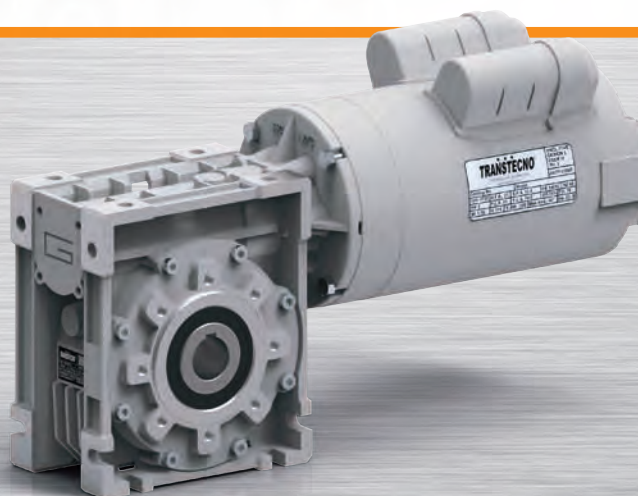
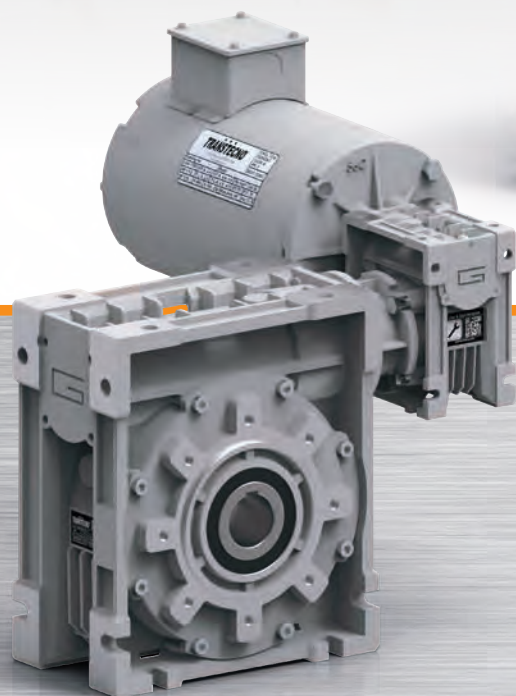
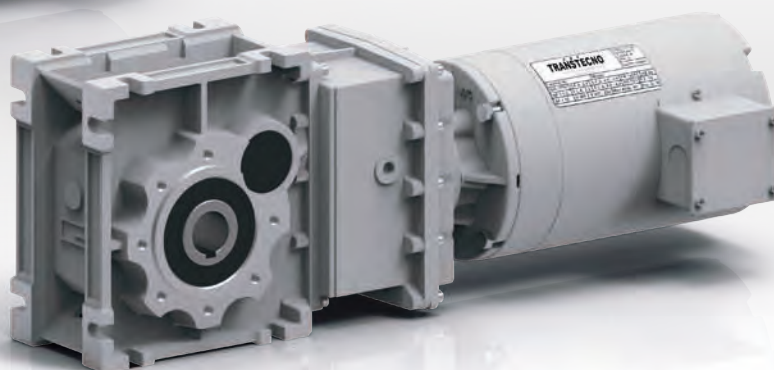
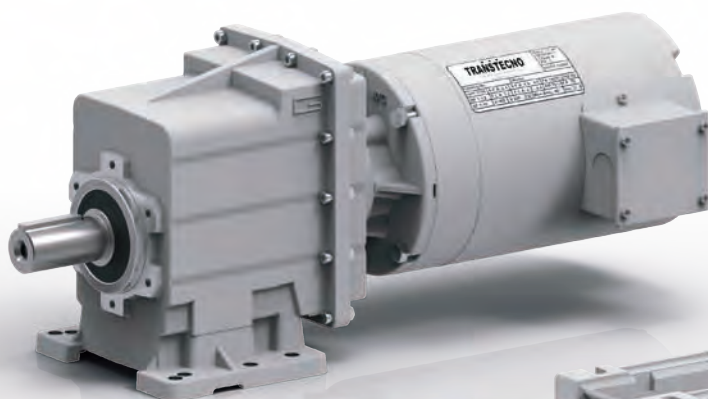
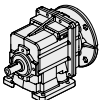
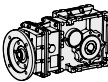
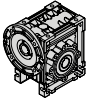
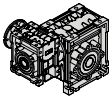


TRANSTECNO[®]
THE MODULAR GEARMOTOR



NEMA DIMENSIONS



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Atex Grupo

La directiva ATEX distingue entre dos grupos de equipos.
 El Grupo I aplica a equipos destinados para uso en minas y el Grupo II aplica a todas las demás áreas de la industria.
 TRANSTECNO ofrece controladores para el Grupo II.

Atex Group

*The ATEX directive distinguishes between two equipments group.
 Group I applies to equipment intended for use in mines and Group II applies to all other areas the surface industry.
 TRANSTECNO offers driver for Group II*

Categoría

La categoría de equipos distingue el nivel de protección necesario y si la protección es para gas-aire o mezclas de polvo-aire. ATEX distingue tres categorías de niveles: 1, 2 y 3 basados en la duración de la exposición a atmósferas potencialmente explosivas, siendo la categoría 1 la más peligrosa.
 Siguiendo la categoría de números, la letra G es para gases y la D para polvo.

Category

*The equipment category distinguishes the level of equipment protection needed and if the protection is for gas-air or dust-air mixtures. ATEX distinguishes three category levels; 1, 2 and 3 based upon the duration of exposure to a potentially explosive atmosphere with category 1 being the most dangerous.
 Following the category number is a letter G for gas or D for dust.*

Zonas

La directriz ATEX 1999/92/EC requiere operadores de planta y acredita la clasificación de lugares en el lugar de trabajo donde pueden haber atmósferas explosivas en áreas peligrosas o no peligrosas.
 Las áreas peligrosas son divididas en zonas:
 Atmósferas con mezclas de gas-aire son divididas en zonas 0, 1 y 2, siendo la zona 0 la más peligrosa.
 Atmósferas con mezclas de polvo-aire son divididas en zonas 20, 21 y 22, siendo la zona 20 la mas peligrosa.

Zones

ATEX guideline 1999/92/EC requires plant operators and approved authorities to classify places at the workplace where explosive atmospheres may occur into hazardous or non-hazardous areas. Hazardous areas are further divided into zones. Atmospheres with gas-air mixtures are divided into zones 0, 1, and 2 with zone 0 being the most hazardous. Atmospheres with dust-air mixtures are divided into zones 20, 21, and 22 with zone 20 being the most hazardous.

Clasificación de Zonas
Zones Classification

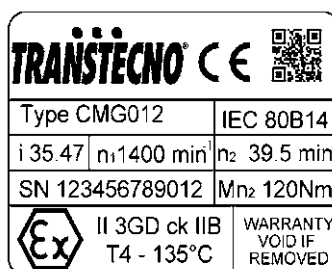
Grupo II Industria en General Group II Surface industry				
Gas / Gas G	Polvo / Dust D			
Zona / Zone		Categoría / Category	Presencia de peligro Hazard Presence	
0	20	1	Continuo / Continuous	Controladores no disponibles para estas áreas de riesgo Drives not available for these hazardous area
1	21	2	Ocasional / Occasional	
2	22	3	Anormal Abnormal	Transtecno ofrece controladores solo para esta área Transtecno offers drives for this area only

Superficies Calientes
Heated surfaces

	Categoría Category	
G	2	La temperatura de superficie máxima no debe EXCEDER del 80% de la temperatura de ignición mínima del gas <i>The maximum surface temperature shall not EXCEED 80% of the minimum ignition temperature of the gas</i>
	3	La temperatura de superficie máxima no debe EXCEDER del 2/3 de la temperatura de ignición mínima del gas <i>The maximum surface temperature shall not EXCEED the minimum ignition temperature of the gas</i>
D	2	La temperatura de superficie máxima no debe EXCEDER del 2/3 de la temperatura de ignición mínima del gas <i>The maximum surface temperature shall not EXCEED 2/3 of the minimum ignition temperature of the gas</i>
	3	

Temperatura Máxima de la Superficie
Maximum surface temperature

Clase Class	Temperatura Máxima de Superficie Maximum temperature surface	Temperatura ambiente de referencia: -20°C < > 40°C <i>Reference ambient temperature:</i> -20°C < > 40°C
	°C	
T1	450	
T2	300	
T3	200	
T4	135	
T5	100	
T6	85	

Denominación de la placa de identificación ATEX
Atex nameplate designation


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 y variadores.

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 **n_1** [rpm]**Input speed**

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

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

Cuando se requieran otras velocidades, contactar con nuestro servicio técnico.

When different speeds are required, contact our Technical Service.

Relación de reducción **i** **Gear ratio**

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 del tornillo sinfín. Con los datos del catálogo se puede obtener con la siguiente fórmula:

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 **n_2** [rpm]**Output speed**

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

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

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

En los motovariadores esto es el resultado de cálculos más complejos, para esto en el catálogo encontrara todos los valores de n_2 en función de la velocidad en entrada y del campo de variación mínimo y máximo.

In mechanical variators this value is more complicated to calculate. In fact the application data need to be known in order to calculate this value. All the n_2 values are given in this catalogue according to the input speed and allowable range.

Par requerido **Mr_2** [lb-inch]**Requested torque**

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).

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

Mn₂ [lb-inch]

Nominal torque

Es el par transmisible a la salida del reductor, en base a la velocidad en entrada n₁ 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 M₂ (par de salida) y sf (factor de servicio):

This is the output torque that can be transmitted by the gearbox according to input speed n₁ 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 M₂ (output torque) and sf (service factor):

$$Mn_2 = M_2 \cdot sf$$

Par transmitido

M₂ [lb-inch]

Output torque

Es el par transmitido en la salida del reductor.

Depende de la potencia P₁ del motor instalado, de las revoluciones de salida n₂ y del rendimiento dinámico Rd.

Se puede calcular mediante la relación:

This is the gearbox's output torque. It is strictly related to power P₁ of the motor installed, output rpm n₂ and dynamic efficiency Rd. It can be calculated with the following formula:

$$M_2 = \frac{63025 \cdot P_1 \cdot Rd}{n_2}$$

o:
or:

$$M_2 = \frac{63025 \cdot P_2}{n_2}$$

dónde:
where:

$$P_2 = P_1 \cdot R$$

Rendimiento

Rd; Rs

Efficiency

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 n₁ 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 tabla de la pág.D7 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%.

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 n₁ 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 in the table on page D7.

On helical gearboxes CMG and CMB the average efficiency is 94%.

Potencia de entrada

P₁ [hp]

Input power

Es la potencia del motor aplicada en la entrada al reductor y se refiere a la velocidad n₁.

Se puede calcular de la siguiente manera:

This is the power applied by the motor at the gearbox input in reference to speed n₁.

It can be calculated with the following formula:

$$P_1 = \frac{M_2 \cdot n_2}{63025 \cdot Rd}$$

Factor de servicio

sf

Service factor

Es una 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.

	A - Carga uniforme	$fa \leq 0.3$
Tipo de carga	B - Carga con choques moderados	$fa \leq 3$
	C - Carga con choques fuertes	$fa \leq 10$

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

- J_e (kgm²) momento de inercia de las masas externas, referido al eje del motor.
- J_m (kgm²) momento de inercia del motor.

Para valores > 10 se recomienda contactar con el Servicio Técnico.

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.

	A - Uniform	$fa \leq 0.3$
Type of load	B - Moderate shocks	$fa \leq 3$
	C - Heavy shocks	$fa \leq 10$

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

- J_e (kgm²) moment of reduced external inertia at the drive-shaft
- J_m (kgm²) moment of inertia of motor.

If $fa > 10$ call our Technical Service.

A

Clase de carga / Load class

Carga uniforme / Uniform load

sf									
h/d	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

Clase de carga / Load class

Carga con choques moderados / Moderate shock load

sf									
h/d	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

Clase de carga / Load class

Carga con choques fuertes / Heavy shock load

sf									
h/d	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

Ejemplo de aplicación:

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**

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 trasportadoras.

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 - 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, molidores a percusión, prensas de excéntrica, plegadoras, mesas giratorias, pulidoras, vibradores, cortadoras.

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.

Application example:

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**

Factor de servicio clase AGMA
AGMA
Service class AGMA

Los números de clases AGMA tienen la misma función del factor de servicio.

Las clases de aplicación son I, II y III siendo la clase III la mas obligada para servicios críticos.

La relación entre el factor de servicio y las clases de aplicación pueden ser resumidas como sigue:

AGMA class numbers have the same function as the service factor. The application classes are I, II, III with class III being the most severe service duty.

The relationship between the service factor and classes of application can be summarized as below:

Aplicación clases AGMA <i>Application class AGMA</i>	Factor de servicio <i>Service factor</i>
I	0.8 - 1.39
II	1.4 - 1.99
III	≥ 2.00

APLICACIÓN	APPLICATION	OPERACIÓN TOTAL/LOAD DURATION		
		0/3 h	3/10 h	10/24 h
AGITADORES O MEZCLADORAS	AGITATORS (mixers)			
Líquidos Puros	Pure Liquids	I	I	II
Líquidos y Sólidos	Liquids and Solids	I	II	II
Líquidos de densidad variable	Liquids - Variable Density	I	II	II
SOPLADORES	BLOWERS			
Centrífugos	Centrifugal	I	I	II
Lóbulo	Lobe	I	II	II
De Aspas	Vane	I	II	II
FABRICACIÓN DE CERVEZA Y DESTILACIÓN	BREWING AND DISTILLING			
Maquinaria para Embotellado	Bottling Machinery	I	I	II
Ollas de Hervor - Servicio Continuo	Brew Kettles - Continuous Duty	II	II	II
Cocinas - Servicio Continuo	Cookers - Continuous Duty	II	II	II
Cubos de Maceración - Servicio Continuo	Mash Tubs - Continuous Duty	II	II	II
Tolva Dosificadora - Arranques Frecuentes	Scale Hopper - Frequent Starts	II	II	II
ENLATADORAS	CAN FILLING MACHINES	I	I	II
VUELCA VAGONES	CAR DUMPERS	II	III	III
REMOLCADOR DE VAGONES	CAR PULLERS	I	II	II
CLARIFICADORES	CLARIFIERS	I	I	II
CLASIFICADORES	CLASSIFIERS	I	II	II
MAQUINARIA PARA TRABAJAR ARCILLA	CLAY WORKING MACHINERY			
Prensa para ladrillo	Brick Press	II	III	III
Máquina de briquetas	Briquette Machine	II	III	III
Amasadora	Pug Mill	I	II	II
COMPACTADORES	COMPACTORS	III	III	III
COMPRESORES	COMPRESSORS			
Centrífugos	Centrifugal	I	I	II
De Lóbulos	Lobe	I	II	II
Alternativos Multicilíndricos	Reciprocating, Multi-Cylinder	II	III	III
Alternativos de Cilindro Único	Reciprocating, Single-Cylinder	III	III	III

Factor de servicio clase AGMA
AGMA
Service class AGMA

APLICACIÓN	APPLICATION	OPERACIÓN TOTAL/LOAD DURATION		
		0/3 h	3/10 h	10/24 h
TRANSPORTADORAS - PROPÓSITO GENERAL	CONVEYORS - GENERAL PURPOSE			
Uniformemente cargado o alimentado	<i>Uniformly loaded</i>	I	I	II
Servicio pesado	<i>Heavy Duty</i>	I	II	II
Servicio severo	<i>Severe Duty</i>	II	III	III
GRÚAS	CRANES			
Montacargas principal - Servicio medio	<i>Main Hoist - Medium Duty</i>	II	II	II
Montacargas principal - Servicio pesado	<i>Main Hoist - Heavy Duty</i>	III	III	III
Reversa	<i>Reversing</i>	II	II	II
Polipasto	<i>Skip Hoist</i>	II	II	II
Recorrido del Carro	<i>Trolley Drive</i>	II	II	II
Recorrido del Puente	<i>Bridge Drive</i>	II	II	II
TRITURADORAS	CRUSHER			
Piedra o mineral	<i>Stone or Ore</i>	III	III	III
DRAGAS	DREDGES			
Bobinas de cable	<i>Cable Reels</i>	II	II	II
Transportadoras	<i>Conveyors</i>	II	II	II
Unidades de Accionamiento de Cabezal Cortante	<i>Cutter Head Drives</i>	III	III	III
Bombas	<i>Pumps</i>	III	III	III
Cedazos	<i>Screen Drives</i>	III	III	III
Apiladores	<i>Stackers</i>	II	II	II
Cabrestantes Utilitarios (Malacates)	<i>Winches</i>	II	II	II
ELEVADORES	ELEVATORS			
De Cangilones	<i>Bucket</i>	I	II	II
Descarga Centrífuga	<i>Centrifugal Discharge</i>	I	I	II
Escaleras mecánicas	<i>Escalators</i>	I	I	II
Flete	<i>Freight</i>	I	II	II
Descarga por gravedad	<i>Gravity Discharge</i>	I	I	II
EXTRUSORAS	EXTRUDERS			
Generales	<i>General</i>	II	II	II
Plásticos - Variador de velocidad	<i>Plastics - Variable Speed Drive</i>	III	III	III
Plásticos - Accionador de velocidad fija	<i>Plastics - Fixed Speed Drive</i>	III	III	III
Caucho/Hule - Operación de tornillo continuo	<i>Rubber - Continuous Screw Operation</i>	III	III	III
Rubber - Operación de tornillo intermitente	<i>Rubber - Intermittent Screw Operation</i>	III	III	III

Factor de servicio clase AGMA
AGMA
Service class AGMAA

APLICACIÓN	APPLICATION	OPERACIÓN TOTAL/LOAD DURATION		
		0/3 h	3/10 h	10/24 h
VENTILADORES	FANS			
Centrífugos	Centrifugal	I	I	II
Torres de enfriamiento	Cooling Towers	III	III	III
Tiro forzado	Forced Draft	II	II	II
Tiro inducido	Induced Draft	II	II	II
Industrial y minería	Industrial and Mine	II	II	II
ALIMENTADORES	FEEDERS			
Salpicaderos (tipo Mandil)	Apron	I	II	II
Correas	Belt	I	II	II
Disco	Disc	I	I	II
Reciprocante	Reciprocating	II	III	III
Tornillo	Screw	I	II	II
INDUSTRIA ALIMENTICIA	FOOD INDUSTRY			
Cocina de Cereales	Cereal Cooker	I	I	II
Mezclador de pasta	Dough Mixer	II	II	II
Picadoras de carne	Meat Grinders	II	II	II
Rebanadoras	Slicers	I	II	II
GENERADORES Y EXCITADORES	GENERATORS AND EXCITERS	II	II	II
MOLINOS DE MARTILLO	HAMMER MILLS	III	III	III
MONTACARGAS	HOISTS			
Alta Resistencia	Heavy Duty	III	III	III
Resistencia Media	Medium Duty	II	II	II
Contenedor	Skip Hoist	II	II	II
LAVADORAS	LAUNDRY			
Tinas	Tumblers	II	II	II
Máquinas de lavado	Washers	II	II	III
INDUSTRIA DE LA MADERA	LUMBER INDUSTRY			
Descortezador - Automático	Barkers - Spindle Feed	II	II	II
Descortezador - Principal	Barkers - Main Drive	III	III	III
Transportador - Quemador	Conveyors - Burner	II	II	II
Transportadoras - Principal o Servicio pesado	Conveyors - Main or Heavy Duty	II	II	II
Transportadora Principal de Troncos	Conveyors - Main log	III	III	III
Conveyors - Sierra de cadena, sierra de troceado	Conveyors - Re-saw, Merry-Go-Round	II	II	II
Transportador - Losas	Conveyors - Siab	III	III	III
Transportador - Carrusel	Conveyors - Transfer	II	II	II
Transferencia por cadena	Chains - Floor	II	II	II
Transferencia de Vía de Grúa	Chains - Green	II	II	III

Factor de servicio clase AGMA
AGMA
Service class AGMA

APLICACIÓN	APPLICATION	OPERACIÓN TOTAL/LOAD DURATION		
		0/3 h	3/10 h	10/24 h
Sierras cortadoras - Cadena	<i>Cut-Off Saws - Chain</i>	II	II	III
Sierras cortadoras - Arrastre	<i>Cut-Off Saws - Drag</i>	II	II	III
Tambores de descortezado	<i>Debarking Drums</i>	III	III	III
Alimentadores - De Canteadora	<i>Feeds - Edger</i>	II	II	II
Alimentadores - Multiple	<i>Feeds - Gang</i>	II	III	III
Alimentadores - de Desbastadora	<i>Feeds - Trimmer</i>	II	II	II
Plataforma de registro	<i>Log Deck</i>	III	III	III
Disparos de registro - tipo inclinado- tipo circular	<i>Log Hauls - Incline - Well Type</i>	III	III	III
Conexión de dispositivos giratorios	<i>Log Turning Devices</i>	III	III	III
Alimentación de la aplanadora	<i>Planer Feed</i>	II	II	II
Aplanadora en inclinación de elevadores	<i>Planer Tilting Hoists</i>	II	II	II
Rodillo - de extracción -activos - de Cajas	<i>Rolls - live-off brg. - Roll Cases</i>	III	III	III
Mesa de Clasificación	<i>Sorting Table</i>	II	II	II
Elevador con caja de volteo	<i>Tipple Hoist</i>	II	II	II
Transportador - De Cadenas	<i>Transfers - Chain</i>	II	II	III
Transportador -Tipo Grúa	<i>Transfers - Craneway</i>	II	II	III
Unidades de batea	<i>Tray Drives</i>	II	II	II
Sepilladora para chapas	<i>Veneer Lathe Drives</i>	II	II	II
LAMINADORAS DE METAL	METAL MILLS			
Accionamiento Principal y Carro de Banco de Estirado	<i>Draw Bench Carriage and Main Drive</i>	II	II	II
Mesa de salida - Controlador Grupal no reversible	<i>Runout Table - Non reversing Group Drives</i>	II	II	II
Mesa de salida - Controlador individual no reversible	<i>Runout Table - Non reversing Individual Drives</i>	III	III	III
Mesas Transportadoras Reversibles	<i>Runout Table - Reversing</i>	III	III	III
Impulsadores de Placa	<i>Slab Pushers</i>	II	II	II
Cizallas	<i>Shears</i>	III	III	III
Trefilado	<i>Wire drawing</i>	II	II	II
Máquina de bobinado de alambre	<i>Wire Winding Machine</i>	II	II	II
BANDAS DE METAL -MAQUINARIA DE PROCESAMIENTO-	METAL STRIP PROCESSING MACHINERY			
Bridas	<i>Bridles</i>	II	II	II
Bobinadoras y Desbobinadoras	<i>Coilers and Uncoilers</i>	I	I	II
Arista - Condensador de ajuste	<i>Edge Trimmers</i>	I	II	II
Laminadora de Rodillos	<i>Flatteners</i>	II	II	II
Acumuladores	<i>Loopers (Accumulators)</i>	I	I	I
Rodillos de arrastre	<i>Pinch Rolls</i>	II	II	I
Cuchillas de corte	<i>Scrap Choppers</i>	II	II	II
Cizalla	<i>Shears</i>	III	III	III
Cortadoras	<i>Slitters</i>	I	II	II

Factor de servicio clase AGMA
AGMA
Service class AGMA

APLICACIÓN	APPLICATION	OPERACIÓN TOTAL/LOAD DURATION		
		0/3 h	3/10 h	10/24 h
MOLINOS TIPO ROTATORIO	MILLS, ROTARY TYPE			
Bola y varilla - Engranaje tipo espolón	Ball and Rod - Spur Ring Gear	III	III	III
Bola y varilla - Engranaje anular helicoidal	Ball and Rod - Helical Ring Gear	II	II	II
Bola y varilla - Conexión directa	Ball and Rod - Direct Connected	III	III	III
Bola y varilla - Hornos de cemento	Ball and Rod - Cement Kilns	II	II	II
Bola y varilla - Secadores y enfriadores	Ball and Rod - Dryers and Coolers	II	II	II
FABRICACIÓN DE PAPEL 1)	PAPER MILLS 1)			
Agitador / Mezclador	Agitator (Mixer)	II	II	II
Agitador para líquidos puros	Agitator for Pure liquors	II	II	II
Descortezadora Hiráulica	Barking Drums	III	III	III
Descortezadora - Mecánica	Barkers - Mechanical	III	III	III
Blanqueador	Beater	II	II	II
Batidora Desfibradora	Breaker Stack	II	II	II
Calandrador 2)	Calender 2)	II	II	II
Máquina Convertidora	Chipper	III	III	III
Alimentador de viruta	Chip Feeder	II	II	II
Rodillos de recubrimiento	Coating Rolls	II	II	II
Transportadoras - Viruta, corteza, químicos	Conveyors - Chip, Bark, Chemical	II	II	II
Transportadora - Troncos -incluye placa-	Conveyors - Log (including Slab)	III	III	III
Enrolladores	Couch Rolls	II	II	II
Cortadora	Cutter	III	III	III
Moldes cilíndricos	Cylinder Molds	III	III	III
Secadoras 2)	Dryers 2)			
Máquina de papel	Paper Machine	II	II	II
Transportadoras	Conveyor Type	II	II	II
Prensa de Impresión	Embosses	II	II	II
Extrusora	Extruder	II	II	II
Rodillos Fourdrinier	Fourdrinier Rolls	II	II	II
Refinadores cónicos Jordán	Jordan Pulverizer	II	II	II
Lavadoras y Espesadoras	Kiln Drive	II	II	II
Enrolladora de Papel	Paper Rolls	II	II	II
Tina de Mezcla	Platter	II	II	II
Prensadora -Filtro y succión-	Presses - Felt & Suction	II	II	II
Despulpadora	Pulper	III	III	III
Bombas de vacío	Pumps - Vacuum	II	II	II
Carretes (tipo superficial)	Reel (Surface Type)	II	II	II
Mallas - Viruta	Screens - Chip	II	II	II

Factor de servicio clase AGMA
AGMA
Service class AGMA

APLICACIÓN	APPLICATION	OPERACIÓN TOTAL/LOAD DURATION		
		0/3 h	3/10 h	10/24 h
Mallas - Rotatoria	Screens - Rotary	II	II	II
Mallas - Vibratoria	Screens - Vibrating	III	III	III
Prensa Encoladora	Size Press	II	II	II
Súper calandradora 3)	Supercalendar3)	II	II	II
Espesador (Motor AC)	Thickener (AC Motor)	II	II	II
Espesador (Motor DC)	Thickener (DC Motor)	II	II	II
Lavadora (Motor AC)	Washer (AC Motor)	II	II	II
Lavadora (Motor DC)	Washer (DC Motor)	II	II	II
Soporte de rollos	Wind and Unwind Stand	I	I	I
Enrolladoras (tipo superficial)	Winders (Surface Type)	II	II	II
Secadoras Yankee 2)	Yankee Dryers 2)	II	II	II
INDUSTRIAS DE PLÁSTICOS - PROCESOS PRIMARIOS	PLASTICS INDUSTRY - PRIMARY PROCESSING			
Mezcladores internos intensivos - por lotes	Intensive Internal Mixers - Batch Mixers	III	III	III
Mezcladores internos intensivos - continuos	Intensive Internal Mixers - Continuous Mixers	II	II	II
Molino de caída por lotes -2 rollos lisos-	Batch Drop Mill - 2 smooth rolls	II	II	II
Alimentación continua, mantenimiento y molino de mezcla	Continuous Feed, Holding & Blend Mill Calendars	II	II	II
INDUSTRIAS DE PLÁSTICOS - PROCESOS SECUNDARIOS	PLASTICS INDUSTRY - SECONDARY PROCESSING			
Moldeadores de Soplado	Blow Molders	II	II	II
De revestimiento	Coating	II	II	II
De Película	Film	II	II	II
De Tubo	Pipe	II	II	II
Pre plastificantes	Pre-Plasticizers	II	II	II
De Barras	Rods	II	II	II
De Lámina	Sheet	II	II	II
De Tubería	Tubing	II	II	II
EXTRACTORES -REMOLQUE DE BARCAZAS	PULLERS - BARGE HAUL	II	II	II
BOMBAS	PUMPS			
Centrifugas	Centrifugal	I	I	II
Dosificadoras	Proportioning	II	II	II
Reciprocante - Actuación simple, 3 o mas cilindros	Reciprocating - Single Acting, 3 or more cylinders	II	II	II
Reciprocante - Actuación doble, 2 o mas cilindros	Reciprocating - Double Acting, 2 or more cylinders	II	II	II
De engrane giratorio	Rotary - Gear Type	I	I	II
Rotatoria -Lóbulo	Rotary - Lobe	I	I	II
Rotatoria -Paletas	Rotary - Vane	I	I	II

Factor de servicio clase AGMA
AGMA
Service class AGMA

APLICACIÓN	APPLICATION	OPERACIÓN TOTAL/LOAD DURATION		
		0/3 h	3/10 h	10/24 h
INDUSTRIA DEL CAUCHO	RUBBER INDUSTRY			
Mezcladores internos intensivos - Mezcladoras por lotes	<i>Intensive Internal - Batch Mixers</i>	III	III	III
Mezcladores internos intensivos -Mezcladores continuos	<i>Intensive Internal - Continuous Mixers</i>	II	II	II
Molinos Mezcladores -2 rodillos lisos	<i>Mixing Mill - 2 smooth rolls</i>	II	II	II
Molinos Mezcladores -2 rollo, 1 rodillo corrugado-	<i>Mixing Mill - 1 or 2 corrugated rolls</i>	III	III	III
Molino de Lote Descendente – 2 rodillos lisos	<i>Batch Drop Mill - 2 smooth rolls</i>	II	II	II
Quebradora en Caliente – 2 rodilloso, 1 rodillo corrugado	<i>Cracker Warmer - 2 roll, 1 corrugated roll</i>	III	III	III
Quebradora -2 rodillos corrugados	<i>Cracker - 2 corrugated rolls</i>	III	III	III
Ligas, Alimentación & molinos mezcladores - 2 rodillos	<i>Holding, Feed & Blend Mill - 2 rolls</i>	II	II	II
Refinadores -2 rodillos	<i>Refiner - 2 rolls</i>	II	II	II
Calandrias para Caucho	<i>Calenders</i>	II	II	II
MEZCLADOR DE ARENA	SAND MULLER	II	II	II
EQUIPOS DE TRATAMIENTO DE AGUAS RESIDUALES	SEWAGE DISPOSAL EQUIPMENT			
Cribas de barra	<i>Bar Screens</i>	II	II	II
Alimentadores químicos	<i>Chemical Feeders</i>	II	II	II
Cribas de desagüe	<i>Dewatering Screens</i>	II	II	II
Rompedores de espuma	<i>Scum Breakers</i>	II	II	II
Mezcladores lentos o rápidos	<i>Slow or Rapid Mixers</i>	II	II	II
Colector de Sedimentos	<i>Sludge Collectors</i>	II	II	II
Espesadores	<i>Thickener</i>	II	II	II
Filtros de vacío	<i>Vacuum Filters</i>	II	II	II
CRIBAS	SCREENS			
Para limpieza de Aire	<i>Air Washing</i>	I	I	II
Giratorias de Piedra o Grava	<i>Rotary - Stone or Gravel</i>	II	II	II
Toma de Agua Movil	<i>Traveling Water Intake</i>	I	I	I
TRANSPORTADORES HELICOIDALES	SCREW CONVEYORS			
Uniformemente cargado o alimentado	<i>Uniformly loaded or Fed</i>	I	I	II
Servicio pesado	<i>Heavy Duty</i>	I	II	II
INDUSTRIA AZUCARERA	SUGAR INDUSTRY			
Cortadora de remolacha	<i>Beet Slicer</i>	III	III	III
Cortadoras de Caña	<i>Cane Knives</i>	II	II	II
Trituradoras	<i>Crushers</i>	II	II	II
Molinos (terminal de baja velocidad)	<i>Mills (low speed end)</i>	III	III	III

Factor de servicio clase AGMA

AGMA

Service class AGMA

APLICACIÓN	APPLICATION	OPERACIÓN TOTAL/LOAD DURATION		
		0/3 h	3/10 h	10/24 h
INDUSTRIA TEXTIL	TEXTILE INDUSTRY			
Enrolladoras	Batchers	II	II	II
Calandrias	Calendars	II	II	II
Cardas	Cards	II	II	II
Tambores de Secado	Dry Cans	II	II	II
Secadores	Dyeing Machinery	II	II	II
Telares	Looms	II	II	II
Planchadoras	Mangles	II	II	II
Perchadoras	Nappers	II	II	II
Rellenadoras	Pads	II	II	II
Encoladoras	Slashers	II	II	II
Enjabonadoras	Soapers	II	II	II
Hilanderas	Spinners	II	II	II
Bastidores Tensores	Tenter Frames	II	II	II
Lavadoras	Washers	II	II	II
Enrolladoras	Winders	II	II	II

Notas sobre la tabla de FACTOR DE SERVICIO PARA REDUCTORES:

1) La clasificación de los números listados para la aplicación de la industria del papel son consistentes con los mostrados en la información técnica de la TAPPI (Asociación Técnica de la industria del papel y la pulpa), hoja 0406- 18 1967: factores de servicio para engranajes en servicios pesados en la industria del papel y la pulpa.

2) Solo para transporte anti fricción.

3) Un factor de servicio de 1.00 puede ser aplicado a la velocidad base de una súper calandradora que opera sobre caballos de fuerza con un rango de velocidad constante y en el rango de la constante del torque donde la velocidad de la potencia sea mayor que 1.5 a 1. Un número de clase II es aplicable a súper calandradoras que operan en todo el rango de velocidad con par constante o cuando la gama de velocidades de los caballos de fuerza constante es menor de 1.5 a 1.

Notes to GEARMOTOR SERVICE FACTOR table:

1) The class numbers listed for paper mill applications are consistent with those shown in TAPPI (Technical Association of Pulp and Paper Industry) Technical Information Sheet 0406-18 1967, Service Factors for Gears on major Equipment in the Paper and Pulp Industry.

2) Anti-friction bearings only.

3) A Class Number of I may be applied at base speed of a supercalendar operating over a speed range of part-range constant horsepower and part-range constant torque where the constant horsepower speed range is greater than 1.5 to 1. A Class Number of II is applicable to supercalendars operating over the entire speed range at constant torque or where the constant horsepower speed range is less than 1.5 to 1.

Carga radial

R; R₂ [N]

Radial load

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:

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:

$$R = \frac{2 \cdot M_2 \cdot kr}{d} \leq R_2$$

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

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

Señalamos que los valores R₂ son válidos para cargas aplicadas a la mitad del eje de salida, entonces la comparación debe hacerse en las mismas condiciones.

Keep in mind that values R₂ 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

A; A₂ [N]

Axial load

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 A₂ en el eje es:

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 A₂ 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 A₂, consultar con nuestro servicio técnico.

If axial load A that acts on the shaft is greater than A₂, contact our Technical Service.

Seleccionando el motorreductor

Selecting the gearmotors

Para seleccionar el motorreductor requerido realizar el siguiente procedimiento:

To select the required gearmotor, perform the procedure below:

1. Determinar el factor de servicio *f_s* 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 de del motor P usando las siguientes 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:

$$P = \frac{M \cdot n_2}{63025 \cdot Rd}$$

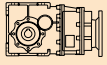
Motor reductor
Gearmotor

donde Rd es para la eficiencia dinámica (indicada en la página D6) y n₂ indica la salida requerida RPM del motorreductor.

where Rd stands for the dynamic efficiency (indicated on page D6) and n₂ indicates the required output rpm of the gearmotor.

Seleccionando el motorreductor

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 sf es igual o mayor que la unidad calculada en el punto 1).

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		
0.16							
0.12 kW (1750 rpm)	348.2	28	12.7	III	5.03	CMG002	56C
	287.0	34	10.5	III	6.10		56C
	233.6	41	8.5	III	7.49		56C
	194.7	50	8.9	III	8.99		56C

Ejemplo / Example:

Aplicación / Application:
Cinta transportadora / Conveyor belt

P : 0.16 hp
sf : 8
 n_2 : 230 rpm

Unidad de potencia seleccionado / Power unit selected:

CMG002 $i = 7.49$, $P_1 = 0.16$ hp, $sf = 8.5$

Selecting the gearmotors

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 sf is equal to or greater than that calculated at point 1).

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		
0.25							
0.18 kW (1750 rpm)	350	40	9.2	III	5	CM040	56C
	233	58	6.7	III	7.5		56C
	175	76	5.3	III	10		56C
	117	109	3.6	III	15		56C
	88	141	2.5	III	20		56C
	70	167	2.0	III	25		56C
	58	189	2.2	III	30		56C
	44	234	1.6	II	40		56C

Ejemplo / Example:

Aplicación / Application:
Cinta transportadora / Conveyor belt

P : 0.24 hp
sf : 2.0
 n_2 : 55 rpm

Unidad de potencia seleccionado / Power unit selected:

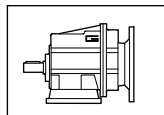
CM040 $i = 30$, $P_1 = 0.25$ hp, $sf = 2.2$

Lubricación

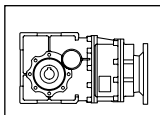
Lubrication

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

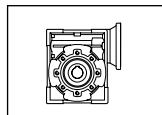
All unit sizes of CMG, CMB, CM and CMM series are complete with a long life synthetic lubricant, viscosity 320 and do not require maintenance.



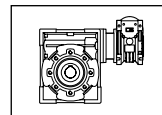
CMG



CMB



CM



CMM

SHELL	AGIP	ESSO	MOBIL	CASTROL	BP
Tivela Oil SC320	Telium VSF320	S320	Glygoyle 30	Alphasyn PG320	Energol SG-XP 320

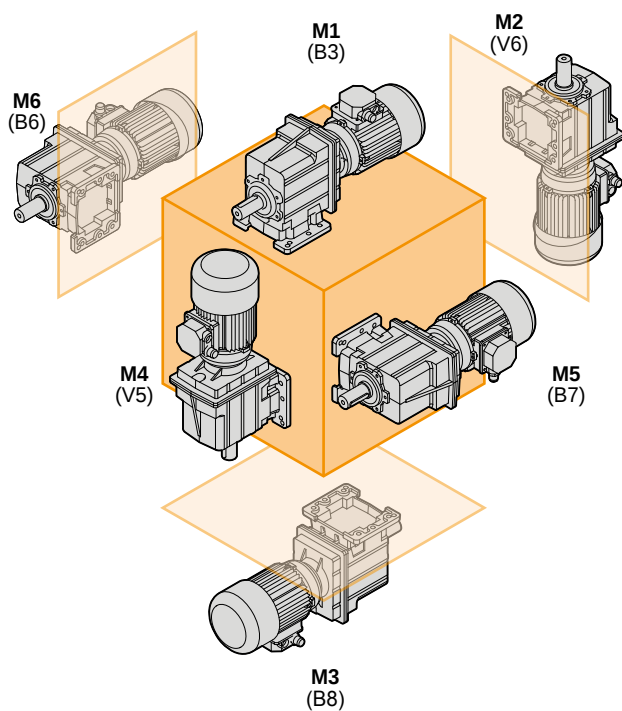
Las tablas indican la cantidad aproximada de lubricante contenido y/o que se debe verter. Especifique siempre la posición de montaje deseada al momento de hacer el pedido.

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

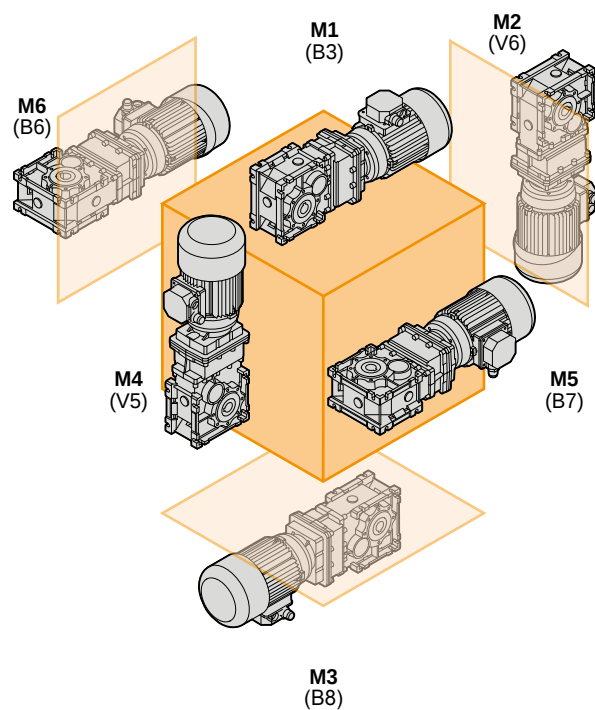
Verificar la cantidad de lubricante dependiendo de la posición de montaje en todos los reductores CM 130.

Check the lubricant quantity depending on the mounting position on all gearboxes CM 130.

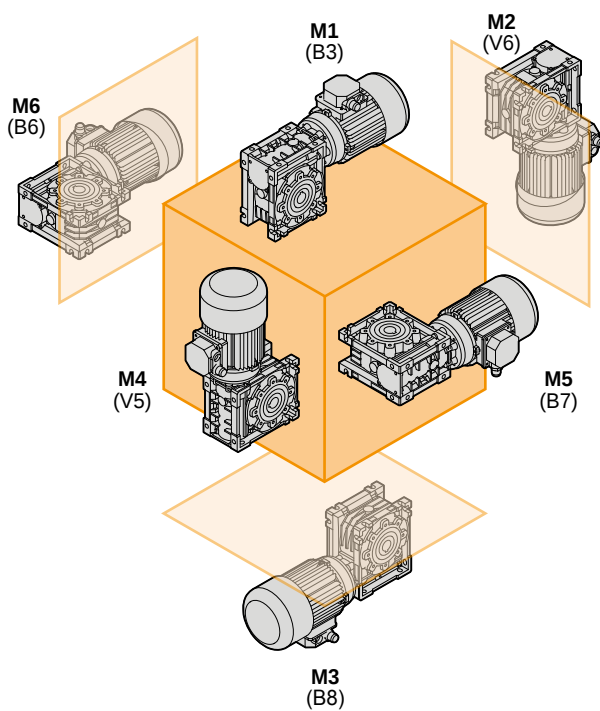
CMG



CMB



CM



Temperatura de servicio
Operating temperature

La temperatura ambiente afecta las especificaciones de los reductores.

The environmental temperature affects specifications of gearboxes.

Gama de temperatura estándar / Standard temperature range

CMG	-35°C / +50°C	-31°F / +122°F
CMB	-35°C / +50°C	-31°F / +122°F
CM040 - CM050	-25°C / +50°C	-13°F / +122°F
CM063 - CM130	-35°C / +50°C	-31°F / +122°F

Gamas de temperaturas especiales / Special temperature range

	<-15°C / <-5°F	-35°C/-25°C / <-31°F-13°F	<-35°C / <-31°F	>+50°C / >+112°F
CMG00 - CMG04			usar sellos de aceite de silicona (VMQ) <i>use silicone (VMQ) oil seals</i> usar lubricantes para bajas temperaturas <i>use low temperature lubricant</i>	usar sellos de aceite de Viton (FPM) <i>use Viton (FPM) oil seals</i> usar lubricante para altas temperaturas <i>use high temperature lubricant</i>
CMB633 - CMB903				
CM040 - CM050		sustituir el sello de aceite con NBR <i>replace input oil seal with NBR</i>		
CM063 - CM110				
CM130	reducir las cargas radiales en salida <i>halve the output radial loads</i>			

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;

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 (o motovariador) 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 o el motovariador 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.

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 preventive 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.*

Aplicaciones críticas

En estos casos consultar con nuestro Servicio Técnico

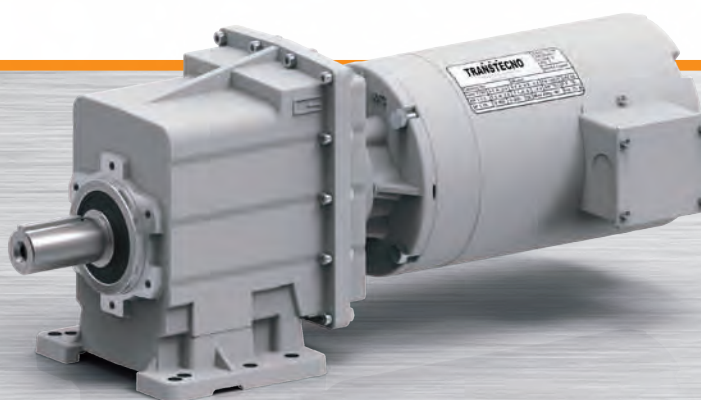
- uso como multiplicador;
- uso como montacargas;
- uso en posiciones no contempladas en el catálogo;
- uso en ambientes con presión diferente de la atmosférica;
- uso en ambiente con temperaturas $<-35^{\circ}\text{C}$ or $>+50^{\circ}\text{C}$

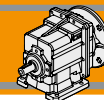
Critical applications

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 $<-35^{\circ}\text{C}$ or $>+50^{\circ}\text{C}$*

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

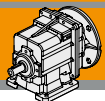




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Clasificación	<i>Classification</i>	B2
Sentidos de rotación	<i>Direction of rotation</i>	B3
Nomenclatura	<i>Legend</i>	B3
Lubricación	<i>Lubrication</i>	B4
Cargas radiales	<i>Radial loads</i>	B4
Datos técnicos	<i>Technical data</i>	B5
Dimensiones	<i>Dimensions</i>	B20

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**

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**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Características técnicas**

Los reductores 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:

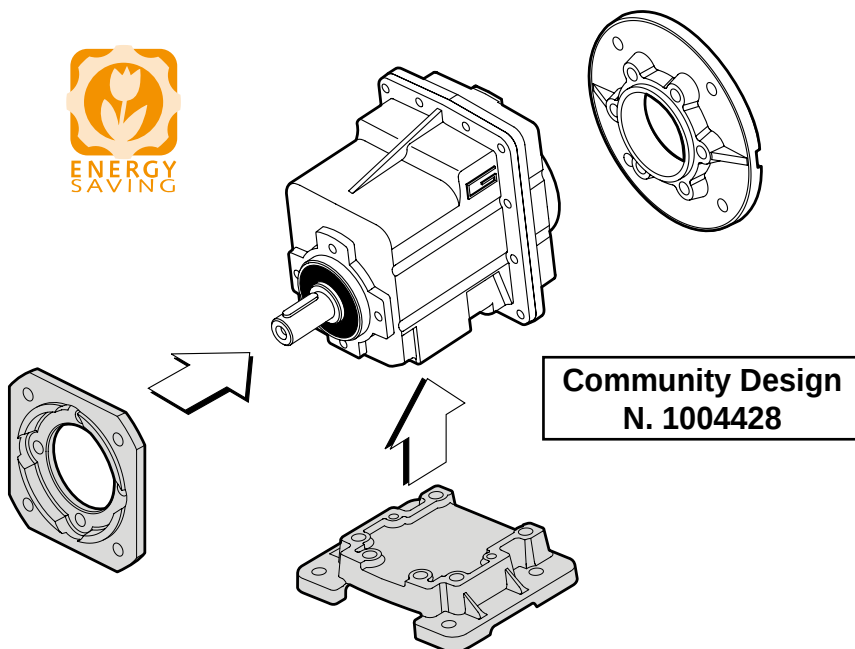
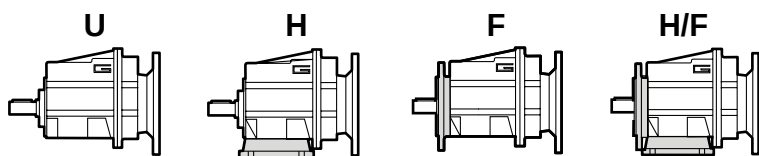
- Cuerpo y bridas de entrada en inyección de aluminio
- Bridas de salida y base en fierro vaciado;
- Engranajes siempre rectificadas;
- Lubricación permanente con aceite sintético.

Technical features

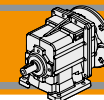
The high degree of modularity is a design feature of CMG helical gearboxes range. It is possible to set up the version required using flanges or feet.

The main features of CMG range are:

- *Die-cast aluminum housings and input flanges.*
- *Cast iron feet and output flanges;*
- *Ground-hardened helical gears;*
- *Permanent synthetic oil long-life lubrication.*

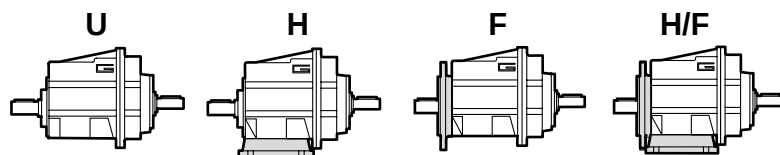
**Clasificación****Classification**

REDUCTOR / GEARBOX					
CMG	1	2	H65	9.81	56C
Tipo Type	Tamaño Size	Etapas Stages	Versión Version	Relación de reducción Ratio	
CMG	00 01 02 03 04	2 3	U H F... H/F...	ver tablas see tables	56C 140TC 180TC 210TC



Clasificación

Classification



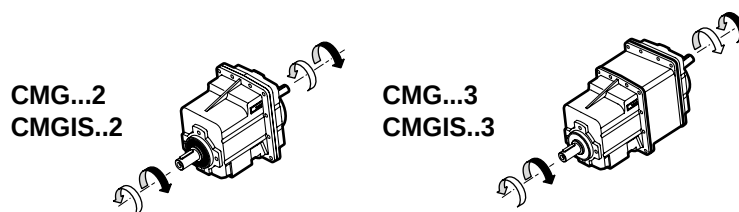
CMG

REDUCTOR / GEARBOX				
CMGIS	01	2	U	9.81
Tipo Type	Tamaño Size	Etapas Stages	Versión Version	Relación de reducción Ratio
CMGIS	00 01 02 03 04	2 3	U H F... H/F...	ver tablas see tables

MOTOR / MOTOR					
1 hp / 0.75kW	4p	3ph	220/440V	60Hz	T1
Potencia Power	Polos Poles	Fases Phases	Tensión Voltage	Frecuencia Frequency	Posición caja de bornes Terminal box pos.
ver tablas see tables	2p 4p 6p 8p	1ph 3ph	230V 230/400V - 220/440V	50Hz 60Hz	T1 (Std) T4 T2 T3

Sentidos de rotación

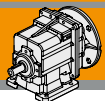
Direction of rotation



Nomenclatura

Legend

n_1 [rpm]	Velocidad de entrada / Input speed
n_2 [rpm]	Velocidad de salida / Output speed
i	Relación de reducción / Ratio
P_1 [kW]	Potencia en la entrada / Input power
M_2 [Nm]	Par en la salida en función de P_1 / Output torque referred to P_1
P_{n1} [kW]	Potencia nominal en la entrada / Nominal input power
M_{n2} [Nm]	Par nominal en la salida en función de P_{n1} / Nominal output torque referred to P_{n1}
sf	Rendimiento dinámico / Service factor
R_2 [N]	Carga radial admisible en la salida / Maximum output radial load
A_2 [N]	Carga axial admisible en la salida / Maximum output axial load



CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

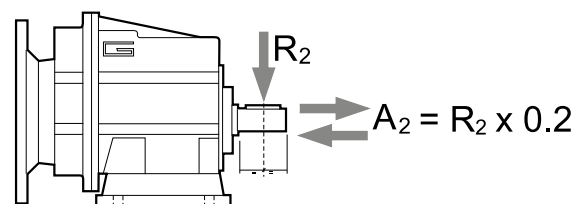
Lubricación

Todos los reductores de los tamaños 00, 01, 02, 03 y 04 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.

Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use sizes 00, 01, 02, 03 and 04 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

Lubrication

Cargas radiales

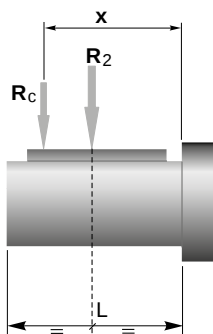


Radial loads

n ₂ [rpm]	R ₂ [lb]				
	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04
700	93	172	344	447	535
600	98	181	362	470	563
500	104	192	384	500	598
400	113	207	414	538	644
250	132	242	484	630	754
180	147	297	574	747	876
150	168	316	610	793	954
120	181	367	779	855	1028
100	215	414	828	1013	1177
80	232	446	892	1133	1347
60	255	491	982	1248	1482
40	292	562	1124	1461	1798
10	292	562	1124	1461	1798

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

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

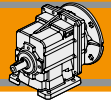


	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04
a	2.874	0.394	4.606	5.197	5.905
b	2.087	3.307	3.622	4.016	4.528
R _{2MAX}	292	562	1124	1461	1798

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

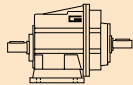
a, b = valores dados en la tabla
a, b = values given in the table

$$R \leq R_c$$



Datos técnicos

Technical data

	i	Mn ₂ [lb·in]	n ₁ = 1750 rpm			n ₁ = 1150 rpm		
			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters 56 C	n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters 56 C
			CMG 002					
	5.03	354	348	2.04		229	1.34	
	6.10	354	287	1.68		189	1.10	
	7.49	354	234	1.37		154	0.90	
	8.99	442	195	1.42		128	0.94	
	10.16	442	172	1.26		113	0.83	
	12.07	442	145	1.06		95.3	0.70	
	13.40	619	131	1.34		85.9	0.88	
	15.14	619	116	1.18		76.0	0.78	
	18.17	619	96.3	0.99		63.3	0.65	
	21.58	619	81.1	0.83		53.3	0.55	
	23.51	619	74.4	0.76		48.9	0.50	
	25.10	619	69.7	0.71		45.8	0.47	
	27.08	619	64.6	0.66		42.5	0.43	
	32.49	619	53.9	0.55		35.4	0.36	
	42.04	619	41.6	0.43		27.4	0.28	
	44.89	619	39.0	0.40		25.6	0.26	*
	48.86	619	35.8	0.37		23.5	0.24	*

NOTA

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



* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B19.

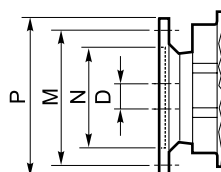
NOTE

Highlighted áreas indicate the motor input flange available on each gearbox size.

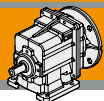


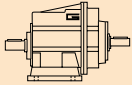
* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B19.



Dimensiones NEMA/ NEMA Dimensions	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625

**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Datos técnicos****Technical data**

	i	Mn ₂ [lb·in]	n ₁ = 1750 rpm				n ₁ = 1150 rpm			
			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters		n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters	
					56 C	140 TC			56 C	140 TC

CMG 012

	3.82	531	458	4.02			301	2.64		
	4.63	531	378	3.32			248	2.18		
	5.69	531	308	2.70			202	1.77		
	7.72	708	227	2.65			149	1.74		
	9.17	708	191	2.23			125	1.47		
	9.81	708	178	2.09			117	1.37		
	11.50	885	152	2.23			100	1.46		
	11.90	885	147	2.15			96.6	1.41		
	13.80	1062	127	2.23			83.3	1.46		
	14.62	1062	120	2.10			78.6	1.38		
	17.86	1062	98.0	1.72			64.4	1.13		
	19.07	1062	91.8	1.61			60.3	1.06		
	19.83	1062	88.2	1.55			58.0	1.02		
	23.56	1062	74.3	1.30			48.8	0.86		*
	29.56	1062	59.2	1.04			38.9	0.68		*
	35.47	1062	49.3	0.87		*	32.4	0.57		*
	45.89	1062	38.1	0.67		*	25.1	0.44		*
	49.00	1062	35.7	0.63		*	23.5	0.41	*	*
	53.33	1062	32.8	0.58		*	21.6	0.38	*	*

CMG 013

	63.22	1062	27.7	0.50		*	18.2	0.33		*
	75.08	1062	23.3	0.42		*	15.3	0.27	*	*
	89.17	1062	19.6	0.35		*	12.9	0.23	*	*
	113.05	1062	15.5	0.28		*	10.2	0.18	*	*
	134.27	1062	13.0	0.23		*	8.6	0.15	*	*
	173.72	1062	10.1	0.18		*	6.6	0.12	*	*
	202.16	1062	8.7	0.16		*	5.7	0.10	*	*
	261.57	1062	6.7	0.12		*	4.4	0.08	*	*
	304.00	1062	5.8	0.10		*	3.8	0.07	*	*
	393.33	1062	4.4	0.08		*	2.9	0.05	*	*

NOTA

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



* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B19.

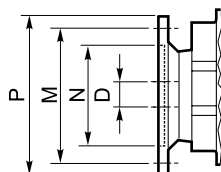
NOTE

Highlighted áreas indicate the motor input flange available on each gearbox size.

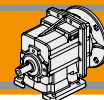


* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B19.

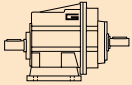


Dimensiones NEMA/ NEMA Dimensions		
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875



Datos técnicos

Technical data

	i	Mn ₂ [lb·in]	n ₁ = 1750 rpm				n ₁ = 1150 rpm			
			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters		n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters	
					56 C	140 TC			56 C	140 TC

CMG 022

	3.66	885	479	7.00			315	4.60		
	4.43	885	395	5.77			259	3.79		
	5.45	885	321	4.70			211	3.09		
	7.39	1062	237	4.16			156	2.73		
	8.78	1062	199	3.50			131	2.30		
	9.93	1062	176	3.09			116	2.03		
	11.01	1770	159	4.65			104	3.06		
	12.05	1770	145	4.25			95.4	2.79		
	13.21	1770	132	3.87			87.0	2.55		
	14.81	1770	118	3.46			77.7	2.27		
	17.10	1416	102	2.40			67.3	1.57		
	18.26	1416	95.9	2.24			63.0	1.47		
	20.08	1770	87.1	2.55			57.3	1.68		
	23.85	1770	73.4	2.15			48.2	1.41		
	29.93	1770	58.5	1.71			38.4	1.12		
	35.91	1770	48.7	1.43			32.0	0.94		
	46.46	1770	37.7	1.10			24.8	0.72		*
	49.61	1770	35.3	1.03			23.2	0.68		*
	54.00	1770	32.4	0.95			21.3	0.62		*

CMG 023

	64.01	1770	27.3	0.82		*	18.0	0.54		*
	76.02	1770	23.0	0.69		*	15.1	0.45		*
	90.29	1770	19.4	0.58		*	12.7	0.38		*
	114.46	1770	15.3	0.46		*	10.0	0.30		*
	135.95	1770	12.9	0.38		*	8.5	0.25	*	*
	175.89	1770	9.9	0.30		*	6.5	0.20	*	*
	204.69	1770	8.5	0.26		*	5.6	0.17	*	*
	264.84	1770	6.6	0.20		*	4.3	0.13	*	*
	307.80	1770	5.7	0.17		*	3.7	0.11	*	*
	398.25	1770	4.4	0.13		*	2.9	0.09	*	*

NOTA

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

NOTE

Highlighted areas indicate the motor input flange available on each gearbox size.



