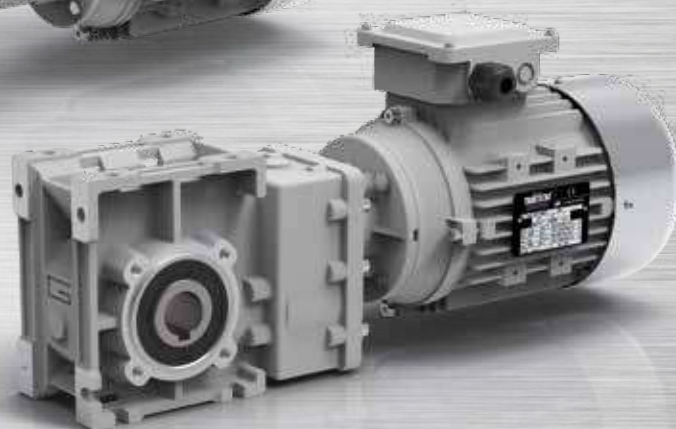
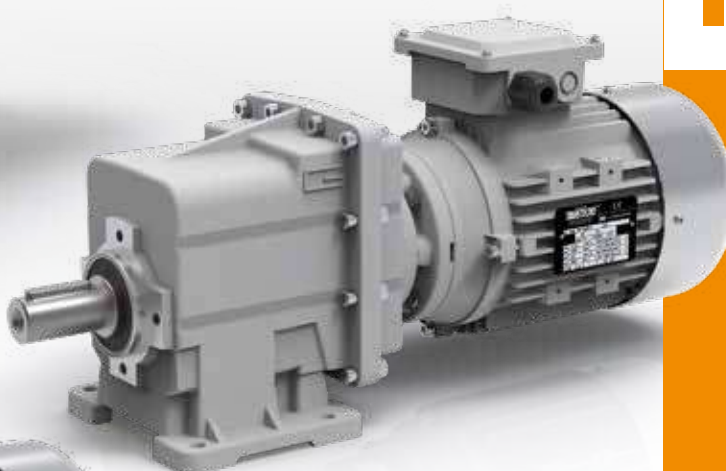


**TRANSTECNO**<sup>®</sup>  
the modular gearmotor


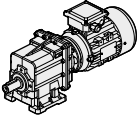

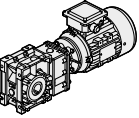

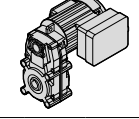

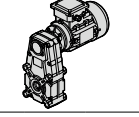

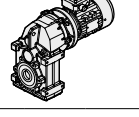
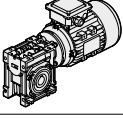
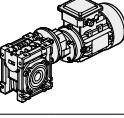
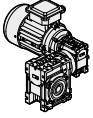

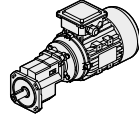
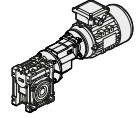
AC  
**Alu**

60Hz

IEC





	Índice	Índice	Index	Pág. Pág. Page
	<b>A</b> Introducción	<i>Introdução</i>	Introduction	A1
 	<b>B</b> Motorreductores de engranajes cilíndricos CMG	<i>Motoredutores de engrenagens helicoidais</i> CMG	Helical in-line gearmotors CMG	B1
 	<b>C</b> Motorreductores de ejes ortogonales CMB	<i>Motoredutores com eixos ortogonais</i> CMB	Helical bevel gearmotors CMB	C1
 	<b>D</b> Motorreductores pendulares KFT105	<i>Motoredutores de eixos paralelos</i> KFT105	Helical parallel gearmotors KFT105	D1
 	<b>E</b> Motorreductores pendulares FT	<i>Motoredutores de eixos paralelos</i> FT	Helical parallel gearmotors FT	E1
 	<b>F</b> Motorreductores pendulares ATS	<i>Motoredutores de eixos paralelos</i> ATS	Helical parallel gearmotors ATS	F1
 	<b>G</b> Motorreductores sinfín corona CM/CMP	<i>Motoredutores de rosca sem fim</i> CM/CMP	Wormgearmotors CM/CMP	G1
	<b>H</b> Motorreductores sinfín corona de doble reducción CMM	<i>Motoredutores de rosca sem fim combinados</i> CMM	Double reduction wormgearmotors CMM	H1
 	<b>I</b> Motorreductores helicoidal de etapa única PU	<i>Motoredutores com engrenagens cilíndricas mono-estágio</i> PU	Single stage helical gearmotors PU	I1
	<b>L</b> Motorreductores sinfín corona con pre-reductor PU CMPU	<i>Motoredutores de rosca sem fim com pré-estágio PU</i> CMPU	PU Pre-stage wormgearmotors CMPU	L1
	<b>M</b> Apéndice	<i>Apêndice</i>	Appendix	M1

Este catálogo anula y sustituye cualquier edición previa o otras revisiones. También nos reservamos el derecho de realizar cambios sin previo aviso.

La versión más actualizada está disponible en la página web [www.transtecno.com](http://www.transtecno.com)

Este catálogo anula e substitui qualquer edição e revisão anterior. Também nos reservamos o direito de fazer alterações sem aviso prévio.

A versão atualizada está disponível no nosso site [www.transtecno.com](http://www.transtecno.com)

This catalogue supersedes any previous edition and revision. We reserve the right to implement modifications without notice.

The most updated version is available on our website [www.transtecno.com](http://www.transtecno.com)





Índice	Índice	Index	Pág. Pág. Page
Información general	<i>Generalidades</i>	General information	<b>A2</b>
Velocidad de entrada	<i>Velocidade entrada</i>	Input speed	<b>A2</b>
Relación de reducción	<i>Relação de redução</i>	Gear ratio	<b>A2</b>
Velocidad de salida	<i>Velocidade na saída</i>	Output speed	<b>A2</b>
Par requerido	<i>Torque solicitado</i>	Requested torque	<b>A2</b>
Par nominal	<i>Torque nominal</i>	Nominal torque	<b>A3</b>
Par transmitido	<i>Torque transmitido</i>	Output torque	<b>A3</b>
Rendimiento	<i>Rendimento</i>	Efficiency	<b>A3</b>
Reversibilidad y irreversibilidad	<i>Reversibilidade e irreversibilidade</i>	Reversibility and irreversibility	<b>A4</b>
Potencia en entrada	<i>Potência na entrada</i>	Input power	<b>A4</b>
Factor de servicio	<i>Fator de serviço</i>	Service factor	<b>A5</b>
Carga radial	<i>Carga radial</i>	Radial loads	<b>A6</b>
Carga axial	<i>Carga axial</i>	Axial load	<b>A6</b>
Selección de motorreductores	<i>Escolha dos motoredutores</i>	Selecting the gearmotors	<b>A7</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>A8</b>
Posición de Montaje	<i>Posição de montagem</i>	Mounting positions	<b>A8</b>
Temperatura de operación	<i>Temperatura de trabalho</i>	Operating temperature	<b>A10</b>
Instalación y controles	<i>Instalações e verificações</i>	Installation and inspection	<b>A11</b>
Aplicaciones críticas	<i>Aplicações críticas</i>	Critical applications	<b>A11</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**

**Información general**

Para una mejor comprensión de los temas y de los datos presentes en el catálogo, proponemos una simbología acompañada por la información necesaria para una selección correcta de los motorreductores.

**Información general**

*Para melhor compreender os assuntos e os dados expostos neste catálogo, propomos a simbologia utilizada acompanhando-a das informações de base para atingir uma correta seleção dos motoredutores.*

**General information**

Information in this manual is provided with symbols in order to understand the subject matter and data. These symbols are intended to aid the user in selecting the right gearmotors.

**Velocidad de entrada**

Es la velocidad en la entrada del reductor y está relacionada con el tipo de motor seleccionado.

Cuando se requieran otras velocidades, contactar con nuestro servicio técnico

**Velocidade entrada**

$$n_1 \text{ [min}^{-1}\text{]}$$

*Representa a velocidade referida no tipo de motorização pré-estabelecida e é aplicada na entrada no reductor.*

*Para seleções de velocidades diversas daquelas referidas, consulte nosso Serviço Técnico.*

**Input speed**

This is the input speed at the gearbox related to the type of drive unit selected.

When different speeds are required, contact our Technical Service.

**Relación de reducción**

Es una magnitud adimensional y está relacionada con el número de dientes de los engranajes internos del reductor. En los reductores sinfín corona se obtiene dividiendo el número de dientes de la corona entre el número de roscas (Z) del tornillo sinfín. Con los datos del catálogo se puede obtener con la siguiente fórmula:

**Relação de redução**

$$i$$

*É uma tamanho sem dimensão e é em função do número dos dentes das engrenagens internas no reductor.*

*Nos reductores com rosca sem fim, obtém-se dividindo o número de dente da coroa pelo número dos filetes (Z) da rosca sem fim. Pelos dados do catálogo, obtém-se com a relação:*

This value is strictly related to the size and number of teeth gears inside the gearbox. This value is obtained in wormgearboxes by dividing the number of wheel teeth by the number of starts (Z) of the worm.

From the data given in the catalogue, the value can be calculated using the following formula:

$$i = \frac{n_1}{n_2}$$

**Velocidad de salida**

Es la velocidad resultante en el eje de salida del reductor y se obtiene de la fórmula anterior:

**Velocidade na saída**

$$n_2 \text{ [min}^{-1}\text{]}$$

*É a velocidade resultante no eixo de saída do reductor e é retirada da relação precedente:*

**Output speed**

This is the gearbox output speed calculated using the formula given above:

$$n_2 = \frac{n_1}{i}$$

**Par requerido**

Es el par requerido para la aplicación y es necesario para seleccionar la motorización. Puede ser comunicado por el usuario o calculado a través de los datos de la aplicación (si se conocen).

**Torque Solicitado**

$$Mr_2 \text{ [Nm]}$$

*É o torque solicitado pela aplicação e é indispensável pela seleção de uma motorização. Este pode ser comunicado pelo usuário ou calculado com base nos dados de aplicação (se fornecidos).*

**Requested torque**

This is the torque needed for the application and must be known when selecting a drive system. It can either be provided by the user or calculated according to the application data (if provided).

## Par nominal

## Torque nominal

## Nominal torque

$$Mn_2 \text{ [Nm]}$$

Es el par transmisible a la salida del reductor, en base a la velocidad en entrada  $n_1$  y a la relación de reducción  $i$ .

Se calcula considerando un servicio con una carga continua constante, que corresponde a un factor de servicio igual a 1. Este valor no aparece en el catálogo, pero se puede calcular aproximadamente mediante la relación siguiente entre  $M_2$  (par de salida) y SF (factor de servicio):

*Representa o torque na saída transmissível pelo reductor com base na velocidade na entrada  $n_1$  e na relação de redução  $i$ . Este é calculado com base num serviço com carga contínua uniforme correspondente com um fator de serviço igual a 1. Este valor não é indicado no presente catálogo, mas pode ser retirado aproximadamente com a seguinte relação entre  $M_2$  (binário transmitido) e sf (fator de serviço):*

This is the output torque that can be transmitted by the gearbox according to input speed  $n_1$  and gear ratio  $i$ . It is calculated based on service with a continuous steady load corresponding to a service factor equal to 1. This value is not given in the catalogue but can be calculated approximately with the following formula between  $M_2$  (output torque) and sf (service factor):

$$Mn_2 = M_2 \cdot sf$$

## Par transmitido

## Torque Transmitido

## Output torque

$$M_2 \text{ [Nm]}$$

Es el par transmitido en la salida del reductor.

Depende de la potencia  $P_1$  del motor instalado, de las revoluciones de salida  $n_2$  y del rendimiento dinámico  $Rd$ .

Se puede calcular mediante la relación:

*É o torque transmitido na saída do reductor. Depende da potência  $P_1$  do motor instalado, do número de giros na saída  $n_2$  e do rendimento dinâmico  $Rd$  e pode ser calculado com a relação:*

This is the gearbox's output torque. It is strictly related to power  $P_1$  of the motor installed, output rpm  $n_2$  and dynamic efficiency  $Rd$ . It can be calculated with the following formula:

$$M_2 = \frac{9550 \cdot P_1 \cdot Rd}{n_2}$$

o:  
or:  
or:

$$M_2 = \frac{9550 \cdot P_2}{n_2}$$

dónde:  
onde:  
where:

$$P_2 = P_1 \cdot Rd$$

## Rendimiento

## Rendimento

## Efficiency

$$Rd; Rs$$

Los cálculos de rendimiento se basan en el rendimiento dinámico  $Rd$  de los reductores (el valor óptimo se alcanza en velocidad de marcha después del rodaje).

En los reductores combinados, el rendimiento total es el resultado del producto de los rendimientos de los dos reductores, considerando que en el segundo reductor el rendimiento se evaluará según la velocidad de entrada reducida que se obtiene dividiendo  $n_1$  entre la relación de reducción del primer reductor.

Es necesario considerar que en los reductores sinfín corona hay también un rendimiento estático  $Rs$ , durante el arranque, que reduce el momento resultante: es importante tomarlo en consideración cuando se seleccionan motorreductores para aplicaciones intermitentes (ej. levantamientos).

En la sección CM/CMP están indicados los valores del rendimiento dinámico y estático de los reductores sinfín corona. En los reductores de engranajes CMG y CMB el rendimiento medio es 94%.

*Os cálculos das prestações foram efetuados com base no rendimento dinâmico  $Rd$  dos reductores (valor optimal que se atinge no funcionamento com regime depois da rodagem).*

*Nos reductores combinados, o rendimento global é dado pelo produto dos rendimentos dos dois reductores, considerando, porém, que no segundo reductor deverá ser avaliado com base na velocidade reduzida na entrada obtida dividindo  $n_1$  para a relação  $i$  do primeiro reductor.*

*É importante considerar que nos reductores com rosca sem fim tem-se um valor de rendimento estático  $Rs$ , presente na fase de arranque, que desqualifica sensivelmente o torque resultante; por isso influência de modo determinante a escolha de motorizações destinadas a aplicações intermitentes (ex: elevações).*

*O valor dos rendimentos dinâmico e estático dos reductores com rosca sem fim são indicados em seção CM/CMP. Nos reductores de engrenagens CMG, CMB e PU o rendimento médio é de 94%.*

Efficiency is calculated based on dynamic efficiency  $Rd$  of the gearboxes (optimal value reached when running at normal speed after the break in period).

In combination gearboxes, overall efficiency is obtained from the combined efficiency of the two gearboxes. However, keep in mind that efficiency of the second gearbox should be determined according to the reduced input speed obtained by dividing  $n_1$  by ratio  $i$  of the first gearbox.

It is important to remember that wormgearboxes also have static efficiency value  $Rs$  present at start-up. This value notably reduces the resulting torque. As a result, it must be taken into consideration when selecting drive systems for intermittent operations (e.g. lifting) as it is a determinant factor.

Dynamic and static efficiency of wormgearboxes are given into section CM/CMP. On helical gearboxes CMG, CMB and PU the average efficiency is 94%.

**Reversibilidad e irreversibilidad**

**Reversibilidade e irreversibilidade**

**Reversibility and irreversibility**

La consecuencia directa del rendimiento (estático y dinámico) es la reversibilidad del reductor tornillo sin fin, que es la posibilidad de girar el eje de entrada, aplicando una fuerza en el eje de salida.

La incapacidad o dificultad en hacer esta acción determina el grado de reversibilidad (o irreversibilidad) del reductor.

Esta característica, muy significativa del reductor sinfín corona, se ve afectada por numerosos factores, como el ángulo de hélice (es decir, la relación de reducción), la lubricación, la temperatura, el acabado superficial del tornillo, las vibraciones, etc. En las aplicaciones que incluyen traslaciones, es necesario asegurar una reversibilidad alta para evitar que las inercias de las masas en movimiento causen picos de carga inaceptables en los órganos de transmisión.

En las aplicaciones donde se necesita el no retorno de la carga (por ejemplo, levantamientos o cintas transportadoras inclinadas) en ausencia de un freno motor, es necesario seleccionar un reductor con alto grado de irreversibilidad.

Sin embargo debemos mencionar que el no retorno de la carga debe ser totalmente garantizado solamente instalando un motor auto frenante (u otro dispositivo externo)

En la siguiente tabla hay una indicación de los diferentes grados de reversibilidad e irreversibilidad de los reductores sinfín en función de los rendimientos estático Rd y dinámico Rs.

*A consequência direta do rendimento (estático e dinâmico) é a reversibilidade do redutor com rosca sem fim que consiste na possibilidade de fazer girar a eixo de entrada através da aplicação de uma torção mais ou menos acentuada na eixo de saída.*

*A impossibilidade ou dificuldade em efetuar a ação acima descrita determina o grau de reversibilidade (ou irreversibilidade) de um redutor.*

*Esta característica, muito significativa nos redutores com rosca sem fim, é influenciada por múltiplos fatores como o ângulo da hélice (portanto relação de transmissão), lubrificação, temperatura, acabamento superficial da rosca sem fim, presença de vibrações, etc.*

*Em aplicações em que estão presentes translações, é necessário garantir uma elevada reversibilidade onde evitar que as inércias das massas em movimento possam determinar pontas de carga inadmissíveis nas peças de transmissão.*

*Em aplicações na quais é pedido um não retorno da carga (ex: elevações ou fitas transportadoras inclinadas) na ausência de um freio motor é necessário escolher um redutor caracterizado por um elevado grau de irreversibilidade.*

*De qualquer forma, evidenciamos que a garantia absoluta de não retorno é dada exclusivamente pela instalação de um motor autotravagem ou de um outro dispositivo de travagem externo.*

*A tabela subjacente indica a título puramente indicativo os vários graus de reversibilidade/irreversibilidade nos reductores com rosca sem fim em função do rendimento dinâmico Rd e estático Rs.*

Reversibility of the wormgearbox is the direct consequence of efficiency (static and dynamic). This determines whether or not the input shaft can be rotated by applying a certain torque on the output shaft.

Whether or not this can be done and how difficult it actually is to do determine the degree of reversibility (or irreversibility) of a gearbox.

This feature, quite significant in wormgearboxes, is affected by numerous factors including the helix angle (therefore drive ratio), lubrication, temperature, surface finish of the worm, vibrations, etc...

In applications that include translations, high reversibility must be guaranteed to prevent inertia of the moving parts from creating unacceptable load peaks on the drive parts.

In applications that require non-return of the load (e.g. lifting or inclined conveyor belts) a gearbox with high irreversibility must be chosen when a motor-brake unit is not present.

However, we would like to point out that non-return can be totally assured only by installing a self-braking motor or other external braking device.

The table below is provided for reference purposes only. It contains the various degrees of reversibility/irreversibility of wormgearboxes in relation to dynamic Rd and static Rs efficiency.

Rd	Reversibilidad e irreversibilidad dinámica	Reversibilidade e irreversibilidade dinâmica	Dynamic reversibility and irreversibility
> 0.6	Reversibilidad dinámica	Reversibilidade dinâmica	Dynamic reversibility
0.5 - 0.6	Reversibilidad dinámica incierta	Reversibilidade dinâmica incerta	Uncertain dynamic reversibility
0.4 - 0.5	Adecuada irreversibilidad dinámica	Boa irreversibilidade dinâmica	Good dynamic irreversibility
<0.4	Irreversibilidad dinámica	Irreversibilidade dinâmica	Dynamic irreversibility
Rs	Reversibilidad e irreversibilidad estática	Reversibilidade e irreversibilidade estática	Static reversibility and irreversibility
> 0.55	Reversibilidad estática	Reversibilidade estática	Static reversibility
0.5 - 0.55	Reversibilidad estática incierta	Reversibilidade estática incerta	Uncertain static reversibility
<0.5	Irreversibilidad estática	Irreversibilidade estática	Static irreversibility

## Potencia de entrada

## Potência de entrada

## Input power

$$P_1 \text{ [kW]}$$

Es la potencia del motor aplicada en la entrada al reductor y se refiere a la velocidad  $n_1$ .

Se puede calcular de la siguiente manera:

É a potência do motor aplicada na entrada do redutor e indicada na velocidade  $n_1$ .

Pode ser calculada como a seguir:

This is the power applied by the motor at the gearbox input in reference to speed  $n_1$ . It can be calculated with the following formula:

$$P_1 = \frac{M_2 \cdot n_2}{9550 \cdot R_d}$$

## Factor de servicio

## Fator de serviço

## Service factor

$$sf$$

Es un magnitud adimensional que indica el sobredimensionamiento aplicable a una motorización para garantizar la resistencia a los choques y la durabilidad necesaria.

Las tablas del catálogo ofrecen una amplia selección de motorizaciones con factores de servicio diferentes que pueden satisfacer a la mayoría de las aplicaciones.

Para una correcta interpretación de los valores del factor de servicio  $sf$  en las selecciones propuestas, encontrarán en las tablas siguientes los valores aproximados de las clases de carga A, B, C, de las horas de funcionamiento cotidiano y del número de arranques por hora.

Una vez definida la clase de carga de la aplicación, se busca en la tabla el correspondiente valor de  $sf$  para elegir la unidad más adecuada.

É uma grandeza adimensional que indica o superdimensionamento a aplicar numa determinada motorização para garantir a resistência aos choques e a duração pedida.

As tabelas do catálogo oferecem uma vasta escolha de motorizações com fatores de serviço diferenciados que podem satisfazer a maior parte das aplicações mais ou menos penosas.

Para uma correta interpretação dos valores do fator de serviço  $sf$  indicados ao lado de cada seleção proposta, indicamos nas seguintes tabelas os valores indicativos atribuídos às classes de carga A, B, C e na duração de funcionamento diário h/d e ao número de arranques/hora.

Definindo a classe de carga à qual se refere a aplicação, deve ser procurado na tabela o valor correspondente de  $sf$  a utilizar na escolha da motorização ideal.

This value indicates how a certain drive system is to be over-sized in order to assure the requested service and stand up to shocks.

The tables given in the catalogue offer a wide range of drive systems with different service factors able to satisfy most types of applications. To correctly understand service factor values  $sf$  given for each item, approximate values for load classes A, B and C along with the number of hours of daily operation h/d and number of start-ups/hours need to be known.

Once the load class required for the application has been determined, locate corresponding value  $sf$  to be used when selecting the most suitable drive system.

	Tipo de carga	Tipo de carga	Type of load	fa
A	- Carga uniforme	Carga uniforme	Uniform	fa ≤ 0.3
B	- Carga con choques moderados	Carga con choques moderado	Moderate shocks	fa ≤ 3
C	- Carga con choques fuertes	Carga con choques fortes	Heavy shocks	fa ≤ 10

$$fa = \frac{J_e}{J_m}$$

- $J_e$  (kgm<sup>2</sup>) momento de inercia de las masas externas, referido al eje del motor.
- $J_m$  (kgm<sup>2</sup>) momento de inercia del motor. Para valores > 10 se recomienda contactar con el Servicio Técnico
- $J_e$  (kgm<sup>2</sup>) momento de inércia externo reduzido na árvore motor.
- $J_m$  (kgm<sup>2</sup>) momento de inércia motor. Se faz > 10 consulte nosso Serviço Técnico.
- $J_e$  (kgm<sup>2</sup>) moment of reduced external inertia at the drive-shaft
- $J_m$  (kgm<sup>2</sup>) moment of inertia of motor. If  $fa > 10$  call our Technical Service.



Factor de servicio

Fator de serviço

Service factor

A

Carga uniforme / Carga uniforme / Uniform load

sf									
h/d	n. arranques/hora / n. arranques/hora / n. start-up/hour								
	2	4	8	16	32	63	125	250	500
4	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2
8	1.0	1.0	1.1	1.1	1.3	1.3	1.3	1.3	1.3
16	1.3	1.3	1.3	1.3	1.5	1.5	1.5	1.5	1.5
24	1.5	1.5	1.5	1.5	1.8	1.8	1.8	1.8	1.8

B

Carga con choques moderados / Carga con choques moderados / Moderate shock load

sf									
h/d	n. arranques/hora / n. arranques/hora / n. start-up/hour								
	2	4	8	16	32	63	125	250	500
4	1.0	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
8	1.3	1.3	1.3	1.3	1.5	1.5	1.5	1.5	1.5
16	1.5	1.5	1.5	1.5	1.8	1.8	1.8	1.8	1.8
24	1.8	1.8	1.8	1.8	2.2	2.2	2.2	2.2	2.2

C

Carga con choques fuertes / Carga con choques fortes / Heavy shock load

sf									
h/d	n. arranques/hora / n. arranques/hora / n. start-up/hour								
	2	4	8	16	32	63	125	250	500
4	1.3	1.3	1.3	1.3	1.5	1.5	1.5	1.5	1.5
8	1.5	1.5	1.5	1.5	1.8	1.8	1.8	1.8	1.8
16	1.8	1.8	1.8	1.8	2.2	2.2	2.2	2.2	2.2
24	2.2	2.2	2.2	2.2	2.5	2.5	2.5	2.5	2.5

Como establecer el **sf**:

Cinta transportadora atribuible a la clase de carga **B (carga con choques moderados)**, previsto para una hora de funcionamiento diaria (h/d) **16** horas y con **8** arranques/hora

De la tabla obtenemos: **sf = 1.5**

Como calcular o **sf**:

Fita transportadora atribuível à classe de carga **B (carga con choques moderados)** e prevista para uma duração de funcionamento diária (h/d) de **16** horas e com **8** arranques/hora.

Pela tabela indicamos **sf = 1.5**

How to establish **sf**:

Conveyor belt assigned to load class **B (moderate shock load)**, to be run **16** hours a day (h/d) with **8** start-ups/hour.

The following value is obtained from the table **sf = 1.5**

A

Tornillos de Arquímedes para materiales ligeros, ventiladores, líneas de montaje, cintas transportadoras para materiales ligeros, pequeños agitadores, elevadores, máquinas limpiadoras, máquinas llenadoras, máquinas comprobadoras, cintas transportadoras.

A

Rosca transportadora para materiais leves, ventiladores, linhas de montagem, correias transportadoras para materiais leves, pequenos misturadores, elevadores, máquinas de limpeza, máquinas de controle.

A

Screw feeders for light materials, fans, assembly lines, conveyor belts for light materials, small mixers, lifts, cleaning machines, fillers, control machines.

B

Dispositivos de enrollado, alimentadores de las máquinas para la madera, montacargas, equilibradores, roscadoras, agitadores medios y mezcladores, cintas transportadoras para materiales pesados, cabrestantes, puertas corredizas, raspadores de abono, máquinas empaquetadoras, hormigoneras, mecanismos para el movimiento de las grúas, fresadoras, plegadoras, bombas de engranajes.

B

Dispositivos de elevação, alimentadores de máquinas para trabalhar madeira, montacargas, balanceadores, tornos, misturadores médios, correias transportadoras para materiais pesados, guinchos, portas de correr, raspadores de fertilizantes, máquinas de embalagem, betoneiras, mecanismos de guindaste, fresas, máquinas de dobrar, engrenagem, bombas.

B

Winding devices, woodworking machine feeders, goods lifts, balancers, threading machines, medium mixers, conveyor belts for heavy materials, winches, sliding doors, fertilizer scrapers, packing machines, concrete mixers, crane mechanisms, milling cutters, folding machines, gear pumps.

C

Agitadores para materiales pesados, cizallas, prensas, centrifugadoras, soportes rotativos, cabrestantes y elevadores para materiales pesados, tornos para la rectificación, molinos de piedras, elevadores de cangilones, perforadoras, moledores a percusión, prensas de excéntrica, plegadoras, mesas giratorias, pulidoras, vibradores, cortadoras.

C

Misturadores para materiais pesados, tesouras, prensas, centrífugas, suporte rotativo, guinchos e elevadores para materiais pesados, moedores, elevadores de caçamba, máquinas de perfuração, prensas, máquinas para dobra, plataformas giratórias, máquinas para perfuração vibradores, trituradores.

C

Mixers for heavy materials, shears, presses, centrifuges, rotating supports, winches and lifts for heavy materials, grinding lathes, stone mills, bucket elevators, drilling machines, hammer mills, cam presses, folding machines, turntables, tumbling barrels, vibrators, shredders.



## Carga radial

## Carga radial

## Radial load

**R; R<sub>2</sub> [N]**

La aplicación en el eje de salida del reductor de piñones, poleas, etc. determina fuerzas radiales que es necesario considerar para evitar excesivo estrés y el riesgo de daños del reductor.

El cálculo de la carga radial externa R que actúa sobre el eje del reductor se puede calcular de la siguiente manera:

$$R = \frac{2000 \cdot M_2 \cdot kr}{d} \leq R_2$$

donde:

**d [mm]** Diámetro primitivo del piñón o polea

**kr** coeficiente con relación al tipo de transmisión:

**kr = 1.4** transmisión por cadena  
**kr = 1.1** transmisión por cadena  
**kr = 1.5 - 2.5** polea para correa trapecial

Señalamos que los valores R<sub>2</sub> son válidos para cargas aplicadas a la mitad del eje de salida, entonces la comparación debe hacerse en las mismas condiciones.

*A aplicação na eixo de saída do reductor de pinhão, roldanas, etc. determina forças radiais que devem necessariamente ser consideradas para evitar solicitações excessivas com o risco de danos do mesmo.*

*O cálculo da carga radial externa R agente no eixo do reductor pode ser determinado como segue:*

onde:

**d [mm]** diâmetro primitivo do pinhão ou da roldana

**kr** coeficiente referido ao tipo de transmissão:

**kr = 1.4** roda para corrente  
**kr = 1.1** engrenagem  
**kr = 1.5 - 2.5** roldana para cinta em V

Señalamos que los valores R<sub>2</sub> son válidos para cargas aplicadas a la mitad del eje de salida, entonces la comparación debe hacerse en las mismas condiciones.

Pinions, pulleys, etc applied on the output shaft of the gearboxes create radial forces that must be taken into consideration to avoid excessive stress risking damage to the gearbox itself.

External radial load R that acts on the gearbox shaft can be calculated as follows:

where:

**d [mm]** diameter of the pinion or pulley

**kr** coefficient in relation to type of transmission:

**kr = 1.4** sprocket wheel  
**kr = 1.1** gear  
**kr = 1.5 - 2.5** pulley for V belts

Keep in mind that values R<sub>2</sub> refer to loads that act on the center-line of the output shaft (considering the shaft protrudes). As a result, the value should be compared under the same conditions.

## Carga axial

## Carga axial

## Axial load

**A; A<sub>2</sub> [N]**

A veces, junto con la carga radial también puede estar presente una fuerza A que actúa axialmente en el eje de salida; en este caso tener en cuenta que la carga axial admisible A<sub>2</sub> en el eje es:

*Às vezes, juntamente à carga axial, pode estar presente também a força A que age axialmente na árvore de saída; neste caso leve em conta que a carga axial admissível A<sub>2</sub> na árvore é a considerar:*

At times, along with the radial load, force A may be present that acts axially on the output shaft. In this case, keep in mind allowable axial load A<sub>2</sub> that can be applied on the shaft is:

$$A_2 = R_2 \cdot 0.2$$

Si el valor de la carga axial A en el eje resulta superior a A<sub>2</sub>, consultar con nuestro servicio técnico.

*No caso em que o valor da carga axial A agente na árvore resulte superior a A<sub>2</sub> consulte nosso Serviço Técnico.*

If axial load A that acts on the shaft is greater than A<sub>2</sub>, contact our Technical Service.

**Seleccionando el motorreductor**

**Escolha dos motoredutores**

**Selecting the gearmotors**

Para seleccionar el motorreductor requerido realizar el siguiente procedimiento:

Para a escolha de um motoredutor é necessário seguir procedimento indicado.

To select the required gearmotor, perform the procedure below:

1. Determinar el factor de servicio  $s_f$  para la aplicación deseada haciendo referencia a los gráficos dados en la página A6. Esto está hecho considerando la clase de carga, la operación horas/días y el número de puesta en marcha/hora.
2. Si la potencia de salida del motor requerido  $P$  es conocida, ir al punto 3); si el torque de salida requerido  $M$  es conocido, determine la salida del motor  $P$  usando las siguientes fórmulas:

1. Para a aplicação desejada, retire o fator de serviço  $s_f$  das tabelas na página A6 com base na classe de carga, nas horas de funcionamento diário e no número de arranques horários.
2. Se conhece-se a potência do motor  $P$  [kW] pedida, passe ao ponto 3); nota-se em na saída o torque  $M$  solicitado, é necessário calcular a potência motor  $P$  com as fórmulas:

1. Determine the service factor  $s_f$  for the desired application by referring to the charts given on page A6. This is to be done by considering the class of load, the operational hours/day and the number of start-ups/ hour.
2. If the required motor power output  $P$  is known, go to item 3); if the required output torque  $M$  is known, determine motor output  $P$  by using the following formulas:

$$P = \frac{M \cdot n_2}{9550 \cdot Rd}$$

Motor reductor  
Motoredutores  
Gearmotor

donde  $R_d$  es para la eficiencia dinámica (indicada en la página G7) y  $n_2$  indica la salida requerida RPM del motorreductor.

onde  $R_d$  é o rendimento dinâmico (indicado na página G7) e  $n_2$  o número de giros pedidos na saída no motoredutor.

where  $R_d$  stands for the dynamic efficiency (indicated on page G7) and  $n_2$  indicates the required output rpm of the gearmotor.

3. Use la gráfica de especificación para buscar la unidad de potencia donde  $P_1$  es mayor que o igual a  $P$  con una velocidad  $n_2/n_{2max}$  que se aproxima al valor deseado. Elija una unidad de potencia donde el factor de servicio indicado  $s_f$  es igual o mayor que la unidad calculada en el punto 1).

3. Nas tabelas dos dados técnicos procure a motorização em que seja  $P_1$  maior ou igual a  $P$  e com referência a uma velocidade  $n_2/n_{2max}$  próxima àquela desejada, escolha a motorização em que o fator de serviço  $s_f$  indicado resulte igual ou superior aquele retirado no ponto 1).

3. Use the specification chart to search for the power unit where  $P_1$  is greater than or equal to  $P$  with a speed  $n_2/n_{2max}$  that approximates the desired one. Choose a power unit where the indicated service factor  $s_f$  is equal to or greater than that calculated at point 1).

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	$s_f$	$i$		
---------------	-------------------------------	---------------	-------	-----	---	---

**0.18**

63B4 (1750 min <sup>-1</sup> )	<b>27.7</b>	58	2.1	63.22	<b>CMG013</b>	<b>B5</b>
	<b>23.3</b>	69	1.7	75.08		
	<b>19.6</b>	82	1.5	89.17		
	<b>15.5</b>	104	1.1	113.05		
	<b>13</b>	124	1	134.27		

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	$s_f$	$i$		
---------------	-------------------------------	---------------	-------	-----	---	---

**0.18**

63B4 (1750 min <sup>-1</sup> )	<b>117</b>	12	3.8	15	<b>CM040</b>	<b>B5/B14</b>
	<b>88</b>	15	2.6	20		
	<b>70</b>	18	2.1	25		
	<b>58</b>	21	2.3	30		
	<b>44</b>	26	1.6	40		
	<b>35</b>	29	1.3	50		
	<b>29</b>	34	1.1	60		

Ejemplo: / Exemplo: / Example:

**Aplicación / Aplicação / Application:**

Cinta transportadora / Esteira transportadora / Conveyor belt

$P$  : 0.18 kW  
 $s_f$  : 1.5  
 $n_2$  : 23 min<sup>-1</sup>

Motorización seleccionada / Motorização escolhida / Power unit selected:

**CMG013**  $i = 75.08$ ,  $P_1 = 0.18$  kW,  $s_f = 1.7$

Ejemplo: / Exemplo: / Example:

**Aplicación / Aplicação / Application:**

Cinta transportadora / Esteira transportadora / Conveyor belt

$P$  : 0.17 kW  
 $s_f$  : 1.5  
 $n_2$  : 45 min<sup>-1</sup>

Motorización seleccionada / Motorização escolhida / Power unit selected:

**CM040**  $i = 40$ ,  $P_1 = 0.18$  kW,  $s_f = 1.6$

**Lubricación**

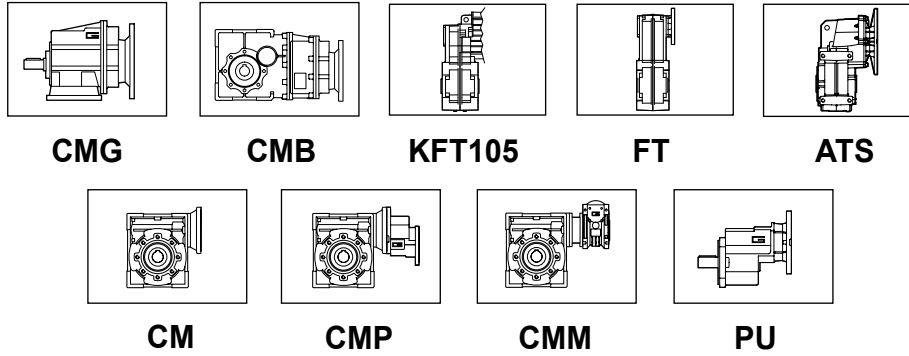
**Lubrificação**

**Lubrication**

Los reductores de las serie CMG, CMB, KFT105, FT, ATS, CM, CMM y de la PU se suministran con lubricante sintético viscosidad 320 de larga duración y no requieren mantenimiento.

Os redutores da série CMG, CMB, KFT105, FT, ATS, CM, CMM e PU são fornecidos completos de lubrificante sintético de viscosidade 320 com longa duração, portanto não necessitam de manutenção.

All unit sizes of CMG, CMB, KFT105, FT, ATS, CM, CMP, CMM and PU series are complete with a long life synthetic lubricant, viscosity 320 and do not require maintenance.



SHELL	AGIP	KLUBER	CASTROL	ESSO	MOBIL
Shell Omala S4 WE320	Tellium VSF320	Klubersynth GH 6 320	Alphasyn PG320	S320	Mobil Glygoyle HE 320

En las secciones del catálogo se encuentran las tablas con las cantidades aproximadas de aceite contenido/necesario. En el pedido es necesario indicar siempre la posición de montaje.

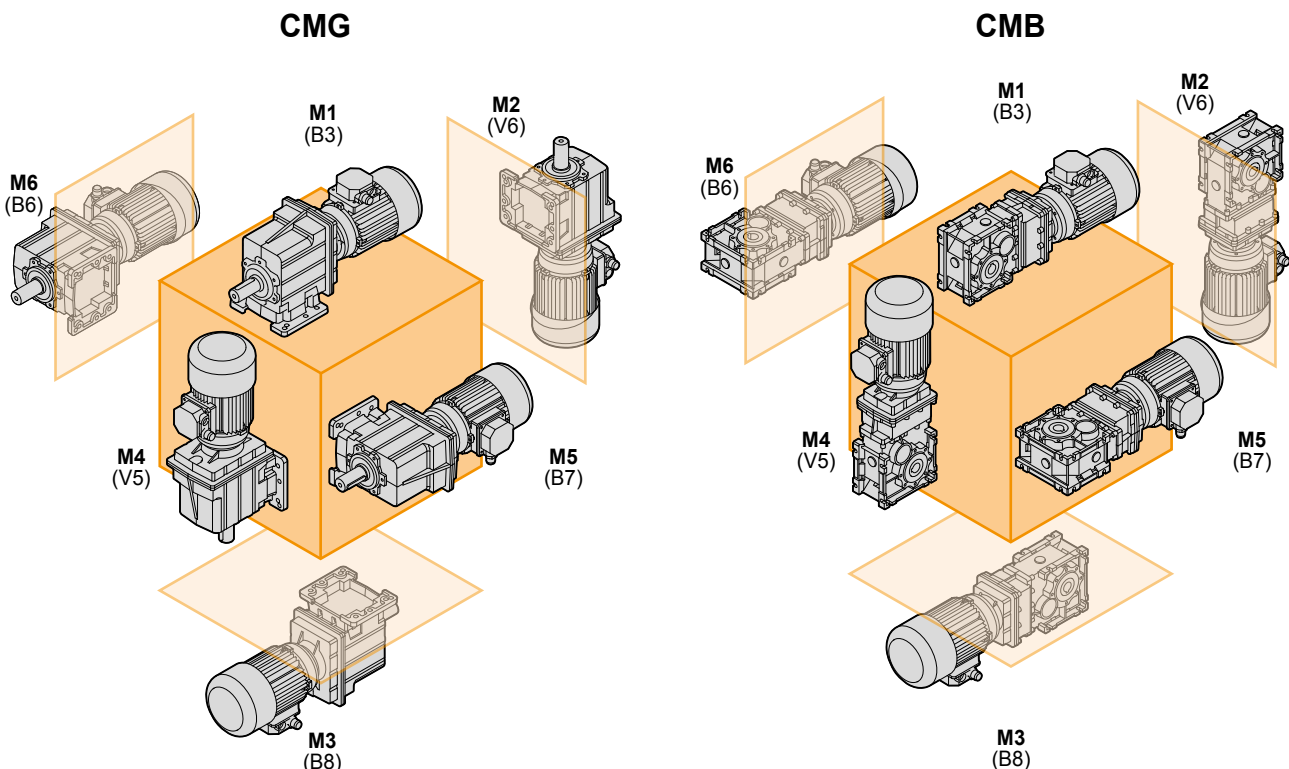
Nas seções específicas são indicadas as tabelas com as quantidades indicativas de lubrificante contidas e/ou a introduzir. Na fase de pedido é necessário especificar sempre a posição de montagem desejada.

The tables contain the approximate amount of lubricant held and/or to be put in. Always specify the desired installation position at the time of order.

**Posición de Montaje**

**Posição de montagem**

**Mounting positions**

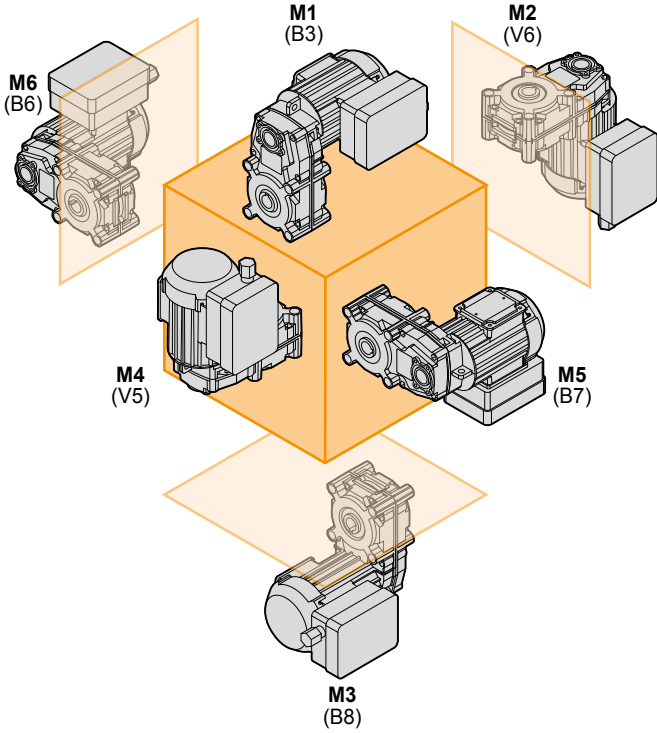


Posición de Montaje

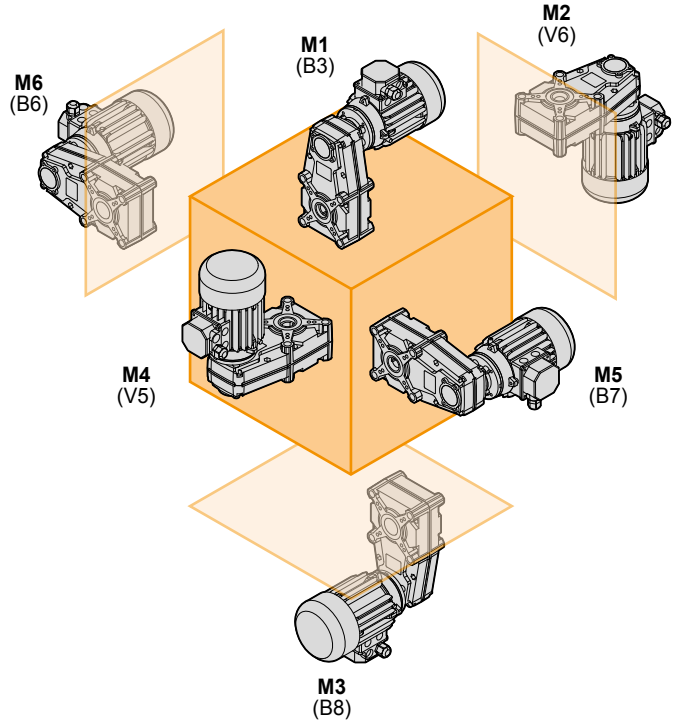
Posição de montagem

Mounting positions

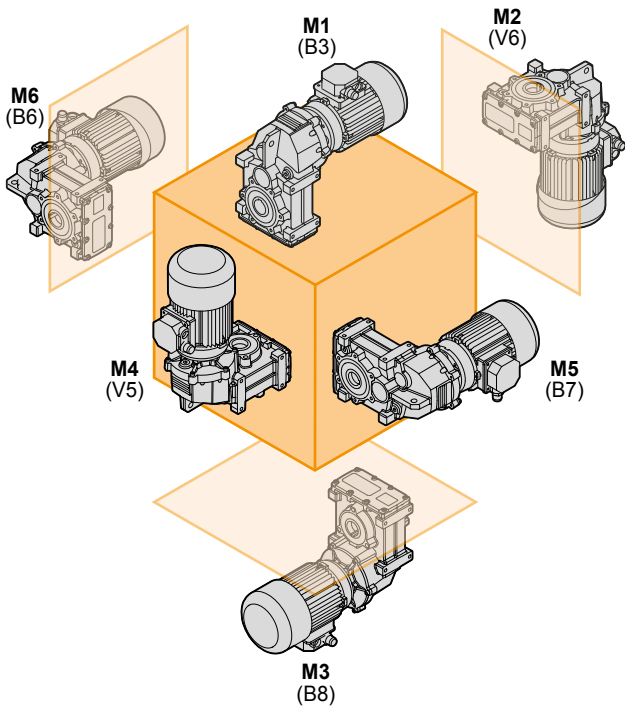
KFT 105



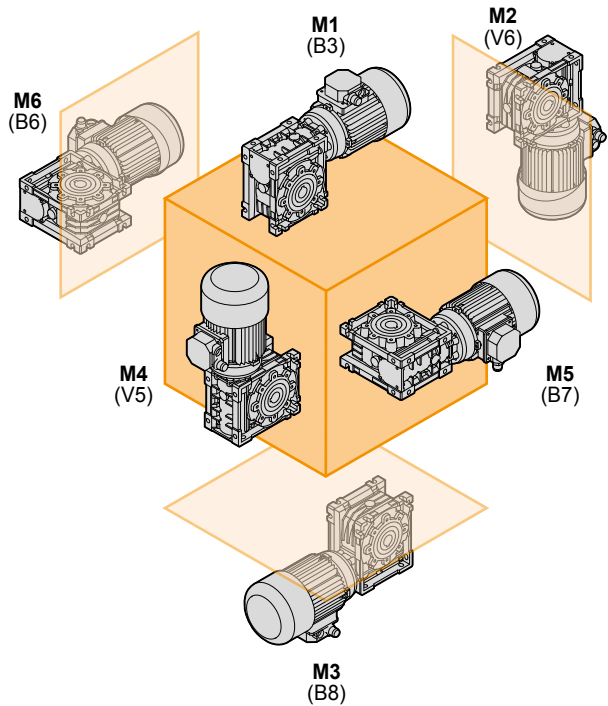
FT



ATS



CM



## Temperatura de operación

## Temperatura de trabalho

## Operating temperature

La temperatura ambiente afecta las especificaciones de los reductores.

A temperatura ambiental influi nas especificações de redutores e variadores.

The ambient temperature affects specifications of gearboxes.

## Gama de temperatura estándar / Campo de temperatura padrão / Standard temperature range

CMG	-35°C / +50°C
CMB	-35°C / +50°C
KFT105	-35°C / +50°C
FT	-35°C / +50°C
ATS	-35°C / +50°C
CM026 - CM050	-25°C / +50°C
CM063 - CM130	-35°C / +50°C
CMP	-35°C / +50°C
PU	-35°C / +50°C

## Gammas de temperaturas especiais / Campos de temperatura especiais / Special temperature range

	<-15°C	-35°C/-25°C	<-35°C	>+50°C
CMG				
CMB				
KFT105				
FT				
ATS				
CM026 - CM050		sustituir el sello de aceite con NBR <i>substituir vedante rotacional da entrada com NBR</i> replace input oil seal with NBR		
CM063 - CM110				
CM130	reducir las cargas radiales en salida <i>reduzir as cargas radiais na saída halve</i> reduce radial loads in halph			
CMP				
PU				

Si la temperatura es <0°:

- verificar que el motor sea idóneo para trabajar a bajas temperaturas;
- verificar que el motor pueda proveer mayor par de arranque a causa del aumento de la viscosidad del lubricante;
- para una lubricación óptima accionar sin carga algunos minutos;

Para temperaturas <0°C refira-se às seguintes notas:

- verifique se o motor está apto ao funcionamento com baixa temperatura;
- assegure-se que o motor possa fornecer maior torque de arranque por causa do aumento de viscosidade do lubrificante;
- proceda alguns minutos de funcionamento a vácuo para garantir a optimal lubrificação;

For temperature <0°C refer to the following notes:

- check if the motor is suitable for low temperature;
- due to the high viscosity of the lubricant, check if the motor can supply high starting torque;
- let the group run for a few minutes without load to guarantee good lubrication;



### Instalación y controles

Al momento de la instalación del equipo reductor es recomendable verificar que:

- Los datos en la placa correspondan al producto pedido;
- Las superficies de acoplamiento y los ejes sean limpios y sin abolladuras;
- Las superficies donde se instala el reductor sean planas y bastante rígidas;
- El eje de la máquina operadora y del reductor sean correctamente alineados;
- Se hayan instalados los limitadores de par si hay probabilidad de golpes o bloqueo durante el funcionamiento;
- Las partes rotativas de las máquinas lleven las protecciones de seguridad necesarias;
- Para instalaciones al exterior, sean presentes adecuadas protecciones contra la exposición a los agentes atmosféricos;
- El ambiente de trabajo no sea expuesto a agentes corrosivos (a menos que no haya sido comunicado en el pedido, a fin de preparar el reductor para este uso);
- Los piñones y poleas sean correctamente ensamblados en el eje de salida o de entrada del reductor, para evitar cargas radiales y/o axiales superiores a las admitidas;
- Todos los acoplamientos sean tratados con adecuado producto anticorrosivo para evitar oxidaciones;
- Todos los tornillos de sujeción estén bien apretados;
- Verificar la cantidad de lubricante dependiendo de la posición de montaje en todos los motorreductores CM 130.

### Instalação e verificações

Na fase de instalação do reductor ou motorvariador é importante verificar se:

- *os dados referidos na placa de identificação correspondem ao produto que foi pedido;*
- *as superfícies de acoplamento e às eixos estão cuidadosamente limpas e sem machucaduras;*
- *as superfícies nas quais será instalado o reductor estão perfeitamente planas e suficientemente rígidas;*
- *a eixo da máquina e aquela do reductor estão corretamente alinhadas;*
- *foram instalados sistemas de limitação do torque se forem previstos choques ou bloqueios da máquina durante o funcionamento;*
- *foram colocadas as proteções necessárias para antinfortunisticas nas peças rotativas;*
- *foram criadas as coberturas necessárias para a proteção dos agentes atmosféricos se a instalação é efetuada à área aberta e está sujeita às intempéries;*
- *o ambiente de trabalho não é corrosivo (a menos que esta especificação não tenha sido declarada no pedido com o fim de predispor o reductor à esta utilização);*
- *os eventuais pinhões ou roldanas montados na eixo de saída ou entrada do reductor estão contraídos corretamente de modo tal a não gerar cargas radiais e/ou superiores àquelas admissíveis;*
- *em todos os acoplamentos foi aplicado uma proteção anti-oxidante adequada para prevenir eventuais oxidações por contato;*
- *todos os parafusos de fixação estão fechados corretamente;*
- *para todos os variadores e os redutores de grandeza CMG 05, CMB 1103, CM 130 e CM150 a correta quantidade de lubrificante em função da posição de montagem.*

### Installation and inspection

While installing the gearbox, always make sure that:

- the specifications stamped on the rating plate match those indicated for the unit actually ordered;
- the mating surfaces and the shafts are thoroughly clean and free of dents;
- the surfaces where the gearbox are to be mounted on are flat and strong enough;
- the machine drive shaft and the gearbox shaft are perfectly aligned;
- the required torque limiters have been installed if the machine is likely to produce shocks or blockages during operation;
- the rotary parts have been provided with the required safety guards;
- adequate weatherproof covering has been provided if the machine is to be installed outdoor;
- the working environment is not exposed to corrosive agents (unless this has been indicated while placing the order so that the gearbox can be adequately set up);
- the pinions or pulleys on the gearbox input/output shafts are properly fitted in order not to produce radial and/or axial loads that exceed the maximum allowable limits;
- all the couplings have been treated with adequate rust preventative in order to avoid oxidation provoked by contact;
- all the mounting screws have been securely tightened;
- check the lubricant quantity depending on the mounting position on all gearboxes CM 130.w

### Aplicaciones críticas

En estos casos consultar con nuestro Servicio Técnico

- uso como multiplicador;
- uso como montacargas;
- uso en posiciones no contempladas en el catálogo;
- uso en ambientes con presión diferente de la atmosférica;
- uso en ambiente con temperaturas <-35°C or >+50°C

### Aplicações críticas

En estos casos consultar con nuestro Servicio Técnico

- *utilização como multiplicador;*
- *utilização como guincho de elevação;*
- *utilização em posições não previstas no catálogo;*
- *utilização em ambiente com pressão diversas daquela atmosférica;*
- *utilização em ambiente com temperaturas <-35°C o >+50°C*

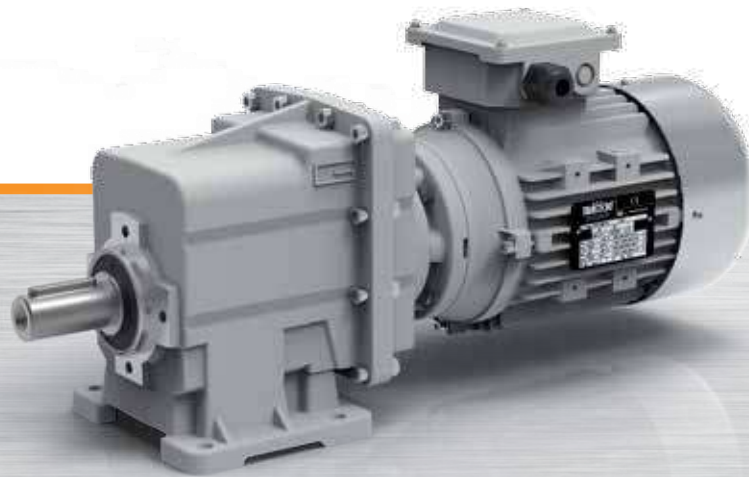
### Critical applications

In these cases please contact the Technical Service

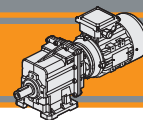
- used to increase speed ;
- used as a hoist;
- used in mounting positions not shown in the catalogue;
- use in environment pressure other than atmospheric pressure;
- use in places with temperature <-35°C or >+50°C



Motorreductores de engranajes cilíndricos  
**Motoredutores de engrenagens helicoidais**  
Helical in-line gearmotors





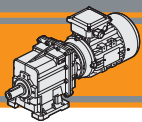


Índice	Índice	Index	Pag. Pág. Page
Características técnicas	<i>Características técnicas</i>	Technical features	<b>B2</b>
Clasificación	<i>Designação</i>	Classification	<b>B2</b>
Sentidos de rotación	<i>Sentidos de rotação</i>	Direction of rotation	<b>B3</b>
Nomenclatura	<i>Simbologia</i>	Legend	<b>B3</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>B3</b>
Cargas radiales	<i>Cargas radiais</i>	Radial loads	<b>B4</b>
Datos técnicos	<i>Dados técnicos</i>	Technical data	<b>B5</b>
Dimensiones	<i>Dimensões</i>	Dimensions	<b>B16</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**



**CMG**

**Motorreductores de engranajes cilíndricos**  
**Motoredutores de engrenagens helicoidais**  
**Helical in-line gearmotors**

**60 Hz**

**Características técnicas**

Los motorreductores a engranajes cilíndricos de la serie CMG son caracterizados por un elevado grado de modularidad: partiendo de un cuerpo base, es posible configurarlo de acuerdo a las exigencias, con brida o base.

Características comunes para toda la serie:

- Cuerpo y bridas de entrada en inyección de aluminio;
- Bridas de salida y base en fierro vaciado;
- Engranajes siempre rectificadas;
- Lubricación permanente con aceite sintético.

**Características técnicas**

*Os redutores da série CMG são caracterizados por um elevado grau de modularidade: partindo de um corpo de base, é possível configurá-lo de acordo com as exigências, com flange ou pé.*

Características comuns a toda a série:

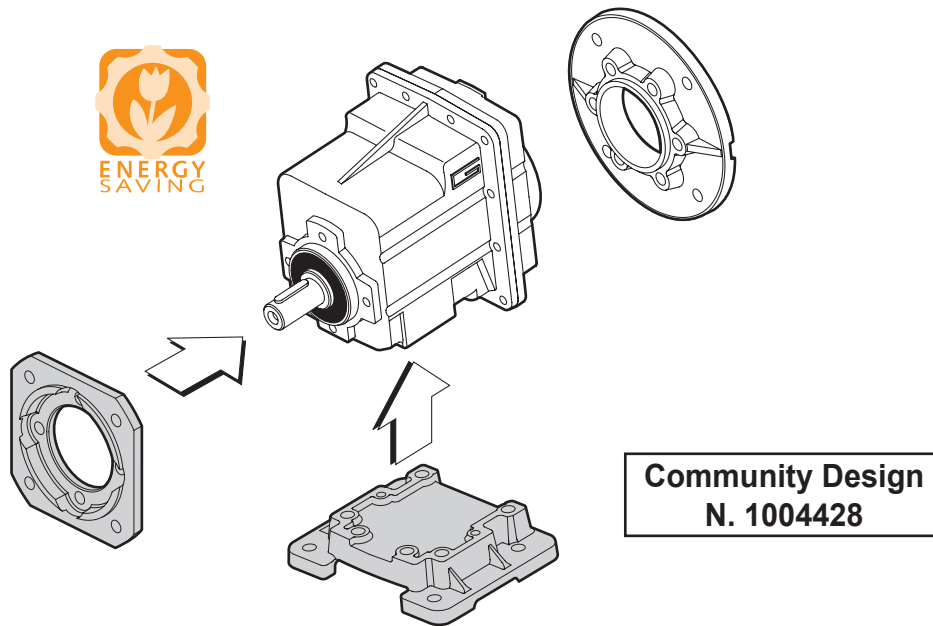
- *Carcaça e flange PAM em pressofusão de alumínio para os tamanhos;*
- *Pé e flange de saída em ferro fundido;*
- *Engrenagens sempre retificadas;*
- *Lubrificação permanente com óleo sintético.*

**Technical features**

The high degree of modularity is a design feature of CMG helical in-line gearmotors range. It is possible to set up the version required using flanges or feet.

The main features of CMG range are:

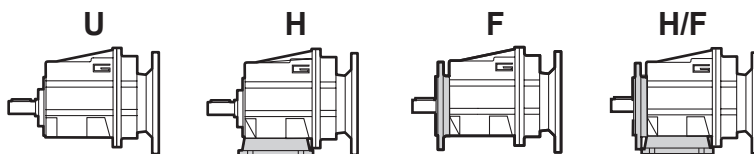
- Die-cast aluminum housings and input flanges for sizes 00, 01, 02, 03 and 04;
- Cast iron feet and output flanges;
- Ground-hardened helical gears;
- Permanent synthetic oil long-life lubrication.



**Clasificación**

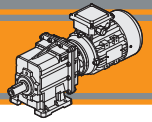
**Designação**

**Classification**



REDUCTOR / REDUTOR / GEARBOX

CMG	01	2	H65	9.81	D20	71	B14
Tipo Tipo Type	Tamaño Tamanho Size	Etapas Estágios Stages	Versión Versão Version	Relación de reducción Rapporto Ratio	∅ Eje de salida ∅ Eixo saída ∅ Output shaft	IEC 	Forma constructiva Forma construtiva Version
CMG	00 01 02 03 04	2 3	U... H... F... H.../F...	Véase tablas Veja tabelas see tables	Véase tablas Veja tabelas see tables	56.. — 112..	B5 B14



## Clasificación

## Designação

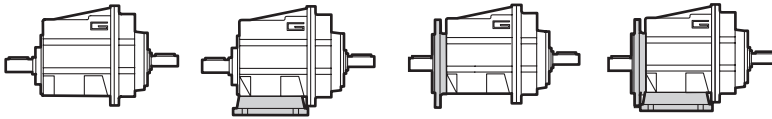
## Classification

U

H

F

H/F



## REDUCTOR / REDUTOR / GEARBOX

CMGIS	01	2	U	9.81	D20
Tipo Tipo Type	Tamaño Tamanho Size	Etapas Estágios Stages	Versión Versão Version	Relación de reducción Rapporto Ratio	Ø Eje de salida Ø Eixo saída Ø Output shaft
CMGIS	01 02 03 04	2 3	U... H... F... H.../F...	Veja tabelas Véase tablas see tables	Veja tabelas Véase tablas see tables

## MOTOR / MOTOR / MOTOR

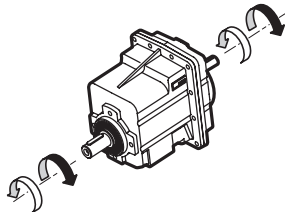
0.75kW	4p	3ph	230/400V	60Hz	T1
Potencia Potência Power	Polos Pólos Poles	Fases Fases Phases	Tensión Tensão Voltage	Frecuencia Frequência Frequency	Posición caja de bornes Pos. Conexão Terminal box pos.
Veja tabelas Véase tablas see tables	2p 4p 6p 8p	1ph 3ph	230V 230/400V	60Hz	T1 (Std)  T4 T3

## Sentidos de rotación

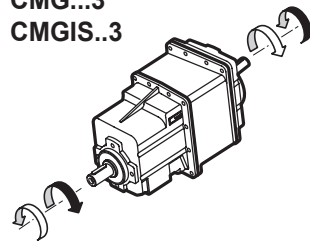
## Sentidos de rotação

## Direction of rotation

CMG...2  
 CMGIS..2



CMG...3  
 CMGIS..3

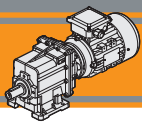


## Nomenclatura

## Simbologia

## Legend

$n_1$	[rpm]	Velocidad de entrada / <i>Velocidade na entrada</i> / Input speed
$n_2$	[rpm]	Velocidad de salida / <i>Velocidade na saída</i> / Output speed
$i$		Relación de reducción / <i>Relação de redução</i> / Ratio
$P_1$	[kW]	Potencia en la entrada / <i>Potência da entrada</i> / Input power
$M_2$	[Nm]	Par en la salida en función de $P_1$ / <i>Torque na saída em função de <math>P_1</math></i> / Output torque referred to $P_1$
$P_{N1}$	[kW]	Potencia nominal en la entrada / <i>Potência nominal na entrada</i> / Nominal input power
$M_{N2}$	[Nm]	Par nominal en la salida en función de $P_{N1}$ / <i>Torque nominal na saída em função de <math>P_{N1}</math></i> / Nominal output torque referred to $P_{N1}$
$sf$		Factor de servicio / <i>Fator de serviço</i> / Service factor
$R_2$	[N]	Carga radial admisible en la salida / <i>Carga radial admissível na saída</i> / Maximum output radial load
$A_2$	[N]	Carga axial admisible en la salida / <i>Carga axial admissível na saída</i> / Maximum output axial load



**Lubrificación**

Todos los motorreductores son previamente lubricados con aceite sintético con grado de viscosidad 320, por lo tanto, pueden ser instalados en cualquier posición de montaje y no requieren mantenimiento.

**Lubrificação**

*Todos os motoredutores são fornecidos completos de lubrificante sintético de viscosidade 320, portanto, podem ser instalados em qualquer posição de montagem e não necessitam de manutenção*

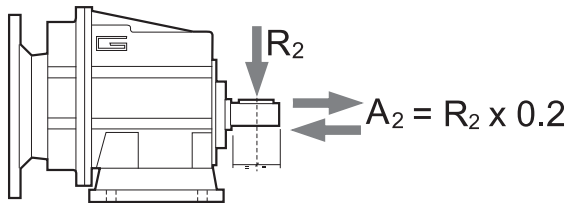
**Lubrication**

Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors in all mounting position; for this reason they can be installed in any assembly position and do not require maintenance.

**Cargas radiales**

**Cargas radiais**

**Radial loads**

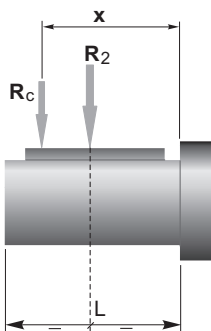


n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]				
	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04
700	416	764	1529	1987	2379
600	437	805	1609	2092	2504
500	465	855	1710	2223	2661
400	501	921	1842	2395	2866
250	586	1077	2154	2801	3353
180	653	1323	2554	3321	3897
150	748	1406	2714	3529	4244
120	806	1631	3467	3801	4572
100	958	1842	3684	4507	5234
80	1032	1984	3969	5042	5991
60	1136	2184	4368	5549	6594
40	1300	2500	5000	6500	8000
10	1300	2500	5000	6500	8000

Cuando la carga radial no se aplica en el punto medio del eje, es necesario calcular la carga efectiva a través la siguiente fórmula:

*Quando a carga radial resultante não é aplicada na linha mediana da eixo, é preciso calcular aquela efetiva com a seguinte fórmula:*

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:



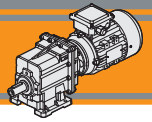
	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04
a	73	104	117	132	150
b	53	84	92	102	115
R <sub>2MAX</sub>	1300	2500	5000	6500	8000

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valores dados en la tabla  
a, b = valores referidos na tabela  
a, b = values given in the table






## Datos técnicos

## Dados técnicos

## Technical data

$n_1$  1750 [min<sup>-1</sup>]

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$	IEC Motores aplicables IEC Motores aplicáveis IEC Motor adapters			
					56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14
<b>CMGIS 002</b>								
	<b>348</b>	40	1.5	5.03				
	<b>287</b>	40	1.3	6.10				
	<b>234</b>	40	1.0	7.49				
	<b>195</b>	50	1.1	8.99				
	<b>172</b>	50	0.94	10.16				
	<b>145</b>	50	0.79	12.07				
	<b>131</b>	70	1.00	13.40				
	<b>116</b>	70	0.88	15.14				
	<b>96</b>	70	0.74	18.17				
	<b>81</b>	70	0.62	21.58				*
	<b>74</b>	70	0.57	23.51				*
	<b>70</b>	70	0.53	25.10				*
	<b>65</b>	70	0.49	27.08				*
	<b>54</b>	70	0.41	32.49				*
	<b>42</b>	70	0.32	42.04				*
	<b>39</b>	70	0.30	44.89			*	*
	<b>36</b>	70	0.27	48.86			*	*
	<b>32</b>	70	0.24	55.10			*	*

## NOTA

Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.

## N.B.

As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.

## N.B.

Highlighted areas indicate motor inputs available on each size of unit.



\* = El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico



\* = O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

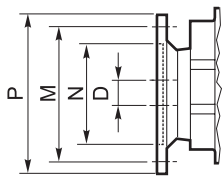


\* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

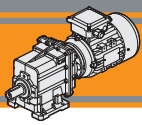
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B15.

Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas B10 a pag. B15.

Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B15.



IEC Dimensión / IEC Dimensões / IEC Dimensions								
	56 B5	56 B14	63 B5	63 B14	71 B5	71 B14	80 B5	80 B14
<b>N</b>	80	50	95	60	110	70	130	80
<b>M</b>	100	65	115	75	130	85	165	100
<b>P</b>	120	80	140	90	160	105	200	120
<b>D</b>	9		11		14		19	

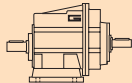


**Datos técnicos**

**Dados técnicos**

**Technical data**

**$n_1$  1750 [min<sup>-1</sup>]**

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMGIS 012</b>				
	458	60	3.0	3.82
	378	60	2.5	4.63
	308	60	2.0	5.69
	227	80	2.0	7.72
	191	80	1.7	9.17
	178	80	1.6	9.81
	152	100	1.7	11.50
	147	100	1.6	11.90
	127	120	1.7	13.80
	120	120	1.6	14.62
	98	120	1.3	17.86
	92	120	1.2	19.07
	88	120	1.2	19.83
	74	120	1.0	23.56
	59	120	0.78	29.56
	49	120	0.65	35.47
	38	120	0.50	45.89
	36	120	0.47	49.00
	33	120	0.43	53.33
	29	120	0.38	60.15

IEC Motores aplicables IEC Motores aplicáveis IEC Motor adapters				
56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14	90 B5/B14
				*
				*
				*
				*
				*
			*	*
			*	*
			*	*
			*	*


<b>CMGIS 013</b>				
	28	120	0.37	63.22
	23	120	0.31	75.08
	20	120	0.26	89.17
	15	120	0.21	113.05
	13	120	0.17	134.27
	10	120	0.13	173.72
	8.7	120	0.12	202.16
	6.7	120	0.09	261.57
	5.8	120	0.08	304.00
	4.4	120	0.06	393.33
	3.9	120	0.05	443.59


56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14	90 B5/B14
			*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*


**NOTA**  
 Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.

**N.B.**  
 As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.

**N.B.**  
 Highlighted areas indicate motor inputs available on each size of unit.

 \* = El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico

 \* = O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

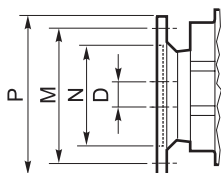
 \* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

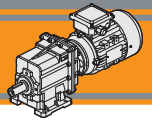
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B15.

Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas B10 a pag. B15.

Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B15.

IEC Dimension / IEC Dimensões / IEC Dimensions										
	56 B5	56 B14	63 B5	63 B14	71 B5	71 B14	80 B5	80 B14	90 B5	90 B14
<b>N</b>	80	50	95	60	110	70	130	80	130	95
<b>M</b>	100	65	115	75	130	85	165	100	165	115
<b>P</b>	120	80	140	90	160	105	200	120	200	140
<b>D</b>	9		11		14		19		24	






## Datos técnicos

## Dados técnicos

## Technical data

$n_1$  1750 [min<sup>-1</sup>]

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMGIS 022</b>				
	479	100	5.2	3.66
	395	100	4.3	4.43
	321	100	3.5	5.45
	237	120	3.1	7.39
	199	120	2.6	8.78
	176	120	2.3	9.93
	159	200	3.5	11.01
	145	200	3.2	12.05
	132	160	2.3	13.21
	118	200	2.6	14.81
	102	130	1.5	17.10
	87	200	1.9	20.08
	73	200	1.6	23.85
	58	200	1.3	29.93
	49	200	1.1	35.91
	38	200	0.82	46.46
	35	200	0.77	49.61
	32	200	0.71	54.00
	29	200	0.63	60.90

IEC Motores aplicables  
 IEC Motores aplicáveis  
 IEC Motor adapters

56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14	90 B5/B14
				*
				*
				*
				*
			*	*

## CMGIS 023

	27	200	0.61	64.01
	23	200	0.51	76.02
	19	200	0.43	90.29
	15	200	0.34	114.46
	13	200	0.29	135.95
	9.9	200	0.22	175.89
	8.5	200	0.19	204.69
	6.6	200	0.15	264.84
	5.7	200	0.13	307.80
	4.4	200	0.10	398.25
	3.9	200	0.09	449.14

56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14	90 B5/B14
			*	*
			*	*
			*	*
			*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*

## NOTA

Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.

## N.B.

As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.

## N.B.

Highlighted areas indicate motor inputs available on each size of unit.



\* =El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico



\* =O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

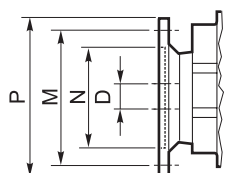


\* =The service factor (sf) has to be selected depending on application: please contact our Technical Department.

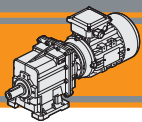
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B15.

Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas B10 a pag. B15.

Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B15.



IEC Dimension / IEC Dimensões / IEC Dimensions										
	56 B5	56 B14	63 B5	63 B14	71 B5	71 B14	80 B5	80 B14	90 B5	90 B14
N	80	50	95	60	110	70	130	80	130	95
M	100	65	115	75	130	85	165	100	165	115
P	120	80	140	90	160	105	200	120	200	140
D	9		11		14		19		24	

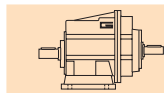


**Datos técnicos**

**Dados técnicos**

**Technical data**

**$n_1$  1750 [min<sup>-1</sup>]**



**$n_2$**  [min<sup>-1</sup>]  
 **$Mn_2$**  [Nm]  
 **$Pn_1$**  [kW]  
 **$i$**

**IEC Motores aplicables**  
**IEC Motores aplicáveis**  
**IEC Motor adapters**

**CMGIS 032**

468	150	7.7	3.74
389	150	6.4	4.50
319	150	5.2	5.48
277	180	5.4	6.31
221	180	4.3	7.93
193	180	3.8	9.08
160	180	3.1	10.93
139	250	3.8	12.60
132	250	3.6	13.30
114	280	3.5	15.30
96	240	2.5	18.21
91	280	2.8	19.24
83	240	2.2	21.15
70	300	2.3	24.99
57	300	1.9	30.57
51	300	1.7	34.20
45	300	1.5	38.63
40	300	1.3	44.18
34	300	1.1	51.30
29	300	0.90	60.80

71 B5	80 B5/B14	90 B5/B14	100 B5/B14	112 B5/B14
B				
B				
B				
B				
B				
B				*
B				*
B				*
B				*
B				*
B				*
B				*
B			*	*
B			*	*
B			*	*
B			*	*
B			*	*
B		*	*	*
B		*	*	*

**CMGIS 033**

24	300	0.80	72.83
18	300	0.60	97.45
15	300	0.51	115.74
12	300	0.42	140.81
10	300	0.34	174.26
7.8	300	0.26	225.47
6.7	300	0.22	262.05
5.4	300	0.18	325.79
4.6	300	0.15	378.64
4.1	300	0.14	427.03

56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14	90 B5/B14
				*
			*	*
			*	*
			*	*
			*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*
		*	*	*

**NOTA**

Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.

**N.B.**

As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.

**N.B.**

Highlighted areas indicate motor inputs available on each size of unit.



\* =El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico



\* =O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

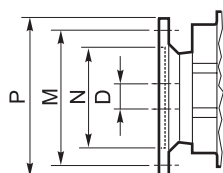


\* =The service factor (sf) has to be selected depending on application: please contact our Technical Department.

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B15.

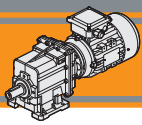
Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas B10 a pag. B15.

Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B15.



IEC Dimensión / IEC Dimensões / IEC Dimensions												
	56 B5	56 B14	63 B5	63 B14	71 B5	71 B14	80 B5	80 B14	90 B5	90 B14	100/112 B5	100/112 B14
<b>N</b>	80	50	95	60	110	70	130	80	130	95	180	110
<b>M</b>	100	65	115	75	130	85	165	100	165	115	215	130
<b>P</b>	120	80	140	90	160	105	200	120	200	140	250	160
<b>D</b>	9		11		14		19		24		28	





**CMG**

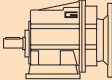

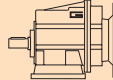

Motorreductores de engranajes cilíndricos  
 Motoredutores de engrenagens helicoidais  
 Helical in-line gearmotors

**60 Hz**

**Datos técnicos**

**Dados técnicos**

**Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i						
<b>0.09</b>							<b>0.12</b>										
(0.12 hp)	<b>348</b>	2.4	16.9	5.03	<b>CMG002</b>	<b>B5/B14</b>	(0.16 hp)	<b>348</b>	3.2	12.7	5.03	<b>CMG002</b>	<b>B5/B14</b>				
	<b>287</b>	2.9	13.9	6.10			<b>B5/B14</b>	<b>B5/B14</b>		<b>287</b>	3.8			10.4	6.10	<b>B5/B14</b>	<b>B5/B14</b>
56B4	<b>234</b>	3.5	11.3	7.49			<b>B5/B14</b>	<b>B5/B14</b>	63A4	<b>234</b>	4.7			8.5	7.49	<b>B5/B14</b>	<b>B5/B14</b>
(1750 min <sup>-1</sup> )	<b>195</b>	4.2	11.8	8.99			<b>B5/B14</b>	<b>B5/B14</b>	(1750 min <sup>-1</sup> )	<b>195</b>	5.7			8.8	8.99	<b>B5/B14</b>	<b>B5/B14</b>
	<b>172</b>	4.8	10.4	10.16			<b>B5/B14</b>	<b>B5/B14</b>		<b>172</b>	6.4			7.8	10.16	<b>B5/B14</b>	<b>B5/B14</b>
	<b>145</b>	5.7	8.8	12.07			<b>B5/B14</b>	<b>B5/B14</b>		<b>145</b>	7.6			6.6	12.07	<b>B5/B14</b>	<b>B5/B14</b>
	<b>131</b>	6.3	11.1	13.40			<b>B5/B14</b>	<b>B5/B14</b>		<b>131</b>	8.4			8.3	13.40	<b>B5/B14</b>	<b>B5/B14</b>
	<b>116</b>	7.1	9.8	15.14			<b>B5/B14</b>	<b>B5/B14</b>		<b>116</b>	10			7.4	15.14	<b>B5/B14</b>	<b>B5/B14</b>
	<b>96</b>	8.6	8.2	18.17			<b>B5/B14</b>	<b>B5/B14</b>		<b>96</b>	11			6.1	18.17	<b>B5/B14</b>	<b>B5/B14</b>
	<b>81</b>	10	6.9	21.58			<b>B5/B14</b>	<b>B5/B14</b>		<b>81</b>	14			5.2	21.58	<b>B5/B14</b>	<b>B5/B14</b>
	<b>74</b>	11	6.3	23.51			<b>B5/B14</b>	<b>B5/B14</b>		<b>74</b>	15			4.7	23.51	<b>B5/B14</b>	<b>B5/B14</b>
	<b>70</b>	12	5.9	25.10			<b>B5/B14</b>	<b>B5/B14</b>		<b>70</b>	16			4.4	25.10	<b>B5/B14</b>	<b>B5/B14</b>
	<b>65</b>	13	5.5	27.08			<b>B5/B14</b>	<b>B5/B14</b>		<b>65</b>	17			4.1	27.08	<b>B5/B14</b>	<b>B5/B14</b>
	<b>54</b>	15	4.6	32.49			<b>B5/B14</b>	<b>B5/B14</b>		<b>54</b>	20			3.4	32.49	<b>B5/B14</b>	<b>B5/B14</b>
	<b>42</b>	20	3.5	42.04			<b>B5/B14</b>	<b>B5/B14</b>		<b>42</b>	26			2.6	42.04	<b>B5/B14</b>	<b>B5/B14</b>
	<b>39</b>	21	3.3	44.89			<b>B5/B14</b>	<b>B5/B14</b>		<b>39</b>	28			2.5	44.89	<b>B5/B14</b>	<b>B5/B14</b>
	<b>36</b>	23	3.0	48.86			<b>B5/B14</b>	<b>B5/B14</b>		<b>36</b>	31			2.3	48.86	<b>B5/B14</b>	<b>B5/B14</b>
	<b>32</b>	26	2.7	55.10	<b>B5/B14</b>	<b>B5/B14</b>		<b>32</b>	35	2.0	55.10	<b>B5/B14</b>	<b>B5/B14</b>				
	<b>38</b>	22	5.5	45.89	<b>CMG012</b>	<b>B5/B14</b>		<b>38</b>	29	4.2	45.89	<b>CMG012</b>	<b>B5/B14</b>				
	<b>36</b>	23	5.2	49.00			<b>B5/B14</b>	<b>B5/B14</b>	<b>36</b>	31	3.9			49.00	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>33</b>	25	4.8	53.33			<b>B5/B14</b>	<b>B5/B14</b>	<b>33</b>	34	3.6			53.33	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>29</b>	28	4.2	60.15			<b>B5/B14</b>	<b>B5/B14</b>	<b>29</b>	38	3.2			60.15	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>28</b>	29	4.1	63.22	<b>CMG013</b>	<b>B5/B14</b>		<b>28</b>	39	3.1	63.22	<b>CMG013</b>	<b>B5/B14</b>				
	<b>23</b>	35	3.5	75.08			<b>B5/B14</b>	<b>B5/B14</b>	<b>23</b>	46	2.6			75.08	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>20</b>	41	2.9	89.17			<b>B5/B14</b>	<b>B5/B14</b>	<b>20</b>	55	2.2			89.17	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>15</b>	52	2.3	113.05			<b>B5/B14</b>	<b>B5/B14</b>	<b>15</b>	70	1.7			113.05	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>13</b>	62	1.9	134.27			<b>B5/B14</b>	<b>B5/B14</b>	<b>13</b>	83	1.5			134.27	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>10</b>	80	1.5	173.72			<b>B5/B14</b>	<b>B5/B14</b>	<b>10</b>	107	1.1			173.72	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>8.7</b>	93	1.3	202.16			<b>B5/B14</b>	<b>B5/B14</b>	<b>8.7</b>	124	1.0			202.16	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>6.7</b>	121	1.0	261.57	<b>B5/B14</b>	<b>B5/B14</b>	<b>6.7</b>	161	0.7	261.57	<b>B5/B14</b>	<b>B5/B14</b>					
	<b>5.8</b>	140	0.9	304.00	<b>B5/B14</b>	<b>B5/B14</b>											
	<b>4.4</b>	171	0.7	393.33	<b>CMG023</b>	<b>B5/B14</b>		<b>27</b>	39	5.1	64.01	<b>CMG023</b>	<b>B5/B14</b>				
	<b>3.9</b>	171	0.7	443.59			<b>B5/B14</b>	<b>B5/B14</b>	<b>23</b>	47	4.3			76.02	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>19</b>	42	4.8	90.29			<b>B5/B14</b>	<b>B5/B14</b>	<b>19</b>	56	3.6			90.29	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>15</b>	53	3.8	114.46			<b>B5/B14</b>	<b>B5/B14</b>	<b>15</b>	70	2.8			114.46	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>13</b>	63	3.2	135.95			<b>B5/B14</b>	<b>B5/B14</b>	<b>13</b>	84	2.4			135.95	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>9.9</b>	81	2.5	175.89			<b>B5/B14</b>	<b>B5/B14</b>	<b>10</b>	108	1.8			175.89	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>8.5</b>	94	2.1	204.69			<b>B5/B14</b>	<b>B5/B14</b>	<b>8.5</b>	126	1.6			204.69	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>6.6</b>	122	1.6	264.84			<b>B5/B14</b>	<b>B5/B14</b>	<b>6.6</b>	163	1.2			264.84	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>5.7</b>	142	1.4	307.80			<b>B5/B14</b>	<b>B5/B14</b>	<b>5.7</b>	189	1.1			307.80	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>4.4</b>	184	1.1	398.25			<b>B5/B14</b>	<b>B5/B14</b>	<b>4.4</b>	245	0.8			398.25	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>3.9</b>	207	1.0	449.14	<b>B5/B14</b>	<b>B5/B14</b>	<b>3.9</b>	276	0.7	449.14	<b>B5/B14</b>	<b>B5/B14</b>					
	<b>12</b>	65	4.6	140.81	<b>CMG033</b>	<b>B5/B14</b>		<b>10</b>	107	2.8	174.26	<b>CMG033</b>	<b>B5/B14</b>				
	<b>10</b>	80	3.7	174.26			<b>B5/B14</b>	<b>B5/B14</b>	<b>7.8</b>	139	2.2			225.47	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>7.8</b>	104	2.9	225.47			<b>B5/B14</b>	<b>B5/B14</b>	<b>6.7</b>	161	1.9			262.05	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>6.7</b>	121	2.5	262.05			<b>B5/B14</b>	<b>B5/B14</b>	<b>5.4</b>	201	1.5			325.79	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>5.4</b>	150	2.0	325.79			<b>B5/B14</b>	<b>B5/B14</b>	<b>4.6</b>	233	1.3			378.64	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>4.6</b>	175	1.7	378.64			<b>B5/B14</b>	<b>B5/B14</b>	<b>4.1</b>	263	1.1			427.03	<b>B5/B14</b>	<b>B5/B14</b>	
	<b>4.1</b>	197	1.5	427.03			<b>B5/B14</b>	<b>B5/B14</b>	<b>7.8</b>	139	3.6			225.47	<b>CMG043</b>	<b>B5/B14</b>	
	<b>7.8</b>	104	4.8	225.47			<b>B5/B14</b>	<b>B5/B14</b>	<b>6.7</b>	161	3.1			262.05			<b>B5/B14</b>
	<b>6.7</b>	121	4.1	262.05	<b>B5/B14</b>	<b>B5/B14</b>	<b>5.4</b>	201	2.5	325.79	<b>B5/B14</b>	<b>B5/B14</b>					
	<b>5.4</b>	150	3.3	325.79	<b>B5/B14</b>	<b>B5/B14</b>	<b>4.6</b>	233	2.1	378.64	<b>B5/B14</b>	<b>B5/B14</b>					
	<b>4.6</b>	175	2.9	378.64	<b>CMG043</b>	<b>B5/B14</b>		<b>4.1</b>	263	1.9	427.03	<b>B5/B14</b>	<b>B5/B14</b>				
	<b>4.1</b>	197	2.5	427.03			<b>B5/B14</b>	<b>B5/B14</b>									

NOTA:

Por favor verifique que el torque de salida M2 no exceda el valor de las áreas grises

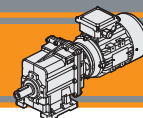
N.B.

Sempre verifique que o torque M2 não exceda o valor indicado nas caixas cinzas

N.B.

