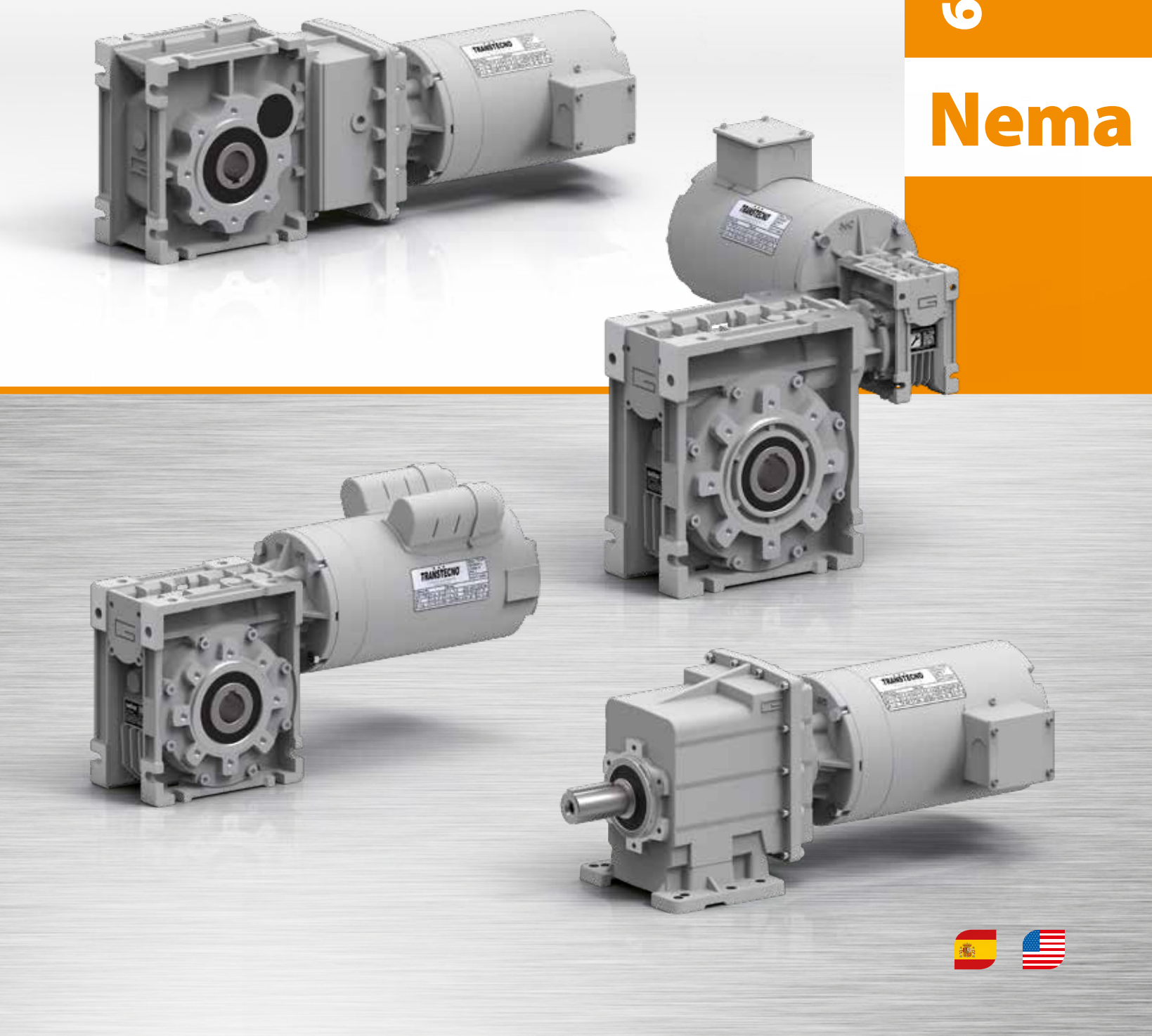
TRANSTECNO®

the modular gearmotor

AC Alü

60Hz

# Nema



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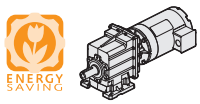
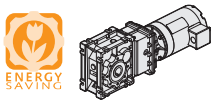
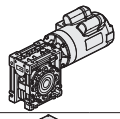
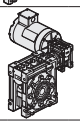
|  | B | Motorreductores a engranajes cilíndricos CMG | Helical in-line gearmotors CMG | B1 |
|  | C | Motorreductores de ejes ortogonales CMB | Helical bevel gearmotors CMG | C1 |
|  | D | Motorreductores sinfín corona CM | Wormgearmotors CM | D1 |
|  | E | Motorreductores sinfín corona de doble reducción CMM | Double reduction wormgearmotors CMM | E1 |
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## Información general

## *General information*

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.

*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***

| h/d | sf — 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***

| h/d | sf — 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***

| h/d | sf — 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<br>*Application class AGMA* | Factor de servicio<br>*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.

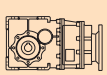
*where Rd stands for the dynamic efficiency (indicated on page D6) and $n_2$ indicates the required output rpm of the gearmotor.*

## 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** | 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** |

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:*

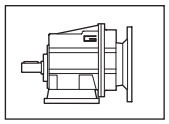
**CM040 i = 30, $P_1$ = 0.25 hp, sf = 2.2**

## Lubricación

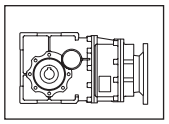
Los reductores de las serie CMG, CMB, CM, y de la CMM se suministran con lubricante sintético viscosidad 320 de larga duración y no requieren mantenimiento.

## *Lubrication*

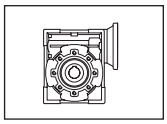
*All unit sizes of CMG, CMB, CM and CMM series are complete with a long life synthetic lubricant, viscosity 320 and do not require maintenance.*



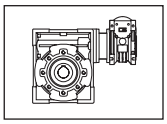
**CMG**



**CMB**



**CM**



**CMM**

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

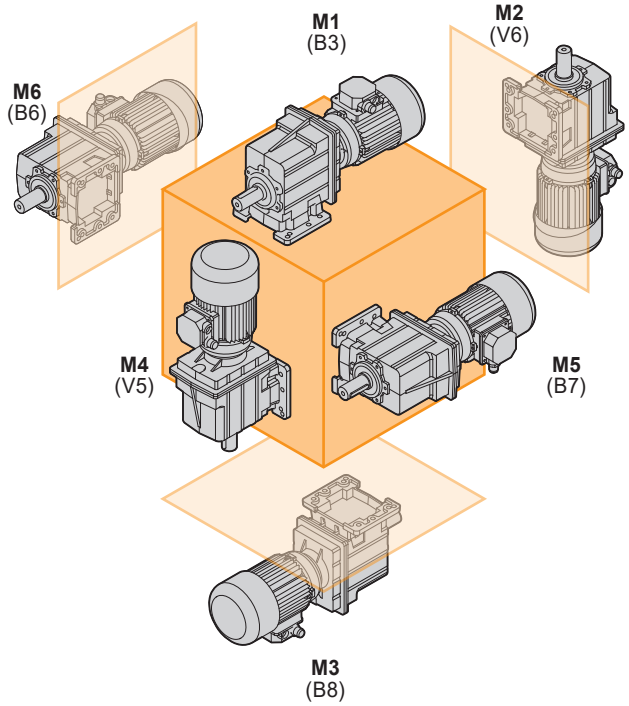
Verificar la cantidad de lubricante dependiendo de la posición de montaje en todos los reductores CM 130.

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

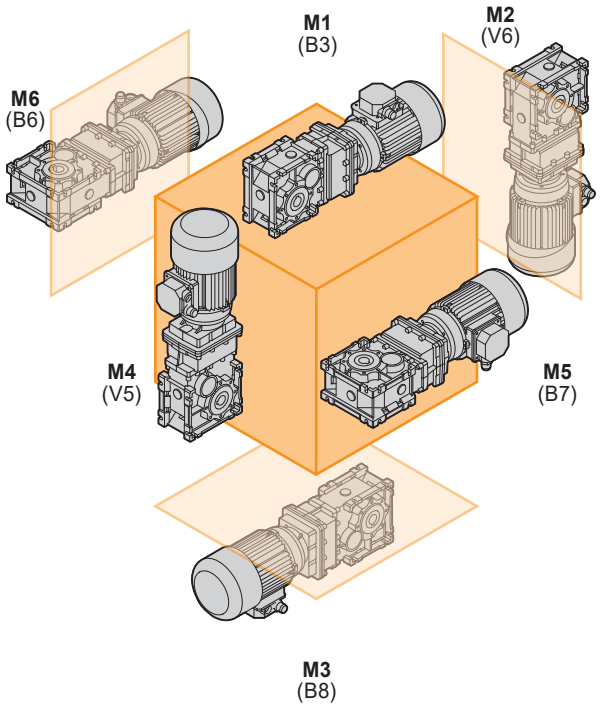
## Posición de Montaje

*Mounting positions*

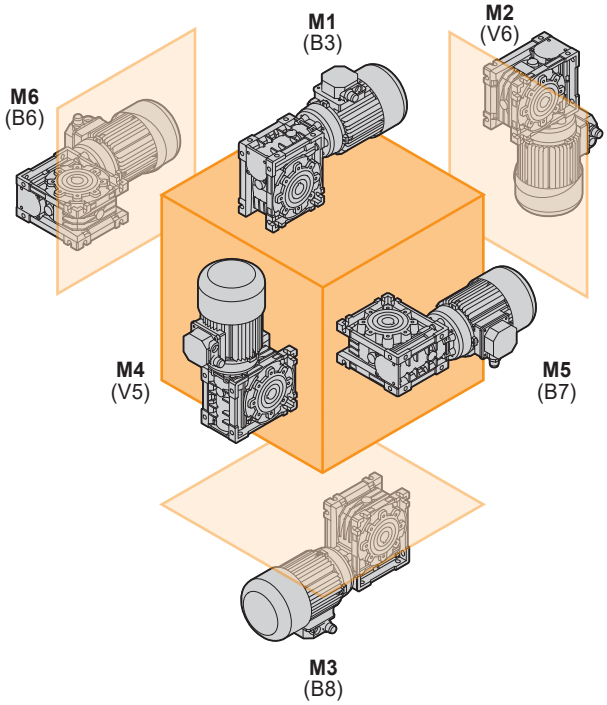
### CMG




### 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 - CM110** | -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 sellos de aceite de Viton (FPM) *use Viton (FPM) oil seals* |
| **CMB633 - CMB903** | | | | |
| **CM040 - CM050** | | sustituir el sello de aceite con NBR *replace input oil seal with NBR* | *usar lubricantes para bajas temperaturas use low temperature lubricant* | *usar lubricante para altas temperaturas use high temperature lubricant* |
| **CM063 - CM110** | | | | |

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

## *Installation and inspection*

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.

*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

## *Critical applications*

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

*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

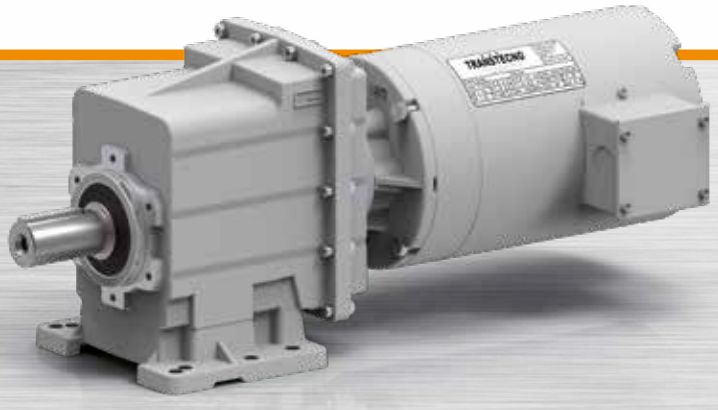
# CMG

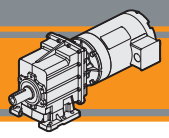
CMG Alu

60Hz

## Motorreductores a engranajes cilíndricos
## Helical in-line gearmotors

Nema







ENERGY SAVING


| Índice | *Index* | Pág. *Page* |
|---|---|---|
| Características técnicas | *Technical features* | **B2** |
| Clasificación | *Classification* | **B2** |
| Sentidos de rotación | *Direction of rotation* | **B3** |
| Nomenclatura | *Symbols* | **B3** |
| Lubricación | *Lubrication* | **B4** |
| Cargas radiales | *Radial loads* | **B4** |
| Datos técnicos | *Technical data* | **B5** |
| Dimensiones | *Dimensions* | **B16** |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## Características técnicas

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

Características comunes para toda la serie:

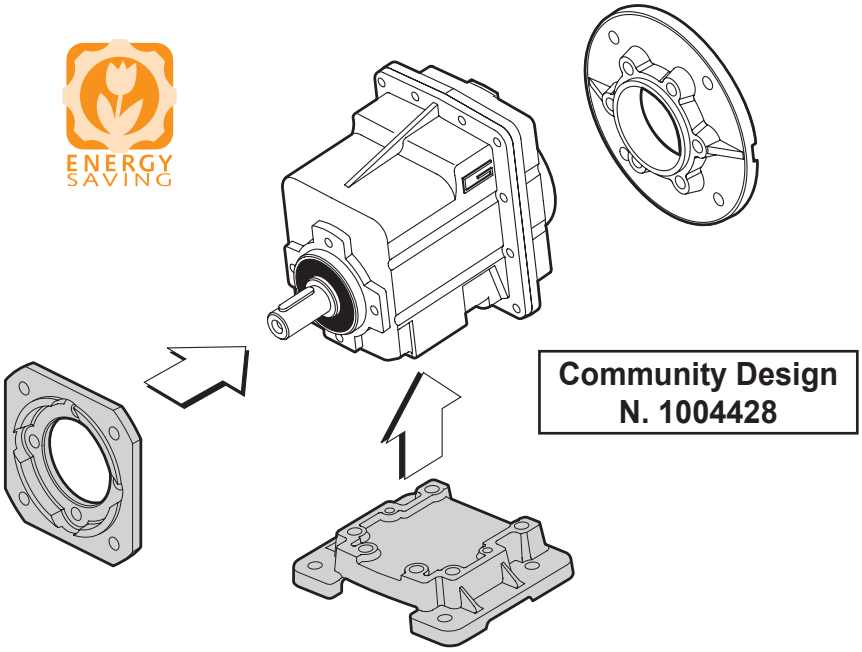
- Cuerpo y bridas de entrada en inyección de aluminio
- Bridas de salida y base en fierro vaciado;
- Engranajes siempre rectificados;
- Lubricación permanente con aceite sintético.

## *Technical features*

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

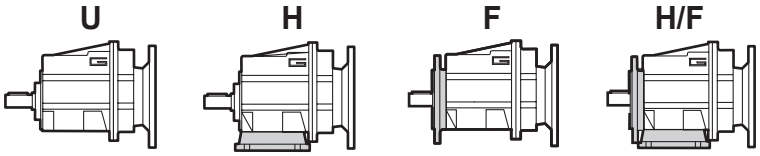
*The main features of CMG range are:*

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



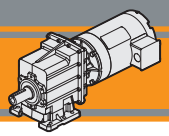

## Clasificación

## *Classification*

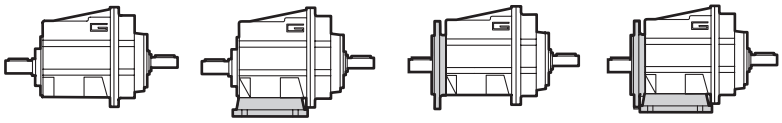



REDUCTOR / *GEARBOX*

| CMG | 01 | 2 | H65 | 9.81 | D1.0 | 56C |
|---|---|---|---|---|---|---|
| Tipo<br>*Type* | Tamaño<br>*Size* | Etapas<br>*Stages* | Versión<br>*Version* | Relación de reducción<br>*Ratio* | Eje de salida<br>*Output shaft* | NEMA |
| **CMG** | **00**<br>**01**<br>**02**<br>**03**<br>**04** | **2**<br>**3** | **U**<br>**H**<br>**F…**<br>**H/F…** | ver tablas<br>*see tables* | ver tablas<br>*see tables* | **56C**<br>**140TC**<br>**180TC**<br>**210TC** |



## Clasificación / *Classification*




REDUCTOR / *GEARBOX*

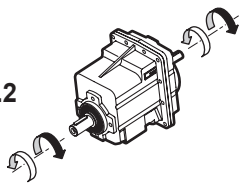
| CMGIS | 01 | 2 | U | 9.81 | D1.0 |
|---|---|---|---|---|---|
| Tipo *Type* | Tamaño *Size* | Etapas *Stages* | Versión *Version* | Relación de reducción *Ratio* | Eje de salida *Output shaft* |
| **CMGIS** | **00**<br>**01**<br>**02**<br>**03**<br>**04** | **2**<br>**3** | **U**<br>**H**<br>**F…**<br>**H/F…** | ver tablas *see tables* | ver tablas *see tables* |

MOTOR / *MOTOR*

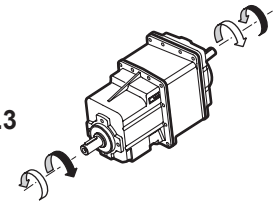
| 1 hp / 0.75kW | 4p | 3ph | 220/440V | 60Hz | T1 |
|---|---|---|---|---|---|
| Potencia *Power* | Polos *Poles* | Fases *Phases* | Tensión *Voltage* | Frecuencia *Frequency* | Posición caja de bornes *Terminal box pos.* |
| ver tablas *see tables* | **2p**<br>**4p**<br>**6p**<br>**8p** | **1ph**<br>**3ph**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

## Sentidos de rotación / *Direction of rotation*

**CMG...2**
**CMGIS..2**



**CMG...3**
**CMGIS..3**



## Nomenclatura / *Symbols*

| | | |
|---|---|---|
| $n_1$ | [rpm] | Velocidad de entrada / *Input speed* |
| $n_2$ | [rpm] | Velocidad de salida / *Output speed* |
| i | | Relación de reducción / *Ratio* |
| $P_1$ | [hp] | Potencia en la entrada / *Input power* |
| $M_2$ | [lb·in] | Par en la salida en función de $P_1$ / *Output torque referred to $P_1$* |
| $Pn_1$ | [hp] | Potencia nominal en la entrada / *Nominal input power* |
| $Mn_2$ | [lb·in] | Par nominal en la salida en función de $Pn_1$ / *Nominal output torque referred to $Pn_1$* |
| sf | | Rendimiento dinámico / *Service factor* |
| $R_1$ | [lb] | Carga radial permitida a la entrada / *Permitted input radial load* |
| $A_1$ | [lb] | Carga axial permitida a la entrada / *Permitted input axial load* |
| $R_2$ | [lb] | Carga radial admisible en la salida / *Maximum output radial load* |
| $A_2$ | [lb] | Carga axial admisible en la salida / *Maximum output axial load* |

## Lubricación

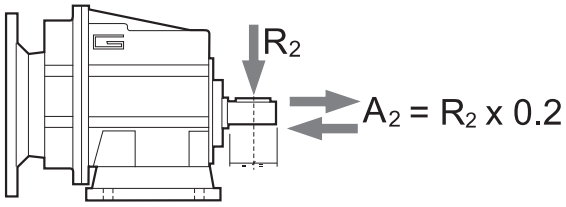
Todos los reductores de los tamaños 00, 01, 02, 03 y 04 son previamente lubricados con aceite sintético con grado de viscosidad 320, por lo tanto, pueden ser instalados en cualquier posición de montaje y no requieren mantenimiento.

## *Lubrication*

*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

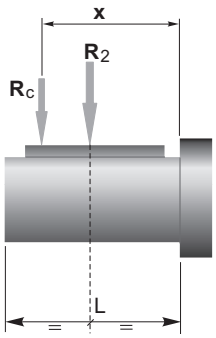
## *Radial loads*




| $n_2$ [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:*

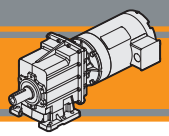



| | CMG 00 | CMG 01 | CMG 02 | CMG 03 | CMG 04 |
|---|---|---|---|---|---|
| a | 2.874 | 0.394 | 4.606 | 5.197 | 5.905 |
| b | 2.087 | 3.307 | 3.622 | 4.016 | 4.528 |
| $R_{2MAX}$ | 292 | 562 | 1124 | 1461 | 1798 |

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

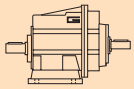
$$R \leq R_c$$

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 | | |
|---|---|---|---|---|---|
| | | | $n_2$ [rpm] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* 56 C |
| **CMG 002** | | | | | |
| | 5.03 | 354 | **348** | 2.04 | |
| | 6.10 | 354 | **287** | 1.68 | |
| | 7.49 | 354 | **234** | 1.37 | |
| | 8.99 | 442 | **195** | 1.42 | |
| | 10.16 | 442 | **172** | 1.26 | |
| | 12.07 | 442 | **145** | 1.06 | |
| | 13.40 | 619 | **131** | 1.34 | |
| | 15.14 | 619 | **116** | 1.18 | |
| | 18.17 | 619 | **96.3** | 0.99 | |
| | 21.58 | 619 | **81.1** | 0.83 | |
| | 23.51 | 619 | **74.4** | 0.76 | |
| | 25.10 | 619 | **69.7** | 0.71 | |
| | 27.08 | 619 | **64.6** | 0.66 | |
| | 32.49 | 619 | **53.9** | 0.55 | |
| | 42.04 | 619 | **41.6** | 0.43 | |
| | 44.89 | 619 | **39.0** | 0.40 | |
| | 48.86 | 619 | **35.8** | 0.37 | |
| | 55.10 | 619 | **31.8** | 0.33 | |

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

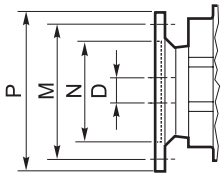
* = $Pn_1$ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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

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

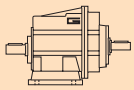
* = *The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

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




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

## Datos técnicos / *Technical data*

|  | i | $Mn_2$ [lb·in] | $n_1$ = 1750 rpm | | | |
|---|---|---|---|---|---|---|
| | | | $n_2$ [rpm] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* 56 C | 140 TC |
| **CMG 012** | | | | | | |
| | 3.82 | 531 | **458** | 4.02 | | |
| | 4.63 | 531 | **378** | 3.32 | | |
| | 5.69 | 531 | **308** | 2.70 | | |
| | 7.72 | 708 | **227** | 2.65 | | |
| | 9.17 | 708 | **191** | 2.23 | | |
| | 9.81 | 708 | **178** | 2.09 | | |
| | 11.50 | 885 | **152** | 2.23 | | |
| | 11.90 | 885 | **147** | 2.15 | | |
| | 13.80 | 1062 | **127** | 2.23 | | |
| | 14.62 | 1062 | **120** | 2.10 | | |
| | 17.86 | 1062 | **98.0** | 1.72 | | |
| | 19.07 | 1062 | **91.8** | 1.61 | | |
| | 19.83 | 1062 | **88.2** | 1.55 | | |
| | 23.56 | 1062 | **74.3** | 1.30 | | |
| | 29.56 | 1062 | **59.2** | 1.04 | | |
| | 35.47 | 1062 | **49.3** | 0.87 | | * |
| | 45.89 | 1062 | **38.1** | 0.67 | | * |
| | 49.00 | 1062 | **35.7** | 0.63 | | * |
| | 53.33 | 1062 | **32.8** | 0.58 | | * |
| | 60.15 | 1062 | **29.1** | 0.51 | | * |
| **CMG 013** | | | | | | |
| | 63.22 | 1062 | **27.7** | 0.50 | | * |
| | 75.08 | 1062 | **23.3** | 0.42 | | * |
| | 89.17 | 1062 | **19.6** | 0.35 | | * |
| | 113.05 | 1062 | **15.5** | 0.28 | | * |
| | 134.27 | 1062 | **13.0** | 0.23 | | * |
| | 173.72 | 1062 | **10.1** | 0.18 | | * |
| | 202.16 | 1062 | **8.7** | 0.16 | | * |
| | 261.57 | 1062 | **6.7** | 0.12 | | * |
| | 304.00 | 1062 | **5.8** | 0.10 | | * |
| | 393.33 | 1062 | **4.4** | 0.08 | | * |
| | 443.59 | 1062 | **3.9** | 0.07 | | * |

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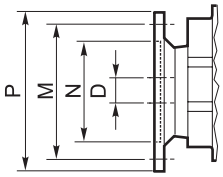
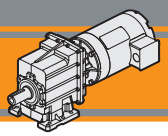
***** = *The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

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

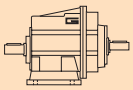



| Dimensiones NEMA/ *NEMA Dimensions* | | |
|---|---|---|
| | 56 C | 140 TC |
| **N** | 4.5 | |
| **M** | 5.88 | |
| **P** | 6.5 | |
| **D** | 0.625 | 0.875 |





## Datos técnicos / *Technical data*

|  | i | $Mn_2$ [lb·in] | $n_1$ = 1750 rpm | | | |
|---|---|---|---|---|---|---|
| | | | $n_2$ [rpm] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* | |
| | | | | | 56 C | 140 TC |
| **CMG 022** | | | | | | |
| | 3.66 | 885 | **479** | 7.00 | | |
| | 4.43 | 885 | **395** | 5.77 | | |
| | 5.45 | 885 | **321** | 4.70 | | |
| | 7.39 | 1062 | **237** | 4.16 | | |
| | 8.78 | 1062 | **199** | 3.50 | | |
| | 9.93 | 1062 | **176** | 3.09 | | |
| | 11.01 | 1770 | **159** | 4.65 | | |
| | 12.05 | 1770 | **145** | 4.25 | | |
| | 13.21 | 1770 | **132** | 3.87 | | |
| | 14.81 | 1770 | **118** | 3.46 | | |
| | 17.10 | 1416 | **102** | 2.40 | | |
| | 18.26 | 1416 | **95.9** | 2.24 | | |
| | 20.08 | 1770 | **87.1** | 2.55 | | |
| | 23.85 | 1770 | **73.4** | 2.15 | | |
| | 29.93 | 1770 | **58.5** | 1.71 | | |
| | 35.91 | 1770 | **48.7** | 1.43 | | |
| | 46.46 | 1770 | **37.7** | 1.10 | | |
| | 49.61 | 1770 | **35.3** | 1.03 | | |
| | 54.00 | 1770 | **32.4** | 0.95 | | |
| | 60.90 | 1770 | **28.7** | 0.84 | | |
| **CMG 023** | | | | | | |
| | 64.01 | 1770 | **27.3** | 0.82 | | * |
| | 76.02 | 1770 | **23.0** | 0.69 | | * |
| | 90.29 | 1770 | **19.4** | 0.58 | | * |
| | 114.46 | 1770 | **15.3** | 0.46 | | * |
| | 135.95 | 1770 | **12.9** | 0.38 | | * |
| | 175.89 | 1770 | **9.9** | 0.30 | | * |
| | 204.69 | 1770 | **8.5** | 0.26 | | * |
| | 264.84 | 1770 | **6.6** | 0.20 | | * |
| | 307.80 | 1770 | **5.7** | 0.17 | | * |
| | 398.25 | 1770 | **4.4** | 0.13 | | * |
| | 449.14 | 1770 | **3.99** | 0.12 | | * |

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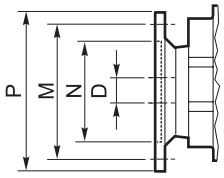
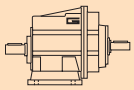
***** = *The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

*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 | | | | |
|---|---|---|---|---|---|---|
| | | $n_2$ [rpm] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* | | |
| | | | | 56 C | 140 TC | 180 TC |
| **CMG 032** | | | | | | |
| **3.74** | 1327 | **468** | 10.26 | | | |
| **4.50** | 1327 | **389** | 8.52 | | | |
| **5.48** | 1327 | **319** | 7.00 | | | |
| **6.31** | 1593 | **277** | 7.30 | | | |
| **7.93** | 1593 | **221** | 5.81 | | | |
| **9.08** | 1593 | **193** | 5.08 | | | |
| **10.93** | 1593 | **160** | 4.22 | | | |
| **12.60** | 2212 | **139** | 5.08 | | | |
| **13.30** | 2212 | **132** | 4.81 | | | |
| **15.30** | 2478 | **114** | 4.68 | | | |
| **18.21** | 2478 | **96.1** | 3.94 | | | |
| **19.24** | 2478 | **91.0** | 3.73 | | | |
| **21.15** | 2478 | **82.7** | 3.39 | | | |
| **24.99** | 2655 | **70.0** | 3.07 | | | |
| **30.57** | 2655 | **57.2** | 2.51 | | | * |
| **34.20** | 2655 | **51.2** | 2.25 | | | * |
| **38.63** | 2655 | **45.3** | 1.99 | | | * |
| **44.18** | 2655 | **39.6** | 1.74 | | | * |
| **51.30** | 2655 | **34.1** | 1.50 | | | * |
| **60.80** | 2655 | **28.8** | 1.26 | | | * |
| **CMG 033** | | | | | | |
| **72.83** | 2655 | **24.0** | 1.08 | | | |
| **97.45** | 2655 | **18.0** | 0.80 | | * | |
| **115.74** | 2655 | **15.1** | 0.68 | | * | |
| **140.81** | 2655 | **12.4** | 0.56 | | * | |
| **174.26** | 2655 | **10.0** | 0.45 | | * | |
| **225.47** | 2655 | **7.8** | 0.35 | | * | |
| **262.05** | 2655 | **6.7** | 0.30 | | * | |
| **325.79** | 2655 | **5.4** | 0.24 | | * | |
| **378.64** | 2655 | **4.6** | 0.21 | | * | |
| **427.03** | 2655 | **4.1** | 0.18 | | * | |

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

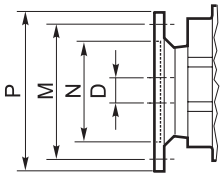
*NOTE*
*Highlighted áreas indicate the motor input flange available on each gearbox size.*

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

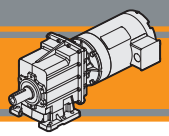
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas B10 a la B19.

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

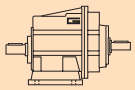
*Before selecting any gearbox, please read the performance values shown in the tables on page B10 to B19.*




| Dimensiones NEMA/ *NEMA Dimensions* | | | |
|---|---|---|---|
| | 56 C | 140 TC | 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 | | | | |
|---|---|---|---|---|---|---|---|
| | | | $n_2$ [rpm] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* | | |
| | | | | | 56 C | 140 TC | 180 TC |
| **CMG 042** | | | | | | | |
| | **3.74** | 2035 | **468** | 15.73 | | | |
| | **4.50** | 2035 | **389** | 13.07 | | | |
| | **5.48** | 2035 | **319** | 10.74 | | | |
| | **6.31** | 2301 | **277** | 10.55 | | | |
| | **7.93** | 2301 | **221** | 8.39 | | | |
| | **9.08** | 2478 | **193** | 7.90 | | | |
| | **10.93** | 2478 | **160** | 6.56 | | | |
| | **12.60** | 3097 | **139** | 7.11 | | | |
| | **13.30** | 3097 | **132** | 6.74 | | | |
| | **15.30** | 3717 | **114** | 7.03 | | | |
| | **18.21** | 3717 | **96.1** | 5.90 | | | |
| | **19.24** | 3717 | **91.0** | 5.59 | | | |
| | **24.99** | 4425 | **70.0** | 5.12 | | | |
| | **30.57** | 4425 | **57.2** | 4.19 | | | |
| | **34.20** | 4425 | **51.2** | 3.74 | | | |
| | **38.63** | 4425 | **45.3** | 3.31 | | | |
| | **44.18** | 4425 | **39.6** | 2.90 | | | |
| | **51.30** | 4425 | **34.1** | 2.49 | | | * |
| | **60.80** | 4248 | **28.8** | 2.02 | | | * |
| **CMG 043** | | | | | | | |
| | **72.83** | 4425 | **24.0** | 1.79 | | | |
| | **97.45** | 4425 | **18.0** | 1.34 | | | |
| | **115.74** | 4425 | **15.1** | 1.13 | | | |
| | **140.81** | 4425 | **12.4** | 0.93 | | | |
| | **174.26** | 4425 | **10.0** | 0.75 | | * | |
| | **225.47** | 4425 | **7.8** | 0.58 | | * | |
| | **262.05** | 4425 | **6.7** | 0.50 | | * | |
| | **325.79** | 4425 | **5.4** | 0.40 | | * | |
| | **378.64** | 4425 | **4.6** | 0.35 | | * | |
| | **427.03** | 4425 | **4.1** | 0.31 | | * | |

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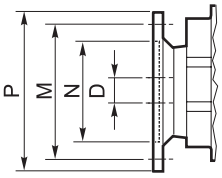
*** =** *The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

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



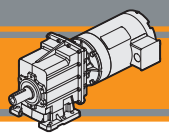

| Dimensiones NEMA/ *NEMA Dimensions* | | | |
|---|---|---|---|
| | 56 C | 140 TC | 180 TC |
| **N** | 4.5 | | 8.5 |
| **M** | 5.88 | | 7.25 |
| **P** | 6.5 | | 9 |
| **D** | 0.625 | 0.875 | 1.125 |

## Datos técnicos — *Technical data*

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **0.16 hp** | | | | | | | |
| 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** | 101 | 6.2 | III | 18.17 | | **56C** |
| | **81** | 119 | 5.2 | III | 21.58 | | **56C** |
| | **74** | 130 | 4.8 | III | 23.51 | | **56C** |
| | **70** | 139 | 4.5 | III | 25.10 | | **56C** |
| | **64** | 150 | 4.1 | III | 27.08 | | **56C** |
| | **54** | 180 | 3.4 | III | 32.49 | | **56C** |
| | **42** | 233 | 2.7 | III | 42.04 | | **56C** |
| | **39** | 248 | 2.5 | III | 44.89 | | **56C** |
| | **36** | 270 | 2.3 | III | 48.86 | | **56C** |
| | **32** | 305 | 2.0 | III | 55.10 | | **56C** |
| | **458** | 21 | 25.1 | III | 3.82 | **CMG012** | **56C** |
| | **378** | 26 | 20.7 | III | 4.63 | | **56C** |
| | **308** | 31 | 16.9 | III | 5.69 | | **56C** |
| | **227** | 43 | 16.6 | III | 7.72 | | **56C** |
| | **191** | 51 | 14.0 | III | 9.17 | | **56C** |
| | **178** | 54 | 13.0 | III | 9.81 | | **56C** |
| | **152** | 64 | 13.9 | III | 11.50 | | **56C** |
| | **147** | 66 | 13.4 | III | 11.90 | | **56C** |
| | **127** | 76 | 13.9 | III | 13.80 | | **56C** |
| | **120** | 81 | 13.1 | III | 14.62 | | **56C** |
| | **98** | 99 | 10.8 | III | 17.86 | | **56C** |
| | **92** | 105 | 10.1 | III | 19.07 | | **56C** |
| | **88** | 110 | 9.7 | III | 19.83 | | **56C** |
| | **74** | 130 | 8.2 | III | 23.56 | | **56C** |
| | **59** | 163 | 6.5 | III | 29.56 | | **56C** |
| | **49** | 196 | 5.4 | III | 35.47 | | **56C** |
| | **38** | 254 | 4.2 | III | 45.89 | | **56C** |
| | **36** | 271 | 3.9 | III | 49.00 | | **56C** |
| | **33** | 295 | 3.6 | III | 53.33 | | **56C** |
| | **29** | 333 | 3.2 | III | 60.15 | | **56C** |
| | **28** | 342 | 3.1 | III | 63.22 | **CMG013** | **56C** |
| | **23** | 407 | 2.6 | III | 75.08 | | **56C** |
| | **20** | 483 | 2.2 | III | 89.17 | | **56C** |
| | **15** | 612 | 1.7 | II | 113.05 | | **56C** |
| | **13** | 727 | 1.5 | II | 134.27 | | **56C** |
| | **10** | 941 | 1.1 | I | 173.72 | | **56C** |
| | **8.7** | 1095 | 1.0 | I | 202.16 | | **56C** |
| | **6.7** | 1330 | 0.8 | I | 261.57 | | **56C** |
| | **5.8** | 1330 | 0.8 | I | 304.00 | | **56C** |
| | **4.4** | 1330 | 0.8 | I | 393.33 | | **56C** |
| | **3.9** | 1330 | 0.8 | I | 443.59 | | **56C** |

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **0.16 hp** | | | | | | | |
| 0.12 kW (1750 rpm) | **27** | 347 | 5.1 | III | 64.01 | **CMG023** | **56C** |
| | **23** | 412 | 4.3 | III | 76.02 | | **56C** |
| | **19** | 489 | 3.6 | III | 90.29 | | **56C** |
| | **15** | 620 | 2.9 | III | 114.46 | | **56C** |
| | **13** | 736 | 2.4 | III | 135.95 | | **56C** |
| | **10** | 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** |
| | **3.9** | 2157 | 0.8 | I | 449.14 | | **56C** |
| | **10** | 944 | 2.8 | III | 174.26 | **CMG033** | **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** |
| | **4.1** | 2313 | 1.1 | I | 427.03 | | **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** |
| | **4.1** | 2313 | 1.9 | II | 427.03 | | **56C** |
| **0.25 hp** | | | | | | | |
| 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** | 157 | 3.9 | III | 18.17 | | **56C** |
| | **81** | 187 | 3.3 | III | 21.58 | | **56C** |
| | **74** | 203 | 3.0 | III | 23.51 | | **56C** |
| | **70** | 217 | 2.9 | III | 25.10 | | **56C** |
| | **65** | 234 | 2.6 | III | 27.08 | | **56C** |
| | **54** | 281 | 2.2 | III | 32.49 | | **56C** |
| | **42** | 363 | 1.7 | II | 42.04 | | **56C** |
| | **39** | 388 | 1.6 | II | 44.89 | | **56C** |
| | **36** | 422 | 1.5 | II | 48.86 | | **56C** |
| | **32** | 476 | 1.3 | I | 55.10 | | **56C** |

Verificar que el par $M_2$ utilizado no exceda el valor indicado en la casilla en gris..
*Please check that the output torque $M_2$ does not exceed the value in the grey areas.*



## 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) | **458** | 33 | 16.1 | III | 3.82 | CMG012 | 56C |
| | **378** | 40 | 13.3 | III | 4.63 | | 56C |
| | **308** | 49 | 10.8 | III | 5.69 | | 56C |
| | **227** | 67 | 10.6 | III | 7.72 | | 56C |
| | **191** | 79 | 8.9 | III | 9.17 | | 56C |
| | **178** | 85 | 8.3 | III | 9.81 | | 56C |
| | **152** | 99 | 8.9 | III | 11.50 | | 56C |
| | **147** | 103 | 8.6 | III | 11.90 | | 56C |
| | **127** | 119 | 8.9 | III | 13.80 | | 56C |
| | **120** | 126 | 8.4 | III | 14.62 | | 56C |
| | **98** | 154 | 6.9 | III | 17.86 | | 56C |
| | **92** | 165 | 6.4 | III | 19.07 | | 56C |
| | **88** | 171 | 6.2 | III | 19.83 | | 56C |
| | **74** | 204 | 5.2 | III | 23.56 | | 56C |
| | **59** | 255 | 4.2 | III | 29.56 | | 56C |
| | **49** | 307 | 3.5 | III | 35.47 | | 56C |
| | **38** | 397 | 2.7 | III | 45.89 | | 56C |
| | **36** | 424 | 2.5 | III | 49.00 | | 56C |
| | **33** | 461 | 2.3 | III | 53.33 | | 56C |
| | **29** | 520 | 2.0 | III | 60.15 | | 56C |
| | **28** | 535 | 2.0 | II | 63.22 | CMG013 | 56C |
| | **23** | 635 | 1.7 | II | 75.08 | | 56C |
| | **20** | 755 | 1.4 | II | 89.17 | | 56C |
| | **15** | 957 | 1.1 | I | 113.05 | | 56C |
| | **13** | 1136 | 0.9 | I | 134.27 | | 56C |
| | **27** | 542 | 3.3 | III | 64.01 | CMG023 | 56C |
| | **23** | 643 | 2.8 | III | 76.02 | | 56C |
| | **19** | 764 | 2.3 | III | 90.29 | | 56C |
| | **15** | 969 | 1.8 | II | 114.46 | | 56C |
| | **13** | 1150 | 1.5 | II | 135.95 | | 56C |
| | **10** | 1489 | 1.2 | I | 175.89 | | 56C |
| | **8.5** | 1732 | 1.0 | I | 204.69 | | 56C |
| | **24** | 616 | 4.3 | III | 72.83 | CMG033 | 56C |
| | **18** | 825 | 3.2 | III | 97.45 | | 56C |
| | **15** | 979 | 2.7 | III | 115.74 | | 56C |
| | **12** | 1192 | 2.2 | III | 140.81 | | 56C |
| | **10** | 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 |
| | **10** | 1475 | 3.0 | III | 174.26 | CMG043 | 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 |
| | **4.1** | 3614 | 1.2 | I | 427.03 | | 56C |

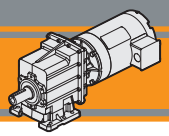
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **0.33 hp** | | | | | | | |
| 0.22 kW (1750 rpm) | **348** | 57 | 6.2 | III | 5.03 | CMG002 | 56C |
| | **287** | 70 | 5.1 | III | 6.10 | | 56C |
| | **234** | 85 | 4.1 | III | 7.49 | | 56C |
| | **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** | 207 | 3.0 | III | 18.17 | | 56C |
| | **81** | 246 | 2.5 | III | 21.58 | | 56C |
| | **74** | 268 | 2.3 | III | 23.51 | | 56C |
| | **70** | 286 | 2.2 | III | 25.10 | | 56C |
| | **65** | 309 | 2.0 | III | 27.08 | | 56C |
| | **54** | 371 | 1.7 | II | 32.49 | | 56C |
| | **42** | 480 | 1.3 | I | 42.04 | | 56C |
| | **39** | 512 | 1.2 | I | 44.89 | | 56C |
| | **36** | 557 | 1.1 | I | 48.86 | | 56C |
| | **32** | 629 | 1.0 | I | 55.10 | | 56C |
| | **458** | 44 | 12.2 | III | 3.82 | CMG012 | 56C |
| | **378** | 53 | 10.0 | III | 4.63 | | 56C |
| | **308** | 65 | 8.2 | III | 5.69 | | 56C |
| | **227** | 88 | 8.0 | III | 7.72 | | 56C |
| | **191** | 105 | 6.8 | III | 9.17 | | 56C |
| | **178** | 112 | 6.3 | III | 9.81 | | 56C |
| | **152** | 131 | 6.7 | III | 11.50 | | 56C |
| | **147** | 136 | 6.5 | III | 11.90 | | 56C |
| | **127** | 157 | 6.7 | III | 13.80 | | 56C |
| | **120** | 167 | 6.4 | III | 14.62 | | 56C |
| | **98** | 204 | 5.2 | III | 17.86 | | 56C |
| | **92** | 218 | 4.9 | III | 19.07 | | 56C |
| | **88** | 226 | 4.7 | III | 19.83 | | 56C |
| | **74** | 269 | 4.0 | III | 23.56 | | 56C |
| | **59** | 337 | 3.1 | III | 29.56 | | 56C |
| | **49** | 405 | 2.6 | III | 35.47 | | 56C |
| | **38** | 524 | 2.0 | III | 45.89 | | 56C |
| | **36** | 559 | 1.9 | II | 49.00 | | 56C |
| | **33** | 608 | 1.7 | II | 53.33 | | 56C |
| | **29** | 686 | 1.5 | II | 60.15 | | 56C |
| | **28** | 706 | 1.5 | II | 63.22 | CMG013 | 56C |
| | **23** | 839 | 1.3 | I | 75.08 | | 56C |
| | **20** | 996 | 1.1 | I | 89.17 | | 56C |
| | **15** | 1263 | 0.8 | I | 113.05 | | 56C |
| | **38** | 530 | 3.3 | III | 46.46 | CMG022 | 56C |
| | **35** | 566 | 3.1 | III | 49.61 | | 56C |
| | **32** | 616 | 2.9 | III | 54.00 | | 56C |
| | **29** | 706 | 2.5 | III | 60.90 | | 56C |
| | **27** | 715 | 2.5 | III | 64.01 | CMG023 | 56C |
| | **23** | 849 | 2.1 | III | 76.02 | | 56C |
| | **19** | 1009 | 1.8 | II | 90.29 | | 56C |
| | **15** | 1279 | 1.4 | I | 114.46 | | 56C |
| | **13** | 1519 | 1.2 | I | 135.95 | | 56C |
| | **10** | 1965 | 0.9 | I | 175.89 | | 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 (1750 rpm) | **24** | 814 | 3.3 | **III** | 72.83 | **CMG033** | **56C** |
| | **18** | 1089 | 2.4 | **III** | 97.45 | | **56C** |
| | **15** | 1293 | 2.1 | **III** | 115.74 | | **56C** |
| | **12** | 1573 | 1.7 | **II** | 140.81 | | **56C** |
| | **10** | 1947 | 1.4 | **I** | 174.26 | | |
| | **7.8** | 2519 | 1.1 | **I** | 225.47 | | **56C** |
| | **6.7** | 2927 | 0.9 | **I** | 262.05 | | **56C** |
| | **12** | 1573 | 2.8 | **III** | 140.81 | **CMG043** | **56C** |
| | **10** | 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** |
| | **4.1** | 4770 | 0.9 | **I** | 427.03 | | **56C** |
| **0.5 hp** | | | | | | | |
| 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** | 314 | 2.0 | **II** | 18.17 | | **56C** |
| | **81** | 373 | 1.7 | **II** | 21.58 | | **56C** |
| | **74** | 406 | 1.5 | **II** | 23.51 | | **56C** |
| | **70** | 434 | 1.4 | **II** | 25.10 | | **56C** |
| | **65** | 468 | 1.3 | **I** | 27.08 | | **56C** |
| | **54** | 562 | 1.1 | **I** | 32.49 | | **56C** |
| | **42** | 727 | 0.9 | **I** | 42.04 | | **56C** |
| | **458** | 66 | 8.0 | **III** | 3.82 | **CMG012** | **56C** |
| | **378** | 80 | 6.6 | **III** | 4.63 | | **56C** |
| | **308** | 98 | 5.4 | **III** | 5.69 | | **56C** |
| | **227** | 133 | 5.3 | **III** | 7.72 | | **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** | 309 | 3.4 | **III** | 17.86 | | **56C** |
| | **92** | 330 | 3.2 | **III** | 19.07 | | **56C** |
| | **88** | 343 | 3.1 | **III** | 19.83 | | **56C** |
| | **74** | 407 | 2.6 | **III** | 23.56 | | **56C** |
| | **59** | 511 | 2.1 | **III** | 29.56 | | **56C** |
| | **49** | 613 | 1.7 | **II** | 35.47 | | **56C** |
| | **38** | 793 | 1.3 | **I** | 45.89 | | **56C** |
| | **36** | 847 | 1.3 | **I** | 49.00 | | **56C** |
| | **33** | 922 | 1.2 | **I** | 53.33 | | **56C** |
| | **29** | 1040 | 1.0 | **I** | 60.15 | | **56C** |

