Units **PHQA**
*Reductores planetarios **PHQA***
Riduttori planetari **PHQA**

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Please take notice of the indications on page PHQA6! ***¡Por favor observe las indicaciones en la página PHQA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQA421 (M_{2BMAX}=170 Nm)												
5,500	**PHQA421_0055 MF**	2000	6000	**≤14**	1,9	3,9	1	37	59	120	170	240
5,500	**PHQA421_0055 MF**	2000	6000	**>14≤19**	1,9	3,9	1	38	59	120	170	300
5,500	**PHQA421_0055 MF**	2000	6000	**>19≤24**	1,8	3,9	1	38	59	120	170	300
5,500	**PHQA421_0055 MFL**	2000	6000	**>24≤32**	5,0	4,6	1	39	59	120	170	300
PHQA422 (M_{2BMAX}=170 Nm)												
22,00	**PHQA422_0220 MF**	3700	6500	**≤11**	0,63	4,5	1	37	60	120	170	300
22,00	**PHQA422_0220 MF**	3700	6500	**>11≤14**	0,64	4,5	1	37	60	120	170	300
22,00	**PHQA422_0220 MF**	3700	6500	**>14≤19**	0,64	4,5	1	37	60	120	170	300
22,00	**PHQA422_0220 MFL**	3700	6500	**>19≤24**	1,7	5,2	1	37	60	120	170	300
27,50	**PHQA422_0280 MF**	4000	7000	**≤11**	0,57	4,5	1	37	58	120	170	300
27,50	**PHQA422_0280 MF**	4000	7000	**>11≤14**	0,58	4,5	1	37	58	120	170	300
27,50	**PHQA422_0280 MF**	4000	7000	**>14≤19**	0,58	4,5	1	37	58	120	170	300
27,50	**PHQA422_0280 MFL**	4000	7000	**>19≤24**	1,6	5,2	1	37	58	120	170	300
38,50	**PHQA422_0390 MF**	4500	8000	**≤11**	0,52	4,5	1	36	57	120	170	300
38,50	**PHQA422_0390 MF**	4500	8000	**>11≤14**	0,52	4,5	1	36	57	120	170	300
38,50	**PHQA422_0390 MF**	4500	8000	**>14≤19**	0,52	4,5	1	36	57	120	170	300
38,50	**PHQA422_0390 MFL**	4500	8000	**>19≤24**	1,6	5,2	1	37	57	120	170	300
55,00	**PHQA422_0550 MF**	4500	8000	**≤11**	0,50	4,5	1	35	55	120	170	300
55,00	**PHQA422_0550 MF**	4500	8000	**>11≤14**	0,50	4,5	1	35	55	120	170	300
55,00	**PHQA422_0550 MF**	4500	8000	**>14≤19**	0,50	4,5	1	35	55	120	170	300
55,00	**PHQA422_0550 MFL**	4500	8000	**>19≤24**	1,6	5,2	1	35	55	120	170	300
PHQA521 (M_{2BMAX}=430 Nm)												
5,500	**PHQA521_0055 MF**	2500	5500	**≤19**	5,7	6,6	1	90	60	280	430	640
5,500	**PHQA521_0055 MF**	2500	5500	**>19≤24**	5,7	6,6	1	92	60	280	430	790
5,500	**PHQA521_0055 MF**	2500	5500	**>24≤32**	5,6	6,6	1	92	60	280	430	800
5,500	**PHQA521_0055 MF**	2500	5500	**>32≤35**	5,6	6,6	1	92	60	280	430	800
5,500	**PHQA521_0055 MFL**	2500	5500	**>32≤38**	13	8,3	1	99	60	280	430	800
PHQA522 (M_{2BMAX}=430 Nm)												
22,00	**PHQA522_0220 MF**	3300	6000	**≤14**	2,0	8,1	1	93	61	280	430	800
22,00	**PHQA522_0220 MF**	3300	6000	**>14≤19**	2,0	8,1	1	93	61	280	430	800
22,00	**PHQA522_0220 MF**	3300	6000	**>19≤24**	1,9	8,1	1	93	61	280	430	800
22,00	**PHQA522_0220 MFL**	3300	6000	**≤24**	5,0	8,8	1	94	61	280	430	800
22,00	**PHQA522_0220 MFL**	3300	6000	**>24≤32**	5,0	8,8	1	94	61	280	430	800
27,50	**PHQA522_0280 MF**	3700	6500	**≤14**	1,8	8,1	1	93	59	280	430	800
27,50	**PHQA522_0280 MF**	3700	6500	**>14≤19**	1,8	8,1	1	93	59	280	430	800
27,50	**PHQA522_0280 MF**	3700	6500	**>19≤24**	1,7	8,1	1	93	59	280	430	800
27,50	**PHQA522_0280 MFL**	3700	6500	**≤24**	4,9	8,8	1	93	59	280	430	800
27,50	**PHQA522_0280 MFL**	3700	6500	**>24≤32**	4,9	8,8	1	93	59	280	430	800
38,50	**PHQA522_0390 MF**	4000	7000	**≤14**	1,7	8,1	1	91	58	280	430	800
38,50	**PHQA522_0390 MF**	4000	7000	**>14≤19**	1,8	8,1	1	91	58	280	430	800
38,50	**PHQA522_0390 MF**	4000	7000	**>19≤24**	1,7	8,1	1	91	58	280	430	800
38,50	**PHQA522_0390 MFL**	4000	7000	**≤24**	4,8	8,8	1	91	58	280	430	800
38,50	**PHQA522_0390 MFL**	4000	7000	**>24≤32**	4,8	8,8	1	91	58	280	430	800
55,00	**PHQA522_0550 MF**	4000	7000	**≤14**	1,7	8,1	1	87	56	280	430	800
55,00	**PHQA522_0550 MF**	4000	7000	**>14≤19**	1,7	8,1	1	87	56	280	430	800
55,00	**PHQA522_0550 MF**	4000	7000	**>19≤24**	1,6	8,1	1	87	56	280	430	800
55,00	**PHQA522_0550 MFL**	4000	7000	**≤24**	4,7	8,8	1	87	56	280	430	800
55,00	**PHQA522_0550 MFL**	4000	7000	**>24≤32**	4,7	8,8	1	87	56	280	430	800

Planetary Gear Units **PHQA**
Reductores planetarios ***PHQA***
Riduttori planetari **PHQA**

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Please take notice of the indications on page PHQA6! ***¡Por favor observe las indicaciones en la página PHQA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQA721 (M_{2BMAX}=950 Nm)												
5,500	**PHQA721_0055 MF**	2200	5000	**≤24**	14	12,9	1	189	61	650	950	1260
5,500	**PHQA721_0055 MF**	2200	5000	**>24≤32**	15	12,9	1	197	61	650	950	1580
5,500	**PHQA721_0055 MF**	2200	5000	**>32≤38**	15	12,9	1	197	61	650	950	1820
5,500	**PHQA721_0055 MFL**	2200	5000	**>38≤48**	33	16,7	1	213	61	650	950	1900
PHQA722 (M_{2BMAX}=950 Nm)												
22,00	**PHQA722_0220 MF**	3000	5000	**≤19**	6,0	14,6	1	203	62	650	950	1900
22,00	**PHQA722_0220 MF**	3000	5000	**>19≤24**	6,1	14,6	1	203	62	650	950	1900
22,00	**PHQA722_0220 MF**	3000	5000	**>24≤32**	6,0	14,6	1	203	62	650	950	1900
22,00	**PHQA722_0220 MF**	3000	5000	**>32≤35**	6,0	14,6	1	203	62	650	950	1900
22,00	**PHQA722_0220 MFL**	3000	5000	**>32≤38**	13	16,3	1	205	62	650	950	1900
27,50	**PHQA722_0280 MF**	3500	6000	**≤19**	5,5	14,6	1	203	60	650	950	1900
27,50	**PHQA722_0280 MF**	3500	6000	**>19≤24**	5,6	14,6	1	203	60	650	950	1900
27,50	**PHQA722_0280 MF**	3500	6000	**>24≤32**	5,5	14,6	1	203	60	650	950	1900
27,50	**PHQA722_0280 MF**	3500	6000	**>32≤35**	5,5	14,6	1	203	60	650	950	1900
27,50	**PHQA722_0280 MFL**	3500	6000	**>32≤38**	12	16,3	1	204	60	650	950	1900
38,50	**PHQA722_0390 MF**	3700	6500	**≤19**	5,2	14,6	1	201	59	650	950	1900
38,50	**PHQA722_0390 MF**	3700	6500	**>19≤24**	5,2	14,6	1	201	59	650	950	1900
38,50	**PHQA722_0390 MF**	3700	6500	**>24≤32**	5,1	14,6	1	201	59	650	950	1900
38,50	**PHQA722_0390 MF**	3700	6500	**>32≤35**	5,1	14,6	1	201	59	650	950	1900
38,50	**PHQA722_0390 MFL**	3700	6500	**>32≤38**	12	16,3	1	202	59	650	950	1900
55,00	**PHQA722_0550 MF**	3700	6500	**≤19**	5,0	14,6	1	195	57	650	950	1900
55,00	**PHQA722_0550 MF**	3700	6500	**>19≤24**	5,0	14,6	1	195	57	650	950	1900
55,00	**PHQA722_0550 MF**	3700	6500	**>24≤32**	4,9	14,6	1	195	57	650	950	1900
55,00	**PHQA722_0550 MF**	3700	6500	**>32≤35**	4,9	14,6	1	195	57	650	950	1900
55,00	**PHQA722_0550 MFL**	3700	6500	**>32≤38**	12	16,3	1	195	57	650	950	1900
PHQA723 (M_{2BMAX}=950 Nm)												
88,00	**PHQA723_0880 MF**	3300	6000	**≤14**	2,0	16,4	1	204	61	650	950	1900
88,00	**PHQA723_0880 MF**	3300	6000	**>14≤19**	2,0	16,4	1	204	61	650	950	1900
88,00	**PHQA723_0880 MF**	3300	6000	**>19≤24**	1,9	16,4	1	204	61	650	950	1900
88,00	**PHQA723_0880 MFL**	3300	6000	**≤24**	5,1	17,1	1	204	61	650	950	1900
88,00	**PHQA723_0880 MFL**	3300	6000	**>24≤32**	5,1	17,1	1	204	61	650	950	1900
110,0	**PHQA723_1100 MF**	3300	6000	**≤14**	2,0	16,4	1	203	61	650	950	1900
110,0	**PHQA723_1100 MF**	3300	6000	**>14≤19**	2,0	16,4	1	203	61	650	950	1900
110,0	**PHQA723_1100 MF**	3300	6000	**>19≤24**	1,9	16,4	1	203	61	650	950	1900
110,0	**PHQA723_1100 MFL**	3300	6000	**≤24**	5,1	17,1	1	204	61	650	950	1900
110,0	**PHQA723_1100 MFL**	3300	6000	**>24≤32**	5,1	17,1	1	204	61	650	950	1900
137,5	**PHQA723_1380 MF**	3700	6500	**≤14**	1,9	16,4	1	203	59	650	950	1900
137,5	**PHQA723_1380 MF**	3700	6500	**>14≤19**	1,9	16,4	1	203	59	650	950	1900
137,5	**PHQA723_1380 MF**	3700	6500	**>19≤24**	1,8	16,4	1	203	59	650	950	1900
137,5	**PHQA723_1380 MFL**	3700	6500	**≤24**	4,9	17,1	1	203	59	650	950	1900
137,5	**PHQA723_1380 MFL**	3700	6500	**>24≤32**	4,9	17,1	1	203	59	650	950	1900
154,0	**PHQA723_1540 MF**	4000	7000	**≤14**	1,8	16,4	1	203	58	650	950	1900
154,0	**PHQA723_1540 MF**	4000	7000	**>14≤19**	1,8	16,4	1	203	58	650	950	1900
154,0	**PHQA723_1540 MF**	4000	7000	**>19≤24**	1,7	16,4	1	203	58	650	950	1900
154,0	**PHQA723_1540 MFL**	4000	7000	**≤24**	4,8	17,1	1	203	58	650	950	1900
154,0	**PHQA723_1540 MFL**	4000	7000	**>24≤32**	4,8	17,1	1	203	58	650	950	1900
192,5	**PHQA723_1930 MF**	4000	7000	**≤14**	1,7	16,4	1	203	58	650	950	1900
192,5	**PHQA723_1930 MF**	4000	7000	**>14≤19**	1,8	16,4	1	203	58	650	950	1900
192,5	**PHQA723_1930 MF**	4000	7000	**>19≤24**	1,7	16,4	1	203	58	650	950	1900
192,5	**PHQA723_1930 MFL**	4000	7000	**≤24**	4,8	17,1	1	203	58	650	950	1900
192,5	**PHQA723_1930 MFL**	4000	7000	**>24≤32**	4,8	17,1	1	203	58	650	950	1900
220,0	**PHQA723_2200 MF**	4000	7000	**≤14**	1,7	16,4	1	202	56	650	950	1900
220,0	**PHQA723_2200 MF**	4000	7000	**>14≤19**	1,7	16,4	1	202	56	650	950	1900
220,0	**PHQA723_2200 MF**	4000	7000	**>19≤24**	1,6	16,4	1	202	56	650	950	1900
220,0	**PHQA723_2200 MFL**	4000	7000	**≤24**	4,8	17,1	1	202	56	650	950	1900
220,0	**PHQA723_2200 MFL**	4000	7000	**>24≤32**	4,8	17,1	1	202	56	650	950	1900

Planetary Gear Units **PHQA**
Reductores planetarios ***PHQA***
Riduttori planetari **PHQA**

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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQA723 (M_{2BMAX}=950 Nm)												
275,0	**PHQA723_2750 MF**	4000	7000	**≤14**	1,7	16,4	1	202	56	650	950	1900
275,0	**PHQA723_2750 MF**	4000	7000	**>14≤19**	1,7	16,4	1	202	56	650	950	1900
275,0	**PHQA723_2750 MF**	4000	7000	**>19≤24**	1,6	16,4	1	202	56	650	950	1900
275,0	**PHQA723_2750 MFL**	4000	7000	**≤24**	4,8	17,1	1	202	56	650	950	1900
275,0	**PHQA723_2750 MFL**	4000	7000	**>24≤32**	4,8	17,1	1	202	56	650	950	1900
385,0	**PHQA723_3850 MF**	4000	7000	**≤14**	1,7	16,4	1	201	56	650	950	1900
385,0	**PHQA723_3850 MF**	4000	7000	**>14≤19**	1,7	16,4	1	201	56	650	950	1900
385,0	**PHQA723_3850 MF**	4000	7000	**>19≤24**	1,6	16,4	1	201	56	650	950	1900
385,0	**PHQA723_3850 MFL**	4000	7000	**≤24**	4,8	17,1	1	201	56	650	950	1900
385,0	**PHQA723_3850 MFL**	4000	7000	**>24≤32**	4,8	17,1	1	201	56	650	950	1900
550,0	**PHQA723_5500 MF**	4000	7000	**≤14**	1,7	16,4	1	195	56	650	950	1900
550,0	**PHQA723_5500 MF**	4000	7000	**>14≤19**	1,7	16,4	1	195	56	650	950	1900
550,0	**PHQA723_5500 MF**	4000	7000	**>19≤24**	1,6	16,4	1	195	56	650	950	1900
550,0	**PHQA723_5500 MFL**	4000	7000	**≤24**	4,7	17,1	1	195	56	650	950	1900
550,0	**PHQA723_5500 MFL**	4000	7000	**>24≤32**	4,7	17,1	1	195	56	650	950	1900
PHQA822 (M_{2BMAX}=2600 Nm)												
22,00	**PHQA822_0220 MF**	2500	4500	**≤24**	16	39,8	1	634	63	1700	2600	4400
22,00	**PHQA822_0220 MF**	2500	4500	**>24≤32**	16	39,8	1	639	63	1700	2600	4400
22,00	**PHQA822_0220 MF**	2500	4500	**>32≤38**	16	39,8	1	639	63	1700	2600	4400
22,00	**PHQA822_0220 MFL**	2500	4500	**>38≤48**	35	43,6	1	649	63	1700	2600	4400
27,50	**PHQA822_0280 MF**	3000	5500	**≤24**	14	39,8	1	639	61	1700	2600	4400
27,50	**PHQA822_0280 MF**	3000	5500	**>24≤32**	15	39,8	1	642	61	1700	2600	4400
27,50	**PHQA822_0280 MF**	3000	5500	**>32≤38**	15	39,8	1	642	61	1700	2600	4400
27,50	**PHQA822_0280 MFL**	3000	5500	**>38≤48**	34	43,6	1	648	61	1700	2600	4400
38,50	**PHQA822_0390 MF**	3300	6000	**≤24**	13	39,8	1	634	60	1700	2600	4400
38,50	**PHQA822_0390 MF**	3300	6000	**>24≤32**	13	39,8	1	634	60	1700	2600	4400
38,50	**PHQA822_0390 MF**	3300	6000	**>32≤38**	13	39,8	1	634	60	1700	2600	4400
38,50	**PHQA822_0390 MFL**	3300	6000	**>38≤48**	32	43,6	1	639	60	1700	2600	4400
55,00	**PHQA822_0550 MF**	3300	6000	**≤24**	12	39,8	1	611	58	1580	2600	4400
55,00	**PHQA822_0550 MF**	3300	6000	**>24≤32**	12	39,8	1	611	58	1580	2600	4400
55,00	**PHQA822_0550 MF**	3300	6000	**>32≤38**	12	39,8	1	611	58	1580	2600	4400
55,00	**PHQA822_0550 MFL**	3300	6000	**>38≤48**	31	43,6	1	613	58	1580	2600	4400
PHQA823 (M_{2BMAX}=2600 Nm)												
88,00	**PHQA823_0880 MF**	3000	5000	**≤19**	6,1	42,6	1	644	62	1700	2600	4400
88,00	**PHQA823_0880 MF**	3000	5000	**>19≤24**	6,2	42,6	1	645	62	1700	2600	4400
88,00	**PHQA823_0880 MF**	3000	5000	**>24≤32**	6,1	42,6	1	645	62	1700	2600	4400
88,00	**PHQA823_0880 MF**	3000	5000	**>32≤35**	6,1	42,6	1	645	62	1700	2600	4400
88,00	**PHQA823_0880 MFL**	3000	5000	**>32≤38**	13	44,3	1	646	62	1700	2600	4400
110,0	**PHQA823_1100 MF**	3500	6000	**≤19**	6,0	42,6	1	645	62	1700	2600	4400
110,0	**PHQA823_1100 MF**	3500	6000	**>19≤24**	6,1	42,6	1	645	62	1700	2600	4400
110,0	**PHQA823_1100 MF**	3500	6000	**>24≤32**	6,0	42,6	1	645	62	1700	2600	4400
110,0	**PHQA823_1100 MF**	3500	6000	**>32≤35**	6,0	42,6	1	645	62	1700	2600	4400
110,0	**PHQA823_1100 MFL**	3500	6000	**>32≤38**	13	44,3	1	646	62	1700	2600	4400
137,5	**PHQA823_1380 MF**	3500	6000	**≤19**	5,5	42,6	1	645	60	1700	2600	4400
137,5	**PHQA823_1380 MF**	3500	6000	**>19≤24**	5,6	42,6	1	645	60	1700	2600	4400
137,5	**PHQA823_1380 MF**	3500	6000	**>24≤32**	5,5	42,6	1	645	60	1700	2600	4400
137,5	**PHQA823_1380 MF**	3500	6000	**>32≤35**	5,5	42,6	1	645	60	1700	2600	4400
137,5	**PHQA823_1380 MFL**	3500	6000	**>32≤38**	12	44,3	1	645	60	1700	2600	4400
154,0	**PHQA823_1540 MF**	3700	6500	**≤19**	5,2	42,6	1	644	59	1700	2600	4400
154,0	**PHQA823_1540 MF**	3700	6500	**>19≤24**	5,2	42,6	1	644	59	1700	2600	4400
154,0	**PHQA823_1540 MF**	3700	6500	**>24≤32**	5,1	42,6	1	644	59	1700	2600	4400
154,0	**PHQA823_1540 MF**	3700	6500	**>32≤35**	5,1	42,6	1	644	59	1700	2600	4400
154,0	**PHQA823_1540 MFL**	3700	6500	**>32≤38**	12	44,3	1	644	59	1700	2600	4400
192,5	**PHQA823_1930 MF**	3700	6500	**≤19**	5,2	42,6	1	644	59	1700	2600	4400
192,5	**PHQA823_1930 MF**	3700	6500	**>19≤24**	5,2	42,6	1	644	59	1700	2600	4400
192,5	**PHQA823_1930 MF**	3700	6500	**>24≤32**	5,1	42,6	1	644	59	1700	2600	4400

Planetary Gear Units **PHQA**
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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQA823 (M_{2BMAX}=2600 Nm)												
192,5	**PHQA823_1930 MF**	3700	6500	**>32≤35**	5,1	42,6	1	644	59	1700	2600	4400
192,5	**PHQA823_1930 MFL**	3700	6500	**>32≤38**	12	44,3	1	645	59	1700	2600	4400
220,0	**PHQA823_2200 MF**	3700	6500	**≤19**	5,0	42,6	1	641	57	1700	2600	4400
220,0	**PHQA823_2200 MF**	3700	6500	**>19≤24**	5,0	42,6	1	641	57	1700	2600	4400
220,0	**PHQA823_2200 MF**	3700	6500	**>24≤32**	4,9	42,6	1	641	57	1700	2600	4400
220,0	**PHQA823_2200 MF**	3700	6500	**>32≤35**	4,9	42,6	1	641	57	1700	2600	4400
220,0	**PHQA823_2200 MFL**	3700	6500	**>32≤38**	12	44,3	1	641	57	1700	2600	4400
275,0	**PHQA823_2750 MF**	3700	6500	**≤19**	5,0	42,6	1	643	57	1700	2600	4400
275,0	**PHQA823_2750 MF**	3700	6500	**>19≤24**	5,0	42,6	1	643	57	1700	2600	4400
275,0	**PHQA823_2750 MF**	3700	6500	**>24≤32**	4,9	42,6	1	643	57	1700	2600	4400
275,0	**PHQA823_2750 MF**	3700	6500	**>32≤35**	4,9	42,6	1	643	57	1700	2600	4400
275,0	**PHQA823_2750 MFL**	3700	6500	**>32≤38**	12	44,3	1	643	57	1700	2600	4400
385,0	**PHQA823_3850 MF**	3700	6500	**≤19**	5,0	42,6	1	635	57	1700	2600	4400
385,0	**PHQA823_3850 MF**	3700	6500	**>19≤24**	5,0	42,6	1	635	57	1700	2600	4400
385,0	**PHQA823_3850 MF**	3700	6500	**>24≤32**	4,9	42,6	1	635	57	1700	2600	4400
385,0	**PHQA823_3850 MF**	3700	6500	**>32≤35**	4,9	42,6	1	635	57	1700	2600	4400
385,0	**PHQA823_3850 MFL**	3700	6500	**>32≤38**	12	44,3	1	635	57	1700	2600	4400
550,0	**PHQA823_5500 MF**	3700	6500	**≤19**	5,0	42,6	1	611	57	1580	2600	4400
550,0	**PHQA823_5500 MF**	3700	6500	**>19≤24**	5,0	42,6	1	611	57	1580	2600	4400
550,0	**PHQA823_5500 MF**	3700	6500	**>24≤32**	4,9	42,6	1	611	57	1580	2600	4400
550,0	**PHQA823_5500 MF**	3700	6500	**>32≤35**	4,9	42,6	1	611	57	1580	2600	4400
550,0	**PHQA823_5500 MFL**	3700	6500	**>32≤38**	12	44,3	1	611	57	1580	2600	4400
PHQA932 (M_{2BMAX}=6000 Nm)												
18,00	**PHQA932_0180 MF**	1800	3000	**≤32**	78	81,0	1	1167	66	3800	6000	7520
18,00	**PHQA932_0180 MF**	1800	3000	**>32≤38**	78	81,0	1	1177	66	3800	6000	8720
18,00	**PHQA932_0180 MF**	1800	3000	**>38≤48**	77	81,0	1	1177	66	3800	6000	10500
24,00	**PHQA932_0240 MF**	2200	3500	**≤32**	49	81,0	1	1185	64	3800	6000	10020
24,00	**PHQA932_0240 MF**	2200	3500	**>32≤38**	49	81,0	1	1191	64	3800	6000	11630
24,00	**PHQA932_0240 MF**	2200	3500	**>38≤48**	48	81,0	1	1191	64	3800	6000	12000
30,00	**PHQA932_0300 MF**	2500	4000	**≤32**	42	81,0	1	1188	62	3800	6000	12000
30,00	**PHQA932_0300 MF**	2500	4000	**>32≤38**	42	81,0	1	1192	62	3800	6000	12000
30,00	**PHQA932_0300 MF**	2500	4000	**>38≤48**	42	81,0	1	1192	62	3800	6000	12000
42,00	**PHQA932_0420 MF**	2800	4500	**≤32**	37	81,0	1	1182	61	3800	6000	12000
42,00	**PHQA932_0420 MF**	2800	4500	**>32≤38**	37	81,0	1	1182	61	3800	6000	12000
42,00	**PHQA932_0420 MF**	2800	4500	**>38≤48**	36	81,0	1	1182	61	3800	6000	12000
60,00	**PHQA932_0600 MF**	2800	4500	**≤32**	34	81,0	1	1144	59	3800	6000	12000
60,00	**PHQA932_0600 MF**	2800	4500	**>32≤38**	34	81,0	1	1144	59	3800	6000	12000
60,00	**PHQA932_0600 MF**	2800	4500	**>38≤48**	33	81,0	1	1144	59	3800	6000	12000

Planetary Gear Units **PHQA**
Reductores planetarios ***PHQA***
Riduttori planetari **PHQA**

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Please take notice of the indications on page PHQA6! ***¡Por favor observe las indicaciones en la página PHQA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQA933 (M_{2BMAX}=6000 Nm)												
72,00	**PHQA933_0720 MF**	2200	4500	**≤24**	18	85,1	1	1197	63	3800	6000	12000
72,00	**PHQA933_0720 MF**	2200	4500	**>24≤32**	18	85,1	1	1198	63	3800	6000	12000
72,00	**PHQA933_0720 MF**	2200	4500	**>32≤38**	18	85,1	1	1198	63	3800	6000	12000
72,00	**PHQA933_0720 MFL**	2200	4500	**>38≤48**	37	88,9	1	1202	63	3800	6000	12000
96,00	**PHQA933_0960 MF**	2500	4500	**≤24**	16	85,1	1	1202	63	3800	6000	12000
96,00	**PHQA933_0960 MF**	2500	4500	**>24≤32**	17	85,1	1	1203	63	3800	6000	12000
96,00	**PHQA933_0960 MF**	2500	4500	**>32≤38**	17	85,1	1	1203	63	3800	6000	12000
96,00	**PHQA933_0960 MFL**	2500	4500	**>38≤48**	36	88,9	1	1205	63	3800	6000	12000
120,0	**PHQA933_1200 MF**	2500	4500	**≤24**	16	85,1	1	1199	63	3800	6000	12000
120,0	**PHQA933_1200 MF**	2500	4500	**>24≤32**	16	85,1	1	1200	63	3800	6000	12000
120,0	**PHQA933_1200 MF**	2500	4500	**>32≤38**	16	85,1	1	1200	63	3800	6000	12000
120,0	**PHQA933_1200 MFL**	2500	4500	**>38≤48**	35	88,9	1	1201	63	3800	6000	12000
150,0	**PHQA933_1500 MF**	3000	5500	**≤24**	14	85,1	1	1200	61	3800	6000	12000
150,0	**PHQA933_1500 MF**	3000	5500	**>24≤32**	15	85,1	1	1200	61	3800	6000	12000
150,0	**PHQA933_1500 MF**	3000	5500	**>32≤38**	15	85,1	1	1200	61	3800	6000	12000
150,0	**PHQA933_1500 MFL**	3000	5500	**>38≤48**	33	88,9	1	1201	61	3800	6000	12000
168,0	**PHQA933_1680 MF**	3300	6000	**≤24**	13	85,1	1	1202	60	3800	6000	12000
168,0	**PHQA933_1680 MF**	3300	6000	**>24≤32**	13	85,1	1	1202	60	3800	6000	12000
168,0	**PHQA933_1680 MF**	3300	6000	**>32≤38**	13	85,1	1	1202	60	3800	6000	12000
168,0	**PHQA933_1680 MFL**	3300	6000	**>38≤48**	32	88,9	1	1203	60	3800	6000	12000
210,0	**PHQA933_2100 MF**	3300	6000	**≤24**	13	85,1	1	1199	60	3800	6000	12000
210,0	**PHQA933_2100 MF**	3300	6000	**>24≤32**	13	85,1	1	1199	60	3800	6000	12000
210,0	**PHQA933_2100 MF**	3300	6000	**>32≤38**	13	85,1	1	1199	60	3800	6000	12000
210,0	**PHQA933_2100 MFL**	3300	6000	**>38≤48**	32	88,9	1	1200	60	3800	6000	12000
240,0	**PHQA933_2400 MF**	3300	6000	**≤24**	12	85,1	1	1197	58	3800	6000	12000
240,0	**PHQA933_2400 MF**	3300	6000	**>24≤32**	12	85,1	1	1197	58	3800	6000	12000
240,0	**PHQA933_2400 MF**	3300	6000	**>32≤38**	12	85,1	1	1197	58	3800	6000	12000
240,0	**PHQA933_2400 MFL**	3300	6000	**>38≤48**	32	88,9	1	1197	58	3800	6000	12000
300,0	**PHQA933_3000 MF**	3300	6000	**≤24**	12	85,1	1	1196	58	3800	6000	12000
300,0	**PHQA933_3000 MF**	3300	6000	**>24≤32**	12	85,1	1	1196	58	3800	6000	12000
300,0	**PHQA933_3000 MF**	3300	6000	**>32≤38**	12	85,1	1	1196	58	3800	6000	12000
300,0	**PHQA933_3000 MFL**	3300	6000	**>38≤48**	31	88,9	1	1196	58	3800	6000	12000
420,0	**PHQA933_4200 MF**	3300	6000	**≤24**	12	85,1	1	1184	58	3800	6000	12000
420,0	**PHQA933_4200 MF**	3300	6000	**>24≤32**	12	85,1	1	1184	58	3800	6000	12000
420,0	**PHQA933_4200 MF**	3300	6000	**>32≤38**	12	85,1	1	1184	58	3800	6000	12000
420,0	**PHQA933_4200 MFL**	3300	6000	**>38≤48**	31	88,9	1	1184	58	3800	6000	12000
600,0	**PHQA933_6000 MF**	3300	6000	**≤24**	12	85,1	1	1144	58	3800	6000	12000
600,0	**PHQA933_6000 MF**	3300	6000	**>24≤32**	12	85,1	1	1144	58	3800	6000	12000
600,0	**PHQA933_6000 MF**	3300	6000	**>32≤38**	12	85,1	1	1144	58	3800	6000	12000
600,0	**PHQA933_6000 MFL**	3300	6000	**>38≤48**	31	88,9	1	1144	58	3800	6000	12000
PHQA1032 (M_{2BMAX}=10000 Nm)												
24,00	**PHQA1032_0240 ME**	2000	3000	**≤48**	91	118,2	1,5	2062	65	6500	10000	20000
24,00	**PHQA1032_0240 ME**	2000	3000	**>48≤55**	96	118,2	1,5	2062	65	6500	10000	20000
24,00	**PHQA1032_0240 ME**	2000	3000	**>55≤60**	100	118,2	1,5	2062	65	6500	10000	20000
30,00	**PHQA1032_0300 ME**	2200	3500	**≤48**	72	118,2	1,5	2058	63	6500	10000	20000
30,00	**PHQA1032_0300 ME**	2200	3500	**>48≤55**	77	118,2	1,5	2058	63	6500	10000	20000
30,00	**PHQA1032_0300 ME**	2200	3500	**>55≤60**	82	118,2	1,5	2058	63	6500	10000	20000
42,00	**PHQA1032_0420 ME**	2500	4000	**≤48**	57	118,2	1,5	2040	62	6500	10000	20000
42,00	**PHQA1032_0420 ME**	2500	4000	**>48≤55**	62	118,2	1,5	2040	62	6500	10000	20000
42,00	**PHQA1032_0420 ME**	2500	4000	**>55≤60**	67	118,2	1,5	2040	62	6500	10000	20000
60,00	**PHQA1032_0600 ME**	2500	4000	**≤48**	50	118,2	1,5	1970	60	6500	10000	20000
60,00	**PHQA1032_0600 ME**	2500	4000	**>48≤55**	55	118,2	1,5	1970	60	6500	10000	20000
60,00	**PHQA1032_0600 ME**	2500	4000	**>55≤60**	60	118,2	1,5	1970	60	6500	10000	20000

Planetary Gear Units **PHQA**
Reductores planetarios ***PHQA***
Riduttori planetari **PHQA**

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Please take notice of the indications on page PHQA6! ***¡Por favor observe las indicaciones en la página PHQA6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQA6!**

i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQA1033 (M_{2BMAX}=10000 Nm)												
96,00	**PHQA1033_0960 ME**	2200	3500	**≤32**	28	128,1	1,5	2061	64	6500	10000	20000
96,00	**PHQA1033_0960 ME**	2200	3500	**>32≤38**	32	128,1	1,5	2062	64	6500	10000	20000
96,00	**PHQA1033_0960 ME**	2200	3500	**>38≤48**	36	128,1	1,5	2062	64	6500	10000	20000
96,00	**PHQA1033_0960 MEL**	2200	3500	**>48≤55**	67	132,7	1,5	2067	64	6500	10000	20000
96,00	**PHQA1033_0960 MEL**	2200	3500	**>55≤60**	72	132,7	1,5	2067	64	6500	10000	20000
120,0	**PHQA1033_1200 ME**	2200	3500	**≤32**	27	128,1	1,5	2057	64	6500	10000	20000
120,0	**PHQA1033_1200 ME**	2200	3500	**>32≤38**	31	128,1	1,5	2058	64	6500	10000	20000
120,0	**PHQA1033_1200 ME**	2200	3500	**>38≤48**	35	128,1	1,5	2058	64	6500	10000	20000
120,0	**PHQA1033_1200 MEL**	2200	3500	**>48≤55**	66	132,7	1,5	2061	64	6500	10000	20000
120,0	**PHQA1033_1200 MEL**	2200	3500	**>55≤60**	71	132,7	1,5	2061	64	6500	10000	20000
150,0	**PHQA1033_1500 ME**	2500	4000	**≤32**	20	128,1	1,5	2058	62	6500	10000	20000
150,0	**PHQA1033_1500 ME**	2500	4000	**>32≤38**	24	128,1	1,5	2058	62	6500	10000	20000
150,0	**PHQA1033_1500 ME**	2500	4000	**>38≤48**	28	128,1	1,5	2058	62	6500	10000	20000
150,0	**PHQA1033_1500 MEL**	2500	4000	**>48≤55**	59	132,7	1,5	2060	62	6500	10000	20000
150,0	**PHQA1033_1500 MEL**	2500	4000	**>55≤60**	64	132,7	1,5	2060	62	6500	10000	20000
168,0	**PHQA1033_1680 ME**	2800	4500	**≤32**	15	128,1	1,5	2062	61	6500	10000	20000
168,0	**PHQA1033_1680 ME**	2800	4500	**>32≤38**	18	128,1	1,5	2062	61	6500	10000	20000
168,0	**PHQA1033_1680 ME**	2800	4500	**>38≤48**	21	128,1	1,5	2062	61	6500	10000	20000
168,0	**PHQA1033_1680 MEL**	2800	4500	**>48≤55**	53	132,7	1,5	2063	61	6500	10000	20000
210,0	**PHQA1033_2100 ME**	2800	4500	**≤32**	15	128,1	1,5	2058	61	6500	10000	20000
210,0	**PHQA1033_2100 ME**	2800	4500	**>32≤38**	17	128,1	1,5	2058	61	6500	10000	20000
210,0	**PHQA1033_2100 ME**	2800	4500	**>38≤48**	20	128,1	1,5	2058	61	6500	10000	20000
210,0	**PHQA1033_2100 MEL**	2800	4500	**>48≤55**	53	132,7	1,5	2059	61	6500	10000	20000
240,0	**PHQA1033_2400 ME**	2800	4500	**≤32**	12	128,1	1,5	2055	59	6500	10000	20000
240,0	**PHQA1033_2400 ME**	2800	4500	**>32≤38**	15	128,1	1,5	2055	59	6500	10000	20000
240,0	**PHQA1033_2400 ME**	2800	4500	**>38≤48**	18	128,1	1,5	2055	59	6500	10000	20000
240,0	**PHQA1033_2400 MEL**	2800	4500	**>48≤55**	50	132,7	1,5	2056	59	6500	10000	20000
300,0	**PHQA1033_3000 ME**	2800	4500	**≤32**	12	128,1	1,5	2053	59	6500	10000	20000
300,0	**PHQA1033_3000 ME**	2800	4500	**>32≤38**	14	128,1	1,5	2053	59	6500	10000	20000
300,0	**PHQA1033_3000 ME**	2800	4500	**>38≤48**	18	128,1	1,5	2053	59	6500	10000	20000
300,0	**PHQA1033_3000 MEL**	2800	4500	**>48≤55**	50	132,7	1,5	2054	59	6500	10000	20000
420,0	**PHQA1033_4200 ME**	2800	4500	**≤32**	12	128,1	1,5	2036	59	6500	10000	20000
420,0	**PHQA1033_4200 ME**	2800	4500	**>32≤38**	14	128,1	1,5	2036	59	6500	10000	20000
420,0	**PHQA1033_4200 ME**	2800	4500	**>38≤48**	18	128,1	1,5	2036	59	6500	10000	20000
420,0	**PHQA1033_4200 MEL**	2800	4500	**>48≤55**	50	132,7	1,5	2036	59	6500	10000	20000
600,0	**PHQA1033_6000 ME**	2800	4500	**≤32**	12	128,1	1,5	1969	59	6500	10000	20000
600,0	**PHQA1033_6000 ME**	2800	4500	**>32≤38**	14	128,1	1,5	1969	59	6500	10000	20000
600,0	**PHQA1033_6000 ME**	2800	4500	**>38≤48**	17	128,1	1,5	1969	59	6500	10000	20000
600,0	**PHQA1033_6000 MEL**	2800	4500	**>48≤55**	50	132,7	1,5	1969	59	6500	10000	20000

Dimension drawings
ServoFit® Planetary Gear Units **PHQA**

Dibujos acotados
Reductores planetarios
ServoFit® PHQA

Disegni quotati
ServoFit® Riduttori planetari **PHQA**

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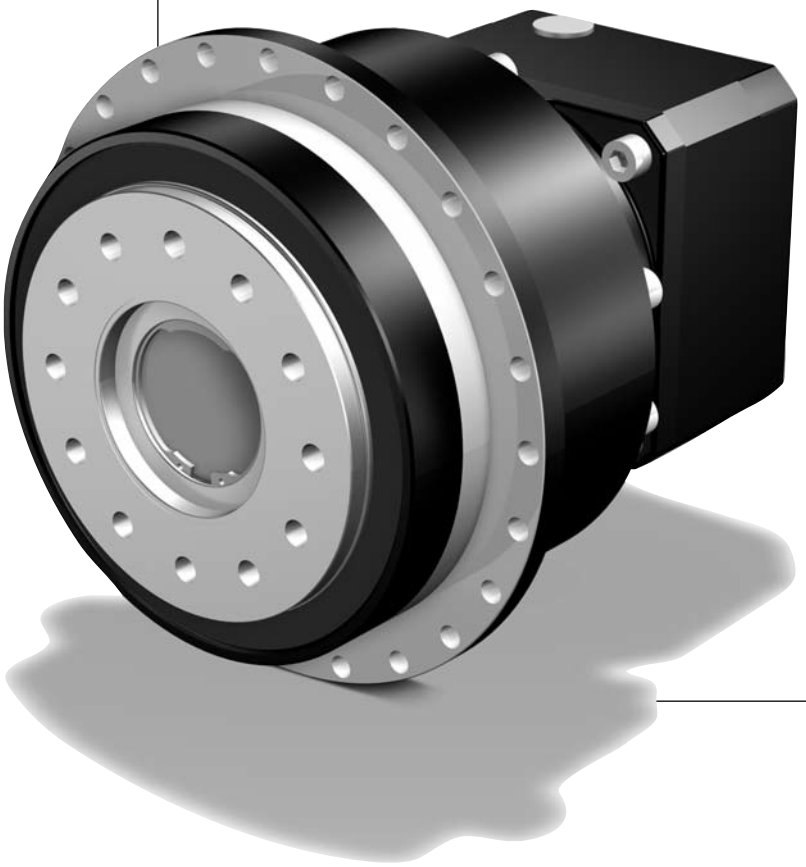

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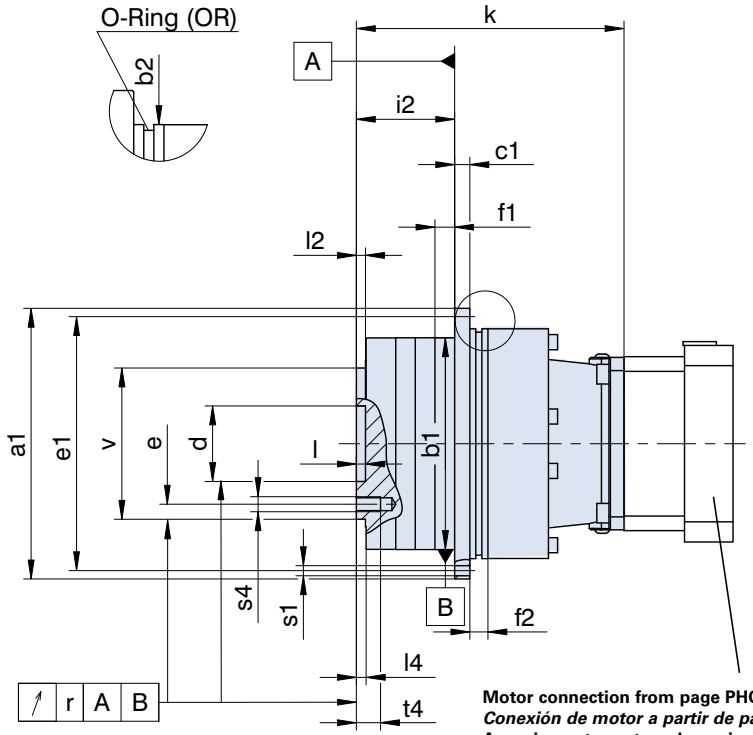
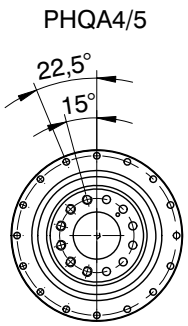
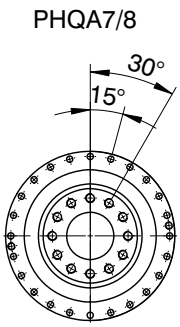
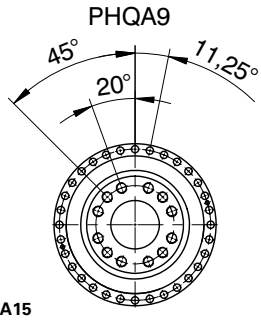
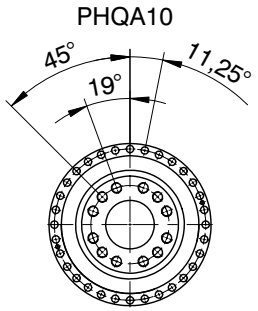
PHQA4...MF - PHQA9...MF
PHQA10...ME











Motor connection from page PHQA15
Conexión de motor a partir de página PHQA15
Accopiamento motore da pagina PHQA15

Typ	øa1	øb1	øb2	c1	ød	øe	øe1	f1	f2
PHQA421	118h7	90h7	95h7	7	31,5H6	50	109	10	10
PHQA422	118h7	90h7	95h7	7	31,5H6	50	109	10	10
PHQA521	145h7	110h7	120h7	8	40,0H6	63	135	10	12
PHQA522	145h7	110h7	120h7	8	40,0H6	63	135	10	12
PHQA721	179h7	140h7	152h7	10	50,0H6	80	168	12	12
PHQA722	179h7	140h7	152h7	10	50,0H6	80	168	12	12
PHQA723	179h7	140h7	152h7	10	50,0H6	80	168	12	12
PHQA822	247h7	200h7	212h7	12	80,0H6	125	233	15	15
PHQA823	247h7	200h7	212h7	12	80,0H6	125	233	15	15
PHQA932	300	255h7	255h7	18	90,0H6	145	280	20	33
PHQA933	300	255h7	255h7	18	90,0H6	145	280	20	33
PHQA1032	330	285h7	-	20	95,0H6	166	310	20	20
PHQA1033	330	285h7	-	20	95,0H6	166	310	20	20

Typ	i2	k	l	l2	l4	OR	r	øs1	s4	t4	øv
PHQA421	30	66,0	6	6	6,5	90x3	0,020	5,5	M6	11	63h7
PHQA422	30	113,0	6	6	6,5	90x3	0,020	5,5	M6	11	63h7
PHQA521	29	70,0	6	6	6,5	110x3	0,020	5,5	M8	11	80h7
PHQA522	29	124,5	6	6	6,5	110x3	0,020	5,5	M8	11	80h7
PHQA721	38	88,0	6	6	6,5	145x3	0,025	6,6	M10	14	100h7
PHQA722	38	150,0	6	6	6,5	145x3	0,025	6,6	M10	16	100h7
PHQA723	38	204,5	6	6	6,5	145x3	0,025	6,6	M10	16	100h7
PHQA822	50	201,0	8	8	8,5	200x5	0,030	9,0	M12	17	160h7
PHQA823	50	263,0	8	8	8,5	200x5	0,030	9,0	M12	17	160h7
PHQA932	66	290,5	12	11	12,0	238x5	0,030	13,5	M20	28	180h7
PHQA933	66	367,0	12	11	12,0	238x5	0,030	13,5	M20	28	180h7
PHQA1032	75	350,0	10	15	15,0	270x6	0,040	13,5	M24	35	200h7
PHQA1033	75	444,0	10	15	15,0	270x6	0,040	13,5	M24	35	200h7

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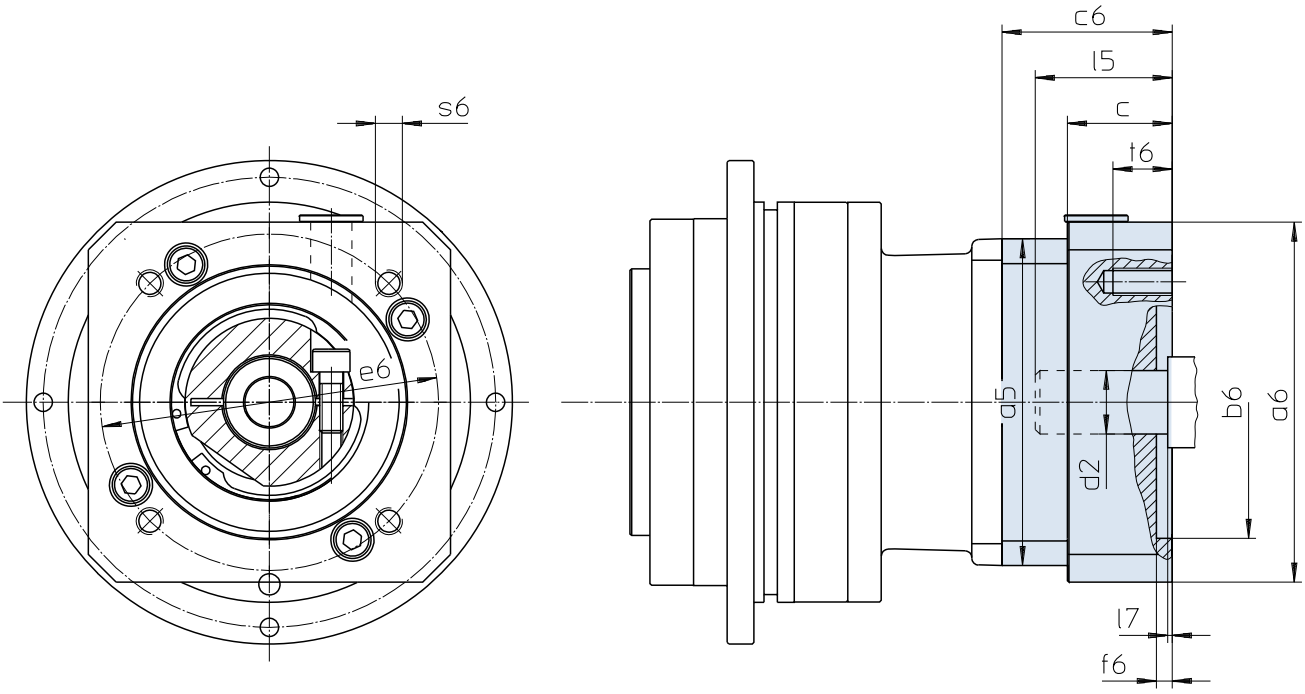
PHQA421...MF - PHQA723...MF



Further motor connection dimensions on request.

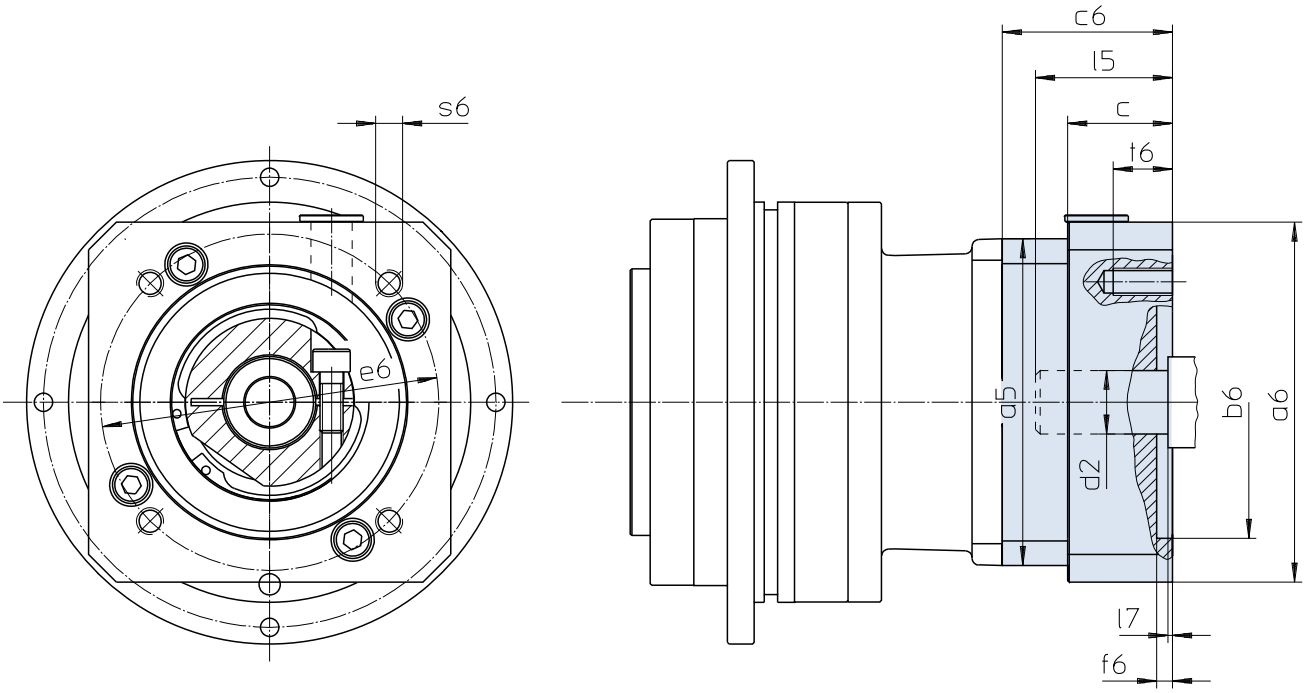
Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHQA421	50,0H7	95	24	41	95	100	21	54,0	2,5	2,5	M6	13
PHQA421	80,0H7	100	24	41	95	100	21	54,0	4,0	2,5	M6	13
PHQA421	95,0H7	115	24	50	95	100	30	63,0	4,0	11,5	M8	16
PHQA421	95,0H7	115	24	41	95	100	21	54,0	4,0	2,5	M8	21
PHQA421	95,0H7	130	24	41	95	115	21	54,0	4,0	2,5	M8	21
PHQA421	110,0H7	130	24	50	95	115	30	63,0	4,0	11,5	M8	16
PHQA421	110,0H7	145	24	58	95	130	38	71,0	7,0	19,5	M8	16
PHQA421	130,0H7	165	24	50	95	140	30	63,0	5,0	11,5	M10	20
PHQA422	40,0H7	63	19	40	72	75	18	51,5	3,0	3,0	M5	11
PHQA422	50,0H7	70	19	40	72	75	18	51,5	3,0	3,0	M4	9
PHQA422	50,0H7	95	19	40	72	80	18	51,5	3,0	3,0	M6	13
PHQA422	60,0H7	75	19	40	75	72	-	51,5	3,5	3,0	M5	11
PHQA422	60,0H7	90	19	40	72	75	18	51,5	3,5	3,0	M5	9
PHQA422	70,0H7	90	19	40	72	80	18	51,5	3,5	3,0	M5	9
PHQA422	80,0H7	100	19	40	90	90	-	51,5	3,5	3,0	M6	13
PHQA422	95,0H7	115	19	40	72	100	18	51,5	4,0	3,0	M8	18
PHQA422	95,0H7	130	19	40	72	115	18	51,5	4,0	3,0	M8	18
PHQA521	80,0H7	100	35	51	120	115	24	64,0	4,0	2,5	M6	13
PHQA521	95,0H7	115	35	51	120	115	24	64,0	4,0	2,5	M8	16
PHQA521	95,0H7	130	35	51	120	115	24	64,0	4,0	2,5	M8	16
PHQA521	110,0H7	130	35	51	120	115	24	64,0	4,0	2,5	M8	16
PHQA521	110,0H7	145	35	64	120	130	37	77,0	7,0	15,5	M8	14
PHQA521	110,0H7	145	35	51	120	140	42	82,0	7,0	2,5	M8	16
PHQA521	130,0H7	165	35	59	120	140	32	72,0	5,0	10,5	M10	20
PHQA522/PHQA723	50,0H7	70	24	41	98	100	21	56,0	4,0	2,5	M4	10
PHQA522/PHQA723	50,0H7	95	24	41	98	100	21	56,0	2,5	2,5	M6	13
PHQA522/PHQA723	60,0H7	75	24	41	98	100	21	56,0	3,5	2,5	M5	9
PHQA522/PHQA723	80,0H7	100	24	41	100	98	-	56,0	4,0	2,5	M6	13
PHQA522/PHQA723	95,0H7	115	24	41	100	98	-	56,0	4,0	2,5	M8	16
PHQA522/PHQA723	95,0H7	115	24	50	98	100	30	65,0	4,0	11,5	M8	16
PHQA522/PHQA723	95,0H7	130	24	41	98	115	21	56,0	4,0	2,5	M8	16
PHQA522/PHQA723	95,0H7	130	24	50	98	115	30	65,0	4,0	11,5	M8	16
PHQA522/PHQA723	110,0H7	130	24	50	98	115	30	65,0	4,0	11,5	M8	16
PHQA522/PHQA723	110,0H7	145	24	58	98	130	38	73,0	7,0	19,5	M8	16
PHQA522/PHQA723	130,0H7	165	24	50	98	140	30	65,0	7,0	11,5	M10	20

STÖBER

PHQA721...MF - PHQA933...MF
PHQA10...ME



Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHQA721	110,0H7	130	38	63	152	145	26	78,0	5,0	4,5	M8	14
PHQA721	110,0H7	145	38	74	152	145	37	89,0	5,0	15,5	M8	16
PHQA721	110,0H7	165	38	63	152	145	26	78,0	5,0	4,5	M10	26
PHQA721	114,3H7	200	38	82	152	180	45	97,0	5,0	23,5	M12	25
PHQA721	130,0H7	165	38	63	152	145	26	78,0	5,0	4,5	M10	26
PHQA721	130,0H7	215	38	63	152	190	26	78,0	5,0	4,5	M12	26
PHQA721	180,0H7	215	38	63	152	190	26	78,0	5,0	4,5	M12	26
PHQA721	180,0H7	215	38	82	152	190	45	97,0	5,0	23,5	M12	25
PHQA722/PHQA823	80,0H7	100	35	51	115	120	24	64,0	4,0	3,0	M6	13
PHQA722/PHQA823	95,0H7	115	35	51	115	115	-	64,0	4,0	3,0	M8	16
PHQA722/PHQA823	95,0H7	130	35	51	115	120	24	64,0	4,0	3,0	M8	16
PHQA722/PHQA823	110,0H7	130	35	51	115	115	-	64,0	4,0	3,0	M8	16
PHQA722/PHQA823	110,0H7	145	35	59	115	140	32	72,0	6,5	11,0	M8	16
PHQA722/PHQA823	110,0H7	145	35	69	115	140	42	82,0	7,0	21,0	M8	16
PHQA722/PHQA823	110,0H7	165	35	51	115	140	24	64,0	5,0	3,0	M10	24
PHQA722/PHQA823	130,0H7	165	35	59	115	140	32	72,0	5,0	11,0	M10	20
PHQA822/PHQA933	110,0H7	130	38	63	145	145	26	78,0	5,0	4,5	M8	14
PHQA822/PHQA933	110,0H7	145	38	74	145	145	37	89,0	5,0	15,5	M8	16
PHQA822/PHQA933	110,0H7	165	38	63	145	145	26	78,0	5,0	4,5	M10	26
PHQA822/PHQA933	114,3H7	200	38	82	145	180	45	97,0	5,0	23,5	M12	25
PHQA822/PHQA933	130,0H7	165	38	63	145	145	26	78,0	5,0	4,5	M10	26
PHQA822/PHQA933	130,0H7	215	38	63	145	190	26	78,0	5,0	4,5	M12	26
PHQA822/PHQA933	180,0H7	215	38	82	145	190	45	97,0	5,0	23,5	M12	25
PHQA932	114,3H7	200	48	82	190	190	34	94,0	4,0	3,5	M12	34
PHQA932	130,0H7	165	48	82	190	190	34	94,0	5,0	3,5	M10	18
PHQA932	130,0H7	215	48	82	190	190	34	94,0	5,0	3,5	M12	34
PHQA932	180,0H7	215	48	83	190	190	35	95,0	5,0	4,5	M12	35
PHQA932	250,0H7	300	48	86	190	260	38	98,0	6,0	7,5	M16	38
PHQA1032	180,0H7	215	60	85	225	190	43	-	6,0	5,0	M12	25
PHQA1032	250,0H7	300	60	111	225	260	69	134,0	6,0	31,0	M16	32
PHQA1032	250,0H7	300	60	85	225	260	43	108,0	6,0	5,0	M16	32
PHQA1032	300,0H7	350	60	111	225	314	69	134,0	6,0	31,0	M16	34
PHQA1033	110,0H7	165	48	81	190	190	34	93,0	5,0	4,5	M10	18
PHQA1033	114,3H7	200	48	81	190	190	34	93,0	4,0	4,5	M12	34
PHQA1033	130,0H7	165	48	81	190	190	34	93,0	5,0	4,5	M10	18
PHQA1033	130,0H7	215	48	81	190	190	34	93,0	5,0	4,5	M12	34
PHQA1033	180,0H7	215	48	82	190	190	35	94,0	5,0	5,5	M12	35
PHQA1033	180,0H7	215	48	81	190	190	-	93,0	5,0	4,5	M12	25
PHQA1033	250,0H7	300	48	85	190	260	38	97,0	6,0	8,5	M16	38

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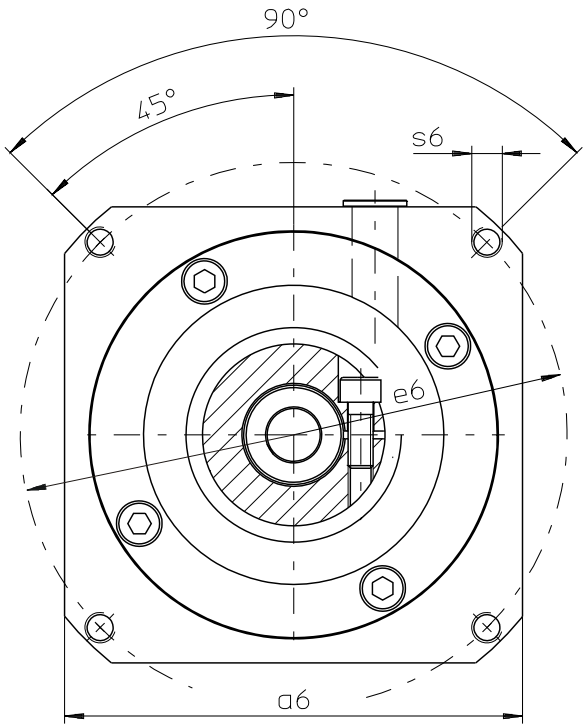
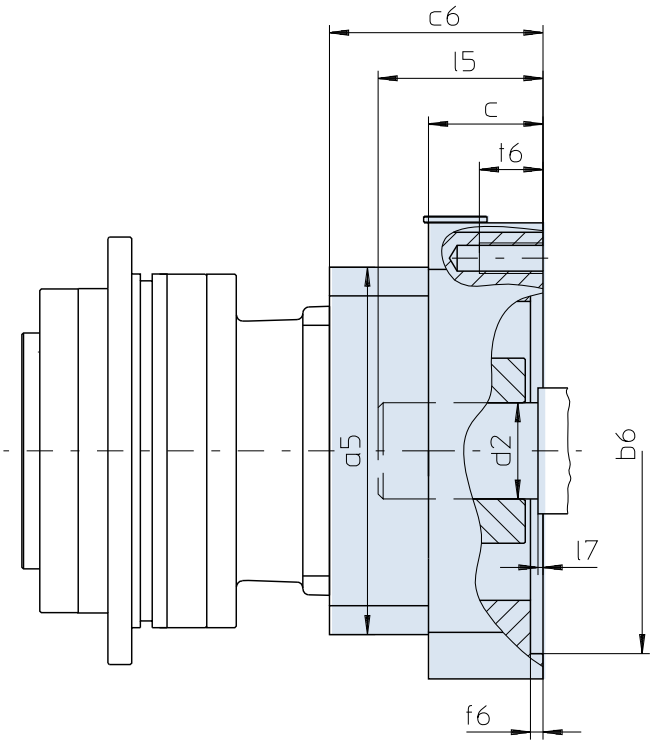
PHQA421...MFL - PHQA723...MFL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHQA421	80,0H7	100	32	51	114	115	24	65,5	4,0	2,5	M6	13
PHQA421	110,0H7	145	32	64	114	130	37	78,5	7,0	15,5	M8	14
PHQA421	110,0H7	145	32	51	114	140	42	83,5	7,0	2,5	M8	16
PHQA421	130,0H7	165	32	59	114	140	32	73,5	5,0	10,5	M10	20
PHQA422	50,0H7	70	24	41	100	100	21	55,5	4,0	2,5	M4	10
PHQA422	60,0H7	75	24	41	100	100	21	55,5	3,5	2,5	M5	9
PHQA422	95,0H7	115	24	41	100	100	21	55,5	4,0	2,5	M8	21
PHQA422	95,0H7	115	24	50	100	100	30	64,5	4,0	11,5	M8	16
PHQA422	110,0H7	130	24	50	100	115	30	64,5	4,0	11,5	M8	16
PHQA422	95,0H7	130	24	41	100	115	21	55,5	4,0	2,5	M8	16
PHQA422	95,0H7	130	24	50	100	115	30	64,5	4,0	11,5	M8	16
PHQA422	110,0H7	145	24	58	100	130	38	72,5	7,0	19,5	M8	16
PHQA422	130,0H7	165	24	50	100	140	30	64,5	7,0	11,5	M10	20
PHQA521	110,0H7	130	38	63	152	145	26	82,0	5,0	4,5	M8	14
PHQA521	130,0H7	165	38	63	152	145	26	82,0	5,0	4,5	M10	26
PHQA521	110,0H7	165	38	63	152	145	26	82,0	5,0	4,5	M10	26
PHQA521	114,3H7	200	38	82	152	180	45	101,0	5,0	23,5	M12	25
PHQA521	130,0H7	215	38	63	152	190	26	82,0	5,0	4,5	M12	26
PHQA521	180,0H7	215	38	63	152	190	26	82,0	5,0	4,5	M12	26
PHQA521	180,0H7	215	38	82	152	190	45	101,0	5,0	23,5	M12	25
PHQA522/PHQA723	80,0H7	100	32	50	115	120	24	67,5	4,0	2,5	M6	13
PHQA522/PHQA723	110,0H7	145	32	58	115	140	32	75,5	6,5	10,5	M8	16
PHQA522/PHQA723	130,0H7	165	32	58	115	140	32	75,5	5,0	10,5	M10	20
PHQA522/PHQA723	110,0H7	165	32	50	115	140	24	67,5	5,0	2,5	M10	24

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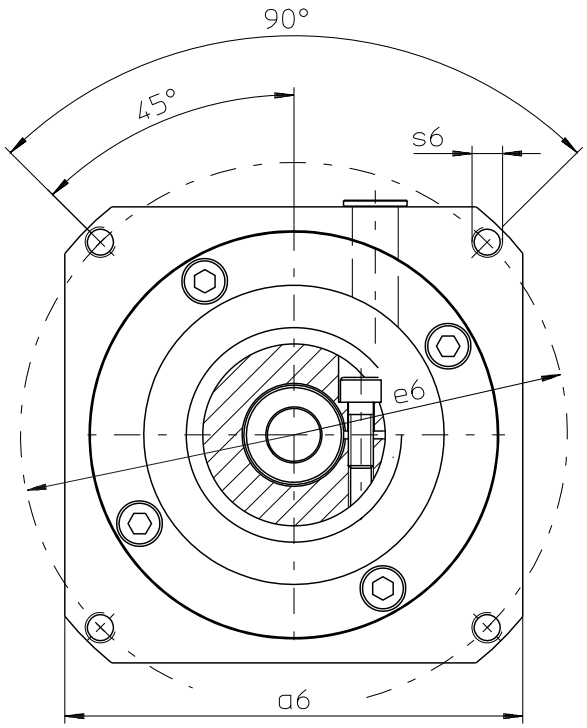
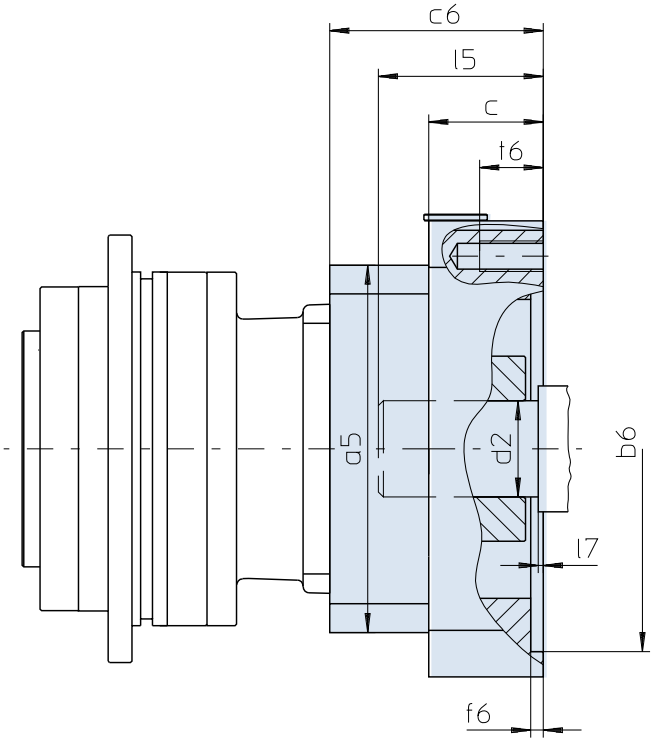
PHQA721...MFL - PHQA933...MFL
PHQA1033...MEL





Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	a5	□a6	c	c6	f6	l7max	s6	t6
PHQA721	180,0H7	215	48	83	208	190	35	103,0	5,0	4,5	M12	35
PHQA721	250,0H7	300	48	86	208	260	38	106,0	6,0	7,5	M16	38
PHQA722/PHQA823	110,0H7	130	38	63	145	145	26	82,0	5,0	4,5	M8	14
PHQA722/PHQA823	130,0H7	165	38	63	145	145	26	82,0	5,0	4,5	M10	26
PHQA722/PHQA823	110,0H7	165	38	63	145	145	26	82,0	5,0	4,5	M10	26
PHQA722/PHQA823	114,3H7	200	38	82	145	180	45	101,0	5,0	23,5	M12	25
PHQA722/PHQA823	130,0H7	215	38	63	145	190	26	82,0	5,0	4,5	M12	26
PHQA722/PHQA823	180,0H7	215	38	82	145	190	45	101,0	5,0	23,5	M12	25
PHQA822/PHQA933	130,0H7	165	48	82	190	190	34	102,0	5,0	3,5	M10	18
PHQA822/PHQA933	114,3H7	200	48	82	190	190	34	102,0	4,0	3,5	M12	34
PHQA822/PHQA933	180,0H7	215	48	83	190	190	35	103,0	5,0	4,5	M12	35
PHQA822/PHQA933	250,0H7	300	48	86	190	260	38	106,0	6,0	7,5	M16	38
PHQA1033	250,0H7	300	60	85	225	260	43	110,0	6,0	5,0	M16	32
PHQA1033	300,0H7	350	60	111	225	314	69	136,0	6,0	31,0	M16	34

ServoFit® PHQK Right-Angle Planetary Gear Units
Reductores planetarios ortogonales ***ServoFit® PHQK***
Riduttori planetari coppia conica **ServoFit® PHQK**

STÖBER

Quattro Power Precision Angular Planetary Gear Units

- Acceleration torque: 320 – 43000 Nm
- Low backlash: 3,5 - 4 arcmin
- High power density due to 4-fold (Quattro) planet system
- extremely high torsional and tilting stiffness
- EasyAdapt® motor adapter with clamp coupling:
  - easy to assemble due to spreading function
  - aluminium lightweight construction
  - low construction length
  - high torsional stiffness
  - optionally with clamping set for increased safety
  - optionally with double seal
- FKM seal at input, continuous operation without cooling
- advanced gear technology
- low mass moments of inertia
- quiet running
- efficiency:
  3 stage ≥ 93 %
  4 stage ≥ 90 %

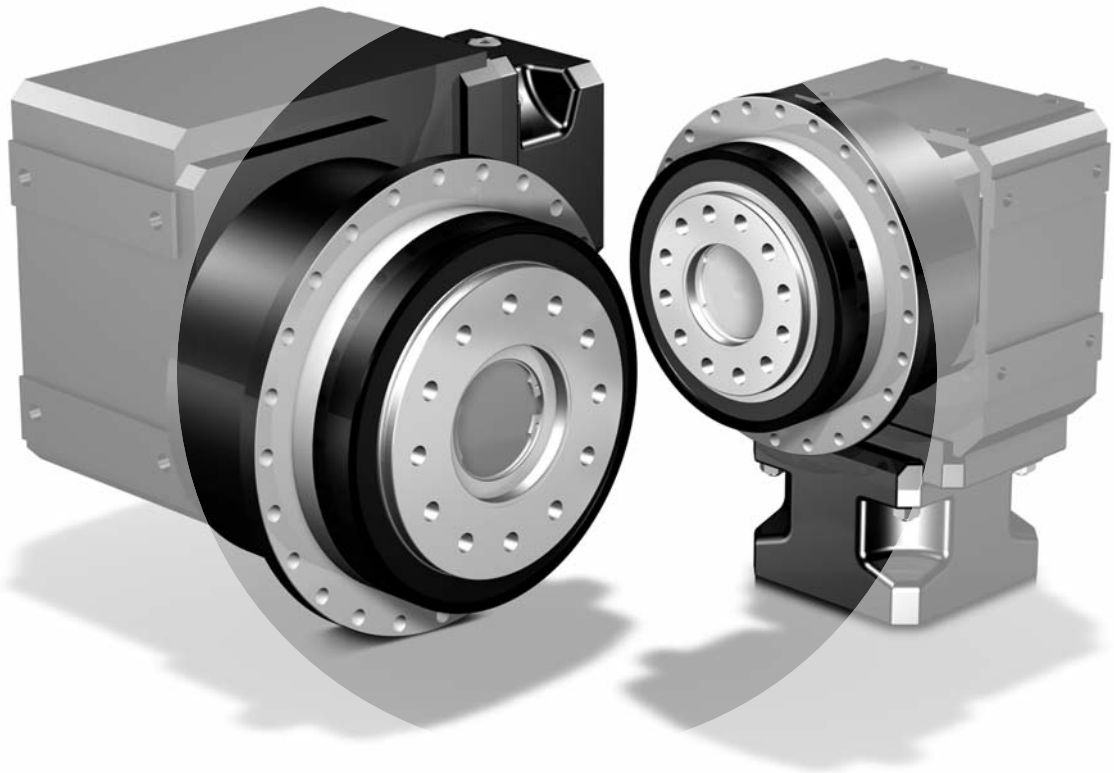
Reductores planetarios ortogonales de precisión Quattro Power

- *Par de aceleración: 320 – 43000 Nm*
- *Bajo juego de giro: 3,5 – 4 arcmin*
- *Alta densidad de potencia por sistema planetario cuádruplo (Quattro)*
- *Rigideces a la torsión y al vuelco extremadamente altas*
- *Adaptador de motor EasyAdapt® con acoplamiento de anillo de apriete*
  - *Fácil de montar gracias a la función de expansión*
  - *Construcción ligera de aluminio*
  - *Longitud constructiva corta*
  - *Gran resistencia a la torsión*
  - *Opcionalmente con kit de sujeción para una mayor seguridad*
  - *Opcionalmente con sellado doble*
- *Anillo retén de FKM en la entrada, trabajo permanente sin enfriamiento*
- *Tecnología superior de dentado*
- *Bajos momentos de inercia de masa*
- *Marcha extremadamente suave*
- *Rendimiento:*
  3 trenes ≥ 93 %
  4 trenes ≥ 90 %

Riduttori planetari angolari di precisione Quattro Power

- Coppia di accelerazione: 320 – 43000 Nm
- Gioco minimo: 3,5 – 4 arcmin
- Densità di potenza elevata grazie al sistema planetario quadruplo (Quattro)
- Rigidità torsionale e rigidità al ribaltamento estremamente elevate
- Adattatore motore EasyAdapt® con giunto di bloccaggio:
  - Montaggio più facile grazie alla funzione di divaricazione
  - Struttura leggera in alluminio
  - Lunghezza contenuta
  - Elevata resistenza alla torsione
  - Kit di serraggio opzionale per una maggiore sicurezza
  - Doppio isolamento opzionale
- Anello di tenuta in FKM all'ingresso, funzionamento continuo senza raffreddamento
- Tecnologia della dentatura avanzata
- Momenti di inerzia ridotti
- Estremamente silenziosi
- Rendimento:
  3 stadi ≥ 93 %
  4 stadi ≥ 90 %

ServoFit® PHQK



ServoFit® PHQK
Right-Angle
Planetary Gear Units

Reductores planetarios ortogonales ***ServoFit® PHQK***

ServoFit® Riduttori planetari - coppia conica **PHQK**

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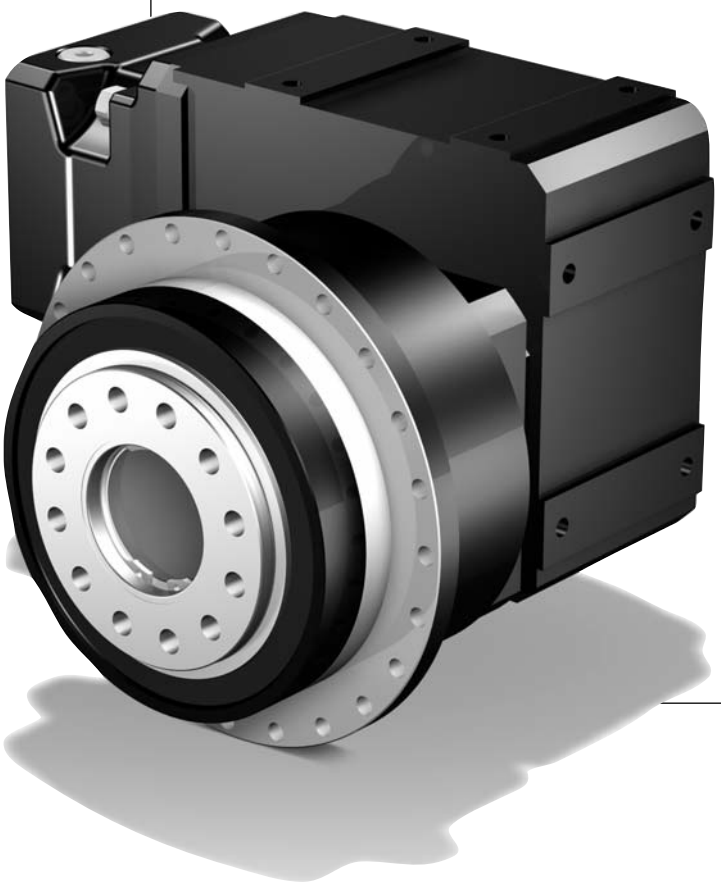

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PHQK

Type designation / *Tipificación* / Indentificazione dei modelli

STÖBER

PHQ 8 2 1 F 0055 K402VF 0040 ME20

1 2 3 4 5 6 7 8 9

1 Gear unit type
PHQ – Planetary gear unit

2 Planetary gear unit size

3 Generation number

4 Stages PHQ gear unit
1 – 1 stage

5 Design PHQ gear unit
F – flange shaft

6 Transmission ratio PHQ gear unit i x 10

7 Angular gear input
K – helical bevel gear units 2-stage
Please indicate mounting side (3 or 4) with your order.

8 Transmission ratio K gear unit i x 10

9 Mounting series
ME – Motor adapter K gear unit with EasyAdapt® coupling
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection page PHQK22, please observe the max. dimensions).
MB – Motor adapter square with brake (option) (see brochure ID 441904)

Ordering data acc. to the type designation above.
Further ordering details:
– mounting position
– access clamping screw motor coupling
– information as whether the output is on page 3 or 4
– information as to whether the radial shaft seals on the output are made from FKM or NBR. Recommendation: FKM for an operating time ≥ 60%
– reversing operation of the output shaft ±20 to ±90 degrees (horizontal mounting) ? (also see page A13)

The torques and forces specified in this catalog only apply under the following conditions:
- For the attachment of the flange shaft and the gear unit housing on the machine side using screws of quality 12.9
- If the gear unit housings are adjusted at the pilot (H7)
PHQ4-PHQ10: øb1 or øb2
PHQ11-PHQ12: øb1 and øb3
- If the flange shaft is adjusted with the connecting element at the pilot ød or øv

1 *Tipo de reductor*
PHQ *– Reductor planetario*

2 *Tamaño del reductor planetario*

3 *Cifra de generación*

4 *Número de trenes reductor PHQ*
1 *– 1 tren*

5 *Ejecución reductor PHQ*
F *– Eje con brida*

6 *Número característico de la relación de reducción reductor PHQ i x 10*

7 *Entrada angular*
K *– Reductor cónico 2 trenes*
Indicar lado de la opción (3 ó 4) para el pedido.

8 *Número característico de la relación de reducción reductor K i x 10*

9 *Grupos de opciones*
ME *– Adaptador de motor reductor K con acoplamiento EasyAdapt®*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor página PHQK22, por favor observar dimensiones máximas).
MB *– Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

Datos de pedido de acuerdo a la tipificación indicada arriba.
Otros datos de pedido:
– *Posición de instalación*
– *Acceso al tornillo de apriete del acoplamiento de motor*
– *Indicación si sobre lado 3 o lado 4*
– *Indicación si anillos retén en la salida de FKM o de NBR. Recomendación: FKM para duración de conexión ≥ 60%*
– *¿Trabajo reversible del eje de salida de ± 20 hasta ± 90 grados (instalación horizontal)? (ver tambien pag. A13)*

Los pares y fuerzas indicados en este catálogo se aplican bajo las siguientes condiciones:
- *Al fijar el eje de brida y la carcasa del reductor en el lado de la máquina con tornillos de la calidad 12.9*
- *Si las carcasas del reductor están ajustadas en el borde de ajuste øb1 o øb2 (H7)*
PHQ4-PHQ10: øb1 o øb2
PHQ11-PHQ12: øb1 y øb3
- *Si el eje de brida está ajustada con el elemento de unión en el borde de ajuste ød o øv.*

1 Modello di riduttore
PHQ– Riduttore planetario

2 Taglia del riduttore angolare

3 Numero di generazione

4 Numero di stadi riduttore PHQ
1 – 1-stadio

5 Esecuzione del riduttore PHQ
F – Albero flangiato

6 Rapporto di trasmissione del riduttore PHQ i x 10

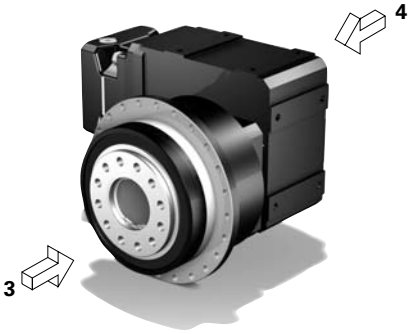
7 Ingresso angolare
K – Riduttori a coppia conica a 2-stadi
Al momento dell'ordine indicare il lato di montaggio (3 o 4).

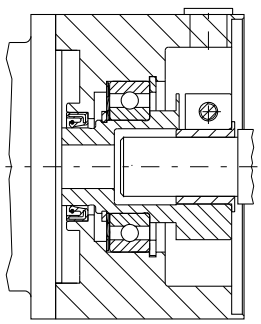
8 Rapporto di riduzione riduttore K i x 10
9 Opzioni annessi
ME - Adattatore motore riduttore K con giunto EasyAdapt®
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore pagina PHQK22, si prega di rispettare le misure max.).
MB – Adattatore motore quadro con freno (opzione) (vedere prospetto ID 441904)

Dati dell'ordine conformi alla indentificazione dei modelli di cui sopra.
Altri dati dell'ordine:
– Posizione di montaggio
– Accesso al giunto di accoppiamento motore
– Indicare se l'albero uscita sul lato 3 o 4
– Indicare se gli anelli di tenuta radiali dell'albero uscita sono in FKM o NBR. Raccomandazione: FKM per fattore di servizio ≥ 60%
– Funzionamento reversibile dell'albero uscita da ± 20 fino a ± 90 gradi (montaggio orizzontale) ? (vedere anche pagina A13)

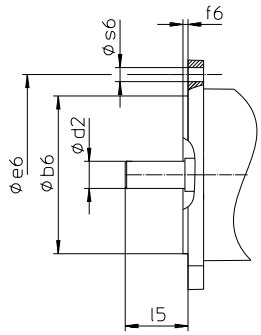
Le coppie e le forze indicate in questo catalogo si applicano alle seguenti condizioni:
- Per il fissaggio dell' albero flangiato e dell' scatola del riduttore sul lato macchina con viti di qualità 12.9
- Se le scatole del riduttore sono adattate sul bordo di accoppiamento øb1 o øb2 (H7)
PHQ4-PHQ10: øb1 o øb2
PHQ11-PHQ12: øb1 e øb3
- Se l' albero flangiato è adattato dell' elemento di collegamento sul bordo di accoppiamento ød o øv

PH821F 0055 K402VF 0040 ME20





EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Mounting positions / *Posiciones de instalación* / Posizioni di montaggio

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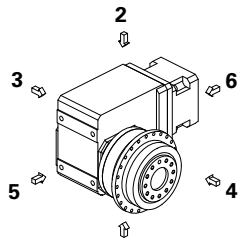
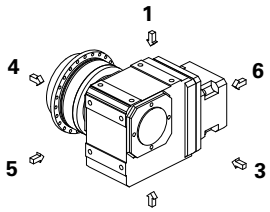
PHQ5K1 - PHQ8K4

EL1



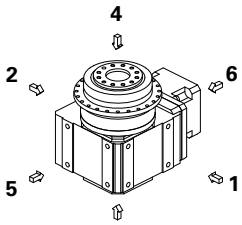
1

EL2



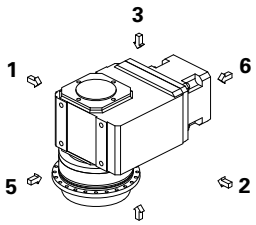
2

EL3



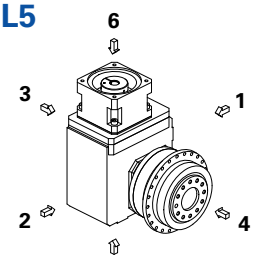
3

EL4



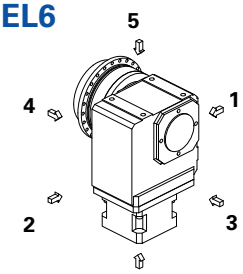
4

EL5



5

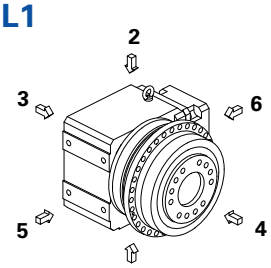
EL6



6

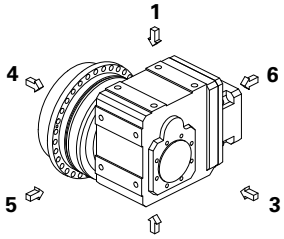
PHQ9K5 - PHQ12K9

EL1



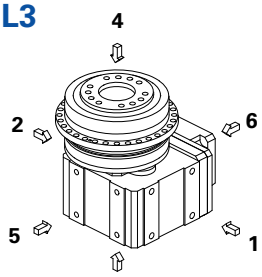
1

EL2



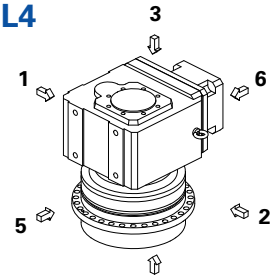
2

EL3



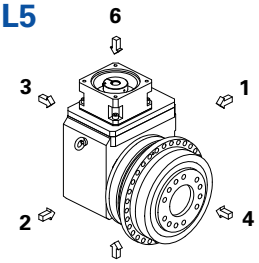
3

EL4



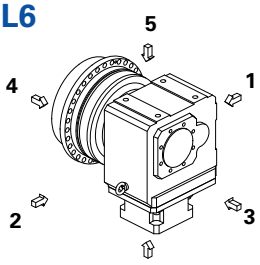
4

EL5



5

EL6



6

The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

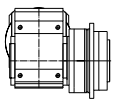
Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

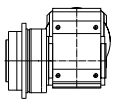
Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).

Mounting / *Montaje* / Montaggio PHQ

PHQ5K1 - PHQ8K4

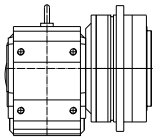


PHQ Side/*lado*/faccia 4

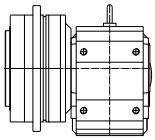


PHQ Side/*lado*/lato 3

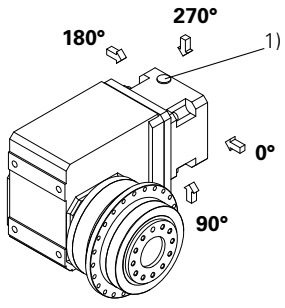
PHQ9K5 - PHQ12K9



PHQ Side/*lado*/faccia 4



PHQ Side/*lado*/lato 3



1) Access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamento motore

Shaft / housing design Output **PHQ**	*Ejecución de eje / de carcasa Salida **PHQ***	Esecuzione albero / carcassa Uscita **PHQ**

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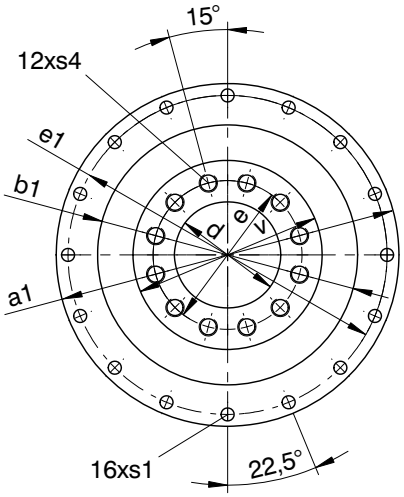
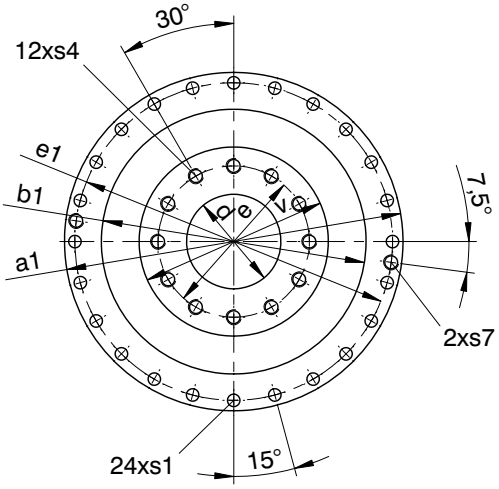
Flange shaft | ***Eje con brida*** | **Albero flangiato**

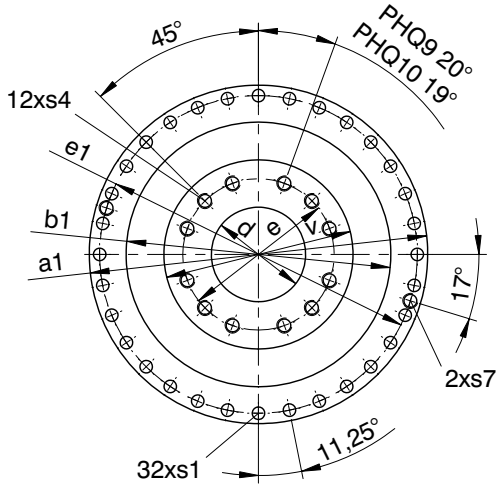
PHQ4 + PHQ5



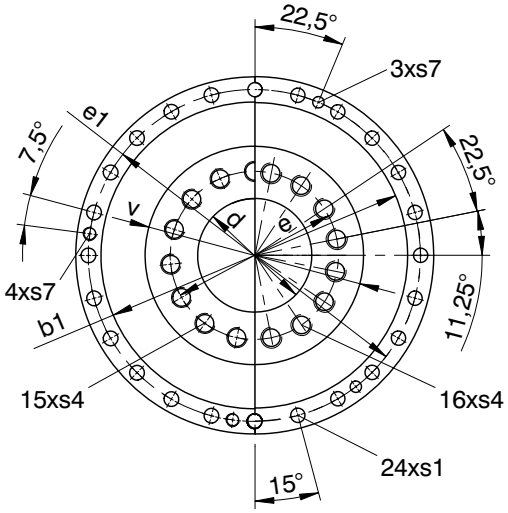
PHQ7 + PHQ8



PHQ9 + PHQ10



PHQ11 | PHQ12



Shaft design “F” | ***Ejecución de eje “F”*** | **Esecuzione albero “F”**

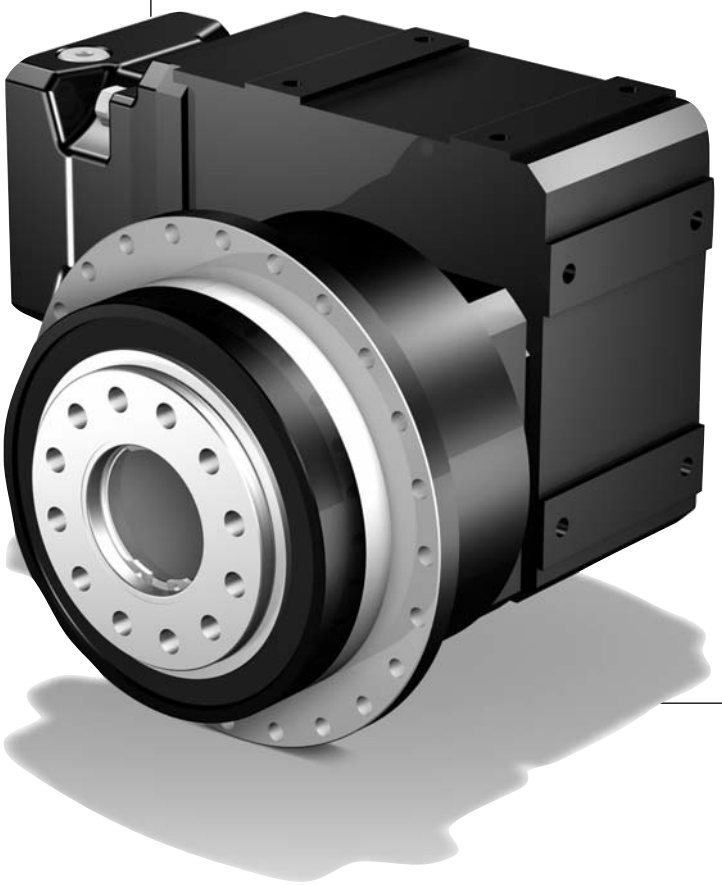
Typ	øa1	øb1	ød	øe	øe1	øs1	s4	s7	v
PHQ4	118h7	90h7	31,5H6	50	109	5,5	M6	-	63h7
PHQ5	145h7	110h7	40,0H6	63	135	5,5	M8	-	80h7
PHQ7	179h7	140h7	50,0H6	80	168	6,6	M10	-	100h7
PHQ8	247h7	200h7	80,0H6	125	233	9,0	M12	M10	160h7
PHQ9	300h7	255h7	90,0H6	145	280	13,5	M20	M8	180h7
PHQ10	330h7	285h7	95,0H6	166	310	13,5	M24	M10	200h7
PHQ11	425	365h6	120,0H6	200	395	17,5	M24	M16	260h7
PHQ12	550	470h6	180,0H7	280	510	22,0	M30	M16	330h7

Select. table **ServoFit®** **PHQK** Right-Angle Planetary Gear Units

Tabla de selección Red. planet. ortogonales ***ServoFit® PHQK***

Tabella di selezione **ServoFit®** Riduttori planetari - coppia conica **PHQK**

STÖBER



PHQK

Select. table **ServoFit® PHQK** Right-Angle Planetary Gear Units

*Tabla de selección Red. planet. ortogonales **ServoFit® PHQK***

Tabella di selezione **ServoFit®** Riduttori planetari - coppia conica **PHQK**

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Symbols:

- **i** - Gear unit ratio
- **i_{exakt}** - Exact math. ratio
- **n_{1MAX}** - Max. input speed
  - DBH - Continuous operation - input and output horizontal (EL1, EL2)
  - DBV - Continuous operation - input or output vertical (EL3, EL4, EL5, EL6)
  - ZB - Cycle operation (at ambient temperature 20°C, also see page A11/A12)
- **J_1** - Mass moment of inertia 2) (related to input)
- **G** - Weight
- **$\Lambda\varphi_2$** - Backlash
- **C_2** - Gear unit rigidity (related to output at M_{2B})
- **M_{2N}** - Rated torque 1) 2)
- **M_{2B}** - Max. perm. acceleration torque 2)
- **M_{2NOT}** - Emergency-Off moment 2) (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

Denominaciones:

- ***i*** - *Relación de reducción*
- ***i_{exakt}*** - *Relación de reducción matem. exacta*
- ***n_{1MAX}*** - *Velocidad máx. de entrada*
  - *DBH - Trabajo continuo - entrada y salida horizontal (EL1, EL2)*
  - *DBV - Trabajo continuo - entrada y salida vertical (EL3, EL4, EL5, EL6)*
  - *ZB - Trabajo cíclico (a temperatura ambiente 20°C, ver también página A11/A12)*
- ***J_1*** - *Momento de inercia de masa (referido a la entrada)*
- ***G*** - *Peso*
- ***$\Lambda\varphi_2$*** - *Juego de giro*
- ***C_2*** - *Rigidez del reductor (referido a la salida para M_{2B})*
- ***M_{2N}*** - *Par nominal 1)*
- ***M_{2B}*** - *Par máx. admisible de aceleración*
- ***M_{2NOT}*** - *Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

Simboli:

- **i** - Rapporto di riduzione
- **i_{exakt}** - Rapporto di riduzione mat. preciso
- **n_{1MAX}** - Max. numero di giri in ingresso
  - DBH - Funzionamento continuo - ingresso e uscita orizzontale (EL1, EL2)
  - DBV - Funzionamento continuo - ingresso e uscita verticale (EL3, EL4, EL5, EL6)
  - ZB - Funzionamento ciclico (a temperatura ambiente di 20°C, vedere anche pagina A11/A12)
- **J_1** - Momento di inerzia 2) (riferito all'ingresso)
- **G** - Peso
- **$\Lambda\varphi_2$** - Gioco
- **C_2** - Rigidità del riduttore (riferito all'uscita per M_{2B})
- **M_{2N}** - Coppia nominale 1) 2)
- **M_{2B}** - Coppia di accelerazione max. ammessa 2)
- **M_{2NOT}** - Coppia di emergenza 2) (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

1) Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

2) If you use a pinion securing element (option), the torque values can be partly increased. This also results in higher mass moments of inertia.
Values on request or using the EASY Online product catalog (configurator) on our website
http://products.stoeber.de/

1) Los valores se refieren a la velocidad de entrada n_1 = 1500 min^{-1}

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

2) Con el kit de sujeción opcional, valores parcialmente superiores. Con esto aumentan los pares de inercia de masa.
Valores disponibles bajo petición o en el catálogo de productos EASY Online (configurador).
http://products.stoeber.de/

1) I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

2) In caso di impiego di kit di serraggio opzionale possono essere rilevati valori in parte più elevati. *In questo modo risultano dei momenti d'inerzia di massa più elevati.*
Indicazione dei valori su richiesta oppure tramite catalogo prodotti EASY Online (configuratore).
http://products.stoeber.de/

Right-Angle Planetary Gear Units **PHQK**
*Reductores planetarios ortogonales **PHQK***
Riduttori planetari-coppia conica **PHQK**

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Please take notice of the indications on page PHQK6! ***¡Por favor observe las indicaciones en la página PHQK6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQK6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ5K1 (M2BMAX=430 Nm)													
22,00	22/1	**PHQ521F0055 K102VF0040 ME10**	3300	2800	4500	**≤14**	1,3	15,4	4	67	280	430	550
22,00	22/1	**PHQ521F0055 K102VF0040 ME10**	3300	2800	4500	**>14≤19**	1,6	15,5	4	69	280	430	670
22,00	22/1	**PHQ521F0055 K102VF0040 ME20**	3300	2800	4500	**≤19**	2,7	16,4	4	68	280	430	670
22,00	22/1	**PHQ521F0055 K102VF0040 ME20**	3300	2800	4500	**>19≤24**	3,4	16,5	4	70	280	430	670
30,62	8360/273	**PHQ521F0055 K102VF0056 ME10**	3300	2800	4500	**≤14**	1,1	15,4	4	69	280	430	770
30,62	8360/273	**PHQ521F0055 K102VF0056 ME10**	3300	2800	4500	**>14≤19**	1,3	15,5	4	70	280	430	800
30,62	8360/273	**PHQ521F0055 K102VF0056 ME20**	3300	2800	4500	**≤19**	2,5	16,4	4	69	280	430	800
30,62	8360/273	**PHQ521F0055 K102VF0056 ME20**	3300	2800	4500	**>19≤24**	3,2	16,5	4	70	280	430	800
33,00	33/1	**PHQ521F0055 K102VF0060 ME10**	3300	2800	4500	**≤14**	0,88	15,4	4	69	280	430	800
33,00	33/1	**PHQ521F0055 K102VF0060 ME10**	3300	2800	4500	**>14≤19**	1,1	15,5	4	70	280	430	800
33,00	33/1	**PHQ521F0055 K102VF0060 ME20**	3300	2800	4500	**≤19**	2,3	16,4	4	70	280	430	800
33,00	33/1	**PHQ521F0055 K102VF0060 ME20**	3300	2800	4500	**>19≤24**	3,0	16,5	4	70	280	430	800
36,54	3289/90	**PHQ521F0055 K102VF0066 ME10**	3600	3300	5000	**≤14**	0,80	15,4	4	69	280	430	800
36,54	3289/90	**PHQ521F0055 K102VF0066 ME10**	3600	3300	5000	**>14≤19**	1,1	15,5	4	70	280	430	800
36,54	3289/90	**PHQ521F0055 K102VF0066 ME20**	3500	3300	5000	**≤19**	2,2	16,4	4	70	280	430	800
36,54	3289/90	**PHQ521F0055 K102VF0066 ME20**	3500	3300	5000	**>19≤24**	3,0	16,5	4	70	280	430	800
45,70	21021/460	**PHQ521F0055 K102VF0083 ME10**	3600	3300	5000	**≤14**	0,68	15,4	4	70	280	430	800
45,70	21021/460	**PHQ521F0055 K102VF0083 ME10**	3600	3300	5000	**>14≤19**	0,93	15,5	4	70	280	430	800
45,70	21021/460	**PHQ521F0055 K102VF0083 ME20**	3500	3300	5000	**≤19**	2,1	16,4	4	70	280	430	800
45,70	21021/460	**PHQ521F0055 K102VF0083 ME20**	3500	3300	5000	**>19≤24**	2,8	16,5	4	70	280	430	800
50,87	9614/189	**PHQ521F0055 K102VF0092 ME10**	3600	3300	5000	**≤14**	0,72	15,4	4	70	280	430	800
50,87	9614/189	**PHQ521F0055 K102VF0092 ME10**	3600	3300	5000	**>14≤19**	0,97	15,5	4	70	280	430	800
50,87	9614/189	**PHQ521F0055 K102VF0092 ME20**	3500	3300	5000	**≤19**	2,1	16,4	4	70	280	430	800
50,87	9614/189	**PHQ521F0055 K102VF0092 ME20**	3500	3300	5000	**>19≤24**	2,9	16,5	4	70	280	430	800
55,77	5577/100	**PHQ521F0055 K102VF0100 ME10**	4000	3800	5500	**≤14**	0,60	15,4	4	70	280	430	800
55,77	5577/100	**PHQ521F0055 K102VF0100 ME10**	4000	3800	5500	**>14≤19**	0,85	15,5	4	70	280	430	800
55,77	5577/100	**PHQ521F0055 K102VF0100 ME20**	3500	3500	5000	**≤19**	2,0	16,4	4	70	280	430	800
55,77	5577/100	**PHQ521F0055 K102VF0100 ME20**	3500	3500	5000	**>19≤24**	2,7	16,5	4	70	280	430	800
63,61	1463/23	**PHQ521F0055 K102VF0115 ME10**	3600	3300	5000	**≤14**	0,63	15,4	4	70	280	430	800
63,61	1463/23	**PHQ521F0055 K102VF0115 ME10**	3600	3300	5000	**>14≤19**	0,88	15,5	4	70	280	430	800
63,61	1463/23	**PHQ521F0055 K102VF0115 ME20**	3500	3300	5000	**≤19**	2,0	16,4	4	70	280	430	800
63,61	1463/23	**PHQ521F0055 K102VF0115 ME20**	3500	3300	5000	**>19≤24**	2,8	16,5	4	70	280	430	800
69,40	4719/68	**PHQ521F0055 K102VF0125 ME10**	4000	3800	5500	**≤14**	0,54	15,4	4	70	280	430	800
69,40	4719/68	**PHQ521F0055 K102VF0125 ME10**	4000	3800	5500	**>14≤19**	0,79	15,5	4	70	280	430	800
69,40	4719/68	**PHQ521F0055 K102VF0125 ME20**	3500	3500	5000	**≤19**	2,0	16,4	4	70	280	430	800
69,40	4719/68	**PHQ521F0055 K102VF0125 ME20**	3500	3500	5000	**>19≤24**	2,7	16,5	4	70	280	430	800
77,63	2717/35	**PHQ521F0055 K102VF0140 ME10**	4000	3800	5500	**≤14**	0,56	15,4	4	70	280	430	800
77,63	2717/35	**PHQ521F0055 K102VF0140 ME10**	4000	3800	5500	**>14≤19**	0,82	15,5	4	70	280	430	800
77,63	2717/35	**PHQ521F0055 K102VF0140 ME20**	3500	3500	5000	**≤19**	2,0	16,4	4	70	280	430	800
77,63	2717/35	**PHQ521F0055 K102VF0140 ME20**	3500	3500	5000	**>19≤24**	2,7	16,5	4	70	280	430	800
91,93	1287/14	**PHQ521F0055 K102VF0165 ME10**	4000	4000	6000	**≤14**	0,48	15,4	4	70	280	430	800
91,93	1287/14	**PHQ521F0055 K102VF0165 ME10**	4000	4000	6000	**>14≤19**	0,73	15,5	4	70	280	430	800
91,93	1287/14	**PHQ521F0055 K102VF0165 ME20**	3500	3500	5000	**≤19**	1,9	16,4	4	70	280	430	800
91,93	1287/14	**PHQ521F0055 K102VF0165 ME20**	3500	3500	5000	**>19≤24**	2,6	16,5	4	70	280	430	800
96,60	11495/119	**PHQ521F0055 K102VF0175 ME10**	4000	3800	5500	**≤14**	0,52	15,4	4	70	280	430	800
96,60	11495/119	**PHQ521F0055 K102VF0175 ME10**	4000	3800	5500	**>14≤19**	0,77	15,5	4	70	280	430	800
96,60	11495/119	**PHQ521F0055 K102VF0175 ME20**	3500	3500	5000	**≤19**	1,9	16,4	4	70	280	430	800
96,60	11495/119	**PHQ521F0055 K102VF0175 ME20**	3500	3500	5000	**>19≤24**	2,7	16,5	4	70	280	430	800
110,8	4433/40	**PHQ521F0055 K102VF0200 ME10**	4000	4000	6000	**≤14**	0,46	15,4	4	70	280	430	800
110,8	4433/40	**PHQ521F0055 K102VF0200 ME10**	4000	4000	6000	**>14≤19**	0,71	15,5	4	70	280	430	800
110,8	4433/40	**PHQ521F0055 K102VF0200 ME20**	3500	3500	5000	**≤19**	1,9	16,4	4	70	280	430	800
110,8	4433/40	**PHQ521F0055 K102VF0200 ME20**	3500	3500	5000	**>19≤24**	2,6	16,5	4	70	280	430	800
128,0	6270/49	**PHQ521F0055 K102VF0230 ME10**	4000	4000	6000	**≤14**	0,47	15,4	4	70	280	430	800
128,0	6270/49	**PHQ521F0055 K102VF0230 ME10**	4000	4000	6000	**>14≤19**	0,72	15,5	4	70	280	430	800
128,0	6270/49	**PHQ521F0055 K102VF0230 ME20**	3500	3500	5000	**≤19**	1,9	16,4	4	70	280	430	800
128,0	6270/49	**PHQ521F0055 K102VF0230 ME20**	3500	3500	5000	**>19≤24**	2,6	16,5	4	70	280	430	800
138,7	13871/100	**PHQ521F0055 K102VF0250 ME10**	4000	4000	6000	**≤14**	0,43	15,4	4	70	280	430	800
138,7	13871/100	**PHQ521F0055 K102VF0250 ME10**	4000	4000	6000	**>14≤19**	0,68	15,5	4	70	280	430	800
138,7	13871/100	**PHQ521F0055 K102VF0250 ME20**	3500	3500	5000	**≤19**	1,8	16,4	4	70	280	430	800
138,7	13871/100	**PHQ521F0055 K102VF0250 ME20**	3500	3500	5000	**>19≤24**	2,6	16,5	4	70	280	430	800
154,3	6479/42	**PHQ521F0055 K102VF0280 ME10**	4000	4000	6000	**≤14**	0,45	15,4	4	70	280	430	800
154,3	6479/42	**PHQ521F0055 K102VF0280 ME10**	4000	4000	6000	**>14≤19**	0,70	15,5	4	70	280	430	800

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ5K1 (M2BMAX=430 Nm)													
154,3	6479/42	**PHQ521F0055 K102VF0280 ME20**	3500	3500	5000	**≤19**	1,9	16,4	4	70	280	430	800
154,3	6479/42	**PHQ521F0055 K102VF0280 ME20**	3500	3500	5000	**>19≤24**	2,6	16,5	4	70	280	430	800
185,4	51909/280	**PHQ521F0055 K102VF0340 ME10**	4000	4000	6000	**≤14**	0,38	15,4	4	70	280	430	800
185,4	51909/280	**PHQ521F0055 K102VF0340 ME10**	4000	4000	6000	**>14≤19**	0,63	15,5	4	70	280	430	800
193,1	20273/105	**PHQ521F0055 K102VF0350 ME10**	4000	4000	6000	**≤14**	0,43	15,4	4	70	280	430	800
193,1	20273/105	**PHQ521F0055 K102VF0350 ME10**	4000	4000	6000	**>14≤19**	0,68	15,5	4	70	280	430	800
193,1	20273/105	**PHQ521F0055 K102VF0350 ME20**	3500	3500	5000	**≤19**	1,8	16,4	4	70	280	430	800
193,1	20273/105	**PHQ521F0055 K102VF0350 ME20**	3500	3500	5000	**>19≤24**	2,6	16,5	4	70	280	430	800
221,7	4433/20	**PHQ521F0055 K102VF0400 ME10**	4000	4000	6000	**≤14**	0,37	15,4	4	70	280	390	700
221,7	4433/20	**PHQ521F0055 K102VF0400 ME10**	4000	4000	6000	**>14≤19**	0,62	15,5	4	70	280	390	700
258,0	25289/98	**PHQ521F0055 K102VF0470 ME10**	4000	4000	6000	**≤14**	0,38	15,4	4	70	280	430	800
258,0	25289/98	**PHQ521F0055 K102VF0470 ME10**	4000	4000	6000	**>14≤19**	0,63	15,5	4	70	280	430	800
276,7	55341/200	**PHQ521F0055 K102VF0500 ME10**	4000	4000	6000	**≤14**	0,37	15,4	4	70	260	320	570
276,7	55341/200	**PHQ521F0055 K102VF0500 ME10**	4000	4000	6000	**>14≤19**	0,62	15,5	4	70	260	320	570
308,5	6479/21	**PHQ521F0055 K102VF0560 ME10**	4000	4000	6000	**≤14**	0,37	15,4	4	70	280	430	800
308,5	6479/21	**PHQ521F0055 K102VF0560 ME10**	4000	4000	6000	**>14≤19**	0,62	15,5	4	70	280	430	800
385,2	26961/70	**PHQ521F0055 K102VF0700 ME10**	4000	4000	6000	**≤14**	0,36	15,4	4	70	280	430	800
385,2	26961/70	**PHQ521F0055 K102VF0700 ME10**	4000	4000	6000	**>14≤19**	0,62	15,5	4	70	280	430	800
PHQ7K2 (M2BMAX=950 Nm)													
22,00	22/1	**PHQ721F0055 K202VF0040 ME10**	3000	2600	4000	**≤14**	2,9	27,5	4	123	250	250	330
22,00	22/1	**PHQ721F0055 K202VF0040 ME10**	3000	2600	4000	**>14≤19**	3,2	27,6	4	129	250	250	330
22,00	22/1	**PHQ721F0055 K202VF0040 ME20**	3000	2600	4000	**≤19**	4,4	28,5	4	129	610	840	1040
22,00	22/1	**PHQ721F0055 K202VF0040 ME20**	3000	2600	4000	**>19≤24**	5,1	28,6	4	133	610	920	1670
22,00	22/1	**PHQ721F0055 K202VF0040 ME20**	3000	2600	4000	**>24≤32**	6,6	28,6	4	134	610	920	1670
22,00	22/1	**PHQ721F0055 K202VF0040 ME30**	3000	2600	4000	**≤24**	10	30,4	4	133	610	920	1670
22,00	22/1	**PHQ721F0055 K202VF0040 ME30**	3000	2600	4000	**>24≤32**	10	30,4	4	135	610	920	1670
22,00	22/1	**PHQ721F0055 K202VF0040 ME30**	3000	2600	4000	**>32≤38**	12	30,5	4	135	610	920	1670
24,00	24/1	**PHQ721F0055 K202VF0044 ME10**	3000	2600	4000	**≤14**	2,6	27,5	4	126	490	490	600
24,00	24/1	**PHQ721F0055 K202VF0044 ME10**	3000	2600	4000	**>14≤19**	2,8	27,6	4	131	540	540	730
24,00	24/1	**PHQ721F0055 K202VF0044 ME20**	3000	2600	4000	**≤19**	4,0	28,5	4	130	630	920	1140
24,00	24/1	**PHQ721F0055 K202VF0044 ME20**	3000	2600	4000	**>19≤24**	4,8	28,6	4	134	630	950	1700
24,00	24/1	**PHQ721F0055 K202VF0044 ME20**	3000	2600	4000	**>24≤32**	6,2	28,6	4	135	630	950	1700
24,00	24/1	**PHQ721F0055 K202VF0044 ME30**	3000	2600	4000	**≤24**	9,7	30,4	4	133	630	950	1700
24,00	24/1	**PHQ721F0055 K202VF0044 ME30**	3000	2600	4000	**>24≤32**	9,8	30,4	4	135	630	950	1700
24,00	24/1	**PHQ721F0055 K202VF0044 ME30**	3000	2600	4000	**>32≤38**	12	30,5	4	135	630	950	1700
28,47	2107/74	**PHQ721F0055 K202VF0052 ME20**	3000	2600	4000	**≤19**	3,6	28,5	4	132	650	950	1350
28,47	2107/74	**PHQ721F0055 K202VF0052 ME20**	3000	2600	4000	**>19≤24**	4,3	28,6	4	134	650	950	1700
28,47	2107/74	**PHQ721F0055 K202VF0052 ME20**	3000	2600	4000	**>24≤32**	5,8	28,6	4	135	650	950	1700
28,47	2107/74	**PHQ721F0055 K202VF0052 ME30**	3000	2600	4000	**≤24**	9,2	30,4	4	134	650	950	1700
28,47	2107/74	**PHQ721F0055 K202VF0052 ME30**	3000	2600	4000	**>24≤32**	9,3	30,4	4	135	650	950	1700
28,47	2107/74	**PHQ721F0055 K202VF0052 ME30**	3000	2600	4000	**>32≤38**	11	30,5	4	135	650	950	1700
33,00	33/1	**PHQ721F0055 K202VF0060 ME10**	3000	2600	4000	**≤14**	2,1	27,5	4	130	650	680	830
33,00	33/1	**PHQ721F0055 K202VF0060 ME10**	3000	2600	4000	**>14≤19**	2,4	27,6	4	133	650	740	1000
33,00	33/1	**PHQ721F0055 K202VF0060 ME20**	3000	2600	4000	**≤19**	3,6	28,5	4	133	650	950	1570
33,00	33/1	**PHQ721F0055 K202VF0060 ME20**	3000	2600	4000	**>19≤24**	4,3	28,6	4	135	650	950	1700
33,00	33/1	**PHQ721F0055 K202VF0060 ME20**	3000	2600	4000	**>24≤32**	5,8	28,6	4	135	650	950	1700
33,00	33/1	**PHQ721F0055 K202VF0060 ME30**	3000	2600	4000	**≤24**	9,2	30,4	4	135	650	950	1700
33,00	33/1	**PHQ721F0055 K202VF0060 ME30**	3000	2600	4000	**>24≤32**	9,4	30,4	4	135	650	950	1700
33,00	33/1	**PHQ721F0055 K202VF0060 ME30**	3000	2600	4000	**>32≤38**	11	30,5	4	135	650	950	1700
36,76	2279/62	**PHQ721F0055 K202VF0067 ME10**	3500	3100	4500	**≤14**	1,5	27,5	4	131	650	750	920
36,76	2279/62	**PHQ721F0055 K202VF0067 ME10**	3500	3100	4500	**>14≤19**	1,8	27,6	4	134	650	820	1110
36,76	2279/62	**PHQ721F0055 K202VF0067 ME20**	3500	3100	4500	**≤19**	3,0	28,5	4	133	650	950	1700
36,76	2279/62	**PHQ721F0055 K202VF0067 ME20**	3500	3100	4500	**>19≤24**	3,7	28,6	4	135	650	950	1700
36,76	2279/62	**PHQ721F0055 K202VF0067 ME20**	3500	3100	4500	**>24≤32**	5,2	28,6	4	135	650	950	1700
36,76	2279/62	**PHQ721F0055 K202VF0067 ME30**	3500	3100	4000	**≤24**	8,6	30,4	4	135	650	950	1700
36,76	2279/62	**PHQ721F0055 K202VF0067 ME30**	3500	3100	4000	**>24≤32**	8,8	30,4	4	135	650	950	1700
36,76	2279/62	**PHQ721F0055 K202VF0067 ME30**	3500	3100	4000	**>32≤38**	10	30,5	4	136	650	950	1700
39,15	23177/592	**PHQ721F0055 K202VF0071 ME20**	3000	2600	4000	**≤19**	3,2	28,5	4	134	650	950	1700
39,15	23177/592	**PHQ721F0055 K202VF0071 ME20**	3000	2600	4000	**>19≤24**	4,0	28,6	4	135	650	950	1700

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ7K2 (M2BMAX=950 Nm)													
39,15	23177/592	**PHQ721F0055 K202VF0071 ME20**	3000	2600	4000	**>24≤32**	5,4	28,6	4	135	650	950	1700
39,15	23177/592	**PHQ721F0055 K202VF0071 ME30**	3000	2600	4000	**≤24**	8,9	30,4	4	135	650	950	1700
39,15	23177/592	**PHQ721F0055 K202VF0071 ME30**	3000	2600	4000	**>24≤32**	9,0	30,4	4	135	650	950	1700
39,15	23177/592	**PHQ721F0055 K202VF0071 ME30**	3000	2600	4000	**>32≤38**	11	30,5	4	136	650	950	1700
46,18	1247/27	**PHQ721F0055 K202VF0084 ME10**	3500	3100	4500	**≤14**	1,2	27,5	4	133	650	950	1160
46,18	1247/27	**PHQ721F0055 K202VF0084 ME10**	3500	3100	4500	**>14≤19**	1,4	27,6	4	134	650	950	1400
46,18	1247/27	**PHQ721F0055 K202VF0084 ME20**	3500	3100	4500	**≤19**	2,6	28,5	4	134	650	950	1700
46,18	1247/27	**PHQ721F0055 K202VF0084 ME20**	3500	3100	4500	**>19≤24**	3,4	28,6	4	135	650	950	1700
46,18	1247/27	**PHQ721F0055 K202VF0084 ME20**	3500	3100	4500	**>24≤32**	4,8	28,6	4	135	650	950	1700
46,18	1247/27	**PHQ721F0055 K202VF0084 ME30**	3500	3100	4000	**≤24**	8,3	30,4	4	135	650	950	1700
46,18	1247/27	**PHQ721F0055 K202VF0084 ME30**	3500	3100	4000	**>24≤32**	8,4	30,4	4	136	650	950	1700
46,18	1247/27	**PHQ721F0055 K202VF0084 ME30**	3500	3100	4000	**>32≤38**	10	30,5	4	136	650	950	1700
50,55	25069/496	**PHQ721F0055 K202VF0092 ME10**	3500	3100	4500	**≤14**	1,3	27,5	4	133	650	950	1270
50,55	25069/496	**PHQ721F0055 K202VF0092 ME10**	3500	3100	4500	**>14≤19**	1,6	27,6	4	135	650	950	1530
50,55	25069/496	**PHQ721F0055 K202VF0092 ME20**	3500	3100	4500	**≤19**	2,8	28,5	4	134	650	950	1700
50,55	25069/496	**PHQ721F0055 K202VF0092 ME20**	3500	3100	4500	**>19≤24**	3,5	28,6	4	135	650	950	1700
50,55	25069/496	**PHQ721F0055 K202VF0092 ME20**	3500	3100	4500	**>24≤32**	5,0	28,6	4	136	650	950	1700
50,55	25069/496	**PHQ721F0055 K202VF0092 ME30**	3500	3100	4000	**≤24**	8,4	30,4	4	135	650	950	1700
50,55	25069/496	**PHQ721F0055 K202VF0092 ME30**	3500	3100	4000	**>24≤32**	8,6	30,4	4	136	650	950	1700
50,55	25069/496	**PHQ721F0055 K202VF0092 ME30**	3500	3100	4000	**>32≤38**	10	30,5	4	136	650	950	1700
55,40	2881/52	**PHQ721F0055 K202VF0100 ME10**	3900	3500	5000	**≤14**	0,98	27,5	4	134	650	950	1390
55,40	2881/52	**PHQ721F0055 K202VF0100 ME10**	3900	3500	5000	**>14≤19**	1,2	27,6	4	135	650	950	1680
55,40	2881/52	**PHQ721F0055 K202VF0100 ME20**	3500	3500	5000	**≤19**	2,4	28,5	4	135	650	950	1700
55,40	2881/52	**PHQ721F0055 K202VF0100 ME20**	3500	3500	5000	**>19≤24**	3,2	28,6	4	135	650	950	1700
55,40	2881/52	**PHQ721F0055 K202VF0100 ME20**	3500	3500	5000	**>24≤32**	4,6	28,6	4	136	650	950	1700
55,40	2881/52	**PHQ721F0055 K202VF0100 ME30**	3500	3500	4000	**≤24**	8,1	30,4	4	135	650	950	1700
55,40	2881/52	**PHQ721F0055 K202VF0100 ME30**	3500	3500	4000	**>24≤32**	8,2	30,4	4	136	650	950	1700
55,40	2881/52	**PHQ721F0055 K202VF0100 ME30**	3500	3500	4000	**>32≤38**	10,0	30,5	4	136	650	950	1700
63,50	13717/216	**PHQ721F0055 K202VF0115 ME10**	3500	3100	4500	**≤14**	1,1	27,5	4	134	650	950	1600
63,50	13717/216	**PHQ721F0055 K202VF0115 ME10**	3500	3100	4500	**>14≤19**	1,3	27,6	4	135	650	950	1700
63,50	13717/216	**PHQ721F0055 K202VF0115 ME20**	3500	3100	4500	**≤19**	2,5	28,5	4	135	650	950	1700
63,50	13717/216	**PHQ721F0055 K202VF0115 ME20**	3500	3100	4500	**>19≤24**	3,2	28,6	4	136	650	950	1700
63,50	13717/216	**PHQ721F0055 K202VF0115 ME20**	3500	3100	4500	**>24≤32**	4,7	28,6	4	136	650	950	1700
63,50	13717/216	**PHQ721F0055 K202VF0115 ME30**	3500	3100	4000	**≤24**	8,2	30,4	4	135	650	950	1700
63,50	13717/216	**PHQ721F0055 K202VF0115 ME30**	3500	3100	4000	**>24≤32**	8,3	30,4	4	136	650	950	1700
63,50	13717/216	**PHQ721F0055 K202VF0115 ME30**	3500	3100	4000	**>32≤38**	10	30,5	4	136	650	950	1700
69,88	559/8	**PHQ721F0055 K202VF0125 ME10**	3900	3500	5000	**≤14**	0,80	27,5	4	135	650	950	1700
69,88	559/8	**PHQ721F0055 K202VF0125 ME10**	3900	3500	5000	**>14≤19**	1,1	27,6	4	135	650	950	1700
69,88	559/8	**PHQ721F0055 K202VF0125 ME20**	3500	3500	5000	**≤19**	2,3	28,5	4	135	650	950	1700
69,88	559/8	**PHQ721F0055 K202VF0125 ME20**	3500	3500	5000	**>19≤24**	3,0	28,6	4	136	650	950	1700
69,88	559/8	**PHQ721F0055 K202VF0125 ME20**	3500	3500	5000	**>24≤32**	4,5	28,6	4	136	650	950	1700
69,88	559/8	**PHQ721F0055 K202VF0125 ME30**	3500	3500	4000	**≤24**	7,9	30,4	4	136	650	950	1700
69,88	559/8	**PHQ721F0055 K202VF0125 ME30**	3500	3500	4000	**>24≤32**	8,0	30,4	4	136	650	950	1700
69,88	559/8	**PHQ721F0055 K202VF0125 ME30**	3500	3500	4000	**>32≤38**	9,8	30,5	4	136	650	950	1700
76,18	31691/416	**PHQ721F0055 K202VF0140 ME10**	3900	3500	5000	**≤14**	0,90	27,5	4	135	650	950	1700
76,18	31691/416	**PHQ721F0055 K202VF0140 ME10**	3900	3500	5000	**>14≤19**	1,1	27,6	4	135	650	950	1700
76,18	31691/416	**PHQ721F0055 K202VF0140 ME20**	3500	3500	5000	**≤19**	2,3	28,5	4	135	650	950	1700
76,18	31691/416	**PHQ721F0055 K202VF0140 ME20**	3500	3500	5000	**>19≤24**	3,1	28,6	4	136	650	950	1700
76,18	31691/416	**PHQ721F0055 K202VF0140 ME20**	3500	3500	5000	**>24≤32**	4,5	28,6	4	136	650	950	1700
76,18	31691/416	**PHQ721F0055 K202VF0140 ME30**	3500	3500	4000	**≤24**	8,0	30,4	4	136	650	950	1700
76,18	31691/416	**PHQ721F0055 K202VF0140 ME30**	3500	3500	4000	**>24≤32**	8,1	30,4	4	136	650	950	1700
76,18	31691/416	**PHQ721F0055 K202VF0140 ME30**	3500	3500	4000	**>32≤38**	9,9	30,5	4	136	650	950	1700
92,72	2967/32	**PHQ721F0055 K202VF0170 ME10**	4000	3900	5500	**≤14**	0,65	27,5	4	135	650	950	1700
92,72	2967/32	**PHQ721F0055 K202VF0170 ME10**	4000	3900	5500	**>14≤19**	0,90	27,6	4	135	650	950	1700
92,72	2967/32	**PHQ721F0055 K202VF0170 ME20**	3500	3500	5000	**≤19**	2,1	28,5	4	135	650	950	1700
92,72	2967/32	**PHQ721F0055 K202VF0170 ME20**	3500	3500	5000	**>19≤24**	2,8	28,6	4	136	650	950	1700
92,72	2967/32	**PHQ721F0055 K202VF0170 ME20**	3500	3500	5000	**>24≤32**	4,3	28,6	4	136	650	950	1700
92,72	2967/32	**PHQ721F0055 K202VF0170 ME30**	3500	3500	4000	**≤24**	7,8	30,4	4	136	650	950	1700
92,72	2967/32	**PHQ721F0055 K202VF0170 ME30**	3500	3500	4000	**>24≤32**	7,9	30,4	4	136	650	950	1700
92,72	2967/32	**PHQ721F0055 K202VF0170 ME30**	3500	3500	4000	**>32≤38**	9,6	30,5	4	136	650	950	1700
96,08	6149/64	**PHQ721F0055 K202VF0175 ME10**	3900	3500	5000	**≤14**	0,75	27,5	4	135	650	950	1700
96,08	6149/64	**PHQ721F0055 K202VF0175 ME10**	3900	3500	5000	**>14≤19**	1,00	27,6	4	135	650	950	1700

Right-Angle Planetary Gear Units **PHQK**
Reductores planetarios ortogonales ***PHQK***
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ7K2 (M2BMAX=950 Nm)													
96,08	6149/64	**PHQ721F0055 K202VF0175 ME20**	3500	3500	5000	**≤19**	2,2	28,5	4	135	650	950	1700
96,08	6149/64	**PHQ721F0055 K202VF0175 ME20**	3500	3500	5000	**>19≤24**	2,9	28,6	4	136	650	950	1700
96,08	6149/64	**PHQ721F0055 K202VF0175 ME20**	3500	3500	5000	**>24≤32**	4,4	28,6	4	136	650	950	1700
96,08	6149/64	**PHQ721F0055 K202VF0175 ME30**	3500	3500	4000	**≤24**	7,9	30,4	4	136	650	950	1700
96,08	6149/64	**PHQ721F0055 K202VF0175 ME30**	3500	3500	4000	**>24≤32**	8,0	30,4	4	136	650	950	1700
96,08	6149/64	**PHQ721F0055 K202VF0175 ME30**	3500	3500	4000	**>32≤38**	9,7	30,5	4	136	650	950	1700
111,8	559/5	**PHQ721F0055 K202VF0200 ME10**	4000	3900	5500	**≤14**	0,58	27,5	4	135	650	950	1700
111,8	559/5	**PHQ721F0055 K202VF0200 ME10**	4000	3900	5500	**>14≤19**	0,83	27,6	4	136	650	950	1700
111,8	559/5	**PHQ721F0055 K202VF0200 ME20**	3500	3500	5000	**≤19**	2,0	28,5	4	136	650	950	1700
111,8	559/5	**PHQ721F0055 K202VF0200 ME20**	3500	3500	5000	**>19≤24**	2,7	28,6	4	136	650	950	1700
127,5	32637/256	**PHQ721F0055 K202VF0230 ME10**	4000	3900	5500	**≤14**	0,62	27,5	4	135	650	950	1700
127,5	32637/256	**PHQ721F0055 K202VF0230 ME10**	4000	3900	5500	**>14≤19**	0,87	27,6	4	136	650	950	1700
127,5	32637/256	**PHQ721F0055 K202VF0230 ME20**	3500	3500	5000	**≤19**	2,1	28,5	4	136	650	950	1700
127,5	32637/256	**PHQ721F0055 K202VF0230 ME20**	3500	3500	5000	**>19≤24**	2,8	28,6	4	136	650	950	1700
127,5	32637/256	**PHQ721F0055 K202VF0230 ME20**	3500	3500	5000	**>24≤32**	4,3	28,6	4	136	650	950	1700
127,5	32637/256	**PHQ721F0055 K202VF0230 ME30**	3500	3500	4000	**≤24**	7,7	30,4	4	136	650	950	1700
127,5	32637/256	**PHQ721F0055 K202VF0230 ME30**	3500	3500	4000	**>24≤32**	7,9	30,4	4	136	650	950	1700
127,5	32637/256	**PHQ721F0055 K202VF0230 ME30**	3500	3500	4000	**>32≤38**	9,6	30,5	4	136	650	950	1700
138,2	1935/14	**PHQ721F0055 K202VF0250 ME10**	4000	3900	5500	**≤14**	0,52	27,5	4	135	650	950	1700
138,2	1935/14	**PHQ721F0055 K202VF0250 ME10**	4000	3900	5500	**>14≤19**	0,77	27,6	4	136	650	950	1700
138,2	1935/14	**PHQ721F0055 K202VF0250 ME20**	3500	3500	5000	**≤19**	1,9	28,5	4	136	650	950	1700
138,2	1935/14	**PHQ721F0055 K202VF0250 ME20**	3500	3500	5000	**>19≤24**	2,7	28,6	4	136	650	950	1700
153,7	6149/40	**PHQ721F0055 K202VF0280 ME10**	4000	3900	5500	**≤14**	0,56	27,5	4	136	650	950	1700
153,7	6149/40	**PHQ721F0055 K202VF0280 ME10**	4000	3900	5500	**>14≤19**	0,81	27,6	4	136	650	950	1700
153,7	6149/40	**PHQ721F0055 K202VF0280 ME20**	3500	3500	5000	**≤19**	2,0	28,5	4	136	650	950	1700
153,7	6149/40	**PHQ721F0055 K202VF0280 ME20**	3500	3500	5000	**>19≤24**	2,7	28,6	4	136	650	950	1700
184,9	1849/10	**PHQ721F0055 K202VF0340 ME10**	4000	3900	5500	**≤14**	0,46	27,5	4	136	650	950	1700
184,9	1849/10	**PHQ721F0055 K202VF0340 ME10**	4000	3900	5500	**>14≤19**	0,71	27,6	4	136	650	950	1700
184,9	1849/10	**PHQ721F0055 K202VF0340 ME20**	3500	3500	5000	**≤19**	1,9	28,5	4	136	650	950	1700
184,9	1849/10	**PHQ721F0055 K202VF0340 ME20**	3500	3500	5000	**>19≤24**	2,6	28,6	4	136	650	950	1700
190,0	21285/112	**PHQ721F0055 K202VF0350 ME10**	4000	3900	5500	**≤14**	0,51	27,5	4	136	650	950	1700
190,0	21285/112	**PHQ721F0055 K202VF0350 ME10**	4000	3900	5500	**>14≤19**	0,76	27,6	4	136	650	950	1700
190,0	21285/112	**PHQ721F0055 K202VF0350 ME20**	3500	3500	5000	**≤19**	1,9	28,5	4	136	650	950	1700
190,0	21285/112	**PHQ721F0055 K202VF0350 ME20**	3500	3500	5000	**>19≤24**	2,7	28,6	4	136	650	950	1700
222,2	1333/6	**PHQ721F0055 K202VF0400 ME10**	4000	3900	5500	**≤14**	0,41	27,5	4	136	610	730	1150
222,2	1333/6	**PHQ721F0055 K202VF0400 ME10**	4000	3900	5500	**>14≤19**	0,66	27,6	4	136	610	730	1150
254,2	20339/80	**PHQ721F0055 K202VF0460 ME10**	4000	3900	5500	**≤14**	0,46	27,5	4	136	650	950	1700
254,2	20339/80	**PHQ721F0055 K202VF0460 ME10**	4000	3900	5500	**>14≤19**	0,71	27,6	4	136	650	950	1700
254,2	20339/80	**PHQ721F0055 K202VF0460 ME20**	3500	3500	5000	**≤19**	1,9	28,5	4	136	650	950	1700
254,2	20339/80	**PHQ721F0055 K202VF0460 ME20**	3500	3500	5000	**>19≤24**	2,6	28,6	4	136	650	950	1700
277,7	6665/24	**PHQ721F0055 K202VF0500 ME10**	4000	3900	5500	**≤14**	0,39	27,5	4	136	510	610	1100
277,7	6665/24	**PHQ721F0055 K202VF0500 ME10**	4000	3900	5500	**>14≤19**	0,64	27,6	4	136	510	610	1100
305,5	14663/48	**PHQ721F0055 K202VF0560 ME10**	4000	3900	5500	**≤14**	0,41	27,5	4	136	650	950	1580
305,5	14663/48	**PHQ721F0055 K202VF0560 ME10**	4000	3900	5500	**>14≤19**	0,66	27,6	4	136	650	950	1580
381,8	73315/192	**PHQ721F0055 K202VF0690 ME10**	4000	3900	5500	**≤14**	0,39	27,5	4	136	650	840	1520
381,8	73315/192	**PHQ721F0055 K202VF0690 ME10**	4000	3900	5500	**>14≤19**	0,64	27,6	4	136	650	840	1520
PHQ8K4 (M2BMAX=2600 Nm)													
22,00	22/1	**PHQ821F0055 K402VF0040 ME30**	2600	2200	3500	**≤24**	18	65,9	3,5	375	1610	1950	2440
22,00	22/1	**PHQ821F0055 K402VF0040 ME30**	2600	2200	3500	**>24≤32**	18	66,0	3,5	391	1610	2420	3240
22,00	22/1	**PHQ821F0055 K402VF0040 ME30**	2600	2200	3500	**>32≤38**	20	66,1	3,5	395	1610	2420	4000
22,00	22/1	**PHQ821F0055 K402VF0040 ME40**	2600	2200	3500	**≤38**	28	70,7	3,5	390	1610	2420	4000
22,00	22/1	**PHQ821F0055 K402VF0040 ME40**	2600	2200	3500	**>38≤48**	42	71,1	3,5	394	1610	2420	4000
24,00	24/1	**PHQ821F0055 K402VF0044 ME30**	2600	2200	3500	**≤24**	17	65,9	3,5	379	1660	2120	2660
24,00	24/1	**PHQ821F0055 K402VF0044 ME30**	2600	2200	3500	**>24≤32**	17	66,0	3,5	393	1660	2490	3530
24,00	24/1	**PHQ821F0055 K402VF0044 ME30**	2600	2200	3500	**>32≤38**	19	66,1	3,5	395	1660	2490	4000
24,00	24/1	**PHQ821F0055 K402VF0044 ME40**	2600	2200	3500	**≤38**	27	70,7	3,5	392	1660	2490	4000
24,00	24/1	**PHQ821F0055 K402VF0044 ME40**	2600	2200	3500	**>38≤48**	40	71,1	3,5	395	1660	2490	4000
29,82	1849/62	**PHQ821F0055 K402VF0054 ME30**	2600	2200	3500	**≤24**	14	65,9	3,5	386	1700	2600	3300
29,82	1849/62	**PHQ821F0055 K402VF0054 ME30**	2600	2200	3500	**>24≤32**	14	66,0	3,5	395	1700	2600	4000

Right-Angle Planetary Gear Units **PHQK**
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ8K4 (M2BMAX=2600 Nm)													
29,82	1849/62	**PHQ821F0055 K402VF0054 ME30**	2600	2200	3500	**>32≤38**	16	66,1	3,5	397	1700	2600	4000
29,82	1849/62	**PHQ821F0055 K402VF0054 ME40**	2600	2200	3500	**≤38**	24	70,7	3,5	395	1700	2600	4000
29,82	1849/62	**PHQ821F0055 K402VF0054 ME40**	2600	2200	3500	**>38≤48**	38	71,1	3,5	397	1700	2600	4000
33,00	33/1	**PHQ821F0055 K402VF0060 ME30**	2600	2200	3500	**≤24**	15	65,9	3,5	388	1700	2600	3660
33,00	33/1	**PHQ821F0055 K402VF0060 ME30**	2600	2200	3500	**>24≤32**	15	66,0	3,5	396	1700	2600	4000
33,00	33/1	**PHQ821F0055 K402VF0060 ME30**	2600	2200	3500	**>32≤38**	17	66,1	3,5	397	1700	2600	4000
33,00	33/1	**PHQ821F0055 K402VF0060 ME40**	2600	2200	3500	**≤38**	25	70,7	3,5	395	1700	2600	4000
33,00	33/1	**PHQ821F0055 K402VF0060 ME40**	2600	2200	3500	**>38≤48**	39	71,1	3,5	397	1700	2600	4000
36,95	2365/64	**PHQ821F0055 K402VF0067 ME20**	3000	2600	4000	**≤19**	6,4	64,3	3,5	378	1410	1410	1760
36,95	2365/64	**PHQ821F0055 K402VF0067 ME20**	3000	2600	4000	**>19≤24**	7,1	64,4	3,5	392	1700	2060	2800
36,95	2365/64	**PHQ821F0055 K402VF0067 ME20**	3000	2600	4000	**>24≤32**	8,6	64,4	3,5	395	1700	2060	2800
36,95	2365/64	**PHQ821F0055 K402VF0067 ME30**	3000	2600	4000	**≤24**	12	65,9	3,5	391	1700	2600	4000
36,95	2365/64	**PHQ821F0055 K402VF0067 ME30**	3000	2600	4000	**>24≤32**	12	66,0	3,5	397	1700	2600	4000
36,95	2365/64	**PHQ821F0055 K402VF0067 ME30**	3000	2600	4000	**>32≤38**	14	66,1	3,5	398	1700	2600	4000
36,95	2365/64	**PHQ821F0055 K402VF0067 ME40**	3000	2600	3500	**≤38**	22	70,7	3,5	396	1700	2600	4000
36,95	2365/64	**PHQ821F0055 K402VF0067 ME40**	3000	2600	3500	**>38≤48**	36	71,1	3,5	398	1700	2600	4000
41,01	20339/496	**PHQ821F0055 K402VF0075 ME30**	2600	2200	3500	**≤24**	13	65,9	3,5	392	1700	2600	4000
41,01	20339/496	**PHQ821F0055 K402VF0075 ME30**	2600	2200	3500	**>24≤32**	13	66,0	3,5	397	1700	2600	4000
41,01	20339/496	**PHQ821F0055 K402VF0075 ME30**	2600	2200	3500	**>32≤38**	15	66,1	3,5	398	1700	2600	4000
41,01	20339/496	**PHQ821F0055 K402VF0075 ME40**	2600	2200	3500	**≤38**	23	70,7	3,5	397	1700	2600	4000
41,01	20339/496	**PHQ821F0055 K402VF0075 ME40**	2600	2200	3500	**>38≤48**	37	71,1	3,5	398	1700	2600	4000
46,07	645/14	**PHQ821F0055 K402VF0084 ME20**	3000	2600	4000	**≤19**	5,0	64,3	3,5	386	1700	1760	2190
46,07	645/14	**PHQ821F0055 K402VF0084 ME20**	3000	2600	4000	**>19≤24**	5,8	64,4	3,5	395	1700	2570	3490
46,07	645/14	**PHQ821F0055 K402VF0084 ME20**	3000	2600	4000	**>24≤32**	7,2	64,4	3,5	397	1700	2570	3490
46,07	645/14	**PHQ821F0055 K402VF0084 ME30**	3000	2600	4000	**≤24**	11	65,9	3,5	394	1700	2600	4000
46,07	645/14	**PHQ821F0055 K402VF0084 ME30**	3000	2600	4000	**>24≤32**	11	66,0	3,5	398	1700	2600	4000
46,07	645/14	**PHQ821F0055 K402VF0084 ME30**	3000	2600	4000	**>32≤38**	13	66,1	3,5	398	1700	2600	4000
46,07	645/14	**PHQ821F0055 K402VF0084 ME40**	3000	2600	3500	**≤38**	21	70,7	3,5	397	1700	2600	4000
46,07	645/14	**PHQ821F0055 K402VF0084 ME40**	3000	2600	3500	**>38≤48**	35	71,1	3,5	398	1700	2600	4000
50,81	26015/512	**PHQ821F0055 K402VF0092 ME20**	3000	2600	4000	**≤19**	5,6	64,3	3,5	388	1700	1940	2410
50,81	26015/512	**PHQ821F0055 K402VF0092 ME20**	3000	2600	4000	**>19≤24**	6,3	64,4	3,5	396	1700	2600	3850
50,81	26015/512	**PHQ821F0055 K402VF0092 ME20**	3000	2600	4000	**>24≤32**	7,8	64,4	3,5	397	1700	2600	3850
50,81	26015/512	**PHQ821F0055 K402VF0092 ME30**	3000	2600	4000	**≤24**	11	65,9	3,5	395	1700	2600	4000
50,81	26015/512	**PHQ821F0055 K402VF0092 ME30**	3000	2600	4000	**>24≤32**	11	66,0	3,5	398	1700	2600	4000
50,81	26015/512	**PHQ821F0055 K402VF0092 ME30**	3000	2600	4000	**>32≤38**	13	66,1	3,5	399	1700	2600	4000
50,81	26015/512	**PHQ821F0055 K402VF0092 ME40**	3000	2600	3500	**≤38**	22	70,7	3,5	398	1700	2600	4000
50,81	26015/512	**PHQ821F0055 K402VF0092 ME40**	3000	2600	3500	**>38≤48**	35	71,1	3,5	399	1700	2600	4000
55,54	1333/24	**PHQ821F0055 K402VF0100 ME20**	3400	3000	4500	**≤19**	4,2	64,3	3,5	390	1700	2120	2640
55,54	1333/24	**PHQ821F0055 K402VF0100 ME20**	3400	3000	4500	**>19≤24**	4,9	64,4	3,5	396	1700	2600	4000
55,54	1333/24	**PHQ821F0055 K402VF0100 ME20**	3400	3000	4500	**>24≤32**	6,4	64,4	3,5	398	1700	2600	4000
55,54	1333/24	**PHQ821F0055 K402VF0100 ME30**	3400	3000	4000	**≤24**	10	65,9	3,5	396	1700	2600	4000
55,54	1333/24	**PHQ821F0055 K402VF0100 ME30**	3400	3000	4000	**>24≤32**	10	66,0	3,5	398	1700	2600	4000
55,54	1333/24	**PHQ821F0055 K402VF0100 ME30**	3400	3000	4000	**>32≤38**	12	66,1	3,5	399	1700	2600	4000
55,54	1333/24	**PHQ821F0055 K402VF0100 ME40**	3000	3000	3500	**≤38**	20	70,7	3,5	398	1700	2600	4000
55,54	1333/24	**PHQ821F0055 K402VF0100 ME40**	3000	3000	3500	**>38≤48**	34	71,1	3,5	399	1700	2600	4000
63,35	7095/112	**PHQ821F0055 K402VF0115 ME20**	3000	2600	4000	**≤19**	4,5	64,3	3,5	392	1700	2420	3010
63,35	7095/112	**PHQ821F0055 K402VF0115 ME20**	3000	2600	4000	**>19≤24**	5,2	64,4	3,5	397	1700	2600	4000
63,35	7095/112	**PHQ821F0055 K402VF0115 ME20**	3000	2600	4000	**>24≤32**	6,7	64,4	3,5	398	1700	2600	4000
63,35	7095/112	**PHQ821F0055 K402VF0115 ME30**	3000	2600	4000	**≤24**	10	65,9	3,5	397	1700	2600	4000
63,35	7095/112	**PHQ821F0055 K402VF0115 ME30**	3000	2600	4000	**>24≤32**	10	66,0	3,5	399	1700	2600	4000
63,35	7095/112	**PHQ821F0055 K402VF0115 ME30**	3000	2600	4000	**>32≤38**	12	66,1	3,5	399	1700	2600	4000
63,35	7095/112	**PHQ821F0055 K402VF0115 ME40**	3000	2600	3500	**≤38**	20	70,7	3,5	398	1700	2600	4000
63,35	7095/112	**PHQ821F0055 K402VF0115 ME40**	3000	2600	3500	**>38≤48**	34	71,1	3,5	399	1700	2600	4000
69,62	1462/21	**PHQ821F0055 K402VF0125 ME20**	3400	3000	4500	**≤19**	3,5	64,3	3,5	393	1700	2600	3310
69,62	1462/21	**PHQ821F0055 K402VF0125 ME20**	3400	3000	4500	**>19≤24**	4,2	64,4	3,5	397	1700	2600	4000
69,62	1462/21	**PHQ821F0055 K402VF0125 ME20**	3400	3000	4500	**>24≤32**	5,7	64,4	3,5	398	1700	2600	4000
69,62	1462/21	**PHQ821F0055 K402VF0125 ME30**	3400	3000	4000	**≤24**	9,3	65,9	3,5	397	1700	2600	4000
69,62	1462/21	**PHQ821F0055 K402VF0125 ME30**	3400	3000	4000	**>24≤32**	9,4	66,0	3,5	399	1700	2600	4000
69,62	1462/21	**PHQ821F0055 K402VF0125 ME30**	3400	3000	4000	**>32≤38**	11	66,1	3,5	399	1700	2600	4000
69,62	1462/21	**PHQ821F0055 K402VF0125 ME40**	3000	3000	3500	**≤38**	19	70,7	3,5	399	1700	2600	4000
69,62	1462/21	**PHQ821F0055 K402VF0125 ME40**	3000	3000	3500	**>38≤48**	33	71,1	3,5	399	1700	2600	4000
76,37	14663/192	**PHQ821F0055 K402VF0140 ME20**	3400	3000	4500	**≤19**	3,9	64,3	3,5	394	1700	2600	3630

Right-Angle Planetary Gear Units **PHQK**
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ8K4 (M2BMAX=2600 Nm)													
76,37	14663/192	**PHQ821F0055 K402VF0140 ME20**	3400	3000	4500	**>19≤24**	4,6	64,4	3,5	398	1700	2600	4000
76,37	14663/192	**PHQ821F0055 K402VF0140 ME20**	3400	3000	4500	**>24≤32**	6,1	64,4	3,5	399	1700	2600	4000
76,37	14663/192	**PHQ821F0055 K402VF0140 ME30**	3400	3000	4000	**≤24**	9,6	65,9	3,5	397	1700	2600	4000
76,37	14663/192	**PHQ821F0055 K402VF0140 ME30**	3400	3000	4000	**>24≤32**	9,8	66,0	3,5	399	1700	2600	4000
76,37	14663/192	**PHQ821F0055 K402VF0140 ME30**	3400	3000	4000	**>32≤38**	12	66,1	3,5	399	1700	2600	4000
76,37	14663/192	**PHQ821F0055 K402VF0140 ME40**	3000	3000	3500	**≤38**	20	70,7	3,5	399	1700	2600	4000
76,37	14663/192	**PHQ821F0055 K402VF0140 ME40**	3000	3000	3500	**>38≤48**	33	71,1	3,5	399	1700	2600	4000
93,16	559/6	**PHQ821F0055 K402VF0170 ME20**	3500	3300	5000	**≤19**	2,9	64,3	3,5	396	1700	2600	4000
93,16	559/6	**PHQ821F0055 K402VF0170 ME20**	3500	3300	5000	**>19≤24**	3,6	64,4	3,5	398	1700	2600	4000
93,16	559/6	**PHQ821F0055 K402VF0170 ME20**	3500	3300	5000	**>24≤32**	5,1	64,4	3,5	399	1700	2600	4000
93,16	559/6	**PHQ821F0055 K402VF0170 ME30**	3500	3300	4000	**≤24**	8,6	65,9	3,5	398	1700	2600	4000
93,16	559/6	**PHQ821F0055 K402VF0170 ME30**	3500	3300	4000	**>24≤32**	8,8	66,0	3,5	399	1700	2600	4000
93,16	559/6	**PHQ821F0055 K402VF0170 ME30**	3500	3300	4000	**>32≤38**	11	66,1	3,5	399	1700	2600	4000
93,16	559/6	**PHQ821F0055 K402VF0170 ME40**	3000	3000	3500	**≤38**	19	70,7	3,5	399	1700	2600	4000
93,16	559/6	**PHQ821F0055 K402VF0170 ME40**	3000	3000	3500	**>38≤48**	32	71,1	3,5	399	1700	2600	4000
95,73	8041/84	**PHQ821F0055 K402VF0175 ME20**	3400	3000	4500	**≤19**	3,3	64,3	3,5	396	1700	2600	4000
95,73	8041/84	**PHQ821F0055 K402VF0175 ME20**	3400	3000	4500	**>19≤24**	4,0	64,4	3,5	398	1700	2600	4000
95,73	8041/84	**PHQ821F0055 K402VF0175 ME20**	3400	3000	4500	**>24≤32**	5,5	64,4	3,5	399	1700	2600	4000
95,73	8041/84	**PHQ821F0055 K402VF0175 ME30**	3400	3000	4000	**≤24**	9,1	65,9	3,5	398	1700	2600	4000
95,73	8041/84	**PHQ821F0055 K402VF0175 ME30**	3400	3000	4000	**>24≤32**	9,2	66,0	3,5	399	1700	2600	4000
95,73	8041/84	**PHQ821F0055 K402VF0175 ME30**	3400	3000	4000	**>32≤38**	11	66,1	3,5	399	1700	2600	4000
95,73	8041/84	**PHQ821F0055 K402VF0175 ME40**	3000	3000	3500	**≤38**	19	70,7	3,5	399	1700	2600	4000
95,73	8041/84	**PHQ821F0055 K402VF0175 ME40**	3000	3000	3500	**>38≤48**	33	71,1	3,5	399	1700	2600	4000
111,1	1333/12	**PHQ821F0055 K402VF0200 ME20**	3500	3300	5000	**≤19**	2,6	64,3	3,5	397	1700	2600	4000
111,1	1333/12	**PHQ821F0055 K402VF0200 ME20**	3500	3300	5000	**>19≤24**	3,3	64,4	3,5	399	1700	2600	4000
111,1	1333/12	**PHQ821F0055 K402VF0200 ME20**	3500	3300	5000	**>24≤32**	4,8	64,4	3,5	399	1700	2600	4000
111,1	1333/12	**PHQ821F0055 K402VF0200 ME30**	3500	3300	4000	**≤24**	8,3	66,0	3,5	399	1700	2600	4000
111,1	1333/12	**PHQ821F0055 K402VF0200 ME30**	3500	3300	4000	**>24≤32**	8,4	66,0	3,5	399	1700	2600	4000
111,1	1333/12	**PHQ821F0055 K402VF0200 ME30**	3500	3300	4000	**>32≤38**	10	66,1	3,5	399	1700	2600	4000
128,1	6149/48	**PHQ821F0055 K402VF0230 ME20**	3500	3300	5000	**≤19**	2,7	64,3	3,5	398	1700	2600	4000
128,1	6149/48	**PHQ821F0055 K402VF0230 ME20**	3500	3300	5000	**>19≤24**	3,5	64,4	3,5	399	1700	2600	4000
128,1	6149/48	**PHQ821F0055 K402VF0230 ME20**	3500	3300	5000	**>24≤32**	4,9	64,4	3,5	399	1700	2600	4000
128,1	6149/48	**PHQ821F0055 K402VF0230 ME30**	3500	3300	4000	**≤24**	8,5	65,9	3,5	399	1700	2600	4000
128,1	6149/48	**PHQ821F0055 K402VF0230 ME30**	3500	3300	4000	**>24≤32**	8,7	66,0	3,5	399	1700	2600	4000
128,1	6149/48	**PHQ821F0055 K402VF0230 ME30**	3500	3300	4000	**>32≤38**	10	66,1	3,5	399	1700	2600	4000
128,1	6149/48	**PHQ821F0055 K402VF0230 ME40**	3000	3000	3500	**≤38**	19	70,7	3,5	399	1700	2600	4000
128,1	6149/48	**PHQ821F0055 K402VF0230 ME40**	3000	3000	3500	**>38≤48**	32	71,1	3,5	399	1700	2600	4000
139,0	4171/30	**PHQ821F0055 K402VF0250 ME20**	3500	3300	5000	**≤19**	2,4	64,3	3,5	398	1700	2600	4000
139,0	4171/30	**PHQ821F0055 K402VF0250 ME20**	3500	3300	5000	**>19≤24**	3,1	64,4	3,5	399	1700	2600	4000
139,0	4171/30	**PHQ821F0055 K402VF0250 ME20**	3500	3300	5000	**>24≤32**	4,6	64,4	3,5	399	1700	2600	4000
139,0	4171/30	**PHQ821F0055 K402VF0250 ME30**	3500	3300	4000	**≤24**	8,0	66,0	3,5	399	1700	2600	4000
139,0	4171/30	**PHQ821F0055 K402VF0250 ME30**	3500	3300	4000	**>24≤32**	8,1	66,0	3,5	399	1700	2600	4000
139,0	4171/30	**PHQ821F0055 K402VF0250 ME30**	3500	3300	4000	**>32≤38**	9,9	66,1	3,5	399	1700	2600	4000
152,7	14663/96	**PHQ821F0055 K402VF0280 ME20**	3500	3300	5000	**≤19**	2,5	64,3	3,5	398	1700	2600	4000
152,7	14663/96	**PHQ821F0055 K402VF0280 ME20**	3500	3300	5000	**>19≤24**	3,2	64,4	3,5	399	1700	2600	4000
152,7	14663/96	**PHQ821F0055 K402VF0280 ME20**	3500	3300	5000	**>24≤32**	4,7	64,4	3,5	399	1700	2600	4000
152,7	14663/96	**PHQ821F0055 K402VF0280 ME30**	3500	3300	4000	**≤24**	8,2	66,0	3,5	399	1700	2600	4000
152,7	14663/96	**PHQ821F0055 K402VF0280 ME30**	3500	3300	4000	**>24≤32**	8,3	66,0	3,5	399	1700	2600	4000
152,7	14663/96	**PHQ821F0055 K402VF0280 ME30**	3500	3300	4000	**>32≤38**	10	66,1	3,5	399	1700	2600	4000
185,2	2408/13	**PHQ821F0055 K402VF0340 ME20**	3500	3300	5000	**≤19**	2,1	64,3	3,5	399	1700	2460	4000
185,2	2408/13	**PHQ821F0055 K402VF0340 ME20**	3500	3300	5000	**>19≤24**	2,8	64,3	3,5	399	1700	2460	4000
191,2	45881/240	**PHQ821F0055 K402VF0350 ME20**	3500	3300	5000	**≤19**	2,3	64,3	3,5	399	1700	2600	4000
191,2	45881/240	**PHQ821F0055 K402VF0350 ME20**	3500	3300	5000	**>19≤24**	3,0	64,4	3,5	399	1700	2600	4000
191,2	45881/240	**PHQ821F0055 K402VF0350 ME20**	3500	3300	5000	**>24≤32**	4,5	64,4	3,5	399	1700	2600	4000
191,2	45881/240	**PHQ821F0055 K402VF0350 ME30**	3500	3300	4000	**≤24**	8,0	66,0	3,5	399	1700	2600	4000
191,2	45881/240	**PHQ821F0055 K402VF0350 ME30**	3500	3300	4000	**>24≤32**	8,1	66,0	3,5	399	1700	2600	4000
191,2	45881/240	**PHQ821F0055 K402VF0350 ME30**	3500	3300	4000	**>32≤38**	9,8	66,1	3,5	399	1700	2600	4000
222,8	2451/11	**PHQ821F0055 K402VF0410 ME20**	3500	3300	5000	**≤19**	2,0	64,3	3,5	399	1630	1950	3530
222,8	2451/11	**PHQ821F0055 K402VF0410 ME20**	3500	3300	5000	**>19≤24**	2,8	64,3	3,5	399	1630	1950	3530
254,7	3311/13	**PHQ821F0055 K402VF0460 ME20**	3500	3300	5000	**≤19**	2,1	64,3	3,5	399	1700	2600	4000
254,7	3311/13	**PHQ821F0055 K402VF0460 ME20**	3500	3300	5000	**>19≤24**	2,8	64,3	3,5	399	1700	2600	4000
277,3	5547/20	**PHQ821F0055 K402VF0500 ME20**	3500	3300	5000	**≤19**	2,0	64,3	3,5	399	1420	1710	3090

Right-Angle Planetary Gear Units **PHQK**
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ8K4 (M2BMAX=2600 Nm)													
277,3	5547/20	**PHQ821F0055 K402VF0500 ME20**	3500	3300	5000	**>19≤24**	2,7	64,3	3,5	399	1420	1710	3090
306,4	2451/8	**PHQ821F0055 K402VF0560 ME20**	3500	3300	5000	**≤19**	2,0	64,3	3,5	399	1700	2600	4000
306,4	2451/8	**PHQ821F0055 K402VF0560 ME20**	3500	3300	5000	**>19≤24**	2,7	64,3	3,5	399	1700	2600	4000
381,4	61017/160	**PHQ821F0055 K402VF0690 ME20**	3500	3300	5000	**≤19**	1,9	64,3	3,5	399	1700	2350	4000
381,4	61017/160	**PHQ821F0055 K402VF0690 ME20**	3500	3300	5000	**>19≤24**	2,7	64,3	3,5	400	1700	2350	4000
PHQ9K5 (M2BMAX=5760 Nm)													
44,08	1102/25	**PHQ931F0060 K513VF0073 ME30**	1900	1800	3000	**≤24**	24	91,5	4	748	3800	3840	4810
44,08	1102/25	**PHQ931F0060 K513VF0073 ME30**	1900	1800	3000	**>24≤32**	24	91,6	4	763	3800	5140	6390
44,08	1102/25	**PHQ931F0060 K513VF0073 ME30**	1900	1800	3000	**>32≤38**	26	91,7	4	767	3800	5760	8780
44,08	1102/25	**PHQ931F0060 K513VF0073 ME40**	1900	1800	3000	**≤38**	34	96,3	4	763	3800	5760	8780
44,08	1102/25	**PHQ931F0060 K513VF0073 ME40**	1900	1800	3000	**>38≤48**	48	96,7	4	766	3800	5760	8780
48,80	17081/350	**PHQ931F0060 K513VF0081 ME30**	1900	1800	3000	**≤24**	22	91,5	4	752	3800	4260	5330
48,80	17081/350	**PHQ931F0060 K513VF0081 ME30**	1900	1800	3000	**>24≤32**	23	91,6	4	765	3800	5690	7080
48,80	17081/350	**PHQ931F0060 K513VF0081 ME30**	1900	1800	3000	**>32≤38**	24	91,7	4	767	3800	5760	9720
48,80	17081/350	**PHQ931F0060 K513VF0081 ME40**	1900	1800	3000	**≤38**	33	96,3	4	764	3800	5760	9720
48,80	17081/350	**PHQ931F0060 K513VF0081 ME40**	1900	1800	3000	**>38≤48**	46	96,7	4	767	3800	5760	9720
55,01	8526/155	**PHQ931F0060 K513VF0092 ME30**	1900	1800	3000	**≤24**	20	91,5	4	756	3800	4800	6010
55,01	8526/155	**PHQ931F0060 K513VF0092 ME30**	1900	1800	3000	**>24≤32**	20	91,6	4	766	3800	5760	7980
55,01	8526/155	**PHQ931F0060 K513VF0092 ME30**	1900	1800	3000	**>32≤38**	21	91,7	4	768	3800	5760	10960
55,01	8526/155	**PHQ931F0060 K513VF0092 ME40**	1900	1800	3000	**≤38**	30	96,3	4	766	3800	5760	10960
55,01	8526/155	**PHQ931F0060 K513VF0092 ME40**	1900	1800	3000	**>38≤48**	43	96,7	4	768	3800	5760	10960
60,90	609/10	**PHQ931F0060 K513VF0100 ME30**	1900	1800	3000	**≤24**	18	91,5	4	759	3800	5310	6650
60,90	609/10	**PHQ931F0060 K513VF0100 ME30**	1900	1800	3000	**>24≤32**	19	91,6	4	767	3800	5760	8830
60,90	609/10	**PHQ931F0060 K513VF0100 ME30**	1900	1800	3000	**>32≤38**	20	91,7	4	769	3800	5760	11250
60,90	609/10	**PHQ931F0060 K513VF0100 ME40**	1900	1800	3000	**≤38**	29	96,3	4	767	3800	5760	11250
60,90	609/10	**PHQ931F0060 K513VF0100 ME40**	1900	1800	3000	**>38≤48**	42	96,7	4	768	3800	5760	11250
69,41	10759/155	**PHQ931F0060 K513VF0115 ME30**	2300	2200	3600	**≤24**	16	91,5	4	762	3800	5760	7580
69,41	10759/155	**PHQ931F0060 K513VF0115 ME30**	2300	2200	3600	**>24≤32**	16	91,6	4	768	3800	5760	10070
69,41	10759/155	**PHQ931F0060 K513VF0115 ME30**	2300	2200	3600	**>32≤38**	18	91,7	4	769	3800	5760	11250
69,41	10759/155	**PHQ931F0060 K513VF0115 ME40**	2300	2200	3500	**≤38**	26	96,3	4	768	3800	5760	11250
69,41	10759/155	**PHQ931F0060 K513VF0115 ME40**	2300	2200	3500	**>38≤48**	40	96,7	4	769	3800	5760	11250
76,85	1537/20	**PHQ931F0060 K513VF0130 ME30**	2300	2200	3600	**≤24**	15	91,5	4	763	3800	5760	8390
76,85	1537/20	**PHQ931F0060 K513VF0130 ME30**	2300	2200	3600	**>24≤32**	15	91,6	4	769	3800	5760	11140
76,85	1537/20	**PHQ931F0060 K513VF0130 ME30**	2300	2200	3600	**>32≤38**	17	91,7	4	770	3800	5760	11250
76,85	1537/20	**PHQ931F0060 K513VF0130 ME40**	2300	2200	3500	**≤38**	25	96,3	4	768	3800	5760	11250
76,85	1537/20	**PHQ931F0060 K513VF0130 ME40**	2300	2200	3500	**>38≤48**	39	96,7	4	769	3800	5760	11250
87,22	11774/135	**PHQ931F0060 K513VF0145 ME20**	2300	2200	3600	**≤19**	7,7	89,9	4	756	3280	3280	4080
87,22	11774/135	**PHQ931F0060 K513VF0145 ME20**	2300	2200	3600	**>19≤24**	8,5	90,0	4	766	3800	4800	6510
87,22	11774/135	**PHQ931F0060 K513VF0145 ME20**	2300	2200	3600	**>24≤32**	9,9	90,0	4	768	3800	4800	6510
87,22	11774/135	**PHQ931F0060 K513VF0145 ME30**	2300	2200	3600	**≤24**	14	91,5	4	765	3800	5760	9530
87,22	11774/135	**PHQ931F0060 K513VF0145 ME30**	2300	2200	3600	**>24≤32**	14	91,6	4	769	3800	5760	11250
87,22	11774/135	**PHQ931F0060 K513VF0145 ME30**	2300	2200	3600	**>32≤38**	15	91,7	4	770	3800	5760	11250
87,22	11774/135	**PHQ931F0060 K513VF0145 ME40**	2300	2200	3500	**≤38**	24	96,3	4	769	3800	5760	11250
87,22	11774/135	**PHQ931F0060 K513VF0145 ME40**	2300	2200	3500	**>38≤48**	37	96,7	4	770	3800	5760	11250
96,56	26071/270	**PHQ931F0060 K513VF0160 ME20**	2300	2200	3600	**≤19**	7,3	89,9	4	759	3630	3630	4520
96,56	26071/270	**PHQ931F0060 K513VF0160 ME20**	2300	2200	3600	**>19≤24**	8,0	90,0	4	767	3800	5320	7210
96,56	26071/270	**PHQ931F0060 K513VF0160 ME20**	2300	2200	3600	**>24≤32**	9,5	90,0	4	769	3800	5320	7210
96,56	26071/270	**PHQ931F0060 K513VF0160 ME30**	2300	2200	3600	**≤24**	13	91,5	4	766	3800	5760	10550
96,56	26071/270	**PHQ931F0060 K513VF0160 ME30**	2300	2200	3600	**>24≤32**	13	91,6	4	770	3800	5760	11250
96,56	26071/270	**PHQ931F0060 K513VF0160 ME30**	2300	2200	3600	**>32≤38**	15	91,7	4	770	3800	5760	11250
96,56	26071/270	**PHQ931F0060 K513VF0160 ME40**	2300	2200	3500	**≤38**	23	96,3	4	769	3800	5760	11250
96,56	26071/270	**PHQ931F0060 K513VF0160 ME40**	2300	2200	3500	**>38≤48**	37	96,7	4	770	3800	5760	11250
104,9	6293/60	**PHQ931F0060 K513VF0175 ME20**	2800	2500	4000	**≤19**	6,3	89,9	4	761	3800	3950	4910
104,9	6293/60	**PHQ931F0060 K513VF0175 ME20**	2800	2500	4000	**>19≤24**	7,1	90,0	4	768	3800	5760	7830
104,9	6293/60	**PHQ931F0060 K513VF0175 ME20**	2800	2500	4000	**>24≤32**	8,5	90,0	4	769	3800	5760	7830
104,9	6293/60	**PHQ931F0060 K513VF0175 ME30**	2800	2500	4000	**≤24**	12	91,5	4	767	3800	5760	11250
104,9	6293/60	**PHQ931F0060 K513VF0175 ME30**	2800	2500	4000	**>24≤32**	12	91,6	4	770	3800	5760	11250
104,9	6293/60	**PHQ931F0060 K513VF0175 ME30**	2800	2500	4000	**>32≤38**	14	91,7	4	770	3800	5760	11250
104,9	6293/60	**PHQ931F0060 K513VF0175 ME40**	2800	2500	3500	**≤38**	22	96,3	4	770	3800	5760	11250