Please check that the output torque M2 does not exceed the value in the grey areas

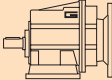

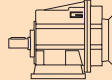





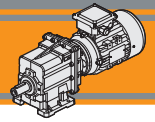
## Datos técnicos

## Dados técnicos

## Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i						
<b>0.18</b>							<b>0.25</b>										
(0.25 hp)	348	4.7	8.4	5.03	CMG002	B5/B14	(0.33 hp)	348	6.6	6.1	5.03	CMG002	B5/B14				
	287	5.8	7.0	6.10						287	8.0			5.0	6.10		
63B4	234	7.1	5.7	7.49					63C4	234	10			4.1	7.49		
(1750 min <sup>-1</sup> )	195	8.5	5.9	8.99					(1750 min <sup>-1</sup> )	195	12			4.2	8.99		
	172	10	5.2	10.16						172	13			3.8	10.16		
	145	11	4.4	12.07						145	16			3.2	12.07		
	131	13	5.5	13.40						131	18			4.0	13.40		
	116	14	4.9	15.14						116	20			3.5	15.14		
	96	17	4.1	18.17						96	24			2.9	18.17		
	81	20	3.4	21.58						81	28			2.5	21.58		
	74	22	3.2	23.51						74	31			2.3	23.51		
	70	24	3.0	25.10						70	33			2.1	25.10		
	65	26	2.7	27.08						65	35			2.0	27.08		
	54	31	2.3	32.49						54	43			1.6	32.49		
	42	40	1.8	42.04						42	55			1.3	42.04		
	39	42	1.7	44.89						39	59			1.2	44.89		
	36	46	1.5	48.86				36	64	1.1	48.86						
	32	52	1.3	55.10				32	72	1.0	55.10						
	74	22	5.4	23.56	CMG012	B5/B14		92	25	4.8	19.07	CMG012	B5/B14				
	59	28	4.3	29.56						88	26			4.6	19.83		
	49	33	3.6	35.47						74	31			3.9	23.56		
	38	43	2.8	45.89						59	39			3.1	29.56		
	36	46	2.6	49.00						49	46			2.6	35.47		
	33	50	2.4	53.33						38	60			2.0	45.89		
	29	57	2.1	60.15				36	64	1.9	49.00						
	28	58	2.1	63.22	CMG013	B5/B14		33	70	1.7	53.33	CMG013	B5/B14				
	23	69	1.7	75.08						29	79			1.5	60.15		
	20	82	1.5	89.17						28	81			1.5	63.22		
	15	104	1.1	113.05						23	96			1.2	75.08		
	13	124	1.0	134.27				20	114	1.0	89.17						
	27	59	3.4	64.01	CMG023	B5/B14		38	61	3.3	46.46	CMG022	B5/B14				
	23	70	2.8	76.02						35	65			3.1	49.61		
	19	83	2.4	90.29						32	71			2.8	54.00		
	15	106	1.9	114.46						29	80			2.5	60.90		
	13	126	1.6	135.95													
	10	162	1.2	175.89						27	82			2.4	64.01	CMG023	B5/B14
	8.5	189	1.1	204.69				23	97	2.1	76.02						
	12	130	2.3	140.81	CMG033	B5/B14		19	116	1.7	90.29						
	10	161	1.9	174.26						15	147	1.4	114.46				
	7.8	208	1.4	225.47						13	174	1.1	135.95				
	6.7	242	1.2	262.05						10	226	0.9	175.89				
	5.4	301	1.0	325.79													
	4.6	350	0.9	378.64				24	93	3.2	72.83	CMG033	B5/B14				
	10	161	3.1	174.26	CMG043	B5/B14		18	125	2.4	97.45						
	7.8	208	2.4	225.47						15	148			2.0	115.74		
	6.7	242	2.1	262.05						12	181			1.7	140.81		
	5.4	301	1.7	325.79						10	223			1.3	174.26		
	4.6	350	1.4	378.64						7.8	289			1.0	225.47		
	4.1	394	1.3	427.03						6.7	336	0.9	262.05				
								15	148	3.4	115.74	CMG043	B5/B14				
								12	181	2.8	140.81						
								10	223	2.2	174.26						
								7.8	289	1.7	225.47						
								6.7	336	1.5	262.05						
								5.4	418	1.2	325.79						
								4.6	486	1.0	378.64						
								4.1	548	0.9	427.03						

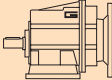

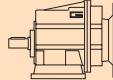



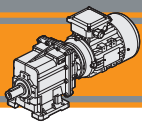


## Datos técnicos

## Dados técnicos

## Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i								
<b>0.75</b>							<b>1.1</b>												
(1.0 hp)	<b>348</b>	20	2.0	5.03	<b>CMG002</b>	<b>B5/B14</b>	(1.5 hp)	<b>348</b>	29	1.4	5.03	<b>CMG002</b>	<b>B5/B14</b>						
	<b>287</b>	24	1.7	6.10				<b>287</b>	35	1.1	6.10				<b>B5/B14</b>				
80A4	<b>234</b>	29	1.4	7.49				<b>234</b>	43	0.9	7.49				<b>B5/B14</b>				
(1750 min <sup>-1</sup> )	<b>195</b>	35	1.4	8.99				<b>195</b>	52	1.0	8.99				<b>B5/B14</b>				
	<b>172</b>	40	1.3	10.16				<b>172</b>	59	0.9	10.16				<b>B5/B14</b>				
	<b>145</b>	47	1.1	12.07				<b>131</b>	77	0.9	13.40				<b>B5/B14</b>				
	<b>131</b>	53	1.3	13.40															
	<b>116</b>	59	1.2	15.14				<b>458</b>	22	2.7	3.82			<b>CMG012</b>	<b>B5/B14</b>				
	<b>96</b>	71	1.0	18.17				<b>378</b>	27	2.2	4.63						<b>B5/B14</b>		
	<b>458</b>	15	4.0	3.82			<b>CMG012</b>	<b>B5/B14</b>	<b>308</b>	33	1.8					5.69		<b>B5/B14</b>	
	<b>378</b>	18	3.3	4.63		<b>227</b>			44	1.8	7.72		<b>B5/B14</b>						
	<b>308</b>	22	2.7	5.69		<b>191</b>			53	1.5	9.17		<b>B5/B14</b>						
	<b>227</b>	30	2.6	7.72		<b>178</b>			57	1.4	9.81		<b>B5/B14</b>						
	<b>191</b>	36	2.2	9.17		<b>152</b>			66	1.5	11.50		<b>B5/B14</b>						
	<b>178</b>	39	2.1	9.81		<b>147</b>			69	1.5	11.90		<b>B5/B14</b>						
	<b>152</b>	45	2.2	11.50		<b>127</b>			80	1.5	13.80		<b>B5/B14</b>						
	<b>147</b>	47	2.1	11.90		<b>120</b>			84	1.4	14.62		<b>B5/B14</b>						
	<b>127</b>	54	2.2	13.80		<b>98</b>			103	1.2	17.86		<b>B5/B14</b>						
	<b>120</b>	57	2.1	14.62		<b>92</b>			110	1.1	19.07		<b>B5/B14</b>						
	<b>98</b>	70	1.7	17.86		<b>88</b>	114	1.0	19.83		<b>B5/B14</b>								
	<b>92</b>	75	1.6	19.07		<b>74</b>	136	0.9	23.56		<b>B5/B14</b>								
	<b>88</b>	78	1.5	19.83						<b>CMG022</b>	<b>B5/B14</b>								
	<b>74</b>	93	1.3	23.56		<b>479</b>	21	4.7	3.66				<b>B5/B14</b>						
	<b>59</b>	116	1.0	29.56		<b>395</b>	26	3.9	4.43				<b>B5/B14</b>						
	<b>49</b>	139	0.9	35.47		<b>321</b>	31	3.2	5.45				<b>B5/B14</b>						
	<b>176</b>	39	3.1	9.93	<b>CMG022</b>	<b>B5/B14</b>	<b>237</b>	43	2.8			7.39		<b>B5/B14</b>					
	<b>159</b>	43	4.6	11.01				<b>199</b>	51			2.4	8.78		<b>B5/B14</b>				
	<b>145</b>	47	4.2	12.05				<b>176</b>	57			2.1	9.93		<b>B5/B14</b>				
	<b>132</b>	52	3.1	13.21				<b>159</b>	63			3.2	11.01		<b>B5/B14</b>				
	<b>118</b>	58	3.4	14.81				<b>145</b>	69			2.9	12.05		<b>B5/B14</b>				
	<b>102</b>	67	1.9	17.10				<b>132</b>	76			2.1	13.21		<b>B5/B14</b>				
	<b>87</b>	79	2.5	20.08				<b>118</b>	85	2.3	14.81		<b>B5/B14</b>						
	<b>73</b>	94	2.1	23.85				<b>102</b>	99	1.3	17.10		<b>B5/B14</b>						
	<b>58</b>	118	1.7	29.93				<b>87</b>	116	1.7	20.08		<b>B5/B14</b>						
	<b>49</b>	141	1.4	35.91				<b>73</b>	137	1.5	23.85		<b>B5/B14</b>						
	<b>38</b>	183	1.1	46.46		<b>58</b>	172	1.2	29.93		<b>B5/B14</b>								
	<b>35</b>	195	1.0	49.61		<b>49</b>	207	1.0	35.91		<b>B5/B14</b>								
	<b>32</b>	212	0.9	54.00						<b>CMG032</b>	<b>B5/B14</b>								
	<b>83</b>	83	2.9	21.15	<b>CMG032</b>	<b>B5/B14</b>	<b>160</b>	63	2.9			10.93		<b>B5/B14</b>					
	<b>70</b>	98	3.1	24.99				<b>139</b>	73			3.4	12.60		<b>B5/B14</b>				
	<b>57</b>	120	2.5	30.57				<b>132</b>	77			3.3	13.30		<b>B5/B14</b>				
	<b>51</b>	134	2.2	34.20				<b>114</b>	88			3.2	15.30		<b>B5/B14</b>				
	<b>45</b>	152	2.0	38.63				<b>96</b>	105			2.3	18.21		<b>B5/B14</b>				
	<b>40</b>	174	1.7	44.18				<b>91</b>	111			2.5	19.24		<b>B5/B14</b>				
	<b>34</b>	202	1.5	51.30				<b>83</b>	122			2.0	21.15		<b>B5/B14</b>				
	<b>29</b>	239	1.3	60.80				<b>70</b>	144			2.1	24.99		<b>B5/B14</b>				
	<b>24</b>	280	1.1	72.83				<b>57</b>	176			1.7	30.57		<b>B5/B14</b>				
	<b>18</b>	375	1.3	97.45				<b>51</b>	197	1.5	34.20		<b>B5/B14</b>						
	<b>15</b>	445	1.1	115.74		<b>45</b>	223	1.3	38.63		<b>B5/B14</b>								
	<b>12</b>	542	0.9	140.81		<b>40</b>	255	1.2	44.18		<b>B5/B14</b>								
					<b>CMG033</b>	<b>B5/B14</b>	<b>34</b>	296	1.0	51.30	<b>CMG032</b>	<b>B5/B14</b>							
								<b>29</b>	350	0.9			60.80		<b>B5/B14</b>				
							<b>CMG042</b>	<b>B5/B14</b>	<b>91</b>	111			3.8	19.24	<b>CMG042</b>	<b>B5/B14</b>			
										<b>70</b>			144	3.5			24.99		<b>B5/B14</b>
										<b>57</b>			176	2.8			30.57		<b>B5/B14</b>
										<b>51</b>			197	2.5			34.20		<b>B5/B14</b>
										<b>45</b>			223	2.2			38.63		<b>B5/B14</b>
										<b>40</b>			255	2.0			44.18		<b>B5/B14</b>
										<b>34</b>			296	1.7			51.30		<b>B5/B14</b>
										<b>29</b>			350	1.4			60.80		<b>B5/B14</b>
					<b>CMG043</b>	<b>B5/B14</b>			<b>24</b>	411	1.2	72.83	<b>CMG043</b>	<b>B5/B14</b>					
										<b>18</b>	550	0.9					97.45		<b>B5/B14</b>



**CMG**

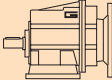

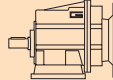

Motorreductores de engranajes cilíndricos  
 Motoredutores de engrenagens helicoidais  
 Helical in-line gearmotors

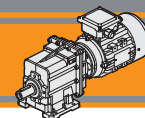
60 Hz

Datos técnicos

Dados técnicos

Technical data

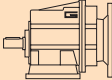

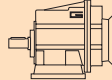

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>1.5</b>							<b>2.2</b>							
(2.0 hp)	458	30	2.0	3.82	CMG012	B5/B14	(3.0 hp)	458	44	1.4	3.82	CMG012	B5/B14	
	378	36	1.6	4.63		B5/B14		378	53	1.1	4.63		B5/B14	
90S4	308	45	1.3	5.69		B5/B14	90L4	308	66	0.9	5.69		B5/B14	
(1750 min <sup>-1</sup> )	227	61	1.3	7.72		B5/B14	(1750 min <sup>-1</sup> )	227	89	0.9	7.72		B5/B14	
	191	72	1.1	9.17		B5/B14								
	178	77	1.0	9.81		B5/B14								
	152	90	1.1	11.50		B5/B14								
	147	94	1.1	11.90		B5/B14								
	127	108	1.1	13.80		B5/B14								
	120	115	1.0	14.62		B5/B14								
	98	140	0.9	17.86	B5/B14									
	479	29	3.5	3.66	CMG022	B5/B14		479	42	2.4	3.66	CMG022	B5/B14	
	395	35	2.9	4.43		B5/B14		395	51	2.0	4.43		B5/B14	
	321	43	2.3	5.45		B5/B14		321	63	1.6	5.45		B5/B14	
	237	58	2.1	7.39		B5/B14		237	85	1.4	7.39		B5/B14	
	199	69	1.7	8.78		B5/B14		199	101	1.2	8.78		B5/B14	
	176	78	1.5	9.93		B5/B14		176	115	1.0	9.93		B5/B14	
	159	87	2.3	11.01		B5/B14		159	127	1.6	11.01		B5/B14	
	145	95	2.1	12.05		B5/B14		145	139	1.4	12.05		B5/B14	
	132	104	1.5	13.21		B5/B14		118	171	1.2	14.81		B5/B14	
	118	116	1.7	14.81		B5/B14								
	87	158	1.3	20.08	B5/B14		468	43	3.5	3.74	CMG032	B5/B14		
	73	187	1.1	23.85	B5/B14		389	52	2.9	4.50		B5/B14		
	58	235	0.9	29.93	B5/B14		319	63	2.4	5.48		B5/B14		
	468	29	5.1	3.74	CMG032	B5/B14	277	73	2.5	6.31		B5/B14		
	389	35	4.2	4.50		B5/B14		221	91	2.0		7.93	B5/B14	
	319	43	3.5	5.48		B5/B14		193	105	1.7		9.08	B5/B14	
	277	50	3.6	6.31		B5/B14		160	126	1.4		10.93	B5/B14	
	221	62	2.9	7.93		B5/B14		139	145	1.7		12.60	B5/B14	
	193	71	2.5	9.08		B5/B14		132	153	1.6		13.30	B5/B14	
	160	86	2.1	10.93		B5/B14		114	176	1.6		15.30	B5/B14	
	139	99	2.5	12.60		B5/B14		91	222	1.3	19.24	B5/B14		
	132	105	2.4	13.30		B5/B14		70	288	1.0	24.99	B5/B14		
	114	120	2.3	15.30		B5/B14		57	352	0.9	30.57	B5/B14		
	96	143	1.7	18.21	B5/B14									
	91	151	1.9	19.24	B5/B14		468	43	5.3	3.74	CMG042	B5/B14		
	83	166	1.4	21.15	B5/B14		389	52	4.4	4.50		B5/B14		
	70	196	1.5	24.99	B5/B14		319	63	3.6	5.48		B5/B14		
	57	240	1.2	30.57	B5/B14		277	73	3.6	6.31		B5/B14		
	51	269	1.1	34.20	B5/B14		221	91	2.8	7.93		B5/B14		
	45	304	1.0	38.63	B5/B14		193	105	2.7	9.08		B5/B14		
	40	347	0.9	44.18	B5/B14		160	126	2.2	10.93		B5/B14		
	160	86	3.3	10.93	CMG042	B5/B14	139	145	2.4	12.60		B5/B14		
	139	99	3.5	12.60		B5/B14		132	153	2.3		13.30	B5/B14	
	132	105	3.3	13.30		B5/B14		114	176	2.4		15.30	B5/B14	
	114	120	3.5	15.30		B5/B14		91	222	1.9	19.24	B5/B14		
	91	151	2.8	19.24		B5/B14		70	288	1.7	24.99	B5/B14		
	70	196	2.5	24.99		B5/B14		57	352	1.4	30.57	B5/B14		
	57	240	2.1	30.57		B5/B14		51	394	1.3	34.20	B5/B14		
	51	269	1.9	34.20		B5/B14		45	445	1.1	38.63	B5/B14		
	45	304	1.6	38.63		B5/B14		40	509	1.0	44.18	B5/B14		
	40	347	1.4	44.18		B5/B14								
	34	403	1.2	51.30	B5/B14									
	29	478	1.0	60.80	B5/B14									
	24	560	0.9	72.83	CMG043	B5/B14								

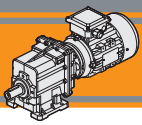


## Datos técnicos

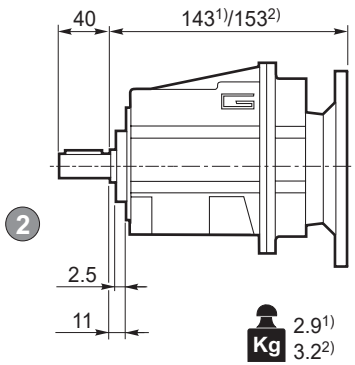
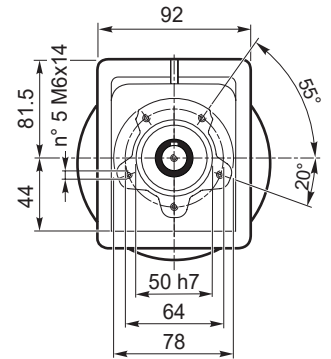
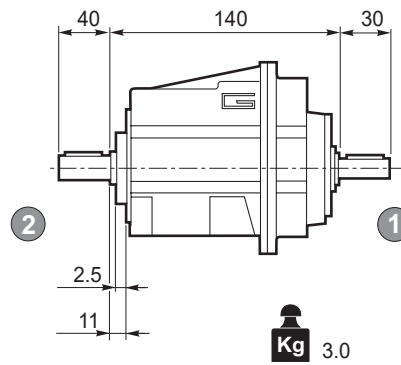
## Dados técnicos

## Technical data

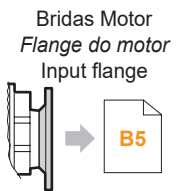
$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i										
<b>3</b>							<b>4.5</b>														
(4.0 hp)	<b>468</b>	59	2.6	3.74	CMG032	B5/B14	(6.0 hp)	<b>468</b>	88	1.7	3.74	CMG032	B5/B14								
	<b>389</b>	71	2.1	4.50						<b>389</b>	106			1.4	4.50						
100LA4	<b>319</b>	86	1.7	5.48					112MA4	<b>319</b>	129			1.2	5.48						
(1750 min <sup>-1</sup> )	<b>277</b>	99	1.8	6.31					(1750 min <sup>-1</sup> )	<b>277</b>	149			1.2	6.31						
	<b>221</b>	125	1.4	7.93						<b>221</b>	187			1.0	7.93						
	<b>193</b>	143	1.3	9.08												CMG042	B5/B14				
	<b>160</b>	172	1.0	10.93						<b>468</b>	88			2.6	3.74						
	<b>139</b>	198	1.3	12.60						<b>389</b>	106			2.2	4.50						
	<b>132</b>	209	1.2	13.30						<b>319</b>	129			1.8	5.48						
	<b>114</b>	240	1.2	15.30						<b>277</b>	149			1.7	6.31						
	<b>91</b>	302	0.9	19.24						<b>221</b>	187			1.4	7.93						
							CMG042	B5/B14		<b>193</b>	214			1.3	9.08						
	<b>468</b>	59	3.9	3.74										<b>160</b>	258			1.1	10.93		
	<b>389</b>	71	3.2	4.50										<b>139</b>	297			1.2	12.60		
	<b>319</b>	86	2.7	5.48						<b>132</b>	314	1.1	13.30								
	<b>277</b>	99	2.6	6.31						<b>114</b>	361	1.2	15.30								
	<b>221</b>	125	2.1	7.93						<b>91</b>	454	0.9	19.24								
	<b>193</b>	143	2.0	9.08						<b>70</b>	589	0.8	24.99								
	<b>160</b>	172	1.6	10.93																	
	<b>139</b>	198	1.8	12.60																	
	<b>132</b>	209	1.7	13.30																	
	<b>114</b>	240	1.7	15.30																	
	<b>91</b>	302	1.4	19.24																	
	<b>70</b>	393	1.3	24.99																	
	<b>57</b>	480	1.0	30.57																	
	<b>51</b>	538	0.9	34.20																	
<b>3.7</b>							<b>5.5</b>														
(5.0 hp)	<b>468</b>	73	2.1	3.74	CMG032	B5/B14	(7.5 hp)	<b>468</b>	108	1.4	3.74	CMG032	B5/B14								
	<b>389</b>	87	1.7	4.50						<b>389</b>	130			1.2	4.50						
100LB4	<b>319</b>	106	1.4	5.48					112MB4	<b>319</b>	158			0.9	5.48						
(1750 min <sup>-1</sup> )	<b>277</b>	122	1.5	6.31					(1750 min <sup>-1</sup> )	<b>277</b>	182			1.0	6.31						
	<b>221</b>	154	1.2	7.93												CMG042	B5/B14				
	<b>193</b>	176	1.0	9.08						<b>468</b>	108			2.1	3.74						
	<b>160</b>	212	0.8	10.93						<b>389</b>	130			1.8	4.50						
	<b>139</b>	244	1.0	12.60						<b>319</b>	158			1.5	5.48						
	<b>132</b>	258	1.0	13.30						<b>277</b>	182			1.4	6.31						
	<b>114</b>	297	0.9	15.30						<b>221</b>	229			1.1	7.93						
							CMG042	B5/B14		<b>193</b>	262			1.1	9.08						
	<b>468</b>	73	3.2	3.74										<b>160</b>	315			0.9	10.93		
	<b>389</b>	87	2.6	4.50										<b>139</b>	363			1.0	12.60		
	<b>319</b>	106	2.2	5.48										<b>132</b>	383			0.9	13.30		
	<b>277</b>	122	2.1	6.31						<b>114</b>	441	1.0	15.30								
	<b>221</b>	154	1.7	7.93																	
	<b>193</b>	176	1.6	9.08																	
	<b>160</b>	212	1.3	10.93																	
	<b>139</b>	244	1.4	12.60																	
	<b>132</b>	258	1.4	13.30																	
	<b>114</b>	297	1.4	15.30																	
	<b>91</b>	373	1.1	19.24																	
	<b>70</b>	484	1.0	24.99																	
	<b>57</b>	593	0.8	30.57																	

**CMG**

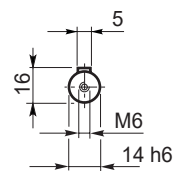
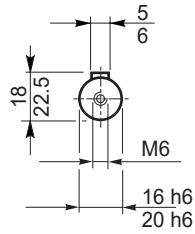
Motorreductores de engranajes cilíndricos  
 Motoredutores de engrenagens helicoidais  
 Helical in-line gearmotors

**60 Hz****Dimensiones****Dimensões****Dimensions****CMG 002 U****CMG 002 U****CMGIS 002 U**

<sup>1)</sup>IEC 63/71, <sup>2)</sup>IEC 80

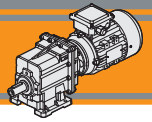


Eje de salida  
Eixo saída  
Output shaft



Eje de entrada  
Eixo entrada  
Input shaft





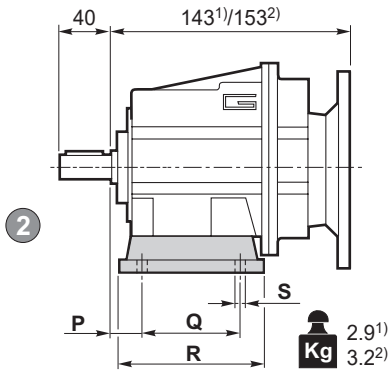
Dimensiones

Dimensões

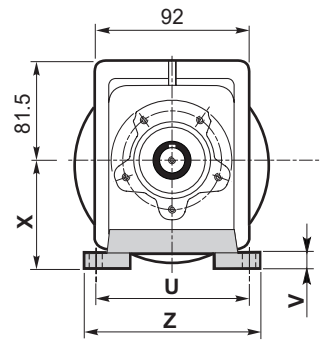
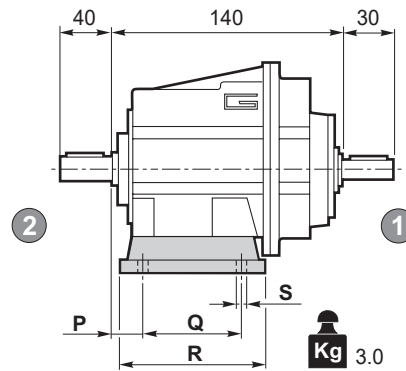
Dimensions

CMG 002 H..

CMG 002 H..

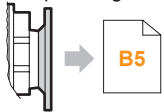


CMGIS 002 H..

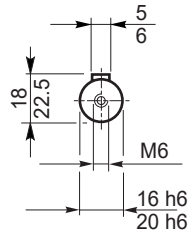


<sup>1)</sup>IEC 63/71, <sup>2)</sup>IEC 80

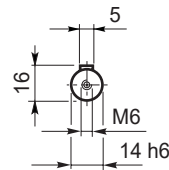
Bridas Motor  
 Flange do motor  
 Input flange



Eje de salida  
 Eixo saída  
 Output shaft



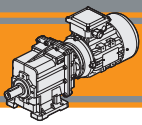
Eje de entrada  
 Eixo entrada  
 Input shaft



Versión H / Versão H / H Version

CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Base / Foot	
									Tipo / Tipo / Type	Peso / Peso / Weight [kg]
002	18	60	80	9	100	10	60	120	H60	0.2
	18	80	104	9	110 - 120	10	75	145	H75	0.3
	18	50 - 87	110	9	110	10	85	135	H85	0.4

Preferencial / Preferencial / Preferred



**CMG**

Motorreductores de engranajes cilíndricos  
 Motoredutores de engrenagens helicoidais  
 Helical in-line gearmotors

60 Hz

Dimensiones

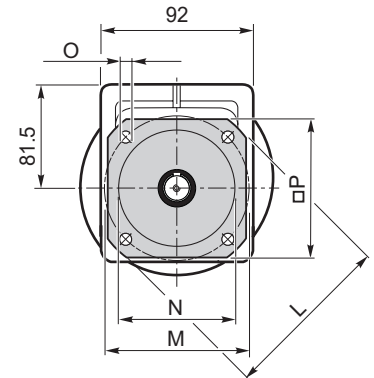
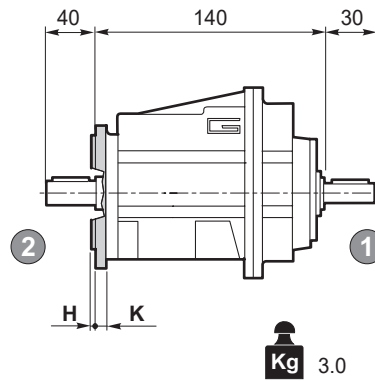
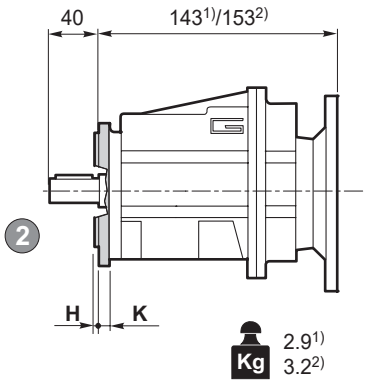
Dimensões

Dimensions

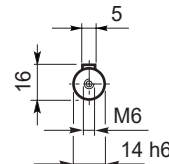
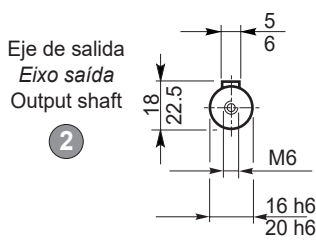
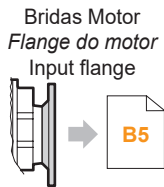
**CMG 002 F..**

**CMG 002 F..**

**CMGIS 002 F..**

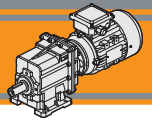


<sup>1)</sup>IEC 63/71, <sup>2)</sup>IEC 80



Eje de entrada  
Eixo entrada  
Input shaft

Versión F / Versão F / F Version									
CMG CMGIS	H	K	L	M	N f7	O	P	Brida / Flange / Flange	
								Tipo / Tipo / Type	Peso / Peso / Weight [kg]
002	3.5	7	105	85	70	6.5	90	F105	0.1
	3.5	8	120	100	80	9	100	F120	0.2
	3.5	8	140	115	95	9	115	F140	0.2



Dimensiones

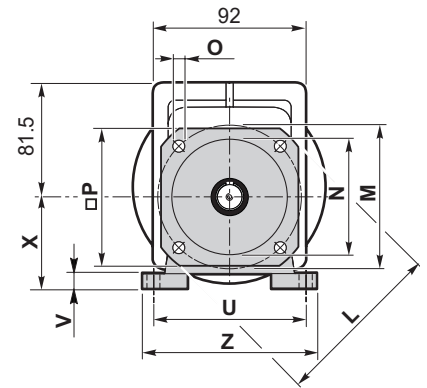
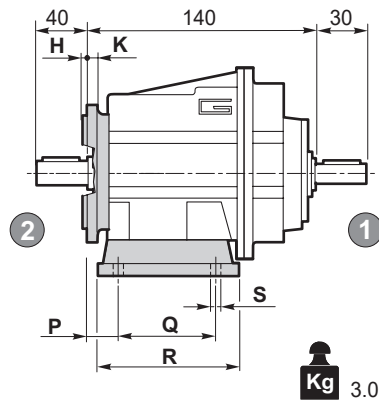
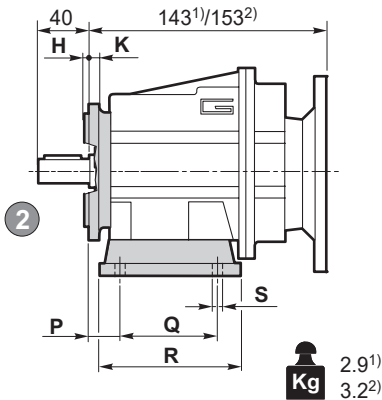
Dimensões

Dimensions

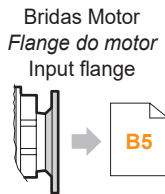
CMG 002 H../F..

CMG 002 H../F..

CMGIS 002 H../F..

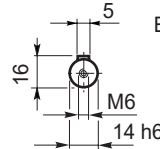
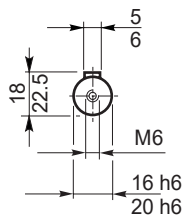


¹)IEC 63/71, ²)IEC 80



Eje de salida  
 Eixo saída  
 Output shaft

2



Eje de entrada  
 Eixo entrada  
 Input shaft

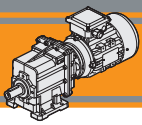
1

Versión H / Versão H / H Version									Combinaciones posibles H/F Combinações possíveis H/F Possible combinations H/F				
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Base / Foot		F105	F120	F140
									Tipo / Tipo / Type	Kg			
002	18	60	80	9	100	10	60	120	H60	0.2	•	•	•
	18	80	104	9	110 - 120	10	75	145	H75	0.3	•	•	•
	18	50 - 87	110	9	110	10	85	135	H85	0.4	•	•	•

■ Preferencial / Preferencial / Preferred • Combinaciones posibles H/F / Combinações possíveis H/F / Possible combinations H/F

Versión F / Versão F / F Version								Brida / Flange / Flange	
CMG CMGIS	H	K	L	M	N f7	O	P	Tipo / Tipo / Type	Peso / Peso / Weight [kg]
								002	3.5
3.5	8	120	100	80	9	100	F120		0.2
3.5	8	140	115	95	9	115	F140		0.2





**CMG**

Motorreductores de engranajes cilíndricos  
Motoredutores de engrenagens helicoidais  
Helical in-line gearmotors

60 Hz

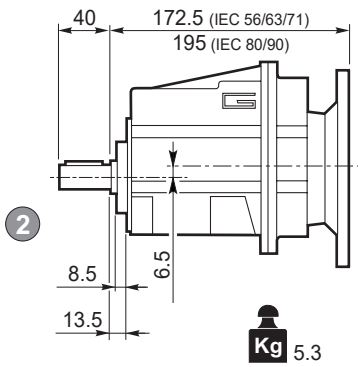
Dimensiones

Dimensões

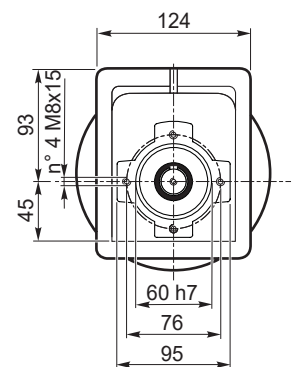
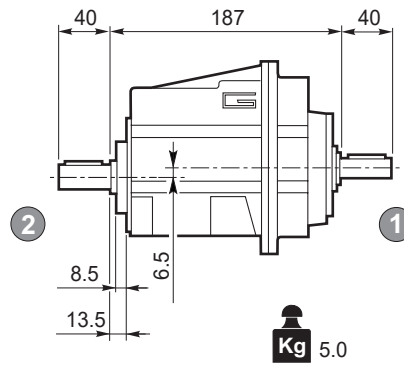
Dimensions

**CMG 012 U - CMG 013 U**

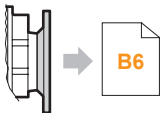
**CMG 012 U**



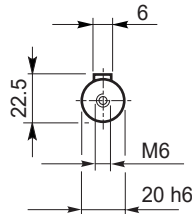
**CMGIS 012 U**



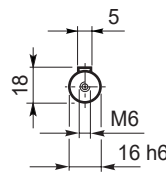
Bridas Motor  
Flange do motor  
Input flange



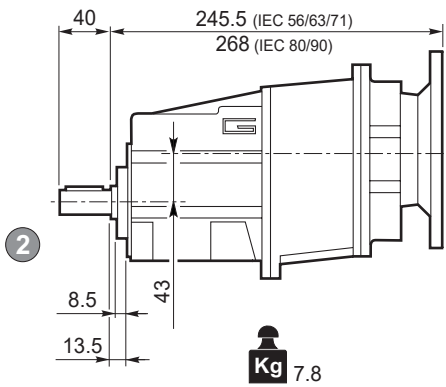
Eje de salida  
Eixo saída  
Output shaft



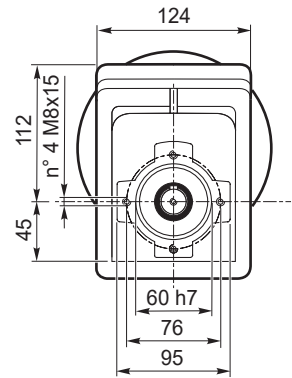
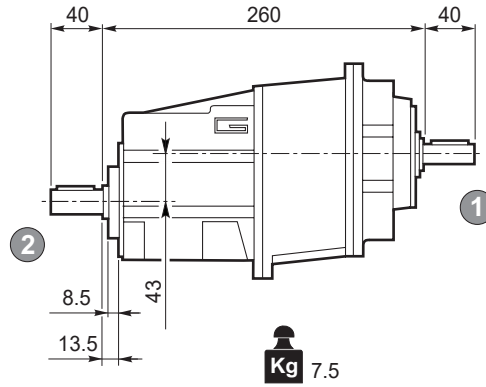
Eje de entrada  
Eixo entrada  
Input shaft



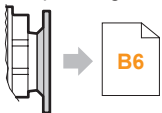
**CMG 013 U**



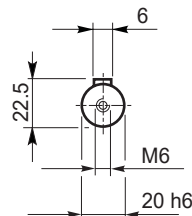
**CMGIS 013 U**



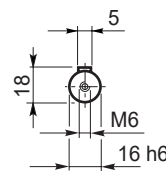
Bridas Motor  
Flange do motor  
Input flange

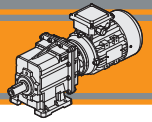


Eje de salida  
Eixo saída  
Output shaft



Eje de entrada  
Eixo entrada  
Input shaft





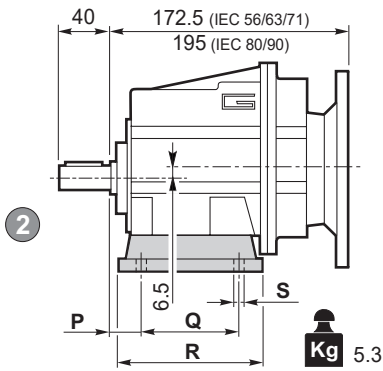
Dimensiones

Dimensões

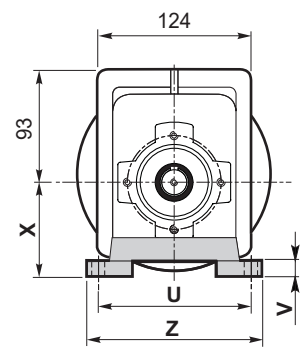
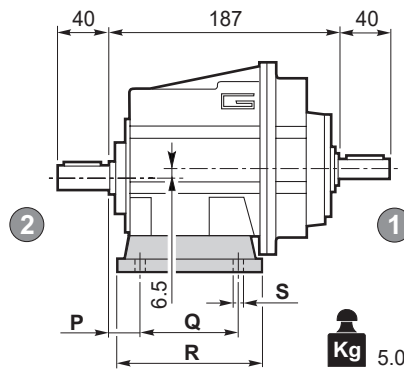
Dimensions

CMG 012 H.. - CMG 013 H..

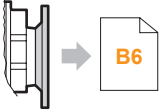
CMG 012 H..



CMGIS 012 H..



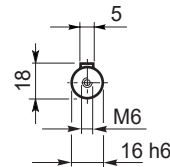
Bridas Motor  
 Flange do motor  
 Input flange



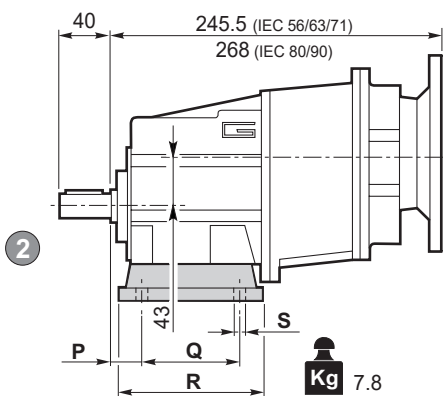
Eje de salida  
 Eixo saída  
 Output shaft



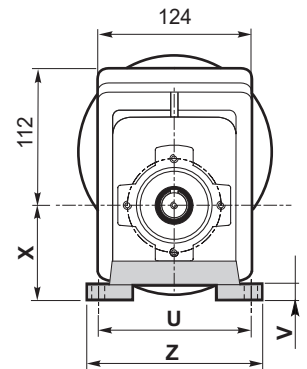
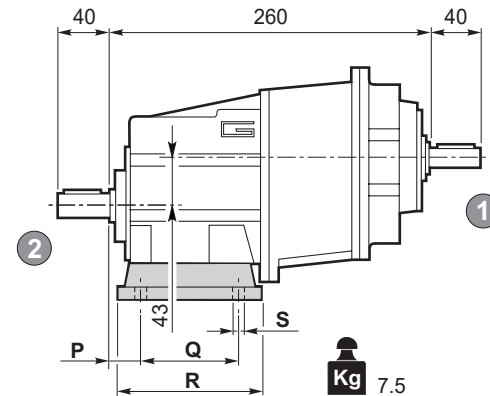
Eje de entrada  
 Eixo entrada  
 Input shaft



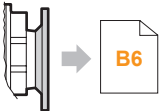
CMG 013 H..



CMGIS 013 H..



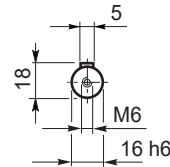
Bridas Motor  
 Flange do motor  
 Input flange



Eje de salida  
 Eixo saída  
 Output shaft



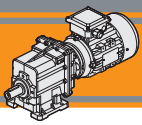
Eje de entrada  
 Eixo entrada  
 Input shaft



Versión H / Versão H / H Version

CMG CMGIS	P	Q	R	S	U	V	X	Z	Patás / Base / Foot	
									Tipo / Tipo / Type	Peso / Peso / Weight [kg]
012 013	20	85	108	9	115	12	65	139	H65	0.7
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7

Preferencial / Preferencial / Preferred



**CMG**

Motorreductores de engranajes cilíndricos  
 Motores de engrenagens helicoidais  
 Helical in-line gearmotors

60 Hz

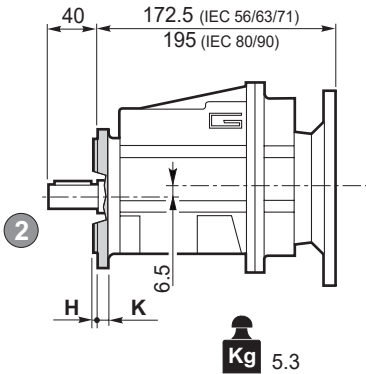
Dimensiones

Dimensões

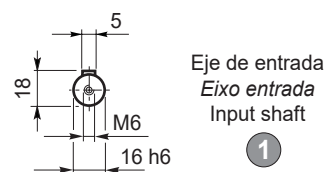
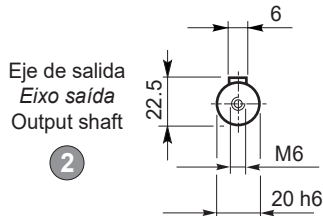
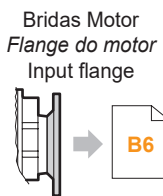
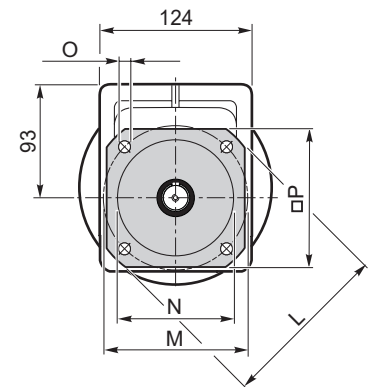
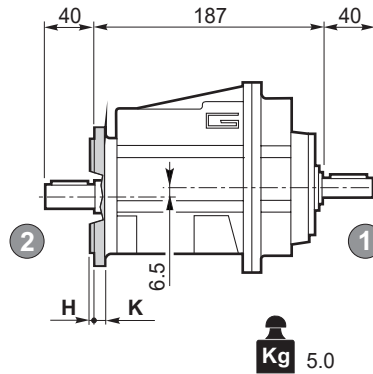
Dimensions

**CMG 012 F.. - CMG 013 F..**

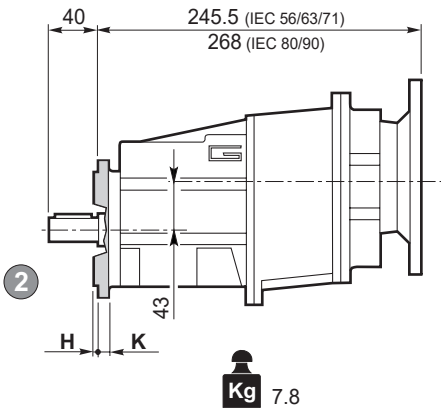
**CMG 012 F..**



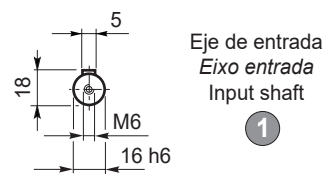
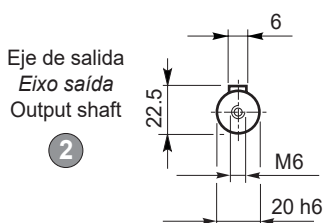
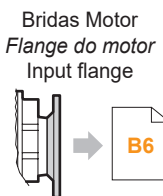
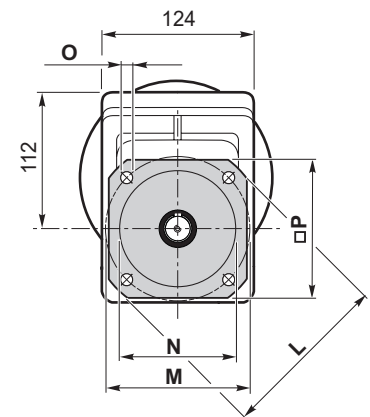
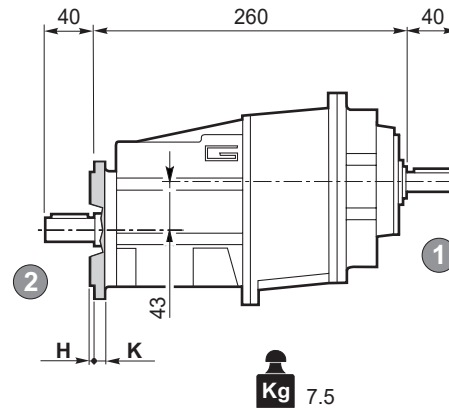
**CMGIS 012 F..**



**CMG 013 F..**



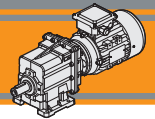
**CMGIS 013 F..**



Versión F / Versão F / F Version

CMG CMGIS	H	K	L	M	N f7	O	P	Brida / Flange / Flange	
								Tipo / Tipo / Type	Peso / Peso / Weight [kg]
012 013	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8





Dimensiones

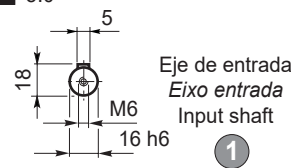
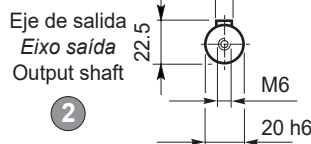
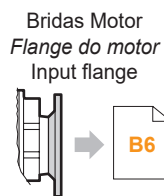
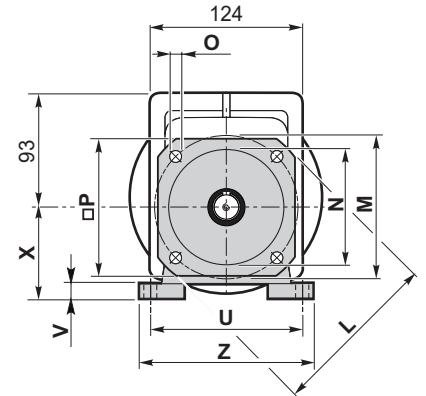
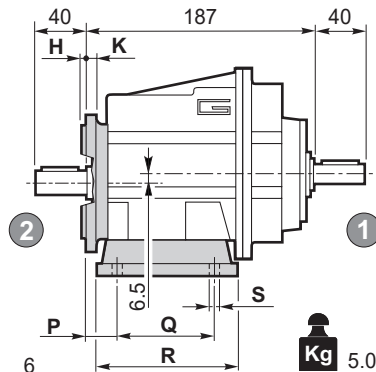
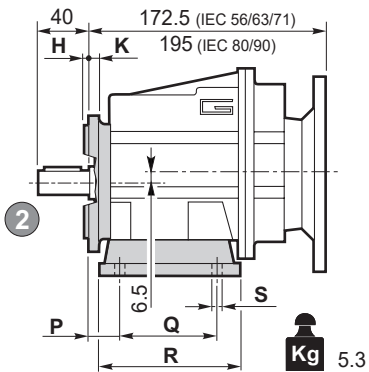
Dimensões

Dimensions

CMG 012 H../F.. - CMG 013 H../F..

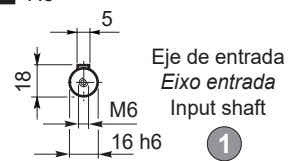
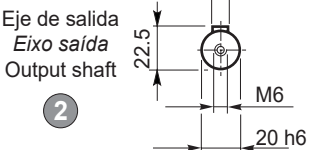
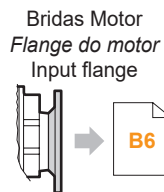
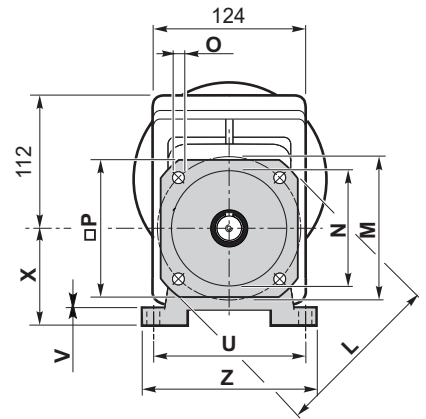
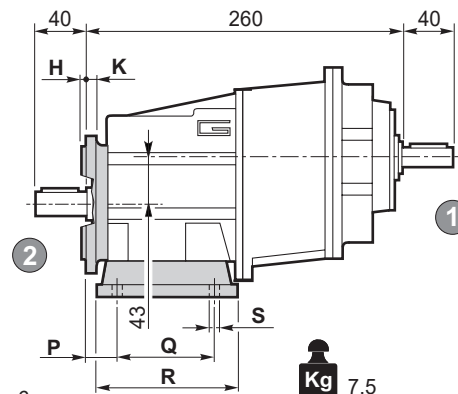
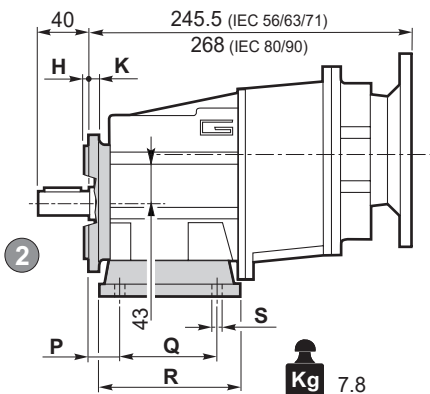
CMG 012 H../F..

CMGIS 012 H../F..



CMG 013 H../F..

CMGIS 013 H../F..

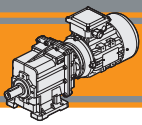


Versión H / Versão H / H Version										Combinaciones posibles H/F Combinacoes possíveis H/F Possible combinations H/F				
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Base / Foot		F120	F140	F160	F200
									Tipo / Tipo / Type	Kg				
012 013	20	85	108	9	115	12	65	139	H65	0.7	•	•		
	18	80	118	9	110	12	75	140	H75	1.0	•	•		
	25	85	120	9	120	12	80	140	H80	1.1	•	•	•	
	18	50 - 87	118	9	110	12	85	130	H85	1.2	•	•	•	
	25	130	154	9	110	12	90	135	H90	1.5	•	•	•	•
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7	•	•	•	•

Preferencial / Preferencial / Preferred

• Combinaciones posibles H/F / Combinacoes possíveis H/F / Possible combinations H/F

Versión F / Versão F / F Version									
CMG CMGIS	H	K	L	M	N f7	O	P	Brida / Flange / Flange	
								Tipo / Tipo / Type	Peso / Peso / Weight [kg]
012 013	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8



**CMG**

Motorreductores de engranajes cilíndricos  
Motoredutores de engrenagens helicoidais  
Helical in-line gearmotors

60 Hz

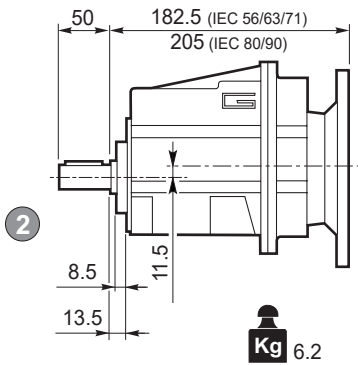
Dimensiones

Dimensões

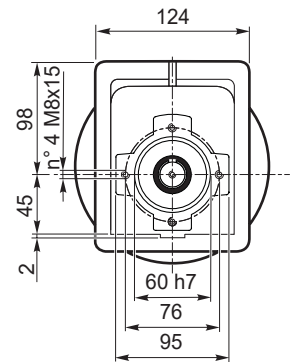
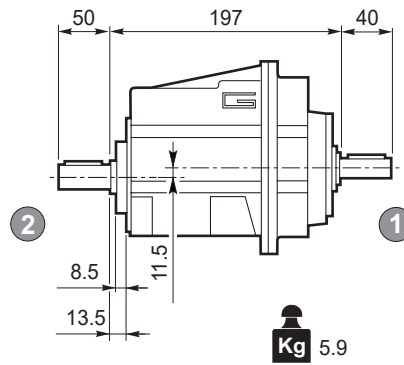
Dimensions

**CMG 022 U - CMG 023 U**

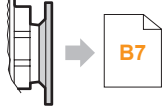
**CMG 022 U**



**CMGIS 022 U**

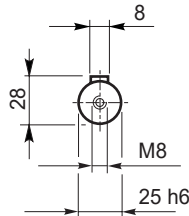


Bridas Motor  
Flange do motor  
Input flange



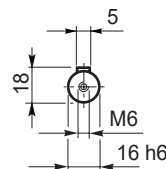
Eje de salida  
Eixo saída  
Output shaft

2

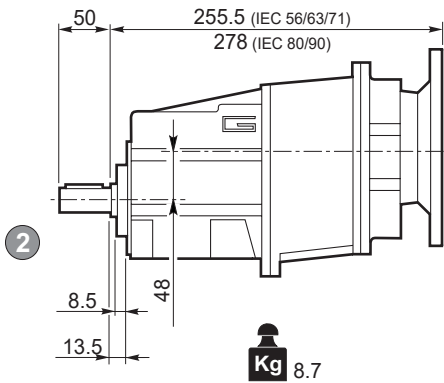


Eje de entrada  
Eixo entrada  
Input shaft

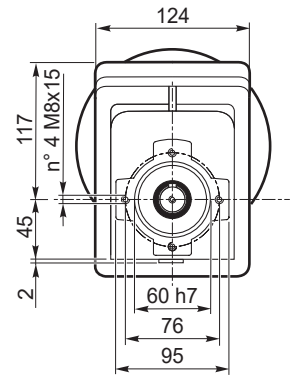
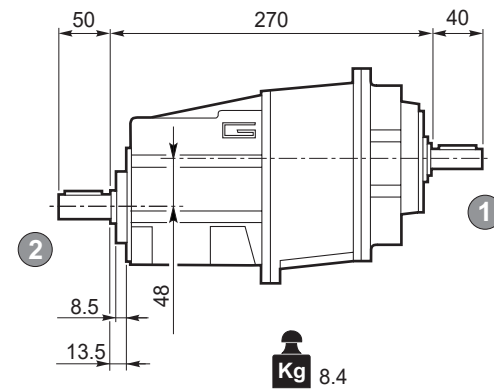
1



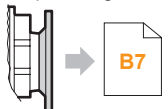
**CMG 023 U**



**CMGIS 023 U**

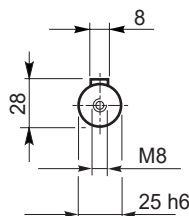


Bridas Motor  
Flange do motor  
Input flange



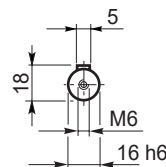
Eje de salida  
Eixo saída  
Output shaft

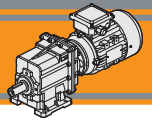
2



Eje de entrada  
Eixo entrada  
Input shaft

1





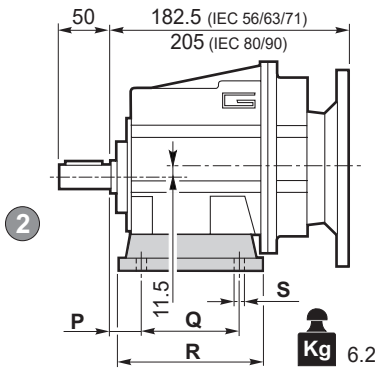
Dimensiones

Dimensões

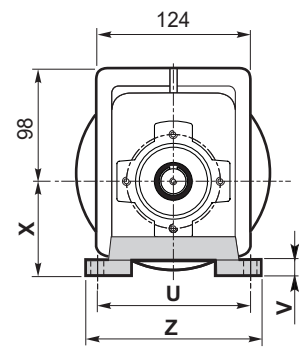
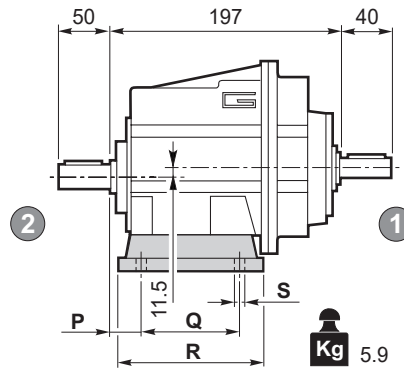
Dimensions

CMG 022 H.. - CMG 023 H..

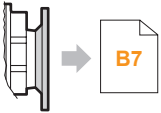
CMG 022 H..



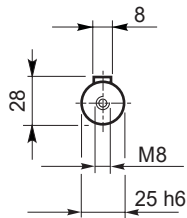
CMGIS 022 H..



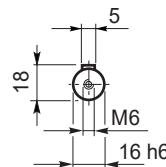
Bridas Motor  
 Flange do motor  
 Input flange



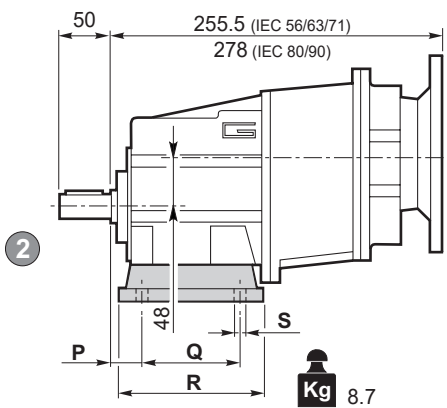
Eje de salida  
 Eixo saída  
 Output shaft



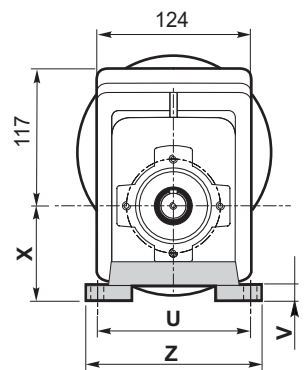
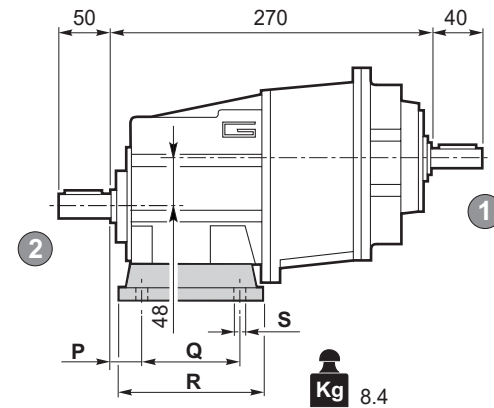
Eje de entrada  
 Eixo entrada  
 Input shaft



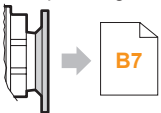
CMG 023 H..



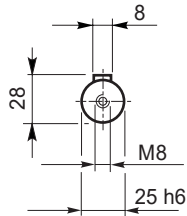
CMGIS 023 H..



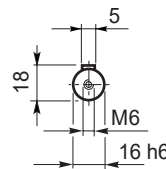
Bridas Motor  
 Flange do motor  
 Input flange



Eje de salida  
 Eixo saída  
 Output shaft



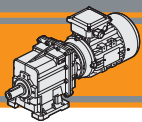
Eje de entrada  
 Eixo entrada  
 Input shaft



Versión H / Versão H / H Version

CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Base / Foot	
									Tipo / Tipo / Type	Peso / Peso / Weight [kg]
022 023	20	85	108	9	115	12	65	139	H65	0.7
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7

Preferencial / Preferencial / Preferred



**CMG**

Motorreductores de engranajes cilíndricos  
 Motores de engrenagens helicoidais  
 Helical in-line gearmotors

60 Hz

Dimensiones

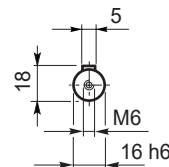
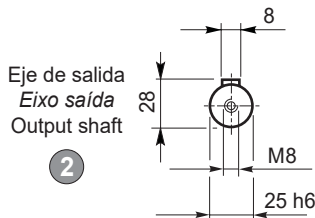
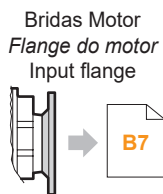
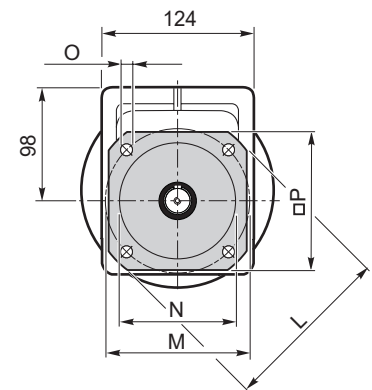
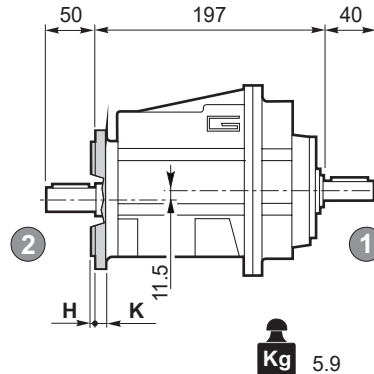
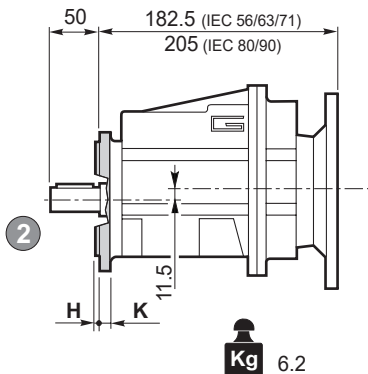
Dimensões

Dimensions

**CMG 022 F.. - CMG 023 F..**

**CMG 022 F..**

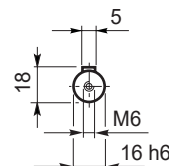
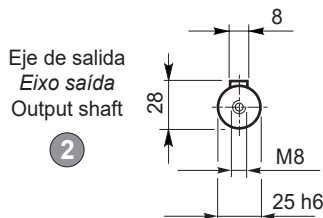
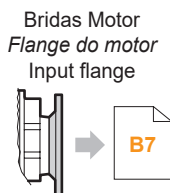
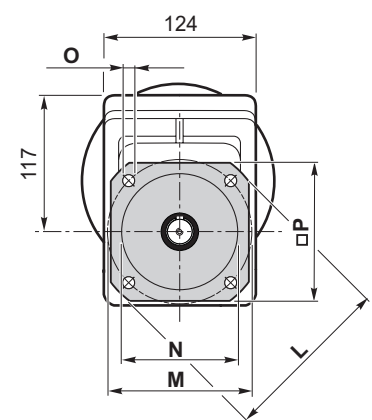
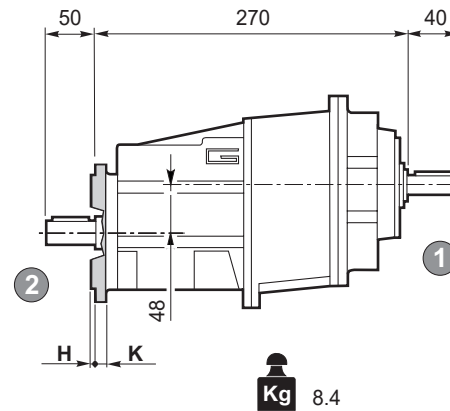
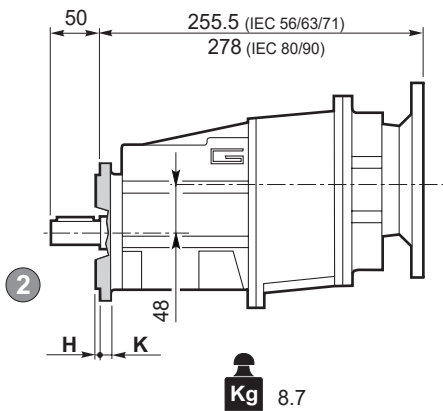
**CMGIS 022 F..**



Eje de entrada  
 Eixo entrada  
 Input shaft

**CMG 023 F..**

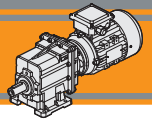
**CMGIS 023 F..**



Eje de entrada  
 Eixo entrada  
 Input shaft

Versión F / Versão F / F Version

CMG CMGIS	H	K	L	M	N f7	O	P	Brida / Flange / Flange	
								Tipo / Tipo / Type	Peso / Peso / Weight [kg]
022 023	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8



Dimensiones

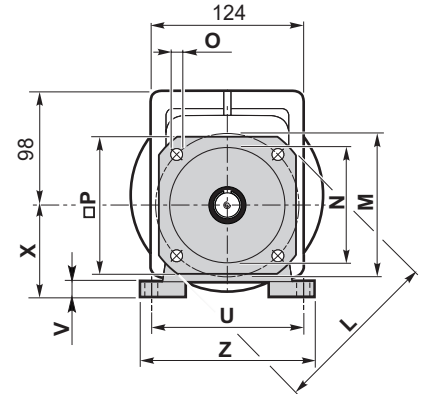
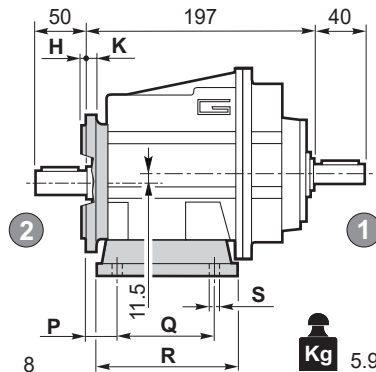
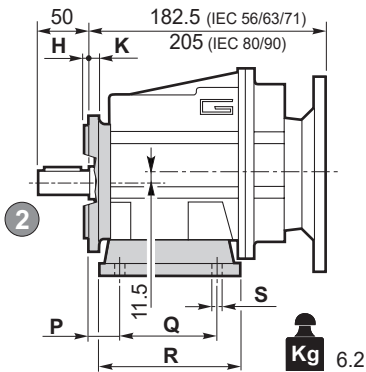
Dimensões

Dimensions

CMG 022 H../F.. - CMG 023 H../F..

CMG 022 H../F..

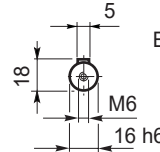
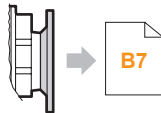
CMGIS 022 H../F..



Bridas Motor  
Flange do motor  
Input flange

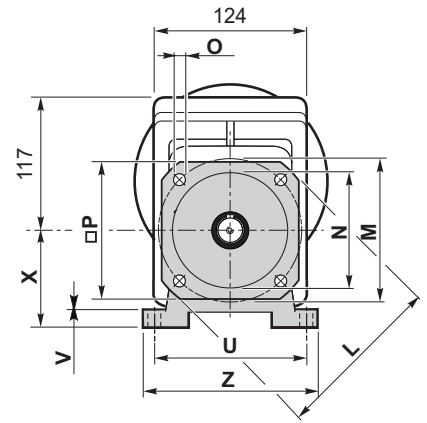
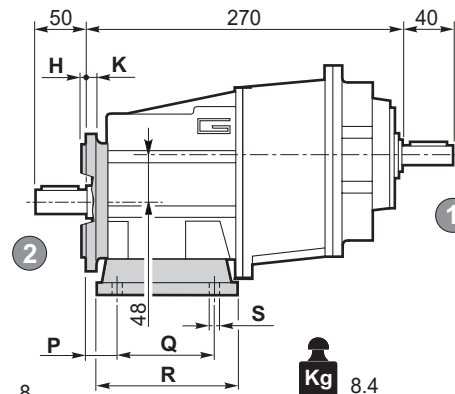
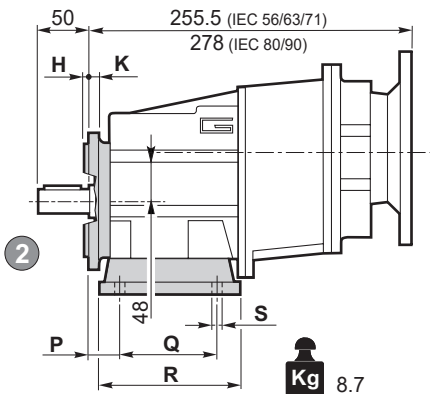
Eje de salida  
Eixo saída  
Output shaft

Eje de entrada  
Eixo entrada  
Input shaft



CMG 023 H../F..

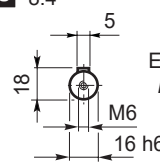
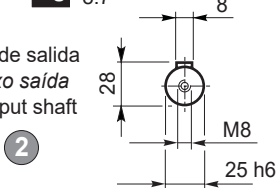
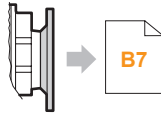
CMGIS 023 H../F..



Bridas Motor  
Flange do motor  
Input flange

Eje de salida  
Eixo saída  
Output shaft

Eje de entrada  
Eixo entrada  
Input shaft

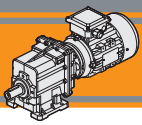


Versión H / Versão H / H Version									Combinaciones posibles H/F Combinacoes possíveis H/F Possible combinations H/F					
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Base / Foot		F120	F140	F160	F200
									Tipo / Tipo / Type	Kg				
022 023	20	85	108	9	115	12	65	139	H65	0.7	•	•		
	18	80	118	9	110	12	75	140	H75	1.0	•	•		
	25	85	120	9	120	12	80	140	H80	1.1	•	•	•	
	18	50 - 87	118	9	110	12	85	130	H85	1.2	•	•	•	
	25	130	154	9	110	12	90	135	H90	1.5	•	•	•	•
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7	•	•	•	•

Preferencial / Preferencial / Preferred

• Combinaciones posibles H/F / Combinacoes possíveis H/F / Possible combinations H/F

Versión F / Versão F / F Version									Brida / Flange / Flange	
CMG CMGIS	H	K	L	M	N f7	O	P	Tipo / Tipo / Type		Peso / Peso / Weight [kg]
								022 023	3	
3.5	9	140	115	95	9	115	F140		0.8	
3.5	9	160	130	110	9	126	F160		1.1	
3.5	11	200	165	130	11	165	F200		1.8	



# CMG

## Motorreductores de engranajes cilíndricos Motoredutores de engrenagens helicoidais Helical in-line gearmotors

### 60 Hz

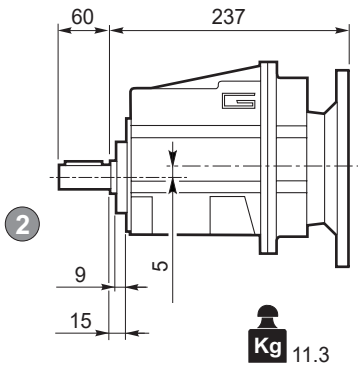
### Dimensiones

### Dimensões

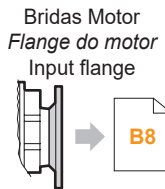
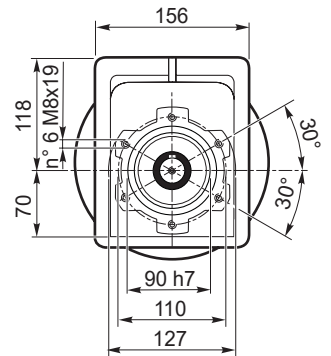
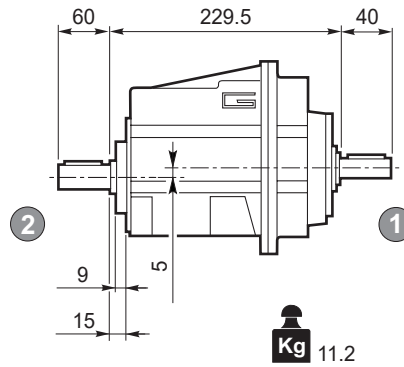
### Dimensions

## CMG 032 U - CMG 033 U

### CMG 032 U

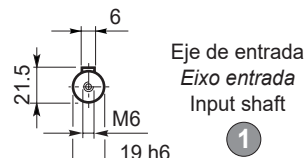
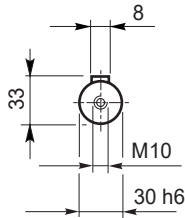


### CMGIS 032 U



Eje de salida  
Eixo saída  
Output shaft

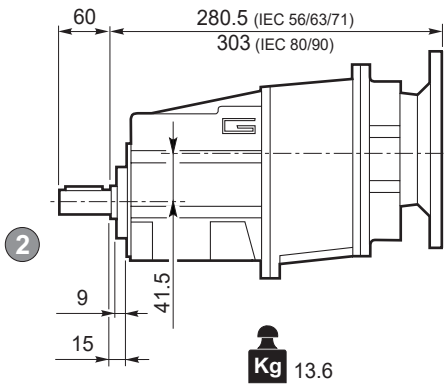
2



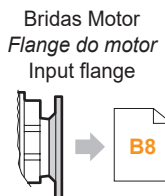
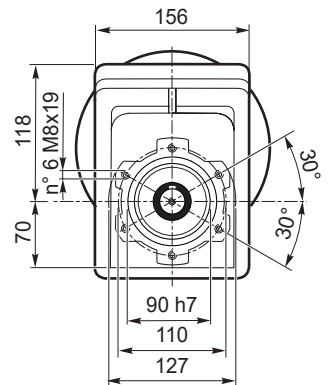
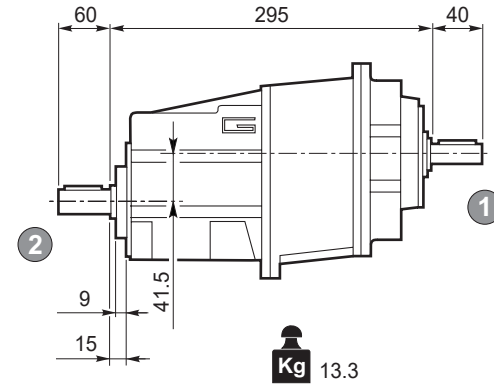
Eje de entrada  
Eixo entrada  
Input shaft

1

### CMG 033 U

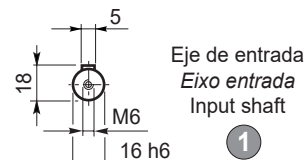
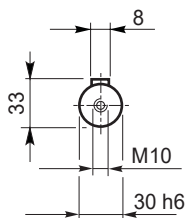


### CMGIS 033 U



Eje de salida  
Eixo saída  
Output shaft

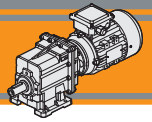
2



Eje de entrada  
Eixo entrada  
Input shaft

1





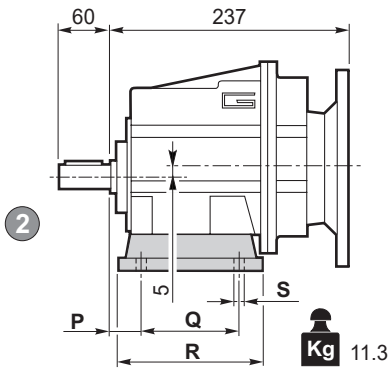
Dimensiones

Dimensões

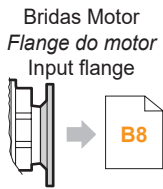
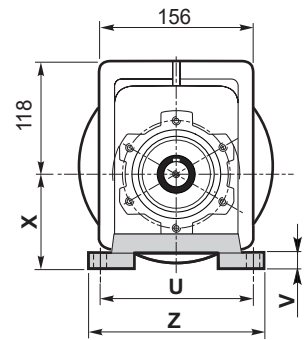
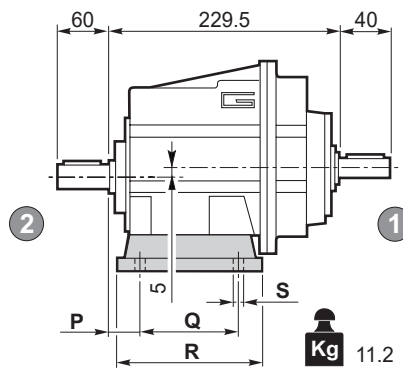
Dimensions

CMG 032 H.. - CMG 033 H..

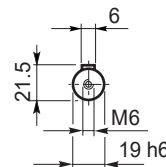
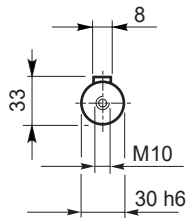
CMG 032 H..



CMGIS 032 H..

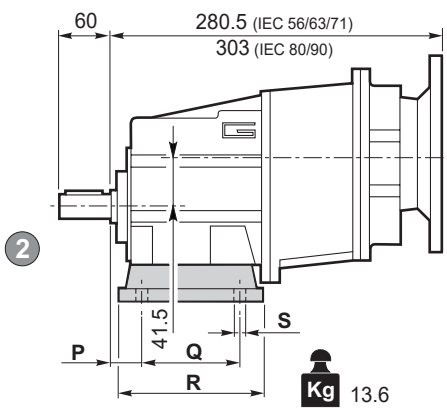


Eje de salida  
Eixo saída  
Output shaft

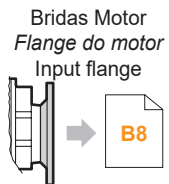
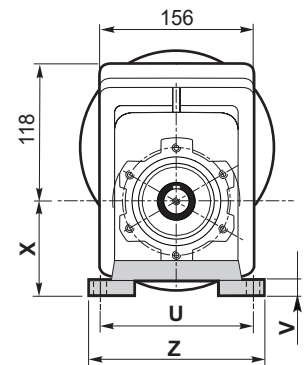
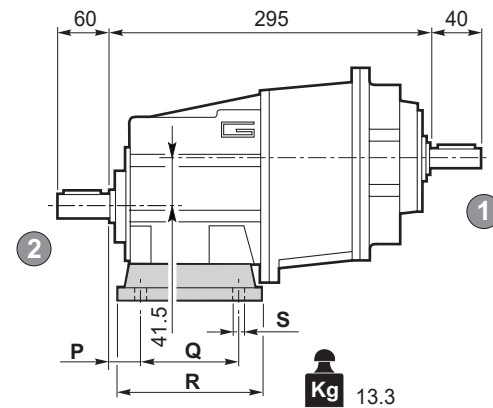


Eje de entrada  
Eixo entrada  
Input shaft

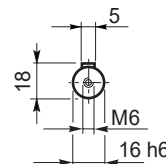
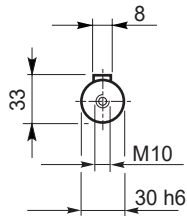
CMG 033 H..



CMGIS 033 H..



Eje de salida  
Eixo saída  
Output shaft

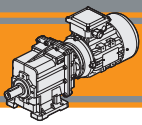


Eje de entrada  
Eixo entrada  
Input shaft

Versión H / Versão H / H Version

CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Base / Foot	
									Tipo / Tipo / Type	Peso / Peso / Weight [kg]
032 033	30	105	136	14	160	14	95	194	H95	1.5
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6
	19.5	149.5	184	14	180	18	130	214	H130	2.9

Preferencial / Preferencial / Preferred



**CMG**

Motorreductores de engranajes cilíndricos  
 Motores de engrenagens helicoidais  
 Helical in-line gearmotors

60 Hz

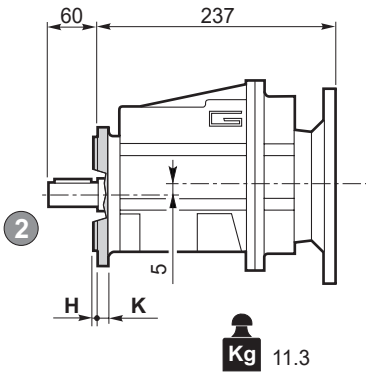
Dimensiones

Dimensões

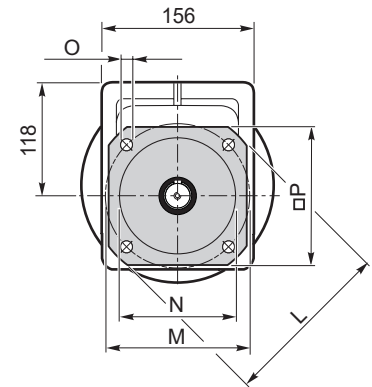
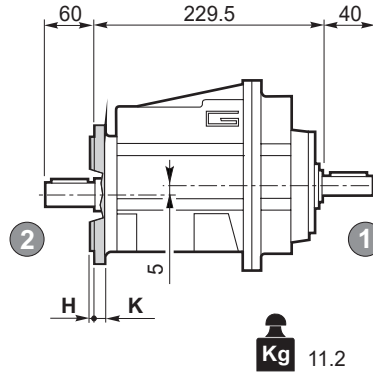
Dimensions

**CMG 032 F.. - CMG 033 F..**

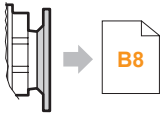
**CMG 032 F..**



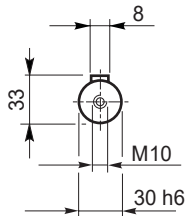
**CMGIS 032 F..**



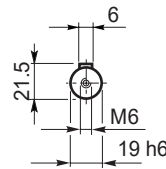
Bridas Motor  
Flange do motor  
Input flange



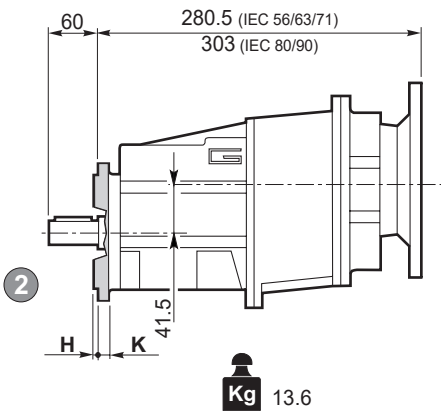
Eje de salida  
Eixo saída  
Output shaft



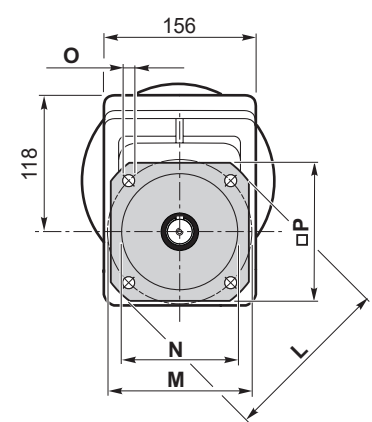
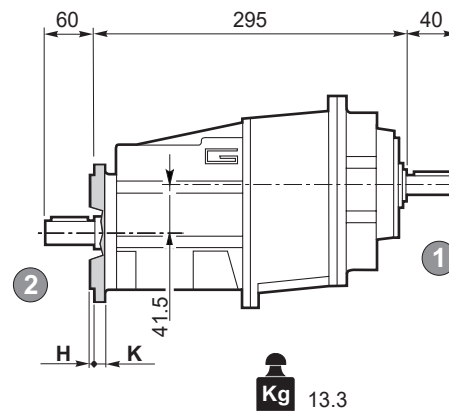
Eje de entrada  
Eixo entrada  
Input shaft



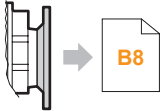
**CMG 033 F..**



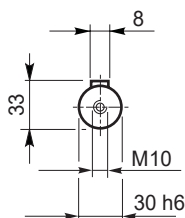
**CMGIS 033 F..**



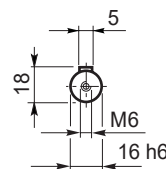
Bridas Motor  
Flange do motor  
Input flange



Eje de salida  
Eixo saída  
Output shaft

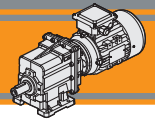


Eje de entrada  
Eixo entrada  
Input shaft



Versión F / Versão F / F Version

CMG CMGIS	H	K	L	M	N f7	O	P	Brida / Flange / Flange	
								Tipo / Tipo / Type	Peso / Peso / Weight [kg]
032 033	3.5	11	160	130	110	9	140	F160	1.0
	3.5	11	200	165	130	11	165	F200	1.8
	4	13	250	215	180	14	215	F250	2.9



Dimensiones

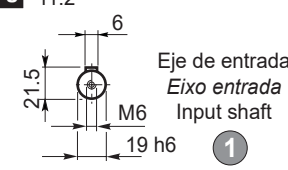
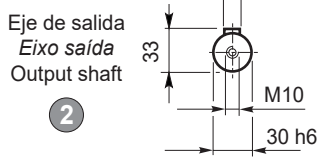
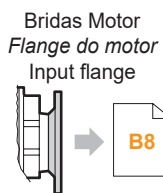
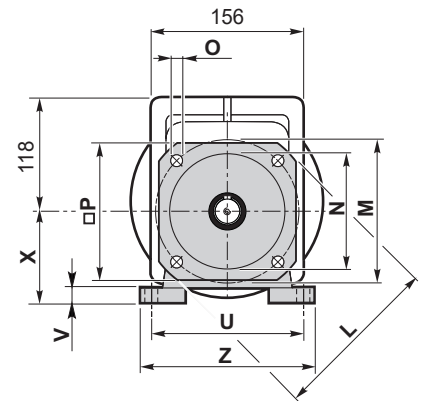
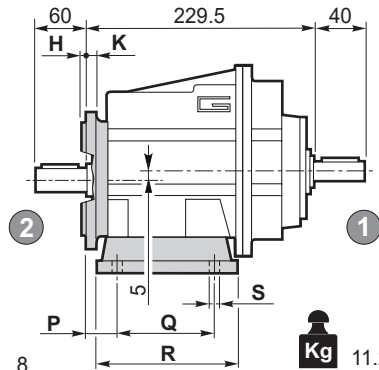
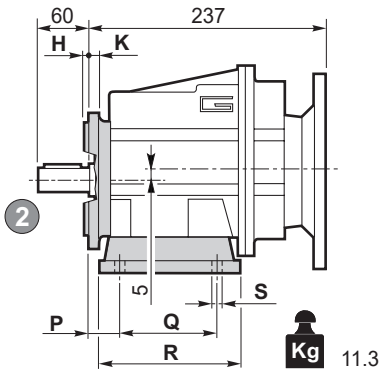
Dimensões

Dimensions

CMG 032 H./F.. - CMG 033 H./F..

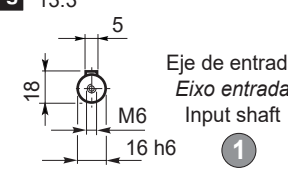
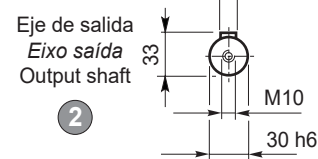
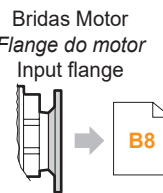
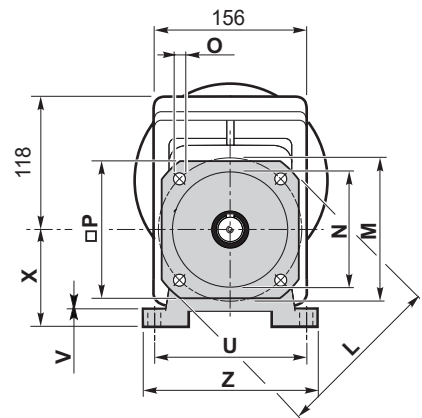
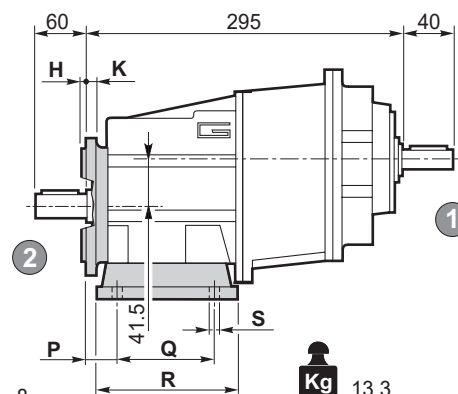
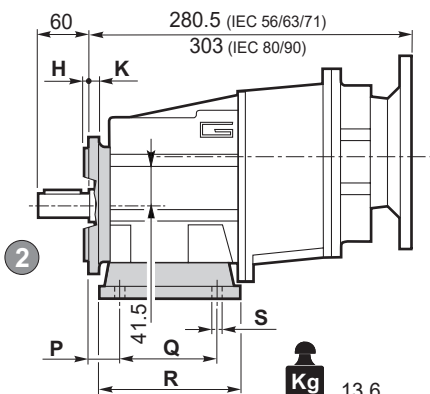
CMG 032 H./F..

CMGIS 032 H./F..



CMG 033 H./F..

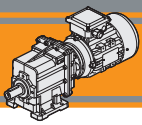
CMGIS 033 H./F..



Versión H / Versão H / H Version									Combinazioni possibili H/F Possible combinations H/F				
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Base / Foot		F160	F200	F250
									Tipo / Tipo / Type	Kg			
032 033	30	105	136	14	160	14	95	194	H95	1.5	•	•	
	30	100	150	11	150	14	110	185	H110	1.9	•	•	
	18	70			160								
	30	165	195	14	135	14	115	170	H115	2.2	•	•	•
	35	110	160	14	170	14	120	210	H120	2.6	•	•	•
	19.5	149.5	184	14	180	18	130	214	H130	2.9	•	•	•

Preferencial / Preferencial / Preferred • Combinaciones posibles H/F / Combinações possíveis H/F / Possible combinations H/F

Versión F / Versão F / F Version								Brida / Flange / Flange		
CMG CMGIS	H	K	L	M	N f7	O	P	Tipo / Tipo / Type		Peso / Peso / Weight [kg]
								032 033	3.5	
3.5	11	200	165	130	11	165	F200		1.8	
4	13	250	215	180	14	215	F250		2.9	



**CMG**

Motorreductores de engranajes cilíndricos  
 Motoredutores de engrenagens helicoidais  
 Helical in-line gearmotors

**60 Hz**

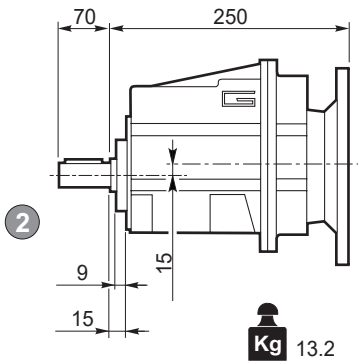
Dimensiones

Dimensões

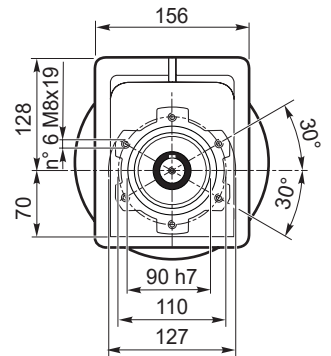
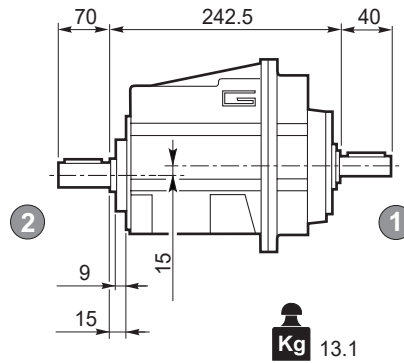
Dimensions

**CMG 042 U - CMG 043 U**

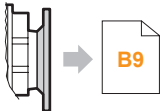
**CMG 042 U**



**CMGIS 042 U**

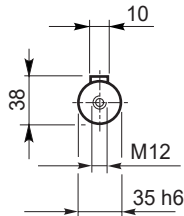


Bridas Motor  
 Flange do motor  
 Input flange



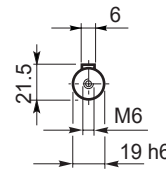
Eje de salida  
 Eixo saída  
 Output shaft

2

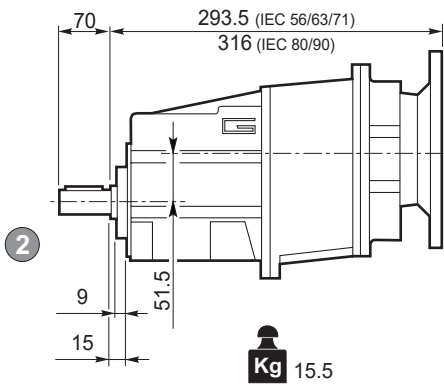


Eje de entrada  
 Eixo entrada  
 Input shaft

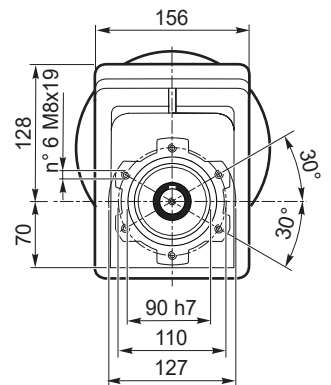
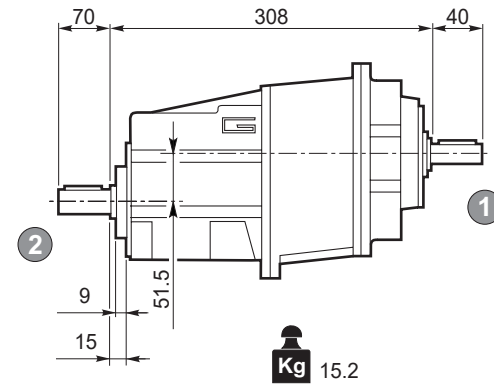
1



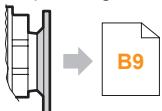
**CMG 043 U**



**CMGIS 043 U**

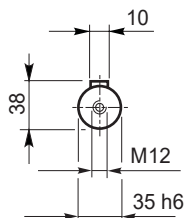


Bridas Motor  
 Flange do motor  
 Input flange



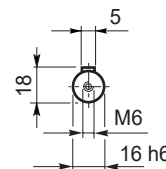
Eje de salida  
 Eixo saída  
 Output shaft

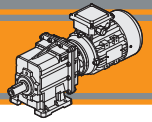
2



Eje de entrada  
 Eixo entrada  
 Input shaft

1





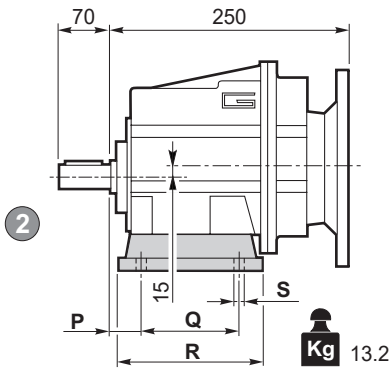
Dimensiones

Dimensões

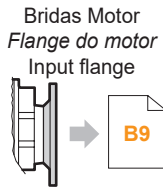
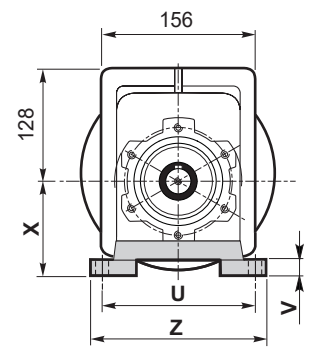
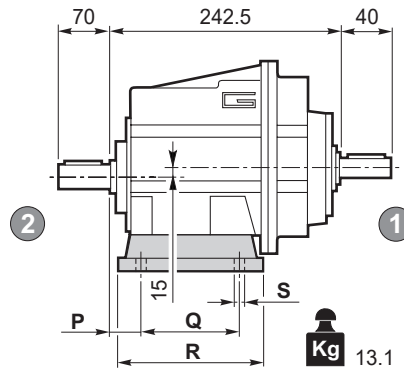
Dimensions

CMG 042 H.. - CMG 043 H..