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **0.5 hp** | | | | | | | |
| 0.37 kW (1750 rpm) | **28** | 1070 | 1.0 | **I** | 63.22 | **CMG013** | **56C** |
| | **23** | 1271 | 0.8 | **I** | 75.08 | | **56C** |
| | **58** | 517 | 3.4 | **III** | 29.93 | **CMG022** | **56C** |
| | **49** | 621 | 2.9 | **III** | 35.91 | | **56C** |
| | **38** | 803 | 2.2 | **III** | 46.46 | | **56C** |
| | **35** | 858 | 2.1 | **III** | 49.61 | | **56C** |
| | **32** | 933 | 1.9 | **II** | 54.00 | | **56C** |
| | **29** | 1045 | 1.7 | **II** | 60.90 | | **56C** |
| | **27** | 1083 | 1.6 | **II** | 64.01 | **CMG023** | **56C** |
| | **23** | 1287 | 1.4 | **I** | 76.02 | | **56C** |
| | **19** | 1528 | 1.2 | **I** | 90.29 | | **56C** |
| | **15** | 1937 | 0.9 | **I** | 114.46 | | **56C** |
| | **34** | 887 | 3.0 | **III** | 51.30 | **CMG032** | **56C** |
| | **29** | 1051 | 2.5 | **III** | 60.80 | | **56C** |
| | **24** | 1233 | 2.2 | **III** | 72.83 | **CMG033** | **56C** |
| | **18** | 1649 | 1.6 | **II** | 97.45 | | **56C** |
| | **15** | 1959 | 1.4 | **I** | 115.74 | | **56C** |
| | **12** | 2383 | 1.1 | **I** | 140.81 | | **56C** |
| | **10** | 2950 | 0.9 | **I** | 174.26 | | **56C** |
| | **24** | 1233 | 3.6 | **III** | 72.83 | **CMG043** | **56C** |
| | **18** | 1649 | 2.7 | **III** | 97.45 | | **56C** |
| | **15** | 1959 | 2.3 | **III** | 115.74 | | **56C** |
| | **12** | 2383 | 1.9 | **II** | 140.81 | | **56C** |
| | **10** | 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** |
| **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** | 471 | 1.3 | **I** | 18.17 | | **56C** |
| | **81** | 560 | 1.1 | **I** | 21.58 | | **56C** |
| | **74** | 610 | 1.0 | **I** | 23.51 | | **56C** |
| | **70** | 651 | 1.0 | **I** | 25.10 | | **56C** |
| | **65** | 702 | 0.9 | **I** | 27.08 | | **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) | **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** | 463 | 2.3 | **III** | 17.86 | | **56C** |
| | **92** | 494 | 2.1 | **III** | 19.07 | | **56C** |
| | **88** | 514 | 2.1 | **III** | 19.83 | | **56C** |
| | **74** | 611 | 1.7 | **II** | 23.56 | | **56C** |
| | **59** | 766 | 1.4 | **I** | 29.56 | | **56C** |
| | **49** | 920 | 1.2 | **I** | 35.47 | | **56C** |
| | **38** | 1190 | 0.9 | **I** | 45.89 | | **56C** |
| | **36** | 1271 | 0.8 | **I** | 49.00 | | **56C** |
| | **87** | 521 | 3.4 | **III** | 20.08 | **CMG022** | **56C** |
| | **73** | 618 | 2.9 | **III** | 23.85 | | **56C** |
| | **58** | 776 | 2.3 | **III** | 29.93 | | **56C** |
| | **49** | 931 | 1.9 | **II** | 35.91 | | **56C** |
| | **38** | 1205 | 1.5 | **II** | 46.46 | | **56C** |
| | **35** | 1286 | 1.4 | **I** | 49.61 | | **56C** |
| | **32** | 1400 | 1.3 | **I** | 54.00 | | **56C** |
| | **29** | 1581 | 1.1 | **I** | 60.90 | | **56C** |
| | **27** | 1625 | 1.1 | **I** | 64.01 | **CMG023** | **56C** |
| | **23** | 1930 | 0.9 | **I** | 76.02 | | **56C** |
| | **57** | 793 | 3.3 | **III** | 30.57 | **CMG032** | **56C** |
| | **51** | 887 | 3.0 | **III** | 34.20 | | **56C** |
| | **45** | 1002 | 2.7 | **III** | 38.63 | | **56C** |
| | **40** | 1145 | 2.3 | **III** | 44.18 | | **56C** |
| | **34** | 1330 | 2.0 | **II** | 51.30 | | **56C** |
| | **29** | 1576 | 1.7 | **II** | 60.80 | | **56C** |
| | **24** | 1849 | 1.4 | **II** | 72.83 | **CMG033** | **56C** |
| | **18** | 2474 | 1.1 | **I** | 97.45 | | **56C** |
| | **15** | 2938 | 0.9 | **I** | 115.74 | | **56C** |
| | **34** | 1330 | 3.3 | **III** | 51.30 | **CMG042** | **56C** |
| | **29** | 1576 | 2.7 | **III** | 60.80 | | **56C** |
| | **24** | 1849 | 2.4 | **III** | 72.83 | **CMG043** | **56C** |
| | **18** | 2474 | 1.8 | **II** | 97.45 | | **56C** |
| | **15** | 2938 | 1.5 | **II** | 115.74 | | **56C** |
| | **12** | 3575 | 1.2 | **I** | 140.81 | | **56C** |
| | **10** | 4424 | 1.0 | **I** | 174.26 | | **56C** |

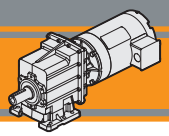
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **1 hp** | | | | | | | |
| 0.75 kW (1750 rpm) | **348** | 174 | 2.0 | **III** | 5.03 | **CMG002** | **56C** |
| | **287** | 211 | 1.7 | **II** | 6.10 | | **56C** |
| | **234** | 259 | 1.4 | **I** | 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** | 628 | 1.0 | **I** | 18.17 | | **56C** |
| | **81** | 746 | 0.8 | **I** | 21.58 | | **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** | 617 | 1.7 | **II** | 17.86 | | **56C-140TC** |
| | **92** | 659 | 1.6 | **II** | 19.07 | | **56C-140TC** |
| | **88** | 686 | 1.5 | **II** | 19.83 | | **56C-140TC** |
| | **74** | 814 | 1.3 | **I** | 23.56 | | **56C-140TC** |
| | **59** | 1022 | 1.0 | **I** | 29.56 | | **56C-140TC** |
| | **49** | 1226 | 0.9 | **I** | 35.47 | | **56C-140TC** |
| | **102** | 591 | 2.4 | **III** | 17.10 | **CMG022** | **56C-140TC** |
| | **96** | 631 | 2.2 | **III** | 18.26 | | **56C-140TC** |
| | **87** | 694 | 2.5 | **III** | 20.08 | | **56C-140TC** |
| | **73** | 825 | 2.1 | **III** | 23.85 | | **56C-140TC** |
| | **58** | 1035 | 1.7 | **II** | 29.93 | | **56C-140TC** |
| | **49** | 1241 | 1.4 | **II** | 35.91 | | **56C-140TC** |
| | **38** | 1606 | 1.1 | **I** | 46.46 | | **56C-140TC** |
| | **35** | 1715 | 1.0 | **I** | 49.61 | | **56C-140TC** |
| | **32** | 1867 | 0.9 | **I** | 54.00 | | **56C-140TC** |
| | **29** | 1553 | 1.1 | **I** | 60.90 | | **56C-140TC** |
| | **57** | 1057 | 2.5 | **III** | 30.57 | **CMG032** | **56C-140TC** |
| | **51** | 1182 | 2.2 | **III** | 34.20 | | **56C-140TC** |
| | **45** | 1336 | 2.0 | **II** | 38.63 | | **56C-140TC** |
| | **40** | 1527 | 1.7 | **II** | 44.18 | | **56C-140TC** |
| | **34** | 1774 | 1.5 | **II** | 51.30 | | **56C-140TC** |
| | **29** | 2102 | 1.3 | **I** | 60.80 | | **56C-140TC** |
| | **24** | 2465 | 1.1 | **I** | 72.83 | **CMG033** | **56C-140TC** |
| | **45** | 1336 | 3.3 | **III** | 38.63 | **CMG042** | **56C-140TC** |
| | **40** | 1527 | 2.9 | **III** | 44.18 | | **56C-140TC** |
| | **34** | 1774 | 2.5 | **III** | 51.30 | | **56C-140TC** |
| | **29** | 2102 | 2.0 | **III** | 60.80 | | **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) | **24** | 2465 | 1.8 | II | 72.83 | **CMG043** | **56C-140TC** |
| | **18** | 3299 | 1.3 | I | 97.45 | | **56C-140TC** |
| | **15** | 3918 | 1.1 | I | 115.74 | | **56C-140TC** |
| | **12** | 4767 | 0.9 | I | 140.81 | | **56C-140TC** |
| **1.5 hp** | | | | | | | |
| 1.1 kW (1750 rpm) | **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** | 926 | 1.1 | I | 17.86 | | **56C-140TC** |
| | **92** | 989 | 1.1 | I | 19.07 | | **56C-140TC** |
| | **88** | 1029 | 1.0 | I | 19.83 | | **56C-140TC** |
| | **74** | 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** |
| | **96** | 947 | 1.5 | II | 18.26 | | **56C-140TC** |
| | **87** | 1041 | 1.7 | II | 20.08 | | **56C-140TC** |
| | **73** | 1237 | 1.4 | II | 23.85 | | **56C-140TC** |
| | **58** | 1552 | 1.1 | I | 29.93 | | **56C-140TC** |
| | **49** | 1862 | 1.0 | I | 35.91 | | **56C-140TC** |
| | **114** | 793 | 3.1 | III | 15.30 | **CMG032** | **56C-140TC** |
| | **96** | 944 | 2.6 | III | 18.21 | | **56C-140TC** |
| | **91** | 998 | 2.5 | III | 19.24 | | **56C-140TC** |
| | **83** | 1097 | 2.3 | III | 21.15 | | **56C-140TC** |
| | **70** | 1296 | 2.0 | III | 24.99 | | **56C-140TC** |
| | **57** | 1585 | 1.7 | II | 30.57 | | **56C-140TC** |
| | **51** | 1774 | 1.5 | II | 34.20 | | **56C-140TC** |
| | **45** | 2003 | 1.3 | I | 38.63 | | **56C-140TC** |
| | **40** | 2291 | 1.2 | I | 44.18 | | **56C-140TC** |
| | **34** | 2660 | 1.0 | I | 51.30 | | **56C-140TC** |
| | **29** | 3153 | 0.8 | I | 60.80 | | **56C-140TC** |

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **1.5 hp** | | | | | | | |
| 1.1 kW (1750 rpm) | **57** | 1585 | 2.8 | III | 30.57 | **CMG042** | **56C-140TC** |
| | **51** | 1774 | 2.5 | III | 34.20 | | **56C-140TC** |
| | **45** | 2003 | 2.2 | III | 38.63 | | **56C-140TC** |
| | **40** | 2291 | 1.9 | II | 44.18 | | **56C-140TC** |
| | **34** | 2660 | 1.7 | II | 51.30 | | **56C-140TC** |
| | **29** | 3153 | 1.3 | I | 60.80 | | **56C-140TC** |
| | **24** | 3698 | 1.2 | I | 72.83 | **CMG043** | **56C-140TC** |
| | **18** | 4948 | 0.9 | I | 97.45 | | **56C-140TC** |
| **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** |
| | **98** | 1235 | 0.9 | I | 17.86 | | **56C-140TC** |
| | **92** | 1318 | 0.8 | I | 19.07 | | **56C-140TC** |
| | **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** |
| | **96** | 1262 | 1.1 | I | 18.26 | | **56C-140TC** |
| | **87** | 1388 | 1.3 | I | 20.08 | | **56C-140TC** |
| | **73** | 1649 | 1.1 | I | 23.85 | | **56C-140TC** |
| | **58** | 2069 | 0.9 | I | 29.93 | | **56C-140TC** |
| | **221** | 548 | 2.9 | III | 7.93 | **CMG032** | **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** | 1259 | 2.0 | II | 18.21 | | **56C-140TC** |
| | **91** | 1330 | 1.9 | II | 19.24 | | **56C-140TC** |
| | **83** | 1462 | 1.7 | II | 21.15 | | **56C-140TC** |
| | **70** | 1728 | 1.5 | II | 24.99 | | **56C-140TC** |
| | **57** | 2114 | 1.3 | I | 30.57 | | **56C-140TC** |
| | **51** | 2365 | 1.1 | I | 34.20 | | **56C-140TC** |
| | **45** | 2671 | 1.0 | I | 38.63 | | **56C-140TC** |
| | **40** | 3054 | 0.9 | I | 44.18 | | **56C-140TC** |



## Datos técnicos / *Technical data*

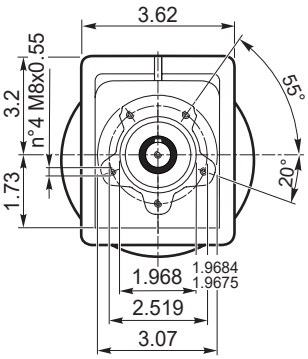
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **2 hp** | | | | | | | |
| 1.5 kW (1750 rpm) | **96** | 1259 | 3.0 | **III** | 18.21 | **CMG042** | **56C-140TC** |
| | **91** | 1330 | 2.8 | **III** | 19.24 | | **56C-140TC** |
| | **70** | 1728 | 2.6 | **III** | 24.99 | | **56C-140TC** |
| | **57** | 2114 | 2.1 | **III** | 30.57 | | **56C-140TC** |
| | **51** | 2365 | 1.9 | **II** | 34.20 | | **56C-140TC** |
| | **45** | 2671 | 1.7 | **II** | 38.63 | | **56C-140TC** |
| | **40** | 3054 | 1.4 | **II** | 44.18 | | **56C-140TC** |
| | **34** | 3547 | 1.2 | **I** | 51.30 | | **56C-140TC** |
| | **29** | 4204 | 1.0 | **I** | 60.80 | | **56C-140TC** |
| | **24** | 4931 | 0.9 | **I** | 72.83 | **CMG043** | **56C-140TC** |
| **3 hp** | | | | | | | |
| 2.2 kW (1750 rpm) | **458** | 396 | 1.3 | **I** | 3.82 | **CMG012** | **140TC-180TC** |
| | **378** | 480 | 1.1 | **I** | 4.63 | | **140TC-180TC** |
| | **308** | 590 | 0.9 | **I** | 5.69 | | **140TC-180TC** |
| | **227** | 800 | 0.9 | **I** | 7.72 | | **140TC-180TC** |
| | **479** | 379 | 2.3 | **III** | 3.66 | **CMG022** | **140TC-180TC** |
| | **395** | 460 | 1.9 | **II** | 4.43 | | **140TC-180TC** |
| | **321** | 565 | 1.6 | **II** | 5.45 | | **140TC-180TC** |
| | **237** | 766 | 1.4 | **I** | 7.39 | | **140TC-180TC** |
| | **199** | 910 | 1.2 | **I** | 8.78 | | **140TC-180TC** |
| | **176** | 1030 | 1.0 | **I** | 9.93 | | **140TC-180TC** |
| | **159** | 1142 | 1.5 | **II** | 11.01 | | **140TC-180TC** |
| | **145** | 1250 | 1.4 | **II** | 12.05 | | **140TC-180TC** |
| | **132** | 1370 | 1.3 | **I** | 13.21 | | **140TC-180TC** |
| | **118** | 1536 | 1.2 | **I** | 14.81 | | **140TC-180TC** |
| | **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** | 1889 | 1.3 | **I** | 18.21 | | **140TC-180TC** |
| | **91** | 1995 | 1.2 | **I** | 19.24 | | **140TC-180TC** |
| | **83** | 2194 | 1.1 | **I** | 21.15 | | **140TC-180TC** |
| | **70** | 2592 | 1.0 | **I** | 24.99 | | **140TC-180TC** |
| | **57** | 3171 | 0.8 | I | 30.57 | | **140TC-180TC** |

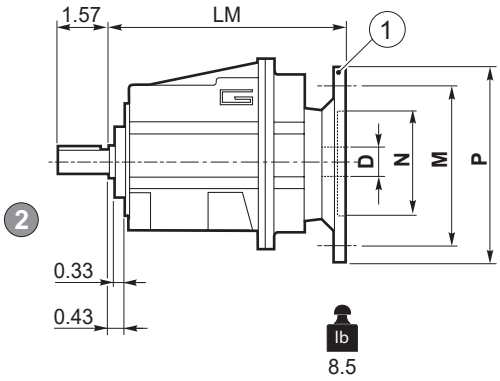
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **3 hp** | | | | | | | |
| 2.2 kW (1750 rpm) | **221** | 823 | 2.8 | **III** | 7.93 | **CMG042** | **140TC-180TC** |
| | **193** | 942 | 2.6 | **III** | 9.08 | | **140TC-180TC** |
| | **160** | 1133 | 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** | 1889 | 2.0 | **II** | 18.21 | | **140TC-180TC** |
| | **91** | 1995 | 1.9 | **II** | 19.24 | | **140TC-180TC** |
| | **70** | 2592 | 1.7 | **II** | 24.99 | | **140TC-180TC** |
| | **57** | 3171 | 1.4 | **I** | 30.57 | | **140TC-180TC** |
| | **51** | 3547 | 1.2 | **I** | 34.20 | | **140TC-180TC** |
| | **45** | 4007 | 1.1 | **I** | 38.63 | | **140TC-180TC** |
| | **40** | 4582 | 1.0 | **I** | 44.18 | | **140TC-180TC** |
| | **34** | 5321 | 0.8 | **I** | 51.30 | | **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** |
| | **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** | 3148 | 1.2 | **I** | 18.21 | | **180TC** |
| | **91** | 3325 | 1.1 | **I** | 19.24 | | **180TC** |
| | **70** | 4320 | 1.0 | **I** | 24.99 | | **180TC** |
| | **57** | 5285 | 0.8 | **I** | 30.57 | | **180TC** |

**Dimensiones** ***Dimensions***

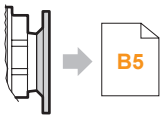
# CMG 002 U

## CMG 002 U

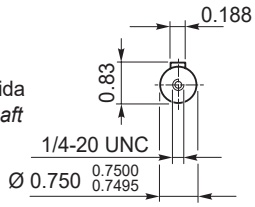


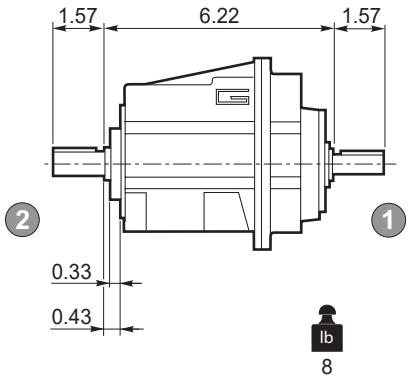

Bridas Motor
*NEMA C-FACE*



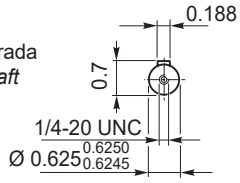

Eje de salida
*Output shaft*
2




## CMGIS 002 U



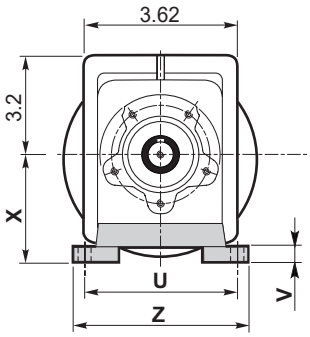

Eje de entrada
*Input shaft*
1



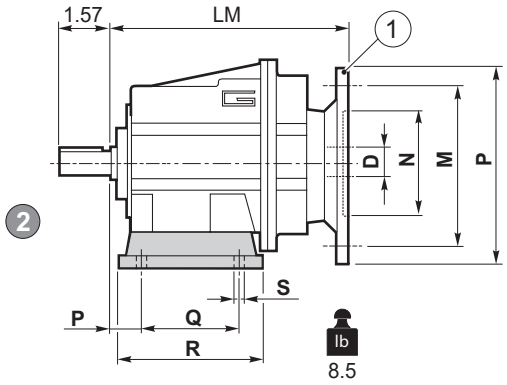

| **Brida Motor** / *Motor flange* | |
|---|---|
| (1) **Dimensiones NEMA** ***NEMA Dimensions*** | |
| | **56 C** |
| **N** | 4.5 |
| **M** | 5.88 |
| **P** | 6.5 |
| **D** | 0.625 |
| **LM 002** | 6.61 |

**Dimensiones** ***Dimensions***

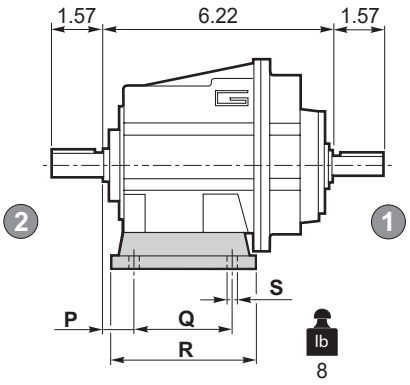
# CMG 002 H



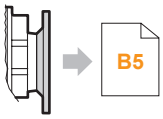

## CMG 002 H..



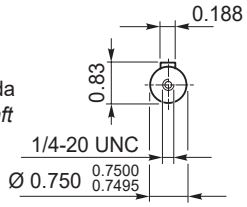

## CMGIS 002 H..



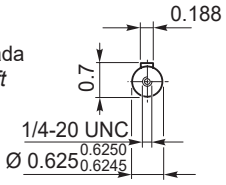

Bridas Motor
*NEMA C-FACE*




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 |

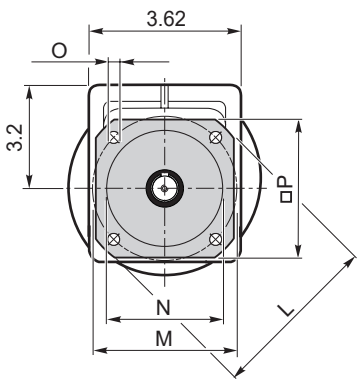
Preferencial / *Preferred*

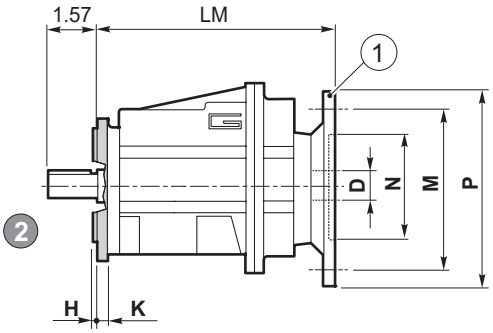
| **Brida Motor** / *Motor flange* | |
|---|---|
| (1) **Dimensiones NEMA** ***NEMA Dimensions*** | |
| | **56 C** |
| **N** | 4.5 |
| **M** | 5.88 |
| **P** | 6.5 |
| **D** | 0.625 |
| **LM 002** | 6.61 |

**Dimensiones** *Dimensions*

# CMG 002 F

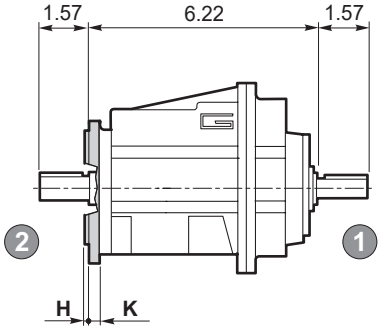
## CMG 002 F..



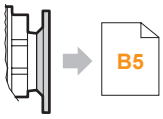

lb 8.5

## CMGIS 002 F..

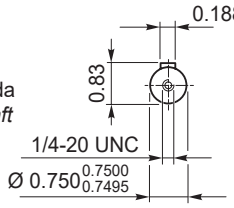



lb 8

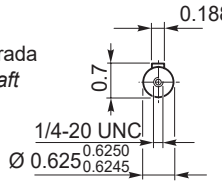
Bridas Motor
*NEMA C-FACE*




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* | Brida / *Flange* 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 | 0.354 | 3.937 | F120 | 0.44 |
| | 0.138 | 0.315 | 5.512 | 4.528 | 3.740 3.7386 3.7372 | 0.354 | 4.528 | F140 | 0.44 |

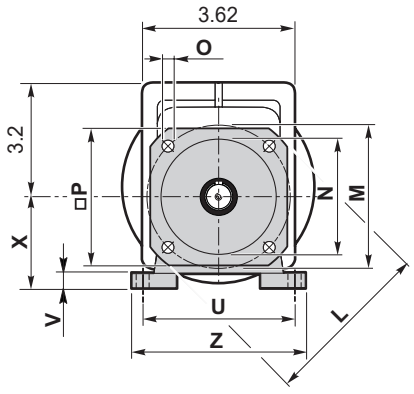
| Brida Motor / *Motor flange* | |
|---|---|
| (1) Dimensiones NEMA *NEMA Dimensions* | 56 C |
| N | 4.5 |
| M | 5.88 |
| P | 6.5 |
| D | 0.625 |
| LM 002 | 6.61 |

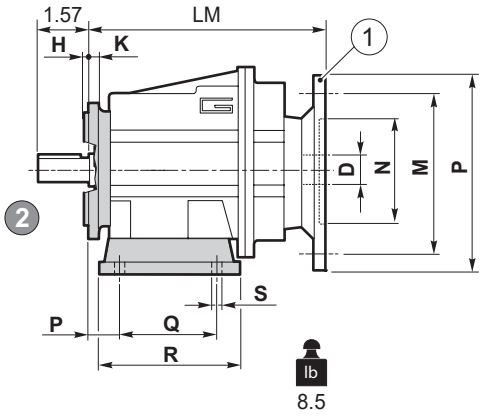
**Dimensiones** *Dimensions*

# CMG 002 H../F..

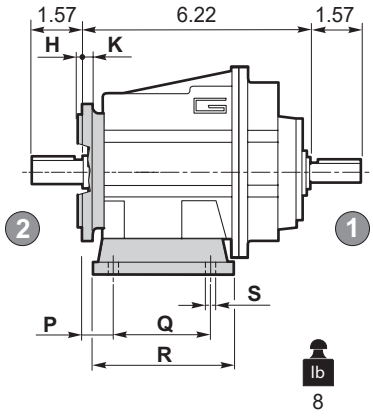


## CMG 002 H../F..

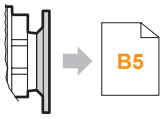


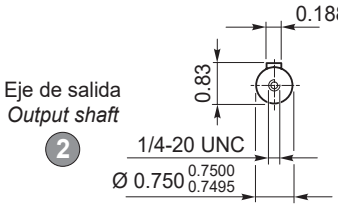

## CMGIS 002 H../F..



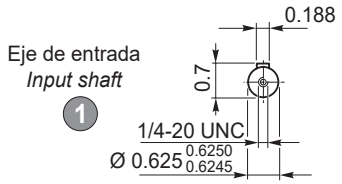

Bridas Motor
*NEMA C-FACE*




Eje de salida
*Output shaft*




Eje de entrada
*Input shaft*




| Versión F / *F Version* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CMG CMGIS | H | K | L | M | N | O | P | Brida / *Flange* | |
| | | | | | | | | Tipo / *Type* | Peso / *Weight* [lb] |
| 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 | 0.354 | 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 | • | • | • |

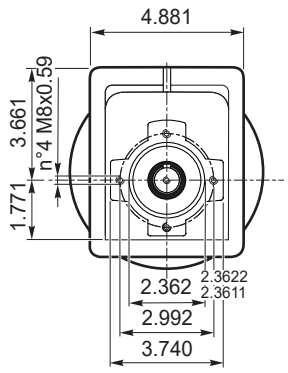
Preferencial / *Preferred*

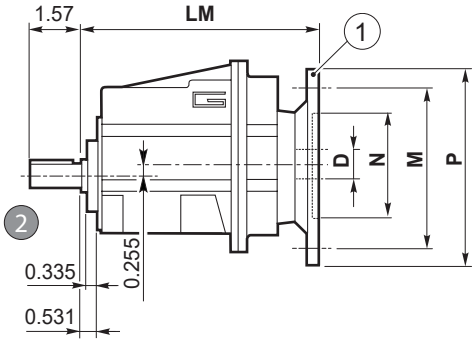
• Combinaciones posibles H/F / *Possible combinations H/F*

**Dimensiones** *Dimensions*

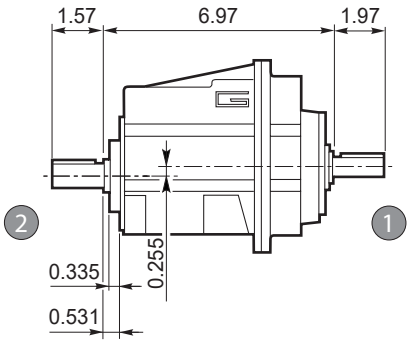
# CMG 012 U - CMG 013 U

## CMG 012 U

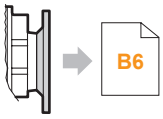



## CMGIS 012 U

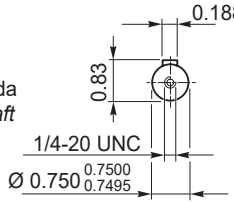



Bridas Motor
*NEMA C-FACE*



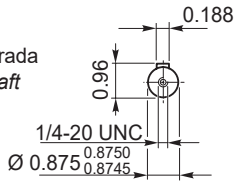

lb 14.2

Eje de salida
*Output shaft*
2

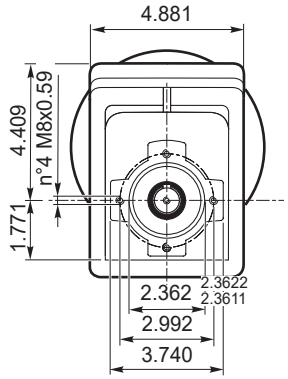


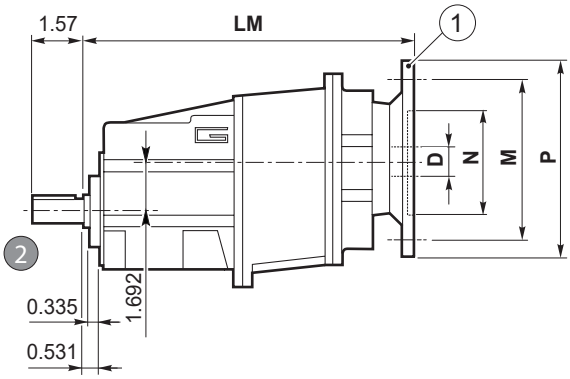

lb 13.4

Eje de entrada
*Input shaft*
1

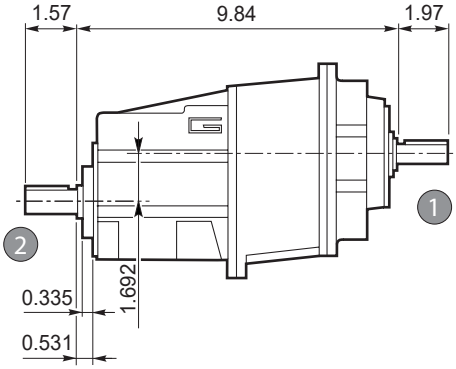



## CMG 013 U

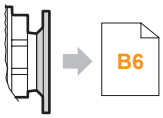



## CMGIS 013 U

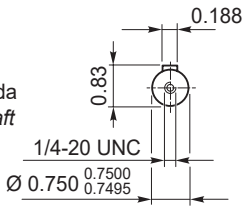



Bridas Motor
*NEMA C-FACE*



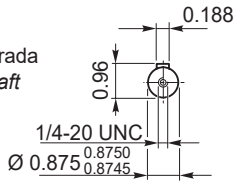

lb 20.1

Eje de salida
*Output shaft*
2

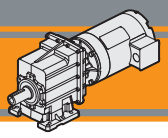



lb 20

Eje de entrada
*Input shaft*
1



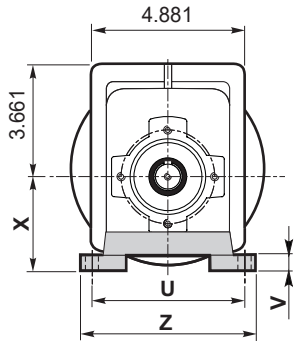

| **Brida Motor** / *Motor flange* | | |
|---|---|---|
| (1) **Dimensiones NEMA** *NEMA Dimensions* | | |
| | **56 C** | **140 TC** |
| **N** | 4.5 | |
| **M** | 5.88 | |
| **P** | 6.5 | |
| **D** | 0.625 | 0.875 |
| **LM 012** | 7.87 | |
| **LM 013** | 10.75 | |

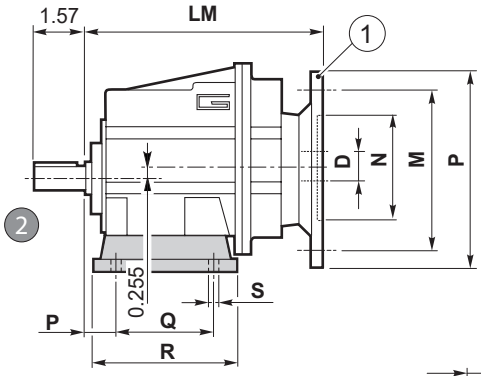




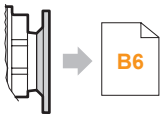
# CMG 012 H.. - CMG 013 H..

## CMG 012 H..



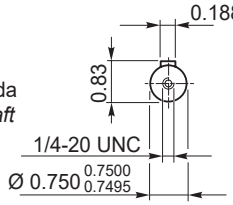




Bridas Motor
*NEMA C-FACE*

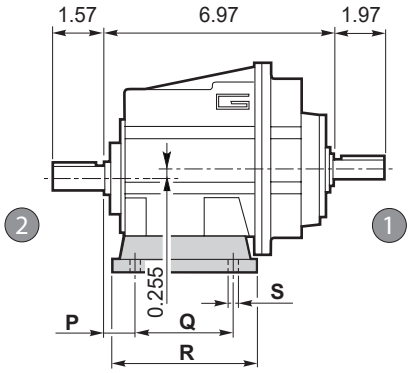



lb
14.2

Eje de salida
*Output shaft*
2

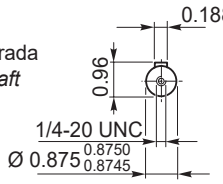



## CMGIS 012 H..

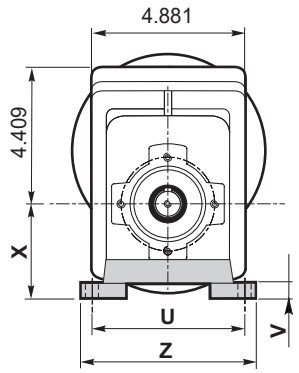


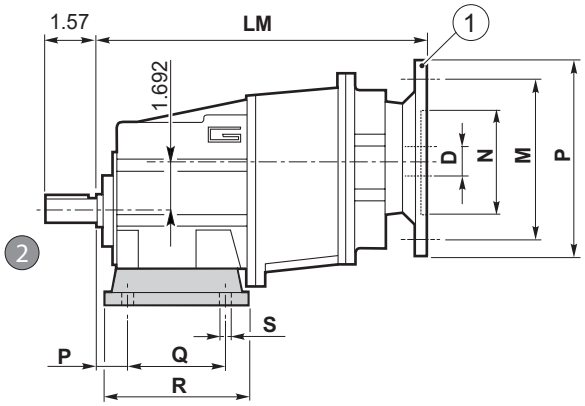

lb
13.4

Eje de entrada
*Input shaft*
1

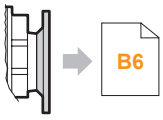



## CMG 013 H..



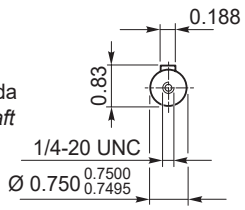




Bridas Motor
*NEMA C-FACE*

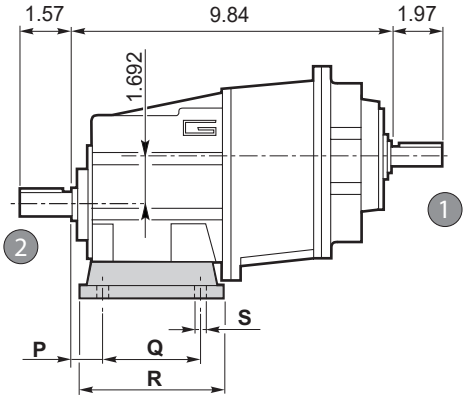



lb
20.1

Eje de salida
*Output shaft*
2

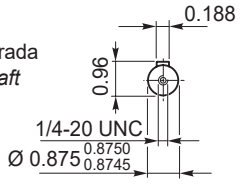



## CMGIS 013 H..




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 |

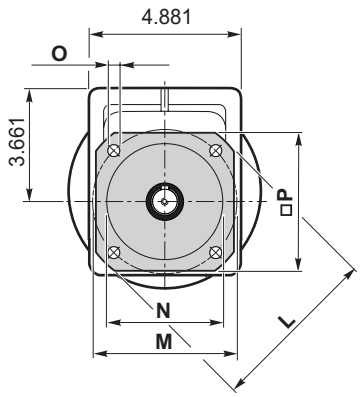
Preferencial / *Preferred*

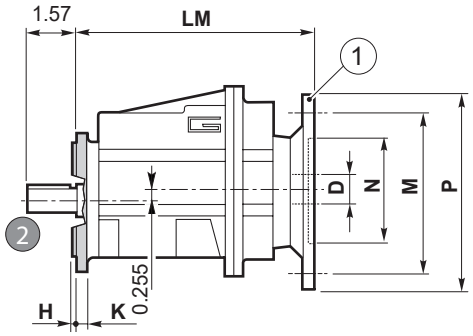
| **Brida Motor** / *Motor flange* | | |
|---|---|---|
| (1) **Dimensiones NEMA** ***NEMA Dimensions*** | | |
| | **56 C** | **140 TC** |
| **N** | 4.5 | |
| **M** | 5.88 | |
| **P** | 6.5 | |
| **D** | 0.625 | 0.875 |
| **LM 012** | 7.87 | |
| **LM 013** | 10.75 | |

**Dimensiones** *Dimensions*

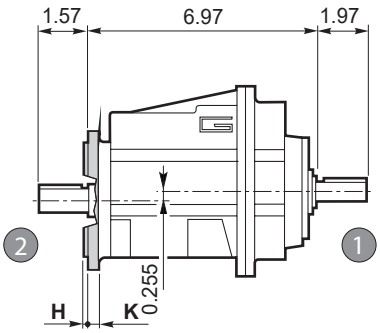
# CMG 012 F - CMG 013 F

## CMG 012 F..

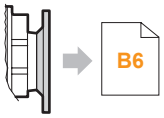



## CMGIS 012 F..

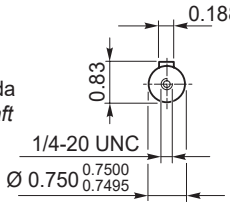



Bridas Motor
*NEMA C-FACE*



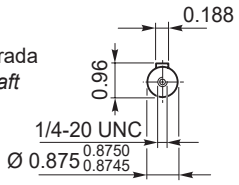

lb
14.2

Eje de salida
*Output shaft*
2

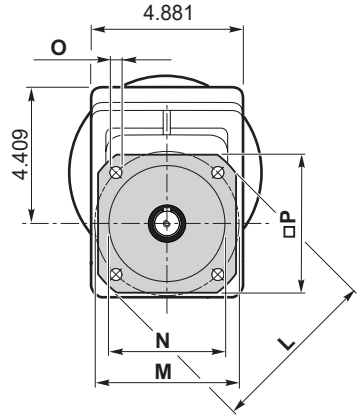


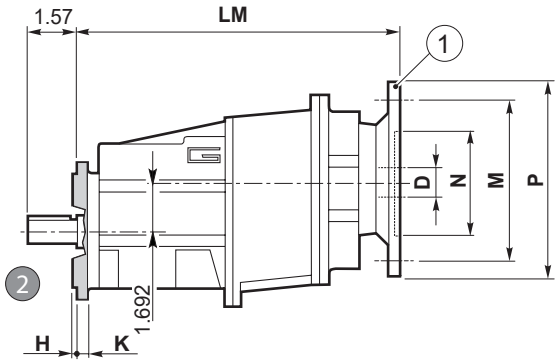

lb
13.4

Eje de entrada
*Input shaft*
1

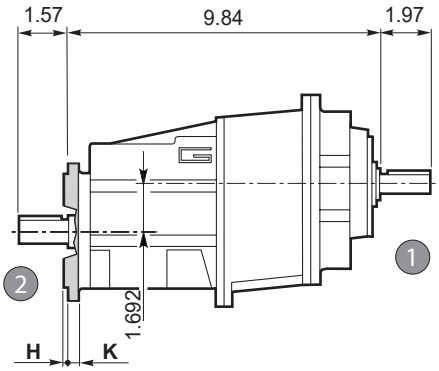



## CMG 013 F..

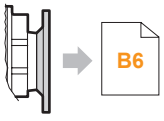



## CMGIS 013 F..

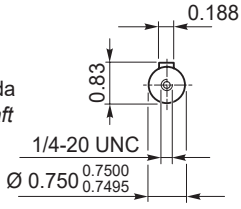



Bridas Motor
*NEMA C-FACE*



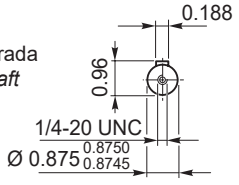

lb
20.1

Eje de salida
*Output shaft*
2




lb
20

Eje de entrada
*Input shaft*
1



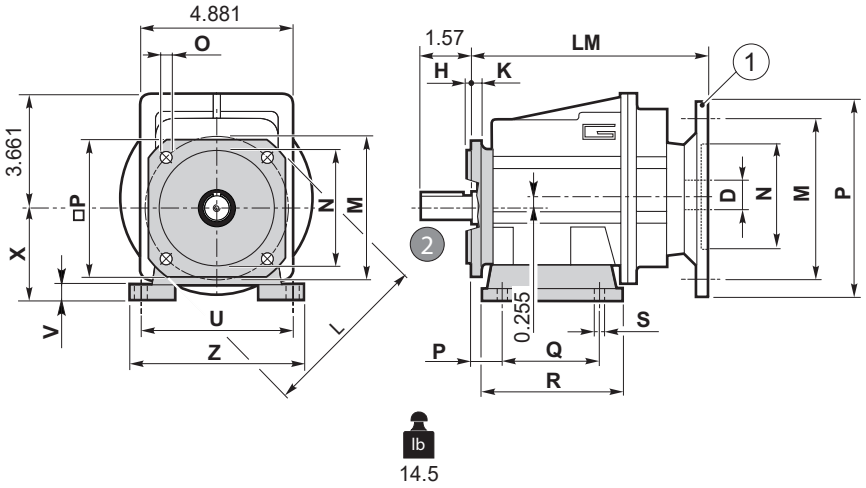

| Versión F / *F Version* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CMG CMGIS | H | K | L | M | N | O | P | Brida / *Flange* Tipo / *Type* | Peso / *Weight* [lb] |
| 012 013 | 0.118 | 0.354 | 4.724 | 3.937 | 3.150 3.1488 3.1476 | 0.354 | 4.173 | F120 | 1.102 |
| | 0.138 | 0.354 | 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 | |

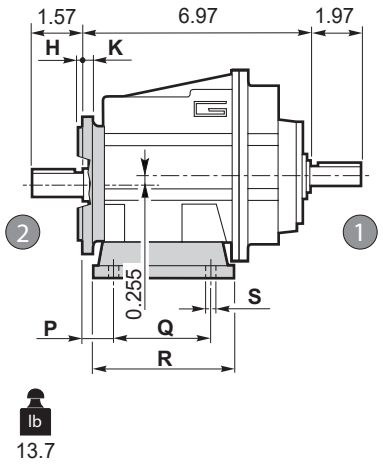
**Dimensiones** *Dimensions*

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

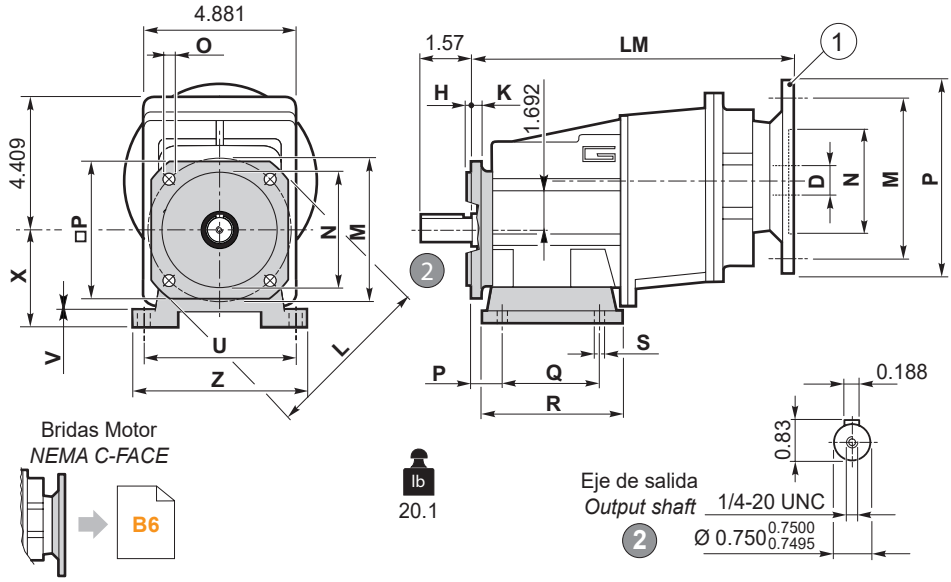
## CMG 012 H../F..



