CHAIN & DRIVES®
COMPLETE POWER TRANSMISSION

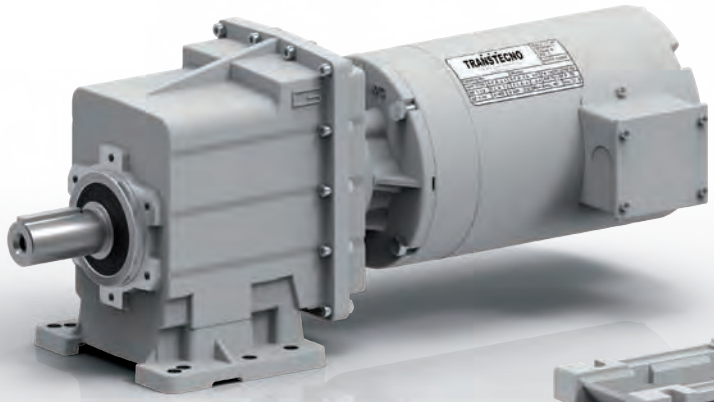
POWER > SPEED > TORQUE

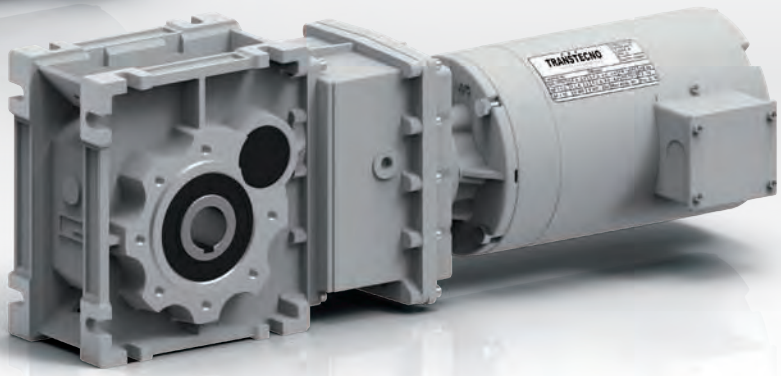
TRANSTECNO®

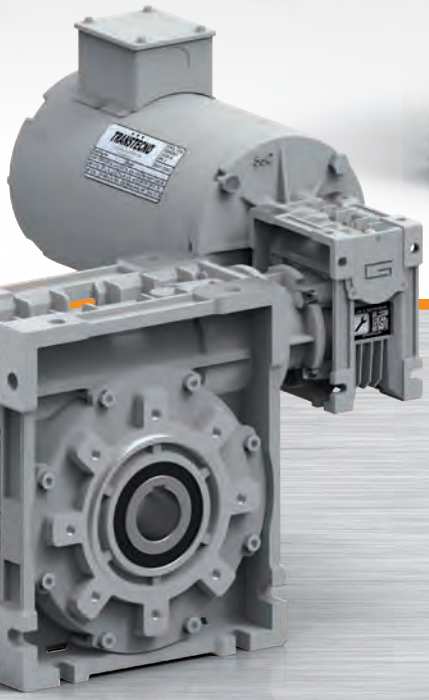
THE MODULAR GEARMOTOR

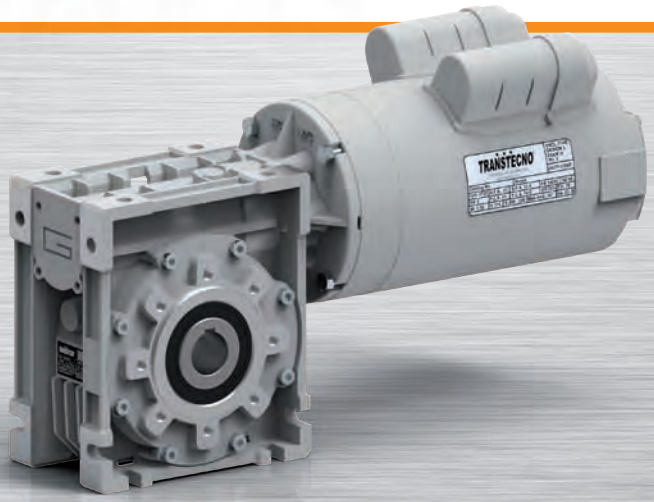
AC Alu

NEMA DIMENSIONS









TRANSTECNO · GENUINE · PRODUCTS

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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 / *Continuos*	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*

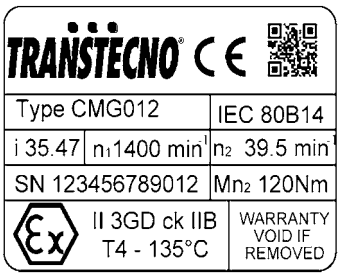
Superficies Calientes — *Heated surfaces*

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

Temperatura Máxima de la Superficie — *Maximum surface temperature*

Clase *Class*	Temperatura Máxima de Superficie *Maximum temperature surface*	
	°C	Temperatura ambiente de referencia: -20°C < > 40°C *Reference ambient tempreture:* *-20°C <* *> 40°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.

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

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

When different speeds are required, contact our Technical Service.

Relación de reducción

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 n2 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 n2 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 selecionar 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 — Mn_2 [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 n_1 and gear ratio i. It is calculated based on service with a continuous steady load corresponding to a service factor equal to 1. This value is not given in the catalogue but can be calculated approximately with the following formula between M_2 (output torque) and sf (service factor):

$$Mn_2 = M_2 \cdot sf$$

Par transmitido — M_2 [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 P_1 of the motor installed, output rpm n_2 and dynamic efficiency Rd. It can be calculated with the following formula:

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

o: *or:*

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

dónde: *where:*

$$P_2 = P_2 \cdot R$$

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 efficency 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 un magnitud adimensional que indica el sobredimensionamiento aplicable a una motorización para garantizar la resistencia a los choques y la durabilidad necesaria.
Las tablas del catálogo ofrecen una amplia selección de motorizaciones con factores de servicio diferentes que pueden satisfacer a la mayoría de las aplicaciones.
Para una correcta interpretación de los valores del factor de servicio sf en las selecciones propuestas, encontraran 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.

This value indicates how a certain drive system is to be over-sized in order to assure the requested service and stand up to shocks.
The tables given in the catalogue offer a wide range of drive systems with different service factors able to satisfy most types of applications. To correctly understand service factor values sf given for each item, approximate values for load classes A, B and C along with the number of hours of daily operation h/d and number of start-ups/hours need to be known.
Once the load class required for the application has been determined, locate corresponding value sf to be used when selecting the most suitable drive system.

Tipo de carga	**A** - Carga uniforme	fa ≤ 0.3
	B - Carga con choques moderados	fa ≤ 3
	C - Carga con choques fuertes	fa ≤ 10

Type of load	***A** - Uniform*	*fa ≤ 0.3*
	***B** - Moderate shocks*	*fa ≤ 3*
	***C** - Heavy shocks*	*fa ≤ 10*

$$fa = \frac{Je}{Jm}$$

- Je (kgm^2) momento de inercia de las masas externas, referido al eje del motor.
- Jm (kgm^2) momento de inercia del motor.
  Para valores > 10 se recomienda contactar con el Servicio Técnico.

$$fa = \frac{Je}{Jm}$$

- *Je (kgm^2) moment of reduced external inertia at the drive-shaft*
- *Jm (kgm^2) 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

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, moledores 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.*

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**

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 aplicacion 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 *Application class AGMA*	Factor de servicio *Service factor*
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	***COMPRESORS***			
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 - PROPÒSITO GENERAL	***CONVEYORS - GENERAL PURPOSE***			
Uniformemente cargado o alimentado	*Uniformly loaded*	I	I	II
Servicio pesado	*Heavy Duty*	I	II	II
Servicio severo	*Severe Duty*	II	III	III
GRÚAS	***CRANES***			
Montacargas principal - Servicio medio	*Main Hoist - Medium Duty*	II	II	II
Montacargas principal - Servicio pesado	*Main Hoist - Heavy Duty*	III	III	III
Reversa	*Reversing*	II	II	II
Polipasto	*Skip Hoist*	II	II	II
Recorrido del Carro	*Trolley Drive*	II	II	II
Recorrido del Puente	*Bridge Drive*	II	II	II
TRITURADORAS	***CRUSHER***			
Piedra o mineral	*Stone or Ore*	III	III	III
DRAGAS	***DREDGES***			
Bobinas de cable	*Cable Reels*	II	II	II
Transportadoras	*Conveyors*	II	II	II
Unidades de Accionamiento de Cabezal Cortante	*Cutter Head Drives*	III	III	III
Bombas	*Pumps*	III	III	III
Cedazos	*Screen Drives*	III	III	III
Apiladores	*Stackers*	II	II	II
Cabrestantes Utilitarios (Malacates)	*Winches*	II	II	II
ELEVADORES	***ELEVATORS***			
De Cangilones	*Bucket*	I	II	II
Descarga Centrífuga	*Centrifugal Discharge*	I	I	II
Escaleras mecánicas	*Escalators*	I	I	II
Flete	*Freight*	I	II	II
Descarga por gravedad	*Gravity Discharge*	I	I	II
EXTRUSORAS	***EXTRUDERS***			
Generales	*General*	II	II	II
Plásticos - Variador de velocidad	*Plastics - Variable Speed Drive*	III	III	III
Plásticos - Accionador de velocidad fija	*Plastics - Fixed Speed Drive*	III	III	III
Caucho/Hule - Operación de tornillo continuo	*Rubber - Continuous Screw Operation*	III	III	III
Rubber - Operación de tornillo intermitente	*Rubber - Intermittent Screw Operation*	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 - Fioor*	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	*Cut-Off Saws - Chain*	II	II	III
Sierras cortadoras - Arrastre	*Cut-Off Saws - Drag*	II	II	III
Tambores de descortezado	*Debarking Drums*	III	III	III
Alimentadores - De Canteadora	*Feeds - Edger*	II	II	II
Alimentadores - Multiple	*Feeds - Gang*	II	III	III
Alimentadores - de Desbastadora	*Feeds - Trimmer*	II	II	II
Plataforma de registro	*Log Deck*	III	III	III
Disparos de registro - tipo inclinado- tipo circular	*Log Hauls - Incline - Well Type*	III	III	III
Conexión de dispositivos giratorios	*Log Turning Devices*	III	III	III
Alimentación de la aplanadora	*Planer Feed*	II	II	II
Aplanadora en inclinación de elevadores	*Planer Tilting Hoists*	II	II	II
Rodillo - de extracción -activos - de Cajas	*Rolls - live-off brg. - Roll Cases*	III	III	III
Mesa de Clasificación	*Sorting Table*	II	II	II
Elevador con caja de volteo	*Tipple Hoist*	II	II	II
Transportador - De Cadenas	*Transfers - Chain*	II	II	III
Transportador -Tipo Grùa	*Transfers - Craneway*	II	II	III
Unidades de batea	*Tray Drives*	II	II	II
Sepilladora para chapas	*Veneer Lathe Drives*	II	II	II
LAMINADORAS DE METAL	***METAL MILLS***			
Accionamiento Principal y Carro de Banco de Estirado	*Draw Bench Carriage and Main Drive*	II	II	II
Mesa de salida - Controlador Grupal no reversible	*Runout Table - Non reversing Group Drives*	II	II	II
Mesa de salida - Controlador individual no reversible	*Runout Table - Non reversing Individual Drives*	III	III	III
Mesas Transportadoras Reversibles	*Runout Table - Reversing*	III	III	III
Impulsadores de Placa	*Slab Pushers*	II	II	II
Cizallas	*Shears*	III	III	III
Trefilado	*Wire drawing*	II	II	II
Máquina de bobinado de alambre	*Wire Winding Machine*	II	II	II
BANDAS DE METAL -MAQUINARIA DE PROCESAMIENTO-	***METAL STRIP PROCESSING MACHINERY***			
Bridas	*Bridles*	II	II	II
Bobinadoras y Desbobinadoras	*Coilers and Uncoilers*	I	I	II
Arista - Condensador de ajuste	*Edge Trimmers*	I	II	II
Laminadora de Rodillos	*Flatteners*	II	II	II
Acumuladores	*Loopers (Accumulators)*	I	I	I
Rodillos de arrastre	*Pinch Rolls*	II	II	I
Cuchillas de corte	*Scrap Choppers*	II	II	II
Cizalla	*Shears*	III	III	III
Cortadoras	*Slitters*	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
Calandradora 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
Enrrolladores	*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	*Embosser*	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 -Fieltro 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-Piasticizers*	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	*Intensive Internal - Batch Mixers*	III	III	III
Mezcladores internos intensivos -Mezcladores continuos	*Intensive Internal - Continuous Mixers*	II	II	II
Molinos Mezcladores -2 rodillos lisos	*Mixing Mill - 2 smooth rolls*	II	II	II
Molinos Mezcladores -2 rollo, 1 rodillo corrugado-	*Mixing Mill - 1 or 2 corrugated rolls*	III	III	III
Molino de Lote Descendente – 2 rodillos lisos	*Batch Drop Mill - 2 smooth rolls*	II	II	II
Quebradora en Caliente – 2 rodilloso, 1 rodillo corrugado	*Cracker Warmer - 2 roll, 1 corrugated roll*	III	III	III
Quebradora -2 rodillos corrugados	*Cracker - 2 corrugated rolls*	III	III	III
Ligas, Alimentación & molinos mezcladores - 2 rodillos	*Holding, Feed & Blend Mill - 2 rolls*	II	II	II
Refinadores -2 rodillos	*Refiner - 2 rolls*	II	II	II
Calandrias para Caucho	*Calenders*	II	II	II
MEZCLADOR DE ARENA	***SAND MULLER***	II	II	II
EQUIPOS DE TRATAMIENTO DE AGUAS RESIDUALES	***SEWAGE DISPOSAL EQUIPMENT***			
Cribas de barra	*Bar Screens*	II	II	II
Alimentadores químicos	*Chemical Feeders*	II	II	II
Cribas de desagüe	*Dewatering Screens*	II	II	II
Rompedores de espuma	*Scum Breakers*	II	II	II
Mezcladores lentos o rápidos	*Slow or Rapid Mixers*	II	II	II
Colector de Sedimentos	*Sludge Collectors*	II	II	II
Espesadores	*Thickener*	II	II	II
Filtros de vacío	*Vacuum Filters*	II	II	II
CRIBAS	***SCREENS***			
Para limpieza de Aire	*Air Washing*	I	I	II
Giratorias de Piedra o Grava	*Rotary - Stone or Gravel*	II	II	II
Toma de Agua Movil	*Traveling Water Intake*	I	I	I
TRANSPORTADORES HELICOIDALES	***SCREW CONVEYORS***			
Uniformemente cargado o alimentado	*Uniformly loaded or Fed*	I	I	II
Servicio pesado	*Heavy Duty*	I	II	II
INDUSTRIA AZUCARERA	***SUGAR INDUSTRY***			
Cortadora de remolacha	*Beet Slicer*	III	III	III
Cortadoras de Caña	*Cane Knives*	II	II	II
Trituradoras	*Crushers*	II	II	II
Molinos (terminal de baja velocidad)	*Mills (low speed end)*	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***			
Enrrolladoras	*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
Enrrolladoras	*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 tecnica 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 fricciòn.
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 to1.

Carga radial — R; R_2 [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 R_2 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; A_2 [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 A_2 that can be applied on the shaft is:

$$A_2 = R_2 \cdot 0.2$$

Si el valor de la carga axial A en el eje resulta superior a A_2, consultar con nuestro servicio técnico.

If axial load A that acts on the shaft is greater than A_2, contact our Technical Service.

Seleccionando el motorreductor — *Selecting the gearmotors*

Para seleccionar el motorreductor requerido realizar el siguiente procedimiento:

1. Determinar el factor de servicio fs 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:

To select the required gearmotor, perform the procedure below:

1. *Determine the service factor sf 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.

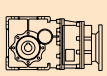
where Rd stands for the dynamic efficiency (indicated on page D6) and n_2 indicates the required output rpm of the gearmotor.

Seleccionando el motorreductor

Selecting the gearmotors

3. Use la gráfica de especificación para buscar la unidad de potencia donde P1 es mayor que o igual a P con una velocidad n2/n2max que se aproxima al valor deseado. Elija una unidad de potencia donde el factor de servicio indicado fs es igual o mayor que la unidad calculada en el punto 1).

3. Use the specification chart to search for the power unit where P_1 is greater than or equal to P with a speed n_2/n_{2max} that approximates the desired one. Choose a power unit where the indicated service factor 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		
0.16							
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

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:*

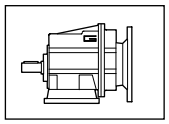
CM040 i = 30, P_1 = 0.25 hp, sf = 2.2

Lubricación

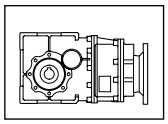
Lubrication

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.

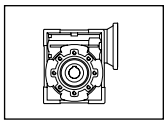
All unit sizes of CMG, CMB, CM and CMM series are complete with a long life synthetic lubricant, viscosity 320 and do not require maintenance.



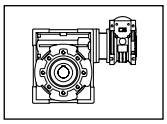
CMG



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.

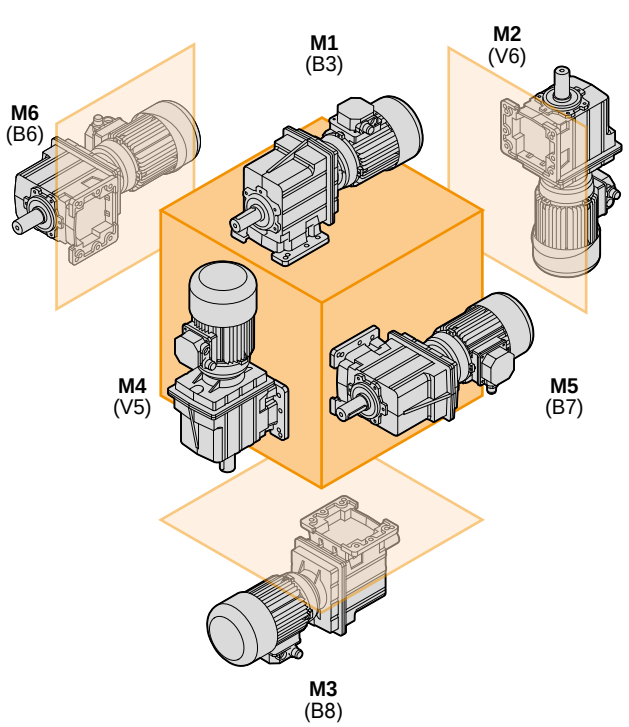
Verificar la cantidad de lubricante dependiendo de la posición de montaje en todos los reductores CM 130.

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

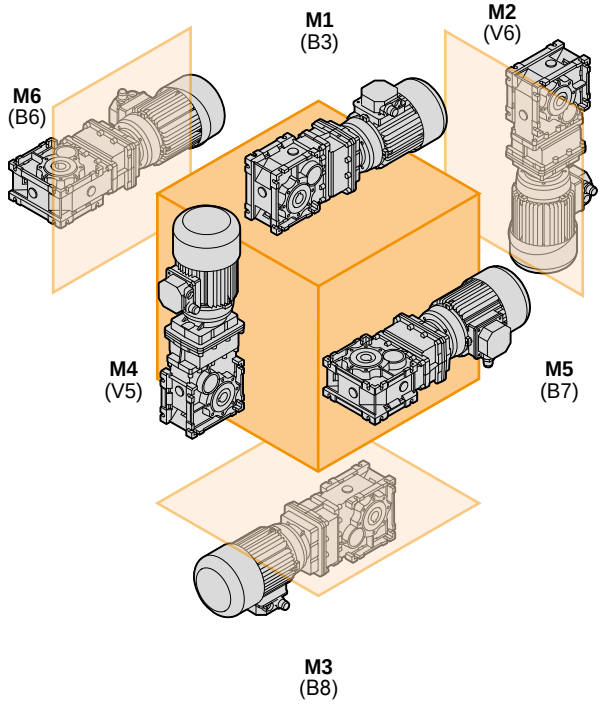
Posición de Montaje

Mounting positions

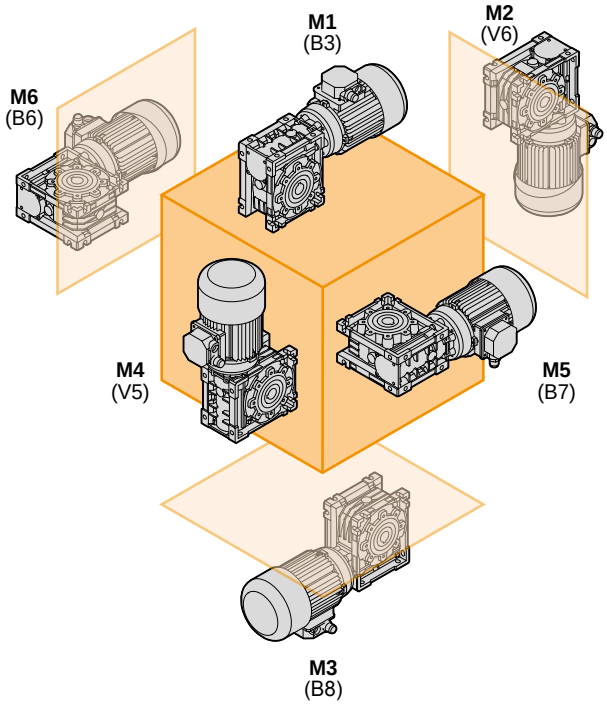
CMG



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) *use silicone (VMQ) oil seals* *usar lubricantes para bajas temperaturas use low temperature lubricant*	usar sellos de aceite de Viton (FPM) *use Viton (FPM) oil seals* *usar lubricante para altas temperaturas use high temperature lubricant*
CMB633 - CMB903				
CM040 - CM050		sustituir el sello de aceite con NBR *replace input oil seal with NBR*		
CM063 - CM110				
CM130	reducir las cargas radiales en salida *halve the output radial loads*			

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 superificies de acoplamiento y los ejes sean limpios y sin abolladuras;
- Las supeficies 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 maquinas 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 tornillo de sujeción estén bien apretados;
- Verificar la cantidad de lubricante dependiendo de la posicion 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 preventative in order to avoid oxidation provoked by contact;*
- *all the mounting screws have been securely tightened;*
- *check the lubricant quantity depending on the mounting position on all gearboxes CM 130.*

Aplicaciones críticas

En estos casos consultar con nuestro Servicio Técnico

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

Critical applications

In these cases please contact the Technical Service

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

TRANSTECNO®

THE MODULAR GEARMOTOR

CMG

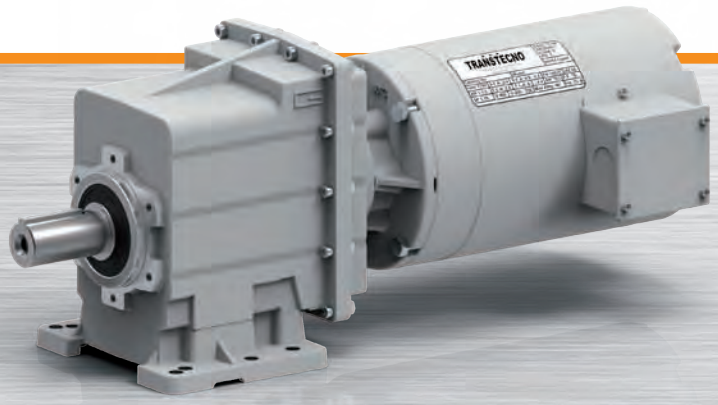
CMG

CMG Alu

NEMA DIMENSIONS

REDUCTORES COAXIALES DE ENGRANAJES HELICOIDALES

HELICAL GEARBOXES



TRANSTECNO · GENUINE · PRODUCTS

ENERGY SAVING

Índice	*Index*	Pág. *Page*

Características técnicas

Technical features

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.

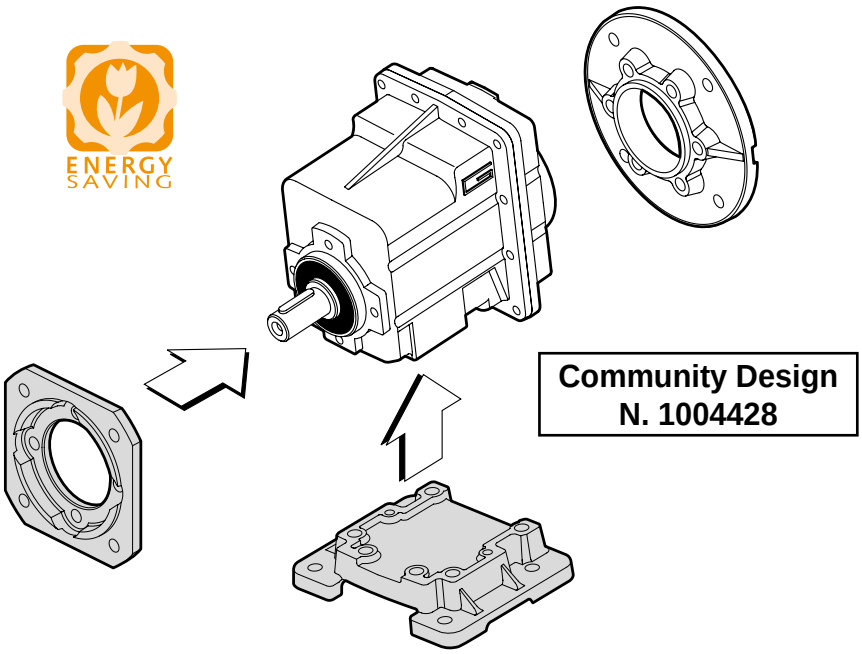
Características comunes para toda la serie:

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

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.

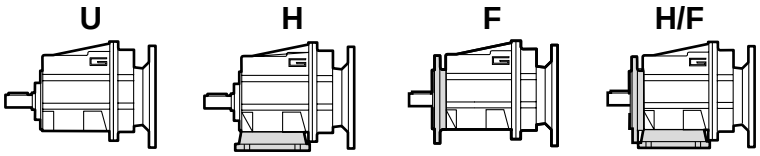
The main features of CMG range are:

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

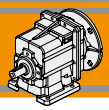


Clasificación

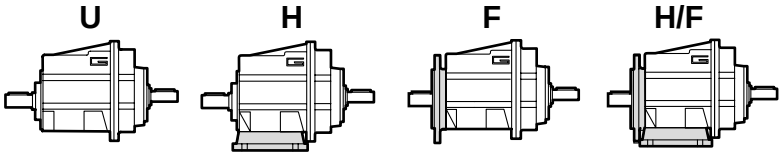
Classification



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



Clasificación / *Classification*

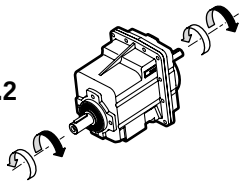


REDUCTOR / *GEARBOX*				
CMGIS	**01**	**2**	**U**	**9.81**
Tipo *Type*	Tamaño *Size*	Etapas *Stages*	Versión *Version*	Relación de reducción *Ratio*
CMGIS	**00** **01** **02** **03** **04**	**2** **3**	**U** **H** **F…** **H/F…**	ver tablas *see tables*

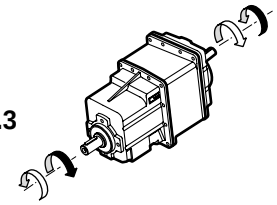
MOTOR / *MOTOR*					
1 hp / 0.75kW	**4p**	**3ph**	**220/440V**	**60Hz**	**T1**
Potencia *Power*	Polos *Poles*	Fases *Phases*	Tensión *Voltage*	Frecuencia *Frequency*	Posición caja de bornes *Terminal box pos.*
ver tablas *see tables*	**2p** **4p** **6p** **8p**	**1ph** **3ph**	**230V** **230/400V** **-**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

Sentidos de rotación / *Direction of rotation*

CMG...2
CMGIS..2



CMG...3
CMGIS..3



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*
Pn_1	[kW]	Potencia nominal en la entrada / *Nominal input power*
Mn_2	[Nm]	Par nominal en la salida en función de Pn_1 / *Nominal output torque referred to Pn_1*
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*

Lubricación

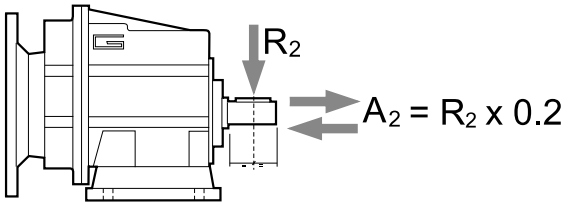
Lubrication

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.

Cargas radiales

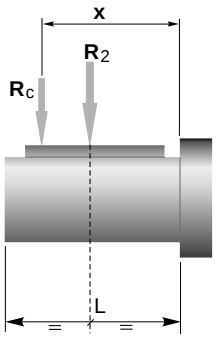
Radial loads



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:

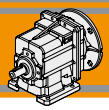


	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04
a	2.874	0.394	4.606	5.197	5.905
b	2.087	3.307	3.622	4.016	4.528
R_{2MAX}	292	562	1124	1461	1798

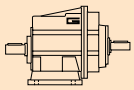
$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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



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.

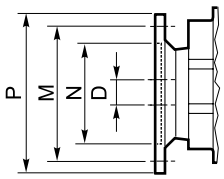
NOTE
Highlighted áreas indicate the motor input flange available on each gearbox size.

*** =** Pn_1 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.

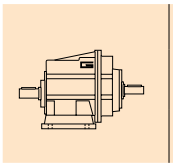
*** =** *The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

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

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	140 TC	n_2 [rpm]	Pn_1 [hp]	NEMA Motores aplicables *NEMA Motor adapters* 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.

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

*** =** Pn_1 es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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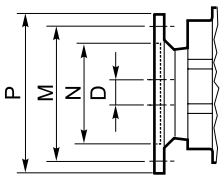
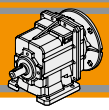
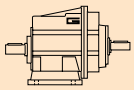
Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B19.



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* 56 C	140 TC	n_2 [rpm]	Pn_1 [hp]	NEMA Motores aplicables *NEMA Motor adapters* 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.

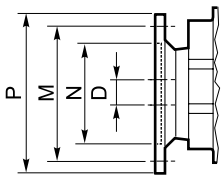
NOTE
Highlighted áreas indicate the motor input flange available on each gearbox size.

*** =** Pn_1 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.

**** =*** *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	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.

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

*** =** Pn_1 es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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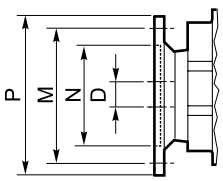
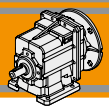
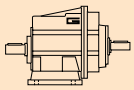


Dimensiones NEMA/ *NEMA Dimensions*			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125



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

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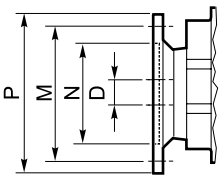


Dimensiones NEMA/ *NEMA Dimensions*			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125

Datos técnicos

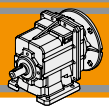
Technical data

0.16 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.12 kW (1750 rpm)	**348**	28	12.7	**III**	5.03	**CMG002**	**56C**
	287	34	10.5	**III**	6.10		**56C**
	234	41	8.5	**III**	7.49		**56C**
	195	50	8.9	**III**	8.99		**56C**
	172	56	7.9	**III**	10.16		**56C**
	145	67	6.6	**III**	12.07		**56C**
	131	74	8.4	**III**	13.40		**56C**
	116	84	7.4	**III**	15.14		**56C**
	96.3	101	6.2	**III**	18.17		**56C**
	81.1	119	5.2	**III**	21.58		**56C**
	74.4	130	4.8	**III**	23.51		**56C**
	69.7	139	4.5	**III**	25.10		**56C**
	64.6	150	4.1	**III**	27.08		**56C**
	53.9	180	3.4	**III**	32.49		**56C**
	41.6	233	2.7	**III**	42.04		**56C**
	39.0	248	2.5	**III**	44.89		**56C**
	35.8	270	2.3	**III**	48.86		**56C**
	38.1	254	4.2	**III**	45.89	**CMG012**	**56C**
	35.7	271	3.9	**III**	49.00		**56C**
	32.8	295	3.6	**III**	53.33		**56C**
	27.7	342	3.1	**III**	63.22	**CMG013**	**56C**
	23.3	407	2.6	**III**	75.08		**56C**
	19.6	483	2.2	**III**	89.17		**56C**
	15.5	612	1.7	**II**	113.05		**56C**
	13.0	727	1.5	**II**	134.27		**56C**
	10.1	941	1.1	**I**	173.72		**56C**
	8.7	1095	1.0	**I**	202.16		**56C**
	6.7	1417	0.7	**I**	261.57		**56C**
	5.8	1647	0.6	**I**	304.00		**56C**
	4.4	2130	0.5	**I**	393.33		**56C**
	27.3	347	5.1	**III**	64.01	**CMG023**	**56C**
	23.0	412	4.3	**III**	76.02		**56C**
	19.4	489	3.6	**III**	90.29		**56C**
	15.3	620	2.9	**III**	114.46		**56C**
	12.9	736	2.4	**III**	135.95		**56C**
	9.9	953	1.9	**II**	175.89		**56C**
	8.5	1109	1.6	**II**	204.69		**56C**
	6.6	1434	1.2	**I**	264.84		**56C**
	5.7	1667	1.1	**I**	307.80		**56C**
	4.4	2157	0.8	**I**	398.25		**56C**
	12.4	763	3.5	**III**	140.81	**CMG033**	**56C**
	10.0	944	2.8	**III**	174.26		**56C**
	7.8	1221	2.2	**III**	225.47		**56C**
	6.7	1419	1.9	**II**	262.05		**56C**
	5.4	1765	1.5	**II**	325.79		**56C**
	4.6	2051	1.3	**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**

0.25 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.18 kW (1750 rpm)	**348**	43	8.1	**III**	5.03	**CMG002**	**56C**
	287	53	6.7	**III**	6.10		**56C**
	234	65	5.5	**III**	7.49		**56C**
	195	78	5.7	**III**	8.99		**56C**
	172	88	5.0	**III**	10.16		**56C**
	145	104	4.2	**III**	12.07		**56C**
	131	116	5.4	**III**	13.40		**56C**
	116	131	4.7	**III**	15.14		**56C**
	96.3	157	3.9	**III**	18.17		**56C**
	81.1	187	3.3	**III**	21.58		**56C**
	74.4	203	3.0	**III**	23.51		**56C**
	69.7	217	2.9	**III**	25.10		**56C**
	64.6	234	2.6	**III**	27.08		**56C**
	53.9	281	2.2	**III**	32.49		**56C**
	41.6	363	1.7	**II**	42.04		**56C**
	39.0	388	1.6	**II**	44.89		**56C**
	35.8	422	1.5	**II**	48.86		**56C**
	59.2	255	4.2	**III**	29.56	**CMG012**	**56C**
	49.3	307	3.5	**III**	35.47		**56C**
	38.1	397	2.7	**III**	45.89		**56C**
	35.7	424	2.5	**III**	49.00		**56C**
	32.8	461	2.3	**III**	53.33		**56C**
	27.7	535	2.0	**II**	63.22	**CMG013**	**56C**
	23.3	635	1.7	**II**	75.08		**56C**
	19.6	755	1.4	**II**	89.17		**56C**
	15.5	957	1.1	**I**	113.05		**56C**
	13.0	1136	0.9	**I**	134.27		**56C**
	37.7	402	4.4	**III**	46.46	**CMG022**	**56C**
	35.3	429	4.1	**III**	49.61		**56C**
	32.4	467	3.8	**III**	54.00		**56C**
	27.3	542	3.3	**III**	64.01	**CMG023**	**56C**
	23.0	643	2.8	**III**	76.02		**56C**
	19.4	764	2.3	**III**	90.29		**56C**
	15.3	969	1.8	**II**	114.46		**56C**
	12.9	1150	1.5	**II**	135.95		**56C**
	9.9	1489	1.2	**I**	175.89		**56C**
	8.5	1732	1.0	**I**	204.69		**56C**
	24.0	616	4.3	**III**	72.83	**CMG033**	**56C**
	18.0	825	3.2	**III**	97.45		**56C**
	15.1	979	2.7	**III**	115.74		**56C**
	12.4	1192	2.2	**III**	140.81		**56C**
	10.0	1475	1.8	**II**	174.26		**56C**
	7.8	1908	1.4	**I**	225.47		**56C**
	6.7	2218	1.2	**I**	262.05		**56C**
	5.4	2757	1.0	**I**	325.79		**56C**
	4.6	3204	0.8	**I**	378.64		**56C**



Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
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		**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		
	91.8	218	4.9	**III**	19.07	**CMG012**	**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		**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	**CMG013**	**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		NEMA
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	**II**	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		**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	**CMG012**	**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		**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**

Datos técnicos

Technical data

0.33 hp

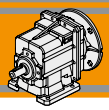
P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.22 kW (1150 rpm)	**48.2**	414	4.3	**III**	23.85	**CMG022**	**56C**
	38.4	520	3.4	**III**	29.93		**56C**
	32.0	623	2.8	**III**	35.91		**56C**
	24.8	807	2.2	**III**	46.46		**56C**
	23.2	861	2.1	**III**	49.61		**56C**
	21.3	937	1.9	**II**	54.00		**56C**
	18.0	1088	1.6	**II**	64.01	**CMG023**	**56C**
	15.1	1292	1.4	**I**	76.02		**56C**
	12.7	1535	1.2	**I**	90.29		**56C**
	10.0	1946	0.9	**I**	114.46		**56C**
	37.6	531	5.0	**III**	30.57	**CMG032**	**56C**
	33.6	594	4.5	**III**	34.20		**56C**
	29.8	671	4.0	**III**	38.63		**56C**
	26.0	767	3.5	**III**	44.18		**56C**
	22.4	891	3.0	**III**	51.30		**56C**
	18.9	1056	2.5	**III**	60.80		**56C**
	15.8	1238	2.1	**III**	72.83	**CMG033**	**56C**
	11.8	1657	1.6	**II**	97.45		**56C**
	9.9	1968	1.3	**I**	115.74		**56C**
	8.2	2394	1.1	**I**	140.81		**56C**
	6.6	2962	0.9	**I**	174.26		**56C**
	15.8	1238	3.6	**III**	72.83	**CMG043**	**56C**
	11.8	1657	2.7	**III**	97.45		**56C**
	9.9	1968	2.2	**III**	115.74		**56C**
	8.2	2394	1.8	**II**	140.81		**56C**
	6.6	2962	1.5	**II**	174.26		**56C**
	5.1	3833	1.2	**I**	225.47		**56C**
	4.4	4455	1.0	**I**	262.05		**56C**

0.5 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.37 kW (1750 rpm)	**348**	87	4.1	**III**	5.03	**CMG002**	**56C**
	287	105	3.4	**III**	6.10		**56C**
	234	129	2.7	**III**	7.49		**56C**
	195	155	2.8	**III**	8.99		**56C**
	172	176	2.5	**III**	10.16		**56C**
	145	209	2.1	**III**	12.07		**56C**
	131	232	2.7	**III**	13.40		**56C**
	116	262	2.4	**III**	15.14		**56C**
	96.3	314	2.0	**II**	18.17		**56C**
	81.1	373	1.7	**II**	21.58		**56C**
	74.4	406	1.5	**II**	23.51		**56C**
	69.7	434	1.4	**II**	25.10		**56C**
	64.6	468	1.3	**I**	27.08		**56C**
	53.9	562	1.1	**I**	32.49		**56C**

0.5 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.37 kW (1750 rpm)	**227**	133	5.3	**III**	7.72	**CMG012**	**56C**
	191	158	4.5	**III**	9.17		**56C**
	178	170	4.2	**III**	9.81		**56C**
	152	199	4.5	**III**	11.50		**56C**
	147	206	4.3	**III**	11.90		**56C**
	127	239	4.5	**III**	13.80		**56C**
	120	253	4.2	**III**	14.62		**56C**
	98.0	309	3.4	**III**	17.86		**56C**
	91.8	330	3.2	**III**	19.07		**56C**
	88.2	343	3.1	**III**	19.83		**56C**
	74.3	407	2.6	**III**	23.56		**56C**
	59.2	511	2.1	**III**	29.56		**56C**
	49.3	613	1.7	**II**	35.47		**56C**
	38.1	793	1.3	**I**	45.89		**56C**
	35.7	847	1.3	**I**	49.00		**56C**
	32.8	922	1.2	**I**	53.33		**56C**
	27.7	1070	1.0	**I**	63.22	**CMG013**	**56C**
	73.4	412	4.3	**III**	23.85	**CMG022**	**56C**
	58.5	517	3.4	**III**	29.93		**56C**
	48.7	621	2.9	**III**	35.91		**56C**
	37.7	803	2.2	**III**	46.46		**56C**
	35.3	858	2.1	**III**	49.61		**56C**
	32.4	933	1.9	**II**	54.00		**56C**
	27.3	1083	1.6	**II**	64.01	**CMG023**	**56C**
	23.0	1287	1.4	**I**	76.02		**56C**
	19.4	1528	1.2	**I**	90.29		**56C**
	15.3	1937	0.9	**I**	114.46		**56C**
	51.2	591	4.5	**III**	34.20	**CMG032**	**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		NEMA
0.5 hp							
0.37 kW (1150 rpm)	**229**	132	2.7	**III**	5.03	**CMG002**	**56C**
	189	160	2.2	**III**	6.10		**56C**
	154	197	1.8	**II**	7.49		**56C**
	128	236	1.9	**II**	8.99		**56C**
	113	267	1.7	**II**	10.16		**56C**
	95.3	317	1.4	**I**	12.07		**56C**
	85.9	352	1.8	**II**	13.40		**56C**
	76.0	398	1.6	**II**	15.14		**56C**
	63.3	478	1.3	**I**	18.17		**56C**
	53.3	568	1.1	**I**	21.58		**56C**
	48.9	618	1.0	**I**	23.51		**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**
	248	122	4.4	**III**	4.63		**56C**
	202	150	3.5	**III**	5.69		**56C**
	149	203	3.5	**III**	7.72		**56C**
	125	241	2.9	**III**	9.17		**56C**
	117	258	2.7	**III**	9.81		**56C**
	100	303	2.9	**III**	11.50		**56C**
	96.6	313	2.8	**III**	11.90		**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**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.5 hp							
0.37 kW (1150 rpm)	**46.0**	657	4.0	**III**	24.99	**CMG032**	**56C**
	37.6	804	3.3	**III**	30.57		**56C**
	33.6	900	3.0	**III**	34.20		**56C**
	29.8	1016	2.6	**III**	38.63		**56C**
	26.0	1162	2.3	**III**	44.18		**56C**
	22.4	1349	2.0	**II**	51.30		**56C**
	18.9	1599	1.7	**II**	60.80		**56C**
	15.8	1876	1.4	**II**	72.83	**CMG033**	**56C**
	11.8	2510	1.1	**I**	97.45		**56C**
	9.9	2981	0.9	**I**	115.74		**56C**
	29.8	1016	4.4	**III**	38.63	**CMG042**	**56C**
	26.0	1162	3.8	**III**	44.18		**56C**
	22.4	1349	3.3	**III**	51.30		**56C**
	18.9	1599	2.7	**III**	60.80		**56C**
	15.8	1876	2.4	**III**	72.83	**CMG043**	**56C**
	11.8	2510	1.8	**II**	97.45		**56C**
	9.9	2981	1.5	**II**	115.74		**56C**
	8.2	3627	1.2	**I**	140.81		**56C**
	6.6	4488	1.0	**I**	174.26		**56C**
0.75 hp							
0.55 kW (1750 rpm)	**348**	130	2.7	**III**	5.03	**CMG002**	**56C**
	287	158	2.2	**III**	6.10		**56C**
	234	194	1.8	**II**	7.49		**56C**
	195	233	1.9	**II**	8.99		**56C**
	172	263	1.7	**II**	10.16		**56C**
	145	313	1.4	**II**	12.07		**56C**
	131	347	1.8	**II**	13.40		**56C**
	116	393	1.6	**II**	15.14		**56C**
	96.3	471	1.3	**I**	18.17		**56C**
	81.1	560	1.1	**I**	21.58		**56C**
	74.4	610	1.0	**I**	23.51		**56C**
	69.7	651	1.0	**I**	25.10		**56C**
	64.6	702	0.9	**I**	27.08		**56C**

Datos técnicos

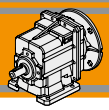
Technical data

0.75 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.55 kW (1750 rpm)	**458**	99	5.4	**III**	3.82	**CMG012**	**56C**
	378	120	4.4	**III**	4.63		**56C**
	308	148	3.6	**III**	5.69		**56C**
	227	200	3.5	**III**	7.72		**56C**
	191	238	3.0	**III**	9.17		**56C**
	178	254	2.8	**III**	9.81		**56C**
	152	298	3.0	**III**	11.50		**56C**
	147	309	2.9	**III**	11.90		**56C**
	127	358	3.0	**III**	13.80		**56C**
	120	379	2.8	**III**	14.62		**56C**
	98.0	463	2.3	**III**	17.86		**56C**
	91.8	494	2.1	**III**	19.07		**56C**
	88.2	514	2.1	**III**	19.83		**56C**
	74.3	611	1.7	**II**	23.56		**56C**
	59.2	766	1.4	**I**	29.56		**56C**
	49.3	920	1.2	**I**	35.47		**56C**
	38.1	1190	0.9	**I**	45.89		**56C**
	118	384	4.6	**III**	14.81	**CMG022**	**56C**
	102	443	3.2	**III**	17.10		**56C**
	95.9	473	3.0	**III**	18.26		**56C**
	87.1	521	3.4	**III**	20.08		**56C**
	73.4	618	2.9	**III**	23.85		**56C**
	58.5	776	2.3	**III**	29.93		**56C**
	48.7	931	1.9	**II**	35.91		**56C**
	37.7	1205	1.5	**II**	46.46		**56C**
	35.3	1286	1.4	**I**	49.61		**56C**
	32.4	1400	1.3	**I**	54.00		**56C**
	27.3	1625	1.1	**I**	64.01	**CMG023**	**56C**
	23.0	1930	0.9	**I**	76.02		**56C**
	70.0	648	4.1	**III**	24.99	**CMG032**	**56C**
	57.2	793	3.3	**III**	30.57		**56C**
	51.2	887	3.0	**III**	34.20		**56C**
	45.3	1002	2.7	**III**	38.63		**56C**
	39.6	1145	2.3	**III**	44.18		**56C**
	34.1	1330	2.0	**II**	51.30		**56C**
	28.8	1576	1.7	**II**	60.80		**56C**
	24.0	1849	1.4	**II**	72.83	**CMG033**	**56C**
	18.0	2474	1.1	**I**	97.45		**56C**
	15.1	2938	0.9	**I**	115.74		**56C**
	45.3	1002	4.4	**III**	38.63	**CMG042**	**56C**
	39.6	1145	3.9	**III**	44.18		**56C**
	34.1	1330	3.3	**III**	51.30		**56C**
	28.8	1576	2.7	**III**	60.80		**56C**
	24.0	1849	2.4	**III**	72.83	**CMG043**	**56C**
	18.0	2474	1.8	**II**	97.45		**56C**
	15.1	2938	1.5	**II**	115.74		**56C**
	12.4	3575	1.2	**I**	140.81		**56C**
	10.0	4424	1.0	**I**	174.26		**56C**