Right-Angle Planetary Gear Units **PHQK**
Reductores planetarios ortogonales ***PHQK***
Riduttori planetari-coppia conica **PHQK**

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Please take notice of the indications on page PHQK6! ***¡Por favor observe las indicaciones en la página PHQK6!*** **Si raccomanda di rispettare le avvertenze a pagina PHQK6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ9K5 (M2BMAX=5760 Nm)													
104,9	6293/60	**PHQ931F0060 K513VF0175 ME40**	2800	2500	3500	**>38≤48**	36	96,7	4	770	3800	5760	11250
116,1	27869/240	**PHQ931F0060 K513VF0195 ME20**	2800	2500	4000	**≤19**	6,0	89,9	4	763	3800	4370	5430
116,1	27869/240	**PHQ931F0060 K513VF0195 ME20**	2800	2500	4000	**>19≤24**	6,7	90,0	4	768	3800	5760	8670
116,1	27869/240	**PHQ931F0060 K513VF0195 ME20**	2800	2500	4000	**>24≤32**	8,2	90,0	4	769	3800	5760	8670
116,1	27869/240	**PHQ931F0060 K513VF0195 ME30**	2800	2500	4000	**≤24**	12	91,5	4	768	3800	5760	11250
116,1	27869/240	**PHQ931F0060 K513VF0195 ME30**	2800	2500	4000	**>24≤32**	12	91,6	4	770	3800	5760	11250
116,1	27869/240	**PHQ931F0060 K513VF0195 ME30**	2800	2500	4000	**>32≤38**	14	91,7	4	770	3800	5760	11250
116,1	27869/240	**PHQ931F0060 K513VF0195 ME40**	2800	2500	3500	**≤38**	22	96,3	4	770	3800	5760	11250
116,1	27869/240	**PHQ931F0060 K513VF0195 ME40**	2800	2500	3500	**>38≤48**	36	96,7	4	770	3800	5760	11250
132,0	2639/20	**PHQ931F0060 K513VF0220 ME20**	2800	2500	4000	**≤19**	5,0	89,9	4	765	3800	4970	6180
132,0	2639/20	**PHQ931F0060 K513VF0220 ME20**	2800	2500	4000	**>19≤24**	5,8	90,0	4	769	3800	5760	9160
132,0	2639/20	**PHQ931F0060 K513VF0220 ME20**	2800	2500	4000	**>24≤32**	7,2	90,0	4	770	3800	5760	9160
132,0	2639/20	**PHQ931F0060 K513VF0220 ME30**	2800	2500	4000	**≤24**	11	91,5	4	768	3800	5760	11250
132,0	2639/20	**PHQ931F0060 K513VF0220 ME30**	2800	2500	4000	**>24≤32**	11	91,6	4	770	3800	5760	11250
132,0	2639/20	**PHQ931F0060 K513VF0220 ME30**	2800	2500	4000	**>32≤38**	13	91,7	4	771	3800	5760	11250
132,0	2639/20	**PHQ931F0060 K513VF0220 ME40**	2800	2500	3500	**≤38**	21	96,3	4	770	3800	5760	11250
132,0	2639/20	**PHQ931F0060 K513VF0220 ME40**	2800	2500	3500	**>38≤48**	35	96,7	4	771	3800	5760	11250
146,1	11687/80	**PHQ931F0060 K513VF0240 ME20**	2800	2500	4000	**≤19**	4,8	89,9	4	766	3800	5500	6840
146,1	11687/80	**PHQ931F0060 K513VF0240 ME20**	2800	2500	4000	**>19≤24**	5,5	90,0	4	769	3800	5760	10140
146,1	11687/80	**PHQ931F0060 K513VF0240 ME20**	2800	2500	4000	**>24≤32**	7,0	90,0	4	770	3800	5760	10140
146,1	11687/80	**PHQ931F0060 K513VF0240 ME30**	2800	2500	4000	**≤24**	11	91,5	4	769	3800	5760	11250
146,1	11687/80	**PHQ931F0060 K513VF0240 ME30**	2800	2500	4000	**>24≤32**	11	91,6	4	770	3800	5760	11250
146,1	11687/80	**PHQ931F0060 K513VF0240 ME30**	2800	2500	4000	**>32≤38**	12	91,7	4	771	3800	5760	11250
146,1	11687/80	**PHQ931F0060 K513VF0240 ME40**	2800	2500	3500	**≤38**	21	96,3	4	770	3800	5760	11250
146,1	11687/80	**PHQ931F0060 K513VF0240 ME40**	2800	2500	3500	**>38≤48**	34	96,7	4	771	3800	5760	11250
175,1	14007/80	**PHQ931F0060 K513VF0290 ME20**	3400	3000	4500	**≤19**	3,9	89,9	4	767	3800	5760	8200
175,1	14007/80	**PHQ931F0060 K513VF0290 ME20**	3400	3000	4500	**>19≤24**	4,6	90,0	4	770	3800	5760	10350
175,1	14007/80	**PHQ931F0060 K513VF0290 ME20**	3400	3000	4500	**>24≤32**	6,1	90,0	4	770	3800	5760	10350
175,1	14007/80	**PHQ931F0060 K513VF0290 ME30**	3400	3000	4000	**≤24**	9,7	91,5	4	770	3800	5760	11250
175,1	14007/80	**PHQ931F0060 K513VF0290 ME30**	3400	3000	4000	**>24≤32**	9,8	91,6	4	771	3800	5760	11250
175,1	14007/80	**PHQ931F0060 K513VF0290 ME30**	3400	3000	4000	**>32≤38**	12	91,7	4	771	3800	5760	11250
175,1	14007/80	**PHQ931F0060 K513VF0290 ME40**	3000	3000	3500	**≤38**	20	96,3	4	771	3800	5760	11250
175,1	14007/80	**PHQ931F0060 K513VF0290 ME40**	3000	3000	3500	**>38≤48**	33	96,7	4	771	3800	5760	11250
193,8	62031/320	**PHQ931F0060 K513VF0320 ME20**	3400	3000	4500	**≤19**	3,8	89,9	4	768	3800	5760	9070
193,8	62031/320	**PHQ931F0060 K513VF0320 ME20**	3400	3000	4500	**>19≤24**	4,5	90,0	4	770	3800	5760	11250
193,8	62031/320	**PHQ931F0060 K513VF0320 ME20**	3400	3000	4500	**>24≤32**	6,0	90,0	4	771	3800	5760	11250
193,8	62031/320	**PHQ931F0060 K513VF0320 ME30**	3400	3000	4000	**≤24**	9,6	91,5	4	770	3800	5760	11250
193,8	62031/320	**PHQ931F0060 K513VF0320 ME30**	3400	3000	4000	**>24≤32**	9,7	91,6	4	771	3800	5760	11250
193,8	62031/320	**PHQ931F0060 K513VF0320 ME30**	3400	3000	4000	**>32≤38**	11	91,7	4	771	3800	5760	11250
193,8	62031/320	**PHQ931F0060 K513VF0320 ME40**	3000	3000	3500	**≤38**	20	96,3	4	771	3800	5760	11250
193,8	62031/320	**PHQ931F0060 K513VF0320 ME40**	3000	3000	3500	**>38≤48**	33	96,7	4	771	3800	5760	11250
208,8	1044/5	**PHQ931F0060 K513VF0350 ME20**	3400	3000	4500	**≤19**	3,4	89,9	4	769	3800	5760	9770
208,8	1044/5	**PHQ931F0060 K513VF0350 ME20**	3400	3000	4500	**>19≤24**	4,1	90,0	4	770	3800	5760	11130
208,8	1044/5	**PHQ931F0060 K513VF0350 ME20**	3400	3000	4500	**>24≤32**	5,6	90,0	4	771	3800	5760	11130
208,8	1044/5	**PHQ931F0060 K513VF0350 ME30**	3400	3000	4000	**≤24**	9,1	91,6	4	770	3800	5760	11130
208,8	1044/5	**PHQ931F0060 K513VF0350 ME30**	3400	3000	4000	**>24≤32**	9,2	91,6	4	771	3800	5760	11130
208,8	1044/5	**PHQ931F0060 K513VF0350 ME30**	3400	3000	4000	**>32≤38**	11	91,7	4	771	3800	5760	11130
231,2	8091/35	**PHQ931F0060 K513VF0390 ME20**	3400	3000	4500	**≤19**	3,3	89,9	4	769	3800	5760	10820
231,2	8091/35	**PHQ931F0060 K513VF0390 ME20**	3400	3000	4500	**>19≤24**	4,0	90,0	4	770	3800	5760	11250
231,2	8091/35	**PHQ931F0060 K513VF0390 ME20**	3400	3000	4500	**>24≤32**	5,5	90,0	4	771	3800	5760	11250
231,2	8091/35	**PHQ931F0060 K513VF0390 ME30**	3400	3000	4000	**≤24**	9,0	91,6	4	770	3800	5760	11250
231,2	8091/35	**PHQ931F0060 K513VF0390 ME30**	3400	3000	4000	**>24≤32**	9,1	91,6	4	771	3800	5760	11250
231,2	8091/35	**PHQ931F0060 K513VF0390 ME30**	3400	3000	4000	**>32≤38**	11	91,7	4	771	3800	5760	11250
261,0	261/1	**PHQ931F0060 K513VF0440 ME20**	3400	3000	4500	**≤19**	2,9	89,9	4	769	3800	5760	11250
261,0	261/1	**PHQ931F0060 K513VF0440 ME20**	3400	3000	4500	**>19≤24**	3,6	90,0	4	771	3800	5760	11250
261,0	261/1	**PHQ931F0060 K513VF0440 ME20**	3400	3000	4500	**>24≤32**	5,1	90,0	4	771	3800	5760	11250
261,0	261/1	**PHQ931F0060 K513VF0440 ME30**	3400	3000	4000	**≤24**	8,6	91,6	4	770	3800	5760	11250
261,0	261/1	**PHQ931F0060 K513VF0440 ME30**	3400	3000	4000	**>24≤32**	8,7	91,6	4	771	3800	5760	11250
261,0	261/1	**PHQ931F0060 K513VF0440 ME30**	3400	3000	4000	**>32≤38**	10	91,7	4	771	3800	5760	11250
289,0	8091/28	**PHQ931F0060 K513VF0480 ME20**	3400	3000	4500	**≤19**	2,9	89,9	4	770	3800	5760	11250
289,0	8091/28	**PHQ931F0060 K513VF0480 ME20**	3400	3000	4500	**>19≤24**	3,6	90,0	4	771	3800	5760	11250
289,0	8091/28	**PHQ931F0060 K513VF0480 ME20**	3400	3000	4500	**>24≤32**	5,1	90,0	4	771	3800	5760	11250

Right-Angle Planetary Gear Units **PHQK**
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Riduttori planetari-coppia conica **PHQK**

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ9K5 (M2BMAX=5760 Nm)													
289,0	8091/28	**PHQ931F0060 K513VF0480 ME30**	3400	3000	4000	**≤24**	8,5	91,6	4	771	3800	5760	11250
289,0	8091/28	**PHQ931F0060 K513VF0480 ME30**	3400	3000	4000	**>24≤32**	8,6	91,6	4	771	3800	5760	11250
289,0	8091/28	**PHQ931F0060 K513VF0480 ME30**	3400	3000	4000	**>32≤38**	10	91,7	4	771	3800	5760	11250
349,8	22736/65	**PHQ931F0060 K513VF0580 ME20**	3400	3000	4500	**≤19**	2,5	89,9	4	770	3800	5760	11250
349,8	22736/65	**PHQ931F0060 K513VF0580 ME20**	3400	3000	4500	**>19≤24**	3,2	90,0	4	771	3800	5760	11250
349,8	22736/65	**PHQ931F0060 K513VF0580 ME20**	3400	3000	4500	**>24≤32**	4,7	90,0	4	771	3800	5760	11250
349,8	22736/65	**PHQ931F0060 K513VF0580 ME30**	3400	3000	4000	**≤24**	8,1	91,6	4	771	3800	5760	11250
349,8	22736/65	**PHQ931F0060 K513VF0580 ME30**	3400	3000	4000	**>24≤32**	8,3	91,6	4	771	3800	5760	11250
349,8	22736/65	**PHQ931F0060 K513VF0580 ME30**	3400	3000	4000	**>32≤38**	10	91,7	4	771	3800	5760	11250
387,3	25172/65	**PHQ931F0060 K513VF0650 ME20**	3400	3000	4500	**≤19**	2,5	89,9	4	770	3800	5760	11250
387,3	25172/65	**PHQ931F0060 K513VF0650 ME20**	3400	3000	4500	**>19≤24**	3,2	90,0	4	771	3800	5760	11250
387,3	25172/65	**PHQ931F0060 K513VF0650 ME20**	3400	3000	4500	**>24≤32**	4,7	90,0	4	771	3800	5760	11250
387,3	25172/65	**PHQ931F0060 K513VF0650 ME30**	3400	3000	4000	**≤24**	8,1	91,6	4	771	3800	5760	11250
387,3	25172/65	**PHQ931F0060 K513VF0650 ME30**	3400	3000	4000	**>24≤32**	8,2	91,6	4	771	3800	5760	11250
387,3	25172/65	**PHQ931F0060 K513VF0650 ME30**	3400	3000	4000	**>32≤38**	10,0	91,7	4	771	3800	5760	11250
420,5	841/2	**PHQ931F0060 K513VF0700 ME20**	3400	3000	4500	**≤19**	2,3	89,9	4	770	3800	5670	7980
420,5	841/2	**PHQ931F0060 K513VF0700 ME20**	3400	3000	4500	**>19≤24**	3,0	89,9	4	771	3800	5670	7980
465,6	26071/56	**PHQ931F0060 K513VF0780 ME20**	3400	3000	4500	**≤19**	2,2	89,9	4	771	3800	5760	8840
465,6	26071/56	**PHQ931F0060 K513VF0780 ME20**	3400	3000	4500	**>19≤24**	3,0	89,9	4	771	3800	5760	8840
523,7	26187/50	**PHQ931F0060 K513VF0870 ME20**	3400	3000	4500	**≤19**	2,1	89,9	4	771	3800	4760	8230
523,7	26187/50	**PHQ931F0060 K513VF0870 ME20**	3400	3000	4500	**>19≤24**	2,8	89,9	4	771	3800	4760	8230
579,9	115971/200	**PHQ931F0060 K513VF0970 ME20**	3400	3000	4500	**≤19**	2,1	89,9	4	771	3800	5280	9110
579,9	115971/200	**PHQ931F0060 K513VF0970 ME20**	3400	3000	4500	**>19≤24**	2,8	89,9	4	771	3800	5280	9110
PHQ10K7 (M2BMAX=10000 Nm)													
45,38	59535/1312	**PHQ1031F0060 K713VF0076 ME40**	1700	1600	2700	**≤38**	79	156,2	4	1527	6500	10000	12490
45,38	59535/1312	**PHQ1031F0060 K713VF0076 ME40**	1700	1600	2700	**>38≤48**	92	156,6	4	1545	6500	10000	16950
45,38	59535/1312	**PHQ1031F0060 K713VF0076 ME50**	1700	1600	2700	**>55≤60**	120	164,2	4	1551	6500	10000	16950
50,24	263655/5248	**PHQ1031F0060 K713VF0084 ME40**	1700	1600	2700	**≤38**	74	156,2	4	1533	6500	10000	13830
50,24	263655/5248	**PHQ1031F0060 K713VF0084 ME40**	1700	1600	2700	**>38≤48**	88	156,6	4	1548	6500	10000	18760
50,24	263655/5248	**PHQ1031F0060 K713VF0084 ME50**	1700	1600	2700	**>55≤60**	116	164,2	4	1553	6500	10000	18760
55,13	441/8	**PHQ1031F0060 K713VF0092 ME40**	1700	1600	2700	**≤38**	63	156,2	4	1538	6500	10000	15180
55,13	441/8	**PHQ1031F0060 K713VF0092 ME40**	1700	1600	2700	**>38≤48**	77	156,6	4	1550	6500	10000	20000
55,13	441/8	**PHQ1031F0060 K713VF0092 ME50**	1700	1600	2700	**>55≤60**	105	164,2	4	1554	6500	10000	20000
61,03	1953/32	**PHQ1031F0060 K713VF0100 ME40**	1700	1600	2700	**≤38**	60	156,2	4	1542	6500	10000	16800
61,03	1953/32	**PHQ1031F0060 K713VF0100 ME40**	1700	1600	2700	**>38≤48**	74	156,6	4	1552	6500	10000	20000
61,03	1953/32	**PHQ1031F0060 K713VF0100 ME50**	1700	1600	2700	**>55≤60**	102	164,2	4	1555	6500	10000	20000
70,69	70119/992	**PHQ1031F0060 K713VF0120 ME30**	2000	1900	3000	**≤24**	39	151,6	4	1523	6160	6160	7720
70,69	70119/992	**PHQ1031F0060 K713VF0120 ME30**	2000	1900	3000	**>24≤32**	39	151,7	4	1548	6500	8240	10250
70,69	70119/992	**PHQ1031F0060 K713VF0120 ME30**	2000	1900	3000	**>32≤38**	41	151,8	4	1553	6500	10000	14080
70,69	70119/992	**PHQ1031F0060 K713VF0120 ME40**	2000	1900	3000	**≤38**	49	156,2	4	1547	6500	10000	19460
70,69	70119/992	**PHQ1031F0060 K713VF0120 ME40**	2000	1900	3000	**>38≤48**	63	156,6	4	1554	6500	10000	20000
70,69	70119/992	**PHQ1031F0060 K713VF0120 ME50**	2000	1900	3000	**≤55**	87	164,1	4	1555	6500	10000	14080
70,69	70119/992	**PHQ1031F0060 K713VF0120 ME50**	2000	1900	3000	**>55≤60**	91	164,2	4	1557	6500	10000	20000
78,26	10017/128	**PHQ1031F0060 K713VF0130 ME30**	2000	1900	3000	**≤24**	37	151,6	4	1530	6500	6820	8550
78,26	10017/128	**PHQ1031F0060 K713VF0130 ME30**	2000	1900	3000	**>24≤32**	37	151,7	4	1551	6500	9120	11350
78,26	10017/128	**PHQ1031F0060 K713VF0130 ME30**	2000	1900	3000	**>32≤38**	39	151,8	4	1555	6500	10000	15590
78,26	10017/128	**PHQ1031F0060 K713VF0130 ME40**	2000	1900	3000	**≤38**	48	156,2	4	1549	6500	10000	20000
78,26	10017/128	**PHQ1031F0060 K713VF0130 ME40**	2000	1900	3000	**>38≤48**	62	156,6	4	1555	6500	10000	20000
78,26	10017/128	**PHQ1031F0060 K713VF0130 ME50**	2000	1900	3000	**≤55**	85	164,1	4	1556	6500	10000	15590
78,26	10017/128	**PHQ1031F0060 K713VF0130 ME50**	2000	1900	3000	**>55≤60**	89	164,2	4	1557	6500	10000	20000
88,81	1421/16	**PHQ1031F0060 K713VF0150 ME30**	2000	1900	3000	**≤24**	30	151,6	4	1537	6500	7740	9700
88,81	1421/16	**PHQ1031F0060 K713VF0150 ME30**	2000	1900	3000	**>24≤32**	30	151,7	4	1553	6500	10000	12880
88,81	1421/16	**PHQ1031F0060 K713VF0150 ME30**	2000	1900	3000	**>32≤38**	32	151,8	4	1556	6500	10000	17640
88,81	1421/16	**PHQ1031F0060 K713VF0150 ME40**	2000	1900	3000	**≤38**	41	156,2	4	1552	6500	10000	20000
88,81	1421/16	**PHQ1031F0060 K713VF0150 ME40**	2000	1900	3000	**>38≤48**	55	156,6	4	1557	6500	10000	20000
88,81	1421/16	**PHQ1031F0060 K713VF0150 ME50**	2000	1900	3000	**≤55**	78	164,1	4	1557	6500	10000	17640
88,81	1421/16	**PHQ1031F0060 K713VF0150 ME50**	2000	1900	3000	**>55≤60**	83	164,2	4	1558	6500	10000	20000
98,33	6293/64	**PHQ1031F0060 K713VF0165 ME30**	2000	1900	3000	**≤24**	29	151,6	4	1541	6500	8570	10740
98,33	6293/64	**PHQ1031F0060 K713VF0165 ME30**	2000	1900	3000	**>24≤32**	29	151,7	4	1554	6500	10000	14260

Right-Angle Planetary Gear Units **PHQK**
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Riduttori planetari-coppia conica **PHQK**

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ10K7 (M2BMAX=10000 Nm)													
98,33	6293/64	**PHQ1031F0060 K713VF0165 ME30**	2000	1900	3000	**>32≤38**	31	151,8	4	1557	6500	10000	19530
98,33	6293/64	**PHQ1031F0060 K713VF0165 ME40**	2000	1900	3000	**≤38**	40	156,2	4	1553	6500	10000	20000
98,33	6293/64	**PHQ1031F0060 K713VF0165 ME40**	2000	1900	3000	**>38≤48**	53	156,6	4	1557	6500	10000	20000
98,33	6293/64	**PHQ1031F0060 K713VF0165 ME50**	2000	1900	3000	**≤55**	77	164,1	4	1558	6500	10000	19530
98,33	6293/64	**PHQ1031F0060 K713VF0165 ME50**	2000	1900	3000	**>55≤60**	81	164,2	4	1559	6500	10000	20000
109,7	80703/736	**PHQ1031F0060 K713VF0185 ME30**	2400	2200	3400	**≤24**	25	151,6	4	1545	6500	9560	11980
109,7	80703/736	**PHQ1031F0060 K713VF0185 ME30**	2400	2200	3400	**>24≤32**	25	151,7	4	1556	6500	10000	15900
109,7	80703/736	**PHQ1031F0060 K713VF0185 ME30**	2400	2200	3400	**>32≤38**	26	151,8	4	1558	6500	10000	20000
109,7	80703/736	**PHQ1031F0060 K713VF0185 ME40**	2400	2200	3400	**≤38**	35	156,2	4	1555	6500	10000	20000
109,7	80703/736	**PHQ1031F0060 K713VF0185 ME40**	2400	2200	3400	**>38≤48**	49	156,6	4	1558	6500	10000	20000
109,7	80703/736	**PHQ1031F0060 K713VF0185 ME50**	2400	2200	3000	**≤55**	73	164,1	4	1558	6500	10000	20000
109,7	80703/736	**PHQ1031F0060 K713VF0185 ME50**	2400	2200	3000	**>55≤60**	77	164,2	4	1559	6500	10000	20000
121,4	357399/2944	**PHQ1031F0060 K713VF0200 ME30**	2400	2200	3400	**≤24**	24	151,6	4	1548	6500	10000	13260
121,4	357399/2944	**PHQ1031F0060 K713VF0200 ME30**	2400	2200	3400	**>24≤32**	24	151,7	4	1556	6500	10000	17600
121,4	357399/2944	**PHQ1031F0060 K713VF0200 ME30**	2400	2200	3400	**>32≤38**	26	151,8	4	1558	6500	10000	20000
121,4	357399/2944	**PHQ1031F0060 K713VF0200 ME40**	2400	2200	3400	**≤38**	34	156,2	4	1556	6500	10000	20000
121,4	357399/2944	**PHQ1031F0060 K713VF0200 ME40**	2400	2200	3400	**>38≤48**	48	156,6	4	1558	6500	10000	20000
121,4	357399/2944	**PHQ1031F0060 K713VF0200 ME50**	2400	2200	3000	**≤55**	72	164,1	4	1559	6500	10000	20000
121,4	357399/2944	**PHQ1031F0060 K713VF0200 ME50**	2400	2200	3000	**>55≤60**	76	164,2	4	1559	6500	10000	20000
136,4	43659/320	**PHQ1031F0060 K713VF0230 ME30**	2400	2200	3400	**≤24**	20	151,6	4	1550	6500	10000	14900
136,4	43659/320	**PHQ1031F0060 K713VF0230 ME30**	2400	2200	3400	**>24≤32**	20	151,7	4	1557	6500	10000	19780
136,4	43659/320	**PHQ1031F0060 K713VF0230 ME30**	2400	2200	3400	**>32≤38**	22	151,8	4	1559	6500	10000	20000
136,4	43659/320	**PHQ1031F0060 K713VF0230 ME40**	2400	2200	3400	**≤38**	30	156,2	4	1557	6500	10000	20000
136,4	43659/320	**PHQ1031F0060 K713VF0230 ME40**	2400	2200	3400	**>38≤48**	44	156,6	4	1559	6500	10000	20000
136,4	43659/320	**PHQ1031F0060 K713VF0230 ME50**	2400	2200	3000	**≤55**	68	164,1	4	1559	6500	10000	20000
136,4	43659/320	**PHQ1031F0060 K713VF0230 ME50**	2400	2200	3000	**>55≤60**	72	164,2	4	1560	6500	10000	20000
151,1	193347/1280	**PHQ1031F0060 K713VF0250 ME30**	2400	2200	3400	**≤24**	19	151,6	4	1552	6500	10000	16500
151,1	193347/1280	**PHQ1031F0060 K713VF0250 ME30**	2400	2200	3400	**>24≤32**	20	151,7	4	1558	6500	10000	20000
151,1	193347/1280	**PHQ1031F0060 K713VF0250 ME30**	2400	2200	3400	**>32≤38**	21	151,8	4	1559	6500	10000	20000
151,1	193347/1280	**PHQ1031F0060 K713VF0250 ME40**	2400	2200	3400	**≤38**	30	156,2	4	1558	6500	10000	20000
151,1	193347/1280	**PHQ1031F0060 K713VF0250 ME40**	2400	2200	3400	**>38≤48**	44	156,6	4	1559	6500	10000	20000
151,1	193347/1280	**PHQ1031F0060 K713VF0250 ME50**	2400	2200	3000	**≤55**	68	164,1	4	1559	6500	10000	20000
151,1	193347/1280	**PHQ1031F0060 K713VF0250 ME50**	2400	2200	3000	**>55≤60**	72	164,2	4	1560	6500	10000	20000
175,7	22491/128	**PHQ1031F0060 K713VF0290 ME30**	2900	2600	3800	**≤24**	16	151,6	4	1554	6500	10000	19190
175,7	22491/128	**PHQ1031F0060 K713VF0290 ME30**	2900	2600	3800	**>24≤32**	16	151,7	4	1559	6500	10000	20000
175,7	22491/128	**PHQ1031F0060 K713VF0290 ME30**	2900	2600	3800	**>32≤38**	18	151,8	4	1559	6500	10000	20000
175,7	22491/128	**PHQ1031F0060 K713VF0290 ME40**	2900	2600	3500	**≤38**	26	156,2	4	1558	6500	10000	20000
175,7	22491/128	**PHQ1031F0060 K713VF0290 ME40**	2900	2600	3500	**>38≤48**	40	156,6	4	1560	6500	10000	20000
175,7	22491/128	**PHQ1031F0060 K713VF0290 ME50**	2500	2500	3000	**≤55**	64	164,1	4	1560	6500	10000	20000
175,7	22491/128	**PHQ1031F0060 K713VF0290 ME50**	2500	2500	3000	**>55≤60**	68	164,2	4	1560	6500	10000	20000
194,5	99603/512	**PHQ1031F0060 K713VF0320 ME30**	2900	2600	3800	**≤24**	15	151,6	4	1556	6500	10000	20000
194,5	99603/512	**PHQ1031F0060 K713VF0320 ME30**	2900	2600	3800	**>24≤32**	16	151,7	4	1559	6500	10000	20000
194,5	99603/512	**PHQ1031F0060 K713VF0320 ME30**	2900	2600	3800	**>32≤38**	17	151,8	4	1560	6500	10000	20000
194,5	99603/512	**PHQ1031F0060 K713VF0320 ME40**	2900	2600	3500	**≤38**	26	156,2	4	1559	6500	10000	20000
194,5	99603/512	**PHQ1031F0060 K713VF0320 ME40**	2900	2600	3500	**>38≤48**	40	156,6	4	1560	6500	10000	20000
194,5	99603/512	**PHQ1031F0060 K713VF0320 ME50**	2500	2500	3000	**≤55**	64	164,1	4	1560	6500	10000	20000
194,5	99603/512	**PHQ1031F0060 K713VF0320 ME50**	2500	2500	3000	**>55≤60**	68	164,2	4	1560	6500	10000	20000
212,6	1701/8	**PHQ1031F0060 K713VF0350 ME30**	2900	2600	3800	**≤24**	14	151,6	4	1556	6500	10000	20000
212,6	1701/8	**PHQ1031F0060 K713VF0350 ME30**	2900	2600	3800	**>24≤32**	14	151,7	4	1559	6500	10000	20000
212,6	1701/8	**PHQ1031F0060 K713VF0350 ME30**	2900	2600	3800	**>32≤38**	16	151,8	4	1560	6500	10000	20000
212,6	1701/8	**PHQ1031F0060 K713VF0350 ME40**	2900	2600	3500	**≤38**	24	156,1	4	1559	6500	10000	20000
212,6	1701/8	**PHQ1031F0060 K713VF0350 ME40**	2900	2600	3500	**>38≤48**	37	156,5	4	1560	6500	10000	20000
212,6	1701/8	**PHQ1031F0060 K713VF0350 ME50**	2500	2500	3000	**≤55**	62	164,1	4	1560	6500	10000	20000
212,6	1701/8	**PHQ1031F0060 K713VF0350 ME50**	2500	2500	3000	**>55≤60**	66	164,1	4	1560	6500	10000	20000
235,4	7533/32	**PHQ1031F0060 K713VF0390 ME30**	2900	2600	3800	**≤24**	13	151,6	4	1557	6500	10000	20000
235,4	7533/32	**PHQ1031F0060 K713VF0390 ME30**	2900	2600	3800	**>24≤32**	14	151,7	4	1560	6500	10000	20000
235,4	7533/32	**PHQ1031F0060 K713VF0390 ME30**	2900	2600	3800	**>32≤38**	15	151,8	4	1560	6500	10000	20000
235,4	7533/32	**PHQ1031F0060 K713VF0390 ME40**	2900	2600	3500	**≤38**	24	156,1	4	1559	6500	10000	20000
235,4	7533/32	**PHQ1031F0060 K713VF0390 ME40**	2900	2600	3500	**>38≤48**	37	156,5	4	1560	6500	10000	20000
235,4	7533/32	**PHQ1031F0060 K713VF0390 ME50**	2500	2500	3000	**≤55**	62	164,1	4	1560	6500	10000	20000
235,4	7533/32	**PHQ1031F0060 K713VF0390 ME50**	2500	2500	3000	**>55≤60**	66	164,1	4	1560	6500	10000	20000
270,3	112455/416	**PHQ1031F0060 K713VF0450 ME30**	2900	2600	3800	**≤24**	12	151,6	4	1558	6500	10000	20000

Right-Angle Planetary Gear Units **PHQK**
Reductores planetarios ortogonales ***PHQK***
Riduttori planetari-coppia conica **PHQK**

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ10K7 (M2BMAX=10000 Nm)													
270,3	112455/416	**PHQ1031F0060 K713VF0450 ME30**	2900	2600	3800	**>24≤32**	12	151,7	4	1560	6500	10000	20000
270,3	112455/416	**PHQ1031F0060 K713VF0450 ME30**	2900	2600	3800	**>32≤38**	14	151,8	4	1560	6500	10000	20000
270,3	112455/416	**PHQ1031F0060 K713VF0450 ME40**	2900	2600	3500	**≤38**	22	156,1	4	1560	6500	10000	20000
270,3	112455/416	**PHQ1031F0060 K713VF0450 ME40**	2900	2600	3500	**>38≤48**	35	156,5	4	1560	6500	10000	20000
270,3	112455/416	**PHQ1031F0060 K713VF0450 ME50**	2500	2500	3000	**≤55**	60	164,1	4	1560	6500	10000	20000
270,3	112455/416	**PHQ1031F0060 K713VF0450 ME50**	2500	2500	3000	**>55≤60**	65	164,1	4	1560	6500	10000	20000
299,3	498015/1664	**PHQ1031F0060 K713VF0500 ME30**	2900	2600	3800	**≤24**	12	151,6	4	1559	6500	10000	20000
299,3	498015/1664	**PHQ1031F0060 K713VF0500 ME30**	2900	2600	3800	**>24≤32**	12	151,7	4	1560	6500	10000	20000
299,3	498015/1664	**PHQ1031F0060 K713VF0500 ME30**	2900	2600	3800	**>32≤38**	13	151,8	4	1560	6500	10000	20000
299,3	498015/1664	**PHQ1031F0060 K713VF0500 ME40**	2900	2600	3500	**≤38**	22	156,1	4	1560	6500	10000	20000
299,3	498015/1664	**PHQ1031F0060 K713VF0500 ME40**	2900	2600	3500	**>38≤48**	35	156,5	4	1560	6500	10000	20000
299,3	498015/1664	**PHQ1031F0060 K713VF0500 ME50**	2500	2500	3000	**≤55**	60	164,1	4	1560	6500	10000	20000
299,3	498015/1664	**PHQ1031F0060 K713VF0500 ME50**	2500	2500	3000	**>55≤60**	64	164,1	4	1560	6500	10000	20000
351,4	22491/64	**PHQ1031F0060 K713VF0590 ME30**	2900	2600	3800	**≤24**	10	151,6	4	1559	6500	10000	20000
351,4	22491/64	**PHQ1031F0060 K713VF0590 ME30**	2900	2600	3800	**>24≤32**	10	151,7	4	1560	6500	10000	20000
351,4	22491/64	**PHQ1031F0060 K713VF0590 ME30**	2900	2600	3800	**>32≤38**	12	151,8	4	1560	6500	10000	20000
351,4	22491/64	**PHQ1031F0060 K713VF0590 ME40**	2900	2600	3500	**≤38**	20	156,1	4	1560	6500	10000	20000
351,4	22491/64	**PHQ1031F0060 K713VF0590 ME40**	2900	2600	3500	**>38≤48**	34	156,5	4	1560	6500	10000	20000
351,4	22491/64	**PHQ1031F0060 K713VF0590 ME50**	2500	2500	3000	**≤55**	59	164,1	4	1560	6500	10000	20000
351,4	22491/64	**PHQ1031F0060 K713VF0590 ME50**	2500	2500	3000	**>55≤60**	63	164,1	4	1560	6500	10000	20000
389,1	99603/256	**PHQ1031F0060 K713VF0650 ME30**	2900	2600	3800	**≤24**	10	151,6	4	1559	6500	10000	20000
389,1	99603/256	**PHQ1031F0060 K713VF0650 ME30**	2900	2600	3800	**>24≤32**	10	151,7	4	1560	6500	10000	20000
389,1	99603/256	**PHQ1031F0060 K713VF0650 ME30**	2900	2600	3800	**>32≤38**	12	151,8	4	1560	6500	10000	20000
389,1	99603/256	**PHQ1031F0060 K713VF0650 ME40**	2900	2600	3500	**≤38**	20	156,1	4	1560	6500	10000	20000
389,1	99603/256	**PHQ1031F0060 K713VF0650 ME40**	2900	2600	3500	**>38≤48**	34	156,5	4	1560	6500	10000	20000
389,1	99603/256	**PHQ1031F0060 K713VF0650 ME50**	2500	2500	3000	**≤55**	58	164,1	4	1560	6500	10000	20000
389,1	99603/256	**PHQ1031F0060 K713VF0650 ME50**	2500	2500	3000	**>55≤60**	63	164,1	4	1560	6500	10000	20000
427,2	13671/32	**PHQ1031F0060 K713VF0710 ME30**	2900	2600	3800	**≤24**	9,3	151,6	4	1560	6500	10000	17790
427,2	13671/32	**PHQ1031F0060 K713VF0710 ME30**	2900	2600	3800	**>24≤32**	9,5	151,7	4	1560	6500	10000	17790
427,2	13671/32	**PHQ1031F0060 K713VF0710 ME30**	2900	2600	3800	**>32≤38**	11	151,8	4	1560	6500	10000	17790
473,0	60543/128	**PHQ1031F0060 K713VF0790 ME30**	2900	2600	3800	**≤24**	9,3	151,6	4	1560	6500	10000	19700
473,0	60543/128	**PHQ1031F0060 K713VF0790 ME30**	2900	2600	3800	**>24≤32**	9,4	151,7	4	1560	6500	10000	19700
473,0	60543/128	**PHQ1031F0060 K713VF0790 ME30**	2900	2600	3800	**>32≤38**	11	151,8	4	1560	6500	10000	19700
534,0	68355/128	**PHQ1031F0060 K713VF0890 ME30**	2900	2600	3800	**≤24**	8,7	151,6	4	1560	6500	10000	18790
534,0	68355/128	**PHQ1031F0060 K713VF0890 ME30**	2900	2600	3800	**>24≤32**	8,8	151,7	4	1560	6500	10000	18790
534,0	68355/128	**PHQ1031F0060 K713VF0890 ME30**	2900	2600	3800	**>32≤38**	11	151,8	4	1560	6500	10000	18790
591,2	302715/512	**PHQ1031F0060 K713VF0990 ME30**	2900	2600	3800	**≤24**	8,7	151,6	4	1560	6500	10000	20000
591,2	302715/512	**PHQ1031F0060 K713VF0990 ME30**	2900	2600	3800	**>24≤32**	8,8	151,7	4	1560	6500	10000	20000
591,2	302715/512	**PHQ1031F0060 K713VF0990 ME30**	2900	2600	3800	**>32≤38**	11	151,8	4	1560	6500	10000	20000
PHQ11K8 (M2BMAX=22000 Nm)													
44,67	3127/70	**PHQ1131F0060 K813VF0074 ME40**	1600	1500	2600	**≤38**	164	296,9	4	2528	9840	9840	12300
44,67	3127/70	**PHQ1131F0060 K813VF0074 ME40**	1600	1500	2600	**>38≤48**	178	297,3	4	2578	12300	12300	16680
44,67	3127/70	**PHQ1131F0060 K813VF0074 ME50**	1600	1500	2600	**>55≤60**	206	304,6	4	2595	12300	12300	16680
49,46	96937/1960	**PHQ1131F0060 K813VF0082 ME40**	1600	1500	2600	**≤38**	150	296,9	4	2545	10890	10890	13620
49,46	96937/1960	**PHQ1131F0060 K813VF0082 ME40**	1600	1500	2600	**>38≤48**	164	297,3	4	2586	13000	13620	18470
49,46	96937/1960	**PHQ1131F0060 K813VF0082 ME50**	1600	1500	2600	**>55≤60**	192	304,6	4	2600	13000	13620	18470
55,70	11977/215	**PHQ1131F0060 K813VF0093 ME40**	1600	1500	2600	**≤38**	122	296,9	4	2561	12270	12270	15340
55,70	11977/215	**PHQ1131F0060 K813VF0093 ME40**	1600	1500	2600	**>38≤48**	136	297,3	4	2594	13000	15340	20800
55,70	11977/215	**PHQ1131F0060 K813VF0093 ME50**	1600	1500	2600	**>55≤60**	164	304,6	4	2605	13000	15340	20800
61,67	53041/860	**PHQ1131F0060 K813VF0105 ME40**	1600	1500	2600	**≤38**	113	296,9	4	2572	13000	13580	16980
61,67	53041/860	**PHQ1131F0060 K813VF0105 ME40**	1600	1500	2600	**>38≤48**	127	297,3	4	2599	13000	16980	23030
61,67	53041/860	**PHQ1131F0060 K813VF0105 ME50**	1600	1500	2600	**>55≤60**	155	304,6	4	2608	13000	16980	23030
89,05	28497/320	**PHQ1131F0060 K813VF0150 ME40**	1900	1800	2900	**≤38**	69	296,9	4	2599	13000	19610	24520
89,05	28497/320	**PHQ1131F0060 K813VF0150 ME40**	1900	1800	2900	**>38≤48**	83	297,3	4	2612	13000	22000	33260
89,05	28497/320	**PHQ1131F0060 K813VF0150 ME50**	1900	1800	2900	**>55≤60**	111	304,6	4	2616	13000	22000	33260
98,59	126201/1280	**PHQ1131F0060 K813VF0165 ME40**	1900	1800	2900	**≤38**	66	296,9	4	2603	13000	21720	27150
98,59	126201/1280	**PHQ1131F0060 K813VF0165 ME40**	1900	1800	2900	**>38≤48**	79	297,3	4	2614	13000	22000	36820
98,59	126201/1280	**PHQ1131F0060 K813VF0165 ME50**	1900	1800	2900	**>55≤60**	107	304,6	4	2617	13000	22000	36820
104,0	30149/290	**PHQ1131F0060 K813VF0175 ME30**	2300	2100	3300	**≤24**	48	292,0	4	2574	9060	9060	11350

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Planetenwinkelgetriebe **PHQK**
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i	iexakt	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ11K8 (M_{2BMAX}=22000 Nm)													
104,0	30149/290	**PHQ1131F0060 K813VF0175 ME30**	2300	2100	3300	**>24≤32**	49	292,1	4	2607	11660	12120	15080
104,0	30149/290	**PHQ1131F0060 K813VF0175 ME30**	2300	2100	3300	**>32≤38**	50	292,2	4	2614	11660	15270	20710
104,0	30149/290	**PHQ1131F0060 K813VF0175 ME40**	2300	2100	3300	**≤38**	59	296,9	4	2605	13000	22000	28620
104,0	30149/290	**PHQ1131F0060 K813VF0175 ME40**	2300	2100	3300	**>38≤48**	73	297,3	4	2615	13000	22000	38820
104,0	30149/290	**PHQ1131F0060 K813VF0175 ME50**	2300	2100	3000	**≤55**	97	304,5	4	2616	13000	15270	20710
104,0	30149/290	**PHQ1131F0060 K813VF0175 ME50**	2300	2100	3000	**>55≤60**	101	304,6	4	2618	13000	22000	38820
115,1	133517/1160	**PHQ1131F0060 K813VF0190 ME30**	2300	2100	3300	**≤24**	46	292,0	4	2583	10040	10040	12570
115,1	133517/1160	**PHQ1131F0060 K813VF0190 ME30**	2300	2100	3300	**>24≤32**	46	292,1	4	2610	12910	13420	16690
115,1	133517/1160	**PHQ1131F0060 K813VF0190 ME30**	2300	2100	3300	**>32≤38**	48	292,2	4	2616	12910	16900	22920
115,1	133517/1160	**PHQ1131F0060 K813VF0190 ME40**	2300	2100	3300	**≤38**	56	296,9	4	2608	13000	22000	31690
115,1	133517/1160	**PHQ1131F0060 K813VF0190 ME40**	2300	2100	3300	**>38≤48**	70	297,3	4	2616	13000	22000	40000
115,1	133517/1160	**PHQ1131F0060 K813VF0190 ME50**	2300	2100	3000	**≤55**	94	304,5	4	2617	13000	16900	22920
115,1	133517/1160	**PHQ1131F0060 K813VF0190 ME50**	2300	2100	3000	**>55≤60**	98	304,6	4	2619	13000	22000	40000
138,3	31801/230	**PHQ1131F0060 K813VF0230 ME30**	2300	2100	3300	**≤24**	34	292,0	4	2595	12050	12050	15100
138,3	31801/230	**PHQ1131F0060 K813VF0230 ME30**	2300	2100	3300	**>24≤32**	35	292,1	4	2614	12400	16120	20050
138,3	31801/230	**PHQ1131F0060 K813VF0230 ME30**	2300	2100	3300	**>32≤38**	36	292,2	4	2618	12400	18050	24490
138,3	31801/230	**PHQ1131F0060 K813VF0230 ME40**	2300	2100	3300	**≤38**	45	296,9	4	2613	13000	22000	38070
138,3	31801/230	**PHQ1131F0060 K813VF0230 ME40**	2300	2100	3300	**>38≤48**	59	297,3	4	2619	13000	22000	40000
138,3	31801/230	**PHQ1131F0060 K813VF0230 ME50**	2300	2100	3000	**≤55**	83	304,5	4	2619	13000	18050	24490
138,3	31801/230	**PHQ1131F0060 K813VF0230 ME50**	2300	2100	3000	**>55≤60**	87	304,6	4	2620	13000	22000	40000
153,1	140833/920	**PHQ1131F0060 K813VF0260 ME30**	2300	2100	3300	**≤24**	33	292,0	4	2601	13000	13350	16720
153,1	140833/920	**PHQ1131F0060 K813VF0260 ME30**	2300	2100	3300	**>24≤32**	33	292,1	4	2616	13000	17840	22200
153,1	140833/920	**PHQ1131F0060 K813VF0260 ME30**	2300	2100	3300	**>32≤38**	35	292,2	4	2619	13000	19990	27110
153,1	140833/920	**PHQ1131F0060 K813VF0260 ME40**	2300	2100	3300	**≤38**	44	296,9	4	2615	13000	22000	40000
153,1	140833/920	**PHQ1131F0060 K813VF0260 ME40**	2300	2100	3300	**>38≤48**	57	297,3	4	2619	13000	22000	40000
153,1	140833/920	**PHQ1131F0060 K813VF0260 ME50**	2300	2100	3000	**≤55**	81	304,5	4	2620	13000	19990	27110
153,1	140833/920	**PHQ1131F0060 K813VF0260 ME50**	2300	2100	3000	**>55≤60**	85	304,6	4	2621	13000	22000	40000
175,5	7021/40	**PHQ1131F0060 K813VF0290 ME30**	2800	2500	3600	**≤24**	26	292,0	4	2606	13000	15300	19170
175,5	7021/40	**PHQ1131F0060 K813VF0290 ME30**	2800	2500	3600	**>24≤32**	26	292,1	4	2618	13000	20460	25450
175,5	7021/40	**PHQ1131F0060 K813VF0290 ME30**	2800	2500	3600	**>32≤38**	28	292,2	4	2620	13000	21600	29300
175,5	7021/40	**PHQ1131F0060 K813VF0290 ME40**	2800	2500	3500	**≤38**	37	296,9	4	2617	13000	22000	40000
175,5	7021/40	**PHQ1131F0060 K813VF0290 ME40**	2800	2500	3500	**>38≤48**	50	297,3	4	2620	13000	22000	40000
175,5	7021/40	**PHQ1131F0060 K813VF0290 ME50**	2500	2500	3000	**≤55**	74	304,5	4	2621	13000	21600	29300
175,5	7021/40	**PHQ1131F0060 K813VF0290 ME50**	2500	2500	3000	**>55≤60**	78	304,6	4	2621	13000	22000	40000
194,3	31093/160	**PHQ1131F0060 K813VF0320 ME30**	2800	2500	3600	**≤24**	25	292,0	4	2609	13000	16940	21220
194,3	31093/160	**PHQ1131F0060 K813VF0320 ME30**	2800	2500	3600	**>24≤32**	25	292,1	4	2619	13000	22000	28180
194,3	31093/160	**PHQ1131F0060 K813VF0320 ME30**	2800	2500	3600	**>32≤38**	27	292,2	4	2621	13000	22000	32430
194,3	31093/160	**PHQ1131F0060 K813VF0320 ME40**	2800	2500	3500	**≤38**	36	296,9	4	2618	13000	22000	40000
194,3	31093/160	**PHQ1131F0060 K813VF0320 ME40**	2800	2500	3500	**>38≤48**	50	297,3	4	2621	13000	22000	40000
194,3	31093/160	**PHQ1131F0060 K813VF0320 ME50**	2500	2500	3000	**≤55**	73	304,5	4	2621	13000	22000	32430
194,3	31093/160	**PHQ1131F0060 K813VF0320 ME50**	2500	2500	3000	**>55≤60**	77	304,6	4	2622	13000	22000	40000
216,8	8673/40	**PHQ1131F0060 K813VF0360 ME30**	2800	2500	3600	**≤24**	21	292,0	4	2612	13000	18900	23680
216,8	8673/40	**PHQ1131F0060 K813VF0360 ME30**	2800	2500	3600	**>24≤32**	21	292,1	4	2620	13000	22000	30360
216,8	8673/40	**PHQ1131F0060 K813VF0360 ME30**	2800	2500	3600	**>32≤38**	23	292,2	4	2621	13000	22000	30360
216,8	8673/40	**PHQ1131F0060 K813VF0360 ME40**	2800	2500	3500	**≤38**	31	296,9	4	2619	13000	22000	40000
216,8	8673/40	**PHQ1131F0060 K813VF0360 ME40**	2800	2500	3500	**>38≤48**	45	297,3	4	2621	13000	22000	40000
216,8	8673/40	**PHQ1131F0060 K813VF0360 ME50**	2500	2500	3000	**≤55**	69	304,5	4	2622	13000	22000	30360
216,8	8673/40	**PHQ1131F0060 K813VF0360 ME50**	2500	2500	3000	**>55≤60**	73	304,6	4	2622	13000	22000	40000
240,1	38409/160	**PHQ1131F0060 K813VF0400 ME30**	2800	2500	3600	**≤24**	20	292,0	4	2614	13000	20930	26220
240,1	38409/160	**PHQ1131F0060 K813VF0400 ME30**	2800	2500	3600	**>24≤32**	20	292,1	4	2620	13000	22000	33620
240,1	38409/160	**PHQ1131F0060 K813VF0400 ME30**	2800	2500	3600	**>32≤38**	22	292,2	4	2622	13000	22000	33620
240,1	38409/160	**PHQ1131F0060 K813VF0400 ME40**	2800	2500	3500	**≤38**	31	296,9	4	2620	13000	22000	40000
240,1	38409/160	**PHQ1131F0060 K813VF0400 ME40**	2800	2500	3500	**>38≤48**	45	297,3	4	2622	13000	22000	40000
240,1	38409/160	**PHQ1131F0060 K813VF0400 ME50**	2500	2500	3000	**≤55**	68	304,5	4	2622	13000	22000	33620
240,1	38409/160	**PHQ1131F0060 K813VF0400 ME50**	2500	2500	3000	**>55≤60**	72	304,6	4	2622	13000	22000	40000
265,5	531/2	**PHQ1131F0060 K813VF0440 ME30**	2800	2500	3600	**≤24**	17	292,0	4	2616	13000	22000	29000
265,5	531/2	**PHQ1131F0060 K813VF0440 ME30**	2800	2500	3600	**>24≤32**	17	292,1	4	2621	13000	22000	34120
265,5	531/2	**PHQ1131F0060 K813VF0440 ME30**	2800	2500	3600	**>32≤38**	19	292,2	4	2622	13000	22000	34120
265,5	531/2	**PHQ1131F0060 K813VF0440 ME40**	2800	2500	3500	**≤38**	27	296,8	4	2621	13000	22000	34120
265,5	531/2	**PHQ1131F0060 K813VF0440 ME40**	2800	2500	3500	**>38≤48**	41	297,2	4	2622	13000	22000	34120
265,5	531/2	**PHQ1131F0060 K813VF0440 ME50**	2500	2500	3000	**≤55**	65	304,5	4	2622	13000	22000	34120
265,5	531/2	**PHQ1131F0060 K813VF0440 ME50**	2500	2500	3000	**>55≤60**	70	304,5	4	2622	13000	22000	34120

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
PHQ11K8 (M2BMAX=22000 Nm)													
293,9	16461/56	**PHQ1131F0060 K813VF0490 ME30**	2800	2500	3600	**≤24**	16	292,0	4	2617	13000	22000	32100
293,9	16461/56	**PHQ1131F0060 K813VF0490 ME30**	2800	2500	3600	**>24≤32**	17	292,1	4	2621	13000	22000	37780
293,9	16461/56	**PHQ1131F0060 K813VF0490 ME30**	2800	2500	3600	**>32≤38**	18	292,2	4	2622	13000	22000	37780
293,9	16461/56	**PHQ1131F0060 K813VF0490 ME40**	2800	2500	3500	**≤38**	27	296,8	4	2621	13000	22000	37780
293,9	16461/56	**PHQ1131F0060 K813VF0490 ME40**	2800	2500	3500	**>38≤48**	40	297,2	4	2622	13000	22000	37780
293,9	16461/56	**PHQ1131F0060 K813VF0490 ME50**	2500	2500	3000	**≤55**	65	304,5	4	2622	13000	22000	37780
293,9	16461/56	**PHQ1131F0060 K813VF0490 ME50**	2500	2500	3000	**>55≤60**	69	304,5	4	2622	13000	22000	37780
354,5	42539/120	**PHQ1131F0060 K813VF0590 ME30**	2800	2500	3600	**≤24**	13	292,0	4	2619	13000	22000	38720
354,5	42539/120	**PHQ1131F0060 K813VF0590 ME30**	2800	2500	3600	**>24≤32**	13	292,1	4	2622	13000	22000	39940
354,5	42539/120	**PHQ1131F0060 K813VF0590 ME30**	2800	2500	3600	**>32≤38**	15	292,2	4	2622	13000	22000	39940
354,5	42539/120	**PHQ1131F0060 K813VF0590 ME40**	2800	2500	3500	**≤38**	23	296,8	4	2622	13000	22000	39940
354,5	42539/120	**PHQ1131F0060 K813VF0590 ME40**	2800	2500	3500	**>38≤48**	37	297,2	4	2622	13000	22000	39940
354,5	42539/120	**PHQ1131F0060 K813VF0590 ME50**	2500	2500	3000	**≤55**	62	304,5	4	2623	13000	22000	39940
354,5	42539/120	**PHQ1131F0060 K813VF0590 ME50**	2500	2500	3000	**>55≤60**	66	304,5	4	2623	13000	22000	39940
392,5	188387/480	**PHQ1131F0060 K813VF0650 ME30**	2800	2500	3600	**≤24**	13	292,0	4	2620	13000	22000	40000
392,5	188387/480	**PHQ1131F0060 K813VF0650 ME30**	2800	2500	3600	**>24≤32**	13	292,1	4	2622	13000	22000	40000
392,5	188387/480	**PHQ1131F0060 K813VF0650 ME30**	2800	2500	3600	**>32≤38**	15	292,2	4	2623	13000	22000	40000
392,5	188387/480	**PHQ1131F0060 K813VF0650 ME40**	2800	2500	3500	**≤38**	23	296,8	4	2622	13000	22000	40000
392,5	188387/480	**PHQ1131F0060 K813VF0650 ME40**	2800	2500	3500	**>38≤48**	37	297,2	4	2623	13000	22000	40000
392,5	188387/480	**PHQ1131F0060 K813VF0650 ME50**	2500	2500	3000	**≤55**	61	304,5	4	2623	13000	22000	40000
392,5	188387/480	**PHQ1131F0060 K813VF0650 ME50**	2500	2500	3000	**>55≤60**	66	304,5	4	2623	13000	22000	40000
430,2	10325/24	**PHQ1131F0060 K813VF0720 ME30**	2800	2500	3600	**≤24**	12	292,0	4	2620	13000	22000	40000
430,2	10325/24	**PHQ1131F0060 K813VF0720 ME30**	2800	2500	3600	**>24≤32**	12	292,1	4	2622	13000	22000	40000
430,2	10325/24	**PHQ1131F0060 K813VF0720 ME30**	2800	2500	3600	**>32≤38**	14	292,2	4	2623	13000	22000	40000
430,2	10325/24	**PHQ1131F0060 K813VF0720 ME40**	2800	2500	3500	**≤38**	22	296,8	4	2622	13000	22000	40000
430,2	10325/24	**PHQ1131F0060 K813VF0720 ME40**	2800	2500	3500	**>38≤48**	35	297,2	4	2623	13000	22000	40000
430,2	10325/24	**PHQ1131F0060 K813VF0720 ME50**	2500	2500	3000	**≤55**	60	304,5	4	2623	13000	22000	40000
430,2	10325/24	**PHQ1131F0060 K813VF0720 ME50**	2500	2500	3000	**>55≤60**	64	304,5	4	2623	13000	22000	40000
476,3	45725/96	**PHQ1131F0060 K813VF0790 ME30**	2800	2500	3600	**≤24**	11	292,0	4	2621	13000	22000	40000
476,3	45725/96	**PHQ1131F0060 K813VF0790 ME30**	2800	2500	3600	**>24≤32**	12	292,1	4	2623	13000	22000	40000
476,3	45725/96	**PHQ1131F0060 K813VF0790 ME30**	2800	2500	3600	**>32≤38**	13	292,2	4	2623	13000	22000	40000
476,3	45725/96	**PHQ1131F0060 K813VF0790 ME40**	2800	2500	3500	**≤38**	22	296,8	4	2622	13000	22000	40000
476,3	45725/96	**PHQ1131F0060 K813VF0790 ME40**	2800	2500	3500	**>38≤48**	35	297,2	4	2623	13000	22000	40000
476,3	45725/96	**PHQ1131F0060 K813VF0790 ME50**	2500	2500	3000	**≤55**	60	304,5	4	2623	13000	22000	40000
476,3	45725/96	**PHQ1131F0060 K813VF0790 ME50**	2500	2500	3000	**>55≤60**	64	304,5	4	2623	13000	22000	40000
526,6	21063/40	**PHQ1131F0060 K813VF0880 ME30**	2800	2500	3600	**≤24**	10	292,0	4	2621	13000	15200	20610
526,6	21063/40	**PHQ1131F0060 K813VF0880 ME30**	2800	2500	3600	**>24≤32**	10	292,1	4	2622	13000	15200	20610
526,6	21063/40	**PHQ1131F0060 K813VF0880 ME30**	2800	2500	3600	**>32≤38**	12	292,2	4	2623	13000	15200	20610
583,0	93279/160	**PHQ1131F0060 K813VF0970 ME30**	2800	2500	3600	**≤24**	10	292,0	4	2622	13000	16830	22820
583,0	93279/160	**PHQ1131F0060 K813VF0970 ME30**	2800	2500	3600	**>24≤32**	10	292,1	4	2623	13000	16830	22820
583,0	93279/160	**PHQ1131F0060 K813VF0970 ME30**	2800	2500	3600	**>32≤38**	12	292,2	4	2623	13000	16830	22820
PHQ12K9 (M2BMAX=43000 Nm)													
75,15	221247/2944	**PHQ1231F0060 K913VF0125 ME40**	1800	1800	2800	**≤38**	182	543,7	4	4556	16550	16550	20690
75,15	221247/2944	**PHQ1231F0060 K913VF0125 ME40**	1800	1800	2800	**>38≤48**	196	544,1	4	4614	20690	20690	28060
75,15	221247/2944	**PHQ1231F0060 K913VF0125 ME50**	1800	1800	2800	**>55≤60**	224	551,4	4	4633	20690	20690	28060
114,4	915/8	**PHQ1231F0060 K913VF0190 ME40**	2200	2100	3100	**≤38**	106	543,7	4	4617	25000	25190	31490
114,4	915/8	**PHQ1231F0060 K913VF0190 ME40**	2200	2100	3100	**>38≤48**	120	544,1	4	4643	25000	31490	42710
114,4	915/8	**PHQ1231F0060 K913VF0190 ME50**	2200	2100	3000	**>55≤60**	148	551,4	4	4651	25000	31490	42710
143,7	266631/1856	**PHQ1231F0060 K913VF0240 ME40**	2200	2100	3100	**≤38**	80	543,7	4	4635	25000	31640	39550
143,7	266631/1856	**PHQ1231F0060 K913VF0240 ME40**	2200	2100	3100	**>38≤48**	94	544,1	4	4651	25000	39550	53650
143,7	266631/1856	**PHQ1231F0060 K913VF0240 ME50**	2200	2100	3000	**≤55**	118	551,3	4	4653	20700	20700	28070
143,7	266631/1856	**PHQ1231F0060 K913VF0240 ME50**	2200	2100	3000	**>55≤60**	122	551,4	4	4656	25000	39550	53650
192,7	141825/736	**PHQ1231F0060 K913VF0320 ME40**	2600	2500	3400	**≤38**	58	543,7	4	4648	25000	42440	53050
192,7	141825/736	**PHQ1231F0060 K913VF0320 ME40**	2600	2500	3400	**>38≤48**	72	544,1	4	4657	25000	43000	71960
192,7	141825/736	**PHQ1231F0060 K913VF0320 ME50**	2500	2500	3000	**≤55**	96	551,3	4	4658	24420	24420	33120
192,7	141825/736	**PHQ1231F0060 K913VF0320 ME50**	2500	2500	3000	**>55≤60**	100	551,4	4	4660	25000	43000	71960
228,3	584319/2560	**PHQ1231F0060 K913VF0380 ME40**	2600	2500	3400	**≤38**	49	543,7	4	4653	25000	43000	62840
228,3	584319/2560	**PHQ1231F0060 K913VF0380 ME40**	2600	2500	3400	**>38≤48**	63	544,1	4	4659	25000	43000	78170
228,3	584319/2560	**PHQ1231F0060 K913VF0380 ME50**	2500	2500	3000	**≤55**	86	551,3	4	4660	25000	26500	35950

Planetenwinkelgetriebe **PHQK**
PHQK *Right Angle Planetary Gear Units*
Réducteurs planétaires à couple conique **PHQK**

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Bitte beachten Sie die Hinweise auf Seite PHQK6! | ***Please take notice of the indications on page PHQK6!*** | **Veuillez s. v. p. prendre en considération les observations à la page PHQK6!**

i	iexakt	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
PHQ12K9 (M_{2BMAX}=43000 Nm)													
228,3	584319/2560	**PHQ1231F0060 K913VF0380 ME50**	2500	2500	3000	**>55≤60**	91	551,4	4	4661	25000	43000	78170
293,6	300669/1024	**PHQ1231F0060 K913VF0490 ME40**	2600	2500	3400	**≤38**	39	543,7	4	4657	25000	43000	80000
293,6	300669/1024	**PHQ1231F0060 K913VF0490 ME40**	2600	2500	3400	**>38≤48**	52	544,1	4	4661	25000	43000	80000
293,6	300669/1024	**PHQ1231F0060 K913VF0490 ME50**	2500	2500	3000	**≤55**	76	551,3	4	4662	25000	29230	39650
293,6	300669/1024	**PHQ1231F0060 K913VF0490 ME50**	2500	2500	3000	**>55≤60**	80	551,4	4	4663	25000	43000	80000
378,4	629703/1664	**PHQ1231F0060 K913VF0630 ME40**	2600	2500	3400	**≤38**	32	543,7	4	4660	25000	43000	80000
378,4	629703/1664	**PHQ1231F0060 K913VF0630 ME40**	2600	2500	3400	**>38≤48**	45	544,1	4	4663	25000	43000	80000
378,4	629703/1664	**PHQ1231F0060 K913VF0630 ME50**	2500	2500	3000	**≤55**	69	551,3	4	4663	25000	33030	44790
378,4	629703/1664	**PHQ1231F0060 K913VF0630 ME50**	2500	2500	3000	**>55≤60**	73	551,4	4	4663	25000	43000	80000
450,0	187209/416	**PHQ1231F0060 K913VF0750 ME40**	2600	2500	3400	**≤38**	28	543,6	4	4662	25000	39290	53300
450,0	187209/416	**PHQ1231F0060 K913VF0750 ME40**	2600	2500	3400	**>38≤48**	41	544,0	4	4663	25000	39290	53300
450,0	187209/416	**PHQ1231F0060 K913VF0750 ME50**	2500	2500	3000	**≤55**	66	551,3	4	4664	25000	39290	53300
450,0	187209/416	**PHQ1231F0060 K913VF0750 ME50**	2500	2500	3000	**>55≤60**	70	551,3	4	4664	25000	39290	53300
554,1	7199037/12992	**PHQ1231F0060 K914VF0920 ME40**	2600	2500	3400	**≤38**	24	556,1	4	4663	25000	39550	53650
554,1	7199037/12992	**PHQ1231F0060 K914VF0920 ME40**	2600	2500	3400	**>38≤48**	37	556,5	4	4664	25000	39550	53650
562,7	4177219/7424	**PHQ1231F0060 K914VF0940 ME30**	2600	2500	3400	**≤24**	12	551,3	4	4660	16490	16740	22710
562,7	4177219/7424	**PHQ1231F0060 K914VF0940 ME30**	2600	2500	3400	**>24≤32**	12	551,4	4	4662	16490	16740	22710
562,7	4177219/7424	**PHQ1231F0060 K914VF0940 ME30**	2600	2500	3400	**>32≤38**	14	551,5	4	4663	16490	16740	22710
572,5	293105/512	**PHQ1231F0060 K913VF0950 ME40**	2600	2500	3400	**≤38**	24	543,6	4	4663	25000	37160	57590
572,5	293105/512	**PHQ1231F0060 K913VF0950 ME40**	2600	2500	3400	**>38≤48**	38	544,0	4	4664	25000	37160	57590
572,5	293105/512	**PHQ1231F0060 K913VF0950 ME50**	2500	2500	3000	**≤55**	62	551,3	4	4664	25000	37160	57590
572,5	293105/512	**PHQ1231F0060 K913VF0950 ME50**	2500	2500	3000	**>55≤60**	67	551,3	4	4664	25000	37160	57590
743,3	3829275/5152	**PHQ1231F0060 K914VF1240 ME40**	2600	2500	3400	**≤38**	22	556,1	4	4664	25000	43000	71960
743,3	3829275/5152	**PHQ1231F0060 K914VF1240 ME40**	2600	2500	3400	**>38≤48**	36	556,5	4	4664	25000	43000	71960
754,7	2221925/2944	**PHQ1231F0060 K914VF1260 ME30**	2600	2500	3400	**≤24**	11	551,3	4	4662	22120	22460	30460
754,7	2221925/2944	**PHQ1231F0060 K914VF1260 ME30**	2600	2500	3400	**>24≤32**	11	551,4	4	4663	22120	22460	30460
754,7	2221925/2944	**PHQ1231F0060 K914VF1260 ME30**	2600	2500	3400	**>32≤38**	12	551,5	4	4664	22120	22460	30460
880,4	15776613/17920	**PHQ1231F0060 K914VF1470 ME40**	2600	2500	3400	**≤38**	21	556,1	4	4664	25000	43000	78170
880,4	15776613/17920	**PHQ1231F0060 K914VF1470 ME40**	2600	2500	3400	**>38≤48**	35	556,5	4	4664	25000	43000	78170
894,0	9154331/10240	**PHQ1231F0060 K914VF1490 ME30**	2600	2500	3400	**≤24**	10,0	551,3	4	4663	25000	26500	35940
894,0	9154331/10240	**PHQ1231F0060 K914VF1490 ME30**	2600	2500	3400	**>24≤32**	10	551,4	4	4664	25000	26500	35940
894,0	9154331/10240	**PHQ1231F0060 K914VF1490 ME30**	2600	2500	3400	**>32≤38**	12	551,5	4	4664	25000	26500	35940
1133	8118063/7168	**PHQ1231F0060 K914VF1890 ME40**	2600	2500	3400	**≤38**	21	556,1	4	4664	25000	43000	80000
1133	8118063/7168	**PHQ1231F0060 K914VF1890 ME40**	2600	2500	3400	**>38≤48**	34	556,5	4	4664	25000	43000	80000
1150	4710481/4096	**PHQ1231F0060 K914VF1920 ME30**	2600	2500	3400	**≤24**	9,3	551,3	4	4664	25000	29230	39640
1150	4710481/4096	**PHQ1231F0060 K914VF1920 ME30**	2600	2500	3400	**>24≤32**	9,4	551,4	4	4664	25000	29230	39640
1150	4710481/4096	**PHQ1231F0060 K914VF1920 ME30**	2600	2500	3400	**>32≤38**	11	551,5	4	4664	25000	29230	39640
1460	17001981/11648	**PHQ1231F0060 K914VF2430 ME40**	2600	2500	3400	**≤38**	20	556,1	4	4664	25000	43000	80000
1460	17001981/11648	**PHQ1231F0060 K914VF2430 ME40**	2600	2500	3400	**>38≤48**	34	556,5	4	4665	25000	43000	80000
1482	9865347/6656	**PHQ1231F0060 K914VF2470 ME30**	2600	2500	3400	**≤24**	8,9	551,3	4	4664	25000	33020	44790
1482	9865347/6656	**PHQ1231F0060 K914VF2470 ME30**	2600	2500	3400	**>24≤32**	9,0	551,4	4	4664	25000	33020	44790
1482	9865347/6656	**PHQ1231F0060 K914VF2470 ME30**	2600	2500	3400	**>32≤38**	11	551,5	4	4665	25000	33020	44790
1763	2932941/1664	**PHQ1231F0060 K914VF2940 ME30**	2600	2500	3400	**≤24**	8,6	551,3	4	4664	25000	39290	53290
1763	2932941/1664	**PHQ1231F0060 K914VF2940 ME30**	2600	2500	3400	**>24≤32**	8,8	551,4	4	4665	25000	39290	53290
1763	2932941/1664	**PHQ1231F0060 K914VF2940 ME30**	2600	2500	3400	**>32≤38**	10	551,5	4	4665	25000	39290	53290
2242	13775935/6144	**PHQ1231F0060 K914VF3740 ME30**	2600	2500	3400	**≤24**	8,4	551,3	4	4664	25000	37160	57590
2242	13775935/6144	**PHQ1231F0060 K914VF3740 ME30**	2600	2500	3400	**>24≤32**	8,5	551,4	4	4665	25000	37160	57590
2242	13775935/6144	**PHQ1231F0060 K914VF3740 ME30**	2600	2500	3400	**>32≤38**	10	551,5	4	4665	25000	37160	57590

Dimension drawings
ServoFit® PHQK
Right- Angle Planetary Gear Units

Dibujos acotados Red. planetarios ortogonales
ServoFit® PHQK

Disegni quotati
ServoFit® Riduttori planetari - coppia conica **PHQK**

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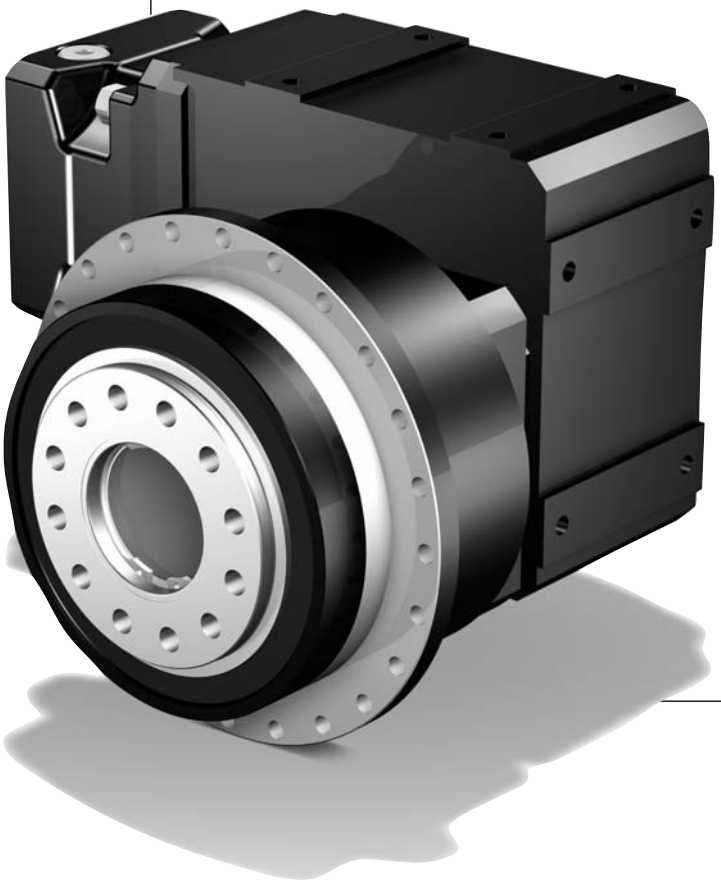

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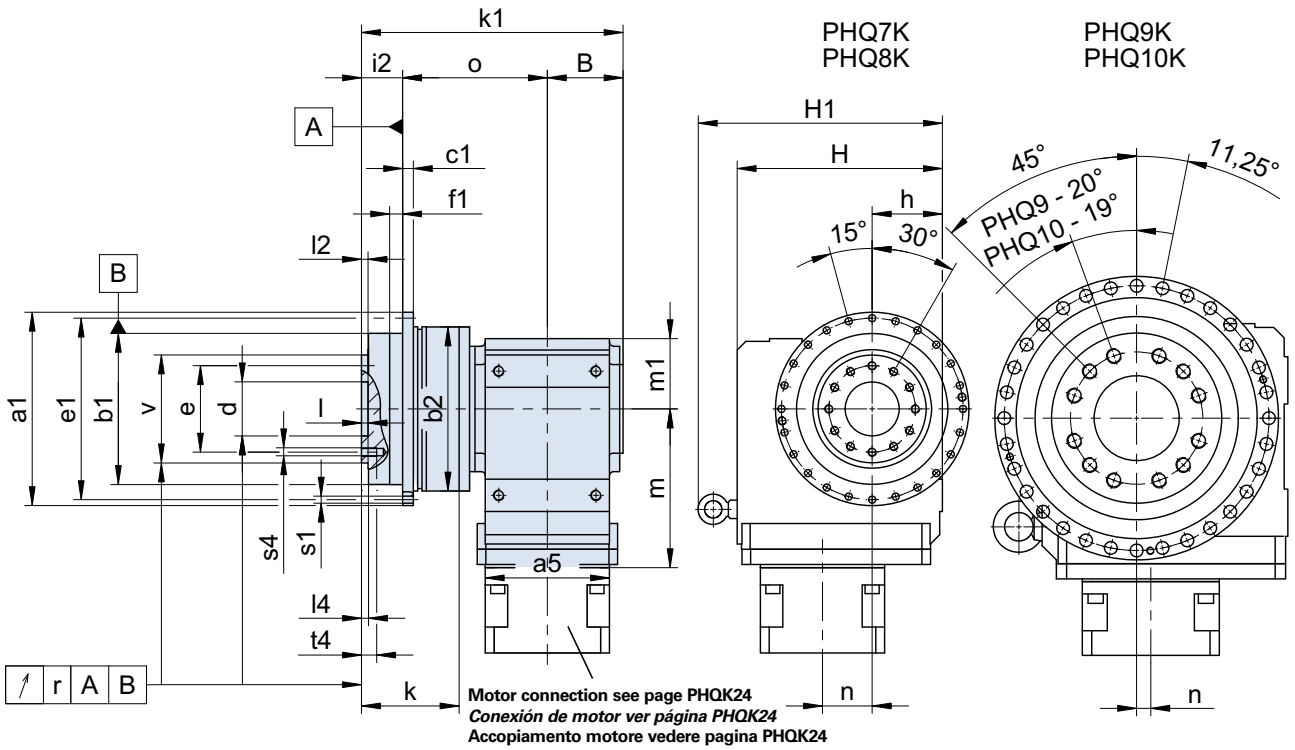
PHQ7K2_ME_ - PHQ10K7_ME_



Motor connection see page PHQK24
Conexión de motor ver página PHQK24
Accopiamento motore vedere pagina PHQK24

Planetary gear unit mounted on side 3. ***Reductore planetario montado sobre lado 3.*** **Riduttore angolare montato sul lato 3.**

Typ	øa1	øb1	øb2	B	c1	ød	øe	øe1	f1	h	H	H1
PHQ521_....K102	145h7	110h7	120	56,0	8	40H6	63	135	10	60	160	-
PHQ721_....K202	179h7	140h7	152	70,0	10	50H6	80	168	12	65	190	-
PHQ821_....K402	247h7	200h7	212	90,0	12	80H6	125	233	15	90	240	-
PHQ931_....K513	300h7	255h7	255	96,0	18	90H6	145	280	20	160	260	312
PHQ1031_....K713	330h7	285h7	-	116,5	20	95H6	166	310	20	212	342	403

Typ	i2	k	k1	l	l2	l4	m1	o	r	øs1	s4	t4	øv
PHQ521_....K102	29	70	201,0	6	6	6,5	60	116,0	0,020	5,5	M8	11	80h7
PHQ721_....K202	38	88	242,0	6	6	6,5	65	134,0	0,025	6,6	M10	16	100h7
PHQ821_....K402	50	126	327,5	8	8	8,5	90	187,5	0,030	9,0	M12	17	160h7
PHQ931_....K513	66	145	358,5	12	11	12,0	100	196,5	0,030	13,5	M20	28	180h7
PHQ1031_....K713	75	160	429,5	10	15	15,0	125	238,0	0,040	13,5	M24	35	200h7

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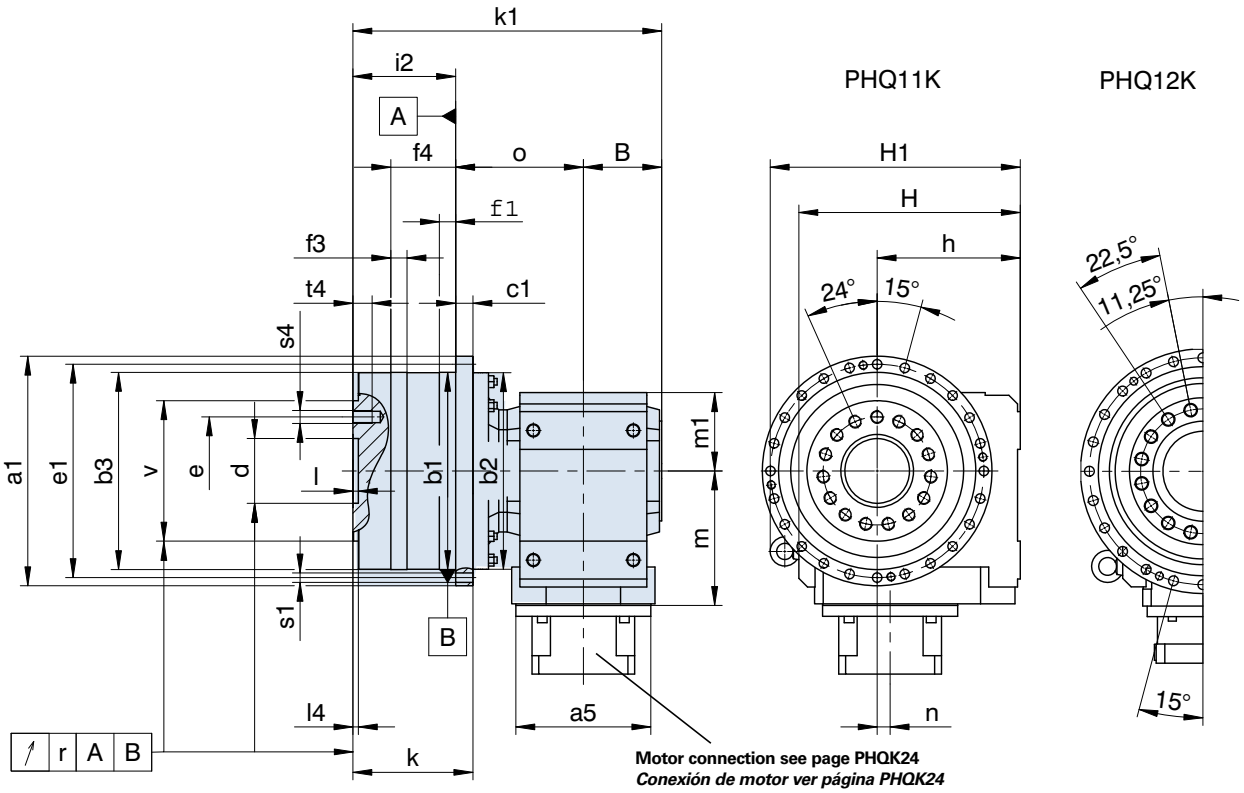
PHQ11K8_ME_-PHQ12K9_ME_



Motor connection see page PHQK24
Conexión de motor ver página PHQK24
Accopiamento motore vedere pagina PHQK24

Typ	øa1	øb1	øb2	øb3	B	c1	ød	øe	øe1	f1	f3	f4	h
PHQ1131_....K813	425	365h6	365	365g6	145,0	32	120H6	200	395	30	30	120	265
PHQ1231_....K913	550	470h6	470	470g6	170,0	45	180H7	280	510	30	30	145	315
PHQ1231_....K914	550	470h6	470	470g6	170,0	45	180H7	280	510	30	30	145	315

Typ	H	H1	i2	k	k1	l	l4	m1	o	r	øs1	s4	t4	øv
PHQ1131_....K813	410	471	190,0	222	571,5	10	10	145	236,5	0,040	17,5	M24	36	260h7
PHQ1231_....K913	495	565	206,5	252	658,5	10	11	180	282,0	0,040	22,0	M30	48	330h7
PHQ1231_....K914	495	565	206,5	252	658,5	10	11	180	282,0	0,040	22,0	M30	48	330h7

Typ	ME10			ME20			ME30			ME40			ME50		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n	a5	m	n
PHQ5K1	□98	124	36	□115	128	36	-	-	-	-	-	-	-	-	-
PHQ7K2	□98	143	46	□115	147	46	□145	149	46	-	-	-	-	-	-
PHQ8K4	-	-	-	ø160	187	60	□145	189	60	□190	192	60	-	-	-
PHQ9K5	-	-	-	ø160	172	15	□145	174	15	□190	177	15	-	-	-
PHQ10K7	-	-	-	-	-	-	ø200	221	20	□190	224	20	ø300	237	20
PHQ11K8	-	-	-	-	-	-	ø200	247	24	ø250	249	24	ø300	262	24
PHQ12K9	-	-	-	-	-	-	-	-	-	ø250	294	25	ø300	307	25

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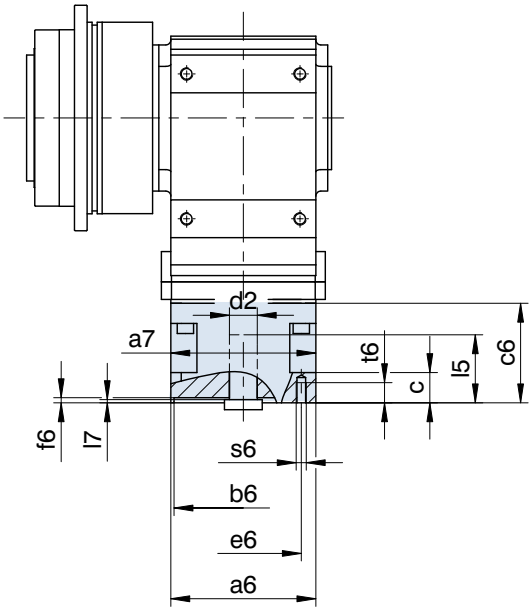
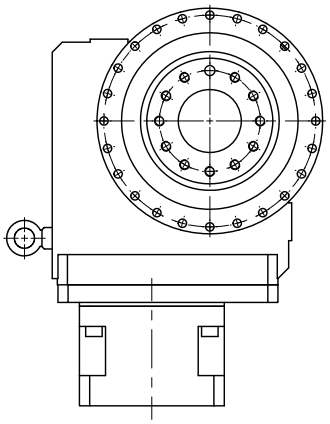
PHQ5K1_ME_ - PHQ12K9_ME_





Planetary gear unit mounted on side 3. ***Reductore planetario montado sobre lado 3.*** **Riduttore angolare montato sul lato 3.**

Typ	øb6	øe6	ød2max	l5max	□a6	□a7	c	c6	f6	l7max	s6	t6
ME10	50,0H7	70	19	41	100	98	21	61,0	4,0	3,0	M4	10
ME10	50,0H7	95	19	41	100	98	21	61,0	2,5	3,0	M6	13
ME10	60,0H7	75	19	41	100	98	21	61,0	3,5	3,0	M5	9
ME10	80,0H7	100	19	41	100	98	21	61,0	4,0	3,0	M6	13
ME10	95,0H7	115	19	41	100	98	21	61,0	4,0	3,0	M8	21
ME10	95,0H7	115	19	50	100	98	30	70,0	4,0	12,0	M8	16
ME10	95,0H7	130	19	41	115	98	21	61,0	4,0	3,0	M8	16
ME10	95,0H7	130	19	50	115	98	30	70,0	4,0	12,0	M8	16
ME10	110,0H7	130	19	50	115	98	30	70,0	4,0	12,0	M8	16
ME10	110,0H7	145	19	58	130	98	38	78,0	7,0	20,0	M8	16
ME10	130,0H7	165	19	50	140	98	30	70,0	7,0	12,0	M10	20
ME20	80,0H7	100	32	53	120	115	24	74,0	4,0	3,5	M6	13
ME20	95,0H7	115	32	53	120	115	24	74,0	5,0	3,5	M8	16
ME20	95,0H7	130	32	53	120	115	24	74,0	4,0	3,5	M8	16
ME20	110,0H7	130	32	53	120	115	24	74,0	4,0	3,5	M8	16
ME20	110,0H7	145	32	61	140	115	32	82,0	6,5	11,5	M8	16
ME20	110,0H7	145	32	71	140	115	42	92,0	7,0	21,5	M8	16
ME20	110,0H7	165	32	53	140	115	24	74,0	5,0	3,5	M10	24
ME20	130,0H7	165	32	53	140	116	38	111,5	5,0	3,0	M10	20
ME20	130,0H7	165	32	61	140	115	32	82,0	5,0	11,5	M10	20
ME30	110,0H7	130	38	62	145	145	26	86,0	5,0	4,5	M8	14
ME30	110,0H7	145	38	73	145	145	37	97,0	5,0	15,5	M8	16
ME30	110,0H7	165	38	62	145	145	26	86,0	5,0	4,5	M10	26
ME30	114,3H7	200	38	81	180	145	45	105,0	5,0	23,5	M12	25
ME30	130,0H7	165	38	62	145	145	26	86,0	5,0	4,5	M10	26
ME30	130,0H7	215	38	62	190	145	26	86,0	5,0	4,5	M12	26
ME30	130,0H7	215	38	62	190	116	26	112,0	5,0	3,0	M12	25
ME30	180,0H7	215	38	62	190	145	26	86,0	5,0	4,5	M12	26
ME30	180,0H7	215	38	81	190	145	45	105,0	5,0	23,5	M12	25
ME30	180,0H7	215	38	62	190	116	55	160,0	5,0	3,0	M12	25
ME40	110,0H7	165	48	81	190	190	34	122,0	5,0	4,5	M10	18
ME40	114,3H7	200	48	81	190	190	34	122,0	4,0	4,5	M12	34
ME40	130,0H7	165	48	81	190	190	34	122,0	5,0	4,5	M10	18
ME40	130,0H7	215	48	81	190	190	34	122,0	5,0	4,5	M12	34
ME40	180,0H7	215	48	82	190	190	35	123,0	5,0	5,5	M12	35
ME40	250,0H7	300	48	85	260	190	38	126,0	6,0	8,5	M16	38
ME50	250,0H7	300	60	86	260	254	43	124,5	6,0	5,5	M16	32
ME50	300,0H7	350	60	112	314	254	69	150,5	6,0	31,5	M16	34

ServoFit® KS Right-Angle Servo Gear Units
Reductores servo ortogonales ***ServoFit® KS***
ServoFit® Servoriduttori ortogonale **KS**

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Right-Angle Servo Gear Units

- Acceleration torque:
  90 – 400 Nm
- Backlash standard:
  4 – 6 arcmin
- Type of shaft: flange hollow shaft for the central feed-through of supply lines, solid shaft, hollow shaft with shrink ring
- torsionally rigid block design
- FKM seal at input
- easy to assemble due to spreading function in the clamping hub
- symmetrically friction-optimized output bearings
- advanced gear technology
- quiet running
- efficiency:
  2 stage ≥ 95 %
  3 stage ≥ 93 %

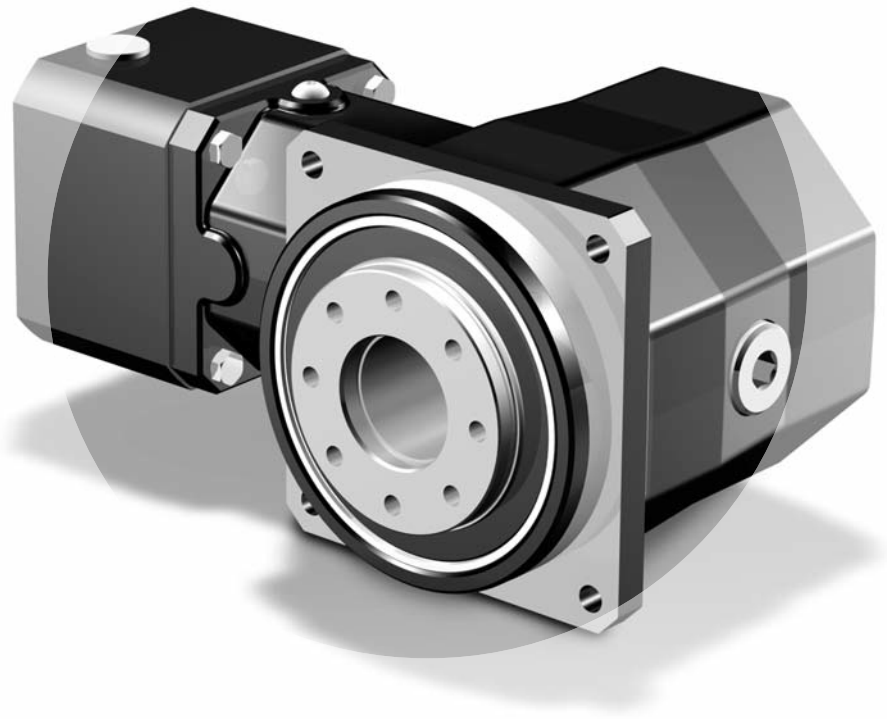
Reductores servo ortogonales

- *Par de aceleración:*
  90 - 400 Nm
- *Juego de giro estándar:*
  4 - 6 arcmin
- *Formas de eje: eje hueco con brida para el paso central de líneas de alimentación, eje macizo, eje hueco con disco de contracción*
- *Construcción monobloc a prueba de torsión*
- *Anillo retén de FKM en la entrada*
- *Fácil de montar gracias a la función de expansión en el cojinete de aprieté*
- *Apoyo simétrico de salida optimizado a la fricción*
- *Tecnología superior de dentado*
- *Marcha extremadamente suave*
- *Rendimiento:*
  2 trenes ≥ 95 %
  3 trenes ≥ 93 %

Servoriduttori ortogonale

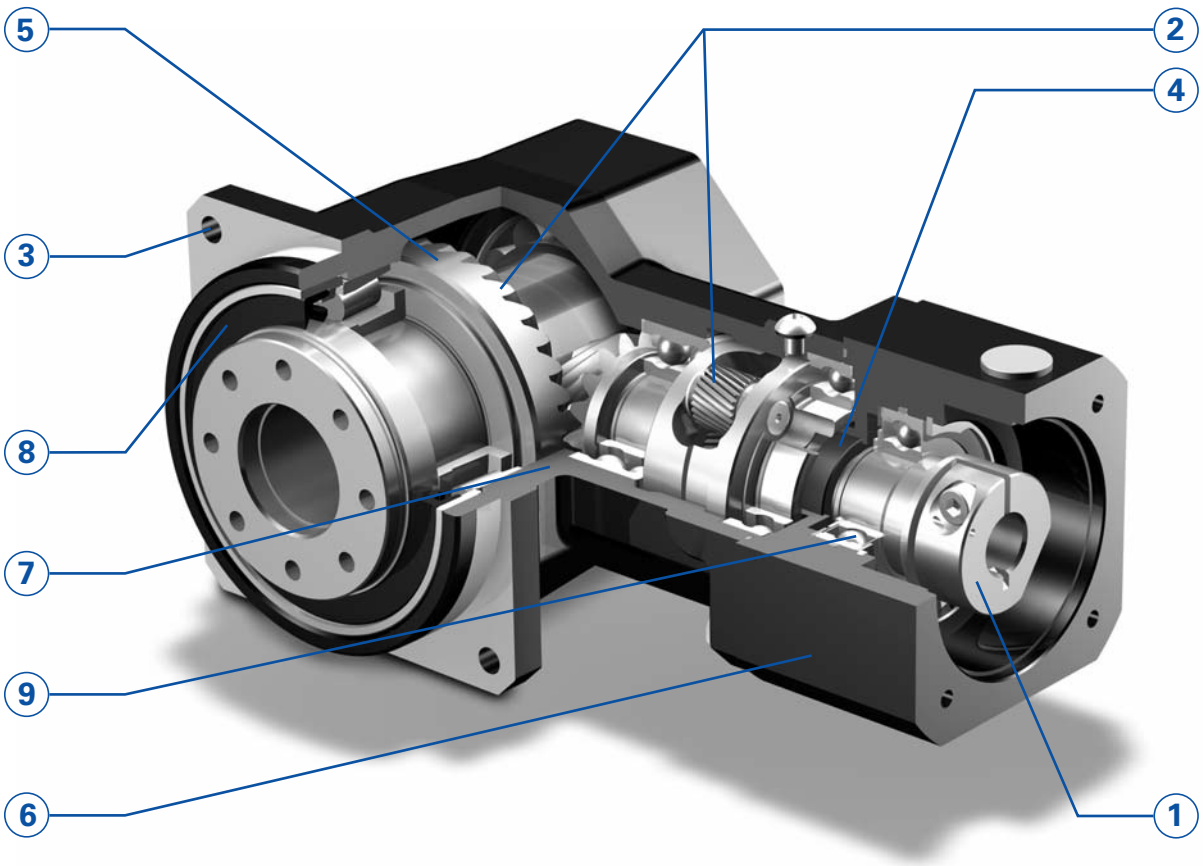
- Coppia di accelerazione:
  90 - 400 Nm
- Gioco standard:
  4 - 6 arcmin
- Esecuzioni albero: albero cavo flangiato per il passaggio centrale di linee di alimentazione, albero pieno, albero cavo con disco di serraggio
- Monoblocco resistente allo svergolamento
- Montaggio più facile grazie alla funzione di divaricazione del giunto di bloccaggio
- Anello di tenuta in FKM in ingresso
- Supporto uscita simmetrico ad attrito ottimizzato
- Tecnologia della dentatura avanzata
- Estremamente silenzioso
- Rendimento:
  2 stadi ≥ 95 %
  3 stadi ≥ 93 %

ServoFit® KS



ServoFit® KS Right-Angle Servo Gear Units
Reductores servo ortogonales ***ServoFit® KS***
ServoFit® Servoriduttori ortogonale **KS**

STÖBER



• ***Maximum smoothness of running due to the time-tested helical gearing in the planetary input stage and due to the ground and spiral-geared bevel gear set.***
On-hands experience gained over the past decades has consistently been put to practice. This has resulted mainly in optimized gear tooth microgeometry, ensuring highest backlash stability, minimum circumferential backlash and extremely quiet gear operation.

• *The* ***pre-loaded output bearing*** *enables* ***maximum loads and tilt rigidity.***

• *The* ***STOBER EasyAdapt® motor adapter system*** *allows easy and accurate motor installation in minutes with no special tools required.*

• ***Wide selection*** *of IEC and NEMA motor adapters for all common brands of motors.*

• ***Máxima serenidad de marcha por el probado dentado helicoidal en el tren de entrada planetario y por el juego de ruedas cónicas rectificado y de dentado espiral.***
Los conocimientos prácticos de los últimos décadas han sido aplicados consecuentemente. Los resultados son ante todo, optimizaciones en la microgeometría del dentado.
Esto asegura máxima estabilidad de juego, mínimo juego de giro y ruido de marcha extremadamente bajo.

• *Por el* ***apoyo de salida pretensado*** *se obtienen* ***máximas cargas y rigidez al vuelco.***

• *El* ***sistema STOBER EasyAdapt®, de opciones para motores*** *permite el montaje sencillo y sin errores en pocos minutos. No se requieren herramientas especiales.*

• ***Gran selección*** *de adaptadores de motor (IEC y NEMA) para todos los tipos usuales de motores.*

• **Massima silenziosità grazie alla dentatura elicoidale di comprovata validità nel prestadio planetario e grazie al set di coppie coniche rettificate ed a dentatura a spirale.**
Le conoscenze empiriche degli ultimi decenni sono state trasposte in maniera coerente. Il risultato é soprattutto a perfezionamento della microgeometria della dentatura. Questo consente di ottenere una stabilità di gioco elevatissima abbinata ad una rumorosità estremamente bassa.

• Grazie al **supporto uscita precaricato** si raggiungono i **valori massimi di carico e di rigidità al ribaltamento.**

• Il **sistema di montaggio del motore EasyAdapt® STOBER** consente un montaggio del motore semplice e senza errori nel giro di pochi minuti. Non sono richiesti utensili speciali.

• **Ampia scelta** di adattatori motore (CEI e NEMA) per tutti i comuni tipi di motori.

ServoFit® KS Right-Angle Servo Gear Units
Reductores servo ortogonales ***ServoFit® KS***
ServoFit® Servoriduttori ortogonale **KS**

STÖBER

(1) EasyAdapt® coupling
Accurate and precise motor installation by clamping screw. Designed for **large motor shaft diameters**.
The single-piece design and optimized features to accommodate the motor shaft diameter help **minimize inertia** and ensure superior dynamic performance.
The **balanced** clamp coupling ensures quiet, vibration-free operation, also at high speeds.
Spacer bushes to accommodate custom motor shaft diameters.

(2) High gearing quality provided by case-hardened and finish-ground sun gears, planetary gears and bevel gears.

(3) Gearbox mounting
Mounting bolts are freely accessible in driven direction.

(4) IP65 enclosure. Sealed with a **FKM** radial oil seal for the smallest possible shaft diameter. Reduces friction, thus preventing internal heat build-up. Increases efficiency. **Continuous duty operation** possible without addition cooling.

(5) Highest overload capacity and ultimate tensile strength provided by large-dimensioned components.

(6) Motor adapter made of aluminium for **low gear unit weight**.

(7) Highest running accuracy and precision ensured by single-piece housing design. Housing material: High-tensile tempered ductile iron.

(8) NBR double-lip radial oil seals. For continuous duty applications and superior chemical resistance requirements **FKM** oil seals are available as an **option**.

(9) Input shaft bearings with shields and high-temperature grease for maintenance-free operation.

(10) Lubricated for life with high-quality hydrophobic synthetic gear oil.

(1) Acoplamiento EasyAdapt®
*Acoplamiento de motor **sin errores** mediante un tornillo de apriete. Concebido para **grandes diámetros de ejes de motor**.*
*La **estructura de una pieza** y la óptima adaptación al diámetro del eje del motor se encargan **de bajísimos momentos de inercia de masa** y así de alta dinámica.*
*El acoplamiento **equilibrado** de anillo de apriete se encarga de una marcha suave, libre de vibraciones, aún a altas velocidades.*
Manguitos distanciadores para la adaptación de diámetros no usuales de motor.

***(2) Alta calidad de dentado** por piñones solares, ruedas planetarias y cónicas, templados por cementación y rectificados.*

(3) Fijación del reductor
Libre acceso a los tronillos de fijación en dirección de salida.

*(4) Tipo de protección **IP65**. Sellado con anillo retén **FKM** sobre mínimo diámetro posible del eje. Reduce la fricción y así también el calentamiento. Aumenta el rendimiento.*
***Trabajo continuo** posible sin enfriamiento adicional.*

***(5) Máxima seguridad de sobrecarga y resistencia a la rotura** por componentes generosamente dimensionados.*

*(6) Adaptador de motor de aluminio para **peso reducido del reductor**.*

***(7) Máxima exactitud y precisión de marcha** por diseño de carcasa de una pieza. Material de la carcasa: Fundición nodular de alta resistencia.*

(8) Anillos retén de doble labio de NBR**. Para el uso en trabajo continuo así como para muy buena resistencia química, es ofrecida adicionalmente la **opción FKM.

(9) Apoyos del eje de accionamiento con discos de cubierta y grasa para alta temperatura para trabajo libre de mantenimiento.

***(10) Lubricación de por vida** con aceite sintético, hidrófobo, de alta calidad, para reductores.*

(1) Giunto EasyAdapt®
Montaggio del motore **senza errori** grazie alla vite di arresto. Concepito per **motori con grandi diametri dell'albero**.
La **struttura monoblocco** e l'adattamento ottimizzato al diametro dell'albero motore assicurano **momenti di inerzia bassissimi** e pertanto la massima dinamica.
Il giunto di montaggio **equilibrato** garantisce un funzionamento silenzioso e senza vibrazioni anche a altro numero di giri.
Bussole per l'adattamento ai diametri degli alberi motore non comuni.

(2) Alta qualità della dentatura grazie al solare, ai planetari ed alle coppie coniche cementati e rettificati.

(3) Fissaggio riduttore
Viti di fissaggio liberamente accessibili in direzione uscita.

(4) Classe di protezione **IP65**. Ermetizzazione con anello di tenuta radiale per alberi FKM sul diametro albero più piccolo. Riduce l'attrito e conseguentemente il riscaldamento. Aumenta il rendimento.
Il **funzionamento continuo** è possibile senza raffreddamento aggiuntivo.

(5) Sicurezza in fatto di sovraccarichi e resistenza alla rottura massime grazie a componenti di grandi dimensioni.

(6) Adattatore per motore in alluminio per un **peso del riduttore contenuto**.

(7) Massima esattezza di funzionamento e precisione grazie al design monoblocco della carcassa. Ghisa sferoidale ad alta resistenza.

(8) Anelli di tenuta radiali per alberi a doppio labbro in **FKM.** Per l'impiego in funzionamento continuo, nonché per una resistenza chimica ottimale, è inoltre offerta **l'opzione FKM**.

(9) Cuscinetto albero ingresso con schermato con grasso per alte temperature per un esercizio privo di richiede manutenzione.

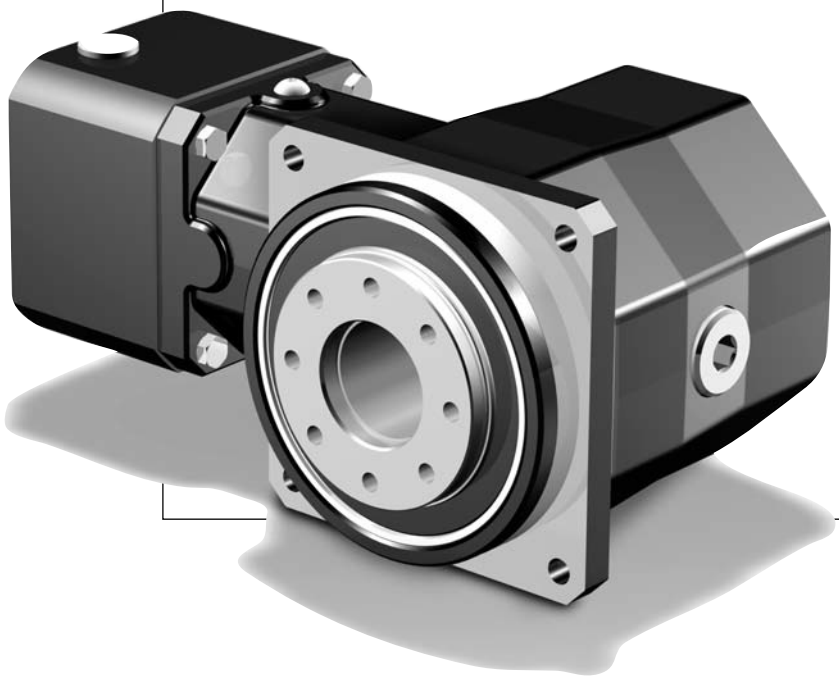
(10) Lubrificazione a vita con olio per riduttori sintetico idrofobico di alta qualità.

ServoFit® KS
Right-Angle
Servo Gear Units

Reductores servo ortogonales
ServoFit® KS

ServoFit® Servo-riduttori ortogonale
KS

STÖBER



Contents KS

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Selection table ServoFit® KS Right-Angle Servo Gear Units	KS5
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Resumen del contenido KS

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Posiciones de instalación	*KS4*
Tabla de selección Reduct. servo ortogonales ServoFit® KS	*KS5*
Dibujos acotados Reduct. servo ortogonales ServoFit® KS	*KS11*

Indice KS

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Posizioni di montaggio	KS4
Tabella di selezione ServoFit® Servorid. ortogonale KS	KS5
Disegni quotati ServoFit® Servorid. ortogonale KS	KS11

KS

Type designation / *Denominación de tipo* / Identificazione tipologica

KS 5 0 2 F F 0060 ME

1 2 3 4 5 6 7 8

1 Gear unit type
KS - Right-Angle Servo Gear Units

2 Right-Angle Servo Gear Unit size

3 Generation number

4 Stages KS gear unit
2 - 2 stage
3 - 3 stage

5 Shaft design KS gear unit
G - shaft without key (side 4)
P - shaft with key (side 4)
F - flange hollow shaft (side 4)
S - hollow shaft with shrink ring (side 3)

6 Housing design
F - Standard design

7 Transmission ratio KS gear unit i x 10

8 Mounting series
ME - Motor adapter with EasyAdapt® coupling
MEL - Motor adapter with EasyAdapt® coupling and large motor plate
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection from page KS16, please observe the max. dimensions).

Ordering data according to the type designation above.

1 *Tipo de reductor*
KS *–Servoreductor ortogonal*

2 *Tamaño del servoreductor ortogonal*

3 *Cifra de generación*

4 *Número de trenes del reductor KS*
2 *–2 trenes*
3 *–3 trenes*

5 *Ejecución del eje del reductor KS*
G *–Eje senza chaveta (lado 4)*
P *–Eje con chaveta (lado 4)*
F *–Eje hueco con brida (lado 4)*
S *–Eje hueco con disco de contracción (lado 3)*

6 *Tipo constructivo de la carcasa*
F *–Ejecución estándar*

7 *Número característico de la relación de reducción reductor KS i x 10*

8 *Grupos de opciones*
ME *– Adaptador de motor con acoplamiento EasyAdapt®*
MEL *– Adaptador de motor con acoplamiento EasyAdapt® y placa grande de motor*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor a partir de la página KS16, por favor observar dimensiones máximas).

Datos de pedido de acuerdo a la tipificación indicada arriba.

1 Tipo riduttore
KS –Servoriduttore ortogonale

2 Taglia servoriduttori ortogonale

3 Numero di generazione

4 Numero di stadi riduttore KS
2 –2 stadi
3 –3 stadi

5 Esecuzione albero riduttore KS
G –Albero senza chiavetta (lato 4)
P –Albero con chiavetta (lato 4)
F –Albero cavo flangiato (lato 4)
S –Albero cavo con disco di serraggio (lato 3)

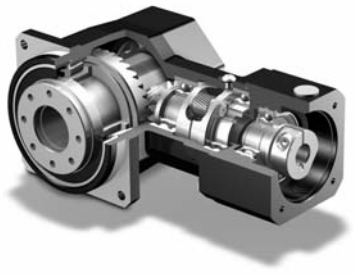
6 Tipo di carcassa
F –Esecuzione standard

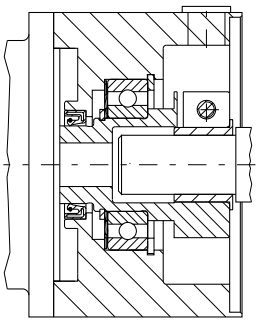
7 Rapporto di riduzione riduttore KS i x 10

8 Opzioni annessi
ME – Adattatore motore con giunto EasyAdapt®
MEL – Adattatore motore con giunto EasyAdapt® e flangia motore grande
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore da pagina KS16, si prega di rispettare le misure max.).

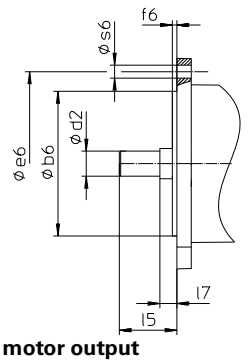
Dati dell'ordine conformi alla identificazione dei modelli di cui sopra.

KS502 FF 0060 ME





EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore

Type designation | *Denominación de tipo* | Identificazione tipologica

Further ordering details:
- mounting position
  3 stage gear units in EL5 only possible with oil equalizing tank, see page KS15!
- access clamping screw motor coupling
- information as to whether the radial shaft seals on the output are made from FKM or NBR. Recommendation: FKM for an operating time ≥ 60%

When fitting a gear unit with shaft version "F" or "S", the alignment of the machine shaft to the hollow shaft has to be taken into consideration (max. alignment ≤ 0.03 mm).

ATTENTION! The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

Otros datos de pedido:
- *Posición de instalación*
  ¡Reductores 3 trenes en EL5 sólo posible con compensador de aceite, ver página KS15!
- *Acceso al tornillo de apriete del acoplamiento de motor*
- *Indicación si anillos retén en la salida de FKM o de NBR.*
  Recomendación:
  FKM para duración de conexión ≥ 60%.

En caso de uso de la forma de eje "F" y "S" deberá observarse en la fijación del reductor la alineación del eje de la máquina respecto al eje hueco del reductor (desviación máx. ≤ 0,03 mm).

***¡ATENCIÓN!** Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

Altri dati dell'ordine:
- Posizione di montaggio
  Riduttori 3 stadi in EL5 solo possibile con serbatoio di compensazione olio, vedere pagina KS15!
- Accesso al giunto di accoppiamonto motore
- Indicare se gli anelli di tenuta radiali dell' albero uscita sono in FKM o NBR.
  Raccomandazione:
  FKM per fattore di servizio ≥ 60%.

Se si utilizza l'esecuzione albero "F" ed "S", in sede di fissaggio riduttore si deve fare attenzione all'allineamento dell'albero macchina con l'albero cavo riduttore (scostamento massimo ≤ 0,03 mm).

ATTENZIONE! Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

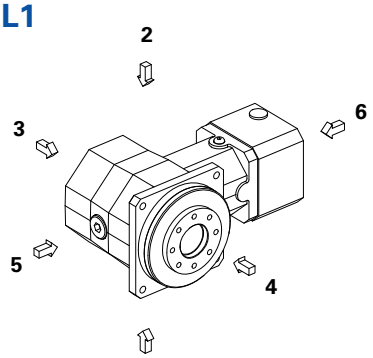
Mounting positions

Posiciones de instalación

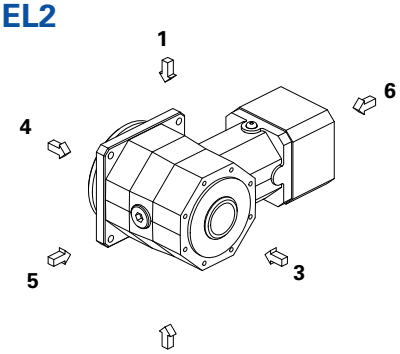
Posizioni di montaggio

STÖBER

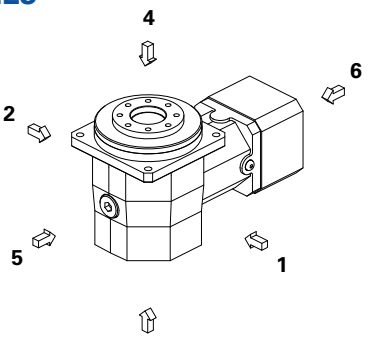
EL1



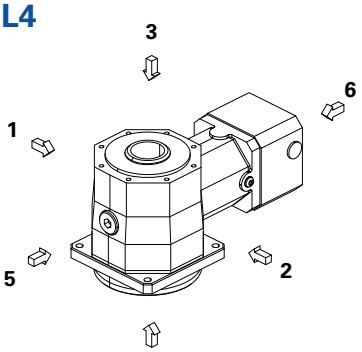
EL2



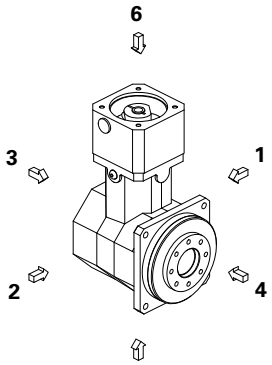
EL3



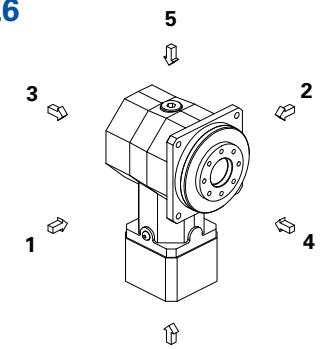
EL4



EL5



EL6



The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

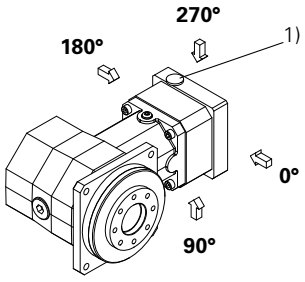
Please visit our website for more detailed information about oil quantities (ID 441871).

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a las cantidades de lubricante (ID 441871).

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul quantità di lubrificante possono essere reperite su Internet (ID 441871).



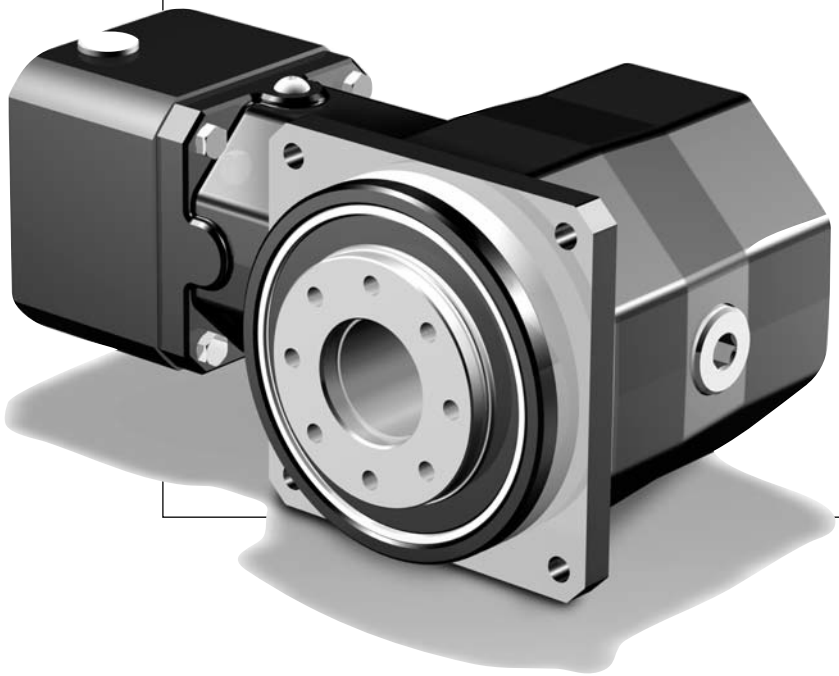
1) Access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamonto motore

Selection table **ServoFit® KS** Right-Angle Servo Gear Units

*Tabla de selección Reduct. servo ortogonales **ServoFit® KS***

Tabella di selezione **ServoFit®** Servorid. ortogonale **KS**

STÖBER



Selection table **ServoFit® KS** Right-Angle Servo Gear Units

*Tabla de selección Reduct. servo ortogonales **ServoFit® KS***

Tabella di selezione **ServoFit®** Servorid. ortogonale **KS**

STÖBER

Symbols:

i - Gear unit ratio
n_{1MAX} - Max. input speed
DB - Continuous operation
ZB - Cycle operation
(at ambient temperature 20°C, also see page A11/A12)
MWø - Motor shaft diameter
J_1 - Mass mom. of inertia (related to input)
G - Weight
$\Lambda\varphi_2$ - Backlash
C_2 - Gear unit rigidity (related to output at M_{2B})
L_{PA} - Max. noise level (n_1 = 2000 rpm)
M_{2N} - Rated torque [1]
M_{2B} - Max. perm. acceleration torque
Attention: Values for M_{2B} are valid for gear units with shaft design "G". Therefore we generally recommend this shaft design for cycle operation.
M_{2NOT} - Emergency-Off moment (10^3 load changes)

Please take notice of the operating factors on page A11/A12!

[1] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

Denominaciones:

i *– Relación de reducción*
n_{1MAX} *– Velocidad máx. de entrada*
DB – Trabajo continuo
ZB – Trabajo cíclico
(a temperatura ambiente 20°C, ver también página A11/A12)
MWø *– Diámetro de eje del motor*
J_1 *– Momento de inercia de masa (referido a la entrada)*
G *– Peso*
$\Lambda\varphi_2$ *–Juego de giro*
C_2 *– Rigidez del reductor (referido a la salida para M_{2B})*
L_{PA} *– Ruido máx. de marcha (n_1 = 2000 min^{-1})*
M_{2N} *– Par nominal [1]*
M_{2B} *– Par máx. admisible de aceleración*
Atención: *Datos respecto a M_{2B} se refieren al reductor en ejecución de eje "G". Por ello, esta ejecución de eje es recomendada en general para trabajo cíclico.*
M_{2NOT} *– Par de PARADA DE EMERGENCIA (10^3 cambios de carga)*

¡Por favor observe las factores de operación en la página A11/A12!

[1] Los valores se refieren a la velocidad de entrada n_1 = 1500 min^{-1}

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

Simboli:

i – Rapporto di riduzione
n_{1MAX} – Max. numero di giri in ingresso
DB – funzionamento continuo
ZB – funzionamento ciclico
(a temperatura ambiente di 20°C, vedere anche pag. A11/A12)
MWø – Diametro dell'albero motore
J_1 – Momento di inerzia (riferito all'ingresso)
G – Peso
$\Lambda\varphi_2$ – Gioco
C_2 – Rigidità del riduttore (riferito all'uscita per M_{2B})
L_{PA} – Rumorosità max. (n_1 = 2000 min^{-1})
M_{2N} – Coppia nominale [1]
M_{2B} – Coppia di accelerazione max. ammessa
Attenzione: I dati relativi a M_{2B} si riferiscono al riduttore nell'esecuzione albero "G". Quest'esecuzione albero è generalmente raccomandata per il ciclo di funzionamento.
M_{2NOT} – Coppia di emergenza (10^3 variazioni di carico)

Si raccomanda di rispettare i fattori di servizio a pagina A11/A12!

[1] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min^{-1}.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

Right-Angle Servo Gear Units **KS**
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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
KS402 (M_{2BMAX}=90 Nm)												
6,000	**KS402_0060 ME**	3000	6000	**≤11**	0,91	7,7	6	8,0	63	60	90	140
6,000	**KS402_0060 ME**	3000	6000	**>11≤14**	0,94	7,7	6	8,1	63	60	90	140
6,000	**KS402_0060 ME**	3000	6000	**>14≤19**	1,1	7,7	6	8,1	63	60	90	140
6,000	**KS402_0060 MEL**	3000	6000	**>19≤24**	1,5	8,4	6	8,4	63	60	90	140
8,000	**KS402_0080 ME**	3500	6000	**≤11**	0,56	7,7	6	8,2	60	65	90	140
8,000	**KS402_0080 ME**	3500	6000	**>11≤14**	0,59	7,7	6	8,3	60	65	90	140
8,000	**KS402_0080 ME**	3500	6000	**>14≤19**	0,71	7,7	6	8,3	60	65	90	140
8,000	**KS402_0080 MEL**	3500	6000	**>19≤24**	1,2	8,4	6	8,4	60	65	90	140
10,00	**KS402_0100 ME**	3800	6000	**≤11**	0,43	7,7	6	8,3	58	65	90	140
10,00	**KS402_0100 ME**	3800	6000	**>11≤14**	0,46	7,7	6	8,3	58	65	90	140
10,00	**KS402_0100 ME**	3800	6000	**>14≤19**	0,58	7,7	6	8,3	58	65	90	140
10,00	**KS402_0100 MEL**	3800	6000	**>19≤24**	1,1	8,4	6	8,4	58	65	90	140
14,00	**KS402_0140 ME**	4000	6000	**≤11**	0,32	7,7	6	8,4	57	65	90	140
14,00	**KS402_0140 ME**	4000	6000	**>11≤14**	0,36	7,7	6	8,4	57	65	90	140
14,00	**KS402_0140 ME**	4000	6000	**>14≤19**	0,47	7,7	6	8,4	57	65	90	140
14,00	**KS402_0140 MEL**	4000	6000	**>19≤24**	0,96	8,4	6	8,5	57	65	90	140
20,00	**KS402_0200 ME**	4000	6000	**≤11**	0,28	7,7	6	8,5	55	60	90	140
20,00	**KS402_0200 ME**	4000	6000	**>11≤14**	0,31	7,7	6	8,5	55	60	90	140
20,00	**KS402_0200 ME**	4000	6000	**>14≤19**	0,43	7,7	6	8,5	55	60	90	140
20,00	**KS402_0200 MEL**	4000	6000	**>19≤24**	0,91	8,4	6	8,5	55	60	90	140
KS403 (M_{2BMAX}=90 Nm)												
24,00	**KS403_0240 ME**	3500	6000	**≤9**	0,16	7,8	6	8,4	59	60	90	140
24,00	**KS403_0240 ME**	3500	6000	**>9≤11**	0,18	7,8	6	8,5	59	60	90	140
24,00	**KS403_0240 ME**	3500	6000	**>11≤14**	0,20	7,8	6	8,5	59	60	90	140
24,00	**KS403_0240 MEL**	3500	6000	**>14≤19**	0,48	8,2	6	8,5	59	60	90	140
32,00	**KS403_0320 ME**	3500	6000	**≤9**	0,14	7,8	6	8,5	59	65	90	140
32,00	**KS403_0320 ME**	3500	6000	**>9≤11**	0,15	7,8	6	8,5	59	65	90	140
32,00	**KS403_0320 ME**	3500	6000	**>11≤14**	0,17	7,8	6	8,5	59	65	90	140
32,00	**KS403_0320 MEL**	3500	6000	**>14≤19**	0,46	8,2	6	8,5	59	65	90	140
40,00	**KS403_0400 ME**	3500	6000	**≤9**	0,13	7,8	6	8,5	59	65	90	140
40,00	**KS403_0400 ME**	3500	6000	**>9≤11**	0,15	7,8	6	8,5	59	65	90	140
40,00	**KS403_0400 ME**	3500	6000	**>11≤14**	0,17	7,8	6	8,5	59	65	90	140
40,00	**KS403_0400 MEL**	3500	6000	**>14≤19**	0,45	8,2	6	8,5	59	65	90	140
50,00	**KS403_0500 ME**	4000	6000	**≤9**	0,10	7,8	6	8,5	57	65	90	140
50,00	**KS403_0500 ME**	4000	6000	**>9≤11**	0,11	7,8	6	8,5	57	65	90	140
50,00	**KS403_0500 ME**	4000	6000	**>11≤14**	0,13	7,8	6	8,5	57	65	90	140
50,00	**KS403_0500 MEL**	4000	6000	**>14≤19**	0,42	8,2	6	8,5	57	65	90	140
70,00	**KS403_0700 ME**	4500	6000	**≤9**	0,08	7,8	6	8,5	56	65	90	140
70,00	**KS403_0700 ME**	4500	6000	**>9≤11**	0,09	7,8	6	8,5	56	65	90	140
70,00	**KS403_0700 ME**	4500	6000	**>11≤14**	0,11	7,8	6	8,5	56	65	90	140
70,00	**KS403_0700 MEL**	4500	6000	**>14≤19**	0,40	8,2	6	8,5	56	65	90	140
80,00	**KS403_0800 ME**	4500	6000	**≤9**	0,07	7,8	6	8,5	54	65	90	140
80,00	**KS403_0800 ME**	4500	6000	**>9≤11**	0,08	7,8	6	8,5	54	65	90	140
80,00	**KS403_0800 ME**	4500	6000	**>11≤14**	0,10	7,8	6	8,5	54	65	90	140
80,00	**KS403_0800 MEL**	4500	6000	**>14≤19**	0,40	8,2	6	8,5	54	65	90	140
100,0	**KS403_1000 ME**	4500	6000	**≤9**	0,07	7,8	6	8,5	54	65	90	140
100,0	**KS403_1000 ME**	4500	6000	**>9≤11**	0,08	7,8	6	8,5	54	65	90	140
100,0	**KS403_1000 ME**	4500	6000	**>11≤14**	0,10	7,8	6	8,5	54	65	90	140
100,0	**KS403_1000 MEL**	4500	6000	**>14≤19**	0,40	8,2	6	8,5	54	65	90	140
140,0	**KS403_1400 ME**	4500	6000	**≤9**	0,07	7,8	6	8,5	54	65	90	140
140,0	**KS403_1400 ME**	4500	6000	**>9≤11**	0,08	7,8	6	8,5	54	65	90	140
140,0	**KS403_1400 ME**	4500	6000	**>11≤14**	0,10	7,8	6	8,5	54	65	90	140
140,0	**KS403_1400 MEL**	4500	6000	**>14≤19**	0,39	8,2	6	8,5	54	65	90	140
200,0	**KS403_2000 ME**	4500	6000	**≤9**	0,07	7,8	6	8,5	54	60	90	140
200,0	**KS403_2000 ME**	4500	6000	**>9≤11**	0,08	7,8	6	8,5	54	60	90	140
200,0	**KS403_2000 ME**	4500	6000	**>11≤14**	0,10	7,8	6	8,5	54	60	90	140
200,0	**KS403_2000 MEL**	4500	6000	**>14≤19**	0,39	8,2	6	8,5	54	60	90	140

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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
KS502 (M_{2BMAX}=200 Nm)												
6,000	**KS502_0060 ME**	2500	5500	**≤14**	2,3	12,9	5	16	64	100	200	260
6,000	**KS502_0060 ME**	2500	5500	**>14≤19**	2,4	12,9	5	16	64	100	200	300
6,000	**KS502_0060 ME**	2500	5500	**>19≤24**	2,5	12,9	5	16	64	100	200	300
6,000	**KS502_0060 MEL**	2500	5500	**>24≤32**	4,1	13,6	5	17	64	100	200	300
8,000	**KS502_0080 ME**	2800	6000	**≤14**	1,6	12,9	5	17	61	130	200	300
8,000	**KS502_0080 ME**	2800	6000	**>14≤19**	1,8	12,9	5	17	61	130	200	300
8,000	**KS502_0080 ME**	2800	6000	**>19≤24**	1,9	12,9	5	17	61	130	200	300
8,000	**KS502_0080 MEL**	2800	6000	**>24≤32**	3,5	13,6	5	17	61	130	200	300
10,00	**KS502_0100 ME**	3000	6000	**≤14**	1,2	12,9	5	17	59	130	200	300
10,00	**KS502_0100 ME**	3000	6000	**>14≤19**	1,4	12,9	5	17	59	130	200	300
10,00	**KS502_0100 ME**	3000	6000	**>19≤24**	1,5	12,9	5	17	59	130	200	300
10,00	**KS502_0100 MEL**	3000	6000	**>24≤32**	3,1	13,6	5	17	59	130	200	300
14,00	**KS502_0140 ME**	3200	6000	**≤14**	0,90	12,9	5	17	58	130	200	300
14,00	**KS502_0140 ME**	3200	6000	**>14≤19**	1,0	12,9	5	17	58	130	200	300
14,00	**KS502_0140 ME**	3200	6000	**>19≤24**	1,1	12,9	5	17	58	130	200	300
14,00	**KS502_0140 MEL**	3200	6000	**>24≤32**	2,8	13,6	5	17	58	130	200	300
20,00	**KS502_0200 ME**	3500	6000	**≤14**	0,71	12,9	5	17	56	120	200	300
20,00	**KS502_0200 ME**	3500	6000	**>14≤19**	0,84	12,9	5	17	56	120	200	300
20,00	**KS502_0200 ME**	3500	6000	**>19≤24**	0,96	12,9	5	17	56	120	200	300
20,00	**KS502_0200 MEL**	3500	6000	**>24≤32**	2,6	13,6	5	17	56	120	200	300
KS503 (M_{2BMAX}=200 Nm)												
24,00	**KS503_0240 ME**	3100	6000	**≤11**	0,49	13,7	5	17	60	100	200	300
24,00	**KS503_0240 ME**	3100	6000	**>11≤14**	0,52	13,7	5	17	60	100	200	300
24,00	**KS503_0240 ME**	3100	6000	**>14≤19**	0,64	13,7	5	17	60	100	200	300
24,00	**KS503_0240 MEL**	3100	6000	**>19≤24**	1,1	14,4	5	17	60	100	200	300
32,00	**KS503_0320 ME**	3100	6000	**≤11**	0,45	13,7	5	17	60	130	200	300
32,00	**KS503_0320 ME**	3100	6000	**>11≤14**	0,48	13,7	5	17	60	130	200	300
32,00	**KS503_0320 ME**	3100	6000	**>14≤19**	0,60	13,7	5	17	60	130	200	300
32,00	**KS503_0320 MEL**	3100	6000	**>19≤24**	1,1	14,4	5	17	60	130	200	300
40,00	**KS503_0400 ME**	3100	6000	**≤11**	0,43	13,7	5	17	60	130	200	300
40,00	**KS503_0400 ME**	3100	6000	**>11≤14**	0,46	13,7	5	17	60	130	200	300
40,00	**KS503_0400 ME**	3100	6000	**>14≤19**	0,58	13,7	5	17	60	130	200	300
40,00	**KS503_0400 MEL**	3100	6000	**>19≤24**	1,1	14,4	5	17	60	130	200	300
50,00	**KS503_0500 ME**	3500	6000	**≤11**	0,35	13,7	5	17	58	130	200	300
50,00	**KS503_0500 ME**	3500	6000	**>11≤14**	0,38	13,7	5	17	58	130	200	300
50,00	**KS503_0500 ME**	3500	6000	**>14≤19**	0,50	13,7	5	17	58	130	200	300
50,00	**KS503_0500 MEL**	3500	6000	**>19≤24**	0,98	14,4	5	17	58	130	200	300
70,00	**KS503_0700 ME**	4200	6000	**≤11**	0,28	13,7	5	17	57	130	200	300
70,00	**KS503_0700 ME**	4200	6000	**>11≤14**	0,31	13,7	5	17	57	130	200	300
70,00	**KS503_0700 ME**	4200	6000	**>14≤19**	0,43	13,7	5	17	57	130	200	300
70,00	**KS503_0700 MEL**	4200	6000	**>19≤24**	0,92	14,4	5	17	57	130	200	300
80,00	**KS503_0800 ME**	4200	6000	**≤11**	0,26	13,7	5	17	55	130	200	300
80,00	**KS503_0800 ME**	4200	6000	**>11≤14**	0,29	13,7	5	17	55	130	200	300
80,00	**KS503_0800 ME**	4200	6000	**>14≤19**	0,41	13,7	5	17	55	130	200	300
80,00	**KS503_0800 MEL**	4200	6000	**>19≤24**	0,90	14,4	5	17	55	130	200	300
100,0	**KS503_1000 ME**	4200	6000	**≤11**	0,26	13,7	5	17	55	130	200	300
100,0	**KS503_1000 ME**	4200	6000	**>11≤14**	0,29	13,7	5	17	55	130	200	300
100,0	**KS503_1000 ME**	4200	6000	**>14≤19**	0,40	13,7	5	17	55	130	200	300
100,0	**KS503_1000 MEL**	4200	6000	**>19≤24**	0,89	14,4	5	17	55	130	200	300
140,0	**KS503_1400 ME**	4200	6000	**≤11**	0,25	13,7	5	17	55	130	200	300
140,0	**KS503_1400 ME**	4200	6000	**>11≤14**	0,29	13,7	5	17	55	130	200	300
140,0	**KS503_1400 ME**	4200	6000	**>14≤19**	0,40	13,7	5	17	55	130	200	300
140,0	**KS503_1400 MEL**	4200	6000	**>19≤24**	0,89	14,4	5	17	55	130	200	300
200,0	**KS503_2000 ME**	4200	6000	**≤11**	0,25	13,7	5	17	55	120	200	300
200,0	**KS503_2000 ME**	4200	6000	**>11≤14**	0,28	13,7	5	17	55	120	200	300
200,0	**KS503_2000 ME**	4200	6000	**>14≤19**	0,40	13,7	5	17	55	120	200	300
200,0	**KS503_2000 MEL**	4200	6000	**>19≤24**	0,89	14,4	5	17	55	120	200	300

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i	Typ	n_{1MAX} DB [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/arcmin]	L_{PA} [dB(A)]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
KS702 (M_{2BMAX}=400 Nm)												
6,000	**KS702_0060 ME**	2100	4500	**≤19**	7,7	25,1	4	39	65	240	400	600
6,000	**KS702_0060 ME**	2100	4500	**>19≤24**	8,0	25,1	4	40	65	240	400	600
6,000	**KS702_0060 ME**	2100	4500	**>24≤32**	8,3	25,1	4	40	65	240	400	600
6,000	**KS702_0060 MEL**	2100	4500	**>32≤38**	12	26,8	4	41	65	240	400	600
8,000	**KS702_0080 ME**	2500	5000	**≤19**	4,8	25,1	4	41	62	250	400	600
8,000	**KS702_0080 ME**	2500	5000	**>19≤24**	5,1	25,1	4	41	62	250	400	600
8,000	**KS702_0080 ME**	2500	5000	**>24≤32**	5,5	25,1	4	41	62	250	400	600
8,000	**KS702_0080 MEL**	2500	5000	**>32≤38**	9,2	26,8	4	41	62	250	400	600
10,00	**KS702_0100 ME**	2800	6000	**≤19**	3,7	25,1	4	41	60	250	400	600
10,00	**KS702_0100 ME**	2800	6000	**>19≤24**	4,1	25,1	4	41	60	250	400	600
10,00	**KS702_0100 ME**	2800	6000	**>24≤32**	4,4	25,1	4	41	60	250	400	600
10,00	**KS702_0100 MEL**	2800	6000	**>32≤38**	8,2	26,8	4	42	60	250	400	600
14,00	**KS702_0140 ME**	3000	6000	**≤19**	2,8	25,1	4	42	59	250	400	600
14,00	**KS702_0140 ME**	3000	6000	**>19≤24**	3,0	25,1	4	42	59	250	400	600
14,00	**KS702_0140 ME**	3000	6000	**>24≤32**	3,4	25,1	4	42	59	250	400	600
14,00	**KS702_0140 MEL**	3000	6000	**>32≤38**	7,1	26,8	4	42	59	250	400	600
20,00	**KS702_0200 ME**	3200	6000	**≤19**	2,3	25,1	4	42	57	250	400	600
20,00	**KS702_0200 ME**	3200	6000	**>19≤24**	2,6	25,1	4	42	57	250	400	600
20,00	**KS702_0200 ME**	3200	6000	**>24≤32**	2,9	25,1	4	42	57	250	400	600
20,00	**KS702_0200 MEL**	3200	6000	**>32≤38**	6,7	26,8	4	42	57	250	400	600
KS703 (M_{2BMAX}=400 Nm)												
24,00	**KS703_0240 ME**	3000	6000	**≤14**	1,4	27,4	4	42	61	240	400	600
24,00	**KS703_0240 ME**	3000	6000	**>14≤19**	1,5	27,4	4	42	61	240	400	600
24,00	**KS703_0240 ME**	3000	6000	**>19≤24**	1,6	27,4	4	42	61	240	400	600
24,00	**KS703_0240 MEL**	3000	6000	**>24≤32**	3,2	28,1	4	42	61	240	400	600
32,00	**KS703_0320 ME**	3000	6000	**≤14**	1,2	27,4	4	42	61	250	400	600
32,00	**KS703_0320 ME**	3000	6000	**>14≤19**	1,3	27,4	4	42	61	250	400	600
32,00	**KS703_0320 ME**	3000	6000	**>19≤24**	1,5	27,4	4	42	61	250	400	600
32,00	**KS703_0320 MEL**	3000	6000	**>24≤32**	3,1	28,1	4	42	61	250	400	600
40,00	**KS703_0400 ME**	3000	6000	**≤14**	1,1	27,4	4	42	61	250	400	600
40,00	**KS703_0400 ME**	3000	6000	**>14≤19**	1,3	27,4	4	42	61	250	400	600
40,00	**KS703_0400 ME**	3000	6000	**>19≤24**	1,4	27,4	4	42	61	250	400	600
40,00	**KS703_0400 MEL**	3000	6000	**>24≤32**	3,0	28,1	4	42	61	250	400	600
50,00	**KS703_0500 ME**	3200	6000	**≤14**	0,91	27,4	4	42	59	250	400	600
50,00	**KS703_0500 ME**	3200	6000	**>14≤19**	1,1	27,4	4	42	59	250	400	600
50,00	**KS703_0500 ME**	3200	6000	**>19≤24**	1,2	27,4	4	42	59	250	400	600
50,00	**KS703_0500 MEL**	3200	6000	**>24≤32**	2,8	28,1	4	42	59	250	400	600
70,00	**KS703_0700 ME**	3500	6000	**≤14**	0,73	27,4	4	42	58	250	400	600
70,00	**KS703_0700 ME**	3500	6000	**>14≤19**	0,87	27,4	4	42	58	250	400	600
70,00	**KS703_0700 ME**	3500	6000	**>19≤24**	0,98	27,4	4	42	58	250	400	600
70,00	**KS703_0700 MEL**	3500	6000	**>24≤32**	2,6	28,1	4	42	58	250	400	600
80,00	**KS703_0800 ME**	4000	6000	**≤14**	0,68	27,4	4	42	56	250	400	600
80,00	**KS703_0800 ME**	4000	6000	**>14≤19**	0,81	27,4	4	42	56	250	400	600
80,00	**KS703_0800 ME**	4000	6000	**>19≤24**	0,93	27,4	4	42	56	250	400	600
80,00	**KS703_0800 MEL**	4000	6000	**>24≤32**	2,6	28,1	4	42	56	250	400	600
100,0	**KS703_1000 ME**	4000	6000	**≤14**	0,67	27,4	4	42	56	250	400	600
100,0	**KS703_1000 ME**	4000	6000	**>14≤19**	0,80	27,4	4	42	56	250	400	600
100,0	**KS703_1000 ME**	4000	6000	**>19≤24**	0,92	27,4	4	42	56	250	400	600
100,0	**KS703_1000 MEL**	4000	6000	**>24≤32**	2,6	28,1	4	42	56	250	400	600
140,0	**KS703_1400 ME**	4000	6000	**≤14**	0,66	27,4	4	42	56	250	400	600
140,0	**KS703_1400 ME**	4000	6000	**>14≤19**	0,79	27,4	4	42	56	250	400	600
140,0	**KS703_1400 ME**	4000	6000	**>19≤24**	0,91	27,4	4	42	56	250	400	600
140,0	**KS703_1400 MEL**	4000	6000	**>24≤32**	2,5	28,1	4	42	56	250	400	600
200,0	**KS703_2000 ME**	4000	6000	**≤14**	0,65	27,4	4	42	56	250	400	600
200,0	**KS703_2000 ME**	4000	6000	**>14≤19**	0,79	27,4	4	42	56	250	400	600
200,0	**KS703_2000 ME**	4000	6000	**>19≤24**	0,90	27,4	4	42	56	250	400	600
200,0	**KS703_2000 MEL**	4000	6000	**>24≤32**	2,5	28,1	4	42	56	250	400	600

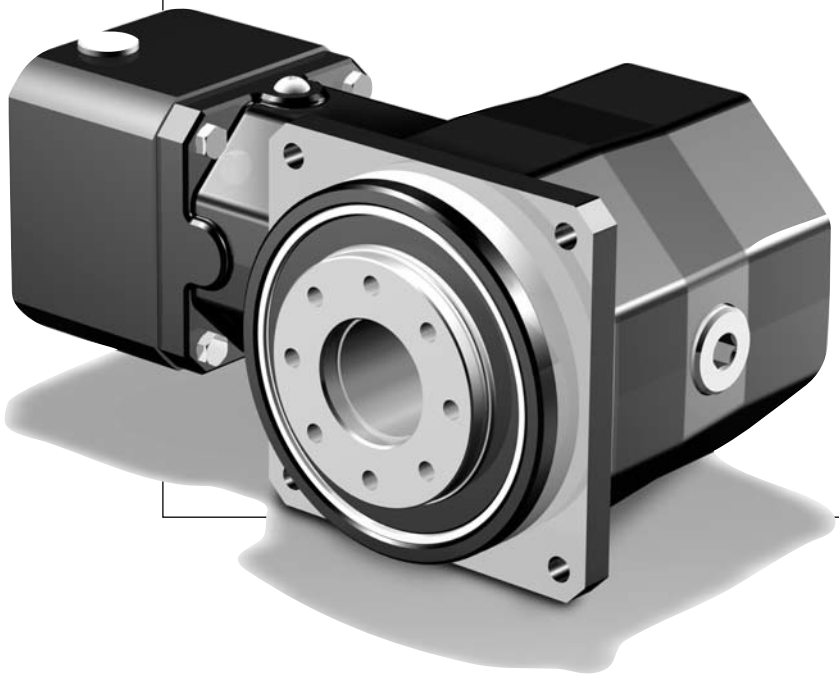
KS

Dimension drawings **ServoFit® KS** Right-Angle Servo Gear Units

Dibujos acotados Reduct. servo ortogonales ***ServoFit® KS***

Disegni quotati **ServoFit®** Servorid. ortogonali **KS**

STÖBER



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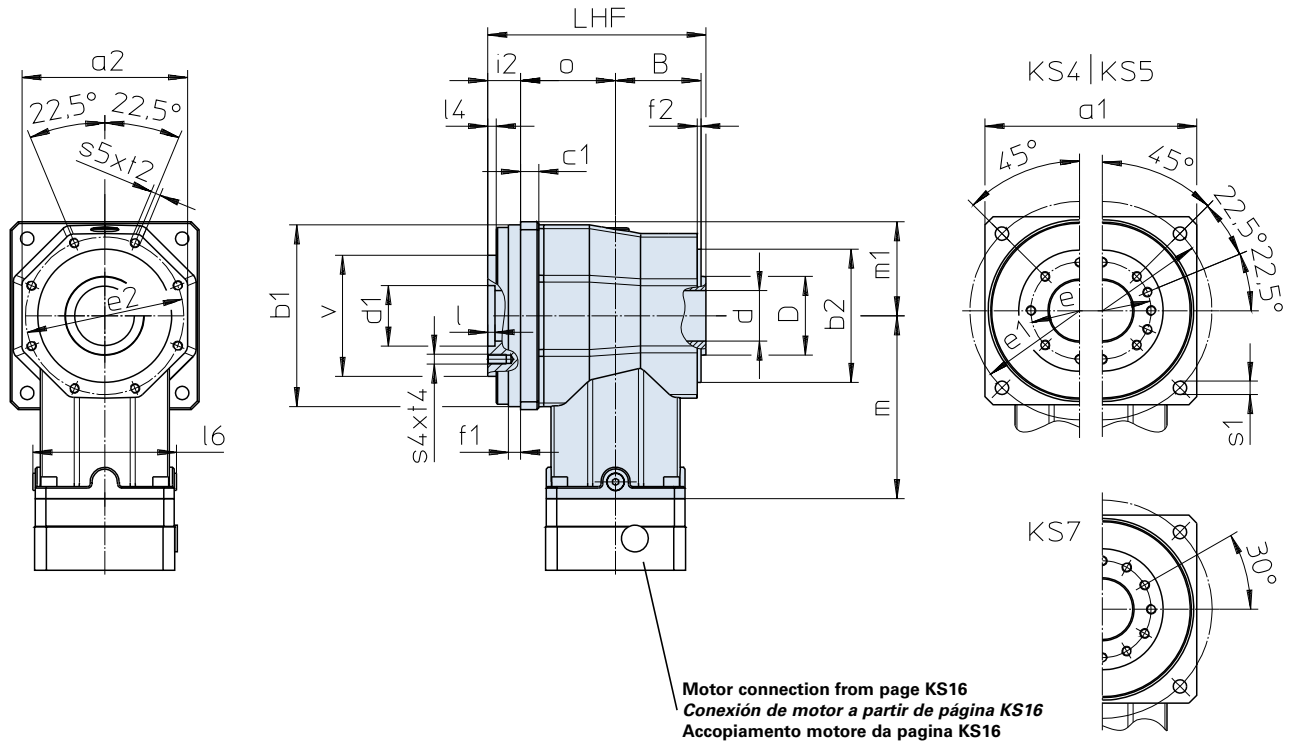
STÖBER

KS4_FF_ME - KS7_FF_ME



Motor connection from page KS16
Conexión de motor a partir de página KS16
Accopiamento motore da pagina KS16

Further dimensions for 3 stage gear units in EL5 on page KS15!

¡Dimensiones adicionales para los reductores a partir de página KS15!

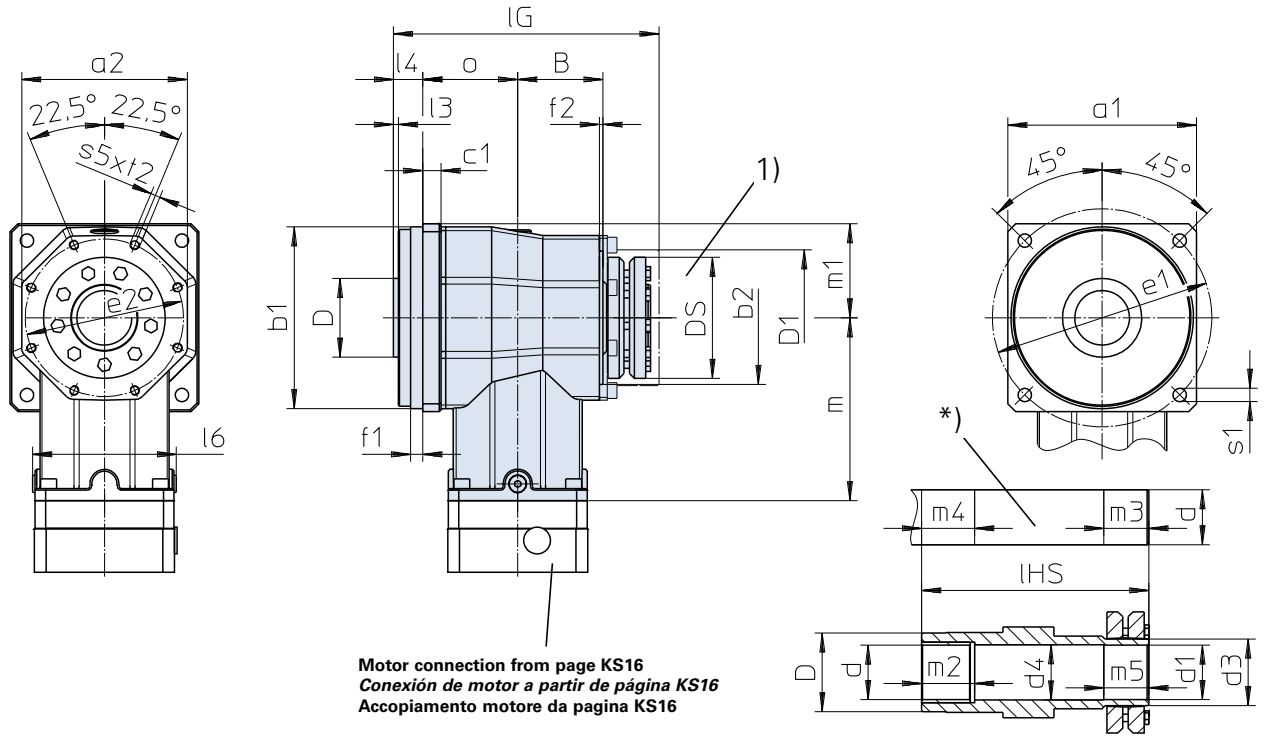
Albero uscita disponibile anche senza chiavetta! Ulteriori misure relative ai riduttori da pagina KS15!

Typ	□a1	□a2	øb1	øb2	B	c1	ød	ød1	øD	øe	øe1	øe2	f1
KS402	101	93	95h6	75h6	51	10	30	31,5H7	40d9	50	120	88	8
KS403	101	93	95h6	75h6	51	10	30	31,5H7	40d9	50	120	88	8
KS502	125	109	120h6	90h6	58	10	38	40,0H7	48d9	63	145	105	9
KS503	125	109	120h6	90h6	58	10	38	40,0H7	48d9	63	145	105	9
KS702	155	135	150h6	110h6	70	15	49	50,0H7	60d9	80	180	130	10
KS703	155	135	150h6	110h6	70	15	49	50,0H7	60d9	80	180	130	10

Typ	f2	i2	l	l4	l6	LHF	m	m1	o	øs1	s4	s5	t2	t4	øv
KS402	3	20	6	6,0	77,5	127	104,0	50,5	53	6,6	M6	M5	9	11	63h7
KS403	3	20	6	6,0	77,5	127	144,0	50,5	53	6,6	M6	M5	9	11	63h7
KS502	3	22	7	6,5	98,0	145	123,0	62,5	62	9,0	M6	M6	11	12	80h7
KS503	3	22	7	6,5	98,0	145	172,0	62,5	62	9,0	M6	M6	11	12	80h7
KS702	3	27	7	7,0	120,0	178	151,0	77,5	78	11,0	M8	M8	14	15	100h7
KS703	3	27	7	7,0	120,0	178	205,5	77,5	78	11,0	M8	M8	14	15	100h7

STÖBER

KS4_SF_ME - KS7_SF_ME



Motor connection from page KS16
Conexión de motor a partir de página KS16
Accopiamento motore da pagina KS16

Further dimensions for 3 stage gear units in EL5 on page KS15!

¡Dimensiones adicionales para los reductores a partir de página KS15!

Albero uscita disponibile anche senza chiavetta! Ulteriori misure relative ai riduttori da pagina KS15!

Typ	□a1	□a2	øb1	øb2	B	c1	ød	ød1	ød3	ød4	øD	øD1	øDS	øe1	øe2
KS402	101	93	95h6	75h6	51	10	25h6	25H7h6	30	25,5	40	72	60	120	88
KS403	101	93	95h6	75h6	51	10	25h6	25H7h6	30	25,5	40	72	60	120	88
KS502	125	109	120h6	90h6	58	10	35h6	35H7h6	44	35,5	50	92	80	145	105
KS503	125	109	120h6	90h6	58	10	35h6	35H7h6	44	35,5	50	92	80	145	105
KS702	155	135	150h6	110h6	70	15	45h6	45H7h6	55	45,5	65	112	100	180	130
KS703	155	135	150h6	110h6	70	15	45h6	45H7h6	55	45,5	65	112	100	180	130

Typ	f1	f2	l3	l4	l6	lG	lHS	m	m1	m2	m3	m4	m5	o	øs1	øs5	t2
KS402	8	3	4	18,0	77,5	158,0	151,0	104,0	50,5	20	34	25	29	53	6,6	M5	9
KS403	8	3	4	18,0	77,5	158,0	151,0	144,0	50,5	20	34	25	29	53	6,6	M5	9
KS502	9	3	4	19,5	98,0	179,5	171,5	123,0	62,5	30	39	35	34	62	9,0	M6	11
KS503	9	3	4	19,5	98,0	179,5	171,5	172,0	62,5	30	39	35	34	62	9,0	M6	11
KS702	10	3	4	24,0	120,0	218,0	211,0	151,0	77,5	40	42	45	37	78	11,0	M8	14
KS703	10	3	4	24,0	120,0	218,0	211,0	205,5	77,5	40	42	45	37	78	11,0	M8	14

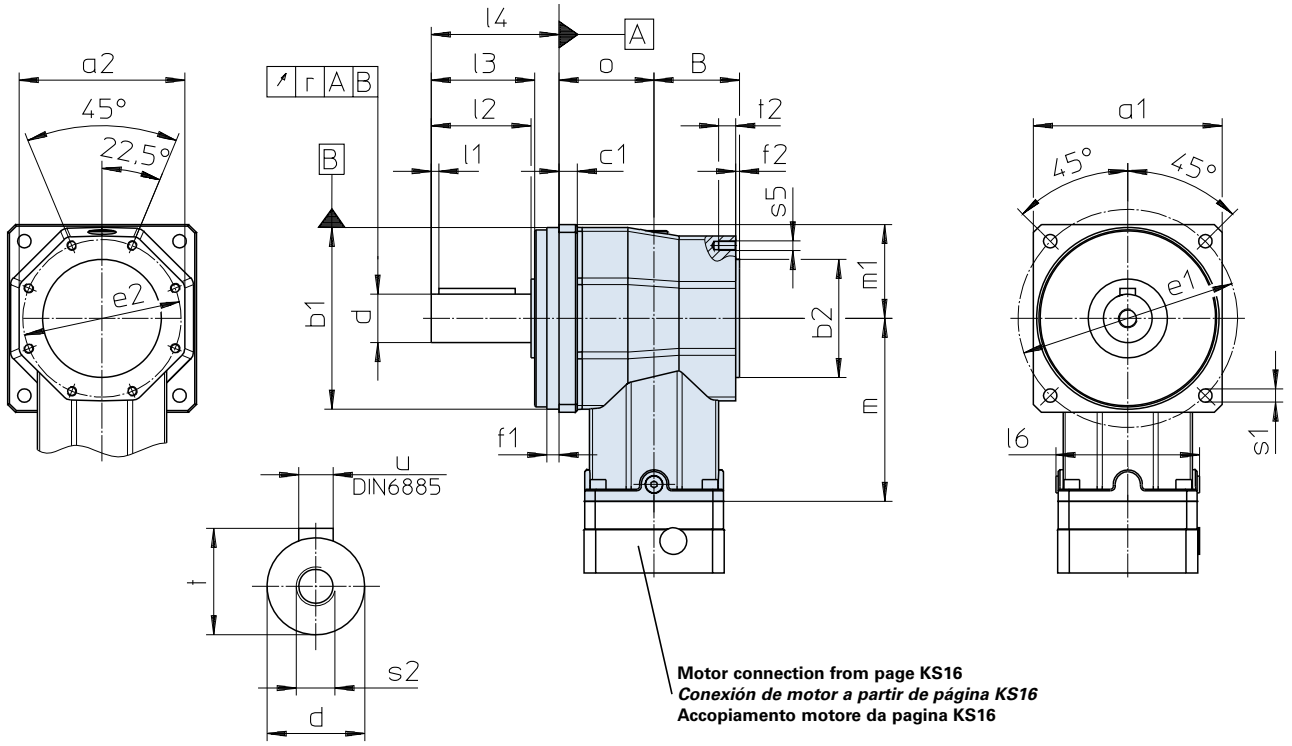
***)** Machine shaft to be driven
1) Cover – possible retrofit on request!
Subject to dimensional changes in the interests of technical development.

****)*** *Eje de máquina a cargo del cliente*
1) *Cubierta – ¡Posibilidad de equipamiento retroactivo a consultar! Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos*

***)** Albero macchina da comandare
1) Copertura – applicabile in seguito su richiesta! Con riserva di variazioni dimensionali dovute allo sviluppo tecnico

STÖBER

KS4_PF_ME - KS7_PF_ME



Output shaft can also be delivered without key. Further dimensions for 3 stage gear units in EL5 on page KS15!

¡Eje de salida también disponible sin chaveta! ¡Dimensiones adicionales para los reductores a partir de página KS15!

Albero uscita disponibile anche senza chiavetta! Ulteriori misure relative ai riduttori da pagina KS15!

Typ	□a1	□a2	øb1	øb2	B	c1	ød	øe1	øe2	f1	f2	l1	l2
KS402	101	93	95h6	75h6	51	10	22k6	120	88	8	3	3	36
KS403	101	93	95h6	75h6	51	10	22k6	120	88	8	3	3	36
KS502	125	109	120h6	90h6	58	10	32k6	145	105	9	3	3	58
KS503	125	109	120h6	90h6	58	10	32k6	145	105	9	3	3	58
KS702	155	135	150h6	110h6	70	15	40k6	180	130	10	3	4	82
KS703	155	135	150h6	110h6	70	15	40k6	180	130	10	3	4	82

Typ	l3	l4	l6	r	m	m1	o	øs1	s2	s5	t	t2	u
KS402	38	52,0	77,5	0,020	104,0	50,5	53	6,6	M8	M5	24,5	9	A6x6x28
KS403	38	52,0	77,5	0,020	144,0	50,5	53	6,6	M8	M5	24,5	9	A6x6x28
KS502	60	75,5	98,0	0,020	123,0	62,5	62	9,0	M12	M6	35,0	11	A10x8x50
KS503	60	75,5	98,0	0,020	172,0	62,5	62	9,0	M12	M6	35,0	11	A10x8x50
KS702	85	105,0	120,0	0,025	151,0	77,5	78	11,0	M16	M8	43,0	14	A12x8x70
KS703	85	105,0	120,0	0,025	205,5	77,5	78	11,0	M16	M8	43,0	14	A12x8x70

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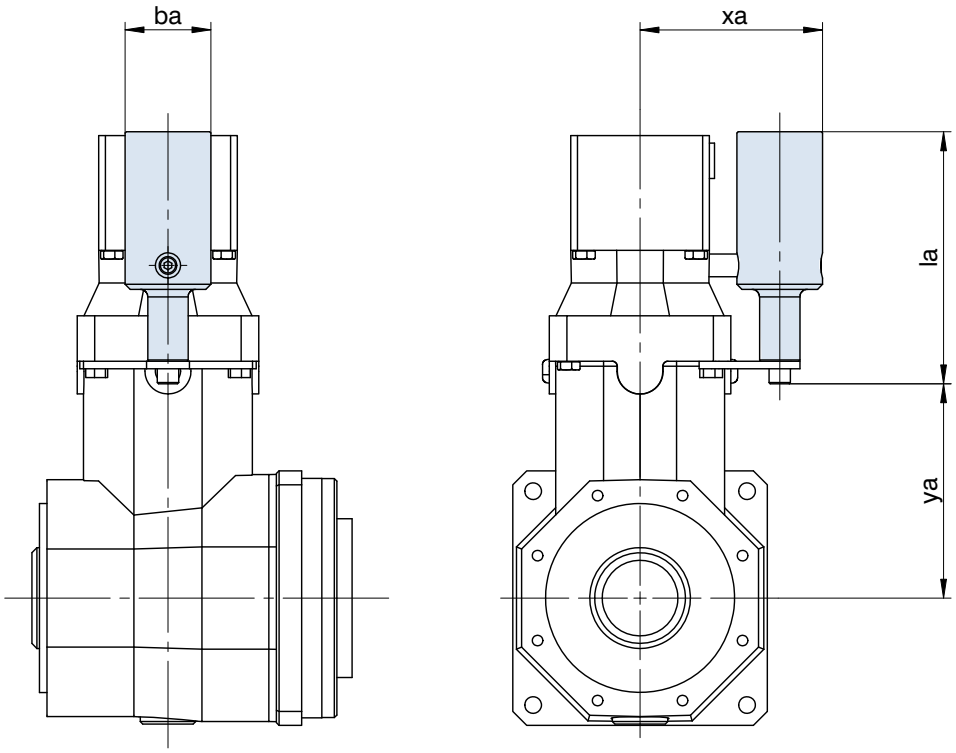
KS403_ME - KS703_ME



Further gear unit dimensions from page KS12. ***¡Dimensiones adicionales para los reductores a partir de página KS12!*** **Ulteriori misure relative ai riduttori da pagina KS12!**

Typ	ba	la	xa	ya
KS403	34	100	74,5	85
KS503	39	122	92,0	105
KS703	49	134	109,5	132

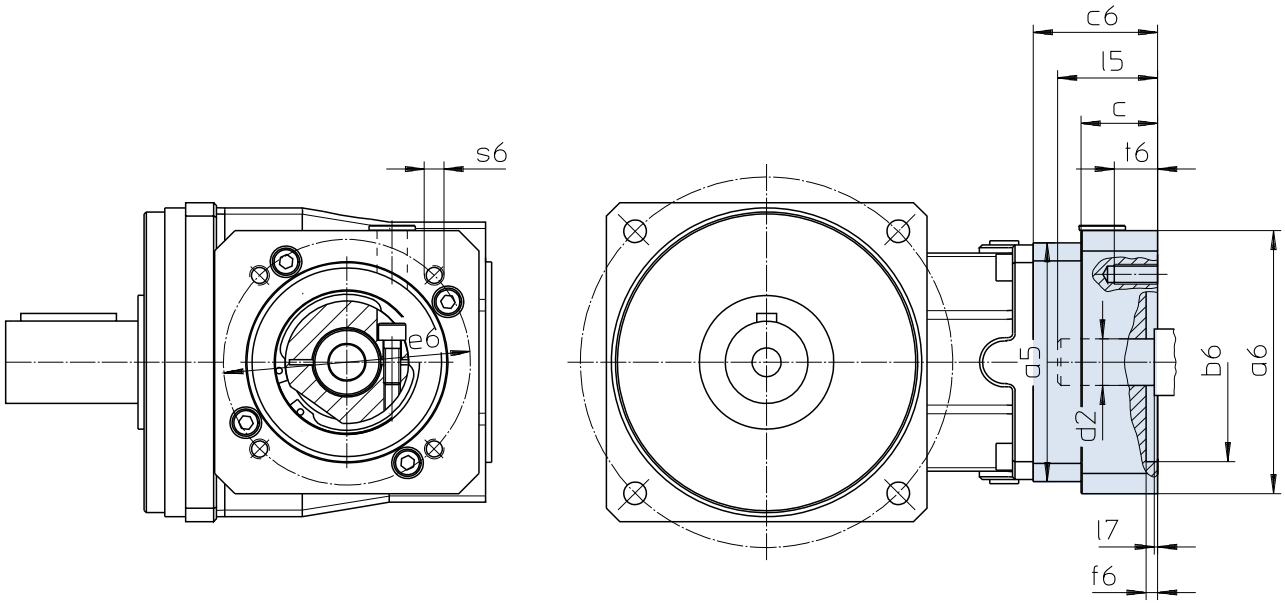
3 stage gear units in EL5 only possible with oil equalizing tank!
In mounting position EL5 the gear units have a higher filling level. The oil equalizing tank prevents any oil from escaping the gear unit. Mounting is possible on gear unit side 1 and 2, please indicate with your order.

