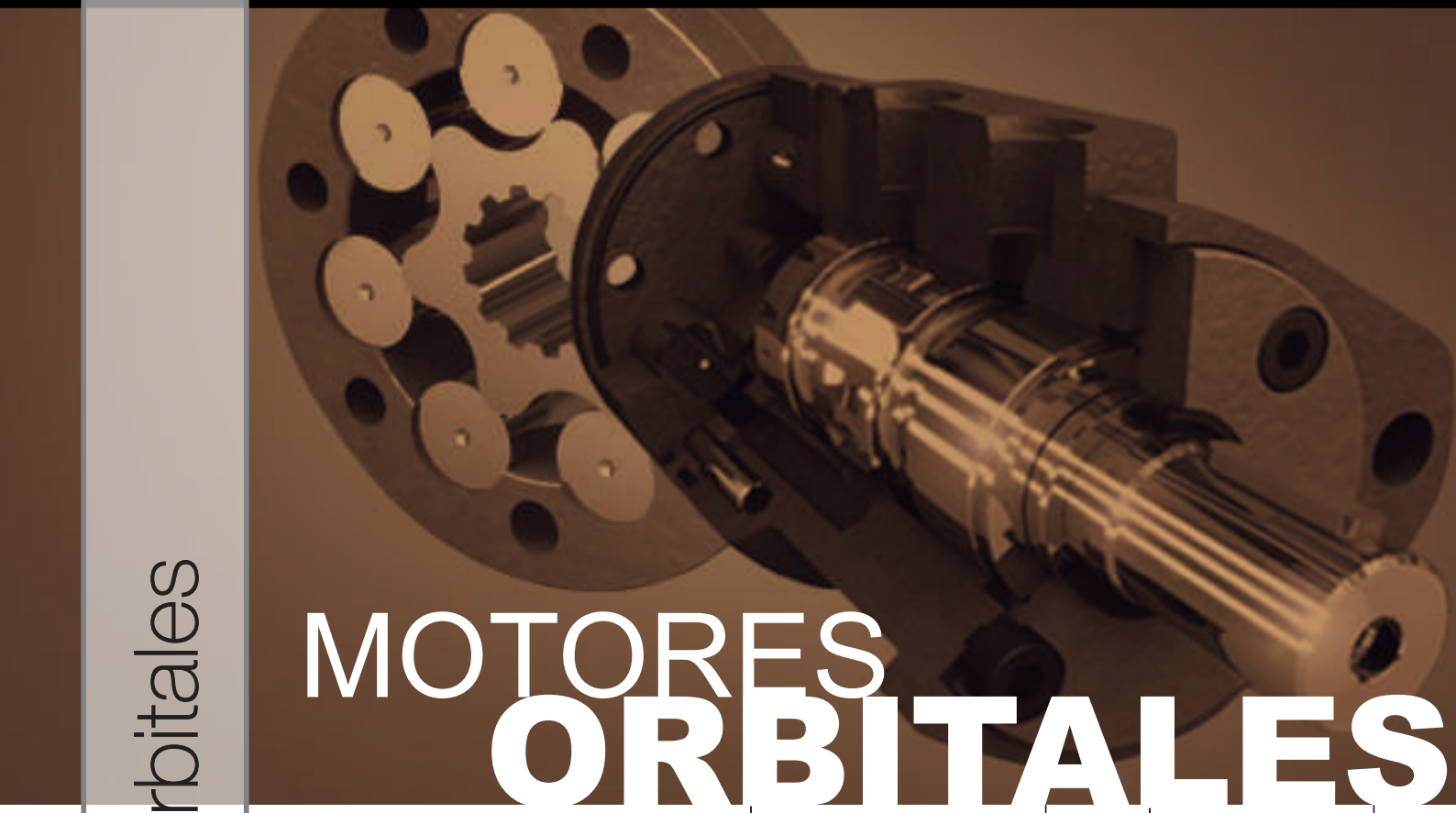
pilmhor®
oleohidráulica

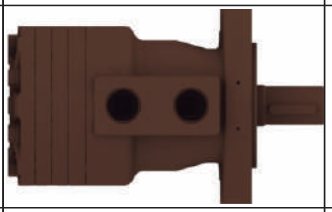
www.pilmhor.com.ar

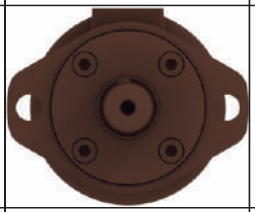


# MOTORES ORBITALES

Motores hidraulicos orbitales

MOS-L
MOR-AS
MOR-AS-R





# GENERALIDADES

Es el mayor productor nacional de motores hidráulicos de baja velocidad y alto torque. Ofrece una amplia gama de motores de diferentes tipos y modelos (**MOS-L**, **MOR-AS** y **MOR-AS-R**).

Los motores presentan un desplazamiento volumétrico entre 46,5 cm3 y 479 cm3 por revolución. La gama de velocidades varía según el tipo de motor, al igual que el torque de funcionamiento máximo que oscila entre 9 y 51,5 Kgm y las potencias máximas entre 10 y 22 HP.

Los productos Pilmhor, en base a su constante investigación e incorporación de moderna tecnología, ofrecen considerables beneficios:

- Elevado par de arranque.
- Par de funcionamiento constante en una amplia gama de velocidades.
- Instantánea inversión de giro.
- Rendimiento elevado.
- Larga vida útil en condiciones de trabajo extremas.
- Diseño robusto y compacto.
- Posibilidad de aplicar al eje de salida elevadas cargas radiales y axiales.
- Permite la conexión de motores en serie.

## Aplicaciones de los motores hidráulicos PILMHOR

- Maquinarias e implementos agrícolas.
- Maquinaria vial y minera.
- Maquinaria textil, alimenticia.
- Grúas y cintas transportadoras.
- Máquinas para la industria plástica y del caucho.
- Equipos para la industria pesquera.
- Propulsión hidrostática de vehículos livianos.
- Perforadoras de suelo, laminadoras, bobinadoras, motobarredoras, etc.

# MOTOR MOS-L

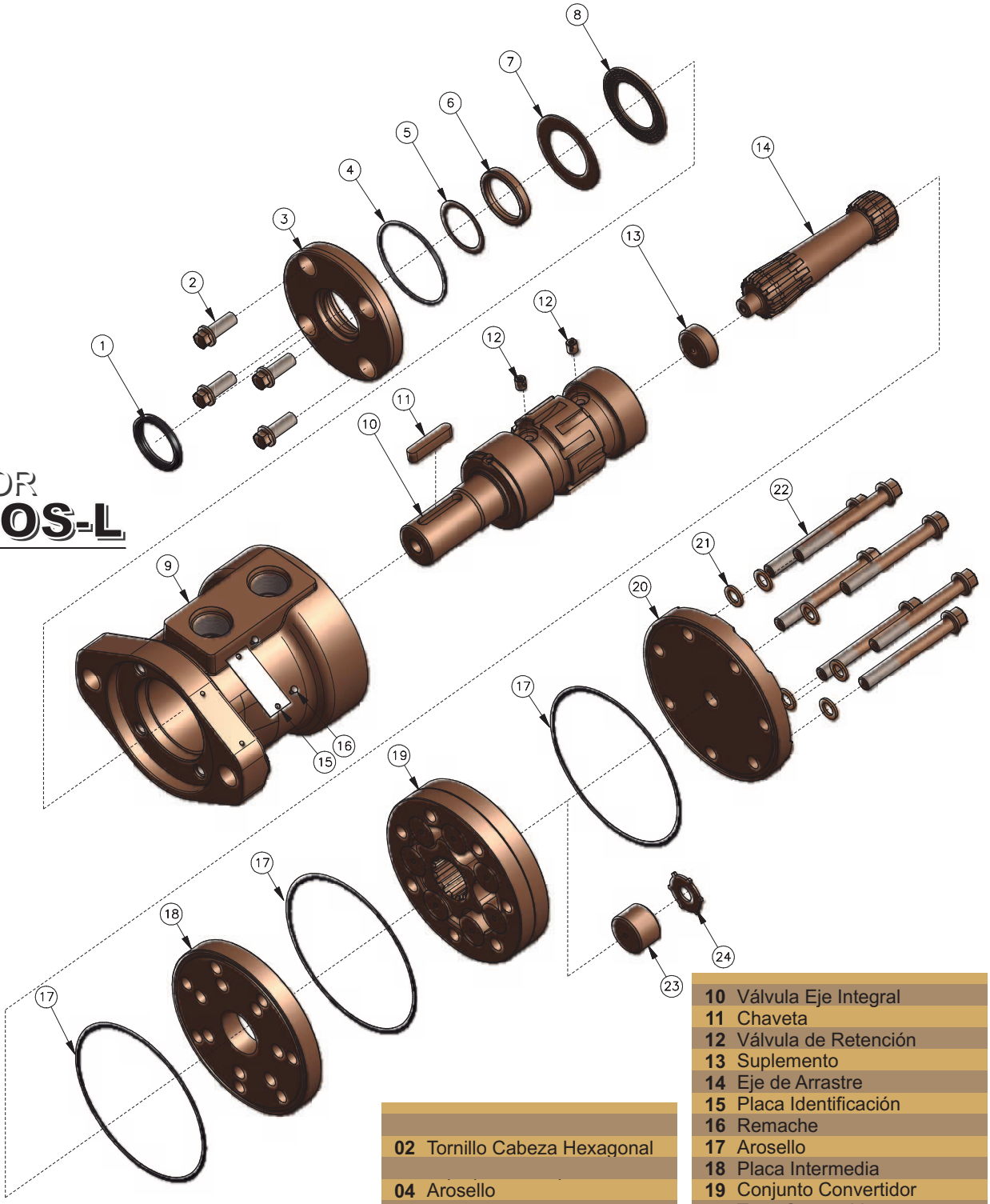
**Desplazamientos de 46.5 a 479 cm/rev**