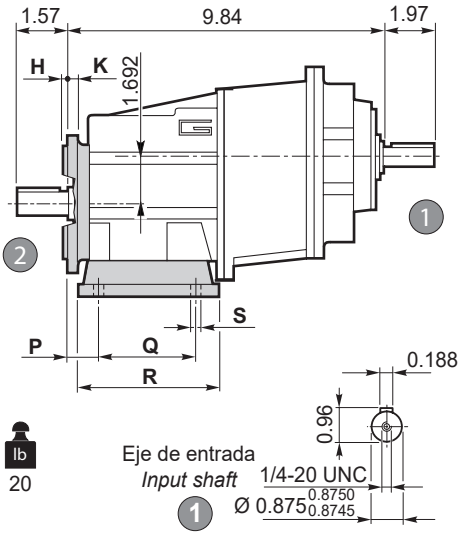

## CMGIS 012 H../F..




## CMG 013 H../F..




## CMGIS 013 H../F..




| 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*** | | **F120** | **F140** | **F160** | **F200** |
| | | | | | | | | | Tipo *Type* | Peso / *Weight* [lb] | | | | |
| **012 013** | **0.787** | **3.346** | **4.252** | **0.354** | **4.528** | **0.472** | **2.559** | **5.472** | **H65** | **1.543** | • | • | | |
| | 0.709 | 3.150 | 4.646 | 0.354 | 4.331 | 0.472 | 2.953 | 5.512 | **H75** | 2.205 | • | • | • | |
| | 0.984 | 3.346 | 4.724 | 0.354 | 4.724 | 0.472 | 3.150 | 5.512 | **H80** | 2.425 | • | • | • | |
| | 0.709 | 1.968-3.425 | 4.646 | 0.354 | 4.331 | 0.472 | 3.346 | 5.118 | **H85** | 2.646 | • | • | • | |
| | 0.984 | 5.118 | 6.063 | 0.354 | 4.331 | 0.472 | 3.543 | 5.315 | **H90** | 3.307 | • | • | • | • |
| | 0.709 | 2.362-4.232 | 5.315 | 0.433 | 5.118 | 0.472 | 3.937 | 6.102 | **H100** | 3.748 | • | • | • | • |

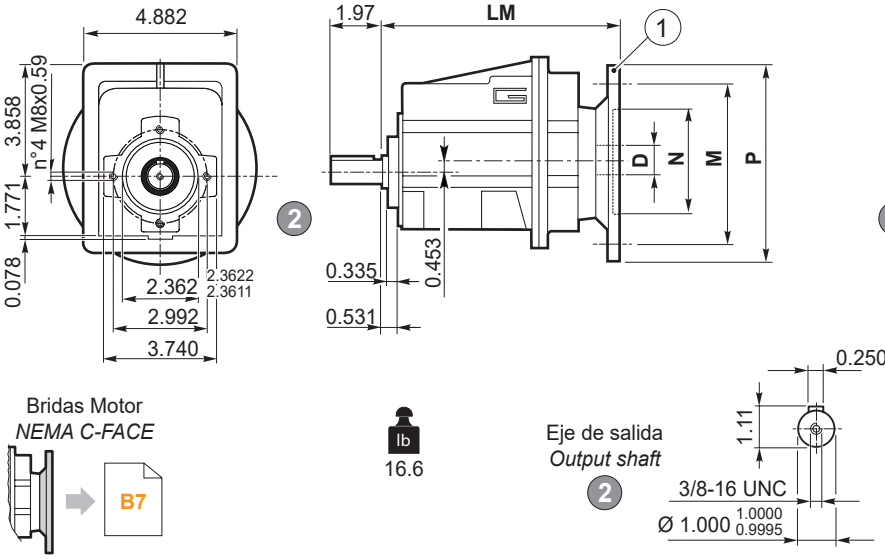
Preferencial / *Preferred*

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

**Dimensiones** *Dimensions*

# CMG 022 U - CMG 023 U

## CMG 022 U




Bridas Motor
*NEMA C-FACE*



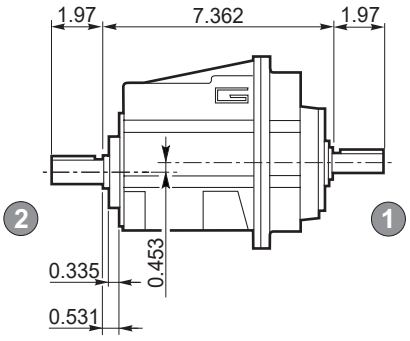

lb 16.6

Eje de salida
*Output shaft*
2

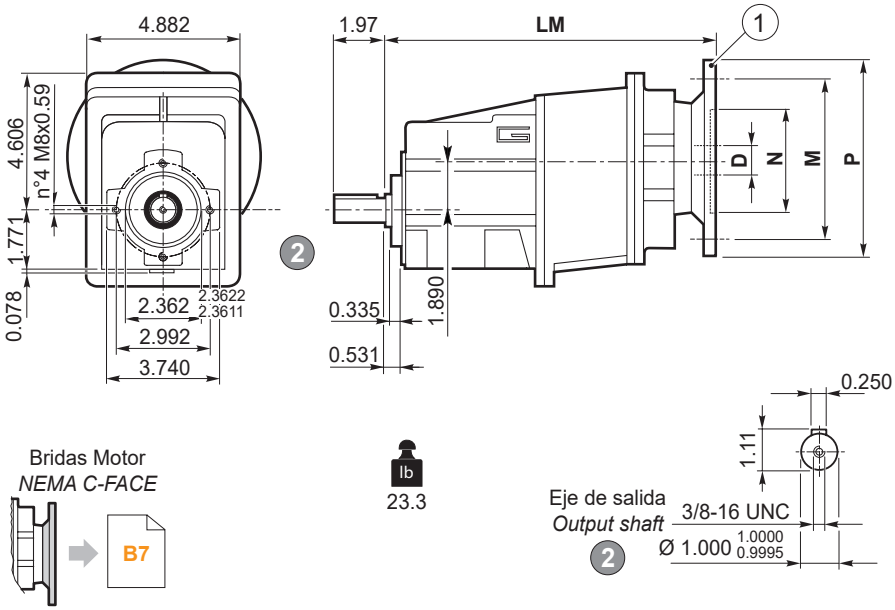
lb 15.8

Eje de entrada
*Input shaft*
1

## CMGIS 022 U




## CMG 023 U




Bridas Motor
*NEMA C-FACE*



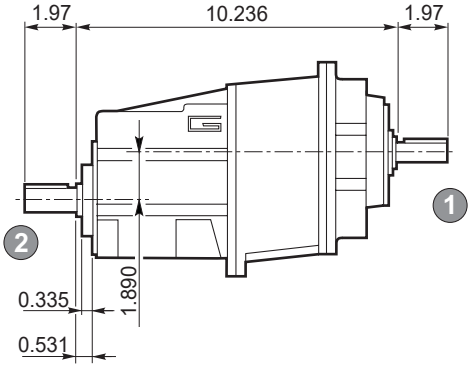

lb 23.3

Eje de salida
*Output shaft*
2

lb 22.5

Eje de entrada
*Input shaft*
1

## CMGIS 023 U

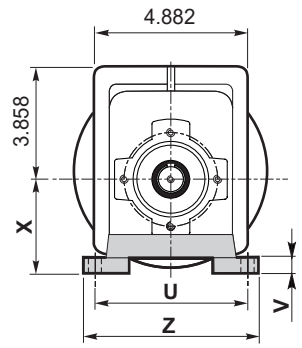


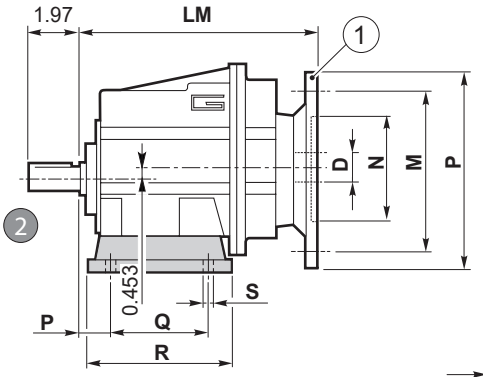

| Brida Motor / *Motor flange* | | |
|---|---|---|
| ① Dimensiones NEMA *NEMA Dimensions* | | |
| | **56 C** | **140 TC** |
| **N** | 4.5 | |
| **M** | 5.88 | |
| **P** | 6.5 | |
| **D** | 0.625 | 0.875 |
| **LM 022** | 8.268 | |
| **LM 023** | 10.61 | |

**Dimensiones** *Dimensions*

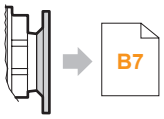
# CMG 022 H.. - CMG 023 H..

## CMG 022 H..



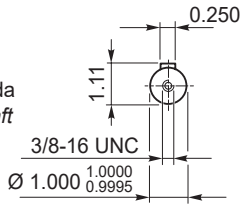




Bridas Motor
*NEMA C-FACE*

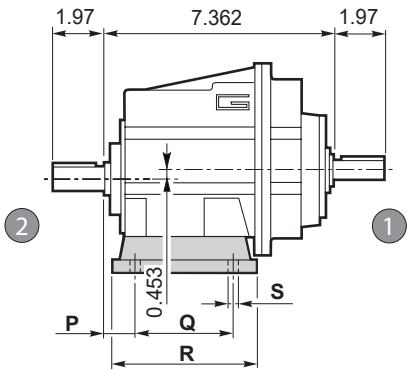



lb
16.6

Eje de salida
*Output shaft*
2

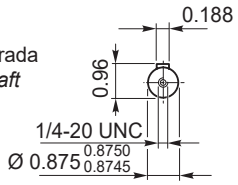



## CMGIS 022 H..

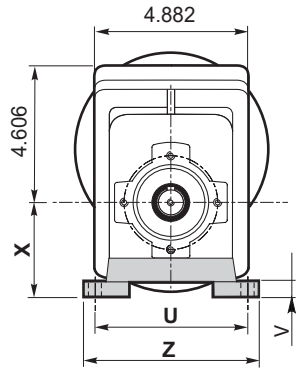


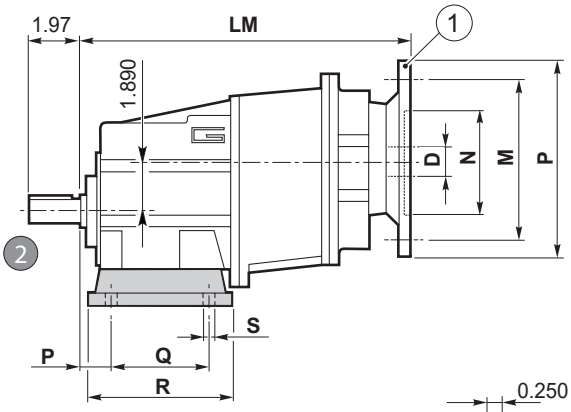

lb
15.8

Eje de entrada
*Input shaft*
1

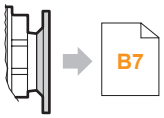



## CMG 023 H..



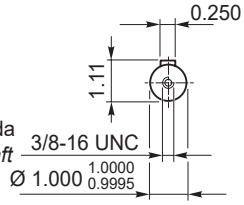




Bridas Motor
*NEMA C-FACE*

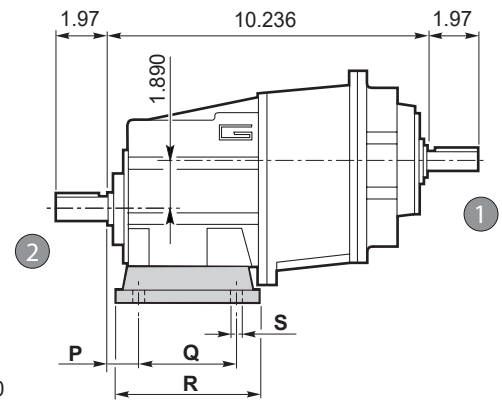



lb
23.3

Eje de salida
*Output shaft*
2

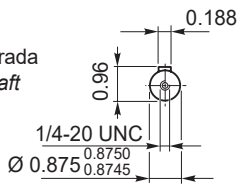



## CMGIS 023 H..




lb
22.5

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] |
| 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 |

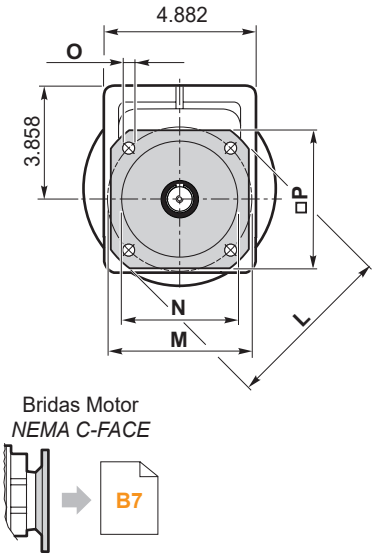
Preferencial / *Preferred*

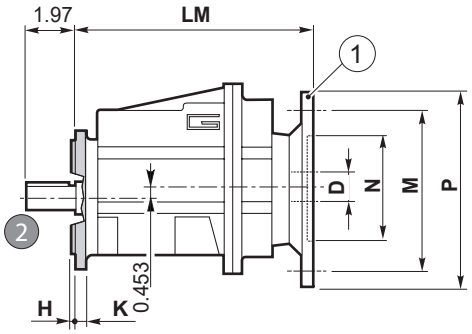
| **Brida Motor** / *Motor flange* | | |
|---|---|---|
| 1 **Dimensiones NEMA** ***NEMA Dimensions*** | **56 C** | **140 TC** |
| **N** | 4.5 | |
| **M** | 5.88 | |
| **P** | 6.5 | |
| **D** | 0.625 | 0.875 |
| **LM 022** | 8.268 | |
| **LM 023** | 10.61 | |

**Dimensiones** *Dimensions*

# CMG 022 F.. - CMG 023 F..

## CMG 022 F..



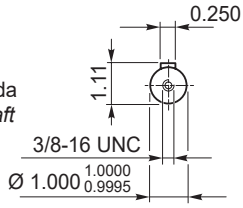




Bridas Motor
*NEMA C-FACE*

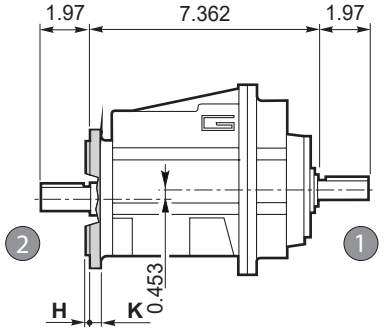



lb 16.6

Eje de salida
*Output shaft*
2

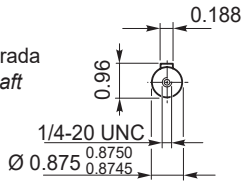



## CMGIS 022 F..

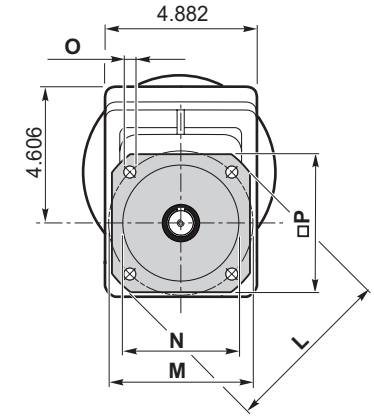


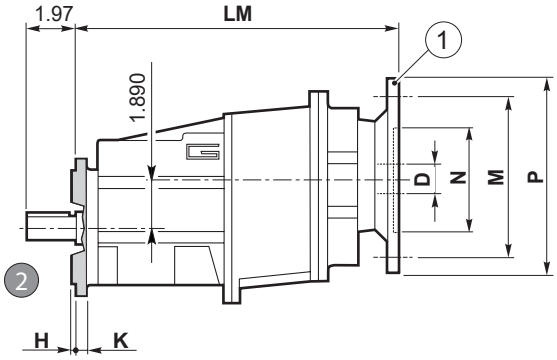

lb 15.8

Eje de entrada
*Input shaft*
1

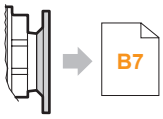



## CMG 023 F..



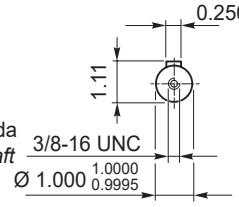




Bridas Motor
*NEMA C-FACE*

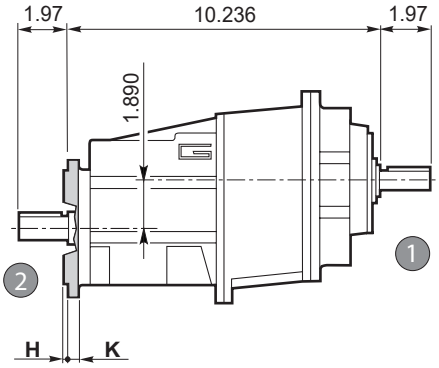



lb 23.3

Eje de salida
*Output shaft*
2

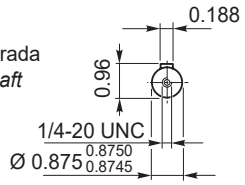



## CMGIS 023 F..




lb 22.5

Eje de entrada
*Input shaft*
1



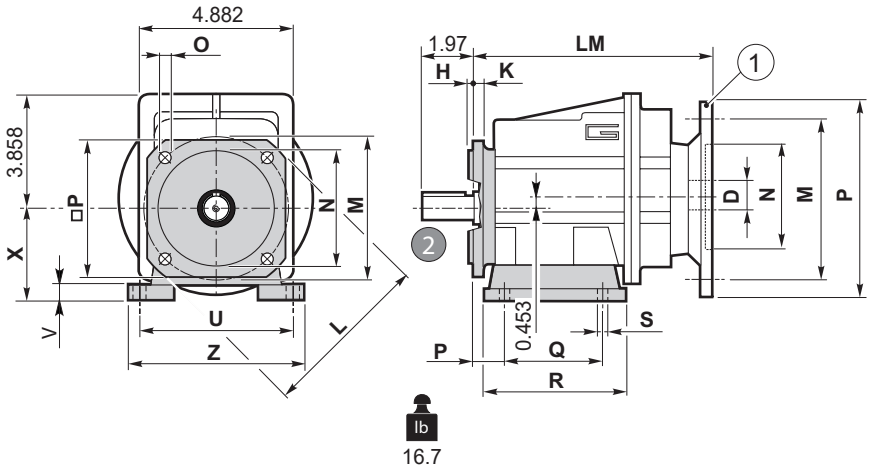

| Versión **F** / ***F** Version* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **CMG CMGIS** | **H** | **K** | **L** | **M** | **N** | **O** | **P** | **Brida / *Flange*** Tipo / *Type* | Peso / *Weight* [lb] |
| **022 023** | 0.118 | 0.354 | 4.724 | 3.937 | 3.150 3.1488 3.1476 | 0.354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

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

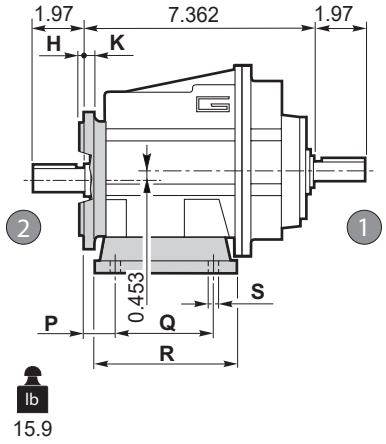
**Dimensiones** *Dimensions*

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

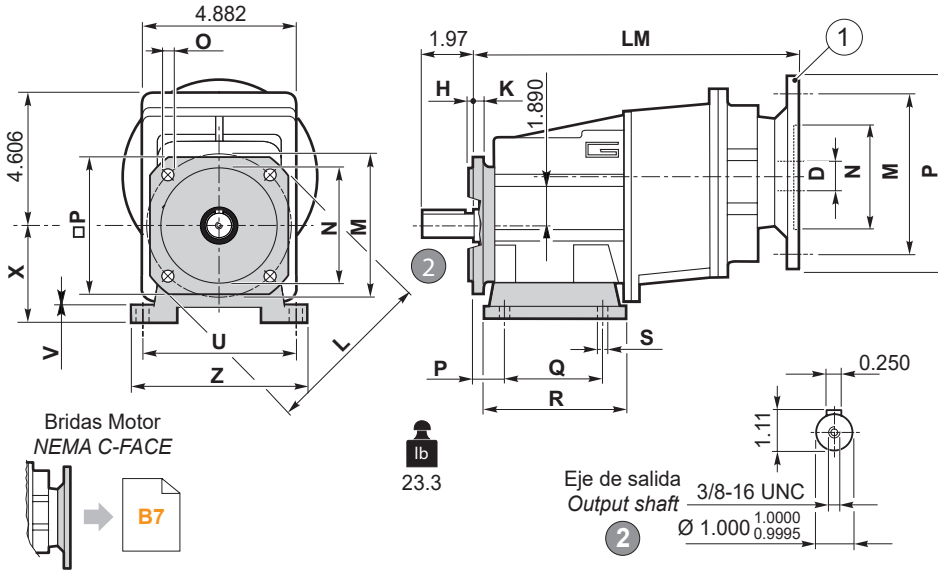
## CMG 022 H../F..



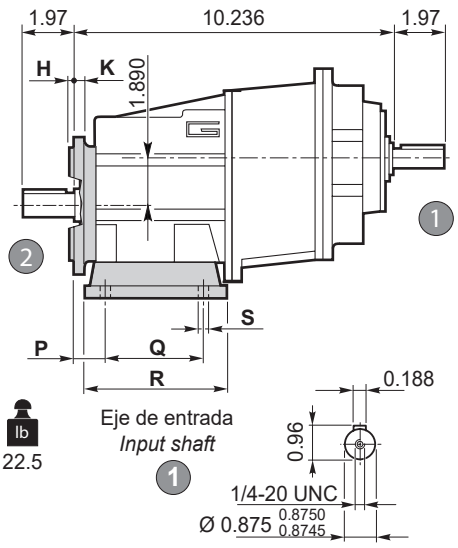

## CMGIS 022 H../F..




## 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 | • | • | • | • |

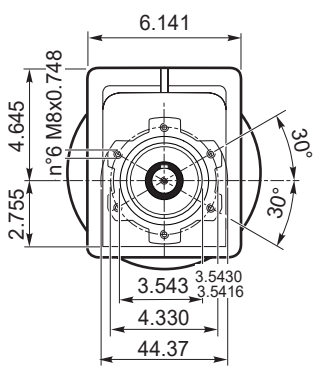
Preferencial / *Preferred*

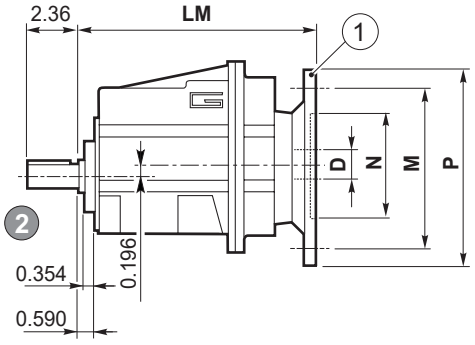
• Combinaciones posibles H/F / *Possible combinations H/F*

**Dimensiones** *Dimensions*

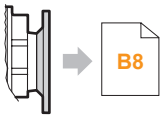
# CMG 032 U - CMG 033 U

## CMG 032 U



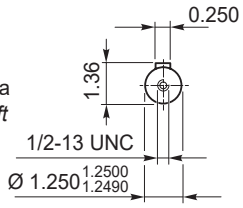




Bridas Motor
*NEMA C-FACE*

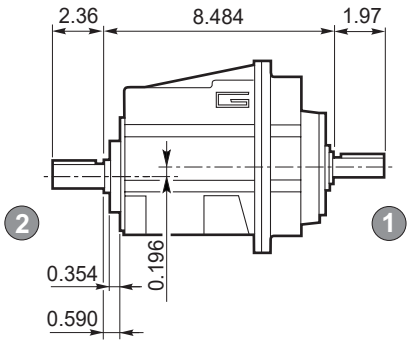



lb
24.9

Eje de salida
*Output shaft*
2

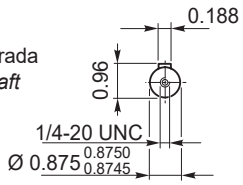



## CMGIS 032 U

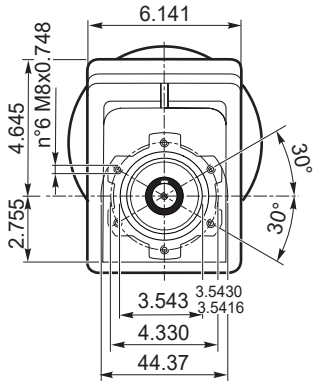


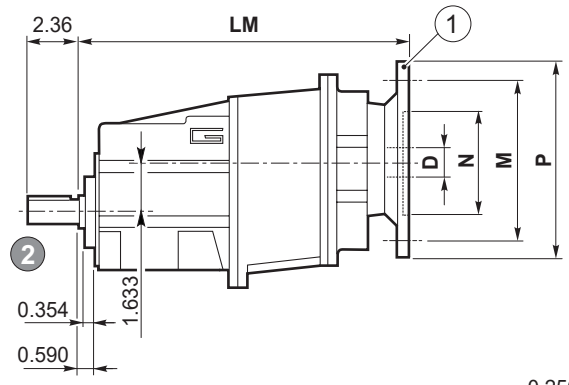

lb
24.7

Eje de entrada
*Input shaft*
1

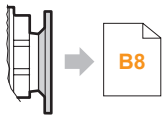



## CMG 033 U



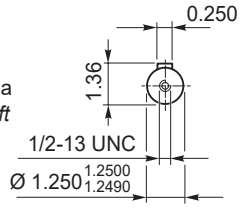




Bridas Motor
*NEMA C-FACE*

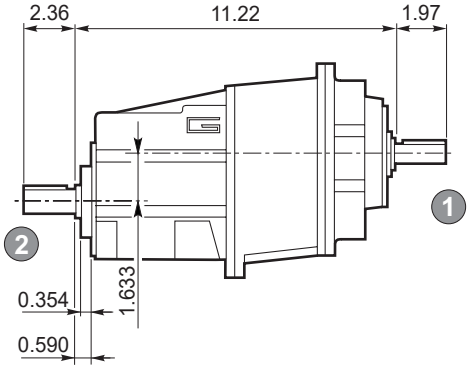



lb
30

Eje de salida
*Output shaft*
2

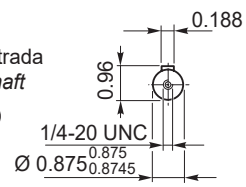



## CMGIS 033 U

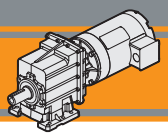



lb
29.3

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 | | - |

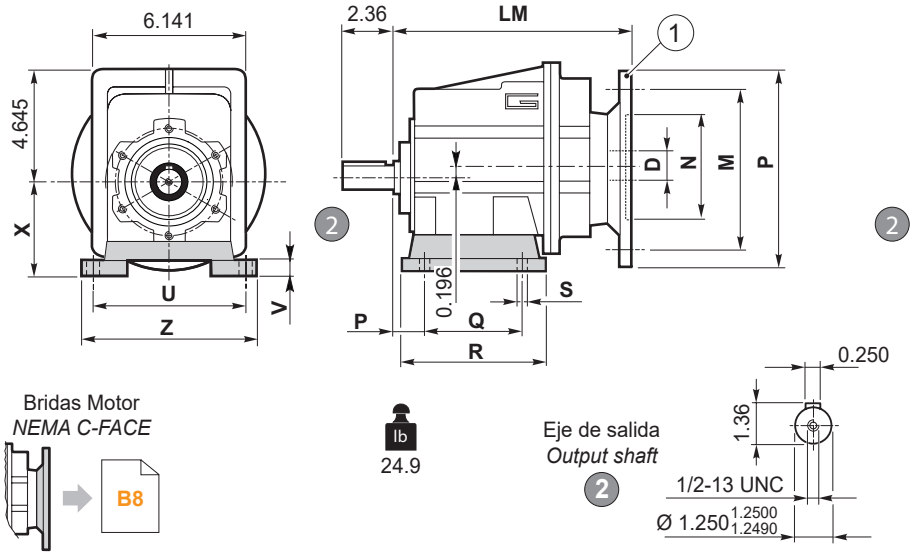


**Dimensiones** ***Dimensions***



# CMG 032 H.. - CMG 033 H..

## CMG 032 H..



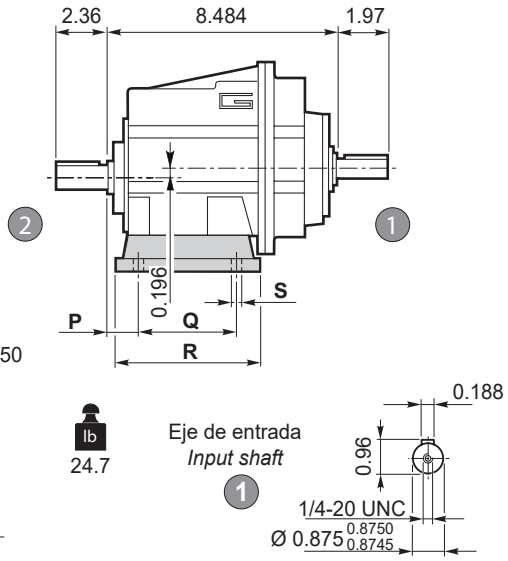

Bridas Motor
*NEMA C-FACE*




lb
24.9

Eje de salida
*Output shaft*
2

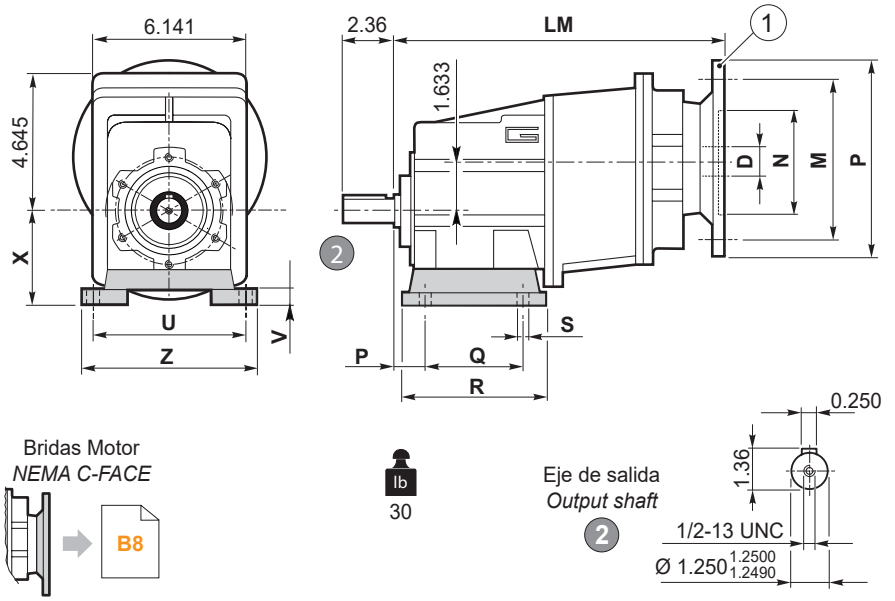
## CMGIS 032 H..




lb
24.7

Eje de entrada
*Input shaft*
1

## CMG 033 H..



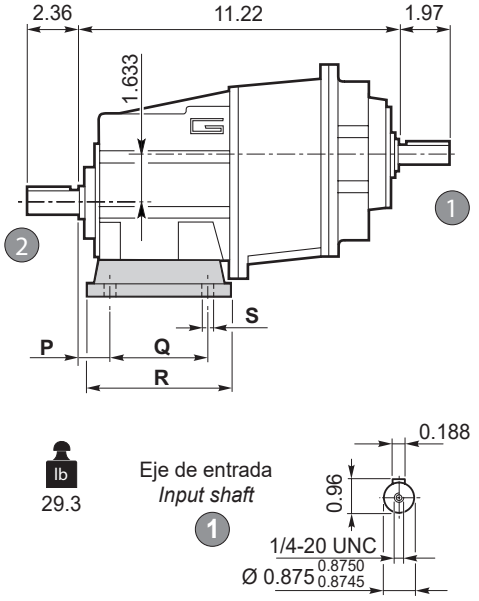

Bridas Motor
*NEMA C-FACE*




lb
30

Eje de salida
*Output shaft*
2

## CMGIS 033 H..




lb
29.3

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] |
| | **1.181** | **4.134** | **5.354** | **0.551** | **6.299** | **0.551** | **3.740** | **7.638** | **H95** | **3.307** |
| **032 033** | 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 |
| | 0.768 | 5.885 | 7.244 | 0.551 | 7.086 | 0.709 | 5.118 | 8.425 | **H130** | 6.390 |

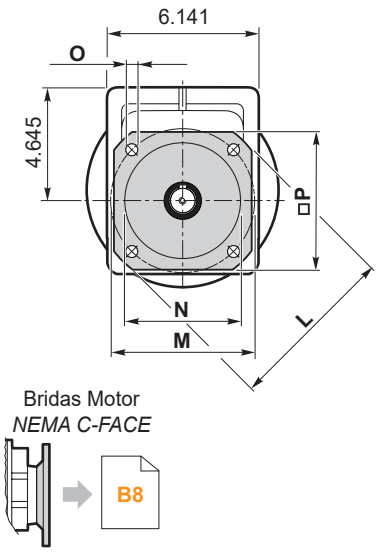
| **Brida Motor** / *Motor flange* | | | |
|---|---|---|---|
| (1) **Dimensiones NEMA** ***NEMA Dimensions*** | | | |
| | **56 C** | **140 TC** | **180 TC** |
| **N** | 4.5 | | 4.5 |
| **M** | 5.88 | | 7.25 |
| **P** | 6.5 | | 9 |
| **D** | 0.625 | 0.875 | 1.125 |
| **LM 032** | 9.705 | | 9.612 |
| **LM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

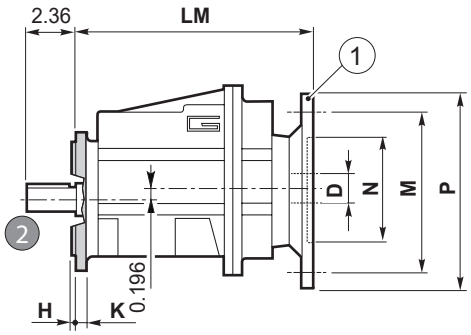
Preferencial / *Preferred*

**Dimensiones** *Dimensions*

# CMG 032 F.. - CMG 033 F..

## CMG 032 F..



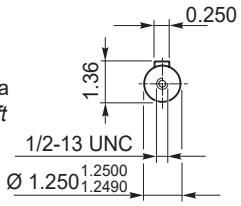




Bridas Motor
*NEMA C-FACE*

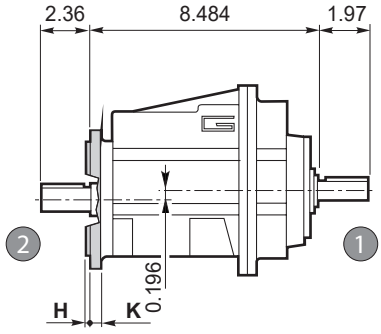



lb
24.9

Eje de salida
*Output shaft*
2

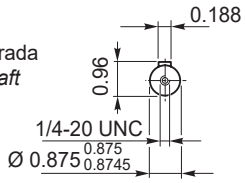



## CMGIS 032 F..

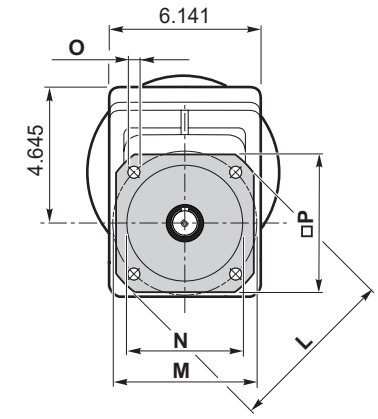


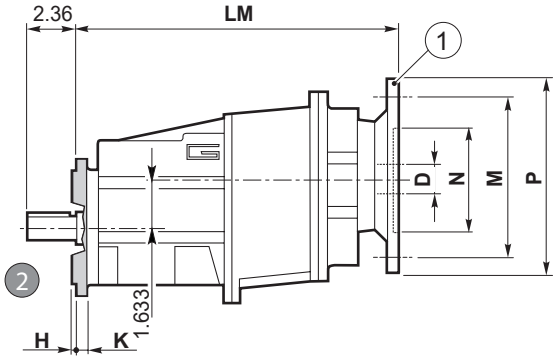

lb
24.7

Eje de entrada
*Input shaft*
1

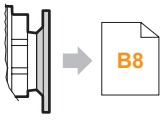



## CMG 033 F..



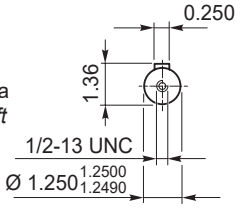




Bridas Motor
*NEMA C-FACE*

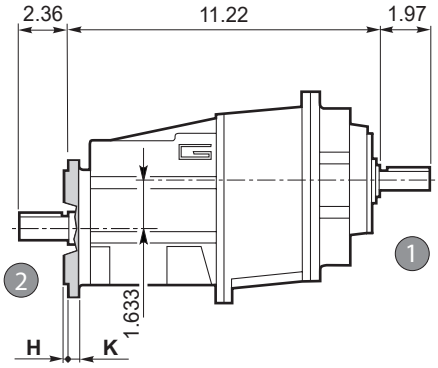



lb
30

Eje de salida
*Output shaft*
2

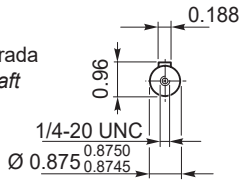



## CMGIS 033 F..




lb
29.3

Eje de entrada
*Input shaft*
1



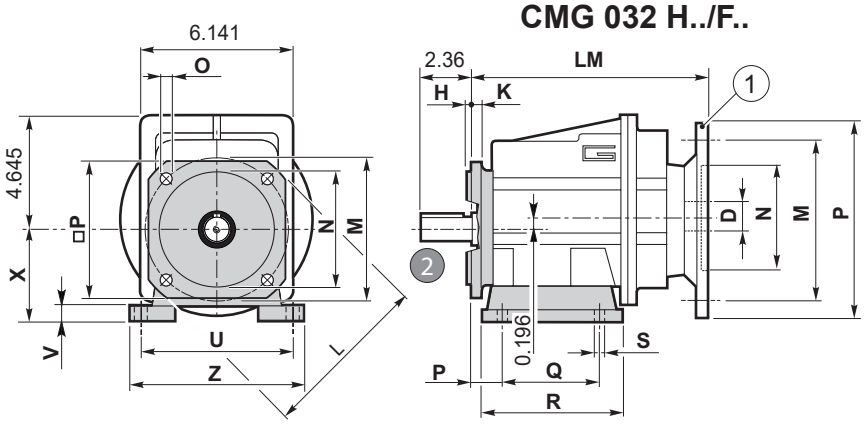

| Versión **F** / ***F** Version* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **CMG CMGIS** | **H** | **K** | **L** | **M** | **N** | **O** | **P** | **Brida / *Flange*** | |
| | | | | | | | | Tipo / *Type* | Peso / *Weight* [lb] |
| **032 033** | 0.138 | 0.433 | 6.299 | 5.118 | 4.331 $^{4.3296}_{4.3282}$ | 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*

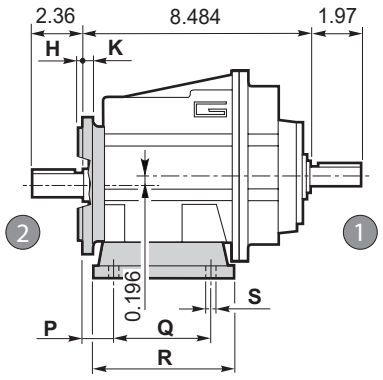
## CMG 032 H../F.. - CMG 033 H../F..

### CMG 032 H../F..



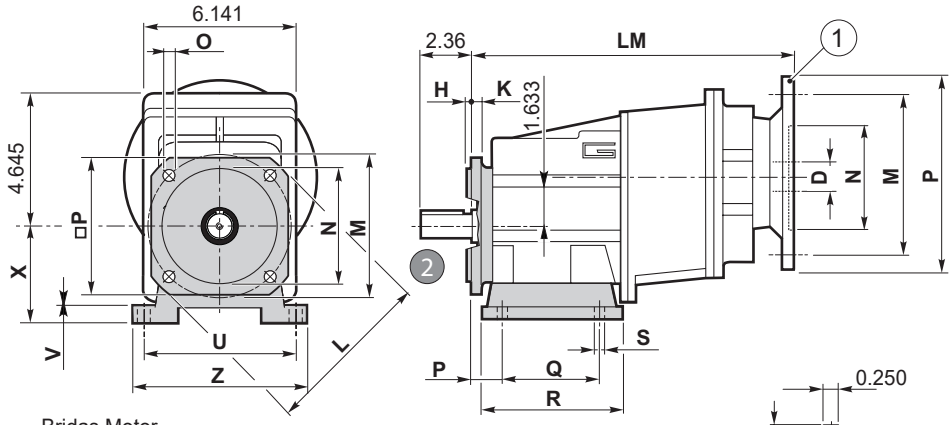

lb 24.9

### CMGIS 032 H../F..

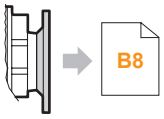



lb 24.7

### CMG 033 H../F..



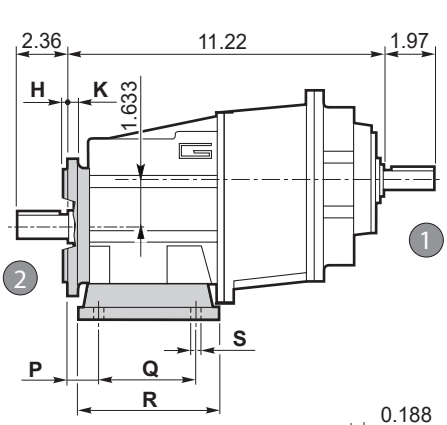

Bridas Motor
*NEMA C-FACE*




lb 30

Eje de salida
*Output shaft*
2

### CMGIS 033 H../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 | | - |

| **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] | **F160** | **F200** | **F250** |
| **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 | • | • | • |
| | 0.768 | 5.885 | 7.244 | 0.551 | 7.086 | 0.709 | 5.118 | 8.425 | **H130** | 6.390 | • | • | • |

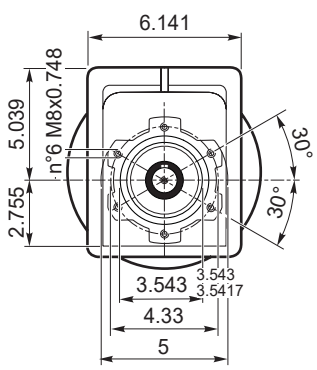
Preferencial / *Preferred*

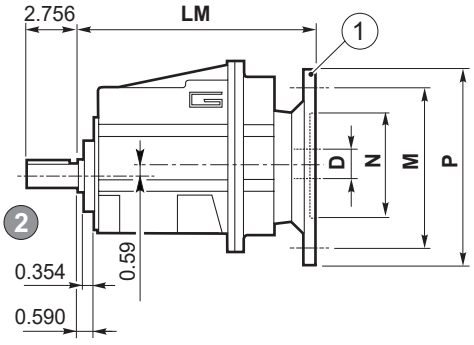
• Combinaciones posibles H/F / *Possible combinations H/F*

**Dimensiones** *Dimensions*

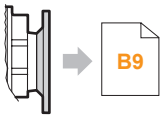
# CMG 042 U - CMG 043 U

## CMG 042 U



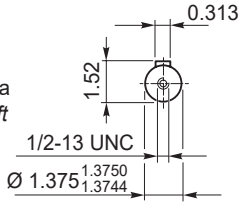




Bridas Motor
*NEMA C-FACE*

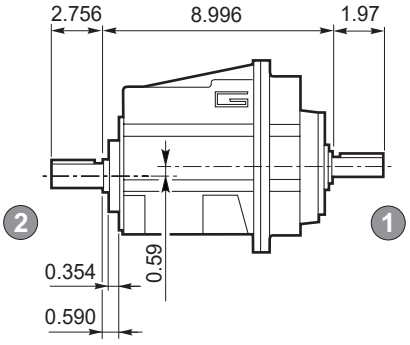



lb
29.1

Eje de salida
*Output shaft*
2

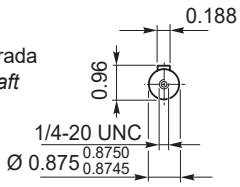



## CMGIS 042 U

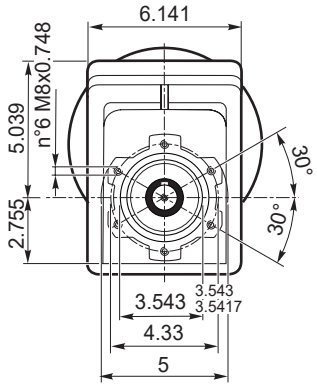


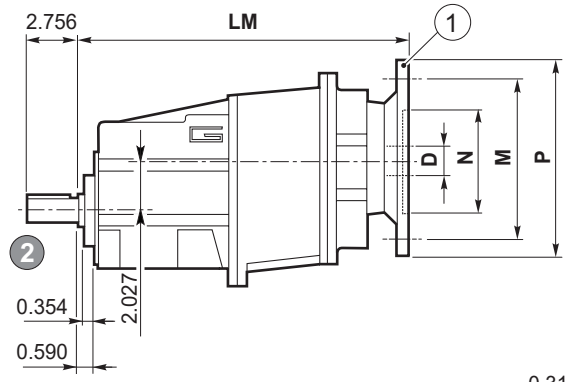

lb
28.8

Eje de entrada
*Input shaft*
1

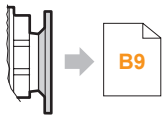



## CMG 043 U



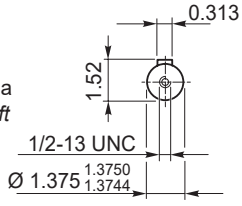




Bridas Motor
*NEMA C-FACE*

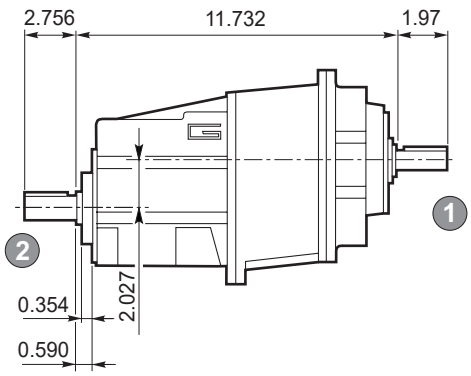



lb
34.1

Eje de salida
*Output shaft*
2

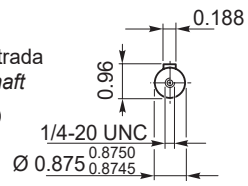



## CMGIS 043 U

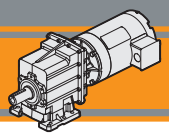



lb
33.5

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 | | - |

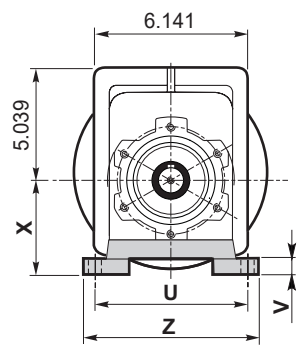


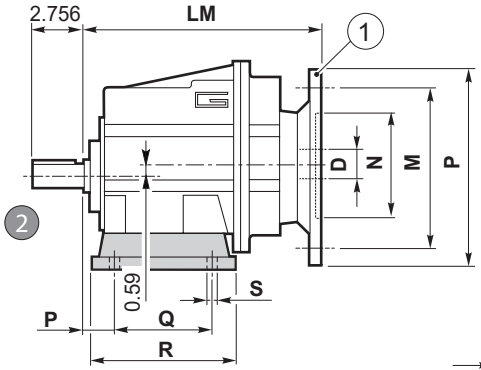
**Dimensiones** ***Dimensions***



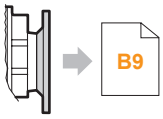
# CMG 042 H.. - CMG 043 H..