0.75 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.55 kW (1150 rpm)	**229**	198	1.8	**II**	5.03	**CMG002**	**56C**
	189	241	1.5	**II**	6.10		**56C**
	154	296	1.2	**I**	7.49		**56C**
	128	355	1.2	**I**	8.99		**56C**
	113	401	1.1	**I**	10.16		**56C**
	95.3	476	0.9	**I**	12.07		**56C**
	85.9	529	1.2	**I**	13.40		**56C**
	76.0	597	1.0	**I**	15.14		**56C**
	63.3	717	0.9	**I**	18.17		**56C**
	301	151	3.5	**III**	3.82	**CMG012**	**56C**
	248	183	2.9	**III**	4.63		**56C**
	202	224	2.4	**III**	5.69		**56C**
	149	304	2.3	**III**	7.72		**56C**
	125	362	2.0	**II**	9.17		**56C**
	117	387	1.8	**II**	9.81		**56C**
	100	454	2.0	**II**	11.50		**56C**
	96.6	470	1.9	**II**	11.90		**56C**
	83.3	545	2.0	**II**	13.80		**56C**
	78.6	577	1.8	**II**	14.62		**56C**
	64.4	705	1.5	**II**	17.86		**56C**
	60.3	752	1.4	**II**	19.07		**56C**
	58.0	783	1.4	**I**	19.83		**56C**
	48.8	929	1.1	**I**	23.56		**56C**
	38.9	1166	0.9	**I**	29.56		**56C**
	156	292	3.6	**III**	7.39	**CMG022**	**56C**
	131	346	3.1	**III**	8.78		**56C**
	116	392	2.7	**III**	9.93		**56C**
	104	434	4.1	**III**	11.01		**56C**
	95.4	476	3.7	**III**	12.05		**56C**
	87.0	521	3.4	**III**	13.21		**56C**
	77.7	584	3.0	**III**	14.81		**56C**
	67.3	675	2.1	**III**	17.10		**56C**
	63.0	720	2.0	**II**	18.26		**56C**
	57.3	792	2.2	**III**	20.08		**56C**
	48.2	941	1.9	**II**	23.85		**56C**
	38.4	1181	1.5	**II**	29.93		**56C**
	32.0	1417	1.2	**I**	35.91		**56C**
	24.8	1833	1.0	**I**	46.46		**56C**
	23.2	1958	0.9	**I**	49.61		**56C**
	63.1	719	3.4	**III**	18.21	**CMG032**	**56C**
	59.8	759	3.3	**III**	19.24		**56C**
	54.4	835	3.0	**III**	21.15		**56C**
	46.0	986	2.7	**III**	24.99		**56C**
	37.6	1206	2.2	**III**	30.57		**56C**
	33.6	1349	2.0	**II**	34.20		**56C**
	29.8	1524	1.7	**II**	38.63		**56C**
	26.0	1743	1.5	**II**	44.18		**56C**
	22.4	2024	1.3	**I**	51.30		**56C**
	18.9	2399	1.1	**I**	60.80		**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		NEMA
0.75 hp							
0.55 kW (1150 rpm)	**46.0**	986	4.5	**III**	24.99	**CMG042**	**56C**
	37.6	1206	3.7	**III**	30.57		**56C**
	33.6	1349	3.3	**III**	34.20		**56C**
	29.8	1524	2.9	**III**	38.63		**56C**
	26.0	1743	2.5	**III**	44.18		**56C**
	22.4	2024	2.2	**III**	51.30		**56C**
	18.9	2399	1.8	**II**	60.80		**56C**
	15.8	2814	1.6	**II**	72.83	**CMG043**	**56C**
	11.8	3765	1.2	**I**	97.45		**56C**
	9.9	4472	1.0	**I**	115.74		**56C**
1 hp							
0.75 kW (1750 rpm)	**348**	174	2.0	**III**	5.03	**CMG002**	**56C**
	287	211	1.7	**II**	6.10		**56C**
	234	259	1.4	**I**	7.49		**56C**
	195	311	1.4	**II**	8.99		**56C**
	172	351	1.3	**I**	10.16		**56C**
	145	417	1.1	**I**	12.07		**56C**
	131	463	1.3	**I**	13.40		**56C**
	116	523	1.2	**I**	15.14		**56C**
	96.3	628	1.0	**I**	18.17		**56C**
	458	132	4.0	**III**	3.82	**CMG012**	**56C-140TC**
	378	160	3.3	**III**	4.63		**56C-140TC**
	308	197	2.7	**III**	5.69		**56C-140TC**
	227	267	2.7	**III**	7.72		**56C-140TC**
	191	317	2.2	**III**	9.17		**56C-140TC**
	178	339	2.1	**III**	9.81		**56C-140TC**
	152	398	2.2	**III**	11.50		**56C-140TC**
	147	412	2.2	**III**	11.90		**56C-140TC**
	127	477	2.2	**III**	13.80		**56C-140TC**
	120	506	2.1	**III**	14.62		**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**

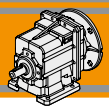
P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
1 hp							
0.75 kW (1750 rpm)	**321**	188	4.7	**III**	5.45	**CMG022**	**56C-140TC**
	237	255	4.2	**III**	7.39		**56C-140TC**
	199	303	3.5	**III**	8.78		**56C-140TC**
	176	343	3.1	**III**	9.93		**56C-140TC**
	159	381	4.6	**III**	11.01		**56C-140TC**
	145	417	4.2	**III**	12.05		**56C-140TC**
	132	457	3.9	**III**	13.21		**56C-140TC**
	118	512	3.5	**III**	14.81		**56C-140TC**
	102	591	2.4	**III**	17.10		**56C-140TC**
	95.9	631	2.2	**III**	18.26		**56C-140TC**
	87.1	694	2.5	**III**	20.08		**56C-140TC**
	73.4	825	2.1	**III**	23.85		**56C-140TC**
	58.5	1035	1.7	**II**	29.93		**56C-140TC**
	48.7	1241	1.4	**II**	35.91		**56C-140TC**
	37.7	1606	1.1	**I**	46.46		**56C-140TC**
	35.3	1715	1.0	**I**	49.61		**56C-140TC**
	32.4	1867	0.9	**I**	54.00		**56C-140TC**
	96.1	630	3.9	**III**	18.21	**CMG032**	**56C-140TC**
	91.0	665	3.7	**III**	19.24		**56C-140TC**
	82.7	731	3.4	**III**	21.15		**56C-140TC**
	70.0	864	3.1	**III**	24.99		**56C-140TC**
	57.2	1057	2.5	**III**	30.57		**56C-140TC**
	51.2	1182	2.2	**III**	34.20		**56C-140TC**
	45.3	1336	2.0	**II**	38.63		**56C-140TC**
	39.6	1527	1.7	**II**	44.18		**56C-140TC**
	34.1	1774	1.5	**II**	51.30		**56C-140TC**
	28.8	2102	1.3	**I**	60.80		**56C-140TC**
	24.0	2465	1.1	**I**	72.83	**CMG033**	**56C-140TC**
	57.2	1057	4.2	**III**	30.57	**CMG042**	**56C-140TC**
	51.2	1182	3.7	**III**	34.20		**56C-140TC**
	45.3	1336	3.3	**III**	38.63		**56C-140TC**
	39.6	1527	2.9	**III**	44.18		**56C-140TC**
	34.1	1774	2.5	**III**	51.30		**56C-140TC**
	28.8	2102	2.0	**III**	60.80		**56C-140TC**
	24.0	2465	1.8	**II**	72.83	**CMG043**	**56C-140TC**
	18.0	3299	1.3	**I**	97.45		**56C-140TC**
	15.1	3918	1.1	**I**	115.74		**56C-140TC**
	12.4	4767	0.9	**I**	140.81		**56C-140TC**
0.75 kW (1150 rpm)	**229**	264	1.3	**I**	5.03	**CMG002**	**56C**
	189	321	1.1	**I**	6.10		**56C**
	154	394	0.9	**I**	7.49		**56C**
	128	473	0.9	**I**	8.99		**56C**

Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
1 hp							
0.75 kW (1150 rpm)	**301**	201	2.6	**III**	3.82	**CMG012**	**56C-140TC**
	248	244	2.2	**III**	4.63		**56C-140TC**
	202	299	1.8	**II**	5.69		**56C-140TC**
	149	406	1.7	**II**	7.72		**56C-140TC**
	125	482	1.5	**II**	9.17		**56C-140TC**
	117	516	1.4	**I**	9.81		**56C-140TC**
	100	605	1.5	**II**	11.50		**56C-140TC**
	96.6	626	1.4	**II**	11.90		**56C-140TC**
	83.3	726	1.5	**II**	13.80		**56C-140TC**
	78.6	769	1.4	**I**	14.62		**56C-140TC**
	64.4	939	1.1	**I**	17.86		**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**
	259	233	3.8	**III**	4.43		**56C-140TC**
	211	287	3.1	**III**	5.45		**56C-140TC**
	156	389	2.7	**III**	7.39		**56C-140TC**
	131	462	2.3	**III**	8.78		**56C-140TC**
	116	523	2.0	**III**	9.93		**56C-140TC**
	104	579	3.1	**III**	11.01		**56C-140TC**
	95.4	634	2.8	**III**	12.05		**56C-140TC**
	87.0	695	2.5	**III**	13.21		**56C-140TC**
	77.7	779	2.3	**III**	14.81		**56C-140TC**
	67.3	899	1.6	**II**	17.10		**56C-140TC**
	63.0	960	1.5	**II**	18.26		**56C-140TC**
	57.3	1056	1.7	**II**	20.08		**56C-140TC**
	48.2	1255	1.4	**II**	23.85		**56C-140TC**
	38.4	1574	1.1	**I**	29.93		**56C-140TC**
	32.0	1889	0.9	**I**	35.91		**56C-140TC**
	127	478	3.3	**III**	9.08	**CMG032**	**56C-140TC**
	105	575	2.8	**III**	10.93		**56C-140TC**
	91.2	663	3.3	**III**	12.60		**56C-140TC**
	86.5	700	3.2	**III**	13.30		**56C-140TC**
	75.2	805	3.1	**III**	15.30		**56C-140TC**
	63.1	958	2.6	**III**	18.21		**56C-140TC**
	59.8	1012	2.4	**III**	19.24		**56C-140TC**
	54.4	1113	2.2	**III**	21.15		**56C-140TC**
	46.0	1315	2.0	**III**	24.99		**56C-140TC**
	37.6	1608	1.7	**II**	30.57		**56C-140TC**
	33.6	1799	1.5	**II**	34.20		**56C-140TC**
	29.8	2032	1.3	**I**	38.63		**56C-140TC**
	26.0	2324	1.1	**I**	44.18		**56C-140TC**
	22.4	2699	1.0	**I**	51.30		**56C-140TC**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
1 hp							
0.75 kW (1150 rpm)	**63.1**	958	3.9	**III**	18.21	**CMG042**	**56C-140TC**
	59.8	1012	3.7	**III**	19.24		**56C-140TC**
	46.0	1315	3.4	**III**	24.99		**56C-140TC**
	37.6	1608	2.8	**III**	30.57		**56C-140TC**
	33.6	1799	2.5	**III**	34.20		**56C-140TC**
	29.8	2032	2.2	**III**	38.63		**56C-140TC**
	26.0	2324	1.9	**II**	44.18		**56C-140TC**
	22.4	2699	1.6	**II**	51.30		**56C-140TC**
	18.9	3199	1.3	**I**	60.80		**56C-140TC**
	15.8	3752	1.2	**I**	72.83	**CMG043**	**56C-140TC**
1.5 hp							
1.1 kW (1750 rpm)	**348**	261	1.4	**I**	5.03	**CMG002**	**56C**
	287	316	1.1	**I**	6.10		**56C**
	234	388	0.9	**I**	7.49		**56C**
	195	466	0.9	**I**	8.99		**56C**
	458	198	2.7	**III**	3.82	**CMG012**	**56C-140TC**
	378	240	2.2	**III**	4.63		**56C-140TC**
	308	295	1.8	**II**	5.69		**56C-140TC**
	227	400	1.8	**II**	7.72		**56C-140TC**
	191	475	1.5	**II**	9.17		**56C-140TC**
	178	509	1.4	**I**	9.81		**56C-140TC**
	152	596	1.5	**II**	11.50		**56C-140TC**
	147	617	1.4	**II**	11.90		**56C-140TC**
	127	716	1.5	**II**	13.80		**56C-140TC**
	120	758	1.4	**II**	14.62		**56C-140TC**
	98.0	926	1.1	**I**	17.86		**56C-140TC**
	91.8	989	1.1	**I**	19.07		**56C-140TC**
	88.2	1029	1.0	**I**	19.83		**56C-140TC**
	74.3	1222	0.9	**I**	23.56		**56C-140TC**
	479	190	4.7	**III**	3.66	**CMG022**	**56C-140TC**
	395	230	3.8	**III**	4.43		**56C-140TC**
	321	283	3.1	**III**	5.45		**56C-140TC**
	237	383	2.8	**III**	7.39		**56C-140TC**
	199	455	2.3	**III**	8.78		**56C-140TC**
	176	515	2.1	**III**	9.93		**56C-140TC**
	159	571	3.1	**III**	11.01		**56C-140TC**
	145	625	2.8	**III**	12.05		**56C-140TC**
	132	685	2.6	**III**	13.21		**56C-140TC**
	118	768	2.3	**III**	14.81		**56C-140TC**
	102	887	1.6	**II**	17.10		**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		NEMA
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		**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	**CMG042**	**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**

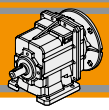
P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
1.5 hp							
1.1 kW (1150 rpm)	**307**	295	4.5	**III**	3.74	**CMG032**	**140TC-180TC**
	255	355	3.7	**III**	4.50		**140TC-180TC**
	210	433	3.1	**III**	5.48		**140TC-180TC**
	182	498	3.2	**III**	6.31		**140TC-180TC**
	145	626	2.5	**III**	7.93		**140TC-180TC**
	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		**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	**CMG042**	**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**

Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
2 hp							
1.5 kW (1750 rpm)	**479**	253	3.5	**III**	3.66	**CMG022**	**56C-140TC**
	395	307	2.9	**III**	4.43		**56C-140TC**
	321	377	2.3	**III**	5.45		**56C-140TC**
	237	511	2.1	**III**	7.39		**56C-140TC**
	199	607	1.8	**II**	8.78		**56C-140TC**
	176	687	1.5	**II**	9.93		**56C-140TC**
	159	761	2.3	**III**	11.01		**56C-140TC**
	145	833	2.1	**III**	12.05		**56C-140TC**
	132	914	1.9	**II**	13.21		**56C-140TC**
	118	1024	1.7	**II**	14.81		**56C-140TC**
	102	1182	1.2	**I**	17.10		**56C-140TC**
	95.9	1262	1.1	**I**	18.26		**56C-140TC**
	87.1	1388	1.3	**I**	20.08		**56C-140TC**
	73.4	1649	1.1	**I**	23.85		**56C-140TC**
	319	379	3.5	**III**	5.48	**CMG032**	**56C-140TC**
	277	436	3.7	**III**	6.31		**56C-140TC**
	221	548	2.9	**III**	7.93		**56C-140TC**
	193	628	2.5	**III**	9.08		**56C-140TC**
	160	755	2.1	**III**	10.93		**56C-140TC**
	139	872	2.5	**III**	12.60		**56C-140TC**
	132	920	2.4	**III**	13.30		**56C-140TC**
	114	1058	2.3	**III**	15.30		**56C-140TC**
	96.1	1259	2.0	**II**	18.21		**56C-140TC**
	91.0	1330	1.9	**II**	19.24		**56C-140TC**
	82.7	1462	1.7	**II**	21.15		**56C-140TC**
	70.0	1728	1.5	**II**	24.99		**56C-140TC**
	57.2	2114	1.3	**I**	30.57		**56C-140TC**
	51.2	2365	1.1	**I**	34.20		**56C-140TC**
	45.3	2671	1.0	**I**	38.63		**56C-140TC**
	193	628	3.9	**III**	9.08	**CMG042**	**56C-140TC**
	160	755	3.3	**III**	10.93		**56C-140TC**
	139	872	3.6	**III**	12.60		**56C-140TC**
	132	920	3.4	**III**	13.30		**56C-140TC**
	114	1058	3.5	**III**	15.30		**56C-140TC**
	96.1	1259	3.0	**III**	18.21		**56C-140TC**
	91.0	1330	2.8	**III**	19.24		**56C-140TC**
	70.0	1728	2.6	**III**	24.99		**56C-140TC**
	57.2	2114	2.1	**III**	30.57		**56C-140TC**
	51.2	2365	1.9	**II**	34.20		**56C-140TC**
	45.3	2671	1.7	**II**	38.63		**56C-140TC**
	39.6	3054	1.4	**II**	44.18		**56C-140TC**
	34.1	3547	1.2	**I**	51.30		**56C-140TC**
	28.8	4204	1.0	**I**	60.80		**56C-140TC**
	24.0	4931	0.9	**I**	72.83	**CMG043**	**56C-140TC**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
2 hp							
1.5 kW (1150 rpm)	**307**	394	3.4	**III**	3.74	**CMG032**	**180TC**
	255	474	2.8	**III**	4.50		**180TC**
	210	577	2.3	**III**	5.48		**180TC**
	182	664	2.4	**III**	6.31		**180TC**
	145	835	1.9	**II**	7.93		**180TC**
	127	955	1.7	**II**	9.08		**180TC**
	105	1150	1.4	**I**	10.93		**180TC**
	91.2	1326	1.7	**II**	12.60		**180TC**
	86.5	1399	1.6	**II**	13.30		**180TC**
	75.2	1610	1.5	**II**	15.30		**180TC**
	63.1	1916	1.3	**I**	18.21		**180TC**
	59.8	2024	1.2	**I**	19.24		**180TC**
	54.4	2225	1.1	**I**	21.15		**180TC**
	46.0	2630	1.0	**I**	24.99		**180TC**
	307	394	5.2	**III**	3.74	**CMG042**	**180TC**
	255	474	4.3	**III**	4.50		**180TC**
	210	577	3.5	**III**	5.48		**180TC**
	182	664	3.5	**III**	6.31		**180TC**
	145	835	2.8	**III**	7.93		**180TC**
	127	955	2.6	**III**	9.08		**180TC**
	105	1150	2.2	**III**	10.93		**180TC**
	91.2	1326	2.3	**III**	12.60		**180TC**
	86.5	1399	2.2	**III**	13.30		**180TC**
	75.2	1610	2.3	**III**	15.30		**180TC**
	63.1	1916	1.9	**II**	18.21		**180TC**
	59.8	2024	1.8	**II**	19.24		**180TC**
	46.0	2630	1.7	**II**	24.99		**180TC**
	37.6	3217	1.4	**I**	30.57		**180TC**
	33.6	3598	1.2	**I**	34.20		**180TC**
	29.8	4065	1.1	**I**	38.63		**180TC**
	26.0	4648	1.0	**I**	44.18		**180TC**
3 hp							
2.2 kW (1750 rpm)	**458**	396	1.3	**I**	3.82	**CMG012**	**140TC**
	378	480	1.1	**I**	4.63		**140TC**
	308	590	0.9	**I**	5.69		**140TC**
	227	800	0.9	**I**	7.72		**140TC**
	479	379	2.3	**III**	3.66	**CMG022**	**140TC**
	395	460	1.9	**II**	4.43		**140TC**
	321	565	1.6	**II**	5.45		**140TC**
	237	766	1.4	**I**	7.39		**140TC**
	199	910	1.2	**I**	8.78		**140TC**
	176	1030	1.0	**I**	9.93		**140TC**
	159	1142	1.5	**II**	11.01		**140TC**
	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

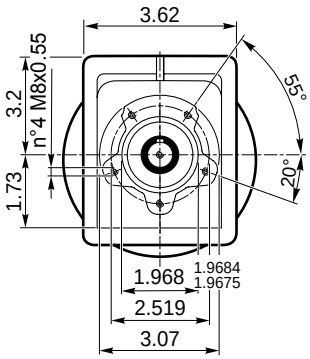
Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
3 hp							
2.2 kW (1750 rpm)	**468**	388	3.4	**III**	3.74	**CMG032**	**140TC-180TC**
	389	467	2.8	**III**	4.50		**140TC-180TC**
	319	569	2.3	**III**	5.48		**140TC-180TC**
	277	654	2.4	**III**	6.31		**140TC-180TC**
	221	823	1.9	**II**	7.93		**140TC-180TC**
	193	942	1.7	**II**	9.08		**140TC-180TC**
	160	1133	1.4	**II**	10.93		**140TC-180TC**
	139	1307	1.7	**II**	12.60		**140TC-180TC**
	132	1379	1.6	**II**	13.30		**140TC-180TC**
	114	1587	1.6	**II**	15.30		**140TC-180TC**
	96.1	1889	1.3	**I**	18.21		**140TC-180TC**
	91.0	1995	1.2	**I**	19.24		**140TC-180TC**
	82.7	2194	1.1	**I**	21.15		**140TC-180TC**
	70.0	2592	1.0	**I**	24.99		**140TC-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**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
5 hp							
3.7 kW (1750 rpm)	**468**	647	3.1	**III**	3.74	**CMG042**	**180TC**
	389	779	2.6	**III**	4.50		**180TC**
	319	948	2.1	**III**	5.48		**180TC**
	277	1090	2.1	**III**	6.31		**180TC**
	221	1371	1.7	**II**	7.93		**180TC**
	193	1569	1.6	**II**	9.08		**180TC**
	160	1888	1.3	**I**	10.93		**180TC**
	139	2179	1.4	**II**	12.60		**180TC**
	132	2299	1.3	**I**	13.30		**180TC**
	114	2645	1.4	**II**	15.30		**180TC**
	96.1	3148	1.2	**I**	18.21		**180TC**
	91.0	3325	1.1	**I**	19.24		**180TC**
	70.0	4320	1.0	**I**	24.99		**180TC**
	57.2	5285	0.8	**I**	30.57		**180TC**

Dimensiones ***Dimensions***

CMG 002 U



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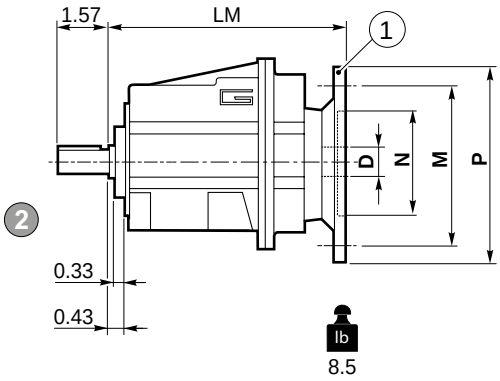

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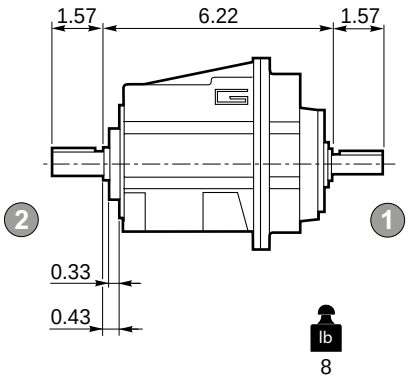
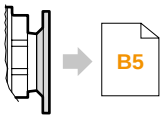
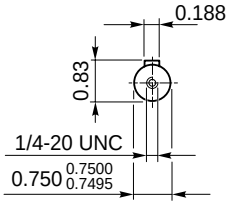


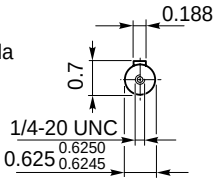
Bridas Motor
NEMA C-FACE



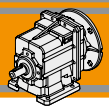
Eje de salida
Output shaft
2



Eje de entrada
Input shaft
1

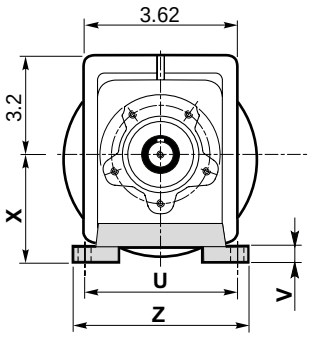


Brida Motor / *Motor flange*	
1 **Dimensiones NEMA** ***NEMA Dimensions***	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM 002	6.61



Dimensiones ***Dimensions***

CMG 002 H



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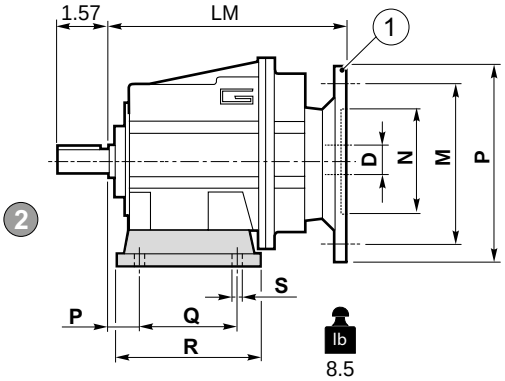

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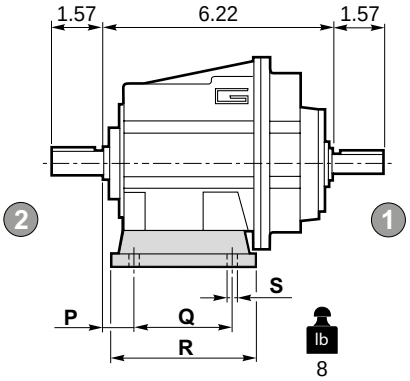
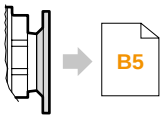
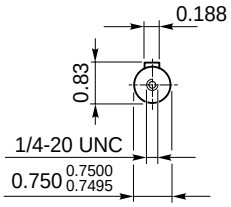


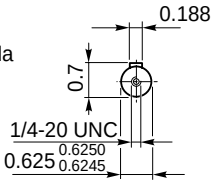
Bridas Motor
NEMA C-FACE



Eje de salida
Output shaft
2



Eje de entrada
Input shaft
1



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

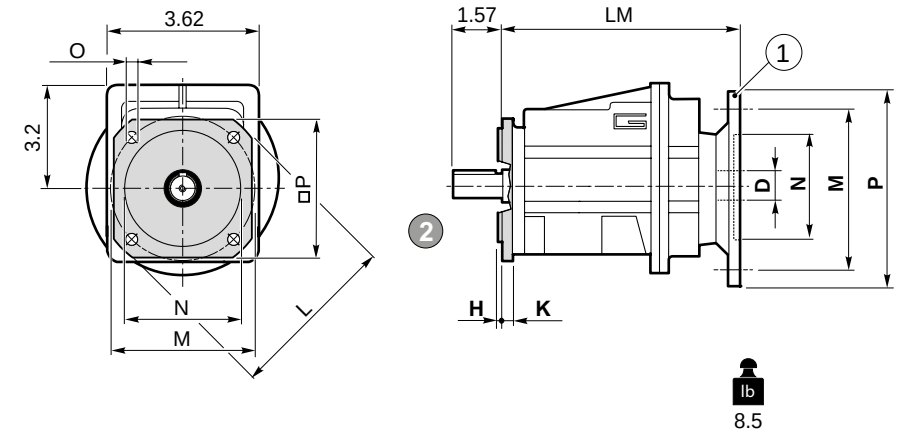
Preferencial / *Preferred*

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

Dimensiones ***Dimensions***

CMG 002 F

CMG 002 F..



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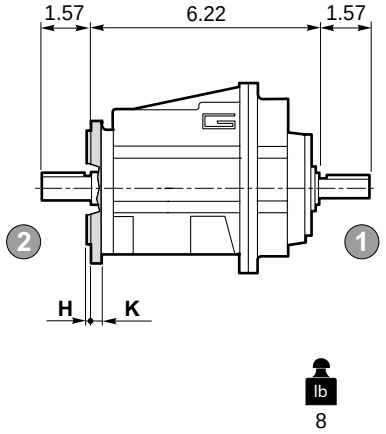
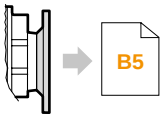
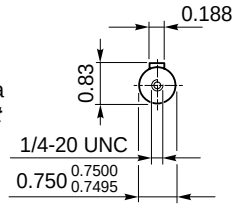


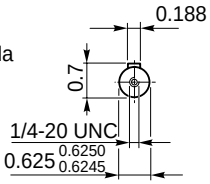
Bridas Motor
NEMA C-FACE



Eje de salida
Output shaft
2

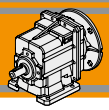


Eje de entrada
Input shaft
1



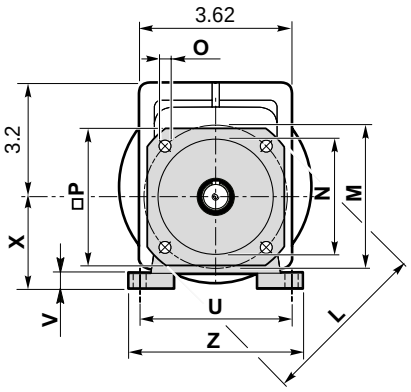
Versión F / *F Version*									
CMG CMGIS	**H**	**K**	**L**	**M**	**N**	**O**	**P**	**Brida / *Flange***	
								Tipo / *Type*	Peso / *Weight* [lb]
002	0.138	0.276	4.134	3.346	2.756 2.7548 2.7536	0.256	3.543	**F105**	0.22
	0.138	0.315	4.724	3.937	3.150 3.1488 3.1476	0.276	3.937	**F120**	0.44
	0.138	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..



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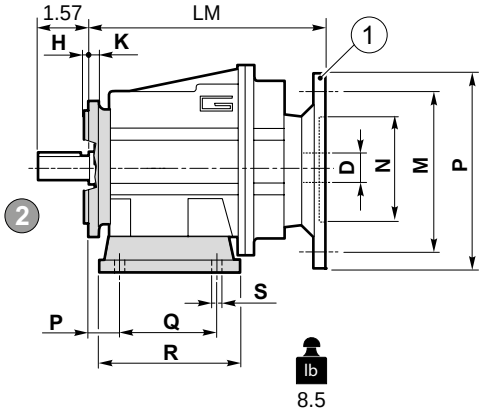

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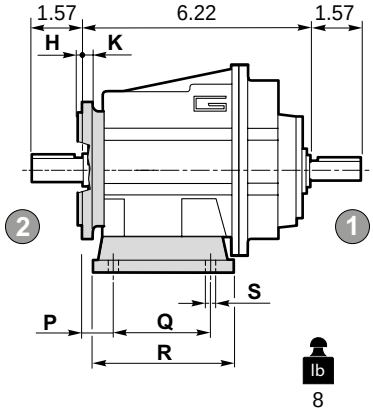
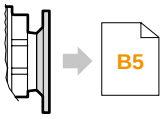
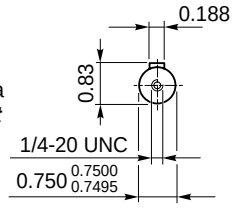


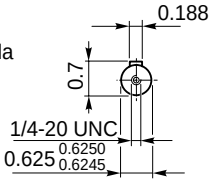
Bridas Motor
NEMA C-FACE



Eje de salida
Output shaft
2



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]
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	•	•	•

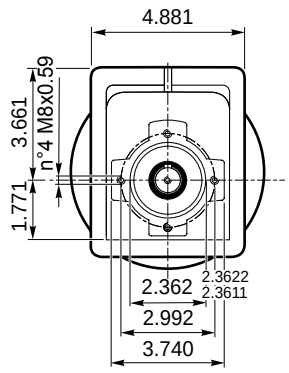
Preferencial / *Preferred*

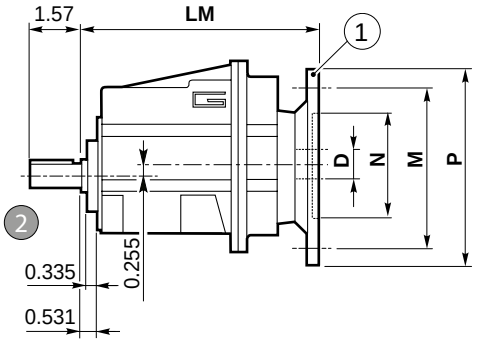
• Combinaciones posibles H/F / *Possible combinations H/F*

Dimensiones *Dimensions*

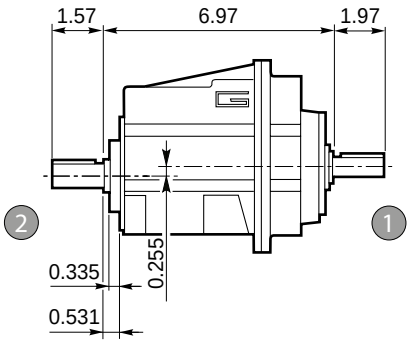
CMG 012 U - CMG 013 U

CMG 012 U

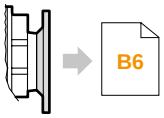




CMGIS 012 U

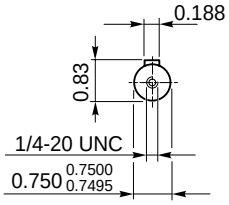


Bridas Motor
NEMA C-FACE



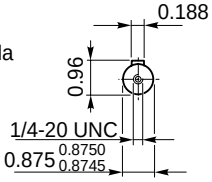
lb 14.2

Eje de salida
Output shaft
2

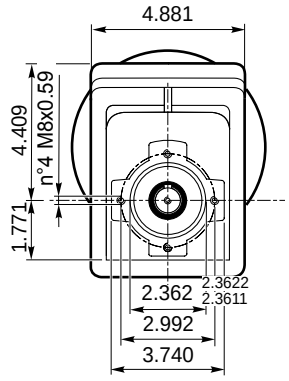


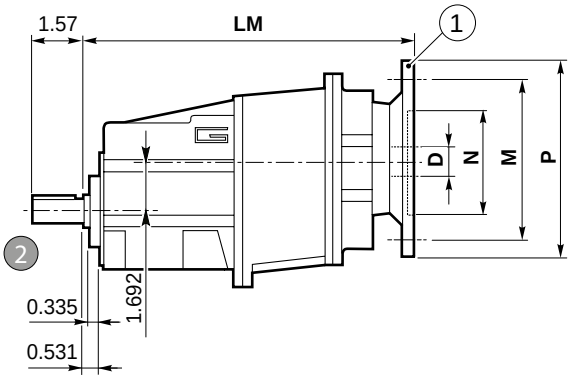
lb 13.4

Eje de entrada
Input shaft
1

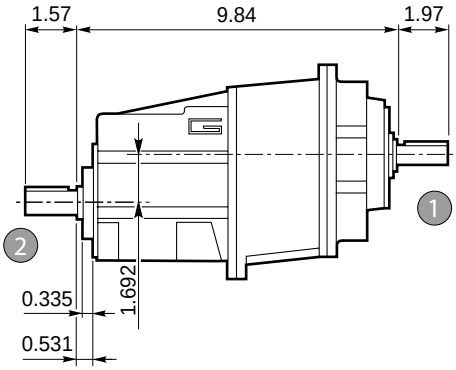


CMG 013 U

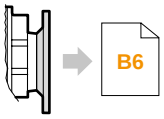




CMGIS 013 U

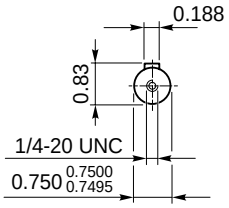


Bridas Motor
NEMA C-FACE



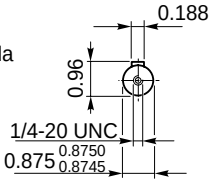
lb 20.1

Eje de salida
Output shaft
2

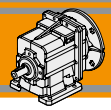


lb 20

Eje de entrada
Input shaft
1



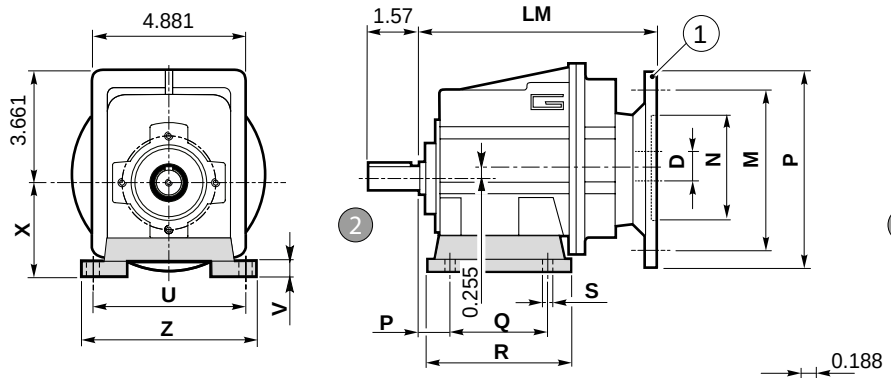
Brida Motor / *Motor flange*		
1 **Dimensiones NEMA** ***NEMA Dimensions***		
	56 C	**140 TC**
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 012	7.87	
LM 013	10.75	



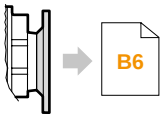
Dimensiones ***Dimensions***

CMG 012 H.. - CMG 013 H..

CMG 012 H..



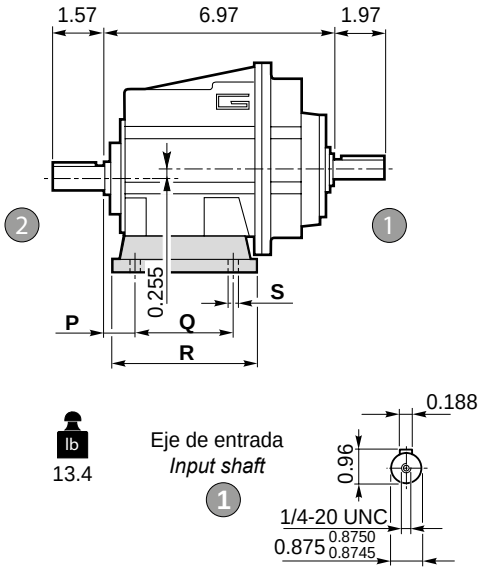
Bridas Motor
NEMA C-FACE



lb 14.2

Eje de salida
Output shaft
2

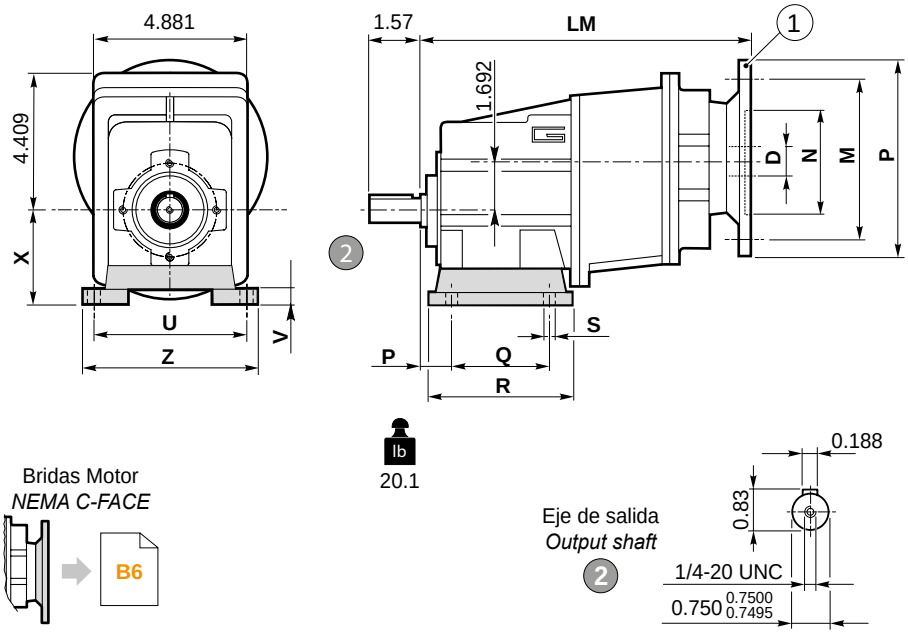
CMGIS 012 H..



lb 13.4

Eje de entrada
Input shaft
1

CMG 013 H..

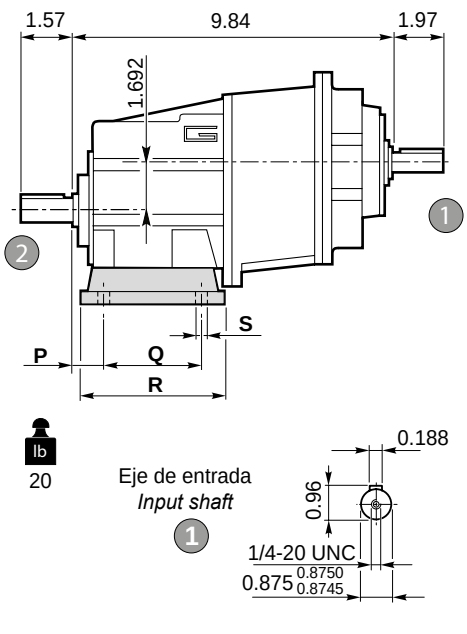


Bridas Motor
NEMA C-FACE

lb 20.1

Eje de salida
Output shaft
2

CMGIS 013 H..



lb 20

Eje de entrada
Input shaft
1

Versión **H** / ***H** Version*										
CMG CMGIS	**P**	**Q**	**R**	**S**	**U**	**V**	**X**	**Z**	**Patas / *Foot*** 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

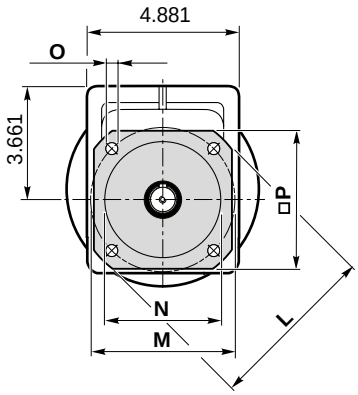
Preferencial / *Preferred*

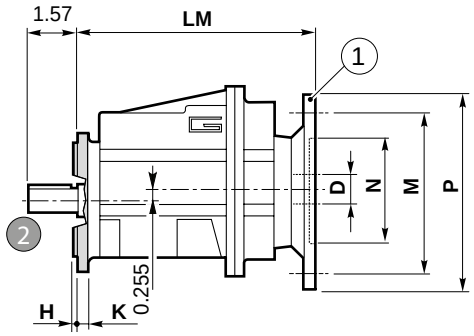
Brida Motor / *Motor flange*		
1 **Dimensiones NEMA** ***NEMA Dimensions***		
	56 C	**140 TC**
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 012	7.87	
LM 013	10.75	

Dimensiones *Dimensions*

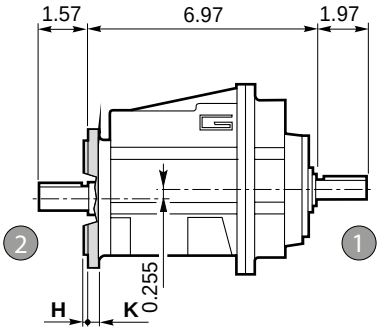
CMG 012 F - CMG 013 F

CMG 012 F..

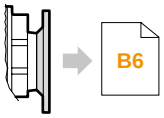




CMGIS 012 F..

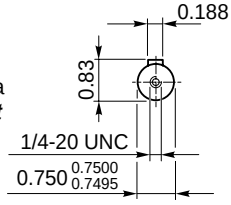


Bridas Motor
NEMA C-FACE



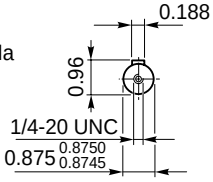
lb 14.2

Eje de salida
Output shaft
2

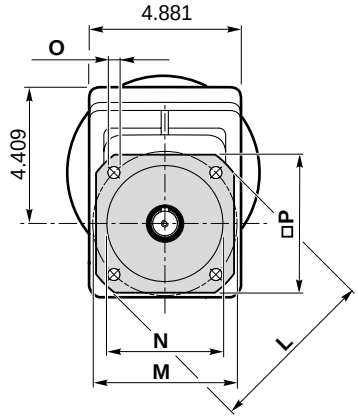


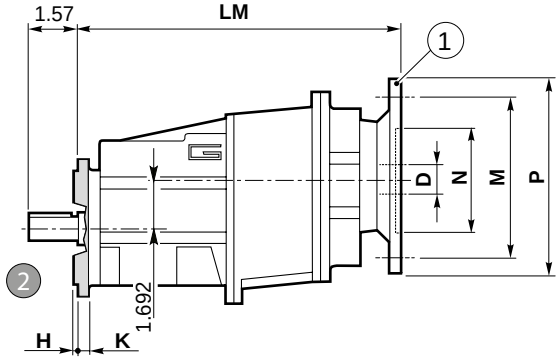
lb 13.4

Eje de entrada
Input shaft
1

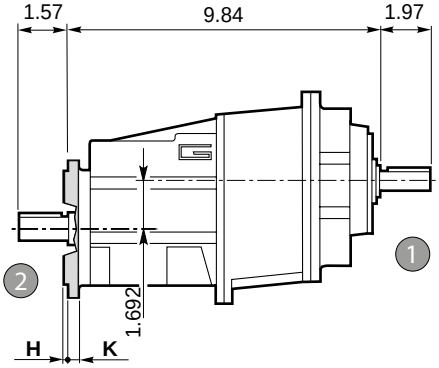


CMG 013 F..

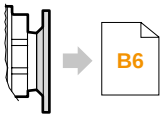




CMGIS 013 F..

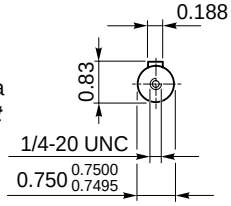


Bridas Motor
NEMA C-FACE



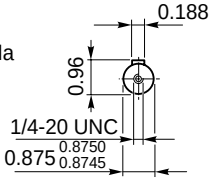
lb 20.1

Eje de salida
Output shaft
2



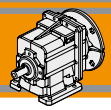
lb 20

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

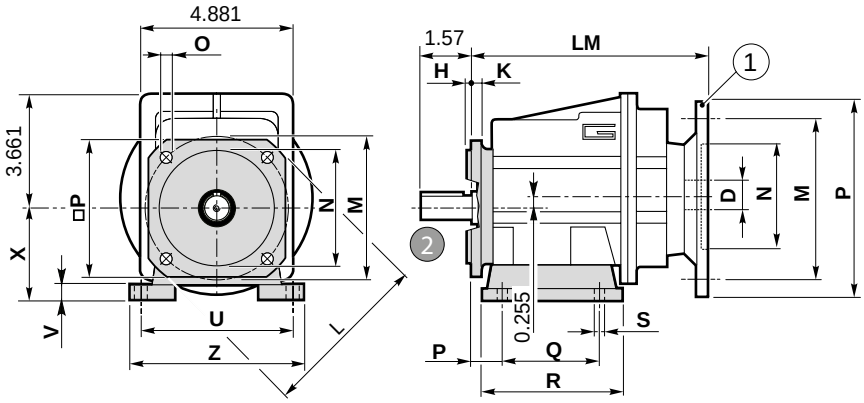
Brida Motor / *Motor flange*		
1 **Dimensiones NEMA** ***NEMA Dimensions***		
	56 C	**140 TC**
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 012	7.87	
LM 013	10.75	



Dimensiones *Dimensions*

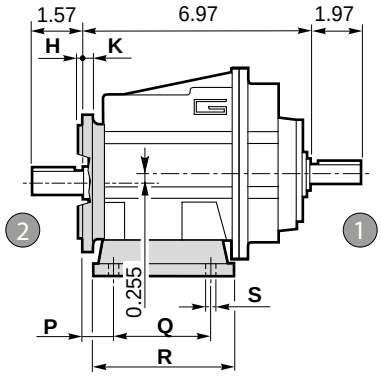
CMG 012 H../F.. - CMG 013 H../F..