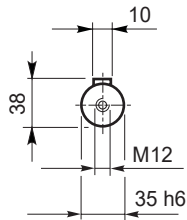
CMG 042 H..



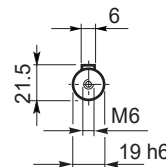
CMGIS 042 H..



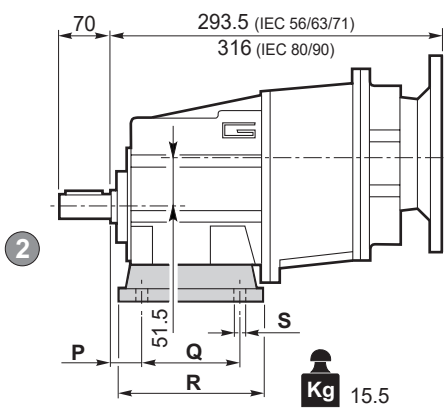
Eje de salida  
Eixo saída  
Output shaft



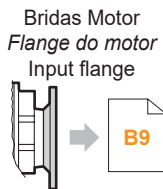
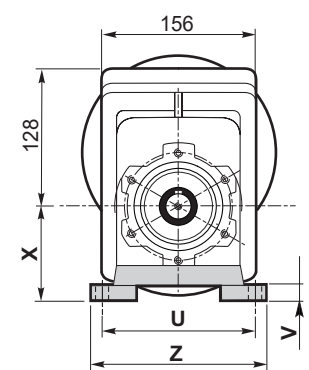
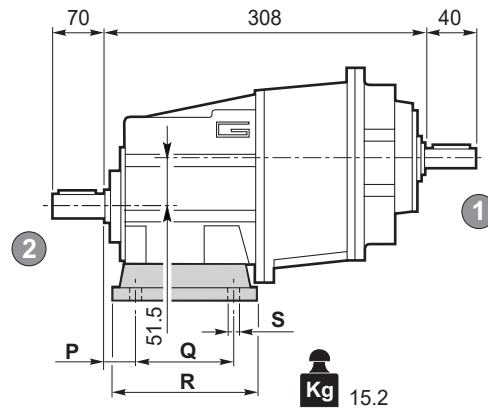
Eje de entrada  
Eixo entrada  
Input shaft



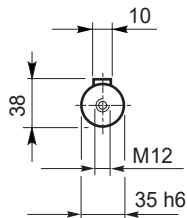
CMG 043 H..



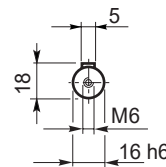
CMGIS 043 H..



Eje de salida  
Eixo saída  
Output shaft



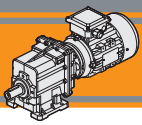
Eje de entrada  
Eixo entrada  
Input shaft



Versión H / Versão H / H Version

CMG CMGIS	P	Q	R	S	U	V	X	Z	Patás / Base / Foot	
									Tipo / Tipo / Type	Peso / Peso / Weight [kg]
042 043	30	105	136	14	160	14	95	194	H95	1.5
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6
	19.5	149.5	184	14	180	18	130	214	H130	2.9

Preferencial / Preferencial / Preferred



**CMG**

Motorreductores de engranajes cilíndricos  
 Motores de engrenagens helicoidais  
 Helical in-line gearmotors

60 Hz

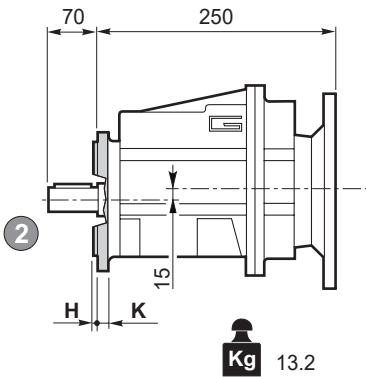
Dimensiones

Dimensões

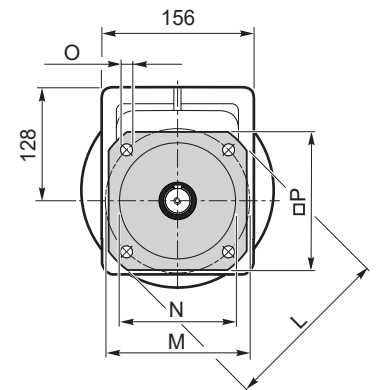
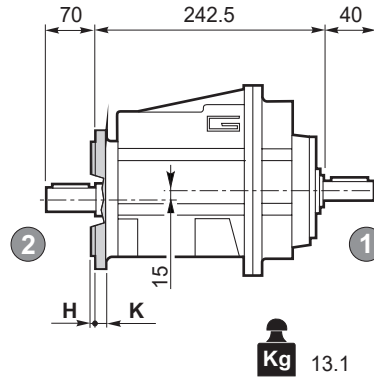
Dimensions

**CMG 042 F.. - CMG 043 F..**

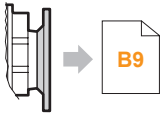
**CMG 042 F..**



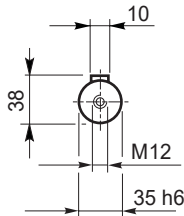
**CMGIS 042 F..**



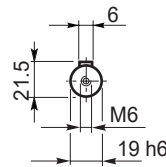
Bridas Motor  
Flange do motor  
Input flange



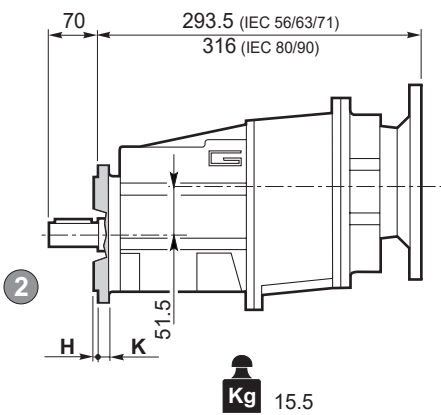
Eje de salida  
Eixo saída  
Output shaft



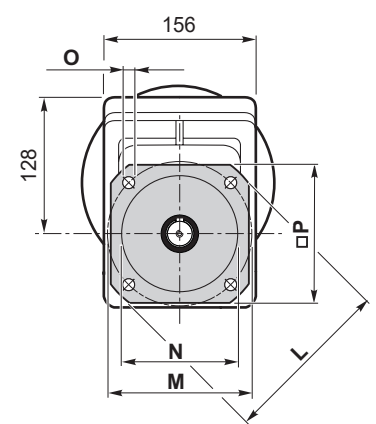
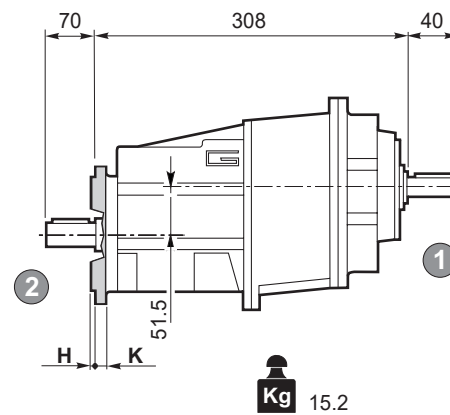
Eje de entrada  
Eixo entrada  
Input shaft



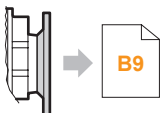
**CMG 043 F..**



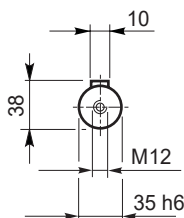
**CMGIS 043 F..**



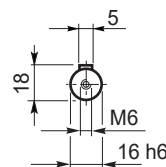
Bridas Motor  
Flange do motor  
Input flange



Eje de salida  
Eixo saída  
Output shaft



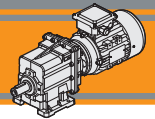
Eje de entrada  
Eixo entrada  
Input shaft



**Versión F / Versão F / F Version**

CMG CMGIS	H	K	L	M	N f7	O	P	Brida / Flange / Flange	
								Tipo / Tipo / Type	Peso / Peso / Weight [kg]
042 043	3.5	11	160	130	110	9	140	F160	1.0
	3.5	11	200	165	130	11	165	F200	1.8
	4	13	250	215	180	14	215	F250	2.9





Dimensiones

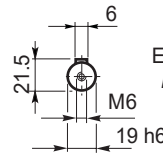
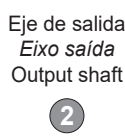
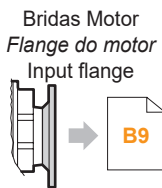
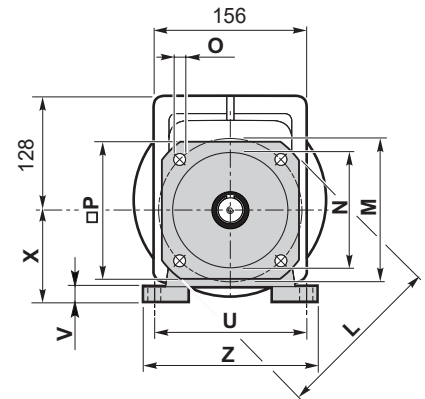
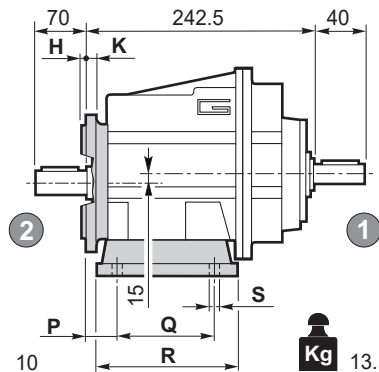
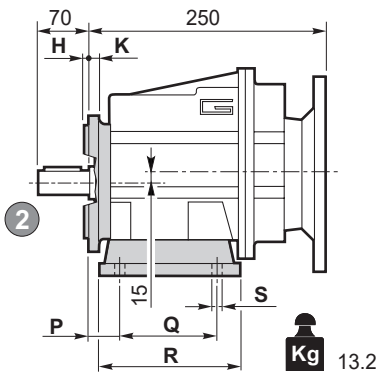
Dimensões

Dimensions

CMG 042 H../F.. - CMG 043 H../F..

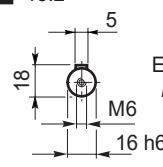
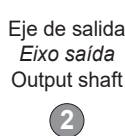
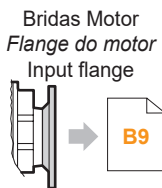
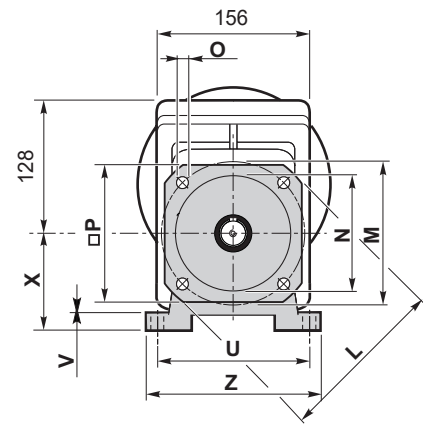
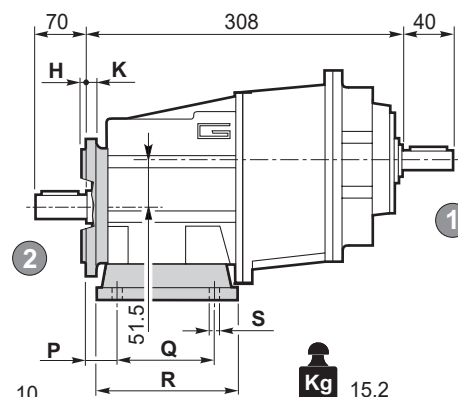
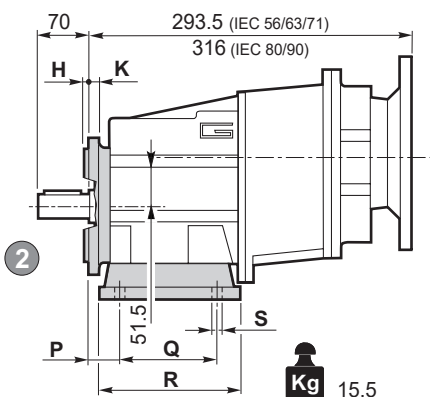
CMG 042 H../F..

CMGIS 042 H../F..



CMG 043 H../F..

CMGIS 043 H../F..



Versión H / Versão H / H Version										Combinaciones posibles H/F Combinacoes possíveis H/F Possible combinations H/F			
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patás / Base / Foot		F160	F200	F250
									Tipo / Tipo / Type	Kg			
042 043	30	105	136	14	160	14	95	194	H95	1.5	•	•	
	30	100	150	11	150	14	110	185	H110	1.9	•	•	
	18	70			160								
	30	165	195	14	135	14	115	170	H115	2.2	•	•	•
	35	110	160	14	170	14	120	210	H120	2.6	•	•	•
19.5	149.5	184	14	180	18	130	214	H130	2.9	•	•	•	

Preferencial / Preferencial / Preferred • Combinaciones posibles H/F / Combinacoes possíveis H/F / Possible combinations H/F

Versión F / Versão F / F Version										Brida / Flange / Flange	
CMG CMGIS	H	K	L	M	N f7	O	P	Peso / Peso / Weight			
								Tipo / Tipo / Type	[kg]		
042 043	3.5	11	160	130	110	9	140	F160	1.0		
	3.5	11	200	165	130	11	165	F200	1.8		
	4	13	250	215	180	14	215	F250	2.9		



**TRANSTECNO**<sup>®</sup>  
the modular gearmotor

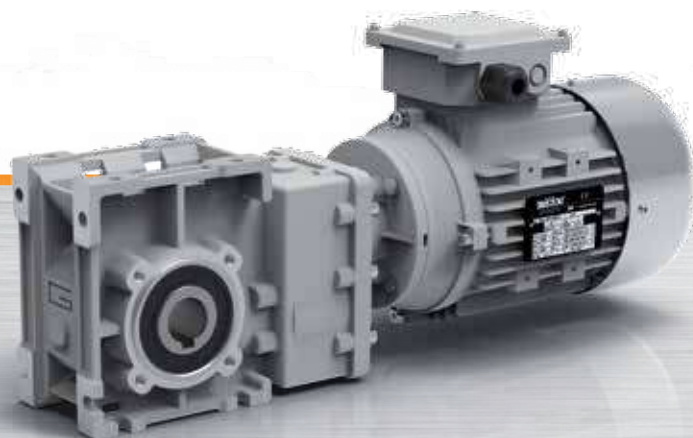
**CMB**



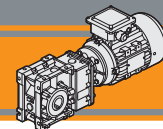
**60HZ**

**IEC**

Motorreductores de ejes ortogonales  
**Motoredutores com eixos ortogonais**  
Helical bevel gearmotors





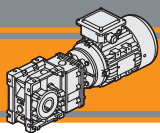


Índice	Índice	Index	Pag. Pág. Page
Características técnicas	<i>Características técnicas</i>	Technical features	<b>C2</b>
Clasificación	<i>Designação</i>	Classification	<b>C2</b>
Sentidos de rotación	<i>Sentidos de rotação</i>	Direction of rotation	<b>C3</b>
Nomenclatura	<i>Simbologia</i>	Legend	<b>C3</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>C3</b>
Cargas radiales	<i>Cargas radiais</i>	Radial loads	<b>C4</b>
Datos técnicos	<i>Dados técnicos</i>	Technical data	<b>C5</b>
Dimensiones	<i>Dimensões</i>	Dimensions	<b>C16</b>
Accesorios	<i>Acessórios</i>	Accessories	<b>C16</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**



# CMB

## Motorreductores de ejes ortogonales Motoredutores com eixos ortogonais Helical bevel gearmotors

### 60 Hz

#### Características técnicas

Los motoredutores de ejes ortogonales serie CMB se caracterizan por un alto grado de modularidad, de hecho, fueron desarrollados con una carcasa completamente intercambiable con la de los reductores de tornillo sinfin de la serie CM. Por lo tanto, se configuran de acuerdo con las necesidades de la aplicación: con brida de salida, eje de salida, brazo de reacción.

Características comunes a toda la serie:

- Carcasa en aluminio en los tamaños.
- Engranajes siempre rectificadas.
- Lubricación permanente con aceite sintético de larga vida.

#### Características técnicas

Os motoredutores CMB, são caracterizados por um elevado grau de modularidade: sua carcaça é completamente intercambiável com a série CM (rosca sem-fim). Eles são configurados de acordo com as necessidades da aplicação, com flange de saída, eixo de saída ou braço de torção.

Características comuns a toda a série:

- Carcaça em alumínio nos tamanhos.
- Lubrificação permanente com óleo sintético.
- Lubrificação permanente com óleo sintético

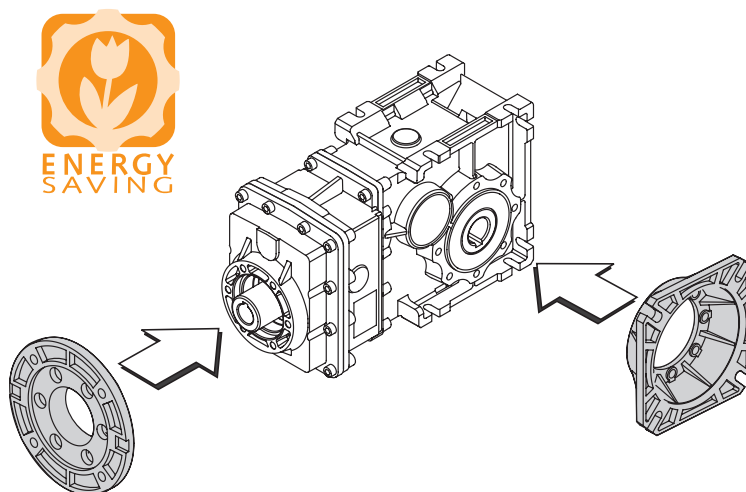
#### Technical features

The high degree of modularity of CMB helical bevel gearmotors allows it to be completely interchangeable with CM wormgearboxes.

It is possible to set up the version required using output flanges, output shafts and optional torque arms.

Common features of all CMB range are:

- Die-cast aluminum housing.
- Ground helical gears.
- Permanent synthetic oil long-life lubrication.



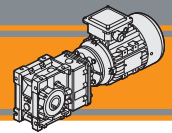
#### Clasificación

#### Designação

#### Classification

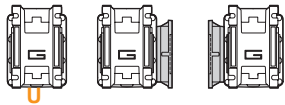
REDUCTOR / REDUTOR / GEARBOX										
CMB	63 3	U	9.81	D25	90	B5	SZDX	BR SX	90	
Tipo Tipo Type	Tamaño Tamanho Size	Etapas Estágios Stages	Versión Versão Version	Relación de reducción Rapporto Ratio	Eje de salida hueco Eixo saída vazado Hollow output shaft	IEC 	Forma constructiva Forma construtiva Version	Ø Eje de salida Ø Eixo saída Ø Output shaft	Brazo de reacción Braço de reação Torque arm	Ángulo Ângulo Angle
 <b>CMB</b>	<b>40</b> <b>50</b> <b>63</b> <b>90</b>	<b>2</b> <b>3</b>	<b>U</b> <b>FD</b> <b>FS</b> <b>FBD</b> <b>FBS</b> <b>FLD</b> <b>FLS</b>	Véase tablas Veja tabelas see tables	Véase tablas Veja tabelas see tables	<b>56..</b> <b>—</b> <b>90..</b>	<b>B5</b> <b>B14</b>	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BR SX</b>  *	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>

REDUCTOR / REDUTOR / GEARBOX									
CMBIS	63 3	U	9.81	D25	SZDX	BR SX	90		
Tipo Tipo Type	Tamaño Tamanho Size	Etapas Estágios Stages	Versión Versão Version	Relación de reducción Rapporto Ratio	Eje de salida hueco Eixo saída vazado Hollow output shaft	Ø Eje de salida Ø Eixo saída Ø Output shaft	Brazo de reacción Braço de reação Torque arm	Ángulo Ângulo Angle	
 <b>CMBIS</b>	<b>40</b> <b>50</b> <b>63</b> <b>90</b>	<b>2</b> <b>3</b>	<b>U</b> <b>FD</b> <b>FS</b> <b>FBD</b> <b>FBS</b> <b>FLD</b> <b>FLS</b>	Véase tablas Veja tabelas see tables	Véase tablas Veja tabelas see tables	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BR SX</b>  *	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	



## Clasificación

Relación de reducción  
 Versão Redutor  
 Gearbox Version

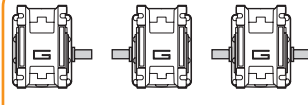


**FD**  
**FLD**  
**FBD**

**FS**  
**FLS**  
**FBS**

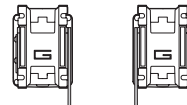
## Designação

Eje de salida  
 Eixo de saída  
 Output shaft



**SZDX**      **SZSX**      **DZ**

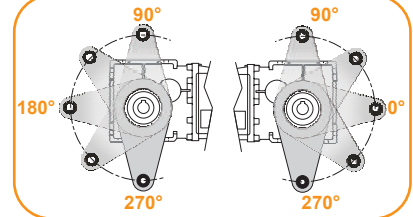
Brazo de reacción  
 Braço de reação  
 Torque arm \*



**BRDX**      **BRSX**

## Classification

Ángulo  
 Ângulo  
 Angle



NOTA: el brazo de reacción se suministra desmontado.

\* NOTA: o braço de reação é fornecido desmontado.

NOTE: the torque arm will be supplied not assembled.

MOTOR / MOTOR / MOTOR

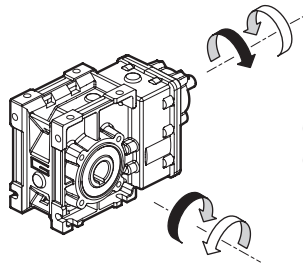
0.75kW	4p	3ph	230/400V	60Hz	T1
Potencia Potência Power	Polos Pólos Poles	Fases Fases Phases	Tensión Tensão Voltage	Frecuencia Frequência Frequency	Posición caja de bornes Pos. Conexão Terminal box pos.
Veja tabelas Véase tablas see tables	<b>2p</b> <b>4p</b> <b>6p</b> <b>8p</b>	<b>1ph</b> <b>3ph</b>	<b>230V</b> <b>230/400V</b>	<b>60Hz</b>	<b>T1 (Std)</b>  <b>T4</b> <b>T2</b> <b>T3</b>

## Sentidos de rotación

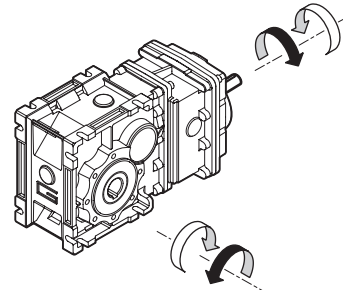
## Sentidos de rotação

## Direction of rotation

**CMB...2**  
**CMBIS..2**



**CMB...3**  
**CMBIS..3**



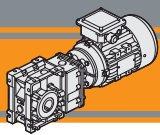
## Nomenclatura

## Simbologia

## Legend

$n_1$	[rpm]	Velocidad de entrada / Velocidade na entrada / Input speed
$n_2$	[rpm]	Velocidad de salida / Velocidade na saída / Output speed
$i$		Relación de reducción / Relação de redução / Ratio
$P_1$	[kW]	Potencia en la entrada / Potência da entrada / Input power
$M_2$	[Nm]	Par en la salida en función de $P_1$ / Torque na saída em função de $P_1$ / Output torque referred to $P_1$
$P_{n1}$	[kW]	Potencia nominal en la entrada / Potência nominal na entrada / Nominal input power
$M_{n2}$	[Nm]	Par nominal en la salida en función de $P_{n1}$ / Torque nominal na saída em função de $P_{n1}$ / Nominal output torque referred to $P_{n1}$
$sf$		Factor de servicio / Fator de serviço / Service factor
$R_2$	[N]	Carga radial admisible en la salida / Carga radial admissível na saída / Maximum output radial load
$A_2$	[N]	Carga axial admisible en la salida / Carga axial admissível na saída / Maximum output axial load





**Lubricación**

Todos los motoredutores de ejes ortogonales se suministran con lubricante sintético, viscosidad 320, por lo que se pueden instalar en cualquier posición de montaje y no requieren mantenimiento.

**Lubrificação**

Todos os são fornecidos com lubrificante sintético, viscosidade 320, de modo que possam ser instalado em qualquer posição.

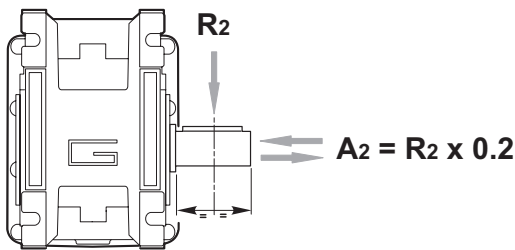
**Lubrication**

Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use CMB gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

**Cargas radiales**

**Cargas radiais**

**Radial loads**

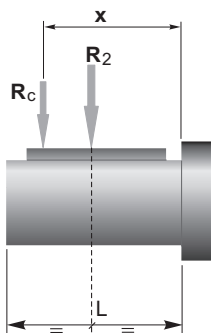


n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]			
	CMB 402	CMB 502	CMB 633	CMB 903
400	905	1116	1835	2682
300	996	1228	2020	2952
200	1141	1406	2312	3379
170	1204	1484	2441	3567
140	1414	1743	2604	3806
100	1582	1949	2913	4686
90	1638	2019	3321	4853
60	2047	2490	3801	5556
40	2524	3029	4492	6614
30	2778	3334	5159	7540
20	3180	3816	5906	8631
15	3500	4200	6500	9500
10	3500	4200	6500	9500

Cuando la carga radial no se aplica en el punto medio del eje, es necesario calcular la carga efectiva a través la siguiente fórmula:

Quando a carga radial resultante não é aplicada na linha mediana da eixo, é preciso calcular aquela efetiva com a seguinte fórmula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

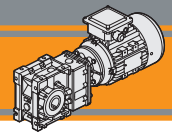


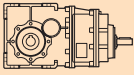
	CMB 402	CMB 502	CMB 633	CMB 903
<b>a</b>	86	104	118	157
<b>b</b>	66	79	93	117
<b>R<sub>2MAX</sub></b>	3500	4200	6500	9500

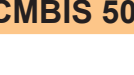
$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valores dados en la tabla  
a, b = valores referidos na tabela  
a, b = values given in the table


**Datos técnicos**
**Dados técnicos**
**Technical data**
 **$n_1$  1750 [min<sup>-1</sup>]**

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$	IEC Motores aplicables IEC Motores aplicáveis IEC Motor adapters			
					56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14
<b>CMBIS 402</b>								
	283	40	1.3	6.18				*
	234	40	1.0	7.49				*
	190	40	0.85	9.20				*
	148	45	0.74	11.83				*
	140	45	0.70	12.48				*
	118	45	0.59	14.83				*
	99	45	0.50	17.63				*
	94	55	0.58	18.60				*
	78	55	0.48	22.33				*
	73	55	0.45	23.91				*
	61	65	0.44	28.89				*
	57	65	0.41	30.84				*
	52	65	0.38	33.57				*
	49	65	0.36	35.63				*
	41	65	0.30	42.75			*	*
	32	65	0.23	55.31			*	*
	30	65	0.21	59.06			*	*
	27	65	0.20	64.29			*	*
	24	65	0.17	72.50			*	*

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$	IEC Motores aplicables IEC Motores aplicáveis IEC Motor adapters			
					56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14
<b>CMBIS 502</b>								
	283	70	2.2	6.18				
	234	70	1.8	7.49				
	190	70	1.5	9.20				
	148	90	1.5	11.83				
	140	90	1.4	12.48				
	118	90	1.2	14.83				
	99	90	1.0	17.63				
	94	110	1.2	18.60				
	78	110	0.96	22.33				
	73	110	0.90	23.91				
	61	125	0.84	28.89				
	57	125	0.79	30.84				
	52	125	0.73	33.57				
	49	125	0.68	35.63				
	41	125	0.57	42.75				*
	32	125	0.44	55.31				*
	30	125	0.41	59.06				*
	27	125	0.38	64.29				*
	24	125	0.34	72.50				*

**NOTA**

Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.



\* =El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico

**N.B.**

As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.



\* =O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

**N.B.**

Highlighted areas indicate motor inputs available on each size of unit.

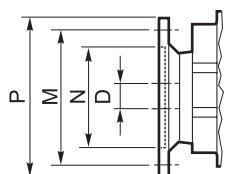


\* =The service factor (sf) has to be selected depending on application: please contact our Technical Department.

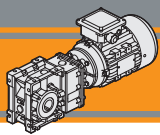
Antes de seleccionar cualquier reductor, favor de revisar los valores dedesempeño en las páginas C8 a la C11.

Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas C8 a pag. C11.

Before selecting any gearbox, please read the performance values shown in the tables on page C8 to C11.



IEC Dimension / IEC Dimensões / IEC Dimensions								
	56 B5	56 B14	63 B5	63 B14	71 B5	71 B14	80 B5	80 B14
<b>N</b>	80	50	95	60	110	70	130	80
<b>M</b>	100	65	115	75	130	85	165	100
<b>P</b>	120	80	140	90	160	105	200	120
<b>D</b>	9		11		14		19	

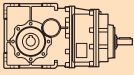


**Datos técnicos**

**Dados técnicos**

**Technical data**

**n<sub>1</sub> 1750 [min<sup>-1</sup>]**

	n <sub>2</sub> [min <sup>-1</sup> ]	Mn <sub>2</sub> [Nm]	Pn <sub>1</sub> [kW]	i	IEC Motores aplicables IEC Motores aplicáveis IEC Motor adapters					
					56 B5/B14	63 B5/B14	71 B5/B14	80 B5/B14	90 B5/B14	
<b>CMBIS 633</b>										
266	150	4.4	6.58							
219	150	3.7	7.99							
178	150	3.0	9.81							
168	150	2.8	10.44							
140	150	2.3	12.53							
131	150	2.2	13.31							
111	170	2.1	15.81							
98	220	2.4	17.77							
81	220	2.0	21.56							
66	220	1.6	26.48							
62	220	1.5	28.17							
52	220	1.3	33.81							
49	220	1.2	35.92							*
45	250	1.3	38.88							*
37	250	1.0	47.16							*
30	250	0.84	57.93							*
28	250	0.79	61.63							*
24	250	0.66	73.96							*
22	250	0.62	78.58				*			*
19	250	0.52	93.33				*			*
12	250	0.35	140.52				*			*
9.6	250	0.27	181.81			*	*			*
8.3	250	0.23	211.31			*	*			*
7.3	250	0.20	238.31			*	*			*

**NOTA**

Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.

**N.B.**

As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.

**N.B.**

Highlighted areas indicate motor inputs available on each size of unit.



\* = El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico



\* = O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

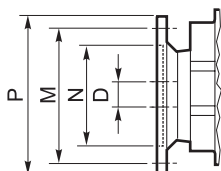


\* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

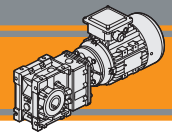
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C8 a la C11.

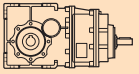
Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas C8 a pag. C11.

Before selecting any gearbox, please read the performance values shown in the tables on page C8 to C11.



IEC Dimension / IEC Dimensões / IEC Dimensions										
	56 B5	56 B14	63 B5	63 B14	71 B5	71 B14	80 B5	80 B14	90 B5	90 B14
<b>N</b>	80	50	95	60	110	70	130	80	130	95
<b>M</b>	100	65	115	75	130	85	165	100	165	115
<b>P</b>	120	80	140	90	160	105	200	120	200	140
<b>D</b>	9		11		14		19		24	


**Datos técnicos**
**Dados técnicos**
**Technical data**
 **$n_1$  1750 [min<sup>-1</sup>]**

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$	IEC Motores aplicables IEC Motores aplicáveis IEC Motor adapters			
					71 B5	80 B5/B14	90 B5/B14	100/112 B5/B14
<b>CMBIS 903</b>								
	263	280	8.2	6.65	B			
	219	280	6.8	8.00	B			
	180	280	5.6	9.74	B			
	156	280	4.9	11.21	B			
	124	300	4.1	14.09	B			
	98	450	4.9	17.95	B			
	81	450	4.1	21.60	B			
	67	450	3.3	26.30	B			
	58	450	2.9	30.25	B			
	45	500	2.5	39.26	B			*
	37	500	2.1	47.25	B			*
	30	500	1.7	57.52	B			*
	26	500	1.5	66.17	B			*
	21	500	1.2	83.20	B		*	*
	16	500	0.90	108.09	B		*	*
	13	500	0.74	132.23	B		*	*
	12	500	0.66	147.92	B		*	*
	10	500	0.58	167.09	B	*	*	*
	9.2	500	0.51	191.06	B	*	*	*
	7.9	500	0.44	221.88	B	*	*	*
	6.7	500	0.37	262.96	B	*	*	*

**NOTA**

Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.



\* = El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico

**N.B.**

As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.



\* = O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

**N.B.**

Highlighted areas indicate motor inputs available on each size of unit.

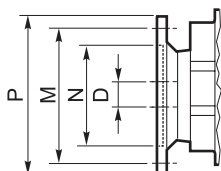


\* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

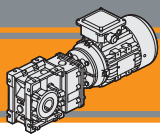
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C8 a la C11.

Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas C8 a pag. C11.

Before selecting any gearbox, please read the performance values shown in the tables on page C8 to C11.



IEC Dimension / IEC Dimensões / IEC Dimensions							
	71 B5	80 B5	80 B14	90 B5	90 B14	100/112 B5	100/112 B14
<b>N</b>	110	130	80	130	95	180	110
<b>M</b>	130	165	100	165	115	215	130
<b>P</b>	160	200	120	200	140	250	160
<b>D</b>	14	19		24		28	



# CMB

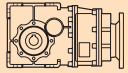

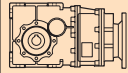

## Motorreductores de ejes ortogonales Motoredutores com eixos ortogonais Helical bevel gearmotors

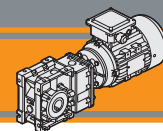
### 60 Hz

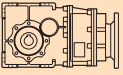

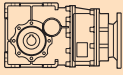

#### Datos técnicos

#### Dados técnicos

#### Technical data

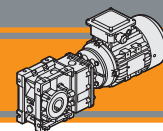
$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i					
<b>0.09</b>							<b>0.12</b>									
(0.12 hp)	283	2.9	14.0	6.18	CMB402	B5/B14	(0.16 hp)	24	46	5.5	73.96	CMB633	B5/B14			
	234	3.5	11.6	7.49			B5/B14		22	48	5.2			78.58	B5/B14	
56B4	190	4.2	9.4	9.20			B5/B14		63A4	19	57			4.4	93.33	B5/B14
(1750 min <sup>-1</sup> )	148	5.5	8.2	11.83			B5/B14		(1750 min <sup>-1</sup> )	12	86			2.9	140.52	B5/B14
	140	5.8	7.8	12.48			B5/B14			10	112			2.2	181.81	B5/B14
	118	6.8	6.6	14.83			B5/B14			8.3	130			1.9	211.31	B5/B14
	99	8.1	5.5	17.63			B5/B14			7.3	147			1.7	238.31	B5/B14
	94	8.6	6.4	18.60			B5/B14									
	78	10	5.3	22.33			B5/B14									
	73	11	5.0	23.91			B5/B14									
	61	13	4.9	28.89			B5/B14									
	57	14	4.6	30.84			B5/B14									
	52	15	4.2	33.57			B5/B14									
	49	16	4.0	35.63			B5/B14									
	41	20	3.3	42.75	B5/B14											
	32	26	2.5	55.31	B5/B14											
	30	27	2.4	59.06	B5/B14											
	27	30	2.2	64.29	B5/B14											
	24	33	1.9	72.50	B5/B14											
	32	26	4.9	55.31	CMB502	B5/B14		283	5.7	7.0	6.18	CMB402	B5/B14			
	30	27	4.6	59.06			B5/B14		234	6.9	5.8			7.49	B5/B14	
	27	30	4.2	64.29			B5/B14		63B4	190	8.5			4.7	9.20	B5/B14
	24	33	3.7	72.50			B5/B14		(1750 min <sup>-1</sup> )	148	11			4.1	11.83	B5/B14
	24	34	7.32	73.96	CMB633	B5/B14		140	12	3.9	12.48			B5/B14		
	22	36	6.89	78.58			B5/B14		118	14	3.3			14.83	B5/B14	
	19	43	5.80	93.33			B5/B14		99	16	2.8			17.63	B5/B14	
	13	65	3.85	140.52			B5/B14		94	17	3.2			18.60	B5/B14	
	10	84	2.98	181.81			B5/B14		78	21	2.7			22.33	B5/B14	
	8	98	2.56	211.31			B5/B14		73	22	2.5			23.91	B5/B14	
	7	110	2.27	238.31	B5/B14		61	27	2.4	28.89	B5/B14					
	30	27	4.6	59.06	B5/B14		57	28	2.3	30.84	B5/B14					
	27	30	4.2	64.29	B5/B14		52	31	2.1	33.57	B5/B14					
	24	33	3.7	72.50	B5/B14		49	33	2.0	35.63	B5/B14					
	24	34	7.32	73.96	CMB633	B5/B14		41	39	1.6	42.75	B5/B14				
	22	36	6.89	78.58			B5/B14		32	51	1.3	55.31	B5/B14			
	19	43	5.80	93.33			B5/B14		30	55	1.2	59.06	B5/B14			
	13	65	3.85	140.52			B5/B14		27	59	1.1	64.29	B5/B14			
	10	84	2.98	181.81			B5/B14		24	67	1.0	72.50	B5/B14			
	8	98	2.56	211.31			B5/B14			57	28	4.4	30.84	CMB502	B5/B14	
	7	110	2.27	238.31			B5/B14		52	31	4.0	33.57				
	30	27	4.6	59.06			B5/B14		49	33	3.8	35.63				
	27	30	4.2	64.29			B5/B14		41	39	3.2	42.75				
	24	33	3.7	72.50			B5/B14		32	51	2.4	55.31				
	24	34	7.32	73.96			B5/B14		30	55	2.3	59.06				
	22	36	6.89	78.58			B5/B14		27	59	2.1	64.29				
	19	43	5.80	93.33			B5/B14		24	67	1.9	72.50				
	13	65	3.85	140.52			B5/B14			30	53	4.7	57.93			
	10	84	2.98	181.81	B5/B14		28	57	4.4	61.63						
	8	98	2.56	211.31	B5/B14		24	68	3.7	73.96						
	7	110	2.27	238.31	B5/B14		22	73	3.4	78.58						
	30	27	4.6	59.06	B5/B14		19	86	2.9	93.33						
	27	30	4.2	64.29	B5/B14		12	130	1.9	140.52						
	24	33	3.7	72.50	B5/B14		10	168	1.5	181.81						
	24	34	7.32	73.96	B5/B14		8.3	195	1.3	211.31						
	22	36	6.89	78.58	B5/B14		7.3	220	1.1	238.31						
	19	43	5.80	93.33	B5/B14											
	13	65	3.85	140.52	B5/B14											
	10	84	2.98	181.81	B5/B14											
	8	98	2.56	211.31	B5/B14											
	7	110	2.27	238.31	B5/B14											
	30	27	4.6	59.06	B5/B14											
	27	30	4.2	64.29	B5/B14											
	24	33	3.7	72.50	B5/B14											
	24	34	7.32	73.96	CMB633	B5/B14		283	5.7	7.0	6.18	CMB502	B5/B14			
	22	36	6.89	78.58			B5/B14		234	6.9	5.8			7.49	B5/B14	
	19	43	5.80	93.33			B5/B14		63B4	190	8.5			4.7	9.20	B5/B14
	13	65	3.85	140.52			B5/B14		(1750 min <sup>-1</sup> )	148	11			4.1	11.83	B5/B14
	10	84	2.98	181.81			B5/B14		140	12	3.9			12.48	B5/B14	
	8	98	2.56	211.31			B5/B14		118	14	3.3			14.83	B5/B14	
	7	110	2.27	238.31			B5/B14		99	16	2.8			17.63	B5/B14	
	30	27	4.6	59.06			B5/B14		94	17	3.2			18.60	B5/B14	
	27	30	4.2	64.29			B5/B14		78	21	2.7			22.33	B5/B14	
	24	33	3.7	72.50			B5/B14		73	22	2.5			23.91	B5/B14	
	24	34	7.32	73.96			B5/B14		61	27	2.4			28.89	B5/B14	
	22	36	6.89	78.58			B5/B14		57	28	2.3			30.84	B5/B14	
	19	43	5.80	93.33			B5/B14		52	31	2.1			33.57	B5/B14	
	13	65	3.85	140.52			B5/B14		49	33	2.0			35.63	B5/B14	
	10	84	2.98	181.81	B5/B14		41	39	1.6	42.75	B5/B14					
	8	98	2.56	211.31	B5/B14		32	51	1.3	55.31	B5/B14					
	7	110	2.27	238.31	B5/B14		30	55	1.2	59.06	B5/B14					
	30	27	4.6	59.06	B5/B14		27	59	1.1	64.29	B5/B14					
	27	30	4.2	64.29	B5/B14		24	67	1.0	72.50	B5/B14					
	24	33	3.7	72.50	B5/B14			57	28	4.4	30.84	CMB502	B5/B14			
	24	34	7.32	73.96	B5/B14		52	31	4.0	33.57						
	22	36	6.89	78.58	B5/B14		49	33	3.8	35.63						
	19	43	5.80	93.33	B5/B14		41	39	3.2	42.75						
	13	65	3.85	140.52	B5/B14		32	51	2.4	55.31						
	10	84	2.98	181.81	B5/B14		30	55	2.3	59.06						
	8	98	2.56	211.31	B5/B14		27	59	2.1	64.29						
	7	110	2.27	238.31	B5/B14		24	67	1.9	72.50						
	30	27	4.6	59.06	B5/B14			30	53	4.7	57.93					
	27	30	4.2	64.29	B5/B14		28	57	4.4	61.63						
	24	33	3.7	72.50	B5/B14		24	68	3.7	73.96						
	24	34	7.32	73.96	B5/B14		22	73	3.4	78.58						
	22	36	6.89	78.58	B5/B14		19	86	2.9	93.33						
	19	43	5.80	93.33	B5/B14		12	130	1.9	140.52						
	13	65	3.85	140.52	B5/B14		10	168	1.5	181.81						
	10	84	2.98	181.81	B5/B14		8.3	195	1.3	211.31						
	8	98	2.56	211.31	B5/B14		7.3	220	1.1	238.31						
	7	110	2.27	238.31	B5/B14											
	30	27	4.6	59.06	B5/B14											
	27	30	4.2	64.29	B5/B14											
	24	33	3.7	72.50	B5/B14											
	24	34	7.32	73.96	CMB633	B5/B14		283	5.7	7.0	6.18	CMB502	B5/B14			
	22	36	6.89	78.58			B5/B14		234	6.9	5.8			7.49	B5/B14	
	19	43	5.80	93.33			B5/B14		63B4	190	8.5			4.7	9.20	B5/B14
	13	65	3.85	140.52			B5/B14		(1750 min <sup>-1</sup> )	148	11			4.1	11.83	B5/B14
	10	84	2.98	181.81			B5/B14		140	12	3.9			12.48	B5/B14	
	8	98	2.56	211.31			B5/B14		118	14	3.3			14.83	B5/B14	
	7	110	2.27	238.31			B5/B14		99	16	2.8			17.6		

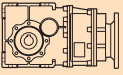

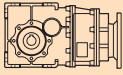


**Datos técnicos**
**Dados técnicos**
**Technical data**

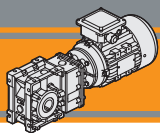
$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i						
<b>0.25</b>							<b>0.37</b>										
(0.33 hp)	<b>283</b>	7.9	5.1	6.18	<b>CMB402</b>	<b>B5/B14</b>	(0.50 hp)	<b>283</b>	12	3.4	6.18	<b>CMB402</b>	<b>B5/B14</b>				
	<b>234</b>	10	4.2	7.49			<b>B5/B14</b>	<b>B5/B14</b>		<b>234</b>	14			2.8	7.49	<b>B5/B14</b>	<b>B5/B14</b>
63C4	<b>190</b>	12	3.4	9.20			<b>B5/B14</b>	<b>B5/B14</b>	71A4	<b>190</b>	17			2.3	9.20	<b>B5/B14</b>	<b>B5/B14</b>
(1750 min <sup>-1</sup> )	<b>148</b>	15	3.0	11.83			<b>B5/B14</b>	<b>B5/B14</b>	(1750 min <sup>-1</sup> )	<b>148</b>	22			2.0	11.83	<b>B5/B14</b>	<b>B5/B14</b>
	<b>140</b>	16	2.8	12.48			<b>B5/B14</b>	<b>B5/B14</b>		<b>140</b>	24			1.9	12.48	<b>B5/B14</b>	<b>B5/B14</b>
	<b>118</b>	19	2.4	14.83			<b>B5/B14</b>	<b>B5/B14</b>		<b>118</b>	28			1.6	14.83	<b>B5/B14</b>	<b>B5/B14</b>
	<b>99</b>	23	2.0	17.63			<b>B5/B14</b>	<b>B5/B14</b>		<b>99</b>	33			1.3	17.63	<b>B5/B14</b>	<b>B5/B14</b>
	<b>94</b>	24	2.3	18.60			<b>B5/B14</b>	<b>B5/B14</b>		<b>94</b>	35			1.6	18.60	<b>B5/B14</b>	<b>B5/B14</b>
	<b>78</b>	29	1.9	22.33			<b>B5/B14</b>	<b>B5/B14</b>		<b>78</b>	42			1.3	22.33	<b>B5/B14</b>	<b>B5/B14</b>
	<b>73</b>	31	1.8	23.91			<b>B5/B14</b>	<b>B5/B14</b>		<b>73</b>	45			1.2	23.91	<b>B5/B14</b>	<b>B5/B14</b>
	<b>61</b>	37	1.8	28.89			<b>B5/B14</b>	<b>B5/B14</b>		<b>61</b>	55			1.2	28.89	<b>B5/B14</b>	<b>B5/B14</b>
	<b>57</b>	40	1.6	30.84			<b>B5/B14</b>	<b>B5/B14</b>		<b>57</b>	59			1.1	30.84	<b>B5/B14</b>	<b>B5/B14</b>
	<b>52</b>	43	1.5	33.57			<b>B5/B14</b>	<b>B5/B14</b>		<b>52</b>	64			1.0	33.57	<b>B5/B14</b>	<b>B5/B14</b>
	<b>49</b>	46	1.4	35.63			<b>B5/B14</b>	<b>B5/B14</b>		<b>49</b>	68			1.0	35.63	<b>B5/B14</b>	<b>B5/B14</b>
	<b>41</b>	55	1.2	42.75	<b>B5/B14</b>	<b>B5/B14</b>		<b>283</b>	12	6.0	6.18	<b>CMB502</b>	<b>B5/B14</b>				
	<b>32</b>	71	0.9	55.31	<b>B5/B14</b>	<b>B5/B14</b>		<b>234</b>	14	4.9	7.49			<b>B5/B14</b>	<b>B5/B14</b>		
	<b>30</b>	76	0.9	59.06	<b>B5/B14</b>	<b>B5/B14</b>		<b>190</b>	17	4.0	9.20			<b>B5/B14</b>	<b>B5/B14</b>		
	<b>94</b>	24	4.6	18.60	<b>CMB502</b>	<b>B5/B14</b>		<b>148</b>	22	4.0	11.83			<b>B5/B14</b>	<b>B5/B14</b>		
	<b>78</b>	29	3.8	22.33			<b>B5/B14</b>	<b>B5/B14</b>		<b>140</b>	24			3.8	12.48	<b>B5/B14</b>	<b>B5/B14</b>
	<b>73</b>	31	3.6	23.91			<b>B5/B14</b>	<b>B5/B14</b>		<b>118</b>	28			3.2	14.83	<b>B5/B14</b>	<b>B5/B14</b>
	<b>61</b>	37	3.4	28.89			<b>B5/B14</b>	<b>B5/B14</b>		<b>99</b>	33			2.7	17.63	<b>B5/B14</b>	<b>B5/B14</b>
	<b>57</b>	40	3.2	30.84			<b>B5/B14</b>	<b>B5/B14</b>		<b>94</b>	35			3.1	18.60	<b>B5/B14</b>	<b>B5/B14</b>
	<b>52</b>	43	2.9	33.57			<b>B5/B14</b>	<b>B5/B14</b>		<b>78</b>	42			2.6	22.33	<b>B5/B14</b>	<b>B5/B14</b>
	<b>49</b>	46	2.7	35.63			<b>B5/B14</b>	<b>B5/B14</b>		<b>73</b>	45			2.4	23.91	<b>B5/B14</b>	<b>B5/B14</b>
	<b>41</b>	55	2.3	42.75			<b>B5/B14</b>	<b>B5/B14</b>		<b>61</b>	55			2.3	28.89	<b>B5/B14</b>	<b>B5/B14</b>
	<b>32</b>	71	1.8	55.31			<b>B5/B14</b>	<b>B5/B14</b>		<b>57</b>	59			2.1	30.84	<b>B5/B14</b>	<b>B5/B14</b>
	<b>30</b>	76	1.7	59.06			<b>B5/B14</b>	<b>B5/B14</b>		<b>52</b>	64			2.0	33.57	<b>B5/B14</b>	<b>B5/B14</b>
	<b>27</b>	82	1.5	64.29			<b>B5/B14</b>	<b>B5/B14</b>		<b>49</b>	68			1.8	35.63	<b>B5/B14</b>	<b>B5/B14</b>
	<b>24</b>	93	1.3	72.50			<b>B5/B14</b>	<b>B5/B14</b>		<b>41</b>	81	1.5	42.75	<b>B5/B14</b>	<b>B5/B14</b>		
	<b>45</b>	50	5.0	38.88			<b>CMB633</b>	<b>B5/B14</b>		<b>32</b>	105	1.2	55.31	<b>B5/B14</b>	<b>B5/B14</b>		
	<b>37</b>	60	4.1	47.16					<b>B5/B14</b>	<b>B5/B14</b>		<b>30</b>	112	1.1	59.06	<b>B5/B14</b>	<b>B5/B14</b>
	<b>30</b>	74	3.4	57.93	<b>B5/B14</b>	<b>B5/B14</b>				<b>27</b>	122	1.0	64.29	<b>B5/B14</b>	<b>B5/B14</b>		
	<b>28</b>	79	3.2	61.63	<b>B5/B14</b>	<b>B5/B14</b>				<b>24</b>	138	0.9	72.50	<b>B5/B14</b>	<b>B5/B14</b>		
	<b>24</b>	95	2.6	73.96	<b>B5/B14</b>	<b>B5/B14</b>				<b>62</b>	53	4.1	28.17	<b>CMB633</b>	<b>B5/B14</b>		
	<b>22</b>	101	2.5	78.58	<b>B5/B14</b>	<b>B5/B14</b>				<b>52</b>	64	3.4	33.81			<b>B5/B14</b>	<b>B5/B14</b>
	<b>19</b>	120	2.1	93.33	<b>B5/B14</b>	<b>B5/B14</b>				<b>49</b>	68	3.2	35.92			<b>B5/B14</b>	<b>B5/B14</b>
	<b>12</b>	180	1.4	140.52	<b>B5/B14</b>	<b>B5/B14</b>				<b>45</b>	74	3.4	38.88			<b>B5/B14</b>	<b>B5/B14</b>
	<b>10</b>	233	1.1	181.81	<b>B5/B14</b>	<b>B5/B14</b>				<b>37</b>	90	2.8	47.16			<b>B5/B14</b>	<b>B5/B14</b>
	<b>8.3</b>	271	0.9	211.31	<b>B5/B14</b>	<b>B5/B14</b>				<b>30</b>	110	2.3	57.93			<b>B5/B14</b>	<b>B5/B14</b>
										<b>28</b>	117	2.1	61.63			<b>B5/B14</b>	<b>B5/B14</b>
										<b>24</b>	140	1.8	73.96			<b>B5/B14</b>	<b>B5/B14</b>
										<b>22</b>	149	1.7	78.58			<b>B5/B14</b>	<b>B5/B14</b>
										<b>19</b>	177	1.4	93.33			<b>B5/B14</b>	<b>B5/B14</b>
								<b>12</b>	267	0.9	140.52	<b>B5/B14</b>	<b>B5/B14</b>				
								<b>30</b>	109	4.6	57.52	<b>CMB903</b>	<b>B5</b>				
								<b>26</b>	126	4.0	66.17					<b>B5</b>	<b>B5</b>
								<b>21</b>	158	3.2	83.20					<b>B5</b>	<b>B5</b>
								<b>16</b>	205	2.4	108.09			<b>B5</b>	<b>B5</b>		
								<b>13</b>	251	2.0	132.23			<b>B5</b>	<b>B5</b>		
								<b>12</b>	281	1.8	147.92			<b>B5</b>	<b>B5</b>		
								<b>10</b>	317	1.6	167.09			<b>B5</b>	<b>B5</b>		
								<b>9.2</b>	363	1.4	191.06			<b>B5</b>	<b>B5</b>		
								<b>7.9</b>	421	1.2	221.88			<b>B5</b>	<b>B5</b>		
								<b>6.7</b>	499	1.0	262.96			<b>B5</b>	<b>B5</b>		






**Datos técnicos**
**Dados técnicos**
**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>1.1</b>							<b>2.2</b>							
(1.5 hp)	266	37	4.0	6.58	CMB633	B5/B14	(3.0 hp)	266	74	2.0	6.58	CMB633	B5/B14	
	219	45	3.3	7.99		B5/B14		219	90	1.7	7.99		B5/B14	
80B4	178	55	2.7	9.81		B5/B14	90L4	178	111	1.4	9.81		B5/B14	
(1750 min <sup>-1</sup> )	168	59	2.5	10.44		B5/B14	(1750 min <sup>-1</sup> )	168	118	1.3	10.44		B5/B14	
	140	71	2.1	12.53		B5/B14		140	141	1.1	12.53		B5/B14	
	131	75	2.0	13.31		B5/B14		131	150	1.0	13.31		B5/B14	
	111	89	1.9	15.81		B5/B14		111	178	1.0	15.81		B5/B14	
	98	100	2.2	17.77		B5/B14		98	201	1.1	17.77		B5/B14	
	81	122	1.8	21.56		B5/B14		81	243	0.9	21.56		B5/B14	
	66	149	1.5	26.48		B5/B14								
	62	159	1.4	28.17		B5/B14		263	75	3.7	6.65		CMB903	B5/B14
	52	191	1.2	33.81		B5/B14		219	90	3.1	8.00			B5/B14
	49	203	1.1	35.92		B5/B14		180	110	2.5	9.74			B5/B14
	45	219	1.1	38.88		B5/B14		156	126	2.2	11.21			B5/B14
	37	266	0.9	47.16	B5/B14		124	159	1.9	14.09	B5/B14			
							98	203	2.2	17.95	B5/B14			
	263	38	7.5	6.65	CMB903	B5/B14	81	244	1.8	21.60	B5/B14			
	219	45	6.2	8.00		B5/B14		67	297	1.5	26.30	B5/B14		
	180	55	5.1	9.74		B5/B14		58	341	1.3	30.25	B5/B14		
	156	63	4.4	11.21		B5/B14		45	443	1.1	39.26	B5/B14		
	124	80	3.8	14.09		B5/B14		37	533	0.9	47.25	B5/B14		
	98	101	4.4	17.95		B5/B14								
	81	122	3.7	21.60		B5/B14								
	67	148	3.0	26.30		B5/B14								
	58	171	2.6	30.25		B5/B14								
	45	222	2.3	39.26		B5/B14								
	37	267	1.9	47.25		B5/B14								
	30	325	1.5	57.52		B5/B14								
	26	373	1.3	66.17		B5/B14								
	21	469	1.1	83.20		B5/B14								
<b>1.5</b>							<b>3</b>							
(2.0 hp)	266	51	3.0	6.58	CMB633	B5/B14	(4.0 hp)	263	102	2.7	6.65	CMB903	B5/B14	
	219	61	2.4	7.99		B5/B14		219	123	2.3	8.00		B5/B14	
90S4	178	76	2.0	9.81		B5/B14	100LA4	178	150	1.9	9.74		B5/B14	
(1750 min <sup>-1</sup> )	168	80	1.9	10.44		B5/B14	(1750 min <sup>-1</sup> )	156	172	1.6	11.21		B5/B14	
	140	96	1.6	12.53		B5/B14		124	217	1.4	14.09		B5/B14	
	131	102	1.5	13.31		B5/B14		98	276	1.6	17.95		B5/B14	
	111	122	1.4	15.81		B5/B14		81	332	1.4	21.60		B5/B14	
	98	137	1.6	17.77		B5/B14		67	405	1.1	26.30		B5/B14	
	81	166	1.3	21.56		B5/B14		58	466	1.0	30.25		B5/B14	
	66	204	1.1	26.48		B5/B14								
	62	217	1.0	28.17		B5/B14								
	52	260	0.8	33.81		B5/B14								
	263	51	5.5	6.65		CMB903	B5/B14							
	219	62	4.5	8.00	B5/B14									
	180	75	3.7	9.74	B5/B14									
	156	86	3.2	11.21	B5/B14									
	124	108	2.8	14.09	B5/B14									
	98	138	3.3	17.95	B5/B14									
	81	166	2.7	21.60	B5/B14									
	67	202	2.2	26.30	B5/B14									
	58	233	1.9	30.25	B5/B14									
	45	302	1.7	39.26	B5/B14									
	37	364	1.4	47.25	B5/B14									
	30	443	1.1	57.52	B5/B14									
	26	509	1.0	66.17	B5/B14									
<b>1.5</b>							<b>3.7</b>							
(2.0 hp)	266	51	3.0	6.58	CMB633	B5/B14	(5.0 hp)	263	126	2.2	6.65	CMB903	B5/B14	
	219	61	2.4	7.99		B5/B14		219	152	1.8	8.00		B5/B14	
90S4	178	76	2.0	9.81		B5/B14	112M4	178	185	1.5	9.74		B5/B14	
(1750 min <sup>-1</sup> )	168	80	1.9	10.44		B5/B14	(1750 min <sup>-1</sup> )	156	213	1.3	11.21		B5/B14	
	140	96	1.6	12.53		B5/B14		124	267	1.1	14.09		B5/B14	
	131	102	1.5	13.31		B5/B14		98	341	1.3	17.95		B5/B14	
	111	122	1.4	15.81		B5/B14		81	410	1.1	21.60		B5/B14	
	98	137	1.6	17.77		B5/B14		67	499	0.9	26.30		B5/B14	
	81	166	1.3	21.56		B5/B14								
	66	204	1.1	26.48		B5/B14								
	62	217	1.0	28.17		B5/B14								
	52	260	0.8	33.81		B5/B14								
	263	51	5.5	6.65		CMB903	B5/B14							
	219	62	4.5	8.00	B5/B14									
	180	75	3.7	9.74	B5/B14									
	156	86	3.2	11.21	B5/B14									
	124	108	2.8	14.09	B5/B14									
	98	138	3.3	17.95	B5/B14									
	81	166	2.7	21.60	B5/B14									
	67	202	2.2	26.30	B5/B14									
	58	233	1.9	30.25	B5/B14									
	45	302	1.7	39.26	B5/B14									
	37	364	1.4	47.25	B5/B14									
	30	443	1.1	57.52	B5/B14									
	26	509	1.0	66.17	B5/B14									
<b>1.5</b>							<b>4.5</b>							
(2.0 hp)	266	51	3.0	6.58	CMB633	B5/B14	(6.0 hp)	263	154	1.8	6.65	CMB903	B5/B14	
	219	61	2.4	7.99		B5/B14		219	185	1.5	8.00		B5/B14	
90S4	178	76	2.0	9.81		B5/B14	112MA4	178	225	1.2	9.74		B5/B14	
(1750 min <sup>-1</sup> )	168	80	1.9	10.44		B5/B14	(1750 min <sup>-1</sup> )	156	259	1.1	11.21		B5/B14	
	140	96	1.6	12.53		B5/B14		124	325	0.9	14.09		B5/B14	
	131	102	1.5	13.31		B5/B14		98	414	1.1	17.95		B5/B14	
	111	122	1.4	15.81		B5/B14		81	499	0.9	21.60		B5/B14	
	98	137	1.6	17.77		B5/B14								
	81	166	1.3	21.56		B5/B14								
	66	204	1.1	26.48		B5/B14								
	62	217	1.0	28.17		B5/B14								
	52	260	0.8	33.81		B5/B14								
	263	51	5.5	6.65		CMB903	B5/B14							
	219	62	4.5	8.00	B5/B14									
	180	75	3.7	9.74	B5/B14									
	156	86	3.2	11.21	B5/B14									
	124	108	2.8	14.09	B5/B14									
	98	138	3.3	17.95	B5/B14									
	81	166	2.7	21.60	B5/B14									
	67	202	2.2	26.30	B5/B14									
	58	233	1.9	30.25	B5/B14									
	45	302	1.7	39.26	B5/B14									
	37	364	1.4	47.25	B5/B14									
	30	443	1.1	57.52	B5/B14									
	26	509	1.0	66.17	B5/B14									
<b>1.5</b>							<b>5.5</b>							
(2.0 hp)	266	51	3.0	6.58	CMB633	B5/B14	(7.5 hp)	263	188	1.5	6.65	CMB903	B5/B14	
	219	61	2.4	7.99		B5/B14		219	226	1.2	8.00		B5/B14	
90S4	178	76	2.0	9.81		B5/B14	112MB4	178	275	1.0	9.74		B5/B14	
(1750 min <sup>-1</sup> )	168	80	1.9	10.44		B5/B14	(1750 min <sup>-1</sup> )	156	316	0.9	11.21		B5/B14	
	140	96	1.6	12.53		B5/B14		98	506	0.9	17.95		B5/B14	
	131	102	1.5	13.31		B5/B14								
	111	122	1.4	15.81		B5/B14								
	98	137	1.6	17.77		B5/B14								
	81	166	1.3	21.56		B5/B14								
	66	204	1.1	26.48										



**CMB**

Motorreductores de ejes ortogonales  
 Motores com eixos ortogonais  
 Helical bevel gearmotors

60 Hz

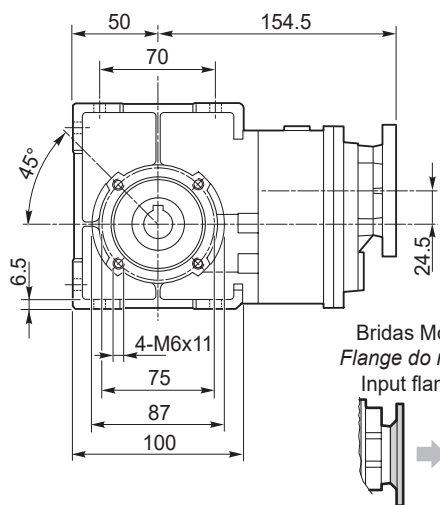
Dimensiones

Dimensões

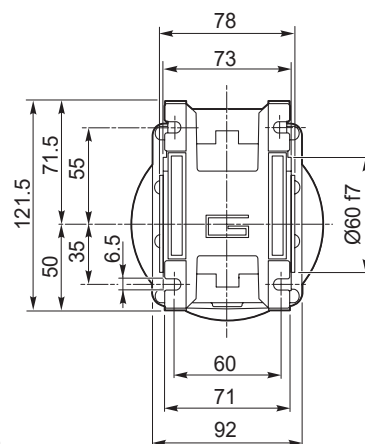
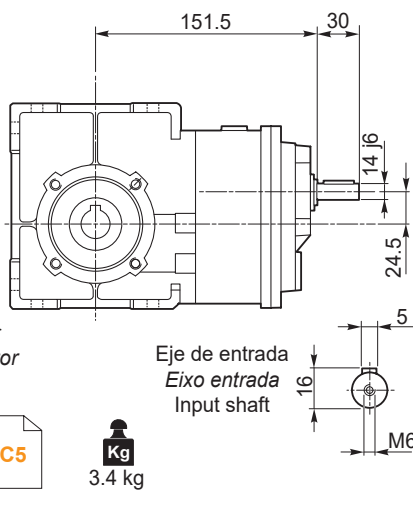
Dimensions

**CMB 402.. - CMBIS 402..**

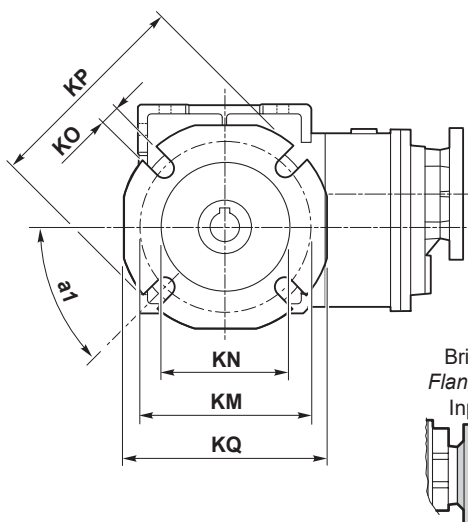
**CMB 402 U..**



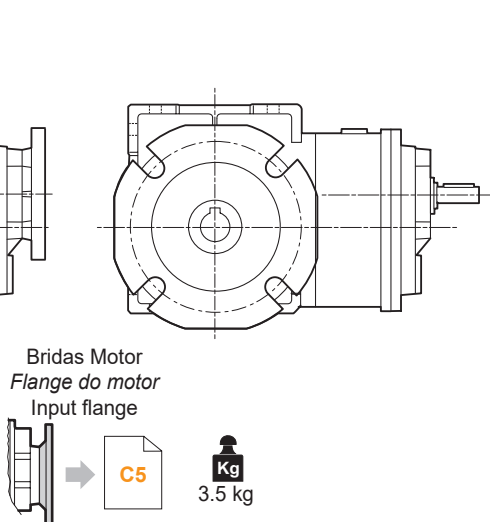
**CMBIS 402 U..**



**CMB 402 F..**



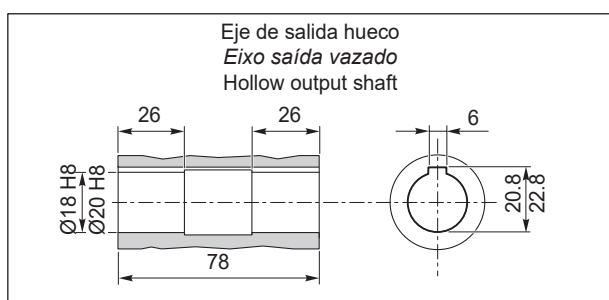
**CMBIS 402 F..**

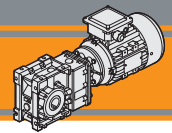


Versión F / Versão F / F Version

CMB CMBIS	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	Brida / Flange / Flange Tipo / Tipo / Type
402	45°	67	7.5	4.5	80-95	60	9	110	95	F
	45°	97	7.5	4.5	80-95	60	9	110	95	FL
	45°	80	8.5	5	115-125	95	9.5	140	112	FB

**CMB 402.. D.. - CMBIS 402.. D..**





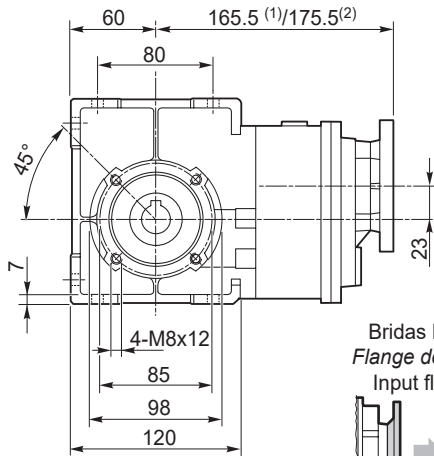
Dimensiones

Dimensões

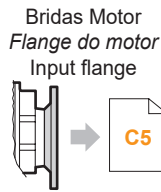
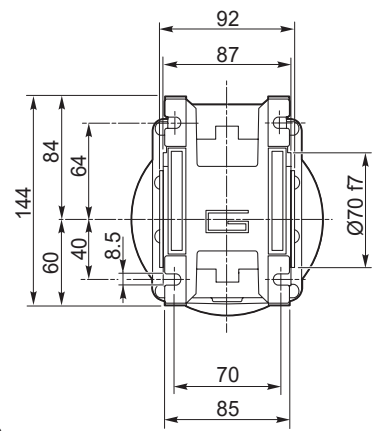
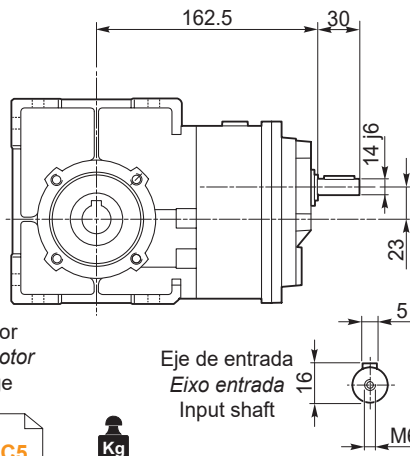
Dimensions

**CMB 502.. - CMBIS 502..**

**CMB 502 U..**



**CMBIS 502 U..**

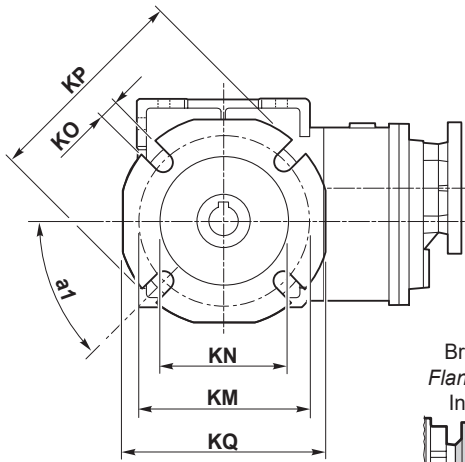


**kg**  
 (1) 4.7 kg  
 (2) 5.0 kg

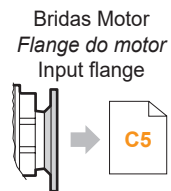
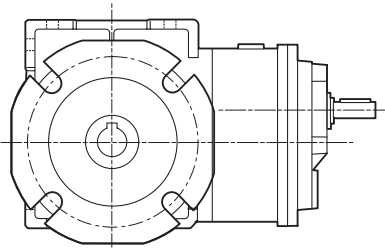
Eje de entrada  
 Eixo entrada  
 Input shaft

(1) IEC 56/63/71  
 (2) IEC 80

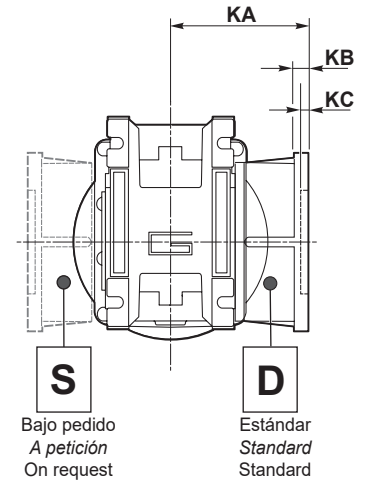
**CMB 502 F..**



**CMBIS 502 F..**



**kg**  
 4.8 kg

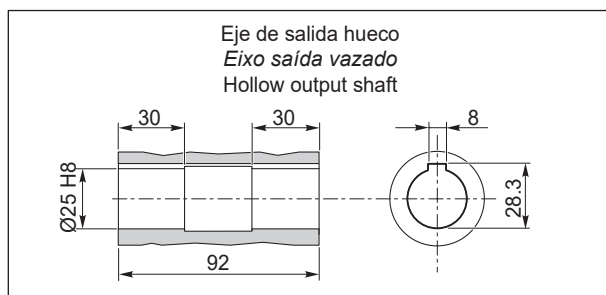


**S**  
 Bajo pedido  
 A petición  
 On request

**D**  
 Estándar  
 Standard  
 Standard

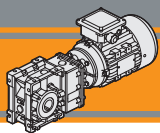
Versión F / Versão F / F Version										
CMB CMBIS	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	Brida / Flange / Flange Tipo / Tipo / Type
502	45°	90	9	5	90-110	70	11	125	110	F
	45°	120	9	5	90-110	70	11	125	110	FL
	45°	89	9	5	130-145	110	9.5	160	132	FB

**CMB 502.. D.. - CMBIS 502.. D..**



Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

CMB



Dimensiones

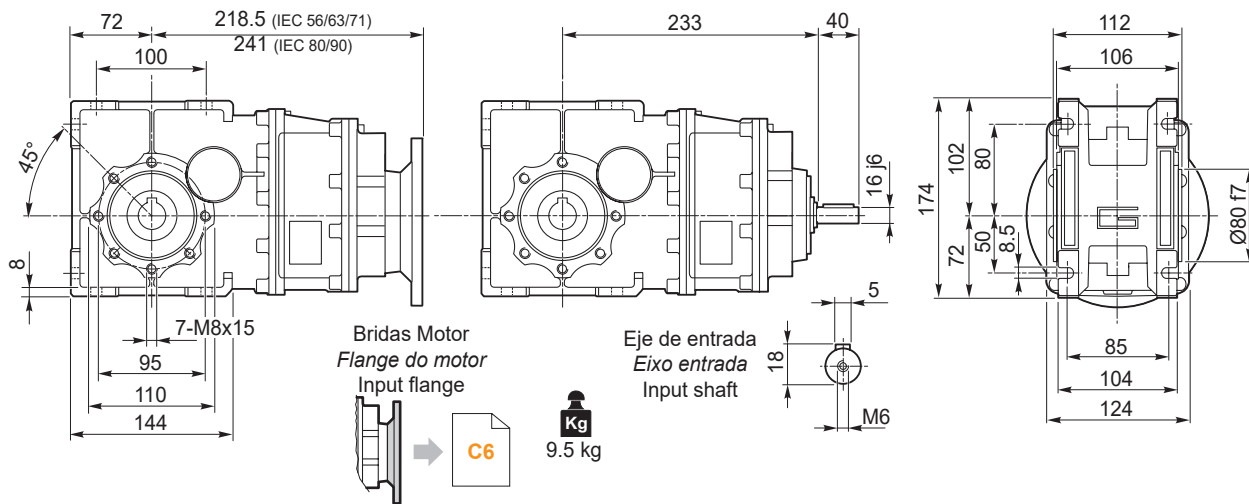
Dimensões

Dimensions

**CMB 633.. - CMBIS 633..**

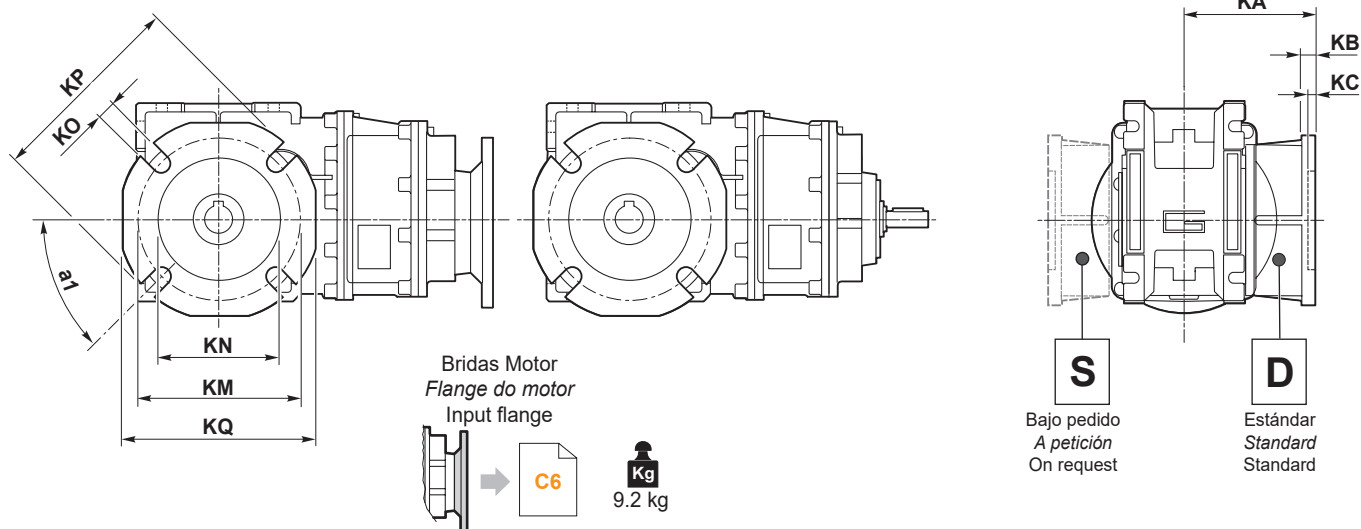
**CMB 633 U..**

**CMBIS 633 U..**



**CMB 633 F..**

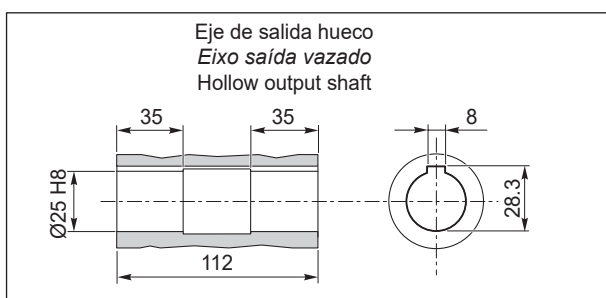
**CMBIS 633 F..**

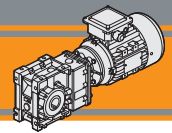


Versión F / Versão F / F Version

CMB CMBIS	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	Brida / Flange / Flange Tipo / Tipo / Type
633	45°	82	10	6	150-160	115	11	180	142	F
	45°	112	10	8	150-160	115	11	180	142	FL
	45°	98	11	5	165	130	11	200	160	FB

**CMB 633.. D.. - CMBIS 633.. D..**





Dimensiones

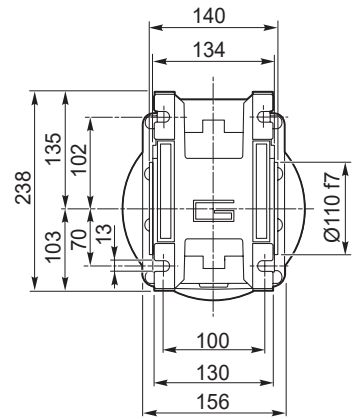
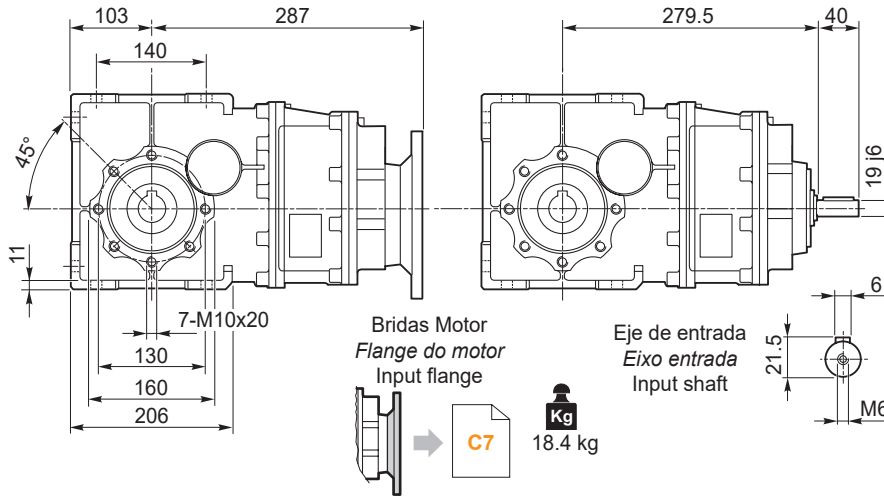
Dimensões

Dimensions

**CMB 903.. - CMBIS 903..**

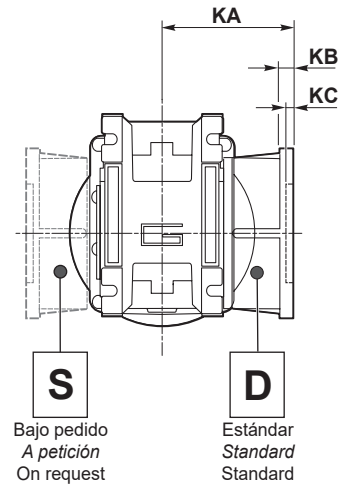
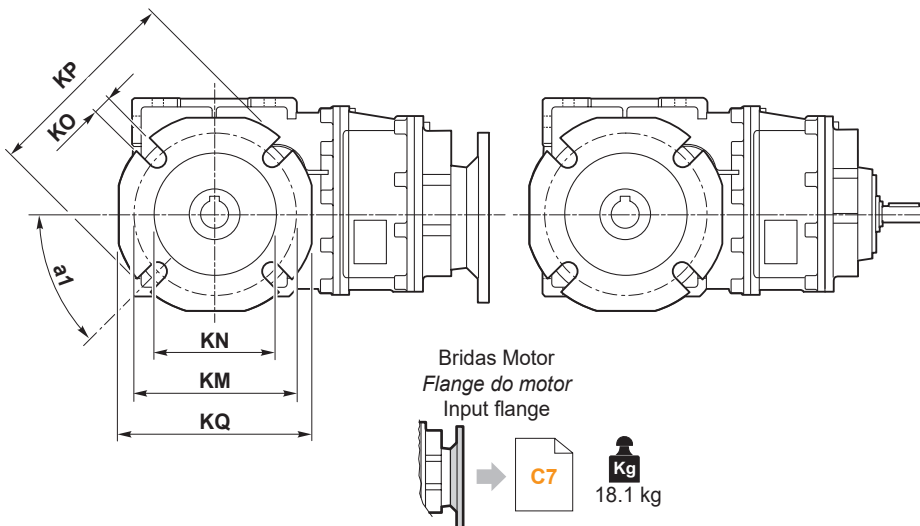
**CMB 903 U..**

**CMBIS 903 U..**



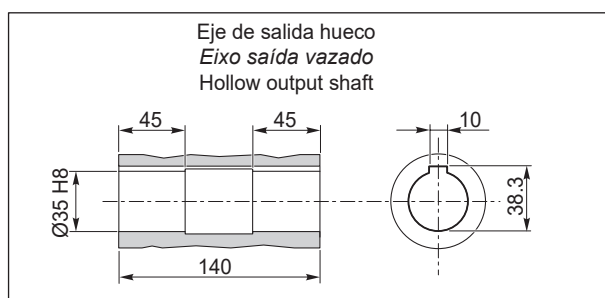
**CMB 903 F..**

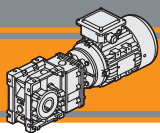
**CMBIS 903 F..**



Versión F / Versão F / F Version										
CMB CMBIS	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	Brida / Flange / Flange Tipo / Tipo / Type
903	45°	111	13	6	175-188	152	14	210	200	F

**CMB 903.. D.. - CMBIS 903.. D..**

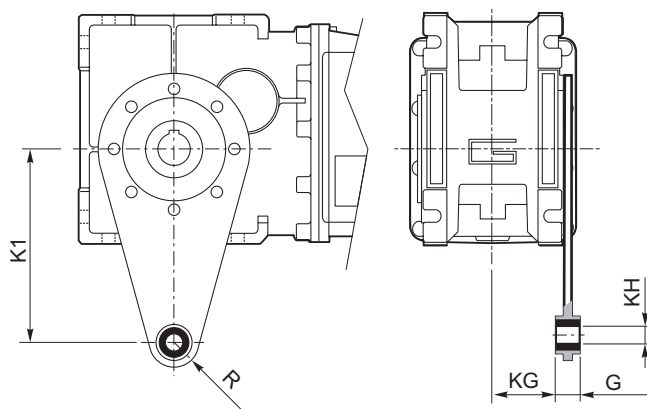
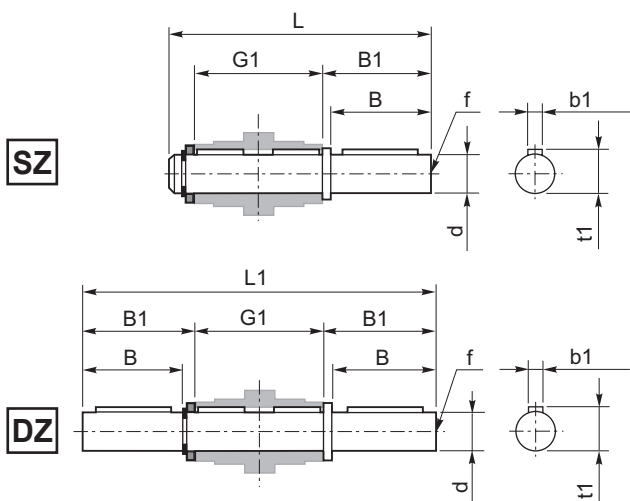




**Accesorios**

**Acessórios**

**Accessories**



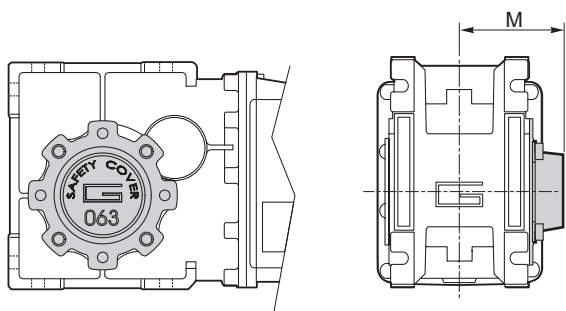
Eje de salida / Eixo saída / Output shaft

CMB CMBIS	d h7	B	B1	G1	L	L1	f	b1	t1
<b>402</b>	18	40	43	78	128	164	M6	6	20.5
<b>502</b>	25	50	53.5	92	153	199	M10	8	28
<b>633</b>	25	50	53.5	112	173	219	M10	8	28
<b>903</b>	35	80	84.5	140	234	309	M12	10	38

Brazo de reacción / Braço de reação / Torque arm

CMB CMBIS	K1	G	KG	KH	R
<b>402</b>	100	14	31	10	18
<b>502</b>	100	14	38	10	18
<b>633</b>	150	14	47.5	10	18
<b>903</b>	200	25	56.5	20	30

**SC - Cubierta de seguridad / Tampa de proteção / Safety cover**



CMB CMBIS	M
<b>402</b>	54.5
<b>502</b>	62.5
<b>633</b>	73
<b>903</b>	94



**TRANSTECNO**<sup>®</sup>  
the modular gearmotor

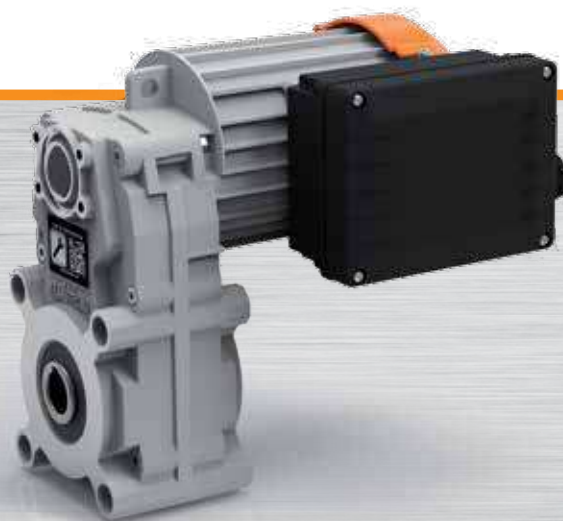
# KFT105



60HZ

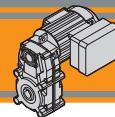
IEC

Motorreductores pendulares  
Motoredutores de eixos paralelos  
Helical parallel gearmotors







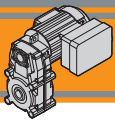


Índice	Índice	Index	Pag. Pág. Page
Características técnicas	<i>Características técnicas</i>	Technical features	<b>D2</b>
Clasificación	<i>Designação</i>	Classification	<b>D2</b>
Sentidos de rotación	<i>Sentidos de rotação</i>	Direction of rotation	<b>D3</b>
Nomenclatura	<i>Simbologia</i>	Legend	<b>D3</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>D3</b>
Cargas radiales	<i>Cargas radiais</i>	Radial loads	<b>D4</b>
Datos técnicos	<i>Dados técnicos</i>	Technical data	<b>D5</b>
Dimensiones	<i>Dimensões</i>	Dimensions	<b>D16</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**



### Características técnicas

La gama de motorreductores pendulares KFT105 tiene las siguientes características principales:

- Diseño compacto
- Motores monofásicos
- Carcasa de aluminio fundido
- Engranajes helicoidales
- Lubricación con aceite sintético de larga vida
- Disponible con 3 y 4 etapas de reducción

### Características técnicas

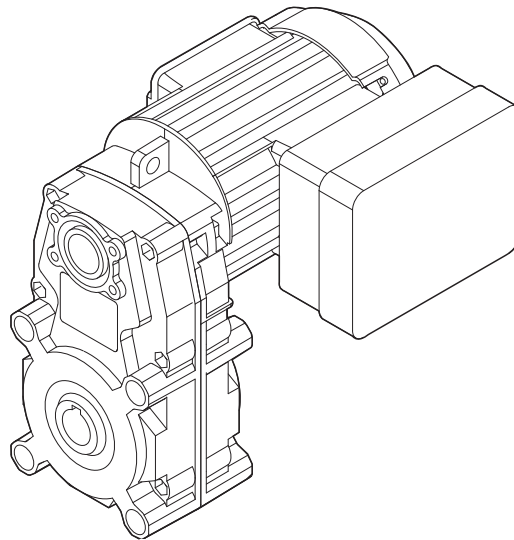
Os Motores de eixos paralelos KFT105 possuem como principais características principais:

- Design compacto
- Motorização monofásica AC Motor
- Carcaça de alumínio fundido sob pressão
- Engrenagens com dentes helicoidais
- lubrificação permanente com óleo sintético
- Disponível com 3 ou 4 estágios de redução

### Technical features

KFT105 helical parallel gearmotors range has the following main features:

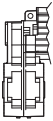
- Compact design
- AC single phase motors available
- Die-cast aluminum housings
- Helical gears
- Permanent synthetic oil long-life lubrication
- Available with 3 and 4 reduction stages




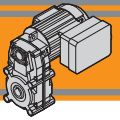
### Clasificación

### Designação

### Classification

REDUCTOR / REDUTOR / GEARBOX				
KFT	105/3	U	88.87	O20
Tipo Tipo Type	Tamaño Tamanho Size	Versión Versão Version	Relación de reducción Rapporto Ratio	Eje de salida hueco Eixo saída vazado Hollow output shaft
KFT 	105/3 105/4	U... F...	Véase tablas Veja tabelas see tables	Véase tablas Veja tabelas see tables

MOTOR / MOTOR / MOTOR						
40W	4p	1ph	230	60Hz	T1	TEFC
Potencia Potência Power	Polos Pólos Poles	Fases Fases Phases	Tensión Tensão Voltage	Frecuencia Frequência Frequency	Posición caja de bornes Pos. Conexão Terminal box pos.	Ventilación de enfriamiento Ventilação Fan cooling
Véase tablas Veja tabelas see tables	2p 4p 6p	1ph	230V	60Hz	T4 (Std)  T2	TEFC TENV


**Nomenclatura**
**Simbologia**
**Legend**

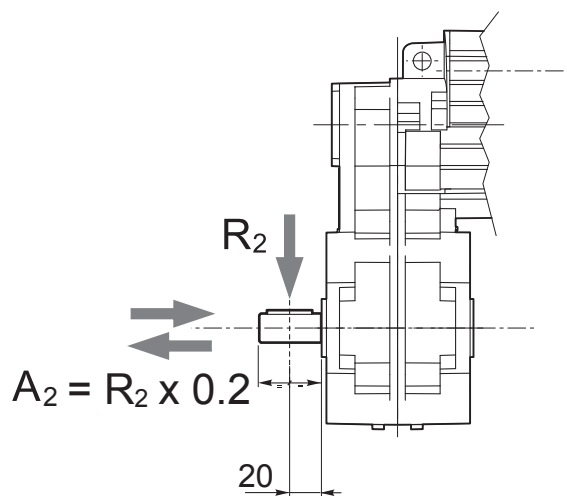
$n_1$	[rpm]	Velocidad de entrada / <i>Velocidade na entrada</i> / Input speed
$n_2$	[rpm]	Velocidad de salida / <i>Velocidade na saída</i> / Output speed
$i$		Relación de reducción / <i>Relação de redução</i> / Ratio
$P_1$	[kW]	Potencia en la entrada / <i>Potência da entrada</i> / Input power
$M_2$	[Nm]	Par en la salida en función de $P_1$ / <i>Torque na saída em função de <math>P_1</math></i> / Output torque referred to $P_1$
$P_{n1}$	[kW]	Potencia nominal en la entrada / <i>Potência nominal na entrada</i> / Nominal input power
$M_{n2}$	[Nm]	Par nominal en la salida en función de $P_{n1}$ / <i>Torque nominal na saída em função de <math>P_{n1}</math></i> / Nominal output torque referred to $P_{n1}$
$sf$		Factor de servicio / <i>Fator de serviço</i> / Service factor
$R_2$	[N]	Carga radial admisible en la salida / <i>Carga radial admissível na saída</i> / Maximum output radial load
$A_2$	[N]	Carga axial admisible en la salida / <i>Carga axial admissível na saída</i> / Maximum output axial load
$V$	[V]	Tensión / <i>Tensão</i> / Voltage
$F$	[Hz]	Frecuencia / <i>Frequência</i> / Frequency
$I_n$	[A]	Corriente nominal / <i>Torque nominal</i> / Nominal current
$I_s$	[A]	Corriente de arranque / <i>Torque de pico</i> / Start current
$\cos\phi$		Factor de potencia / <i>Fator de potência</i> / Power factor
$C$	[ $\mu$ ]	Condensador / <i>Capacidade do condensador</i> / Capacitor

**Lubricación**
**Lubrificação**
**Lubrication**

Todos los motoredutores pendulares son previamente lubricados con aceite sintético con grado de viscosidad 320, por lo tanto, pueden ser instalados en cualquier posición de montaje y no requieren mantenimiento.