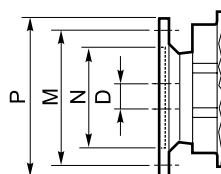
* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico



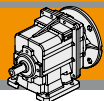
* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

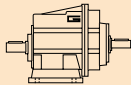
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B19.

Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B19.



Dimensiones NEMA/ NEMA Dimensions		
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875

**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Datos técnicos****Technical data**

	i	Mn ₂ [lb·in]	n ₁ = 1750 rpm					n ₁ = 1150 rpm				
			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters		
					56 C	140 TC	180 TC			56 C	140 TC	180 TC
CMG 032												
	3.74	1327	468	10.26				307	6.74			
	4.50	1327	389	8.52				255	5.60			
	5.48	1327	319	7.00				210	4.60			
	6.31	1593	277	7.30				182	4.80			
	7.93	1593	221	5.81				145	3.82			
	9.08	1593	193	5.08				127	3.34			
	10.93	1593	160	4.22				105	2.77			
	12.60	2212	139	5.08				91.2	3.34			
	13.30	2212	132	4.81				86.5	3.16			
	15.30	2478	114	4.68				75.2	3.08			
	18.21	2478	96.1	3.94				63.1	2.59			
	19.24	2478	91.0	3.73				59.8	2.45			
	21.15	2478	82.7	3.39				54.4	2.23			
	24.99	2655	70.0	3.07				46.0	2.02			
	30.57	2655	57.2	2.51			*	37.6	1.65			
	34.20	2655	51.2	2.25			*	33.6	1.48			
	38.63	2655	45.3	1.99			*	29.8	1.31			
	44.18	2655	39.6	1.74			*	26.0	1.14			*
	51.30	2655	34.1	1.50			*	22.4	0.98			*
	60.80	2655	28.8	1.26			*	18.9	0.83		*	*

CMG 033

	72.83	2655	24.0	1.08				15.8	0.71		*	
	97.45	2655	18.0	0.80		*		11.8	0.53		*	
	115.74	2655	15.1	0.68		*		9.9	0.45		*	
	140.81	2655	12.4	0.56		*		8.2	0.37		*	
	174.26	2655	10.0	0.45		*		6.6	0.30		*	
	225.47	2655	7.8	0.35		*		5.1	0.23	*	*	
	262.05	2655	6.7	0.30		*		4.4	0.20	*	*	
	325.79	2655	5.4	0.24		*		3.5	0.16	*	*	
	378.64	2655	4.6	0.21		*		3.0	0.14	*	*	

NOTA

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



* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B19.

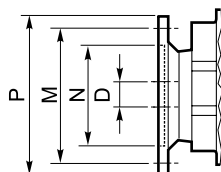
NOTE

Highlighted áreas indicate the motor input flange available on each gearbox size.

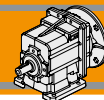


* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B19.

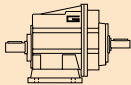


Dimensiones NEMA/ NEMA Dimensions			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125



Datos técnicos

Technical data

	i	Mn ₂ [lb·in]	n ₁ = 1750 rpm					n ₁ = 1150 rpm				
			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters		
					56 C	140 TC	180 TC			56 C	140 TC	180 TC
CMG 042												
	3.74	2035	468	15.73				307	10.34			
	4.50	2035	389	13.07				255	8.59			
	5.48	2035	319	10.74				210	7.06			
	6.31	2301	277	10.55				182	6.93			
	7.93	2301	221	8.39				145	5.51			
	9.08	2478	193	7.90				127	5.19			
	10.93	2478	160	6.56				105	4.31			
	12.60	3097	139	7.11				91.2	4.67			
	13.30	3097	132	6.74				86.5	4.43			
	15.30	3717	114	7.03				75.2	4.62			
	18.21	3717	96.1	5.90				63.1	3.88			
	19.24	3717	91.0	5.59				59.8	3.67			
	24.99	4425	70.0	5.12				46.0	3.37			
	30.57	4425	57.2	4.19				37.6	2.75			
	34.20	4425	51.2	3.74				33.6	2.46			
	38.63	4425	45.3	3.31				29.8	2.18			
	44.18	4425	39.6	2.90				26.0	1.90			
	51.30	4425	34.1	2.49			*	22.4	1.64			
	60.80	4248	28.8	2.02			*	18.9	1.33			

CMG 043												
	72.83	4425	24.0	1.79				15.8	1.18			
	97.45	4425	18.0	1.34				11.8	0.88		*	
	115.74	4425	15.1	1.13				9.9	0.74		*	
	140.81	4425	12.4	0.93				8.2	0.61		*	
	174.26	4425	10.0	0.75		*		6.6	0.49		*	
	225.47	4425	7.8	0.58		*		5.1	0.38		*	
	262.05	4425	6.7	0.50		*		4.4	0.33		*	
	325.79	4425	5.4	0.40		*		3.5	0.26	*	*	
	378.64	4425	4.6	0.35		*		3.0	0.23	*	*	

NOTA

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

NOTE

Highlighted areas indicate the motor input flange available on each gearbox size.



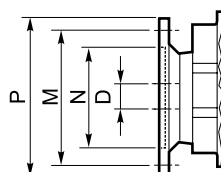
* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico



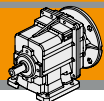
* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

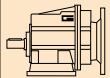
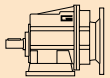
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B19.

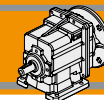
Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B19.



Dimensiones NEMA/ NEMA Dimensions			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125

**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Datos técnicos****Technical data**

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.16 hp								0.25 hp							
0.12 kW (1750 rpm)	348	28	12.7	III	5.03	CMG002	56C	0.18 kW (1750 rpm)	348	43	8.1	III	5.03	CMG002	56C
	287	34	10.5	III	6.10		56C		287	53	6.7	III	6.10		56C
	234	41	8.5	III	7.49		56C		234	65	5.5	III	7.49		56C
	195	50	8.9	III	8.99		56C		195	78	5.7	III	8.99		56C
	172	56	7.9	III	10.16		56C		172	88	5.0	III	10.16		56C
	145	67	6.6	III	12.07		56C		145	104	4.2	III	12.07		56C
	131	74	8.4	III	13.40		56C		131	116	5.4	III	13.40		56C
	116	84	7.4	III	15.14		56C		116	131	4.7	III	15.14		56C
	96.3	101	6.2	III	18.17		56C		96.3	157	3.9	III	18.17		56C
	81.1	119	5.2	III	21.58		56C		81.1	187	3.3	III	21.58		56C
	74.4	130	4.8	III	23.51		56C		74.4	203	3.0	III	23.51		56C
	69.7	139	4.5	III	25.10		56C		69.7	217	2.9	III	25.10		56C
	64.6	150	4.1	III	27.08		56C		64.6	234	2.6	III	27.08		56C
	53.9	180	3.4	III	32.49		56C		53.9	281	2.2	III	32.49		56C
	41.6	233	2.7	III	42.04		56C		41.6	363	1.7	II	42.04		56C
	39.0	248	2.5	III	44.89		56C		39.0	388	1.6	II	44.89		56C
	35.8	270	2.3	III	48.86		56C		35.8	422	1.5	II	48.86		56C
	38.1	254	4.2	III	45.89	CMG012	56C		59.2	255	4.2	III	29.56	CMG012	56C
	35.7	271	3.9	III	49.00		56C		49.3	307	3.5	III	35.47		56C
	32.8	295	3.6	III	53.33		56C		38.1	397	2.7	III	45.89		56C
	27.7	342	3.1	III	63.22	CMG013	56C		35.7	424	2.5	III	49.00	CMG013	56C
	23.3	407	2.6	III	75.08		56C		32.8	461	2.3	III	53.33		56C
	19.6	483	2.2	III	89.17		56C		27.7	535	2.0	II	63.22		56C
	15.5	612	1.7	II	113.05		56C		23.3	635	1.7	II	75.08		56C
	13.0	727	1.5	II	134.27	CMG023	56C		19.6	755	1.4	II	89.17	CMG023	56C
	10.1	941	1.1	I	173.72		56C		15.5	957	1.1	I	113.05		56C
	8.7	1095	1.0	I	202.16		56C		13.0	1136	0.9	I	134.27		56C
	6.7	1417	0.7	I	261.57		56C		37.7	402	4.4	III	46.46	CMG022	56C
	5.8	1647	0.6	I	304.00		56C		35.3	429	4.1	III	49.61		56C
	4.4	2130	0.5	I	393.33		56C		32.4	467	3.8	III	54.00		56C
	27.3	347	5.1	III	64.01		56C		27.3	542	3.3	III	64.01	CMG033	56C
	23.0	412	4.3	III	76.02		56C		23.0	643	2.8	III	76.02		56C
	19.4	489	3.6	III	90.29		56C		19.4	764	2.3	III	90.29		56C
	15.3	620	2.9	III	114.46		56C		15.3	969	1.8	II	114.46		56C
	12.9	736	2.4	III	135.95		56C		12.9	1150	1.5	II	135.95		56C
	9.9	953	1.9	II	175.89		56C		9.9	1489	1.2	I	175.89		56C
	8.5	1109	1.6	II	204.69		56C		8.5	1732	1.0	I	204.69		56C
	6.6	1434	1.2	I	264.84		56C		24.0	616	4.3	III	72.83		56C
	5.7	1667	1.1	I	307.80		56C		18.0	825	3.2	III	97.45		56C
	4.4	2157	0.8	I	398.25		56C		15.1	979	2.7	III	115.74		56C
	12.4	763	3.5	III	140.81	CMG033	56C		12.4	1192	2.2	III	140.81		56C
	10.0	944	2.8	III	174.26		56C		10.0	1475	1.8	II	174.26		56C
	7.8	1221	2.2	III	225.47		56C		7.8	1908	1.4	I	225.47		56C
	6.7	1419	1.9	II	262.05		56C		6.7	2218	1.2	I	262.05		56C
	5.4	1765	1.5	II	325.79		56C		5.4	2757	1.0	I	325.79		56C
	4.6	2051	1.3	I	378.64		56C		4.6	3204	0.8	I	378.64		56C
	7.8	1221	3.6	III	225.47	CMG043	56C								
	6.7	1419	3.1	III	262.05		56C								
	5.4	1765	2.5	III	325.79		56C								
	4.6	2051	2.2	III	378.64		56C								



Datos técnicos

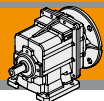
Technical data

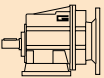
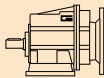
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.25 hp							
0.18 kW (1750 rpm)	15.1	979	4.5	III	115.74	CMG043	56C
	12.4	1192	3.7	III	140.81		56C
	10.0	1475	3.0	III	174.26		56C
	7.8	1908	2.3	III	225.47		56C
	6.7	2218	2.0	II	262.05		56C
	5.4	2757	1.6	II	325.79		56C
	4.6	3204	1.4	I	378.64		56C

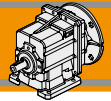
0.33 hp							
0.22 kW (1750 rpm)	348	57	6.2	III	5.03	CMG002	56C
	287	70	5.1	III	6.10		56C
	234	85	4.1	III	7.49		56C
	195	103	4.3	III	8.99		56C
	172	116	3.8	III	10.16		56C
	145	138	3.2	III	12.07		56C
	131	153	4.1	III	13.40		56C
	116	173	3.6	III	15.14		56C
	96.3	207	3.0	III	18.17		56C
	81.1	246	2.5	III	21.58		56C
	74.4	268	2.3	III	23.51	CMG012	56C
	69.7	286	2.2	III	25.10		56C
	64.6	309	2.0	III	27.08		56C
	53.9	371	1.7	II	32.49		56C
	41.6	480	1.3	I	42.04		56C
	39.0	512	1.2	I	44.89		56C
	35.8	557	1.1	I	48.86		56C
	91.8	218	4.9	III	19.07		56C
	88.2	226	4.7	III	19.83		56C
	74.3	269	4.0	III	23.56		56C
	59.2	337	3.1	III	29.56	CMG013	56C
	49.3	405	2.6	III	35.47		56C
	38.1	524	2.0	III	45.89		56C
	35.7	559	1.9	II	49.00		56C
	32.8	608	1.7	II	53.33		56C
	27.7	706	1.5	II	63.22		56C
	23.3	839	1.3	I	75.08		56C
	19.6	996	1.1	I	89.17		56C
	58.5	341	5.2	III	29.93	CMG022	56C
	48.7	410	4.3	III	35.91		56C
	37.7	530	3.3	III	46.46		56C
	35.3	566	3.1	III	49.61		56C
	32.4	616	2.9	III	54.00		56C
	27.3	715	2.5	III	64.01	CMG023	56C
	23.0	849	2.1	III	76.02		56C
	19.4	1009	1.8	II	90.29		56C
	15.3	1279	1.4	I	114.46		56C
	12.9	1519	1.2	I	135.95		56C

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.33 hp							
0.22 kW (1750 rpm)	24.0	814	3.3	III	72.83	CMG033	56C
	18.0	1089	2.4	III	97.45		56C
	15.1	1293	2.1	III	115.74		56C
	12.4	1573	1.7	II	140.81		56C
	10.0	1947	1.4	I	174.26		56C
	7.8	2519	1.1	I	225.47		56C
	18.0	1089	4.1	III	97.45	CMG043	56C
	15.1	1293	3.4	III	115.74		56C
	12.4	1573	2.8	III	140.81		56C
	10.0	1947	2.3	III	174.26		56C
	7.8	2519	1.8	III	225.47		56C
	6.7	2927	1.5	II	262.05		56C
	5.4	3639	1.2	I	325.79		56C
	4.6	4230	1.0	I	378.64		56C

0.22 kW (1150 rpm)	229	87	4.1	III	5.03	CMG002	56C
	189	106	3.3	III	6.10		56C
	154	130	2.7	III	7.49		56C
	128	156	2.8	III	8.99		56C
	113	176	2.5	III	10.16		56C
	95.3	209	2.1	III	12.07		56C
	85.9	233	2.7	III	13.40		56C
	76.0	263	2.4	III	15.14		56C
	63.3	315	2.0	II	18.17		56C
	53.3	375	1.7	II	21.58		56C
	48.9	408	1.5	II	23.51	CMG012	56C
	45.8	436	1.4	II	25.10		56C
	42.5	470	1.3	I	27.08		56C
	35.4	564	1.1	I	32.49		56C
	27.4	730	0.8	I	42.04		56C
	125	159	4.4	III	9.17		56C
	117	170	4.2	III	9.81		56C
	100	200	4.4	III	11.50		56C
	96.6	207	4.3	III	11.90		56C
	83.3	240	4.4	III	13.80		56C
	78.6	254	4.2	III	14.62	CMG013	56C
	64.4	310	3.4	III	17.86		56C
	60.3	331	3.2	III	19.07		56C
	58.0	344	3.1	III	19.83		56C
	48.8	409	2.6	III	23.56		56C
	38.9	513	2.1	III	29.56		56C
	32.4	616	1.7	II	35.47		56C
	25.1	797	1.3	I	45.89		56C
	23.5	851	1.2	I	49.00		56C
	21.6	926	1.1	I	53.33		56C
	18.2	1075	1.0	I	63.22	CMG013	56C

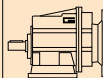
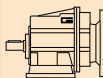
**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Datos técnicos****Technical data**

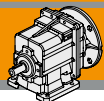
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.33 hp								0.5 hp							
0.22 kW (1150 rpm)	48.2	414	4.3	III	23.85	CMG022	56C	0.37 kW (1750 rpm)	227	133	5.3	III	7.72	CMG012	56C
	38.4	520	3.4	III	29.93		56C		191	158	4.5	III	9.17		56C
	32.0	623	2.8	III	35.91		56C		178	170	4.2	III	9.81		56C
	24.8	807	2.2	III	46.46		56C		152	199	4.5	III	11.50		56C
	23.2	861	2.1	III	49.61		56C		147	206	4.3	III	11.90		56C
	21.3	937	1.9	II	54.00		56C		127	239	4.5	III	13.80		56C
									120	253	4.2	III	14.62		56C
	18.0	1088	1.6	II	64.01	CMG023	56C		98.0	309	3.4	III	17.86		56C
	15.1	1292	1.4	I	76.02		56C		91.8	330	3.2	III	19.07		56C
	12.7	1535	1.2	I	90.29		56C		88.2	343	3.1	III	19.83		56C
	10.0	1946	0.9	I	114.46		56C		74.3	407	2.6	III	23.56		56C
									59.2	511	2.1	III	29.56		56C
	37.6	531	5.0	III	30.57	CMG032	56C		49.3	613	1.7	II	35.47		56C
	33.6	594	4.5	III	34.20		56C		38.1	793	1.3	I	45.89		56C
	29.8	671	4.0	III	38.63		56C		35.7	847	1.3	I	49.00		56C
	26.0	767	3.5	III	44.18		56C		32.8	922	1.2	I	53.33		56C
	22.4	891	3.0	III	51.30		56C								
	18.9	1056	2.5	III	60.80		56C		27.7	1070	1.0	I	63.22	CMG013	56C
									73.4	412	4.3	III	23.85		56C
	15.8	1238	2.1	III	72.83	CMG033	56C		58.5	517	3.4	III	29.93	CMG022	56C
	11.8	1657	1.6	II	97.45		56C		48.7	621	2.9	III	35.91		56C
	9.9	1968	1.3	I	115.74		56C		37.7	803	2.2	III	46.46		56C
	8.2	2394	1.1	I	140.81		56C		35.3	858	2.1	III	49.61		56C
	6.6	2962	0.9	I	174.26		56C		32.4	933	1.9	II	54.00		56C
	15.8	1238	3.6	III	72.83	CMG043	56C		27.3	1083	1.6	II	64.01	CMG023	56C
	11.8	1657	2.7	III	97.45		56C		23.0	1287	1.4	I	76.02		56C
	9.9	1968	2.2	III	115.74		56C		19.4	1528	1.2	I	90.29		56C
	8.2	2394	1.8	II	140.81		56C		15.3	1937	0.9	I	114.46		56C
	6.6	2962	1.5	II	174.26		56C								
	5.1	3833	1.2	I	225.47		56C		51.2	591	4.5	III	34.20	CMG032	56C
	4.4	4455	1.0	I	262.05		56C		45.3	668	4.0	III	38.63		56C
									39.6	764	3.5	III	44.18		56C
									34.1	887	3.0	III	51.30		56C
									28.8	1051	2.5	III	60.80		56C
									24.0	1233	2.2	III	72.83	CMG033	56C
									18.0	1649	1.6	II	97.45		56C
									15.1	1959	1.4	I	115.74		56C
									12.4	2383	1.1	I	140.81		56C
									10.0	2950	0.9	I	174.26		56C
									34.1	887	5.0	III	51.30	CMG042	56C
									28.8	1051	4.0	III	60.80		56C
									24.0	1233	3.6	III	72.83	CMG043	56C
									18.0	1649	2.7	III	97.45		56C
									15.1	1959	2.3	III	115.74		56C
									12.4	2383	1.9	II	140.81		56C
									10.0	2950	1.5	II	174.26		56C
									7.8	3816	1.2	I	225.47		56C
									6.7	4435	1.0	I	262.05		56C

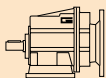
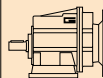


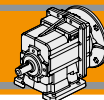
Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.5 hp								0.5 hp							
0.37 kW (1150 rpm)	229	132	2.7	III	5.03	CMG002	56C	0.37 kW (1150 rpm)	46.0	657	4.0	III	24.99	CMG032	56C
	189	160	2.2	III	6.10		56C	37.6	804	3.3	III	30.57	56C		
	154	197	1.8	II	7.49		56C	33.6	900	3.0	III	34.20	56C		
	128	236	1.9	II	8.99		56C	29.8	1016	2.6	III	38.63	56C		
	113	267	1.7	II	10.16		56C	26.0	1162	2.3	III	44.18	56C		
	95.3	317	1.4	I	12.07		56C	22.4	1349	2.0	II	51.30	56C		
	85.9	352	1.8	II	13.40		56C	18.9	1599	1.7	II	60.80	56C		
	76.0	398	1.6	II	15.14		56C								
	63.3	478	1.3	I	18.17		56C	15.8	1876	1.4	II	72.83	CMG033	56C	
	53.3	568	1.1	I	21.58		56C	11.8	2510	1.1	I	97.45		56C	
	48.9	618	1.0	I	23.51		56C	9.9	2981	0.9	I	115.74		56C	
	45.8	660	0.9	I	25.10		56C								
	42.5	712	0.9	I	27.08	56C									
	301	100	5.3	III	3.82	CMG012	56C	29.8	1016	4.4	III	38.63	CMG042	56C	
	248	122	4.4	III	4.63		56C	26.0	1162	3.8	III	44.18		56C	
	202	150	3.5	III	5.69		56C	22.4	1349	3.3	III	51.30		56C	
	149	203	3.5	III	7.72		56C	18.9	1599	2.7	III	60.80	56C		
	125	241	2.9	III	9.17		56C	15.8	1876	2.4	III	72.83	CMG043	56C	
	117	258	2.7	III	9.81		56C	11.8	2510	1.8	II	97.45		56C	
	110	275	2.5	III	10.50		56C	9.9	2981	1.5	II	115.74		56C	
	100	303	2.9	III	11.50		56C	8.2	3627	1.2	I	140.81	56C		
	96.6	313	2.8	III	11.90		56C	6.6	4488	1.0	I	174.26	56C		
	83.3	363	2.9	III	13.80		56C								
	78.6	385	2.8	III	14.62		56C								
	64.4	470	2.3	III	17.86		56C								
	60.3	502	2.1	III	19.07	56C									
	58.0	522	2.0	III	19.83	56C									
	48.8	620	1.7	II	23.56	56C									
	38.9	777	1.4	I	29.56	56C									
	32.4	933	1.1	I	35.47	56C									
	25.1	1207	0.9	I	45.89	56C									
	104	290	6.1	III	11.01	CMG022	56C								
	95.4	317	5.6	III	12.05		56C								
	87.0	348	5.1	III	13.21		56C								
77.7	389	4.5	III	14.81	56C										
67.3	450	3.1	III	17.10	56C										
63.0	480	2.9	III	18.26	56C										
57.3	528	3.4	III	20.08	56C										
48.2	627	2.8	III	23.85	56C										
38.4	787	2.2	III	29.93	56C										
32.0	945	1.9	II	35.91	56C										
24.8	1222	1.4	II	46.46	56C										
23.2	1305	1.4	I	49.61	56C										
21.3	1420	1.2	I	54.00	56C										
18.0	1649	1.1	I	64.01	CMG023	56C									
15.1	1958	0.9	I	76.02		56C									
0.75 hp								0.75 hp							
0.55 kW (1750 rpm)	348	130	2.7	III	5.03	CMG002	56C	0.55 kW (1750 rpm)	287	158	2.2	III	6.10	CMG002	56C
	287	158	2.2	III	6.10		56C	234	194	1.8	II	7.49	56C		
	234	194	1.8	II	7.49		56C	195	233	1.9	II	8.99	56C		
	195	233	1.9	II	8.99		56C	172	263	1.7	II	10.16	56C		
	172	263	1.7	II	10.16		56C	145	313	1.4	II	12.07	56C		
	145	313	1.4	II	12.07		56C	131	347	1.8	II	13.40	56C		
	131	347	1.8	II	13.40		56C	116	393	1.6	II	15.14	56C		
	116	393	1.6	II	15.14		56C	96.3	471	1.3	I	18.17	56C		
	96.3	471	1.3	I	18.17		56C	81.1	560	1.1	I	21.58	56C		
	81.1	560	1.1	I	21.58		56C	74.4	610	1.0	I	23.51	56C		
	74.4	610	1.0	I	23.51		56C	69.7	651	1.0	I	25.10	56C		
	69.7	651	1.0	I	25.10		56C	64.6	702	0.9	I	27.08	56C		
	64.6	702	0.9	I	27.08		56C								

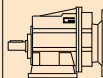
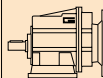
**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Datos técnicos****Technical data**

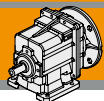
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			
0.75 hp								0.75 hp								
0.55 kW (1750 rpm)	458	99	5.4	III	3.82	CMG012	56C	0.55 kW (1150 rpm)	229	198	1.8	II	5.03	CMG002	56C	
	378	120	4.4	III	4.63		56C		189	241	1.5	II	6.10		56C	
	308	148	3.6	III	5.69		56C		154	296	1.2	I	7.49		56C	
	227	200	3.5	III	7.72		56C		128	355	1.2	I	8.99		56C	
	191	238	3.0	III	9.17		56C		113	401	1.1	I	10.16		56C	
	178	254	2.8	III	9.81		56C		95.3	476	0.9	I	12.07		56C	
	152	298	3.0	III	11.50		56C		85.9	529	1.2	I	13.40		56C	
	147	309	2.9	III	11.90		56C		76.0	597	1.0	I	15.14		56C	
	127	358	3.0	III	13.80		56C		63.3	717	0.9	I	18.17		56C	
	120	379	2.8	III	14.62		56C									
	98.0	463	2.3	III	17.86		56C		301	151	3.5	III	3.82		CMG012	56C
	91.8	494	2.1	III	19.07		56C		248	183	2.9	III	4.63			56C
	88.2	514	2.1	III	19.83		56C		202	224	2.4	III	5.69			56C
	74.3	611	1.7	II	23.56		56C		149	304	2.3	III	7.72			56C
	59.2	766	1.4	I	29.56		56C		125	362	2.0	II	9.17			56C
	49.3	920	1.2	I	35.47		56C		117	387	1.8	II	9.81			56C
	38.1	1190	0.9	I	45.89	56C	100	454	2.0	II	11.50	56C				
							96.6	470	1.9	II	11.90	56C				
	118	384	4.6	III	14.81	CMG022	56C	83.3	545	2.0	II	13.80	56C			
	102	443	3.2	III	17.10		56C	78.6	577	1.8	II	14.62	56C			
	95.9	473	3.0	III	18.26		56C	64.4	705	1.5	II	17.86	56C			
	87.1	521	3.4	III	20.08		56C	60.3	752	1.4	II	19.07	56C			
	73.4	618	2.9	III	23.85		56C	58.0	783	1.4	I	19.83	56C			
	58.5	776	2.3	III	29.93		56C	48.8	929	1.1	I	23.56	56C			
	48.7	931	1.9	II	35.91		56C	38.9	1166	0.9	I	29.56	56C			
	37.7	1205	1.5	II	46.46		56C									
	35.3	1286	1.4	I	49.61	56C	156	292	3.6	III	7.39	CMG022	56C			
	32.4	1400	1.3	I	54.00	56C	131	346	3.1	III	8.78		56C			
							116	392	2.7	III	9.93		56C			
	27.3	1625	1.1	I	64.01	CMG023	56C	104	434	4.1	III		11.01	56C		
	23.0	1930	0.9	I	76.02		56C	95.4	476	3.7	III		12.05	56C		
								87.0	521	3.4	III		13.21	56C		
	70.0	648	4.1	III	24.99	CMG032	56C	77.7	584	3.0	III		14.81	56C		
	57.2	793	3.3	III	30.57		56C	67.3	675	2.1	III		17.10	56C		
	51.2	887	3.0	III	34.20		56C	63.0	720	2.0	II	18.26	56C			
	45.3	1002	2.7	III	38.63		56C	57.3	792	2.2	III	20.08	56C			
	39.6	1145	2.3	III	44.18		56C	48.2	941	1.9	II	23.85	56C			
	34.1	1330	2.0	II	51.30		56C	38.4	1181	1.5	II	29.93	56C			
	28.8	1576	1.7	II	60.80		56C	32.0	1417	1.2	I	35.91	56C			
								24.8	1833	1.0	I	46.46	56C			
	24.0	1849	1.4	II	72.83	CMG033	56C	23.2	1958	0.9	I	49.61	56C			
	18.0	2474	1.1	I	97.45		56C									
	15.1	2938	0.9	I	115.74		56C	63.1	719	3.4	III	18.21	CMG032	56C		
							59.8	759	3.3	III	19.24	56C				
	45.3	1002	4.4	III	38.63	CMG042	56C	54.4	835	3.0	III	21.15		56C		
	39.6	1145	3.9	III	44.18		56C	46.0	986	2.7	III	24.99		56C		
	34.1	1330	3.3	III	51.30		56C	37.6	1206	2.2	III	30.57		56C		
	28.8	1576	2.7	III	60.80		56C	33.6	1349	2.0	II	34.20		56C		
							29.8	1524	1.7	II	38.63	56C				
24.0	1849	2.4	III	72.83	CMG043	56C	26.0	1743	1.5	II	44.18	56C				
18.0	2474	1.8	II	97.45		56C	22.4	2024	1.3	I	51.30	56C				
15.1	2938	1.5	II	115.74		56C	18.9	2399	1.1	I	60.80	56C				
12.4	3575	1.2	I	140.81		56C										
10.0	4424	1.0	I	174.26		56C	15.8	2814	0.9	I	72.83	CMG033	56C			

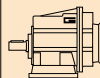


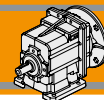
Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i					
0.75 hp								1 hp										
0.55 kW (1150 rpm)	46.0	986	4.5	III	24.99	CMG042	56C	0.75 kW (1750 rpm)	321	188	4.7	III	5.45	CMG022	56C-140TC			
	37.6	1206	3.7	III	30.57		56C		237	255	4.2	III	7.39		56C-140TC			
	33.6	1349	3.3	III	34.20		56C		199	303	3.5	III	8.78		56C-140TC			
	29.8	1524	2.9	III	38.63		56C		176	343	3.1	III	9.93		56C-140TC			
	26.0	1743	2.5	III	44.18		56C		159	381	4.6	III	11.01		56C-140TC			
	22.4	2024	2.2	III	51.30		56C		145	417	4.2	III	12.05		56C-140TC			
	18.9	2399	1.8	II	60.80		56C		132	457	3.9	III	13.21		56C-140TC			
							118		512	3.5	III	14.81	56C-140TC					
		15.8	2814	1.6	II	72.83	CMG043		56C		102	591	2.4		III	17.10	CMG032	56C-140TC
		11.8	3765	1.2	I	97.45			56C		95.9	631	2.2		III	18.26		56C-140TC
	9.9	4472	1.0	I	115.74	56C			87.1	694	2.5	III	20.08	56C-140TC				
1 hp								1 hp										
0.75 kW (1750 rpm)	348	174	2.0	III	5.03	CMG002	56C		96.1	630	3.9	III	18.21	CMG032	56C-140TC			
	287	211	1.7	II	6.10		56C		91.0	665	3.7	III	19.24		56C-140TC			
	234	259	1.4	I	7.49		56C		82.7	731	3.4	III	21.15		56C-140TC			
	195	311	1.4	II	8.99		56C		70.0	864	3.1	III	24.99		56C-140TC			
	172	351	1.3	I	10.16		56C		57.2	1057	2.5	III	30.57		56C-140TC			
	145	417	1.1	I	12.07		56C		51.2	1182	2.2	III	34.20		56C-140TC			
	131	463	1.3	I	13.40		56C		45.3	1336	2.0	II	38.63		56C-140TC			
	116	523	1.2	I	15.14		56C		39.6	1527	1.7	II	44.18		56C-140TC			
	96.3	628	1.0	I	18.17	56C		34.1	1774	1.5	II	51.30	56C-140TC					
						CMG012			28.8	2102	1.3	I	60.80		56C-140TC			
										24.0	2465	1.1	I	72.83	CMG033	56C-140TC		
		458	132	4.0	III		3.82	56C-140TC		57.2	1057	4.2	III	30.57		CMG042	56C-140TC	
		378	160	3.3	III		4.63	56C-140TC		51.2	1182	3.7	III	34.20	56C-140TC			
		308	197	2.7	III		5.69	56C-140TC		45.3	1336	3.3	III	38.63	56C-140TC			
		227	267	2.7	III		7.72	56C-140TC		39.6	1527	2.9	III	44.18	56C-140TC			
		191	317	2.2	III		9.17	56C-140TC		34.1	1774	2.5	III	51.30	56C-140TC			
		178	339	2.1	III		9.81	56C-140TC		28.8	2102	2.0	III	60.80	CMG043	56C-140TC		
		152	398	2.2	III		11.50	56C-140TC		24.0	2465	1.8	II	72.83		56C-140TC		
		147	412	2.2	III		11.90	56C-140TC		18.0	3299	1.3	I	97.45		56C-140TC		
		127	477	2.2	III		13.80	56C-140TC		15.1	3918	1.1	I	115.74		56C-140TC		
		120	506	2.1	III		14.62	56C-140TC		12.4	4767	0.9	I	140.81		56C-140TC		
		98.0	617	1.7	II		17.86	56C-140TC										
		91.8	659	1.6	II		19.07	56C-140TC										
		88.2	686	1.5	II		19.83	56C-140TC										
		74.3	814	1.3	I		23.56	56C-140TC										
		59.2	1022	1.0	I		29.56	56C-140TC										
	0.75 kW (1150 rpm)								0.75 kW (1150 rpm)									
		229	264	1.3	I		5.03	CMG002	56C		229	264	1.3	I	5.03	CMG002	56C	
		189	321	1.1	I		6.10		56C		189	321	1.1	I	6.10		56C	
		154	394	0.9	I		7.49		56C		154	394	0.9	I	7.49		56C	
		128	473	0.9	I		8.99		56C		128	473	0.9	I	8.99		56C	

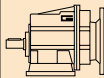
**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Datos técnicos****Technical data**

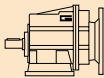
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			
1 hp								1 hp								
0.75 kW (1150 rpm)	301	201	2.6	III	3.82	CMG012	56C-140TC	0.75 kW (1150 rpm)	63.1	958	3.9	III	18.21	CMG042	56C-140TC	
	248	244	2.2	III	4.63		56C-140TC		59.8	1012	3.7	III	19.24		56C-140TC	
	202	299	1.8	II	5.69		56C-140TC		46.0	1315	3.4	III	24.99		56C-140TC	
	149	406	1.7	II	7.72		56C-140TC		37.6	1608	2.8	III	30.57		56C-140TC	
	125	482	1.5	II	9.17		56C-140TC		33.6	1799	2.5	III	34.20		56C-140TC	
	117	516	1.4	I	9.81		56C-140TC		29.8	2032	2.2	III	38.63		56C-140TC	
	100	605	1.5	II	11.50		56C-140TC		26.0	2324	1.9	II	44.18		56C-140TC	
	96.6	626	1.4	II	11.90		56C-140TC		22.4	2699	1.6	II	51.30		56C-140TC	
	83.3	726	1.5	II	13.80		56C-140TC		18.9	3199	1.3	I	60.80		56C-140TC	
	78.6	769	1.4	I	14.62		56C-140TC									
	64.4	939	1.1	I	17.86		56C-140TC		15.8	3752	1.2	I	72.83		CMG043	56C-140TC
	60.3	1003	1.1	I	19.07		56C-140TC									
	58.0	1043	1.0	I	19.83	56C-140TC										
	315	192	4.6	III	3.66	CMG022	56C-140TC		1.1 kW (1750 rpm)	348	261	1.4	I	5.03	CMG002	56C
	259	233	3.8	III	4.43		56C-140TC			287	316	1.1	I	6.10		56C
	211	287	3.1	III	5.45		56C-140TC			234	388	0.9	I	7.49		56C
	156	389	2.7	III	7.39		56C-140TC			195	466	0.9	I	8.99		56C
	131	462	2.3	III	8.78		56C-140TC			458	198	2.7	III	3.82	CMG012	56C-140TC
	116	523	2.0	III	9.93		56C-140TC			378	240	2.2	III	4.63		56C-140TC
	104	579	3.1	III	11.01		56C-140TC			308	295	1.8	II	5.69		56C-140TC
95.4	634	2.8	III	12.05	56C-140TC		227	400		1.8	II	7.72	56C-140TC			
87.0	695	2.5	III	13.21	56C-140TC		191	475		1.5	II	9.17	56C-140TC			
77.7	779	2.3	III	14.81	56C-140TC		178	509		1.4	I	9.81	56C-140TC			
67.3	899	1.6	II	17.10	56C-140TC		152	596		1.5	II	11.50	56C-140TC			
63.0	960	1.5	II	18.26	56C-140TC		147	617		1.4	II	11.90	56C-140TC			
57.3	1056	1.7	II	20.08	56C-140TC	127	716	1.5		II	13.80	56C-140TC				
48.2	1255	1.4	II	23.85	56C-140TC	120	758	1.4		II	14.62	56C-140TC				
38.4	1574	1.1	I	29.93	56C-140TC	98.0	926	1.1		I	17.86	56C-140TC				
32.0	1889	0.9	I	35.91	56C-140TC	91.8	989	1.1		I	19.07	56C-140TC				
127	478	3.3	III	9.08	CMG032	56C-140TC	88.2	1029		1.0	I	19.83	56C-140TC			
105	575	2.8	III	10.93		56C-140TC	74.3	1222		0.9	I	23.56	56C-140TC			
91.2	663	3.3	III	12.60		56C-140TC	479	190		4.7	III	3.66	CMG022	56C-140TC		
86.5	700	3.2	III	13.30		56C-140TC	395	230		3.8	III	4.43		56C-140TC		
75.2	805	3.1	III	15.30		56C-140TC	321	283	3.1	III	5.45	56C-140TC				
63.1	958	2.6	III	18.21		56C-140TC	237	383	2.8	III	7.39	56C-140TC				
59.8	1012	2.4	III	19.24		56C-140TC	199	455	2.3	III	8.78	56C-140TC				
54.4	1113	2.2	III	21.15		56C-140TC	176	515	2.1	III	9.93	56C-140TC				
46.0	1315	2.0	III	24.99		56C-140TC	159	571	3.1	III	11.01	56C-140TC				
37.6	1608	1.7	II	30.57		56C-140TC	145	625	2.8	III	12.05	56C-140TC				
33.6	1799	1.5	II	34.20		56C-140TC	132	685	2.6	III	13.21	56C-140TC				
29.8	2032	1.3	I	38.63		56C-140TC	118	768	2.3	III	14.81	56C-140TC				
26.0	2324	1.1	I	44.18	56C-140TC	102	887	1.6	II	17.10	56C-140TC					
22.4	2699	1.0	I	51.30	56C-140TC	95.9	947	1.5	II	18.26	56C-140TC					
						87.1	1041	1.7	II	20.08	56C-140TC					
						73.4	1237	1.4	II	23.85	56C-140TC					
						58.5	1552	1.1	I	29.93	56C-140TC					
						48.7	1862	1.0	I	35.91	56C-140TC					



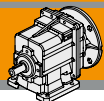
Datos técnicos

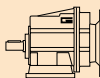
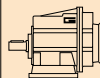
Technical data

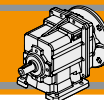
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
1.5 hp							
1.1 kW (1750 rpm)	221	411	3.9	III	7.93	CMG032	56C-140TC
	193	471	3.4	III	9.08		56C-140TC
	160	567	2.8	III	10.93		56C-140TC
	139	654	3.4	III	12.60		56C-140TC
	132	690	3.2	III	13.30		56C-140TC
	114	793	3.1	III	15.30		56C-140TC
	96.1	944	2.6	III	18.21		56C-140TC
	91.0	998	2.5	III	19.24		56C-140TC
	82.7	1097	2.3	III	21.15		56C-140TC
	70.0	1296	2.0	III	24.99		56C-140TC
	57.2	1585	1.7	II	30.57	CMG042	56C-140TC
	51.2	1774	1.5	II	34.20		56C-140TC
	45.3	2003	1.3	I	38.63		56C-140TC
	39.6	2291	1.2	I	44.18		56C-140TC
	34.1	2660	1.0	I	51.30		56C-140TC
	96.1	944	3.9	III	18.21		56C-140TC
	91.0	998	3.7	III	19.24		56C-140TC
	70.0	1296	3.4	III	24.99		56C-140TC
	57.2	1585	2.8	III	30.57		56C-140TC
	51.2	1774	2.5	III	34.20		56C-140TC
	45.3	2003	2.2	III	38.63		56C-140TC
	39.6	2291	1.9	II	44.18		56C-140TC
	34.1	2660	1.7	II	51.30		56C-140TC
	28.8	3153	1.3	I	60.80		56C-140TC
	24.0	3698	1.2	I	72.83	CMG043	56C-140TC
	18.0	4948	0.9	I	97.45		56C-140TC
1.1 kW (1150 rpm)	301	301	1.8	II	3.82	CMG012	140TC
	248	365	1.5	II	4.63		140TC
	202	449	1.2	I	5.69		140TC
	149	609	1.2	I	7.72		140TC
	125	723	1.0	I	9.17		140TC
	117	774	0.9	I	9.81		140TC
	100	908	1.0	I	11.50		140TC
	96.6	939	0.9	I	11.90		140TC
	83.3	1089	1.0	I	13.80		140TC
	78.6	1154	0.9	I	14.62		140TC
	315	288	3.1	III	3.66	CMG022	140TC
	259	350	2.5	III	4.43		140TC
	211	430	2.1	III	5.45		140TC
	156	583	1.8	II	7.39		140TC
	131	693	1.5	II	8.78		140TC
	116	784	1.4	I	9.93		140TC
	104	869	2.0	III	11.01		140TC
	95.4	951	1.9	II	12.05		140TC
	87.0	1043	1.7	II	13.21		140TC
	77.7	1168	1.5	II	14.81		140TC
	67.3	1349	1.0	I	17.10		140TC
	63.0	1441	1.0	I	18.26		140TC
	57.3	1585	1.1	I	20.08		140TC
	48.2	1882	0.9	I	23.85		140TC

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
1.5 hp							
1.1 kW (1150 rpm)	307	295	4.5	III	3.74	CMG032	140TC-180TC
	255	355	3.7	III	4.50		140TC-180TC
	210	433	3.1	III	5.48		140TC-180TC
	182	498	3.2	III	6.31		140TC-180TC
	145	626	2.5	III	7.93		140TC-180TC
	127	716	2.2	III	9.08		140TC-180TC
	105	862	1.8	II	10.93		140TC-180TC
	91.2	995	2.2	III	12.60		140TC-180TC
	86.5	1050	2.1	III	13.30		140TC-180TC
	75.2	1207	2.1	III	15.30		140TC-180TC
	63.1	1437	1.7	II	18.21	CMG042	140TC-180TC
	59.8	1518	1.6	II	19.24		140TC-180TC
	54.4	1669	1.5	II	21.15		140TC-180TC
	46.0	1972	1.3	I	24.99		140TC-180TC
	37.6	2413	1.1	I	30.57		140TC-180TC
	33.6	2699	1.0	I	34.20		140TC-180TC
	29.8	3049	0.9	I	38.63		140TC-180TC
	145	626	3.7	III	7.93		140TC-180TC
	127	716	3.5	III	9.08		140TC-180TC
	105	862	2.9	III	10.93		140TC-180TC
	91.2	995	3.1	III	12.60		140TC-180TC
	86.5	1050	3.0	III	13.30		140TC-180TC
	75.2	1207	3.1	III	15.30		140TC-180TC
	63.1	1437	2.6	III	18.21		140TC-180TC
	59.8	1518	2.4	III	19.24		140TC-180TC
	46.0	1972	2.2	III	24.99		140TC-180TC
	37.6	2413	1.8	II	30.57		140TC-180TC
	33.6	2699	1.6	II	34.20		140TC-180TC
	29.8	3049	1.5	II	38.63		140TC-180TC
	26.0	3486	1.3	I	44.18		140TC-180TC
	22.4	4048	1.1	I	51.30		140TC-180TC
	18.9	4798	0.9	I	60.80		140TC-180TC

2 hp							
1.5 kW (1750 rpm)	458	264	2.0	III	3.82	CMG012	56C-140TC
	378	320	1.7	II	4.63		56C-140TC
	308	393	1.3	I	5.69		56C-140TC
	227	534	1.3	I	7.72		56C-140TC
	191	634	1.1	I	9.17		56C-140TC
	178	678	1.0	I	9.81		56C-140TC
	152	795	1.1	I	11.50		56C-140TC
	147	823	1.1	I	11.90		56C-140TC
	127	954	1.1	I	13.80		56C-140TC
	120	1011	1.1	I	14.62		56C-140TC

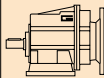
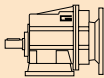
**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Datos técnicos****Technical data**

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb-in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb-in]	sf	AGMA	i			
2 hp								2 hp								
1.5 kW (1750 rpm)	479	253	3.5	III	3.66	CMG022	56C-140TC	1.5 kW (1150 rpm)	307	394	3.4	III	3.74	CMG032	180TC	
	395	307	2.9	III	4.43		56C-140TC		255	474	2.8	III	4.50		180TC	
	321	377	2.3	III	5.45		56C-140TC		210	577	2.3	III	5.48		180TC	
	237	511	2.1	III	7.39		56C-140TC		182	664	2.4	III	6.31		180TC	
	199	607	1.8	II	8.78		56C-140TC		145	835	1.9	II	7.93		180TC	
	176	687	1.5	II	9.93		56C-140TC		127	955	1.7	II	9.08		180TC	
	159	761	2.3	III	11.01		56C-140TC		105	1150	1.4	I	10.93		180TC	
	145	833	2.1	III	12.05		56C-140TC		91.2	1326	1.7	II	12.60		180TC	
	132	914	1.9	II	13.21		56C-140TC		86.5	1399	1.6	II	13.30		180TC	
	118	1024	1.7	II	14.81		56C-140TC		75.2	1610	1.5	II	15.30		180TC	
	102	1182	1.2	I	17.10		56C-140TC		63.1	1916	1.3	I	18.21		180TC	
	95.9	1262	1.1	I	18.26		56C-140TC		59.8	2024	1.2	I	19.24		180TC	
	87.1	1388	1.3	I	20.08		56C-140TC		54.4	2225	1.1	I	21.15		180TC	
	73.4	1649	1.1	I	23.85		56C-140TC		46.0	2630	1.0	I	24.99		180TC	
	319	379	3.5	III	5.48	CMG032	56C-140TC		307	394	5.2	III	3.74	CMG042	180TC	
	277	436	3.7	III	6.31		56C-140TC		255	474	4.3	III	4.50		180TC	
	221	548	2.9	III	7.93		56C-140TC		210	577	3.5	III	5.48		180TC	
	193	628	2.5	III	9.08		56C-140TC		182	664	3.5	III	6.31		180TC	
	160	755	2.1	III	10.93		56C-140TC		145	835	2.8	III	7.93		180TC	
	139	872	2.5	III	12.60		56C-140TC		127	955	2.6	III	9.08		180TC	
	132	920	2.4	III	13.30		56C-140TC		105	1150	2.2	III	10.93		180TC	
	114	1058	2.3	III	15.30		56C-140TC		91.2	1326	2.3	III	12.60		180TC	
	96.1	1259	2.0	II	18.21		56C-140TC		86.5	1399	2.2	III	13.30		180TC	
	91.0	1330	1.9	II	19.24		56C-140TC		75.2	1610	2.3	III	15.30		180TC	
	82.7	1462	1.7	II	21.15		56C-140TC		63.1	1916	1.9	II	18.21		180TC	
	70.0	1728	1.5	II	24.99		56C-140TC		59.8	2024	1.8	II	19.24		180TC	
	57.2	2114	1.3	I	30.57		56C-140TC		46.0	2630	1.7	II	24.99		180TC	
	51.2	2365	1.1	I	34.20		56C-140TC		37.6	3217	1.4	I	30.57		180TC	
	45.3	2671	1.0	I	38.63		56C-140TC		33.6	3598	1.2	I	34.20		180TC	
	193	628	3.9	III	9.08		CMG042		56C-140TC	29.8	4065	1.1	I		38.63	180TC
	160	755	3.3	III	10.93				56C-140TC	26.0	4648	1.0	I		44.18	180TC
	139	872	3.6	III	12.60	56C-140TC		3 hp								
	132	920	3.4	III	13.30	56C-140TC		2.2 kW (1750 rpm)	458	396	1.3	I	3.82	CMG012	140TC	
	114	1058	3.5	III	15.30	56C-140TC			378	480	1.1	I	4.63		140TC	
	96.1	1259	3.0	III	18.21	56C-140TC			308	590	0.9	I	5.69		140TC	
	91.0	1330	2.8	III	19.24	56C-140TC			227	800	0.9	I	7.72		140TC	
	70.0	1728	2.6	III	24.99	56C-140TC			479	379	2.3	III	3.66	CMG022	140TC	
	57.2	2114	2.1	III	30.57	56C-140TC			395	460	1.9	II	4.43		140TC	
	51.2	2365	1.9	II	34.20	56C-140TC			321	565	1.6	II	5.45		140TC	
	45.3	2671	1.7	II	38.63	56C-140TC			237	766	1.4	I	7.39		140TC	
	39.6	3054	1.4	II	44.18	56C-140TC			199	910	1.2	I	8.78		140TC	
	34.1	3547	1.2	I	51.30	56C-140TC			176	1030	1.0	I	9.93		140TC	
	28.8	4204	1.0	I	60.80	56C-140TC		159	1142	1.5	II	11.01	140TC			
	24.0	4931	0.9	I	72.83	CMG043		145	1250	1.4	II	12.05	140TC			
								132	1370	1.3	I	13.21	140TC			
								118	1536	1.2	I	14.81	140TC			

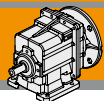
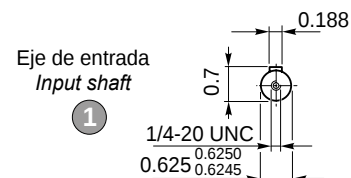
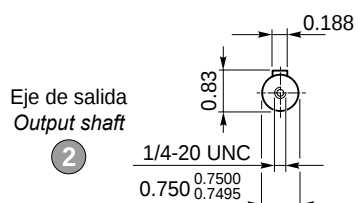
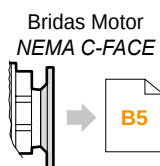
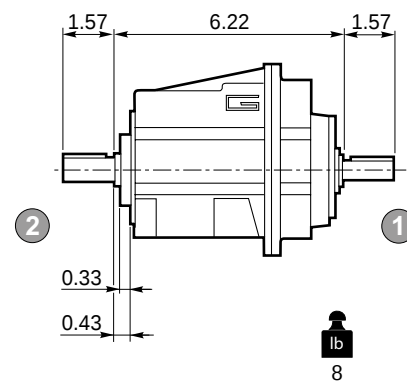
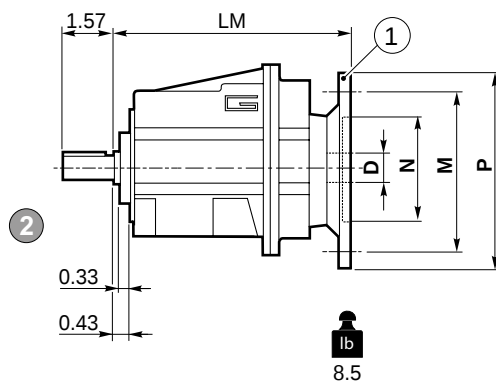
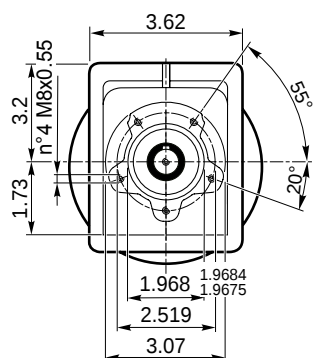


Datos técnicos

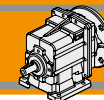
Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
3 hp								5 hp							
2.2 kW (1750 rpm)	468	388	3.4	III	3.74	CMG032	140TC-180TC	3.7 kW (1750 rpm)	468	647	3.1	III	3.74	CMG042	180TC
	389	467	2.8	III	4.50		140TC-180TC		389	779	2.6	III	4.50		180TC
	319	569	2.3	III	5.48		140TC-180TC		319	948	2.1	III	5.48		180TC
	277	654	2.4	III	6.31		140TC-180TC		277	1090	2.1	III	6.31		180TC
	221	823	1.9	II	7.93		140TC-180TC		221	1371	1.7	II	7.93		180TC
	193	942	1.7	II	9.08		140TC-180TC		193	1569	1.6	II	9.08		180TC
	160	1133	1.4	II	10.93		140TC-180TC		160	1888	1.3	I	10.93		180TC
	139	1307	1.7	II	12.60		140TC-180TC		139	2179	1.4	II	12.60		180TC
	132	1379	1.6	II	13.30		140TC-180TC		132	2299	1.3	I	13.30		180TC
	114	1587	1.6	II	15.30		140TC-180TC		114	2645	1.4	II	15.30		180TC
	96.1	1889	1.3	I	18.21		140TC-180TC		96.1	3148	1.2	I	18.21		180TC
	91.0	1995	1.2	I	19.24		140TC-180TC		91.0	3325	1.1	I	19.24		180TC
	82.7	2194	1.1	I	21.15		140TC-180TC		70.0	4320	1.0	I	24.99		180TC
	70.0	2592	1.0	I	24.99		140TC-180TC		57.2	5285	0.8	I	30.57		180TC
	468	388	5.2	III	3.74	CMG042	140TC-180TC								
	389	467	4.4	III	4.50		140TC-180TC								
	319	569	3.6	III	5.48		140TC-180TC								
	277	654	3.5	III	6.31		140TC-180TC								
	221	823	2.8	III	7.93		140TC-180TC								
	193	942	2.6	III	9.08		140TC-180TC								
	160	1133	2.2	III	10.93		140TC-180TC								
	139	1307	2.4	III	12.60		140TC-180TC								
	132	1379	2.2	III	13.30		140TC-180TC								
	114	1587	2.3	III	15.30		140TC-180TC								
	96.1	1889	2.0	II	18.21		140TC-180TC								
	91.0	1995	1.9	II	19.24		140TC-180TC								
	70.0	2592	1.7	II	24.99		140TC-180TC								
	57.2	3171	1.4	I	30.57		140TC-180TC								
	51.2	3547	1.2	I	34.20		140TC-180TC								
	45.3	4007	1.1	I	38.63		140TC-180TC								
	39.6	4582	1.0	I	44.18		140TC-180TC								

5 hp							
3.7 kW (1750 rpm)	468	647	2.1	III	3.74	CMG032	180TC
	389	779	1.7	II	4.50		180TC
	319	948	1.4	II	5.48		180TC
	277	1090	1.5	II	6.31		180TC
	221	1371	1.2	I	7.93		180TC
	193	1569	1.0	I	9.08		180TC
	139	2179	1.0	I	12.60		180TC
	132	2299	1.0	I	13.30		180TC
	114	2645	0.9	I	15.30		180TC

**CMG****REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES**
HELICAL GEARBOXES**Dimensiones****Dimensions****CMG 002 U****CMGIS 002 U**

Brida Motor / Motor flange	
1 Dimensiones NEMA NEMA Dimensions	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM 002	6.61



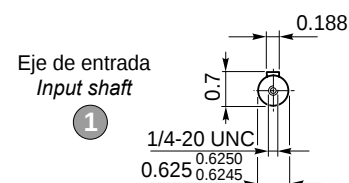
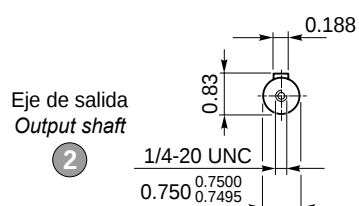
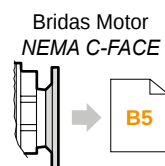
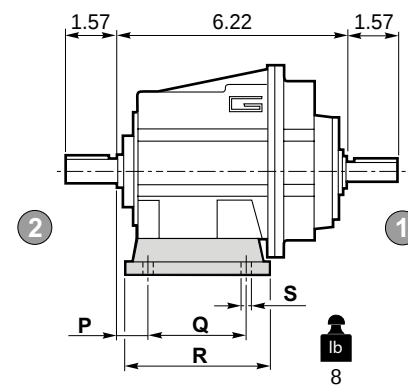
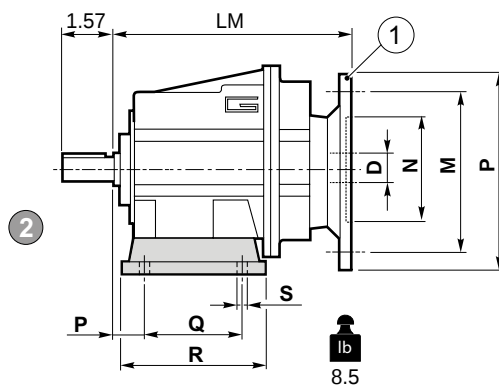
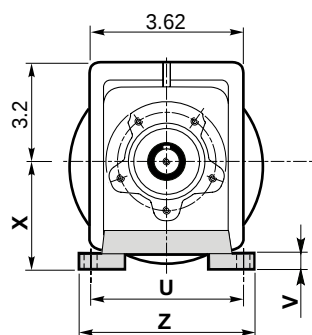
Dimensiones

Dimensions

CMG 002 H

CMG 002 H..

CMGIS 002 H..

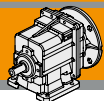


Versión H / H Version										
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Foot	
									Tipo / Type	Peso / Weight [lb]
002	0.709	2.362	3.150	0.354	3.937	0.394	2.362	4.724	H60	0.44
	0.709	3.150	4.094	0.354	4.331-4.724	0.394	2.953	5.709	H75	0.66
	0.709	1.968-3.425	4.331	0.354	4.331	0.394	3.346	5.315	H85	0.88

Preferencial / Preferred

Brida Motor / Motor flange	
1	Dimensiones NEMA NEMA Dimensions
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM 002	6.61





CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

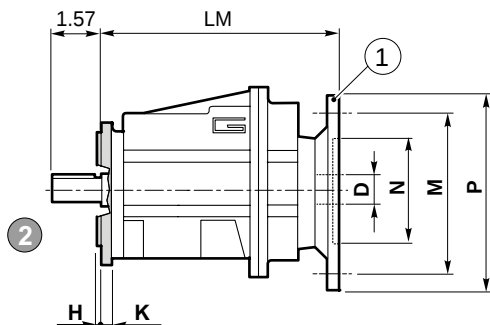
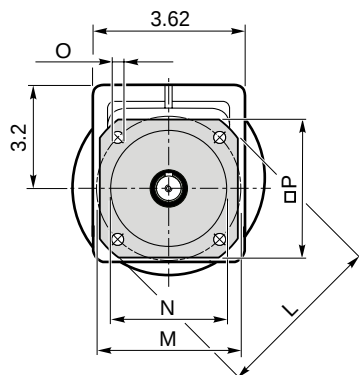
Dimensiones

Dimensions

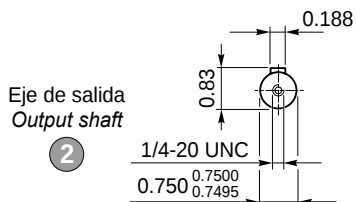
CMG 002 F

CMG 002 F.