**Potencia hasta 16.3 hp**
**Cupla hasta 51 kgm**

PILMHOR

## MOTOR ORBITAL MOS-L

MOTOR
**MOS-L**




| | |
|---|---|
| 02 | Tornillo Cabeza Hexagonal |
| 04 | Arosello |
| 05 | Respaldo Reten |
| 06 | Reten Alta Presión |
| 07 | Tapa Rodamiento Axial |
| 08 | Rodamiento Axial |
| 09 | Cuerpo Mos-L |

| | |
|---|---|
| 10 | Válvula Eje Integral |
| 11 | Chaveta |
| 12 | Válvula de Retención |
| 13 | Suplemento |
| 14 | Eje de Arrastre |
| 15 | Placa Identificación |
| 16 | Remache |
| 17 | Arosello |
| 18 | Placa Intermedia |
| 19 | Conjunto Convertidor |
| 20 | Tapa Convertidor |
| 21 | Arandela |
| 22 | Tornillo Cabeza Hexagonal |
| 23 | Suplemento Inferior |
| 24 | Suplemento Inferior Dentado |

LA EMPRESA SE RESERVA EL DERECHO DE REALIZAR MODIFICACIONES SIN PREVIO AVISO



pilmhor
oleohidráulica

# CARACTERÍSTICAS TÉCNICAS

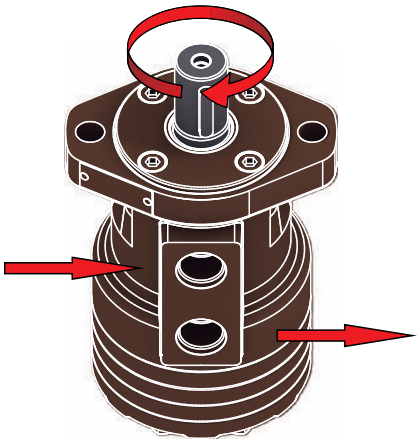
## TABLA DE VALORES

| | VALORACIONES | | MODELOS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
| ESPECIFICACIONES TÉCNICAS | Desplazamiento | $cm^3$/rev | 46.50 | 77.40 | 100.60 | 124.50 | 160.60 | 185.50 | 228.80 | 281.10 | 378.40 | 479 |
| | | $in^3$/rev | 2.84 | 4.72 | 6.14 | 7.60 | 9.80 | 11.32 | 13.96 | 17.15 | 23.09 | 29.23 |
| | Velocidad máxima | rpm | 800 | 770 | 595 | 482 | 375 | 315 | 260 | 210 | 155 | 120 |
| | Caudal máximo | lts/min | 40 | 60 | | | | | | | | |
| | | gal/min | 10.57 | 15.85 | | | | | | | | |
| | Presión de trabajo | $kg/cm^2$ | 140 | | | | 120 | | | 100 | | 80 |
| | | psi | 1991,5 | | | | 1707 | | | 1424,5 | | 1138 |
| | Velocidad por cada lt/min (*) | rpm | 21.40 | 12.80 | 9.90 | 8.00 | 6.20 | 5.20 | 4.30 | 3.50 | 2.60 | 2.00 |
| | Cupla (**) | kgm | 9.20 | 15.00 | 19.60 | 24.10 | 26.20 | 28.50 | 34.60 | 35.20 | 46.10 | 51.00 |
| | | In-lb | 798.6 | 1302.1 | 1701.5 | 2092.1 | 2274.4 | 2474 | 3003.6 | 3055.7 | 4001.9 | 4427.3 |
| | Potencia (**) | hp | 10.00 | 16.10 | 16.30 | 16.20 | 13.70 | 12.70 | 12.50 | 10.10 | 9.60 | 8.20 |
| | | kW | 7.46 | 12.01 | 12.15 | 12.08 | 10.22 | 9.47 | 9.32 | 7.53 | 7.16 | 6.11 |
| | Peso aproximado | kg | 7.10 | 7.50 | 7.80 | 8.00 | 8.30 | 8.50 | 8.80 | 9.40 | 9.90 | 10.50 |
| | | lb | 15.65 | 16.53 | 17.20 | 17.64 | 18.30 | 18.74 | 19.40 | 20.75 | 21.83 | 23.15 |

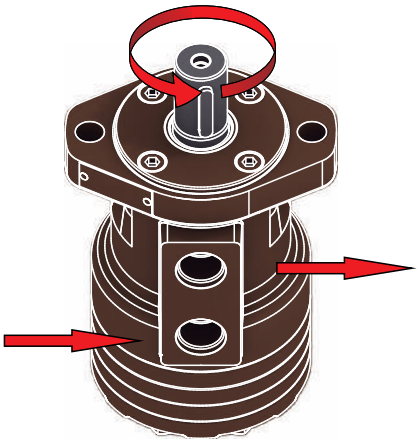
(*) Ensayo realizado con presión normal de trabajo
(**) Ensayo realizado con presión normal de trabajo y máximo caudal
Para eventuales sobrecargas (intermitente/pico) solicitar asesoramiento técnico complementario.
Temperatura durante el ensayo 50ºC. Aceite hidráulico ISO 46.