*Todos os motoredutores são fornecidos completos de lubrificante sintético de viscosidade 320, portanto, podem ser instalados em qualquer posição de montagem e não necessitam de manutenção.*

*Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*

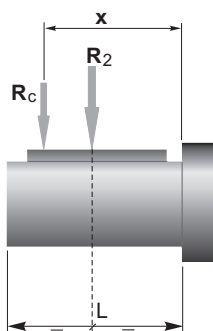
**Cargas radiales**
**Cargas radiais**
**Radial loads**


$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]
	KFT105
70	1500
40	1700
30	1850
20	2000
10	2000
5	2000

Cuando la carga radial no se aplica en el punto medio del eje, es necesario calcular la carga efectiva a través la siguiente fórmula:

*Quando a carga radial resultante não é aplicada na linha mediana da eixo, é preciso calcular aquela efetiva com a seguinte fórmula:*

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

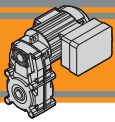


	KFT105
$a$	82
$b$	62
$R_{2MAX}$	2000

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

$a, b =$  valores dados en la tabla  
 $a, b =$  valores referidos na tabela  
 $a, b =$  values given in the table





























Datos técnicos

Dados técnicos

Technical data

$n_1$  1750 [min<sup>-1</sup>]

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	M <sub>n</sub> [Nm]	i		P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	M <sub>n</sub> [Nm]	i																																																																																																																																																																																																																																																																																																																																												
<b>25</b>							<b>90</b>																																																																																																																																																																																																																																																																																																																																																	
85	2.6	15.2	40	20.57	KFT105/3		85	9	4.2	40	20.57	KFT105/3																																																																																																																																																																																																																																																																																																																																												
53	4.3	11.7	50	33.32			39	5.7	11.4	65	44.36			32	7.0	9.2	65	54.87	24	9.2	7.1	65	71.84	23	10	6.6	65	77.07	20	11	5.7	65	88.87	14	16	4.1	65	124.81	9.6	23	2.8	65	181.35	7.8	29	2.3	65	224.32	5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2	40	20.57	KFT105/3		53	6.8	7.3	50	33.32	39	9.1	7.1	65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40													
39	5.7	11.4	65	44.36			32	7.0	9.2	65	54.87			24	9.2	7.1	65	71.84	23	10	6.6	65	77.07	20	11	5.7	65	88.87	14	16	4.1	65	124.81	9.6	23	2.8	65	181.35	7.8	29	2.3	65	224.32	5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2			40	20.57	KFT105/3		53			6.8	7.3	50	33.32	39	9.1	7.1	65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3										53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40												
32	7.0	9.2	65	54.87			24	9.2	7.1	65	71.84			23	10	6.6	65	77.07	20	11	5.7	65	88.87	14	16	4.1	65	124.81	9.6	23	2.8	65	181.35	7.8	29	2.3	65	224.32	5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2			40	20.57	KFT105/3				53			6.8			7.3	50	33.32	39	9.1	7.1	65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3												53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40											
24	9.2	7.1	65	71.84			23	10	6.6	65	77.07			20	11	5.7	65	88.87	14	16	4.1	65	124.81	9.6	23	2.8	65	181.35	7.8	29	2.3	65	224.32	5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2			40	20.57	KFT105/3				53					6.8			7.3			50	33.32	39	9.1	7.1	65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3														53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40										
23	10	6.6	65	77.07			20	11	5.7	65	88.87			14	16	4.1	65	124.81	9.6	23	2.8	65	181.35	7.8	29	2.3	65	224.32	5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2			40	20.57	KFT105/3				53					6.8					7.3			50			33.32	39	9.1	7.1	65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3																53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40									
20	11	5.7	65	88.87			14	16	4.1	65	124.81			9.6	23	2.8	65	181.35	7.8	29	2.3	65	224.32	5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2			40	20.57	KFT105/3				53					6.8					7.3					50			33.32			39	9.1	7.1	65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3																		53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40								
14	16	4.1	65	124.81			9.6	23	2.8	65	181.35			7.8	29	2.3	65	224.32	5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2			40	20.57	KFT105/3				53					6.8					7.3					50					33.32			39			9.1	7.1	65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3																				53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40							
9.6	23	2.8	65	181.35			7.8	29	2.3	65	224.32			5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2			40	20.57	KFT105/3				53					6.8					7.3					50					33.32					39			9.1			7.1	65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3																						53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40						
7.8	29	2.3	65	224.32			5.6	40	1.6	65	315.05			4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2			40	20.57	KFT105/3				53					6.8					7.3					50					33.32					39					9.1			7.1			65	44.36	32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3																								53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40					
5.6	40	1.6	65	315.05	4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98	2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>40</b>							<b>120</b>							85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2	40	20.57	KFT105/3				53	6.8	7.3			50	33.32					39					9.1					7.1					65					44.36					32					11			5.8			65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3																							53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40											
4.8	47	1.4	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4																																																																																																																																																																																																																																																																																																																																													
3.3	69	0.9	65	534.98	3.3	110	0.6	65	534.98																																																																																																																																																																																																																																																																																																																																															
2.6	85	0.8	65	661.76	2.6	110	0.6	65	661.76																																																																																																																																																																																																																																																																																																																																															
1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40																																																																																																																																																																																																																																																																																																																																															
<b>40</b>							<b>120</b>																																																																																																																																																																																																																																																																																																																																																	
85	4.2	9.5	40	20.57	KFT105/3		85	13	3.2	40	20.57	KFT105/3																																																																																																																																																																																																																																																																																																																																												
53	6.8	7.3	50	33.32			39	9.1	7.1	65	44.36			32	11	5.8	65	54.87	24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4			3.3	110	0.6	65	534.98					3.3	110	0.6			65	534.98		2.6	110		0.6		65	661.76		2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53	10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6			65	929.40																																																																																																																							
39	9.1	7.1	65	44.36			32	11	5.8	65	54.87			24	15	4.4	65	71.84	23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98			3.3	110	0.6	65	534.98					2.6	110	0.6	65	661.76	2.6	110		0.6	65		661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53			10	4.9	50	33.32	39	14	4.8	65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																
32	11	5.8	65	54.87			24	15	4.4	65	71.84			23	16	4.1	65	77.07	20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98			2.6	110	0.6	65	661.76			2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53			10	4.9	50	33.32	39	14	4.8			65	44.36	32	17	3.8	65	54.87	24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																							
24	15	4.4	65	71.84			23	16	4.1	65	77.07			20	18	3.6	65	88.87	14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53			10	4.9	50	33.32	39	14	4.8			65	44.36	32	17	3.8	65	54.87			24	22	2.9	65	71.84	23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																														
23	16	4.1	65	77.07			20	18	3.6	65	88.87			14	26	2.5	65	124.81	9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53	10	4.9	50	33.32	39			14	4.8	65	44.36	32	17	3.8			65	54.87	24	22	2.9	65	71.84			23	24	2.7	65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																																			
20	18	3.6	65	88.87			14	26	2.5	65	124.81			9.6	37	1.7	65	181.35	7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53	10			4.9	50	33.32	39	14	4.8	65			44.36	32	17	3.8	65	54.87	24			22	2.9	65	71.84	23	24	2.7			65	77.07	20	27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																																						
14	26	2.5	65	124.81			9.6	37	1.7	65	181.35			7.8	46	1.4	65	224.32	5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53	10			4.9	50	33.32			39	14	4.8	65	44.36	32	17			3.8	65	54.87	24	22	2.9	65			71.84	23	24	2.7	65	77.07	20			27	2.4	65	88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																																									
9.6	37	1.7	65	181.35			7.8	46	1.4	65	224.32			5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53	10			4.9	50	33.32			39	14	4.8			65	44.36	32	17	3.8	65	54.87			24	22	2.9	65	71.84	23	24			2.7	65	77.07	20	27	2.4	65			88.87	14	38	1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																																												
7.8	46	1.4	65	224.32			5.6	65	1.0	65	315.05			4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53	10			4.9	50	33.32			39	14	4.8			65	44.36	32			17	3.8	65	54.87	24	22	2.9			65	71.84	23	24	2.7	65	77.07			20	27	2.4	65	88.87	14	38			1.7	65	124.81	9.6	56	1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																																															
5.6	65	1.0	65	315.05	4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4	3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98	2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76	1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40	<b>60</b>														85	6.3	6.3	40	20.57	KFT105/3								53			10	4.9	50			33.32	39	14			4.8	65	44.36			32	17	3.8			65	54.87	24			22	2.9	65	71.84	23	24	2.7			65	77.07	20	27	2.4	65	88.87			14	38	1.7	65	124.81	9.6	56			1.2	65	181.35	7.8	69	0.9	65	224.32	5.6	97	0.7	65	315.05	4.8	110	0.6	65	368.19	KFT105/4							3.3	110	0.6	65	534.98							2.6	110	0.6	65	661.76							1.9	110	0.6	65	929.40																																																																																																																																																																				
4.8	76	0.9	65	368.19	KFT105/4	4.8	110	0.6	65	368.19	KFT105/4																																																																																																																																																																																																																																																																																																																																													
3.3	110	0.6	65	534.98	3.3	110	0.6	65	534.98																																																																																																																																																																																																																																																																																																																																															
2.6	110	0.6	65	661.76	2.6	110	0.6	65	661.76																																																																																																																																																																																																																																																																																																																																															
1.9	110	0.6	65	929.40	1.9	110	0.6	65	929.40																																																																																																																																																																																																																																																																																																																																															
<b>60</b>																																																																																																																																																																																																																																																																																																																																																								
85	6.3	6.3	40	20.57	KFT105/3																																																																																																																																																																																																																																																																																																																																																			
53	10	4.9	50	33.32																																																																																																																																																																																																																																																																																																																																																				
39	14	4.8	65	44.36																																																																																																																																																																																																																																																																																																																																																				
32	17	3.8	65	54.87																																																																																																																																																																																																																																																																																																																																																				
24	22	2.9	65	71.84																																																																																																																																																																																																																																																																																																																																																				
23	24	2.7	65	77.07																																																																																																																																																																																																																																																																																																																																																				
20	27	2.4	65	88.87																																																																																																																																																																																																																																																																																																																																																				
14	38	1.7	65	124.81																																																																																																																																																																																																																																																																																																																																																				
9.6	56	1.2	65	181.35																																																																																																																																																																																																																																																																																																																																																				
7.8	69	0.9	65	224.32																																																																																																																																																																																																																																																																																																																																																				
5.6	97	0.7	65	315.05																																																																																																																																																																																																																																																																																																																																																				
4.8	110	0.6	65	368.19	KFT105/4																																																																																																																																																																																																																																																																																																																																																			
3.3	110	0.6	65	534.98																																																																																																																																																																																																																																																																																																																																																				
2.6	110	0.6	65	661.76																																																																																																																																																																																																																																																																																																																																																				
1.9	110	0.6	65	929.40																																																																																																																																																																																																																																																																																																																																																				

**N.B.**

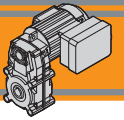
Por favor, compruebe que el par de salida M2 no exceda el valor en las áreas grises

**N. B.**

Sempre verifique que o torque (M2) não exceda o valor indicado nas tabelas cinzas

**N.B.**

Please check that the output torque M2 does not exceed the value in the grey areas



## Datos técnicos

## Dados técnicos

## Electrical technical data

1 Ph	$P_n$ [W]	$V$ [V]	$F$ [Hz]	$I_n$ [A]	$I_s$ [A]	$\cos\phi$	$C$ [ $\mu$ F]
	25	230	50	0.40	0.58	0.98	8.0
	40			0.60	1.00	0.70	8.0
	60			0.65	1.71	0.84	8.0
	90			0.85	1.75	0.93	12.5
	120			1.10	3.00	0.97	14.0

**Nota:**

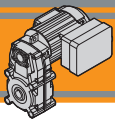
Versión trifásica disponible bajo pedido.  
 Por favor, póngase en contacto con el  
 servicio técnico.

**Nota:**

A versão trifásica está disponível a pedido.  
 Por favor contactar a assistência técnica

**Note:**

Three-phase version available upon  
 request.  
 Please contact our technical service.



**Dimensiones**

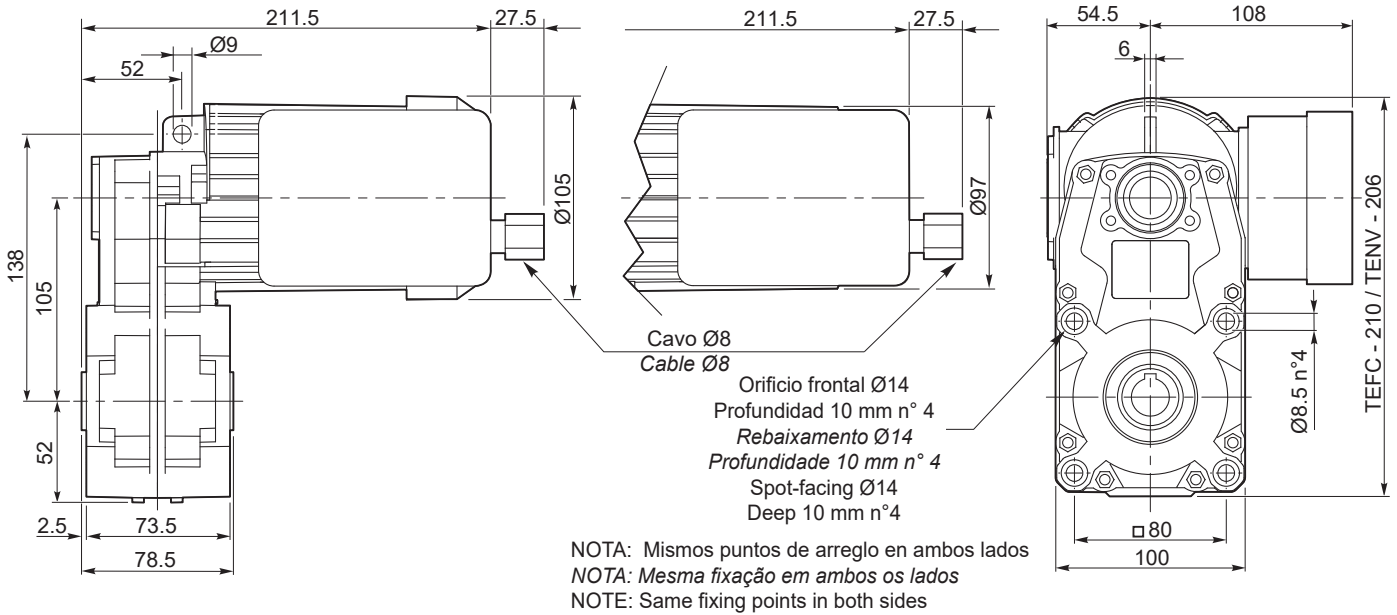
**Dimensões**

**Dimensions**

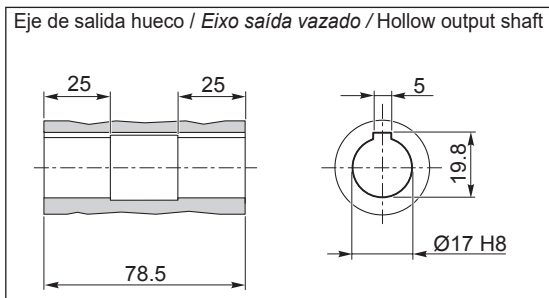
**KFT 105... 25W - 40W - 60W - 90W**

**KFT 105...1 Ph...TEFC**

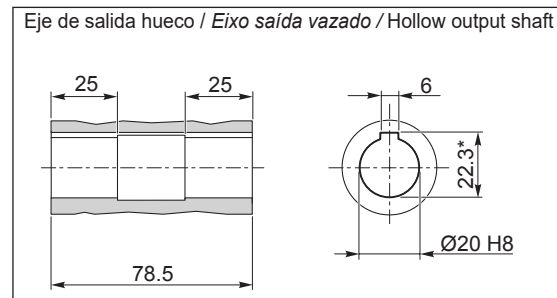
**KFT 105...1 Ph...TENV**



**O17**

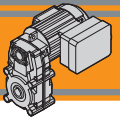


**O20**



\*Ranura especial / Encaixe da chaveta rebaxada / Special Keyway





Dimensiones

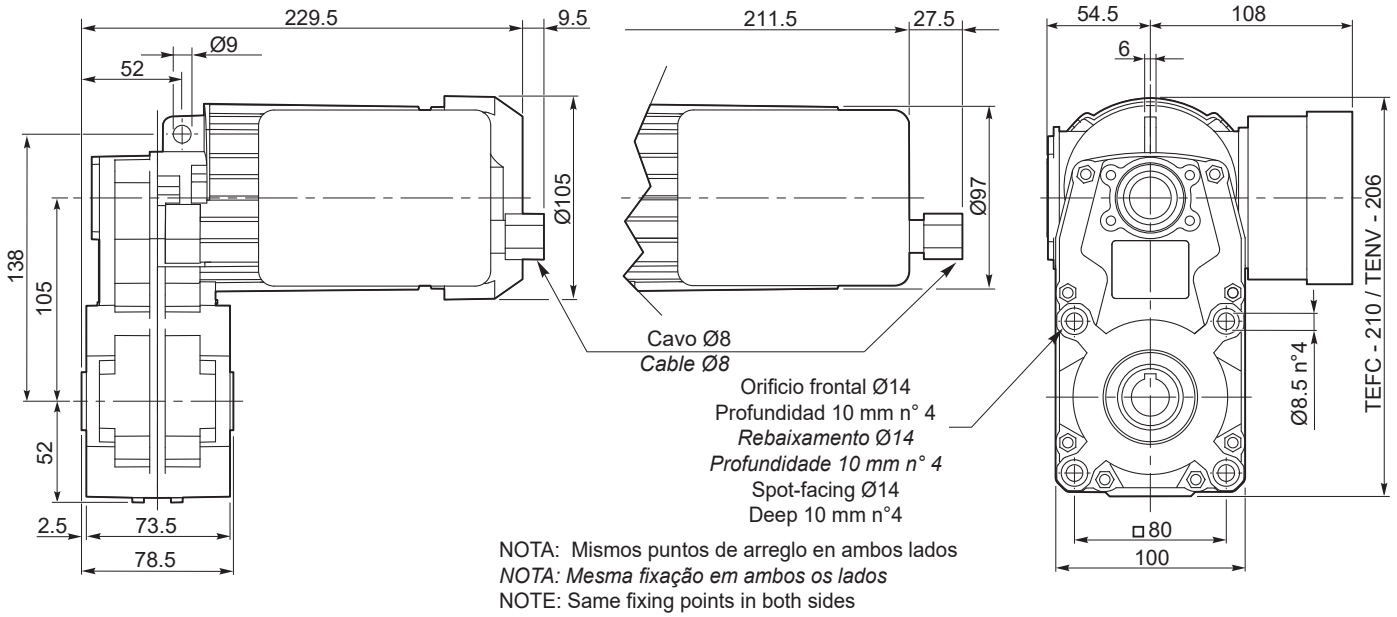
Dimensões

Dimensions

KFT 105... 120W

KFT 105...1 Ph... TEFC

KFT 105...1 Ph...TENV

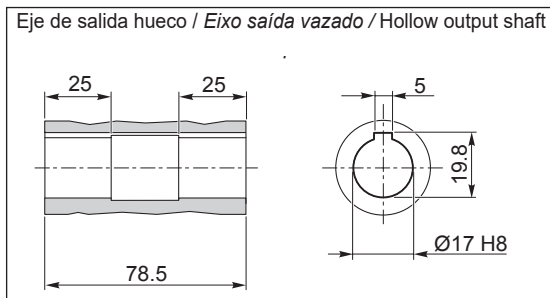


**Nota:**  
 Versión trifásica disponible bajo pedido.  
 Por favor, póngase en contacto con el  
 servicio técnico.

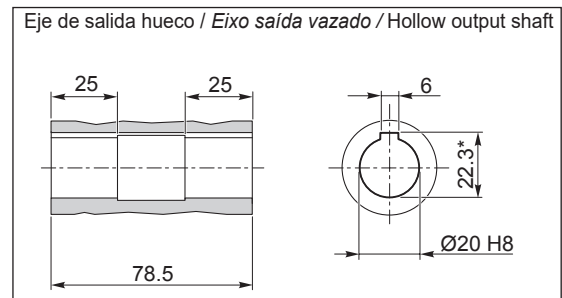
**Nota:**  
 A versão trifásica está disponível a pedido.  
 Por favor contactar a assistência técnica

**Note:**  
 Three-phase version available upon  
 request.  
 Please contact our technical service.

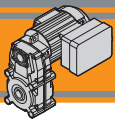
O17



O20



\*Ranura especial / Encaixe da chaveta rebaixada / Special Keyway



**Conexiones eléctricas**

**Ligações elétricas**

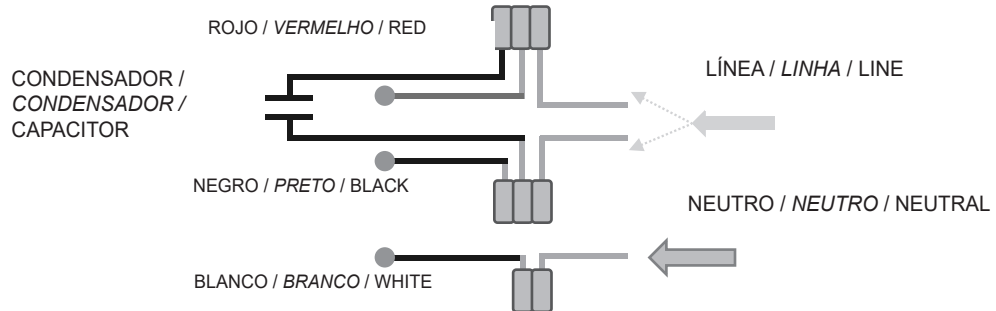
**Electrical connections**

**Versión 230 V 50 Hz monofásica**

**Versão 230 V 50 Hz monofásica**

**230 V 50 Hz single-phase version**

CONECTOR WAGO / CONECTOR WAGO / WAGO CONNECTOR



**Línea = ROJO**  
 Relación = 20.57 ÷ 315.05

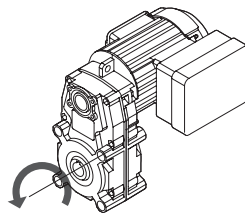
**Línea = NEGRO**  
 Relación = 368.19 to 929.40

**Linha = VERMELHO**  
 Relação = 20.57 ÷ 315.05

**Linha = PRETO**  
 Relação = 368.19 to 929.40

**Line = RED**  
 Ratio = 20.57 ÷ 315.05

**Line = BLACK**  
 Ratio = 368.19 to 929.40



**Línea = NEGRO**  
 Relación = 20.57 ÷ 315.05

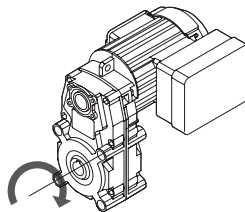
**Línea = ROJO**  
 Relación = 368.19 to 929.40

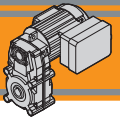
**Linha = PRETO**  
 Relação = 20.57 ÷ 315.05

**Linha = VERMELHO**  
 Relação = 368.19 to 929.40

**Line = BLACK**  
 Ratio = 20.57 ÷ 315.05

**Línea = RED**  
 Ratio = 368.19 to 929.40





## Conexiones eléctricas

## Ligações elétricas

## Electrical connections

Versión 230 V 50 Hz monofásica

Versão 230 V 50 Hz monofásica

230 V 50 Hz single-phase version

**Nota:**

En caso de que sea necesario conectar la PTO, para una mayor protección térmica del motor, seguir el circuito siguiente

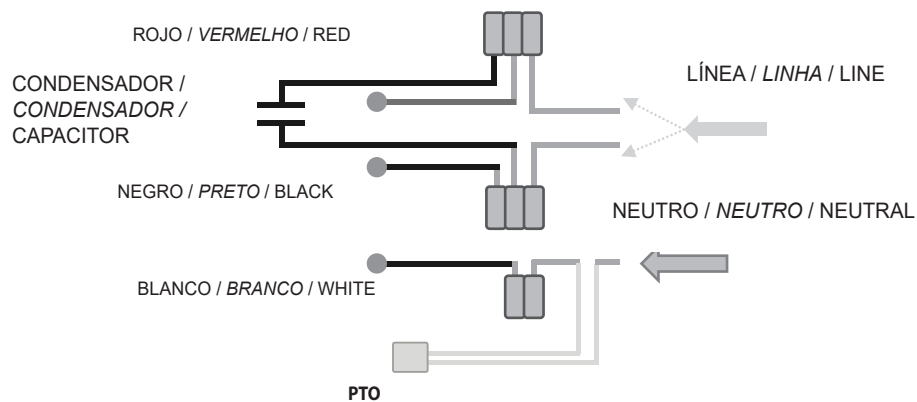
**Nota:**

Caso seja necessário ligar a PTO, para maior proteção térmica do motor, seguir o esquema abaixo

**Note:**

Should it be necessary to connect the PTO, for increased thermal protection of the motor, follow the diagram below

CONECTOR WAGO / CONECTOR WAGO / WAGO CONNECTOR



Conexión al circuito de mando del motor a cargo del cliente.

A ligação ao circuito de comando do motor é da responsabilidade do cliente.

Motor supply connection by the customer.



Por motivos de seguridad, no se recomienda la conexión en serie. Si es necesario, póngase en contacto con el Servicio Técnico de Transtecno.



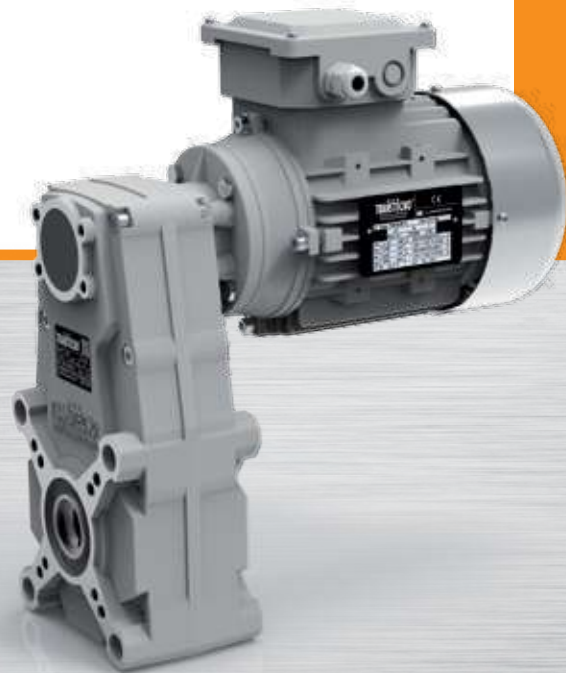
Por motivos de segurança, é desaconselhada a ligação em série. Se necessário, contactar a Assistência Técnica Transtecno.



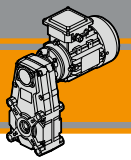
For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service.



Motorreductores pendulares  
**Motoredutores de eixos paralelos**  
Helical parallel gearmotors







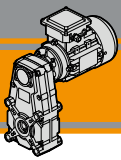
Índice	Índice	Index	Pag. Pág. Page
Características técnicas	<i>Características técnicas</i>	Technical features	<b>E2</b>
Clasificación	<i>Designação</i>	Classification	<b>E2</b>
Sentidos de rotación	<i>Sentidos de rotação</i>	Direction of rotation	<b>E3</b>
Nomenclatura	<i>Simbologia</i>	Legend	<b>E3</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>E3</b>
Cargas radiales	<i>Cargas radiais</i>	Radial loads	<b>E4</b>
Datos técnicos	<i>Dados técnicos</i>	Technical data	<b>E5</b>
Dimensiones	<i>Dimensões</i>	Dimensions	<b>E8</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**





**FT**

**Motorreductores pendulares**  
**Motoredutores de eixos paralelos**  
**Helical parallel gearmotors**

**60 Hz**

**Características técnicas**

**Características técnicas**

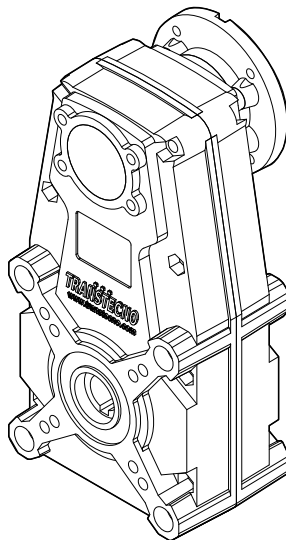
**Technical features**

La gama de motorreductores pendulares FT tiene las siguientes características principales:

Os Motoredutores de eixos paralelos FT possuem as seguintes características principais:

FT helical parallel gearmotors range has the following main features:


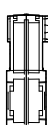
- Carcasas de aluminio fundido a presión
- Aceite de lubricación sintética de larga duración
- Engranajes helicoidales.
- Caixa de alumínio fundido sob pressão
- Lubrificação permanente com óleo sintético
- Engrenagens cilíndricas com dentes helicoidais.
- Die-cast aluminum housings
- Permanent synthetic oil long-life lubrication.
- helical gears.

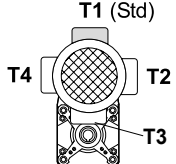


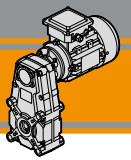
**Clasificación**

**Designação**

**Classification**

REDUCTOR / REDUTOR / GEARBOX						
FT	146	U	60.63	O20	56	B5
Tipo Tipo Type	Tamaño Tamanho Size	Versión Versão Version	Relación de reducción Rapporto Ratio	Eje de salida hueco Eixo saída vazado Hollow output shaft	IEC 	Forma constructiva Forma construtiva Version
<b>FT</b> 	<b>105/3</b> <b>105/4</b> <b>146</b> <b>196</b>	<b>U...</b>	Véase tablas Veja tabelas see tables	Véase tablas Veja tabelas see tables	<b>56</b> <b>63</b> <b>71</b> <b>80</b> <b>90</b>	<b>B5</b> <b>B14</b>

MOTOR / MOTOR / MOTOR					
0.09kW	4p	3ph	230/400V	60Hz	T1
Potencia Potência Power	Polos Pólos Poles	Fases Fases Phases	Tensión Tensão Voltage	Frecuencia Frequência Frequency	Posición caja de bornes Pos. Conexão Terminal box pos.
Véase tablas Veja tabelas see tables	<b>2p</b> <b>4p</b> <b>6p</b> <b>8p</b>	<b>1ph</b> <b>3ph</b>	<b>230V</b> <b>230/400V</b>	<b>60Hz</b>	<b>T1 (Std)</b> 

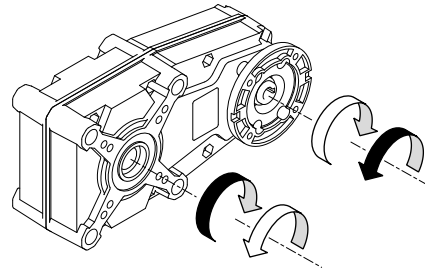
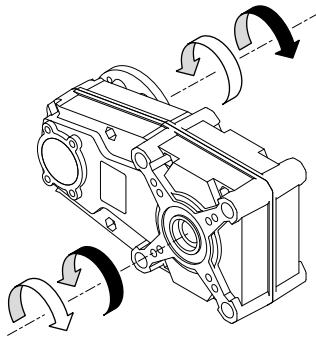


## Sentidos de rotación

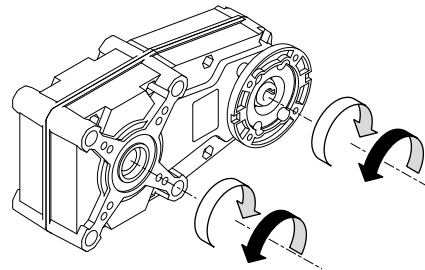
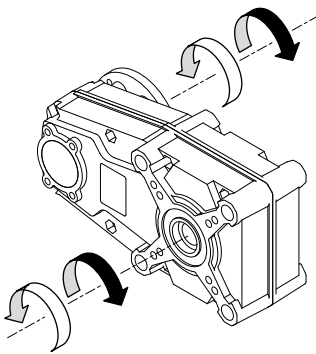
## Sentidos de rotação

## Direction of rotation

FT105/3  
 FT146  
 FT196



FT105/4



## Nomenclatura

## Simbologia

## Legend

$n_1$	[rpm]	Velocidad de entrada / <i>Velocidade na entrada</i> / Input speed
$n_2$	[rpm]	Velocidad de salida / <i>Velocidade na saída</i> / Output speed
$i$		Relación de reducción / <i>Relação de redução</i> / Ratio
$P_1$	[kW]	Potencia en la entrada / <i>Potência da entrada</i> / Input power
$M_2$	[Nm]	Par en la salida en función de $P_1$ / <i>Torque na saída em função de <math>P_1</math></i> / Output torque referred to $P_1$
$P_{n1}$	[kW]	Potencia nominal en la entrada / <i>Potência nominal na entrada</i> / Nominal input power
$M_{n2}$	[Nm]	Par nominal en la salida en función de $P_{n1}$ / <i>Torque nominal na saída em função de <math>P_{n1}</math></i> / Nominal output torque referred to $P_{n1}$
$sf$		Factor de servicio / <i>Fator de serviço</i> / Service factor
$R_2$	[N]	Carga radial admisible en la salida / <i>Carga radial admissível na saída</i> / Maximum output radial load
$A_2$	[N]	Carga axial admisible en la salida / <i>Carga axial admissível na saída</i> / Maximum output axial load

## Lubricación

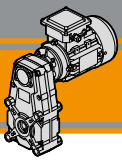
## Lubrificação

## Lubrication

Todos los motoredutores pendulares son previamente lubricados con aceite sintético con grado de viscosidad 320, por lo tanto, pueden ser instalados en cualquier posición de montaje y no requieren mantenimiento.

*Todos os motoredutores são fornecidos completos de lubrificante sintético de viscosidade 320, portanto, podem ser instalados em qualquer posição de montagem e não necessitam de manutenção.*

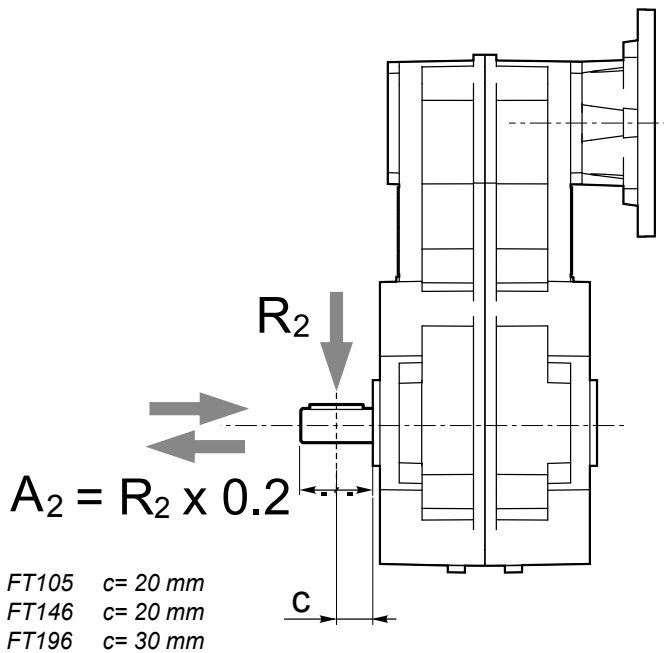
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.



Cargas radiales

Cargas radiais

Radial loads

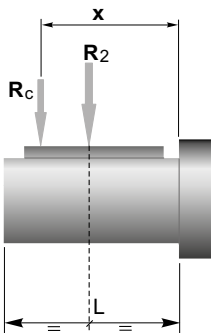


$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]		
	FT105	FT146	FT196
70	1500	2500	3500
40	1700	2700	4000
30	1850	2850	4600
20	2000	3000	5500
10	2000	3000	7000
5	2000	3000	7000

Cuando la carga radial no se aplica en el punto medio del eje, es necesario calcular la carga efectiva a través la siguiente fórmula:

Quando a carga radial resultante não é aplicada na linha mediana da eixo, é preciso calcular aquela efetiva com a seguinte fórmula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

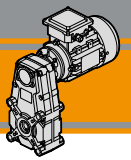


	FT105	FT146	FT196
<b>a</b>	82	82,5	132
<b>b</b>	62	62,5	102
<b>R<sub>2MAX</sub></b>	2000	3000	7000

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valores dados en la tabla  
 a, b = valores referidos na tabela  
 a, b = values given in the table




## Datos técnicos

## Dados técnicos

## Technical data

 **$n_1$  1750 [min<sup>-1</sup>]**

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>FT105</b>				
<b>FT105/3</b>	85	40	0.38	20.57
	53	50	0.29	33.32
	39	65	0.29	44.36
	32	65	0.23	54.87
	24	65	0.18	71.84
	23	65	0.16	77.07
	20	65	0.14	88.87
	14	65	0.10	124.81
	9.6	65	0.07	181.35
<b>FT105/4</b>	7.8	65	0.06	224.32
	5.6	65	0.04	315.05
	4.8	65	0.03	368.19
	3.3	65	0.02	534.98
	2.6	65	0.02	661.76
1.9	65	0.01	929.40	

**IEC Motores aplicables**  
**IEC Motores aplicáveis**  
**IEC Motor adapters**
**56B14****FT146**

<b>93</b>	80	0.81	18.75	
			26.17	
			28.26	
<b>50</b>	100	0.54	35.07	
			39.44	
			46.44	
			52.86	
			60.63	
<b>29</b>	110	0.35	70.00	
			84.63	
			95.61	
			113.40	
			133.45	
			150.18	
			160.43	
			178.83	
<b>11</b>	120	0.14	223.92	
			236.83	
			300.07	
			397.38	
			0.13	178.83
			0.10	223.92
0.10	236.83			
0.08	300.07			
0.06	397.38			


**56 B5/B14****63 B5/B14****71 B5/B14****FT196**

<b>86</b>	350	3.3	20.41	
			34.81	
			42.61	
			59.36	
<b>24</b>	550	1.4	72.68	
			92.82	
			123.95	
			158.02	
			201.80	
			269.47	
			0.85	123.95
			0.66	158.02
0.52	201.80			
0.39	269.47			

**71 B5/B14****80 B5/B14****90 B5/B14**

## NOTA


Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.

 \* =seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas E6-E7.

## N.B.


As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.

 \* =hido em função da aplicação: entre em contato com o nosso Serviço Técnico.

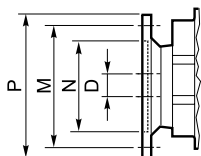
Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas E6-E7.

## N.B.

Highlighted areas indicate motor inputs available on each size of unit.

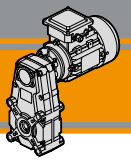
 \* =lected depending on application: please contact our Technical Department.

Before selecting any gearbox, please read the performance values shown in the tables on page E6-E7



	IEC Dimension / IEC Dimensões / IEC Dimensions									
	56 B5	56 B14	63 B5	63 B14	71 B5	71 B14	80 B5	80 B14	90 B5	90 B14
<b>N</b>	80	50	95	60	110	70	130	80	130	95
<b>M</b>	100	65	115	75	130	85	165	100	165	115
<b>P</b>	120	80	140	90	160	105	200	120	200	140
	9		11		14		19		24	









## Datos técnicos

## Dados técnicos

## Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>0.37</b>							<b>1.5</b>							
(0.50 hp)	<b>93</b>	36	2.2	18.75	<b>FT146</b>	<b>B5/B14</b>	(2.0 hp)	<b>86</b>	157	2.2	20.41	<b>FT196</b>	<b>B5/B14</b>	
	<b>67</b>	50	1.6	26.17		<b>B5/B14</b>		<b>50</b>	268	1.5	34.81		<b>B5/B14</b>	
71A4	<b>62</b>	54	1.5	28.26		<b>B5/B14</b>		90S4	<b>41</b>	328	1.4		42.61	<b>B5/B14</b>
(1750 min <sup>-1</sup> )	<b>50</b>	67	1.5	35.07		<b>B5/B14</b>		(1750 min <sup>-1</sup> )	<b>29</b>	457	1.1		59.36	<b>B5/B14</b>
	<b>44</b>	75	1.3	39.44		<b>B5/B14</b>			<b>24</b>	559	1.0		72.68	<b>B5/B14</b>
	<b>38</b>	88	1.1	46.44		<b>B5/B14</b>								
	<b>33</b>	100	1.0	52.86		<b>B5/B14</b>								
	<b>29</b>	115	1.0	60.63		<b>B5/B14</b>								
	<b>25</b>	133	0.8	70.00		<b>B5/B14</b>								
	<b>86</b>	39	9.0	20.41		<b>FT196</b>	<b>B5/B14</b>	(3.0 hp)	<b>86</b>	230	1.5		20.41	<b>FT196</b>
	<b>50</b>	66	6.1	34.81	<b>B5/B14</b>			<b>50</b>	393	1.0	34.81	<b>B5/B14</b>		
	<b>41</b>	81	5.6	42.61	<b>B5/B14</b>			90L4	<b>41</b>	481	0.9	42.61	<b>B5/B14</b>	
	<b>29</b>	113	4.4	59.36	<b>B5/B14</b>			(1750 min <sup>-1</sup> )						
	<b>24</b>	138	4.0	72.68	<b>B5/B14</b>									
	<b>19</b>	176	3.1	92.82	<b>B5/B14</b>									
	<b>14</b>	235	2.3	123.95	<b>B5/B14</b>									
	<b>11</b>	300	1.8	158.02	<b>B5/B14</b>									
	<b>8.7</b>	383	1.4	201.80	<b>B5/B14</b>									
	<b>6.5</b>	511	1.1	269.47	<b>B5/B14</b>									

**0.55**

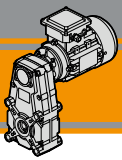
(0.75 hp)	<b>93</b>	53	1.5	18.75	<b>FT146</b>	<b>B5/B14</b>
	<b>67</b>	74	1.1	26.17		<b>B5/B14</b>
71B4	<b>62</b>	80	1.0	28.26		<b>B5/B14</b>
(1750 min <sup>-1</sup> )	<b>50</b>	99	1.0	35.07		<b>B5/B14</b>
	<b>44</b>	111	0.90	39.44		<b>B5/B14</b>
	<b>86</b>	58	6.1	20.41	<b>FT196</b>	<b>B5/B14</b>
	<b>50</b>	98	4.1	34.81		<b>B5/B14</b>
	<b>41</b>	120	3.7	42.61		<b>B5/B14</b>
	<b>29</b>	167	3.0	59.36		<b>B5/B14</b>
	<b>24</b>	205	2.7	72.68		<b>B5/B14</b>
	<b>19</b>	262	2.1	92.82		<b>B5/B14</b>
	<b>14</b>	350	1.6	123.95		<b>B5/B14</b>
	<b>11</b>	446	1.2	158.02		<b>B5/B14</b>
	<b>8.7</b>	569	1.0	201.80		<b>B5/B14</b>

**0.75**

(1.0 hp)	<b>86</b>	79	4.5	20.41	<b>FT196</b>	<b>B5/B14</b>
	<b>50</b>	134	3.0	34.81		<b>B5/B14</b>
80A4	<b>41</b>	164	2.7	42.61		<b>B5/B14</b>
(1750 min <sup>-1</sup> )	<b>29</b>	228	2.2	59.36		<b>B5/B14</b>
	<b>24</b>	280	2.0	72.68		<b>B5/B14</b>
	<b>19</b>	357	1.5	92.82		<b>B5/B14</b>
	<b>14</b>	477	1.2	123.95		<b>B5/B14</b>
	<b>11</b>	608	0.9	158.02		<b>B5/B14</b>

**1.1**

(1.5 hp)	<b>86</b>	115	3.0	20.41	<b>FT196</b>	<b>B5/B14</b>
	<b>50</b>	196	2.0	34.81		<b>B5/B14</b>
80B4	<b>41</b>	240	1.9	42.61		<b>B5/B14</b>
(1750 min <sup>-1</sup> )	<b>29</b>	335	1.5	59.36		<b>B5/B14</b>
	<b>24</b>	410	1.3	72.68		<b>B5/B14</b>
	<b>19</b>	524	1.1	92.82		<b>B5/B14</b>



**FT**

**Motorreductores pendulares**  
**Motoredutores de eixos paralelos**  
**Helical parallel gearmotors**

**60 Hz**

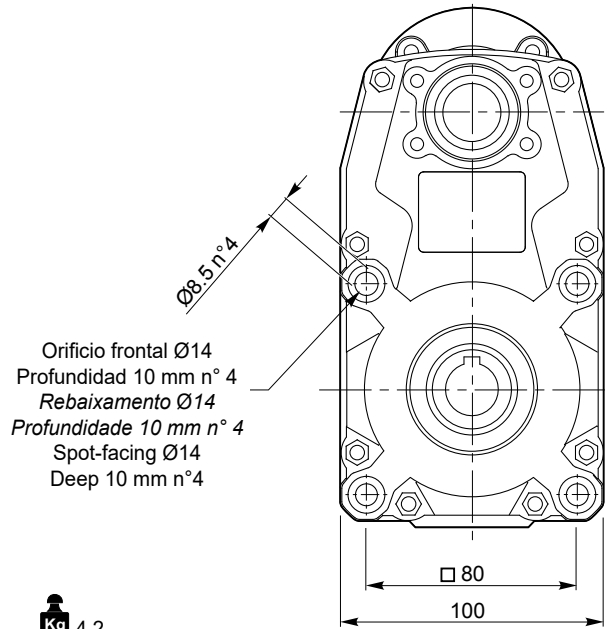
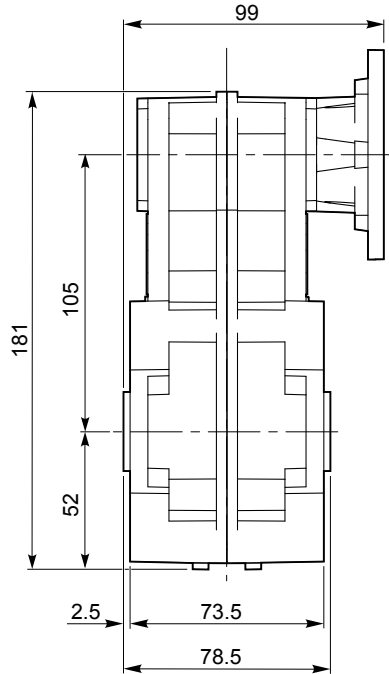
**Dimensiones**

**Dimensões**

**Dimensions**

**FT 105**

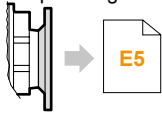
**FT 105...U**



Orificio frontal Ø14  
 Profundidad 10 mm n° 4  
 Rebaixamento Ø14  
 Profundidade 10 mm n° 4  
 Spot-facing Ø14  
 Deep 10 mm n°4

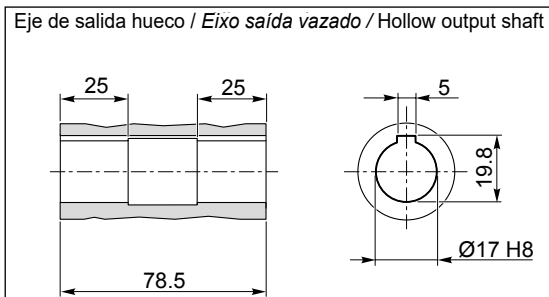
**4.2**

Bridas Motor  
 Flange do motor  
 Input flange

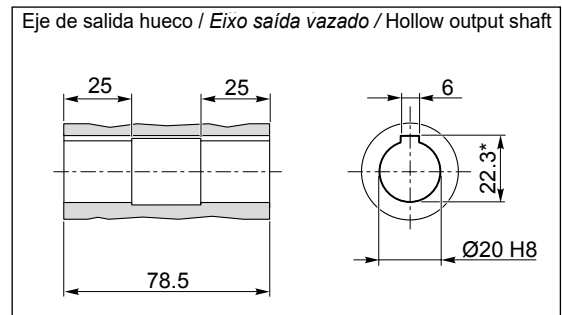


NOTA: Mismos puntos de arreglo en ambos lados  
 NOTA: Mesma fixação em ambos os lados  
 NOTE: Same fixing points in both sides

**O17**

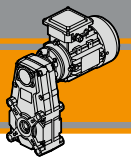


**O20**



\*Ranura especial / Encaixe da chaveta rebaixada / Special Keyway





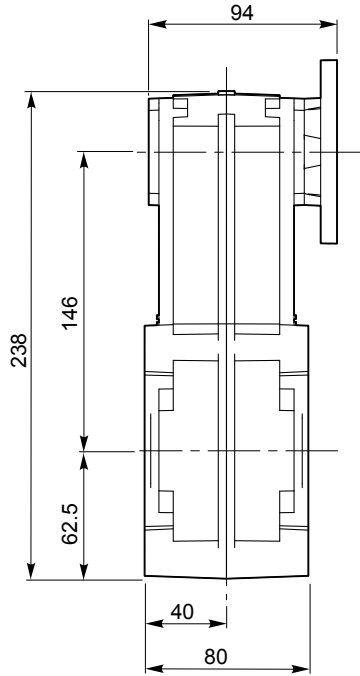
Dimensiones

Dimensões

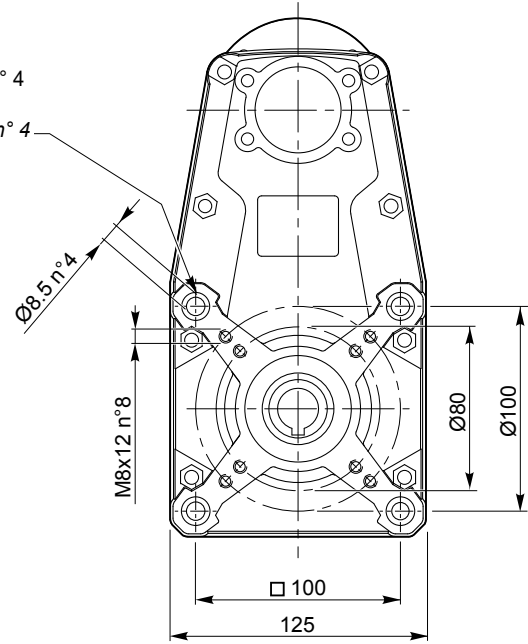
Dimensions

FT 146

FT 146 U



Orificio frontal Ø14  
 Profundidad 9.5 mm n° 4  
 Rebaixamento Ø14  
 Profundidade 9.5 mm n° 4  
 Spot-facing Ø14  
 Deep 9.5 mm n°4



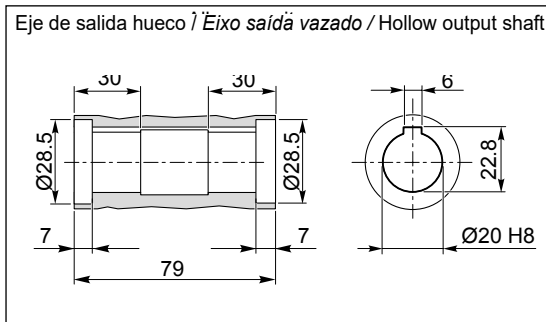
**Kg** 4.7

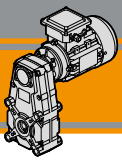
Bridas Motor  
 Flange do motor  
 Input flange



NOTA: Mismos puntos de arreglo en ambos lados  
 NOTA: Mesma fixação em ambos os lados  
 NOTE: Same fixing points in both sides

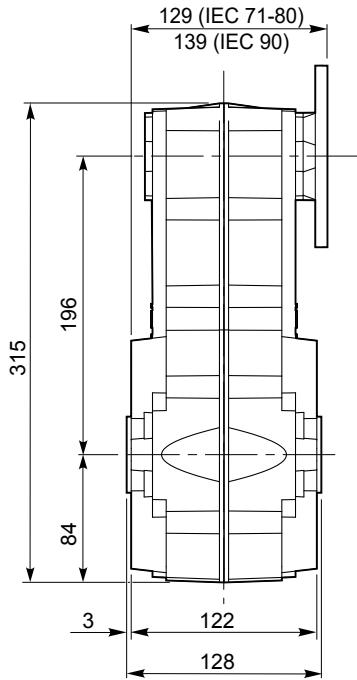
O20



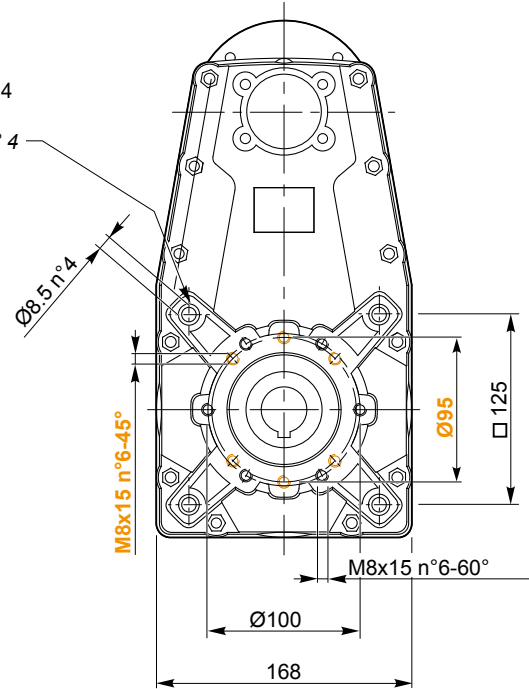


FT 196

FT 196 U



Orificio frontal Ø14  
 Profundidad 11 mm n° 4  
 Rebaixamento Ø14  
 Profundidade 11 mm n° 4  
 Spot-facing Ø14  
 Deep 11 mm n° 4



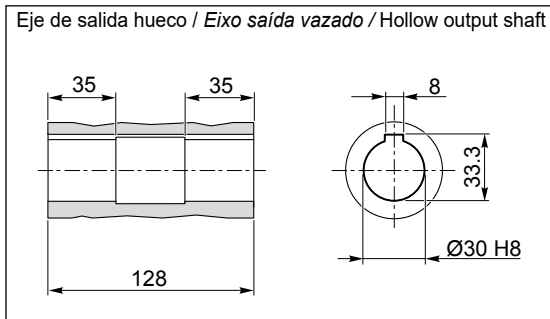
**Kg** 12.1

Bridas Motor  
 Flange do motor  
 Input flange

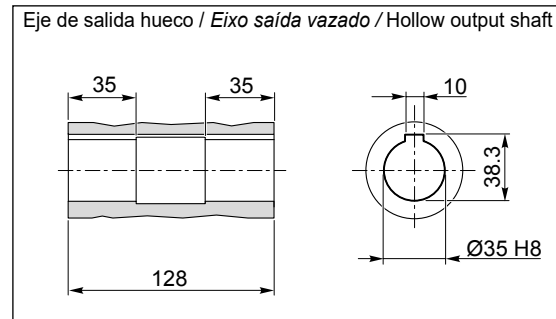


NOTA: Mismos puntos de arreglo en ambos lados  
 NOTA: Mesma fixação em ambos os lados  
 NOTE: Same fixing points in both sides

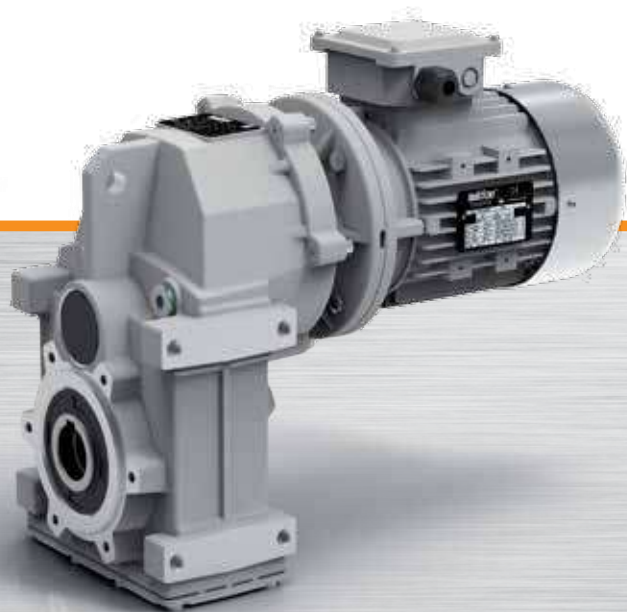
O30



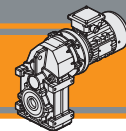
O35



Motorreductores pendulares  
**Motoredutores de eixos paralelos**  
Helical parallel gearmotors





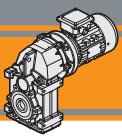


Índice	Índice	Index	Pag. Pág. Page
Características técnicas	<i>Características técnicas</i>	Technical features	<b>F2</b>
Clasificación	<i>Designação</i>	Classification	<b>F2</b>
Sentidos de rotación	<i>Sentidos de rotação</i>	Direction of rotation	<b>F3</b>
Nomenclatura	<i>Simbologia</i>	Legend	<b>F3</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>F3</b>
Cargas radiales	<i>Cargas radiais</i>	Radial loads	<b>F4</b>
Datos técnicos	<i>Dados técnicos</i>	Technical data	<b>F5</b>
Dimensiones	<i>Dimensões</i>	Dimensions	<b>F16</b>
Accesorios	<i>Acessórios</i>	Accessories	<b>F17</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**

**ATS****Motorreductores pendulares**  
**Motoredutores de eixos paralelos**  
**Helical parallel gearmotors****60 Hz****Características técnicas**

El alto grado de modularidad es una característica del diseño de la línea ATS motoredutores pendulares. Es posible configurar la versión requerida usando los kits de entrada y salida.

Las principales características de gama ATS son:

- Carcasas y bridas de entrada de aluminio fundido a presión
- Aceite de lubricación sintética de larga duración.
- Bridas de salida de hierro fundido.

**Características técnicas**

*Os motoredutores da série ATS são caracterizados por um elevado grau de modularidade: a partir de um corpo base, é possível configurar de acordo com os requisitos de diferentes kits de entrada e de saída.*

*Características comuns a toda a série:*

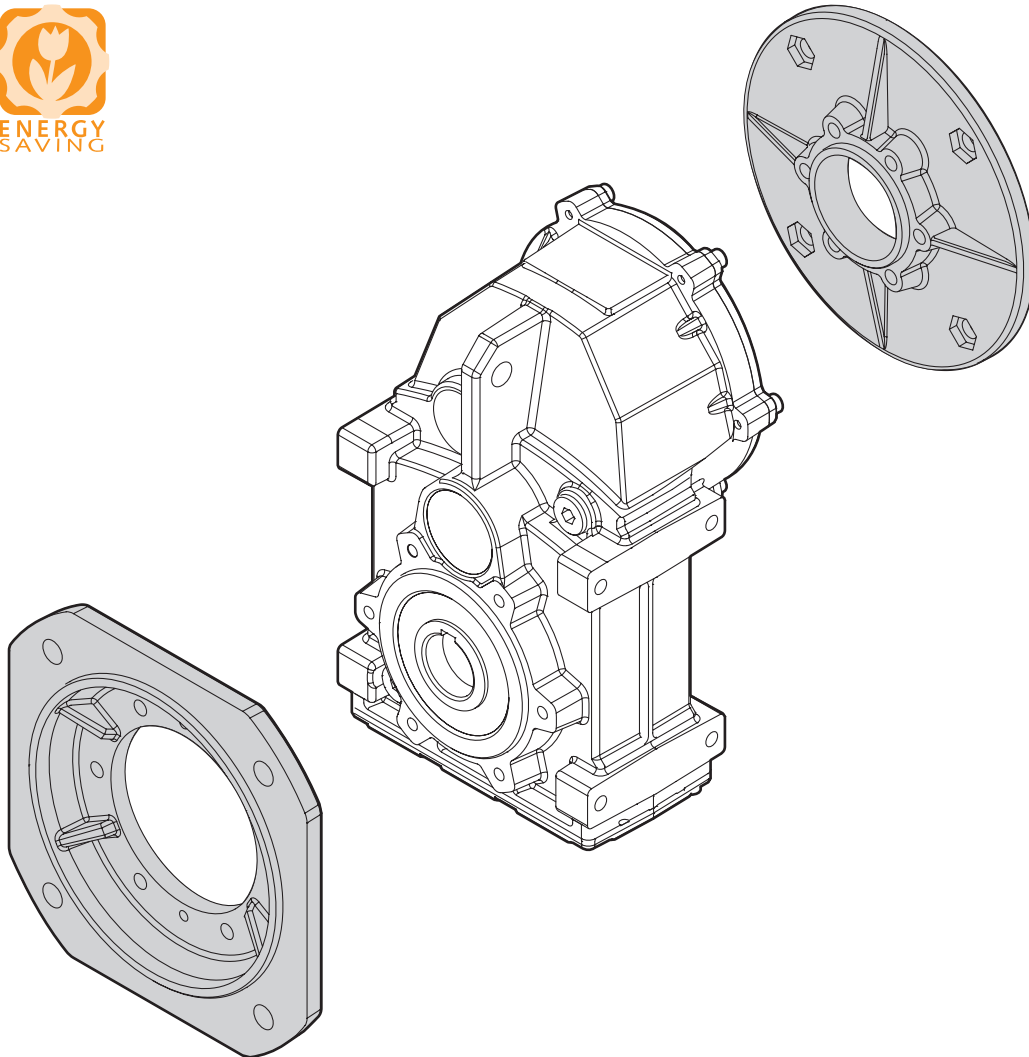
- *Carcaça e Flange de alumínio fundido*
- *Lubrificação permanente com óleo sintético.*
- *Flanges de saída de ferro fundido.*

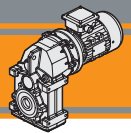
**Technical features**

The high degree of modularity is a design feature of ATS helical parallel range. It is possible to set up the version required by using input and output kits.

The main features of ATS range are:

- Die-cast aluminum housings and input flanges
- Permanent synthetic oil long-life lubrication.
- Cast iron output flanges.





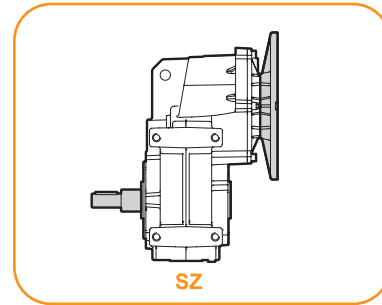
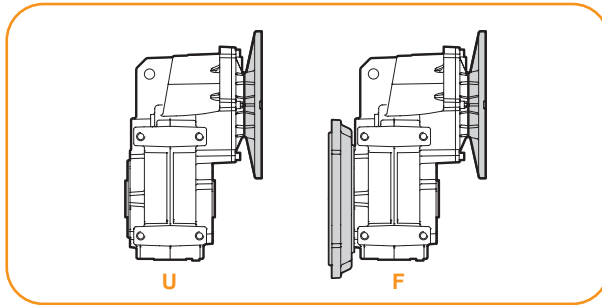
Clasificación

Designação

Classification

Relación de reducción  
Versão Redutor  
Gearbox Version

Eje de salida  
Eixo de saída  
Output shaft

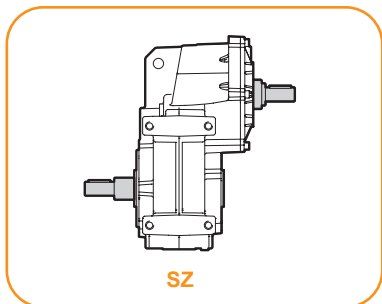
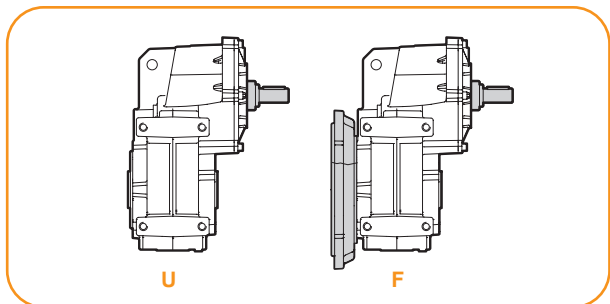


REDUCTOR / REDUTOR / GEARBOX

ATS	90	2	U	29.65	D35	90	B5	SZ
Tipo Tipo Type	Tamaño Tamanho Size	Etapas Estágios Stages	Versión Versão Version	Relación de reducción Rapporto Ratio	Eje de salida hueco Eixo saída vazado Hollow output shaft	IEC 	Forma constructiva Forma construtiva Version	Eje de salida Eixo de saída Output shaft
<b>ATS</b> 	<b>90</b> <b>91</b>	<b>2</b> <b>3</b>	<b>U...</b> <b>F...</b>	Véase tablas Veja tabelas see tables	Véase tablas Veja tabelas see tables	<b>63..</b> — <b>112..</b>	<b>B5</b> <b>B14</b>	<b>SZ</b>

Relación de reducción  
Versão Redutor  
Gearbox Version

Eje de salida  
Eixo de saída  
Output shaft



REDUCTOR / REDUTOR / GEARBOX

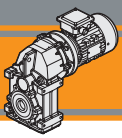
ATSIS	90	2	U	29.65	D35	SZ
Tipo Tipo Type	Tamaño Tamanho Size	Etapas Estágios Stages	Versión Versão Version	Relación de reducción Rapporto Ratio	Eje de salida hueco Eixo saída vazado Hollow output shaft	Eje de salida Eixo de saída Output shaft
<b>ATSIS</b> 	<b>90</b> <b>91</b>	<b>2</b> <b>3</b>	<b>U...</b> <b>F...</b>	Véase tablas Veja tabelas see tables	Véase tablas Veja tabelas see tables	<b>SZ</b>

MOTOR / MOTOR / MOTOR

0.75kW	4p	3ph	230/400V	60Hz	T1
Potencia Potência Power	Polos Pólos Poles	Fases Fases Phases	Tensión Tensão Voltage	Frecuencia Frequência Frequency	Posición caja de bornes Pos. Conexão Terminal box pos.
Véase tablas Veja tabelas see tables	<b>2p</b> <b>4p</b> <b>6p</b> <b>8p</b>	<b>1ph</b> <b>3ph</b>	<b>230V</b> <b>230/400V</b>	<b>60Hz</b>	<b>T1 (Std)</b> 

ATS





**ATS**

Motorreductores pendulares  
 Motores de eixos paralelos  
 Helical parallel gearmotors

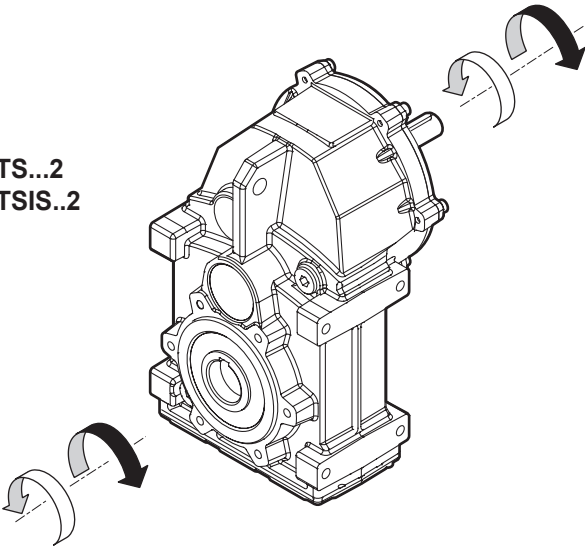
60 Hz

Sentidos de rotación

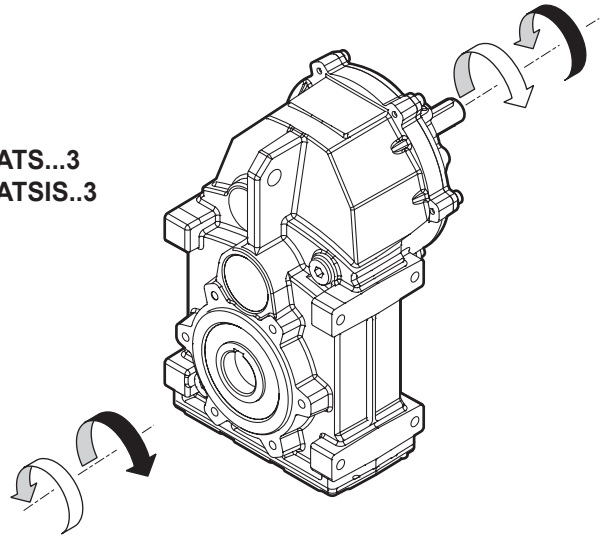
Sentidos de rotação

Direction of rotation

ATS...2  
 AT SIS..2



ATS...3  
 AT SIS..3



**Nomenclatura**

**Simbologia**

**Legend**

$n_1$	[rpm]	Velocidad de entrada / <i>Velocidade na entrada</i> / Input speed
$n_2$	[rpm]	Velocidad de salida / <i>Velocidade na saída</i> / Output speed
$i$		Relación de reducción / <i>Relação de redução</i> / Ratio
$P_1$	[kW]	Potencia en la entrada / <i>Potência da entrada</i> / Input power
$M_2$	[Nm]	Par en la salida en función de $P_1$ / <i>Torque na saída em função de <math>P_1</math></i> / Output torque referred to $P_1$
$P_{n1}$	[kW]	Potencia nominal en la entrada / <i>Potência nominal na entrada</i> / Nominal input power
$M_{n2}$	[Nm]	Par nominal en la salida en función de $P_{n1}$ / <i>Torque nominal na saída em função de <math>P_{n1}</math></i> / Nominal output torque referred to $P_{n1}$
$sf$		Factor de servicio / <i>Fator de serviço</i> / Service factor
$R_2$	[N]	Carga radial admisible en la salida / <i>Carga radial admissível na saída</i> / Maximum output radial load
$A_2$	[N]	Carga axial admisible en la salida / <i>Carga axial admissível na saída</i> / Maximum output axial load

**Lubricación**

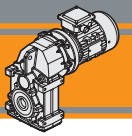
**Lubrificação**

**Lubrication**

Todos los motoreductores pendulares son previamente lubricados con aceite sintético con grado de viscosidad 320, por lo tanto, pueden ser instalados en cualquier posición de montaje y no requieren mantenimiento.

*Todos os motoredutores são fornecidos completos de lubrificante sintético de viscosidade 320, portanto, podem ser instalados em qualquer posição de montagem e não necessitam de manutenção.*

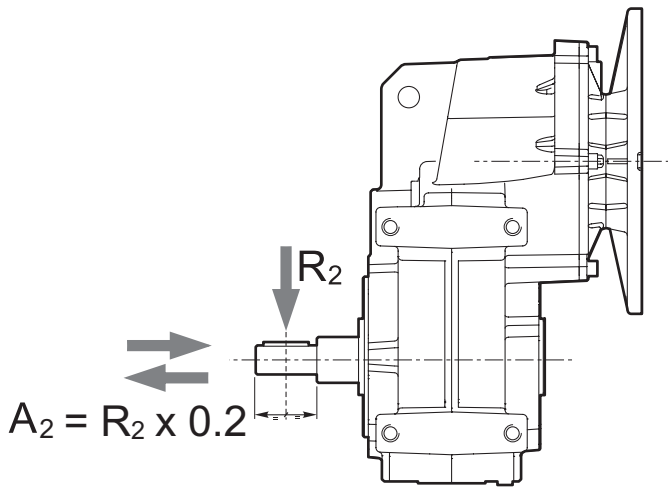
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.



Cargas radiales

Cargas radiais

Radial loads

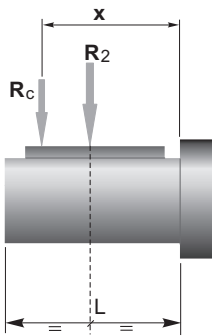


n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]	
	ATS 902 ATS 903	ATS 912 ATS 913
240	2400	3600
180	2400	4200
150	2400	4200
120	2500	4600
100	2800	4800
85	3090	5100
70	3150	5250
55	3630	6000
40	4440	6900
30	5100	7800
20	6000	9500
15	6000	10000
10	6000	10000
5	6000	10000

Cuando la carga radial no se aplica en el punto medio del eje, es necesario calcular la carga efectiva a través la siguiente fórmula:

Quando a carga radial resultante não é aplicada na linha mediana da eixo, é preciso calcular aquela efetiva com a seguinte fórmula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

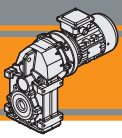


	ATS 902 ATS 903	ATS 912 ATS 913
a	152	174.5
b	97	114.5
R <sub>2MAX</sub>	6000	10000

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valores dados en la tabla  
a, b = valores referidos na tabela  
a, b = values given in the table



**ATS**

**Motorreductores pendulares**  
**Motoredutores de eixos paralelos**  
**Helical parallel gearmotors**


**60 Hz**

**Datos técnicos**

**Dados técnicos**

**Technical data**

**n<sub>1</sub> 1750 [min<sup>-1</sup>]**


	n <sub>2</sub> [min <sup>-1</sup> ]	Mn <sub>2</sub> [Nm]	Pn <sub>1</sub> [kW]	i
<b>ATSIS 902</b>				
	298	200	6.51	5.87
	222	250	6.06	7.87
	185	300	6.05	9.47
	152	350	5.79	11.53
	132	350	5.04	13.26
	112	350	4.26	15.68
	105	350	4.01	16.68
	92	400	4.00	19.09
	80	400	3.48	21.96
	66	400	2.88	26.50
	63	400	2.77	27.61
	59	400	2.58	29.65
	52	400	2.28	33.49
	49	400	2.13	35.87
	46	400	2.04	38.29
	40	400	1.78	43.88
	36	400	1.59	49.09
	33	350	1.29	52.71
	32	400	1.41	55.45
	28	400	1.23	63.41
	24	400	1.06	73.64
	20	400	0.89	87.27

IEC Motori applicabili IEC Motor adapters				
71 B5	80 B5/B14	90 B5/B14	100 B5/B14	112 B5/B14
B				
B				
B				
B				
B				
B				
B				
B				*
B				*
B				*
B			*	*
B			*	*
B			*	*
B			*	*
B			*	*
B			*	*
B			*	*
B			*	*
B		*	*	*
B		*	*	*
B		*	*	*

<b>ATSIS 903</b>				
	17	400	0.78	100.33
	14	400	0.62	125.89
	13	400	0.59	131.65
	13	400	0.56	139.88
	12	400	0.52	151.07
	11	400	0.47	166.13
	10	400	0.45	172.40
	8.4	400	0.37	208.45
	7.8	400	0.35	223.41
	7.0	400	0.31	250.14
	5.4	400	0.24	323.65
	5.1	400	0.23	345.59
	4.7	400	0.21	376.15
	4.1	400	0.18	424.21


63 B5	71 B5/B14	80 B5/B14	90 B5/B14
			*
		*	*
		*	*
		*	*
		*	*
		*	*
		*	*
		*	*
	*	*	*
	*	*	*
	*	*	*
	*	*	*
	*	*	*

**NOTA**  
 Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.

 \* = El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico


Antes de seleccionar cualquier reductor, favor de revisar los valores dedesempeño en las páginas F8 a la F11.

**N.B.**  
 As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.

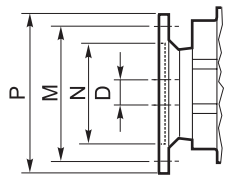
 \* = O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas F8 a pag. F11.

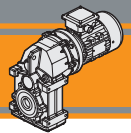
**N.B.**  
 Highlighted areas indicate motor inputs available on each size of unit.


 \* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

Before selecting any gearbox, please read the performance values shown in the tables on page on page F8 to F11.



Dimensioni IEC / IEC Dimensions									
	63 B5	71 B5	71 B14	80 B5	80 B14	90 B5	90 B14	100/112 B5	100/112 B14
<b>N</b>	95	110	70	130	80	130	95	180	110
<b>M</b>	115	130	85	165	100	165	115	215	130
<b>P</b>	140	160	105	200	120	200	140	250	160
<b>D</b>	11	14		19		24		28	


**Datos técnicos**
**Dados técnicos**
**Technical data**
 **$n_1$  1750 [min<sup>-1</sup>]**

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>ATSIS 912</b>				
	306	350	11.69	5.71
	228	350	8.72	7.66
	198	400	8.63	8.85
	190	400	8.28	9.22
	156	400	6.80	11.23
	147	400	6.43	11.87
	135	500	7.39	12.92
	122	500	6.68	14.29
	108	500	5.88	16.24
	101	500	5.49	17.39
	87	600	5.72	20.01
	83	600	5.43	21.10
	70	600	4.55	25.16
	68	600	4.44	25.81
	61	600	4.05	28.88
	54	600	3.58	32.69
	47	520	2.72	37.30
	44	600	2.93	39.98
	39	600	2.62	44.73
	35	600	2.31	50.53
	30	600	2.02	57.77
	26	600	1.74	67.09
	22	520	1.27	79.52

IEC Motores aplicables IEC Motores aplicáveis IEC Motor adapters				
71 B5	80 B5/B14	90 B5/B14	100 B5/B14	112 B5/B14
B				
B				
B				
B				
B				
B				
B				
B				
B				
B				
B				
B				
B				
B				
B				*
B				*
B				*
B				*
B			*	*
B			*	*
B			*	*
B			*	*

**ATSIS913**

21	600	1.42	82.28
19	600	1.24	93.96
17	600	1.15	101.41
14	600	0.95	122.61
13	600	0.89	131.41
12	600	0.79	147.13
11	600	0.74	157.08
9.2	600	0.62	189.92
8.6	600	0.57	203.55
7.7	600	0.51	227.91
5.9	600	0.40	294.88
5.6	600	0.37	314.87
5.1	600	0.34	342.72
4.5	600	0.30	386.51

63 B5	71 B5/B14	80 B5/B14	90 B5/B14
			*
			*
			*
			*
			*
			*
		*	*
		*	*
		*	*
		*	*
		*	*
		*	*
		*	*

**NOTA**

Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.



\* = El Factor de servicio (sf) se deberá seleccionar con respecto a la aplicación: Favor de contactar con nuestro Servicio Técnico

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas F8 a la F11.

**N.B.**

As áreas destacadas indicam a aplicabilidade correspondente ao tamanho do motor.



\* = O fator de serviço (sf) deve ser escolhido em função da aplicação: entre em contato com o nosso Serviço Técnico.

Antes de executar a escolha do motoredutor analisar o desempenho listado nas tabelas das páginas F8 a pag. F11.

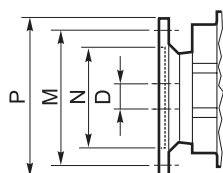
**N.B.**

Highlighted areas indicate motor inputs available on each size of unit.

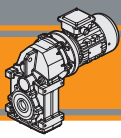


\* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

Before selecting any gearbox, please read the performance values shown in the tables on page on page F8 to F11.