## CMG 042 H..



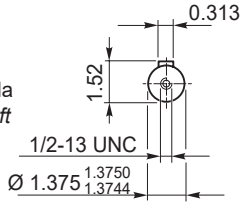




Bridas Motor
*NEMA C-FACE*

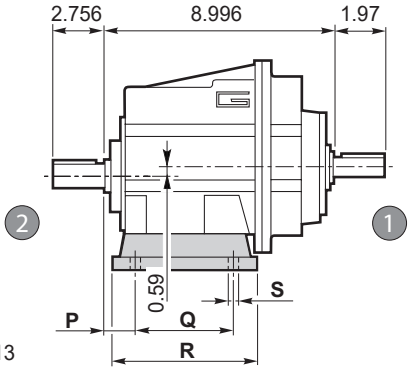



lb
29.1

Eje de salida
*Output shaft*
2

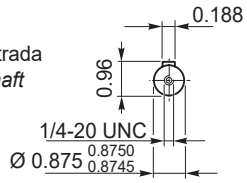



## CMGIS 042 H..

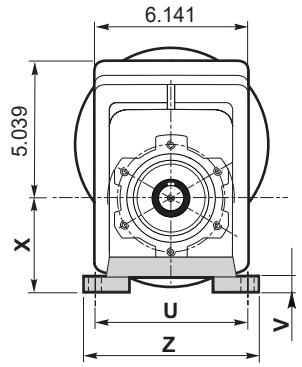


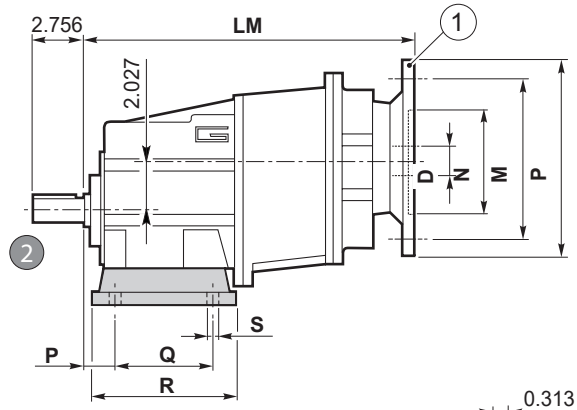

lb
28.8

Eje de entrada
*Input shaft*
1

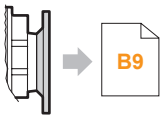



## CMG 043 H..



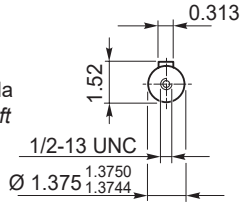




Bridas Motor
*NEMA C-FACE*

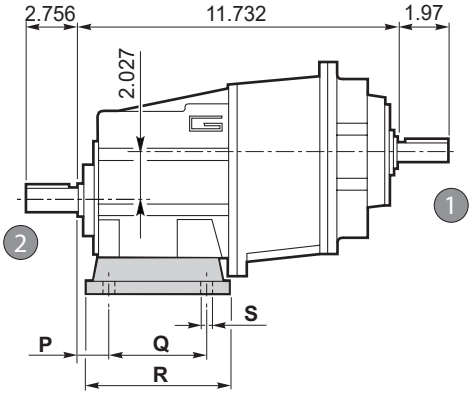



lb
34.1

Eje de salida
*Output shaft*
2

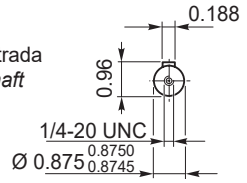



## CMGIS 043 H..




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] |
|---|---|---|---|---|---|---|---|---|---|---|
| | **1.181** | **4.134** | **5.354** | **0.551** | **6.299** | **0.551** | **3.740** | **7.638** | **H95** | **3.307** |
| 042 043 | 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 |
| | 0.768 | 5.885 | 7.244 | 0.551 | 7.086 | 0.709 | 5.118 | 8.425 | **H130** | 6.390 |

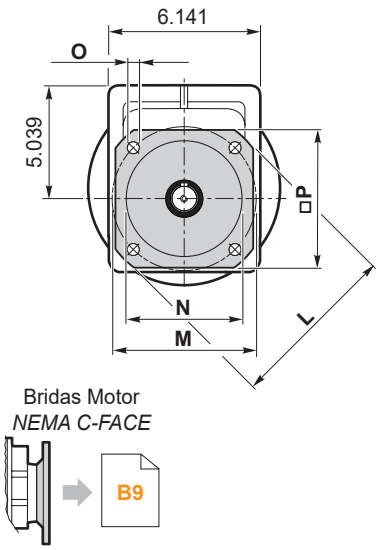
Preferencial / *Preferred*

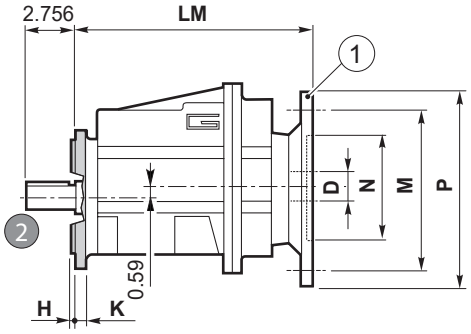
| **Brida Motor** / *Motor flange* | | | |
|---|---|---|---|
| 1 **Dimensiones NEMA** ***NEMA Dimensions*** | | | |
| | **56 C** | **140 TC** | **180 TC** |
| **N** | 4.5 | | 8.5 |
| **M** | 5.88 | | 7.25 |
| **P** | 6.5 | | 9 |
| **D** | 0.625 | 0.875 | 1.125 |
| **LM 042** | 10.217 | | 10.124 |
| **LM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

**Dimensiones** *Dimensions*

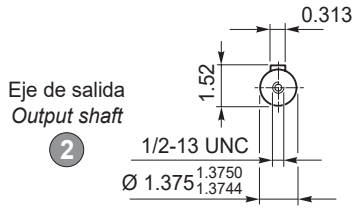
# CMG 042 F.. - CMG 043 F..

## CMG 042 F..

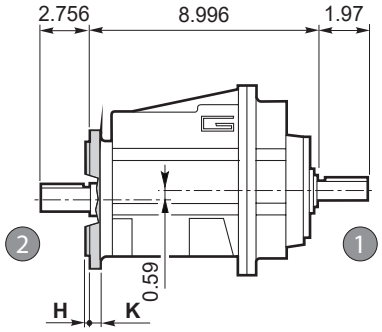


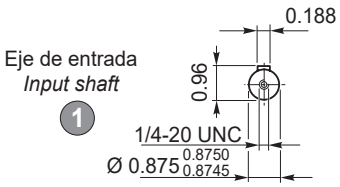

lb 29.1



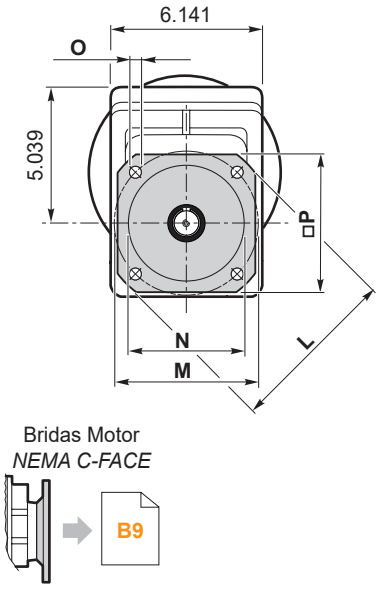

## CMGIS 042 F..

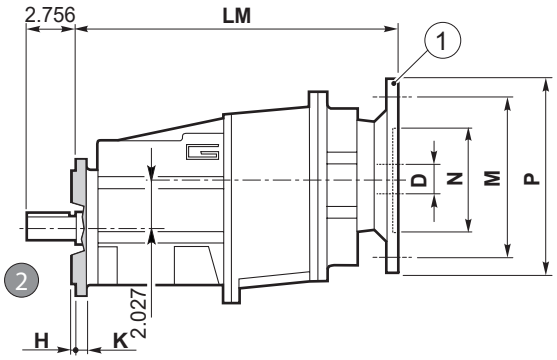



lb 28.8

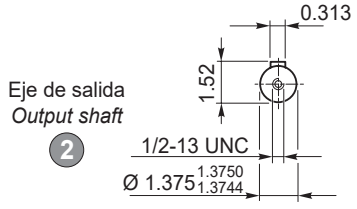



## CMG 043 F..

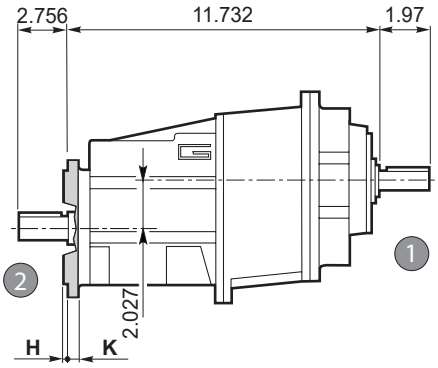


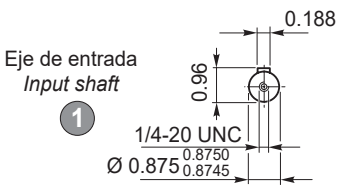

lb 34.1




## CMGIS 043 F..




lb 33.5




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

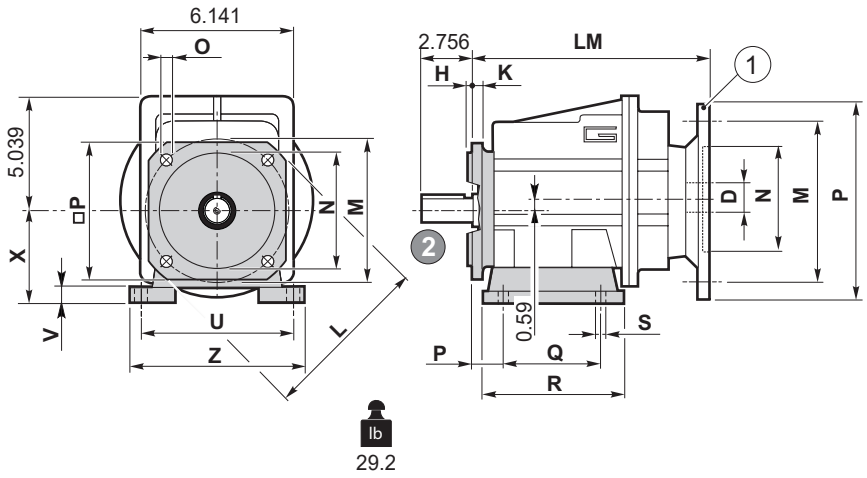
| **Brida Motor** / *Motor flange* | | | |
|---|---|---|---|
| (1) **Dimensiones NEMA** ***NEMA Dimensions*** | | | |
| | **56 C** | **140 TC** | **180 TC** |
| **N** | 4.5 | | 8.5 |
| **M** | 5.88 | | 7.25 |
| **P** | 6.5 | | 9 |
| **D** | 0.625 | 0.875 | 1.125 |
| **LM 042** | 10.217 | | 10.124 |
|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

**Dimensiones** *Dimensions*

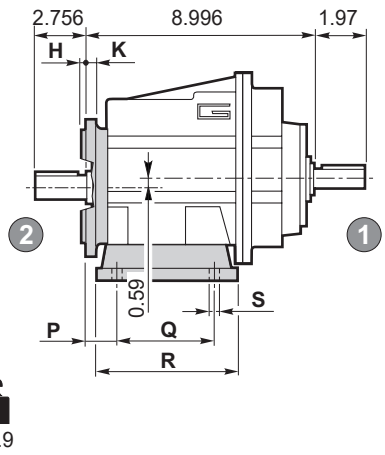
# CMG 042 H../F.. - CMG 043 H../F..



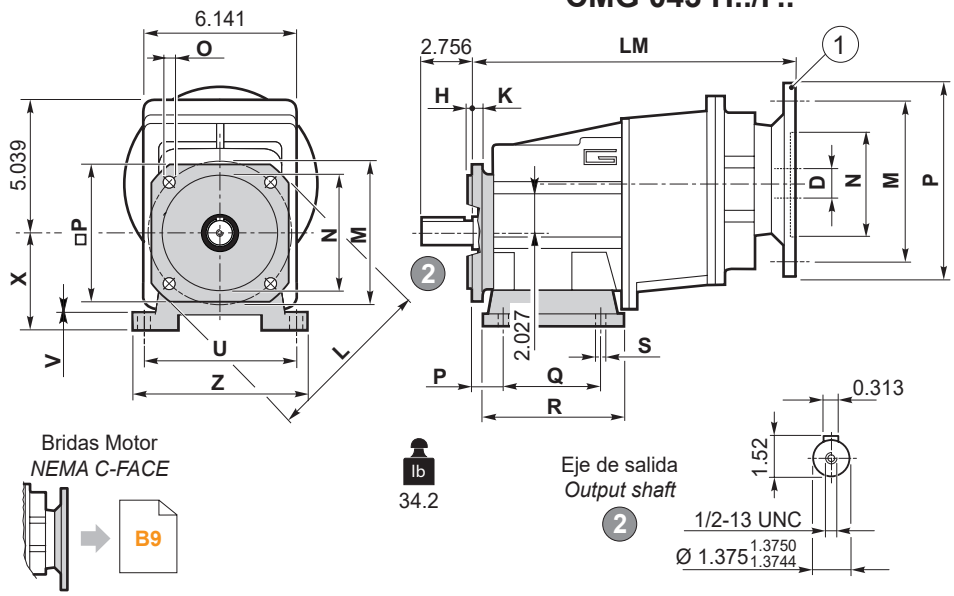
## CMG 042 H../F..



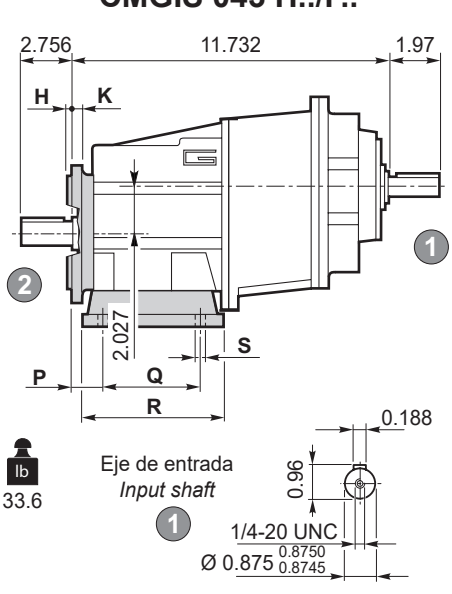

## CMGIS 042 H../F..




## CMG 043 H../F..




## CMGIS 043 H../F..




| Versión **F** / ***F** Version* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **CMG CMGIS** | **H** | **K** | **L** | **M** | **N** | **O** | **P** | **Brida / *Flange*** | |
| | | | | | | | | Tipo / *Type* | Peso / *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] | **F160** | **F200** | **F250** |
| **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 | • | • | • |
| | 0.768 | 5.885 | 7.244 | 0.551 | 7.086 | 0.709 | 5.118 | 8.425 | **H130** | 6.390 | • | • | • |

Preferencial / *Preferred*

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

# Note

TRANSTECNO®
the modular gearmotor

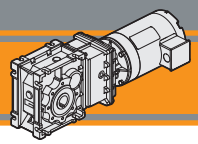
# CMB

CMB Alü

60Hz

## Nema

## Motorreductores de ejes ortogonales
## Helical bevel gearmotors





ENERGY SAVING


| Índice | *Index* | Pág. *Page* |
|---|---|---|
| Características técnicas | *Technical features* | **C2** |
| Clasificación | *Classification* | **C2** |
| Sentidos de rotación | *Direction of rotation* | **C3** |
| Nomenclatura | *Symbols* | **C3** |
| Lubricación | *Lubrication* | **C4** |
| Cargas radiales | *Radial loads* | **C4** |
| Esquema Intercambiable CMB - CM | *Interchangeability CMB - CM* | **C5** |
| Datos técnicos | *Technical data* | **C6** |
| Dimensiones | *Dimensions* | **C13** |
| Accesorios | *Accessories* | **C17** |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## Características técnicas

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..

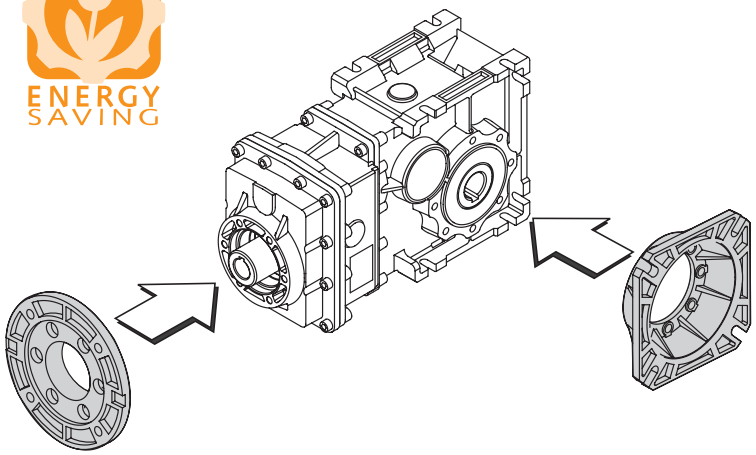
## *Technical features*

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

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

*Common features of all CMB range are:*
- *Die-cast aluminum housing.*
- *Ground helical gears.*
- *Permanently filled with synthetic oil for long life lubrication.*

ENERGY SAVING



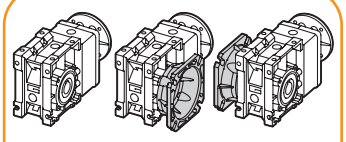
## Clasificación

## *Classification*

REDUCTOR / *GEARBOX*

| CMB | 63 | 3 | U | 9.81 | D1.125 | 56C | SZDX | BRSX | 90° |
|---|---|---|---|---|---|---|---|---|---|
| Tipo *Type* | Tamaño *Size* | Etapas *Stages* | Versión *Version* | Relación de reducción *Ratio* | Eje de salida *Output shaft* | NEMA | Eje de salida *Output shaft* | Brazo de reacción *Torque arm* | Ângulo *Angle* |
| **CMB** | **40**<br>**50**<br>**63**<br>**90** | **2**<br>**3** | **U**<br>**FD**<br>**FS**<br>**FBD**<br>**FBS**<br>**FLD**<br>**FLS** | ver tablas *see tables* | ver tablas *see tables* | **56C**<br>**140TC**<br>**180TC**<br>**210TC** | **SZDX**<br>**SZSX**<br>**DZ** | **BRSX**<br>**BRDX** | **0°**<br>**90°**<br>**180°**<br>**270°** |

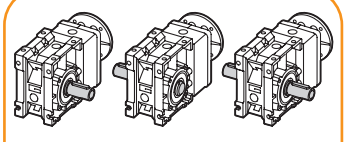
Relación de reducción *Gearbox Version*



U FD FLD FBD FS FLS FBS

F.....D = Lado derecho / *Right side*
F.....S = Lado izquierdo / *Left side*

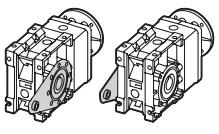
Eje de salida *Output shaft*



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*

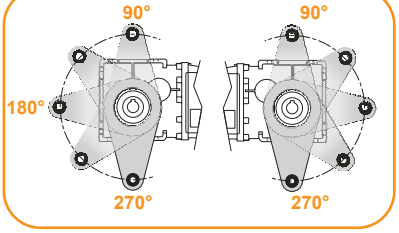
Brazo de reacción *Torque arm*



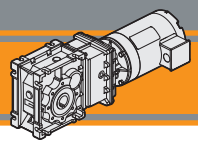
BRDX BRSX

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

Posición del Brazo *Torque arm position* (*)

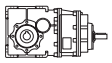



(*) NOTA: El brazo de reacción se suministra desmontado.
*NOTE: the torque arm will be supplied not assembled.*



## Clasificación / *Classification*

REDUCTOR / *GEARBOX*

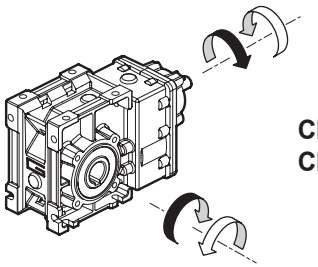
| CMB | 63 | 3 | U | 9.81 | D1.125 | SZDX | BRSX | 90° |
|---|---|---|---|---|---|---|---|---|
| Tipo *Type* | Tamaño *Size* | Etapas *Stages* | Versión *Version* | Relación de reducción *Ratio* | Eje de salida *Output shaft* | Eje de salida *Output shaft* | Brazo de reacción *Torque arm* | Ângulo *Angle* |
| **CMBIS**  | **40**<br>**50**<br>**63**<br>**90** | **2**<br>**3** | **U**<br>**FD**<br>**FS**<br>**FBD**<br>**FBS**<br>**FLD**<br>**FLS** | ver tablas *see tables* | ver tablas *see tables* | **SZDX**<br>**SZSX**<br>**DZ** | **BRSX**<br>**BRDX** | **0°**<br>**90°**<br>**180°**<br>**270°** |

MOTOR / *MOTOR*

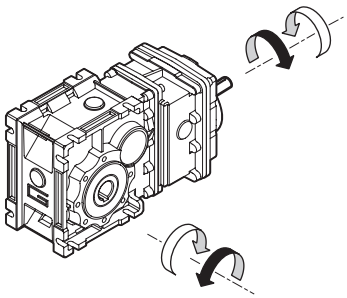
| 1 hp / 0.75 kW | 4p | 3ph | 220/440V | 60Hz | T1 |
|---|---|---|---|---|---|
| Potencia *Power* | Polos *Poles* | Fases *Phases* | Tensión *Voltage* | Frecuencia *Frequency* | Posición caja de bornes *Terminal box pos.* |
| véase tablas *see tables* | **2p**<br>**4p**<br>**6p**<br>**8p** | **1ph**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

## Sentido de rotación / *Direction of rotation*

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



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



## Nomenclatura / *Symbols*

| | | |
|---|---|---|
| $n_1$ | [rpm] | Velocidad de entrada / *Input speed* |
| $n_2$ | [rpm] | Velocidad de salida / *Output speed* |
| i | | Relación de reducción / *Ratio* |
| $P_1$ | [hp] | Potencia en la entrada / *Input power* |
| $M_2$ | [lb·in] | Par en la salida en función de $P_1$ / *Output torque referred to $P_1$* |
| $Pn_1$ | [hp] | Potencia nominal en la entrada / *Nominal input power* |
| $Mn_2$ | [lb·in] | Par nominal en la salida en función de $Pn_1$ / *Nominal output torque referred to $Pn_1$* |
| sf | | Rendimiento dinámico / *Service factor* |
| $R_1$ | [lb] | Carga radial permitida a la entrada / *Permitted input radial load* |
| $A_1$ | [lb] | Carga axial permitida a la entrada / *Permitted input axial load* |
| $R_2$ | [lb] | Carga radial admisible en la salida / *Maximum output radial load* |
| $A_2$ | [lb] | Carga axial admisible en la salida / *Maximum output axial load* |

## Lubricación

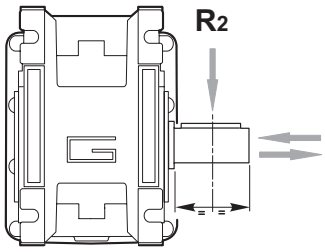
Todos los engranajes en los tamaños 402, 502, 633 y 903 se suministran con lubricante sintético, viscosidad 320, por lo que se pueden instalar en cualquier posición de montaje y no requieren mantenimiento.

## *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

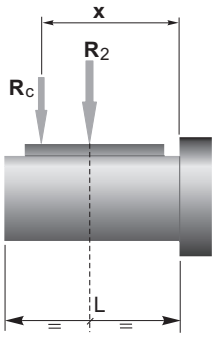
## *Radial loads*




| $n_2$ [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 |

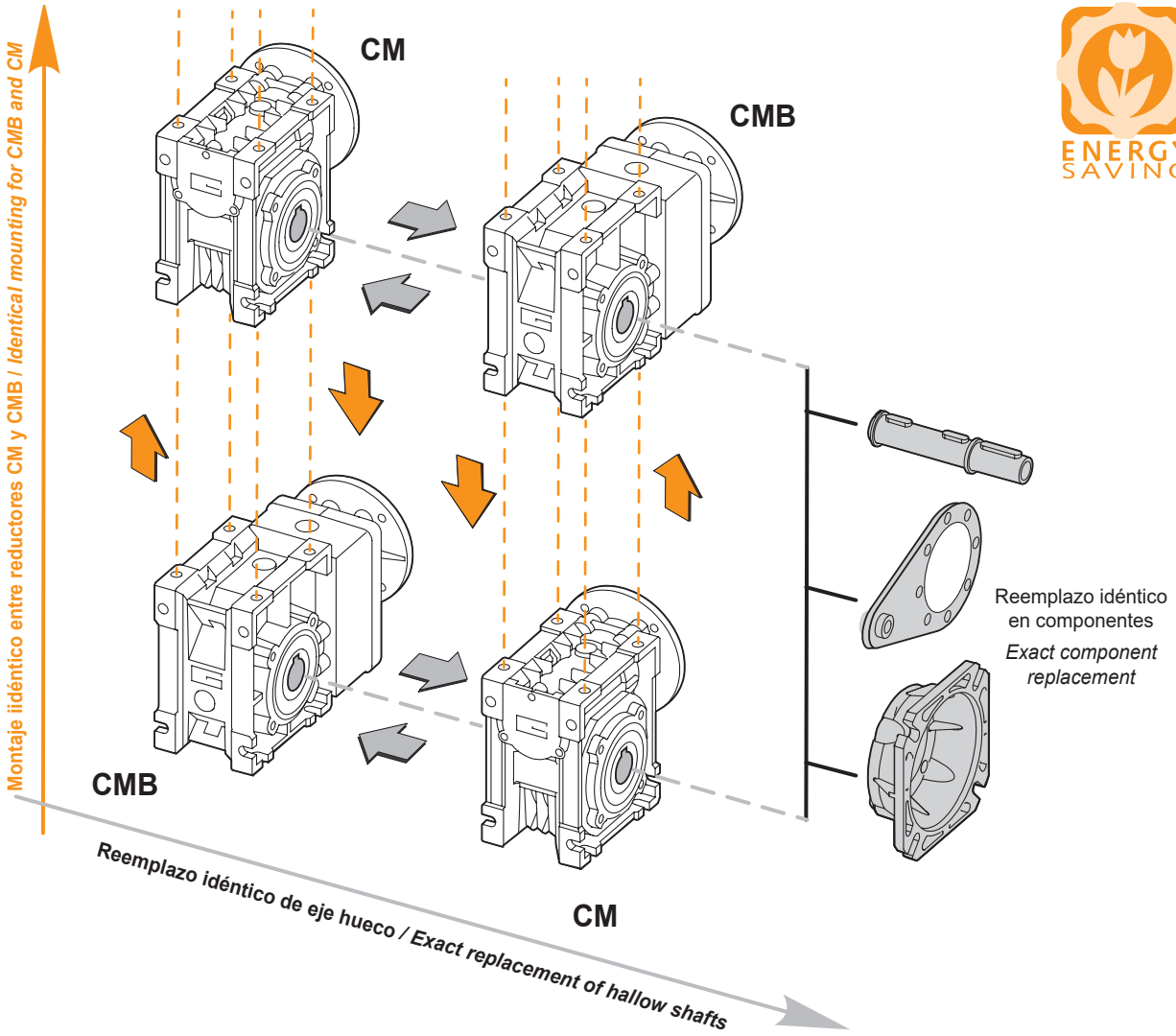
$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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

## Esquema Intercambiable CMB - CM

## *Interchangeability CMB - CM*

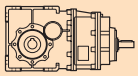



| CMB | | CM | |
|---|---|---|---|
| C13 | CMB 402 | CM 040 | D12 |
| C14 | CMB 502 | CM 050 | D14 |
| C15 | CMB 633 | CM 063 | D16 |
| C16 | CMB 903 | CM 090 | D18 |

**CMB:** Reductores ejes Ortogonales
*Helical Bevel Gearboxes*

**CM:** Reductores sinfín Corona
*Wormgearsboxes*

## Datos técnicos / *Technical data*

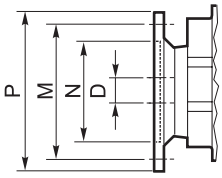
|  | i | $Mn_2$ [lb·in] | $n_1$ = 1750 rpm | | |
|---|---|---|---|---|---|
| | | | $n_2$ [rpm] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* 56 C |
| **CMBIS 402** | | | | | |
| | **6.18** | 354 | **283** | 1.69 | |
| | **7.49** | 354 | **234** | 1.40 | |
| | **9.2** | 354 | **190** | 1.14 | |
| | **11.83** | 398 | **148** | 0.99 | |
| | **12.48** | 398 | **140** | 0.94 | |
| | **14.83** | 398 | **118** | 0.79 | |
| | **17.63** | 398 | **99.3** | 0.67 | |
| | **18.6** | 487 | **94.1** | 0.77 | |
| | **22.33** | 487 | **78.4** | 0.64 | |
| | **23.91** | 487 | **73.2** | 0.60 | |
| | **28.89** | 575 | **60.6** | 0.59 | |
| | **30.84** | 575 | **56.7** | 0.55 | |
| | **33.57** | 575 | **52.1** | 0.51 | |
| | **35.63** | 575 | **49.1** | 0.48 | |
| | **42.75** | 575 | **40.9** | 0.40 | |
| | **55.31** | 575 | **31.6** | 0.31 | |
| | **59.06** | 575 | **29.6** | 0.29 | |
| | **64.29** | 575 | **27.2** | 0.26 | |
| | **72.50** | 575 | 24.1 | 0.23 | |
| **CMBIS 502** | | | | | |
| | **6.18** | 619 | **283** | 2.96 | |
| | **7.49** | 619 | **234** | 2.44 | |
| | **9.20** | 619 | **190** | 1.99 | |
| | **11.83** | 796 | **148** | 1.99 | |
| | **12.48** | 796 | **140** | 1.88 | |
| | **14.83** | 796 | **118** | 1.59 | |
| | **17.63** | 796 | **99.3** | 1.33 | |
| | **18.60** | 973 | **94.1** | 1.55 | |
| | **22.33** | 973 | **78.4** | 1.29 | |
| | **23.91** | 973 | **73.2** | 1.20 | |
| | **28.89** | 1106 | **60.6** | 1.13 | |
| | **30.84** | 1106 | **56.7** | 1.06 | |
| | **33.57** | 1106 | **52.1** | 0.97 | |
| | **35.63** | 1106 | **49.1** | 0.92 | |
| | **42.75** | 1106 | **40.9** | 0.76 | |
| | **55.31** | 1106 | **31.6** | 0.59 | |
| | **59.06** | 1106 | **29.6** | 0.55 | |
| | **64.29** | 1106 | **27.2** | 0.51 | |
| | **72.50** | 1106 | **24.1** | 0.45 | |

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

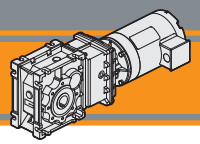
Antes de seleccionar cualquier reductor, favor de revisar los valores de desempeño en las páginas C9 a la C15.

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

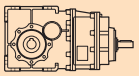
*Before selecting any gearbox, please read the performance values shown in the tables on page C9 to C15.*




| 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 | | | |
|---|---|---|---|---|---|---|
| | | | $n_2$ [rpm] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* | |
| | | | | | 56 C | 140 TC |
| **CMBIS 633** | | | | | | |
| | **6.58** | 1327 | **266** | 5.95 | | |
| | **7.99** | 1327 | **219** | 4.91 | | |
| | **9.81** | 1327 | **178** | 4.00 | | |
| | **10.44** | 1327 | **168** | 3.76 | | |
| | **12.53** | 1327 | **140** | 3.13 | | |
| | **13.31** | 1327 | **131** | 2.95 | | |
| | **15.81** | 1504 | **111** | 2.81 | | |
| | **17.77** | 1947 | **98.5** | 3.24 | | |
| | **21.56** | 1947 | **81.2** | 2.67 | | |
| | **26.48** | 1947 | **66.1** | 2.17 | | |
| | **28.17** | 1947 | **62.1** | 2.04 | | |
| | **33.81** | 1947 | **51.8** | 1.70 | | |
| | **35.92** | 1947 | **48.7** | 1.60 | | |
| | **38.88** | 2212 | **45.0** | 1.68 | | |
| | **47.16** | 2212 | **37.1** | 1.39 | | |
| | **57.93** | 2212 | **30.2** | 1.13 | | |
| | **61.63** | 2212 | **28.4** | 1.06 | | |
| | **73.96** | 2212 | **23.7** | 0.88 | | * |
| | **78.58** | 2212 | **22.3** | 0.83 | | * |
| | **93.33** | 2212 | **18.8** | 0.70 | | * |
| | **140.52** | 2212 | **12.5** | 0.47 | | * |
| | **181.81** | 2212 | **9.6** | 0.36 | | * |
| | **211.31** | 2212 | **8.3** | 0.31 | | * |
| | **238.31** | 2212 | **7.3** | 0.27 | | * |

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

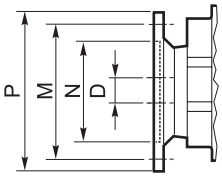
*NOTE*
*Highlighted áreas indicate the motor input flange available on each gearbox size.*

*** =** $Pn_1$ 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.

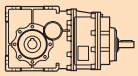
*** =** *The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

*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 | | | | |
|---|---|---|---|---|---|---|---|
| | | | $n_2$ [rpm] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* | | |
| | | | | | 56 C | 140 TC | 180 TC |
| **CMBIS 903** | | | | | | | |
| | **6.65** | 2478 | **263** | 11.01 | | | |
| | **8.00** | 2478 | **219** | 9.15 | | | |
| | **9.74** | 2478 | **180** | 7.51 | | | |
| | **11.21** | 2478 | **156** | 6.53 | | | |
| | **14.09** | 2655 | **124** | 5.56 | | | |
| | **17.95** | 3982 | **97.5** | 6.55 | | | |
| | **21.60** | 3982 | **81.0** | 5.45 | | | |
| | **26.30** | 3982 | **66.5** | 4.47 | | | |
| | **30.25** | 3982 | **57.9** | 3.89 | | | |
| | **39.26** | 4425 | **44.6** | 3.33 | | | |
| | **47.25** | 4425 | **37.0** | 2.77 | | | |
| | **57.52** | 4425 | **30.4** | 2.27 | | | * |
| | **66.17** | 4425 | **26.4** | 1.98 | | | * |
| | **83.20** | 4425 | **21.0** | 1.57 | | | * |
| | **108.09** | 4425 | **16.2** | 1.21 | | | * |
| | **132.23** | 4425 | **13.2** | 0.99 | | | * |
| | **147.92** | 4425 | **11.8** | 0.88 | | * | * |
| | **167.09** | 4425 | **10.5** | 0.78 | | * | * |
| | **191.06** | 4425 | **9.2** | 0.68 | | * | * |
| | **221.88** | 4425 | **7.9** | 0.59 | | * | * |
| | **262.96** | 4425 | **6.7** | 0.50 | | * | * |

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

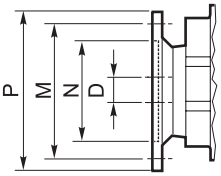
*NOTE*
*Highlighted áreas indicate the motor input flange available on each gearbox size.*

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

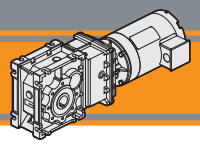
*** =** *The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

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

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




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



## Datos técnicos

*Technical data*

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | 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** | 95 | 4.2 | III | 17.63 | | **56C** |
| | **94** | 101 | 4.8 | III | 18.60 | | **56C** |
| | **78** | 121 | 4.0 | III | 22.33 | | **56C** |
| | **73** | 129 | 3.8 | III | 23.91 | | **56C** |
| | **61** | 156 | 3.7 | III | 28.89 | | **56C** |
| | **57** | 167 | 3.4 | III | 30.84 | | **56C** |
| | **52** | 182 | 3.2 | III | 33.57 | | **56C** |
| | **49** | 193 | 3.0 | III | 35.63 | | **56C** |
| | **41** | 232 | 2.5 | III | 42.75 | | **56C** |
| | **32** | 300 | 1.9 | II | 55.31 | | **56C** |
| | **30** | 320 | 1.8 | II | 59.06 | | **56C** |
| | **27** | 348 | 1.7 | II | 64.29 | | **56C** |
| | **24** | 393 | 1.5 | II | 72.50 | | **56C** |
| | **283** | 33 | 18.5 | III | 6.18 | **CMB502** | **56C** |
| | **234** | 41 | 15.3 | III | 7.49 | | **56C** |
| | **190** | 50 | 12.4 | III | 9.20 | | **56C** |
| | **148** | 64 | 12.4 | III | 11.83 | | **56C** |
| | **140** | 68 | 11.8 | III | 12.48 | | **56C** |
| | **118** | 80 | 9.9 | III | 14.83 | | **56C** |
| | **99** | 95 | 8.3 | III | 17.63 | | **56C** |
| | **94** | 101 | 9.7 | III | 18.60 | | **56C** |
| | **78** | 121 | 8.1 | III | 22.33 | | **56C** |
| | **73** | 129 | 7.5 | III | 23.91 | | **56C** |
| | **61** | 156 | 7.1 | III | 28.89 | | **56C** |
| | **57** | 167 | 6.6 | III | 30.84 | | **56C** |
| | **52** | 182 | 6.1 | III | 33.57 | | **56C** |
| | **49** | 193 | 5.7 | III | 35.63 | | **56C** |
| | **41** | 232 | 4.8 | III | 42.75 | | **56C** |
| | **32** | 300 | 3.7 | III | 55.31 | | **56C** |
| | **30** | 320 | 3.5 | III | 59.06 | | **56C** |
| | **27** | 348 | 3.2 | III | 64.29 | | **56C** |
| | **24** | 393 | 2.8 | III | 72.50 | | **56C** |
| | **24** | 401 | 5.5 | III | 73.96 | **CMB633** | **56C** |
| | **22** | 426 | 5.2 | III | 78.58 | | **56C** |
| | **19** | 505 | 4.4 | III | 93.33 | | **56C** |
| | **12** | 761 | 2.9 | III | 140.52 | | **56C** |
| | **10** | 985 | 2.2 | III | 181.81 | | **56C** |
| | **8.3** | 1145 | 1.9 | II | 211.31 | | **56C** |
| | **7.3** | 1291 | 1.7 | II | 238.31 | | **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** |

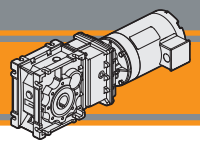
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **0.25 hp** | | | | | | | |
| 0.18 kW (1750 rpm) | **283** | 52 | 6.8 | III | 6.18 | **CMB402** | **56C** |
| | **234** | 63 | 5.6 | III | 7.49 | | **56C** |
| | **190** | 78 | 4.5 | III | 9.20 | | **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** | 149 | 2.7 | III | 17.63 | | **56C** |
| | **94** | 157 | 3.1 | III | 18.60 | | **56C** |
| | **78** | 189 | 2.6 | III | 22.33 | | **56C** |
| | **73** | 202 | 2.4 | III | 23.91 | | **56C** |
| | **61** | 244 | 2.4 | III | 28.89 | | **56C** |
| | **57** | 261 | 2.2 | III | 30.84 | | **56C** |
| | **52** | 284 | 2.0 | III | 33.57 | | **56C** |
| | **49** | 301 | 1.9 | II | 35.63 | | **56C** |
| | **41** | 362 | 1.6 | II | 42.75 | | **56C** |
| | **32** | 468 | 1.2 | I | 55.31 | | **56C** |
| | **30** | 500 | 1.2 | I | 59.06 | | **56C** |
| | **27** | 544 | 1.1 | I | 64.29 | | **56C** |
| | **24** | 614 | 0.9 | I | 72.50 | | **56C** |
| | **283** | 52 | 11.9 | III | 6.18 | **CMB502** | **56C** |
| | **234** | 63 | 9.8 | III | 7.49 | | **56C** |
| | **190** | 78 | 8.0 | III | 9.20 | | **56C** |
| | **148** | 100 | 8.0 | III | 11.83 | | **56C** |
| | **140** | 106 | 7.5 | III | 12.48 | | **56C** |
| | **118** | 125 | 6.3 | III | 14.83 | | **56C** |
| | **99** | 149 | 5.3 | III | 17.63 | | **56C** |
| | **94** | 157 | 6.2 | III | 18.60 | | **56C** |
| | **78** | 189 | 5.2 | III | 22.33 | | **56C** |
| | **73** | 202 | 4.8 | III | 23.91 | | **56C** |
| | **61** | 244 | 4.5 | III | 28.89 | | **56C** |
| | **57** | 261 | 4.2 | III | 30.84 | | **56C** |
| | **52** | 284 | 3.9 | III | 33.57 | | **56C** |
| | **49** | 301 | 3.7 | III | 35.63 | | **56C** |
| | **41** | 362 | 3.1 | III | 42.75 | | **56C** |
| | **32** | 468 | 2.4 | III | 55.31 | | **56C** |
| | **30** | 500 | 2.2 | III | 59.06 | | **56C** |
| | **27** | 544 | 2.0 | III | 64.29 | | **56C** |
| | **24** | 614 | 1.8 | II | 72.50 | | **56C** |
| | **24** | 626 | 3.5 | III | 73.96 | **CMB633** | **56C** |
| | **22** | 665 | 3.3 | III | 78.58 | | **56C** |
| | **19** | 790 | 2.8 | III | 93.33 | | **56C** |
| | **12** | 1189 | 1.9 | II | 140.52 | | **56C** |
| | **10** | 1539 | 1.4 | II | 181.81 | | **56C** |
| | **8.3** | 1788 | 1.2 | I | 211.31 | | **56C** |
| | **7.3** | 2017 | 1.1 | I | 238.31 | | **56C** |
| | **12** | 1252 | 3.5 | III | 147.92 | **CMB903** | **56C** |
| | **10** | 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** |

## Datos técnicos

*Technical data*

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **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** | 197 | 2.0 | III | 17.63 | | 56C |
| | **94** | 208 | 2.3 | III | 18.60 | | 56C |
| | **78** | 249 | 2.0 | II | 22.33 | | 56C |
| | **73** | 267 | 1.8 | II | 23.91 | | 56C |
| | **61** | 323 | 1.8 | II | 28.89 | | 56C |
| | **57** | 345 | 1.7 | II | 30.84 | | 56C |
| | **52** | 375 | 1.5 | II | 33.57 | | 56C |
| | **49** | 398 | 1.4 | II | 35.63 | | 56C |
| | **41** | 478 | 1.2 | I | 42.75 | | 56C |
| | **32** | 618 | 0.9 | I | 55.31 | | 56C |
| | **30** | 660 | 0.9 | I | 59.06 | | 56C |
| | **283** | 69 | 9.0 | III | 6.18 | CMB502 | 56C |
| | **234** | 84 | 7.4 | III | 7.49 | | 56C |
| | **190** | 103 | 6.0 | III | 9.20 | | 56C |
| | **148** | 132 | 6.0 | III | 11.83 | | 56C |
| | **140** | 139 | 5.7 | III | 12.48 | | 56C |
| | **118** | 166 | 4.8 | III | 14.83 | | 56C |
| | **99** | 197 | 4.0 | III | 17.63 | | 56C |
| | **94** | 208 | 4.7 | III | 18.60 | | 56C |
| | **78** | 249 | 3.9 | III | 22.33 | | 56C |
| | **73** | 267 | 3.6 | III | 23.91 | | 56C |
| | **61** | 323 | 3.4 | III | 28.89 | | 56C |
| | **57** | 345 | 3.2 | III | 30.84 | | 56C |
| | **52** | 375 | 2.9 | III | 33.57 | | 56C |
| | **49** | 398 | 2.8 | III | 35.63 | | 56C |
| | **41** | 478 | 2.3 | III | 42.75 | | 56C |
| | **32** | 618 | 1.8 | II | 55.31 | | 56C |
| | **30** | 660 | 1.7 | II | 59.06 | | 56C |
| | **27** | 718 | 1.5 | II | 64.29 | | 56C |
| | **24** | 810 | 1.4 | I | 72.50 | | 56C |
| | **30** | 647 | 3.4 | III | 57.93 | CMB633 | 56C |
| | **28** | 688 | 3.2 | III | 61.63 | | 56C |
| | **24** | 826 | 2.7 | III | 73.96 | | 56C |
| | **22** | 878 | 2.5 | III | 78.58 | | 56C |
| | **19** | 1043 | 2.1 | III | 93.33 | | 56C |
| | **12** | 1570 | 1.4 | II | 140.52 | | 56C |
| | **10** | 2031 | 1.1 | I | 181.81 | | 56C |
| | **8.3** | 2361 | 0.9 | I | 211.31 | | 56C |
| | **7.3** | 2662 | 0.8 | I | 238.31 | | 56C |
| | **12** | 1652 | 2.7 | III | 147.92 | CMB903 | 56C |
| | **10** | 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 |

| $P_1$ [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** | 298 | 1.3 | I | 17.63 | | 56C |
| | **94** | 315 | 1.5 | II | 18.60 | | 56C |
| | **78** | 378 | 1.3 | I | 22.33 | | 56C |
| | **73** | 405 | 1.2 | I | 23.91 | | 56C |
| | **61** | 489 | 1.2 | I | 28.89 | | 56C |
| | **57** | 522 | 1.1 | I | 30.84 | | 56C |
| | **52** | 568 | 1.0 | I | 33.57 | | 56C |
| | **49** | 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** | 298 | 2.7 | III | 17.63 | | 56C |
| | **94** | 315 | 3.1 | III | 18.60 | | 56C |
| | **78** | 378 | 2.6 | III | 22.33 | | 56C |
| | **73** | 405 | 2.4 | III | 23.91 | | 56C |
| | **61** | 489 | 2.3 | III | 28.89 | | 56C |
| | **57** | 522 | 2.1 | III | 30.84 | | 56C |
| | **52** | 568 | 1.9 | II | 33.57 | | 56C |
| | **49** | 603 | 1.8 | II | 35.63 | | 56C |
| | **41** | 724 | 1.5 | II | 42.75 | | 56C |
| | **32** | 936 | 1.2 | I | 55.31 | | 56C |
| | **30** | 1000 | 1.1 | I | 59.06 | | 56C |
| | **27** | 1088 | 1.0 | I | 64.29 | | 56C |
| | **24** | 1227 | 0.9 | I | 72.50 | | 56C |
| | **52** | 572 | 3.4 | III | 33.81 | CMB633 | 56C |
| | **49** | 608 | 3.2 | III | 35.92 | | 56C |
| | **45** | 658 | 3.4 | III | 38.88 | | 56C |
| | **37** | 798 | 2.8 | III | 47.16 | | 56C |
| | **30** | 981 | 2.3 | III | 57.93 | | 56C |
| | **28** | 1043 | 2.1 | III | 61.63 | | 56C |
| | **24** | 1252 | 1.8 | II | 73.96 | | 56C |
| | **22** | 1330 | 1.7 | II | 78.58 | | 56C |
| | **19** | 1580 | 1.4 | II | 93.33 | | 56C |
| | **12** | 2378 | 0.9 | I | 140.52 | | 56C |
| | **26** | 1120 | 4.0 | III | 66.17 | CMB903 | 56C |
| | **21** | 1408 | 3.1 | III | 83.20 | | 56C |
| | **16** | 1830 | 2.4 | III | 108.09 | | 56C |
| | **13** | 2238 | 2.0 | II | 132.23 | | 56C |
| | **12** | 2504 | 1.8 | II | 147.92 | | 56C |
| | **10** | 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 |