CMG 012 H../F..



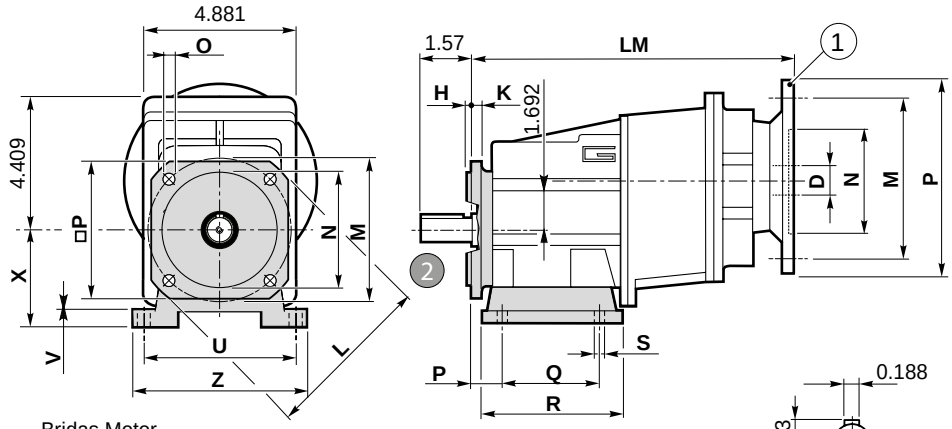
lb 14.5

CMGIS 012 H../F..

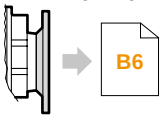


lb 13.7

CMG 013 H../F..



Bridas Motor
NEMA C-FACE

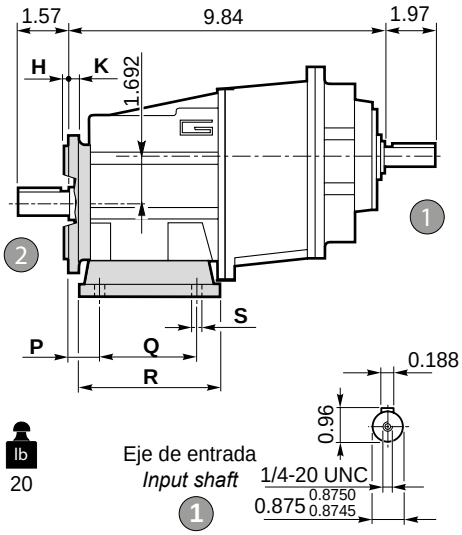


B6

lb 20.1

Eje de salida
Output shaft
2

CMGIS 013 H../F..



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	

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]	**F120**	**F140**	**F160**	**F200**
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	•	•	•	•

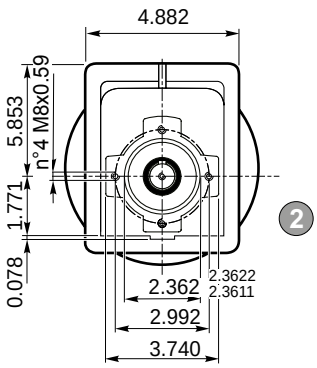
Preferencial / *Preferred*

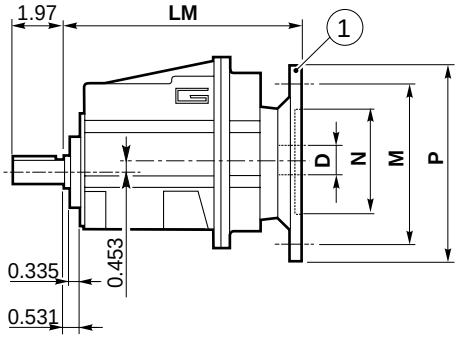
• Combinaciones posibles H/F / *Possible combinations H/F*

Dimensiones ***Dimensions***

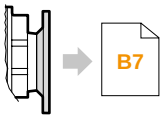
CMG 022 U - CMG 023 U

CMG 022 U



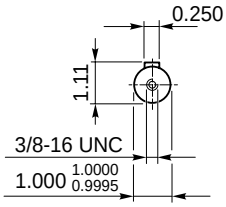


Bridas Motor
NEMA C-FACE

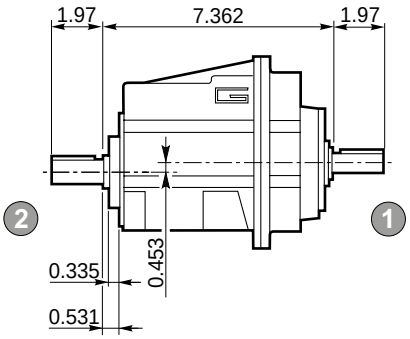


lb 16.6

Eje de salida
Output shaft
2

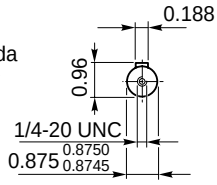


CMGIS 022 U

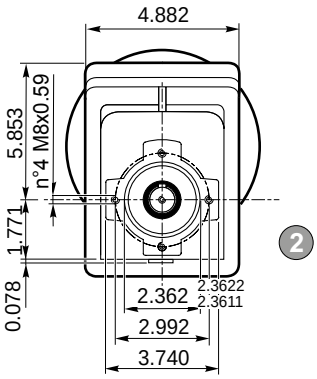


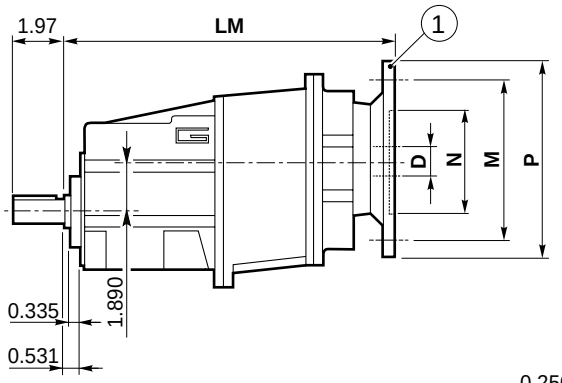
lb 15.8

Eje de entrada
Input shaft
1

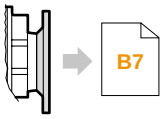


CMG 023 U



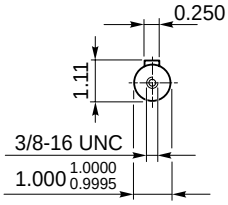


Bridas Motor
NEMA C-FACE

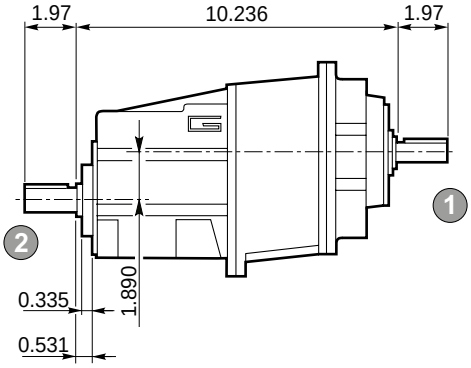


lb 23.3

Eje de salida
Output shaft
2

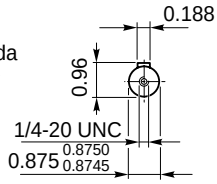


CMGIS 023 U

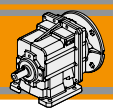


lb 22.5

Eje de entrada
Input shaft
1



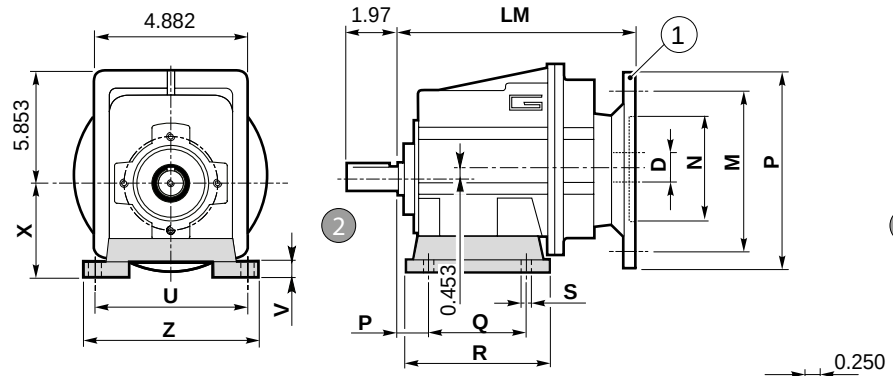
Brida Motor / *Motor flange*		
(1) **Dimensiones NEMA** ***NEMA Dimensions***		
	56 C	**140 TC**
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 022	8.268	
LM 023	10.61	



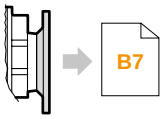
Dimensiones ***Dimensions***

CMG 022 H.. - CMG 023 H..

CMG 022 H..



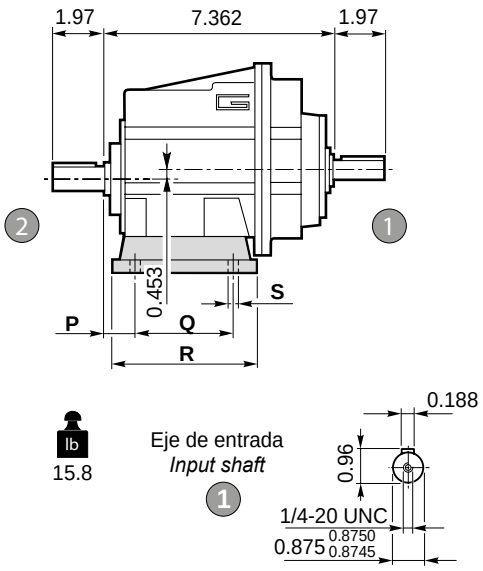
Bridas Motor
NEMA C-FACE



16.6 lb

Eje de salida
Output shaft
2

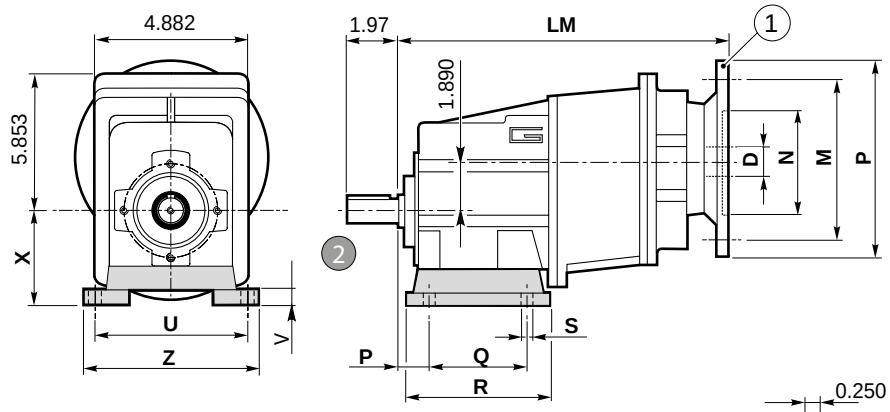
CMGIS 022 H..



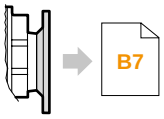
15.8 lb

Eje de entrada
Input shaft
1

CMG 023 H..



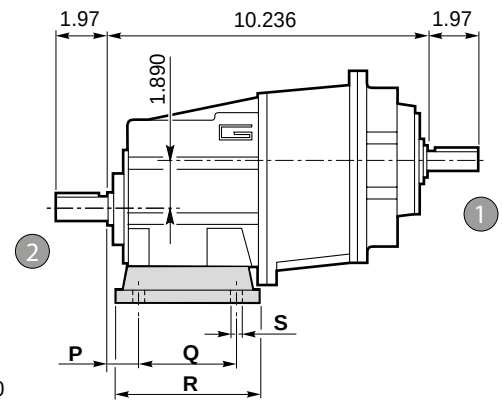
Bridas Motor
NEMA C-FACE



23.3 lb

Eje de salida
Output shaft
2

CMGIS 023 H..



22.5 lb

Eje de entrada
Input shaft
1

Versión **H** / ***H*** *Version*										
CMG CMGIS	**P**	**Q**	**R**	**S**	**U**	**V**	**X**	**Z**	**Patas / *Foot*** 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

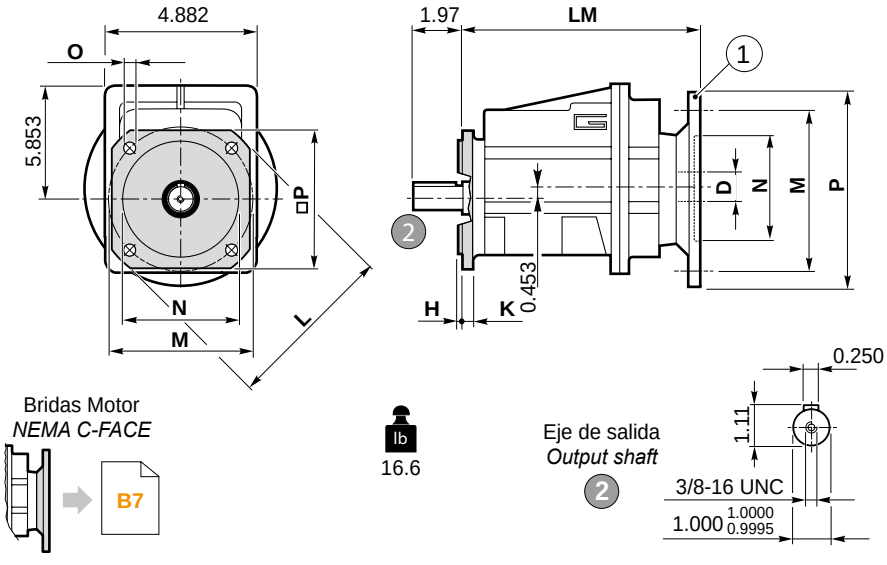
Preferencial / *Preferred*

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	

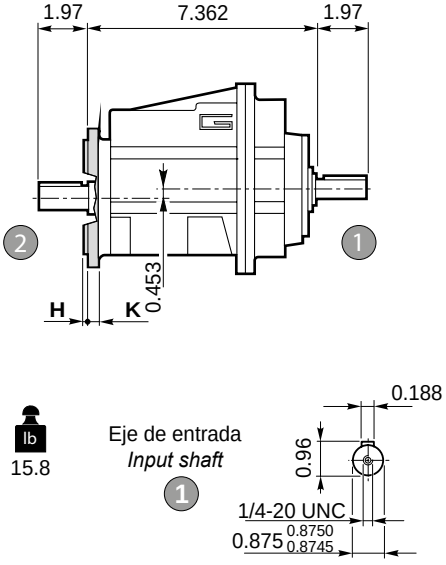
Dimensiones ***Dimensions***

CMG 022 F.. - CMG 023 F..

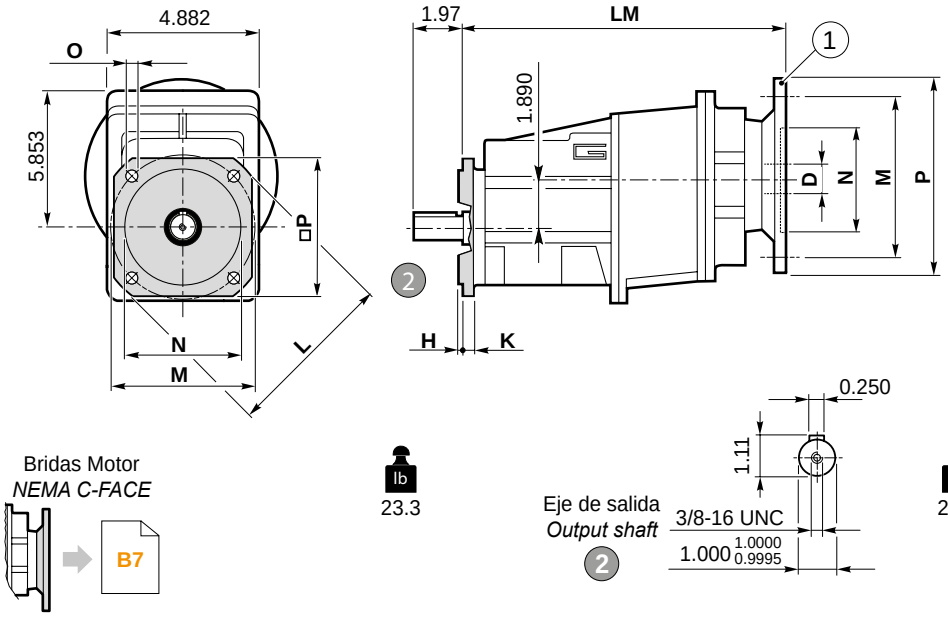
CMG 022 F..



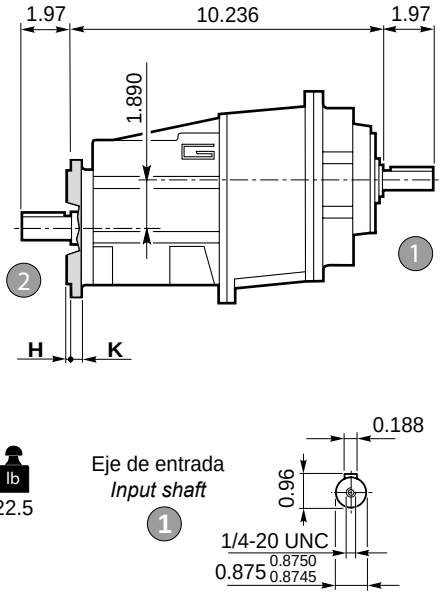
CMGIS 022 F..



CMG 023 F..

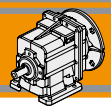


CMGIS 023 F..



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

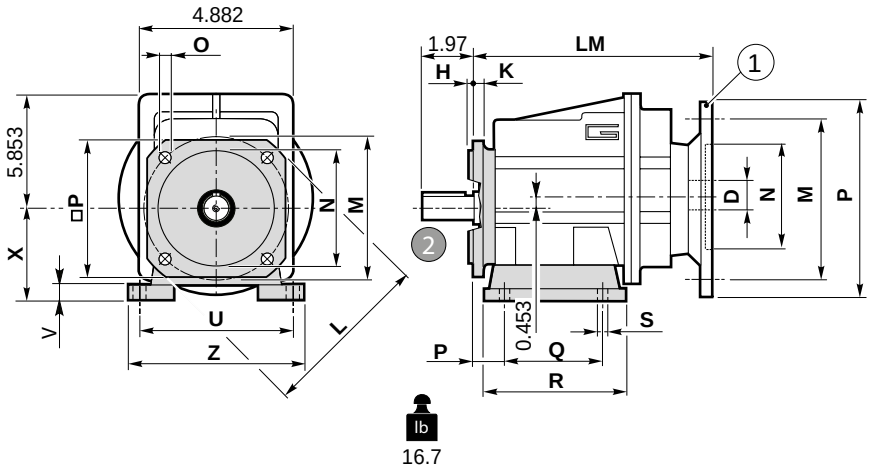
Brida Motor / *Motor flange*		
(1) **Dimensiones NEMA** ***NEMA Dimensions***		
	56 C	**140 TC**
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM 022	8.268	
LM 023	10.61	



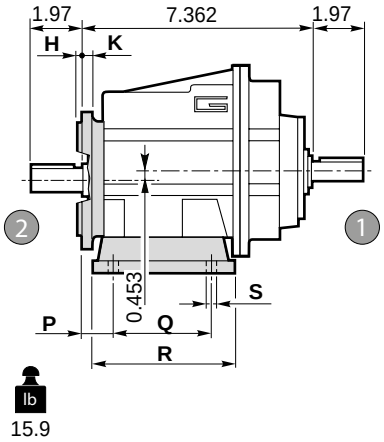
Dimensiones *Dimensions*

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

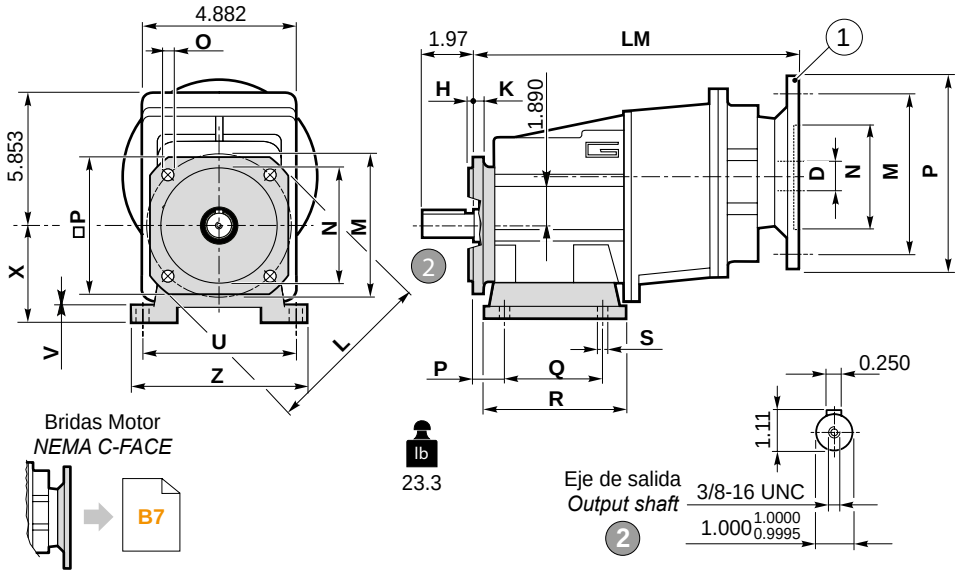
CMG 022 H../F..



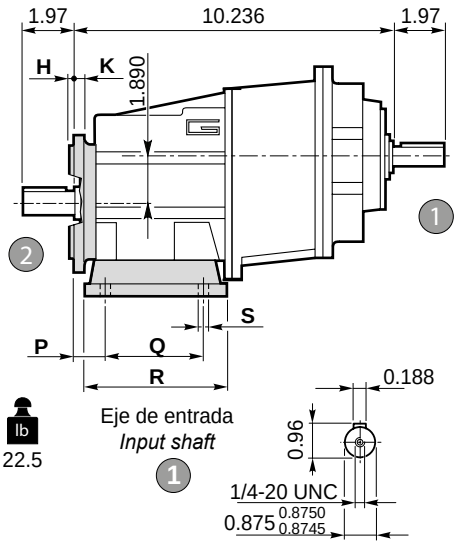
CMGIS 022 H../F..



CMG 023 H../F..



CMGIS 023 H../F..



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*** Tipo *Type*	Peso / *Weight* [lb]	**F120**	**F140**	**F160**	**F200**
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	●	●	●	●

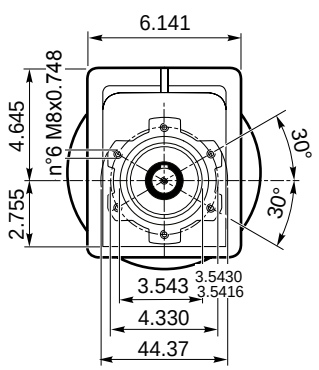
Preferencial / *Preferred*

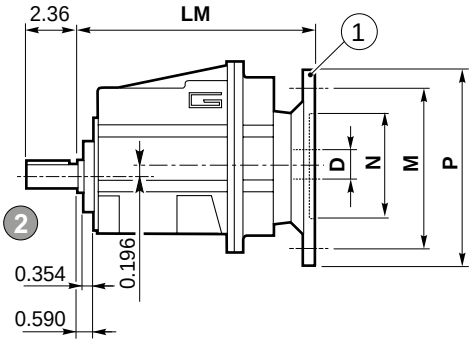
● Combinaciones posibles H/F / *Possible combinations H/F*

Dimensiones *Dimensions*

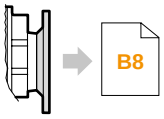
CMG 032 U - CMG 033 U

CMG 032 U



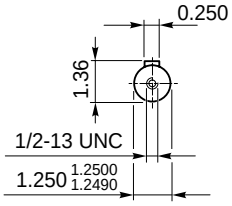


Bridas Motor
NEMA C-FACE

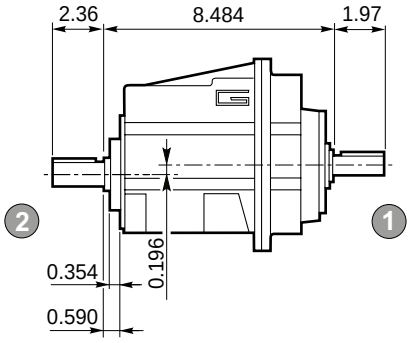


lb 24.9

Eje de salida
Output shaft
2

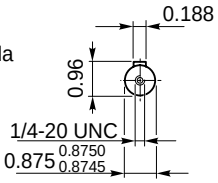


CMGIS 032 U

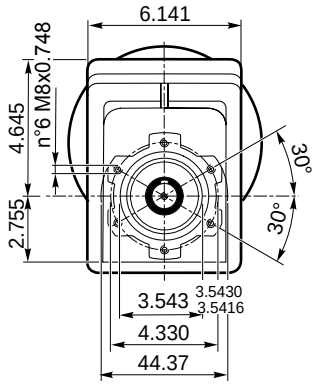


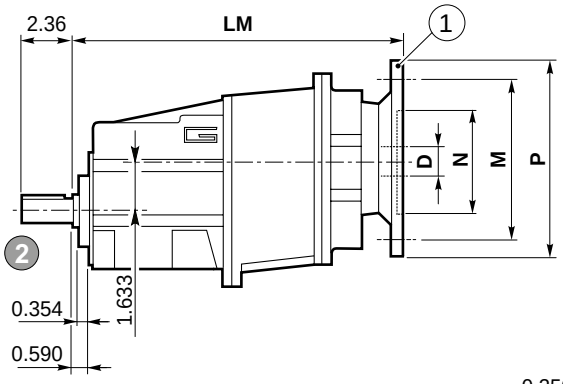
lb 24.7

Eje de entrada
Input shaft
1

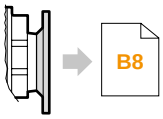


CMG 033 U



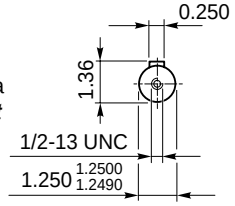


Bridas Motor
NEMA C-FACE

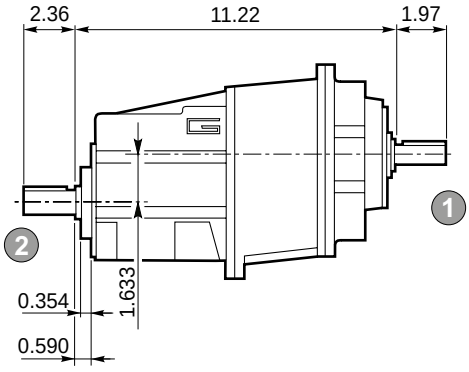


lb 30

Eje de salida
Output shaft
2

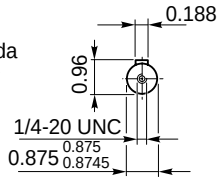


CMGIS 033 U

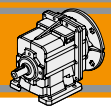


lb 29.3

Eje de entrada
Input shaft
1



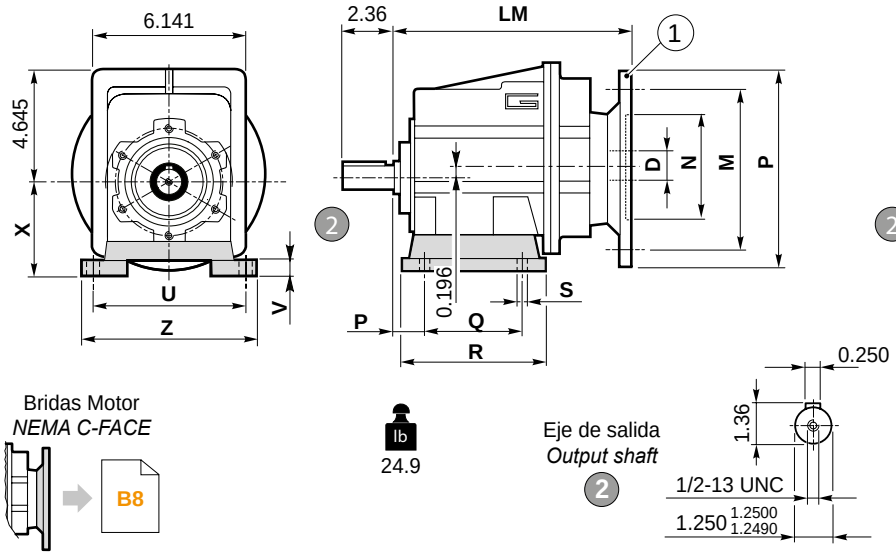
Brida Motor / *Motor flange*			
(1) **Dimensiones NEMA** *NEMA Dimensions*			
	56 C	**140 TC**	**180 TC**
N	4.5		4.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 032	9.705		9.612
LM 033	12.126		-



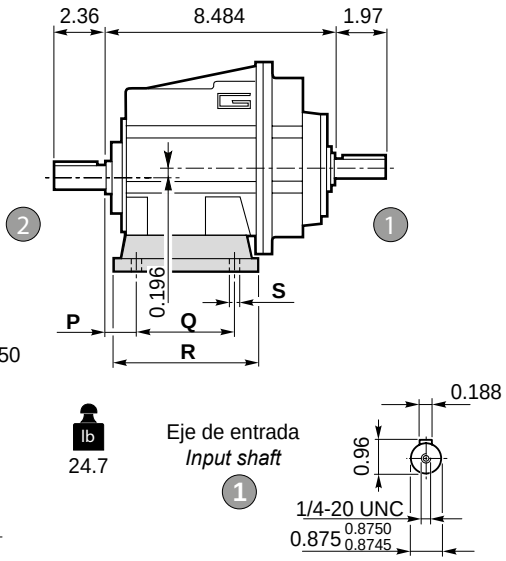
Dimensiones ***Dimensions***

CMG 032 H.. - CMG 033 H..

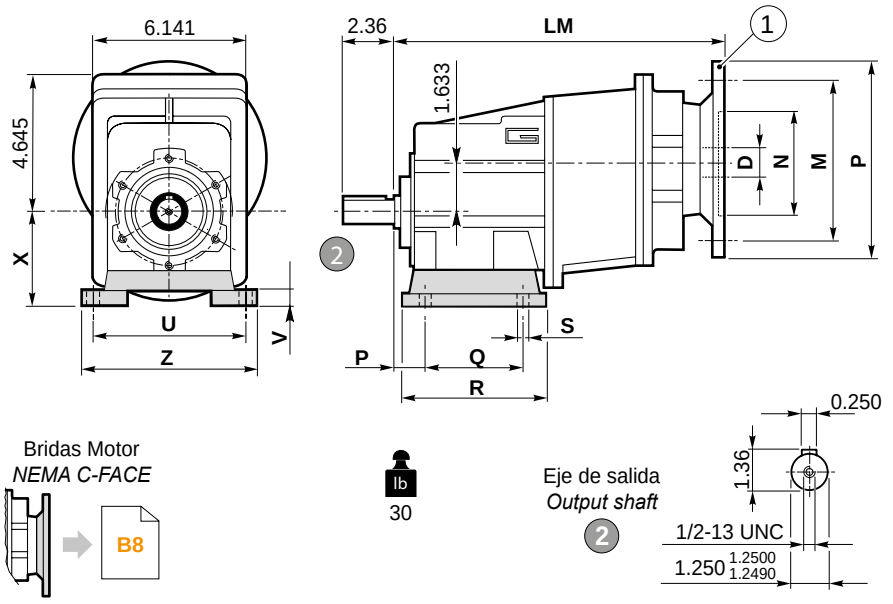
CMG 032 H..



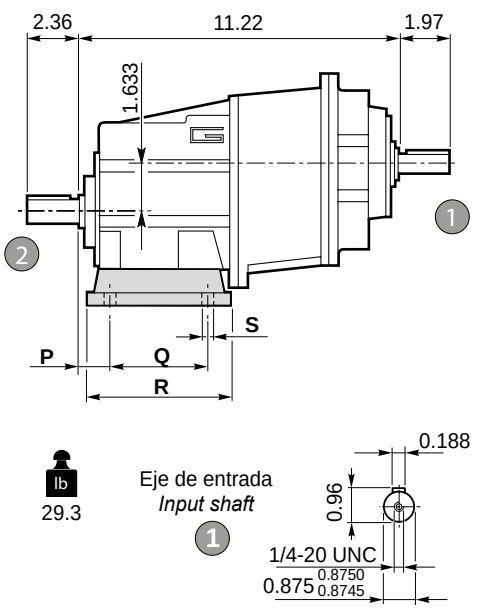
CMGIS 032 H..



CMG 033 H..



CMGIS 033 H..



Versión **H** / ***H*** *Version*										
CMG CMGIS	**P**	**Q**	**R**	**S**	**U**	**V**	**X**	**Z**	**Patas / *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

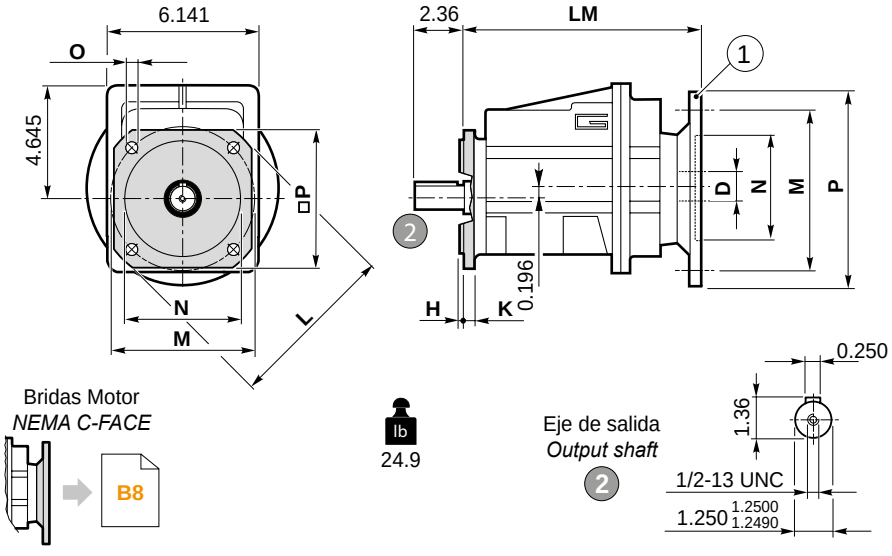
Preferencial / *Preferred*

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		-

Dimensiones *Dimensions*

CMG 032 F.. - CMG 033 F..

CMG 032 F..

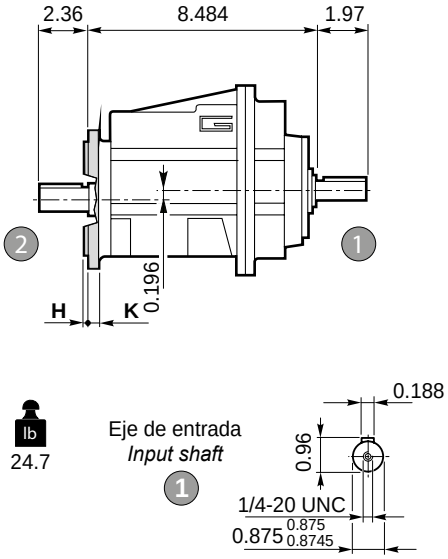


Bridas Motor
NEMA C-FACE

lb 24.9

Eje de salida
Output shaft
2

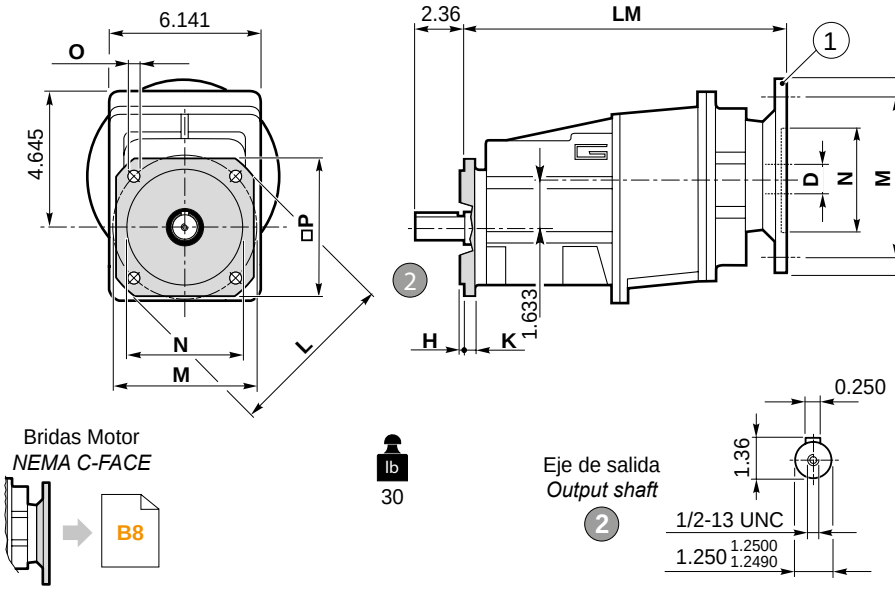
CMGIS 032 F..



lb 24.7

Eje de entrada
Input shaft
1

CMG 033 F..

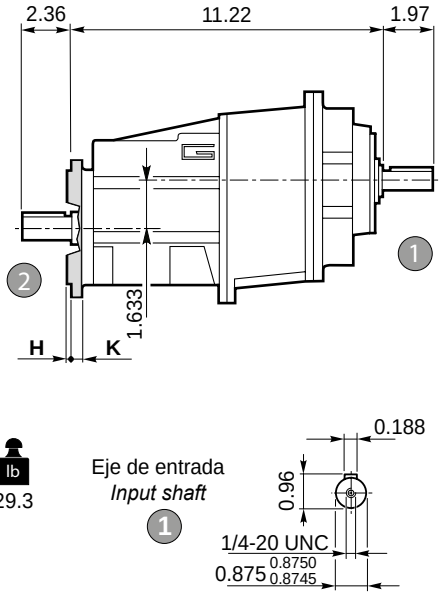


Bridas Motor
NEMA C-FACE

lb 30

Eje de salida
Output shaft
2

CMGIS 033 F..

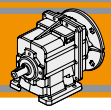


lb 29.3

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

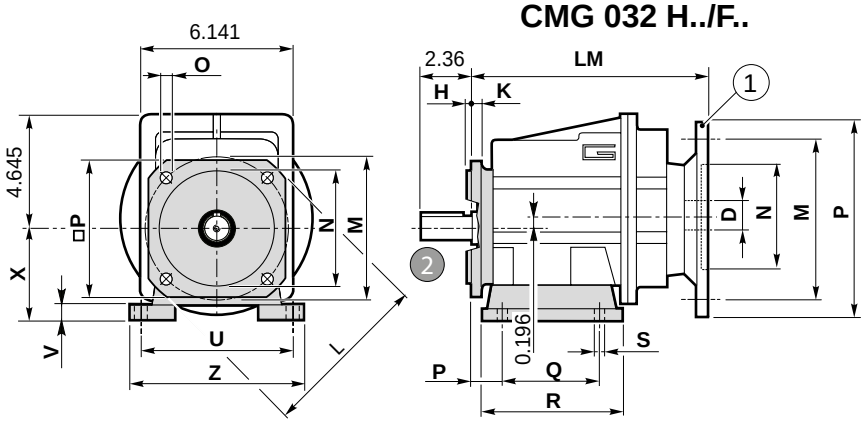
Brida Motor / *Motor flange*			
1 **Dimensiones NEMA** ***NEMA Dimensions***			
	56 C	**140 TC**	**180 TC**
N	4.5		4.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 032	9.705		9.612
LM 033	12.126		



Dimensiones *Dimensions*

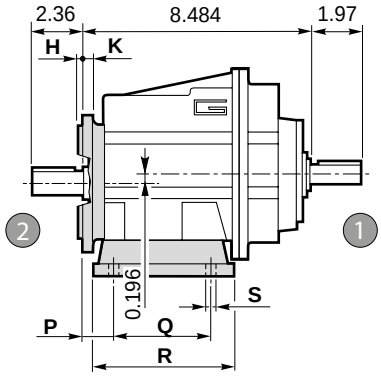
CMG 032 H../F.. - CMG 033 H../F..

CMG 032 H../F..



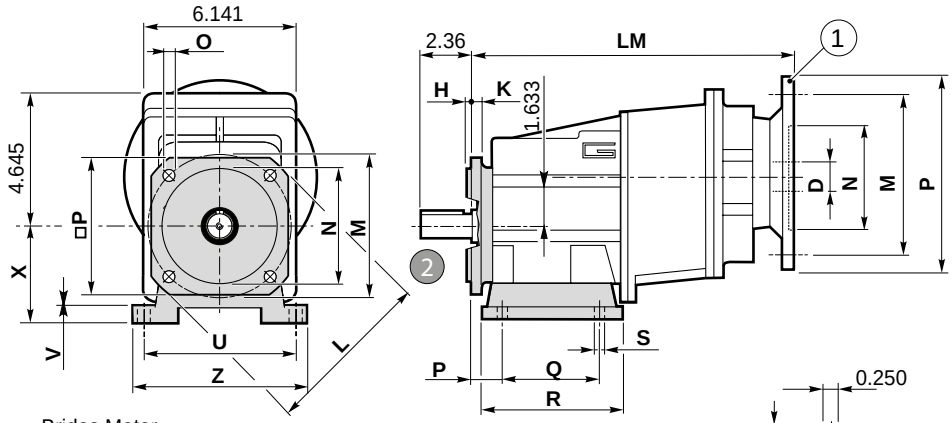
24.9

CMGIS 032 H../F..

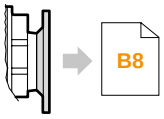


24.7

CMG 033 H../F..



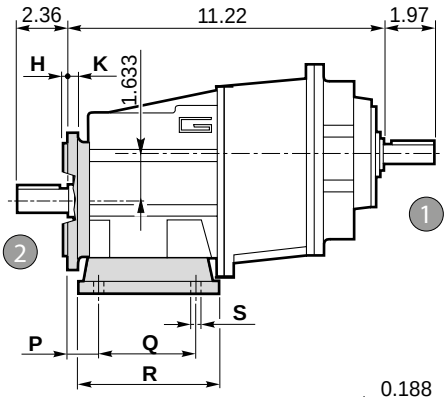
Bridas Motor
NEMA C-FACE



30

Eje de salida
Output shaft
2

CMGIS 033 H../F..



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		-

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]	**F120**	**F140**	**F160**	**F200**
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	•	•	•	•

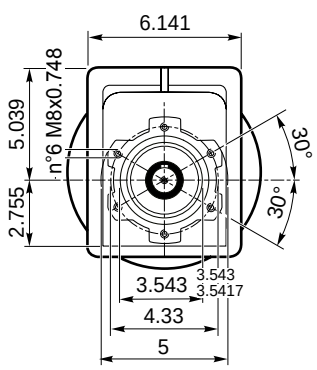
Preferencial / *Preferred*

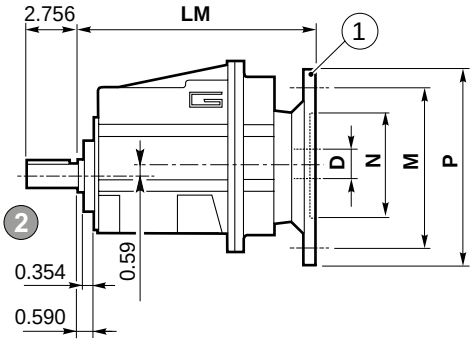
• Combinaciones posibles H/F / *Possible combinations H/F*

Dimensiones ***Dimensions***

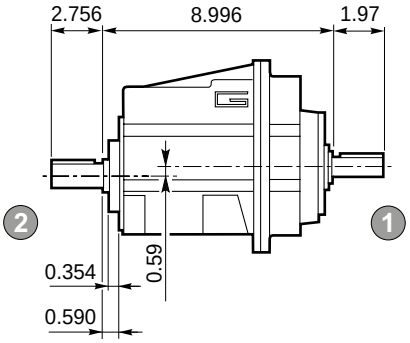
CMG 042 U - CMG 043 U

CMG 042 U

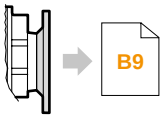




CMGIS 042 U

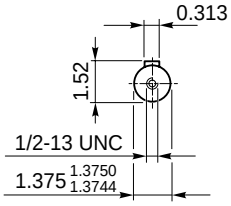


Bridas Motor
NEMA C-FACE



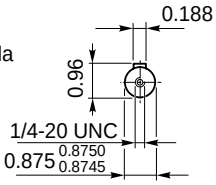
lb 29.1

Eje de salida
Output shaft
2

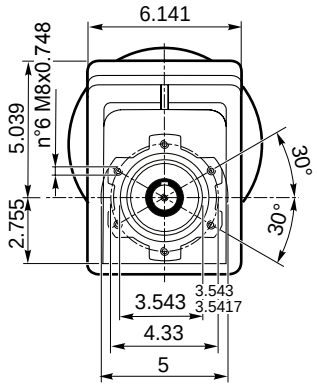


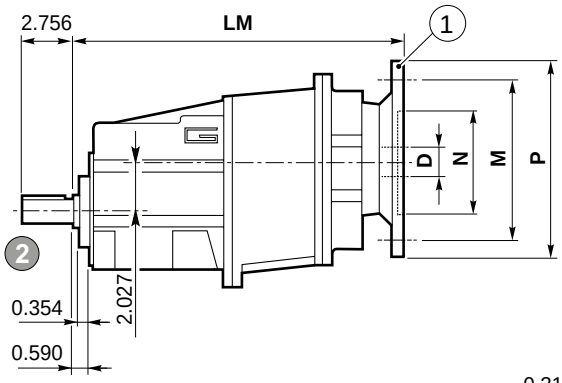
lb 28.8

Eje de entrada
Input shaft
1

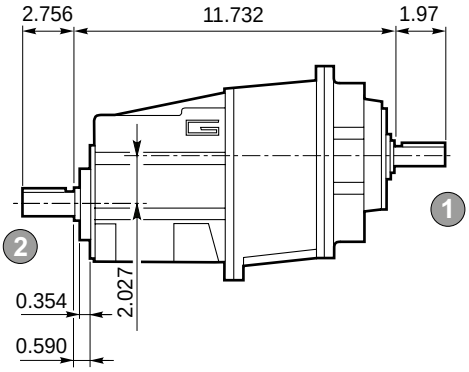


CMG 043 U

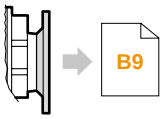




CMGIS 043 U

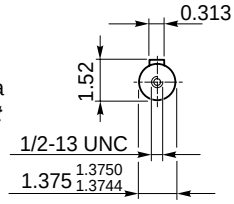


Bridas Motor
NEMA C-FACE



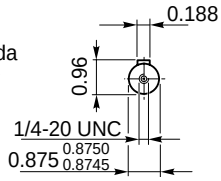
lb 34.1

Eje de salida
Output shaft
2

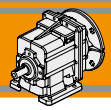


lb 33.5

Eje de entrada
Input shaft
1



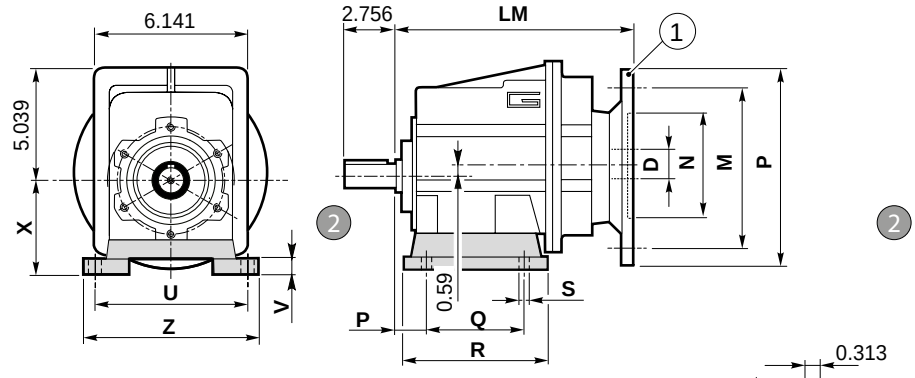
Brida Motor / *Motor flange*			
(1) **Dimensiones NEMA** ***NEMA Dimensions***			
	56 C	**140 TC**	**180 TC**
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 042	10.217		10.124
LM 043	12.638		-



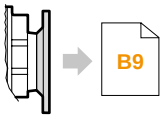
Dimensiones ***Dimensions***

CMG 042 H.. - CMG 043 H..