CMGIS 002 F.

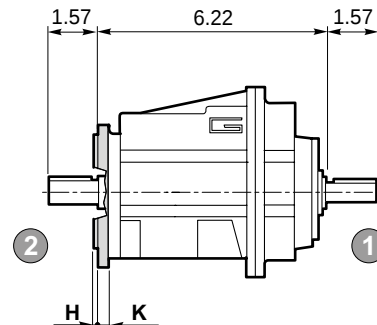


lb
8.5

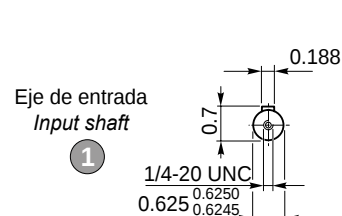


Eje de salida
Output shaft

2



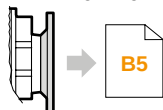
lb
8



Eje de entrada
Input shaft

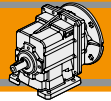
1

Bridas Motor
NEMA C-FACE



Versión F / F Version									
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange	
								Tipo / Type	Peso / Weight [lb]
002	0.138	0.276	4.134	3.346	2.756 ^{2.7548} _{2.7536}	0.256	3.543	F105	0.22
	0.138	0.315	4.724	3.937	3.150 ^{3.1488} _{3.1476}	0.276	3.937	F120	0.44
	0.138	0.315	5.512	4.528	3.740 ^{3.7386} _{3.7372}	0.354	4.528	F140	0.44

Brida Motor / Motor flange	
1	Dimensiones NEMA NEMA Dimensions
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM 002	6.61



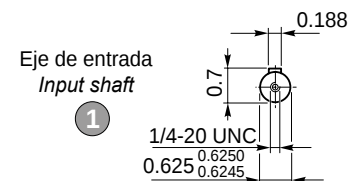
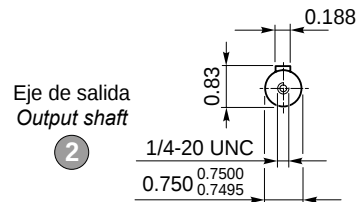
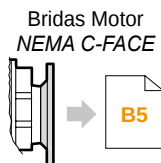
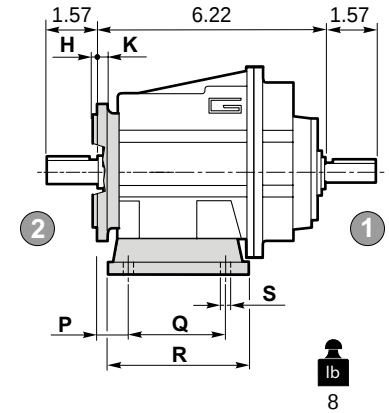
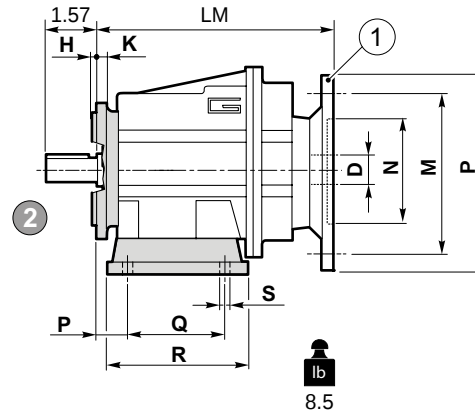
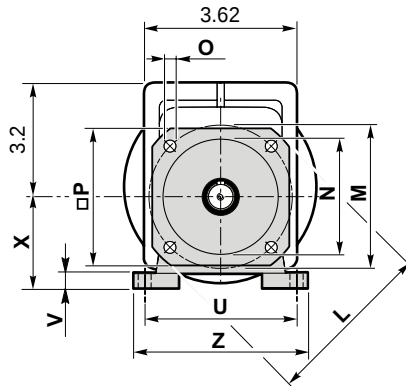
Dimensiones

Dimensions

CMG 002 H../F..

CMG 002 H../F..

CMGIS 002 H../F..



Versión F / F Version									
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange	
								Tipo / Type	Peso / Weight [lb]
002	0.138	0.276	4.134	3.346	2.756 ^{2.7548} / _{2.7536}	0.256	3.543	F105	0.22
	0.138	0.315	4.724	3.937	3.150 ^{3.1488} / _{3.1476}	0.276	3.937	F120	0.44
	0.138	0.315	5.512	4.528	3.740 ^{3.7386} / _{3.7372}	0.354	4.528	F140	0.44

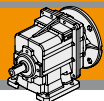
Brida Motor / Motor flange	
1	Dimensiones NEMA NEMA Dimensions
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM 002	6.61

Versión H / H Version										Combinaciones Posibles H/F Possible combinations H/F			
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Foot				
									Tipo Type	Peso / Weight [lb]	F105	F120	F140
002	0.709	2.362	3.150	0.354	3.937	0.394	2.362	4.724	H60	0.44	●	●	●
	0.709	3.150	4.094	0.354	4.331-4.724	0.394	2.953	5.709	H75	0.66	●	●	●
	0.709	1.968-3.425	4.331	0.354	4.331	0.394	3.346	5.315	H85	0.88	●	●	●

Preferencial / Preferred

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





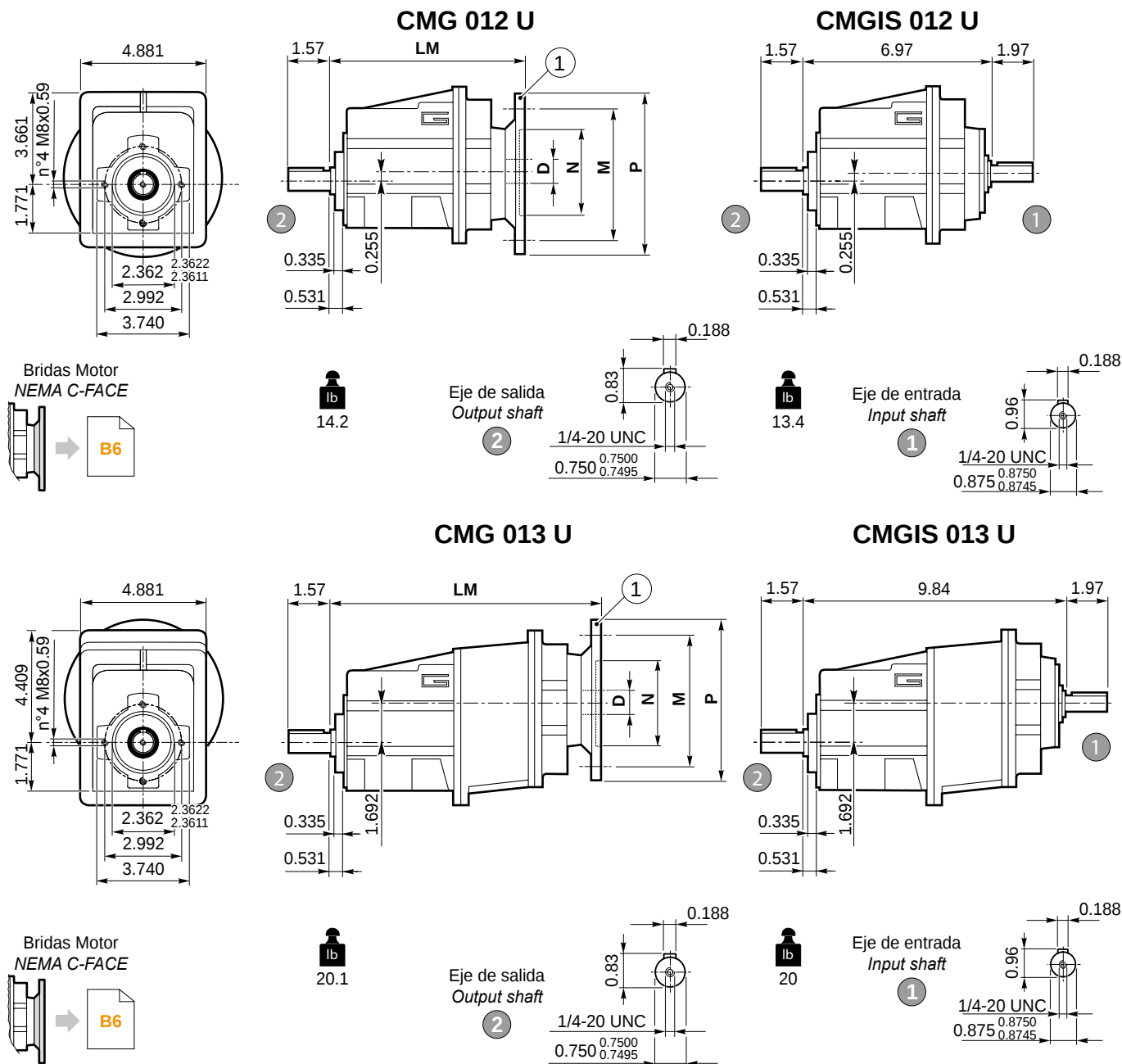
CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

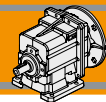
Dimensiones

Dimensions

CMG 012 U - CMG 013 U



Brida Motor / Motor flange		
1 Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC
N		4.5
M		5.88
P		6.5
D	0.625	0.875
LM 012		7.87
LM 013		10.75



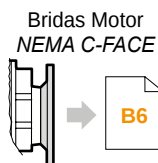
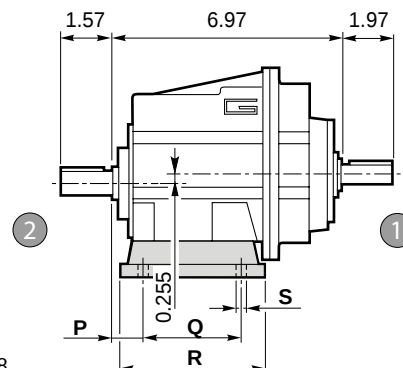
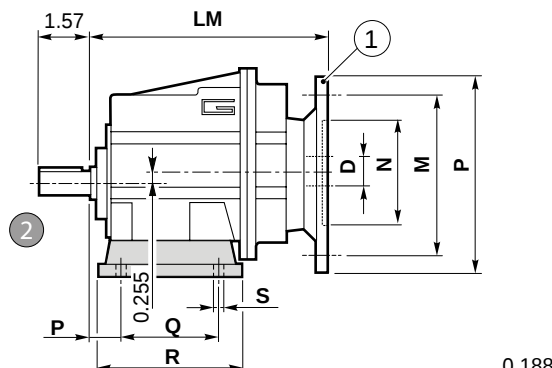
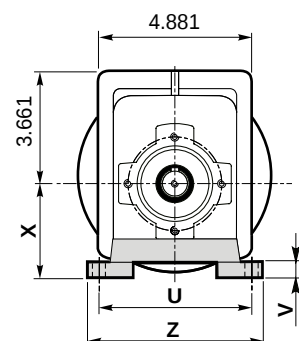
Dimensiones

Dimensions

CMG 012 H.. - CMG 013 H..

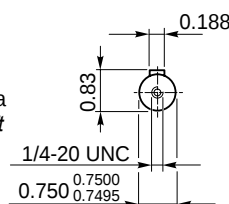
CMG 012 H..

CMGIS 012 H..



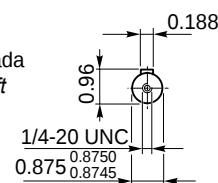
Eje de salida
Output shaft

2



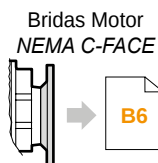
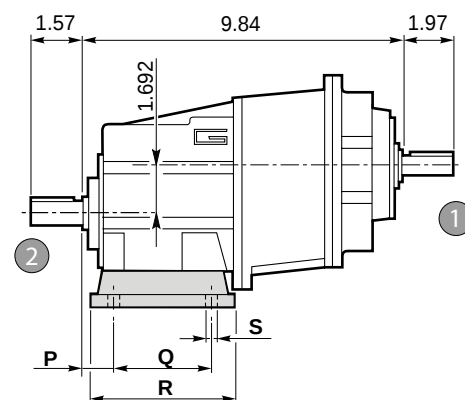
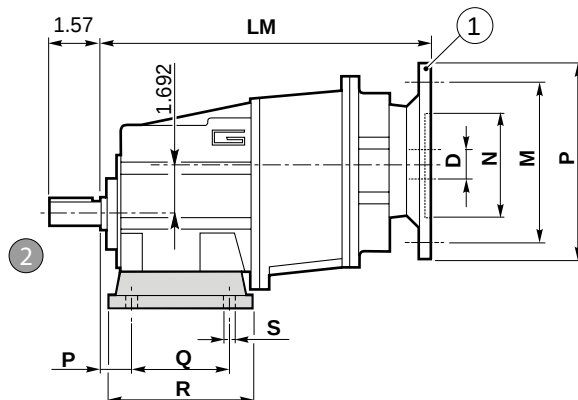
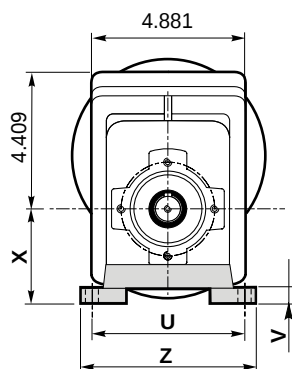
Eje de entrada
Input shaft

1



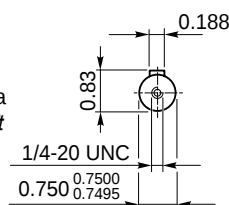
CMG 013 H..

CMGIS 013 H..



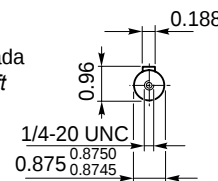
Eje de salida
Output shaft

2



Eje de entrada
Input shaft

1

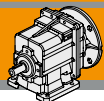


Versión H / <i>H Version</i>										
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / <i>Foot</i>	
									Tipo / <i>Type</i>	Peso / <i>Weight</i> [lb]
012 013	0.787	3.346	4.252	0.354	4.528	0.472	2.559	5.472	H65	1.543
	0.709	3.150	4.646	0.354	4.331	0.472	2.953	5.512	H75	2.205
	0.984	3.346	4.724	0.354	4.724	0.472	3.150	5.512	H80	2.425
	0.709	1.968-3.425	4.646	0.354	4.331	0.472	3.346	5.118	H85	2.646
	0.984	5.118	6.063	0.354	4.331	0.472	3.543	5.315	H90	3.307
	0.709	2.362-4.232	5.315	0.433	5.118	0.472	3.937	6.102	H100	3.748

Preferencial / Preferred

Brida Motor / Motor flange		
1	Dimensiones NEMA NEMA Dimensions	
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 012	7.87	
LM 013	10.75	





CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

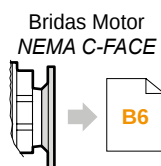
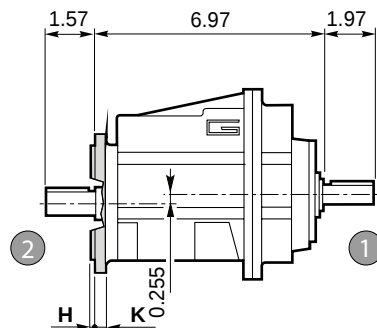
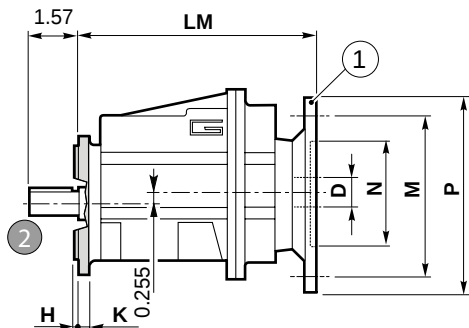
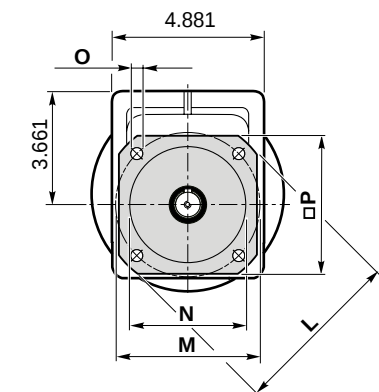
Dimensiones

Dimensions

CMG 012 F - CMG 013 F

CMG 012 F..

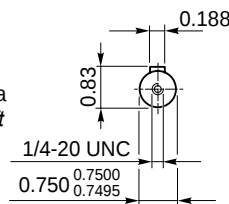
CMGIS 012 F..



lb
14.2

Eje de salida
Output shaft

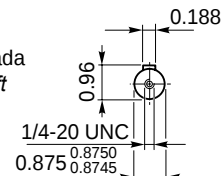
2



lb
13.4

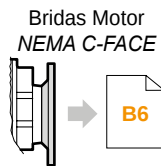
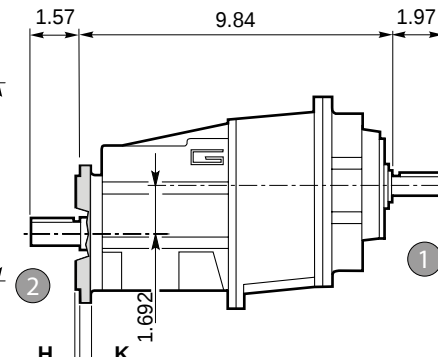
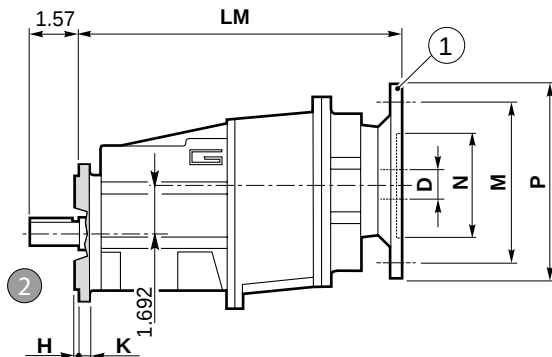
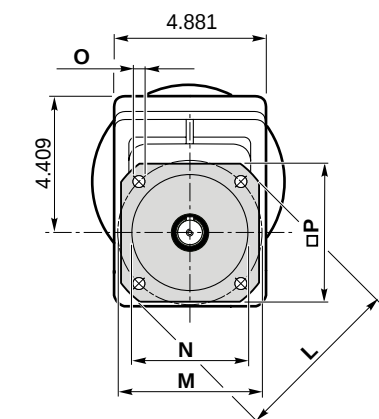
Eje de entrada
Input shaft

1



CMG 013 F..

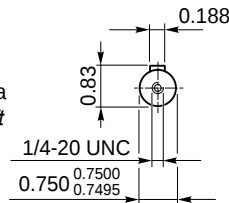
CMGIS 013 F..



lb
20.1

Eje de salida
Output shaft

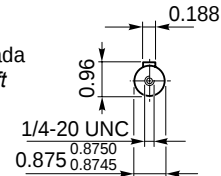
2



lb
20

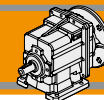
Eje de entrada
Input shaft

1



Versión F / F Version									
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange	
								Tipo / Type	Peso / Weight [lb]
012 013	0.118	0.354	4.724	3.937	3.150 ^{3.1488} _{3.1476}	0.354	4.173	F120	1.102
	0.138	0.354	5.512	4.528	3.740 ^{3.7386} _{3.7372}	0.354	4.528	F140	1.764
	0.138	0.354	6.299	5.118	4.331 ^{4.3296} _{4.3282}	0.354	4.961	F160	2.425
	0.138	0.433	7.874	6.496	5.118 ^{5.1163} _{5.1147}	0.433	6.496	F200	3.968

Brida Motor / Motor flange		
1	Dimensiones NEMA NEMA Dimensions	
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 012	7.87	
LM 013	10.75	



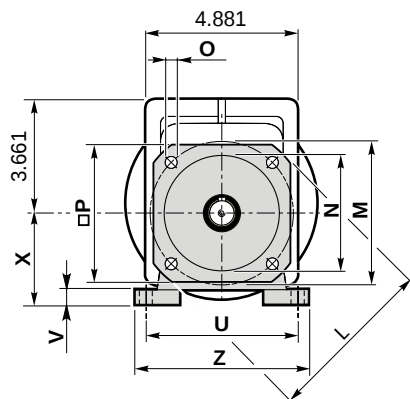
Dimensiones

Dimensions

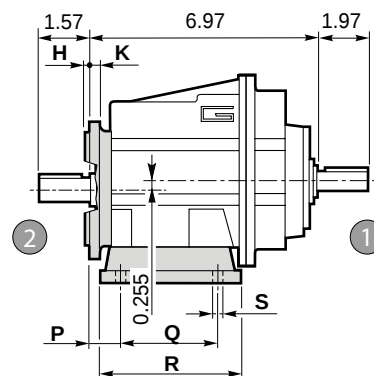
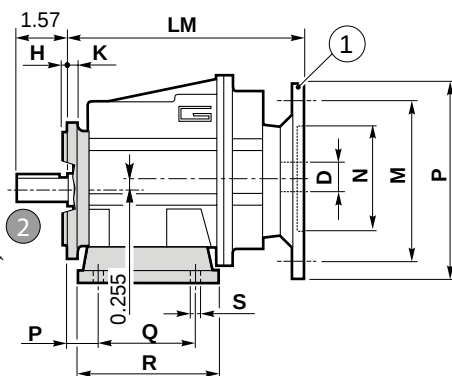
CMG 012 H../F.. - CMG 013 H../F..

CMG 012 H../F..

CMGIS 012 H../F..



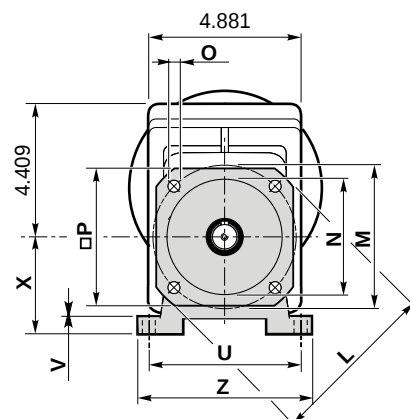
14.5



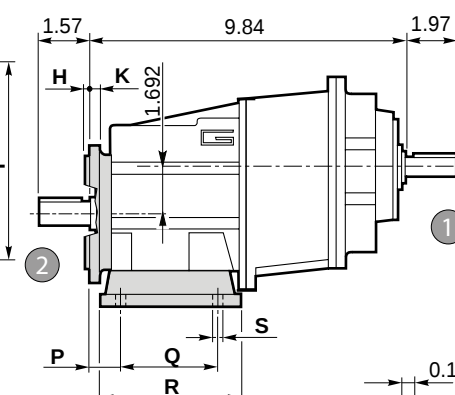
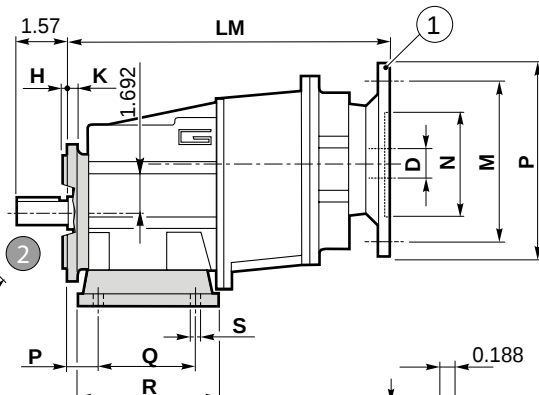
13.7

CMG 013 H../F..

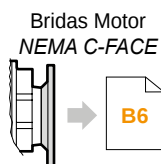
CMGIS 013 H../F..



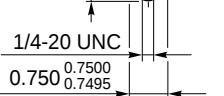
20.1



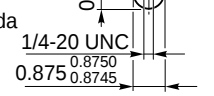
20



Eje de salida
Output shaft



Eje de entrada
Input shaft



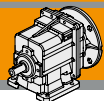
Versión F / F Version									
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange	
								Tipo / Type	Peso / Weight [lb]
012 013	0.118	0.354	4.724	3.937	3.150 ^{3.1488} _{3.1476}	0.354	4.173	F120	1.102
	0.138	0.354	5.512	4.528	3.740 ^{3.7386} _{3.7372}	0.354	4.528	F140	1.764
	0.138	0.354	6.299	5.118	4.331 ^{4.3296} _{4.3282}	0.354	4.961	F160	2.425
	0.138	0.433	7.874	6.496	5.118 ^{5.1163} _{5.1147}	0.433	6.496	F200	3.968

Brida Motor / Motor flange		
1	Dimensiones NEMA NEMA Dimensions	
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 012	7.87	
LM 013	10.75	

Versión H / H Version										Combinaciones posibles H/F Possible combinations H/F				
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patás / Foot		F120	F140	F160	F200
									Tipo Type	Peso / Weight [lb]				
012 013	0.787	3.346	4.252	0.354	4.528	0.472	2.559	5.472	H65	1.543	●	●		
	0.709	3.150	4.646	0.354	4.331	0.472	2.953	5.512	H75	2.205	●	●	●	
	0.984	3.346	4.724	0.354	4.724	0.472	3.150	5.512	H80	2.425	●	●	●	
	0.709	1.968-3.425	4.646	0.354	4.331	0.472	3.346	5.118	H85	2.646	●	●	●	
	0.984	5.118	6.063	0.354	4.331	0.472	3.543	5.315	H90	3.307	●	●	●	●
	0.709	2.362-4.232	5.315	0.433	5.118	0.472	3.937	6.102	H100	3.748	●	●	●	●

Preferencial / Preferred

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



CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

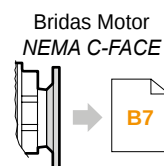
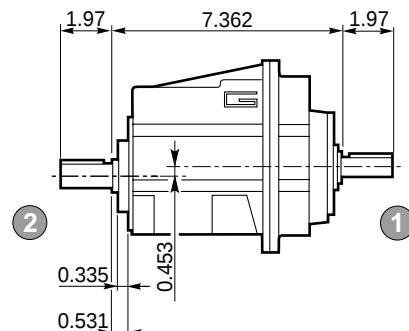
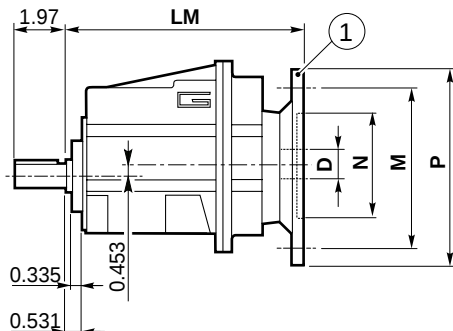
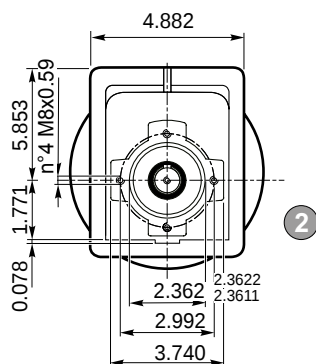
Dimensiones

Dimensions

CMG 022 U - CMG 023 U

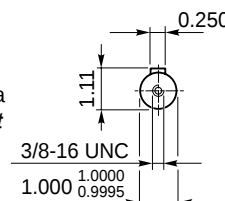
CMG 022 U

CMGIS 022 U



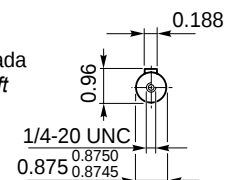
Eje de salida
Output shaft

2



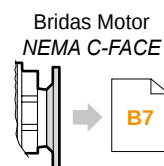
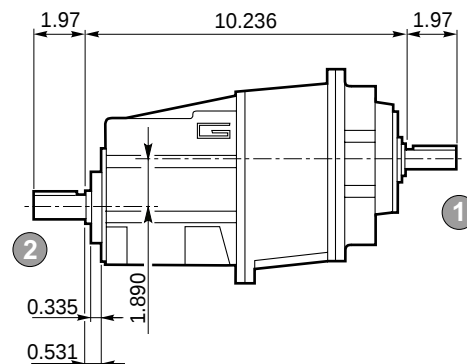
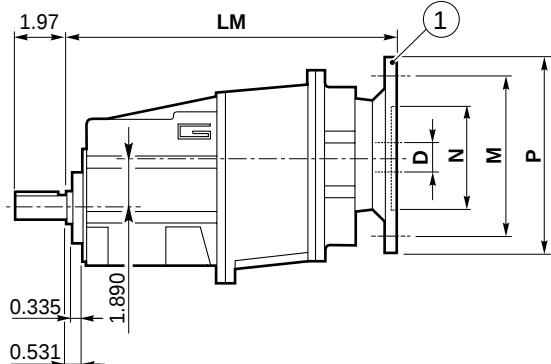
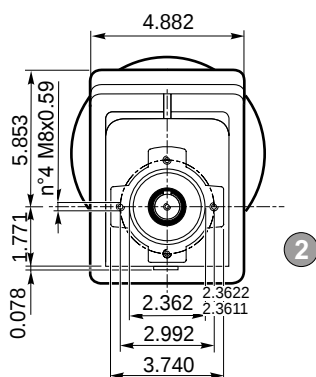
Eje de entrada
Input shaft

1



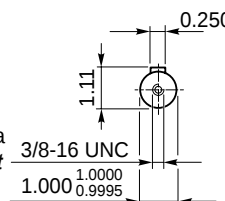
CMG 023 U

CMGIS 023 U



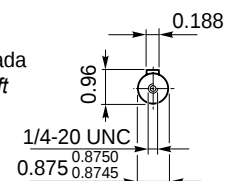
Eje de salida
Output shaft

2

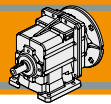


Eje de entrada
Input shaft

1



Brida Motor / Motor flange		
1 Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC
N		4.5
M		5.88
P		6.5
D	0.625	0.875
LM 022		8.268
LM 023		10.61



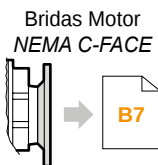
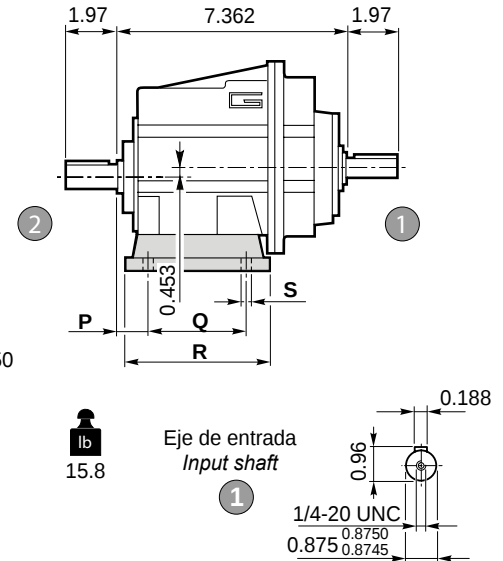
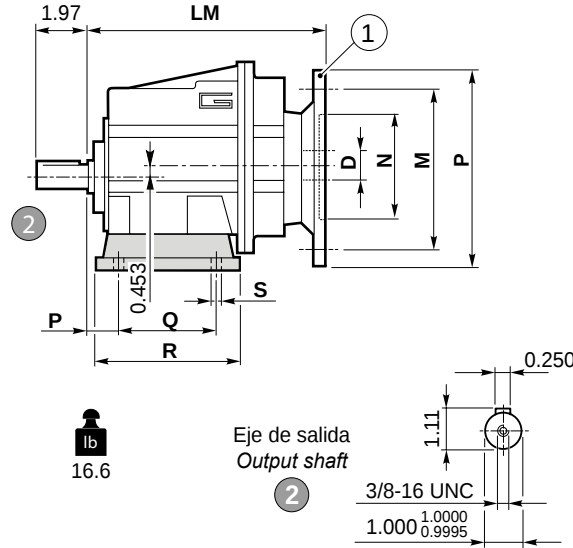
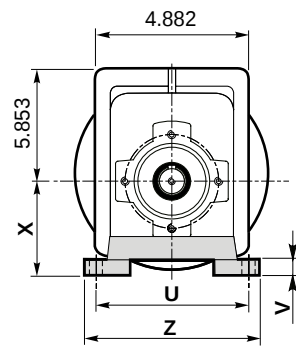
Dimensiones

Dimensions

CMG 022 H.. - CMG 023 H..

CMG 022 H..

CMGIS 022 H..



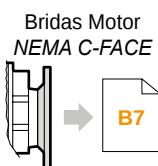
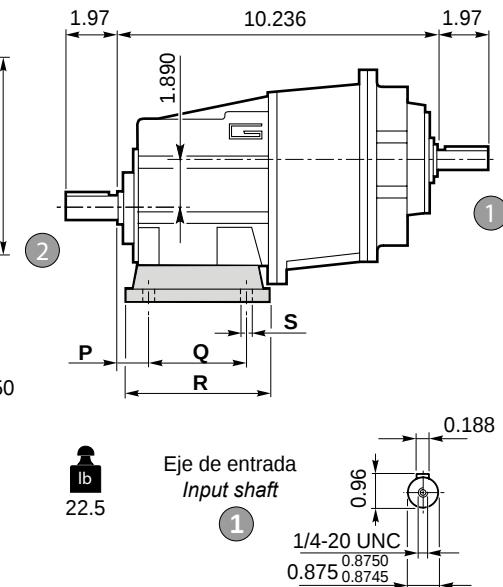
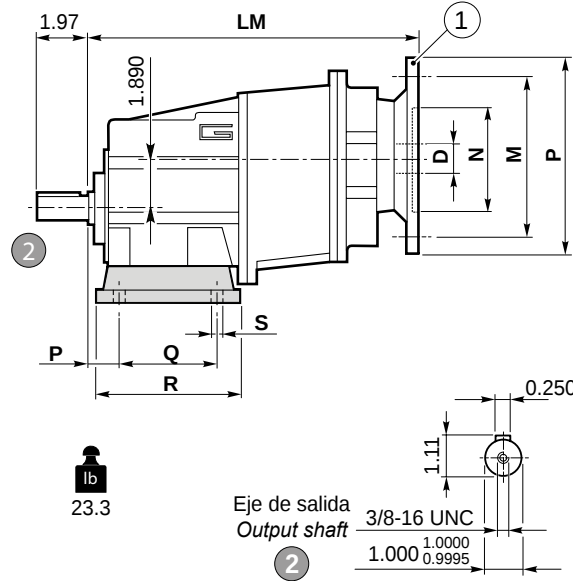
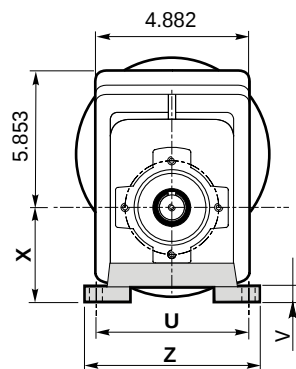
Eje de salida
Output shaft



Eje de entrada
Input shaft

CMG 023 H..

CMGIS 023 H..



Eje de salida
Output shaft



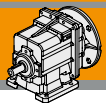
Eje de entrada
Input shaft

Versión H / <i>H Version</i>										
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patás / <i>Foot</i>	
									Tipo / <i>Type</i>	Peso / <i>Weight</i> [lb]
022 023	0.787	3.346	4.252	0.354	4.528	0.472	2.559	5.472	H65	1.543
	0.709	3.150	4.646	0.354	4.331	0.472	2.953	5.512	H75	2.205
	0.984	3.346	4.724	0.354	4.724	0.472	3.150	5.512	H80	2.425
	0.709	1.968-3.425	4.646	0.354	4.331	0.472	3.346	5.118	H85	2.646
	0.984	5.118	6.063	0.354	4.331	0.472	3.543	5.315	H90	3.307
	0.709	2.362-4.232	5.315	0.433	5.118	0.472	3.937	6.102	H100	3.748

Preferencial / Preferred

Brida Motor / Motor flange		
1	Dimensiones NEMA NEMA Dimensions	
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 022	8.268	
LM 023	10.61	





CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

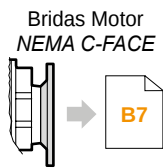
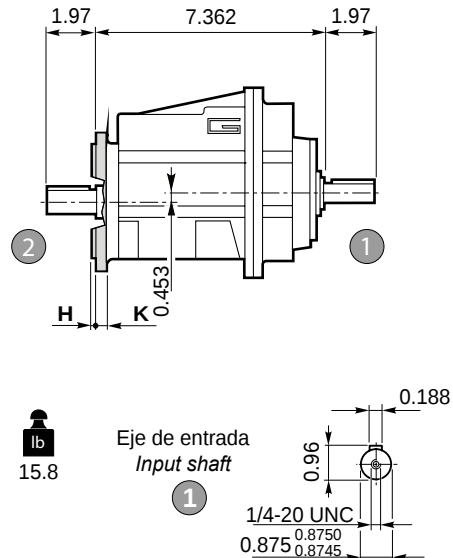
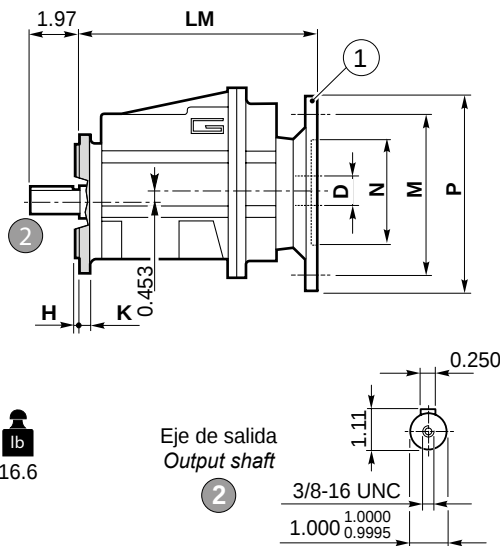
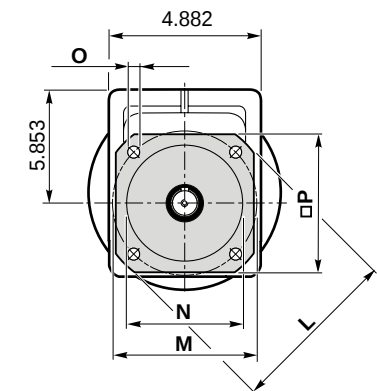
Dimensiones

Dimensions

CMG 022 F.. - CMG 023 F..

CMG 022 F..

CMGIS 022 F..



lb
16.6

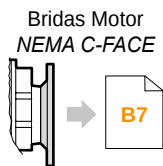
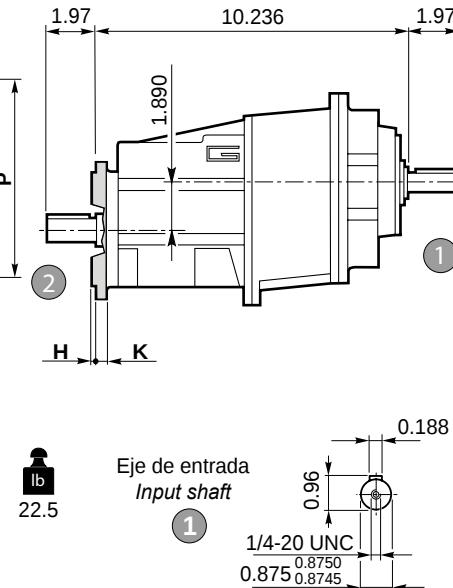
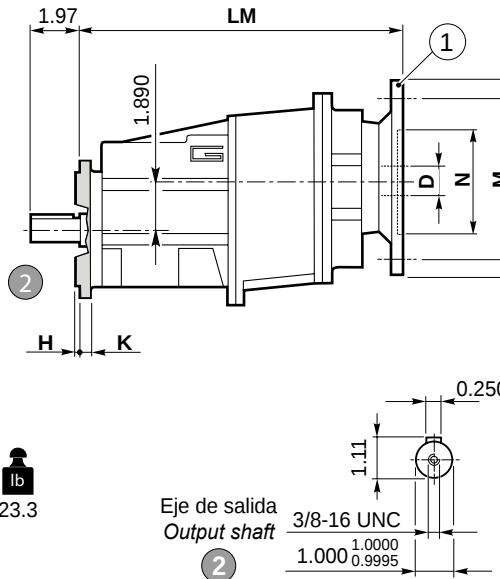
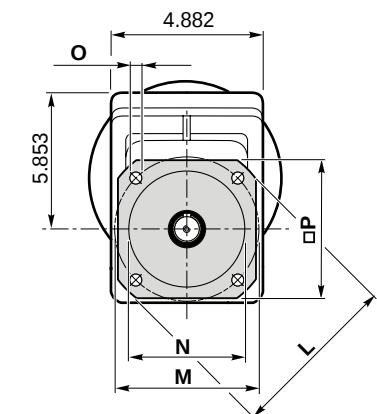
Eje de salida
Output shaft
2

lb
15.8

Eje de entrada
Input shaft
1

CMG 023 F..

CMGIS 023 F..



lb
23.3

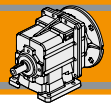
Eje de salida
Output shaft
2

lb
22.5

Eje de entrada
Input shaft
1

Versión F / F Version									
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange	
								Tipo / Type	Peso / Weight [lb]
022 023	0.118	0.354	4.724	3.937	3.150 ^{3.1488} _{3.1476}	0.354	4.173	F120	1.102
	0.138	0.354	5.512	4.528	3.740 ^{3.7386} _{3.7372}	0.354	4.528	F140	1.764
	0.138	0.354	6.299	5.118	4.331 ^{4.3296} _{4.3282}	0.354	4.961	F160	2.425
	0.138	0.433	7.874	6.496	5.118 ^{5.1163} _{5.1147}	0.433	6.496	F200	3.968

Brida Motor / Motor flange		
1	Dimensiones NEMA NEMA Dimensions	
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 022	8.268	
LM 023	10.61	



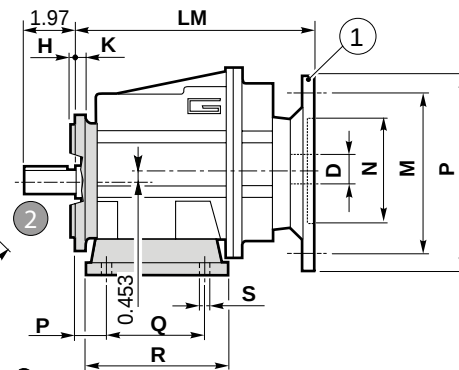
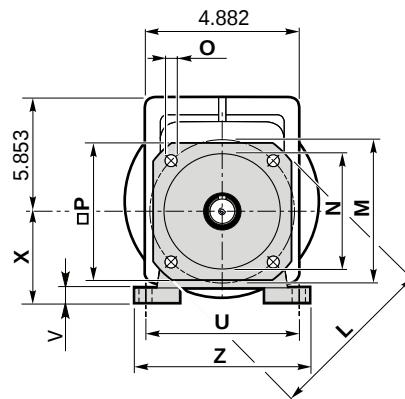
Dimensiones

Dimensions

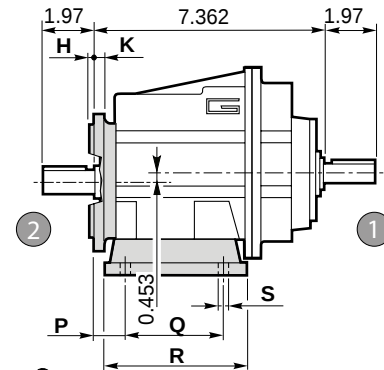
CMG 022 H../F.. - CMG 023 H../F..

CMG 022 H../F..

CMGIS 022 H../F..



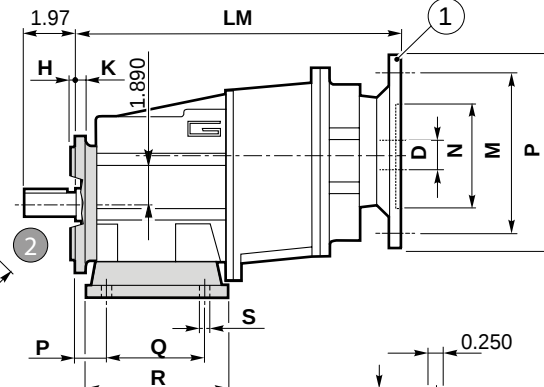
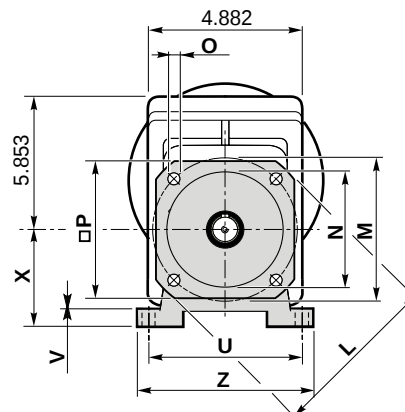
lb
16.7



lb
15.9

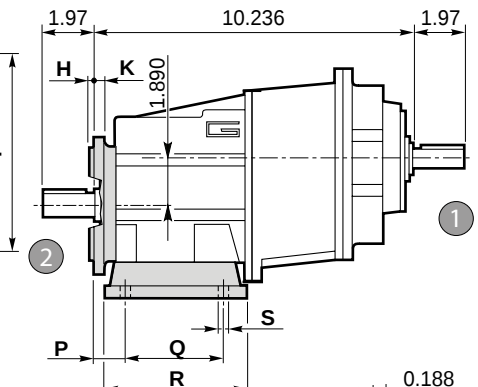
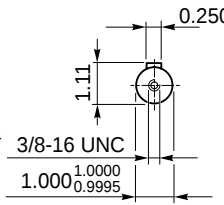
CMG 023 H../F..

CMGIS 023 H../F..



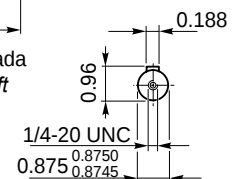
lb
23.3

Eje de salida
Output shaft

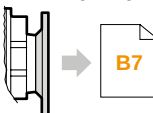


lb
22.5

Eje de entrada
Input shaft



Bridas Motor
NEMA C-FACE



Versión F / F Version									
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange	
								Tipo / Type	Peso / Weight [lb]
022 023	0.118	0.354	4.724	3.937	3.150 ^{3.1488} _{3.1476}	0.354	4.173	F120	1.102
	0.138	0.354	5.512	4.528	3.740 ^{3.7386} _{3.7372}	0.354	4.528	F140	1.764
	0.138	0.354	6.299	5.118	4.331 ^{4.3296} _{4.3282}	0.354	4.961	F160	2.425
	0.138	0.433	7.874	6.496	5.118 ^{5.1163} _{5.1147}	0.433	6.496	F200	3.968

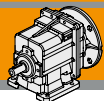
Brida Motor / Motor flange			
1	Dimensiones NEMA		
	NEMA Dimensions		
	56 C	140 TC	
N	4.5		
M	5.88		
P	6.5		
D	0.625	0.875	
LM 022	8.268		
LM 023	10.61		

Versión H / H Version										Combinaciones posibles H/F Possible combinations H/F				
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Foot		F120	F140	F160	F200
									Tipo Type	Peso / Weight [lb]				
022 023	0.787	3.346	4.252	0.354	4.528	0.472	2.559	5.472	H65	1.543	●	●		
	0.709	3.150	4.646	0.354	4.331	0.472	2.953	5.512	H75	2.205	●	●	●	
	0.984	3.346	4.724	0.354	4.724	0.472	3.150	5.512	H80	2.425	●	●	●	
	0.709	1.968-3.425	4.646	0.354	4.331	0.472	3.346	5.118	H85	2.646	●	●	●	
	0.984	5.118	6.063	0.354	4.331	0.472	3.543	5.315	H90	3.307	●	●	●	●
	0.709	2.362-4.232	5.315	0.433	5.118	0.472	3.937	6.102	H100	3.748	●	●	●	●

Preferencial / Preferred

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





CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

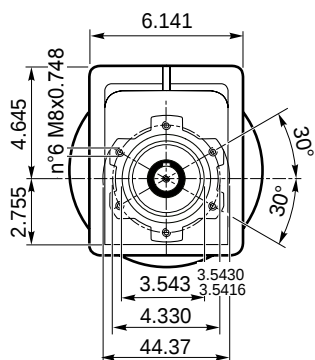
Dimensiones

Dimensions

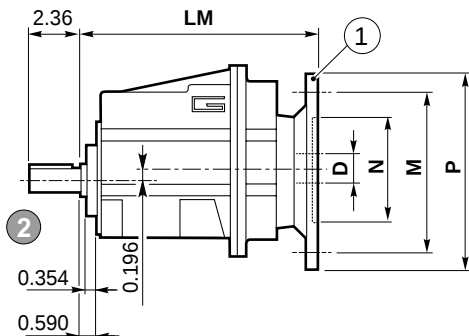
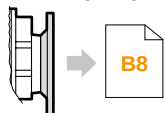
CMG 032 U - CMG 033 U

CMG 032 U

CMGIS 032 U



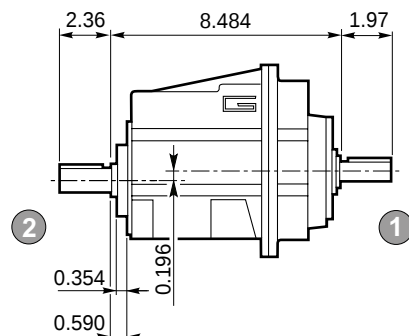
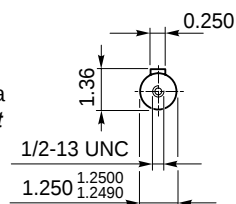
Bridas Motor
NEMA C-FACE



lb
24.9

Eje de salida
Output shaft

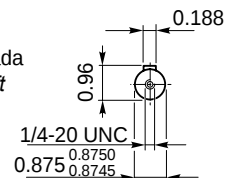
2



lb
24.7

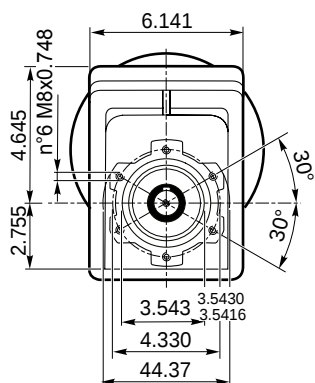
Eje de entrada
Input shaft

1

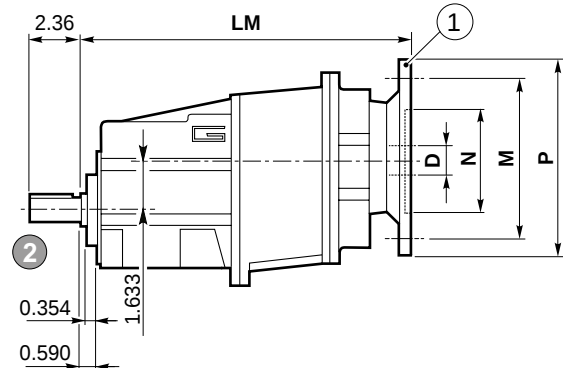
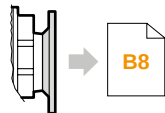


CMG 033 U

CMGIS 033 U



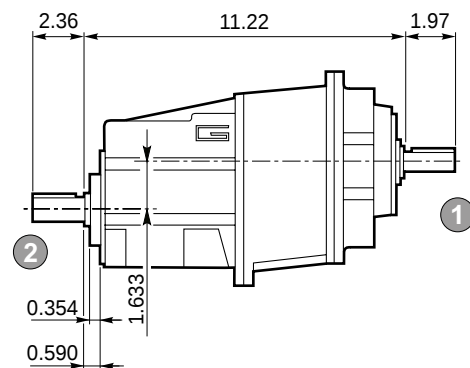
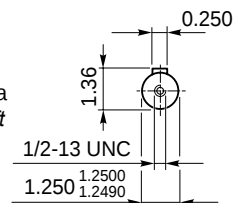
Bridas Motor
NEMA C-FACE



lb
30

Eje de salida
Output shaft

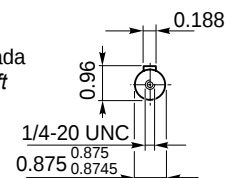
2



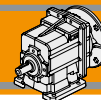
lb
29.3

Eje de entrada
Input shaft

1



Brida Motor / Motor flange			
1 Dimensiones NEMA NEMA Dimensions			
	56 C	140 TC	180 TC
N		4.5	4.5
M		5.88	7.25
P		6.5	9
D	0.625	0.875	1.125
LM 032		9.705	9.612
LM 033		12.126	-



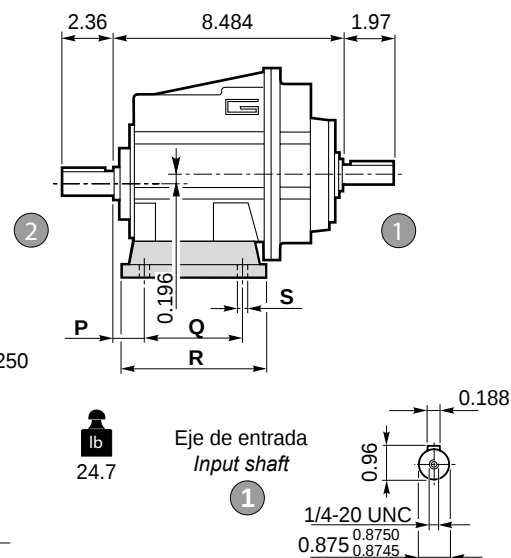
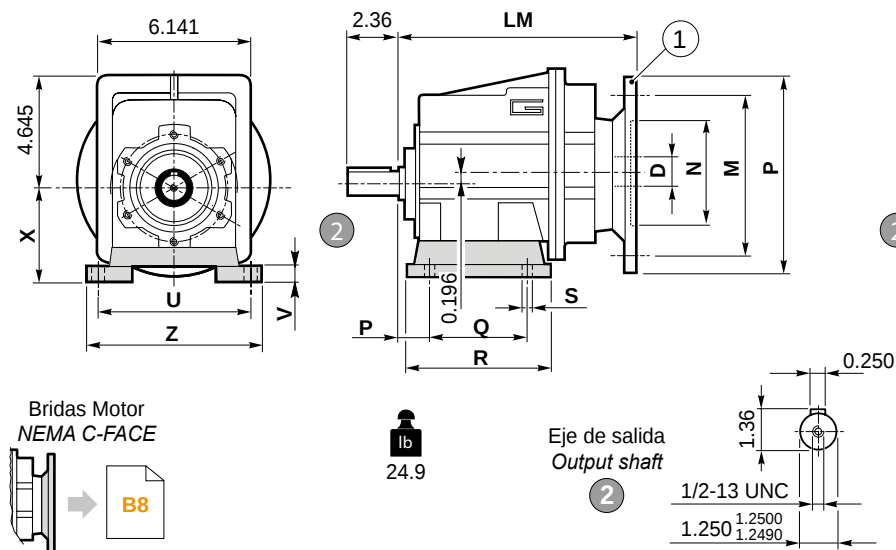
Dimensiones

Dimensions

CMG 032 H.. - CMG 033 H..

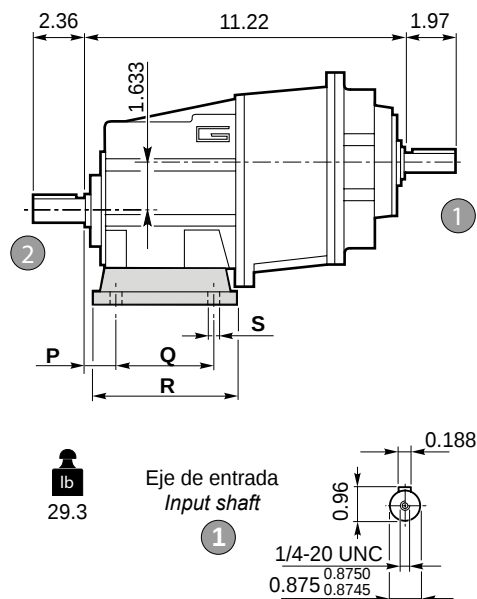
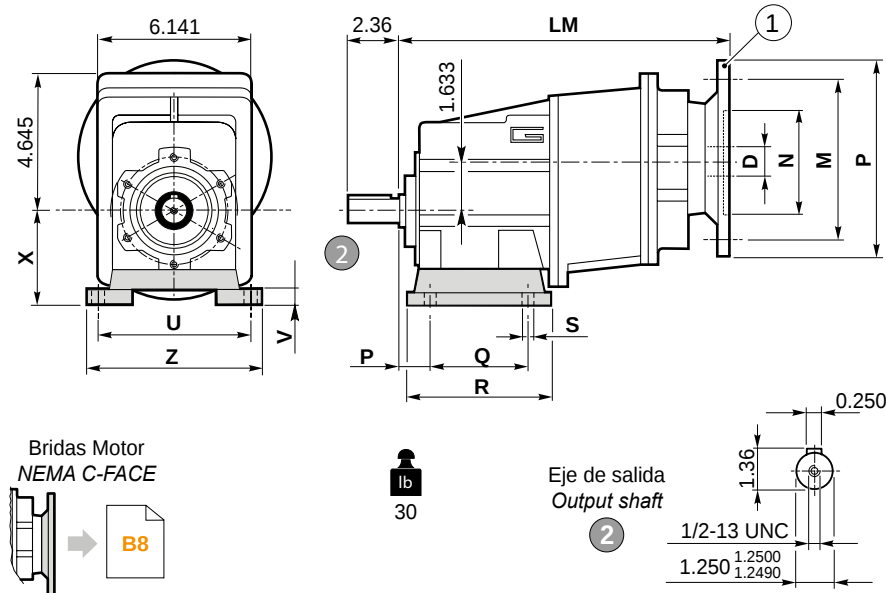
CMG 032 H..

CMGIS 032 H..



CMG 033 H..