MOTOR
**MOS-L**

## DIRECCIÓN DE ROTACIÓN DEL EJE DE SALIDA



SENTIDO HORARIO



SENTIDO ANTI-HORARIO

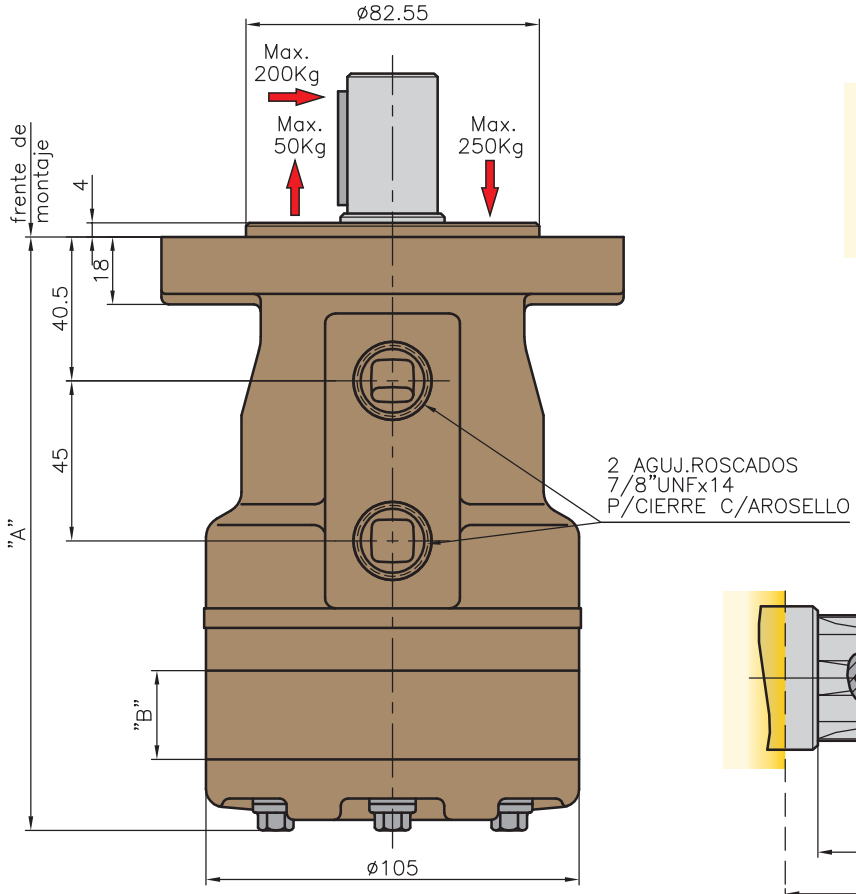
LA EMPRESA SE RESERVA EL DERECHO DE REALIZAR MODIFICACIONES SIN PREVIO AVISO



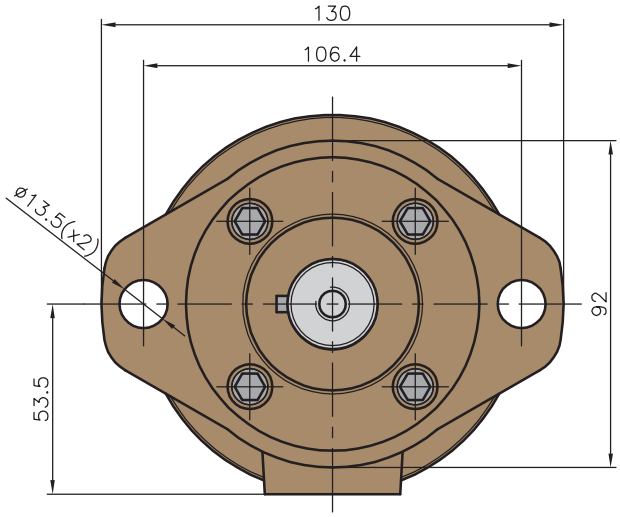
pilmhor®
oleohidráulica

# CARACTERÍSTICAS TÉCNICAS

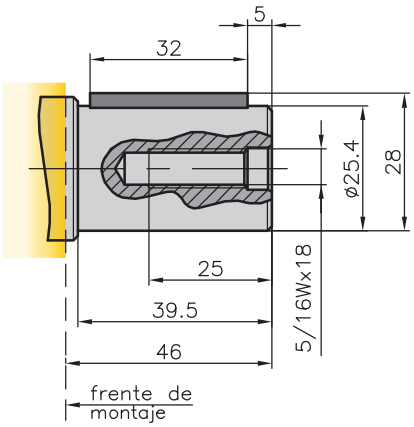
## DIMENSIONES DE MONTAJE




**NOTA:** Conexión de drenaje 1/4"NPTx18 (s/ tapa posterior)

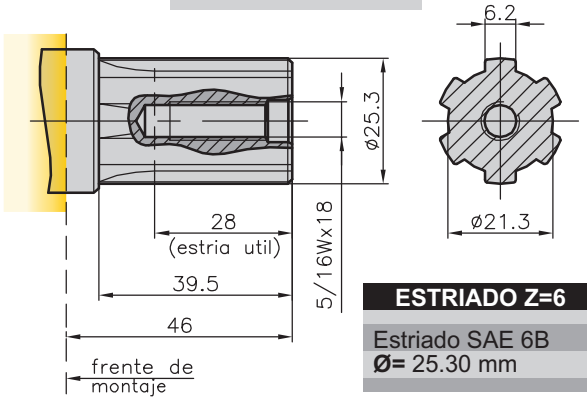



## TIPO DE EJES



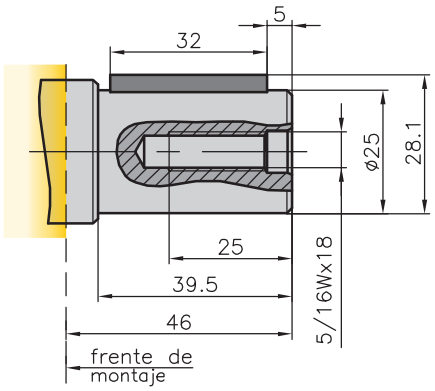

**CILINDRICO Ø25.4**

**Ø=** 25.40 mm (1")
Chav. Cuadrada
1/4" x 1/4" x 1 1/4"




**ESTRIADO Z=6**

Estriado SAE 6B
**Ø=** 25.30 mm




**CILINDRICO Ø25**

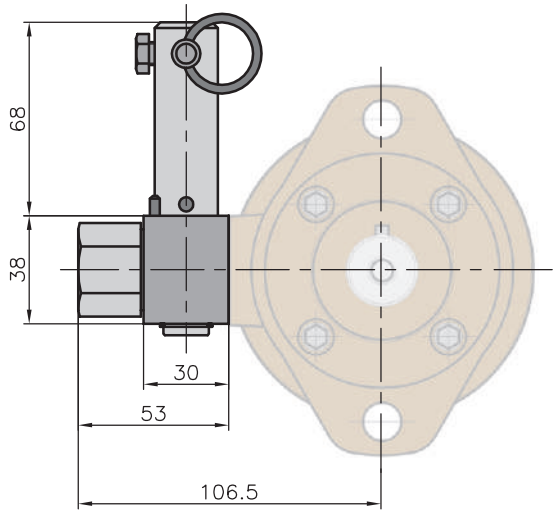
**Ø=** 25.00 mm (63/64")
Chav. Cuadrada
1/4" x 1/4" x 1 1/4"

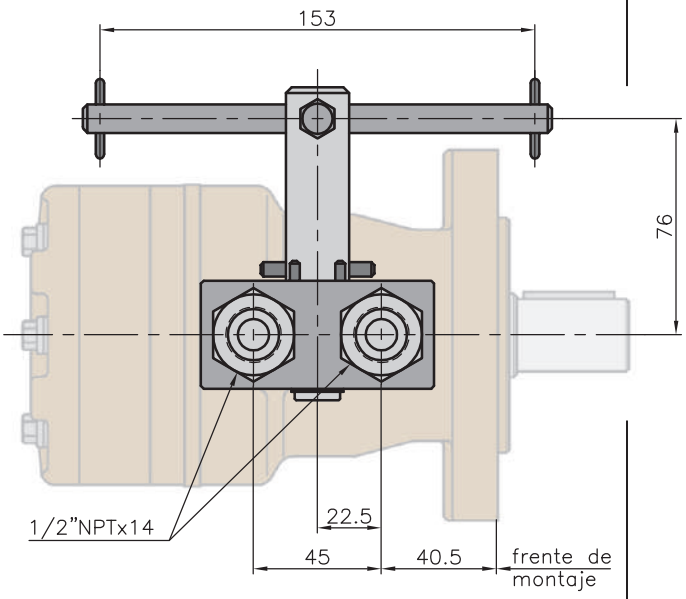
| MODELO | | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COTA "A" | mm | 148.5 | 152.5 | 155.5 | 158.5 | 164.5 | 167.5 | 173.5 | 180.5 | 193.5 | 206.5 |
| | inches | 5 27/32" | 6" | 6 1/8" | 6 15/64" | 6 15/32" | 6 19/32" | 6 53/64" | 7 7/64" | 7 5/8" | 8 1/8" |
| COTA "B" | mm | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
| | inches | 15/64" | 25/64" | 33/64" | 41/64" | 55/64" | 63/64" | 7/32" | 1" 1/2 | 2" 1/64 | 2" 17/32 |