Dimensioni IEC / IEC Dimensions									
	63 B5	71 B5	71 B14	80 B5	80 B14	90 B5	90 B14	100/112 B5	100/112 B14
<b>N</b>	95	110	70	130	80	130	95	180	110
<b>M</b>	115	130	85	165	100	165	115	215	130
<b>P</b>	140	160	105	200	120	200	140	250	160
<b>D</b>	11	14		19		24		28	



**Datos técnicos**

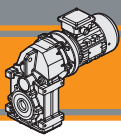
**Dados técnicos**

**Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i					
<b>0.12</b>							<b>0.25</b>									
(0.16 hp)	17	62	6.5	100.33	ATS903	B5	(0.33 hp)	17	129	3.1	100.33	ATS903	B5			
	14	77	5.2	125.89			B5		14	161	2.5			125.89	B5	
63A4	13	81	4.9	131.65			B5		63C4	13	169			2.4	131.65	B5
(1750 min <sup>-1</sup> )	13	86	4.6	139.88			B5		(1750 min <sup>-1</sup> )	13	179			2.2	139.88	B5
	12	93	4.3	151.07			B5			12	194			2.1	151.07	B5
	11	102	3.9	166.13			B5			11	213			1.9	166.13	B5
	10	106	3.8	172.40			B5			10	221			1.8	172.40	B5
	8.4	128	3.1	208.45			B5			8.4	267			1.5	208.45	B5
	7.8	138	2.9	223.41			B5			7.8	287			1.4	223.41	B5
	7.0	154	2.6	250.14			B5			7.0	321			1.2	250.14	B5
	5.4	199	2.0	323.65			B5			5.4	415			1.0	323.65	B5
	5.1	213	1.9	345.59			B5			5.1	443			0.9	345.59	B5
	4.7	232	1.7	376.15			B5									
	4.1	261	1.5	424.21	B5											
	7.7	140	4.3	227.91	ATS913	B5		11	201	3.0	157.08	ATS913	B5/B14			
	5.9	182	3.3	294.88			B5		9.2	244	2.5			189.92	B5/B14	
	5.6	194	3.1	314.87			B5		8.6	261	2.3			203.55	B5/B14	
	5.1	211	2.8	342.72			B5		7.7	292	2.1			227.91	B5/B14	
	4.5	238	2.5	386.51			B5		5.9	378	1.6			294.88	B5/B14	
							B5		5.6	404	1.5			314.87	B5/B14	
							B5		5.1	440	1.4			342.72	B5/B14	
							B5		4.5	496	1.2			386.51	B5/B14	

<b>0.18</b>							<b>0.37</b>									
(0.25 hp)	17	93	4.3	100.33	ATS903	B5	(0.50 hp)	298	11	17.6	5.87	ATS902	B5			
	14	116	3.4	125.89			B5		222	15	16.4			7.87	B5	
63B4	13	122	3.3	131.65			B5		71A4	185	18			16.3	9.47	B5
(1750 min <sup>-1</sup> )	13	129	3.1	139.88			B5		(1750 min <sup>-1</sup> )	152	22			15.7	11.53	B5
	12	139	2.9	151.07			B5			132	26			13.6	13.26	B5
	11	153	2.6	166.13			B5			112	30			11.5	15.68	B5
	10	159	2.5	172.40			B5			105	32			10.8	16.68	B5
	8.4	192	2.1	208.45			B5			92	37			10.8	19.09	B5
	7.8	206	1.9	223.41			B5			80	43			9.4	21.96	B5
	7.0	231	1.7	250.14			B5			66	51			7.8	26.50	B5
	5.4	299	1.3	323.65			B5			63	54			7.5	27.61	B5
	5.1	319	1.3	345.59			B5			59	57			7.0	29.65	B5
	4.7	347	1.2	376.15			B5			52	65			6.2	33.49	B5
	4.1	392	1.0	424.21	B5			49	70	5.8	35.87	B5				
	9.2	175	3.4	189.92	ATS913	B5		46	73	5.5	38.29	B5				
	8.6	188	3.2	203.55			B5		40	83	4.8	43.88	B5			
	7.7	210	2.9	227.91			B5		36	93	4.3	49.09	B5			
	5.9	272	2.2	294.88			B5		33	100	3.5	52.71	B5			
	5.6	291	2.1	314.87			B5		32	105	3.8	55.45	B5			
	5.1	316	1.9	342.72			B5		28	120	3.3	63.41	B5			
	4.5	357	1.7	386.51			B5		24	140	2.9	73.64	B5			
							B5		20	166	2.4	87.27	B5			









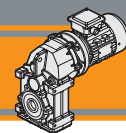
**Datos técnicos**





**Dados técnicos**

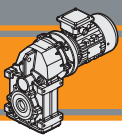
**Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i						
<b>1.1</b>							<b>1.5</b>										
(1.5 hp)	<b>298</b>	34	5.9	5.87	<b>ATS902</b>	<b>B5/B14</b>	(2.0 hp)	<b>101</b>	137	3.7	17.39	<b>ATS912</b>	<b>B5/B14</b>				
	<b>222</b>	45	5.5	7.87				<b>87</b>	157	3.8	20.01						
80B4	<b>185</b>	55	5.5	9.47				<b>83</b>	166	3.6	21.10						
(1750 min <sup>-1</sup> )	<b>152</b>	66	5.3	11.53				90S4	<b>70</b>	198	3.0			25.16		<b>B5/B14</b>	
	<b>132</b>	76	4.6	13.26				(1750 min <sup>-1</sup> )	<b>68</b>	203	3.0			25.81		<b>B5/B14</b>	
	<b>112</b>	90	3.9	15.68					<b>61</b>	222	2.7			28.88		<b>B5/B14</b>	
	<b>105</b>	96	3.6	16.68					<b>54</b>	251	2.4			32.69		<b>B5/B14</b>	
	<b>92</b>	110	3.6	19.09					<b>47</b>	287	1.8			37.30		<b>B5/B14</b>	
	<b>80</b>	127	3.2	21.96					<b>44</b>	308	2.0			39.98		<b>B5/B14</b>	
	<b>66</b>	153	2.6	26.50					<b>39</b>	344	1.7			44.73		<b>B5/B14</b>	
	<b>63</b>	159	2.5	27.61					<b>35</b>	389	1.5			50.53		<b>B5/B14</b>	
	<b>59</b>	171	2.3	29.65					<b>30</b>	445	1.3			57.77		<b>B5/B14</b>	
	<b>52</b>	193	2.1	33.49					<b>26</b>	516	1.2			67.09		<b>B5/B14</b>	
	<b>49</b>	207	1.9	35.87													
	<b>46</b>	216	1.9	38.29					<b>21</b>	633	0.9			82.28	<b>ATS913</b>	<b>B5/B14</b>	
	<b>40</b>	248	1.6	43.88													
	<b>36</b>	277	1.4	49.09													
	<b>32</b>	313	1.3	55.45													
	<b>28</b>	358	1.1	63.41													
	<b>24</b>	416	1.0	73.64													
	<b>61</b>	163	3.7	28.88	<b>ATS912</b>	<b>B5/B14</b>	<b>2.2</b>										
	<b>54</b>	184	3.3	32.69				(3.0 hp)	<b>298</b>	68	3.0	5.87	<b>ATS902</b>	<b>B5/B14</b>			
	<b>47</b>	210	2.5	37.30					<b>222</b>	91	2.8	7.87				<b>B5/B14</b>	
	<b>44</b>	226	2.7	39.98					<b>185</b>	109	2.7	9.47				<b>B5/B14</b>	
	<b>39</b>	252	2.4	44.73					(1750 min <sup>-1</sup> )	<b>152</b>	133	2.6			11.53		<b>B5/B14</b>
	<b>35</b>	285	2.1	50.53					<b>132</b>	153	2.3	13.26				<b>B5/B14</b>	
	<b>30</b>	326	1.8	57.77					<b>112</b>	181	1.9	15.68				<b>B5/B14</b>	
	<b>26</b>	379	1.6	67.09					<b>105</b>	192	1.8	16.68				<b>B5/B14</b>	
									<b>92</b>	220	1.8	19.09				<b>B5/B14</b>	
									<b>80</b>	253	1.6	21.96				<b>B5/B14</b>	
							<b>66</b>	305	1.3	26.50		<b>B5/B14</b>					
							<b>63</b>	318	1.3	27.61		<b>B5/B14</b>					
							<b>59</b>	342	1.2	29.65		<b>B5/B14</b>					
							<b>52</b>	386	1.0	33.49		<b>B5/B14</b>					
							<b>49</b>	413	1.0	35.87		<b>B5/B14</b>					
	<b>21</b>	464	1.3	82.28	<b>ATS913</b>	<b>B5/B14</b>						<b>ATS912</b>	<b>B5/B14</b>				
	<b>19</b>	530	1.1	93.96					<b>306</b>	66	5.3			5.71		<b>B5/B14</b>	
	<b>17</b>	572	1.0	101.41					<b>228</b>	88	4.0			7.66		<b>B5/B14</b>	
	<b>14</b>	692	0.9	122.61					<b>198</b>	102	3.9			8.85		<b>B5/B14</b>	
									<b>190</b>	106	3.8			9.22		<b>B5/B14</b>	
							<b>156</b>	129	3.1	11.23				<b>B5/B14</b>			
							<b>147</b>	137	2.9	11.87				<b>B5/B14</b>			
							<b>135</b>	149	3.4	12.92				<b>B5/B14</b>			
							<b>122</b>	165	3.0	14.29				<b>B5/B14</b>			
							<b>108</b>	187	2.7	16.24				<b>B5/B14</b>			
							<b>101</b>	200	2.5	17.39		<b>B5/B14</b>					
							<b>87</b>	231	2.6	20.01		<b>B5/B14</b>					
							<b>83</b>	243	2.5	21.10		<b>B5/B14</b>					
							<b>70</b>	290	2.1	25.16		<b>B5/B14</b>					
							<b>68</b>	298	2.0	25.81		<b>B5/B14</b>					
							<b>61</b>	326	1.8	28.88		<b>B5/B14</b>					
							<b>54</b>	369	1.6	32.69		<b>B5/B14</b>					
							<b>44</b>	451	1.3	39.98		<b>B5/B14</b>					
							<b>39</b>	505	1.2	44.73		<b>B5/B14</b>					
							<b>35</b>	570	1.1	50.53		<b>B5/B14</b>					




**Datos técnicos**
**Dados técnicos**
**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i											
<b>3.0</b>							<b>4.5</b>															
(4.0 hp)	<b>298</b>	92	2.2	5.87	<b>ATS902</b>	<b>B5/B14</b>	(6.0 hp)	<b>298</b>	138	1.4	5.87	<b>ATS902</b>	<b>B5/B14</b>									
	<b>222</b>	124	2.0	7.87				<b>222</b>	186	1.3	7.87				<b>222</b>	186	1.3	7.87				
100LA4	<b>185</b>	149	2.0	9.47				<b>185</b>	223	1.3	9.47				<b>185</b>	223	1.3	9.47				
(1750 min <sup>-1</sup> )	<b>152</b>	181	1.9	11.53				<b>152</b>	272	1.3	11.53				<b>152</b>	272	1.3	11.53				
	<b>132</b>	208	1.7	13.26				<b>132</b>	313	1.1	13.26				<b>132</b>	313	1.1	13.26				
	<b>112</b>	246	1.4	15.68				<b>112</b>	370	0.9	15.68				<b>112</b>	370	0.9	15.68				
	<b>105</b>	262	1.3	16.68				<b>105</b>	393	0.9	16.68				<b>105</b>	393	0.9	16.68				
	<b>92</b>	300	1.3	19.09				<b>92</b>	450	0.9	19.09				<b>92</b>	450	0.9	19.09				
	<b>80</b>	345	1.2	21.96				<b>80</b>							<b>80</b>							
	<b>66</b>	417	1.0	26.50				<b>66</b>							<b>66</b>							
	<b>63</b>	434	0.9	27.61				<b>63</b>							<b>63</b>							
	<b>306</b>	90	3.9	5.71			<b>ATS912</b>	<b>B5/B14</b>		<b>306</b>	135			2.6	5.71	<b>ATS912</b>	<b>B5/B14</b>					
	<b>228</b>	120	2.9	7.66						<b>228</b>	181			1.9	7.66				<b>228</b>	181	1.9	7.66
	<b>198</b>	139	2.9	8.85						<b>198</b>	209			1.9	8.85				<b>198</b>	209	1.9	8.85
	<b>190</b>	145	2.8	9.22		<b>190</b>			217	1.8	9.22		<b>190</b>	217	1.8			9.22				
	<b>156</b>	176	2.3	11.23		<b>156</b>			265	1.5	11.23		<b>156</b>	265	1.5			11.23				
	<b>147</b>	187	2.1	11.87		<b>147</b>			280	1.4	11.87		<b>147</b>	280	1.4			11.87				
	<b>135</b>	203	2.5	12.92		<b>135</b>			305	1.6	12.92		<b>135</b>	305	1.6			12.92				
	<b>122</b>	225	2.2	14.29		<b>122</b>			337	1.5	14.29		<b>122</b>	337	1.5			14.29				
	<b>108</b>	255	2.0	16.24		<b>108</b>			383	1.3	16.24		<b>108</b>	383	1.3			16.24				
	<b>101</b>	273	1.8	17.39		<b>101</b>			410	1.2	17.39		<b>101</b>	410	1.2			17.39				
	<b>87</b>	314	1.9	20.01		<b>87</b>			472	1.3	20.01		<b>87</b>	472	1.3			20.01				
	<b>83</b>	332	1.8	21.10		<b>83</b>			497	1.2	21.10		<b>83</b>	497	1.2			21.10				
	<b>70</b>	395	1.5	25.16		<b>70</b>			593	1.0	25.16		<b>70</b>	593	1.0			25.16				
	<b>68</b>	406	1.5	25.81		<b>68</b>			609	1.0	25.81		<b>68</b>	609	1.0			25.81				
	<b>61</b>	444	1.4	28.88		<b>61</b>					<b>61</b>											
	<b>54</b>	503	1.2	32.69		<b>54</b>					<b>54</b>											
	<b>44</b>	615	1.0	39.98		<b>44</b>					<b>44</b>											
	<b>39</b>	688	0.9	44.73		<b>39</b>					<b>39</b>											
<b>3.7</b>							<b>5.5</b>															
(5.0 hp)	<b>298</b>	114	1.8	5.87	<b>ATS902</b>	<b>B5/B14</b>	(7.5 hp)	<b>298</b>	169	1.2	5.87	<b>ATS902</b>	<b>B5/B14</b>									
	<b>222</b>	153	1.6	7.87				<b>222</b>	227	1.1	7.87				<b>222</b>	227	1.1	7.87				
100LB4	<b>185</b>	184	1.6	9.47				<b>185</b>	273	1.1	9.47				<b>185</b>	273	1.1	9.47				
(1750 min <sup>-1</sup> )	<b>152</b>	223	1.6	11.53				<b>152</b>	332	1.1	11.53				<b>152</b>	332	1.1	11.53				
	<b>132</b>	257	1.4	13.26				<b>132</b>	382	0.9	13.26				<b>132</b>	382	0.9	13.26				
	<b>112</b>	304	1.2	15.68				<b>112</b>							<b>112</b>							
	<b>105</b>	323	1.1	16.68				<b>105</b>							<b>105</b>							
	<b>92</b>	370	1.1	19.09				<b>92</b>							<b>92</b>							
	<b>80</b>	426	0.9	21.96				<b>80</b>							<b>80</b>							
	<b>306</b>	111	3.2	5.71			<b>ATS912</b>	<b>B5/B14</b>		<b>306</b>	165			2.1	5.71	<b>ATS912</b>	<b>B5/B14</b>					
	<b>228</b>	149	2.4	7.66						<b>228</b>	221			1.6	7.66				<b>228</b>	221	1.6	7.66
	<b>198</b>	172	2.3	8.85						<b>198</b>	255			1.6	8.85				<b>198</b>	255	1.6	8.85
	<b>190</b>	179	2.2	9.22						<b>190</b>	266			1.5	9.22				<b>190</b>	266	1.5	9.22
	<b>156</b>	218	1.8	11.23						<b>156</b>	324			1.2	11.23				<b>156</b>	324	1.2	11.23
	<b>147</b>	230	1.7	11.87		<b>147</b>			342	1.2	11.87		<b>147</b>	342	1.2			11.87				
	<b>135</b>	250	2.0	12.92		<b>135</b>			372	1.3	12.92		<b>135</b>	372	1.3			12.92				
	<b>122</b>	277	1.8	14.29		<b>122</b>			412	1.2	14.29		<b>122</b>	412	1.2			14.29				
	<b>108</b>	315	1.6	16.24		<b>108</b>			468	1.1	16.24		<b>108</b>	468	1.1			16.24				
	<b>101</b>	337	1.5	17.39		<b>101</b>			501	1.0	17.39		<b>101</b>	501	1.0			17.39				
	<b>87</b>	388	1.5	20.01		<b>87</b>			577	1.0	20.01		<b>87</b>	577	1.0			20.01				
	<b>83</b>	409	1.5	21.10		<b>83</b>			608	1.0	21.10		<b>83</b>	608	1.0			21.10				
	<b>70</b>	488	1.2	25.16		<b>70</b>							<b>70</b>									
	<b>68</b>	500	1.2	25.81		<b>68</b>							<b>68</b>									
	<b>61</b>	548	1.1	28.88		<b>61</b>					<b>61</b>											
	<b>54</b>	620	1.0	32.69		<b>54</b>					<b>54</b>											



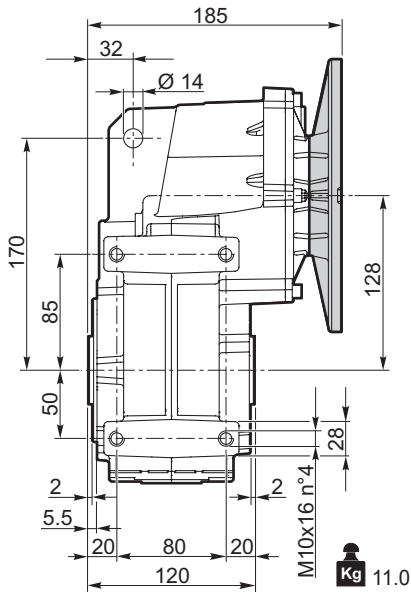
**Dimensiones**

**Dimensões**

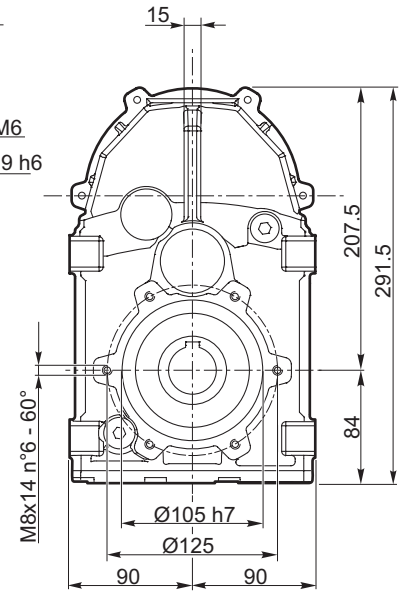
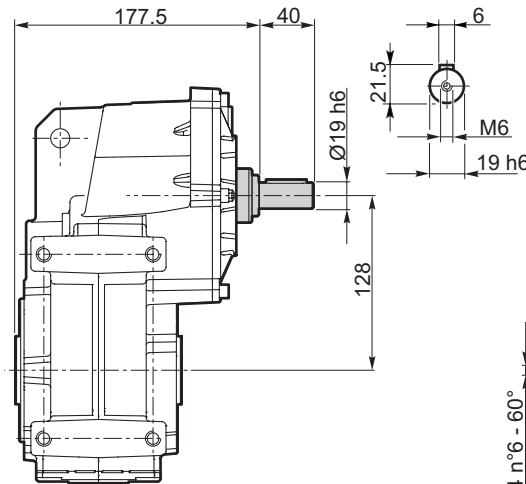
**Dimensions**

**ATS 902**

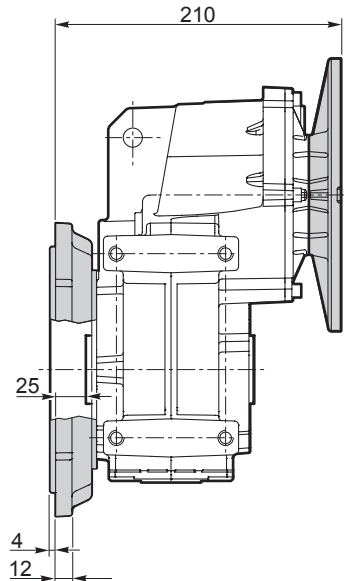
**ATS 902 U..**



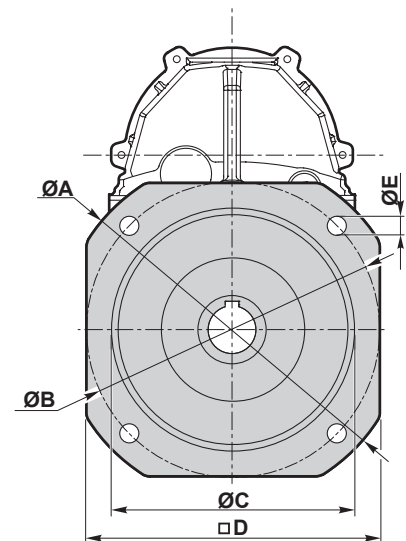
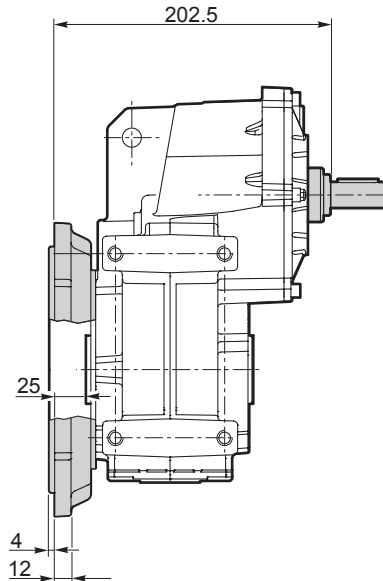
**ATSIS 902 U..**



**ATS 902 F..**



**ATSIS 902 F..**

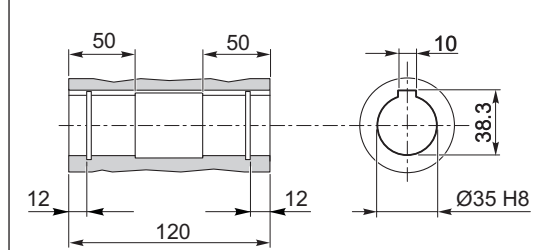
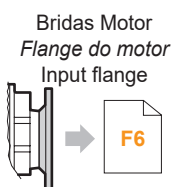


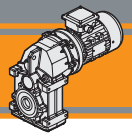
**Versión F / Versão F / F Version**

ATS ATSIS	ØA	ØB	ØC f7	□D	ØE	Brida / Flange / Flange	
						Tipo / Tipo / Type	Peso / Peso / Weight [kg]
<b>902</b>	200	165	130	165	11	<b>F200</b>	2
	250	215	180	215	14	<b>F250</b>	3.2

**ATS 902.. D35 - ATSIS 902.. D35**

Eje de salida hueco / Eixo saída vazado / Hollow output shaft





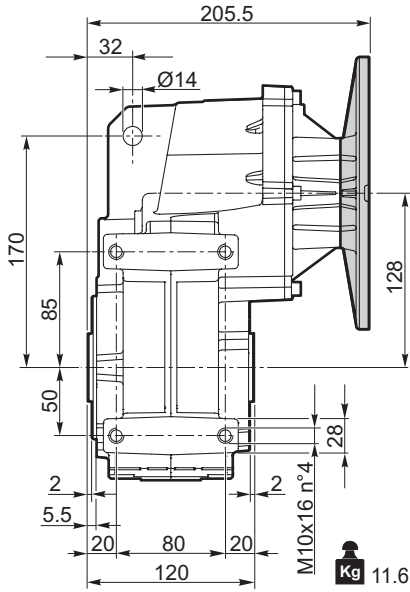
Dimensiones

Dimensões

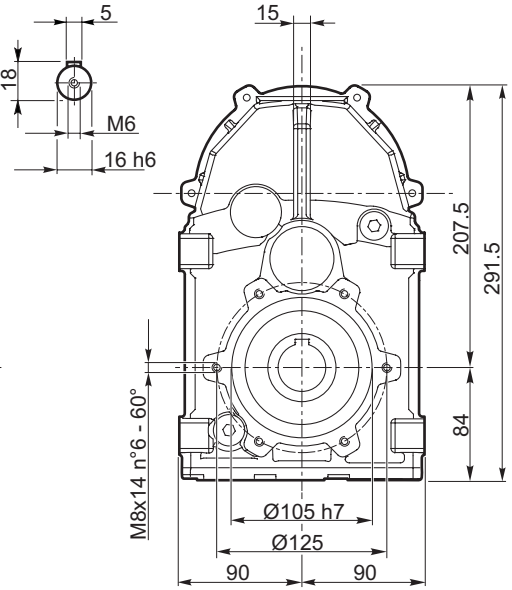
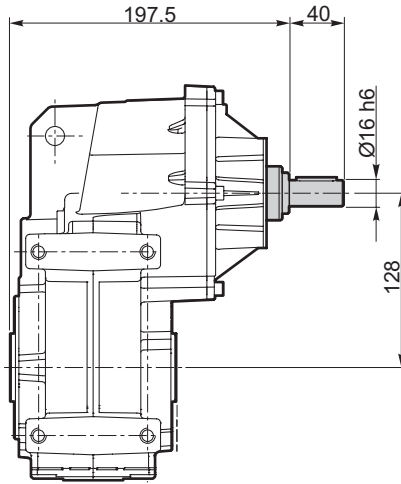
Dimensions

ATS 903

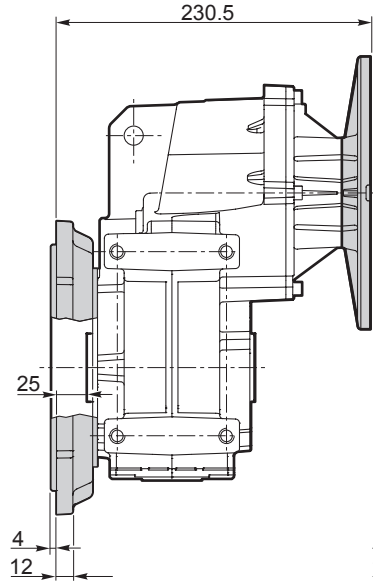
ATS 903 U..



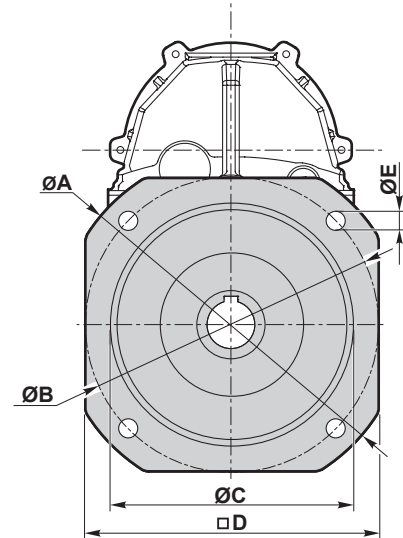
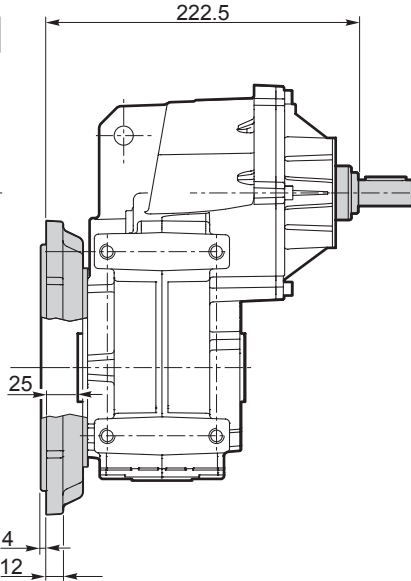
ATSIS 903 U..



ATS 903 F..



ATSIS 903 F..

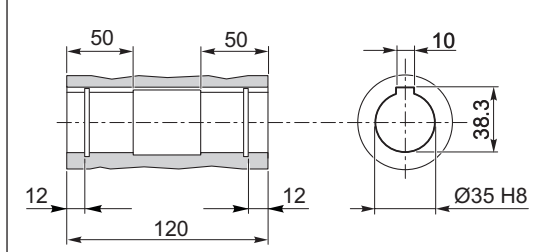
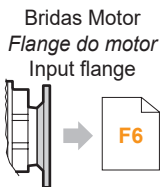


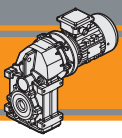
Versión F / Versão F / F Version

ATS ATSIS	ØA	ØB	ØC f7	□D	ØE	Brida / Flange / Flange	
						Tipo / Tipo / Type	Peso / Peso / Weight [kg]
903	200	165	130	165	11	F200	2
	250	215	180	215	14	F250	3.2

ATS 903.. D35 - ATSIS 903.. D35

Eje de salida hueco / Eixo saída vazado / Hollow output shaft





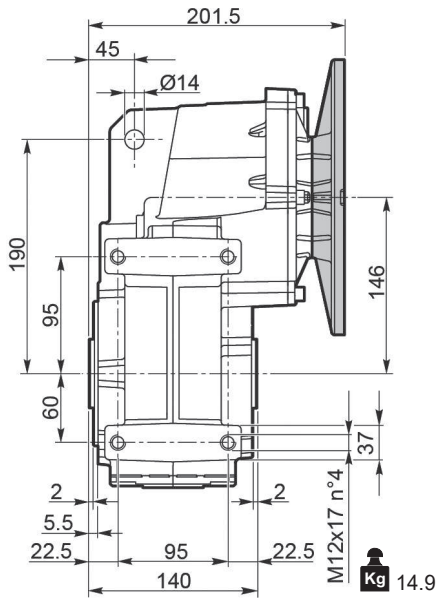
**Dimensiones**

**Dimensões**

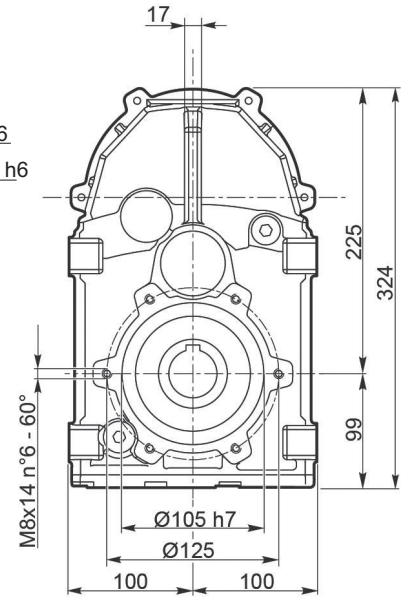
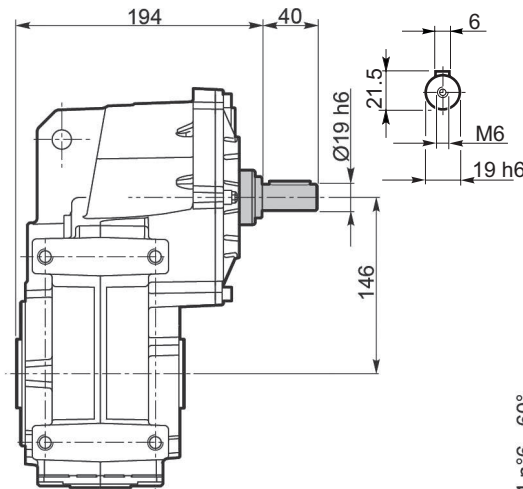
**Dimensions**

**ATS 912**

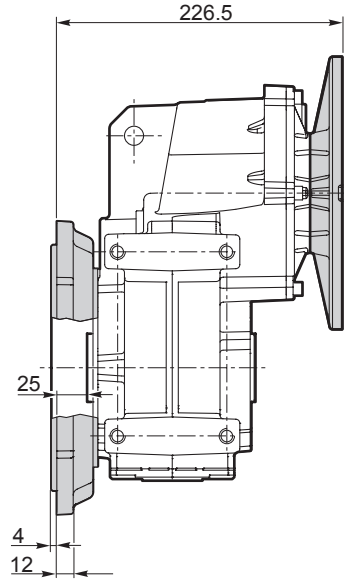
**ATS 912 U..**



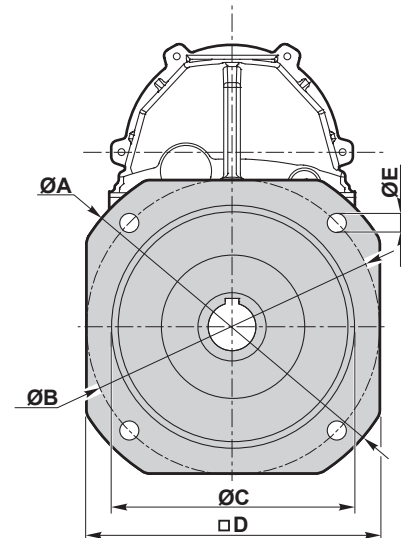
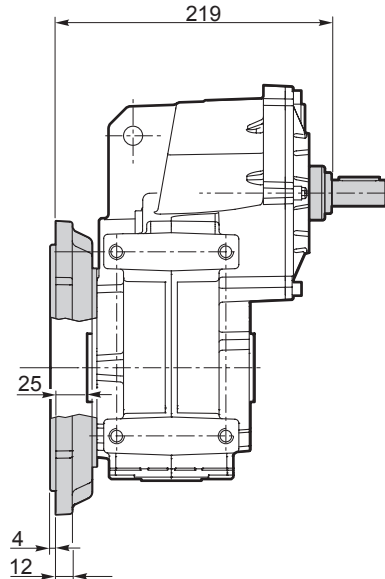
**ATSIS 912 U..**



**ATS 912 F..**



**ATSIS 912 F..**

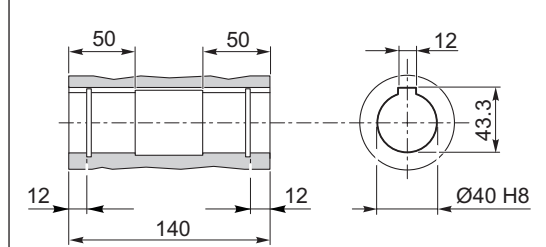
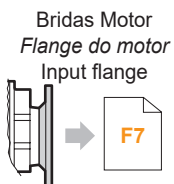


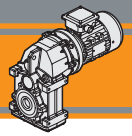
**Versión F / Versão F / F Version**

ATS ATSIS	ØA	ØB	ØC f7	□D	ØE	Brida / Flange / Flange	
						Tipo / Tipo / Type	Peso / Peso / Weight [kg]
912	200	165	130	165	11	F200	2
	250	215	180	215	14	F250	3.2

**ATS 912.. D40 - ATSIS 912.. D40**

Eje de salida hueco / Eixo saída vazado / Hollow output shaft





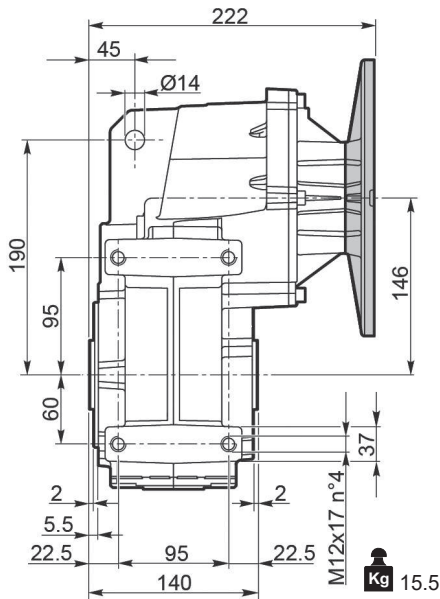
Dimensiones

Dimensões

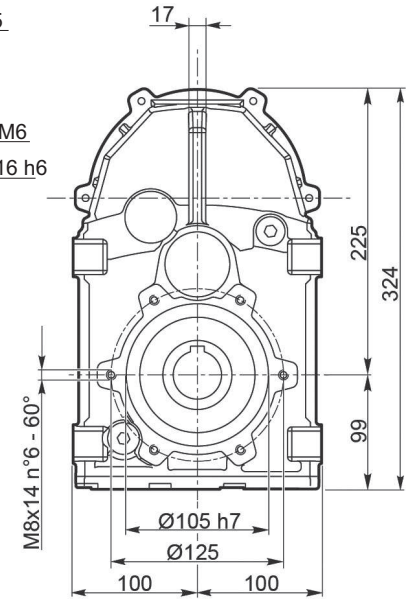
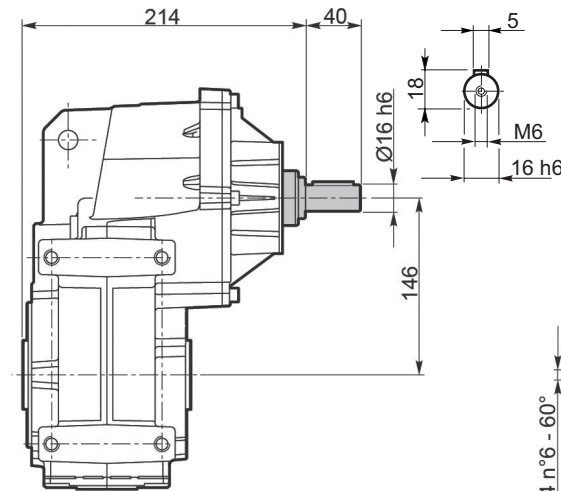
Dimensions

ATS 913

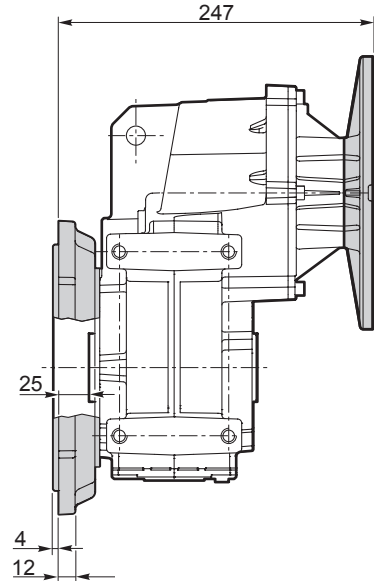
ATS 913 U..



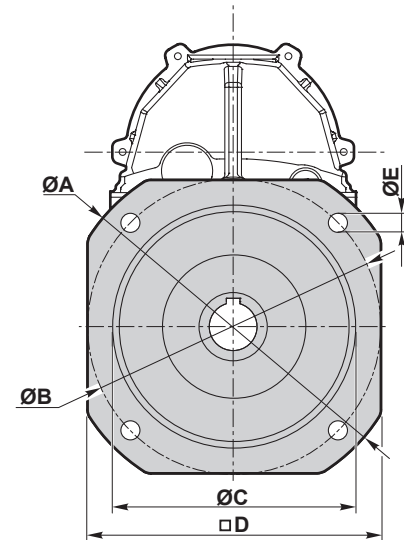
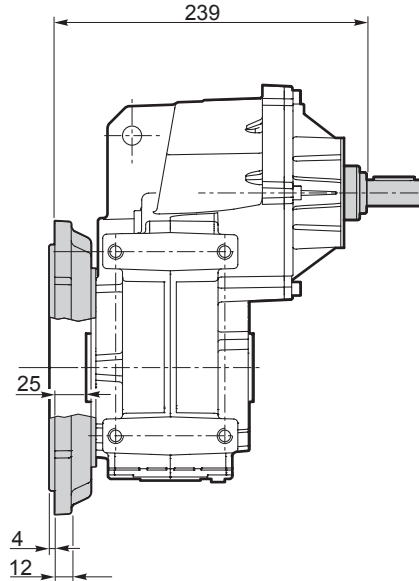
ATSIS 913 U..



ATS 913 F..



ATSIS 913 F..



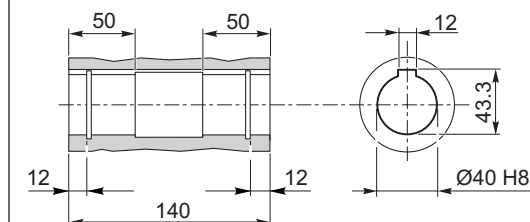
Versión F / Versão F / F Version

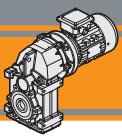
ATS ATSIS	$\varnothing A$	$\varnothing B$	$\varnothing C$ f7	$\square D$	$\varnothing E$	Brida / Flange / Flange	
						Tipo / Tipo / Type	Peso / Peso / Weight [kg]
913	200	165	130	165	11	F200	2
	250	215	180	215	14	F250	3.2

ATS 913.. D40 - ATSIS 913.. D40

Eje de salida hueco / Eixo saída vazado / Hollow output shaft

Bridas Motor  
Flange do motor  
Input flange





**Accesorios**

Eje de salida

**Acessórios**

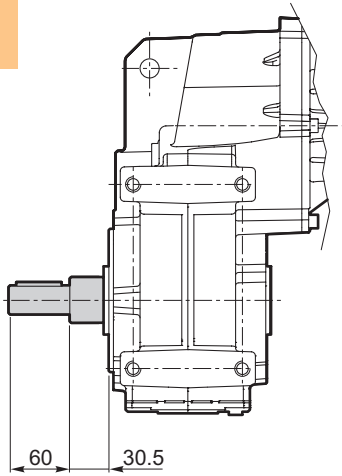
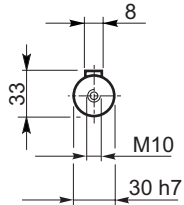
Eixo de saída

**Accessories**

Single output shaft

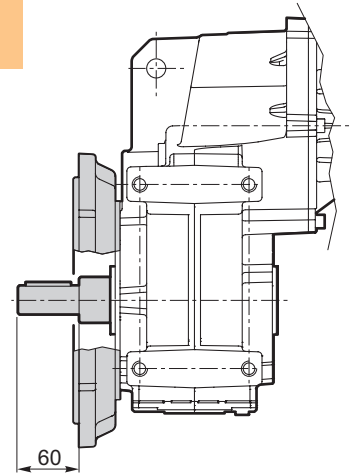
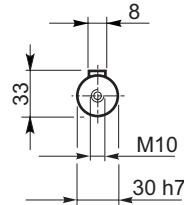
ATS90... U .. SZ

ATSIS90... U .. SZ



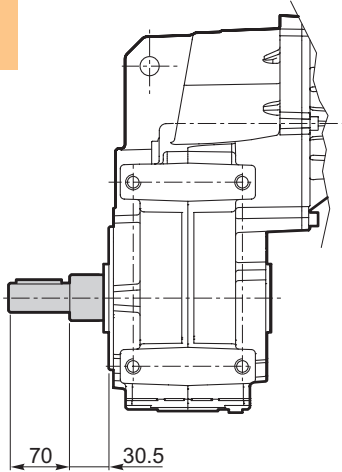
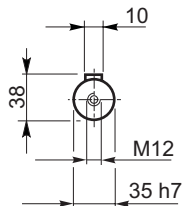
ATS90... F .. SZ

ATSIS90... F .. SZ



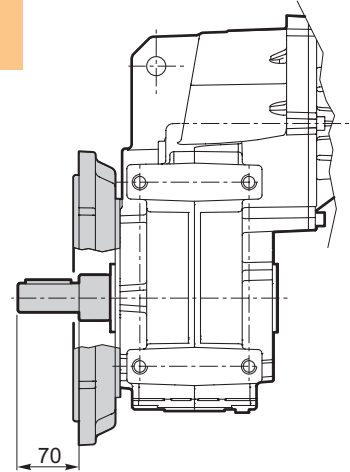
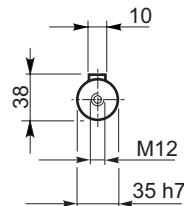
ATS91... U .. SZ

ATSIS91... U .. SZ



ATS91... F .. SZ

ATSIS91... F .. SZ



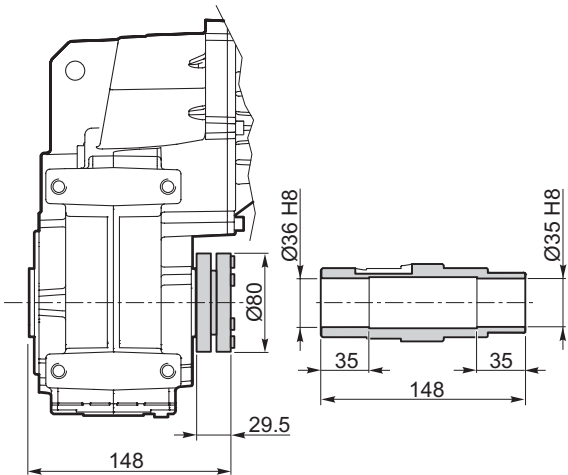
Eje de salida con anillo de contracción

Eixo de saída com disco de contração

Output shaft with shrink disk

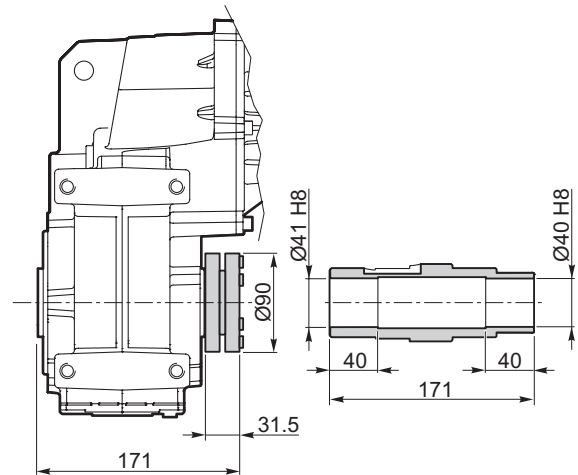
ATS90... U .. G35

ATSIS90... U .. G35



ATS91... U .. G40

ATSIS91... U .. G40

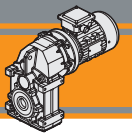


Kit de eje de salida con anillo de contracción disponible bajo pedido: para obtener instrucciones de montaje favor de ponerse en contacto con nuestro Servicio Técnico

O kit eixo de saída com disco de contração é disponível sob encomenda: para instruções de montagem consultar ao nosso Serviço Técnico

Output shaft kit with shrink disk available on request: for assembly instructions please contact our Technical Service





## Accesorios

Kit de montaje de eje de salida

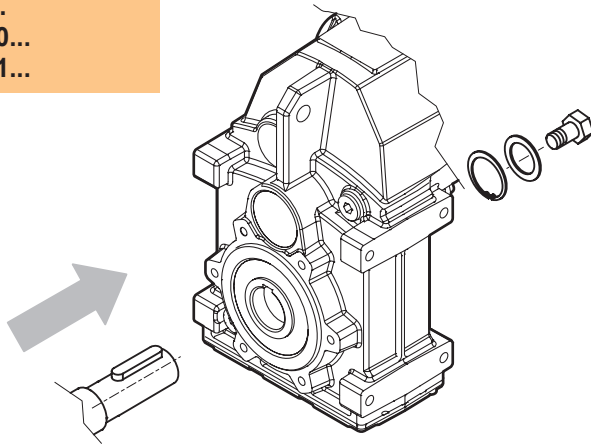
## Acessórios

Kit de montagem eixo de saída

## Accessories

Output shaft assembly kit

ATS90...  
 ATS91...  
 AT SIS90...  
 AT SIS91...



Kit de montaje del eje de salida disponible bajo pedido: para obtener instrucciones de montaje favor de ponerse en contacto con nuestro Servicio Técnico

*kit de montagem do eixo de saída disponível sob encomenda: para instruções de montagem consultar ao nosso Serviço Técnico*

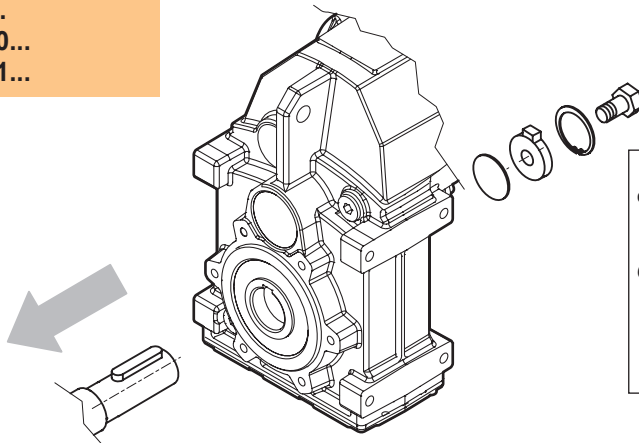
Output shaft assembly kit available upon request: for assembly instructions please contact our Technical Assistance

Kit de desmontaje del eje de salida

Kit para remoção do eixo de saída

Output shaft disassembly kit

ATS90...  
 ATS91...  
 AT SIS90...  
 AT SIS91...



Kit de desmontaje del eje de salida disponible bajo pedido: para obtener instrucciones de montaje favor de ponerse en contacto con nuestro Servicio Técnico

*O kit de remoção do eixo de saída disponível sob encomenda: para instruções de montagem consultar ao nosso Serviço Técnico*

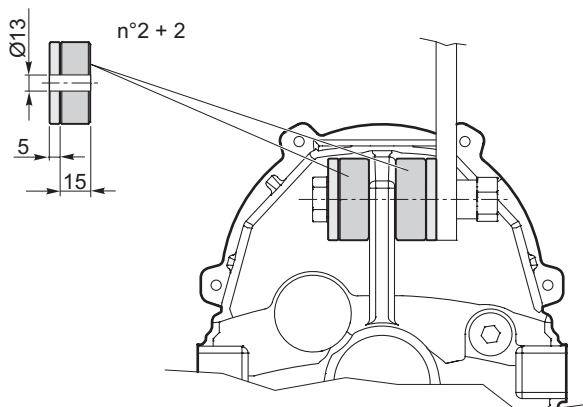
Output shaft disassembly kit available upon request: for assembly instructions please contact our Technical Assistance

Kit del brazo de reacción

Kit braço de torção

Torque arm kit

ATS90...U  
 ATS91...U  
 AT SIS90...U  
 AT SIS91...U



Kit del brazo de reacción disponible bajo pedido: para obtener instrucciones de montaje favor de ponerse en contacto con nuestro Servicio Técnico

*O kit braço de torção está disponível sob encomenda: para instruções de montagem consultar ao nosso Serviço Técnico*

Torque arm kit available upon request: for assembly instructions please contact our Technical Assistance





**TRANSTECNO**<sup>®</sup>  
the modular gearmotor

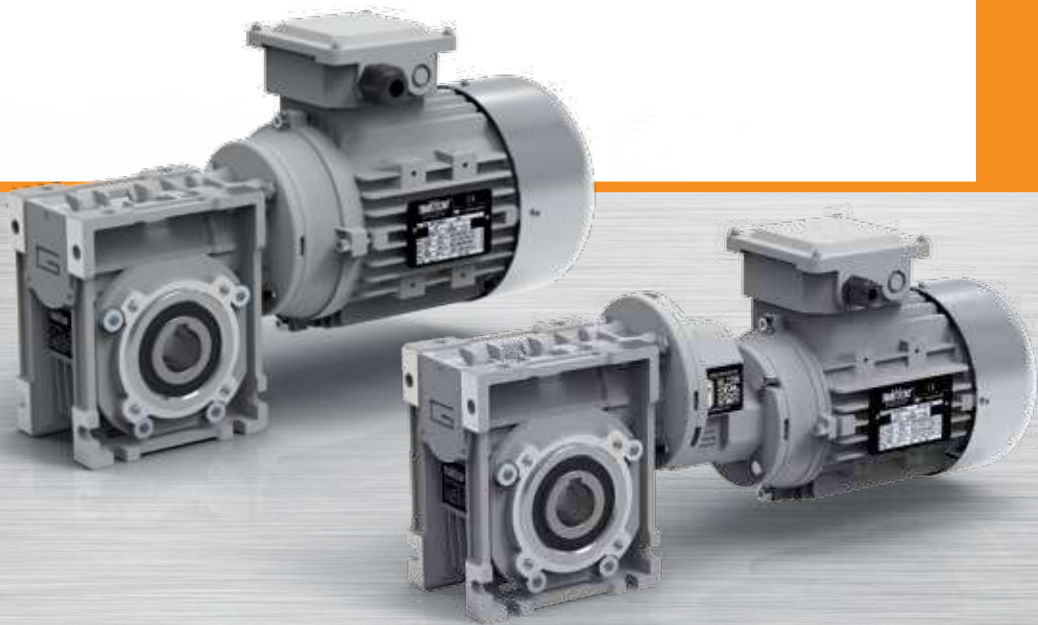
**CM-CMP**



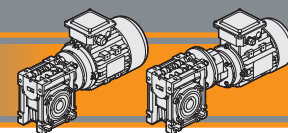
**60Hz**

**IEC**

Motorreductores sinfín corona  
**Motoredutores de rosca sem fim**  
Wormgearmotors





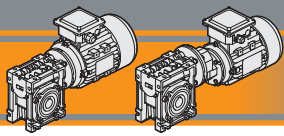


Índice	Índice	Index	Pag. Pág. Page
Características técnicas	<i>Características técnicas</i>	Technical features	<b>G2</b>
Clasificación	<i>Designação</i>	Classification	<b>G2</b>
Sentidos de rotación	<i>Sentidos de rotação</i>	Direction of rotation	<b>G4</b>
Nomenclatura	<i>Simbologia</i>	Legend	<b>G4</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>G5</b>
Cargas radiales	<i>Cargas radiais</i>	Radial loads	<b>G6</b>
Datos de dentado	<i>Dados de dentadura</i>	Toothing data	<b>G7</b>
Rendimiento	<i>Rendimento</i>	Efficiency	<b>G7</b>
Datos técnicos	<i>Dados técnicos</i>	Technical data	<b>G8</b>
Motores aplicables	<i>Motores aplicáveis</i>	IEC Motor adapters	<b>G16</b>
Dimensiones	<i>Dimensões</i>	Dimensions	<b>G18</b>
Accesorios	<i>Acessórios</i>	Accessories	<b>G32</b>
Opciones	<i>Opções</i>	Options	<b>G33</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**



# CM/CMP

Motorreductores sinfín corona  
 Motores de rosca sem fim  
 Wormgearmotors

60 Hz

## Características técnicas

El elevado nivel de modularidad caracteriza los motorreductores sinfín corona de la serie CM y CMP; los diversos kits de entrada y salida permiten una versatilidad extrema del motorreductor. Los motorreductores de la serie CM y CMP poseen las características siguientes:

- Los tamaños 026, 030, 040, 050, 063, 075, 090 y 110 están contruidos con carcasa de aluminio. Los tamaños 130 y 150 en hierro fundido;
- Los tamaños 090, 110, 130 y 150 se suministran con rodamientos de rodillos cónicos en el sinfín;
- El pre-reductor se fabrica con carcasa de aluminio;

## Características técnicas

A elevada modularidade contradistingue os redutores de rosca sem fim da série CM e CMP: os vários kits de entrada e saída os tornam extremamente versáteis. As principais características das séries CM e CMP são:

- Carcaça em alumínio nas grandezas 026, 030, 040, 050, 063, 075, 090 e 110. As grandezas 130 e 150 são construídas com carcaça em ferro fundido;
- Os tamanhos 090, 110, 130 e 150 são fornecidos com rolamentos cônicos
- Os pré estágios são construídos com carcaça em alumínio

## Technical features

The high degree of modularity is a design feature of CM and CMP wormgearmotors range thanks to a wide selection of input and output kits.

Main features of CM and CMP range are:

- Die-cast aluminum housing on sizes 026, 030, 040, 050, 063, 070, 075, 090 and 110. Cast iron housing on size 130 and 150;
- Double taper roller bearing on sizes 090, 110, 130 and 150;
- Die-cast aluminum housing on pre-stage units;





## Clasificación

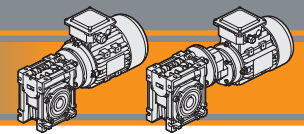
## Designação

## Classification

### REDUCTORES DE SINFÍN CORONA REDUTORES DE ROSCA SEM FIM WORMGEARBOXES

REDUCTOR / REDUTOR / GEARBOX

CM	050	U	10	71	B5	SZDX	BR SX	90	M1	VS
Tipo Tipo Type	Tamaño Tamanho Size	Versión Versão Version	Relación de reducción Rapporto Ratio	IEC 	Forma constructiva Forma construtiva Version	∅ Eje de salida ∅ Eixo saída ∅ Output shaft	Braço de reacção Braço de reação Torque arm	Ángulo Ângulo Angle	Posición de montaje Pos. de montagem Mounting position	Opción Opções Options
<b>CM</b> 	<b>026</b> <b>026 (D11)</b> <b>026 (D14)</b> <b>030</b> <b>040</b> <b>050</b> <b>063</b> <b>070</b> <b>075</b> <b>090</b> <b>110</b> <b>130</b> <b>150</b>	<b>U</b> <b>F...</b>	Véase tablas Veja tabelas see tables	<b>56..</b> <b>—</b> <b>132..</b>	<b>B5</b> <b>B14</b>	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BR SX</b> 	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	<b>M1 (B3)</b> <b>M2 (V6)</b> <b>M3 (B8)</b> <b>M4 (V5)</b> <b>M6 (B6)</b> <b>M5 (B7)</b>	<b>VS</b>
<b>CMIS</b> 										



Clasificación

Designação

Classification

**PREDUCTORES SINFÍN CORONA CON PRE-REDUCTOR**  
**REDUTORES DE ROSCA SEM FIM COM PRÉ-ESTÁGIO**  
**PRE-STAGE WORMGEARBOXES**

REDUCTOR / REDUTOR / GEARBOX												
CMP	063/050	U	90	63	B14	SZDX	BRSX	90	P4	M1	VS	
Tipo Tipo Type	Tamaño Tamanho Size	Versión Versão Version	Relación de reducción Rapporto Ratio	IEC 	Forma constructiva Forma construtiva Version	∅ Eje de salida ∅ Eixo saída ∅ Output shaft	Brazo de reacción Braço de reação Torque arm	Ángulo Ângulo Angle	Posición de montaje Pos. de montagem Mounting position	Opciones Opções Options	Opciones Opções Options	
<p><b>CMP</b></p>	<p>056/030</p> <p>056/040</p> <p>063/040</p> <p>063/050</p> <p>063/063</p> <p>071/050</p> <p>071/063</p> <p>071/070</p> <p>071/075</p> <p>071/090</p> <p>080/063</p> <p>080/070</p> <p>080/075</p> <p>080/090</p> <p>080/110</p> <p>080/130</p> <p>090/070</p> <p>090/075</p> <p>090/090</p> <p>090/110</p> <p>090/130</p>	<p><b>U</b></p> <p><b>F...</b></p>	<p>Véase tablas</p> <p>Veja tabelas</p> <p>see tables</p>	<p>56..</p> <p>—</p> <p>80..</p>	<p><b>B5</b></p> <p><b>B14</b></p>	<p><b>SZDX</b></p> <p><b>SZSX</b></p> <p><b>DZ</b></p>	<p><b>BRDX</b></p> <p><b>BRSX</b></p>	<p>0°</p> <p>90°</p> <p>180°</p> <p>270°</p>	<p><b>P1</b></p> <p><b>P2</b></p> <p><b>P3 (standard)</b></p> <p><b>P4</b></p>	<p><b>M1 (B3)</b></p> <p><b>M2 (V6)</b></p> <p><b>M3 (B8)</b></p> <p><b>M4 (V5)</b></p> <p><b>M6 (B6)</b></p> <p><b>M5 (B7)</b></p>	<p><b>VS</b></p>	

CM/CMP

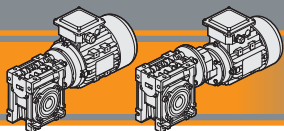
NOTA: el brazo de reacción se suministra desmontado.

\* NOTA: o braço de reação é fornecido desmontado.

NOTE: the torque arm will be supplied not assembled.

<p>Relación de reducción Versão Redutor Gearbox Version</p> <p><b>U</b>   <b>F...D</b>   <b>F...S</b></p>	<p>Eje de salida Eixo de saída Output shaft</p> <p><b>SZDX</b>   <b>SZSX</b>   <b>DZ</b></p>	<p>Brazo de reacción Braço de reação Torque arm</p> <p><b>BRDX</b>   <b>BRSX</b></p>	<p>Ángulo Ângulo Angle</p> <p>90°   90° 180°   270°</p>
---	--	--	---

MOTOR / MOTOR / MOTOR					
0.75kW	4p	3ph	230/400V	60Hz	T1
Potencia Potência Power	Polos Pólos Poles	Fases Fases Phases	Tensión Tensão Voltage	Frecuencia Frequência Frequency	Posición caja de bornes Pos. Conexão Terminal box pos.
Véase tablas Veja tabelas see tables	2p 4p 6p 8p	1ph 3ph	230/400V 220/380V ... 230V ...	60Hz	T1 (Std)  T4   T2 T3

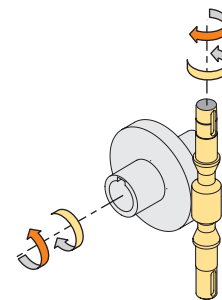
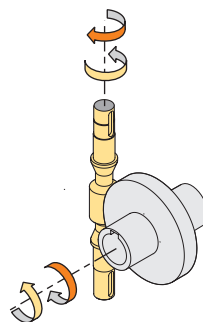
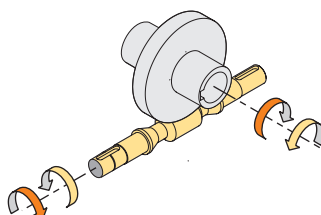
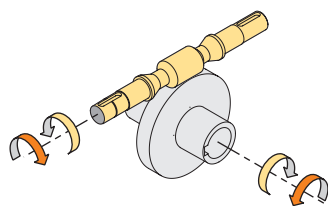


Sentidos de rotación

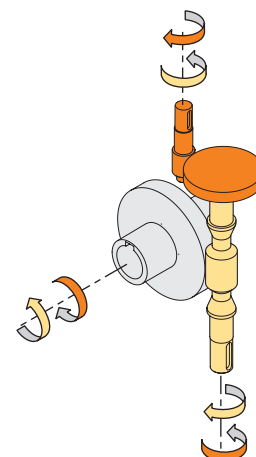
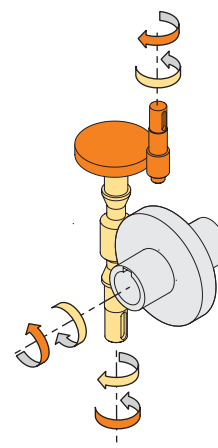
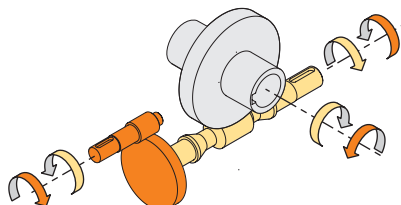
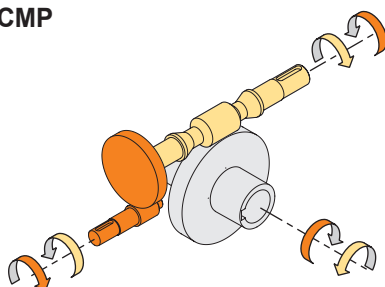
Sentidos de rotação

Direction of rotation

CM



CMP



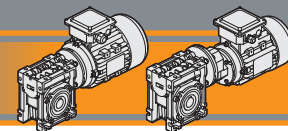
Nomenclatura

Simbologia

Legend

$n_1$	[rpm]	Velocidad de entrada / <i>Velocidade na entrada</i> / Input speed
$n_2$	[rpm]	Velocidad de salida / <i>Velocidade na saída</i> / Output speed
$i$		Relación de reducción / <i>Relação de redução</i> / Ratio
$P_1$	[kW]	Potencia en la entrada / <i>Potência da entrada</i> / Input power
$M_2$	[Nm]	Par en la salida en función de $P_1$ / <i>Torque na saída em função de <math>P_1</math></i> / Output torque referred to $P_1$
$Pn_1$	[kW]	Potencia nominal en la entrada / <i>Potência nominal na entrada</i> / Nominal input power
$Mn_2$	[Nm]	Par nominal en la salida en función de $Pn_1$ / <i>Torque nominal na saída em função de <math>Pn_1</math></i> / Nominal output torque referred to $Pn_1$
$sf$		Factor de servicio / <i>Fator de serviço</i> / Service factor
$Rd$	%	Rendimiento estático / <i>Rendimento estático</i> / Dynamic efficiency
$Rs$	%	Rendimiento estático / <i>Rendimento statico</i> / Static efficiency
$R_2$	[N]	Carga radial admisible en la salida / <i>Carga radial admissível na saída</i> / Maximum output radial load
$A_2$	[N]	Carga axial admisible en la salida / <i>Carga axial admissível na saída</i> / Maximum output axial load
$Z$		Número de entradas del tornillo / <i>Número de princípios dos parafusos</i> / Worm starts
$\beta$		Ángulo de hélic / <i>Ângulo de hélice</i> / Helix angle





**Lubricación**

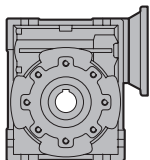
**Lubrificação**

**Lubrication**

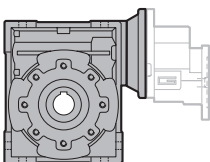
Todos los motorreductores sinfín corona son previamente lubricados con aceite sintético con grado de viscosidad 320, por lo tanto, pueden ser instalados en cualquier posición de montaje y no requieren mantenimiento.

Todos os motoredutores são fornecidos completos de lubrificante sintético de viscosidade 320, portanto, podem ser instalados em qualquer posição de montagem e não necessitam de manutenção.

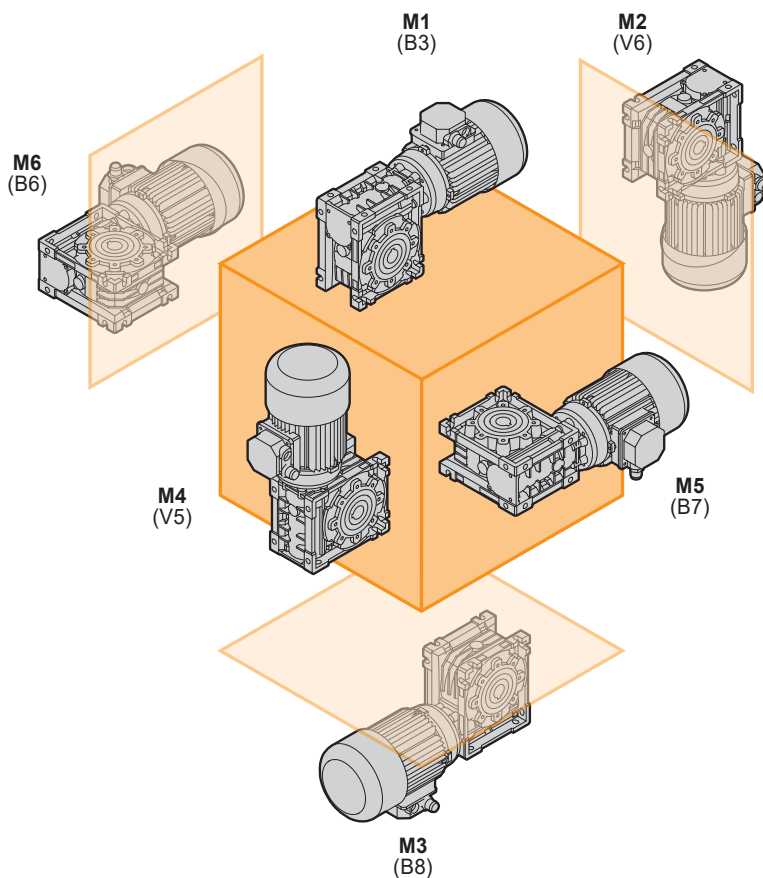
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.



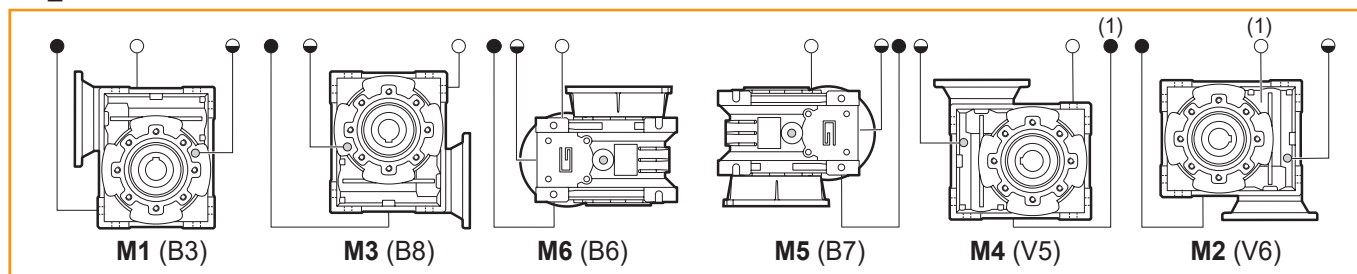
CM	Cantidad de aceite (litros) / Quantidade de óleo (litros) / Oil quantity (litres)					
	M1 (B3)	M3 (B8)	M6 (B6)	M5 (B7)	M4 (V5)	M2 (V6)
130	4.5	3.3	3.5	3.5	4.5	3.3
150	7	5.1	5.4	5.4	7	5.1



CMP	Cantidad de aceite (litros) / Quantidade de óleo (litros) / Oil quantity (litres)					
	M1 (B3)	M3 (B8)	M6 (B6)	M5 (B7)	M4 (V5)	M2 (V6)
080/130 - 090/130	4.5	3.3	3.5	3.5	4.5	3.3



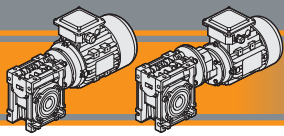
**CM\_CMP 130 - 150**



(standard)

(1): Tapón en posición trasera  
 Válvula na posição posterior  
 Plug in backside position

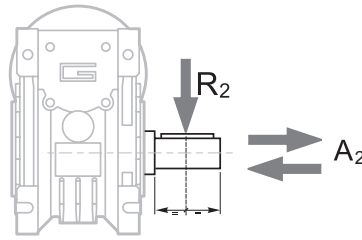
- Tapón de purga y tapón de llenado del aceite  
 Válvula de Respiro e tampa de preenchimento / Breather and filling plug
- ◐ Nivel del aceite / Nivel de óleo / Oil level plug
- Tapon de drenado del aceite / Oil drain plug



**Cargas radiales**

**Cargas radiais**

**Radial loads**



$$A_2 = R_2 \times 0.2$$

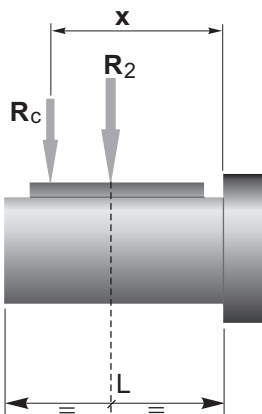
n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]										
	CM026	CM030	CM040	CM050	CM063	CM070	CM075	CM090	CM110	CM130	CM150
187	400	674	1264	1770	2445	2613	2824	3161	5058	5732	6962
140	490	743	1392	1949	2692	2878	3110	3481	5570	6313	7663
93	580	851	1596	2234	3085	3298	3564	3990	6384	7235	8771
70	610	936	1754	2456	3392	3626	3918	4386	7018	7953	9654
56	610	1008	1890	2646	3654	3906	4221	4725	7560	8567	10400
47	610	1069	2004	2805	3874	4141	4475	5009	8014	9083	11051
35	610	1179	2210	3095	4273	4568	4937	5526	8842	10021	12163
28	610	1270	2381	3334	4603	4921	5318	5953	9524	10794	13103
23	610	1356	2542	3559	4915	5254	5678	6356	10170	11526	13924
18	610	1471	2759	3862	5334	5702	6162	6897	11036	12507	15182
14	610	1600	3000	4200	5800	6200	6700	7500	12000	13600	16500

CM... /030 CMP... /040 CMP... /050 CMP... /063 CMP... /070 CMP... /075 CMP... /090 CMP... /110 CMP... /130

Cuando la carga radial no se aplica en el punto medio del eje, es necesario calcular la carga efectiva a través la siguiente fórmula:

Quando a carga radial resultante não é aplicada na linha mediana da eixo, é preciso calcular aquela efetiva com a seguinte fórmula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

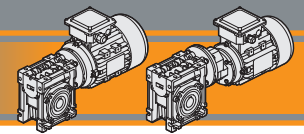


	CM	CM / CMP									
	026	030	040	050	063	075	090	110	130	150	
a	56	65	84	101	120	131	182	176	188	215	
b	43	50	64	76	95	101	122	136	148	174	
R <sub>2MAX</sub>	610	1600	3000	4200	5800	6700	7500	12000	13600	16500	

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valores dados en la tabla  
 a, b = valores referidos na tabela  
 a, b = values given in the table



Datos de dentado

Dados de dentadura

Toothing data

	Datos del engranaje sinfín corona Dados do binário de parafusos coroa Worm wheel data	Relación de reducción / Relação / Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	Z	6	4	3	2	2		1	1	1	1		
	β	34° 35'	24° 41'	19° 1'	12° 57'	10° 30'		6° 33'	5° 17'	4° 26'	3° 49'		
CM030	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	27° 4'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CM040	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CM050	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	33° 37'	23° 54'	18° 23'	12° 29'	10° 6'	8° 28'	6° 19'	5° 5'	4° 15'	3° 39'	2° 51'	2° 20'
CM063	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 23'	24° 31'	18° 53'	12° 50'	10° 24'	8° 44'	6° 30'	5° 14'	4° 23'	3° 47'	2° 57'	2° 25'
CM075	Z		4	3	2	2	2	1	1	1	1	1	1
	β		26° 17'	20° 20'	13° 52'	11° 18'	9° 32'	7° 2'	5° 42'	4° 48'	4° 8'	3° 14'	2° 40'
CM090	Z		4	3	2	2	2	1	1	1	1	1	1
	β		29° 11'	22° 43'	15° 36'	12° 50'	10° 53'	7° 56'	6° 30'	5° 29'	4° 45'	3° 45'	3° 6'
CM110	Z		4	3	2	2	2	1	1	1	1	1	1
	β		28° 14'	21° 56'	15° 1'	14° 41'	12° 34'	7° 38'	7° 28'	6° 21'	5° 32'	4° 24'	3° 39'
CM130	Z		4	3	2	2	2	1	1	1	1	1	1
	β		28° 43'	22° 20'	15° 19'	13° 47'	11° 54'	7° 48'	7° 00'	6° 01'	5° 16'	4° 08'	3° 27'
CM150	Z		6	4	3	2	2	2	1	1	1	1	1
	β		32° 09'	24° 35'	17° 27'	12° 53'	11° 19'	9° 50'	6° 32'	5° 43'	4° 57'	3° 55'	3° 14'

Rendimiento

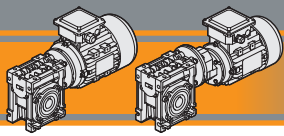
Rendimento

Efficiency

	n <sub>1</sub> [min <sup>-1</sup> ]	Rendimiento Rendimento Efficiency	Relación de reducción / Relação / Ratio											
			5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	2800	Rd	89	87	85	83	80		73	68	64	60		
	1400		87	84	83	78	74		66	61	57	53		
	900		84	83	80	75	71		61	57	52	48		
CM030	2800	Rs	72	71	68	61	56	46	41	36	34			
	1400		89	88	86	84	81	78	74	70	65	62	57	52
	900		86	85	84	79	75	72	67	62	58	55	48	43
CM040	2800	Rd	84	83	81	75	71	68	62	58	53	49	43	39
	1400		72	67	63	55	50	43	39	35	31	27	23	21
	900		90	89	87	84	83	80	77	73	69	66	60	56
CM050	2800	Rs	88	86	84	81	78	74	70	65	60	58	52	46
	1400		74	71	67	60	55	51	45	40	36	32	28	24
	900		91	90	88	86	84	82	78	74	71	68	62	58
CM063	2800	Rd	89	87	85	82	79	76	72	67	63	60	54	49
	1400		91	90	88	86	84	83	79	76	73	70	65	60
	900		89	86	84	81	78	75	70	65	61	58	52	47
CM070	2800	Rs	73	71	67	60	55	51	45	40	36	33	28	24
	1400		90	89	87	85	84	80	77	74	72	67	62	
	900		89	87	84	82	80	76	72	68	65	60	53	
CM075	2800	Rd	87	85	82	79	77	72	67	63	60	54	49	
	1400		72	69	62	60	55	48	43	38	36	31	26	
	900		90	89	87	85	84	81	78	75	72	68	63	
CM090	2800	Rs	89	87	84	81	78	75	70	66	63	57	52	
	1400		89	86	84	81	78	75	70	65	61	58	52	47
	900		73	71	67	60	55	51	45	40	36	33	28	24
CM110	2800	Rd	91	90	88	86	84	83	79	76	73	70	65	60
	1400		90	89	87	85	84	80	77	74	72	67	62	
	900		89	87	84	82	80	76	72	68	65	60	53	
CM130	2800	Rs	87	85	83	80	77	73	68	64	61	55	50	
	1400		72	69	62	60	55	48	43	39	36	31	26	
	900		90	89	88	86	85	84	80	77	74	72	67	62
CM150	2800	Rd	89	88	86	84	83	79	76	73	70	65	60	
	1400		88	87	84	82	80	76	72	68	65	60	55	
	900		88	87	84	82	80	76	72	68	65	60	55	
CM150	2800	Rs	74	71	65	61	59	51	46	42	39	34	30	
	1400		90	89	88	87	86	82	81	79	77	73	70	
	900		89	88	86	85	84	80	79	76	73	68	64	
CM150	2800	Rd	88	87	84	83	82	78	75	71	68	63	59	
	1400		74	71	64	64	60	50	49	46	42	37	33	
	900		90	89	88	87	86	82	80	79	77	72	70	
CM150	2800	Rs	89	88	86	84	83	79	76	73	70	64	59	
	1400		74	71	64	64	60	50	49	46	42	37	33	
	900		92	91	90	89	87	86	83	80	78	73	72	
CM150	2800	Rd	91	90	88	86	84	83	78	76	73	68	64	
	1400		90	89	87	84	83	81	75	74	71	64	60	
	900		90	89	87	84	83	81	75	74	71	64	60	
CM150	2800	Rs	73	71	66	60	57	54	45	42	39	33	29	
	1400		92	91	90	89	87	86	83	80	78	73	72	
	900		91	90	88	86	84	83	78	76	73	68	64	



Rendimiento teórico del reductor después del rodaje  
Rendimento teórico do redutor após a rodagem  
Theoretical efficiency of the gearbox after the first running period




**Datos técnicos**

**Dados técnicos**

**Technical data**

**$n_1$  1750 [min<sup>-1</sup>]**


	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS026</b>	<b>350</b>	13	0.55	5
	<b>233</b>	14	0.41	7.5
	<b>175</b>	14	0.31	10
	<b>117</b>	14	0.22	15
	<b>88</b>	14	0.17	20
	<b>58</b>	15	0.14	30
	<b>44</b>	14	0.11	40
	<b>35</b>	13	0.08	50
	<b>29</b>	12	0.07	60

<b>CMIS030</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>350</b>	18	0.77	5
	<b>233</b>	20	0.57	7.5
	<b>175</b>	21	0.46	10
	<b>117</b>	21	0.32	15
	<b>88</b>	19	0.23	20
	<b>70</b>	20	0.20	25
	<b>58</b>	22	0.20	30
	<b>44</b>	20	0.15	40
	<b>35</b>	19	0.12	50
	<b>29</b>	17	0.09	60
	<b>22</b>	15	0.07	80
	<b>18</b>	14	0.06	100

<b>CMIS040</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>350</b>	41	1.7	5
	<b>233</b>	44	1.3	7.5
	<b>175</b>	45	0.98	10
	<b>117</b>	45	0.68	15
	<b>88</b>	40	0.47	20
	<b>70</b>	38	0.38	25
	<b>58</b>	48	0.42	30
	<b>44</b>	42	0.30	40
	<b>35</b>	39	0.24	50
	<b>29</b>	36	0.19	60
	<b>22</b>	33	0.15	80
	<b>18</b>	31	0.12	100

<b>CMIS050</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>350</b>	75	3.1	5
	<b>233</b>	79	2.2	7.5
	<b>175</b>	82	1.8	10
	<b>117</b>	82	1.2	15
	<b>88</b>	72	0.84	20
	<b>70</b>	70	0.68	25
	<b>58</b>	88	0.75	30
	<b>44</b>	76	0.52	40
	<b>35</b>	72	0.42	50
	<b>29</b>	69	0.35	60
	<b>22</b>	60	0.25	80
	<b>18</b>	56	0.21	100

<b>CMIS063</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>350</b>	134	5.5	5
	<b>233</b>	144	4.0	7.5
	<b>175</b>	148	3.2	10
	<b>117</b>	154	2.2	15
	<b>88</b>	136	1.5	20
	<b>70</b>	135	1.3	25
	<b>58</b>	166	1.4	30
	<b>44</b>	142	0.93	40
	<b>35</b>	136	0.76	50
	<b>29</b>	126	0.61	60
	<b>22</b>	118	0.47	80
	<b>18</b>	116	0.41	100

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS070</b>	<b>233</b>	200	5.5	7.5
	<b>175</b>	218	4.6	10
	<b>117</b>	221	3.2	15
	<b>88</b>	202	2.3	20
	<b>70</b>	180	1.6	25
	<b>58</b>	241	1.9	30
	<b>44</b>	210	1.3	40
	<b>35</b>	190	1.0	50
	<b>29</b>	181	0.85	60
	<b>22</b>	159	0.61	80
	<b>18</b>	154	0.53	100

<b>CMIS075</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>233</b>	238	6.5	7.5
	<b>175</b>	257	5.4	10
	<b>117</b>	266	3.9	15
	<b>88</b>	242	2.7	20
	<b>70</b>	225	2.1	25
	<b>58</b>	289	2.3	30
	<b>44</b>	251	1.6	40
	<b>35</b>	227	1.2	50
	<b>29</b>	218	1.0	60
	<b>22</b>	193	0.74	80
	<b>18</b>	183	0.61	100

<b>CMIS090</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>233</b>	342	9.3	7.5
	<b>175</b>	380	7.8	10
	<b>117</b>	433	6.2	15
	<b>88</b>	414	4.5	20
	<b>70</b>	369	3.3	25
	<b>58</b>	493	3.8	30
	<b>44</b>	434	2.6	40
	<b>35</b>	385	1.9	50
	<b>29</b>	352	1.5	60
	<b>22</b>	324	1.2	80
	<b>18</b>	299	0.91	100

<b>CMIS110</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>233</b>	605	16.4	7.5
	<b>175</b>	669	13.8	10
	<b>117</b>	730	10.3	15
	<b>88</b>	740	8.0	20
	<b>70</b>	670	5.8	25
	<b>58</b>	815	6.1	30
	<b>44</b>	768	4.5	40
	<b>35</b>	699	3.4	50
	<b>29</b>	626	2.6	60
	<b>22</b>	562	1.9	80
	<b>18</b>	523	1.5	100

<b>CMIS130</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>233</b>	750	20.6	7.5
	<b>175</b>	820	17.1	10
	<b>117</b>	910	12.9	15
	<b>88</b>	910	9.9	20
	<b>70</b>	920	8.1	25
	<b>58</b>	1050	8.1	30
	<b>44</b>	1050	6.3	40
	<b>35</b>	970	4.7	50
	<b>29</b>	890	3.7	60
	<b>22</b>	830	2.8	80
	<b>18</b>	735	2.1	100

<b>CMIS150</b>	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
	<b>233</b>	1080	29.0	7.5
	<b>175</b>	1116	22.7	10
	<b>117</b>	1125	15.6	15
	<b>88</b>	1170	12.5	20
	<b>70</b>	1080	9.4	25
	<b>58</b>	1080	7.9	30
	<b>44</b>	1395	8.2	40
	<b>35</b>	1260	6.1	50
	<b>29</b>	1134	4.7	60
	<b>22</b>	1035	3.5	80
	<b>18</b>	900	2.6	100

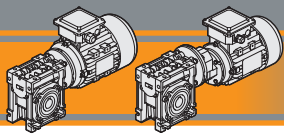
Nota:  $Pn_1$  es la potencia mecánica de entrada que será reducida por el factor de calentamiento con el fin de obtener el correspondiente. Para más información, favor de ponerse en contacto con nuestro servicio técnico.

Nota:  $Pn_1$  é a potência mecânica. A potência aplicável é reduzida do fator térmico. Para maiores detalhes, consulte nosso Serviço Técnico.

Note:  $Pn_1$  is an input mechanical power which must be reduced by the heating factor in order to get the relevant one. For more details please contact our Technical Service.