CMG 042 H..



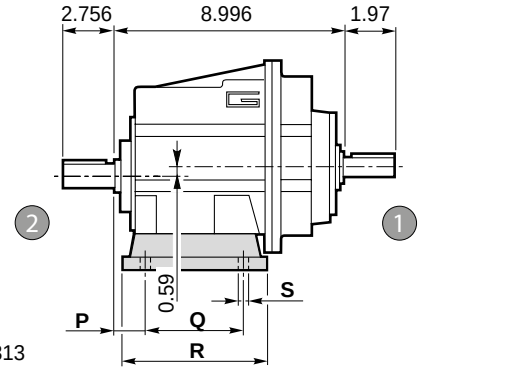
Bridas Motor
NEMA C-FACE



lb 29.1

Eje de salida
Output shaft
2

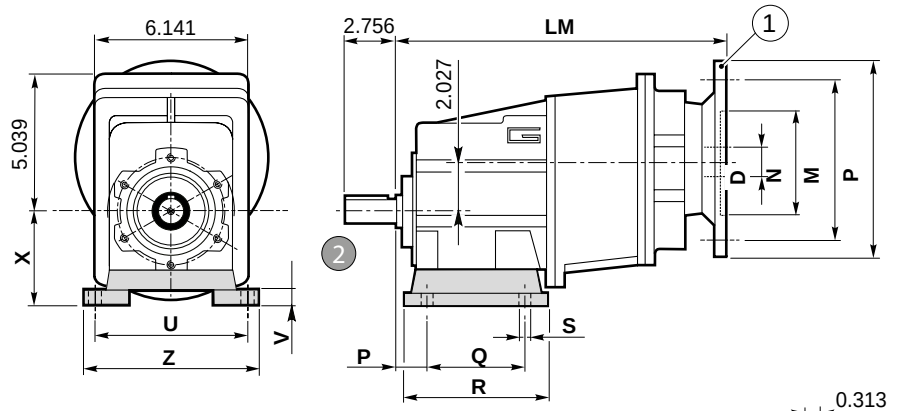
CMGIS 042 H..



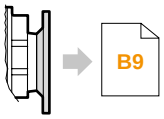
lb 28.8

Eje de entrada
Input shaft
1

CMG 043 H..



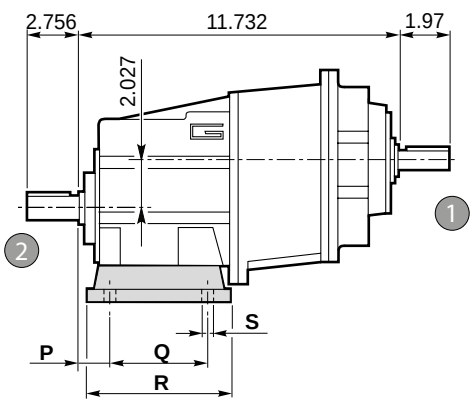
Bridas Motor
NEMA C-FACE



lb 34.1

Eje de salida
Output shaft
2

CMGIS 043 H..



lb 33.5

Eje de entrada
Input shaft
1

Versión **H** / ***H** Version*										
CMG CMGIS	**P**	**Q**	**R**	**S**	**U**	**V**	**X**	**Z**	**Patas / *Foot*** 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			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

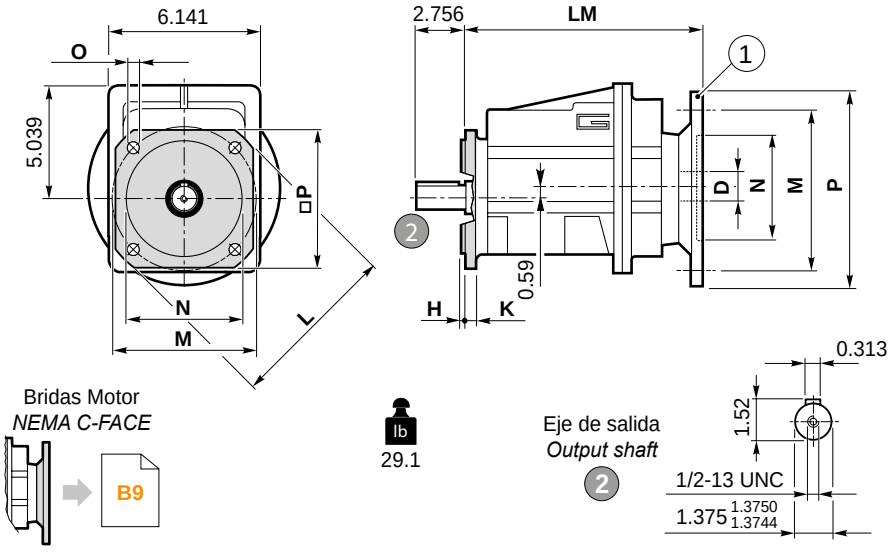
Preferencial / *Preferred*

Brida Motor / *Motor flange*			
1 **Dimensiones NEMA** ***NEMA Dimensions***			
	56 C	**140 TC**	**180 TC**
N	4.5		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		-

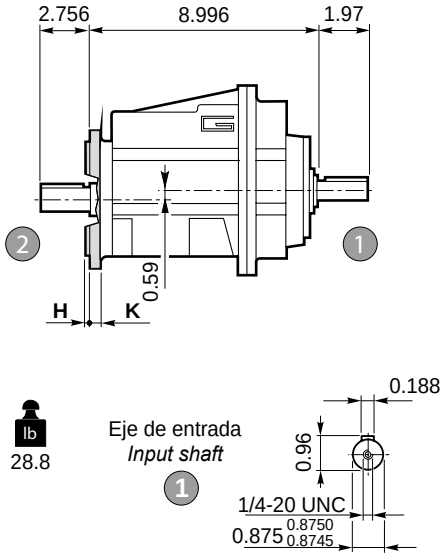
Dimensiones *Dimensions*

CMG 042 F.. - CMG 043 F..

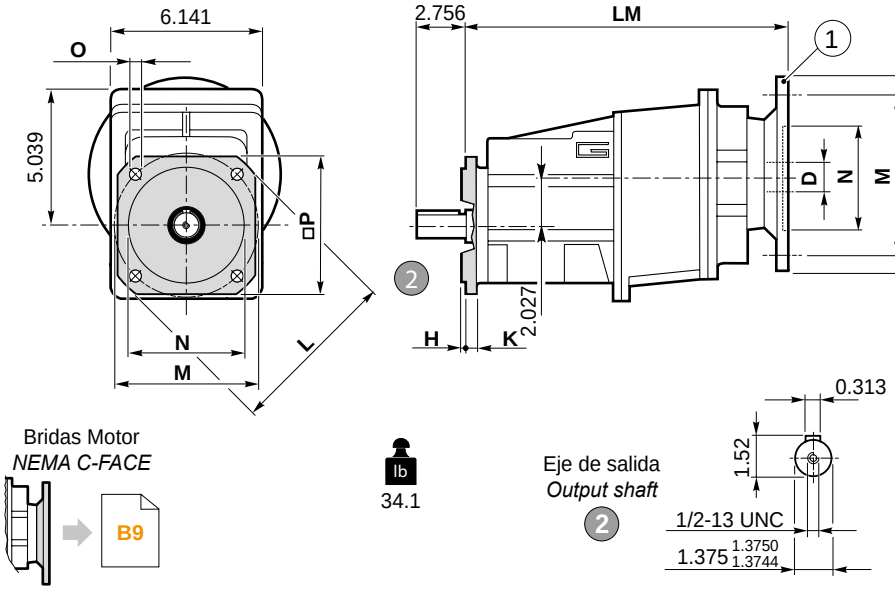
CMG 042 F..



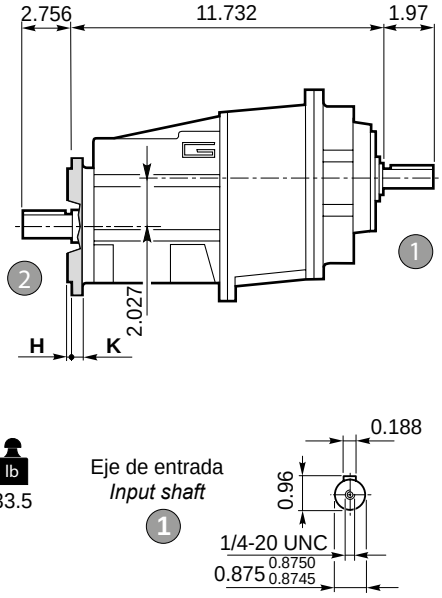
CMGIS 042 F..



CMG 043 F..

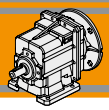


CMGIS 043 F..



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

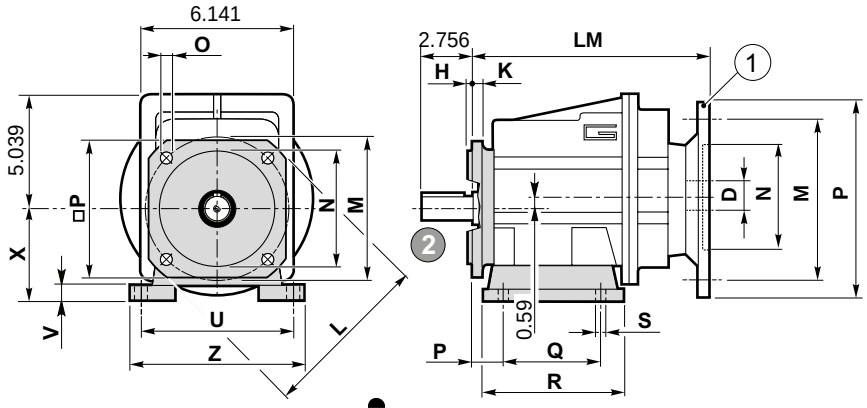
Brida Motor / *Motor flange*			
1 **Dimensiones NEMA** ***NEMA Dimensions***			
	56 C	**140 TC**	**180 TC**
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM 042	10.217		10.124
LM 043	12.638		-



Dimensiones *Dimensions*

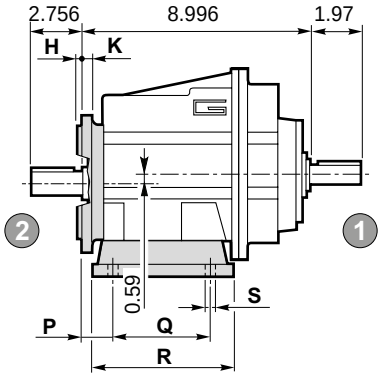
CMG 042 H../F.. - CMG 043 H../F..

CMG 042 H../F..



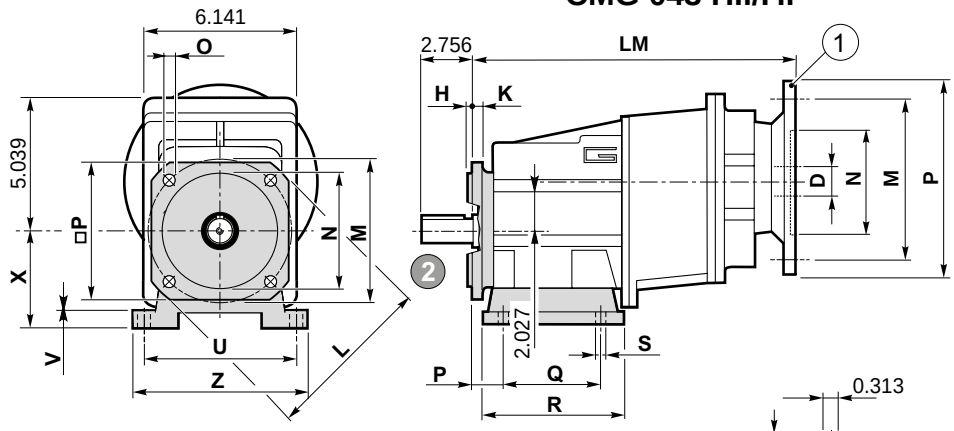
lb 29.2

CMGIS 042 H../F..



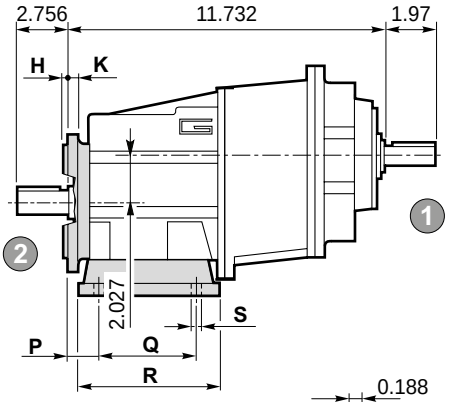
lb 28.9

CMG 043 H../F..



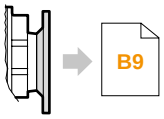
lb 34.2

CMGIS 043 H../F..

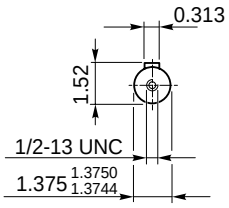


lb 33.6

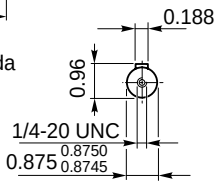
Bridas Motor
NEMA C-FACE



Eje de salida
Output shaft
2



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		-

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]	**F120**	**F140**	**F160**	**F200**
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			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*

TRANSTECNO®

THE MODULAR GEARMOTOR

CMB

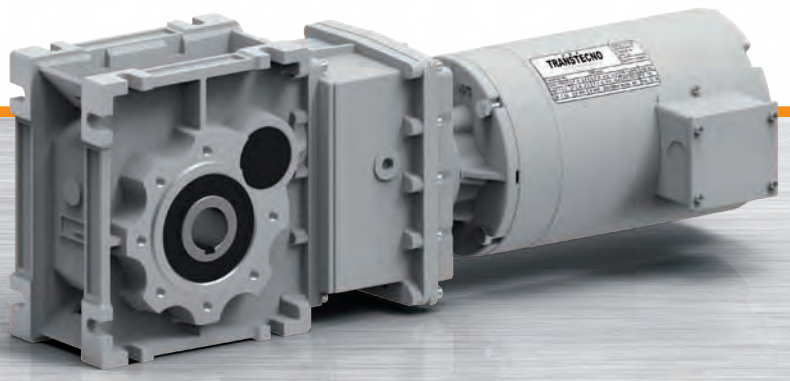
CMB

CMB Alu

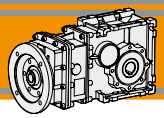
NEMA DIMENSIONS

REDUCTORES ORTOGONALES DE ENGRANAJES HELICOIDALES

HELICAL BEVEL GEARBOXES



TRANSTECNO · GENUINE · PRODUCTS



ENERGY SAVING

Índice	*Index*	Pág. *Page*

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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Características técnicas

Technical features

Los reductores ortogonales de engranajes helicoidales serie CMB se caracterizan por un alto grado de modularidad, de hecho, fueron desarollados 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:

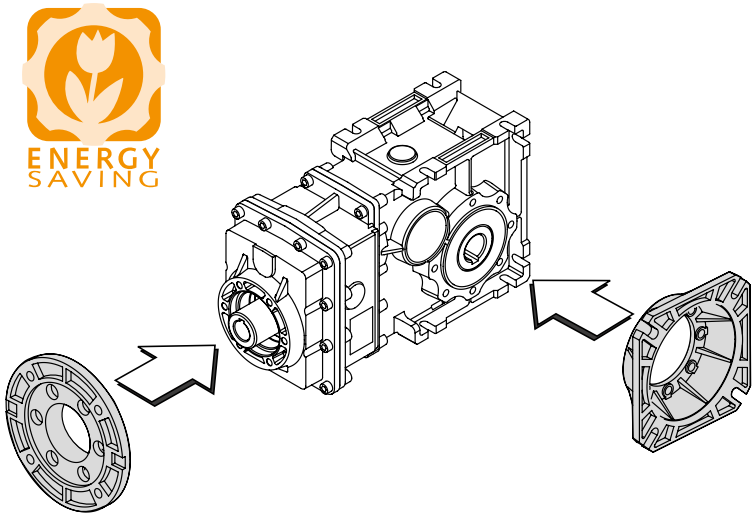
- Carcasa en aluminio en los tamaños.
- Engranajes siempre rectificados.
- Lubricación permanente con aceite sintético de larga vida..

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.*



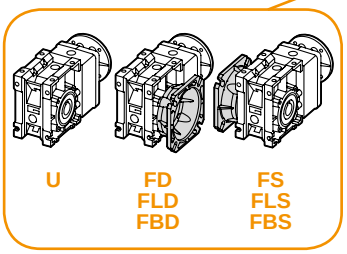
Clasificación

Classification

REDUCTOR / *GEARBOX*

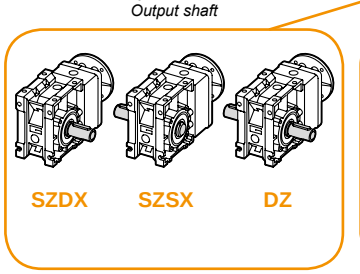
CMB	63	3	U	9.81	56C	SZDX	BRSX	90°
Tipo *Type*	Tamaño *Size*	Etapas *Stages*	Versión *Version*	Relación de reducción *Ratio*	NEMA	Eje de salida *Output shaft*	Brazo de reacción *Torque arm*	Ângulo *Angle*
CMB	**40** **50** **63** **90**	**2** **3**	**U** **FD** **FS** **FBD** **FBS** **FLD** **FLS**	véase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

Relación de reducción
Gearbox Version



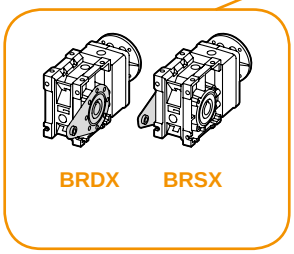
F.....D = Lado derecho / *Right side*
FL = Brida larga / *Long flange*
F.....S = Lado izquierdo / *Left side*
FB = Brida corta / *Short flange*

Eje de salida
Output shaft



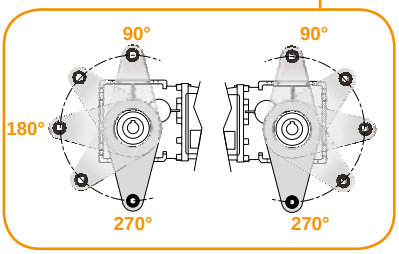
SZDX = Flecha sencilla lado derecho
Single shaft right side
DZ = Flecha doble / *Double shaft*
SZSX =Flecha sencilla lado izquierdo
Single shaft left side

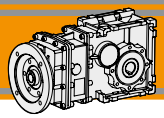
Brazo de reacción
Torque arm



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

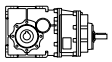
Posición del Brazo
Torque arm position





Clasificación / *Classification*

REDUCTOR / *GEARBOX*

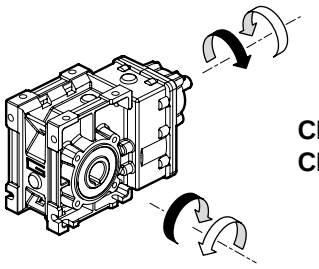
CMB	63	3	U	9.81	SZDX	BRSX	90°
Tipo *Type*	Tamaño *Size*	Etapas *Stages*	Versión *Version*	Relación de reducción *Ratio*	Eje de salida *Output shaft*	Brazo de reacción *Torque arm*	Ângulo *Angle*
CMBIS 	**40** **50** **63** **90**	**2** **3**	**U** **FD** **FS** **FBD** **FBS** **FLD** **FLS**	véase tablas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

MOTOR / *MOTOR*

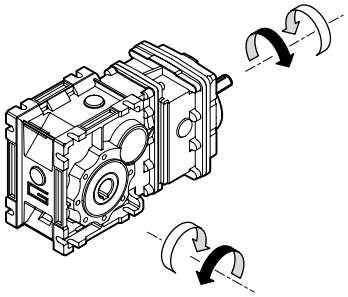
1 hp / 0.75 kW	4p	3ph	220/440V	60Hz	T1
Potencia *Power*	Polos *Poles*	Fases *Phases*	Tensión *Voltage*	Frecuencia *Frequency*	Posición caja de bornes *Terminal box pos.*
véase tablas *see tables*	**2p** **4p** **6p** **8p**	**1ph** **3ph**	**230V** **230/400V** **220/440V**	**50Hz** **60Hz**	**T1** (Std)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

Sentido de rotación / *Direction of rotation*

CMB...2
CMBIS..2



CMB...3
CMBIS..3



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*
Pn_1	[kW]	Potencia nominal en la entrada / *Nominal input power*
Mn_2	[Nm]	Par nominal en la salida en función de Pn_1 / *Nominal output torque referred to Pn_1*
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*

Lubricación

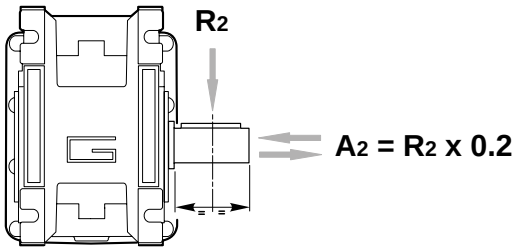
Todos los engranajes en los tamaños 402, 502, 633 y 903 se suministran con lubricante sintético, viscosidad 320, por lo que se pueden instalar en cualquier posición de montaje y no requieren mantenimiento.

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

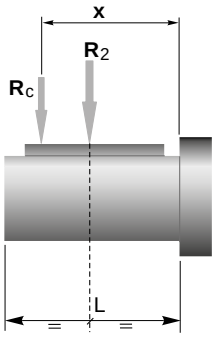
Radial loads



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:

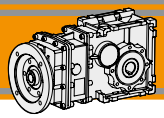


	CMB 402	CMB 502	CMB 633	CMB 903
a	3.386	4.094	4.646	6.181
b	2.598	3.110	3.661	4.606
R_{2MAX}	787	944	1461	2136

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

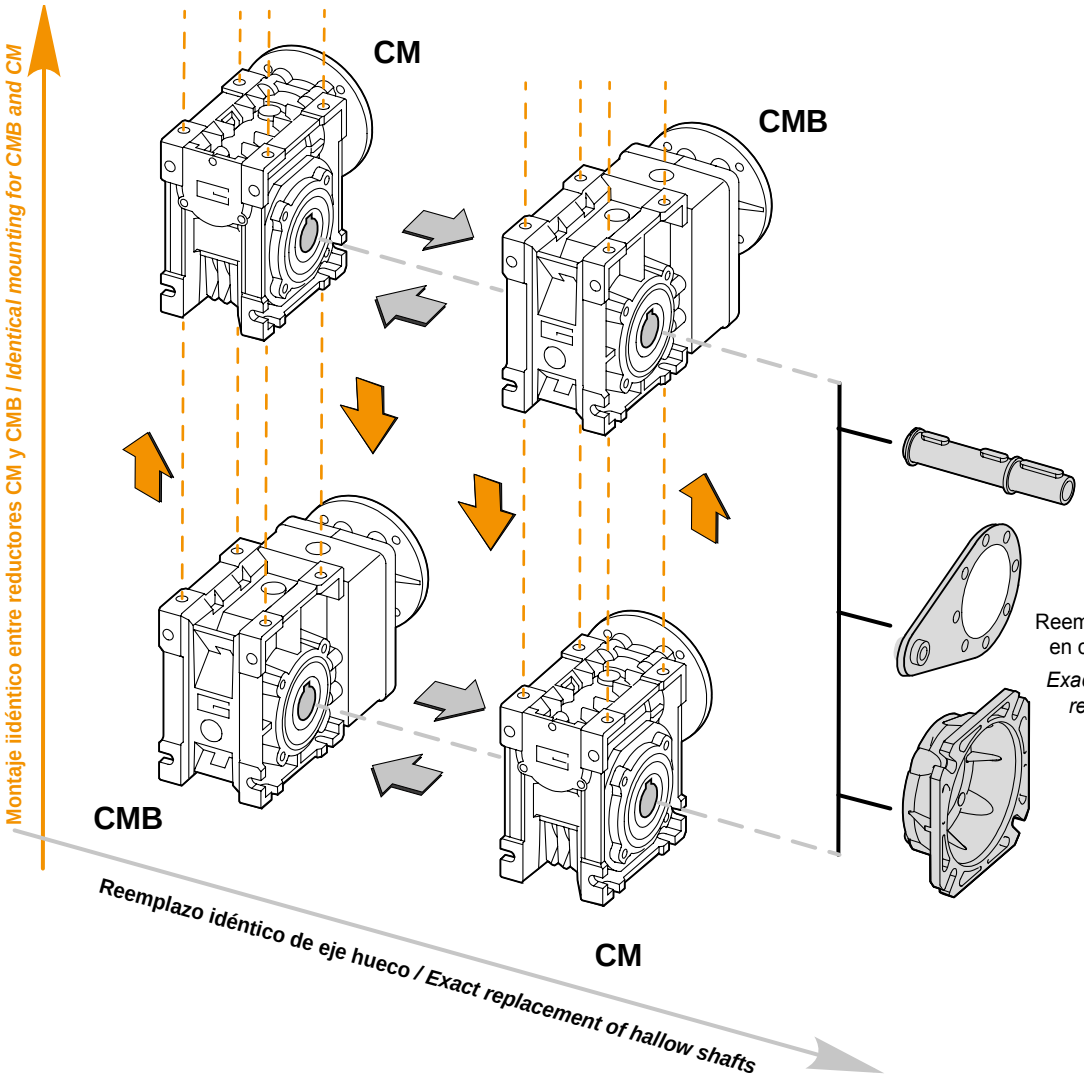
$$R \leq R_c$$

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



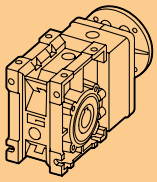
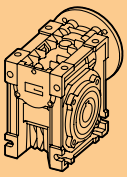
Esquema Intercambiable CMB - CM

Interchangeability CMB - CM



ENERGY SAVING

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
Wormgearsboxes

Datos técnicos / *Technical data*

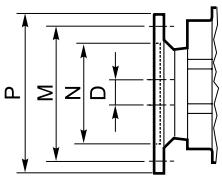
i	Mn_2 [lb·in]	n_1 = 1750 rpm			n_1 = 1150 rpm		
		n_2 [rpm]	Pn_1 [hp]	NEMA Motores aplicables *NEMA Motor adapters* 56 C	n_2 [rpm]	Pn_1 [hp]	NEMA Motores aplicables *NEMA Motor adapters* 56 C
CMBIS 402							
6.18	354	**283**	1.69		**186**	1.11	
7.49	354	**234**	1.40		**153**	0.92	
9.2	354	**190**	1.14		**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.

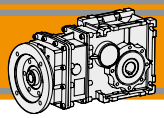
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C9 a la C15.

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

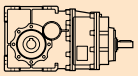
Before selecting any gearbox, please read the performance values shown in the tables on page C9 to C15.



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.

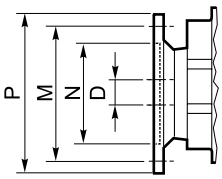
NOTE
Highlighted áreas indicate the motor input flange available on each gearbox size.

*** =** Pn_1 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.

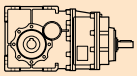
**** =*** *The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

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

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.

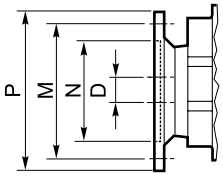
NOTE
Highlighted áreas indicate the motor input flange available on each gearbox size.

*** =** Pn_1 es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

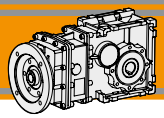
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C9 a la C15.

**** =*** *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	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		NEMA
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**

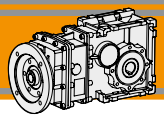
P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.25 hp							
0.18 kW (1750 rpm)	**73.2**	202	4.8	**III**	23.91	**CMB502**	**56C**
	60.6	244	4.5	**III**	28.89		**56C**
	56.7	261	4.2	**III**	30.84		**56C**
	52.1	284	3.9	**III**	33.57		**56C**
	49.1	301	3.7	**III**	35.63		**56C**
	40.9	362	3.1	**III**	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**

Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.33 hp							
0.25 kW (1750 rpm)	**118**	166	4.8	**III**	14.83	**CMB502**	**56C**
	99.3	197	4.0	**III**	17.63		**56C**
	94.1	208	4.7	**III**	18.60		**56C**
	78.4	249	3.9	**III**	22.33		**56C**
	73.2	267	3.6	**III**	23.91		**56C**
	60.6	323	3.4	**III**	28.89		**56C**
	56.7	345	3.2	**III**	30.84		**56C**
	52.1	375	2.9	**III**	33.57		**56C**
	49.1	398	2.8	**III**	35.63		**56C**
	40.9	478	2.3	**III**	42.75		**56C**
	31.6	618	1.8	**II**	55.31		**56C**
	29.6	660	1.7	**II**	59.06		**56C**
	27.2	718	1.5	**II**	64.29		**56C**
	45.0	434	5.1	**III**	38.88	**CMB633**	**56C**
	37.1	527	4.2	**III**	47.16		**56C**
	30.2	647	3.4	**III**	57.93		**56C**
	28.4	688	3.2	**III**	61.63		**56C**
	23.7	826	2.7	**III**	73.96		**56C**
	22.3	878	2.5	**III**	78.58		**56C**
	18.8	1043	2.1	**III**	93.33		**56C**
	12.5	1570	1.4	**II**	140.52		**56C**
	9.6	2031	1.1	**I**	181.81		**56C**
	8.3	2361	0.9	**I**	211.31		**56C**
	21.0	929	4.8	**III**	83.20	**CMB903**	**56C**
	16.2	1208	3.7	**III**	108.09		**56C**
	13.2	1477	3.0	**III**	132.23		**56C**
	11.8	1652	2.7	**III**	147.92		**56C**
	10.5	1867	2.4	**III**	167.09		**56C**
	9.2	2134	2.1	**III**	191.06		**56C**
	7.9	2479	1.8	**II**	221.88		**56C**
	6.7	2938	1.5	**II**	262.96		**56C**
0.25 kW (1150 rpm)	**186**	105	3.4	**III**	6.18	**CMB402**	**56C**
	153	127	2.8	**III**	7.49		**56C**
	125	156	2.3	**III**	9.20		**56C**
	97.2	201	2.0	**II**	11.83		**56C**
	92.1	212	1.9	**II**	12.48		**56C**
	77.6	252	1.6	**II**	14.83		**56C**
	65.2	300	1.3	**I**	17.63		**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**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.33 hp							
0.25 kW (1150 rpm)	**125**	156	4.0	**III**	9.20	**CMB502**	**56C**
	97.2	201	4.0	**III**	11.83		**56C**
	92.1	212	3.8	**III**	12.48		**56C**
	77.6	252	3.2	**III**	14.83		**56C**
	65.2	300	2.7	**III**	17.63		**56C**
	61.8	316	3.1	**III**	18.60		**56C**
	51.5	380	2.6	**III**	22.33		**56C**
	48.1	406	2.4	**III**	23.91		**56C**
	39.8	491	2.3	**III**	28.89		**56C**
	37.3	524	2.1	**III**	30.84		**56C**
	34.3	571	1.9	**II**	33.57		**56C**
	32.3	606	1.8	**II**	35.63		**56C**
	26.9	727	1.5	**II**	42.75		**56C**
	20.8	940	1.2	**I**	55.31		**56C**
	19.5	1004	1.1	**I**	59.06		**56C**
	17.9	1093	1.0	**I**	64.29		**56C**
	53.3	367	5.3	**III**	21.56	**CMB633**	**56C**
	43.4	450	4.3	**III**	26.48		**56C**
	40.8	479	4.1	**III**	28.17		**56C**
	34.0	575	3.4	**III**	33.81		**56C**
	32.0	611	3.2	**III**	35.92		**56C**
	29.6	661	3.3	**III**	38.88		**56C**
	24.4	802	2.8	**III**	47.16		**56C**
	19.9	985	2.2	**III**	57.93		**56C**
	18.7	1048	2.1	**III**	61.63		**56C**
	15.5	1257	1.8	**II**	73.96		**56C**
	14.6	1336	1.7	**II**	78.58		**56C**
	12.3	1587	1.4	**I**	93.33		**56C**
	8.2	2389	0.9	**I**	140.52		**56C**
	20.0	978	4.5	**III**	57.52	**CMB903**	**56C**
	17.4	1125	3.9	**III**	66.17		**56C**
	13.8	1414	3.1	**III**	83.20		**56C**
	10.6	1838	2.4	**III**	108.09		**56C**
	8.7	2248	2.0	**II**	132.23		**56C**
	7.8	2514	1.8	**II**	147.92		**56C**
	6.9	2840	1.6	**II**	167.09		**56C**
	6.0	3248	1.4	**I**	191.06		**56C**
	5.2	3772	1.2	**I**	221.88		**56C**
	4.4	4470	1.0	**I**	262.96		**56C**



Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.5 hp							
0.37 kW (1750 rpm)	**283**	105	3.4	**III**	6.18	**CMB402**	**56C**
	234	127	2.8	**III**	7.49		**56C**
	190	156	2.3	**III**	9.20		**56C**
	148	200	2.0	**II**	11.83		**56C**
	140	211	1.9	**II**	12.48		**56C**
	118	251	1.6	**II**	14.83		**56C**
	99.3	298	1.3	**I**	17.63		**56C**
	94.1	315	1.5	**II**	18.60		**56C**
	78.4	378	1.3	**I**	22.33		**56C**
	73.2	405	1.2	**I**	23.91		**56C**
	60.6	489	1.2	**I**	28.89		**56C**
	56.7	522	1.1	**I**	30.84		**56C**
	52.1	568	1.0	**I**	33.57		**56C**
	49.1	603	1.0	**I**	35.63		**56C**
	283	105	5.9	**III**	6.18	**CMB502**	**56C**
	234	127	4.9	**III**	7.49		**56C**
	190	156	4.0	**III**	9.20		**56C**
	148	200	4.0	**III**	11.83		**56C**
	140	211	3.8	**III**	12.48		**56C**
	118	251	3.2	**III**	14.83		**56C**
	99.3	298	2.7	**III**	17.63		**56C**
	94.1	315	3.1	**III**	18.60		**56C**
	78.4	378	2.6	**III**	22.33		**56C**
	73.2	405	2.4	**III**	23.91		**56C**
	60.6	489	2.3	**III**	28.89		**56C**
	56.7	522	2.1	**III**	30.84		**56C**
	52.1	568	1.9	**II**	33.57		**56C**
	49.1	603	1.8	**II**	35.63		**56C**
	40.9	724	1.5	**II**	42.75		**56C**
	31.6	936	1.2	**I**	55.31		**56C**
	29.6	1000	1.1	**I**	59.06		**56C**
	27.2	1088	1.0	**I**	64.29		**56C**
	81.2	365	5.3	**III**	21.56	**CMB633**	**56C**
	66.1	448	4.3	**III**	26.48		**56C**
	62.1	477	4.1	**III**	28.17		**56C**
	51.8	572	3.4	**III**	33.81		**56C**
	48.7	608	3.2	**III**	35.92		**56C**
	45.0	658	3.4	**III**	38.88		**56C**
	37.1	798	2.8	**III**	47.16		**56C**
	30.2	981	2.3	**III**	57.93		**56C**
	28.4	1043	2.1	**III**	61.63		**56C**
	23.7	1252	1.8	**II**	73.96		**56C**
	22.3	1330	1.7	**II**	78.58		**56C**
	18.8	1580	1.4	**II**	93.33		**56C**
	12.5	2378	0.9	**I**	140.52		**56C**
	30.4	974	4.5	**III**	57.52	**CMB903**	**56C**
	26.4	1120	4.0	**III**	66.17		**56C**
	21.0	1408	3.1	**III**	83.20		**56C**
	16.2	1830	2.4	**III**	108.09		**56C**
	13.2	2238	2.0	**II**	132.23		**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**

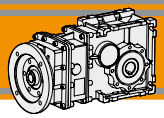
P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.5 hp							
0.37 kW (1150 rpm)	**186**	159	2.2	**III**	6.18	**CMB402**	**56C**
	153	193	1.8	**II**	7.49		**56C**
	125	237	1.5	**II**	9.20		**56C**
	97.2	305	1.3	**I**	11.83		**56C**
	92.1	322	1.2	**I**	12.48		**56C**
	77.6	382	1.0	**I**	14.83		**56C**
	65.2	454	0.9	**I**	17.63		**56C**
	61.8	479	1.0	**I**	18.60		**56C**
	186	159	3.9	**III**	6.18	**CMB502**	**56C**
	153	193	3.2	**III**	7.49		**56C**
	125	237	2.6	**III**	9.20		**56C**
	97.2	305	2.6	**III**	11.83		**56C**
	92.1	322	2.5	**III**	12.48		**56C**
	77.6	382	2.1	**III**	14.83		**56C**
	65.2	454	1.8	**II**	17.63		**56C**
	61.8	479	2.0	**III**	18.60		**56C**
	51.5	575	1.7	**II**	22.33		**56C**
	48.1	616	1.6	**II**	23.91		**56C**
	39.8	744	1.5	**II**	28.89		**56C**
	37.3	794	1.4	**I**	30.84		**56C**
	34.3	865	1.3	**I**	33.57		**56C**
	32.3	918	1.2	**I**	35.63		**56C**
	26.9	1101	1.0	**I**	42.75		**56C**
	91.8	323	4.1	**III**	12.53	**CMB633**	**56C**
	86.4	343	3.9	**III**	13.31		**56C**
	72.7	407	3.7	**III**	15.81		**56C**
	64.7	458	4.3	**III**	17.77		**56C**
	53.3	555	3.5	**III**	21.56		**56C**
	43.4	682	2.9	**III**	26.48		**56C**
	40.8	726	2.7	**III**	28.17		**56C**
	34.0	871	2.2	**III**	33.81		**56C**
	32.0	925	2.1	**III**	35.92		**56C**
	29.6	1001	2.2	**III**	38.88		**56C**
	24.4	1215	1.8	**II**	47.16		**56C**
	19.9	1492	1.5	**II**	57.93		**56C**
	18.7	1587	1.4	**I**	61.63		**56C**
	15.5	1905	1.2	**I**	73.96		**56C**
	14.6	2024	1.1	**I**	78.58		**56C**
	12.3	2404	0.9	**I**	93.33		**56C**
	38.0	779	5.1	**III**	30.25	**CMB903**	**56C**
	29.3	1011	4.4	**III**	39.26		**56C**
	24.3	1217	3.6	**III**	47.25		**56C**
	20.0	1482	3.0	**III**	57.52		**56C**
	17.4	1704	2.6	**III**	66.17		**56C**
	13.8	2143	2.1	**III**	83.20		**56C**
	10.6	2784	1.6	**II**	108.09		**56C**
	8.7	3406	1.3	**I**	132.23		**56C**
	7.8	3810	1.2	**I**	147.92		**56C**
	6.9	4304	1.0	**I**	167.09		**56C**
	6.0	4921	0.9	**I**	191.06		**56C**

Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.75 hp							
0.55 kW (1750 rpm)	**283**	157	2.3	**III**	6.18	**CMB402**	**56C**
	234	190	1.9	**II**	7.49		**56C**
	190	234	1.5	**II**	9.20		**56C**
	148	300	1.3	**I**	11.83		**56C**
	140	317	1.3	**I**	12.48		**56C**
	118	376	1.1	**I**	14.83		**56C**
	99.3	447	0.9	**I**	17.63		**56C**
	94.1	472	1.0	**I**	18.60		**56C**
	283	157	4.0	**III**	6.18	**CMB502**	**56C**
	234	190	3.3	**III**	7.49		**56C**
	190	234	2.7	**III**	9.20		**56C**
	148	300	2.7	**III**	11.83		**56C**
	140	317	2.5	**III**	12.48		**56C**
	118	376	2.1	**III**	14.83		**56C**
	99.3	447	1.8	**II**	17.63		**56C**
	94.1	472	2.1	**III**	18.60		**56C**
	78.4	567	1.7	**II**	22.33		**56C**
	73.2	607	1.6	**II**	23.91		**56C**
	60.6	733	1.5	**II**	28.89		**56C**
	56.7	783	1.4	**II**	30.84		**56C**
	52.1	852	1.3	**I**	33.57		**56C**
	49.1	904	1.2	**I**	35.63		**56C**
	40.9	1085	1.0	**I**	42.75		**56C**
	140	318	4.2	**III**	12.53	**CMB633**	**56C**
	131	338	3.9	**III**	13.31		**56C**
	111	401	3.7	**III**	15.81		**56C**
	98.5	451	4.3	**III**	17.77		**56C**
	81.2	547	3.6	**III**	21.56		**56C**
	66.1	672	2.9	**III**	26.48		**56C**
	62.1	715	2.7	**III**	28.17		**56C**
	51.8	858	2.3	**III**	33.81		**56C**
	48.7	912	2.1	**III**	35.92		**56C**
	45.0	987	2.2	**III**	38.88		**56C**
	37.1	1197	1.8	**II**	47.16		**56C**
	30.2	1471	1.5	**II**	57.93		**56C**
	28.4	1565	1.4	**II**	61.63		**56C**
	23.7	1878	1.2	**I**	73.96		**56C**
	22.3	1995	1.1	**I**	78.58		**56C**
	18.8	2369	0.9	**I**	93.33		**56C**
	57.9	768	5.2	**III**	30.25	**CMB903**	**56C**
	44.6	997	4.4	**III**	39.26		**56C**
	37.0	1200	3.7	**III**	47.25		**56C**
	30.4	1460	3.0	**III**	57.52		**56C**
	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**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.75 hp							
0.55 kW (1150 rpm)	**186**	239	1.5	**II**	6.18	**CMB402**	**56C**
	153	289	1.2	**I**	7.49		**56C**
	125	356	1.0	**I**	9.20		**56C**
	97.2	457	0.9	**I**	11.83		**56C**
	186	239	2.6	**III**	6.18	**CMB502**	**56C**
	153	289	2.1	**III**	7.49		**56C**
	125	356	1.7	**II**	9.20		**56C**
	97.2	457	1.7	**II**	11.83		**56C**
	92.1	482	1.7	**II**	12.48		**56C**
	77.6	573	1.4	**I**	14.83		**56C**
	65.2	681	1.2	**I**	17.63		**56C**
	61.8	719	1.4	**I**	18.60		**56C**
	51.5	863	1.1	**I**	22.33		**56C**
	48.1	924	1.1	**I**	23.91		**56C**
	39.8	1116	1.0	**I**	28.89		**56C**
	37.3	1192	0.9	**I**	30.84		**56C**
	175	254	5.2	**III**	6.58	**CMB633**	**56C-140TC**
	144	309	4.3	**III**	7.99		**56C-140TC**
	117	379	3.5	**III**	9.81		**56C-140TC**
	110	403	3.3	**III**	10.44		**56C-140TC**
	91.8	484	2.7	**III**	12.53		**56C-140TC**
	86.4	514	2.6	**III**	13.31		**56C-140TC**
	72.7	611	2.5	**III**	15.81		**56C-140TC**
	64.7	687	2.8	**III**	17.77		**56C-140TC**
	53.3	833	2.3	**III**	21.56		**56C-140TC**
	43.4	1023	1.9	**II**	26.48		**56C-140TC**
	40.8	1089	1.8	**II**	28.17		**56C-140TC**
	34.0	1306	1.5	**II**	33.81		**56C-140TC**
	32.0	1388	1.4	**II**	35.92		**56C-140TC**
	29.6	1502	1.5	**II**	38.88		**56C-140TC**
	24.4	1822	1.2	**I**	47.16		**56C-140TC**
	19.9	2238	1.0	**I**	57.93		**56C-140TC**
	18.7	2381	0.9	**I**	61.63		**56C-140TC**
	53.2	835	4.8	**III**	21.60	**CMB903**	**56C-140TC**
	43.7	1016	3.9	**III**	26.30		**56C-140TC**
	38.0	1169	3.4	**III**	30.25		**56C-140TC**
	29.3	1517	2.9	**III**	39.26		**56C-140TC**
	24.3	1826	2.4	**III**	47.25		**56C-140TC**
	20.0	2222	2.0	**II**	57.52		**56C-140TC**
	17.4	2557	1.7	**II**	66.17		**56C-140TC**
	13.8	3215	1.4	**I**	83.20		**56C-140TC**
	10.6	4176	1.1	**I**	108.09		**56C-140TC**
	8.7	5109	0.9	**I**	132.23		**56C-140TC**



Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
1 hp							
0.75 kW (1750 rpm)	**283**	209	1.7	**II**	6.18	**CMB402**	**56C**
	234	254	1.4	**I**	7.49		**56C**
	190	312	1.1	**I**	9.20		**56C**
	148	400	1.0	**I**	11.83		**56C**
	140	423	0.9	**I**	12.48		**56C**
	283	209	3.0	**III**	6.18	**CMB502**	**56C**
	234	254	2.4	**III**	7.49		**56C**
	190	312	2.0	**II**	9.20		**56C**
	148	400	2.0	**II**	11.83		**56C**
	140	423	1.9	**II**	12.48		**56C**
	118	502	1.6	**II**	14.83		**56C**
	99.3	597	1.3	**I**	17.63		**56C**
	94.1	630	1.5	**II**	18.60		**56C**
	78.4	756	1.3	**I**	22.33		**56C**
	73.2	809	1.2	**I**	23.91		**56C**
	60.6	978	1.1	**I**	28.89		**56C**
	56.7	1044	1.1	**I**	30.84		**56C**
	52.1	1136	1.0	**I**	33.57		**56C**
	49.1	1206	0.9	**I**	35.63		**56C**
	266	223	6.0	**III**	6.58	**CMB633**	**56C-140TC**
	219	270	4.9	**III**	7.99		**56C-140TC**
	178	332	4.0	**III**	9.81		**56C-140TC**
	168	353	3.8	**III**	10.44		**56C-140TC**
	140	424	3.1	**III**	12.53		**56C-140TC**
	131	451	2.9	**III**	13.31		**56C-140TC**
	111	535	2.8	**III**	15.81		**56C-140TC**
	98.5	602	3.2	**III**	17.77		**56C-140TC**
	81.2	730	2.7	**III**	21.56		**56C-140TC**
	66.1	897	2.2	**III**	26.48		**56C-140TC**
	62.1	954	2.0	**III**	28.17		**56C-140TC**
	51.8	1145	1.7	**II**	33.81		**56C-140TC**
	48.7	1216	1.6	**II**	35.92		**56C-140TC**
	45.0	1316	1.7	**II**	38.88		**56C-140TC**
	37.1	1597	1.4	**I**	47.16		**56C-140TC**
	30.2	1961	1.1	**I**	57.93		**56C-140TC**
	28.4	2086	1.1	**I**	61.63		**56C-140TC**
	66.5	890	4.5	**III**	26.30	**CMB903**	**56C-140TC**
	57.9	1024	3.9	**III**	30.25		**56C-140TC**
	44.6	1329	3.3	**III**	39.26		**56C-140TC**
	37.0	1600	2.8	**III**	47.25		**56C-140TC**
	30.4	1947	2.3	**III**	57.52		**56C-140TC**
	26.4	2240	2.0	**II**	66.17		**56C-140TC**
	21.0	2817	1.6	**II**	83.20		**56C-140TC**
	16.2	3659	1.2	**I**	108.09		**56C-140TC**
	13.2	4476	1.0	**I**	132.23		**56C-140TC**

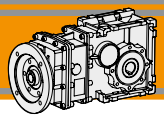
P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
1 hp							
0.75 kW (1150 rpm)	**186**	318	1.1	**I**	6.18	**CMB402**	**56C**
	153	386	0.9	**I**	7.49		**56C**
	186	318	1.9	**II**	6.18	**CMB502**	**56C**
	153	386	1.6	**II**	7.49		**56C**
	125	474	1.3	**I**	9.20		**56C**
	97.2	609	1.3	**I**	11.83		**56C**
	92.1	643	1.2	**I**	12.48		**56C**
	77.6	764	1.0	**I**	14.83		**56C**
	65.2	908	0.9	**I**	17.63		**56C**
	61.8	958	1.0	**I**	18.60		**56C**
	175	339	3.9	**III**	6.58	**CMB633**	**56C-140TC**
	144	412	3.2	**III**	7.99		**56C-140TC**
	117	506	2.6	**III**	9.81		**56C-140TC**
	110	538	2.5	**III**	10.44		**56C-140TC**
	91.8	645	2.1	**III**	12.53		**56C-140TC**
	86.4	686	1.9	**II**	13.31		**56C-140TC**
	72.7	814	1.8	**II**	15.81		**56C-140TC**
	64.7	915	2.1	**III**	17.77		**56C-140TC**
	53.3	1111	1.8	**II**	21.56		**56C-140TC**
	43.4	1364	1.4	**II**	26.48		**56C-140TC**
	40.8	1451	1.3	**I**	28.17		**56C-140TC**
	34.0	1742	1.1	**I**	33.81		**56C-140TC**
	32.0	1850	1.1	**I**	35.92		**56C-140TC**
	29.6	2003	1.1	**I**	38.88		**56C-140TC**
	24.4	2429	0.9	**I**	47.16		**56C-140TC**
	103	577	4.3	**III**	11.21	**CMB903**	**56C-140TC**
	81.6	726	3.7	**III**	14.09		**56C-140TC**
	64.1	925	4.3	**III**	17.95		**56C-140TC**
	53.2	1113	3.6	**III**	21.60		**56C-140TC**
	43.7	1355	2.9	**III**	26.30		**56C-140TC**
	38.0	1558	2.6	**III**	30.25		**56C-140TC**
	29.3	2023	2.2	**III**	39.26		**56C-140TC**
	24.3	2434	1.8	**II**	47.25		**56C-140TC**
	20.0	2963	1.5	**II**	57.52		**56C-140TC**
	17.4	3409	1.3	**I**	66.17		**56C-140TC**
	13.8	4286	1.0	**I**	83.20		**56C-140TC**

Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
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		NEMA
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

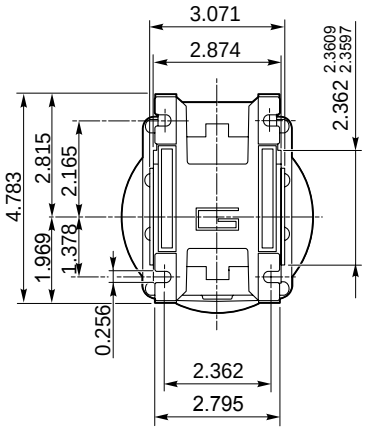
Technical data

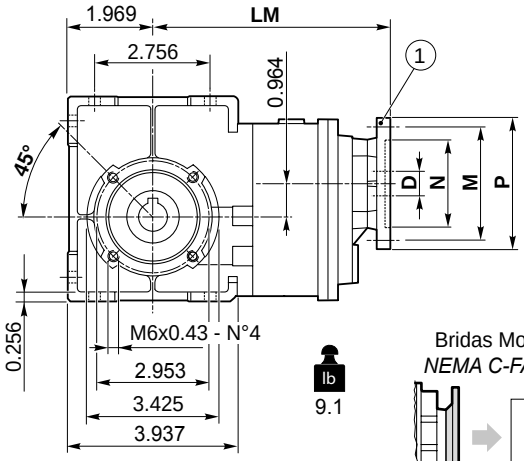
P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
2 hp							
1.5 kW (1150 rpm)	**173**	685	3.6	**III**	6.65	**CMB903**	**180TC**
	144	825	3.0	**III**	8.00		**180TC**
	118	1004	2.5	**III**	9.74		**180TC**
	103	1155	2.1	**III**	11.21		**180TC**
	81.6	1452	1.8	**II**	14.09		**180TC**
	64.1	1849	2.2	**III**	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**

Dimensiones ***Dimensions***

CMB 402 - CMBIS 402

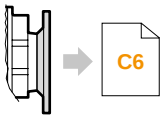
CMB 402 U



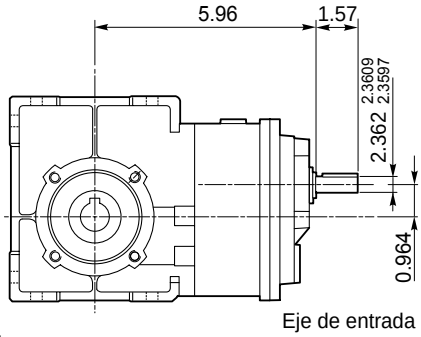


lb 9.1

Bridas Motor
NEMA C-FACE

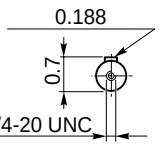


CMBIS 402 U

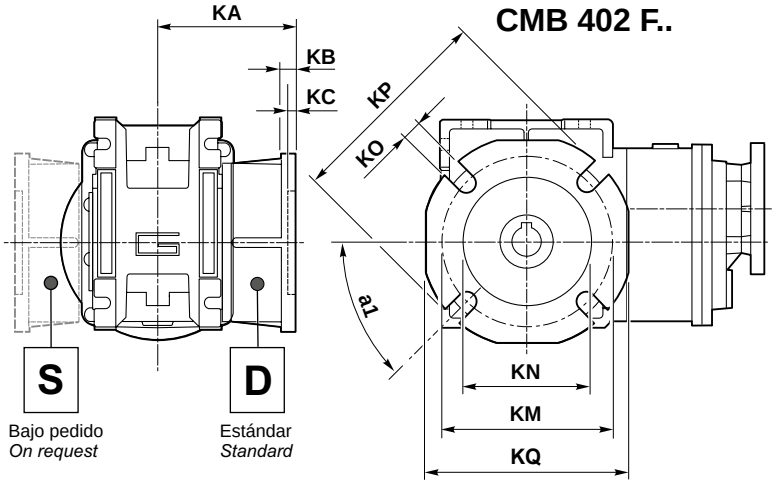


lb 9.3

Eje de entrada
Input shaft



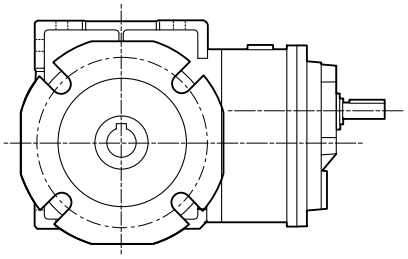
CMB 402 F..



S — Bajo pedido / *On request*

D — Estándar / *Standard*

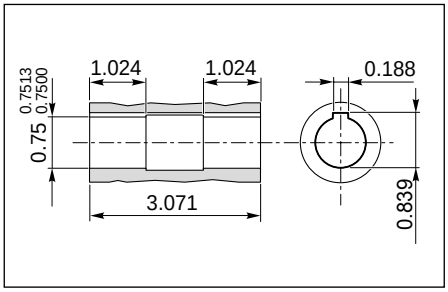
CMBIS 402 F..



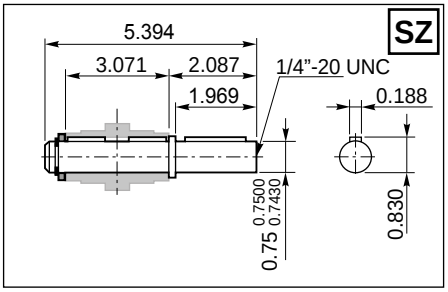
Versión **F** / ***F Version***										
CMB CMBIS	**a_1**	**KA**	**KB**	**KC**	**KM**	**KN**	**KO**	**KP**	**□ KQ**	**Brida / *Flange*** Tipo / *Type*
402	45°	2.638	0.295	0.77	3.150-3.740	2.362 2.3640 2.3622	0.354	4.331	3.740	**F**
	45°	3.819	0.295	0.77	3.150-3.740	2.362 2.3640 2.3622	0.354	4.331	3.740	**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

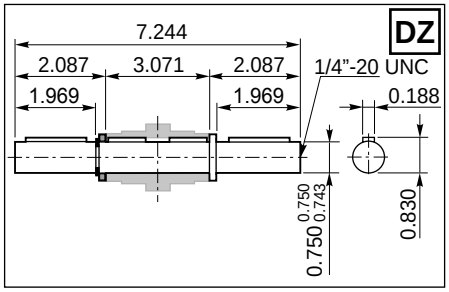
Eje de salida hueco / *Hollow output shaft*

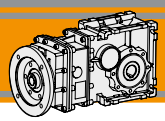


Eje de salida / *Output shaft*



Eje de salida / *Output shaft*

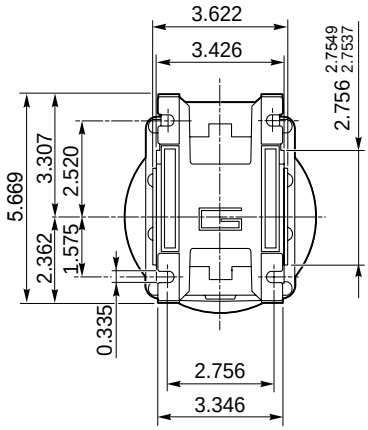


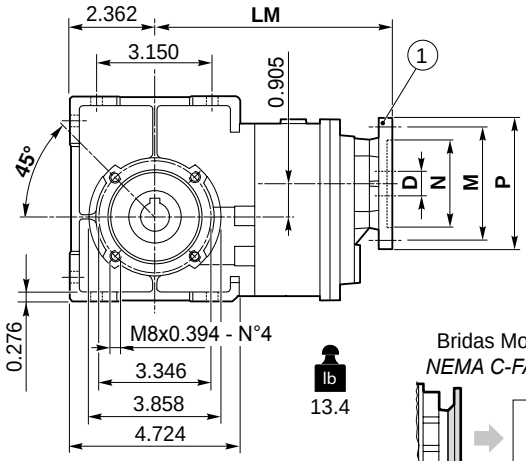


Dimensiones *Dimensions*

CMB 502 - CMBIS 502

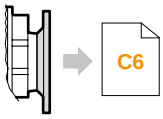
CMB 502 U



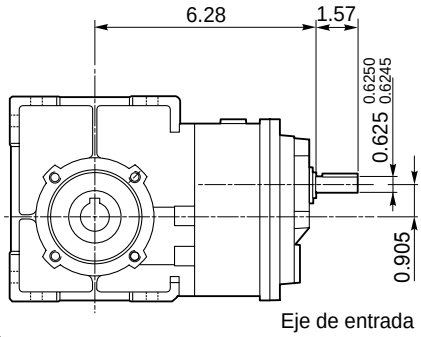


lb 13.4

Bridas Motor
NEMA C-FACE

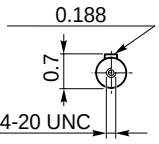


CMBIS 502 U

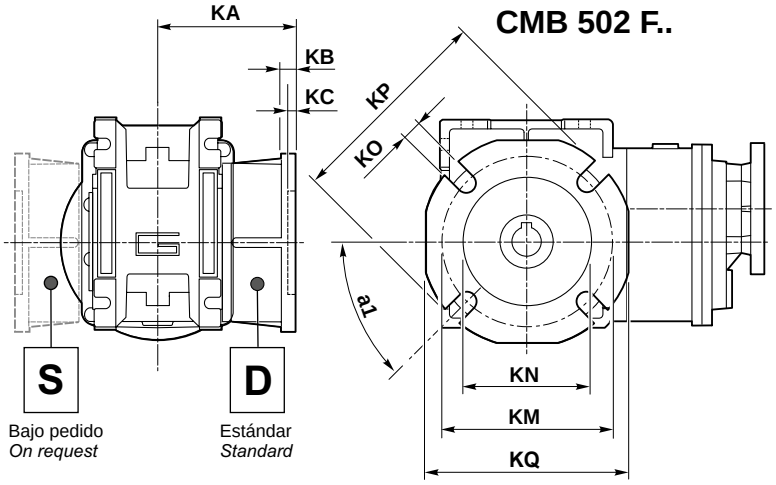


lb 13.9

Eje de entrada
Input shaft



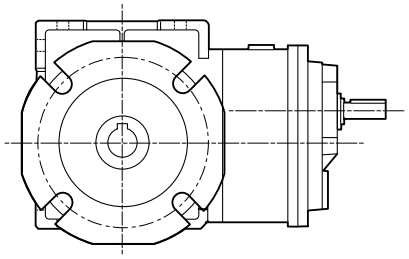
CMB 502 F..



S — Bajo pedido *On request*

D — Estándar *Standard*

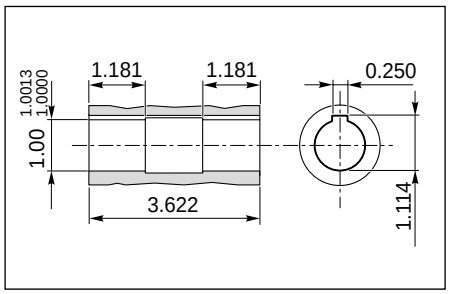
CMBIS 502 F..



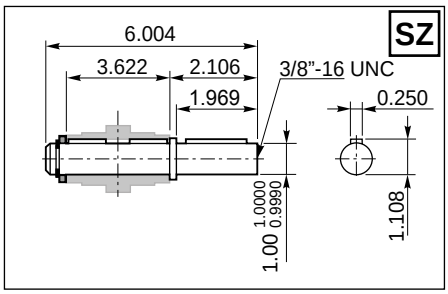
Versión **F** / ***F Version***										
CMB CMBIS	**a_1**	**KA**	**KB**	**KC**	**KM**	**KN**	**KO**	**KP**	**□ KQ**	**Brida / *Flange*** Tipo / *Type*
502	45°	3.543	0.354	0.197	3.543-4.331	2.756 $^{2.7577}_{2.7559}$	0.433	4.921	4,331	**F**
	45°	4.724	0.354	0.197	3.543-4.331	2.756 $^{2.7577}_{2.7559}$	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

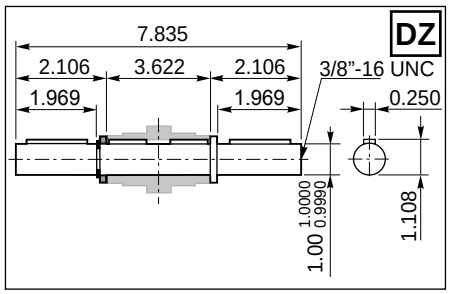
Eje de salida hueco / *Hollow output shaft*



Eje de salida / *Output shaft*



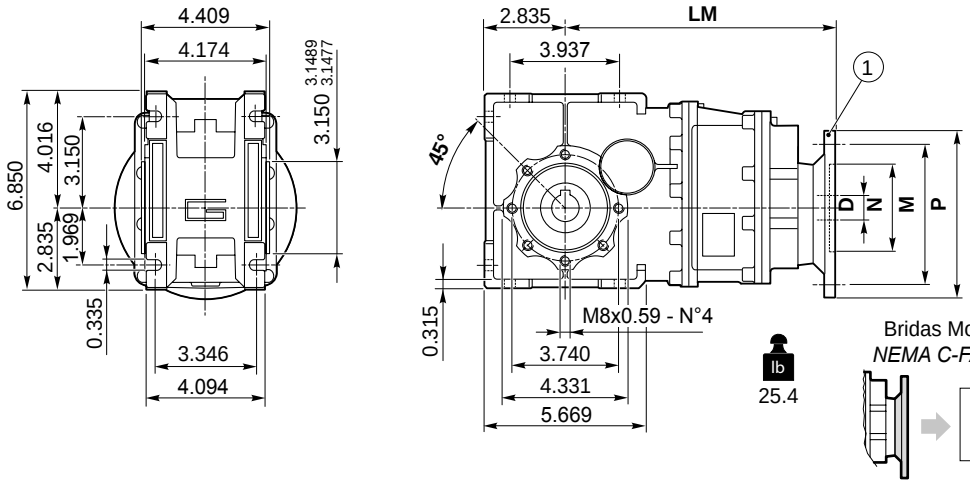
Eje de salida / *Output shaft*



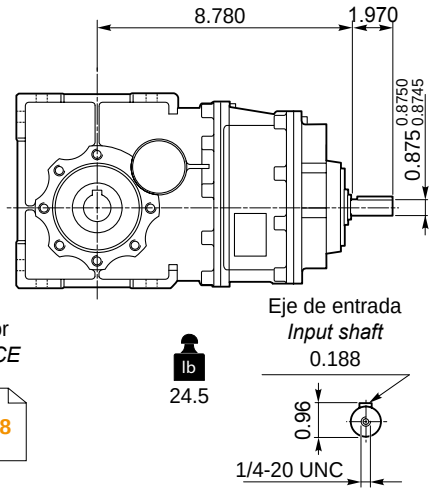
Dimensiones *Dimensions*

CMB 633 - CMBIS 633

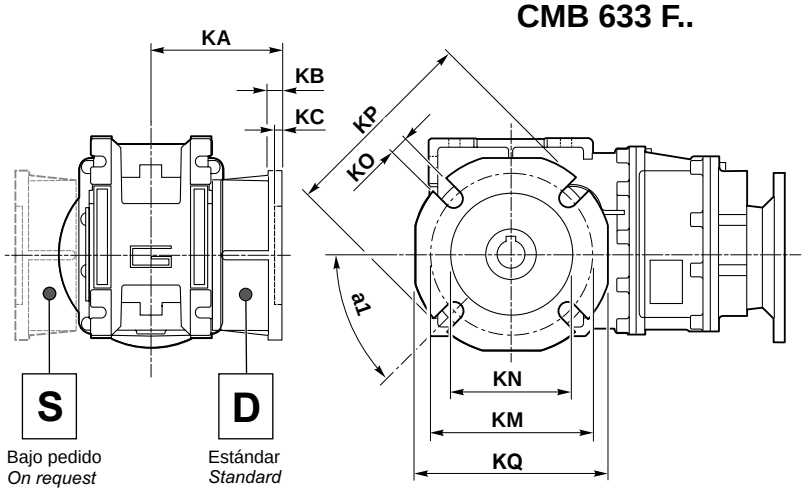
CMB 633 U



CMBIS 633 U



CMB 633 F..



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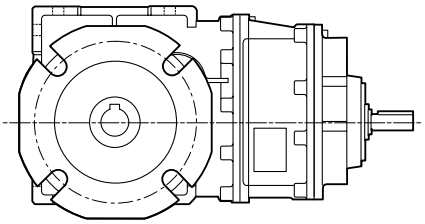
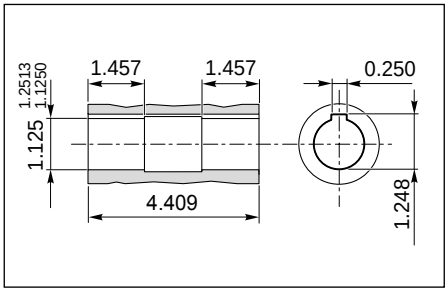


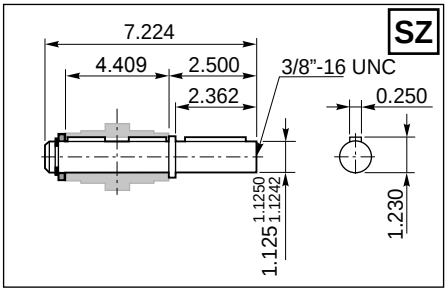
Versión **F** / ***F Version***										
CMB CMBIS	**a_1**	**KA**	**KB**	**KC**	**KM**	**KN**	**KO**	**KP**	**□ KQ**	**Brida / *Flange*** Tipo / *Type*
633	45°	3.228	0.394	0.236	5.906-6.299	4.528 4.5297 4.5276	0.433	7.087	5.591	**F**
	45°	4.409	0.394	0.314	5.906-6.299	4.528 4.5297 4.5276	0.433	7.087	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

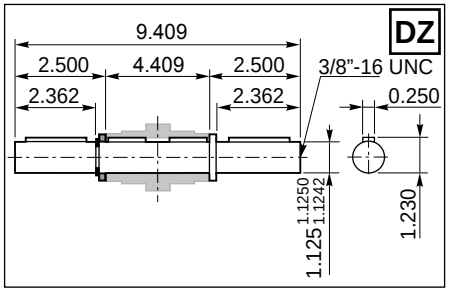
Eje de salida hueco / *Hollow output shaft*

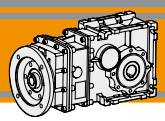


Eje de salida / *Output shaft*



Eje de salida / *Output shaft*

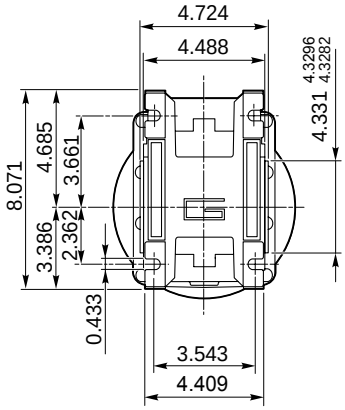


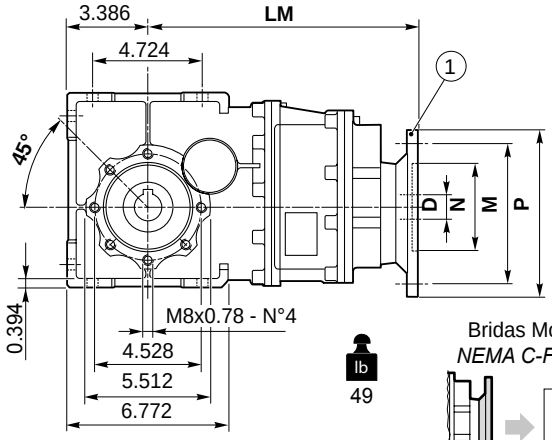


Dimensiones *Dimensions*

CMB 903 - CMBIS 903

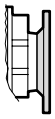
CMB 903 U





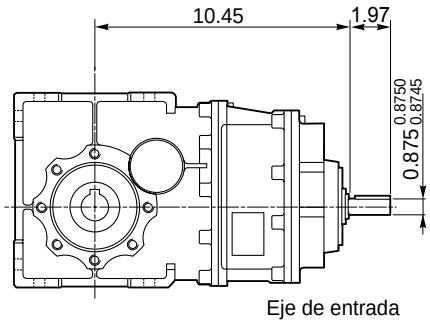
lb 49

Bridas Motor
NEMA C-FACE



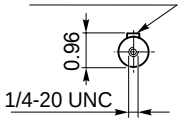
C9

CMBIS 903 U



lb 48.5

Eje de entrada
Input shaft



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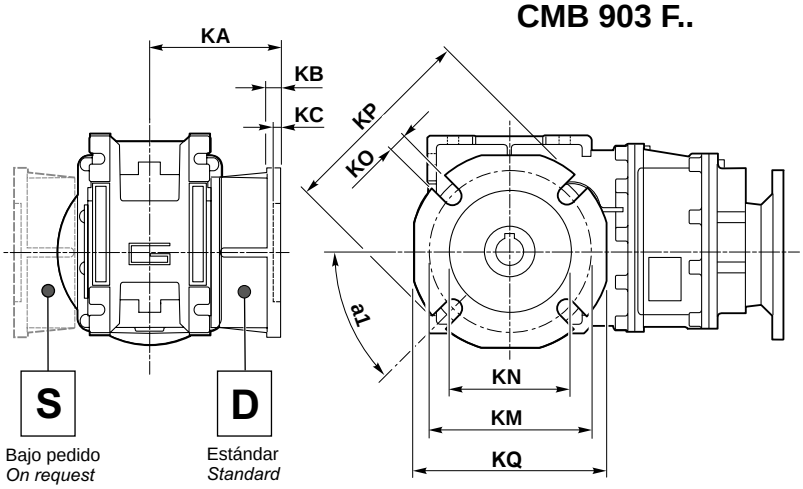
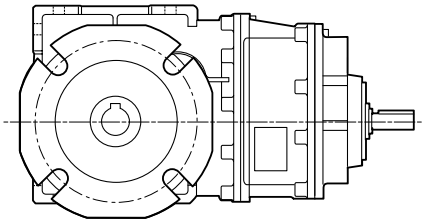


Bajo pedido
On request

Estándar
Standard

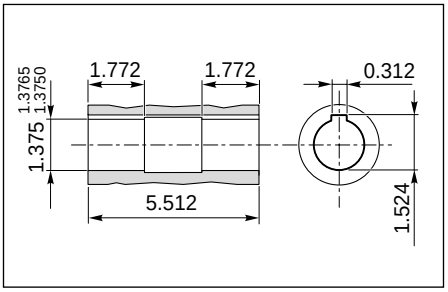
CMBIS 903 F..



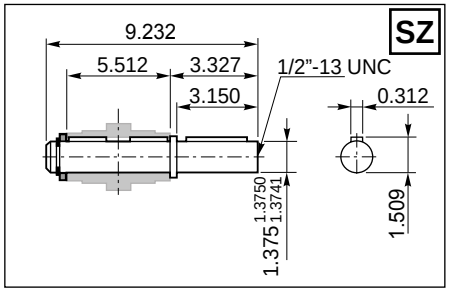
Versión **F** / ***F Version***										
CMB CMBIS	**a_1**	**KA**	**KB**	**KC**	**KM**	**KN**	**KO**	**KP**	**□ KQ**	**Brida / *Flange*** Tipo / *Type*
933	45°	4.37	0.512	0.236	6.890-7.480	5.984 5.9867 5.9843	0.551	8.268	7.874	**F**

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

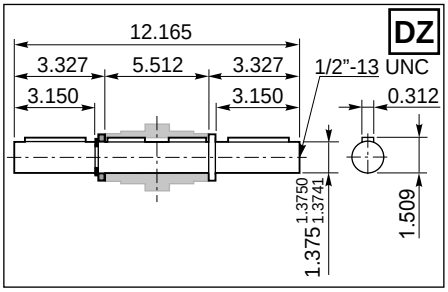
Eje de salida hueco / *Hollow output shaft*



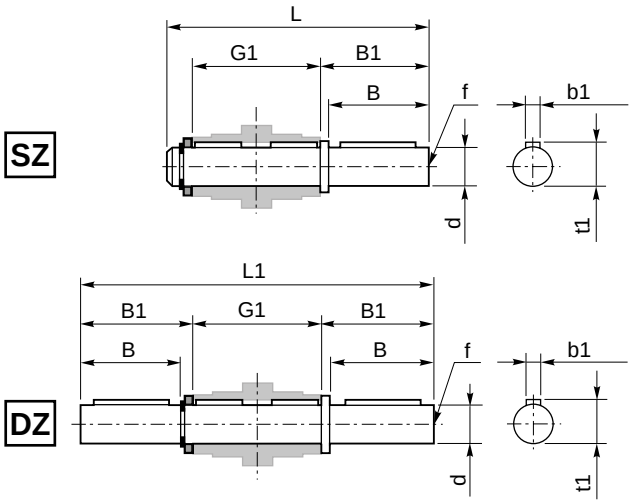
Eje de salida / *Output shaft*

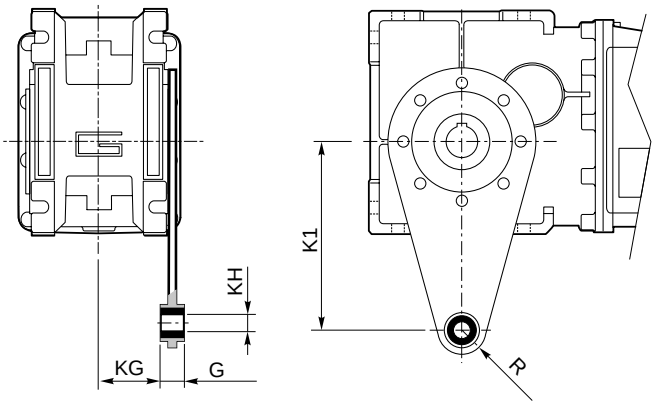


Eje de salida / *Output shaft*



Accessorios *Accessories*





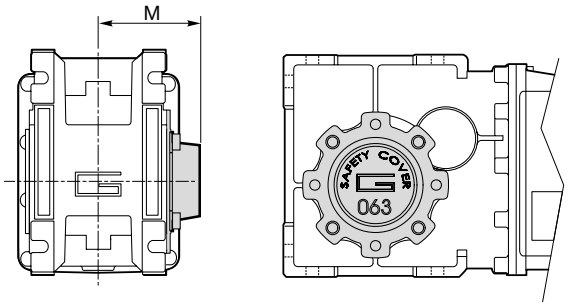
Eje de salida / *Output shaft*

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

TRANSTECNO®

THE MODULAR GEARMOTOR

CM

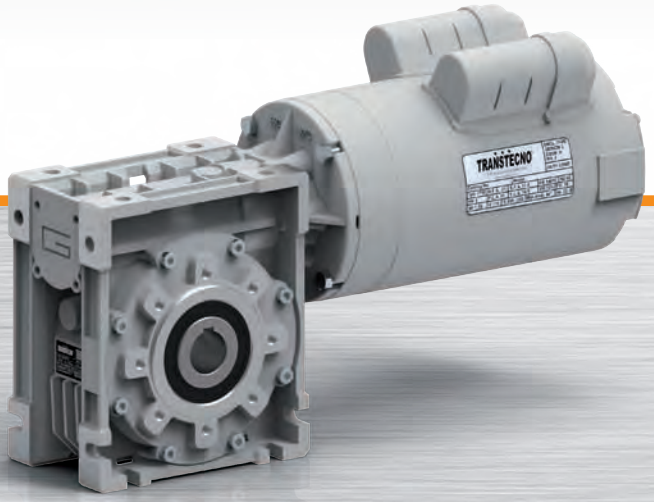
CM

CM Alu

NEMA DIMENSIONS

REDUCTORES SINFÍN CORONA

WORMGEARBOXES



TRANSTECNO · GENUINE · PRODUCTS

Características técnicas

Technical features

El elevado nivel de modularidad caracteriza a los reductores sinfín 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:

- Los tamaños 040, 050, 063, 075, 090 y 110 están construidos 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;

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:

- *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

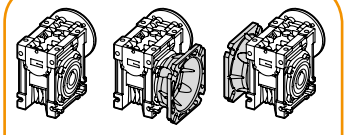
Classification

REDUCTORES SINFÍN 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*	NEMA	Eje de salida *Output shaft*	Brazo de reacción *Torque arm*	Ângulo *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)
	063	**FS**		**180TC**	**DZ**		**180°**	**M3** (B8)
	075	**FBD**		**210TC**			**270°**	**M4** (V5)
CMIS	**090**	**FBS**						**M5** (B7)
	110	**FLD**						**M6** (B6)
	130	**FLS**						

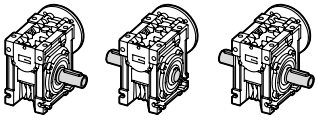
Relación de reducción
Gearbox Version



U **FD FLD FBD** **FS FLS FBS**

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

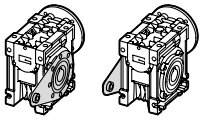
Eje de salida
Output shaft



SZDX **SZSX** **DZ**

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

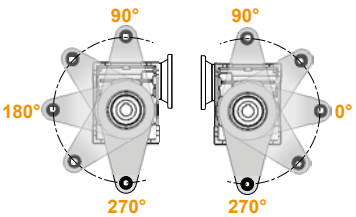
Brazo de reacción
Torque arm



BRDX **BRSX**

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

Posición del Brazo
Torque arm position



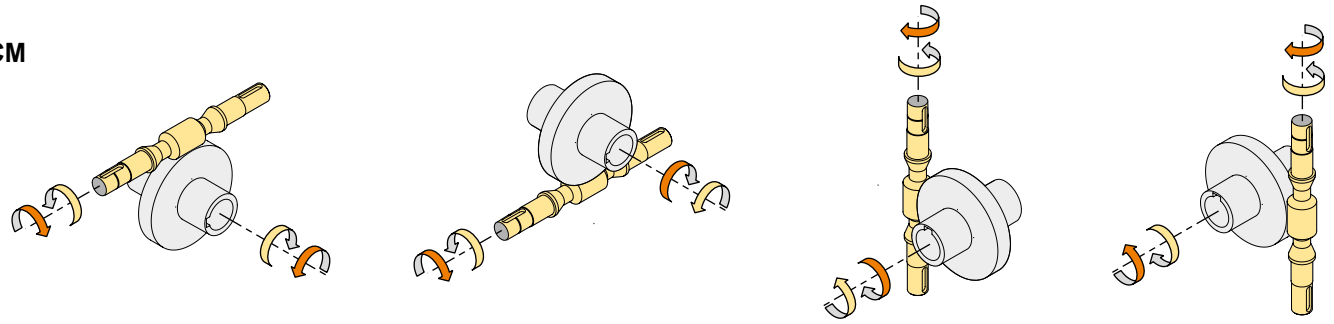
Clasificación / *Classification*

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**

CM

Sentidos de rotación / *Direction of rotation*

CM



Nomenclatura / *Legend*

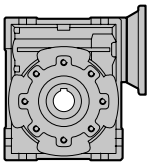
n_1	[rpm]	Velocidad de entrada / *Input speed*	sf		Rendimiento dinámico / *Service factor*
n_2	[rpm]	Velocidad de salida / *Output speed*	Rd	%	Rendimiento dinámico / *Dynamic efficiency*
i		Relación de reducción / *Ratio*	Rs	%	Rendimiento estático / *Static efficiency*
P_1	[kW]	Potencia nominal en la entrada / *Nominal input power*	R_2	[N]	Carga radial admisible en la salida / *Maximum output radial load*
M_2	[Nm]	Par en la salida en función de P_1 / *Output torque referred to P_1*	A_2	N]	Carga axial admisible en la salida / *Maximum output axial load*
Pn_1	[kW]	Potencia nominal en la entrada / *Nominal input power*	Z		Número de entradas del tornillo / *Worm starts*
Mn_2	[Nm]	Par nominal en la salida en función de Pn_1 / *Nominal output torque referred to Pn_1*	β		Ángulo de hélicoidal / *Helix angle*

Lubricación

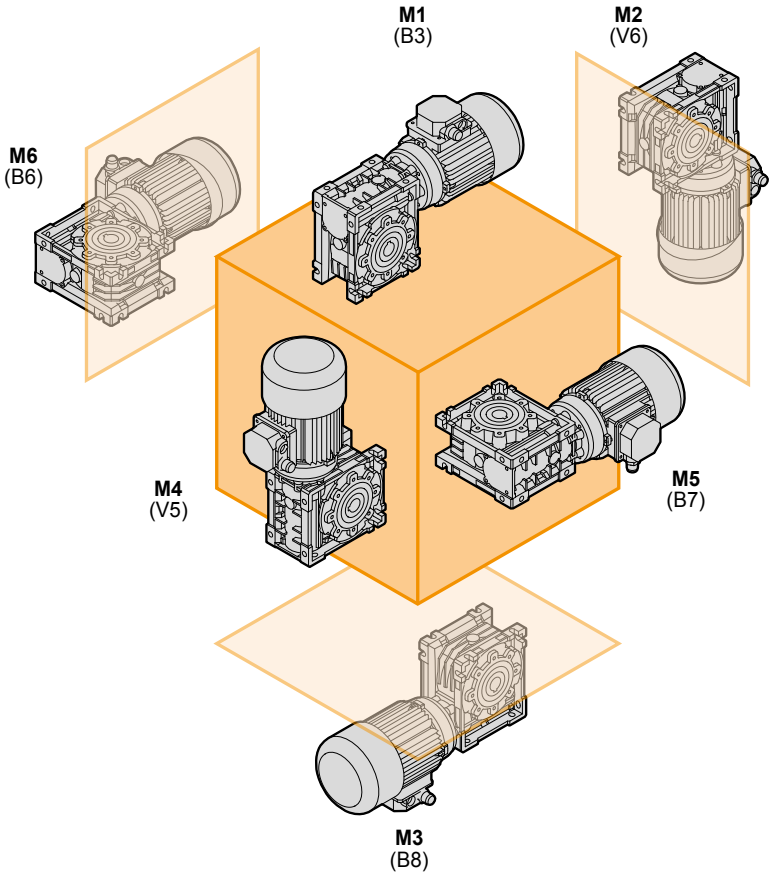
Lubrication

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

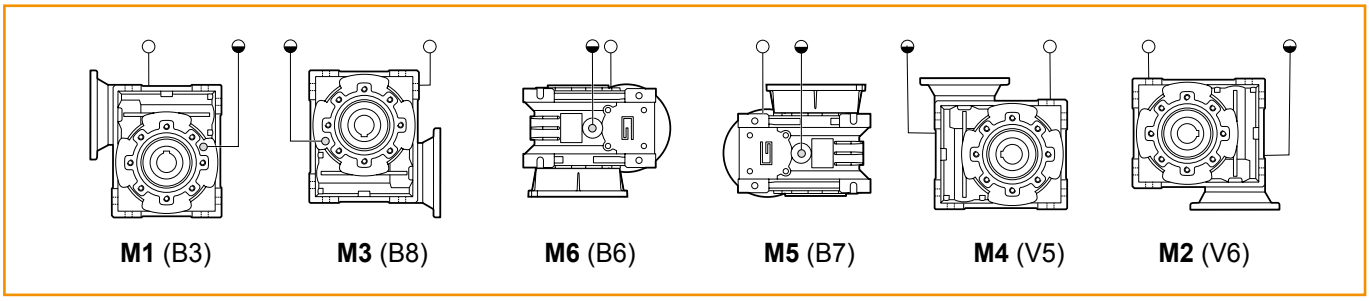
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearboxes in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.



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

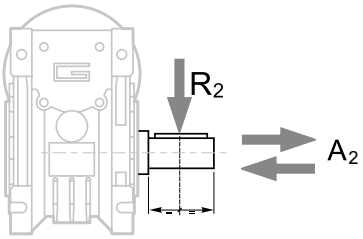


(Estándar)
(standard)

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

Cargas radiales

Radial loads

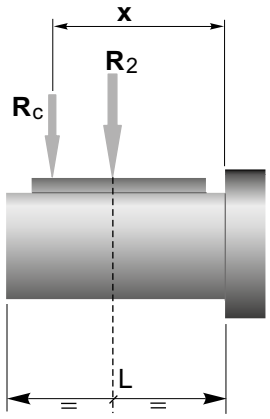


$A_2 = R_2 \times 0.2$

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 do determine the degree of reversibility (or irreversibility) of a gearbox.
This feature, quite significant in wormgearboxes, is affected by numerous factors including the helix angle (therefore drive ratio), lubrication, temperature, surface finish of the worm, vibrations, etc...

In applications that include translations, high reversibility must be guaranteed to prevent inertia of the moving parts from creating unacceptable load peaks on the drive parts.
In applications that require non-return of the load (e.g. lifting or inclined conveyor belts) a gearbox with high irreversibility must be chosen when a motor-brake unit is not present.

However, we would like to point out that non-return can be totally assured only by installing a self-braking motor or other external braking device.
The table below is provided for reference purposes only. It contains the various degrees of reversibility/irreversibility of wormgearboxes in relation to dynamic Rd and static Rs efficiency.

Rd	**Reversibilidad e irreversibilidad dinámica**	***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: Reversibillidad estática incierta	*Uncertain static reversibility*
<0.5	Irreversibilidad estática	*Static irreversibility*

Datos de dentado / *Toothing data*

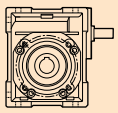
	Datos del engranaje sinfín corona *Worm wheel data*	Relación de reducción / *Ratio*											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CM040	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3°46'	2° 57'	2° 25'
CM050	Z		4	3	2	2	2	1	1	1	1	1	1
	β		23° 54'	18°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

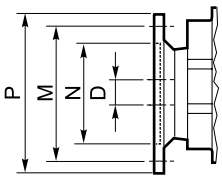
	i	n_1 = 1750 rpm				n_1 = 1150 rpm			
		n_2 [rpm]	Mn_2 [lb·in]	Pn_1 [hp]	NEMA Motores aplicables *NEMA Motor adapters* 56 C	n_2 [rpm]	Mn_2 [lb·in]	Pn_1 [hp]	NEMA Motores aplicables *NEMA Motor adapters* 56 C
CMIS 40									
	5	**350**	363	2.29		**230**	416	1.76	
	7.5	**233**	389	1.68		**153**	451	1.31	
	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.

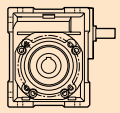
NOTE Highlighted áreas indicate the motor input flange available on each gearbox size.

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.