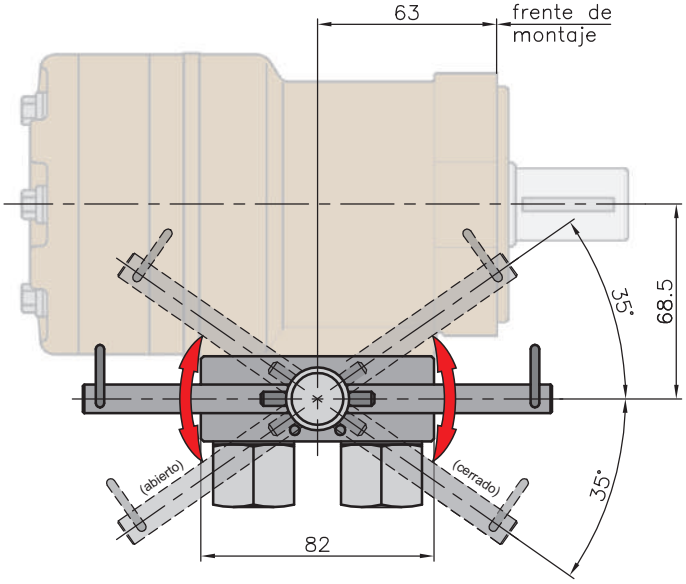


pilmhor oleohidráulica

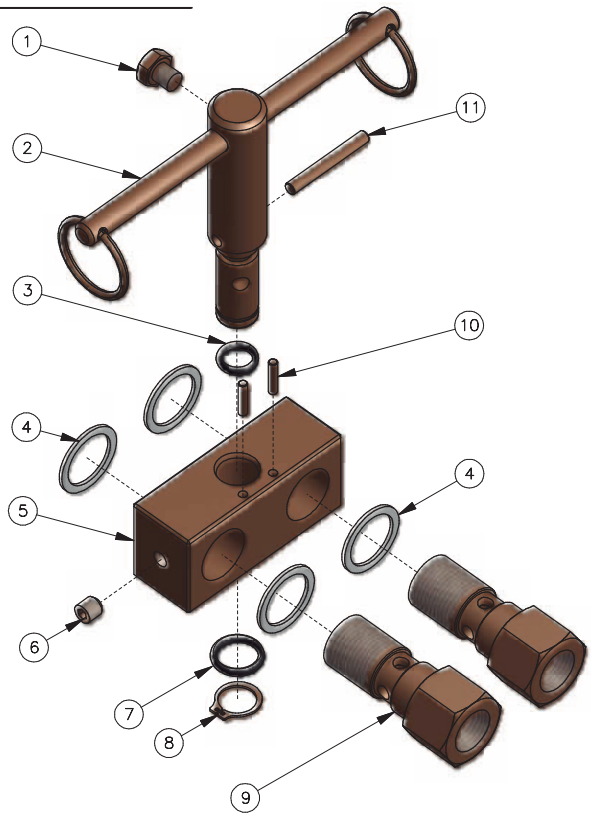
## VALVULA DE CORTE



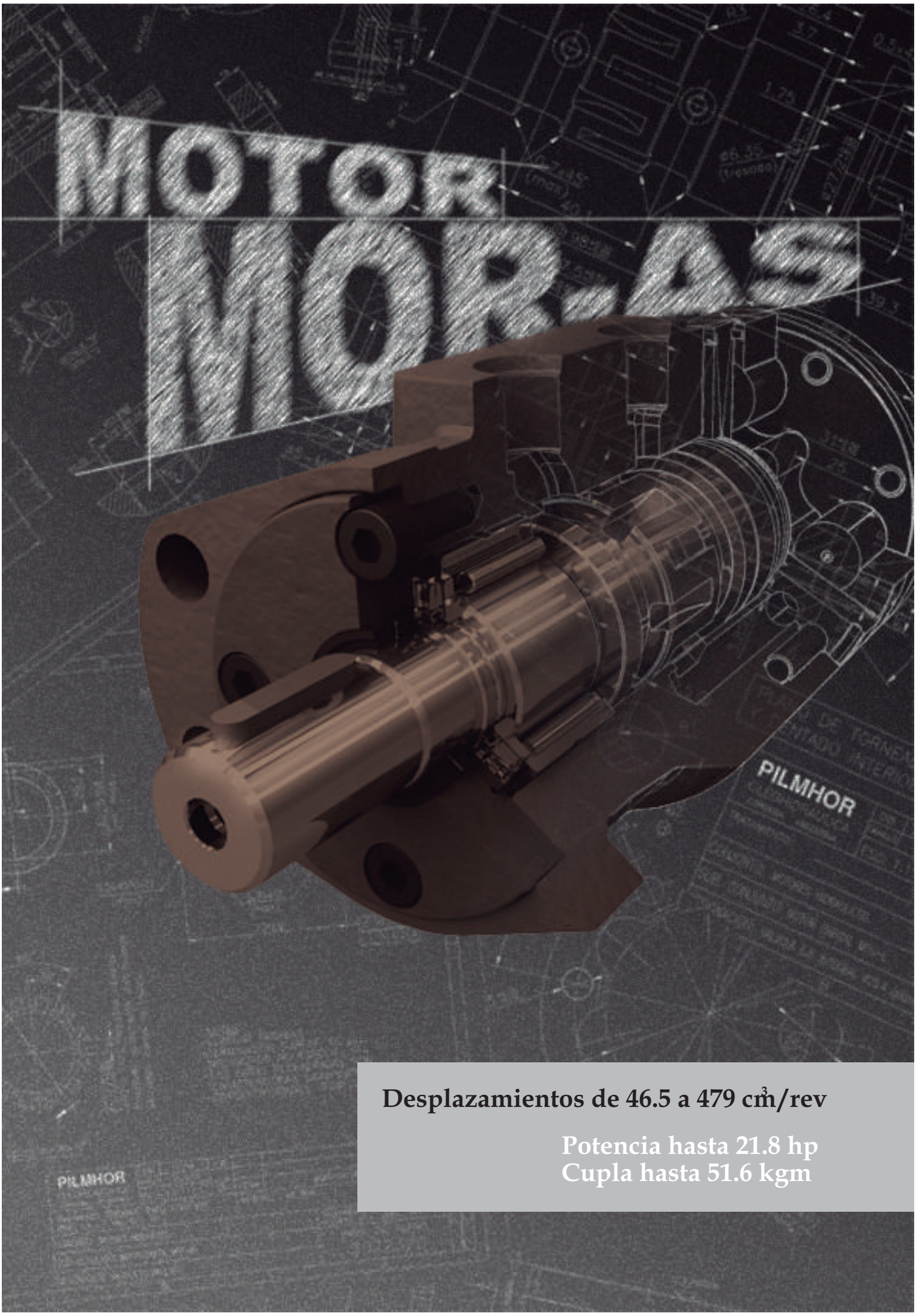

MOTOR
# MOS-L




| | |
|---|---|
| **01** | Tornillo Cabeza Hexagonal |
| **02** | Conjunto Palanca Accionamiento |
| **03** | Arosello Palanca |
| **04** | Arandela de Cierre |
| **05** | Cuerpo Valvula |
| **06** | Gusanillo |
| **07** | Arosello Cuerpo |
| **08** | Anillo de Seguridad |
| **09** | Conector |
| **10** | Espina Elastica |
| **11** | Espina Cilindrica |



pilmhor® oleohidráulica

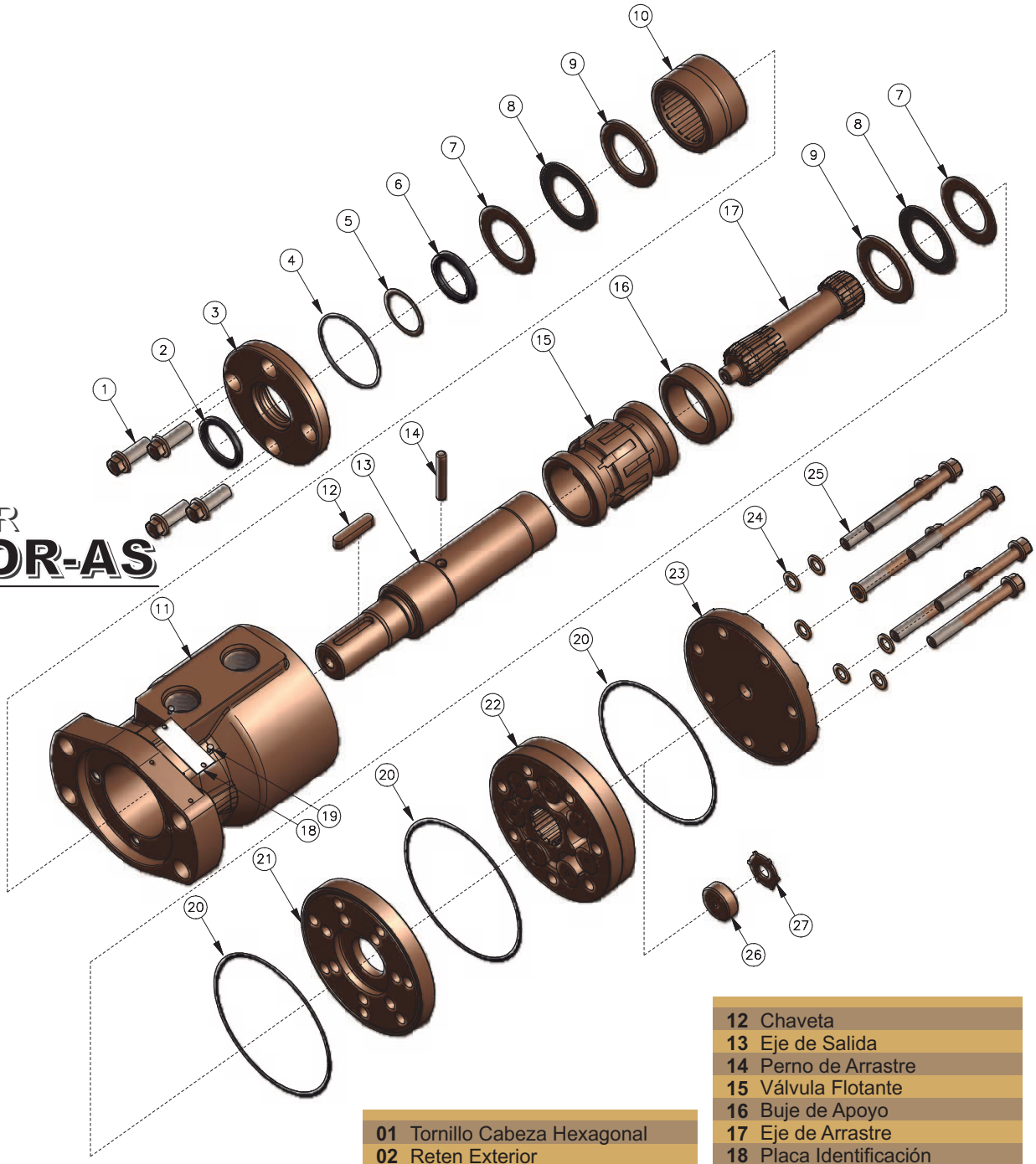



**Desplazamientos de 46.5 a 479 $cm^3$/rev**

**Potencia hasta 21.8 hp**
**Cupla hasta 51.6 kgm**

## MOTOR ORBITAL MOR-AS

MOTOR
**MOR-AS**




| | |
|---|---|
| 01 | Tornillo Cabeza Hexagonal |
| 02 | Reten Exterior |
| 03 | Tapa para Cuerpo |
| 04 | Arosello |
| 05 | Respaldo Reten |
| 06 | Reten Alta Presión |
| 07 | Tapa Rodamiento Axial (fina) |
| 08 | Rodamiento Axial |
| 09 | Tapa Rodamiento Axial (gruesa) |
| 10 | Rodamiento de Rodillos |
| 11 | Cuerpo |

| | |
|---|---|
| 12 | Chaveta |
| 13 | Eje de Salida |
| 14 | Perno de Arrastre |
| 15 | Válvula Flotante |
| 16 | Buje de Apoyo |
| 17 | Eje de Arrastre |
| 18 | Placa Identificación |
| 19 | Remache |
| 20 | Arosello |
| 21 | Placa Intermedia |
| 22 | Conjunto Convertidor |
| 23 | Tapa Convertidor |
| 24 | Arandela |
| 25 | Tornillo Cabeza Hexagonal |
| 26 | Suplemento Inferior |
| 27 | Suplemento Inferior Dentado |