¡Reductores 3 trenes en EL5 sólo posible con compensador de aceite!
En la posición de montaje EL5, los reductores cuentan con un mayor nivel de llenado. El depósito de compensación del aceite impide que salga aceite hacia el reductor. El montaje se puede realizar en los lados 1 y 2 del reductor; por favor, acompañe el pedido de la información pertinente.

Riduttori 3 stadi in EL5 possibile solo con serbatoio di compensazione olio!
Nella posizione di montaggio EL5 tutti i riduttori hanno un elevato livello di riempimento. Il contenitore per il bilanciamento del livello dell'olio impedisce eventuali fuoriuscite dal riduttore. E' possibile effettuare il montaggio ai lati 1 e 2 del riduttore; si prega di fornire le necessarie indicazioni in fase di ordine.

STÖBER

KS4_ME - KS7_ME



Further motor connection dimensions on request.

Otras medidas de conexión a consultar.

Altre misure di accopiamento motore su richiesta.

Typ	øb6	øe6	ød2max	l5max	□a5	□a6	c	c6	f6	l7max	s6	t6
KS402/KS503	40,0H7	63	19	40	72	75,0	18	51,5	3,0	3,0	M5	11
KS402/KS503	50,0H7	70	19	40	72	75,0	18	51,5	3,0	3,0	M4	9
KS402/KS503	50,0H7	95	19	40	72	80,0	18	51,5	3,0	3,0	M6	13
KS402/KS503	60,0H7	75	19	40	75	72,0	-	51,5	3,5	3,0	M5	11
KS402/KS503	60,0H7	90	19	40	72	75,0	18	51,5	3,5	3,0	M5	9
KS402/KS503	70,0H7	90	19	40	72	80,0	18	51,5	3,5	3,0	M5	9
KS402/KS503	80,0H7	100	19	40	90	90,0	-	51,5	3,5	3,0	M6	13
KS402/KS503	95,0H7	115	19	40	72	100,0	18	51,5	4,0	3,0	M8	18
KS402/KS503	95,0H7	130	19	40	72	115,0	18	51,5	4,0	3,0	M8	18
KS403	40,0H7	63	14	30	55	55,0	-	32,0	3,5	3,0	M4	6
KS403	40,0H7	63	14	30	55	55,0	-	32,0	3,5	3,0	M5	11
KS403	50,0H7	70	14	30	60	60,0	-	32,0	3,5	3,0	M4	9
KS403	50,0H7	95	14	30	55	90,0	15	32,0	3,5	3,0	M6	15
KS403	60,0H7	75	14	30	75	75,0	-	32,0	3,5	3,0	M5	11
KS502/KS703	50,0H7	70	24	42	98	100,0	21	56,0	4,0	3,0	M4	10
KS502/KS703	50,0H7	95	24	42	98	100,0	21	56,0	2,5	3,0	M6	13
KS502/KS703	60,0H7	75	24	42	98	100,0	21	56,0	3,5	3,0	M5	9
KS502/KS703	60,0H7	75	24	48	100	100,0	28	56,0	3,5	3,0	M5	11
KS502/KS703	80,0H7	100	24	42	100	98,0	-	56,0	4,0	3,0	M6	13
KS502/KS703	95,0H7	115	24	42	100	98,0	-	56,0	4,0	3,0	M8	16
KS502/KS703	95,0H7	115	24	51	98	100,0	30	65,0	4,0	12,0	M8	16
KS502/KS703	95,0H7	130	24	42	98	115,0	21	56,0	4,0	3,0	M8	16
KS502/KS703	95,0H7	130	24	51	98	115,0	30	65,0	4,0	12,0	M8	16
KS502/KS703	110,0H7	130	24	51	98	115,0	30	65,0	4,0	12,0	M8	16
KS502/KS703	110,0H7	145	24	59	98	130,0	38	73,0	7,0	20,0	M8	16
KS502/KS703	130,0H7	165	24	51	98	140,0	30	65,0	7,0	12,0	M10	20
KS702	80,0H7	100	32	50	115	120,0	24	64,0	4,0	3,5	M6	13
KS702	95,0H7	115	32	50	115	115,0	-	64,0	4,0	3,5	M8	16
KS702	95,0H7	130	32	50	115	115,0	-	64,0	4,0	3,5	M8	16
KS702	110,0H7	130	32	50	115	115,0	-	64,0	4,0	3,5	M8	16
KS702	110,0H7	145	32	58	115	140,0	32	72,0	6,5	11,5	M8	16
KS702	110,0H7	145	32	68	115	140,0	42	82,0	7,0	21,5	M8	16
KS702	110,0H7	165	32	50	115	140,0	24	64,0	5,0	3,5	M10	24
KS702	130,0H7	165	32	58	115	140,0	32	72,0	5,0	11,5	M10	20

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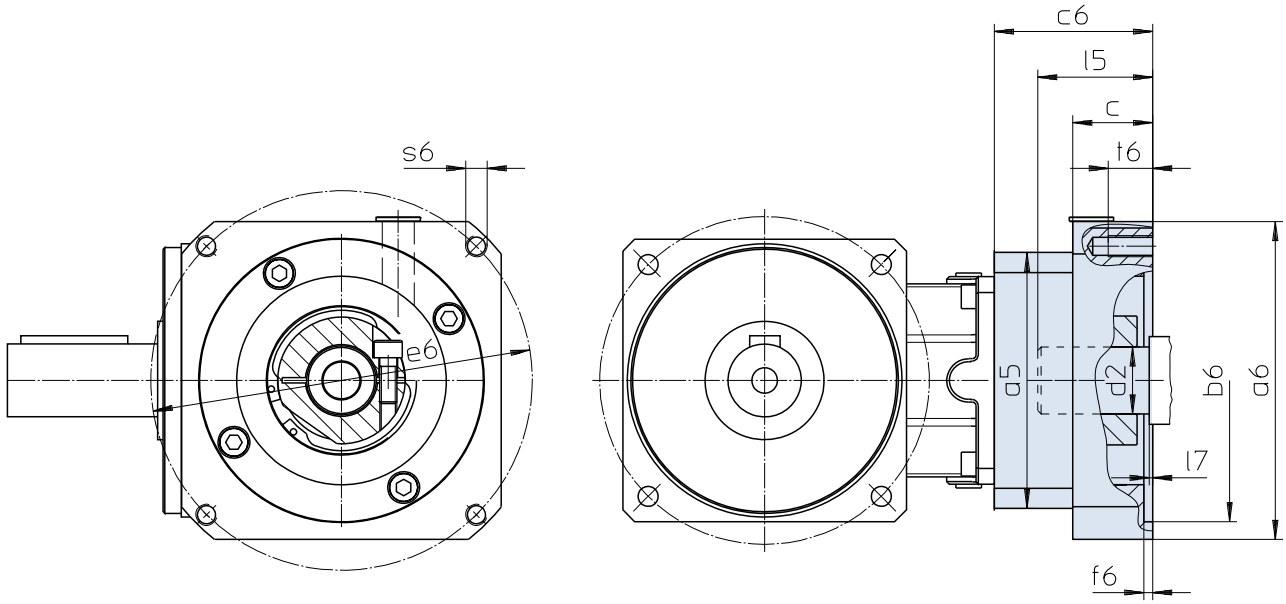
KS4_MEL - KS7_MEL



Further motor connection dimensions on request. ***Otras medidas de conexión a consultar.*** **Altre misure di accopiamento motore su richiesta.**

Typ	øb6	øe6	ød2max	l5max	□a5	□a6	c	c6	f6	l7max	s6	t6
KS402/KS503	50,0H7	70	24	42	100	100	21	57,8	4,0	3,0	M4	10
KS402/KS503	60,0H7	75	24	42	100	100	21	57,8	3,5	3,0	M5	9
KS402/KS503	80,0H7	100	24	42	100	100	21	57,8	4,0	3,0	M6	13
KS402/KS503	95,0H7	115	24	42	100	100	21	57,8	4,0	3,0	M8	21
KS402/KS503	95,0H7	115	24	51	100	100	30	66,8	4,0	12,0	M8	16
KS402/KS503	95,0H7	130	24	42	100	115	21	57,8	4,0	3,0	M8	16
KS402/KS503	95,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
KS402/KS503	110,0H7	130	24	51	100	115	30	66,8	4,0	12,0	M8	16
KS402/KS503	110,0H7	145	24	59	100	130	38	74,8	7,0	20,0	M8	16
KS402/KS503	130,0H7	165	24	51	100	140	30	66,8	7,0	12,0	M10	20
KS403	60,0H7	75	19	40	75	75	18	51,5	3,5	3,0	M5	11
KS403	60,0H7	90	19	40	75	75	18	51,5	3,5	3,0	M5	9
KS403	70,0H7	90	19	40	75	80	18	51,5	3,5	3,0	M5	9
KS403	80,0H7	100	19	40	75	90	18	51,5	3,5	3,0	M6	13
KS403	95,0H7	115	19	40	75	100	18	51,5	4,0	3,0	M8	18
KS403	95,0H7	130	19	40	75	115	18	51,5	4,0	3,0	M8	18
KS502/KS703	80,0H7	100	32	50	115	120	24	67,5	4,0	3,5	M6	13
KS502/KS703	110,0H7	130	32	50	115	120	24	67,5	4,0	3,5	M8	16
KS502/KS703	110,0H7	145	32	58	115	140	32	75,5	6,5	11,5	M8	16
KS502/KS703	110,0H7	145	32	68	115	140	42	85,5	7,0	21,5	M8	16
KS502/KS703	110,0H7	165	32	50	115	140	24	67,5	5,0	3,5	M10	24
KS502/KS703	130,0H7	165	32	58	115	140	32	75,5	5,0	11,5	M10	20
KS702	110,0H7	130	38	61	145	145	26	80,0	5,0	4,5	M8	14
KS702	110,0H7	165	38	61	145	145	26	80,0	5,0	4,5	M10	26
KS702	114,3H7	200	38	80	145	180	45	99,0	5,0	23,5	M12	25
KS702	130,0H7	165	38	61	145	145	26	80,0	5,0	4,5	M10	26
KS702	130,0H7	215	38	61	145	190	26	80,0	5,0	4,5	M12	26
KS702	180,0H7	215	38	80	145	190	45	99,0	5,0	23,5	M12	25

ServoFit® C Helical Gear Units
*Reductores coaxiales **ServoFit® C***
ServoFit® Riduttori coassiali **C**

STÖBER

Compact Helical Gear Units

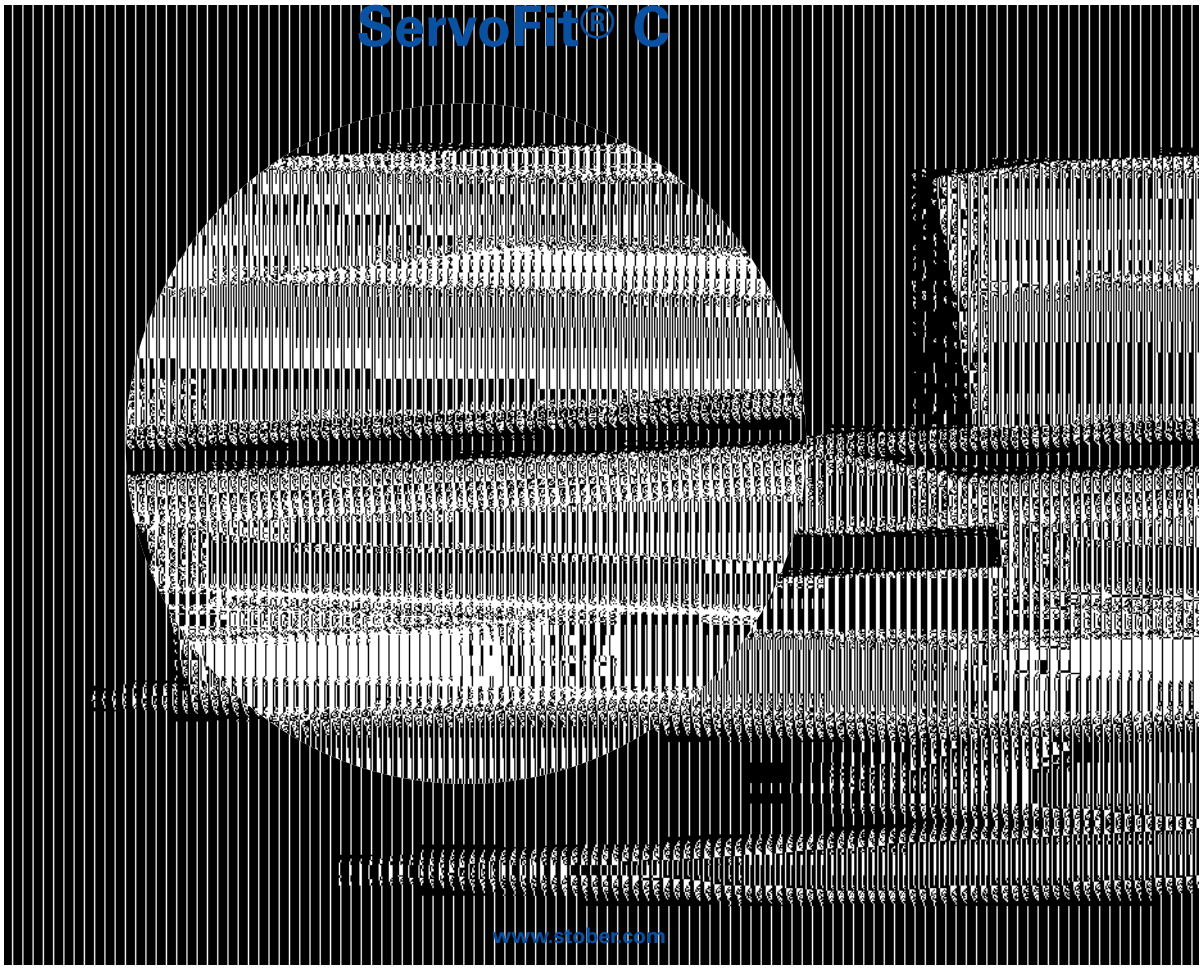
- Acceleration torque: 43 – 8000 Nm
- Backlash: 10 – 20 arcmin
- Coaxial design
- Styles: Pitch circle diameter, foot and flange mounting
- Output shaft with key; C0 to C5 shaft without key as an option, from C6 on request
- FKM seal at input
- EasyAdapt® motor adapter with clamp coupling:
  - easy to assemble due to spreading function
  - aluminium lightweight construction
  - low construction length
  - high torsional stiffness
  - optionally with clamping set for increased safety
  - optionally with double seal
- Symmetrically friction-optimized output bearings (reinforced bearing version on request)
- Advanced gear technology
- Quiet running
- Efficiency:
  2 stage ≥ 97 %
  3 stage ≥ 96 %

Reductores coaxiales compactos, de dentado helicoidal

- *Par de aceleración: 43 - 8000 Nm*
- *Juego de giro: 10 - 20 arcmin*
- *Ejecución coaxial*
- *Tipos constructivos: Círculo de agujeros roscados, ejecución de pedestal y de brida*
- *Eje de salida con chaveta; C0 hasta C5 opcional con eje sin chaveta, a partir de C6 sobre consulta*
- *Anillo retén de FKM en la entrada*
- *Adaptador de motor EasyAdapt® con acoplamiento de anillo de apriete*
  - *Fácil de montar gracias a la función de expansión*
  - *Construcción ligera de aluminio*
  - *Longitud constructiva corta*
  - *Gran resistencia a la torsión*
  - *Opcionalmente con kit de sujeción para una mayor seguridad*
  - *Opcionalmente con sellado doble*
- *Apoyo simétrico de salida optimizado a la fricción (ejecución reforzada sobre consulta)*
- *Tecnología superior de dentado*
- *Marcha extremadamente suave*
- *Rendimiento:*
  2 trenes ≥ 97 %
  3 trenes ≥ 96 %

Riduttori coassiali compatti con dentatura elicoidale

- Coppia di accelerazione: 43 - 8000 Nm
- Gioco: 10 - 20 arcmin
- Costruzione coassiale
- Tipologie costruttive: fissaggio con fori filettati, esecuzione con piedini ed esecuzione flangiata
- Albero d'uscita con chiavetta; C0 fino a C5 opzionale con albero senza chiavette, dalla taglia C6 su richiesta
- Anello di tenuta in FKM in ingresso
- Adattatore motore con giunto di bloccaggio EasyAdapt®:
  - Montaggio più facile grazie alla funzione di divaricazione
  - Struttura leggera in alluminio
  - Lunghezza contenuta
  - Elevata resistenza alla torsione
  - Kit di serraggio opzionale per una maggiore sicurezza
  - Doppio isolamento opzionale
- Supporto uscita simmetrico ad attrito ottimizzato (esecuzione rinforzata su richiesta)
- Tecnologia della dentatura avanzata
- Estremamente silenziosi
- Rendimento:
  2 stadi ≥ 97 %
  3 stadi ≥ 96 %

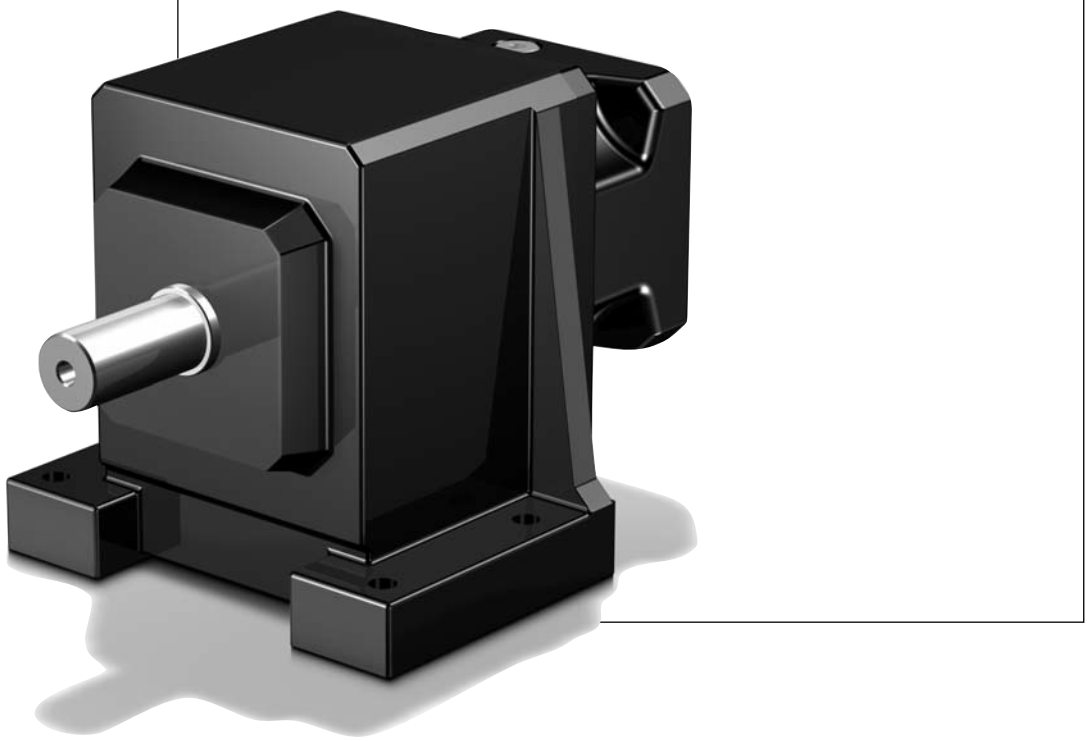


ServoFit® C
Helical Gear Units

Reductores coaxiales
ServoFit® C

ServoFit® Riduttori coassiali **C**

STÖBER



Contents C

Type designation - Available combinations	C2
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Helical Gear Units C	C39

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Denominación de tipo – Tipos constructivos	*C4*
Posiciones de instalación	*C5*
Tabla de selección	
Reductores coaxiales C	*C7*
Dibujos acotados	
Reductores coaxiales C	*C39*

Indice C

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Identificazione tipologica – tipologie costruttive	C4
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Disegni quotati	
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C

Type designation - Available combinations

Denominación de tipo – Formas de ejecución

Identificazione tipologica – forme esecutive

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C 1 0 2 N 0280 ME20

1 2 3 4 5 6 7

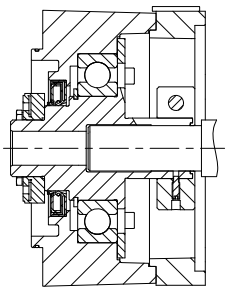
C 102 N 0280 ME20

1 Gear unit type
2 Gear unit size
3 Generation number
4 Stages
5 Styles according page C4
6 Transmission ratio i x 10
7 Mounting series
• **ME** Motor adapter with EasyAdapt® coupling
Acc. to customer specs (Dimension drawing of customer motor necessary! Also see pic. motor output and motor connection page PHK39, please observe the max. dimensions).
- optionally with clamping set
- optionally with double seal (MSS1 HS)
• **MB** Motor adapter square with brake (option) (see brochure ID 441904)

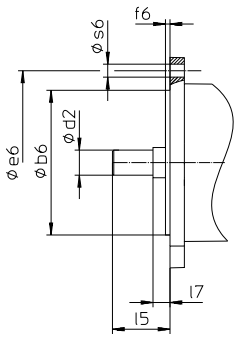
1 *Tipo de reductor*
2 *Tamaño de reductor*
3 *Cifra de generación*
4 *Número de trenes*
5 *Tipos constructivos según página C4*
6 *Número característico de la relación de reducción i x 10*
7 *Grupos de anexo*
• ***ME*** *Adaptador de motor con acoplamiento EasyAdapt®*
Según deseo del cliente (¡es necesario plano acotado del motor del cliente! Ver fig. salida de motor y conexión de motor página PHK39, por favor observar dimensiones máximas).
- Opcionalmente con kit de sujeción
- Opcionalmente con sellado doble (MSS1 HS)
• ***MB*** *Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

1 Modello di riduttore
2 Taglia del riduttore
3 Numero di generazione
4 Numero di stadi
5 Tipologie costruttive secondo la pag. C4
6 Rapporto di riduzione i x 10
7 Opzioni annessi
• **ME** Adattatore motore con giunto EasyAdapt®
Su richiesta del cliente (è necessario il disegno quotato del motore del cliente! Vedere fig. uscita motore e accopiamento motore pagina PHK39, si prega di rispettare le misure max.).
- kit di serraggio opzionale
- doppio isolamento (MSS1 HS) opzionale
• **MB** Adattatore motore quadro con freno (opzione) (vedere prospetto ID 441904)

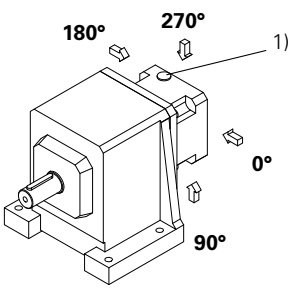
Type of shaft ***Formas de eje*** **Esecuzione albero**	**Styles**	***Tipos constructivos***	**Tipologie costruttive**	
	N	**G**	**Q**	**F**
Solid shaft *Eje macizo* Albero pieno	**V** N	G	Q	F



EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore



1) Access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamonto motore

Type designation | *Denominación de tipo* | Identificazione tipologica

Ordering data according to the type designation above. Further ordering details:
- Mounting position "EL" according to page C5
- Access clamping screw motor coupling according to page C2

*** WARNING!**
Attaching the gear units using the threaded hole circle: The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

Datos de pedido de acuerdo a la tipificación indicada arriba. Otros datos de pedido:
- *Pos. de instalación "EL" según la pág. C5*
- *Acceso al tornillo de apriete del acoplamiento de motor según la pág. C2*

**** ¡ATENCIÓN!***
Fijación de los reductores mediante el círculo de agujeros roscados: *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra. Altri dati dell'ordine:
- Posizione di montaggio "EL" conf. alla pag. C5
- Accesso al giunto di accoppiamonto motore conf. alla pag. C2

*** ATTENZIONE!**
Fissaggio dei riduttori mediante foratura filettata: Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

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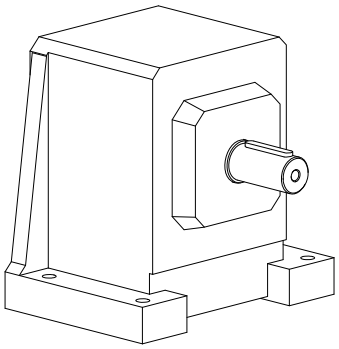
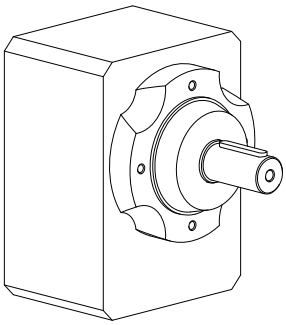
N

Foot mounting
Ejecución de pedestal
Esecuzione con piedini



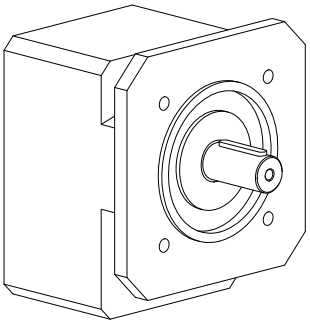
G *

Pitch circle diameter
Círculo de agujeros roscados
Fissaggio con fori filettati



Q

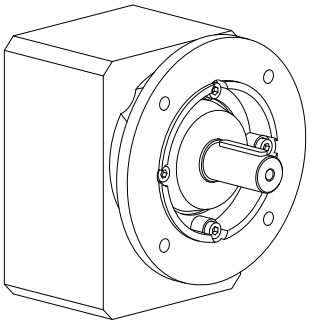
Square flange mounting
Ejecución de brida cuadrada
Esecuzione a flangia quadra



Note: Design with gear unit size C0-C4
Observación: Ejecución para tamaño de reductor C0-C4
Nota: Esecuzione per taglia riduttore C0-C4

F

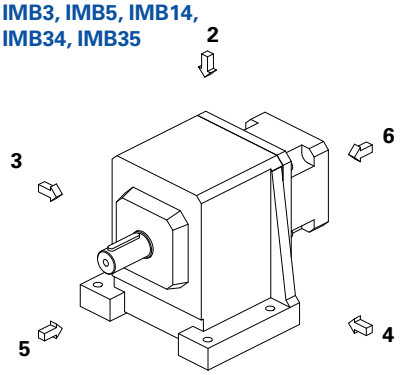
Flange mounting
Ejecución de brida
Esecuzione flangiata



Mounting positions | *Posiciones de instalación* | Posizioni di montaggio

EL1

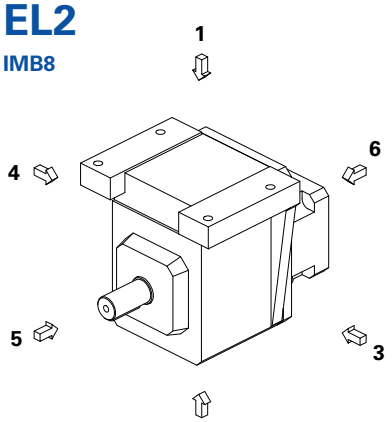
IMB3, IMB5, IMB14, IMB34, IMB35



1

EL2

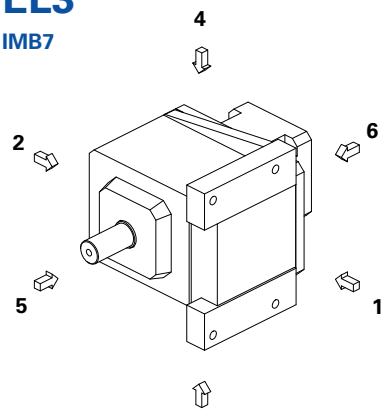
IMB8



2

EL3

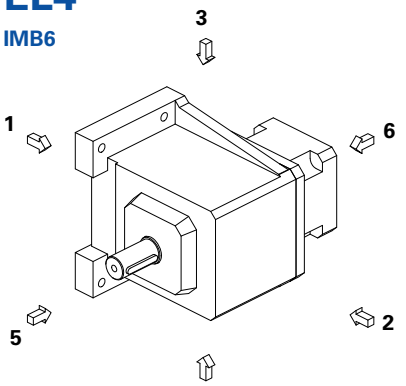
IMB7



3

EL4

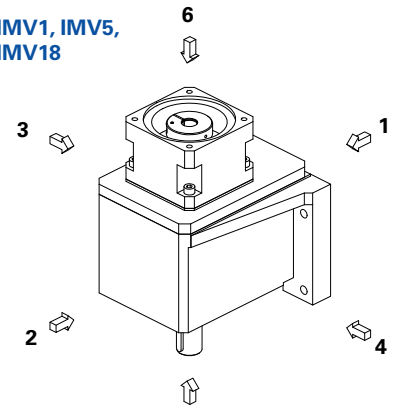
IMB6



4

EL5

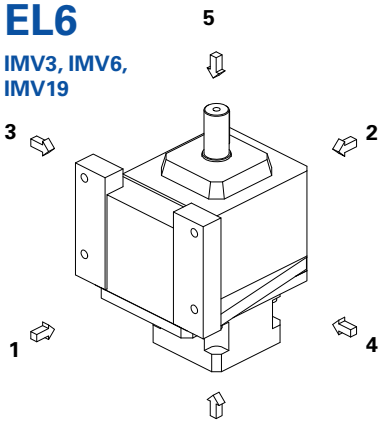
IMV1, IMV5, IMV18



5

EL6

IMV3, IMV6, IMV19



6

The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Ventilation valves are supplied as standard for gear sizes C6 - C9.

***Los reductores** están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

En los tamaños de reductores C6 - C9 están montadas válvulas de aireación de modo estándar.

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite in Internet (ID 441871).

Per le grandezze riduttore C6 - C9 le valvole di sfiato sono montate come standard.

C

Selection table
ServoFit® C Helical Gear Units

Tabla de selección
Reductores coaxiales
ServoFit® C

Tabella di selezione
ServoFit® Riduttori coassiali ***C***

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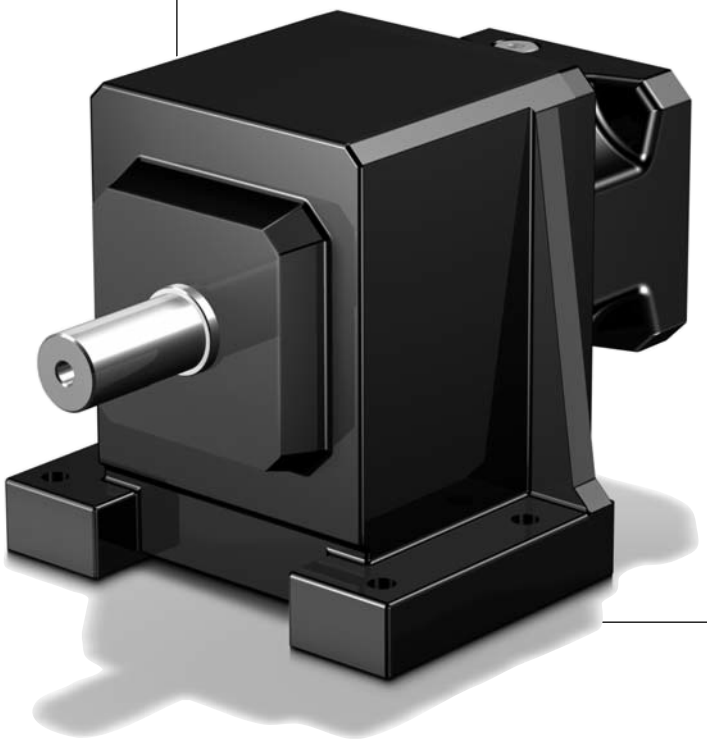

C

Selection table **ServoFit® C** Helical Gear Units

Tabla de selección Reductor coaxiales ***ServoFit® C***

Tabella di selezione **ServoFit®** Riduttori coassiali **C**

Symbols:

i - Gear unit ratio
i_{exakt} - Exact math. ratio
n_{1MAX} - Max. input speed
DBH - Continuous operation - input horizontal
DBV - Continuous operation - input vertical
ZB - Cycle operation
(at ambient temperature 20°C, also see page A11/A12)
Higher speeds on request!
MWø - Motor shaft diameter
J_1 - Mass moment of inertia [2]
(related to input)
G - Weight
(style N, quantity of lubricant for EL1)
$\Delta\varphi_2$ - Backlash
C_2 - Gear unit rigidity
(related to output at M_{2B})
M_{2N} - Rated torque [1] [2]
M_{2B} - max. perm. acceleration torque [2]
M_{2NOT} - Emergency-Off moment [2]
(10^3 load changes)

Denominaciones:

i - *relación de transmisión*
i_{exakt} - *relación de transmisión matemáticamente exacta*
n_{1MAX} - *velocidad máx.*
DBH - Operación permanente - entrada horizontal
DBV - Operación permanente - entrada vertical
ZB - Operación cíclica
(a 20°C de temperatura ambiente, ver también página A11/A12)
Velocidades mayores sobre pedida!
MWø - *Diámetro de eje del motor*
J_1 - *Momento de inercia de masas [2] (del accionamiento referido a la entrada)*
G - *Peso del reductor (tipo constructivo N, cantidad de aceite para EL1)*
$\Delta\varphi_2$ - *juego máx. de giro*
C_2 - *Rigidez del reductor al giro (referido a la salida par M_{2B})*
M_{2N} - *Par nominal [1] [2]*
M_{2B} - *Par máx. adm. de aceleración [2]*
M_{2NOT} - *Momento de PARADA DE EMERGENCIA [2] (10^3 cambios de carga)*

Simboli:

i - Rapporto di riduzione
i_{exakt} - Rapporto di riduzione mat. preciso
n_{1MAX} - Numero di giri in ingresso max.
DBH - Funzionamento ininterrotto - ingresso orizzontale
DBV - Funzionamento ininterrotto - ingresso verticale
ZB - Funzionamento ciclico
(a temperatura ambiente di 20°C vedere anche pag. A11/A12)
Numeri di giri più elevati su richiesta!
MWø - Diametro dell'albero motore
J_1 - Momento di inerzia dell'azionamento [2] (riferito all'ingresso)
G - Peso del riduttore
(tipo costruttivo N, quantità d'olio per EL1)
$\Delta\varphi_2$ - Gioco max.
C_2 - Rigidità torsionale riduttore (riferito all uscita per M_{2B})
M_{2N} - Coppia nominale [1] [2]
M_{2B} - Coppia di accelerazione max. consentita [2]
M_{2NOT} - Coppia di emergenza [2]
(10^3 variazioni di carico)

[1] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

[2] If you use a pinion securing element (option), the torque values can be partly increased. This also results in higher mass moments of inertia.
Values on request or using the EASY Online product catalog (configurator) on our website
http://products.stoeber.de/

[1] Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

[2] Con el kit de sujeción opcional, valores parcialmente superiores. Con esto aumentan los pares de inercia de masa.
Valores disponibles bajo petición o en el catálogo de productos EASY Online (configurador).
http://products.stoeber.de/

[1] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

[2] In caso di impiego di kit di serraggio opzionale possono essere rilevati valori in parte più elevati. *In questo modo risultano dei momenti d'inerzia di massa più elevati.*
Indicazione dei valori su richiesta oppure tramite catalogo prodotti EASY Online (configuratore).
http://products.stoeber.de/

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C002 (M2BMAX=72 Nm)													
1,997	1480/741	**C002_0020 ME10**	3500	3000	6000	**≤14**	1,1	7,4	20	1,1	35	36	45
1,997	1480/741	**C002_0020 ME10**	3500	3000	6000	**>14≤19**	1,4	7,4	20	1,2	35	46	58
1,997	1480/741	**C002_0020 ME20**	3500	3000	5000	**≤19**	2,5	8,4	20	1,2	35	46	58
1,997	1480/741	**C002_0020 ME20**	3500	3000	5000	**>19≤24**	3,3	8,4	20	1,2	35	46	58
2,769	36/13	**C002_0028 ME10**	3500	3000	6000	**≤14**	0,81	7,4	20	1,2	39	50	63
2,769	36/13	**C002_0028 ME10**	3500	3000	6000	**>14≤19**	1,1	7,4	20	1,2	39	58	81
2,769	36/13	**C002_0028 ME20**	3500	3000	5000	**≤19**	2,2	8,4	20	1,2	39	58	81
2,769	36/13	**C002_0028 ME20**	3500	3000	5000	**>19≤24**	3,0	8,4	20	1,2	39	58	81
3,067	46/15	**C002_0031 ME10**	3700	3600	6000	**≤14**	0,75	7,4	20	1,2	40	55	69
3,067	46/15	**C002_0031 ME10**	3700	3600	6000	**>14≤19**	1,00	7,4	20	1,2	40	60	89
3,067	46/15	**C002_0031 ME20**	3500	3500	5000	**≤19**	2,2	8,4	20	1,2	40	60	89
3,067	46/15	**C002_0031 ME20**	3500	3500	5000	**>19≤24**	2,9	8,4	20	1,2	40	60	89
3,318	1702/513	**C002_0033 ME10**	3700	3600	6000	**≤14**	0,74	7,4	20	1,2	41	60	75
3,318	1702/513	**C002_0033 ME10**	3700	3600	6000	**>14≤19**	0,99	7,4	20	1,2	41	62	97
3,318	1702/513	**C002_0033 ME20**	3500	3500	5000	**≤19**	2,2	8,4	20	1,2	41	62	97
3,318	1702/513	**C002_0033 ME20**	3500	3500	5000	**>19≤24**	2,9	8,4	20	1,2	41	62	97
3,835	441/115	**C002_0038 ME10**	3700	3600	6000	**≤14**	0,65	7,4	20	1,2	43	65	87
3,835	441/115	**C002_0038 ME10**	3700	3600	6000	**>14≤19**	0,90	7,4	20	1,2	43	65	110
3,835	441/115	**C002_0038 ME20**	3500	3500	5000	**≤19**	2,1	8,4	20	1,2	43	65	110
3,835	441/115	**C002_0038 ME20**	3500	3500	5000	**>19≤24**	2,8	8,4	20	1,2	43	65	110
4,149	1813/437	**C002_0041 ME10**	3700	3600	6000	**≤14**	0,64	7,4	20	1,2	44	65	94
4,149	1813/437	**C002_0041 ME10**	3700	3600	6000	**>14≤19**	0,89	7,4	20	1,2	44	65	110
4,149	1813/437	**C002_0041 ME20**	3500	3500	5000	**≤19**	2,1	8,4	20	1,2	44	65	110
4,149	1813/437	**C002_0041 ME20**	3500	3500	5000	**>19≤24**	2,8	8,4	20	1,2	44	65	110
4,680	117/25	**C002_0047 ME10**	4000	4000	6000	**≤14**	0,58	7,4	20	1,2	46	65	110
4,680	117/25	**C002_0047 ME10**	4000	4000	6000	**>14≤19**	0,83	7,4	20	1,2	46	65	110
4,680	117/25	**C002_0047 ME20**	3500	3500	5000	**≤19**	2,0	8,4	20	1,2	46	65	110
4,680	117/25	**C002_0047 ME20**	3500	3500	5000	**>19≤24**	2,7	8,4	20	1,2	46	65	110
5,063	481/95	**C002_0051 ME10**	4000	4000	6000	**≤14**	0,57	7,4	20	1,2	47	65	110
5,063	481/95	**C002_0051 ME10**	4000	4000	6000	**>14≤19**	0,82	7,4	20	1,2	47	65	110
5,063	481/95	**C002_0051 ME20**	3500	3500	5000	**≤19**	2,0	8,4	20	1,2	47	65	110
5,063	481/95	**C002_0051 ME20**	3500	3500	5000	**>19≤24**	2,7	8,4	20	1,2	47	65	110
5,824	99/17	**C002_0058 ME10**	4000	4000	6000	**≤14**	0,52	7,4	20	1,2	49	65	110
5,824	99/17	**C002_0058 ME10**	4000	4000	6000	**>14≤19**	0,77	7,4	20	1,2	49	65	110
5,824	99/17	**C002_0058 ME20**	3500	3500	5000	**≤19**	1,9	8,4	20	1,2	49	65	110
5,824	99/17	**C002_0058 ME20**	3500	3500	5000	**>19≤24**	2,7	8,4	20	1,2	49	65	110
6,300	2035/323	**C002_0063 ME10**	4000	4000	6000	**≤14**	0,52	7,4	20	1,2	51	65	110
6,300	2035/323	**C002_0063 ME10**	4000	4000	6000	**>14≤19**	0,77	7,4	20	1,2	51	65	110
6,300	2035/323	**C002_0063 ME20**	3500	3500	5000	**≤19**	1,9	8,4	20	1,2	51	65	110
6,300	2035/323	**C002_0063 ME20**	3500	3500	5000	**>19≤24**	2,7	8,4	20	1,2	51	65	110
7,714	54/7	**C002_0077 ME10**	4000	4000	6000	**≤14**	0,47	7,4	20	1,2	54	65	110
7,714	54/7	**C002_0077 ME10**	4000	4000	6000	**>14≤19**	0,72	7,4	20	1,2	54	65	110
7,714	54/7	**C002_0077 ME20**	3500	3500	5000	**≤19**	1,9	8,4	20	1,2	54	65	110
7,714	54/7	**C002_0077 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	20	1,2	54	65	110
8,235	667/81	**C002_0082 ME10**	3700	3600	6000	**≤14**	0,65	7,4	16	1,6	60	72	120
8,235	667/81	**C002_0082 ME10**	3700	3600	6000	**>14≤19**	0,91	7,4	16	1,6	60	72	120
8,235	667/81	**C002_0082 ME20**	3500	3500	5000	**≤19**	2,1	8,4	16	1,6	60	72	120
8,235	667/81	**C002_0082 ME20**	3500	3500	5000	**>19≤24**	2,8	8,4	16	1,6	60	72	120
9,228	1495/162	**C002_0092 ME10**	3700	3600	6000	**≤14**	0,65	7,4	16	1,6	60	65	120
9,228	1495/162	**C002_0092 ME10**	3700	3600	6000	**>14≤19**	0,90	7,4	16	1,6	60	65	120
9,228	1495/162	**C002_0092 ME20**	3500	3500	5000	**≤19**	2,1	8,4	16	1,6	60	65	120
9,228	1495/162	**C002_0092 ME20**	3500	3500	5000	**>19≤24**	2,8	8,4	16	1,6	60	65	120
10,30	1421/138	**C002_0105 ME10**	3700	3600	6000	**≤14**	0,59	7,4	16	1,6	60	72	120
10,30	1421/138	**C002_0105 ME10**	3700	3600	6000	**>14≤19**	0,84	7,4	16	1,6	60	72	120
10,30	1421/138	**C002_0105 ME20**	3500	3500	5000	**≤19**	2,0	8,4	16	1,6	60	72	120
10,30	1421/138	**C002_0105 ME20**	3500	3500	5000	**>19≤24**	2,7	8,4	16	1,6	60	72	120
11,54	3185/276	**C002_0115 ME10**	3700	3600	6000	**≤14**	0,58	7,4	16	1,6	60	65	120
11,54	3185/276	**C002_0115 ME10**	3700	3600	6000	**>14≤19**	0,83	7,4	16	1,6	60	65	120
11,54	3185/276	**C002_0115 ME20**	3500	3500	5000	**≤19**	2,0	8,4	16	1,6	60	65	120
11,54	3185/276	**C002_0115 ME20**	3500	3500	5000	**>19≤24**	2,7	8,4	16	1,6	60	65	120
12,57	377/30	**C002_0125 ME10**	4000	4000	6000	**≤14**	0,54	7,4	16	1,6	60	72	120
12,57	377/30	**C002_0125 ME10**	4000	4000	6000	**>14≤19**	0,79	7,4	16	1,6	60	72	120

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C002 (M2BMAX=72 Nm)													
12,57	377/30	**C002_0125 ME20**	3500	3500	5000	**≤19**	2,0	8,4	16	1,6	60	72	120
12,57	377/30	**C002_0125 ME20**	3500	3500	5000	**>19≤24**	2,7	8,4	16	1,6	60	72	120
14,08	169/12	**C002_0140 ME10**	4000	4000	6000	**≤14**	0,54	7,4	16	1,6	60	65	120
14,08	169/12	**C002_0140 ME10**	4000	4000	6000	**>14≤19**	0,79	7,4	16	1,6	60	65	120
14,08	169/12	**C002_0140 ME20**	3500	3500	5000	**≤19**	2,0	8,4	16	1,6	60	65	120
14,08	169/12	**C002_0140 ME20**	3500	3500	5000	**>19≤24**	2,7	8,4	16	1,6	60	65	120
15,64	1595/102	**C002_0155 ME10**	4000	4000	6000	**≤14**	0,50	7,4	16	1,6	60	72	120
15,64	1595/102	**C002_0155 ME10**	4000	4000	6000	**>14≤19**	0,75	7,4	16	1,6	60	72	120
15,64	1595/102	**C002_0155 ME20**	3500	3500	5000	**≤19**	1,9	8,4	16	1,6	60	72	120
15,64	1595/102	**C002_0155 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	16	1,6	60	72	120
17,53	3575/204	**C002_0175 ME10**	4000	4000	6000	**≤14**	0,50	7,4	16	1,6	60	65	120
17,53	3575/204	**C002_0175 ME10**	4000	4000	6000	**>14≤19**	0,75	7,4	16	1,6	60	65	120
17,53	3575/204	**C002_0175 ME20**	3500	3500	5000	**≤19**	1,9	8,4	16	1,6	60	65	120
17,53	3575/204	**C002_0175 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	16	1,6	60	65	120
20,71	145/7	**C002_0210 ME10**	4000	4000	6000	**≤14**	0,46	7,4	16	1,6	60	72	120
20,71	145/7	**C002_0210 ME10**	4000	4000	6000	**>14≤19**	0,71	7,4	16	1,6	60	72	120
20,71	145/7	**C002_0210 ME20**	3500	3500	5000	**≤19**	1,9	8,4	16	1,6	60	72	120
20,71	145/7	**C002_0210 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	16	1,6	60	72	120
23,21	325/14	**C002_0230 ME10**	4000	4000	6000	**≤14**	0,46	7,4	16	1,6	60	65	120
23,21	325/14	**C002_0230 ME10**	4000	4000	6000	**>14≤19**	0,71	7,4	16	1,6	60	65	120
23,21	325/14	**C002_0230 ME20**	3500	3500	5000	**≤19**	1,9	8,4	16	1,6	60	65	120
23,21	325/14	**C002_0230 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	16	1,6	60	65	120
24,97	899/36	**C002_0250 ME10**	4000	4000	6000	**≤14**	0,44	7,4	16	1,6	60	72	120
24,97	899/36	**C002_0250 ME10**	4000	4000	6000	**>14≤19**	0,69	7,4	16	1,6	60	72	120
24,97	899/36	**C002_0250 ME20**	3500	3500	5000	**≤19**	1,9	8,4	16	1,6	60	72	120
24,97	899/36	**C002_0250 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	16	1,6	60	72	120
27,99	2015/72	**C002_0280 ME10**	4000	4000	6000	**≤14**	0,44	7,4	16	1,6	60	65	120
27,99	2015/72	**C002_0280 ME10**	4000	4000	6000	**>14≤19**	0,69	7,4	16	1,6	60	65	120
27,99	2015/72	**C002_0280 ME20**	3500	3500	5000	**≤19**	1,9	8,4	16	1,6	60	65	120
27,99	2015/72	**C002_0280 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	16	1,6	60	65	120
31,26	2813/90	**C002_0310 ME10**	4000	4000	6000	**≤14**	0,42	7,4	16	1,6	60	72	120
31,26	2813/90	**C002_0310 ME10**	4000	4000	6000	**>14≤19**	0,67	7,4	16	1,6	60	72	120
31,26	2813/90	**C002_0310 ME20**	3500	3500	5000	**≤19**	1,8	8,4	16	1,6	60	72	120
31,26	2813/90	**C002_0310 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	16	1,6	60	72	120
35,03	1261/36	**C002_0350 ME10**	4000	4000	6000	**≤14**	0,42	7,4	16	1,6	60	65	120
35,03	1261/36	**C002_0350 ME10**	4000	4000	6000	**>14≤19**	0,67	7,4	16	1,6	60	65	120
35,03	1261/36	**C002_0350 ME20**	3500	3500	5000	**≤19**	1,8	8,4	16	1,6	60	65	120
35,03	1261/36	**C002_0350 ME20**	3500	3500	5000	**>19≤24**	2,6	8,4	16	1,6	60	65	120
41,77	3509/84	**C002_0420 ME10**	4000	4000	6000	**≤14**	0,38	7,4	16	1,6	60	72	120
41,77	3509/84	**C002_0420 ME10**	4000	4000	6000	**>14≤19**	0,63	7,4	16	1,6	60	72	120
46,82	7865/168	**C002_0470 ME10**	4000	4000	6000	**≤14**	0,38	7,4	16	1,6	60	65	120
46,82	7865/168	**C002_0470 ME10**	4000	4000	6000	**>14≤19**	0,63	7,4	16	1,6	60	65	120
49,94	899/18	**C002_0500 ME10**	4000	4000	6000	**≤14**	0,37	7,4	16	1,6	60	72	120
49,94	899/18	**C002_0500 ME10**	4000	4000	6000	**>14≤19**	0,62	7,4	16	1,6	60	72	120
55,97	2015/36	**C002_0560 ME10**	4000	4000	6000	**≤14**	0,37	7,4	16	1,6	60	65	120
55,97	2015/36	**C002_0560 ME10**	4000	4000	6000	**>14≤19**	0,62	7,4	16	1,6	60	65	120
62,35	1247/20	**C002_0620 ME10**	4000	4000	6000	**≤14**	0,36	7,4	16	1,6	60	72	120
62,35	1247/20	**C002_0620 ME10**	4000	4000	6000	**>14≤19**	0,62	7,4	16	1,6	60	72	120
69,88	559/8	**C002_0700 ME10**	4000	4000	6000	**≤14**	0,36	7,4	16	1,6	60	65	120
69,88	559/8	**C002_0700 ME10**	4000	4000	6000	**>14≤19**	0,61	7,4	16	1,6	60	65	120

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C102 (M2BMAX=140 Nm)													
2,018	1128/559	**C102_0020 ME10**	3100	2600	5000	**≤14**	2,3	12,3	18	2,5	36	36	46
2,018	1128/559	**C102_0020 ME10**	3100	2600	5000	**>14≤19**	2,5	12,3	18	2,8	47	47	59
2,018	1128/559	**C102_0020 ME20**	3100	2600	5000	**≤19**	3,7	13,3	18	2,7	68	68	84
2,018	1128/559	**C102_0020 ME20**	3100	2600	5000	**>19≤24**	4,5	13,3	18	3,0	70	100	150
2,018	1128/559	**C102_0020 ME20**	3100	2600	5000	**>24≤32**	5,9	13,3	18	3,0	70	100	150
2,018	1128/559	**C102_0020 ME30**	3100	2600	4000	**≤24**	9,4	15,2	18	3,0	70	100	150
2,018	1128/559	**C102_0020 ME30**	3100	2600	4000	**>24≤32**	9,5	15,2	18	3,1	70	100	150
2,018	1128/559	**C102_0020 ME30**	3100	2600	4000	**>32≤38**	11	15,2	18	3,1	70	100	150
2,177	468/215	**C102_0022 ME10**	3100	2600	5000	**≤14**	2,2	12,3	18	2,6	39	39	49
2,177	468/215	**C102_0022 ME10**	3100	2600	5000	**>14≤19**	2,5	12,3	18	2,8	51	51	63
2,177	468/215	**C102_0022 ME20**	3100	2600	5000	**≤19**	3,7	13,3	18	2,8	71	73	91
2,177	468/215	**C102_0022 ME20**	3100	2600	5000	**>19≤24**	4,4	13,3	18	3,0	71	110	160
2,177	468/215	**C102_0022 ME20**	3100	2600	5000	**>24≤32**	5,9	13,3	18	3,1	71	110	160
2,177	468/215	**C102_0022 ME30**	3100	2600	4000	**≤24**	9,3	15,2	18	3,0	71	110	160
2,177	468/215	**C102_0022 ME30**	3100	2600	4000	**>24≤32**	9,5	15,2	18	3,1	71	110	160
2,177	468/215	**C102_0022 ME30**	3100	2600	4000	**>32≤38**	11	15,2	18	3,1	71	110	160
2,394	2303/962	**C102_0024 ME20**	3100	2600	5000	**≤19**	3,3	13,3	18	2,8	74	80	100
2,394	2303/962	**C102_0024 ME20**	3100	2600	5000	**>19≤24**	4,1	13,3	18	3,0	74	110	170
2,394	2303/962	**C102_0024 ME20**	3100	2600	5000	**>24≤32**	5,5	13,3	18	3,1	74	110	170
2,394	2303/962	**C102_0024 ME30**	3100	2600	4000	**≤24**	9,0	15,2	18	3,0	74	110	170
2,394	2303/962	**C102_0024 ME30**	3100	2600	4000	**>24≤32**	9,1	15,2	18	3,1	74	110	170
2,394	2303/962	**C102_0024 ME30**	3100	2600	4000	**>32≤38**	11	15,2	18	3,1	74	110	170
2,582	1911/740	**C102_0026 ME20**	3100	2600	5000	**≤19**	3,3	13,3	18	2,9	75	86	110
2,582	1911/740	**C102_0026 ME20**	3100	2600	5000	**>19≤24**	4,0	13,3	18	3,0	75	110	190
2,582	1911/740	**C102_0026 ME20**	3100	2600	5000	**>24≤32**	5,5	13,3	18	3,1	75	110	190
2,582	1911/740	**C102_0026 ME30**	3100	2600	4000	**≤24**	8,9	15,2	18	3,0	75	110	190
2,582	1911/740	**C102_0026 ME30**	3100	2600	4000	**>24≤32**	9,1	15,2	18	3,1	75	110	190
2,582	1911/740	**C102_0026 ME30**	3100	2600	4000	**>32≤38**	11	15,2	18	3,1	75	110	190
3,091	2491/806	**C102_0031 ME10**	3600	3100	6000	**≤14**	1,4	12,3	18	2,8	56	56	70
3,091	2491/806	**C102_0031 ME10**	3600	3100	6000	**>14≤19**	1,6	12,3	18	3,0	63	72	90
3,091	2491/806	**C102_0031 ME20**	3500	3100	5000	**≤19**	2,8	13,3	18	3,0	80	100	130
3,091	2491/806	**C102_0031 ME20**	3500	3100	5000	**>19≤24**	3,6	13,3	18	3,1	80	120	220
3,091	2491/806	**C102_0031 ME20**	3500	3100	5000	**>24≤32**	5,0	13,3	18	3,1	80	120	220
3,091	2491/806	**C102_0031 ME30**	3500	3100	4000	**≤24**	8,5	15,2	18	3,1	80	120	220
3,091	2491/806	**C102_0031 ME30**	3500	3100	4000	**>24≤32**	8,6	15,2	18	3,1	80	120	220
3,091	2491/806	**C102_0031 ME30**	3500	3100	4000	**>32≤38**	10	15,2	18	3,1	80	120	220
3,334	2067/620	**C102_0033 ME10**	3600	3100	6000	**≤14**	1,4	12,3	18	2,9	60	60	75
3,334	2067/620	**C102_0033 ME10**	3600	3100	6000	**>14≤19**	1,6	12,3	18	3,0	68	78	97
3,334	2067/620	**C102_0033 ME20**	3500	3100	5000	**≤19**	2,8	13,3	18	3,0	82	110	140
3,334	2067/620	**C102_0033 ME20**	3500	3100	5000	**>19≤24**	3,6	13,3	18	3,1	82	120	220
3,334	2067/620	**C102_0033 ME20**	3500	3100	5000	**>24≤32**	5,0	13,3	18	3,1	82	120	220
3,334	2067/620	**C102_0033 ME30**	3500	3100	4000	**≤24**	8,5	15,2	18	3,1	82	120	220
3,334	2067/620	**C102_0033 ME30**	3500	3100	4000	**>24≤32**	8,6	15,2	18	3,1	82	120	220
3,334	2067/620	**C102_0033 ME30**	3500	3100	4000	**>32≤38**	10	15,2	18	3,1	82	120	220
3,883	1363/351	**C102_0039 ME10**	3600	3100	6000	**≤14**	1,1	12,3	18	2,9	69	70	88
3,883	1363/351	**C102_0039 ME10**	3600	3100	6000	**>14≤19**	1,3	12,3	18	3,0	69	90	110
3,883	1363/351	**C102_0039 ME20**	3500	3100	5000	**≤19**	2,6	13,3	18	3,0	86	130	160
3,883	1363/351	**C102_0039 ME20**	3500	3100	5000	**>19≤24**	3,3	13,3	18	3,1	86	130	220
3,883	1363/351	**C102_0039 ME20**	3500	3100	5000	**>24≤32**	4,8	13,3	18	3,1	86	130	220
3,883	1363/351	**C102_0039 ME30**	3500	3100	4000	**≤24**	8,2	15,2	18	3,1	86	130	220
3,883	1363/351	**C102_0039 ME30**	3500	3100	4000	**>24≤32**	8,3	15,2	18	3,1	86	130	220
3,883	1363/351	**C102_0039 ME30**	3500	3100	4000	**>32≤38**	10	15,2	18	3,1	86	130	220
4,189	377/90	**C102_0042 ME10**	3600	3100	6000	**≤14**	1,1	12,3	18	3,0	74	76	95
4,189	377/90	**C102_0042 ME10**	3600	3100	6000	**>14≤19**	1,3	12,3	18	3,0	74	98	120
4,189	377/90	**C102_0042 ME20**	3500	3100	5000	**≤19**	2,5	13,3	18	3,0	89	130	180
4,189	377/90	**C102_0042 ME20**	3500	3100	5000	**>19≤24**	3,3	13,3	18	3,1	89	130	220
4,189	377/90	**C102_0042 ME20**	3500	3100	5000	**>24≤32**	4,7	13,3	18	3,1	89	130	220
4,189	377/90	**C102_0042 ME30**	3500	3100	4000	**≤24**	8,2	15,2	18	3,1	89	130	220
4,189	377/90	**C102_0042 ME30**	3500	3100	4000	**>24≤32**	8,3	15,2	18	3,1	89	130	220
4,189	377/90	**C102_0042 ME30**	3500	3100	4000	**>32≤38**	10	15,2	18	3,1	89	130	220
4,658	3149/676	**C102_0047 ME10**	3800	3500	6000	**≤14**	0,92	12,3	18	3,0	72	84	110
4,658	3149/676	**C102_0047 ME10**	3800	3500	6000	**>14≤19**	1,2	12,3	18	3,1	72	110	140

C

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C102 (M2BMAX=140 Nm)													
4,658	3149/676	**C102_0047 ME20**	3500	3500	5000	**≤19**	2,4	13,3	18	3,1	92	130	190
4,658	3149/676	**C102_0047 ME20**	3500	3500	5000	**>19≤24**	3,1	13,3	18	3,1	92	130	220
4,658	3149/676	**C102_0047 ME20**	3500	3500	5000	**>24≤32**	4,6	13,3	18	3,1	92	130	220
4,658	3149/676	**C102_0047 ME30**	3500	3500	4000	**≤24**	8,0	15,2	18	3,1	92	130	220
4,658	3149/676	**C102_0047 ME30**	3500	3500	4000	**>24≤32**	8,2	15,2	18	3,1	92	130	220
4,658	3149/676	**C102_0047 ME30**	3500	3500	4000	**>32≤38**	9,9	15,2	18	3,1	92	130	220
5,025	201/40	**C102_0050 ME10**	3800	3500	6000	**≤14**	0,91	12,3	18	3,0	77	91	110
5,025	201/40	**C102_0050 ME10**	3800	3500	6000	**>14≤19**	1,2	12,3	18	3,1	77	120	150
5,025	201/40	**C102_0050 ME20**	3500	3500	5000	**≤19**	2,4	13,3	18	3,1	94	130	210
5,025	201/40	**C102_0050 ME20**	3500	3500	5000	**>19≤24**	3,1	13,3	18	3,1	94	130	220
5,025	201/40	**C102_0050 ME20**	3500	3500	5000	**>24≤32**	4,6	13,3	18	3,1	94	130	220
5,025	201/40	**C102_0050 ME30**	3500	3500	4000	**≤24**	8,0	15,2	18	3,1	94	130	220
5,025	201/40	**C102_0050 ME30**	3500	3500	4000	**>24≤32**	8,2	15,2	18	3,1	94	130	220
5,025	201/40	**C102_0050 ME30**	3500	3500	4000	**>32≤38**	9,9	15,2	18	3,1	94	130	220
5,875	47/8	**C102_0059 ME10**	3800	3500	6000	**≤14**	0,77	12,3	18	3,0	78	110	130
5,875	47/8	**C102_0059 ME10**	3800	3500	6000	**>14≤19**	1,0	12,3	18	3,1	78	130	170
5,875	47/8	**C102_0059 ME20**	3500	3500	5000	**≤19**	2,2	13,3	18	3,1	99	130	220
5,875	47/8	**C102_0059 ME20**	3500	3500	5000	**>19≤24**	3,0	13,3	18	3,1	99	130	220
5,875	47/8	**C102_0059 ME20**	3500	3500	5000	**>24≤32**	4,4	13,3	18	3,1	99	130	220
5,875	47/8	**C102_0059 ME30**	3500	3500	4000	**≤24**	7,9	15,2	18	3,1	99	130	220
5,875	47/8	**C102_0059 ME30**	3500	3500	4000	**>24≤32**	8,0	15,2	18	3,1	99	130	220
5,875	47/8	**C102_0059 ME30**	3500	3500	4000	**>32≤38**	9,7	15,2	18	3,1	99	130	220
6,338	507/80	**C102_0063 ME10**	3800	3500	6000	**≤14**	0,76	12,3	18	3,1	84	110	140
6,338	507/80	**C102_0063 ME10**	3800	3500	6000	**>14≤19**	1,0	12,3	18	3,1	84	130	180
6,338	507/80	**C102_0063 ME20**	3500	3500	5000	**≤19**	2,2	13,3	18	3,1	100	130	220
6,338	507/80	**C102_0063 ME20**	3500	3500	5000	**>19≤24**	2,9	13,3	18	3,1	100	130	220
6,338	507/80	**C102_0063 ME20**	3500	3500	5000	**>24≤32**	4,4	13,3	18	3,1	100	130	220
6,338	507/80	**C102_0063 ME30**	3500	3500	4000	**≤24**	7,9	15,2	18	3,1	100	130	220
6,338	507/80	**C102_0063 ME30**	3500	3500	4000	**>24≤32**	8,0	15,2	18	3,1	100	130	220
6,338	507/80	**C102_0063 ME30**	3500	3500	4000	**>32≤38**	9,7	15,2	18	3,1	100	130	220
7,796	3243/416	**C102_0078 ME10**	4000	3900	6000	**≤14**	0,63	12,3	18	3,1	83	130	180
7,796	3243/416	**C102_0078 ME10**	4000	3900	6000	**>14≤19**	0,88	12,3	18	3,1	83	130	210
7,796	3243/416	**C102_0078 ME20**	3500	3500	5000	**≤19**	2,1	13,3	18	3,1	110	130	220
7,796	3243/416	**C102_0078 ME20**	3500	3500	5000	**>19≤24**	2,8	13,3	18	3,1	110	130	220
7,796	3243/416	**C102_0078 ME20**	3500	3500	5000	**>24≤32**	4,3	13,3	18	3,1	110	130	220
7,796	3243/416	**C102_0078 ME30**	3500	3500	4000	**≤24**	7,7	15,2	18	3,1	110	130	220
7,796	3243/416	**C102_0078 ME30**	3500	3500	4000	**>24≤32**	7,9	15,2	18	3,1	110	130	220
7,796	3243/416	**C102_0078 ME30**	3500	3500	4000	**>32≤38**	9,6	15,2	18	3,1	110	130	220
8,263	1537/186	**C102_0083 ME10**	3600	3100	6000	**≤14**	1,1	12,3	15	3,9	120	140	190
8,263	1537/186	**C102_0083 ME10**	3600	3100	6000	**>14≤19**	1,4	12,3	15	3,9	120	140	240
8,263	1537/186	**C102_0083 ME20**	3500	3100	5000	**≤19**	2,6	13,3	15	3,9	120	140	240
8,263	1537/186	**C102_0083 ME20**	3500	3100	5000	**>19≤24**	3,3	13,3	15	3,9	120	140	240
8,263	1537/186	**C102_0083 ME20**	3500	3100	5000	**>24≤32**	4,8	13,3	15	3,9	120	140	240
8,263	1537/186	**C102_0083 ME30**	3500	3100	4000	**≤24**	8,2	15,2	15	3,9	120	140	240
8,263	1537/186	**C102_0083 ME30**	3500	3100	4000	**>24≤32**	8,3	15,2	15	3,9	120	140	240
8,263	1537/186	**C102_0083 ME30**	3500	3100	4000	**>32≤38**	10	15,2	15	3,9	120	140	240
9,326	3180/341	**C102_0093 ME10**	3600	3100	6000	**≤14**	1,1	12,3	15	3,9	120	140	210
9,326	3180/341	**C102_0093 ME10**	3600	3100	6000	**>14≤19**	1,3	12,3	15	3,9	120	140	240
9,326	3180/341	**C102_0093 ME20**	3500	3100	5000	**≤19**	2,5	13,3	15	3,9	120	140	240
9,326	3180/341	**C102_0093 ME20**	3500	3100	5000	**>19≤24**	3,3	13,3	15	3,9	120	140	240
9,326	3180/341	**C102_0093 ME20**	3500	3100	5000	**>24≤32**	4,7	13,3	15	3,9	120	140	240
9,326	3180/341	**C102_0093 ME30**	3500	3100	4000	**≤24**	8,2	15,2	15	3,9	120	140	240
9,326	3180/341	**C102_0093 ME30**	3500	3100	4000	**>24≤32**	8,3	15,2	15	3,9	120	140	240
9,326	3180/341	**C102_0093 ME30**	3500	3100	4000	**>32≤38**	10	15,2	15	3,9	120	140	240
10,38	841/81	**C102_0105 ME10**	3600	3100	6000	**≤14**	0,92	12,3	15	3,9	120	140	230
10,38	841/81	**C102_0105 ME10**	3600	3100	6000	**>14≤19**	1,2	12,3	15	3,9	120	140	240
10,38	841/81	**C102_0105 ME20**	3500	3100	5000	**≤19**	2,4	13,3	15	3,9	120	140	240
10,38	841/81	**C102_0105 ME20**	3500	3100	5000	**>19≤24**	3,1	13,3	15	3,9	120	140	240
10,38	841/81	**C102_0105 ME20**	3500	3100	5000	**>24≤32**	4,6	13,3	15	3,9	120	140	240
10,38	841/81	**C102_0105 ME30**	3500	3100	4000	**≤24**	8,0	15,2	15	3,9	120	140	240
10,38	841/81	**C102_0105 ME30**	3500	3100	4000	**>24≤32**	8,2	15,2	15	3,9	120	140	240
10,38	841/81	**C102_0105 ME30**	3500	3100	4000	**>32≤38**	9,9	15,2	15	3,9	120	140	240

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C102 (M2BMAX=140 Nm)													
11,72	1160/99	**C102_0115 ME10**	3600	3100	6000	**≤14**	0,91	12,3	15	3,9	120	140	240
11,72	1160/99	**C102_0115 ME10**	3600	3100	6000	**>14≤19**	1,2	12,3	15	3,9	120	140	240
11,72	1160/99	**C102_0115 ME20**	3500	3100	5000	**≤19**	2,4	13,3	15	3,9	120	140	240
11,72	1160/99	**C102_0115 ME20**	3500	3100	5000	**>19≤24**	3,1	13,3	15	3,9	120	140	240
11,72	1160/99	**C102_0115 ME20**	3500	3100	5000	**>24≤32**	4,6	13,3	15	3,9	120	140	240
11,72	1160/99	**C102_0115 ME30**	3500	3100	4000	**≤24**	8,0	15,2	15	3,9	120	140	240
11,72	1160/99	**C102_0115 ME30**	3500	3100	4000	**>24≤32**	8,1	15,2	15	3,9	120	140	240
11,72	1160/99	**C102_0115 ME30**	3500	3100	4000	**>32≤38**	9,9	15,2	15	3,9	120	140	240
12,46	1943/156	**C102_0125 ME10**	3800	3500	6000	**≤14**	0,80	12,3	15	3,9	120	140	240
12,46	1943/156	**C102_0125 ME10**	3800	3500	6000	**>14≤19**	1,0	12,3	15	3,9	120	140	240
12,46	1943/156	**C102_0125 ME20**	3500	3500	5000	**≤19**	2,3	13,3	15	3,9	120	140	240
12,46	1943/156	**C102_0125 ME20**	3500	3500	5000	**>19≤24**	3,0	13,3	15	3,9	120	140	240
12,46	1943/156	**C102_0125 ME20**	3500	3500	5000	**>24≤32**	4,5	13,3	15	3,9	120	140	240
12,46	1943/156	**C102_0125 ME30**	3500	3500	4000	**≤24**	7,9	15,2	15	3,9	120	140	240
12,46	1943/156	**C102_0125 ME30**	3500	3500	4000	**>24≤32**	8,0	15,2	15	3,9	120	140	240
12,46	1943/156	**C102_0125 ME30**	3500	3500	4000	**>32≤38**	9,8	15,2	15	3,9	120	140	240
14,06	2010/143	**C102_0140 ME10**	3800	3500	6000	**≤14**	0,79	12,3	15	3,9	120	140	240
14,06	2010/143	**C102_0140 ME10**	3800	3500	6000	**>14≤19**	1,0	12,3	15	3,9	120	140	240
14,06	2010/143	**C102_0140 ME20**	3500	3500	5000	**≤19**	2,2	13,3	15	3,9	120	140	240
14,06	2010/143	**C102_0140 ME20**	3500	3500	5000	**>19≤24**	3,0	13,3	15	3,9	120	140	240
14,06	2010/143	**C102_0140 ME20**	3500	3500	5000	**>24≤32**	4,4	13,3	15	3,9	120	140	240
14,06	2010/143	**C102_0140 ME30**	3500	3500	4000	**≤24**	7,9	15,2	15	3,9	120	140	240
14,06	2010/143	**C102_0140 ME30**	3500	3500	4000	**>24≤32**	8,0	15,2	15	3,9	120	140	240
14,06	2010/143	**C102_0140 ME30**	3500	3500	4000	**>32≤38**	9,8	15,2	15	3,9	120	140	240
15,71	377/24	**C102_0155 ME10**	3800	3500	6000	**≤14**	0,69	12,3	15	3,9	120	140	240
15,71	377/24	**C102_0155 ME10**	3800	3500	6000	**>14≤19**	0,94	12,3	15	3,9	120	140	240
15,71	377/24	**C102_0155 ME20**	3500	3500	5000	**≤19**	2,1	13,3	15	3,9	120	140	240
15,71	377/24	**C102_0155 ME20**	3500	3500	5000	**>19≤24**	2,9	13,3	15	3,9	120	140	240
15,71	377/24	**C102_0155 ME20**	3500	3500	5000	**>24≤32**	4,3	13,3	15	3,9	120	140	240
15,71	377/24	**C102_0155 ME30**	3500	3500	4000	**≤24**	7,8	15,2	15	3,9	120	140	240
15,71	377/24	**C102_0155 ME30**	3500	3500	4000	**>24≤32**	7,9	15,2	15	3,9	120	140	240
15,71	377/24	**C102_0155 ME30**	3500	3500	4000	**>32≤38**	9,7	15,2	15	3,9	120	140	240
17,73	195/11	**C102_0175 ME10**	3800	3500	6000	**≤14**	0,68	12,3	15	3,9	120	140	240
17,73	195/11	**C102_0175 ME10**	3800	3500	6000	**>14≤19**	0,93	12,3	15	3,9	120	140	240
17,73	195/11	**C102_0175 ME20**	3500	3500	5000	**≤19**	2,1	13,3	15	3,9	120	140	240
17,73	195/11	**C102_0175 ME20**	3500	3500	5000	**>19≤24**	2,9	13,3	15	3,9	120	140	240
17,73	195/11	**C102_0175 ME20**	3500	3500	5000	**>24≤32**	4,3	13,3	15	3,9	120	140	240
17,73	195/11	**C102_0175 ME30**	3500	3500	4000	**≤24**	7,8	15,2	15	3,9	120	140	240
17,73	195/11	**C102_0175 ME30**	3500	3500	4000	**>24≤32**	7,9	15,2	15	3,9	120	140	240
17,73	195/11	**C102_0175 ME30**	3500	3500	4000	**>32≤38**	9,7	15,2	15	3,9	120	140	240
20,84	667/32	**C102_0210 ME10**	4000	3900	6000	**≤14**	0,59	12,3	15	3,9	120	140	240
20,84	667/32	**C102_0210 ME10**	4000	3900	6000	**>14≤19**	0,84	12,3	15	3,9	120	140	240
20,84	667/32	**C102_0210 ME20**	3500	3500	5000	**≤19**	2,0	13,3	15	3,9	120	140	240
20,84	667/32	**C102_0210 ME20**	3500	3500	5000	**>19≤24**	2,8	13,3	15	3,9	120	140	240
20,84	667/32	**C102_0210 ME20**	3500	3500	5000	**>24≤32**	4,2	13,3	15	3,9	120	140	240
20,84	667/32	**C102_0210 ME30**	3500	3500	4000	**≤24**	7,7	15,2	15	3,9	120	140	240
20,84	667/32	**C102_0210 ME30**	3500	3500	4000	**>24≤32**	7,8	15,2	15	3,9	120	140	240
20,84	667/32	**C102_0210 ME30**	3500	3500	4000	**>32≤38**	9,6	15,2	15	3,9	120	140	240
23,52	1035/44	**C102_0240 ME10**	4000	3900	6000	**≤14**	0,58	12,3	15	3,9	120	140	240
23,52	1035/44	**C102_0240 ME10**	4000	3900	6000	**>14≤19**	0,83	12,3	15	3,9	120	140	240
23,52	1035/44	**C102_0240 ME20**	3500	3500	5000	**≤19**	2,0	13,3	15	3,9	120	140	240
23,52	1035/44	**C102_0240 ME20**	3500	3500	5000	**>19≤24**	2,8	13,3	15	3,9	120	140	240
23,52	1035/44	**C102_0240 ME20**	3500	3500	5000	**>24≤32**	4,2	13,3	15	3,9	120	140	240
23,52	1035/44	**C102_0240 ME30**	3500	3500	4000	**≤24**	7,7	15,2	15	3,9	120	140	240
23,52	1035/44	**C102_0240 ME30**	3500	3500	4000	**>24≤32**	7,8	15,2	15	3,9	120	140	240
23,52	1035/44	**C102_0240 ME30**	3500	3500	4000	**>32≤38**	9,6	15,2	15	3,9	120	140	240
25,13	377/15	**C102_0250 ME10**	4000	3900	6000	**≤14**	0,53	12,3	15	3,9	120	140	240
25,13	377/15	**C102_0250 ME10**	4000	3900	6000	**>14≤19**	0,78	12,3	15	3,9	120	140	240
25,13	377/15	**C102_0250 ME20**	3500	3500	5000	**≤19**	1,9	13,3	15	3,9	120	140	240
25,13	377/15	**C102_0250 ME20**	3500	3500	5000	**>19≤24**	2,7	13,3	15	3,9	120	140	240
28,36	312/11	**C102_0280 ME10**	4000	3900	6000	**≤14**	0,53	12,3	15	3,9	120	140	240
28,36	312/11	**C102_0280 ME10**	4000	3900	6000	**>14≤19**	0,78	12,3	15	3,9	120	140	240

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C102 (M2BMAX=140 Nm)													
28,36	312/11	**C102_0280 ME20**	3500	3500	5000	**≤19**	1,9	13,3	15	3,9	120	140	240
28,36	312/11	**C102_0280 ME20**	3500	3500	5000	**>19≤24**	2,7	13,3	15	3,9	120	140	240
31,07	435/14	**C102_0310 ME10**	4000	3900	6000	**≤14**	0,49	12,3	15	3,9	120	140	240
31,07	435/14	**C102_0310 ME10**	4000	3900	6000	**>14≤19**	0,74	12,3	15	3,9	120	140	240
31,07	435/14	**C102_0310 ME20**	3500	3500	5000	**≤19**	1,9	13,3	15	3,9	120	140	240
31,07	435/14	**C102_0310 ME20**	3500	3500	5000	**>19≤24**	2,6	13,3	15	3,9	120	140	240
35,07	2700/77	**C102_0350 ME10**	4000	3900	6000	**≤14**	0,49	12,3	15	3,9	120	140	240
35,07	2700/77	**C102_0350 ME10**	4000	3900	6000	**>14≤19**	0,74	12,3	15	3,9	120	140	240
35,07	2700/77	**C102_0350 ME20**	3500	3500	5000	**≤19**	1,9	13,3	15	3,9	120	140	240
35,07	2700/77	**C102_0350 ME20**	3500	3500	5000	**>19≤24**	2,6	13,3	15	3,9	120	140	240
41,57	1247/30	**C102_0420 ME10**	4000	3900	6000	**≤14**	0,45	12,3	15	3,9	120	140	240
41,57	1247/30	**C102_0420 ME10**	4000	3900	6000	**>14≤19**	0,70	12,3	15	3,9	120	140	240
41,57	1247/30	**C102_0420 ME20**	3500	3500	5000	**≤19**	1,9	13,3	15	3,9	120	140	240
41,57	1247/30	**C102_0420 ME20**	3500	3500	5000	**>19≤24**	2,6	13,3	15	3,9	120	140	240
46,91	516/11	**C102_0470 ME10**	4000	3900	6000	**≤14**	0,45	12,3	15	3,9	120	140	240
46,91	516/11	**C102_0470 ME10**	4000	3900	6000	**>14≤19**	0,70	12,3	15	3,9	120	140	240
46,91	516/11	**C102_0470 ME20**	3500	3500	5000	**≤19**	1,9	13,3	15	3,9	120	140	240
46,91	516/11	**C102_0470 ME20**	3500	3500	5000	**>19≤24**	2,6	13,3	15	3,9	120	140	240
49,94	899/18	**C102_0500 ME10**	4000	3900	6000	**≤14**	0,40	12,3	15	3,9	120	140	240
49,94	899/18	**C102_0500 ME10**	4000	3900	6000	**>14≤19**	0,65	12,3	15	3,9	120	140	240
56,36	620/11	**C102_0560 ME10**	4000	3900	6000	**≤14**	0,40	12,3	15	3,9	120	140	240
56,36	620/11	**C102_0560 ME10**	4000	3900	6000	**>14≤19**	0,65	12,3	15	3,9	120	140	240
62,43	4495/72	**C102_0620 ME10**	4000	3900	6000	**≤14**	0,38	12,3	15	3,9	120	140	240
62,43	4495/72	**C102_0620 ME10**	4000	3900	6000	**>14≤19**	0,64	12,3	15	3,9	120	140	240
70,46	775/11	**C102_0700 ME10**	4000	3900	6000	**≤14**	0,38	12,3	15	3,9	120	140	240
70,46	775/11	**C102_0700 ME10**	4000	3900	6000	**>14≤19**	0,63	12,3	15	3,9	120	140	240
C103 (M2BMAX=140 Nm)													
81,64	31349/384	**C103_0820 ME10**	4000	3900	6000	**≤14**	0,41	15,2	15	3,9	120	140	240
81,64	31349/384	**C103_0820 ME10**	4000	3900	6000	**>14≤19**	0,66	15,2	15	3,9	120	140	240
92,13	16215/176	**C103_0920 ME10**	4000	3900	6000	**≤14**	0,41	15,2	15	3,9	120	140	240
92,13	16215/176	**C103_0920 ME10**	4000	3900	6000	**>14≤19**	0,66	15,2	15	3,9	120	140	240
111,1	1222/11	**C103_1110 ME10**	4000	3900	6000	**≤14**	0,41	15,2	15	3,9	120	140	240
111,1	1222/11	**C103_1110 ME10**	4000	3900	6000	**>14≤19**	0,66	15,2	15	3,9	120	140	240
137,3	10575/77	**C103_1370 ME10**	4000	3900	6000	**≤14**	0,40	15,2	15	3,9	120	140	240
137,3	10575/77	**C103_1370 ME10**	4000	3900	6000	**>14≤19**	0,65	15,2	15	3,9	120	140	240
183,7	2021/11	**C103_1840 ME10**	4000	3900	6000	**≤14**	0,40	15,2	15	3,9	120	140	240
183,7	2021/11	**C103_1840 ME10**	4000	3900	6000	**>14≤19**	0,65	15,2	15	3,9	120	140	240
220,8	7285/33	**C103_2210 ME10**	4000	3900	6000	**≤14**	0,40	15,2	15	3,9	120	140	240
220,8	7285/33	**C103_2210 ME10**	4000	3900	6000	**>14≤19**	0,65	15,2	15	3,9	120	140	240
275,9	36425/132	**C103_2760 ME10**	4000	3900	6000	**≤14**	0,40	15,2	15	3,9	120	140	240
275,9	36425/132	**C103_2760 ME10**	4000	3900	6000	**>14≤19**	0,65	15,2	15	3,9	120	140	240

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C202 (M2BMAX=230 Nm)													
2,009	432/215	**C202_0020 ME20**	3000	2600	4500	**≤19**	5,7	17,3	17	4,7	67	67	84
2,009	432/215	**C202_0020 ME20**	3000	2600	4500	**>19≤24**	6,5	17,3	17	5,5	110	120	150
2,009	432/215	**C202_0020 ME20**	3000	2600	4500	**>24≤32**	7,9	17,3	17	5,7	110	120	150
2,009	432/215	**C202_0020 ME30**	3000	2600	4000	**≤24**	12	19,2	17	5,4	110	150	190
2,009	432/215	**C202_0020 ME30**	3000	2600	4000	**>24≤32**	12	19,2	17	5,8	110	160	350
2,009	432/215	**C202_0020 ME30**	3000	2600	4000	**>32≤38**	13	19,2	17	5,9	110	160	350
2,184	2160/989	**C202_0022 ME20**	3000	2600	4500	**≤19**	5,6	17,3	17	4,8	73	73	91
2,184	2160/989	**C202_0022 ME20**	3000	2600	4500	**>19≤24**	6,3	17,3	17	5,6	110	130	160
2,184	2160/989	**C202_0022 ME20**	3000	2600	4500	**>24≤32**	7,8	17,3	17	5,7	110	130	160
2,184	2160/989	**C202_0022 ME30**	3000	2600	4000	**≤24**	11	19,2	17	5,5	110	160	210
2,184	2160/989	**C202_0022 ME30**	3000	2600	4000	**>24≤32**	12	19,2	17	5,8	110	160	350
2,184	2160/989	**C202_0022 ME30**	3000	2600	4000	**>32≤38**	13	19,2	17	5,9	110	160	350
2,475	99/40	**C202_0025 ME20**	3000	2600	4500	**≤19**	4,7	17,3	17	5,1	83	83	100
2,475	99/40	**C202_0025 ME20**	3000	2600	4500	**>19≤24**	5,5	17,3	17	5,7	110	140	180
2,475	99/40	**C202_0025 ME20**	3000	2600	4500	**>24≤32**	6,9	17,3	17	5,8	110	140	180
2,475	99/40	**C202_0025 ME30**	3000	2600	4000	**≤24**	10	19,2	17	5,6	110	140	180
2,475	99/40	**C202_0025 ME30**	3000	2600	4000	**>24≤32**	11	19,2	17	5,8	110	140	180
2,475	99/40	**C202_0025 ME30**	3000	2600	4000	**>32≤38**	12	19,2	17	5,9	110	140	180
2,690	495/184	**C202_0027 ME20**	3000	2600	4500	**≤19**	4,6	17,3	17	5,2	90	90	110
2,690	495/184	**C202_0027 ME20**	3000	2600	4500	**>19≤24**	5,4	17,3	17	5,7	120	160	200
2,690	495/184	**C202_0027 ME20**	3000	2600	4500	**>24≤32**	6,8	17,3	17	5,8	120	160	200
2,690	495/184	**C202_0027 ME30**	3000	2600	4000	**≤24**	10	19,2	17	5,7	120	160	200
2,690	495/184	**C202_0027 ME30**	3000	2600	4000	**>24≤32**	10	19,2	17	5,9	120	160	200
2,690	495/184	**C202_0027 ME30**	3000	2600	4000	**>32≤38**	12	19,2	17	5,9	120	160	200
3,103	90/29	**C202_0031 ME20**	3500	3100	5000	**≤19**	3,9	17,3	17	5,4	100	100	130
3,103	90/29	**C202_0031 ME20**	3500	3100	5000	**>19≤24**	4,7	17,3	17	5,8	120	180	230
3,103	90/29	**C202_0031 ME20**	3500	3100	5000	**>24≤32**	6,1	17,3	17	5,9	120	180	230
3,103	90/29	**C202_0031 ME30**	3500	3100	4000	**≤24**	9,6	19,2	17	5,7	120	180	230
3,103	90/29	**C202_0031 ME30**	3500	3100	4000	**>24≤32**	9,7	19,2	17	5,9	120	180	230
3,103	90/29	**C202_0031 ME30**	3500	3100	4000	**>32≤38**	11	19,2	17	5,9	120	180	230
3,373	2250/667	**C202_0034 ME20**	3500	3100	5000	**≤19**	3,8	17,3	17	5,5	110	110	140
3,373	2250/667	**C202_0034 ME20**	3500	3100	5000	**>19≤24**	4,6	17,3	17	5,8	130	190	250
3,373	2250/667	**C202_0034 ME20**	3500	3100	5000	**>24≤32**	6,0	17,3	17	5,9	130	190	250
3,373	2250/667	**C202_0034 ME30**	3500	3100	4000	**≤24**	9,5	19,2	17	5,8	130	190	250
3,373	2250/667	**C202_0034 ME30**	3500	3100	4000	**>24≤32**	9,6	19,2	17	5,9	130	190	250
3,373	2250/667	**C202_0034 ME30**	3500	3100	4000	**>32≤38**	11	19,2	17	5,9	130	190	250
3,888	486/125	**C202_0039 ME10**	3500	3100	5000	**≤14**	1,9	16,3	17	5,3	70	70	88
3,888	486/125	**C202_0039 ME10**	3500	3100	5000	**>14≤19**	2,1	16,3	17	5,6	78	91	110
3,888	486/125	**C202_0039 ME20**	3500	3100	5000	**≤19**	3,3	17,3	17	5,6	130	130	160
3,888	486/125	**C202_0039 ME20**	3500	3100	5000	**>19≤24**	4,1	17,3	17	5,9	130	200	280
3,888	486/125	**C202_0039 ME20**	3500	3100	5000	**>24≤32**	5,5	17,3	17	5,9	130	200	280
3,888	486/125	**C202_0039 ME30**	3500	3100	4000	**≤24**	9,0	19,2	17	5,8	130	200	280
3,888	486/125	**C202_0039 ME30**	3500	3100	4000	**>24≤32**	9,1	19,2	17	5,9	130	200	280
3,888	486/125	**C202_0039 ME30**	3500	3100	4000	**>32≤38**	11	19,2	17	6,0	130	200	280
4,226	486/115	**C202_0042 ME10**	3500	3100	5000	**≤14**	1,8	16,3	17	5,4	76	76	96
4,226	486/115	**C202_0042 ME10**	3500	3100	5000	**>14≤19**	2,1	16,3	17	5,7	85	98	120
4,226	486/115	**C202_0042 ME20**	3500	3100	5000	**≤19**	3,3	17,3	17	5,7	140	140	180
4,226	486/115	**C202_0042 ME20**	3500	3100	5000	**>19≤24**	4,0	17,3	17	5,9	140	200	310
4,226	486/115	**C202_0042 ME20**	3500	3100	5000	**>24≤32**	5,5	17,3	17	5,9	140	200	310
4,226	486/115	**C202_0042 ME30**	3500	3100	4000	**≤24**	8,9	19,2	17	5,9	140	200	310
4,226	486/115	**C202_0042 ME30**	3500	3100	4000	**>24≤32**	9,1	19,2	17	6,0	140	200	310
4,226	486/115	**C202_0042 ME30**	3500	3100	4000	**>32≤38**	11	19,2	17	6,0	140	200	310
4,667	14/3	**C202_0047 ME10**	3700	3500	5500	**≤14**	1,5	16,3	17	5,5	81	84	110
4,667	14/3	**C202_0047 ME10**	3700	3500	5500	**>14≤19**	1,7	16,3	17	5,8	81	110	140
4,667	14/3	**C202_0047 ME20**	3500	3500	5000	**≤19**	2,9	17,3	17	5,7	140	160	200
4,667	14/3	**C202_0047 ME20**	3500	3500	5000	**>19≤24**	3,7	17,3	17	5,9	140	200	340
4,667	14/3	**C202_0047 ME20**	3500	3500	5000	**>24≤32**	5,1	17,3	17	6,0	140	200	340
4,667	14/3	**C202_0047 ME30**	3500	3500	4000	**≤24**	8,6	19,2	17	5,9	140	200	340
4,667	14/3	**C202_0047 ME30**	3500	3500	4000	**>24≤32**	8,7	19,2	17	6,0	140	200	340
4,667	14/3	**C202_0047 ME30**	3500	3500	4000	**>32≤38**	10	19,2	17	6,0	140	200	340
5,072	350/69	**C202_0051 ME10**	3700	3500	5500	**≤14**	1,5	16,3	17	5,6	88	92	110
5,072	350/69	**C202_0051 ME10**	3700	3500	5500	**>14≤19**	1,7	16,3	17	5,8	88	120	150

C

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	i_{exakt}	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
C202 (M_{2BMAX}=230 Nm)													
5,072	350/69	**C202_0051 ME20**	3500	3500	5000	**≤19**	2,9	17,3	17	5,8	140	170	210
5,072	350/69	**C202_0051 ME20**	3500	3500	5000	**>19≤24**	3,6	17,3	17	5,9	140	200	350
5,072	350/69	**C202_0051 ME20**	3500	3500	5000	**>24≤32**	5,1	17,3	17	6,0	140	200	350
5,072	350/69	**C202_0051 ME30**	3500	3500	4000	**≤24**	8,6	19,2	17	5,9	140	200	350
5,072	350/69	**C202_0051 ME30**	3500	3500	4000	**>24≤32**	8,7	19,2	17	6,0	140	200	350
5,072	350/69	**C202_0051 ME30**	3500	3500	4000	**>32≤38**	10	19,2	17	6,0	140	200	350
5,791	666/115	**C202_0058 ME10**	3700	3500	5500	**≤14**	1,2	16,3	17	5,7	86	100	130
5,791	666/115	**C202_0058 ME10**	3700	3500	5500	**>14≤19**	1,4	16,3	17	5,8	86	130	170
5,791	666/115	**C202_0058 ME20**	3500	3500	5000	**≤19**	2,6	17,3	17	5,8	150	190	240
5,791	666/115	**C202_0058 ME20**	3500	3500	5000	**>19≤24**	3,4	17,3	17	5,9	150	200	350
5,791	666/115	**C202_0058 ME20**	3500	3500	5000	**>24≤32**	4,8	17,3	17	6,0	150	200	350
5,791	666/115	**C202_0058 ME30**	3500	3500	4000	**≤24**	8,3	19,2	17	5,9	150	200	350
5,791	666/115	**C202_0058 ME30**	3500	3500	4000	**>24≤32**	8,4	19,2	17	6,0	150	200	350
5,791	666/115	**C202_0058 ME30**	3500	3500	4000	**>32≤38**	10	19,2	17	6,0	150	200	350
6,295	3330/529	**C202_0063 ME10**	3700	3500	5500	**≤14**	1,2	16,3	17	5,7	93	110	140
6,295	3330/529	**C202_0063 ME10**	3700	3500	5500	**>14≤19**	1,4	16,3	17	5,9	93	150	180
6,295	3330/529	**C202_0063 ME20**	3500	3500	5000	**≤19**	2,6	17,3	17	5,8	160	200	260
6,295	3330/529	**C202_0063 ME20**	3500	3500	5000	**>19≤24**	3,3	17,3	17	6,0	160	200	350
6,295	3330/529	**C202_0063 ME20**	3500	3500	5000	**>24≤32**	4,8	17,3	17	6,0	160	200	350
6,295	3330/529	**C202_0063 ME30**	3500	3500	4000	**≤24**	8,3	19,2	17	6,0	160	200	350
6,295	3330/529	**C202_0063 ME30**	3500	3500	4000	**>24≤32**	8,4	19,2	17	6,0	160	200	350
6,295	3330/529	**C202_0063 ME30**	3500	3500	4000	**>32≤38**	10	19,2	17	6,0	160	200	350
7,800	39/5	**C202_0078 ME10**	4000	3900	6000	**≤14**	0,89	16,3	17	5,8	91	140	180
7,800	39/5	**C202_0078 ME10**	4000	3900	6000	**>14≤19**	1,1	16,3	17	5,9	91	170	220
7,800	39/5	**C202_0078 ME20**	3500	3500	5000	**≤19**	2,3	17,3	17	5,9	170	200	330
7,800	39/5	**C202_0078 ME20**	3500	3500	5000	**>19≤24**	3,1	17,3	17	6,0	170	200	350
7,800	39/5	**C202_0078 ME20**	3500	3500	5000	**>24≤32**	4,5	17,3	17	6,0	170	200	350
7,800	39/5	**C202_0078 ME30**	3500	3500	4000	**≤24**	8,0	19,2	17	6,0	170	200	350
7,800	39/5	**C202_0078 ME30**	3500	3500	4000	**>24≤32**	8,1	19,2	17	6,0	170	200	350
7,800	39/5	**C202_0078 ME30**	3500	3500	4000	**>32≤38**	9,9	19,2	17	6,0	170	200	350
8,190	475/58	**C202_0082 ME20**	3500	3100	5000	**≤19**	3,4	17,3	14	8,1	200	230	340
8,190	475/58	**C202_0082 ME20**	3500	3100	5000	**>19≤24**	4,1	17,3	14	8,2	200	230	400
8,190	475/58	**C202_0082 ME20**	3500	3100	5000	**>24≤32**	5,6	17,3	14	8,3	200	230	400
8,190	475/58	**C202_0082 ME30**	3500	3100	4000	**≤24**	9,0	19,2	14	8,2	200	230	400
8,190	475/58	**C202_0082 ME30**	3500	3100	4000	**>24≤32**	9,1	19,2	14	8,3	200	230	400
8,190	475/58	**C202_0082 ME30**	3500	3100	4000	**>32≤38**	11	19,2	14	8,3	200	230	400
9,387	2450/261	**C202_0094 ME20**	3500	3100	5000	**≤19**	3,3	17,3	14	8,1	200	230	390
9,387	2450/261	**C202_0094 ME20**	3500	3100	5000	**>19≤24**	4,1	17,3	14	8,2	200	230	400
9,387	2450/261	**C202_0094 ME20**	3500	3100	5000	**>24≤32**	5,5	17,3	14	8,3	200	230	400
9,387	2450/261	**C202_0094 ME30**	3500	3100	4000	**≤24**	9,0	19,2	14	8,2	200	230	400
9,387	2450/261	**C202_0094 ME30**	3500	3100	4000	**>24≤32**	9,1	19,2	14	8,3	200	230	400
9,387	2450/261	**C202_0094 ME30**	3500	3100	4000	**>32≤38**	11	19,2	14	8,3	200	230	400
10,26	513/50	**C202_0105 ME10**	3500	3100	5000	**≤14**	1,5	16,3	14	8,1	190	190	230
10,26	513/50	**C202_0105 ME10**	3500	3100	5000	**>14≤19**	1,8	16,3	14	8,2	200	230	300
10,26	513/50	**C202_0105 ME20**	3500	3100	5000	**≤19**	3,0	17,3	14	8,2	200	230	400
10,26	513/50	**C202_0105 ME20**	3500	3100	5000	**>19≤24**	3,7	17,3	14	8,2	200	230	400
10,26	513/50	**C202_0105 ME20**	3500	3100	5000	**>24≤32**	5,2	17,3	14	8,3	200	230	400
10,26	513/50	**C202_0105 ME30**	3500	3100	4000	**≤24**	8,6	19,2	14	8,2	200	230	400
10,26	513/50	**C202_0105 ME30**	3500	3100	4000	**>24≤32**	8,8	19,2	14	8,3	200	230	400
10,26	513/50	**C202_0105 ME30**	3500	3100	4000	**>32≤38**	10	19,2	14	8,3	200	230	400
11,76	294/25	**C202_0120 ME10**	3500	3100	5000	**≤14**	1,5	16,3	14	8,1	200	210	270
11,76	294/25	**C202_0120 ME10**	3500	3100	5000	**>14≤19**	1,7	16,3	14	8,2	200	230	340
11,76	294/25	**C202_0120 ME20**	3500	3100	5000	**≤19**	3,0	17,3	14	8,2	200	230	400
11,76	294/25	**C202_0120 ME20**	3500	3100	5000	**>19≤24**	3,7	17,3	14	8,3	200	230	400
11,76	294/25	**C202_0120 ME20**	3500	3100	5000	**>24≤32**	5,2	17,3	14	8,3	200	230	400
11,76	294/25	**C202_0120 ME30**	3500	3100	4000	**≤24**	8,6	19,2	14	8,3	200	230	400
11,76	294/25	**C202_0120 ME30**	3500	3100	4000	**>24≤32**	8,7	19,2	14	8,3	200	230	400
11,76	294/25	**C202_0120 ME30**	3500	3100	4000	**>32≤38**	10	19,2	14	8,3	200	230	400
12,32	665/54	**C202_0125 ME10**	3700	3500	5500	**≤14**	1,2	16,3	14	8,1	200	220	280
12,32	665/54	**C202_0125 ME10**	3700	3500	5500	**>14≤19**	1,5	16,3	14	8,2	200	230	360
12,32	665/54	**C202_0125 ME20**	3500	3500	5000	**≤19**	2,7	17,3	14	8,2	200	230	400
12,32	665/54	**C202_0125 ME20**	3500	3500	5000	**>19≤24**	3,4	17,3	14	8,3	200	230	400

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C202 (M2BMAX=230 Nm)													
12,32	665/54	**C202_0125 ME20**	3500	3500	5000	**>24≤32**	4,9	17,3	14	8,3	200	230	400
12,32	665/54	**C202_0125 ME30**	3500	3500	4000	**≤24**	8,4	19,2	14	8,3	200	230	400
12,32	665/54	**C202_0125 ME30**	3500	3500	4000	**>24≤32**	8,5	19,2	14	8,3	200	230	400
12,32	665/54	**C202_0125 ME30**	3500	3500	4000	**>32≤38**	10	19,2	14	8,3	200	230	400
14,12	3430/243	**C202_0140 ME10**	3700	3500	5500	**≤14**	1,2	16,3	14	8,2	200	230	320
14,12	3430/243	**C202_0140 ME10**	3700	3500	5500	**>14≤19**	1,5	16,3	14	8,2	200	230	400
14,12	3430/243	**C202_0140 ME20**	3500	3500	5000	**≤19**	2,7	17,3	14	8,2	200	230	400
14,12	3430/243	**C202_0140 ME20**	3500	3500	5000	**>19≤24**	3,4	17,3	14	8,3	200	230	400
14,12	3430/243	**C202_0140 ME20**	3500	3500	5000	**>24≤32**	4,9	17,3	14	8,3	200	230	400
14,12	3430/243	**C202_0140 ME30**	3500	3500	4000	**≤24**	8,3	19,2	14	8,3	200	230	400
14,12	3430/243	**C202_0140 ME30**	3500	3500	4000	**>24≤32**	8,5	19,2	14	8,3	200	230	400
14,12	3430/243	**C202_0140 ME30**	3500	3500	4000	**>32≤38**	10	19,2	14	8,3	200	230	400
15,28	703/46	**C202_0155 ME10**	3700	3500	5500	**≤14**	1,0	16,3	14	8,2	200	230	350
15,28	703/46	**C202_0155 ME10**	3700	3500	5500	**>14≤19**	1,3	16,3	14	8,2	200	230	400
15,28	703/46	**C202_0155 ME20**	3500	3500	5000	**≤19**	2,5	17,3	14	8,2	200	230	400
15,28	703/46	**C202_0155 ME20**	3500	3500	5000	**>19≤24**	3,2	17,3	14	8,3	200	230	400
15,28	703/46	**C202_0155 ME20**	3500	3500	5000	**>24≤32**	4,7	17,3	14	8,3	200	230	400
15,28	703/46	**C202_0155 ME30**	3500	3500	4000	**≤24**	8,1	19,2	14	8,3	200	230	400
15,28	703/46	**C202_0155 ME30**	3500	3500	4000	**>24≤32**	8,3	19,2	14	8,3	200	230	400
15,28	703/46	**C202_0155 ME30**	3500	3500	4000	**>32≤38**	10,0	19,2	14	8,3	200	230	400
17,52	3626/207	**C202_0175 ME10**	3700	3500	5500	**≤14**	1,0	16,3	14	8,2	200	230	400
17,52	3626/207	**C202_0175 ME10**	3700	3500	5500	**>14≤19**	1,3	16,3	14	8,3	200	230	400
17,52	3626/207	**C202_0175 ME20**	3500	3500	5000	**≤19**	2,5	17,3	14	8,2	200	230	400
17,52	3626/207	**C202_0175 ME20**	3500	3500	5000	**>19≤24**	3,2	17,3	14	8,3	200	230	400
17,52	3626/207	**C202_0175 ME20**	3500	3500	5000	**>24≤32**	4,7	17,3	14	8,3	200	230	400
17,52	3626/207	**C202_0175 ME30**	3500	3500	4000	**≤24**	8,1	19,2	14	8,3	200	230	400
17,52	3626/207	**C202_0175 ME30**	3500	3500	4000	**>24≤32**	8,3	19,2	14	8,3	200	230	400
17,52	3626/207	**C202_0175 ME30**	3500	3500	4000	**>32≤38**	10,0	19,2	14	8,3	200	230	400
20,58	247/12	**C202_0210 ME10**	4000	3900	6000	**≤14**	0,80	16,3	14	8,2	200	230	400
20,58	247/12	**C202_0210 ME10**	4000	3900	6000	**>14≤19**	1,1	16,3	14	8,3	200	230	400
20,58	247/12	**C202_0210 ME20**	3500	3500	5000	**≤19**	2,3	17,3	14	8,3	200	230	400
20,58	247/12	**C202_0210 ME20**	3500	3500	5000	**>19≤24**	3,0	17,3	14	8,3	200	230	400
20,58	247/12	**C202_0210 ME20**	3500	3500	5000	**>24≤32**	4,5	17,3	14	8,3	200	230	400
20,58	247/12	**C202_0210 ME30**	3500	3500	4000	**≤24**	7,9	19,2	14	8,3	200	230	400
20,58	247/12	**C202_0210 ME30**	3500	3500	4000	**>24≤32**	8,0	19,2	14	8,3	200	230	400
20,58	247/12	**C202_0210 ME30**	3500	3500	4000	**>32≤38**	9,8	19,2	14	8,3	200	230	400
23,59	637/27	**C202_0240 ME10**	4000	3900	6000	**≤14**	0,80	16,3	14	8,2	200	230	400
23,59	637/27	**C202_0240 ME10**	4000	3900	6000	**>14≤19**	1,0	16,3	14	8,3	200	230	400
23,59	637/27	**C202_0240 ME20**	3500	3500	5000	**≤19**	2,3	17,3	14	8,3	200	230	400
23,59	637/27	**C202_0240 ME20**	3500	3500	5000	**>19≤24**	3,0	17,3	14	8,3	200	230	400
23,59	637/27	**C202_0240 ME20**	3500	3500	5000	**>24≤32**	4,5	17,3	14	8,3	200	230	400
23,59	637/27	**C202_0240 ME30**	3500	3500	4000	**≤24**	7,9	19,2	14	8,3	200	230	400
23,59	637/27	**C202_0240 ME30**	3500	3500	4000	**>24≤32**	8,0	19,2	14	8,3	200	230	400
23,59	637/27	**C202_0240 ME30**	3500	3500	4000	**>32≤38**	9,8	19,2	14	8,3	200	230	400
24,64	1577/64	**C202_0250 ME10**	4000	3900	6000	**≤14**	0,70	16,3	14	8,3	200	230	400
24,64	1577/64	**C202_0250 ME10**	4000	3900	6000	**>14≤19**	0,95	16,3	14	8,3	200	230	400
24,64	1577/64	**C202_0250 ME20**	3500	3500	5000	**≤19**	2,2	17,3	14	8,3	200	230	400
24,64	1577/64	**C202_0250 ME20**	3500	3500	5000	**>19≤24**	2,9	17,3	14	8,3	200	230	400
24,64	1577/64	**C202_0250 ME20**	3500	3500	5000	**>24≤32**	4,4	17,3	14	8,3	200	230	400
24,64	1577/64	**C202_0250 ME30**	3500	3500	4000	**≤24**	7,8	19,2	14	8,3	200	230	400
24,64	1577/64	**C202_0250 ME30**	3500	3500	4000	**>24≤32**	7,9	19,2	14	8,3	200	230	400
24,64	1577/64	**C202_0250 ME30**	3500	3500	4000	**>32≤38**	9,7	19,2	14	8,3	200	230	400
28,24	4067/144	**C202_0280 ME10**	4000	3900	6000	**≤14**	0,70	16,3	14	8,3	200	230	400
28,24	4067/144	**C202_0280 ME10**	4000	3900	6000	**>14≤19**	0,95	16,3	14	8,3	200	230	400
28,24	4067/144	**C202_0280 ME20**	3500	3500	5000	**≤19**	2,2	17,3	14	8,3	200	230	400
28,24	4067/144	**C202_0280 ME20**	3500	3500	5000	**>19≤24**	2,9	17,3	14	8,3	200	230	400
28,24	4067/144	**C202_0280 ME20**	3500	3500	5000	**>24≤32**	4,4	17,3	14	8,3	200	230	400
28,24	4067/144	**C202_0280 ME30**	3500	3500	4000	**≤24**	7,8	19,2	14	8,3	200	230	400
28,24	4067/144	**C202_0280 ME30**	3500	3500	4000	**>24≤32**	7,9	19,2	14	8,3	200	230	400
28,24	4067/144	**C202_0280 ME30**	3500	3500	4000	**>32≤38**	9,7	19,2	14	8,3	200	230	400
30,69	399/13	**C202_0310 ME10**	4000	3900	6000	**≤14**	0,61	16,3	14	8,3	200	230	400
30,69	399/13	**C202_0310 ME10**	4000	3900	6000	**>14≤19**	0,86	16,3	14	8,3	200	230	400

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C202 (M2BMAX=230 Nm)													
30,69	399/13	**C202_0310 ME20**	3500	3500	5000	**≤19**	2,0	17,3	14	8,3	200	230	400
30,69	399/13	**C202_0310 ME20**	3500	3500	5000	**>19≤24**	2,8	17,3	14	8,3	200	230	400
35,18	1372/39	**C202_0350 ME10**	4000	3900	6000	**≤14**	0,61	16,3	14	8,3	200	230	400
35,18	1372/39	**C202_0350 ME10**	4000	3900	6000	**>14≤19**	0,86	16,3	14	8,3	200	230	400
35,18	1372/39	**C202_0350 ME20**	3500	3500	5000	**≤19**	2,0	17,3	14	8,3	200	230	400
35,18	1372/39	**C202_0350 ME20**	3500	3500	5000	**>19≤24**	2,8	17,3	14	8,3	200	230	400
40,85	817/20	**C202_0410 ME10**	4000	3900	6000	**≤14**	0,52	16,3	14	8,3	200	230	400
40,85	817/20	**C202_0410 ME10**	4000	3900	6000	**>14≤19**	0,77	16,3	14	8,3	200	230	400
40,85	817/20	**C202_0410 ME20**	3500	3500	5000	**≤19**	1,9	17,3	14	8,3	200	230	400
40,85	817/20	**C202_0410 ME20**	3500	3500	5000	**>19≤24**	2,7	17,3	14	8,3	200	230	400
46,82	2107/45	**C202_0470 ME10**	4000	3900	6000	**≤14**	0,52	16,3	14	8,3	200	230	400
46,82	2107/45	**C202_0470 ME10**	4000	3900	6000	**>14≤19**	0,77	16,3	14	8,3	200	230	400
46,82	2107/45	**C202_0470 ME20**	3500	3500	5000	**≤19**	1,9	17,3	14	8,3	200	230	400
46,82	2107/45	**C202_0470 ME20**	3500	3500	5000	**>19≤24**	2,7	17,3	14	8,3	200	230	400
49,23	1083/22	**C202_0490 ME10**	4000	3900	6000	**≤14**	0,48	16,3	14	8,3	200	230	400
49,23	1083/22	**C202_0490 ME10**	4000	3900	6000	**>14≤19**	0,74	16,3	14	8,3	200	230	400
49,23	1083/22	**C202_0490 ME20**	3500	3500	5000	**≤19**	1,9	17,3	14	8,3	200	230	400
49,23	1083/22	**C202_0490 ME20**	3500	3500	5000	**>19≤24**	2,6	17,3	14	8,3	200	230	400
56,42	1862/33	**C202_0560 ME10**	4000	3900	6000	**≤14**	0,48	16,3	14	8,3	200	230	400
56,42	1862/33	**C202_0560 ME10**	4000	3900	6000	**>14≤19**	0,73	16,3	14	8,3	200	230	400
56,42	1862/33	**C202_0560 ME20**	3500	3500	5000	**≤19**	1,9	17,3	14	8,3	200	230	400
56,42	1862/33	**C202_0560 ME20**	3500	3500	5000	**>19≤24**	2,6	17,3	14	8,3	200	230	400
61,35	2945/48	**C202_0610 ME10**	4000	3900	6000	**≤14**	0,42	16,3	14	8,3	190	220	270
61,35	2945/48	**C202_0610 ME10**	4000	3900	6000	**>14≤19**	0,67	16,3	14	8,3	190	220	270
70,32	7595/108	**C202_0700 ME10**	4000	3900	6000	**≤14**	0,42	16,3	14	8,3	200	230	310
70,32	7595/108	**C202_0700 ME10**	4000	3900	6000	**>14≤19**	0,67	16,3	14	8,3	200	230	310
C203 (M2BMAX=230 Nm)													
79,59	7163/90	**C203_0800 ME20**	3500	3500	5000	**≤19**	2,0	22,2	14	8,3	200	230	400
79,59	7163/90	**C203_0800 ME20**	3500	3500	5000	**>19≤24**	2,7	22,2	14	8,3	200	230	400
80,62	11609/144	**C203_0810 ME10**	4000	3900	6000	**≤14**	0,42	21,2	14	8,3	200	230	400
80,62	11609/144	**C203_0810 ME10**	4000	3900	6000	**>14≤19**	0,67	21,2	14	8,3	200	230	400
91,23	36946/405	**C203_0910 ME20**	3500	3500	5000	**≤19**	2,0	22,2	14	8,3	200	230	400
91,23	36946/405	**C203_0910 ME20**	3500	3500	5000	**>19≤24**	2,7	22,2	14	8,3	200	230	400
92,40	29939/324	**C203_0920 ME10**	4000	3900	6000	**≤14**	0,42	21,2	14	8,3	200	230	400
92,40	29939/324	**C203_0920 ME10**	4000	3900	6000	**>14≤19**	0,67	21,2	14	8,3	200	230	400
109,2	117943/1080	**C203_1090 ME20**	3500	3500	5000	**≤19**	2,0	22,2	14	8,3	200	230	400
109,2	117943/1080	**C203_1090 ME20**	3500	3500	5000	**>19≤24**	2,7	22,2	14	8,3	200	230	400
110,6	191149/1728	**C203_1110 ME10**	4000	3900	6000	**≤14**	0,42	21,2	14	8,3	200	230	400
110,6	191149/1728	**C203_1110 ME10**	4000	3900	6000	**>14≤19**	0,67	21,2	14	8,3	200	230	400
136,0	79576/585	**C203_1360 ME20**	3500	3500	5000	**≤19**	2,0	22,2	14	8,3	200	230	400
136,0	79576/585	**C203_1360 ME20**	3500	3500	5000	**>19≤24**	2,7	22,2	14	8,3	200	230	400
137,8	16121/117	**C203_1380 ME10**	4000	3900	6000	**≤14**	0,41	21,2	14	8,3	200	230	400
137,8	16121/117	**C203_1380 ME10**	4000	3900	6000	**>14≤19**	0,66	21,2	14	8,3	200	230	400
181,0	122206/675	**C203_1810 ME20**	3500	3500	5000	**≤19**	1,9	22,2	14	8,3	200	230	400
181,0	122206/675	**C203_1810 ME20**	3500	3500	5000	**>19≤24**	2,7	22,2	14	8,3	200	230	400
183,4	99029/540	**C203_1830 ME10**	4000	3900	6000	**≤14**	0,41	21,2	14	8,3	200	230	400
183,4	99029/540	**C203_1830 ME10**	4000	3900	6000	**>14≤19**	0,66	21,2	14	8,3	200	230	400
221,0	43757/198	**C203_2210 ME10**	4000	3900	6000	**≤14**	0,40	21,2	14	8,3	200	230	400
221,0	43757/198	**C203_2210 ME10**	4000	3900	6000	**>14≤19**	0,65	21,2	14	8,3	200	230	400
275,4	356965/1296	**C203_2750 ME10**	4000	3900	6000	**≤14**	0,40	21,2	14	8,3	200	230	310
275,4	356965/1296	**C203_2750 ME10**	4000	3900	6000	**>14≤19**	0,65	21,2	14	8,3	200	230	310

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C302 (M2BMAX=400 Nm)													
2,020	608/301	**C302_0020 ME30**	2700	2300	4000	**≤24**	15	24,3	16	6,2	160	160	190
2,020	608/301	**C302_0020 ME30**	2700	2300	4000	**>24≤32**	15	24,3	16	6,8	170	260	390
2,020	608/301	**C302_0020 ME30**	2700	2300	4000	**>32≤38**	16	24,3	16	6,9	170	260	390
2,020	608/301	**C302_0020 ME40**	2700	2300	3500	**≤38**	25	29,2	16	6,7	170	260	390
2,020	608/301	**C302_0020 ME40**	2700	2300	3500	**>38≤48**	38	29,2	16	6,9	170	260	390
2,177	468/215	**C302_0022 ME30**	2700	2300	4000	**≤24**	14	24,3	16	6,3	170	170	210
2,177	468/215	**C302_0022 ME30**	2700	2300	4000	**>24≤32**	14	24,3	16	6,8	180	270	420
2,177	468/215	**C302_0022 ME30**	2700	2300	4000	**>32≤38**	16	24,3	16	6,9	180	270	420
2,177	468/215	**C302_0022 ME40**	2700	2300	3500	**≤38**	24	29,2	16	6,8	180	270	420
2,177	468/215	**C302_0022 ME40**	2700	2300	3500	**>38≤48**	38	29,2	16	6,9	180	270	420
2,510	1634/651	**C302_0025 ME30**	2700	2300	4000	**≤24**	13	24,3	16	6,5	190	190	240
2,510	1634/651	**C302_0025 ME30**	2700	2300	4000	**>24≤32**	13	24,3	16	6,9	190	280	490
2,510	1634/651	**C302_0025 ME30**	2700	2300	4000	**>32≤38**	15	24,3	16	7,0	190	280	490
2,510	1634/651	**C302_0025 ME40**	2700	2300	3500	**≤38**	23	29,2	16	6,9	190	280	490
2,510	1634/651	**C302_0025 ME40**	2700	2300	3500	**>38≤48**	36	29,2	16	6,9	190	280	490
2,705	1677/620	**C302_0027 ME30**	2700	2300	4000	**≤24**	13	24,3	16	6,6	190	210	260
2,705	1677/620	**C302_0027 ME30**	2700	2300	4000	**>24≤32**	13	24,3	16	6,9	190	290	520
2,705	1677/620	**C302_0027 ME30**	2700	2300	4000	**>32≤38**	14	24,3	16	7,0	190	290	520
2,705	1677/620	**C302_0027 ME40**	2700	2300	3500	**≤38**	23	29,2	16	6,9	190	290	520
2,705	1677/620	**C302_0027 ME40**	2700	2300	3500	**>38≤48**	36	29,2	16	7,0	190	290	520
3,110	1045/336	**C302_0031 ME20**	3200	2800	4500	**≤19**	5,5	22,4	16	6,2	100	100	130
3,110	1045/336	**C302_0031 ME20**	3200	2800	4500	**>19≤24**	6,2	22,4	16	6,7	180	180	230
3,110	1045/336	**C302_0031 ME20**	3200	2800	4500	**>24≤32**	7,7	22,4	16	6,9	180	180	230
3,110	1045/336	**C302_0031 ME30**	3200	2800	4000	**≤24**	11	24,3	16	6,7	200	240	300
3,110	1045/336	**C302_0031 ME30**	3200	2800	4000	**>24≤32**	11	24,3	16	6,9	200	300	550
3,110	1045/336	**C302_0031 ME30**	3200	2800	4000	**>32≤38**	13	24,3	16	7,0	200	300	550
3,110	1045/336	**C302_0031 ME40**	3000	2800	3500	**≤38**	21	29,2	16	6,9	200	300	550
3,110	1045/336	**C302_0031 ME40**	3000	2800	3500	**>38≤48**	35	29,2	16	7,0	200	300	550
3,352	429/128	**C302_0034 ME20**	3200	2800	4500	**≤19**	5,3	22,4	16	6,3	110	110	140
3,352	429/128	**C302_0034 ME20**	3200	2800	4500	**>19≤24**	6,1	22,4	16	6,8	200	200	240
3,352	429/128	**C302_0034 ME20**	3200	2800	4500	**>24≤32**	7,5	22,4	16	6,9	200	200	240
3,352	429/128	**C302_0034 ME30**	3200	2800	4000	**≤24**	11	24,3	16	6,7	210	260	320
3,352	429/128	**C302_0034 ME30**	3200	2800	4000	**>24≤32**	11	24,3	16	7,0	210	310	550
3,352	429/128	**C302_0034 ME30**	3200	2800	4000	**>32≤38**	13	24,3	16	7,0	210	310	550
3,352	429/128	**C302_0034 ME40**	3000	2800	3500	**≤38**	21	29,2	16	6,9	210	310	550
3,352	429/128	**C302_0034 ME40**	3000	2800	3500	**>38≤48**	35	29,2	16	7,0	210	310	550
3,878	190/49	**C302_0039 ME20**	3200	2800	4500	**≤19**	4,4	22,4	16	6,5	130	130	160
3,878	190/49	**C302_0039 ME20**	3200	2800	4500	**>19≤24**	5,2	22,4	16	6,9	200	230	280
3,878	190/49	**C302_0039 ME20**	3200	2800	4500	**>24≤32**	6,6	22,4	16	6,9	200	230	280
3,878	190/49	**C302_0039 ME30**	3200	2800	4000	**≤24**	10	24,3	16	6,8	220	300	370
3,878	190/49	**C302_0039 ME30**	3200	2800	4000	**>24≤32**	10	24,3	16	7,0	220	320	550
3,878	190/49	**C302_0039 ME30**	3200	2800	4000	**>32≤38**	12	24,3	16	7,0	220	320	550
3,878	190/49	**C302_0039 ME40**	3000	2800	3500	**≤38**	20	29,2	16	7,0	220	320	550
3,878	190/49	**C302_0039 ME40**	3000	2800	3500	**>38≤48**	34	29,2	16	7,0	220	320	550
4,179	117/28	**C302_0042 ME20**	3200	2800	4500	**≤19**	4,4	22,4	16	6,6	140	140	170
4,179	117/28	**C302_0042 ME20**	3200	2800	4500	**>19≤24**	5,1	22,4	16	6,9	220	240	300
4,179	117/28	**C302_0042 ME20**	3200	2800	4500	**>24≤32**	6,6	22,4	16	7,0	220	240	300
4,179	117/28	**C302_0042 ME30**	3200	2800	4000	**≤24**	10	24,3	16	6,9	220	320	400
4,179	117/28	**C302_0042 ME30**	3200	2800	4000	**>24≤32**	10	24,3	16	7,0	220	330	550
4,179	117/28	**C302_0042 ME30**	3200	2800	4000	**>32≤38**	12	24,3	16	7,0	220	330	550
4,179	117/28	**C302_0042 ME40**	3000	2800	3500	**≤38**	20	29,2	16	7,0	220	330	550
4,179	117/28	**C302_0042 ME40**	3000	2800	3500	**>38≤48**	34	29,2	16	7,0	220	330	550
4,675	589/126	**C302_0047 ME20**	3500	3100	5000	**≤19**	3,8	22,4	16	6,7	160	160	200
4,675	589/126	**C302_0047 ME20**	3500	3100	5000	**>19≤24**	4,5	22,4	16	6,9	210	270	340
4,675	589/126	**C302_0047 ME20**	3500	3100	5000	**>24≤32**	6,0	22,4	16	7,0	210	270	340
4,675	589/126	**C302_0047 ME30**	3500	3100	4000	**≤24**	9,6	24,3	16	6,9	230	330	450
4,675	589/126	**C302_0047 ME30**	3500	3100	4000	**>24≤32**	9,8	24,3	16	7,0	230	330	550
4,675	589/126	**C302_0047 ME30**	3500	3100	4000	**>32≤38**	11	24,3	16	7,0	230	330	550
4,675	589/126	**C302_0047 ME40**	3000	3000	3500	**≤38**	20	29,2	16	7,0	230	330	550
4,675	589/126	**C302_0047 ME40**	3000	3000	3500	**>38≤48**	33	29,2	16	7,0	230	330	550
5,038	403/80	**C302_0050 ME20**	3500	3100	5000	**≤19**	3,8	22,4	16	6,7	170	170	210
5,038	403/80	**C302_0050 ME20**	3500	3100	5000	**>19≤24**	4,5	22,4	16	6,9	230	290	370

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C302 (M2BMAX=400 Nm)													
5,038	403/80	**C302_0050 ME20**	3500	3100	5000	**>24≤32**	6,0	22,4	16	7,0	230	290	370
5,038	403/80	**C302_0050 ME30**	3500	3100	4000	**≤24**	9,6	24,3	16	6,9	240	330	480
5,038	403/80	**C302_0050 ME30**	3500	3100	4000	**>24≤32**	9,7	24,3	16	7,0	240	330	550
5,038	403/80	**C302_0050 ME30**	3500	3100	4000	**>32≤38**	11	24,3	16	7,0	240	330	550
5,038	403/80	**C302_0050 ME40**	3000	3000	3500	**≤38**	20	29,2	16	7,0	240	330	550
5,038	403/80	**C302_0050 ME40**	3000	3000	3500	**>38≤48**	33	29,2	16	7,0	240	330	550
5,859	2584/441	**C302_0059 ME20**	3500	3100	5000	**≤19**	3,2	22,4	16	6,8	200	200	240
5,859	2584/441	**C302_0059 ME20**	3500	3100	5000	**>19≤24**	4,0	22,4	16	7,0	230	320	400
5,859	2584/441	**C302_0059 ME20**	3500	3100	5000	**>24≤32**	5,4	22,4	16	7,0	230	320	400
5,859	2584/441	**C302_0059 ME30**	3500	3100	4000	**≤24**	9,0	24,3	16	7,0	250	330	550
5,859	2584/441	**C302_0059 ME30**	3500	3100	4000	**>24≤32**	9,2	24,3	16	7,0	250	330	550
5,859	2584/441	**C302_0059 ME30**	3500	3100	4000	**>32≤38**	11	24,3	16	7,0	250	330	550
5,859	2584/441	**C302_0059 ME40**	3000	3000	3500	**≤38**	19	29,2	16	7,0	250	330	550
5,859	2584/441	**C302_0059 ME40**	3000	3000	3500	**>38≤48**	33	29,2	16	7,0	250	330	550
6,314	221/35	**C302_0063 ME20**	3500	3100	5000	**≤19**	3,2	22,4	16	6,8	210	210	260
6,314	221/35	**C302_0063 ME20**	3500	3100	5000	**>19≤24**	3,9	22,4	16	7,0	250	330	430
6,314	221/35	**C302_0063 ME20**	3500	3100	5000	**>24≤32**	5,4	22,4	16	7,0	250	330	430
6,314	221/35	**C302_0063 ME30**	3500	3100	4000	**≤24**	9,0	24,3	16	7,0	250	330	550
6,314	221/35	**C302_0063 ME30**	3500	3100	4000	**>24≤32**	9,1	24,3	16	7,0	250	330	550
6,314	221/35	**C302_0063 ME30**	3500	3100	4000	**>32≤38**	11	24,3	16	7,1	250	330	550
6,314	221/35	**C302_0063 ME40**	3000	3000	3500	**≤38**	19	29,2	16	7,0	250	330	550
6,314	221/35	**C302_0063 ME40**	3000	3000	3500	**>38≤48**	33	29,2	16	7,0	250	330	550
7,841	494/63	**C302_0078 ME20**	3500	3500	5000	**≤19**	2,7	22,4	16	6,9	240	260	330
7,841	494/63	**C302_0078 ME20**	3500	3500	5000	**>19≤24**	3,4	22,4	16	7,0	240	330	470
7,841	494/63	**C302_0078 ME20**	3500	3500	5000	**>24≤32**	4,9	22,4	16	7,0	240	330	470
7,841	494/63	**C302_0078 ME30**	3500	3500	4000	**≤24**	8,5	24,3	16	7,0	270	330	550
7,841	494/63	**C302_0078 ME30**	3500	3500	4000	**>24≤32**	8,6	24,3	16	7,0	270	330	550
7,841	494/63	**C302_0078 ME30**	3500	3500	4000	**>32≤38**	10	24,3	16	7,1	270	330	550
7,841	494/63	**C302_0078 ME40**	3000	3000	3500	**≤38**	19	29,2	16	7,0	270	330	550
7,841	494/63	**C302_0078 ME40**	3000	3000	3500	**>38≤48**	32	29,2	16	7,1	270	330	550
8,250	33/4	**C302_0083 ME20**	3200	2800	4500	**≤19**	4,4	22,4	13	8,5	280	280	340
8,250	33/4	**C302_0083 ME20**	3200	2800	4500	**>19≤24**	5,2	22,4	13	8,7	340	400	600
8,250	33/4	**C302_0083 ME20**	3200	2800	4500	**>24≤32**	6,6	22,4	13	8,7	340	400	600
8,250	33/4	**C302_0083 ME30**	3200	2800	4000	**≤24**	10	24,3	13	8,6	340	400	700
8,250	33/4	**C302_0083 ME30**	3200	2800	4000	**>24≤32**	10	24,3	13	8,7	340	400	700
8,250	33/4	**C302_0083 ME30**	3200	2800	4000	**>32≤38**	12	24,3	13	8,7	340	400	700
8,250	33/4	**C302_0083 ME40**	3000	2800	3500	**≤38**	20	29,2	13	8,7	340	400	700
8,250	33/4	**C302_0083 ME40**	3000	2800	3500	**>38≤48**	34	29,2	13	8,7	340	400	700
9,310	3575/384	**C302_0093 ME20**	3200	2800	4500	**≤19**	4,4	22,4	13	8,6	310	310	390
9,310	3575/384	**C302_0093 ME20**	3200	2800	4500	**>19≤24**	5,1	22,4	13	8,7	350	350	680
9,310	3575/384	**C302_0093 ME20**	3200	2800	4500	**>24≤32**	6,6	22,4	13	8,7	350	350	680
9,310	3575/384	**C302_0093 ME30**	3200	2800	4000	**≤24**	10	24,3	13	8,7	350	350	700
9,310	3575/384	**C302_0093 ME30**	3200	2800	4000	**>24≤32**	10	24,3	13	8,7	350	350	700
9,310	3575/384	**C302_0093 ME30**	3200	2800	4000	**>32≤38**	12	24,3	13	8,7	350	350	700
9,310	3575/384	**C302_0093 ME40**	3000	2800	3500	**≤38**	20	29,2	13	8,7	350	350	700
9,310	3575/384	**C302_0093 ME40**	3000	2800	3500	**>38≤48**	34	29,2	13	8,7	350	350	700
10,29	72/7	**C302_0105 ME20**	3200	2800	4500	**≤19**	3,8	22,4	13	8,6	340	340	430
10,29	72/7	**C302_0105 ME20**	3200	2800	4500	**>19≤24**	4,5	22,4	13	8,7	350	400	700
10,29	72/7	**C302_0105 ME20**	3200	2800	4500	**>24≤32**	6,0	22,4	13	8,7	350	400	700
10,29	72/7	**C302_0105 ME30**	3200	2800	4000	**≤24**	9,6	24,3	13	8,7	350	400	700
10,29	72/7	**C302_0105 ME30**	3200	2800	4000	**>24≤32**	9,7	24,3	13	8,7	350	400	700
10,29	72/7	**C302_0105 ME30**	3200	2800	4000	**>32≤38**	11	24,3	13	8,7	350	400	700
10,29	72/7	**C302_0105 ME40**	3000	2800	3500	**≤38**	20	29,2	13	8,7	350	400	700
10,29	72/7	**C302_0105 ME40**	3000	2800	3500	**>38≤48**	33	29,2	13	8,7	350	400	700
11,61	325/28	**C302_0115 ME20**	3200	2800	4500	**≤19**	3,7	22,4	13	8,6	350	350	490
11,61	325/28	**C302_0115 ME20**	3200	2800	4500	**>19≤24**	4,5	22,4	13	8,7	350	350	700
11,61	325/28	**C302_0115 ME20**	3200	2800	4500	**>24≤32**	5,9	22,4	13	8,7	350	350	700
11,61	325/28	**C302_0115 ME30**	3200	2800	4000	**≤24**	9,5	24,3	13	8,7	350	350	700
11,61	325/28	**C302_0115 ME30**	3200	2800	4000	**>24≤32**	9,7	24,3	13	8,7	350	350	700
11,61	325/28	**C302_0115 ME30**	3200	2800	4000	**>32≤38**	11	24,3	13	8,7	350	350	700
11,61	325/28	**C302_0115 ME40**	3000	2800	3500	**≤38**	20	29,2	13	8,7	350	350	700
11,61	325/28	**C302_0115 ME40**	3000	2800	3500	**>38≤48**	33	29,2	13	8,7	350	350	700

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C302 (M2BMAX=400 Nm)													
12,40	62/5	**C302_0125 ME20**	3500	3100	5000	**≤19**	3,4	22,4	13	8,6	350	400	520
12,40	62/5	**C302_0125 ME20**	3500	3100	5000	**>19≤24**	4,1	22,4	13	8,7	350	400	700
12,40	62/5	**C302_0125 ME20**	3500	3100	5000	**>24≤32**	5,6	22,4	13	8,7	350	400	700
12,40	62/5	**C302_0125 ME30**	3500	3100	4000	**≤24**	9,2	24,3	13	8,7	350	400	700
12,40	62/5	**C302_0125 ME30**	3500	3100	4000	**>24≤32**	9,3	24,3	13	8,7	350	400	700
12,40	62/5	**C302_0125 ME30**	3500	3100	4000	**>32≤38**	11	24,3	13	8,7	350	400	700
12,40	62/5	**C302_0125 ME40**	3000	3000	3500	**≤38**	19	29,2	13	8,7	350	400	700
12,40	62/5	**C302_0125 ME40**	3000	3000	3500	**>38≤48**	33	29,2	13	8,7	350	400	700
13,99	2015/144	**C302_0140 ME20**	3500	3100	5000	**≤19**	3,3	22,4	13	8,7	350	350	590
13,99	2015/144	**C302_0140 ME20**	3500	3100	5000	**>19≤24**	4,1	22,4	13	8,7	350	350	700
13,99	2015/144	**C302_0140 ME20**	3500	3100	5000	**>24≤32**	5,5	22,4	13	8,7	350	350	700
13,99	2015/144	**C302_0140 ME30**	3500	3100	4000	**≤24**	9,1	24,3	13	8,7	350	350	700
13,99	2015/144	**C302_0140 ME30**	3500	3100	4000	**>24≤32**	9,3	24,3	13	8,7	350	350	700
13,99	2015/144	**C302_0140 ME30**	3500	3100	4000	**>32≤38**	11	24,3	13	8,7	350	350	700
13,99	2015/144	**C302_0140 ME40**	3000	3000	3500	**≤38**	19	29,2	13	8,7	350	350	700
13,99	2015/144	**C302_0140 ME40**	3000	3000	3500	**>38≤48**	33	29,2	13	8,7	350	350	700
15,54	544/35	**C302_0155 ME20**	3500	3100	5000	**≤19**	2,9	22,4	13	8,7	350	400	650
15,54	544/35	**C302_0155 ME20**	3500	3100	5000	**>19≤24**	3,7	22,4	13	8,7	350	400	700
15,54	544/35	**C302_0155 ME20**	3500	3100	5000	**>24≤32**	5,1	22,4	13	8,7	350	400	700
15,54	544/35	**C302_0155 ME30**	3500	3100	4000	**≤24**	8,7	24,3	13	8,7	350	400	700
15,54	544/35	**C302_0155 ME30**	3500	3100	4000	**>24≤32**	8,9	24,3	13	8,7	350	400	700
15,54	544/35	**C302_0155 ME30**	3500	3100	4000	**>32≤38**	11	24,3	13	8,7	350	400	700
15,54	544/35	**C302_0155 ME40**	3000	3000	3500	**≤38**	19	29,2	13	8,7	350	400	700
15,54	544/35	**C302_0155 ME40**	3000	3000	3500	**>38≤48**	33	29,2	13	8,7	350	400	700
17,54	1105/63	**C302_0175 ME20**	3500	3100	5000	**≤19**	2,9	22,4	13	8,7	350	350	700
17,54	1105/63	**C302_0175 ME20**	3500	3100	5000	**>19≤24**	3,7	22,4	13	8,7	350	350	700
17,54	1105/63	**C302_0175 ME20**	3500	3100	5000	**>24≤32**	5,1	22,4	13	8,7	350	350	700
17,54	1105/63	**C302_0175 ME30**	3500	3100	4000	**≤24**	8,7	24,3	13	8,7	350	350	700
17,54	1105/63	**C302_0175 ME30**	3500	3100	4000	**>24≤32**	8,9	24,3	13	8,7	350	350	700
17,54	1105/63	**C302_0175 ME30**	3500	3100	4000	**>32≤38**	11	24,3	13	8,7	350	350	700
17,54	1105/63	**C302_0175 ME40**	3000	3000	3500	**≤38**	19	29,2	13	8,7	350	350	700
17,54	1105/63	**C302_0175 ME40**	3000	3000	3500	**>38≤48**	32	29,2	13	8,7	350	350	700
20,80	104/5	**C302_0210 ME20**	3500	3500	5000	**≤19**	2,5	22,4	13	8,7	350	400	700
20,80	104/5	**C302_0210 ME20**	3500	3500	5000	**>19≤24**	3,3	22,4	13	8,7	350	400	700
20,80	104/5	**C302_0210 ME20**	3500	3500	5000	**>24≤32**	4,7	22,4	13	8,7	350	400	700
20,80	104/5	**C302_0210 ME30**	3500	3500	4000	**≤24**	8,3	24,3	13	8,7	350	400	700
20,80	104/5	**C302_0210 ME30**	3500	3500	4000	**>24≤32**	8,5	24,3	13	8,7	350	400	700
20,80	104/5	**C302_0210 ME30**	3500	3500	4000	**>32≤38**	10	24,3	13	8,7	350	400	700
20,80	104/5	**C302_0210 ME40**	3000	3000	3500	**≤38**	19	29,2	13	8,7	350	400	700
20,80	104/5	**C302_0210 ME40**	3000	3000	3500	**>38≤48**	32	29,2	13	8,7	350	400	700
23,47	845/36	**C302_0230 ME20**	3500	3500	5000	**≤19**	2,5	22,4	13	8,7	350	350	700
23,47	845/36	**C302_0230 ME20**	3500	3500	5000	**>19≤24**	3,3	22,4	13	8,7	350	350	700
23,47	845/36	**C302_0230 ME20**	3500	3500	5000	**>24≤32**	4,7	22,4	13	8,7	350	350	700
23,47	845/36	**C302_0230 ME30**	3500	3500	4000	**≤24**	8,3	24,3	13	8,7	350	350	700
23,47	845/36	**C302_0230 ME30**	3500	3500	4000	**>24≤32**	8,5	24,3	13	8,7	350	350	700
23,47	845/36	**C302_0230 ME30**	3500	3500	4000	**>32≤38**	10	24,3	13	8,7	350	350	700
23,47	845/36	**C302_0230 ME40**	3000	3000	3500	**≤38**	18	29,2	13	8,7	350	350	700
23,47	845/36	**C302_0230 ME40**	3000	3000	3500	**>38≤48**	32	29,2	13	8,7	350	350	700
24,80	124/5	**C302_0250 ME20**	3500	3500	5000	**≤19**	2,4	22,4	13	8,7	350	400	700
24,80	124/5	**C302_0250 ME20**	3500	3500	5000	**>19≤24**	3,1	22,4	13	8,7	350	400	700
24,80	124/5	**C302_0250 ME20**	3500	3500	5000	**>24≤32**	4,6	22,4	13	8,7	350	400	700
24,80	124/5	**C302_0250 ME30**	3500	3500	4000	**≤24**	8,0	24,3	13	8,7	350	400	700
24,80	124/5	**C302_0250 ME30**	3500	3500	4000	**>24≤32**	8,2	24,3	13	8,7	350	400	700
24,80	124/5	**C302_0250 ME30**	3500	3500	4000	**>32≤38**	9,9	24,3	13	8,7	350	400	700
27,99	2015/72	**C302_0280 ME20**	3500	3500	5000	**≤19**	2,4	22,4	13	8,7	350	350	700
27,99	2015/72	**C302_0280 ME20**	3500	3500	5000	**>19≤24**	3,1	22,4	13	8,7	350	350	700
27,99	2015/72	**C302_0280 ME20**	3500	3500	5000	**>24≤32**	4,6	22,4	13	8,7	350	350	700
27,99	2015/72	**C302_0280 ME30**	3500	3500	4000	**≤24**	8,0	24,3	13	8,7	350	350	700
27,99	2015/72	**C302_0280 ME30**	3500	3500	4000	**>24≤32**	8,2	24,3	13	8,7	350	350	700
27,99	2015/72	**C302_0280 ME30**	3500	3500	4000	**>32≤38**	9,9	24,3	13	8,7	350	350	700
31,04	776/25	**C302_0310 ME20**	3500	3500	5000	**≤19**	2,2	22,4	13	8,7	350	400	700
31,04	776/25	**C302_0310 ME20**	3500	3500	5000	**>19≤24**	3,0	22,4	13	8,7	350	400	700

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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Please take notice of the indications on page C6! ***¡Por favor observe las indicaciones en la página C6!*** **Si raccomanda di rispettare le avvertenze a pagina C6!**

i	i_{exakt}	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
C302 (M_{2BMAX}=400 Nm)													
31,04	776/25	**C302_0310 ME20**	3500	3500	5000	**>24≤32**	4,4	22,4	13	8,7	350	400	700
31,04	776/25	**C302_0310 ME30**	3500	3500	4000	**≤24**	7,9	24,3	13	8,7	350	400	700
31,04	776/25	**C302_0310 ME30**	3500	3500	4000	**>24≤32**	8,0	24,3	13	8,7	350	400	700
31,04	776/25	**C302_0310 ME30**	3500	3500	4000	**>32≤38**	9,7	24,3	13	8,7	350	400	700
35,03	1261/36	**C302_0350 ME20**	3500	3500	5000	**≤19**	2,2	22,4	13	8,7	350	350	700
35,03	1261/36	**C302_0350 ME20**	3500	3500	5000	**>19≤24**	2,9	22,4	13	8,7	350	350	700
35,03	1261/36	**C302_0350 ME20**	3500	3500	5000	**>24≤32**	4,4	22,4	13	8,7	350	350	700
35,03	1261/36	**C302_0350 ME30**	3500	3500	4000	**≤24**	7,9	24,3	13	8,7	350	350	700
35,03	1261/36	**C302_0350 ME30**	3500	3500	4000	**>24≤32**	8,0	24,3	13	8,7	350	350	700
35,03	1261/36	**C302_0350 ME30**	3500	3500	4000	**>32≤38**	9,7	24,3	13	8,7	350	350	700
41,35	2688/65	**C302_0410 ME20**	3500	3500	5000	**≤19**	2,0	22,4	13	8,7	350	400	700
41,35	2688/65	**C302_0410 ME20**	3500	3500	5000	**>19≤24**	2,8	22,4	13	8,7	350	400	700
46,67	140/3	**C302_0470 ME20**	3500	3500	5000	**≤19**	2,0	22,4	13	8,7	350	350	700
46,67	140/3	**C302_0470 ME20**	3500	3500	5000	**>19≤24**	2,8	22,4	13	8,7	350	350	700
49,75	2736/55	**C302_0500 ME20**	3500	3500	5000	**≤19**	2,0	22,4	13	8,7	350	400	700
49,75	2736/55	**C302_0500 ME20**	3500	3500	5000	**>19≤24**	2,7	22,4	13	8,7	350	400	700
56,14	1235/22	**C302_0560 ME20**	3500	3500	5000	**≤19**	2,0	22,4	13	8,7	350	350	700
56,14	1235/22	**C302_0560 ME20**	3500	3500	5000	**>19≤24**	2,7	22,4	13	8,7	350	350	700
61,92	1548/25	**C302_0620 ME20**	3500	3500	5000	**≤19**	1,9	22,4	13	8,7	330	400	660
61,92	1548/25	**C302_0620 ME20**	3500	3500	5000	**>19≤24**	2,6	22,4	13	8,7	330	400	660
69,88	559/8	**C302_0700 ME20**	3500	3500	5000	**≤19**	1,9	22,4	13	8,7	350	350	700
69,88	559/8	**C302_0700 ME20**	3500	3500	5000	**>19≤24**	2,6	22,4	13	8,7	350	350	700
C303 (M_{2BMAX}=400 Nm)													
80,43	6032/75	**C303_0800 ME20**	3500	3500	5000	**≤19**	2,0	26,6	13	8,7	350	400	700
80,43	6032/75	**C303_0800 ME20**	3500	3500	5000	**>19≤24**	2,7	26,6	13	8,7	350	400	700
81,47	1222/15	**C303_0810 ME10**	3800	3500	5500	**≤14**	0,44	25,6	13	8,7	350	400	520
81,47	1222/15	**C303_0810 ME10**	3800	3500	5500	**>14≤19**	0,69	25,6	13	8,7	350	400	520
90,76	4901/54	**C303_0910 ME20**	3500	3500	5000	**≤19**	2,0	26,6	13	8,7	350	350	700
90,76	4901/54	**C303_0910 ME20**	3500	3500	5000	**>19≤24**	2,7	26,6	13	8,7	350	350	700
91,93	39715/432	**C303_0920 ME10**	3800	3500	5500	**≤14**	0,44	25,6	13	8,7	350	350	590
91,93	39715/432	**C303_0920 ME10**	3800	3500	5500	**>14≤19**	0,69	25,6	13	8,7	350	350	590
108,2	11687/108	**C303_1080 ME20**	3500	3500	5000	**≤19**	2,0	26,6	13	8,7	350	350	700
108,2	11687/108	**C303_1080 ME20**	3500	3500	5000	**>19≤24**	2,7	26,6	13	8,7	350	350	700
109,6	94705/864	**C303_1100 ME10**	3800	3500	5500	**≤14**	0,43	25,6	13	8,7	350	350	700
109,6	94705/864	**C303_1100 ME10**	3800	3500	5500	**>14≤19**	0,68	25,6	13	8,7	350	350	700
135,4	36569/270	**C303_1350 ME20**	3500	3500	5000	**≤19**	2,0	26,6	13	8,7	350	350	700
135,4	36569/270	**C303_1350 ME20**	3500	3500	5000	**>19≤24**	2,7	26,6	13	8,7	350	350	700
137,2	59267/432	**C303_1370 ME10**	3800	3500	5500	**≤14**	0,42	25,6	13	8,7	350	350	700
137,2	59267/432	**C303_1370 ME10**	3800	3500	5500	**>14≤19**	0,67	25,6	13	8,7	350	350	700
180,4	1624/9	**C303_1800 ME20**	3500	3500	5000	**≤19**	2,0	26,6	13	8,7	350	350	700
180,4	1624/9	**C303_1800 ME20**	3500	3500	5000	**>19≤24**	2,7	26,6	13	8,7	350	350	700
182,8	1645/9	**C303_1830 ME10**	3800	3500	5500	**≤14**	0,41	25,6	13	8,7	350	350	700
182,8	1645/9	**C303_1830 ME10**	3800	3500	5500	**>14≤19**	0,66	25,6	13	8,7	350	350	700
217,1	7163/33	**C303_2170 ME20**	3500	3500	5000	**≤19**	1,9	26,6	13	8,7	350	350	700
217,1	7163/33	**C303_2170 ME20**	3500	3500	5000	**>19≤24**	2,7	26,6	13	8,7	350	350	700
219,9	58045/264	**C303_2200 ME10**	3800	3500	5500	**≤14**	0,41	25,6	13	8,7	350	350	700
219,9	58045/264	**C303_2200 ME10**	3800	3500	5500	**>14≤19**	0,66	25,6	13	8,7	350	350	700
273,7	26273/96	**C303_2740 ME10**	3800	3500	5500	**≤14**	0,40	25,6	13	8,7	350	350	700
273,7	26273/96	**C303_2740 ME10**	3800	3500	5500	**>14≤19**	0,66	25,6	13	8,7	350	350	700

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C402 (M2BMAX=600 Nm)													
1,968	551/280	**C402_0020 ME30**	2500	2100	3500	**≤24**	25	34,5	15	13	150	150	190
1,968	551/280	**C402_0020 ME30**	2500	2100	3500	**>24≤32**	25	34,5	15	15	250	310	380
1,968	551/280	**C402_0020 ME30**	2500	2100	3500	**>32≤38**	27	34,5	15	16	250	310	380
1,968	551/280	**C402_0020 ME40**	2500	2100	3500	**≤38**	35	39,4	15	15	250	310	380
1,968	551/280	**C402_0020 ME40**	2500	2100	3500	**>38≤48**	48	39,4	15	16	250	310	380
2,456	609/248	**C402_0025 ME30**	2500	2100	3500	**≤24**	20	34,5	15	14	190	190	240
2,456	609/248	**C402_0025 ME30**	2500	2100	3500	**>24≤32**	20	34,5	15	16	270	380	480
2,456	609/248	**C402_0025 ME30**	2500	2100	3500	**>32≤38**	22	34,5	15	16	270	380	480
2,456	609/248	**C402_0025 ME40**	2500	2100	3500	**≤38**	30	39,4	15	16	270	380	480
2,456	609/248	**C402_0025 ME40**	2500	2100	3500	**>38≤48**	44	39,4	15	16	270	380	480
3,099	1537/496	**C402_0031 ME30**	2900	2500	4000	**≤24**	16	34,5	15	15	240	240	300
3,099	1537/496	**C402_0031 ME30**	2900	2500	4000	**>24≤32**	16	34,5	15	16	290	440	600
3,099	1537/496	**C402_0031 ME30**	2900	2500	4000	**>32≤38**	18	34,5	15	17	290	440	600
3,099	1537/496	**C402_0031 ME40**	2900	2500	3500	**≤38**	26	39,4	15	16	290	440	600
3,099	1537/496	**C402_0031 ME40**	2900	2500	3500	**>38≤48**	40	39,4	15	17	290	440	600
3,894	841/216	**C402_0039 ME20**	2900	2500	4000	**≤19**	7,8	32,6	15	14	130	130	160
3,894	841/216	**C402_0039 ME20**	2900	2500	4000	**>19≤24**	8,6	32,6	15	16	230	230	280
3,894	841/216	**C402_0039 ME20**	2900	2500	4000	**>24≤32**	10	32,6	15	16	230	230	280
3,894	841/216	**C402_0039 ME30**	2900	2500	4000	**≤24**	14	34,5	15	16	300	300	370
3,894	841/216	**C402_0039 ME30**	2900	2500	4000	**>24≤32**	14	34,5	15	17	310	470	710
3,894	841/216	**C402_0039 ME30**	2900	2500	4000	**>32≤38**	16	34,5	15	17	310	470	710
3,894	841/216	**C402_0039 ME40**	2900	2500	3500	**≤38**	24	39,4	15	16	310	470	710
3,894	841/216	**C402_0039 ME40**	2900	2500	3500	**>38≤48**	37	39,4	15	17	310	470	710
4,682	899/192	**C402_0047 ME20**	3300	2800	4500	**≤19**	6,4	32,6	15	15	160	160	200
4,682	899/192	**C402_0047 ME20**	3300	2800	4500	**>19≤24**	7,1	32,6	15	16	240	270	340
4,682	899/192	**C402_0047 ME20**	3300	2800	4500	**>24≤32**	8,6	32,6	15	17	240	270	340
4,682	899/192	**C402_0047 ME30**	3300	2800	4000	**≤24**	12	34,5	15	16	330	360	450
4,682	899/192	**C402_0047 ME30**	3300	2800	4000	**>24≤32**	12	34,5	15	17	330	500	800
4,682	899/192	**C402_0047 ME30**	3300	2800	4000	**>32≤38**	14	34,5	15	17	330	500	800
4,682	899/192	**C402_0047 ME40**	3000	2800	3500	**≤38**	22	39,4	15	17	330	500	800
4,682	899/192	**C402_0047 ME40**	3000	2800	3500	**>38≤48**	36	39,4	15	17	330	500	800
5,891	377/64	**C402_0059 ME20**	3300	2800	4500	**≤19**	5,1	32,6	15	16	200	200	250
5,891	377/64	**C402_0059 ME20**	3300	2800	4500	**>19≤24**	5,8	32,6	15	16	260	320	400
5,891	377/64	**C402_0059 ME20**	3300	2800	4500	**>24≤32**	7,3	32,6	15	17	260	320	400
5,891	377/64	**C402_0059 ME30**	3300	2800	4000	**≤24**	11	34,5	15	16	360	450	570
5,891	377/64	**C402_0059 ME30**	3300	2800	4000	**>24≤32**	11	34,5	15	17	360	540	850
5,891	377/64	**C402_0059 ME30**	3300	2800	4000	**>32≤38**	13	34,5	15	17	360	540	850
5,891	377/64	**C402_0059 ME40**	3000	2800	3500	**≤38**	21	39,4	15	17	360	540	850
5,891	377/64	**C402_0059 ME40**	3000	2800	3500	**>38≤48**	35	39,4	15	17	360	540	850
7,816	2001/256	**C402_0078 ME20**	3500	3200	5000	**≤19**	3,9	32,6	15	16	260	260	330
7,816	2001/256	**C402_0078 ME20**	3500	3200	5000	**>19≤24**	4,7	32,6	15	17	270	360	450
7,816	2001/256	**C402_0078 ME20**	3500	3200	5000	**>24≤32**	6,1	32,6	15	17	270	360	450
7,816	2001/256	**C402_0078 ME30**	3500	3200	4000	**≤24**	9,7	34,5	15	17	400	550	750
7,816	2001/256	**C402_0078 ME30**	3500	3200	4000	**>24≤32**	9,9	34,5	15	17	400	550	850
7,816	2001/256	**C402_0078 ME30**	3500	3200	4000	**>32≤38**	12	34,5	15	17	400	550	850
7,816	2001/256	**C402_0078 ME40**	3000	3000	3500	**≤38**	20	39,4	15	17	400	550	850
7,816	2001/256	**C402_0078 ME40**	3000	3000	3500	**>38≤48**	33	39,4	15	17	400	550	850
8,285	3339/403	**C402_0083 ME30**	2900	2500	4000	**≤24**	14	34,5	12	21	550	600	800
8,285	3339/403	**C402_0083 ME30**	2900	2500	4000	**>24≤32**	14	34,5	12	22	550	600	1100
8,285	3339/403	**C402_0083 ME30**	2900	2500	4000	**>32≤38**	15	34,5	12	22	550	600	1100
8,285	3339/403	**C402_0083 ME40**	2900	2500	3500	**≤38**	24	39,4	12	22	550	600	1100
8,285	3339/403	**C402_0083 ME40**	2900	2500	3500	**>38≤48**	37	39,4	12	22	550	600	1100
9,261	3445/372	**C402_0093 ME30**	2900	2500	4000	**≤24**	13	34,5	12	21	550	550	890
9,261	3445/372	**C402_0093 ME30**	2900	2500	4000	**>24≤32**	14	34,5	12	22	550	550	1100
9,261	3445/372	**C402_0093 ME30**	2900	2500	4000	**>32≤38**	15	34,5	12	22	550	550	1100
9,261	3445/372	**C402_0093 ME40**	2900	2500	3500	**≤38**	24	39,4	12	22	550	550	1100
9,261	3445/372	**C402_0093 ME40**	2900	2500	3500	**>38≤48**	37	39,4	12	22	550	550	1100
10,41	406/39	**C402_0105 ME20**	2900	2500	4000	**≤19**	6,2	32,6	12	21	350	350	440
10,41	406/39	**C402_0105 ME20**	2900	2500	4000	**>19≤24**	7,0	32,6	12	22	550	600	760
10,41	406/39	**C402_0105 ME20**	2900	2500	4000	**>24≤32**	8,4	32,6	12	22	550	600	760
10,41	406/39	**C402_0105 ME30**	2900	2500	4000	**≤24**	12	34,5	12	21	550	600	1000
10,41	406/39	**C402_0105 ME30**	2900	2500	4000	**>24≤32**	12	34,5	12	22	550	600	1100

Helical Gear Units **C**
Reductores coaxiales **C**
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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C402 (M2BMAX=600 Nm)													
10,41	406/39	**C402_0105 ME30**	2900	2500	4000	**>32≤38**	14	34,5	12	22	550	600	1100
10,41	406/39	**C402_0105 ME40**	2900	2500	3500	**≤38**	22	39,4	12	22	550	600	1100
10,41	406/39	**C402_0105 ME40**	2900	2500	3500	**>38≤48**	36	39,4	12	22	550	600	1100
11,64	1885/162	**C402_0115 ME20**	2900	2500	4000	**≤19**	6,1	32,6	12	21	390	390	490
11,64	1885/162	**C402_0115 ME20**	2900	2500	4000	**>19≤24**	6,9	32,6	12	22	550	550	850
11,64	1885/162	**C402_0115 ME20**	2900	2500	4000	**>24≤32**	8,3	32,6	12	22	550	550	850
11,64	1885/162	**C402_0115 ME30**	2900	2500	4000	**≤24**	12	34,5	12	22	550	550	1100
11,64	1885/162	**C402_0115 ME30**	2900	2500	4000	**>24≤32**	12	34,5	12	22	550	550	1100
11,64	1885/162	**C402_0115 ME30**	2900	2500	4000	**>32≤38**	14	34,5	12	22	550	550	1100
11,64	1885/162	**C402_0115 ME40**	2900	2500	3500	**≤38**	22	39,4	12	22	550	550	1100
11,64	1885/162	**C402_0115 ME40**	2900	2500	3500	**>38≤48**	36	39,4	12	22	550	550	1100
12,52	651/52	**C402_0125 ME20**	3300	2800	4500	**≤19**	5,3	32,6	12	21	420	420	520
12,52	651/52	**C402_0125 ME20**	3300	2800	4500	**>19≤24**	6,0	32,6	12	22	550	600	910
12,52	651/52	**C402_0125 ME20**	3300	2800	4500	**>24≤32**	7,5	32,6	12	22	550	600	910
12,52	651/52	**C402_0125 ME30**	3300	2800	4000	**≤24**	11	34,5	12	22	550	600	1100
12,52	651/52	**C402_0125 ME30**	3300	2800	4000	**>24≤32**	11	34,5	12	22	550	600	1100
12,52	651/52	**C402_0125 ME30**	3300	2800	4000	**>32≤38**	13	34,5	12	22	550	600	1100
12,52	651/52	**C402_0125 ME40**	3000	2800	3500	**≤38**	21	39,4	12	22	550	600	1100
12,52	651/52	**C402_0125 ME40**	3000	2800	3500	**>38≤48**	35	39,4	12	22	550	600	1100
13,99	2015/144	**C402_0140 ME20**	3300	2800	4500	**≤19**	5,2	32,6	12	21	470	470	590
13,99	2015/144	**C402_0140 ME20**	3300	2800	4500	**>19≤24**	6,0	32,6	12	22	550	550	1020
13,99	2015/144	**C402_0140 ME20**	3300	2800	4500	**>24≤32**	7,4	32,6	12	22	550	550	1020
13,99	2015/144	**C402_0140 ME30**	3300	2800	4000	**≤24**	11	34,5	12	22	550	550	1100
13,99	2015/144	**C402_0140 ME30**	3300	2800	4000	**>24≤32**	11	34,5	12	22	550	550	1100
13,99	2015/144	**C402_0140 ME30**	3300	2800	4000	**>32≤38**	13	34,5	12	22	550	550	1100
13,99	2015/144	**C402_0140 ME40**	3000	2800	3500	**≤38**	21	39,4	12	22	550	550	1100
13,99	2015/144	**C402_0140 ME40**	3000	2800	3500	**>38≤48**	35	39,4	12	22	550	550	1100
15,75	63/4	**C402_0160 ME20**	3300	2800	4500	**≤19**	4,4	32,6	12	21	530	530	660
15,75	63/4	**C402_0160 ME20**	3300	2800	4500	**>19≤24**	5,1	32,6	12	22	550	600	1070
15,75	63/4	**C402_0160 ME20**	3300	2800	4500	**>24≤32**	6,6	32,6	12	22	550	600	1070
15,75	63/4	**C402_0160 ME30**	3300	2800	4000	**≤24**	10	34,5	12	22	550	600	1100
15,75	63/4	**C402_0160 ME30**	3300	2800	4000	**>24≤32**	10	34,5	12	22	550	600	1100
15,75	63/4	**C402_0160 ME30**	3300	2800	4000	**>32≤38**	12	34,5	12	22	550	600	1100
15,75	63/4	**C402_0160 ME40**	3000	2800	3500	**≤38**	20	39,4	12	22	550	600	1100
15,75	63/4	**C402_0160 ME40**	3000	2800	3500	**>38≤48**	34	39,4	12	22	550	600	1100
17,60	845/48	**C402_0175 ME20**	3300	2800	4500	**≤19**	4,3	32,6	12	22	550	550	740
17,60	845/48	**C402_0175 ME20**	3300	2800	4500	**>19≤24**	5,1	32,6	12	22	550	550	1100
17,60	845/48	**C402_0175 ME20**	3300	2800	4500	**>24≤32**	6,5	32,6	12	22	550	550	1100
17,60	845/48	**C402_0175 ME30**	3300	2800	4000	**≤24**	10	34,5	12	22	550	550	1100
17,60	845/48	**C402_0175 ME30**	3300	2800	4000	**>24≤32**	10	34,5	12	22	550	550	1100
17,60	845/48	**C402_0175 ME30**	3300	2800	4000	**>32≤38**	12	34,5	12	22	550	550	1100
17,60	845/48	**C402_0175 ME40**	3000	2800	3500	**≤38**	20	39,4	12	22	550	550	1100
17,60	845/48	**C402_0175 ME40**	3000	2800	3500	**>38≤48**	34	39,4	12	22	550	550	1100
20,90	4347/208	**C402_0210 ME20**	3500	3200	5000	**≤19**	3,5	32,6	12	22	550	600	870
20,90	4347/208	**C402_0210 ME20**	3500	3200	5000	**>19≤24**	4,3	32,6	12	22	550	600	1100
20,90	4347/208	**C402_0210 ME20**	3500	3200	5000	**>24≤32**	5,7	32,6	12	22	550	600	1100
20,90	4347/208	**C402_0210 ME30**	3500	3200	4000	**≤24**	9,3	34,5	12	22	550	600	1100
20,90	4347/208	**C402_0210 ME30**	3500	3200	4000	**>24≤32**	9,5	34,5	12	22	550	600	1100
20,90	4347/208	**C402_0210 ME30**	3500	3200	4000	**>32≤38**	11	34,5	12	22	550	600	1100
20,90	4347/208	**C402_0210 ME40**	3000	3000	3500	**≤38**	19	39,4	12	22	550	600	1100
20,90	4347/208	**C402_0210 ME40**	3000	3000	3500	**>38≤48**	33	39,4	12	22	550	600	1100
23,36	1495/64	**C402_0230 ME20**	3500	3200	5000	**≤19**	3,5	32,6	12	22	550	550	980
23,36	1495/64	**C402_0230 ME20**	3500	3200	5000	**>19≤24**	4,2	32,6	12	22	550	550	1100
23,36	1495/64	**C402_0230 ME20**	3500	3200	5000	**>24≤32**	5,7	32,6	12	22	550	550	1100
23,36	1495/64	**C402_0230 ME30**	3500	3200	4000	**≤24**	9,3	34,5	12	22	550	550	1100
23,36	1495/64	**C402_0230 ME30**	3500	3200	4000	**>24≤32**	9,4	34,5	12	22	550	550	1100
23,36	1495/64	**C402_0230 ME30**	3500	3200	4000	**>32≤38**	11	34,5	12	22	550	550	1100
23,36	1495/64	**C402_0230 ME40**	3000	3000	3500	**≤38**	19	39,4	12	22	550	550	1100
23,36	1495/64	**C402_0230 ME40**	3000	3000	3500	**>38≤48**	33	39,4	12	22	550	550	1100
24,92	324/13	**C402_0250 ME20**	3500	3200	5000	**≤19**	3,1	32,6	12	22	550	600	1040
24,92	324/13	**C402_0250 ME20**	3500	3200	5000	**>19≤24**	3,9	32,6	12	22	550	600	1100
24,92	324/13	**C402_0250 ME20**	3500	3200	5000	**>24≤32**	5,3	32,6	12	22	550	600	1100