*** =** Pn_1 es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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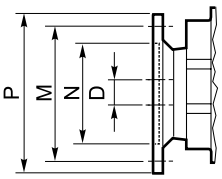
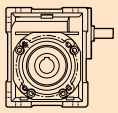


Dimensiones NEMA/ *NEMA Dimensions*			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125

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
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NOTE
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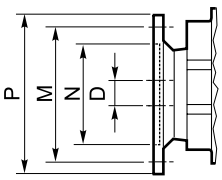
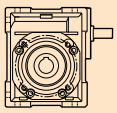


Dimensiones NEMA/ *NEMA Dimensions*				
	56 C	140 TC	180 TC	210 TC
N	4.5		8.5	
M	5.88		7.25	
P	6.5		9	
D	0.625	0.875	1.125	1.375

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.
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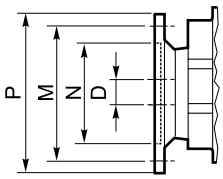

Dimensiones NEMA/ *NEMA Dimensions*				
	56 C	140 TC	180 TC	210 TC
N	4.5		8.5	
M	5.88		7.25	
P	6.5		9	
D	0.625	0.875	1.125	1.375

Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.16 hp							
0.12 kW (1750 rpm)	**350**	25	14.3	**III**	5	**CM040**	**56C**
	233	37	10.5	**III**	7.5		**56C**
	175	48	8.2	**III**	10		**56C**
	117	70	5.7	**III**	15		**56C**
	88	90	3.9	**III**	20		**56C**
	70	107	3.2	**III**	25		**56C**
	58	121	3.5	**III**	30		**56C**
	44	150	2.5	**III**	40		**56C**
	35	173	2.0	**II**	50		**56C**
	29	201	1.6	**II**	60		**56C**
	22	240	1.2	**I**	80		**56C**
	18	265	1.0	**I**	100		**56C**
	35	182	3.5	**III**	50	**CM050**	**56C**
	29	208	2.9	**III**	60		**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**
	46	154	2.5	**III**	25		**56C**
	38	174	2.9	**III**	30		**56C**
	29	211	2.0	**III**	40		**56C**
	23	250	1.6	**II**	50		**56C**
	19	279	1.4	**I**	60		**56C**
	14	323	1.1	**I**	80		**56C**
	12	360	0.9	**I**	100		**56C**
	29	218	3.5	**III**	40	**CM050**	**56C**
	23	259	2.8	**III**	50		**56C**
	19	290	2.3	**III**	60		**56C**
	14	337	1.8	**II**	80		**56C**
	12	377	1.5	**II**	100		**56C**
0.25 hp							
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**
	35	270	1.3	**I**	50		**56C**
	29	314	1.0	**I**	60		**56C**
	44	241	2.8	**III**	40	**CM050**	**56C**
	35	284	2.2	**III**	50		**56C**
	29	324	1.9	**II**	60		**56C**
	22	389	1.4	**I**	80		**56C**
	18	442	1.1	**I**	100		**56C**
	22	411	2.5	**III**	80	**CM063**	**56C**
	18	469	2.2	**III**	100		**56C**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.25 hp							
0.18 kW (1150 rpm)	**77**	158	3.0	**III**	15	**CM040**	**56C**
	58	203	2.0	**II**	20		**56C**
	46	240	1.6	**II**	25		**56C**
	38	272	1.8	**II**	30		**56C**
	29	329	1.3	**I**	40		**56C**
	23	391	1.0	**I**	50		**56C**
	19	436	0.9	**I**	60		**56C**
	58	206	3.4	**III**	20	**CM050**	**56C**
	46	247	2.7	**III**	25		**56C**
	38	280	3.1	**III**	30		**56C**
	29	340	2.2	**III**	40		**56C**
	23	405	1.8	**II**	50		**56C**
	19	453	1.5	**II**	60		**56C**
	14	527	1.2	**I**	80		**56C**
	12	590	1.0	**I**	100		**56C**
	19	477	2.6	**III**	60	**CM063**	**56C**
	14	570	2.0	**II**	80		**56C**
	12	644	1.7	**II**	100		**56C**
0.33 hp							
0.22 kW (1750 rpm)	**350**	52	6.9	**III**	5	**CM040**	**56C**
	233	77	5.1	**III**	7.5		**56C**
	175	100	4.0	**III**	10		**56C**
	117	145	2.8	**III**	15		**56C**
	88	186	1.9	**II**	20		**56C**
	70	220	1.5	**II**	25		**56C**
	58	250	1.7	**II**	30		**56C**
	44	309	1.2	**I**	40		**56C**
	35	357	1.0	**I**	50		**56C**
	88	188	3.4	**III**	20	**CM050**	**56C**
	70	226	2.7	**III**	25		**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**
	22	514	1.0	**I**	80		**56C**
	18	583	0.9	**I**	100		**56C**
	29	450	2.5	**III**	60	**CM063**	**56C**
	22	542	1.9	**II**	80		**56C**
	18	619	1.7	**II**	100		**56C**
	18	654	2.5	**III**	100	**CM075**	**56C**

Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
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		NEMA
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**

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Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.75 hp							
0.55 kW (1750 rpm)	**44**	779	2.9	**III**	40	**CM075**	**56C**
	35	933	2.2	**III**	50		**56C**
	29	1054	1.8	**II**	60		**56C**
	22	1298	1.3	**I**	80		**56C**
	18	1487	1.1	**I**	100		**56C**
	35	987	3.5	**III**	50	**CM090**	**56C**
	29	1135	2.7	**III**	60		**56C**
	22	1384	2.1	**III**	80		**56C**
	18	1622	1.6	**II**	100		**56C**
0.55 kW (1150 rpm)	**153**	262	3.1	**III**	7.5	**CM050**	**56C**
	115	346	2.4	**III**	10		**56C**
	77	487	1.7	**II**	15		**56C**
	58	617	1.1	**I**	20		**56C**
	46	740	0.9	**I**	25		**56C**
	38	839	1.0	**I**	30		**56C**
	77	500	3.2	**III**	15	**CM063**	**56C-140TC**
	58	642	2.1	**III**	20		**56C-140TC**
	46	771	1.6	**II**	25		**56C-140TC**
	38	864	1.9	**II**	30		**56C-140TC**
	29	1070	1.3	**I**	40		**56C-140TC**
	23	1255	1.1	**I**	50		**56C-140TC**
	19	1432	0.9	**I**	60		**56C**
	46	792	2.7	**III**	25	**CM075**	**56C-140TC**
	38	901	3.3	**III**	30		**56C-140TC**
	29	1119	2.3	**III**	40		**56C-140TC**
	23	1316	1.7	**II**	50		**56C-140TC**
	19	1481	1.5	**II**	60		**56C-140TC**
	14	1810	1.1	**I**	80		**56C-140TC**
	12	2057	0.9	**I**	100		**56C**
	23	1399	2.8	**III**	50	**CM090**	**56C-140TC**
	19	1580	2.3	**III**	60		**56C-140TC**
	14	1942	1.7	**II**	80		**56C-140TC**
	12	2221	1.3	**I**	100		**56C-140TC**
	14	2073	2.8	**III**	80	**CM110**	**140TC**
	12	2427	2.2	**III**	100		**140TC**
1 hp							
0.75 kW (1750 rpm)	**350**	157	4.2	**III**	5	**CM050**	**56C**
	233	235	3.0	**III**	7.5		**56C**
	175	306	2.4	**III**	10		**56C**
	117	443	1.6	**II**	15		**56C**
	88	570	1.1	**I**	20		**56C**
	70	685	0.9	**I**	25		**56C**
	58	779	1.0	**I**	30		**56C**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
1 hp							
0.75 kW (1750 rpm)	**117**	454	3.0	**III**	15	**CM063**	**56C-140TC**
	88	584	2.1	**III**	20		**56C-140TC**
	70	703	1.7	**II**	25		**56C-140TC**
	58	811	1.8	**II**	30		**56C-140TC**
	44	1009	1.2	**I**	40		**56C-140TC**
	35	1189	1.0	**I**	50		**56C-140TC**
	70	721	2.8	**III**	25	**CM075**	**56C-140TC**
	58	833	3.1	**III**	30		**56C-140TC**
	44	1038	2.1	**III**	40		**56C-140TC**
	35	1244	1.6	**II**	50		**56C-140TC**
	29	1406	1.4	**I**	60		**56C-140TC**
	22	1730	1.0	**I**	80		**56C-140TC**
	44	1096	3.5	**III**	40	**CM090**	**56C-140TC**
	35	1316	2.6	**III**	50		**56C-140TC**
	29	1514	2.1	**III**	60		**56C-140TC**
	22	1845	1.6	**II**	80		**56C-140TC**
	18	2163	1.2	**I**	100		**56C-140TC**
	22	1961	2.4	**III**	80	**CM110**	**140TC**
	18	2307	1.9	**II**	100		**140TC**
	22	1990	3.7	**III**	80	**CM130**	**140TC**
	18	2307	2.8	**III**	100		**140TC**
0.75 kW (1150 rpm)	**230**	239	3.3	**III**	5	**CM050**	**56C**
	153	350	2.3	**III**	7.5		**56C**
	115	461	1.8	**II**	10		**56C**
	77	650	1.3	**I**	15		**56C**
	58	823	0.9	**I**	20		**56C**
	115	461	3.4	**III**	10	**CM063**	**56C-140TC**
	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**
	29	1426	1.0	**I**	40		**56C-140TC**
	58	867	2.8	**III**	20	**CM075**	**56C-140TC**
	46	1056	2.0	**III**	25		**56C-140TC**
	38	1201	2.4	**III**	30		**56C-140TC**
	29	1492	1.7	**II**	40		**56C-140TC**
	23	1755	1.3	**I**	50		**56C-140TC**
	19	1975	1.1	**I**	60		**56C-140TC**
	14	2413	0.8	**I**	80		**56C-140TC**
	46	1097	3.4	**III**	25	**CM090**	**56C-140TC**
	29	1558	2.8	**III**	40		**56C-140TC**
	23	1865	2.1	**III**	50		**56C-140TC**
	19	2106	1.7	**II**	60		**56C-140TC**
	14	2589	1.3	**I**	80		**56C-140TC**
	12	2962	1.0	**I**	100		**56C-140TC**

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Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
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		**140TC**
	115	699	3.8	**III**	10	**CM075**	**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**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
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	**CM075**	**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		**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	**CM110**	**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		**140TC**
	35	2703	3.2	**III**	50	**CM130**	**140TC**
	29	3158	2.5	**III**	60		**140TC**
	22	3979	1.8	**II**	80		**140TC**
	18	4614	1.4	**II**	100		**140TC**

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Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
2 hp							
1.5 kW (1150 rpm)	**153**	716	3.5	**III**	7.5	**CM075**	**180TC**
	115	932	2.9	**III**	10		**180TC**
	77	1366	2.0	**III**	15		**180TC**
	58	1733	1.4	**II**	20		**180TC**
	46	2112	1.0	**I**	25		**180TC**
	38	2402	1.2	**I**	30		**180TC**
	153	724	5.1	**III**	7.5	**CM090**	**180TC**
	115	954	4.2	**III**	10		**180TC**
	77	1382	3.3	**III**	15		**180TC**
	58	1799	2.3	**III**	20		**180TC**
	46	2194	1.7	**II**	25		**180TC**
	38	2501	2.0	**III**	30		**180TC**
	29	3116	1.4	**II**	40		**180TC**
	23	3730	1.1	**I**	50		**180TC**
	46	2249	3.0	**III**	25	**CM110**	**180TC**
	38	2534	3.3	**III**	30		**180TC**
	29	3335	2.4	**III**	40		**180TC**
	23	3949	1.8	**II**	50		**180TC**
	19	4476	1.4	**II**	60		**180TC**
	14	5529	1.1	**I**	80		**180TC**
	29	3247	3.0	**III**	40	**CM130**	**180TC**
	23	4004	2.3	**III**	50		**180TC**
	19	4607	1.9	**II**	60		**180TC**
	14	5617	1.4	**I**	80		**180TC**
3 hp							
2.2 kW (1750 rpm)	**350**	487	2.4	**III**	5	**CM063**	**140TC**
	233	714	1.8	**II**	7.5		**140TC**
	175	930	1.4	**II**	10		**140TC**
	117	1362	1.0	**I**	15		**140TC**
	233	722	2.9	**III**	7.5	**CM075**	**140TC-180TC**
	175	941	2.4	**III**	10		**140TC-180TC**
	117	1362	1.7	**II**	15		**140TC-180TC**
	88	1795	1.2	**I**	20		**140TC-180TC**
	70	2163	0.9	**I**	25		**140TC-180TC**
	58	2498	1.0	**I**	30		**140TC-180TC**
	175	962	3.5	**III**	10	**CM090**	**140TC-180TC**
	117	1395	2.7	**III**	15		**140TC-180TC**
	88	1817	2.0	**III**	20		**140TC-180TC**
	70	2244	1.5	**II**	25		**140TC-180TC**
	58	2595	1.7	**II**	30		**140TC-180TC**
	44	3287	1.2	**I**	40		**140TC-180TC**
	35	3947	0.9	**I**	50		**140TC-180TC**

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
3 hp							
2.2 kW (1750 rpm)	**88**	1838	3.2	**III**	20	**CM110**	**140TC-180TC**
	70	2271	2.4	**III**	25		**140TC-180TC**
	58	2628	2.5	**III**	30		**140TC-180TC**
	44	3417	1.9	**II**	40		**140TC-180TC**
	35	4109	1.4	**I**	50		**140TC-180TC**
	29	4736	1.1	**I**	60		**140TC-180TC**
	70	2244	3.6	**III**	25	**CM130**	**140TC-180TC**
	58	2563	3.6	**III**	30		**140TC-180TC**
	44	3287	2.8	**III**	40		**140TC-180TC**
	35	4055	2.1	**III**	50		**140TC-180TC**
	29	4736	1.7	**II**	60		**140TC-180TC**
	22	5969	1.2	**I**	80		**140TC**
2.2 kW (1150 rpm)	**77**	2098	3.7	**III**	15	**CM110**	**210TC**
	58	2764	2.6	**III**	20		**210TC**
	46	3373	2.0	**III**	25		**210TC**
	38	3801	2.2	**III**	30		**210TC**
	58	2699	3.4	**III**	20	**CM130**	**210TC**
	46	3332	2.8	**III**	25		**210TC**
	38	3801	2.7	**III**	30		**210TC**
5 hp							
3.7 kW (1750 rpm)	**233**	1203	1.8	**II**	7.5	**CM075**	**180TC**
	175	1568	1.5	**II**	10		**180TC**
	117	2271	1.0	**I**	15		**180TC**
	233	1217	2.5	**III**	7.5	**CM090**	**180TC**
	175	1604	2.1	**III**	10		**180TC**
	117	2325	1.6	**II**	15		**180TC**
	88	3028	1.2	**I**	20		**180TC**
	70	3740	0.9	**I**	25		**180TC**
	58	4325	1.0	**I**	30		**180TC**
	175	1604	3.4	**III**	10	**CM110**	**180TC**
	117	2352	2.6	**III**	15		**180TC**
	88	3064	1.9	**II**	20		**180TC**
	70	3785	1.4	**II**	25		**180TC**
	58	4379	1.5	**II**	30		**180TC**
	44	5695	1.1	**I**	40		**180TC**
	35	6848	0.8	**I**	50		**180TC**
	117	2325	3.5	**III**	15	**CM130**	**180TC**
	88	3028	2.7	**III**	20		**180TC**
	70	3740	2.2	**III**	25		**180TC**
	58	4271	2.2	**III**	30		**180TC**
	44	5479	1.7	**II**	40		**180TC**
	35	6758	1.3	**I**	50		**180TC**
	29	7894	1.0	**I**	60		**180TC**

Datos técnicos

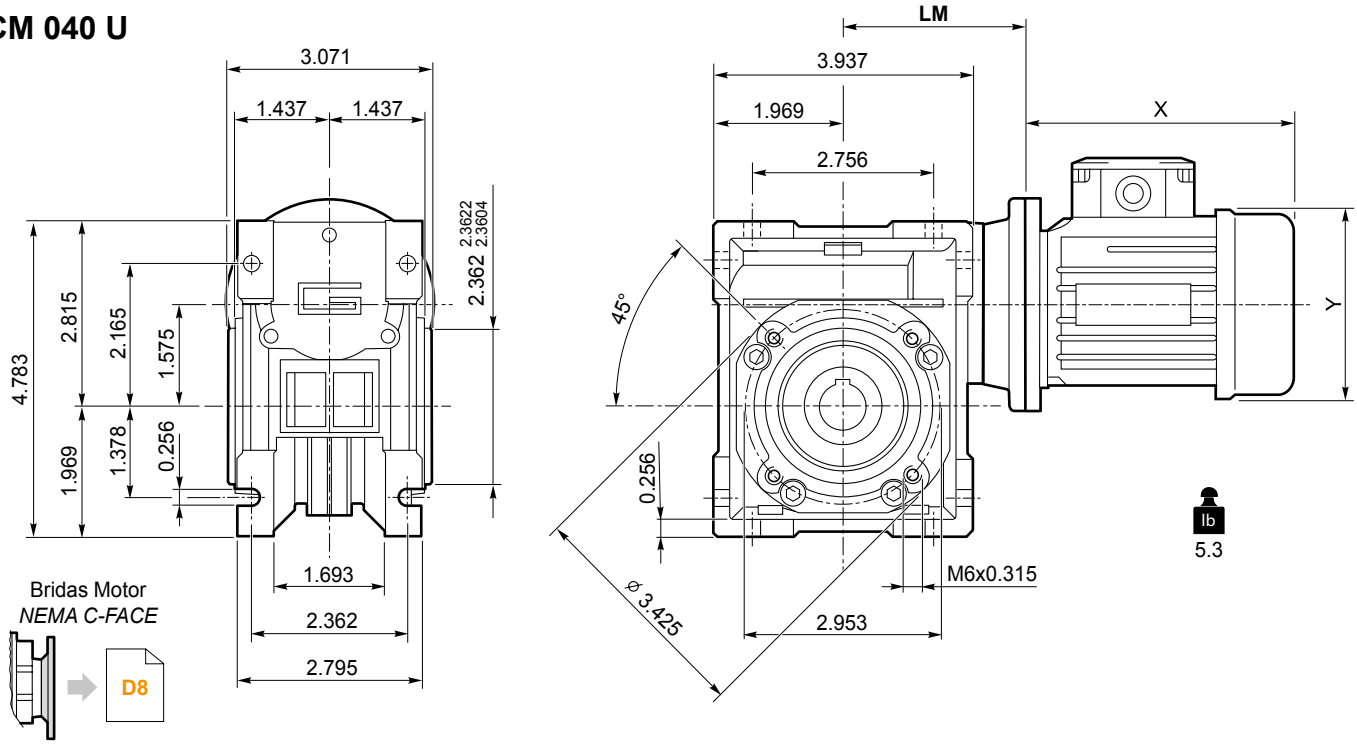
Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
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**

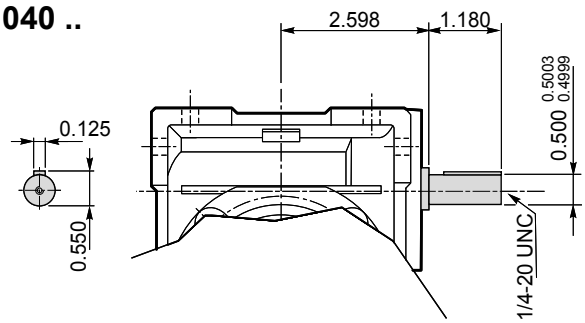
Dimensiones *Dimensions*

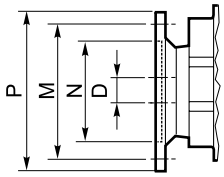
CM 040 U - CMIS 040 U

CM 040 U



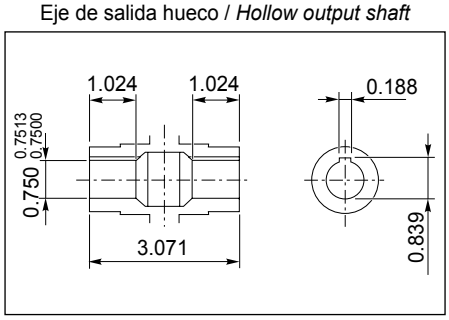
CMIS 040 ..



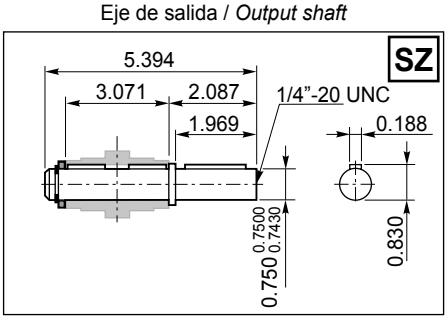


Brida Motor / *Motor flange*	
Dimensiones NEMA ***NEMA Dimensions***	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.150

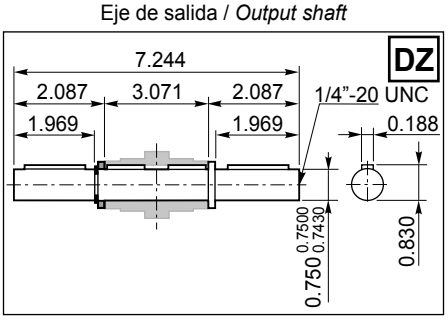
Eje de salida hueco / *Hollow output shaft*



Eje de salida / *Output shaft*

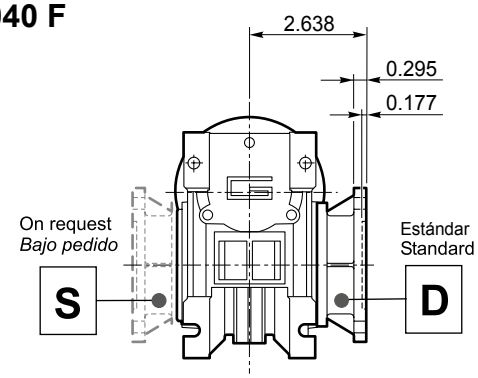


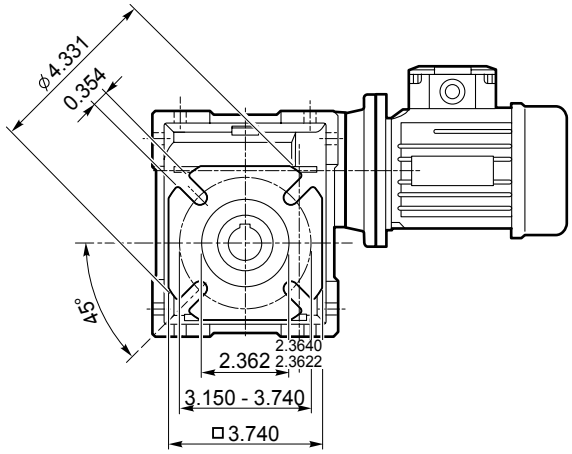
Eje de salida / *Output shaft*



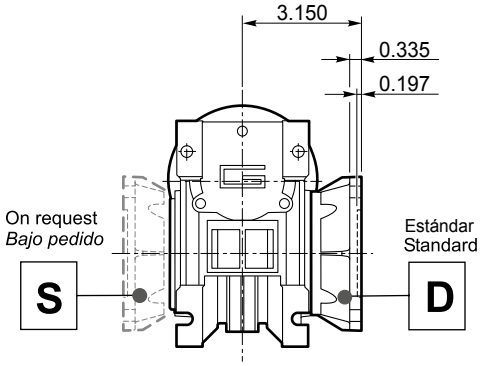
CM 040 F..

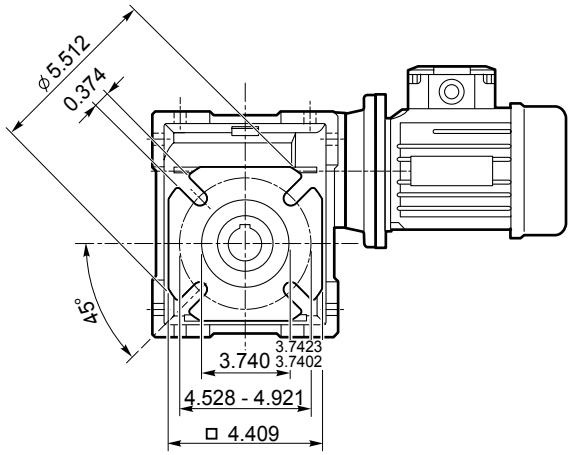
CM 040 F



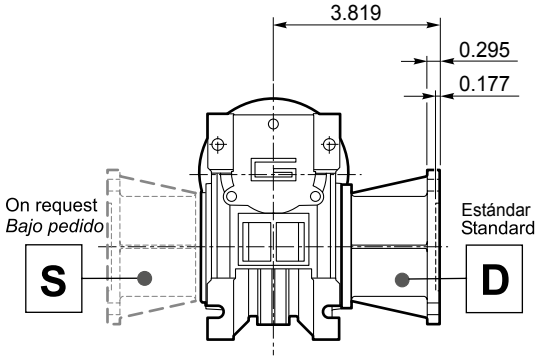


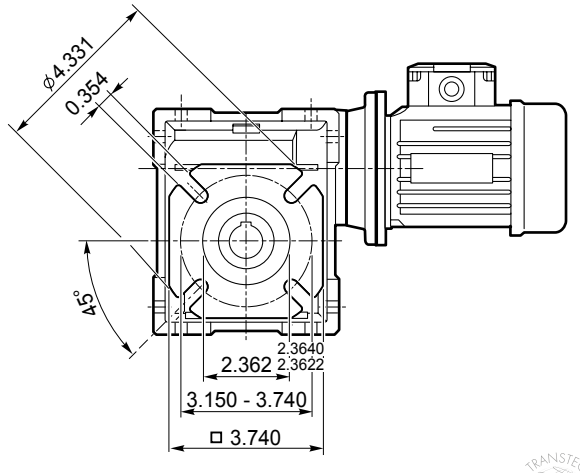
CM 040 FB





CM 040 FL

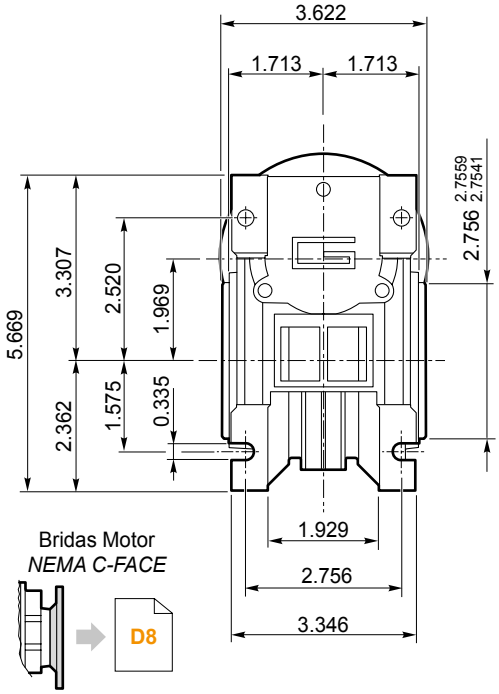


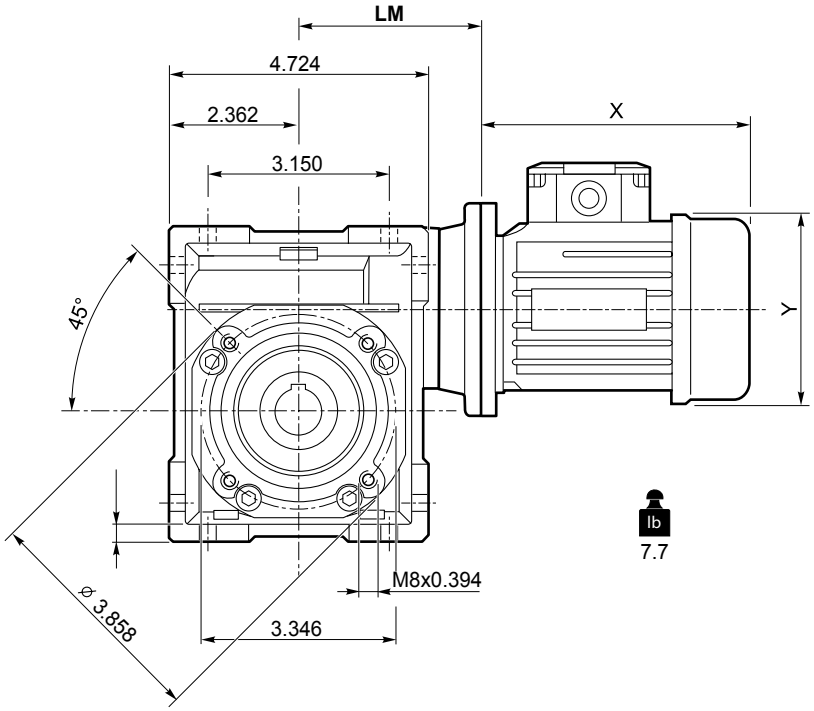


Dimensiones ***Dimensions***

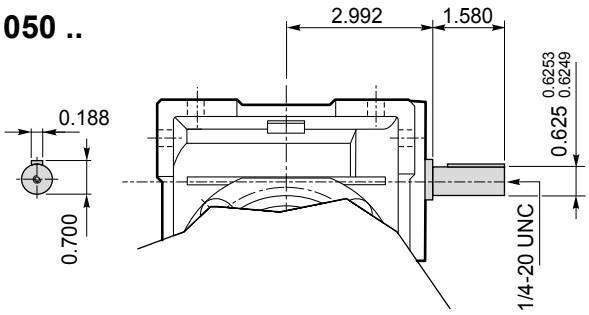
CM 050 U - CMIS 050 U

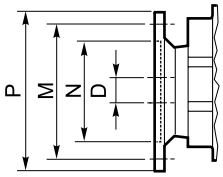
CM 050 U





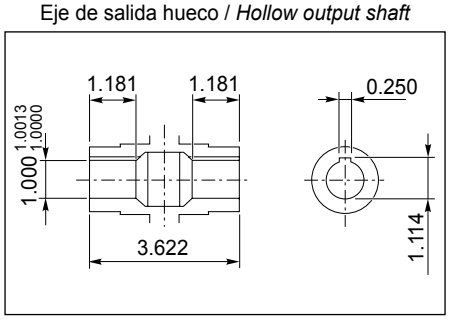
CMIS 050 ..



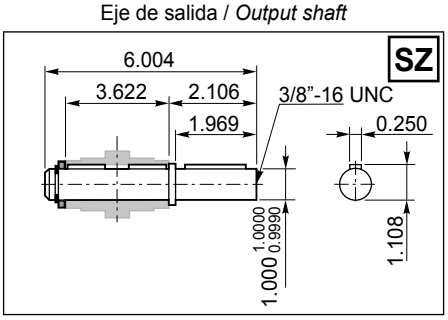


Brida Motor / *Motor flange*	
Dimensiones NEMA ***NEMA Dimensions***	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.346

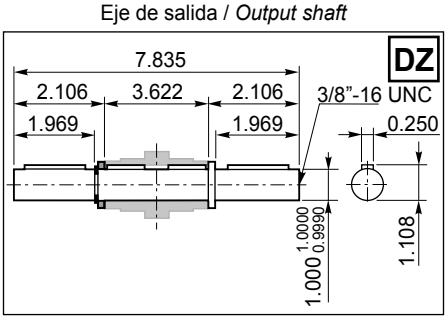
Eje de salida hueco / *Hollow output shaft*



Eje de salida / *Output shaft*

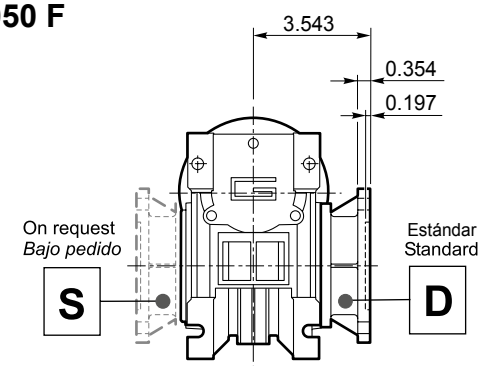


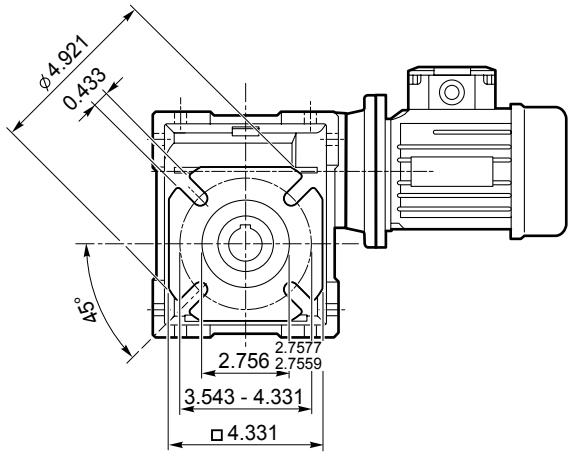
Eje de salida / *Output shaft*



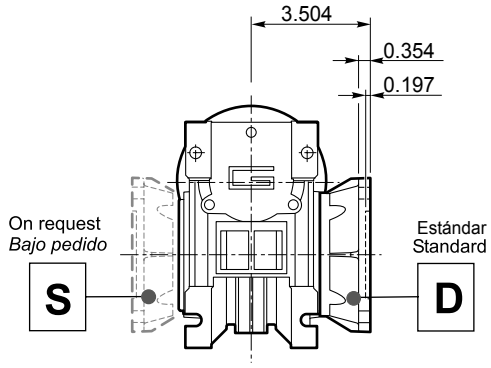
CM 050 F..

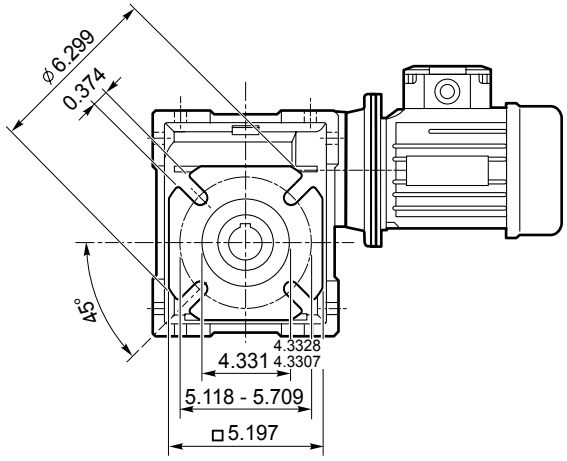
CM 050 F



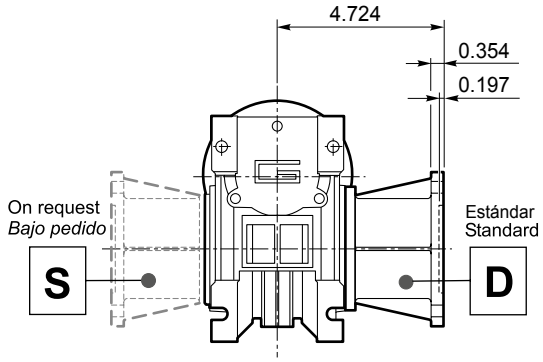


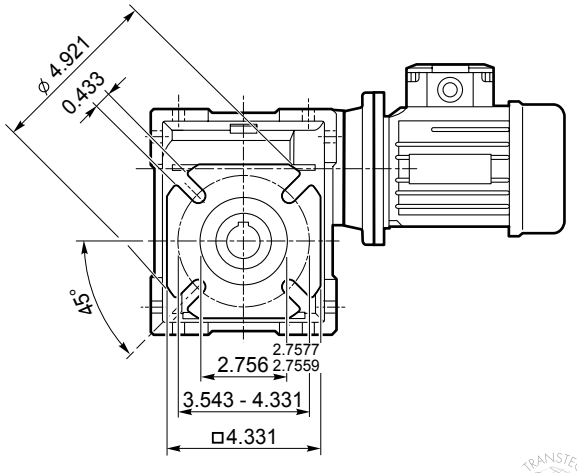
CM 050 FB





CM 050 FL

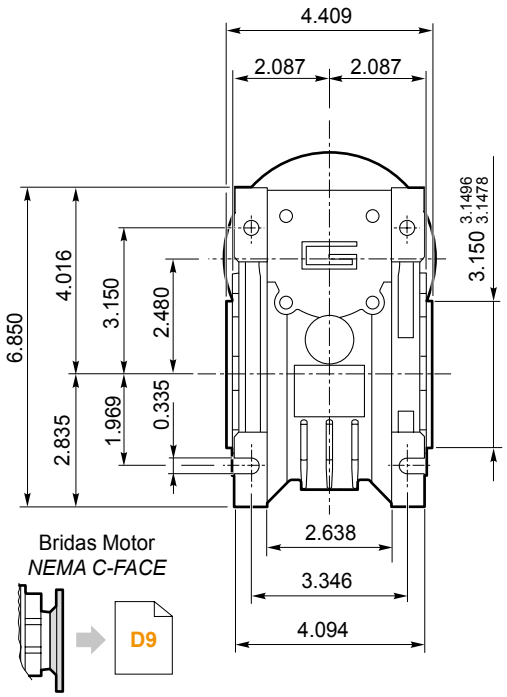


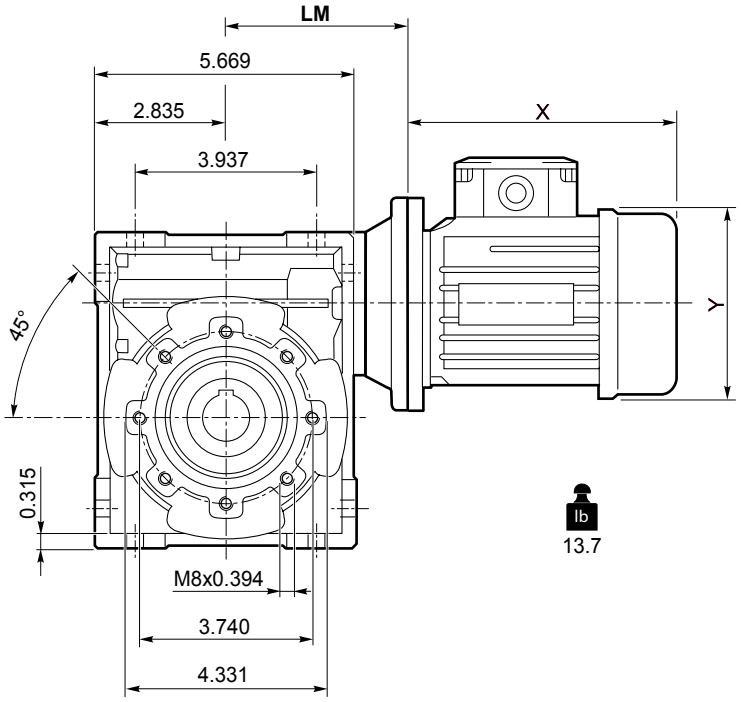


Dimensiones *Dimensions*

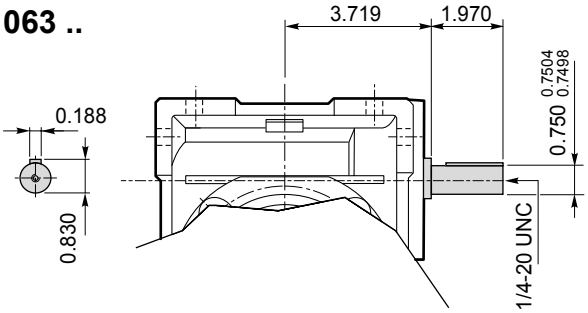
CM 063 U - CMIS 063 U

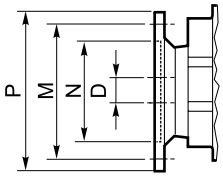
CM 063 U





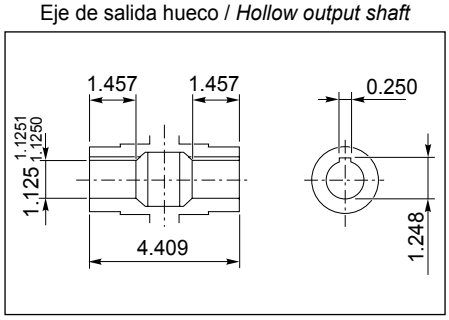
CMIS 063 ..



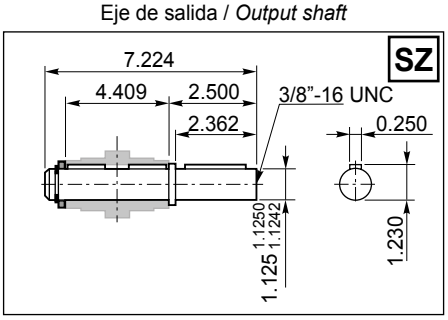


Brida Motor / *Motor flange*		
Dimensiones NEMA ***NEMA Dimensions***		
	56 C	**140 TC**
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM	4.055	

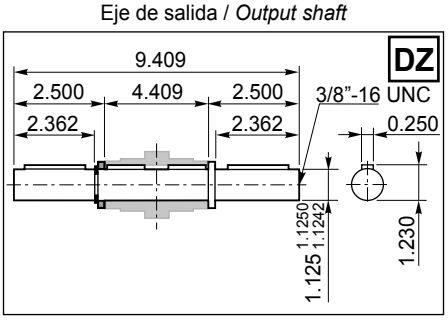
Eje de salida hueco / *Hollow output shaft*



Eje de salida / *Output shaft*

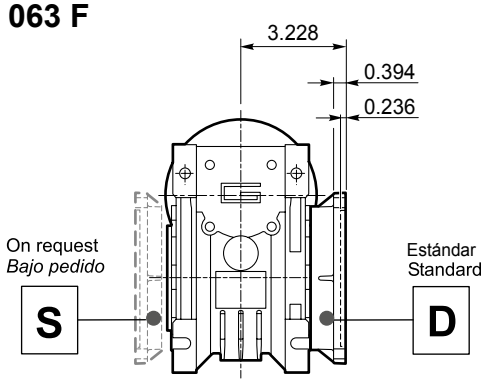


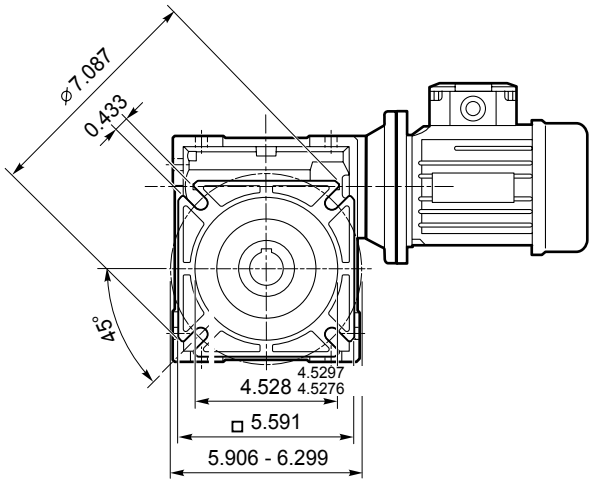
Eje de salida / *Output shaft*



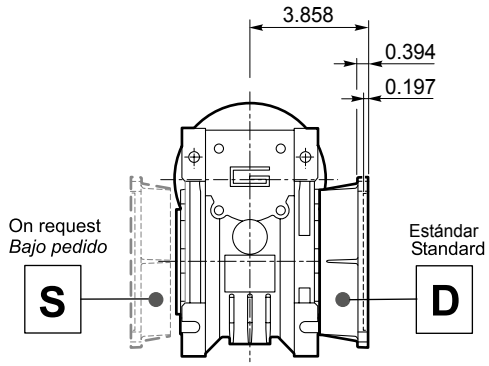
CM 063 F..

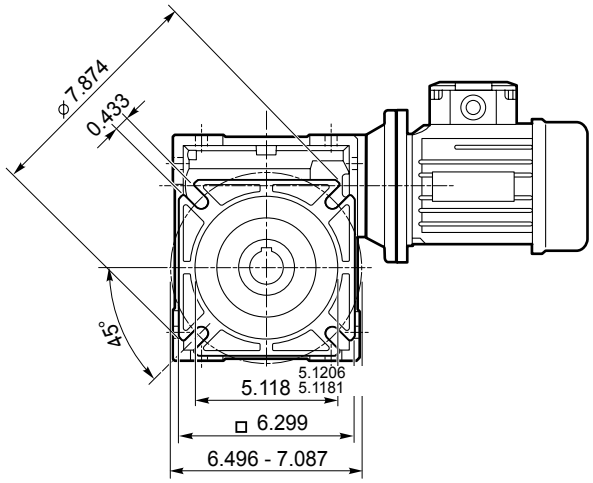
CM 063 F



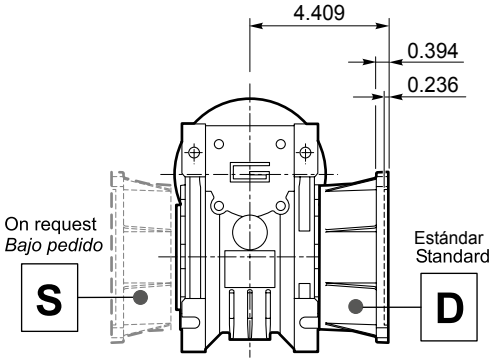


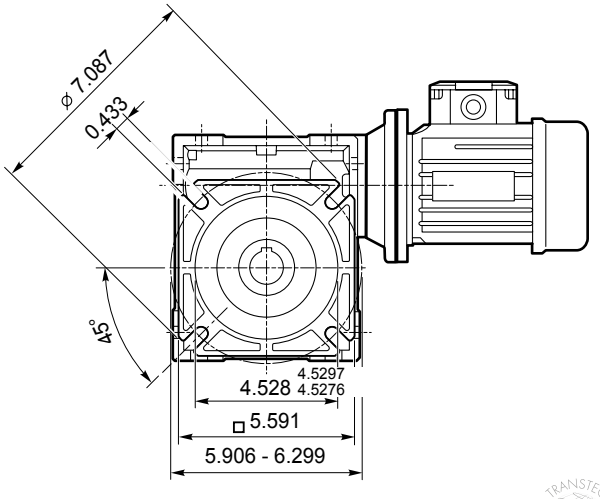
CM 063 FB





CM 063 FL

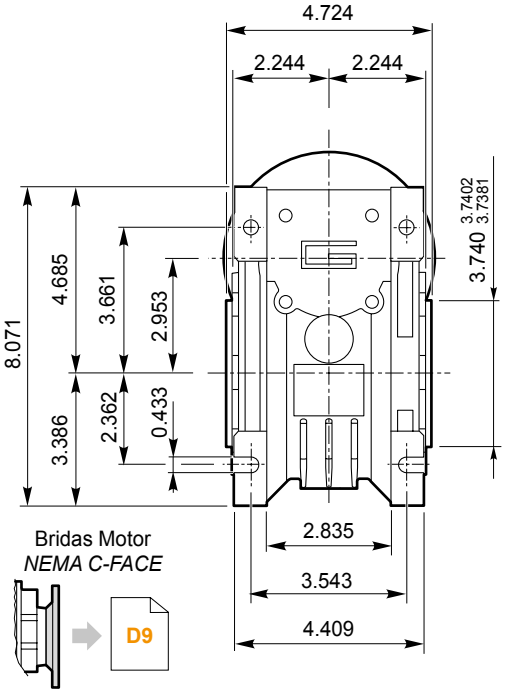


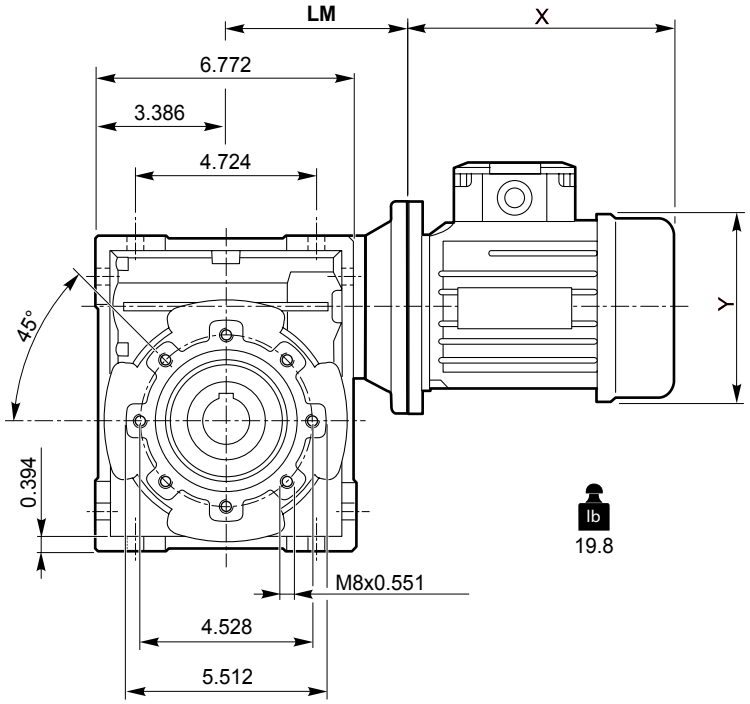


Dimensiones ***Dimensions***

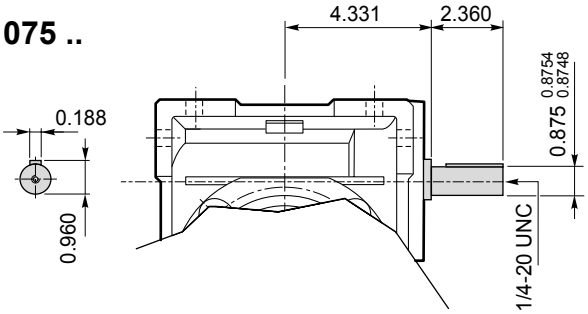
CM 075 U - CMIS 075 U

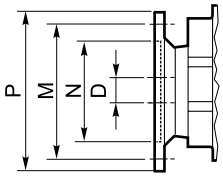
CM 075 U





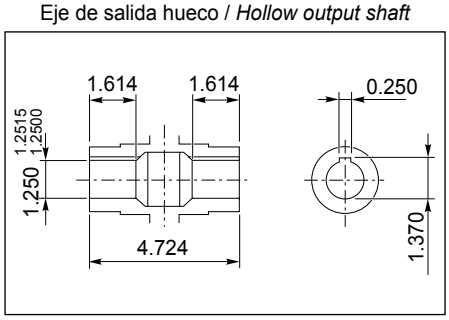
CMIS 075 ..