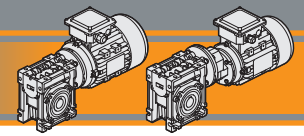








**Datos técnicos**

**Dados técnicos**

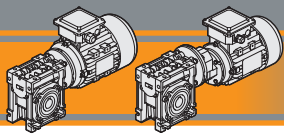
**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>0.18</b>								<b>0.37</b>							
(0.25 hp)	29	37	3.4	60	CM063		B5	(0.50 hp)	350	9	4.6	5	CM040		B5/B14
	29	42	4.5	60	CM063	CMP063/063	B14		233	13	3.4	7.5	CM040		B5/B14
63B4	23	51	3.4	75	CM063	CMP063/063	B14	71A4	175	17	2.7	10	CM040		B5/B14
(1750 min <sup>-1</sup> )	22	45	2.6	80	CM063		B5	(1750 min <sup>-1</sup> )	117	25	1.8	15	CM040		B5/B14
	19	55	4.2	90	CM063	CMP063/063	B14		88	31	1.3	20	CM040		B5/B14
	18	51	2.3	100	CM063		B5		70	37	1.0	25	CM040		B5/B14
	15	69	3.0	120	CM063	CMP063/063	B14		58	42	1.1	30	CM040		B5/B14
	12	82	2.3	150	CM063	CMP063/063	B14		44	52	0.8	40	CM040		B5/B14
	10	92	1.9	180	CM063	CMP063/063	B14								
	7	109	1.4	240	CM063	CMP063/063	B14		117	25	3.3	15	CM050		B5/B14
	6	121	1.2	300	CM063	CMP063/063	B14		88	32	2.3	20	CM050		B5/B14
									70	38	1.8	25	CM050		B5/B14
									58	44	2.0	30	CM050		B5/B14
									44	54	1.4	40	CM050		B5/B14
									35	64	1.1	50	CM050		B5/B14
									29	73	0.9	60	CM050		B5/B14
									29	84	1.2	60	CM050		B5/B14
									23	99	0.9	75	CM050	CMP071/050	B14
									19	116	1.1	90	CM050	CMP071/050	B14
									70	39	3.4	25	CM063		B5/B14
									58	45	3.7	30	CM063		B5/B14
									44	57	2.5	40	CM063		B5/B14
									35	67	2.0	50	CM063		B5/B14
									29	76	1.7	60	CM063		B5/B14
									29	87	2.2	60	CM063	CMP071/063	B14
									23	104	1.7	75	CM063	CMP071/063	B14
									22	92	1.3	80	CM063		B5/B14
									19	114	2.1	90	CM063	CMP071/063	B14
									18	105	1.1	100	CM063		B5/B14
									15	142	1.4	120	CM063	CMP071/063	B14
									12	169	1.1	150	CM063	CMP071/063	B14
									10	189	0.9	180	CM063	CMP071/063	B14
									35	69	2.8	50	CM070		B5
									29	79	2.3	60	CM070		B5
									29	88	3.2	60	CM070	CMP071/070	B14
									23	105	2.4	75	CM070	CMP071/070	B14
									22	97	1.6	80	CM070		B5
									19	118	2.9	90	CM070	CMP071/070	B14
									18	107	1.4	100	CM070		B5
									15	145	2.1	120	CM070	CMP071/070	B14
									12	169	1.6	150	CM070	CMP071/070	B14
									10	189	1.4	180	CM070	CMP071/070	B14
									7	223	1.0	240	CM070	CMP071/070	B14
									22	97	2.0	80	CM075		B5
									19	119	3.4	90	CM075	CMP071/075	B14
									18	111	1.6	100	CM075		B5
									15	147	2.5	120	CM075	CMP071/075	B14
									12	172	1.9	150	CM075	CMP071/075	B14
									10	192	1.6	180	CM075	CMP071/075	B14
									7	228	1.2	240	CM075	CMP071/075	B14
									6	255	0.9	300	CM075	CMP071/075	B14


**Datos técnicos**
**Dados técnicos**
**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>0.37</b>								<b>0.55</b>							
(0.50 hp)	22	103	3.1	80	CM090		B5	(0.75 hp)	23	165	3.1	75		CMP071/090	B14
	19	125	5.5	90		CMP071/090	B14		22	154	2.1	80	CM090		B5
71A4	18	121	2.5	100	CM090		B5	71B4	19	185	3.7	90		CMP071/090	B14
(1750 min <sup>-1</sup> )	15	154	4.0	120		CMP071/090	B14	(1750 min <sup>-1</sup> )	18	180	1.7	100	CM090		B5
	12	181	3.1	150		CMP071/090	B14		15	229	2.7	120		CMP071/090	B14
	10	210	2.4	180		CMP071/090	B14		12	269	2.1	150		CMP071/090	B14
	7	247	1.8	240		CMP071/090	B14		10	312	1.6	180		CMP071/090	B14
	6	279	1.5	300		CMP071/090	B14		7	367	1.2	240		CMP071/090	B14
	6	279	1.5	300		CMP071/090	B14		6	415	1.0	300		CMP071/090	B14
<b>0.55</b>								<b>0.75</b>							
(0.75 hp)	350	13	3.1	5	CM040		B5/B14	(1.0 hp)	350	18	4.1	5	CM050		B5/B14
	233	19	2.3	7.5	CM040		B5/B14		233	27	3.0	7.5	CM050		B5/B14
71B4	175	25	1.8	10	CM040		B5/B14	80A4	175	35	2.4	10	CM050		B5/B14
(1750 min <sup>-1</sup> )	117	36	1.2	15	CM040		B5/B14	(1750 min <sup>-1</sup> )	117	50	1.6	15	CM050		B5/B14
	88	47	0.9	20	CM040		B5/B14		88	65	1.1	20	CM050		B5/B14
	350	13	5.6	5	CM050		B5/B14		70	78	0.9	25	CM050		B5/B14
	233	20	4.0	7.5	CM050		B5/B14		58	88	1.0	30	CM050		B5/B14
	175	26	3.2	10	CM050		B5/B14		117	52	3.0	15	CM063		B5/B14
	117	37	2.2	15	CM050		B5/B14		88	66	2.1	20	CM063		B5/B14
	88	47	1.5	20	CM050		B5/B14		70	80	1.7	25	CM063		B5/B14
	70	57	1.2	25	CM050		B5/B14		58	92	1.8	30	CM063		B5/B14
	58	65	1.4	30	CM050		B5/B14		44	115	1.2	40	CM063		B5/B14
	44	80	0.9	40	CM050		B5/B14		35	135	1.0	50	CM063		B5/B14
	117	38	4.1	15	CM063		B5/B14		29	155	0.8	60	CM063		B5/B14
	88	49	2.8	20	CM063		B5/B14		29	176	1.1	60		CMP080/063	B14
	70	59	2.3	25	CM063		B5/B14		19	231	1.0	90		CMP080/063	B14
	58	68	2.5	30	CM063		B5/B14		88	67	3.0	20	CM070		B5/B14
	44	84	1.7	40	CM063		B5/B14		70	82	2.2	25	CM070		B5/B14
	35	99	1.4	50	CM063		B5/B14		58	93	2.6	30	CM070		B5/B14
	29	113	1.1	60	CM063		B5/B14		44	118	1.8	40	CM070		B5/B14
	29	129	1.5	60		CMP071/063	B14		35	139	1.4	50	CM070		B5/B14
	23	154	1.1	75		CMP071/063	B14		29	160	1.1	60	CM070		B5/B14
	22	137	0.9	80	CM063		B5/B14		29	178	1.6	60		CMP080/070	B14
	19	169	1.4	90		CMP071/063	B14		23	214	1.2	75		CMP080/070	B14
	15	212	1.0	120		CMP071/063	B14		19	238	1.4	90		CMP080/070	B14
	35	102	1.9	50	CM070		B5		15	294	1.0	120		CMP080/070	B14
	29	117	1.5	60	CM070		B5		44	118	2.1	40	CM075		B5/B14
	29	131	2.2	60		CMP071/070	B14		35	141	1.6	50	CM075		B5/B14
	23	157	1.6	75		CMP071/070	B14		29	160	1.4	60	CM075		B5/B14
	22	144	1.1	80	CM070		B5		29	180	1.9	60		CMP080/075	B14
	19	175	2.0	90		CMP071/070	B14		23	217	1.4	75		CMP080/075	B14
	18	159	1.0	100	CM070		B5		22	196	1.0	80	CM075		B5/B14
	15	215	1.4	120		CMP071/070	B14		19	242	1.7	90		CMP080/075	B14
	12	251	1.1	150		CMP071/070	B14		15	298	1.2	120		CMP080/075	B14
	10	281	0.9	180		CMP071/070	B14		12	349	0.9	150		CMP080/075	B14
	29	132	2.5	60		CMP071/075	B14		35	149	2.6	50	CM090		B5/B14
	23	159	1.9	75		CMP071/075	B14		29	172	2.0	60	CM090		B5/B14
	22	144	1.3	80	CM075		B5		29	188	3.1	60		CMP080/090	B14
	19	177	2.3	90		CMP071/075	B14		23	226	2.3	75		CMP080/090	B14
	18	165	1.1	100	CM075		B5		22	210	1.5	80	CM090		B5/B14
	15	219	1.7	120		CMP071/075	B14		19	253	2.7	90		CMP080/090	B14
	12	256	1.3	150		CMP071/075	B14		18	246	1.2	100	CM090		B5/B14
	10	286	1.1	180		CMP071/075	B14		15	313	2.0	120		CMP080/090	B14
									12	367	1.5	150		CMP080/090	B14
									10	426	1.2	180		CMP080/090	B14









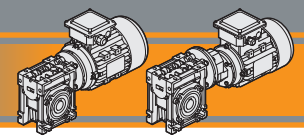








Datos técnicos

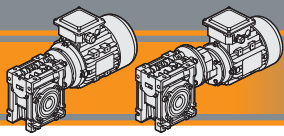
Dados técnicos

Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i				P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>0.75</b>								<b>1.1</b>							
(1.0 hp)	29	179	3.5	60	CM110		B5	(1.5 hp)	70	125	3.0	25	CM090		B5/B14
	29	193	5.0	60		CMP080/110	B14		58	144	3.4	30	CM090		B5/B14
80A4	23	235	3.9	75		CMP080/110	B14	80B4	44	182	2.4	40	CM090		B5/B14
(1750 min <sup>-1</sup> )	22	223	2.5	80	CM110		B5	(1750 min <sup>-1</sup> )	35	219	1.8	50	CM090		B5/B14
	19	260	4.4	90		CMP080/110	B14		29	252	1.4	60	CM090		B5/B14
	18	262	2.0	100	CM110		B5		29	275	2.1	60		CMP080/090	B14
	15	332	3.3	120		CMP080/110	B14		23	331	1.5	75		CMP080/090	B14
	12	391	2.5	150		CMP080/110	B14		22	307	1.1	80	CM090		B5/B14
	10	448	2.0	180		CMP080/110	B14		19	371	1.9	90		CMP080/090	B14
	7	549	1.4	240		CMP080/110	B14		15	459	1.4	120		CMP080/090	B14
	6	626	1.1	300		CMP080/110	B14		12	538	1.0	150		CMP080/090	B14
	22	226	3.7	80	CM130		B5		35	228	3.1	50	CM110		B5
	19	260	5.4	90		CMP080/130	B14		29	263	2.4	60	CM110		B5
	18	262	2.8	100	CM130		B5		29	282	3.4	60		CMP080/110	B14
	15	327	3.8	120		CMP080/130	B14		23	344	2.6	75		CMP080/110	B14
	12	403	3.1	150		CMP080/130	B14		22	327	1.7	80	CM110		B5
	10	462	2.3	180		CMP080/130	B14		19	381	3.0	90		CMP080/110	B14
	7	558	1.8	240		CMP080/130	B14		18	384	1.4	100	CM110		B5
	6	638	1.3	300		CMP080/130	B14		15	487	2.2	120		CMP080/110	B14
									12	574	1.7	150		CMP080/110	B14
									10	657	1.3	180		CMP080/110	B14
									7	805	1.0	240		CMP080/110	B14
<b>1.1</b>								<b>1.5</b>							
(1.5 hp)	350	27	2.8	5	CM050		B5/B14	(2.0 hp)	350	37	3.6	5	CM063		B5/B14
	233	39	2.0	7.5	CM050		B5/B14		233	54	2.7	7.5	CM063		B5/B14
80B4	175	51	1.6	10	CM050		B5/B14	90S4	175	70	2.1	10	CM063		B5/B14
(1750 min <sup>-1</sup> )	117	74	1.1	15	CM050		B5/B14	(1750 min <sup>-1</sup> )	117	103	1.5	15	CM063		B5/B14
	350	27	5.0	5	CM063		B5/B14		88	133	1.0	20	CM063		B5/B14
	233	40	3.6	7.5	CM063		B5/B14		70	160	0.8	25	CM063		B5/B14
	175	52	2.9	10	CM063		B5/B14		58	184	0.9	30	CM063		B5/B14
	117	76	2.0	15	CM063		B5/B14								
	88	97	1.4	20	CM063		B5/B14		233	55	3.7	7.5	CM070		B5/B14
	70	117	1.2	25	CM063		B5/B14		175	71	3.1	10	CM070		B5/B14
	58	135	1.2	30	CM063		B5/B14		117	103	2.1	15	CM070		B5/B14
	117	76	2.9	15	CM070		B5/B14		88	134	1.5	20	CM070		B5/B14
	88	98	2.1	20	CM070		B5/B14		70	164	1.1	25	CM070		B5/B14
	70	120	1.5	25	CM070		B5/B14		58	187	1.3	30	CM070		B5/B14
	58	137	1.8	30	CM070		B5/B14		44	236	0.9	40	CM070		B5/B14
	44	173	1.2	40	CM070		B5/B14								
	35	204	0.9	50	CM070		B5/B14		117	103	2.6	15	CM075		B5/B14
	29	261	1.1	60		CMP080/070	B14		88	136	1.8	20	CM075		B5/B14
	23	313	0.8	75		CMP080/070	B14		70	164	1.4	25	CM075		B5/B14
	19	349	1.0	90		CMP080/070	B14		58	189	1.5	30	CM075		B5/B14
	88	100	2.4	20	CM075		B5/B14		44	236	1.1	40	CM075		B5/B14
	70	120	1.9	25	CM075		B5/B14		29	361	0.9	60		CMP090/075	B5/B14
	58	139	2.1	30	CM075		B5/B14								
	44	173	1.5	40	CM075		B5/B14								
	35	207	1.1	50	CM075		B5/B14								
	29	234	0.9	60	CM075		B5/B14								
	29	265	1.3	60		CMP080/075	B14								
	23	318	0.9	75		CMP080/075	B14								
	19	355	1.1	90		CMP080/075	B14								


**Datos técnicos**
**Dados técnicos**
**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				
<b>1.5</b>								<b>2.2</b>								
(2.0 hp)	88	138	3.0	20	CM090			(3.0 hp)	117	155	2.8	15	CM090			B5/B14
	70	170	2.2	25	CM090				88	202	2.1	20	CM090			B5/B14
90S4	58	196	2.5	30	CM090			90L4	70	249	1.5	25	CM090			B5/B14
(1750 min <sup>-1</sup> )	44	249	1.7	40	CM090			(1750 min <sup>-1</sup> )	58	288	1.7	30	CM090			B5/B14
	35	299	1.3	50	CM090				44	365	1.2	40	CM090			B5/B14
	29	344	1.0	60	CM090				35	438	0.9	50	CM090			B5/B14
	29	375	1.5	60		CMP090/090	B5/B14		29	551	1.0	60		CMP090/090	B5/B14	
	23	451	1.1	75		CMP090/090	B5/B14									
	19	505	1.4	90		CMP090/090	B5/B14		88	204	3.6	20	CM110			B5/B14
	15	626	1.0	120		CMP090/090	B5/B14		70	252	2.7	25	CM110			B5/B14
									58	292	2.8	30	CM110			B5/B14
	44	259	3.0	40	CM110				44	379	2.0	40	CM110			B5/B14
	35	311	2.2	50	CM110				35	456	1.5	50	CM110			B5/B14
	29	359	1.7	60	CM110				29	526	1.2	60	CM110			B5/B14
	29	385	2.5	60		CMP090/110	B5/B14		29	565	1.7	60		CMP090/110	B5/B14	
	23	469	1.9	75		CMP090/110	B5/B14		23	688	1.3	75		CMP090/110	B5/B14	
	22	445	1.3	80	CM110				22	653	0.9	80	CM110			B5/B14
	19	520	2.2	90		CMP090/110	B5/B14		19	762	1.5	90		CMP090/110	B5/B14	
	18	524	1.0	100	CM110				15	974	1.1	120		CMP090/110	B5/B14	
	15	664	1.6	120		CMP090/110	B5/B14		12	1147	0.9	150		CMP090/110	B5/B14	
	12	782	1.3	150		CMP090/110	B5/B14									
	10	895	1.0	180		CMP090/110	B5/B14		44	365	2.9	40	CM130			B5
									35	450	2.2	50	CM130			B5
	35	307	3.2	50	CM130		B5		29	526	1.7	60	CM130			B5
	29	359	2.5	60	CM130		B5		29	558	2.2	60		CMP090/130	B5/B14	
	29	380	3.3	60		CMP090/130	B5/B14		23	679	1.8	75		CMP090/130	B5/B14	
	23	463	2.6	75		CMP090/130	B5/B14		22	663	1.3	80	CM130			B5
	22	452	1.8	80	CM130		B5		19	762	1.8	90		CMP090/130	B5/B14	
	19	520	2.7	90		CMP090/130	B5/B14		18	768	1.0	100	CM130			B5
	18	524	1.4	100	CM130		B5		15	960	1.3	120		CMP090/130	B5/B14	
	15	655	1.9	120		CMP090/130	B5/B14		12	1182	1.0	150		CMP090/130	B5/B14	
	12	806	1.5	150		CMP090/130	B5/B14									
	10	924	1.2	180		CMP090/130	B5/B14									
	7	1117	0.9	240		CMP090/130	B5/B14									
<b>2.2</b>								<b>3.0</b>								
(3.0 hp)	350	54	2.5	5	CM063			(4.0 hp)	233	109	1.8	7.5	CM070			B5/B14
	233	79	1.8	7.5	CM063				175	142	1.5	10	CM070			B5/B14
90L4	175	103	1.4	10	CM063			100LA4	117	206	1.1	15	CM070			B5/B14
(1750 min <sup>-1</sup> )	117	151	1.0	15	CM063			(1750 min <sup>-1</sup> )								
									233	109	2.2	7.5	CM075			B5/B14
	233	80	2.5	7.5	CM070				175	142	1.8	10	CM075			B5/B14
	175	104	2.1	10	CM070				117	206	1.3	15	CM075			B5/B14
	117	151	1.5	15	CM070				88	272	0.9	20	CM075			B5/B14
	88	197	1.0	20	CM070											
	58	274	0.9	30	CM070				233	111	3.1	7.5	CM090			B5/B14
									175	146	2.6	10	CM090			B5/B14
	233	80	3.0	7.5	CM075				117	211	2.1	15	CM090			B5/B14
	175	104	2.5	10	CM075				88	275	1.5	20	CM090			B5/B14
	117	151	1.8	15	CM075				70	340	1.1	25	CM090			B5/B14
	88	199	1.2	20	CM075				58	393	1.3	30	CM090			B5/B14
	70	240	0.9	25	CM075				44	498	0.9	40	CM090			B5/B14
	58	277	1.0	30	CM075											
									117	214	3.4	15	CM110			B5/B14
									88	278	2.7	20	CM110			B5/B14
									70	344	1.9	25	CM110			B5/B14



# CM/CMP







Motorreductores sinfín corona  
 Motores de rosca sem fim  
 Wormgearmotors

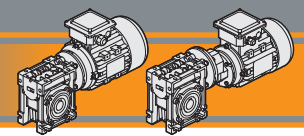
60 Hz







Datos técnicos

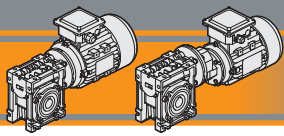
Dados técnicos

Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>3.0</b>								<b>4.5</b>							
(4.0 hp)	58	398	2.0	30	CM110		B5/B14	(6.0 hp)	233	164	1.2	7.5	CM070		B5/B14
	44	517	1.5	40	CM110		B5/B14		175	214	1.0	10	CM070		B5/B14
100LA4	35	622	1.1	50	CM110		B5/B14	112MA4							
(1750 min <sup>-1</sup> )	29	717	0.9	60	CM110		B5/B14	(1750 min <sup>-1</sup> )	233	164	1.5	7.5	CM075		B5/B14
									175	214	1.2	10	CM075		B5/B14
	70	340	2.7	25	CM130		B5		117	309	0.9	15	CM075		B5/B14
	58	388	2.7	30	CM130		B5								
	44	498	2.1	40	CM130		B5		233	166	2.1	7.5	CM090		B5/B14
	35	614	1.6	50	CM130		B5		175	219	1.7	10	CM090		B5/B14
	29	717	1.2	60	CM130		B5		117	317	1.4	15	CM090		B5/B14
	22	904	0.9	80	CM130		B5		88	413	1.0	20	CM090		B5/B14
	44	511	2.7	40	CM150		B5		233	166	3.6	7.5	CM110		B5/B14
	35	622	2.0	50	CM150		B5		175	219	3.1	10	CM110		B5/B14
	29	717	1.6	60	CM150		B5		117	320	2.3	15	CM110		B5/B14
	22	891	1.2	80	CM150		B5		88	417	1.8	20	CM110		B5/B14
	18	1048	0.9	100	CM150		B5		70	516	1.3	25	CM110		B5/B14
									58	597	1.4	30	CM110		B5/B14
									44	776	1.0	40	CM110		B5/B14
<b>3.7</b>															
(5.0 hp)	233	135	1.5	7.5	CM070		B5/B14								
	175	176	1.2	10	CM070		B5/B14		233	164	4.6	7.5	CM130		B5
100LB4									175	216	3.8	10	CM130		B5
(1750 min <sup>-1</sup> )	233	135	1.8	7.5	CM075		B5/B14		117	317	2.9	15	CM130		B5
	175	176	1.5	10	CM075		B5/B14		88	413	2.2	20	CM130		B5
	117	254	1.0	15	CM075		B5/B14		70	510	1.8	25	CM130		B5
									58	582	1.8	30	CM130		B5
	233	136	2.5	7.5	CM090		B5/B14		44	747	1.4	40	CM130		B5
	175	180	2.1	10	CM090		B5/B14		35	921	1.1	50	CM130		B5
	117	260	1.7	15	CM090		B5/B14								
	88	339	1.2	20	CM090		B5/B14		88	422	2.8	20	CM150		B5
	70	419	0.9	25	CM090		B5/B14		70	516	2.1	25	CM150		B5
	58	485	1.0	30	CM090		B5/B14		58	611	1.8	30	CM150		B5
									44	766	1.8	40	CM150		B5
	233	136	4.4	7.5	CM110		B5/B14		35	933	1.4	50	CM150		B5
	175	180	3.7	10	CM110		B5/B14		29	1076	1.1	60	CM150		B5
	117	263	2.8	15	CM110		B5/B14								
	88	343	2.2	20	CM110		B5/B14								
	70	424	1.6	25	CM110		B5/B14								
	58	491	1.7	30	CM110		B5/B14								
	44	638	1.2	40	CM110		B5/B14								
	35	767	0.9	50	CM110		B5/B14								
	88	339	2.7	20	CM130		B5								
	70	419	2.2	25	CM130		B5								
	58	479	2.2	30	CM130		B5								
	44	614	1.7	40	CM130		B5								
	35	757	1.3	50	CM130		B5								
	29	884	1.0	60	CM130		B5								
	70	424	2.5	25	CM150		B5								
	58	503	2.1	30	CM150		B5								
	44	630	2.2	40	CM150		B5								
	35	767	1.6	50	CM150		B5								
	29	884	1.3	60	CM150		B5								
	22	1098	0.9	80	CM150		B5								
								<b>5.5</b>							
								(7.5 hp)	233	200	1.0	7.5	CM070		B5/B14
								112MB4	233	200	1.2	7.5	CM075		B5/B14
								(1750 min <sup>-1</sup> )	175	261	1.0	10	CM075		B5/B14
									233	203	1.7	7.5	CM090		B5/B14
									175	267	1.4	10	CM090		B5/B14
									117	387	1.1	15	CM090		B5/B14
									233	203	3.0	7.5	CM110		B5/B14
									175	267	2.5	10	CM110		B5/B14
									117	392	1.9	15	CM110		B5/B14
									88	510	1.5	20	CM110		B5/B14
									70	630	1.1	25	CM110		B5/B14
									58	729	1.1	30	CM110		B5/B14


**Datos técnicos**
**Dados técnicos**
**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>5.5</b>															
(7.5 hp)	233	200	3.7	7.5	CM130		B5	(15.0 hp)	233	405	1.5	7.5	CM110		B5/B14
	175	264	3.1	10	CM130		B5		175	534	1.3	10	CM110		B5/B14
112MB4 (1750 min <sup>-1</sup> )	117	387	2.4	15	CM130		B5	132L4 (1750 min <sup>-1</sup> )	117	783	0.9	15	CM110		B5/B14
	88	504	1.8	20	CM130		B5		233	401	1.9	7.5	CM130		B5/B14
	70	623	1.5	25	CM130		B5						CM130		B5/B14
	58	711	1.5	30	CM130		B5						CM130		B5/B14
	44	912	1.2	40	CM130		B5						CM130		B5/B14
	35	1126	0.9	50	CM130		B5						CM130		B5/B14
	117	396	2.8	15	CM150		B5						233	410	2.6
	88	516	2.3	20	CM150		B5		CM150		B5				
70	630	1.7	25	CM150		B5	CM150		B5						
58	747	1.4	30	CM150		B5	CM150		B5						
44	936	1.5	40	CM150		B5	CM150		B5						
35	1141	1.1	50	CM150		B5	CM150		B5						
29	1315	0.9	60	CM150		B5	70	1261	0.9	25	CM150		B5		
<b>7.5</b>															
(10.0 hp)	233	276	2.2	7.5	CM110		B5/B14	(20.0 hp)	233	559	1.9	7.5	CM150		B5
	175	364	1.8	10	CM110		B5/B14		175	737	1.5	10	CM150		B5
132MA4 (1750 min <sup>-1</sup> )	117	534	1.4	15	CM110		B5/B14	160M4 (1750 min <sup>-1</sup> )	117	1081	1.0	15	CM150		B5
	88	696	1.1	20	CM110		B5/B14		88	1408	0.8	20	CM150		B5
	233	273	2.7	7.5	CM130		B5/B14		233	689	1.6	7.5	CM150		B5
	175	360	2.3	10	CM130		B5/B14						CM150		B5
	117	528	1.7	15	CM130		B5/B14						CM150		B5
	88	688	1.3	20	CM130		B5/B14						CM150		B5
	70	849	1.1	25	CM130		B5/B14						CM150		B5
	58	970	1.1	30	CM130		B5/B14						CM150		B5
233	279	3.9	7.5	CM150		B5	160L4 (1750 min <sup>-1</sup> )	117	1333	0.8	15	CM150		B5	
175	368	3.0	10	CM150		B5						CM150		B5	
117	540	2.1	15	CM150		B5						CM150		B5	
88	704	1.7	20	CM150		B5						CM150		B5	
70	860	1.3	25	CM150		B5						CM150		B5	
58	1019	1.1	30	CM150		B5						CM150		B5	
44	1277	1.1	40	CM150		B5	44	1277	1.1	40	CM150		B5		
<b>9.2</b>															
(12.5 hp)	233	339	1.8	7.5	CM110		B5/B14	132MB4 (1750 min <sup>-1</sup> )	233	339	1.8	7.5	CM110		B5/B14
	175	447	1.5	10	CM110		B5/B14		175	447	1.5	10	CM110		B5/B14
132MB4 (1750 min <sup>-1</sup> )	117	655	1.1	15	CM110		B5/B14	233	335	2.2	7.5	CM130		B5/B14	
	88	853	0.9	20	CM110		B5/B14					CM130		B5/B14	
	233	335	2.2	7.5	CM130		B5/B14					CM130		B5/B14	
	175	442	1.9	10	CM130		B5/B14					CM130		B5/B14	
	117	648	1.4	15	CM130		B5/B14					CM130		B5/B14	
	88	843	1.1	20	CM130		B5/B14					CM130		B5/B14	
	70	1042	0.9	25	CM130		B5/B14					CM130		B5/B14	
	58	1190	0.9	30	CM130		B5/B14					CM130		B5/B14	
233	343	3.2	7.5	CM150		B5	233	452	2.5	10	CM150		B5		
175	452	2.5	10	CM150		B5					CM150		B5		
117	663	1.7	15	CM150		B5					CM150		B5		
88	864	1.4	20	CM150		B5					CM150		B5		
70	1054	1.0	25	CM150		B5					CM150		B5		
58	1250	0.9	30	CM150		B5					CM150		B5		
44	1566	0.9	40	CM150		B5	44	1566	0.9	40	CM150		B5		



# CM/CMP

Motorreductores sinfín corona  
 Motoredutores de rosca sem fim  
 Wormgearmotors

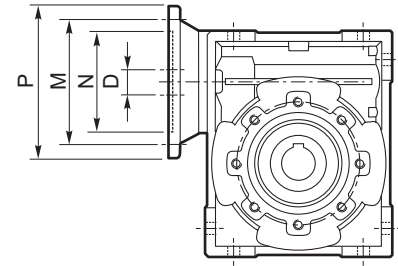
60 Hz

**Motores aplicables**

**Motores aplicáveis**

**IEC Motor adapters**

	IEC	N	M	P	D	i																		
						5	7.5	10	15	20	25	30	40	50	60	80	100							
<b>CM026</b>	<b>56B14</b>	50	65	80	9																			
<b>CM030</b>	<b>63B5</b>	95	115	140	11																			
	<b>63B14</b>	60	75	90																				
	<b>56B5</b>	80	100	120	9	B	B	B	B	B	B	B	B	B										
	<b>56B14</b>	50	65	80																				
<b>CM040</b>	<b>71B5</b>	110	130	160	14																			
	<b>71B14</b>	70	85	105																				
	<b>63B5</b>	95	115	140	11	B	B	B	B	B	B	B	B											
	<b>63B14</b>	60	75	90																				
	<b>56B5</b>	80	100	120	9	BS	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B	B						
	<b>56B14</b>	50	65	80																				
<b>CM050</b>	<b>80B5</b>	130	165	200	19																			
	<b>80B14</b>	80	100	120																				
	<b>71B5</b>	110	130	160	14	B	B	B	B	B	B	B												
	<b>71B14</b>	70	85	105																				
	<b>63B5</b>	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B	B							
	<b>63B14</b>	60	75	90																				
<b>CM063</b>	<b>90B5</b>	130	165	200	24																			
	<b>90B14</b>	95	115	140																				
	<b>80B5</b>	130	165	200	19	B	B	B	B	B	B	B												
	<b>80B14</b>	80	100	120																				
	<b>71B5</b>	110	130	160	14	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B								
	<b>71B14</b>	70	85	105																				
	<b>63B5</b>	95	115	140	11									BS	BS	BS	B	B						
<b>CM070</b>	<b>100/112B5</b>	180	215	250	28																			
	<b>100/112B14</b>	110	130	160																				
	<b>90B5</b>	130	165	200	24		B	B	B	B														
	<b>90B14</b>	95	115	140																				
	<b>80B5</b>	130	165	200	19		BS	BS	BS	BS	B	B	B											
	<b>80B14</b>	80	100	120																				
	<b>71B5</b>	110	130	160	14						BS	BS	BS	B	B	B	B							
<b>CM075</b>	<b>100/112B5</b>	180	215	250	28																			
	<b>100/112B14</b>	110	130	160																				
	<b>90B5</b>	130	165	200	24		B	B	B	B	B	B												
	<b>90B14</b>	95	115	140																				
	<b>80B5</b>	130	165	200	19		BS	BS	BS	BS	BS	BS	B	B										
	<b>80B14</b>	80	100	120																				
	<b>71B5</b>	110	130	160	14									BS	BS	B	B	B						



**N.B.** Las áreas grises indican los tamaño de los motores aplicables.

**N.B.** As áreas cinzas indicam o tamanho dos motores aplicados.

**N.B.** Grey areas indicate motor inputs available on each size of unit.

**B/BS** = Casquillo de reducción en acero

**B/BS** = Bucha de redução em aço

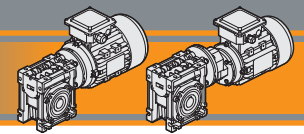
**B/BS** = Metal shaft sleeve

**Note:** Brida Nema disponible según la demanda

**Nota:** flange Nema disponível sob encomenda

**Note:** Nema flange available on demand



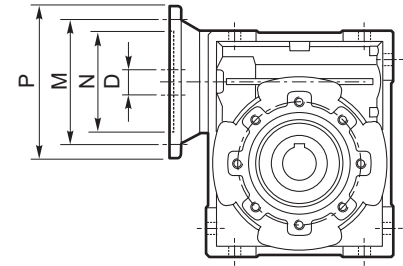


Motores aplicables

Motores aplicáveis

IEC Motor adapters

	IEC	N	M	P	D	i												
						5	7.5	10	15	20	25	30	40	50	60	80	100	
CM090	100/112B5	180	215	250	28													
	100/112B14	110	130	160														
	90B5	130	165	200	24	B	B	B	B	B	B	B						
	90B14	95	115	140														
	80B5	130	165	200	19	BS	BS	BS	BS	BS	BS	BS	B	B	B			
	80B14	80	100	120														
	71B5	110	130	160	14									BS	BS	BS	B	
CM110	132B5	230	265	300	38													
	132B14	130	165	200														
	100/112B5	180	215	250	28	B	B	B	B	B	B							
	100/112B14	110	130	160														
	90B5	130	165	200	24	BS	BS	BS	BS	BS	BS	B	B	B				
	90B14	95	115	140														
	80B5	130	165	200	19							BS	BS	BS	B	B		
CM130	132B5	230	265	300	38													
	132B14	130	165	200														
	100/112B5	180	215	250	28	B	B	B	B	B	B							
	90B5	130	165	200	24	BS	BS	BS	BS	BS	BS	B	B	B	B			
	80B5	130	165	200	19								BS	BS	BS	BS		
CM150	160B5	250	300	350	42													
	132B5	230	265	300	38	B	B	B	B	B								
	100/112B5	180	215	250	28	BS	BS	BS	BS	BS	B	B	B	B				



N.B. Las áreas grises indican los tamaño de los motores aplicables.

N.B. As áreas cinzas indicam o tamanho dos motores aplicados.

N.B. Grey areas indicate motor inputs available on each size of unit.

B/BS = Casquillo de reducción en acero

B/BS = Bucha de redução em aço

B/BS = Metal shaft sleeve

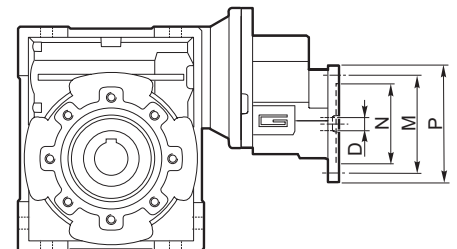
CM/CMP

Note: Brida Nema disponible según la demanda

Nota: flange Nema disponível sob encomenda

Note: Nema flange available on demand

CMP	IEC	N	M	P	D	i (i <sub>1</sub> x i <sub>2</sub> )									
						60 (3x20)	75 (3x25)	90 (3x30)	120 (3x40)	150 (3x50)	180 (3x60)	240 (3x80)	300 (3x100)		
056/030	56 B14	50	65	80	9										
056/040						B	B	B	B						
063/040	63 B14	60	75	90	11										
063/050						B	B	B							
063/063						BS	BS	BS	B	B	B				
071/050	71 B14	70	85	105	14										
071/063						B	B	B							
071/070						B	B	B	B						
071/075						B	B	B	B						
071/090						BS	BS	BS	B	B	B				
080/063	80 B14	80	100	120	19										
080/070															
080/075															
080/090						B	B	B							
080/110						BS	BS	B	B	B	B				
080/130						BS	BS	BS	BS	B	B	B	B		
090/070						90 B14 90 B5	95 130	115 165	140 200	24					
090/075															
090/090	B	B	B												
090/110	BS	BS	B	B	B						B				
090/130	BS	BS	BS	BS	B						B	B	B		



N.B. Las áreas grises indican los tamaño de los motores aplicables

N.B. As áreas cinzas indicam o tamanho dos motores aplicados

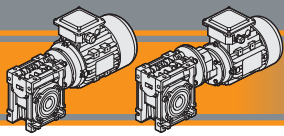
N.B. Grey areas indicate motor inputs available on each size of unit.

B/BS = Casquillo de reducción en acero

B/BS = Bucha de redução em aço

B/BS = Metal shaft sleeve



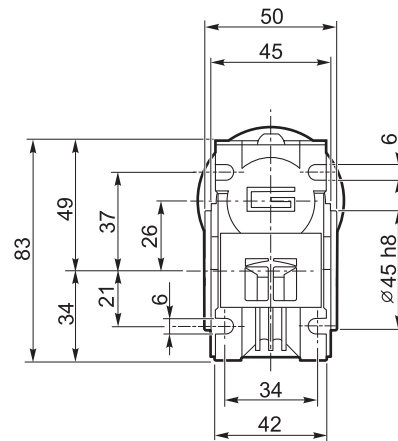
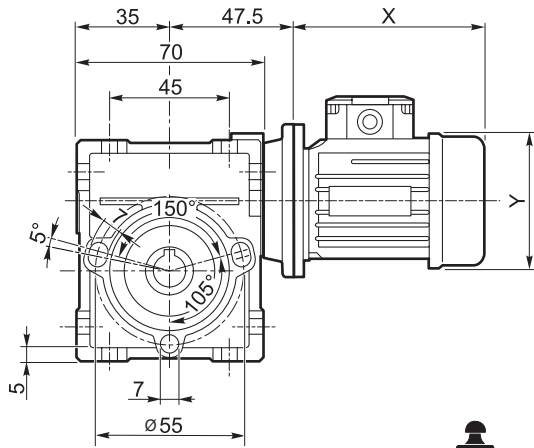


**Dimensiones**

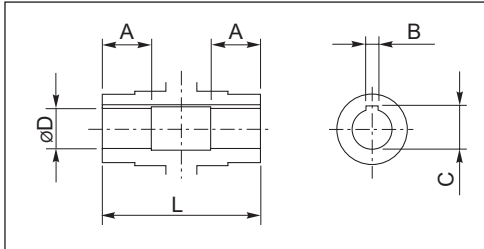
**Dimensões**

**Dimensions**

**CM 026 U**



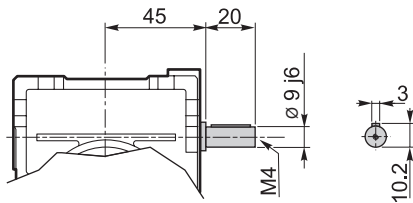
**Kg**  
0.8



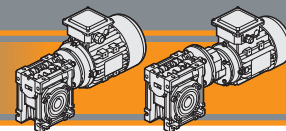
Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

Grandezza Size	ø D H8	L	A	B	C
CM 026 (D14)	14	50	15	5	16.2
CM 026	12	50	15	4	13.8
CM 026 (D11)	11	50	15	4	12.8

**CMIS 026 ..**





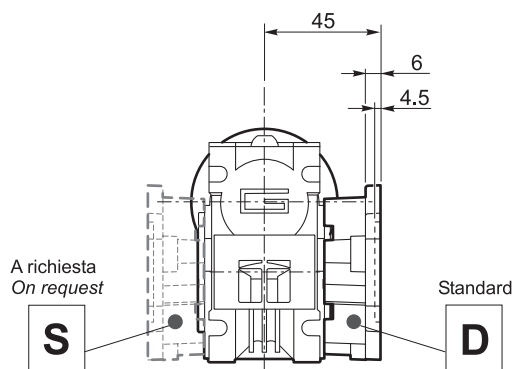
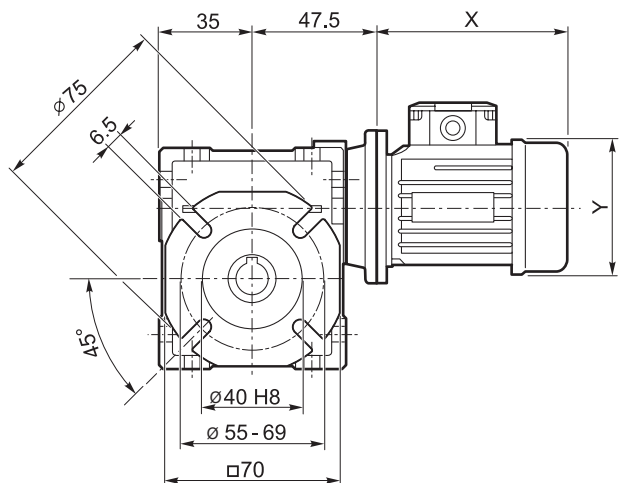


Dimensiones

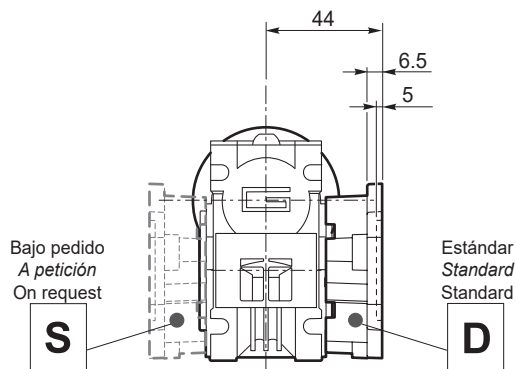
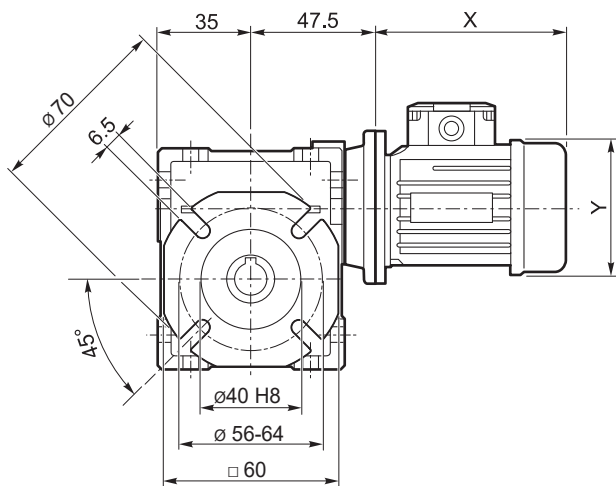
Dimensões

Dimensions

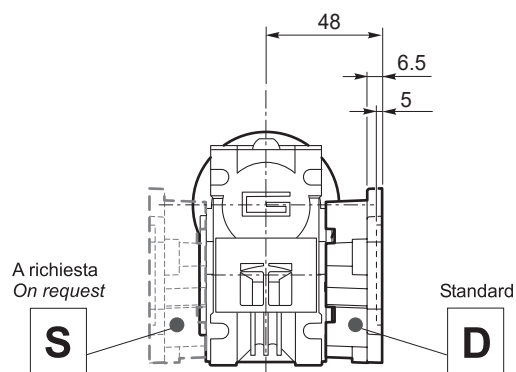
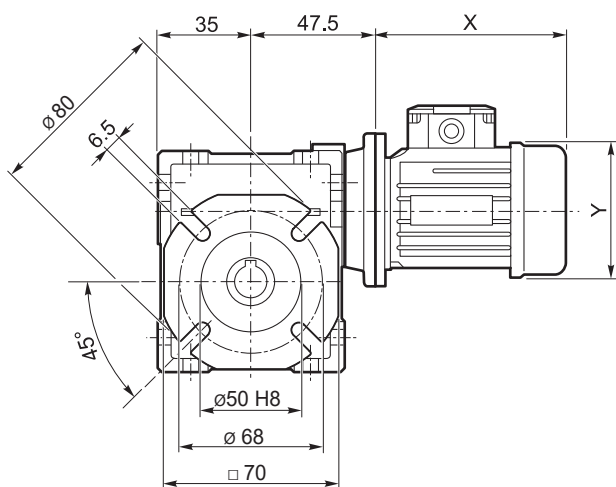
CM 026 F



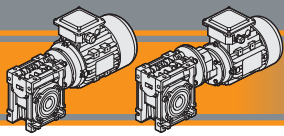
CM 026 F28



CM 026 F30



CM/CMP

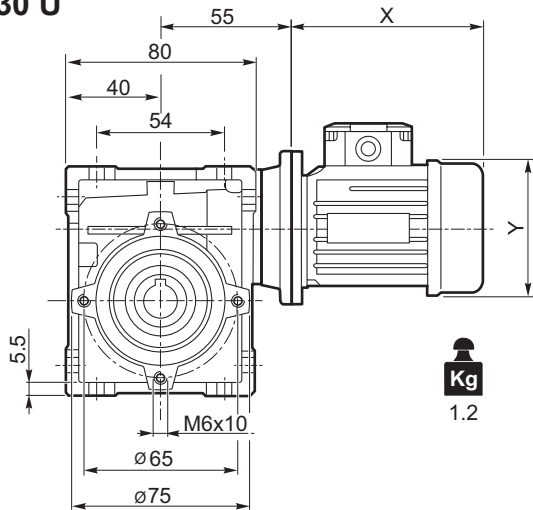


**Dimensiones**

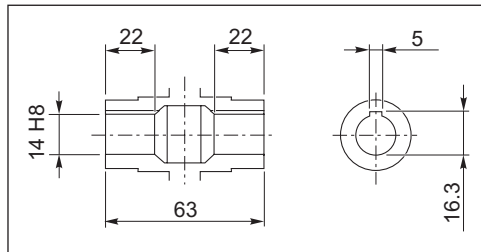
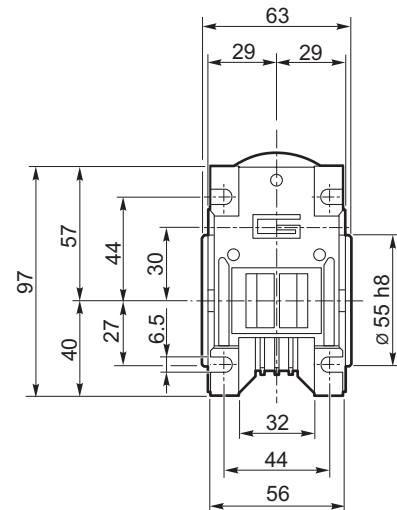
**Dimensões**

**Dimensions**

**CM 030 U**

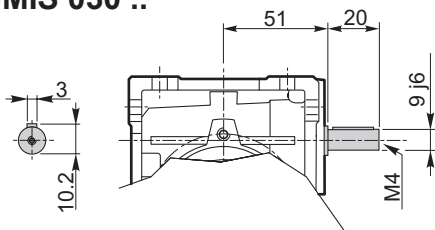


**Kg**  
1.2

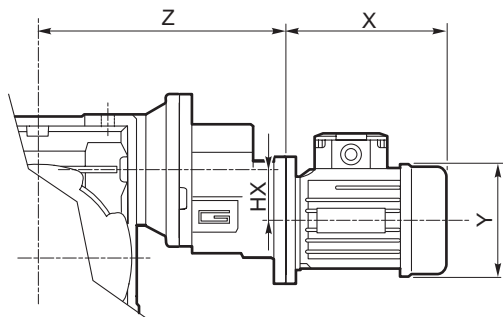


Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

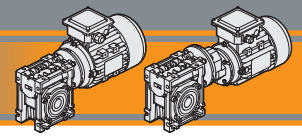
**CMIS 030 ..**



**CMP ..**



	HX	Z	<b>Kg</b>
<b>056/030</b>	30.5	124	2.1



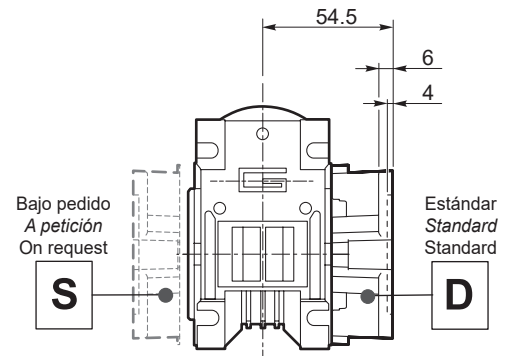
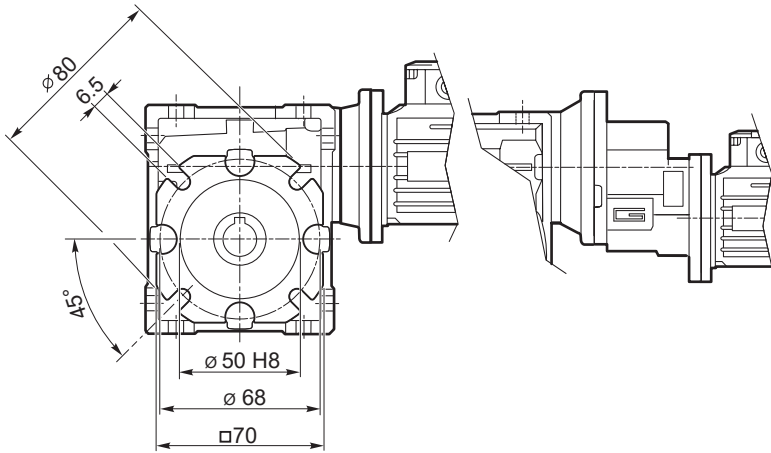
Dimensiones

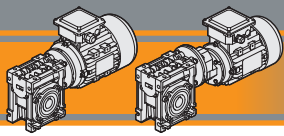
Dimensões

Dimensions

CM 030 F

CMP../030 F



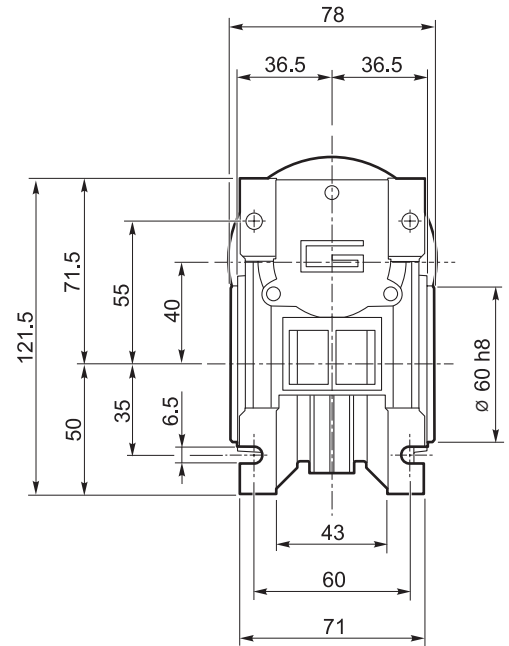
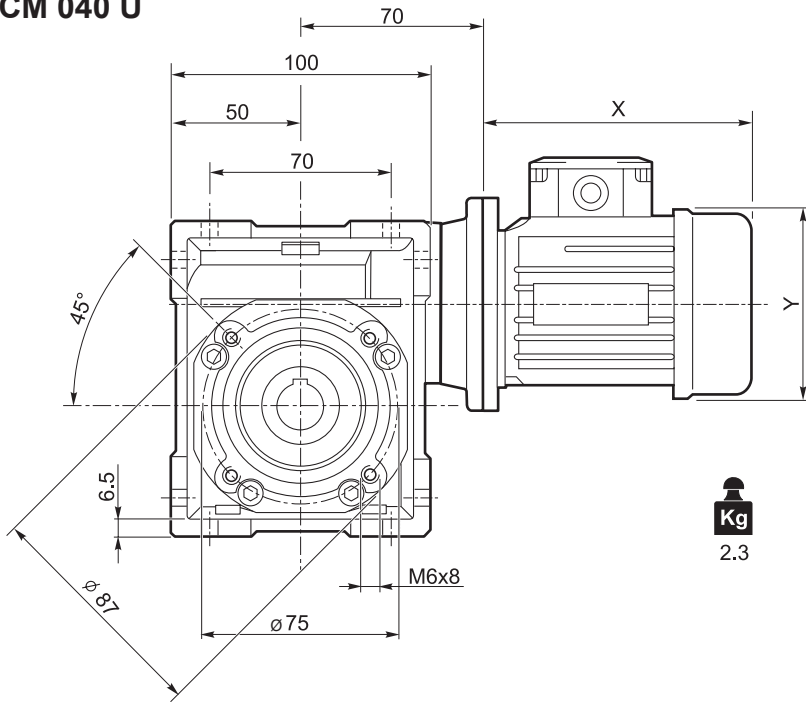


**Dimensiones**

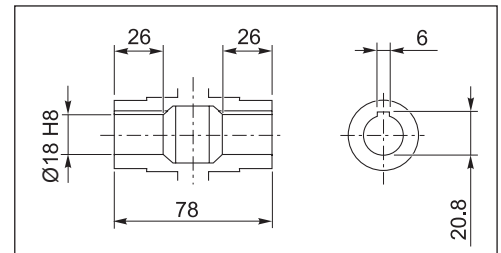
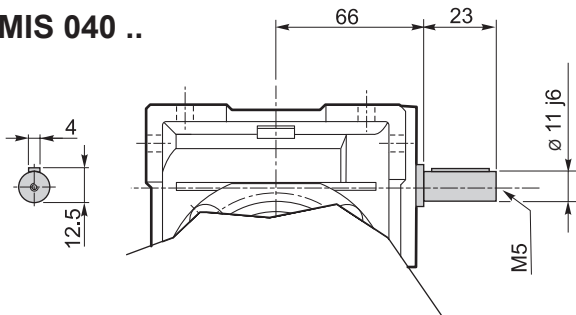
**Dimensões**

**Dimensions**

**CM 040 U**

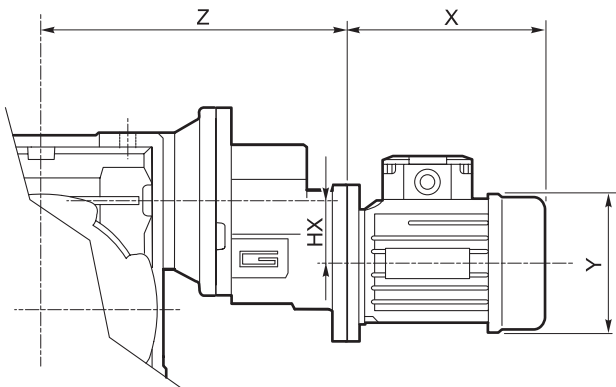


**CMIS 040 ..**

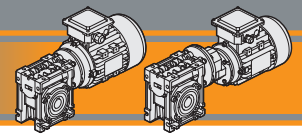


Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

**CMP ..**



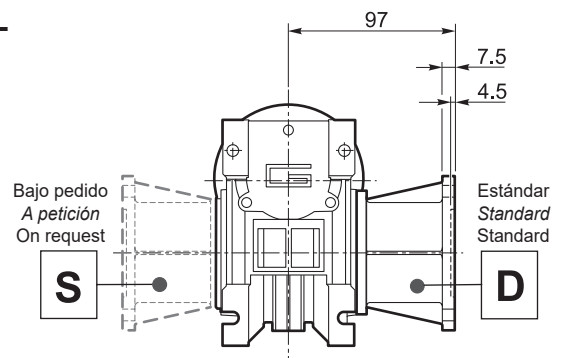
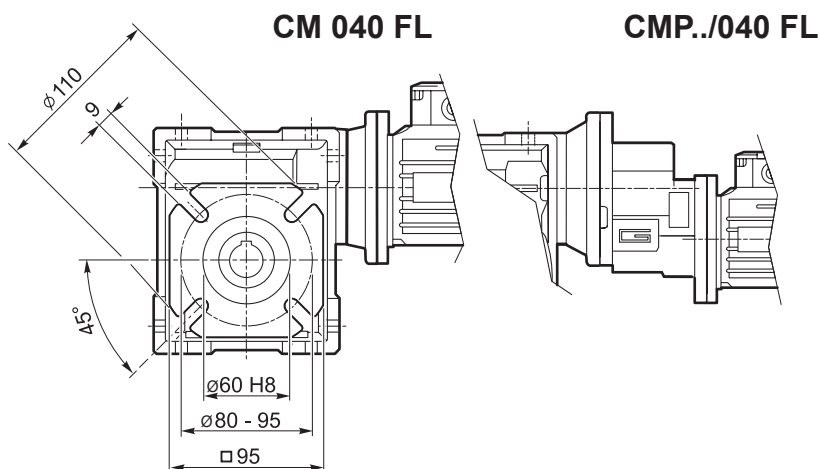
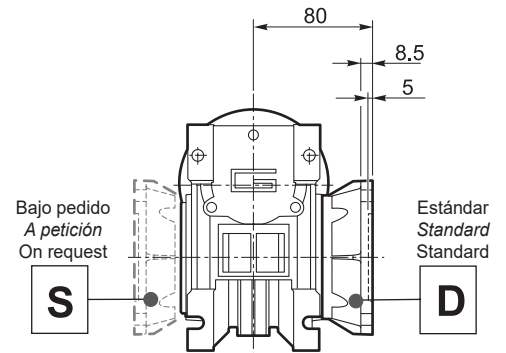
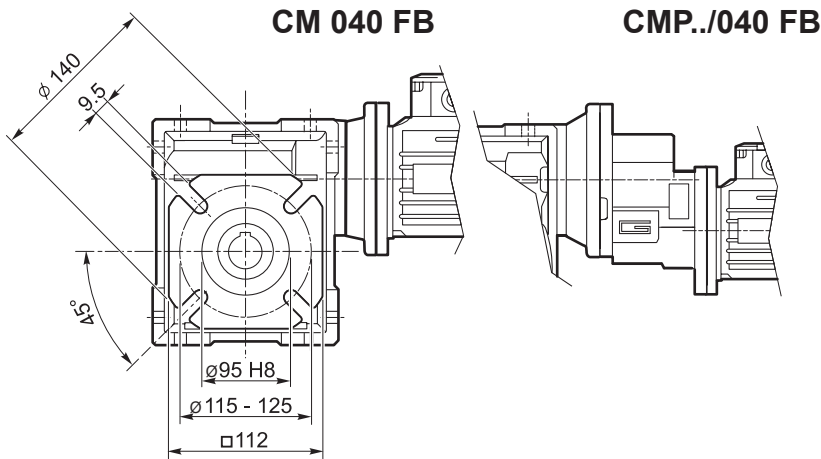
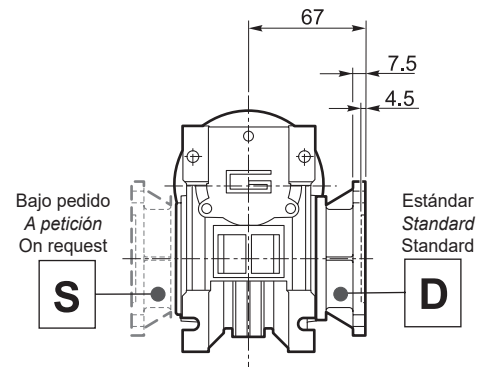
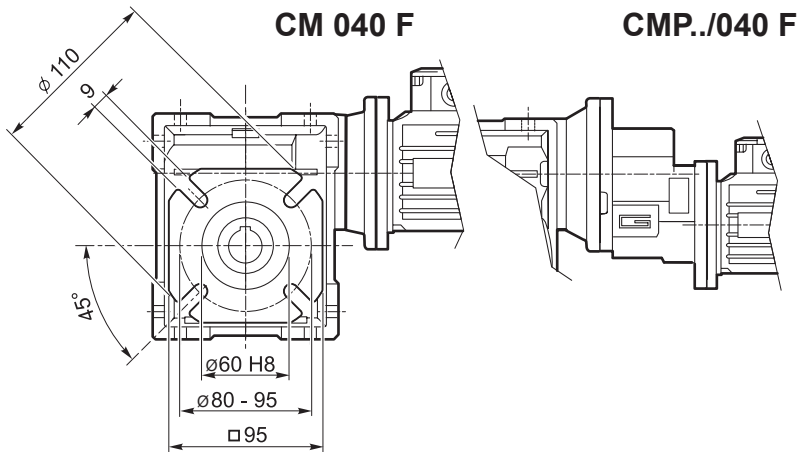
	HX	Z	Kg
<b>056/040</b>	30.5	139	3.2
<b>063/040</b>	30.5	142	3.3



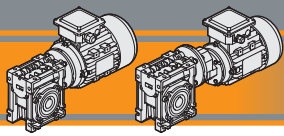
Dimensiones

Dimensões

Dimensions



CM/CMP

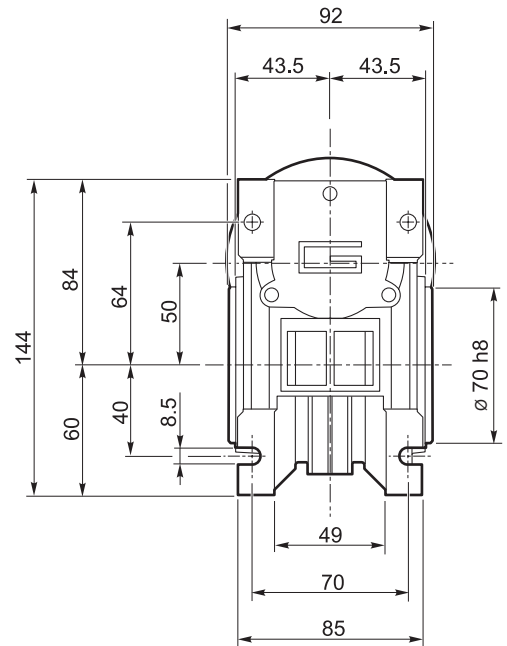
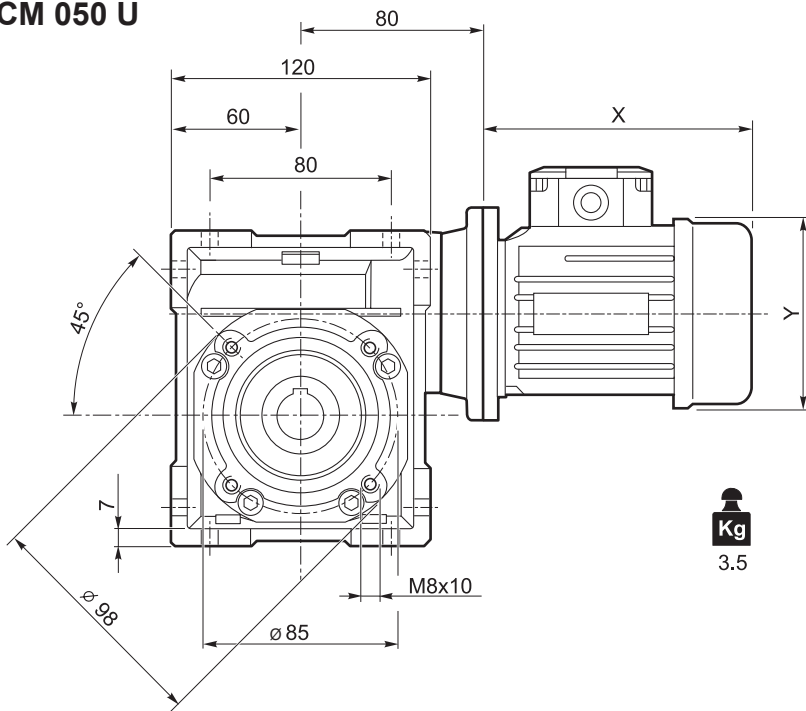


**Dimensiones**

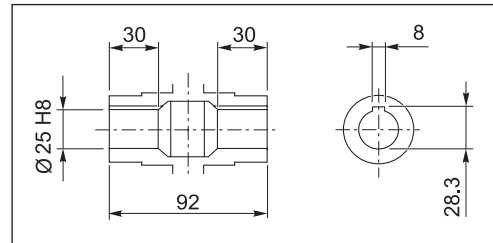
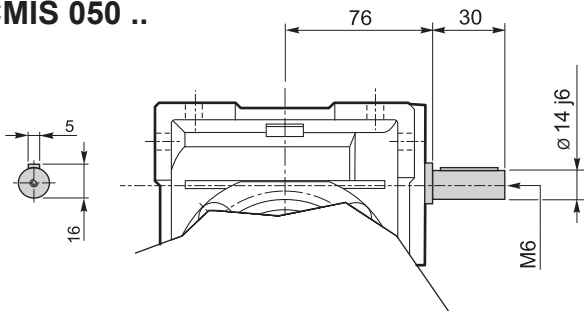
**Dimensões**

**Dimensions**

**CM 050 U**

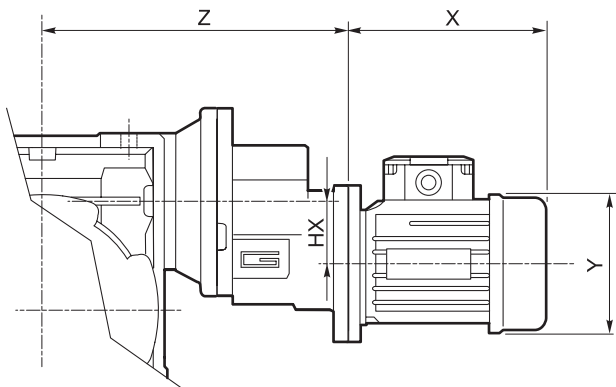


**CMIS 050 ..**

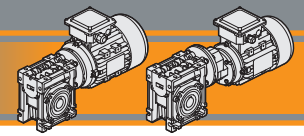


Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

**CMP ..**



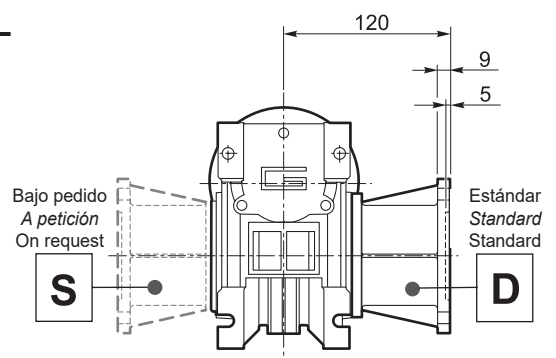
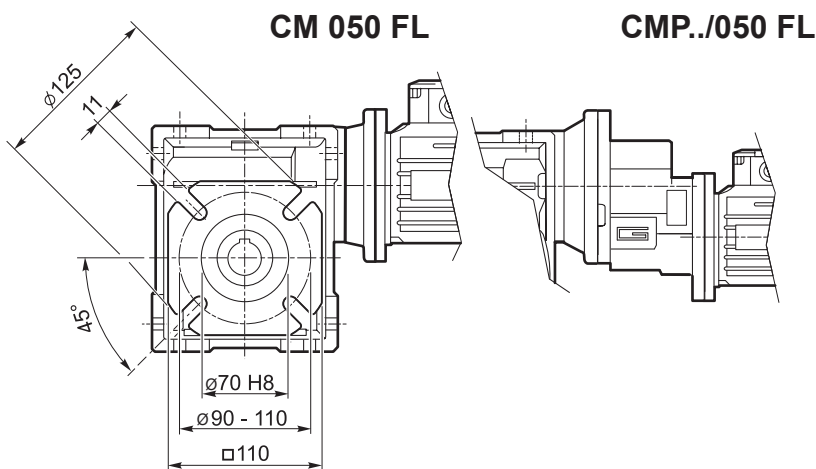
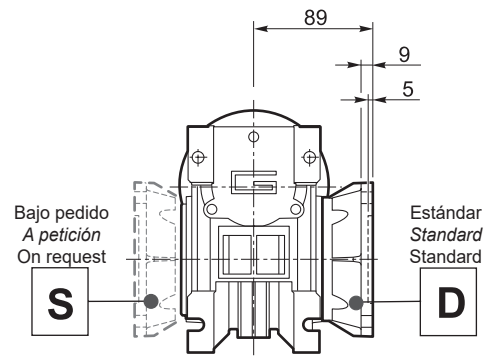
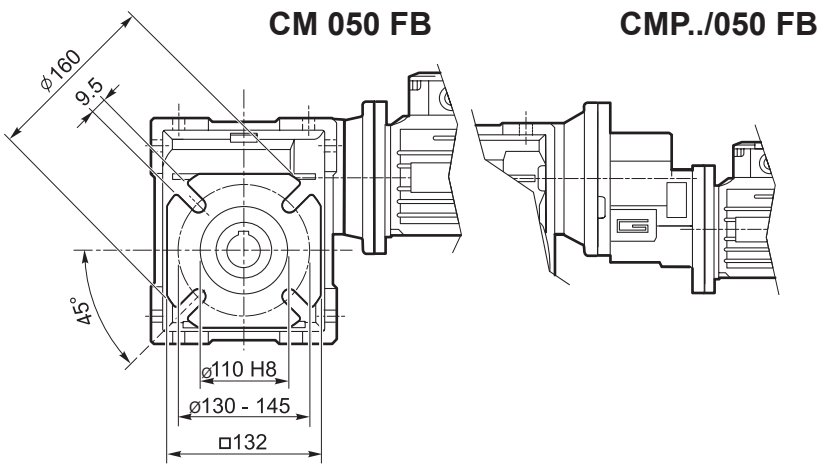
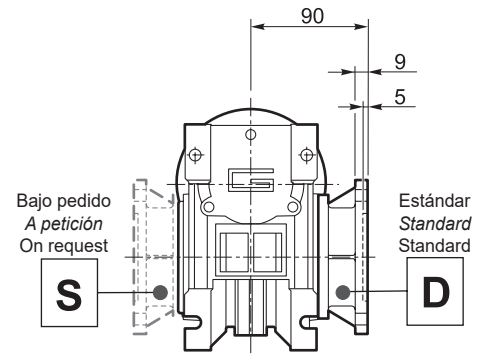
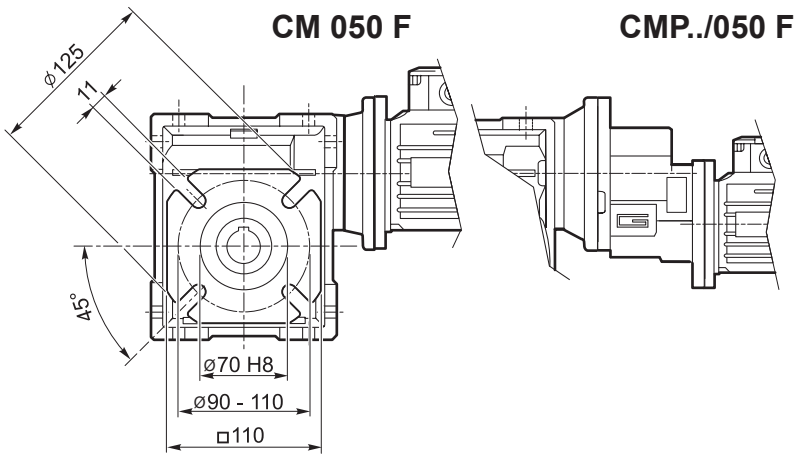
	HX	Z	Kg
<b>063/050</b>	30.5	152	4.5
<b>071/050</b>	41	169	5.5



Dimensiones

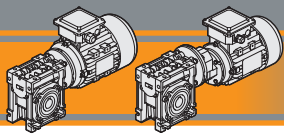
Dimensões

Dimensions



CM/CMP



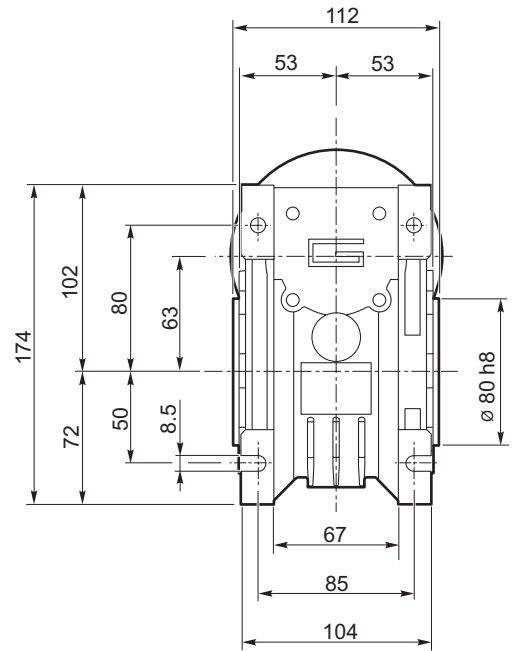
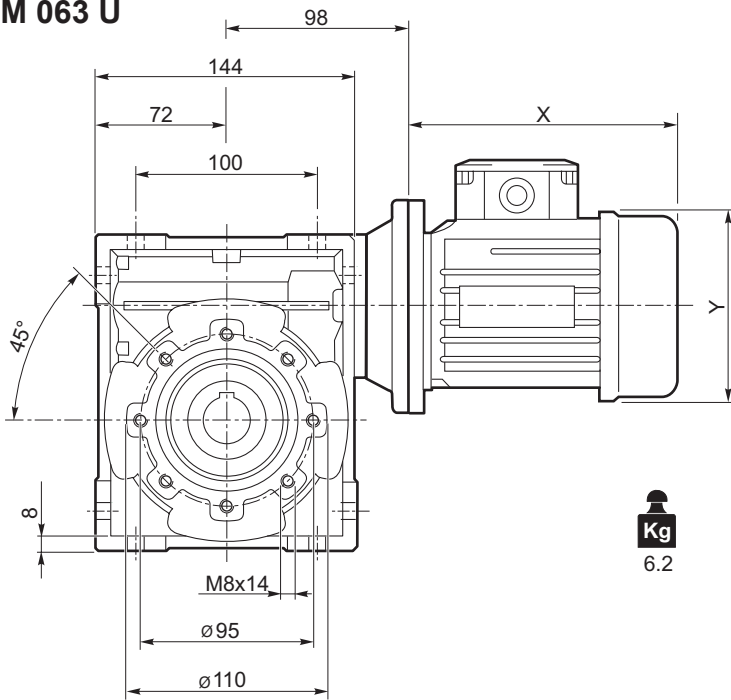


**Dimensiones**

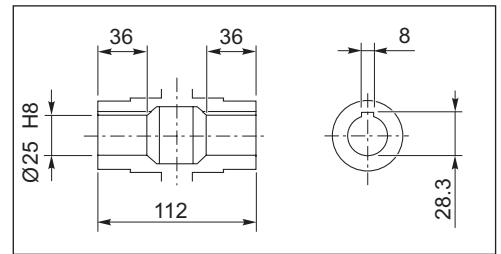
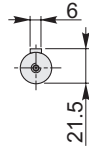
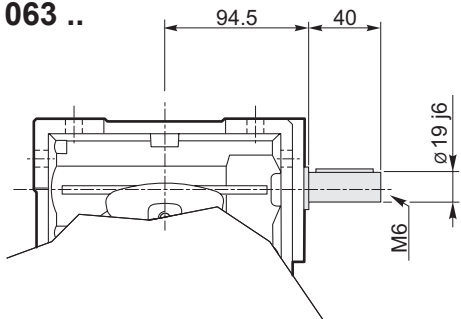
**Dimensões**

**Dimensions**

**CM 063 U**

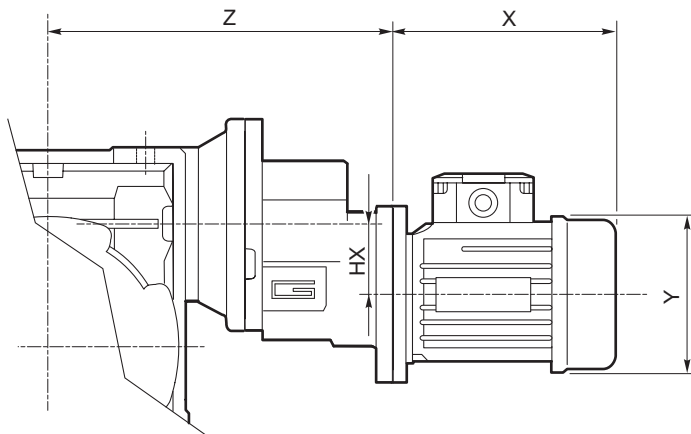


**CMIS 063 ..**

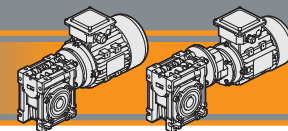


Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

**CMP ..**



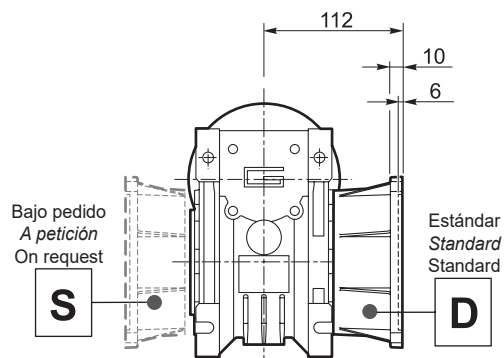
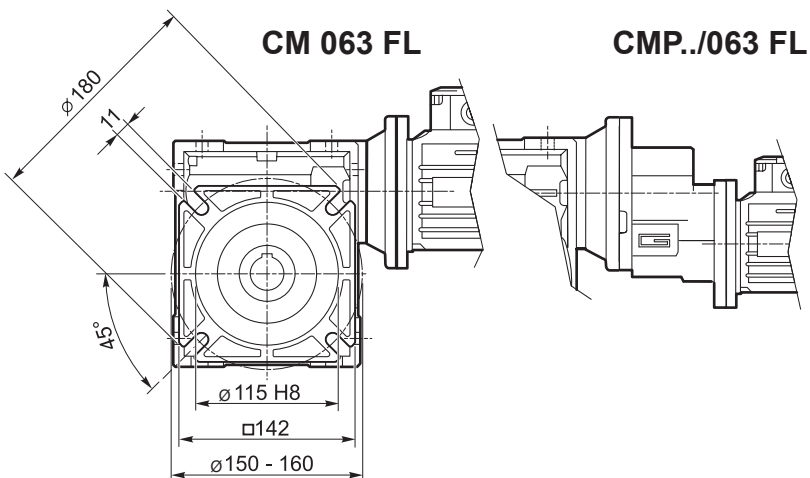
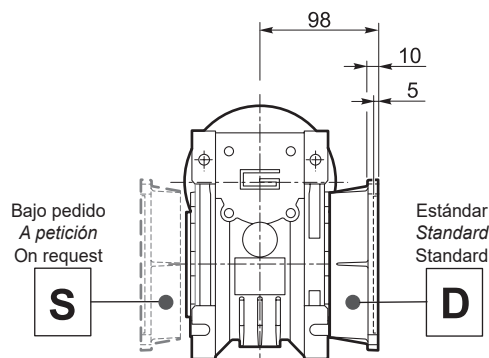
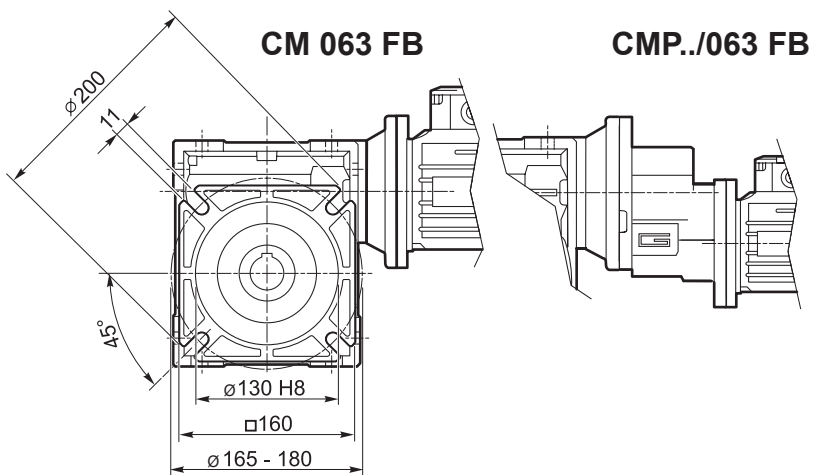
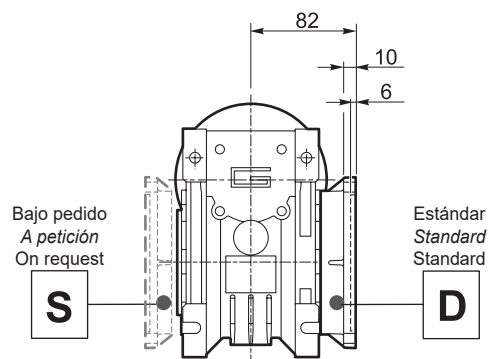
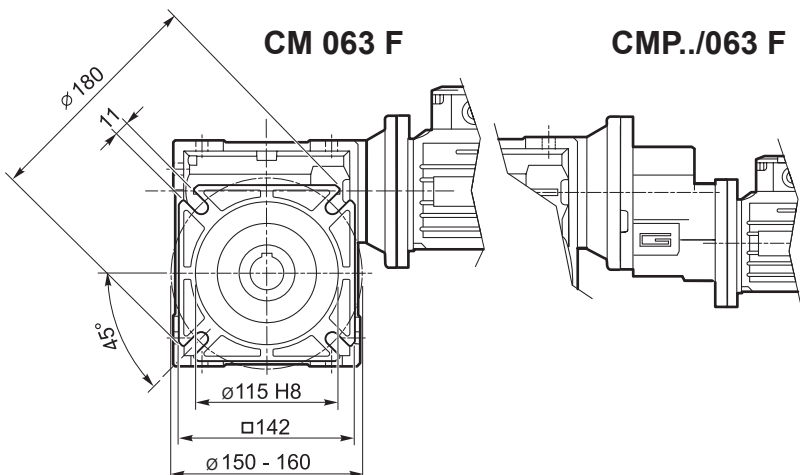
	HX	Z	Kg
<b>063/063</b>	30.5	170	7.2
<b>071/063</b>	41	187	8.2
<b>080/063</b>	41	198	9.0



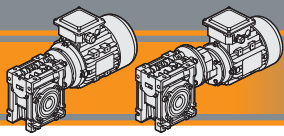
Dimensiones

Dimensões

Dimensions



CM/CMP

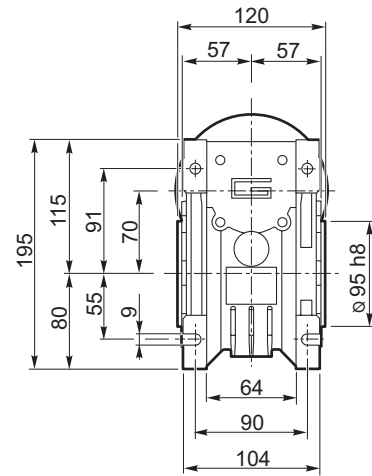
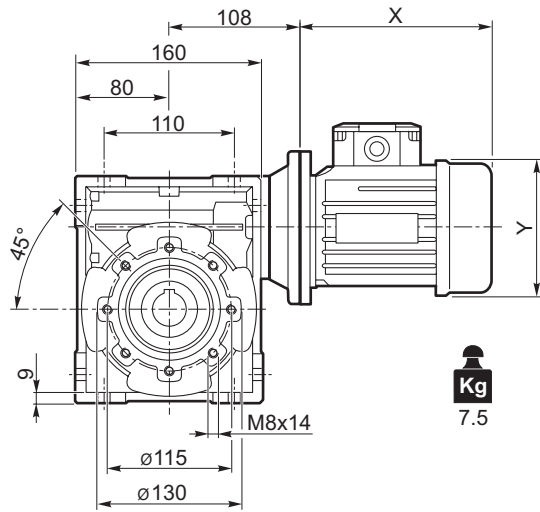


Dimensiones

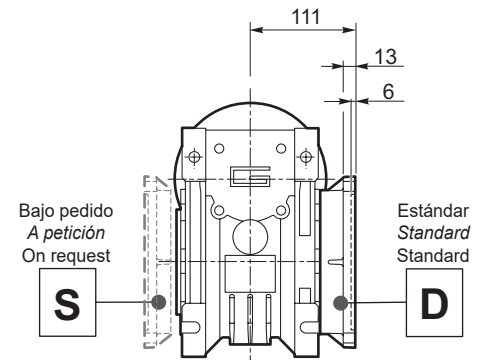
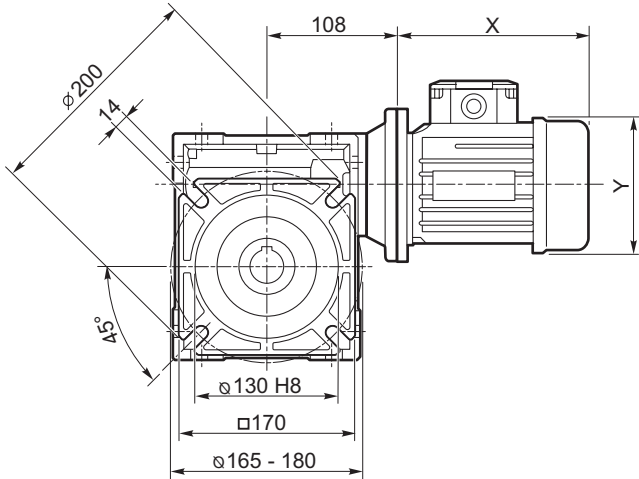
Dimensões

Dimensions

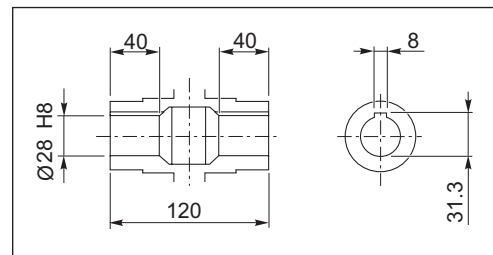
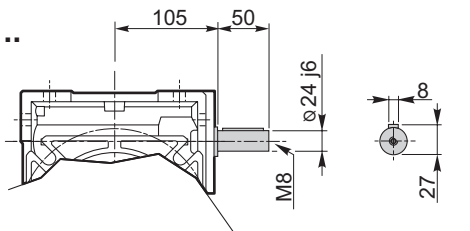
**CM 070 U**



**CM 070 F**

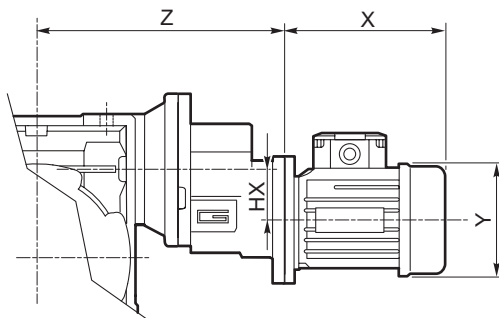


**CMIS 070 ..**

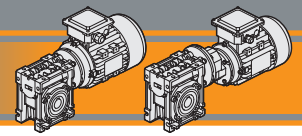


Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

**CMP ..**



	HX	Z	Kg
071/070	41	197	9
080/070	41	208	9.8
090/070	36.5	262	10.5

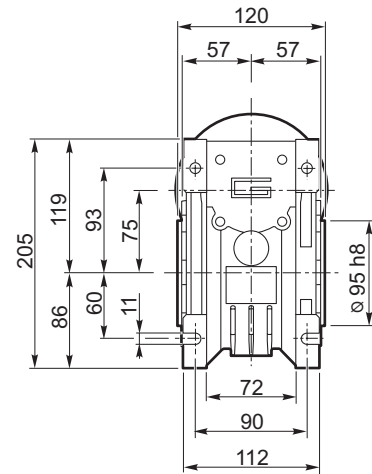
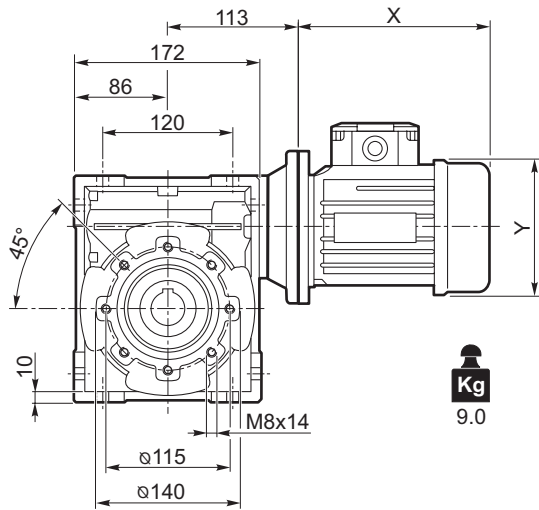


Dimensiones

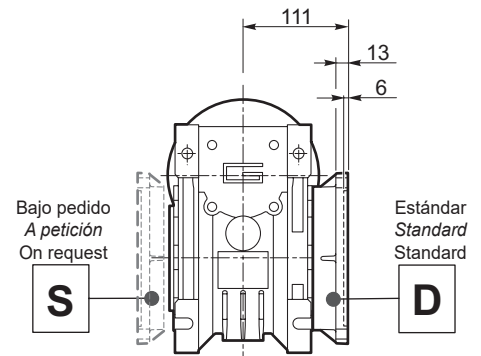
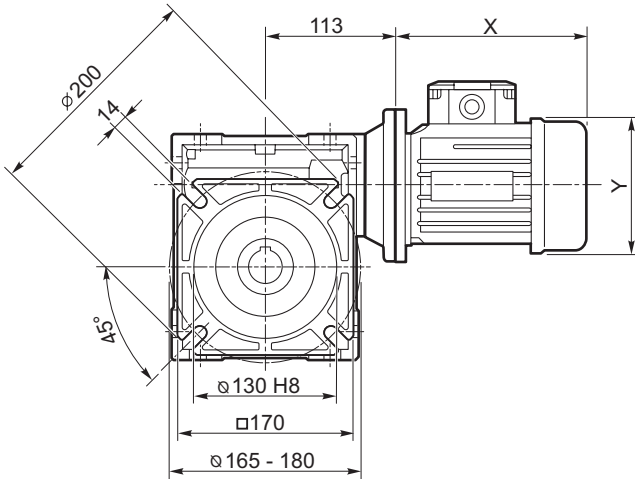
Dimensões

Dimensions

CM 075 U

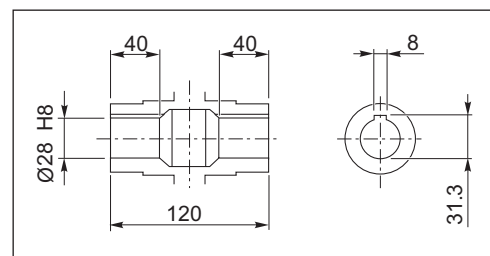
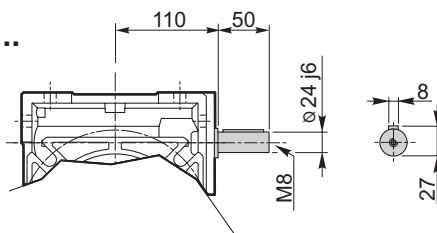


CM 075 F



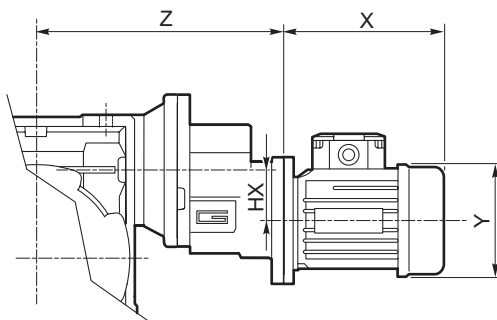
CM/CMP

CMIS 075 ..

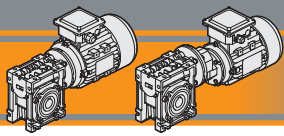


Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

CMP ..



	HX	Z	Kg
071/075	41	202	11.0
080/075	41	213	11.8
090/075	36.5	267	12.5

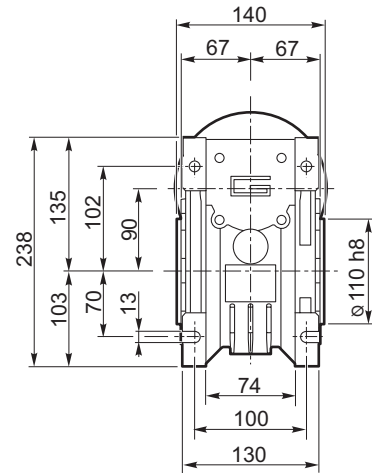
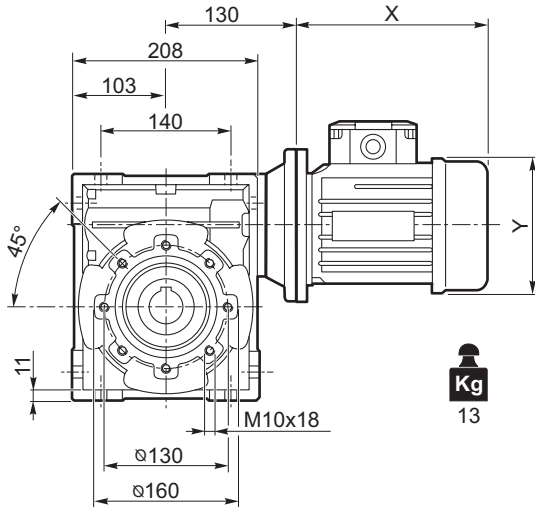


**Dimensiones**

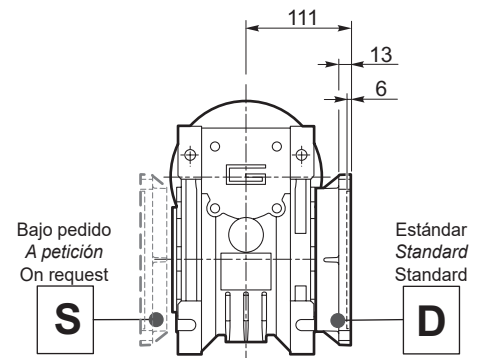
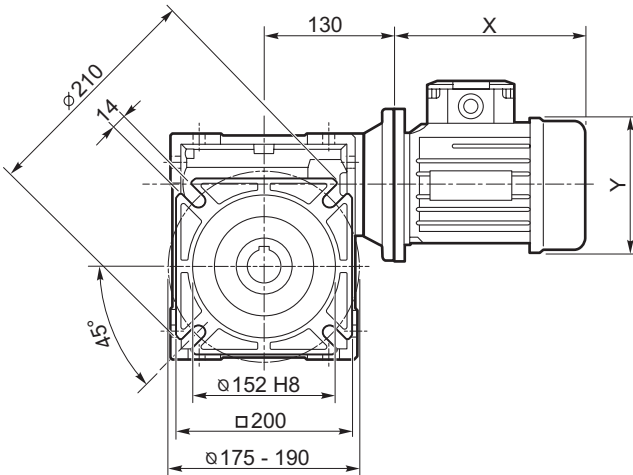
**Dimensões**

**Dimensions**

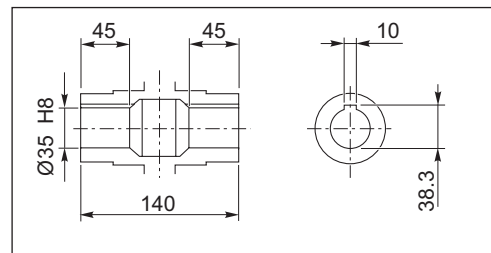
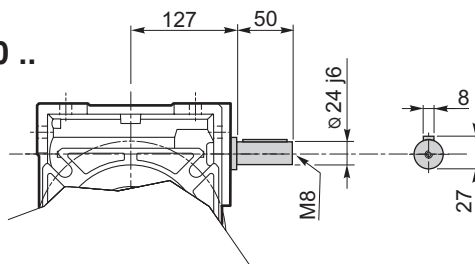
**CM 090 U**



**CM 090 F**

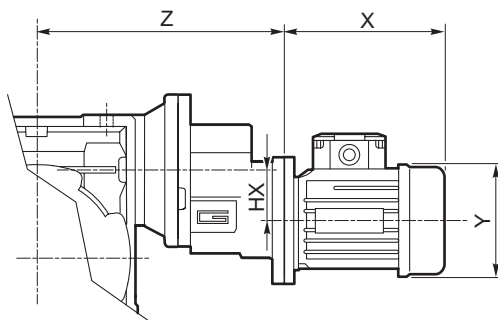


**CMIS 090 ..**

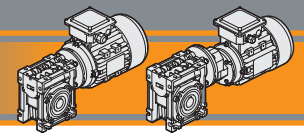


Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

**CMP ..**



	HX	Z	Kg
<b>071/090</b>	41	219	15.0
<b>080/090</b>	41	230	15.8
<b>090/090</b>	36.5	284	16.5

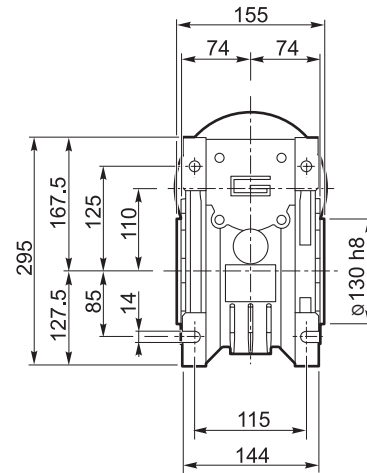
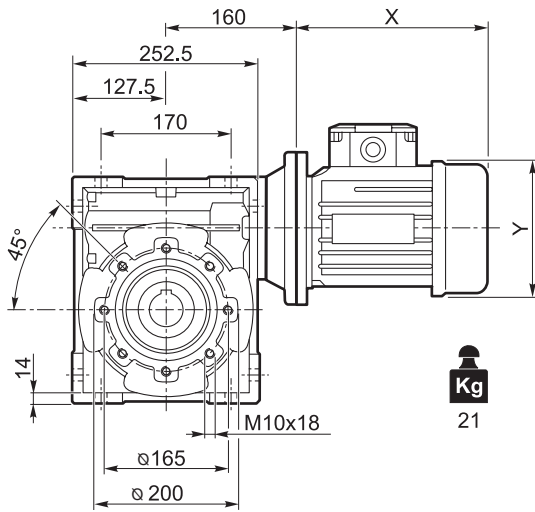


Dimensiones

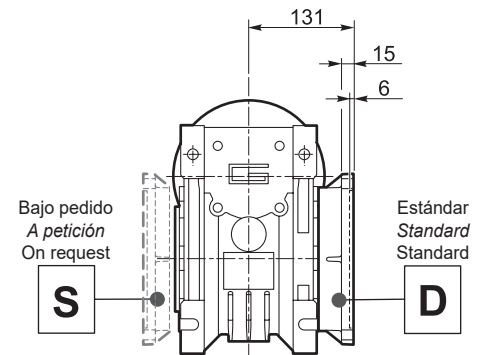
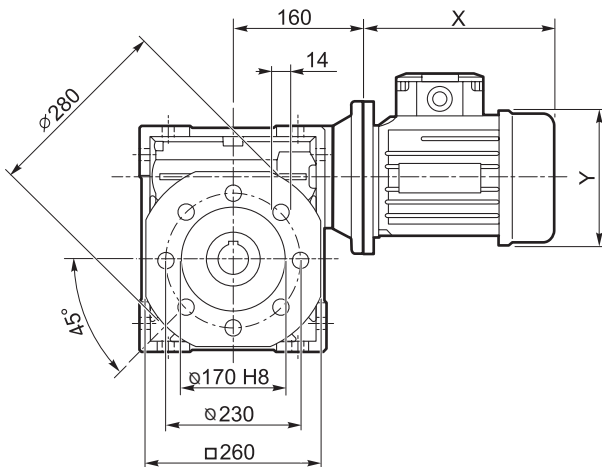
Dimensões

Dimensions

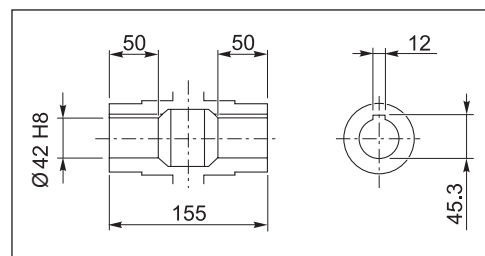
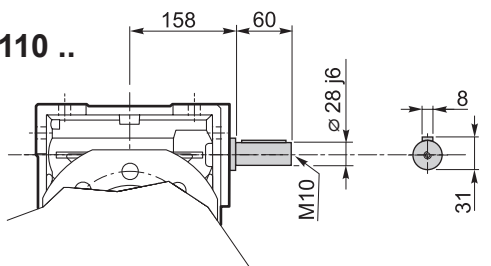
CM 110 U



CM 110 F

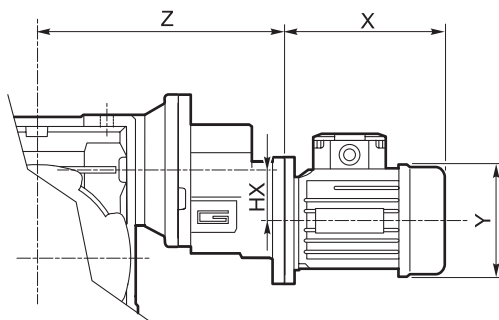


CMIS 110 ..