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C402 (M2BMAX=600 Nm)													
24,92	324/13	**C402_0250 ME30**	3500	3200	4000	**≤24**	8,8	34,5	12	22	550	600	1100
24,92	324/13	**C402_0250 ME30**	3500	3200	4000	**>24≤32**	8,9	34,5	12	22	550	600	1100
24,92	324/13	**C402_0250 ME30**	3500	3200	4000	**>32≤38**	11	34,5	12	22	550	600	1100
27,86	195/7	**C402_0280 ME20**	3500	3200	5000	**≤19**	3,1	32,6	12	22	550	550	1100
27,86	195/7	**C402_0280 ME20**	3500	3200	5000	**>19≤24**	3,8	32,6	12	22	550	550	1100
27,86	195/7	**C402_0280 ME20**	3500	3200	5000	**>24≤32**	5,3	32,6	12	22	550	550	1100
27,86	195/7	**C402_0280 ME30**	3500	3200	4000	**≤24**	8,8	34,5	12	22	550	550	1100
27,86	195/7	**C402_0280 ME30**	3500	3200	4000	**>24≤32**	8,9	34,5	12	22	550	550	1100
27,86	195/7	**C402_0280 ME30**	3500	3200	4000	**>32≤38**	11	34,5	12	22	550	550	1100
31,15	405/13	**C402_0310 ME20**	3500	3200	5000	**≤19**	2,7	32,6	12	22	550	600	1100
31,15	405/13	**C402_0310 ME20**	3500	3200	5000	**>19≤24**	3,5	32,6	12	22	550	600	1100
31,15	405/13	**C402_0310 ME20**	3500	3200	5000	**>24≤32**	4,9	32,6	12	22	550	600	1100
31,15	405/13	**C402_0310 ME30**	3500	3200	4000	**≤24**	8,4	34,5	12	22	550	600	1100
31,15	405/13	**C402_0310 ME30**	3500	3200	4000	**>24≤32**	8,5	34,5	12	22	550	600	1100
31,15	405/13	**C402_0310 ME30**	3500	3200	4000	**>32≤38**	10	34,5	12	22	550	600	1100
34,82	975/28	**C402_0350 ME20**	3500	3200	5000	**≤19**	2,7	32,6	12	22	550	550	1100
34,82	975/28	**C402_0350 ME20**	3500	3200	5000	**>19≤24**	3,5	32,6	12	22	550	550	1100
34,82	975/28	**C402_0350 ME20**	3500	3200	5000	**>24≤32**	4,9	32,6	12	22	550	550	1100
34,82	975/28	**C402_0350 ME30**	3500	3200	4000	**≤24**	8,4	34,5	12	22	550	550	1100
34,82	975/28	**C402_0350 ME30**	3500	3200	4000	**>24≤32**	8,5	34,5	12	22	550	550	1100
34,82	975/28	**C402_0350 ME30**	3500	3200	4000	**>32≤38**	10	34,5	12	22	550	550	1100
41,75	7056/169	**C402_0420 ME20**	3500	3200	5000	**≤19**	2,4	32,6	12	22	550	600	1100
41,75	7056/169	**C402_0420 ME20**	3500	3200	5000	**>19≤24**	3,1	32,6	12	22	550	600	1100
41,75	7056/169	**C402_0420 ME20**	3500	3200	5000	**>24≤32**	4,6	32,6	12	22	550	600	1100
41,75	7056/169	**C402_0420 ME30**	3500	3200	4000	**≤24**	8,0	34,5	12	22	550	600	1100
41,75	7056/169	**C402_0420 ME30**	3500	3200	4000	**>24≤32**	8,2	34,5	12	22	550	600	1100
41,75	7056/169	**C402_0420 ME30**	3500	3200	4000	**>32≤38**	9,9	34,5	12	22	550	600	1100
46,67	140/3	**C402_0470 ME20**	3500	3200	5000	**≤19**	2,4	32,6	12	22	550	550	1100
46,67	140/3	**C402_0470 ME20**	3500	3200	5000	**>19≤24**	3,1	32,6	12	22	550	550	1100
46,67	140/3	**C402_0470 ME20**	3500	3200	5000	**>24≤32**	4,6	32,6	12	22	550	550	1100
46,67	140/3	**C402_0470 ME30**	3500	3200	4000	**≤24**	8,0	34,5	12	22	550	550	1100
46,67	140/3	**C402_0470 ME30**	3500	3200	4000	**>24≤32**	8,2	34,5	12	22	550	550	1100
46,67	140/3	**C402_0470 ME30**	3500	3200	4000	**>32≤38**	9,9	34,5	12	22	550	550	1100
50,19	1305/26	**C402_0500 ME20**	3500	3200	5000	**≤19**	2,2	32,6	12	22	550	600	930
50,19	1305/26	**C402_0500 ME20**	3500	3200	5000	**>19≤24**	2,9	32,6	12	22	550	600	930
56,10	9425/168	**C402_0560 ME20**	3500	3200	5000	**≤19**	2,2	32,6	12	22	550	550	1040
56,10	9425/168	**C402_0560 ME20**	3500	3200	5000	**>19≤24**	2,9	32,6	12	22	550	550	1040
62,52	8127/130	**C402_0630 ME20**	3500	3200	5000	**≤19**	2,1	32,6	12	22	500	600	960
62,52	8127/130	**C402_0630 ME20**	3500	3200	5000	**>19≤24**	2,8	32,6	12	22	500	600	960
69,88	559/8	**C402_0700 ME20**	3500	3200	5000	**≤19**	2,1	32,6	12	22	550	550	1070
69,88	559/8	**C402_0700 ME20**	3500	3200	5000	**>19≤24**	2,8	32,6	12	22	550	550	1070
C403 (M2BMAX=600 Nm)													
80,81	42021/520	**C403_0810 ME20**	3500	3200	5000	**≤19**	2,1	37,1	12	22	550	600	1100
80,81	42021/520	**C403_0810 ME20**	3500	3200	5000	**>19≤24**	2,8	37,1	12	22	550	600	1100
90,32	8671/96	**C403_0900 ME20**	3500	3200	5000	**≤19**	2,1	37,1	12	22	550	550	1100
90,32	8671/96	**C403_0900 ME20**	3500	3200	5000	**>19≤24**	2,8	37,1	12	22	550	550	1100
107,7	754/7	**C403_1080 ME20**	3500	3200	5000	**≤19**	2,0	37,1	12	22	550	550	1100
107,7	754/7	**C403_1080 ME20**	3500	3200	5000	**>19≤24**	2,8	37,1	12	22	550	550	1100
134,6	1885/14	**C403_1350 ME20**	3500	3200	5000	**≤19**	2,0	37,1	12	22	550	550	1100
134,6	1885/14	**C403_1350 ME20**	3500	3200	5000	**>19≤24**	2,8	37,1	12	22	550	550	1100
180,4	1624/9	**C403_1800 ME20**	3500	3200	5000	**≤19**	2,0	37,1	12	22	550	550	1100
180,4	1624/9	**C403_1800 ME20**	3500	3200	5000	**>19≤24**	2,7	37,1	12	22	550	550	1100
216,9	54665/252	**C403_2170 ME20**	3500	3200	5000	**≤19**	2,0	37,1	12	22	550	550	1040
216,9	54665/252	**C403_2170 ME20**	3500	3200	5000	**>19≤24**	2,7	37,1	12	22	550	550	1040
270,2	16211/60	**C403_2700 ME20**	3500	3200	5000	**≤19**	2,0	37,1	12	22	550	550	1070
270,2	16211/60	**C403_2700 ME20**	3500	3200	5000	**>19≤24**	2,7	37,1	12	22	550	550	1070

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C502 (M2BMAX=920 Nm)													
1,976	81/41	**C502_0020 ME30**	2400	2000	3000	**≤24**	38	46,1	14	15	150	150	190
1,976	81/41	**C502_0020 ME30**	2400	2000	3000	**>24≤32**	38	46,1	14	19	290	310	380
1,976	81/41	**C502_0020 ME30**	2400	2000	3000	**>32≤38**	40	46,1	14	20	290	310	380
1,976	81/41	**C502_0020 ME40**	2400	2000	3000	**≤38**	48	51,0	14	18	360	360	460
1,976	81/41	**C502_0020 ME40**	2400	2000	3000	**>38≤48**	62	51,0	14	20	390	580	720
1,976	81/41	**C502_0020 ME50**	2400	2000	3000	**≤55**	86	58,6	14	20	390	580	720
1,976	81/41	**C502_0020 ME50**	2400	2000	3000	**>55≤60**	90	58,6	14	20	390	580	720
3,077	477/155	**C502_0031 ME30**	2800	2400	3500	**≤24**	23	46,1	14	18	240	240	300
3,077	477/155	**C502_0031 ME30**	2800	2400	3500	**>24≤32**	23	46,1	14	20	350	480	600
3,077	477/155	**C502_0031 ME30**	2800	2400	3500	**>32≤38**	25	46,1	14	21	350	480	600
3,077	477/155	**C502_0031 ME40**	2800	2400	3500	**≤38**	33	51,0	14	20	450	480	600
3,077	477/155	**C502_0031 ME40**	2800	2400	3500	**>38≤48**	47	51,0	14	20	450	480	600
3,077	477/155	**C502_0031 ME50**	2500	2400	3000	**>55≤60**	76	58,6	14	21	450	480	600
3,867	58/15	**C502_0039 ME30**	2800	2400	3500	**≤24**	19	46,1	14	19	300	300	370
3,867	58/15	**C502_0039 ME30**	2800	2400	3500	**>24≤32**	19	46,1	14	20	390	600	750
3,867	58/15	**C502_0039 ME30**	2800	2400	3500	**>32≤38**	20	46,1	14	21	390	600	750
3,867	58/15	**C502_0039 ME40**	2800	2400	3500	**≤38**	29	51,0	14	20	490	600	750
3,867	58/15	**C502_0039 ME40**	2800	2400	3500	**>38≤48**	42	51,0	14	21	490	600	750
3,867	58/15	**C502_0039 ME50**	2500	2400	3000	**>55≤60**	71	58,6	14	21	490	600	750
4,629	162/35	**C502_0046 ME20**	3100	2700	4000	**≤19**	10	44,2	14	18	150	150	190
4,629	162/35	**C502_0046 ME20**	3100	2700	4000	**>19≤24**	11	44,2	14	20	270	270	340
4,629	162/35	**C502_0046 ME20**	3100	2700	4000	**>24≤32**	12	44,2	14	20	270	270	340
4,629	162/35	**C502_0046 ME30**	3100	2700	4000	**≤24**	16	46,1	14	20	360	360	440
4,629	162/35	**C502_0046 ME30**	3100	2700	4000	**>24≤32**	16	46,1	14	21	400	700	880
4,629	162/35	**C502_0046 ME30**	3100	2700	4000	**>32≤38**	18	46,1	14	21	400	700	880
4,629	162/35	**C502_0046 ME40**	3000	2700	3500	**≤38**	26	51,0	14	21	520	700	880
4,629	162/35	**C502_0046 ME40**	3000	2700	3500	**>38≤48**	40	51,0	14	21	520	700	880
4,629	162/35	**C502_0046 ME50**	2500	2500	3000	**>55≤60**	69	58,6	14	21	520	700	880
5,850	117/20	**C502_0059 ME30**	3100	2700	4000	**≤24**	14	46,1	14	20	440	450	560
5,850	117/20	**C502_0059 ME30**	3100	2700	4000	**>24≤32**	14	46,1	14	21	440	770	970
5,850	117/20	**C502_0059 ME30**	3100	2700	4000	**>32≤38**	15	46,1	14	21	440	770	970
5,850	117/20	**C502_0059 ME40**	3000	2700	3500	**≤38**	24	51,0	14	21	560	770	970
5,850	117/20	**C502_0059 ME40**	3000	2700	3500	**>38≤48**	37	51,0	14	21	560	770	970
5,850	117/20	**C502_0059 ME50**	2500	2500	3000	**>55≤60**	66	58,6	14	21	560	770	970
7,763	621/80	**C502_0078 ME20**	3400	3000	4500	**≤19**	5,6	44,2	14	20	260	260	320
7,763	621/80	**C502_0078 ME20**	3400	3000	4500	**>19≤24**	6,3	44,2	14	21	320	400	500
7,763	621/80	**C502_0078 ME20**	3400	3000	4500	**>24≤32**	7,8	44,2	14	21	320	400	500
7,763	621/80	**C502_0078 ME30**	3400	3000	4000	**≤24**	11	46,1	14	21	460	600	750
7,763	621/80	**C502_0078 ME30**	3400	3000	4000	**>24≤32**	12	46,1	14	21	460	800	1110
7,763	621/80	**C502_0078 ME30**	3400	3000	4000	**>32≤38**	13	46,1	14	21	460	800	1110
7,763	621/80	**C502_0078 ME40**	3000	3000	3500	**≤38**	22	51,0	14	21	610	800	1110
7,763	621/80	**C502_0078 ME40**	3000	3000	3500	**>38≤48**	35	51,0	14	21	610	800	1110
7,763	621/80	**C502_0078 ME50**	2500	2500	3000	**>55≤60**	64	58,6	14	21	610	800	1110
8,263	1537/186	**C502_0083 ME30**	2800	2400	3500	**≤24**	19	46,1	12	22	630	630	790
8,263	1537/186	**C502_0083 ME30**	2800	2400	3500	**>24≤32**	19	46,1	12	23	800	920	1600
8,263	1537/186	**C502_0083 ME30**	2800	2400	3500	**>32≤38**	20	46,1	12	23	800	920	1600
8,263	1537/186	**C502_0083 ME40**	2800	2400	3500	**≤38**	29	51,0	12	22	800	920	1600
8,263	1537/186	**C502_0083 ME40**	2800	2400	3500	**>38≤48**	42	51,0	12	23	800	920	1600
8,263	1537/186	**C502_0083 ME50**	2500	2400	3000	**>55≤60**	71	58,6	12	23	800	920	1600
9,261	3445/372	**C502_0093 ME30**	2800	2400	3500	**≤24**	18	46,1	12	22	710	710	890
9,261	3445/372	**C502_0093 ME30**	2800	2400	3500	**>24≤32**	18	46,1	12	23	800	850	1600
9,261	3445/372	**C502_0093 ME30**	2800	2400	3500	**>32≤38**	20	46,1	12	23	800	850	1600
9,261	3445/372	**C502_0093 ME40**	2800	2400	3500	**≤38**	28	51,0	12	23	800	850	1600
9,261	3445/372	**C502_0093 ME40**	2800	2400	3500	**>38≤48**	42	51,0	12	23	800	850	1600
9,261	3445/372	**C502_0093 ME50**	2500	2400	3000	**>55≤60**	71	58,6	12	23	800	850	1600
10,38	841/81	**C502_0105 ME30**	2800	2400	3500	**≤24**	16	46,1	12	22	800	800	1000
10,38	841/81	**C502_0105 ME30**	2800	2400	3500	**>24≤32**	16	46,1	12	23	800	920	1600
10,38	841/81	**C502_0105 ME30**	2800	2400	3500	**>32≤38**	18	46,1	12	23	800	920	1600
10,38	841/81	**C502_0105 ME40**	2800	2400	3500	**≤38**	26	51,0	12	23	800	920	1600
10,38	841/81	**C502_0105 ME40**	2800	2400	3500	**>38≤48**	40	51,0	12	23	800	920	1600
10,38	841/81	**C502_0105 ME50**	2500	2400	3000	**>55≤60**	69	58,6	12	23	800	920	1600
11,64	1885/162	**C502_0115 ME30**	2800	2400	3500	**≤24**	16	46,1	12	22	800	850	1120

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C502 (M2BMAX=920 Nm)													
11,64	1885/162	**C502_0115 ME30**	2800	2400	3500	**>24≤32**	16	46,1	12	23	800	850	1600
11,64	1885/162	**C502_0115 ME30**	2800	2400	3500	**>32≤38**	17	46,1	12	23	800	850	1600
11,64	1885/162	**C502_0115 ME40**	2800	2400	3500	**≤38**	26	51,0	12	23	800	850	1600
11,64	1885/162	**C502_0115 ME40**	2800	2400	3500	**>38≤48**	39	51,0	12	23	800	850	1600
11,64	1885/162	**C502_0115 ME50**	2500	2400	3000	**>55≤60**	68	58,6	12	23	800	850	1600
12,43	87/7	**C502_0125 ME20**	3100	2700	4000	**≤19**	8,1	44,2	12	22	420	420	520
12,43	87/7	**C502_0125 ME20**	3100	2700	4000	**>19≤24**	8,8	44,2	12	22	720	720	900
12,43	87/7	**C502_0125 ME20**	3100	2700	4000	**>24≤32**	10	44,2	12	23	720	720	900
12,43	87/7	**C502_0125 ME30**	3100	2700	4000	**≤24**	14	46,1	12	22	800	920	1190
12,43	87/7	**C502_0125 ME30**	3100	2700	4000	**>24≤32**	14	46,1	12	23	800	920	1600
12,43	87/7	**C502_0125 ME30**	3100	2700	4000	**>32≤38**	16	46,1	12	23	800	920	1600
12,43	87/7	**C502_0125 ME40**	3000	2700	3500	**≤38**	24	51,0	12	23	800	920	1600
12,43	87/7	**C502_0125 ME40**	3000	2700	3500	**>38≤48**	38	51,0	12	23	800	920	1600
12,43	87/7	**C502_0125 ME50**	2500	2500	3000	**>55≤60**	67	58,6	12	23	800	920	1600
13,93	195/14	**C502_0140 ME20**	3100	2700	4000	**≤19**	7,9	44,2	12	22	470	470	580
13,93	195/14	**C502_0140 ME20**	3100	2700	4000	**>19≤24**	8,7	44,2	12	23	800	810	1010
13,93	195/14	**C502_0140 ME20**	3100	2700	4000	**>24≤32**	10	44,2	12	23	800	810	1010
13,93	195/14	**C502_0140 ME30**	3100	2700	4000	**≤24**	14	46,1	12	22	800	850	1340
13,93	195/14	**C502_0140 ME30**	3100	2700	4000	**>24≤32**	14	46,1	12	23	800	850	1600
13,93	195/14	**C502_0140 ME30**	3100	2700	4000	**>32≤38**	16	46,1	12	23	800	850	1600
13,93	195/14	**C502_0140 ME40**	3000	2700	3500	**≤38**	24	51,0	12	23	800	850	1600
13,93	195/14	**C502_0140 ME40**	3000	2700	3500	**>38≤48**	37	51,0	12	23	800	850	1600
13,93	195/14	**C502_0140 ME50**	2500	2500	3000	**>55≤60**	67	58,6	12	23	800	850	1600
15,71	377/24	**C502_0155 ME30**	3100	2700	4000	**≤24**	12	46,1	12	23	800	920	1510
15,71	377/24	**C502_0155 ME30**	3100	2700	4000	**>24≤32**	12	46,1	12	23	800	920	1600
15,71	377/24	**C502_0155 ME30**	3100	2700	4000	**>32≤38**	14	46,1	12	23	800	920	1600
15,71	377/24	**C502_0155 ME40**	3000	2700	3500	**≤38**	22	51,0	12	23	800	920	1600
15,71	377/24	**C502_0155 ME40**	3000	2700	3500	**>38≤48**	36	51,0	12	23	800	920	1600
15,71	377/24	**C502_0155 ME50**	2500	2500	3000	**>55≤60**	65	58,6	12	23	800	920	1600
17,60	845/48	**C502_0175 ME30**	3100	2700	4000	**≤24**	12	46,1	12	23	800	850	1600
17,60	845/48	**C502_0175 ME30**	3100	2700	4000	**>24≤32**	12	46,1	12	23	800	850	1600
17,60	845/48	**C502_0175 ME30**	3100	2700	4000	**>32≤38**	14	46,1	12	23	800	850	1600
17,60	845/48	**C502_0175 ME40**	3000	2700	3500	**≤38**	22	51,0	12	23	800	850	1600
17,60	845/48	**C502_0175 ME40**	3000	2700	3500	**>38≤48**	36	51,0	12	23	800	850	1600
17,60	845/48	**C502_0175 ME50**	2500	2500	3000	**>55≤60**	65	58,6	12	23	800	850	1600
20,84	667/32	**C502_0210 ME20**	3400	3000	4500	**≤19**	4,9	44,2	12	22	700	700	870
20,84	667/32	**C502_0210 ME20**	3400	3000	4500	**>19≤24**	5,6	44,2	12	23	800	920	1330
20,84	667/32	**C502_0210 ME20**	3400	3000	4500	**>24≤32**	7,1	44,2	12	23	800	920	1330
20,84	667/32	**C502_0210 ME30**	3400	3000	4000	**≤24**	11	46,1	12	23	800	920	1600
20,84	667/32	**C502_0210 ME30**	3400	3000	4000	**>24≤32**	11	46,1	12	23	800	920	1600
20,84	667/32	**C502_0210 ME30**	3400	3000	4000	**>32≤38**	13	46,1	12	23	800	920	1600
20,84	667/32	**C502_0210 ME40**	3000	3000	3500	**≤38**	21	51,0	12	23	800	920	1600
20,84	667/32	**C502_0210 ME40**	3000	3000	3500	**>38≤48**	34	51,0	12	23	800	920	1600
20,84	667/32	**C502_0210 ME50**	2500	2500	3000	**>55≤60**	64	58,6	12	23	800	920	1600
23,36	1495/64	**C502_0230 ME20**	3400	3000	4500	**≤19**	4,9	44,2	12	23	780	780	980
23,36	1495/64	**C502_0230 ME20**	3400	3000	4500	**>19≤24**	5,6	44,2	12	23	800	850	1490
23,36	1495/64	**C502_0230 ME20**	3400	3000	4500	**>24≤32**	7,1	44,2	12	23	800	850	1490
23,36	1495/64	**C502_0230 ME30**	3400	3000	4000	**≤24**	11	46,1	12	23	800	850	1600
23,36	1495/64	**C502_0230 ME30**	3400	3000	4000	**>24≤32**	11	46,1	12	23	800	850	1600
23,36	1495/64	**C502_0230 ME30**	3400	3000	4000	**>32≤38**	13	46,1	12	23	800	850	1600
23,36	1495/64	**C502_0230 ME40**	3000	3000	3500	**≤38**	21	51,0	12	23	800	850	1600
23,36	1495/64	**C502_0230 ME40**	3000	3000	3500	**>38≤48**	34	51,0	12	23	800	850	1600
23,36	1495/64	**C502_0230 ME50**	2500	2500	3000	**>55≤60**	63	58,6	12	23	800	850	1600
25,07	2407/96	**C502_0250 ME20**	3400	3000	4500	**≤19**	4,1	44,2	12	23	800	840	1050
25,07	2407/96	**C502_0250 ME20**	3400	3000	4500	**>19≤24**	4,9	44,2	12	23	800	920	1440
25,07	2407/96	**C502_0250 ME20**	3400	3000	4500	**>24≤32**	6,3	44,2	12	23	800	920	1440
25,07	2407/96	**C502_0250 ME30**	3400	3000	4000	**≤24**	9,9	46,1	12	23	800	920	1600
25,07	2407/96	**C502_0250 ME30**	3400	3000	4000	**>24≤32**	10	46,1	12	23	800	920	1600
25,07	2407/96	**C502_0250 ME30**	3400	3000	4000	**>32≤38**	12	46,1	12	23	800	920	1600
25,07	2407/96	**C502_0250 ME40**	3000	3000	3500	**≤38**	20	51,0	12	23	800	920	1600
25,07	2407/96	**C502_0250 ME40**	3000	3000	3500	**>38≤48**	34	51,0	12	23	800	920	1600
25,07	2407/96	**C502_0250 ME50**	2500	2500	3000	**>55≤60**	63	58,6	12	23	800	920	1600

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C502 (M2BMAX=920 Nm)													
28,10	5395/192	**C502_0280 ME20**	3400	3000	4500	**≤19**	4,1	44,2	12	23	800	850	1170
28,10	5395/192	**C502_0280 ME20**	3400	3000	4500	**>19≤24**	4,8	44,2	12	23	800	850	1600
28,10	5395/192	**C502_0280 ME20**	3400	3000	4500	**>24≤32**	6,3	44,2	12	23	800	850	1600
28,10	5395/192	**C502_0280 ME30**	3400	3000	4000	**≤24**	9,9	46,1	12	23	800	850	1600
28,10	5395/192	**C502_0280 ME30**	3400	3000	4000	**>24≤32**	10	46,1	12	23	800	850	1600
28,10	5395/192	**C502_0280 ME30**	3400	3000	4000	**>32≤38**	12	46,1	12	23	800	850	1600
28,10	5395/192	**C502_0280 ME40**	3000	3000	3500	**≤38**	20	51,0	12	23	800	850	1600
28,10	5395/192	**C502_0280 ME40**	3000	3000	3500	**>38≤48**	34	51,0	12	23	800	850	1600
28,10	5395/192	**C502_0280 ME50**	2500	2500	3000	**>55≤60**	63	58,6	12	23	800	850	1600
31,23	406/13	**C502_0310 ME20**	3400	3000	4500	**≤19**	3,5	44,2	12	23	800	920	1310
31,23	406/13	**C502_0310 ME20**	3400	3000	4500	**>19≤24**	4,2	44,2	12	23	800	920	1520
31,23	406/13	**C502_0310 ME20**	3400	3000	4500	**>24≤32**	5,7	44,2	12	23	800	920	1520
31,23	406/13	**C502_0310 ME30**	3400	3000	4000	**≤24**	9,1	46,1	12	23	800	920	1520
31,23	406/13	**C502_0310 ME30**	3400	3000	4000	**>24≤32**	9,3	46,1	12	23	800	920	1520
31,23	406/13	**C502_0310 ME30**	3400	3000	4000	**>32≤38**	11	46,1	12	23	800	920	1520
35,00	35/1	**C502_0350 ME20**	3400	3000	4500	**≤19**	3,4	44,2	12	23	800	850	1460
35,00	35/1	**C502_0350 ME20**	3400	3000	4500	**>19≤24**	4,2	44,2	12	23	800	850	1600
35,00	35/1	**C502_0350 ME20**	3400	3000	4500	**>24≤32**	5,6	44,2	12	23	800	850	1600
35,00	35/1	**C502_0350 ME30**	3400	3000	4000	**≤24**	9,1	46,1	12	23	800	850	1600
35,00	35/1	**C502_0350 ME30**	3400	3000	4000	**>24≤32**	9,2	46,1	12	23	800	850	1600
35,00	35/1	**C502_0350 ME30**	3400	3000	4000	**>32≤38**	11	46,1	12	23	800	850	1600
41,69	667/16	**C502_0420 ME20**	3400	3000	4500	**≤19**	2,8	44,2	12	23	800	920	1600
41,69	667/16	**C502_0420 ME20**	3400	3000	4500	**>19≤24**	3,6	44,2	12	23	800	920	1600
41,69	667/16	**C502_0420 ME20**	3400	3000	4500	**>24≤32**	5,0	44,2	12	23	800	920	1600
41,69	667/16	**C502_0420 ME30**	3400	3000	4000	**≤24**	8,5	46,1	12	23	800	920	1600
41,69	667/16	**C502_0420 ME30**	3400	3000	4000	**>24≤32**	8,6	46,1	12	23	800	920	1600
41,69	667/16	**C502_0420 ME30**	3400	3000	4000	**>32≤38**	10	46,1	12	23	800	920	1600
46,72	1495/32	**C502_0470 ME20**	3400	3000	4500	**≤19**	2,8	44,2	12	23	800	850	1600
46,72	1495/32	**C502_0470 ME20**	3400	3000	4500	**>19≤24**	3,6	44,2	12	23	800	850	1600
46,72	1495/32	**C502_0470 ME20**	3400	3000	4500	**>24≤32**	5,0	44,2	12	23	800	850	1600
46,72	1495/32	**C502_0470 ME30**	3400	3000	4000	**≤24**	8,5	46,1	12	23	800	850	1600
46,72	1495/32	**C502_0470 ME30**	3400	3000	4000	**>24≤32**	8,6	46,1	12	23	800	850	1600
46,72	1495/32	**C502_0470 ME30**	3400	3000	4000	**>32≤38**	10	46,1	12	23	800	850	1600
49,82	1943/39	**C502_0500 ME20**	3400	3000	4500	**≤19**	2,6	44,2	12	23	800	920	1600
49,82	1943/39	**C502_0500 ME20**	3400	3000	4500	**>19≤24**	3,3	44,2	12	23	800	920	1600
49,82	1943/39	**C502_0500 ME20**	3400	3000	4500	**>24≤32**	4,8	44,2	12	23	800	920	1600
49,82	1943/39	**C502_0500 ME30**	3400	3000	4000	**≤24**	8,2	46,1	12	23	800	920	1600
49,82	1943/39	**C502_0500 ME30**	3400	3000	4000	**>24≤32**	8,4	46,1	12	23	800	920	1600
49,82	1943/39	**C502_0500 ME30**	3400	3000	4000	**>32≤38**	10	46,1	12	23	800	920	1600
55,83	335/6	**C502_0560 ME20**	3400	3000	4500	**≤19**	2,6	44,2	12	23	800	850	1600
55,83	335/6	**C502_0560 ME20**	3400	3000	4500	**>19≤24**	3,3	44,2	12	23	800	850	1600
55,83	335/6	**C502_0560 ME20**	3400	3000	4500	**>24≤32**	4,8	44,2	12	23	800	850	1600
55,83	335/6	**C502_0560 ME30**	3400	3000	4000	**≤24**	8,2	46,1	12	23	800	850	1600
55,83	335/6	**C502_0560 ME30**	3400	3000	4000	**>24≤32**	8,4	46,1	12	23	800	850	1600
55,83	335/6	**C502_0560 ME30**	3400	3000	4000	**>32≤38**	10	46,1	12	23	800	850	1600
62,43	4495/72	**C502_0620 ME20**	3400	3000	4500	**≤19**	2,3	44,2	12	23	710	860	1080
62,43	4495/72	**C502_0620 ME20**	3400	3000	4500	**>19≤24**	3,0	44,2	12	23	710	860	1080
69,97	10075/144	**C502_0700 ME20**	3400	3000	4500	**≤19**	2,3	44,2	12	23	800	850	1210
69,97	10075/144	**C502_0700 ME20**	3400	3000	4500	**>19≤24**	3,0	44,2	12	23	800	850	1210

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C503 (M2BMAX=920 Nm)													
80,60	19343/240	**C503_0810 ME20**	3400	3000	4500	**≤19**	2,2	48,1	12	23	800	920	1330
80,60	19343/240	**C503_0810 ME20**	3400	3000	4500	**>19≤24**	2,9	48,1	12	23	800	920	1330
90,32	8671/96	**C503_0900 ME20**	3400	3000	4500	**≤19**	2,2	48,1	12	23	800	850	1490
90,32	8671/96	**C503_0900 ME20**	3400	3000	4500	**>19≤24**	2,9	48,1	12	23	800	850	1490
108,6	31291/288	**C503_1090 ME20**	3400	3000	4500	**≤19**	2,1	48,1	12	23	800	850	1600
108,6	31291/288	**C503_1090 ME20**	3400	3000	4500	**>19≤24**	2,8	48,1	12	23	800	850	1600
135,3	406/3	**C503_1350 ME20**	3400	3000	4500	**≤19**	2,1	48,1	12	23	800	850	1600
135,3	406/3	**C503_1350 ME20**	3400	3000	4500	**>19≤24**	2,8	48,1	12	23	800	850	1600
180,6	8671/48	**C503_1810 ME20**	3400	3000	4500	**≤19**	2,0	48,1	12	23	800	850	1600
180,6	8671/48	**C503_1810 ME20**	3400	3000	4500	**>19≤24**	2,8	48,1	12	23	800	850	1600
215,9	1943/9	**C503_2160 ME20**	3400	3000	4500	**≤19**	2,0	48,1	12	23	800	850	1600
215,9	1943/9	**C503_2160 ME20**	3400	3000	4500	**>19≤24**	2,7	48,1	12	23	800	850	1600
270,5	58435/216	**C503_2710 ME20**	3400	3000	4500	**≤19**	2,0	48,1	12	23	800	850	1210
270,5	58435/216	**C503_2710 ME20**	3400	3000	4500	**>19≤24**	2,7	48,1	12	23	800	850	1210
C612 (M2BMAX=1650 Nm)													
4,184	2745/656	**C612_0042 ME40**	2300	1900	2800	**≤38**	65	66,3	10	66	770	770	960
4,184	2745/656	**C612_0042 ME40**	2300	1900	2800	**>38≤48**	79	66,3	10	70	930	1220	1520
4,184	2745/656	**C612_0042 ME50**	2300	1900	2800	**≤55**	103	73,9	10	72	930	1220	1520
4,184	2745/656	**C612_0042 ME50**	2300	1900	2800	**>55≤60**	107	73,9	10	72	930	1220	1520
5,083	61/12	**C612_0051 ME40**	2300	1900	2800	**≤38**	54	66,3	10	69	940	940	1170
5,083	61/12	**C612_0051 ME40**	2300	1900	2800	**>38≤48**	68	66,3	10	71	990	1480	1850
5,083	61/12	**C612_0051 ME50**	2300	1900	2800	**≤55**	92	73,9	10	72	990	1480	1850
5,083	61/12	**C612_0051 ME50**	2300	1900	2800	**>55≤60**	96	73,9	10	72	990	1480	1850
6,518	3233/496	**C612_0065 ME30**	2700	2300	3300	**≤24**	33	61,4	10	65	500	500	630
6,518	3233/496	**C612_0065 ME30**	2700	2300	3300	**>24≤32**	33	61,4	10	71	830	1010	1260
6,518	3233/496	**C612_0065 ME30**	2700	2300	3300	**>32≤38**	35	61,4	10	72	830	1010	1260
6,518	3233/496	**C612_0065 ME40**	2700	2300	3300	**≤38**	44	66,3	10	71	1070	1200	1500
6,518	3233/496	**C612_0065 ME40**	2700	2300	3300	**>38≤48**	58	66,3	10	72	1070	1610	2370
6,518	3233/496	**C612_0065 ME50**	2500	2300	3000	**≤55**	82	73,9	10	73	1070	1610	2370
6,518	3233/496	**C612_0065 ME50**	2500	2300	3000	**>55≤60**	86	73,9	10	73	1070	1610	2370
7,111	64/9	**C612_0071 ME40**	2300	1900	2800	**≤38**	51	66,3	10	71	1110	1310	1640
7,111	64/9	**C612_0071 ME40**	2300	1900	2800	**>38≤48**	64	66,3	10	73	1110	1380	2590
7,111	64/9	**C612_0071 ME50**	2300	1900	2800	**≤55**	88	73,9	10	73	1110	1380	2590
7,111	64/9	**C612_0071 ME50**	2300	1900	2800	**>55≤60**	92	73,9	10	73	1110	1380	2590
8,190	1769/216	**C612_0082 ME30**	2700	2300	3300	**≤24**	27	61,4	10	68	630	630	790
8,190	1769/216	**C612_0082 ME30**	2700	2300	3300	**>24≤32**	27	61,4	10	72	910	1270	1580
8,190	1769/216	**C612_0082 ME30**	2700	2300	3300	**>32≤38**	29	61,4	10	73	910	1270	1580
8,190	1769/216	**C612_0082 ME40**	2700	2300	3300	**≤38**	37	66,3	10	72	1160	1510	1890
8,190	1769/216	**C612_0082 ME40**	2700	2300	3300	**>38≤48**	51	66,3	10	73	1160	1650	2900
8,190	1769/216	**C612_0082 ME50**	2500	2300	3000	**≤55**	75	73,9	10	73	1160	1650	2900
8,190	1769/216	**C612_0082 ME50**	2500	2300	3000	**>55≤60**	79	73,9	10	74	1160	1650	2900
9,118	848/93	**C612_0091 ME30**	2700	2300	3300	**≤24**	31	61,4	10	69	700	700	880
9,118	848/93	**C612_0091 ME30**	2700	2300	3300	**>24≤32**	31	61,4	10	73	1160	1380	1770
9,118	848/93	**C612_0091 ME30**	2700	2300	3300	**>32≤38**	33	61,4	10	73	1160	1380	1770
9,118	848/93	**C612_0091 ME40**	2700	2300	3300	**≤38**	42	66,3	10	72	1200	1380	2100
9,118	848/93	**C612_0091 ME40**	2700	2300	3300	**>38≤48**	56	66,3	10	73	1200	1380	2600
9,118	848/93	**C612_0091 ME50**	2500	2300	3000	**≤55**	79	73,9	10	74	1200	1380	2600
9,118	848/93	**C612_0091 ME50**	2500	2300	3000	**>55≤60**	83	73,9	10	74	1200	1380	2600
10,11	3721/368	**C612_0100 ME30**	3000	2600	3500	**≤24**	22	61,4	10	70	780	780	970
10,11	3721/368	**C612_0100 ME30**	3000	2600	3500	**>24≤32**	22	61,4	10	73	960	1440	1800
10,11	3721/368	**C612_0100 ME30**	3000	2600	3500	**>32≤38**	24	61,4	10	73	960	1440	1800
10,11	3721/368	**C612_0100 ME40**	3000	2600	3500	**≤38**	33	66,3	10	73	1240	1650	2330
10,11	3721/368	**C612_0100 ME40**	3000	2600	3500	**>38≤48**	47	66,3	10	73	1240	1650	2900
10,11	3721/368	**C612_0100 ME50**	2500	2500	3000	**≤55**	71	73,9	10	74	1240	1650	2900
10,11	3721/368	**C612_0100 ME50**	2500	2500	3000	**>55≤60**	75	73,9	10	74	1240	1650	2900
11,46	928/81	**C612_0115 ME30**	2700	2300	3300	**≤24**	25	61,4	10	71	880	880	1100
11,46	928/81	**C612_0115 ME30**	2700	2300	3300	**>24≤32**	25	61,4	10	73	1280	1380	2220
11,46	928/81	**C612_0115 ME30**	2700	2300	3300	**>32≤38**	27	61,4	10	74	1280	1380	2220
11,46	928/81	**C612_0115 ME40**	2700	2300	3300	**≤38**	36	66,3	10	73	1300	1380	2600

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C612 (M2BMAX=1650 Nm)													
11,46	928/81	**C612_0115 ME40**	2700	2300	3300	**>38≤48**	50	66,3	10	74	1300	1380	2600
11,46	928/81	**C612_0115 ME50**	2500	2300	3000	**≤55**	74	73,9	10	74	1300	1380	2600
11,46	928/81	**C612_0115 ME50**	2500	2300	3000	**>55≤60**	78	73,9	10	74	1300	1380	2600
12,58	2013/160	**C612_0125 ME30**	3000	2600	3500	**≤24**	18	61,4	10	72	970	970	1210
12,58	2013/160	**C612_0125 ME30**	3000	2600	3500	**>24≤32**	19	61,4	10	73	1030	1650	2120
12,58	2013/160	**C612_0125 ME30**	3000	2600	3500	**>32≤38**	20	61,4	10	74	1030	1650	2120
12,58	2013/160	**C612_0125 ME40**	3000	2600	3500	**≤38**	29	66,3	10	73	1340	1650	2900
12,58	2013/160	**C612_0125 ME40**	3000	2600	3500	**>38≤48**	43	66,3	10	74	1340	1650	2900
12,58	2013/160	**C612_0125 ME50**	2500	2500	3000	**≤55**	67	73,9	10	74	1340	1650	2900
12,58	2013/160	**C612_0125 ME50**	2500	2500	3000	**>55≤60**	71	73,9	10	74	1340	1650	2900
14,15	976/69	**C612_0140 ME30**	3000	2600	3500	**≤24**	21	61,4	10	72	1090	1090	1360
14,15	976/69	**C612_0140 ME30**	3000	2600	3500	**>24≤32**	21	61,4	10	73	1300	1380	2520
14,15	976/69	**C612_0140 ME30**	3000	2600	3500	**>32≤38**	23	61,4	10	74	1300	1380	2520
14,15	976/69	**C612_0140 ME40**	3000	2600	3500	**≤38**	32	66,3	10	73	1300	1380	2600
14,15	976/69	**C612_0140 ME40**	3000	2600	3500	**>38≤48**	46	66,3	10	74	1300	1380	2600
14,15	976/69	**C612_0140 ME50**	2500	2500	3000	**≤55**	70	73,9	10	74	1300	1380	2600
14,15	976/69	**C612_0140 ME50**	2500	2500	3000	**>55≤60**	74	73,9	10	74	1300	1380	2600
16,20	1037/64	**C612_0160 ME30**	3200	2900	4000	**≤24**	15	61,4	10	73	1090	1240	1560
16,20	1037/64	**C612_0160 ME30**	3200	2900	4000	**>24≤32**	15	61,4	10	74	1090	1650	2290
16,20	1037/64	**C612_0160 ME30**	3200	2900	4000	**>32≤38**	17	61,4	10	74	1090	1650	2290
16,20	1037/64	**C612_0160 ME40**	3000	2900	3500	**≤38**	26	66,3	10	74	1450	1650	2900
16,20	1037/64	**C612_0160 ME40**	3000	2900	3500	**>38≤48**	39	66,3	10	74	1450	1650	2900
16,20	1037/64	**C612_0160 ME50**	2500	2500	3000	**≤55**	63	73,9	10	74	1450	1650	2900
16,20	1037/64	**C612_0160 ME50**	2500	2500	3000	**>55≤60**	67	73,9	10	74	1450	1650	2900
17,60	88/5	**C612_0175 ME30**	3000	2600	3500	**≤24**	18	61,4	10	73	1300	1350	1690
17,60	88/5	**C612_0175 ME30**	3000	2600	3500	**>24≤32**	18	61,4	10	74	1300	1380	2600
17,60	88/5	**C612_0175 ME30**	3000	2600	3500	**>32≤38**	20	61,4	10	74	1300	1380	2600
17,60	88/5	**C612_0175 ME40**	3000	2600	3500	**≤38**	28	66,3	10	74	1300	1380	2600
17,60	88/5	**C612_0175 ME40**	3000	2600	3500	**>38≤48**	42	66,3	10	74	1300	1380	2600
17,60	88/5	**C612_0175 ME50**	2500	2500	3000	**≤55**	66	73,9	10	74	1300	1380	2600
17,60	88/5	**C612_0175 ME50**	2500	2500	3000	**>55≤60**	70	73,9	10	74	1300	1380	2600
19,61	549/28	**C612_0195 ME30**	3200	2900	4000	**≤24**	13	61,4	10	73	1130	1510	1880
19,61	549/28	**C612_0195 ME30**	3200	2900	4000	**>24≤32**	13	61,4	10	74	1130	1650	2560
19,61	549/28	**C612_0195 ME30**	3200	2900	4000	**>32≤38**	15	61,4	10	74	1130	1650	2560
19,61	549/28	**C612_0195 ME40**	3000	2900	3500	**≤38**	23	66,3	10	74	1450	1650	2560
19,61	549/28	**C612_0195 ME40**	3000	2900	3500	**>38≤48**	37	66,3	10	74	1450	1650	2560
19,61	549/28	**C612_0195 ME50**	2500	2500	3000	**>55≤60**	66	73,9	10	74	1450	1650	2560
22,67	68/3	**C612_0230 ME30**	3200	2900	4000	**≤24**	15	61,4	10	73	1300	1380	2180
22,67	68/3	**C612_0230 ME30**	3200	2900	4000	**>24≤32**	15	61,4	10	74	1300	1380	2600
22,67	68/3	**C612_0230 ME30**	3200	2900	4000	**>32≤38**	16	61,4	10	74	1300	1380	2600
22,67	68/3	**C612_0230 ME40**	3000	2900	3500	**≤38**	25	66,3	10	74	1300	1380	2600
22,67	68/3	**C612_0230 ME40**	3000	2900	3500	**>38≤48**	39	66,3	10	74	1300	1380	2600
22,67	68/3	**C612_0230 ME50**	2500	2500	3000	**≤55**	63	73,9	10	74	1300	1380	2600
22,67	68/3	**C612_0230 ME50**	2500	2500	3000	**>55≤60**	67	73,9	10	74	1300	1380	2600
24,93	5185/208	**C612_0250 ME30**	3200	2900	4000	**≤24**	11	61,4	10	73	1170	1650	2390
24,93	5185/208	**C612_0250 ME30**	3200	2900	4000	**>24≤32**	11	61,4	10	74	1170	1650	2900
24,93	5185/208	**C612_0250 ME30**	3200	2900	4000	**>32≤38**	13	61,4	10	74	1170	1650	2900
24,93	5185/208	**C612_0250 ME40**	3000	2900	3500	**≤38**	21	66,3	10	74	1450	1650	2900
24,93	5185/208	**C612_0250 ME40**	3000	2900	3500	**>38≤48**	35	66,3	10	74	1450	1650	2900
24,93	5185/208	**C612_0250 ME50**	2500	2500	3000	**>55≤60**	64	73,9	10	74	1450	1650	2900
27,43	192/7	**C612_0270 ME30**	3200	2900	4000	**≤24**	13	61,4	10	74	1300	1380	2600
27,43	192/7	**C612_0270 ME30**	3200	2900	4000	**>24≤32**	13	61,4	10	74	1300	1380	2600
27,43	192/7	**C612_0270 ME30**	3200	2900	4000	**>32≤38**	15	61,4	10	74	1300	1380	2600
27,43	192/7	**C612_0270 ME40**	3000	2900	3500	**≤38**	23	66,3	10	74	1300	1380	2600
27,43	192/7	**C612_0270 ME40**	3000	2900	3500	**>38≤48**	37	66,3	10	74	1300	1380	2600
27,43	192/7	**C612_0270 ME50**	2500	2500	3000	**>55≤60**	66	73,9	10	74	1300	1380	2600
32,41	1037/32	**C612_0320 ME30**	3200	2900	4000	**≤24**	10,0	61,4	10	74	1220	1650	2900
32,41	1037/32	**C612_0320 ME30**	3200	2900	4000	**>24≤32**	10	61,4	10	74	1220	1650	2900
32,41	1037/32	**C612_0320 ME30**	3200	2900	4000	**>32≤38**	12	61,4	10	74	1220	1650	2900
32,41	1037/32	**C612_0320 ME40**	3000	2900	3500	**≤38**	20	66,3	10	74	1450	1650	2900
32,41	1037/32	**C612_0320 ME40**	3000	2900	3500	**>38≤48**	34	66,3	10	74	1450	1650	2900
32,41	1037/32	**C612_0320 ME50**	2500	2500	3000	**>55≤60**	63	73,9	10	74	1450	1650	2900

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C612 (M2BMAX=1650 Nm)													
34,87	1360/39	**C612_0350 ME30**	3200	2900	4000	**≤24**	11	61,4	10	74	1300	1380	2600
34,87	1360/39	**C612_0350 ME30**	3200	2900	4000	**>24≤32**	11	61,4	10	74	1300	1380	2600
34,87	1360/39	**C612_0350 ME30**	3200	2900	4000	**>32≤38**	13	61,4	10	74	1300	1380	2600
34,87	1360/39	**C612_0350 ME40**	3000	2900	3500	**≤38**	21	66,3	10	74	1300	1380	2600
34,87	1360/39	**C612_0350 ME40**	3000	2900	3500	**>38≤48**	35	66,3	10	74	1300	1380	2600
34,87	1360/39	**C612_0350 ME50**	2500	2500	3000	**>55≤60**	64	73,9	10	74	1300	1380	2600
39,40	1891/48	**C612_0390 ME30**	3200	2900	4000	**≤24**	9,2	61,4	10	74	1220	1280	1600
39,40	1891/48	**C612_0390 ME30**	3200	2900	4000	**>24≤32**	9,3	61,4	10	74	1220	1280	1600
39,40	1891/48	**C612_0390 ME30**	3200	2900	4000	**>32≤38**	11	61,4	10	74	1220	1280	1600
45,33	136/3	**C612_0450 ME30**	3200	2900	4000	**≤24**	9,9	61,4	10	74	1300	1380	2600
45,33	136/3	**C612_0450 ME30**	3200	2900	4000	**>24≤32**	10	61,4	10	74	1300	1380	2600
45,33	136/3	**C612_0450 ME30**	3200	2900	4000	**>32≤38**	12	61,4	10	74	1300	1380	2600
45,33	136/3	**C612_0450 ME40**	3000	2900	3500	**≤38**	20	66,3	10	74	1300	1380	2600
45,33	136/3	**C612_0450 ME40**	3000	2900	3500	**>38≤48**	34	66,3	10	74	1300	1380	2600
45,33	136/3	**C612_0450 ME50**	2500	2500	3000	**>55≤60**	63	73,9	10	74	1300	1380	2600
55,11	496/9	**C612_0550 ME30**	3200	2900	4000	**≤24**	9,1	61,4	10	74	1300	1380	2240
55,11	496/9	**C612_0550 ME30**	3200	2900	4000	**>24≤32**	9,2	61,4	10	74	1300	1380	2240
55,11	496/9	**C612_0550 ME30**	3200	2900	4000	**>32≤38**	11	61,4	10	74	1300	1380	2240
68,89	620/9	**C612_0690 ME30**	3200	2900	4000	**≤24**	8,6	61,4	10	74	1300	1380	2360
68,89	620/9	**C612_0690 ME30**	3200	2900	4000	**>24≤32**	8,7	61,4	10	74	1300	1380	2360
68,89	620/9	**C612_0690 ME30**	3200	2900	4000	**>32≤38**	10	61,4	10	74	1300	1380	2360
C613 (M2BMAX=1650 Nm)													
49,28	31537/640	**C613_0490 ME30**	3200	2900	4000	**≤24**	8,6	69,8	10	74	1450	1550	1940
49,28	31537/640	**C613_0490 ME30**	3200	2900	4000	**>24≤32**	8,8	69,8	10	74	1450	1550	1940
49,28	31537/640	**C613_0490 ME30**	3200	2900	4000	**>32≤38**	11	69,8	10	74	1450	1550	1940
63,46	48739/768	**C613_0630 ME30**	3200	2900	4000	**≤24**	8,4	69,8	10	74	1450	1650	2290
63,46	48739/768	**C613_0630 ME30**	3200	2900	4000	**>24≤32**	8,5	69,8	10	74	1450	1650	2290
63,46	48739/768	**C613_0630 ME30**	3200	2900	4000	**>32≤38**	10	69,8	10	74	1450	1650	2290
75,81	5307/70	**C613_0760 ME20**	3200	2900	4000	**≤19**	2,3	67,9	10	74	910	910	1140
75,81	5307/70	**C613_0760 ME20**	3200	2900	4000	**>19≤24**	3,1	67,9	10	74	910	910	1140
76,80	8601/112	**C613_0770 ME30**	3200	2900	4000	**≤24**	8,3	69,8	10	74	1450	1650	2560
76,80	8601/112	**C613_0770 ME30**	3200	2900	4000	**>24≤32**	8,4	69,8	10	74	1450	1650	2560
76,80	8601/112	**C613_0770 ME30**	3200	2900	4000	**>32≤38**	10	69,8	10	74	1450	1650	2560
88,78	799/9	**C613_0890 ME30**	3200	2900	4000	**≤24**	8,4	69,8	10	74	1300	1380	2600
88,78	799/9	**C613_0890 ME30**	3200	2900	4000	**>24≤32**	8,5	69,8	10	74	1300	1380	2600
88,78	799/9	**C613_0890 ME30**	3200	2900	4000	**>32≤38**	10	69,8	10	74	1300	1380	2600
97,63	243695/2496	**C613_0980 ME30**	3200	2900	4000	**≤24**	8,2	69,8	10	74	1450	1650	2900
97,63	243695/2496	**C613_0980 ME30**	3200	2900	4000	**>24≤32**	8,3	69,8	10	74	1450	1650	2900
97,63	243695/2496	**C613_0980 ME30**	3200	2900	4000	**>32≤38**	10	69,8	10	74	1450	1650	2900
106,1	3712/35	**C613_1060 ME20**	3200	2900	4000	**≤19**	2,3	67,9	10	74	1280	1280	1600
106,1	3712/35	**C613_1060 ME20**	3200	2900	4000	**>19≤24**	3,0	67,9	10	74	1280	1280	1600
107,4	752/7	**C613_1070 ME30**	3200	2900	4000	**≤24**	8,3	69,8	10	74	1300	1380	2600
107,4	752/7	**C613_1070 ME30**	3200	2900	4000	**>24≤32**	8,4	69,8	10	74	1300	1380	2600
107,4	752/7	**C613_1070 ME30**	3200	2900	4000	**>32≤38**	10	69,8	10	74	1300	1380	2600
126,9	48739/384	**C613_1270 ME30**	3200	2900	4000	**≤24**	8,1	69,8	10	74	1450	1650	2900
126,9	48739/384	**C613_1270 ME30**	3200	2900	4000	**>24≤32**	8,2	69,8	10	74	1450	1650	2900
126,9	48739/384	**C613_1270 ME30**	3200	2900	4000	**>32≤38**	10,0	69,8	10	74	1450	1650	2900
134,8	15776/117	**C613_1350 ME20**	3200	2900	4000	**≤19**	2,2	67,9	10	74	1300	1380	1720
134,8	15776/117	**C613_1350 ME20**	3200	2900	4000	**>19≤24**	2,9	67,9	10	74	1300	1380	1720
136,6	15980/117	**C613_1370 ME30**	3200	2900	4000	**≤24**	8,2	69,8	10	74	1300	1380	2600
136,6	15980/117	**C613_1370 ME30**	3200	2900	4000	**>24≤32**	8,3	69,8	10	74	1300	1380	2600
136,6	15980/117	**C613_1370 ME30**	3200	2900	4000	**>32≤38**	10	69,8	10	74	1300	1380	2600
175,3	7888/45	**C613_1750 ME20**	3200	2900	4000	**≤19**	2,1	67,9	10	74	1300	1380	2010
175,3	7888/45	**C613_1750 ME20**	3200	2900	4000	**>19≤24**	2,8	67,9	10	74	1300	1380	2010
177,6	1598/9	**C613_1780 ME30**	3200	2900	4000	**≤24**	8,1	69,8	10	74	1300	1380	2600
177,6	1598/9	**C613_1780 ME30**	3200	2900	4000	**>24≤32**	8,2	69,8	10	74	1300	1380	2600
177,6	1598/9	**C613_1780 ME30**	3200	2900	4000	**>32≤38**	10,0	69,8	10	74	1300	1380	2600
213,1	28768/135	**C613_2130 ME20**	3200	2900	4000	**≤19**	2,1	67,9	10	74	1300	1380	2240
213,1	28768/135	**C613_2130 ME20**	3200	2900	4000	**>19≤24**	2,8	67,9	10	74	1300	1380	2240

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C613 (M2BMAX=1650 Nm)													
266,4	7192/27	**C613_2660 ME20**	3200	2900	4000	**≤19**	2,0	67,9	10	74	1300	1380	2360
266,4	7192/27	**C613_2660 ME20**	3200	2900	4000	**>19≤24**	2,8	67,9	10	74	1300	1380	2360
C712 (M2BMAX=2760 Nm)													
4,259	477/112	**C712_0043 ME40**	2200	1900	2600	**≤38**	114	101,6	10	102	780	780	980
4,259	477/112	**C712_0043 ME40**	2200	1900	2600	**>38≤48**	128	101,6	10	112	1240	1240	1550
4,259	477/112	**C712_0043 ME50**	2200	1900	2600	**≤55**	152	109,2	10	115	1240	1240	1550
4,259	477/112	**C712_0043 ME50**	2200	1900	2600	**>55≤60**	156	109,2	10	116	1240	1240	1550
5,311	1827/344	**C712_0053 ME40**	2200	1900	2600	**≤38**	90	101,6	10	109	980	980	1220
5,311	1827/344	**C712_0053 ME40**	2200	1900	2600	**>38≤48**	103	101,6	10	116	1550	1550	1930
5,311	1827/344	**C712_0053 ME50**	2200	1900	2600	**≤55**	127	109,2	10	118	1550	1550	1930
5,311	1827/344	**C712_0053 ME50**	2200	1900	2600	**>55≤60**	131	109,2	10	118	1550	1550	1930
7,357	3480/473	**C712_0074 ME40**	2200	1900	2600	**≤38**	83	101,6	10	115	1360	1360	1690
7,357	3480/473	**C712_0074 ME40**	2200	1900	2600	**>38≤48**	97	101,6	10	119	1850	2140	2680
7,357	3480/473	**C712_0074 ME50**	2200	1900	2600	**≤55**	121	109,2	10	120	1850	2140	2680
7,357	3480/473	**C712_0074 ME50**	2200	1900	2600	**>55≤60**	125	109,2	10	120	1850	2140	2680
8,490	4347/512	**C712_0085 ME40**	2600	2300	3100	**≤38**	56	101,6	10	116	1560	1560	1960
8,490	4347/512	**C712_0085 ME40**	2600	2300	3100	**>38≤48**	70	101,6	10	119	1940	2470	3090
8,490	4347/512	**C712_0085 ME50**	2500	2300	3000	**≤55**	94	109,2	10	120	1940	2470	3090
8,490	4347/512	**C712_0085 ME50**	2500	2300	3000	**>55≤60**	98	109,2	10	120	1940	2470	3090
9,912	4599/464	**C712_0099 ME30**	2900	2600	3400	**≤24**	39	96,7	10	111	760	760	950
9,912	4599/464	**C712_0099 ME30**	2900	2600	3400	**>24≤32**	39	96,7	10	118	1180	1540	1920
9,912	4599/464	**C712_0099 ME30**	2900	2600	3400	**>32≤38**	41	96,7	10	120	1180	1540	1920
9,912	4599/464	**C712_0099 ME40**	2900	2600	3400	**≤38**	50	101,6	10	118	1830	1830	2280
9,912	4599/464	**C712_0099 ME40**	2900	2600	3400	**>38≤48**	64	101,6	10	120	2050	2760	3610
9,912	4599/464	**C712_0099 ME50**	2500	2500	3000	**≤55**	87	109,2	10	121	2050	2760	3610
9,912	4599/464	**C712_0099 ME50**	2500	2500	3000	**>55≤60**	91	109,2	10	121	2050	2760	3610
11,76	1035/88	**C712_0120 ME40**	2600	2300	3100	**≤38**	54	101,6	10	119	2000	2170	2710
11,76	1035/88	**C712_0120 ME40**	2600	2300	3100	**>38≤48**	68	101,6	10	121	2000	2300	4000
11,76	1035/88	**C712_0120 ME50**	2500	2300	3000	**≤55**	92	109,2	10	121	2000	2300	4000
11,76	1035/88	**C712_0120 ME50**	2500	2300	3000	**>55≤60**	96	109,2	10	121	2000	2300	4000
13,18	4851/368	**C712_0130 ME30**	2900	2600	3400	**≤24**	29	96,7	10	116	1010	1010	1270
13,18	4851/368	**C712_0130 ME30**	2900	2600	3400	**>24≤32**	29	96,7	10	120	1250	1820	2270
13,18	4851/368	**C712_0130 ME30**	2900	2600	3400	**>32≤38**	31	96,7	10	121	1250	1820	2270
13,18	4851/368	**C712_0130 ME40**	2900	2600	3400	**≤38**	40	101,6	10	120	2250	2430	3040
13,18	4851/368	**C712_0130 ME40**	2900	2600	3400	**>38≤48**	54	101,6	10	121	2250	2760	4790
13,18	4851/368	**C712_0130 ME50**	2500	2500	3000	**≤55**	78	109,2	10	121	2250	2760	4790
13,18	4851/368	**C712_0130 ME50**	2500	2500	3000	**>55≤60**	82	109,2	10	121	2250	2760	4790
13,73	4380/319	**C712_0135 ME30**	2900	2600	3400	**≤24**	37	96,7	10	116	1050	1050	1320
13,73	4380/319	**C712_0135 ME30**	2900	2600	3400	**>24≤32**	37	96,7	10	120	1630	2130	2660
13,73	4380/319	**C712_0135 ME30**	2900	2600	3400	**>32≤38**	39	96,7	10	121	1630	2130	2660
13,73	4380/319	**C712_0135 ME40**	2900	2600	3400	**≤38**	48	101,6	10	120	2000	2300	3160
13,73	4380/319	**C712_0135 ME40**	2900	2600	3400	**>38≤48**	62	101,6	10	121	2000	2300	4000
13,73	4380/319	**C712_0135 ME50**	2500	2500	3000	**≤55**	86	109,2	10	121	2000	2300	4000
13,73	4380/319	**C712_0135 ME50**	2500	2500	3000	**>55≤60**	90	109,2	10	122	2000	2300	4000
16,73	1071/64	**C712_0165 ME30**	3100	2900	3600	**≤24**	23	96,7	10	118	1290	1290	1610
16,73	1071/64	**C712_0165 ME30**	3100	2900	3600	**>24≤32**	23	96,7	10	121	1360	2180	2720
16,73	1071/64	**C712_0165 ME30**	3100	2900	3600	**>32≤38**	25	96,7	10	121	1360	2180	2720
16,73	1071/64	**C712_0165 ME40**	3000	2900	3500	**≤38**	33	101,6	10	121	2400	2760	3850
16,73	1071/64	**C712_0165 ME40**	3000	2900	3500	**>38≤48**	47	101,6	10	121	2400	2760	4800
16,73	1071/64	**C712_0165 ME50**	2500	2500	3000	**≤55**	71	109,2	10	122	2400	2760	4800
16,73	1071/64	**C712_0165 ME50**	2500	2500	3000	**>55≤60**	75	109,2	10	122	2400	2760	4800
18,26	420/23	**C712_0185 ME30**	2900	2600	3400	**≤24**	28	96,7	10	119	1400	1400	1750
18,26	420/23	**C712_0185 ME30**	2900	2600	3400	**>24≤32**	28	96,7	10	121	1730	2300	3150
18,26	420/23	**C712_0185 ME30**	2900	2600	3400	**>32≤38**	30	96,7	10	122	1730	2300	3150
18,26	420/23	**C712_0185 ME40**	2900	2600	3400	**≤38**	39	101,6	10	121	2000	2300	4000
18,26	420/23	**C712_0185 ME40**	2900	2600	3400	**>38≤48**	53	101,6	10	122	2000	2300	4000
18,26	420/23	**C712_0185 ME50**	2500	2500	3000	**≤55**	76	109,2	10	122	2000	2300	4000
18,26	420/23	**C712_0185 ME50**	2500	2500	3000	**>55≤60**	81	109,2	10	122	2000	2300	4000
20,67	1323/64	**C712_0210 ME30**	3100	2900	3600	**≤24**	19	96,7	10	120	1380	1590	1990

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C712 (M2BMAX=2760 Nm)													
20,67	1323/64	**C712_0210 ME30**	3100	2900	3600	**>24≤32**	19	96,7	10	121	1380	2260	2820
20,67	1323/64	**C712_0210 ME30**	3100	2900	3600	**>32≤38**	20	96,7	10	122	1380	2260	2820
20,67	1323/64	**C712_0210 ME40**	3000	2900	3500	**≤38**	29	101,6	10	121	2400	2760	4760
20,67	1323/64	**C712_0210 ME40**	3000	2900	3500	**>38≤48**	43	101,6	10	122	2400	2760	4800
20,67	1323/64	**C712_0210 ME50**	2500	2500	3000	**≤55**	67	109,2	10	122	2400	2760	4800
20,67	1323/64	**C712_0210 ME50**	2500	2500	3000	**>55≤60**	71	109,2	10	122	2400	2760	4800
23,18	255/11	**C712_0230 ME30**	3100	2900	3600	**≤24**	22	96,7	10	120	1780	1780	2230
23,18	255/11	**C712_0230 ME30**	3100	2900	3600	**>24≤32**	22	96,7	10	121	1880	2300	3770
23,18	255/11	**C712_0230 ME30**	3100	2900	3600	**>32≤38**	24	96,7	10	122	1880	2300	3770
23,18	255/11	**C712_0230 ME40**	3000	2900	3500	**≤38**	33	101,6	10	121	2000	2300	4000
23,18	255/11	**C712_0230 ME40**	3000	2900	3500	**>38≤48**	47	101,6	10	122	2000	2300	4000
23,18	255/11	**C712_0230 ME50**	2500	2500	3000	**≤55**	70	109,2	10	122	2000	2300	4000
23,18	255/11	**C712_0230 ME50**	2500	2500	3000	**>55≤60**	74	109,2	10	122	2000	2300	4000
25,31	405/16	**C712_0250 ME30**	3100	2900	3600	**≤24**	15	96,7	10	120	1450	1940	2430
25,31	405/16	**C712_0250 ME30**	3100	2900	3600	**>24≤32**	16	96,7	10	122	1450	2540	3170
25,31	405/16	**C712_0250 ME30**	3100	2900	3600	**>32≤38**	17	96,7	10	122	1450	2540	3170
25,31	405/16	**C712_0250 ME40**	3000	2900	3500	**≤38**	26	101,6	10	122	2400	2540	3170
25,31	405/16	**C712_0250 ME40**	3000	2900	3500	**>38≤48**	39	101,6	10	122	2400	2540	3170
25,31	405/16	**C712_0250 ME50**	2500	2500	3000	**>55≤60**	68	109,2	10	122	2400	2540	3170
28,64	315/11	**C712_0290 ME30**	3100	2900	3600	**≤24**	18	96,7	10	121	1910	2200	2750
28,64	315/11	**C712_0290 ME30**	3100	2900	3600	**>24≤32**	18	96,7	10	122	1910	2300	3910
28,64	315/11	**C712_0290 ME30**	3100	2900	3600	**>32≤38**	20	96,7	10	122	1910	2300	3910
28,64	315/11	**C712_0290 ME40**	3000	2900	3500	**≤38**	29	101,6	10	122	2000	2300	4000
28,64	315/11	**C712_0290 ME40**	3000	2900	3500	**>38≤48**	43	101,6	10	122	2000	2300	4000
28,64	315/11	**C712_0290 ME50**	2500	2500	3000	**≤55**	66	109,2	10	122	2000	2300	4000
28,64	315/11	**C712_0290 ME50**	2500	2500	3000	**>55≤60**	70	109,2	10	122	2000	2300	4000
33,80	2163/64	**C712_0340 ME30**	3100	2900	3600	**≤24**	13	96,7	10	121	1490	2600	3250
33,80	2163/64	**C712_0340 ME30**	3100	2900	3600	**>24≤32**	13	96,7	10	122	1490	2760	3710
33,80	2163/64	**C712_0340 ME30**	3100	2900	3600	**>32≤38**	14	96,7	10	122	1490	2760	3710
33,80	2163/64	**C712_0340 ME40**	3000	2900	3500	**≤38**	23	101,6	10	122	2400	2760	3710
33,80	2163/64	**C712_0340 ME40**	3000	2900	3500	**>38≤48**	36	101,6	10	122	2400	2760	3710
33,80	2163/64	**C712_0340 ME50**	2500	2500	3000	**>55≤60**	65	109,2	10	122	2400	2760	3710
35,07	2700/77	**C712_0350 ME30**	3100	2900	3600	**≤24**	15	96,7	10	121	2000	2300	3370
35,07	2700/77	**C712_0350 ME30**	3100	2900	3600	**>24≤32**	15	96,7	10	122	2000	2300	4000
35,07	2700/77	**C712_0350 ME30**	3100	2900	3600	**>32≤38**	17	96,7	10	122	2000	2300	4000
35,07	2700/77	**C712_0350 ME40**	3000	2900	3500	**≤38**	25	101,6	10	122	2000	2300	4000
35,07	2700/77	**C712_0350 ME40**	3000	2900	3500	**>38≤48**	39	101,6	10	122	2000	2300	4000
35,07	2700/77	**C712_0350 ME50**	2500	2500	3000	**>55≤60**	68	109,2	10	122	2000	2300	4000
41,02	2625/64	**C712_0410 ME30**	3100	2900	3600	**≤24**	11	96,7	10	121	1530	2510	3940
41,02	2625/64	**C712_0410 ME30**	3100	2900	3600	**>24≤32**	11	96,7	10	122	1530	2510	4070
41,02	2625/64	**C712_0410 ME30**	3100	2900	3600	**>32≤38**	13	96,7	10	122	1530	2510	4070
41,02	2625/64	**C712_0410 ME40**	3000	2900	3500	**≤38**	21	101,6	10	122	2090	2510	4070
41,02	2625/64	**C712_0410 ME40**	3000	2900	3500	**>38≤48**	35	101,6	10	122	2090	2510	4070
41,02	2625/64	**C712_0410 ME50**	2500	2500	3000	**>55≤60**	64	109,2	10	122	2090	2510	4070
46,82	515/11	**C712_0470 ME30**	3100	2900	3600	**≤24**	12	96,7	10	122	2000	2300	4000
46,82	515/11	**C712_0470 ME30**	3100	2900	3600	**>24≤32**	13	96,7	10	122	2000	2300	4000
46,82	515/11	**C712_0470 ME30**	3100	2900	3600	**>32≤38**	14	96,7	10	122	2000	2300	4000
46,82	515/11	**C712_0470 ME40**	3000	2900	3500	**≤38**	23	101,6	10	122	2000	2300	4000
46,82	515/11	**C712_0470 ME40**	3000	2900	3500	**>38≤48**	36	101,6	10	122	2000	2300	4000
46,82	515/11	**C712_0470 ME50**	2500	2500	3000	**>55≤60**	65	109,2	10	122	2000	2300	4000
56,82	625/11	**C712_0570 ME30**	3100	2900	3600	**≤24**	11	96,7	10	122	2000	2300	4000
56,82	625/11	**C712_0570 ME30**	3100	2900	3600	**>24≤32**	11	96,7	10	122	2000	2300	4000
56,82	625/11	**C712_0570 ME30**	3100	2900	3600	**>32≤38**	13	96,7	10	122	2000	2300	4000
56,82	625/11	**C712_0570 ME40**	3000	2900	3500	**≤38**	21	101,6	10	122	2000	2300	4000
56,82	625/11	**C712_0570 ME40**	3000	2900	3500	**>38≤48**	35	101,6	10	122	2000	2300	4000
56,82	625/11	**C712_0570 ME50**	2500	2500	3000	**>55≤60**	64	109,2	10	122	2000	2300	4000
69,55	765/11	**C712_0700 ME30**	3100	2900	3600	**≤24**	9,8	96,7	10	122	2000	2120	2650
69,55	765/11	**C712_0700 ME30**	3100	2900	3600	**>24≤32**	10,0	96,7	10	122	2000	2120	2650
69,55	765/11	**C712_0700 ME30**	3100	2900	3600	**>32≤38**	12	96,7	10	122	2000	2120	2650

Helical Gear Units **C**
Reductores coaxiales **C**
Riduttori coassiali **C**

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Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C713 (M2BMAX=2760 Nm)													
50,85	18711/368	**C713_0510 ME40**	3000	2900	3500	**≤38**	21	114,7	10	122	2400	2760	4800
50,85	18711/368	**C713_0510 ME40**	3000	2900	3500	**>38≤48**	34	114,7	10	122	2400	2760	4800
64,55	4131/64	**C713_0650 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2400	2760	4800
64,55	4131/64	**C713_0650 ME40**	3000	2900	3500	**>38≤48**	34	114,7	10	122	2400	2760	4800
79,73	5103/64	**C713_0800 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2400	2760	4800
79,73	5103/64	**C713_0800 ME40**	3000	2900	3500	**>38≤48**	34	114,7	10	122	2400	2760	4800
80,97	20727/256	**C713_0810 ME30**	3100	2900	3600	**≤24**	8,7	109,8	10	122	2220	2260	2820
80,97	20727/256	**C713_0810 ME30**	3100	2900	3600	**>24≤32**	8,8	109,8	10	122	2220	2260	2820
80,97	20727/256	**C713_0810 ME30**	3100	2900	3600	**>32≤38**	11	109,8	10	122	2220	2260	2820
89,42	6885/77	**C713_0890 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2000	2300	4000
89,42	6885/77	**C713_0890 ME40**	3000	2900	3500	**>38≤48**	34	114,7	10	122	2000	2300	4000
97,63	10935/112	**C713_0980 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2400	2540	3170
97,63	10935/112	**C713_0980 ME40**	3000	2900	3500	**>38≤48**	34	114,7	10	122	2400	2540	3170
99,14	6345/64	**C713_0990 ME30**	3100	2900	3600	**≤24**	8,5	109,8	10	122	2350	2530	3170
99,14	6345/64	**C713_0990 ME30**	3100	2900	3600	**>24≤32**	8,6	109,8	10	122	2350	2530	3170
99,14	6345/64	**C713_0990 ME30**	3100	2900	3600	**>32≤38**	10	109,8	10	122	2350	2530	3170
110,5	1215/11	**C713_1100 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2000	2300	4000
110,5	1215/11	**C713_1100 ME40**	3000	2900	3500	**>38≤48**	34	114,7	10	122	2000	2300	4000
130,4	8343/64	**C713_1300 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2400	2760	3710
130,4	8343/64	**C713_1300 ME40**	3000	2900	3500	**>38≤48**	33	114,7	10	122	2400	2760	3710
132,4	33887/256	**C713_1320 ME30**	3100	2900	3600	**≤24**	8,3	109,8	10	122	2400	2760	3710
132,4	33887/256	**C713_1320 ME30**	3100	2900	3600	**>24≤32**	8,4	109,8	10	122	2400	2760	3710
132,4	33887/256	**C713_1320 ME30**	3100	2900	3600	**>32≤38**	10	109,8	10	122	2400	2760	3710
135,3	72900/539	**C713_1350 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2000	2300	4000
135,3	72900/539	**C713_1350 ME40**	3000	2900	3500	**>38≤48**	34	114,7	10	122	2000	2300	4000
137,3	10575/77	**C713_1370 ME30**	3100	2900	3600	**≤24**	8,5	109,8	10	122	2000	2300	4000
137,3	10575/77	**C713_1370 ME30**	3100	2900	3600	**>24≤32**	8,6	109,8	10	122	2000	2300	4000
137,3	10575/77	**C713_1370 ME30**	3100	2900	3600	**>32≤38**	10	109,8	10	122	2000	2300	4000
180,6	13905/77	**C713_1810 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2000	2300	4000
180,6	13905/77	**C713_1810 ME40**	3000	2900	3500	**>38≤48**	33	114,7	10	122	2000	2300	4000
183,4	24205/132	**C713_1830 ME30**	3100	2900	3600	**≤24**	8,3	109,8	10	122	2000	2300	4000
183,4	24205/132	**C713_1830 ME30**	3100	2900	3600	**>24≤32**	8,4	109,8	10	122	2000	2300	4000
183,4	24205/132	**C713_1830 ME30**	3100	2900	3600	**>32≤38**	10	109,8	10	122	2000	2300	4000
219,2	16875/77	**C713_2190 ME40**	3000	2900	3500	**≤38**	20	114,7	10	122	2000	2300	4000
219,2	16875/77	**C713_2190 ME40**	3000	2900	3500	**>38≤48**	33	114,7	10	122	2000	2300	4000
222,5	29375/132	**C713_2230 ME30**	3100	2900	3600	**≤24**	8,2	109,8	10	122	2000	2300	4000
222,5	29375/132	**C713_2230 ME30**	3100	2900	3600	**>24≤32**	8,3	109,8	10	122	2000	2300	4000
222,5	29375/132	**C713_2230 ME30**	3100	2900	3600	**>32≤38**	10	109,8	10	122	2000	2300	4000
C812 (M2BMAX=4800 Nm)													
6,670	767/115	**C812_0067 ME40**	2500	2200	2800	**≤38**	150	161,2	10	133	1230	1230	1540
6,670	767/115	**C812_0067 ME40**	2500	2200	2800	**>38≤48**	164	161,2	10	139	1940	1940	2430
6,670	767/115	**C812_0067 ME50**	2500	2200	2800	**≤55**	188	168,8	10	141	1940	1940	2430
6,670	767/115	**C812_0067 ME50**	2500	2200	2800	**>55≤60**	192	168,8	10	142	1940	1940	2430
9,043	208/23	**C812_0090 ME40**	2500	2200	2800	**≤38**	139	161,2	10	190	1670	1670	2080
9,043	208/23	**C812_0090 ME40**	2500	2200	2800	**>38≤48**	153	161,2	10	197	2630	2630	3290
9,043	208/23	**C812_0090 ME50**	2500	2200	2800	**≤55**	177	168,8	10	199	2630	2630	3290
9,043	208/23	**C812_0090 ME50**	2500	2200	2800	**>55≤60**	181	168,8	10	199	2630	2630	3290
10,15	944/93	**C812_0100 ME40**	2700	2400	3200	**≤38**	92	161,2	10	140	1870	1870	2340
10,15	944/93	**C812_0100 ME40**	2700	2400	3200	**>38≤48**	106	161,2	10	143	2680	2950	3690
10,15	944/93	**C812_0100 ME50**	2500	2400	3000	**≤55**	130	168,8	10	144	2950	2950	3690
10,15	944/93	**C812_0100 ME50**	2500	2400	3000	**>55≤60**	134	168,8	10	144	2950	2950	3690
12,75	5546/435	**C812_0125 ME40**	2700	2400	3200	**≤38**	72	161,2	10	142	2350	2350	2940
12,75	5546/435	**C812_0125 ME40**	2700	2400	3200	**>38≤48**	86	161,2	10	144	2840	3710	4640
12,75	5546/435	**C812_0125 ME50**	2500	2400	3000	**≤55**	109	168,8	10	144	3610	3710	4640
12,75	5546/435	**C812_0125 ME50**	2500	2400	3000	**>55≤60**	114	168,8	10	144	3610	3710	4640
13,76	1280/93	**C812_0140 ME40**	2700	2400	3200	**≤38**	87	161,2	10	198	2540	2540	3170
13,76	1280/93	**C812_0140 ME40**	2700	2400	3200	**>38≤48**	101	161,2	10	201	3600	4010	5010
13,76	1280/93	**C812_0140 ME50**	2500	2400	3000	**≤55**	125	168,8	10	202	3600	4010	5010
13,76	1280/93	**C812_0140 ME50**	2500	2400	3000	**>55≤60**	129	168,8	10	202	3600	4010	5010

Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C812 (M2BMAX=4800 Nm)													
17,10	1180/69	**C812_0170 ME40**	2900	2700	3400	**≤38**	53	161,2	10	143	3040	3150	3940
17,10	1180/69	**C812_0170 ME40**	2900	2700	3400	**>38≤48**	67	161,2	10	144	3040	4800	6220
17,10	1180/69	**C812_0170 ME50**	2500	2500	3000	**≤55**	91	168,8	10	145	3990	4800	6220
17,10	1180/69	**C812_0170 ME50**	2500	2500	3000	**>55≤60**	95	168,8	10	145	3990	4800	6220
17,29	1504/87	**C812_0175 ME40**	2700	2400	3200	**≤38**	69	161,2	10	200	3180	3180	3980
17,29	1504/87	**C812_0175 ME40**	2700	2400	3200	**>38≤48**	83	161,2	10	202	3600	4140	6290
17,29	1504/87	**C812_0175 ME50**	2500	2400	3000	**≤55**	107	168,8	10	202	3600	4140	6290
17,29	1504/87	**C812_0175 ME50**	2500	2400	3000	**>55≤60**	111	168,8	10	202	3600	4140	6290
20,26	6077/300	**C812_0200 ME40**	2900	2700	3400	**≤38**	45	161,2	10	144	3140	3730	4660
20,26	6077/300	**C812_0200 ME40**	2900	2700	3400	**>38≤48**	59	161,2	10	145	3140	4800	6760
20,26	6077/300	**C812_0200 ME50**	2500	2500	3000	**≤55**	83	168,8	10	145	4190	4800	6760
20,26	6077/300	**C812_0200 ME50**	2500	2500	3000	**>55≤60**	87	168,8	10	145	4190	4800	6760
23,19	1600/69	**C812_0230 ME40**	2900	2700	3400	**≤38**	52	161,2	10	201	3600	4140	5340
23,19	1600/69	**C812_0230 ME40**	2900	2700	3400	**>38≤48**	66	161,2	10	203	3600	4140	7200
23,19	1600/69	**C812_0230 ME50**	2500	2500	3000	**≤55**	90	168,8	10	203	3600	4140	7200
23,19	1600/69	**C812_0230 ME50**	2500	2500	3000	**>55≤60**	94	168,8	10	203	3600	4140	7200
26,06	3127/120	**C812_0260 ME40**	2900	2700	3400	**≤38**	37	161,2	10	145	3240	4800	6000
26,06	3127/120	**C812_0260 ME40**	2900	2700	3400	**>38≤48**	50	161,2	10	145	3240	4800	7450
26,06	3127/120	**C812_0260 ME50**	2500	2500	3000	**≤55**	74	168,8	10	145	4200	4800	7450
26,06	3127/120	**C812_0260 ME50**	2500	2500	3000	**>55≤60**	78	168,8	10	145	4200	4800	7450
27,47	412/15	**C812_0270 ME40**	2900	2700	3400	**≤38**	44	161,2	10	202	3600	4140	6330
27,47	412/15	**C812_0270 ME40**	2900	2700	3400	**>38≤48**	58	161,2	10	203	3600	4140	7200
27,47	412/15	**C812_0270 ME50**	2500	2500	3000	**≤55**	82	168,8	10	203	3600	4140	7200
27,47	412/15	**C812_0270 ME50**	2500	2500	3000	**>55≤60**	86	168,8	10	203	3600	4140	7200
33,59	2183/65	**C812_0340 ME40**	2900	2700	3400	**≤38**	30	161,2	10	145	3370	4800	7730
33,59	2183/65	**C812_0340 ME40**	2900	2700	3400	**>38≤48**	44	161,2	10	145	3370	4800	8400
33,59	2183/65	**C812_0340 ME50**	2500	2500	3000	**≤55**	68	168,8	10	145	4200	4800	8400
33,59	2183/65	**C812_0340 ME50**	2500	2500	3000	**>55≤60**	72	168,8	10	145	4200	4800	8400
35,33	106/3	**C812_0350 ME40**	2900	2700	3400	**≤38**	36	161,2	10	203	3600	4140	7200
35,33	106/3	**C812_0350 ME40**	2900	2700	3400	**>38≤48**	50	161,2	10	203	3600	4140	7200
35,33	106/3	**C812_0350 ME50**	2500	2500	3000	**≤55**	74	168,8	10	203	3600	4140	7200
35,33	106/3	**C812_0350 ME50**	2500	2500	3000	**>55≤60**	78	168,8	10	203	3600	4140	7200
39,94	2596/65	**C812_0400 ME40**	2900	2700	3400	**≤38**	27	161,2	10	145	3470	3690	4610
39,94	2596/65	**C812_0400 ME40**	2900	2700	3400	**>38≤48**	40	161,2	10	145	3470	3690	4610
39,94	2596/65	**C812_0400 ME50**	2500	2500	3000	**>55≤60**	69	168,8	10	145	3690	3690	4610
45,54	592/13	**C812_0460 ME40**	2900	2700	3400	**≤38**	30	161,2	10	203	3600	4140	7200
45,54	592/13	**C812_0460 ME40**	2900	2700	3400	**>38≤48**	44	161,2	10	203	3600	4140	7200
45,54	592/13	**C812_0460 ME50**	2500	2500	3000	**≤55**	68	168,8	10	203	3600	4140	7200
45,54	592/13	**C812_0460 ME50**	2500	2500	3000	**>55≤60**	72	168,8	10	203	3600	4140	7200
54,15	704/13	**C812_0540 ME40**	2900	2700	3400	**≤38**	26	161,2	10	203	3600	4140	6250
54,15	704/13	**C812_0540 ME40**	2900	2700	3400	**>38≤48**	40	161,2	10	203	3600	4140	6250
54,15	704/13	**C812_0540 ME50**	2500	2500	3000	**>55≤60**	69	168,8	10	203	3600	4140	6250
68,89	620/9	**C812_0690 ME40**	2900	2700	3400	**≤38**	23	161,2	10	203	3600	4140	6750
68,89	620/9	**C812_0690 ME40**	2900	2700	3400	**>38≤48**	37	161,2	10	203	3600	4140	6750
68,89	620/9	**C812_0690 ME50**	2500	2500	3000	**>55≤60**	66	168,8	10	204	3600	4140	6750

Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
C813 (M2BMAX=4800 Nm)													
49,18	49914/1015	**C813_0490 ME40**	2900	2700	3400	**≤38**	23	173,7	10	203	3710	3710	4640
49,18	49914/1015	**C813_0490 ME40**	2900	2700	3400	**>38≤48**	37	173,7	10	203	3710	3710	4640
65,96	10620/161	**C813_0660 ME40**	2900	2700	3400	**≤38**	22	173,7	10	203	4190	4800	6220
65,96	10620/161	**C813_0660 ME40**	2900	2700	3400	**>38≤48**	35	173,7	10	203	4190	4800	6220
78,13	54693/700	**C813_0780 ME40**	2900	2700	3400	**≤38**	21	173,7	10	203	4200	4800	6760
78,13	54693/700	**C813_0780 ME40**	2900	2700	3400	**>38≤48**	35	173,7	10	204	4200	4800	6760
79,34	285619/3600	**C813_0790 ME30**	2900	2700	3400	**≤24**	9,8	168,8	10	203	2460	2490	3110
79,34	285619/3600	**C813_0790 ME30**	2900	2700	3400	**>24≤32**	9,9	168,8	10	203	2460	2490	3110
79,34	285619/3600	**C813_0790 ME30**	2900	2700	3400	**>32≤38**	12	168,8	10	203	2460	2490	3110
89,44	14400/161	**C813_0890 ME40**	2900	2700	3400	**≤38**	22	173,7	10	203	3600	4140	7200
89,44	14400/161	**C813_0890 ME40**	2900	2700	3400	**>38≤48**	35	173,7	10	204	3600	4140	7200
90,82	18800/207	**C813_0910 ME30**	2900	2700	3400	**≤24**	10	168,8	10	203	2810	2860	3570
90,82	18800/207	**C813_0910 ME30**	2900	2700	3400	**>24≤32**	10	168,8	10	203	2810	2860	3570
90,82	18800/207	**C813_0910 ME30**	2900	2700	3400	**>32≤38**	12	168,8	10	204	2810	2860	3570
100,5	28143/280	**C813_1010 ME40**	2900	2700	3400	**≤38**	21	173,7	10	204	4200	4800	7450
100,5	28143/280	**C813_1010 ME40**	2900	2700	3400	**>38≤48**	34	173,7	10	204	4200	4800	7450
105,9	3708/35	**C813_1060 ME40**	2900	2700	3400	**≤38**	21	173,7	10	204	3600	4140	7200
105,9	3708/35	**C813_1060 ME40**	2900	2700	3400	**>38≤48**	35	173,7	10	204	3600	4140	7200
107,6	4841/45	**C813_1080 ME30**	2900	2700	3400	**≤24**	9,7	168,8	10	203	3330	3370	4210
107,6	4841/45	**C813_1080 ME30**	2900	2700	3400	**>24≤32**	9,8	168,8	10	204	3330	3370	4210
107,6	4841/45	**C813_1080 ME30**	2900	2700	3400	**>32≤38**	12	168,8	10	204	3330	3370	4210
129,5	58941/455	**C813_1300 ME40**	2900	2700	3400	**≤38**	20	173,7	10	204	4200	4800	8400
129,5	58941/455	**C813_1300 ME40**	2900	2700	3400	**>38≤48**	34	173,7	10	204	4200	4800	8400
136,3	954/7	**C813_1360 ME40**	2900	2700	3400	**≤38**	21	173,7	10	204	3600	4140	7200
136,3	954/7	**C813_1360 ME40**	2900	2700	3400	**>38≤48**	34	173,7	10	204	3600	4140	7200
138,4	2491/18	**C813_1380 ME30**	2900	2700	3400	**≤24**	9,1	168,8	10	203	3600	3720	4650
138,4	2491/18	**C813_1380 ME30**	2900	2700	3400	**>24≤32**	9,3	168,8	10	204	3600	3720	4650
138,4	2491/18	**C813_1380 ME30**	2900	2700	3400	**>32≤38**	11	168,8	10	204	3600	3720	4650
175,6	15984/91	**C813_1760 ME40**	2900	2700	3400	**≤38**	20	173,7	10	204	3600	4140	7200
175,6	15984/91	**C813_1760 ME40**	2900	2700	3400	**>38≤48**	34	173,7	10	204	3600	4140	7200
178,4	6956/39	**C813_1780 ME30**	2900	2700	3400	**≤24**	8,8	168,8	10	204	3600	4140	5250
178,4	6956/39	**C813_1780 ME30**	2900	2700	3400	**>24≤32**	8,9	168,8	10	204	3600	4140	5250
178,4	6956/39	**C813_1780 ME30**	2900	2700	3400	**>32≤38**	11	168,8	10	204	3600	4140	5250
208,9	19008/91	**C813_2090 ME40**	2900	2700	3400	**≤38**	20	173,7	10	204	3600	4140	6250
208,9	19008/91	**C813_2090 ME40**	2900	2700	3400	**>38≤48**	34	173,7	10	204	3600	4140	6250
212,1	8272/39	**C813_2120 ME30**	2900	2700	3400	**≤24**	8,6	168,8	10	204	3600	4140	6250
212,1	8272/39	**C813_2120 ME30**	2900	2700	3400	**>24≤32**	8,7	168,8	10	204	3600	4140	6250
212,1	8272/39	**C813_2120 ME30**	2900	2700	3400	**>32≤38**	10	168,8	10	204	3600	4140	6250
265,7	1860/7	**C813_2660 ME40**	2900	2700	3400	**≤38**	20	173,7	10	204	3600	4140	6750
265,7	1860/7	**C813_2660 ME40**	2900	2700	3400	**>38≤48**	33	173,7	10	204	3600	4140	6750
269,8	7285/27	**C813_2700 ME30**	2900	2700	3400	**≤24**	8,4	168,8	10	204	3600	4140	6750
269,8	7285/27	**C813_2700 ME30**	2900	2700	3400	**>24≤32**	8,5	168,8	10	204	3600	4140	6750
269,8	7285/27	**C813_2700 ME30**	2900	2700	3400	**>32≤38**	10	168,8	10	204	3600	4140	6750
C912 (M2BMAX=7210 Nm)													
20,15	2257/112	**C912_0200 ME50**	2500	2500	3000	**≤55**	116	259,2	10	260	4800	5630	7030
20,15	2257/112	**C912_0200 ME50**	2500	2500	3000	**>55≤60**	120	259,2	10	260	4800	5630	7030
28,63	2405/84	**C912_0290 ME50**	2500	2500	3000	**≤55**	112	259,2	10	391	6000	6500	9990
28,63	2405/84	**C912_0290 ME50**	2500	2500	3000	**>55≤60**	116	259,2	10	391	6000	6500	9990
32,13	3599/112	**C912_0320 ME50**	2500	2500	3000	**≤55**	84	259,2	10	261	5140	6760	8440
32,13	3599/112	**C912_0320 ME50**	2500	2500	3000	**>55≤60**	88	259,2	10	261	5140	6760	8440
39,30	4087/104	**C912_0390 ME50**	2500	2500	3000	**≤55**	76	259,2	10	261	5190	7210	10370
39,30	4087/104	**C912_0390 ME50**	2500	2500	3000	**>55≤60**	80	259,2	10	261	5190	7210	10370
45,66	3835/84	**C912_0460 ME50**	2500	2500	3000	**≤55**	83	259,2	10	392	6000	6500	12000
45,66	3835/84	**C912_0460 ME50**	2500	2500	3000	**>55≤60**	87	259,2	10	392	6000	6500	12000
55,83	335/6	**C912_0560 ME50**	2500	2500	3000	**≤55**	75	259,2	10	392	6000	6500	12000
55,83	335/6	**C912_0560 ME50**	2500	2500	3000	**>55≤60**	79	259,2	10	392	6000	6500	12000
69,97	10075/144	**C912_0700 ME50**	2500	2500	3000	**>55≤60**	73	259,2	10	392	5520	5520	6900

STÖBER

Please take notice of the indications on page C8! ***¡Por favor observe las indicaciones en la página C8!*** **Si raccomanda di rispettare le avvertenze a pagina C8!**

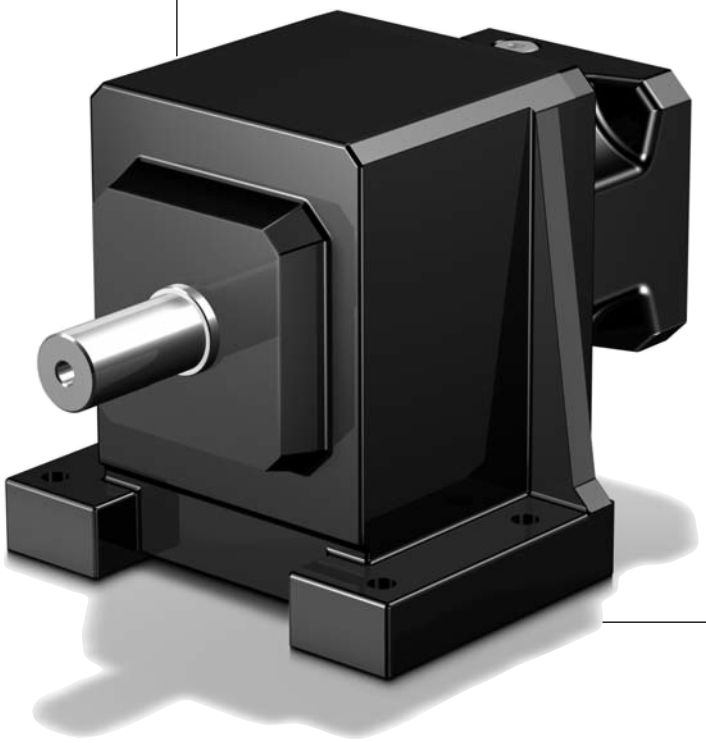
i	iexakt	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
C913 (M_{2BMAX}=8000 Nm)													
64,59	295545/4576	**C913_0650 ME50**	2500	2500	3000	**≤55**	64	288,1	10	392	7000	8000	12780
64,59	295545/4576	**C913_0650 ME50**	2500	2500	3000	**>55≤60**	68	288,1	10	392	7000	8000	12780
77,73	60939/784	**C913_0780 ME40**	2800	2600	3200	**≤38**	24	280,5	10	392	4990	5630	7030
77,73	60939/784	**C913_0780 ME40**	2800	2600	3200	**>38≤48**	37	280,5	10	392	4990	5630	7030
79,06	115107/1456	**C913_0790 ME50**	2500	2500	3000	**≤55**	63	288,1	10	392	7000	8000	14000
79,06	115107/1456	**C913_0790 ME50**	2500	2500	3000	**>55≤60**	67	288,1	10	392	7000	8000	14000
91,76	8075/88	**C913_0920 ME50**	2500	2500	3000	**≤55**	64	288,1	10	393	6000	6500	12000
91,76	8075/88	**C913_0920 ME50**	2500	2500	3000	**>55≤60**	68	288,1	10	393	6000	6500	12000
99,42	20679/208	**C913_0990 ME50**	2500	2500	3000	**≤55**	62	288,1	10	393	7000	8000	14000
99,42	20679/208	**C913_0990 ME50**	2500	2500	3000	**>55≤60**	66	288,1	10	393	7000	8000	14000
110,4	21645/196	**C913_1100 ME40**	2800	2600	3200	**≤38**	23	280,5	10	392	6000	6500	9990
110,4	21645/196	**C913_1100 ME40**	2800	2600	3200	**>38≤48**	37	280,5	10	392	6000	6500	9990
112,3	3145/28	**C913_1120 ME50**	2500	2500	3000	**≤55**	63	288,1	10	393	6000	6500	12000
112,3	3145/28	**C913_1120 ME50**	2500	2500	3000	**>55≤60**	67	288,1	10	393	6000	6500	12000
126,1	183549/1456	**C913_1260 ME50**	2500	2500	3000	**≤55**	61	288,1	10	393	7000	8000	14000
126,1	183549/1456	**C913_1260 ME50**	2500	2500	3000	**>55≤60**	65	288,1	10	393	7000	8000	14000
141,3	565/4	**C913_1410 ME50**	2500	2500	3000	**≤55**	61	288,1	10	393	6000	6500	12000
141,3	565/4	**C913_1410 ME50**	2500	2500	3000	**>55≤60**	66	288,1	10	393	6000	6500	12000
176,1	34515/196	**C913_1760 ME40**	2800	2600	3200	**≤38**	21	280,5	10	393	6000	6500	12000
176,1	34515/196	**C913_1760 ME40**	2800	2600	3200	**>38≤48**	35	280,5	10	393	6000	6500	12000
179,1	5015/28	**C913_1790 ME50**	2500	2500	3000	**≤55**	61	288,1	10	393	6000	6500	12000
179,1	5015/28	**C913_1790 ME50**	2500	2500	3000	**>55≤60**	65	288,1	10	393	6000	6500	12000
215,4	3015/14	**C913_2150 ME40**	2800	2600	3200	**≤38**	21	280,5	10	393	6000	6500	12000
215,4	3015/14	**C913_2150 ME40**	2800	2600	3200	**>38≤48**	35	280,5	10	393	6000	6500	12000

Dimension drawings **ServoFit® C** Helical Gear Units

Dibujos acotados Reductores coaxiales ***ServoFit® C***

Disegni quotati **ServoFit®** Riduttori coassiali ***C***

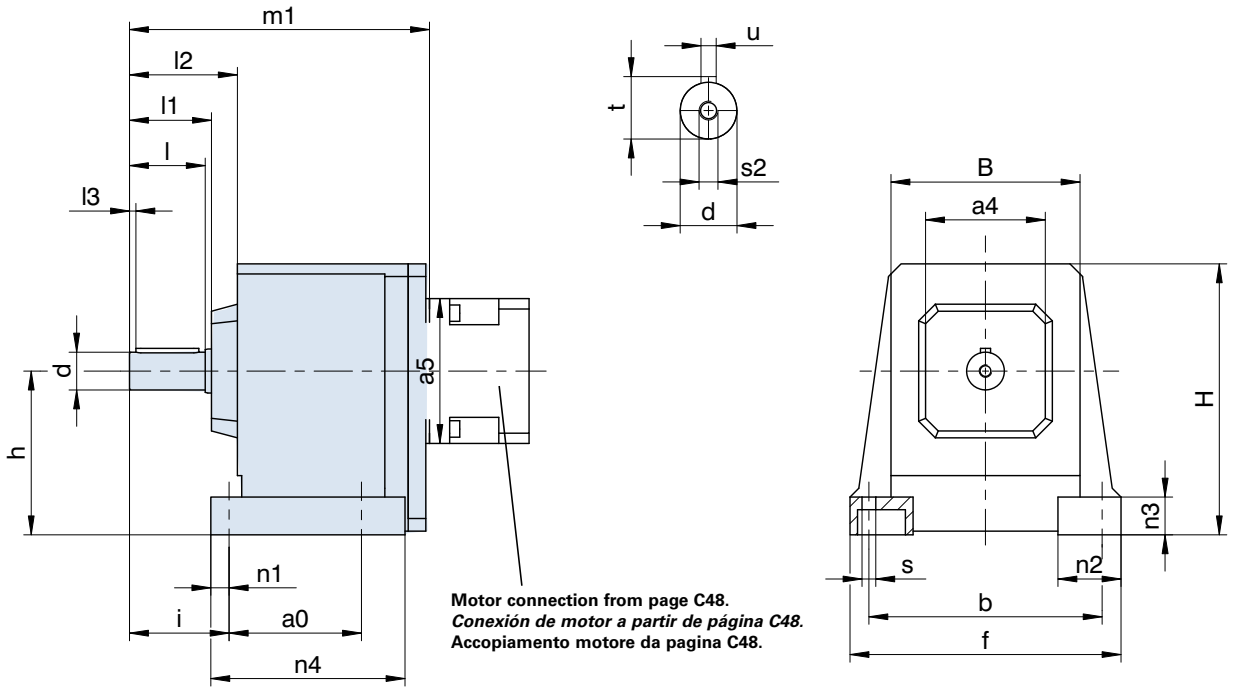
STÖBER



C

STÖBER

C0_N_ME_ - C5_N_ME_



Motor connection from page C48.
Conexión de motor a partir de página C48.
Accopiamento motore da pagina C48.

Output shaft can also be delivered without key.
Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta!
¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta.
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	a0	□a4	b	B	ød	f	h	H	H1	i	l	l1	l2	l3	n1	n2	n3	n4	øs	s2	t	u
C0	62	60	110	92	20k6	132	82	144	-	55	40	44	57	3	11	35	20	95	7	M6	22,5	A6x6x32
C1	70	80	150	124	25k6	176	102	177	-	67	50	54	69	5	13	42	25	118	9	M10	28,0	A8x7x40
C2	85	95	170	138	30k6	200	115	195	-	79	60	65	86	5	14	50	30	135	11	M10	33,0	A8x7x50
C3	105	95	185	150	30k6	215	130	215	-	79	60	65	85	5	14	50	30	154	11	M10	33,0	A8x7x50
C4	110	110	220	175	40k6	255	145	245	-	105	80	86	106	5	19	60	35	180	14	M16	43,0	A12x8x70
C5	130	130	245	192	40k6	290	170	290	-	108	80	86	107	5	22	70	40	197	18	M16	43,0	A12x8x70
C6	215	177	245	225	50k6	300	200	315	367	130	100	106	153	5	25	75	40	265	18	M16	53,5	A14x9x90
C7	235	192	300	265	60m6	365	235	375	436	163	120	127	185	5	25	90	50	285	18	M20	64,0	A18x11x100
C8	300	223	340	310	70m6	435	290	450	511	190	140	148	218	5	29	95	55	360	22	M20	74,5	A20x12x125
C9	340	277	400	365	90m6	510	340	530	600	222	170	178	256	5	34	110	60	410	26	M24	95,0	A25x14x140

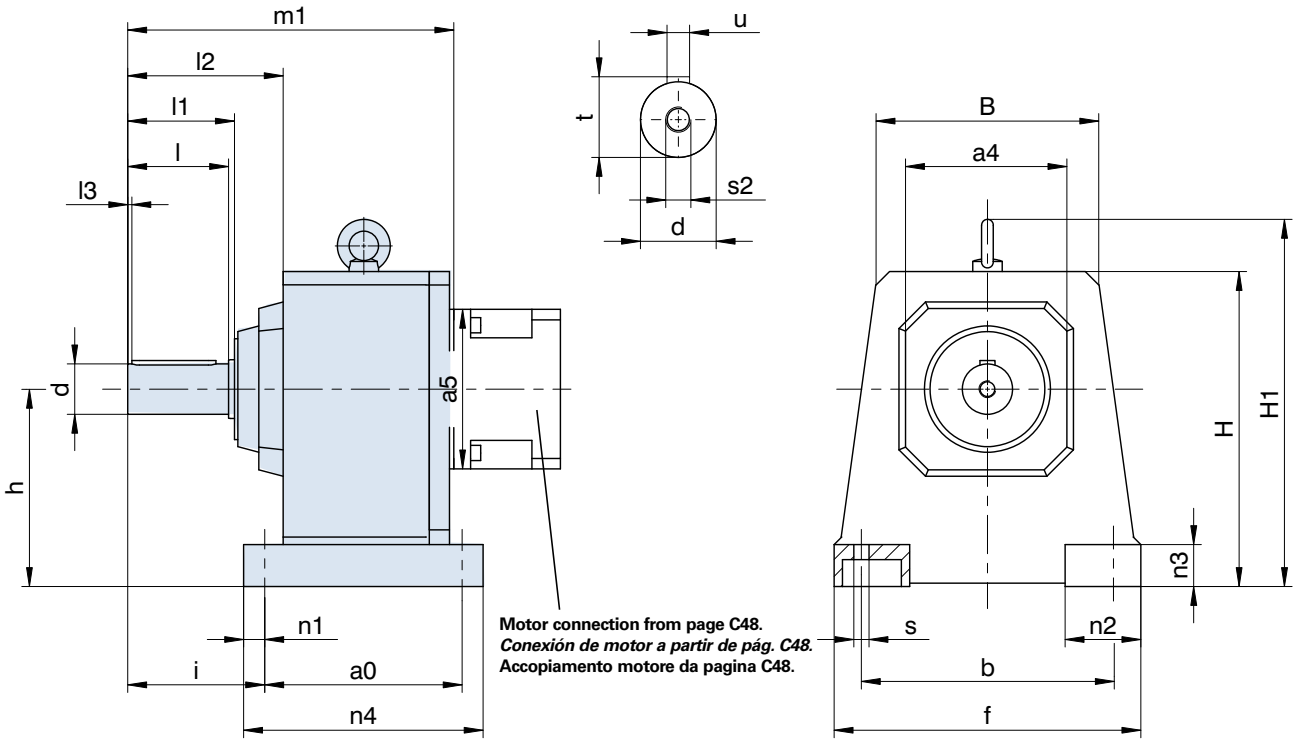
Dimensions **a5, m1** see next page.

*Medidas **a5, m1** ver página siguiente.*

Dimensiones **a5, m1** vedere la pagina successiva.

STÖBER

C6_N_ME_ - C9_N_ME_



Motor connection from page C48.
Conexión de motor a partir de pág. C48.
Accopiamento motore da pagina C48.

Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	ME10		ME20		ME30		ME40		ME50	
	a5	m1	a5	m1	a5	m1	a5	m1	a5	m1
C002	□98	154	□115	158	-	-	-	-	-	-
C102	□98	187	□115	191	□145	193	-	-	-	-
C103	ø140	224	-	-	-	-	-	-	-	-
C202	ø140	215	□115	219	□145	221	-	-	-	-
C203	ø140	252	ø160	262*	-	-	-	-	-	-
C302	-	-	ø160	238	□145	240	□190	243	-	-
C303	ø140	271	ø160	281*	-	-	-	-	-	-
C402	-	-	ø160	286	□145	288	□190	291	-	-
C403	-	-	ø160	329	-	-	-	-	-	-
C502	-	-	ø160	307	ø200	309	□190	312	ø300	326
C503	-	-	ø160	350	-	-	-	-	-	-
C612	-	-	-	-	ø200	333*	□190	336*	ø300	349*
C613	-	-	ø160	375*	ø200	395*	-	-	-	-
C712	-	-	-	-	ø200	386	ø250	388	ø300	401
C713	-	-	-	-	ø200	447	ø250	459*	-	-
C812	-	-	-	-	-	-	ø250	455	ø300	468
C813	-	-	-	-	ø200	514	ø250	526	-	-
C912	-	-	-	-	-	-	-	-	ø300	535
C913	-	-	-	-	-	-	ø250	593	ø300	618

*** Motor and gear unit are not co-axial with this design.** Further dimensions see previous page.

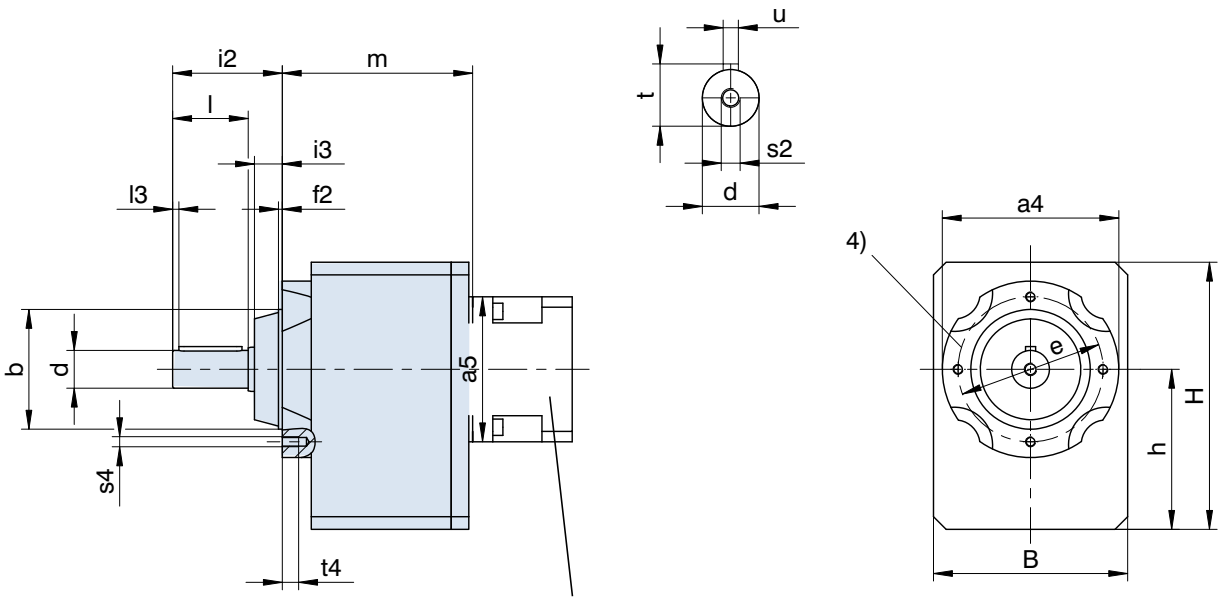
**** Motor y reductor no son coaxiales en esta ejecución.*** *Otras medidas ver página anterior.*

*** Il motore e il riduttore non sono coassiali in questa esecuzione.** Altre dimensioni vedere la pagina precedente.

C

STÖBER

C0_G_ME_ - C5_G_ME_



Motor connection from page C48.
Conexión de motor a partir de página C48.
Accopiamento motore da pagina C48.

Output shaft can also be delivered without key.
Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta!
¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta.
Si raccomanda di rispettare le avvertenze a pagina A19!

4) C5: 8 tapped holes are turned by 22.5 degrees.

4) C5: 8 agujeros roscados desplazados 22,5°.

4) C5: 8 fori filettati sfalsati di 22,5°.

Typ	a4	øb	B	ød	øe	f2	h	H	H1	i2	i3	l	l3	s2	s4	t	t4	u
C0	87	55j6	97	20k6	75	3,0	79,0	141,0	-	58	14	40	3	M6	M6	22,5	10	A6x6x32
C1	120	80j6	130	25k6	100	3,0	100,0	175,0	-	71	17	50	5	M10	M6	28,0	13	A8x7x40
C2	140	95j6	142	30k6	115	3,0	112,0	192,0	-	87	22	60	5	M10	M8	33,0	13	A8x7x50
C3	140	95j6	154	30k6	115	3,0	127,0	212,0	-	87	22	60	5	M10	M8	33,0	13	A8x7x50
C4	160	110j6	178	40k6	130	3,5	142,5	242,5	-	108	22	80	5	M16	M10	43,0	16	A12x8x70
C5	192	130j6	195	40k6	165	3,5	166,0	286,0	-	109	23	80	5	M16	M10	43,0	16	A12x8x70
C6	180	140j6	225	50k6	165	5,0	195,0	310,0	362	136	30	100	5	M16	M10	53,5	16	A14x9x90
C7	195	155j6	265	60m6	185	8,0	231,0	371,0	432	164	37	120	5	M20	M12	64,0	19	A18x11x100
C8	226	185j6	310	70m6	215	5,0	285,0	445,0	506	185	37	140	5	M20	M12	74,5	19	A20x12x125
C9	280	230j6	365	90m6	265	5,0	334,0	524,0	594	220	42	170	5	M24	M16	95,0	26	A25x14x140

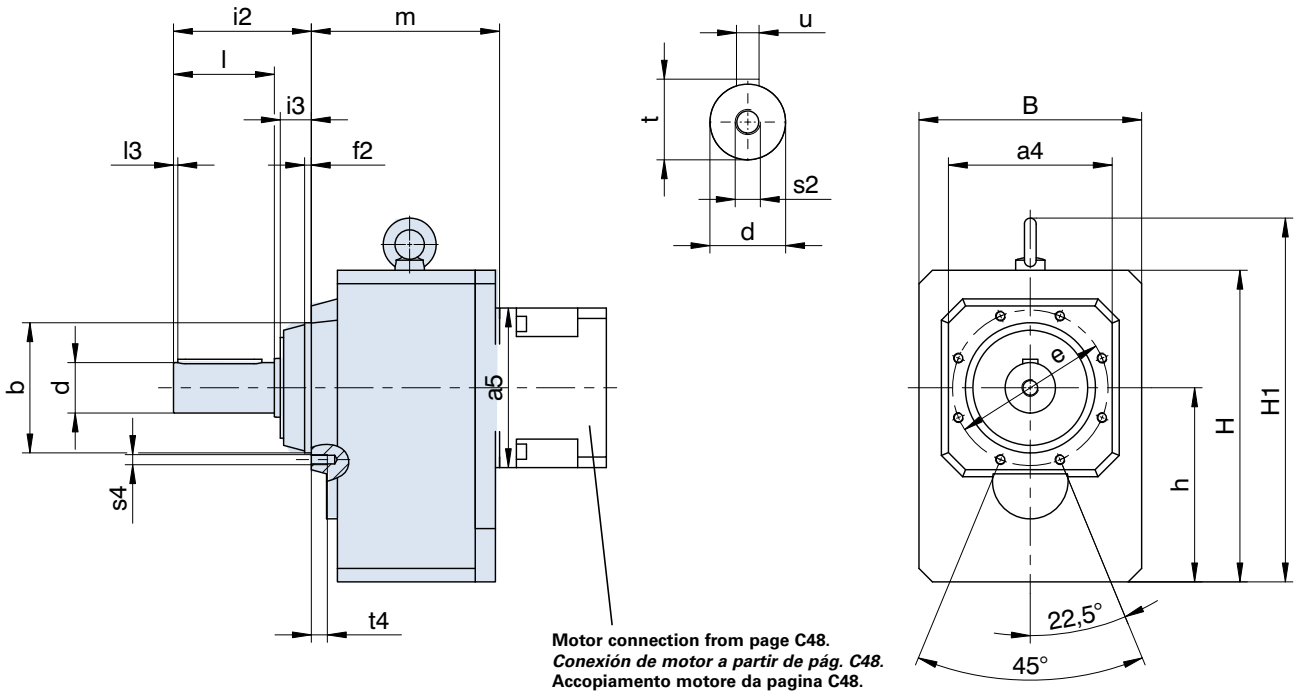
Dimensions **a5, m** see next page.

*Medidas **a5, m** ver página siguiente.*

Dimensiones **a5, m** vedere la pagina successiva.

STÖBER

C6_G_ME_ - C9_G_ME_



Motor connection from page C48.
Conexión de motor a partir de pág. C48.
Accopiamento motore da pagina C48.

Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	ME10		ME20		ME30		ME40		ME50	
	a5	m	a5	m	a5	m	a5	m	a5	m
C002	□98	96	□115	100	-	-	-	-	-	-
C102	□98	116	□115	120	□145	122	-	-	-	-
C103	ø140	153	-	-	-	-	-	-	-	-
C202	ø140	128	□115	132	□145	134	-	-	-	-
C203	ø140	165	ø160	175*	-	-	-	-	-	-
C302	-	-	ø160	151	□145	153	□190	156	-	-
C303	ø140	184	ø160	194*	-	-	-	-	-	-
C402	-	-	ø160	178	□145	180	□190	183	-	-
C403	-	-	ø160	221	-	-	-	-	-	-
C502	-	-	ø160	198	ø200	200	□190	203	ø300	217
C503	-	-	ø160	241	-	-	-	-	-	-
C612	-	-	-	-	ø200	197*	□190	200*	ø300	213*
C613	-	-	ø160	239*	ø200	259*	-	-	-	-
C712	-	-	-	-	ø200	222	ø250	224	ø300	237
C713	-	-	-	-	ø200	283	ø250	295*	-	-
C812	-	-	-	-	-	-	ø250	270	ø300	283
C813	-	-	-	-	ø200	329	ø250	341	-	-
C912	-	-	-	-	-	-	-	-	ø300	315
C913	-	-	-	-	-	-	ø250	373	ø300	398

*** Motor and gear unit are not co-axial with this design.** Further dimensions see previous page.

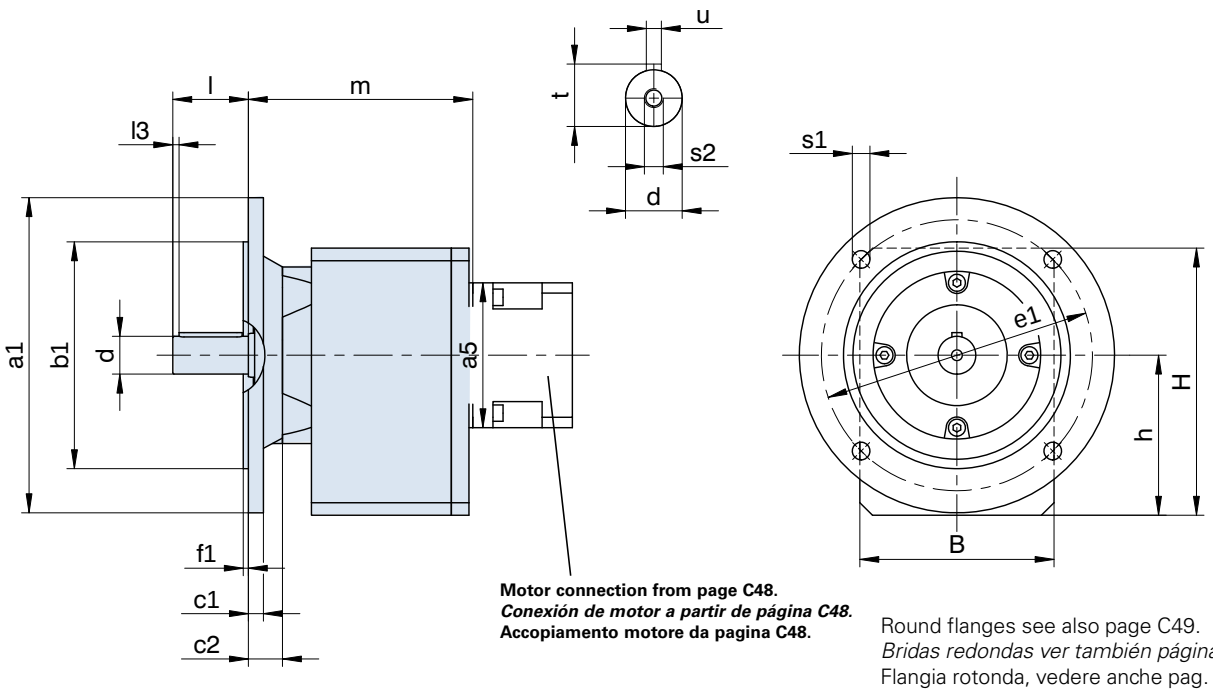
**** Motor y reductor no son coaxiales en esta ejecución.*** *Otras medidas ver página anterior.*

*** Il motore e il riduttore non sono coassiali in questa esecuzione.** Altre dimensioni vedere la pagina precedente.

C

STÖBER

C0_F_ME_ - C5_F_ME_



Motor connection from page C48.
Conexión de motor a partir de página C48.
Accopiamento motore da pagina C48.

Round flanges see also page C49.
Bridas redondas ver también página C49.
Flangia rotonda, vedere anche pag. C49.

Output shaft can also be delivered without key. Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta! ¡Por favor observe las indicaciones en la página A19!

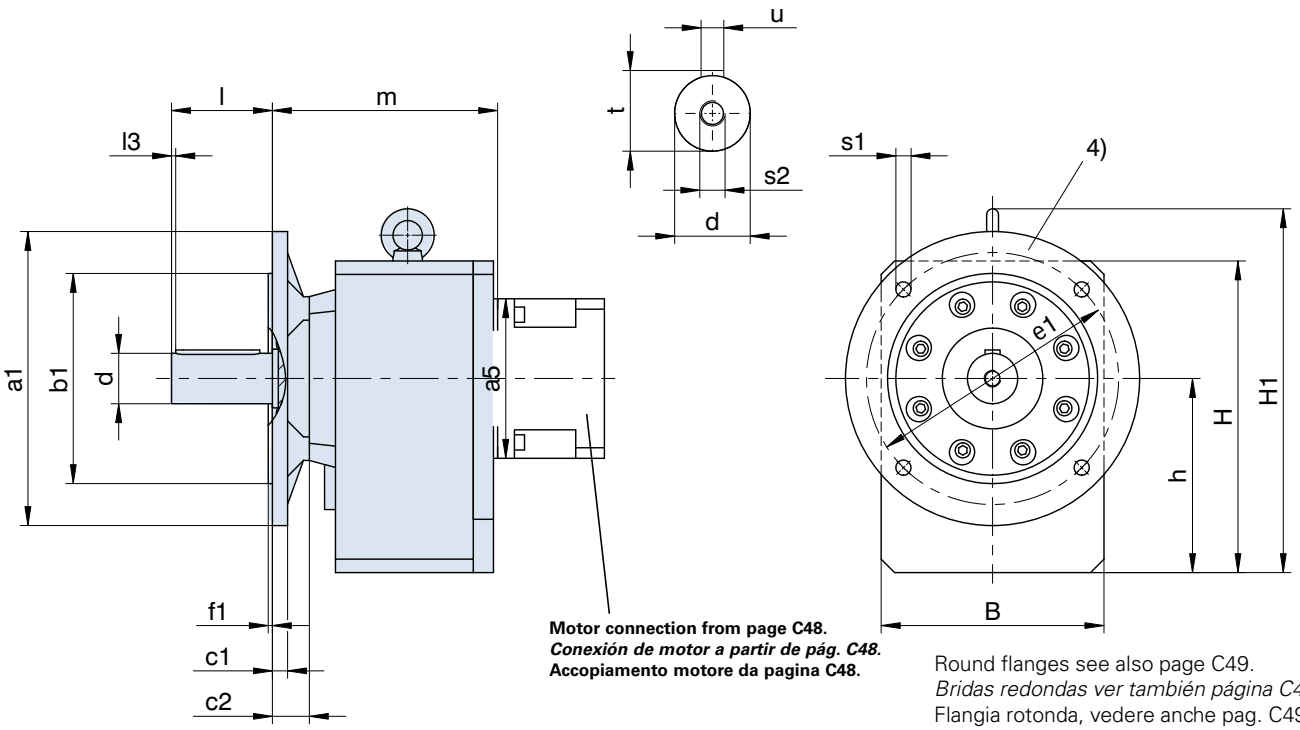
Albero di uscita disponible anche senza chiavetta. Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	øa1	øb1	B	c1	c2	ød	øe1	f1	h	H	H1	l	l3	øs1	s2	t	u
C0	160	110j6	97	10	18	20k6	130	3,0	79,0	141,0	-	40	3	9	M6	22,5	A6x6x32
C1	200	130j6	130	12	21	25k6	165	3,5	100,0	175,0	-	50	5	11	M10	28,0	A8x7x40
C2	200	130j6	142	12	27	30k6	165	3,5	112,0	192,0	-	60	5	11	M10	33,0	A8x7x50
C3	250	180j6	154	12	27	30k6	215	4,0	127,0	212,0	-	60	5	14	M10	33,0	A8x7x50
C4	250	180j6	178	14	28	40k6	215	4,0	142,5	242,5	-	80	5	14	M16	43,0	A12x8x70
C5	300	230j6	195	16	29	40k6	265	4,0	166,0	286,0	-	80	5	14	M16	43,0	A12x8x70
C6	300	230j6	225	17	36	50k6	265	4,0	195,0	310,0	362	100	5	14	M16	53,5	A14x9x90
C7	350	250h6	265	18	44	60m6	300	5,0	231,0	371,0	432	120	5	18	M20	64,0	A18x11x100
C8	400	300h6	310	20	45	70m6	350	5,0	285,0	445,0	506	140	5	18	M20	74,5	A20x12x125
C9	450	350h6	365	23	50	90m6	400	5,0	334,0	524,0	594	170	5	18	M24	95,0	A25x14x140

Dimensions **a5, m** see next page. *Medidas **a5, m** ver página siguiente.* Dimensiones **a5, m** vedere la pagina successiva.

STÖBER

C6_F_ME_ - C9_F_ME_



Motor connection from page C48.
Conexión de motor a partir de pág. C48.
Accopiamento motore da pagina C48.

Round flanges see also page C49.
Bridas redondas ver también página C49.
Flangia rotonda, vedere anche pag. C49.

Please refer to the notes on page A19! | ***¡Por favor observe las indicaciones en la página A19!*** | **Si raccomanda di rispettare le avvertenze a pagina A19!**

4) C9: 8 holes are turned by 22.5 degrees. | ***4) C9: 8 agujeros desplazados 22,5°.*** | **4) C9: 8 fori sfalsati di 22,5°.**

Typ	ME10		ME20		ME30		ME40		ME50	
	a5	m	a5	m	a5	m	a5	m	a5	m
C002	□98	114	□115	118	-	-	-	-	-	-
C102	□98	137	□115	141	□145	143	-	-	-	-
C103	ø140	174	-	-	-	-	-	-	-	-
C202	ø140	155	□115	159	□145	161	-	-	-	-
C203	ø140	192	ø160	202*	-	-	-	-	-	-
C302	-	-	ø160	178	□145	180	□190	183	-	-
C303	ø140	211	ø160	221*	-	-	-	-	-	-
C402	-	-	ø160	206	□145	208	□190	211	-	-
C403	-	-	ø160	249	-	-	-	-	-	-
C502	-	-	ø160	227	ø200	229	□190	232	ø300	246
C503	-	-	ø160	270	-	-	-	-	-	-
C612	-	-	-	-	ø200	233*	□190	236*	ø300	249*
C613	-	-	ø160	275*	ø200	295*	-	-	-	-
C712	-	-	-	-	ø200	266	ø250	268	ø300	281
C713	-	-	-	-	ø200	327	ø250	339*	-	-
C812	-	-	-	-	-	-	ø250	315	ø300	328
C813	-	-	-	-	ø200	374	ø250	386	-	-
C912	-	-	-	-	-	-	-	-	ø300	365
C913	-	-	-	-	-	-	ø250	423	ø300	448

*** Motor and gear unit are not co-axial with this design.** Further dimensions see previous page.

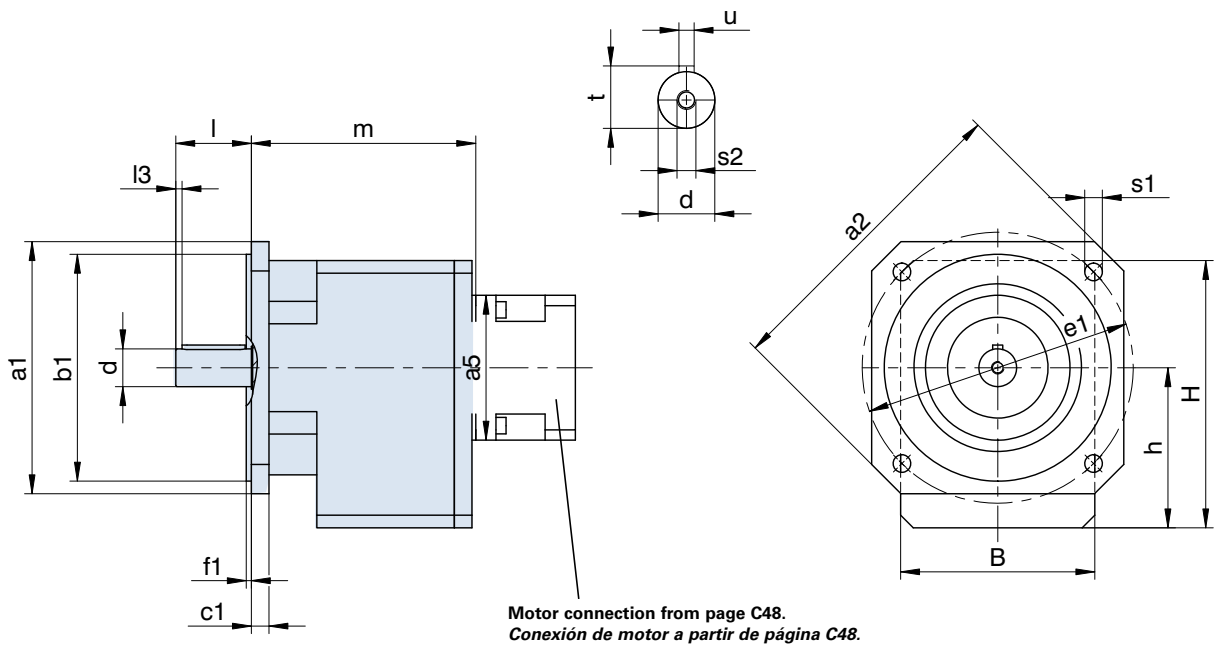
**** Motor y reductor no son coaxiales en esta ejecución.*** *Otras medidas ver página anterior.*

*** Il motore e il riduttore non sono coassiali in questa esecuzione.** Altre dimensioni vedere la pagina precedente.

C

STÖBER

C0_Q_ME_ - C4_Q_ME_



Motor connection from page C48.
Conexión de motor a partir de página C48.
Accopiamento motore da pagina C48.

Output shaft can also be delivered without key.
Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta!
¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta.
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	□a1	□a2	øb1	B	c1	ød	øe1	f1	h	H	l	l3	øs1	s2	t	u
C0	124	160	110j6	97	9	20k6	130	3,0	79,0	141,0	40	3	9	M6	22,5	A6x6x32
C1	145	192	130j6	130	11	25k6	165	3,5	100,0	175,0	50	5	11	M10	28,0	A8x7x40
C2	145	192	130j6	142	11	30k6	165	3,5	112,0	192,0	60	5	11	M10	33,0	A8x7x50
C3	200	250	180j6	154	14	30k6	215	4,0	127,0	212,0	60	5	14	M10	33,0	A8x7x50
C4	200	250	180j6	178	14	40k6	215	4,0	142,5	242,5	80	5	14	M16	43,0	A12x8x70

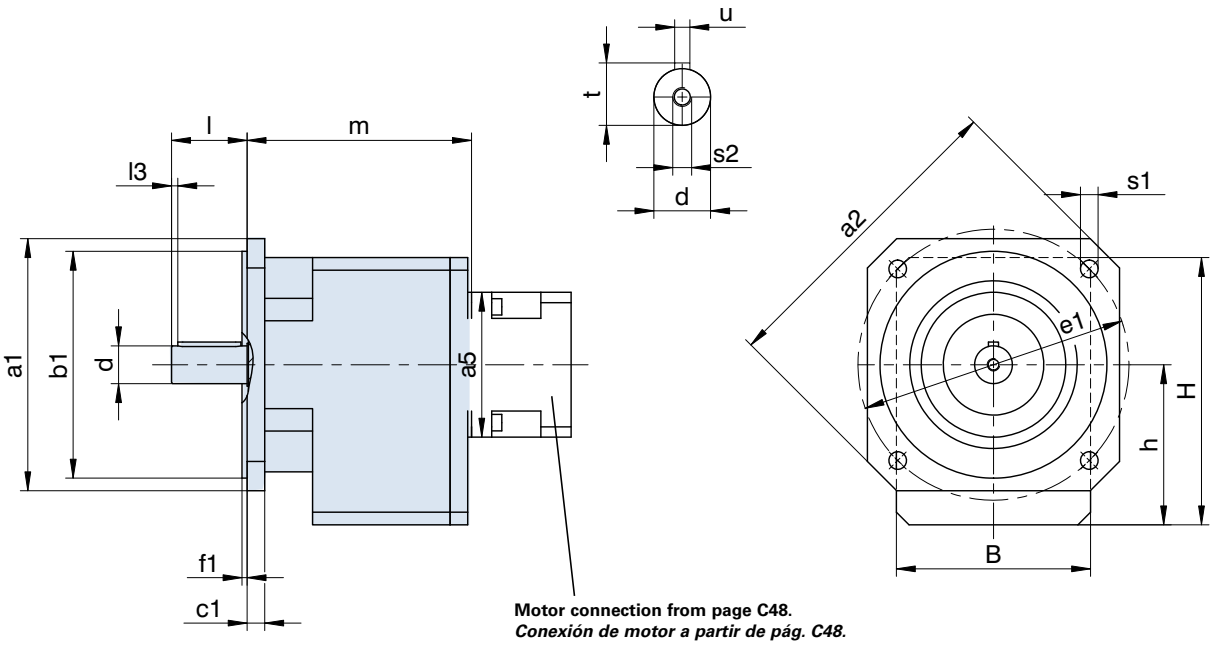
Dimensions **a5, m** see next page.

*Medidas **a5, m** ver página siguiente.*

Dimensiones **a5, m** vedere la pagina successiva.

STÖBER

C0_Q_ME_ - C4_Q_ME_



Motor connection from page C48.
Conexión de motor a partir de pág. C48.
Accopiamento motore da pagina C48.

Output shaft can also be delivered without key. Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta! ¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta. Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	ME10		ME20		ME30		ME40	
	a5	m	a5	m	a5	m	a5	m
C002	□98	114	□115	118	-	-	-	-
C102	□98	137	□115	141	□145	143	-	-
C103	ø140	174	-	-	-	-	-	-
C202	ø140	155	□115	159	□145	161	-	-
C203	ø140	192	ø160	202*	-	-	-	-
C302	-	-	ø160	178	□145	180	□190	183
C303	ø140	211	ø160	221*	-	-	-	-
C402	-	-	ø160	206	□145	208	□190	211
C403	-	-	ø160	249	-	-	-	-

*** Motor and gear unit are not co-axial with this design.** Further dimensions see previous page.

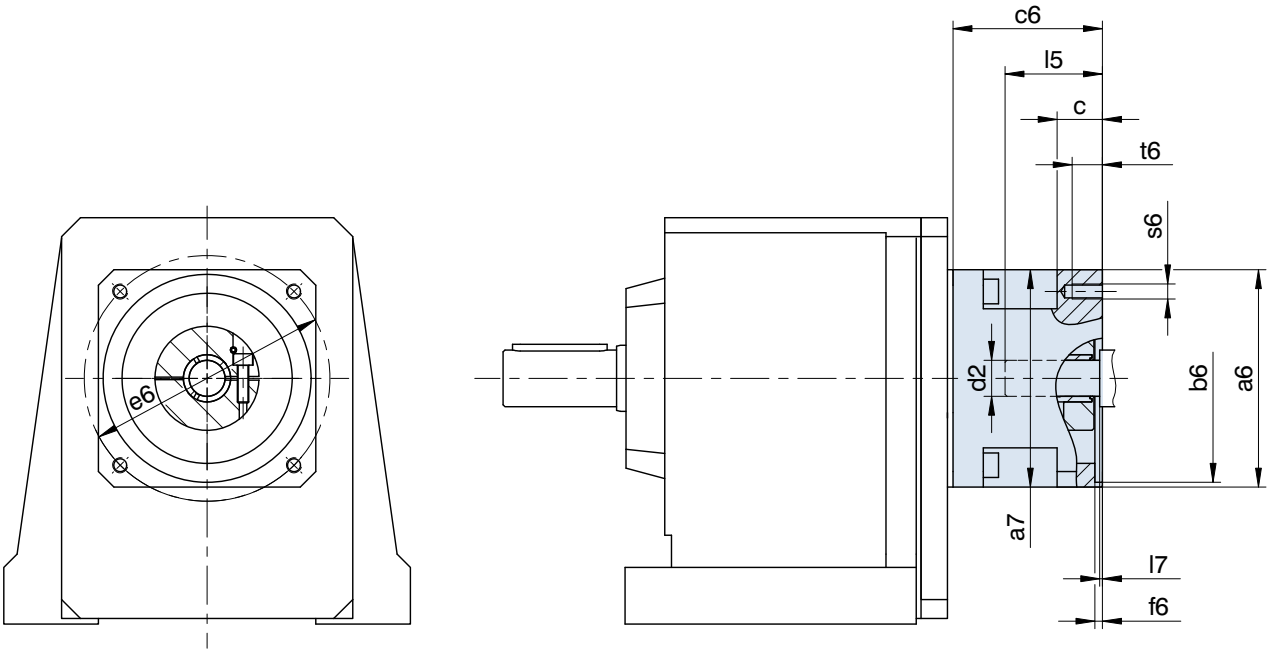
**** Motor y reductor no son coaxiales en esta ejecución.*** *Otras medidas ver página anterior.*

*** Il motore e il riduttore non sono coassiali in questa esecuzione.** Altre dimensioni vedere la pagina precedente.

C

STÖBER

C0_ME_ - C9_ME_



Refer to the standard dimension drawings for further gear unit dimensions.
Please refer to the notes on page A19!

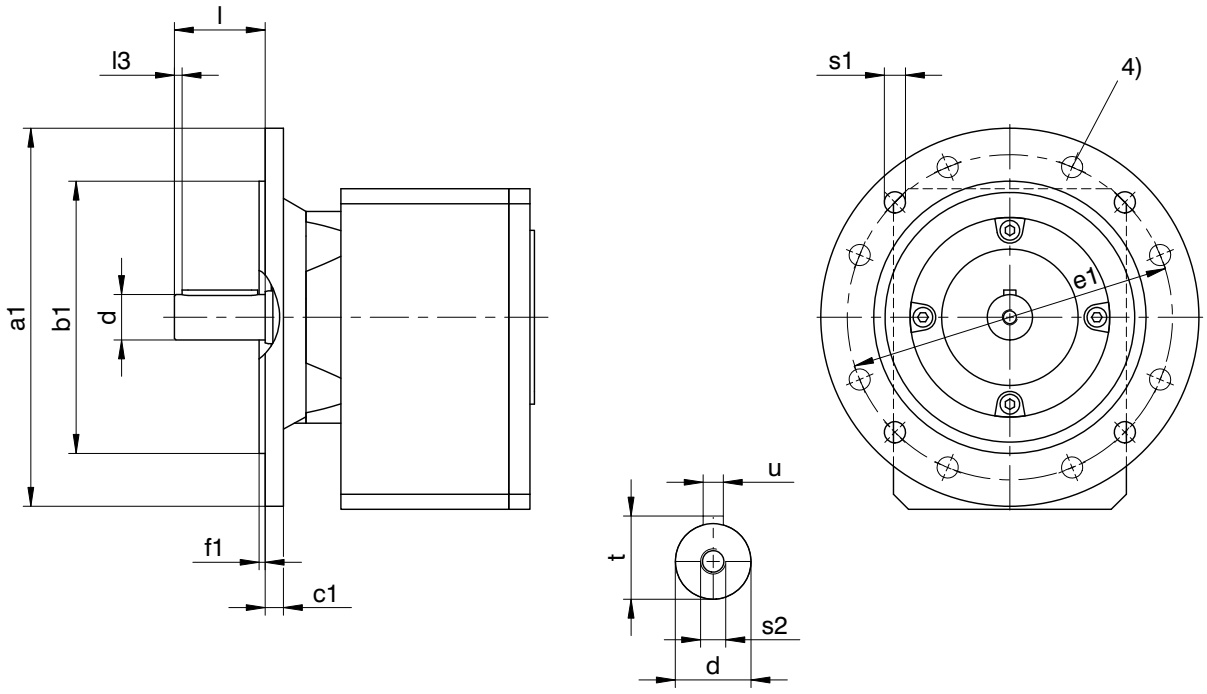
Otras medidas de reductor pueden ser tomadas de los dibujos estándar acotados.
¡Por favor observe las indicaciones en la página A19!

Per altre dimensioni riduttore fare riferimento ai disegni quotati standard.
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	øb6	øe6	ød2max	l5max	□a6	□a7	c	c6	f6	l7max	s6	t6
ME10	50,0H7	70	19	41	100	98	21,0	61,0	4,0	3,0	M4	10
ME10	50,0H7	95	19	41	100	98	21,0	61,0	2,5	3,0	M6	13
ME10	60,0H7	75	19	41	100	98	21,0	61,0	3,5	3,0	M5	9
ME10	80,0H7	100	19	41	100	98	21,0	61,0	4,0	3,0	M6	13
ME10	95,0H7	115	19	41	100	98	21,0	61,0	4,0	3,0	M8	21
ME10	95,0H7	115	19	50	100	98	30,0	70,0	4,0	12,0	M8	16
ME10	95,0H7	130	19	41	115	98	21,0	61,0	4,0	3,0	M8	16
ME10	95,0H7	130	19	50	115	98	30,0	70,0	4,0	12,0	M8	16
ME10	110,0H7	130	19	50	115	98	30,0	70,0	4,0	12,0	M8	16
ME10	110,0H7	145	19	58	130	98	38,0	78,0	7,0	20,0	M8	16
ME10	130,0H7	165	19	50	140	98	30,0	70,0	7,0	12,0	M10	20
ME20	80,0H7	100	32	53	120	115	24,0	74,0	4,0	3,5	M6	13
ME20	95,0H7	115	32	53	120	115	24,0	74,0	5,0	3,5	M8	16
ME20	95,0H7	130	32	53	120	115	24,0	74,0	4,0	3,5	M8	16
ME20	110,0H7	130	32	53	120	115	24,0	74,0	4,0	3,5	M8	16
ME20	110,0H7	145	32	61	140	115	32,0	82,0	6,5	11,5	M8	16
ME20	110,0H7	145	32	71	140	115	42,0	92,0	7,0	21,5	M8	16
ME20	110,0H7	165	32	53	140	115	24,0	74,0	5,0	3,5	M10	24
ME20	130,0H7	165	32	53	140	116	37,5	111,5	5,0	3,0	M10	20
ME20	130,0H7	165	32	61	140	115	32,0	82,0	5,0	11,5	M10	20
ME30	110,0H7	130	38	62	145	145	26,0	86,0	5,0	4,5	M8	14
ME30	110,0H7	145	38	73	145	145	37,0	97,0	5,0	15,5	M8	16
ME30	110,0H7	165	38	62	145	145	26,0	86,0	5,0	4,5	M10	26
ME30	114,3H7	200	38	81	180	145	45,0	105,0	5,0	23,5	M12	25
ME30	130,0H7	165	38	62	145	145	26,0	86,0	5,0	4,5	M10	26
ME30	130,0H7	215	38	62	190	145	26,0	86,0	5,0	4,5	M12	26
ME30	130,0H7	215	38	62	190	116	26,0	112,0	5,0	3,0	M12	25
ME30	180,0H7	215	38	62	190	145	26,0	86,0	5,0	4,5	M12	26
ME30	180,0H7	215	38	81	190	145	45,0	105,0	5,0	23,5	M12	25
ME30	180,0H7	215	38	62	190	116	55,0	160,0	5,0	3,0	M12	25
ME40	110,0H7	165	48	81	190	190	34,0	122,0	5,0	4,5	M10	18
ME40	114,3H7	200	48	81	190	190	34,0	122,0	4,0	4,5	M12	34
ME40	130,0H7	165	48	81	190	190	34,0	122,0	5,0	4,5	M10	18
ME40	130,0H7	215	48	81	190	190	34,0	122,0	5,0	4,5	M12	34
ME40	180,0H7	215	48	82	190	190	35,0	123,0	5,0	5,5	M12	35
ME40	250,0H7	300	48	85	260	190	38,0	126,0	6,0	8,5	M16	38
ME50	250,0H7	300	60	86	260	254	43,0	124,5	6,0	5,5	M16	32
ME50	300,0H7	350	60	112	314	254	69,0	150,5	6,0	31,5	M16	34

STÖBER

C0_ - C9_



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	øa1	øb1	c1	ød	øe1	f1	l	l3	øs1	s2	t	u
C0	120	80j6	10	20k6	100	3,0	40	3	7	M6	22,5	A6x6x32
C0	140	95j6	10	20k6	115	3,0	40	3	9	M6	22,5	A6x6x32
C0	160	110j6	10	20k6	130	3,0	40	3	9	M6	22,5	A6x6x32
C1	140	95j6	8	25k6	115	3,5	50	5	9	M10	28,0	A8x7x40
C1	160	110j6	10	25k6	130	3,5	50	5	9	M10	28,0	A8x7x40
C1	200	130j6	12	25k6	165	3,5	50	5	11	M10	28,0	A8x7x40
C2	160	110j6	10	30k6	130	3,5	60	5	9	M10	33,0	A8x7x50
C2	200	130j6	12	30k6	165	3,5	60	5	11	M10	33,0	A8x7x50
C2	250	180j6	12	30k6	215	4,0	60	5	14	M10	33,0	A8x7x50
C3	160	110j6	10	30k6	130	3,5	60	5	9	M10	33,0	A8x7x50
C3	200	130j6	12	30k6	165	3,5	60	5	11	M10	33,0	A8x7x50
C3	250	180j6	12	30k6	215	4,0	60	5	14	M10	33,0	A8x7x50
C4	200	130j6	14	40k6	165	3,5	80	5	11	M16	43,0	A12x8x70
C4	250	180j6	14	40k6	215	4,0	80	5	14	M16	43,0	A12x8x70
C4	300	230j6	14	40k6	265	4,0	80	5	14	M16	43,0	A12x8x70
C5	250	180j6	14	40k6	215	4,0	80	5	14	M16	43,0	A12x8x70
C5	300	230j6	16	40k6	265	4,0	80	5	14	M16	43,0	A12x8x70
C6	300	230j6	17	50k6	265	4,0	100	5	14	M16	53,5	A14x9x90
C7	350	250h6	18	60m6	300	5,0	120	5	18	M20	64,0	A18x11x100
C8	350	250h6	18	70m6	300	5,0	140	5	18	M20	74,5	A20x12x125
C8	400	300h6	20	70m6	350	5,0	140	5	18	M20	74,5	A20x12x125
C84)	450	350h6	20	70m6	400	5,0	140	5	18	M20	74,5	A20x12x125
C94)	450	350h6	23	90m6	400	5,0	170	5	18	M24	95,0	A25x14x140

Refer to the standard dimension drawings for further gear unit dimensions. Subject to dimensional changes in the interests of technical development.
4) 8 holes are turned by 22.5 degrees.

tras medidas de reductor pueden ser tomadas de los dibujos estándar acotados. Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos.
4) 8 agujeros desplazados 22,5°.

Per altre dimensioni riduttore fare riferimento ai disegni quotati standard. Con riserva di variazioni dimensionali dovute allo sviluppo tecnico.
4) 8 fori sfalsati di 22,5°.

ServoFit® F Offset Helical Gear Units
*Reductores de ejes paralelos **ServoFit® F***
ServoFit® Riduttori pendolari **F**

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Offset Helical Gear Units with widely spaced axles

- Acceleration torque: 92 – 1100 Nm
- Backlash standard: 10 - 11 arcmin
- Backlash class II: 5 - 8 arcmin
- Styles: Flange mounting, pitch circle diameter and side fastening
- Type of shaft: solid shaft, hollow shaft with shrink disk or key groove, as option with cover
- Hollow shaft with spiral groove (as grease depot) to make installing and removing the machine shaft easier
- Their flat gear case design and the large shaft-centre distance makes these gear units suitable for applications where space is limited
- FKM seal at input
- EasyAdapt® motor adapter with clamp coupling:
  - easy to assemble due to spreading function
  - aluminium lightweight construction
  - low construction length
  - high torsional stiffness
  - optionally with clamping set for increased safety
  - optionally with double seal
- Symmetrically, friction-optimized output bearings
- Advanced gear technology
- Quiet running
- Efficiency:
  2 stage ≥ 97 %
  3 stage ≥ 96 %

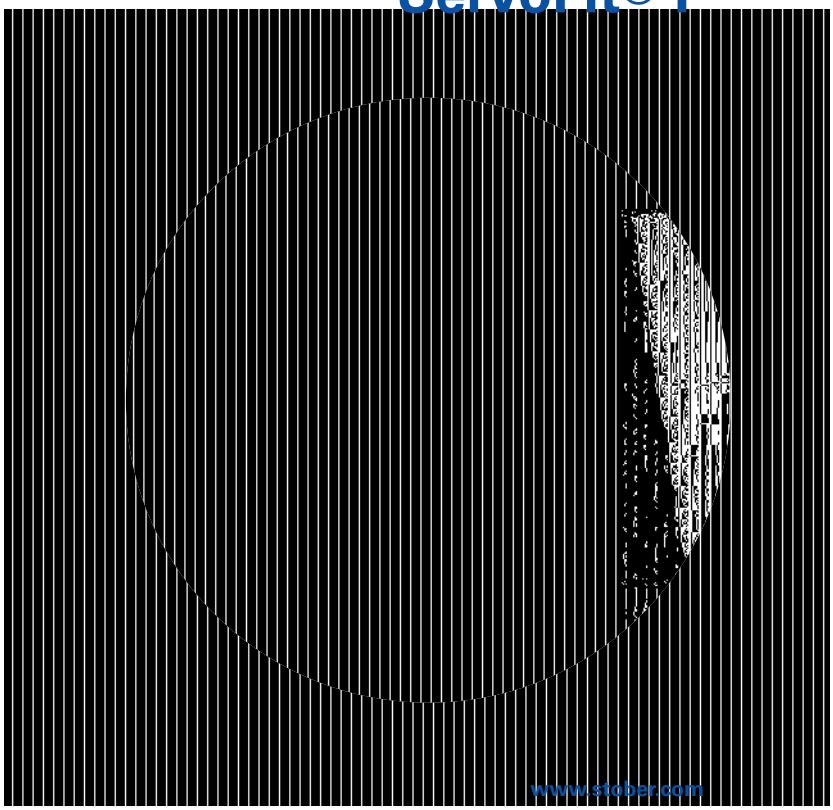
Reductores de ejes paralelos, de dentado helicoidal, con mayor distancia entre ejes

- *Par de aceleración: 92 - 1100 Nm*
- *Juego de giro estándar: 10 - 11 arcmin*
- *Juego de giro clase II: 5 - 8 arcmin*
- *Tipos constructivos: brida, círculo de agujeros roscados y fijación lateral*
- *Formas de eje: eje macizo, eje hueco con disco de contracción o chavetero, opcional con cubierta*
- *Para facilitar el montaje o desmontaje del árbol de la máquina los árboles huecos están provistos con una ranura helicoidal (como depósito de grasa)*
- *Por las carcasas planas del reductor y la gran distancia entre ejes, adecuados para espacios estrechos*
- *Anillo retén de FKM en la entrada*
- *Adaptador de motor EasyAdapt® con acoplamiento de anillo de apriete*
  - *Fácil de montar gracias a la función de expansión*
  - *Construcción ligera de aluminio*
  - *Longitud constructiva corta*
  - *Gran resistencia a la torsión*
  - *Opcionalmente con kit de sujeción para una mayor seguridad*
  - *Opcionalmente con sellado doble*
- *Apoyos de salida simétricos optimizados a la fricción*
- *Tecnología superior de dentado*
- *Marcha extremadamente suave*
- *Rendimiento:*
  2 trenes ≥ 97 %
  3 trenes ≥ 96 %

Riduttori pendolari con dentatura elicoidale e grande interasse

- Coppia di accelerazione: 92 - 1100 Nm
- Gioco standard: 10 - 11 arcmin
- Gioco classe II: 5 - 8 arcmin
- Tipologie costruttive: flangia, fissaggio con fori filettati e fissaggio laterale
- Esecuzioni albero: albero pieno, albero cavo con disco di serraggio o cava chiavetta, optional con copertura
- Per facilitare il montaggio e lo smontaggio dell'albero macchina, gli alberi cavi sono provvisti di una scanalatura a spirale (in qualità di deposito grasso)
- Adatti per spazi ridotti grazie alla carcassa piatta del riduttore ed al grande interasse
- Anello di tenuta in FKM in ingresso
- Adattatore motore con giunto di bloccaggio EasyAdapt®:
  - Montaggio più facile grazie alla funzione di divaricazione
  - Struttura leggera in alluminio
  - Lunghezza contenuta
  - Elevata resistenza alla torsione
  - Kit di serraggio opzionale per una maggiore sicurezza
  - Doppio isolamento opzionale
- Supporto uscita simmetrico ad attrito ottimizzato
- Tecnologia della dentatura superiore
- Estremamente silenziosi
- Rendimento:
  2 stadi ≥ 97 %
  3 stadi ≥ 96 %

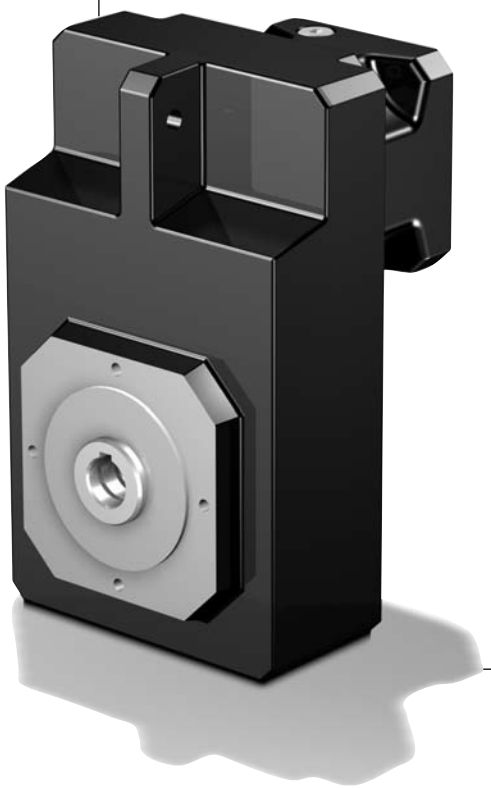
ServoFit® F



ServoFit® F Offset Helical Gear Units

*Reductores de ejes paralelos **ServoFit® F***

ServoFit® Riduttori pendolari **F**



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Denominación de tipo – Tipos constructivos	*F4*
Posiciones de instalación	*F5*
Tabla de selección	
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Dibujos acotados	
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Indice F

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F

Type designation - Available combinations

Denominación de tipo – Formas de ejecución

Identificazione tipologica – forme esecutive

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F 2 0 2 A G 0940 ME20

1 2 3 4 5 6 7 8

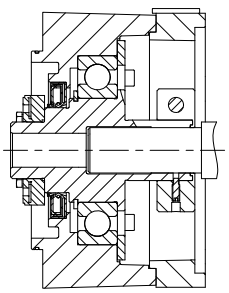
F 202 AG 0940 ME20

1 Gear unit type
2 Gear unit size
3 Generation number
4 Stages
5 Shaft version (e.g. A = hollow shaft)
6 Style (e.g. G = pitch circle diameter)
7 Transmission ratio i x 10
8 Mounting series
- **ME** Motor adapter with EasyAdapt® coupling
  - optionally with clamping set
  - optionally with double seal (MSS1 HS)
- **MB** Motor adapter square with brake (option) (see brochure ID 441904)

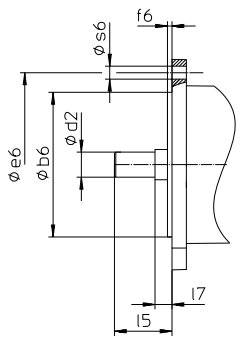
1 *Tipo de reductor*
2 *Tamaño de reductor*
3 *Cifra de generación*
4 *Número de trenes*
5 *Ejecución de eje (p. ej. A = Eje hueco)*
6 *Tipos constructivos (p. ej. G = Circulo de agujeros roscados)*
7 *Número característico de la relación de reducción i x 10*
8 *Grupos de anexo*
- ***ME*** *Adaptador de motor con acoplamiento EasyAdapt®*
  - *Opcionalmente con kit de sujeción*
  - *Opcionalmente con sellado doble (MSS1 HS)*
- ***MB*** *Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

1 Tipo riduttore
2 Grandezza riduttore
3 Numero di generazione
4 Numero di stadi
5 Esecuzione albero (ad ese. A = Albero cavo)
6 tipologie costruttive (ad ese. G = fissaggio a fori filettati)
7 Rapporto di riduzione i x 10
8 Opzioni annessi
- **ME** Adattatore motore con giunto EasyAdapt®
  - kit di serraggio opzionale
  - doppio isolamento opzionale (MSS1 HS)
- **MB** Adattatore motore quadrato con freno (opzione) (vedere prospetto ID 441904)

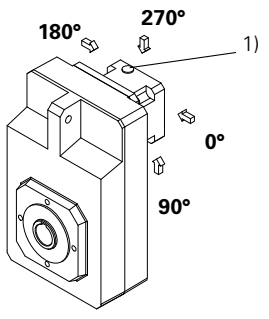
Type of shaft ***Formas de eje*** **Esecuzione albero**		**Styles** ***Tipos constructivos*** **Tipologie costruttive**			
		F	**G**	**Q**	**GN**
Hollow shaft *Eje hueco* Albero cavo	**A**	AF	AG	AQ	AGN
Hollow shaft for shrink ring connection *Eje hueco con disco de contracción* Albero cavo con disco di serraggio	**S**	SF	SG	SQ	SGN
Solid shaft *Eje macizo* Albero pieno	**V**	VF	-	VQ	-



EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore



1) Access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamonto motore

Type designation | *Denominación de tipo* | Identificazione tipologica

Ordering data according to the type designation above. Further ordering details:
- Mounting position "EL" acc. to page F5
- Access clamping screw motor coupling acc. to page F2

*** WARNING!**
Attaching the gear units using the threaded hole circle: The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

Datos de pedido de acuerdo a la tipificación indicada arriba. Otros datos de pedido:
- *Pos. de instalación "EL" según la pág. F5*
- *Acceso al tornillo de apriete del acoplamien to de motor según la pág. F2*

**** ¡ATENCIÓN!***
Fijación de los reductores mediante el círculo de agujeros roscados: *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra. Altri dati dell'ordine:
- Posizione di montaggio "EL" conf. alla pag. F5
- Accesso al giunto di accoppiamonto motore conf. alla pag. F2

*** ATTENZIONE!**
Fissaggio dei riduttori mediante foratura filettata: Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

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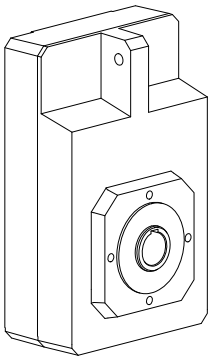
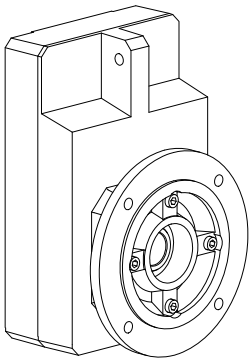
G *

Pitch circle diameter
Círculo de agujeros roscados
Fissaggio con fori filettati



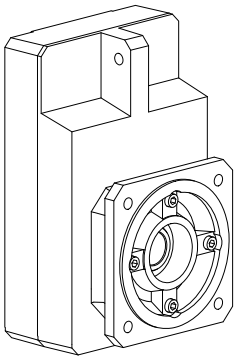
F

Flange mounting
Ejecución de brida
Esecuzione flangiata



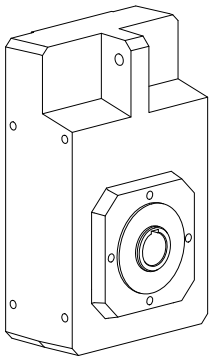
Q

Square flange
Brida cuadrada
Flangia quadra



GN *

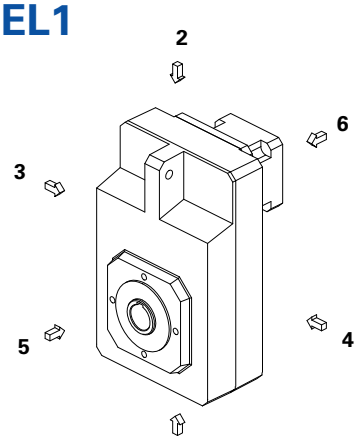
Pitch circle diameter +
Side fastening
Círculo de agujeros roscados + fijación lateral
Fissaggio con fori filettati + fissaggio laterale



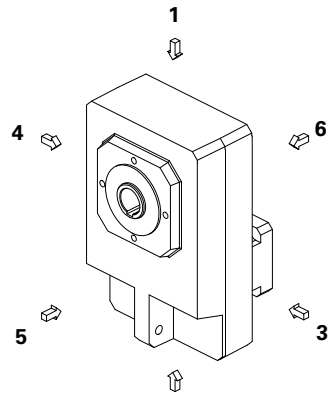
Mounting positions *Posiciones de instalación* Posizioni di montaggio

STÖBER

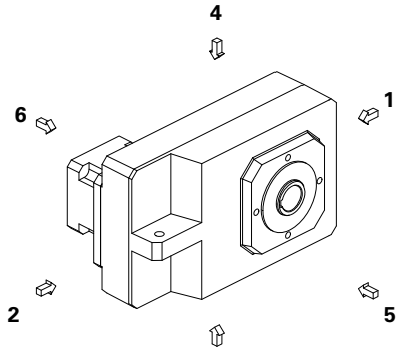
EL1



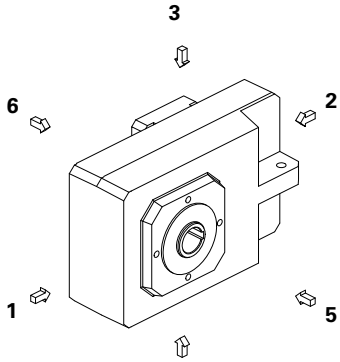
EL2



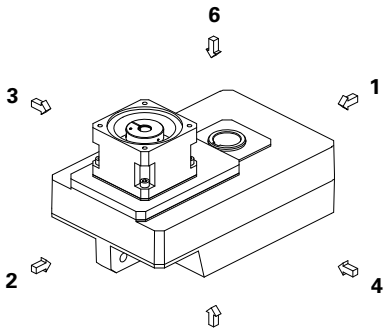
EL3



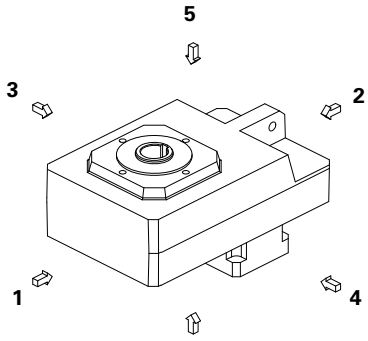
EL4



EL5



EL6



The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).