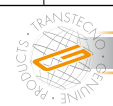
CMGIS 033 H..

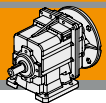
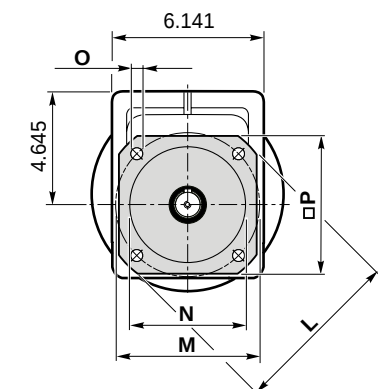
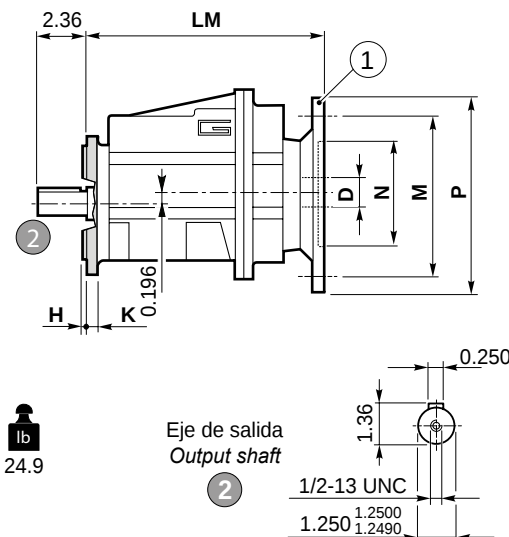
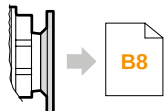


Versión H / <i>H Version</i>										
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patás / Foot	
									Tipo / Type	Peso / Weight [lb]
032 033	1.181	4.134	5.354	0.551	6.299	0.551	3.740	7.638	H95	3.307
	1.181	3.937	5.905	0.433	5.905	0.551	4.331	7.283	H110	4.189
	0.709	2.756			6.299					
	1.181	6.496	7.677	0.551	5.315	0.551	4.528	6.693	H115	4.850
	1.378	4.331	6.299	0.551	6.693	0.551	4.724	8.268	H120	5.732

Preferencial / Preferred

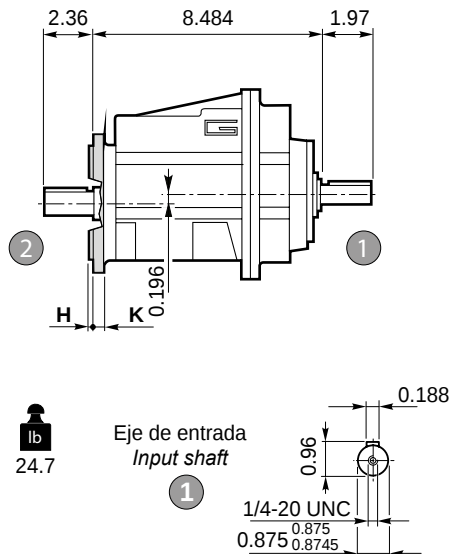
Brida Motor / Motor flange			
1	Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC	180 TC
N	4.5		4.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 032	9.705		9.612
LM 033	12.126		-




CMG
REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES
Dimensiones
Dimensions
CMG 032 F.. - CMG 033 F..
CMG 032 F..
CMGIS 032 F..

 Bridas Motor
NEMA C-FACE

 lb
24.9

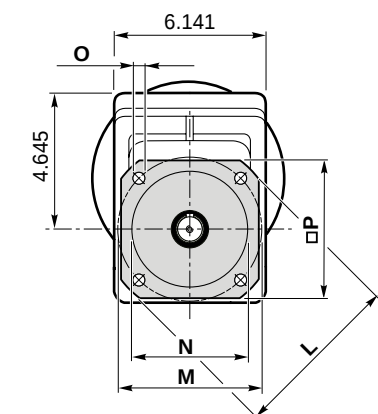
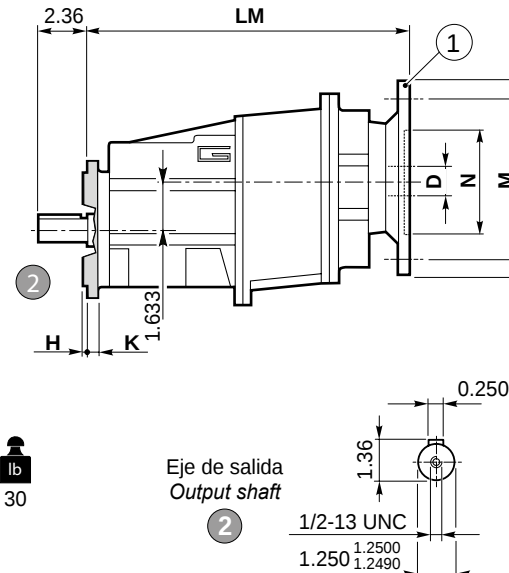
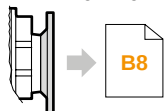
 Eje de salida
Output shaft

2


 lb
24.7

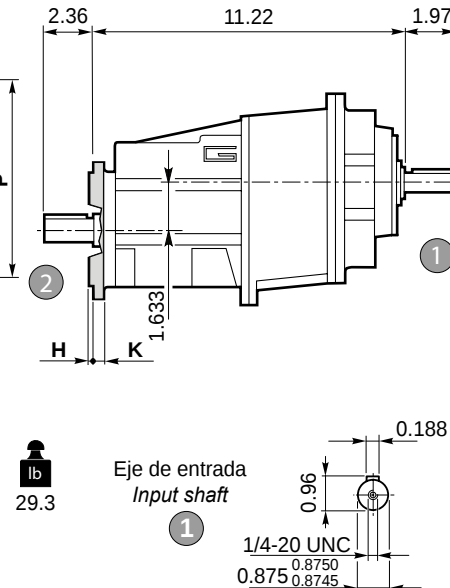
 Eje de entrada
Input shaft

1

CMG 033 F..
CMGIS 033 F..

 Bridas Motor
NEMA C-FACE

 lb
30

 Eje de salida
Output shaft

2

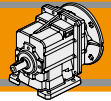

 lb
29.3

 Eje de entrada
Input shaft

1

Versión F / F Version										
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange		
								Tipo / Type	Peso / Weight [lb]	
032 033	0.138	0.433	6.299	5.118	4.331	^{4.3296} _{4.3282}	0.354	5.512	F160	2.205
	0.138	0.433	7.874	6.496	5.118	^{5.1163} _{5.1147}	0.433	6.496	F200	3.968
	0.157	0.512	9.842	8.465	7.087	^{7.0853} _{7.0837}	0.551	8.465	F250	6.393

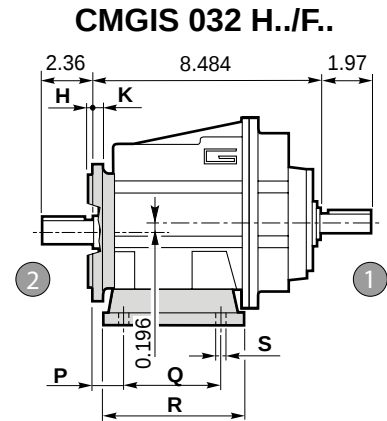
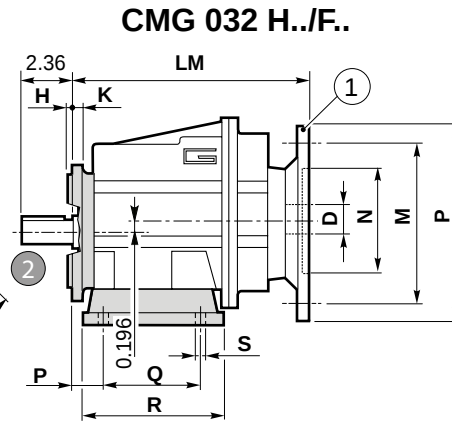
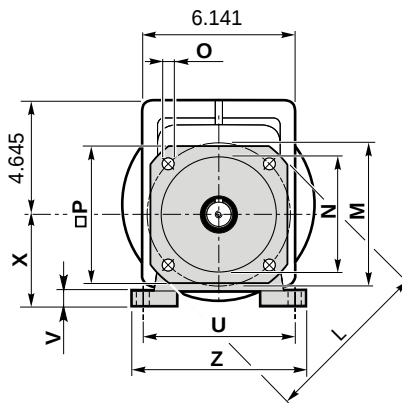
Brida Motor / Motor flange			
1	Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC	180 TC
N	4.5		4.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 032	9.705		9.612
LM 033	12.126		



Dimensiones

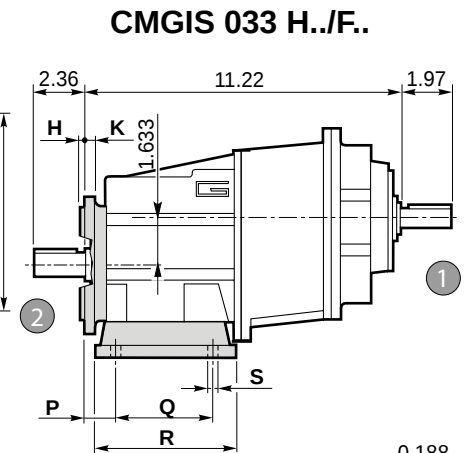
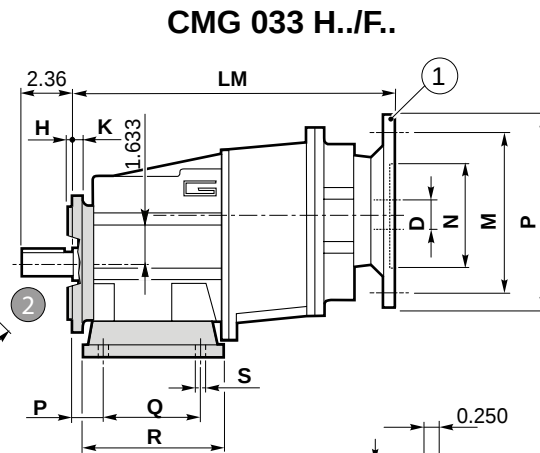
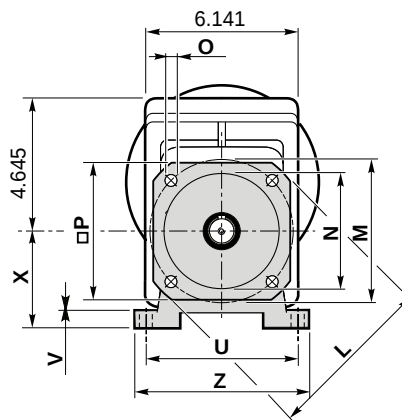
Dimensions

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



lb
24.9

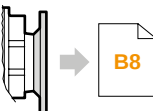
lb
24.7



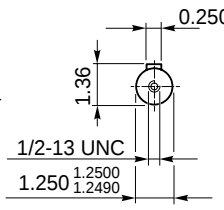
lb
30

lb
29.3

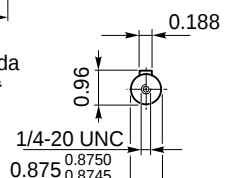
Bridas Motor
NEMA C-FACE



Eje de salida
Output shaft



Eje de entrada
Input shaft



Versión F / F Version									
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange	
								Tipo / Type	Peso / Weight [lb]
032 033	0.138	0.433	6.299	5.118	4.331 ^{4.3296} _{4.3282}	0.354	5.512	F160	2.205
	0.138	0.433	7.874	6.496	5.118 ^{5.1163} _{5.1147}	0.433	6.496	F200	3.968
	0.157	0.512	9.842	8.465	7.087 ^{7.0853} _{7.0837}	0.551	8.465	F250	6.393

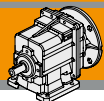
Brida Motor / Motor flange			
1	Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC	180 TC
N	4.5		4.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 032	9.705		9.612
LM 033	12.126		-

Versión H / H Version										Combinaciones posibles H/F Possible combinations H/F				
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Foot		F120	F140	F160	F200
									Tipo Type	Peso / Weight [lb]				
032 033	1.181	4.134	5.354	0.551	6.299	0.551	3.740	7.638	H95	3.307	●	●		
	1.181	3.937	5.905	0.433	5.905	0.551	4.331	7.283	H110	4.189	●	●	●	
	0.709	2.756			6.299						●	●	●	
	1.181	6.496	7.677	0.551	5.315	0.551	4.528	6.693	H115	4.850	●	●	●	
	1.378	4.331	6.299	0.551	6.693	0.551	4.724	8.268	H120	5.732	●	●	●	●

Preferencial / Preferred

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





CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

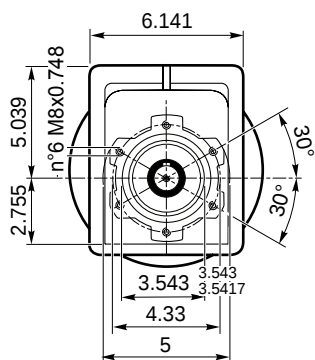
Dimensiones

Dimensions

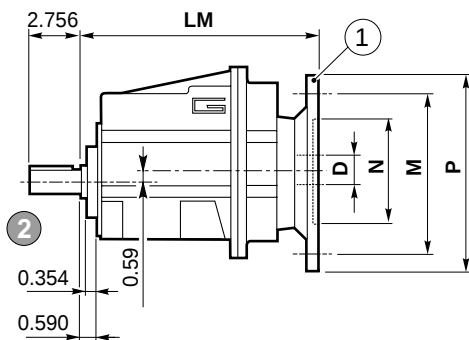
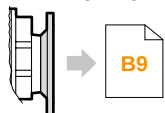
CMG 042 U - CMG 043 U

CMG 042 U

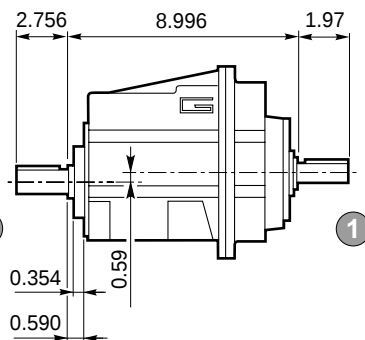
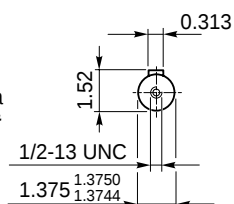
CMGIS 042 U



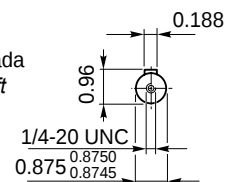
Bridas Motor
NEMA C-FACE



Eje de salida
Output shaft

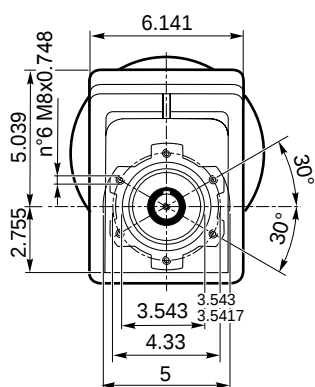


Eje de entrada
Input shaft

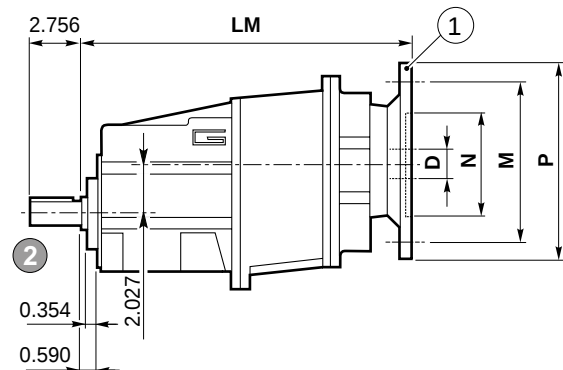
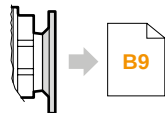


CMG 043 U

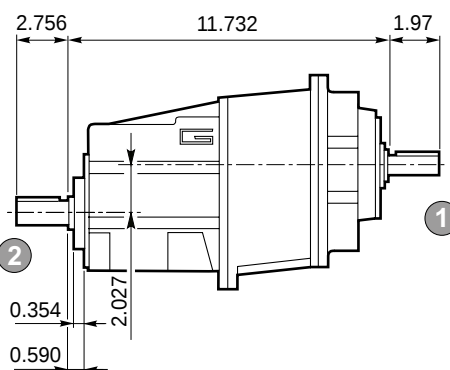
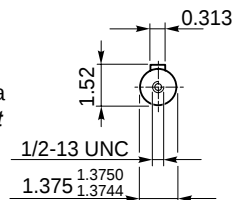
CMGIS 043 U



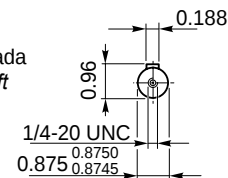
Bridas Motor
NEMA C-FACE



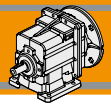
Eje de salida
Output shaft



Eje de entrada
Input shaft



Brida Motor / Motor flange			
1 Dimensiones NEMA NEMA Dimensions			
	56 C	140 TC	180 TC
N		4.5	8.5
M		5.88	7.25
P		6.5	9
D	0.625	0.875	1.125
LM 042		10.217	10.124
LM 043		12.638	-



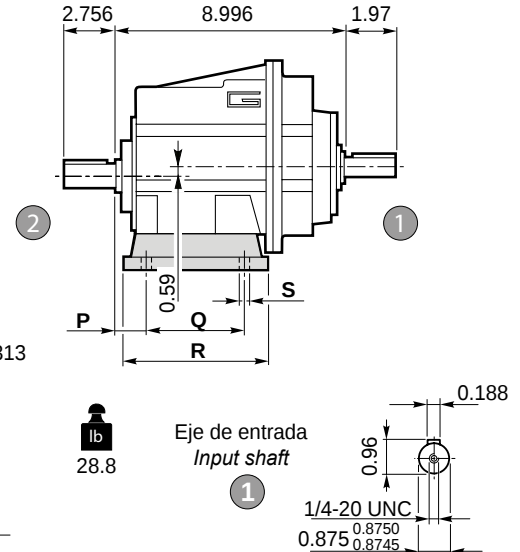
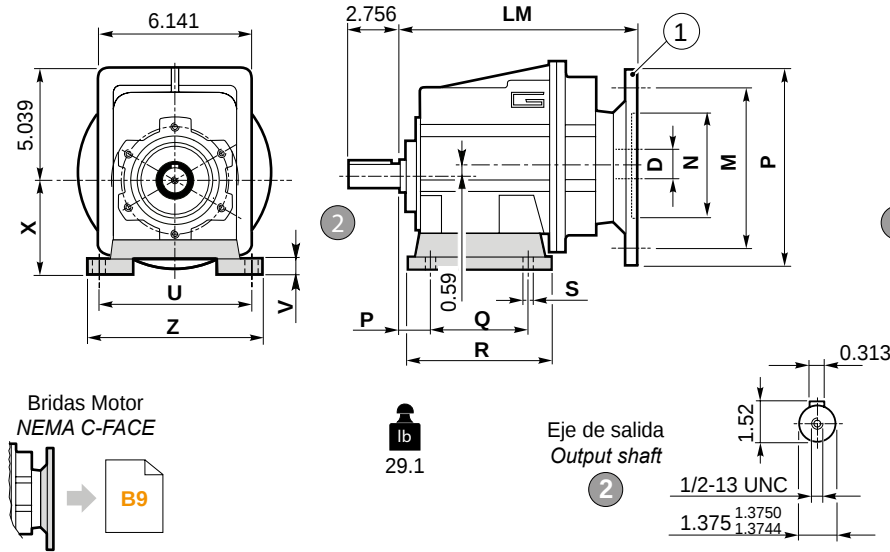
Dimensiones

Dimensions

CMG 042 H.. - CMG 043 H..

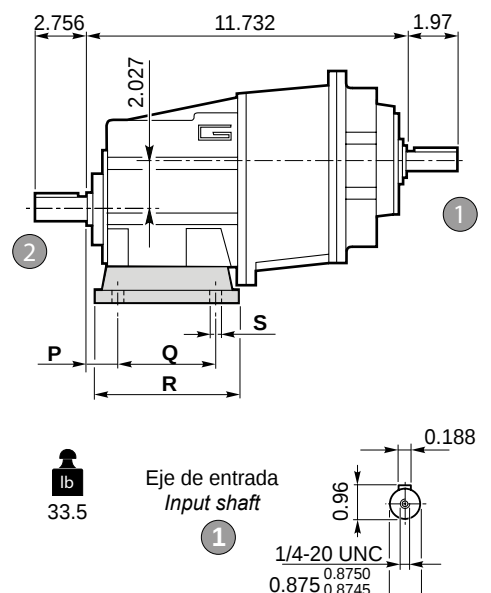
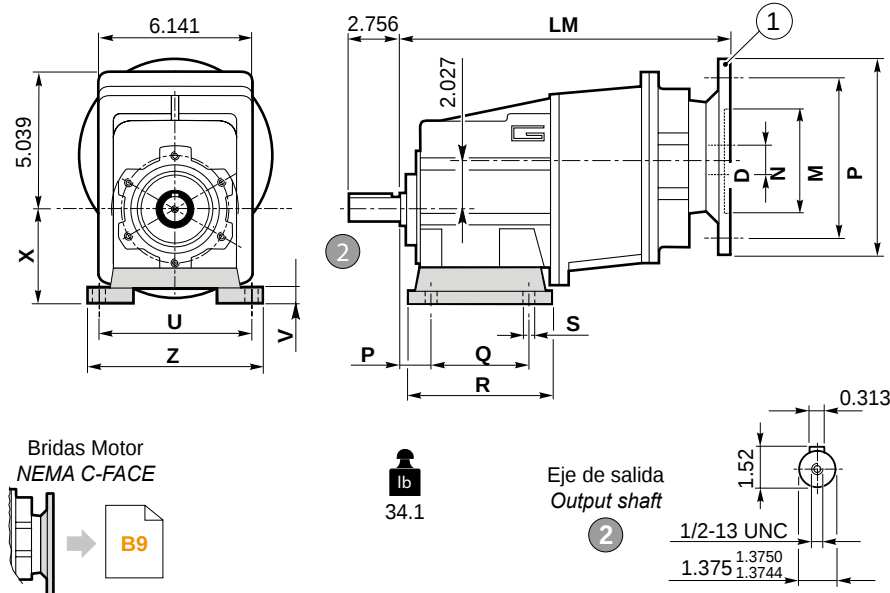
CMG 042 H..

CMGIS 042 H..



CMG 043 H..

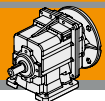
CMGIS 043 H..



Versión H / H Version									
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Foot
									Tipo / Type
042 043	1.181	4.134	5.354	0.551	6.299	0.551	3.740	7.638	H95
	1.181	3.937	5.905	0.433	5.905	0.551	4.331	7.283	H110
	0.709	2.756			6.299				
	1.181	6.496	7.677	0.551	5.315	0.551	4.528	6.693	H115
	1.378	4.331	6.299	0.551	6.693	0.551	4.724	8.268	H120

Preferencial / Preferred

Brida Motor / Motor flange			
1	Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 042	10.217		10.124
LM 043	12.638		-



CMG

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES
HELICAL GEARBOXES

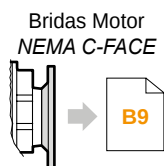
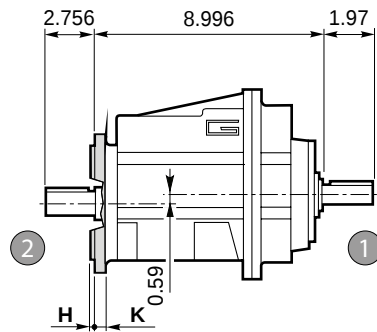
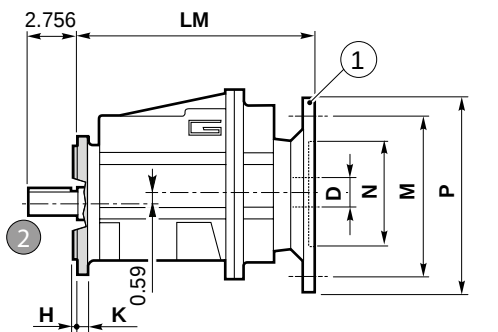
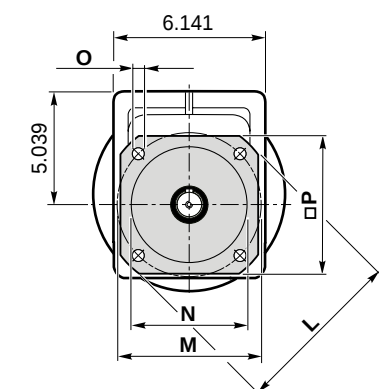
Dimensiones

Dimensions

CMG 042 F.. - CMG 043 F..

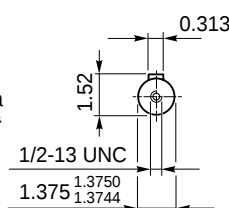
CMG 042 F..

CMGIS 042 F..



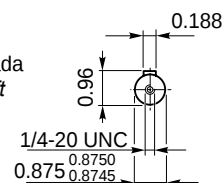
lb
29.1

Eje de salida
Output shaft
2



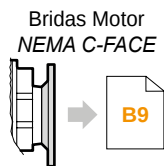
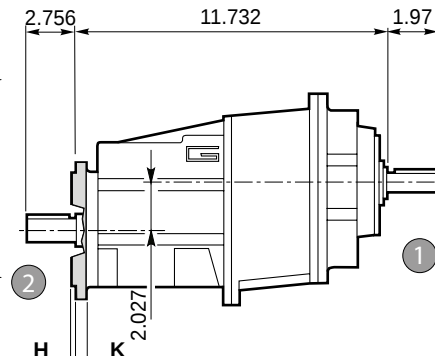
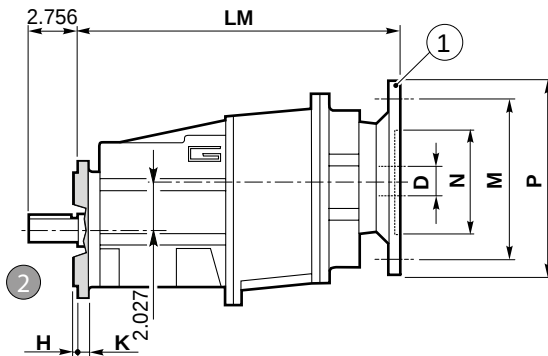
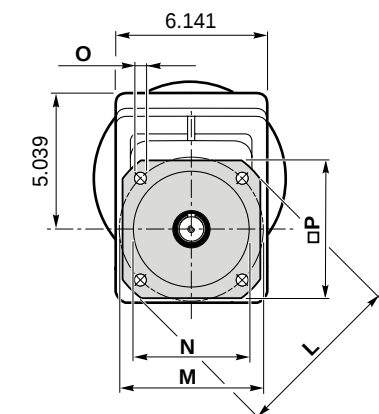
lb
28.8

Eje de entrada
Input shaft
1



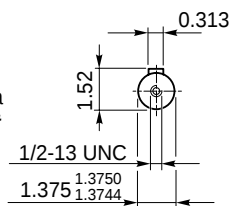
CMG 043 F..

CMGIS 043 F..



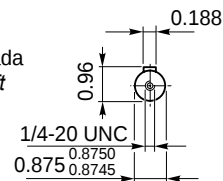
lb
34.1

Eje de salida
Output shaft
2



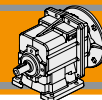
lb
33.5

Eje de entrada
Input shaft
1



Versión F / F Version										
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange		
								Tipo / Type	Peso / Weight [lb]	
042 043	0.138	0.433	6.299	5.118	4.331	^{4.3296} _{4.3282}	0.354	5.512	F160	2.205
	0.138	0.433	7.874	6.496	5.118	^{5.1163} _{5.1147}	0.433	6.496	F200	3.968
	0.157	0.512	9.842	8.465	7.087	^{7.0853} _{7.0837}	0.551	8.465	F250	6.393

Brida Motor / Motor flange			
1	Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 042	10.217		10.124
LM 043	12.638		-



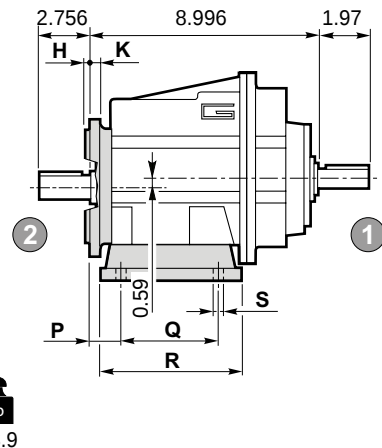
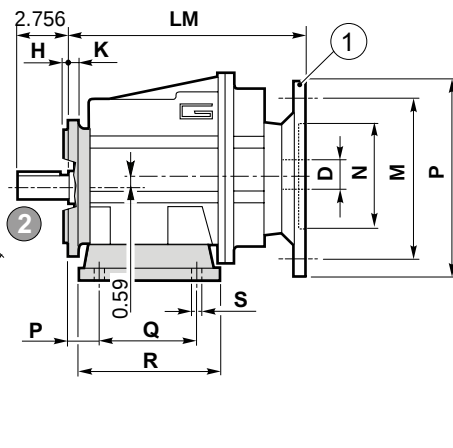
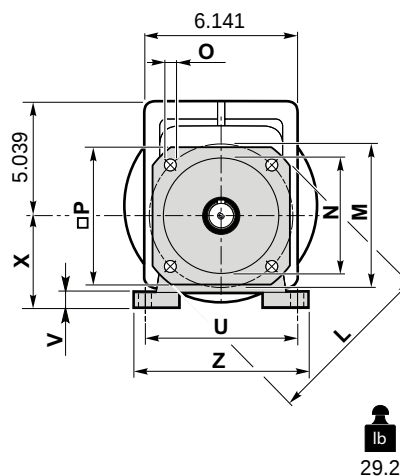
Dimensiones

Dimensions

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

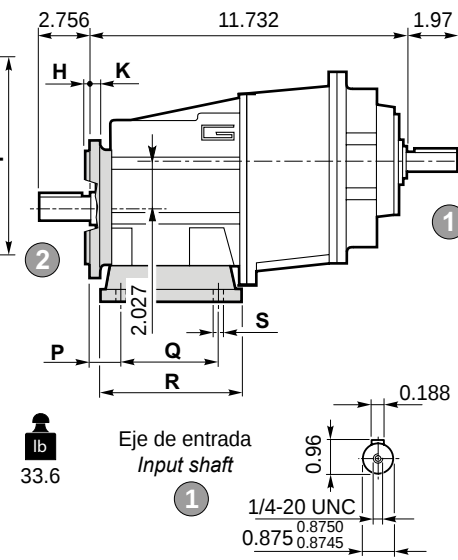
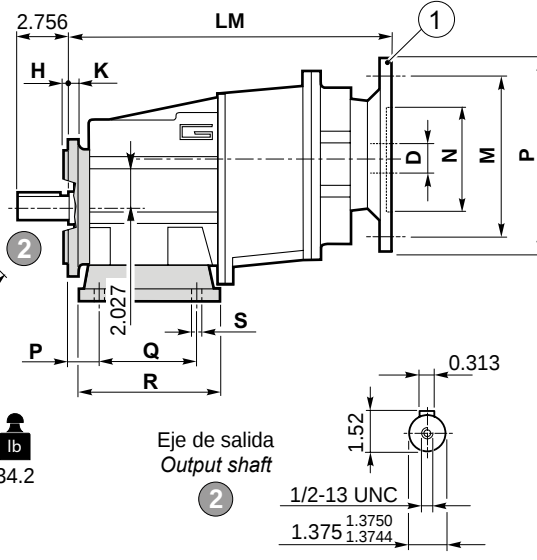
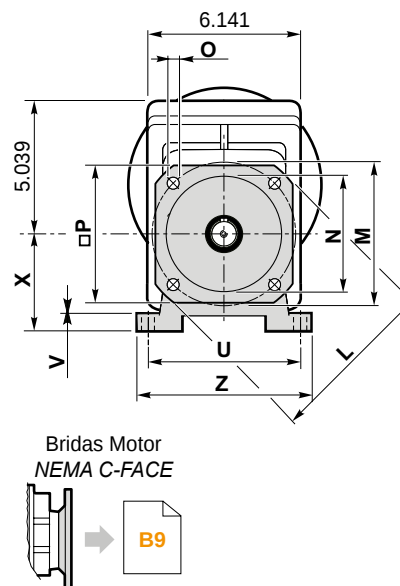
CMG 042 H../F..

CMGIS 042 H../F..



CMG 043 H../F..

CMGIS 043 H../F..



Versión F / F Version									
CMG CMGIS	H	K	L	M	N	O	P	Brida / Flange	
								Tipo / Type	Peso / Weigh [lb]
042 043	0.138	0.433	6.299	5.118	4.331 ^{4.3296} _{4.3282}	0.354	5.512	F160	2.205
	0.138	0.433	7.874	6.496	5.118 ^{5.1163} _{5.1147}	0.433	6.496	F200	3.968
	0.157	0.512	9.842	8.465	7.087 ^{7.0853} _{7.0837}	0.551	8.465	F250	6.393

Brida Motor / Motor flange			
1	Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 042	10.217		10.124
LM 043	12.638		-

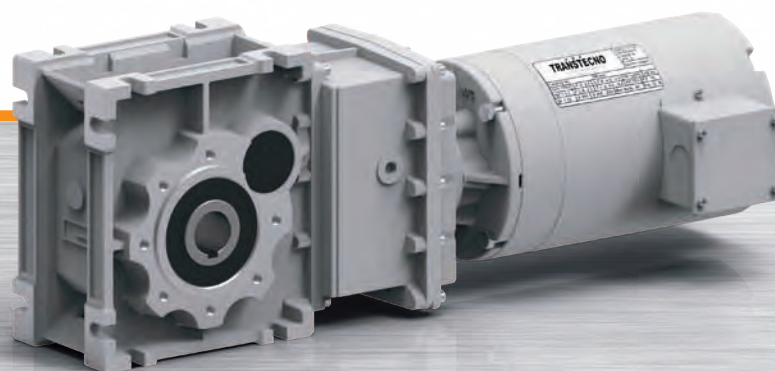
Versión H / H Version										Combinaciones posibles H/F Possible combinations H/F				
CMG CMGIS	P	Q	R	S	U	V	X	Z	Patas / Foot		F120	F140	F160	F200
									Tipo Type	Peso / Weight [lb]				
042 043	1.181	4.134	5.354	0.551	6.299	0.551	3.740	7.638	H95	3.307	●	●		
	1.181	3.937	5.905	0.433	5.905	0.551	4.331	7.283	H110	4.189	●	●	●	
	0.709	2.756			●						●	●		
	1.181	6.496	7.677	0.551	5.315	0.551	4.528	6.693	H115	4.850	●	●	●	
	1.378	4.331	6.299	0.551	6.693	0.551	4.724	8.268	H120	5.732	●	●	●	●

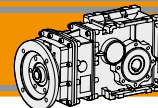
Preferencial / Preferred

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



***REDUCTORES ORTOGONALES
DE ENGRANAJES HELICOIDALES***
HELICAL BEVEL GEARBOXES





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Características técnicas
 Clasificación
 Sentidos de rotación
 Nomenclatura
 Lubricación
 Cargas radiales
 Datos técnicos
 Dimensiones
 Accesorios

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Technical features
Classification
Direction of rotation
Legend
Lubrication
Radial loads
Technical data
Dimensions
Accessories

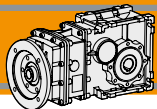
Pág.
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CMB

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**

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CMB

REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES HELICAL BEVEL GEARBOXES

Características técnicas

Los reductores ortogonales de engranajes helicoidales 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..

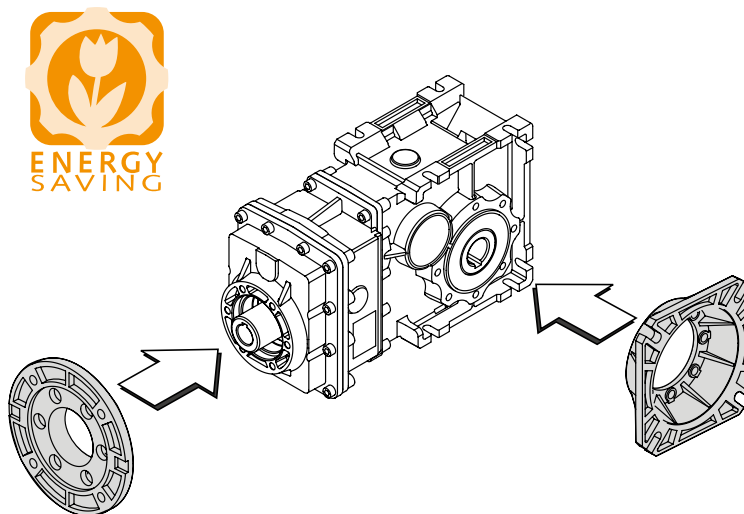
Technical features

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

With this feature, output flanges, output shafts and torque arms can be interchanged as required.

Common features of all CMB range are:

- Die-cast aluminum housing.
- Ground helical gears.
- Permanently filled with synthetic oil for long life lubrication.



Clasificación

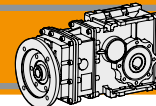
Classification

REDUCTOR / GEARBOX								
CMB	63	3	U	9.81	56C	SZDX	BRSX	90°
Tipo Type	Tamaño Size	Etapas Stages	Versión Version	Relación de reducción Ratio		Eje de salida Output shaft	Brazo de reacción Torque arm	Ángulo Angle
CMB 	40 50 63 90	2 3	U FD FS FBD FBS FLD FLS	véase tablas see tables	56C 140TC 180TC 210TC	SZDX SZSX DZ	BRSX BRDX	0° 90° 180° 270°
Relación de reducción Gearbox Version Eje de salida Output shaft Brazo de reacción Torque arm Posición del Brazo Torque arm position								

F.....D = Lado derecho / Right side
FL = Brida larga / Long flange
F.....S = Lado izquierdo / Left side
FB = Brida corta / Short flange

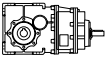
SZDX = Flecha sencilla lado derecho
Single shaft right side
DZ = Flecha doble / Double shaft
SZSX = Flecha sencilla lado izquierdo
Single shaft left side

BRDX = Lado derecho / Right side
BRSX = Lado izquierdo / Left side

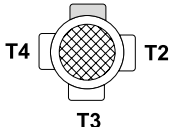


Clasificación

Classification

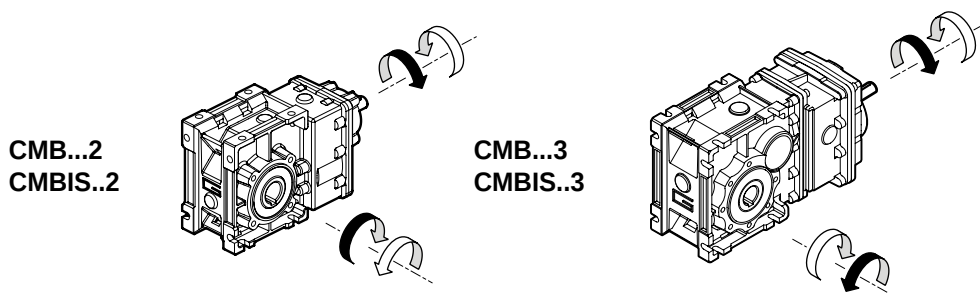
REDUCTOR / GEARBOX							
CMB	63	3	U	9.81	SZDX	BRSX	90°
Tipo Type	Tamaño Size	Etapas Stages	Versión Version	Relación de reducción Ratio	Eje de salida Output shaft	Brazo de reacción Torque arm	Ángulo Angle
CMBIS 	40 50 63 90	2 3	U FD FS FBD FBS FLD FLS	véase tablas see tables	SZDX SZSX DZ	BRSX BRDX	0° 90° 180° 270°

CMB

MOTOR / MOTOR					
1 hp / 0.75 kW	4p	3ph	220/440V	60Hz	T1
Potencia Power	Polos Poles	Fases Phases	Tensión Voltage	Frecuencia Frequency	Posición caja de bornes Terminal box pos.
véase tablas see tables	2p 4p 6p 8p	1ph 3ph	230V 230/400V 220/440V	50Hz 60Hz	T1 (Std) 

Sentido de rotación

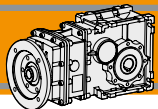
Direction of rotation



Nomenclatura

Legend

n_1	[rpm]	Velocidad de entrada / <i>Input speed</i>
n_2	[rpm]	Velocidad de salida / <i>Output speed</i>
i		Relación de reducción / <i>Ratio</i>
P_1	[kW]	Potencia en la entrada / <i>Input power</i>
M_2	[Nm]	Par en la salida en función de P_1 / <i>Output torque referred to P_1</i>
P_{n1}	[kW]	Potencia nominal en la entrada / <i>Nominal input power</i>
M_{n2}	[Nm]	Par nominal en la salida en función de P_{n1} / <i>Nominal output torque referred to P_{n1}</i>
sf		Rendimiento dinámico / <i>Service factor</i>
R_2	[N]	Carga radial admisible en la salida / <i>Maximum output radial load</i>
A_2	[N]	Carga axial admisible en la salida / <i>Maximum output axial load</i>



CMB

REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES
HELICAL BEVEL GEARBOXES

Lubricación

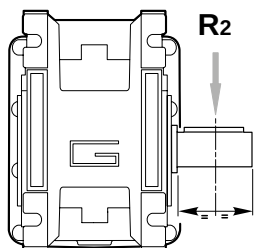
Todos los engranajes en los tamaños 402, 502, 633 y 903 se suministran con lubricante sintético, viscosidad 320, por lo que se pueden instalar en cualquier posición de montaje y no requieren mantenimiento.

Lubrication

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

Cargas radiales

Radial loads

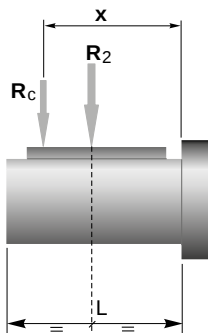


$$A_2 = R_2 \times 0.2$$

n ₂ [rpm]	R ₂ [lb]			
	CMB 402	CMB 502	CMB 633	CMB 903
400	204	251	413	603
300	224	276	454	664
200	256	316	520	760
170	271	334	549	802
140	318	392	585	856
100	356	438	655	1053
90	368	454	747	1091
60	460	560	855	1249
40	567	681	1010	1487
30	625	749	1160	1695
20	715	858	1328	1940
15	787	944	1461	2136
10	787	944	1461	2136

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

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

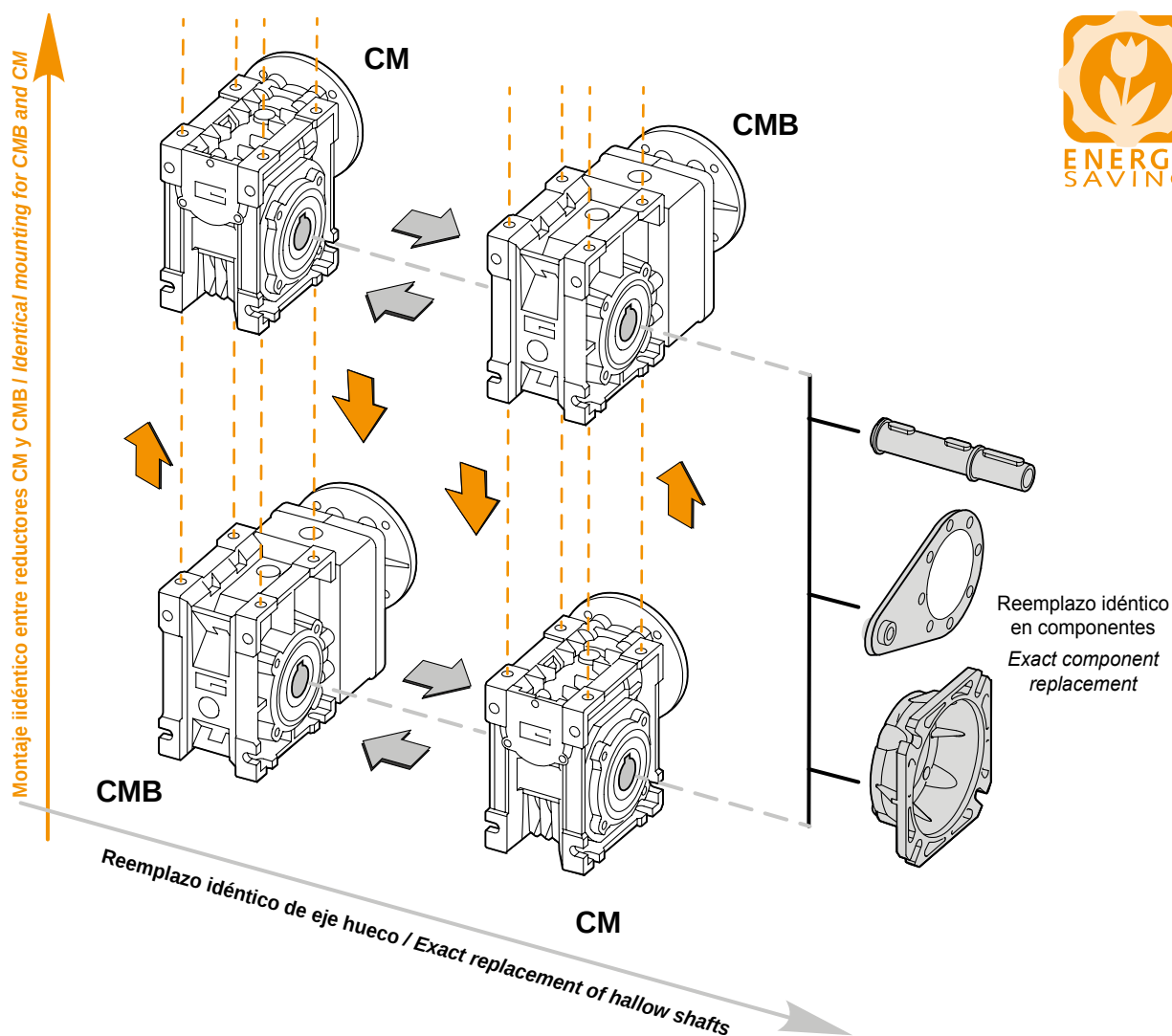
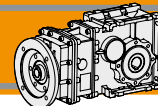


	CMB 402	CMB 502	CMB 633	CMB 903
a	3.386	4.094	4.646	6.181
b	2.598	3.110	3.661	4.606
R_{2MAX}	787	944	1461	2136

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

$$R \leq R_c$$

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



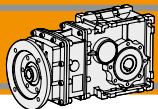
CMB

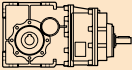
CMB		CM	
C16	CMB 402	CM 040	D18
C17	CMB 502	CM 050	D20
C18	CMB 633	CM 063	D22
C19	CMB 903	CM 090	D26

CMB: Reductores ejes Ortogonales
Helical Bevel Gearboxes

CM: Reductores sinfín Corona
Wormgearboxes




CMB
REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES
HELICAL BEVEL GEARBOXES
Datos técnicos
Technical data

	i	Mn ₂ [lb·in]	n ₁ = 1750 rpm			n ₁ = 1150 rpm		
			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters	n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters
					56 C			56 C

CMBIS 402

6.18	354	283	1.69		186	1.11	
7.49	354	234	1.40		153	0.92	
9.2	354	190	1.14		125	0.75	
11.83	398	148	0.99		97.2	0.65	
12.48	398	140	0.94		92.1	0.62	
14.83	398	118	0.79		77.6	0.52	
17.63	398	99.3	0.67		65.2	0.44	
18.6	487	94.1	0.77		61.8	0.51	
22.33	487	78.4	0.64		51.5	0.42	
23.91	487	73.2	0.60		48.1	0.40	
28.89	575	60.6	0.59		39.8	0.39	
30.84	575	56.7	0.55		37.3	0.36	
33.57	575	52.1	0.51		34.3	0.33	
35.63	575	49.1	0.48		32.3	0.31	
42.75	575	40.9	0.40		26.9	0.26	
55.31	575	31.6	0.31		20.8	0.20	
59.06	575	29.6	0.29		19.5	0.19	
64.29	575	27.2	0.26		17.9	0.17	

CMBIS 502

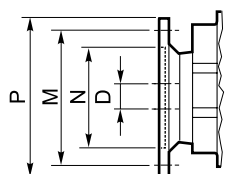
6.18	619	283	2.96		186	1.95	
7.49	619	234	2.44		153	1.60	
9.20	619	190	1.99		125	1.31	
11.83	796	148	1.99		97.2	1.31	
12.48	796	140	1.88		92.1	1.24	
14.83	796	118	1.59		77.6	1.04	
17.63	796	99.3	1.33		65.2	0.88	
18.60	973	94.1	1.55		61.8	1.02	
22.33	973	78.4	1.29		51.5	0.85	
23.91	973	73.2	1.20		48.1	0.79	
28.89	1106	60.6	1.13		39.8	0.74	
30.84	1106	56.7	1.06		37.3	0.70	
33.57	1106	52.1	0.97		34.3	0.64	
35.63	1106	49.1	0.92		32.3	0.60	
42.75	1106	40.9	0.76		26.9	0.50	
55.31	1106	31.6	0.59		20.8	0.39	
59.06	1106	29.6	0.55		19.5	0.36	
64.29	1106	27.2	0.51		17.9	0.33	

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

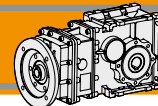
NOTE Highlighted áreas indicate the motor input flange available on each gearbox size.

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C9 a la C15.

Before selecting any gearbox, please read the performance values shown in the tables on page C9 to C15.

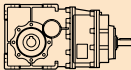


Dimensiones NEMA/ NEMA Dimensions	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625



Datos técnicos

Technical data

	i	Mn ₂ [lb·in]	n ₁ = 1750 rpm				n ₁ = 1150 rpm			
			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters		n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters	
					56 C	140 TC			56 C	140 TC
CMBIS 633										
	6.58	1327	266	5.95			175	3.91		
	7.99	1327	219	4.91			144	3.23		
	9.81	1327	178	4.00			117	2.63		
	10.44	1327	168	3.76			110	2.47		
	12.53	1327	140	3.13			91.8	2.06		
	13.31	1327	131	2.95			86.4	1.94		
	15.81	1504	111	2.81			72.7	1.85		
	17.77	1947	98.5	3.24			64.7	2.13		
	21.56	1947	81.2	2.67			53.3	1.75		
	26.48	1947	66.1	2.17			43.4	1.43		
	28.17	1947	62.1	2.04			40.8	1.34		
	33.81	1947	51.8	1.70			34.0	1.12		
	35.92	1947	48.7	1.60			32.0	1.05		
	38.88	2212	45.0	1.68			29.6	1.10		
	47.16	2212	37.1	1.39			24.4	0.91		
	57.93	2212	30.2	1.13			19.9	0.74		
	61.63	2212	28.4	1.06			18.7	0.70		
	73.96	2212	23.7	0.88		*	15.5	0.58		*
	78.58	2212	22.3	0.83		*	14.6	0.55		*
	93.33	2212	18.8	0.70		*	12.3	0.46		*
	140.52	2212	12.5	0.47		*	8.2	0.31		*
	181.81	2212	9.6	0.36		*	6.3	0.24	*	*
	211.31	2212	8.3	0.31		*	5.4	0.20	*	*

NOTA

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



* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C9 a la C15.

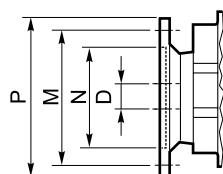
NOTE

Highlighted áreas indicate the motor input flange available on each gearbox size.

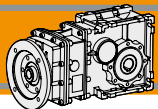


* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

Before selecting any gearbox, please read the performance values shown in the tables on page C9 to C15.



Dimensiones NEMA/ NEMA Dimensions		
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875

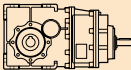


CMB

REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES
HELICAL BEVEL GEARBOXES

Datos técnicos

Technical data

	i	Mn ₂ [lb·in]	n ₁ = 1750 rpm					n ₁ = 1150 rpm				
			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters			n ₂ [rpm]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters		
					56 C	140 TC	180 TC			56 C	140 TC	180 TC
CMBIS 903												
	6.65	2478	263	11.01				173	7.23			
	8.00	2478	219	9.15				144	6.01			
	9.74	2478	180	7.51				118	4.94			
	11.21	2478	156	6.53				103	4.29			
	14.09	2655	124	5.56				81.6	3.66			
	17.95	3982	97.5	6.55				64.1	4.31			
	21.60	3982	81.0	5.45				53.2	3.58			
	26.30	3982	66.5	4.47				43.7	2.94			
	30.25	3982	57.9	3.89				38.0	2.56			
	39.26	4425	44.6	3.33				29.3	2.19			
	47.25	4425	37.0	2.77				24.3	1.82			
	57.52	4425	30.4	2.27			*	20.0	1.49			
	66.17	4425	26.4	1.98			*	17.4	1.30			
	83.20	4425	21.0	1.57			*	13.8	1.03			*
	108.09	4425	16.2	1.21			*	10.6	0.79			*
	132.23	4425	13.2	0.99			*	8.7	0.65			*
	147.92	4425	11.8	0.88		*	*	7.8	0.58		*	*
	167.09	4425	10.5	0.78		*	*	6.9	0.51		*	*
	191.06	4425	9.2	0.68		*	*	6.0	0.45		*	*
	221.88	4425	7.9	0.59		*	*	5.2	0.39		*	*
	262.96	4425	6.7	0.50		*	*	4.4	0.33		*	*

NOTA

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

NOTE

Highlighted áreas indicate the motor input flange available on each gearbox size.



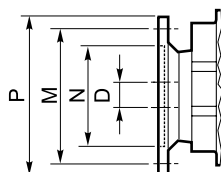
* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico



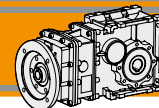
* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C9 a la C15.

Before selecting any gearbox, please read the performance values shown in the tables on page C9 to C15.