## 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** | 447 | 0.9 | **I** | 17.63 | | **56C** |
| | **94** | 472 | 1.0 | **I** | 18.60 | | **56C** |
| | **78** | 567 | 0.9 | **I** | 22.33 | | **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** | 447 | 1.8 | **II** | 17.63 | | **56C** |
| | **94** | 472 | 2.1 | **III** | 18.60 | | **56C** |
| | **78** | 567 | 1.7 | **II** | 22.33 | | **56C** |
| | **73** | 607 | 1.6 | **II** | 23.91 | | **56C** |
| | **61** | 733 | 1.5 | **II** | 28.89 | | **56C** |
| | **57** | 783 | 1.4 | **II** | 30.84 | | **56C** |
| | **52** | 852 | 1.3 | **I** | 33.57 | | **56C** |
| | **49** | 904 | 1.2 | **I** | 35.63 | | **56C** |
| | **41** | 1085 | 1.0 | **I** | 42.75 | | **56C** |
| | **98** | 451 | 4.3 | **III** | 17.77 | **CMB633** | **56C** |
| | **81** | 547 | 3.6 | **III** | 21.56 | | **56C** |
| | **66** | 672 | 2.9 | **III** | 26.48 | | **56C** |
| | **62** | 715 | 2.7 | **III** | 28.17 | | **56C** |
| | **52** | 858 | 2.3 | **III** | 33.81 | | **56C** |
| | **49** | 912 | 2.1 | **III** | 35.92 | | **56C** |
| | **45** | 987 | 2.2 | **III** | 38.88 | | **56C** |
| | **37** | 1197 | 1.8 | **II** | 47.16 | | **56C** |
| | **30** | 1471 | 1.5 | **II** | 57.93 | | **56C** |
| | **28** | 1565 | 1.4 | **II** | 61.63 | | **56C** |
| | **24** | 1878 | 1.2 | **I** | 73.96 | | **56C** |
| | **22** | 1995 | 1.1 | **I** | 78.58 | | **56C** |
| | **19** | 2369 | 0.9 | **I** | 93.33 | | **56C** |
| | **37** | 1200 | 3.7 | **III** | 47.25 | **CMB903** | **56C** |
| | **30** | 1460 | 3.0 | **III** | 57.52 | | **56C** |
| | **26** | 1680 | 2.6 | **III** | 66.17 | | **56C** |
| | **21** | 2112 | 2.1 | **III** | 83.20 | | **56C** |
| | **16** | 2744 | 1.6 | **II** | 108.09 | | **56C** |
| | **13** | 3357 | 1.3 | **I** | 132.23 | | **56C** |
| | **12** | 3755 | 1.2 | **I** | 147.92 | | **56C** |
| | **10** | 4242 | 1.0 | **I** | 167.09 | | **56C** |
| | **9** | 4851 | 0.9 | **I** | 191.06 | | **56C** |

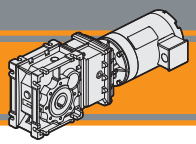
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **1 hp** | | | | | | | |
| 0.75 kW (1750 rpm) | **283** | 209 | 1.7 | **II** | 6.18 | **CMB402** | **56C** |
| | **234** | 254 | 1.4 | **I** | 7.49 | | **56C** |
| | **190** | 312 | 1.1 | **I** | 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** | 597 | 1.3 | **I** | 17.63 | | **56C** |
| | **94** | 630 | 1.5 | **II** | 18.60 | | **56C** |
| | **78** | 756 | 1.3 | **I** | 22.33 | | **56C** |
| | **73** | 809 | 1.2 | **I** | 23.91 | | **56C** |
| | **61** | 978 | 1.1 | **I** | 28.89 | | **56C** |
| | **57** | 1044 | 1.1 | **I** | 30.84 | | **56C** |
| | **52** | 1136 | 1.0 | **I** | 33.57 | | **56C** |
| | **49** | 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** | 602 | 3.2 | **III** | 17.77 | | **56C-140TC** |
| | **81** | 730 | 2.7 | **III** | 21.56 | | **56C-140TC** |
| | **66** | 897 | 2.2 | **III** | 26.48 | | **56C-140TC** |
| | **62** | 954 | 2.0 | **III** | 28.17 | | **56C-140TC** |
| | **52** | 1145 | 1.7 | **II** | 33.81 | | **56C-140TC** |
| | **49** | 1216 | 1.6 | **II** | 35.92 | | **56C-140TC** |
| | **45** | 1316 | 1.7 | **II** | 38.88 | | **56C-140TC** |
| | **37** | 1597 | 1.4 | **I** | 47.16 | | **56C-140TC** |
| | **30** | 1961 | 1.1 | **I** | 57.93 | | **56C-140TC** |
| | **28** | 2086 | 1.1 | **I** | 61.63 | | **56C-140TC** |
| | **24** | 2504 | 0.9 | **I** | 73.96 | | **56C-140TC** |
| | **22** | 2660 | 0.8 | **I** | 78.58 | | **56C-140TC** |
| | **58** | 1024 | 3.9 | **III** | 30.25 | **CMB903** | **56C-140TC** |
| | **45** | 1329 | 3.3 | **III** | 39.26 | | **56C-140TC** |
| | **37** | 1600 | 2.8 | **III** | 47.25 | | **56C-140TC** |
| | **30** | 1947 | 2.3 | **III** | 57.52 | | **56C-140TC** |
| | **26** | 2240 | 2.0 | **II** | 66.17 | | **56C-140TC** |
| | **21** | 2817 | 1.6 | **II** | 83.20 | | **56C-140TC** |
| | **16** | 3659 | 1.2 | **I** | 108.09 | | **56C-140TC** |
| | **13** | 4476 | 1.0 | **I** | 132.23 | | **56C-140TC** |
| | **12** | 5007 | 0.9 | **I** | 147.92 | | **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) | **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** | 902 | 2.2 | III | 17.77 | | 56C-140TC |
| | **81** | 1095 | 1.8 | II | 21.56 | | 56C-140TC |
| | **66** | 1345 | 1.4 | II | 26.48 | | 56C-140TC |
| | **62** | 1431 | 1.4 | I | 28.17 | | 56C-140TC |
| | **52** | 1717 | 1.1 | I | 33.81 | | 56C-140TC |
| | **49** | 1824 | 1.1 | I | 35.92 | | 56C-140TC |
| | **45** | 1974 | 1.1 | I | 38.88 | | 56C-140TC |
| | **37** | 2395 | 0.9 | I | 47.16 | | 56C-140TC |
| | **263** | 338 | 7.3 | III | 6.65 | CMB903 | 56C-140TC |
| | **219** | 406 | 6.1 | III | 8.00 | | 56C-140TC |
| | **180** | 495 | 5.0 | III | 9.74 | | 56C-140TC |
| | **156** | 569 | 4.4 | III | 11.21 | | 56C-140TC |
| | **124** | 716 | 3.7 | III | 14.09 | | 56C-140TC |
| | **98** | 911 | 4.4 | III | 17.95 | | 56C-140TC |
| | **81** | 1097 | 3.6 | III | 21.60 | | 56C-140TC |
| | **67** | 1335 | 3.0 | III | 26.30 | | 56C-140TC |
| | **58** | 1536 | 2.6 | III | 30.25 | | 56C-140TC |
| | **45** | 1994 | 2.2 | III | 39.26 | | 56C-140TC |
| | **37** | 2399 | 1.8 | II | 47.25 | | 56C-140TC |
| | **30** | 2921 | 1.5 | II | 57.52 | | 56C-140TC |
| | **26** | 3360 | 1.3 | I | 66.17 | | 56C-140TC |
| | **21** | 4225 | 1.0 | I | 83.20 | | 56C-140TC |
| **2 hp** | | | | | | | |
| 1.5 kW (1750 rpm) | **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** | 1203 | 1.6 | II | 17.77 | | 56C-140TC |
| | **81** | 1460 | 1.3 | I | 21.56 | | 56C-140TC |
| | **66** | 1793 | 1.1 | I | 26.48 | | 56C-140TC |
| | **62** | 1908 | 1.0 | I | 28.17 | | 56C-140TC |
| | **52** | 2289 | 0.9 | I | 33.81 | | 56C-140TC |

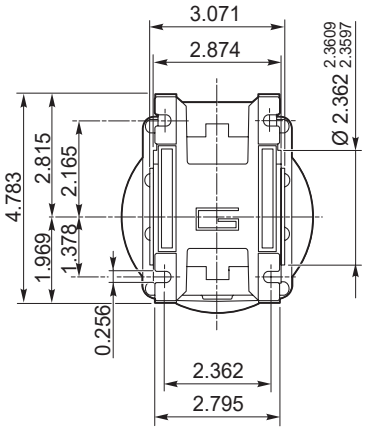
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **2 hp** | | | | | | | |
| 1.5 kW (1750 rpm) | **263** | 450 | 5.5 | III | 6.65 | CMB903 | 56C-140TC |
| | **219** | 542 | 4.6 | III | 8.00 | | 56C-140TC |
| | **180** | 660 | 3.8 | III | 9.74 | | 56C-140TC |
| | **156** | 759 | 3.3 | III | 11.21 | | 56C-140TC |
| | **124** | 954 | 2.8 | III | 14.09 | | 56C-140TC |
| | **98** | 1215 | 3.3 | III | 17.95 | | 56C-140TC |
| | **81** | 1462 | 2.7 | III | 21.60 | | 56C-140TC |
| | **67** | 1780 | 2.2 | III | 26.30 | | 56C-140TC |
| | **58** | 2048 | 1.9 | II | 30.25 | | 56C-140TC |
| | **45** | 2658 | 1.7 | II | 39.26 | | 56C-140TC |
| | **37** | 3199 | 1.4 | I | 47.25 | | 56C-140TC |
| | **30** | 3894 | 1.1 | I | 57.52 | | 56C-140TC |
| | **26** | 4480 | 1.0 | I | 66.17 | | 56C-140TC |
| **3 hp** | | | | | | | |
| 2.2 kW (1750 rpm) | **266** | 669 | 2.0 | II | 6.58 | CMB633 | 140TC-180TC |
| | **219** | 811 | 1.6 | II | 7.99 | | 140TC-180TC |
| | **178** | 997 | 1.3 | I | 9.81 | | 140TC-180TC |
| | **168** | 1060 | 1.3 | I | 10.44 | | 140TC-180TC |
| | **140** | 1272 | 1.0 | I | 12.53 | | 140TC-180TC |
| | **131** | 1352 | 1.0 | I | 13.31 | | 140TC-180TC |
| | **111** | 1605 | 0.9 | I | 15.81 | | 140TC-180TC |
| | **98** | 1805 | 1.1 | I | 17.77 | | 140TC-180TC |
| | **81** | 2189 | 0.9 | I | 21.56 | | 140TC-180TC |
| | **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 |
| | **98** | 1823 | 2.2 | III | 17.95 | | 140TC-180TC |
| | **81** | 2194 | 1.8 | II | 21.60 | | 140TC-180TC |
| | **67** | 2671 | 1.5 | II | 26.30 | | 140TC-180TC |
| | **58** | 3072 | 1.3 | I | 30.25 | | 140TC-180TC |
| | **45** | 3987 | 1.1 | I | 39.26 | | 140TC-180TC |
| | **37** | 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 |
| | **98** | 3038 | 1.3 | I | 17.95 | | 180TC |
| | **81** | 3656 | 1.1 | I | 21.60 | | 180TC |
| | **67** | 4451 | 0.9 | I | 26.30 | | 180TC |

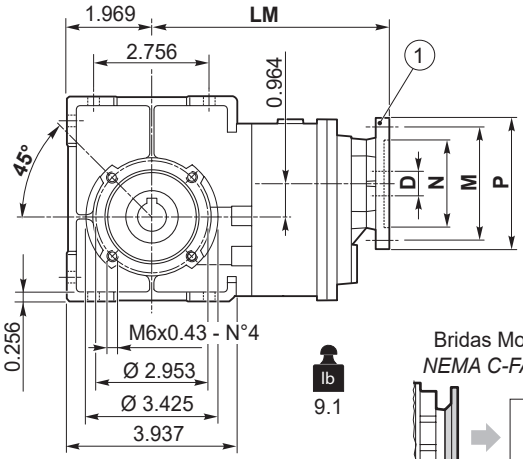


**Dimensiones** *Dimensions*

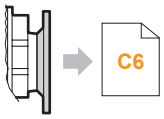
# CMB 402 - CMBIS 402

## CMB 402 U

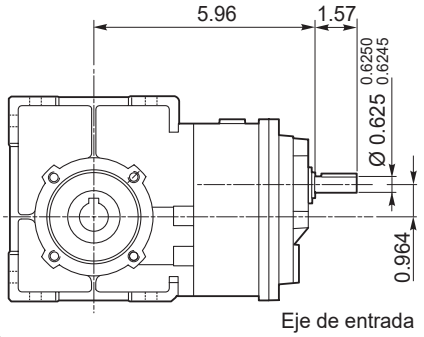


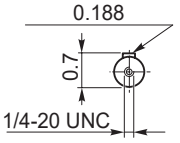

Bridas Motor
*NEMA C-FACE*

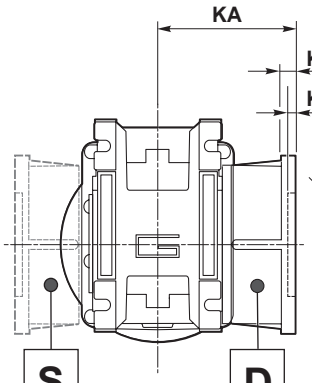



## CMBIS 402 U



Eje de entrada
*Input shaft*

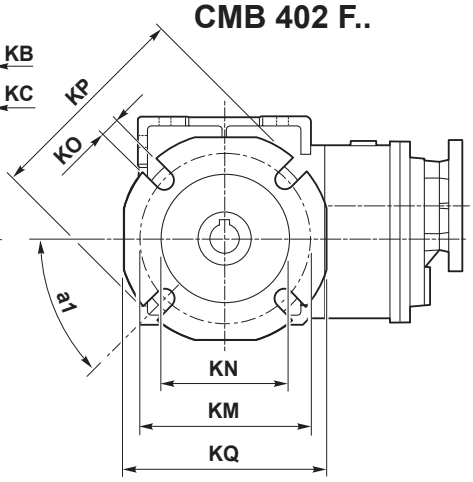


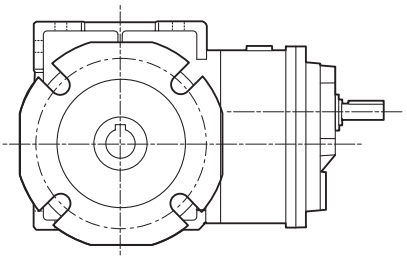

Bajo pedido
*On request*

Estándar
*Standard*

## CMB 402 F..



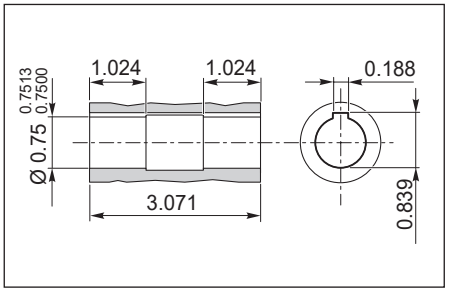

## CMBIS 402 F..



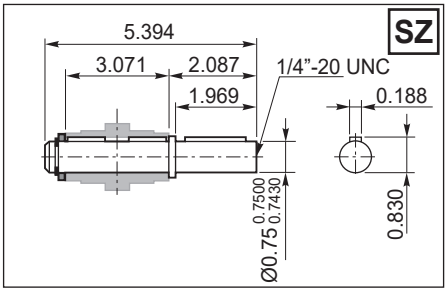
| Versión **F** / ***F** Version* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CMB CMBIS** | $a_1$ | **KA** | **KB** | **KC** | **KM** | **KN** | **KO** | **KP** | **□ KQ** | **Brida / *Flange*** Tipo / *Type* |
| **402** | 45° | 2.638 | 0.295 | 0.77 | 3.150-3.740 | 2.362 $^{2.3640}_{2.3622}$ | 0.354 | 4.331 | 3.740 | **F** |
| | 45° | 3.819 | 0.295 | 0.77 | 3.150-3.740 | 2.362 $^{2.3640}_{2.3622}$ | 0.354 | 4.331 | 3.740 | **FL** |
| | 45° | 3.150 | 0.335 | 0.197 | 4.527-4.921 | 3.740 $^{3.7423}_{3.7402}$ | 0.374 | 5.512 | 4.409 | **FB** |

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

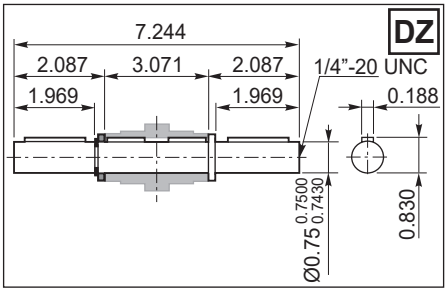
Eje de salida hueco / *Hollow output shaft*




Eje de salida / *Output shaft*



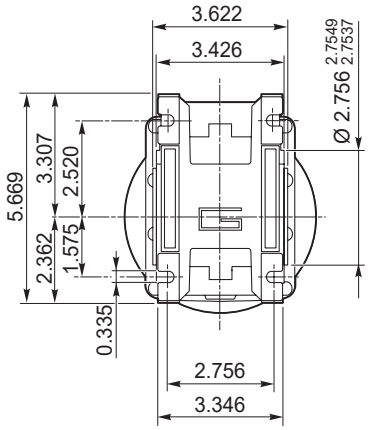

Eje de salida / *Output shaft*

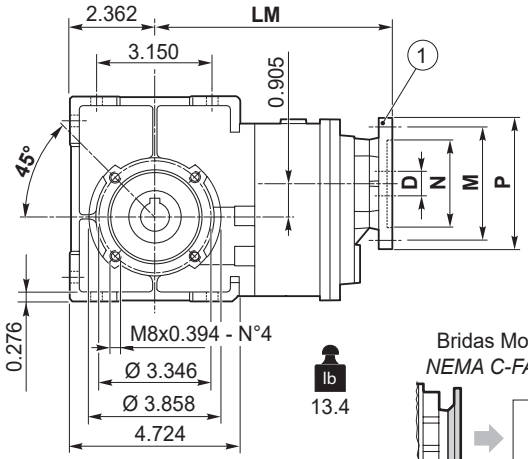


**Dimensiones** *Dimensions*

# CMB 502 - CMBIS 502

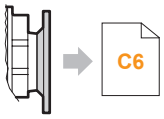
## CMB 502 U



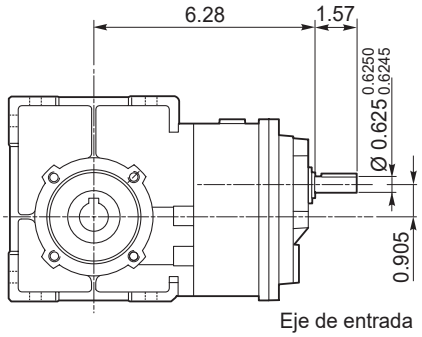




lb 13.4

Bridas Motor
*NEMA C-FACE*

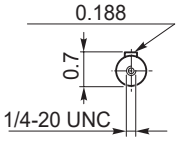



## CMBIS 502 U

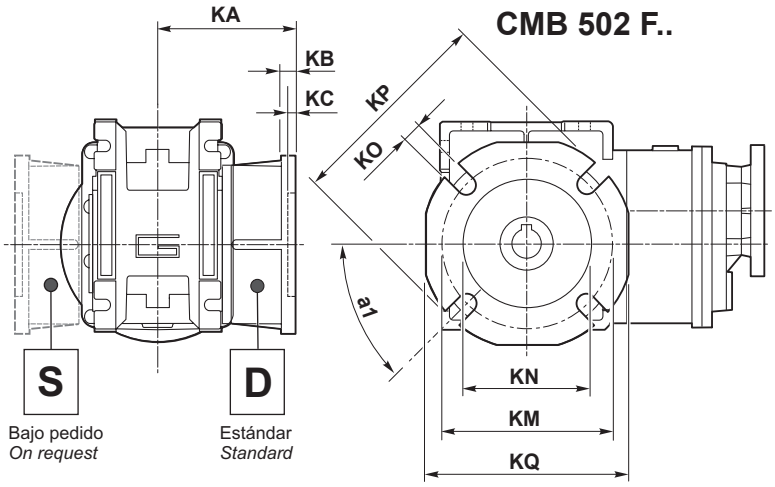



lb 13.9

Eje de entrada
*Input shaft*




## CMB 502 F..

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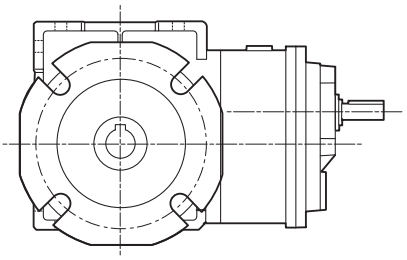
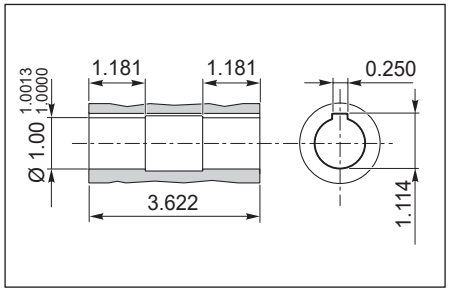


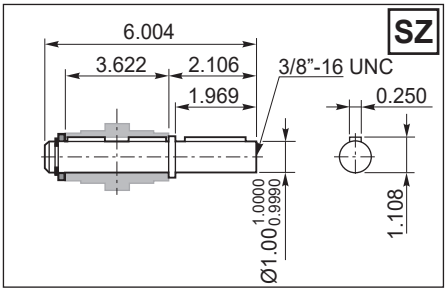
| Versión **F** / ***F** Version* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CMB CMBIS** | $a_1$ | **KA** | **KB** | **KC** | **KM** | **KN** | **KO** | **KP** | **□ KQ** | **Brida** / ***Flange*** Tipo / *Type* |
| **502** | 45° | 3.543 | 0.354 | 0.197 | 3.543-4.331 | 2.756 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 |

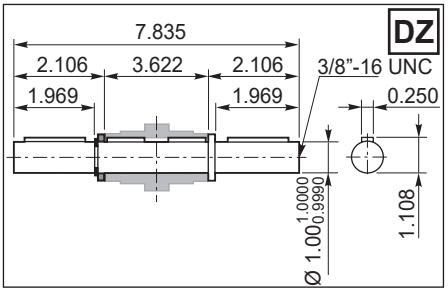
Eje de salida hueco / *Hollow output shaft*

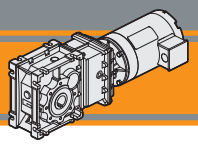



Eje de salida / *Output shaft*




Eje de salida / *Output shaft*

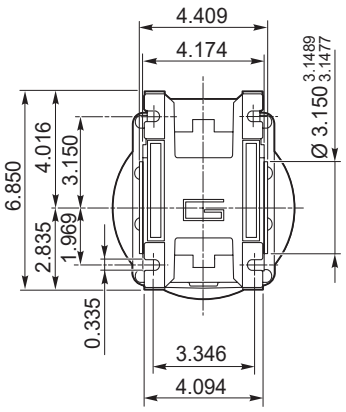


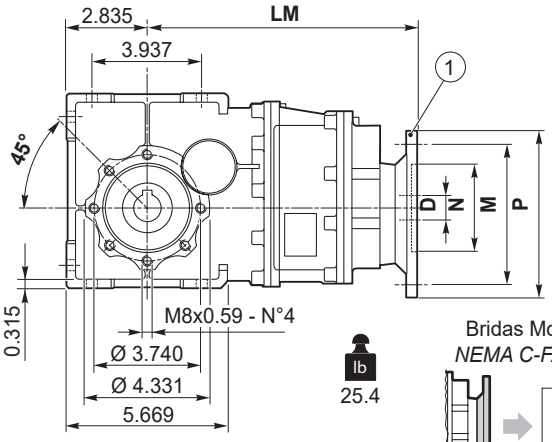




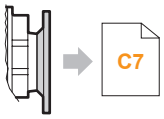
# CMB 633 - CMBIS 633

## CMB 633 U

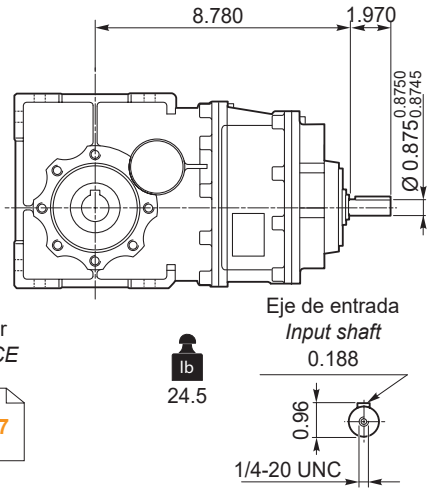


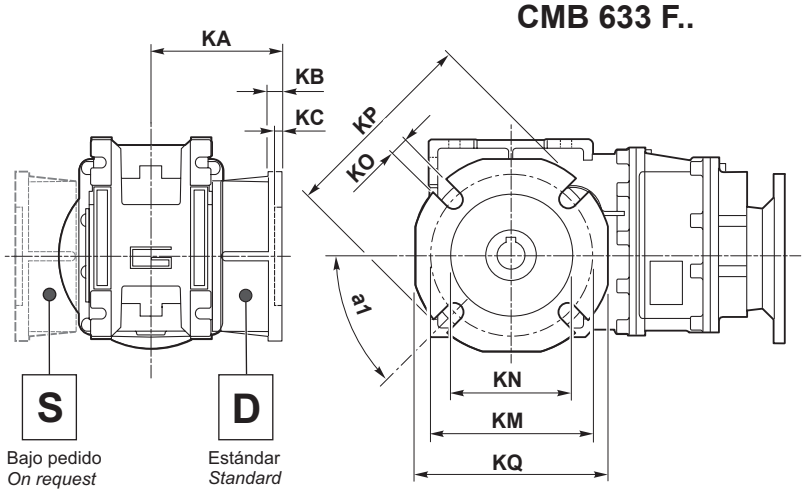

Bridas Motor
*NEMA C-FACE*




## CMBIS 633 U



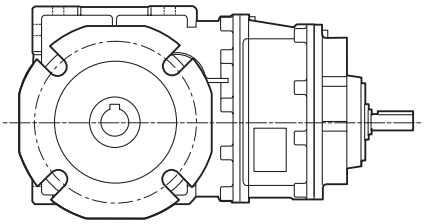

## CMB 633 F..




Bajo pedido
*On request*

Estándar
*Standard*

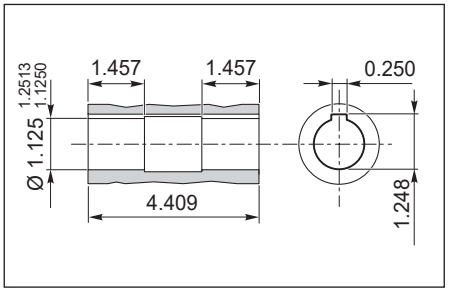
## CMBIS 633 F..



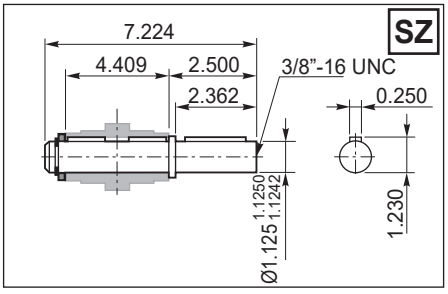
| Versión **F** / ***F** Version* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CMB CMBIS** | $a_1$ | **KA** | **KB** | **KC** | **KM** | **KN** | **KO** | **KP** | **□ KQ** | **Brida / *Flange*** Tipo / *Type* |
| **633** | 45° | 3.228 | 0.394 | 0.236 | 5.906-6.299 | 4.528 4.5297 4.5276 | 0.433 | 7.087 | 5.591 | **F** |
| | 45° | 4.409 | 0.394 | 0.314 | 5.906-6.299 | 4.528 4.5297 4.5276 | 0.433 | 7.087 | 5.591 | **FL** |
| | 45° | 3.858 | 0.433 | 0.197 | 6.496-7.087 | 5.118 5.1206 5.1181 | 0.433 | 7.874 | 6.229 | **FB** |

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

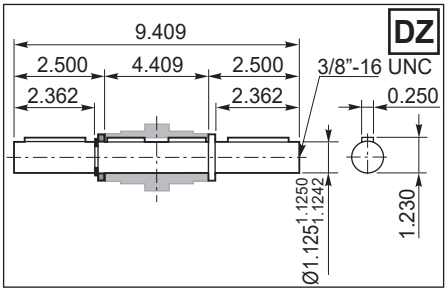
Eje de salida hueco / *Hollow output shaft*




Eje de salida / *Output shaft*



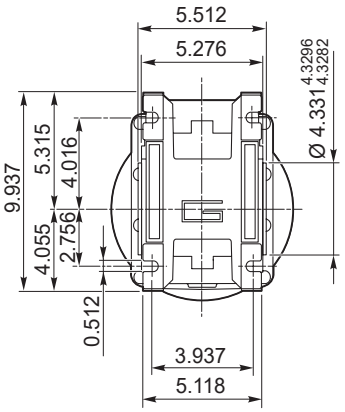

Eje de salida / *Output shaft*

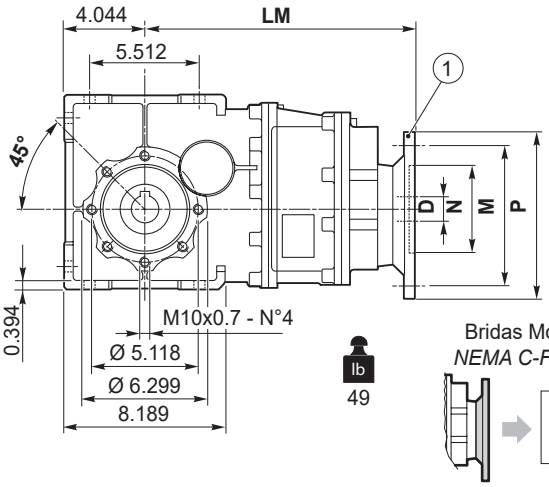


**Dimensiones** *Dimensions*

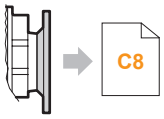
# CMB 903 - CMBIS 903

## CMB 903 U

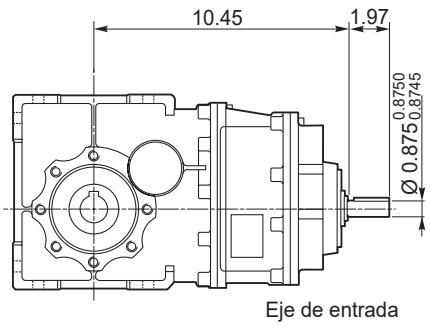


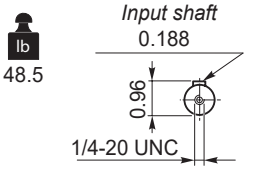




Bridas Motor
*NEMA C-FACE*

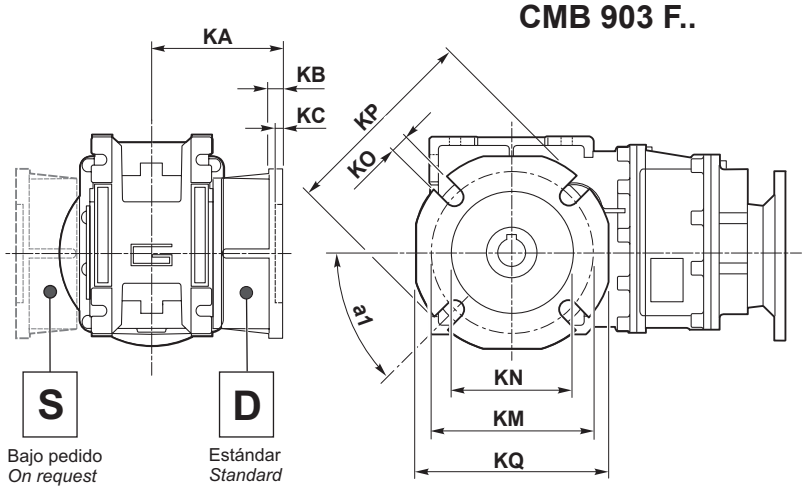



## CMBIS 903 U



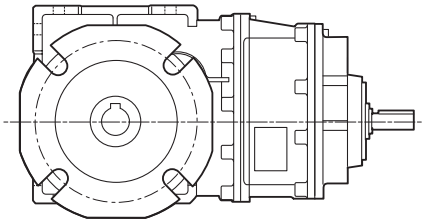

## CMB 903 F..




Bajo pedido
*On request*

Estándar
*Standard*

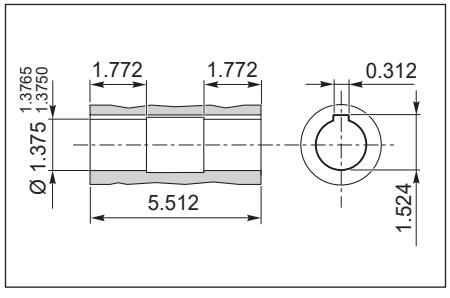
## CMBIS 903 F..



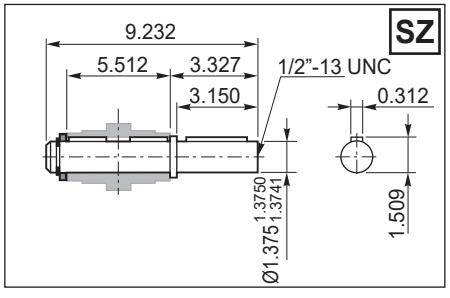
| Versión **F** / ***F** Version* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CMB CMBIS** | **$a_1$** | **KA** | **KB** | **KC** | **KM** | **KN** | **KO** | **KP** | **□ KQ** | **Brida / *Flange*** Tipo / *Type* |
| **933** | 45° | 4.37 | 0.512 | 0.236 | 6.890-7.480 | 5.984 $^{5.9867}_{5.9843}$ | 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 |

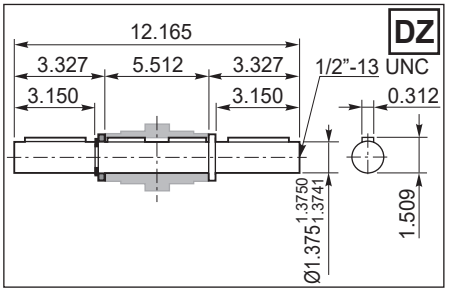
Eje de salida hueco / *Hollow output shaft*

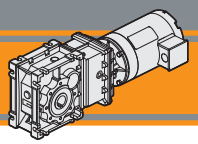



Eje de salida / *Output shaft*




Eje de salida / *Output shaft*

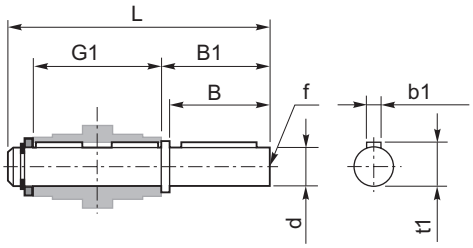




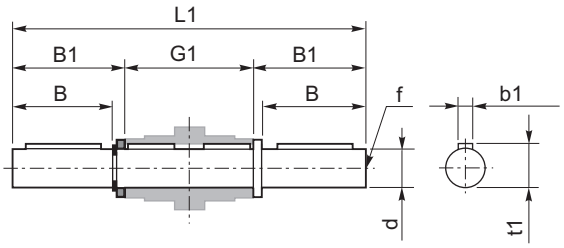
## Accessorios — *Accessories*

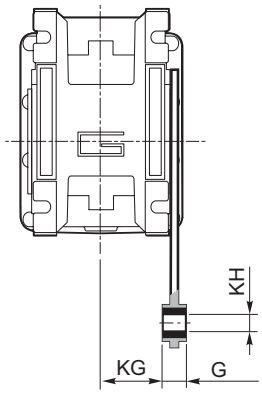


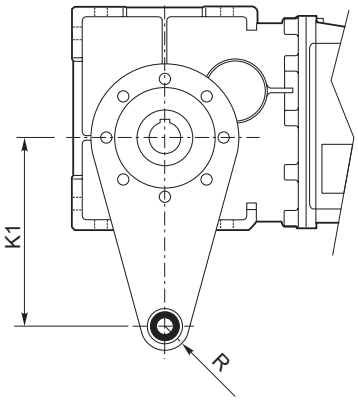
SZ




DZ



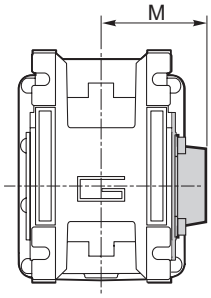

Eje de salida / *Output shaft*

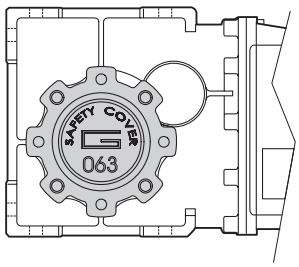
| CMB | d | B | B1 | G1 | L | L1 | f | b1 | t1 |
|---|---|---|---|---|---|---|---|---|---|
| 402 | 0.750 $^{0.7500}_{0.7430}$ | 1.969 | 20.87 | 3.071 | 5.394 | 7.244 | 1/4"-20 | 0.188 | 0.830 |
| 502 | 1.000 $^{1.0000}_{0.9992}$ | 1.696 | 2.106 | 3.622 | 6.004 | 7.835 | 3/8"-16 | 0.250 | 1.108 |
| 633 | 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 |

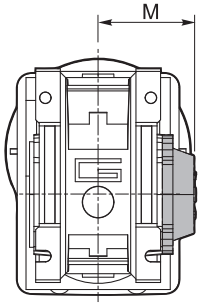
## SC - Cubierta de seguridad / *Safety cover*

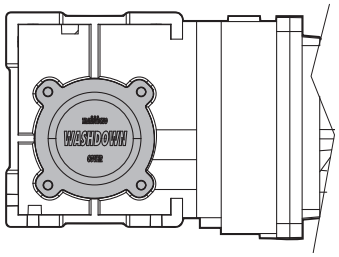



| CMB | M |
|---|---|
| 402 | 2.146 |
| 502 | 2.461 |
| 633 | 2.874 |
| 903 | 3.701 |

## WD - *Kit washdown cover*




| CMB | M |
|---|---|
| 402 | 2.18 |
| 502 | 2.50 |
| 633 | 2.81 |
| 903 | 3.74 |

# Note

TRANSTECNO®
the modular gearmotor

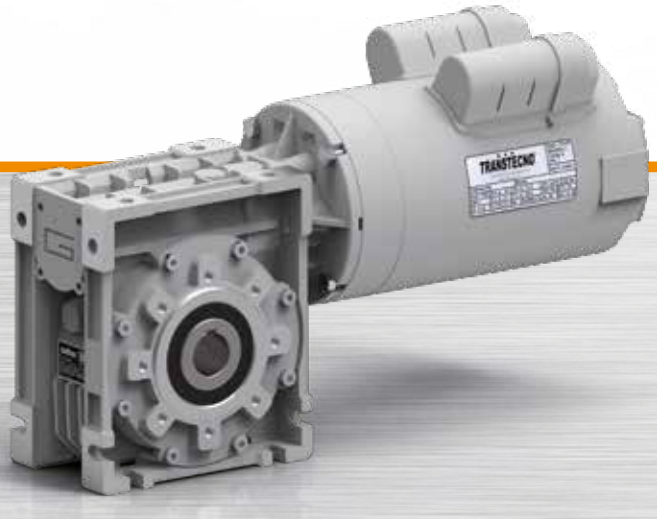
# CM

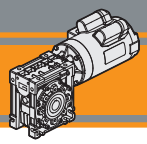
CM Alü

60Hz

## Nema

## Motorreductores sinfín corona
## Wormgearmotors





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| Clasificación | *Classification* | **D2** |
| Sentidos de rotación | *Direction of rotation* | **D3** |
| Nomenclatura | *Symbols* | **D3** |
| Lubricación | *Lubrication* | **D3** |
| Cargas radiales | *Radial loads* | **D3** |
| Reversibilidad e irreversibilidad | *Reversibility and irreversibility* | **D4** |
| Datos de dentado | *Toothing data* | **D5** |
| Rendimiento | *Efficiency* | **D5** |
| Datos técnicos | *Technical data* | **D6** |
| Dimensiones | *Dimensions* | **D12** |
| Accesorios | *Accessories* | **D24** |
| Opciones | *Options* | **D25** |


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

## 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;
- Los tamaños 090 y 110 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;*
- *Double taper roller bearing on sizes 090 and 110;*

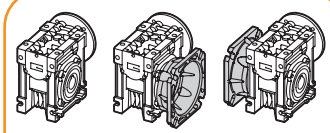
## Clasificación — *Classification*

### 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** **CMIS** | **040** **050** **063** **075** **090** **110** | **U** **FD** **FS** **FBD** **FBS** **FLD** **FLS** | véase tablas *see tables* | **56C** **140TC** **180TC** **210TC** | **SZDX** **SZSX** **DZ** | **BRSX** **BRDX** | **0°** **90°** **180°** **270°** | **M1** (B3) **M2** (V6) **M3** (B8) **M4** (V5) **M5** (B7) **M6** (B6) |

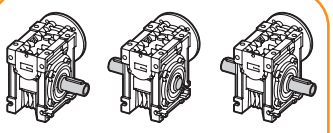
Relación de reducción *Gearbox Version*



U — FD FLD FBD — FS FLS FBS

F.....D = Lado derecho / *Right side*
F.....S = Lado izquierdo / *Left side*

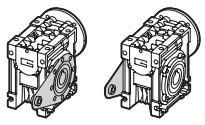
Eje de salida *Output shaft*



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*

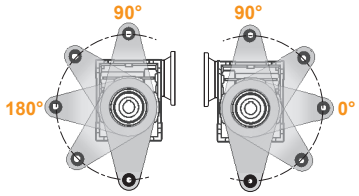
Brazo de reacción *Torque arm*



BRDX — BRSX

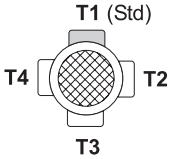
BRDX = Lado derecho / *Right side*
BRSX = Lado izquierdo / *Left side*

Posición del Brazo *Torque arm position* (*)



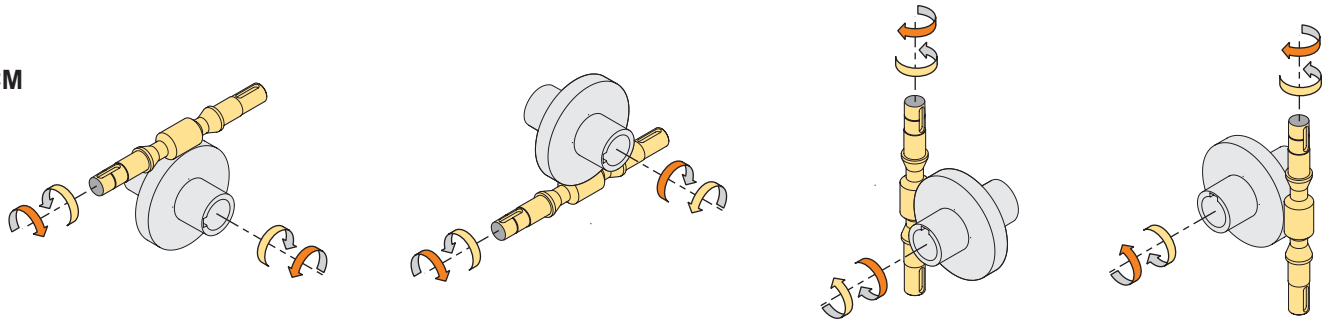

(*) NOTA: El brazo de reacción se suministra desmontado.
*NOTE: the torque arm will be supplied not assembled.*

MOTOR / *MOTOR*

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

## Sentidos de rotación — *Direction of rotation*

**CM**



## Nomenclatura — *Symbols*

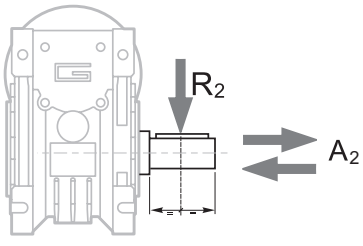
| | | | | | |
|---|---|---|---|---|---|
| $n_1$ | [rpm] | Velocidad de entrada / *Input speed* | sf | | Rendimiento dinámico / *Service factor* |
| $n_2$ | [rpm] | Velocidad de salida / *Output speed* | Rd | % | Rendimiento dinámico / *Dynamic efficiency* |
| i | | Relación de reducción / *Ratio* | Rs | % | Rendimiento estático / *Static efficiency* |
| $P_1$ | [hp] | Potencia en la entrada / *Input power* | $R_2$ | [lb] | Carga radial admisible en la salida / *Maximum output radial load* |
| $M_2$ | [lb·in] | Par en la salida en función de $P_1$ / *Output torque referred to $P_1$* | $A_2$ | [lb] | Carga axial admisible en la salida / *Maximum output axial load* |
| $Pn_1$ | [hp] | Potencia nominal en la entrada / *Nominal input power* | Z | | Número de entradas del tornillo / *Worm starts* |
| $Mn_2$ | [lb·in] | 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.*

## Cargas radiales — *Radial loads*




$A_2 = R_2 \times 0.2$

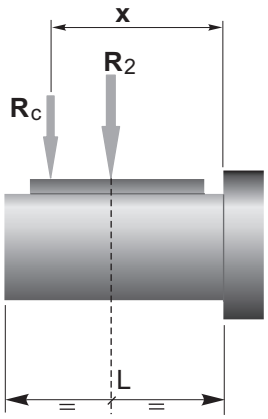
| $n_2$ [rpm] | $R_2$ [lb] | | | | | |
|---|---|---|---|---|---|---|
| | CM040 | CM050 | CM063 | CM075 | CM090 | CM110 |
| **187** | 284 | 398 | 550 | 635 | 711 | 1137 |
| **140** | 313 | 438 | 605 | 699 | 783 | 1252 |
| **93** | 359 | 502 | 694 | 801 | 897 | 1435 |
| **70** | 394 | 552 | 763 | 881 | 986 | 1578 |
| **56** | 425 | 595 | 821 | 949 | 1062 | 1699 |
| **47** | 450 | 631 | 871 | 1006 | 1126 | 1802 |
| **35** | 497 | 696 | 961 | 1110 | 1242 | 1988 |
| **28** | 535 | 749 | 1035 | 1195 | 1338 | 2141 |
| **23** | 572 | 800 | 1105 | 1277 | 1429 | 2286 |
| **18** | 620 | 868 | 1199 | 1385 | 1551 | 2481 |
| **14** | 674 | 944 | 1304 | 1506 | 1686 | 2698 |

## Cargas radiales

## *Radial loads*

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 |
| a | 84 | 101 | 120 | 131 | 182 | 176 |
| b | 64 | 76 | 95 | 101 | 122 | 136 |
| $R_{2MAX}$ | 674 | 944 | 1304 | 1506 | 1686 | 2698 |

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

$$R \leq R_c$$

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

## Reversibilidad e irreversibilidad

## *Reversibility and irreversibility*

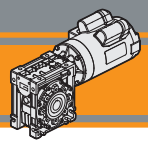
La reversibilidad en los motorreductores sinfín y corona es consecuencia directa de la eficiencia (estática y dinámica). Esto determina si la flecha de entrada puede o no ser rotada por la aplicación de un cierto torque en la flecha de salida.
El grado de reversibilidad (o irreversibilidad) de un reductor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

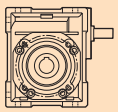


## Rendimiento / *Efficiency*

| | $n_1$ [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 |
| | | 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 |
| | | 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 |
| | | 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 |
| | | 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 |
| | | 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 |
| | | 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*

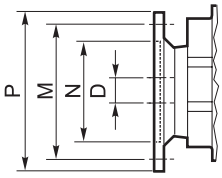
|  | i | $n_1$ = 1750 rpm | | | |
|---|---|---|---|---|---|
| | | $n_2$ [rpm] | $Mn_2$ [lb·in] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* 56 C |
| **CMIS 40** | | | | | |
| | **5** | **350** | 363 | 2.29 | |
| | **7.5** | **233** | 389 | 1.68 | |
| | **10** | **175** | 398 | 1.32 | |
| | **15** | **117** | 398 | 0.91 | |
| | **20** | **88** | 354 | 0.63 | |
| | **25** | **70** | 336 | 0.50 | |
| | **30** | **58** | 425 | 0.56 | |
| | **40** | **44** | 372 | 0.40 | |
| | **50** | **35** | 345 | 0.32 | |
| | **60** | **29** | 319 | 0.25 | |
| | **80** | **22** | 292 | 0.19 | |
| | **100** | **18** | 274 | 0.17 | |
| **CMIS 50** | | | | | |
| | **5** | **350** | 664 | 4.14 | |
| | **7.5** | **233** | 699 | 2.97 | |
| | **10** | **175** | 726 | 2.37 | |
| | **15** | **117** | 726 | 1.64 | |
| | **20** | **88** | 637 | 1.12 | |
| | **25** | **70** | 620 | 0.90 | |
| | **30** | **58** | 779 | 1.00 | |
| | **40** | **44** | 673 | 0.70 | |
| | **50** | **35** | 637 | 0.56 | |
| | **60** | **29** | 611 | 0.47 | |
| | **80** | **22** | 531 | 0.34 | |
| | **100** | **18** | 496 | 0.28 | |

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.