F

Selection table
ServoFit® F Offset
Helical Gear Units

Tabla de selección
Reductores de ejes
*paralelos **ServoFit® F***

Tabella di selezione
ServoFit® Riduttori
pendolari **F**

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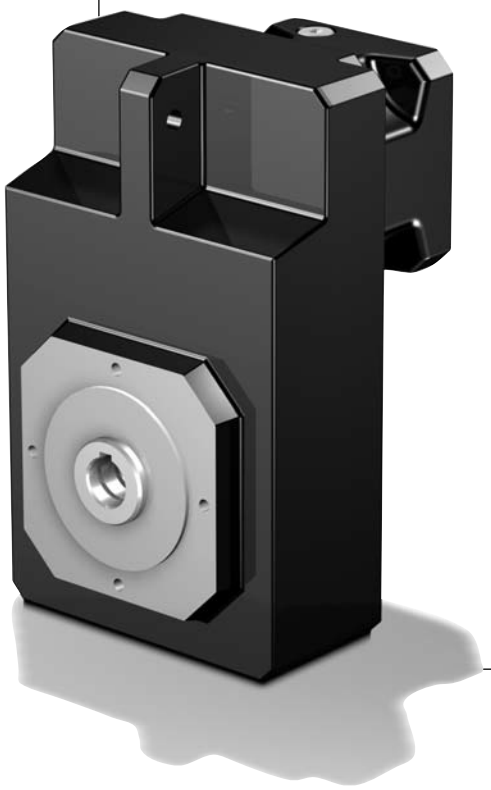

F

Selection table **ServoFit® F** Offset Helical Gear Units

*Tabla de selección Reductores de ejes paralelos **ServoFit® F***

Tabella di selezione **ServoFit®** Riduttori pendolari **F**

STÖBER

Symbols:

i - Gear unit ratio
i_{exakt} - Exact math. ratio
n_{1MAX} - Max. input speed
DBH - Continuous operation - input horizontal
DBV - Continuous operation - input vertical
ZB - Cycle operation
(at ambient temperature 20°C, also see page A11/A12)
Higher speeds on request!
MWø - Motor shaft diameter
J_1 - Mass moment of inertia [2]
(related to input)
G - Weight
(style G, quantity of lubricant for EL1)
$\Delta\varphi_2$ - Backlash
C_2 - Gear unit rigidity
(related to output at M_{2B})
M_{2N} - Rated torque [1] [2]
M_{2B} - max. perm. acceleration torque [2]
M_{2NOT} - Emergency-Off moment [2]
(10^3 load changes)

Denominaciones:

i - *relación de transmisión*
i_{exakt} - *relación de transmisión matemáticamente exacta*
n_{1MAX} - *velocidad máx.*
DBH - Operación permanente - entrada horizontal
DBV - Operación permanente - entrada vertical
ZB - Operación cíclica
(a 20°C de temperatura ambiente, ver también página A11/A12)
Velocidades mayores sobre pedida!
MWø - *Diámetro de eje del motor*
J_1 - *Momento de inercia de masas [2] (del accionamiento referido a la entrada)*
G - *Peso del reductor (tipo constructivo G, cantidad de aceite para EL1)*
$\Delta\varphi_2$ - *juego máx. de giro*
C_2 - *Rigidez del reductor al giro (referido a la salida par M_{2B})*
M_{2N} - *Par nominal [1] [2]*
M_{2B} - *Par máx. adm. de aceleración [2]*
M_{2NOT} - *Momento de PARADA DE EMERGENCIA [2] (10^3 cambios de carga)*

Simboli:

i - Rapporto di riduzione
i_{exakt} - Rapporto di riduzione mat. preciso
n_{1MAX} - Numero di giri in ingresso max.
DBH - Funzionamento ininterrotto - ingresso orizzontale
DBV - Funzionamento ininterrotto - ingresso verticale
ZB - Funzionamento ciclico
(a temperatura ambiente di 20°C vedere anche pag. A11/A12)
Numeri di giri più elevati su richiesta!
MWø - Diametro dell'albero motore
J_1 - Momento di inerzia dell'azionamento [2] (riferito all'ingresso)
G - Peso del riduttore
(tipo costruttivo G, quantità d'olio per EL1)
$\Delta\varphi_2$ - Gioco max.
C_2 - Rigidità torsionale riduttore (riferito all uscita per M_{2B})
M_{2N} - Coppia nominale [1] [2]
M_{2B} - Coppia di accelerazione max. consentita [2]
M_{2NOT} - Coppia di emergenza [2]
(10^3 variazioni di carico)

[1] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

[2] If you use a pinion securing element (option), the torque values can be partly increased. This also results in higher mass moments of inertia.
Values on request or using the EASY Online product catalog (configurator) on our website
http://products.stoeber.de/

[1] Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

[2] Con el kit de sujeción opcional, valores parcialmente superiores. Con esto aumentan los pares de inercia de masa.
Valores disponibles bajo petición o en el catálogo de productos EASY Online (configurador).
http://products.stoeber.de/

[1] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

[2] In caso di impiego di kit di serraggio opzionale possono essere rilevati valori in parte più elevati. *In questo modo risultano dei momenti d'inerzia di massa più elevati.*
Indicazione dei valori su richiesta oppure tramite catalogo prodotti EASY Online (configuratore).
http://products.stoeber.de/

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Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F102 (M2BMAX=120 Nm)													
4,308	56/13	**F102_0043 ME10**	3500	3000	6000	**≤14**	1,9	12,6	11/8	5,8	69	78	97
4,308	56/13	**F102_0043 ME10**	3500	3000	6000	**>14≤19**	2,1	12,6	11/8	6,2	69	100	130
4,308	56/13	**F102_0043 ME20**	3500	3000	5000	**≤19**	3,3	13,6	11/8	6,1	69	100	130
4,308	56/13	**F102_0043 ME20**	3500	3000	5000	**>19≤24**	4,0	13,6	11/8	6,4	69	100	130
6,462	84/13	**F102_0065 ME10**	3500	3000	6000	**≤14**	1,1	12,6	11/8	6,2	79	110	150
6,462	84/13	**F102_0065 ME10**	3500	3000	6000	**>14≤19**	1,4	12,6	11/8	6,4	79	110	190
6,462	84/13	**F102_0065 ME20**	3500	3000	5000	**≤19**	2,6	13,6	11/8	6,3	79	110	190
6,462	84/13	**F102_0065 ME20**	3500	3000	5000	**>19≤24**	3,3	13,6	11/8	6,5	79	110	190
7,156	322/45	**F102_0072 ME10**	3700	3600	6000	**≤14**	1,0	12,6	11/8	6,3	81	110	160
7,156	322/45	**F102_0072 ME10**	3700	3600	6000	**>14≤19**	1,3	12,6	11/8	6,4	81	110	200
7,156	322/45	**F102_0072 ME20**	3500	3500	5000	**≤19**	2,4	13,6	11/8	6,4	81	110	200
7,156	322/45	**F102_0072 ME20**	3500	3500	5000	**>19≤24**	3,2	13,6	11/8	6,5	81	110	200
8,948	1029/115	**F102_0089 ME10**	3700	3600	6000	**≤14**	0,82	12,6	11/8	6,4	88	110	200
8,948	1029/115	**F102_0089 ME10**	3700	3600	6000	**>14≤19**	1,1	12,6	11/8	6,5	88	110	200
8,948	1029/115	**F102_0089 ME20**	3500	3500	5000	**≤19**	2,2	13,6	11/8	6,4	88	110	200
8,948	1029/115	**F102_0089 ME20**	3500	3500	5000	**>19≤24**	3,0	13,6	11/8	6,5	88	110	200
10,92	273/25	**F102_0110 ME10**	4000	4000	6000	**≤14**	0,69	12,6	11/8	6,4	94	110	200
10,92	273/25	**F102_0110 ME10**	4000	4000	6000	**>14≤19**	0,94	12,6	11/8	6,5	94	110	200
10,92	273/25	**F102_0110 ME20**	3500	3500	5000	**≤19**	2,1	13,6	11/8	6,5	94	110	200
10,92	273/25	**F102_0110 ME20**	3500	3500	5000	**>19≤24**	2,8	13,6	11/8	6,5	94	110	200
13,59	231/17	**F102_0135 ME10**	4000	4000	6000	**≤14**	0,60	12,6	11/8	6,5	100	110	200
13,59	231/17	**F102_0135 ME10**	4000	4000	6000	**>14≤19**	0,85	12,6	11/8	6,5	100	110	200
13,59	231/17	**F102_0135 ME20**	3500	3500	5000	**≤19**	2,0	13,6	11/8	6,5	100	110	200
13,59	231/17	**F102_0135 ME20**	3500	3500	5000	**>19≤24**	2,7	13,6	11/8	6,5	100	110	200
18,46	1495/81	**F102_0185 ME10**	3700	3600	6000	**≤14**	0,71	12,6	11/6	7,7	110	120	240
18,46	1495/81	**F102_0185 ME10**	3700	3600	6000	**>14≤19**	0,96	12,6	11/6	7,7	110	120	240
18,46	1495/81	**F102_0185 ME20**	3500	3500	5000	**≤19**	2,1	13,6	11/6	7,7	110	120	240
18,46	1495/81	**F102_0185 ME20**	3500	3500	5000	**>19≤24**	2,9	13,6	11/6	7,7	110	120	240
23,08	3185/138	**F102_0230 ME10**	3700	3600	6000	**≤14**	0,62	12,6	11/6	7,7	120	120	240
23,08	3185/138	**F102_0230 ME10**	3700	3600	6000	**>14≤19**	0,87	12,6	11/6	7,7	120	120	240
23,08	3185/138	**F102_0230 ME20**	3500	3500	5000	**≤19**	2,0	13,6	11/6	7,7	120	120	240
23,08	3185/138	**F102_0230 ME20**	3500	3500	5000	**>19≤24**	2,8	13,6	11/6	7,7	120	120	240
28,17	169/6	**F102_0280 ME10**	4000	4000	6000	**≤14**	0,56	12,6	11/6	7,7	120	120	240
28,17	169/6	**F102_0280 ME10**	4000	4000	6000	**>14≤19**	0,81	12,6	11/6	7,7	120	120	240
28,17	169/6	**F102_0280 ME20**	3500	3500	5000	**≤19**	2,0	13,6	11/6	7,7	120	120	240
28,17	169/6	**F102_0280 ME20**	3500	3500	5000	**>19≤24**	2,7	13,6	11/6	7,7	120	120	240
35,05	3575/102	**F102_0350 ME10**	4000	4000	6000	**≤14**	0,51	12,6	11/6	7,7	120	120	240
35,05	3575/102	**F102_0350 ME10**	4000	4000	6000	**>14≤19**	0,77	12,6	11/6	7,7	120	120	240
35,05	3575/102	**F102_0350 ME20**	3500	3500	5000	**≤19**	1,9	13,6	11/6	7,7	120	120	240
35,05	3575/102	**F102_0350 ME20**	3500	3500	5000	**>19≤24**	2,7	13,6	11/6	7,7	120	120	240
46,43	325/7	**F102_0460 ME10**	4000	4000	6000	**≤14**	0,47	12,6	11/6	7,7	120	120	240
46,43	325/7	**F102_0460 ME10**	4000	4000	6000	**>14≤19**	0,72	12,6	11/6	7,7	120	120	240
46,43	325/7	**F102_0460 ME20**	3500	3500	5000	**≤19**	1,9	13,6	11/6	7,7	120	120	240
46,43	325/7	**F102_0460 ME20**	3500	3500	5000	**>19≤24**	2,6	13,6	11/6	7,7	120	120	240
55,97	2015/36	**F102_0560 ME10**	4000	4000	6000	**≤14**	0,45	12,6	11/6	7,7	120	120	240
55,97	2015/36	**F102_0560 ME10**	4000	4000	6000	**>14≤19**	0,70	12,6	11/6	7,7	120	120	240
55,97	2015/36	**F102_0560 ME20**	3500	3500	5000	**≤19**	1,9	13,6	11/6	7,7	120	120	240
55,97	2015/36	**F102_0560 ME20**	3500	3500	5000	**>19≤24**	2,6	13,6	11/6	7,7	120	120	240
70,06	1261/18	**F102_0700 ME10**	4000	4000	6000	**≤14**	0,42	12,6	11/6	7,7	120	120	240
70,06	1261/18	**F102_0700 ME10**	4000	4000	6000	**>14≤19**	0,68	12,6	11/6	7,7	120	120	240
70,06	1261/18	**F102_0700 ME20**	3500	3500	5000	**≤19**	1,8	13,6	11/6	7,7	120	120	240
70,06	1261/18	**F102_0700 ME20**	3500	3500	5000	**>19≤24**	2,6	13,6	11/6	7,7	120	120	240
93,63	7865/84	**F102_0940 ME10**	4000	4000	6000	**≤14**	0,38	12,6	11/6	7,7	120	120	240
93,63	7865/84	**F102_0940 ME10**	4000	4000	6000	**>14≤19**	0,63	12,6	11/6	7,7	120	120	240
111,9	2015/18	**F102_1120 ME10**	4000	4000	6000	**≤14**	0,37	12,6	11/6	7,7	120	120	240
111,9	2015/18	**F102_1120 ME10**	4000	4000	6000	**>14≤19**	0,62	12,6	11/6	7,7	120	120	240
139,8	559/4	**F102_1400 ME10**	4000	4000	6000	**≤14**	0,36	12,6	11/6	7,7	120	120	240
139,8	559/4	**F102_1400 ME10**	4000	4000	6000	**>14≤19**	0,62	12,6	11/6	7,7	120	120	240

Offset Helical Gear Units **F**
Reductores de ejes paralelos ***F***
Riduttori pendolari **F**

Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F202 (M2BMAX=270 Nm)													
4,680	2616/559	**F202_0047 ME10**	3100	2600	5000	**≤14**	4,4	20,8	11/8	12	84	84	110
4,680	2616/559	**F202_0047 ME10**	3100	2600	5000	**>14≤19**	4,7	20,8	11/8	14	110	110	140
4,680	2616/559	**F202_0047 ME20**	3100	2600	5000	**≤19**	5,9	21,8	11/8	14	140	160	200
4,680	2616/559	**F202_0047 ME20**	3100	2600	5000	**>19≤24**	6,6	21,8	11/8	15	140	210	340
4,680	2616/559	**F202_0047 ME20**	3100	2600	5000	**>24≤32**	8,1	21,8	11/8	15	140	210	340
4,680	2616/559	**F202_0047 ME30**	3100	2600	4000	**≤24**	12	23,7	11/8	15	140	210	340
4,680	2616/559	**F202_0047 ME30**	3100	2600	4000	**>24≤32**	12	23,7	11/8	15	140	210	340
4,680	2616/559	**F202_0047 ME30**	3100	2600	4000	**>32≤38**	13	23,7	11/8	15	140	210	340
5,552	5341/962	**F202_0056 ME20**	3100	2600	5000	**≤19**	4,9	21,8	11/8	14	150	190	230
5,552	5341/962	**F202_0056 ME20**	3100	2600	5000	**>19≤24**	5,6	21,8	11/8	15	150	210	400
5,552	5341/962	**F202_0056 ME20**	3100	2600	5000	**>24≤32**	7,1	21,8	11/8	15	150	210	400
5,552	5341/962	**F202_0056 ME30**	3100	2600	4000	**≤24**	11	23,7	11/8	15	150	210	400
5,552	5341/962	**F202_0056 ME30**	3100	2600	4000	**>24≤32**	11	23,7	11/8	15	150	210	400
5,552	5341/962	**F202_0056 ME30**	3100	2600	4000	**>32≤38**	12	23,7	11/8	15	150	210	400
7,167	5777/806	**F202_0072 ME10**	3600	3100	6000	**≤14**	2,3	20,8	11/8	14	130	130	160
7,167	5777/806	**F202_0072 ME10**	3600	3100	6000	**>14≤19**	2,6	20,8	11/8	15	150	170	210
7,167	5777/806	**F202_0072 ME20**	3500	3100	5000	**≤19**	3,8	21,8	11/8	15	160	210	300
7,167	5777/806	**F202_0072 ME20**	3500	3100	5000	**>19≤24**	4,5	21,8	11/8	15	160	210	400
7,167	5777/806	**F202_0072 ME20**	3500	3100	5000	**>24≤32**	6,0	21,8	11/8	15	160	210	400
7,167	5777/806	**F202_0072 ME30**	3500	3100	4000	**≤24**	9,4	23,7	11/8	15	160	210	400
7,167	5777/806	**F202_0072 ME30**	3500	3100	4000	**>24≤32**	9,6	23,7	11/8	15	160	210	400
7,167	5777/806	**F202_0072 ME30**	3500	3100	4000	**>32≤38**	11	23,7	11/8	15	160	210	400
9,006	3161/351	**F202_0090 ME10**	3600	3100	6000	**≤14**	1,7	20,8	11/8	15	160	160	200
9,006	3161/351	**F202_0090 ME10**	3600	3100	6000	**>14≤19**	1,9	20,8	11/8	15	160	210	260
9,006	3161/351	**F202_0090 ME20**	3500	3100	5000	**≤19**	3,1	21,8	11/8	15	170	210	380
9,006	3161/351	**F202_0090 ME20**	3500	3100	5000	**>19≤24**	3,9	21,8	11/8	15	170	210	400
9,006	3161/351	**F202_0090 ME20**	3500	3100	5000	**>24≤32**	5,3	21,8	11/8	15	170	210	400
9,006	3161/351	**F202_0090 ME30**	3500	3100	4000	**≤24**	8,8	23,7	11/8	15	170	210	400
9,006	3161/351	**F202_0090 ME30**	3500	3100	4000	**>24≤32**	8,9	23,7	11/8	15	170	210	400
9,006	3161/351	**F202_0090 ME30**	3500	3100	4000	**>32≤38**	11	23,7	11/8	15	170	210	400
10,80	7303/676	**F202_0110 ME10**	3800	3500	6000	**≤14**	1,3	20,8	11/8	15	170	190	240
10,80	7303/676	**F202_0110 ME10**	3800	3500	6000	**>14≤19**	1,6	20,8	11/8	15	170	210	310
10,80	7303/676	**F202_0110 ME20**	3500	3500	5000	**≤19**	2,8	21,8	11/8	15	190	210	400
10,80	7303/676	**F202_0110 ME20**	3500	3500	5000	**>19≤24**	3,5	21,8	11/8	15	190	210	400
10,80	7303/676	**F202_0110 ME20**	3500	3500	5000	**>24≤32**	5,0	21,8	11/8	15	190	210	400
10,80	7303/676	**F202_0110 ME30**	3500	3500	4000	**≤24**	8,4	23,7	11/8	15	190	210	400
10,80	7303/676	**F202_0110 ME30**	3500	3500	4000	**>24≤32**	8,6	23,7	11/8	15	190	210	400
10,80	7303/676	**F202_0110 ME30**	3500	3500	4000	**>32≤38**	10	23,7	11/8	16	190	210	400
13,63	109/8	**F202_0135 ME10**	3800	3500	6000	**≤14**	1,0	20,8	11/8	15	180	210	310
13,63	109/8	**F202_0135 ME10**	3800	3500	6000	**>14≤19**	1,3	20,8	11/8	15	180	210	400
13,63	109/8	**F202_0135 ME20**	3500	3500	5000	**≤19**	2,5	21,8	11/8	15	200	210	400
13,63	109/8	**F202_0135 ME20**	3500	3500	5000	**>19≤24**	3,2	21,8	11/8	15	200	210	400
13,63	109/8	**F202_0135 ME20**	3500	3500	5000	**>24≤32**	4,7	21,8	11/8	16	200	210	400
13,63	109/8	**F202_0135 ME30**	3500	3500	4000	**≤24**	8,1	23,7	11/8	15	200	210	400
13,63	109/8	**F202_0135 ME30**	3500	3500	4000	**>24≤32**	8,3	23,7	11/8	16	200	210	400
13,63	109/8	**F202_0135 ME30**	3500	3500	4000	**>32≤38**	10,0	23,7	11/8	16	200	210	400
18,65	6360/341	**F202_0185 ME10**	3600	3100	6000	**≤14**	1,3	20,8	11/6	18	220	270	420
18,65	6360/341	**F202_0185 ME10**	3600	3100	6000	**>14≤19**	1,6	20,8	11/6	18	220	270	480
18,65	6360/341	**F202_0185 ME20**	3500	3100	5000	**≤19**	2,8	21,8	11/6	18	220	270	480
18,65	6360/341	**F202_0185 ME20**	3500	3100	5000	**>19≤24**	3,5	21,8	11/6	18	220	270	480
18,65	6360/341	**F202_0185 ME20**	3500	3100	5000	**>24≤32**	5,0	21,8	11/6	18	220	270	480
18,65	6360/341	**F202_0185 ME30**	3500	3100	4000	**≤24**	8,4	23,7	11/6	18	220	270	480
18,65	6360/341	**F202_0185 ME30**	3500	3100	4000	**>24≤32**	8,5	23,7	11/6	18	220	270	480
18,65	6360/341	**F202_0185 ME30**	3500	3100	4000	**>32≤38**	10	23,7	11/6	18	220	270	480
23,43	2320/99	**F202_0230 ME10**	3600	3100	6000	**≤14**	1,0	20,8	11/6	18	240	270	480
23,43	2320/99	**F202_0230 ME10**	3600	3100	6000	**>14≤19**	1,3	20,8	11/6	18	240	270	480
23,43	2320/99	**F202_0230 ME20**	3500	3100	5000	**≤19**	2,5	21,8	11/6	18	240	270	480
23,43	2320/99	**F202_0230 ME20**	3500	3100	5000	**>19≤24**	3,2	21,8	11/6	18	240	270	480
23,43	2320/99	**F202_0230 ME20**	3500	3100	5000	**>24≤32**	4,7	21,8	11/6	18	240	270	480
23,43	2320/99	**F202_0230 ME30**	3500	3100	4000	**≤24**	8,2	23,7	11/6	18	240	270	480
23,43	2320/99	**F202_0230 ME30**	3500	3100	4000	**>24≤32**	8,3	23,7	11/6	18	240	270	480
23,43	2320/99	**F202_0230 ME30**	3500	3100	4000	**>32≤38**	10	23,7	11/6	18	240	270	480

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Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
F202 (M_{2BMAX}=270 Nm)													
28,11	4020/143	**F202_0280 ME10**	3800	3500	6000	**≤14**	0,88	20,8	11/6	18	240	270	480
28,11	4020/143	**F202_0280 ME10**	3800	3500	6000	**>14≤19**	1,1	20,8	11/6	18	240	270	480
28,11	4020/143	**F202_0280 ME20**	3500	3500	5000	**≤19**	2,3	21,8	11/6	18	240	270	480
28,11	4020/143	**F202_0280 ME20**	3500	3500	5000	**>19≤24**	3,1	21,8	11/6	18	240	270	480
28,11	4020/143	**F202_0280 ME20**	3500	3500	5000	**>24≤32**	4,5	21,8	11/6	18	240	270	480
28,11	4020/143	**F202_0280 ME30**	3500	3500	4000	**≤24**	8,0	23,7	11/6	18	240	270	480
28,11	4020/143	**F202_0280 ME30**	3500	3500	4000	**>24≤32**	8,1	23,7	11/6	18	240	270	480
28,11	4020/143	**F202_0280 ME30**	3500	3500	4000	**>32≤38**	9,9	23,7	11/6	18	240	270	480
35,46	390/11	**F202_0350 ME10**	3800	3500	6000	**≤14**	0,74	20,8	11/6	18	240	270	480
35,46	390/11	**F202_0350 ME10**	3800	3500	6000	**>14≤19**	0,99	20,8	11/6	18	240	270	480
35,46	390/11	**F202_0350 ME20**	3500	3500	5000	**≤19**	2,2	21,8	11/6	18	240	270	480
35,46	390/11	**F202_0350 ME20**	3500	3500	5000	**>19≤24**	2,9	21,8	11/6	18	240	270	480
35,46	390/11	**F202_0350 ME20**	3500	3500	5000	**>24≤32**	4,4	21,8	11/6	18	240	270	480
35,46	390/11	**F202_0350 ME30**	3500	3500	4000	**≤24**	7,9	23,7	11/6	18	240	270	480
35,46	390/11	**F202_0350 ME30**	3500	3500	4000	**>24≤32**	8,0	23,7	11/6	18	240	270	480
35,46	390/11	**F202_0350 ME30**	3500	3500	4000	**>32≤38**	9,7	23,7	11/6	18	240	270	480
47,05	1035/22	**F202_0470 ME10**	4000	3900	6000	**≤14**	0,62	20,8	11/6	18	240	270	480
47,05	1035/22	**F202_0470 ME10**	4000	3900	6000	**>14≤19**	0,87	20,8	11/6	18	240	270	480
47,05	1035/22	**F202_0470 ME20**	3500	3500	5000	**≤19**	2,1	21,8	11/6	18	240	270	480
47,05	1035/22	**F202_0470 ME20**	3500	3500	5000	**>19≤24**	2,8	21,8	11/6	18	240	270	480
47,05	1035/22	**F202_0470 ME20**	3500	3500	5000	**>24≤32**	4,3	21,8	11/6	18	240	270	480
47,05	1035/22	**F202_0470 ME30**	3500	3500	4000	**≤24**	7,7	23,7	11/6	18	240	270	480
47,05	1035/22	**F202_0470 ME30**	3500	3500	4000	**>24≤32**	7,9	23,7	11/6	18	240	270	480
47,05	1035/22	**F202_0470 ME30**	3500	3500	4000	**>32≤38**	9,6	23,7	11/6	18	240	270	480
56,73	624/11	**F202_0570 ME10**	4000	3900	6000	**≤14**	0,55	20,8	11/6	18	240	270	480
56,73	624/11	**F202_0570 ME10**	4000	3900	6000	**>14≤19**	0,81	20,8	11/6	18	240	270	480
56,73	624/11	**F202_0570 ME20**	3500	3500	5000	**≤19**	2,0	21,8	11/6	18	240	270	480
56,73	624/11	**F202_0570 ME20**	3500	3500	5000	**>19≤24**	2,7	21,8	11/6	18	240	270	480
70,13	5400/77	**F202_0700 ME10**	4000	3900	6000	**≤14**	0,50	20,8	11/6	18	240	270	480
70,13	5400/77	**F202_0700 ME10**	4000	3900	6000	**>14≤19**	0,75	20,8	11/6	18	240	270	480
70,13	5400/77	**F202_0700 ME20**	3500	3500	5000	**≤19**	1,9	21,8	11/6	18	240	270	480
70,13	5400/77	**F202_0700 ME20**	3500	3500	5000	**>19≤24**	2,7	21,8	11/6	18	240	270	480
93,82	1032/11	**F202_0940 ME10**	4000	3900	6000	**≤14**	0,45	20,8	11/6	18	240	270	480
93,82	1032/11	**F202_0940 ME10**	4000	3900	6000	**>14≤19**	0,71	20,8	11/6	18	240	270	480
93,82	1032/11	**F202_0940 ME20**	3500	3500	5000	**≤19**	1,9	21,8	11/6	18	240	270	480
93,82	1032/11	**F202_0940 ME20**	3500	3500	5000	**>19≤24**	2,6	21,8	11/6	18	240	270	480
112,7	1240/11	**F202_1130 ME10**	4000	3900	6000	**≤14**	0,40	20,8	11/6	18	240	270	480
112,7	1240/11	**F202_1130 ME10**	4000	3900	6000	**>14≤19**	0,66	20,8	11/6	18	240	270	480
140,9	1550/11	**F202_1410 ME10**	4000	3900	6000	**≤14**	0,39	20,8	11/6	18	240	270	480
140,9	1550/11	**F202_1410 ME10**	4000	3900	6000	**>14≤19**	0,64	20,8	11/6	18	240	270	480
F203 (M_{2BMAX}=270 Nm)													
184,3	16215/88	**F203_1840 ME10**	4000	3900	6000	**≤14**	0,41	23,7	11/7	18	240	270	480
184,3	16215/88	**F203_1840 ME10**	4000	3900	6000	**>14≤19**	0,66	23,7	11/7	18	240	270	480
222,2	2444/11	**F203_2220 ME10**	4000	3900	6000	**≤14**	0,41	23,7	11/7	18	240	270	480
222,2	2444/11	**F203_2220 ME10**	4000	3900	6000	**>14≤19**	0,66	23,7	11/7	18	240	270	480
274,7	21150/77	**F203_2750 ME10**	4000	3900	6000	**≤14**	0,40	23,7	11/7	18	240	270	480
274,7	21150/77	**F203_2750 ME10**	4000	3900	6000	**>14≤19**	0,66	23,7	11/7	18	240	270	480
367,5	4042/11	**F203_3670 ME10**	4000	3900	6000	**≤14**	0,40	23,7	11/7	18	240	270	480
367,5	4042/11	**F203_3670 ME10**	4000	3900	6000	**>14≤19**	0,65	23,7	11/7	18	240	270	480
441,5	14570/33	**F203_4420 ME10**	4000	3900	6000	**≤14**	0,40	23,7	11/7	18	240	270	480
441,5	14570/33	**F203_4420 ME10**	4000	3900	6000	**>14≤19**	0,65	23,7	11/7	18	240	270	480
551,9	36425/66	**F203_5520 ME10**	4000	3900	6000	**≤14**	0,40	23,7	11/7	18	240	270	480
551,9	36425/66	**F203_5520 ME10**	4000	3900	6000	**>14≤19**	0,65	23,7	11/7	18	240	270	480

Offset Helical Gear Units **F**
Reductores de ejes paralelos ***F***
Riduttori pendolari **F**

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Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F302 (M2BMAX=450 Nm)													
4,644	4992/1075	**F302_0046 ME20**	3000	2600	4500	**≤19**	10,0	29,4	11/8	17	160	160	190
4,644	4992/1075	**F302_0046 ME20**	3000	2600	4500	**>19≤24**	11	29,4	11/8	19	230	270	340
4,644	4992/1075	**F302_0046 ME20**	3000	2600	4500	**>24≤32**	12	29,4	11/8	20	230	270	340
4,644	4992/1075	**F302_0046 ME30**	3000	2600	4000	**≤24**	16	31,3	11/8	19	230	350	450
4,644	4992/1075	**F302_0046 ME30**	3000	2600	4000	**>24≤32**	16	31,3	11/8	20	230	350	650
4,644	4992/1075	**F302_0046 ME30**	3000	2600	4000	**>32≤38**	18	31,3	11/8	20	230	350	650
5,720	143/25	**F302_0057 ME20**	3000	2600	4500	**≤19**	7,5	29,4	11/8	18	190	190	240
5,720	143/25	**F302_0057 ME20**	3000	2600	4500	**>19≤24**	8,3	29,4	11/8	20	250	330	420
5,720	143/25	**F302_0057 ME20**	3000	2600	4500	**>24≤32**	9,7	29,4	11/8	20	250	330	420
5,720	143/25	**F302_0057 ME30**	3000	2600	4000	**≤24**	13	31,3	11/8	19	250	330	420
5,720	143/25	**F302_0057 ME30**	3000	2600	4000	**>24≤32**	13	31,3	11/8	20	250	330	420
5,720	143/25	**F302_0057 ME30**	3000	2600	4000	**>32≤38**	15	31,3	11/8	20	250	330	420
7,172	208/29	**F302_0072 ME20**	3500	3100	5000	**≤19**	5,7	29,4	11/8	19	240	240	300
7,172	208/29	**F302_0072 ME20**	3500	3100	5000	**>19≤24**	6,4	29,4	11/8	20	270	350	520
7,172	208/29	**F302_0072 ME20**	3500	3100	5000	**>24≤32**	7,9	29,4	11/8	20	270	350	520
7,172	208/29	**F302_0072 ME30**	3500	3100	4000	**≤24**	11	31,3	11/8	20	270	350	520
7,172	208/29	**F302_0072 ME30**	3500	3100	4000	**>24≤32**	11	31,3	11/8	20	270	350	520
7,172	208/29	**F302_0072 ME30**	3500	3100	4000	**>32≤38**	13	31,3	11/8	20	270	350	520
8,986	5616/625	**F302_0090 ME10**	3500	3100	5000	**≤14**	3,0	28,4	11/8	19	160	160	200
8,986	5616/625	**F302_0090 ME10**	3500	3100	5000	**>14≤19**	3,3	28,4	11/8	20	180	210	260
8,986	5616/625	**F302_0090 ME20**	3500	3100	5000	**≤19**	4,5	29,4	11/8	19	290	300	380
8,986	5616/625	**F302_0090 ME20**	3500	3100	5000	**>19≤24**	5,2	29,4	11/8	20	290	350	650
8,986	5616/625	**F302_0090 ME20**	3500	3100	5000	**>24≤32**	6,7	29,4	11/8	20	290	350	650
8,986	5616/625	**F302_0090 ME30**	3500	3100	4000	**≤24**	10	31,3	11/8	20	290	350	650
8,986	5616/625	**F302_0090 ME30**	3500	3100	4000	**>24≤32**	10	31,3	11/8	20	290	350	650
8,986	5616/625	**F302_0090 ME30**	3500	3100	4000	**>32≤38**	12	31,3	11/8	20	290	350	650
10,79	1456/135	**F302_0110 ME10**	3700	3500	5500	**≤14**	2,3	28,4	11/8	19	190	190	240
10,79	1456/135	**F302_0110 ME10**	3700	3500	5500	**>14≤19**	2,5	28,4	11/8	20	190	250	310
10,79	1456/135	**F302_0110 ME20**	3500	3500	5000	**≤19**	3,7	29,4	11/8	20	310	350	450
10,79	1456/135	**F302_0110 ME20**	3500	3500	5000	**>19≤24**	4,5	29,4	11/8	20	310	350	650
10,79	1456/135	**F302_0110 ME20**	3500	3500	5000	**>24≤32**	5,9	29,4	11/8	20	310	350	650
10,79	1456/135	**F302_0110 ME30**	3500	3500	4000	**≤24**	9,4	31,3	11/8	20	310	350	650
10,79	1456/135	**F302_0110 ME30**	3500	3500	4000	**>24≤32**	9,5	31,3	11/8	20	310	350	650
10,79	1456/135	**F302_0110 ME30**	3500	3500	4000	**>32≤38**	11	31,3	11/8	20	310	350	650
13,38	7696/575	**F302_0135 ME10**	3700	3500	5500	**≤14**	1,7	28,4	11/8	20	200	240	300
13,38	7696/575	**F302_0135 ME10**	3700	3500	5500	**>14≤19**	1,9	28,4	11/8	20	200	310	390
13,38	7696/575	**F302_0135 ME20**	3500	3500	5000	**≤19**	3,1	29,4	11/8	20	330	350	560
13,38	7696/575	**F302_0135 ME20**	3500	3500	5000	**>19≤24**	3,9	29,4	11/8	20	330	350	650
13,38	7696/575	**F302_0135 ME20**	3500	3500	5000	**>24≤32**	5,3	29,4	11/8	20	330	350	650
13,38	7696/575	**F302_0135 ME30**	3500	3500	4000	**≤24**	8,8	31,3	11/8	20	330	350	650
13,38	7696/575	**F302_0135 ME30**	3500	3500	4000	**>24≤32**	8,9	31,3	11/8	20	330	350	650
13,38	7696/575	**F302_0135 ME30**	3500	3500	4000	**>32≤38**	11	31,3	11/8	20	330	350	650
18,77	4900/261	**F302_0190 ME20**	3500	3100	5000	**≤19**	3,7	29,4	11/6	22	370	450	780
18,77	4900/261	**F302_0190 ME20**	3500	3100	5000	**>19≤24**	4,5	29,4	11/6	22	370	450	800
18,77	4900/261	**F302_0190 ME20**	3500	3100	5000	**>24≤32**	5,9	29,4	11/6	22	370	450	800
18,77	4900/261	**F302_0190 ME30**	3500	3100	4000	**≤24**	9,4	31,3	11/6	22	370	450	800
18,77	4900/261	**F302_0190 ME30**	3500	3100	4000	**>24≤32**	9,5	31,3	11/6	22	370	450	800
18,77	4900/261	**F302_0190 ME30**	3500	3100	4000	**>32≤38**	11	31,3	11/6	22	370	450	800
23,52	588/25	**F302_0240 ME10**	3500	3100	5000	**≤14**	1,8	28,4	11/6	22	400	420	530
23,52	588/25	**F302_0240 ME10**	3500	3100	5000	**>14≤19**	2,0	28,4	11/6	22	400	450	680
23,52	588/25	**F302_0240 ME20**	3500	3100	5000	**≤19**	3,2	29,4	11/6	22	400	450	800
23,52	588/25	**F302_0240 ME20**	3500	3100	5000	**>19≤24**	3,9	29,4	11/6	22	400	450	800
23,52	588/25	**F302_0240 ME20**	3500	3100	5000	**>24≤32**	5,4	29,4	11/6	22	400	450	800
23,52	588/25	**F302_0240 ME30**	3500	3100	4000	**≤24**	8,9	31,3	11/6	22	400	450	800
23,52	588/25	**F302_0240 ME30**	3500	3100	4000	**>24≤32**	9,0	31,3	11/6	22	400	450	800
23,52	588/25	**F302_0240 ME30**	3500	3100	4000	**>32≤38**	11	31,3	11/6	22	400	450	800
28,23	6860/243	**F302_0280 ME10**	3700	3500	5500	**≤14**	1,4	28,4	11/6	22	400	450	640
28,23	6860/243	**F302_0280 ME10**	3700	3500	5500	**>14≤19**	1,7	28,4	11/6	22	400	450	800
28,23	6860/243	**F302_0280 ME20**	3500	3500	5000	**≤19**	2,9	29,4	11/6	22	400	450	800
28,23	6860/243	**F302_0280 ME20**	3500	3500	5000	**>19≤24**	3,6	29,4	11/6	22	400	450	800
28,23	6860/243	**F302_0280 ME20**	3500	3500	5000	**>24≤32**	5,1	29,4	11/6	22	400	450	800
28,23	6860/243	**F302_0280 ME30**	3500	3500	4000	**≤24**	8,5	31,3	11/6	22	400	450	800

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Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F302 (M2BMAX=450 Nm)													
28,23	6860/243	**F302_0280 ME30**	3500	3500	4000	**>24≤32**	8,6	31,3	11/6	22	400	450	800
28,23	6860/243	**F302_0280 ME30**	3500	3500	4000	**>32≤38**	10	31,3	11/6	22	400	450	800
35,03	7252/207	**F302_0350 ME10**	3700	3500	5500	**≤14**	1,1	28,4	11/6	22	400	450	790
35,03	7252/207	**F302_0350 ME10**	3700	3500	5500	**>14≤19**	1,4	28,4	11/6	22	400	450	800
35,03	7252/207	**F302_0350 ME20**	3500	3500	5000	**≤19**	2,6	29,4	11/6	22	400	450	800
35,03	7252/207	**F302_0350 ME20**	3500	3500	5000	**>19≤24**	3,3	29,4	11/6	22	400	450	800
35,03	7252/207	**F302_0350 ME20**	3500	3500	5000	**>24≤32**	4,8	29,4	11/6	22	400	450	800
35,03	7252/207	**F302_0350 ME30**	3500	3500	4000	**≤24**	8,2	31,3	11/6	22	400	450	800
35,03	7252/207	**F302_0350 ME30**	3500	3500	4000	**>24≤32**	8,4	31,3	11/6	22	400	450	800
35,03	7252/207	**F302_0350 ME30**	3500	3500	4000	**>32≤38**	10	31,3	11/6	22	400	450	800
47,19	1274/27	**F302_0470 ME10**	4000	3900	6000	**≤14**	0,86	28,4	11/6	22	400	450	800
47,19	1274/27	**F302_0470 ME10**	4000	3900	6000	**>14≤19**	1,1	28,4	11/6	22	400	450	800
47,19	1274/27	**F302_0470 ME20**	3500	3500	5000	**≤19**	2,3	29,4	11/6	22	400	450	800
47,19	1274/27	**F302_0470 ME20**	3500	3500	5000	**>19≤24**	3,0	29,4	11/6	22	400	450	800
47,19	1274/27	**F302_0470 ME20**	3500	3500	5000	**>24≤32**	4,5	29,4	11/6	22	400	450	800
47,19	1274/27	**F302_0470 ME30**	3500	3500	4000	**≤24**	8,0	31,3	11/6	22	400	450	800
47,19	1274/27	**F302_0470 ME30**	3500	3500	4000	**>24≤32**	8,1	31,3	11/6	22	400	450	800
47,19	1274/27	**F302_0470 ME30**	3500	3500	4000	**>32≤38**	9,8	31,3	11/6	22	400	450	800
56,49	4067/72	**F302_0560 ME10**	4000	3900	6000	**≤14**	0,74	28,4	11/6	22	400	450	800
56,49	4067/72	**F302_0560 ME10**	4000	3900	6000	**>14≤19**	0,99	28,4	11/6	22	400	450	800
56,49	4067/72	**F302_0560 ME20**	3500	3500	5000	**≤19**	2,2	29,4	11/6	22	400	450	800
56,49	4067/72	**F302_0560 ME20**	3500	3500	5000	**>19≤24**	2,9	29,4	11/6	22	400	450	800
56,49	4067/72	**F302_0560 ME20**	3500	3500	5000	**>24≤32**	4,4	29,4	11/6	22	400	450	800
56,49	4067/72	**F302_0560 ME30**	3500	3500	4000	**≤24**	7,9	31,3	11/6	22	400	450	800
56,49	4067/72	**F302_0560 ME30**	3500	3500	4000	**>24≤32**	8,0	31,3	11/6	22	400	450	800
56,49	4067/72	**F302_0560 ME30**	3500	3500	4000	**>32≤38**	9,7	31,3	11/6	22	400	450	800
70,36	2744/39	**F302_0700 ME10**	4000	3900	6000	**≤14**	0,64	28,4	11/6	22	400	450	800
70,36	2744/39	**F302_0700 ME10**	4000	3900	6000	**>14≤19**	0,89	28,4	11/6	22	400	450	800
70,36	2744/39	**F302_0700 ME20**	3500	3500	5000	**≤19**	2,1	29,4	11/6	22	400	450	800
70,36	2744/39	**F302_0700 ME20**	3500	3500	5000	**>19≤24**	2,8	29,4	11/6	22	400	450	800
93,64	4214/45	**F302_0940 ME10**	4000	3900	6000	**≤14**	0,54	28,4	11/6	22	400	450	800
93,64	4214/45	**F302_0940 ME10**	4000	3900	6000	**>14≤19**	0,79	28,4	11/6	22	400	450	800
93,64	4214/45	**F302_0940 ME20**	3500	3500	5000	**≤19**	2,0	29,4	11/6	22	400	450	800
93,64	4214/45	**F302_0940 ME20**	3500	3500	5000	**>19≤24**	2,7	29,4	11/6	22	400	450	800
112,8	3724/33	**F302_1130 ME10**	4000	3900	6000	**≤14**	0,49	28,4	11/6	22	400	450	800
112,8	3724/33	**F302_1130 ME10**	4000	3900	6000	**>14≤19**	0,74	28,4	11/6	22	400	450	800
112,8	3724/33	**F302_1130 ME20**	3500	3500	5000	**≤19**	1,9	29,4	11/6	22	400	450	800
112,8	3724/33	**F302_1130 ME20**	3500	3500	5000	**>19≤24**	2,6	29,4	11/6	22	400	450	800
140,6	7595/54	**F302_1410 ME10**	4000	3900	6000	**≤14**	0,43	28,4	11/6	22	400	450	620
140,6	7595/54	**F302_1410 ME10**	4000	3900	6000	**>14≤19**	0,68	28,4	11/6	22	400	450	620
F303 (M2BMAX=450 Nm)													
182,4	73892/405	**F303_1820 ME20**	3500	3500	5000	**≤19**	2,0	34,3	11/7	22	400	450	800
182,4	73892/405	**F303_1820 ME20**	3500	3500	5000	**>19≤24**	2,7	34,3	11/7	22	400	450	800
184,8	29939/162	**F303_1850 ME10**	4000	3900	6000	**≤14**	0,43	33,3	11/7	22	400	450	800
184,8	29939/162	**F303_1850 ME10**	4000	3900	6000	**>14≤19**	0,68	33,3	11/7	22	400	450	800
218,4	117943/540	**F303_2180 ME20**	3500	3500	5000	**≤19**	2,0	34,3	11/7	22	400	450	800
218,4	117943/540	**F303_2180 ME20**	3500	3500	5000	**>19≤24**	2,7	34,3	11/7	22	400	450	800
221,2	191149/864	**F303_2210 ME10**	4000	3900	6000	**≤14**	0,42	33,3	11/7	22	400	450	800
221,2	191149/864	**F303_2210 ME10**	4000	3900	6000	**>14≤19**	0,67	33,3	11/7	22	400	450	800
272,1	159152/585	**F303_2720 ME20**	3500	3500	5000	**≤19**	2,0	34,3	11/7	22	400	450	800
272,1	159152/585	**F303_2720 ME20**	3500	3500	5000	**>19≤24**	2,7	34,3	11/7	22	400	450	800
275,6	32242/117	**F303_2760 ME10**	4000	3900	6000	**≤14**	0,41	33,3	11/7	22	400	450	800
275,6	32242/117	**F303_2760 ME10**	4000	3900	6000	**>14≤19**	0,66	33,3	11/7	22	400	450	800
362,1	244412/675	**F303_3620 ME20**	3500	3500	5000	**≤19**	1,9	34,3	11/7	22	400	450	800
362,1	244412/675	**F303_3620 ME20**	3500	3500	5000	**>19≤24**	2,7	34,3	11/7	22	400	450	800
366,8	99029/270	**F303_3670 ME10**	4000	3900	6000	**≤14**	0,41	33,3	11/7	22	400	450	800
366,8	99029/270	**F303_3670 ME10**	4000	3900	6000	**>14≤19**	0,66	33,3	11/7	22	400	450	800
442,0	43757/99	**F303_4420 ME10**	4000	3900	6000	**≤14**	0,40	33,3	11/7	22	400	450	800
442,0	43757/99	**F303_4420 ME10**	4000	3900	6000	**>14≤19**	0,65	33,3	11/7	22	400	450	800

Offset Helical Gear Units **F**
Reductores de ejes paralelos ***F***
Riduttori pendolari **F**

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Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F303 (M2BMAX=450 Nm)													
550,9	356965/648	**F303_5510 ME10**	4000	3900	6000	**≤14**	0,40	33,3	11/7	22	400	450	620
550,9	356965/648	**F303_5510 ME10**	4000	3900	6000	**>14≤19**	0,65	33,3	11/7	22	400	450	620
F402 (M2BMAX=700 Nm)													
4,678	1408/301	**F402_0047 ME30**	2700	2300	4000	**≤24**	22	39,6	10/7	34	360	360	450
4,678	1408/301	**F402_0047 ME30**	2700	2300	4000	**>24≤32**	23	39,6	10/7	37	390	550	910
4,678	1408/301	**F402_0047 ME30**	2700	2300	4000	**>32≤38**	24	39,6	10/7	38	390	550	910
4,678	1408/301	**F402_0047 ME40**	2700	2300	3500	**≤38**	33	44,5	10/7	37	390	550	910
4,678	1408/301	**F402_0047 ME40**	2700	2300	3500	**>38≤48**	46	44,5	10/7	38	390	550	910
5,813	3784/651	**F402_0058 ME30**	2700	2300	4000	**≤24**	18	39,6	10/7	36	410	450	560
5,813	3784/651	**F402_0058 ME30**	2700	2300	4000	**>24≤32**	18	39,6	10/7	38	410	550	1100
5,813	3784/651	**F402_0058 ME30**	2700	2300	4000	**>32≤38**	20	39,6	10/7	38	410	550	1100
5,813	3784/651	**F402_0058 ME40**	2700	2300	3500	**≤38**	28	44,5	10/7	37	410	550	1100
5,813	3784/651	**F402_0058 ME40**	2700	2300	3500	**>38≤48**	42	44,5	10/7	38	410	550	1100
7,202	605/84	**F402_0072 ME20**	3200	2800	4500	**≤19**	8,8	37,7	10/7	34	240	240	300
7,202	605/84	**F402_0072 ME20**	3200	2800	4500	**>19≤24**	9,5	37,7	10/7	37	420	420	520
7,202	605/84	**F402_0072 ME20**	3200	2800	4500	**>24≤32**	11	37,7	10/7	38	420	420	520
7,202	605/84	**F402_0072 ME30**	3200	2800	4000	**≤24**	15	39,6	10/7	37	450	550	690
7,202	605/84	**F402_0072 ME30**	3200	2800	4000	**>24≤32**	15	39,6	10/7	38	450	550	1100
7,202	605/84	**F402_0072 ME30**	3200	2800	4000	**>32≤38**	16	39,6	10/7	38	450	550	1100
7,202	605/84	**F402_0072 ME40**	3000	2800	3500	**≤38**	25	44,5	10/7	38	450	550	1100
7,202	605/84	**F402_0072 ME40**	3000	2800	3500	**>38≤48**	38	44,5	10/7	38	450	550	1100
8,980	440/49	**F402_0090 ME20**	3200	2800	4500	**≤19**	6,6	37,7	10/7	35	300	300	380
8,980	440/49	**F402_0090 ME20**	3200	2800	4500	**>19≤24**	7,3	37,7	10/7	37	470	520	650
8,980	440/49	**F402_0090 ME20**	3200	2800	4500	**>24≤32**	8,8	37,7	10/7	38	470	520	650
8,980	440/49	**F402_0090 ME30**	3200	2800	4000	**≤24**	12	39,6	10/7	37	480	550	860
8,980	440/49	**F402_0090 ME30**	3200	2800	4000	**>24≤32**	13	39,6	10/7	38	480	550	1100
8,980	440/49	**F402_0090 ME30**	3200	2800	4000	**>32≤38**	14	39,6	10/7	38	480	550	1100
8,980	440/49	**F402_0090 ME40**	3000	2800	3500	**≤38**	23	44,5	10/7	38	480	550	1100
8,980	440/49	**F402_0090 ME40**	3000	2800	3500	**>38≤48**	36	44,5	10/7	38	480	550	1100
10,83	682/63	**F402_0110 ME20**	3500	3100	5000	**≤19**	5,3	37,7	10/7	36	360	360	450
10,83	682/63	**F402_0110 ME20**	3500	3100	5000	**>19≤24**	6,0	37,7	10/7	38	490	550	790
10,83	682/63	**F402_0110 ME20**	3500	3100	5000	**>24≤32**	7,5	37,7	10/7	38	490	550	790
10,83	682/63	**F402_0110 ME30**	3500	3100	4000	**≤24**	11	39,6	10/7	38	510	550	1040
10,83	682/63	**F402_0110 ME30**	3500	3100	4000	**>24≤32**	11	39,6	10/7	38	510	550	1100
10,83	682/63	**F402_0110 ME30**	3500	3100	4000	**>32≤38**	13	39,6	10/7	38	510	550	1100
10,83	682/63	**F402_0110 ME40**	3000	3000	3500	**≤38**	21	44,5	10/7	38	510	550	1100
10,83	682/63	**F402_0110 ME40**	3000	3000	3500	**>38≤48**	35	44,5	10/7	38	510	550	1100
13,57	5984/441	**F402_0135 ME20**	3500	3100	5000	**≤19**	4,2	37,7	10/7	37	450	450	570
13,57	5984/441	**F402_0135 ME20**	3500	3100	5000	**>19≤24**	4,9	37,7	10/7	38	540	550	930
13,57	5984/441	**F402_0135 ME20**	3500	3100	5000	**>24≤32**	6,4	37,7	10/7	38	540	550	930
13,57	5984/441	**F402_0135 ME30**	3500	3100	4000	**≤24**	10,0	39,6	10/7	38	550	550	1100
13,57	5984/441	**F402_0135 ME30**	3500	3100	4000	**>24≤32**	10	39,6	10/7	38	550	550	1100
13,57	5984/441	**F402_0135 ME30**	3500	3100	4000	**>32≤38**	12	39,6	10/7	39	550	550	1100
13,57	5984/441	**F402_0135 ME40**	3000	3000	3500	**≤38**	20	44,5	10/7	38	550	550	1100
13,57	5984/441	**F402_0135 ME40**	3000	3000	3500	**>38≤48**	34	44,5	10/7	39	550	550	1100
18,62	3575/192	**F402_0185 ME20**	3200	2800	4500	**≤19**	5,1	37,7	10/5	38	610	620	780
18,62	3575/192	**F402_0185 ME20**	3200	2800	4500	**>19≤24**	5,8	37,7	10/5	38	610	700	1350
18,62	3575/192	**F402_0185 ME20**	3200	2800	4500	**>24≤32**	7,3	37,7	10/5	39	610	700	1350
18,62	3575/192	**F402_0185 ME30**	3200	2800	4000	**≤24**	11	39,6	10/5	38	610	700	1400
18,62	3575/192	**F402_0185 ME30**	3200	2800	4000	**>24≤32**	11	39,6	10/5	39	610	700	1400
18,62	3575/192	**F402_0185 ME30**	3200	2800	4000	**>32≤38**	13	39,6	10/5	39	610	700	1400
18,62	3575/192	**F402_0185 ME40**	3000	2800	3500	**≤38**	21	44,5	10/5	39	610	700	1400
18,62	3575/192	**F402_0185 ME40**	3000	2800	3500	**>38≤48**	35	44,5	10/5	39	610	700	1400
23,21	325/14	**F402_0230 ME20**	3200	2800	4500	**≤19**	4,2	37,7	10/5	38	660	700	970
23,21	325/14	**F402_0230 ME20**	3200	2800	4500	**>19≤24**	5,0	37,7	10/5	39	660	700	1400
23,21	325/14	**F402_0230 ME20**	3200	2800	4500	**>24≤32**	6,4	37,7	10/5	39	660	700	1400
23,21	325/14	**F402_0230 ME30**	3200	2800	4000	**≤24**	10	39,6	10/5	38	660	700	1400
23,21	325/14	**F402_0230 ME30**	3200	2800	4000	**>24≤32**	10	39,6	10/5	39	660	700	1400
23,21	325/14	**F402_0230 ME30**	3200	2800	4000	**>32≤38**	12	39,6	10/5	39	660	700	1400

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Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F402 (M2BMAX=700 Nm)													
23,21	325/14	**F402_0230 ME40**	3000	2800	3500	**≤38**	20	44,5	10/5	39	660	700	1400
23,21	325/14	**F402_0230 ME40**	3000	2800	3500	**>38≤48**	34	44,5	10/5	39	660	700	1400
27,99	2015/72	**F402_0280 ME20**	3500	3100	5000	**≤19**	3,7	37,7	10/5	38	700	700	1170
27,99	2015/72	**F402_0280 ME20**	3500	3100	5000	**>19≤24**	4,4	37,7	10/5	39	700	700	1400
27,99	2015/72	**F402_0280 ME20**	3500	3100	5000	**>24≤32**	5,9	37,7	10/5	39	700	700	1400
27,99	2015/72	**F402_0280 ME30**	3500	3100	4000	**≤24**	9,5	39,6	10/5	39	700	700	1400
27,99	2015/72	**F402_0280 ME30**	3500	3100	4000	**>24≤32**	9,6	39,6	10/5	39	700	700	1400
27,99	2015/72	**F402_0280 ME30**	3500	3100	4000	**>32≤38**	11	39,6	10/5	39	700	700	1400
27,99	2015/72	**F402_0280 ME40**	3000	3000	3500	**≤38**	20	44,5	10/5	39	700	700	1400
27,99	2015/72	**F402_0280 ME40**	3000	3000	3500	**>38≤48**	33	44,5	10/5	39	700	700	1400
35,08	2210/63	**F402_0350 ME20**	3500	3100	5000	**≤19**	3,1	37,7	10/5	38	700	700	1400
35,08	2210/63	**F402_0350 ME20**	3500	3100	5000	**>19≤24**	3,9	37,7	10/5	39	700	700	1400
35,08	2210/63	**F402_0350 ME20**	3500	3100	5000	**>24≤32**	5,3	37,7	10/5	39	700	700	1400
35,08	2210/63	**F402_0350 ME30**	3500	3100	4000	**≤24**	8,9	39,6	10/5	39	700	700	1400
35,08	2210/63	**F402_0350 ME30**	3500	3100	4000	**>24≤32**	9,1	39,6	10/5	39	700	700	1400
35,08	2210/63	**F402_0350 ME30**	3500	3100	4000	**>32≤38**	11	39,6	10/5	39	700	700	1400
35,08	2210/63	**F402_0350 ME40**	3000	3000	3500	**≤38**	19	44,5	10/5	39	700	700	1400
35,08	2210/63	**F402_0350 ME40**	3000	3000	3500	**>38≤48**	33	44,5	10/5	39	700	700	1400
46,94	845/18	**F402_0470 ME20**	3500	3500	5000	**≤19**	2,7	37,7	10/5	39	700	700	1400
46,94	845/18	**F402_0470 ME20**	3500	3500	5000	**>19≤24**	3,4	37,7	10/5	39	700	700	1400
46,94	845/18	**F402_0470 ME20**	3500	3500	5000	**>24≤32**	4,9	37,7	10/5	39	700	700	1400
46,94	845/18	**F402_0470 ME30**	3500	3500	4000	**≤24**	8,5	39,6	10/5	39	700	700	1400
46,94	845/18	**F402_0470 ME30**	3500	3500	4000	**>24≤32**	8,6	39,6	10/5	39	700	700	1400
46,94	845/18	**F402_0470 ME30**	3500	3500	4000	**>32≤38**	10	39,6	10/5	39	700	700	1400
46,94	845/18	**F402_0470 ME40**	3000	3000	3500	**≤38**	19	44,5	10/5	39	700	700	1400
46,94	845/18	**F402_0470 ME40**	3000	3000	3500	**>38≤48**	32	44,5	10/5	39	700	700	1400
55,97	2015/36	**F402_0560 ME20**	3500	3500	5000	**≤19**	2,5	37,7	10/5	39	700	700	1400
55,97	2015/36	**F402_0560 ME20**	3500	3500	5000	**>19≤24**	3,2	37,7	10/5	39	700	700	1400
55,97	2015/36	**F402_0560 ME20**	3500	3500	5000	**>24≤32**	4,7	37,7	10/5	39	700	700	1400
55,97	2015/36	**F402_0560 ME30**	3500	3500	4000	**≤24**	8,1	39,6	10/5	39	700	700	1400
55,97	2015/36	**F402_0560 ME30**	3500	3500	4000	**>24≤32**	8,2	39,6	10/5	39	700	700	1400
55,97	2015/36	**F402_0560 ME30**	3500	3500	4000	**>32≤38**	10,0	39,6	10/5	39	700	700	1400
70,06	1261/18	**F402_0700 ME20**	3500	3500	5000	**≤19**	2,3	37,7	10/5	39	700	700	1400
70,06	1261/18	**F402_0700 ME20**	3500	3500	5000	**>19≤24**	3,0	37,7	10/5	39	700	700	1400
70,06	1261/18	**F402_0700 ME20**	3500	3500	5000	**>24≤32**	4,5	37,7	10/5	39	700	700	1400
70,06	1261/18	**F402_0700 ME30**	3500	3500	4000	**≤24**	7,9	39,6	10/5	39	700	700	1400
70,06	1261/18	**F402_0700 ME30**	3500	3500	4000	**>24≤32**	8,1	39,6	10/5	39	700	700	1400
70,06	1261/18	**F402_0700 ME30**	3500	3500	4000	**>32≤38**	9,8	39,6	10/5	39	700	700	1400
93,33	280/3	**F402_0930 ME20**	3500	3500	5000	**≤19**	2,1	37,7	10/5	39	700	700	1400
93,33	280/3	**F402_0930 ME20**	3500	3500	5000	**>19≤24**	2,8	37,7	10/5	39	700	700	1400
112,3	1235/11	**F402_1120 ME20**	3500	3500	5000	**≤19**	2,0	37,7	10/5	39	700	700	1400
112,3	1235/11	**F402_1120 ME20**	3500	3500	5000	**>19≤24**	2,7	37,7	10/5	39	700	700	1400
139,8	559/4	**F402_1400 ME20**	3500	3500	5000	**≤19**	1,9	37,7	10/5	39	700	700	1400
139,8	559/4	**F402_1400 ME20**	3500	3500	5000	**>19≤24**	2,7	37,7	10/5	39	700	700	1400

Offset Helical Gear Units **F**
Reductores de ejes paralelos ***F***
Riduttori pendolari **F**

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Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F403 (M2BMAX=700 Nm)													
181,5	4901/27	**F403_1820 ME20**	3500	3500	5000	**≤19**	2,0	41,9	10/6	39	700	700	1400
181,5	4901/27	**F403_1820 ME20**	3500	3500	5000	**>19≤24**	2,7	41,9	10/6	39	700	700	1400
183,9	39715/216	**F403_1840 ME10**	3800	3500	5500	**≤14**	0,45	40,9	10/6	39	700	700	1180
183,9	39715/216	**F403_1840 ME10**	3800	3500	5500	**>14≤19**	0,70	40,9	10/6	39	700	700	1180
216,4	11687/54	**F403_2160 ME20**	3500	3500	5000	**≤19**	2,0	41,9	10/6	39	700	700	1400
216,4	11687/54	**F403_2160 ME20**	3500	3500	5000	**>19≤24**	2,7	41,9	10/6	39	700	700	1400
219,2	94705/432	**F403_2190 ME10**	3800	3500	5500	**≤14**	0,44	40,9	10/6	39	700	700	1400
219,2	94705/432	**F403_2190 ME10**	3800	3500	5500	**>14≤19**	0,69	40,9	10/6	39	700	700	1400
270,9	36569/135	**F403_2710 ME20**	3500	3500	5000	**≤19**	2,0	41,9	10/6	39	700	700	1400
270,9	36569/135	**F403_2710 ME20**	3500	3500	5000	**>19≤24**	2,7	41,9	10/6	39	700	700	1400
274,4	59267/216	**F403_2740 ME10**	3800	3500	5500	**≤14**	0,42	40,9	10/6	39	700	700	1400
274,4	59267/216	**F403_2740 ME10**	3800	3500	5500	**>14≤19**	0,68	40,9	10/6	39	700	700	1400
360,9	3248/9	**F403_3610 ME20**	3500	3500	5000	**≤19**	2,0	41,9	10/6	39	700	700	1400
360,9	3248/9	**F403_3610 ME20**	3500	3500	5000	**>19≤24**	2,7	41,9	10/6	39	700	700	1400
365,6	3290/9	**F403_3660 ME10**	3800	3500	5500	**≤14**	0,41	40,9	10/6	39	700	700	1400
365,6	3290/9	**F403_3660 ME10**	3800	3500	5500	**>14≤19**	0,66	40,9	10/6	39	700	700	1400
434,1	14326/33	**F403_4340 ME20**	3500	3500	5000	**≤19**	2,0	41,9	10/6	39	700	700	1400
434,1	14326/33	**F403_4340 ME20**	3500	3500	5000	**>19≤24**	2,7	41,9	10/6	39	700	700	1400
439,7	58045/132	**F403_4400 ME10**	3800	3500	5500	**≤14**	0,41	40,9	10/6	39	700	700	1400
439,7	58045/132	**F403_4400 ME10**	3800	3500	5500	**>14≤19**	0,66	40,9	10/6	39	700	700	1400
547,4	26273/48	**F403_5470 ME10**	3800	3500	5500	**≤14**	0,41	40,9	10/6	39	700	700	1400
547,4	26273/48	**F403_5470 ME10**	3800	3500	5500	**>14≤19**	0,66	40,9	10/6	39	700	700	1400
F602 (M2BMAX=1100 Nm)													
4,546	1273/280	**F602_0045 ME30**	2500	2100	3500	**≤24**	44	66,6	10/7	57	350	350	440
4,546	1273/280	**F602_0045 ME30**	2500	2100	3500	**>24≤32**	44	66,6	10/7	67	580	710	880
4,546	1273/280	**F602_0045 ME30**	2500	2100	3500	**>32≤38**	46	66,6	10/7	69	580	710	880
4,546	1273/280	**F602_0045 ME40**	2500	2100	3500	**≤38**	54	71,5	10/7	66	640	710	880
4,546	1273/280	**F602_0045 ME40**	2500	2100	3500	**>38≤48**	68	71,5	10/7	69	640	710	880
5,673	1407/248	**F602_0057 ME30**	2500	2100	3500	**≤24**	32	66,6	10/7	62	440	440	540
5,673	1407/248	**F602_0057 ME30**	2500	2100	3500	**>24≤32**	32	66,6	10/7	69	650	880	1100
5,673	1407/248	**F602_0057 ME30**	2500	2100	3500	**>32≤38**	34	66,6	10/7	70	650	880	1100
5,673	1407/248	**F602_0057 ME40**	2500	2100	3500	**≤38**	42	71,5	10/7	68	690	880	1100
5,673	1407/248	**F602_0057 ME40**	2500	2100	3500	**>38≤48**	56	71,5	10/7	70	690	880	1100
7,159	3551/496	**F602_0072 ME30**	2900	2500	4000	**≤24**	24	66,6	10/7	65	550	550	690
7,159	3551/496	**F602_0072 ME30**	2900	2500	4000	**>24≤32**	24	66,6	10/7	70	700	1000	1380
7,159	3551/496	**F602_0072 ME30**	2900	2500	4000	**>32≤38**	26	66,6	10/7	71	700	1000	1380
7,159	3551/496	**F602_0072 ME40**	2900	2500	3500	**≤38**	34	71,5	10/7	70	740	1000	1380
7,159	3551/496	**F602_0072 ME40**	2900	2500	3500	**>38≤48**	48	71,5	10/7	71	740	1000	1380
8,995	1943/216	**F602_0090 ME20**	2900	2500	4000	**≤19**	13	64,7	10/7	62	300	300	380
8,995	1943/216	**F602_0090 ME20**	2900	2500	4000	**>19≤24**	13	64,7	10/7	69	520	520	650
8,995	1943/216	**F602_0090 ME20**	2900	2500	4000	**>24≤32**	15	64,7	10/7	70	520	520	650
8,995	1943/216	**F602_0090 ME30**	2900	2500	4000	**≤24**	19	66,6	10/7	68	690	690	860
8,995	1943/216	**F602_0090 ME30**	2900	2500	4000	**>24≤32**	19	66,6	10/7	71	760	1000	1600
8,995	1943/216	**F602_0090 ME30**	2900	2500	4000	**>32≤38**	20	66,6	10/7	72	760	1000	1600
8,995	1943/216	**F602_0090 ME40**	2900	2500	3500	**≤38**	29	71,5	10/7	71	800	1000	1600
8,995	1943/216	**F602_0090 ME40**	2900	2500	3500	**>38≤48**	42	71,5	10/7	72	800	1000	1600
10,82	2077/192	**F602_0110 ME20**	3300	2800	4500	**≤19**	9,8	64,7	10/7	65	360	360	450
10,82	2077/192	**F602_0110 ME20**	3300	2800	4500	**>19≤24**	11	64,7	10/7	70	560	630	790
10,82	2077/192	**F602_0110 ME20**	3300	2800	4500	**>24≤32**	12	64,7	10/7	71	560	630	790
10,82	2077/192	**F602_0110 ME30**	3300	2800	4000	**≤24**	16	66,6	10/7	69	820	830	1040
10,82	2077/192	**F602_0110 ME30**	3300	2800	4000	**>24≤32**	16	66,6	10/7	72	820	1000	1600
10,82	2077/192	**F602_0110 ME30**	3300	2800	4000	**>32≤38**	17	66,6	10/7	72	820	1000	1600
10,82	2077/192	**F602_0110 ME40**	3000	2800	3500	**≤38**	26	71,5	10/7	71	850	1000	1600
10,82	2077/192	**F602_0110 ME40**	3000	2800	3500	**>38≤48**	39	71,5	10/7	72	850	1000	1600
13,61	871/64	**F602_0135 ME20**	3300	2800	4500	**≤19**	7,2	64,7	10/7	68	460	460	570
13,61	871/64	**F602_0135 ME20**	3300	2800	4500	**>19≤24**	7,9	64,7	10/7	71	590	740	920
13,61	871/64	**F602_0135 ME20**	3300	2800	4500	**>24≤32**	9,4	64,7	10/7	72	590	740	920
13,61	871/64	**F602_0135 ME30**	3300	2800	4000	**≤24**	13	66,6	10/7	71	860	1000	1310
13,61	871/64	**F602_0135 ME30**	3300	2800	4000	**>24≤32**	13	66,6	10/7	72	860	1000	1600

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Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F602 (M2BMAX=1100 Nm)													
13,61	871/64	**F602_0135 ME30**	3300	2800	4000	**>32≤38**	15	66,6	10/7	72	860	1000	1600
13,61	871/64	**F602_0135 ME40**	3000	2800	3500	**≤38**	23	71,5	10/7	72	920	1000	1600
13,61	871/64	**F602_0135 ME40**	3000	2800	3500	**>38≤48**	37	71,5	10/7	72	920	1000	1600
18,52	3445/186	**F602_0185 ME30**	2900	2500	4000	**≤24**	15	66,6	10/5	76	1020	1100	1780
18,52	3445/186	**F602_0185 ME30**	2900	2500	4000	**>24≤32**	15	66,6	10/5	77	1020	1100	2000
18,52	3445/186	**F602_0185 ME30**	2900	2500	4000	**>32≤38**	17	66,6	10/5	77	1020	1100	2000
18,52	3445/186	**F602_0185 ME40**	2900	2500	3500	**≤38**	25	71,5	10/5	77	1020	1100	2000
18,52	3445/186	**F602_0185 ME40**	2900	2500	3500	**>38≤48**	39	71,5	10/5	77	1020	1100	2000
23,27	1885/81	**F602_0230 ME20**	2900	2500	4000	**≤19**	7,3	64,7	10/5	75	780	780	970
23,27	1885/81	**F602_0230 ME20**	2900	2500	4000	**>19≤24**	8,0	64,7	10/5	77	1100	1100	1690
23,27	1885/81	**F602_0230 ME20**	2900	2500	4000	**>24≤32**	9,5	64,7	10/5	77	1100	1100	1690
23,27	1885/81	**F602_0230 ME30**	2900	2500	4000	**≤24**	13	66,6	10/5	77	1100	1100	2000
23,27	1885/81	**F602_0230 ME30**	2900	2500	4000	**>24≤32**	13	66,6	10/5	77	1100	1100	2000
23,27	1885/81	**F602_0230 ME30**	2900	2500	4000	**>32≤38**	15	66,6	10/5	77	1100	1100	2000
23,27	1885/81	**F602_0230 ME40**	2900	2500	3500	**≤38**	23	71,5	10/5	77	1100	1100	2000
23,27	1885/81	**F602_0230 ME40**	2900	2500	3500	**>38≤48**	37	71,5	10/5	77	1100	1100	2000
27,99	2015/72	**F602_0280 ME20**	3300	2800	4500	**≤19**	6,0	64,7	10/5	76	940	940	1170
27,99	2015/72	**F602_0280 ME20**	3300	2800	4500	**>19≤24**	6,7	64,7	10/5	77	1100	1100	2000
27,99	2015/72	**F602_0280 ME20**	3300	2800	4500	**>24≤32**	8,2	64,7	10/5	77	1100	1100	2000
27,99	2015/72	**F602_0280 ME30**	3300	2800	4000	**≤24**	12	66,6	10/5	77	1100	1100	2000
27,99	2015/72	**F602_0280 ME30**	3300	2800	4000	**>24≤32**	12	66,6	10/5	77	1100	1100	2000
27,99	2015/72	**F602_0280 ME30**	3300	2800	4000	**>32≤38**	14	66,6	10/5	77	1100	1100	2000
27,99	2015/72	**F602_0280 ME40**	3000	2800	3500	**≤38**	22	71,5	10/5	77	1100	1100	2000
27,99	2015/72	**F602_0280 ME40**	3000	2800	3500	**>38≤48**	36	71,5	10/5	77	1100	1100	2000
35,21	845/24	**F602_0350 ME20**	3300	2800	4500	**≤19**	4,8	64,7	10/5	76	1100	1100	1470
35,21	845/24	**F602_0350 ME20**	3300	2800	4500	**>19≤24**	5,5	64,7	10/5	77	1100	1100	2000
35,21	845/24	**F602_0350 ME20**	3300	2800	4500	**>24≤32**	7,0	64,7	10/5	77	1100	1100	2000
35,21	845/24	**F602_0350 ME30**	3300	2800	4000	**≤24**	11	66,6	10/5	77	1100	1100	2000
35,21	845/24	**F602_0350 ME30**	3300	2800	4000	**>24≤32**	11	66,6	10/5	77	1100	1100	2000
35,21	845/24	**F602_0350 ME30**	3300	2800	4000	**>32≤38**	12	66,6	10/5	77	1100	1100	2000
35,21	845/24	**F602_0350 ME40**	3000	2800	3500	**≤38**	21	71,5	10/5	77	1100	1100	2000
35,21	845/24	**F602_0350 ME40**	3000	2800	3500	**>38≤48**	34	71,5	10/5	77	1100	1100	2000
46,72	1495/32	**F602_0470 ME20**	3500	3200	5000	**≤19**	3,8	64,7	10/5	77	1100	1100	1950
46,72	1495/32	**F602_0470 ME20**	3500	3200	5000	**>19≤24**	4,5	64,7	10/5	77	1100	1100	2000
46,72	1495/32	**F602_0470 ME20**	3500	3200	5000	**>24≤32**	6,0	64,7	10/5	77	1100	1100	2000
46,72	1495/32	**F602_0470 ME30**	3500	3200	4000	**≤24**	9,6	66,6	10/5	77	1100	1100	2000
46,72	1495/32	**F602_0470 ME30**	3500	3200	4000	**>24≤32**	9,7	66,6	10/5	77	1100	1100	2000
46,72	1495/32	**F602_0470 ME30**	3500	3200	4000	**>32≤38**	11	66,6	10/5	77	1100	1100	2000
46,72	1495/32	**F602_0470 ME40**	3000	3000	3500	**≤38**	20	71,5	10/5	77	1100	1100	2000
46,72	1495/32	**F602_0470 ME40**	3000	3000	3500	**>38≤48**	33	71,5	10/5	77	1100	1100	2000
55,71	390/7	**F602_0560 ME20**	3500	3200	5000	**≤19**	3,3	64,7	10/5	77	1100	1100	2000
55,71	390/7	**F602_0560 ME20**	3500	3200	5000	**>19≤24**	4,0	64,7	10/5	77	1100	1100	2000
55,71	390/7	**F602_0560 ME20**	3500	3200	5000	**>24≤32**	5,5	64,7	10/5	77	1100	1100	2000
55,71	390/7	**F602_0560 ME30**	3500	3200	4000	**≤24**	9,0	66,6	10/5	77	1100	1100	2000
55,71	390/7	**F602_0560 ME30**	3500	3200	4000	**>24≤32**	9,1	66,6	10/5	77	1100	1100	2000
55,71	390/7	**F602_0560 ME30**	3500	3200	4000	**>32≤38**	11	66,6	10/5	77	1100	1100	2000
69,64	975/14	**F602_0700 ME20**	3500	3200	5000	**≤19**	2,9	64,7	10/5	77	1100	1100	2000
69,64	975/14	**F602_0700 ME20**	3500	3200	5000	**>19≤24**	3,6	64,7	10/5	77	1100	1100	2000
69,64	975/14	**F602_0700 ME20**	3500	3200	5000	**>24≤32**	5,1	64,7	10/5	77	1100	1100	2000
69,64	975/14	**F602_0700 ME30**	3500	3200	4000	**≤24**	8,5	66,6	10/5	77	1100	1100	2000
69,64	975/14	**F602_0700 ME30**	3500	3200	4000	**>24≤32**	8,6	66,6	10/5	77	1100	1100	2000
69,64	975/14	**F602_0700 ME30**	3500	3200	4000	**>32≤38**	10	66,6	10/5	77	1100	1100	2000
93,33	280/3	**F602_0930 ME20**	3500	3200	5000	**≤19**	2,5	64,7	10/5	77	1100	1100	2000
93,33	280/3	**F602_0930 ME20**	3500	3200	5000	**>19≤24**	3,2	64,7	10/5	77	1100	1100	2000
93,33	280/3	**F602_0930 ME20**	3500	3200	5000	**>24≤32**	4,7	64,7	10/5	77	1100	1100	2000
93,33	280/3	**F602_0930 ME30**	3500	3200	4000	**≤24**	8,1	66,6	10/5	77	1100	1100	2000
93,33	280/3	**F602_0930 ME30**	3500	3200	4000	**>24≤32**	8,2	66,6	10/5	77	1100	1100	2000
93,33	280/3	**F602_0930 ME30**	3500	3200	4000	**>32≤38**	10,0	66,6	10/5	77	1100	1100	2000
112,2	9425/84	**F602_1120 ME20**	3500	3200	5000	**≤19**	2,2	64,7	10/5	77	1100	1100	2000
112,2	9425/84	**F602_1120 ME20**	3500	3200	5000	**>19≤24**	3,0	64,7	10/5	77	1100	1100	2000
139,8	559/4	**F602_1400 ME20**	3500	3200	5000	**≤19**	2,1	64,7	10/5	77	1100	1100	2000
139,8	559/4	**F602_1400 ME20**	3500	3200	5000	**>19≤24**	2,8	64,7	10/5	77	1100	1100	2000

F

Offset Helical Gear Units **F**
*Reductores de ejes paralelos **F***
Riduttori pendolari **F**

Please take notice of the indications on page F8! ***¡Por favor observe las indicaciones en la página F8!*** **Si raccomanda di rispettare le avvertenze a pagina F8!**

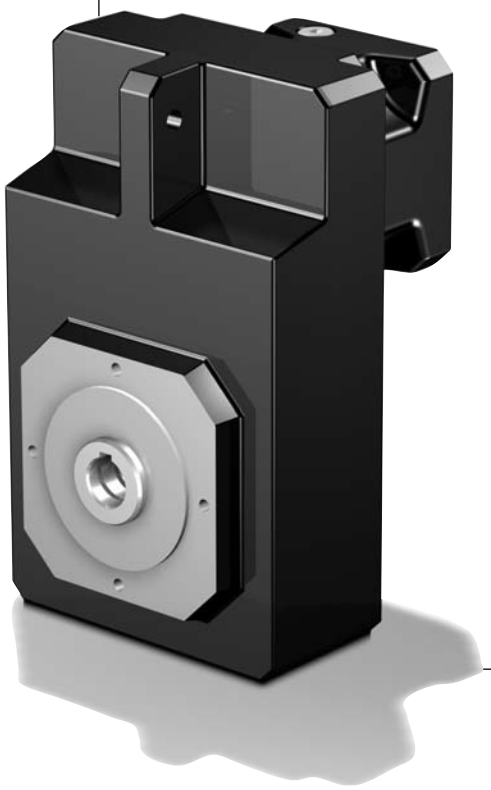
i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
F603 (M2BMAX=1100 Nm)													
180,6	8671/48	**F603_1810 ME20**	3500	3200	5000	**≤19**	2,1	69,2	10/6	77	1100	1100	2000
180,6	8671/48	**F603_1810 ME20**	3500	3200	5000	**>19≤24**	2,8	69,2	10/6	77	1100	1100	2000
215,4	1508/7	**F603_2150 ME20**	3500	3200	5000	**≤19**	2,1	69,2	10/6	77	1100	1100	2000
215,4	1508/7	**F603_2150 ME20**	3500	3200	5000	**>19≤24**	2,8	69,2	10/6	77	1100	1100	2000
269,3	1885/7	**F603_2690 ME20**	3500	3200	5000	**≤19**	2,0	69,2	10/6	77	1100	1100	2000
269,3	1885/7	**F603_2690 ME20**	3500	3200	5000	**>19≤24**	2,8	69,2	10/6	77	1100	1100	2000
360,9	3248/9	**F603_3610 ME20**	3500	3200	5000	**≤19**	2,0	69,2	10/6	77	1100	1100	2000
360,9	3248/9	**F603_3610 ME20**	3500	3200	5000	**>19≤24**	2,7	69,2	10/6	77	1100	1100	2000
433,8	54665/126	**F603_4340 ME20**	3500	3200	5000	**≤19**	2,0	69,2	10/6	77	1100	1100	2000
433,8	54665/126	**F603_4340 ME20**	3500	3200	5000	**>19≤24**	2,7	69,2	10/6	77	1100	1100	2000
540,4	16211/30	**F603_5400 ME20**	3500	3200	5000	**≤19**	2,0	69,2	10/6	77	1100	1100	2000
540,4	16211/30	**F603_5400 ME20**	3500	3200	5000	**>19≤24**	2,7	69,2	10/6	77	1100	1100	2000

Dimension drawings
ServoFit® F
Offset Helical Gear Units

Dibujos acotados
Reductores de ejes paralelos ***ServoFit® F***

Disegni quotati
ServoFit® Riduttori pendolari **F**

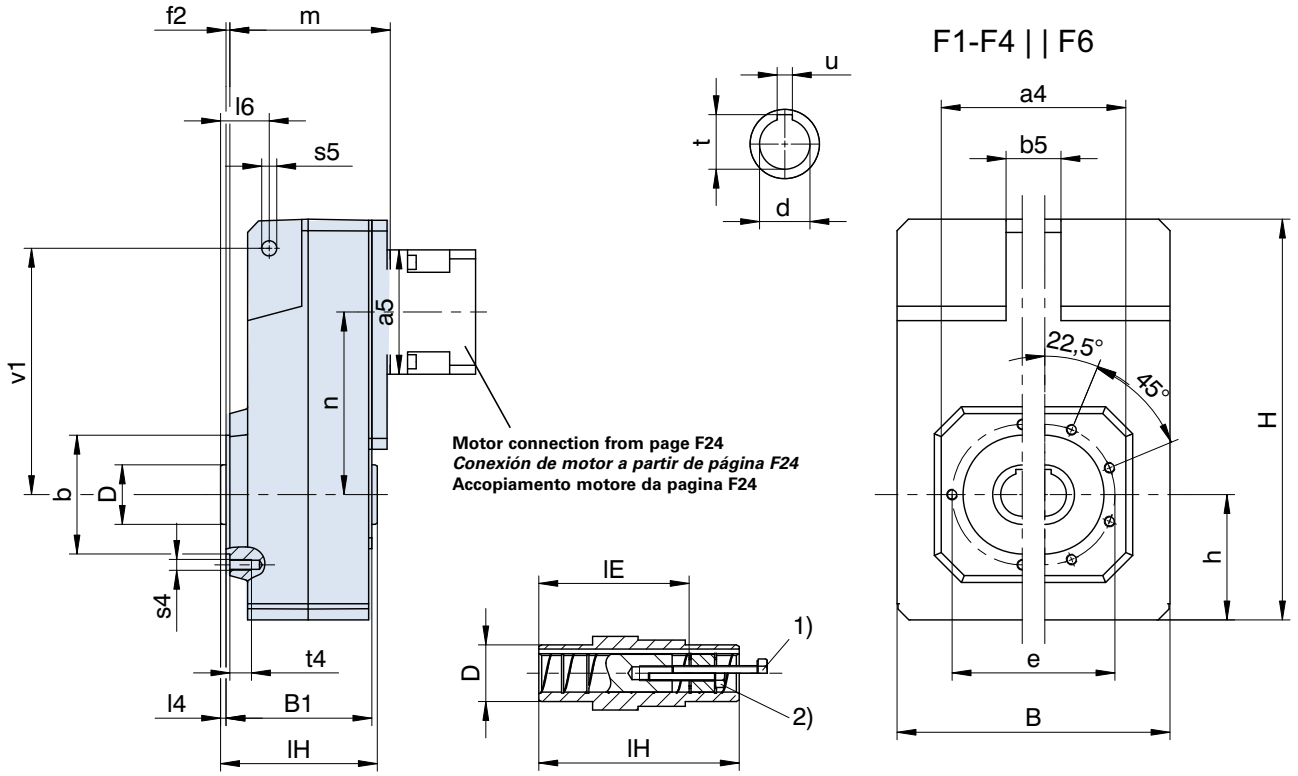
STÖBER



F

STÖBER

F1_AG_ME_ - F6_AG_ME_



Motor connection from page F24
Conexión de motor a partir de página F24
Accopiamento motore da pagina F24

Shaft-mounted: 1), 2) see page A19 | ***Ejecución enchufable:** 1), 2) ver página A19* | **Esecuzione ad albero cavo:** 1), 2) vedere pag. A19

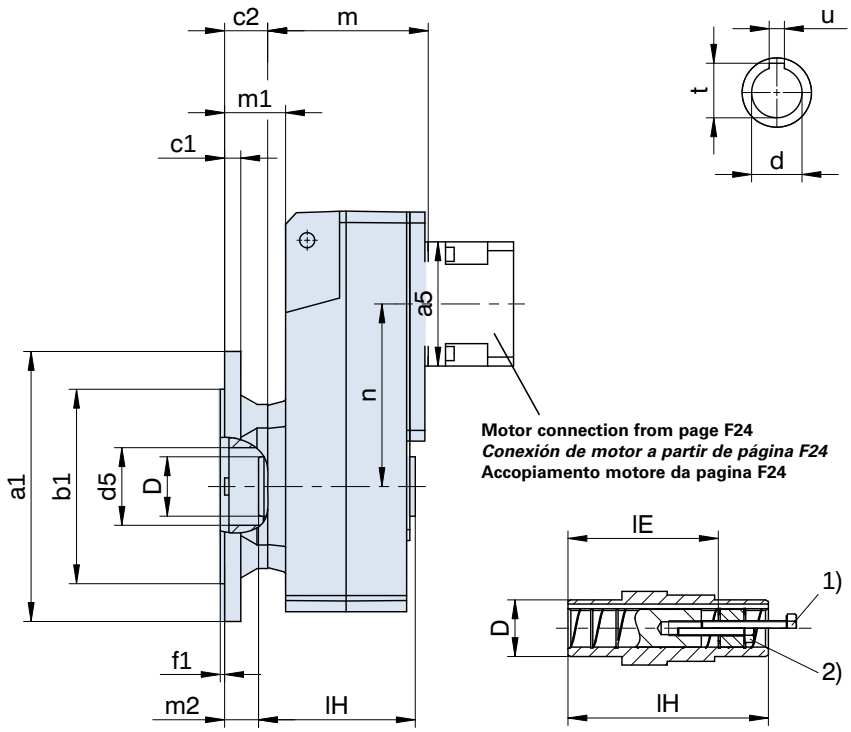
Typ	øa1	□a4	øb	øb1	b5	B	B1	c1	c2	ød	ød5	øD	øe	øe1	f1
F1	160	100	70$_{j6}$	110$_{j6}$	20	145	87	10	32	20^{H7}	52	35	85	130	3,5
F2	200	130	95$_{j6}$	130$_{j6}$	22	180	105	14	38	25^{H7}	65	45	115	165	3,5
F3	250	150	110$_{j6}$	180$_{j6}$	30	206	120	15	40	30^{H7}	72	50	130	215	4,0
F4	250	150	110$_{j6}$	180$_{j6}$	30	230	135	15	40	40^{H7}	72	55	130	215	4,0
F6	300	180	130$_{j6}$	230$_{j6}$	35	265	166	17	40	50^{H7}	80	70	165	265	4,0

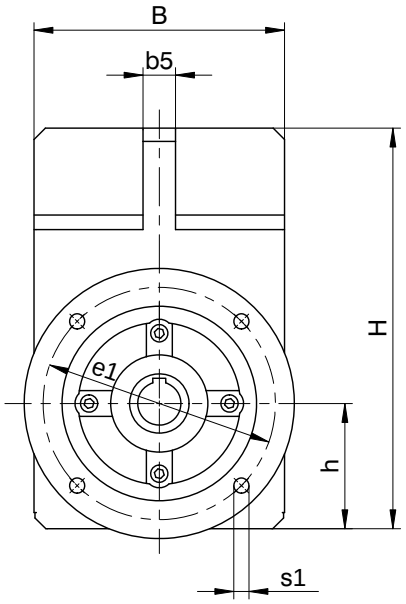
Typ	f2	h	H	l4	l6	lE	lH	m1	m2	øs1	s4	øs5	t	t4	u	v1
F1	2,5	74	238,0	4	35	73	95	44,5	25,5	9	M8	11	22,8	13	6^{JS9}	150
F2	3,0	93	299,0	5	40	92	115	53,0	30,0	11	M8	11	28,3	13	8^{JS9}	181
F3	3,5	106	335,5	5	45	103	130	56,5	31,5	14	M10	14	33,3	16	8^{JS9}	205
F4	3,5	116	370,0	5	45	114	145	56,5	31,5	14	M10	14	43,3	16	12^{JS9}	228
F6	3,5	137	433,0	7	55	143	180	60,5	29,5	14	M10	22	53,8	16	14^{JS9}	270

Dimensions **a5, m, n** see next page. | *Medidas **a5, m, n** ver página siguiente.* | Dimensioni **a5, m, n** vedere la pagina successiva.

STÖBER

F1_AF_ME_ - F6_AF_ME_





Shaft-mounted: 1), 2) see page A19 | ***Ejecución enchufable:*** *1), 2) ver página A19* | **Esecuzione ad albero cavo:** 1), 2) vedere pag. A19

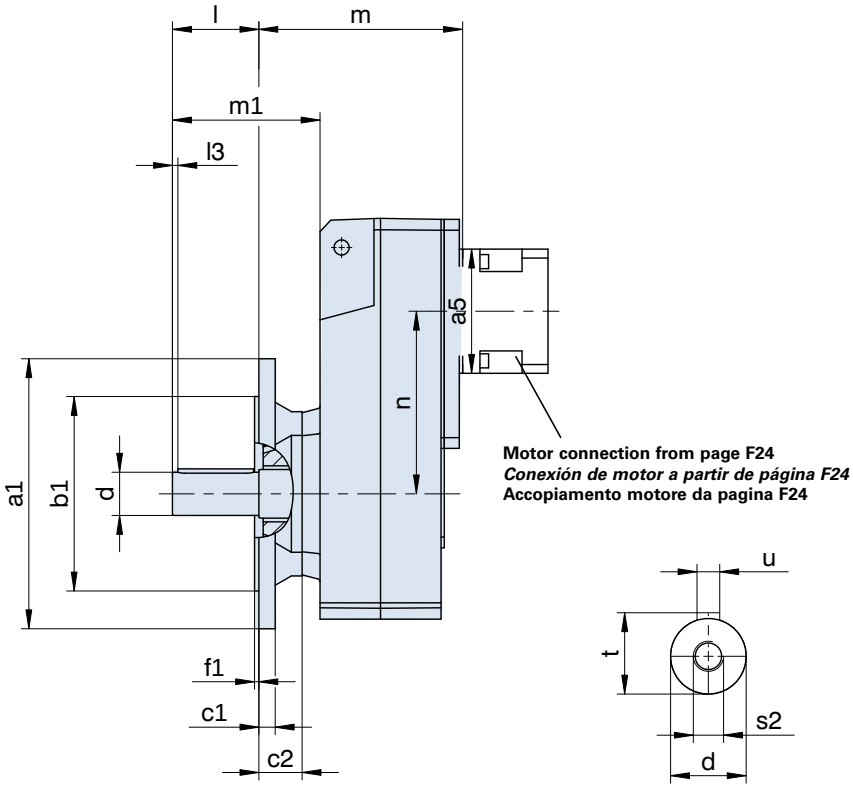
Typ	ME10			ME20			ME30			ME40		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n
F102	□98	97,5	102,0	□115	101,5	102,0	-	-	-	-	-	-
F202	□98	115,0	131,0	□115	119,0	131,0	□145	121,0	131,0	-	-	-
F203	ø140	152,0	131,0	-	-	-	-	-	-	-	-	-
F302	ø140	129,5	149,5	□115	133,5	149,5	□145	135,5	149,5	-	-	-
F303	ø140	166,5	149,5	ø160	176,5	113,0	-	-	-	-	-	-
F402	-	-	-	ø160	148,5	169,0	□145	150,5	169,0	□190	153,5	169,0
F403	ø140	181,5	169,0	ø160	191,5	132,0	-	-	-	-	-	-
F602	-	-	-	ø160	179,5	196,0	□145	181,5	196,0	□190	184,5	196,0
F603	-	-	-	ø160	222,5	196,0	-	-	-	-	-	-

Further dimensions see previous page. | *Otras medidas ver página anterior.* | Altre dimensioni vedere la pagina precedente.

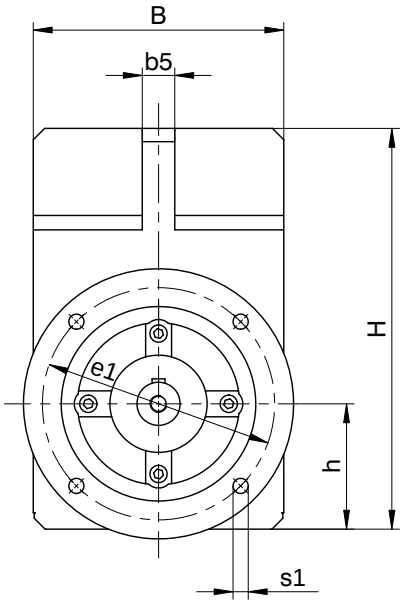
F

STÖBER

F1_VF_ME_ - F6_VF_ME_



Motor connection from page F24
Conexión de motor a partir de página F24
Accopiamento motore da pagina F24



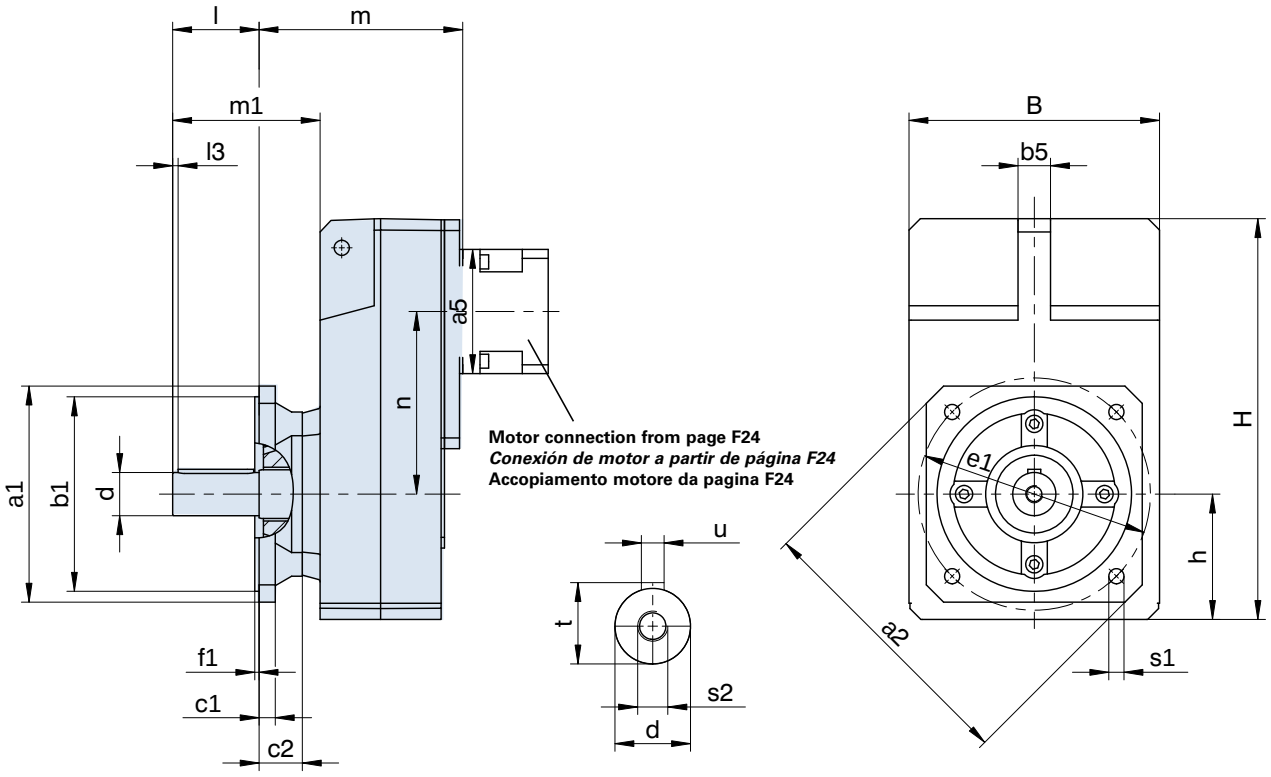
Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	øa1	□a1	□a2	øb1	b5	B	c1	c2	ød	øe1	f1	h	H	l	l3	m1	øs1	s2	t	u
F1	160	125	160	110j6	20	145	10	32	25k6	130	3,5	74	238,0	50	5	94,5	9	M10	28,0	A8x7x40
F2	200	150	195	130j6	22	180	14	38	30k6	165	3,5	93	299,0	60	5	113,0	11	M10	33,0	A8x7x50
F3	250	200	260	180j6	30	206	15	40	35k6	215	4,0	106	335,5	70	5	126,5	14	M12	38,0	A10x8x60
F4	250	200	260	180j6	30	230	15	40	40k6	215	4,0	116	370,0	80	5	136,5	14	M16	43,0	A12x8x70
F6	300	250	325	230j6	35	265	17	40	50k6	265	4,0	137	433,0	100	5	160,5	14	M16	53,5	A14x9x90

Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

STÖBER

F1_VQ_ME_ - F6_VQ_ME_



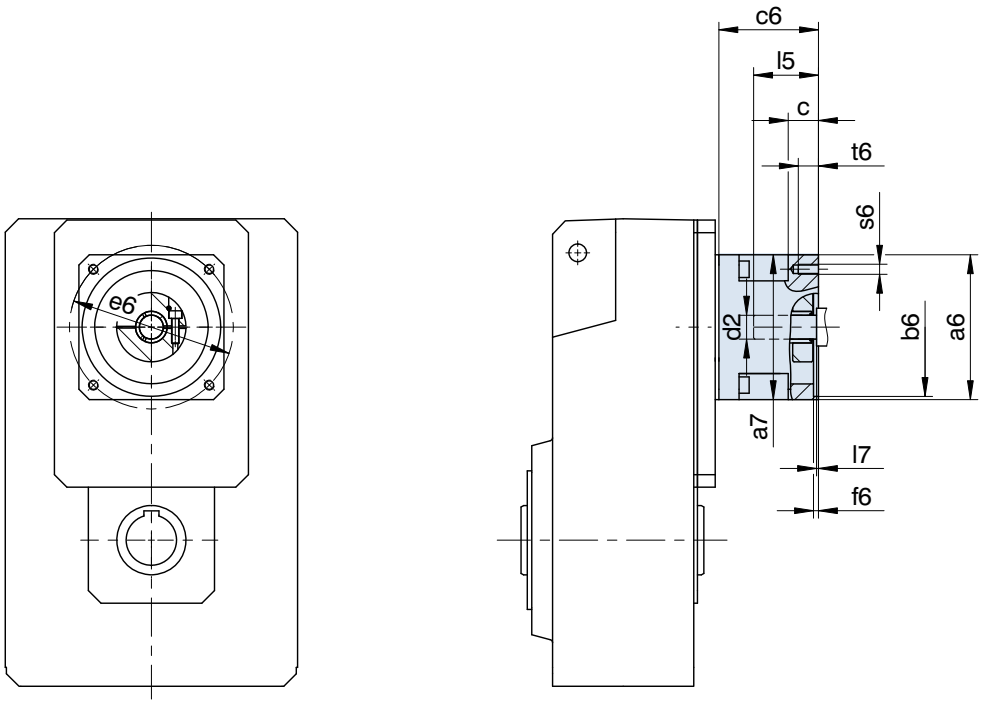
Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	ME10			ME20			ME30			ME40		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n
F102	□98	129,5	102,0	□115	133,5	102,0	-	-	-	-	-	-
F202	□98	153,0	131,0	□115	157,0	131,0	□145	159,0	131,0	-	-	-
F203	ø140	190,0	131,0	-	-	-	-	-	-	-	-	-
F302	ø140	169,5	149,5	□115	173,5	149,5	□145	175,5	149,5	-	-	-
F303	ø140	206,5	149,5	ø160	216,5	113,0	-	-	-	-	-	-
F402	-	-	-	ø160	188,5	169,0	□145	190,5	169,0	□190	193,5	169,0
F403	ø140	221,5	169,0	ø160	231,5	132,0	-	-	-	-	-	-
F602	-	-	-	ø160	219,5	196,0	□145	221,5	196,0	□190	224,5	196,0
F603	-	-	-	ø160	262,5	196,0	-	-	-	-	-	-

Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

STÖBER

F1_ME_ - F6_ME_



Refer to the standard dimension drawings for further gear unit dimensions.
Please refer to the notes on page A19!

Otras medidas de reductor pueden ser tomadas de los dibujos estándar acotados.
¡Por favor observe las indicaciones en la página A19!

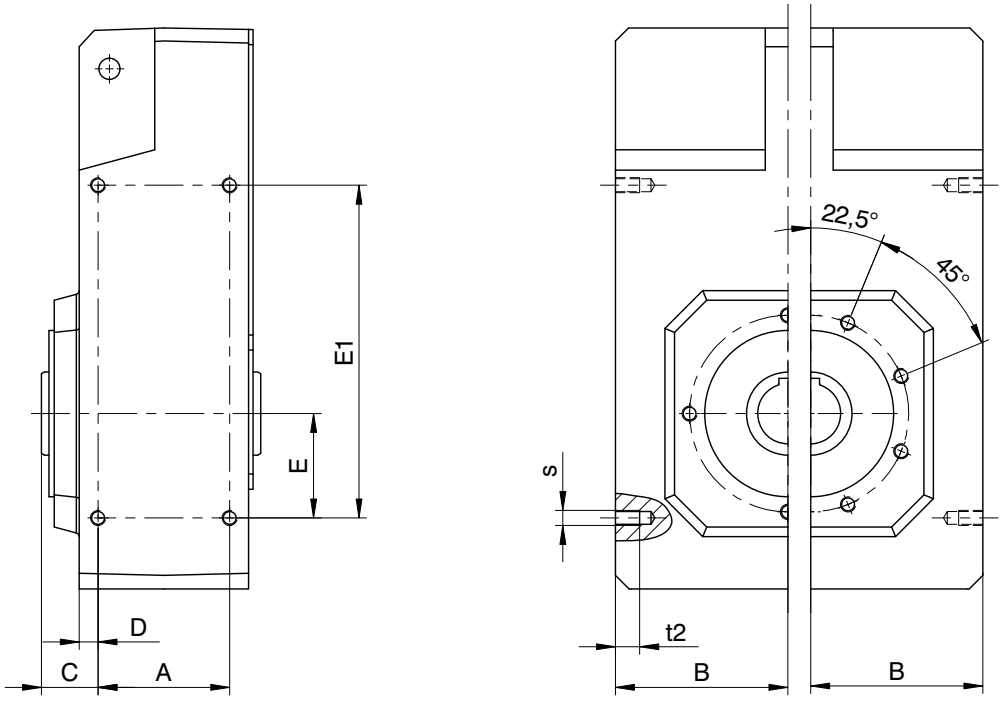
Per altre dimensioni riduttore fare riferimento ai disegni quotati standard.
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	øb6	øe6	ød2max	l5max	□a6	□a7	c	c6	f6	l7max	s6	t6
ME10	50,0H7	70	19	41	100	98	21,0	61,0	4,0	3,0	M4	10
ME10	50,0H7	95	19	41	100	98	21,0	61,0	2,5	3,0	M6	13
ME10	60,0H7	75	19	41	100	98	21,0	61,0	3,5	3,0	M5	9
ME10	80,0H7	100	19	41	100	98	21,0	61,0	4,0	3,0	M6	13
ME10	95,0H7	115	19	41	100	98	21,0	61,0	4,0	3,0	M8	21
ME10	95,0H7	115	19	50	100	98	30,0	70,0	4,0	12,0	M8	16
ME10	95,0H7	130	19	41	115	98	21,0	61,0	4,0	3,0	M8	16
ME10	95,0H7	130	19	50	115	98	30,0	70,0	4,0	12,0	M8	16
ME10	110,0H7	130	19	50	115	98	30,0	70,0	4,0	12,0	M8	16
ME10	110,0H7	145	19	58	130	98	38,0	78,0	7,0	20,0	M8	16
ME10	130,0H7	165	19	50	140	98	30,0	70,0	7,0	12,0	M10	20
ME20	80,0H7	100	32	53	120	115	24,0	74,0	4,0	3,5	M6	13
ME20	95,0H7	115	32	53	120	115	24,0	74,0	5,0	3,5	M8	16
ME20	95,0H7	130	32	53	120	115	24,0	74,0	4,0	3,5	M8	16
ME20	110,0H7	130	32	53	120	115	24,0	74,0	4,0	3,5	M8	16
ME20	110,0H7	145	32	61	140	115	32,0	82,0	6,5	11,5	M8	16
ME20	110,0H7	145	32	71	140	115	42,0	92,0	7,0	21,5	M8	16
ME20	110,0H7	165	32	53	140	115	24,0	74,0	5,0	3,5	M10	24
ME20	130,0H7	165	32	53	140	116	37,5	111,5	5,0	3,0	M10	20
ME20	130,0H7	165	32	61	140	115	32,0	82,0	5,0	11,5	M10	20
ME30	110,0H7	130	38	62	145	145	26,0	86,0	5,0	4,5	M8	14
ME30	110,0H7	145	38	73	145	145	37,0	97,0	5,0	15,5	M8	16
ME30	110,0H7	165	38	62	145	145	26,0	86,0	5,0	4,5	M10	26
ME30	114,3H7	200	38	81	180	145	45,0	105,0	5,0	23,5	M12	25
ME30	130,0H7	165	38	62	145	145	26,0	86,0	5,0	4,5	M10	26
ME30	130,0H7	215	38	62	190	145	26,0	86,0	5,0	4,5	M12	26
ME30	130,0H7	215	38	62	190	116	26,0	112,0	5,0	3,0	M12	25
ME30	180,0H7	215	38	62	190	145	26,0	86,0	5,0	4,5	M12	26
ME30	180,0H7	215	38	81	190	145	45,0	105,0	5,0	23,5	M12	25
ME30	180,0H7	215	38	62	190	116	55,0	160,0	5,0	3,0	M12	25
ME40	110,0H7	165	48	81	190	190	34,0	122,0	5,0	4,5	M10	18
ME40	114,3H7	200	48	81	190	190	34,0	122,0	4,0	4,5	M12	34
ME40	130,0H7	165	48	81	190	190	34,0	122,0	5,0	4,5	M10	18
ME40	130,0H7	215	48	81	190	190	34,0	122,0	5,0	4,5	M12	34
ME40	180,0H7	215	48	82	190	190	35,0	123,0	5,0	5,5	M12	35
ME40	250,0H7	300	48	85	260	190	38,0	126,0	6,0	8,5	M16	38

STÖBER

F1_N - F6_N

F1-F4 | | F6



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Refer to the standard dimension drawings for further gear unit dimensions. Subject to dimensional changes in the interests of technical development.

Otras medidas de reductor pueden ser tomadas de los dibujos estándar acotados. Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos.

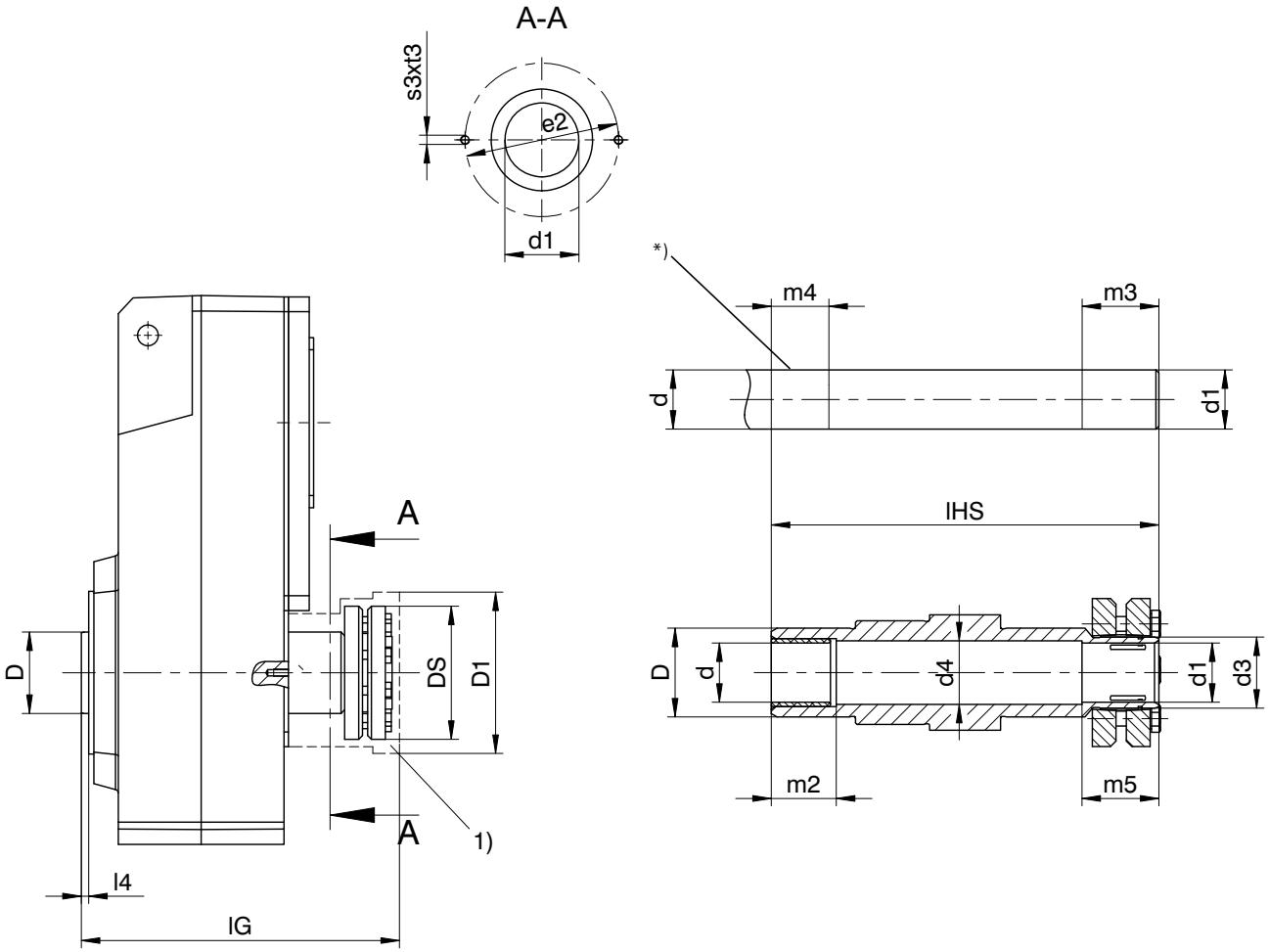
Per altre dimensioni riduttore fare riferimento ai disegni quotati standard. Con riserva di variazioni dimensionali dovute allo sviluppo tecnico.

Typ	A	B	C	D	E	E1	s	t2
F1	50	71	29,0	10,0	40	140	M6	11
F2	64	88	33,5	10,5	55	175	M8	13
F3	72	102	37,5	12,5	60	200	M10	16
F4	87	114	37,5	12,5	70	220	M10	16
F6	108	131	46,5	15,5	85	270	M12	19

F

Offset Helical Gear Units **F** with hollow shaft for shrink ring connect.
*Reductores de ejes paralelos **F** con eje hueco con disco de contracción*
Riduttori pendolari **F** con albero cavo con disco di serraggio

F1_S - F6_S



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	ød	ød1	ød3	ød4	øD	øD1	øDS	øe2	lG	lHS	l4	m2	m3	m4	m5	s3	t3
F1	20h9	20H7h9	24	20,5	35	63	50	58	150	146	4	20	31	25	26	M5	9
F2	25h9	25H7h9	30	25,5	45	73	60	72	180	175	5	20	37	25	32	M5	9
F3	30h9	30H7h9	36	30,5	50	83	72	78	196	192	5	25	37	30	32	M5	9
F4	40h9	40H7h9	50	40,5	55	108	90	83	215	210	5	40	45	45	40	M5	9
F6	50h9	50H7h9	62	50,5	70	128	106	102	251	248	7	40	47	45	42	M5	9

***)** Machine shaft to be driven
1) Cover – possible retrofit on request !
Subject to dimensional changes in the interests of technical development.

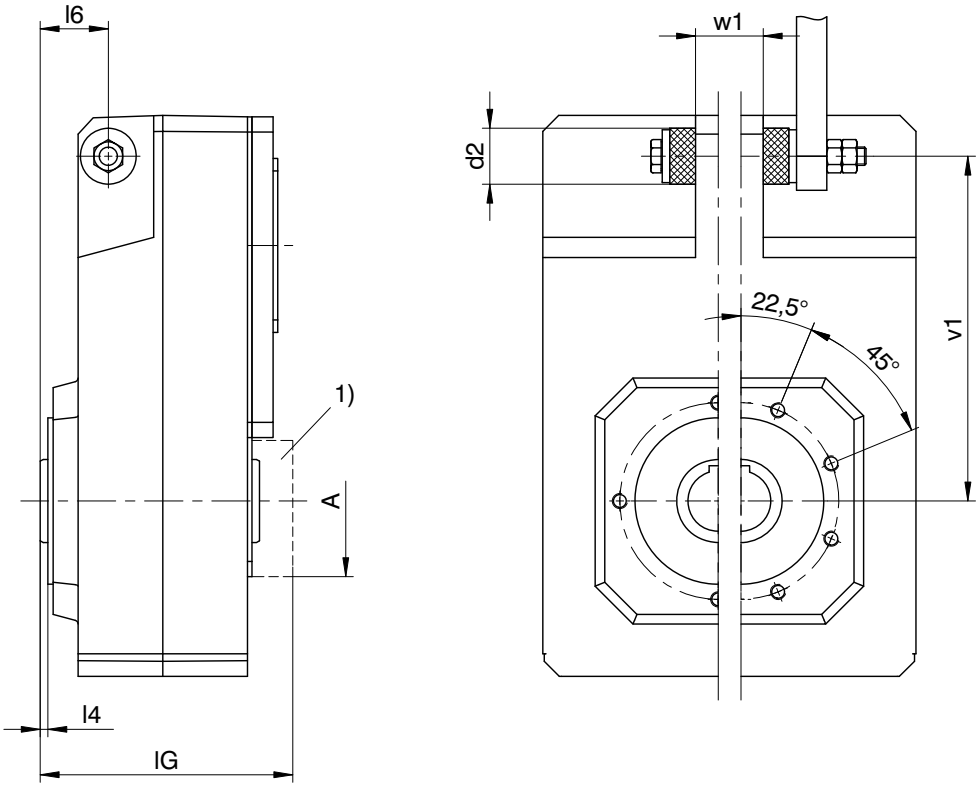
****)*** *Eje de máquina a cargo del cliente*
1) *Cubierta – ¡Posibilidad de equipamiento retroactivo a consultar!*
Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos.

***)** Albero macchina da condurre
1) Copertura – applicabile in seguito su richiesta !
Con riserva di variazioni dimensionali dovute allo sviluppo tecnico.

STÖBER

F1_ - F6_

F1-F4 | | F6



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

d2=outside dia of the rubber in the uncompressed state. The rubber buffer can, if required, be supplied at a price extra.
Order No.:
126850 (F1 - F2); 126851 (F3 - F4); 126852 (F6)
1) Cover optional

d2*=Diámetro exterior de los topes de goma sin carga. A pedido, el tope de goma puede ser suministrado con sobreprecio.*
Nro. de pedido:
126850 (F1 - F2); 126851 (F3 - F4); 126852 (F6)
1) *Cubierta opcional*

d2= diametro esterno degli ammortizzatori di gomma non sotto tensione. L'ammortizzatore di gomma può essere fornito a richiesta (sovrapprezzo).
Codice:
126850 (F1 - F2); 126851 (F3 - F4); 126852 (F6)
1) Copertura optional

Typ	øA	ød1	ød2	l1	l4	l6	lG	v1	w1
F1	70	11,0$^{+0,5}$	30	15	4	35	110,5	150	20
F2	82	11,0$^{+0,5}$	30	15	5	40	130,5	181	22
F3	88	12,5$^{+0,5}$	40	20	5	45	155,5	205	30
F4	100	12,5$^{+0,5}$	40	20	5	45	174,5	228	30
F6	115	21,0$^{+0,5}$	60	30	7	55	192,5	270	35

F

ServoFit® KL Helical Bevel Gear Units
Reductores cónicos ***ServoFit® KL***
ServoFit® Riduttori a coppia conica **KL**

STÖBER

Compact Helical Geared Right-Angle Geared Units

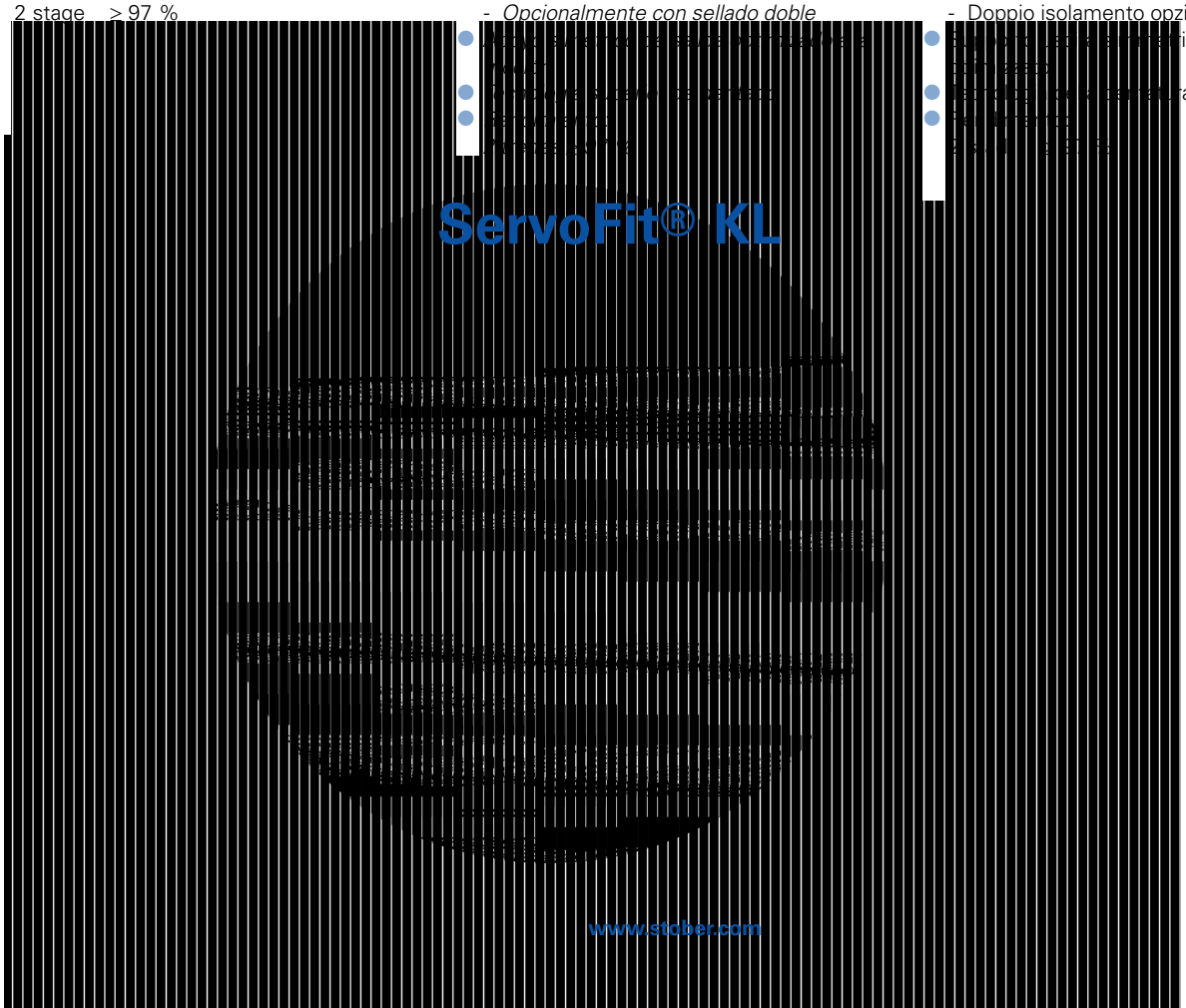
- Acceleration torque: 22 – 65 Nm
- Backlash: 16 - 25 arcmin
- consistent oil quantity, suitable for every mounting position
- Styles: Pitch circle diameter and flange mounting (as option with foot plates)
- Type of shaft:
  - Solid shaft with/without key
  - Hollow shaft with shrink disk or key groove, as option with cover
- Hollow shaft with spiral groove (as grease depot) to make installing and removing the machine shaft easier
- torsionally rigid block design
- no offset between motor and output axle
- plane housing design
- FKM seal at input
- EasyAdapt® motor adapter with clamp coupling:
  - aluminium lightweight construction
  - low construction length
  - high torsional stiffness
  - optionally with clamping set for increased safety
  - optionally with double seal
- symmetrically friction-optimized output bearings
- advanced gear technology
- efficiency:
  2 stage > 97 %

Reductores ortogonales, de dentado helicoidal, compactos

- *Par de aceleración: 22 - 65 Nm*
- *Juego de giro: 16 - 25 arcmin*
- *Cantidad de aceite consistente, apto para cualquier posición de montaje*
- *Tipos constructivos: círculo de agujeros roscados y ejecución de brida (opcional con listones de zócalo)*
- *Formas de eje:*
  - *eje con/sin chaveta*
  - *eje hueco con disco de contracción o chavetero, opcional con cubierta*
- *Para facilitar el montaje o desmontaje del árbol de la máquina los árboles huecos están provistos con una ranura helicoidal (como depósito de grasa)*
- *Construcción monobloc a prueba de torsión*
- *No decalaje axial entre eje de motor y eje de salida*
- *Diseño de caja liso*
- *Anillo retén de FKM en la entrada*
- *Adaptador de motor EasyAdapt® con acoplamiento de anillo de apriete*
  - *Fácil de montar gracias a la función de expansión*
  - *Construcción ligera de aluminio*
  - *Longitud constructiva corta*
  - *Gran resistencia a la torsión*
  - *Opcionalmente con kit de sujeción para una mayor seguridad*
  - *Opcionalmente con sellado doble*
- [redacted]

Riduttori rinvio angolo con dentatura elicoidale compatti

- Coppia di accelerazione: 22 - 65 Nm
- Gioco standard: 16 - 25 arcmin
- Quantità di olio uniforme, possibilità di impiego in tutte le posizioni
- Tipologie costruttive: fissaggio con fori filettati ed esecuzione flangiata (optional con piedini)
- Esecuzioni albero:
  - albero con/senza chiavetta
  - albero cavo con disco di serraggio o cava chiavetta, optional con copertura
- Per facilitare il montaggio e lo smontaggio dell'albero macchina, gli alberi cavi sono provvisti di una scanalatura a spirale (in qualità di deposito grasso)
- Monoblocco resistente allo svergolamento
- Nessuno disassamento asse di motore e asse di uscita
- Design di carcassa liscio
- Anello di tenuta in FKM in ingresso
- Adattatore motore con giunto di bloccaggio EasyAdapt®:
  - Montaggio più facile grazie alla funzione di divaricazione
  - Struttura leggera in alluminio
  - Lunghezza contenuta
  - Elevata resistenza alla torsione
  - Kit di serraggio opzionale per una maggiore sicurezza
  - Doppio isolamento opzionale
- [redacted]ico ad attrito
- [redacted]a avanzata
- [redacted]

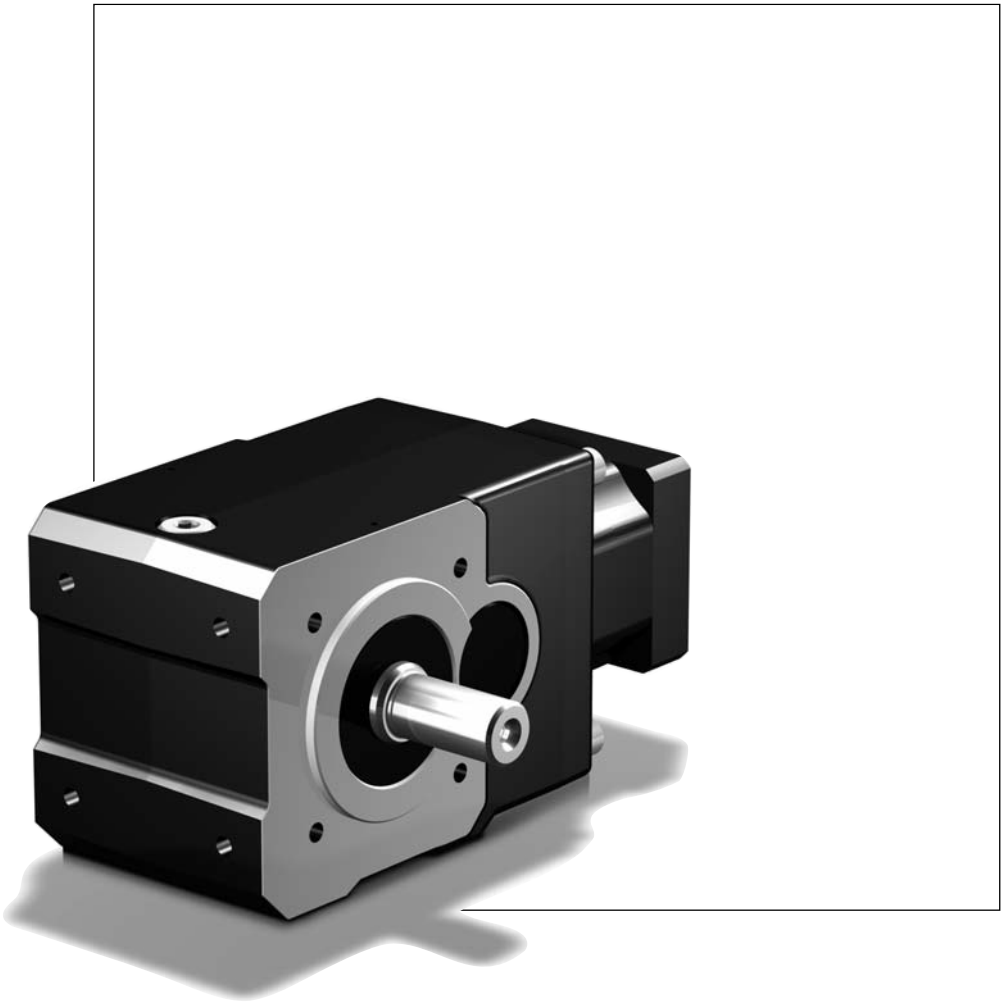


ServoFit® KL Helical Bevel Gear Units

Reductores cónicos ***ServoFit® KL***

ServoFit® Riduttori coppia conica **KL**

STÖBER



Contents KL

Type designation - Available combinations	KL2
Type designation - Styles	KL4
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Dimension drawings Helical Bevel Gear Units KL	KL9

Resumen del contenido KL

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Denominación de tipo – Tipos constructivos	*KL4*
Tabla de selección Reductores cónicos KL	*KL5*
Dibujos acotados Reductores cónicos KL	*KL9*

Indice KL

Identificazione tipologica – forme esecutive	KL2
Identificazione tipologica – tipologie costruttive	KL4
Tabella di selezione Riduttori a coppia conica KL	KL5
Disegni quotati Riduttori a coppia conica KL	KL9

KL

Type designation - Available combinations

Denominación de tipo – Formas de ejecución

Identificazione tipologica – forme esecutive

STÖBER

KL 2 0 2 G G 0160 MQ

1 2 3 4 5 6 7 8

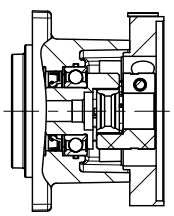
KL 202 GG 0160 MQ

1 Gear unit type
2 Gear unit size
3 Generation number
4 Stages
5 Shaft version (e.g. G = shaft without key)
6 Styles (e.g. G = Pitch circle diameter)
7 Transmission ratio i x 10
8 Mounting series
• Motor adapter square **MQ**

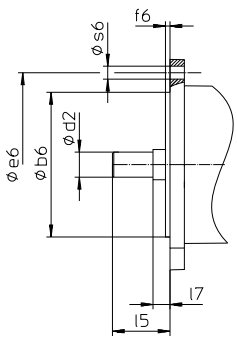
1 *Tipo de reductor*
2 *Tamaño de reductor*
3 *Cifra de generación*
4 *Número de trenes*
5 *Ejecución de eje (p. ej. G = eje sin chaveta)*
6 *Tipo constructivo (p. ej. G = círculo de agujeros roscados)*
7 *Número característico de la relación de reducción i x 10*
8 *Grupos de anexo*
*• Adaptador de motor cuadrada **MQ***

1 Tipo riduttore
2 Grandezza riduttore
3 Numero di generazione
4 Numero di stadi
5 Esecuzione albero (p. e. G = albero senza chiavetta)
6 Tipologia costruttiva (p. e. G = fissaggio con fori filettati)
7 Rapporto di riduzione i x 10
8 Opzioni annessi
• Adattatore motore quadrato **MQ**

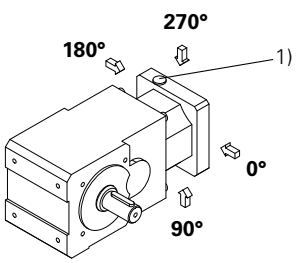
Type of shaft ***Formas de eje*** **Esecuzione albero**		**Styles**	***Tipos constructivos***	**Tipologie costruttive**
		G	**F**	**NG**
Hollow shaft *Eje hueco* Albero cavo	**A**	AG	AF	ANG
Hollow shaft for shrink ring connection *Eje hueco con disco de contracción* Albero cavo con disco di serraggio	**S**	SG	SF	SNG
Shaft with key *Eje con chaveta* Albero con chiavetta	**P**	PG	PF	PNG
Shaft without key *Eje sin chaveta* Albero senza chiavetta	**G**	GG	GF	GNG



KL Coupling MQ
KL Acoplamiento MQ
Giunto KL MQ



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore



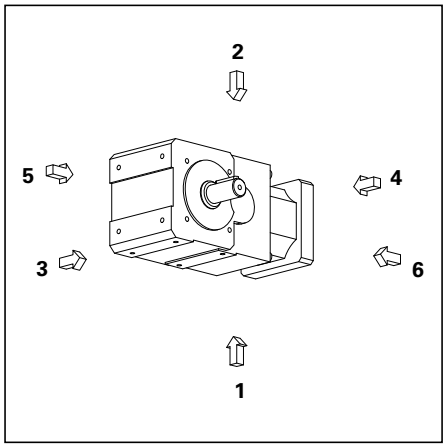
1) Access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamonto motore

Type designation — *Denominación de tipo* — Identificazione tipologica

Ordering data according to the type designation above. Further ordering details:
- Access clamping screw motor coupling acc. to page KL2
- Solid shaft gear unit side 3, 4 or both sides
- Hollow shaft entry side 3 or 4
- Hollow shaft for shrink ring connection entry side 3 or 4 (shrink disk opposite to entry side)
- Foot plates gear unit side 1 or 5
- Flange gear unit side 3 or 4
- Pitch circle diameter gear unit side 3 or 4

*** WARNING!**
Attaching the gear units using the threaded hole circle: The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

Explanation of the gear unit sides:



Datos de pedido según la tipificación de arriba. Otros datos de pedido:
- *Acceso al tornillo de apriete del acoplamien to de motor según la pag. KL2*
- *Eje macizo lado reductor 3, 4 o ambos lados*
- *Eje hueco lado de enchufe 3 o 4*
- *Eje hueco con disco de contracción lado de enchufe 3 o 4 (disco de contracción delante de lado de enchufe)*
- *Listónes de zócalo lado reductor 1 o 5*
- *Brida lado reductor 3 o 4*
- *Círculo de agujeros roscados lado reductor 3 o 4*

**** ¡ATENCIÓN!***
Fijación de los reductores mediante el círculo de agujeros roscados: *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

Explicación de los lados del reductor:

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra. Altri dati dell'ordine:
- Accesso al giunto di accoppiamonto motore conf. alla pag. KL2
- Albero pieno lato riduttore 3, 4 o entrambi i lati
- Albero cavo lato innesto 3 o 4
- Albero cavo con disco di serraggio lato innesto 3 o 4 (disco di serraggio contro a lato .. innesto)
- Piedini lato riduttore 1 o 5
- Flangia lato riduttore 3 o 4
- Fissagio con fori filettati lato riduttore 3 o 4

*** ATTENZIONE!**
Fissaggio dei riduttori mediante foratura filettata: Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

Spiegazione dei lati del riduttore:

Type designation – Styles

Denominación de tipo – Tipos constructivos

Identificazione tipologica – tipologie costruttive

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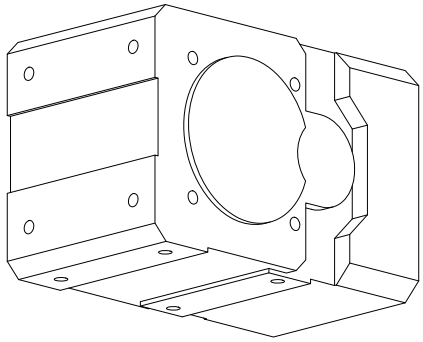
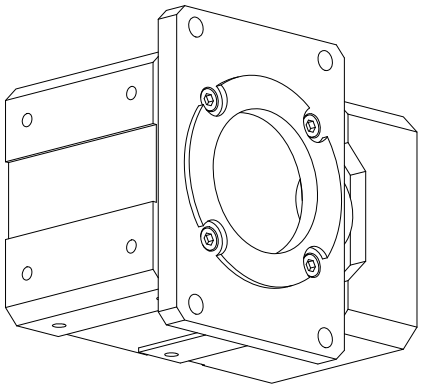
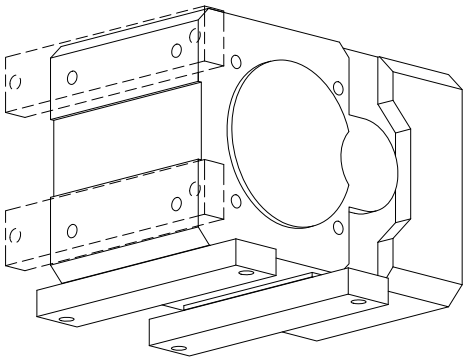
G* Pitch circle diam. • *Círculo de agujeros roscados* • Fissaggio con fori filettati



F • Flange mounting • *Ejecución de brida* • Esecuzione flangiata



NG* • Foot mounting + Pitch circle diameter
• *Ejecución de pedestal + círculo de agujeros roscados*
• Esecuzione con piedini + Fissaggio con fori filettati

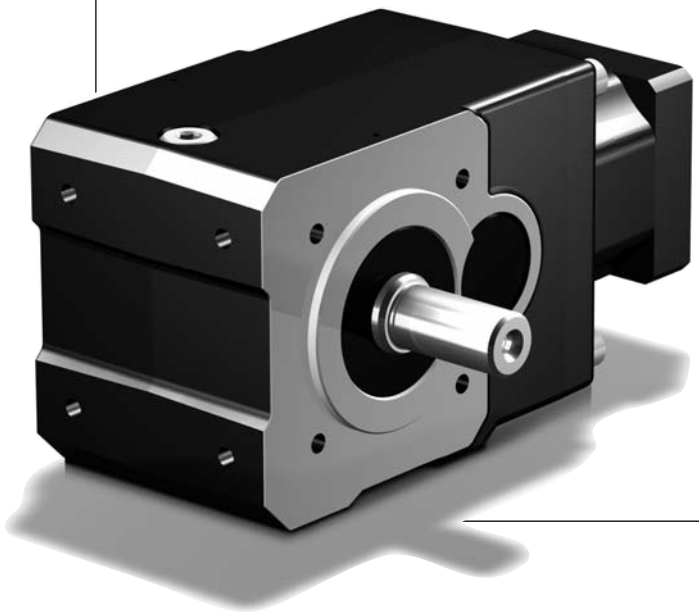


Selection table
ServoFit® KL Helical
Bevel Gear Units

Tabla de selección
Reductores cónicos
ServoFit® KL

Tabella di selezione
ServoFit® Riduttori
coppia conica **KL**

STÖBER



Selection table **ServoFit® KL** Helical Bevel Gear Units

*Tabla de selección Reductores cónicos **ServoFit® KL***

Tabella di selezione **ServoFit®** Riduttori coppia conica **KL**

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Symbols:

- **i** - Gear unit ratio
- **i_{exakt}** - Exact math. ratio
- **n_{1MAX}** - Max. input speed
  - DB - Continuous operation
  - ZB - Cycle operation
  - (at ambient temperature 20°C, also see page A11/A12)
  - Higher speeds on request!
- **MWø** - Motor shaft diameter
- **J_1** - Mass moment of inertia (related to input)
- **G** - Weight (style G, quantity of lubricant for EL1)
- **$\Delta\varphi_2$** - Backlash
- **C_2** - Gear unit rigidity (related to output at M_{2B})
- **M_{2N}** - Rated torque
- **M_{2B}** - max. perm. acceleration torque
- **M_{2NOT}** - Emergency-Off moment (10^3 load changes)

Denominaciones:

- ***i*** - *relación de transmisión*
- ***i_{exakt}*** - *relación de transmisión matemáticamente exacta*
- ***n_{1MAX}*** - *velocidad máx.*
  - *DB - Operación permanente*
  - *ZB - Operación cíclica*
  - *(a 20°C de temperatura ambiente, ver también página A11/A12)*
  - *Velocidades mayores sobre pedida!*
- ***MWø*** - *Diámetro de eje del motor*
- ***J_1*** - *Momento de inercia de masas (del accionamiento referido a la entrada)*
- ***G*** - *Peso del reductor (tipo constructivo G, cantidad de aceite para EL1)*
- ***$\Delta\varphi_2$*** - *Juego de giro*
- ***C_2*** - *Rigidez del reductor al giro (referido a la salida par M_{2B})*
- ***M_{2N}*** - *Par nominal*
- ***M_{2B}*** - *Par máx. adm. de aceleración*
- ***M_{2NOT}*** - *Momento de PARADA DE EMERGENCIA (10^3 cambios de carga)*

Simboli:

- **i** - Rapporto di riduzione
- **i_{exakt}** - Rapporto di riduzione mat. preciso
- **n_{1MAX}** - Numero di giri in ingresso max.
  - DB - Funzionamento ininterrotto
  - ZB - Funzionamento ciclico
  - (a temperatura ambiente di 20°C vedere anche pag. A11/A12)
  - Numeri di giri più elevati su richiesta!
- **G** - Peso del riduttore (tipo costruttivo G, quantità d'olio per EL1)
- **MWø** - Diametro dell'albero motore
- **J_1** - Momento di inerzia dell'azionamento (riferito all'ingresso)
- **$\Delta\varphi_2$** - Gioco
- **C_2** - Rigidità torsionale riduttore (riferito all uscita per M_{2B})
- **M_{2N}** - Coppia nominale
- **M_{2B}** - Coppia di accelerazione max. consentita
- **M_{2NOT}** - Coppia di emergenza (10^3 variazioni di carico)

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Please take notice of the indications on page KL8! ***¡Por favor observe las indicaciones en la página KL8!*** **Si raccomanda di rispettare le avvertenze a pagina KL8!**

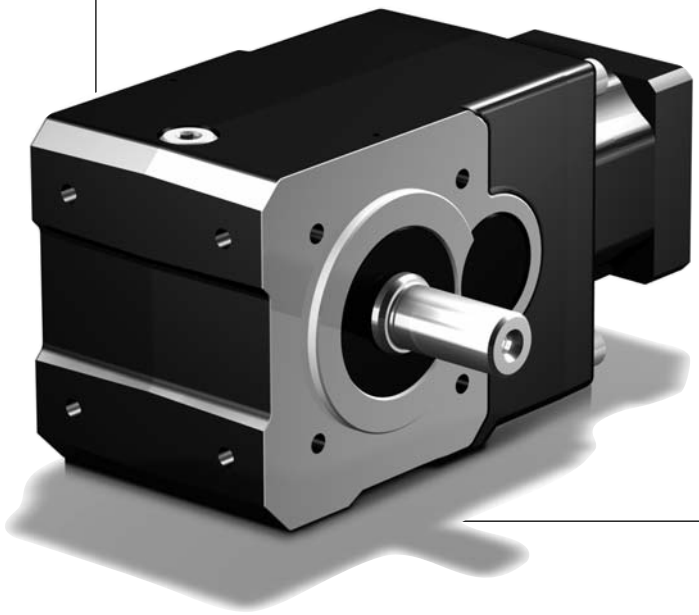
i	iexakt	Typ	n1MAX DB [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
KL102 (M2BMAX=32 Nm)												
4,000	4/1	**KL102_0040 MQ**	3500	5000	**≤16**	0,40	6,2	25	1,0	15	22	29
8,000	8/1	**KL102_0080 MQ**	3500	5000	**≤16**	0,37	6,2	20	1,6	25	30	58
16,00	16/1	**KL102_0160 MQ**	4000	6000	**≤16**	0,31	6,2	20	1,8	25	30	60
32,00	32/1	**KL102_0320 MQ**	4000	6000	**≤16**	0,30	6,2	20	1,7	25	32	64
KL202 (M2BMAX=65 Nm)												
4,000	4/1	**KL202_0040 MQ**	3500	5000	**≤19**	1,0	9,5	20	1,8	35	47	58
8,000	8/1	**KL202_0080 MQ**	3500	5000	**≤19**	0,89	9,5	16	3,5	50	60	120
16,00	16/1	**KL202_0160 MQ**	4000	6000	**≤19**	0,66	9,5	16	3,9	50	60	120
32,00	32/1	**KL202_0320 MQ**	4000	6000	**≤19**	0,64	9,5	16	3,2	50	65	130

Dimension drawings
ServoFit® KL Helical
Bevel Gear Units

Dibujos acotados
Reductores cónicos
ServoFit® KL

Disegni quotati
ServoFit® Riduttori
coppia conica **KL**

STÖBER



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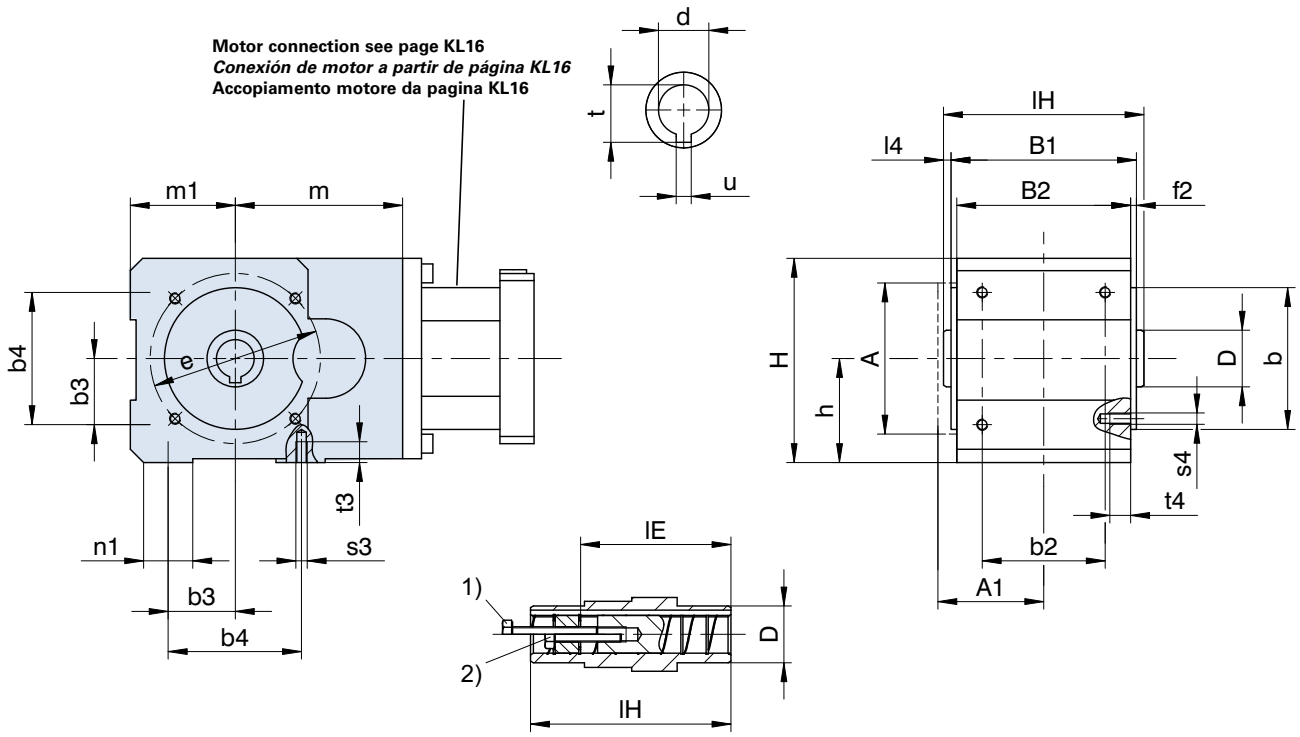
KL1_AG_MQ - KL2_AG_MQ



Shaft-mounted: 1), 2) see page A19 | ***Ejecución enchufable:*** *1), 2) ver página A19* | **Esecuzione ad albero cavo:** 1), 2) vedere pag. A19

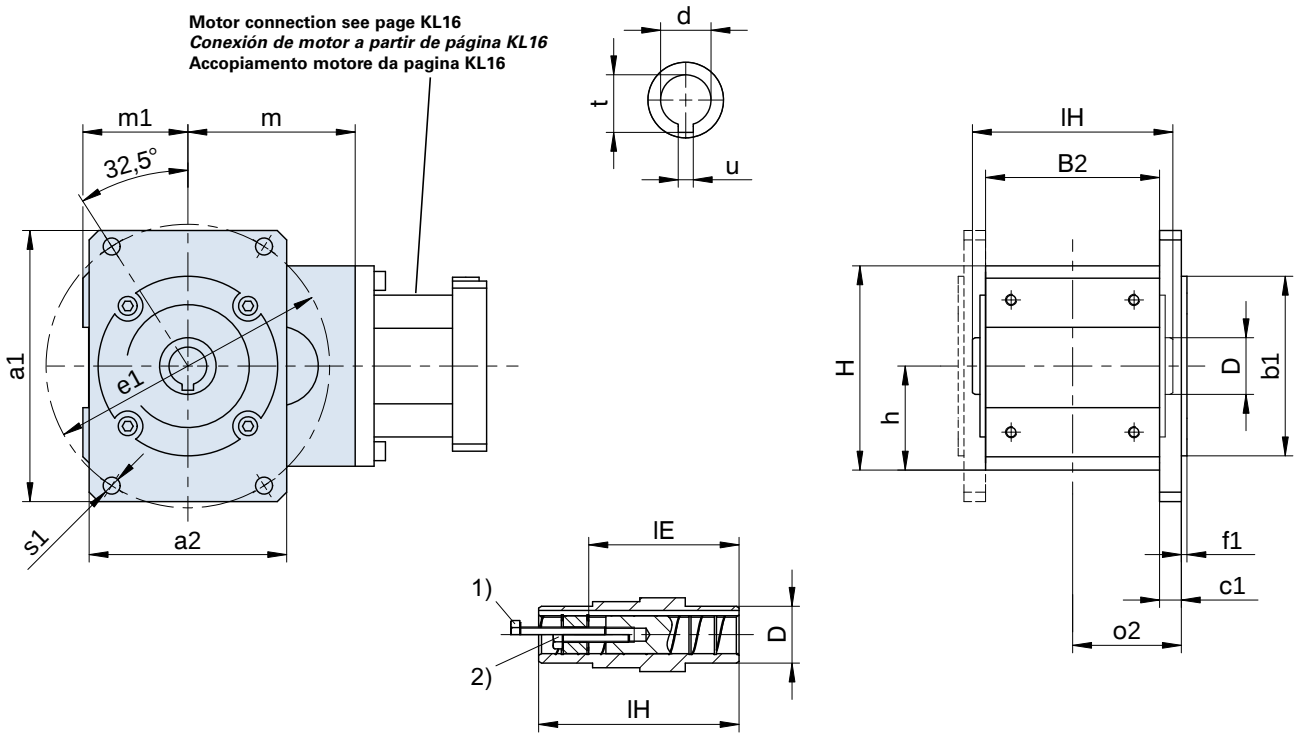
Typ	a1	a2	□A	A1	øb	øb1	b2	b3	b4	B1	B2	c1	ød	øD	øe	øe1
KL1	128,5	88,5	70	47,5	60_{j6}	60_{j6}	50	27,5	55	81	75	11,5	16^{H7}	25	75	130
KL2	143,5	104,5	80	57,0	75_{j6}	95_{j6}	65	35,0	70	98	92	11,5	20^{H7}	30	90	150

Typ	f1	f2	h	H	l4	lE	lH	m1	n1	o2	s1	s3	s4	t	t3	t4	u
KL1	3	3	46	90	3	60,5	87	46	21	49,0	9	M6	M6	18,3	11	11	5^{JS9}
KL2	3	3	55	108	4	79,5	106	55	26	57,5	9	M6	M6	22,8	13	13	6^{JS9}

Dimension **m** see next page. | *Medida **m** ver página siguiente.* | Dimensione **m** vedere la pagina successiva.

STÖBER

KL1_AF_MQ - KL2_AF_MQ



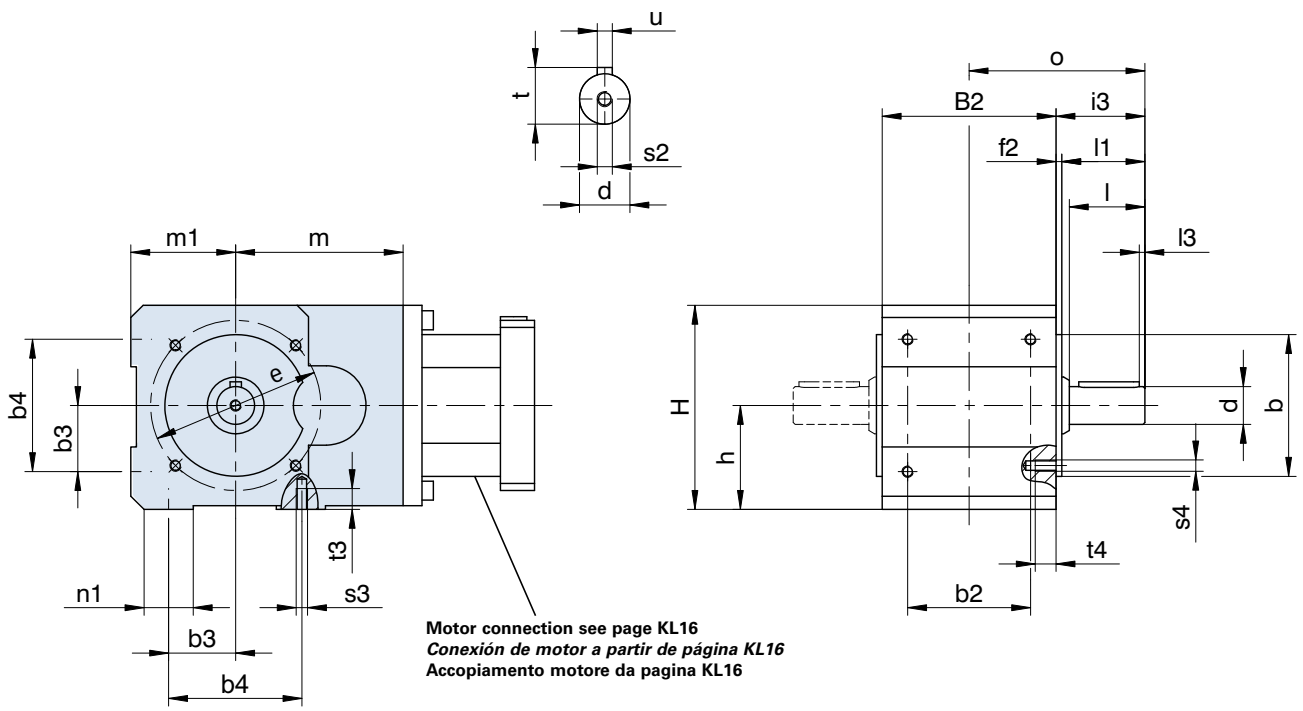
Shaft-mounted: 1), 2) see page A19 | ***Ejecución enchufable:*** *1), 2) ver página A19* | **Esecuzione ad albero cavo:** 1), 2) vedere pag. A19

Typ	MQ m
KL102	67,5
KL202	88,5

Further dimensions see previous page. | *Otras medidas ver página anterior.* | Altre dimensioni vedere la pagina precedente.

STÖBER

KL1_PG_MQ - KL2_PG_MQ



Motor connection see page KL16
Conexión de motor a partir de página KL16
Accopiamento motore da pagina KL16

Output shaft can also be delivered without key. Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta! ¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta. Si raccomanda di rispettare le avvertenze a pagina A19!

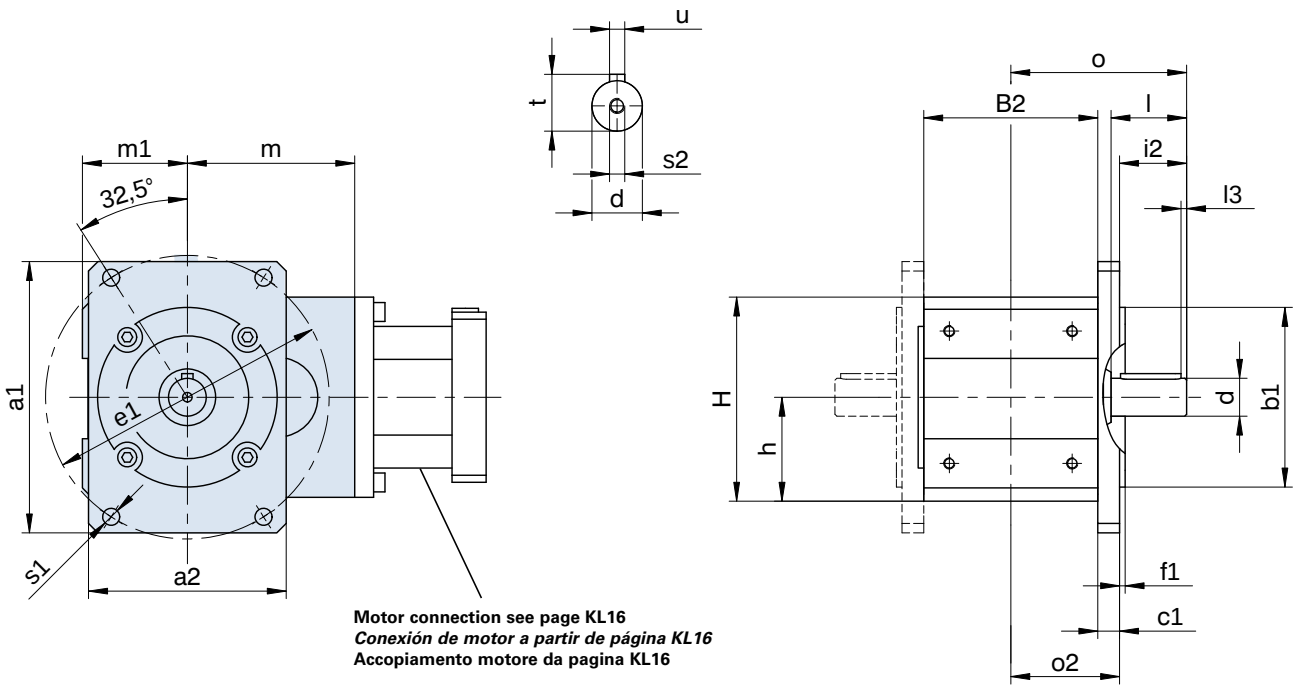
Typ	a1	a2	øb	øb1	b2	b3	b4	B2	c1	ød	øe	øe1	f1	f2	h	H
KL1	128,5	88,5	60$_{j6}$	60$_{j6}$	50	27,5	55	75	11,5	16^{k6}	75	130	3	3,0	46	90
KL2	143,5	104,5	75$_{j6}$	95$_{j6}$	65	35,0	70	92	11,5	20^{k6}	90	150	3	3,0	55	108

Typ	i2	i3	l	l1	l3	m1	n1	o	o2	øs1	s2	s3	s4	t	t3	t4	u
KL1	26,5	38,0	32	35	3	46	21	75,5	49,0	9	M5	M6	M6	18,0	11	11	A5x5x22
KL2	35,5	47,0	40	44	3	55	26	93,0	57,5	9	M6	M6	M6	22,5	13	13	A6x6x32

Dimension **m** see next page. *Medida **m** ver página siguiente.* Dimensione **m** vedere la pagina successiva.

STÖBER

KL1_PF_MQ - KL2_PF_MQ



Motor connection see page KL16
Conexión de motor a partir de página KL16
Accopiamento motore da pagina KL16

Output shaft can also be delivered without key. Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta! ¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta. Si raccomanda di rispettare le avvertenze a pagina A19!

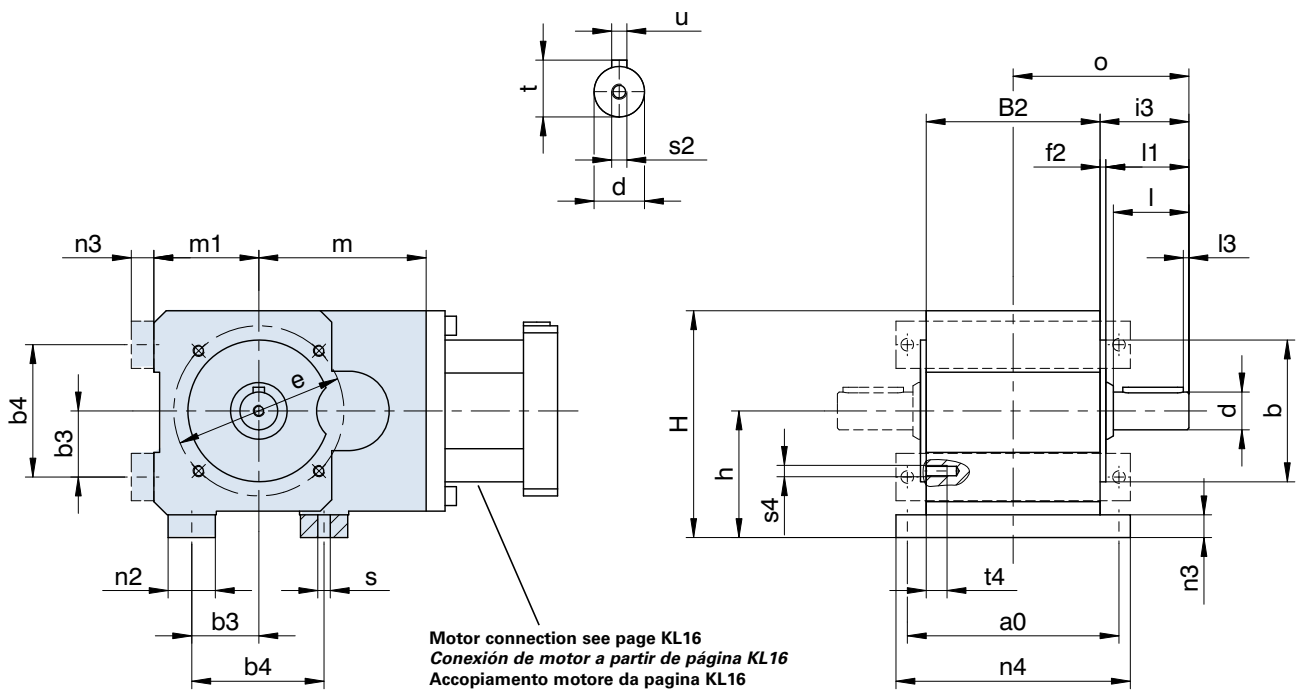
Typ	MQ m
KL102	67,5
KL202	88,5

Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

KL

STÖBER

KL1_PNG_MQ - KL2_PNG_MQ



Motor connection see page KL16
Conexión de motor a partir de página KL16
Accopiamento motore da pagina KL16

Output shaft can also be delivered without key.
Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta!
¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta.
Si raccomanda di rispettare le avvertenze a pagina A19!

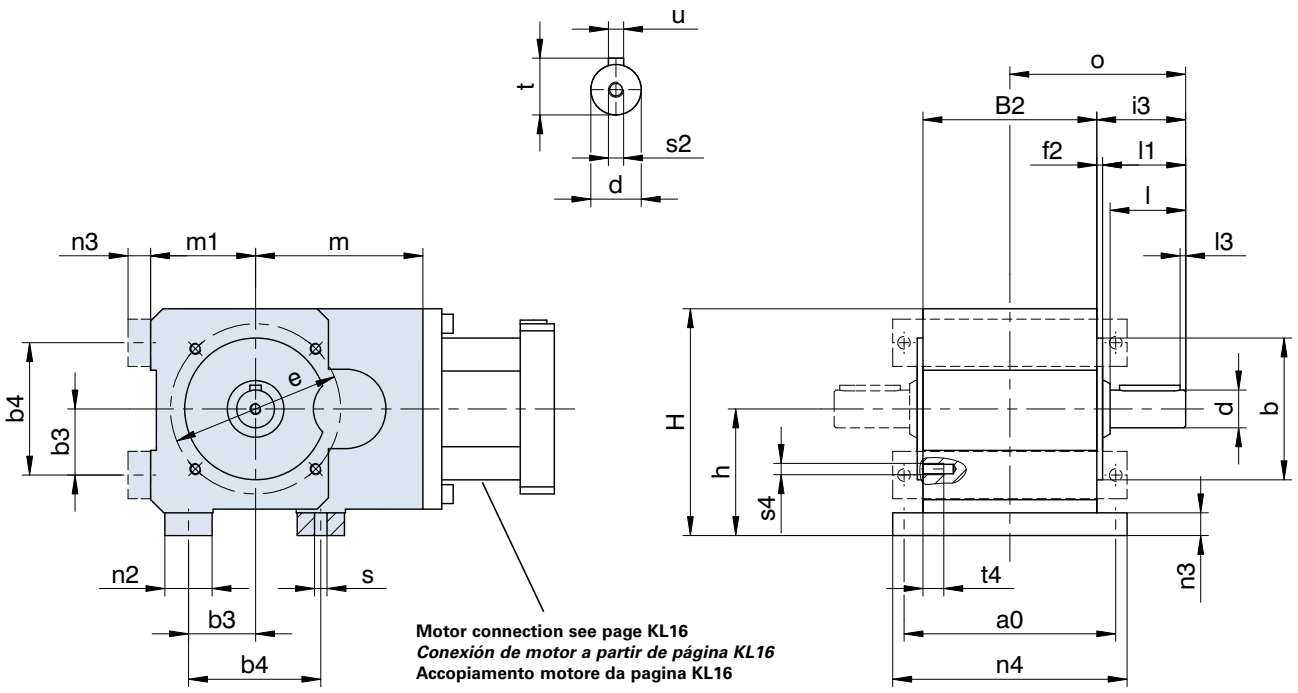
Typ	a0	øb	b3	b4	B2	ød	øe	f2	h	H	i3	l
KL1	95,0	60$_{j6}$	27,5	55	75	16^{k6}	75	3,0	58	102	38,0	32
KL2	112,0	75$_{j6}$	35,0	70	92	20^{k6}	90	3,0	67	120	47,0	40

Typ	l1	l3	m1	n2	n3	n4	o	s	s2	s4	t	t4	u
KL1	35	3	46	20	12	107	75,5	6,6	M5	M6	18	11	A5x5x22
KL2	44	3	55	25	12	124	93,0	6,6	M6	M6	23	13	A6x6x32

Dimension **m** see next page. *Medida **m** ver página siguiente.* Dimensione **m** vedere la pagina successiva.

STÖBER

KL1_PNG_MQ - KL2_PNG_MQ



Motor connection see page KL16
Conexión de motor a partir de página KL16
Accopiamento motore da pagina KL16

Output shaft can also be delivered without key. Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta! ¡Por favor observe las indicaciones en la página A19!

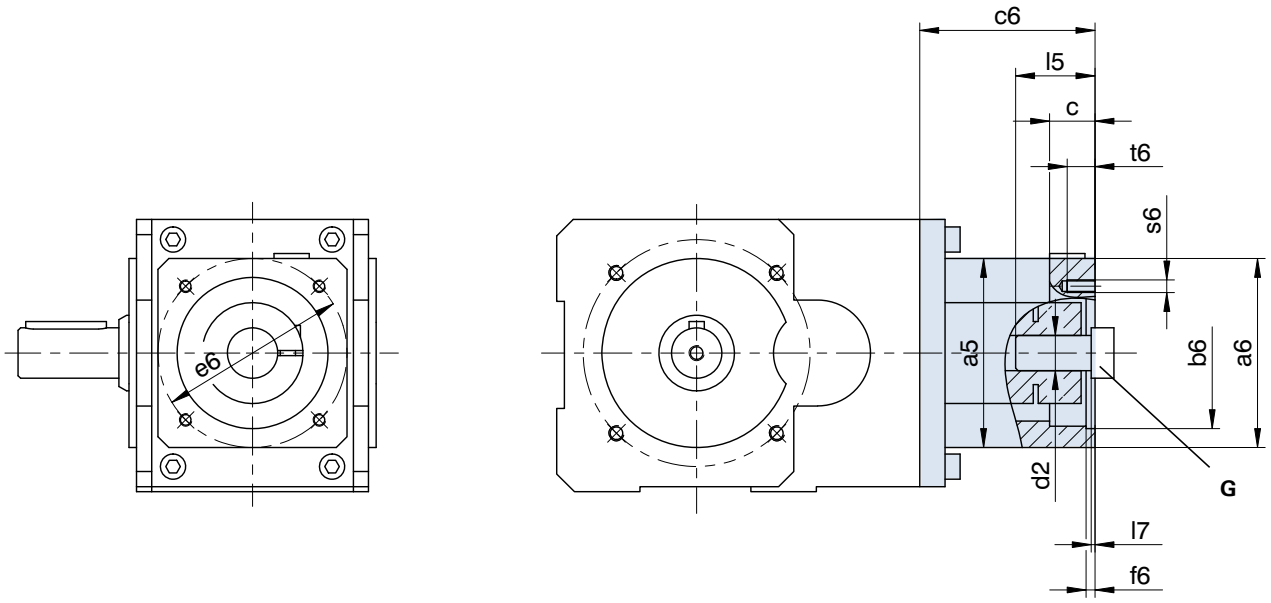
Albero di uscita disponible anche senza chiavetta. Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	MQ m
KL102	67,5
KL202	88,5

Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

STÖBER

KL1_MQ - KL2_MQ



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

MQ	øb6	øe6	ød2min	ød2max	l5max	a5	a6	c	c6	f6	l7max	s6	t6
KL102_MQ	40H7	63	9	16	30	55	55	15	61,5	3,5	3	M5	10
KL102_MQ	50H7	70	9	16	30	55	60	15	61,5	3,5	3	M4	9
KL102_MQ	50H7	95	9	16	30	55	90	15	61,5	3,5	3	M6	15
KL102_MQ	60H7	75	9	16	30	55	75	15	61,5	3,5	3	M5	10
KL202_MQ	40H7	63	9	19	40	72	72	18	69,5	3,0	3	M4	11
KL202_MQ	40H7	63	9	19	40	75	75	18	69,5	3,0	3	M5	11
KL202_MQ	50H7	70	9	19	40	75	75	18	69,5	3,0	3	M4	9
KL202_MQ	50H7	95	9	19	40	75	80	18	69,5	3,0	3	M6	13
KL202_MQ	60H7	75	9	19	40	75	75	18	69,5	3,5	3	M5	11
KL202_MQ	60H7	90	9	19	40	75	75	18	69,5	3,5	3	M5	9
KL202_MQ	70H7	90	9	19	40	75	80	18	69,5	3,5	3	M5	9
KL202_MQ	80H7	100	9	19	40	75	90	18	69,5	3,5	3	M6	13
KL202_MQ	95H7	115	9	19	40	75	100	18	69,5	4,0	3	M8	18
KL202_MQ	95H7	130	9	19	40	75	115	18	69,5	4,0	3	M8	18

Refer to the standard dimension drawings for further gear unit dimensions. Subject to dimensional changes in the interests of technical development.