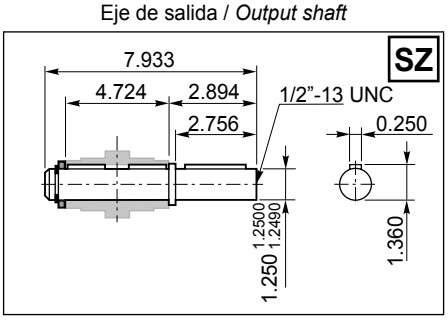


Brida Motor / *Motor flange*			
Dimensiones NEMA *NEMA Dimensions*			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM	4.055		4.750

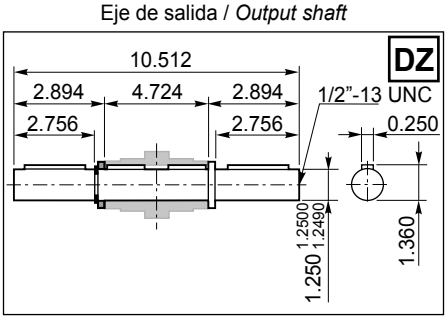
Eje de salida hueco / *Hollow output shaft*

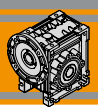


Eje de salida / *Output shaft*



Eje de salida / *Output shaft*

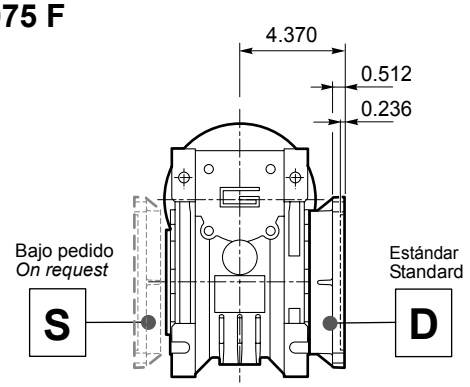


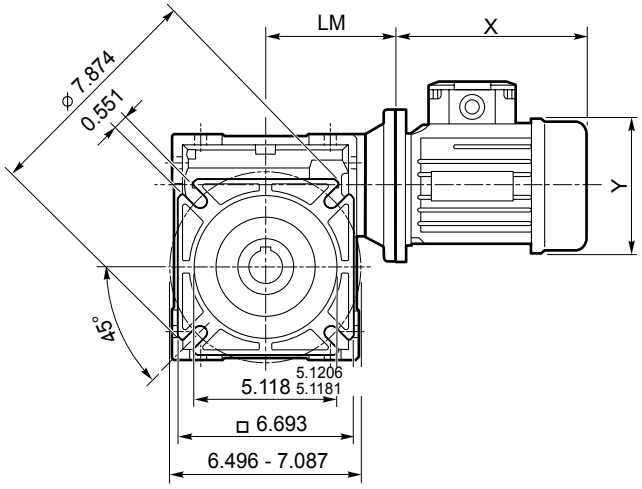


Dimensiones ***Dimensions***

CM 075 F..

CM 075 F

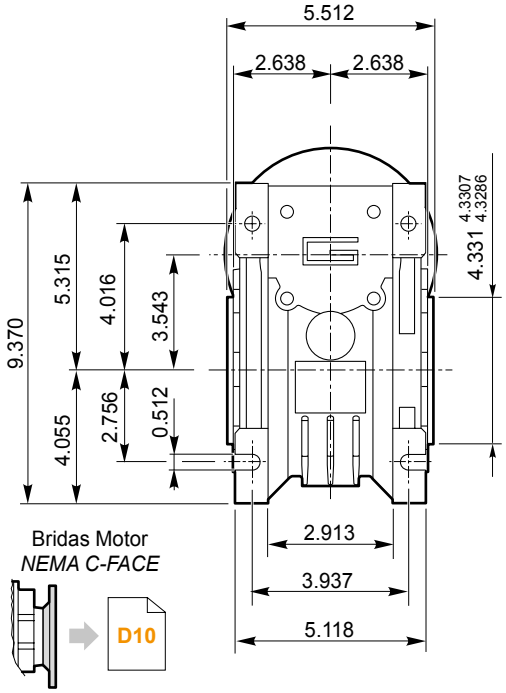


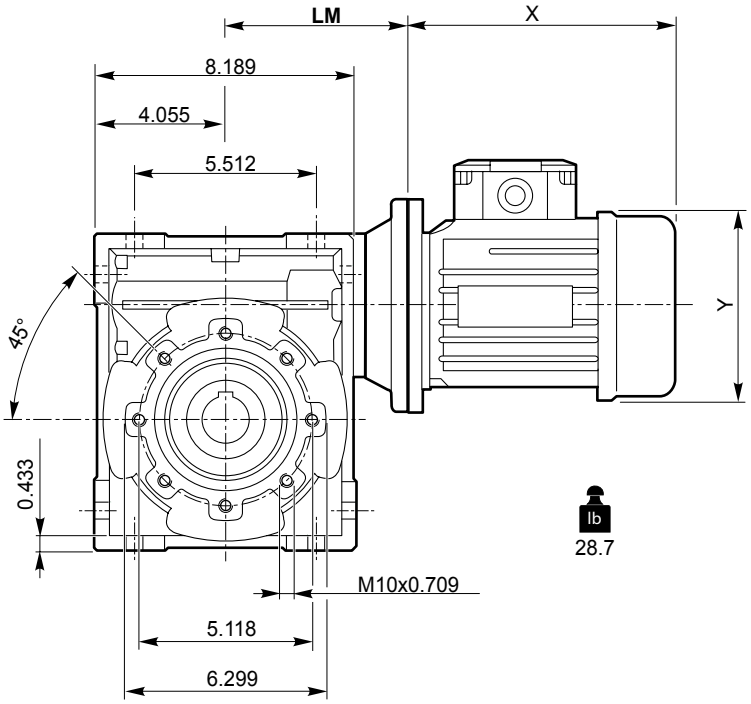


Dimensiones *Dimensions*

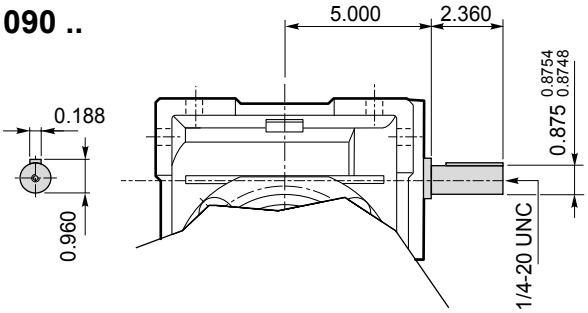
CM 090 U - CMIS 090 U

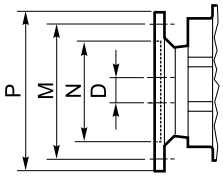
CM 090 U





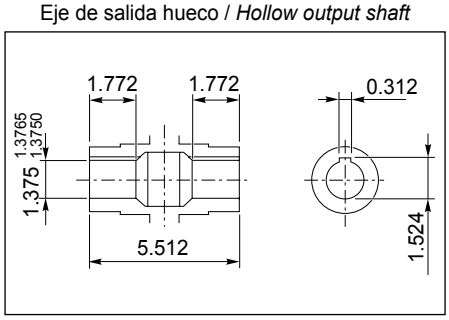
CMIS 090 ..



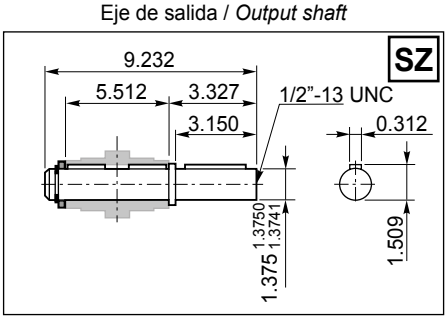


Brida Motor / *Motor flange*			
Dimensiones NEMA *NEMA Dimensions*			
	56 C	140 TC	180 TC
N	4.5		8.5
M	5.88		7.25
P	6.5		9
D	0.625	0.875	1.125
LM	5.512		5.419

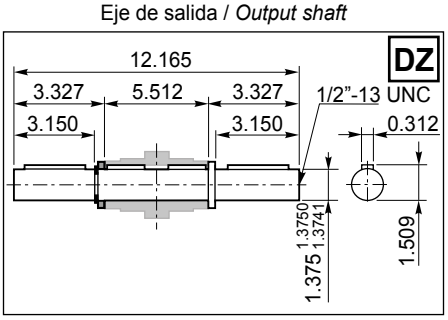
Eje de salida hueco / *Hollow output shaft*



Eje de salida / *Output shaft*

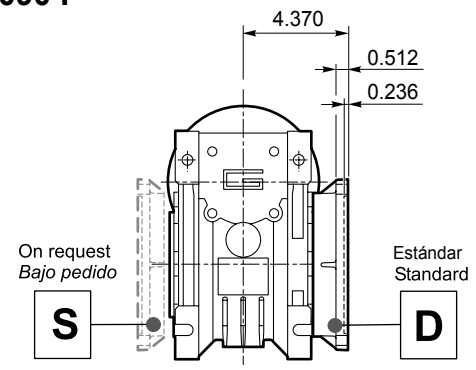


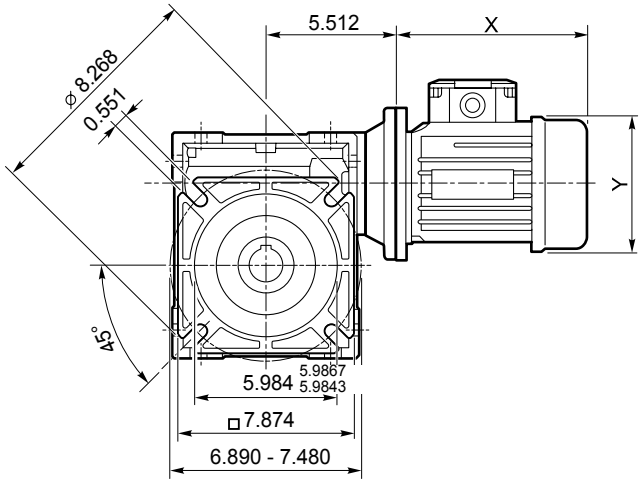
Eje de salida / *Output shaft*



CM 090 F..

CM 090 F

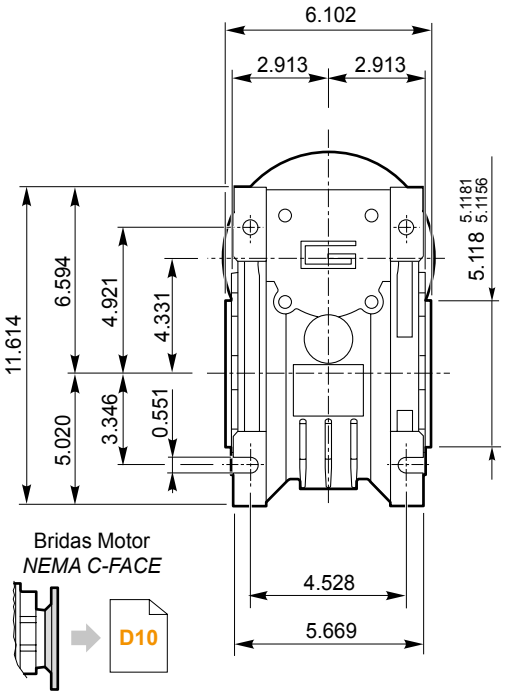


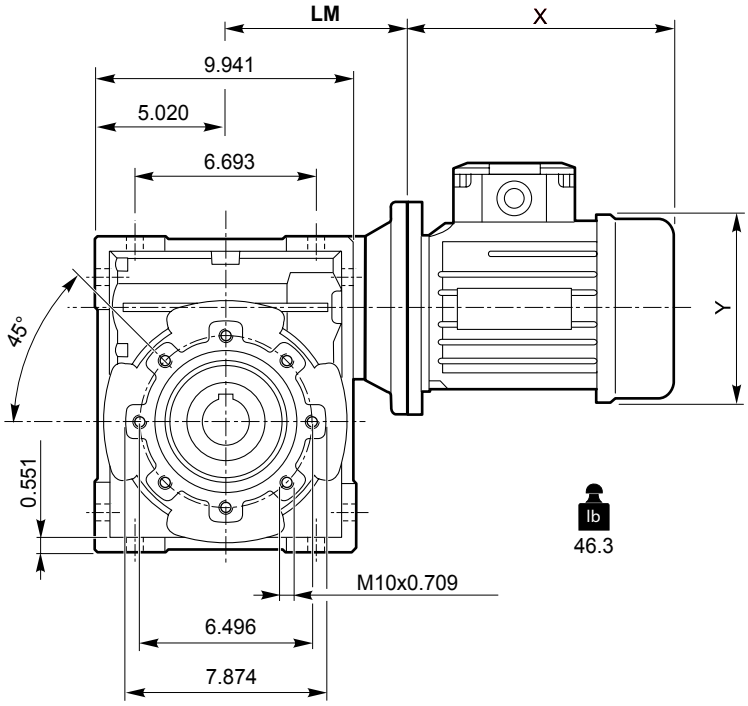


Dimensiones ***Dimensions***

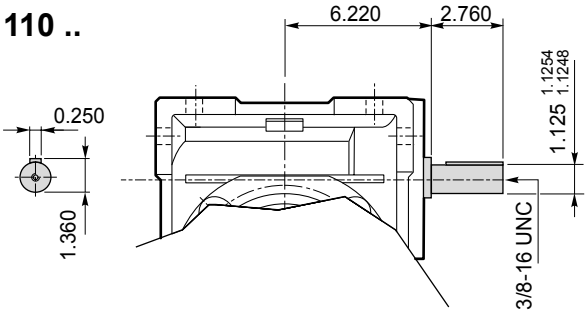
CM 110 U - CMIS 110 U

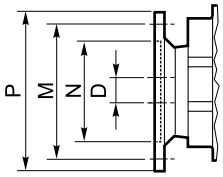
CM 110 U





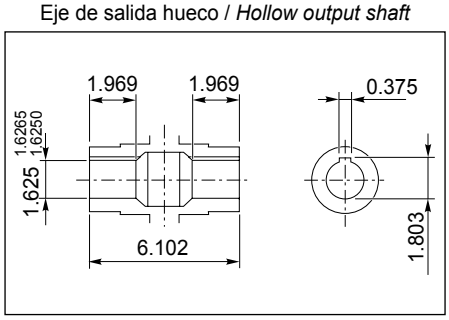
CMIS 110 ..



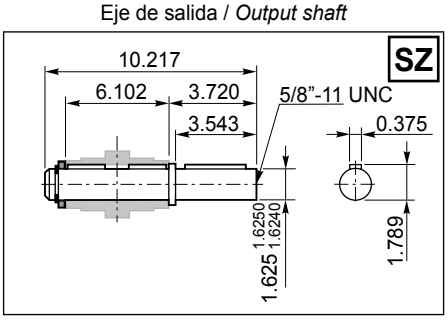


Brida Motor / *Motor flange*			
Dimensiones NEMA ***NEMA Dimensions***			
	140 TC	**180 TC**	**210 TC**
N	4.5	8.5	
M	5.88	7.25	
P	6.5	9	
D	0.875	1.125	1.375
LM	6.693	6.482	

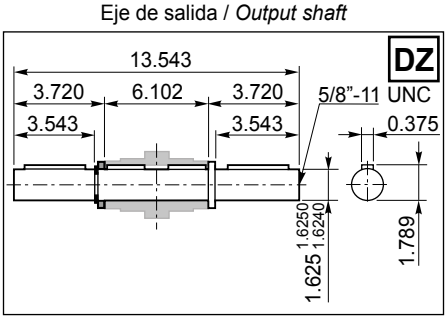
Eje de salida hueco / *Hollow output shaft*

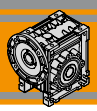


Eje de salida / *Output shaft*



Eje de salida / *Output shaft*

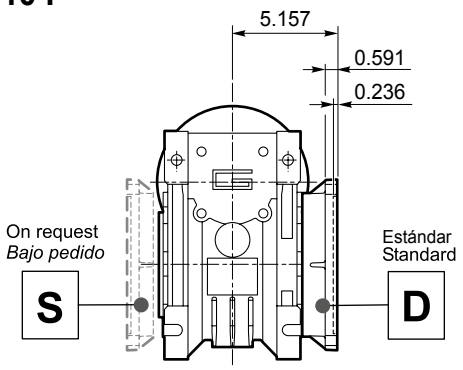


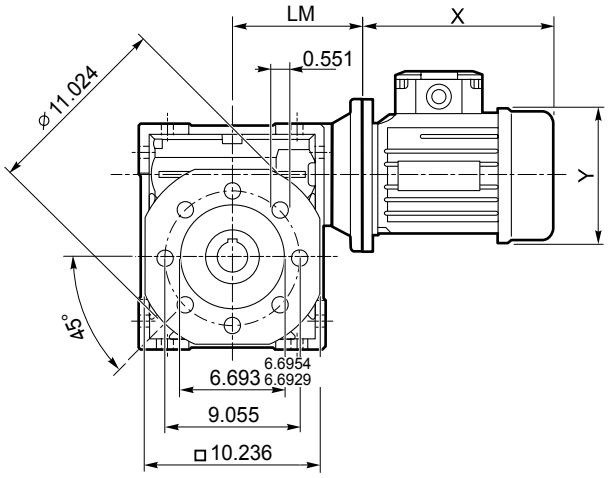


Dimensiones ***Dimensions***

CM 110 F..

CM 110 F

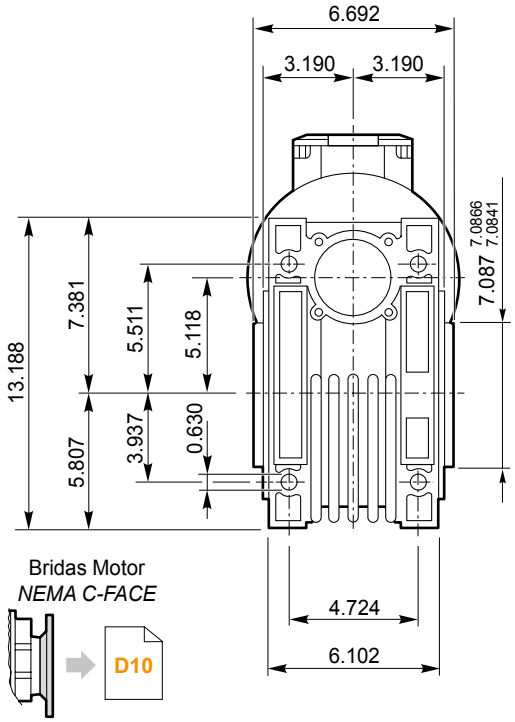


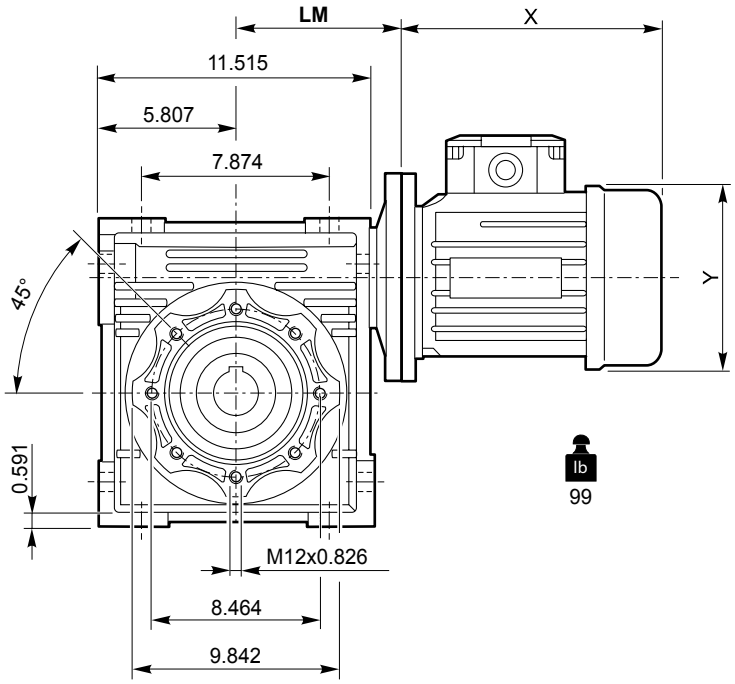


Dimensiones ***Dimensions***

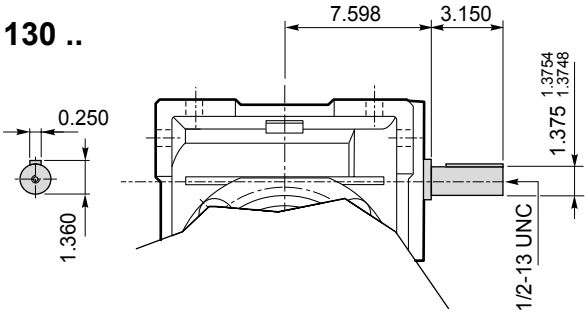
CM 130 U - CMIS 130 U

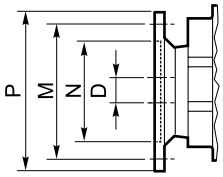
CM 130 U





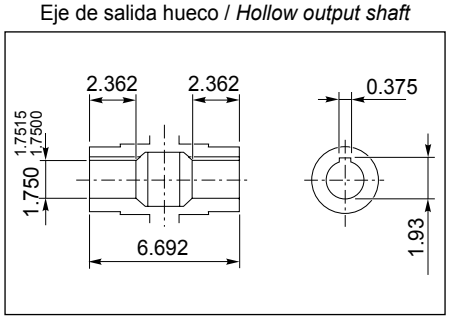
CMIS 130 ..



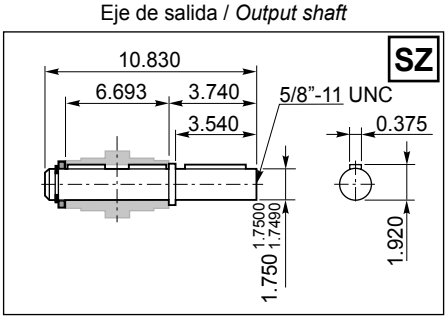


Brida Motor / *Motor flange*			
Dimensiones NEMA ***NEMA Dimensions***			
	140 TC	**180 TC**	**210 TC**
N	4.5	8.5	
M	5.88	7.25	
P	6.5	9	
D	0.875	1.125	1.375
LM	7.598		

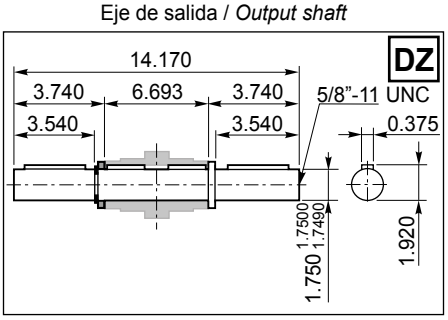
Eje de salida hueco / *Hollow output shaft*

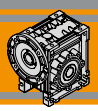


Eje de salida / *Output shaft*



Eje de salida / *Output shaft*

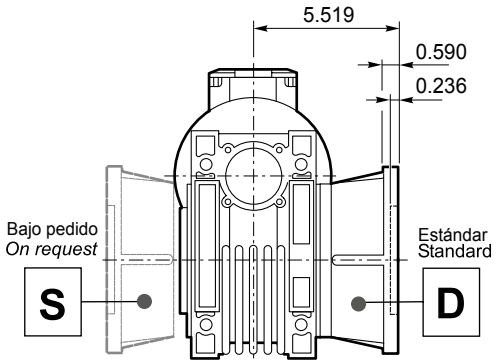


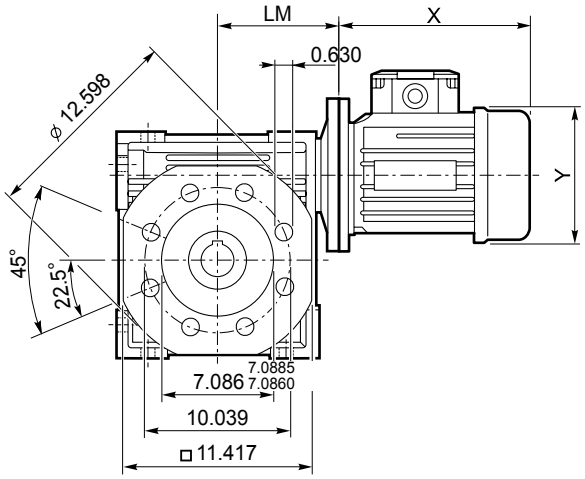


Dimensiones ***Dimensions***

CM 130 F..

CM 130 F



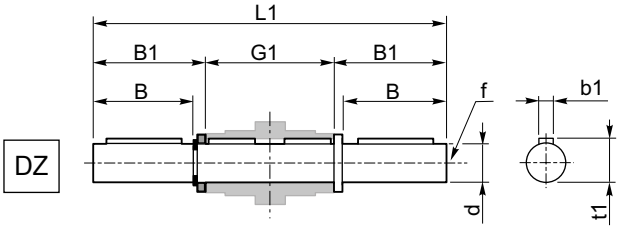


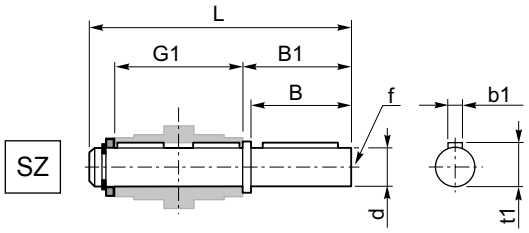
Accesorios

Accessories

Eje de salida simple y doble

Single and double output shaft



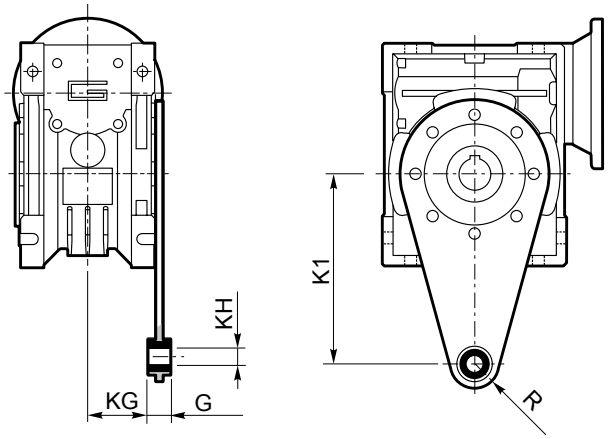


CM	d	B	B1	G1	L	L1	f	b1	t1
040	0.750 $^{0.7500}_{0.7430}$	1.969	2.087	3.071	5.394	7.244	1/4"-20	0.188	0.830
050	1.000 $^{1.0000}_{0.9992}$	1.969	2.106	3.622	6.004	7.835	3/8"-16	0.250	1.108
063	1.125 $^{1.1250}_{1.1242}$	2.362	2.500	4.409	7.224	9.409	3/8"-16	0.250	1.230
075	1.250 $^{1.2500}_{1.2490}$	2.756	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

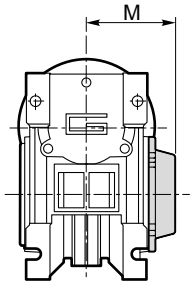
CM	K1	G	KG	KH	R
040	3.937	0.551	1.220	0.394	0.709
050	3.937	0.551	1.496	0.394	0.709
063	5.906	0.551	1.870	0.394	0.709
075	7.874	0.984	1.831	0.787	1.181
090	7.874	0.984	2.224	0.787	1.181
110	9.843	1.181	2.441	0.984	1.378
130	9.842	1.181	2.717	0.984	1.378

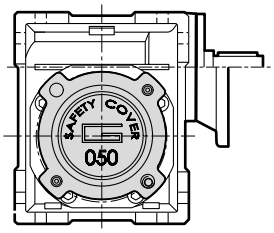


Opciones *Options*

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





TRANSTECNO®

THE MODULAR GEARMOTOR

CMM

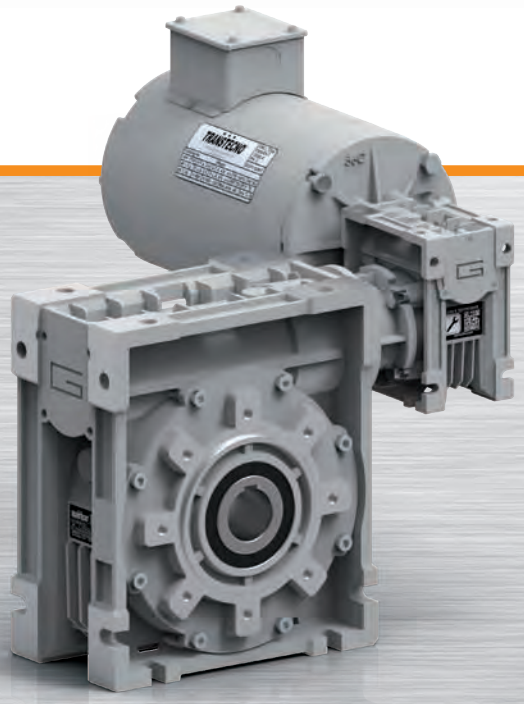
CMM

CMM Alu

NEMA DIMENSIONS

REDUCTORES SINFÍN Y CORONA DOBLE REDUCCIÓN

DOUBLE REDUCTION WORM-WORM GEARBOXES



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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.*

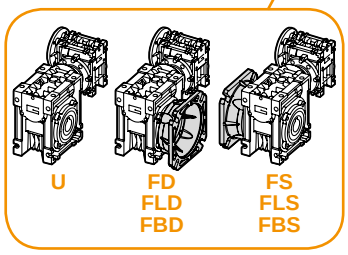
Clasificación

Classification

REDUCTOR / *GEARBOX*

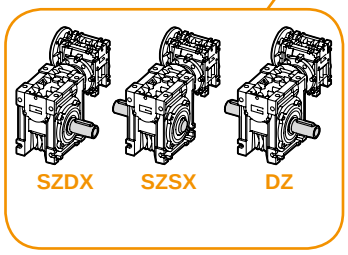
CMM	040/075	FD	300	56C	SZDX	BRSX	90	M1	US1
Tipo *Type*	Tamaño *Size*	Versión *Version*	Relación de reducción *Ratio*	NEMA	Eje de salida *Output shaft*	Brazo de reacción *Torque arm*	Ângulo *Angle*	Posición de montaje Mounting position	*Ejecución de montaje* *Mounting execution*
CMM **CMMIS**	**040/075** **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**

Relación de reducción
Gearbox Version



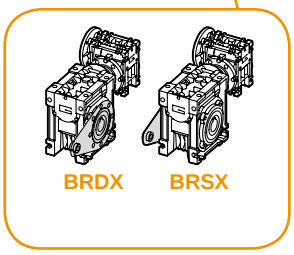
F.....D = Lado derecho / *Right side*
FL = Brida larga / *Long flange*
F.....S = Lado izquierdo / *Left side*
FB = Brida corta / *Short flange*

Eje de salida
Output shaft



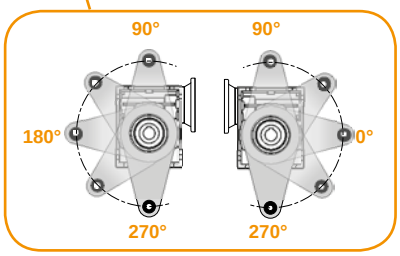
SZDX = Flecha sencilla lado derecho
Single shaft right side
DZ = Flecha doble / *Double shaft*
SZSX =Flecha sencilla lado izquierdo
Single shaft left side

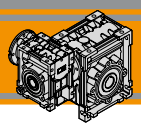
Brazo de reacción
Torque arm



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

Ângulo
Angle





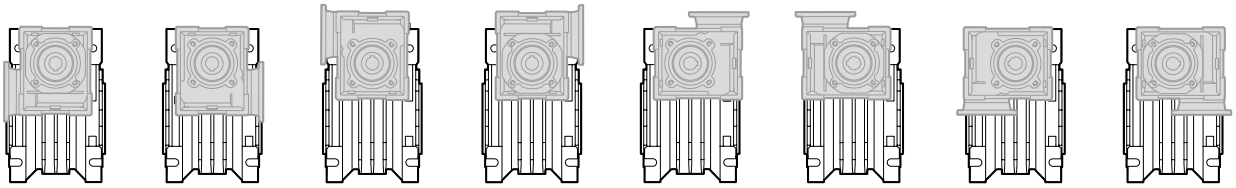
Clasificación / *Classification*

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**

Nomenclatura / *Legend*

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

Ejecuciòn de montaje / *Mounting executions*



UB1 **UB2** **US1** **US2** **UV1** **UV2** **UC1** **UC2**

Relaciones combinadas / *Combination ratio*

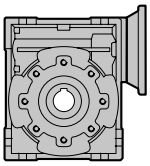
CMM 040/075 - CMM 040/090 - CMM 050/110 - CMM 063/130																
	i (i_1 x i_2)															
	75	**100**	**150**	**200**	**250**	**300**	**400**	**500**	**600**	**750**	**900**	**1200**	**1500**	**1800**	**2400**	**3000**
i_1	7.5	10	10	10	10	10	10	10	20	25	30	40	50	60	60	60
i_2	10	10	15	20	25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

Lubricación

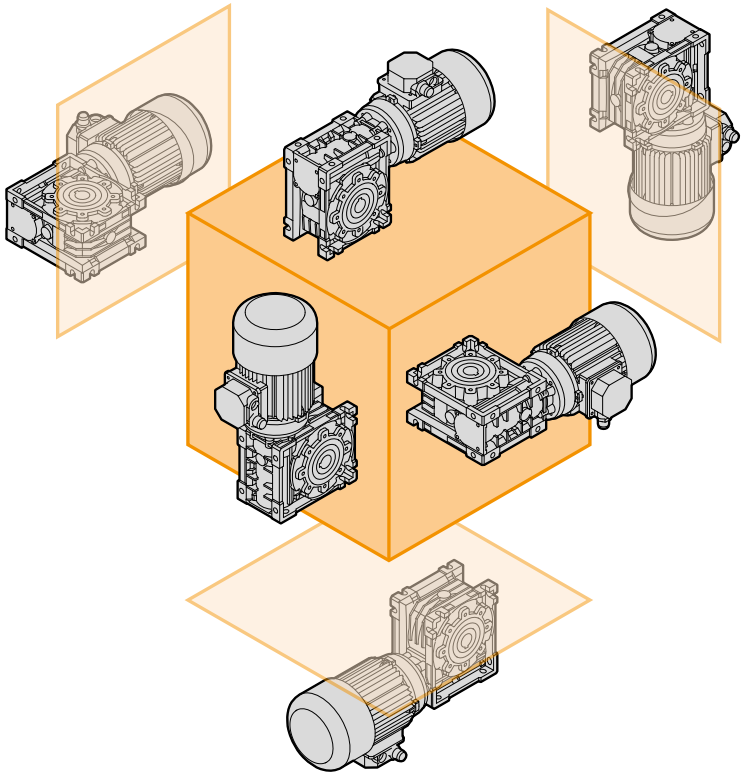
Lubrication

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.

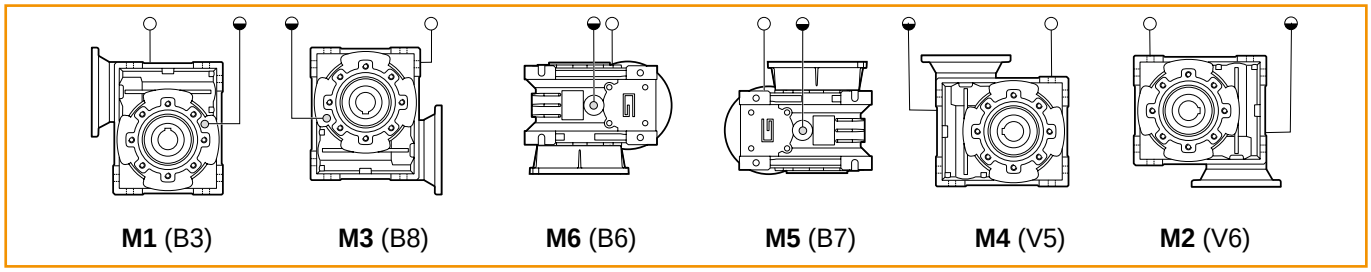
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearboxes size 40, 50, 63, 75, 90, 110 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance. Only for size 130, the lubrication depended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



	Cantidad de aceite (US gal) / ***Oil quantity*** *(US gal)*					
CM	**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



Posiciòn 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

0.16 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.12 kW	**2.92**	2007	2.4	**III**	600	**CMM 040/075**	**56C**
(1750 rpm)	**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**

0.25 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.18 kW	**5.83**	1689	2.9	**III**	300	**CMM 040/075**	**56C**
(1750 rpm)	**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		**56C**
	1.46	5160	0.8	**I**	1200		**56C**
	3.50	2533	2.4	**III**	500	**CMM 040/090**	**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		**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	**CMM 050/110**	**56C**
	1.17	6755	2.1	**III**	1500		**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	**CMM 063/130**	**56C**
	1.17	7298	2.5	**III**	1500		**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**

0.33 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.22 kW	**8.75**	1709	2.4	**III**	200	**CMM 040/075**	**56C**
(1750 rpm)	**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		**56C**
	1.94	5573	0.9	**I**	900		
	4.38	2873	2.5	**III**	400	**CMM 040/090**	**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		**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	**CMM 050/110**	**56C**
	1.94	6114	2.3	**III**	900		**56C**
	1.46	7770	1.6	**II**	1200		**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	**CMM 063/130**	**56C**
	1.46	8360	1.9	**II**	1200		**56C**
	1.17	9633	1.9	**II**	1500		**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**

0.5 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.37 kW	**11.67**	2055	2.3	**III**	150	**CMM 040/075**	**56C**
(1750 rpm)	**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		**56C**

Datos técnicos

Technical data

0.5 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.37 kW	**4.38**	4633	2.8	**III**	400	**CMM 050/110**	**56C**
(1750 rpm)	**3.50**	5506	2.0	**III**	500		**56C**
	2.92	6519	2.2	**III**	600		**56C**
	2.33	8149	1.7	**II**	750		**56C**
	1.94	9264	1.5	**II**	900		**56C**
	1.46	11773	1.1	**I**	1200		**56C**
	1.17	13510	1.0	**I**	1500		**56C**
	0.97	15440	0.9	**I**	1800		**56C**
	2.92	7165	2.5	**III**	600	**CMM 063/130**	**56C**
	2.33	8625	2.1	**III**	750		**56C**
	1.94	9952	1.8	**II**	900		**56C**
	1.46	12666	1.3	**I**	1200		**56C**
	1.17	14596	1.3	**I**	1500		**56C**
	0.97	16719	1.1	**I**	1800		**56C**

0.75 hp

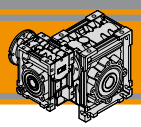
P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.55 kW	**23.33**	1686	2.6	**III**	75	**CMM 040/075**	**56C**
(1750 rpm)	**17.50**	2195	2.0	**III**	100		**56C**
	11.67	3082	1.5	**II**	150		**56C**
	8.75	3884	1.1	**I**	200		**56C**
	7.00	4574	0.8	**I**	250		**56C**
	11.67	3166	2.4	**III**	150	**CMM 040/090**	**56C**
	8.75	4053	1.8	**II**	200		**56C**
	7.00	4855	1.3	**I**	250		**56C**
	5.83	5320	1.6	**II**	300		**56C**
	4.38	6530	1.1	**I**	400		**56C**
	3.50	7600	0.8	**I**	500		**56C**
	2.92	9879	0.8	**I**	600		**56C**
	7.00	5127	2.2	**III**	250	**CMM 050/110**	**56C**
	5.83	5468	2.6	**III**	300		**56C**
	4.38	6950	1.8	**II**	400		**56C**
	3.50	8260	1.4	**I**	500		**56C**
	2.92	9779	1.4	**II**	600		**56C**
	2.33	12224	1.2	**I**	750		**56C**
	1.94	13896	1.0	**I**	900		**56C**
	4.38	6840	2.4	**III**	400	**CMM 063/130**	**56C**
	3.50	8278	1.7	**II**	500		**56C**
	2.92	10748	1.7	**II**	600		**56C**
	2.33	12937	1.4	**II**	750		**56C**
	1.94	14928	1.2	**I**	900		**56C**
	1.46	18999	0.8	**I**	1200		**56C**
	1.17	21894	0.8	**I**	1500		**56C**

1 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
0.75 kW	**23.33**	2248	2.0	**II**	75	**CMM 040/075**	**56C**
(1750 rpm)	**17.50**	2927	1.5	**II**	100		**56C**
	11.67	4109	1.1	**I**	150		**56C**
	8.75	5179	0.8	**I**	200		**56C**
	11.67	4222	1.8	**II**	150	**CMM 040/090**	**56C**
	8.75	5404	1.3	**I**	200		**56C**
	7.00	6474	1.0	**I**	250		**56C**
	5.83	7093	1.2	**I**	300		**56C**
	4.38	8707	0.8	**I**	400		**56C**
	8.75	5620	2.2	**III**	200	**CMM 050/110**	**56C**
	7.00	6836	1.7	**II**	250		**56C**
	5.83	7291	1.9	**II**	300		**56C**
	4.38	9266	1.4	**I**	400		**56C**
	3.50	11013	1.0	**I**	500		**56C**
	2.92	13039	1.1	**I**	600		**56C**
	2.33	16298	0.9	**I**	750		**56C**
	7.00	6604	2.2	**III**	250	**CMM 063/130**	**56C-140TC**
	5.83	7165	2.5	**III**	300		**56C-140TC**
	4.38	9120	1.8	**II**	400		**56C-140TC**
	3.50	11038	1.3	**I**	500		**56C-140TC**
	2.92	14331	1.3	**I**	600		**56C-140TC**
	2.33	17250	1.1	**I**	750		**56C-140TC**
	1.94	19904	0.9	**I**	900		**56C-140TC**

1.5 hp

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
1.1 kW	**23.33**	3372	1.3	**I**	75	**CMM 040/075**	**56C**
(1750 rpm)	**17.50**	4391	1.0	**I**	100		**56C**
	23.33	3458	1.9	**II**	75	**CMM 040/090**	**56C**
	17.50	4503	1.5	**II**	100		**56C**
	11.67	6333	1.2	**I**	150		**56C**
	8.75	8106	0.9	**I**	200		**56C**
	17.50	4614	2.6	**III**	100	**CMM 050/110**	**56C**
	11.67	6494	2.0	**III**	150		**56C**
	8.75	8431	1.5	**II**	200		**56C**
	7.00	10253	1.1	**I**	250		**56C**
	5.83	10937	1.3	**I**	300		**56C**
	4.38	13899	0.9	**I**	400		**56C**
	11.67	6270	2.7	**III**	150	**CMM 063/130**	**56C-140TC**
	8.75	8142	2.0	**II**	200		**56C-140TC**
	7.00	9907	1.5	**II**	250		**56C-140TC**
	5.83	10748	1.7	**II**	300		**56C-140TC**
	4.38	13679	1.2	**I**	400		**56C-140TC**
	3.50	16556	0.9	**I**	500		**56C-140TC**
	2.92	21496	0.8	**I**	600		**56C-140TC**



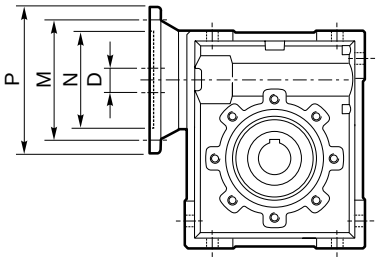
Datos técnicos

Technical data

P_1 [hp]	n_2 [rpm]	M_2 [lb·in]	sf	AGMA	i		NEMA
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**

Motores Aplicables IEC

IEC Motor adapters



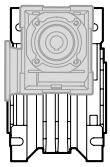
NOTA / NOTE

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

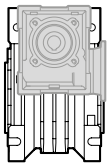
Grey areas indicate motor inputs available on each size of unit.