Dimensiones NEMA/ NEMA Dimensions			
	56 C	140 TC	180 TC
N		4.5	8.5
M		5.88	7.25
P		6.5	9
D	0.625	0.875	1.125



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
------------------------	-------------------------	---------------------------	----	------	---	---	---

0.16 hp

0.12 kW (1750 rpm)	283	33	10.6	III	6.18	CMB402	56C
	234	41	8.7	III	7.49		56C
	190	50	7.1	III	9.20		56C
	148	64	6.2	III	11.83		56C
	140	68	5.9	III	12.48		56C
	118	80	5.0	III	14.83		56C
	99.3	95	4.2	III	17.63		56C
	94.1	101	4.8	III	18.60		56C
	78.4	121	4.0	III	22.33		56C
	73.2	129	3.8	III	23.91		56C
	60.6	156	3.7	III	28.89		56C
	56.7	167	3.4	III	30.84		56C
	52.1	182	3.2	III	33.57		56C
	49.1	193	3.0	III	35.63		56C
	40.9	232	2.5	III	42.75		56C
	31.6	300	1.9	II	55.31		56C
	29.6	320	1.8	II	59.06		56C
	27.2	348	1.7	II	64.29		56C
	40.9	232	4.8	III	42.75	CMB502	56C
	31.6	300	3.7	III	55.31		56C
	29.6	320	3.5	III	59.06		56C
	27.2	348	3.2	III	64.29		56C
	23.7	401	5.5	III	73.96	CMB633	56C
	22.3	426	5.2	III	78.58		56C
	18.8	505	4.4	III	93.33		56C
	12.5	761	2.9	III	140.52		56C
	9.6	985	2.2	III	181.81		56C
	8.3	1145	1.9	II	211.31		56C
	9.2	1035	4.3	III	191.06	CMB903	56C
	7.9	1202	3.7	III	221.88		56C
	6.7	1424	3.1	III	262.96		56C

0.25 hp

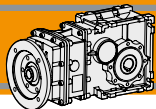
0.18 kW (1750 rpm)	283	52	6.8	III	6.18	CMB402	56C
	234	63	5.6	III	7.49		56C
	190	78	4.5	III	9.20		56C
	148	100	4.0	III	11.83		56C
	140	106	3.8	III	12.48		56C
	118	125	3.2	III	14.83		56C
	99.3	149	2.7	III	17.63		56C
	94.1	157	3.1	III	18.60		56C
	78.4	189	2.6	III	22.33		56C
	73.2	202	2.4	III	23.91		56C
	60.6	244	2.4	III	28.89		56C
	56.7	261	2.2	III	30.84		56C
	52.1	284	2.0	III	33.57		56C
	49.1	301	1.9	II	35.63		56C
	40.9	362	1.6	II	42.75		56C
	31.6	468	1.2	I	55.31		56C
	29.6	500	1.2	I	59.06		56C
	27.2	544	1.1	I	64.29		56C

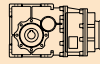
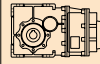
0.25 hp

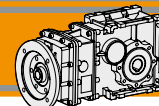
0.18 kW (1750 rpm)	73.2	202	4.8	III	23.91	CMB502	56C
	60.6	244	4.5	III	28.89		56C
	56.7	261	4.2	III	30.84		56C
	52.1	284	3.9	III	33.57		56C
	49.1	301	3.7	III	35.63		56C
	40.9	362	3.1	III	42.75		56C
	31.6	468	2.4	III	55.31		56C
	29.6	500	2.2	III	59.06		56C
	27.2	544	2.0	III	64.29		56C
	37.1	399	5.5	III	47.16	CMB633	56C
	30.2	490	4.5	III	57.93		56C
	28.4	522	4.2	III	61.63		56C
	23.7	626	3.5	III	73.96		56C
	22.3	665	3.3	III	78.58		56C
	18.8	790	2.8	III	93.33		56C
	12.5	1189	1.9	II	140.52		56C
	9.6	1539	1.4	II	181.81		56C
	8.3	1788	1.2	I	211.31		56C
	16.2	915	4.8	III	108.09	CMB903	56C
	13.2	1119	4.0	III	132.23		56C
	11.8	1252	3.5	III	147.92		56C
	10.5	1414	3.1	III	167.09		56C
	9.2	1617	2.7	III	191.06		56C
	7.9	1878	2.4	III	221.88		56C
	6.7	2225	2.0	II	262.96		56C

0.33 hp

0.22 kW (1750 rpm)	283	69	5.1	III	6.18	CMB402	56C
	234	84	4.2	III	7.49		56C
	190	103	3.4	III	9.20		56C
	148	132	3.0	III	11.83		56C
	140	139	2.9	III	12.48		56C
	118	166	2.4	III	14.83		56C
	99.3	197	2.0	III	17.63		56C
	94.1	208	2.3	III	18.60		56C
	78.4	249	2.0	II	22.33		56C
	73.2	267	1.8	II	23.91		56C
	60.6	323	1.8	II	28.89		56C
	56.7	345	1.7	II	30.84		56C
	52.1	375	1.5	II	33.57		56C
	49.1	398	1.4	II	35.63		56C
	40.9	478	1.2	I	42.75		56C
	31.6	618	0.9	I	55.31		56C

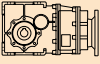
**CMB****REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES**
HELICAL BEVEL GEARBOXES**Datos técnicos****Technical data**

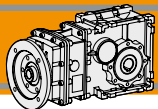
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.33 hp								0.33 hp							
0.25 kW (1750 rpm)	118	166	4.8	III	14.83	CMB502	56C	0.25 kW (1150 rpm)	125	156	4.0	III	9.20	CMB502	56C
	99.3	197	4.0	III	17.63		56C		97.2	201	4.0	III	11.83		56C
	94.1	208	4.7	III	18.60		56C		92.1	212	3.8	III	12.48		56C
	78.4	249	3.9	III	22.33		56C		77.6	252	3.2	III	14.83		56C
	73.2	267	3.6	III	23.91		56C		65.2	300	2.7	III	17.63		56C
	60.6	323	3.4	III	28.89		56C		61.8	316	3.1	III	18.60		56C
	56.7	345	3.2	III	30.84		56C		51.5	380	2.6	III	22.33		56C
	52.1	375	2.9	III	33.57		56C		48.1	406	2.4	III	23.91		56C
	49.1	398	2.8	III	35.63		56C		39.8	491	2.3	III	28.89		56C
	40.9	478	2.3	III	42.75		56C		37.3	524	2.1	III	30.84		56C
	31.6	618	1.8	II	55.31		56C		34.3	571	1.9	II	33.57		56C
	29.6	660	1.7	II	59.06		56C		32.3	606	1.8	II	35.63		56C
	27.2	718	1.5	II	64.29	56C	26.9		727	1.5	II	42.75	56C		
						CMB633			20.8	940	1.2	I	55.31	56C	
	45.0	434	5.1	III	38.88		56C		19.5	1004	1.1	I	59.06	56C	
	37.1	527	4.2	III	47.16		56C		17.9	1093	1.0	I	64.29	56C	
	30.2	647	3.4	III	57.93		56C						CMB633	56C	
	28.4	688	3.2	III	61.63		56C		53.3	367	5.3	III		21.56	56C
	23.7	826	2.7	III	73.96		56C		43.4	450	4.3	III		26.48	56C
	22.3	878	2.5	III	78.58		56C		40.8	479	4.1	III		28.17	56C
	18.8	1043	2.1	III	93.33		56C		34.0	575	3.4	III		33.81	56C
	12.5	1570	1.4	II	140.52		56C		32.0	611	3.2	III		35.92	56C
	9.6	2031	1.1	I	181.81		56C		29.6	661	3.3	III		38.88	56C
	8.3	2361	0.9	I	211.31		56C		24.4	802	2.8	III		47.16	56C
						CMB903			19.9	985	2.2	III		57.93	56C
	21.0	929	4.8	III	83.20		56C		18.7	1048	2.1	III		61.63	56C
	16.2	1208	3.7	III	108.09		56C		15.5	1257	1.8	II	73.96	56C	
	13.2	1477	3.0	III	132.23		56C		14.6	1336	1.7	II	78.58	56C	
	11.8	1652	2.7	III	147.92		56C		12.3	1587	1.4	I	93.33	56C	
	10.5	1867	2.4	III	167.09		56C		8.2	2389	0.9	I	140.52	56C	
	9.2	2134	2.1	III	191.06		56C						CMB903	56C	
	7.9	2479	1.8	II	221.88		56C		20.0	978	4.5	III		57.52	56C
6.7	2938	1.5	II	262.96	56C	17.4	1125	3.9	III	66.17	56C				
						13.8	1414	3.1	III	83.20	56C				
0.25 kW (1150 rpm)	186	105	3.4	III	6.18	CMB402	56C	10.6	1838	2.4	III	108.09	56C		
	153	127	2.8	III	7.49		56C	8.7	2248	2.0	II	132.23	56C		
	125	156	2.3	III	9.20		56C	7.8	2514	1.8	II	147.92	56C		
	97.2	201	2.0	II	11.83		56C	6.9	2840	1.6	II	167.09	56C		
	92.1	212	1.9	II	12.48		56C	6.0	3248	1.4	I	191.06	56C		
	77.6	252	1.6	II	14.83		56C	5.2	3772	1.2	I	221.88	56C		
	65.2	300	1.3	I	17.63		56C	4.4	4470	1.0	I	262.96	56C		
	61.8	316	1.5	II	18.60		56C								
	51.5	380	1.3	I	22.33		56C								
	48.1	406	1.2	I	23.91		56C								
	39.8	491	1.2	I	28.89		56C								
	37.3	524	1.1	I	30.84		56C								
	34.3	571	1.0	I	33.57		56C								
	32.3	606	0.9	I	35.63		56C								

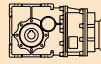
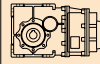


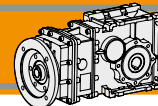
Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.5 hp								0.5 hp							
0.37 kW (1750 rpm)	283	105	3.4	III	6.18	CMB402	56C	0.37 kW (1150 rpm)	186	159	2.2	III	6.18	CMB402	56C
	234	127	2.8	III	7.49		56C		153	193	1.8	II	7.49		56C
	190	156	2.3	III	9.20		56C		125	237	1.5	II	9.20		56C
	148	200	2.0	II	11.83		56C		97.2	305	1.3	I	11.83		56C
	140	211	1.9	II	12.48		56C		92.1	322	1.2	I	12.48		56C
	118	251	1.6	II	14.83		56C		77.6	382	1.0	I	14.83		56C
	99.3	298	1.3	I	17.63		56C		65.2	454	0.9	I	17.63		56C
	94.1	315	1.5	II	18.60		56C		61.8	479	1.0	I	18.60		56C
	78.4	378	1.3	I	22.33		56C								
	73.2	405	1.2	I	23.91		56C		186	159	3.9	III	6.18	CMB502	56C
	60.6	489	1.2	I	28.89		56C		153	193	3.2	III	7.49		56C
	56.7	522	1.1	I	30.84		56C		125	237	2.6	III	9.20		56C
	52.1	568	1.0	I	33.57		56C		97.2	305	2.6	III	11.83		56C
	49.1	603	1.0	I	35.63		56C		92.1	322	2.5	III	12.48		56C
									77.6	382	2.1	III	14.83		56C
	283	105	5.9	III	6.18	CMB502	56C		65.2	454	1.8	II	17.63		56C
	234	127	4.9	III	7.49		56C		61.8	479	2.0	III	18.60		56C
	190	156	4.0	III	9.20		56C		51.5	575	1.7	II	22.33		56C
	148	200	4.0	III	11.83		56C		48.1	616	1.6	II	23.91		56C
	140	211	3.8	III	12.48		56C		39.8	744	1.5	II	28.89		56C
	118	251	3.2	III	14.83		56C		37.3	794	1.4	I	30.84		56C
	99.3	298	2.7	III	17.63		56C		34.3	865	1.3	I	33.57		56C
	94.1	315	3.1	III	18.60		56C		32.3	918	1.2	I	35.63		56C
	78.4	378	2.6	III	22.33		56C		26.9	1101	1.0	I	42.75		56C
	73.2	405	2.4	III	23.91		56C								
	60.6	489	2.3	III	28.89		56C		91.8	323	4.1	III	12.53	CMB633	56C
	56.7	522	2.1	III	30.84		56C		86.4	343	3.9	III	13.31		56C
	52.1	568	1.9	II	33.57		56C		72.7	407	3.7	III	15.81		56C
	49.1	603	1.8	II	35.63		56C		64.7	458	4.3	III	17.77		56C
	40.9	724	1.5	II	42.75		56C		53.3	555	3.5	III	21.56		56C
	31.6	936	1.2	I	55.31		56C		43.4	682	2.9	III	26.48		56C
	29.6	1000	1.1	I	59.06		56C		40.8	726	2.7	III	28.17		56C
	27.2	1088	1.0	I	64.29		56C		34.0	871	2.2	III	33.81		56C
									32.0	925	2.1	III	35.92		56C
	81.2	365	5.3	III	21.56	CMB633	56C		29.6	1001	2.2	III	38.88		56C
	66.1	448	4.3	III	26.48		56C		24.4	1215	1.8	II	47.16		56C
	62.1	477	4.1	III	28.17		56C		19.9	1492	1.5	II	57.93		56C
	51.8	572	3.4	III	33.81		56C		18.7	1587	1.4	I	61.63		56C
	48.7	608	3.2	III	35.92		56C		15.5	1905	1.2	I	73.96		56C
	45.0	658	3.4	III	38.88		56C		14.6	2024	1.1	I	78.58		56C
	37.1	798	2.8	III	47.16		56C		12.3	2404	0.9	I	93.33		56C
	30.2	981	2.3	III	57.93		56C								
	28.4	1043	2.1	III	61.63		56C		38.0	779	5.1	III	30.25	CMB903	56C
	23.7	1252	1.8	II	73.96		56C		29.3	1011	4.4	III	39.26		56C
	22.3	1330	1.7	II	78.58		56C		24.3	1217	3.6	III	47.25		56C
	18.8	1580	1.4	II	93.33		56C		20.0	1482	3.0	III	57.52		56C
	12.5	2378	0.9	I	140.52		56C		17.4	1704	2.6	III	66.17		56C
									13.8	2143	2.1	III	83.20		56C
	30.4	974	4.5	III	57.52	CMB903	56C		10.6	2784	1.6	II	108.09		56C
	26.4	1120	4.0	III	66.17		56C		8.7	3406	1.3	I	132.23		56C
	21.0	1408	3.1	III	83.20		56C		7.8	3810	1.2	I	147.92		56C
	16.2	1830	2.4	III	108.09		56C		6.9	4304	1.0	I	167.09		56C
	13.2	2238	2.0	II	132.23		56C		6.0	4921	0.9	I	191.06		56C
	11.8	2504	1.8	II	147.92		56C								
	10.5	2828	1.6	II	167.09		56C								
	9.2	3234	1.4	I	191.06		56C								
	7.9	3755	1.2	I	221.88		56C								
	6.7	4451	1.0	I	262.96		56C								

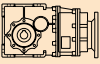

CMB
REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES
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Datos técnicos
Technical data

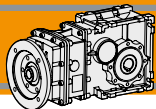
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.75 hp								0.75 hp							
0.55 kW (1750 rpm)	283	157	2.3	III	6.18	CMB402	56C	0.55 kW (1150 rpm)	186	239	1.5	II	6.18	CMB402	56C
	234	190	1.9	II	7.49		56C		153	289	1.2	I	7.49		56C
	190	234	1.5	II	9.20		56C		125	356	1.0	I	9.20		56C
	148	300	1.3	I	11.83		56C		97.2	457	0.9	I	11.83		56C
	140	317	1.3	I	12.48		56C								
	118	376	1.1	I	14.83		56C		186	239	2.6	III	6.18	CMB502	56C
	99.3	447	0.9	I	17.63		56C		153	289	2.1	III	7.49		56C
	94.1	472	1.0	I	18.60		56C		125	356	1.7	II	9.20		56C
							97.2		457	1.7	II	11.83	56C		
	283	157	4.0	III	6.18	CMB502	56C		92.1	482	1.7	II	12.48		56C
	234	190	3.3	III	7.49		56C		77.6	573	1.4	I	14.83		56C
	190	234	2.7	III	9.20		56C		65.2	681	1.2	I	17.63		56C
	148	300	2.7	III	11.83		56C		61.8	719	1.4	I	18.60		56C
	140	317	2.5	III	12.48		56C		51.5	863	1.1	I	22.33	56C	
	118	376	2.1	III	14.83		56C		48.1	924	1.1	I	23.91	56C	
	99.3	447	1.8	II	17.63		56C		39.8	1116	1.0	I	28.89	56C	
	94.1	472	2.1	III	18.60		56C		37.3	1192	0.9	I	30.84	56C	
	78.4	567	1.7	II	22.33	56C									
	73.2	607	1.6	II	23.91	56C	175		254	5.2	III	6.58	CMB633	56C-140TC	
	60.6	733	1.5	II	28.89	56C	144		309	4.3	III	7.99		56C-140TC	
	56.7	783	1.4	II	30.84	56C	117		379	3.5	III	9.81		56C-140TC	
	52.1	852	1.3	I	33.57	56C	110		403	3.3	III	10.44		56C-140TC	
	49.1	904	1.2	I	35.63	56C	91.8		484	2.7	III	12.53		56C-140TC	
	40.9	1085	1.0	I	42.75	56C	86.4		514	2.6	III	13.31		56C-140TC	
							72.7		611	2.5	III	15.81		56C-140TC	
	140	318	4.2	III	12.53	CMB633	56C		64.7	687	2.8	III		17.77	56C-140TC
	131	338	3.9	III	13.31		56C		53.3	833	2.3	III	21.56	56C-140TC	
	111	401	3.7	III	15.81		56C		43.4	1023	1.9	II	26.48	56C-140TC	
	98.5	451	4.3	III	17.77		56C		40.8	1089	1.8	II	28.17	56C-140TC	
	81.2	547	3.6	III	21.56		56C		34.0	1306	1.5	II	33.81	56C-140TC	
	66.1	672	2.9	III	26.48		56C		32.0	1388	1.4	II	35.92	56C-140TC	
	62.1	715	2.7	III	28.17		56C		29.6	1502	1.5	II	38.88	56C-140TC	
	51.8	858	2.3	III	33.81		56C		24.4	1822	1.2	I	47.16	56C-140TC	
	48.7	912	2.1	III	35.92	56C	19.9		2238	1.0	I	57.93	56C-140TC		
	45.0	987	2.2	III	38.88	56C	18.7		2381	0.9	I	61.63	56C-140TC		
	37.1	1197	1.8	II	47.16	56C									
	30.2	1471	1.5	II	57.93	56C	53.2		835	4.8	III	21.60	CMB903	56C-140TC	
	28.4	1565	1.4	II	61.63	56C	43.7		1016	3.9	III	26.30		56C-140TC	
	23.7	1878	1.2	I	73.96	56C	38.0		1169	3.4	III	30.25		56C-140TC	
	22.3	1995	1.1	I	78.58	56C	29.3		1517	2.9	III	39.26		56C-140TC	
	18.8	2369	0.9	I	93.33	56C	24.3		1826	2.4	III	47.25		56C-140TC	
							20.0		2222	2.0	II	57.52		56C-140TC	
	57.9	768	5.2	III	30.25	CMB903	56C		17.4	2557	1.7	II		66.17	56C-140TC
	44.6	997	4.4	III	39.26		56C		13.8	3215	1.4	I		83.20	56C-140TC
	37.0	1200	3.7	III	47.25		56C		10.6	4176	1.1	I	108.09	56C-140TC	
	30.4	1460	3.0	III	57.52		56C		8.7	5109	0.9	I	132.23	56C-140TC	
	26.4	1680	2.6	III	66.17		56C								
	21.0	2112	2.1	III	83.20		56C								
	16.2	2744	1.6	II	108.09		56C								
	13.2	3357	1.3	I	132.23		56C								
	11.8	3755	1.2	I	147.92	56C									
	10.5	4242	1.0	I	167.09	56C									
	9.2	4851	0.9	I	191.06	56C									



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			
1 hp								1 hp								
0.75 kW (1750 rpm)	283	209	1.7	II	6.18	CMB402	56C	0.75 kW (1150 rpm)	186	318	1.1	I	6.18	CMB402	56C	
	234	254	1.4	I	7.49		56C		153	386	0.9	I	7.49		56C	
	190	312	1.1	I	9.20		56C									
	148	400	1.0	I	11.83		56C		186	318	1.9	II	6.18		CMB502	56C
	140	423	0.9	I	12.48		56C		153	386	1.6	II	7.49			56C
									125	474	1.3	I	9.20	56C		
	283	209	3.0	III	6.18		CMB502		56C	97.2	609	1.3	I	11.83		56C
	234	254	2.4	III	7.49				56C	92.1	643	1.2	I	12.48		56C
	190	312	2.0	II	9.20				56C	77.6	764	1.0	I	14.83	56C	
	148	400	2.0	II	11.83				56C	65.2	908	0.9	I	17.63	56C	
	140	423	1.9	II	12.48	56C			61.8	958	1.0	I	18.60	56C		
	118	502	1.6	II	14.83	56C										
	99.3	597	1.3	I	17.63	56C			175	339	3.9	III	6.58	CMB633	56C-140TC	
	94.1	630	1.5	II	18.60	56C			144	412	3.2	III	7.99		56C-140TC	
	78.4	756	1.3	I	22.33	56C			117	506	2.6	III	9.81		56C-140TC	
	73.2	809	1.2	I	23.91	56C			110	538	2.5	III	10.44		56C-140TC	
	60.6	978	1.1	I	28.89	56C	91.8		645	2.1	III	12.53	56C-140TC			
	56.7	1044	1.1	I	30.84	56C	86.4		686	1.9	II	13.31	56C-140TC			
	52.1	1136	1.0	I	33.57	56C	72.7		814	1.8	II	15.81	56C-140TC			
	49.1	1206	0.9	I	35.63	56C	64.7		915	2.1	III	17.77	56C-140TC			
							53.3		1111	1.8	II	21.56	56C-140TC			
	266	223	6.0	III	6.58	CMB633	56C-140TC		43.4	1364	1.4	II	26.48		56C-140TC	
	219	270	4.9	III	7.99		56C-140TC		40.8	1451	1.3	I	28.17	56C-140TC		
	178	332	4.0	III	9.81		56C-140TC		34.0	1742	1.1	I	33.81	56C-140TC		
	168	353	3.8	III	10.44		56C-140TC		32.0	1850	1.1	I	35.92	56C-140TC		
	140	424	3.1	III	12.53		56C-140TC		29.6	2003	1.1	I	38.88	56C-140TC		
	131	451	2.9	III	13.31		56C-140TC		24.4	2429	0.9	I	47.16	56C-140TC		
	111	535	2.8	III	15.81		56C-140TC									
	98.5	602	3.2	III	17.77		56C-140TC		103	577	4.3	III	11.21	CMB903	56C-140TC	
	81.2	730	2.7	III	21.56		56C-140TC		81.6	726	3.7	III	14.09		56C-140TC	
66.1	897	2.2	III	26.48	56C-140TC		64.1	925	4.3	III	17.95	56C-140TC				
62.1	954	2.0	III	28.17	56C-140TC	53.2	1113	3.6	III	21.60	56C-140TC					
51.8	1145	1.7	II	33.81	56C-140TC	43.7	1355	2.9	III	26.30	56C-140TC					
48.7	1216	1.6	II	35.92	56C-140TC	38.0	1558	2.6	III	30.25	56C-140TC					
45.0	1316	1.7	II	38.88	56C-140TC	29.3	2023	2.2	III	39.26	56C-140TC					
37.1	1597	1.4	I	47.16	56C-140TC	24.3	2434	1.8	II	47.25	56C-140TC					
30.2	1961	1.1	I	57.93	56C-140TC	20.0	2963	1.5	II	57.52	56C-140TC					
28.4	2086	1.1	I	61.63	56C-140TC	17.4	3409	1.3	I	66.17	56C-140TC					
						13.8	4286	1.0	I	83.20	56C-140TC					
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CMB
REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES
HELICAL BEVEL GEARBOXES
Datos técnicos
Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
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1.5 hp

1.1 kW (1750 rpm)	283	314	1.1	I	6.18	CMB402	56C
	234	380	0.9	I	7.49		56C
	283	314	2.0	II	6.18	CMB502	56C
	234	380	1.6	II	7.49		56C
	190	467	1.3	I	9.20		56C
	148	601	1.3	I	11.83		56C
	140	634	1.3	I	12.48		56C
	118	753	1.1	I	14.83		56C
	99.3	895	0.9	I	17.63		56C
	94.1	945	1.0	I	18.60		56C
	266	334	4.0	III	6.58	CMB633	56C-140TC
	219	406	3.3	III	7.99		56C-140TC
	178	498	2.7	III	9.81		56C-140TC
	168	530	2.5	III	10.44		56C-140TC
	140	636	2.1	III	12.53		56C-140TC
	131	676	2.0	II	13.31		56C-140TC
	111	803	1.9	II	15.81		56C-140TC
	98.5	902	2.2	III	17.77		56C-140TC
	81.2	1095	1.8	II	21.56		56C-140TC
	66.1	1345	1.4	II	26.48		56C-140TC
	62.1	1431	1.4	I	28.17		56C-140TC
	51.8	1717	1.1	I	33.81		56C-140TC
	48.7	1824	1.1	I	35.92		56C-140TC
	45.0	1974	1.1	I	38.88		56C-140TC
	37.1	2395	0.9	I	47.16		56C-140TC
	180	495	5.0	III	9.74	CMB903	56C-140TC
	156	569	4.4	III	11.21		56C-140TC
	124	716	3.7	III	14.09		56C-140TC
	97.5	911	4.4	III	17.95		56C-140TC
	81.0	1097	3.6	III	21.60		56C-140TC
	66.5	1335	3.0	III	26.30		56C-140TC
	57.9	1536	2.6	III	30.25		56C-140TC
	44.6	1994	2.2	III	39.26		56C-140TC
	37.0	2399	1.8	II	47.25		56C-140TC
	30.4	2921	1.5	II	57.52		56C-140TC
	26.4	3360	1.3	I	66.17		56C-140TC
	21.0	4225	1.0	I	83.20		56C-140TC

1.1 kW (1150 rpm)	175	509	2.6	III	6.58	CMB633	140TC
	144	617	2.2	III	7.99		140TC
	117	758	1.8	II	9.81		140TC
	110	807	1.6	II	10.44		140TC
	91.8	968	1.4	I	12.53		140TC
	86.4	1028	1.3	I	13.31		140TC
	72.7	1222	1.2	I	15.81		140TC
	64.7	1373	1.4	II	17.77		140TC
	53.3	1666	1.2	I	21.56		140TC
	43.4	2046	1.0	I	26.48		140TC
	40.8	2177	0.9	I	28.17		140TC

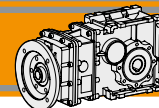
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
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1.5 hp

1.1 kW (1150 rpm)	173	514	4.8	III	6.65	CMB903	140TC-180TC
	144	618	4.0	III	8.00		140TC-180TC
	118	753	3.3	III	9.74		140TC-180TC
	103	866	2.9	III	11.21		140TC-180TC
	81.6	1089	2.4	III	14.09		140TC-180TC
	64.1	1387	2.9	III	17.95		140TC-180TC
	53.2	1669	2.4	III	21.60		140TC-180TC
	43.7	2032	2.0	II	26.30		140TC-180TC
	38.0	2337	1.7	II	30.25		140TC-180TC
	29.3	3034	1.5	II	39.26		140TC-180TC
	24.3	3651	1.2	I	47.25		140TC-180TC
	20.0	4445	1.0	I	57.52		140TC-180TC
	17.4	5113	0.9	I	66.17		140TC-180TC

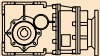
2 hp

1.5 kW (1750 rpm)	283	418	1.5	II	6.18	CMB502	56C
	234	507	1.2	I	7.49		56C
	190	623	1.0	I	9.20		56C
	148	801	1.0	I	11.83		56C
	140	845	0.9	I	12.48		56C
	266	446	3.0	III	6.58	CMB633	56C-140TC
	219	541	2.5	III	7.99		56C-140TC
	178	664	2.0	II	9.81		56C-140TC
	168	707	1.9	II	10.44		56C-140TC
	140	848	1.6	II	12.53		56C-140TC
	131	901	1.5	II	13.31		56C-140TC
	111	1070	1.4	II	15.81		56C-140TC
	98.5	1203	1.6	II	17.77		56C-140TC
	81.2	1460	1.3	I	21.56		56C-140TC
	66.1	1793	1.1	I	26.48		56C-140TC
	62.1	1908	1.0	I	28.17		56C-140TC
	263	450	5.5	III	6.65	CMB903	56C-140TC
	219	542	4.6	III	8.00		56C-140TC
	180	660	3.8	III	9.74		56C-140TC
	156	759	3.3	III	11.21		56C-140TC
	124	954	2.8	III	14.09		56C-140TC
	97.5	1215	3.3	III	17.95		56C-140TC
	81.0	1462	2.7	III	21.60		56C-140TC
	66.5	1780	2.2	III	26.30		56C-140TC
	57.9	2048	1.9	II	30.25		56C-140TC
	44.6	2658	1.7	II	39.26		56C-140TC
	37.0	3199	1.4	I	47.25		56C-140TC
	30.4	3894	1.1	I	57.52		56C-140TC
	26.4	4480	1.0	I	66.17		56C-140TC



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
------------------------	-------------------------	---------------------------	----	------	---	---	---

2 hp

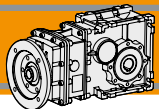
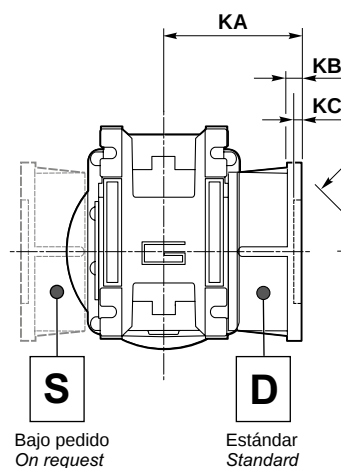
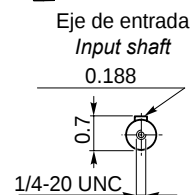
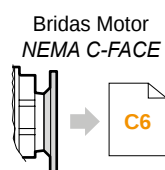
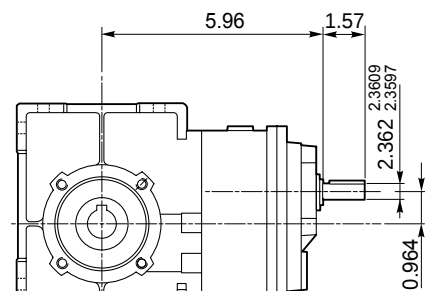
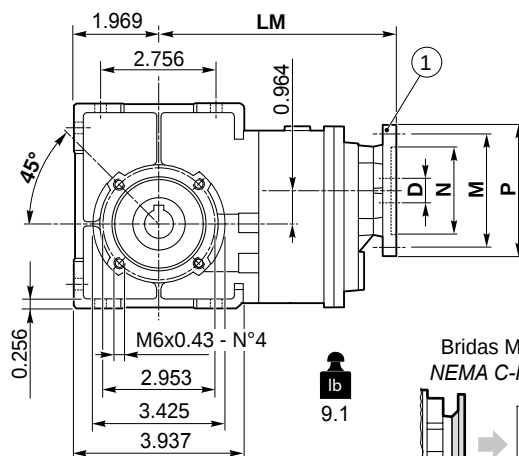
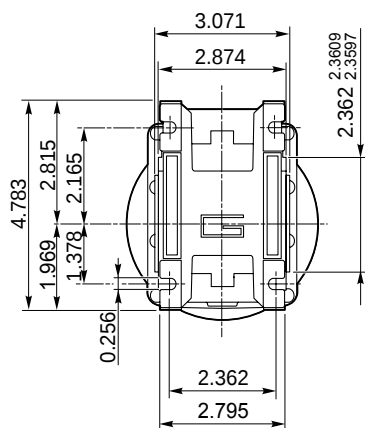
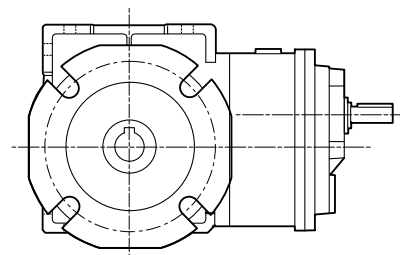
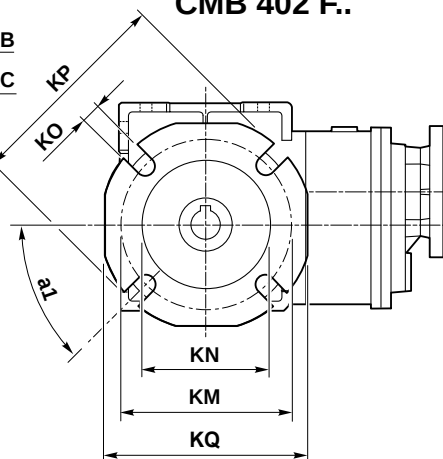
1.5 kW (1150 rpm)	173	685	3.6	III	6.65	CMB903	180TC
	144	825	3.0	III	8.00		180TC
	118	1004	2.5	III	9.74		180TC
	103	1155	2.1	III	11.21		180TC
	81.6	1452	1.8	II	14.09		180TC
	64.1	1849	2.2	III	17.95		180TC
	53.2	2225	1.8	II	21.60		180TC
	43.7	2709	1.5	II	26.30		180TC
	38.0	3117	1.3	I	30.25		180TC
	29.3	4045	1.1	I	39.26		180TC
	24.3	4868	0.9	I	47.25		180TC

3 hp

2.2 kW (1750 rpm)	266	669	2.0	II	6.58	CMB633	140TC
	219	811	1.6	II	7.99		140TC
	178	997	1.3	I	9.81		140TC
	168	1060	1.3	I	10.44		140TC
	140	1272	1.0	I	12.53		140TC
	131	1352	1.0	I	13.31		140TC
	111	1605	0.9	I	15.81		140TC
	98.5	1805	1.1	I	17.77		140TC
	263	675	3.7	III	6.65	CMB903	140TC-180TC
	219	813	3.0	III	8.00		140TC-180TC
	180	990	2.5	III	9.74		140TC-180TC
	156	1138	2.2	III	11.21		140TC-180TC
	124	1431	1.9	II	14.09		140TC-180TC
	97.5	1823	2.2	III	17.95		140TC-180TC
	81.0	2194	1.8	II	21.60		140TC-180TC
	66.5	2671	1.5	II	26.30		140TC-180TC
	57.9	3072	1.3	I	30.25		140TC-180TC
	44.6	3987	1.1	I	39.26		140TC-180TC
	37.0	4799	0.9	I	47.25		140TC-180TC

5 hp

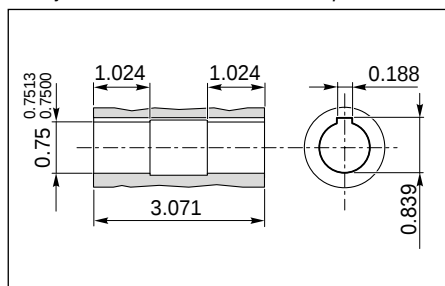
3.7 kW (1750 rpm)	263	1126	2.2	III	6.65	CMB903	180TC
	219	1355	1.8	II	8.00		180TC
	180	1649	1.5	II	9.74		180TC
	156	1897	1.3	I	11.21		180TC
	124	2385	1.1	I	14.09		180TC
	97.5	3038	1.3	I	17.95		180TC
	81.0	3656	1.1	I	21.60		180TC
	66.5	4451	0.9	I	26.30		180TC


CMB
REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES
HELICAL BEVEL GEARBOXES
Dimensiones
Dimensions
CMB 402 - CMBIS 402
CMB 402 U
CMBIS 402 U

CMB 402 F..
CMBIS 402 F..


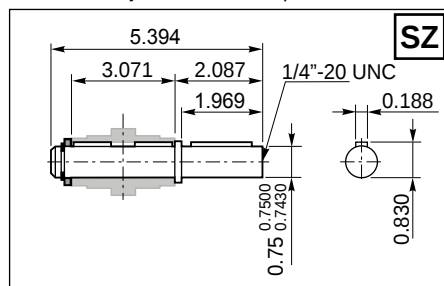
Versión F / F Version										
CMB CMBIS	a ₁	KA	KB	KC	KM	KN	KO	KP	□ KQ	Brida / Flange Tipo / Type
402	45°	2.638	0.295	0.77	3.150-3.740	2.362 ^{2.3640} / _{2.3622}	0.354	4.331	3.740	F
	45°	3.819	0.295	0.77	3.150-3.740	2.362 ^{2.3640} / _{2.3622}	0.354	4.331	3.740	FL
	45°	3.150	0.335	0.197	4.527-4.921	3.740 ^{3.7423} / _{3.7402}	0.374	5.512	4.409	FB

Brida Motor / Motor flange	
1	Dimensiones NEMA NEMA Dimensions
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	6.72

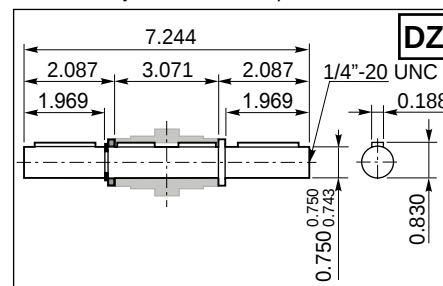
Eje de salida hueco / Hollow output shaft

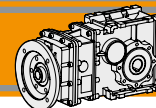


Eje de salida / Output shaft



Eje de salida / Output shaft

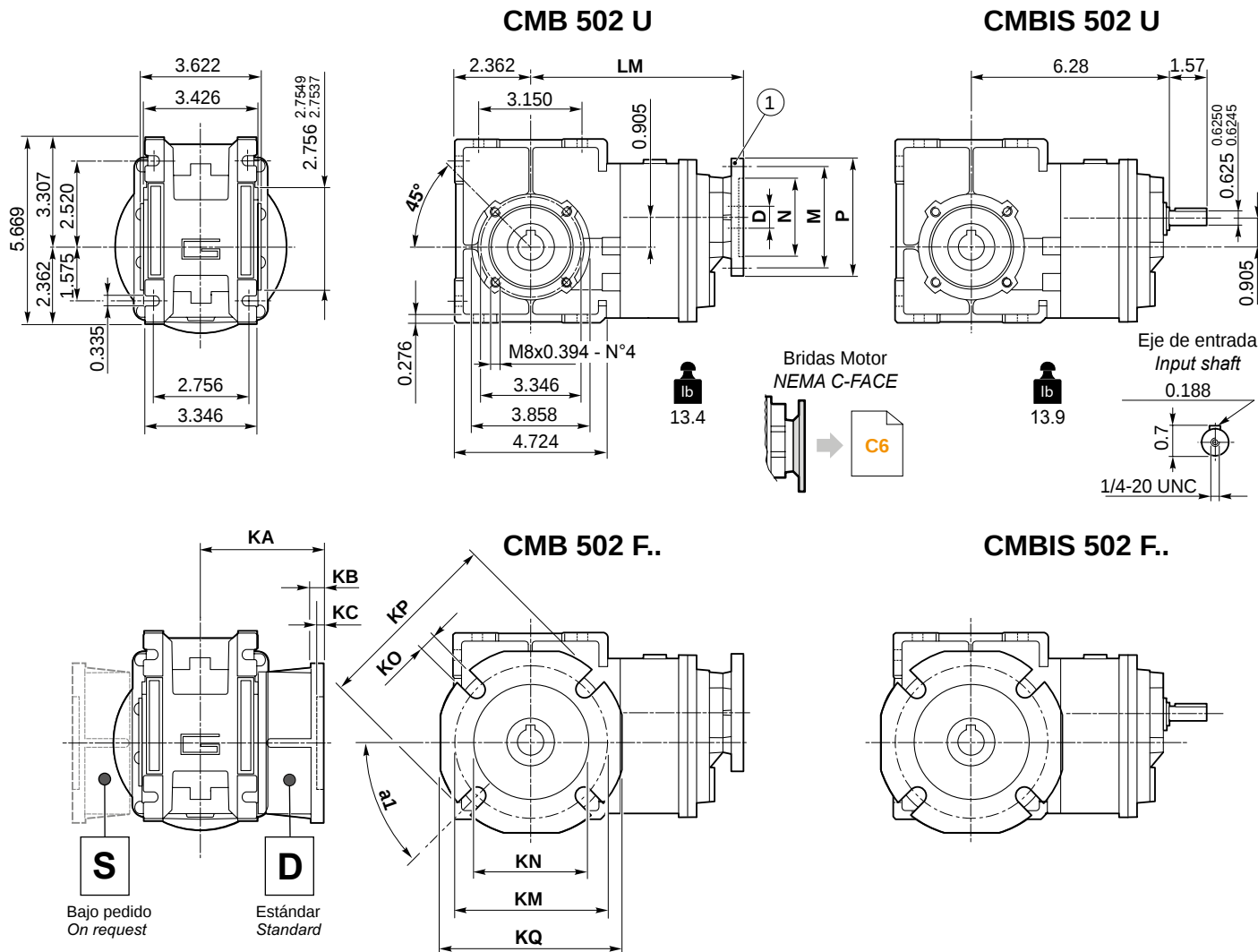




Dimensiones

Dimensions

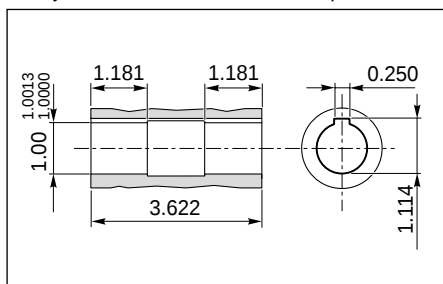
CMB 502 - CMBIS 502



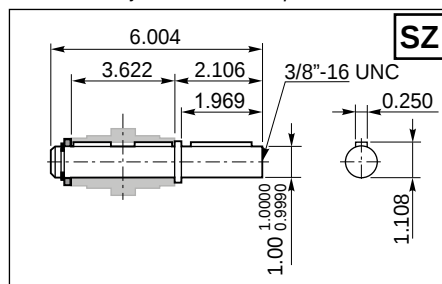
Versión F / F Version										Brida / Flange Tipo / Type
CMB CMBIS	a ₁	KA	KB	KC	KM	KN	KO	KP	□ KQ	
502	45°	3.543	0.354	0.197	3.543-4.331	2.756 ^{2.7577} / _{2.7559}	0.433	4.921	4,331	F
	45°	4.724	0.354	0.197	3.543-4.331	2.756 ^{2.7577} / _{2.7559}	0.433	4.921	4,331	FL
	45°	3.504	0.354	0.197	5.118-5.709	4.331 ^{4.3328} / _{4.3307}	0.374	6.299	5,197	FB

Brida Motor / Motor flange	
1	Dimensiones NEMA NEMA Dimensions
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	7.11

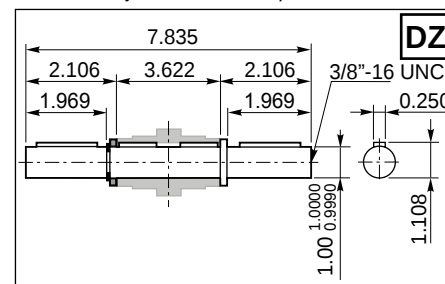
Eje de salida hueco / Hollow output shaft

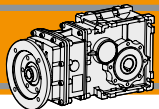
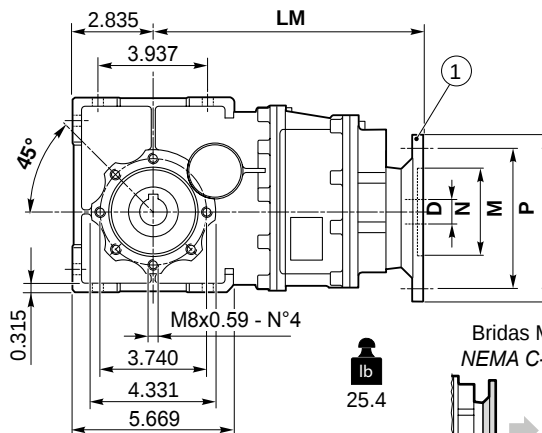
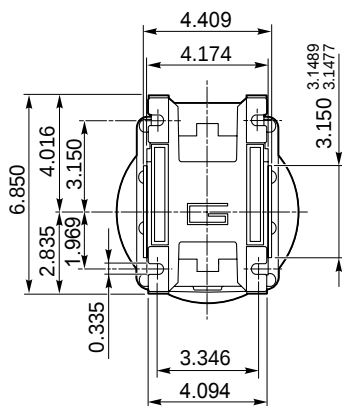
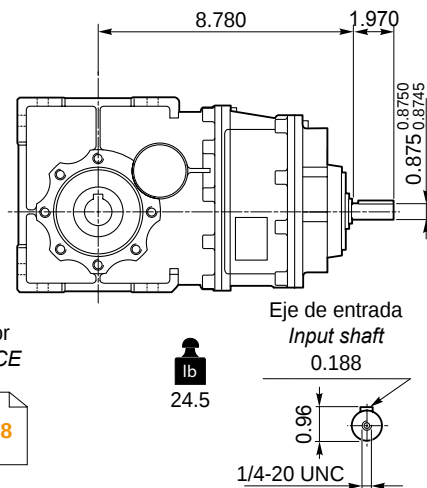
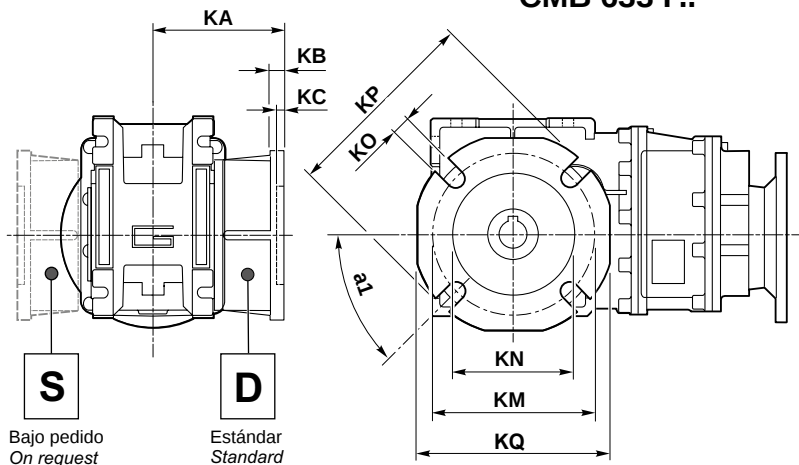
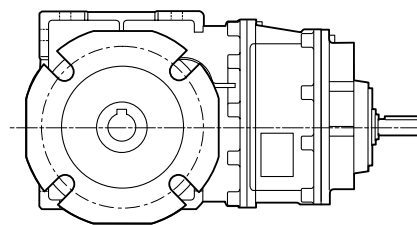


Eje de salida / Output shaft



Eje de salida / Output shaft

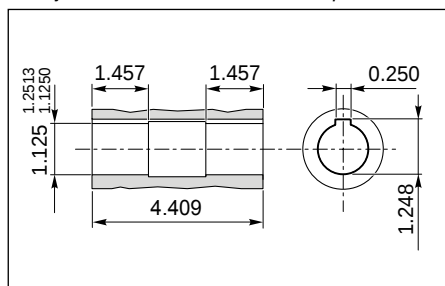



CMB
REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES
HELICAL BEVEL GEARBOXES
Dimensiones
Dimensions
CMB 633 - CMBIS 633
CMB 633 U

CMBIS 633 U

CMB 633 F..

CMBIS 633 F..


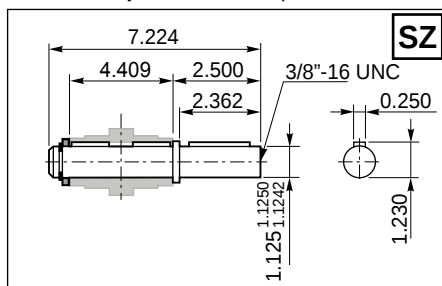
Versión F / F Version										
CMB CMBIS	a ₁	KA	KB	KC	KM	KN	KO	KP	□ KQ	Brida / Flange Tipo / Type
633	45°	3.228	0.394	0.236	5.906-6.299	4.528 ^{4.5297} 4.5276	0.433	7.087	5.591	F
	45°	4.409	0.394	0.314	5.906-6.299	4.528 ^{4.5297} 4.5276	0.433	7.087	5.591	FL
	45°	3.858	0.433	0.197	6.496-7.087	5.118 ^{5.1206} 5.1181	0.433	7.874	6.229	FB

Brida Motor / Motor flange		
1	Dimensiones NEMA NEMA Dimensions	
	56 C	140 TC
N	4.5	4.5
M	5.88	5.88
P	6.5	6.5
D	0.625	0.875
LM	9.69	9.69

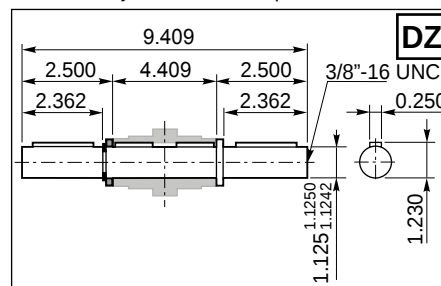
Eje de salida hueco / Hollow output shaft

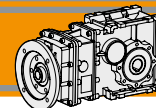


Eje de salida / Output shaft



Eje de salida / Output shaft



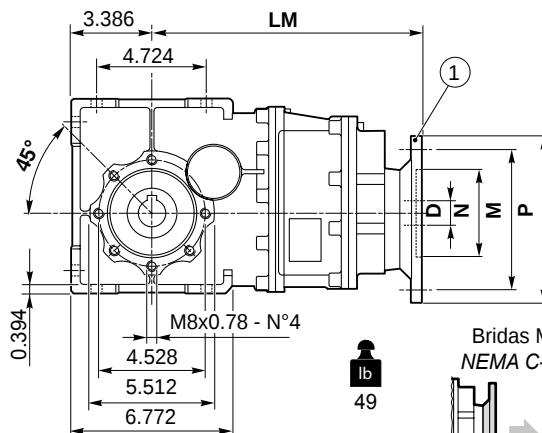
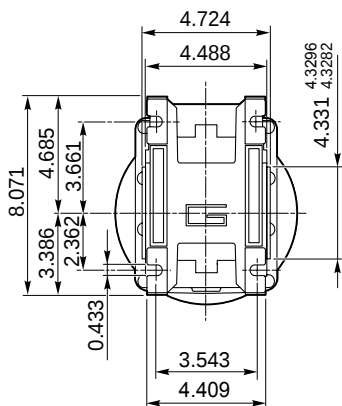


Dimensiones

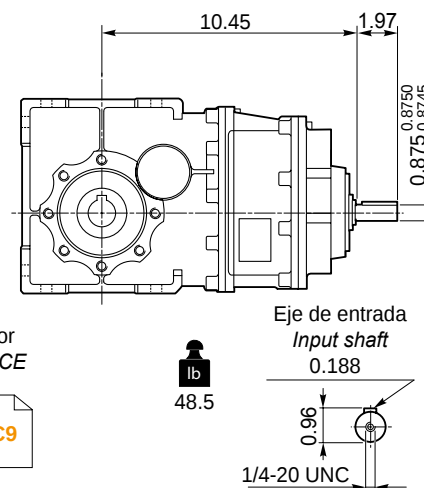
Dimensions

CMB 903 - CMBIS 903

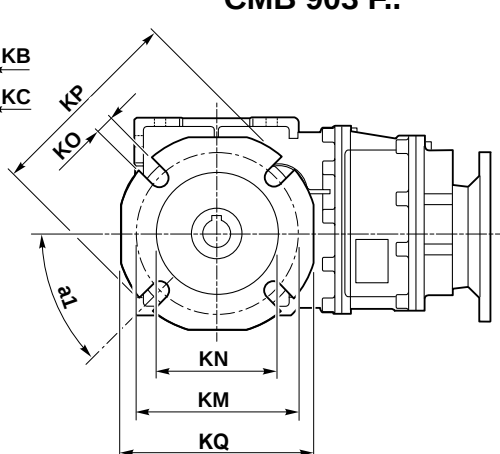
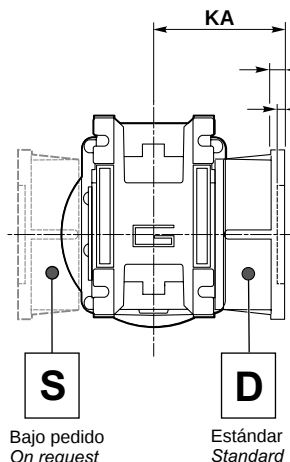
CMB 903 U



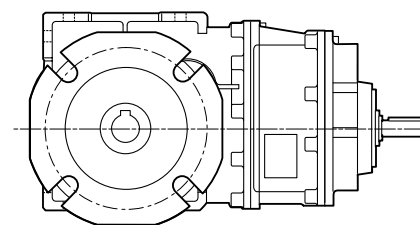
CMBIS 903 U



CMB 903 F.



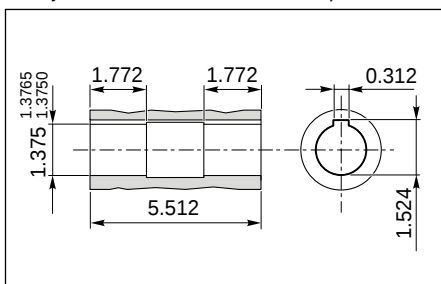
CMBIS 903 F.



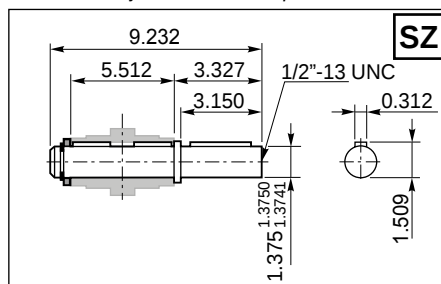
Versión F / F Version									
CMB CMBIS	a ₁	KA	KB	KC	KM	KN	KO	KP	□ KQ
933	45°	4.37	0.512	0.236	6.890-7.480	5.984 5.9867 5.9843	0.551	8.268	7.874
Brida / Flange Tipo / Type									
F									

Brida Motor / Motor flange			
1	Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC	180 TC
N	4.5	4.5	8.5
M	5.88	5.88	7.25
P	6.5	6.5	9
D	0.625	0.875	1.125
LM	11.67	11.67	11.58

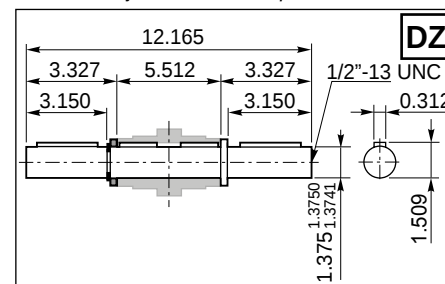
Eje de salida hueco / Hollow output shaft

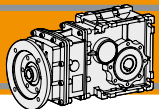


Eje de salida / Output shaft



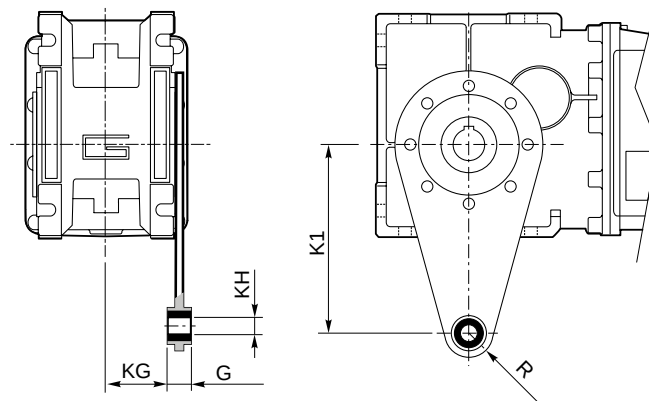
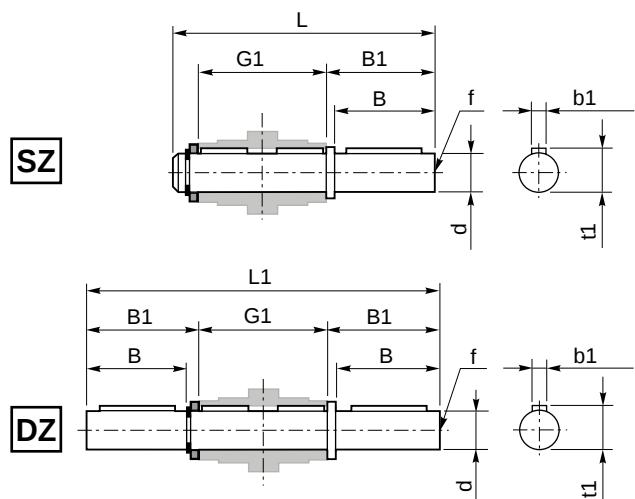
Eje de salida / Output shaft




CMB
REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES
HELICAL BEVEL GEARBOXES

Accesorios

Accessories



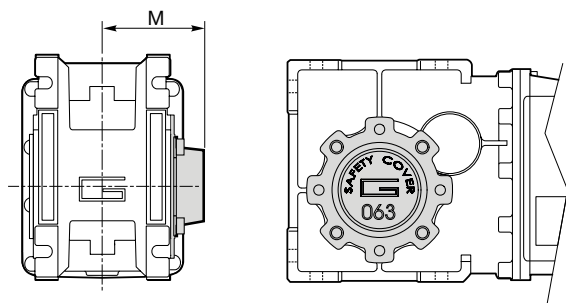
Eje de salida / Output shaft

CMB	d	B	B1	G1	L	L1	f	b1	t1
402	0.750 0.7500 0.7430	1.969	20.87	3.071	5.394	7.244	1/4"-20	0.188	0.830
502	1.000 1.0000 0.9992	1.696	2.106	3.622	6.004	7.835	3/8"-16	0.250	1.108
633	1.125 1.1250 1.1242	2.362	2.500	4.409	7.224	9.409	3/8"-16	0.250	1.230
903	1.375 1.3750 1.3741	3.150	3.327	5.512	9.232	12.165	1/2"-13	0.312	1.509

Brazo de reacción / Torque arm

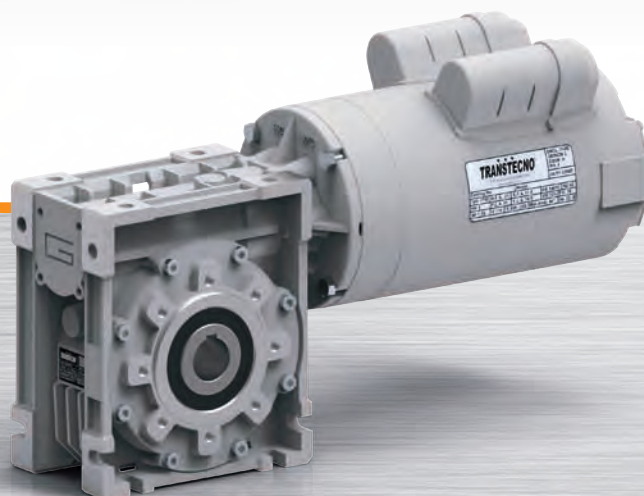
CMB	K1	G	KG	KH	R
402	3.937	0.551	1.220	0.394	0.709
502	3.937	0.551	1.496	0.394	0.709
633	5.906	0.551	1.870	0.394	0.709
903	7.874	0.984	2.224	0.787	1.181

SC - Cubierta de seguridad / Safety cover



CMB	M
402	2.146
502	2.461
633	2.874
903	3.701

REDUCTORES SINFIN CORONA
WORMGEARBOXES

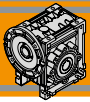




Índice	Index	Pág. Page
Características técnicas	<i>Technical features</i>	D2
Clasificación	<i>Classification</i>	D2
Sentidos de rotación	<i>Direction of rotation</i>	D3
Nomenclatura	<i>Legend</i>	D3
Lubricación	<i>Lubrication</i>	D4
Cargas radiales	<i>Radial loads</i>	D5
Datos de dentado	<i>Toothing data</i>	D6
Rendimiento	<i>Efficiency</i>	D6
Datos técnicos	<i>Technical data</i>	D7
Motores aplicables	<i>IEC Motor adapters</i>	D24
Dimensiones	<i>Dimensions</i>	D26
Accesorios	<i>Accessories</i>	D39
Opciones	<i>Options</i>	D40

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Características técnicas

Technical features

El elevado nivel de modularidad caracteriza a los reductores sinfin corona de la serie CM; los diversos kit de entrada y salida permiten una versatilidad extrema del reductor. Los reductores de la serie CM poseen las características siguientes:

The high degree of modularity is a design feature of CM wormgearboxes range thanks to a wide selection of input and output kits. Main features of CM range are:

- Los tamaños 040, 050, 063, 075, 090 y 110 están contruidos con carcasa de aluminio. El tamaño 130 en hierro fundido;
- Los tamaños 090, 110 y 130 se suministran con rodamientos de rodillos cónicos en el sinfin;
- Die-cast aluminum housing on sizes 040, 050, 063, 075, 090 and 110. Cast iron housing on size 130;
- Double taper roller bearing on sizes 090, 110 and 130;

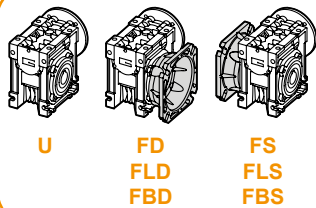
Clasificación

Classification

REDUCTORES SINFIN CORONA / WORMGEARBOXES

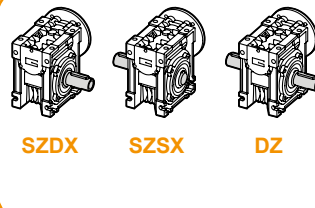
REDUCTOR / GEARBOX								
CM	050	U	10	56C	SZDX	BRSX	90°	M1
Tipo Type	Tamaño Size	Versión de reductor Gearbox Version	Relación de reducción Ratio		Eje de salida Output shaft	Brazo de reacción Torque arm	Ángulo Angle	Posición de montaje Mounting position
CM	040	U	véase tablas see tables	56C	SZDX	BRSX	0°	M1 (B3)
	050	FD		140TC	SZSX	BRDX	90°	M2 (V6)
CMIS	063	FS		180TC	DZ		180°	M3 (B8)
	075	FBD		210TC			270°	M4 (V5)
	090	FBS						M5 (B7)
	110	FLD						M6 (B6)
	130	FLS						

Relación de reducción
Gearbox Version



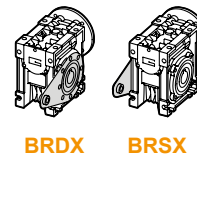
F.....D = Lado derecho / Right side
FL = Brida larga / Long flange
F.....S = Lado izquierdo / Left side
FB = Brida corta / Short flange

Eje de salida
Output shaft



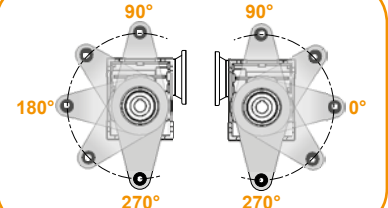
SZDX = Flecha sencilla lado derecho
Single shaft right side
DZ = Flecha doble / Double shaft
SZSX = Flecha sencilla lado izquierdo
Single shaft left side

Brazo de reacción
Torque arm



BRDX = Lado derecho / Right side
BRSX = Lado izquierdo / Left side

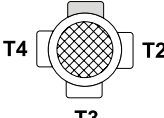
Posición del Brazo
Torque arm position





Clasificación

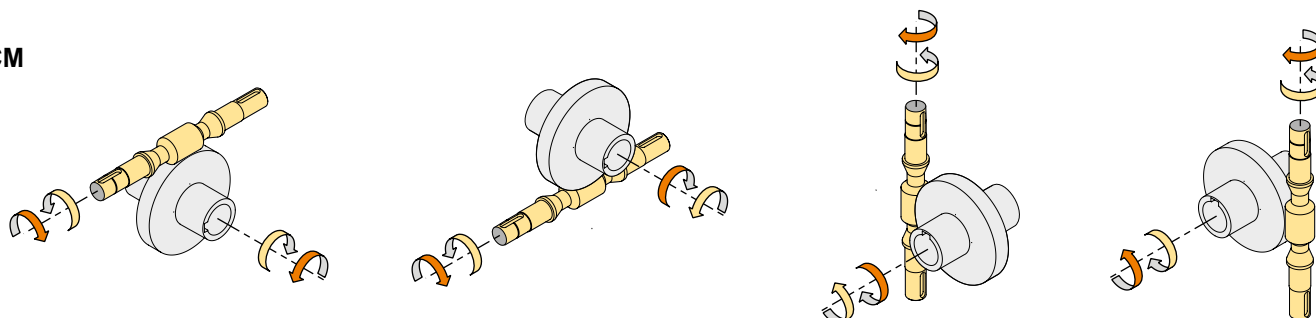
Classification

MOTOR / MOTOR					
1 hp / 0.75kW	4p	3ph	220/440V	60Hz	T1
Potencia Power véase tablas See tables	Polos Poles 2p 4p 6p 8p	Fases Phases 1ph 3ph	Tensión Voltage 230V 230/400V ... 220/440V	Frecuencia Frequency 50Hz 60Hz	Posición caja de bornes Terminal box pos. T1 (Std)  T4 T2 T3

Sentidos de rotación

Direction of rotation

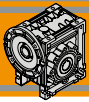
CM



Nomenclatura

Legend

n_1 [rpm]	Velocidad de entrada / <i>Input speed</i>	sf	Rendimiento dinámico / <i>Service factor</i>
n_2 [rpm]	Velocidad de salida / <i>Output speed</i>	Rd %	Rendimiento dinámico / <i>Dynamic efficiency</i>
i	Relación de reducción / <i>Ratio</i>	Rs %	Rendimiento estático / <i>Static efficiency</i>
P_1 [kW]	Potencia nominal en la entrada / <i>Nominal input power</i>	R_2 [N]	Carga radial admisible en la salida / <i>Maximum output radial load</i>
M_2 [Nm]	Par en la salida en función de P_1 / <i>Output torque referred to P_1</i>	A_2 [N]	Carga axial admisible en la salida / <i>Maximum output axial load</i>
P_{n1} [kW]	Potencia nominal en la entrada / <i>Nominal input power</i>	Z	Número de entradas del tornillo / <i>Worm starts</i>
M_{n2} [Nm]	Par nominal en la salida en función de P_{n1} / <i>Nominal output torque referred to P_{n1}</i>	β	Ángulo de helicoidal / <i>Helix angle</i>

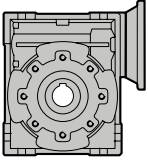


Lubricación

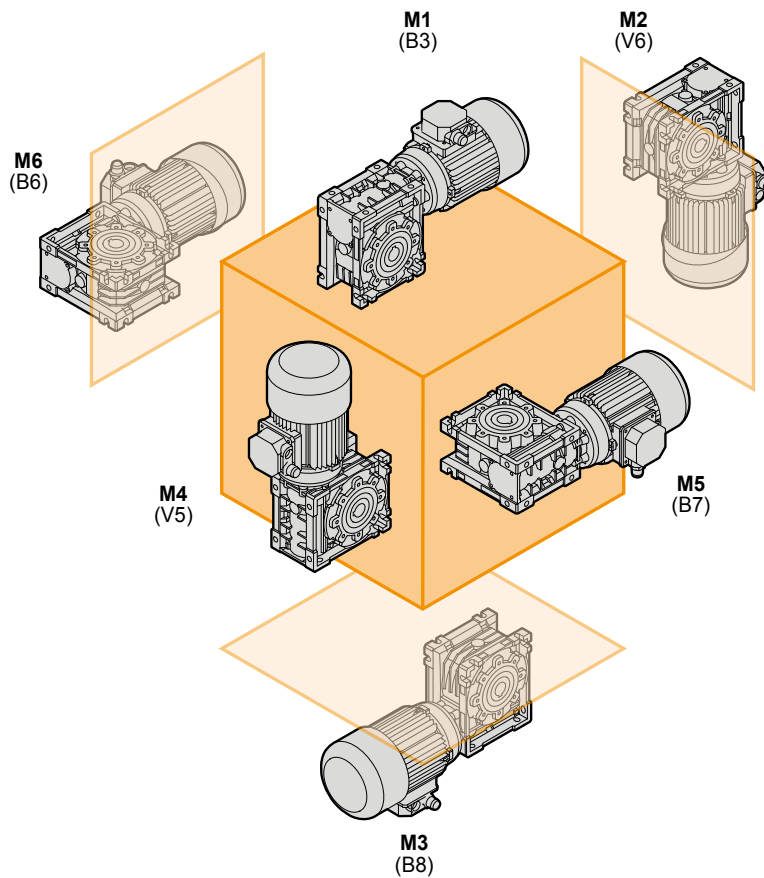
Lubricación permanente de aceite sintético de larga vida (grado de viscosidad 320) que hace posible utilizar los reductores en todas las posiciones de montaje, así mismo no requieren de mantenimiento eliminando el cambio de aceite.