G – shaft without key

Otras medidas de reductor pueden ser tomadas de los dibujos estándar acotados. Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos.

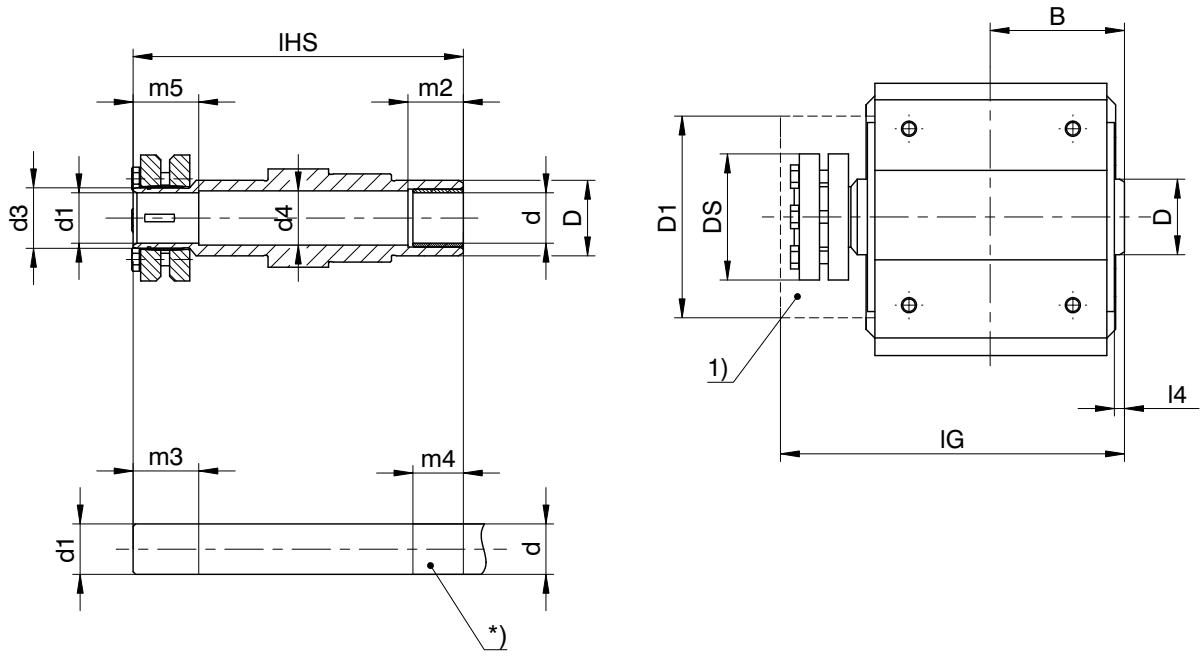
G *– eje sin chaveta*

Per altre dimensioni riduttore fare riferimento ai disegni quotati standard. Con riserva di variazioni dimensionali dovute allo sviluppo tecnico.

G – albero senza chiavetta

STÖBER

KL1_S - KL2_S



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

***)** Machine shaft to be driven
1) Cover – possible retrofit on request !
Subject to dimensional changes in the interests of technical development.

****)*** *Eje de máquina a cargo del cliente*
1) *Cubierta – ¡Posibilidad de equipamiento retroactivo a consultar!*
Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos

***)** Albero macchina da comandare
1) Copertura - applicabile in seguito su richiesta !
Con riserva di variazioni dimensionali dovute allo sviluppo tecnico

Typ	B	ød	ød1	ød3	ød4	øD	øD1	øDS	l4	lG	lHS	m2	m3	m4	m5
KL102	43,5	16H7	16H7h6	20	17,5	25	64	46,2	3,0	114,5	109	17	22	28	23
KL202	53,0	20H7	20H7h6	24	21,5	30	79	50,0	4,0	139,0	131	22	27	31	26

ServoFit® K Helical Bevel Gear Units
*Reductores cónicos **ServoFit® K***
ServoFit® Riduttori a coppia conica **K**

STÖBER

Highly Rigid Helical Geared Right-Angle Gear Units

- Acceleration torque: 60 – 13200 Nm
- Backlash standard: 10 - 12 arcmin
- Backlash class II: 4 - 6 arcmin
- Backlash class I: 1.5 - 3 arcmin
- Styles: pitch circle diameter and flange mounting (as option with foot plates or torque arm)
- Type of shaft:
  - Solid shaft with key
  - K1 to K4 shaft without key as an option, from K5 on request
  - Hollow shaft with shrink disk or key groove, as option with cover
- Hollow shaft with spiral groove (as grease depot) to make installing and removing the machine shaft easier
- Torsionally rigid block design
- FKM seal at input
- EasyAdapt® motor adapter with clamp coupling:
  - easy to assemble due to spreading function
  - aluminium lightweight construction
  - low construction length
  - high torsional stiffness
  - optionally with clamping set for increased safety
  - optionally with double seal
- Symmetrically friction-optimized output bearings (reinforced bearing version K5 - K8 on request)
- Advanced gear technology
- Quiet running
- Efficiency:
  2 stage ≥ 97 %
  3 stage ≥ 96 %
  4 stage ≥ 94 %

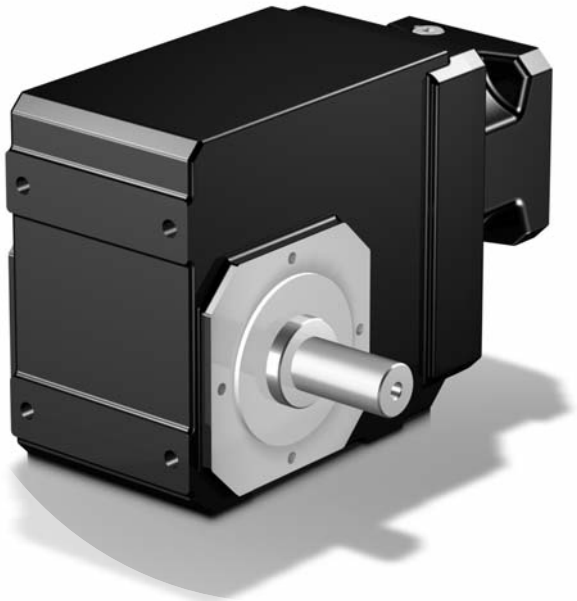
Reductores ortogonales, de dentado helicoidal, de elevada rigidez

- *Par de aceleración: 60 - 13200 Nm*
- *Juego de giro estándar: 10 - 12 arcmin*
- *Juego de giro clase II: 4 - 6 arcmin*
- *Juego de giro clase I: 1,5 - 3 arcmin*
- *Tipos constructivos: círculo de agujeros roscados y ejecución de brida (opc. con listones de zócalo o soporte de par de torsión)*
- *Formas de eje:*
  - eje con chaveta
  - K1 hasta K4 opcional con eje sin chaveta, a partir de K5 sobre consulta
  - eje hueco con disco de contracción o chavetero, opcional con cubierta
- *Para facilitar el montaje o desmontaje del árbol de la máquina los árboles huecos están provistos con una ranura helicoidal (como depósito de grasa)*
- *Construcción monobloc a prueba de torsión*
- *Anillo retén de FKM en la entrada*
- *Adaptador de motor EasyAdapt® con acoplamiento de anillo de apriete*
  - *Fácil de montar gracias a la función de expansión*
  - *Construcción ligera de aluminio*
  - *Longitud constructiva corta*
  - *Gran resistencia a la torsión*
  - *Opcionalmente con kit de sujeción para una mayor seguridad*
  - *Opcionalmente con sellado doble*
- *Apoyo simétrico de salida optimizado a la fricción (ej. reforzada K5 - K8 sobre consulta)*
- *Tecnología superior de dentado*
- *Marcha extremadamente suave*
- *Rendimiento:*
  2 trenes ≥ 97 %
  3 trenes ≥ 96 %
  4 trenes ≥ 94 %

Riduttori rinvio angolo con dentatura elicoidale ad elevata rigidità

- Coppia di accelerazione: 60 - 13200 Nm
- Gioco standard: 10 - 12 arcmin
- Gioco classe II: 4 - 6 arcmin
- Gioco classe I: 1,5 - 3 arcmin
- Tipologie costruttive: fissaggio con fori filettati ed esecuzione flangiata (optional con piedini o braccio di reazione)
- Esecuzioni albero:
  - albero con chiavetta
  - K1 fino a K4 opzional con albero senza chiavetta, dalla taglia K5 su richiesta
  - albero cavo con disco di serraggio o cava chiavetta, optional con copertura
- Per facilitare il montaggio e lo smontaggio dell'albero macchina, gli alberi cavi sono provvisti di una scanalatura a spirale (in qualità di deposito grasso)
- Monoblocco resistente allo svergolamento
- Anello di tenuta in FKM in ingresso
- Adattatore motore con giunto di bloccaggio EasyAdapt®:
  - Montaggio più facile grazie alla funzione di divaricazione
  - Struttura leggera in alluminio
  - Lunghezza contenuta
  - Elevata resistenza alla torsione
  - Kit di serraggio opzionale per una maggiore sicurezza
  - Doppio isolamento opzionale
- Supporto uscita simmetrico ad attrito ottimizzato (esecuzione rinforzata K5 - K8 su richiesta)
- Tecnologia della dentatura avanzata
- Estremamente silenziosi
- Rendimento:
  2 stadi ≥ 97 %
  3 stadi ≥ 96 %
  4 stadi ≥ 94 %

ServoFit® K

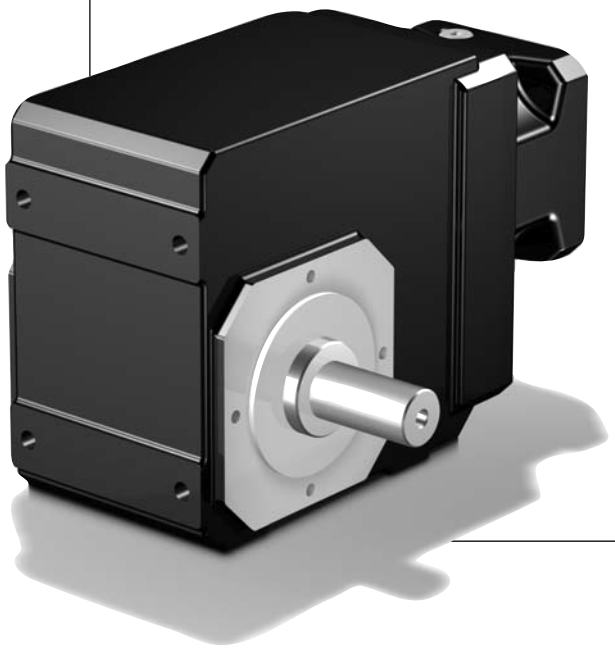


ServoFit® K Helical Bevel Gear Units

Reductores cónicos ***ServoFit® K***

ServoFit® Riduttori coppia conica **K**

STÖBER



Contents K

Type designation - Available combinations	K2
Type designation - Styles	K4
Mounting positions	K5
Selection table	
Helical Bevel Gear Units K	K7
Dimension drawings	
Helical Bevel Gear Units K	K35

Resumen del contenido K

Denominación de tipo – Formas de ejecución	*K2*
Denominación de tipo – Tipos constructivos	*K4*
Posiciones de instalación	*K5*
Tabla de selección	
Reductores cónicos K	*K7*
Dibujos acotados	
Reductores cónicos K	*K35*

Indice K

Identificazione tipologica – forme esecutive	K2
Identificazione tipologica – tipologie costruttive	K4
Posizioni di montaggio	K5
Tabella di selezione	
Riduttori a coppia conica K	K7
Disegni quotati	
Riduttori a coppia conica K	K35

K

Type designation - Available combinations

Denominación de tipo – Formas de ejecución

Identificazione tipologica – forme esecutive

STÖBER

K 5 1 3 V G 0160 ME30

1 2 3 4 5 6 7 8

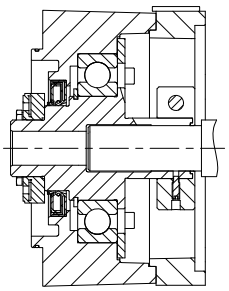
K 513 VG 0160 ME30

1 Gear unit type
2 Gear unit size
3 Generation number
4 Stages
5 Shaft version (e.g. V = solid shaft)
6 Style (e.g. G = Pitch circle diameter)
7 Transmission ratio i x 10
8 Mounting series
- **ME** Motor adapter with EasyAdapt® coupling
  - optionally with clamping set
  - optionally with double seal (MSS1 HS)
- **MB** Motor adapter square with brake (option) (see brochure ID 441904)

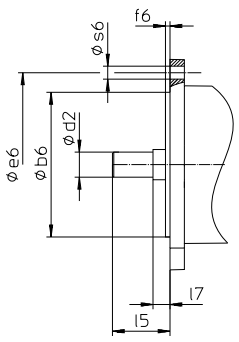
1 *Tipo de reductor*
2 *Tamaño de reductor*
3 *Cifra de generación*
4 *Número de trenes*
5 *Ejecución de eje (p. ej. V = eje majizo)*
6 *Tipo constructivo (p. ej. G = círculo de agujeros roscados*
7 *Número característico de la relación de reducción i x 10*
8 *Grupos de anexo*
- ***ME*** *Adaptador de motor con acoplamiento EasyAdapt®*
  - *Opcionalmente con kit de sujeción*
  - *Opcionalmente con sellado doble (MSS1 HS)*
- ***MB*** *Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

1 Tipo riduttore
2 Grandezza riduttore
3 Numero di generazione
4 Numero di stadi
5 Esecuzione albero (es.: V = albero pieno)
6 Tipologia costruttiva (es.: G = fissaggio con fori filettati)
7 Rapporto di riduzione i x 10
8 Opzioni annessi
- **ME** Adattatore motore con giunto EasyAdapt®
  - kit di serraggio opzionale
  - doppio isolamento (MSS1 HS) opzionale
- **MB** Adattatore motore quadrato con freno (opzione) (vedere prospetto ID 441904)

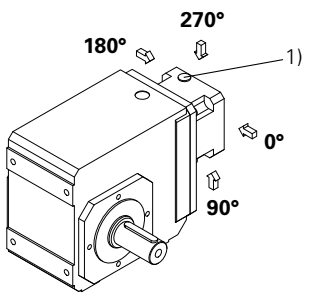
Type of shaft ***Formas de eje*** **Esecuzione albero**		**Styles**	***Tipos constructivos***		**Tipologie costruttive**	
		G	**F**	**GD**	**NG**	**NF**
Hollow shaft *Eje hueco* Albero cavo	**A**	AG	AF	AGD	ANG	ANF
Hollow shaft for shrink ring connection *Eje hueco con disco de contracción* Albero cavo con disco di serraggio	**S**	SG	SF	SGD	SNG	SNF
Solid shaft *Eje macizo* Albero pieno	**V**	VG	VF	-	VNG	VNF



EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore



1) Access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamonto motore

Type designation | *Denominación de tipo* | Identificazione tipologica

Ordering data according to the type designation above. Further ordering details:
- Mounting position "EL" acc. to page K5
- Access clamping screw motor coupling acc. to page K2
- Solid shaft gear unit side 3, 4 or both sides
- Hollow shaft entry side 3 or 4
- Hollow shaft for shrink ring connection entry side 3 or 4 (shrink disk opposite to entry side)
- Foot plates gear unit side 1 or 5
- Flange gear unit side 3 or 4
- Pitch circle diameter gear unit side 3 or 4
- Torque arm gear unit side 1 or 5, eye gear unit side 3 or 4

*** ATTENTION!**
Attaching the gear units using the threaded hole circle: The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. In addition, the gear housing must be adjusted at the pilot (H7).

Datos de pedido según la tipificación de arriba. Otros datos de pedido:
- Pos. de instalación "EL" según la pag. K5
- Acceso al tornillo de apriete del acoplamiento de motor según la pag. K2
- Eje macizo lado reductor 3, 4 o ambos lados
- Eje hueco lado de enchufe 3 o 4
- Eje hueco con disco de contracción lado de enchufe 3 o 4 (disco de contracción delante de lado de enchufe)
- Listónes de zócalo lado reductor 1 o 5
- Brida lado reductor 3 o 4
- Círculo de agujeros roscados lado reductor 3 o 4
- Soporte de par de torsión lado reductor 1 o 5, ojo lado reductor 3 o 4

**** ¡ATENCIÓN!***
Fijación de los reductores mediante el círculo de agujeros roscados: *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).*

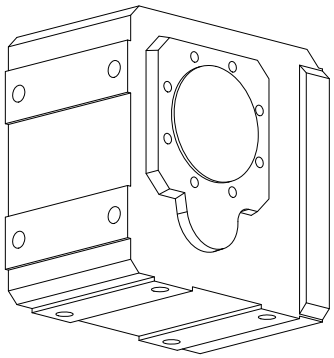
Dati dell'ordine conformi alla identificazione dei modelli di cui sopra. Altri dati dell'ordine:
- Pos. di montaggio "EL" conf. alla pag. K5
- Accesso al giunto di accoppiamonto motore conf. alla pag. K2
- Albero pieno lato riduttore 3, 4 o entrambi i lati
- Albero cavo lato innesto 3 o 4
- Albero cavo con disco di serraggio lato innesto 3 o 4 (disco di serraggio contro a lato innesto)
- Piedini lato riduttore 1 o 5
- Flangia lato riduttore 3 o 4
- Fissagio con fori filettati lato riduttore 3 o 4
- Braccio di reazione lato riduttore 1 o 5, occhio lato riduttore 3 o 4

*** ATTENZIONE!**
Fissaggio dei riduttori mediante foratura filettata: Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

Type designation – Styles / *Denominación de tipo – Tipos constructivos* / Identificazione tipologica – tipologie costruttive

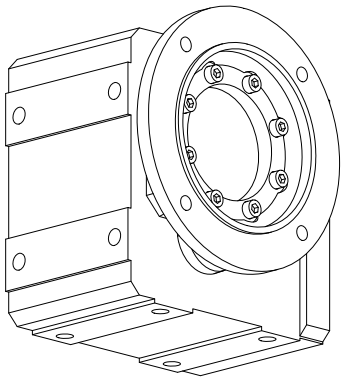
STÖBER

G* Pitch circle diam. • *Círculo de agujeros roscados* • Fissaggio con fori filettati



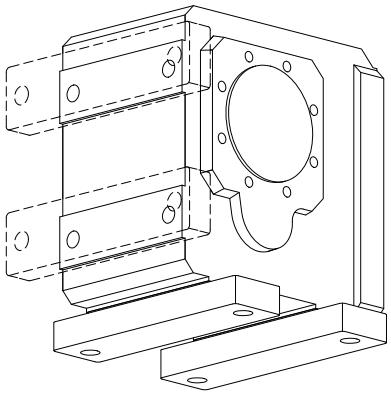
for K10 NG style • *en K10 tipo constructivo NG* • per K10 tipologia costruttiva NG

F • Flange mounting • *Ejecución de brida* • Esecuzione flangiata

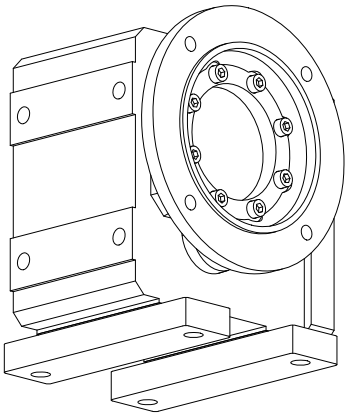


for K10 NF style • *en K10 tipo constructivo NF* • per K10 tipologia costruttiva NF

NG* • Foot mounting + Pitch circle diameter
• *Ejecución de pedestal + círculo de agujeros roscados*
• Esecuzione con piedini + Fissaggio con fori filettati

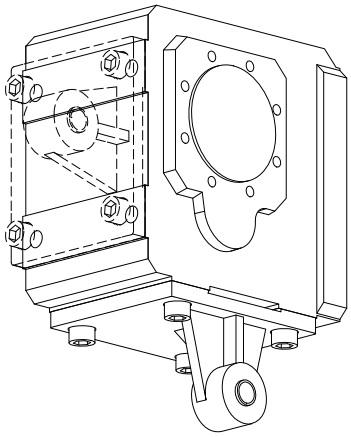


NF • Foot mounting + Flange mounting
• *Ejecución de pedestal + Ejecución de brida*
• Esecuzione con piedini + Esecuzione flangiata



• not valid for all sizes • *no vale para todos tamaños* • non vale per tutte le grandezze

GD* • Pitch circle diameter + Torque arm
• *Círculo de agujeros roscados + soporte de par de torsión*
• Fissaggio con fori filettati + braccio di reazione



for K10 NGD style • *en K10 tipo constructivo NGD* • per K10 tipologia costruttiva NGD

Mounting positions *Posiciones de instalación* Posizioni di montaggio

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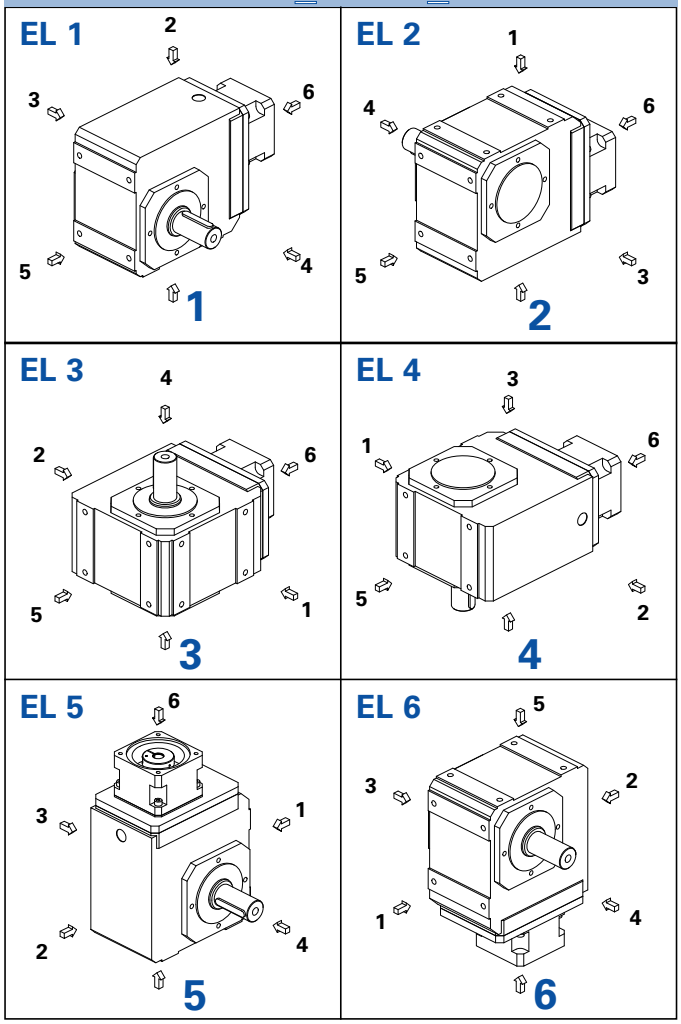
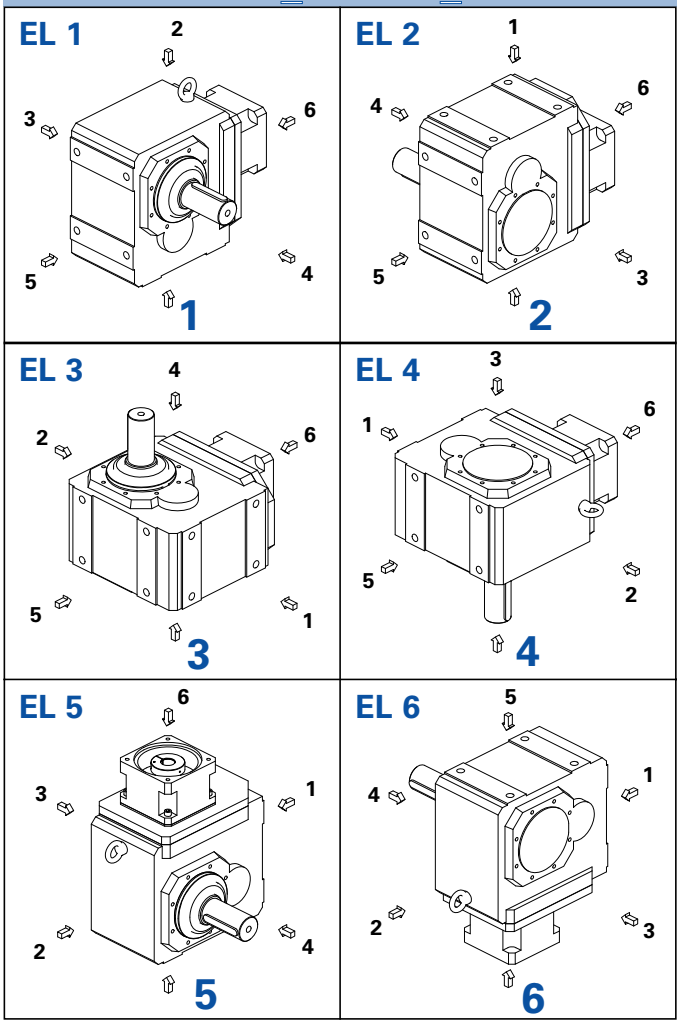
K1_ - K4_



K5_ - K10_



The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Ventilation valves are supplied as standard for gear sizes K5 - K10.

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

En los tamaños de reductores K5 - K10 están montadas válvulas de aireación de modo estándar.

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite su Internet (ID 441871).

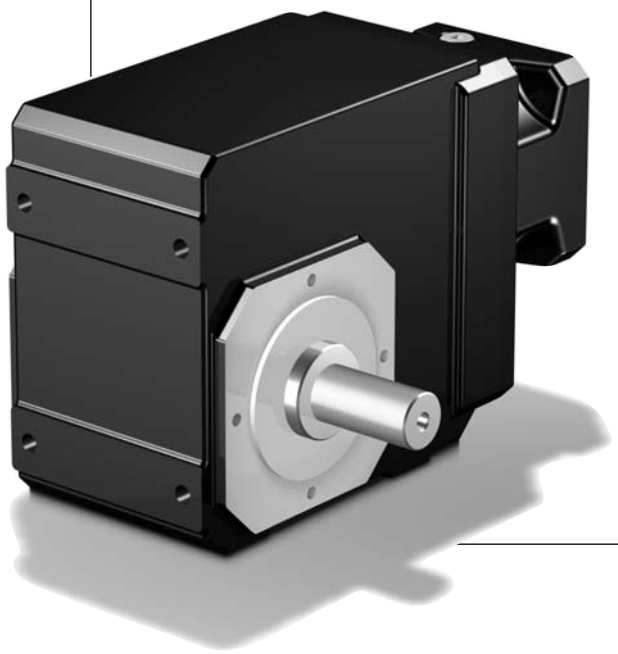
Per le grandezze riduttore K5 - K10 le valvole di sfiato sono montate come standard.

Selection data
ServoFit® K Helical
Bevel Gear Units

Tabla de selección
Reductores cónicos
ServoFit® K

Tabella di selezione
ServoFit® Riduttori
coppia conica **K**

STÖBER



K

Selection data **ServoFit® K** Helical Bevel Gear Units

*Tabla de selección Reductores cónicos **ServoFit® K***

Tabella di selezione **ServoFit®** Riduttori coppia conica **K**

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Symbols:

i - Gear unit ratio
i_{exakt} - Exact math. ratio
n_{1MAX} - Max. input speed
DBH - Continuous operation - input and output horizontal
DBV - Continuous operation - input or output vertical
ZB - Cycle operation
(at ambient temperature 20°C, also see page A11/A12)
Higher speeds on request!
MWø - Motor shaft diameter
J_1 - Mass moment of inertia [2]
(related to input)
G - Weight
(style G, quantity of lubricant for EL1)
$\Delta\varphi_2$ - Backlash (standard/cl.II/cl. I)
Reduced play class I continuous operation with limitations: permitted continuous operation speed reduced by 20%, synthetic oil option must be used.
C_2 - Gear unit rigidity
(related to output at M_{2B})
M_{2N} - Rated torque [1] [2]
M_{2B} - max. perm. acceleration torque [2]
M_{2NOT} - Emergency-Off moment [2]
(10^3 load changes)

Denominaciones:

i - *relación de transmisión*
i_{exakt} - *relación de transmisión matemáticamente exacta*
n_{1MAX} - *velocidad máx.*
DBH - Operación permanente - entrada y salida horizontal
DBV - Operación permanente - entrada o salida vertical
ZB - Operación cíclica
(a 20°C de temperatura ambiente, ver también página A11/A12)
Velocidades mayores sobre pedida!
MWø - *Diámetro de eje del motor*
J_1 - *Momento de inercia de masas [2] (del accionamiento referido a la entrada)*
G - *Peso del reductor (tipo constructivo G, cantidad de aceite para EL1)*
$\Delta\varphi_2$ - *Juego de giro (estándar/clase II/clase I) Juego reducido clase I, servicio continuo restringido: el régimen de revoluciones admisible en servicio continuo se reduce en un 20%; debe utilizarse la opción de aceite sintético.*
C_2 - *Rigidez del reductor al giro (referido a la salida par M_{2B})*
M_{2N} - *Par nominal [1] [2]*
M_{2B} - *Par máx. adm. de aceleración [2]*
M_{2NOT} - *Momento de PARADA DE EMERGENCIA [2] (10^3 cambios de carga)*

Simboli:

i - Rapporto di riduzione
i_{exakt} - Rapporto di riduzione mat. preciso
n_{1MAX} - Numero di giri in ingresso max.
DBH - Funzionamento ininterrotto - ingresso e uscita orizzontale
DBV - Funzionamento ininterrotto - ingresso o uscita verticale
ZB - Funzionamento ciclico
(a temperatura ambiente di 20°C vedere anche pag. A11/A12)
Numeri di giri più elevati su richiesta!
MWø - Diametro dell'albero motore
J_1 - Momento di inerzia dell'azionamento [2] (riferito all'ingresso)
G - Peso del riduttore
(tipo costruttivo G, quantità d'olio per EL1)
$\Delta\varphi_2$ - Gioco (standard/cl. II/cl. I)
Con un sovrapprezzo è disponibile una realizzazione con gioco ridotto; gioco ridotto cl. I Funzionamento continuo con limitazioni: Numero di giri consentito per funzionamento continuo ridotto del 20%, è necessario utilizzare l'opzione olio sintetico.
C_2 - Rigidità torsionale riduttore (riferito all uscita per M_{2B})
M_{2N} - Coppia nominale [1] [2]
M_{2B} - Coppia di accelerazione max. consentita [2]
M_{2NOT} - Coppia di emergenza [2]
(10^3 variazioni di carico)

[1] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

[2] If you use a pinion securing element (option), the torque values can be partly increased. This also results in higher mass moments of inertia.
Values on request or using the EASY Online product catalog (configurator) on our website
http://products.stoeber.de/

[1] Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

[2] Con el kit de sujeción opcional, valores parcialmente superiores. Con esto aumentan los pares de inercia de masa.
Valores disponibles bajo petición o en el catálogo de productos EASY Online (configurador).
http://products.stoeber.de/

[1] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

[2] In caso di impiego di kit di serraggio opzionale possono essere rilevati valori in parte più elevati. *In questo modo risultano dei momenti d'inerzia di massa più elevati.*
Indicazione dei valori su richiesta oppure tramite catalogo prodotti EASY Online (configuratore).
http://products.stoeber.de/

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K6!*** **Si raccomanda di rispettare le avvertenze a pagina K6!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K102 (M2BMAX=140 Nm)													
4,000	4/1	**K102_0040 ME10**	3300	2800	4500	**≤14**	1,2	11,1	12/6	5,9	65	72	90
4,000	4/1	**K102_0040 ME10**	3300	2800	4500	**>14≤19**	1,5	11,1	12/6	6,3	65	93	120
4,000	4/1	**K102_0040 ME20**	3300	2800	4500	**≤19**	2,7	12,1	12/6	6,3	65	93	120
4,000	4/1	**K102_0040 ME20**	3300	2800	4500	**>19≤24**	3,4	12,1	12/6	6,6	65	93	120
5,568	1520/273	**K102_0056 ME10**	3300	2800	4500	**≤14**	1,0	11,1	12/6	6,3	73	100	130
5,568	1520/273	**K102_0056 ME10**	3300	2800	4500	**>14≤19**	1,3	11,1	12/6	6,6	73	110	160
5,568	1520/273	**K102_0056 ME20**	3300	2800	4500	**≤19**	2,5	12,1	12/6	6,5	73	110	160
5,568	1520/273	**K102_0056 ME20**	3300	2800	4500	**>19≤24**	3,2	12,1	12/6	6,7	73	110	160
6,000	6/1	**K102_0060 ME10**	3300	2800	4500	**≤14**	0,85	11,1	12/6	6,4	75	110	140
6,000	6/1	**K102_0060 ME10**	3300	2800	4500	**>14≤19**	1,1	11,1	12/6	6,6	75	110	170
6,000	6/1	**K102_0060 ME20**	3300	2800	4500	**≤19**	2,3	12,1	12/6	6,5	75	110	170
6,000	6/1	**K102_0060 ME20**	3300	2800	4500	**>19≤24**	3,0	12,1	12/6	6,7	75	110	170
6,644	299/45	**K102_0066 ME10**	3600	3300	5000	**≤14**	0,78	11,1	12/6	6,4	77	120	150
6,644	299/45	**K102_0066 ME10**	3600	3300	5000	**>14≤19**	1,0	11,1	12/6	6,6	77	120	190
6,644	299/45	**K102_0066 ME20**	3500	3300	5000	**≤19**	2,2	12,1	12/6	6,6	77	120	190
6,644	299/45	**K102_0066 ME20**	3500	3300	5000	**>19≤24**	2,9	12,1	12/6	6,7	77	120	190
8,309	1911/230	**K102_0083 ME10**	3600	3300	5000	**≤14**	0,67	11,1	12/6	6,6	83	120	190
8,309	1911/230	**K102_0083 ME10**	3600	3300	5000	**>14≤19**	0,92	11,1	12/6	6,7	83	120	220
8,309	1911/230	**K102_0083 ME20**	3500	3300	5000	**≤19**	2,1	12,1	12/6	6,7	83	120	220
8,309	1911/230	**K102_0083 ME20**	3500	3300	5000	**>19≤24**	2,8	12,1	12/6	6,7	83	120	220
9,249	1748/189	**K102_0092 ME10**	3600	3300	5000	**≤14**	0,71	11,1	12/6	6,6	86	130	210
9,249	1748/189	**K102_0092 ME10**	3600	3300	5000	**>14≤19**	0,96	11,1	12/6	6,7	86	130	240
9,249	1748/189	**K102_0092 ME20**	3500	3300	5000	**≤19**	2,1	12,1	12/6	6,7	86	130	240
9,249	1748/189	**K102_0092 ME20**	3500	3300	5000	**>19≤24**	2,9	12,1	12/6	6,7	86	130	240
10,14	507/50	**K102_0100 ME10**	4000	3800	5500	**≤14**	0,59	11,1	12/6	6,6	89	130	220
10,14	507/50	**K102_0100 ME10**	4000	3800	5500	**>14≤19**	0,84	11,1	12/6	6,7	89	130	220
10,14	507/50	**K102_0100 ME20**	3500	3500	5000	**≤19**	2,0	12,1	12/6	6,7	89	130	220
10,14	507/50	**K102_0100 ME20**	3500	3500	5000	**>19≤24**	2,7	12,1	12/6	6,8	89	130	220
11,57	266/23	**K102_0115 ME10**	3600	3300	5000	**≤14**	0,62	11,1	12/6	6,7	93	140	240
11,57	266/23	**K102_0115 ME10**	3600	3300	5000	**>14≤19**	0,87	11,1	12/6	6,7	93	140	240
11,57	266/23	**K102_0115 ME20**	3500	3300	5000	**≤19**	2,0	12,1	12/6	6,7	93	140	240
11,57	266/23	**K102_0115 ME20**	3500	3300	5000	**>19≤24**	2,8	12,1	12/6	6,8	93	140	240
12,62	429/34	**K102_0125 ME10**	4000	3800	5500	**≤14**	0,53	11,1	12/6	6,7	96	130	220
12,62	429/34	**K102_0125 ME10**	4000	3800	5500	**>14≤19**	0,78	11,1	12/6	6,7	96	130	220
12,62	429/34	**K102_0125 ME20**	3500	3500	5000	**≤19**	1,9	12,1	12/6	6,7	96	130	220
12,62	429/34	**K102_0125 ME20**	3500	3500	5000	**>19≤24**	2,7	12,1	12/6	6,8	96	130	220
14,11	494/35	**K102_0140 ME10**	4000	3800	5500	**≤14**	0,56	11,1	12/6	6,7	99	140	240
14,11	494/35	**K102_0140 ME10**	4000	3800	5500	**>14≤19**	0,81	11,1	12/6	6,8	99	140	240
14,11	494/35	**K102_0140 ME20**	3500	3500	5000	**≤19**	2,0	12,1	12/6	6,7	99	140	240
14,11	494/35	**K102_0140 ME20**	3500	3500	5000	**>19≤24**	2,7	12,1	12/6	6,8	99	140	240
16,71	117/7	**K102_0165 ME10**	4000	4000	6000	**≤14**	0,48	11,1	12/6	6,7	100	130	220
16,71	117/7	**K102_0165 ME10**	4000	4000	6000	**>14≤19**	0,73	11,1	12/6	6,8	100	130	220
16,71	117/7	**K102_0165 ME20**	3500	3500	5000	**≤19**	1,9	12,1	12/6	6,8	100	130	220
16,71	117/7	**K102_0165 ME20**	3500	3500	5000	**>19≤24**	2,6	12,1	12/6	6,8	100	130	220
17,56	2090/119	**K102_0175 ME10**	4000	3800	5500	**≤14**	0,51	11,1	12/6	6,7	110	140	240
17,56	2090/119	**K102_0175 ME10**	4000	3800	5500	**>14≤19**	0,76	11,1	12/6	6,8	110	140	240
17,56	2090/119	**K102_0175 ME20**	3500	3500	5000	**≤19**	1,9	12,1	12/6	6,8	110	140	240
17,56	2090/119	**K102_0175 ME20**	3500	3500	5000	**>19≤24**	2,7	12,1	12/6	6,8	110	140	240
20,15	403/20	**K102_0200 ME10**	4000	4000	6000	**≤14**	0,45	11,1	12/6	6,8	110	130	220
20,15	403/20	**K102_0200 ME10**	4000	4000	6000	**>14≤19**	0,70	11,1	12/6	6,8	110	130	220
20,15	403/20	**K102_0200 ME20**	3500	3500	5000	**≤19**	1,9	12,1	12/6	6,8	110	130	220
20,15	403/20	**K102_0200 ME20**	3500	3500	5000	**>19≤24**	2,6	12,1	12/6	6,8	110	130	220
23,27	1140/49	**K102_0230 ME10**	4000	4000	6000	**≤14**	0,47	11,1	12/6	6,8	120	140	240
23,27	1140/49	**K102_0230 ME10**	4000	4000	6000	**>14≤19**	0,72	11,1	12/6	6,8	120	140	240
23,27	1140/49	**K102_0230 ME20**	3500	3500	5000	**≤19**	1,9	12,1	12/6	6,8	120	140	240
23,27	1140/49	**K102_0230 ME20**	3500	3500	5000	**>19≤24**	2,6	12,1	12/6	6,8	120	140	240
25,22	1261/50	**K102_0250 ME10**	4000	4000	6000	**≤14**	0,43	11,1	12/6	6,8	96	120	190
25,22	1261/50	**K102_0250 ME10**	4000	4000	6000	**>14≤19**	0,68	11,1	12/6	6,8	96	120	190
25,22	1261/50	**K102_0250 ME20**	3500	3500	5000	**≤19**	1,8	12,1	12/6	6,8	96	120	190
25,22	1261/50	**K102_0250 ME20**	3500	3500	5000	**>19≤24**	2,6	12,1	12/6	6,8	96	120	190
28,05	589/21	**K102_0280 ME10**	4000	4000	6000	**≤14**	0,45	11,1	12/6	6,8	120	140	240
28,05	589/21	**K102_0280 ME10**	4000	4000	6000	**>14≤19**	0,70	11,1	12/6	6,8	120	140	240

Helical Bevel Gear Units **K**
*Reductores cónicos **K***
Riduttori coppia conica **K**

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K102 (M2BMAX=140 Nm)													
28,05	589/21	**K102_0280 ME20**	3500	3500	5000	**≤19**	1,9	12,1	12/6	6,8	120	140	240
28,05	589/21	**K102_0280 ME20**	3500	3500	5000	**>19≤24**	2,6	12,1	12/6	6,8	120	140	240
33,71	4719/140	**K102_0340 ME10**	4000	4000	6000	**≤14**	0,38	11,1	12/6	6,8	73	88	150
33,71	4719/140	**K102_0340 ME10**	4000	4000	6000	**>14≤19**	0,63	11,1	12/6	6,8	73	88	150
35,11	3686/105	**K102_0350 ME10**	4000	4000	6000	**≤14**	0,42	11,1	12/6	6,8	120	140	240
35,11	3686/105	**K102_0350 ME10**	4000	4000	6000	**>14≤19**	0,68	11,1	12/6	6,8	120	140	240
35,11	3686/105	**K102_0350 ME20**	3500	3500	5000	**≤19**	1,8	12,1	12/6	6,8	120	140	240
35,11	3686/105	**K102_0350 ME20**	3500	3500	5000	**>19≤24**	2,6	12,1	12/6	6,8	120	140	240
40,30	403/10	**K102_0400 ME10**	4000	4000	6000	**≤14**	0,37	11,1	12/6	6,8	61	74	120
40,30	403/10	**K102_0400 ME10**	4000	4000	6000	**>14≤19**	0,62	11,1	12/6	6,8	61	74	120
46,92	2299/49	**K102_0470 ME10**	4000	4000	6000	**≤14**	0,38	11,1	12/6	6,8	100	120	200
46,92	2299/49	**K102_0470 ME10**	4000	4000	6000	**>14≤19**	0,63	11,1	12/6	6,8	100	120	200
50,31	5031/100	**K102_0500 ME10**	4000	4000	6000	**≤14**	0,37	11,1	12/6	6,8	50	60	100
50,31	5031/100	**K102_0500 ME10**	4000	4000	6000	**>14≤19**	0,62	11,1	12/6	6,8	50	60	100
56,10	1178/21	**K102_0560 ME10**	4000	4000	6000	**≤14**	0,37	11,1	12/6	6,8	86	100	170
56,10	1178/21	**K102_0560 ME10**	4000	4000	6000	**>14≤19**	0,62	11,1	12/6	6,8	86	100	170
70,03	2451/35	**K102_0700 ME10**	4000	4000	6000	**≤14**	0,36	11,1	12/6	6,8	70	83	140
70,03	2451/35	**K102_0700 ME10**	4000	4000	6000	**>14≤19**	0,62	11,1	12/6	6,8	70	83	140
K202 (M2BMAX=220 Nm)													
4,000	4/1	**K202_0040 ME10**	3000	2600	4000	**≤14**	2,8	18,6	10/5/1,5	8,5	47	47	58
4,000	4/1	**K202_0040 ME10**	3000	2600	4000	**>14≤19**	3,0	18,6	10/5/1,5	9,4	47	47	58
4,000	4/1	**K202_0040 ME20**	3000	2600	4000	**≤19**	4,2	19,6	10/5/1,5	9,4	120	130	170
4,000	4/1	**K202_0040 ME20**	3000	2600	4000	**>19≤24**	5,0	19,6	10/5/1,5	10	120	170	290
4,000	4/1	**K202_0040 ME20**	3000	2600	4000	**>24≤32**	6,4	19,6	10/5/1,5	10	120	170	290
4,000	4/1	**K202_0040 ME30**	3000	2600	4000	**≤24**	9,9	21,5	10/5/1,5	10	120	170	290
4,000	4/1	**K202_0040 ME30**	3000	2600	4000	**>24≤32**	10	21,5	10/5/1,5	10	120	170	290
4,000	4/1	**K202_0040 ME30**	3000	2600	4000	**>32≤38**	12	21,5	10/5/1,5	10	120	170	290
4,364	48/11	**K202_0044 ME10**	3000	2600	4000	**≤14**	2,5	18,6	10/5/1,5	8,9	79	79	99
4,364	48/11	**K202_0044 ME10**	3000	2600	4000	**>14≤19**	2,7	18,6	10/5/1,5	9,7	100	100	130
4,364	48/11	**K202_0044 ME20**	3000	2600	4000	**≤19**	3,9	19,6	10/5/1,5	9,6	120	150	180
4,364	48/11	**K202_0044 ME20**	3000	2600	4000	**>19≤24**	4,6	19,6	10/5/1,5	10	120	180	320
4,364	48/11	**K202_0044 ME20**	3000	2600	4000	**>24≤32**	6,1	19,6	10/5/1,5	10	120	180	320
4,364	48/11	**K202_0044 ME30**	3000	2600	4000	**≤24**	9,6	21,5	10/5/1,5	10	120	180	320
4,364	48/11	**K202_0044 ME30**	3000	2600	4000	**>24≤32**	9,7	21,5	10/5/1,5	10	120	180	320
4,364	48/11	**K202_0044 ME30**	3000	2600	4000	**>32≤38**	11	21,5	10/5/1,5	11	120	180	320
5,177	2107/407	**K202_0052 ME20**	3000	2600	4000	**≤19**	3,5	19,6	10/5/1,5	9,9	130	170	220
5,177	2107/407	**K202_0052 ME20**	3000	2600	4000	**>19≤24**	4,2	19,6	10/5/1,5	10	130	190	380
5,177	2107/407	**K202_0052 ME20**	3000	2600	4000	**>24≤32**	5,7	19,6	10/5/1,5	10	130	190	380
5,177	2107/407	**K202_0052 ME30**	3000	2600	4000	**≤24**	9,1	21,5	10/5/1,5	10	130	190	380
5,177	2107/407	**K202_0052 ME30**	3000	2600	4000	**>24≤32**	9,2	21,5	10/5/1,5	11	130	190	380
5,177	2107/407	**K202_0052 ME30**	3000	2600	4000	**>32≤38**	11	21,5	10/5/1,5	11	130	190	380
6,000	6/1	**K202_0060 ME10**	3000	2600	4000	**≤14**	2,1	18,6	10/5/1,5	9,7	110	110	140
6,000	6/1	**K202_0060 ME10**	3000	2600	4000	**>14≤19**	2,3	18,6	10/5/1,5	10	130	140	170
6,000	6/1	**K202_0060 ME20**	3000	2600	4000	**≤19**	3,5	19,6	10/5/1,5	10	130	200	250
6,000	6/1	**K202_0060 ME20**	3000	2600	4000	**>19≤24**	4,2	19,6	10/5/1,5	10	130	200	400
6,000	6/1	**K202_0060 ME20**	3000	2600	4000	**>24≤32**	5,7	19,6	10/5/1,5	11	130	200	400
6,000	6/1	**K202_0060 ME30**	3000	2600	4000	**≤24**	9,2	21,5	10/5/1,5	10	130	200	400
6,000	6/1	**K202_0060 ME30**	3000	2600	4000	**>24≤32**	9,3	21,5	10/5/1,5	11	130	200	400
6,000	6/1	**K202_0060 ME30**	3000	2600	4000	**>32≤38**	11	21,5	10/5/1,5	11	130	200	400
6,683	2279/341	**K202_0067 ME10**	3500	3100	4500	**≤14**	1,5	18,6	10/5/1,5	9,8	120	120	150
6,683	2279/341	**K202_0067 ME10**	3500	3100	4500	**>14≤19**	1,7	18,6	10/5/1,5	10	140	160	190
6,683	2279/341	**K202_0067 ME20**	3500	3100	4500	**≤19**	2,9	19,6	10/5/1,5	10	140	210	280
6,683	2279/341	**K202_0067 ME20**	3500	3100	4500	**>19≤24**	3,7	19,6	10/5/1,5	10	140	210	400
6,683	2279/341	**K202_0067 ME20**	3500	3100	4500	**>24≤32**	5,1	19,6	10/5/1,5	11	140	210	400
6,683	2279/341	**K202_0067 ME30**	3500	3100	4000	**≤24**	8,6	21,5	10/5/1,5	10	140	210	400
6,683	2279/341	**K202_0067 ME30**	3500	3100	4000	**>24≤32**	8,7	21,5	10/5/1,5	11	140	210	400
6,683	2279/341	**K202_0067 ME30**	3500	3100	4000	**>32≤38**	10	21,5	10/5/1,5	11	140	210	400
7,118	2107/296	**K202_0071 ME20**	3000	2600	4000	**≤19**	3,2	19,6	10/5/1,5	10	140	210	300
7,118	2107/296	**K202_0071 ME20**	3000	2600	4000	**>19≤24**	3,9	19,6	10/5/1,5	10	140	210	400

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K202 (M2BMAX=220 Nm)													
7,118	2107/296	**K202_0071 ME20**	3000	2600	4000	**>24≤32**	5,4	19,6	10/5/1,5	11	140	210	400
7,118	2107/296	**K202_0071 ME30**	3000	2600	4000	**≤24**	8,8	21,5	10/5/1,5	10	140	210	400
7,118	2107/296	**K202_0071 ME30**	3000	2600	4000	**>24≤32**	9,0	21,5	10/5/1,5	11	140	210	400
7,118	2107/296	**K202_0071 ME30**	3000	2600	4000	**>32≤38**	11	21,5	10/5/1,5	11	140	210	400
8,397	2494/297	**K202_0084 ME10**	3500	3100	4500	**≤14**	1,1	18,6	10/5/1,5	10	150	150	190
8,397	2494/297	**K202_0084 ME10**	3500	3100	4500	**>14≤19**	1,4	18,6	10/5/1,5	10	150	200	240
8,397	2494/297	**K202_0084 ME20**	3500	3100	4500	**≤19**	2,6	19,6	10/5/1,5	10	150	220	350
8,397	2494/297	**K202_0084 ME20**	3500	3100	4500	**>19≤24**	3,3	19,6	10/5/1,5	11	150	220	400
8,397	2494/297	**K202_0084 ME20**	3500	3100	4500	**>24≤32**	4,8	19,6	10/5/1,5	11	150	220	400
8,397	2494/297	**K202_0084 ME30**	3500	3100	4000	**≤24**	8,3	21,5	10/5/1,5	11	150	220	400
8,397	2494/297	**K202_0084 ME30**	3500	3100	4000	**>24≤32**	8,4	21,5	10/5/1,5	11	150	220	400
8,397	2494/297	**K202_0084 ME30**	3500	3100	4000	**>32≤38**	10	21,5	10/5/1,5	11	150	220	400
9,190	2279/248	**K202_0092 ME10**	3500	3100	4500	**≤14**	1,3	18,6	10/5/1,5	10	150	170	210
9,190	2279/248	**K202_0092 ME10**	3500	3100	4500	**>14≤19**	1,6	18,6	10/5/1,5	10	150	210	270
9,190	2279/248	**K202_0092 ME20**	3500	3100	4500	**≤19**	2,8	19,6	10/5/1,5	10	150	220	380
9,190	2279/248	**K202_0092 ME20**	3500	3100	4500	**>19≤24**	3,5	19,6	10/5/1,5	11	150	220	400
9,190	2279/248	**K202_0092 ME20**	3500	3100	4500	**>24≤32**	5,0	19,6	10/5/1,5	11	150	220	400
9,190	2279/248	**K202_0092 ME30**	3500	3100	4000	**≤24**	8,4	21,5	10/5/1,5	11	150	220	400
9,190	2279/248	**K202_0092 ME30**	3500	3100	4000	**>24≤32**	8,5	21,5	10/5/1,5	11	150	220	400
9,190	2279/248	**K202_0092 ME30**	3500	3100	4000	**>32≤38**	10	21,5	10/5/1,5	11	150	220	400
10,07	2881/286	**K202_0100 ME10**	3900	3500	5000	**≤14**	0,96	18,6	10/5/1,5	10	160	180	230
10,07	2881/286	**K202_0100 ME10**	3900	3500	5000	**>14≤19**	1,2	18,6	10/5/1,5	10	160	220	290
10,07	2881/286	**K202_0100 ME20**	3500	3500	5000	**≤19**	2,4	19,6	10/5/1,5	10	160	220	400
10,07	2881/286	**K202_0100 ME20**	3500	3500	5000	**>19≤24**	3,1	19,6	10/5/1,5	11	160	220	400
10,07	2881/286	**K202_0100 ME20**	3500	3500	5000	**>24≤32**	4,6	19,6	10/5/1,5	11	160	220	400
10,07	2881/286	**K202_0100 ME30**	3500	3500	4000	**≤24**	8,1	21,5	10/5/1,5	11	160	220	400
10,07	2881/286	**K202_0100 ME30**	3500	3500	4000	**>24≤32**	8,2	21,5	10/5/1,5	11	160	220	400
10,07	2881/286	**K202_0100 ME30**	3500	3500	4000	**>32≤38**	9,9	21,5	10/5/1,5	11	160	220	400
11,55	1247/108	**K202_0115 ME10**	3500	3100	4500	**≤14**	1,0	18,6	10/5/1,5	10	170	210	260
11,55	1247/108	**K202_0115 ME10**	3500	3100	4500	**>14≤19**	1,3	18,6	10/5/1,5	11	170	220	340
11,55	1247/108	**K202_0115 ME20**	3500	3100	4500	**≤19**	2,5	19,6	10/5/1,5	10	170	220	400
11,55	1247/108	**K202_0115 ME20**	3500	3100	4500	**>19≤24**	3,2	19,6	10/5/1,5	11	170	220	400
11,55	1247/108	**K202_0115 ME20**	3500	3100	4500	**>24≤32**	4,7	19,6	10/5/1,5	11	170	220	400
11,55	1247/108	**K202_0115 ME30**	3500	3100	4000	**≤24**	8,2	21,5	10/5/1,5	11	170	220	400
11,55	1247/108	**K202_0115 ME30**	3500	3100	4000	**>24≤32**	8,3	21,5	10/5/1,5	11	170	220	400
11,55	1247/108	**K202_0115 ME30**	3500	3100	4000	**>32≤38**	10	21,5	10/5/1,5	11	170	220	400
12,71	559/44	**K202_0125 ME10**	3900	3500	5000	**≤14**	0,79	18,6	10/5/1,5	10	170	220	290
12,71	559/44	**K202_0125 ME10**	3900	3500	5000	**>14≤19**	1,0	18,6	10/5/1,5	11	170	220	370
12,71	559/44	**K202_0125 ME20**	3500	3500	5000	**≤19**	2,2	19,6	10/5/1,5	11	170	220	400
12,71	559/44	**K202_0125 ME20**	3500	3500	5000	**>19≤24**	3,0	19,6	10/5/1,5	11	170	220	400
12,71	559/44	**K202_0125 ME20**	3500	3500	5000	**>24≤32**	4,4	19,6	10/5/1,5	11	170	220	400
12,71	559/44	**K202_0125 ME30**	3500	3500	4000	**≤24**	7,9	21,5	10/5/1,5	11	170	220	400
12,71	559/44	**K202_0125 ME30**	3500	3500	4000	**>24≤32**	8,0	21,5	10/5/1,5	11	170	220	400
12,71	559/44	**K202_0125 ME30**	3500	3500	4000	**>32≤38**	9,8	21,5	10/5/1,5	11	170	220	400
13,85	2881/208	**K202_0140 ME10**	3900	3500	5000	**≤14**	0,88	18,6	10/5/1,5	10	180	220	310
13,85	2881/208	**K202_0140 ME10**	3900	3500	5000	**>14≤19**	1,1	18,6	10/5/1,5	11	180	220	400
13,85	2881/208	**K202_0140 ME20**	3500	3500	5000	**≤19**	2,3	19,6	10/5/1,5	11	180	220	400
13,85	2881/208	**K202_0140 ME20**	3500	3500	5000	**>19≤24**	3,1	19,6	10/5/1,5	11	180	220	400
13,85	2881/208	**K202_0140 ME20**	3500	3500	5000	**>24≤32**	4,5	19,6	10/5/1,5	11	180	220	400
13,85	2881/208	**K202_0140 ME30**	3500	3500	4000	**≤24**	8,0	21,5	10/5/1,5	11	180	220	400
13,85	2881/208	**K202_0140 ME30**	3500	3500	4000	**>24≤32**	8,1	21,5	10/5/1,5	11	180	220	400
13,85	2881/208	**K202_0140 ME30**	3500	3500	4000	**>32≤38**	9,9	21,5	10/5/1,5	11	180	220	400
16,86	2967/176	**K202_0170 ME10**	4000	3900	5500	**≤14**	0,64	18,6	10/5/1,5	11	180	220	380
16,86	2967/176	**K202_0170 ME10**	4000	3900	5500	**>14≤19**	0,89	18,6	10/5/1,5	11	180	220	400
16,86	2967/176	**K202_0170 ME20**	3500	3500	5000	**≤19**	2,1	19,6	10/5/1,5	11	190	220	400
16,86	2967/176	**K202_0170 ME20**	3500	3500	5000	**>19≤24**	2,8	19,6	10/5/1,5	11	190	220	400
16,86	2967/176	**K202_0170 ME20**	3500	3500	5000	**>24≤32**	4,3	19,6	10/5/1,5	11	190	220	400
16,86	2967/176	**K202_0170 ME30**	3500	3500	4000	**≤24**	7,8	21,5	10/5/1,5	11	190	220	400
16,86	2967/176	**K202_0170 ME30**	3500	3500	4000	**>24≤32**	7,9	21,5	10/5/1,5	11	190	220	400
16,86	2967/176	**K202_0170 ME30**	3500	3500	4000	**>32≤38**	9,6	21,5	10/5/1,5	11	190	220	400
17,47	559/32	**K202_0175 ME10**	3900	3500	5000	**≤14**	0,74	18,6	10/5/1,5	11	190	220	390
17,47	559/32	**K202_0175 ME10**	3900	3500	5000	**>14≤19**	0,99	18,6	10/5/1,5	11	190	220	400

Helical Bevel Gear Units **K**
*Reductores cónicos **K***
Riduttori coppia conica **K**

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	i_{exakt}	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
K202 (M_{2BMAX}=220 Nm)													
17,47	559/32	**K202_0175 ME20**	3500	3500	5000	**≤19**	2,2	19,6	10/5/1,5	11	190	220	400
17,47	559/32	**K202_0175 ME20**	3500	3500	5000	**>19≤24**	2,9	19,6	10/5/1,5	11	190	220	400
17,47	559/32	**K202_0175 ME20**	3500	3500	5000	**>24≤32**	4,4	19,6	10/5/1,5	11	190	220	400
17,47	559/32	**K202_0175 ME30**	3500	3500	4000	**≤24**	7,9	21,5	10/5/1,5	11	190	220	400
17,47	559/32	**K202_0175 ME30**	3500	3500	4000	**>24≤32**	8,0	21,5	10/5/1,5	11	190	220	400
17,47	559/32	**K202_0175 ME30**	3500	3500	4000	**>32≤38**	9,7	21,5	10/5/1,5	11	190	220	400
20,33	1118/55	**K202_0200 ME10**	4000	3900	5500	**≤14**	0,57	18,6	10/5/1,5	11	180	220	400
20,33	1118/55	**K202_0200 ME10**	4000	3900	5500	**>14≤19**	0,82	18,6	10/5/1,5	11	180	220	400
20,33	1118/55	**K202_0200 ME20**	3500	3500	5000	**≤19**	2,0	19,6	10/5/1,5	11	200	220	400
20,33	1118/55	**K202_0200 ME20**	3500	3500	5000	**>19≤24**	2,7	19,6	10/5/1,5	11	200	220	400
23,18	2967/128	**K202_0230 ME10**	4000	3900	5500	**≤14**	0,62	18,6	10/5/1,5	11	200	220	400
23,18	2967/128	**K202_0230 ME10**	4000	3900	5500	**>14≤19**	0,87	18,6	10/5/1,5	11	200	220	400
23,18	2967/128	**K202_0230 ME20**	3500	3500	5000	**≤19**	2,1	19,6	10/5/1,5	11	200	220	400
23,18	2967/128	**K202_0230 ME20**	3500	3500	5000	**>19≤24**	2,8	19,6	10/5/1,5	11	200	220	400
23,18	2967/128	**K202_0230 ME20**	3500	3500	5000	**>24≤32**	4,3	19,6	10/5/1,5	11	200	220	400
23,18	2967/128	**K202_0230 ME30**	3500	3500	4000	**≤24**	7,7	21,5	10/5/1,5	11	200	220	400
23,18	2967/128	**K202_0230 ME30**	3500	3500	4000	**>24≤32**	7,9	21,5	10/5/1,5	11	200	220	400
23,18	2967/128	**K202_0230 ME30**	3500	3500	4000	**>32≤38**	9,6	21,5	10/5/1,5	11	200	220	400
25,13	1935/77	**K202_0250 ME10**	4000	3900	5500	**≤14**	0,51	18,6	10/5/1,5	11	190	220	400
25,13	1935/77	**K202_0250 ME10**	4000	3900	5500	**>14≤19**	0,77	18,6	10/5/1,5	11	190	220	400
25,13	1935/77	**K202_0250 ME20**	3500	3500	5000	**≤19**	1,9	19,6	10/5/1,5	11	200	220	400
25,13	1935/77	**K202_0250 ME20**	3500	3500	5000	**>19≤24**	2,7	19,6	10/5/1,5	11	200	220	400
27,95	559/20	**K202_0280 ME10**	4000	3900	5500	**≤14**	0,55	18,6	10/5/1,5	11	200	220	400
27,95	559/20	**K202_0280 ME10**	4000	3900	5500	**>14≤19**	0,80	18,6	10/5/1,5	11	200	220	400
27,95	559/20	**K202_0280 ME20**	3500	3500	5000	**≤19**	2,0	19,6	10/5/1,5	11	200	220	400
27,95	559/20	**K202_0280 ME20**	3500	3500	5000	**>19≤24**	2,7	19,6	10/5/1,5	11	200	220	400
33,62	1849/55	**K202_0340 ME10**	4000	3900	5500	**≤14**	0,46	18,6	10/5/1,5	11	150	180	310
33,62	1849/55	**K202_0340 ME10**	4000	3900	5500	**>14≤19**	0,71	18,6	10/5/1,5	11	150	180	310
33,62	1849/55	**K202_0340 ME20**	3500	3500	5000	**≤19**	1,9	19,6	10/5/1,5	11	150	180	310
33,62	1849/55	**K202_0340 ME20**	3500	3500	5000	**>19≤24**	2,6	19,6	10/5/1,5	11	150	180	310
34,55	1935/56	**K202_0350 ME10**	4000	3900	5500	**≤14**	0,50	18,6	10/5/1,5	11	200	220	400
34,55	1935/56	**K202_0350 ME10**	4000	3900	5500	**>14≤19**	0,75	18,6	10/5/1,5	11	200	220	400
34,55	1935/56	**K202_0350 ME20**	3500	3500	5000	**≤19**	1,9	19,6	10/5/1,5	11	200	220	400
34,55	1935/56	**K202_0350 ME20**	3500	3500	5000	**>19≤24**	2,7	19,6	10/5/1,5	11	200	220	400
40,39	1333/33	**K202_0400 ME10**	4000	3900	5500	**≤14**	0,41	18,6	10/5/1,5	11	120	140	200
40,39	1333/33	**K202_0400 ME10**	4000	3900	5500	**>14≤19**	0,66	18,6	10/5/1,5	11	120	140	200
46,23	1849/40	**K202_0460 ME10**	4000	3900	5500	**≤14**	0,45	18,6	10/5/1,5	11	200	220	400
46,23	1849/40	**K202_0460 ME10**	4000	3900	5500	**>14≤19**	0,71	18,6	10/5/1,5	11	200	220	400
46,23	1849/40	**K202_0460 ME20**	3500	3500	5000	**≤19**	1,9	19,6	10/5/1,5	11	200	220	400
46,23	1849/40	**K202_0460 ME20**	3500	3500	5000	**>19≤24**	2,6	19,6	10/5/1,5	11	200	220	400
50,49	6665/132	**K202_0500 ME10**	4000	3900	5500	**≤14**	0,39	18,6	10/5/1,5	11	96	120	190
50,49	6665/132	**K202_0500 ME10**	4000	3900	5500	**>14≤19**	0,64	18,6	10/5/1,5	11	96	120	190
55,54	1333/24	**K202_0560 ME10**	4000	3900	5500	**≤14**	0,40	18,6	10/5/1,5	11	160	190	280
55,54	1333/24	**K202_0560 ME10**	4000	3900	5500	**>14≤19**	0,66	18,6	10/5/1,5	11	160	190	280
69,43	6665/96	**K202_0690 ME10**	4000	3900	5500	**≤14**	0,39	18,6	10/5/1,5	11	130	160	260
69,43	6665/96	**K202_0690 ME10**	4000	3900	5500	**>14≤19**	0,64	18,6	10/5/1,5	11	130	160	260

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K203 (M2BMAX=220 Nm)													
39,45	135407/3432	**K203_0390 ME10**	4000	3900	5500	**≤14**	0,43	21,5	10/6/2,5	11	200	200	250
39,45	135407/3432	**K203_0390 ME10**	4000	3900	5500	**>14≤19**	0,68	21,5	10/6/2,5	11	200	200	250
45,22	58609/1296	**K203_0450 ME10**	4000	3900	5500	**≤14**	0,44	21,5	10/6/2,5	11	200	220	290
45,22	58609/1296	**K203_0450 ME10**	4000	3900	5500	**>14≤19**	0,69	21,5	10/6/2,5	11	200	220	290
49,76	26273/528	**K203_0500 ME10**	4000	3900	5500	**≤14**	0,42	21,5	10/6/2,5	11	200	220	320
49,76	26273/528	**K203_0500 ME10**	4000	3900	5500	**>14≤19**	0,67	21,5	10/6/2,5	11	200	220	320
54,25	135407/2496	**K203_0540 ME10**	4000	3900	5500	**≤14**	0,43	21,5	10/6/2,5	11	200	220	350
54,25	135407/2496	**K203_0540 ME10**	4000	3900	5500	**>14≤19**	0,68	21,5	10/6/2,5	11	200	220	350
66,03	46483/704	**K203_0660 ME10**	4000	3900	5500	**≤14**	0,41	21,5	10/6/2,5	11	200	220	390
66,03	46483/704	**K203_0660 ME10**	4000	3900	5500	**>14≤19**	0,66	21,5	10/6/2,5	11	200	220	390
68,42	26273/384	**K203_0680 ME10**	4000	3900	5500	**≤14**	0,42	21,5	10/6/2,5	11	200	220	390
68,42	26273/384	**K203_0680 ME10**	4000	3900	5500	**>14≤19**	0,67	21,5	10/6/2,5	11	200	220	390
79,62	26273/330	**K203_0800 ME10**	4000	3900	5500	**≤14**	0,41	21,5	10/6/2,5	11	200	220	390
79,62	26273/330	**K203_0800 ME10**	4000	3900	5500	**>14≤19**	0,66	21,5	10/6/2,5	11	200	220	390
90,79	46483/512	**K203_0910 ME10**	4000	3900	5500	**≤14**	0,41	21,5	10/6/2,5	11	200	220	390
90,79	46483/512	**K203_0910 ME10**	4000	3900	5500	**>14≤19**	0,66	21,5	10/6/2,5	11	200	220	390
109,5	26273/240	**K203_1090 ME10**	4000	3900	5500	**≤14**	0,41	21,5	10/6/2,5	11	200	220	390
109,5	26273/240	**K203_1090 ME10**	4000	3900	5500	**>14≤19**	0,66	21,5	10/6/2,5	11	200	220	390
135,3	30315/224	**K203_1350 ME10**	4000	3900	5500	**≤14**	0,40	21,5	10/6/2,5	11	200	220	390
135,3	30315/224	**K203_1350 ME10**	4000	3900	5500	**>14≤19**	0,66	21,5	10/6/2,5	11	200	220	390
181,0	86903/480	**K203_1810 ME10**	4000	3900	5500	**≤14**	0,40	21,5	10/6/2,5	11	200	220	390
181,0	86903/480	**K203_1810 ME10**	4000	3900	5500	**>14≤19**	0,65	21,5	10/6/2,5	11	200	220	390
217,5	62651/288	**K203_2180 ME10**	4000	3900	5500	**≤14**	0,40	21,5	10/6/2,5	11	160	190	270
217,5	62651/288	**K203_2180 ME10**	4000	3900	5500	**>14≤19**	0,65	21,5	10/6/2,5	11	160	190	270
271,9	313255/1152	**K203_2720 ME10**	4000	3900	5500	**≤14**	0,40	21,5	10/6/2,5	11	130	160	260
271,9	313255/1152	**K203_2720 ME10**	4000	3900	5500	**>14≤19**	0,65	21,5	10/6/2,5	11	130	160	260
K302 (M2BMAX=390 Nm)													
4,000	4/1	**K302_0040 ME20**	2700	2300	3800	**≤19**	6,8	24,6	10/4/1,5	14	130	130	170
4,000	4/1	**K302_0040 ME20**	2700	2300	3800	**>19≤24**	7,5	24,6	10/4/1,5	15	200	230	290
4,000	4/1	**K302_0040 ME20**	2700	2300	3800	**>24≤32**	9,0	24,6	10/4/1,5	16	200	230	290
4,000	4/1	**K302_0040 ME30**	2700	2300	3800	**≤24**	13	26,5	10/4/1,5	15	200	310	380
4,000	4/1	**K302_0040 ME30**	2700	2300	3800	**>24≤32**	13	26,5	10/4/1,5	16	200	310	700
4,000	4/1	**K302_0040 ME30**	2700	2300	3800	**>32≤38**	14	26,5	10/4/1,5	16	200	310	700
4,364	48/11	**K302_0044 ME20**	2700	2300	3800	**≤19**	6,2	24,6	10/4/1,5	14	150	150	180
4,364	48/11	**K302_0044 ME20**	2700	2300	3800	**>19≤24**	6,9	24,6	10/4/1,5	16	210	250	320
4,364	48/11	**K302_0044 ME20**	2700	2300	3800	**>24≤32**	8,4	24,6	10/4/1,5	16	210	250	320
4,364	48/11	**K302_0044 ME30**	2700	2300	3800	**≤24**	12	26,5	10/4/1,5	15	210	310	420
4,364	48/11	**K302_0044 ME30**	2700	2300	3800	**>24≤32**	12	26,5	10/4/1,5	16	210	310	700
4,364	48/11	**K302_0044 ME30**	2700	2300	3800	**>32≤38**	14	26,5	10/4/1,5	16	210	310	700
5,375	43/8	**K302_0054 ME20**	2700	2300	3800	**≤19**	5,0	24,6	10/4/1,5	15	180	180	220
5,375	43/8	**K302_0054 ME20**	2700	2300	3800	**>19≤24**	5,8	24,6	10/4/1,5	16	220	310	390
5,375	43/8	**K302_0054 ME20**	2700	2300	3800	**>24≤32**	7,2	24,6	10/4/1,5	16	220	310	390
5,375	43/8	**K302_0054 ME30**	2700	2300	3800	**≤24**	11	26,5	10/4/1,5	16	220	310	390
5,375	43/8	**K302_0054 ME30**	2700	2300	3800	**>24≤32**	11	26,5	10/4/1,5	16	220	310	390
5,375	43/8	**K302_0054 ME30**	2700	2300	3800	**>32≤38**	13	26,5	10/4/1,5	16	220	310	390
6,000	6/1	**K302_0060 ME20**	2700	2300	3800	**≤19**	5,3	24,6	10/4/1,5	15	200	200	250
6,000	6/1	**K302_0060 ME20**	2700	2300	3800	**>19≤24**	6,1	24,6	10/4/1,5	16	230	350	440
6,000	6/1	**K302_0060 ME20**	2700	2300	3800	**>24≤32**	7,5	24,6	10/4/1,5	16	230	350	440
6,000	6/1	**K302_0060 ME30**	2700	2300	3800	**≤24**	11	26,5	10/4/1,5	16	230	350	580
6,000	6/1	**K302_0060 ME30**	2700	2300	3800	**>24≤32**	11	26,5	10/4/1,5	16	230	350	700
6,000	6/1	**K302_0060 ME30**	2700	2300	3800	**>32≤38**	13	26,5	10/4/1,5	16	230	350	700
6,740	2150/319	**K302_0067 ME20**	3200	2800	4200	**≤19**	4,1	24,6	10/4/1,5	15	230	230	280
6,740	2150/319	**K302_0067 ME20**	3200	2800	4200	**>19≤24**	4,8	24,6	10/4/1,5	16	240	360	490
6,740	2150/319	**K302_0067 ME20**	3200	2800	4200	**>24≤32**	6,3	24,6	10/4/1,5	16	240	360	490
6,740	2150/319	**K302_0067 ME30**	3200	2800	4000	**≤24**	9,8	26,5	10/4/1,5	16	240	360	490
6,740	2150/319	**K302_0067 ME30**	3200	2800	4000	**>24≤32**	9,9	26,5	10/4/1,5	16	240	360	490
6,740	2150/319	**K302_0067 ME30**	3200	2800	4000	**>32≤38**	12	26,5	10/4/1,5	16	240	360	490
7,391	473/64	**K302_0074 ME20**	2700	2300	3800	**≤19**	4,5	24,6	10/4/1,5	16	250	250	310
7,391	473/64	**K302_0074 ME20**	2700	2300	3800	**>19≤24**	5,2	24,6	10/4/1,5	16	250	380	540

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K302 (M2BMAX=390 Nm)													
7,391	473/64	**K302_0074 ME20**	2700	2300	3800	**>24≤32**	6,7	24,6	10/4/1,5	16	250	380	540
7,391	473/64	**K302_0074 ME30**	2700	2300	3800	**≤24**	10	26,5	10/4/1,5	16	250	380	540
7,391	473/64	**K302_0074 ME30**	2700	2300	3800	**>24≤32**	10	26,5	10/4/1,5	16	250	380	540
7,391	473/64	**K302_0074 ME30**	2700	2300	3800	**>32≤38**	12	26,5	10/4/1,5	16	250	380	540
8,444	2322/275	**K302_0084 ME10**	3200	2800	4200	**≤14**	2,0	23,6	10/4/1,5	15	150	150	190
8,444	2322/275	**K302_0084 ME10**	3200	2800	4200	**>14≤19**	2,2	23,6	10/4/1,5	16	170	200	250
8,444	2322/275	**K302_0084 ME20**	3200	2800	4200	**≤19**	3,4	24,6	10/4/1,5	16	260	280	350
8,444	2322/275	**K302_0084 ME20**	3200	2800	4200	**>19≤24**	4,2	24,6	10/4/1,5	16	260	390	610
8,444	2322/275	**K302_0084 ME20**	3200	2800	4200	**>24≤32**	5,6	24,6	10/4/1,5	16	260	390	610
8,444	2322/275	**K302_0084 ME30**	3200	2800	4000	**≤24**	9,1	26,5	10/4/1,5	16	260	390	610
8,444	2322/275	**K302_0084 ME30**	3200	2800	4000	**>24≤32**	9,2	26,5	10/4/1,5	16	260	390	610
8,444	2322/275	**K302_0084 ME30**	3200	2800	4000	**>32≤38**	11	26,5	10/4/1,5	16	260	390	610
9,267	1075/116	**K302_0093 ME20**	3200	2800	4200	**≤19**	3,7	24,6	10/4/1,5	16	270	310	390
9,267	1075/116	**K302_0093 ME20**	3200	2800	4200	**>19≤24**	4,5	24,6	10/4/1,5	16	270	390	670
9,267	1075/116	**K302_0093 ME20**	3200	2800	4200	**>24≤32**	5,9	24,6	10/4/1,5	16	270	390	670
9,267	1075/116	**K302_0093 ME30**	3200	2800	4000	**≤24**	9,4	26,5	10/4/1,5	16	270	390	670
9,267	1075/116	**K302_0093 ME30**	3200	2800	4000	**>24≤32**	9,5	26,5	10/4/1,5	16	270	390	670
9,267	1075/116	**K302_0093 ME30**	3200	2800	4000	**>32≤38**	11	26,5	10/4/1,5	16	270	390	670
10,14	3010/297	**K302_0100 ME10**	3500	3100	5000	**≤14**	1,6	23,6	10/4/1,5	16	180	180	230
10,14	3010/297	**K302_0100 ME10**	3500	3100	5000	**>14≤19**	1,8	23,6	10/4/1,5	16	180	240	290
10,14	3010/297	**K302_0100 ME20**	3500	3100	5000	**≤19**	3,0	24,6	10/4/1,5	16	280	340	420
10,14	3010/297	**K302_0100 ME20**	3500	3100	5000	**>19≤24**	3,8	24,6	10/4/1,5	16	280	390	700
10,14	3010/297	**K302_0100 ME20**	3500	3100	5000	**>24≤32**	5,2	24,6	10/4/1,5	16	280	390	700
10,14	3010/297	**K302_0100 ME30**	3500	3100	4000	**≤24**	8,7	26,5	10/4/1,5	16	280	390	700
10,14	3010/297	**K302_0100 ME30**	3500	3100	4000	**>24≤32**	8,8	26,5	10/4/1,5	16	280	390	700
10,14	3010/297	**K302_0100 ME30**	3500	3100	4000	**>32≤38**	11	26,5	10/4/1,5	16	280	390	700
11,61	1161/100	**K302_0115 ME10**	3200	2800	4200	**≤14**	1,8	23,6	10/4/1,5	16	210	210	260
11,61	1161/100	**K302_0115 ME10**	3200	2800	4200	**>14≤19**	2,0	23,6	10/4/1,5	16	230	270	340
11,61	1161/100	**K302_0115 ME20**	3200	2800	4200	**≤19**	3,2	24,6	10/4/1,5	16	290	390	490
11,61	1161/100	**K302_0115 ME20**	3200	2800	4200	**>19≤24**	3,9	24,6	10/4/1,5	16	290	390	700
11,61	1161/100	**K302_0115 ME20**	3200	2800	4200	**>24≤32**	5,4	24,6	10/4/1,5	16	290	390	700
11,61	1161/100	**K302_0115 ME30**	3200	2800	4000	**≤24**	8,9	26,5	10/4/1,5	16	290	390	700
11,61	1161/100	**K302_0115 ME30**	3200	2800	4000	**>24≤32**	9,0	26,5	10/4/1,5	16	290	390	700
11,61	1161/100	**K302_0115 ME30**	3200	2800	4000	**>32≤38**	11	26,5	10/4/1,5	16	290	390	700
12,58	3182/253	**K302_0125 ME10**	3500	3100	5000	**≤14**	1,2	23,6	10/4/1,5	16	190	230	280
12,58	3182/253	**K302_0125 ME10**	3500	3100	5000	**>14≤19**	1,5	23,6	10/4/1,5	16	190	290	370
12,58	3182/253	**K302_0125 ME20**	3500	3100	5000	**≤19**	2,7	24,6	10/4/1,5	16	300	390	530
12,58	3182/253	**K302_0125 ME20**	3500	3100	5000	**>19≤24**	3,4	24,6	10/4/1,5	16	300	390	700
12,58	3182/253	**K302_0125 ME20**	3500	3100	5000	**>24≤32**	4,9	24,6	10/4/1,5	16	300	390	700
12,58	3182/253	**K302_0125 ME30**	3500	3100	4000	**≤24**	8,3	26,5	10/4/1,5	16	300	390	700
12,58	3182/253	**K302_0125 ME30**	3500	3100	4000	**>24≤32**	8,5	26,5	10/4/1,5	16	300	390	700
12,58	3182/253	**K302_0125 ME30**	3500	3100	4000	**>32≤38**	10	26,5	10/4/1,5	16	300	390	700
13,94	1505/108	**K302_0140 ME10**	3500	3100	5000	**≤14**	1,4	23,6	10/4/1,5	16	240	250	310
13,94	1505/108	**K302_0140 ME10**	3500	3100	5000	**>14≤19**	1,7	23,6	10/4/1,5	16	240	320	410
13,94	1505/108	**K302_0140 ME20**	3500	3100	5000	**≤19**	2,9	24,6	10/4/1,5	16	310	390	580
13,94	1505/108	**K302_0140 ME20**	3500	3100	5000	**>19≤24**	3,6	24,6	10/4/1,5	16	310	390	700
13,94	1505/108	**K302_0140 ME20**	3500	3100	5000	**>24≤32**	5,1	24,6	10/4/1,5	16	310	390	700
13,94	1505/108	**K302_0140 ME30**	3500	3100	4000	**≤24**	8,5	26,5	10/4/1,5	16	310	390	700
13,94	1505/108	**K302_0140 ME30**	3500	3100	4000	**>24≤32**	8,6	26,5	10/4/1,5	16	310	390	700
13,94	1505/108	**K302_0140 ME30**	3500	3100	4000	**>32≤38**	10	26,5	10/4/1,5	16	310	390	700
16,94	559/33	**K302_0170 ME10**	3800	3500	5000	**≤14**	0,92	23,6	10/4/1,5	16	200	310	380
16,94	559/33	**K302_0170 ME10**	3800	3500	5000	**>14≤19**	1,2	23,6	10/4/1,5	16	200	380	470
16,94	559/33	**K302_0170 ME20**	3500	3500	5000	**≤19**	2,4	24,6	10/4/1,5	16	330	390	700
16,94	559/33	**K302_0170 ME20**	3500	3500	5000	**>19≤24**	3,1	24,6	10/4/1,5	16	330	390	700
16,94	559/33	**K302_0170 ME20**	3500	3500	5000	**>24≤32**	4,6	24,6	10/4/1,5	16	330	390	700
16,94	559/33	**K302_0170 ME30**	3500	3500	4000	**≤24**	8,0	26,5	10/4/1,5	16	330	390	700
16,94	559/33	**K302_0170 ME30**	3500	3500	4000	**>24≤32**	8,2	26,5	10/4/1,5	16	330	390	700
16,94	559/33	**K302_0170 ME30**	3500	3500	4000	**>32≤38**	9,9	26,5	10/4/1,5	16	330	390	700
17,29	1591/92	**K302_0175 ME10**	3500	3100	5000	**≤14**	1,1	23,6	10/4/1,5	16	260	310	390
17,29	1591/92	**K302_0175 ME10**	3500	3100	5000	**>14≤19**	1,4	23,6	10/4/1,5	16	260	390	500
17,29	1591/92	**K302_0175 ME20**	3500	3100	5000	**≤19**	2,6	24,6	10/4/1,5	16	330	390	700
17,29	1591/92	**K302_0175 ME20**	3500	3100	5000	**>19≤24**	3,3	24,6	10/4/1,5	16	330	390	700

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K302 (M2BMAX=390 Nm)													
17,29	1591/92	**K302_0175 ME20**	3500	3100	5000	**>24≤32**	4,8	24,6	10/4/1,5	16	330	390	700
17,29	1591/92	**K302_0175 ME30**	3500	3100	4000	**≤24**	8,2	26,5	10/4/1,5	16	330	390	700
17,29	1591/92	**K302_0175 ME30**	3500	3100	4000	**>24≤32**	8,4	26,5	10/4/1,5	16	330	390	700
17,29	1591/92	**K302_0175 ME30**	3500	3100	4000	**>32≤38**	10	26,5	10/4/1,5	16	330	390	700
20,28	3569/176	**K302_0200 ME10**	3800	3500	5000	**≤14**	0,78	23,6	10/4/1,5	16	210	370	460
20,28	3569/176	**K302_0200 ME10**	3800	3500	5000	**>14≤19**	1,0	23,6	10/4/1,5	16	210	390	510
20,28	3569/176	**K302_0200 ME20**	3500	3500	5000	**≤19**	2,2	24,6	10/4/1,5	16	350	390	700
20,28	3569/176	**K302_0200 ME20**	3500	3500	5000	**>19≤24**	3,0	24,6	10/4/1,5	16	350	390	700
20,28	3569/176	**K302_0200 ME20**	3500	3500	5000	**>24≤32**	4,4	24,6	10/4/1,5	16	350	390	700
20,28	3569/176	**K302_0200 ME30**	3500	3500	4000	**≤24**	7,9	26,5	10/4/1,5	16	350	390	700
20,28	3569/176	**K302_0200 ME30**	3500	3500	4000	**>24≤32**	8,0	26,5	10/4/1,5	16	350	390	700
20,28	3569/176	**K302_0200 ME30**	3500	3500	4000	**>32≤38**	9,8	26,5	10/4/1,5	16	350	390	700
23,29	559/24	**K302_0230 ME10**	3800	3500	5000	**≤14**	0,86	23,6	10/4/1,5	16	270	390	530
23,29	559/24	**K302_0230 ME10**	3800	3500	5000	**>14≤19**	1,1	23,6	10/4/1,5	16	270	390	640
23,29	559/24	**K302_0230 ME20**	3500	3500	5000	**≤19**	2,3	24,6	10/4/1,5	16	350	390	700
23,29	559/24	**K302_0230 ME20**	3500	3500	5000	**>19≤24**	3,0	24,6	10/4/1,5	16	350	390	700
23,29	559/24	**K302_0230 ME20**	3500	3500	5000	**>24≤32**	4,5	24,6	10/4/1,5	16	350	390	700
23,29	559/24	**K302_0230 ME30**	3500	3500	4000	**≤24**	8,0	26,5	10/4/1,5	16	350	390	700
23,29	559/24	**K302_0230 ME30**	3500	3500	4000	**>24≤32**	8,1	26,5	10/4/1,5	16	350	390	700
23,29	559/24	**K302_0230 ME30**	3500	3500	4000	**>32≤38**	9,8	26,5	10/4/1,5	16	350	390	700
25,26	3612/143	**K302_0250 ME10**	3800	3500	5000	**≤14**	0,66	23,6	10/4/1,5	16	210	390	570
25,26	3612/143	**K302_0250 ME10**	3800	3500	5000	**>14≤19**	0,91	23,6	10/4/1,5	16	210	390	600
25,26	3612/143	**K302_0250 ME20**	3500	3500	5000	**≤19**	2,1	24,6	10/4/1,5	16	350	390	600
25,26	3612/143	**K302_0250 ME20**	3500	3500	5000	**>19≤24**	2,8	24,6	10/4/1,5	16	350	390	600
27,88	3569/128	**K302_0280 ME10**	3800	3500	5000	**≤14**	0,74	23,6	10/4/1,5	16	290	390	630
27,88	3569/128	**K302_0280 ME10**	3800	3500	5000	**>14≤19**	0,99	23,6	10/4/1,5	16	290	390	700
27,88	3569/128	**K302_0280 ME20**	3500	3500	5000	**≤19**	2,2	24,6	10/4/1,5	16	350	390	700
27,88	3569/128	**K302_0280 ME20**	3500	3500	5000	**>19≤24**	2,9	24,6	10/4/1,5	16	350	390	700
27,88	3569/128	**K302_0280 ME20**	3500	3500	5000	**>24≤32**	4,4	24,6	10/4/1,5	16	350	390	700
27,88	3569/128	**K302_0280 ME30**	3500	3500	4000	**≤24**	7,9	26,5	10/4/1,5	16	350	390	700
27,88	3569/128	**K302_0280 ME30**	3500	3500	4000	**>24≤32**	8,0	26,5	10/4/1,5	16	350	390	700
27,88	3569/128	**K302_0280 ME30**	3500	3500	4000	**>32≤38**	9,7	26,5	10/4/1,5	16	350	390	700
33,62	1849/55	**K302_0340 ME10**	3800	3500	5000	**≤14**	0,55	23,6	10/4/1,5	16	220	300	500
33,62	1849/55	**K302_0340 ME10**	3800	3500	5000	**>14≤19**	0,80	23,6	10/4/1,5	16	220	300	500
33,62	1849/55	**K302_0340 ME20**	3500	3500	5000	**≤19**	2,0	24,6	10/4/1,5	16	250	300	500
33,62	1849/55	**K302_0340 ME20**	3500	3500	5000	**>19≤24**	2,7	24,6	10/4/1,5	16	250	300	500
34,73	903/26	**K302_0350 ME10**	3800	3500	5000	**≤14**	0,64	23,6	10/4/1,5	16	290	390	700
34,73	903/26	**K302_0350 ME10**	3800	3500	5000	**>14≤19**	0,89	23,6	10/4/1,5	16	290	390	700
34,73	903/26	**K302_0350 ME20**	3500	3500	5000	**≤19**	2,1	24,6	10/4/1,5	16	350	390	700
34,73	903/26	**K302_0350 ME20**	3500	3500	5000	**>19≤24**	2,8	24,6	10/4/1,5	16	350	390	700
40,51	4902/121	**K302_0410 ME10**	3800	3500	5000	**≤14**	0,50	23,6	10/4/1,5	16	190	230	390
40,51	4902/121	**K302_0410 ME10**	3800	3500	5000	**>14≤19**	0,76	23,6	10/4/1,5	16	190	230	390
40,51	4902/121	**K302_0410 ME20**	3500	3500	5000	**≤19**	1,9	24,6	10/4/1,5	16	190	230	390
40,51	4902/121	**K302_0410 ME20**	3500	3500	5000	**>19≤24**	2,7	24,6	10/4/1,5	16	190	230	390
46,23	1849/40	**K302_0460 ME10**	3800	3500	5000	**≤14**	0,54	23,6	10/4/1,5	16	300	390	690
46,23	1849/40	**K302_0460 ME10**	3800	3500	5000	**>14≤19**	0,79	23,6	10/4/1,5	16	300	390	690
46,23	1849/40	**K302_0460 ME20**	3500	3500	5000	**≤19**	2,0	24,6	10/4/1,5	16	340	390	690
46,23	1849/40	**K302_0460 ME20**	3500	3500	5000	**>19≤24**	2,7	24,6	10/4/1,5	16	340	390	690
50,49	6665/132	**K302_0500 ME10**	3800	3500	5000	**≤14**	0,43	23,6	10/4/1,5	16	150	180	220
50,49	6665/132	**K302_0500 ME10**	3800	3500	5000	**>14≤19**	0,69	23,6	10/4/1,5	16	150	180	220
55,71	2451/44	**K302_0560 ME10**	3800	3500	5000	**≤14**	0,49	23,6	10/4/1,5	16	260	320	530
55,71	2451/44	**K302_0560 ME10**	3800	3500	5000	**>14≤19**	0,75	23,6	10/4/1,5	16	260	320	530
55,71	2451/44	**K302_0560 ME20**	3500	3500	5000	**≤19**	1,9	24,6	10/4/1,5	16	260	320	530
55,71	2451/44	**K302_0560 ME20**	3500	3500	5000	**>19≤24**	2,6	24,6	10/4/1,5	16	260	320	530
69,43	6665/96	**K302_0690 ME10**	3800	3500	5000	**≤14**	0,43	23,6	10/4/1,5	16	210	250	310
69,43	6665/96	**K302_0690 ME10**	3800	3500	5000	**>14≤19**	0,68	23,6	10/4/1,5	16	210	250	310

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K303 (M2BMAX=380 Nm)													
32,65	44892/1375	**K303_0330 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	580
32,65	44892/1375	**K303_0330 ME20**	3500	3500	5000	**>19≤24**	2,8	29,5	10/5/2,5	16	350	380	580
35,83	215/6	**K303_0360 ME20**	3500	3500	5000	**≤19**	2,1	29,5	10/5/2,5	16	350	380	630
35,83	215/6	**K303_0360 ME20**	3500	3500	5000	**>19≤24**	2,8	29,5	10/5/2,5	16	350	380	630
39,19	34916/891	**K303_0390 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
39,19	34916/891	**K303_0390 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
44,89	11223/250	**K303_0450 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
44,89	11223/250	**K303_0450 ME20**	3500	3500	5000	**>19≤24**	2,8	29,5	10/5/2,5	16	350	380	690
48,63	184556/3795	**K303_0490 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
48,63	184556/3795	**K303_0490 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
49,26	74777/1518	**K303_0490 ME10**	3800	3500	5000	**≤14**	0,45	28,5	10/5/2,5	16	250	250	320
49,26	74777/1518	**K303_0490 ME10**	3800	3500	5000	**>14≤19**	0,70	28,5	10/5/2,5	16	250	250	320
53,88	8729/162	**K303_0540 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
53,88	8729/162	**K303_0540 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
54,58	70735/1296	**K303_0550 ME10**	3800	3500	5000	**≤14**	0,46	28,5	10/5/2,5	16	280	280	350
54,58	70735/1296	**K303_0550 ME10**	3800	3500	5000	**>14≤19**	0,71	28,5	10/5/2,5	16	280	280	350
65,50	32422/495	**K303_0650 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
65,50	32422/495	**K303_0650 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
66,35	26273/396	**K303_0660 ME10**	3800	3500	5000	**≤14**	0,43	28,5	10/5/2,5	16	340	340	430
66,35	26273/396	**K303_0660 ME10**	3800	3500	5000	**>14≤19**	0,68	28,5	10/5/2,5	16	340	340	430
66,87	46139/690	**K303_0670 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
66,87	46139/690	**K303_0670 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
67,73	74777/1104	**K303_0680 ME10**	3800	3500	5000	**≤14**	0,45	28,5	10/5/2,5	16	350	350	430
67,73	74777/1104	**K303_0680 ME10**	3800	3500	5000	**>14≤19**	0,70	28,5	10/5/2,5	16	350	350	430
78,41	103501/1320	**K303_0780 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
78,41	103501/1320	**K303_0780 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
79,42	167743/2112	**K303_0790 ME10**	3800	3500	5000	**≤14**	0,42	28,5	10/5/2,5	16	350	380	510
79,42	167743/2112	**K303_0790 ME10**	3800	3500	5000	**>14≤19**	0,67	28,5	10/5/2,5	16	350	380	510
90,06	16211/180	**K303_0900 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
90,06	16211/180	**K303_0900 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
91,23	26273/288	**K303_0910 ME10**	3800	3500	5000	**≤14**	0,43	28,5	10/5/2,5	16	350	380	590
91,23	26273/288	**K303_0910 ME10**	3800	3500	5000	**>14≤19**	0,68	28,5	10/5/2,5	16	350	380	590
107,8	103501/960	**K303_1080 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
107,8	103501/960	**K303_1080 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
109,2	167743/1536	**K303_1090 ME10**	3800	3500	5000	**≤14**	0,42	28,5	10/5/2,5	16	350	380	690
109,2	167743/1536	**K303_1090 ME10**	3800	3500	5000	**>14≤19**	0,67	28,5	10/5/2,5	16	350	380	690
134,3	8729/65	**K303_1340 ME20**	3500	3500	5000	**≤19**	2,0	29,5	10/5/2,5	16	350	380	690
134,3	8729/65	**K303_1340 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	350	380	690
136,0	14147/104	**K303_1360 ME10**	3800	3500	5000	**≤14**	0,41	28,5	10/5/2,5	16	350	380	690
136,0	14147/104	**K303_1360 ME10**	3800	3500	5000	**>14≤19**	0,66	28,5	10/5/2,5	16	350	380	690
178,7	53621/300	**K303_1790 ME20**	3500	3500	5000	**≤19**	1,9	29,5	10/5/2,5	16	340	380	690
178,7	53621/300	**K303_1790 ME20**	3500	3500	5000	**>19≤24**	2,7	29,5	10/5/2,5	16	340	380	690
181,0	86903/480	**K303_1810 ME10**	3800	3500	5000	**≤14**	0,41	28,5	10/5/2,5	16	340	380	690
181,0	86903/480	**K303_1810 ME10**	3800	3500	5000	**>14≤19**	0,66	28,5	10/5/2,5	16	340	380	690
218,2	38399/176	**K303_2180 ME10**	3800	3500	5000	**≤14**	0,40	28,5	10/5/2,5	16	260	320	530
218,2	38399/176	**K303_2180 ME10**	3800	3500	5000	**>14≤19**	0,65	28,5	10/5/2,5	16	260	320	530
271,9	313255/1152	**K303_2720 ME10**	3800	3500	5000	**≤14**	0,40	28,5	10/5/2,5	16	210	250	310
271,9	313255/1152	**K303_2720 ME10**	3800	3500	5000	**>14≤19**	0,65	28,5	10/5/2,5	16	210	250	310

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K402 (M2BMAX=600 Nm)													
4,000	4/1	**K402_0040 ME30**	2600	2200	3500	**≤24**	17	40,0	10/4/1,5	27	310	310	380
4,000	4/1	**K402_0040 ME30**	2600	2200	3500	**>24≤32**	17	40,0	10/4/1,5	29	310	460	780
4,000	4/1	**K402_0040 ME30**	2600	2200	3500	**>32≤38**	19	40,0	10/4/1,5	30	310	460	780
4,000	4/1	**K402_0040 ME40**	2600	2200	3500	**≤38**	27	44,9	10/4/1,5	29	310	460	780
4,000	4/1	**K402_0040 ME40**	2600	2200	3500	**>38≤48**	41	44,9	10/4/1,5	30	310	460	780
4,364	48/11	**K402_0044 ME30**	2600	2200	3500	**≤24**	16	40,0	10/4/1,5	27	310	340	420
4,364	48/11	**K402_0044 ME30**	2600	2200	3500	**>24≤32**	16	40,0	10/4/1,5	30	310	470	850
4,364	48/11	**K402_0044 ME30**	2600	2200	3500	**>32≤38**	18	40,0	10/4/1,5	30	310	470	850
4,364	48/11	**K402_0044 ME40**	2600	2200	3500	**≤38**	26	44,9	10/4/1,5	29	310	470	850
4,364	48/11	**K402_0044 ME40**	2600	2200	3500	**>38≤48**	40	44,9	10/4/1,5	30	310	470	850
5,422	1849/341	**K402_0054 ME30**	2600	2200	3500	**≤24**	14	40,0	10/4/1,5	29	340	420	520
5,422	1849/341	**K402_0054 ME30**	2600	2200	3500	**>24≤32**	14	40,0	10/4/1,5	30	340	510	1050
5,422	1849/341	**K402_0054 ME30**	2600	2200	3500	**>32≤38**	16	40,0	10/4/1,5	30	340	510	1050
5,422	1849/341	**K402_0054 ME40**	2600	2200	3500	**≤38**	24	44,9	10/4/1,5	30	340	510	1050
5,422	1849/341	**K402_0054 ME40**	2600	2200	3500	**>38≤48**	37	44,9	10/4/1,5	30	340	510	1050
6,000	6/1	**K402_0060 ME30**	2600	2200	3500	**≤24**	14	40,0	10/4/1,5	29	350	460	580
6,000	6/1	**K402_0060 ME30**	2600	2200	3500	**>24≤32**	15	40,0	10/4/1,5	30	350	520	1100
6,000	6/1	**K402_0060 ME30**	2600	2200	3500	**>32≤38**	16	40,0	10/4/1,5	30	350	520	1100
6,000	6/1	**K402_0060 ME40**	2600	2200	3500	**≤38**	25	44,9	10/4/1,5	30	350	520	1100
6,000	6/1	**K402_0060 ME40**	2600	2200	3500	**>38≤48**	38	44,9	10/4/1,5	30	350	520	1100
6,719	215/32	**K402_0067 ME20**	3000	2600	4000	**≤19**	6,1	38,1	10/4/1,5	27	220	220	280
6,719	215/32	**K402_0067 ME20**	3000	2600	4000	**>19≤24**	6,8	38,1	10/4/1,5	29	360	390	490
6,719	215/32	**K402_0067 ME20**	3000	2600	4000	**>24≤32**	8,3	38,1	10/4/1,5	30	360	390	490
6,719	215/32	**K402_0067 ME30**	3000	2600	4000	**≤24**	12	40,0	10/4/1,5	29	360	520	650
6,719	215/32	**K402_0067 ME30**	3000	2600	4000	**>24≤32**	12	40,0	10/4/1,5	30	360	550	1100
6,719	215/32	**K402_0067 ME30**	3000	2600	4000	**>32≤38**	14	40,0	10/4/1,5	31	360	550	1100
6,719	215/32	**K402_0067 ME40**	3000	2600	3500	**≤38**	22	44,9	10/4/1,5	30	360	550	1100
6,719	215/32	**K402_0067 ME40**	3000	2600	3500	**>38≤48**	36	44,9	10/4/1,5	30	360	550	1100
7,456	1849/248	**K402_0075 ME30**	2600	2200	3500	**≤24**	13	40,0	10/4/1,5	30	380	560	720
7,456	1849/248	**K402_0075 ME30**	2600	2200	3500	**>24≤32**	13	40,0	10/4/1,5	30	380	560	1100
7,456	1849/248	**K402_0075 ME30**	2600	2200	3500	**>32≤38**	15	40,0	10/4/1,5	31	380	560	1100
7,456	1849/248	**K402_0075 ME40**	2600	2200	3500	**≤38**	23	44,9	10/4/1,5	30	380	560	1100
7,456	1849/248	**K402_0075 ME40**	2600	2200	3500	**>38≤48**	36	44,9	10/4/1,5	31	380	560	1100
8,377	645/77	**K402_0084 ME20**	3000	2600	4000	**≤19**	4,8	38,1	10/4/1,5	28	280	280	350
8,377	645/77	**K402_0084 ME20**	3000	2600	4000	**>19≤24**	5,6	38,1	10/4/1,5	30	390	490	610
8,377	645/77	**K402_0084 ME20**	3000	2600	4000	**>24≤32**	7,0	38,1	10/4/1,5	30	390	490	610
8,377	645/77	**K402_0084 ME30**	3000	2600	4000	**≤24**	11	40,0	10/4/1,5	30	390	590	800
8,377	645/77	**K402_0084 ME30**	3000	2600	4000	**>24≤32**	11	40,0	10/4/1,5	31	390	590	1100
8,377	645/77	**K402_0084 ME30**	3000	2600	4000	**>32≤38**	13	40,0	10/4/1,5	31	390	590	1100
8,377	645/77	**K402_0084 ME40**	3000	2600	3500	**≤38**	21	44,9	10/4/1,5	30	390	590	1100
8,377	645/77	**K402_0084 ME40**	3000	2600	3500	**>38≤48**	34	44,9	10/4/1,5	31	390	590	1100
9,238	2365/256	**K402_0092 ME20**	3000	2600	4000	**≤19**	5,4	38,1	10/4/1,5	29	310	310	390
9,238	2365/256	**K402_0092 ME20**	3000	2600	4000	**>19≤24**	6,1	38,1	10/4/1,5	30	400	540	670
9,238	2365/256	**K402_0092 ME20**	3000	2600	4000	**>24≤32**	7,6	38,1	10/4/1,5	30	400	540	670
9,238	2365/256	**K402_0092 ME30**	3000	2600	4000	**≤24**	11	40,0	10/4/1,5	30	400	600	890
9,238	2365/256	**K402_0092 ME30**	3000	2600	4000	**>24≤32**	11	40,0	10/4/1,5	31	400	600	1100
9,238	2365/256	**K402_0092 ME30**	3000	2600	4000	**>32≤38**	13	40,0	10/4/1,5	31	400	600	1100
9,238	2365/256	**K402_0092 ME40**	3000	2600	3500	**≤38**	21	44,9	10/4/1,5	31	400	600	1100
9,238	2365/256	**K402_0092 ME40**	3000	2600	3500	**>38≤48**	35	44,9	10/4/1,5	31	400	600	1100
10,10	1333/132	**K402_0100 ME20**	3400	3000	4500	**≤19**	4,1	38,1	10/4/1,5	29	340	340	420
10,10	1333/132	**K402_0100 ME20**	3400	3000	4500	**>19≤24**	4,8	38,1	10/4/1,5	30	420	590	730
10,10	1333/132	**K402_0100 ME20**	3400	3000	4500	**>24≤32**	6,3	38,1	10/4/1,5	30	420	590	730
10,10	1333/132	**K402_0100 ME30**	3400	3000	4000	**≤24**	9,9	40,0	10/4/1,5	30	420	600	970
10,10	1333/132	**K402_0100 ME30**	3400	3000	4000	**>24≤32**	10	40,0	10/4/1,5	31	420	600	1100
10,10	1333/132	**K402_0100 ME30**	3400	3000	4000	**>32≤38**	12	40,0	10/4/1,5	31	420	600	1100
10,10	1333/132	**K402_0100 ME40**	3000	3000	3500	**≤38**	20	44,9	10/4/1,5	31	420	600	1100
10,10	1333/132	**K402_0100 ME40**	3000	3000	3500	**>38≤48**	34	44,9	10/4/1,5	31	420	600	1100
11,52	645/56	**K402_0115 ME20**	3000	2600	4000	**≤19**	4,4	38,1	10/4/1,5	30	390	390	480
11,52	645/56	**K402_0115 ME20**	3000	2600	4000	**>19≤24**	5,1	38,1	10/4/1,5	30	430	600	840
11,52	645/56	**K402_0115 ME20**	3000	2600	4000	**>24≤32**	6,6	38,1	10/4/1,5	31	430	600	840
11,52	645/56	**K402_0115 ME30**	3000	2600	4000	**≤24**	10	40,0	10/4/1,5	30	430	600	1100
11,52	645/56	**K402_0115 ME30**	3000	2600	4000	**>24≤32**	10	40,0	10/4/1,5	31	430	600	1100

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K402 (M2BMAX=600 Nm)													
11,52	645/56	**K402_0115 ME30**	3000	2600	4000	**>32≤38**	12	40,0	10/4/1,5	31	430	600	1100
11,52	645/56	**K402_0115 ME40**	3000	2600	3500	**≤38**	20	44,9	10/4/1,5	31	430	600	1100
11,52	645/56	**K402_0115 ME40**	3000	2600	3500	**>38≤48**	34	44,9	10/4/1,5	31	430	600	1100
12,66	2924/231	**K402_0125 ME20**	3400	3000	4500	**≤19**	3,4	38,1	10/4/1,5	30	420	420	530
12,66	2924/231	**K402_0125 ME20**	3400	3000	4500	**>19≤24**	4,1	38,1	10/4/1,5	30	450	600	870
12,66	2924/231	**K402_0125 ME20**	3400	3000	4500	**>24≤32**	5,6	38,1	10/4/1,5	31	450	600	870
12,66	2924/231	**K402_0125 ME30**	3400	3000	4000	**≤24**	9,2	40,0	10/4/1,5	30	450	600	1100
12,66	2924/231	**K402_0125 ME30**	3400	3000	4000	**>24≤32**	9,3	40,0	10/4/1,5	31	450	600	1100
12,66	2924/231	**K402_0125 ME30**	3400	3000	4000	**>32≤38**	11	40,0	10/4/1,5	31	450	600	1100
12,66	2924/231	**K402_0125 ME40**	3000	3000	3500	**≤38**	19	44,9	10/4/1,5	31	450	600	1100
12,66	2924/231	**K402_0125 ME40**	3000	3000	3500	**>38≤48**	33	44,9	10/4/1,5	31	450	600	1100
13,89	1333/96	**K402_0140 ME20**	3400	3000	4500	**≤19**	3,8	38,1	10/4/1,5	30	460	460	580
13,89	1333/96	**K402_0140 ME20**	3400	3000	4500	**>19≤24**	4,5	38,1	10/4/1,5	31	460	600	1010
13,89	1333/96	**K402_0140 ME20**	3400	3000	4500	**>24≤32**	6,0	38,1	10/4/1,5	31	460	600	1010
13,89	1333/96	**K402_0140 ME30**	3400	3000	4000	**≤24**	9,6	40,0	10/4/1,5	30	460	600	1100
13,89	1333/96	**K402_0140 ME30**	3400	3000	4000	**>24≤32**	9,7	40,0	10/4/1,5	31	460	600	1100
13,89	1333/96	**K402_0140 ME30**	3400	3000	4000	**>32≤38**	11	40,0	10/4/1,5	31	460	600	1100
13,89	1333/96	**K402_0140 ME40**	3000	3000	3500	**≤38**	20	44,9	10/4/1,5	31	460	600	1100
13,89	1333/96	**K402_0140 ME40**	3000	3000	3500	**>38≤48**	33	44,9	10/4/1,5	31	460	600	1100
16,94	559/33	**K402_0170 ME20**	3500	3300	5000	**≤19**	2,8	38,1	10/4/1,5	30	490	570	710
16,94	559/33	**K402_0170 ME20**	3500	3300	5000	**>19≤24**	3,5	38,1	10/4/1,5	31	490	600	1010
16,94	559/33	**K402_0170 ME20**	3500	3300	5000	**>24≤32**	5,0	38,1	10/4/1,5	31	490	600	1010
16,94	559/33	**K402_0170 ME30**	3500	3300	4000	**≤24**	8,6	40,0	10/4/1,5	31	490	600	1100
16,94	559/33	**K402_0170 ME30**	3500	3300	4000	**>24≤32**	8,7	40,0	10/4/1,5	31	490	600	1100
16,94	559/33	**K402_0170 ME30**	3500	3300	4000	**>32≤38**	10	40,0	10/4/1,5	31	490	600	1100
16,94	559/33	**K402_0170 ME40**	3000	3000	3500	**≤38**	19	44,9	10/4/1,5	31	490	600	1100
16,94	559/33	**K402_0170 ME40**	3000	3000	3500	**>38≤48**	32	44,9	10/4/1,5	31	490	600	1100
17,41	731/42	**K402_0175 ME20**	3400	3000	4500	**≤19**	3,2	38,1	10/4/1,5	30	500	580	730
17,41	731/42	**K402_0175 ME20**	3400	3000	4500	**>19≤24**	4,0	38,1	10/4/1,5	31	500	600	1100
17,41	731/42	**K402_0175 ME20**	3400	3000	4500	**>24≤32**	5,4	38,1	10/4/1,5	31	500	600	1100
17,41	731/42	**K402_0175 ME30**	3400	3000	4000	**≤24**	9,0	40,0	10/4/1,5	31	500	600	1100
17,41	731/42	**K402_0175 ME30**	3400	3000	4000	**>24≤32**	9,2	40,0	10/4/1,5	31	500	600	1100
17,41	731/42	**K402_0175 ME30**	3400	3000	4000	**>32≤38**	11	40,0	10/4/1,5	31	500	600	1100
17,41	731/42	**K402_0175 ME40**	3000	3000	3500	**≤38**	19	44,9	10/4/1,5	31	500	600	1100
17,41	731/42	**K402_0175 ME40**	3000	3000	3500	**>38≤48**	33	44,9	10/4/1,5	31	500	600	1100
20,20	1333/66	**K402_0200 ME20**	3500	3300	5000	**≤19**	2,6	38,1	10/4/1,5	30	520	600	840
20,20	1333/66	**K402_0200 ME20**	3500	3300	5000	**>19≤24**	3,3	38,1	10/4/1,5	31	520	600	1100
20,20	1333/66	**K402_0200 ME20**	3500	3300	5000	**>24≤32**	4,8	38,1	10/4/1,5	31	520	600	1100
20,20	1333/66	**K402_0200 ME30**	3500	3300	4000	**≤24**	8,2	40,0	10/4/1,5	31	520	600	1100
20,20	1333/66	**K402_0200 ME30**	3500	3300	4000	**>24≤32**	8,3	40,0	10/4/1,5	31	520	600	1100
20,20	1333/66	**K402_0200 ME30**	3500	3300	4000	**>32≤38**	10	40,0	10/4/1,5	31	520	600	1100
23,29	559/24	**K402_0230 ME20**	3500	3300	5000	**≤19**	2,7	38,1	10/4/1,5	31	550	600	970
23,29	559/24	**K402_0230 ME20**	3500	3300	5000	**>19≤24**	3,4	38,1	10/4/1,5	31	550	600	1100
23,29	559/24	**K402_0230 ME20**	3500	3300	5000	**>24≤32**	4,9	38,1	10/4/1,5	31	550	600	1100
23,29	559/24	**K402_0230 ME30**	3500	3300	4000	**≤24**	8,5	40,0	10/4/1,5	31	550	600	1100
23,29	559/24	**K402_0230 ME30**	3500	3300	4000	**>24≤32**	8,6	40,0	10/4/1,5	31	550	600	1100
23,29	559/24	**K402_0230 ME30**	3500	3300	4000	**>32≤38**	10	40,0	10/4/1,5	31	550	600	1100
23,29	559/24	**K402_0230 ME40**	3000	3000	3500	**≤38**	19	44,9	10/4/1,5	31	550	600	1100
23,29	559/24	**K402_0230 ME40**	3000	3000	3500	**>38≤48**	32	44,9	10/4/1,5	31	550	600	1100
25,28	4171/165	**K402_0250 ME20**	3500	3300	5000	**≤19**	2,3	38,1	10/4/1,5	31	500	600	1000
25,28	4171/165	**K402_0250 ME20**	3500	3300	5000	**>19≤24**	3,1	38,1	10/4/1,5	31	500	600	1000
25,28	4171/165	**K402_0250 ME20**	3500	3300	5000	**>24≤32**	4,5	38,1	10/4/1,5	31	500	600	1000
25,28	4171/165	**K402_0250 ME30**	3500	3300	4000	**≤24**	8,0	40,0	10/4/1,5	31	500	600	1000
25,28	4171/165	**K402_0250 ME30**	3500	3300	4000	**>24≤32**	8,1	40,0	10/4/1,5	31	500	600	1000
25,28	4171/165	**K402_0250 ME30**	3500	3300	4000	**>32≤38**	9,9	40,0	10/4/1,5	31	500	600	1000
27,77	1333/48	**K402_0280 ME20**	3500	3300	5000	**≤19**	2,5	38,1	10/4/1,5	31	550	600	1100
27,77	1333/48	**K402_0280 ME20**	3500	3300	5000	**>19≤24**	3,2	38,1	10/4/1,5	31	550	600	1100
27,77	1333/48	**K402_0280 ME20**	3500	3300	5000	**>24≤32**	4,7	38,1	10/4/1,5	31	550	600	1100
27,77	1333/48	**K402_0280 ME30**	3500	3300	4000	**≤24**	8,1	40,0	10/4/1,5	31	550	600	1100
27,77	1333/48	**K402_0280 ME30**	3500	3300	4000	**>24≤32**	8,3	40,0	10/4/1,5	31	550	600	1100
27,77	1333/48	**K402_0280 ME30**	3500	3300	4000	**>32≤38**	10	40,0	10/4/1,5	31	550	600	1100
33,68	4816/143	**K402_0340 ME20**	3500	3300	5000	**≤19**	2,1	38,1	10/4/1,5	31	390	470	710

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K402 (M2BMAX=600 Nm)													
33,68	4816/143	**K402_0340 ME20**	3500	3300	5000	**>19≤24**	2,8	38,1	10/4/1,5	31	390	470	710
34,76	4171/120	**K402_0350 ME20**	3500	3300	5000	**≤19**	2,3	38,1	10/4/1,5	31	550	600	1100
34,76	4171/120	**K402_0350 ME20**	3500	3300	5000	**>19≤24**	3,0	38,1	10/4/1,5	31	550	600	1100
34,76	4171/120	**K402_0350 ME20**	3500	3300	5000	**>24≤32**	4,5	38,1	10/4/1,5	31	550	600	1100
34,76	4171/120	**K402_0350 ME30**	3500	3300	4000	**≤24**	7,9	40,0	10/4/1,5	31	550	600	1100
34,76	4171/120	**K402_0350 ME30**	3500	3300	4000	**>24≤32**	8,1	40,0	10/4/1,5	31	550	600	1100
34,76	4171/120	**K402_0350 ME30**	3500	3300	4000	**>32≤38**	9,8	40,0	10/4/1,5	31	550	600	1100
40,51	4902/121	**K402_0410 ME20**	3500	3300	5000	**≤19**	2,0	38,1	10/4/1,5	31	310	370	620
40,51	4902/121	**K402_0410 ME20**	3500	3300	5000	**>19≤24**	2,7	38,1	10/4/1,5	31	310	370	620
46,31	602/13	**K402_0460 ME20**	3500	3300	5000	**≤19**	2,1	38,1	10/4/1,5	31	530	600	980
46,31	602/13	**K402_0460 ME20**	3500	3300	5000	**>19≤24**	2,8	38,1	10/4/1,5	31	530	600	980
50,43	5547/110	**K402_0500 ME20**	3500	3300	5000	**≤19**	1,9	38,1	10/4/1,5	31	270	320	540
50,43	5547/110	**K402_0500 ME20**	3500	3300	5000	**>19≤24**	2,7	38,1	10/4/1,5	31	270	320	540
55,71	2451/44	**K402_0560 ME20**	3500	3300	5000	**≤19**	2,0	38,1	10/4/1,5	31	420	510	850
55,71	2451/44	**K402_0560 ME20**	3500	3300	5000	**>19≤24**	2,7	38,1	10/4/1,5	31	420	510	850
69,34	5547/80	**K402_0690 ME20**	3500	3300	5000	**≤19**	1,9	38,1	10/4/1,5	31	370	440	740
69,34	5547/80	**K402_0690 ME20**	3500	3300	5000	**>19≤24**	2,7	38,1	10/4/1,5	31	370	440	740
K403 (M2BMAX=590 Nm)													
32,39	2494/77	**K403_0320 ME20**	3500	3300	5000	**≤19**	2,1	42,3	10/5/2,5	31	460	460	570
32,39	2494/77	**K403_0320 ME20**	3500	3300	5000	**>19≤24**	2,9	42,3	10/5/2,5	31	460	460	570
35,72	13717/384	**K403_0360 ME20**	3500	3300	5000	**≤19**	2,2	42,3	10/5/2,5	31	510	510	630
35,72	13717/384	**K403_0360 ME20**	3500	3300	5000	**>19≤24**	2,9	42,3	10/5/2,5	31	510	510	630
39,05	38657/990	**K403_0390 ME20**	3500	3300	5000	**≤19**	2,1	42,3	10/5/2,5	31	550	550	690
39,05	38657/990	**K403_0390 ME20**	3500	3300	5000	**>19≤24**	2,8	42,3	10/5/2,5	31	550	550	690
44,54	1247/28	**K403_0450 ME20**	3500	3300	5000	**≤19**	2,1	42,3	10/5/2,5	31	550	590	790
44,54	1247/28	**K403_0450 ME20**	3500	3300	5000	**>19≤24**	2,8	42,3	10/5/2,5	31	550	590	790
48,94	169592/3465	**K403_0490 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	550	590	870
48,94	169592/3465	**K403_0490 ME20**	3500	3300	5000	**>19≤24**	2,8	42,3	10/5/2,5	31	550	590	870
53,69	38657/720	**K403_0540 ME20**	3500	3300	5000	**≤19**	2,1	42,3	10/5/2,5	31	550	590	950
53,69	38657/720	**K403_0540 ME20**	3500	3300	5000	**>19≤24**	2,8	42,3	10/5/2,5	31	550	590	950
65,50	32422/495	**K403_0650 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	550	590	1010
65,50	32422/495	**K403_0650 ME20**	3500	3300	5000	**>19≤24**	2,7	42,3	10/5/2,5	31	550	590	1010
66,35	26273/396	**K403_0660 ME10**	3600	3300	5000	**≤14**	0,46	41,3	10/5/2,5	31	340	340	430
66,35	26273/396	**K403_0660 ME10**	3600	3300	5000	**>14≤19**	0,71	41,3	10/5/2,5	31	340	340	430
67,30	21199/315	**K403_0670 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	550	590	1080
67,30	21199/315	**K403_0670 ME20**	3500	3300	5000	**>19≤24**	2,8	42,3	10/5/2,5	31	550	590	1080
78,10	38657/495	**K403_0780 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	550	590	1080
78,10	38657/495	**K403_0780 ME20**	3500	3300	5000	**>19≤24**	2,7	42,3	10/5/2,5	31	550	590	1080
79,11	62651/792	**K403_0790 ME10**	3600	3300	5000	**≤14**	0,44	41,3	10/5/2,5	31	400	410	510
79,11	62651/792	**K403_0790 ME10**	3600	3300	5000	**>14≤19**	0,69	41,3	10/5/2,5	31	400	410	510
90,06	16211/180	**K403_0900 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	550	590	1080
90,06	16211/180	**K403_0900 ME20**	3500	3300	5000	**>19≤24**	2,7	42,3	10/5/2,5	31	550	590	1080
91,23	26273/288	**K403_0910 ME10**	3600	3300	5000	**≤14**	0,45	41,3	10/5/2,5	31	470	470	590
91,23	26273/288	**K403_0910 ME10**	3600	3300	5000	**>14≤19**	0,70	41,3	10/5/2,5	31	470	470	590
107,4	38657/360	**K403_1070 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	550	590	1080
107,4	38657/360	**K403_1070 ME20**	3500	3300	5000	**>19≤24**	2,7	42,3	10/5/2,5	31	550	590	1080
108,8	62651/576	**K403_1090 ME10**	3600	3300	5000	**≤14**	0,44	41,3	10/5/2,5	31	550	560	700
108,8	62651/576	**K403_1090 ME10**	3600	3300	5000	**>14≤19**	0,69	41,3	10/5/2,5	31	550	560	700
134,4	120959/900	**K403_1340 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	550	590	1080
134,4	120959/900	**K403_1340 ME20**	3500	3300	5000	**>19≤24**	2,7	42,3	10/5/2,5	31	550	590	1080
136,1	196037/1440	**K403_1360 ME10**	3600	3300	5000	**≤14**	0,43	41,3	10/5/2,5	31	550	590	810
136,1	196037/1440	**K403_1360 ME10**	3600	3300	5000	**>14≤19**	0,68	41,3	10/5/2,5	31	550	590	810
179,1	34916/195	**K403_1790 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	530	590	980
179,1	34916/195	**K403_1790 ME20**	3500	3300	5000	**>19≤24**	2,7	42,3	10/5/2,5	31	530	590	980
181,4	14147/78	**K403_1810 ME10**	3600	3300	5000	**≤14**	0,41	41,3	10/5/2,5	31	530	590	980
181,4	14147/78	**K403_1810 ME10**	3600	3300	5000	**>14≤19**	0,67	41,3	10/5/2,5	31	530	590	980
215,4	23693/110	**K403_2150 ME20**	3500	3300	5000	**≤19**	2,0	42,3	10/5/2,5	31	420	510	850
215,4	23693/110	**K403_2150 ME20**	3500	3300	5000	**>19≤24**	2,7	42,3	10/5/2,5	31	420	510	850
218,2	38399/176	**K403_2180 ME10**	3600	3300	5000	**≤14**	0,41	41,3	10/5/2,5	31	420	510	850

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K403 (M2BMAX=590 Nm)													
218,2	38399/176	**K403_2180 ME10**	3600	3300	5000	**>14≤19**	0,66	41,3	10/5/2,5	31	420	510	850
271,6	86903/320	**K403_2720 ME10**	3600	3300	5000	**≤14**	0,41	41,3	10/5/2,5	31	370	440	740
271,6	86903/320	**K403_2720 ME10**	3600	3300	5000	**>14≤19**	0,66	41,3	10/5/2,5	31	370	440	740
K513 (M2BMAX=1000 Nm)													
7,347	551/75	**K513_0073 ME30**	1900	1800	3000	**≤24**	23	45,8	10/5/2	46	560	560	700
7,347	551/75	**K513_0073 ME30**	1900	1800	3000	**>24≤32**	24	45,8	10/5/2	48	690	1000	1400
7,347	551/75	**K513_0073 ME30**	1900	1800	3000	**>32≤38**	25	45,8	10/5/2	49	690	1000	1400
7,347	551/75	**K513_0073 ME40**	1900	1800	3000	**≤38**	34	50,7	10/5/2	48	690	1000	1400
7,347	551/75	**K513_0073 ME40**	1900	1800	3000	**>38≤48**	47	50,7	10/5/2	49	690	1000	1400
8,134	17081/2100	**K513_0081 ME30**	1900	1800	3000	**≤24**	22	45,8	10/5/2	47	620	620	770
8,134	17081/2100	**K513_0081 ME30**	1900	1800	3000	**>24≤32**	22	45,8	10/5/2	49	720	1000	1560
8,134	17081/2100	**K513_0081 ME30**	1900	1800	3000	**>32≤38**	24	45,8	10/5/2	49	720	1000	1560
8,134	17081/2100	**K513_0081 ME40**	1900	1800	3000	**≤38**	32	50,7	10/5/2	48	720	1000	1560
8,134	17081/2100	**K513_0081 ME40**	1900	1800	3000	**>38≤48**	46	50,7	10/5/2	49	720	1000	1560
9,168	1421/155	**K513_0092 ME30**	1900	1800	3000	**≤24**	19	45,8	10/5/2	47	690	690	870
9,168	1421/155	**K513_0092 ME30**	1900	1800	3000	**>24≤32**	19	45,8	10/5/2	49	750	1000	1750
9,168	1421/155	**K513_0092 ME30**	1900	1800	3000	**>32≤38**	21	45,8	10/5/2	49	750	1000	1750
9,168	1421/155	**K513_0092 ME40**	1900	1800	3000	**≤38**	29	50,7	10/5/2	49	750	1000	1750
9,168	1421/155	**K513_0092 ME40**	1900	1800	3000	**>38≤48**	43	50,7	10/5/2	49	750	1000	1750
10,15	203/20	**K513_0100 ME30**	1900	1800	3000	**≤24**	18	45,8	10/5/2	48	770	770	960
10,15	203/20	**K513_0100 ME30**	1900	1800	3000	**>24≤32**	18	45,8	10/5/2	49	770	1000	1800
10,15	203/20	**K513_0100 ME30**	1900	1800	3000	**>32≤38**	20	45,8	10/5/2	49	770	1000	1800
10,15	203/20	**K513_0100 ME40**	1900	1800	3000	**≤38**	28	50,7	10/5/2	49	770	1000	1800
10,15	203/20	**K513_0100 ME40**	1900	1800	3000	**>38≤48**	42	50,7	10/5/2	49	770	1000	1800
11,57	10759/930	**K513_0115 ME30**	2300	2200	3600	**≤24**	16	45,8	10/5/2	48	810	880	1090
11,57	10759/930	**K513_0115 ME30**	2300	2200	3600	**>24≤32**	16	45,8	10/5/2	49	810	1000	1800
11,57	10759/930	**K513_0115 ME30**	2300	2200	3600	**>32≤38**	17	45,8	10/5/2	49	810	1000	1800
11,57	10759/930	**K513_0115 ME40**	2300	2200	3500	**≤38**	26	50,7	10/5/2	49	810	1000	1800
11,57	10759/930	**K513_0115 ME40**	2300	2200	3500	**>38≤48**	39	50,7	10/5/2	49	810	1000	1800
12,81	1537/120	**K513_0130 ME30**	2300	2200	3600	**≤24**	15	45,8	10/5/2	48	840	970	1210
12,81	1537/120	**K513_0130 ME30**	2300	2200	3600	**>24≤32**	15	45,8	10/5/2	49	840	1000	1800
12,81	1537/120	**K513_0130 ME30**	2300	2200	3600	**>32≤38**	17	45,8	10/5/2	49	840	1000	1800
12,81	1537/120	**K513_0130 ME40**	2300	2200	3500	**≤38**	25	50,7	10/5/2	49	840	1000	1800
12,81	1537/120	**K513_0130 ME40**	2300	2200	3500	**>38≤48**	39	50,7	10/5/2	49	840	1000	1800
14,54	5887/405	**K513_0145 ME20**	2300	2200	3600	**≤19**	7,5	43,9	10/5/2	47	480	480	600
14,54	5887/405	**K513_0145 ME20**	2300	2200	3600	**>19≤24**	8,3	43,9	10/5/2	49	830	830	1040
14,54	5887/405	**K513_0145 ME20**	2300	2200	3600	**>24≤32**	9,7	43,9	10/5/2	49	830	830	1040
14,54	5887/405	**K513_0145 ME30**	2300	2200	3600	**≤24**	13	45,8	10/5/2	49	870	1000	1380
14,54	5887/405	**K513_0145 ME30**	2300	2200	3600	**>24≤32**	13	45,8	10/5/2	49	870	1000	1800
14,54	5887/405	**K513_0145 ME30**	2300	2200	3600	**>32≤38**	15	45,8	10/5/2	49	870	1000	1800
14,54	5887/405	**K513_0145 ME40**	2300	2200	3500	**≤38**	23	50,7	10/5/2	49	870	1000	1800
14,54	5887/405	**K513_0145 ME40**	2300	2200	3500	**>38≤48**	37	50,7	10/5/2	49	870	1000	1800
16,09	26071/1620	**K513_0160 ME20**	2300	2200	3600	**≤19**	7,1	43,9	10/5/2	48	530	530	660
16,09	26071/1620	**K513_0160 ME20**	2300	2200	3600	**>19≤24**	7,8	43,9	10/5/2	49	900	920	1150
16,09	26071/1620	**K513_0160 ME20**	2300	2200	3600	**>24≤32**	9,3	43,9	10/5/2	49	900	920	1150
16,09	26071/1620	**K513_0160 ME30**	2300	2200	3600	**≤24**	13	45,8	10/5/2	49	900	1000	1520
16,09	26071/1620	**K513_0160 ME30**	2300	2200	3600	**>24≤32**	13	45,8	10/5/2	49	900	1000	1800
16,09	26071/1620	**K513_0160 ME30**	2300	2200	3600	**>32≤38**	15	45,8	10/5/2	49	900	1000	1800
16,09	26071/1620	**K513_0160 ME40**	2300	2200	3500	**≤38**	23	50,7	10/5/2	49	900	1000	1800
16,09	26071/1620	**K513_0160 ME40**	2300	2200	3500	**>38≤48**	37	50,7	10/5/2	49	900	1000	1800
17,48	6293/360	**K513_0175 ME20**	2800	2500	4000	**≤19**	6,2	43,9	10/5/2	48	580	580	720
17,48	6293/360	**K513_0175 ME20**	2800	2500	4000	**>19≤24**	6,9	43,9	10/5/2	49	900	1000	1250
17,48	6293/360	**K513_0175 ME20**	2800	2500	4000	**>24≤32**	8,4	43,9	10/5/2	49	900	1000	1250
17,48	6293/360	**K513_0175 ME30**	2800	2500	4000	**≤24**	12	45,8	10/5/2	49	900	1000	1650
17,48	6293/360	**K513_0175 ME30**	2800	2500	4000	**>24≤32**	12	45,8	10/5/2	49	900	1000	1800
17,48	6293/360	**K513_0175 ME30**	2800	2500	4000	**>32≤38**	14	45,8	10/5/2	49	900	1000	1800
17,48	6293/360	**K513_0175 ME40**	2800	2500	3500	**≤38**	22	50,7	10/5/2	49	900	1000	1800
17,48	6293/360	**K513_0175 ME40**	2800	2500	3500	**>38≤48**	36	50,7	10/5/2	49	900	1000	1800
19,35	27869/1440	**K513_0195 ME20**	2800	2500	4000	**≤19**	5,9	43,9	10/5/2	48	640	640	800

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K513 (M2BMAX=1000 Nm)													
19,35	27869/1440	**K513_0195 ME20**	2800	2500	4000	**>19≤24**	6,6	43,9	10/5/2	49	900	1000	1390
19,35	27869/1440	**K513_0195 ME20**	2800	2500	4000	**>24≤32**	8,1	43,9	10/5/2	49	900	1000	1390
19,35	27869/1440	**K513_0195 ME30**	2800	2500	4000	**≤24**	12	45,8	10/5/2	49	900	1000	1800
19,35	27869/1440	**K513_0195 ME30**	2800	2500	4000	**>24≤32**	12	45,8	10/5/2	49	900	1000	1800
19,35	27869/1440	**K513_0195 ME30**	2800	2500	4000	**>32≤38**	14	45,8	10/5/2	49	900	1000	1800
19,35	27869/1440	**K513_0195 ME40**	2800	2500	3500	**≤38**	22	50,7	10/5/2	49	900	1000	1800
19,35	27869/1440	**K513_0195 ME40**	2800	2500	3500	**>38≤48**	35	50,7	10/5/2	49	900	1000	1800
21,99	2639/120	**K513_0220 ME20**	2800	2500	4000	**≤19**	4,9	43,9	10/5/2	49	730	730	910
21,99	2639/120	**K513_0220 ME20**	2800	2500	4000	**>19≤24**	5,7	43,9	10/5/2	49	900	1000	1470
21,99	2639/120	**K513_0220 ME20**	2800	2500	4000	**>24≤32**	7,1	43,9	10/5/2	49	900	1000	1470
21,99	2639/120	**K513_0220 ME30**	2800	2500	4000	**≤24**	11	45,8	10/5/2	49	900	1000	1800
21,99	2639/120	**K513_0220 ME30**	2800	2500	4000	**>24≤32**	11	45,8	10/5/2	49	900	1000	1800
21,99	2639/120	**K513_0220 ME30**	2800	2500	4000	**>32≤38**	13	45,8	10/5/2	49	900	1000	1800
21,99	2639/120	**K513_0220 ME40**	2800	2500	3500	**≤38**	21	50,7	10/5/2	49	900	1000	1800
21,99	2639/120	**K513_0220 ME40**	2800	2500	3500	**>38≤48**	34	50,7	10/5/2	49	900	1000	1800
24,35	11687/480	**K513_0240 ME20**	2800	2500	4000	**≤19**	4,7	43,9	10/5/2	49	800	800	1000
24,35	11687/480	**K513_0240 ME20**	2800	2500	4000	**>19≤24**	5,5	43,9	10/5/2	49	900	1000	1620
24,35	11687/480	**K513_0240 ME20**	2800	2500	4000	**>24≤32**	6,9	43,9	10/5/2	49	900	1000	1620
24,35	11687/480	**K513_0240 ME30**	2800	2500	4000	**≤24**	11	45,8	10/5/2	49	900	1000	1800
24,35	11687/480	**K513_0240 ME30**	2800	2500	4000	**>24≤32**	11	45,8	10/5/2	49	900	1000	1800
24,35	11687/480	**K513_0240 ME30**	2800	2500	4000	**>32≤38**	12	45,8	10/5/2	49	900	1000	1800
24,35	11687/480	**K513_0240 ME40**	2800	2500	3500	**≤38**	21	50,7	10/5/2	49	900	1000	1800
24,35	11687/480	**K513_0240 ME40**	2800	2500	3500	**>38≤48**	34	50,7	10/5/2	49	900	1000	1800
29,18	4669/160	**K513_0290 ME20**	3400	3000	4500	**≤19**	3,8	43,9	10/5/2	49	900	960	1200
29,18	4669/160	**K513_0290 ME20**	3400	3000	4500	**>19≤24**	4,6	43,9	10/5/2	49	900	1000	1660
29,18	4669/160	**K513_0290 ME20**	3400	3000	4500	**>24≤32**	6,0	43,9	10/5/2	49	900	1000	1660
29,18	4669/160	**K513_0290 ME30**	3400	3000	4000	**≤24**	9,6	45,8	10/5/2	49	900	1000	1800
29,18	4669/160	**K513_0290 ME30**	3400	3000	4000	**>24≤32**	9,8	45,8	10/5/2	49	900	1000	1800
29,18	4669/160	**K513_0290 ME30**	3400	3000	4000	**>32≤38**	12	45,8	10/5/2	49	900	1000	1800
29,18	4669/160	**K513_0290 ME40**	3000	3000	3500	**≤38**	20	50,7	10/5/2	49	900	1000	1800
29,18	4669/160	**K513_0290 ME40**	3000	3000	3500	**>38≤48**	33	50,7	10/5/2	49	900	1000	1800
32,31	20677/640	**K513_0320 ME20**	3400	3000	4500	**≤19**	3,7	43,9	10/5/2	49	900	1000	1330
32,31	20677/640	**K513_0320 ME20**	3400	3000	4500	**>19≤24**	4,5	43,9	10/5/2	49	900	1000	1800
32,31	20677/640	**K513_0320 ME20**	3400	3000	4500	**>24≤32**	5,9	43,9	10/5/2	49	900	1000	1800
32,31	20677/640	**K513_0320 ME30**	3400	3000	4000	**≤24**	9,5	45,8	10/5/2	49	900	1000	1800
32,31	20677/640	**K513_0320 ME30**	3400	3000	4000	**>24≤32**	9,7	45,8	10/5/2	49	900	1000	1800
32,31	20677/640	**K513_0320 ME30**	3400	3000	4000	**>32≤38**	11	45,8	10/5/2	49	900	1000	1800
32,31	20677/640	**K513_0320 ME40**	3000	3000	3500	**≤38**	20	50,7	10/5/2	49	900	1000	1800
32,31	20677/640	**K513_0320 ME40**	3000	3000	3500	**>38≤48**	33	50,7	10/5/2	49	900	1000	1800
34,80	174/5	**K513_0350 ME20**	3400	3000	4500	**≤19**	3,4	43,9	10/5/2	49	900	1000	1430
34,80	174/5	**K513_0350 ME20**	3400	3000	4500	**>19≤24**	4,1	43,9	10/5/2	49	900	1000	1780
34,80	174/5	**K513_0350 ME20**	3400	3000	4500	**>24≤32**	5,6	43,9	10/5/2	49	900	1000	1780
34,80	174/5	**K513_0350 ME30**	3400	3000	4000	**≤24**	9,0	45,8	10/5/2	49	900	1000	1780
34,80	174/5	**K513_0350 ME30**	3400	3000	4000	**>24≤32**	9,1	45,8	10/5/2	49	900	1000	1780
34,80	174/5	**K513_0350 ME30**	3400	3000	4000	**>32≤38**	11	45,8	10/5/2	49	900	1000	1780
38,53	2697/70	**K513_0390 ME20**	3400	3000	4500	**≤19**	3,3	43,9	10/5/2	49	900	1000	1590
38,53	2697/70	**K513_0390 ME20**	3400	3000	4500	**>19≤24**	4,0	43,9	10/5/2	49	900	1000	1800
38,53	2697/70	**K513_0390 ME20**	3400	3000	4500	**>24≤32**	5,5	43,9	10/5/2	49	900	1000	1800
38,53	2697/70	**K513_0390 ME30**	3400	3000	4000	**≤24**	8,9	45,8	10/5/2	49	900	1000	1800
38,53	2697/70	**K513_0390 ME30**	3400	3000	4000	**>24≤32**	9,1	45,8	10/5/2	49	900	1000	1800
38,53	2697/70	**K513_0390 ME30**	3400	3000	4000	**>32≤38**	11	45,8	10/5/2	49	900	1000	1800
43,50	87/2	**K513_0440 ME20**	3400	3000	4500	**≤19**	2,9	43,9	10/5/2	49	900	1000	1790
43,50	87/2	**K513_0440 ME20**	3400	3000	4500	**>19≤24**	3,6	43,9	10/5/2	49	900	1000	1800
43,50	87/2	**K513_0440 ME20**	3400	3000	4500	**>24≤32**	5,1	43,9	10/5/2	49	900	1000	1800
43,50	87/2	**K513_0440 ME30**	3400	3000	4000	**≤24**	8,5	45,8	10/5/2	49	900	1000	1800
43,50	87/2	**K513_0440 ME30**	3400	3000	4000	**>24≤32**	8,7	45,8	10/5/2	49	900	1000	1800
43,50	87/2	**K513_0440 ME30**	3400	3000	4000	**>32≤38**	10	45,8	10/5/2	49	900	1000	1800
48,16	2697/56	**K513_0480 ME20**	3400	3000	4500	**≤19**	2,8	43,9	10/5/2	49	900	1000	1800
48,16	2697/56	**K513_0480 ME20**	3400	3000	4500	**>19≤24**	3,6	43,9	10/5/2	49	900	1000	1800
48,16	2697/56	**K513_0480 ME20**	3400	3000	4500	**>24≤32**	5,0	43,9	10/5/2	49	900	1000	1800
48,16	2697/56	**K513_0480 ME30**	3400	3000	4000	**≤24**	8,5	45,8	10/5/2	49	900	1000	1800
48,16	2697/56	**K513_0480 ME30**	3400	3000	4000	**>24≤32**	8,6	45,8	10/5/2	49	900	1000	1800

Helical Bevel Gear Units **K**
*Reductores cónicos **K***
Riduttori copia conica **K**

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K513 (M2BMAX=1000 Nm)													
48,16	2697/56	**K513_0480 ME30**	3400	3000	4000	**>32≤38**	10	45,8	10/5/2	49	900	1000	1800
58,30	11368/195	**K513_0580 ME20**	3400	3000	4500	**≤19**	2,5	43,9	10/5/2	49	900	1000	1800
58,30	11368/195	**K513_0580 ME20**	3400	3000	4500	**>19≤24**	3,2	43,9	10/5/2	49	900	1000	1800
58,30	11368/195	**K513_0580 ME20**	3400	3000	4500	**>24≤32**	4,7	43,9	10/5/2	49	900	1000	1800
58,30	11368/195	**K513_0580 ME30**	3400	3000	4000	**≤24**	8,1	45,8	10/5/2	49	900	1000	1800
58,30	11368/195	**K513_0580 ME30**	3400	3000	4000	**>24≤32**	8,3	45,8	10/5/2	49	900	1000	1800
58,30	11368/195	**K513_0580 ME30**	3400	3000	4000	**>32≤38**	10,0	45,8	10/5/2	50	900	1000	1800
64,54	12586/195	**K513_0650 ME20**	3400	3000	4500	**≤19**	2,4	43,9	10/5/2	49	900	1000	1800
64,54	12586/195	**K513_0650 ME20**	3400	3000	4500	**>19≤24**	3,2	43,9	10/5/2	49	900	1000	1800
64,54	12586/195	**K513_0650 ME20**	3400	3000	4500	**>24≤32**	4,6	43,9	10/5/2	49	900	1000	1800
64,54	12586/195	**K513_0650 ME30**	3400	3000	4000	**≤24**	8,1	45,8	10/5/2	49	900	1000	1800
64,54	12586/195	**K513_0650 ME30**	3400	3000	4000	**>24≤32**	8,2	45,8	10/5/2	50	900	1000	1800
64,54	12586/195	**K513_0650 ME30**	3400	3000	4000	**>32≤38**	10,0	45,8	10/5/2	50	900	1000	1800
70,08	841/12	**K513_0700 ME20**	3400	3000	4500	**≤19**	2,3	43,9	10/5/2	49	820	980	1280
70,08	841/12	**K513_0700 ME20**	3400	3000	4500	**>19≤24**	3,0	43,9	10/5/2	49	820	980	1280
77,59	26071/336	**K513_0780 ME20**	3400	3000	4500	**≤19**	2,2	43,9	10/5/2	49	900	1000	1410
77,59	26071/336	**K513_0780 ME20**	3400	3000	4500	**>19≤24**	3,0	43,9	10/5/2	49	900	1000	1410
87,29	8729/100	**K513_0870 ME20**	3400	3000	4500	**≤19**	2,1	43,9	10/5/2	49	690	830	1320
87,29	8729/100	**K513_0870 ME20**	3400	3000	4500	**>19≤24**	2,8	43,9	10/5/2	49	690	830	1320
96,64	38657/400	**K513_0970 ME20**	3400	3000	4500	**≤19**	2,1	43,9	10/5/2	49	760	920	1460
96,64	38657/400	**K513_0970 ME20**	3400	3000	4500	**>19≤24**	2,8	43,9	10/5/2	49	760	920	1460
K514 (M2BMAX=1000 Nm)													
85,03	76531/900	**K514_0850 ME20**	3400	3000	4500	**≤19**	2,2	48,4	10/6/3	49	900	1000	1470
85,03	76531/900	**K514_0850 ME20**	3400	3000	4500	**>19≤24**	2,9	48,4	10/6/3	49	900	1000	1470
94,15	338923/3600	**K514_0940 ME20**	3400	3000	4500	**≤19**	2,2	48,4	10/6/3	49	900	1000	1620
94,15	338923/3600	**K514_0940 ME20**	3400	3000	4500	**>19≤24**	2,9	48,4	10/6/3	49	900	1000	1620
112,8	135401/1200	**K514_1130 ME20**	3400	3000	4500	**≤19**	2,1	48,4	10/6/3	49	900	1000	1660
112,8	135401/1200	**K514_1130 ME20**	3400	3000	4500	**>19≤24**	2,8	48,4	10/6/3	50	900	1000	1660
124,9	599633/4800	**K514_1250 ME20**	3400	3000	4500	**≤19**	2,1	48,4	10/6/3	49	900	1000	1800
124,9	599633/4800	**K514_1250 ME20**	3400	3000	4500	**>19≤24**	2,8	48,4	10/6/3	50	900	1000	1800
134,6	3364/25	**K514_1350 ME20**	3400	3000	4500	**≤19**	2,1	48,4	10/6/3	49	900	1000	1780
134,6	3364/25	**K514_1350 ME20**	3400	3000	4500	**>19≤24**	2,8	48,4	10/6/3	50	900	1000	1780
149,0	26071/175	**K514_1490 ME20**	3400	3000	4500	**≤19**	2,1	48,4	10/6/3	49	900	1000	1800
149,0	26071/175	**K514_1490 ME20**	3400	3000	4500	**>19≤24**	2,8	48,4	10/6/3	50	900	1000	1800
168,2	841/5	**K514_1680 ME20**	3400	3000	4500	**≤19**	2,0	48,4	10/6/3	50	900	1000	1800
168,2	841/5	**K514_1680 ME20**	3400	3000	4500	**>19≤24**	2,8	48,4	10/6/3	50	900	1000	1800
186,2	26071/140	**K514_1860 ME20**	3400	3000	4500	**≤19**	2,0	48,4	10/6/3	50	900	1000	1800
186,2	26071/140	**K514_1860 ME20**	3400	3000	4500	**>19≤24**	2,8	48,4	10/6/3	50	900	1000	1800
225,4	659344/2925	**K514_2250 ME20**	3400	3000	4500	**≤19**	2,0	48,4	10/6/3	50	900	1000	1800
225,4	659344/2925	**K514_2250 ME20**	3400	3000	4500	**>19≤24**	2,7	48,4	10/6/3	50	900	1000	1800
249,6	729988/2925	**K514_2500 ME20**	3400	3000	4500	**≤19**	2,0	48,4	10/6/3	50	900	1000	1800
249,6	729988/2925	**K514_2500 ME20**	3400	3000	4500	**>19≤24**	2,7	48,4	10/6/3	50	900	1000	1800
271,0	24389/90	**K514_2710 ME20**	3400	3000	4500	**≤19**	2,0	48,4	10/6/3	50	820	980	1280
271,0	24389/90	**K514_2710 ME20**	3400	3000	4500	**>19≤24**	2,7	48,4	10/6/3	50	820	980	1280
300,0	756059/2520	**K514_3000 ME20**	3400	3000	4500	**≤19**	2,0	48,4	10/6/3	50	900	1000	1410
300,0	756059/2520	**K514_3000 ME20**	3400	3000	4500	**>19≤24**	2,7	48,4	10/6/3	50	900	1000	1410
337,5	253141/750	**K514_3380 ME20**	3400	3000	4500	**≤19**	2,0	48,4	10/6/3	50	690	830	1320
337,5	253141/750	**K514_3380 ME20**	3400	3000	4500	**>19≤24**	2,7	48,4	10/6/3	50	690	830	1320
373,7	1121053/3000	**K514_3740 ME20**	3400	3000	4500	**≤19**	2,0	48,4	10/6/3	50	760	920	1460
373,7	1121053/3000	**K514_3740 ME20**	3400	3000	4500	**>19≤24**	2,7	48,4	10/6/3	50	760	920	1460

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K613 (M2BMAX=1600 Nm)													
7,323	19215/2624	**K613_0073 ME30**	1800	1700	2900	**≤24**	37	67,3	10/5/2	74	550	550	690
7,323	19215/2624	**K613_0073 ME30**	1800	1700	2900	**>24≤32**	37	67,3	10/5/2	79	920	1120	1400
7,323	19215/2624	**K613_0073 ME30**	1800	1700	2900	**>32≤38**	39	67,3	10/5/2	81	920	1120	1400
7,323	19215/2624	**K613_0073 ME40**	1800	1700	2900	**≤38**	47	72,2	10/5/2	79	920	1330	1660
7,323	19215/2624	**K613_0073 ME40**	1800	1700	2900	**>38≤48**	61	72,2	10/5/2	81	920	1370	2630
7,323	19215/2624	**K613_0073 ME50**	1800	1700	2900	**≤55**	85	79,8	10/5/2	81	920	1370	2630
7,323	19215/2624	**K613_0073 ME50**	1800	1700	2900	**>55≤60**	89	79,8	10/5/2	81	920	1370	2630
8,107	85095/10496	**K613_0081 ME30**	1800	1700	2900	**≤24**	35	67,3	10/5/2	75	610	610	770
8,107	85095/10496	**K613_0081 ME30**	1800	1700	2900	**>24≤32**	35	67,3	10/5/2	80	950	1240	1550
8,107	85095/10496	**K613_0081 ME30**	1800	1700	2900	**>32≤38**	36	67,3	10/5/2	81	950	1240	1550
8,107	85095/10496	**K613_0081 ME40**	1800	1700	2900	**≤38**	45	72,2	10/5/2	80	950	1420	1840
8,107	85095/10496	**K613_0081 ME40**	1800	1700	2900	**>38≤48**	59	72,2	10/5/2	81	950	1420	2900
8,107	85095/10496	**K613_0081 ME50**	1800	1700	2900	**≤55**	83	79,8	10/5/2	82	950	1420	2900
8,107	85095/10496	**K613_0081 ME50**	1800	1700	2900	**>55≤60**	87	79,8	10/5/2	82	950	1420	2900
11,41	22631/1984	**K613_0115 ME30**	2200	2000	3200	**≤24**	23	67,3	10/5/2	79	860	860	1080
11,41	22631/1984	**K613_0115 ME30**	2200	2000	3200	**>24≤32**	23	67,3	10/5/2	81	1060	1590	2180
11,41	22631/1984	**K613_0115 ME30**	2200	2000	3200	**>32≤38**	25	67,3	10/5/2	82	1060	1590	2180
11,41	22631/1984	**K613_0115 ME40**	2200	2000	3200	**≤38**	33	72,2	10/5/2	81	1060	1590	2180
11,41	22631/1984	**K613_0115 ME40**	2200	2000	3200	**>38≤48**	46	72,2	10/5/2	82	1060	1590	2180
11,41	22631/1984	**K613_0115 ME50**	2200	2000	3000	**>55≤60**	75	79,8	10/5/2	82	1060	1590	2180
12,63	3233/256	**K613_0125 ME30**	2200	2000	3200	**≤24**	22	67,3	10/5/2	79	960	960	1200
12,63	3233/256	**K613_0125 ME30**	2200	2000	3200	**>24≤32**	22	67,3	10/5/2	81	1100	1600	2410
12,63	3233/256	**K613_0125 ME30**	2200	2000	3200	**>32≤38**	24	67,3	10/5/2	82	1100	1600	2410
12,63	3233/256	**K613_0125 ME40**	2200	2000	3200	**≤38**	32	72,2	10/5/2	81	1100	1600	2410
12,63	3233/256	**K613_0125 ME40**	2200	2000	3200	**>38≤48**	45	72,2	10/5/2	82	1100	1600	2410
12,63	3233/256	**K613_0125 ME50**	2200	2000	3000	**>55≤60**	75	79,8	10/5/2	82	1100	1600	2410
14,33	12383/864	**K613_0145 ME30**	2200	2000	3200	**≤24**	18	67,3	10/5/2	80	1090	1090	1360
14,33	12383/864	**K613_0145 ME30**	2200	2000	3200	**>24≤32**	19	67,3	10/5/2	82	1150	1600	2740
14,33	12383/864	**K613_0145 ME30**	2200	2000	3200	**>32≤38**	20	67,3	10/5/2	82	1150	1600	2740
14,33	12383/864	**K613_0145 ME40**	2200	2000	3200	**≤38**	29	72,2	10/5/2	82	1150	1600	2740
14,33	12383/864	**K613_0145 ME40**	2200	2000	3200	**>38≤48**	42	72,2	10/5/2	82	1150	1600	2740
14,33	12383/864	**K613_0145 ME50**	2200	2000	3000	**>55≤60**	71	79,8	10/5/2	82	1150	1600	2740
15,87	54839/3456	**K613_0160 ME30**	2200	2000	3200	**≤24**	18	67,3	10/5/2	80	1190	1200	1500
15,87	54839/3456	**K613_0160 ME30**	2200	2000	3200	**>24≤32**	18	67,3	10/5/2	82	1190	1600	2900
15,87	54839/3456	**K613_0160 ME30**	2200	2000	3200	**>32≤38**	20	67,3	10/5/2	82	1190	1600	2900
15,87	54839/3456	**K613_0160 ME40**	2200	2000	3200	**≤38**	28	72,2	10/5/2	82	1190	1600	2900
15,87	54839/3456	**K613_0160 ME40**	2200	2000	3200	**>38≤48**	42	72,2	10/5/2	82	1190	1600	2900
15,87	54839/3456	**K613_0160 ME50**	2200	2000	3000	**>55≤60**	71	79,8	10/5/2	82	1190	1600	2900
17,16	549/32	**K613_0170 ME20**	2600	2300	3600	**≤19**	9,9	65,4	10/5/2	78	570	570	710
17,16	549/32	**K613_0170 ME20**	2600	2300	3600	**>19≤24**	11	65,4	10/5/2	81	980	980	1230
17,16	549/32	**K613_0170 ME20**	2600	2300	3600	**>24≤32**	12	65,4	10/5/2	82	980	980	1230
17,16	549/32	**K613_0170 ME30**	2600	2300	3600	**≤24**	16	67,3	10/5/2	81	1220	1300	1620
17,16	549/32	**K613_0170 ME30**	2600	2300	3600	**>24≤32**	16	67,3	10/5/2	82	1220	1600	2900
17,16	549/32	**K613_0170 ME30**	2600	2300	3600	**>32≤38**	18	67,3	10/5/2	82	1220	1600	2900
17,16	549/32	**K613_0170 ME40**	2600	2300	3500	**≤38**	26	72,2	10/5/2	82	1220	1600	2900
17,16	549/32	**K613_0170 ME40**	2600	2300	3500	**>38≤48**	39	72,2	10/5/2	82	1220	1600	2900
17,16	549/32	**K613_0170 ME50**	2500	2300	3000	**>55≤60**	69	79,8	10/5/2	82	1220	1600	2900
18,99	17019/896	**K613_0190 ME20**	2600	2300	3600	**≤19**	9,5	65,4	10/5/2	79	630	630	780
18,99	17019/896	**K613_0190 ME20**	2600	2300	3600	**>19≤24**	10	65,4	10/5/2	81	1090	1090	1360
18,99	17019/896	**K613_0190 ME20**	2600	2300	3600	**>24≤32**	12	65,4	10/5/2	82	1090	1090	1360
18,99	17019/896	**K613_0190 ME30**	2600	2300	3600	**≤24**	15	67,3	10/5/2	81	1260	1440	1800
18,99	17019/896	**K613_0190 ME30**	2600	2300	3600	**>24≤32**	15	67,3	10/5/2	82	1260	1600	2900
18,99	17019/896	**K613_0190 ME30**	2600	2300	3600	**>32≤38**	17	67,3	10/5/2	82	1260	1600	2900
18,99	17019/896	**K613_0190 ME40**	2600	2300	3500	**≤38**	25	72,2	10/5/2	82	1260	1600	2900
18,99	17019/896	**K613_0190 ME40**	2600	2300	3500	**>38≤48**	39	72,2	10/5/2	82	1260	1600	2900
18,99	17019/896	**K613_0190 ME50**	2500	2300	3000	**>55≤60**	68	79,8	10/5/2	82	1260	1600	2900
21,68	5551/256	**K613_0220 ME30**	2600	2300	3600	**≤24**	13	67,3	10/5/2	81	1320	1600	2050
21,68	5551/256	**K613_0220 ME30**	2600	2300	3600	**>24≤32**	14	67,3	10/5/2	82	1320	1600	2900
21,68	5551/256	**K613_0220 ME30**	2600	2300	3600	**>32≤38**	15	67,3	10/5/2	82	1320	1600	2900
21,68	5551/256	**K613_0220 ME40**	2600	2300	3500	**≤38**	24	72,2	10/5/2	82	1320	1600	2900
21,68	5551/256	**K613_0220 ME40**	2600	2300	3500	**>38≤48**	37	72,2	10/5/2	82	1320	1600	2900
21,68	5551/256	**K613_0220 ME50**	2500	2300	3000	**>55≤60**	66	79,8	10/5/2	82	1320	1600	2900

Helical Bevel Gear Units **K**
*Reductores cónicos **K***
Riduttori copia conica **K**

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	$\Delta\varphi_2$ [arcmin]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
K613 (M_{2BMAX}=1600 Nm)													
24,01	24583/1024	**K613_0240 ME30**	2600	2300	3600	**≤24**	13	67,3	10/5/2	82	1360	1600	2270
24,01	24583/1024	**K613_0240 ME30**	2600	2300	3600	**>24≤32**	13	67,3	10/5/2	82	1360	1600	2900
24,01	24583/1024	**K613_0240 ME30**	2600	2300	3600	**>32≤38**	15	67,3	10/5/2	82	1360	1600	2900
24,01	24583/1024	**K613_0240 ME40**	2600	2300	3500	**≤38**	23	72,2	10/5/2	82	1360	1600	2900
24,01	24583/1024	**K613_0240 ME40**	2600	2300	3500	**>38≤48**	37	72,2	10/5/2	82	1360	1600	2900
24,01	24583/1024	**K613_0240 ME50**	2500	2300	3000	**>55≤60**	66	79,8	10/5/2	82	1360	1600	2900
28,77	29463/1024	**K613_0290 ME20**	3100	2800	4000	**≤19**	5,6	65,4	10/5/2	81	950	950	1190
28,77	29463/1024	**K613_0290 ME20**	3100	2800	4000	**>19≤24**	6,3	65,4	10/5/2	82	1170	1450	1810
28,77	29463/1024	**K613_0290 ME20**	3100	2800	4000	**>24≤32**	7,8	65,4	10/5/2	82	1170	1450	1810
28,77	29463/1024	**K613_0290 ME30**	3100	2800	4000	**≤24**	11	67,3	10/5/2	82	1450	1600	2720
28,77	29463/1024	**K613_0290 ME30**	3100	2800	4000	**>24≤32**	12	67,3	10/5/2	82	1450	1600	2900
28,77	29463/1024	**K613_0290 ME30**	3100	2800	4000	**>32≤38**	13	67,3	10/5/2	82	1450	1600	2900
28,77	29463/1024	**K613_0290 ME40**	3000	2800	3500	**≤38**	22	72,2	10/5/2	82	1450	1600	2900
28,77	29463/1024	**K613_0290 ME40**	3000	2800	3500	**>38≤48**	35	72,2	10/5/2	82	1450	1600	2900
28,77	29463/1024	**K613_0290 ME50**	2500	2500	3000	**>55≤60**	64	79,8	10/5/2	82	1450	1600	2900
31,86	130479/4096	**K613_0320 ME20**	3100	2800	4000	**≤19**	5,4	65,4	10/5/2	81	1050	1050	1310
31,86	130479/4096	**K613_0320 ME20**	3100	2800	4000	**>19≤24**	6,1	65,4	10/5/2	82	1290	1600	2000
31,86	130479/4096	**K613_0320 ME20**	3100	2800	4000	**>24≤32**	7,6	65,4	10/5/2	82	1290	1600	2000
31,86	130479/4096	**K613_0320 ME30**	3100	2800	4000	**≤24**	11	67,3	10/5/2	82	1450	1600	2900
31,86	130479/4096	**K613_0320 ME30**	3100	2800	4000	**>24≤32**	11	67,3	10/5/2	82	1450	1600	2900
31,86	130479/4096	**K613_0320 ME30**	3100	2800	4000	**>32≤38**	13	67,3	10/5/2	82	1450	1600	2900
31,86	130479/4096	**K613_0320 ME40**	3000	2800	3500	**≤38**	21	72,2	10/5/2	82	1450	1600	2900
31,86	130479/4096	**K613_0320 ME40**	3000	2800	3500	**>38≤48**	35	72,2	10/5/2	82	1450	1600	2900
31,86	130479/4096	**K613_0320 ME50**	2500	2500	3000	**>55≤60**	64	79,8	10/5/2	82	1450	1600	2900
34,61	35441/1024	**K613_0350 ME20**	3100	2800	4000	**≤19**	4,6	65,4	10/5/2	81	1140	1140	1430
34,61	35441/1024	**K613_0350 ME20**	3100	2800	4000	**>19≤24**	5,3	65,4	10/5/2	82	1200	1570	1960
34,61	35441/1024	**K613_0350 ME20**	3100	2800	4000	**>24≤32**	6,8	65,4	10/5/2	82	1200	1570	1960
34,61	35441/1024	**K613_0350 ME30**	3100	2800	4000	**≤24**	10	67,3	10/5/2	82	1450	1600	2900
34,61	35441/1024	**K613_0350 ME30**	3100	2800	4000	**>24≤32**	11	67,3	10/5/2	82	1450	1600	2900
34,61	35441/1024	**K613_0350 ME30**	3100	2800	4000	**>32≤38**	12	67,3	10/5/2	82	1450	1600	2900
34,61	35441/1024	**K613_0350 ME40**	3000	2800	3500	**≤38**	21	72,2	10/5/2	82	1450	1600	2900
34,61	35441/1024	**K613_0350 ME40**	3000	2800	3500	**>38≤48**	34	72,2	10/5/2	82	1450	1600	2900
34,61	35441/1024	**K613_0350 ME50**	2500	2500	3000	**>55≤60**	63	79,8	10/5/2	82	1450	1600	2900
38,32	156953/4096	**K613_0380 ME20**	3100	2800	4000	**≤19**	4,5	65,4	10/5/2	82	1260	1260	1580
38,32	156953/4096	**K613_0380 ME20**	3100	2800	4000	**>19≤24**	5,2	65,4	10/5/2	82	1320	1600	2170
38,32	156953/4096	**K613_0380 ME20**	3100	2800	4000	**>24≤32**	6,7	65,4	10/5/2	82	1320	1600	2170
38,32	156953/4096	**K613_0380 ME30**	3100	2800	4000	**≤24**	10	67,3	10/5/2	82	1450	1600	2900
38,32	156953/4096	**K613_0380 ME30**	3100	2800	4000	**>24≤32**	10	67,3	10/5/2	82	1450	1600	2900
38,32	156953/4096	**K613_0380 ME30**	3100	2800	4000	**>32≤38**	12	67,3	10/5/2	82	1450	1600	2900
38,32	156953/4096	**K613_0380 ME40**	3000	2800	3500	**≤38**	20	72,2	10/5/2	82	1450	1600	2900
38,32	156953/4096	**K613_0380 ME40**	3000	2800	3500	**>38≤48**	34	72,2	10/5/2	82	1450	1600	2900
38,32	156953/4096	**K613_0380 ME50**	2500	2500	3000	**>55≤60**	63	79,8	10/5/2	82	1450	1600	2900
43,11	8967/208	**K613_0430 ME20**	3100	2800	4000	**≤19**	3,8	65,4	10/5/2	82	1230	1420	1780
43,11	8967/208	**K613_0430 ME20**	3100	2800	4000	**>19≤24**	4,5	65,4	10/5/2	82	1230	1600	2070
43,11	8967/208	**K613_0430 ME20**	3100	2800	4000	**>24≤32**	6,0	65,4	10/5/2	82	1230	1600	2070
43,11	8967/208	**K613_0430 ME30**	3100	2800	4000	**≤24**	9,4	67,3	10/5/2	82	1450	1600	2070
43,11	8967/208	**K613_0430 ME30**	3100	2800	4000	**>24≤32**	9,5	67,3	10/5/2	82	1450	1600	2070
43,11	8967/208	**K613_0430 ME30**	3100	2800	4000	**>32≤38**	11	67,3	10/5/2	82	1450	1600	2070
47,73	39711/832	**K613_0480 ME20**	3100	2800	4000	**≤19**	3,7	65,4	10/5/2	82	1360	1570	1970
47,73	39711/832	**K613_0480 ME20**	3100	2800	4000	**>19≤24**	4,4	65,4	10/5/2	82	1360	1600	2290
47,73	39711/832	**K613_0480 ME20**	3100	2800	4000	**>24≤32**	5,9	65,4	10/5/2	82	1360	1600	2290
47,73	39711/832	**K613_0480 ME30**	3100	2800	4000	**≤24**	9,3	67,3	10/5/2	82	1450	1600	2290
47,73	39711/832	**K613_0480 ME30**	3100	2800	4000	**>24≤32**	9,5	67,3	10/5/2	82	1450	1600	2290
47,73	39711/832	**K613_0480 ME30**	3100	2800	4000	**>32≤38**	11	67,3	10/5/2	82	1450	1600	2290
57,55	29463/512	**K613_0580 ME20**	3100	2800	4000	**≤19**	3,0	65,4	10/5/2	82	1300	1600	2370
57,55	29463/512	**K613_0580 ME20**	3100	2800	4000	**>19≤24**	3,7	65,4	10/5/2	82	1300	1600	2800
57,55	29463/512	**K613_0580 ME20**	3100	2800	4000	**>24≤32**	5,2	65,4	10/5/2	82	1300	1600	2800
57,55	29463/512	**K613_0580 ME30**	3100	2800	4000	**≤24**	8,7	67,3	10/5/2	82	1450	1600	2800
57,55	29463/512	**K613_0580 ME30**	3100	2800	4000	**>24≤32**	8,8	67,3	10/5/2	82	1450	1600	2800
57,55	29463/512	**K613_0580 ME30**	3100	2800	4000	**>32≤38**	11	67,3	10/5/2	82	1450	1600	2800
63,71	130479/2048	**K613_0640 ME20**	3100	2800	4000	**≤19**	3,0	65,4	10/5/2	82	1430	1600	2630
63,71	130479/2048	**K613_0640 ME20**	3100	2800	4000	**>19≤24**	3,7	65,4	10/5/2	82	1430	1600	2900