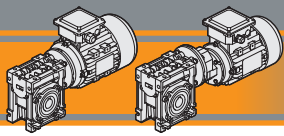
Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

CMP ..



	HX	Z	Kg
080/110	41	260	23.8
090/110	36.5	314	24.5

CM/CMP

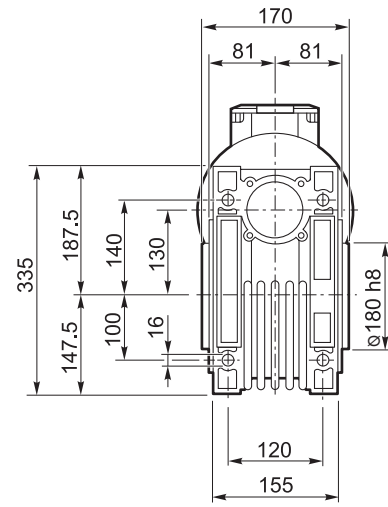
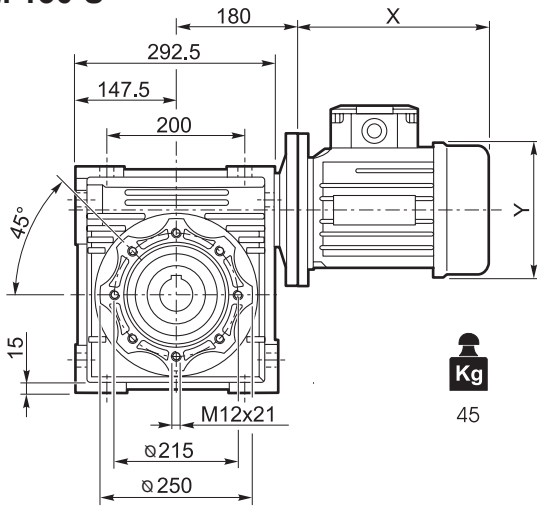


**Dimensiones**

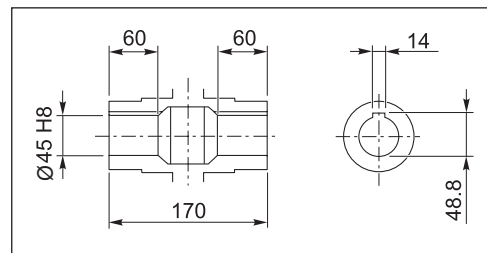
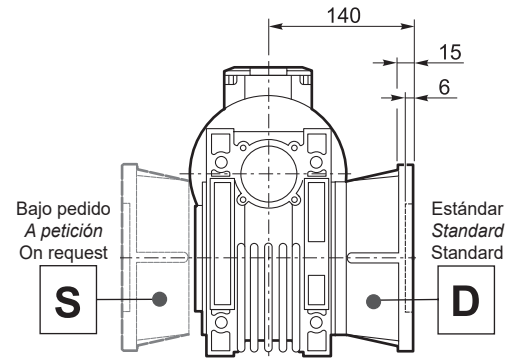
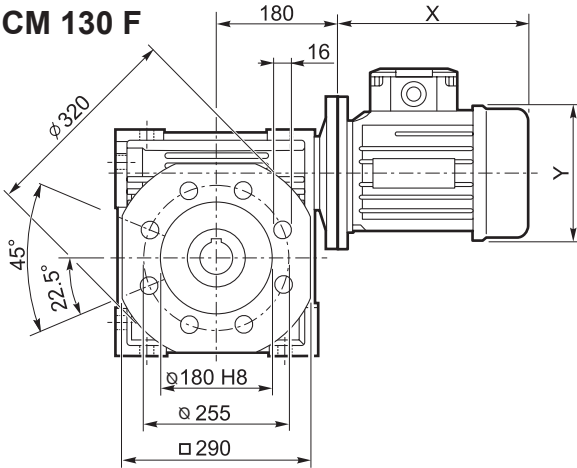
**Dimensões**

**Dimensions**

**CM 130 U**

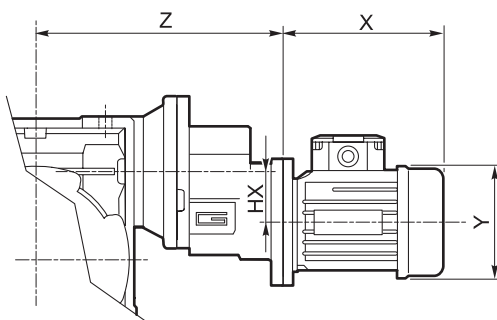


**CM 130 F**



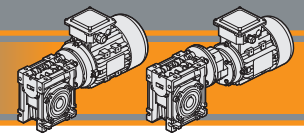
Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

**CMP ..**



	HX	Z	Kg
<b>080/130</b>	41	280	47.8
<b>090/130</b>	36.5	334	48.5



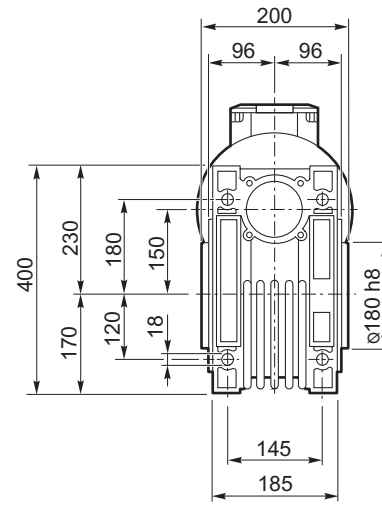
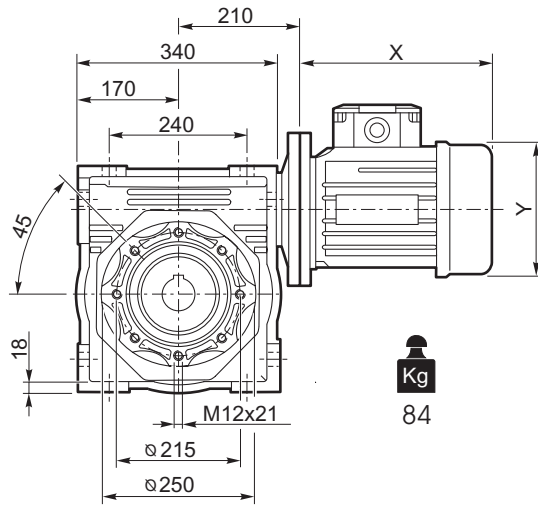


Dimensiones

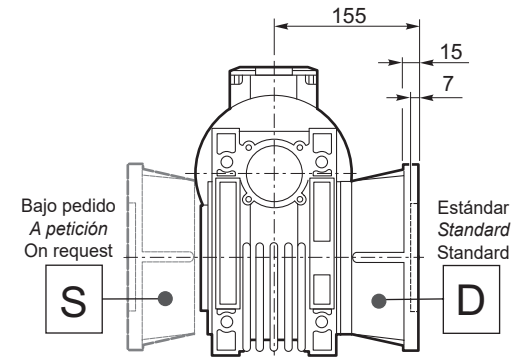
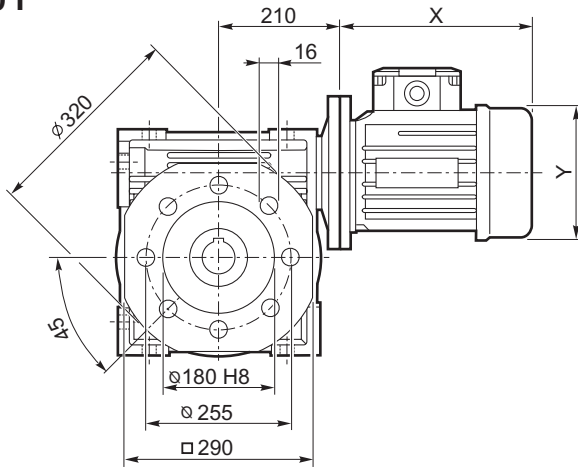
Dimensões

Dimensions

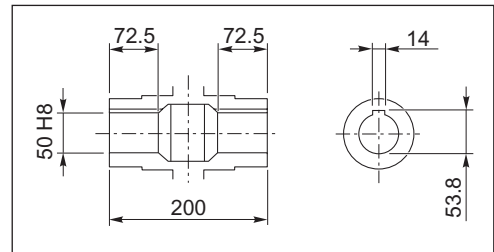
CM 150 U



CM 150 F

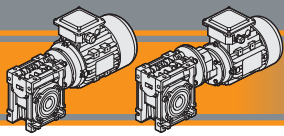


**Note:** Pedido especial  
**Nota:** Item sob pedido especial  
**Note:** Special order item



Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

CM/CMP



Accesorios

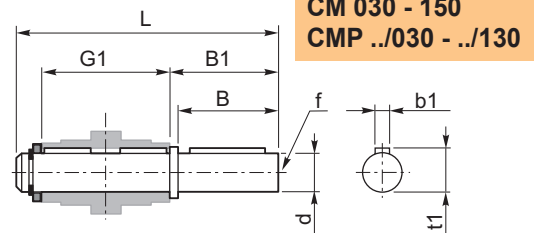
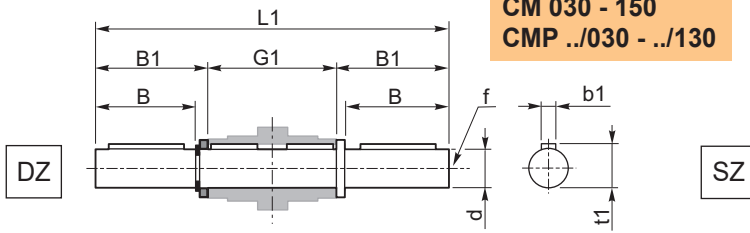
Acessórios

Accessories

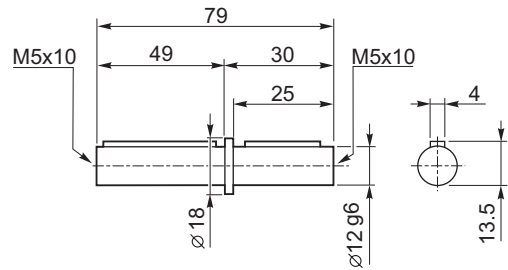
Eje de salida simple y doble

Eixo lenta simples e dupla

Single and double output shaft



CM 026 (\*)



(\*)  
**Nota:** disponible solo para eje de salida hueco Ø12  
**Note:** disponível somente para eixo de saída oco de Ø12  
**Note:** available for output hollow shaft Ø12 only

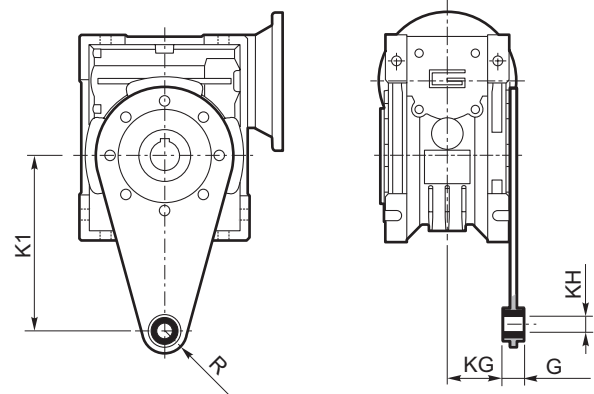
CM	CMP	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
030	056/030	14	30	32.5	63	102	128	M6	5	16
040	056/040 063/040	18	40	43	78	128	164	M6	6	20.5
050	063/050 071/050	25	50	53.5	92	153	199	M10	8	28
063	063/063 071/063 080/063	25	50	53.5	112	173	219	M10	8	28
075	071/075 080/075 090/075	28	60	63.5	120	192	247	M10	8	31
090	071/090 080/090 090/090	35	80	84.5	140	234	309	M12	10	38
110	080/110 090/110	42	80	84.5	155	249	324	M16	12	45
130	080/130 090/130	45	80	85	170	265	340	M16	14	48.5
150	—	50	82	87	200	297	374	M16	14	53.5

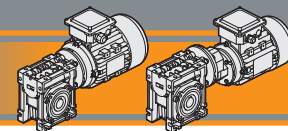
Brazo de reacción

Braço de reação

Torque arm

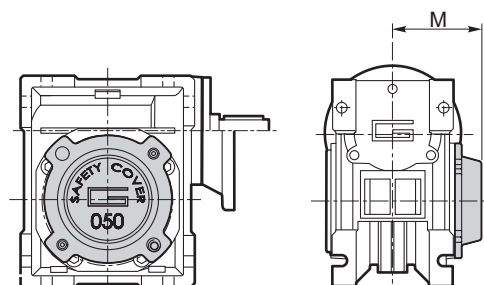
CM	CMP	K1	G	KG	KH	R
030	056/030	85	14	23	8	15
040	056/040 063/040	100	14	31	10	18
050	063/050 071/050	100	14	38	10	18
063	063/063 071/063 080/063	150	14	47.5	10	18
075	071/075 080/075 090/075	200	25	46.5	20	30
090	071/090 080/090 090/090	200	25	56.5	20	30
110	080/110 090/110	250	30	62	25	35
130	080/130 090/130	250	30	69	25	35
150	—	250	30	84	25	35





**SC - Cubierta de seguridad / Tampa de proteção / Safety cover**

CM	CMP	M
030	056/030	47
040	056/040 063/040	54.5
050	063/050 071/050	62.5
063	063/063 071/063 080/063	73
075	071/075 080/075 090/075	79
090	071/090 080/090 090/090	94
110	080/110 090/110	102
130	080/130 090/130	117
150	—	113



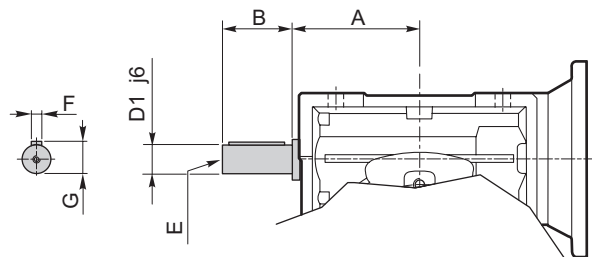
Opciones

Opções

Options

**VS - Tornillo sinfín sobresaliente / Parafuso saliente / Extended input shaft**

CM	CMP	A	B	D <sub>1</sub> j6	E	F	G
030	056/030	45	20	9	M4	3	10.2
040	056/040 063/040	53	23	11	M5	4	12.5
050	063/050 071/050	64	30	14	M6	5	16
063	063/063 071/063 080/063	75	40	19	M6	6	21.5
070	071/070 080/070 090/070	84	40	19	M6	6	21.5
075	071/075 080/075 090/075	90	50	24	M8	8	27
090	071/090 080/090 090/090	108	50	24	M8	8	27
110	080/110 090/110	135	60	28	M10	8	31
130	080/130 090/130	—	—	—	—	—	—
150	—	—	—	—	—	—	—



Construido bajo pedido / Fabricado sob encomenda / Built on request



Motorreductores sinfín corona  
de doble reducción

**Motoredutores de rosca  
sem fim combinados**

Double reduction wormgearmotors







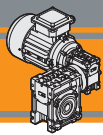
Índice	Índice	Index	Pag. Pág. Page
Características técnicas	<i>Características técnicas</i>	Technical features	<b>H2</b>
Clasificación	<i>Designação</i>	Classification	<b>H2</b>
Ejecución de montaje	<i>Tipos de montagem</i>	Mounting executions	<b>H3</b>
Nomenclatura	<i>Simbologia</i>	Legend	<b>H3</b>
Relaciones combinadas	<i>Combinações de reduções</i>	Combination ratio	<b>H3</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>H4</b>
Datos técnicos	<i>Dados técnicos</i>	Technical data	<b>H5</b>
Motores aplicables	<i>Motores aplicáveis</i>	IEC Motor adapters	<b>H9</b>
Dimensiones	<i>Dimensões</i>	Dimensions	<b>H12</b>
Accesorios	<i>Acessórios</i>	Accessories	<b>H16</b>
Opciones	<i>Opções</i>	Options	<b>H16</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**





**CMM**

**Motorreductores sinfin corona de doble reducción**  
**Motoredutores de rosca sem fim combinados**  
**Double reduction wormgearmotors**

**60 Hz**

**Características técnicas**

**Características técnicas**

**Technical features**

El rango de combinación de los motorreductores sinfin corona CMM tienen las siguientes características principales:

- Caja de aluminio para tamaños 026, 030, 040, 050, 063, 075, 090 y 110. El tamaño 130 tiene carcasa de hierro fundido;
- Doble rodamiento de rodillos cónicos en tamaños 090, 110 y 130;
- Lubricación permanente con aceite sintético.

CMM Motoredutores de rosca sem fim combinados as seguintes características:

- Carcaça de alumínio em tamanhos 026, 030, 040, 050, 063, 070, 075, 090, 110. Tamanho 130 em carcaça de ferro fundido.
- Rolamentos cônicos nos seguintes tamanhos 090, 110 and 130;
- Lubrificação permanente com óleo sintético

CMM double reduction worm gearmotors range have the following main features:

- Die-cast aluminum housing on sizes 026, 030, 040, 050, 063, 070, 075, 090 and 110. Cast iron housing on size 130;
- Double taper roller bearing on sizes 090, 110 and 130;
- Permanent synthetic oil long-life lubrication.

**Clasificación**

**Designação**

**Classification**

REDUCTOR / REDUTOR / GEARBOX											
CMM	030/063	FD	20	71	B5	SZDX	BRSX	90	M1	US1	VS
Tipo Tipo Type	Tamaño Tamanho Size	Versión Versão Version	Relación de reducción Rapporto Ratio	IEC 	Forma constructiva Forma constructiva Version	∅ Eje de salida ∅ Eixo saída ∅ Output shaft	Brazo de reacción Braço de reação Torque arm	Ángulo Ângulo Angle	Posición de montaje Pos. de montagem Mounting position	Ejecución de montaje Tipos de montagem Mounting execution	Opción Opções Options
<b>CMM</b> 	<b>026/026</b> <b>026/026 (D11)</b> <b>026/026 (D14)</b> <b>026/030</b> <b>026/040</b> <b>026/050</b> <b>030/040</b> <b>030/050</b> <b>030/063</b> <b>040/063</b> <b>040/070</b> <b>040/075</b> <b>040/090</b> <b>050/110</b> <b>063/130</b>	<b>U</b> <b>FD</b> <b>FS</b> <b>FBD</b> <b>FBS</b> <b>FLD</b> <b>FLS</b>	Véase tablas Veja tabelas see tables	<b>56..</b> — <b>90..</b>	<b>B5</b> <b>B14</b>	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BRSX</b>  *	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	<b>M1 (B3)</b> <b>M2 (V6)</b> <b>M3 (B8)</b> <b>M4 (V5)</b> <b>M6 (B6)</b> <b>M5 (B7)</b>	<b>UB1</b> <b>UB2</b> <b>US1</b> <b>US2</b> <b>UV1</b> <b>UV2</b> <b>UC1</b> <b>UC2</b>	<b>VS1</b> <b>VS2</b>
Relación de reducción Versão Redutor Gearbox Version			Eje de salida Eixo de saída Output shaft			Brazo de reacción Braço de reação Torque arm *		Ángulo Ângulo Angle			

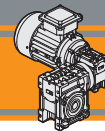
NOTA: el brazo de reacción se suministra desmontado.

\* NOTA: o braço de reação é fornecido desmontado.

NOTE: the torque arm will be supplied not assembled.

**MOTOR / MOTOR / MOTOR**

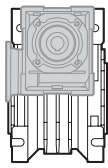
0.25kW	4p	3ph	230/400V	50Hz	T1
Potencia Potência Power	Polos Pólos Poles	Fases Fases Phases	Tensión Tensão Voltage	Frecuencia Frequência Frequency	Posición caja de bornes Pos. Conexão Terminal box pos.
Véase tablas Veja tabelas see tables	<b>2p</b> <b>4p</b> <b>6p</b> <b>8p</b>	<b>1ph</b> <b>3ph</b>	<b>230V</b> <b>230/400V</b>	<b>60Hz</b>	<b>T1 (Std)</b> 



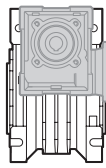
## Ejecución de montaje

## Tipos de montagem

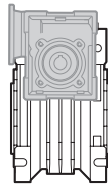
## Mounting executions



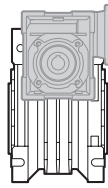
UB1



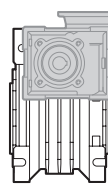
UB2



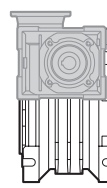
US1



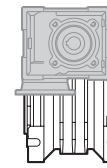
US2



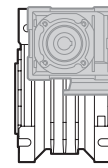
UV1



UV2



UC1



UC2

## Nomenclatura

## Simbologia

## Legend

$n_1$	[rpm]	Velocidad de entrada / <i>Velocidade na entrada</i> / Input speed
$n_2$	[rpm]	Velocidad de salida / <i>Velocidade na saída</i> / Output speed
$i$		Relación de reducción / <i>Relação de redução</i> / Ratio
$P_1$	[kW]	Potencia en la entrada / <i>Potência da entrada</i> / Input power
$M_2$	[Nm]	Par en la salida en función de $P_1$ / <i>Torque na saída em função de <math>P_1</math></i> / Output torque referred to $P_1$
$sf$		Factor de servicio / <i>Fator de serviço</i> / Service factor
$R_2$	[N]	Carga radial admisible en la salida / <i>Carga radial admissível na saída</i> / Maximum output radial load
$A_2$	[N]	Carga axial admisible en la salida / <i>Carga axial admissível na saída</i> / Maximum output axial load

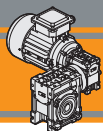
## Relaciones combinadas

## Combinações de reduções

## Combination ratio

CMM 026/026 - CMM 026/030 - CMM 026/040 - CMM 026/050												
$i (i_1 \times i_2)$												
	150	225	300	450	600	900	1200	1500	1800	2400	3000	3600
$i_1$	10	15	10	15	20	30	40	50	60	60	60	60
$i_2$	15	15	30	30	30	30	30	30	30	40	50	60

CMM 030/040 - CMM 030/050 - CMM 030/063 - CMM 040/063 - CMM 040/070 - CMM 040/075 - CMM 040/090 - CMM 050/110 - CMM 063/130																
$i (i_1 \times i_2)$																
	75	100	150	200	250	300	400	500	600	750	900	1200	1500	1800	2400	3000
$i_1$	7.5	10	10	10	10	10	10	10	20	25	30	40	50	60	60	60
$i_2$	10	10	15	20	25	30	40	50	30	30	30	30	30	30	40	50



**Lubricación**

La lubricación permanente con aceite sintético de larga vida (grado de viscosidad 320) hace que sea posible el uso de los reductores tamaños 40, 50, 63, 75, 90 y 110 en todas las posiciones de montaje. Solo para el tamaño 130 la lubricación depende de la posición de montaje.

**Lubrificação**

*Lubrificação permanente longa vida óleo sintético (Grau de viscosidade 320) faz com que seja possível usar os tamanhos de motoredutores 26, 30, 40, 50, 63, 70, 75, 90, 110 em todas as posições de montagem; Por essa razão eles podem ser instalados em qualquer posição de montagem e não requerem manutenção. Apenas para o tamanho 130, a lubrificação depende de posição de montagem.*

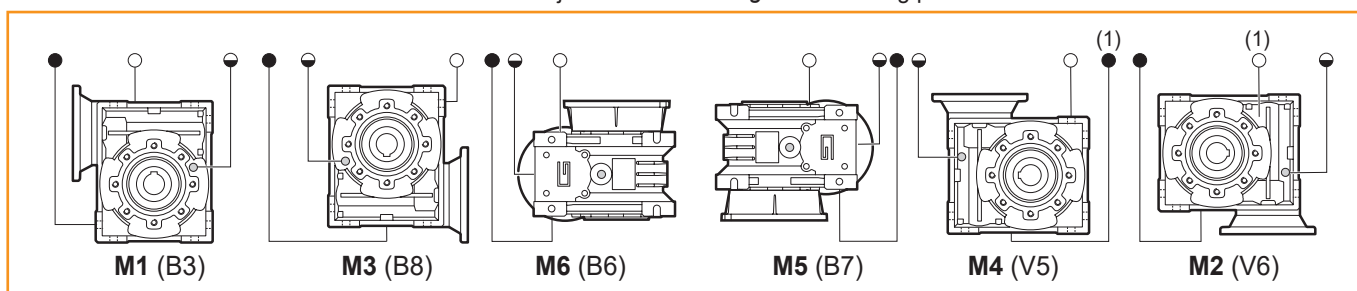
**Lubrication**

Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors size 26, 30, 40, 50, 63, 70, 75, 90, 110 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance. Only for size 130, the lubrication depended of mounting positions.

Cantidad de aceite (litros) / Quantidade de óleo (litros) / Oil quantity (litres)						
	M1 (B3)	M3 (B8)	M6 (B6)	M5 (B7)	M4 (V5)	M2 (V6)
<b>CM130</b>	4.5	3.3	3.5	3.5	4.5	3.3

Lubricación permanente  
 Lubrificação permanente  
 Life lubrication

Posición de montaje / Pos. de montagem / Mounting positions



(standard)

(1): Tapón en posición trasera  
 Válvula na posição posterior  
 Plug in backside position





- Tapón de purga y tapón de llenado del aceite  
 Válvula de Respiro e tampa de preenchimento / Breather and filling plug
- ◐ Nivel del aceite / Nivel de óleo / Oil level plug
- Tapon de drenado del aceite / Oil drain plug



## Datos técnicos

## Dados técnicos

## Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i								
<b>0.09</b>							<b>0.09</b>												
(0.12 hp)	12	33	0.8	150	CMM 026/026	B14	(0.12 hp)	12	45	3.6	150	CMM 030/050	B5/B14						
	7.8	33	0.8	225			B14		8.8	56	2.4			200	B5/B14				
56B4 (1750 min <sup>-1</sup> )	5.8	34	0.8	300			B14		7.0	66	1.9			250	B5/B14				
	3.9	34	0.8	450			B14		5.8	72	2.3			300	B5/B14				
	2.9	34	0.8	600			B14		4.4	87	1.5			400	B5/B14				
	1.9	34	0.8	900			B14		3.5	99	1.3			500	B5/B14				
	1.5	34	0.8	1200			B14		2.9	128	1.3			600	B5/B14				
	1.2	34	0.8	1500			B14		2.3	154	1.1			750	B5/B14				
	0.97	34	0.8	1800			B14		1.9	172	0.9			900	B5/B14				
	0.73	28	0.8	2400			B14		1.5	203	0.8			1200	B5/B14				
	0.58	25	0.8	3000			B14		1.2	203	0.8			1500	B5/B14				
	0.49	23	0.8	3600			B14		0.97	203	0.8			1800	B5/B14				
									0.73	169	0.8			2400	B5/B14				
									0.58	156	0.8			3000	B5/B14				
	12	41	1.0	150			CMM 026/030	B14		5.8	74			4.2	300	CMM 030/063	B5/B14		
	7.8	49	0.8	225					B14		4.4			89	2.9			400	B5/B14
	5.8	50	0.8	300					B14		3.5			103	2.2			500	B5/B14
	3.9	50	0.8	450					B14		2.9			138	2.2			600	B5/B14
	2.9	50	0.8	600					B14		2.3			164	1.9			750	B5/B14
	1.9	50	0.8	900	B14				1.9	186	1.7	900	B5/B14						
	1.5	50	0.8	1200	B14				1.5	230	1.3	1200	B5/B14						
	1.2	50	0.8	1500	B14				1.2	265	1.2	1500	B5/B14						
	0.97	50	0.8	1800	B14				0.97	308	1.0	1800	B5/B14						
	0.73	43	0.8	2400	B14				0.73	325	0.8	2400	B5/B14						
	0.58	38	0.8	3000	B14				0.58	290	0.8	3000	B5/B14						
	0.49	34	0.8	3600	B14														
	12	42	2.1	150	CMM 026/040	B14				5.8	74	4.2	300	CMM 040/063	B5/B14				
	7.8	59	1.5	225					B14		4.4	89	2.9					400	B5/B14
	5.8	70	1.3	300					B14		3.5	103	2.2					500	B5/B14
	3.9	98	0.9	450					B14		2.9	138	2.2					600	B5/B14
	2.9	113	0.8	600					B14		2.3	164	1.9					750	B5/B14
	1.9	113	0.8	900					B14		1.9	186	1.7					900	B5/B14
	1.5	113	0.8	1200					B14		1.5	230	1.3					1200	B5/B14
	1.2	113	0.8	1500			B14		1.2	265	1.2	1500	B5/B14						
	0.97	113	0.8	1800			B14		0.97	308	1.0	1800	B5/B14						
	0.73	93	0.8	2400			B14		0.73	325	0.8	2400	B5/B14						
	0.58	85	0.8	3000			B14		0.58	290	0.8	3000	B5/B14						
	0.49	78	0.8	3600			B14												
	12	44	3.3	150			CMM 026/050	B14		2.9	138	3.3	600			CMM 040/070	B5/B14		
	7.8	62	2.3	225					B14		2.3	164	2.8					750	B5/B14
	5.8	71	2.3	300					B14		1.9	186	2.4					900	B5/B14
	3.9	100	1.6	450					B14		1.5	207	2.2					1200	B5/B14
	2.9	126	1.3	600					B14		1.2	265	1.7					1500	B5/B14
	1.9	169	1.0	900					B14		0.97	308	1.5					1800	B5/B14
	1.5	203	0.8	1200					B14		0.73	369	1.0					2400	B5/B14
	1.2	203	0.8	1500	B14				0.58	420	0.8	3000	B5/B14						
	0.97	203	0.8	1800	B14														
	0.73	169	0.8	2400	B14				1.5	230	2.4	1200	CMM 040/075	B5/B14					
	0.58	156	0.8	3000	B14				1.2	265	2.1	1500							
	0.49	141	0.8	3600	B14				0.97	308	1.8	1800							
									0.73	376	1.2	2400							
									0.58	427	0.9	3000							
	23	23	3.6	75	CMM 030/040	B5/B14				1.2	278	2.5	1500	CMM 040/090	B5/B14				
	18	31	2.7	100					B5/B14		0.97	323	2.0					1800	B5/B14
	12	43	2.0	150					B5/B14		0.73	397	2.0					2400	B5/B14
	8.8	55	1.3	200			B5/B14		0.58	461	1.5	3000	B5/B14						
	7.0	66	1.0	250			B5/B14												
	5.8	71	1.3	300			B5/B14												
	4.4	86	0.9	400			B5/B14												
	3.5	85	0.8	500			B5/B14												
	2.9	113	0.8	600			B5/B14												
	2.3	113	0.8	750			B5/B14												
	1.9	113	0.8	900			B5/B14												
	1.5	113	0.8	1200			B5/B14												
	1.2	113	0.8	1500			B5/B14												
	0.97	113	0.8	1800			B5/B14												
	0.73	93	0.8	2400			B5/B14												
	0.58	85	0.8	3000			B5/B14												

Nota:

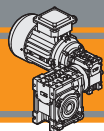
Por favor, compruebe que el par de salida M2 no exceda el valor en las áreas grises

N. B.

Sempre verifique que o torque (M2) não exceda o valor indicado nas tabelas cinzas

N.B.

Please check that the output torque M2 does not exceed the value in the grey areas



**CMM**





Motorreductores sinfín corona de doble reducción  
 Motoredutores de rosca sem fim combinados  
 Double reduction wormgearmotors

60 Hz

Datos técnicos

Dados técnicos

Technical data





P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.12</b>							<b>0.18</b>						
(0.16 hp)	23	31	2.7	75	CMM	B5/B14	(0.25 hp)	23	47	1.8	75	CMM	B5/B14
	18	41	2.0	100	030/040	B5/B14		18	62	1.4	100	030/040	B5/B14
63A4	12	57	1.5	150		B5/B14	63B4	12	85	1.0	150		B5/B14
(1750 min <sup>-1</sup> )	8.8	74	1.0	200		B5/B14	(1750 min <sup>-1</sup> )	23	48	3.1	75	CMM	B5/B14
	5.8	94	1.0	300				18	63	2.4	100	030/050	B5/B14
	23	32	4.6	75	CMM	B5/B14		12	89	1.8	150		B5/B14
	18	42	3.6	100	030/050	B5/B14		8.8	112	1.2	200		B5/B14
	12	59	2.7	150		B5/B14		7.0	132	0.9	250		B5/B14
	8.8	75	1.8	200		B5/B14		5.8	144	1.1	300		B5/B14
	7.0	88	1.4	250		B5/B14		12	88	2.4	150	CMM	B5/B14
	5.8	96	1.7	300		B5/B14		8.8	111	2.4	200	030/063	B5/B14
	4.4	117	1.2	400		B5/B14		7.0	130	1.8	250		B5/B14
	3.5	132	0.9	500		B5/B14		5.8	149	2.1	300		B5/B14
	2.9	171	0.9	600		B5/B14		4.4	178	1.5	400		B5/B14
	8.8	74	3.5	200	CMM	B5/B14		3.5	206	1.1	500		B5/B14
	7.0	87	2.6	250	030/063	B5/B14		2.9	265	1.2	600		B5/B14
	5.8	99	3.1	300		B5/B14		2.3	318	1.0	750		B5/B14
	4.4	119	2.2	400		B5/B14		1.9	355	0.9	900		B5/B14
	3.5	138	1.7	500		B5/B14		8.8	111	2.4	200	CMM	B5/B14
	2.9	177	1.8	600		B5/B14		7.0	130	1.8	250	040/063	B5/B14
	2.3	212	1.5	750		B5/B14		5.8	149	2.1	300		B5/B14
	1.9	237	1.3	900		B5/B14		4.4	178	1.5	400		B5/B14
	1.5	292	1.1	1200		B5/B14		3.5	206	1.1	500		B5/B14
	1.2	342	0.9	1500		B5/B14		2.9	276	1.1	600		B5/B14
	4.4	119	2.2	400	CMM	B5/B14		2.3	327	0.9	750		B5/B14
	3.5	138	1.7	500	040/063	B5/B14		1.9	371	0.8	900		B5/B14
	2.9	184	1.7	600		B5/B14		8.8	112	3.5	200	CMM	B5/B14
	2.3	218	1.4	750		B5/B14		7.0	134	2.5	250	040/070	B5/B14
	1.9	248	1.3	900		B5/B14		5.8	149	3.1	300		B5/B14
	1.5	306	1.0	1200		B5/B14		4.4	178	2.1	400		B5/B14
	1.2	354	0.9	1500		B5/B14		3.5	206	1.6	500		B5/B14
	3.5	138	2.4	500	CMM	B5/B14		2.9	276	1.6	600		B5/B14
	2.9	184	2.5	600	040/070	B5/B14		2.3	327	1.4	750		B5/B14
	2.3	218	2.1	750		B5/B14		1.9	371	1.2	900		B5/B14
	1.9	248	1.8	900		B5/B14		1.5	414	1.1	1200		B5/B14
	1.5	276	1.6	1200		B5/B14		1.2	530	0.9	1500		B5/B14
	1.2	354	1.3	1500		B5/B14		4.4	182	2.6	400	CMM	B5/B14
	0.97	410	1.1	1800		B5/B14		3.5	206	2.0	500	040/075	B5/B14
	2.3	218	2.5	750	CMM	B5/B14		2.9	276	2.0	600		B5/B14
	1.9	248	2.2	900	040/075	B5/B14		2.3	327	1.7	750		B5/B14
	1.5	306	1.8	1200		B5/B14		1.9	371	1.5	900		B5/B14
	1.2	354	1.5	1500		B5/B14		1.5	460	1.2	1200		B5/B14
	0.97	410	1.3	1800		B5/B14		1.2	530	1.0	1500		B5/B14
	0.73	501	0.9	2400		B5/B14		0.97	615	0.9	1800		B5/B14
	1.5	322	2.4	1200	CMM	B5/B14		3.5	223	3.1	500	CMM	B5/B14
	1.2	371	1.9	1500	040/090	B5/B14		2.9	290	2.5	600	040/090	B5/B14
	0.97	431	1.5	1800		B5/B14		2.3	343	2.0	750		B5/B14
	0.73	529	1.5	2400		B5/B14		1.9	390	2.2	900		B5/B14
	0.58	615	1.1	3000		B5/B14		1.5	483	1.6	1200		B5/B14
	0.97	453	2.8	1800	CMM	B5/B14		1.2	557	1.3	1500		B5/B14
	0.73	575	2.5	2400	050/110	B5/B14		0.97	646	1.0	1800		B5/B14
	0.58	684	1.9	3000		B5/B14		0.73	793	1.0	2400		B5/B14
	0.73	624	2.9	2400	CMM	B5		1.5	505	2.8	1200	CMM	B5/B14
	0.58	755	2.1	3000	063/130	B5		1.2	594	2.2	1500	050/110	B5/B14
								0.97	679	1.9	1800		B5/B14
								0.73	863	1.7	2400		B5/B14
								0.58	1026	1.2	3000		B5/B14
								0.97	735	2.8	1800	CMM	B5
								0.73	936	1.9	2400	063/130	B5
								0.58	1132	1.4	3000		B5



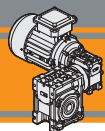
## Datos t3cnicos

## Dados t3cnicos

## Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.25</b>							<b>0.37</b>						
(0.33 hp)	23	65	1.3	75	CMM	B5/B14	(0.50 hp)	23	100	2.9	75	CMM	B5/B14
	18	86	1.0	100	030/040	B5/B14		18	131	2.2	100	040/063	B5/B14
63C4 (1750 min <sup>-1</sup> )	23	66	2.2	75	CMM	B5/B14	71A4 (1750 min <sup>-1</sup> )	12	181	1.7	150		B5/B14
	18	87	1.8	100	030/050	B5/B14		8.8	227	1.1	200		B5/B14
	12	124	1.3	150		B5/B14		7.0	267	0.9	250		B5/B14
	8.8	156	0.9	200		B5/B14		5.8	305	1.0	300		B5/B14
	23	67	2.2	75	CMM	B5/B14		23	102	3.2	75	CMM	B5/B14
	18	88	1.8	100	030/063	B5/B14		18	132	2.5	100	040/070	B5/B14
	12	122	1.8	150		B5/B14		12	183	2.4	150		B5/B14
	8.8	154	1.7	200		B5/B14		8.8	231	1.7	200		B5/B14
	7.0	180	1.3	250		B5/B14		7.0	276	1.2	250		B5/B14
	5.8	206	1.5	300		B5/B14		5.8	305	1.5	300		B5/B14
	4.4	248	1.1	400		B5/B14		4.4	366	1.0	400		B5/B14
	12	122	2.5	150	CMM	B5/B14		8.8	234	2.0	200	CMM	B5/B14
	8.8	154	1.7	200	040/063	B5/B14		7.0	276	1.5	250	040/075	B5/B14
	7.0	180	1.3	250		B5/B14		5.8	305	1.8	300		B5/B14
	5.8	206	1.5	300		B5/B14		4.4	373	1.3	400		B5/B14
	4.4	248	1.1	400		B5/B14		3.5	424	1.0	500		B5/B14
	8.8	156	2.5	200	CMM	B5/B14		2.9	567	1.0	600		B5/B14
	7.0	186	1.8	250	040/070	B5/B14		8.8	244	2.5	200	CMM	B5/B14
	5.8	206	2.2	300		B5/B14		7.0	293	2.4	250	040/090	B5/B14
	4.4	248	1.5	400		B5/B14		5.8	321	2.5	300		B5/B14
	3.5	287	1.2	500		B5/B14		4.4	393	2.1	400		B5/B14
	2.9	383	1.2	600		B5/B14		3.5	458	1.5	500		B5/B14
	2.3	454	1.0	750		B5/B14		2.9	595	1.2	600		B5/B14
	1.9	516	0.9	900		B5/B14		2.3	706	1.0	750		B5/B14
	7.0	186	2.2	250	CMM	B5/B14		1.9	801	1.1	900		B5/B14
	5.8	206	2.7	300	040/075	B5/B14		1.5	992	0.8	1200		B5/B14
	4.4	252	1.9	400		B5/B14		4.4	419	3.4	400	CMM	B5/B14
	3.5	287	1.4	500		B5/B14		3.5	498	2.6	500	050/110	B5/B14
	2.9	383	1.4	600		B5/B14		2.9	613	2.2	600		B5/B14
	2.3	454	1.2	750		B5/B14		2.3	737	1.7	750		B5/B14
	1.9	516	1.1	900		B5/B14		1.9	837	1.9	900		B5/B14
	1.5	638	0.9	1200		B5/B14		1.5	1039	1.3	1200		B5/B14
	4.4	266	3.1	400	CMM	B5/B14		1.2	1221	1.1	1500		B5/B14
	3.5	309	2.2	500	040/090	B5/B14		0.97	1396	0.9	1800		B5/B14
	2.9	402	1.8	600		B5/B14		2.3	780	2.6	750	CMM	B5/B14
	2.3	477	1.4	750		B5/B14		1.9	900	2.3	900	063/130	B5/B14
	1.9	541	1.6	900		B5/B14		1.5	1119	1.8	1200		B5/B14
	1.5	670	1.1	1200		B5/B14		1.2	1319	1.6	1500		B5/B14
	1.2	774	0.9	1500		B5/B14		0.97	1511	1.4	1800		B5/B14
	3.5	336	3.8	500	CMM	B5/B14		0.73	1923	0.9	2400		B5/B14
	2.9	414	3.2	600	050/110	B5/B14							
	2.3	498	2.6	750		B5/B14							
	1.9	566	2.8	900		B5/B14							
	1.5	702	2.0	1200		B5/B14							
	1.2	825	1.6	1500		B5/B14							
	0.97	943	1.3	1800		B5/B14							
	0.73	1198	1.2	2400		B5/B14							
	0.58	1424	0.9	3000		B5/B14							
	1.5	756	2.7	1200	CMM	B5							
	1.2	891	2.3	1500	063/130	B5							
	0.97	1021	2.0	1800		B5							
	0.73	1300	1.4	2400		B5							
	0.58	1573	1.0	3000		B5							





**CMM**





Motorreductores sinfín corona de doble reducción  
 Motoredutores de rosca sem fim combinados  
 Double reduction wormgearmotors

60 Hz

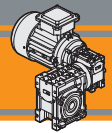
Datos técnicos

Dados técnicos

Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i							
<b>0.55</b>							<b>0.75</b>											
(0.75 hp)	23	149	1.9	75	<b>CMM</b> <b>040/063</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>	(1.0 hp)	23	216	2.8	75	<b>CMM</b> <b>050/110</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	18	194	1.5	100				18	282	2.3	100				18	282	2.3	100
71B4 (1750 min <sup>-1</sup> )	12	269	1.1	150				12	397	2.3	150				12	397	2.3	150
	23	151	2.2	75	<b>CMM</b> <b>040/070</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		8.8	515	2.3	200	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	18	197	1.7	100				7.0	626	2.1	250				7.0	626	2.1	250
	12	272	1.6	150				5.8	668	2.4	300				5.8	668	2.4	300
	8.8	343	1.1	200	<b>CMM</b> <b>040/075</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		4.4	849	1.7	400	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	23	151	2.2	75				3.5	1009	1.3	500				3.5	1009	1.3	500
	18	197	1.7	100				2.9	1242	1.1	600				2.9	1242	1.1	600
	12	276	1.7	150	<b>CMM</b> <b>040/090</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		2.3	1493	0.9	750	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	8.8	348	1.3	200				1.9	1697	0.9	900				7.0	642	2.5	250
	7.0	410	1.0	250				7.0	642	2.5	250				5.8	697	3.0	300
	5.8	454	1.2	300	<b>CMM</b> <b>040/090</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		4.4	887	2.0	400	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	4.4	555	0.8	400				3.5	1074	1.5	500				4.4	887	2.0	400
	12	284	1.7	150				2.9	1313	1.6	600				3.5	1074	1.5	500
	8.8	363	1.7	200	<b>CMM</b> <b>040/090</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		2.3	1580	1.3	750	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	7.0	435	1.6	250				1.9	1823	1.1	900				2.3	1580	1.3	750
	5.8	477	1.7	300				1.9	1823	1.1	900				1.9	1823	1.1	900
	4.4	585	1.4	400	<b>CMM</b> <b>040/090</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		1.5	2269	0.9	1200	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	3.5	681	1.0	500				1.5	2269	0.9	1200				1.5	2269	0.9	1200
	2.9	885	0.8	600				1.5	2269	0.9	1200				1.5	2269	0.9	1200
	7.0	459	2.8	250	<b>CMM</b> <b>050/110</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>	<b>1.1</b>	(1.5 hp)	23	317	1.9	75	<b>CMM</b> <b>050/110</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>				
	5.8	490	3.1	300				18	413	1.5	100				18	413	1.5	100
	4.4	622	2.3	400				12	582	1.5	150				12	582	1.5	150
	3.5	740	1.7	500	<b>CMM</b> <b>050/110</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		8.8	755	1.5	200	<b>CMM</b> <b>050/110</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	2.9	911	1.4	600				7.0	918	1.4	250				7.0	918	1.4	250
	2.3	1095	1.2	750				5.8	980	1.6	300				5.8	980	1.6	300
	1.9	1245	1.3	900	<b>CMM</b> <b>050/110</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		4.4	1245	1.2	400	<b>CMM</b> <b>050/110</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	1.5	1544	1.0	1200				3.5	1480	0.9	500				3.5	1480	0.9	500
	3.5	787	2.0	500				12	596	2.7	150				12	596	2.7	150
	2.9	963	2.1	600	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		8.8	774	2.3	200	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	2.3	1159	1.8	750				7.0	942	1.7	250				7.0	942	1.7	250
	1.9	1337	1.5	900				5.8	1022	2.0	300				5.8	1022	2.0	300
	1.5	1664	1.2	1200	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>		4.4	1301	1.4	400	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
	1.2	1961	1.1	1500				3.5	1575	1.0	500				3.5	1575	1.0	500
	0.97	2246	0.9	1800				2.9	1925	1.1	600				2.9	1925	1.1	600
							2.3	2318	0.9	750		2.3	2318	0.9	750			
<b>1.5</b>							<b>1.5</b>											
							(2.0 hp)	23	443	2.5	75	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
							18	577	2.0	100				18	577	2.0	100	
							12	813	2.0	150				12	813	2.0	150	
							90L4 (1750 min <sup>-1</sup> )	8.8	1056	1.7	200	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
							7.0	1285	1.3	250				7.0	1285	1.3	250	
							5.8	1394	1.5	300				5.8	1394	1.5	300	
								4.4	1774	1.0	400		4.4	1774	1.0	400		
<b>2.2</b>							<b>2.2</b>											
							(3.0 hp)	23	650	1.7	75	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
							18	847	1.4	100				18	847	1.4	100	
							12	1193	1.4	150				12	1193	1.4	150	
							90L4 (1750 min <sup>-1</sup> )	8.8	1549	1.2	200	<b>CMM</b> <b>063/130</b>	<b>B5/B14</b> <b>B5/B14</b> <b>B5/B14</b>					
							7.0	1884	0.9	250				7.0	1884	0.9	250	
							5.8	2044	1.0	300				5.8	2044	1.0	300	

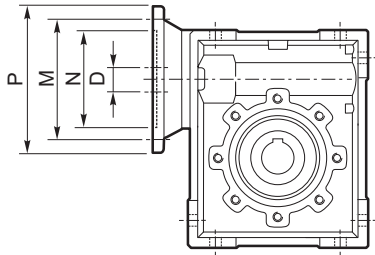




Motores Aplicables IEC

Motores aplicáveis

IEC Motor adapters



N.B. Las áreas grises indican los tamaño de los motores aplicables

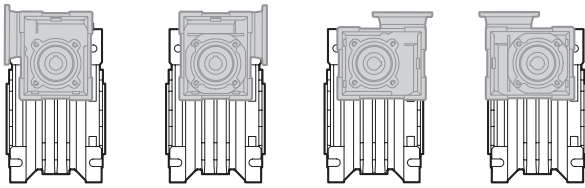
N.B. As áreas evidenciadas em cinza indicam a aplicabilidade da correspondente grandeza do motor.

N.B. Grey areas indicate motor inputs available on each size of unit.

B/BS = Casquillo de reducción en acero

B/BS = Bucha de redução em aço

B/BS = Metal shaft sleeve



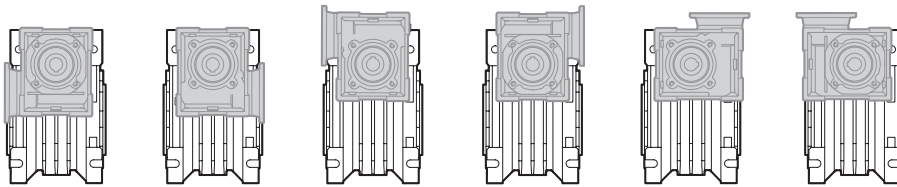
US1

US2

UV1

UV2

CMM	IEC	N	M	P	D	i <sub>1</sub>						
						10	15	20	30	40	50	60
026/026	56B14	50	65	80	9							



UB1

UB2

US1

US2

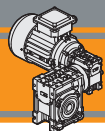
UV1

UV2

CMM	IEC	N	M	P	D	i <sub>1</sub>						
						10	15	20	30	40	50	60
026/030 026/040 026/050	56B14	50	65	80	9							

CMM





**CMM**

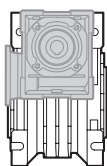
Motorreductores sinfín corona de doble reducción  
 Motoredutores de rosca sem fim combinados  
 Double reduction wormgearmotors

60 Hz

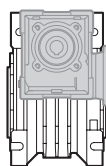
Motores Aplicables IEC

Motores aplicáveis

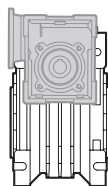
IEC Motor adapters



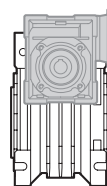
UB1



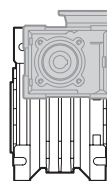
UB2



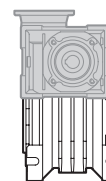
US1



US2



UV1



UV2

CMM	IEC	N	M	P	D	i <sub>1</sub>									
						7.5	10	15	20	25	30	40	50	60	
030/040 030/050 030/063	63B5	95	115	140	11										
	63B14	60	75	90											
	56B5	80	100	120	9	B	B	B	B	B	B	B	B		
	56B14	50	65	80											
040/063 040/070 040/075 040/090	71B5 (*)	110	130	160	14										
	71B14	70	85	105											
	63B5	95	115	140	11	B	B	B	B	B	B	B			
	63B14	60	75	90											
	56B5	80	100	120	9	BS	BS	BS	BS	BS	BS	BS	B	B	
	56B14	50	65	80											
050/110	80B5	130	165	200	19										
	80B14	80	100	120											
	71B5	110	130	160	14	B	B	B	B	B	B				
	71B14	70	85	105											
	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	B	B	B	
	63B14	60	75	90											
063/130	90B5	130	165	200	24										
	90B14	95	115	140											
	80B5	130	165	200	19	B	B	B	B	B	B				
	80B14	80	100	120											
	71B5	110	130	160	14	BS	BS	BS	BS	BS	BS	B	B	B	
	71B14	70	85	105											
	63B5	95	115	140	11							BS	BS	BS	

N.B. Las áreas grises indican los tamaño de los motores aplicables

N.B. As áreas evidenciadas em cinza indicam a aplicabilidade da correspondente grandeza do motor.

N.B. Grey areas indicate motor inputs available on each size of unit.

B/BS = Casquillo de reducción en acero

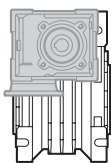
B/BS = Bucha de redução em aço

B/BS = Metal shaft sleeve

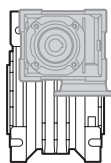
NOTA: la posición de montaje no está disponible para CMM 040/090.

(\*) NOTA : posição de montagem não disponível para CMM 040/090.

NOTE: assembly position not available for CMM 040/090.



UC1



UC2

CMM	IEC	N	M	P	D	i <sub>1</sub>								
						7.5	10	15	20	25	30	40	50	60
030/040 030/050	63B14	60	75	90	11									
	56B5	80	100	120	9	B	B	B	B	B	B	B	B	
	56B14	50	65	80										
030/063	63B5	95	115	140	11									
	63B14	60	75	90										
	56B5	80	100	120	9	B	B	B	B	B	B	B		
	56B14	50	65	80										
040/063 040/070 040/075 040/090	71B5	110	130	160	14									
	71B14	70	85	105										
	63B5	95	115	140	11	B	B	B	B	B	B	B		
	63B14	60	75	90										
	56B5	80	100	120	9	BS	BS	BS	BS	BS	BS	BS	B	B
	56B14	50	65	80										
050/110	80B14	80	100	120	19									
	71B5	110	130	160	14	B	B	B	B	B	B			
	71B14	70	85	105										
	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	B	B	B
	63B14	60	75	90										
063/130	90B14	95	115	140	24									
	80B14	80	100	120	19	B	B	B	B	B	B			
	71B5	110	130	160	14	BS	BS	BS	BS	BS	BS	B	B	B
	71B14	70	85	105										
	63B5	95	115	140	11							BS	BS	BS

N.B. Las áreas grises indican los tamaños de los motores aplicables

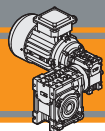
N.B. As áreas evidenciadas em cinza indicam a aplicabilidade da correspondente grandeza do motor.

N.B. Grey areas indicate motor inputs available on each size of unit.

B/BS = Casquillo de reducción en acero

B/BS = Bucha de redução em aço

B/BS = Metal shaft sleeve



**CMM**

Motorreductores sinfín corona de doble reducción  
 Motoredutores de rosca sem fim combinados  
 Double reduction wormgearmotors

60 Hz

Dimensiones

Dimensões

Dimensions

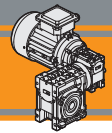
CMM..U - CMM..F...																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>H8</sub>	N1	N2
026/026 (D11)	45	70	11	83	22	47.5	50	35	34	26	26	34	42	55	45	22.5	21
026/026			12														
026/026 (D14)			14														
026/030	54	80	14	97	32	47.5	63	40	34	30	26	44	56	65	55	29	21
026/040	70	100	18	121.5	43	47.5	78	50	34	40	26	60	71	75	60	36.5	21
026/050	80	120	25	144	49	47.5	92	60	34	50	26	70	85	85	70	43.5	21

CMM..U - CMM..F...														
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg
026/026 (D11)	6	—	37	49	49	5	15	21	76	7	—	4	12.8	1.6
026/026												4	13.8	
026/026 (D14)												5	16.2	
026/030	6.5	75	44	57	49	5.5	22	27	81	M6x10(n.4)	90°	5	16.3	2.4
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	3.5
026/050	8.5	98	64	84	49	7	30	40	100.5	M8x10(n.4)	45°	8	28.3	5.0

	CMM..F								CMM..F28							CMM..F30									
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
026/026 (D11)	45°	45	6	4.5	55-69	40	6.5(n.4)	75	70	44	6.5	5	56-64	40	6.5	70	60	48	6.5	5	68	50	6.5	80	70
026/026																									
026/026 (D14)																									

	CMM..F								CMM..FB							CMM..FL									
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
026/026	45°	45	6	4.5	55-69	40	6.5(n.4)	75	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
026/030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
026/040	45°	67	7.5	4.5	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9(n.4)	110	95
026/050	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	132	120	9	5	90-110	70	11(n.4)	125	110

CMMIS						
	A	B	D1 <sub>j6</sub>	E	F	M
026/026	45	20	9	M4	3	10.2
026/030						
026/040						
026/050						

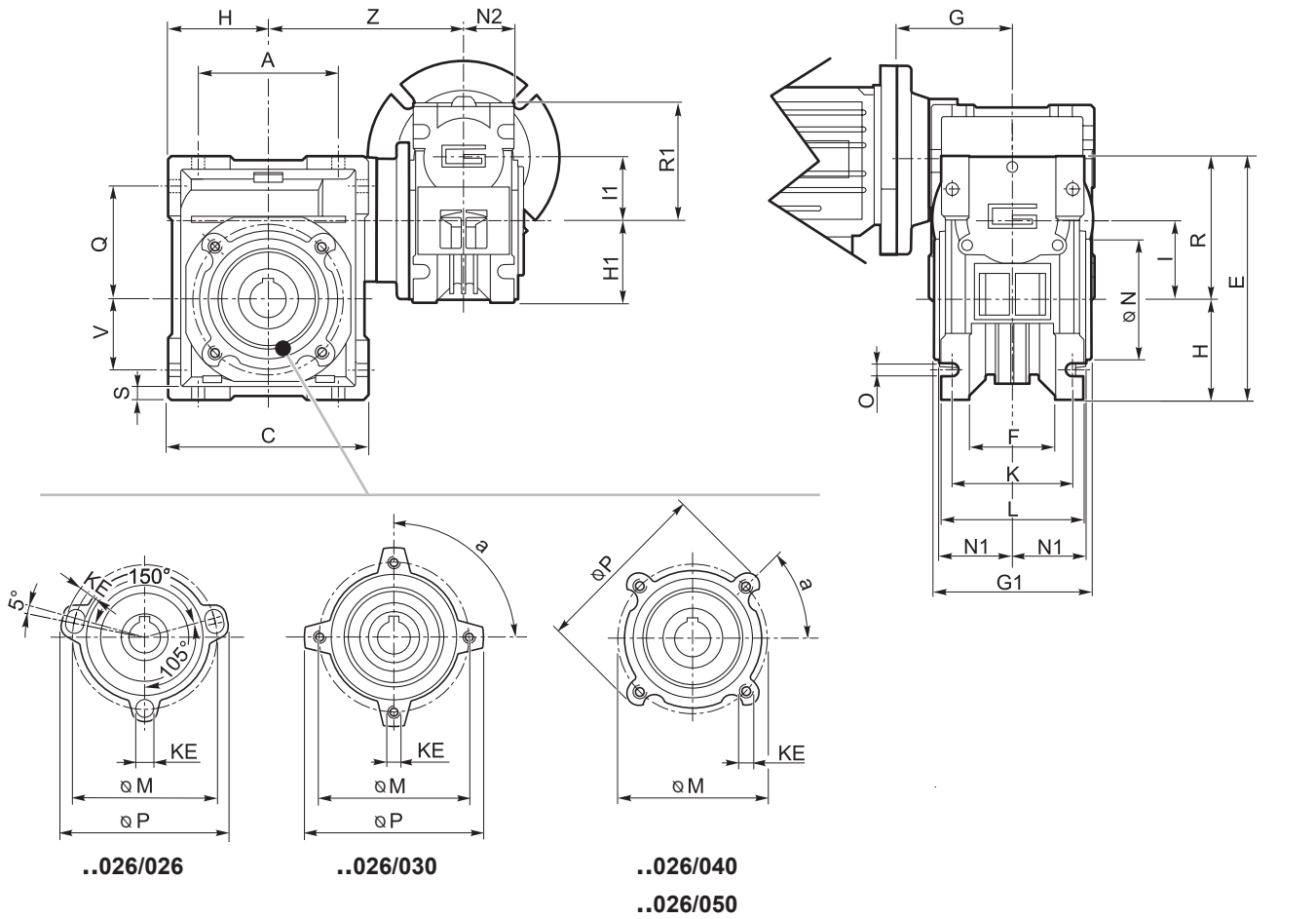


Dimensiones

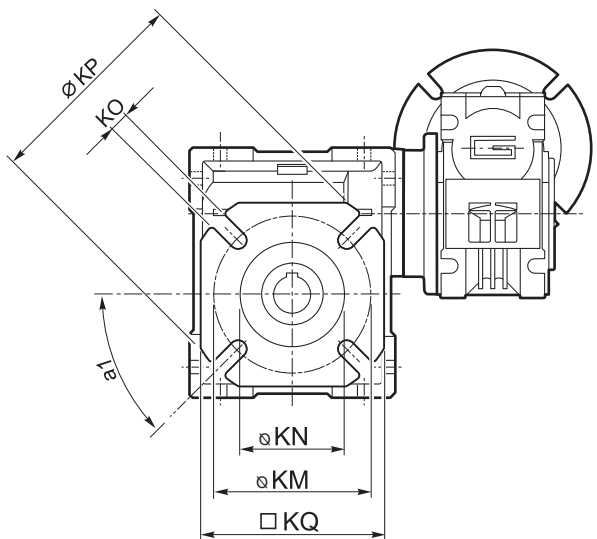
Dimensões

Dimensions

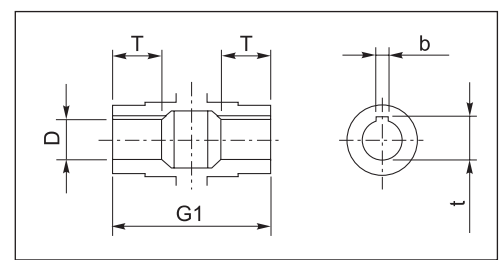
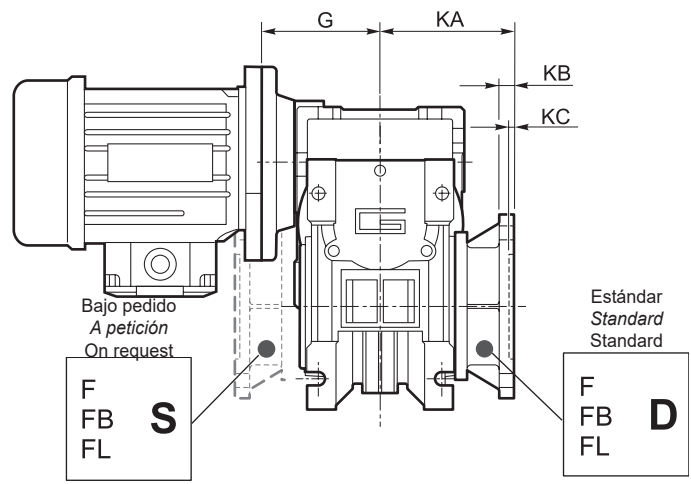
CMM026/..U



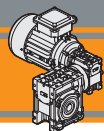
CMM



CMM026/026 F - F28 - F30  
 CMM026/..F - FB - FL



Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft



**CMM**

Motorreductores sin fin corona de doble reducción  
 Motoredutores de rosca sem fim combinados  
 Double reduction wormgearmotors

60 Hz

Dimensiones

Dimensões

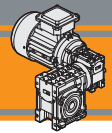
Dimensions

CMM.. - CMM..F - CMM..FB - CMM..FL																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>H8</sub>	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29
030/050	80	120	25	144	49	55	92	60	40	50	30	70	85	85	70	43.5	29
030/063	100	144	25	174	67	55	112	72	40	63	30	85	104	95	80	53	29
040/063	100	144	25	174	67	55	112	72	50	63	40	85	104	95	80	53	36.5
040/070	110	160	28	195	64	70	120	80	50	70	40	90	104	115	95	57	36.5
040/075	120	172	28	205	72	70	120	86	50	75	40	90	112	115	95	57	36.5
040/090	140	208	35	238	74	70	140	103	50	90	40	100	130	130	110	67	36.5
050/110	170	252.5	42	295	—	80	155	127.5	60	110	50	115	144	165	130	74	43.5
063/130	200	292.5	45	335	—	95	170	147.5	72	130	63	120	155	215	180	81	53

CMM.. - CMM..F - CMM..FB - CMM..FL															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8 (21.8)	3.9	
030/050	8.5	98	64	84	57	7	30	40	132	M8x14(n.4)	45°	8	28.3 (27.3)	5.0	
030/063	8.5	110	80	102	57	8	36	50	145	M8x10(n.8)	45°	8	28.3	7.5	
040/063	8.5	110	80	102	71.5	8	36	50	155.5	M8x10(n.8)	45°	8	28.3	9.2	
040/070	9	130	91	115	71.5	9	40	55	160	M8x14(n.8)	45°	8	31.3	10.5	
040/075	11	140	93	119	71.5	10	40	60	165	M8x14(n.8)	45°	8	31.3	12.0	
040/090	13	160	102	135	71.5	11	45	70	182	M10x18(n.8)	45°	10	38.3	15.6	
050/110	14	200	125	167.5	84	14	50	85	225	M10x18(n.8)	45°	12	45.3	30.2	
063/130	16	250	140	187.5	102	15	60	100	245	M12x21(n.8)	45°	14	48.8	55.0	

	CMM..F								CMM..FB								CMM..FL								
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
030/040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9(n.4)	110	95
030/050	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	132	120	9	5	90-110	70	11(n.4)	125	110
030/063	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	160	112	10	6	150-160	115	11(n.4)	180	142
040/063	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	160	112	10	6	150-160	115	11(n.4)	180	142
040/070	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
040/075	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
040/090	45°	111	13	6	175-190	152	14(n.4)	210	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
050/110	45°	131	15	6	230	170	14(n.8)	280	260	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
063/130	22.5°	140	15	6	255	180	16(n.8)	320	290	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

CMMIS						
	A	B	D1 <sub>j6</sub>	E	F	M
030/040 030/050 030/063	51	20	9	M4	3	10.2
040/063 040/070 040/075 040/090	66	23	11	M5	4	12.5
050/110	76	30	14	M6	5	16
063/130	94.5	40	19	M6	6	21.5

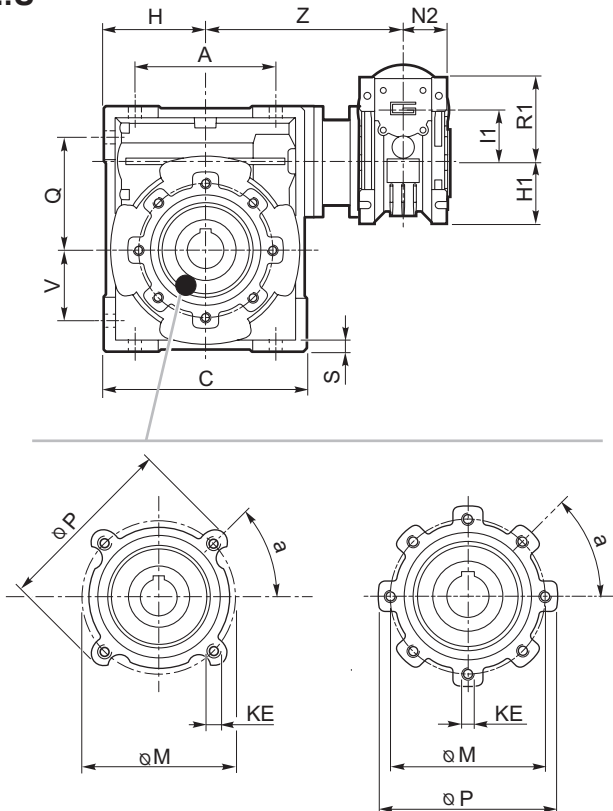


Dimensiones

Dimensões

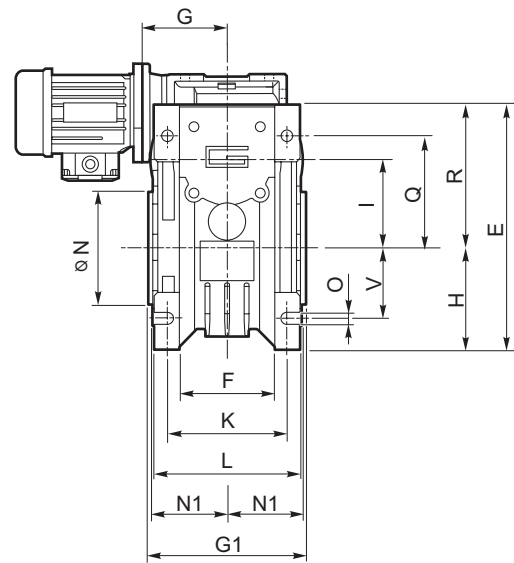
Dimensions

CMM..U

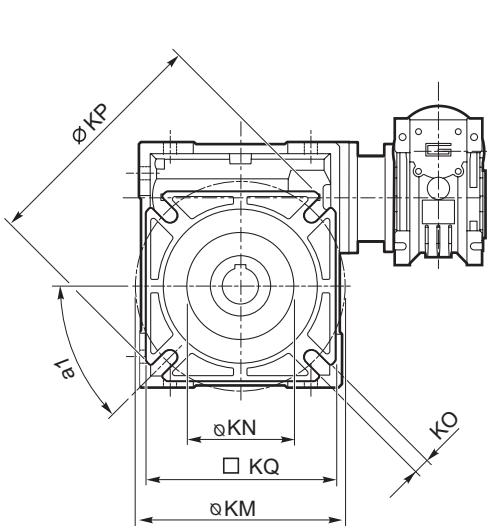


..030/040  
 ..030/050

..030/063 ..040/063  
 ..040/070 ..040/075  
 ..040/090 ..050/110  
 ..063/130



CMM



CMM..F (../030 - ../090)

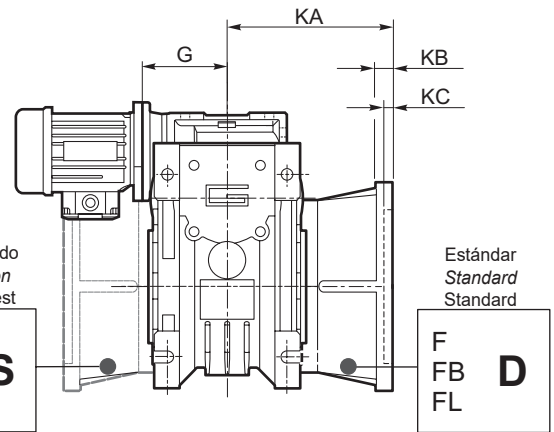
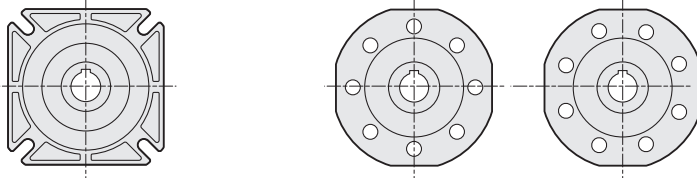
CMM..FB (../040 - ../063)

CMM..FL (../040 - ../063)

CMM..F

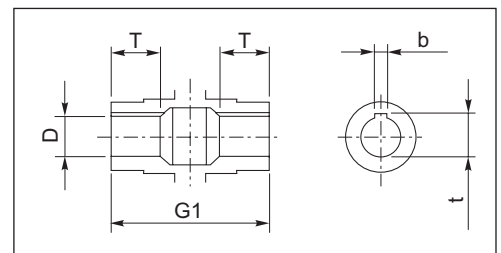
(../110

../130)



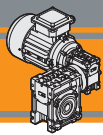
Bajo pedido  
 A petición  
 On request

Estándar  
 Standard  
 Standard



Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft





**CMM**

Motorreductores sinfín corona de doble reducción  
 Motores de rosca sem fim combinados  
 Double reduction wormgearmotors

60 Hz

**Accesorios**

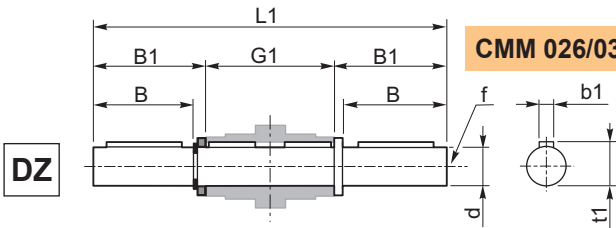
**Acessórios**

**Accessories**

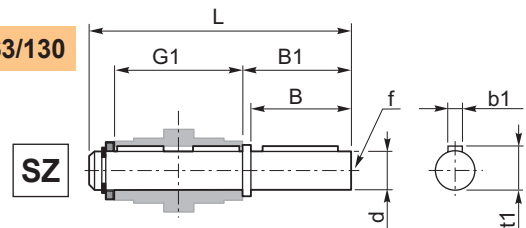
**Eje de salida simple y doble**

**Eixo lenta simples e dupla**

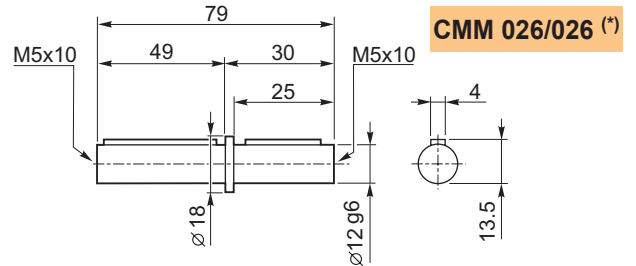
**Single and double output shaft**



**CMM 026/030 - CMM 063/130**



CMM	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
026/030	14	30	32.5	63	102	128	M6	5	16
026/040	18	40	43	78	128	164	M6	6	20.5
030/040	18	40	43	78	128	164	M6	6	20.5
026/050	25	50	53.5	92	153	199	M10	8	28
030/050	25	50	53.5	92	153	199	M10	8	28
030/063	25	50	53.5	112	173	219	M10	8	28
040/063	25	50	53.5	112	173	219	M10	8	28
040/070	28	60	63.5	120	192	247	M10	8	31
040/075	28	60	63.5	120	192	247	M10	8	31
040/090	35	80	84.5	140	234	309	M12	10	38
050/110	42	80	84.5	155	249	324	M16	12	45
063/130	45	80	85	170	265	340	M16	14	48.5



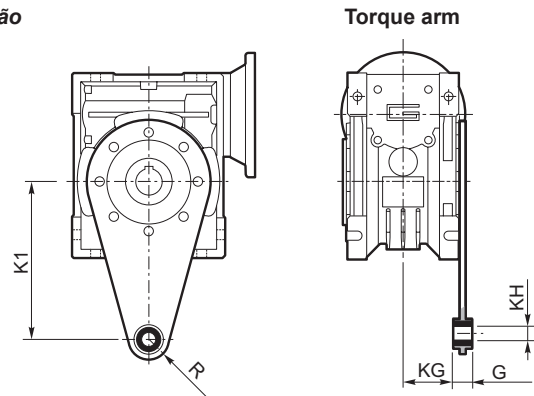
**CMM 026/026 (\*)**

(\*)  
 Nota: disponible solo para eje de salida hueco Ø12  
 Note: disponível somente para eixo de saída oco de Ø12  
 Note: available for output hollow shaft Ø12 only

**Brazo de reacción**

**Braço de reação**

CMM	K1	G	KG	KH	R
026/030	85	14	23	8	15
026/040	100	14	31	10	18
030/040	100	14	31	10	18
026/050	100	14	38	10	18
030/050	100	14	38	10	18
030/063	150	14	47.5	10	18
040/063	150	14	47.5	10	18
040/070	200	25	46.5	20	30
040/075	200	25	46.5	20	30
040/090	200	25	56.5	20	30
050/110	250	30	62	25	35
063/130	250	30	69	25	35

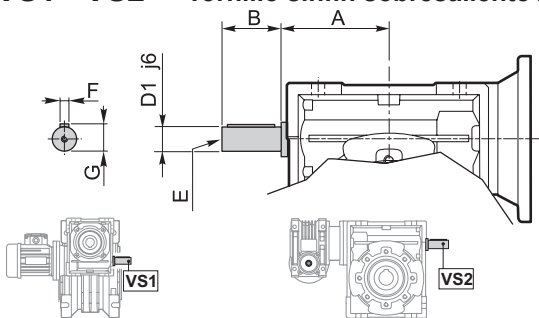


**Opciones**

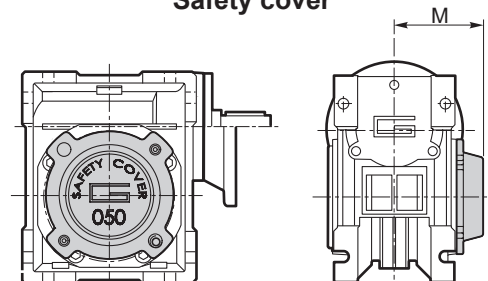
**Opções**

**Options**

**VS1 - VS2 - Tornillo sinfín sobresaliente / Parafuso saliente / Extended input shaft**



**SC - Cubierta de seguridad / Tampa de proteção / Safety cover**



CMM	VS1						VS2					
	A	B	D <sub>1</sub> j6	E	F	G	A	B	D <sub>1</sub> j6	E	F	G
026/030	—	—	—	—	—	—	45	20	9	M4	3	10.2
026/040	—	—	—	—	—	—	53	23	11	M5	4	12.5
026/050	—	—	—	—	—	—	64	30	14	M6	5	16
030/040	45	20	9	M4	3	10.2	53	23	11	M5	4	12.5
030/050	45	20	9	M4	3	10.2	64	30	14	M6	5	16
030/063	45	20	9	M4	3	10.2	75	40	19	M6	6	21.5
040/063	53	23	11	M5	4	12.5	75	40	19	M6	6	21.5
040/070	53	23	11	M5	4	12.5	84	40	19	M6	6	21.5
040/075	53	23	11	M5	4	12.5	90	50	24	M8	8	27
040/090	53	23	11	M5	4	12.5	108	50	24	M8	8	27
050/110	64	30	14	M6	5	16	135	60	28	M10	8	31
063/130	75	40	19	M6	6	21.5	—	—	—	—	—	—

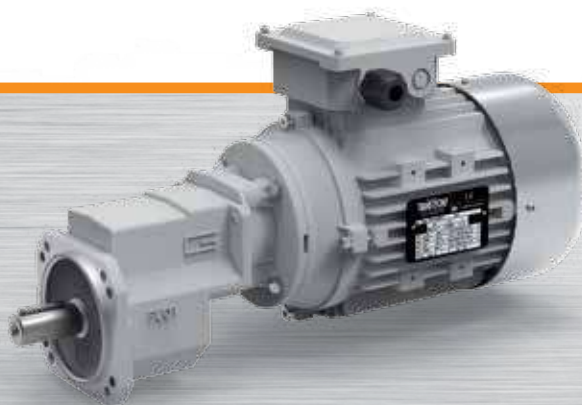
M	CM								
	30	40	50	63	70	75	90	110	130
	47	54.5	62.5	73	75	79	94	102	117

Construido bajo pedido  
 Fabricado sob encomenda  
 Built on request

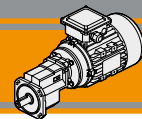
Motorreductores helicoidal  
de etapa única

Motoredutores com engrenagens  
cilíndricas monoestágio

Single stage helical gearmotors





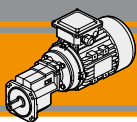


Índice	Índice	Index	Pag. Page
Características técnicas	<i>Características técnicas</i>	Technical features	12
Clasificación	<i>Designação</i>	Classification	12
Sentidos de rotación	<i>Sentidos de rotação</i>	Direction of rotation	12
Lubricación	<i>Lubrificação</i>	Lubrication	13
Cargas radiales	<i>Cargas radiais</i>	Radial loads	13
Nomenclatura	<i>Simbologia</i>	Symbols	13
Datos técnicos	<i>Dados técnicos</i>	Technical data	13
<i>Motores aplicables</i>	<i>Motores aplicáveis</i>	IEC Motor adapters	14
Dimensiones	<i>Dimensões</i>	Dimensions	14

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**



**PU**

**Motorreductores helicoidal de etapa única**  
**Motoredutores com engrenagens cilíndricas mono-estágio**  
**Single stage helical gearmotors**

**60 Hz**

**Características técnicas**

**Características técnicas**

**Technical features**

El reductor helicoidal de etapa única PU tiene las siguientes características principales:

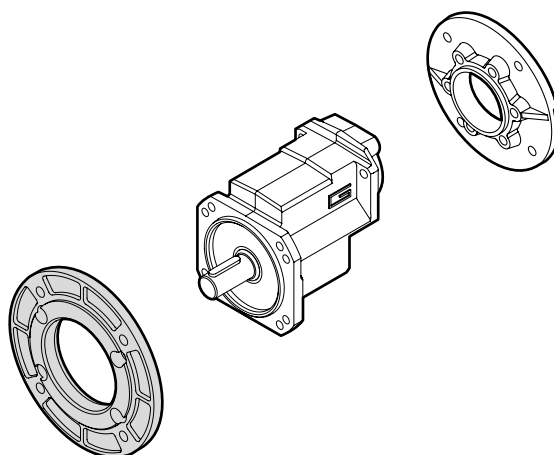
Os motoredutores mono estágio de engrenagens helicoidais da série PU têm como principais características:

PU single stage helical gearmotor range has the following main features:

- Carcasas y bridas de entrada y salida de aluminio fundido a presión;
- Engranajes helicoidales rectificadas
- Aceite de lubricación sintética de larga duración.

- Caixa de entrada de flange e flange de saída fundidos sob pressão;
- Engrenagens retificadas
- Lubrificação permanente com óleo sintético.

- Die-cast aluminum housings, input and output flanges;
- Ground-hardened helical gears;
- Permanent synthetic oil long-life lubrication.

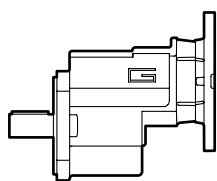


**Clasificación**

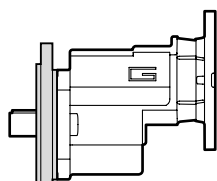
**Designação**

**Classification**

REDUCTOR / REDUTOR / GEARBOX							MOTOR / MOTOR / MOTOR					
PU	01	FT1	5.70	71	B5	O3	0.25kW	4p	3ph	230/400V	50Hz	T1
Tipo Tipo Type	Tamaño Tamanho Size	Versión Versão Version	Relación de reducción Rapporto Ratio	IEC 	Forma constructiva Forma construtiva Version	Ø Eje de salida Ø Eixo saída Ø Output shaft	Potencia Potência Power	Polos Pólos Poles	Fases Fases Phases	Tensión Tensão Voltage	Frecuencia Frequência Frequency	Posición caja de bornes Pos. Conexão Terminal box pos.
	01	U FT1 FT2 FT3	5.70 8.57	63 71 80	B5 B14		Veja tabelas Véase tablas see tables	2p 4p 6p 8p	1ph 3ph	230V 230/400V	50Hz 60Hz	T1 (Std)  T4



**U**

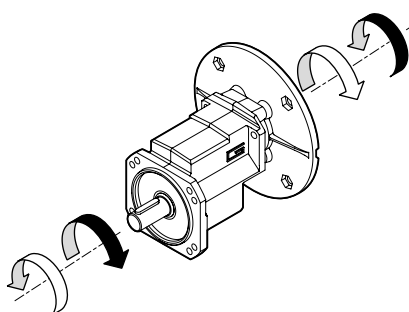


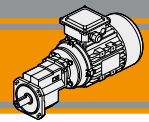
**FT..**

**Sentidos de rotación**

**Sentidos de rotação**

**Direction of rotation**





## Lubrificación

Todos los motoredutores PU son previamente lubricados con aceite sintético con grado de viscosidad 320, por lo tanto, pueden ser instalados en cualquier posición de montaje y no requieren mantenimiento.

## Lubrificação

Todos os motoredutores são fornecidos completos de lubrificante sintético de viscosidade 320, portanto, podem ser instalados em qualquer posição de montagem e não necessitam de manutenção.

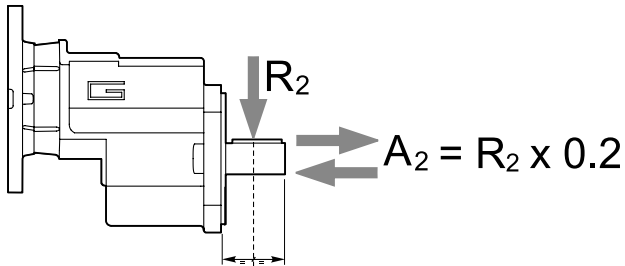
## Lubrication

Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use PU range in all mounting positions and do not require maintenance.

## Cargas radiales

## Cargas radiais

## Radial loads



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]
	PU 01
500	643
400	693
300	763
250	810
200	873
150	961
100	1100

## Nomenclatura

## Simbologia





## Legend

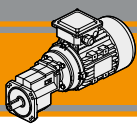
n <sub>1</sub> [rpm]	Velocidad de entrada / <i>Velocidade na entrada</i> / Input speed
n <sub>2</sub> [rpm]	Velocidad de salida / <i>Velocidade na saída</i> / Output speed
i	Relación de reducción / <i>Relação de redução</i> / Ratio
P <sub>1</sub> [kW]	Potencia en la entrada / <i>Potência da entrada</i> / Input power
M <sub>2</sub> [Nm]	Par en la salida en función de P <sub>1</sub> / <i>Torque na saída em função de P<sub>1</sub></i> / Output torque referred to P <sub>1</sub>
sf	Factor de servicio / <i>Fator de serviço</i> / Service factor
R <sub>2</sub> [N]	Carga radial admisible en la salida / <i>Carga radial admissível na saída</i> / Maximum output radial load
A <sub>2</sub> [N]	Carga axial admisible en la salida / <i>Carga axial admissível na saída</i> / Maximum output axial load

## Datos técnicos

## Dados técnicos

## Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.12</b>							<b>0.55</b>						
(0.16 hp)	307	3.6	12.8	5.70	PU01	B5/B14	(0.75 hp)	307	17	2.8	5.70	PU01	B5/B14
	204	5.4	6.8	8.57	PU01	B5/B14		204	25	1.5	8.57	PU01	B5/B14
63A4 (1750 min <sup>-1</sup> )							71B4 (1750 min <sup>-1</sup> )						
<b>0.18</b>							<b>0.75</b>						
(0.25 hp)	307	5.4	8.6	5.70	PU01	B5/B14	(1.0 hp)	307	23	2.1	5.70	PU01	B5/B14
	204	8.2	4.6	8.57	PU01	B5/B14		204	34	1.1	8.57	PU01	B5/B14
63B4 (1750 min <sup>-1</sup> )							80A4 (1750 min <sup>-1</sup> )						
<b>0.25</b>							<b>1.1</b>						
(0.33 hp)	307	8	6.2	5.70	PU01	B5/B14	(1.5 hp)	307	33	1.4	5.70	PU01	B5/B14
	204	11	3.3	8.57	PU01	B5/B14							
63C4 (1750 min <sup>-1</sup> )							80B4 (1750 min <sup>-1</sup> )						
<b>0.37</b>							<b>1.5</b>						
(0.50 hp)	307	11	4.2	5.70	PU01	B5/B14	(2.0 hp)	307	45	1.0	5.70	PU01	B5/B14
	204	17	2.2	8.57	PU01	B5/B14							
71A4 (1750 min <sup>-1</sup> )							90A4 (1750 min <sup>-1</sup> )						



**PU**

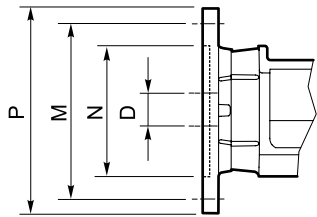
**Motorreductores helicoidal de etapa única**  
**Motoredutores com engrenagens cilíndricas mono-estágio**  
**Single stage helical gearmotors**

**60 Hz**

**Motores aplicables**

**Motores aplicáveis**

**IEC Motor adapters**



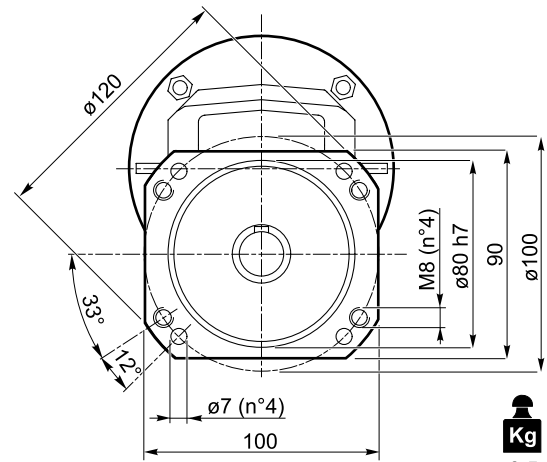
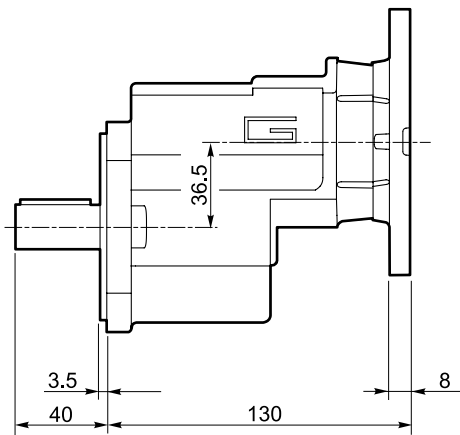
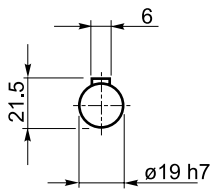
IEC	N	M	P	D	i (Relación de reducción / <i>Rapporto</i> / Ratio)		
					5.70	8.57	
<b>PU01</b>	<b>80 B5</b>	130	165	200	19	<b>B</b>	
	<b>80 B14</b>	80	100	120			
	<b>71 B5</b>	110	130	160	14		
	<b>71 B14</b>	70	85	105			
	<b>63 B5</b>	95	115	140	11		<b>BS</b>
	<b>63 B14</b>	60	75	90			

**Dimensiones**

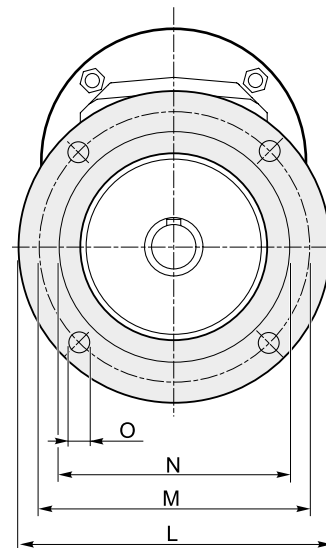
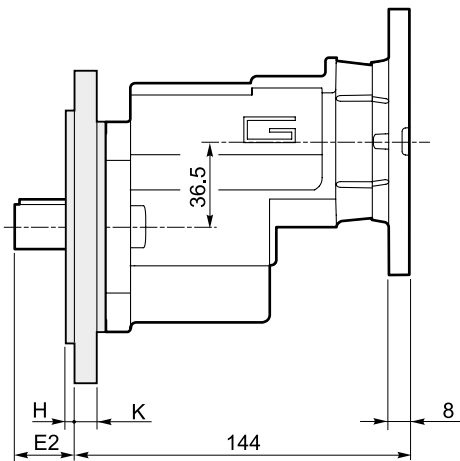
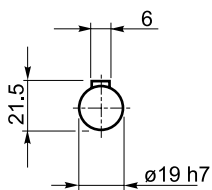
**Dimensões**

**Dimensions**

**PU01 U**



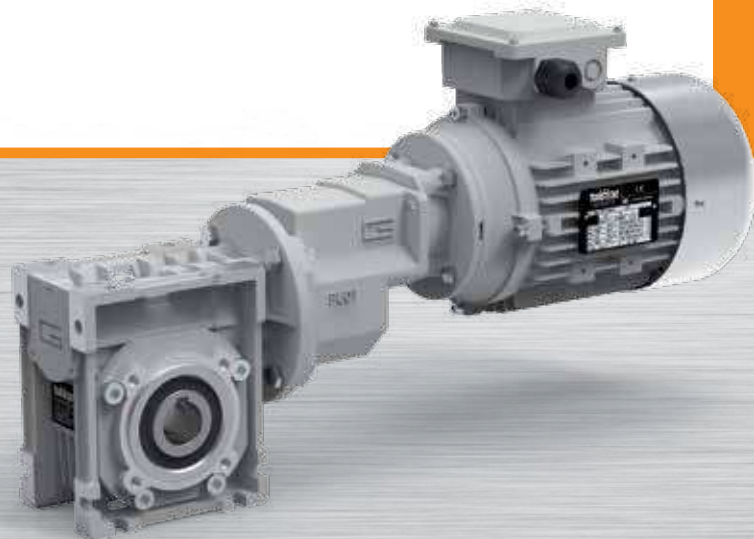
**PU01 FT..**



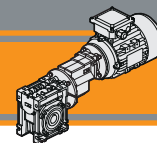
		Versione / Version / Version							Peso / Peso / Weight [kg]
		E <sub>2</sub>	H	K	L	M	N f7	O	
<b>PU01</b>	<b>FT1</b>	26	3	10	140	115	95	M8	0.3
	<b>FT2</b>	26	3.5	10	160	130	110	9	0.4
	<b>FT3</b>	26	3.5	10	200	165	130	11	0.5



Motorreductores sinfín  
corona con pre-reductor PU  
**Motoredutores de rosca  
sem fim com pré-estágio PU**  
PU Pre-stage wormgearmotors





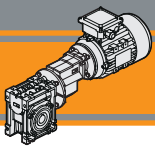


Índice	Índice	Index	Pag. Pág. Page
Características técnicas	<i>Características técnicas</i>	Technical features	<b>L2</b>
Clasificación	<i>Designação</i>	Classification	<b>L2</b>
Sentidos de rotación	<i>Sentidos de rotação</i>	Direction of rotation	<b>L3</b>
Nomenclatura	<i>Simbologia</i>	Symbols	<b>L3</b>
Lubricación	<i>Lubrificação</i>	Lubrication	<b>L4</b>
Cargas radiales	<i>Cargas radiais</i>	Radial loads	<b>L4</b>
<i>Motores aplicables</i>	Motores aplicáveis	IEC Motor adapters	<b>L5</b>
Datos técnicos	<i>Dados técnicos</i>	Technical data	<b>L6</b>
Dimensiones	<i>Dimensões</i>	Dimensions	<b>L10</b>
Accesorios	<i>Acessórios</i>	Accessories	<b>L12</b>
Opciones	<i>Opções</i>	Options	<b>L12</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**



# CMPU

Motorreductores sinfin corona con pre-reductor PU  
 Motoredutores de rosca sem fim com pre-estágio PU  
 PU Pre-stage wormgearmotors

60 Hz

### Características técnicas

### Características técnicas

### Technical features

El alto grado de modularidad es una característica de diseño del motorreductor sinfin corona con pre-reductor CMPU las cuales varían con una amplia selección de kits de entrada y salida. Las principales características de gama CMPU son:

A alta modularidade distingue os motoredutores rosca sem fim da série CMPU: os diferentes kits de entrada e saída torná-los extremamente versátil. As principais características da série CMPU são:

The high degree of modularity is a design feature of CMPU wormgearmotors range thanks to a wide selection of input and output kits. Main features of CMPU range are:

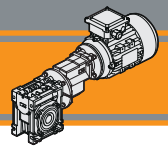
- Carcasa de aluminio fundido a presión;
- O tamanho 090 é fornecido com rolamentos de rolos cônicos junto a rosca-sem fim;
- Lubrificação permanente com óleo sintético.
- Die cast aluminium housing;
- Double taper roller bearing on size 090;
- Permanent synthetic oil long life lubrication.