Lubrication

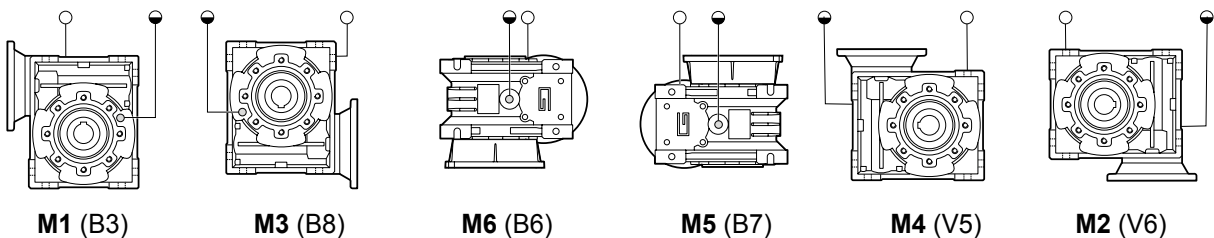
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearboxes in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.



CM	Cantidad de aceite (US gal) / Oil quantity (US gal)					
	M1 (B3)	M3 (B8)	M6 (B6)	M5 (B7)	M4 (V5)	M2 (V6)
130	1.19	0.87	0.92	0.92	1.19	0.87



CM 130



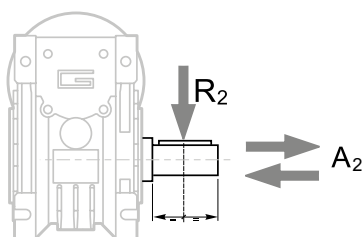
(Estándar)
(standard)

○ Respiradero y tapón de llenado / Breather and filling plug
● Tapón de nivel de aceite / Oil level plug



Cargas radiales

Radial loads

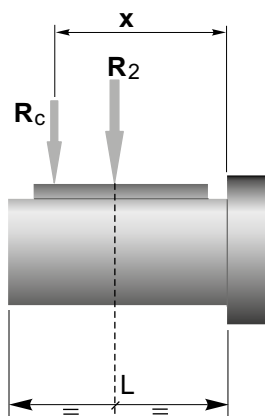


$$A_2 = R_2 \times 0.2$$

n ₂ [rpm]	R ₂ [lb]						
	CM040	CM050	CM063	CM075	CM090	CM110	CM130
187	284	398	550	635	711	1137	1289
140	313	438	605	699	783	1252	1419
93	359	502	694	801	897	1435	1626
70	394	552	763	881	986	1578	1788
56	425	595	821	949	1062	1699	1926
47	450	631	871	1006	1126	1802	2042
35	497	696	961	1110	1242	1988	2253
28	535	749	1035	1195	1338	2141	2427
23	572	800	1105	1277	1429	2286	2591
18	620	868	1199	1385	1551	2481	2812
14	674	944	1304	1506	1686	2698	3057

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

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

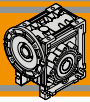


	CM						
	040	050	063	075	090	110	130
a	84	101	120	131	182	176	188
b	64	76	95	101	122	136	148
R _{2MAX}	674	944	1304	1506	1686	2698	3057

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

$$R \leq R_c$$

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



Reversibilidad e irreversibilidad

La reversibilidad en los motorreductores sinfín y corona es consecuencia directa de la eficiencia (estática y dinámica). Esto determina si la flecha de entrada puede o no ser rotada por la aplicación de un cierto torque en la flecha de salida.

El grado de reversibilidad (o irreversibilidad) de un reductor está determinado por la dificultad de poder o no poder rotarlo. Esta significativa característica de los reductores sinfín y corona es afectada por numerosos factores incluyendo el ángulo de diseño de los engranes (así como la relación de reducción), lubricación, temperatura, el maquinado de la superficie del sinfín, vibraciones, etc.

En aplicaciones de traslación, una alta reversibilidad debe ser garantizada en el reductor para evitar inercias de las partes en movimiento o picos de carga inaceptables para los engranes.

En las aplicaciones que requieren un "no-retorno" de la carga (ej. Elevadores o bandas transportadoras inclinadas) un reductor con alta irreversibilidad debe ser seleccionado cuando no se cuenta con un motor con freno.

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).

La siguiente tabla se proporciona únicamente con fines de referencia. En esta se muestran los distintos grados de reversibilidad e irreversibilidad de los reductores sinfín y corona en relación a su eficiencia dinámica Rd y estática Rs.

Reversibility and irreversibility

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 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...

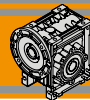
In applications that include translations, high reversibility must be guaranteed to prevent inertia of the moving parts from creating unacceptable load peaks on the drive parts.

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	Dynamic reversibility and irreversibility
> 0.6	Reversibilidad dinámica	Dynamic reversibility
0.5 - 0.6	Reversibilidad dinámica incierta	Uncertain dynamic reversibility
0.4 - 0.5	Irreversibilidad dinámica efectiva	Good dynamic irreversibility
<0.4	Irreversibilidad dinámica	Dynamic irreversibility
Rs	Reversibilidad e irreversibilidad estática	Static reversibility and irreversibility
> 0.55	Irreversibilidad estática	Static reversibility
0.5 - 0.55	Opción A: Reversibilidad estática incierta	Uncertain static reversibility
<0.5	Irreversibilidad estática	Static irreversibility


Datos de dentado
Toothing data

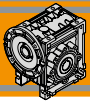
	Datos del engranaje sinfin corona Worm wheel data	Relación de reducción / Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CM040	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CM050	Z		4	3	2	2	2	1	1	1	1	1	1
	β		23° 54'	18° 23'	12° 29'	10° 6'	8° 28'	6° 19'	5° 5'	4° 15'	3° 39'	2° 51'	2° 20'
CM063	Z		4	3	2	2	2	1	1	1	1	1	1
	β		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'

Rendimiento
Efficiency

	n ₁ [rpm]	Rendimiento Efficiency	Relación de reducción / Ratio											
			5	7.5	10	15	20	25	30	40	50	60	80	100
CM040	1750	Rd	88	86	84	81	78	74	70	65	60	58	52	46
	1150		86	84	82	77	74	70	66	60	57	53	46	41
		Rs	74	71	67	60	55	51	45	40	36	32	28	24
CM050	1750	Rd	89	87	85	82	79	76	72	67	63	60	54	49
	1150		87	85	84	79	75	72	68	62	59	55	48	43
		Rs	73	70	66	59	55	51	44	39	35	32	27	23
CM063	1750	Rd	90	88	86	84	81	78	75	70	66	63	57	52
	1150		89	86	84	81	78	75	70	65	61	58	52	47
		Rs	73	71	67	60	55	51	45	40	36	33	28	24
CM075	1750	Rd		89	87	84	83	80	77	73	69	66	60	56
	1150			87	85	83	80	77	73	68	64	61	55	50
		Rs		73	69	62	59	55	48	43	39	36	31	27
CM090	1750	Rd		90	88	86	84	83	79	76	72	69	64	60
	1150			88	87	84	82	80	76	72	68	65	60	55
		Rs		74	71	65	61	59	51	46	42	39	34	30
CM110	1750	Rd		89	88	86	85	84	80	79	76	73	68	64
	1150			88	87	84	83	82	78	75	71	68	63	59
		Rs		74	71	64	64	60	50	49	46	42	37	33
CM130	1750	Rd		89	88	86	84	83	79	76	75	73	69	64
	1150			88	87	84	82	81	77	74	73	70	64	59
		Rs		74	71	64	64	60	50	49	46	42	37	33

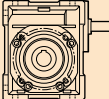


Rendimiento teórico del reductor después del rodaje
Theoretical efficiency of the gearbox after the first running period



Datos técnicos

Technical data

	i	n ₁ = 1750 rpm				n ₁ = 1150 rpm			
		n ₂	Mn ₂	Pn ₁	NEMA Motores aplicables	n ₂	Mn ₂	Pn ₁	NEMA Motores aplicables
		[rpm]	[lb·in]	[hp]	NEMA Motor adapters	[rpm]	[lb·in]	[hp]	NEMA Motor adapters
		56 C				56 C			
CMIS 40									
	5	350	363	2.29		230	416	1.76	
	7.5	233	389	1.68		153	451	1.31	
	10	175	398	1.32		115	460	1.02	
	15	117	398	0.91		77	478	0.75	
	20	88	354	0.63		58	398	0.49	
	25	70	336	0.50		46	389	0.41	
	30	58	425	0.56		38	496	0.46	
	40	44	372	0.40		29	425	0.32	
	50	35	345	0.32		23	407	0.26	
	60	29	319	0.25		19	381	0.22	
	80	22	292	0.19		14	354	0.18	
	100	18	274	0.17		12	319	0.14	

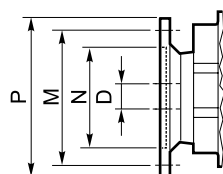
CMIS 50									
	5	350	664	4.14		230	779	3.26	
	7.5	233	699	2.97		153	814	2.33	
	10	175	726	2.37		115	832	1.81	
	15	117	726	1.64		77	841	1.29	
	20	88	637	1.12		58	708	0.86	
	25	70	620	0.90		46	664	0.67	
	30	58	779	1.00		38	876	0.78	
	40	44	673	0.70		29	752	0.55	
	50	35	637	0.56		23	717	0.44	
	60	29	611	0.47		19	673	0.37	
	80	22	531	0.34		14	611	0.29	
	100	18	496	0.28		12	566	0.24	

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

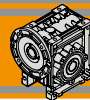
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C8 a la C11.

NOTE Highlighted áreas indicate the motor input flange available on each gearbox size.

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

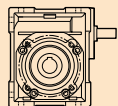


Dimensiones NEMA/ NEMA Dimensions	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625



Datos técnicos

Technical data

	i	n ₁ = 1750 rpm						n ₁ = 1150 rpm					
		n ₂ [rpm]	Mn ₂ [lb·in]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters			n ₂ [rpm]	Mn ₂ [lb·in]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters		
					56 C	140 TC	180 TC				56 C	140 TC	180 TC
CMIS 63													
	5	350	1186	7.31	B			230	1434	5.87	B		
	7.5	233	1274	5.36	B			153	1496	4.23	B		
	10	175	1310	4.23	B			115	1558	3.38	B		
	15	117	1363	3.00	B			77	1575	2.36	B		
	20	88	1204	2.06	B			58	1363	1.59	B		
	25	70	1195	1.70	B			46	1221	1.19	B		
	30	58	1469	1.81	B			38	1646	1.43	B		
	40	44	1257	1.25	B			29	1416	0.99	B		
	50	35	1204	1.01	B			23	1328	0.79	B		
	60	29	1115	0.82				19	1257	0.66			
	80	22	1044	0.64				14	1133	0.50			
	100	18	1027	0.55				12	1080	0.42			

CMIS 75													
	7.5	233	2106	8.76	BS	B		153	2513	7.02	BS	B	
	10	175	2274	7.25	BS	B		115	2664	5.71	BS	B	
	15	117	2354	5.18	BS	B		77	2779	4.07	BS	B	
	20	88	2142	3.58	BS	B		58	2443	2.82	BS	B	
	25	70	1991	2.76	BS	B		46	2159	2.05	BS	B	
	30	58	2531	3.04	BS	B		38	2929	2.44	BS	B	
	40	44	2221	2.11	B			29	2540	1.70	B		
	50	35	2009	1.62	B			23	2301	1.31	B		
	60	29	1929	1.35	B			19	2221	1.13	B		
	80	22	1708	0.99	B			14	1982	0.82	B		
	100	18	1620	0.80				12	1814	0.66			

NOTA

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

B/BS = Casquillo de reducción en acero.



* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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

NOTE

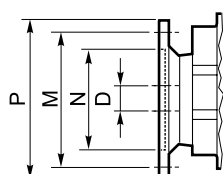
Highlighted áreas indicate the motor input flange available on each gearbox size.

B/BS = Metal shaft sleeve.

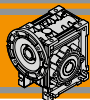


* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

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

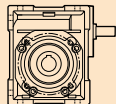


Dimensiones NEMA/ NEMA Dimensions			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125



Datos técnicos

Technical data

	i	n ₁ = 1750 rpm							n ₁ = 1150 rpm						
		n ₂ [rpm]	Mn ₂ [lb·in]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters				n ₂ [rpm]	Mn ₂ [lb·in]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters			
					56 C	140 TC	180 TC	210 TC				56 C	140 TC	180 TC	210 TC
CMIS 90															
	7.5	233	3027	12.44	BS	B			153	3682	10.17	BS	B		
	10	175	3363	10.60	BS	B			115	3974	8.33	BS	B		
	15	117	3832	8.24	BS	B			77	4549	6.58	BS	B		
	20	88	3664	6.05	BS	B			58	4204	4.67	BS	B		
	25	70	3266	4.37	BS	B			46	3726	3.40	BS	B		
	30	58	4363	5.11	BS	B			38	5045	4.03	BS	B		
	40	44	3841	3.51	BS	B			29	4407	2.83	BS	B		
	50	35	3407	2.63	BS	B			23	3929	2.11	BS	B		
	60	29	3115	2.09	B				19	3655	1.74	B			
	80	22	2867	1.55	B				14	3336	1.29	B			
	100	18	2646	1.22	B				12	2974	1.00	B			

CMIS 110

	7.5	233	5354	22.26		BS	B		153	6567	17.94		BS	B	
	10	175	5921	18.67		BS	B		115	7045	14.76		BS	B	
	15	117	6461	13.90		BS	B		77	7744	11.07		BS	B	
	20	88	6549	10.69		BS	B		58	7222	7.84		BS	B	
	25	70	5930	7.83		BS	B		46	6797	6.05		BS	B	
	30	58	7213	8.34		BS	B		38	8461	6.68		BS	B	
	40	44	6797	5.97		B			29	7859	4.71		B		
	50	35	6186	4.52		B			23	7151	3.62		B		
	60	29	5540	3.51		B			19	6487	2.90		B		
	80	22	4974	2.54		B			14	5806	2.10		B		
	100	18	4629	2.01					12	5301	1.64				

NOTA

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

B/BS = Casquillo de reducción en acero.



* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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

NOTE

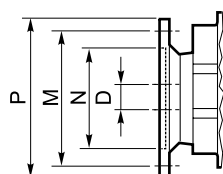
Highlighted áreas indicate the motor input flange available on each gearbox size.

B/BS = Metal shaft sleeve.

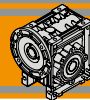


* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

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

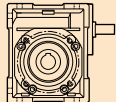


Dimensiones NEMA/ NEMA Dimensions				
	56 C	140 TC	180 TC	210 TC
N	4.5		8.5	
M	5.88		7.25	
P	6.5		9	
D	0.625	0.875	1.125	1.375



Datos técnicos

Technical data

	i	n ₁ = 1750 rpm							n ₁ = 1150 rpm						
		n ₂ [rpm]	Mn ₂ [lb·in]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters				n ₂ [rpm]	Mn ₂ [lb·in]	Pn ₁ [hp]	NEMA Motores aplicables NEMA Motor adapters			
					56 C	140 TC	180 TC	210 TC				56 C	140 TC	180 TC	210 TC
CMIS 130															
	7.5	233	6638	27.59		BS	B		153	7700	21.27		BS	B	
	10	175	7257	22.88		BS	B		115	8408	17.62		BS	B	
	15	117	8054	17.32		BS	B		77	9293	13.45		BS	B	
	20	88	8054	13.14		BS	B		58	9293	10.33		BS	B	
	25	70	8142	10.76		BS	B		46	9293	8.37		BS	B	
	30	58	9293	10.74		BS	B		38	10443	8.24		BS	B	
	40	44	9293	8.16		B			29	9735	6.00		B		
	50	35	8585	6.27		B			23	9381	4.69		B		
	60	29	7877	4.99		B			19	8585	3.73		B		
	80	22	7346	3.75		B			14	7788	2.77		B		
	100	18	6505	2.82					12	6992	2.16				

NOTA

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

B/BS = Casquillo de reducción en acero.



* = Pn₁ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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

NOTE

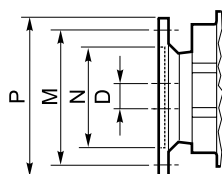
Highlighted áreas indicate the motor input flange available on each gearbox size.

B/BS = Metal shaft sleeve.

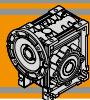


* = The service factor (sf) has to be selected depending on application: please contact our Technical Department.

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



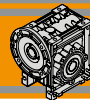
Dimensiones NEMA/ NEMA Dimensions				
	56 C	140 TC	180 TC	210 TC
N	4.5		8.5	
M	5.88		7.25	
P	6.5		9	
D	0.625	0.875	1.125	1.375



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i					
0.16 hp								0.25 hp										
0.12 kW (1750 rpm)	350	25	14.3	III	5	CM040	56C	0.18 kW (1150 rpm)	77	158	3.0	III	15	CM040	56C			
	233	37	10.5	III	7.5		56C		58	203	2.0	II	20		56C			
	175	48	8.2	III	10		56C		46	240	1.6	II	25		56C			
	117	70	5.7	III	15		56C		38	272	1.8	II	30		56C			
	88	90	3.9	III	20		56C		29	329	1.3	I	40		56C			
	70	107	3.2	III	25		56C		23	391	1.0	I	50		56C			
	58	121	3.5	III	30		56C		19	436	0.9	I	60		56C			
	44	150	2.5	III	40		56C											
	35	173	2.0	II	50		56C		58	206	3.4	III	20		CM050	56C		
	29	201	1.6	II	60		56C		46	247	2.7	III	25			56C		
	22	240	1.2	I	80		56C		38	280	3.1	III	30			56C		
	18	265	1.0	I	100		56C		29	340	2.2	III	40			56C		
							23		405	1.8	II	50	56C					
							19		453	1.5	II	60	56C					
	35	182	3.5	III	50	CM050	56C		14	527	1.2	I	80	56C				
	29	208	2.9	III	60		56C		12	590	1.0	I	100	56C				
22	249	2.1	III	80	56C													
18	283	1.8	II	100	56C													
0.12 kW (1150 rpm)	58	130	3.1	III	20	CM040	56C	0.33 hp	0.22 kW (1750 rpm)	350	52	6.9	III	5	CM040	56C		
	46	154	2.5	III	25		56C			233	77	5.1	III	7.5		56C		
	38	174	2.9	III	30		56C			175	100	4.0	III	10		56C		
	29	211	2.0	III	40		56C			117	145	2.8	III	15		56C		
	23	250	1.6	II	50		56C			88	186	1.9	II	20		56C		
	19	279	1.4	I	60		56C			70	220	1.5	II	25		56C		
	14	323	1.1	I	80		56C			58	250	1.7	II	30		56C		
	12	360	0.9	I	100		56C			44	309	1.2	I	40		56C		
	29	218	3.5	III	40	CM050	56C			35	357	1.0	I	50	56C			
	23	259	2.8	III	50		56C											
	19	290	2.3	III	60		56C			88	188	3.4	III	20	CM050	56C		
	14	337	1.8	II	80		56C			70	226	2.7	III	25		56C		
	12	377	1.5	II	100		56C			58	257	3.0	III	30		56C		
										44	319	2.1	III	40		56C		
										35	375	1.7	II	50		56C		
										29	428	1.4	II	60		56C		
0.25 hp	0.18 kW (1750 rpm)	350	40	9.2	III	5	CM040	56C	0.33 hp	0.22 kW (1750 rpm)	350	52	6.9	III	5	CM040	56C	
		233	58	6.7	III	7.5		56C			233	77	5.1	III	7.5		56C	
		175	76	5.3	III	10		56C			175	100	4.0	III	10		56C	
		117	109	3.6	III	15		56C			117	145	2.8	III	15		56C	
		88	141	2.5	III	20		56C			88	186	1.9	II	20		56C	
		70	167	2.0	III	25		56C			70	220	1.5	II	25		56C	
		58	189	2.2	III	30		56C			58	250	1.7	II	30		56C	
		44	234	1.6	II	40		56C			44	309	1.2	I	40		56C	
		35	270	1.3	I	50		56C			35	357	1.0	I	50	56C		
		29	314	1.0	I	60		56C										
		44	241	2.8	III	40		CM050			56C	88	188	3.4	III	20	CM050	56C
		35	284	2.2	III	50					56C	70	226	2.7	III	25		56C
		29	324	1.9	II	60	56C				58	257	3.0	III	30	56C		
		22	389	1.4	I	80	56C				44	319	2.1	III	40	56C		
		18	442	1.1	I	100	56C				35	375	1.7	II	50	56C		
											29	428	1.4	II	60	56C		
22	411	2.5	III	80	CM063	56C	22	514	1.0	I	80	56C						
18	469	2.2	III	100		56C	18	583	0.9	I	100	56C						
							29	450	2.5	III	60	CM063	56C					
							22	542	1.9	II	80		56C					



Datos técnicos

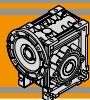
Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.33 hp							
0.22 kW (1150 rpm)	153	114	4.0	III	7.5	CM040	56C
	115	148	3.1	III	10		56C
	77	209	2.3	III	15		56C
	58	268	1.5	II	20		56C
	46	317	1.2	I	25		56C
	38	358	1.4	I	30		56C
	29	434	1.0	I	40		56C
	23	516	0.8	I	50		56C
	58	272	2.6	III	20	CM050	56C
	46	326	2.0	III	25		56C
	38	369	2.4	III	30		56C
	29	449	1.7	II	40		56C
	23	534	1.3	I	50		56C
	19	597	1.1	I	60		56C
	14	695	0.9	I	80		56C
	29	471	3.0	III	40	CM063	56C
	23	552	2.4	III	50		56C
	19	630	2.0	II	60		56C
	14	753	1.5	II	80		56C
	12	851	1.3	I	100		56C
	14	796	2.5	III	80	CM075	56C
	12	905	2.0	III	100		56C

0.5 hp							
0.37 kW (1750 rpm)	350	79	4.6	III	5	CM040	56C
	233	116	3.4	III	7.5		56C
	175	151	2.6	III	10		56C
	117	219	1.8	II	15		56C
	88	281	1.3	I	20		56C
	70	333	1.0	I	25		56C
	58	378	1.1	I	30		56C
	117	222	3.3	III	15	CM050	56C
	88	285	2.2	III	20		56C
	70	342	1.8	II	25		56C
	58	389	2.0	III	30		56C
	44	483	1.4	I	40		56C
	35	568	1.1	I	50		56C
	29	649	0.9	I	60		56C
	70	351	3.4	III	25	CM063	56C
	58	406	3.6	III	30		56C
	44	505	2.5	III	40		56C
	35	595	2.0	III	50		56C
	29	681	1.6	II	60		56C
	22	822	1.3	I	80		56C
	18	937	1.1	I	100		56C
	29	703	2.7	III	60	CM075	56C
	22	865	2.0	II	80		56C
	18	991	1.6	II	100		56C

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
0.5 hp							
0.37 kW (1150 rpm)	230	118	3.5	III	5	CM040	56C
	153	173	2.6	III	7.5		56C
	115	225	2.0	III	10		56C
	77	317	1.5	II	15		56C
	58	406	1.0	I	20		56C
	46	480	0.8	I	25		56C
	115	230	3.6	III	10	CM050	56C
	77	325	2.6	III	15		56C
	58	411	1.7	II	20		56C
	46	494	1.3	I	25		56C
	38	559	1.6	II	30		56C
	29	680	1.1	I	40		56C
	23	809	0.9	I	50		56C
	46	514	2.4	III	25	CM063	56C
	38	576	2.9	III	30		56C
	29	713	2.0	II	40		56C
	23	836	1.6	II	50		56C
	19	954	1.3	I	60		56C
	14	1141	1.0	I	80		56C
	12	1289	0.8	I	100		56C
	29	746	3.4	III	40	CM075	56C
	23	878	2.6	III	50		56C
	19	987	2.3	III	60		56C
	14	1207	1.6	II	80		56C
	12	1371	1.3	I	100		56C
	14	1294	2.6	III	80	CM090	56C-140TC
	12	1481	2.0	III	100		56C-140TC

0.75 hp							
0.55 kW (1750 rpm)	350	118	5.6	III	5	CM050	56C
	233	176	4.0	III	7.5		56C
	175	230	3.2	III	10		56C
	117	333	2.2	III	15		56C
	88	427	1.5	II	20		56C
	70	514	1.2	I	25		56C
	58	584	1.3	I	30		56C
	44	724	0.9	I	40		56C
	88	438	2.7	III	20	CM063	56C
	70	527	2.3	III	25		56C
	58	608	2.4	III	30		56C
	44	757	1.7	II	40		56C
	35	892	1.3	I	50		56C
	29	1022	1.1	I	60		56C
	22	1233	0.8	I	80		56C



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			
0.75 hp								1 hp								
0.55 kW (1750 rpm)	44	779	2.9	III	40	CM075	56C	0.75 kW (1750 rpm)	117	454	3.0	III	15	CM063	56C-140TC	
	35	933	2.2	III	50		56C		88	584	2.1	III	20		56C-140TC	
	29	1054	1.8	II	60		56C		70	703	1.7	II	25		56C-140TC	
	22	1298	1.3	I	80		56C		58	811	1.8	II	30		56C-140TC	
	18	1487	1.1	I	100		56C		44	1009	1.2	I	40		56C-140TC	
	35	987	3.5	III	50	CM090	56C		35	1189	1.0	I	50	CM075	56C-140TC	
	29	1135	2.7	III	60		56C		70	721	2.8	III	25		56C-140TC	
	22	1384	2.1	III	80		56C		58	833	3.1	III	30		56C-140TC	
	18	1622	1.6	II	100		56C		44	1038	2.1	III	40		56C-140TC	
									35	1244	1.6	II	50		56C-140TC	
0.55 kW (1150 rpm)	153	262	3.1	III	7.5	CM050	56C	29	1406	1.4	I	60	CM090	56C-140TC		
	115	346	2.4	III	10		56C	22	1730	1.0	I	80		56C-140TC		
	77	487	1.7	II	15		56C	44	1096	3.5	III	40		56C-140TC		
	58	617	1.1	I	20		56C	35	1316	2.6	III	50		56C-140TC		
	46	740	0.9	I	25		56C	29	1514	2.1	III	60		56C-140TC		
	38	839	1.0	I	30	56C	22	1845	1.6	II	80	56C-140TC				
	77	500	3.2	III	15	CM063	56C-140TC	18	2163	1.2	I	100	CM110	56C-140TC		
	58	642	2.1	III	20		56C-140TC	22	1961	2.4	III	80		140TC		
	46	771	1.6	II	25		56C-140TC	18	2307	1.9	II	100		140TC		
	38	864	1.9	II	30		56C-140TC									
	29	1070	1.3	I	40		56C-140TC	22	1990	3.7	III	80		140TC		
	23	1255	1.1	I	50	56C-140TC	18	2307	2.8	III	100	140TC				
	19	1432	0.9	I	60	56C										
	46	792	2.7	III	25	CM075	56C-140TC	0.75 kW (1150 rpm)	230	239	3.3	III	5	CM050	56C	
	38	901	3.3	III	30		56C-140TC		153	350	2.3	III	7.5		56C	
	29	1119	2.3	III	40		56C-140TC		115	461	1.8	II	10		56C	
	23	1316	1.7	II	50		56C-140TC		77	650	1.3	I	15		56C	
	19	1481	1.5	II	60		56C-140TC		58	823	0.9	I	20		56C	
	14	1810	1.1	I	80	56C-140TC	115		461	3.4	III	10	CM063	56C-140TC		
	12	2057	0.9	I	100	56C	77		666	2.4	III	15		56C-140TC		
							58		856	1.6	II	20		56C-140TC		
							46		1028	1.2	I	25		56C-140TC		
							38		1152	1.4	II	30		56C-140TC		
	23	1399	2.8	III	50	CM090	56C-140TC		29	1426	1.0	I	40	56C-140TC		
	19	1580	2.3	III	60		56C-140TC									
	14	1942	1.7	II	80		56C-140TC		58	867	2.8	III	20	CM075	56C-140TC	
	12	2221	1.3	I	100		56C-140TC		46	1056	2.0	III	25		56C-140TC	
									38	1201	2.4	III	30		56C-140TC	
	14	2073	2.8	III	80	CM110	140TC		29	1492	1.7	II	40		56C-140TC	
	12	2427	2.2	III	100		140TC		23	1755	1.3	I	50		56C-140TC	
									19	1975	1.1	I	60	56C-140TC		
	1 hp	350	157	4.2	III	5	CM050		56C	14	2413	0.8	I	80	CM090	56C-140TC
		233	235	3.0	III	7.5			56C	46	1097	3.4	III	25		56C-140TC
		175	306	2.4	III	10		56C	29	1558	2.8	III	40	56C-140TC		
		117	443	1.6	II	15		56C	23	1865	2.1	III	50	56C-140TC		
88		570	1.1	I	20	56C		19	2106	1.7	II	60	56C-140TC			
70		685	0.9	I	25	56C		14	2589	1.3	I	80	56C-140TC			
58		779	1.0	I	30	56C		12	2962	1.0	I	100	56C-140TC			



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
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1 hp

0.75 kW (1150 rpm)	19	2238	2.9	III	60	CM110	140TC
	14	2764	2.1	III	80		140TC
	12	3236	1.6	II	100		140TC
	14	2808	2.8	III	80	CM130	140TC
	12	3236	2.2	III	100		140TC

1.5 hp

1.1 kW (1750 rpm)	175	465	2.8	III	10	CM063	56C-140TC
	117	681	2.0	III	15		56C-140TC
	88	876	1.4	I	20		56C-140TC
	70	1054	1.1	I	25		56C-140TC
	58	1217	1.2	I	30		56C-140TC
	117	681	3.5	III	15	CM075	56C-140TC
	88	898	2.4	III	20		56C-140TC
	70	1081	1.8	II	25		56C-140TC
	58	1249	2.0	III	30		56C-140TC
	44	1557	1.4	II	40		56C-140TC
	35	1865	1.1	I	50		56C-140TC
	29	2109	0.9	I	60		56C-140TC
	70	1122	2.9	III	25	CM090	56C-140TC
	58	1298	3.4	III	30		56C-140TC
	44	1644	2.3	III	40		56C-140TC
	35	1973	1.7	II	50		56C-140TC
	29	2271	1.4	I	60		56C-140TC
	22	2768	1.0	I	80		56C-140TC
	35	2055	2.8	III	50	CM110	140TC
	29	2368	2.2	III	60		140TC
	22	2941	1.6	II	80		140TC
	18	3460	1.2	I	100		140TC
	29	2368	3.3	III	60	CM130	140TC
	22	2984	2.5	III	80		140TC
	18	3460	1.9	II	100		140TC

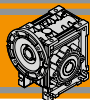
1.1 kW (1150 rpm)	230	366	3.9	III	5	CM063	140TC
	153	531	2.8	III	7.5		140TC
	115	691	2.3	III	10		140TC
	77	1000	1.6	II	15		140TC
	58	1283	1.1	I	20	CM075	140TC
	115	699	3.8	III	10		140TC-180TC
	77	1024	2.7	III	15		140TC-180TC
	58	1300	1.9	II	20		140TC-180TC
	46	1584	1.4	I	25		140TC-180TC
	38	1802	1.6	II	30		140TC-180TC
	29	2238	1.1	I	40		140TC
	23	2633	0.9	I	50		140TC

1.5 hp

1.1 kW (1150 rpm)	58	1349	3.1	III	20	CM090	140TC-180TC
	46	1646	2.3	III	25		140TC-180TC
	38	1876	2.7	III	30		140TC-180TC
	29	2337	1.9	II	40		140TC-180TC
	23	2797	1.4	II	50		140TC-180TC
	19	3159	1.2	I	60		140TC
	14	3883	0.9	I	80		140TC
	29	2501	3.1	III	40	CM110	140TC-180TC
	23	2962	2.4	III	50		140TC-180TC
	19	3357	1.9	II	60		140TC-180TC
	14	4147	1.4	II	80		140TC-180TC
	12	4854	1.1	I	100		140TC
	23	3003	3.1	III	50	CM130	140TC-180TC
	19	3456	2.5	III	60		140TC-180TC
	14	4213	1.8	II	80		140TC-180TC
	12	4854	1.4	II	100		140TC

2 hp

1.5 kW (1750 rpm)	233	476	2.7	III	7.5	CM063	56C-140TC
	175	620	2.1	III	10		56C-140TC
	117	908	1.5	II	15		56C-140TC
	88	1168	1.0	I	20		56C-140TC
	70	1406	0.8	I	25		56C-140TC
	58	1622	0.9	I	30		56C-140TC
	117	908	2.6	III	15		56C-140TC
	88	1197	1.8	II	20		56C-140TC
	70	1442	1.4	I	25		56C-140TC
	58	1665	1.5	II	30		56C-140TC
	44	2076	1.1	I	40	CM075	56C-140TC
	35	2487	0.8	I	50		56C-140TC
	88	1211	3.0	III	20	CM090	56C-140TC
	70	1496	2.2	III	25		56C-140TC
	58	1730	2.5	III	30		56C-140TC
	44	2192	1.8	II	40		56C-140TC
	35	2631	1.3	I	50		56C-140TC
	29	3028	1.0	I	60		56C-140TC
	44	2278	2.8	III	40		140TC
	35	2739	2.1	III	50		140TC
	29	3158	1.6	II	60		140TC
	22	3922	1.2	I	80		140TC
	18	4614	0.9	I	100	CM110	140TC
	35	2703	3.2	III	50		140TC
	29	3158	2.5	III	60		140TC
	22	3979	1.8	II	80		140TC
	18	4614	1.4	II	100	CM130	140TC



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
2 hp								3 hp							
1.5 kW (1150 rpm)	153	716	3.5	III	7.5	CM075	180TC	2.2 kW (1750 rpm)	88	1838	3.2	III	20	CM110	140TC-180TC
	115	932	2.9	III	10		180TC		70	2271	2.4	III	25		140TC-180TC
	77	1366	2.0	III	15		180TC		58	2628	2.5	III	30		140TC-180TC
	58	1733	1.4	II	20		180TC		44	3417	1.9	II	40		140TC-180TC
	46	2112	1.0	I	25		180TC		35	4109	1.4	I	50		140TC-180TC
	38	2402	1.2	I	30		180TC		29	4736	1.1	I	60		140TC-180TC
	153	724	5.1	III	7.5	CM090	180TC		70	2244	3.6	III	25	CM130	140TC-180TC
	115	954	4.2	III	10		180TC		58	2563	3.6	III	30		140TC-180TC
	77	1382	3.3	III	15		180TC		44	3287	2.8	III	40		140TC-180TC
	58	1799	2.3	III	20		180TC		35	4055	2.1	III	50		140TC-180TC
	46	2194	1.7	II	25		180TC		29	4736	1.7	II	60		140TC-180TC
	38	2501	2.0	III	30		180TC		22	5969	1.2	I	80		140TC
	29	3116	1.4	II	40	CM110	180TC	2.2 kW (1150 rpm)	77	2098	3.7	III	15	CM110	210TC
	23	3730	1.1	I	50		180TC		58	2764	2.6	III	20		210TC
	46	2249	3.0	III	25		180TC		46	3373	2.0	III	25		210TC
	38	2534	3.3	III	30		180TC		38	3801	2.2	III	30		210TC
	29	3335	2.4	III	40		180TC		58	2699	3.4	III	20	CM130	210TC
	23	3949	1.8	II	50		180TC		46	3332	2.8	III	25		210TC
19	4476	1.4	II	60	180TC	38	3801		2.7	III	30	210TC			
14	5529	1.1	I	80	CM130	180TC	3.7 kW (1750 rpm)		233	1203	1.8	II	7.5	CM075	180TC
29	3247	3.0	III	40		180TC			175	1568	1.5	II	10		180TC
23	4004	2.3	III	50		180TC			117	2271	1.0	I	15		180TC
19	4607	1.9	II	60		180TC			233	1217	2.5	III	7.5	CM090	180TC
14	5617	1.4	I	80	180TC	175			1604	2.1	III	10	180TC		
					180TC	117		2325	1.6	II	15	180TC			
					180TC	88		3028	1.2	I	20	180TC			
					180TC	70		3740	0.9	I	25	180TC			
					180TC	58		4325	1.0	I	30	180TC			
233	722	2.9	III	7.5	CM075	140TC-180TC		175	1604	3.4	III	10	CM110	180TC	
175	941	2.4	III	10		140TC-180TC		117	2352	2.6	III	15		180TC	
117	1362	1.7	II	15		140TC-180TC		88	3064	1.9	II	20		180TC	
88	1795	1.2	I	20		140TC-180TC		70	3785	1.4	II	25		180TC	
70	2163	0.9	I	25		140TC-180TC		58	4379	1.5	II	30		180TC	
58	2498	1.0	I	30		140TC-180TC		44	5695	1.1	I	40		180TC	
175	962	3.5	III	10	CM090	140TC-180TC		35	6848	0.8	I	50	CM130	180TC	
117	1395	2.7	III	15		140TC-180TC	117	2325	3.5	III	15	180TC			
88	1817	2.0	III	20		140TC-180TC	88	3028	2.7	III	20	180TC			
70	2244	1.5	II	25		140TC-180TC	70	3740	2.2	III	25	180TC			
58	2595	1.7	II	30		140TC-180TC	58	4271	2.2	III	30	180TC			
44	3287	1.2	I	40		140TC-180TC	44	5479	1.7	II	40	180TC			
35	3947	0.9	I	50	CM075	140TC-180TC	35	6758	1.3	I	50	180TC			
						140TC-180TC	29	7894	1.0	I	60	180TC			



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
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5 hp

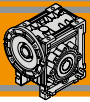
3.7 kW (1150 rpm)	153	1831	3.6	III	7.5	CM110	210TC
	115	2386	3.0	III	10		210TC
	77	3497	2.2	III	15		210TC
	58	4607	1.6	II	20		210TC
	46	5622	1.2	I	25		210TC
	38	6335	1.3	I	30		210TC
	115	2386	3.5	III	10	CM130	210TC
	77	3456	2.7	III	15		210TC
	58	4498	2.1	III	20		210TC
	46	5554	1.7	II	25		210TC
	38	6335	1.6	II	30		210TC

7.5 hp

5.5 kW (1750 rpm)	233	1825	2.7	III	7.5	CM110	210TC
	175	2406	2.3	III	10		210TC
	117	3528	1.7	II	15		210TC
	88	4596	1.3	I	20		210TC
	70	3785	1.4	II	25		210TC
	58	4379	1.5	II	30		210TC
	233	1804	3.7	III	7.5	CM130	210TC
	175	2379	3.1	III	10		210TC
	117	3487	2.3	III	15		210TC
	88	4542	1.8	II	20		210TC
	70	5609	1.5	II	25		210TC
	58	6407	1.5	II	30		210TC

10 hp

7.3 kW (1750 rpm)	233	2433	2.0	III	7.5	CM110	210TC
	175	3208	1.7	II	10		210TC
	117	4704	1.3	I	15		210TC
	88	6128	1.0	I	20		210TC
	233	2406	2.8	III	7.5	CM130	210TC
	175	3172	2.3	III	10		210TC
	117	4650	1.7	II	15		210TC
	88	6055	1.3	I	20		210TC
	70	7479	1.1	I	25		210TC
	58	8543	1.1	I	30		210TC

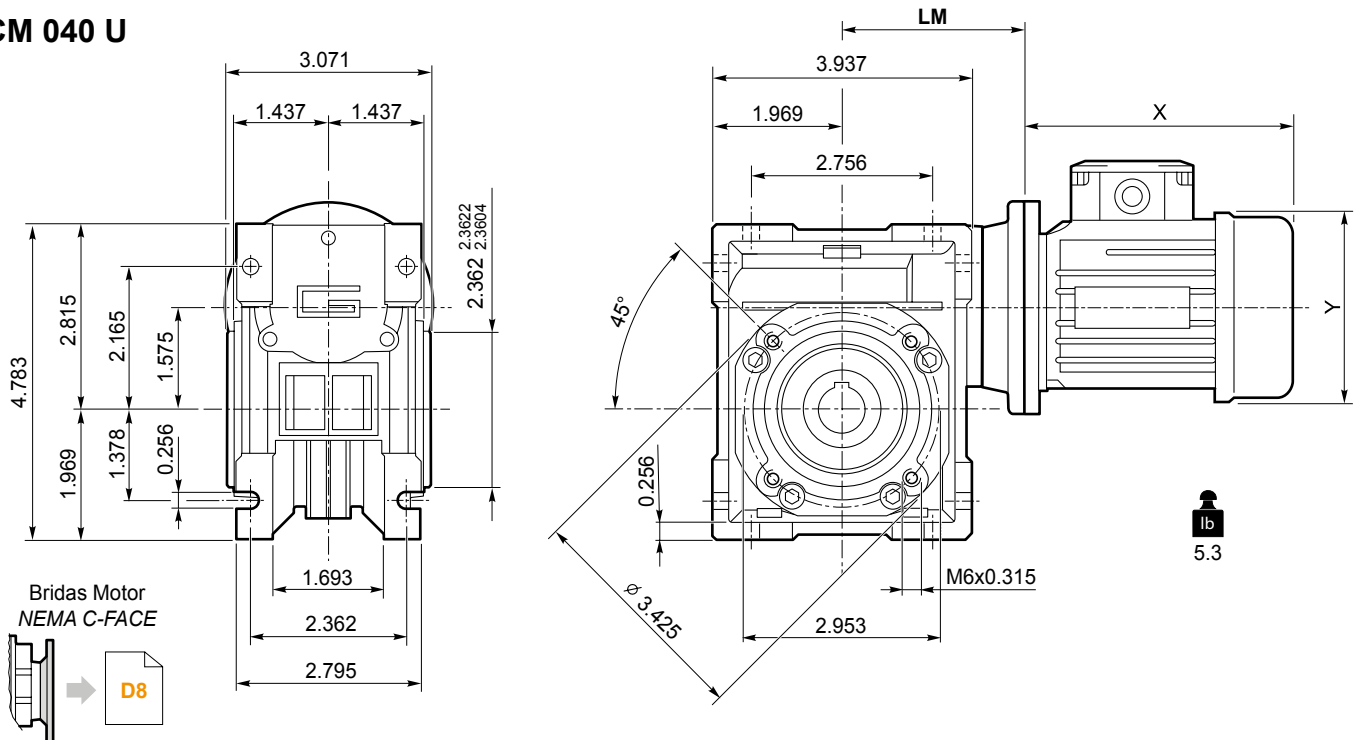


Dimensiones

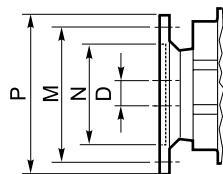
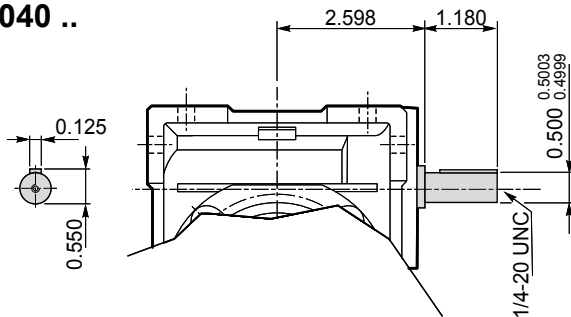
Dimensions

CM 040 U - CMIS 040 U

CM 040 U

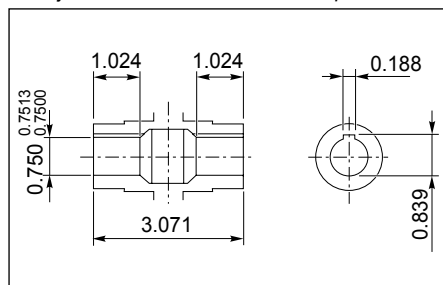


CMIS 040 ..

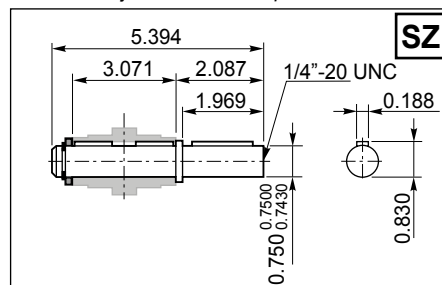


Brida Motor / Motor flange	
Dimensiones NEMA NEMA Dimensions	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.150

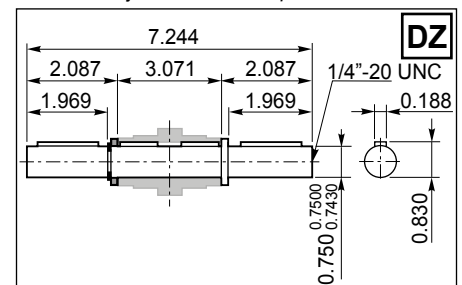
Eje de salida hueco / Hollow output shaft



Eje de salida / Output shaft



Eje de salida / Output shaft



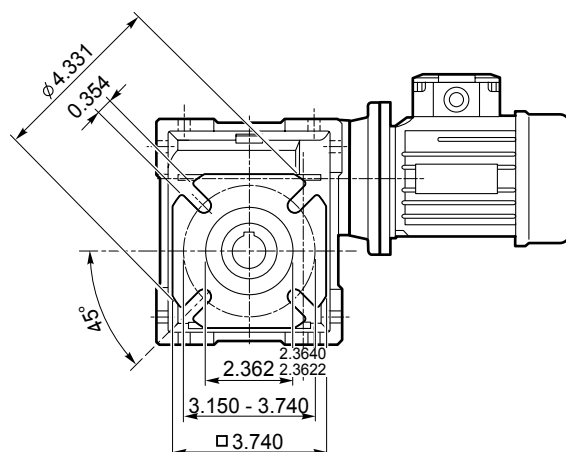
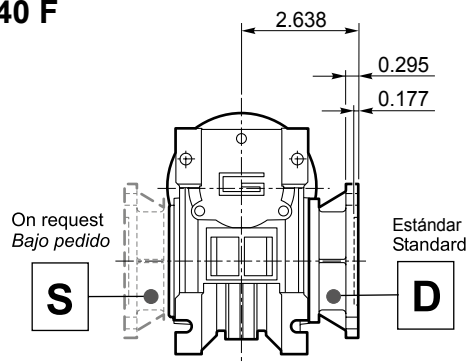


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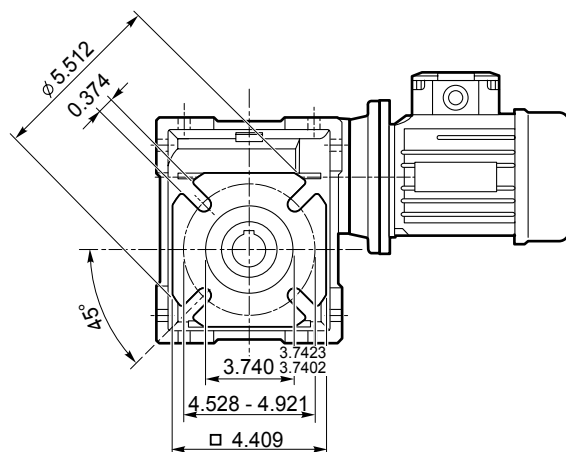
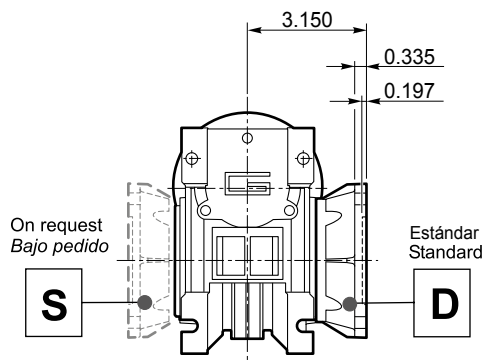
Dimensions

CM 040 F..

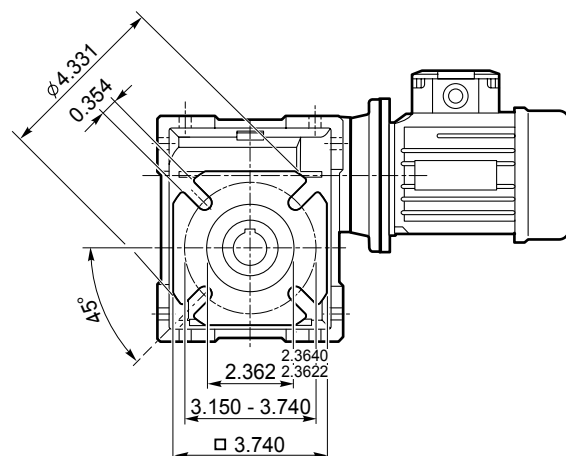
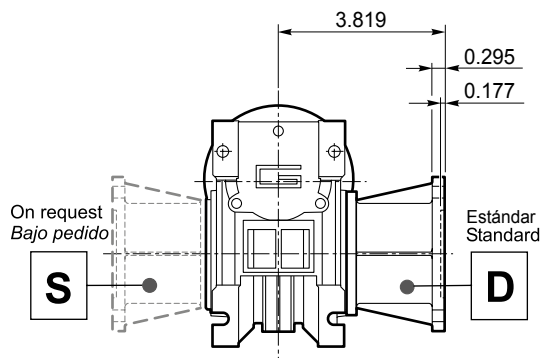
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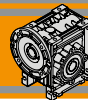


CM 040 FB



CM 040 FL



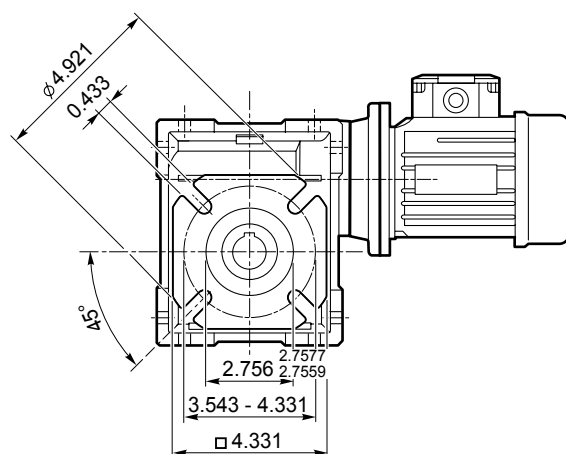
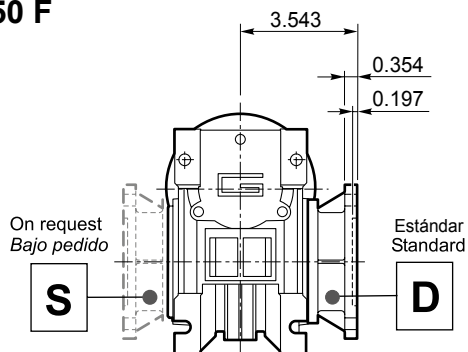


Dimensiones

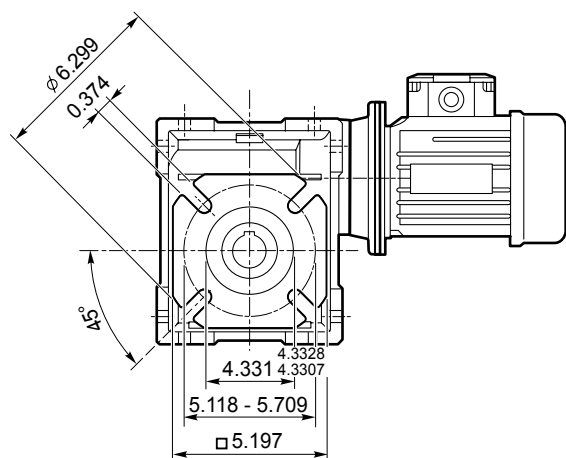
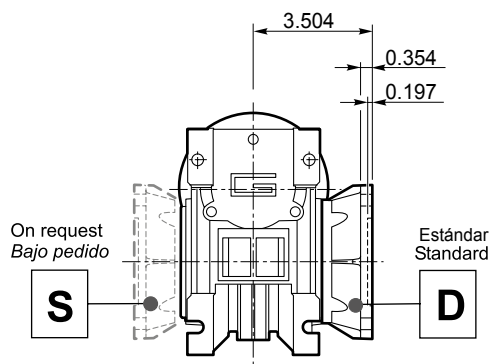
Dimensions

CM 050 F..