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K613 (M2BMAX=1600 Nm)													
63,71	130479/2048	**K613_0640 ME20**	3100	2800	4000	**>24≤32**	5,2	65,4	10/5/2	82	1430	1600	2900
63,71	130479/2048	**K613_0640 ME30**	3100	2800	4000	**≤24**	8,6	67,3	10/5/2	82	1450	1600	2900
63,71	130479/2048	**K613_0640 ME30**	3100	2800	4000	**>24≤32**	8,7	67,3	10/5/2	82	1450	1600	2900
63,71	130479/2048	**K613_0640 ME30**	3100	2800	4000	**>32≤38**	10	67,3	10/5/2	82	1450	1600	2900
68,77	28609/416	**K613_0690 ME20**	3100	2800	4000	**≤19**	2,7	65,4	10/5/2	82	1310	1580	2630
68,77	28609/416	**K613_0690 ME20**	3100	2800	4000	**>19≤24**	3,4	65,4	10/5/2	82	1310	1580	2630
68,77	28609/416	**K613_0690 ME20**	3100	2800	4000	**>24≤32**	4,9	65,4	10/5/2	82	1310	1580	2630
68,77	28609/416	**K613_0690 ME30**	3100	2800	4000	**≤24**	8,3	67,3	10/5/2	82	1310	1580	2630
68,77	28609/416	**K613_0690 ME30**	3100	2800	4000	**>24≤32**	8,5	67,3	10/5/2	82	1310	1580	2630
68,77	28609/416	**K613_0690 ME30**	3100	2800	4000	**>32≤38**	10	67,3	10/5/2	82	1310	1580	2630
76,14	126697/1664	**K613_0760 ME20**	3100	2800	4000	**≤19**	2,7	65,4	10/5/2	82	1450	1600	2900
76,14	126697/1664	**K613_0760 ME20**	3100	2800	4000	**>19≤24**	3,4	65,4	10/5/2	82	1450	1600	2900
76,14	126697/1664	**K613_0760 ME20**	3100	2800	4000	**>24≤32**	4,9	65,4	10/5/2	82	1450	1600	2900
76,14	126697/1664	**K613_0760 ME30**	3100	2800	4000	**≤24**	8,3	67,3	10/5/2	82	1450	1600	2900
76,14	126697/1664	**K613_0760 ME30**	3100	2800	4000	**>24≤32**	8,4	67,3	10/5/2	82	1450	1600	2900
76,14	126697/1664	**K613_0760 ME30**	3100	2800	4000	**>32≤38**	10	67,3	10/5/2	82	1450	1600	2900
86,18	66185/768	**K613_0860 ME20**	3100	2800	4000	**≤19**	2,4	65,4	10/5/2	82	970	1170	1470
86,18	66185/768	**K613_0860 ME20**	3100	2800	4000	**>19≤24**	3,1	65,4	10/5/2	82	970	1170	1470
95,41	293105/3072	**K613_0950 ME20**	3100	2800	4000	**≤19**	2,3	65,4	10/5/2	82	1080	1290	1630
95,41	293105/3072	**K613_0950 ME20**	3100	2800	4000	**>19≤24**	3,1	65,4	10/5/2	82	1080	1290	1630
K614 (M2BMAX=1600 Nm)													
111,3	284809/2560	**K614_1110 ME20**	3100	2800	4000	**≤19**	2,2	69,3	10/6/3	82	1450	1450	1810
111,3	284809/2560	**K614_1110 ME20**	3100	2800	4000	**>19≤24**	2,9	69,3	10/6/3	82	1450	1450	1810
123,2	1261297/10240	**K614_1230 ME20**	3100	2800	4000	**≤19**	2,2	69,3	10/6/3	82	1450	1600	2000
123,2	1261297/10240	**K614_1230 ME20**	3100	2800	4000	**>19≤24**	2,9	69,3	10/6/3	82	1450	1600	2000
133,8	1027789/7680	**K614_1340 ME20**	3100	2800	4000	**≤19**	2,1	69,3	10/6/3	82	1450	1570	1960
133,8	1027789/7680	**K614_1340 ME20**	3100	2800	4000	**>19≤24**	2,9	69,3	10/6/3	82	1450	1570	1960
148,2	4551637/30720	**K614_1480 ME20**	3100	2800	4000	**≤19**	2,1	69,3	10/6/3	82	1450	1600	2170
148,2	4551637/30720	**K614_1480 ME20**	3100	2800	4000	**>19≤24**	2,9	69,3	10/6/3	82	1450	1600	2170
166,7	86681/520	**K614_1670 ME20**	3100	2800	4000	**≤19**	2,1	69,3	10/6/3	82	1450	1600	2070
166,7	86681/520	**K614_1670 ME20**	3100	2800	4000	**>19≤24**	2,8	69,3	10/6/3	83	1450	1600	2070
184,6	383873/2080	**K614_1850 ME20**	3100	2800	4000	**≤19**	2,1	69,3	10/6/3	82	1450	1600	2290
184,6	383873/2080	**K614_1850 ME20**	3100	2800	4000	**>19≤24**	2,8	69,3	10/6/3	83	1450	1600	2290
222,5	284809/1280	**K614_2230 ME20**	3100	2800	4000	**≤19**	2,0	69,3	10/6/3	82	1450	1600	2800
222,5	284809/1280	**K614_2230 ME20**	3100	2800	4000	**>19≤24**	2,8	69,3	10/6/3	83	1450	1600	2800
246,3	1261297/5120	**K614_2460 ME20**	3100	2800	4000	**≤19**	2,0	69,3	10/6/3	82	1450	1600	2900
246,3	1261297/5120	**K614_2460 ME20**	3100	2800	4000	**>19≤24**	2,8	69,3	10/6/3	83	1450	1600	2900
265,9	829661/3120	**K614_2660 ME20**	3100	2800	4000	**≤19**	2,0	69,3	10/6/3	83	1310	1580	2630
265,9	829661/3120	**K614_2660 ME20**	3100	2800	4000	**>19≤24**	2,8	69,3	10/6/3	83	1310	1580	2630
294,4	3674213/12480	**K614_2940 ME20**	3100	2800	4000	**≤19**	2,0	69,3	10/6/3	83	1450	1600	2900
294,4	3674213/12480	**K614_2940 ME20**	3100	2800	4000	**>19≤24**	2,7	69,3	10/6/3	83	1450	1600	2900
333,2	383873/1152	**K614_3330 ME20**	3100	2800	4000	**≤19**	2,0	69,3	10/6/3	83	970	1170	1470
333,2	383873/1152	**K614_3330 ME20**	3100	2800	4000	**>19≤24**	2,7	69,3	10/6/3	83	970	1170	1470
368,9	1700009/4608	**K614_3690 ME20**	3100	2800	4000	**≤19**	2,0	69,3	10/6/3	83	1080	1290	1630
368,9	1700009/4608	**K614_3690 ME20**	3100	2800	4000	**>19≤24**	2,7	69,3	10/6/3	83	1080	1290	1630

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*Reductores cónicos **K***
Riduttori copia conica **K**

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K713 (M2BMAX=2600 Nm)													
7,563	19845/2624	**K713_0076 ME40**	1700	1600	2700	**≤38**	77	100,5	10/5/2	118	1370	1370	1720
7,563	19845/2624	**K713_0076 ME40**	1700	1600	2700	**>38≤48**	91	100,5	10/5/2	122	1520	2170	2710
7,563	19845/2624	**K713_0076 ME50**	1700	1600	2700	**≤55**	115	108,1	10/5/2	123	1520	2170	2710
7,563	19845/2624	**K713_0076 ME50**	1700	1600	2700	**>55≤60**	119	108,1	10/5/2	123	1520	2170	2710
8,373	87885/10496	**K713_0084 ME40**	1700	1600	2700	**≤38**	73	100,5	10/5/2	119	1520	1520	1900
8,373	87885/10496	**K713_0084 ME40**	1700	1600	2700	**>38≤48**	87	100,5	10/5/2	123	1570	2350	3000
8,373	87885/10496	**K713_0084 ME50**	1700	1600	2700	**≤55**	111	108,1	10/5/2	124	1570	2350	3000
8,373	87885/10496	**K713_0084 ME50**	1700	1600	2700	**>55≤60**	115	108,1	10/5/2	124	1570	2350	3000
9,188	147/16	**K713_0092 ME40**	1700	1600	2700	**≤38**	63	100,5	10/5/2	120	1620	1670	2090
9,188	147/16	**K713_0092 ME40**	1700	1600	2700	**>38≤48**	76	100,5	10/5/2	123	1620	2430	3290
9,188	147/16	**K713_0092 ME50**	1700	1600	2700	**≤55**	100	108,1	10/5/2	124	1620	2430	3290
9,188	147/16	**K713_0092 ME50**	1700	1600	2700	**>55≤60**	104	108,1	10/5/2	124	1620	2430	3290
10,17	651/64	**K713_0100 ME40**	1700	1600	2700	**≤38**	60	100,5	10/5/2	121	1670	1850	2310
10,17	651/64	**K713_0100 ME40**	1700	1600	2700	**>38≤48**	74	100,5	10/5/2	124	1670	2510	3650
10,17	651/64	**K713_0100 ME50**	1700	1600	2700	**≤55**	98	108,1	10/5/2	124	1670	2510	3650
10,17	651/64	**K713_0100 ME50**	1700	1600	2700	**>55≤60**	102	108,1	10/5/2	124	1670	2510	3650
11,78	23373/1984	**K713_0120 ME30**	2000	1900	3000	**≤24**	38	95,6	10/5/2	117	890	890	1120
11,78	23373/1984	**K713_0120 ME30**	2000	1900	3000	**>24≤32**	39	95,6	10/5/2	123	1480	1800	2250
11,78	23373/1984	**K713_0120 ME30**	2000	1900	3000	**>32≤38**	40	95,6	10/5/2	124	1480	1800	2250
11,78	23373/1984	**K713_0120 ME40**	2000	1900	3000	**≤38**	49	100,5	10/5/2	122	1760	2140	2670
11,78	23373/1984	**K713_0120 ME40**	2000	1900	3000	**>38≤48**	63	100,5	10/5/2	124	1760	2600	4220
11,78	23373/1984	**K713_0120 ME50**	2000	1900	3000	**≤55**	87	108,1	10/5/2	125	1760	2600	4220
11,78	23373/1984	**K713_0120 ME50**	2000	1900	3000	**>55≤60**	91	108,1	10/5/2	125	1760	2600	4220
13,04	3339/256	**K713_0130 ME30**	2000	1900	3000	**≤24**	37	95,6	10/5/2	119	990	990	1230
13,04	3339/256	**K713_0130 ME30**	2000	1900	3000	**>24≤32**	37	95,6	10/5/2	123	1640	2000	2490
13,04	3339/256	**K713_0130 ME30**	2000	1900	3000	**>32≤38**	39	95,6	10/5/2	124	1640	2000	2490
13,04	3339/256	**K713_0130 ME40**	2000	1900	3000	**≤38**	47	100,5	10/5/2	123	1820	2370	2960
13,04	3339/256	**K713_0130 ME40**	2000	1900	3000	**>38≤48**	61	100,5	10/5/2	124	1820	2600	4680
13,04	3339/256	**K713_0130 ME50**	2000	1900	3000	**≤55**	85	108,1	10/5/2	125	1820	2600	4680
13,04	3339/256	**K713_0130 ME50**	2000	1900	3000	**>55≤60**	89	108,1	10/5/2	125	1820	2600	4680
14,80	1421/96	**K713_0150 ME30**	2000	1900	3000	**≤24**	30	95,6	10/5/2	120	1120	1120	1400
14,80	1421/96	**K713_0150 ME30**	2000	1900	3000	**>24≤32**	30	95,6	10/5/2	124	1630	2260	2820
14,80	1421/96	**K713_0150 ME30**	2000	1900	3000	**>32≤38**	32	95,6	10/5/2	125	1630	2260	2820
14,80	1421/96	**K713_0150 ME40**	2000	1900	3000	**≤38**	40	100,5	10/5/2	124	1900	2600	3360
14,80	1421/96	**K713_0150 ME40**	2000	1900	3000	**>38≤48**	54	100,5	10/5/2	125	1900	2600	4800
14,80	1421/96	**K713_0150 ME50**	2000	1900	3000	**≤55**	78	108,1	10/5/2	125	1900	2600	4800
14,80	1421/96	**K713_0150 ME50**	2000	1900	3000	**>55≤60**	82	108,1	10/5/2	125	1900	2600	4800
16,39	6293/384	**K713_0165 ME30**	2000	1900	3000	**≤24**	29	95,6	10/5/2	121	1240	1240	1550
16,39	6293/384	**K713_0165 ME30**	2000	1900	3000	**>24≤32**	29	95,6	10/5/2	124	1800	2500	3130
16,39	6293/384	**K713_0165 ME30**	2000	1900	3000	**>32≤38**	31	95,6	10/5/2	125	1800	2500	3130
16,39	6293/384	**K713_0165 ME40**	2000	1900	3000	**≤38**	39	100,5	10/5/2	124	1960	2600	3720
16,39	6293/384	**K713_0165 ME40**	2000	1900	3000	**>38≤48**	53	100,5	10/5/2	125	1960	2600	4800
16,39	6293/384	**K713_0165 ME50**	2000	1900	3000	**≤55**	77	108,1	10/5/2	125	1960	2600	4800
16,39	6293/384	**K713_0165 ME50**	2000	1900	3000	**>55≤60**	81	108,1	10/5/2	125	1960	2600	4800
18,28	26901/1472	**K713_0185 ME30**	2400	2200	3400	**≤24**	24	95,6	10/5/2	122	1380	1380	1730
18,28	26901/1472	**K713_0185 ME30**	2400	2200	3400	**>24≤32**	25	95,6	10/5/2	124	1720	2560	3200
18,28	26901/1472	**K713_0185 ME30**	2400	2200	3400	**>32≤38**	26	95,6	10/5/2	125	1720	2560	3200
18,28	26901/1472	**K713_0185 ME40**	2400	2200	3400	**≤38**	35	100,5	10/5/2	124	2030	2600	4150
18,28	26901/1472	**K713_0185 ME40**	2400	2200	3400	**>38≤48**	49	100,5	10/5/2	125	2030	2600	4800
18,28	26901/1472	**K713_0185 ME50**	2400	2200	3000	**≤55**	73	108,1	10/5/2	125	2030	2600	4800
18,28	26901/1472	**K713_0185 ME50**	2400	2200	3000	**>55≤60**	77	108,1	10/5/2	125	2030	2600	4800
20,23	119133/5888	**K713_0200 ME30**	2400	2200	3400	**≤24**	24	95,6	10/5/2	123	1530	1530	1910
20,23	119133/5888	**K713_0200 ME30**	2400	2200	3400	**>24≤32**	24	95,6	10/5/2	125	1900	2600	3550
20,23	119133/5888	**K713_0200 ME30**	2400	2200	3400	**>32≤38**	26	95,6	10/5/2	125	1900	2600	3550
20,23	119133/5888	**K713_0200 ME40**	2400	2200	3400	**≤38**	34	100,5	10/5/2	125	2100	2600	4590
20,23	119133/5888	**K713_0200 ME40**	2400	2200	3400	**>38≤48**	48	100,5	10/5/2	125	2100	2600	4800
20,23	119133/5888	**K713_0200 ME50**	2400	2200	3000	**≤55**	72	108,1	10/5/2	125	2100	2600	4800
20,23	119133/5888	**K713_0200 ME50**	2400	2200	3000	**>55≤60**	76	108,1	10/5/2	125	2100	2600	4800
22,74	14553/640	**K713_0230 ME30**	2400	2200	3400	**≤24**	20	95,6	10/5/2	123	1720	1720	2150
22,74	14553/640	**K713_0230 ME30**	2400	2200	3400	**>24≤32**	20	95,6	10/5/2	125	1830	2600	3780
22,74	14553/640	**K713_0230 ME30**	2400	2200	3400	**>32≤38**	22	95,6	10/5/2	125	1830	2600	3780
22,74	14553/640	**K713_0230 ME40**	2400	2200	3400	**≤38**	30	100,5	10/5/2	125	2190	2600	4800

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K713 (M2BMAX=2600 Nm)													
22,74	14553/640	**K713_0230 ME40**	2400	2200	3400	**>38≤48**	44	100,5	10/5/2	125	2190	2600	4800
22,74	14553/640	**K713_0230 ME50**	2400	2200	3000	**≤55**	68	108,1	10/5/2	125	2190	2600	4800
22,74	14553/640	**K713_0230 ME50**	2400	2200	3000	**>55≤60**	72	108,1	10/5/2	125	2190	2600	4800
25,18	64449/2560	**K713_0250 ME30**	2400	2200	3400	**≤24**	19	95,6	10/5/2	124	1910	1910	2380
25,18	64449/2560	**K713_0250 ME30**	2400	2200	3400	**>24≤32**	19	95,6	10/5/2	125	2030	2600	4180
25,18	64449/2560	**K713_0250 ME30**	2400	2200	3400	**>32≤38**	21	95,6	10/5/2	125	2030	2600	4180
25,18	64449/2560	**K713_0250 ME40**	2400	2200	3400	**≤38**	30	100,5	10/5/2	125	2260	2600	4800
25,18	64449/2560	**K713_0250 ME40**	2400	2200	3400	**>38≤48**	44	100,5	10/5/2	125	2260	2600	4800
25,18	64449/2560	**K713_0250 ME50**	2400	2200	3000	**≤55**	68	108,1	10/5/2	125	2260	2600	4800
25,18	64449/2560	**K713_0250 ME50**	2400	2200	3000	**>55≤60**	72	108,1	10/5/2	125	2260	2600	4800
29,29	7497/256	**K713_0290 ME30**	2900	2600	3800	**≤24**	16	95,6	10/5/2	124	1930	2220	2770
29,29	7497/256	**K713_0290 ME30**	2900	2600	3800	**>24≤32**	16	95,6	10/5/2	125	1930	2600	4090
29,29	7497/256	**K713_0290 ME30**	2900	2600	3800	**>32≤38**	18	95,6	10/5/2	125	1930	2600	4090
29,29	7497/256	**K713_0290 ME40**	2900	2600	3500	**≤38**	26	100,5	10/5/2	125	2380	2600	4800
29,29	7497/256	**K713_0290 ME40**	2900	2600	3500	**>38≤48**	40	100,5	10/5/2	125	2380	2600	4800
29,29	7497/256	**K713_0290 ME50**	2500	2500	3000	**≤55**	64	108,1	10/5/2	125	2380	2600	4800
29,29	7497/256	**K713_0290 ME50**	2500	2500	3000	**>55≤60**	68	108,1	10/5/2	125	2380	2600	4800
32,42	33201/1024	**K713_0320 ME30**	2900	2600	3800	**≤24**	15	95,6	10/5/2	124	2140	2450	3070
32,42	33201/1024	**K713_0320 ME30**	2900	2600	3800	**>24≤32**	16	95,6	10/5/2	125	2140	2600	4530
32,42	33201/1024	**K713_0320 ME30**	2900	2600	3800	**>32≤38**	17	95,6	10/5/2	125	2140	2600	4530
32,42	33201/1024	**K713_0320 ME40**	2900	2600	3500	**≤38**	26	100,5	10/5/2	125	2400	2600	4800
32,42	33201/1024	**K713_0320 ME40**	2900	2600	3500	**>38≤48**	40	100,5	10/5/2	125	2400	2600	4800
32,42	33201/1024	**K713_0320 ME50**	2500	2500	3000	**≤55**	64	108,1	10/5/2	125	2400	2600	4800
32,42	33201/1024	**K713_0320 ME50**	2500	2500	3000	**>55≤60**	68	108,1	10/5/2	125	2400	2600	4800
35,44	567/16	**K713_0350 ME30**	2900	2600	3800	**≤24**	14	95,6	10/5/2	125	2010	2600	3350
35,44	567/16	**K713_0350 ME30**	2900	2600	3800	**>24≤32**	14	95,6	10/5/2	125	2010	2600	4560
35,44	567/16	**K713_0350 ME30**	2900	2600	3800	**>32≤38**	15	95,6	10/5/2	125	2010	2600	4560
35,44	567/16	**K713_0350 ME40**	2900	2600	3500	**≤38**	24	100,5	10/5/2	125	2400	2600	4560
35,44	567/16	**K713_0350 ME40**	2900	2600	3500	**>38≤48**	37	100,5	10/5/2	125	2400	2600	4560
35,44	567/16	**K713_0350 ME50**	2500	2500	3000	**>55≤60**	66	108,1	10/5/2	125	2400	2600	4560
39,23	2511/64	**K713_0390 ME30**	2900	2600	3800	**≤24**	13	95,6	10/5/2	125	2230	2600	3710
39,23	2511/64	**K713_0390 ME30**	2900	2600	3800	**>24≤32**	14	95,6	10/5/2	125	2230	2600	4800
39,23	2511/64	**K713_0390 ME30**	2900	2600	3800	**>32≤38**	15	95,6	10/5/2	125	2230	2600	4800
39,23	2511/64	**K713_0390 ME40**	2900	2600	3500	**≤38**	24	100,5	10/5/2	125	2400	2600	4800
39,23	2511/64	**K713_0390 ME40**	2900	2600	3500	**>38≤48**	37	100,5	10/5/2	125	2400	2600	4800
39,23	2511/64	**K713_0390 ME50**	2500	2500	3000	**>55≤60**	66	108,1	10/5/2	126	2400	2600	4800
45,05	37485/832	**K713_0450 ME30**	2900	2600	3800	**≤24**	12	95,6	10/5/2	125	2080	2600	4260
45,05	37485/832	**K713_0450 ME30**	2900	2600	3800	**>24≤32**	12	95,6	10/5/2	125	2080	2600	4800
45,05	37485/832	**K713_0450 ME30**	2900	2600	3800	**>32≤38**	14	95,6	10/5/2	126	2080	2600	4800
45,05	37485/832	**K713_0450 ME40**	2900	2600	3500	**≤38**	22	100,5	10/5/2	125	2400	2600	4800
45,05	37485/832	**K713_0450 ME40**	2900	2600	3500	**>38≤48**	35	100,5	10/5/2	125	2400	2600	4800
45,05	37485/832	**K713_0450 ME50**	2500	2500	3000	**>55≤60**	64	108,1	10/5/2	126	2400	2600	4800
49,88	166005/3328	**K713_0500 ME30**	2900	2600	3800	**≤24**	12	95,6	10/5/2	125	2310	2600	4720
49,88	166005/3328	**K713_0500 ME30**	2900	2600	3800	**>24≤32**	12	95,6	10/5/2	125	2310	2600	4800
49,88	166005/3328	**K713_0500 ME30**	2900	2600	3800	**>32≤38**	13	95,6	10/5/2	126	2310	2600	4800
49,88	166005/3328	**K713_0500 ME40**	2900	2600	3500	**≤38**	22	100,5	10/5/2	125	2400	2600	4800
49,88	166005/3328	**K713_0500 ME40**	2900	2600	3500	**>38≤48**	35	100,5	10/5/2	126	2400	2600	4800
49,88	166005/3328	**K713_0500 ME50**	2500	2500	3000	**>55≤60**	64	108,1	10/5/2	126	2400	2600	4800
58,57	7497/128	**K713_0590 ME30**	2900	2600	3800	**≤24**	10	95,6	10/5/2	125	2170	2600	4800
58,57	7497/128	**K713_0590 ME30**	2900	2600	3800	**>24≤32**	10	95,6	10/5/2	126	2170	2600	4800
58,57	7497/128	**K713_0590 ME30**	2900	2600	3800	**>32≤38**	12	95,6	10/5/2	126	2170	2600	4800
58,57	7497/128	**K713_0590 ME40**	2900	2600	3500	**≤38**	20	100,5	10/5/2	125	2400	2600	4800
58,57	7497/128	**K713_0590 ME40**	2900	2600	3500	**>38≤48**	34	100,5	10/5/2	126	2400	2600	4800
58,57	7497/128	**K713_0590 ME50**	2500	2500	3000	**>55≤60**	63	108,1	10/5/2	126	2400	2600	4800
64,85	33201/512	**K713_0650 ME30**	2900	2600	3800	**≤24**	10	95,6	10/5/2	125	2400	2600	4800
64,85	33201/512	**K713_0650 ME30**	2900	2600	3800	**>24≤32**	10	95,6	10/5/2	126	2400	2600	4800
64,85	33201/512	**K713_0650 ME30**	2900	2600	3800	**>32≤38**	12	95,6	10/5/2	126	2400	2600	4800
64,85	33201/512	**K713_0650 ME40**	2900	2600	3500	**≤38**	20	100,5	10/5/2	126	2400	2600	4800
64,85	33201/512	**K713_0650 ME40**	2900	2600	3500	**>38≤48**	34	100,5	10/5/2	126	2400	2600	4800
64,85	33201/512	**K713_0650 ME50**	2500	2500	3000	**>55≤60**	63	108,1	10/5/2	126	2400	2600	4800
71,20	4557/64	**K713_0710 ME30**	2900	2600	3800	**≤24**	9,3	95,6	10/5/2	125	2170	2280	2850
71,20	4557/64	**K713_0710 ME30**	2900	2600	3800	**>24≤32**	9,4	95,6	10/5/2	126	2170	2280	2850

Helical Bevel Gear Units **K**
*Reductores cónicos **K***
Riduttori copia conica **K**

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K713 (M2BMAX=2600 Nm)													
71,20	4557/64	**K713_0710 ME30**	2900	2600	3800	**>32≤38**	11	95,6	10/5/2	126	2170	2280	2850
78,83	20181/256	**K713_0790 ME30**	2900	2600	3800	**≤24**	9,3	95,6	10/5/2	125	2400	2520	3150
78,83	20181/256	**K713_0790 ME30**	2900	2600	3800	**>24≤32**	9,4	95,6	10/5/2	126	2400	2520	3150
78,83	20181/256	**K713_0790 ME30**	2900	2600	3800	**>32≤38**	11	95,6	10/5/2	126	2400	2520	3150
89,00	22785/256	**K713_0890 ME30**	2900	2600	3800	**≤24**	8,7	95,6	10/5/2	125	1670	2010	3010
89,00	22785/256	**K713_0890 ME30**	2900	2600	3800	**>24≤32**	8,8	95,6	10/5/2	126	1670	2010	3010
89,00	22785/256	**K713_0890 ME30**	2900	2600	3800	**>32≤38**	11	95,6	10/5/2	126	1670	2010	3010
98,54	100905/1024	**K713_0990 ME30**	2900	2600	3800	**≤24**	8,7	95,6	10/5/2	125	1850	2220	3330
98,54	100905/1024	**K713_0990 ME30**	2900	2600	3800	**>24≤32**	8,8	95,6	10/5/2	126	1850	2220	3330
98,54	100905/1024	**K713_0990 ME30**	2900	2600	3800	**>32≤38**	11	95,6	10/5/2	126	1850	2220	3330
K714 (M2BMAX=2600 Nm)													
89,06	227997/2560	**K714_0890 ME30**	2900	2600	3800	**≤24**	8,7	104,0	10/6/3	125	2400	2600	3450
89,06	227997/2560	**K714_0890 ME30**	2900	2600	3800	**>24≤32**	8,9	104,0	10/6/3	126	2400	2600	3450
89,06	227997/2560	**K714_0890 ME30**	2900	2600	3800	**>32≤38**	11	104,0	10/6/3	126	2400	2600	3450
98,60	1009701/10240	**K714_0990 ME30**	2900	2600	3800	**≤24**	8,7	104,0	10/6/3	125	2400	2600	3820
98,60	1009701/10240	**K714_0990 ME30**	2900	2600	3800	**>24≤32**	8,8	104,0	10/6/3	126	2400	2600	3820
98,60	1009701/10240	**K714_0990 ME30**	2900	2600	3800	**>32≤38**	11	104,0	10/6/3	126	2400	2600	3820
114,7	117453/1024	**K714_1150 ME30**	2900	2600	3800	**≤24**	8,5	104,0	10/6/3	126	2400	2600	4090
114,7	117453/1024	**K714_1150 ME30**	2900	2600	3800	**>24≤32**	8,6	104,0	10/6/3	126	2400	2600	4090
114,7	117453/1024	**K714_1150 ME30**	2900	2600	3800	**>32≤38**	10	104,0	10/6/3	126	2400	2600	4090
127,0	520149/4096	**K714_1270 ME30**	2900	2600	3800	**≤24**	8,5	104,0	10/6/3	126	2400	2600	4530
127,0	520149/4096	**K714_1270 ME30**	2900	2600	3800	**>24≤32**	8,6	104,0	10/6/3	126	2400	2600	4530
127,0	520149/4096	**K714_1270 ME30**	2900	2600	3800	**>32≤38**	10	104,0	10/6/3	126	2400	2600	4530
137,0	5481/40	**K714_1370 ME20**	2900	2600	3800	**≤19**	2,4	102,1	10/6/3	125	1630	1630	2030
137,0	5481/40	**K714_1370 ME20**	2900	2600	3800	**>19≤24**	3,1	102,1	10/6/3	126	1630	1630	2030
138,8	8883/64	**K714_1390 ME30**	2900	2600	3800	**≤24**	8,3	104,0	10/6/3	126	2400	2600	4560
138,8	8883/64	**K714_1390 ME30**	2900	2600	3800	**>24≤32**	8,5	104,0	10/6/3	126	2400	2600	4560
138,8	8883/64	**K714_1390 ME30**	2900	2600	3800	**>32≤38**	10	104,0	10/6/3	126	2400	2600	4560
151,7	24273/160	**K714_1520 ME20**	2900	2600	3800	**≤19**	2,3	102,1	10/6/3	125	1800	1800	2250
151,7	24273/160	**K714_1520 ME20**	2900	2600	3800	**>19≤24**	3,1	102,1	10/6/3	126	1800	1800	2250
153,7	39339/256	**K714_1540 ME30**	2900	2600	3800	**≤24**	8,3	104,0	10/6/3	126	2400	2600	4800
153,7	39339/256	**K714_1540 ME30**	2900	2600	3800	**>24≤32**	8,4	104,0	10/6/3	126	2400	2600	4800
153,7	39339/256	**K714_1540 ME30**	2900	2600	3800	**>32≤38**	10	104,0	10/6/3	126	2400	2600	4800
174,2	72471/416	**K714_1740 ME20**	2900	2600	3800	**≤19**	2,2	102,1	10/6/3	126	1750	1750	2190
174,2	72471/416	**K714_1740 ME20**	2900	2600	3800	**>19≤24**	3,0	102,1	10/6/3	126	1750	1750	2190
176,5	587265/3328	**K714_1760 ME30**	2900	2600	3800	**≤24**	8,2	104,0	10/6/3	126	2400	2600	4800
176,5	587265/3328	**K714_1760 ME30**	2900	2600	3800	**>24≤32**	8,3	104,0	10/6/3	126	2400	2600	4800
176,5	587265/3328	**K714_1760 ME30**	2900	2600	3800	**>32≤38**	10	104,0	10/6/3	126	2400	2600	4800
192,9	320943/1664	**K714_1930 ME20**	2900	2600	3800	**≤19**	2,2	102,1	10/6/3	126	1940	1940	2420
192,9	320943/1664	**K714_1930 ME20**	2900	2600	3800	**>19≤24**	3,0	102,1	10/6/3	126	1940	1940	2420
195,4	2600745/13312	**K714_1950 ME30**	2900	2600	3800	**≤24**	8,2	104,0	10/6/3	126	2400	2600	4800
195,4	2600745/13312	**K714_1950 ME30**	2900	2600	3800	**>24≤32**	8,3	104,0	10/6/3	126	2400	2600	4800
195,4	2600745/13312	**K714_1950 ME30**	2900	2600	3800	**>32≤38**	10	104,0	10/6/3	126	2400	2600	4800
226,5	72471/320	**K714_2260 ME20**	2900	2600	3800	**≤19**	2,1	102,1	10/6/3	126	2040	2040	2560
226,5	72471/320	**K714_2260 ME20**	2900	2600	3800	**>19≤24**	2,9	102,1	10/6/3	126	2040	2040	2560
229,4	117453/512	**K714_2290 ME30**	2900	2600	3800	**≤24**	8,1	104,0	10/6/3	126	2400	2600	4800
229,4	117453/512	**K714_2290 ME30**	2900	2600	3800	**>24≤32**	8,2	104,0	10/6/3	126	2400	2600	4800
229,4	117453/512	**K714_2290 ME30**	2900	2600	3800	**>32≤38**	10,0	104,0	10/6/3	126	2400	2600	4800
250,7	320943/1280	**K714_2510 ME20**	2900	2600	3800	**≤19**	2,1	102,1	10/6/3	126	2260	2260	2830
250,7	320943/1280	**K714_2510 ME20**	2900	2600	3800	**>19≤24**	2,9	102,1	10/6/3	126	2260	2260	2830
254,0	520149/2048	**K714_2540 ME30**	2900	2600	3800	**≤24**	8,1	104,0	10/6/3	126	2400	2600	4800
254,0	520149/2048	**K714_2540 ME30**	2900	2600	3800	**>24≤32**	8,2	104,0	10/6/3	126	2400	2600	4800
254,0	520149/2048	**K714_2540 ME30**	2900	2600	3800	**>32≤38**	10,0	104,0	10/6/3	126	2400	2600	4800
275,3	44051/160	**K714_2750 ME20**	2900	2600	3800	**≤19**	2,1	102,1	10/6/3	126	2170	2280	2850
275,3	44051/160	**K714_2750 ME20**	2900	2600	3800	**>19≤24**	2,8	102,1	10/6/3	126	2170	2280	2850
304,8	195083/640	**K714_3050 ME20**	2900	2600	3800	**≤19**	2,1	102,1	10/6/3	126	2400	2520	3150
304,8	195083/640	**K714_3050 ME20**	2900	2600	3800	**>19≤24**	2,8	102,1	10/6/3	126	2400	2520	3150
344,1	44051/128	**K714_3440 ME20**	2900	2600	3800	**≤19**	2,0	102,1	10/6/3	126	1670	2010	3010
344,1	44051/128	**K714_3440 ME20**	2900	2600	3800	**>19≤24**	2,8	102,1	10/6/3	126	1670	2010	3010

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i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K714 (M2BMAX=2600 Nm)													
381,0	195083/512	**K714_3810 ME20**	2900	2600	3800	**≤19**	2,0	102,1	10/6/3	126	1850	2220	3330
381,0	195083/512	**K714_3810 ME20**	2900	2600	3800	**>19≤24**	2,8	102,1	10/6/3	126	1850	2220	3330
K813 (M2BMAX=4650 Nm)													
7,445	3127/420	**K813_0074 ME40**	1600	1500	2600	**≤38**	160	153,9	10/5/2	178	1350	1350	1690
7,445	3127/420	**K813_0074 ME40**	1600	1500	2600	**>38≤48**	174	153,9	10/5/2	187	2140	2140	2670
7,445	3127/420	**K813_0074 ME50**	1600	1500	2600	**≤55**	198	161,5	10/5/2	190	2140	2140	2670
7,445	3127/420	**K813_0074 ME50**	1600	1500	2600	**>55≤60**	202	161,5	10/5/2	191	2140	2140	2670
8,243	96937/11760	**K813_0082 ME40**	1600	1500	2600	**≤38**	147	153,9	10/5/2	181	1500	1500	1870
8,243	96937/11760	**K813_0082 ME40**	1600	1500	2600	**>38≤48**	161	153,9	10/5/2	189	2360	2360	2960
8,243	96937/11760	**K813_0082 ME50**	1600	1500	2600	**≤55**	185	161,5	10/5/2	191	2360	2360	2960
8,243	96937/11760	**K813_0082 ME50**	1600	1500	2600	**>55≤60**	189	161,5	10/5/2	192	2360	2360	2960
9,284	11977/1290	**K813_0093 ME40**	1600	1500	2600	**≤38**	119	153,9	10/5/2	184	1690	1690	2110
9,284	11977/1290	**K813_0093 ME40**	1600	1500	2600	**>38≤48**	133	153,9	10/5/2	191	2660	2660	3330
9,284	11977/1290	**K813_0093 ME50**	1600	1500	2600	**≤55**	157	161,5	10/5/2	192	2660	2660	3330
9,284	11977/1290	**K813_0093 ME50**	1600	1500	2600	**>55≤60**	161	161,5	10/5/2	193	2660	2660	3330
10,28	53041/5160	**K813_0105 ME40**	1600	1500	2600	**≤38**	111	153,9	10/5/2	186	1870	1870	2330
10,28	53041/5160	**K813_0105 ME40**	1600	1500	2600	**>38≤48**	125	153,9	10/5/2	192	2910	2950	3690
10,28	53041/5160	**K813_0105 ME50**	1600	1500	2600	**≤55**	148	161,5	10/5/2	193	2910	2950	3690
10,28	53041/5160	**K813_0105 ME50**	1600	1500	2600	**>55≤60**	152	161,5	10/5/2	193	2910	2950	3690
14,84	9499/640	**K813_0150 ME40**	1900	1800	2900	**≤38**	68	153,9	10/5/2	191	2690	2690	3370
14,84	9499/640	**K813_0150 ME40**	1900	1800	2900	**>38≤48**	82	153,9	10/5/2	194	3290	4260	5320
14,84	9499/640	**K813_0150 ME50**	1900	1800	2900	**≤55**	106	161,5	10/5/2	195	3290	4260	5320
14,84	9499/640	**K813_0150 ME50**	1900	1800	2900	**>55≤60**	110	161,5	10/5/2	195	3290	4260	5320
16,43	42067/2560	**K813_0165 ME40**	1900	1800	2900	**≤38**	65	153,9	10/5/2	192	2980	2980	3730
16,43	42067/2560	**K813_0165 ME40**	1900	1800	2900	**>38≤48**	79	153,9	10/5/2	194	3400	4650	5890
16,43	42067/2560	**K813_0165 ME50**	1900	1800	2900	**≤55**	102	161,5	10/5/2	195	3400	4650	5890
16,43	42067/2560	**K813_0165 ME50**	1900	1800	2900	**>55≤60**	106	161,5	10/5/2	195	3400	4650	5890
17,33	30149/1740	**K813_0175 ME30**	2300	2100	3300	**≤24**	48	149,0	10/5/2	187	1310	1310	1640
17,33	30149/1740	**K813_0175 ME30**	2300	2100	3300	**>24≤32**	48	149,0	10/5/2	193	2020	2650	3310
17,33	30149/1740	**K813_0175 ME30**	2300	2100	3300	**>32≤38**	49	149,0	10/5/2	194	2020	2650	3310
17,33	30149/1740	**K813_0175 ME40**	2300	2100	3300	**≤38**	58	153,9	10/5/2	193	3150	3150	3930
17,33	30149/1740	**K813_0175 ME40**	2300	2100	3300	**>38≤48**	72	153,9	10/5/2	195	3460	4650	6210
17,33	30149/1740	**K813_0175 ME50**	2300	2100	3000	**≤55**	96	161,5	10/5/2	195	3460	4650	6210
17,33	30149/1740	**K813_0175 ME50**	2300	2100	3000	**>55≤60**	100	161,5	10/5/2	195	3460	4650	6210
19,18	133517/6960	**K813_0190 ME30**	2300	2100	3300	**≤24**	45	149,0	10/5/2	188	1450	1450	1820
19,18	133517/6960	**K813_0190 ME30**	2300	2100	3300	**>24≤32**	45	149,0	10/5/2	194	2240	2930	3670
19,18	133517/6960	**K813_0190 ME30**	2300	2100	3300	**>32≤38**	47	149,0	10/5/2	195	2240	2930	3670
19,18	133517/6960	**K813_0190 ME40**	2300	2100	3300	**≤38**	56	153,9	10/5/2	193	3480	3480	4350
19,18	133517/6960	**K813_0190 ME40**	2300	2100	3300	**>38≤48**	70	153,9	10/5/2	195	3580	4650	6880
19,18	133517/6960	**K813_0190 ME50**	2300	2100	3000	**≤55**	93	161,5	10/5/2	195	3580	4650	6880
19,18	133517/6960	**K813_0190 ME50**	2300	2100	3000	**>55≤60**	98	161,5	10/5/2	195	3580	4650	6880
23,04	31801/1380	**K813_0230 ME30**	2300	2100	3300	**≤24**	34	149,0	10/5/2	191	1740	1740	2180
23,04	31801/1380	**K813_0230 ME30**	2300	2100	3300	**>24≤32**	34	149,0	10/5/2	194	2150	3130	3920
23,04	31801/1380	**K813_0230 ME30**	2300	2100	3300	**>32≤38**	36	149,0	10/5/2	195	2150	3130	3920
23,04	31801/1380	**K813_0230 ME40**	2300	2100	3300	**≤38**	45	153,9	10/5/2	194	3800	4180	5230
23,04	31801/1380	**K813_0230 ME40**	2300	2100	3300	**>38≤48**	58	153,9	10/5/2	195	3800	4650	8260
23,04	31801/1380	**K813_0230 ME50**	2300	2100	3000	**≤55**	82	161,5	10/5/2	196	3800	4650	8260
23,04	31801/1380	**K813_0230 ME50**	2300	2100	3000	**>55≤60**	86	161,5	10/5/2	196	3800	4650	8260
25,51	140833/5520	**K813_0260 ME30**	2300	2100	3300	**≤24**	33	149,0	10/5/2	192	1930	1930	2410
25,51	140833/5520	**K813_0260 ME30**	2300	2100	3300	**>24≤32**	33	149,0	10/5/2	195	2380	3470	4340
25,51	140833/5520	**K813_0260 ME30**	2300	2100	3300	**>32≤38**	35	149,0	10/5/2	195	2380	3470	4340
25,51	140833/5520	**K813_0260 ME40**	2300	2100	3300	**≤38**	43	153,9	10/5/2	195	3940	4630	5790
25,51	140833/5520	**K813_0260 ME40**	2300	2100	3300	**>38≤48**	57	153,9	10/5/2	196	3940	4650	8400
25,51	140833/5520	**K813_0260 ME50**	2300	2100	3000	**≤55**	81	161,5	10/5/2	196	3940	4650	8400
25,51	140833/5520	**K813_0260 ME50**	2300	2100	3000	**>55≤60**	85	161,5	10/5/2	196	3940	4650	8400
29,25	7021/240	**K813_0290 ME30**	2800	2500	3600	**≤24**	26	149,0	10/5/2	193	2210	2210	2770
29,25	7021/240	**K813_0290 ME30**	2800	2500	3600	**>24≤32**	26	149,0	10/5/2	195	2340	3750	4690
29,25	7021/240	**K813_0290 ME30**	2800	2500	3600	**>32≤38**	28	149,0	10/5/2	196	2340	3750	4690
29,25	7021/240	**K813_0290 ME40**	2800	2500	3500	**≤38**	36	153,9	10/5/2	195	4120	4650	6640

Helical Bevel Gear Units **K**
*Reductores cónicos **K***
Riduttori copia conica **K**

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K813 (M2BMAX=4650 Nm)													
29,25	7021/240	**K813_0290 ME40**	2800	2500	3500	**>38≤48**	50	153,9	10/5/2	196	4120	4650	8400
29,25	7021/240	**K813_0290 ME50**	2500	2500	3000	**≤55**	74	161,5	10/5/2	196	4120	4650	8400
29,25	7021/240	**K813_0290 ME50**	2500	2500	3000	**>55≤60**	78	161,5	10/5/2	196	4120	4650	8400
32,39	31093/960	**K813_0320 ME30**	2800	2500	3600	**≤24**	25	149,0	10/5/2	193	2450	2450	3070
32,39	31093/960	**K813_0320 ME30**	2800	2500	3600	**>24≤32**	25	149,0	10/5/2	195	2590	4150	5190
32,39	31093/960	**K813_0320 ME30**	2800	2500	3600	**>32≤38**	27	149,0	10/5/2	196	2590	4150	5190
32,39	31093/960	**K813_0320 ME40**	2800	2500	3500	**≤38**	35	153,9	10/5/2	195	4200	4650	7350
32,39	31093/960	**K813_0320 ME40**	2800	2500	3500	**>38≤48**	49	153,9	10/5/2	196	4200	4650	8400
32,39	31093/960	**K813_0320 ME50**	2500	2500	3000	**≤55**	73	161,5	10/5/2	196	4200	4650	8400
32,39	31093/960	**K813_0320 ME50**	2500	2500	3000	**>55≤60**	77	161,5	10/5/2	196	4200	4650	8400
36,14	2891/80	**K813_0360 ME30**	2800	2500	3600	**≤24**	20	149,0	10/5/2	194	2370	2740	3420
36,14	2891/80	**K813_0360 ME30**	2800	2500	3600	**>24≤32**	21	149,0	10/5/2	196	2370	3890	4860
36,14	2891/80	**K813_0360 ME30**	2800	2500	3600	**>32≤38**	22	149,0	10/5/2	196	2370	3890	4860
36,14	2891/80	**K813_0360 ME40**	2800	2500	3500	**≤38**	31	153,9	10/5/2	195	4200	4650	8200
36,14	2891/80	**K813_0360 ME40**	2800	2500	3500	**>38≤48**	45	153,9	10/5/2	196	4200	4650	8400
36,14	2891/80	**K813_0360 ME50**	2500	2500	3000	**≤55**	69	161,5	10/5/2	196	4200	4650	8400
36,14	2891/80	**K813_0360 ME50**	2500	2500	3000	**>55≤60**	73	161,5	10/5/2	196	4200	4650	8400
40,01	12803/320	**K813_0400 ME30**	2800	2500	3600	**≤24**	20	149,0	10/5/2	194	2620	3030	3790
40,01	12803/320	**K813_0400 ME30**	2800	2500	3600	**>24≤32**	20	149,0	10/5/2	196	2620	4300	5380
40,01	12803/320	**K813_0400 ME30**	2800	2500	3600	**>32≤38**	22	149,0	10/5/2	196	2620	4300	5380
40,01	12803/320	**K813_0400 ME40**	2800	2500	3500	**≤38**	31	153,9	10/5/2	196	4200	4650	8400
40,01	12803/320	**K813_0400 ME40**	2800	2500	3500	**>38≤48**	44	153,9	10/5/2	196	4200	4650	8400
40,01	12803/320	**K813_0400 ME50**	2500	2500	3000	**≤55**	68	161,5	10/5/2	196	4200	4650	8400
40,01	12803/320	**K813_0400 ME50**	2500	2500	3000	**>55≤60**	72	161,5	10/5/2	196	4200	4650	8400
44,25	177/4	**K813_0440 ME30**	2800	2500	3600	**≤24**	17	149,0	10/5/2	195	2490	3350	4190
44,25	177/4	**K813_0440 ME30**	2800	2500	3600	**>24≤32**	17	149,0	10/5/2	196	2490	4370	5460
44,25	177/4	**K813_0440 ME30**	2800	2500	3600	**>32≤38**	19	149,0	10/5/2	196	2490	4370	5460
44,25	177/4	**K813_0440 ME40**	2800	2500	3500	**≤38**	27	153,9	10/5/2	196	4200	4370	5460
44,25	177/4	**K813_0440 ME40**	2800	2500	3500	**>38≤48**	41	153,9	10/5/2	196	4200	4370	5460
44,25	177/4	**K813_0440 ME50**	2500	2500	3000	**>55≤60**	70	161,5	10/5/2	196	4200	4370	5460
48,99	5487/112	**K813_0490 ME30**	2800	2500	3600	**≤24**	16	149,0	10/5/2	195	2760	3710	4640
48,99	5487/112	**K813_0490 ME30**	2800	2500	3600	**>24≤32**	17	149,0	10/5/2	196	2760	4650	6040
48,99	5487/112	**K813_0490 ME30**	2800	2500	3600	**>32≤38**	18	149,0	10/5/2	196	2760	4650	6040
48,99	5487/112	**K813_0490 ME40**	2800	2500	3500	**≤38**	27	153,9	10/5/2	196	4200	4650	6040
48,99	5487/112	**K813_0490 ME40**	2800	2500	3500	**>38≤48**	40	153,9	10/5/2	196	4200	4650	6040
48,99	5487/112	**K813_0490 ME50**	2500	2500	3000	**>55≤60**	69	161,5	10/5/2	196	4200	4650	6040
59,08	42539/720	**K813_0590 ME30**	2800	2500	3600	**≤24**	13	149,0	10/5/2	195	2560	4470	5590
59,08	42539/720	**K813_0590 ME30**	2800	2500	3600	**>24≤32**	13	149,0	10/5/2	196	2560	4650	6390
59,08	42539/720	**K813_0590 ME30**	2800	2500	3600	**>32≤38**	15	149,0	10/5/2	196	2560	4650	6390
59,08	42539/720	**K813_0590 ME40**	2800	2500	3500	**≤38**	23	153,9	10/5/2	196	4200	4650	6390
59,08	42539/720	**K813_0590 ME40**	2800	2500	3500	**>38≤48**	37	153,9	10/5/2	196	4200	4650	6390
59,08	42539/720	**K813_0590 ME50**	2500	2500	3000	**>55≤60**	66	161,5	10/5/2	196	4200	4650	6390
65,41	188387/2880	**K813_0650 ME30**	2800	2500	3600	**≤24**	13	149,0	10/5/2	196	2830	4650	6190
65,41	188387/2880	**K813_0650 ME30**	2800	2500	3600	**>24≤32**	13	149,0	10/5/2	196	2830	4650	7080
65,41	188387/2880	**K813_0650 ME30**	2800	2500	3600	**>32≤38**	15	149,0	10/5/2	196	2830	4650	7080
65,41	188387/2880	**K813_0650 ME40**	2800	2500	3500	**≤38**	23	153,9	10/5/2	196	4200	4650	7080
65,41	188387/2880	**K813_0650 ME40**	2800	2500	3500	**>38≤48**	37	153,9	10/5/2	196	4200	4650	7080
65,41	188387/2880	**K813_0650 ME50**	2500	2500	3000	**>55≤60**	66	161,5	10/5/2	196	4200	4650	7080
71,70	10325/144	**K813_0720 ME30**	2800	2500	3600	**≤24**	12	149,0	10/5/2	196	2640	4330	6790
71,70	10325/144	**K813_0720 ME30**	2800	2500	3600	**>24≤32**	12	149,0	10/5/2	196	2640	4330	7010
71,70	10325/144	**K813_0720 ME30**	2800	2500	3600	**>32≤38**	13	149,0	10/5/2	196	2640	4330	7010
71,70	10325/144	**K813_0720 ME40**	2800	2500	3500	**≤38**	22	153,9	10/5/2	196	3610	4330	7010
71,70	10325/144	**K813_0720 ME40**	2800	2500	3500	**>38≤48**	35	153,9	10/5/2	196	3610	4330	7010
71,70	10325/144	**K813_0720 ME50**	2500	2500	3000	**>55≤60**	64	161,5	10/5/2	196	3610	4330	7010
79,38	45725/576	**K813_0790 ME30**	2800	2500	3600	**≤24**	11	149,0	10/5/2	196	2920	4650	7510
79,38	45725/576	**K813_0790 ME30**	2800	2500	3600	**>24≤32**	12	149,0	10/5/2	196	2920	4650	7760
79,38	45725/576	**K813_0790 ME30**	2800	2500	3600	**>32≤38**	13	149,0	10/5/2	196	2920	4650	7760
79,38	45725/576	**K813_0790 ME40**	2800	2500	3500	**≤38**	22	153,9	10/5/2	196	3990	4650	7760
79,38	45725/576	**K813_0790 ME40**	2800	2500	3500	**>38≤48**	35	153,9	10/5/2	196	3990	4650	7760
79,38	45725/576	**K813_0790 ME50**	2500	2500	3000	**>55≤60**	64	161,5	10/5/2	196	3990	4650	7760
87,76	7021/80	**K813_0880 ME30**	2800	2500	3600	**≤24**	10	149,0	10/5/2	196	2640	2640	3300
87,76	7021/80	**K813_0880 ME30**	2800	2500	3600	**>24≤32**	10	149,0	10/5/2	196	2640	2640	3300

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K813 (M2BMAX=4650 Nm)													
87,76	7021/80	**K813_0880 ME30**	2800	2500	3600	**>32≤38**	12	149,0	10/5/2	196	2640	2640	3300
97,17	31093/320	**K813_0970 ME30**	2800	2500	3600	**≤24**	10	149,0	10/5/2	196	2920	2920	3650
97,17	31093/320	**K813_0970 ME30**	2800	2500	3600	**>24≤32**	10	149,0	10/5/2	196	2920	2920	3650
97,17	31093/320	**K813_0970 ME30**	2800	2500	3600	**>32≤38**	12	149,0	10/5/2	196	2920	2920	3650
K814 (M2BMAX=4650 Nm)													
66,83	38763/580	**K814_0670 ME40**	2800	2500	3500	**≤38**	22	167,0	10/6/3	196	4200	4650	6210
66,83	38763/580	**K814_0670 ME40**	2800	2500	3500	**>38≤48**	36	167,0	10/6/3	196	4200	4650	6210
73,99	1201653/16240	**K814_0740 ME40**	2800	2500	3500	**≤38**	22	167,0	10/6/3	196	4200	4650	6880
73,99	1201653/16240	**K814_0740 ME40**	2800	2500	3500	**>38≤48**	36	167,0	10/6/3	196	4200	4650	6880
88,89	40887/460	**K814_0890 ME40**	2800	2500	3500	**≤38**	21	167,0	10/6/3	196	4200	4650	8260
88,89	40887/460	**K814_0890 ME40**	2800	2500	3500	**>38≤48**	35	167,0	10/6/3	196	4200	4650	8260
98,41	181071/1840	**K814_0980 ME40**	2800	2500	3500	**≤38**	21	167,0	10/6/3	196	4200	4650	8400
98,41	181071/1840	**K814_0980 ME40**	2800	2500	3500	**>38≤48**	35	167,0	10/6/3	196	4200	4650	8400
112,8	9027/80	**K814_1130 ME40**	2800	2500	3500	**≤38**	21	167,0	10/6/3	196	4200	4650	8400
112,8	9027/80	**K814_1130 ME40**	2800	2500	3500	**>38≤48**	34	167,0	10/6/3	196	4200	4650	8400
114,6	329987/2880	**K814_1150 ME30**	2800	2500	3600	**≤24**	9,2	162,1	10/6/3	196	3500	3550	4440
114,6	329987/2880	**K814_1150 ME30**	2800	2500	3600	**>24≤32**	9,3	162,1	10/6/3	196	3500	3550	4440
114,6	329987/2880	**K814_1150 ME30**	2800	2500	3600	**>32≤38**	11	162,1	10/6/3	196	3500	3550	4440
124,9	279837/2240	**K814_1250 ME40**	2800	2500	3500	**≤38**	21	167,0	10/6/3	196	4200	4650	8400
124,9	279837/2240	**K814_1250 ME40**	2800	2500	3500	**>38≤48**	34	167,0	10/6/3	196	4200	4650	8400
126,9	1461371/11520	**K814_1270 ME30**	2800	2500	3600	**≤24**	9,1	162,1	10/6/3	196	3870	3930	4910
126,9	1461371/11520	**K814_1270 ME30**	2800	2500	3600	**>24≤32**	9,2	162,1	10/6/3	196	3870	3930	4910
126,9	1461371/11520	**K814_1270 ME30**	2800	2500	3600	**>32≤38**	11	162,1	10/6/3	196	3870	3930	4910
139,4	11151/80	**K814_1390 ME40**	2800	2500	3500	**≤38**	20	167,0	10/6/3	196	4200	4650	8400
139,4	11151/80	**K814_1390 ME40**	2800	2500	3500	**>38≤48**	34	167,0	10/6/3	196	4200	4650	8400
141,5	135877/960	**K814_1420 ME30**	2800	2500	3600	**≤24**	8,8	162,1	10/6/3	196	3830	3890	4860
141,5	135877/960	**K814_1420 ME30**	2800	2500	3600	**>24≤32**	9,0	162,1	10/6/3	196	3830	3890	4860
141,5	135877/960	**K814_1420 ME30**	2800	2500	3600	**>32≤38**	11	162,1	10/6/3	196	3830	3890	4860
154,3	49383/320	**K814_1540 ME40**	2800	2500	3500	**≤38**	20	167,0	10/6/3	196	4200	4650	8400
154,3	49383/320	**K814_1540 ME40**	2800	2500	3500	**>38≤48**	34	167,0	10/6/3	196	4200	4650	8400
156,7	601741/3840	**K814_1570 ME30**	2800	2500	3600	**≤24**	8,8	162,1	10/6/3	196	4200	4300	5380
156,7	601741/3840	**K814_1570 ME30**	2800	2500	3600	**>24≤32**	8,9	162,1	10/6/3	196	4200	4300	5380
156,7	601741/3840	**K814_1570 ME30**	2800	2500	3600	**>32≤38**	11	162,1	10/6/3	196	4200	4300	5380
170,7	4779/28	**K814_1710 ME40**	2800	2500	3500	**≤38**	20	167,0	10/6/3	196	4200	4370	5460
170,7	4779/28	**K814_1710 ME40**	2800	2500	3500	**>38≤48**	34	167,0	10/6/3	196	4200	4370	5460
173,3	2773/16	**K814_1730 ME30**	2800	2500	3600	**≤24**	8,6	162,1	10/6/3	196	4060	4370	5460
173,3	2773/16	**K814_1730 ME30**	2800	2500	3600	**>24≤32**	8,7	162,1	10/6/3	196	4060	4370	5460
173,3	2773/16	**K814_1730 ME30**	2800	2500	3600	**>32≤38**	10	162,1	10/6/3	196	4060	4370	5460
189,0	148149/784	**K814_1890 ME40**	2800	2500	3500	**≤38**	20	167,0	10/6/3	196	4200	4650	6040
189,0	148149/784	**K814_1890 ME40**	2800	2500	3500	**>38≤48**	34	167,0	10/6/3	196	4200	4650	6040
191,9	85963/448	**K814_1920 ME30**	2800	2500	3600	**≤24**	8,6	162,1	10/6/3	196	4200	4650	6040
191,9	85963/448	**K814_1920 ME30**	2800	2500	3600	**>24≤32**	8,7	162,1	10/6/3	196	4200	4650	6040
191,9	85963/448	**K814_1920 ME30**	2800	2500	3600	**>32≤38**	10	162,1	10/6/3	196	4200	4650	6040
227,9	18231/80	**K814_2280 ME40**	2800	2500	3500	**≤38**	20	167,0	10/6/3	196	4200	4650	6390
227,9	18231/80	**K814_2280 ME40**	2800	2500	3500	**>38≤48**	33	167,0	10/6/3	196	4200	4650	6390
231,4	1999333/8640	**K814_2310 ME30**	2800	2500	3600	**≤24**	8,4	162,1	10/6/3	196	4200	4650	6390
231,4	1999333/8640	**K814_2310 ME30**	2800	2500	3600	**>24≤32**	8,5	162,1	10/6/3	196	4200	4650	6390
231,4	1999333/8640	**K814_2310 ME30**	2800	2500	3600	**>32≤38**	10	162,1	10/6/3	196	4200	4650	6390
252,3	565161/2240	**K814_2520 ME40**	2800	2500	3500	**≤38**	20	167,0	10/6/3	196	4200	4650	7080
252,3	565161/2240	**K814_2520 ME40**	2800	2500	3500	**>38≤48**	33	167,0	10/6/3	196	4200	4650	7080
256,2	8854189/34560	**K814_2560 ME30**	2800	2500	3600	**≤24**	8,3	162,1	10/6/3	196	4200	4650	7070
256,2	8854189/34560	**K814_2560 ME30**	2800	2500	3600	**>24≤32**	8,5	162,1	10/6/3	196	4200	4650	7070
256,2	8854189/34560	**K814_2560 ME30**	2800	2500	3600	**>32≤38**	10	162,1	10/6/3	196	4200	4650	7070
276,6	4425/16	**K814_2770 ME40**	2800	2500	3500	**≤38**	20	167,0	10/6/3	196	3610	4330	7010
276,6	4425/16	**K814_2770 ME40**	2800	2500	3500	**>38≤48**	33	167,0	10/6/3	196	3610	4330	7010
280,8	485275/1728	**K814_2810 ME30**	2800	2500	3600	**≤24**	8,2	162,1	10/6/3	196	3610	4330	7010
280,8	485275/1728	**K814_2810 ME30**	2800	2500	3600	**>24≤32**	8,4	162,1	10/6/3	196	3610	4330	7010
280,8	485275/1728	**K814_2810 ME30**	2800	2500	3600	**>32≤38**	10	162,1	10/6/3	196	3610	4330	7010
306,2	137175/448	**K814_3060 ME40**	2800	2500	3500	**≤38**	20	167,0	10/6/3	196	3990	4650	7760

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K814 (M2BMAX=4650 Nm)													
306,2	137175/448	**K814_3060 ME40**	2800	2500	3500	**>38≤48**	33	167,0	10/6/3	196	3990	4650	7760
310,9	2149075/6912	**K814_3110 ME30**	2800	2500	3600	**≤24**	8,2	162,1	10/6/3	196	3990	4650	7760
310,9	2149075/6912	**K814_3110 ME30**	2800	2500	3600	**>24≤32**	8,4	162,1	10/6/3	196	3990	4650	7760
310,9	2149075/6912	**K814_3110 ME30**	2800	2500	3600	**>32≤38**	10	162,1	10/6/3	196	3990	4650	7760
K913 (M2BMAX=7700 Nm)													
12,53	73749/5888	**K913_0125 ME40**	1800	1800	2800	**≤38**	176	268,7	10/5	354	2270	2270	2840
12,53	73749/5888	**K913_0125 ME40**	1800	1800	2800	**>38≤48**	190	268,7	10/5	367	3590	3590	4490
12,53	73749/5888	**K913_0125 ME50**	1800	1800	2800	**≤55**	214	276,3	10/5	371	3590	3590	4490
12,53	73749/5888	**K913_0125 ME50**	1800	1800	2800	**>55≤60**	218	276,3	10/5	372	3590	3590	4490
19,06	305/16	**K913_0190 ME40**	2200	2100	3100	**≤38**	103	268,7	10/5	368	3460	3460	4330
19,06	305/16	**K913_0190 ME40**	2200	2100	3100	**>38≤48**	117	268,7	10/5	374	4950	5470	6830
19,06	305/16	**K913_0190 ME50**	2200	2100	3000	**≤55**	141	276,3	10/5	376	5470	5470	6830
19,06	305/16	**K913_0190 ME50**	2200	2100	3000	**>55≤60**	145	276,3	10/5	376	5470	5470	6830
23,94	88877/3712	**K913_0240 ME40**	2200	2100	3100	**≤38**	79	268,7	10/5	372	4350	4350	5430
23,94	88877/3712	**K913_0240 ME40**	2200	2100	3100	**>38≤48**	93	268,7	10/5	376	5250	6870	8580
23,94	88877/3712	**K913_0240 ME50**	2200	2100	3000	**≤55**	117	276,3	10/5	377	6870	6870	8580
23,94	88877/3712	**K913_0240 ME50**	2200	2100	3000	**>55≤60**	121	276,3	10/5	377	6870	6870	8580
32,12	47275/1472	**K913_0320 ME40**	2600	2500	3400	**≤38**	57	268,7	10/5	375	5620	5830	7290
32,12	47275/1472	**K913_0320 ME40**	2600	2500	3400	**>38≤48**	71	268,7	10/5	377	5620	7700	11510
32,12	47275/1472	**K913_0320 ME50**	2500	2500	3000	**≤55**	95	276,3	10/5	378	7000	7700	11510
32,12	47275/1472	**K913_0320 ME50**	2500	2500	3000	**>55≤60**	99	276,3	10/5	378	7000	7700	11510
38,04	194773/5120	**K913_0380 ME40**	2600	2500	3400	**≤38**	48	268,7	10/5	376	5810	6910	8630
38,04	194773/5120	**K913_0380 ME40**	2600	2500	3400	**>38≤48**	62	268,7	10/5	378	5810	7700	12510
38,04	194773/5120	**K913_0380 ME50**	2500	2500	3000	**≤55**	86	276,3	10/5	378	7000	7700	12510
38,04	194773/5120	**K913_0380 ME50**	2500	2500	3000	**>55≤60**	90	276,3	10/5	378	7000	7700	12510
48,94	100223/2048	**K913_0490 ME40**	2600	2500	3400	**≤38**	38	268,7	10/5	377	6000	7700	11110
48,94	100223/2048	**K913_0490 ME40**	2600	2500	3400	**>38≤48**	52	268,7	10/5	378	6000	7700	13790
48,94	100223/2048	**K913_0490 ME50**	2500	2500	3000	**≤55**	76	276,3	10/5	378	7000	7700	13790
48,94	100223/2048	**K913_0490 ME50**	2500	2500	3000	**>55≤60**	80	276,3	10/5	379	7000	7700	13790
63,07	209901/3328	**K913_0630 ME40**	2600	2500	3400	**≤38**	31	268,7	10/5	378	6230	7700	14000
63,07	209901/3328	**K913_0630 ME40**	2600	2500	3400	**>38≤48**	45	268,7	10/5	379	6230	7700	14000
63,07	209901/3328	**K913_0630 ME50**	2500	2500	3000	**≤55**	69	276,3	10/5	379	7000	7700	14000
63,07	209901/3328	**K913_0630 ME50**	2500	2500	3000	**>55≤60**	73	276,3	10/5	379	7000	7700	14000
75,00	62403/832	**K913_0750 ME40**	2600	2500	3400	**≤38**	27	268,7	10/5	378	6420	6820	8530
75,00	62403/832	**K913_0750 ME40**	2600	2500	3400	**>38≤48**	41	268,7	10/5	379	6420	6820	8530
75,00	62403/832	**K913_0750 ME50**	2500	2500	3000	**>55≤60**	70	276,3	10/5	379	6820	6820	8530
95,41	293105/3072	**K913_0950 ME40**	2600	2500	3400	**≤38**	24	268,7	10/5	379	5380	6450	9210
95,41	293105/3072	**K913_0950 ME40**	2600	2500	3400	**>38≤48**	38	268,7	10/5	379	5380	6450	9210
95,41	293105/3072	**K913_0950 ME50**	2500	2500	3000	**>55≤60**	67	276,3	10/5	379	5380	6450	9210

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Please take notice of the indications on page K8! ***¡Por favor observe las indicaciones en la página K8!*** **Si raccomanda di rispettare le avvertenze a pagina K8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	Δφ2 [arcmin]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
K914 (M2BMAX=7700 Nm)													
92,35	2399679/25984	**K914_0920 ME40**	2600	2500	3400	**≤38**	23	281,2	10/5	379	6870	6870	8580
92,35	2399679/25984	**K914_0920 ME40**	2600	2500	3400	**>38≤48**	37	281,2	10/5	379	6870	6870	8580
93,78	4177219/44544	**K914_0940 ME30**	2600	2500	3400	**≤24**	12	276,3	10/5	378	2860	2910	3630
93,78	4177219/44544	**K914_0940 ME30**	2600	2500	3400	**>24≤32**	12	276,3	10/5	378	2860	2910	3630
93,78	4177219/44544	**K914_0940 ME30**	2600	2500	3400	**>32≤38**	14	276,3	10/5	379	2860	2910	3630
123,9	1276425/10304	**K914_1240 ME40**	2600	2500	3400	**≤38**	22	281,2	10/5	379	7000	7700	11510
123,9	1276425/10304	**K914_1240 ME40**	2600	2500	3400	**>38≤48**	36	281,2	10/5	379	7000	7700	11510
125,8	2221925/17664	**K914_1260 ME30**	2600	2500	3400	**≤24**	11	276,3	10/5	378	3840	3900	4870
125,8	2221925/17664	**K914_1260 ME30**	2600	2500	3400	**>24≤32**	11	276,3	10/5	379	3840	3900	4870
125,8	2221925/17664	**K914_1260 ME30**	2600	2500	3400	**>32≤38**	12	276,3	10/5	379	3840	3900	4870
146,7	5258871/35840	**K914_1470 ME40**	2600	2500	3400	**≤38**	21	281,2	10/5	379	7000	7700	12510
146,7	5258871/35840	**K914_1470 ME40**	2600	2500	3400	**>38≤48**	35	281,2	10/5	379	7000	7700	12510
149,0	9154331/61440	**K914_1490 ME30**	2600	2500	3400	**≤24**	9,9	276,3	10/5	379	4550	4600	5750
149,0	9154331/61440	**K914_1490 ME30**	2600	2500	3400	**>24≤32**	10	276,3	10/5	379	4550	4600	5750
149,0	9154331/61440	**K914_1490 ME30**	2600	2500	3400	**>32≤38**	12	276,3	10/5	379	4550	4600	5750
188,8	2706021/14336	**K914_1890 ME40**	2600	2500	3400	**≤38**	21	281,2	10/5	379	7000	7700	13790
188,8	2706021/14336	**K914_1890 ME40**	2600	2500	3400	**>38≤48**	34	281,2	10/5	379	7000	7700	13790
191,7	4710481/24576	**K914_1920 ME30**	2600	2500	3400	**≤24**	9,3	276,3	10/5	379	5070	5070	6340
191,7	4710481/24576	**K914_1920 ME30**	2600	2500	3400	**>24≤32**	9,4	276,3	10/5	379	5070	5070	6340
191,7	4710481/24576	**K914_1920 ME30**	2600	2500	3400	**>32≤38**	11	276,3	10/5	379	5070	5070	6340
243,3	5667327/23296	**K914_2430 ME40**	2600	2500	3400	**≤38**	20	281,2	10/5	379	7000	7700	14000
243,3	5667327/23296	**K914_2430 ME40**	2600	2500	3400	**>38≤48**	34	281,2	10/5	379	7000	7700	14000
247,0	3288449/13312	**K914_2470 ME30**	2600	2500	3400	**≤24**	8,8	276,3	10/5	379	5470	5730	7170
247,0	3288449/13312	**K914_2470 ME30**	2600	2500	3400	**>24≤32**	9,0	276,3	10/5	379	5470	5730	7170
247,0	3288449/13312	**K914_2470 ME30**	2600	2500	3400	**>32≤38**	11	276,3	10/5	379	5470	5730	7170
293,8	977647/3328	**K914_2940 ME30**	2600	2500	3400	**≤24**	8,6	276,3	10/5	379	5700	6820	8530
293,8	977647/3328	**K914_2940 ME30**	2600	2500	3400	**>24≤32**	8,7	276,3	10/5	379	5700	6820	8530
293,8	977647/3328	**K914_2940 ME30**	2600	2500	3400	**>32≤38**	10	276,3	10/5	379	5700	6820	8530
373,7	13775935/36864	**K914_3740 ME30**	2600	2500	3400	**≤24**	8,4	276,3	10/5	379	5380	6450	9210
373,7	13775935/36864	**K914_3740 ME30**	2600	2500	3400	**>24≤32**	8,5	276,3	10/5	379	5380	6450	9210
373,7	13775935/36864	**K914_3740 ME30**	2600	2500	3400	**>32≤38**	10	276,3	10/5	379	5380	6450	9210
K1013 (M2BMAX=13200 Nm)													
38,60	8029/208	**K1013_0390 ME50**	2500	2300	3000	**≤55**	122	468,9	10/5	722	9070	10620	13280
38,60	8029/208	**K1013_0390 ME50**	2500	2300	3000	**>55≤60**	126	468,9	10/5	722	9070	10620	13280
61,55	12803/208	**K1013_0620 ME50**	2500	2300	3000	**≤55**	87	468,9	10/5	723	9700	12750	15940
61,55	12803/208	**K1013_0620 ME50**	2500	2300	3000	**>55≤60**	91	468,9	10/5	724	9700	12750	15940
75,28	101773/1352	**K1013_0750 ME50**	2500	2300	3000	**≤55**	78	468,9	10/5	724	9810	13200	19570
75,28	101773/1352	**K1013_0750 ME50**	2500	2300	3000	**>55≤60**	82	468,9	10/5	724	9810	13200	19570
94,33	235445/2496	**K1013_0940 ME50**	2500	2300	3000	**>55≤60**	75	468,9	10/5	724	7330	7330	9170
K1014 (M2BMAX=13200 Nm)													
93,34	252399/2704	**K1014_0930 ME50**	2500	2300	3000	**≤55**	68	497,8	10/5	724	10810	12970	18200
93,34	252399/2704	**K1014_0930 ME50**	2500	2300	3000	**>55≤60**	72	497,8	10/5	724	10810	12970	18200
123,7	7359555/59488	**K1014_1240 ME50**	2500	2300	3000	**≤55**	65	497,8	10/5	724	12000	13200	24000
123,7	7359555/59488	**K1014_1240 ME50**	2500	2300	3000	**>55≤60**	69	497,8	10/5	724	12000	13200	24000
148,9	30969/208	**K1014_1490 ME40**	2500	2300	3200	**≤38**	24	490,2	10/5	724	9420	10620	13280
148,9	30969/208	**K1014_1490 ME40**	2500	2300	3200	**>38≤48**	38	490,2	10/5	724	9420	10620	13280
151,4	409479/2704	**K1014_1510 ME50**	2500	2300	3000	**≤55**	63	497,8	10/5	724	12000	13200	24000
151,4	409479/2704	**K1014_1510 ME50**	2500	2300	3000	**>55≤60**	67	497,8	10/5	724	12000	13200	24000
190,4	514941/2704	**K1014_1900 ME50**	2500	2300	3000	**≤55**	62	497,8	10/5	725	12000	13200	24000
190,4	514941/2704	**K1014_1900 ME50**	2500	2300	3000	**>55≤60**	66	497,8	10/5	725	12000	13200	24000
237,4	49383/208	**K1014_2370 ME40**	2500	2300	3200	**≤38**	22	490,2	10/5	724	10430	12750	15940
237,4	49383/208	**K1014_2370 ME40**	2500	2300	3200	**>38≤48**	35	490,2	10/5	725	10430	12750	15940
290,4	392553/1352	**K1014_2900 ME40**	2500	2300	3200	**≤38**	21	490,2	10/5	725	10730	13200	19570
290,4	392553/1352	**K1014_2900 ME40**	2500	2300	3200	**>38≤48**	35	490,2	10/5	725	10730	13200	19570

Dimension drawings
ServoFit® K Helical
Bevel Gear Units

Dibujos acotados
Reductores cónicos
ServoFit® K

Disegni quotati
ServoFit® Riduttori
coppia conica **K**

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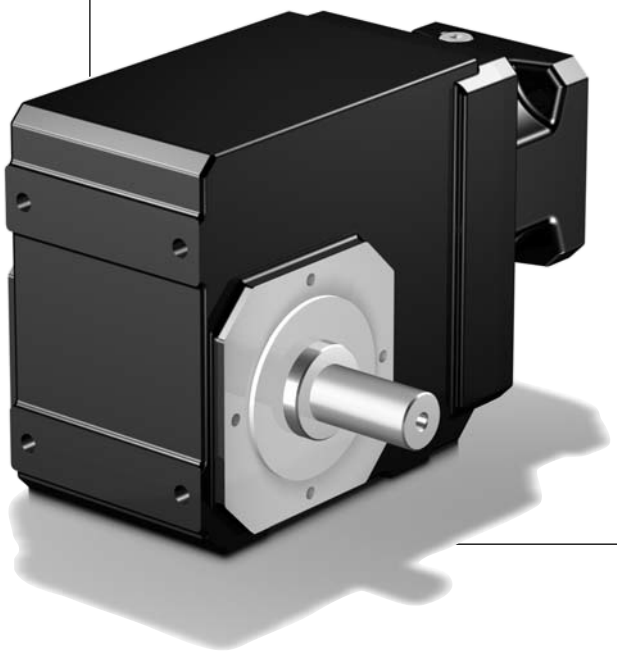

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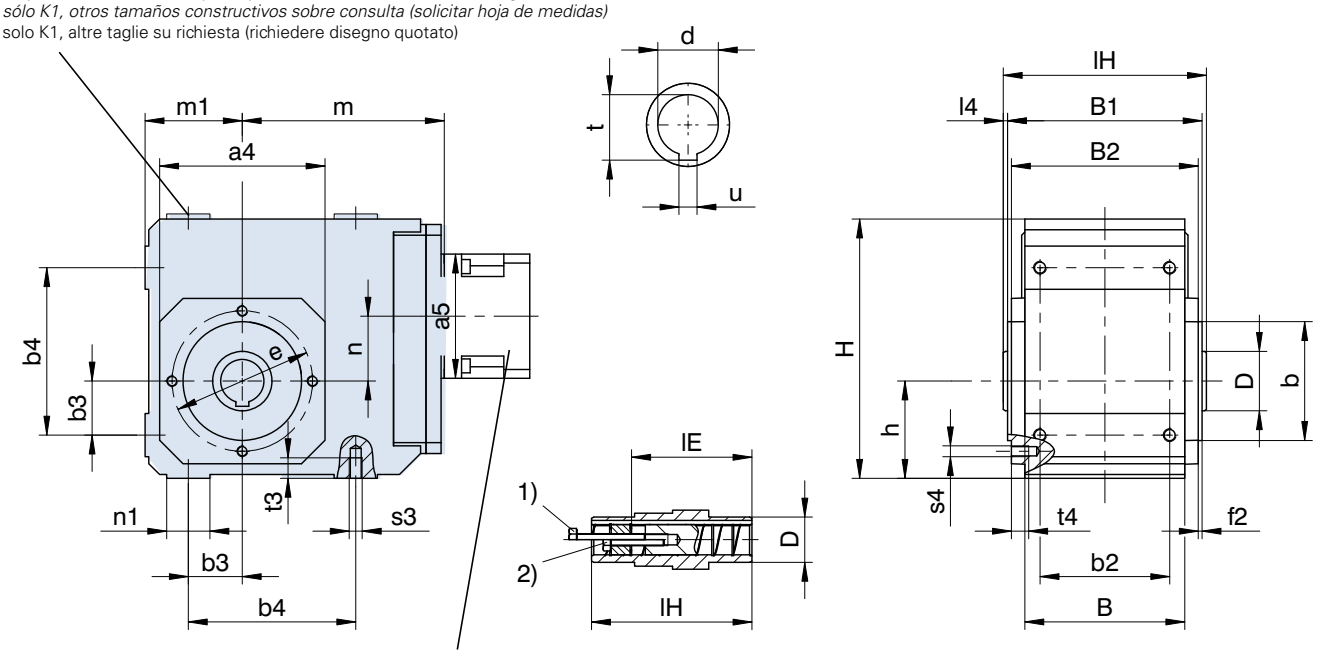
K1_AG_ME_ - K4_AG_ME_

only K1, other sizes on request (please ask for a dimension drawing)
sólo K1, otros tamaños constructivos sobre consulta (solicitar hoja de medidas)
solo K1, altre taglie su richiesta (richiedere disegno quotato)



Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.

Shaft mounted: 1), 2) see page A19
(K1: further hollow shaft diameters see page A19)

***Ejecución enchufable:** 1), 2) ver página A19*
(K1: otros ø de eje hueco ver página A19.)

Esecuzione ad albero cavo: 1), 2) vedere pag. A19
(K1: Per altri ø albero cavo vedere pag. A19.)

Typ	□a4	øb	b2	b3	b4	B	B1	B2	ød	øD	øe	f2	h
K1	105	75$_{j6}$	70	30	90	90	112	106	20^{H7}	40	90	3,0	60
K1	105	75$_{j6}$	70	30	90	90	112	106	25^{H7}	40	90	3,0	60
K1	105	75$_{j6}$	70	30	90	90	112	106	30^{H7}	40	90	3,0	60
K2	116	82$_{j6}$	90	35	115	115	140	134	30^{H7}	45	100	3,0	65
K3	132	95$_{j6}$	105	40	130	130	152	146	35^{H7}	50	115	3,0	75
K4	152	110$_{j6}$	120	50	155	148	180	173	40^{H7}	55	130	3,5	90
K5	145	110$_{j6}$	125	40	140	160	192	185	50^{H7}	65	130	3,5	160
K6	180	140$_{j6}$	130	50	160	168	207	200	50^{H7}	70	165	3,5	190
K7	195	155$_{j6}$	145	55	180	190	233	226	60^{H7}	85	185	3,5	212
K8	226	185$_{j6}$	185	75	240	235	290	282	70^{H7}	100	215	4,0	265
K9	280	230$_{j6}$	225	95	280	285	340	330	90^{H7}	120	265	5,0	315

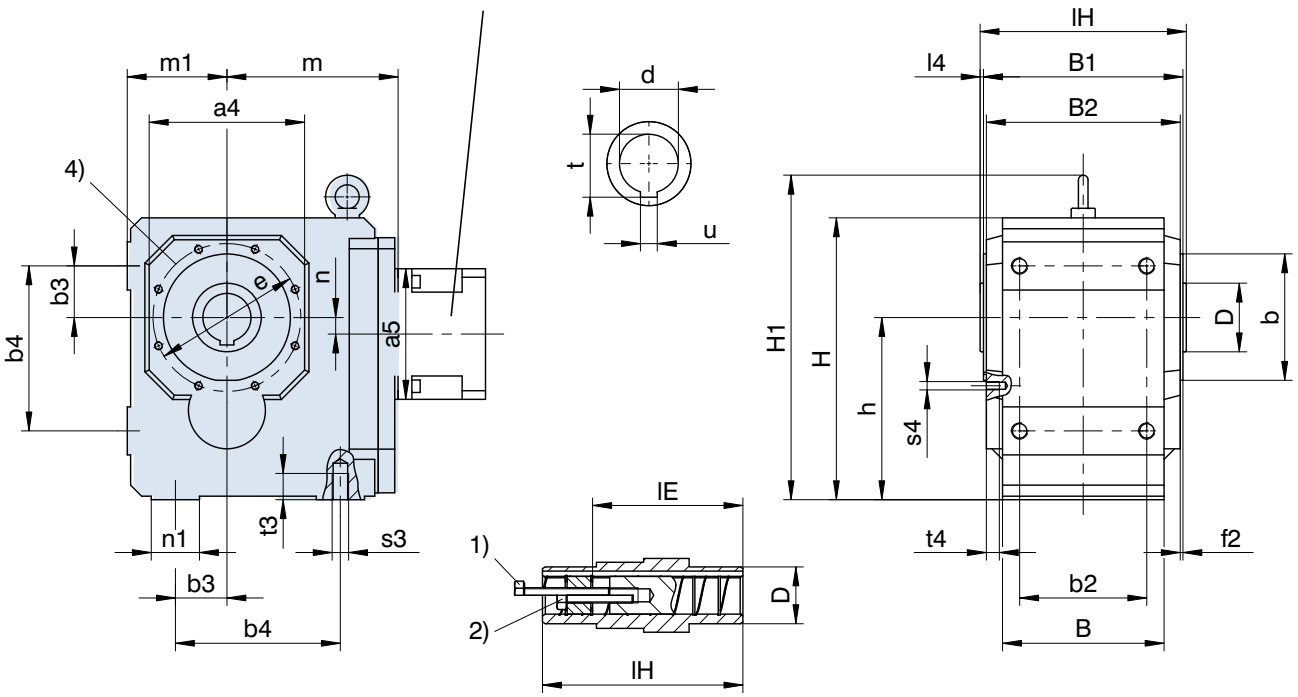
Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	H	H1	l4	lE	lH	m1	n1	s3	s4	t	t3	t4	u
K1	160	-	4,0	98,0	120	60	25	M8	M8	22,8	13	13	6^{JS9}
K1	160	-	4,0	98,0	120	60	25	M8	M8	28,3	13	13	8^{JS9}
K1	160	-	4,0	93,5	120	60	25	M8	M8	32,0	13	13	8^{JS9}
K2	190	-	4,0	121,5	148	65	30	M10	M8	33,3	16	13	8^{JS9}
K3	213	-	4,0	125,0	160	75	35	M10	M8	38,3	16	13	10^{JS9}
K4	240	-	4,0	157,0	188	90	40	M12	M10	43,3	19	16	12^{JS9}
K5	260	312	4,0	164,0	200	100	50	M16	M10	53,8	26	16	14^{JS9}
K6	310	362	4,0	179,0	215	120	55	M16	M10	53,8	26	16	14^{JS9}
K7	342	403	4,5	214,0	242	125	60	M20	M12	64,4	33	19	18^{JS9}
K8	410	471	5,0	263,0	300	145	70	M24	M12	74,9	38	19	20^{JS9}
K9	495	565	5,0	302,0	350	180	80	M30	M16	95,4	48	26	25^{JS9}

STÖBER

K5_AG_ME_ - K9_AG_ME_

Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.



Shaft mounted: 1), 2) see page A19

***Ejecución enchufable:** 1), 2) ver página A19*

Esecuzione ad albero cavo: 1), 2) vedere pag. A19

4) K5-K9: 8 tapped holes turned by 22.5 degrees, K8: 4 additional tapped holes turned by 45 degrees

4) K5-K9: 8 agujeros roscados desplazados 22,5°, K8: adicional 4 agujeros roscados desplazados 45°

4) K5-K9: 8 fori filettati sfalsati di 22,5°, K8: in più 4 fori filettati sfalsati di 45°

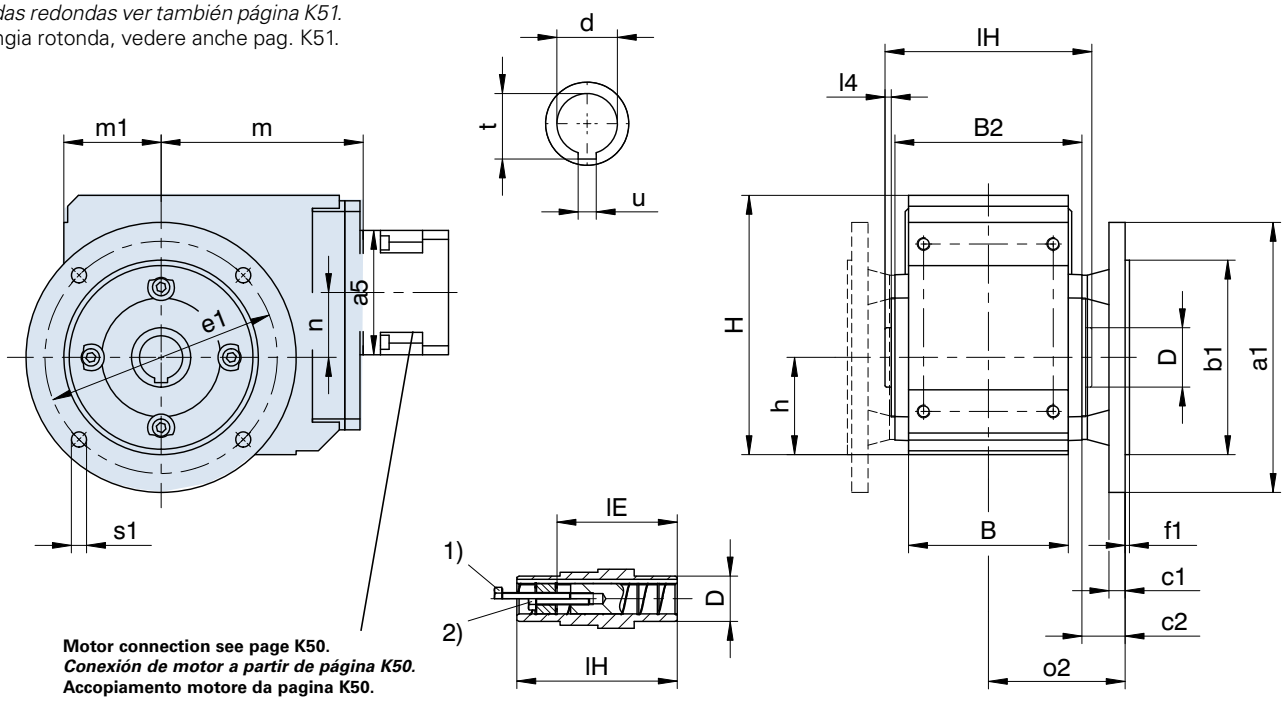
Typ	ME10			ME20			ME30			ME40			ME50		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n	a5	m	n
K102	□98	124	36,0	□115	128	36,0	-	-	-	-	-	-	-	-	-
K202	□98	143	46,0	□115	147	46,0	□145	149	46,0	-	-	-	-	-	-
K203	ø140	180	46,0	-	-	-	-	-	-	-	-	-	-	-	-
K302	ø140	163	52,5	□115	167	52,5	□145	169	52,5	-	-	-	-	-	-
K303	ø140	200	52,5	ø160	210	16,0	-	-	-	-	-	-	-	-	-
K402	-	-	-	ø160	187	60,0	□145	189	60,0	□190	192	60,0	-	-	-
K403	ø140	220	60,0	ø160	230	23,0	-	-	-	-	-	-	-	-	-
K513	-	-	-	ø160	172	15,0	□145	174	15,0	□190	177	15,0	-	-	-
K514	-	-	-	ø160	215	15,0	-	-	-	-	-	-	-	-	-
K613	-	-	-	ø160	191	18,0	ø200	193	18,0	□190	196	18,0	ø300	210	18,0
K614	-	-	-	ø160	234	18,0	-	-	-	-	-	-	-	-	-
K713	-	-	-	-	-	-	ø200	221	20,0	□190	224	20,0	ø300	237	20,0
K714	-	-	-	ø160	263	20,0	ø200	283	20,0	-	-	-	-	-	-
K813	-	-	-	-	-	-	ø200	247	24,0	ø250	249	24,0	ø300	262	24,0
K814	-	-	-	-	-	-	ø200	308	24,0	ø250	320	5,0	-	-	-
K913	-	-	-	-	-	-	-	-	-	ø250	294	25,0	ø300	307	25,0
K914	-	-	-	-	-	-	ø200	353	25,0	ø250	365	25,0	-	-	-

Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

STÖBER

K1_AF_ME_ - K4_AF_ME_

Round flanges see also page K51.
Bridas redondas ver también página K51.
Flangia rotonda, vedere anche pag. K51.



Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.

Shaft mounted: 1), 2) see page A19
(K1: further hollow shaft diameters see page A19)

***Ejecución enchufable:** 1), 2) ver página A19*
(K1: otros ø de eje hueco ver página A19.)

Esecuzione ad albero cavo: 1), 2) vedere pag. A19
(K1: Per altri ø albero cavo vedere pag. A19.)

Typ	øa1	øb1	B	B2	c1	c2	ød	øD	øe1	f1
K1	160	110$_{j6}$	90	106	10	32,0	20^{H7}	40	130	3,5
K1	160	110$_{j6}$	90	106	10	32,0	25^{H7}	40	130	3,5
K1	160	110$_{j6}$	90	106	10	32,0	30^{H7}	40	130	3,5
K2	200	130$_{j6}$	115	134	12	32,0	30^{H7}	45	165	3,5
K3	200	130$_{j6}$	130	146	14	38,0	35^{H7}	50	165	3,5
K4	250	180$_{j6}$	148	173	15	40,0	40^{H7}	55	215	4,0
K5	250	180$_{j6}$	160	185	15	39,5	50^{H7}	65	215	4,0
K6	300	230$_{j6}$	168	200	17	36,0	50^{H7}	70	265	4,0
K7	350	250$_{h6}$	190	226	18	44,0	60^{H7}	85	300	5,0
K8	400	300$_{h6}$	235	282	20	45,0	70^{H7}	100	350	5,0
K9	450	350$_{h6}$	285	330	23	50,0	90^{H7}	120	400	5,0

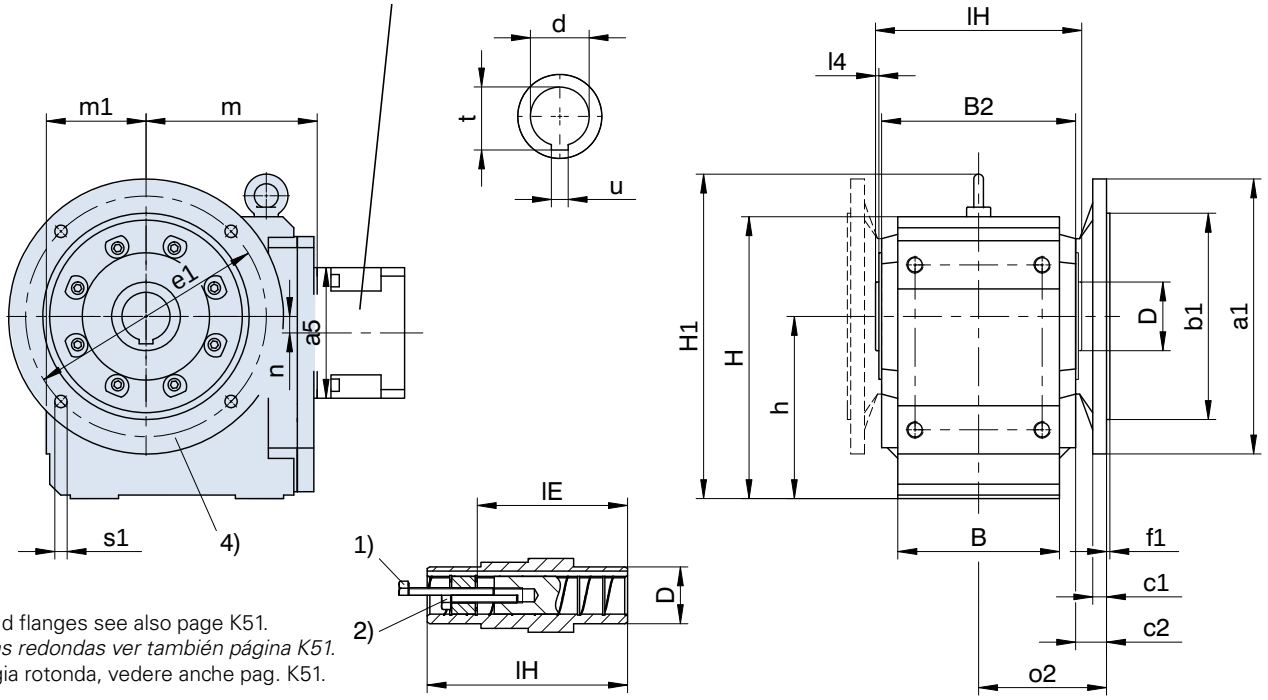
Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	h	H	H1	l4	lE	lH	m1	o2	øs1	t	u
K1	60	160	-	4,0	98,0	120	60	85,0	9	22,8	6^{JS9}
K1	60	160	-	4,0	98,0	120	60	85,0	9	28,3	8^{JS9}
K1	60	160	-	4,0	93,5	120	60	85,0	9	32,0	8^{JS9}
K2	65	190	-	4,0	121,5	148	65	99,0	11	33,3	8^{JS9}
K3	75	213	-	4,0	125,0	160	75	111,0	11	38,3	10^{JS9}
K4	90	240	-	4,0	157,0	188	90	126,5	14	43,3	12^{JS9}
K5	160	260	312	4,0	164,0	200	100	132,0	14	53,8	14^{JS9}
K6	190	310	362	4,0	179,0	215	120	136,0	14	53,8	14^{JS9}
K7	212	342	403	4,5	214,0	242	125	157,0	18	64,4	18^{JS9}
K8	265	410	471	5,0	263,0	300	145	186,0	18	74,9	20^{JS9}
K9	315	495	565	5,0	302,0	350	180	215,0	18	95,4	25^{JS9}

STÖBER

K5_AF_ME_ - K9_AF_ME_

Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.



Round flanges see also page K51.
Bridas redondas ver también página K51.
Flangia rotonda, vedere anche pag. K51.

Shaft mounted: 1), 2) see page A19 | ***Ejecución enchufable:** 1), 2) ver página A19* | **Esecuzione ad albero cavo:** 1), 2) vedere pag. A19

4) K9: 8 holes are turned by 22.5 degrees. | ***4) K9: 8 agujeros desplazados 22,5°.*** | **4) K9: 8 fori sfalsati di 22,5°.**

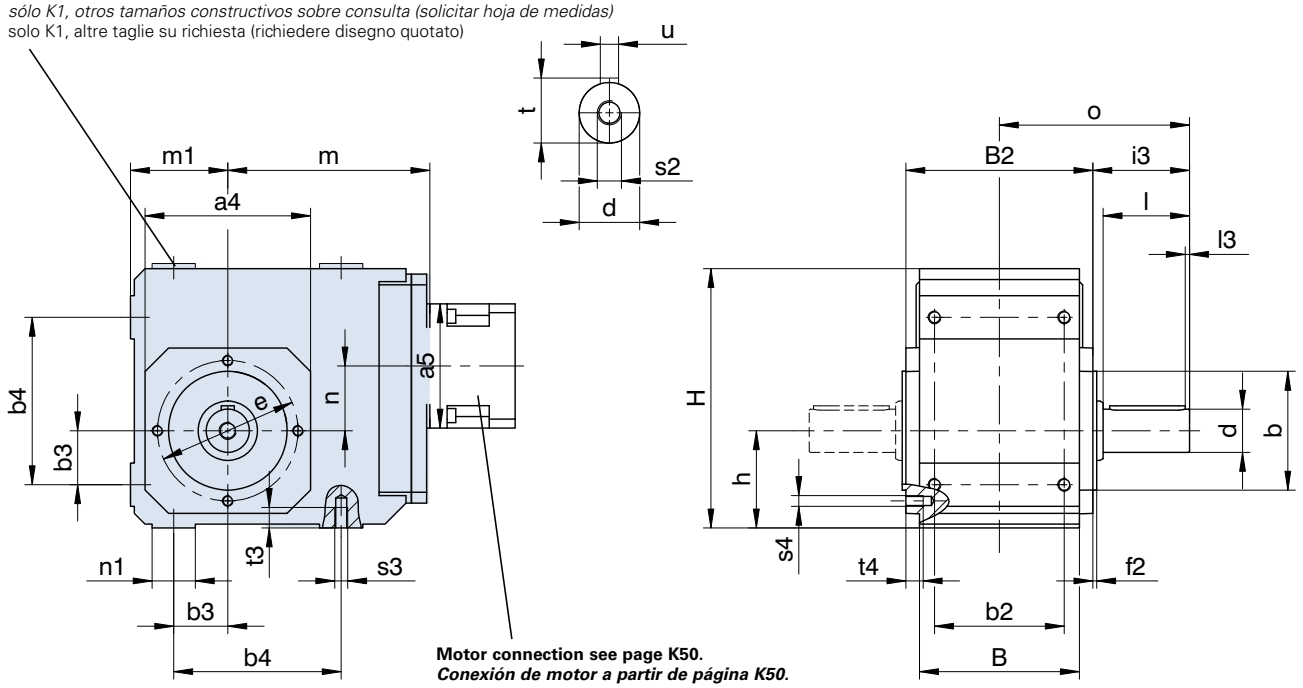
Typ	ME10			ME20			ME30			ME40			ME50		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n	a5	m	n
K102	□98	124	36,0	□115	128	36,0	-	-	-	-	-	-	-	-	-
K202	□98	143	46,0	□115	147	46,0	□145	149	46,0	-	-	-	-	-	-
K203	ø140	180	46,0	-	-	-	-	-	-	-	-	-	-	-	-
K302	ø140	163	52,5	□115	167	52,5	□145	169	52,5	-	-	-	-	-	-
K303	ø140	200	52,5	ø160	210	16,0	-	-	-	-	-	-	-	-	-
K402	-	-	-	ø160	187	60,0	□145	189	60,0	□190	192	60,0	-	-	-
K403	ø140	220	60,0	ø160	230	23,0	-	-	-	-	-	-	-	-	-
K513	-	-	-	ø160	172	15,0	□145	174	15,0	□190	177	15,0	-	-	-
K514	-	-	-	ø160	215	15,0	-	-	-	-	-	-	-	-	-
K613	-	-	-	ø160	191	18,0	ø200	193	18,0	□190	196	18,0	ø300	210	18,0
K614	-	-	-	ø160	234	18,0	-	-	-	-	-	-	-	-	-
K713	-	-	-	-	-	-	ø200	221	20,0	□190	224	20,0	ø300	237	20,0
K714	-	-	-	ø160	263	20,0	ø200	283	20,0	-	-	-	-	-	-
K813	-	-	-	-	-	-	ø200	247	24,0	ø250	249	24,0	ø300	262	24,0
K814	-	-	-	-	-	-	ø200	308	24,0	ø250	320	5,0	-	-	-
K913	-	-	-	-	-	-	-	-	-	ø250	294	25,0	ø300	307	25,0
K914	-	-	-	-	-	-	ø200	353	25,0	ø250	365	25,0	-	-	-

Further dimensions see previous page. | *Otras medidas ver página anterior.* | Altre dimensioni vedere la pagina precedente.

STÖBER

K1_VG_ME_ - K4_VG_ME_

only K1, other sizes on request (please ask for a dimension drawing)
sólo K1, otros tamaños constructivos sobre consulta (solicitar hoja de medidas)
solo K1, altre taglie su richiesta (richiedere disegno quotato)



Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.

Output shaft can also be delivered without key.
Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta!
¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta.
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	□a4	øb	b2	b3	b4	B	B2	ød	øe	f2	h	H	H1
K1	105	75j6	70	30	90	90	106	25k6	90	3,0	60	160	-
K2	116	82j6	90	35	115	115	134	30k6	100	3,0	65	190	-
K3	132	95j6	105	40	130	130	146	30k6	115	3,0	75	213	-
K4	152	110j6	120	50	155	148	173	40k6	130	3,5	90	240	-
K5	145	110j6	125	40	140	160	185	45k6	130	3,5	160	260	312
K6	180	140j6	130	50	160	168	200	50k6	165	3,5	190	310	362
K7	195	155j6	145	55	180	190	226	60m6	185	3,5	212	342	403
K8	226	185j6	185	75	240	235	282	70m6	215	4,0	265	410	471
K9	280	230j6	225	95	280	285	330	90m6	265	5,0	315	495	565

Dimensions **a5, m, n** see next page.

*Medidas **a5, m, n** ver página siguiente.*

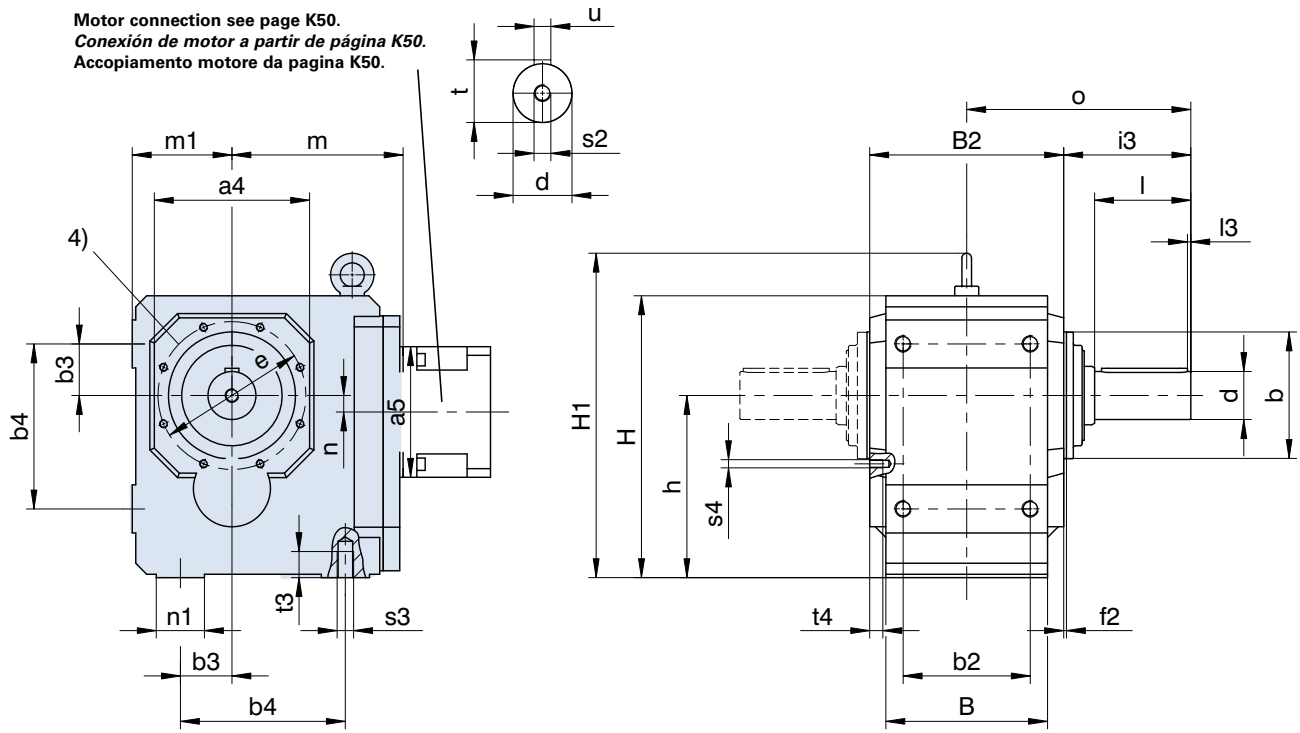
Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	i3	l	l3	m1	n1	o	s2	s3	s4	t	t3	t4	u
K1	62,0	50	4	60	25	115	M10	M8	M8	28,0	13	13	A8x7x40
K2	68,0	60	4	65	30	135	M10	M10	M8	33,0	16	13	A8x7x50
K3	69,0	60	4	75	35	142	M10	M10	M8	33,0	16	13	A8x7x50
K4	89,5	80	4	90	40	176	M16	M12	M10	43,0	19	16	A12x8x70
K5	129,5	90	4	100	50	222	M16	M16	M10	48,5	26	16	A14x9x80
K6	136,0	100	4	120	55	236	M16	M16	M10	53,5	26	16	A14x9x90
K7	164,0	120	4	125	60	277	M20	M20	M12	64,0	33	19	A18x11x110
K8	185,0	140	5	145	70	326	M20	M24	M12	74,5	38	19	A20x12x125
K9	220,0	170	8	180	80	385	M24	M30	M16	95,0	48	26	A25x14x140

STÖBER

K5_VG_ME_ - K9_VG_ME_

Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.



Please refer to the notes on page A19! | ***¡Por favor observe las indicaciones en la página A19!*** | **Si raccomanda di rispettare le avvertenze a pagina A19!**

4) K5-K9: 8 tapped holes turned by 22.5 degrees, K8: 4 additional tapped holes turned by 45 degrees

4) K5-K9: 8 agujeros roscados desplazados 22,5°, K8: adicional 4 agujeros roscados desplazados 45°

4) K5-K9: 8 fori filettati sfalsati di 22,5°, K8: in più 4 fori filettati sfalsati di 45°

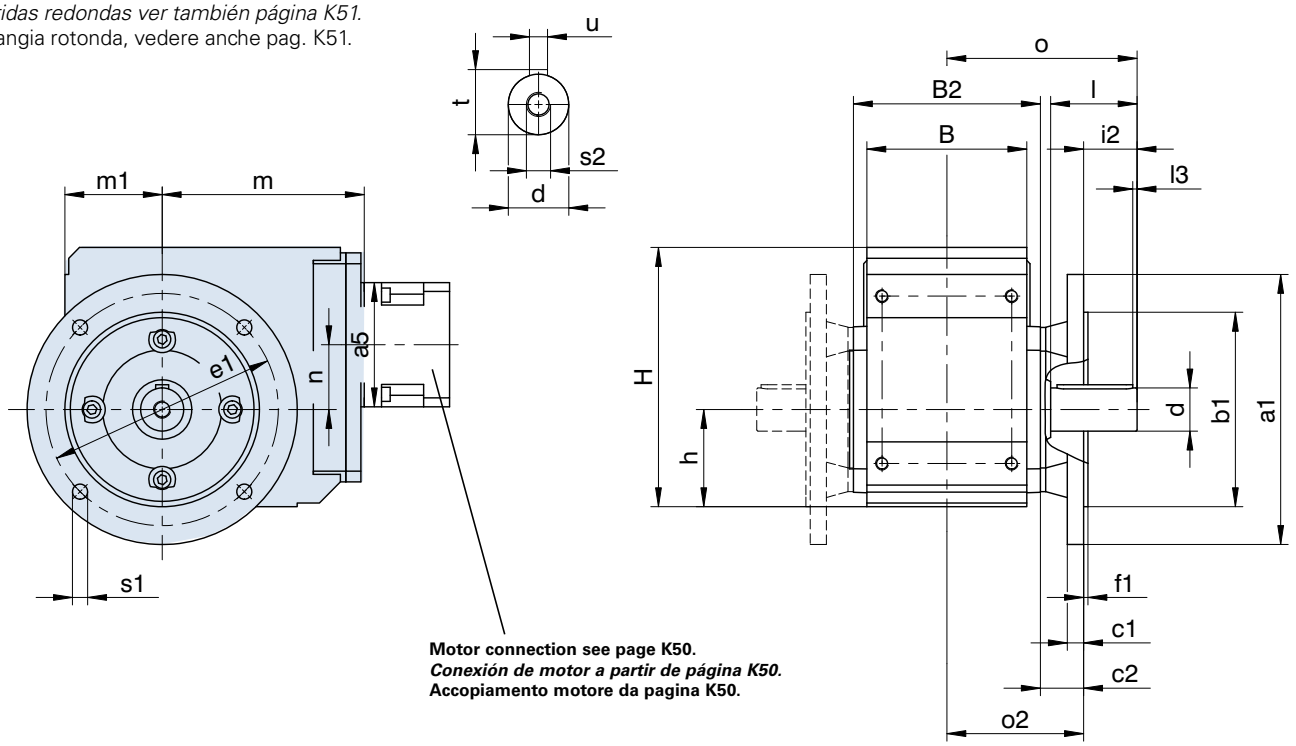
Typ	ME10			ME20			ME30			ME40			ME50		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n	a5	m	n
K102	□98	124	36,0	□115	128	36,0	-	-	-	-	-	-	-	-	-
K202	□98	143	46,0	□115	147	46,0	□145	149	46,0	-	-	-	-	-	-
K203	ø140	180	46,0	-	-	-	-	-	-	-	-	-	-	-	-
K302	ø140	163	52,5	□115	167	52,5	□145	169	52,5	-	-	-	-	-	-
K303	ø140	200	52,5	ø160	210	16,0	-	-	-	-	-	-	-	-	-
K402	-	-	-	ø160	187	60,0	□145	189	60,0	□190	192	60,0	-	-	-
K403	ø140	220	60,0	ø160	230	23,0	-	-	-	-	-	-	-	-	-
K513	-	-	-	ø160	172	15,0	□145	174	15,0	□190	177	15,0	-	-	-
K514	-	-	-	ø160	215	15,0	-	-	-	-	-	-	-	-	-
K613	-	-	-	ø160	191	18,0	ø200	193	18,0	□190	196	18,0	ø300	210	18,0
K614	-	-	-	ø160	234	18,0	-	-	-	-	-	-	-	-	-
K713	-	-	-	-	-	-	ø200	221	20,0	□190	224	20,0	ø300	237	20,0
K714	-	-	-	ø160	263	20,0	ø200	283	20,0	-	-	-	-	-	-
K813	-	-	-	-	-	-	ø200	247	24,0	ø250	249	24,0	ø300	262	24,0
K814	-	-	-	-	-	-	ø200	308	24,0	ø250	320	5,0	-	-	-
K913	-	-	-	-	-	-	-	-	-	ø250	294	25,0	ø300	307	25,0
K914	-	-	-	-	-	-	ø200	353	25,0	ø250	365	25,0	-	-	-

Further dimensions see previous page. | *Otras medidas ver página anterior.* | Altre dimensioni vedere la pagina precedente.

STÖBER

K1_VF_ME_ - K4_VF_ME_

Round flanges see also page K51.
Bridas redondas ver también página K51.
Flangia rotonda, vedere anche pag. K51.



Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.

Output shaft can also be delivered without key. Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta! ¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta. Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	øa1	øb1	B	B2	c1	c2	ød	øe1	f1	h	H
K1	160	110j6	90	106	10	32,0	25k6	130	3,5	60	160
K2	200	130j6	115	134	12	32,0	30k6	165	3,5	65	190
K3	200	130j6	130	146	14	38,0	30k6	165	3,5	75	213
K4	250	180j6	148	173	15	40,0	40k6	215	4,0	90	240
K5	250	180j6	160	185	15	39,5	45k6	215	4,0	160	260
K6	300	230j6	168	200	17	36,0	50k6	265	4,0	190	310
K7	350	250h6	190	226	18	44,0	60m6	300	5,0	212	342
K8	400	300h6	235	282	20	45,0	70m6	350	5,0	265	410
K9	450	350h6	285	330	23	50,0	90m6	400	5,0	315	495

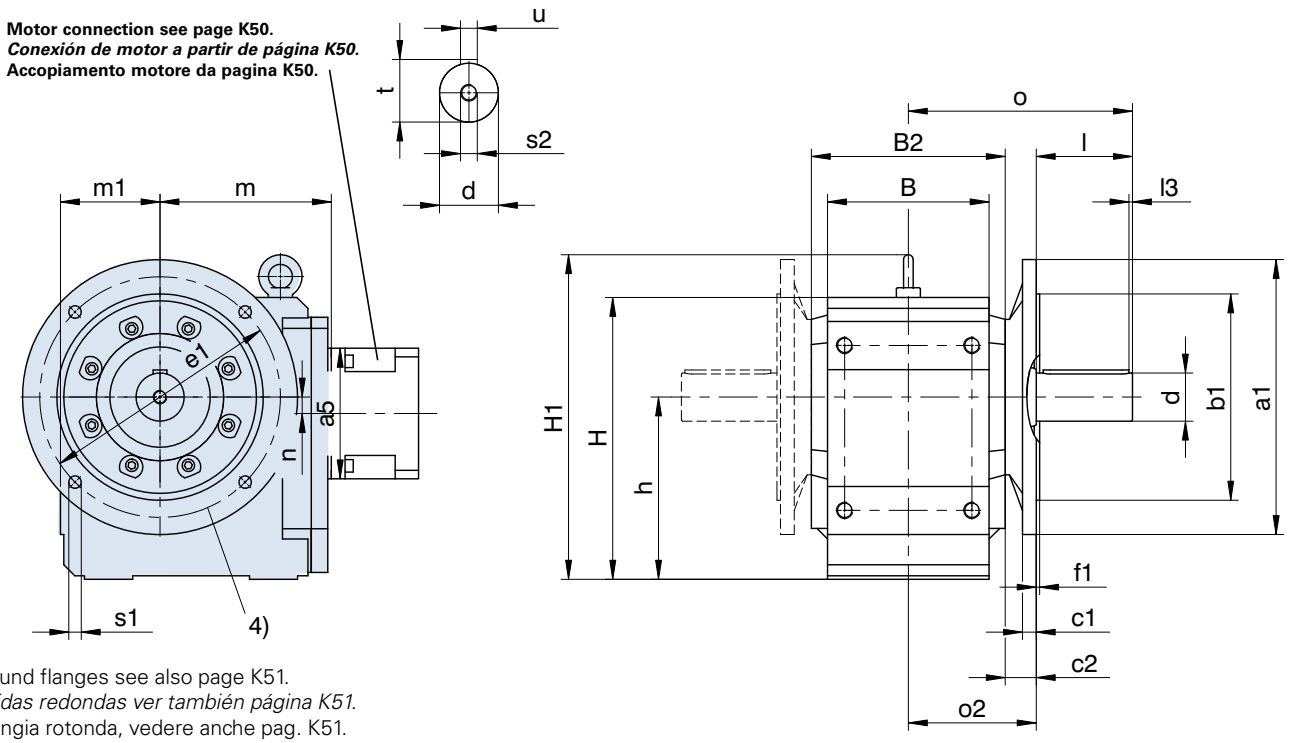
Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	H1	i2	l	l3	m1	o	o2	øs1	s2	t	u
K1	-	30,0	50	4	60	115	85,0	9	M10	28,0	A8x7x40
K2	-	36,0	60	4	65	135	99,0	11	M10	33,0	A8x7x50
K3	-	31,0	60	4	75	142	111,0	11	M10	33,0	A8x7x50
K4	-	49,5	80	4	90	176	126,5	14	M16	43,0	A12x8x70
K5	312	-	90	4	100	222	132,0	14	M16	48,5	A14x9x80
K6	362	-	100	4	120	236	136,0	14	M16	53,5	A14x9x90
K7	403	-	120	4	125	277	157,0	18	M20	64,0	A18x11x110
K8	471	-	140	5	145	326	186,0	18	M20	74,5	A20x12x125
K9	565	-	170	8	180	385	215,0	18	M24	95,0	A25x14x140

STÖBER

K5_VF_ME_ - K9_VF_ME_

Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.



Round flanges see also page K51.
Bridas redondas ver también página K51.
Flangia rotonda, vedere anche pag. K51.

Please refer to the notes on page A19! | ***¡Por favor observe las indicaciones en la página A19!*** | **Si raccomanda di rispettare le avvertenze a pagina A19!**

4) K9: 8 holes are turned by 22.5 degrees. | ***4) K9: 8 agujeros desplazados 22,5°.*** | **4) K9: 8 fori sfalsati di 22,5°.**

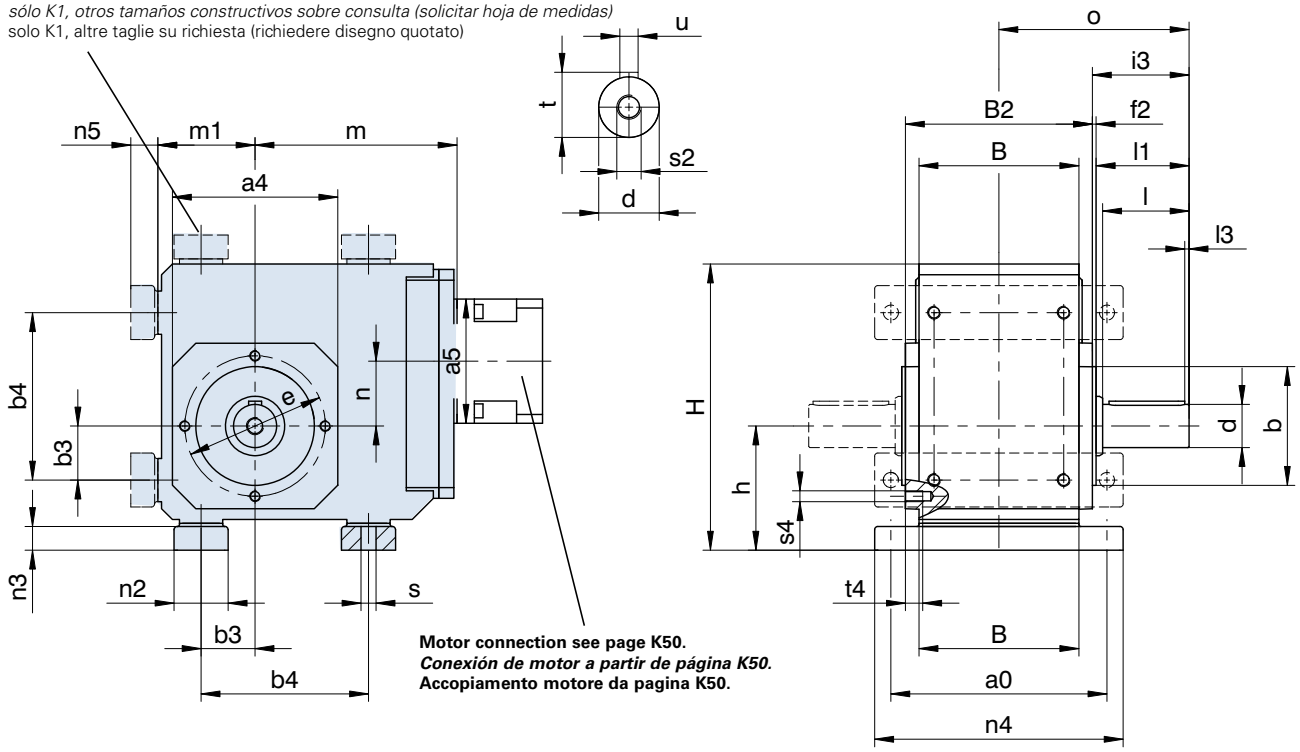
Typ	ME10			ME20			ME30			ME40			ME50		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n	a5	m	n
K102	□98	124	36,0	□115	128	36,0	-	-	-	-	-	-	-	-	-
K202	□98	143	46,0	□115	147	46,0	□145	149	46,0	-	-	-	-	-	-
K203	ø140	180	46,0	-	-	-	-	-	-	-	-	-	-	-	-
K302	ø140	163	52,5	□115	167	52,5	□145	169	52,5	-	-	-	-	-	-
K303	ø140	200	52,5	ø160	210	16,0	-	-	-	-	-	-	-	-	-
K402	-	-	-	ø160	187	60,0	□145	189	60,0	□190	192	60,0	-	-	-
K403	ø140	220	60,0	ø160	230	23,0	-	-	-	-	-	-	-	-	-
K513	-	-	-	ø160	172	15,0	□145	174	15,0	□190	177	15,0	-	-	-
K514	-	-	-	ø160	215	15,0	-	-	-	-	-	-	-	-	-
K613	-	-	-	ø160	191	18,0	ø200	193	18,0	□190	196	18,0	ø300	210	18,0
K614	-	-	-	ø160	234	18,0	-	-	-	-	-	-	-	-	-
K713	-	-	-	-	-	-	ø200	221	20,0	□190	224	20,0	ø300	237	20,0
K714	-	-	-	ø160	263	20,0	ø200	283	20,0	-	-	-	-	-	-
K813	-	-	-	-	-	-	ø200	247	24,0	ø250	249	24,0	ø300	262	24,0
K814	-	-	-	-	-	-	ø200	308	24,0	ø250	320	5,0	-	-	-
K913	-	-	-	-	-	-	-	-	-	ø250	294	25,0	ø300	307	25,0
K914	-	-	-	-	-	-	ø200	353	25,0	ø250	365	25,0	-	-	-

Further dimensions see previous page. | *Otras medidas ver página anterior.* | Altre dimensioni vedere la pagina precedente.

STÖBER

K1_VNG_ME_ - K4_VNG_ME_

only K1, other sizes on request (please ask for a dimension drawing)
sólo K1, otros tamaños constructivos sobre consulta (solicitar hoja de medidas)
solo K1, altre taglie su richiesta (richiedere disegno quotato)



Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.

Output shaft can also be delivered without key.
Please refer to the notes on page A19!

¡Eje de salida también disponible sin chaveta!
¡Por favor observe las indicaciones en la página A19!

Albero di uscita disponible anche senza chiavetta.
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	a0	□a4	øb	b3	b4	B	B2	ød	øe	f2	h	H	H1	i3
K1	115	105	75j6	30	90	90	106	25k6	90	3,0	75	175	-	62,0
K2	155	116	82j6	35	115	115	134	30k6	100	3,0	88	213	-	68,0
K3	170	132	95j6	40	130	130	146	30k6	115	3,0	98	236	-	69,0
K4	200	152	110j6	50	155	148	173	40k6	130	3,5	115	265	-	89,5
K5	200	145	110j6	40	140	160	185	45k6	130	3,5	190	290	342	129,5
K6	210	180	140j6	50	160	168	200	50k6	165	3,5	220	340	392	136,0
K7	241	195	155j6	55	180	190	226	60m6	185	3,5	250	380	441	164,0
K8	300	226	185j6	75	240	235	282	70m6	215	4,0	310	455	516	185,0
K9	360	280	230j6	95	280	285	330	90m6	265	5,0	365	545	615	220,0

Dimensions **a5, m, n** see next page.

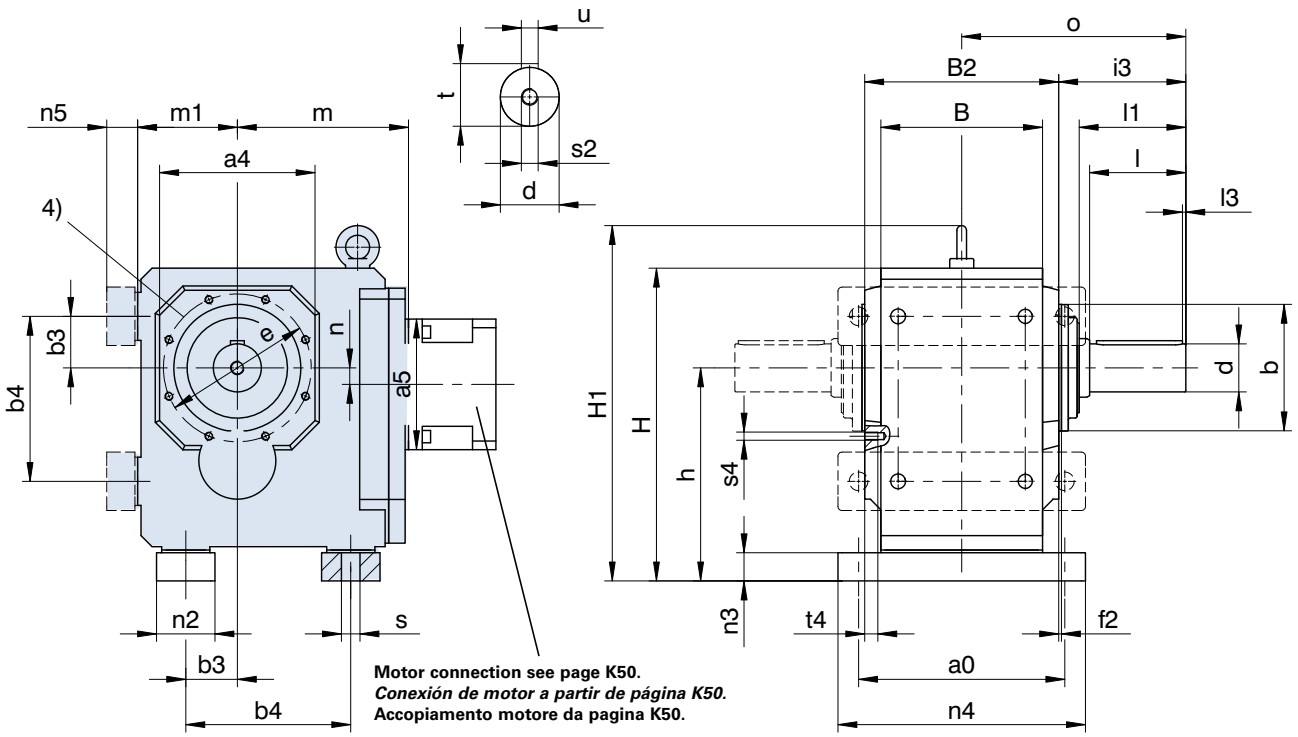
*Medidas **a5, m, n** ver página siguiente.*

Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	l	l1	l3	m1	n2	n3	n4	n5	o	øs	s2	s4	t	t4	u
K1	50	59,0	4	60	30	13	140	15	115	9,0	M10	M8	28,0	13	A8x7x40
K2	60	65,0	4	65	40	20	185	23	135	11,0	M10	M8	33,0	13	A8x7x50
K3	60	66,0	4	75	45	20	200	23	142	11,0	M10	M8	33,0	13	A8x7x50
K4	80	86,0	4	90	50	22	230	25	176	14,0	M16	M10	43,0	16	A12x8x70
K5	90	126,0	4	100	60	27	240	30	222	18,0	M16	M10	48,5	16	A14x9x80
K6	100	109,5	4	120	65	27	250	30	236	18,5	M16	M10	53,5	16	A14x9x90
K7	120	130,5	4	125	70	35	290	38	277	23,0	M20	M12	64,0	19	A18x11x110
K8	140	151,0	5	145	85	41	360	45	326	27,0	M20	M12	74,5	19	A20x12x125
K9	170	191,0	8	180	95	46	430	50	385	34,0	M24	M16	95,0	26	A25x14x140

STÖBER

K5_VNG_ME_ - K9_VNG_ME_



Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.

Please refer to the notes on page A19! | ***¡Por favor observe las indicaciones en la página A19!*** | **Si raccomanda di rispettare le avvertenze a pagina A19!**

4) K5-K9: 8 tapped holes turned by 22.5 degrees, K8: 4 additional tapped holes turned by 45 degrees

4) K5-K9: 8 agujeros roscados desplazados 22,5°, K8: adicional 4 agujeros roscados desplazados 45°

4) K5-K9: 8 fori filettati sfalsati di 22,5°, K8: in più 4 fori filettati sfalsati di 45°

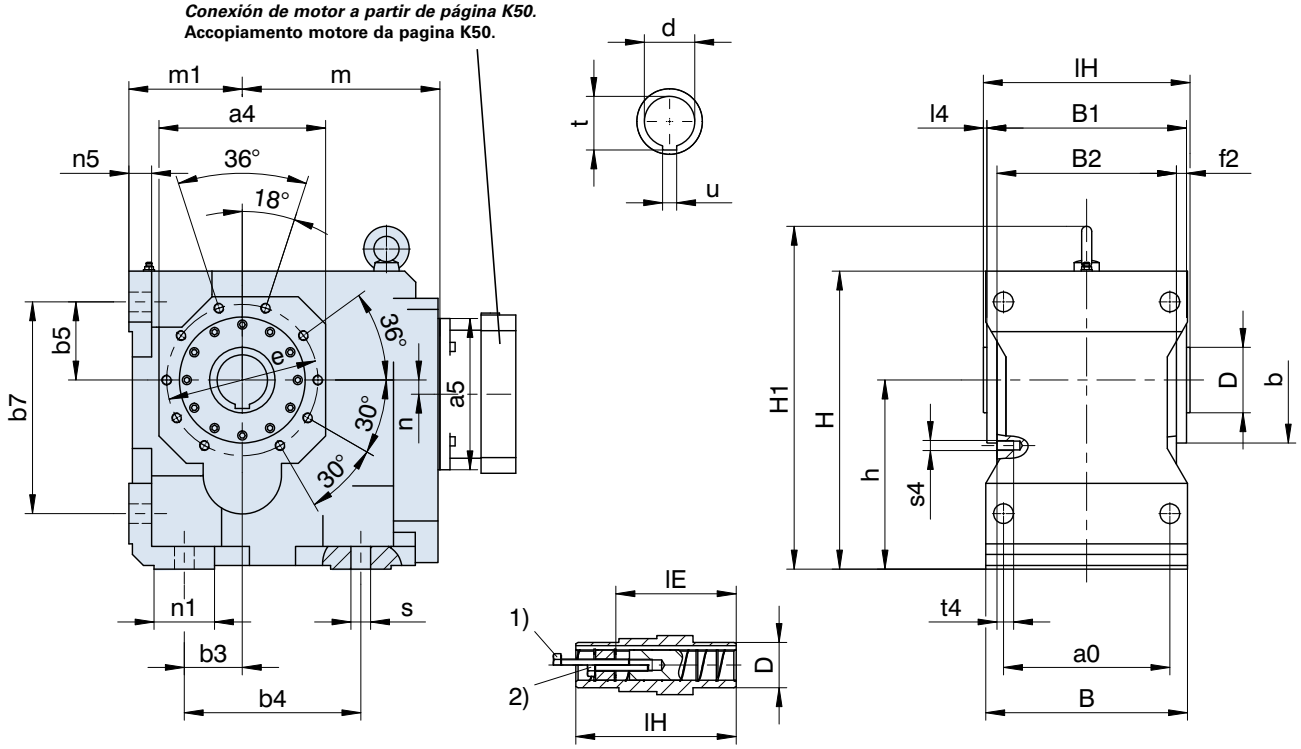
Typ	ME10			ME20			ME30			ME40			ME50		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n	a5	m	n
K102	□98	124	36,0	□115	128	36,0	-	-	-	-	-	-	-	-	-
K202	□98	143	46,0	□115	147	46,0	□145	149	46,0	-	-	-	-	-	-
K203	ø140	180	46,0	-	-	-	-	-	-	-	-	-	-	-	-
K302	ø140	163	52,5	□115	167	52,5	□145	169	52,5	-	-	-	-	-	-
K303	ø140	200	52,5	ø160	210	16,0	-	-	-	-	-	-	-	-	-
K402	-	-	-	ø160	187	60,0	□145	189	60,0	□190	192	60,0	-	-	-
K403	ø140	220	60,0	ø160	230	23,0	-	-	-	-	-	-	-	-	-
K513	-	-	-	ø160	172	15,0	□145	174	15,0	□190	177	15,0	-	-	-
K514	-	-	-	ø160	215	15,0	-	-	-	-	-	-	-	-	-
K613	-	-	-	ø160	191	18,0	ø200	193	18,0	□190	196	18,0	ø300	210	18,0
K614	-	-	-	ø160	234	18,0	-	-	-	-	-	-	-	-	-
K713	-	-	-	-	-	-	ø200	221	20,0	□190	224	20,0	ø300	237	20,0
K714	-	-	-	ø160	263	20,0	ø200	283	20,0	-	-	-	-	-	-
K813	-	-	-	-	-	-	ø200	247	24,0	ø250	249	24,0	ø300	262	24,0
K814	-	-	-	-	-	-	ø200	308	24,0	ø250	320	5,0	-	-	-
K913	-	-	-	-	-	-	-	-	-	ø250	294	25,0	ø300	307	25,0
K914	-	-	-	-	-	-	ø200	353	25,0	ø250	365	25,0	-	-	-

Further dimensions see previous page. | *Otras medidas ver página anterior.* | Altre dimensioni vedere la pagina precedente.

STÖBER

K10_ANG_ME_

Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.



Shaft mounted: 1), 2) see page A19 | ***Ejecución enchufable:*** *1), 2) ver página A19* | **Esecuzione ad albero cavo:** 1), 2) vedere pag. A19

Typ	a0	øa1	□a4	øb	øb1	b3	b4	b5	b7	B	B1	B2	c1	c2	ød	øD	øe
K10	330	550	340	250$_{h6}$	450$_{h6}$	115	350	155	420	400	396	356	25	78	100^{H7}	130	300

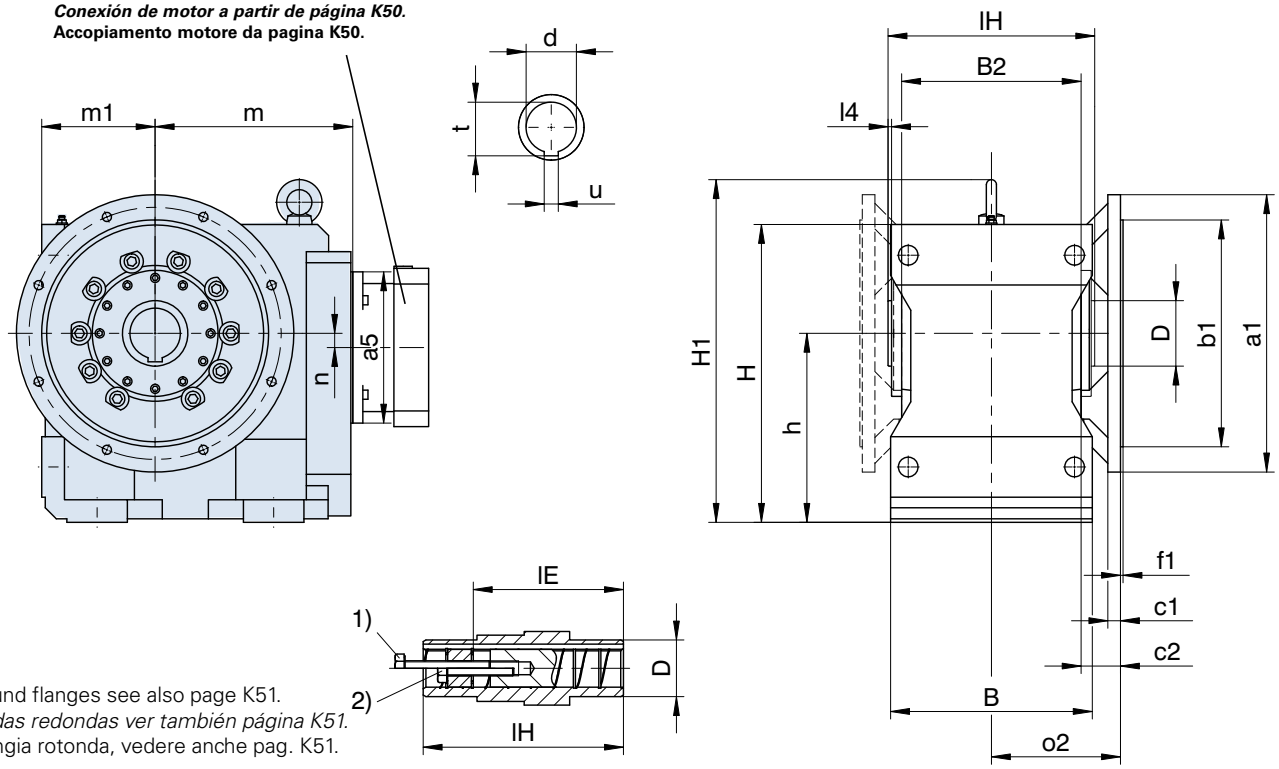
Typ	øe1	f1	f2	h	H	H1	l4	lE	lH	m1	n1	n5	o2	øs	øs1	s4	t	t4	u
K10	500	5	20	375	591	680	7	361	410	225	120	45	256	39	18	M20	106,4	33	28^{JS9}

Dimensions **a5, m, n** see next page. | *Medidas **a5, m, n** ver página siguiente.* | Dimensioni **a5, m, n** vedere la pagina successiva.

STÖBER

K10_ANF_ME_

Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.



Round flanges see also page K51.
Bridas redondas ver también página K51.
Flangia rotonda, vedere anche pag. K51.

Shaft mounted: 1), 2) see page A19 | ***Ejecución enchufable:*** *1), 2) ver página A19* | **Esecuzione ad albero cavo:** 1), 2) vedere pag. A19

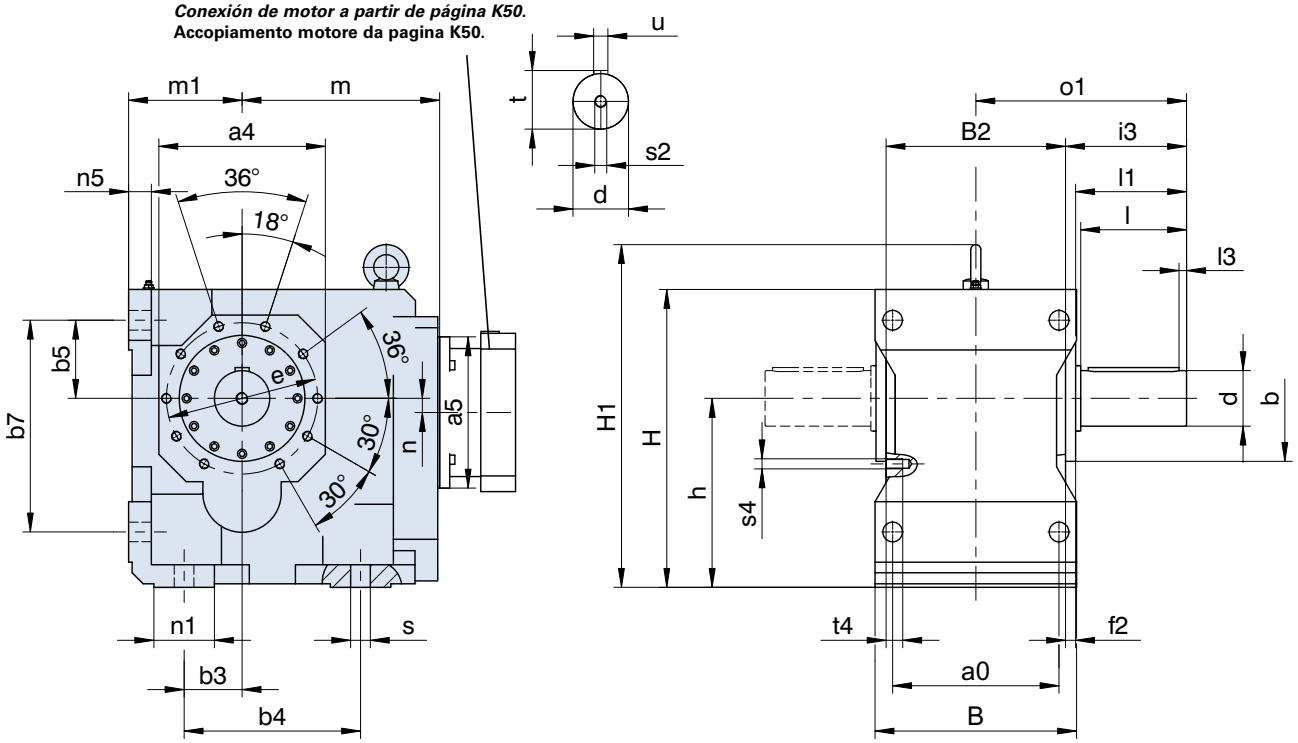
Typ	ME40			ME50		
	a5	m	n	a5	m	n
K1013	-	-	-	ø300	392	28
K1014	ø250	450	28	ø300	475	28

Further dimensions see previous page. | *Otras medidas ver página anterior.* | Altre dimensioni vedere la pagina precedente.

STÖBER

K10_VNG_ME_

Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	a0	øa1	□a4	øb	øb1	b3	b4	b5	b7	B	B2	c1	c2	ød	øe	øe1	f1	f2	h
K10	330	550	340	250h6	450h6	115	350	155	420	400	356	25	78	110m6	300	500	5	20	375

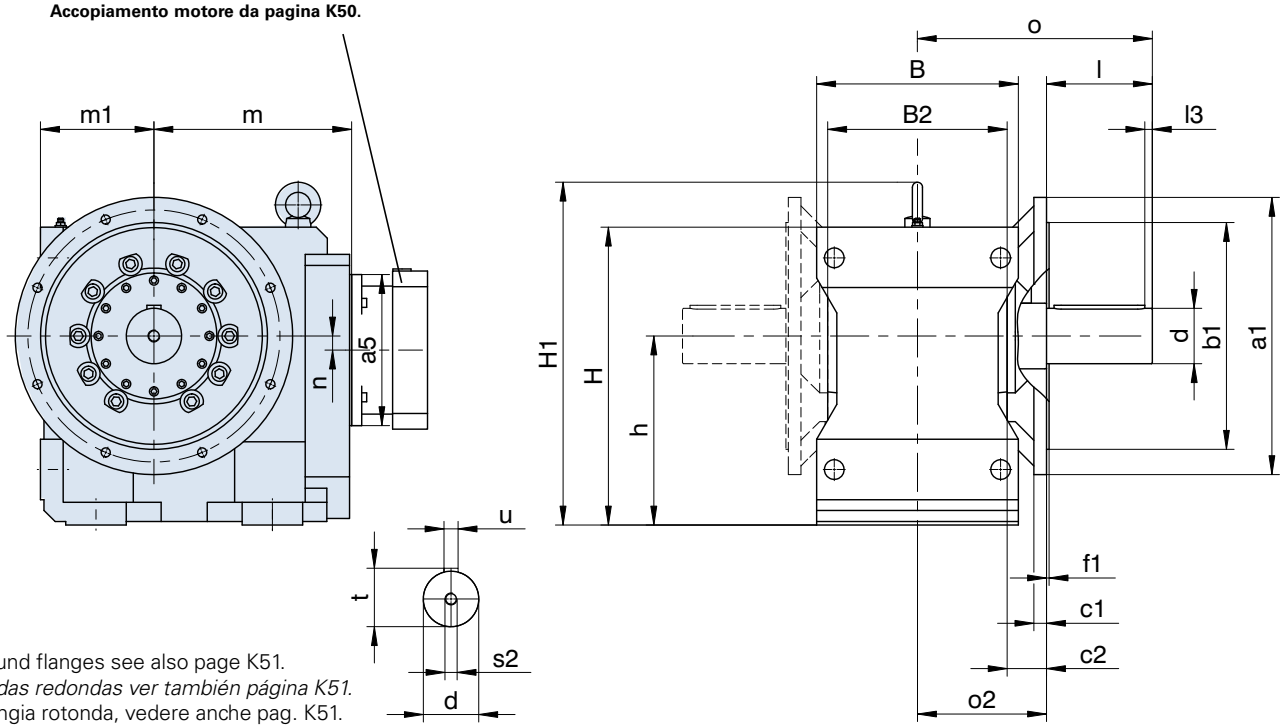
Typ	H	H1	i3	l	l1	l3	m1	n1	n5	o	o1	o2	øs	øs1	s2	s4	t	t4	u
K10	591	680	240	210	220	15	225	120	45	466	418	256	39	18	M24	M20	116	33	A28x16x180

Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

STÖBER

K10_VNF_ME_

Motor connection see page K50.
Conexión de motor a partir de página K50.
Accopiamento motore da pagina K50.



Round flanges see also page K51.
Bridas redondas ver también página K51.
Flangia rotonda, vedere anche pag. K51.

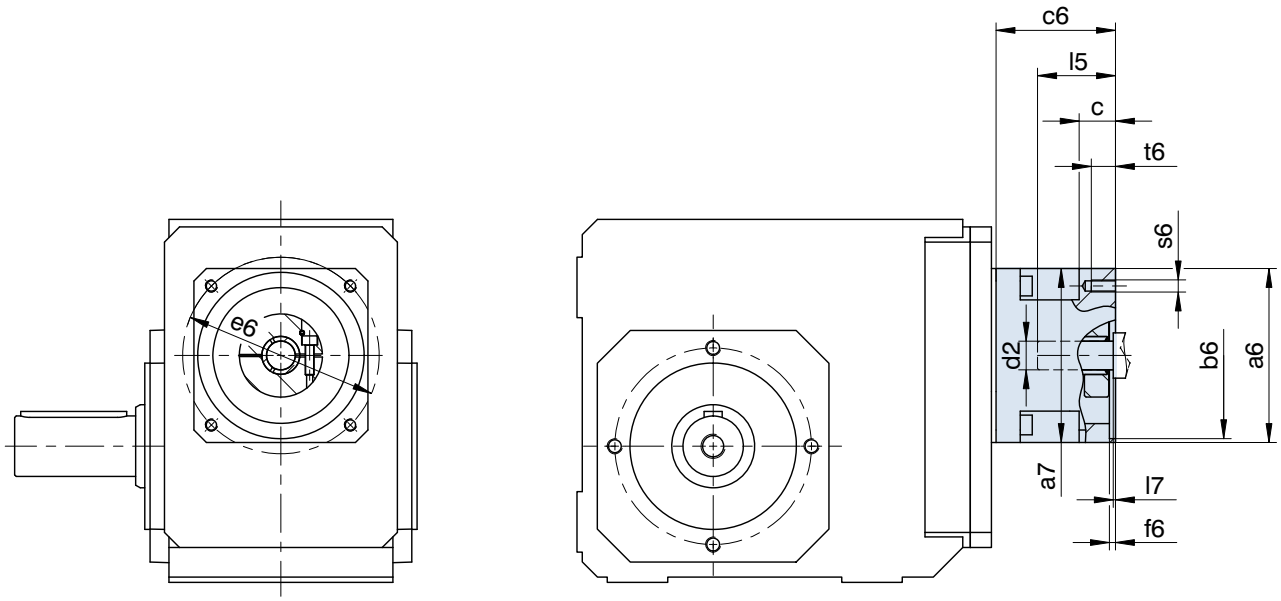
Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	ME40			ME50		
	a5	m	n	a5	m	n
K1013	-	-	-	ø300	392	28
K1014	ø250	450	28	ø300	475	28

Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

STÖBER

K1_ME_ - K10_ME_



Refer to the standard dimension drawings for further gear unit dimensions.
Please refer to the notes on page A19!

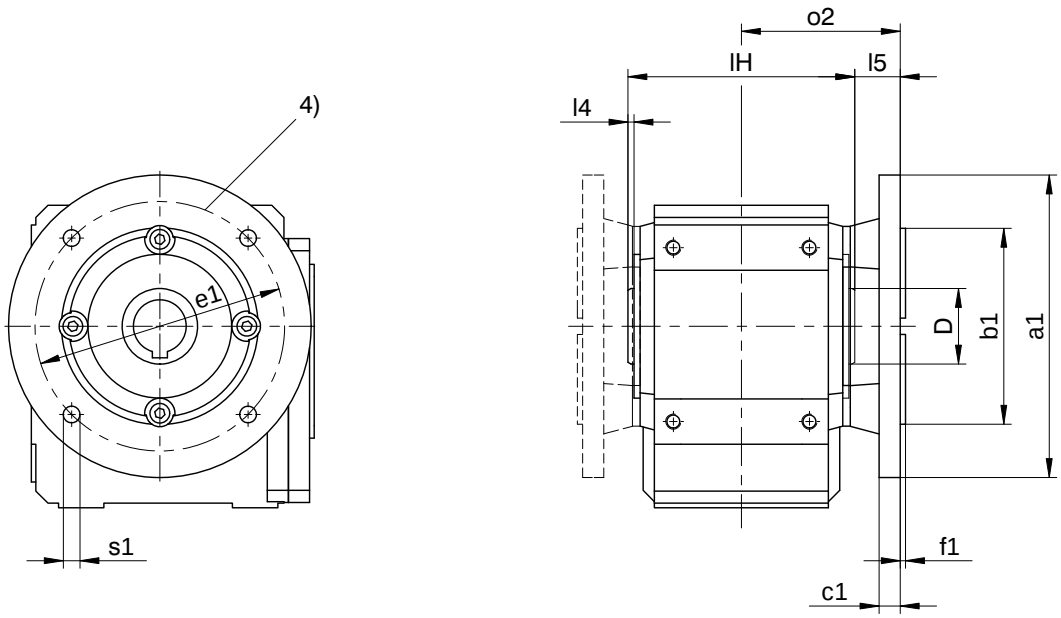
Otras medidas de reductor pueden ser tomadas de los dibujos estándar acotados.
¡Por favor observe las indicaciones en la página A19!

Per altre dimensioni riduttore fare riferimento ai disegni quotati standard.
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	øb6	øe6	ød2max	l5max	□a6	□a7	c	c6	f6	l7max	s6	t6
ME10	50,0H7	70	19	41	100	98	21,0	61,0	4,0	3,0	M4	10
ME10	50,0H7	95	19	41	100	98	21,0	61,0	2,5	3,0	M6	13
ME10	60,0H7	75	19	41	100	98	21,0	61,0	3,5	3,0	M5	9
ME10	80,0H7	100	19	41	100	98	21,0	61,0	4,0	3,0	M6	13
ME10	95,0H7	115	19	41	100	98	21,0	61,0	4,0	3,0	M8	21
ME10	95,0H7	115	19	50	100	98	30,0	70,0	4,0	12,0	M8	16
ME10	95,0H7	130	19	41	115	98	21,0	61,0	4,0	3,0	M8	16
ME10	95,0H7	130	19	50	115	98	30,0	70,0	4,0	12,0	M8	16
ME10	110,0H7	130	19	50	115	98	30,0	70,0	4,0	12,0	M8	16
ME10	110,0H7	145	19	58	130	98	38,0	78,0	7,0	20,0	M8	16
ME10	130,0H7	165	19	50	140	98	30,0	70,0	7,0	12,0	M10	20
ME20	80,0H7	100	32	53	120	115	24,0	74,0	4,0	3,5	M6	13
ME20	95,0H7	115	32	53	120	115	24,0	74,0	5,0	3,5	M8	16
ME20	95,0H7	130	32	53	120	115	24,0	74,0	4,0	3,5	M8	16
ME20	110,0H7	130	32	53	120	115	24,0	74,0	4,0	3,5	M8	16
ME20	110,0H7	145	32	61	140	115	32,0	82,0	6,5	11,5	M8	16
ME20	110,0H7	145	32	71	140	115	42,0	92,0	7,0	21,5	M8	16
ME20	110,0H7	165	32	53	140	115	24,0	74,0	5,0	3,5	M10	24
ME20	130,0H7	165	32	53	140	116	37,5	111,5	5,0	3,0	M10	20
ME20	130,0H7	165	32	61	140	115	32,0	82,0	5,0	11,5	M10	20
ME30	110,0H7	130	38	62	145	145	26,0	86,0	5,0	4,5	M8	14
ME30	110,0H7	145	38	73	145	145	37,0	97,0	5,0	15,5	M8	16
ME30	110,0H7	165	38	62	145	145	26,0	86,0	5,0	4,5	M10	26
ME30	114,3H7	200	38	81	180	145	45,0	105,0	5,0	23,5	M12	25
ME30	130,0H7	165	38	62	145	145	26,0	86,0	5,0	4,5	M10	26
ME30	130,0H7	215	38	62	190	145	26,0	86,0	5,0	4,5	M12	26
ME30	130,0H7	215	38	62	190	116	26,0	112,0	5,0	3,0	M12	25
ME30	180,0H7	215	38	62	190	145	26,0	86,0	5,0	4,5	M12	26
ME30	180,0H7	215	38	81	190	145	45,0	105,0	5,0	23,5	M12	25
ME30	180,0H7	215	38	62	190	116	55,0	160,0	5,0	3,0	M12	25
ME40	110,0H7	165	48	81	190	190	34,0	122,0	5,0	4,5	M10	18
ME40	114,3H7	200	48	81	190	190	34,0	122,0	4,0	4,5	M12	34
ME40	130,0H7	165	48	81	190	190	34,0	122,0	5,0	4,5	M10	18
ME40	130,0H7	215	48	81	190	190	34,0	122,0	5,0	4,5	M12	34
ME40	180,0H7	215	48	82	190	190	35,0	123,0	5,0	5,5	M12	35
ME40	250,0H7	300	48	85	260	190	38,0	126,0	6,0	8,5	M16	38
ME50	250,0H7	300	60	86	260	254	43,0	124,5	6,0	5,5	M16	32
ME50	300,0H7	350	60	112	314	254	69,0	150,5	6,0	31,5	M16	34

STÖBER

K1_AF - K9_AF
K10_ANF



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	øa1	øb1	c1	øD	øe1	f1	l4	l5	lH	o2	øs1
K1	140	95j6	10	40	115	3,0	4,0	25,0	120	85,0	9
K1	160	110j6	10	40	130	3,5	4,0	25,0	120	85,0	9
K2	160	110j6	12	45	130	3,5	4,0	25,0	148	99,0	9
K2	200	130j6	12	45	165	3,5	4,0	25,0	148	99,0	11
K3	160	110j6	14	50	130	3,5	4,0	31,0	160	111,0	9
K3	200	130j6	14	50	165	3,5	4,0	31,0	160	111,0	11
K3	250	180j6	14	50	215	4,0	4,0	31,0	160	111,0	14
K4	250	180j6	15	55	215	4,0	4,0	32,5	188	126,5	14
K5	250	180j6	15	65	215	4,0	4,0	32,0	200	132,0	14
K6	300	230j6	17	70	265	4,0	4,0	28,5	215	136,0	14
K7	350	250h6	18	85	300	5,0	4,5	36,0	242	157,0	18
K8	350	250h6	18	100	300	5,0	5,0	36,0	300	186,0	18
K8	400	300h6	20	100	350	5,0	5,0	36,0	300	186,0	18
K84)	450	350h6	20	100	400	5,0	5,0	36,0	300	186,0	18
K94)	450	350h6	23	120	400	5,0	5,0	40,0	350	215,0	18
K104)	550	450h6	25	130	500	5,0	7,0	51,0	410	256,0	18

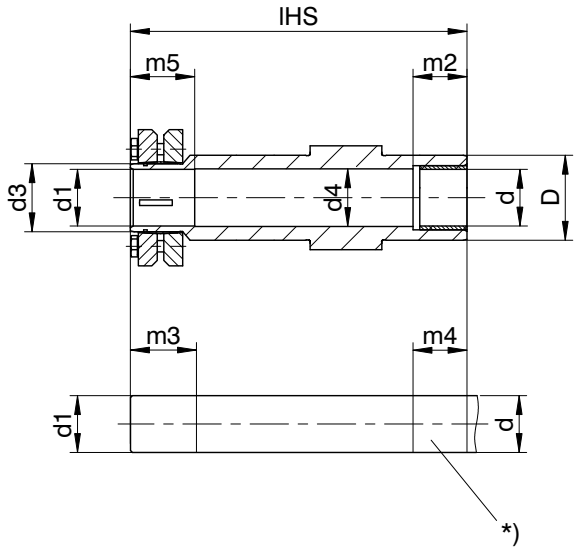
Refer to the standard dimension drawings for further gear unit dimensions. Subject to dimensional changes in the interests of technical development.
4) 8 holes are turned by 22.5 degrees

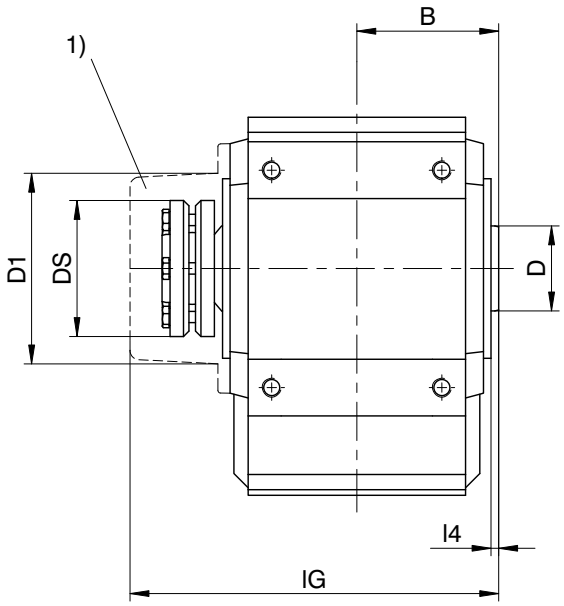
Otras medidas de reductor pueden ser tomadas de los dibujos estándar acotados. Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos.
***4)** 8 agujeros desplazados 22,5°.*

Per altre dimensioni riduttore fare riferimento ai disegni quotati standard. Con riserva di variazioni dimensionali dovute allo sviluppo tecnico.
4) 8 fori sfalsati di 22,5°

STÖBER

K1_S - K10_S





Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

***)** Machine shaft to be driven
1) Cover – possible retrofit on request !
Subject to dimensional changes in the interests of technical development.

***)** *Eje de máquina a cargo del cliente*
1) *Cubierta – ¡Posibilidad de equipamiento retroactivo a consultar!*
Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos.

***)** Albero macchina da comandare
1) Copertura - applicabile in seguito su richiesta !
Con riserva di variazioni dimensionali dovute allo sviluppo tecnico.