LA EMPRESA SE RESERVA EL DERECHO DE REALIZAR MODIFICACIONES SIN PREVIO AVISO



pilmhor
oleohidráulica

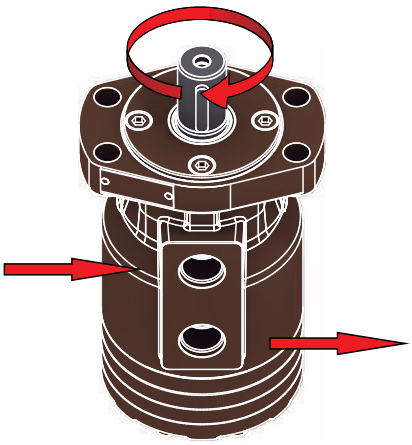
## TABLA DE VALORES

| | VALORACIONES | | MODELOS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
| ESPECIFICACIONES TÉCNICAS | Desplazamiento | $cm^3$/rev | 46.50 | 77.40 | 100.60 | 124.50 | 160.60 | 185.50 | 228.80 | 281.10 | 378.40 | 479 |
| | | $in^3$/rev | 2.84 | 4.72 | 6.14 | 7.60 | 9.80 | 11.32 | 13.96 | 17.15 | 23.09 | 29.23 |
| | Velocidad máxima | rpm | 800 | 770 | 695 | 642 | 495 | 415 | 345 | 280 | 210 | 160 |
| | Caudal máximo | lts/min | 40 | 60 | 70 | 80 | | | | | | |
| | | gal/min | 10.57 | 15.85 | 18.49 | 21.13 | | | | | | |
| | Presión de trabajo | $kg/cm^2$ | 140 | | | | | | 120 | | 100 | 80 |
| | | psi | 1991,5 | | | | 1707 | | | 1424,5 | | 1138 |
| | Velocidad por cada lt/min (*) | rpm | 21.40 | 12.80 | 9.90 | 8.00 | 6.20 | 5.20 | 4.30 | 3.50 | 2.60 | 2.00 |
| | Cupla (**) | kgm | 9.20 | 15.00 | 19.60 | 24.10 | 31.50 | 34.40 | 35.80 | 44.00 | 48.00 | 51.60 |
| | | In-lb | 798.6 | 1302.1 | 1701.5 | 2092.1 | 2734.4 | 2986.2 | 3107.7 | 3819.6 | 4166.8 | 4479.3 |
| | Potencia (**) | hp | 10.00 | 16.10 | 18.90 | 22.00 | 21.8 | 20.00 | 17.20 | 17.20 | 13.90 | 11.50 |
| | | kW | 7.46 | 12.01 | 14.10 | 16.41 | 16.26 | 14.92 | 12.83 | 12.83 | 10.37 | 8.58 |
| | Peso aproximado | kg | 9.00 | 9.40 | 9.70 | 9.90 | 10.20 | 10.40 | 10.70 | 11.30 | 11.70 | 12.30 |
| | | lb | 19.80 | 20.68 | 21.34 | 21.78 | 22.44 | 22.88 | 23.54 | 24.86 | 25.74 | 27.06 |

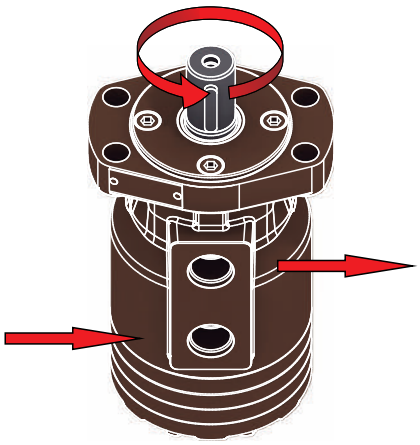
(*) Ensayo realizado con presión normal de trabajo
(**) Ensayo realizado con presión normal de trabajo y máximo caudal
Para eventuales sobrecargas (intermitente/pico) solicitar asesoramiento técnico complementario.
Temperatura durante el ensayo 50ºC. Aceite hidráulico ISO 46.