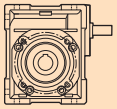
*NOTE Highlighted áreas indicate the motor input flange available on each gearbox size.*

*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 | | | | | |
|---|---|---|---|---|---|---|---|
| | | $n_2$ [rpm] | $Mn_2$ [lb·in] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* 56 C | 140 TC | 180 TC |
| **CMIS 63** | | | | | | | |
| | **5** | **350** | 1186 | 7.31 | **B** | | |
| | **7.5** | **233** | 1274 | 5.36 | **B** | | |
| | **10** | **175** | 1310 | 4.23 | **B** | | |
| | **15** | **117** | 1363 | 3.00 | **B** | | |
| | **20** | **88** | 1204 | 2.06 | **B** | | |
| | **25** | **70** | 1195 | 1.70 | **B** | | |
| | **30** | **58** | 1469 | 1.81 | **B** | | |
| | **40** | **44** | 1257 | 1.25 | | | |
| | **50** | **35** | 1204 | 1.01 | | | |
| | **60** | **29** | 1115 | 0.82 | | | |
| | **80** | **22** | 1044 | 0.64 | | | |
| | **100** | **18** | 1027 | 0.55 | | | |
| **CMIS 75** | | | | | | | |
| | **7.5** | **233** | 2106 | 8.76 | **BS** | **B** | |
| | **10** | **175** | 2274 | 7.25 | **BS** | **B** | |
| | **15** | **117** | 2354 | 5.18 | **BS** | **B** | |
| | **20** | **88** | 2142 | 3.58 | **B** | | |
| | **25** | **70** | 1991 | 2.76 | **B** | | |
| | **30** | **58** | 2531 | 3.04 | **B** | | |
| | **40** | **44** | 2221 | 2.11 | **B** | | |
| | **50** | **35** | 2009 | 1.62 | **B** | | |
| | **60** | **29** | 1929 | 1.35 | | | |
| | **80** | **22** | 1708 | 0.99 | | | |
| | **100** | **18** | 1620 | 0.80 | | | |

NOTA
Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.
**B/BS** = Casquillo de reducción en acero.

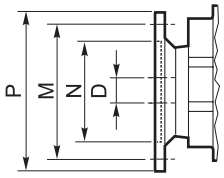
*** =** $Pn_1$ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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

*NOTE*
*Highlighted áreas indicate the motor input flange available on each gearbox size.*
***B/BS** = Metal shaft sleeve.*

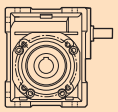
**** =** The service factor (**sf**) has to be selected depending on application: please contact our Technical Department.*

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




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

## Datos técnicos — *Technical data*



| i | $n_1$ = 1750 rpm | | | | | | |
|---|---|---|---|---|---|---|---|
| | $n_2$ [rpm] | $Mn_2$ [lb·in] | $Pn_1$ [hp] | NEMA Motores aplicables *NEMA Motor adapters* | | | |
| | | | | 56 C | 140 TC | 180 TC | 210 TC |
| **CMIS 90** | | | | | | | |
| **7.5** | **233** | 3027 | 12.44 | **BS** | **B** | | |
| **10** | **175** | 3363 | 10.60 | **BS** | **B** | | |
| **15** | **117** | 3832 | 8.24 | **BS** | **B** | | |
| **20** | **88** | 3664 | 6.05 | **BS** | **B** | | |
| **25** | **70** | 3266 | 4.37 | **BS** | **B** | | |
| **30** | **58** | 4363 | 5.11 | **BS** | **B** | | |
| **40** | **44** | 3841 | 3.51 | **B** | | | |
| **50** | **35** | 3407 | 2.63 | **B** | | | |
| **60** | **29** | 3115 | 2.09 | **B** | | | |
| **80** | **22** | 2867 | 1.55 | | | | |
| **100** | **18** | 2646 | 1.22 | | | | |
| **CMIS 110** | | | | | | | |
| **7.5** | **233** | 5354 | 22.26 | | **BS** | **B** | |
| **10** | **175** | 5921 | 18.67 | | **BS** | **B** | |
| **15** | **117** | 6461 | 13.90 | | **BS** | **B** | |
| **20** | **88** | 6549 | 10.69 | | **BS** | **B** | |
| **25** | **70** | 5930 | 7.83 | | **B** | | |
| **30** | **58** | 7213 | 8.34 | | **B** | | |
| **40** | **44** | 6797 | 5.97 | | **B** | | |
| **50** | **35** | 6186 | 4.52 | | **B** | | |
| **60** | **29** | 5540 | 3.51 | | **B** | | |
| **80** | **22** | 4974 | 2.54 | | | | |
| **100** | **18** | 4629 | 2.01 | | | | |

NOTA
Las áreas resaltadas indican el tamaño de carcasa del motor correspondiente.
**B/BS** = Casquillo de reducción en acero.

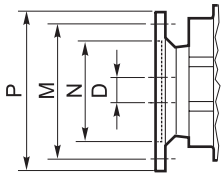
⚠ * = $Pn_1$ es la potencia mecánica. La potencia aplicable resulta reducida por el factor térmico. Para más detalles consultar con nuestro servicio técnico

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

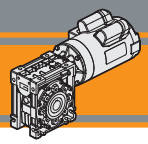
*NOTE*
*Highlighted áreas indicate the motor input flange available on each gearbox size.*
***B/BS** = Metal shaft sleeve.*

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

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




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



## Datos técnicos

*Technical data*

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | 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** |
| | **350** | 26 | 25.9 | III | 5 | **CM050** | **56C** |
| | **233** | 38 | 18.6 | III | 7.5 | | **56C** |
| | **175** | 49 | 14.8 | III | 10 | | **56C** |
| | **117** | 71 | 10.2 | III | 15 | | **56C** |
| | **88** | 91 | 7.0 | III | 20 | | **56C** |
| | **70** | 110 | 5.7 | III | 25 | | **56C** |
| | **58** | 125 | 6.3 | III | 30 | | **56C** |
| | **44** | 155 | 4.4 | III | 40 | | **56C** |
| | **35** | 182 | 3.5 | III | 50 | | **56C** |
| | **29** | 208 | 2.9 | III | 60 | | **56C** |
| | **22** | 249 | 2.1 | III | 80 | | **56C** |
| | **18** | 283 | 1.8 | II | 100 | | **56C** |
| | **35** | 190 | 6.3 | III | 50 | **CM063** | **56C** |
| | **29** | 218 | 5.1 | III | 60 | | **56C** |
| | **22** | 263 | 4.0 | III | 80 | | **56C** |
| | **18** | 300 | 3.4 | III | 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** |
| | **350** | 40 | 16.6 | III | 5 | **CM050** | **56C** |
| | **233** | 59 | 11.9 | III | 7.5 | | **56C** |
| | **175** | 77 | 9.5 | III | 10 | | **56C** |
| | **117** | 111 | 6.5 | III | 15 | | **56C** |
| | **88** | 142 | 4.5 | III | 20 | | **56C** |
| | **70** | 171 | 3.6 | III | 25 | | **56C** |
| | **58** | 195 | 4.0 | III | 30 | | **56C** |
| | **44** | 241 | 2.8 | III | 40 | | **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** |

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **0.25 hp** | | | | | | | |
| 0.18 kW (1750 rpm) | **35** | 297 | 4.0 | III | 50 | **CM063** | **56C** |
| | **29** | 341 | 3.3 | III | 60 | | **56C** |
| | **22** | 411 | 2.5 | III | 80 | | **56C** |
| | **18** | 469 | 2.2 | III | 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** |
| | **350** | 53 | 12.5 | III | 5 | **CM050** | **56C** |
| | **233** | 78 | 9.0 | III | 7.5 | | **56C** |
| | **175** | 101 | 7.2 | III | 10 | | **56C** |
| | **117** | 146 | 5.0 | III | 15 | | **56C** |
| | **88** | 188 | 3.4 | III | 20 | | **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** |
| | **35** | 393 | 3.1 | III | 50 | **CM063** | **56C** |
| | **29** | 450 | 2.5 | III | 60 | | **56C** |
| | **22** | 542 | 1.9 | II | 80 | | **56C** |
| | **18** | 619 | 1.7 | II | 100 | | **56C** |
| | **22** | 571 | 3.0 | III | 80 | **CM075** | **56C** |
| | **18** | 666 | 2.4 | 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** |

## 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) | **350** | 80 | 8.3 | **III** | 5 | **CM050** | **56C** |
| | **233** | 118 | 5.9 | **III** | 7.5 | | **56C** |
| | **175** | 153 | 4.7 | **III** | 10 | | **56C** |
| | **117** | 222 | 3.3 | **III** | 15 | | **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** |
| | **44** | 505 | 2.5 | **III** | 40 | **CM063** | **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** | 714 | 2.7 | **III** | 60 | **CM075** | **56C** |
| | **22** | 865 | 2.0 | **II** | 80 | | **56C** |
| | **18** | 1009 | 1.6 | **II** | 100 | | **56C** |
| | 22 | 923 | 3.1 | III | 80 | **CM090** | **56C** |
| | 18 | 1081 | 2.4 | III | 100 | | **56C** |
| **0.75 hp** | | | | | | | |
| 0.55 kW (1750 rpm) | **350** | 120 | 5.5 | **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** |
| | **58** | 624 | 4.1 | **III** | 30 | **CM075** | **56C** |
| | **44** | 789 | 2.8 | **III** | 40 | | **56C** |
| | **35** | 933 | 2.2 | **III** | 50 | | **56C** |
| | **29** | 1071 | 1.8 | **II** | 60 | | **56C** |
| | **22** | 1298 | 1.3 | **I** | 80 | | **56C** |
| | **18** | 1514 | 1.1 | **I** | 100 | | **56C** |
| | **29** | 1119 | 2.8 | **III** | 60 | **CM090** | **56C** |
| | **22** | 1384 | 2.1 | **III** | 80 | | **56C** |
| | **18** | 1622 | 1.6 | **II** | 100 | | **56C** |

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **1 hp** | | | | | | | |
| 0.75 kW (1750 rpm) | **350** | 160 | 4.1 | **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** |
| | **350** | 162 | 7.3 | **III** | 5 | **CM063** | **56C-140TC** |
| | **233** | 238 | 5.4 | **III** | 7.5 | | **56C-140TC** |
| | **175** | 310 | 4.2 | **III** | 10 | | **56C-140TC** |
| | **117** | 454 | 3.0 | **III** | 15 | | **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** |
| | **35** | 1189 | 1.0 | **I** | 50 | | **56C** |
| | **70** | 721 | 2.8 | **III** | 25 | **CM075** | **56C-140TC** |
| | **58** | 833 | 3.1 | **III** | 30 | | **56C-140TC** |
| | **44** | 1053 | 2.1 | **III** | 40 | | **56C-140TC** |
| | **35** | 1244 | 1.6 | **II** | 50 | | **56C-140TC** |
| | **29** | 1427 | 1.4 | **I** | 60 | | **56C** |
| | **22** | 1730 | 1.0 | **I** | 80 | | **56C** |
| | **35** | 1298 | 2.6 | **III** | 50 | **CM090** | **56C-140TC** |
| | **29** | 1492 | 2.1 | **III** | 60 | | **56C-140TC** |
| | **22** | 1845 | 1.6 | **II** | 80 | | **56C** |
| | **18** | 2163 | 1.2 | **I** | 100 | | **56C** |
| | **22** | 1961 | 2.5 | **III** | 80 | **CM110** | **140TC** |
| | **18** | 2307 | 2.0 | **III** | 100 | | **140TC** |
| **1.5 hp** | | | | | | | |
| 1.1 kW (1750 rpm) | **350** | 243 | 4.9 | **III** | 5 | **CM063** | **56C-140TC** |
| | **233** | 357 | 3.6 | **III** | 7.5 | | **56C-140TC** |
| | **175** | 465 | 2.8 | **III** | 10 | | **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** |
| | **58** | 1217 | 1.2 | **I** | 30 | | **56C-140TC** |
| | **233** | 361 | 5.8 | **III** | 7.5 | **CM075** | **56C-140TC** |
| | **175** | 470 | 4.8 | **III** | 10 | | **56C-140TC** |
| | **117** | 681 | 3.5 | **III** | 15 | | **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** | 1579 | 1.4 | **II** | 40 | | **56C-140TC** |
| | **35** | 1865 | 1.1 | **I** | 50 | | **56C-140TC** |
| | **29** | 2141 | 0.9 | **I** | 60 | | **56C** |

## Datos técnicos

*Technical data*

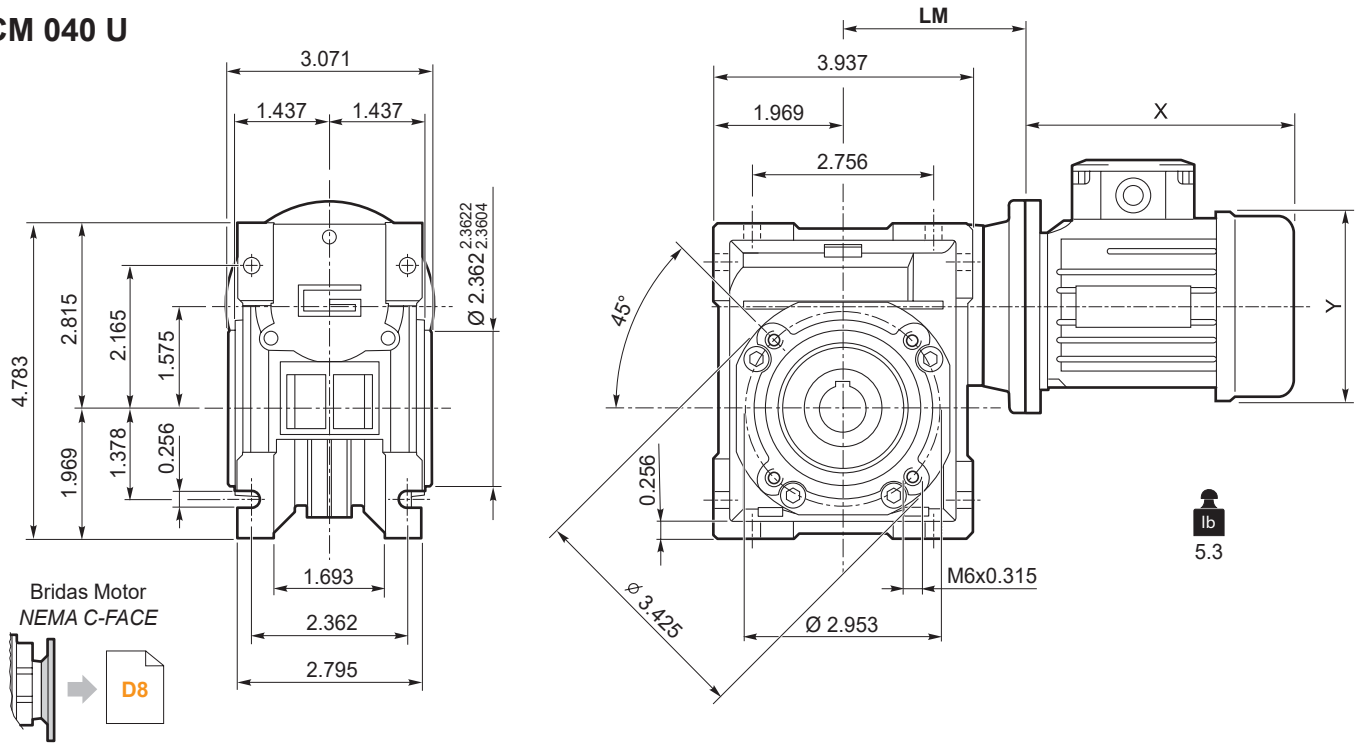
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **1.5 hp** | | | | | | | |
| 1.1 kW (1750 rpm) | **44** | 1644 | 2.3 | III | 40 | CM090 | 56C-140TC |
| | **35** | 1946 | 1.8 | II | 50 | | 56C-140TC |
| | **29** | 2238 | 1.4 | I | 60 | | 56C-140TC |
| | **22** | 2768 | 1.0 | I | 80 | | 56C |
| | **35** | 2055 | 3.0 | III | 50 | CM110 | 140TC |
| | **29** | 2368 | 2.3 | III | 60 | | 140TC |
| | **22** | 2941 | 1.7 | II | 80 | | 140TC |
| | **18** | 3460 | 1.3 | I | 100 | | 140TC |
| **2 hp** | | | | | | | |
| 1.5 kW (1750 rpm) | **350** | 324 | 3.7 | III | 5 | CM063 | 56C-140TC |
| | **233** | 476 | 2.7 | III | 7.5 | | 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 |
| | **233** | 481 | 4.4 | III | 7.5 | CM075 | 56C-140TC |
| | **175** | 627 | 3.6 | III | 10 | | 56C-140TC |
| | **117** | 908 | 2.6 | III | 15 | | 56C-140TC |
| | **88** | 1197 | 1.8 | II | 20 | | 56C-140TC |
| | **70** | 1442 | 1.4 | I | 25 | | 56C-140TC |
| | **58** | 1665 | 1.5 | II | 30 | | 56C-140TC |
| | **44** | 2105 | 1.1 | I | 40 | | 56C-140TC |
| | **88** | 1211 | 3.0 | III | 20 | CM090 | 56C-140TC |
| | **70** | 1496 | 2.2 | III | 25 | | 56C-140TC |
| | **58** | 1709 | 2.6 | III | 30 | | 56C-140TC |
| | **44** | 2192 | 1.8 | II | 40 | | 56C-140TC |
| | **35** | 2595 | 1.3 | I | 50 | | 56C-140TC |
| | **29** | 2984 | 1.0 | I | 60 | | 56C-140TC |
| | **44** | 2278 | 3.0 | III | 40 | CM110 | 140TC |
| | **35** | 2739 | 2.3 | III | 50 | | 140TC |
| | **29** | 3158 | 1.8 | II | 60 | | 140TC |
| | **22** | 3922 | 1.3 | I | 80 | | 140TC |
| | **18** | 4614 | 1.0 | I | 100 | | 140TC |
| **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 |
| | **70** | 2163 | 0.9 | I | 25 | | 140TC |
| | **58** | 2498 | 1.0 | I | 30 | | 140TC |

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **3 hp** | | | | | | | |
| 2.2 kW (1750 rpm) | **233** | 730 | 4.1 | III | 7.5 | CM090 | 140TC-180TC |
| | **175** | 952 | 3.5 | III | 10 | | 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** | 2563 | 1.7 | II | 30 | | 140TC-180TC |
| | **44** | 3287 | 1.2 | I | 40 | | 140TC |
| | **35** | 3893 | 0.9 | I | 50 | | 140TC |
| | **70** | 2271 | 2.6 | III | 25 | CM110 | 140TC-180TC |
| | **58** | 2595 | 2.8 | III | 30 | | 140TC-180TC |
| | **44** | 3417 | 2.0 | II | 40 | | 140TC-180TC |
| | **35** | 4109 | 1.5 | II | 50 | | 140TC-180TC |
| | **29** | 4736 | 1.2 | I | 60 | | 140TC-180TC |
| | **22** | 5882 | 0.8 | I | 80 | | 140TC-180TC |
| **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** | 1586 | 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** | 4271 | 1.0 | I | 30 | | 180TC |
| | **233** | 1203 | 4.5 | III | 7.5 | CM110 | 180TC |
| | **175** | 1586 | 3.7 | III | 10 | | 180TC |
| | **117** | 2325 | 2.8 | III | 15 | | 180TC |
| | **88** | 3064 | 2.1 | III | 20 | | 180TC |
| | **70** | 3785 | 1.6 | II | 25 | | 180TC |
| | **58** | 4325 | 1.7 | II | 30 | | 180TC |
| | **44** | 5695 | 1.2 | I | 40 | | 180TC |
| | **35** | 6848 | 0.9 | I | 50 | | 180TC |
| **7.5 hp** | | | | | | | |
| 5.5 kW (1750 rpm) | **233** | 1804 | 3.0 | III | 7.5 | CM110 | 210TC |
| | **175** | 2379 | 2.5 | III | 10 | | 210TC |
| | **117** | 3487 | 1.9 | II | 15 | | 210TC |
| | **88** | 4596 | 1.4 | II | 20 | | 210TC |
| | **233** | 2406 | 2.2 | III | 7.5 | | 210TC |
| | **175** | 3172 | 1.9 | II | 10 | | 210TC |
| | **117** | 4650 | 1.4 | I | 15 | | 210TC |
| | **88** | 6128 | 1.1 | I | 20 | | 210TC |

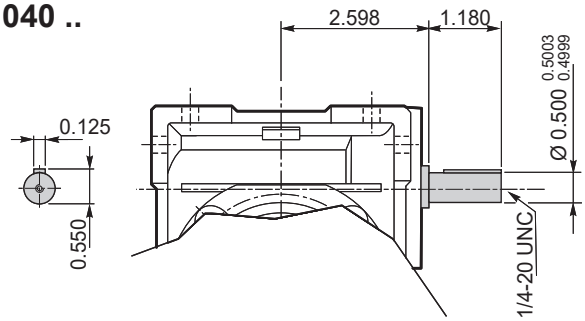
**Dimensiones** *Dimensions*

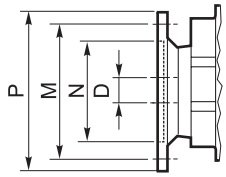
# CM 040 U - CMIS 040 U

## CM 040 U



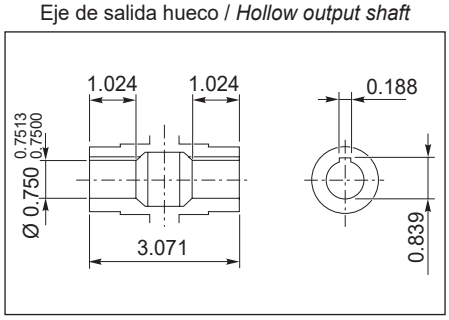

## CMIS 040 ..



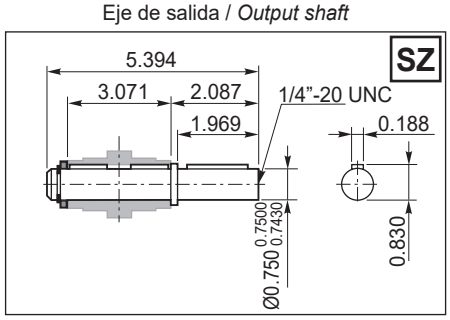




| Brida Motor / *Motor flange* | |
|---|---|
| **Dimensiones NEMA** *NEMA Dimensions* | |
| | **56 C** |
| **N** | 4.5 |
| **M** | 5.88 |
| **P** | 6.5 |
| **D** | 0.625 |
| **LM** | 3.150 |

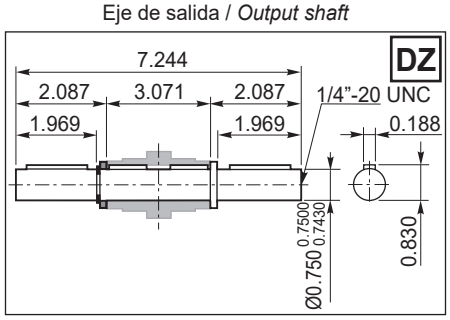
Eje de salida hueco / *Hollow output shaft*




Eje de salida / *Output shaft*



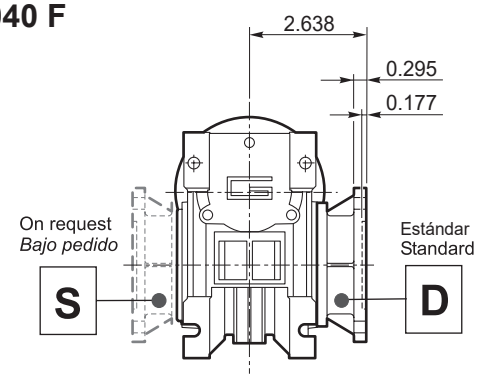

Eje de salida / *Output shaft*

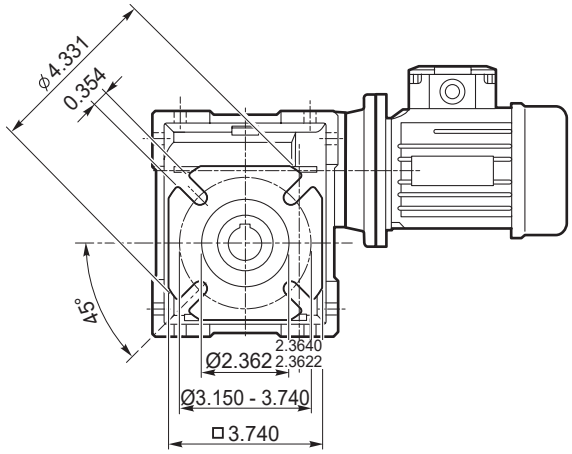


Dimensiones | *Dimensions*

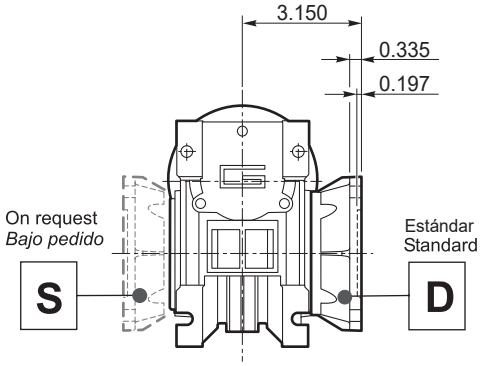
# CM 040 F..

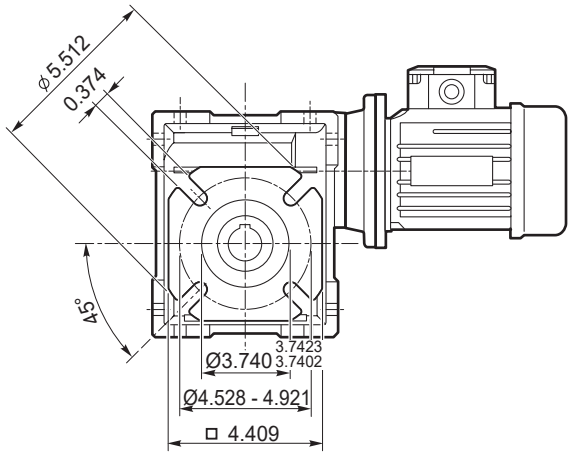
## CM 040 F



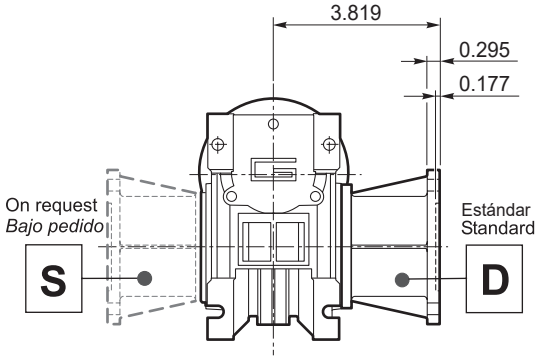



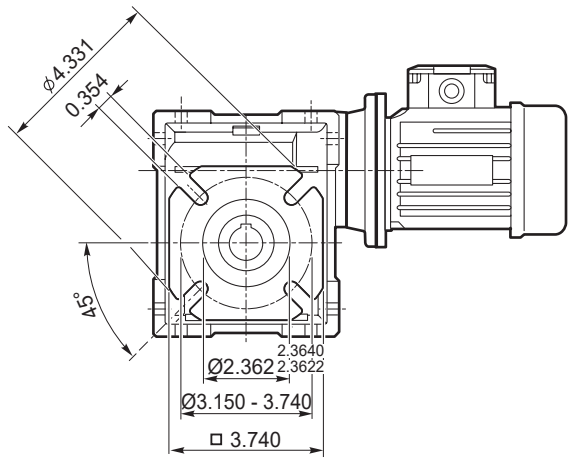

## CM 040 FB




## CM 040 FL

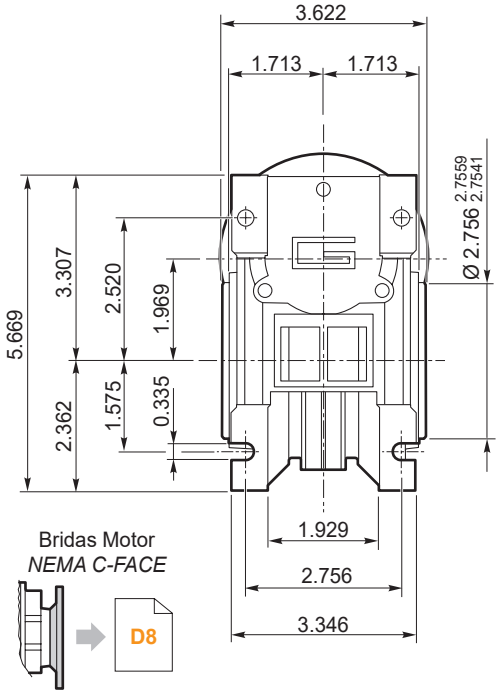


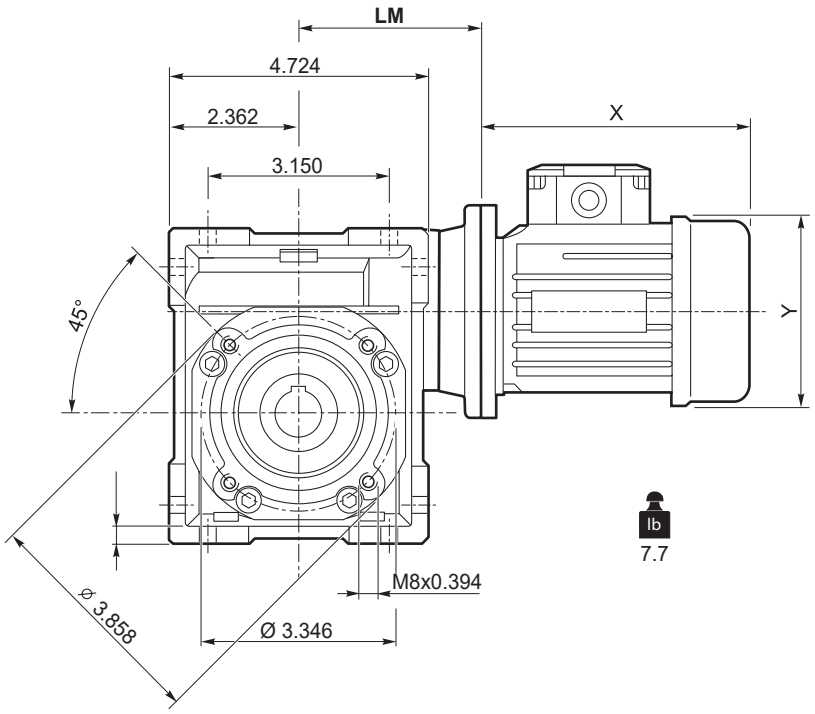



**Dimensiones** *Dimensions*

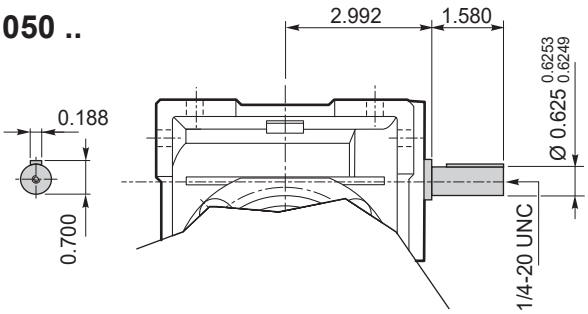
# CM 050 U - CMIS 050 U

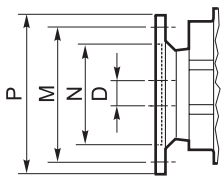
## CM 050 U



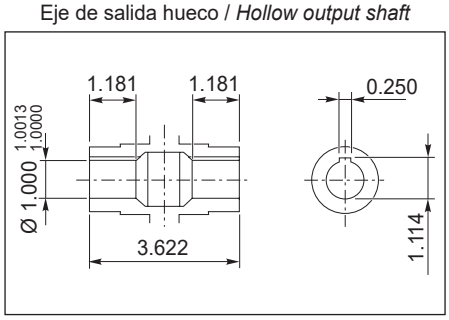

## CMIS 050 ..



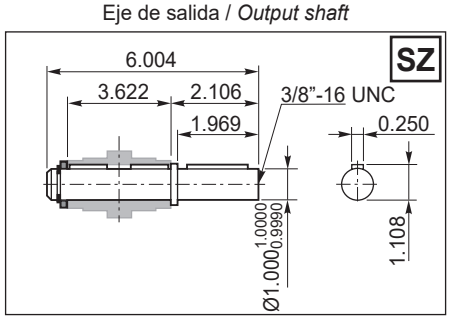




| Brida Motor / *Motor flange* | |
|---|---|
| **Dimensiones NEMA** *NEMA Dimensions* | |
| | **56 C** |
| **N** | 4.5 |
| **M** | 5.88 |
| **P** | 6.5 |
| **D** | 0.625 |
| **LM** | 3.346 |

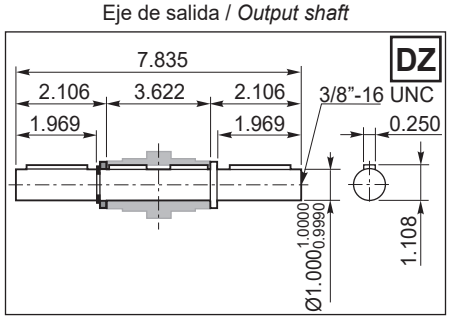
Eje de salida hueco / *Hollow output shaft*




Eje de salida / *Output shaft*



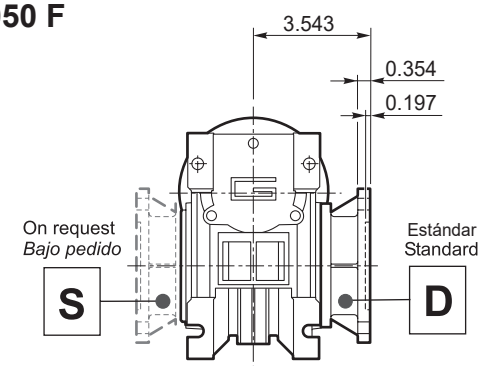

Eje de salida / *Output shaft*

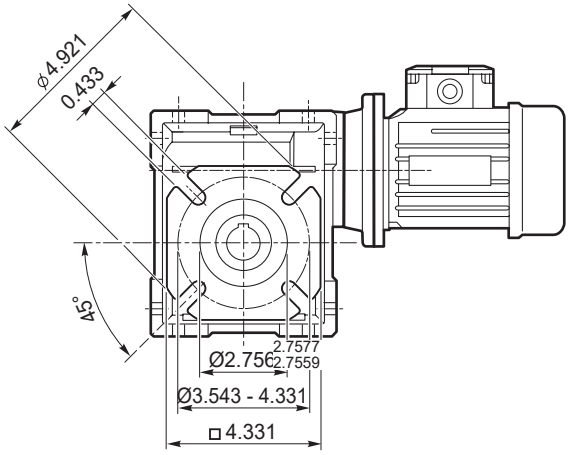


Dimensiones | *Dimensions*

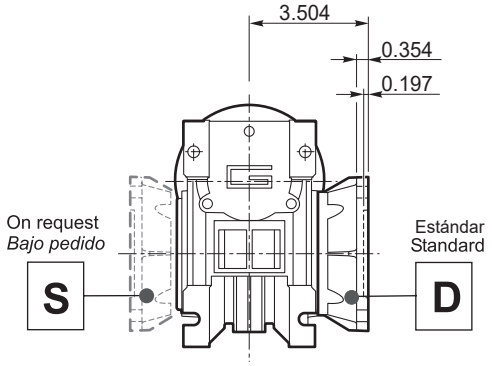
# CM 050 F..

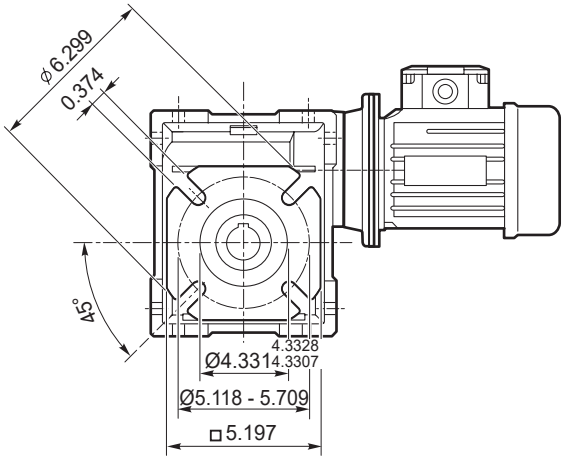
## CM 050 F



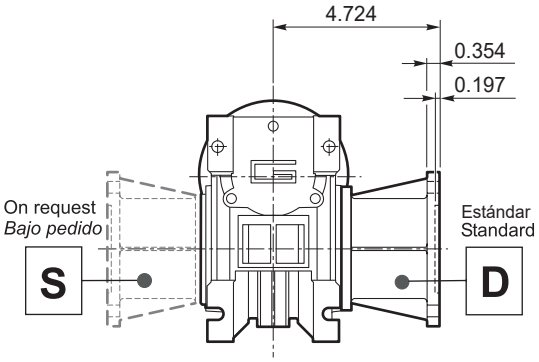



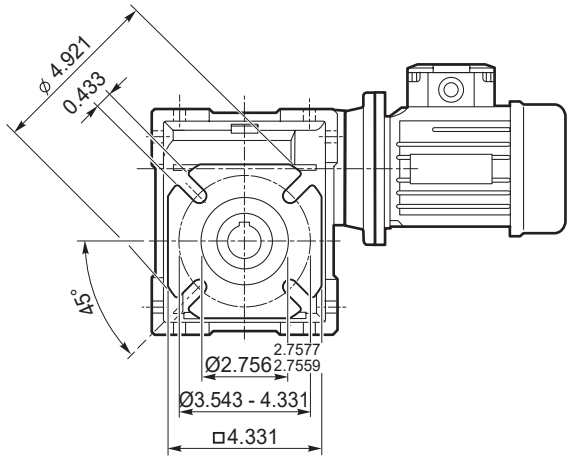

## CM 050 FB




## CM 050 FL

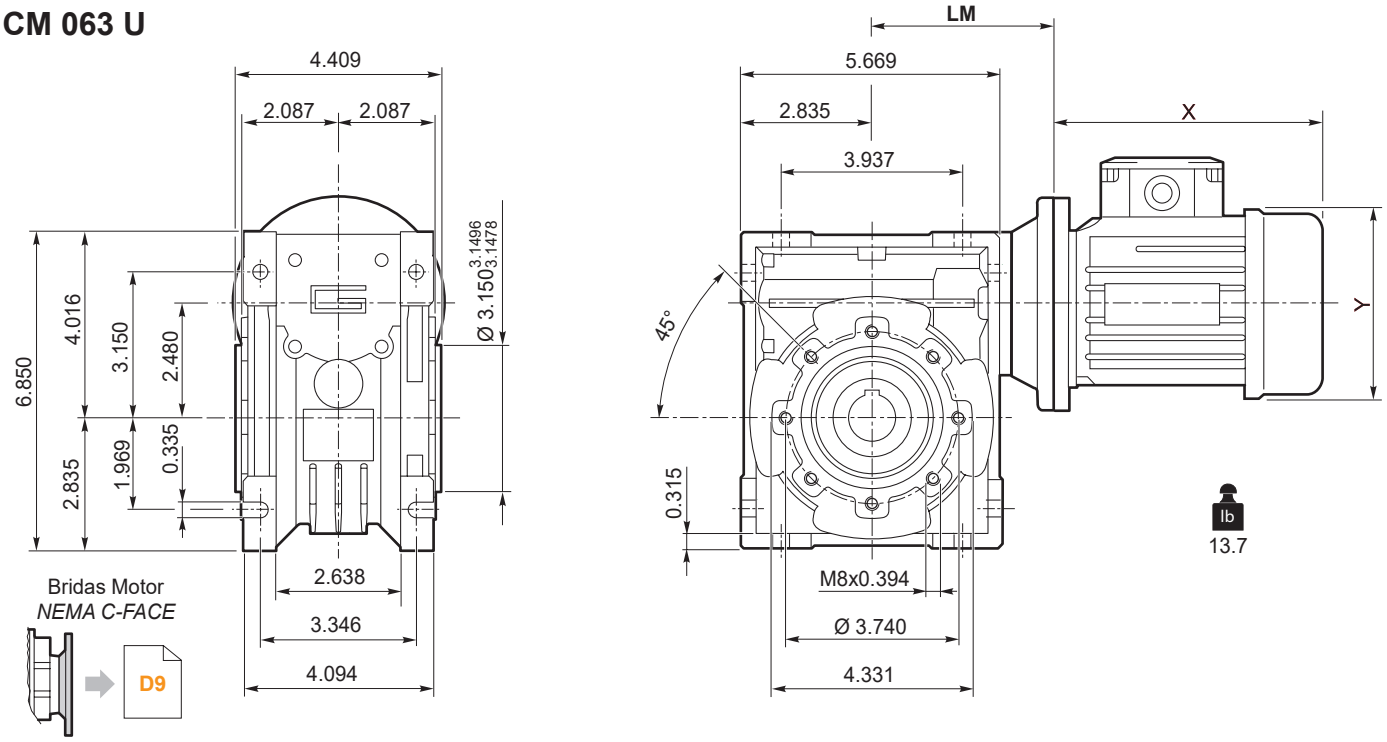


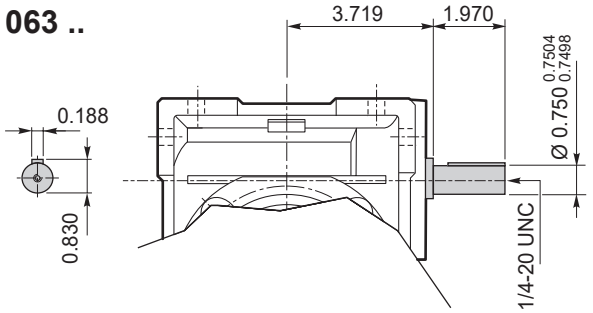
**Dimensiones** *Dimensions*

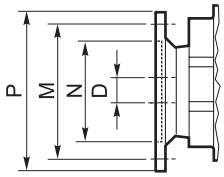
# CM 063 U - CMIS 063 U

## CM 063 U



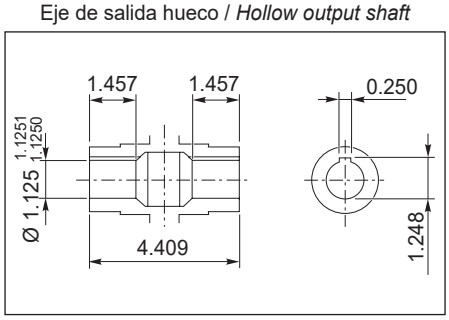

## CMIS 063 ..



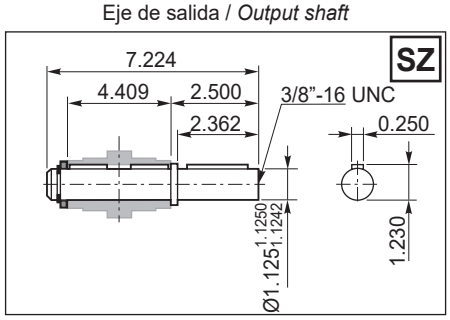




| Brida Motor / *Motor flange* | | |
|---|---|---|
| Dimensiones NEMA *NEMA Dimensions* | | |
| | 56 C | 140 TC |
| N | 4.5 | |
| M | 5.88 | |
| P | 6.5 | |
| D | 0.625 | 0.875 |
| LM | 4.055 | |

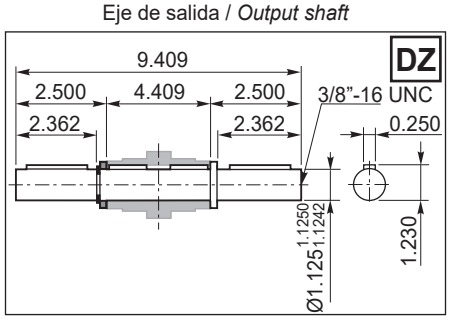
Eje de salida hueco / *Hollow output shaft*




Eje de salida / *Output shaft*



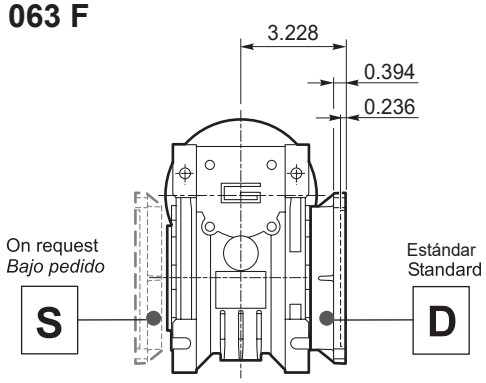

Eje de salida / *Output shaft*

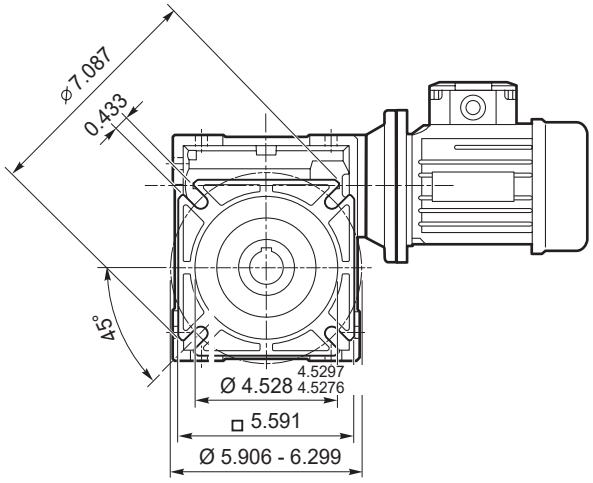


Dimensiones | *Dimensions*

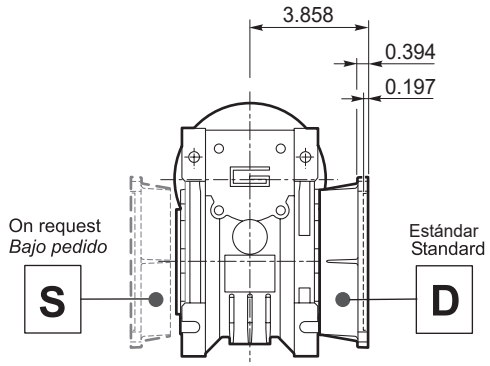
# CM 063 F..