Typ	B	ød	ød1	ød3	ød4	øD	øD1	øDS	lG	lHS	l4	m2	m3	m4	m5
K1	60,0	25h9	25H7h9	30	25,5	40	80,0	60	163	149	4,0	20	34	25	29
K2	74,0	30h9	30H7h9	36	30,5	45	88,0	72	193	178	4,0	25	39	30	34
K3	80,0	35h9	35H7h9	44	35,5	50	101,0	80	206	190	4,0	30	39	35	34
K4	94,0	40h9	40H7h9	50	40,5	55	114,0	90	243	220	4,0	40	39	45	34
K5	100,0	50h9	50H7h9	62	50,5	65	116,0	106	254	237	4,0	40	44	45	39
K6	107,5	50h9	50H7h9	62	50,5	70	128,0	106	276	254	4,0	40	45	45	40
K7	121,0	60h6	60H7h6	75	62,0	85	161,5	138	314	278	4,5	40	45	45	40
K8	150,0	70h6	70H7h6	90	72,0	100	193,0	155	378	352	5,0	50	60	60	50
K9	175,0	90h6	90H7h6	120	92,0	120	244,0	200	428	418	5,0	60	70	70	60
K10	205,0	100h6	100H7h6	130	102,0	130	274,0	230	497	483	7,0	60	80	70	70

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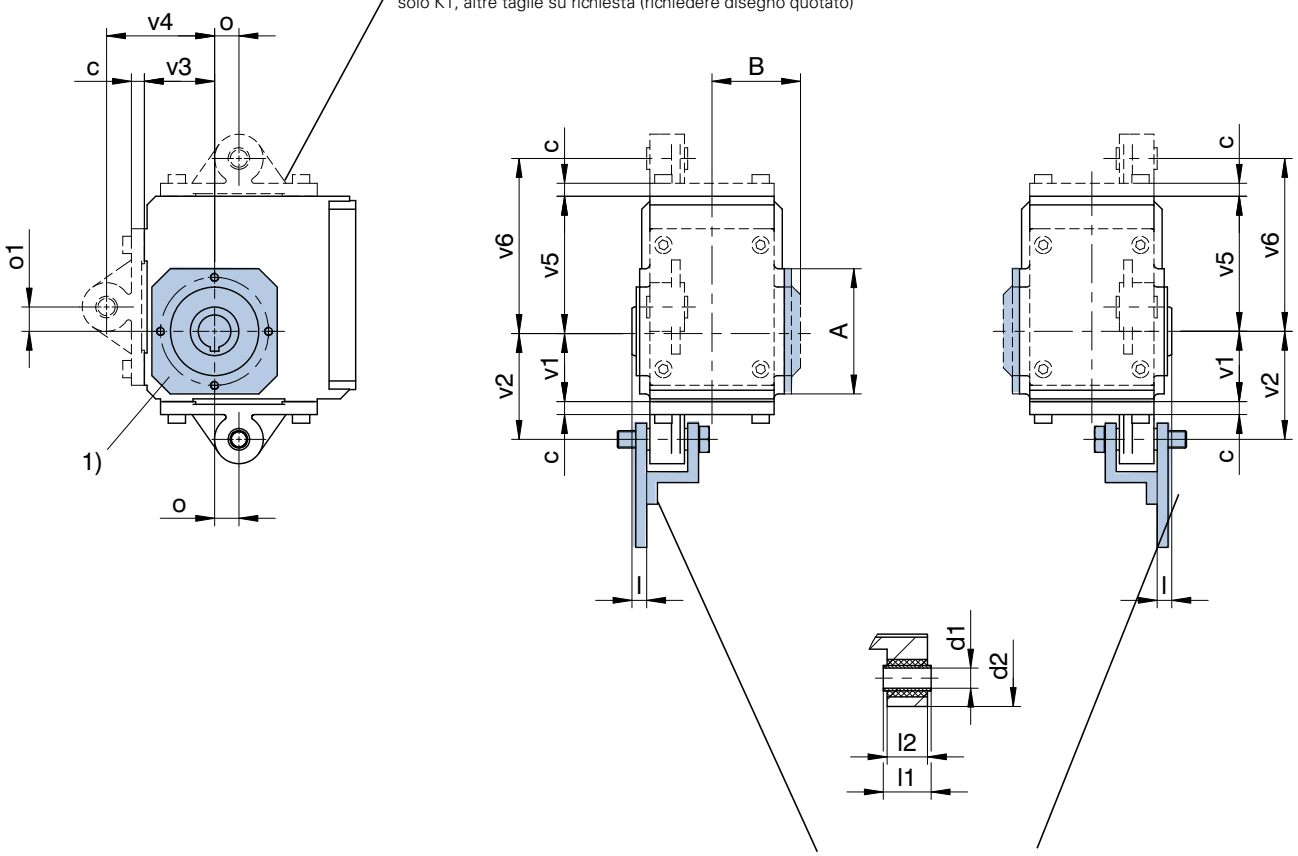
K1_AGD - K4_AGD

only K1, other sizes on request (please ask for a dimension drawing)
sólo K1, otros tamaños constructivos sobre consulta (solicitar hoja de medidas)
solo K1, altre taglie su richiesta (richiedere disegno quotato)



It does not belong to our scope of supplies!
¡No pertenece al alcance del suministro!
Non in dotazione!

Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

In case of supporting without the specially for that assigned torque arms, it is important not to fall below the dimension v4. See page K5 for mounting position.
1) Cover optional

En caso de apoyo sin los soportes de par de torsión previstos de fábrica, no se debe quedar por debajo de la medida v4. Posición de instalación ver página K5.
***1)** Cubierta opcional*

In caso di sostegno senza i bracci di reazione previsti in fabbrica, non è consentito scendere al di sotto della misura v4. Posizione di montaggio: vedere la pag. K5.
1) Copertura opzionale

Typ	□A	øA	B	c	ød1	ød2	l	l1	l2	o	o1	v1	v2	v3	v4	v5	v6
K1	105	-	67,0	10	12^{H9}	43	13,0	28	24	15,0	15,0	60	90	60	90	100	130
K2	116	-	82,0	12	16^{H9}	45	13,5	38	32	22,5	22,5	65	100	65	100	-	-
K3	132	-	88,0	12	16^{H9}	45	12,0	38	32	25,0	25,0	75	120	75	120	-	-
K4	152	-	103,5	14	20^{H9}	55	17,0	46	40	27,5	27,5	90	150	90	150	-	-

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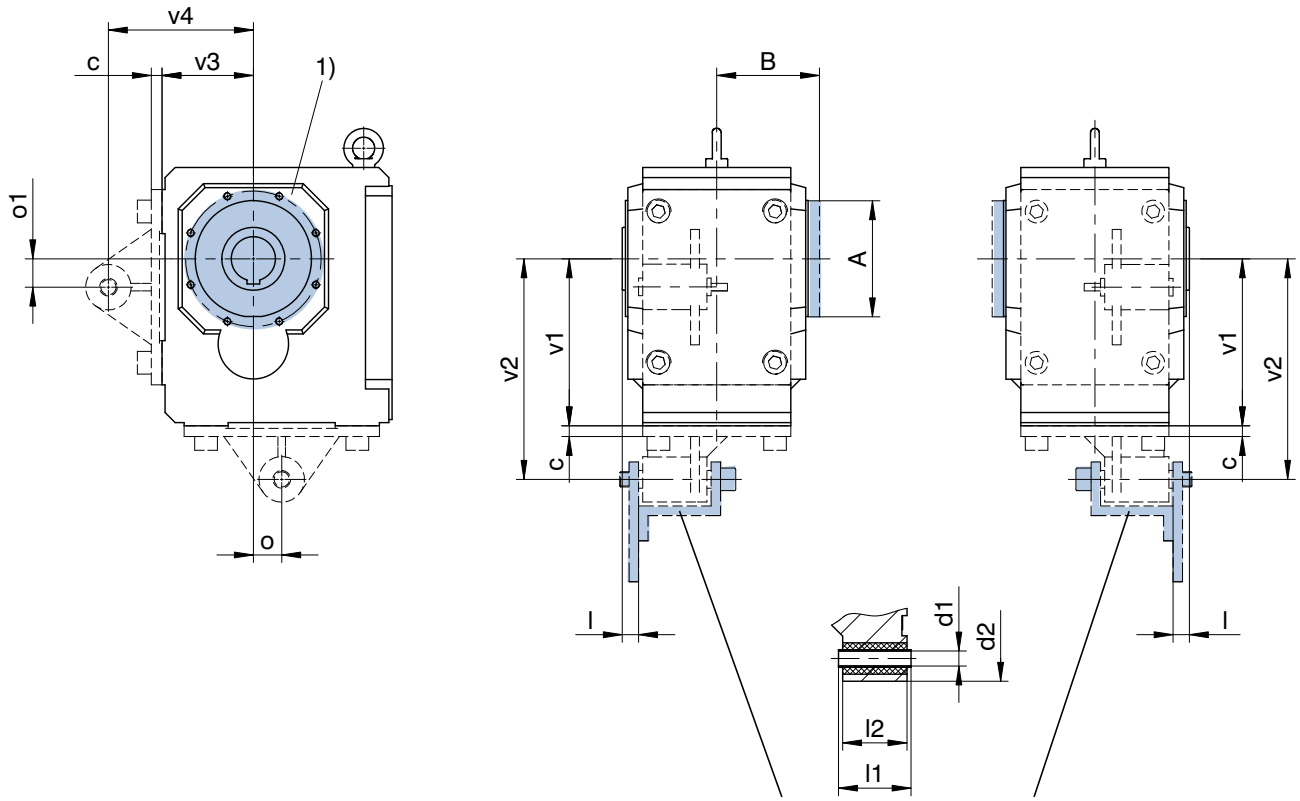
K5_AGD - K9_AGD
K10_ANGD



It does not belong to our scope of supplies!
¡No pertenece al alcance del suministro!
Non in dotazione!

Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	□A	øA	B	c	ød1	ød2	l	l1	l2	o	o1	v1	v2	v3	v4
K5	145	-	109,5	15	20H9	58	17,0	46	40	30,0	30,0	160	250	100	190
K6	-	183	117,0	15	20H9	58	20,5	46	40	30,0	30,0	190	250	120	180
K7	-	205	131,0	17	20H9	68	23,0	70	64	35,0	35,0	212	300	125	213
K8	-	184	161,0	17	24H9	72	26,0	115	102	45,0	45,0	265	350	145	230
K9	-	230	186,0	20	24H9	75	26,0	115	102	45,0	45,0	315	450	180	315
K10	-	200	196,0	42	40H9	120	6,0	124	118	60,0	55,0	375	550	225	400

In case of supporting without the specially for that assigned torque arms, it is important not to fall below the dimension v4. See page K5 for mounting position.
1) Cover optional

En caso de apoyo sin los soportes de par de torsión previstos de fábrica, no se debe quedar por debajo de la medida v4. Posición de instalación ver página K5.
***1)** Cubierta opcional*

In caso di sostegno senza i bracci di reazione previsti in fabbrica, non è consentito scendere al di sotto della misura v4. Posizione di montaggio: vedere la pag. K5.
1) Copertura opzionale

ServoFit® S Helical Worm Gear Units
Reductores corona vis sin fin ***ServoFit® S***
ServoFit® Riduttori vite senza fine **S**

STÖBER

Compact Helical Geared Right-Angle Gear Units

- Acceleration torque: 55 – 960 Nm
- Styles: Pitch circle diameter and flange mounting (as option with foot plates or torque arm)
- Type of shaft: solid shaft, hollow shaft with shrink disk or key groove, as option with cover (as option with extended worm shaft)
- Hollow shaft with spiral groove (as grease depot) to make installing and removing the machine shaft easier
- Torsionally rigid block design
- FKM seal at input
- EasyAdapt® motor adapter with clamp coupling:
  - easy to assemble due to spreading function
  - aluminium lightweight construction
  - low construction length
  - high torsional stiffness
  - optionally with clamping set for increased safety
  - optionally with double seal
- Symmetrically friction-optimized output bearings (reinforced bearing version on request)
- Advanced gear technology
- Quiet running
- Efficiency: ≥ 60 – 91 %

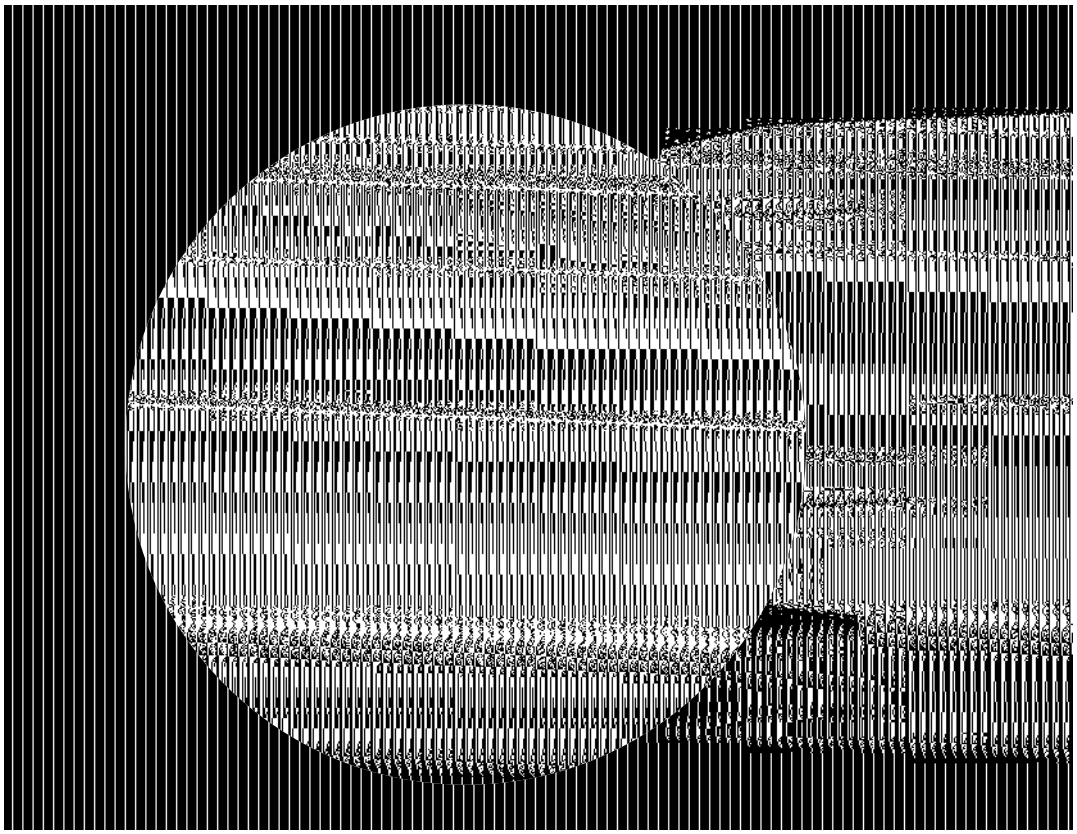
Reductores ortogonales, de dentado helicoidal, compactos

- *Par de aceleración: 55 - 960 Nm*
- *Variantes de reductores: círculo de agujeros roscados y ejecución de brida (opcional con listones de zócalo o soporte de par de torsión)*
- *Formas de eje: eje macizo, eje hueco con disco de contracción o chavetero, opcional con cubierta (opcional con eje prolongado de tornillo sinfín)*
- *Para facilitar el montaje o desmontaje del árbol de la máquina los árboles huecos están provistos con una ranura helicoidal (como depósito de grasa)*
- *Construcción monobloc a prueba de torsión*
- *Anillo retén de FKM en la entrada*
- *Adaptador de motor EasyAdapt® con acoplamiento de anillo de apriete*
  - *Fácil de montar gracias a la función de expansión*
  - *Construcción ligera de aluminio*
  - *Longitud constructiva corta*
  - *Gran resistencia a la torsión*
  - *Opcionalmente con kit de sujeción para una mayor seguridad*
  - *Opcionalmente con sellado doble*
- *Apoyo simétrico de salida optimizado a la fricción, en ejecución reforzada sobre consulta*
- *Tecnología superior de dentado*
- *Marcha extremadamente suave*
- *Rendimiento: ≥ 60 - 91 %*

Riduttori rinvio angolo con dentatura elicoidale compatti

- Coppia di accelerazione: 55 - 960 Nm
- Varianti riduttore: fissaggio a fori filettati ed esecuzione flangiata (optional con piedini o braccio di reazione)
- Esecuzioni albero: albero pieno, albero cavo con disco di serraggio o cava chiavetta, optional con copertura (optional con albero vite senza fine allungato)
- Per facilitare il montaggio e lo smontaggio dell'albero macchina, gli alberi cavi sono provvisti di una scanalatura a spirale (in qualità di deposito grasso)
- Monoblocco resistente allo svergolamento
- Anello di tenuta in FKM in ingresso
- Adattatore motore con giunto di bloccaggio EasyAdapt®:
  - Montaggio più facile grazie alla funzione di divaricazione
  - Struttura leggera in alluminio
  - Lunghezza contenuta
  - Elevata resistenza alla torsione
  - Kit di serraggio opzionale per una maggiore sicurezza
  - Doppio isolamento opzionale
- Supporto uscita simmetrico ad attrito ottimizzato, esecuzione rinforzata su richiesta
- Tecnologia della dentatura avanzata
- Estrema silenziosità
- Rendimento: ≥ 60 - 91 %

ServoFit® S

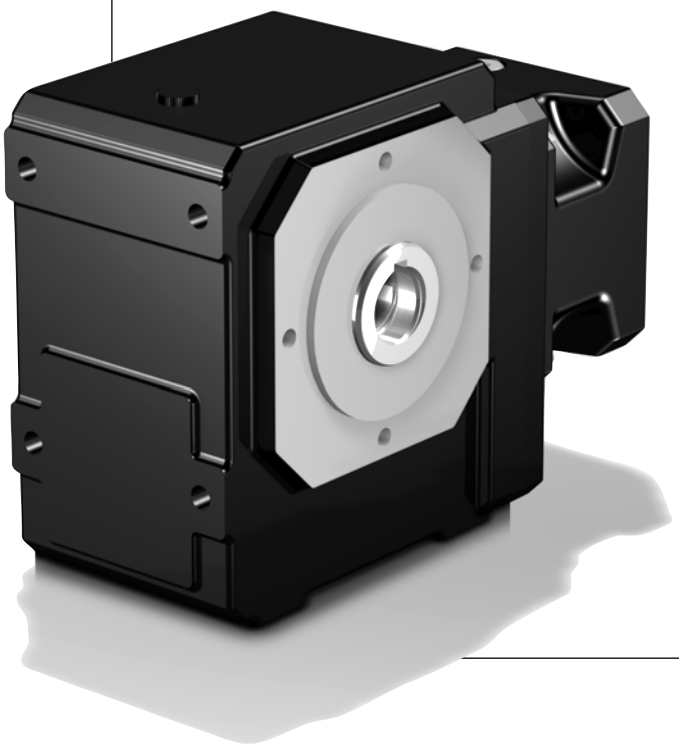


ServoFit® S Helical Worm Gear Units

*Reductores corona vis sin fin **ServoFit® S***

ServoFit® Riduttori vite senza fine **S**

STÖBER



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S

Type designation - Available combinations

Denominación de tipo – Formas de ejecución

Identificazione tipologica – forme esecutive

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S 1 0 2 A G 0870 ME10

1 2 3 4 5 6 7 8

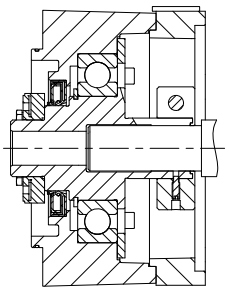
S 102 AG 0870 ME10

1 Gear unit type
2 Gear unit size
3 Generation number
4 Stages
5 Shaft version (e.g. A = Hollow shaft)
6 Style (e.g. G = pitch circle diameter)
7 Transmission ratio i x 10
8 Mounting series
- **ME** Motor adapter with EasyAdapt® coupling
  - optionally with clamping set
  - optionally with double seal (MSS1 HS)
- **MB** Motor adapter square with brake (option) (see brochure ID 441904)

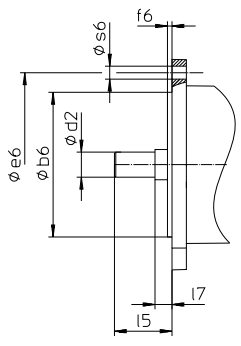
1 *Tipo de reductor*
2 *Tamaño de reductor*
3 *Cifra de generación*
4 *Número de trenes*
5 *Ejecución de eje (p. ej. A = eje hueco)*
6 *Tipo constructivo (p. ej. G = círculo de agujeros roscados)*
7 *Número característico de la relación de reducción i x 10*
8 *Grupos de anexo*
- ***ME*** *Adaptador de motor con acoplamiento EasyAdapt®*
  - *Opcionalmente con kit de sujeción*
  - *Opcionalmente con sellado doble (MSS1 HS)*
- ***MB*** *Adaptador de motor cuadrado con freno (opción) (ver folleto ID 441904)*

1 Tipo riduttore
2 Grandezza riduttore
3 Numero di generazione
4 Numero di stadi
5 Esecuzione albero (es.: A = albero cavo)
6 Tipologia costruttiva (es.: G = fissaggio con fori filettati)
7 Rapport de transmission i x 10
8 Opzioni annessi
- **ME** Adattatore motore con giunto EasyAdapt®
  - kit di serraggio opzionale
  - doppio isolamento (MSS1 HS) opzionale
- **MB** Adattatore motore quadrato con freno (opzione) (vedere prospetto ID 441904)

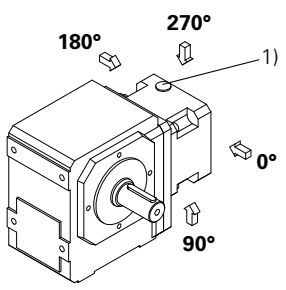
Type of shaft ***Formas de eje*** **Esecuzuione albero**		**Design of gear units**	***Tipos constructivos***		**Tipoligie costruttive**	
		G	**F**	**GD**	**NG**	**NF**
Hollow shaft *Eje hueco* Albero cavo	**A**	AG	AF	AGD	ANG	ANF
Hollow shaft for shrink ring connection *Eje hueco con disco de contracción* Albero cavo con disco di serraggio	**S**	SG	SF	SGD	SNG	SNF
Solid shaft *Eje macizo* Albero pieno	**V**	VG	VF	-	VNG	VNF



EasyAdapt® Coupling ME
EasyAdapt® Acoplamiento ME
Giunto EasyAdapt® ME



Picture: motor output
Fig. Salida de motor
Fig. Uscita motore



1) Access clamping screw motor coupling
1) Acceso al tornillo de apriete del acoplamiento de motor
1) Accesso al giunto di accoppiamonto motore

Type designation - Styles

Denominación de tipo

Identificazione tipologica

Ordering data according to the type designation above. Further ordering details:
- Mounting position "EL" acc. to page S5
- access clamping screw motor coupling acc. to page S2
- Solid shaft gear unit side 3, 4 or both sides
- Hollow shaft entry side 3 or 4
- Hollow shaft for shrink ring connection entry side 3 or 4 (shrink disk opposite to entry side)
- Foot plates gear unit side 1 or 5
- Flange gear unit side 3 or 4
- Pitch circle diameter gear unit side 3 or 4
- Torque arm gear unit side 1 or 5, eye gear unit side 3 or 4

*** ATTENTION!**
Attaching the gear units using the threaded hole circle: The torques and forces specified in this catalog only apply for the attachment of gear units on the machine side using screws of quality 10.9. Not valid for gear units S0!
In addition, the gear housing must be adjusted at the pilot (H7).

Datos de pedido según la tipificación de arriba. Otros datos de pedido:
- Pos. de instalación "EL" según la pag. S5
- Acceso al tornillo de apriete del acoplamiento de motor según la pag. S2
- Eje macizo lado reductor 3, 4 o ambos lados
- Eje hueco lado de enchufe 3 o 4
- Eje hueco con disco de contracción lado de enchufe 3 o 4 (disco de contracción delante de lado de enchufe)
- Listónes de zócalo lado reductor 1 o 5
- Brida lado reductor 3 o 4
- Círculo de agujeros roscados lado red. 3 o 4
- Soporte de par de torsión lado reductor 1 o 5, ojo lado reductor 3 o 4

**** ¡ATENCIÓN!***
Fijación de los reductores mediante el círculo de agujeros roscados: *Los pares y las fuerzas que se indican en este catálogo únicamente son válidos si los reductores se fijan desde el lado de la máquina utilizando tornillos de calidad 10.9. ¡No vale para reductores del tamaño constructivo S0!*
Asimismo, las carcasas de los reductores deben ajustarse en el borde de ajuste (H7).

Dati dell'ordine conformi alla identificazione dei modelli di cui sopra. Altri dati dell'ordine:
- Pos. di montaggio "EL" conf. alla pag. S5
- Accesso al giunto di accoppiamonto motore conf. alla pag. S2
- Albero pieno lato riduttore 3, 4 o entrambi i lati
- Albero cavo lato innesto 3 o 4
- Albero cavo con disco di serraggio lato innesto 3 o 4 (disco di serraggio contro a lato innesto)
- Piedini lato riduttore 1 o 5
- Flangia lato riduttore 3 o 4
- Fissagio con fori filettati lato riduttore 3 o 4
- Braccio di reazione lato riduttore 1 o 5, occhio lato riduttore 3 o 4

*** ATTENZIONE!**
Fissaggio dei riduttori mediante foratura filettata: Le coppie e le forze indicate nel presente catalogo si considerano valide esclusivamente in caso di fissaggio dei riduttori sul lato macchina con viti di qualità 10.9. Non vale per riduttori di grandezza S0!
Inoltre, le carcasse dei riduttori devono essere adattate (H7) al bordo di registro.

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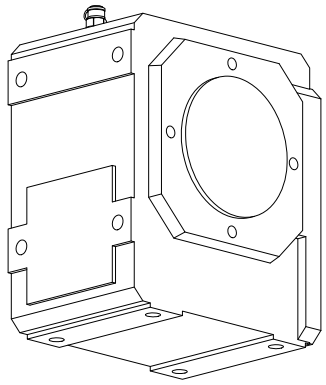
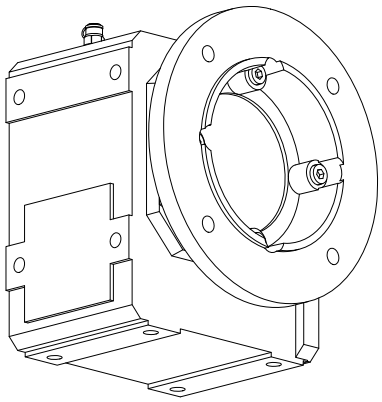
G* Pitch circle diam. • *Círculo de agujeros roscados* • Fissaggio con fori filettati



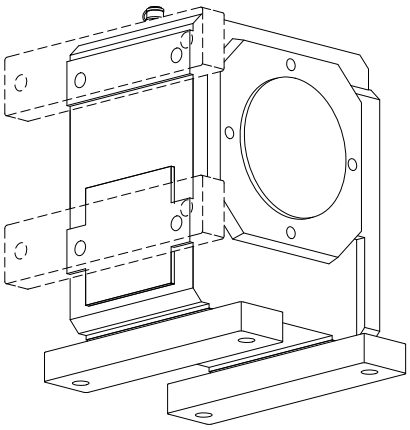
• for S0 NG style • *en S0 tipo constructivo NG* • per S0 tipologia costruttiva NG

F • Flange mounting • *Ejecución de brida* • Esecuzione flangiata

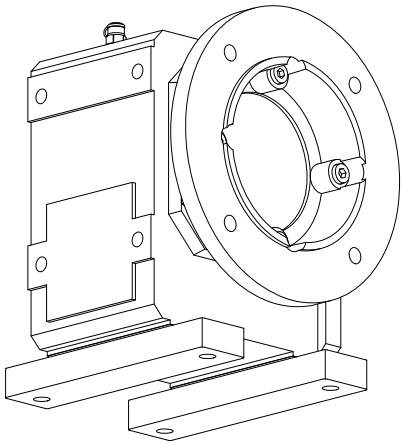


• for S0 NF style • *en S0 tipo constructivo NF* • per S0 tipologia costruttiva NF

NG* • Foot mounting + Pitch circle diameter
• *Ejecución de pedestal + círculo de agujeros roscados*
• Esecuzione con piedini + Fissaggio con fori filettati

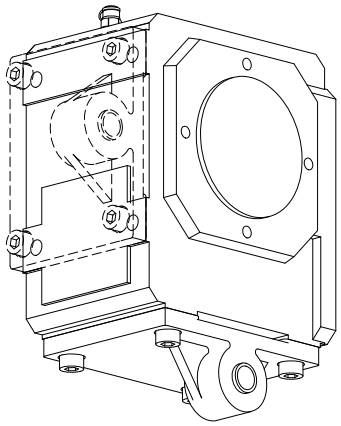


NF • Foot mounting + Flange mounting
• *Ejecución de pedestal + Ejecución de brida*
• Esecuzione con piedini + Esecuzione flangiata



• not valid for all sizes • *no vale para todos tamaños* • non vale per tutti grandezze

GD* • Pitch circle diameter + Torque arm
• *Círculo de agujeros roscados + soporte de par de torsión*
• Fissaggio con fori filettati + Braccio di reazione

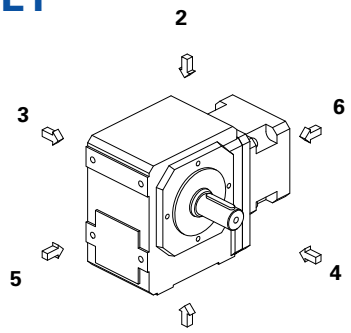


• for S0 NGD style • *en S0 tipo constructivo NGD* • per S0 tipologia costruttiva NGD

Mounting positions *Posiciones de instalación* Posizioni di montaggio

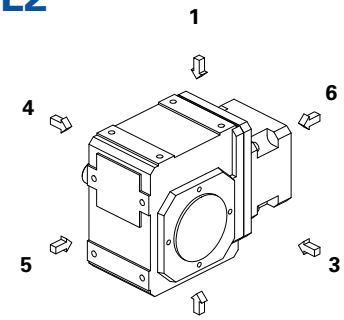
STÖBER

EL1



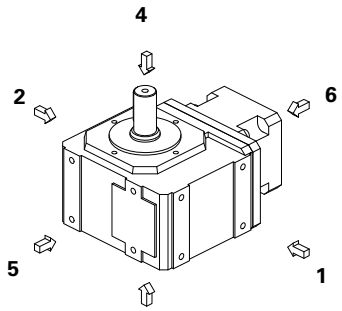
1

EL2



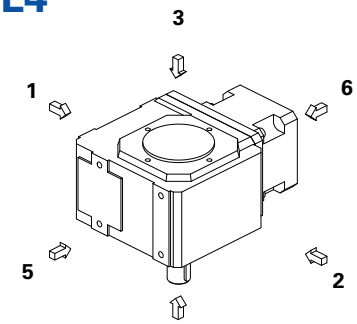
2

EL3



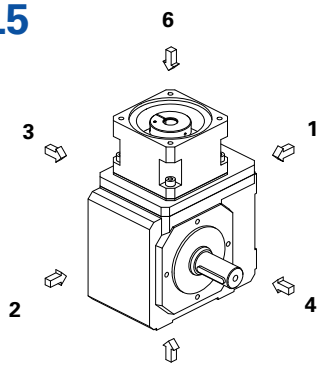
3

EL4



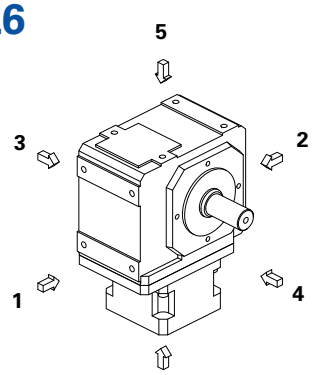
4

EL5



5

EL6



6

The gear units are filled with the quantity and type of lubricant specified on the rating plate. The lubricant fill level and the setup of the gear units depend on the mounting position.
Therefore, any modification of the gear units is permitted only after consulting STOBER.

Please visit our website for more detailed information about oil grades and quantities (ID 441871).

Los reductores *están cargados con la cantidad y tipo de lubricante indicados sobre la placa de tipo. La cantidad de carga de lubricante y la estructura de los reductores dependen de la posición de instalación.*
Por ello, los reductores no deben ser modificados sin consultar previamente a STOBER.

Ud. puede tomar del internet informaciones detalladas con respecto a los tipos y cantidades de lubricante (ID 441871).

I riduttori sono riempiti con la quantità ed il tipo di lubrificante riportati sulla targhetta di identificazione. La quantità di riempimento e la struttura dei riduttori dipendono dalla posizione di montaggio.
Non è consentito, dunque, montare diversamente i riduttori senza avere prima consultato STOBER.

Informazioni dettagliate sul tipo e quantità di lubrificante possono essere reperite in Internet (ID 441871).

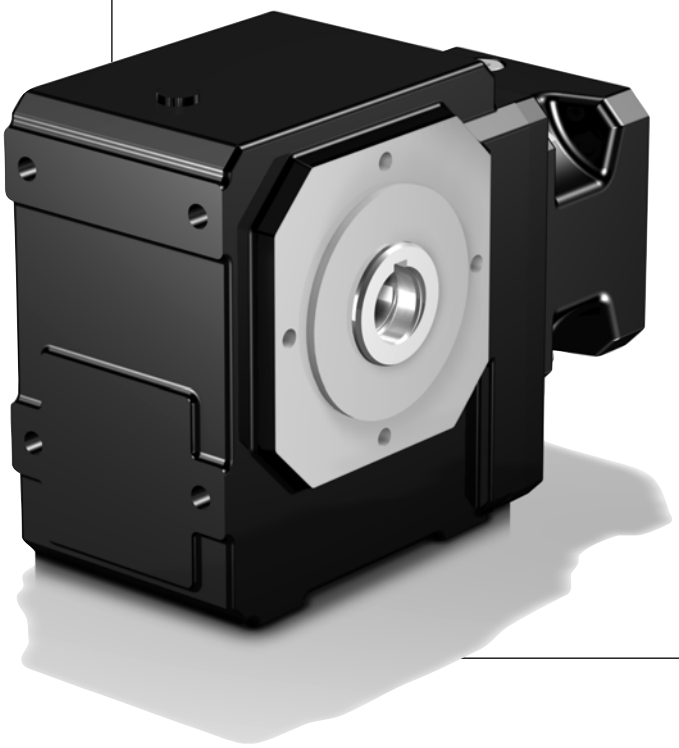
S

Selection table **ServoFit® S** Helical Worm Gear Units

*Tabla de selección Reduct. corona vis sin fin **ServoFit® S***

Tabella di selezione **ServoFit®** Riduttori vite senza fine **S**

STÖBER



S

Selection table **ServoFit® S** Helical Worm Gear Units

*Tabla de selección Reduct. corona vis sin fin **ServoFit® S***

Tabella di selezione **ServoFit®** Riduttori vite senza fine **S**

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Symbols:

- **i** - Gear unit ratio
- **i_{exakt}** - Exact math. ratio
- **n_{1MAX}** - Max. input speed
  - DBH - Continuous operation - input and output horizontal
  - DBV - Continuous operation - input or output vertical
  - ZB - Cycle operation

  (at ambient temperature 20°C, also see page A11/A12)
  Higher speeds on request!
- **MWø** - Motor shaft diameter
- **J_1** - Mass moment of inertia [2] (related to input)
- **G** - Weight (style G, quantity of lubricant for EL1)
- **C_2** - Gear unit rigidity (related to output at M_{2B})
- **M_{2N}** - Rated torque [1] [2]
- **M_{2B}** - max. perm. acceleration torque [2]
- **M_{2NOT}** - Emergency-Off moment [2] (10^3 load changes)

Denominaciones:

- ***i*** - *relación de transmisión*
- ***i_{exakt}*** - *relación de transmisión matemáticamente exacta*
- ***n_{1MAX}*** - *velocidad máx.*
  - *DBH - Operación permanente - entrada y salida horizontal*
  - *DBV - Operación permanente - entrada o salida vertical*
  - *ZB - Operación cíclica*

  (a 20°C de temperatura ambiente, ver también página A11/A12)
  Velocidades mayores sobre pedida!
- ***MWø*** - *Diámetro de eje del motor*
- ***J_1*** - *Momento de inercia de masas [2] (del accionamiento referido a la entrada)*
- ***G*** - *Peso del reductor (tipo constructivo G, cantidad de aceite para EL1)*
- ***C_2*** - *Rigidez del reductor al giro (referido a la salida par M_{2B})*
- ***M_{2N}*** - *Par nominal [1] [2]*
- ***M_{2B}*** - *Par máx. adm. de aceleración [2]*
- ***M_{2NOT}*** - *Momento de PARADA DE EMERGENCIA [2] (10^3 cambios de carga)*

Denominazioni:

- **i** - Rapporto di riduzione
- **i_{exakt}** - Rapporto di riduzione mat. preciso
- **n_{1MAX}** - Numero di giri in ingresso max.
  - DBH - Funzionamento ininterrotto - ingresso e uscita orizzontale
  - DBV - Funzionamento ininterrotto - ingresso o uscita verticale
  - ZB - Funzionamento ciclico

  (a temperatura ambiente di 20°C vedere anche pag. A11/A12)
  Numeri di giri più elevati su richiesta!
- **MWø** - Diametro dell'albero motore
- **J_1** - Momento di inerzia dell'azionamento [2] (riferito all'ingresso)
- **G** - Peso del riduttore (tipo costruttivo G, quantità d'olio per EL1)
- **C_2** - Rigidità torsionale riduttore (riferito all uscita per M_{2B})
- **M_{2N}** - Coppia nominale [1] [2]
- **M_{2B}** - Coppia di accelerazione max. consentita [2]
- **M_{2NOT}** - Coppia di emergenza [2] (10^3 variazioni di carico)

[1] Figures applied to input speed n_1 = 1500 rpm.

The product consisting of permissible torque M_{2N} and permissible speed $n1_{MAXDB}$ does not consider the maximum thermal capacity.

[2] If you use a pinion securing element (option), the torque values can be partly increased. This also results in higher mass moments of inertia.
Values on request or using the EASY Online product catalog (configurator) on our website
http://products.stoeber.de/

[1] Los valores se refieren a la velocidad de entrada n_1 = 1500 min-1

El producto de par adm. M_{2N} y velocidad adm. $n1_{MAXDB}$ no tiene en cuenta la potencia límite térmica.

[2] Con el kit de sujeción opcional, valores parcialmente superiores. Con esto aumentan los pares de inercia de masa.
Valores disponibles bajo petición o en el catálogo de productos EASY Online (configurador).
http://products.stoeber.de/

[1] I valori si riferiscono ai numeri di giri in ingresso n_1 = 1500 min-1.

Il prodotto della coppia ammessa M_{2N} e del numero di giri ammesso $n1_{MAXDB}$ non tiene presente la potenza limite termica.

[2] In caso di impiego di kit di serraggio opzionale possono essere rilevati valori in parte più elevati. *In questo modo risultano dei momenti d'inerzia di massa più elevati.*
Indicazione dei valori su richiesta oppure tramite catalogo prodotti EASY Online (configuratore).
http://products.stoeber.de/

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Please take notice of the indications on page S8! ***¡Por favor observe las indicaciones en la página S8!*** **Si raccomanda di rispettare le avvertenze a pagina S8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
S002 (M2BMAX=110 Nm)												
6,000	6/1	**S002_0060 ME10**	2600	2300	3700	**≤14**	0,83	7,8	4,2	37	55	73
6,000	6/1	**S002_0060 ME10**	2600	2300	3700	**>14≤19**	1,1	7,8	4,3	37	55	73
7,400	37/5	**S002_0074 ME10**	2600	2300	3700	**≤14**	0,70	7,8	4,2	39	58	77
7,400	37/5	**S002_0074 ME10**	2600	2300	3700	**>14≤19**	0,95	7,8	4,3	39	58	77
9,626	1107/115	**S002_0096 ME10**	3000	2800	4500	**≤14**	0,59	7,8	4,3	43	64	85
9,626	1107/115	**S002_0096 ME10**	3000	2800	4500	**>14≤19**	0,84	7,8	4,3	43	64	85
11,88	297/25	**S002_0120 ME10**	3000	2800	4500	**≤14**	0,53	7,8	4,3	47	70	93
11,88	297/25	**S002_0120 ME10**	3000	2800	4500	**>14≤19**	0,79	7,8	4,3	47	70	93
14,93	1269/85	**S002_0150 ME10**	3000	3000	4500	**≤14**	0,49	7,8	4,3	51	77	100
14,93	1269/85	**S002_0150 ME10**	3000	3000	4500	**>14≤19**	0,74	7,8	4,3	51	77	100
19,29	135/7	**S002_0195 ME10**	3000	3000	4500	**≤14**	0,45	7,8	4,3	57	82	100
19,29	135/7	**S002_0195 ME10**	3000	3000	4500	**>14≤19**	0,70	7,8	4,4	57	82	100
23,40	117/5	**S002_0230 ME10**	3000	3000	4500	**≤14**	0,43	7,8	4,3	60	82	100
23,40	117/5	**S002_0230 ME10**	3000	3000	4500	**>14≤19**	0,69	7,8	4,4	60	82	100
29,70	297/10	**S002_0300 ME10**	2800	2600	4500	**≤14**	0,51	7,8	5,5	53	79	110
29,70	297/10	**S002_0300 ME10**	2800	2600	4500	**>14≤19**	0,76	7,8	5,5	53	79	110
37,32	1269/34	**S002_0370 ME10**	3000	3000	4500	**≤14**	0,47	7,8	5,5	58	87	120
37,32	1269/34	**S002_0370 ME10**	3000	3000	4500	**>14≤19**	0,72	7,8	5,5	58	87	120
48,21	675/14	**S002_0480 ME10**	3000	3000	4500	**≤14**	0,44	7,8	5,5	63	95	130
48,21	675/14	**S002_0480 ME10**	3000	3000	4500	**>14≤19**	0,69	7,8	5,5	63	95	130
58,50	117/2	**S002_0590 ME10**	3000	3000	4500	**≤14**	0,43	7,8	5,5	68	100	140
58,50	117/2	**S002_0590 ME10**	3000	3000	4500	**>14≤19**	0,68	7,8	5,5	68	100	140
74,70	747/10	**S002_0750 ME10**	3000	3000	4500	**≤14**	0,41	7,8	5,5	73	110	150
74,70	747/10	**S002_0750 ME10**	3000	3000	4500	**>14≤19**	0,66	7,8	5,5	73	110	150
100,3	702/7	**S002_1000 ME10**	3000	3000	4500	**≤14**	0,37	7,8	5,5	78	110	160
100,3	702/7	**S002_1000 ME10**	3000	3000	4500	**>14≤19**	0,62	7,8	5,5	78	110	160
121,3	364/3	**S002_1210 ME10**	3000	3000	4500	**≤14**	0,43	7,8	5,5	71	110	140
121,3	364/3	**S002_1210 ME10**	3000	3000	4500	**>14≤19**	0,68	7,8	5,5	71	110	140
154,9	2324/15	**S002_1550 ME10**	3000	3000	4500	**≤14**	0,41	7,8	5,5	76	110	150
154,9	2324/15	**S002_1550 ME10**	3000	3000	4500	**>14≤19**	0,66	7,8	5,5	76	110	150
208,0	208/1	**S002_2080 ME10**	3000	3000	4500	**≤14**	0,37	7,8	5,5	82	110	160
208,0	208/1	**S002_2080 ME10**	3000	3000	4500	**>14≤19**	0,62	7,8	5,5	82	110	160
S102 (M2BMAX=190 Nm)												
9,200	46/5	**S102_0092 ME10**	3000	2600	4000	**≤14**	0,78	11,7	5,7	64	96	130
9,200	46/5	**S102_0092 ME10**	3000	2600	4000	**>14≤19**	1,0	11,7	5,8	64	96	130
9,200	46/5	**S102_0092 ME20**	3000	2600	4000	**≤19**	2,2	12,7	5,7	64	96	130
9,200	46/5	**S102_0092 ME20**	3000	2600	4000	**>19≤24**	2,9	12,7	5,8	64	96	130
11,50	1323/115	**S102_0115 ME10**	3000	2600	4000	**≤14**	0,66	11,7	5,7	75	110	150
11,50	1323/115	**S102_0115 ME10**	3000	2600	4000	**>14≤19**	0,91	11,7	5,8	75	110	150
11,50	1323/115	**S102_0115 ME20**	3000	2600	4000	**≤19**	2,1	12,7	5,8	75	110	150
11,50	1323/115	**S102_0115 ME20**	3000	2600	4000	**>19≤24**	2,8	12,7	5,8	75	110	150
14,04	351/25	**S102_0140 ME10**	3000	3000	4500	**≤14**	0,59	11,7	5,8	87	130	170
14,04	351/25	**S102_0140 ME10**	3000	3000	4500	**>14≤19**	0,84	11,7	5,8	87	130	170
14,04	351/25	**S102_0140 ME20**	3000	3000	4500	**≤19**	2,0	12,7	5,8	87	130	170
14,04	351/25	**S102_0140 ME20**	3000	3000	4500	**>19≤24**	2,7	12,7	5,8	87	130	170
17,47	297/17	**S102_0175 ME10**	3000	3000	4500	**≤14**	0,53	11,7	5,8	100	150	200
17,47	297/17	**S102_0175 ME10**	3000	3000	4500	**>14≤19**	0,78	11,7	5,8	100	150	200
17,47	297/17	**S102_0175 ME20**	3000	3000	4500	**≤19**	1,9	12,7	5,8	100	150	200
17,47	297/17	**S102_0175 ME20**	3000	3000	4500	**>19≤24**	2,7	12,7	5,8	100	150	200
23,14	162/7	**S102_0230 ME10**	3000	3000	4500	**≤14**	0,48	11,7	5,8	110	150	230
23,14	162/7	**S102_0230 ME10**	3000	3000	4500	**>14≤19**	0,73	11,7	5,8	110	150	230
23,14	162/7	**S102_0230 ME20**	3000	3000	4500	**≤19**	1,9	12,7	5,8	110	150	230
23,14	162/7	**S102_0230 ME20**	3000	3000	4500	**>19≤24**	2,6	12,7	5,8	110	150	230
27,90	279/10	**S102_0280 ME10**	3000	3000	4500	**≤14**	0,45	11,7	5,8	120	150	240
27,90	279/10	**S102_0280 ME10**	3000	3000	4500	**>14≤19**	0,70	11,7	5,8	120	150	240
27,90	279/10	**S102_0280 ME20**	3000	3000	4500	**≤19**	1,9	12,7	5,8	120	150	240
27,90	279/10	**S102_0280 ME20**	3000	3000	4500	**>19≤24**	2,6	12,7	5,8	120	150	240
34,92	873/25	**S102_0350 ME10**	3000	3000	4500	**≤14**	0,43	11,7	5,8	120	150	230
34,92	873/25	**S102_0350 ME10**	3000	3000	4500	**>14≤19**	0,68	11,7	5,8	120	150	230

Helical Worm Gear Units **S**
Reductores corona vis sin fin ***S***
Riduttori vite senza fine **S**

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Please take notice of the indications on page S8! ***¡Por favor observe las indicaciones en la página S8!*** **Si raccomanda di rispettare le avvertenze a pagina S8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
S102 (M2BMAX=190 Nm)												
34,92	873/25	**S102_0350 ME20**	3000	3000	4500	**≤19**	1,8	12,7	5,8	120	150	230
34,92	873/25	**S102_0350 ME20**	3000	3000	4500	**>19≤24**	2,6	12,7	5,8	120	150	230
43,68	1485/34	**S102_0440 ME10**	3000	2800	4500	**≤14**	0,51	11,7	7,6	120	180	240
43,68	1485/34	**S102_0440 ME10**	3000	2800	4500	**>14≤19**	0,76	11,7	7,6	120	180	240
43,68	1485/34	**S102_0440 ME20**	3000	2800	4500	**≤19**	1,9	12,7	7,6	120	180	240
43,68	1485/34	**S102_0440 ME20**	3000	2800	4500	**>19≤24**	2,7	12,7	7,6	120	180	240
57,86	405/7	**S102_0580 ME10**	3000	3000	4500	**≤14**	0,47	11,7	7,6	130	190	260
57,86	405/7	**S102_0580 ME10**	3000	3000	4500	**>14≤19**	0,72	11,7	7,6	130	190	260
57,86	405/7	**S102_0580 ME20**	3000	3000	4500	**≤19**	1,9	12,7	7,6	130	190	260
57,86	405/7	**S102_0580 ME20**	3000	3000	4500	**>19≤24**	2,6	12,7	7,6	130	190	260
69,75	279/4	**S102_0700 ME10**	3000	3000	4500	**≤14**	0,44	11,7	7,6	140	190	280
69,75	279/4	**S102_0700 ME10**	3000	3000	4500	**>14≤19**	0,70	11,7	7,6	140	190	280
69,75	279/4	**S102_0700 ME20**	3000	3000	4500	**≤19**	1,9	12,7	7,6	140	190	280
69,75	279/4	**S102_0700 ME20**	3000	3000	4500	**>19≤24**	2,6	12,7	7,6	140	190	280
87,30	873/10	**S102_0870 ME10**	3000	3000	4500	**≤14**	0,42	11,7	7,6	150	190	290
87,30	873/10	**S102_0870 ME10**	3000	3000	4500	**>14≤19**	0,67	11,7	7,6	150	190	290
87,30	873/10	**S102_0870 ME20**	3000	3000	4500	**≤19**	1,8	12,7	7,6	150	190	290
87,30	873/10	**S102_0870 ME20**	3000	3000	4500	**>19≤24**	2,6	12,7	7,6	150	190	290
116,7	3267/28	**S102_1170 ME10**	3000	3000	4500	**≤14**	0,38	11,7	7,6	160	190	310
116,7	3267/28	**S102_1170 ME10**	3000	3000	4500	**>14≤19**	0,63	11,7	7,6	160	190	310
139,5	279/2	**S102_1400 ME10**	3000	3000	4500	**≤14**	0,37	11,7	7,6	160	190	320
139,5	279/2	**S102_1400 ME10**	3000	3000	4500	**>14≤19**	0,62	11,7	7,6	160	190	320
174,2	3483/20	**S102_1740 ME10**	3000	3000	4500	**≤14**	0,36	11,7	7,6	130	190	270
174,2	3483/20	**S102_1740 ME10**	3000	3000	4500	**>14≤19**	0,62	11,7	7,6	130	190	270
242,0	242/1	**S102_2420 ME10**	3000	3000	4500	**≤14**	0,38	11,7	7,6	150	190	290
242,0	242/1	**S102_2420 ME10**	3000	3000	4500	**>14≤19**	0,63	11,7	7,6	150	190	290
289,3	868/3	**S102_2890 ME10**	3000	3000	4500	**≤14**	0,37	11,7	7,6	150	190	300
289,3	868/3	**S102_2890 ME10**	3000	3000	4500	**>14≤19**	0,62	11,7	7,6	150	190	300
361,2	1806/5	**S102_3610 ME10**	3000	3000	4500	**≤14**	0,36	11,7	7,6	160	190	310
361,2	1806/5	**S102_3610 ME10**	3000	3000	4500	**>14≤19**	0,62	11,7	7,6	160	190	310
S202 (M2BMAX=360 Nm)												
9,232	1431/155	**S202_0092 ME10**	2800	2500	3900	**≤14**	1,5	19,2	9,1	130	150	190
9,232	1431/155	**S202_0092 ME10**	2800	2500	3900	**>14≤19**	1,7	19,2	9,3	130	190	250
9,232	1431/155	**S202_0092 ME20**	2800	2500	3900	**≤19**	2,9	20,2	9,3	130	190	250
9,232	1431/155	**S202_0092 ME20**	2800	2500	3900	**>19≤24**	3,7	20,2	9,4	130	190	250
9,232	1431/155	**S202_0092 ME20**	2800	2500	3900	**>24≤32**	5,1	20,2	9,4	130	190	250
9,232	1431/155	**S202_0092 ME30**	2800	2500	3900	**≤24**	8,6	22,1	9,4	130	190	250
9,232	1431/155	**S202_0092 ME30**	2800	2500	3900	**>24≤32**	8,7	22,1	9,4	130	190	250
9,232	1431/155	**S202_0092 ME30**	2800	2500	3900	**>32≤38**	10	22,1	9,4	130	190	250
11,60	58/5	**S202_0115 ME10**	2800	2500	3900	**≤14**	1,2	19,2	9,2	150	190	240
11,60	58/5	**S202_0115 ME10**	2800	2500	3900	**>14≤19**	1,4	19,2	9,3	150	220	290
11,60	58/5	**S202_0115 ME20**	2800	2500	3900	**≤19**	2,6	20,2	9,3	150	220	290
11,60	58/5	**S202_0115 ME20**	2800	2500	3900	**>19≤24**	3,3	20,2	9,4	150	220	290
11,60	58/5	**S202_0115 ME20**	2800	2500	3900	**>24≤32**	4,8	20,2	9,4	150	220	290
11,60	58/5	**S202_0115 ME30**	2800	2500	3900	**≤24**	8,3	22,1	9,4	150	220	290
11,60	58/5	**S202_0115 ME30**	2800	2500	3900	**>24≤32**	8,4	22,1	9,4	150	220	290
11,60	58/5	**S202_0115 ME30**	2800	2500	3900	**>32≤38**	10	22,1	9,4	150	220	290
13,92	1809/130	**S202_0140 ME10**	3000	3000	4500	**≤14**	0,96	19,2	9,3	170	230	290
13,92	1809/130	**S202_0140 ME10**	3000	3000	4500	**>14≤19**	1,2	19,2	9,4	170	250	330
13,92	1809/130	**S202_0140 ME20**	3000	3000	4500	**≤19**	2,4	20,2	9,4	170	250	330
13,92	1809/130	**S202_0140 ME20**	3000	3000	4500	**>19≤24**	3,1	20,2	9,4	170	250	330
13,92	1809/130	**S202_0140 ME20**	3000	3000	4500	**>24≤32**	4,6	20,2	9,4	170	250	330
13,92	1809/130	**S202_0140 ME30**	3000	3000	4000	**≤24**	8,1	22,1	9,4	170	250	330
13,92	1809/130	**S202_0140 ME30**	3000	3000	4000	**>24≤32**	8,2	22,1	9,4	170	250	330
13,92	1809/130	**S202_0140 ME30**	3000	3000	4000	**>32≤38**	9,9	22,1	9,4	170	250	330
17,55	351/20	**S202_0175 ME10**	3000	3000	4500	**≤14**	0,79	19,2	9,4	190	280	360
17,55	351/20	**S202_0175 ME10**	3000	3000	4500	**>14≤19**	1,0	19,2	9,4	190	280	380
17,55	351/20	**S202_0175 ME20**	3000	3000	4500	**≤19**	2,2	20,2	9,4	190	280	380
17,55	351/20	**S202_0175 ME20**	3000	3000	4500	**>19≤24**	3,0	20,2	9,4	190	280	380

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Please take notice of the indications on page S8! ***¡Por favor observe las indicaciones en la página S8!*** **Si raccomanda di rispettare le avvertenze a pagina S8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
S202 (M2BMAX=360 Nm)												
17,55	351/20	**S202_0175 ME20**	3000	3000	4500	**>24≤32**	4,4	20,2	9,4	190	280	380
17,55	351/20	**S202_0175 ME30**	3000	3000	4000	**≤24**	7,9	22,1	9,4	190	280	380
17,55	351/20	**S202_0175 ME30**	3000	3000	4000	**>24≤32**	8,0	22,1	9,4	190	280	380
17,55	351/20	**S202_0175 ME30**	3000	3000	4000	**>32≤38**	9,8	22,1	9,4	190	280	380
23,29	1863/80	**S202_0230 ME10**	3000	3000	4500	**≤14**	0,64	19,2	9,4	210	310	430
23,29	1863/80	**S202_0230 ME10**	3000	3000	4500	**>14≤19**	0,89	19,2	9,4	210	310	430
23,29	1863/80	**S202_0230 ME20**	3000	3000	4500	**≤19**	2,1	20,2	9,4	210	310	430
23,29	1863/80	**S202_0230 ME20**	3000	3000	4500	**>19≤24**	2,8	20,2	9,4	210	310	430
23,29	1863/80	**S202_0230 ME20**	3000	3000	4500	**>24≤32**	4,3	20,2	9,4	210	310	430
23,29	1863/80	**S202_0230 ME30**	3000	3000	4000	**≤24**	7,8	22,1	9,4	210	310	430
23,29	1863/80	**S202_0230 ME30**	3000	3000	4000	**>24≤32**	7,9	22,1	9,4	210	310	430
23,29	1863/80	**S202_0230 ME30**	3000	3000	4000	**>32≤38**	9,6	22,1	9,4	210	310	430
28,08	702/25	**S202_0280 ME10**	3000	3000	4500	**≤14**	0,57	19,2	9,4	230	310	450
28,08	702/25	**S202_0280 ME10**	3000	3000	4500	**>14≤19**	0,82	19,2	9,4	230	310	450
28,08	702/25	**S202_0280 ME20**	3000	3000	4500	**≤19**	2,0	20,2	9,4	230	310	450
28,08	702/25	**S202_0280 ME20**	3000	3000	4500	**>19≤24**	2,7	20,2	9,4	230	310	450
34,71	243/7	**S202_0350 ME10**	3000	3000	4500	**≤14**	0,52	19,2	9,4	230	310	470
34,71	243/7	**S202_0350 ME10**	3000	3000	4500	**>14≤19**	0,77	19,2	9,4	230	310	470
34,71	243/7	**S202_0350 ME20**	3000	3000	4500	**≤19**	1,9	20,2	9,4	240	310	470
34,71	243/7	**S202_0350 ME20**	3000	3000	4500	**>19≤24**	2,7	20,2	9,4	240	310	470
43,88	351/8	**S202_0440 ME10**	3000	2700	4200	**≤14**	0,72	19,2	11	210	310	420
43,88	351/8	**S202_0440 ME10**	3000	2700	4200	**>14≤19**	0,97	19,2	11	210	310	420
43,88	351/8	**S202_0440 ME20**	3000	2700	4200	**≤19**	2,2	20,2	11	210	310	420
43,88	351/8	**S202_0440 ME20**	3000	2700	4200	**>19≤24**	2,9	20,2	11	210	310	420
43,88	351/8	**S202_0440 ME20**	3000	2700	4200	**>24≤32**	4,4	20,2	11	210	310	420
43,88	351/8	**S202_0440 ME30**	3000	2700	4000	**≤24**	7,8	22,1	11	210	310	420
43,88	351/8	**S202_0440 ME30**	3000	2700	4000	**>24≤32**	8,0	22,1	11	210	310	420
43,88	351/8	**S202_0440 ME30**	3000	2700	4000	**>32≤38**	9,7	22,1	11	210	310	420
58,22	1863/32	**S202_0580 ME10**	3000	3000	4500	**≤14**	0,60	19,2	11	240	360	470
58,22	1863/32	**S202_0580 ME10**	3000	3000	4500	**>14≤19**	0,85	19,2	11	240	360	470
58,22	1863/32	**S202_0580 ME20**	3000	3000	4500	**≤19**	2,1	20,2	11	240	360	470
58,22	1863/32	**S202_0580 ME20**	3000	3000	4500	**>19≤24**	2,8	20,2	11	240	360	470
58,22	1863/32	**S202_0580 ME20**	3000	3000	4500	**>24≤32**	4,3	20,2	11	240	360	470
58,22	1863/32	**S202_0580 ME30**	3000	3000	4000	**≤24**	7,7	22,1	11	240	360	470
58,22	1863/32	**S202_0580 ME30**	3000	3000	4000	**>24≤32**	7,8	22,1	11	240	360	470
58,22	1863/32	**S202_0580 ME30**	3000	3000	4000	**>32≤38**	9,6	22,1	11	240	360	470
70,20	351/5	**S202_0700 ME10**	3000	3000	4500	**≤14**	0,55	19,2	11	250	360	510
70,20	351/5	**S202_0700 ME10**	3000	3000	4500	**>14≤19**	0,80	19,2	11	250	360	510
70,20	351/5	**S202_0700 ME20**	3000	3000	4500	**≤19**	2,0	20,2	11	250	360	510
70,20	351/5	**S202_0700 ME20**	3000	3000	4500	**>19≤24**	2,7	20,2	11	250	360	510
86,79	1215/14	**S202_0870 ME10**	3000	3000	4500	**≤14**	0,50	19,2	11	270	360	540
86,79	1215/14	**S202_0870 ME10**	3000	3000	4500	**>14≤19**	0,75	19,2	11	270	360	540
86,79	1215/14	**S202_0870 ME20**	3000	3000	4500	**≤19**	1,9	20,2	11	270	360	540
86,79	1215/14	**S202_0870 ME20**	3000	3000	4500	**>19≤24**	2,6	20,2	11	270	360	540
116,1	1161/10	**S202_1160 ME10**	3000	3000	4500	**≤14**	0,45	19,2	11	290	360	580
116,1	1161/10	**S202_1160 ME10**	3000	3000	4500	**>14≤19**	0,70	19,2	11	290	360	580
116,1	1161/10	**S202_1160 ME20**	3000	3000	4500	**≤19**	1,9	20,2	11	290	360	580
116,1	1161/10	**S202_1160 ME20**	3000	3000	4500	**>19≤24**	2,6	20,2	11	290	360	580
139,5	279/2	**S202_1400 ME10**	3000	3000	4500	**≤14**	0,40	19,2	11	300	360	560
139,5	279/2	**S202_1400 ME10**	3000	3000	4500	**>14≤19**	0,65	19,2	11	300	360	560
174,4	1395/8	**S202_1740 ME10**	3000	3000	4500	**≤14**	0,39	19,2	11	270	360	530
174,4	1395/8	**S202_1740 ME10**	3000	3000	4500	**>14≤19**	0,64	19,2	11	270	360	530

Helical Worm Gear Units **S**
Reductores corona vis sin fin **S**
Riduttori vite senza fine **S**

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Please take notice of the indications on page S8! ***¡Por favor observe las indicaciones en la página S8!*** **Si raccomanda di rispettare le avvertenze a pagina S8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
S203 (M2BMAX=360 Nm)												
136,3	28341/208	**S203_1360 ME10**	3000	3000	4500	**≤14**	0,43	22,1	11	300	360	590
136,3	28341/208	**S203_1360 ME10**	3000	3000	4500	**>14≤19**	0,68	22,1	11	300	360	590
171,8	5499/32	**S203_1720 ME10**	3000	3000	4500	**≤14**	0,42	22,1	11	300	360	600
171,8	5499/32	**S203_1720 ME10**	3000	3000	4500	**>14≤19**	0,67	22,1	11	300	360	600
228,0	29187/128	**S203_2280 ME10**	3000	3000	4500	**≤14**	0,41	22,1	11	300	360	600
228,0	29187/128	**S203_2280 ME10**	3000	3000	4500	**>14≤19**	0,66	22,1	11	300	360	600
275,0	5499/20	**S203_2750 ME10**	3000	3000	4500	**≤14**	0,41	22,1	11	300	360	600
275,0	5499/20	**S203_2750 ME10**	3000	3000	4500	**>14≤19**	0,66	22,1	11	300	360	600
339,9	19035/56	**S203_3400 ME10**	3000	3000	4500	**≤14**	0,40	22,1	11	300	360	600
339,9	19035/56	**S203_3400 ME10**	3000	3000	4500	**>14≤19**	0,66	22,1	11	300	360	600
454,7	18189/40	**S203_4550 ME10**	3000	3000	4500	**≤14**	0,40	22,1	11	300	360	600
454,7	18189/40	**S203_4550 ME10**	3000	3000	4500	**>14≤19**	0,65	22,1	11	300	360	600
546,4	4371/8	**S203_5460 ME10**	3000	3000	4500	**≤14**	0,40	22,1	11	300	360	540
546,4	4371/8	**S203_5460 ME10**	3000	3000	4500	**>14≤19**	0,65	22,1	11	300	360	540
683,0	21855/32	**S203_6830 ME10**	3000	3000	4500	**≤14**	0,40	22,1	11	260	360	510
683,0	21855/32	**S203_6830 ME10**	3000	3000	4500	**>14≤19**	0,65	22,1	11	260	360	510
S302 (M2BMAX=660 Nm)												
9,310	270/29	**S302_0093 ME20**	2600	2300	3600	**≤19**	4,5	29,4	19	200	290	360
9,310	270/29	**S302_0093 ME20**	2600	2300	3600	**>19≤24**	5,2	29,4	20	200	300	390
9,310	270/29	**S302_0093 ME20**	2600	2300	3600	**>24≤32**	6,7	29,4	20	200	300	390
9,310	270/29	**S302_0093 ME30**	2600	2300	3600	**≤24**	10	31,3	20	200	300	390
9,310	270/29	**S302_0093 ME30**	2600	2300	3600	**>24≤32**	10	31,3	20	200	300	390
9,310	270/29	**S302_0093 ME30**	2600	2300	3600	**>32≤38**	12	31,3	20	200	300	390
11,66	1458/125	**S302_0115 ME10**	2600	2300	3600	**≤14**	2,2	28,4	19	200	200	250
11,66	1458/125	**S302_0115 ME10**	2600	2300	3600	**>14≤19**	2,5	28,4	20	220	250	320
11,66	1458/125	**S302_0115 ME20**	2600	2300	3600	**≤19**	3,7	29,4	20	250	360	450
11,66	1458/125	**S302_0115 ME20**	2600	2300	3600	**>19≤24**	4,4	29,4	20	250	370	490
11,66	1458/125	**S302_0115 ME20**	2600	2300	3600	**>24≤32**	5,9	29,4	20	250	370	490
11,66	1458/125	**S302_0115 ME30**	2600	2300	3600	**≤24**	9,3	31,3	20	250	370	490
11,66	1458/125	**S302_0115 ME30**	2600	2300	3600	**>24≤32**	9,5	31,3	20	250	370	490
11,66	1458/125	**S302_0115 ME30**	2600	2300	3600	**>32≤38**	11	31,3	20	250	370	490
14,00	14/1	**S302_0140 ME10**	3000	3000	4000	**≤14**	1,7	28,4	20	220	230	290
14,00	14/1	**S302_0140 ME10**	3000	3000	4000	**>14≤19**	2,0	28,4	20	220	300	380
14,00	14/1	**S302_0140 ME20**	3000	3000	4000	**≤19**	3,2	29,4	20	300	430	540
14,00	14/1	**S302_0140 ME20**	3000	3000	4000	**>19≤24**	3,9	29,4	20	300	450	590
14,00	14/1	**S302_0140 ME20**	3000	3000	4000	**>24≤32**	5,4	29,4	20	300	450	590
14,00	14/1	**S302_0140 ME30**	3000	3000	4000	**≤24**	8,8	31,3	20	300	450	590
14,00	14/1	**S302_0140 ME30**	3000	3000	4000	**>24≤32**	9,0	31,3	20	300	450	590
14,00	14/1	**S302_0140 ME30**	3000	3000	4000	**>32≤38**	11	31,3	20	300	450	590
17,37	1998/115	**S302_0175 ME10**	3000	3000	4000	**≤14**	1,3	28,4	20	240	290	360
17,37	1998/115	**S302_0175 ME10**	3000	3000	4000	**>14≤19**	1,6	28,4	20	240	370	470
17,37	1998/115	**S302_0175 ME20**	3000	3000	4000	**≤19**	2,8	29,4	20	350	520	670
17,37	1998/115	**S302_0175 ME20**	3000	3000	4000	**>19≤24**	3,5	29,4	20	350	520	700
17,37	1998/115	**S302_0175 ME20**	3000	3000	4000	**>24≤32**	5,0	29,4	20	350	520	700
17,37	1998/115	**S302_0175 ME30**	3000	3000	4000	**≤24**	8,5	31,3	20	350	520	700
17,37	1998/115	**S302_0175 ME30**	3000	3000	4000	**>24≤32**	8,6	31,3	20	350	520	700
17,37	1998/115	**S302_0175 ME30**	3000	3000	4000	**>32≤38**	10	31,3	20	350	520	700
23,40	117/5	**S302_0230 ME10**	3000	3000	4000	**≤14**	0,98	28,4	20	250	390	480
23,40	117/5	**S302_0230 ME10**	3000	3000	4000	**>14≤19**	1,2	28,4	20	250	470	590
23,40	117/5	**S302_0230 ME20**	3000	3000	4000	**≤19**	2,4	29,4	20	400	520	790
23,40	117/5	**S302_0230 ME20**	3000	3000	4000	**>19≤24**	3,2	29,4	20	400	520	790
23,40	117/5	**S302_0230 ME20**	3000	3000	4000	**>24≤32**	4,6	29,4	20	400	520	790
23,40	117/5	**S302_0230 ME30**	3000	3000	4000	**≤24**	8,1	31,3	20	400	520	790
23,40	117/5	**S302_0230 ME30**	3000	3000	4000	**>24≤32**	8,2	31,3	20	400	520	790
23,40	117/5	**S302_0230 ME30**	3000	3000	4000	**>32≤38**	9,9	31,3	20	400	520	790
28,01	2241/80	**S302_0280 ME10**	3000	3000	4000	**≤14**	0,82	28,4	20	260	460	580
28,01	2241/80	**S302_0280 ME10**	3000	3000	4000	**>14≤19**	1,1	28,4	20	260	520	640
28,01	2241/80	**S302_0280 ME20**	3000	3000	4000	**≤19**	2,3	29,4	20	420	520	840
28,01	2241/80	**S302_0280 ME20**	3000	3000	4000	**>19≤24**	3,0	29,4	20	420	520	840

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i	iexakt	Typ	n_{1MAX} DBH [min^{-1}]	n_{1MAX} DBV [min^{-1}]	n_{1MAX} ZB [min^{-1}]	MWø [mm]	J_1 [10^{-4} kgm^2]	G [kg]	C_2 [Nm/ arcmin]	M_{2N} [Nm]	M_{2B} [Nm]	M_{2NOT} [Nm]
S302 (M_{2BMAX}=660 Nm)												
28,01	2241/80	**S302_0280 ME20**	3000	3000	4000	**>24≤32**	4,5	29,4	20	420	520	840
28,01	2241/80	**S302_0280 ME30**	3000	3000	4000	**≤24**	7,9	31,3	20	420	520	840
28,01	2241/80	**S302_0280 ME30**	3000	3000	4000	**>24≤32**	8,1	31,3	20	420	520	840
28,01	2241/80	**S302_0280 ME30**	3000	3000	4000	**>32≤38**	9,8	31,3	20	420	520	840
34,89	2268/65	**S302_0350 ME10**	3000	3000	4000	**≤14**	0,69	28,4	20	260	520	710
34,89	2268/65	**S302_0350 ME10**	3000	3000	4000	**>14≤19**	0,94	28,4	20	260	520	750
34,89	2268/65	**S302_0350 ME20**	3000	3000	4000	**≤19**	2,1	29,4	20	430	520	750
34,89	2268/65	**S302_0350 ME20**	3000	3000	4000	**>19≤24**	2,8	29,4	20	430	520	750
43,44	999/23	**S302_0430 ME10**	2900	2400	3800	**≤14**	1,1	28,4	26	390	590	790
43,44	999/23	**S302_0430 ME10**	2900	2400	3800	**>14≤19**	1,4	28,4	26	390	590	790
43,44	999/23	**S302_0430 ME20**	2900	2400	3800	**≤19**	2,6	29,4	26	390	590	790
43,44	999/23	**S302_0430 ME20**	2900	2400	3800	**>19≤24**	3,3	29,4	26	390	590	790
43,44	999/23	**S302_0430 ME20**	2900	2400	3800	**>24≤32**	4,8	29,4	26	390	590	790
43,44	999/23	**S302_0430 ME30**	2900	2400	3800	**≤24**	8,2	31,3	26	390	590	790
43,44	999/23	**S302_0430 ME30**	2900	2400	3800	**>24≤32**	8,4	31,3	26	390	590	790
43,44	999/23	**S302_0430 ME30**	2900	2400	3800	**>32≤38**	10	31,3	26	390	590	790
58,50	117/2	**S302_0590 ME10**	3000	2700	4000	**≤14**	0,86	28,4	26	450	660	900
58,50	117/2	**S302_0590 ME10**	3000	2700	4000	**>14≤19**	1,1	28,4	26	450	660	900
58,50	117/2	**S302_0590 ME20**	3000	2700	4000	**≤19**	2,3	29,4	26	450	660	900
58,50	117/2	**S302_0590 ME20**	3000	2700	4000	**>19≤24**	3,0	29,4	26	450	660	900
58,50	117/2	**S302_0590 ME20**	3000	2700	4000	**>24≤32**	4,5	29,4	26	450	660	900
58,50	117/2	**S302_0590 ME30**	3000	2700	4000	**≤24**	8,0	31,3	26	450	660	900
58,50	117/2	**S302_0590 ME30**	3000	2700	4000	**>24≤32**	8,1	31,3	26	450	660	900
58,50	117/2	**S302_0590 ME30**	3000	2700	4000	**>32≤38**	9,8	31,3	26	450	660	900
70,03	2241/32	**S302_0700 ME10**	3000	2700	4000	**≤14**	0,74	28,4	26	480	660	950
70,03	2241/32	**S302_0700 ME10**	3000	2700	4000	**>14≤19**	0,99	28,4	26	480	660	950
70,03	2241/32	**S302_0700 ME20**	3000	2700	4000	**≤19**	2,2	29,4	26	480	660	950
70,03	2241/32	**S302_0700 ME20**	3000	2700	4000	**>19≤24**	2,9	29,4	26	480	660	950
70,03	2241/32	**S302_0700 ME20**	3000	2700	4000	**>24≤32**	4,4	29,4	26	480	660	950
70,03	2241/32	**S302_0700 ME30**	3000	2700	4000	**≤24**	7,9	31,3	26	480	660	950
70,03	2241/32	**S302_0700 ME30**	3000	2700	4000	**>24≤32**	8,0	31,3	26	480	660	950
70,03	2241/32	**S302_0700 ME30**	3000	2700	4000	**>32≤38**	9,7	31,3	26	480	660	950
87,23	1134/13	**S302_0870 ME10**	3000	2700	4000	**≤14**	0,63	28,4	26	500	660	1010
87,23	1134/13	**S302_0870 ME10**	3000	2700	4000	**>14≤19**	0,88	28,4	26	500	660	1010
87,23	1134/13	**S302_0870 ME20**	3000	2700	4000	**≤19**	2,0	29,4	26	500	660	1010
87,23	1134/13	**S302_0870 ME20**	3000	2700	4000	**>19≤24**	2,8	29,4	26	500	660	1010
116,1	1161/10	**S302_1160 ME10**	3000	2700	4000	**≤14**	0,54	28,4	26	530	660	1060
116,1	1161/10	**S302_1160 ME10**	3000	2700	4000	**>14≤19**	0,79	28,4	26	530	660	1060
116,1	1161/10	**S302_1160 ME20**	3000	2700	4000	**≤19**	2,0	29,4	26	530	660	1060
116,1	1161/10	**S302_1160 ME20**	3000	2700	4000	**>19≤24**	2,7	29,4	26	530	660	1060
139,9	1539/11	**S302_1400 ME10**	3000	2700	4000	**≤14**	0,49	28,4	26	540	660	1080
139,9	1539/11	**S302_1400 ME10**	3000	2700	4000	**>14≤19**	0,74	28,4	26	540	660	1080
139,9	1539/11	**S302_1400 ME20**	3000	2700	4000	**≤19**	1,9	29,4	26	540	660	1080
139,9	1539/11	**S302_1400 ME20**	3000	2700	4000	**>19≤24**	2,6	29,4	26	540	660	1080
174,4	1395/8	**S302_1740 ME10**	3000	2700	4000	**≤14**	0,43	28,4	26	430	510	630
174,4	1395/8	**S302_1740 ME10**	3000	2700	4000	**>14≤19**	0,68	28,4	26	430	510	630

Helical Worm Gear Units **S**
Reductores corona vis sin fin ***S***
Riduttori vite senza fine **S**

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Please take notice of the indications on page S8! ***¡Por favor observe las indicaciones en la página S8!*** **Si raccomanda di rispettare le avvertenze a pagina S8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
S303 (M2BMAX=660 Nm)												
135,3	406/3	**S303_1350 ME20**	3000	2700	4000	**≤19**	2,0	34,3	26	540	660	1090
135,3	406/3	**S303_1350 ME20**	3000	2700	4000	**>19≤24**	2,7	34,3	26	540	660	1090
137,1	1645/12	**S303_1370 ME10**	3000	2700	4000	**≤14**	0,46	33,3	26	540	580	730
137,1	1645/12	**S303_1370 ME10**	3000	2700	4000	**>14≤19**	0,71	33,3	26	540	580	730
167,9	19314/115	**S303_1680 ME20**	3000	2700	4000	**≤19**	2,0	34,3	26	550	660	1100
167,9	19314/115	**S303_1680 ME20**	3000	2700	4000	**>19≤24**	2,7	34,3	26	550	660	1100
170,1	15651/92	**S303_1700 ME10**	3000	2700	4000	**≤14**	0,44	33,3	26	550	660	900
170,1	15651/92	**S303_1700 ME10**	3000	2700	4000	**>14≤19**	0,70	33,3	26	550	660	900
226,2	1131/5	**S303_2260 ME20**	3000	2700	4000	**≤19**	2,0	34,3	26	550	660	1100
226,2	1131/5	**S303_2260 ME20**	3000	2700	4000	**>19≤24**	2,7	34,3	26	550	660	1100
229,1	1833/8	**S303_2290 ME10**	3000	2700	4000	**≤14**	0,43	33,3	26	550	660	1100
229,1	1833/8	**S303_2290 ME10**	3000	2700	4000	**>14≤19**	0,68	33,3	26	550	660	1100
270,8	21663/80	**S303_2710 ME20**	3000	2700	4000	**≤19**	2,0	34,3	26	550	660	1100
270,8	21663/80	**S303_2710 ME20**	3000	2700	4000	**>19≤24**	2,7	34,3	26	550	660	1100
274,3	35109/128	**S303_2740 ME10**	3000	2700	4000	**≤14**	0,42	33,3	26	550	660	1100
274,3	35109/128	**S303_2740 ME10**	3000	2700	4000	**>14≤19**	0,67	33,3	26	550	660	1100
337,3	21924/65	**S303_3370 ME20**	3000	2700	4000	**≤19**	2,0	34,3	26	550	660	1100
337,3	21924/65	**S303_3370 ME20**	3000	2700	4000	**>19≤24**	2,7	34,3	26	550	660	1100
341,7	8883/26	**S303_3420 ME10**	3000	2700	4000	**≤14**	0,41	33,3	26	550	660	1100
341,7	8883/26	**S303_3420 ME10**	3000	2700	4000	**>14≤19**	0,66	33,3	26	550	660	1100
454,7	18189/40	**S303_4550 ME10**	3000	2700	4000	**≤14**	0,41	33,3	26	550	660	1100
454,7	18189/40	**S303_4550 ME10**	3000	2700	4000	**>14≤19**	0,66	33,3	26	550	660	1100
548,0	24111/44	**S303_5480 ME10**	3000	2700	4000	**≤14**	0,40	33,3	26	520	660	1040
548,0	24111/44	**S303_5480 ME10**	3000	2700	4000	**>14≤19**	0,65	33,3	26	520	660	1040
683,0	21855/32	**S303_6830 ME10**	3000	2700	4000	**≤14**	0,40	33,3	26	420	490	610
683,0	21855/32	**S303_6830 ME10**	3000	2700	4000	**>14≤19**	0,65	33,3	26	420	490	610
S402 (M2BMAX=960 Nm)												
9,281	297/32	**S402_0093 ME20**	2400	2100	3200	**≤19**	6,4	38,6	27	290	290	360
9,281	297/32	**S402_0093 ME20**	2400	2100	3200	**>19≤24**	7,2	38,6	28	310	470	620
9,281	297/32	**S402_0093 ME20**	2400	2100	3200	**>24≤32**	8,6	38,6	29	310	470	620
9,281	297/32	**S402_0093 ME30**	2400	2100	3200	**≤24**	12	40,5	28	310	470	620
9,281	297/32	**S402_0093 ME30**	2400	2100	3200	**>24≤32**	12	40,5	29	310	470	620
9,281	297/32	**S402_0093 ME30**	2400	2100	3200	**>32≤38**	14	40,5	29	310	470	620
9,281	297/32	**S402_0093 ME40**	2400	2100	3200	**≤38**	22	45,4	29	310	470	620
9,281	297/32	**S402_0093 ME40**	2400	2100	3200	**>38≤48**	36	45,4	29	310	470	620
11,57	81/7	**S402_0115 ME20**	2400	2100	3200	**≤19**	5,1	38,6	28	360	360	450
11,57	81/7	**S402_0115 ME20**	2400	2100	3200	**>19≤24**	5,8	38,6	29	380	570	760
11,57	81/7	**S402_0115 ME20**	2400	2100	3200	**>24≤32**	7,3	38,6	29	380	570	760
11,57	81/7	**S402_0115 ME30**	2400	2100	3200	**≤24**	11	40,5	29	380	570	760
11,57	81/7	**S402_0115 ME30**	2400	2100	3200	**>24≤32**	11	40,5	29	380	570	760
11,57	81/7	**S402_0115 ME30**	2400	2100	3200	**>32≤38**	13	40,5	29	380	570	760
11,57	81/7	**S402_0115 ME40**	2400	2100	3200	**≤38**	21	45,4	29	380	570	760
11,57	81/7	**S402_0115 ME40**	2400	2100	3200	**>38≤48**	35	45,4	29	380	570	760
13,95	279/20	**S402_0140 ME20**	2800	2500	3800	**≤19**	4,2	38,6	28	430	430	540
13,95	279/20	**S402_0140 ME20**	2800	2500	3800	**>19≤24**	5,0	38,6	29	450	680	910
13,95	279/20	**S402_0140 ME20**	2800	2500	3800	**>24≤32**	6,4	38,6	29	450	680	910
13,95	279/20	**S402_0140 ME30**	2800	2500	3800	**≤24**	10	40,5	29	450	680	910
13,95	279/20	**S402_0140 ME30**	2800	2500	3800	**>24≤32**	10	40,5	29	450	680	910
13,95	279/20	**S402_0140 ME30**	2800	2500	3800	**>32≤38**	12	40,5	29	450	680	910
13,95	279/20	**S402_0140 ME40**	2800	2500	3500	**≤38**	20	45,4	29	450	680	910
13,95	279/20	**S402_0140 ME40**	2800	2500	3500	**>38≤48**	34	45,4	29	450	680	910
17,49	612/35	**S402_0175 ME20**	2800	2500	3800	**≤19**	3,5	38,6	29	530	540	670
17,49	612/35	**S402_0175 ME20**	2800	2500	3800	**>19≤24**	4,2	38,6	29	530	720	1060
17,49	612/35	**S402_0175 ME20**	2800	2500	3800	**>24≤32**	5,7	38,6	29	530	720	1060
17,49	612/35	**S402_0175 ME30**	2800	2500	3800	**≤24**	9,3	40,5	29	530	720	1060
17,49	612/35	**S402_0175 ME30**	2800	2500	3800	**>24≤32**	9,4	40,5	29	530	720	1060
17,49	612/35	**S402_0175 ME30**	2800	2500	3800	**>32≤38**	11	40,5	29	530	720	1060
17,49	612/35	**S402_0175 ME40**	2800	2500	3500	**≤38**	19	45,4	29	530	720	1060
17,49	612/35	**S402_0175 ME40**	2800	2500	3500	**>38≤48**	33	45,4	29	530	720	1060

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Please take notice of the indications on page S8! ***¡Por favor observe las indicaciones en la página S8!*** **Si raccomanda di rispettare le avvertenze a pagina S8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
S402 (M2BMAX=960 Nm)												
23,40	117/5	**S402_0230 ME20**	3000	3000	4000	**≤19**	2,9	38,6	29	600	720	900
23,40	117/5	**S402_0230 ME20**	3000	3000	4000	**>19≤24**	3,6	38,6	29	600	720	1200
23,40	117/5	**S402_0230 ME20**	3000	3000	4000	**>24≤32**	5,1	38,6	29	600	720	1200
23,40	117/5	**S402_0230 ME30**	3000	3000	4000	**≤24**	8,7	40,5	29	600	720	1200
23,40	117/5	**S402_0230 ME30**	3000	3000	4000	**>24≤32**	8,8	40,5	29	600	720	1200
23,40	117/5	**S402_0230 ME30**	3000	3000	4000	**>32≤38**	11	40,5	29	600	720	1200
23,40	117/5	**S402_0230 ME40**	3000	3000	3500	**≤38**	19	45,4	29	600	720	1200
23,40	117/5	**S402_0230 ME40**	3000	3000	3500	**>38≤48**	32	45,4	29	600	720	1200
27,90	279/10	**S402_0280 ME20**	3000	3000	4000	**≤19**	2,6	38,6	29	640	720	1060
27,90	279/10	**S402_0280 ME20**	3000	3000	4000	**>19≤24**	3,3	38,6	29	640	720	1200
27,90	279/10	**S402_0280 ME20**	3000	3000	4000	**>24≤32**	4,8	38,6	29	640	720	1200
27,90	279/10	**S402_0280 ME30**	3000	3000	4000	**≤24**	8,3	40,5	29	640	720	1200
27,90	279/10	**S402_0280 ME30**	3000	3000	4000	**>24≤32**	8,4	40,5	29	640	720	1200
27,90	279/10	**S402_0280 ME30**	3000	3000	4000	**>32≤38**	10	40,5	29	640	720	1200
34,92	873/25	**S402_0350 ME20**	3000	3000	4000	**≤19**	2,4	38,6	29	620	720	1200
34,92	873/25	**S402_0350 ME20**	3000	3000	4000	**>19≤24**	3,1	38,6	29	620	720	1200
34,92	873/25	**S402_0350 ME20**	3000	3000	4000	**>24≤32**	4,6	38,6	29	620	720	1200
34,92	873/25	**S402_0350 ME30**	3000	3000	4000	**≤24**	8,0	40,5	29	620	720	1200
34,92	873/25	**S402_0350 ME30**	3000	3000	4000	**>24≤32**	8,1	40,5	29	620	720	1200
34,92	873/25	**S402_0350 ME30**	3000	3000	4000	**>32≤38**	9,9	40,5	29	620	720	1200
43,71	306/7	**S402_0440 ME20**	2600	2300	3600	**≤19**	3,1	38,6	36	580	880	1170
43,71	306/7	**S402_0440 ME20**	2600	2300	3600	**>19≤24**	3,8	38,6	36	580	880	1170
43,71	306/7	**S402_0440 ME20**	2600	2300	3600	**>24≤32**	5,3	38,6	36	580	880	1170
43,71	306/7	**S402_0440 ME30**	2600	2300	3600	**≤24**	8,9	40,5	36	580	880	1170
43,71	306/7	**S402_0440 ME30**	2600	2300	3600	**>24≤32**	9,0	40,5	36	580	880	1170
43,71	306/7	**S402_0440 ME30**	2600	2300	3600	**>32≤38**	11	40,5	36	580	880	1170
43,71	306/7	**S402_0440 ME40**	2600	2300	3500	**≤38**	19	45,4	36	580	880	1170
43,71	306/7	**S402_0440 ME40**	2600	2300	3500	**>38≤48**	33	45,4	36	580	880	1170
58,50	117/2	**S402_0590 ME20**	2800	2600	4000	**≤19**	2,6	38,6	36	660	960	1330
58,50	117/2	**S402_0590 ME20**	2800	2600	4000	**>19≤24**	3,4	38,6	36	660	960	1330
58,50	117/2	**S402_0590 ME20**	2800	2600	4000	**>24≤32**	4,8	38,6	36	660	960	1330
58,50	117/2	**S402_0590 ME30**	2800	2600	4000	**≤24**	8,4	40,5	36	660	960	1330
58,50	117/2	**S402_0590 ME30**	2800	2600	4000	**>24≤32**	8,6	40,5	36	660	960	1330
58,50	117/2	**S402_0590 ME30**	2800	2600	4000	**>32≤38**	10	40,5	36	660	960	1330
58,50	117/2	**S402_0590 ME40**	2800	2600	3500	**≤38**	19	45,4	36	660	960	1330
58,50	117/2	**S402_0590 ME40**	2800	2600	3500	**>38≤48**	32	45,4	36	660	960	1330
69,75	279/4	**S402_0700 ME20**	2800	2600	4000	**≤19**	2,4	38,6	36	700	960	1410
69,75	279/4	**S402_0700 ME20**	2800	2600	4000	**>19≤24**	3,2	38,6	36	700	960	1410
69,75	279/4	**S402_0700 ME20**	2800	2600	4000	**>24≤32**	4,6	38,6	36	700	960	1410
69,75	279/4	**S402_0700 ME30**	2800	2600	4000	**≤24**	8,1	40,5	36	700	960	1410
69,75	279/4	**S402_0700 ME30**	2800	2600	4000	**>24≤32**	8,2	40,5	36	700	960	1410
69,75	279/4	**S402_0700 ME30**	2800	2600	4000	**>32≤38**	9,9	40,5	36	700	960	1410
87,30	873/10	**S402_0870 ME20**	2800	2600	4000	**≤19**	2,3	38,6	36	750	960	1500
87,30	873/10	**S402_0870 ME20**	2800	2600	4000	**>19≤24**	3,0	38,6	36	750	960	1500
87,30	873/10	**S402_0870 ME20**	2800	2600	4000	**>24≤32**	4,5	38,6	36	750	960	1500
87,30	873/10	**S402_0870 ME30**	2800	2600	4000	**≤24**	7,9	40,5	36	750	960	1500
87,30	873/10	**S402_0870 ME30**	2800	2600	4000	**>24≤32**	8,0	40,5	36	750	960	1500
87,30	873/10	**S402_0870 ME30**	2800	2600	4000	**>32≤38**	9,8	40,5	36	750	960	1500
116,3	1512/13	**S402_1160 ME20**	2800	2600	4000	**≤19**	2,1	38,6	36	790	960	1580
116,3	1512/13	**S402_1160 ME20**	2800	2600	4000	**>19≤24**	2,8	38,6	36	790	960	1580
139,9	1539/11	**S402_1400 ME20**	2800	2600	4000	**≤19**	2,0	38,6	36	800	960	1630
139,9	1539/11	**S402_1400 ME20**	2800	2600	4000	**>19≤24**	2,7	38,6	36	800	960	1630
174,2	3483/20	**S402_1740 ME20**	2800	2600	4000	**≤19**	1,9	38,6	36	760	960	1520
174,2	3483/20	**S402_1740 ME20**	2800	2600	4000	**>19≤24**	2,7	38,6	36	760	960	1520

Helical Worm Gear Units **S**
Reductores corona vis sin fin ***S***
Riduttori vite senza fine **S**

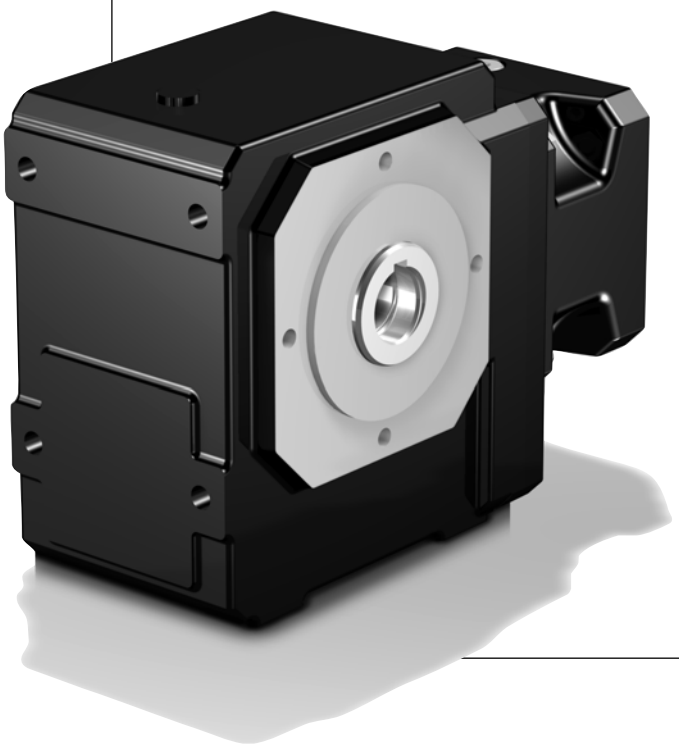
Please take notice of the indications on page S8! ***¡Por favor observe las indicaciones en la página S8!*** **Si raccomanda di rispettare le avvertenze a pagina S8!**

i	iexakt	Typ	n1MAX DBH [min-1]	n1MAX DBV [min-1]	n1MAX ZB [min-1]	MWø [mm]	J1 [10-4 kgm2]	G [kg]	C2 [Nm/ arcmin]	M2N [Nm]	M2B [Nm]	M2NOT [Nm]
S403 (M2BMAX=960 Nm)												
134,9	2697/20	**S403_1350 ME20**	2800	2600	4000	**≤19**	2,1	42,8	36	800	960	1620
134,9	2697/20	**S403_1350 ME20**	2800	2600	4000	**>19≤24**	2,8	42,8	36	800	960	1620
169,0	5916/35	**S403_1690 ME20**	2800	2600	4000	**≤19**	2,0	42,8	36	800	960	1660
169,0	5916/35	**S403_1690 ME20**	2800	2600	4000	**>19≤24**	2,8	42,8	36	800	960	1660
226,2	1131/5	**S403_2260 ME20**	2800	2600	4000	**≤19**	2,0	42,8	36	800	960	1700
226,2	1131/5	**S403_2260 ME20**	2800	2600	4000	**>19≤24**	2,7	42,8	36	800	960	1700
229,1	1833/8	**S403_2290 ME10**	2800	2600	4000	**≤14**	0,45	41,8	36	800	960	1210
229,1	1833/8	**S403_2290 ME10**	2800	2600	4000	**>14≤19**	0,70	41,8	36	800	960	1210
269,7	2697/10	**S403_2700 ME20**	2800	2600	4000	**≤19**	2,0	42,8	36	800	960	1700
269,7	2697/10	**S403_2700 ME20**	2800	2600	4000	**>19≤24**	2,7	42,8	36	800	960	1700
273,2	4371/16	**S403_2730 ME10**	2800	2600	4000	**≤14**	0,44	41,8	36	800	960	1440
273,2	4371/16	**S403_2730 ME10**	2800	2600	4000	**>14≤19**	0,69	41,8	36	800	960	1440
337,6	8439/25	**S403_3380 ME20**	2800	2600	4000	**≤19**	2,0	42,8	36	800	960	1700
337,6	8439/25	**S403_3380 ME20**	2800	2600	4000	**>19≤24**	2,7	42,8	36	800	960	1700
341,9	13677/40	**S403_3420 ME10**	2800	2600	4000	**≤14**	0,42	41,8	36	800	960	1630
341,9	13677/40	**S403_3420 ME10**	2800	2600	4000	**>14≤19**	0,67	41,8	36	800	960	1630
449,7	29232/65	**S403_4500 ME20**	2800	2600	4000	**≤19**	2,0	42,8	36	800	960	1700
449,7	29232/65	**S403_4500 ME20**	2800	2600	4000	**>19≤24**	2,7	42,8	36	800	960	1700
455,5	5922/13	**S403_4560 ME10**	2800	2600	4000	**≤14**	0,41	41,8	36	800	960	1700
455,5	5922/13	**S403_4560 ME10**	2800	2600	4000	**>14≤19**	0,66	41,8	36	800	960	1700
541,0	29754/55	**S403_5410 ME20**	2800	2600	4000	**≤19**	2,0	42,8	36	800	960	1680
541,0	29754/55	**S403_5410 ME20**	2800	2600	4000	**>19≤24**	2,7	42,8	36	800	960	1680
548,0	24111/44	**S403_5480 ME10**	2800	2600	4000	**≤14**	0,41	41,8	36	800	960	1680
548,0	24111/44	**S403_5480 ME10**	2800	2600	4000	**>14≤19**	0,66	41,8	36	800	960	1680
682,1	54567/80	**S403_6820 ME10**	2800	2600	4000	**≤14**	0,40	41,8	36	730	960	1470
682,1	54567/80	**S403_6820 ME10**	2800	2600	4000	**>14≤19**	0,66	41,8	36	730	960	1470

Dimension drawings **ServoFit® S** Helical Worm Gear Units

*Dibujos acotados **ServoFit®** Reductores corona vis sin fin **S***

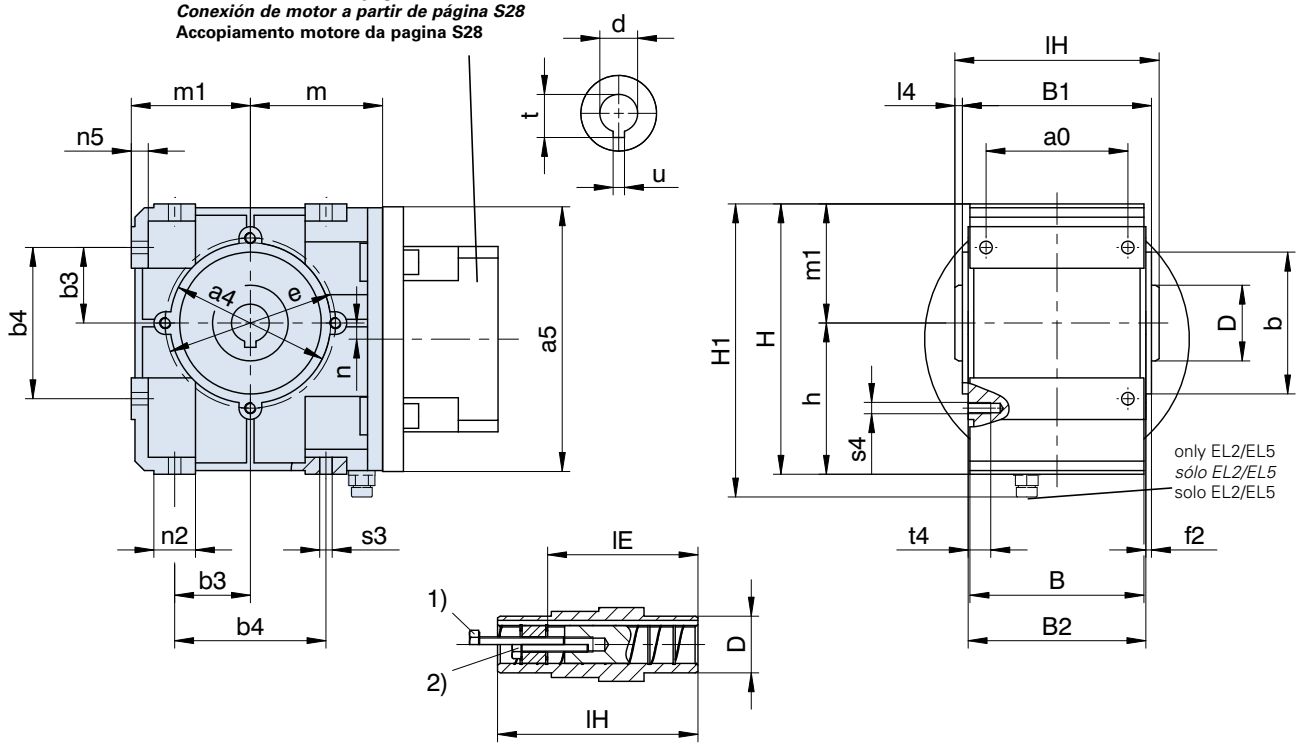
Disegni quotati **ServoFit®** Riduttori vite senza fine **S**



STÖBER

S0_ANG_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



Shaft-mounted: 1), 2) see page A19
(further hollow shaft diameters see page A19)

***Ejecución enchufable:** 1), 2) ver página A19*
(otros ø de eje hueco ver página A19.)

Esecuzione ad albero cavo: 1), 2) vedere pag. A19
(Per altri ø albero cavo vedere pag. A19)

Typ	a0	øa1	øa4	øb	øb1	b3	b4	B	B1	B2	c1	c2	ød	øD	øe	øe1	f1
S0	75	120	85	75j6	80j6	40	80	92	100	94	9	28	20H7	40	90	100	3
S0	75	120	85	75j6	80j6	40	80	92	100	94	9	28	25H7	40	90	100	3

Dimensions **a5, m, n** see next page.

*Medidas **a5, m, n** ver página siguiente.*

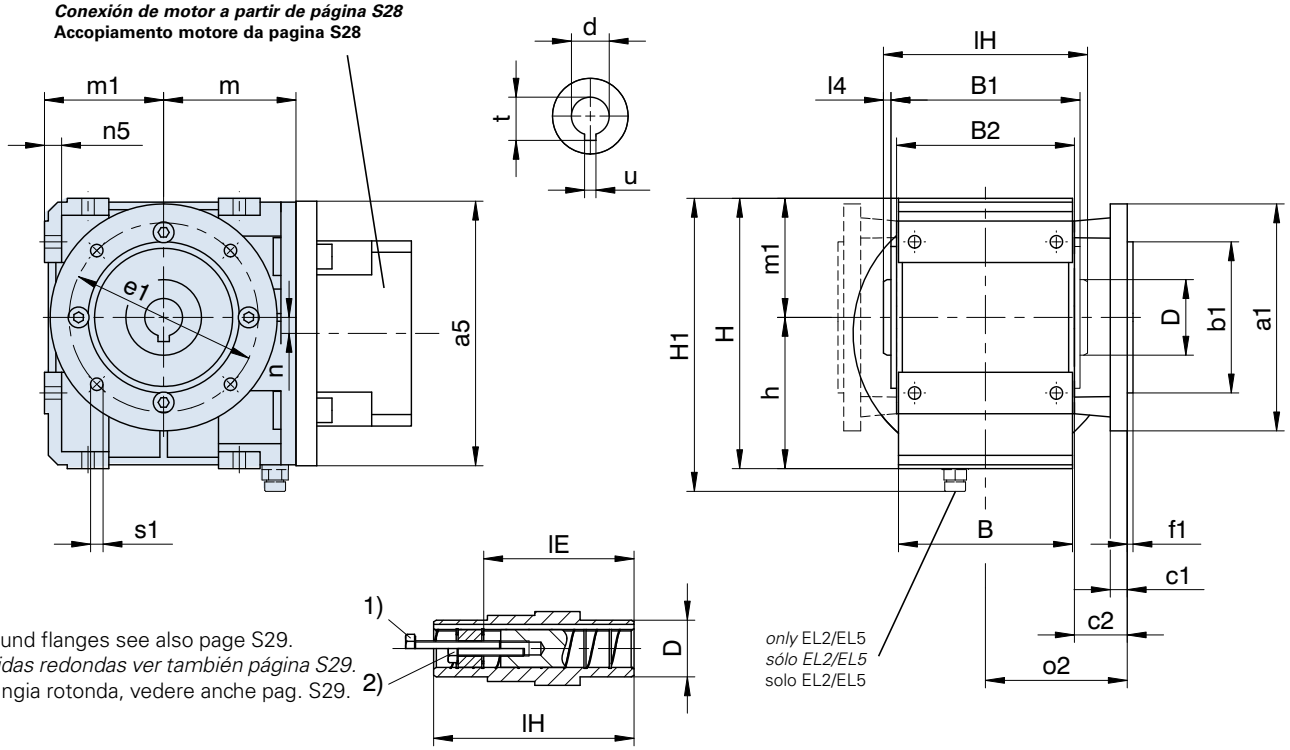
Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	f2	h	H	H1	l4	lE	lH	m1	n2	n5	o2	øs1	øs3	s4	t	t4	u
S0	3	80	143	158	4	86	108	63	22	9	75	6,6	6,6	M6	22,8	13	6JS9
S0	3	80	143	158	4	86	108	63	22	9	75	6,6	6,6	M6	28,3	13	8JS9

STÖBER

S0..ANF_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



Round flanges see also page S29.
Bridas redondas ver también página S29.
Flangia rotonda, vedere anche pag. S29.

Shaft-mounted: 1), 2) see page A19
(further hollow shaft diameters see page A19)

***Ejecución enchufable:** 1), 2) ver página A19*
(otros ø de eje hueco ver página A19.)

Esecuzione ad albero cavo: 1), 2) vedere pag. A19
(Per altri ø albero cavo vedere pag. A19)

Typ	ME10		
	a5	m	n
S002	ø140	70	8,5

Further dimensions see previous page.

Otras medidas ver página anterior.

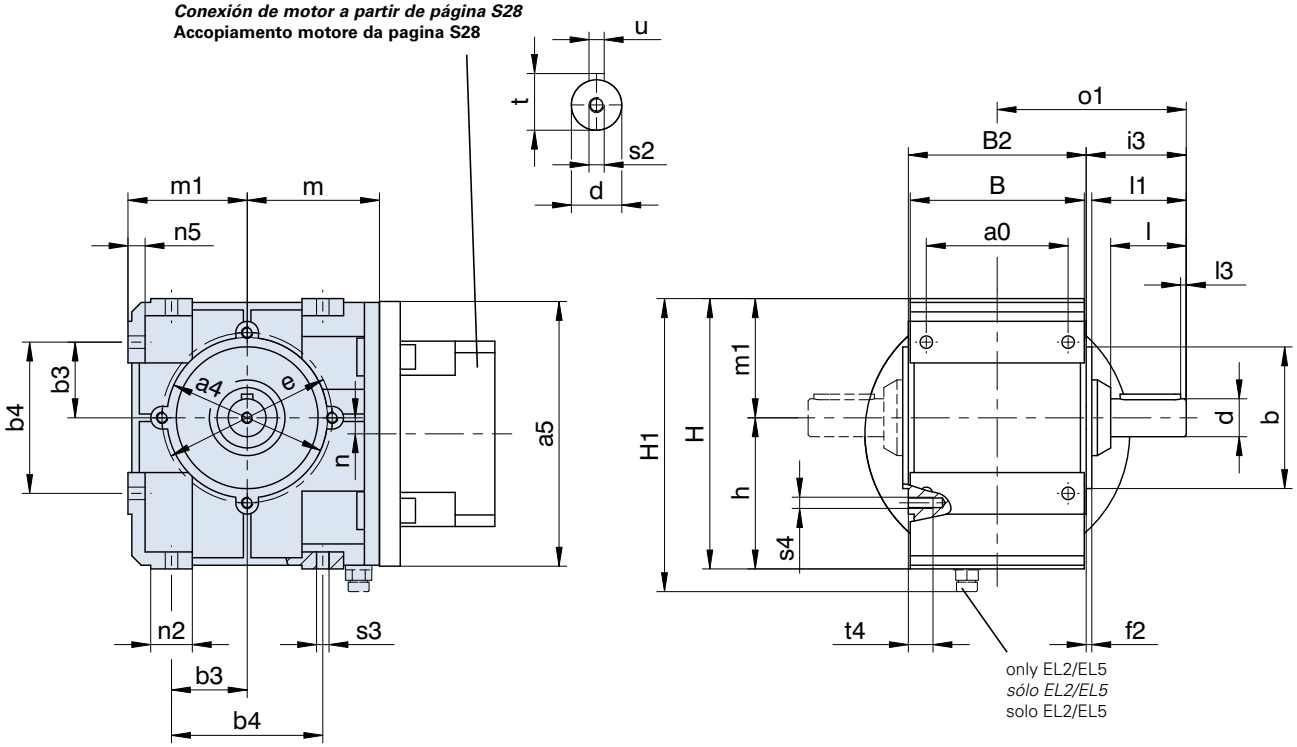
Altre dimensioni vedere la pagina precedente.

S

STÖBER

S0_VNG_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	a0	øa1	øa4	øb	øb1	b3	b4	B	B2	c1	c2	ød	øe	øe1	f1	f2	h
S0	75	120	85	75j6	80j6	40	80	92	94	9	28	20k6	90	100	3	3	80

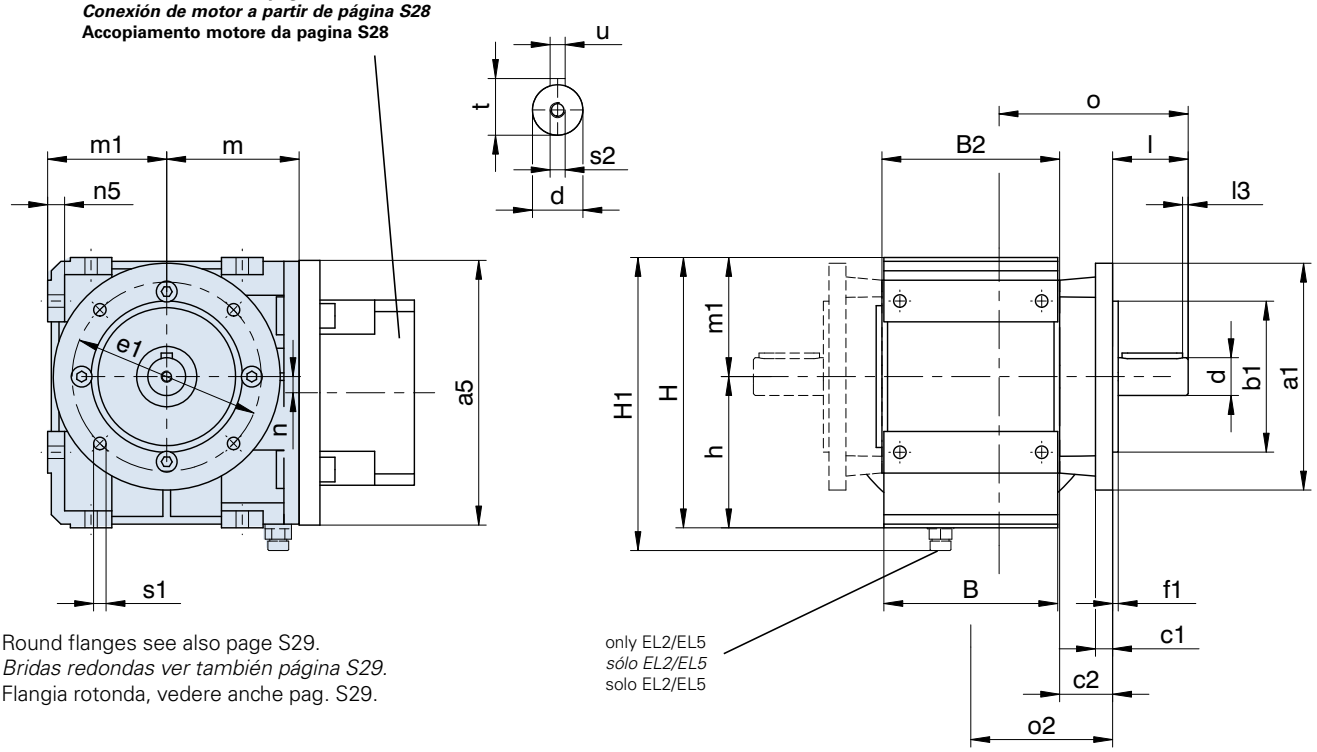
Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	H	H1	i3	l	l1	l3	m1	n2	n5	o	o1	o2	øs1	s2	øs3	s4	t	t4	u
S0	143	158	53	40	50	3	63	22	9	115	100	75	6,6	M6	6,6	M6	22,5	13	A6x6x32

STÖBER

S0_VNF_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



Round flanges see also page S29.
Bridas redondas ver también página S29.
Flangia rotonda, vedere anche pag. S29.

Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

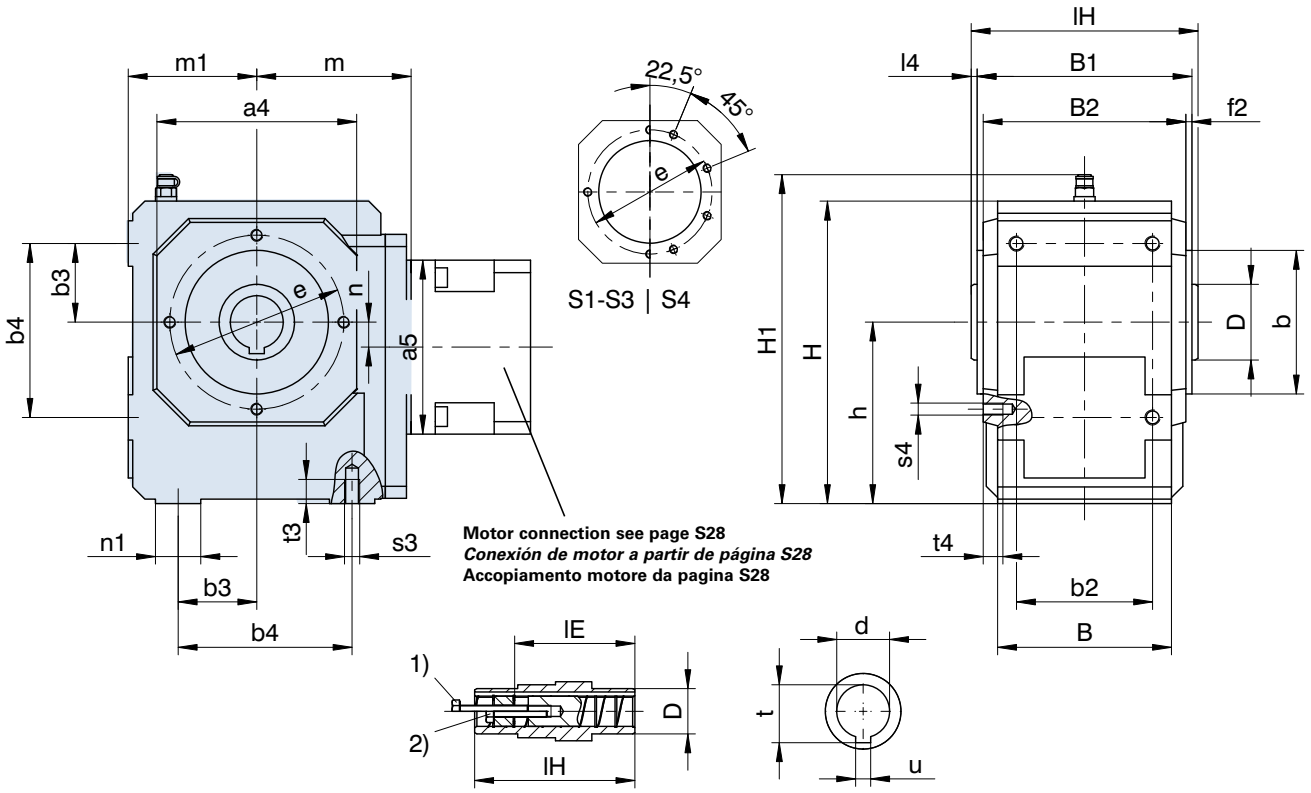
Typ	ME10		
	a5	m	n
S002	ø140	70	8,5

Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

S

STÖBER

S1_AG_ME_ - S4_AG_ME_



Shaft-mounted: 1), 2) see page A19
(further hollow shaft diameters see page A19)

***Ejecución enchufable:** 1), 2) ver página A19*
(otros ø de eje hueco ver página A19.)

Esecuzione ad albero cavo: 1), 2) vedere pag. A19
(Per altri ø albero cavo vedere pag. A19)

Typ	øa1	□a4	øb	øb1	b2	b3	b4	B	B1	B2	c1	c2	ød	øD	øe	øe1	f1
S1	160	105	75j6	110j6	70	40	90	90	112	106	10	32,0	20H7	40	90	130	3,5
S1	160	105	75j6	110j6	70	40	90	90	112	106	10	32,0	25H7	40	90	130	3,5
S1	160	105	75j6	110j6	70	40	90	90	112	106	10	32,0	30H7	40	90	130	3,5
S2	200	132	95j6	130j6	90	52	115	115	142	134	14	38,0	30H7	50	115	165	3,5
S2	200	132	95j6	130j6	90	52	115	115	142	134	14	38,0	35H7	50	115	165	3,5
S3	250	152	110j6	180j6	105	52	130	130	160	153	15	40,0	40H7	55	130	215	4,0
S4	250	145	110j6	180j6	120	67	155	148	180	173	15	39,5	50H7	65	130	215	4,0

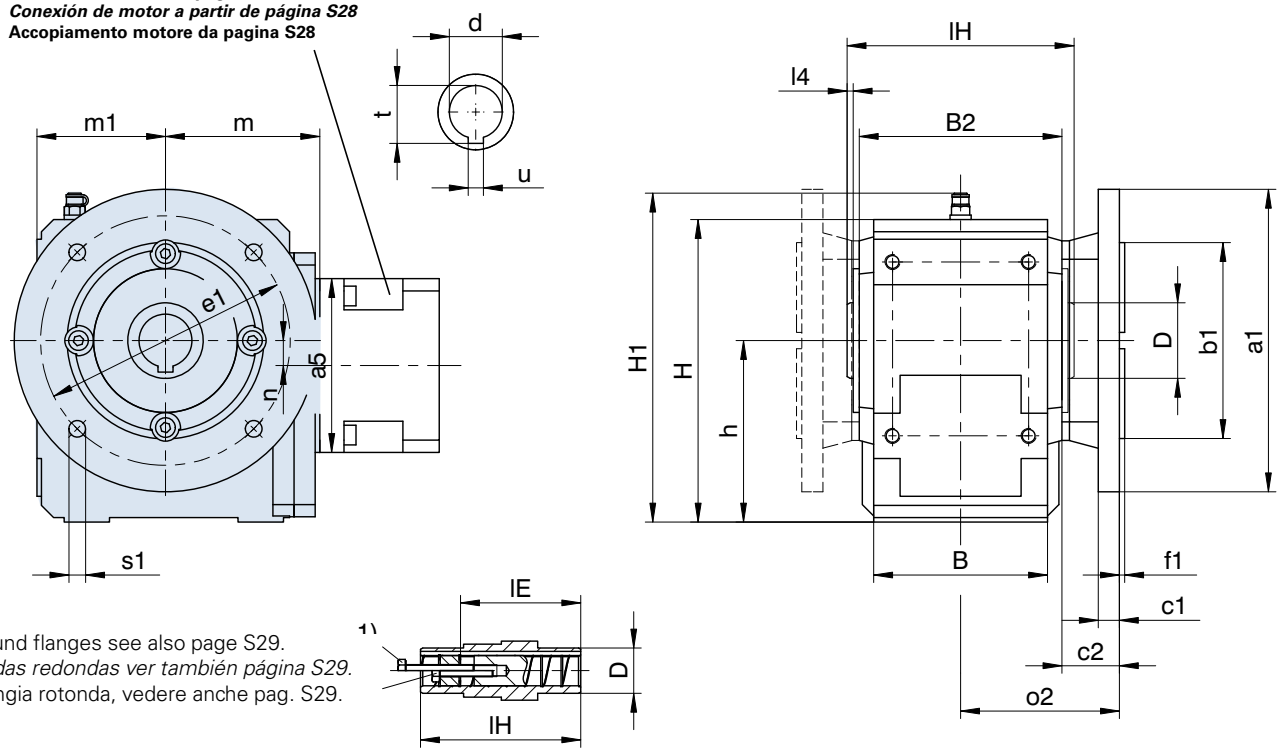
Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	f2	h	H	H1	l4	lE	lH	m1	n1	o2	øs1	s3	s4	t	t3	t4	u
S1	3,0	100	167	187	4	98,0	120	70	25	85,0	9	M8	M8	22,8	13	13	6JS9
S1	3,0	100	167	187	4	98,0	120	70	25	85,0	9	M8	M8	28,3	13	13	8JS9
S1	3,0	100	167	187	4	93,5	120	70	25	85,0	9	M8	M8	32,0	13	13	8JS9
S2	4,0	120	200	220	4	123,5	150	85	30	105,0	11	M10	M8	33,3	16	13	8JS9
S2	4,0	120	200	220	4	119,0	150	85	30	105,0	11	M10	M8	38,3	16	13	10JS9
S3	3,5	140	233	253	4	136,0	168	100	35	116,5	14	M10	M10	43,3	16	16	12JS9
S4	3,5	160	263	283	5	153,0	190	110	40	126,0	14	M12	M10	53,8	19	16	14JS9

STÖBER

S1_AF_ME_ - S4_AF_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



Round flanges see also page S29.
Bridas redondas ver también página S29.
Flangia rotonda, vedere anche pag. S29.

Shaft-mounted: 1), 2) see page A19
(further hollow shaft diameters see page A19)

***Ejecución enchufable:** 1), 2) ver página A19*
(otros ø de eje hueco ver página A19.)

Esecuzione ad albero cavo: 1), 2) vedere pag. A19
(Per altri ø albero cavo vedere pag. A19)

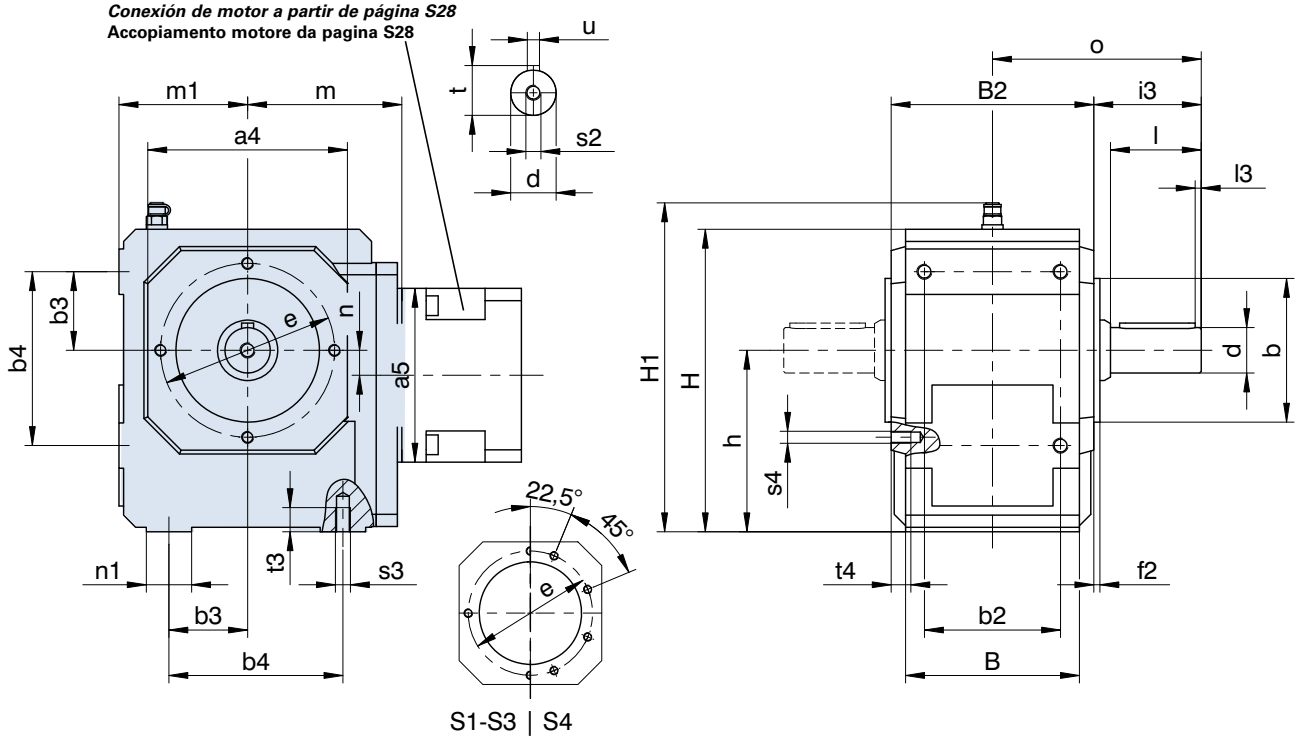
Typ	ME10			ME20			ME30			ME40		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n
S102	□98	83	14,0	□115	87	14,0	-	-	-	-	-	-
S202	□98	98	17,0	□115	102	17,0	□145	104	17,0	-	-	-
S203	ø140	135	17,0	-	-	-	-	-	-	-	-	-
S302	ø140	113	25,5	□115	117	25,5	□145	119	25,5	-	-	-
S303	ø140	150	25,5	ø160	160	62,0	-	-	-	-	-	-
S402	-	-	-	ø160	129	30,0	□145	131	30,0	□190	134	30,0
S403	ø140	162	30,0	ø160	172	67,0	-	-	-	-	-	-

Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

STÖBER

S1_VG_ME_ - S4_VG_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	øa1	□a4	øb	øb1	b2	b3	b4	B	B2	c1	c2	ød	øe	øe1	f1	f2	h
S1	160	105	75j6	110j6	70	40	90	90	106	10	32,0	25k6	90	130	3,5	3,0	100
S2	200	132	95j6	130j6	90	52	115	115	134	14	38,0	30k6	115	165	3,5	4,0	120
S3	250	152	110j6	180j6	105	52	130	130	153	15	40,0	40k6	130	215	4,0	3,5	140
S4	250	145	110j6	180j6	120	67	155	148	173	15	39,5	45k6	130	215	4,0	3,5	160

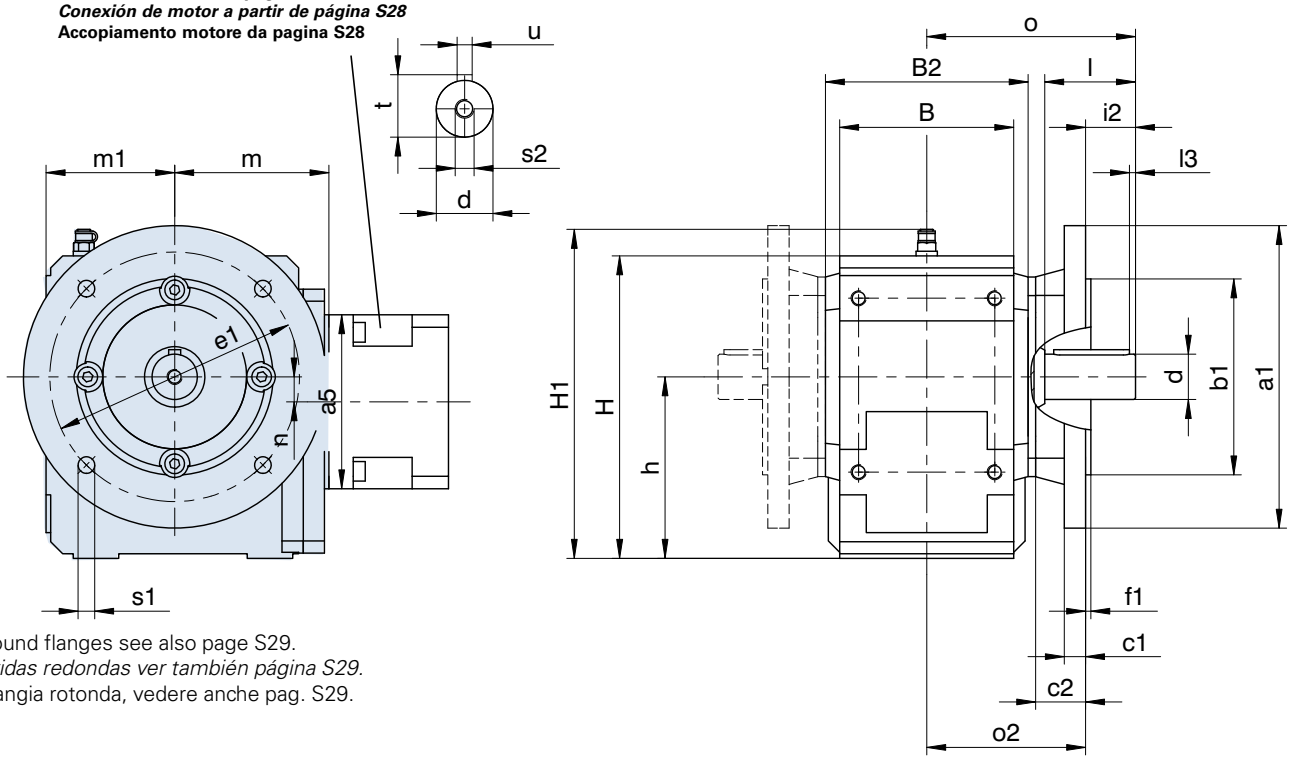
Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	H	H1	i2	i3	l	l3	m1	n1	o	o2	øs1	s2	s3	s4	t	t3	t4	u
S1	167	187	30,0	62,0	50	4	70	25	115	85,0	9	M10	M8	M8	28,0	13	13	A8x7x40
S2	200	220	33,0	71,0	60	4	85	30	138	105,0	11	M10	M10	M8	33,0	16	13	A8x7x50
S3	233	253	53,5	93,5	80	4	100	35	170	116,5	14	M16	M10	M10	43,0	16	16	A12x8x70
S4	263	283	64,0	103,5	90	4	110	40	190	126,0	14	M16	M12	M10	48,5	19	16	A14x9x80

STÖBER

S1_VF_ME_ - S4_VF_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



Round flanges see also page S29.
Bridas redondas ver también página S29.
Flangia rotonda, vedere anche pag. S29.

Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	ME10			ME20			ME30			ME40		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n
S102	□98	83	14,0	□115	87	14,0	-	-	-	-	-	-
S202	□98	98	17,0	□115	102	17,0	□145	104	17,0	-	-	-
S203	ø140	135	17,0	-	-	-	-	-	-	-	-	-
S302	ø140	113	25,5	□115	117	25,5	□145	119	25,5	-	-	-
S303	ø140	150	25,5	ø160	160	62,0	-	-	-	-	-	-
S402	-	-	-	ø160	129	30,0	□145	131	30,0	□190	134	30,0
S403	ø140	162	30,0	ø160	172	67,0	-	-	-	-	-	-

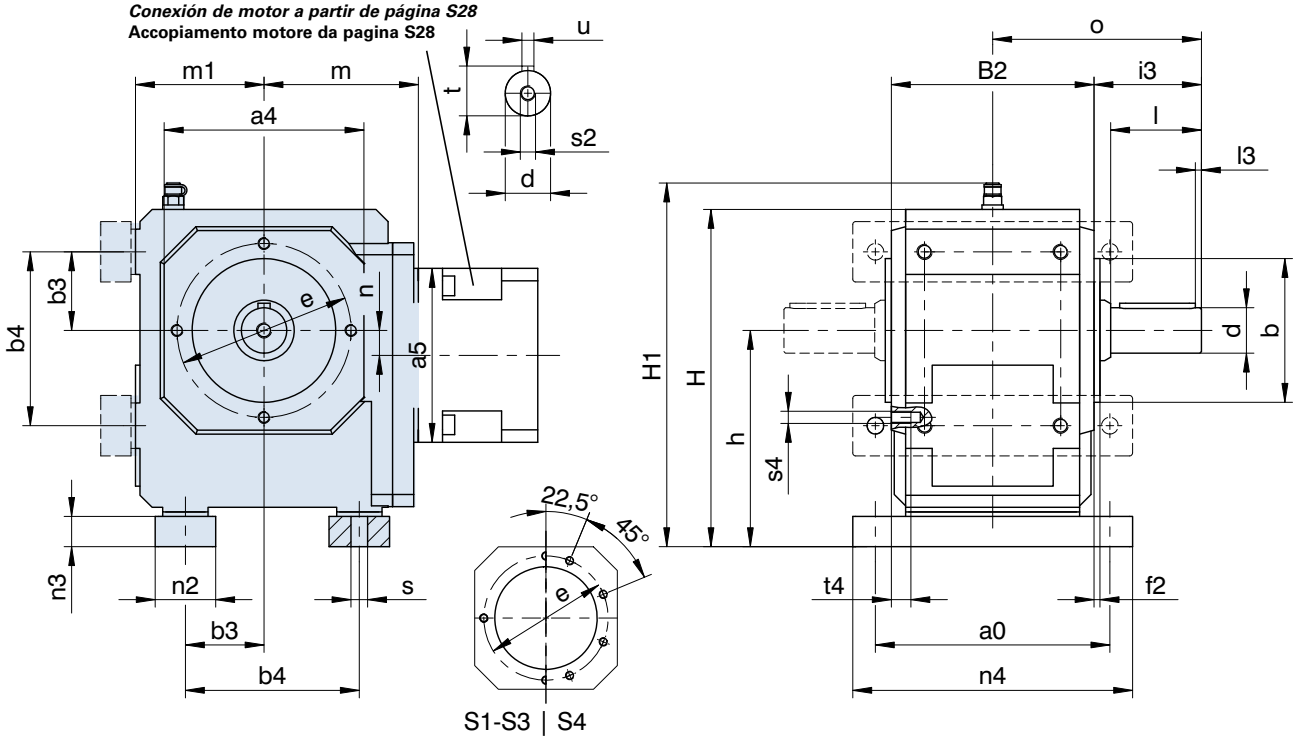
Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

S

STÖBER

S1_VNG_ME_ - S4_VNG_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	a0	□a4	øb	b3	b4	B	B2	ød	øe	f2	h	H	H1
S1	115	105	75j6	40	90	90	106	25k6	90	3,0	115	182	202
S2	155	132	95j6	52	115	115	134	30k6	115	4,0	143	223	243
S3	170	152	110j6	52	130	130	153	40k6	130	3,5	163	256	276
S4	200	145	110j6	67	155	148	173	45k6	130	3,5	185	288	308

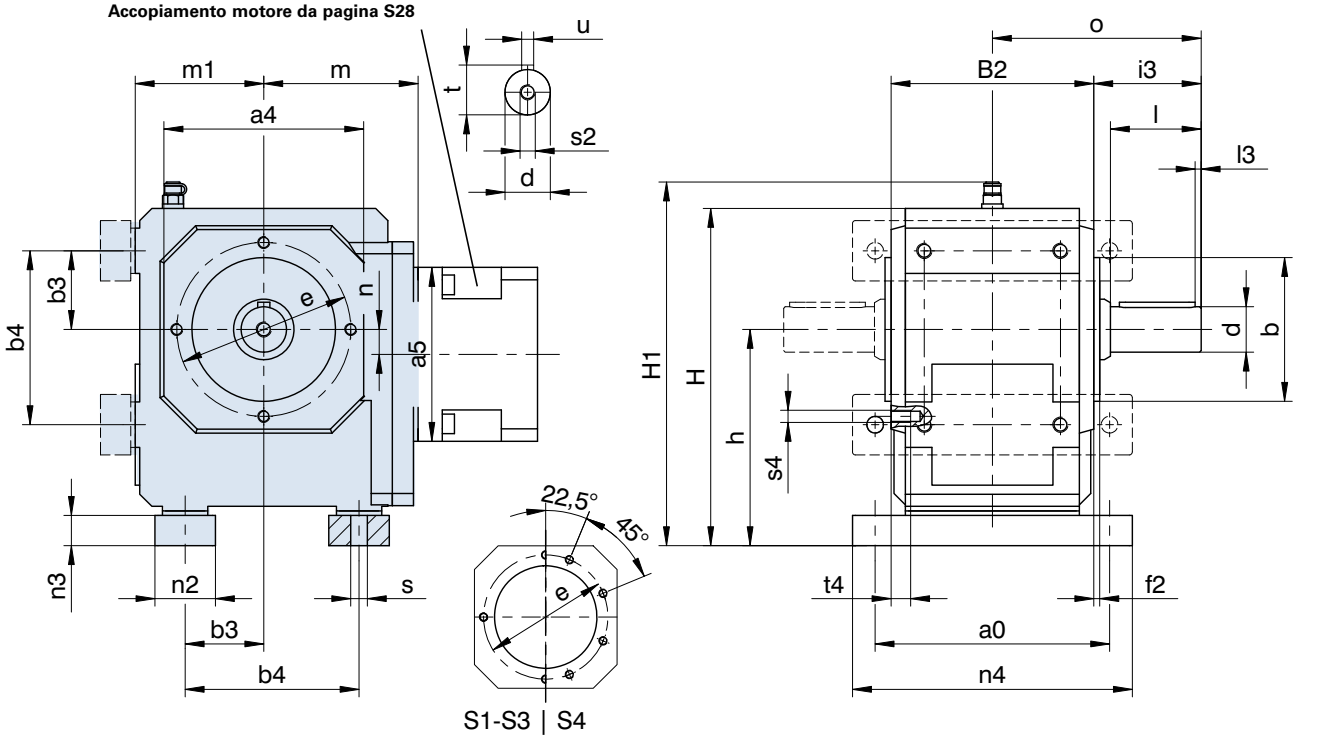
Dimensions **a5, m, n** see next page. *Medidas **a5, m, n** ver página siguiente.* Dimensioni **a5, m, n** vedere la pagina successiva.

Typ	i3	l	l3	m1	n2	n3	n4	n5	o	øs	s2	s4	t	t4	u
S1	62,0	50	4	70	30	13	140	15	115	9,0	M10	M8	28,0	13	A8x7x40
S2	71,0	60	4	85	40	20	185	23	138	11,0	M10	M8	33,0	13	A8x7x50
S3	93,5	80	4	100	45	20	200	23	170	11,0	M16	M10	43,0	16	A12x8x70
S4	103,5	90	4	110	50	22	230	25	190	14,0	M16	M10	48,5	16	A14x9x80

STÖBER

S1_VNG_ME_ - S4_VNG_ME_

Motor connection see page S28
Conexión de motor a partir de página S28
Accopiamento motore da pagina S28



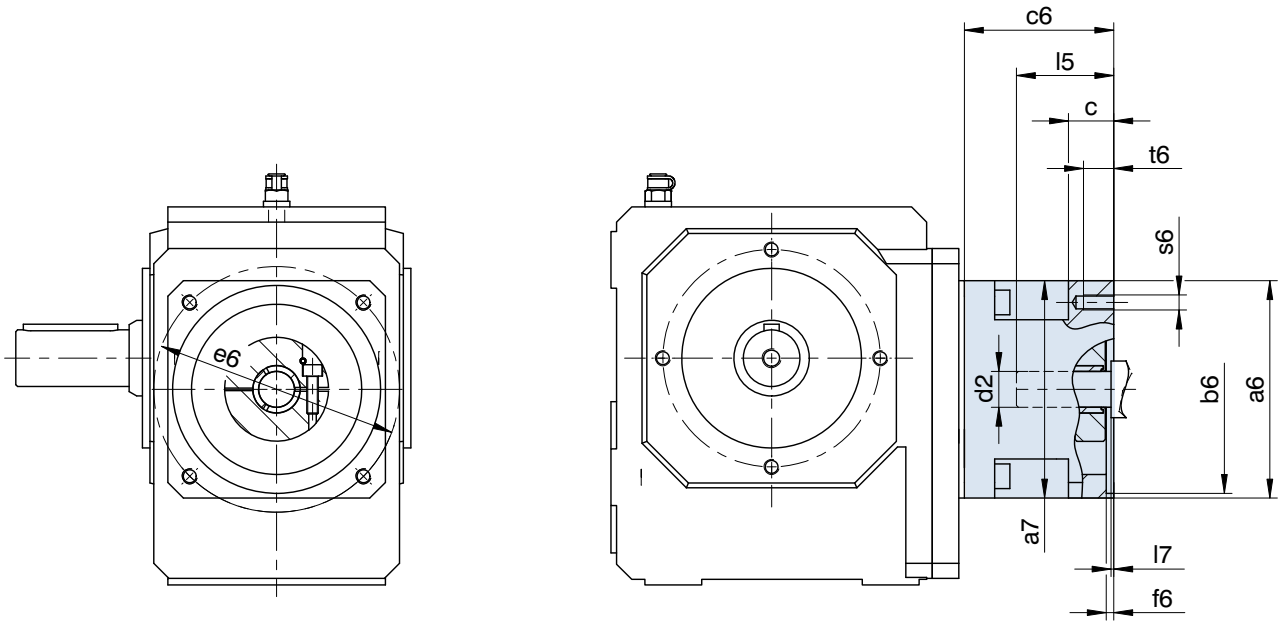
Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	ME10			ME20			ME30			ME40		
	a5	m	n	a5	m	n	a5	m	n	a5	m	n
S102	□98	83	14,0	□115	87	14,0	-	-	-	-	-	-
S202	□98	98	17,0	□115	102	17,0	□145	104	17,0	-	-	-
S203	ø140	135	17,0	-	-	-	-	-	-	-	-	-
S302	ø140	113	25,5	□115	117	25,5	□145	119	25,5	-	-	-
S303	ø140	150	25,5	ø160	160	62,0	-	-	-	-	-	-
S402	-	-	-	ø160	129	30,0	□145	131	30,0	□190	134	30,0
S403	ø140	162	30,0	ø160	172	67,0	-	-	-	-	-	-

Further dimensions see previous page. *Otras medidas ver página anterior.* Altre dimensioni vedere la pagina precedente.

STÖBER

S0_ME_ - S4_ME_



Refer to the standard dimension drawings for further gear unit dimensions.
Please refer to the notes on page A19!

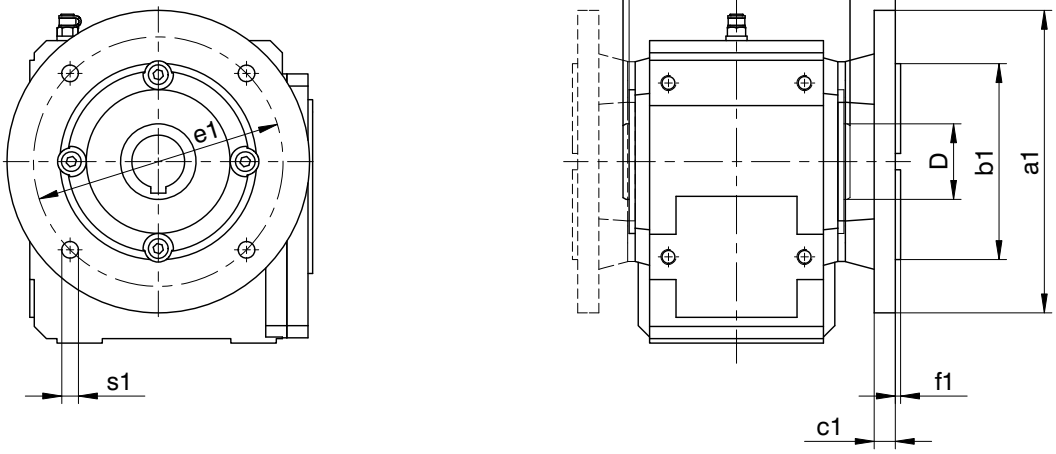
Otras medidas de reductor pueden ser tomadas de los dibujos estándar acotados.
¡Por favor observe las indicaciones en la página A19!

Per altre dimensioni riduttore fare riferimento ai disegni quotati standard.
Si raccomanda di rispettare le avvertenze a pagina A19!

Typ	øb6	øe6	ød2max	l5max	□a6	□a7	c	c6	f6	l7max	s6	t6
ME10	50,0H7	70	19	41	100	98	21,0	61,0	4,0	3,0	M4	10
ME10	50,0H7	95	19	41	100	98	21,0	61,0	2,5	3,0	M6	13
ME10	60,0H7	75	19	41	100	98	21,0	61,0	3,5	3,0	M5	9
ME10	80,0H7	100	19	41	100	98	21,0	61,0	4,0	3,0	M6	13
ME10	95,0H7	115	19	41	100	98	21,0	61,0	4,0	3,0	M8	21
ME10	95,0H7	115	19	50	100	98	30,0	70,0	4,0	12,0	M8	16
ME10	95,0H7	130	19	41	115	98	21,0	61,0	4,0	3,0	M8	16
ME10	95,0H7	130	19	50	115	98	30,0	70,0	4,0	12,0	M8	16
ME10	110,0H7	130	19	50	115	98	30,0	70,0	4,0	12,0	M8	16
ME10	110,0H7	145	19	58	130	98	38,0	78,0	7,0	20,0	M8	16
ME10	130,0H7	165	19	50	140	98	30,0	70,0	7,0	12,0	M10	20
ME20	80,0H7	100	32	53	120	115	24,0	74,0	4,0	3,5	M6	13
ME20	95,0H7	115	32	53	120	115	24,0	74,0	5,0	3,5	M8	16
ME20	95,0H7	130	32	53	120	115	24,0	74,0	4,0	3,5	M8	16
ME20	110,0H7	130	32	53	120	115	24,0	74,0	4,0	3,5	M8	16
ME20	110,0H7	145	32	61	140	115	32,0	82,0	6,5	11,5	M8	16
ME20	110,0H7	145	32	71	140	115	42,0	92,0	7,0	21,5	M8	16
ME20	110,0H7	165	32	53	140	115	24,0	74,0	5,0	3,5	M10	24
ME20	130,0H7	165	32	53	140	116	37,5	111,5	5,0	3,0	M10	20
ME20	130,0H7	165	32	61	140	115	32,0	82,0	5,0	11,5	M10	20
ME30	110,0H7	130	38	62	145	145	26,0	86,0	5,0	4,5	M8	14
ME30	110,0H7	145	38	73	145	145	37,0	97,0	5,0	15,5	M8	16
ME30	110,0H7	165	38	62	145	145	26,0	86,0	5,0	4,5	M10	26
ME30	114,3H7	200	38	81	180	145	45,0	105,0	5,0	23,5	M12	25
ME30	130,0H7	165	38	62	145	145	26,0	86,0	5,0	4,5	M10	26
ME30	130,0H7	215	38	62	190	145	26,0	86,0	5,0	4,5	M12	26
ME30	130,0H7	215	38	62	190	116	26,0	112,0	5,0	3,0	M12	25
ME30	180,0H7	215	38	62	190	145	26,0	86,0	5,0	4,5	M12	26
ME30	180,0H7	215	38	81	190	145	45,0	105,0	5,0	23,5	M12	25
ME30	180,0H7	215	38	62	190	116	55,0	160,0	5,0	3,0	M12	25
ME40	110,0H7	165	48	81	190	190	34,0	122,0	5,0	4,5	M10	18
ME40	114,3H7	200	48	81	190	190	34,0	122,0	4,0	4,5	M12	34
ME40	130,0H7	165	48	81	190	190	34,0	122,0	5,0	4,5	M10	18
ME40	130,0H7	215	48	81	190	190	34,0	122,0	5,0	4,5	M12	34
ME40	180,0H7	215	48	82	190	190	35,0	123,0	5,0	5,5	M12	35
ME40	250,0H7	300	48	85	260	190	38,0	126,0	6,0	8,5	M16	38

STÖBER

S0_ANF
S1_AF - S4_AF



Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Refer to the standard dimension drawings for further gear unit dimensions. Subject to dimensional changes in the interests of technical development.
S0 with flange see also page S19/S21!
Otras medidas de reductor pueden ser tomadas de los dibujos estándar acotados. Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos.
¡S0 con brida ver también página S19/S21!
Per altre dimensioni riduttore fare riferimento ai disegni quotati standard. Con riserva di variazioni dimensionali dovute allo sviluppo tecnico.
S0 con flangia: vedere anche pag. S19/S21!

Typ	øa1	øb1	c1	øD	øe1	f1	l4	l5	lH	o2	øs1
S0	120	80j6	9	40	100	3,0	4	21,0	108	75,0	6,6
S0	160	110j6	10	40	130	3,5	4	21,0	108	75,0	9,0
S1	140	95j6	10	40	115	3,0	4	25,0	120	85,0	9,0
S1	160	110j6	10	40	130	3,5	4	25,0	120	85,0	9,0
S2	160	110j6	14	50	130	3,5	4	30,0	150	105,0	9,0
S2	200	130j6	14	50	165	3,5	4	30,0	150	105,0	11,0
S3	250	180j6	15	55	215	4,0	4	32,5	168	116,5	14,0
S4	250	180j6	15	65	215	4,0	5	31,0	190	126,0	14,0

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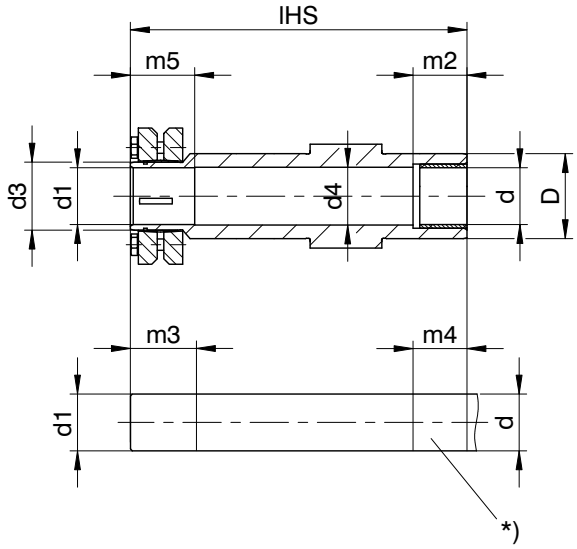
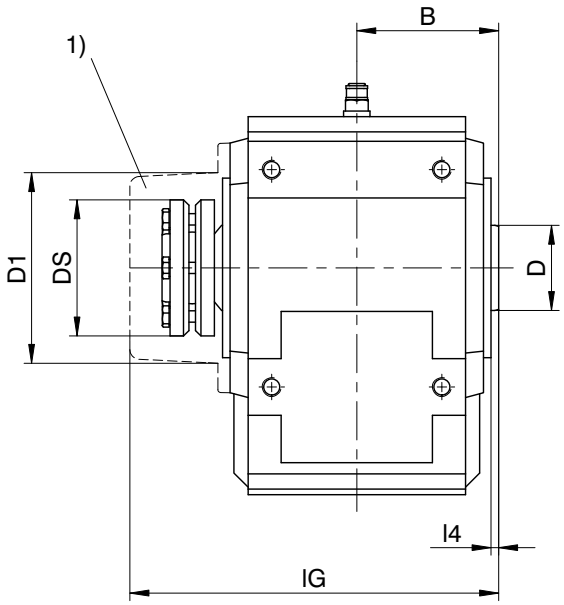
S0_S - S4_S





Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

Typ	B	ød	ød1	ød3	ød4	øD	øD1	øDS	lG	lHS	l4	m2	m3	m4	m5
S0	54	20h9	20H7h9	24	20,5	40	80	50	151	136	4	20	33	25	28
S0	54	25h9	25H7h9	30	25,5	40	80	60	151	136	4	20	34	25	29
S1	60	25h9	25H7h9	30	25,5	40	80	60	163	149	4	20	34	25	29
S2	75	35h9	35H7h9	44	35,5	50	101	80	195	180	4	30	37	35	32
S3	84	40h9	40H7h9	50	40,5	55	114	90	222	200	4	40	39	45	34
S4	95	50h9	50H7h9	62	50,5	65	116	106	243	227	5	40	44	45	39

***)** Machine shaft to be driven
1) Cover – possible retrofit on request!
Subject to dimensional changes in the interests of technical development.

****)*** *Eje de máquina a cargo del cliente*
1) *Cubierta – ¡Posibilidad de equipamiento retroactivo a consultar!*
Reservado el derecho de efectuar modificaciones a las medidas por desarrollos técnicos.

***)** Albero macchina da comandare
1) Copertura – applicabile in seguito su richiesta !
Con riserva di variazioni dimensionali dovute allo sviluppo tecnico.

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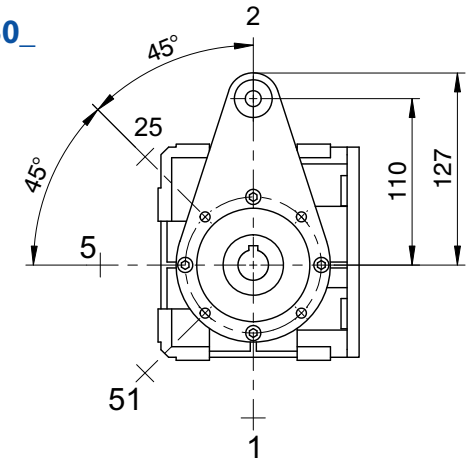
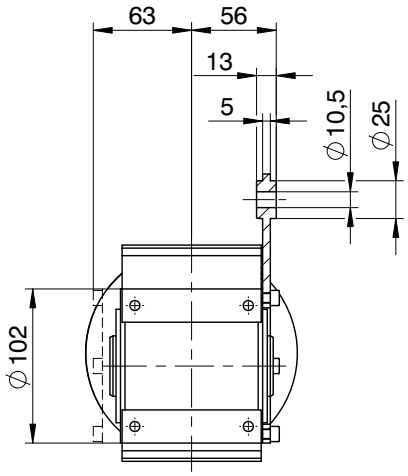
S0_ - S4_

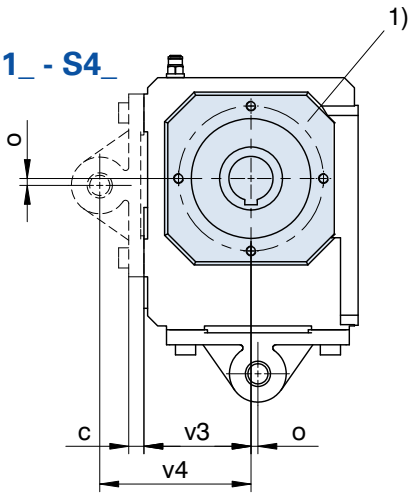
S0_

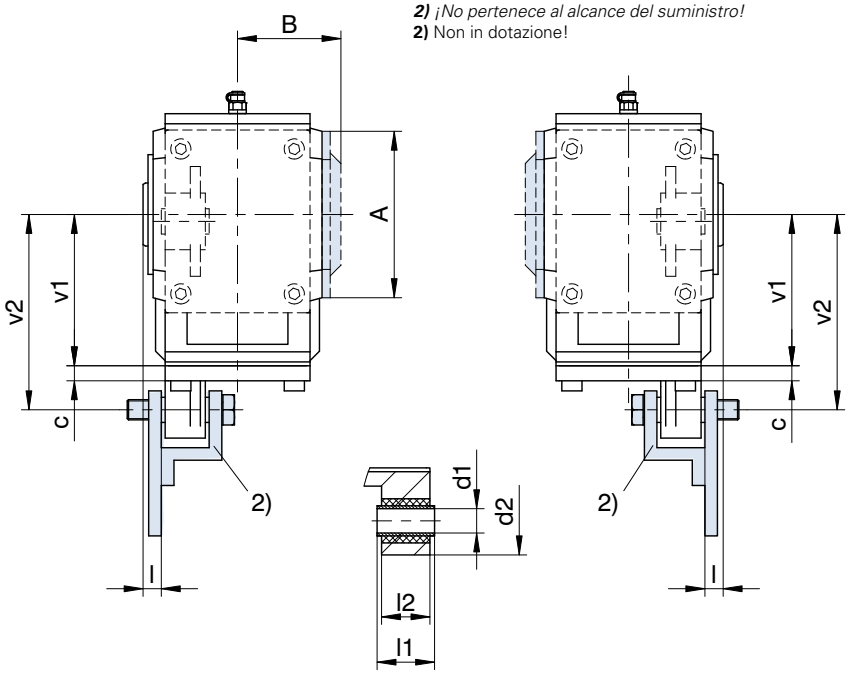




2) It does not belong to our scope of supplies!
2) *¡No pertenece al alcance del suministro!*
2) Non in dotazione!

S1_ - S4_





Please refer to the notes on page A19! ***¡Por favor observe las indicaciones en la página A19!*** **Si raccomanda di rispettare le avvertenze a pagina A19!**

In case of supporting without the specially for that assigned torque arms, it is important not to fall below the dimension v4. See page S5 for mounting position.
1) Cover optional

IEn caso de apoyo sin los soportes de par de torsión previstos de fábrica, no se debe quedar por debajo de la medida v4. Posición de instalación ver página S5.
1) *Cubierta opcional*

In caso di sostegno senza i bracci di reazione previsti in fabbrica, non è consentito scendere al di sotto della misura v4. Posizione di montaggio: vedere la pag. S5.
1) Copertura optional

Typ	□A	B	c	ød1	ød2	l	l1	l2	o	v1	v2	v3	v4
S1	105	67,0	10	12^{H9}	43	13,0	28	24	5,0	100	130	70	100
S2	132	82,0	12	16^{H9}	45	14,5	38	32	5,5	120	155	85	120
S3	152	93,5	12	16^{H9}	45	16,0	38	32	13,0	140	185	100	145
S4	145	103,5	14	20^{H9}	55	18,0	46	40	10,5	160	220	110	170

S

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*Para complementar nuestro catálogo de dibujos EASY Online **cad.stoeber.de** (véase la página siguiente) estaremos encantados de enviarle dibujos CAD de los accionamiento STOBER.*

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Grazie al catalogo prodotti EASY Online potrete scegliere e configurare il Vostro azionamento in modo rapido e mirato.
Potete inviarci direttamente una richiesta, oppure potete generare un foglio dati o un disegno del Vostro azionamento.

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- updated PDF files on www.stober.com -

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GAMA DE PRODUCTOS STOBER

Motorreductores	**Motorreductores servo síncronos (ID 442437)**
	Motorreductores planetarios
	Motorreductores planetarios ortogonales
	Motorreductores coaxiales
	Motorreductores de ejes paralelos
	Motorreductores cónicos
	Motorreductores corona vis sin fin
	Motorreductores servo síncronos ED/EK (ID 441712)
	Motorreductores planetarios
	Motorreductores planetarios ortogonales
	Motorreductores coaxiales
	Motorreductores de ejes paralelos
	Motorreductores cónicos
	Motorreductores corona vis sin fin
	Motorreductores asíncronos IE2 (ID 442356)
	Motorreductores coaxiales
	Motorreductores de ejes paralelos
	Motorreductores cónicos
	Motorreductores corona vis sin fin
	Motorreductores asíncronos (ID 441809)
	Motorreductores coaxiales
	Motorreductores de ejes paralelos
	Motorreductores cónicos
	Motorreductores corona vis sin fin
Electrónica	**Reguladores de accionamientos / Control**
	Motion Controllers MC6 (ID 442711)
	Reguladores de accionamientos SD6 (ID 442711)
	Convertidores digitales servo SDS 5000 (ID 442711)
	Convertidores digitales servo MDS 5000 (ID 442711)
	Convertidores de frecuencia MDS 5000 (ID 442356)
	Convertidores de frecuencia FDS 5000 (ID 442356)
Reductores	**Reductores servo (ID 442257)**
	Reductores planetarios
	Reductores planetarios ortogonales
	Reductores coaxiales
	Reductores de ejes paralelos
	Reductores cónicos
	Reductores corona vis sin fin
	Reductores industrial (ID 441834)
	Reductores coaxiales
	Reductores de ejes paralelos
	Reductores cónicos
	Reductores corona vis sin fin
	Reductores de velocidad (ID 442545)
	Reductores de dos velocidades
Motores	
	Servomotores síncronos EZ (ID 442437/442711)
	Servomotores síncronos con eje hueco EZHD (ID 442437/442711)
	Motorreductores servo síncronos con eje hueco EZHP (ID 442437/442711)
	Servomotores síncronos para accionamiento helicoidal EZS/EZM (ID 442437/442711)
	Servomotores síncronos ED/EK (ID 441712)
	Motores asíncronos IE2 (ID 442356)
	Motores asíncronos (ID 441809)
Accionamientos de cremallera	
	ZTRS/ZTR/ZR (ID 442225)
	ZV (ID 442506)

PROGRAMMA DI PRODUZIONE STOBER

Motoriduttori	**Servomotoriduttori sincroni (ID 442437)**
	Motoriduttori planetari
	Motoriduttori planetari-rinvio angolo
	Motoriduttori coassiali
	Motoriduttori pendolari
	Motoriduttori coppia conica
	Motoriduttori vite senza fine
	Servomotoriduttori sincroni ED/EK (ID 441712)
	Motoriduttori planetari
	Motoriduttori planetari-rinvio angolo
	Motoriduttori coassiali
	Motoriduttori pendolari
	Motoriduttori coppia conica
	Motoriduttori vite senza fine
	Motoriduttori asincroni IE2 (ID 442356)
	Motoriduttori coassiali
	Motoriduttori pendolari
	Motoriduttori coppia conica
	Motoriduttori vite senza fine
	Motoriduttori asincroni (ID 441809)
	Motoriduttori coassiali
	Motoriduttori pendolari
	Motoriduttori coppia conica
	Motoriduttori vite senza fine
Elettronica	**Azionamenti / Controllore**
	Motion Controllers MC6 (ID 442711)
	Azionamenti SD6 (ID 442711)
	Azionamenti SDS 5000 (ID 442711)
	Azionamenti MDS 5000 (ID 442711)
	Inverter MDS 5000 (ID 442356)
	Inverter FDS 5000 (ID 442356)
Riduttori	**Servoriduttori (ID 442257)**
	Riduttori planetari
	Riduttori planetari-rinvio angolo
	Riduttori coassiali
	Riduttori pendolari
	Riduttori coppia conica
	Riduttori vite senza fine
	Riduttori industriali (ID 441834)
	Riduttori coassiali
	Riduttori pendolari
	Riduttori coppia conica
	Riduttori vite senza fine
	Cambio a due velocità (ID 442545)
	Cambio a due velocità
Motori	
	Servomotori sincroni EZ (ID 442437/442711)
	Servomotori sincroni ad albero cavo EZHD (ID 442437/442711)
	Servomotoriduttori sincroni ad albero cavo EZHP (ID 442437/442711)
	Servomotori sincroni per madrevite EZS/EZM (ID 442437/442711)
	Servomotori sincroni ED/EK (ID 441712)
	Motori asincroni IE2 (ID 442356)
	Motori asincroni (ID 441809)
Azionamenti a cremagliera	
	ZTRS/ZTR/ZR (ID 442225)
	ZV (ID 442506)

STOBER PRODUCT RANGE

Geared Motors	**Synchronous Servo Geared Motors (ID 442437)**
	Planetary Geared Motors
	Right-Angle Planetary Geared Motors
	Helical Geared Motors
	Offset Helical Geared Motors
	Helical Bevel Geared Motors
	Helical Worm Geared Motors
	Synchronous Servo Geared Motors ED/EK (ID 441712)
	Planetary Geared Motors
	Right-Angle Planetary Geared Motors
	Helical Geared Motors
	Offset Helical Geared Motors
	Helical Bevel Geared Motors
	Helical Worm Geared Motors
	Asynchronous Geared Motors IE2 (ID 442356)
	Helical Geared Motors
	Offset Helical Geared Motors
	Helical Bevel Geared Motors
	Helical Worm Geared Motors
	Asynchronous Geared Motors (ID 441809)
	Helical Geared Motors
	Offset Helical Geared Motors
	Helical Bevel Geared Motors
	Helical Worm Geared Motors
Electronics	**Drive Controllers / Controller**
	Motion Controllers MC6 (ID 442711)
	Drive Controllers SD6 (ID 442711)
	Servo Inverters SDS 5000 (ID 442711)
	Servo Inverters MDS 5000 (ID 442711)
	Frequency Inverters MDS 5000 (ID 442356)
	Frequency Inverters FDS 5000 (ID 442356)
Gear Units	**Servo Gear Units (ID 442257)**
	Planetary Gear Units
	Right-Angle Planetary Gear Units
	Helical Gear Units
	Offset Helical Gear Units
	Helical Bevel Gear Units
	Helical Worm Gear Units
	Power Transmission Gear Units (ID 441834)
	Helical Gear Units
	Offset Helical Gear Units
	Helical Bevel Gear Units
	Helical Worm Gear Units
	Gearboxes (ID 442545)
	Two-speed Gearboxes
Motors	
	Synchronous Servo Motors EZ (ID 442437/442711)
	Synchronous Servo Motors with Hollow Shaft EZHD (ID 442437/442711)
	Synchronous Servo Geared Motors with Hollow Shaft EZHP (ID 442437/442711)
	Synchronous Servo Motors for Screw Drives EZS/EZM (ID 442437/442711)
	Synchronous Servo Motors ED/EK (ID 441712)
	Asynchronous Motors IE2 (ID 442356)
	Asynchronous Motors (ID 441809)
Rack and Pinion Drives	
	ZTRS/ZTR/ZR (ID 442225)
	ZV (ID 442506)

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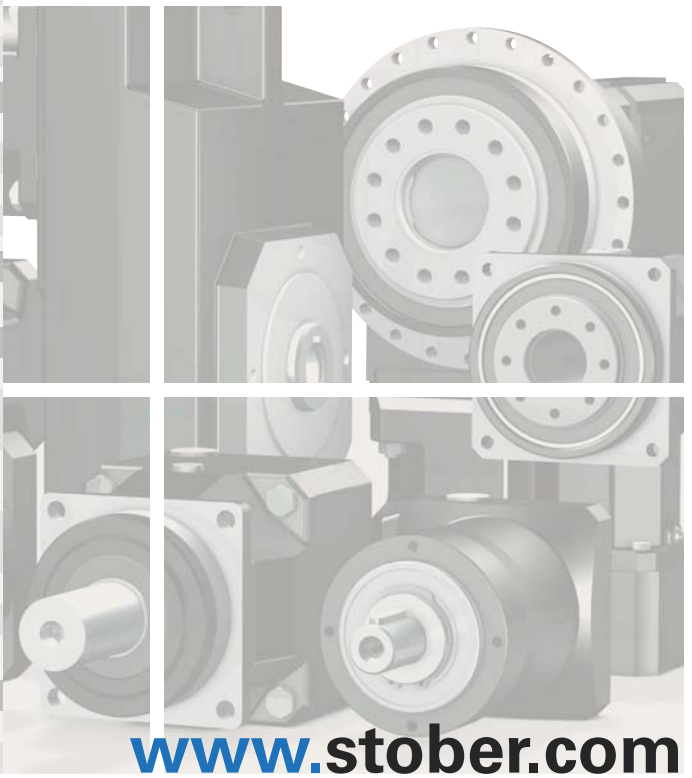

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