B/BS = Buje de metal para flecha

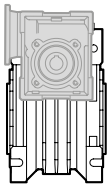
B/BS = Metal shaft sleeve



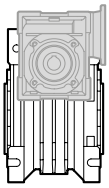
UB1



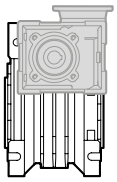
UB2



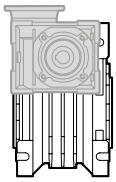
US1



US2

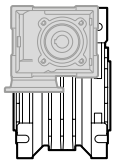


UV1

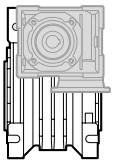


UV2

CMM	NEMA	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	56C	4.5	5.88	6.5	0.625								
050/110	56C	4.5	5.88	6.5	0.625								
063/130	56C	4.5	5.88	6.5	0.625	B							
063/130	140TC	4.5	5.88	6.5	0.875								

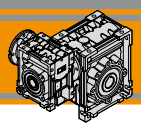


UC1



UC2

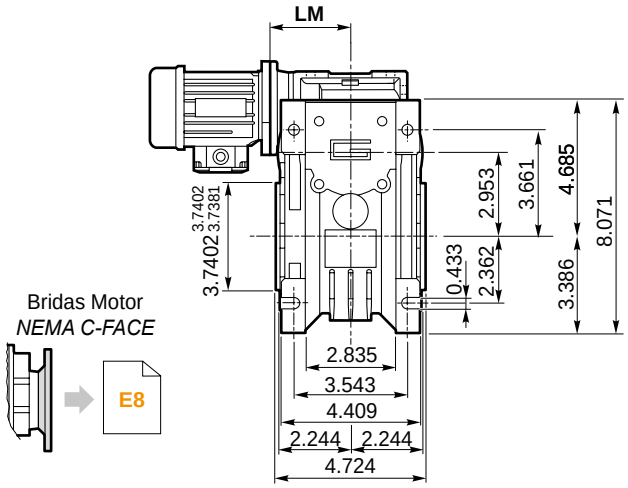
CMM	NEMA	N	M	P	D	i_1							
						7.5	10	20	25	30	40	50	60
050/110	56C	4.5	5.88	6.5	0.625								
063/110	56C	4.5	5.88	6.5	0.625	B							
063/110	140TC	4.5	5.88	6.5	0.875								

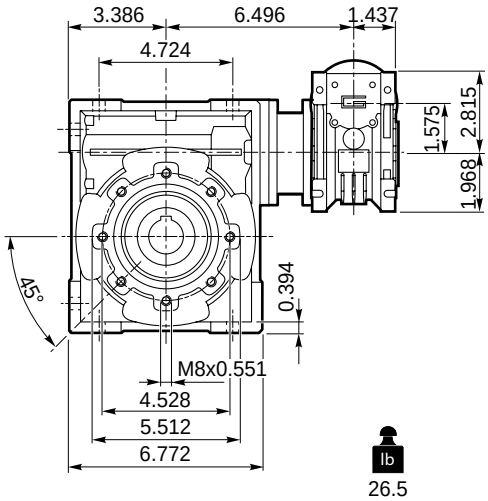


Dimensiones ***Dimensions***

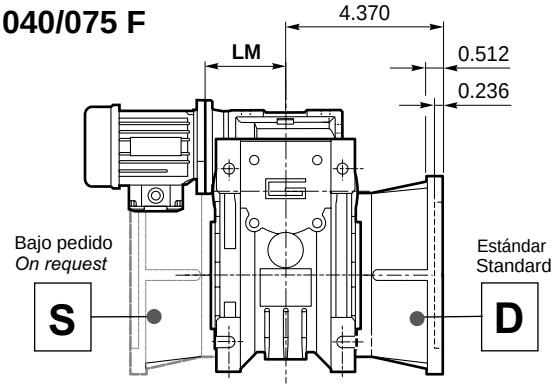
CMM 040/075

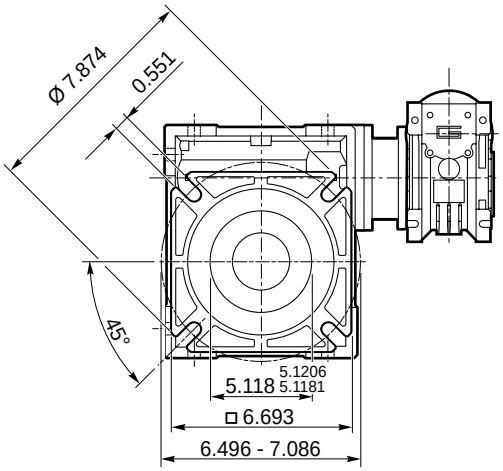
CMM 040/075 U





CMM 040/075 F





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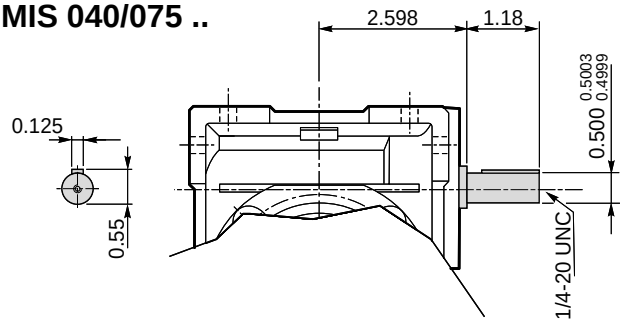
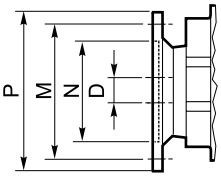
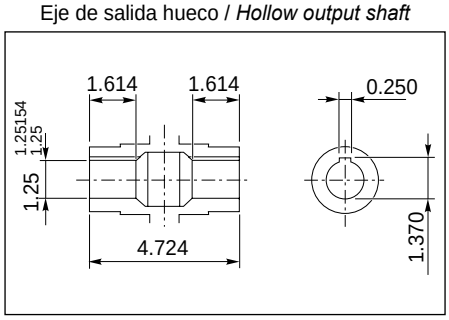


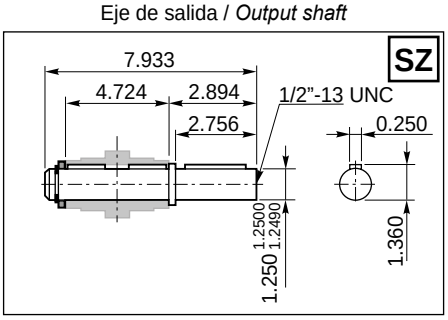


Brida Motor / *Motor flange*	
Dimensiones NEMA ***NEMA Dimensions***	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.15

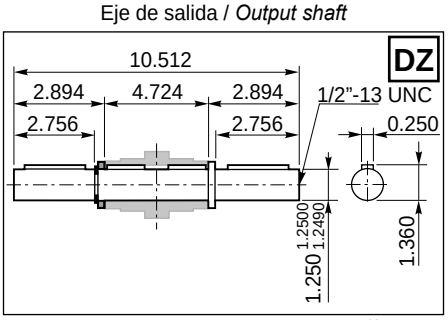
Eje de salida hueco / *Hollow output shaft*



Eje de salida / *Output shaft*



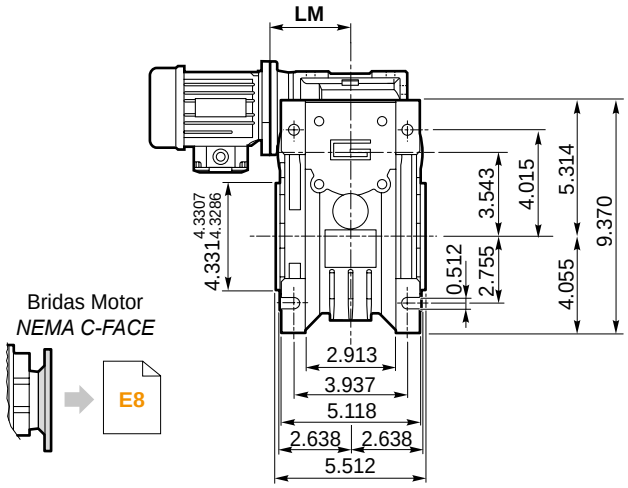
Eje de salida / *Output shaft*

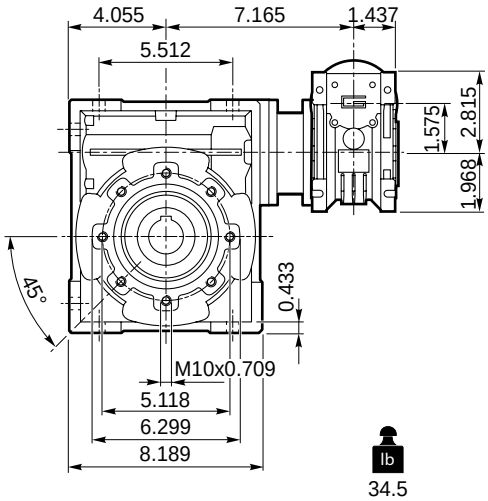


Dimensiones *Dimensions*

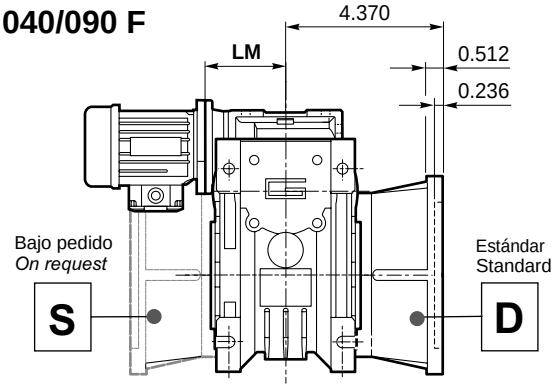
CMM 040/090

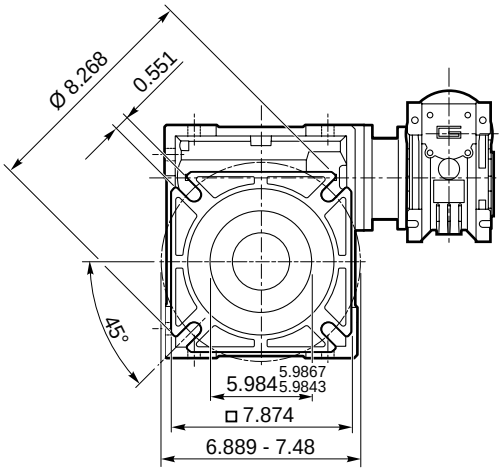
CMM 040/090 U





CMM 040/090 F





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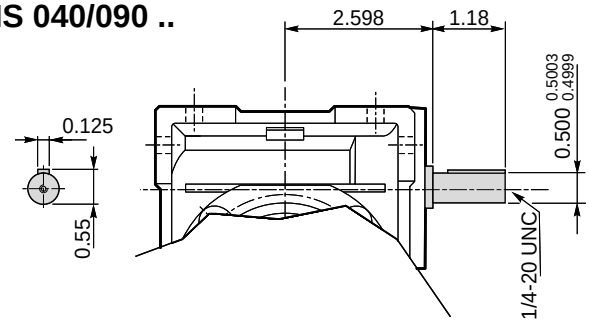
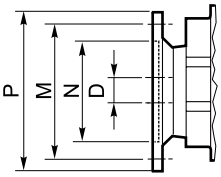
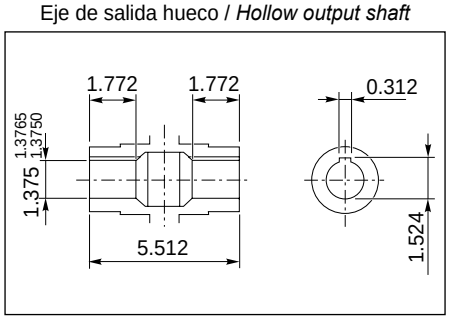


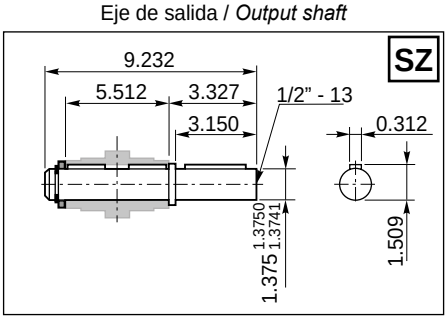


Brida Motor / *Motor flange*	
Dimensiones NEMA *NEMA Dimensions*	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.15

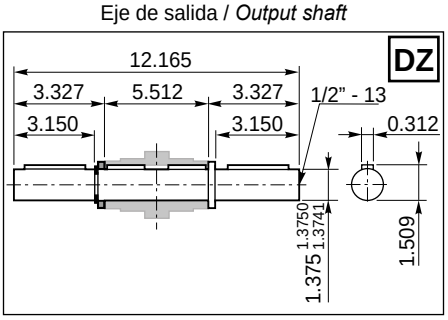
Eje de salida hueco / *Hollow output shaft*

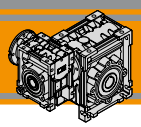


Eje de salida / *Output shaft*



Eje de salida / *Output shaft*

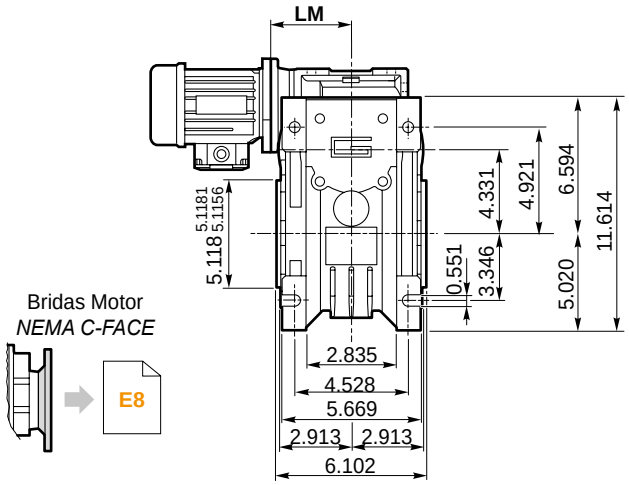


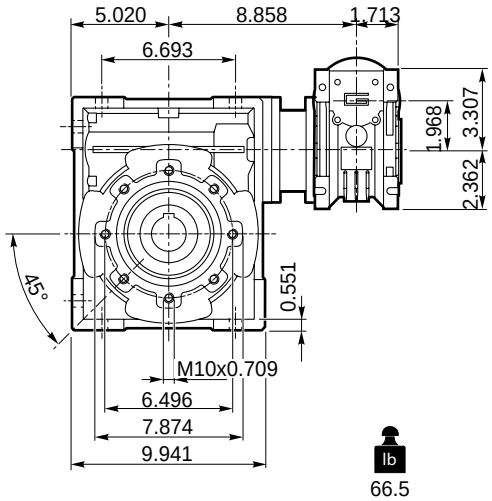


Dimensiones ***Dimensions***

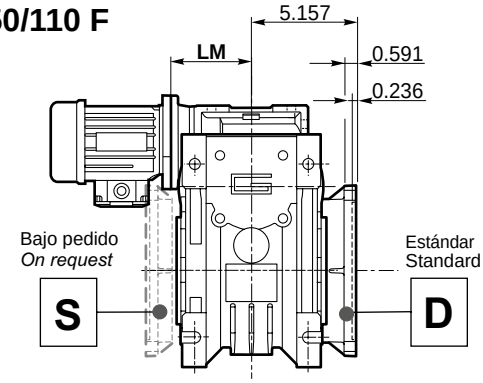
CMM 050/110

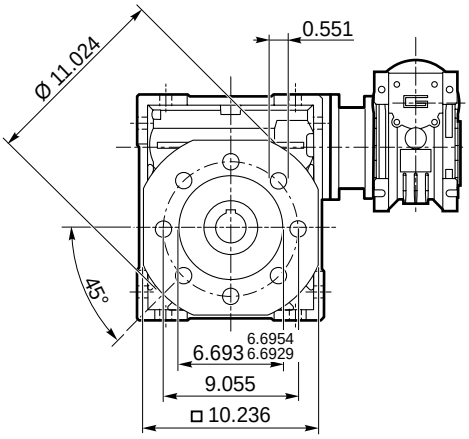
CMM 050/110 U





CMM 050/110 F





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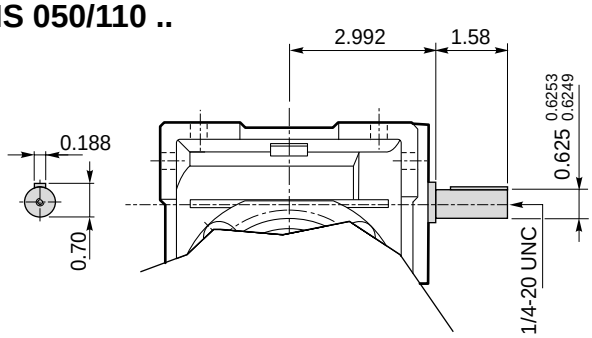
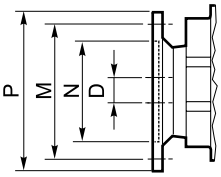
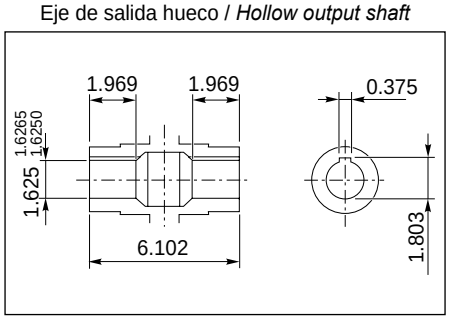


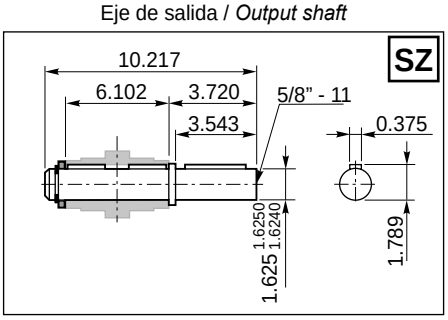


Brida Motor / *Motor flange*	
Dimensiones NEMA ***NEMA Dimensions***	
	56 C
N	4.5
M	5.88
P	6.5
D	0.625
LM	3.346

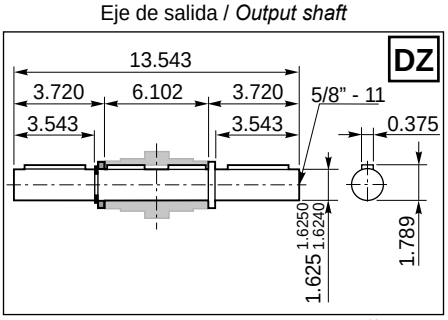
Eje de salida hueco / *Hollow output shaft*



Eje de salida / *Output shaft*



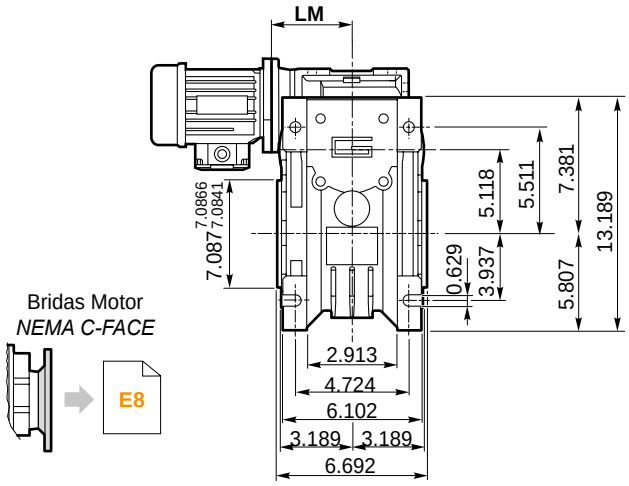
Eje de salida / *Output shaft*

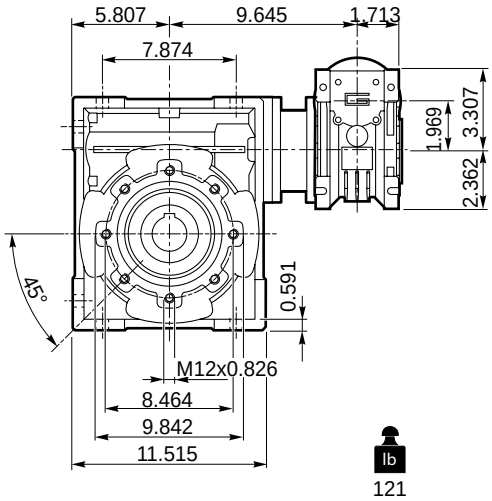


Dimensiones *Dimensions*

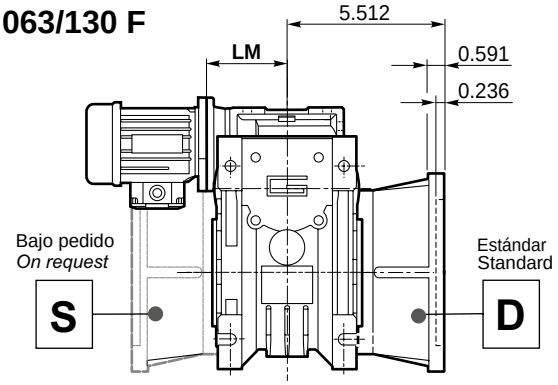
CMM 063/130

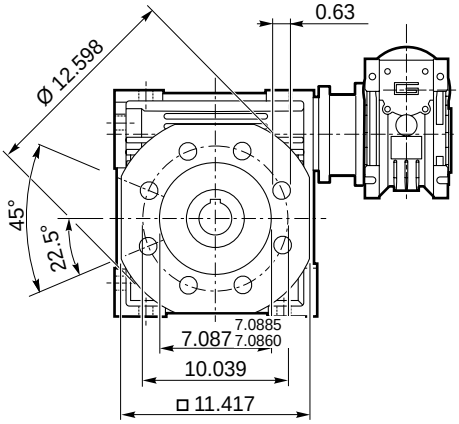
CMM 063/130 U





CMM 063/130 F





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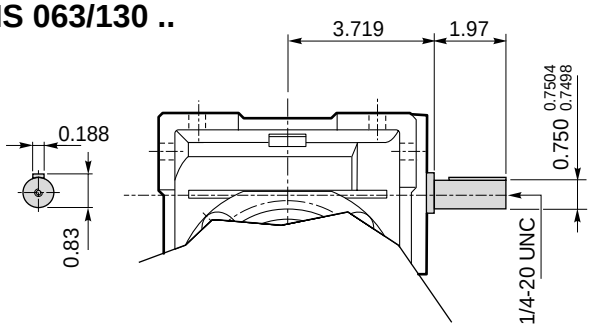
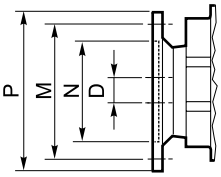
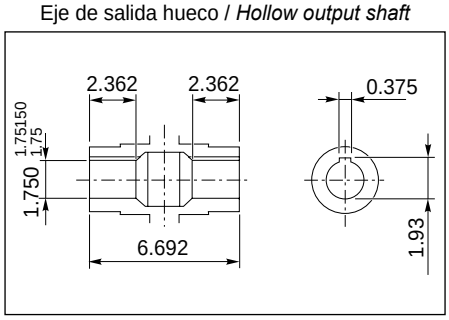


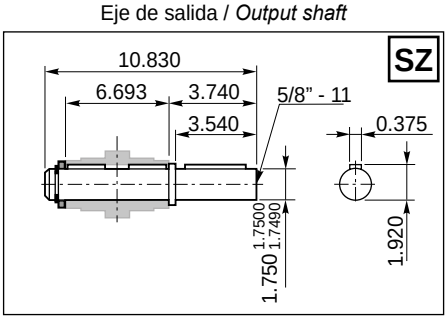


Brida Motor / *Motor flange*		
Dimensiones NEMA *NEMA Dimensions*		
	56 C	**140 TC**
N	4.5	
M	5.88	
P	6.5	
D	0.625	0.875
LM	4.055	

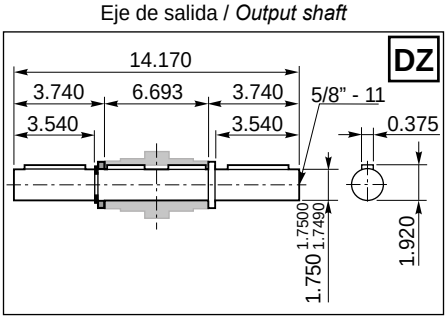
Eje de salida hueco / *Hollow output shaft*

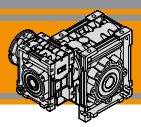


Eje de salida / *Output shaft*



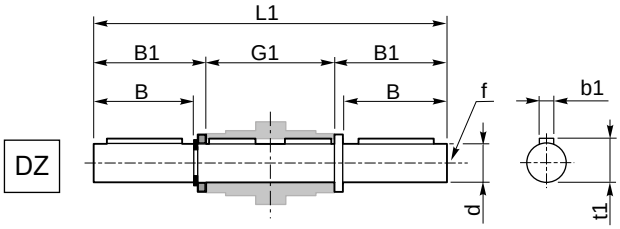
Eje de salida / *Output shaft*

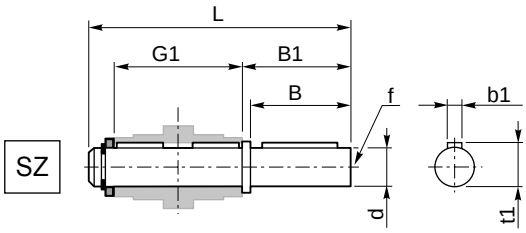




Accesorios / *Accessories*

Eje de salida simple y doble / *Single and double output shaft*

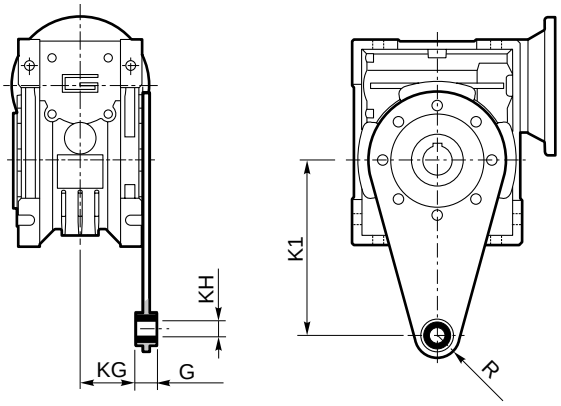




CMM	d	B	B1	G1	L	L1	f	b1	t1
040/075	1.250 $^{1.250}_{1.249}$	2.756	2.894	4.724	7.933	10.512	1/2"-13	0.250	1.360
040/090	1.375 $^{1.375}_{1.3741}$	3.150	3.327	5.512	9.232	12.165	1/2"-13	0.312	1.509
050/110	1.625 $^{1.625}_{1.624}$	3.543	3.720	6.102	10.217	13.543	5/8"-11	0.375	1.789
063/130	1.750 $^{1.750}_{1.749}$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

Brazo de reacción / *Torque arm*

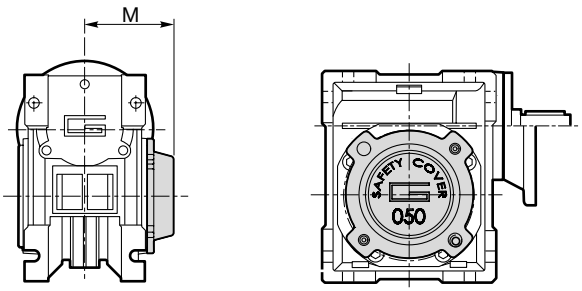
CMM	K1	G	KG	KH	R
040/075	7.874	0.984	1.831	0.787	1.181
040/090	7.874	0.984	2.224	0.787	1.181
050/110	9.843	1.181	2.441	0.984	1.378
063/130	9.842	1.181	2.717	0.984	1.378



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



TRANSTECNO®

THE MODULAR GEARMOTOR

APÉNDICE

APPENDIX

TRANSTECNO · GENUINE · PRODUCTS

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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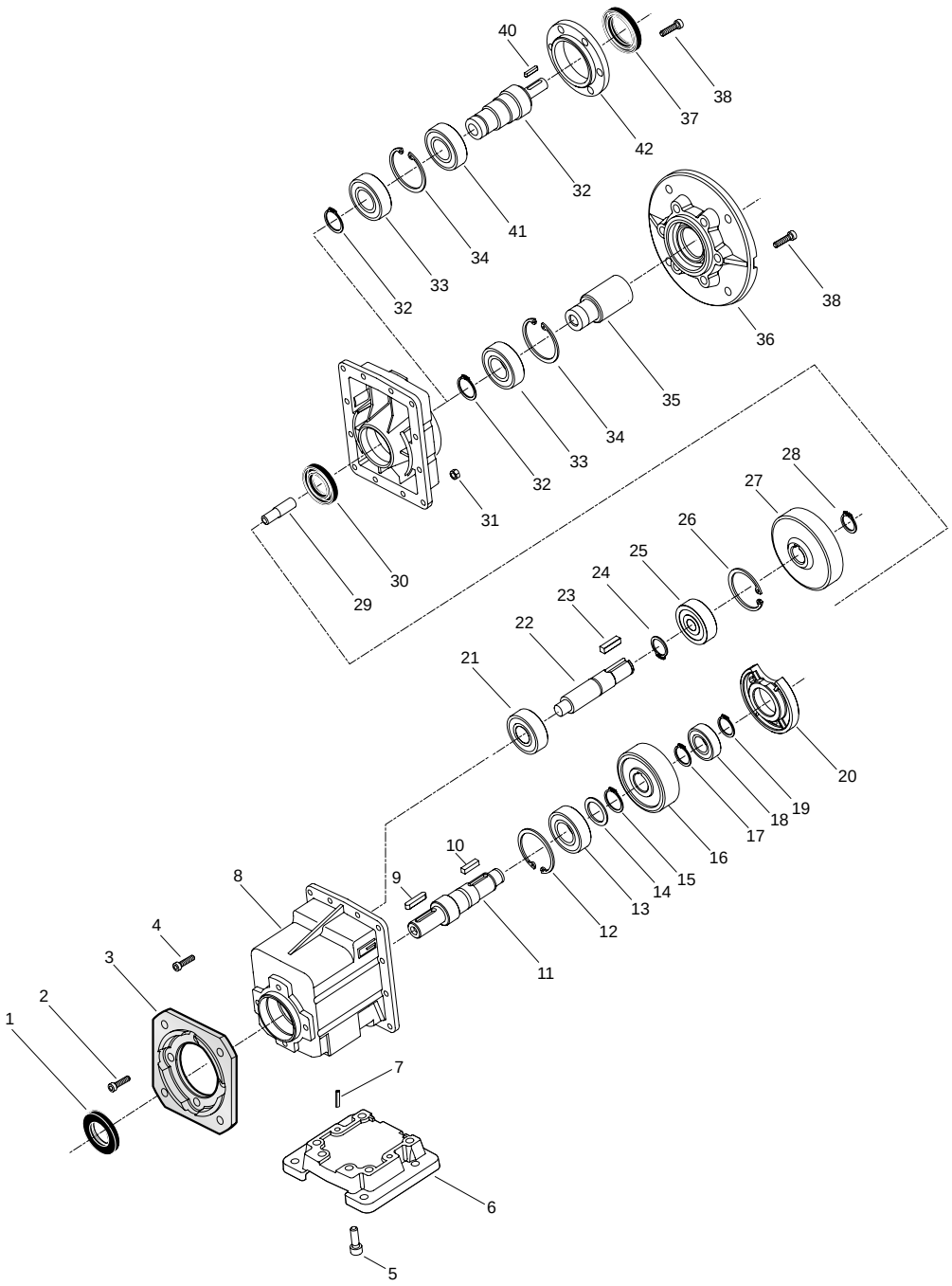
Listado de refacciones ***Spare parts list***

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

Listado de refacciones ***Spare parts list***

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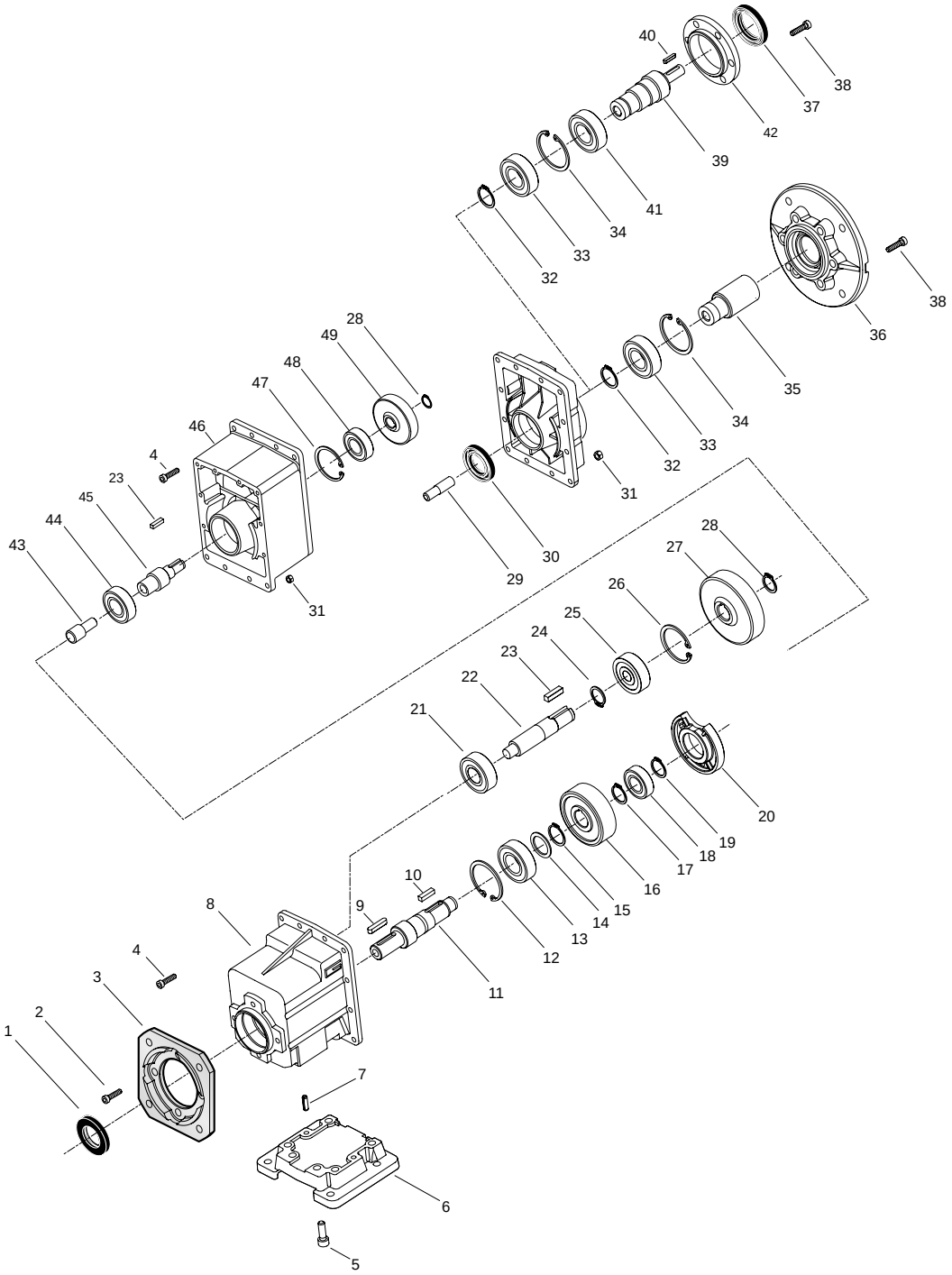
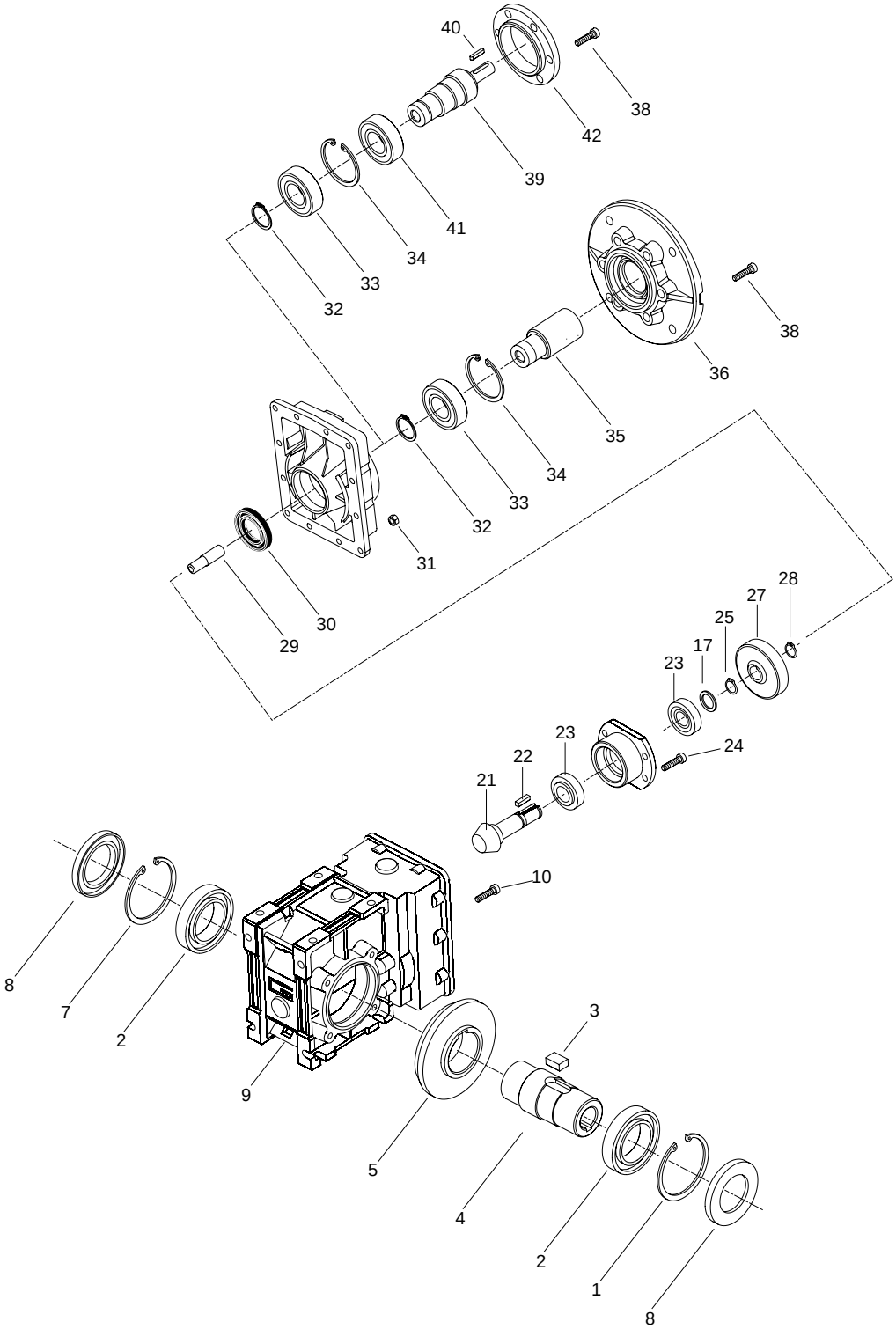


CMG	Rodamientos / *Bearings*								Sellos de aceite / *Oil seals*		
	13	**18**	**21**	**25**	**33**	**41**	**44**	**48**	**1**	**30**	**37**
013	**6205** 25/52/15	**6203** 17/40/12	**6300 2RS** 10/35/11	**6202 2RS** 15/35/11	**6205 2RS** 25/52/15	**6006 2RS** 30/55/13	**6204** 20/47/14	**6203** 17/40/12	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

Listado de refacciones ***Spare parts list***

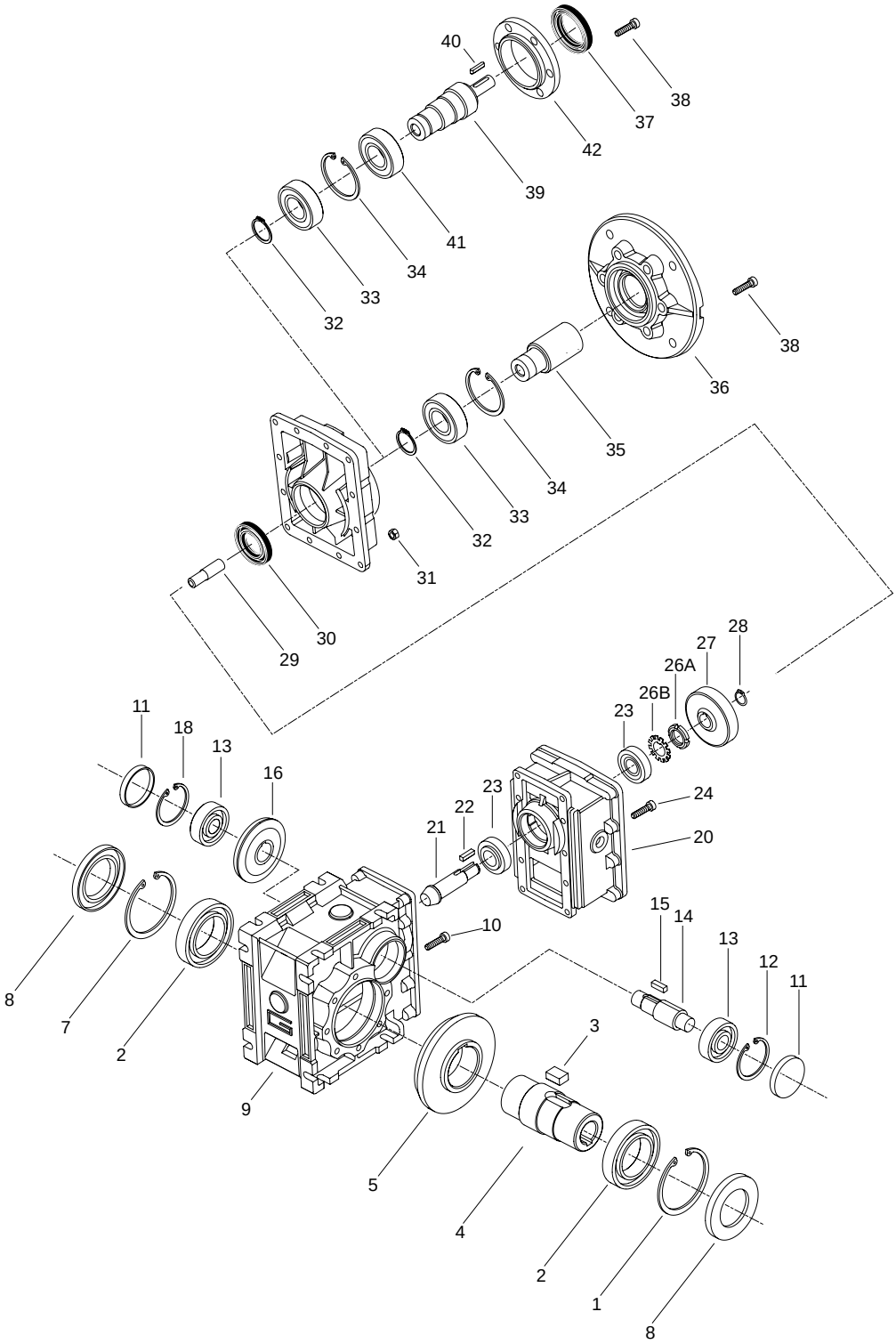
CMB ..2



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

Listado de refacciones ***Spare parts list***

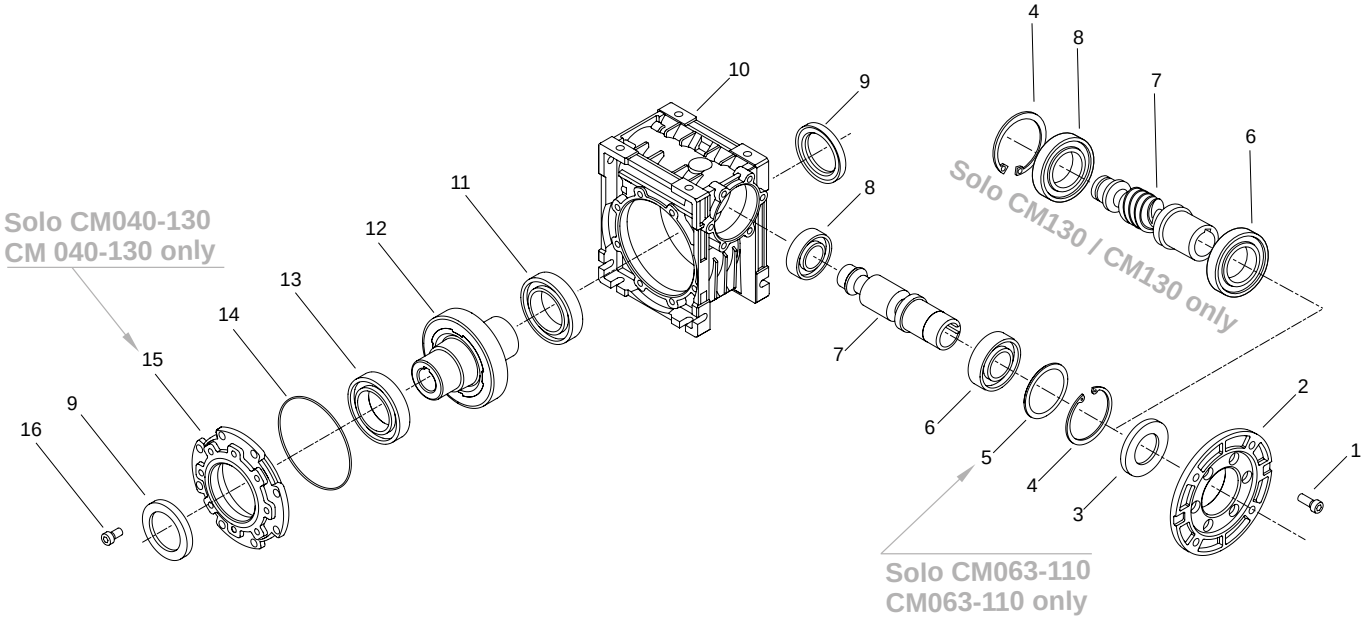
CMB ..3



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

Listado de refacciones ***Spare parts list***

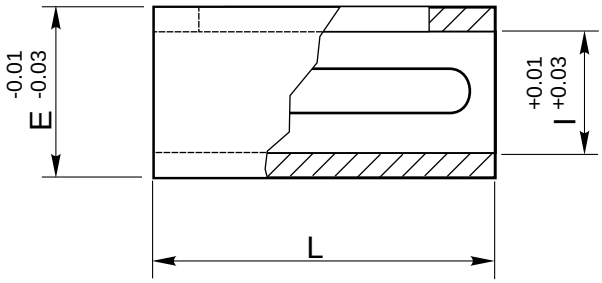
CM040..CM130



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 perdida 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 período 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.

MA TRANSTECNO SAPI DE CV
Av. Mundial # 176, Parque Industrial JM
Apodaca, Nuevo León, C.P. 66600
MÉXICO
Tel: +52 8113340920
info@transtecno.com.mx
www.transtecno.com.mx

TRANSTECNO SRL
HEADQUARTERS
Via Caduti di Sabbiuno, 11 D/E
40011 Anzola Emilia (BO) - ITALY
Tel. +39.051.6425811
Fax +39.051.734943
sales@transtecno.com
www.transtecno.com

BRANCH
Via Ferrari, 27/11
41043 Fraz. Corlo,
Formigine (MO) - ITALY
Tel. +39.059.557522
Fax +39.059.557439
sales@transtecno.com
www.transtecno.com

HANGZHOU TRANSTECNO
POWER TRANSMISSIONS CO; LTD
Changlian Road, Fengdu industry zone,
Pingyao town Yuhang area,
Hangzhou, 311115 - CHINA
Tel. +86.571.86920260
Fax +86.571.86921810
info-china@transtecno.com
www.transtecno.cn

CATACALUNEMA0115

SALES OFFICE BRAZIL
Rua Dr. Freire Alemão 155 / 402
CEP. 90450-060 Auxiliadora Porto Alegre-RS-BRAZIL
Tel. +55.51.3251.5447
Fax +55.51.3251.5447
Mobile +55 51 811 45 962
braziloffice@transtecno.com
www.transtecno.com.br

SALES OFFICE USA
5440 S.W. 156th Place Miami,
FL 33185 - USA
Tel.+1 (305) 220 4423
Fax +1 (305) 220 5945
usaoffice@transtecno.com

TRANSTECNO B.V.
De Stuwdam 43 ind. terrein Wieken/Vinkenhoef
3815 KM Amersfoort - THE NETHERLANDS
Tel. +31.(0)33.4519505
Fax +31.(0)33.4519506
info@transtecno.nl
www.transtecno.nl

SALES OFFICE FRANCE
12 Impasse des Mûriers 38300 Ruy - FRANCE
Tel. +33 (0) 6 85 12 09 87
Fax - Italy +39 051 733904
franceoffice@transtecno.com
www.transtecno.fr

SALES OFFICE GUANGZHOU
Room 401A, LeTian Building, No.188 TangAn Road,
Tianhe District, Guangzhou City, 510665 - CHINA
Tel. + 86 20 38776057
Fax + 86 20 38776127
guangzhouoffice@transtecno.com

SALES OFFICE INDIA
A/10, Anagha, S.N Road, Mulund (W),
Mumbai, 400080 - INDIA
Fax - Italy +39 051 733904
Mobile +91 9820614698
indiaoffice@transtecno.com

SALES OFFICE SOUTH KOREA
D-304 Songdo BRC Smart Valley 30,
Songdomirae-ro, Yeonsu-gu, Incheon, 406-840,
KOREA
Tel. +82 (0) 70 8288 2107
Fax +82 32 815 2107
Mobile +82 10 5094 2107
koreaoffice@transtecno.com
www.transtecno.co.kr

TRANSTECNO®
THE MODULAR GEARMOTOR

WA HEAD OFFICE
Unit 1 / 45 Inspiration Drive WA 6065
(08) 9303 4966 (08) 9303 4977
info@chainanddrives.com.au

NSW HEAD OFFICE
Unit 7 / 70 Holbeche Road Arndell Park NSW 2148
(02) 9674 8611 (02) 9674 8363
salesnsw@chainanddrives.com.au

www.chainanddrives.com.au