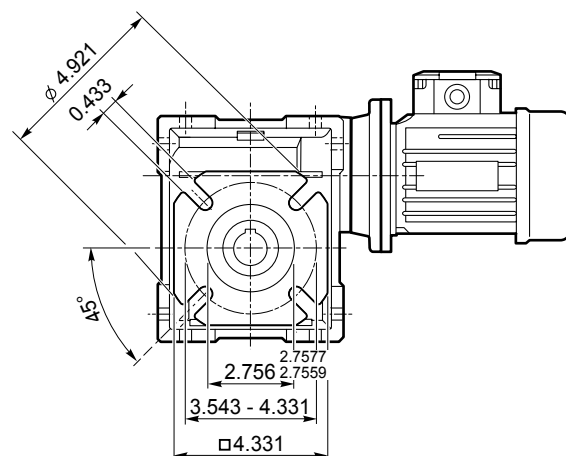
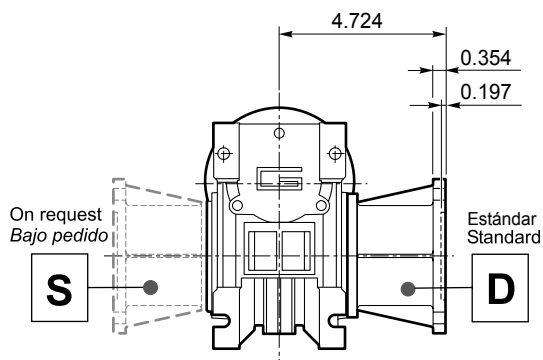
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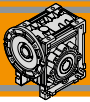


CM 050 FB



CM 050 FL



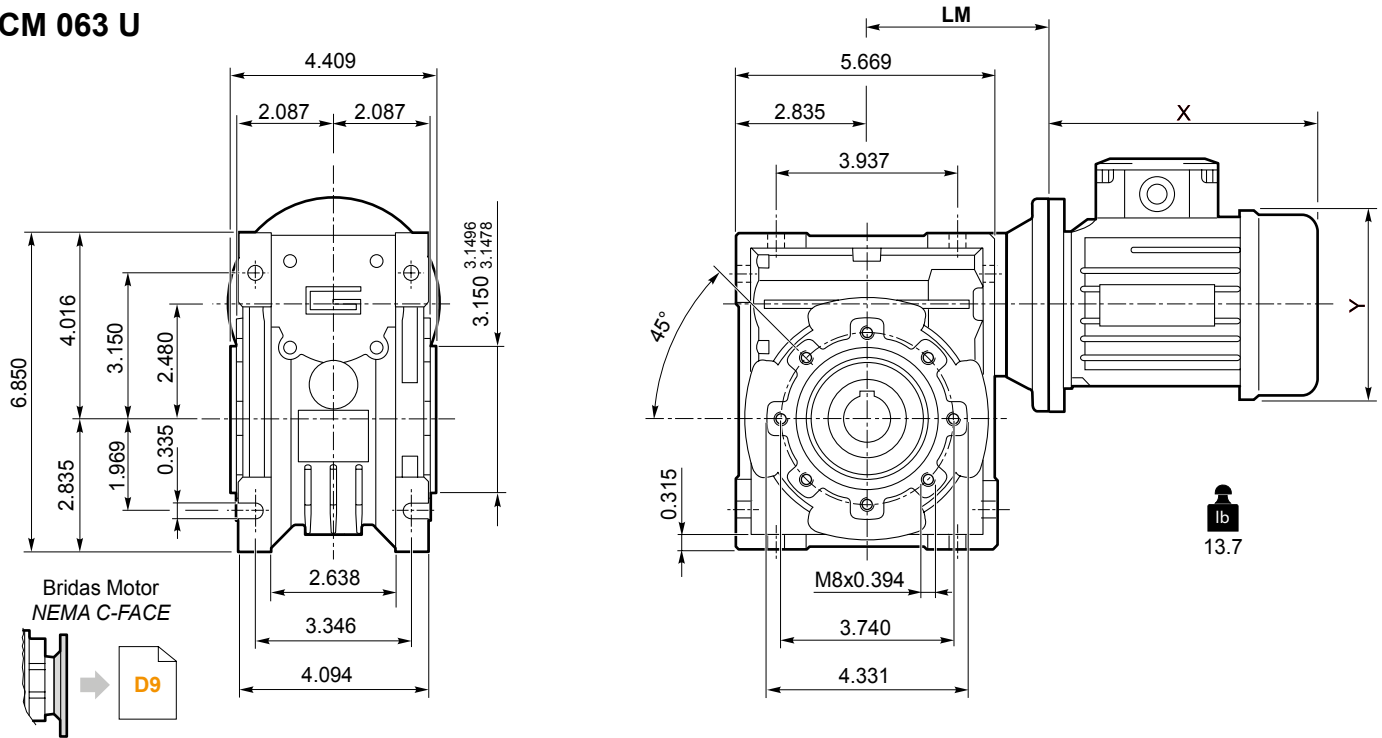


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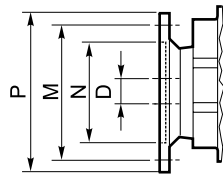
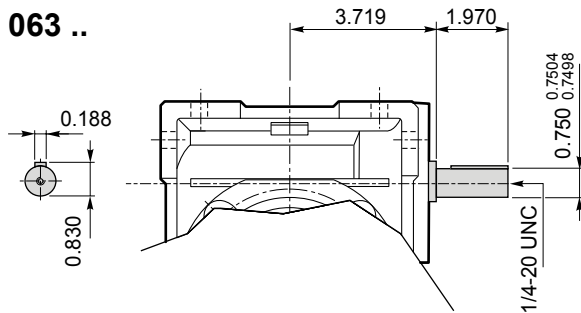
Dimensions

CM 063 U - CMIS 063 U

CM 063 U

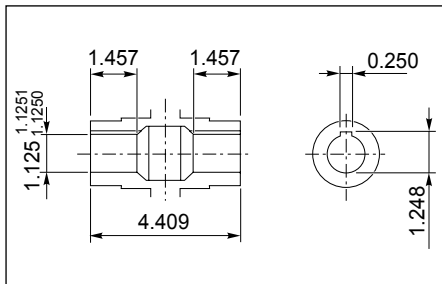


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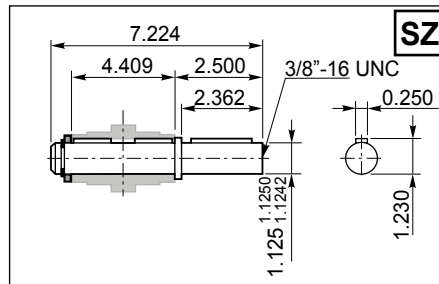


Brida Motor / Motor flange		
Dimensiones NEMA NEMA Dimensions		
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM	4.055	

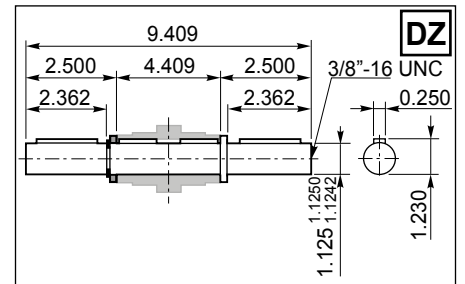
Eje de salida hueco / Hollow output shaft



Eje de salida / Output shaft



Eje de salida / Output shaft



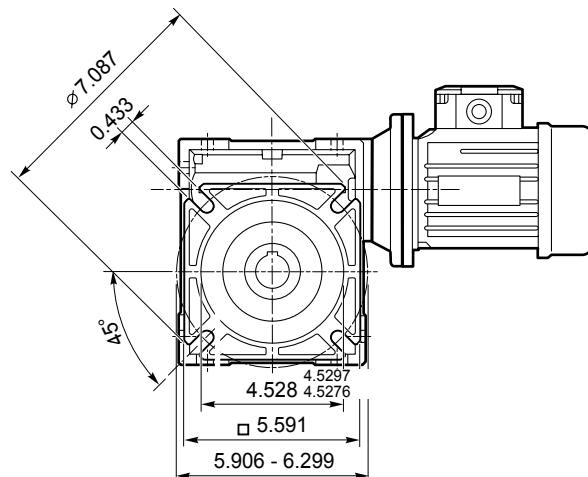
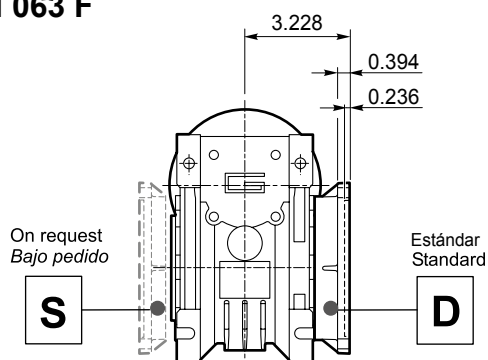


Dimensiones

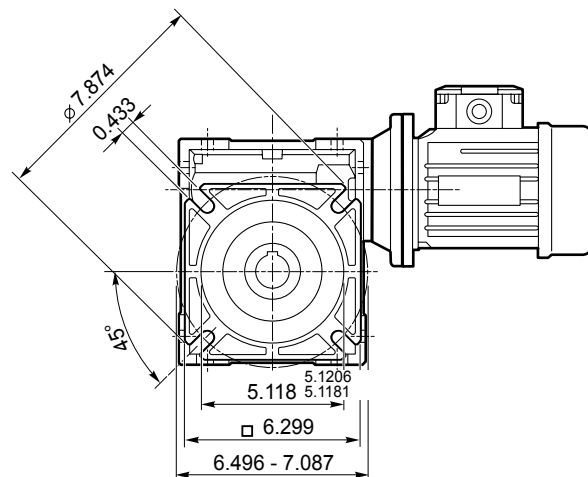
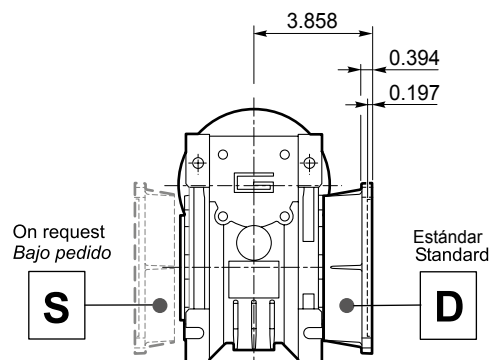
Dimensions

CM 063 F..

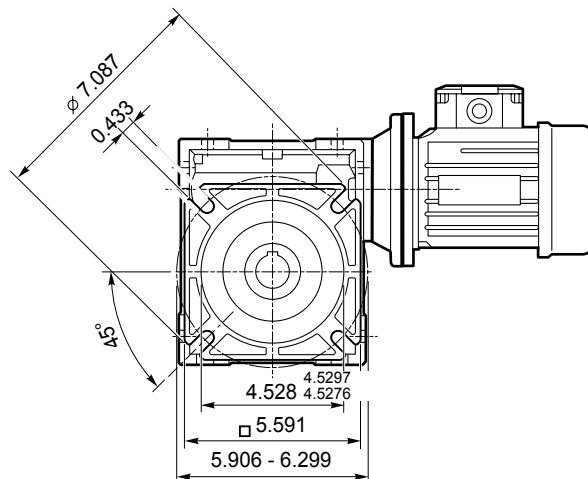
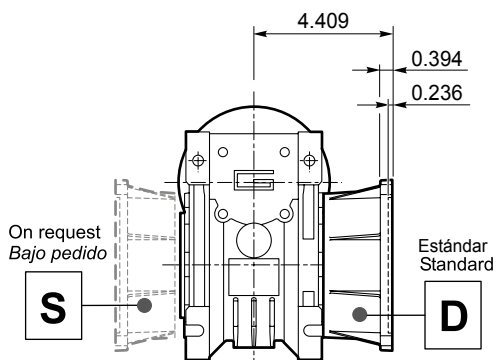
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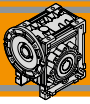


CM 063 FB



CM 063 FL



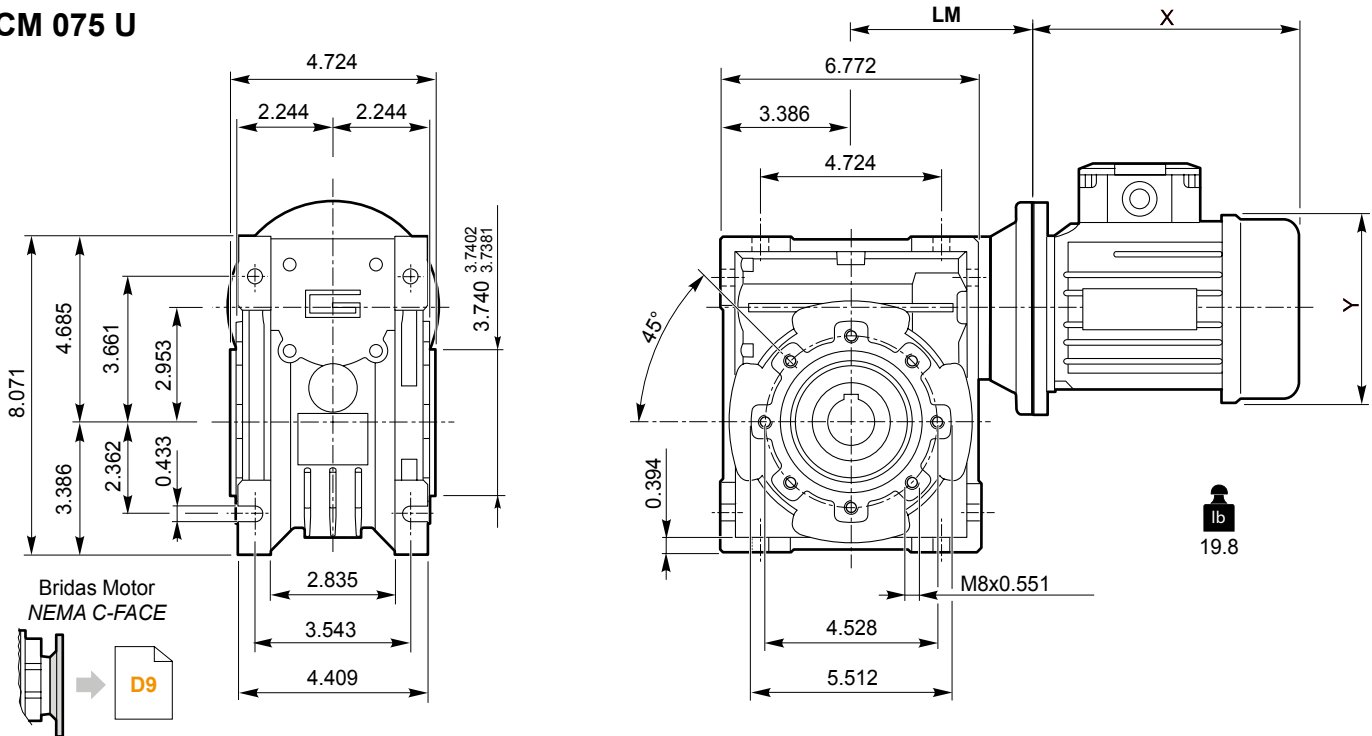


Dimensiones

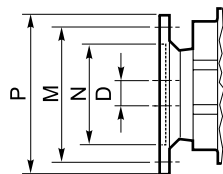
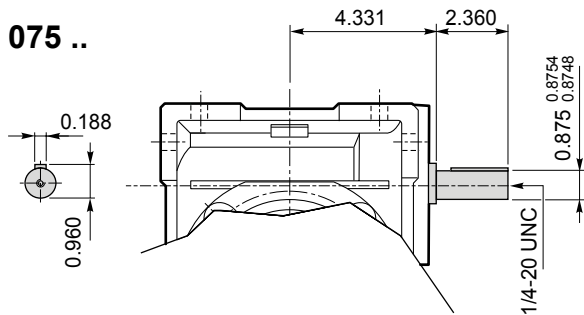
Dimensions

CM 075 U - CMIS 075 U

CM 075 U

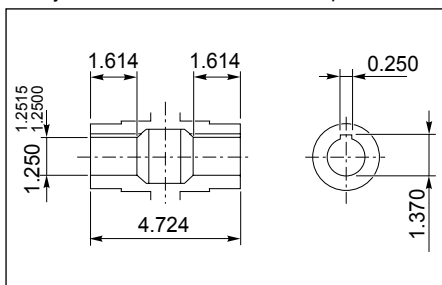


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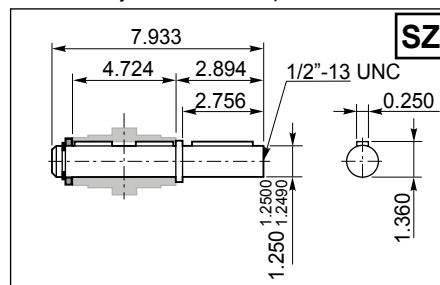


Brida Motor / Motor flange			
Dimensiones NEMA NEMA Dimensions			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM	4.055		4.750

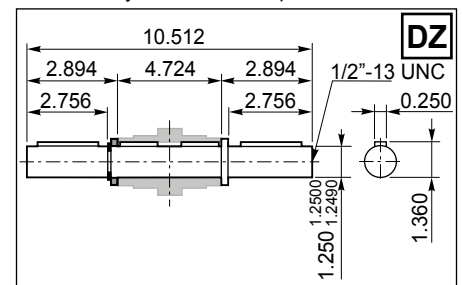
Eje de salida hueco / Hollow output shaft

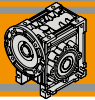


Eje de salida / Output shaft



Eje de salida / Output shaft



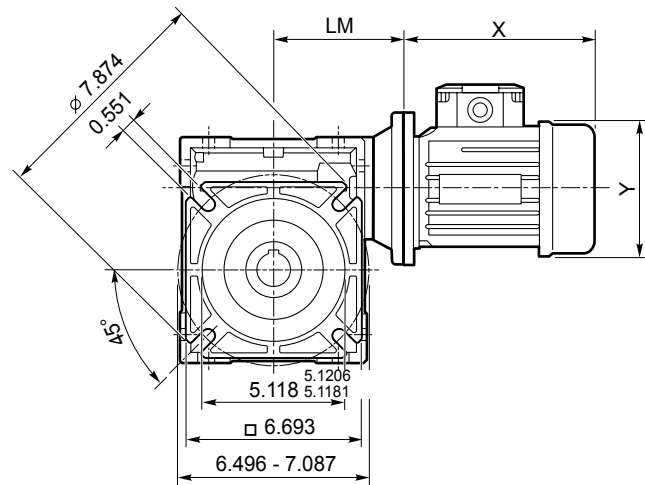
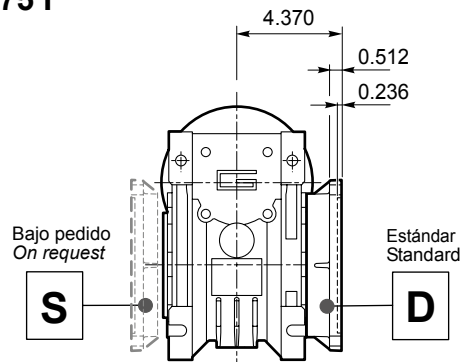


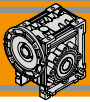
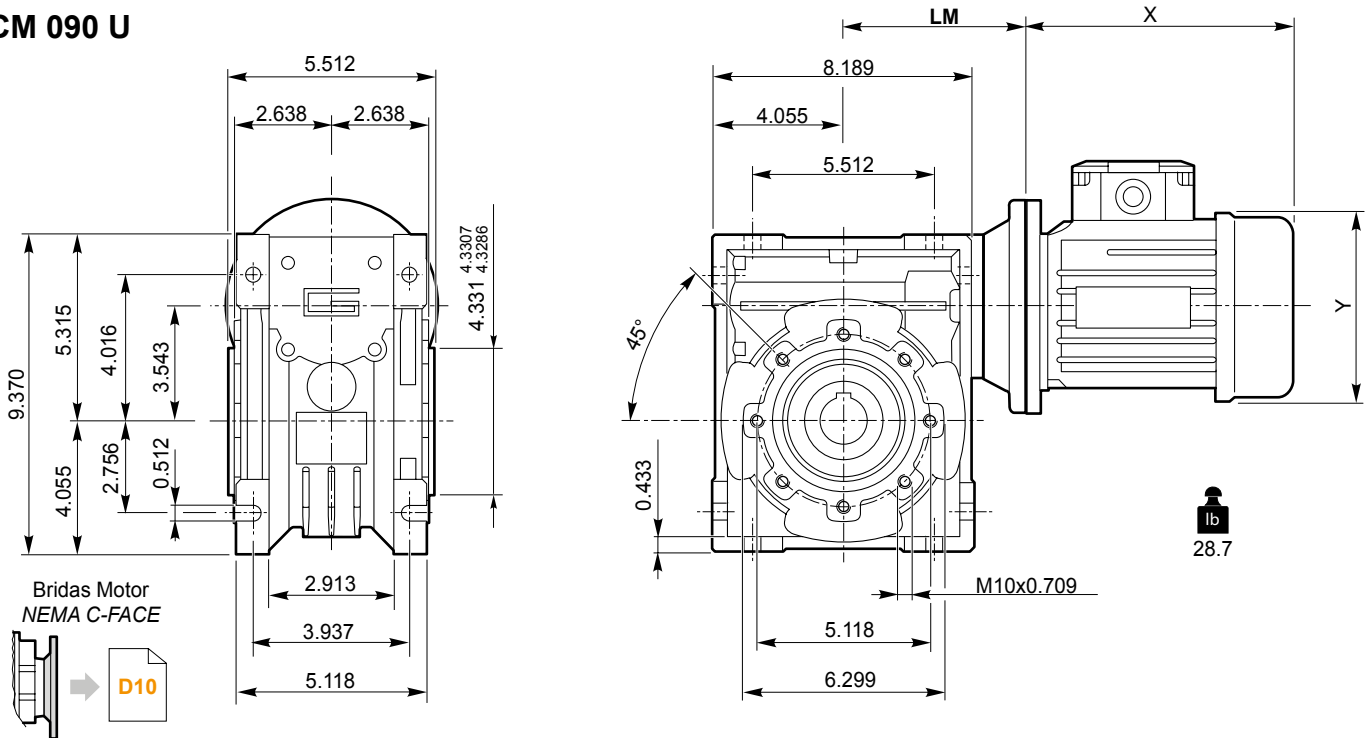
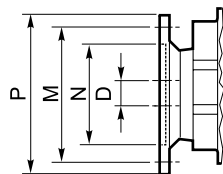
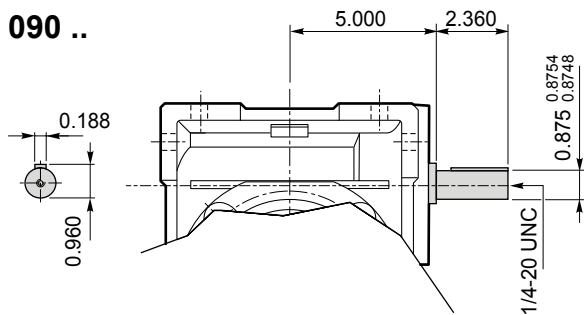
Dimensiones

Dimensions

CM 075 F..

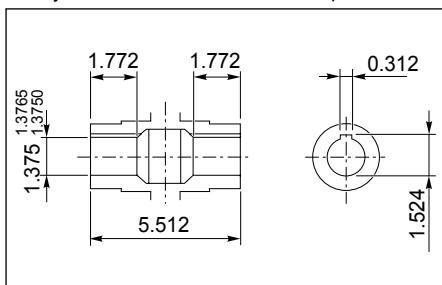
CM 075 F



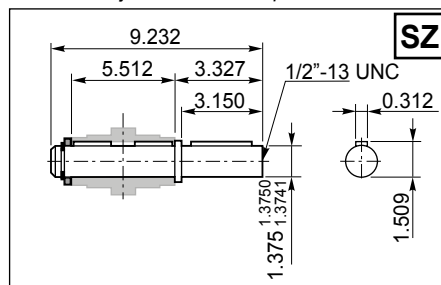
**CM****REDUCTORES SINFIN CORONA**
WORMGEARBOXES**Dimensiones****Dimensions****CM 090 U - CMIS 090 U****CM 090 U****CMIS 090 ..**

Brida Motor / Motor flange			
Dimensiones NEMA NEMA Dimensions			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM	5.512		5.419

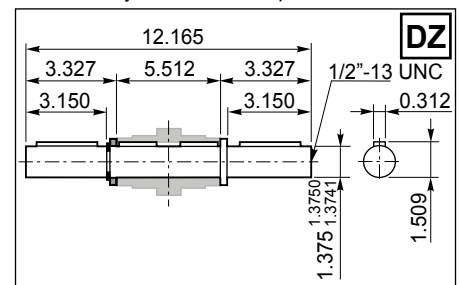
Eje de salida hueco / Hollow output shaft

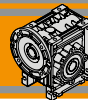


Eje de salida / Output shaft



Eje de salida / Output shaft



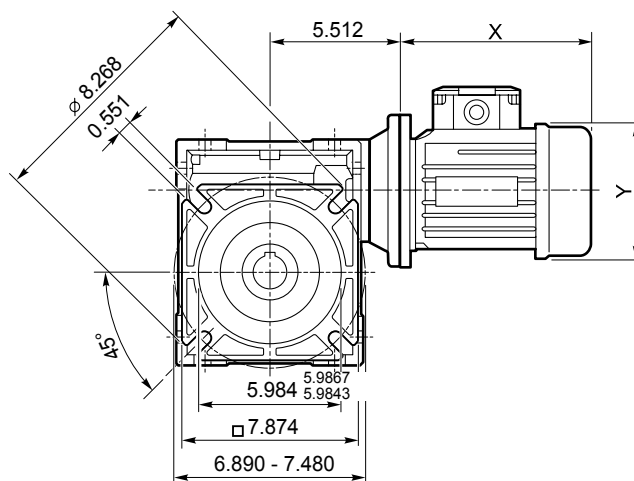
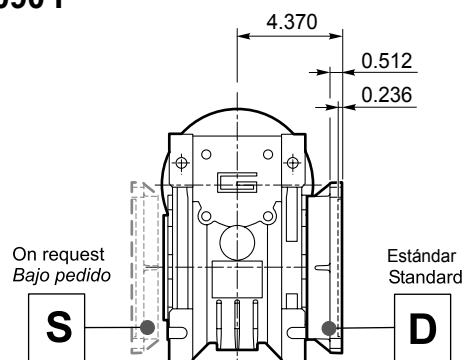


Dimensiones

Dimensions

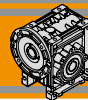
CM 090 F..

CM 090 F





Dimensions

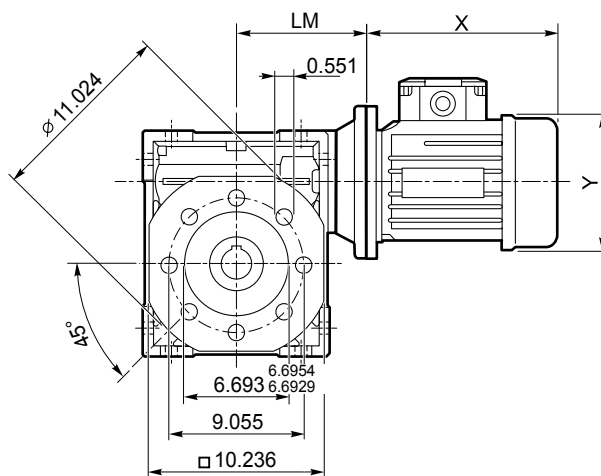
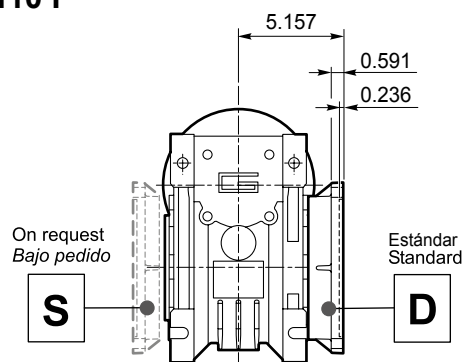


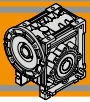
Dimensiones

Dimensions

CM 110 F..

CM 110 F



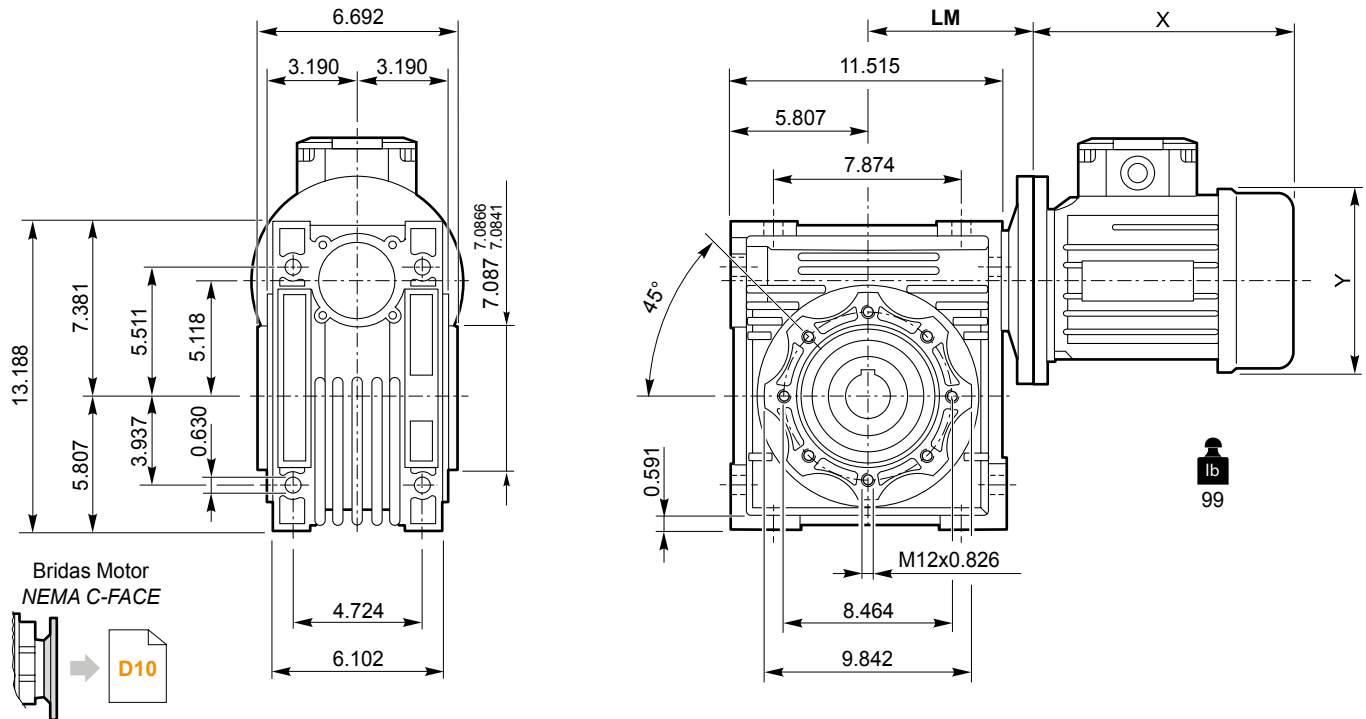


Dimensiones

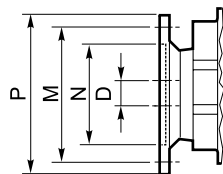
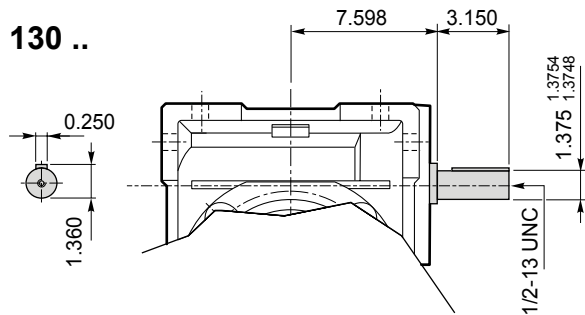
Dimensions

CM 130 U - CMIS 130 U

CM 130 U

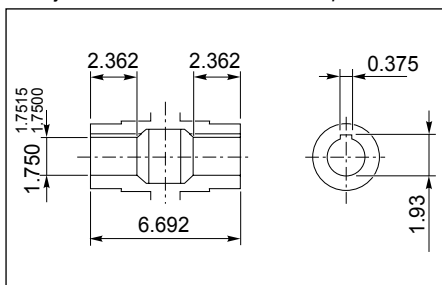


CMIS 130 ..

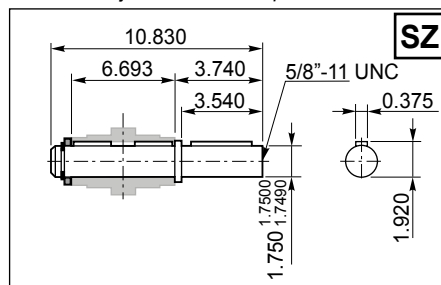


Brida Motor / Motor flange			
Dimensiones NEMA NEMA Dimensions			
	140 TC	180 TC	210 TC
N	4.5	8.5	
M	5.88	7.25	
P	6.5	9	
D	0.875	1.125	1.375
LM	7.598		

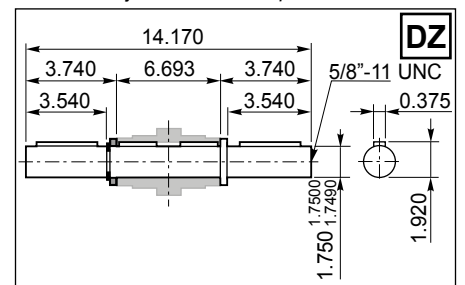
Eje de salida hueco / Hollow output shaft

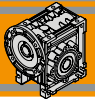


Eje de salida / Output shaft



Eje de salida / Output shaft



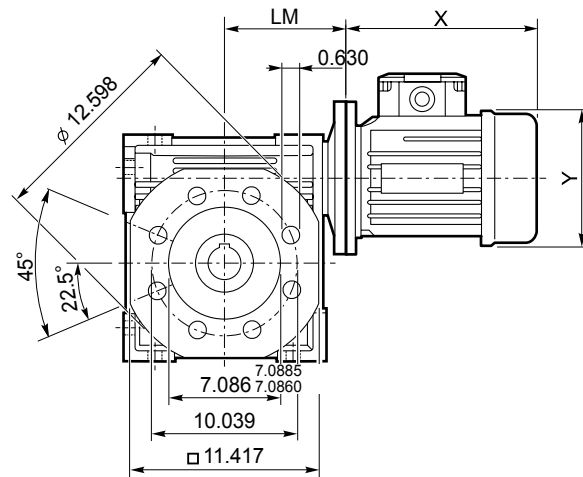
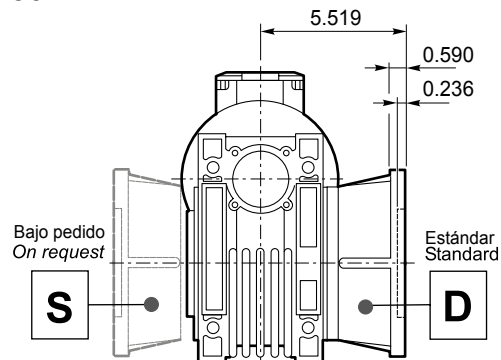


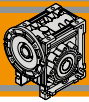
Dimensiones

Dimensions

CM 130 F..

CM 130 F



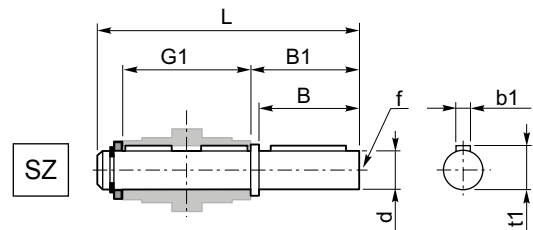
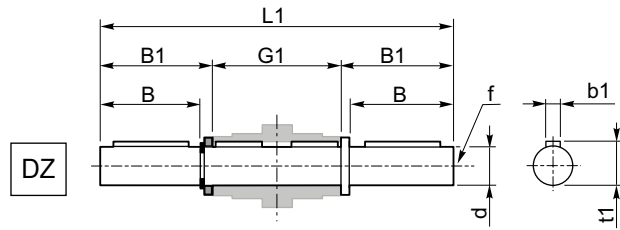


Accesorios

Eje de salida simple y doble

Accessories

Single and double output shaft

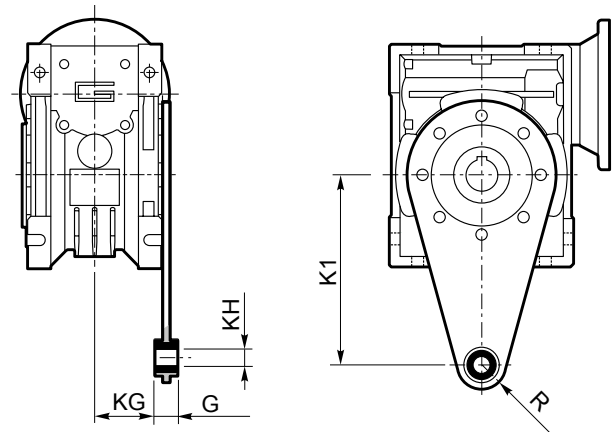


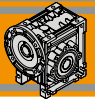
CM	d	B	B1	G1	L	L1	f	b1	t1
040	0.750 0.7500 0.7430	1.969	2.087	3.071	5.394	7.244	1/4"-20	0.188	0.830
050	1.000 1.0000 0.9992	1.969	2.106	3.622	6.004	7.835	3/8"-16	0.250	1.108
063	1.125 1.1250 1.1242	2.362	2.500	4.409	7.224	9.409	3/8"-16	0.250	1.230
075	1.250 1.2500 1.2490	2.756	2.894	4.724	7.933	10.512	1/2"-13	0.250	1.360
090	1.375 1.3750 1.3741	3.150	3.327	5.512	9.232	12.165	1/2"-13	0.312	1.509
110	1.625 1.6250 1.6240	3.543	3.720	6.102	10.217	13.543	5/8"-11	0.375	1.789
130	1.750 1.7500 1.7490	3.540	3.740	6.693	10.830	14.170	5/8"-11	0.375	1.920

Brazo de reacción

Torque arm

CM	K1	G	KG	KH	R
040	3.937	0.551	1.220	0.394	0.709
050	3.937	0.551	1.496	0.394	0.709
063	5.906	0.551	1.870	0.394	0.709
075	7.874	0.984	1.831	0.787	1.181
090	7.874	0.984	2.224	0.787	1.181
110	9.843	1.181	2.441	0.984	1.378
130	9.842	1.181	2.717	0.984	1.378



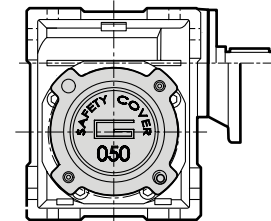
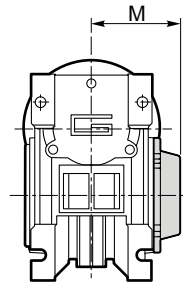


Opciones

Options

SC - Cubierta de seguridad - *Safety Cover*

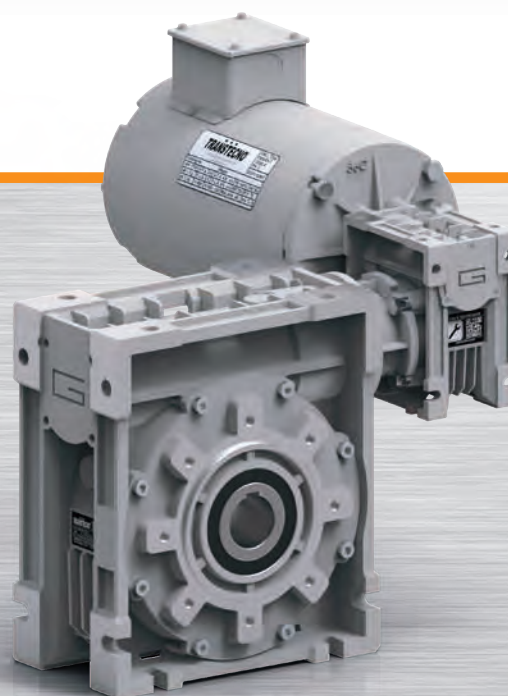
CM	M
040	2.146
050	2.461
063	2.874
075	3.110
090	3.701
110	4.016
130	4.606

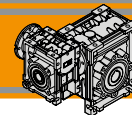


CM

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REDUCTORES SINFIN Y CORONA DOBLE REDUCCION
DOUBLE REDUCTION WORM-WORM GEARBOXES

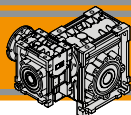




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Clasificación	<i>Classification</i>	E2
Nomenclatura	<i>Legend</i>	E2
Ejecución de montaje	<i>Mounting executions</i>	E3
Relaciones combinadas	<i>Combination ratio</i>	E3
Lubricación	<i>Lubrication</i>	E3
Datos técnicos	<i>Technical data</i>	E4
Motores aplicables	<i>IEC Motor adapters</i>	E8
Dimensiones	<i>Dimensions</i>	E10
Accesorios	<i>Accessories</i>	E14
Opciones	<i>Options</i>	E14

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CMM

REDUCTORES SINFIN Y CORONA DOBLE REDUCCIÓN

DOUBLE REDUCTION WORM-WORM GEARBOXES

Características técnicas

Technical features

El rango de combinación de los reductores CMM tienen las siguientes características principales:

- Caja de aluminio para tamaños 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 range double reduction worm-worm gearboxes have the following main features:

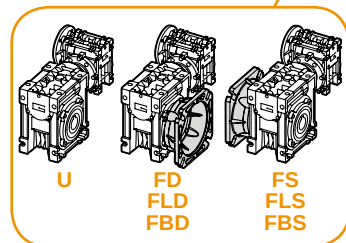
- Die-cast aluminum housing on sizes 040, 050, 063, 075, 090 and 110. Cast iron housing on size 130;
- Double taper roller bearing on sizes 090, 110 and 130;
- Permanent synthetic oil long-life lubrication.

Clasificación

Classification

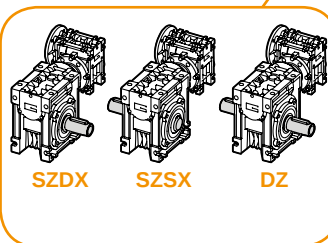
REDUCTOR / GEARBOX									
CMM	040/075	FD	300	56C	SZDX	BRSX	90	M1	US1
Tipo Type	Tamaño Size	Versión Version	Relación de reducción Ratio		Eje de salida Output shaft	Brazo de reacción Torque arm	Ángulo Angle	Posición de montaje Mounting position	Ejecución de montaje Mounting execution
CMM 	040/075 040/090 050/110 063/130	U FD FS FBD FBS FLD FLS	véase tablas see tables	56C 140TC	SZDX SZSX DZ	BRSX BRDX	0° 90° 180° 270°	M1 (B3) M2 (V6) M3 (B8) M4 (V5) M5 (B7) M6 (B6)	UB1 UB2 US1 US2 UV1 UV2 UC1 UC2
CMMIS 									

Relación de reducción
Gearbox Version



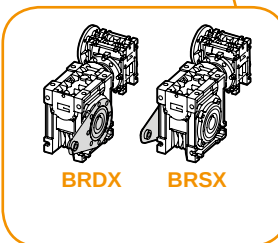
F.....D = Lado derecho / Right side
FL = Brida larga / Long flange
F.....S = Lado izquierdo / Left side
FB = Brida corta / Short flange

Eje de salida
Output shaft



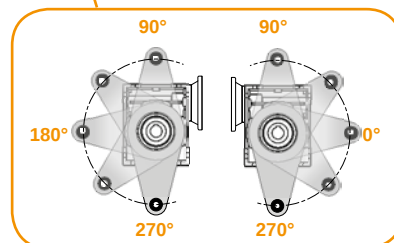
SZDX = Flecha sencilla lado derecho
Single shaft right side
DZ = Flecha doble / Double shaft
SZSX = Flecha sencilla lado izquierdo
Single shaft left side

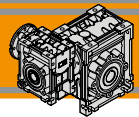
Brazo de reacción
Torque arm



BRDX = Lado derecho / Right side
BRSX = Lado izquierdo / Left side

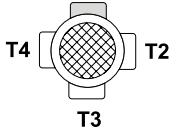
Ángulo
Angle





Clasificación

Classification

MOTOR / MOTOR					
1 hp / 0.75kW	4p	3ph	220/440V	60Hz	T1
Potencia Power	Polos Poles	Fases Phases	Tensión Voltage	Frecuencia Frequency	Posición caja de bornes Terminal box pos.
véase tablas See tables	2p 4p 6p 8p	1ph 3ph	230V 230/400V ... 220/440V	50Hz 60Hz	T1 (Std) 

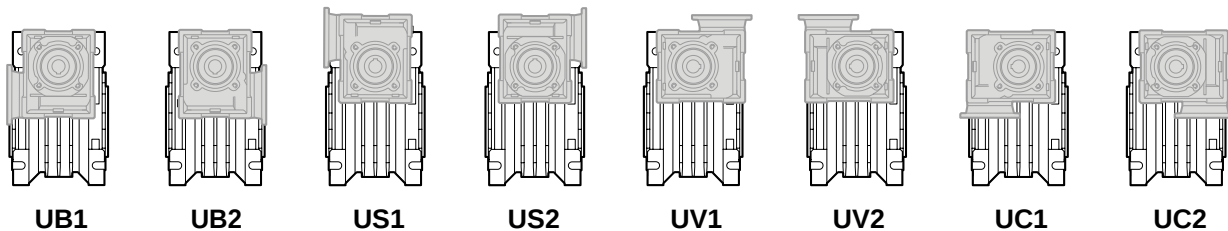
Nomenclatura

Legend

n_1 [rpm]	Velocidad de entrada / <i>Input speed</i>	M_2 [Nm]	Par en la salida en función de P_1 / <i>Output torque referred to P_1</i>
n_2 [rpm]	Velocidad de salida / <i>Output speed</i>	sf	Rendimiento dinámico / <i>Service factor</i>
i	Relación de reducción / <i>Ratio</i>	R_2 [N]	Carga radial admisible en la salida / <i>Maximum output radial load</i>
P_1 [kW]	Potencia en la entrada / <i>Input power</i>	A_2 [N]	Carga axial admisible en la salida / <i>Maximum output axial load</i>

Ejecución de montaje

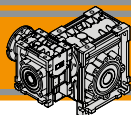
Mounting executions



Relaciones combinadas

Combination ratio

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



CMM

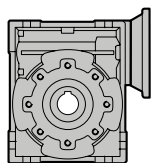
REDUCTORES SINFIN Y CORONA DOBLE REDUCCIÓN
DOUBLE REDUCTION WORM-WORM GEARBOXES

Lubricación

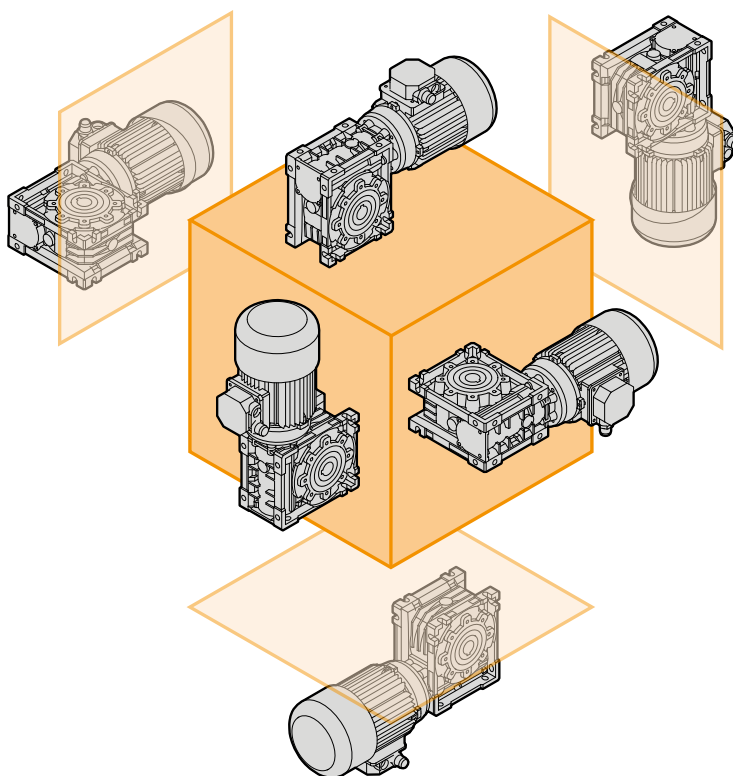
Lubrication

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.

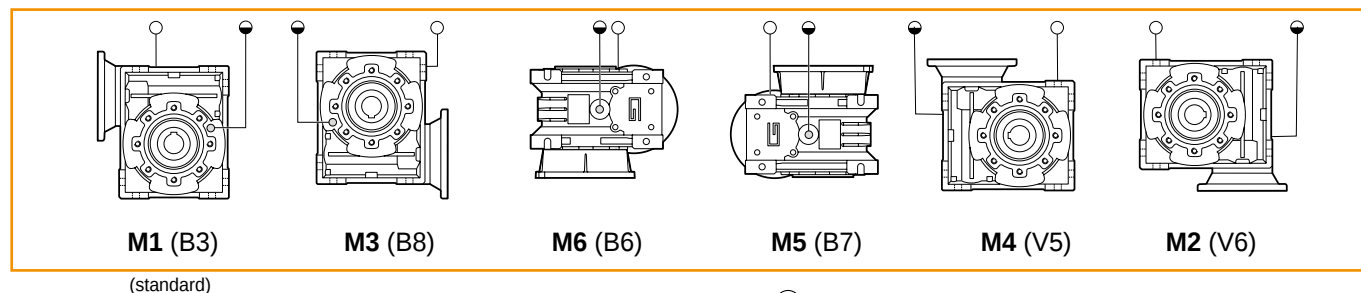
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearboxes size 40, 50, 63, 75, 90, 110 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance. Only for size 130, the lubrication depended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



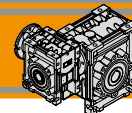
CM	Cantidad de aceite (US gal) / Oil quantity (US gal)					
	M1 (B3)	M3 (B8)	M6 (B6)	M5 (B7)	M4 (V5)	M2 (V6)
130	1.19	0.87	0.92	0.92	1.19	0.87



Posición de montaje / Mounting positions



- Respiradero y tapón de llenado / Breather and filling plug
- Tapón de nivel de aceite / Oil level plug



Datos técnicos

Technical data

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb-in]	sf	AGMA	i		
------------------------	-------------------------	---------------------------	----	------	---	---	---

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb-in]	sf	AGMA	i		
------------------------	-------------------------	---------------------------	----	------	---	---	---

0.16 hp

0.12 kW (1750 rpm)	2.92	2007	2.4	III	600	CMM 040/075	56C
	2.33	2380	2.0	III	750		56C
	1.94	2702	1.8	II	900		56C
	1.46	3345	1.4	II	1200		56C
	1.17	3860	1.3	I	1500		56C
	0.97	4478	1.1	I	1800		56C
	1.46	3513	2.4	III	1200	CMM 040/090	56C
	1.17	4053	2.1	III	1500		56C
	0.97	4702	1.8	II	1800		56C
	0.73	5771	1.2	I	2400		56C
	0.58	6717	0.9	I	3000		56C
	0.97	4941	2.9	III	1800	CMM 050/110	56C
	0.73	6279	2.0	III	2400		56C
	0.58	7463	1.5	II	3000		56C
	0.73	6809	2.4	III	2400	CMM 063/130	56C
	0.58	8241	1.7	II	3000		56C

0.33 hp

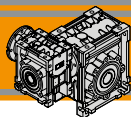
0.22 kW (1750 rpm)	8.75	1709	2.4	III	200	CMM 040/075	56C
	7.00	2012	1.8	II	250		56C
	5.83	2229	2.2	III	300		56C
	4.38	2725	1.5	II	400		56C
	3.50	3096	1.2	I	500		56C
	2.92	4140	1.2	I	600		56C
	2.33	4910	1.0	I	750	CMM 040/090	56C
	1.94	5573	0.9	I	900		56C
	4.38	2873	2.5	III	400		56C
	3.50	3344	1.8	II	500		56C
	2.92	4347	1.9	II	600		56C
	2.33	5155	1.6	II	750		56C
	1.94	5852	1.4	II	900	CMM 050/110	56C
	1.46	7183	1.0	I	1200		56C
	1.17	8360	1.0	I	1500		56C
	0.97	9697	0.9	I	1800		56C
	2.33	5378	2.6	III	750		56C
	1.94	6114	2.3	III	900		56C
	1.46	7770	1.6	II	1200	CMM 063/130	56C
	1.17	8917	1.6	II	1500		56C
	0.97	10191	1.4	I	1800		56C
	0.73	12951	1.0	I	2400		56C
	1.94	6568	2.8	III	900		56C
	1.46	8360	1.9	II	1200		56C
	1.17	9633	1.9	II	1500	CMM 063/130	56C
	0.97	11035	1.7	II	1800		56C
	0.73	14044	1.1	I	2400		56C
	0.58	16998	0.8	I	3000		56C

0.25 hp

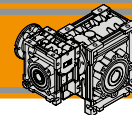
0.18 kW (1750 rpm)	5.83	1689	2.9	III	300	CMM 040/075	56C
	4.38	2064	2.0	III	400		56C
	3.50	2346	1.5	II	500		56C
	2.92	3136	1.5	II	600		56C
	2.33	3719	1.3	I	750		56C
	1.94	4222	1.1	I	900	CMM 040/090	56C
	1.46	5160	0.8	I	1200		56C
	3.50	2533	2.4	III	500		56C
	2.92	3293	2.5	III	600		56C
	2.33	3905	2.1	III	750		56C
	1.94	4433	1.9	II	900		56C
	1.46	5442	1.3	I	1200	CMM 050/110	56C
	1.17	6333	1.3	I	1500		56C
	0.97	7346	1.1	I	1800		56C
	0.73	9018	0.8	I	2400		56C
	1.46	5887	2.2	III	1200		56C
	1.17	6755	2.1	III	1500	CMM 063/130	56C
	0.97	7720	1.8	II	1800		56C
	0.73	9811	1.3	I	2400		56C
	0.58	11661	1.0	I	3000		56C
	1.46	6333	2.5	III	1200		56C
	1.17	7298	2.5	III	1500	CMM 063/130	56C
	0.97	8360	2.2	III	1800		56C
	0.73	10639	1.5	II	2400		56C
	0.58	12877	1.1	I	3000		56C

0.5 hp

0.37 kW (1750 rpm)	11.67	2055	2.3	III	150	CMM 040/075	56C
	8.75	2589	1.6	II	200		56C
	7.00	3049	1.2	I	250		56C
	5.83	3378	1.4	II	300		56C
	4.38	4128	1.0	I	400		56C
	5.83	3546	2.4	III	300	CMM 040/090	56C
	4.38	4353	1.7	II	400		56C
	3.50	5066	1.2	I	500		56C
	2.92	6586	1.3	I	600		56C
	2.33	7811	1.1	I	750		56C
	1.94	8866	0.9	I	900	CMM 063/130	56C

**CMM****REDUCTORES SINFIN Y CORONA DOBLE REDUCCIÓN**
DOUBLE REDUCTION WORM-WORM GEARBOXES**Datos técnicos****Technical data**

P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i			
0.5 hp								1 hp								
0.37 kW (1750 rpm)	4.38	4633	2.8	III	400	CMM 050/110	56C	0.75 kW (1750 rpm)	23.33	2248	2.0	II	75	CMM 040/075	56C	
	3.50	5506	2.0	III	500		56C		17.50	2927	1.5	II	100		56C	
	2.92	6519	2.2	III	600		56C		11.67	4109	1.1	I	150		56C	
	2.33	8149	1.7	II	750		56C		8.75	5179	0.8	I	200		56C	
	1.94	9264	1.5	II	900		56C		11.67	4222	1.8	II	150	CMM 040/090	56C	
	1.46	11773	1.1	I	1200		56C			5404	1.3	I	200		56C	
	1.17	13510	1.0	I	1500		56C			6474	1.0	I	250		56C	
	0.97	15440	0.9	I	1800		56C			7093	1.2	I	300		56C	
	2.92	7165	2.5	III	600	CMM 063/130	56C		4.38	8707	0.8	I	400		56C	
	2.33	8625	2.1	III	750		56C		8.75	5620	2.2	III	200	CMM 050/110	56C	
	1.94	9952	1.8	II	900		56C			6836	1.7	II	250		56C	
	1.46	12666	1.3	I	1200		56C			7291	1.9	II	300		56C	
	1.17	14596	1.3	I	1500		56C			9266	1.4	I	400		56C	
	0.97	16719	1.1	I	1800	56C	11013			1.0	I	500	56C			
							13039			1.1	I	600	56C			
							16298			0.9	I	750	56C			
	0.75 hp	23.33	1686	2.6	III	75	CMM 040/075			56C	1.1 kW (1750 rpm)	7.00	6604	2.2	III	250
17.50		2195	2.0	III	100	56C		5.83	7165	2.5		III	300	56C-140TC		
11.67		3082	1.5	II	150	56C		4.38	9120	1.8		II	400	56C-140TC		
8.75		3884	1.1	I	200	56C		3.50	11038	1.3		I	500	56C-140TC		
7.00		4574	0.8	I	250	56C	2.92	14331	1.3	I		600	56C-140TC			
11.67		3166	2.4	III	150	CMM 040/090	56C	2.33	17250	1.1		I	750	56C-140TC		
8.75		4053	1.8	II	200		56C	1.94	19904	0.9		I	900	56C-140TC		
7.00		4855	1.3	I	250		56C	1.5 hp								
5.83		5320	1.6	II	300		56C	1.1 kW	23.33	3372		1.3	I	75	CMM 040/075	56C
4.38		6530	1.1	I	400		56C	(1750 rpm)	17.50	4391		1.0	I	100		56C
3.50		7600	0.8	I	500		56C	23.33	3458	1.9		II	75	CMM 040/090	56C	
2.92		9879	0.8	I	600		56C	17.50	4503	1.5		II	100		56C	
7.00		5127	2.2	III	250	CMM 050/110	56C	11.67	6333	1.2		I	150		56C	
5.83		5468	2.6	III	300		56C	8.75	8106	0.9		I	200		56C	
4.38		6950	1.8	II	400		56C	17.50	4614	2.6		III	100	CMM 050/110	56C	
3.50		8260	1.4	I	500		56C		6494	2.0		III	150		56C	
2.92		9779	1.4	II	600		56C		8431	1.5		II	200		56C	
2.33		12224	1.2	I	750		56C		10253	1.1		I	250		56C	
1.94		13896	1.0	I	900		56C		10937	1.3		I	300		56C	
4.38		6840	2.4	III	400	CMM 063/130	56C		4.38	13899		0.9	I	400	56C	
3.50		8278	1.7	II	500		56C		11.67	6270		2.7	III	150	CMM 063/130	56C-140TC
2.92		10748	1.7	II	600		56C			8142		2.0	II	200		56C-140TC
2.33		12937	1.4	II	750		56C			9907		1.5	II	250		56C-140TC
1.94		14928	1.2	I	900		56C			10748		1.7	II	300		56C-140TC
1.46		18999	0.8	I	1200		56C			13679		1.2	I	400		56C-140TC
1.17		21894	0.8	I	1500		56C			16556		0.9	I	500		56C-140TC
							21496			0.8		I	600	56C-140TC		



Datos técnicos

Technical data

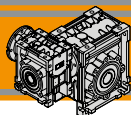
P ₁ [hp]	n ₂ [rpm]	M ₂ [lb·in]	sf	AGMA	i		
------------------------	-------------------------	---------------------------	----	------	---	---	---

2 hp

1.5 kW (1750 rpm)	23.33	4495	1.0	I	75	CMM 040/075	56C
	23.33	4611	1.4	II	75	CMM 040/090	56C
	17.50	6005	1.1	I	100		56C
	11.67	8444	0.9	I	150		56C
	23.33	4723	2.5	III	75	CMM 050/110	56C
	17.50	6152	1.9	II	100		56C
	11.67	8658	1.5	II	150		56C
	8.75	11241	1.1	I	200		56C
	7.00	13671	0.8	I	250		56C
	5.83	14583	1.0	I	300		56C
	17.50	5935	2.5	III	100	CMM 063/130	56C-140TC
	8.75	10857	1.5	II	200		56C-140TC
	7.00	13209	1.1	I	250		56C-140TC
	5.83	14331	1.3	I	300		56C-140TC
	4.38	18239	0.9	I	400		56C-140TC

3 hp

2.2 kW (1750 rpm)	23.33	7254	2.0	III	75	CMM 063/130	140TC
	17.50	8902	1.7	II	100		140TC
	8.75	16285	1.0	I	200		140TC
	5.83	21496	0.8	I	300		140TC

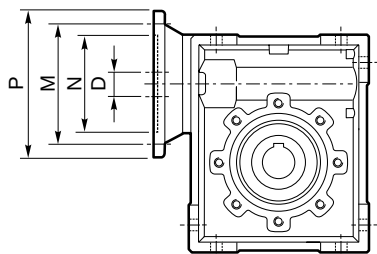


CMM

REDUCTORES SINFIN Y CORONA DOBLE REDUCCIÓN
DOUBLE REDUCTION WORM-WORM GEARBOXES

Motores Aplicables IEC

IEC Motor adapters



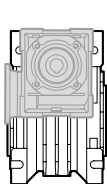
NOTA / NOTE

Las áreas grises indican la aplicabilidad del correspondiente tamaño del motor.