### Clasificación

### Designação

### Classification

REDUCTOR / REDUTOR / GEARBOX											
CMPU	01/050	U	57	71	B14	SZDX	BRSX	90	P4	M1	VS
Tipo Type	Tamaño Tamanho Size	Versión Versão Version	Relación de reducción Rapporto Ratio	IEC	Forma constructiva Forma construtiva Version	∅ Eje de salida ∅ Eixo saída ∅ Output shaft	Brazo de reacción Braço de reação Torque arm	Ángulo Ângulo Angle	Pos. de montaje del pre-reductor Posição de montagem do pré-estágio Pre stage mounting position	Posición de montaje Pos. de montagem Mounting position	Opción Opções Options
	01/050 01/063 01/070 01/075 01/090	U FD FS FLD FLS FBD FBS	Vedere tabella  See tables	63 71 80	B5 B14	SZDX SZSX DZ	BRDX BRSX	0° 90° 180° 270°	P1 P2 P3 (standard) P4	M1 (B3) M2 (V6) M3 (B8) M4 (V5) M6 (B6) M5 (B7)	VS
Versione Version Version			∅ Eje de salida ∅ Eixo saída ∅ Output shaft			Brazo de reacción Braço de reação Torque arm		Ángulo Ângulo Angle			
<p>U FD FS FLD FLS FBD FBS</p>			<p>SZDX SZSX DZ</p>			<p>BRDX BRSX</p>		<p>90° 90° 180° 270° 270° 0°</p>			



**Clasificación**

**Designação**

**Classification**

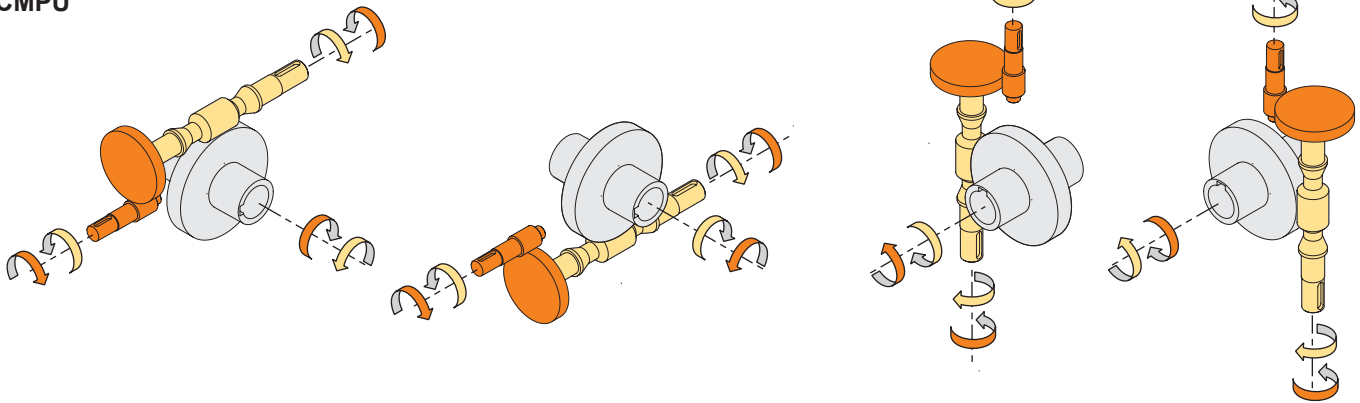
MOTOR / MOTOR / MOTOR					
0.75kW	4p	3ph	230/400V	50Hz	T1
Potencia <i>Potência</i> Power	Polos <i>Pólos</i> Poles	Fases <i>Fases</i> Phases	Tensión <i>Tensão</i> Voltage	Frecuencia <i>Frequência</i> Frequency	Posición caja de bornes <i>Pos. Conexão</i> Terminal box pos.
Veja tabelas <i>Véase tablas</i> see tables	2p 4p 6p 8p	1ph 3ph	230V 230/400V	50Hz 60Hz	T1 (Std)  T4 T2 T3

**Sentidos de rotación**

**Sentidos de rotação**

**Direction of rotation**

**CMPU**

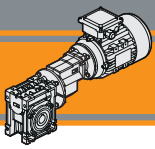


**Nomenclatura**

**Simbologia**

**Legend**

$n_1$	[rpm]	Velocidad de entrada / <i>Velocidade na entrada</i> / Input speed
$n_2$	[rpm]	Velocidad de salida / <i>Velocidade na saída</i> / Output speed
$i$		Relación de reducción / <i>Relação de redução</i> / Ratio
$P_1$	[kW]	Potencia en la entrada / <i>Potência da entrada</i> / Input power
$M_2$	[Nm]	Par en la salida en función de $P_1$ / <i>Torque na saída em função de <math>P_1</math></i> / Output torque referred to $P_1$
$sf$		Factor de servicio / <i>Fator de serviço</i> / Service factor
$R_2$	[N]	Carga radial admisible en la salida / <i>Carga radial admissível na saída</i> / Maximum output radial load
$A_2$	[N]	Carga axial admisible en la salida / <i>Carga axial admissível na saída</i> / Maximum output axial load



### Lubricación

### Lubrificação

### Lubrication

Todos los motoredutores son previamente lubricados con aceite sintético con grado de viscosidad 320, por lo tanto, pueden ser instalados en cualquier posición de montaje y no requieren mantenimiento.

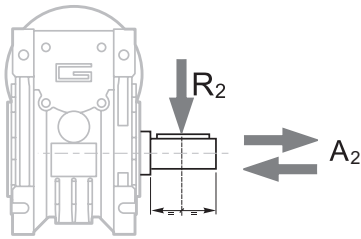
Todos os motoredutores são fornecidos completos de lubrificante sintético de viscosidade 320, portanto, podem ser instalados em qualquer posição de montagem e não necessitam de manutenção.

Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

### Cargas radiales

### Cargas radiais

### Radial loads



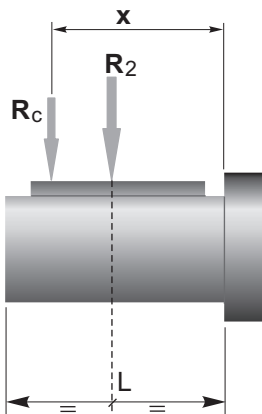
$$A_2 = R_2 \times 0.2$$

n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]				
	CMPU 01/050	CMPU 01/063	CMPU 01/070	CMPU 01/075	CMPU 01/090
47	2805	3874	4141	4475	5009
35	3095	4273	4568	4937	5526
28	3334	4603	4921	5318	5953
23	3559	4915	5254	5678	6356
18	3862	5334	5702	6162	6897
14	4200	5800	6200	6700	7500

Cuando la carga radial no se aplica en el punto medio del eje, es necesario calcular la carga efectiva a través la siguiente fórmula:

Quando a carga radial resultante não é aplicada na linha mediana da eixo, é preciso calcular aquela efetiva com a seguinte fórmula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

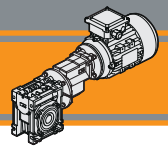


	CMPU				
	01/050	01/063	01/070	01/075	01/090
a	101	120	122	131	182
b	76	95	92	101	122
R <sub>2MAX</sub>	4200	5800	6200	6700	7500

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

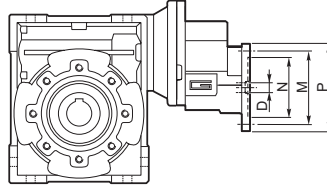
a, b = valores dados en la tabla  
 a, b = valores referidos na tabela  
 a, b = values given in the table



Motores Aplicables IEC

Motores aplicáveis

IEC Motor adapters



CMPU	IEC	N	M	P	D	i (i <sub>1</sub> x i <sub>2</sub> )									
						28.5 (5,7x5)	42.75 (5,7x7,5)	57 (5,7x10)	64.28 (8,57x7,5)	85.5 (5,7x15)	85.7 (8,57x10)	114 (5,7x20)	128.55 (8,57x15)	142.5 (5,7x25)	171 (5,7x30)
01/050	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	63B14	60	75	90											
	71B5	110	130	160	14	B	B	B	B	B	B	B	B	B	
	71B14	70	85	105											
	80B5	130	165	200	19										
80B14	80	100	120												
01/063	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	BS	
	63B14	60	75	90											
	71B5	110	130	160	14	B	B	B	B	B	B	B	B		
	71B14	70	85	105											
	80B5	130	165	200	19										
80B14	80	100	120												
01/070	63B5	95	115	140	11	-	BS	BS	BS	BS	BS	BS	BS	BS	
	63B14	60	75	90											
	71B5	110	130	160	14	-	B	B	B	B	B	B	B		
	71B14	70	85	105											
	80B5	130	165	200	19	-									
80B14	80	100	120												
01/075	63B5	95	115	140	11	-	BS	BS	BS	BS	BS	BS	BS	BS	
	63B14	60	75	90											
	71B5	110	130	160	14	-	B	B	B	B	B	B	B		
	71B14	70	85	105											
	80B5	130	165	200	19	-									
80B14	80	100	120												
01/090	63B5	95	115	140	11	-	BS	BS	BS	BS	BS	BS	BS	BS	
	63B14	60	75	90											
	71B5	110	130	160	14	-	B	B	B	B	B	B	B		
	71B14	70	85	105											
	80B5	130	165	200	19	-									
80B14	80	100	120												

CMPU	IEC	N	M	P	D	i (i <sub>1</sub> x i <sub>2</sub> )									
						228 (5,7x40)	257.1 (8,57x30)	285 (5,7x50)	342.8 (8,57x40)	428.5 (8,57x50)	456 (5,7x80)	514.2 (8,57x60)	570 (5,7x100)	685.6 (8,57x80)	857 (8,57x100)
01/050	63B5	95	115	140	11		BS								
	63B14	60	75	90											
	71B5	110	130	160	14		B								
	71B14	70	85	105											
	80B5	130	165	200	19										
80B14	80	100	120												
01/063	63B5	95	115	140	11	BS	BS	BS	BS	BS		BS			
	63B14	60	75	90											
	71B5	110	130	160	14	B	B	B	B	B		B			
	71B14	70	85	105											
	80B5	130	165	200	19										
80B14	80	100	120												
01/070	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS		
	63B14	60	75	90											
	71B5	110	130	160	14	B	B	B	B	B	B	B	B		
	71B14	70	85	105											
	80B5	130	165	200	19										
80B14	80	100	120												
01/075	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS		
	63B14	60	75	90											
	71B5	110	130	160	14	B	B	B	B	B	B	B	B		
	71B14	70	85	105											
	80B5	130	165	200	19										
80B14	80	100	120												
01/090	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS		
	63B14	60	75	90											
	71B5	110	130	160	14	B	B	B	B	B	B	B	B		
	71B14	70	85	105											
	80B5	130	165	200	19										
80B14	80	100	120												

N.B. Las áreas grises indican los tamaños de los motores aplicables

N.B. As áreas evidenciadas em cinza indicam a aplicabilidade da correspondente grandeza do motor.

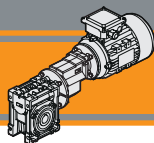
N.B. Grey areas indicate motor inputs available on each size of unit.

B/BS = Casquillo de reducción en acero

B/BS = Bucha de redução em aço

B/BS = Metal shaft sleeve





# CMPU





Motorreductores sinfin corona con pre-reductor PU  
 Motoredutores de rosca sem fim com pre-estagio PU  
 PU Pre-stage wormgearmotors

60 Hz

### Datos técnicos

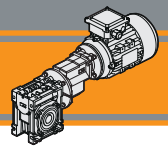
### Dados técnicos





### Technical data

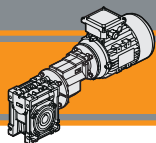
$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i					
<b>0.12</b>							<b>0.18</b>									
(0.16 hp)	61	15	10.6	28.50	CMPU01/050	B5/B14	(0.25 hp)	15	75	1.8	114.00	CMPU01/063	B5/B14			
	41	22	7.2	42.75			B5/B14		14	89	1.8			128.55	B5/B14	
63A4	31	28	5.6	57.00			B5/B14	63B4	12	88	1.4			142.50	B5/B14	
(1750 min <sup>-1</sup> )	27	33	4.8	64.28			B5/B14	(1750 min <sup>-1</sup> )	10	95	1.7			171.00	B5/B14	
	20	40	4.1	85.50			B5/B14		8.2	132	0.9			214.25	B5/B14	
	20	42	3.7	85.70			B5/B14		6.8	144	1.1			257.10	B5/B14	
	15	50	2.8	114.00			B5/B14									
	14	59	2.7	128.55			B5/B14		15	74	3.5			114.00	B5/B14	
	12	59	2.1	142.50			B5/B14		14	88	3.4			128.55	B5/B14	
	10	64	2.5	171.00			B5/B14		12	86	2.6			142.50	B5/B14	
	8.2	88	1.4	214.25			B5/B14		10	99	3.1			171.00	B5/B14	
	6.8	96	1.7	257.10			B5/B14		8.2	130	1.8			214.25	B5/B14	
									7.7	119	2.2			228.00	B5/B14	
	14	59	5.2	128.55			CMPU01/063	B5/B14	6.8	148	2.1			257.10	B5/B14	
	12	58	4.0	142.50	B5/B14	6.1			137	1.7	285.00	B5/B14				
	10	66	4.7	171.00	B5/B14	5.1			178	1.5	342.80	B5/B14				
	8.2	87	2.6	214.25	B5/B14	4.1			206	1.1	428.50	B5/B14				
	7.7	79	3.3	228.00	B5/B14	3.4			228	0.9	514.20	B5/B14				
	6.8	99	3.1	257.10	B5/B14											
	6.1	91	2.5	285.00	B5/B14	8.2			134	2.5	214.25	CMPU01/070	B5/B14			
	5.1	119	2.2	342.80	B5/B14	7.7			119	3.2	228.00		B5/B14			
	4.1	137	1.7	428.50	B5/B14	6.8			148	3.1	257.10		B5/B14			
	3.4	152	1.4	514.20	B5/B14	6.1			137	2.4	285.00		B5/B14			
						5.1			178	2.1	342.80		B5/B14			
	6.1	91	3.7	285.00	CMPU01/070	B5/B14			4.1	206	1.6		428.50	B5/B14		
	5.1	119	3.2	342.80					B5/B14	3.8	176		1.6	456.00	B5/B14	
	4.1	137	2.4	428.50					B5/B14	3.4	228		1.4	514.20	B5/B14	
	3.8	117	2.3	456.00			B5/B14	3.1	198	1.2	570.00		B5/B14			
	3.4	152	2.1	514.20			B5/B14	2.6	264	1.0	685.60		B5/B14			
	3.1	132	1.8	570.00			B5/B14									
	2.6	176	1.6	685.60			B5/B14	5.1	181	2.6	342.80		CMPU01/075	B5/B14		
	2.0	198	1.2	857.00			B5/B14	4.1	206	2.0	428.50			B5/B14		
								3.8	176	1.9	456.00			B5/B14		
	3.8	117	2.8	456.00			CMPU01/075	B5/B14	3.4	233	1.6	514.20		B5/B14		
	3.4	155	2.4	514.20					B5/B14	3.1	198	1.5		570.00	B5/B14	
	3.1	132	2.2	570.00					B5/B14	2.6	264	1.2		685.60	B5/B14	
	2.6	176	1.9	685.60					B5/B14	2.0	297	1.0		857.00	B5/B14	
	2.0	198	1.5	857.00					B5/B14							
	3.8	117	2.8	456.00	CMPU01/075	B5/B14			4.1	223	3.1	428.50		CMPU01/090	B5/B14	
	3.4	155	2.4	514.20					B5/B14	3.8	193	2.8			456.00	B5/B14
	3.1	132	2.2	570.00					B5/B14	3.4	252	2.5			514.20	B5/B14
	2.6	176	1.9	685.60					B5/B14	3.1	214	2.2			570.00	B5/B14
	2.0	198	1.5	857.00					B5/B14	2.6	290	1.8			685.60	B5/B14
										2.0	322	1.5	857.00		B5/B14	
	3.4	168	3.7	514.20					CMPU01/090	B5/B14						
	3.1	143	3.4	570.00							B5/B14					
	2.6	194	2.8	685.60			B5/B14									
	2.0	214	2.2	857.00			B5/B14									

### 0.18

(0.25 hp)	61	22	7.1	28.50	CMPU01/050	B5/B14	
	41	33	4.8	42.75			B5/B14
63B4	31	42	3.7	57.00			B5/B14
(1750 min <sup>-1</sup> )	27	49	3.2	64.28			B5/B14
	20	59	2.7	85.50			B5/B14
	20	63	2.5	85.70			B5/B14


**Datos técnicos**
**Dados técnicos**
**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				
<b>0.25</b>							<b>0.25</b>								
(0.33 hp)	61	30	5.1	28.50	CMPU01/050	B5/B14	(0.33 hp)	3.1	297	1.6	570.00	CMPU01/090	B5/B14		
	41	45	3.5	42.75			B5/B14		2.6	403	1.3			685.60	B5/B14
63C4	31	58	2.7	57.00			B5/B14	63C4	2.0	447	1.1			857.00	B5/B14
(1750 min <sup>-1</sup> )	27	68	2.3	64.28			B5/B14	(1750 min <sup>-1</sup> )							
	20	82	2.0	85.50			B5/B14								
	20	87	1.8	85.70			B5/B14								
	15	104	1.3	114.00			B5/B14								
	14	124	1.3	128.55			B5/B14								
	12	122	1.0	142.50			B5/B14								
	10	133	1.2	171.00			B5/B14								
	27	69	3.5	64.28	CMPU01/063	B5/B14									
	20	81	3.7	85.50			B5/B14								
	20	88	3.3	85.70			B5/B14								
	15	102	2.5	114.00			B5/B14								
	14	122	2.5	128.55			B5/B14								
	12	120	1.9	142.50			B5/B14								
	10	137	2.3	171.00			B5/B14								
	8.2	180	1.3	214.25			B5/B14								
	7.7	165	1.6	228.00			B5/B14								
	6.8	206	1.5	257.10			B5/B14								
	6.1	191	1.2	285.00	B5/B14										
	5.1	247	1.1	342.80	B5/B14										
	12	124	2.8	142.50	CMPU01/070	B5/B14									
	10	137	3.3	171.00			B5/B14								
	8.2	186	1.8	214.25			B5/B14								
	7.7	165	2.3	228.00			B5/B14								
	6.8	206	2.2	257.10			B5/B14								
	6.1	191	1.8	285.00			B5/B14								
	5.1	247	1.5	342.80			B5/B14								
	4.1	286	1.2	428.50			B5/B14								
	3.8	244	1.1	456.00			B5/B14								
	3.4	316	1.0	514.20			B5/B14								
	8.2	186	2.2	214.25	CMPU01/075	B5/B14									
	7.7	168	2.8	228.00			B5/B14								
	6.8	206	2.7	257.10			B5/B14								
	6.1	191	2.1	285.00			B5/B14								
	5.1	252	1.9	342.80			B5/B14								
	4.1	286	1.4	428.50			B5/B14								
	3.8	244	1.3	456.00			B5/B14								
	3.4	323	1.2	514.20			B5/B14								
	3.1	274	1.1	570.00			B5/B14								
	2.6	367	0.9	685.60			B5/B14								
	6.1	206	3.3	285.00	CMPU01/090	B5/B14									
	5.1	266	3.1	342.80			B5/B14								
	4.1	309	2.2	428.50			B5/B14								
	3.8	268	2.0	456.00			B5/B14								
	3.4	351	1.8	514.20			B5/B14								
	6.1	206	3.3	285.00			B5/B14								
	5.1	266	3.1	342.80			B5/B14								
	4.1	309	2.2	428.50			B5/B14								
	3.8	268	2.0	456.00			B5/B14								
	3.4	351	1.8	514.20			B5/B14								
	6.1	206	3.3	285.00	CMPU01/090	B5/B14									
	5.1	266	3.1	342.80			B5/B14								
	4.1	309	2.2	428.50			B5/B14								
	3.8	268	2.0	456.00			B5/B14								
	3.4	351	1.8	514.20			B5/B14								
	6.1	206	3.3	285.00			B5/B14								
	5.1	266	3.1	342.80			B5/B14								
	4.1	309	2.2	428.50			B5/B14								
	3.8	268	2.0	456.00			B5/B14								
	3.4	351	1.8	514.20			B5/B14								
	6.1	206	3.3	285.00	CMPU01/090	B5/B14									
	5.1	266	3.1	342.80			B5/B14								
	4.1	309	2.2	428.50			B5/B14								
	3.8	268	2.0	456.00			B5/B14								
	3.4	351	1.8	514.20			B5/B14								
	6.1	206	3.3	285.00			B5/B14								
	5.1	266	3.1	342.80			B5/B14								
	4.1	309	2.2	428.50			B5/B14								
	3.8	268	2.0	456.00			B5/B14								
	3.4	351	1.8	514.20			B5/B14								



# CMPU





Motorreductores sin fin corona con pre-reductor PU  
 Motoredutores de rosca sem fim com pre-estágio PU  
 PU Pre-stage wormgearmotors

60 Hz

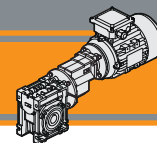
### Datos técnicos





### Dados técnicos

### Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i					
<b>0.37</b>							<b>0.55</b>									
(0.50 hp)	8.2	293	2.4	214.25	CMPU01/090	B5/B14	(0.75 hp)	14	284	1.6	128.55	CMPU01/090	B5/B14			
	7.7	262	3.1	228.00				12	289	2.5	142.50				B5/B14	
71A4	6.8	321	2.4	257.10				71B4	10	317	3.0			171.00		B5/B14
(1750 min <sup>-1</sup> )	6.1	305	2.3	285.00				(1750 min <sup>-1</sup> )	8.2	435	1.6			214.25		B5/B14
	5.1	393	2.1	342.80					7.7	389	2.1			228.00		B5/B14
	4.1	458	1.5	428.50					6.8	476	1.6			257.10		B5/B14
	3.8	397	1.3	456.00					6.1	453	1.5			285.00		B5/B14
	3.4	519	1.2	514.20					5.1	585	1.4			342.80		B5/B14
	3.1	440	1.1	570.00					4.1	681	1.0			428.50		B5/B14
	2.6	597	0.9	685.60					3.8	590	0.9			456.00		B5/B14

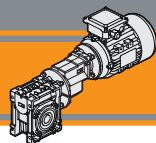
<b>0.55</b>							<b>0.75</b>									
(0.75 hp)	61	67	2.3	28.50	CMPU01/050	B5/B14	(1.0 hp)	61	91	1.7	28.50	CMPU01/050	B5/B14			
	41	99	1.6	42.75				41	135	1.2	42.75				B5/B14	
71B4	31	127	1.2	57.00				80A4	31	174	0.9			57.00		B5/B14
(1750 min <sup>-1</sup> )	27	149	1.0	64.28				(1750 min <sup>-1</sup> )								
	20	181	0.9	85.50					61	93	2.2			28.50	CMPU01/063	B5/B14
	61	68	3.0	28.50	CMPU01/063	B5/B14		41	137	2.1	42.75		B5/B14			
	41	101	2.9	42.75				31	176	1.6	57.00		B5/B14			
	31	129	2.2	57.00				27	206	1.2	64.28		B5/B14			
	27	151	1.6	64.28				20	243	1.2	85.50		B5/B14			
	20	179	1.7	85.50				20	265	1.1	85.70		B5/B14			
	20	194	1.5	85.70			41	139	2.2	42.75	CMPU01/070	B5/B14				
	15	225	1.2	114.00		31	178	2.2	57.00				B5/B14			
	14	268	1.1	128.55		27	209	1.2	64.28				B5/B14			
	12	264	0.9	142.50		20	247	1.8	85.50				B5/B14			
	10	302	1.0	171.00		20	268	1.2	85.70				B5/B14			
	20	181	2.4	85.50	CMPU01/070	B5/B14		15	311	1.3	114.00	CMPU01/075	B5/B14			
	20	197	1.6	85.70				14	371	1.2	128.55				B5/B14	
	15	228	1.7	114.00				12	372	0.9	142.50				B5/B14	
	14	272	1.6	128.55				10	412	1.1	171.00				B5/B14	
	12	272	1.3	142.50					27	209	1.2			64.28		B5/B14
	10	302	1.5	171.00		20	250	2.1	85.50		B5/B14					
	7.7	362	1.0	228.00		20	268	1.2	85.70		B5/B14					
	6.8	454	1.0	257.10		15	316	1.5	114.00		B5/B14					
	20	197	1.6	85.70	CMPU01/075	B5/B14		14	376	1.2	128.55		B5/B14			
	15	231	2.0	114.00				12	372	1.1	142.50		B5/B14			
	14	276	1.9	128.55				10	412	1.3	171.00		B5/B14			
	12	272	1.5	142.50				7.7	503	0.9	228.00		B5/B14			
	10	302	1.8	171.00				6.8	619	0.9	257.10		B5/B14			
	8.2	410	1.0	214.25												
	7.7	369	1.3	228.00												
	6.8	454	1.2	257.10												
	6.1	419	1.0	285.00												


**Datos técnicos**
**Dados técnicos**
**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i					
<b>0.75</b>							<b>1.1</b>									
(1.0 hp)	20	257	3.4	85.50	CMPU01/090	B5/B14	(1.5 hp)	41	209	1.5	42.75	CMPU01/090	B5/B14			
	20	278	1.2	85.70			B5/B14		31	272	1.5			57.00	B5/B14	
80A4	15	329	2.2	114.00			B5/B14		80B4	20	377			1.5	85.50	B5/B14
(1750 min <sup>-1</sup> )	14	387	1.2	128.55			B5/B14		(1750 min <sup>-1</sup> )	15	483			1.5	114.00	B5/B14
	12	394	1.8	142.50			B5/B14			12	578			1.2	142.50	B5/B14
	10	432	2.2	171.00			B5/B14			10	634			1.5	171.00	B5/B14
	8.2	593	1.2	214.25			B5/B14			7.7	778			1.0	228.00	B5/B14
	7.7	530	1.5	228.00			B5/B14									
	6.8	650	1.2	257.10			B5/B14									
	6.1	617	1.1	285.00			B5/B14									
	5.1	797	1.0	342.80	B5/B14											

**1.1**

(1.5 hp)	61	134	1.2	28.50	CMPU01/050	B5/B14
80B4	61	136	1.5	28.50	CMPU01/063	B5/B14
(1750 min <sup>-1</sup> )	41	201	1.5	42.75		B5/B14
	31	258	1.1	57.00		B5/B14
	27	302	1.0	64.28		B5/B14
	41	204	1.5	42.75	CMPU01/070	B5/B14
	31	262	1.5	57.00		B5/B14
	20	362	1.2	85.50		B5/B14
	15	456	0.9	114.00		B5/B14
	41	204	1.5	42.75	CMPU01/075	B5/B14
	31	262	1.5	57.00		B5/B14
	20	367	1.4	85.50		B5/B14
	15	463	1.0	114.00		B5/B14
	10	604	0.9	171.00		B5/B14



# CMPU

Motorreductores sin fin corona con pre-reductor PU  
 Motoredutores de rosca sem fim com pre-estagio PU  
 PU Pre-stage wormgearmotors

60 Hz

**Dimensiones**

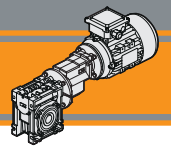
**Dimensões**

**Dimensions**

CMPU.. - CMPU..F - CMPU..FB - CMPU..FL														
	A	C	D <sub>H8</sub>	E	F	G1	H	HX	I	K	L	M	N <sub>H8</sub>	N1
01/050	80	120	25	144	49	92	60	36.5	50	70	85	85	70	43.5
01/063	100	144	25	174	67	112	72	36.5	63	85	104	95	80	53
01/070	110	160	28	195	64	120	80	36.5	70	90	104	115	95	57
01/075	120	172	28	205	72	120	86	36.5	75	90	112	115	95	57
01/090	140	208	35	238	74	140	103	36.5	90	100	130	130	110	67

CMPU.. - CMPU..F - CMPU..FB - CMPU..FL													
	O	P	Q	R	S	T	V	Z	KE	a	b	t	Kg
01/050	8.5	98	64	84	7	30	40	210	M8x10(n.4)	45°	8	28.3 (27.3)	6.0
01/063	8.5	110	80	102	8	36	50	228	M8x14(n.8)	45°	8	28.3	8.7
01/070	9	130	91	115	9	40	55	238	M8x14(n.8)	45°	8	31.3	10.0
01/075	11	140	93	119	10	40	60	243	M8x14(n.8)	45°	8	31.3	11.5
01/090	13	160	102	135	11	45	70	260	M10x18(n.8)	45°	10	38.3	15.5

	CMPU..F								CMPU..FB								CMPU..FL							
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
01/050	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	120	9	5	90-110	70	11(n.4)	125	110
01/063	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	112	10	6	150-160	115	11(n.4)	180	142
01/070	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
01/075	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
01/090	45°	111	13	6	175-190	152	14(n.4)	210	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

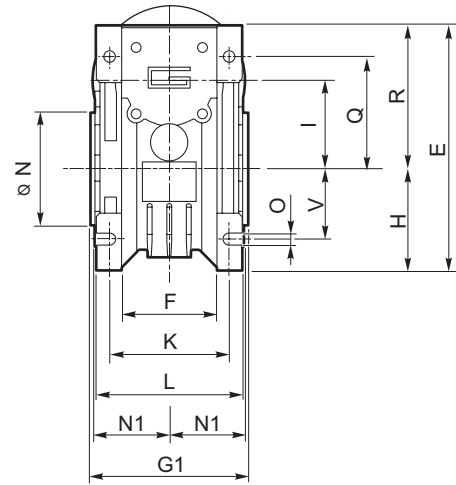
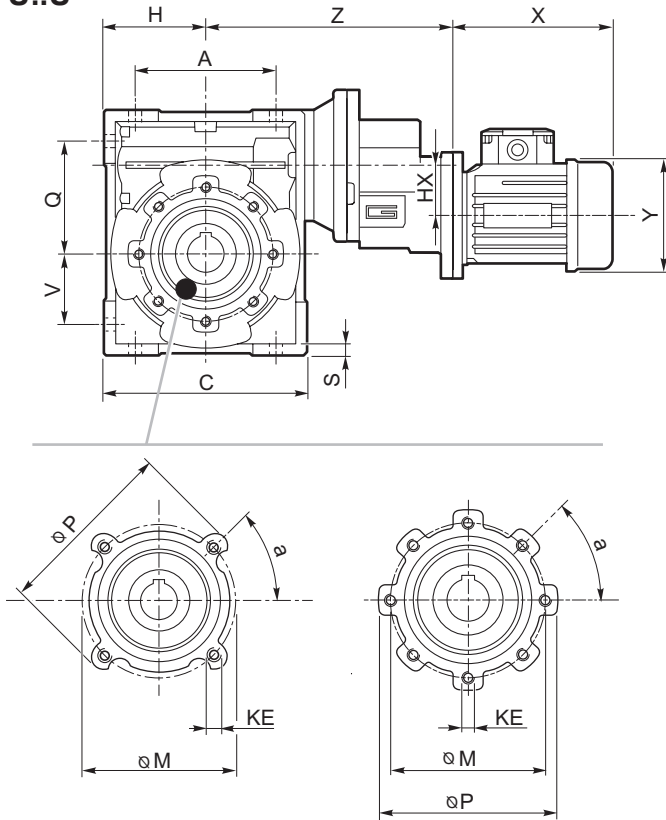


Dimensiones

Dimensões

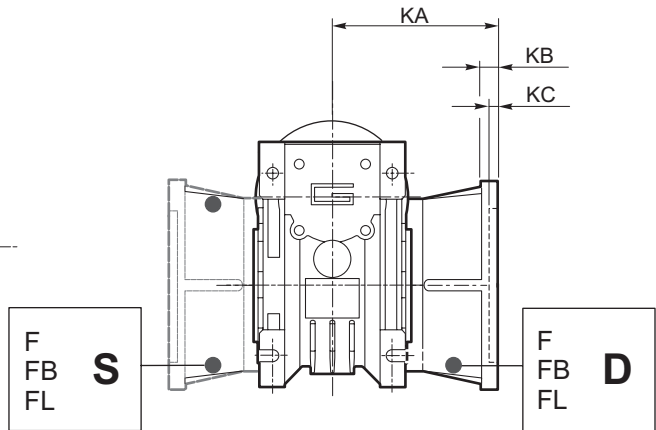
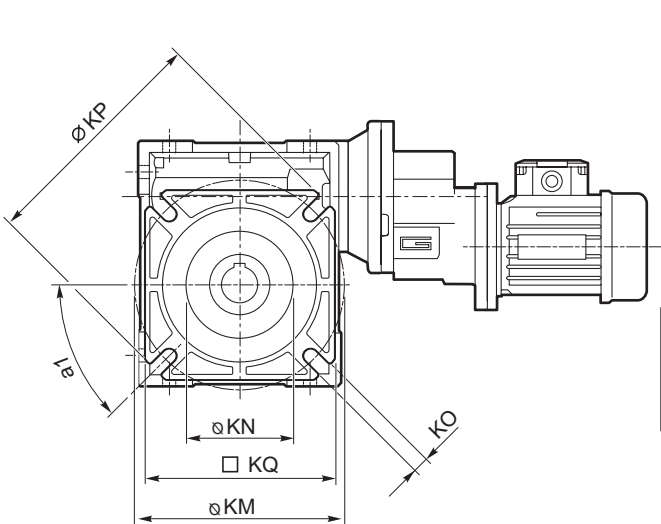
Dimensions

**CMPU..U**

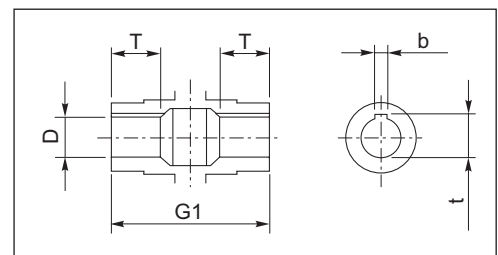


..01/050

..01/063  
 ..01/070  
 ..01/075  
 ..01/090

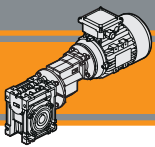


**CMPU..F** (..01/050 - .. 01/090)  
**CMPU..FB** (.. 01/050 - .. 01/063)  
**CMPU..FL** (.. 01/050 - .. 01/063)



Eje de salida hueco  
 Eixo saída vazado  
 Hollow output shaft

CMPU



# CMPU

Motorreductores sin fin corona con pre-reductor PU  
 Motoredutores de rosca sem fim com pre-estagio PU  
 PU Pre-stage wormgearmotors

60 Hz

### Accesorios

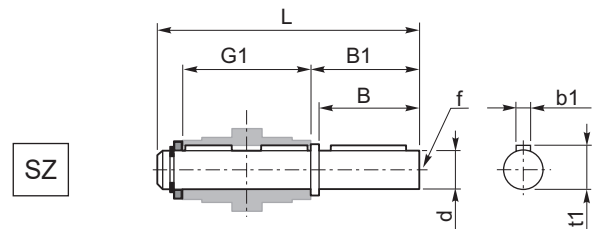
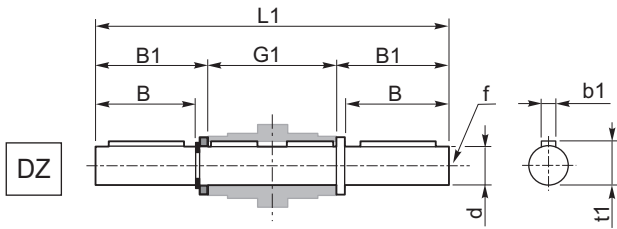
### Acessórios

### Accessories

#### Eje de salida simple y doble

#### Eixo lenta simples e dupla

#### Single and double output shaft



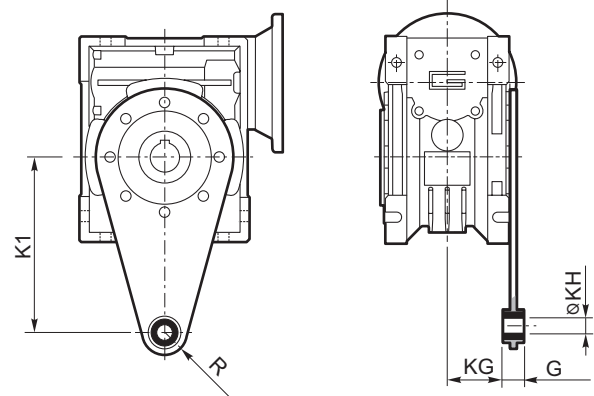
CMPU	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
01/050	25	50	53.5	92	153	199	M10	8	28
01/063	25	50	53.5	112	173	219	M10	8	28
01/070	28	60	63.5	120	192	247	M10	8	31
01/075	28	60	63.5	120	192	247	M10	8	31
01/090	35	80	84.5	140	234	309	M12	10	38

#### Brazo de reacción

#### Braço de reação

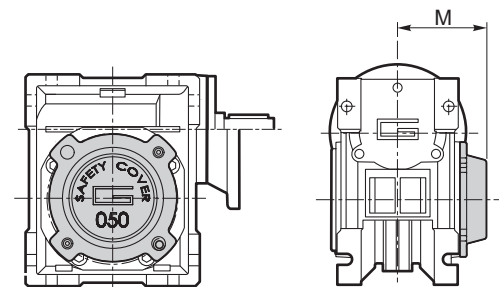
#### Torque arm

CMPU	K1	G	KG	KH	R
01/050	100	14	38	10	18
01/063	150	14	47.5	10	18
01/070	200	25	46.5	20	30
01/075	200	25	46.5	20	30
01/090	200	25	56.5	20	30



#### SC - Cubierta de seguridad / Tampa de proteção / Safety cover

CMPU	M
01/050	62.5
01/063	73
01/070	75
01/075	79
01/090	94



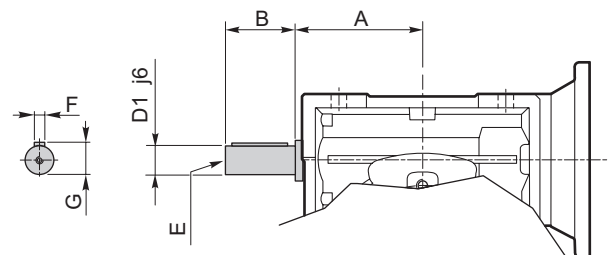
#### Opciones

#### Opções

#### Options

#### VS - Tornillo sin fin sobresaliente / Parafuso saliente / Extended input shaft

CMPU	A	B	D <sub>1</sub> <sub>j6</sub>	E	F	G
01/050	64	30	14	M6	5	16
01/063	75	40	19	M6	6	21.5
01/070	84	40	19	M6	6	21.5
01/075	90	50	24	M8	8	27
01/090	108	50	24	M8	8	27



Construido bajo pedido / Fabricado sob encomenda / Built on request







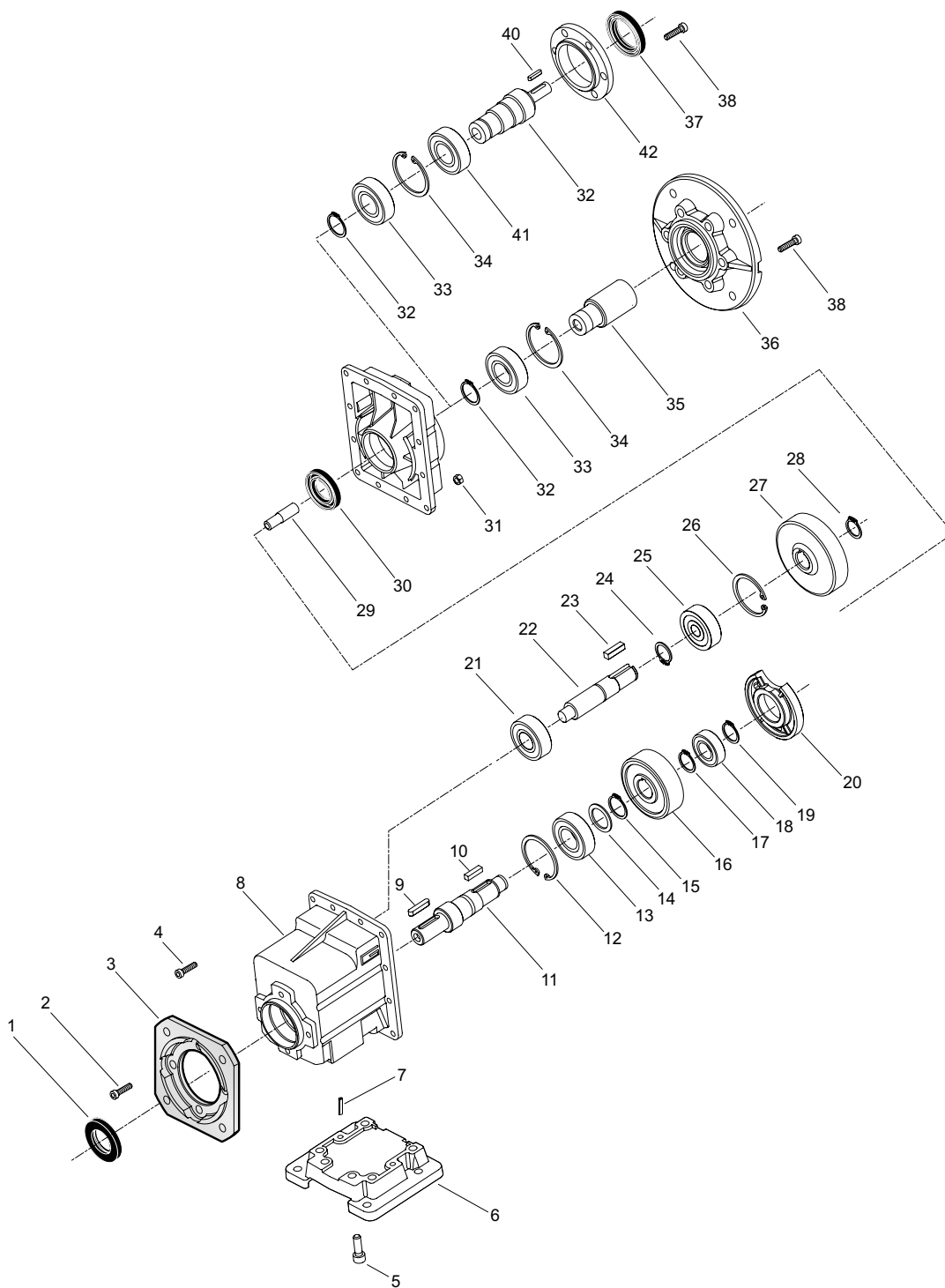
<b>Índice</b>	<b>Índice</b>	<b>Index</b>	<b>Pag. Pág. Page</b>
Listado de refacciones	<i>Listas peças de troca</i>	Spare parts list	
CMG..2	<i>CMG..2</i>	CMG..2	<b>M2</b>
CMG..3	<i>CMG..3</i>	CMG..3	<b>M3</b>
CMB..2	<i>CMB..2</i>	CMB..2	<b>M4</b>
CMB..3	<i>CMB..3</i>	CMB..3	<b>M5</b>
KFT105-FT105	<i>KFT105-FT105</i>	KFT105-FT105	<b>M6</b>
FT146-FT196	<i>FT146-FT196</i>	FT146-FT196	<b>M7</b>
ATS..2	<i>ATS..2</i>	ATS..2	<b>M8</b>
ATS..3	<i>ATS..3</i>	ATS..3	<b>M9</b>
CM026..CM130	<i>CM026..CM130</i>	CM026..CM130	<b>M10</b>
PU	<i>PU</i>	PU	<b>M11</b>
Casquillos de reducción en acero	<i>Bucha de redução em aço</i>	Metal shaft sleeves	<b>M12</b>

Esta sección substituye y anula las ediciones y revisiones previas. Si usted obtiene este catálogo a través de canales de distribución no autorizados o fuera de nuestro control, la versión en vigor no estará garantizada. **En todo caso, la versión más actualizada está disponible en nuestra página de internet [www.transtecno.com](http://www.transtecno.com)**

*Esta seção anula e substitui qualquer edição ou revisão precedente. Caso esta seção não seja encontrada em distribuição controlada, a atualização dos dados aqui contidos não é segura. Neste caso a versão atualizada está disponível no nosso site: [www.transtecno.com](http://www.transtecno.com)*

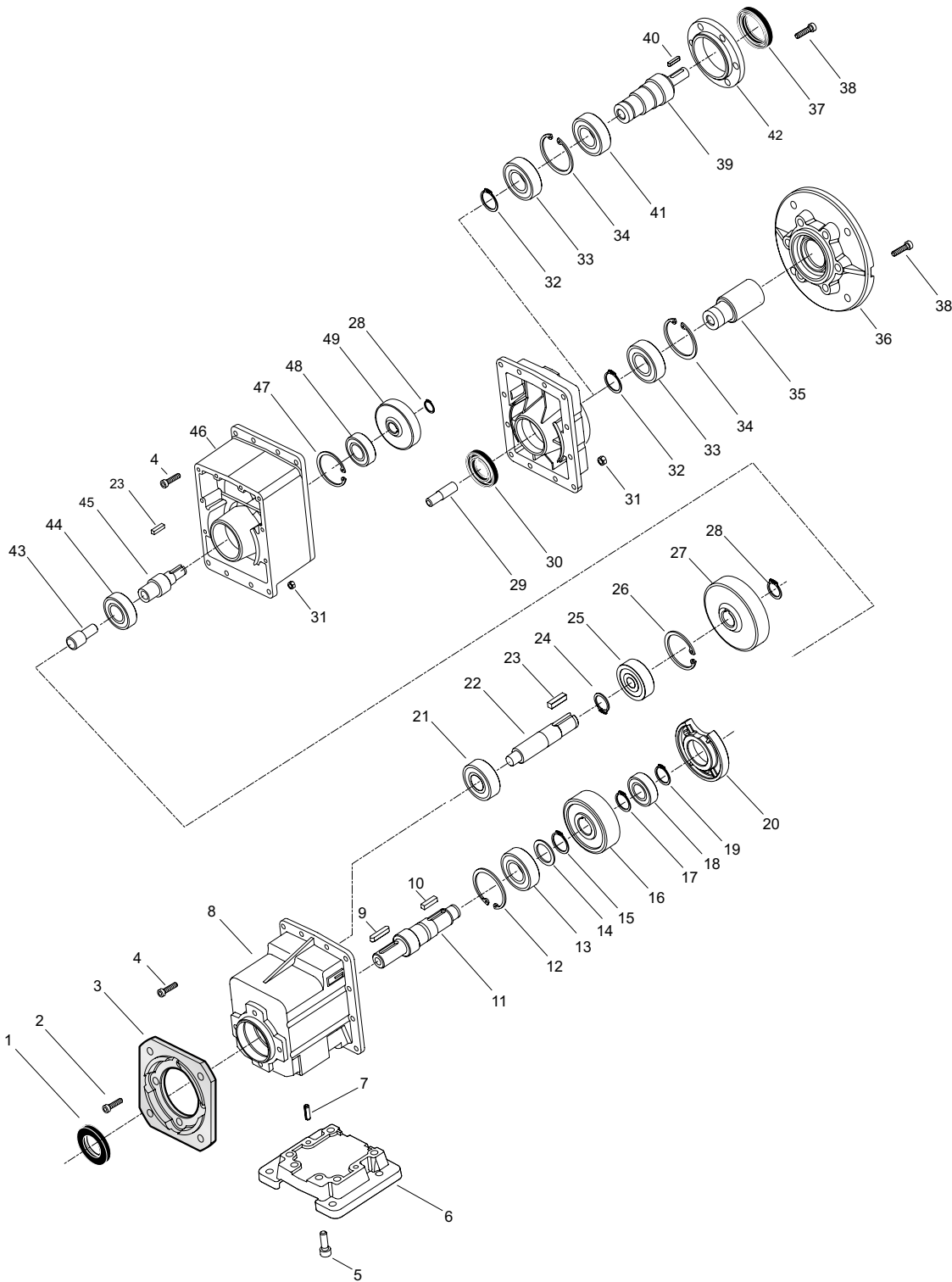
This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)**

**CMG..2**



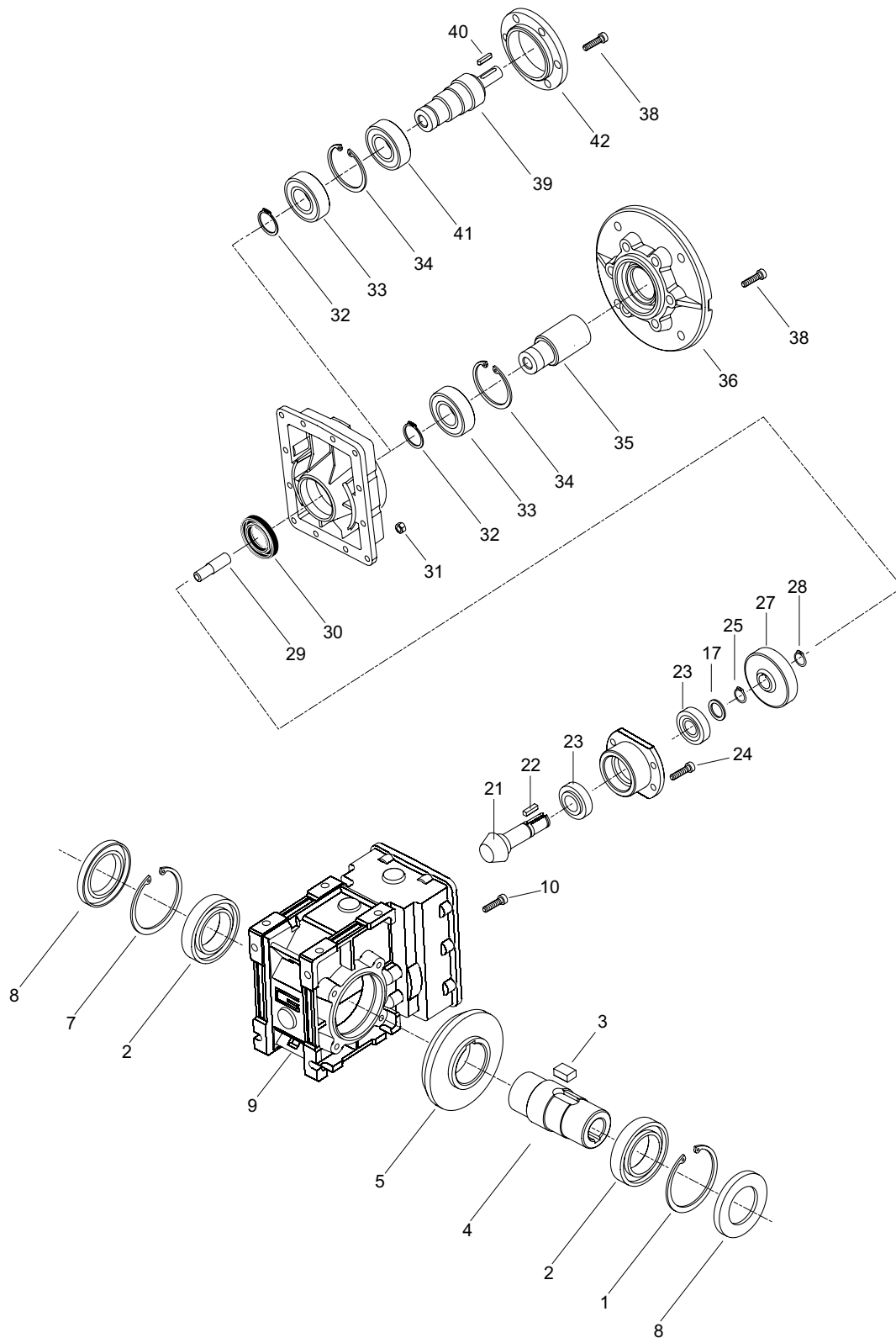
CMG	Sellos de aceite / Anéis / Oil seals		
	1	30	37
002	22/40/7	20/37/7	—
012	30/52/7	25/47/7	35/52/7
022	35/52/7	25/47/7	35/52/7
032	40/72/7	30/52/7	40/60/7
042	45/72/7	30/52/7	40/60/7

**CMG..3**



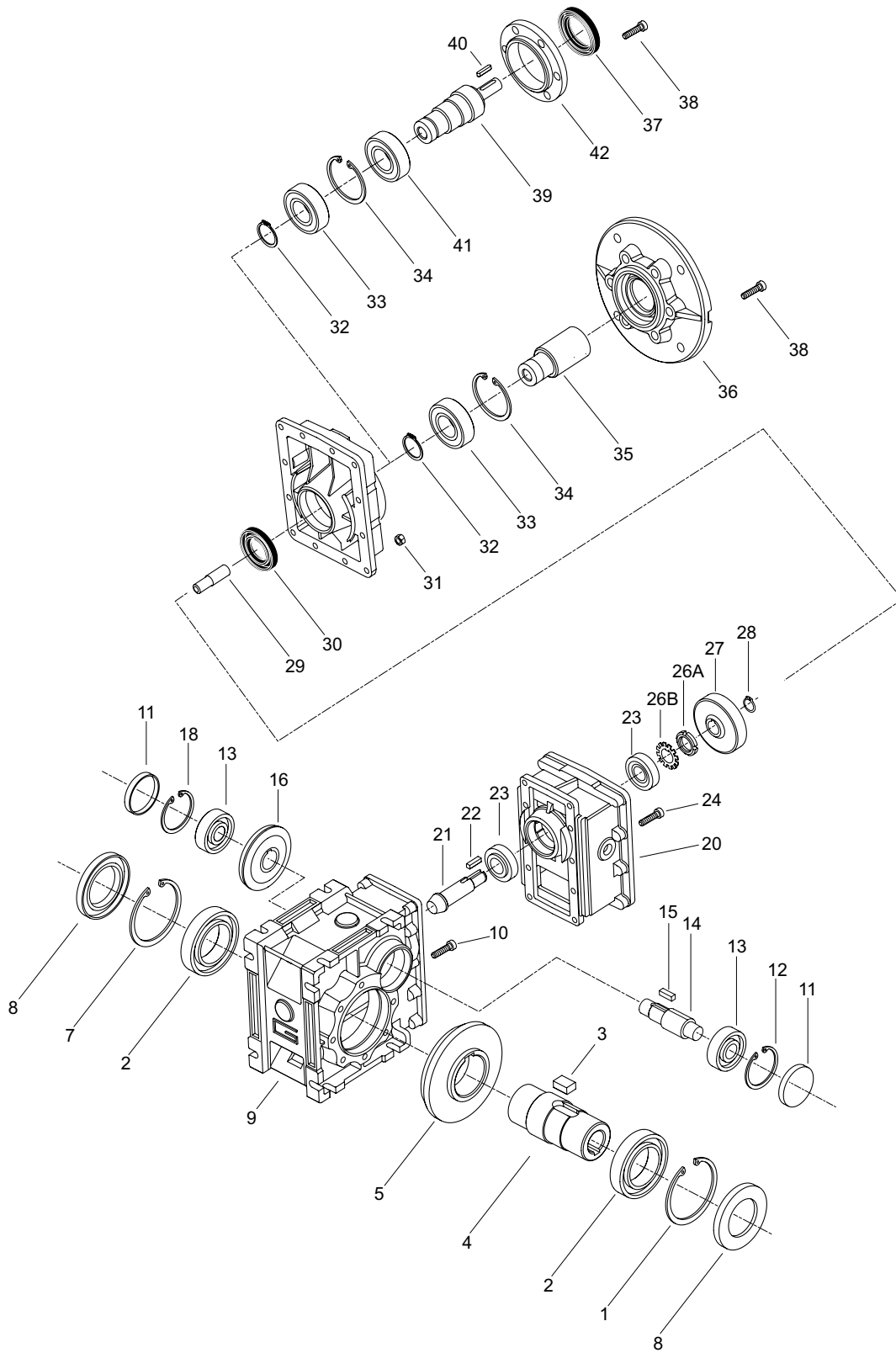
CMG	Sellos de aceite / Anéis / Oil seals		
	1	30	37
013	30/52/7	25/47/7	35/52/7
023	35/52/7	25/47/7	35/52/7
033	40/72/7	30/52/7	40/60/7
043	45/72/7	30/52/7	40/60/7

**CMB ..2**



CMB	Sellos de aceite / Anéis / Oil seals	
	8	30
402	30/55/7	20/37/7
502	40/62/7	20/37/7

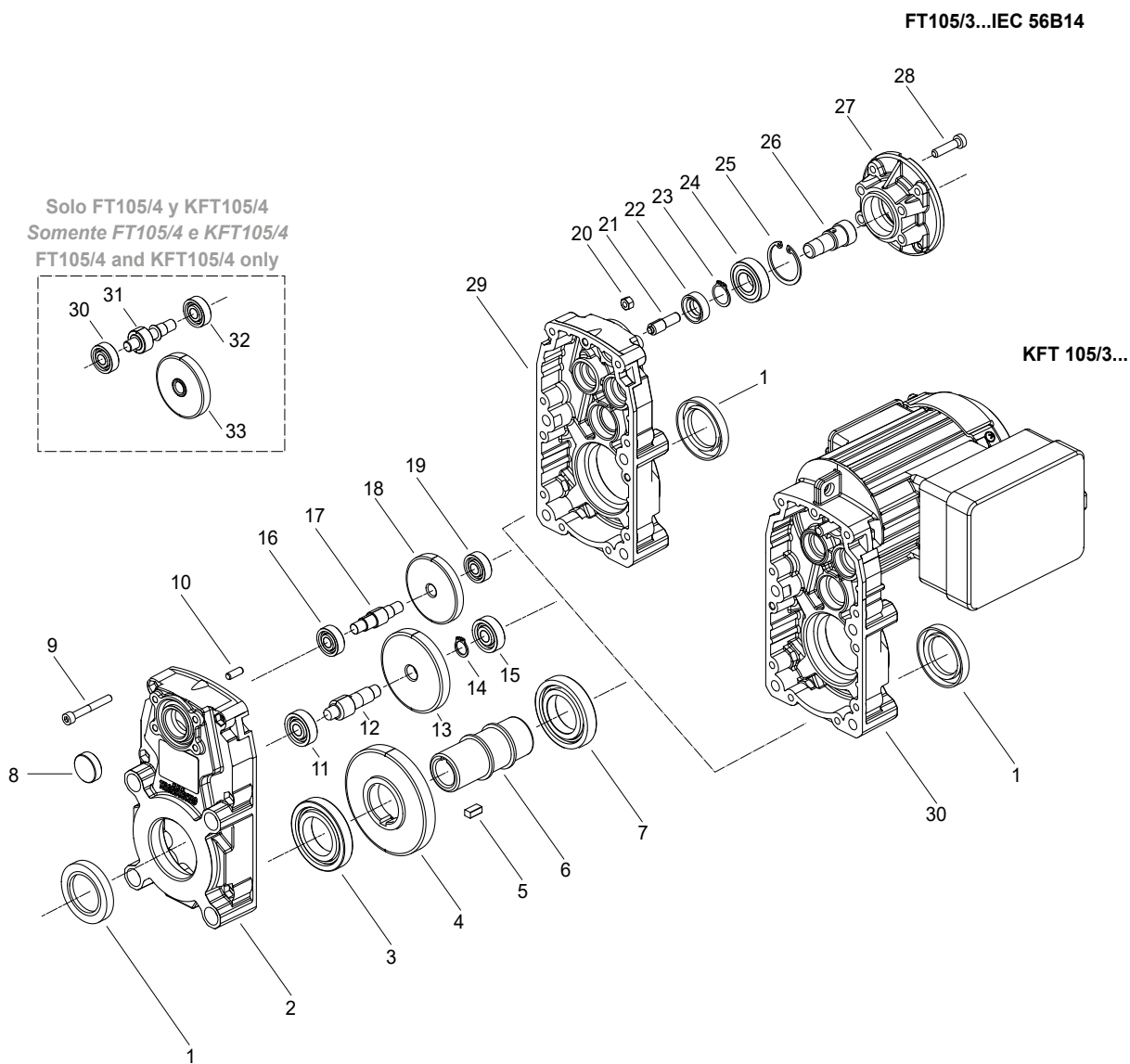
**CMB ..3**



CMB	Sellos de aceite / Anéis / Oil seals			RCA
	8	30	37	11
633	45/75/8	25/47/7	35/52/7	47/7
903	55/90/10	30/52/7	40/60/7	52/7

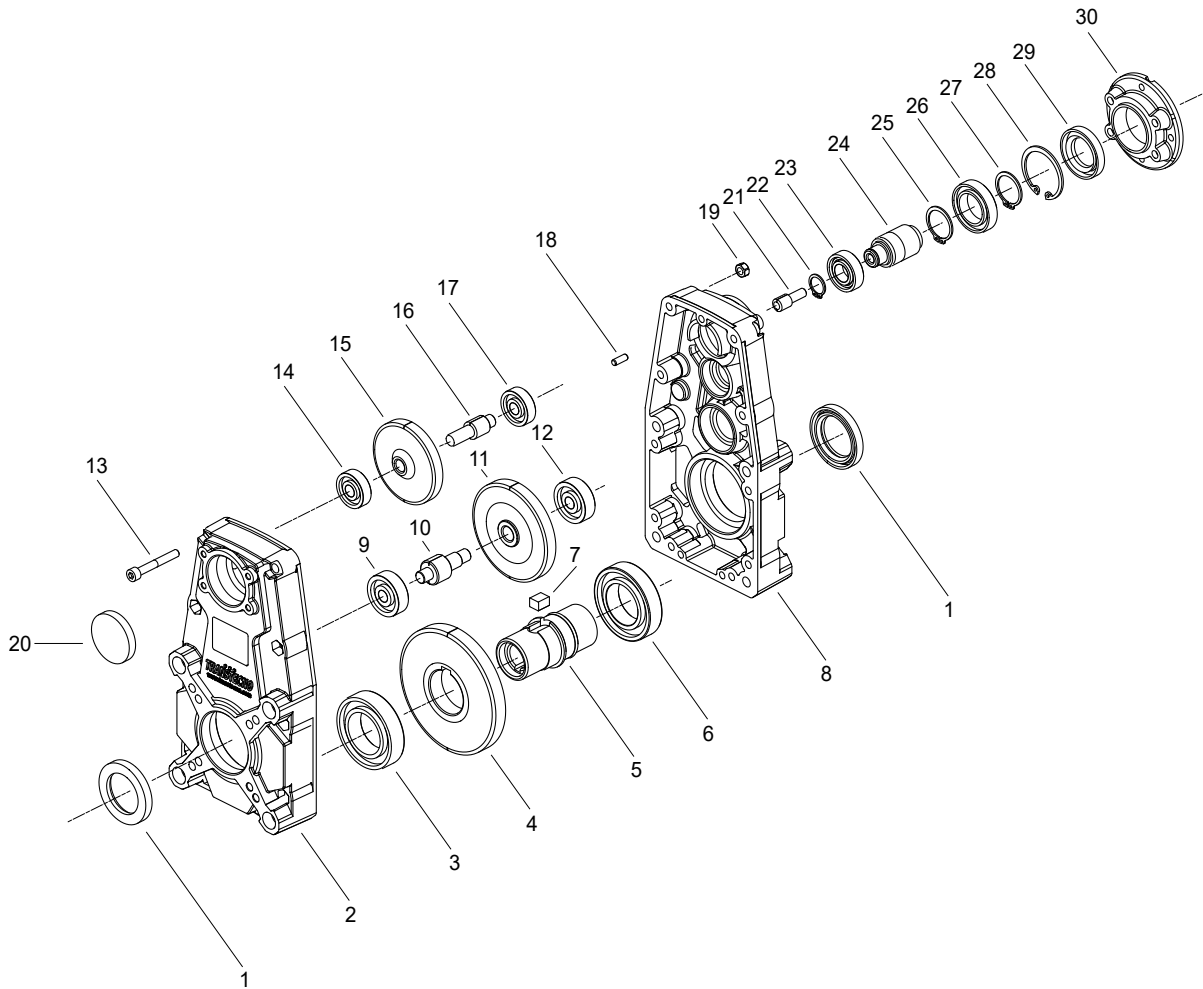


**KFT105 - FT105**



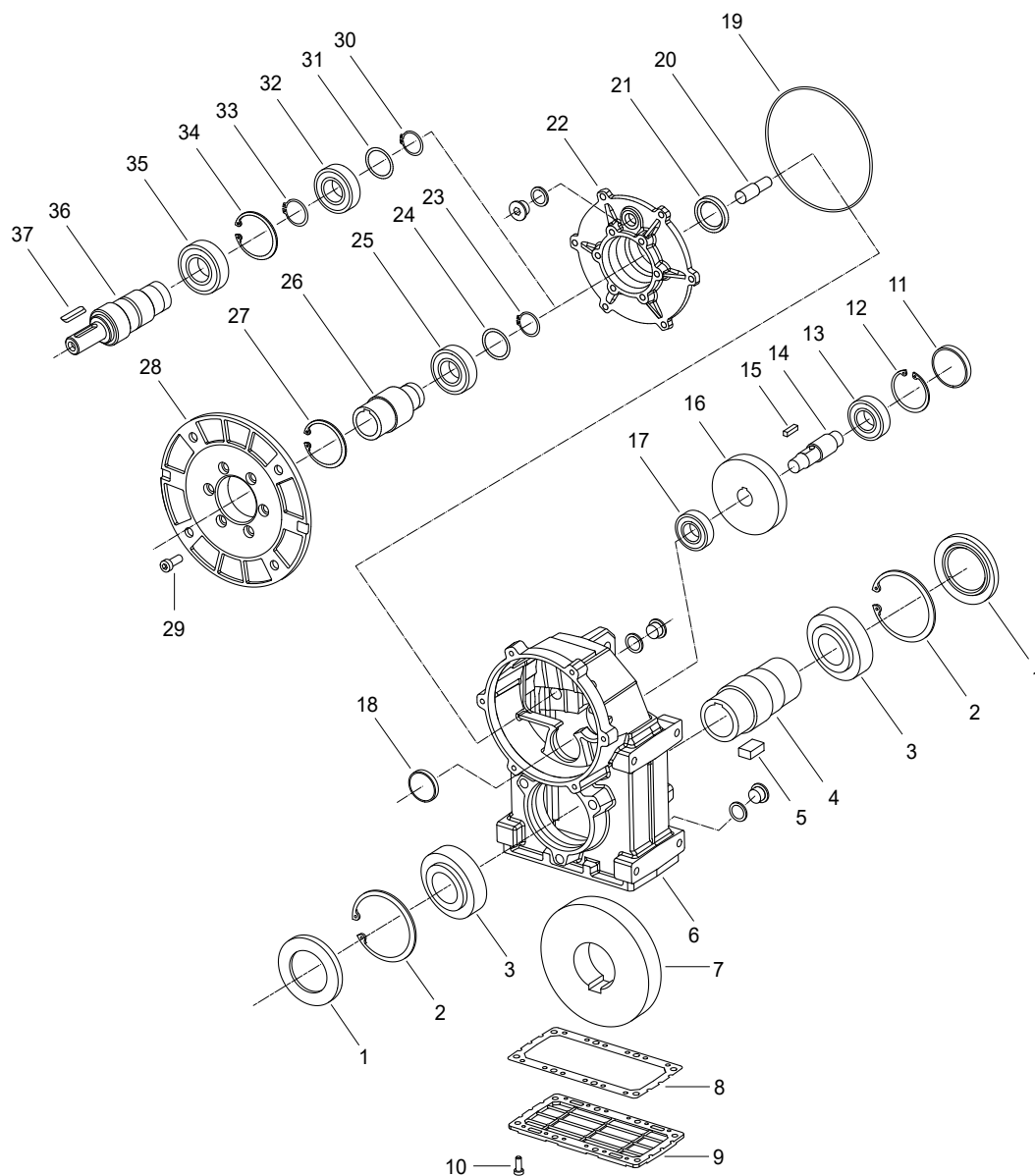
	Sellos de aceite / Anéis / Oil seals		RCA
	1	22	8
<b>FT105</b>			
<b>KFT105</b>	30/47/07	12/22/07	22x7

**FT146 - FT196**



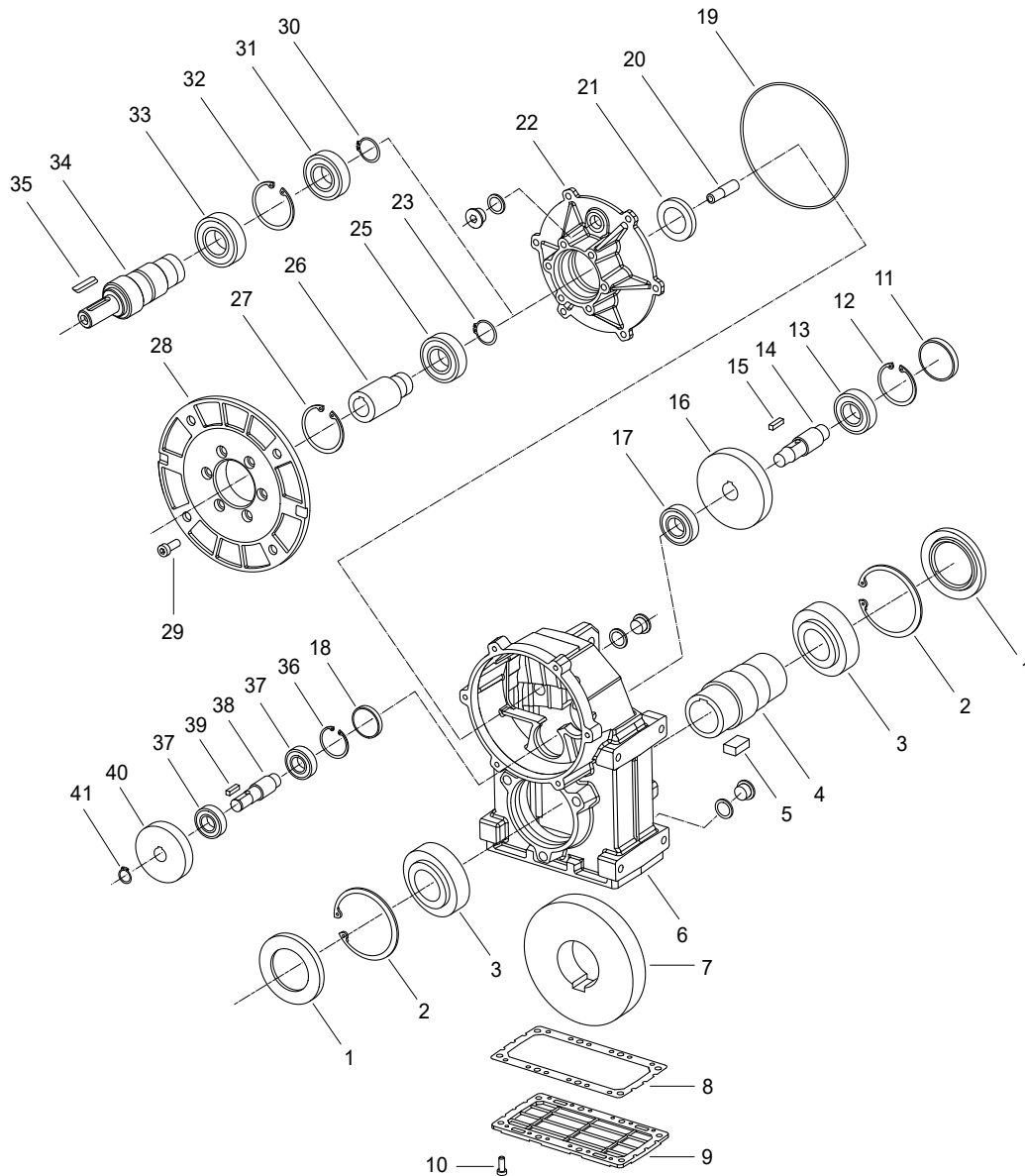
FT	Sellos de aceite / Anéis / Oil seals		RCA
	1	29	20
<b>146</b>	35/52/07	25/42/07	42x7
<b>196</b>	50/72/08	30/47/08	47x7

**ATS .2**



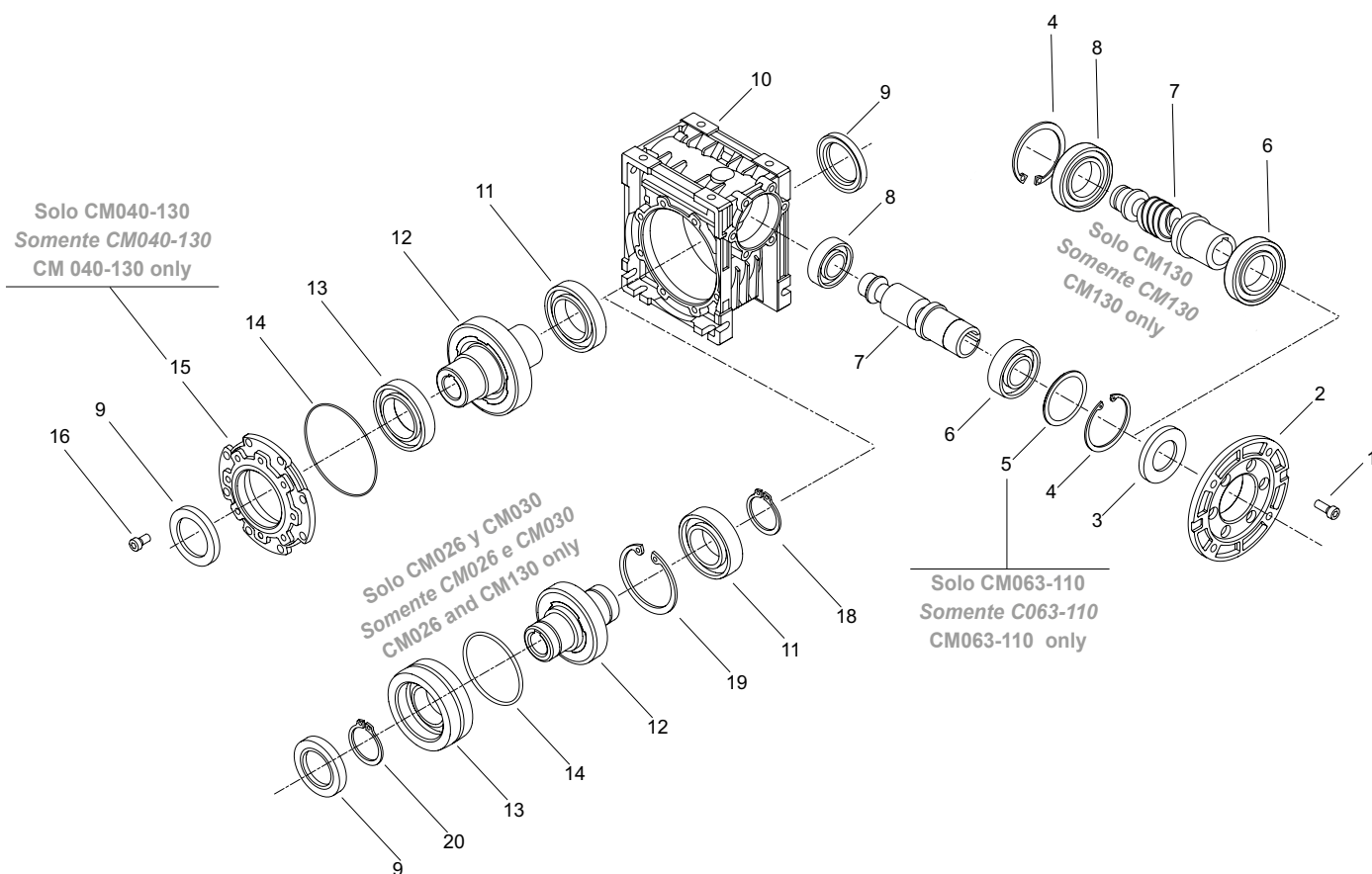
ATS	Sellos de aceite / Anéis / Oil seals		RCA
	1	21	11
<b>902</b>	50/80/8	30/42/7	47x7
<b>912</b>	60/95/8	30/42/7	47x7

**ATS ..3**



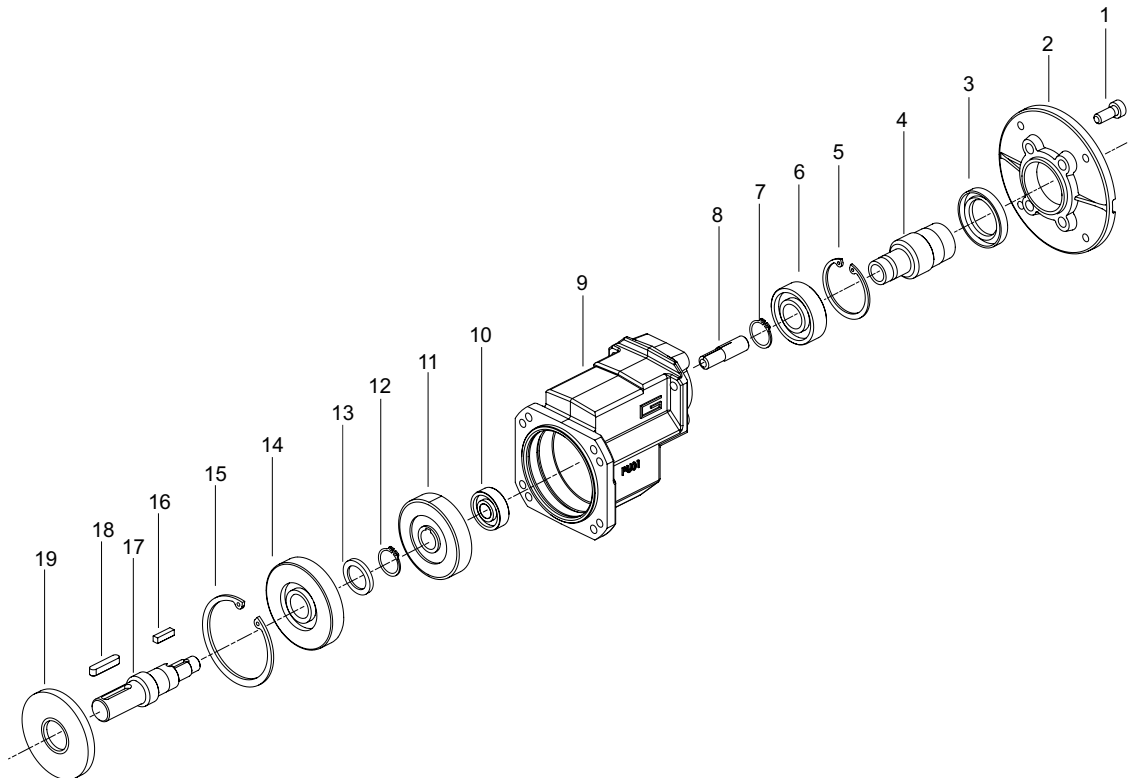
ATS	Sellos de aceite / Anéis / Oil seals		RCA
	1	21	11
<b>903</b>	50/80/8	25/47/7	47x7
<b>913</b>	60/95/8	25/47/7	47x7

**CM026..CM130**



CM	Sellos de aceite / Anéis / Oil seals	
	3	9
<b>026</b>	15/28/7	20/32/5
<b>030</b>	20/37/7	25/40/7
<b>040</b>	25/42/7	30/47/7
<b>050</b>	30/47/7	40/55/7
<b>063</b>	35/62/7	45/65/8
<b>070</b>	40/68/8	45/65/8
<b>075</b>	40/68/7	50/72/8
<b>090</b>	40/68/7	60/85/8
<b>110</b>	50/80/8	65/85/10
<b>130</b>	50/65/8	70/90/10

**PU**

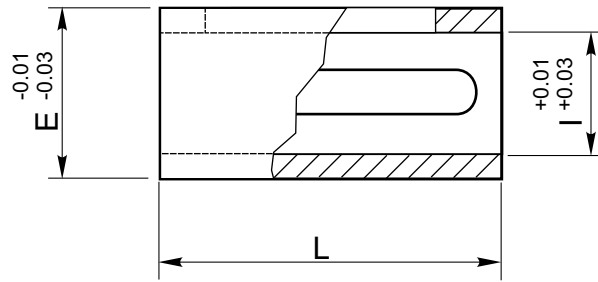


PU	Sellos de aceite / Anéis / Oil seals	
	3	19
01	30/47/7	25/72/7

Casquillos de reducción en acero

Bucha de redução em aço

Metal shaft sleeves



Dimensiones mm. / Dimensões mm. / Dimensions mm.

E	I	L
11	9	22
14	11	28
19	14	40
24	19	50
28	24	60
38	28	70
14	9	26
19	11	35
24	14	40
28	19	40
38	24	70

Notas : los casquillos en acero se suministran con llave.


Nota: As buchas em aço são fornecidas completas com chavetas.

Note: The metal shaft sleeves are supplied complete with keys.



 **TRANSTECNO SRL**  
**HEADQUARTERS**

Company subject to the management  
and coordination of INTERPUMP GROUP SPA  
Via Caduti di Sabbiuno, 11  
40011 Anzola dell'Emilia (BO)  
ITALY  
T+39 051 64 25 811  
F +39 051 73 49 43  
sales@transtecno.com  
[www.transtecno.com](http://www.transtecno.com)

  
**TRANSTECNO®**  
the modular gearmotor  
**MEMBER OF INTERPUMP GROUP**



 **HANGZHOU INTERPUMP  
POWER TRANSMISSIONS CO LTD**  
No.4 Xiuyan Road Fengdu Industry Zone  
Pingyao Town Yuhang District  
Hangzhou City, Zhejiang Province  
311115 – CHINA  
T +86 571 86 92 02 60  
info-china@transtecno.cn  
[www.transtecno.cn](http://www.transtecno.cn)

 **TRANSTECNO IBÉRICA  
THE MODULAR GEARMOTOR, S.A.**  
Carrer de la Ciència, 45  
08840 Viladecans (Barcelona) - SPAIN  
T +34 931 598 950  
info@transtecno.es  
[www.transtecno.es](http://www.transtecno.es)

 **TRANSTECNO B.V.**  
Siliciumweg 32  
3812 SX Amersfoort - NETHERLANDS  
T +31(0) 33 45 19 505  
info@transtecno.nl  
[www.transtecno.nl](http://www.transtecno.nl)

 **TRANSTECNO AANDRIJFTECHNIEK B.V.**  
Siliciumweg 32  
3812 SX Amersfoort - NETHERLANDS  
T +31 (0) 33 20 4 7 006  
info@transtecnoaandrijftechnik.nl  
[www.transtecnoaandrijftechnik.nl](http://www.transtecnoaandrijftechnik.nl)


 **MA TRANSTECNO S.A.P.I. DE C.V.**  
Julián Sepúlveda Dávila #107,  
Parque Industrial SG  
Apodaca, Nuevo León, CP. 66640  
MÉXICO  
T +52 8113340920  
info@transtecno.com.mx  
[www.transtecno.com.mx](http://www.transtecno.com.mx)

 **TRANSTECNO USA**  
8 Creek Parkway,  
Boothwyn PA 19061-8136 - UNITED STATES  
T + 1 (610) 4970154

**TRANSTECNO USA – WEST COAST BRANCH**  
14561 Fryelands Blvd SE  
Monroe, WA 98272 - UNITED STATES  
T +1 360-863-1300  
usaoffice@transtecno.com  
[www.transtecno.com](http://www.transtecno.com)

 **TRANSTECNO CANADA**  
51 B Caldari Road Unit 10  
Vaughan, ON L4K 4G3 - CANADA  
T +1 905 761 0762  
canadaoffice@transtecno.com  
[www.transtecno.com](http://www.transtecno.com)

 **TRANSTECNO INDIA**  
#6A, Sipcot Industrial complex, Phase-1, Elasagiri Road  
Hosur – 635126 Tamilnadu - INDIA  
T +91 4344 274434  
M +91 81443 88800

 **TRANSTECNO BRAZIL**  
Rua Gilberto de Zorzi, 525 Forqueta - CEP. 95115-730  
CX Postal 3544 Caxias do Sul RS – BRAZIL

**TRANSTECNO BRAZIL – SÃO PAULO BRANCH**  
Rua Fortunato Jose Deltreggia, 745 – CEP: 13347-441  
Indaiatuba, São Paulo – BRAZIL  
T +55 19 98927 3906

**TRANSTECNO BRAZIL – PORTO ALEGRE BRANCH**  
Rua Dr. Freire Alemão 155 / 402 - CEP. 90450-060  
Auxiliadora Porto Alegre RS - BRAZIL  
T +55 51 4042 0916  
M +55 51 811 45 962  
braziloffice@transtecno.com  
[www.transtecno.com.br](http://www.transtecno.com.br)

 **INTERPUMP ANTRIEBSTECHNIK GMBH**  
Büro Stuttgart - Dieselstraße 6  
70738 Fellbach - GERMANY  
T +49 (0)171 4781909  
germanoffice@transtecno.com  
[www.transtecno.com](http://www.transtecno.com)

 **TRANSTECNO AUSTRALIA**  
1/2 Access Way, CarrumDowns, Victoria, 3201  
AUSTRALIA  
T +61 (03) 9775 1077  
australiaoffice@transtecno.com  
[www.transtecno.com](http://www.transtecno.com)

 **SALES OFFICE OCEANIA**  
Unit 5, 12 Nyholt Drive, Yatala 4207  
Queensland - AUSTRALIA  
T +61 07 3800 0103  
M +61 04 38060997  
oceaniaoffice@transtecno.com  
[www.transtecno.com.au](http://www.transtecno.com.au)