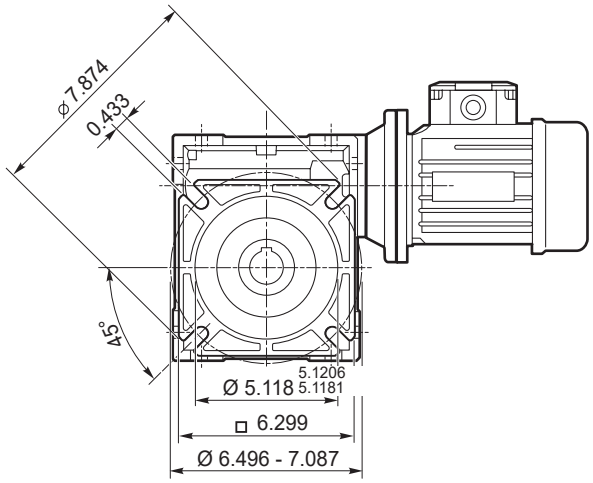
## CM 063 F



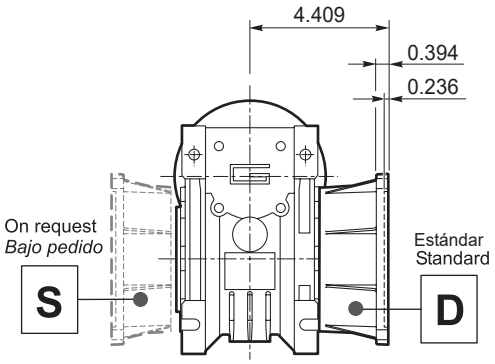



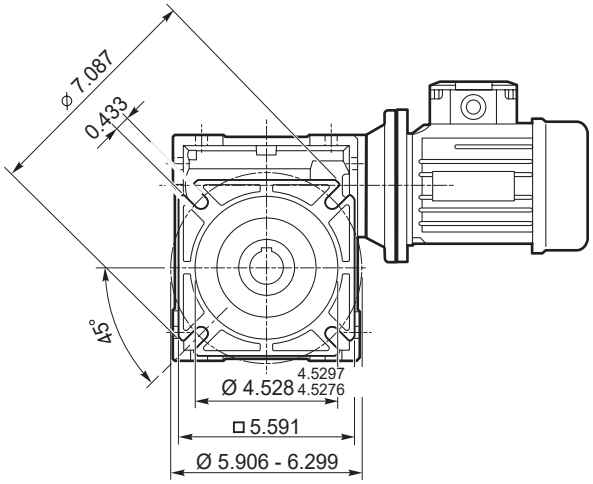

## CM 063 FB




## CM 063 FL

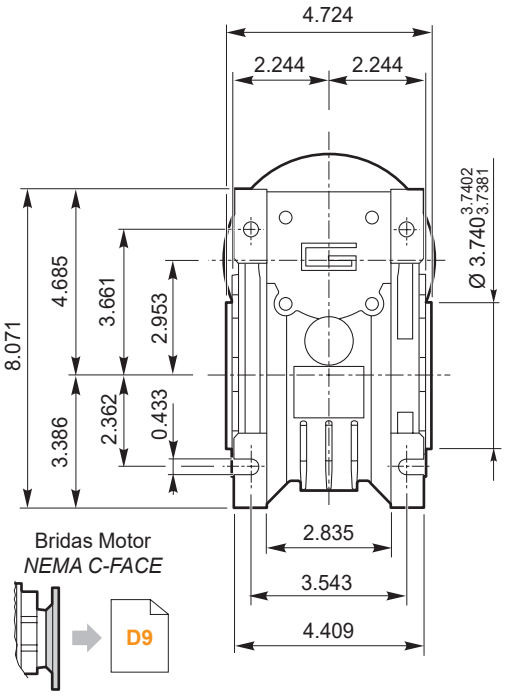


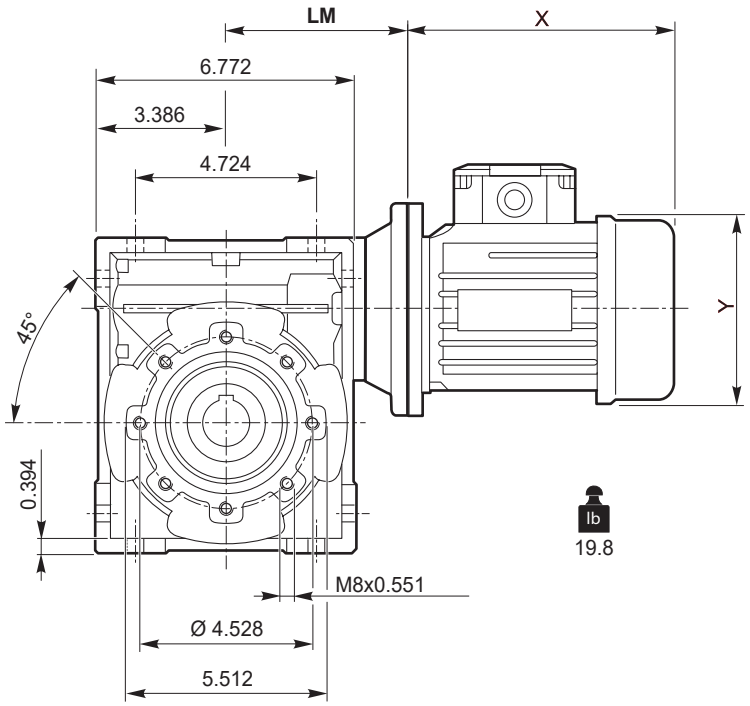



**Dimensiones** *Dimensions*

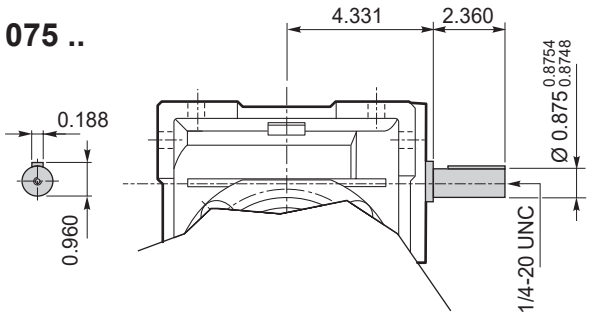
# CM 075 U - CMIS 075 U

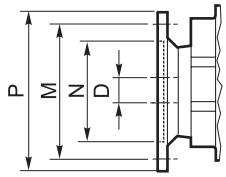
## CM 075 U



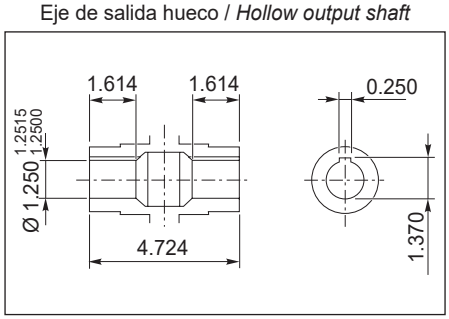

## CMIS 075 ..



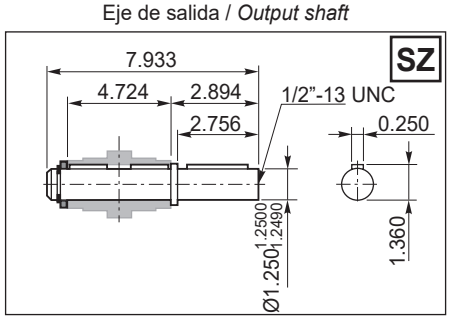




| Brida Motor / *Motor flange* | | | |
|---|---|---|---|
| Dimensiones NEMA *NEMA Dimensions* | | | |
| | 56 C | 140 TC | 180 TC |
| N | 4.5 | | 8.5 |
| M | 5.88 | | 7.25 |
| P | 6.5 | | 9 |
| D | 0.625 | 0.875 | 1.125 |
| LM | 4.842 | | 4.961 |

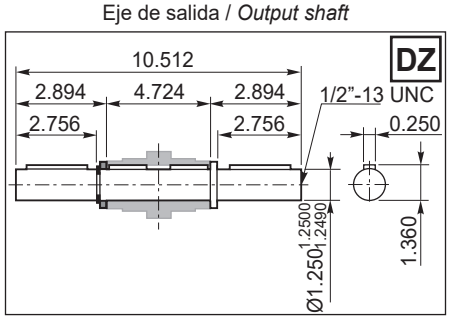
Eje de salida hueco / *Hollow output shaft*




Eje de salida / *Output shaft*



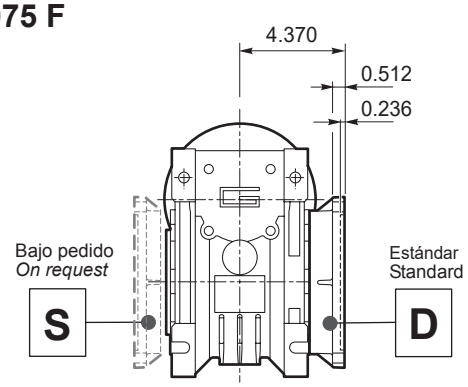

Eje de salida / *Output shaft*

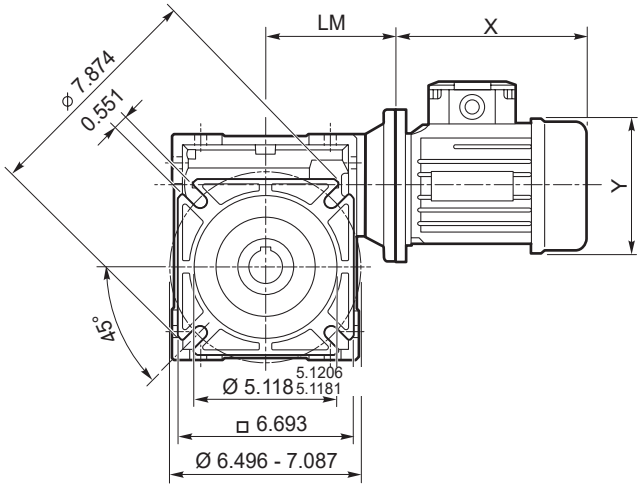


**Dimensiones** ***Dimensions***

## CM 075 F..

### CM 075 F

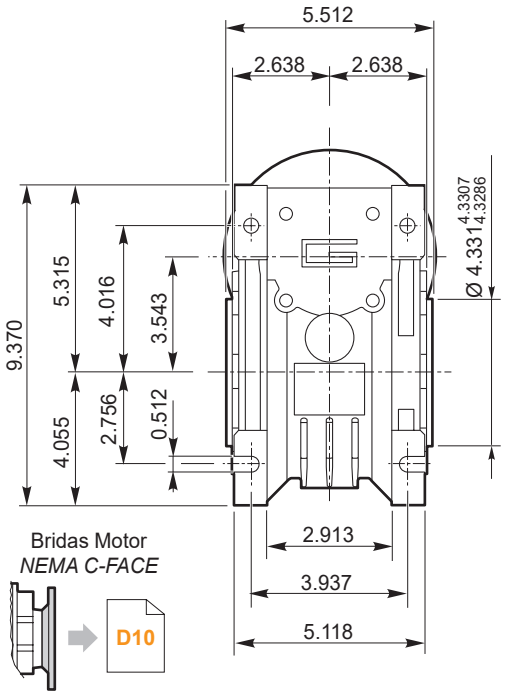


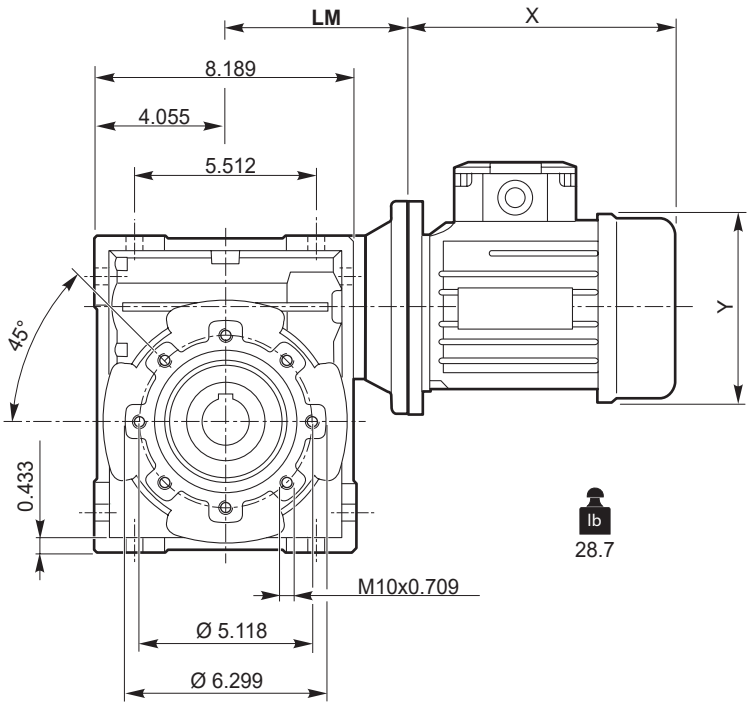



**Dimensiones** *Dimensions*

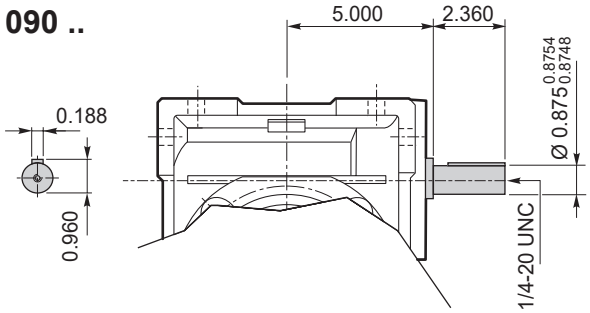
# CM 090 U - CMIS 090 U

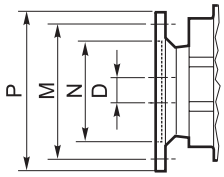
## CM 090 U



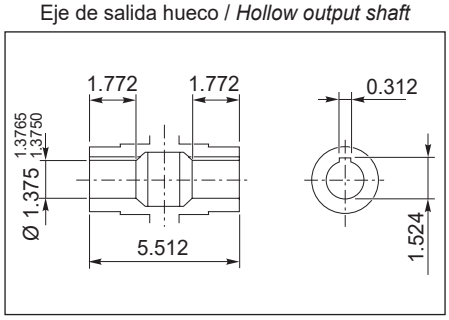

## CMIS 090 ..



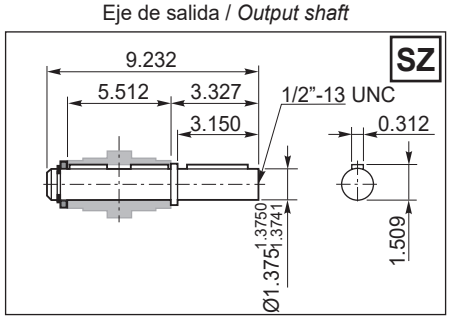




| Brida Motor / *Motor flange* | | | |
|---|---|---|---|
| Dimensiones NEMA *NEMA Dimensions* | | | |
| | 56 C | 140 TC | 180 TC |
| N | 4.5 | | 8.5 |
| M | 5.88 | | 7.25 |
| P | 6.5 | | 9 |
| D | 0.625 | 0.875 | 1.125 |
| LM | 5.512 | | 5.419 |

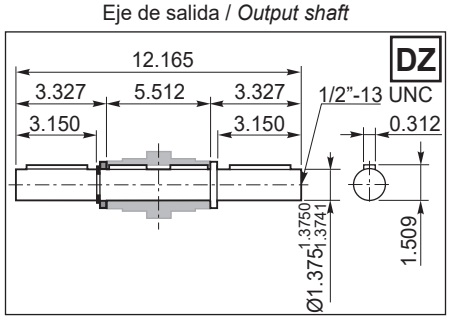
Eje de salida hueco / *Hollow output shaft*

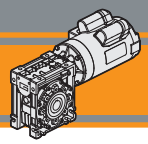



Eje de salida / *Output shaft*




Eje de salida / *Output shaft*

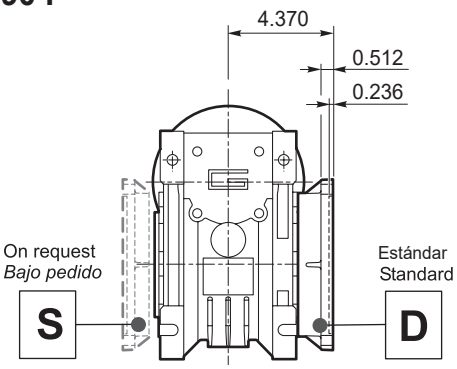


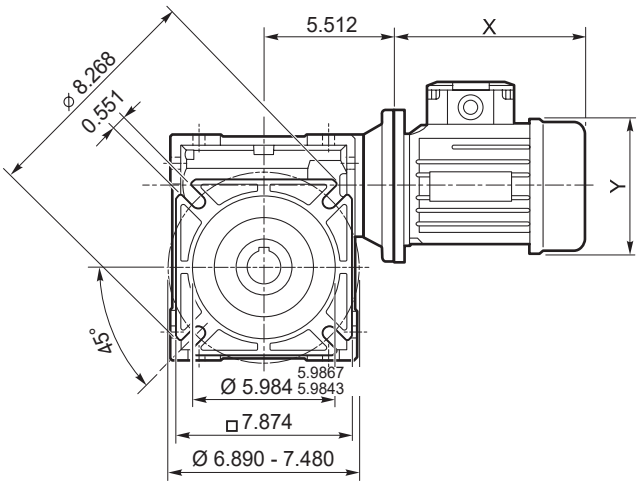




# CM 090 F..

## CM 090 F

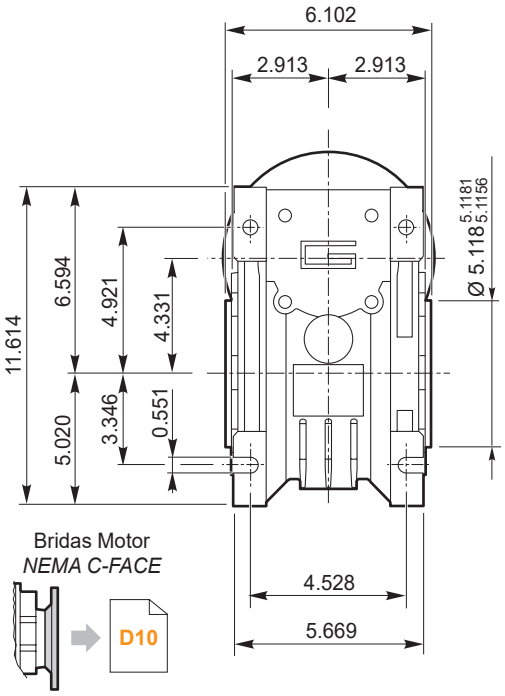


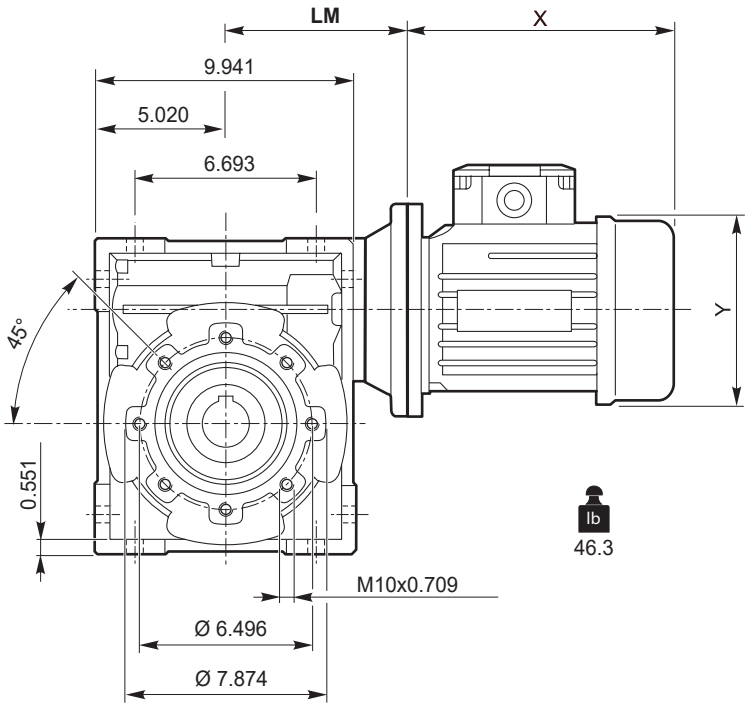



**Dimensiones** *Dimensions*

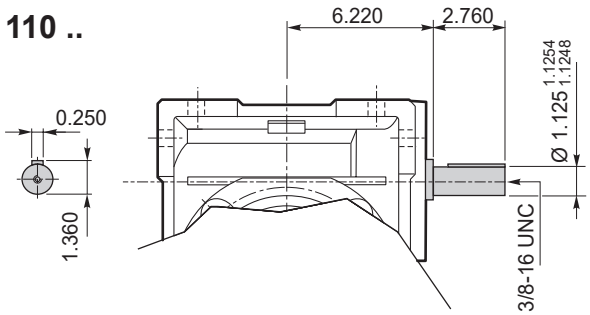
# CM 110 U - CMIS 110 U

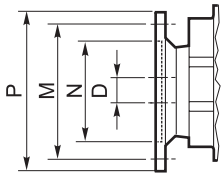
## CM 110 U



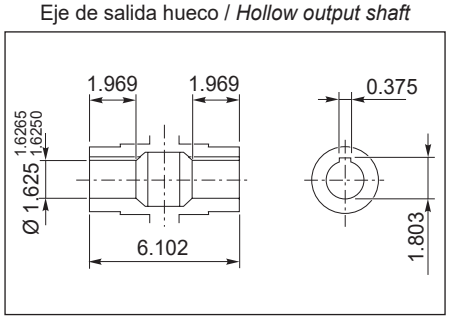

## CMIS 110 ..



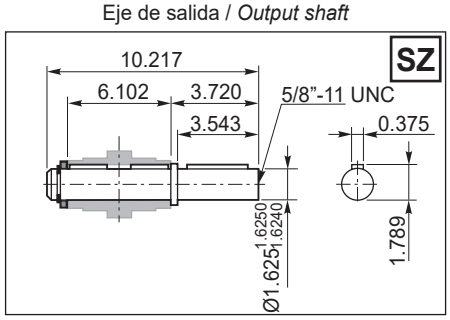




| Brida Motor / *Motor flange* | | | |
|---|---|---|---|
| Dimensiones NEMA *NEMA Dimensions* | | | |
| | 140 TC | 180 TC | 210 TC |
| N | 4.5 | 8.5 | |
| M | 5.88 | 7.25 | |
| P | 6.5 | 9 | |
| D | 0.875 | 1.125 | 1.375 |
| LM | 6.693 | 6.693 | |

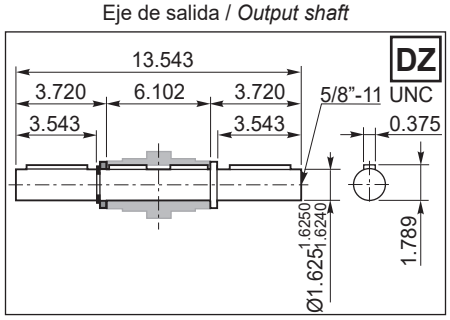
Eje de salida hueco / *Hollow output shaft*

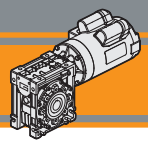



Eje de salida / *Output shaft*




Eje de salida / *Output shaft*

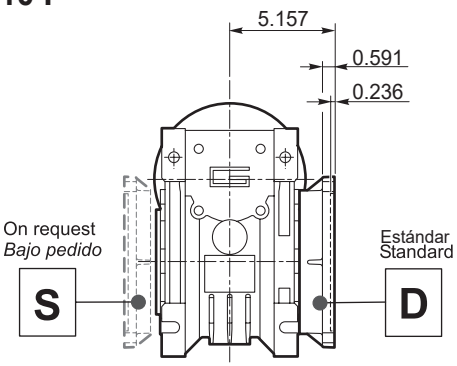


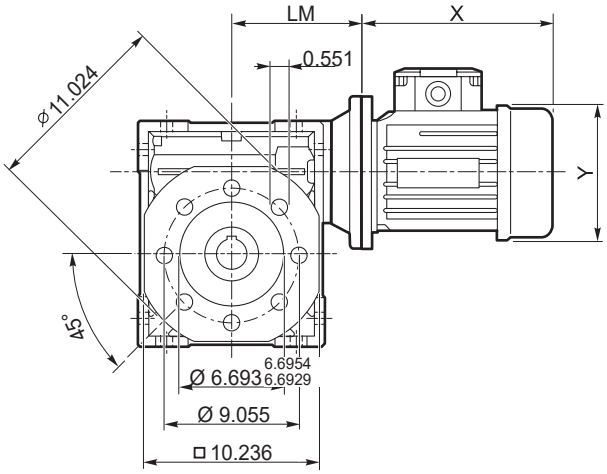




# CM 110 F..

## CM 110 F



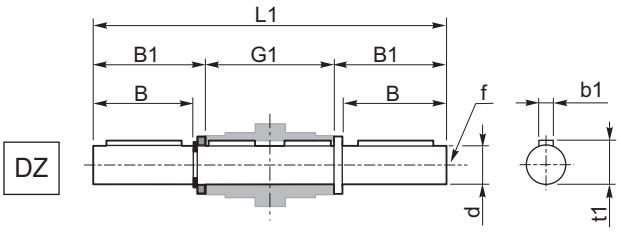



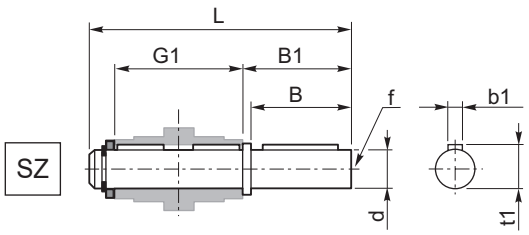
## Accesorios

## *Accessories*

### Eje de salida simple y doble

### *Single and double output shaft*



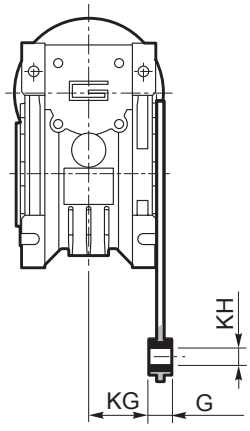



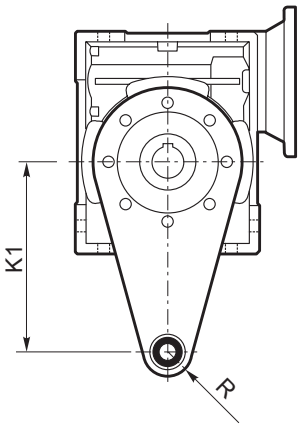

| CM | d | B | B1 | G1 | L | L1 | f | b1 | t1 |
|---|---|---|---|---|---|---|---|---|---|
| **040** | 0.750 $^{0.7500}_{0.7430}$ | 1.969 | 2.087 | 3.071 | 5.394 | 7.244 | 1/4"-20 | 0.188 | 0.830 |
| **050** | 1.000 $^{1.0000}_{0.9992}$ | 1.969 | 2.106 | 3.622 | 6.004 | 7.835 | 3/8"-16 | 0.250 | 1.108 |
| **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 |

### 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 |

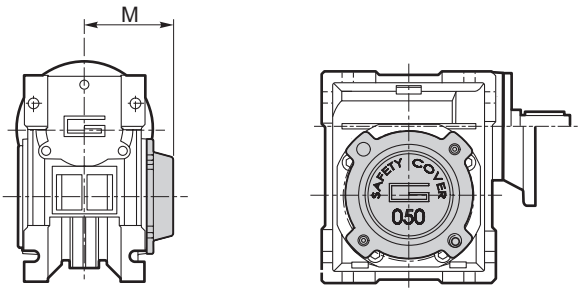


## Opciones / *Options*

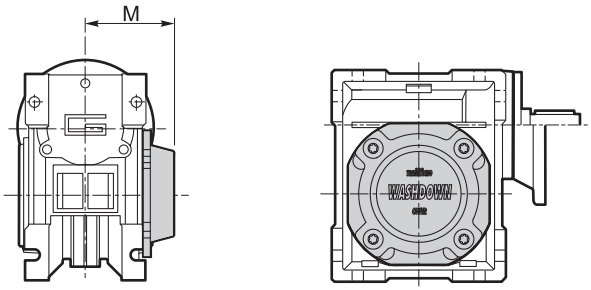
### SC - Cubierta de seguridad - *Safety Cover*

| CM | M |
|---|---|
| 040 | 2.14 |
| 050 | 2.46 |
| 063 | 2.87 |
| 075 | 3.11 |
| 090 | 3.70 |
| 110 | 4.02 |




### WD - *Kit washdown cover*

| CM | M |
|---|---|
| 040 | 2.19 |
| 050 | 2.50 |
| 063 | 2.81 |
| 075 | 3.15 |
| 090 | 3.74 |
| 110 | 4.06 |



# Note

TRANSTECNO®
the modular gearmotor

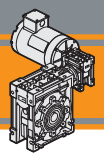
# CMM

CMM Alü

60Hz

## Nema

## Motorreductores sinfín corona de doble reducción
## Double reduction wormgearmotors




| Índice | *Index* | Pág. *Page* |
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| Características técnicas | *Technical features* | **E2** |
| Clasificación | *Classification* | **E2** |
| Nomenclatura | *Symbols* | **E3** |
| Ejecuciòn de montaje | *Mounting executions* | **E3** |
| Relaciones combinadas | *Combination ratio* | **E3** |
| Lubricación | *Lubrication* | **E3** |
| Datos técnicos | *Technical data* | **E4** |
| Motores aplicables | *IEC Motor adapters* | **E6** |
| Dimensiones | *Dimensions* | **E7** |
| Accesorios | *Accessories* | **E10** |
| Opciones | *Options* | **E11** |




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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.
- Doble rodamiento de rodillos cónicos en tamaños 090 y 110.
- 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.*
- *Double taper roller bearing on sizes 090 and 110.*
- *Permanent synthetic oil long-life lubrication.*

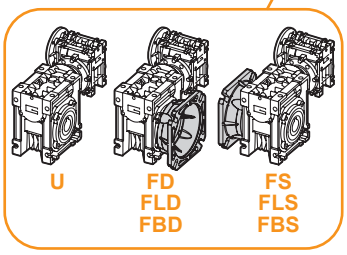
## Clasificación

## *Classification*

REDUCTOR / *GEARBOX*

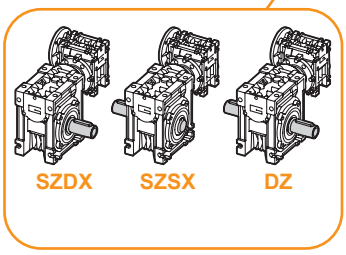
| CMM | 040/075 | FD | 300 | 56C | SZDX | BRSX | 90 | M1 | US1 |
|---|---|---|---|---|---|---|---|---|---|
| Tipo *Type* | Tamaño *Size* | Versión *Version* | Relación de reducción *Ratio* | NEMA | Eje de salida *Output shaft* | Brazo de reacción *Torque arm* | Ângulo *Angle* | Posición de montaje Mounting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

Relación de reducción
*Gearbox Version*



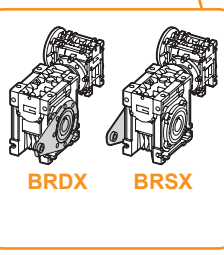

F.....D = Lado derecho / *Right side*
F.....S = Lado izquierdo / *Left side*

Eje de salida
*Output shaft*



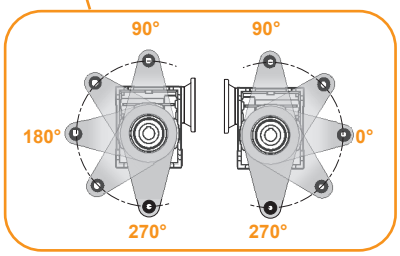

SZDX = Flecha sencilla lado derecho
*Single shaft right side*
DZ = Flecha doble / *Double shaft*
SZSX =Flecha sencilla lado izquierdo
*Single shaft left side*

Brazo de reacción
*Torque arm*

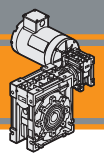



BRDX = Lado derecho / *Right side*
BRSX = Lado izquierdo / *Left side*

Posición del Brazo
*Torque arm position* (*)




(*) NOTA: El brazo de reacción se suministra desmontado.
*NOTE: the torque arm will be supplied not assembled.*



## Clasificación / *Classification*

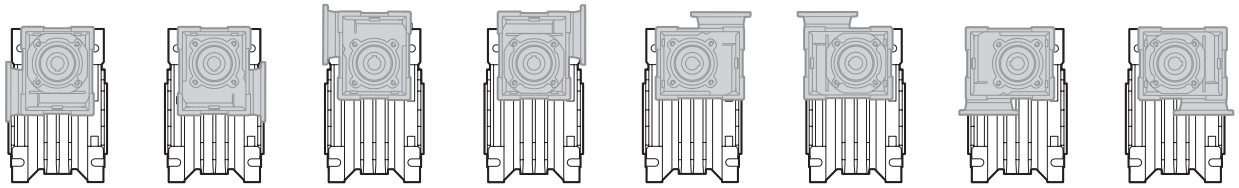
MOTOR / *MOTOR*

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

## Nomenclatura / *Symbols*

| | | |
|---|---|---|
| $n_1$ | [rpm] | Velocidad de entrada / *Input speed* |
| $n_2$ | [rpm] | Velocidad de salida / *Output speed* |
| i | | Relación de reducción / *Ratio* |
| $P_1$ | [hp] | Potencia en la entrada / *Input power* |
| $M_2$ | [lb·in] | Par en la salida en función de $P_1$ / *Output torque referred to $P_1$* |
| $Pn_1$ | [hp] | Potencia nominal en la entrada / *Nominal input power* |
| $Mn_2$ | [lb·in] | Par nominal en la salida en función de $Pn_1$ / *Nominal output torque referred to $Pn_1$* |
| sf | | Rendimiento dinámico / *Service factor* |
| $R_2$ | [lb] | Carga radial admisible en la salida / *Maximum output radial load* |
| $A_2$ | [lb] | 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.

*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.*

## 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) | **23** | 290 | 15.4 | III | 75 | **CMM 040/075** | **56C** |
| | **18** | 377 | 11.8 | III | 100 | | **56C** |
| | **12** | 530 | 8.8 | III | 150 | | **56C** |
| | **8.8** | 667 | 6.2 | III | 200 | | **56C** |
| | **7.0** | 786 | 4.6 | III | 250 | | **56C** |
| | **5.8** | 871 | 5.6 | III | 300 | | **56C** |
| | **4.4** | 1064 | 3.9 | III | 400 | | **56C** |
| | **3.5** | 1209 | 2.9 | III | 500 | | **56C** |
| | **2.9** | 1617 | 3.0 | III | 600 | | **56C** |
| | **2.3** | 1917 | 2.5 | III | 750 | | **56C** |
| | **1.9** | 2177 | 2.2 | III | 900 | | **56C** |
| | **1.5** | 2695 | 1.8 | II | 1200 | | **56C** |
| | **1.2** | 3109 | 1.6 | II | 1500 | | **56C** |
| | **0.97** | 3607 | 1.3 | I | 1800 | | **56C** |
| | **0.73** | 4408 | 0.9 | I | 2400 | | **56C** |
| | **0.58** | 3952 | 0.9 | I | 3000 | | **56C** |
| | **23** | 301 | 22.2 | III | 75 | **CMM 040/090** | **56C** |
| | **18** | 392 | 17.0 | III | 100 | | **56C** |
| | **12** | 544 | 14.2 | III | 150 | | **56C** |
| | **8.8** | 696 | 10.3 | III | 200 | | **56C** |
| | **7.0** | 834 | 7.5 | III | 250 | | **56C** |
| | **5.8** | 914 | 9.1 | III | 300 | | **56C** |
| | **4.4** | 1122 | 6.4 | III | 400 | | **56C** |
| | **3.5** | 1306 | 4.7 | III | 500 | | **56C** |
| | **2.9** | 1698 | 4.9 | III | 600 | | **56C** |
| | **2.3** | 2013 | 4.1 | III | 750 | | **56C** |
| | **1.9** | 2285 | 3.7 | III | 900 | | **56C** |
| | **1.5** | 2830 | 2.9 | III | 1200 | | **56C** |
| | **1.2** | 3265 | 2.6 | III | 1500 | | **56C** |
| | **1.0** | 3787 | 2.2 | III | 1800 | | **56C** |
| | **0.73** | 4649 | 1.5 | II | 2400 | | **56C** |
| | **0.58** | 5410 | 1.1 | I | 3000 | | **56C** |
| | **1.0** | 3980 | 3.5 | III | 1800 | **CMM 050/110** | **56C** |
| | **0.7** | 5058 | 2.5 | III | 2400 | | **56C** |
| | **0.6** | 6011 | 1.9 | II | 3000 | | **56C** |

### 0.25 hp

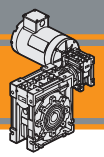
| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| 0.18 kW (1750 rpm) | **23** | 453 | 9.8 | III | 75 | **CMM 040/075** | **56C** |
| | **18** | 589 | 7.6 | III | 100 | | **56C** |
| | **12** | 828 | 5.7 | III | 150 | | **56C** |
| | **8.8** | 1043 | 4.0 | III | 200 | | **56C** |
| | **7.0** | 1228 | 2.9 | III | 250 | | **56C** |
| | **5.8** | 1360 | 3.6 | III | 300 | | **56C** |
| | **4.4** | 1663 | 2.5 | III | 400 | | **56C** |
| | **3.5** | 1889 | 1.9 | II | 500 | | **56C** |
| | **2.9** | 2526 | 1.9 | II | 600 | | **56C** |
| | **2.3** | 2996 | 1.6 | II | 750 | | **56C** |
| | **1.9** | 3401 | 1.4 | II | 900 | | **56C** |
| | **1.5** | 4211 | 1.1 | I | 1200 | | **56C** |
| | **1.2** | 4858 | 1.0 | I | 1500 | | **56C** |
| | **0.97** | 5636 | 0.9 | I | 1800 | | **56C** |

### 0.25 hp

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| 0.18 kW (1750 rpm) | **23** | 470 | 14.2 | III | 75 | **CMM 040/090** | **56C** |
| | **18** | 612 | 10.9 | III | 100 | | **56C** |
| | **12** | 850 | 9.1 | III | 150 | | **56C** |
| | **8.8** | 1088 | 6.6 | III | 200 | | **56C** |
| | **7.0** | 1304 | 4.8 | III | 250 | | **56C** |
| | **5.8** | 1428 | 5.8 | III | 300 | | **56C** |
| | **4.4** | 1753 | 4.1 | III | 400 | | **56C** |
| | **3.5** | 2041 | 3.0 | III | 500 | | **56C** |
| | **2.9** | 2653 | 3.1 | III | 600 | | **56C** |
| | **2.3** | 3146 | 2.7 | III | 750 | | **56C** |
| | **1.9** | 3571 | 2.3 | III | 900 | | **56C** |
| | **1.5** | 4421 | 1.9 | II | 1200 | | **56C** |
| | **1.2** | 5101 | 1.6 | II | 1500 | | **56C** |
| | **1.0** | 5917 | 1.4 | II | 1800 | | **56C** |
| | **0.73** | 7264 | 1.0 | I | 2400 | | **56C** |
| | **1.9** | 3731 | 3.8 | III | 900 | **CMM 050/110** | **56C** |
| | **1.5** | 4629 | 3.0 | III | 1200 | | **56C** |
| | **1.2** | 5441 | 2.6 | III | 1500 | | **56C** |
| | **1.0** | 6219 | 2.3 | III | 1800 | | **56C** |
| | **0.7** | 7903 | 1.6 | II | 2400 | | **56C** |
| | **0.6** | 9393 | 1.2 | I | 3000 | | **56C** |

### 0.33 hp

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| 0.22 kW (1750 rpm) | **23** | 597 | 7.5 | III | 75 | **CMM 040/075** | **56C** |
| | **18** | 778 | 5.7 | III | 100 | | **56C** |
| | **12** | 1092 | 4.3 | III | 150 | | **56C** |
| | **8.8** | 1377 | 3.0 | III | 200 | | **56C** |
| | **7.0** | 1621 | 2.2 | III | 250 | | **56C** |
| | **5.8** | 1796 | 2.7 | III | 300 | | **56C** |
| | **4.4** | 2195 | 1.9 | II | 400 | | **56C** |
| | **3.5** | 2494 | 1.4 | II | 500 | | **56C** |
| | **2.9** | 3335 | 1.5 | II | 600 | | **56C** |
| | **2.3** | 3955 | 1.2 | I | 750 | | **56C** |
| | **1.9** | 4489 | 1.1 | I | 900 | | **56C** |
| | **1.5** | 5558 | 0.9 | I | 1200 | | **56C** |
| | **23** | 620 | 10.7 | III | 75 | **CMM 040/090** | **56C** |
| | **18** | 808 | 8.2 | III | 100 | | **56C** |
| | **12** | 1122 | 6.9 | III | 150 | | **56C** |
| | **8.8** | 1437 | 5.0 | III | 200 | | **56C** |
| | **7.0** | 1721 | 3.7 | III | 250 | | **56C** |
| | **5.8** | 1885 | 4.4 | III | 300 | | **56C** |
| | **4.4** | 2314 | 3.1 | III | 400 | | **56C** |
| | **3.5** | 2693 | 2.3 | III | 500 | | **56C** |
| | **2.9** | 3502 | 2.4 | III | 600 | | **56C** |
| | **2.3** | 4152 | 2.0 | III | 750 | | **56C** |
| | **1.9** | 4714 | 1.8 | II | 900 | | **56C** |
| | **1.5** | 5836 | 1.4 | II | 1200 | | **56C** |
| | **1.2** | 6734 | 1.2 | I | 1500 | | **56C** |
| | **1.0** | 7811 | 1.1 | I | 1800 | | **56C** |