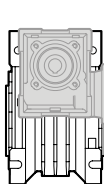
Grey areas indicate motor inputs available on each size of unit.

B/BS = Buje de metal para flecha

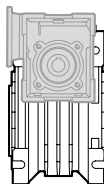
B/BS = Metal shaft sleeve



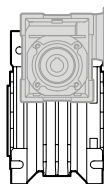
UB1



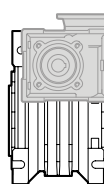
UB2



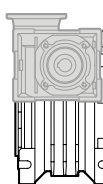
US1



US2

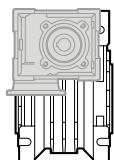


UV1

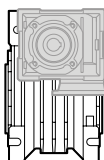


UV2

CMM		N	M	P	D	i_1							
						7.5	10	20	25	30	40	50	60
040/075	56C	4.5	5.88	6.5	0.625								
040/090													
050/110													
063/130	140TC	4.5	5.88	6.5	0.875	B							

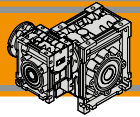


UC1



UC2

CMM		N	M	P	D	i ₁							
						7.5	10	20	25	30	40	50	60
050/110	56C	4.5	5.88	6.5	0.625								
063/110						B							
					140TC								

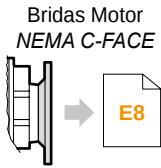
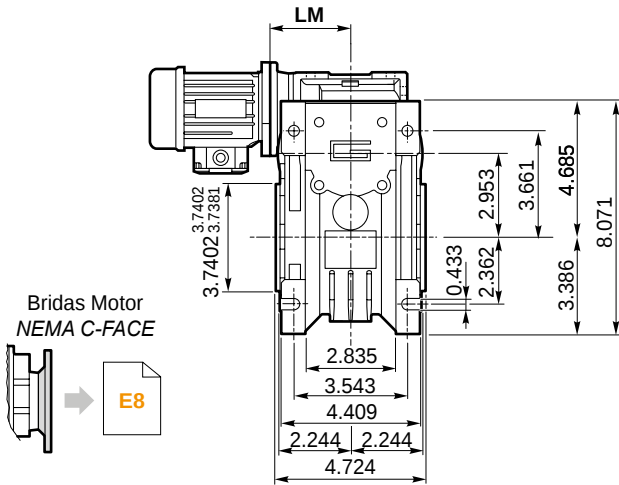


Dimensiones

Dimensions

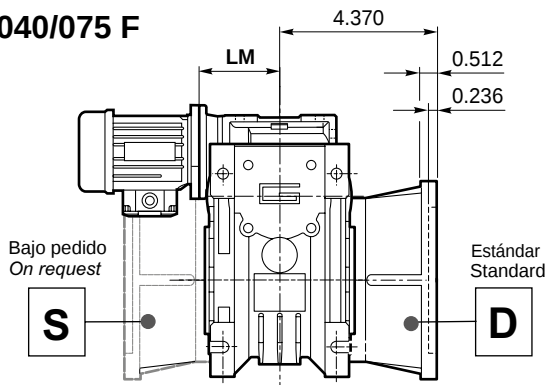
CMM 040/075

CMM 040/075 U



26.5

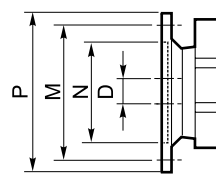
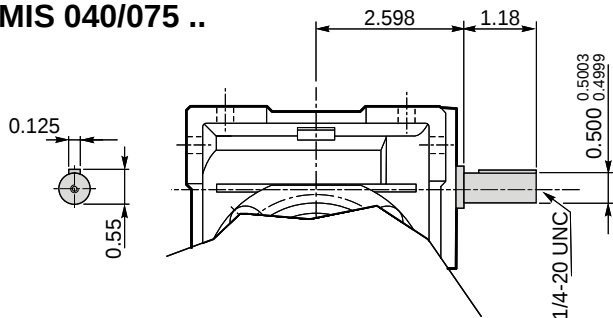
CMM 040/075 F



Bajo pedido
On request

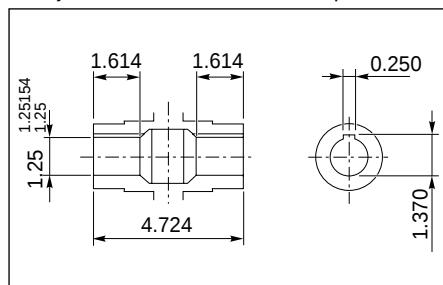
Estándar
Standard

CMMIS 040/075 ..

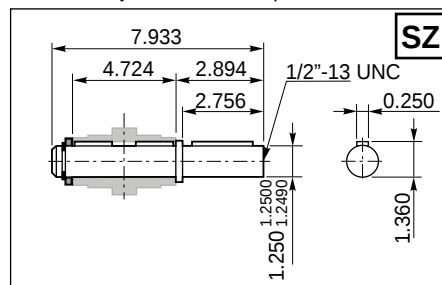


Brida Motor / Motor flange	
Dimensiones NEMA NEMA Dimensions	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.15

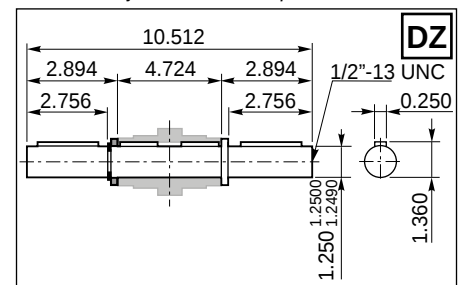
Eje de salida hueco / Hollow output shaft

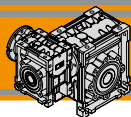


Eje de salida / Output shaft



Eje de salida / Output shaft





CMM

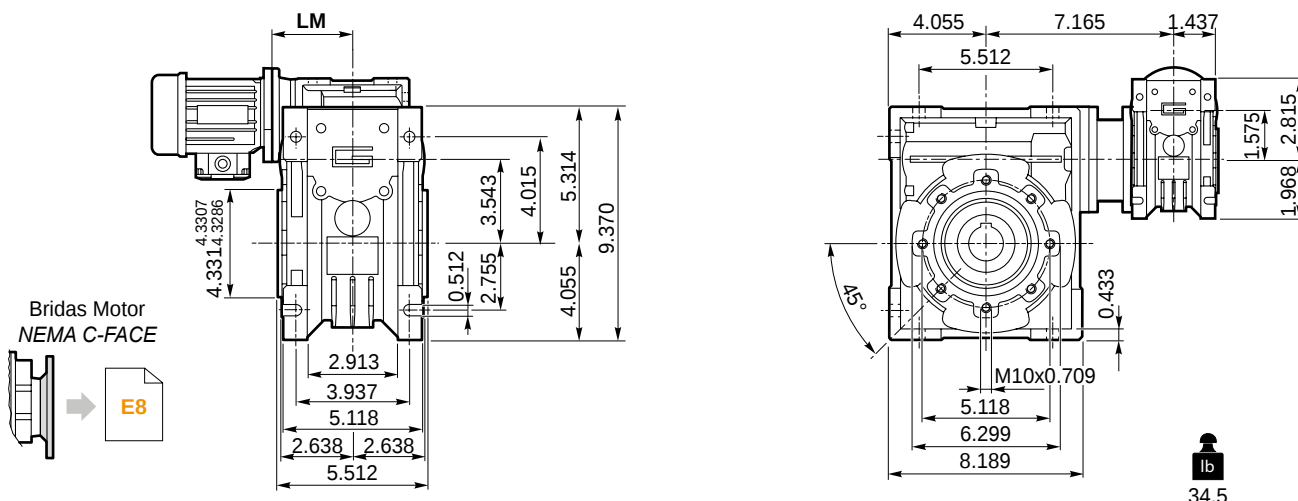
REDUCTORES SINFIN Y CORONA DOBLE REDUCCIÓN
DOUBLE REDUCTION WORM-WORM GEARBOXES

Dimensiones

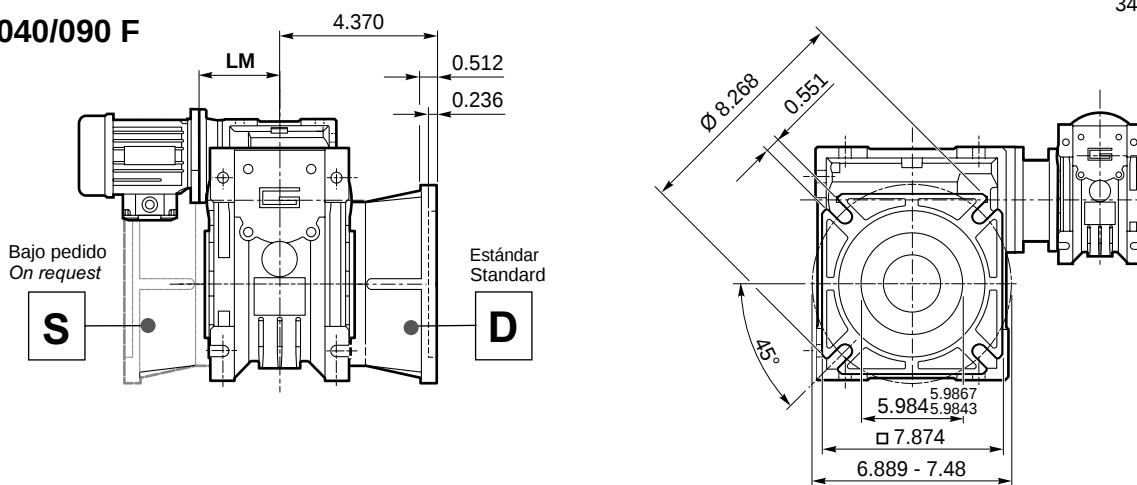
Dimensions

CMM 040/090

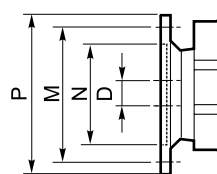
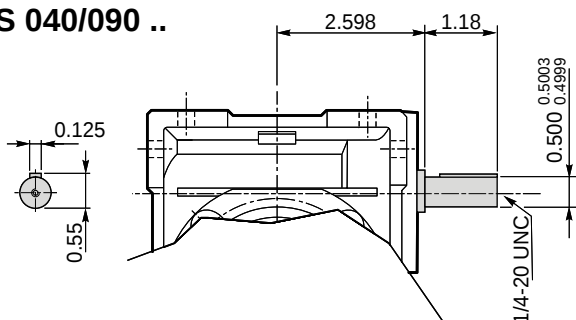
CMM 040/090 U



CMM 040/090 F

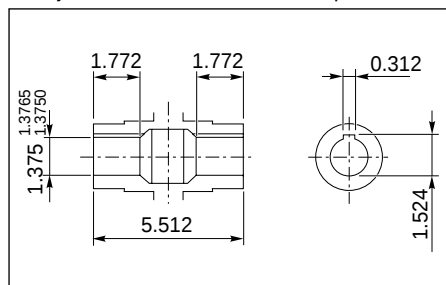


CMMIS 040/090 ..

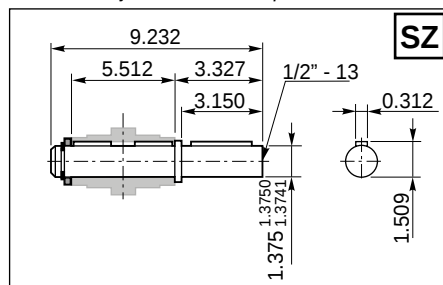


Brida Motor / Motor flange	
Dimensiones NEMA NEMA Dimensions	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.15

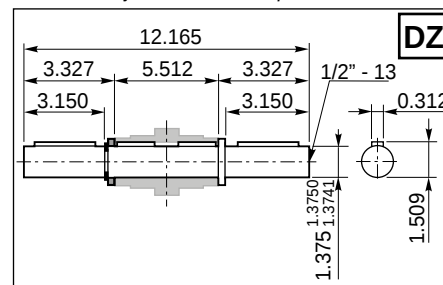
Eje de salida hueco / Hollow output shaft

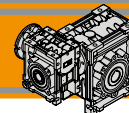


Eje de salida / Output shaft



Eje de salida / Output shaft



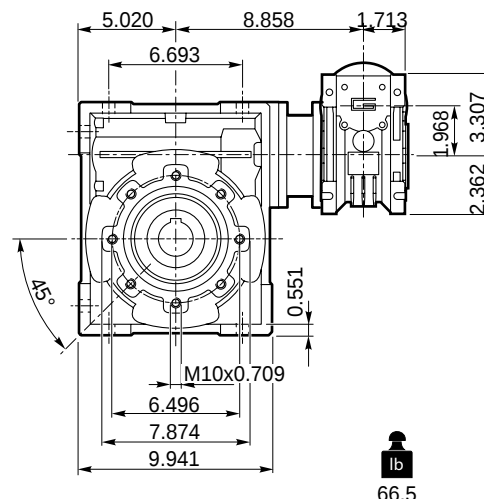
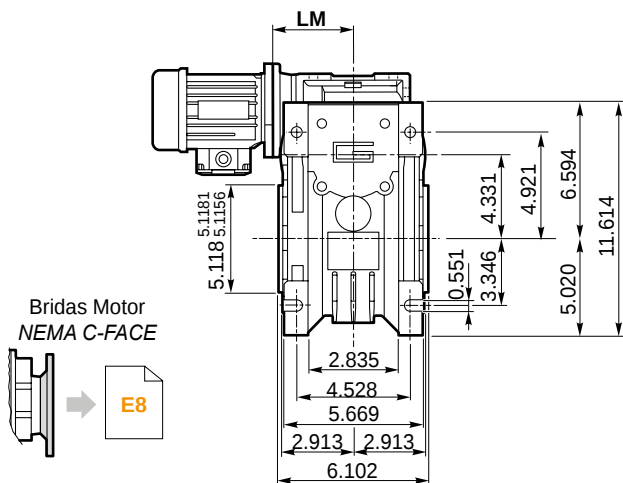


Dimensiones

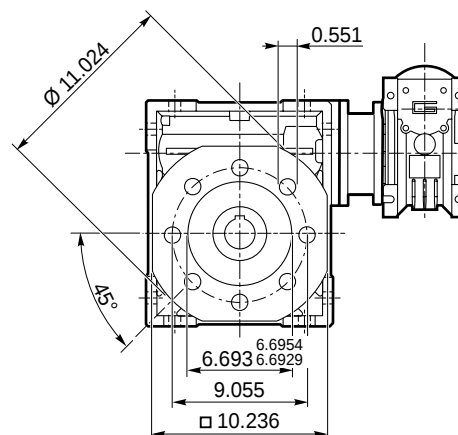
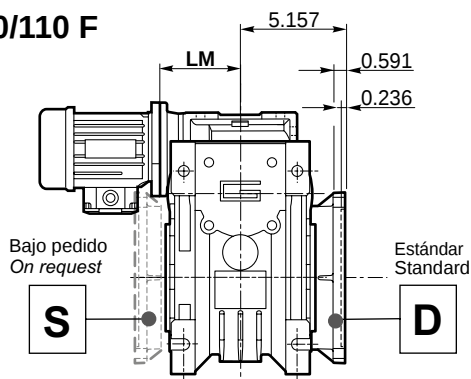
Dimensions

CMM 050/110

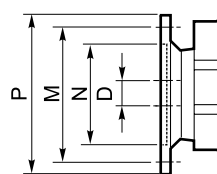
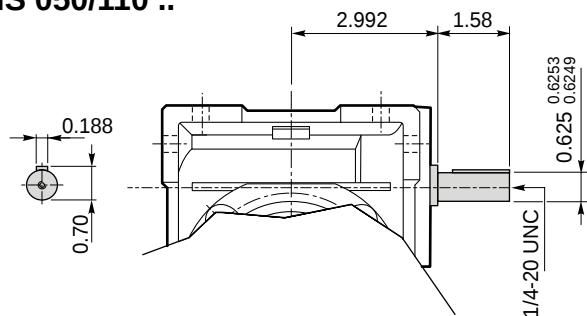
CMM 050/110 U



CMM 050/110 F

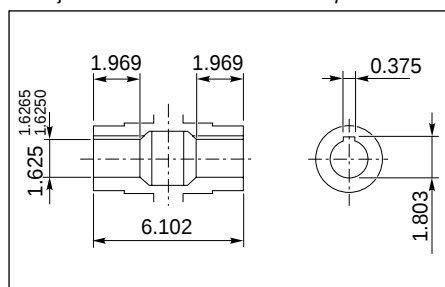


CMMIS 050/110 ..

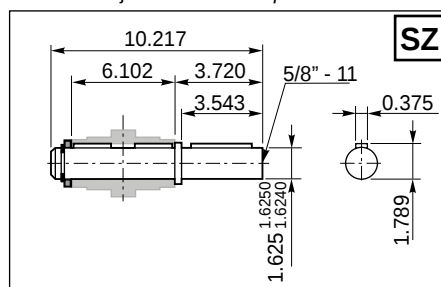


Brida Motor / Motor flange	
Dimensiones NEMA NEMA Dimensions	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.346

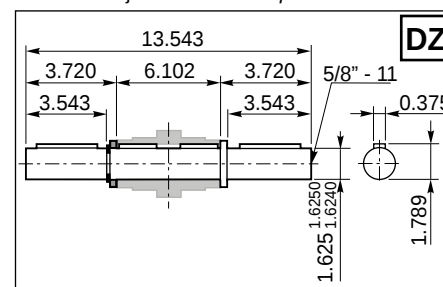
Eje de salida hueco / Hollow output shaft

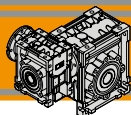


Eje de salida / Output shaft



Eje de salida / Output shaft





CMM

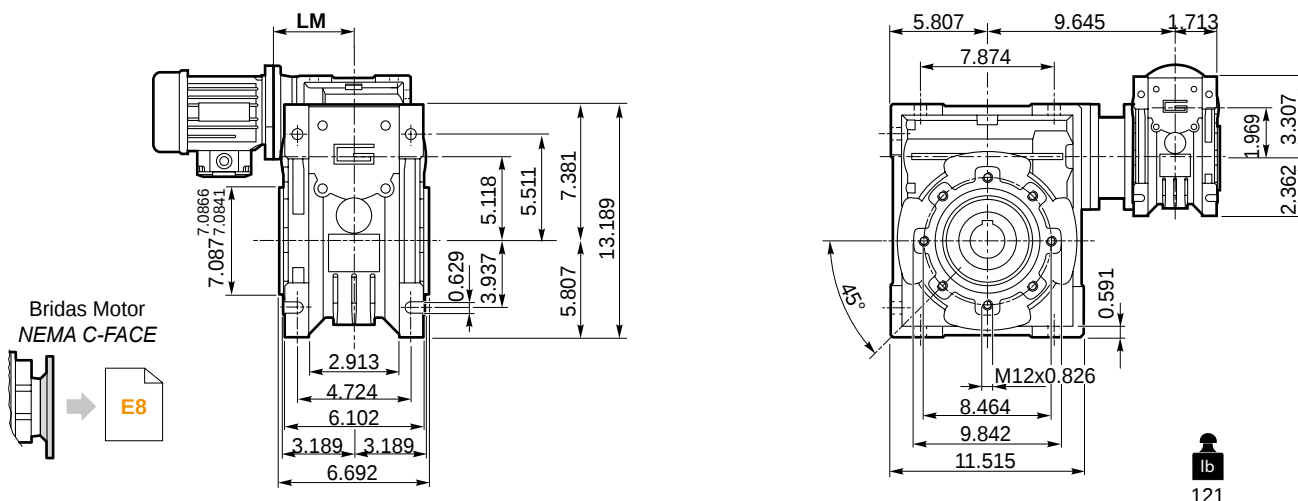
REDUCTORES SINFIN Y CORONA DOBLE REDUCCIÓN
DOUBLE REDUCTION WORM-WORM GEARBOXES

Dimensiones

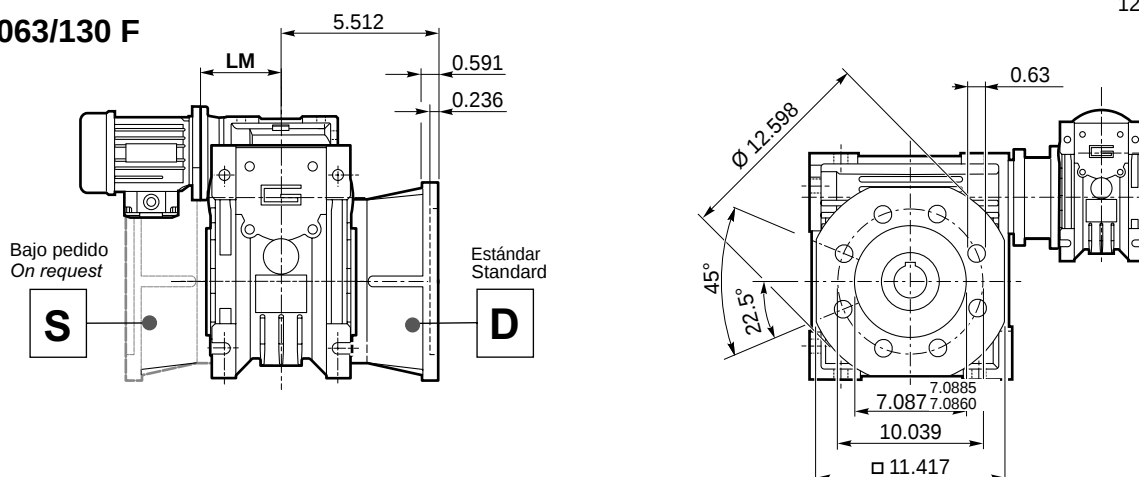
Dimensions

CMM 063/130

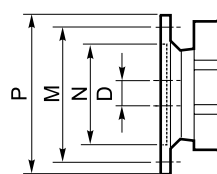
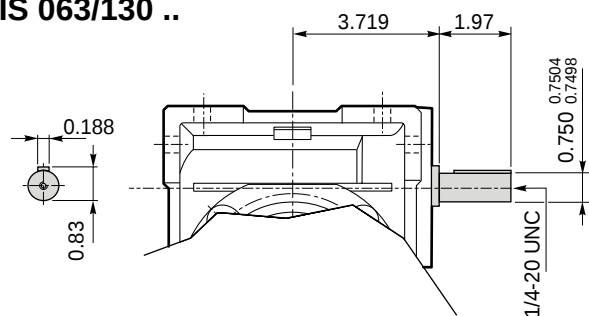
CMM 063/130 U



CMM 063/130 F

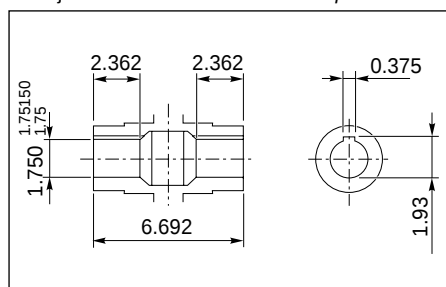


CMMIS 063/130 ..

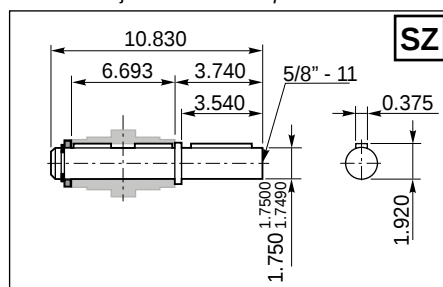


Brida Motor / Motor flange		
Dimensiones NEMA		
NEMA Dimensions		
	56 C	140 TC
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM	4.055	

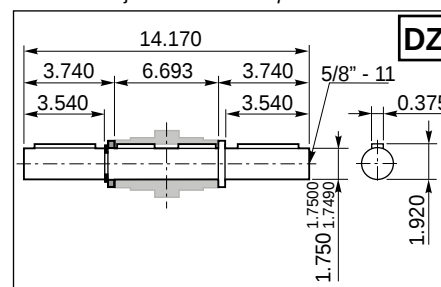
Eje de salida hueco / Hollow output shaft

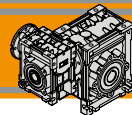


Eje de salida / Output shaft



Eje de salida / Output shaft



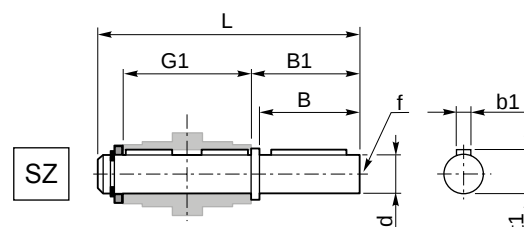
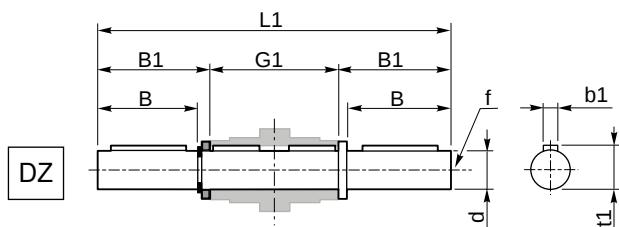


Accesorios

Accessories

Eje de salida simple y doble

Single and double output shaft

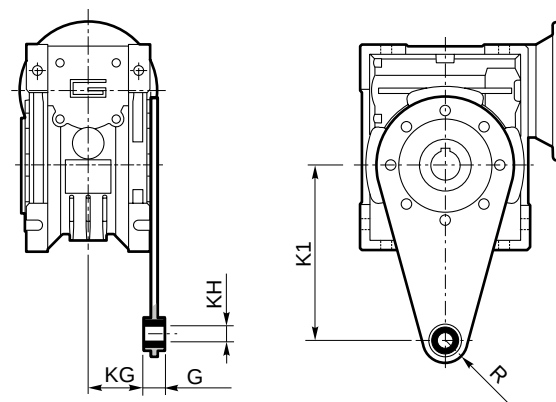


CMM	d	B	B1	G1	L	L1	f	b1	t1
040/075	1.250 ^{1.250} / _{1.249}	2.756	2.894	4.724	7.933	10.512	1/2"-13	0.250	1.360
040/090	1.375 ^{1.375} / _{1.3741}	3.150	3.327	5.512	9.232	12.165	1/2"-13	0.312	1.509
050/110	1.625 ^{1.625} / _{1.624}	3.543	3.720	6.102	10.217	13.543	5/8"-11	0.375	1.789
063/130	1.750 ^{1.750} / _{1.749}	3.540	3.740	6.693	10.830	14.170	5/8"-11	0.375	1.920

Brazo de reacción

Torque arm

CMM	K1	G	KG	KH	R
040/075	7.874	0.984	1.831	0.787	1.181
040/090	7.874	0.984	2.224	0.787	1.181
050/110	9.843	1.181	2.441	0.984	1.378
063/130	9.842	1.181	2.717	0.984	1.378

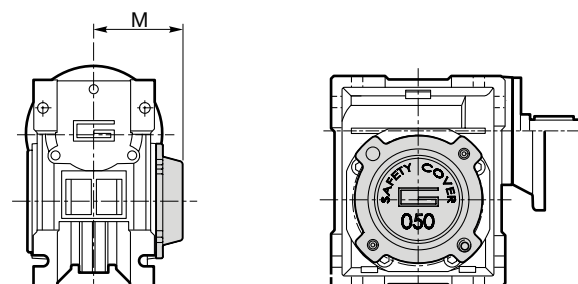


Opciones

Options

SC - Cubierta de seguridad / Safety Cover

CMM	M
040/075	3.110
040/090	3.701
050/110	4.016
063/130	4.606



APÉNDICE
APPENDIX

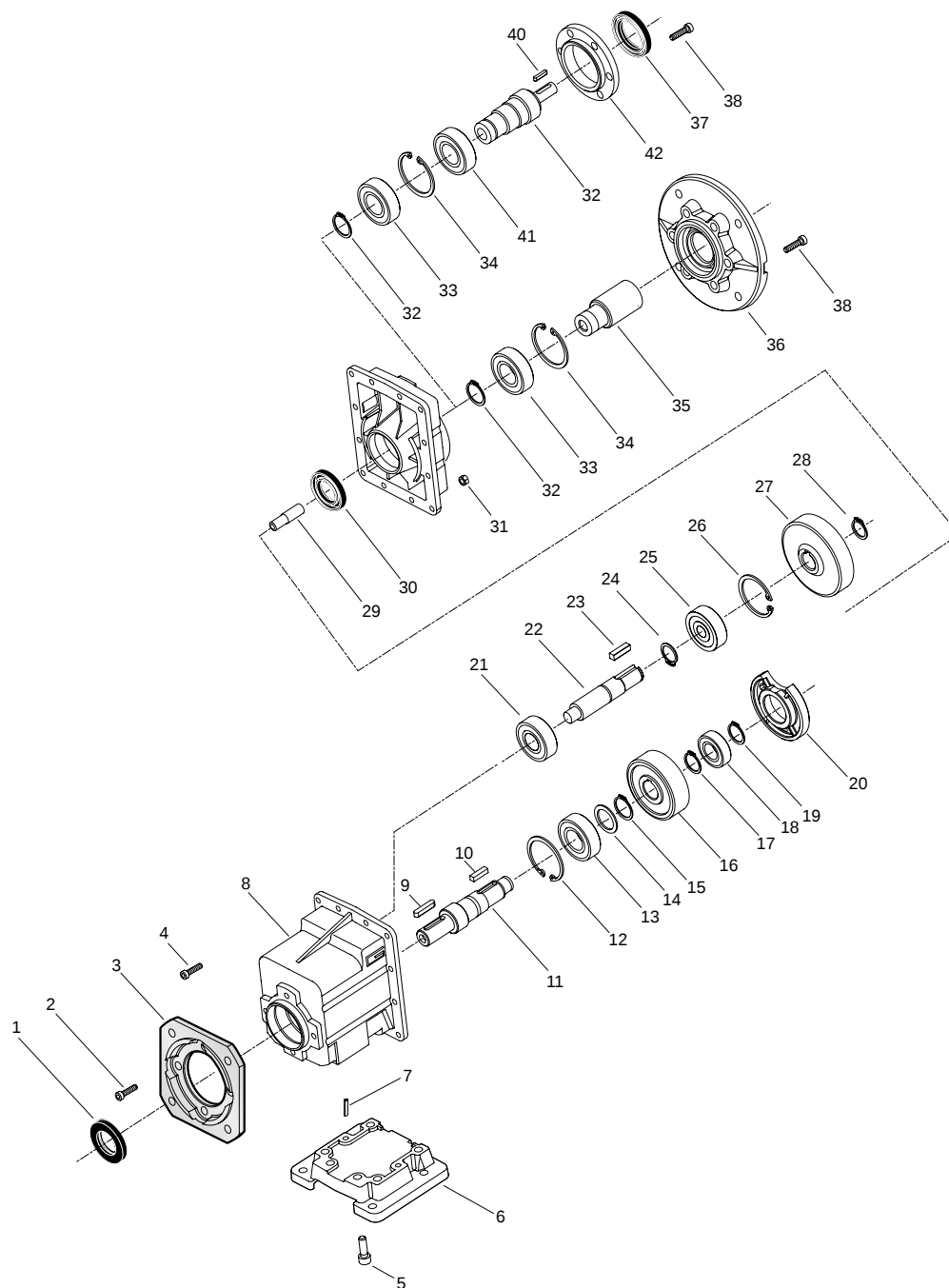


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CMG..3	<i>CMG..3</i>	F3
CMB..2	<i>CMB..2</i>	F4
CMB..3	<i>CMB..3</i>	F5
CM040..CM130	<i>CM040..CM130</i>	F6
Bujes de reducción en acero	<i>Metal shaft sleeves</i>	F7
Garantía	<i>Warranty</i>	F8

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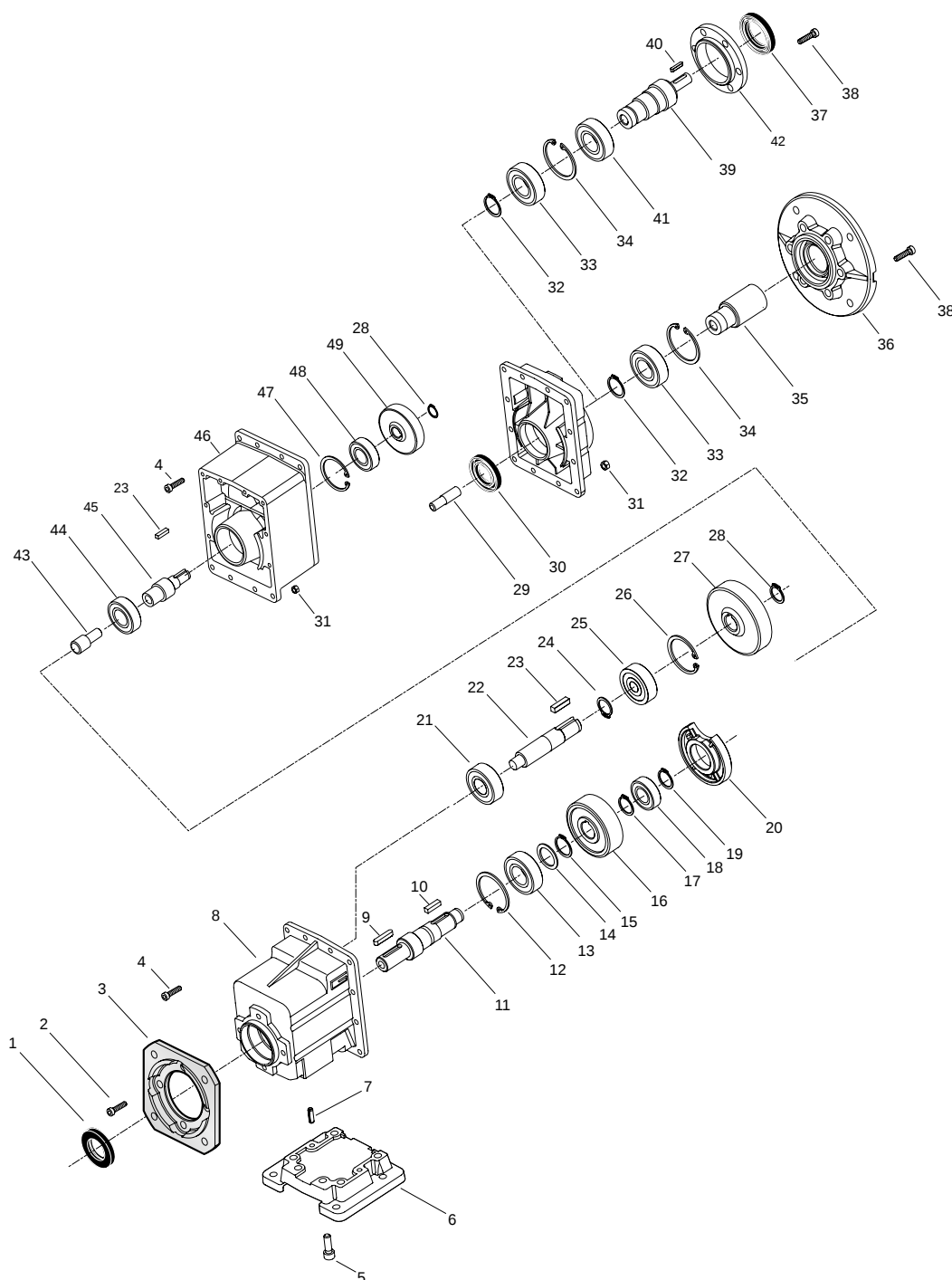
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CMG..2



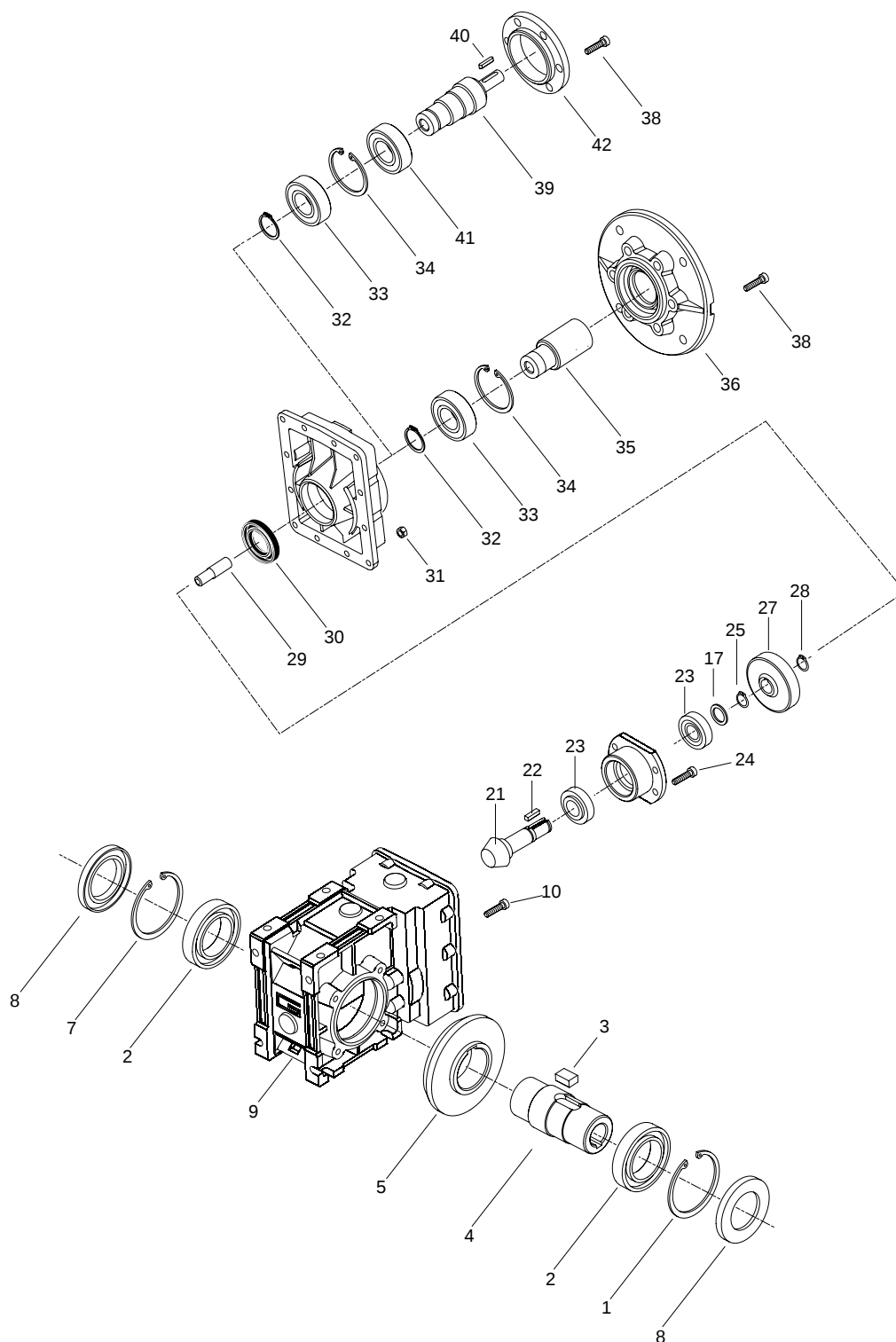
CMG	Rodamientos / Bearings						Sellos de aceite / Oil seals		
	13	18	21	25	33	41	1	30	37
002	6203 40x17x12	6201 32x12x10	6200 30x10x9	6202 2RS 35x15x11	6004 2RS 42x20x12	6204-2RS 47x20x14	22/40/7	20/37/7	—
012	6205 25/52/15	6203 17/40/12	6300 2RS 10/35/11	6202 2RS 15/35/11	6205 2RS 25/52/15	6006 2RS 30/55/13	30/52/7	25/47/7	35/52/7
022	3205A 25/52/20.6	6204 20/47/14	6301 2RS 12/37/12	6302 2RS 15/42/13	6205 2RS 25/52/15	6006 2RS 30/55/13	35/52/7	25/47/7	35/52/7
032	6207 35/72/17	6205 25/52/15	6303 2RS 17/47/14	6204 2RS 17/47/14	6206 2RS 30/62/16	6007 2RS 35/62/14	40/72/7	30/52/7	40/60/7
042	3207A 35/72/27	6206 30/62/16	6304 2RS 20/52/15	6304 2RS 20/52/15	6206 2RS 30/62/16	6007 2RS 35/62/14	45/72/7	30/52/7	40/60/7

CMG..3



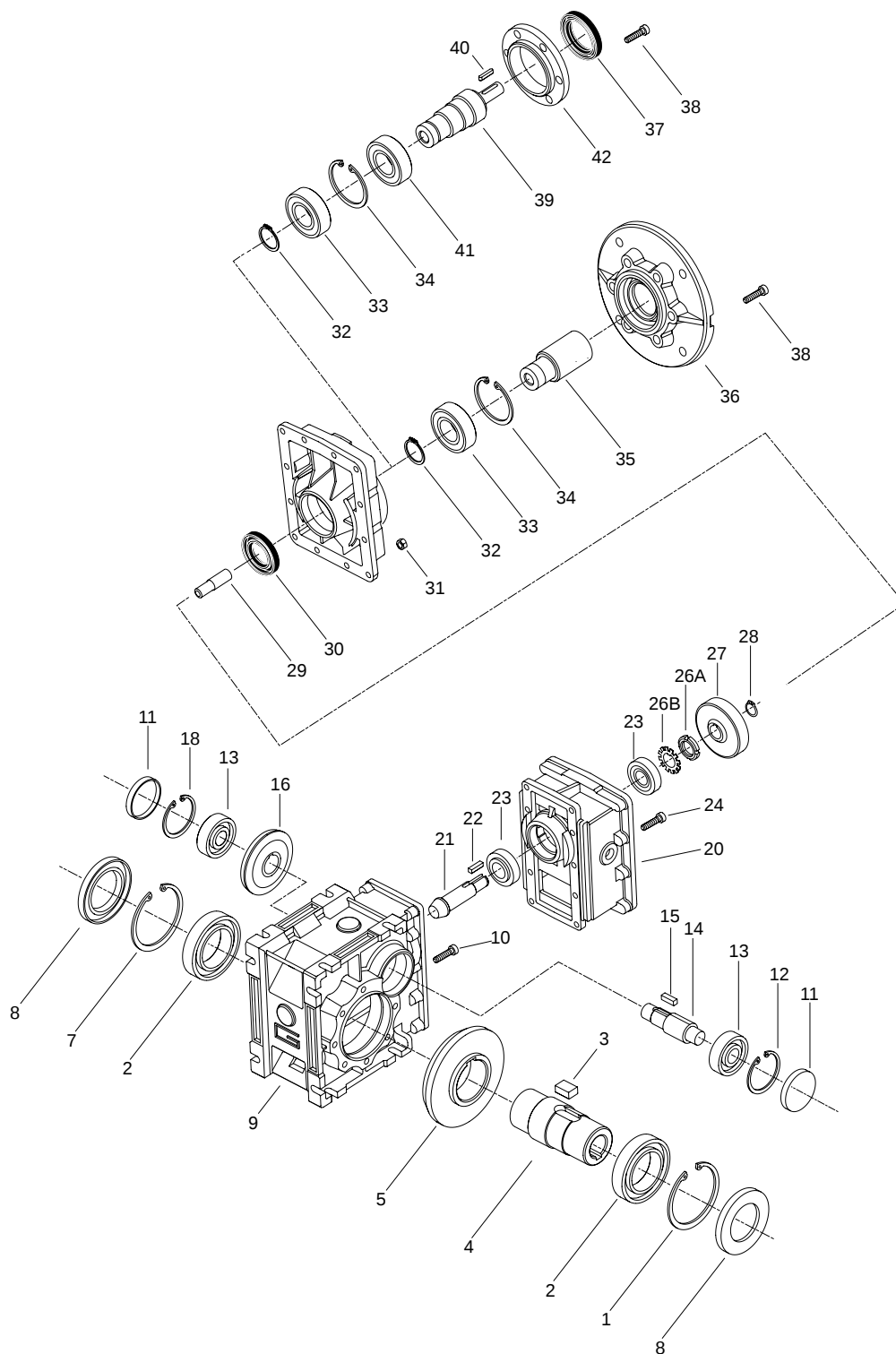
CMG	Rodamientos / Bearings								Sellos de aceite / Oil seals		
	13	18	21	25	33	41	44	48	1	30	37
013	6205 25/52/15	6203 17/40/12	6300 2RS 10/35/11	6202 2RS 15/35/11	6205 2RS 25/52/15	6006 2RS 30/55/13	6204 20/47/14	6203 17/40/12	30/52/7	25/47/7	35/52/7
023	3205A 25/52/20.6	6204 20/47/14	6301 2RS 12/37/12	6302 2RS 15/42/13	6205 2RS 25/52/15	6006 2RS 30/55/13	6204 20/47/14	6203 17/40/12	35/52/7	25/47/7	35/52/7
033	6207 35/72/17	6205 25/52/15	6303 2RS 17/47/14	6204 2RS 17/47/14	6206 2RS 30/62/16	6007 2RS 35/62/14	6205 25/52/15	6204 20/47/14	40/72/7	30/52/7	40/60/7
043	3207A 35/72/27	6206 30/62/16	6304 2RS 20/52/15	6304 2RS 20/52/15	6206 2RS 30/62/16	6007 2RS 35/62/14	6205 25/52/15	6204 20/47/14	45/72/7	30/52/7	40/60/7

CMB ..2



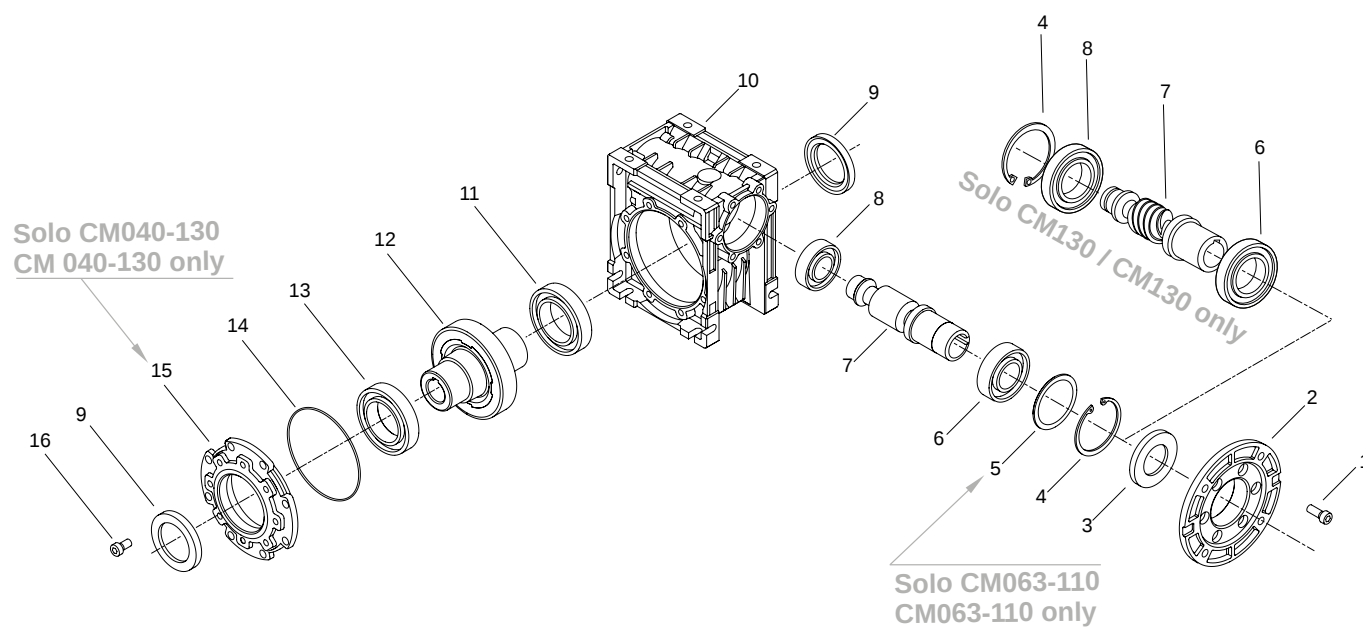
CMB	Rodamientos / Bearings				Sellos de aceite / Oil seals	
	2	23	33	41	8	30
402	16006 30x55x9	7202 BE 15x35x11	6004 2RS 42x20x12	6204-2RS 47x20x14	30/55/7	20/37/7
502	61908 40x62x12	7203 BE 17x40x12	6004 2RS 42x20x12	6204-2RS 47x20x14	40/62/7	20/37/7

CMB .3



CMB	Rodamientos / Bearings					Sellos de aceite / Oil seals			RCA
	2	13	23	33	41	8	30	37	11
633	6009 75x45x16	6303 2RS 47x17x14	30203 17x40x13	6205 2RS 25x52x15	6006 2RS 30x55x13	45/75/8	25/47/7	35/52/7	47/7
903	6011 90x55x18	6304 2RS 52x20x15	30204 47x20x15	6206 2RS 30x62x16	6007 2RS 62x35x14	55/90/10	30/52/7	40/60/7	52/7

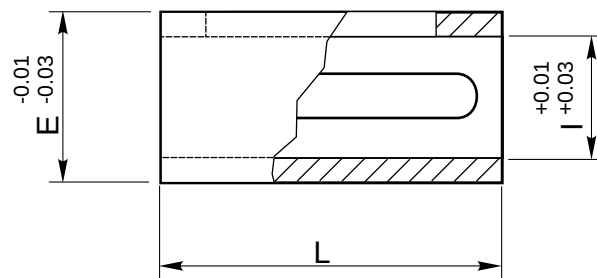
CM040..CM130



CM	Rodamientos / Bearings				Sellos de aceite / Oil seals	
	6	8	11	13	3	9
040	61905 25x42x9	6202 15x35x11	6006 30x55x13	6006 30x55x13	25/42/7	30/47/7
050	61906 30x47x9	6203 17x40x12	6008 40x68x15	6008 40x68x15	30/47/7	40/55/7
063	6007 35x62x14	6205 25x52x15	6009 45x75x16	6009 45x75x16	35/62/7	45/65/8
070	6008 40x68x15	6304 20x52x15	6009 45x75x16	6009 45x75x16	40/68/8	45/65/8
075	6008 40x68x15	6206 30x62x16	6010 50x80x16	6010 50x80x16	40/68/7	50/72/8
090	32008 40x68x19	30206 30x62x17.25	6012 60x95x18	6012 60x95x18	40/68/7	60/85/8
110	32010 50x80x20	32207 35x72x24.25	6013 65x100x18	6013 65x100x18	50/80/8	65/85/10
130	32010 50x80x20	32207 35x72x24.25	6014 70x110x20	6014 70x110x20	50/68/8	70/90/10

Bujes de reducción en flecha de acero

Metal shaft sleeves



Cantidad por caja Quantity each box	Tipo / Type	Dimensiones mm. / Dimensions mm.		
		I	E	L
50	B 0.625-0.875	0.625	0.875	1.73
30	BS 0.625-1.125	0.625	1.125	2.36
20	B 0.875-1.125	0.875	1.125	1.77
15	BS 0.875-1.375	0.875	1.375	2.95
15	B 1.125-1.375	1.125	1.375	2.36

Nota: Los bujes de flecha se suministran con cuñero completo
Note: The metal shaft sleeves are supplied complete with keys.

Garantía

El fabricante garantiza que los bienes estarán libres de defectos de materiales y mano de obra por un periodo de 1 año a partir de la fecha de envío.

El fabricante garantiza únicamente que los bienes, cuando sean embarcados, tendrán la capacidad que se indica en los documentos escritos incluyendo cotizaciones y catálogos, previendo que tales equipos serán instalados apropiadamente, tendrán mantenimiento adecuado, estarán correctamente lubricados, operaran bajo condiciones normales, con supervisión competente y con los límites de carga para los que fueron vendidos y siempre y cuando los equipos estén exentos de la velocidad crítica, de torsión y otro tipo de vibración sin importar lo que lo induzca.

Quedan excluidos de la garantía los casos de pérdida de lubricante debido al desgaste normal de los sellos. La única obligación del fabricante bajo la garantía se limitará a la sustitución o reemplazo de productos defectuosos (o partes defectuosas de los mismos).

Esta garantía no cubre el costo de la instalación del equipo reparado o sustituido y tampoco cubre daños incidentales o emergentes de cualquier naturaleza y tipo (incluyendo el transporte) así como la no utilización temporal de los bienes adquiridos.

Los productos o piezas sustituidos están garantizados por el resto del periodo de la garantía aplicable a la mercancía originalmente suministrada por el vendedor.

Las piezas reemplazadas serán propiedad del vendedor.

Todos los reclamos por productos presuntamente defectuosos deberán hacerse dentro de los 10 días siguientes en los que el cliente se entera de tales defectos. Todas las reclamaciones que no se hagan por escrito y no sean recibidas por el vendedor en el plazo de los 10 días serán canceladas. El cliente deberá enviar el producto supuestamente defectuoso para la inspección del vendedor y ningún otro bien deberá ser devuelto sin el consentimiento por escrito del vendedor. Esta garantía no se extenderá a los bienes sujetos al mal uso, abuso, negligencia, accidente, instalación o mantenimiento inadecuado, lubricación incorrecta o bienes que hayan sido alterados o reparados por cualquier persona que no sea el vendedor o su personal autorizado o representante, así mismo el acoplamiento mecánico y la instalación eléctrica serán responsabilidad de los instaladores.

Warranty

Seller warrants to Buyer that the goods will be commercially free from defects in material and workmanship for a period of 1 year from the date of shipment.

Seller warrants only that the goods , when shipped , shall be capable of delivering the service rating as indicated in Seller's written documents , including quotations and catalogs , providing such equipments are properly installed and maintained , correctly lubricated , operating under normal conditions with competent supervision , and within the load limits for which they were sold and provided further that the equipments are free from critical speed , torsional or other type vibration , no matter how induced.

Excluded from the warranty are cases of lubricant loss due to normal wear of the seals.

Seller's sole obligation under the foregoing warranties is limited to either , at Seller's option , replacing or repairing defective goods (or defective parts thereof).

This warranty does not cover the cost of installation of the equipment repaired or replaced as also does not cover incidental or consequential damages of any nature and kind (including transportation) as well as the temporary non-use of the purchased goods. Replacement goods or parts are warranted for the remainder of the warranty period applicable to the goods originally supplied by Seller.

Replaced parts remain property of Seller.

All claims for allegedly defective goods must be made within 10 days after Buyer learns of such alleged defects. All claims not made in writing and not received by Seller within such 10 days period shall be deemed waived. Buyer shall return a sample of the alleged defective part for Seller's inspection , and no other goods shall be returned to Seller without Seller's written consent . This warranty shall not extend to goods subject to misuse , abuse, neglect , accident or improper installation or maintenance , incorrect lubrication , or goods which have been altered or repaired by anyone other than Seller or its authorized personnel or representative , likewise the mechanical coupling and incorrect electrical installation are under the responsibility of the installers.



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