MOTOR
# MOR-AS

## DIRECCIÓN DE ROTACIÓN DEL EJE DE SALIDA



SENTIDO HORARIO



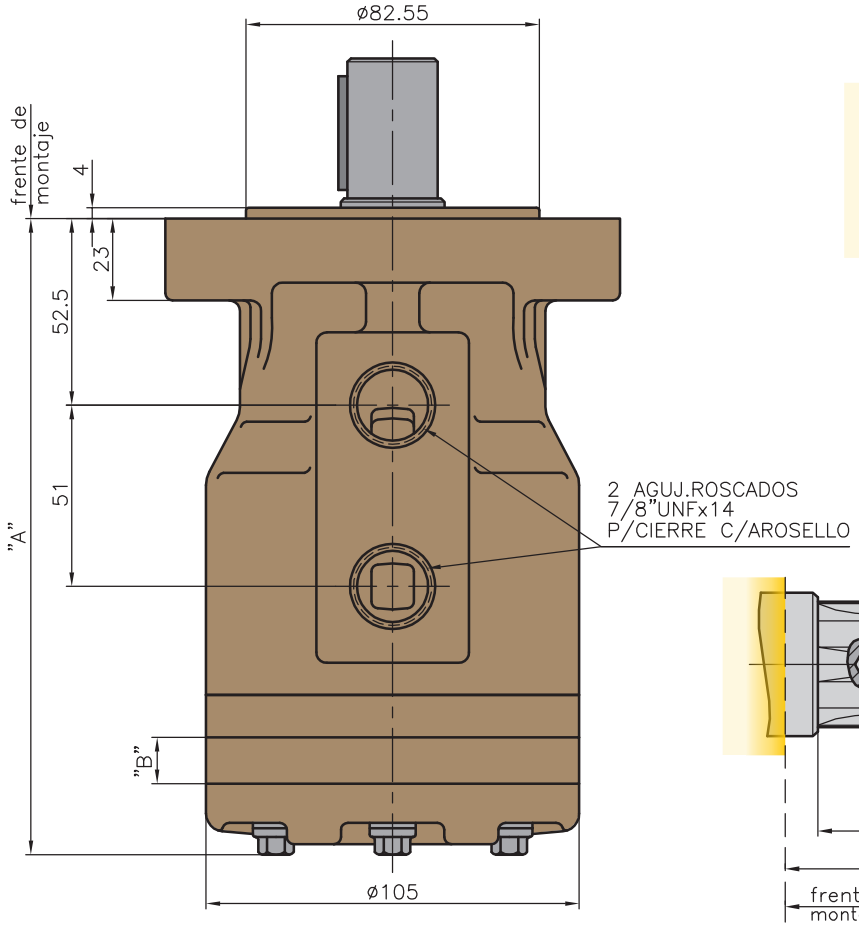
SENTIDO ANTI-HORARIO

LA EMPRESA SE RESERVA EL DERECHO DE REALIZAR MODIFICACIONES SIN PREVIO AVISO

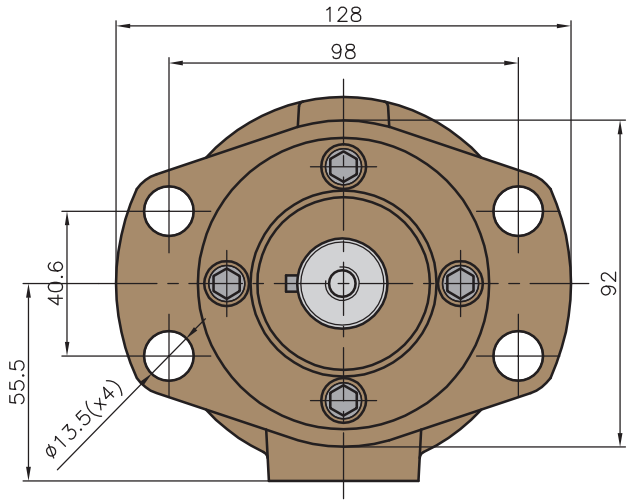


pilmhor
oleohidráulica

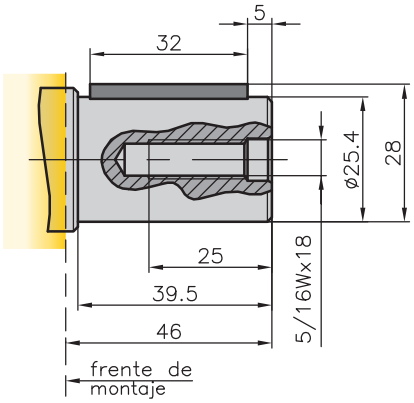
## DIMENSIONES DE MONTAJE




**NOTA:** Conexión de drenaje 1/4"NPTx18 (s/ tapa posterior)

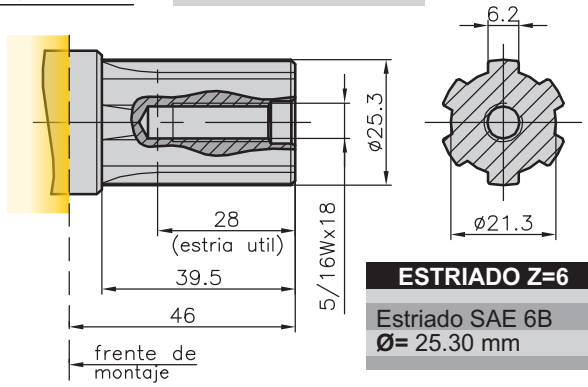



## TIPO DE EJES



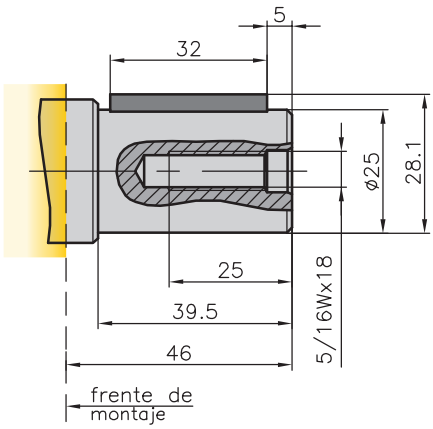

**CILINDRICO Ø25.4**

**Ø=** 25.40 mm (1")
Chav. Cuadrada
1/4" x 1/4" x 1 1/4"




**ESTRIADO Z=6**

Estriado SAE 6B
**Ø=** 25.30 mm



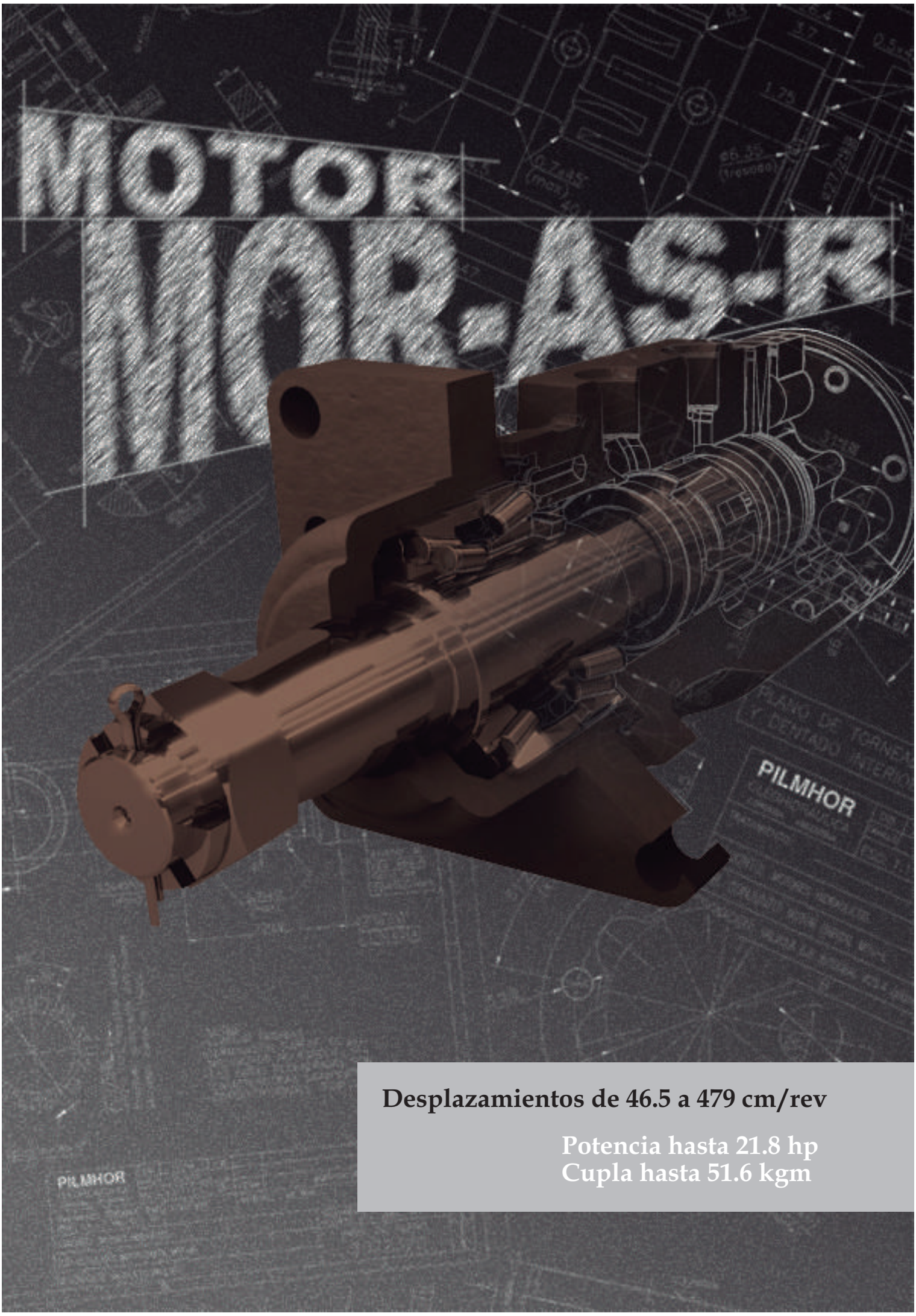

**CILINDRICO Ø25**

**Ø=** 25.00 mm (63/64")
Chav. Cuadrada
1/4" x 1/4" x 1 1/4"

| MODELO | | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COTA "A" | mm | 172.5 | 176.5 | 179.5 | 182.5 | 188.5 | 191.5 | 197.5 | 204.5 | 217.5 | 230.5 |
| | inches | 6 51/64" | 6 61/64" | 7 1/16" | 7 3/16" | 7 27/64" | 7 35/64" | 7 25/32" | 8 3/64" | 8 9/16" | 9 5/64" |
| COTA "B" | mm | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
| | inches | 15/64" | 25/64" | 33/64" | 41/64" | 55/64" | 63/64" | 7/32" | 1" 1/2 | 2" 1/64 | 2" 17/32 |