## Datos técnicos

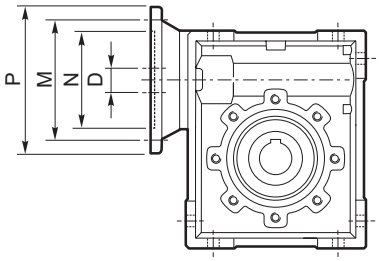
*Technical data*

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **0.33 hp** | | | | | | | |
| 0.22 kW | **2.9** | 3603 | 3.9 | III | 600 | **CMM 050/110** | **56C** |
| (1750 rpm) | **2.3** | 4332 | 3.3 | III | 750 | | **56C** |
| | **1.9** | 4925 | 2.9 | III | 900 | | **56C** |
| | **1.5** | 6111 | 2.3 | III | 1200 | | **56C** |
| | **1.2** | 7183 | 2.0 | II | 1500 | | **56C** |
| | **1.0** | 8209 | 1.7 | II | 1800 | | **56C** |
| | **0.7** | 10432 | 1.2 | I | 2400 | | **56C** |
| | **0.6** | 12399 | 0.9 | I | 3000 | | **56C** |
| **0.5 hp** | | | | | | | |
| 0.37 kW | **23** | 905 | 4.9 | III | 75 | **CMM 040/075** | **56C** |
| (1750 rpm) | **18** | 1179 | 3.8 | III | 100 | | **56C** |
| | **12** | 1655 | 2.8 | III | 150 | | **56C** |
| | **8.8** | 2086 | 2.0 | II | 200 | | **56C** |
| | **7.0** | 2456 | 1.5 | II | 250 | | **56C** |
| | **5.8** | 2721 | 1.8 | II | 300 | | **56C** |
| | **4.4** | 3325 | 1.3 | I | 400 | | **56C** |
| | **3.5** | 3779 | 0.9 | I | 500 | | **56C** |
| | **2.9** | 5053 | 1.0 | I | 600 | | **56C** |
| | **23** | 940 | 7.1 | III | 75 | **CMM 040/090** | **56C** |
| | **18** | 1224 | 5.4 | III | 100 | | **56C** |
| | **12** | 1700 | 4.5 | III | 150 | | **56C** |
| | **8.8** | 2177 | 3.3 | III | 200 | | **56C** |
| | **7.0** | 2607 | 2.4 | III | 250 | | **56C** |
| | **5.8** | 2857 | 2.9 | III | 300 | | **56C** |
| | **4.4** | 3507 | 2.1 | III | 400 | | **56C** |
| | **3.5** | 4081 | 1.5 | II | 500 | | **56C** |
| | **2.9** | 5305 | 1.6 | II | 600 | | **56C** |
| | **2.3** | 6292 | 1.3 | I | 750 | | **56C** |
| | **1.9** | 7142 | 1.2 | I | 900 | | **56C** |
| | **1.5** | 8842 | 0.9 | I | 1200 | | **56C** |
| | **5.8** | 2937 | 4.8 | III | 300 | **CMM 050/110** | **56C** |
| | **4.4** | 3732 | 3.4 | III | 400 | | **56C** |
| | **3.5** | 4436 | 2.5 | III | 500 | | **56C** |
| | **2.9** | 5459 | 2.6 | III | 600 | | **56C** |
| | **2.3** | 6564 | 2.2 | III | 750 | | **56C** |
| | **1.9** | 7462 | 1.9 | II | 900 | | **56C** |
| | **1.5** | 9259 | 1.5 | II | 1200 | | **56C** |
| | **1.2** | 10883 | 1.3 | I | 1500 | | **56C** |
| | **1.0** | 12437 | 1.1 | I | 1800 | | **56C** |

| $P_1$ [hp] | $n_2$ [rpm] | $M_2$ [lb·in] | sf | AGMA | i | | NEMA |
|---|---|---|---|---|---|---|---|
| **0.75 hp** | | | | | | | |
| 0.55 kW | **23** | 1427 | 8.3 | III | 75 | **CMM 050/110** | **56C** |
| (1750 rpm) | **18** | 1858 | 6.3 | III | 100 | | **56C** |
| | **12** | 2615 | 5.0 | III | 150 | | **56C** |
| | **8.8** | 3395 | 3.6 | III | 200 | | **56C** |
| | **7.0** | 4130 | 2.8 | III | 250 | | **56C** |
| | **5.8** | 4405 | 3.2 | III | 300 | | **56C** |
| | **4.4** | 5598 | 2.3 | III | 400 | | **56C** |
| | **3.5** | 6653 | 1.7 | II | 500 | | **56C** |
| | **2.9** | 8188 | 1.7 | II | 600 | | **56C** |
| | **2.3** | 9846 | 1.4 | II | 750 | | **56C** |
| | **1.9** | 11194 | 1.3 | I | 900 | | **56C** |
| | **1.5** | 13888 | 1.0 | I | 1200 | | **56C** |
| | **1.2** | 16324 | 0.9 | I | 1500 | | **56C** |
| **1 hp** | | | | | | | |
| 0.75 kW | **23** | 1902 | 6.2 | III | 75 | **CMM 050/110** | **56C** |
| (1750 rpm) | **18** | 2478 | 4.8 | III | 100 | | **56C** |
| | **12** | 3487 | 3.8 | III | 150 | | **56C** |
| | **8.8** | 4527 | 2.7 | III | 200 | | **56C** |
| | **7.0** | 5506 | 2.1 | III | 250 | | **56C** |
| | **5.8** | 5873 | 2.4 | III | 300 | | **56C** |
| | **4.4** | 7464 | 1.7 | II | 400 | | **56C** |
| | **3.5** | 8871 | 1.3 | I | 500 | | **56C** |
| | **2.9** | 10917 | 1.3 | I | 600 | | **56C** |
| | **2.3** | 13128 | 1.1 | I | 750 | | **56C** |
| | 1.9 | 14925 | 0.9 | I | 900 | | **56C** |

## Motores Aplicables IEC

## *IEC Motor adapters*



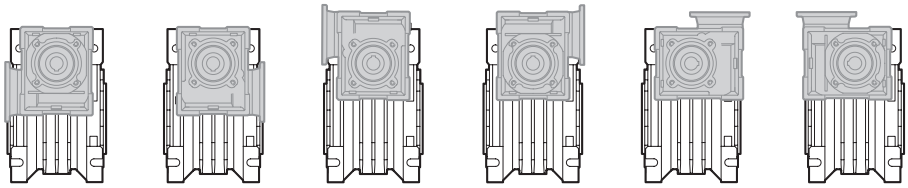

NOTA / NOTE

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

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

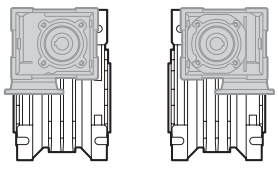
**B/BS = Buje de metal para flecha**

***B/BS = Metal shaft sleeve***



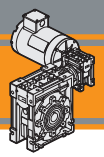
**UB1** **UB2** **US1** **US2** **UV1** **UV2**

| CMM | NEMA | N | M | P | D | $i_1$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 7.5 | 10 | 20 | 25 | 30 | 40 | 50 | 60 |
| **040/075** | | | | | | | | | | | | | |
| **040/090** | **56C** | 4.5 | 5.88 | 6.5 | 0.625 | | | | | | | | |
| **050/110** | | | | | | | | | | | | | |



**UC1** **UC2**

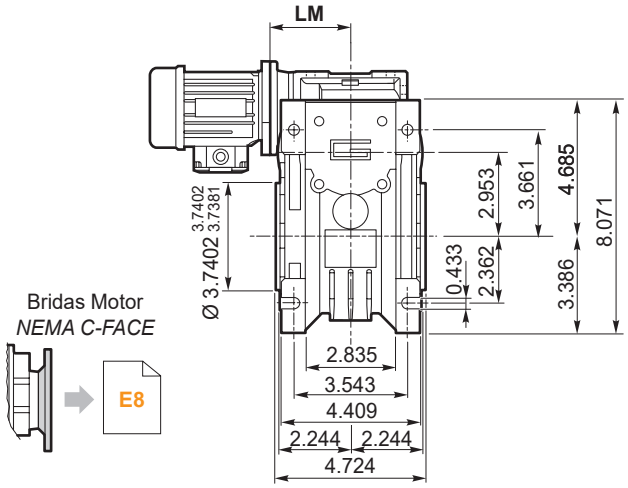
| CMM | NEMA | N | M | P | D | $i_1$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 7.5 | 10 | 20 | 25 | 30 | 40 | 50 | 60 |
| **050/110** | **56C** | 4.5 | 5.88 | 6.5 | 0.625 | | | | | | | | |

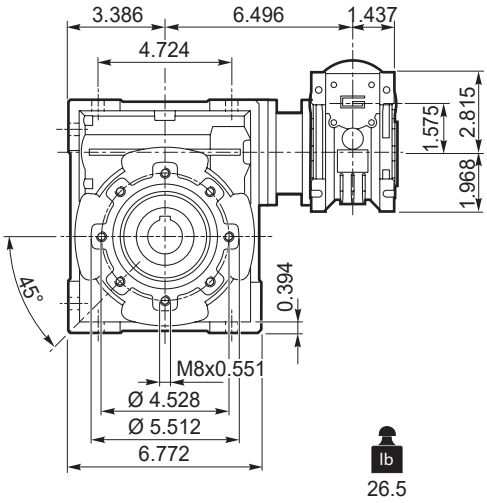




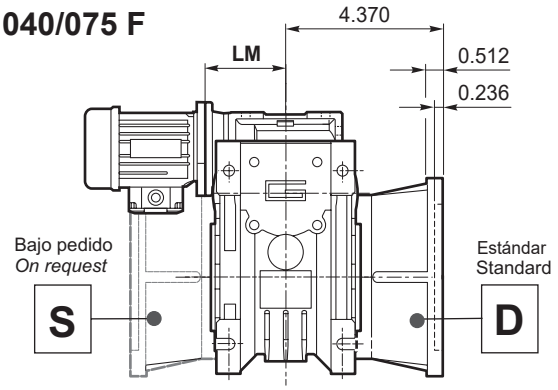
# CMM 040/075

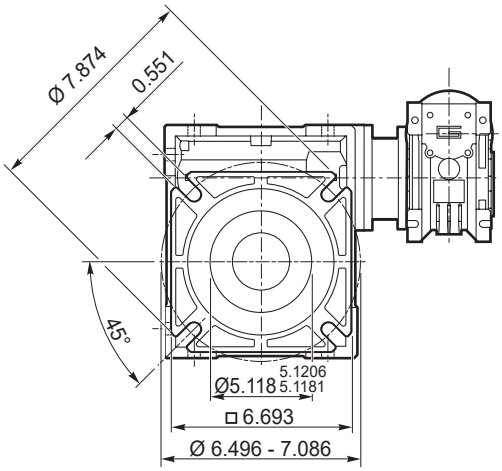
## CMM 040/075 U



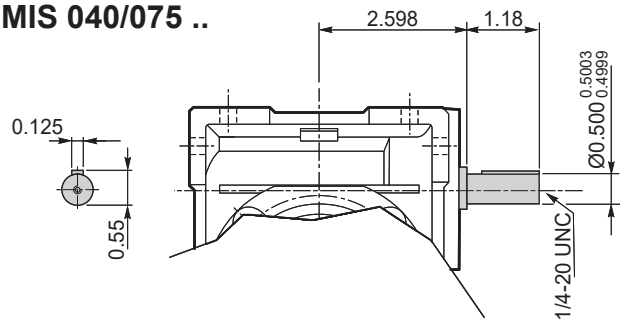



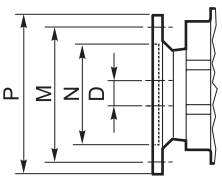

## CMM 040/075 F



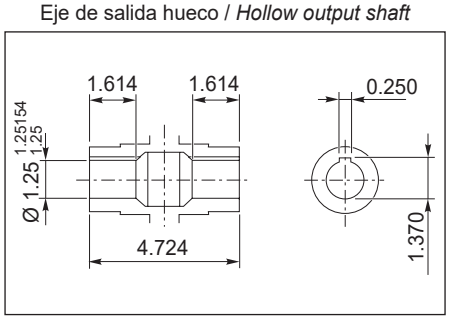

## CMMIS 040/075 ..



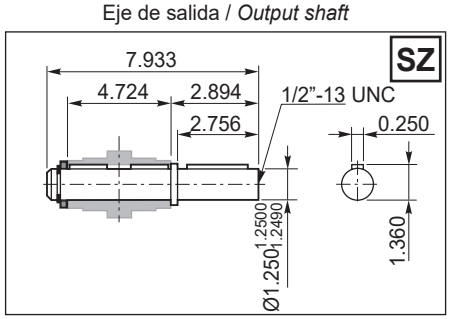




| Brida Motor / *Motor flange* | |
|---|---|
| **Dimensiones NEMA** *NEMA Dimensions* | |
| | **56 C** |
| **N** | 4.5 |
| **M** | 5.88 |
| **P** | 6.5 |
| **D** | 0.625 |
| **LM** | 3.15 |

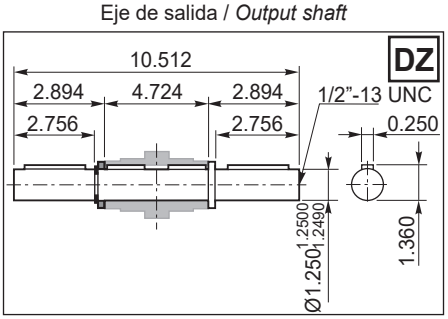
Eje de salida hueco / *Hollow output shaft*




Eje de salida / *Output shaft*



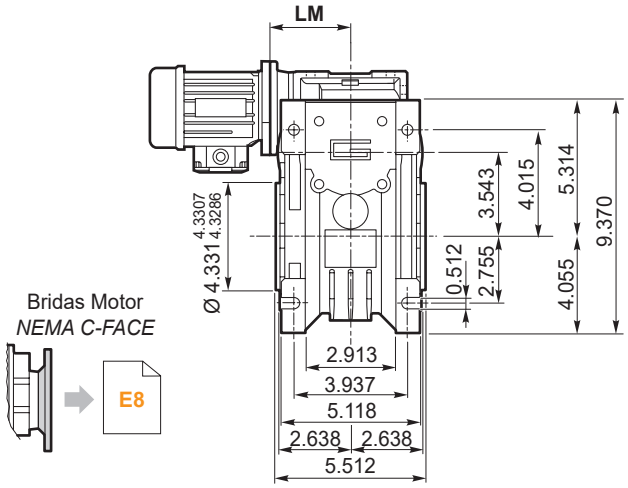

Eje de salida / *Output shaft*

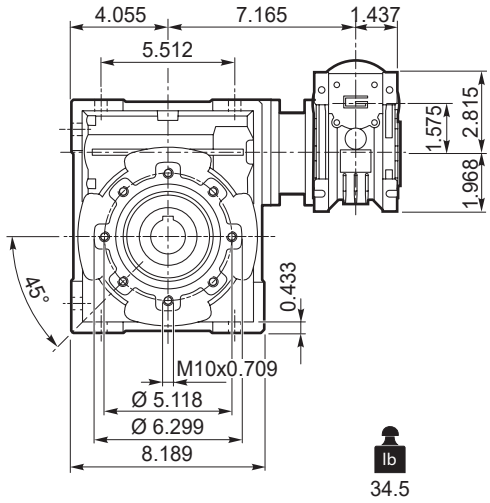


**Dimensiones** *Dimensions*

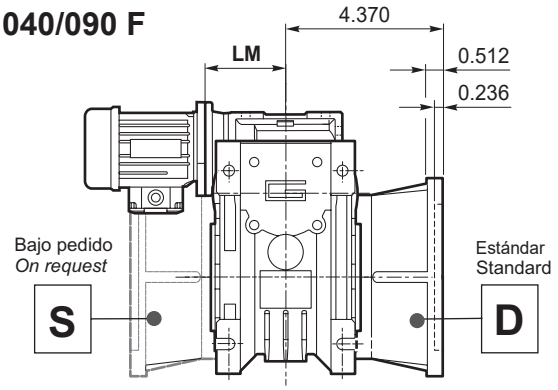
# CMM 040/090

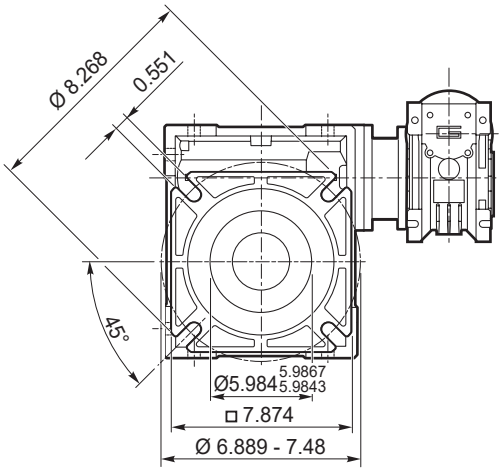
## CMM 040/090 U



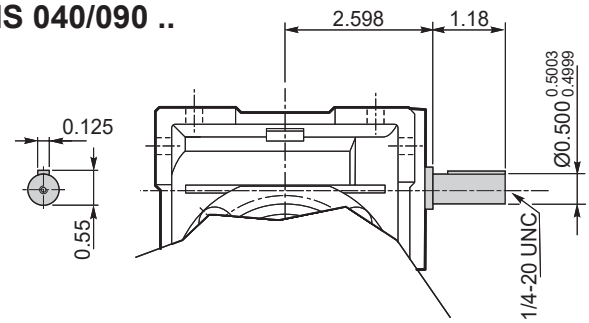



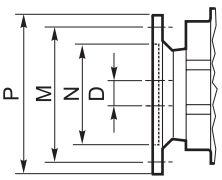

## CMM 040/090 F



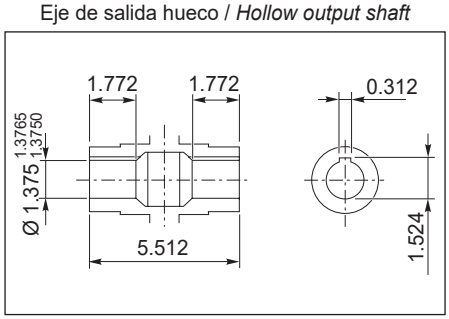

## CMMIS 040/090 ..



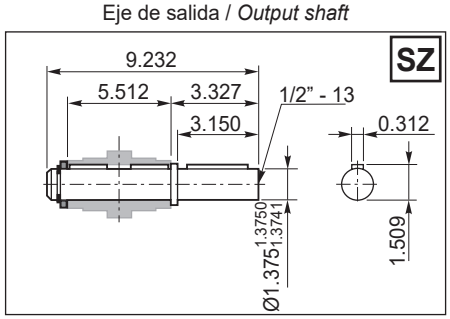




| Brida Motor / *Motor flange* | |
|---|---|
| **Dimensiones NEMA** *NEMA Dimensions* | |
| | **56 C** |
| **N** | 4.5 |
| **M** | 5.88 |
| **P** | 6.5 |
| **D** | 0.625 |
| **LM** | 3.15 |

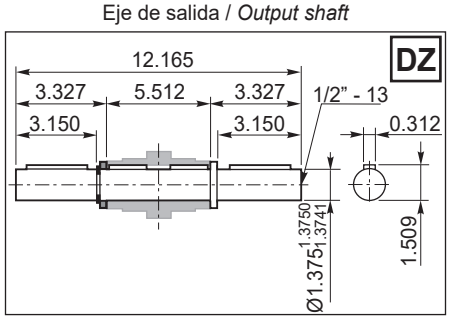
Eje de salida hueco / *Hollow output shaft*

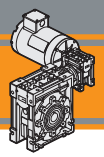



Eje de salida / *Output shaft*




Eje de salida / *Output shaft*

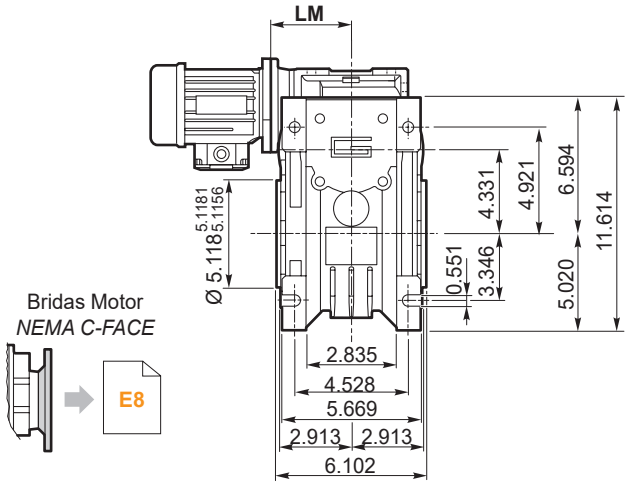


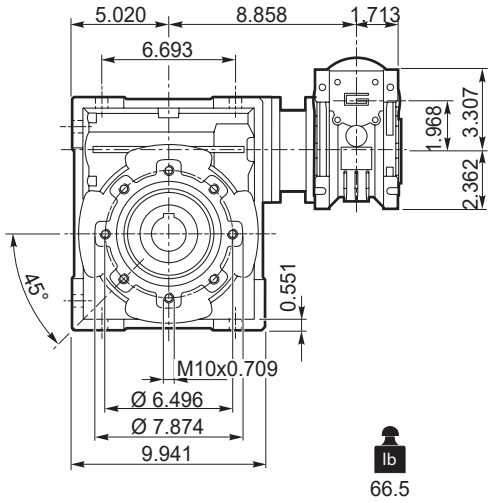




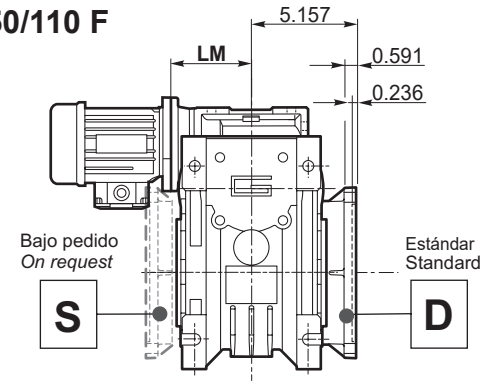
# CMM 050/110

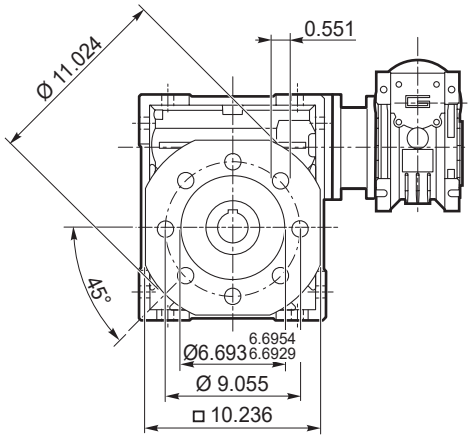
## CMM 050/110 U



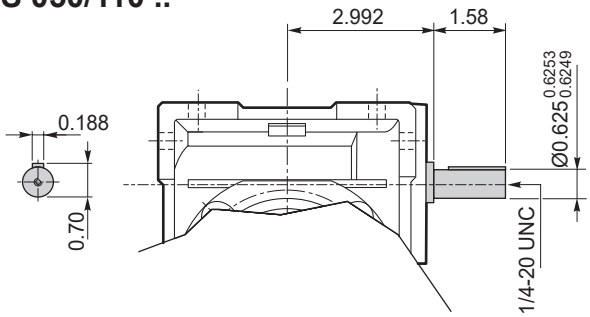



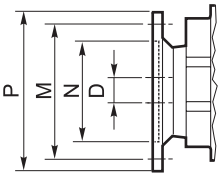

## CMM 050/110 F



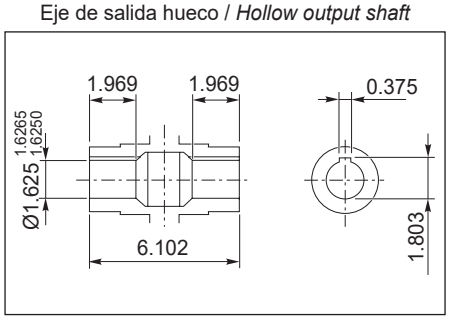

## CMMIS 050/110 ..



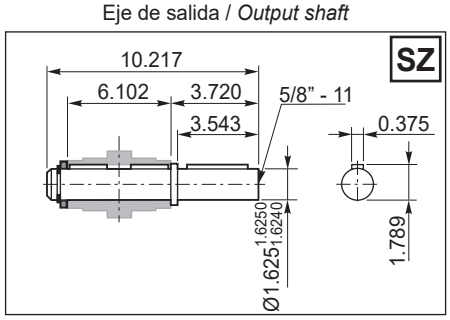




| Brida Motor / *Motor flange* | |
|---|---|
| Dimensiones NEMA *NEMA Dimensions* | |
| | **56 C** |
| **N** | 4.5 |
| **M** | 5.88 |
| **P** | 6.5 |
| **D** | 0.625 |
| **LM** | 3.346 |

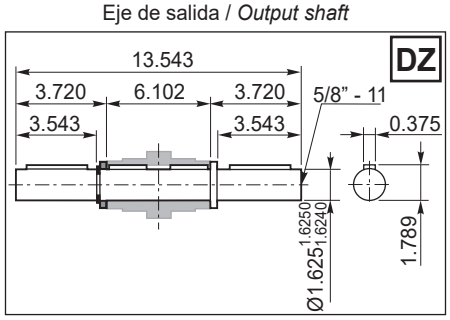
Eje de salida hueco / *Hollow output shaft*




Eje de salida / *Output shaft*

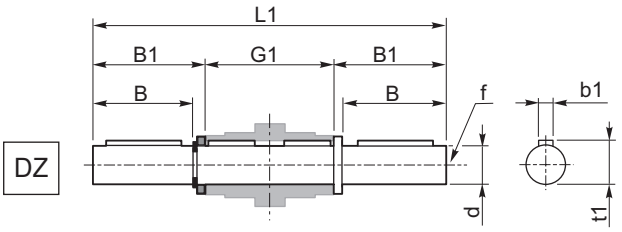


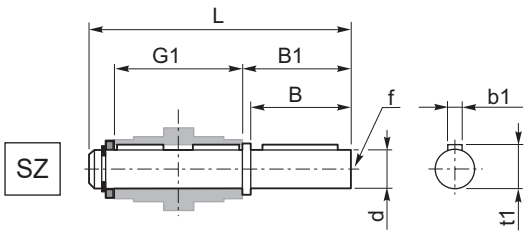

Eje de salida / *Output shaft*



## Accesorios / *Accessories*

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

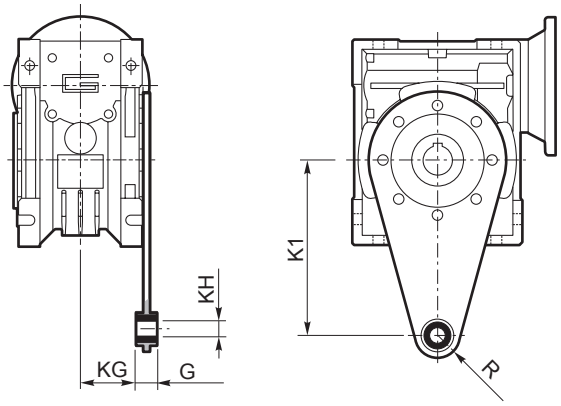


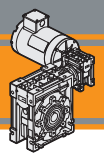




| CMM | d | B | B1 | G1 | L | L1 | f | b1 | t1 |
|---|---|---|---|---|---|---|---|---|---|
| **040/075** | 1.250 $^{1.250}_{1.249}$ | 2.756 | 2.894 | 4.724 | 7.933 | 10.512 | 1/2"-13 | 0.250 | 1.360 |
| **040/090** | 1.375 $^{1.375}_{1.3741}$ | 3.150 | 3.327 | 5.512 | 9.232 | 12.165 | 1/2"-13 | 0.312 | 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 |

### 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 |

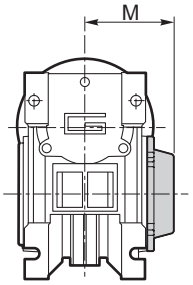


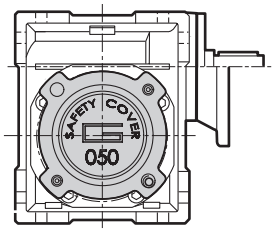


## Opciones / *Options*

### SC - Cubierta de seguridad / *Safety Cover*

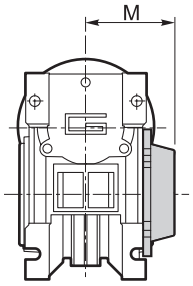
| CM | M |
|---|---|
| 040 | 2.14 |
| 050 | 2.46 |
| 075 | 3.11 |
| 090 | 3.70 |
| 110 | 4.02 |

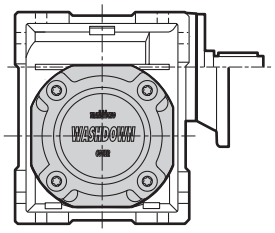



### WD - *Kit washdown cover*

| CM | M |
|---|---|
| 040 | 2.19 |
| 050 | 2.50 |
| 075 | 3.15 |
| 090 | 3.74 |
| 110 | 4.06 |



# Note

TRANSTECNO®
the modular gearmotor

60Hz

# Nema

## Apéndice
## Appendix

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| Listado de refacciones | *Spare parts list* | |
| CMG..2 | *CMG..2* | **F2** |
| CMG..3 | *CMG..3* | **F3** |
| CMB..2 | *CMB..2* | **F4** |
| CMB..3 | *CMB..3* | **F5** |
| CM040..CM130 | *CM040..CM130* | **F6** |
| Bujes de reducción en acero | *Metal shaft sleeves* | **F7** |
| Garantia | *Warranty* | **F8** |


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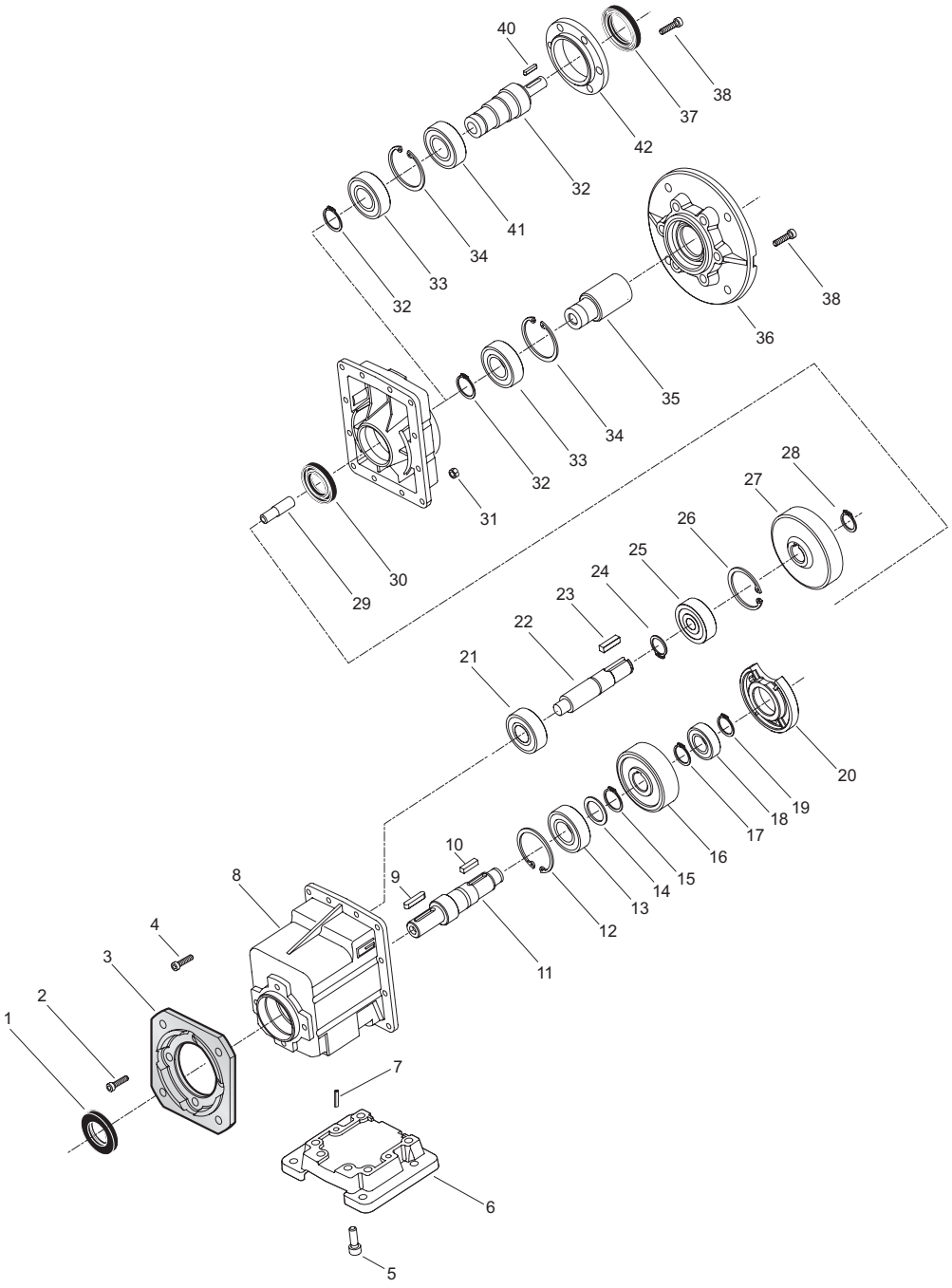
**Listado de refacciones** *Spare parts list*

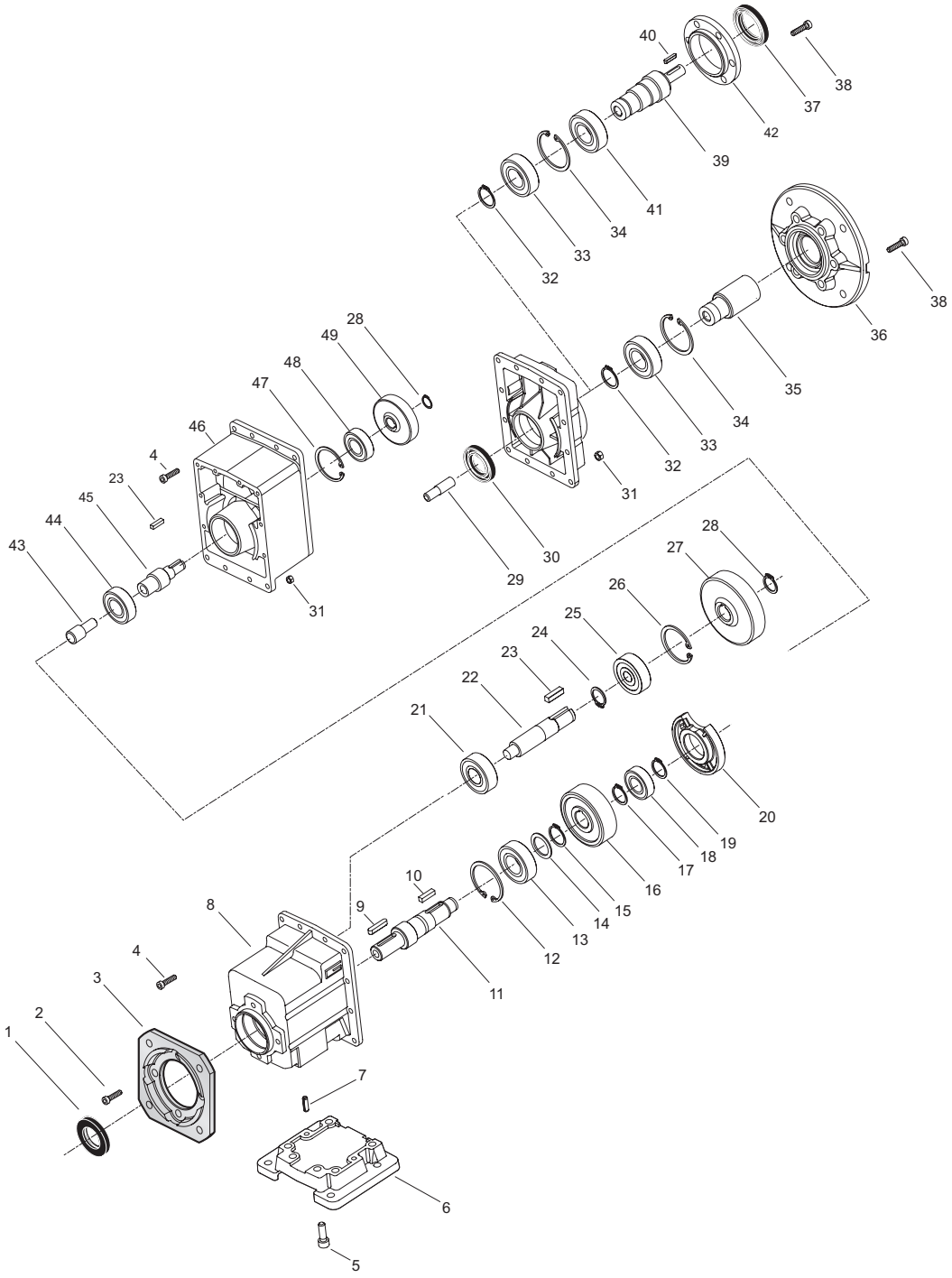
# CMG..2




| 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***

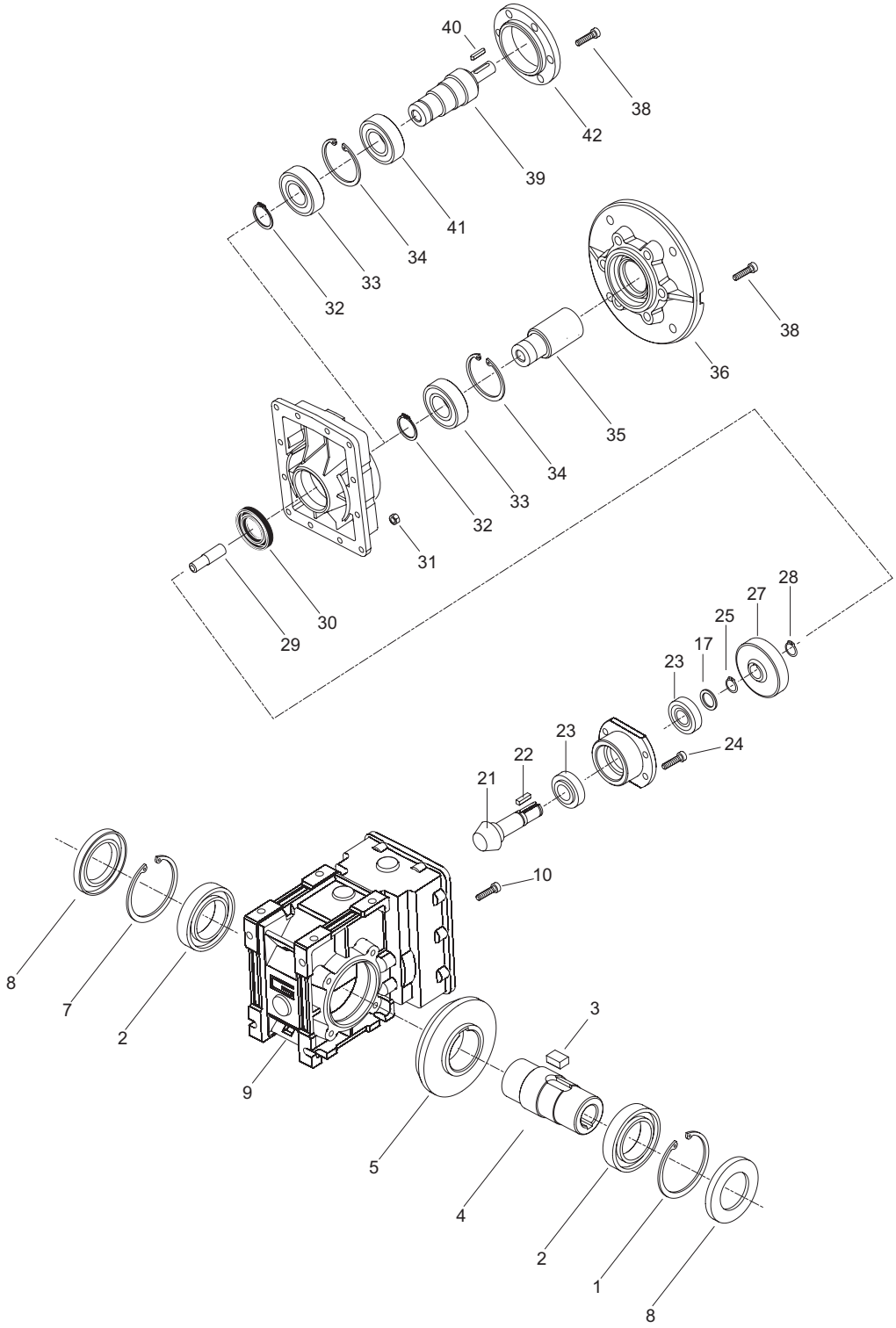
# CMG..3




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

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

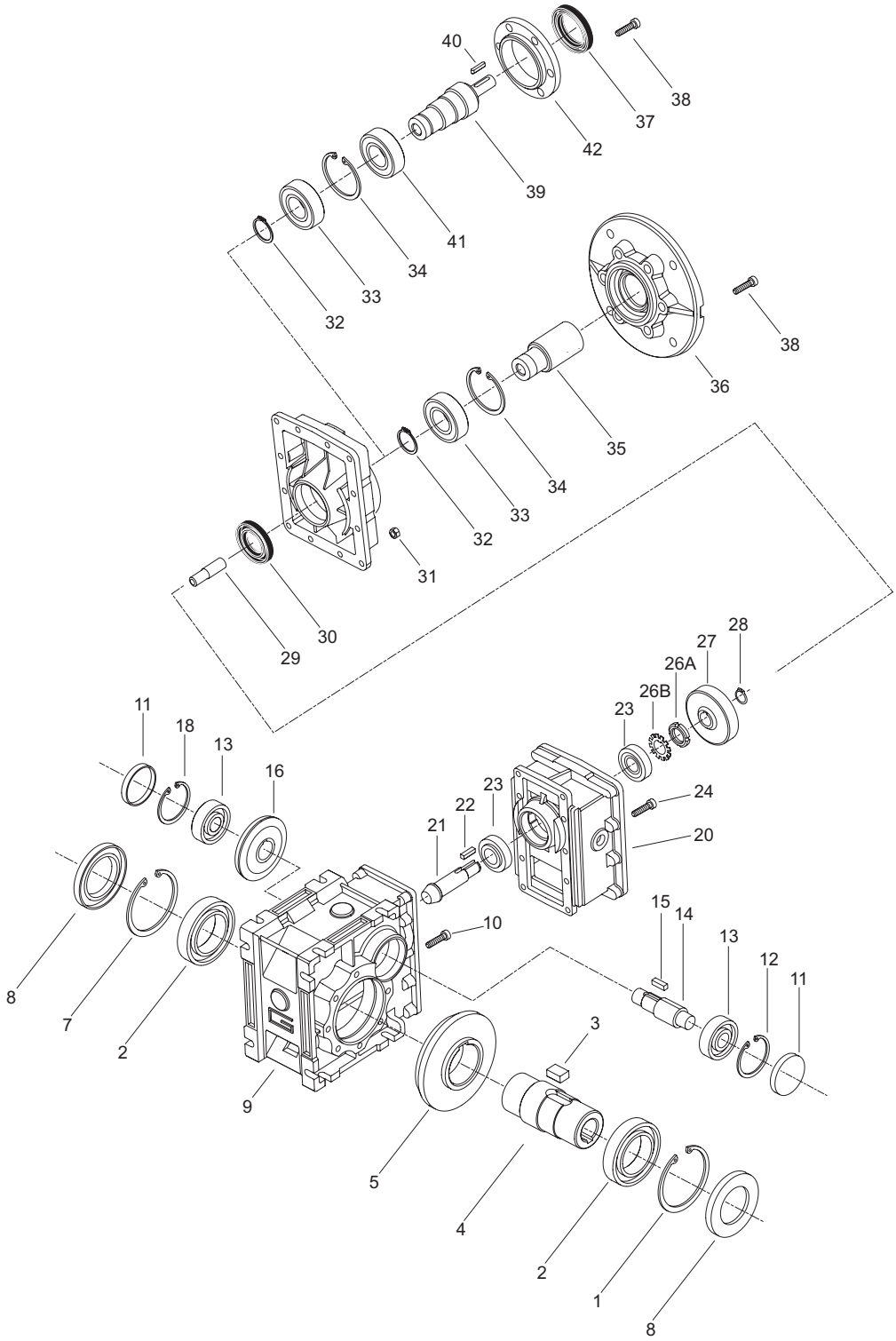
# CMB ..2




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

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

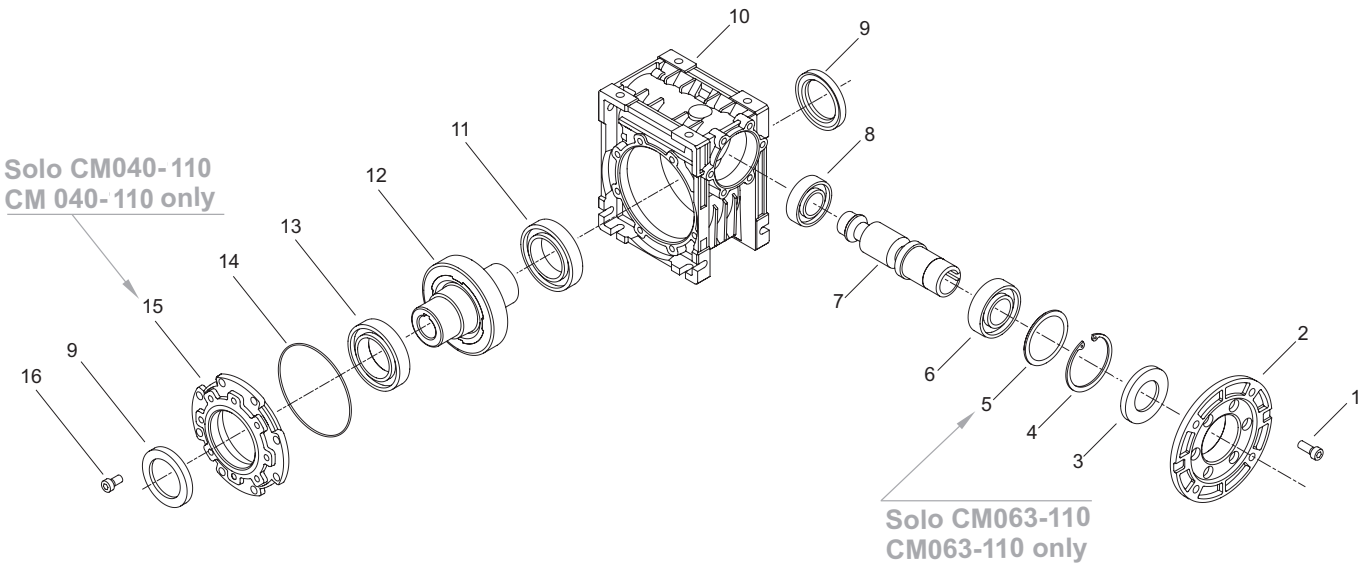
# CMB ..3




| 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 |

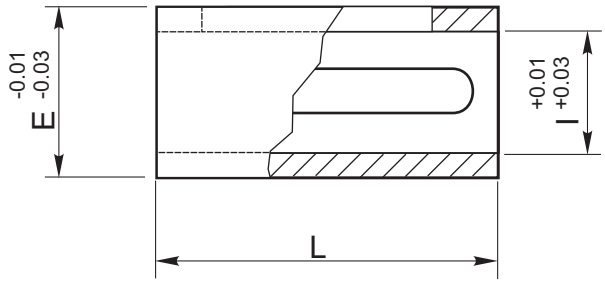
**Listado de refacciones** ***Spare parts list***

# CM040..CM110




| 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 |

## 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 únicamente garantiza que los bienes, cuando sean enviados, 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 uso 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.

Las piezas reemplazadas serán propiedad del fabricante.

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 fabricante y ningún otro bien deberá ser devuelto sin el consentimiento por escrito del fabricante. Esta garantía no se extenderá a los bienes sujetos al mal uso, abuso, negligencia, accidente, instalación o manteni-miento inadecuado, lubricación incorrecta o bienes que hayan sido alterados o reparados por cualquier persona que no sea el fabricante o su personal autorizado o representante, así mismo el acoplamiento mecánico y la instalación eléctrica serán responsabilidad de los instaladores.

## *Warranty*

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

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

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

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

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

*Replaced parts remain property of Seller.*

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

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