pilmhor oleohidráulica

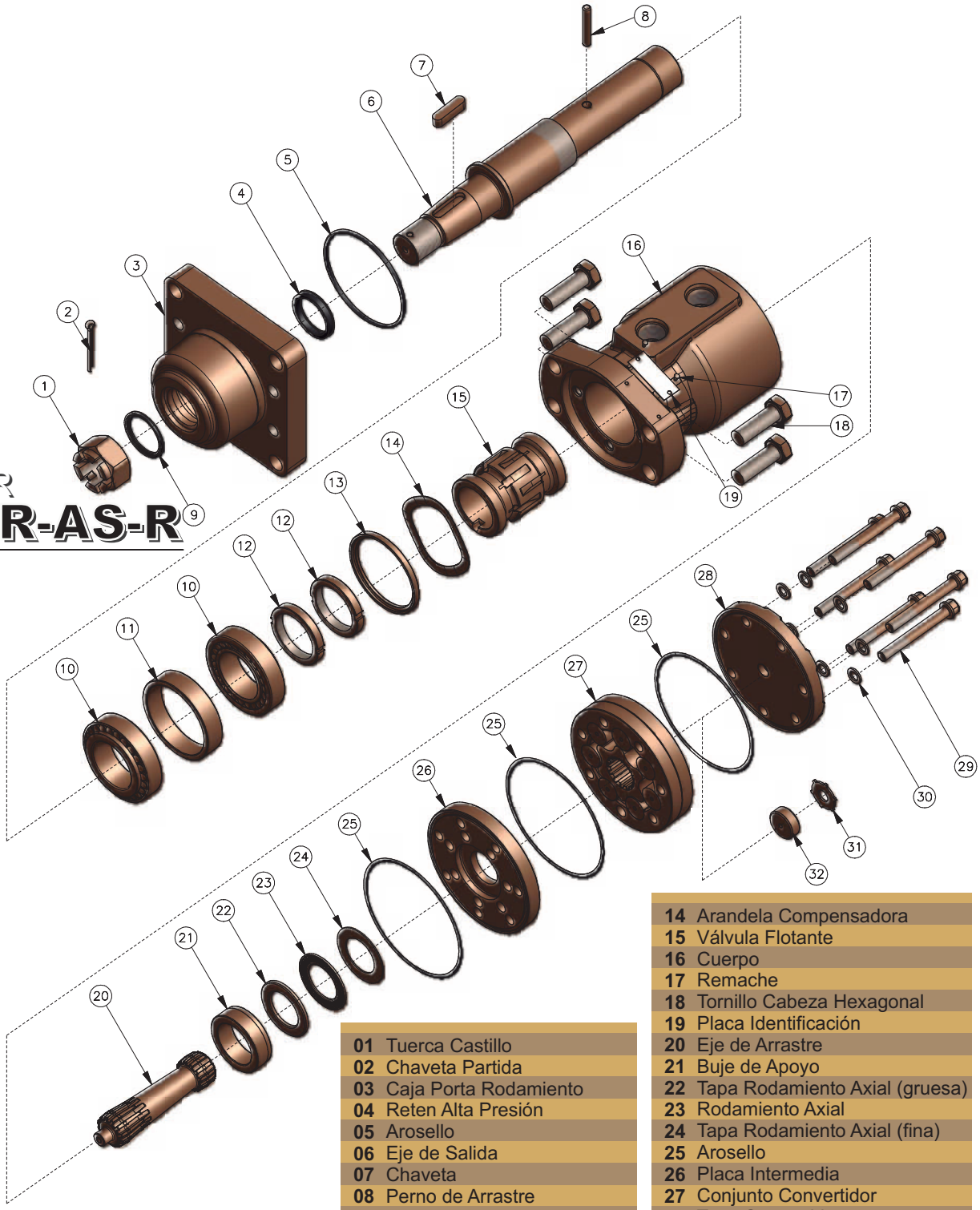



**Desplazamientos de 46.5 a 479 cm/rev**

**Potencia hasta 21.8 hp**
**Cupla hasta 51.6 kgm**

## MOTOR ORBITAL MOR-AS-R

MOTOR
**MOR-AS-R**



| | |
|---|---|
| 01 | Tuerca Castillo |
| 02 | Chaveta Partida |
| 03 | Caja Porta Rodamiento |
| 04 | Reten Alta Presión |
| 05 | Arosello |
| 06 | Eje de Salida |
| 07 | Chaveta |
| 08 | Perno de Arrastre |
| 09 | Reten Exterior |
| 10 | Rodamiento de Rodillos |
| 11 | Anillo Separador |
| 12 | Tuerca Ajuste Rodamiento |
| 13 | Anillo Apoyo Cubeta |
| 14 | Arandela Compensadora |
| 15 | Válvula Flotante |
| 16 | Cuerpo |
| 17 | Remache |
| 18 | Tornillo Cabeza Hexagonal |
| 19 | Placa Identificación |
| 20 | Eje de Arrastre |
| 21 | Buje de Apoyo |
| 22 | Tapa Rodamiento Axial (gruesa) |
| 23 | Rodamiento Axial |
| 24 | Tapa Rodamiento Axial (fina) |
| 25 | Arosello |
| 26 | Placa Intermedia |
| 27 | Conjunto Convertidor |
| 28 | Tapa Convertidor |
| 29 | Tornillo Cabeza Hexagonal |
| 30 | Arandela |
| 31 | Suplemento Inferior Dentado |
| 32 | Suplemento Inferior |

LA EMPRESA SE RESERVA EL DERECHO DE REALIZAR MODIFICACIONES SIN PREVIO AVISO



pilmhor
oleohidráulica

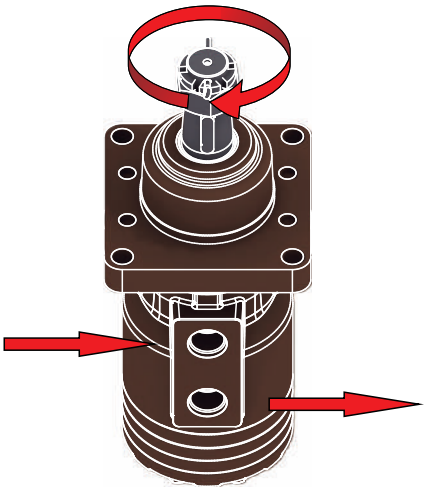
## TABLA DE VALORES

| | VALORACIONES | | MODELOS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
| ESPECIFICACIONES TÉCNICAS | Desplazamiento | $cm^3$/rev | 46.50 | 77.40 | 100.60 | 124.50 | 160.60 | 185.50 | 228.80 | 281.10 | 378.40 | 479 |
| | | $in^3$/rev | 2.84 | 4.72 | 6.14 | 7.60 | 9.80 | 11.32 | 13.96 | 17.15 | 23.09 | 29.23 |
| | Velocidad máxima | rpm | 800 | 770 | 695 | 642 | 495 | 415 | 345 | 280 | 210 | 160 |
| | Caudal máximo | lts/min | 40 | 60 | 70 | 80 | | | | | | |
| | | gal/min | 10.57 | 15.85 | 18.49 | 21.13 | | | | | | |
| | Presión de trabajo | $kg/cm^2$ | 140 | | | | | | 120 | | 100 | 80 |
| | | psi | 1991,5 | | | | 1707 | | | 1424,5 | | 1138 |
| | Velocidad por cada lt/min (*) | rpm | 21.40 | 12.80 | 9.90 | 8.00 | 6.20 | 5.20 | 4.30 | 3.50 | 2.60 | 2.00 |
| | Cupla (**) | kgm | 9.20 | 15.00 | 19.60 | 24.10 | 31.50 | 34.40 | 35.80 | 44.00 | 48.00 | 51.60 |
| | | In-lb | 798.6 | 1302.1 | 1701.5 | 2092.1 | 2734.4 | 2986.2 | 3107.7 | 3819.6 | 4166.8 | 4479.3 |
| | Potencia (**) | hp | 10.00 | 16.10 | 18.90 | 22.00 | 21.8 | 20.00 | 17.20 | 17.20 | 13.90 | 11.50 |
| | | kW | 7.46 | 12.01 | 14.10 | 16.41 | 16.26 | 14.92 | 12.83 | 12.83 | 10.37 | 8.58 |
| | Peso aproximado | kg | 9.00 | 9.40 | 9.70 | 9.90 | 10.20 | 10.40 | 10.70 | 11.30 | 11.70 | 12.30 |
| | | lb | 19.80 | 20.68 | 21.34 | 21.78 | 22.44 | 22.88 | 23.54 | 24.86 | 25.74 | 27.06 |

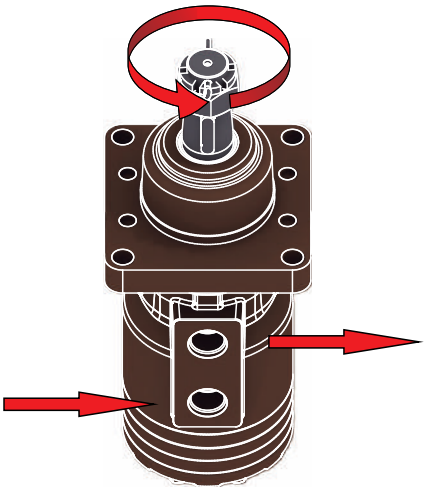
(*) Ensayo realizado con presión normal de trabajo
(**) Ensayo realizado con presión normal de trabajo y máximo caudal
Para eventuales sobrecargas (intermitente/pico) solicitar asesoramiento técnico complementario.
Temperatura durante el ensayo 50ºC. Aceite hidráulico ISO 46.

MOTOR
# MOR-AS-R

## DIRECCIÓN DE ROTACIÓN DEL EJE DE SALIDA



SENTIDO HORARIO



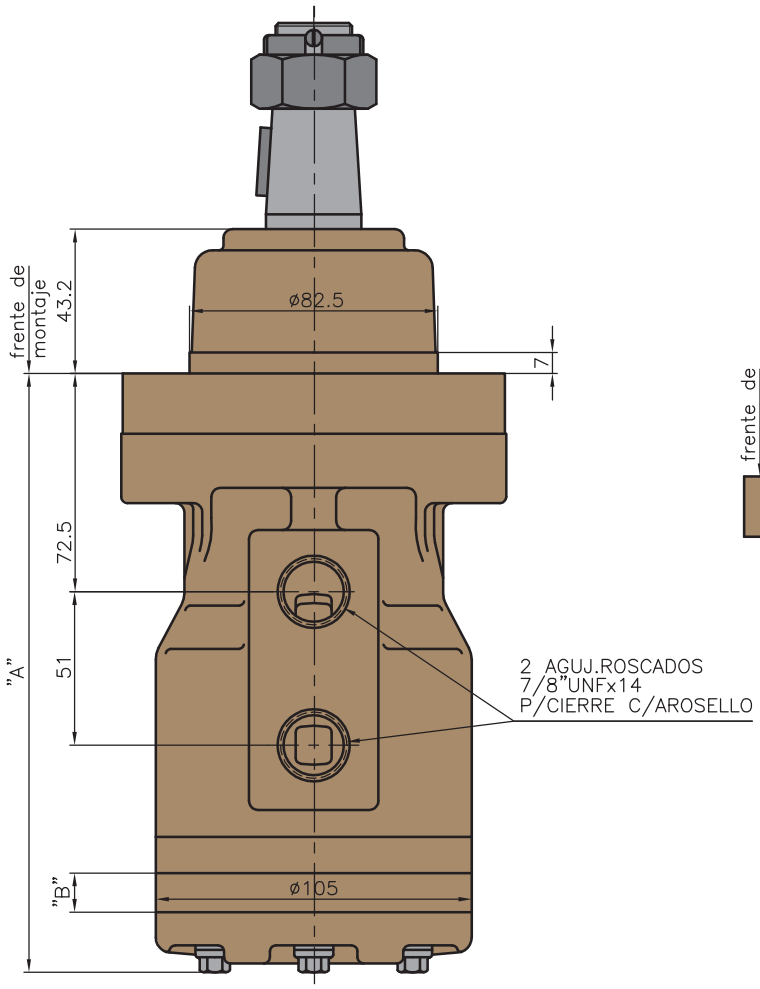
SENTIDO ANTI-HORARIO

LA EMPRESA SE RESERVA EL DERECHO DE REALIZAR MODIFICACIONES SIN PREVIO AVISO

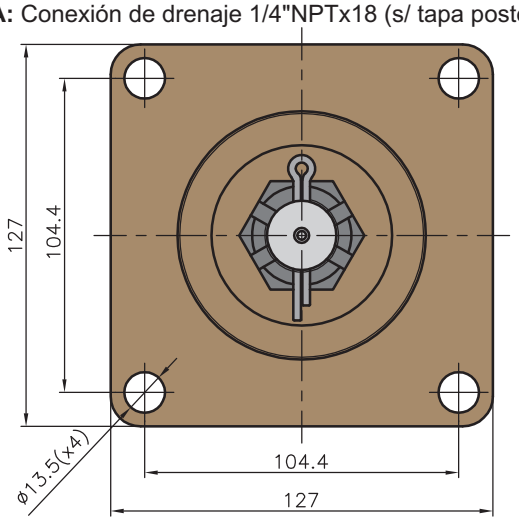


pilmhor oleohidráulica

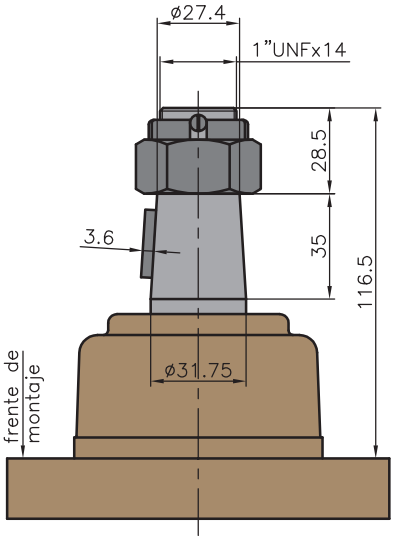
## DIMENSIONES DE MONTAJE




**NOTA:** Conexión de drenaje 1/4"NPTx18 (s/ tapa posterior)

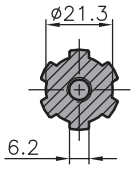


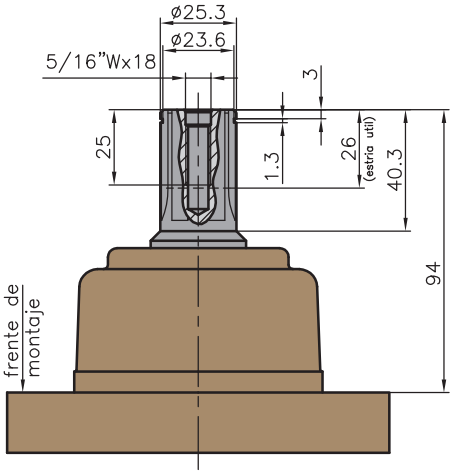

## TIPO DE EJES




**CÓNICO (CONO 1:8)**

**Conicidad=** 1:8
Chav.. Cuadrada
5/16" x 5/16" x 7/8"



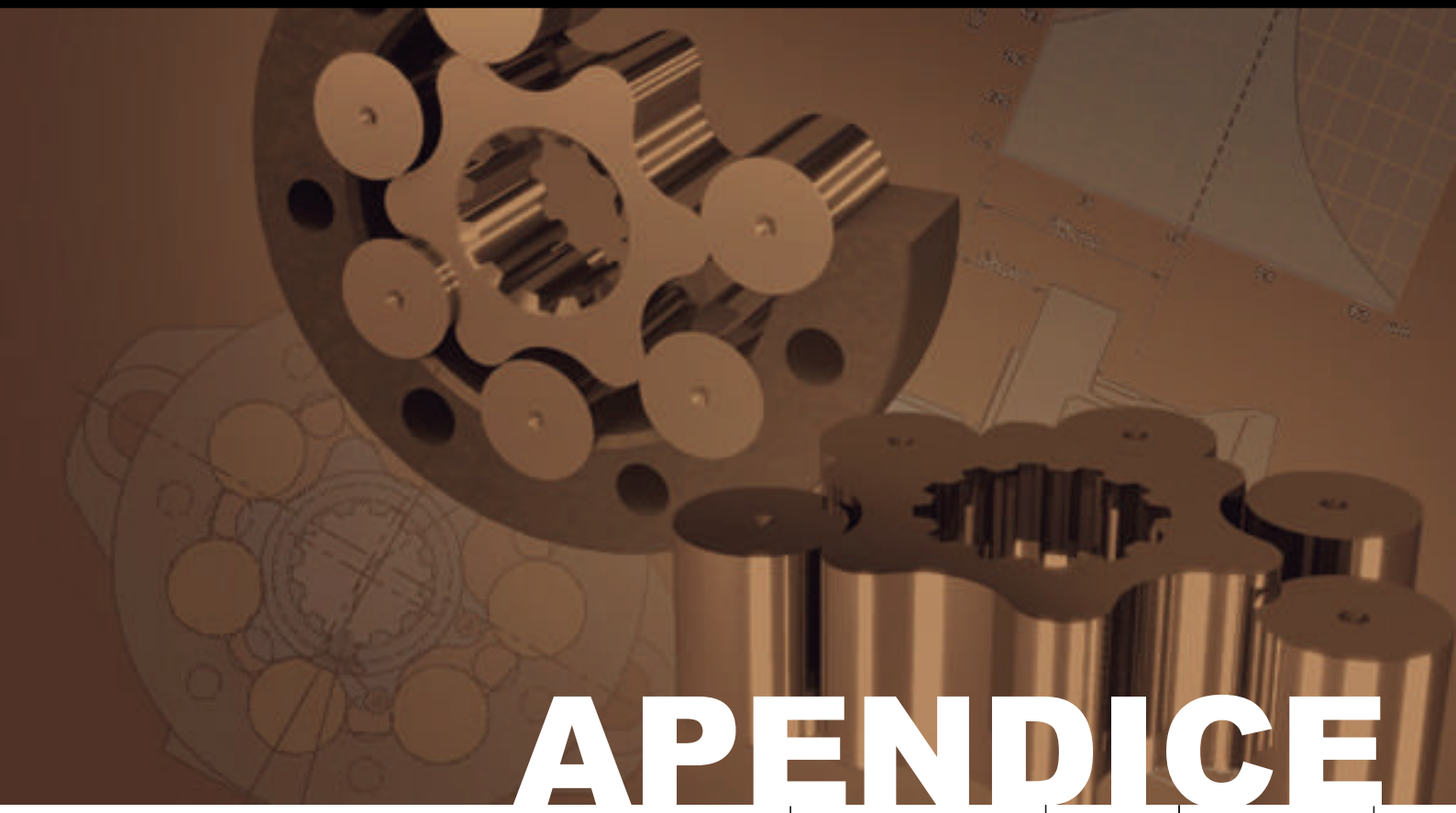

**ESTRIADO Z=6**

Estriado SAE 6B
**Ø=** 25.30 mm

| MODELO | | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COTA "A" | mm | 192.5 | 196.5 | 199.5 | 202.5 | 208.5 | 211.5 | 217.5 | 224.5 | 237.5 | 250.5 |
| | inches | 7 37/64" | 7 47/64" | 7 55/64" | 7 31/32" | 8 13/64" | 8 21/64" | 8 9/16" | 8 27/32" | 9 11/32" | 9 55/64" |
| COTA "B" | mm | 6 | 10 | 13 | 16 | 22 | 25 | 31 | 38 | 51 | 64 |
| | inches | 15/64" | 25/64" | 33/64" | 41/64" | 55/64" | 63/64" | 7/32" | 1" 1/2 | 2" 1/64 | 2" 17/32 |



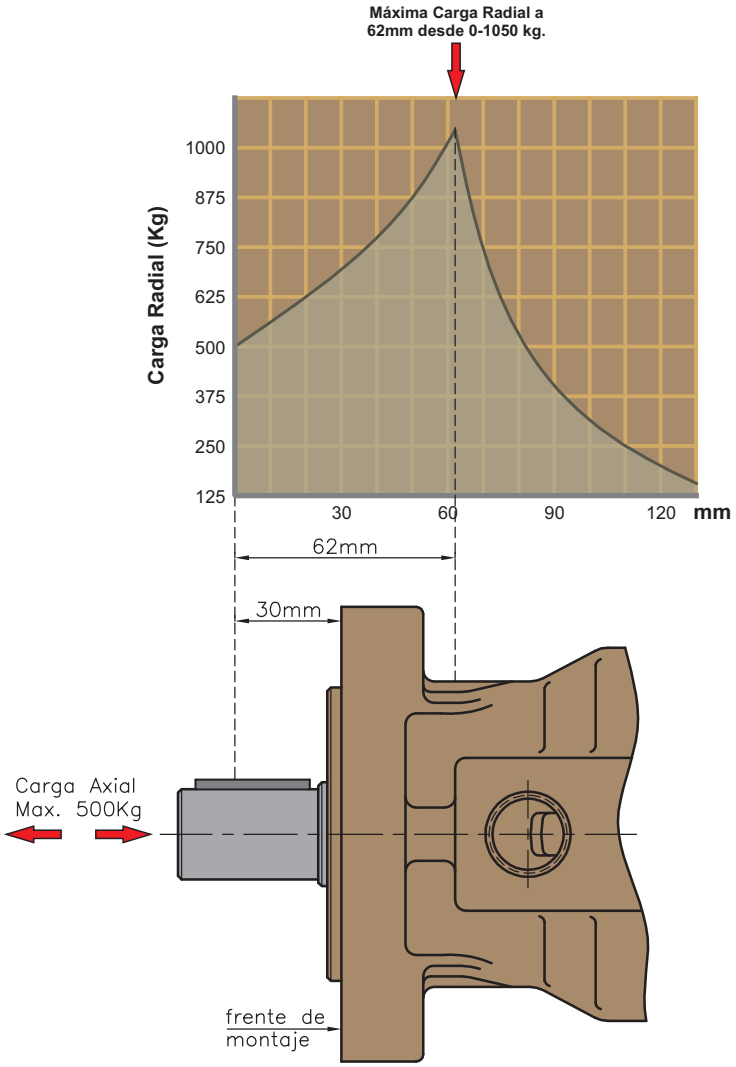
pilmhor® oleohidráulica



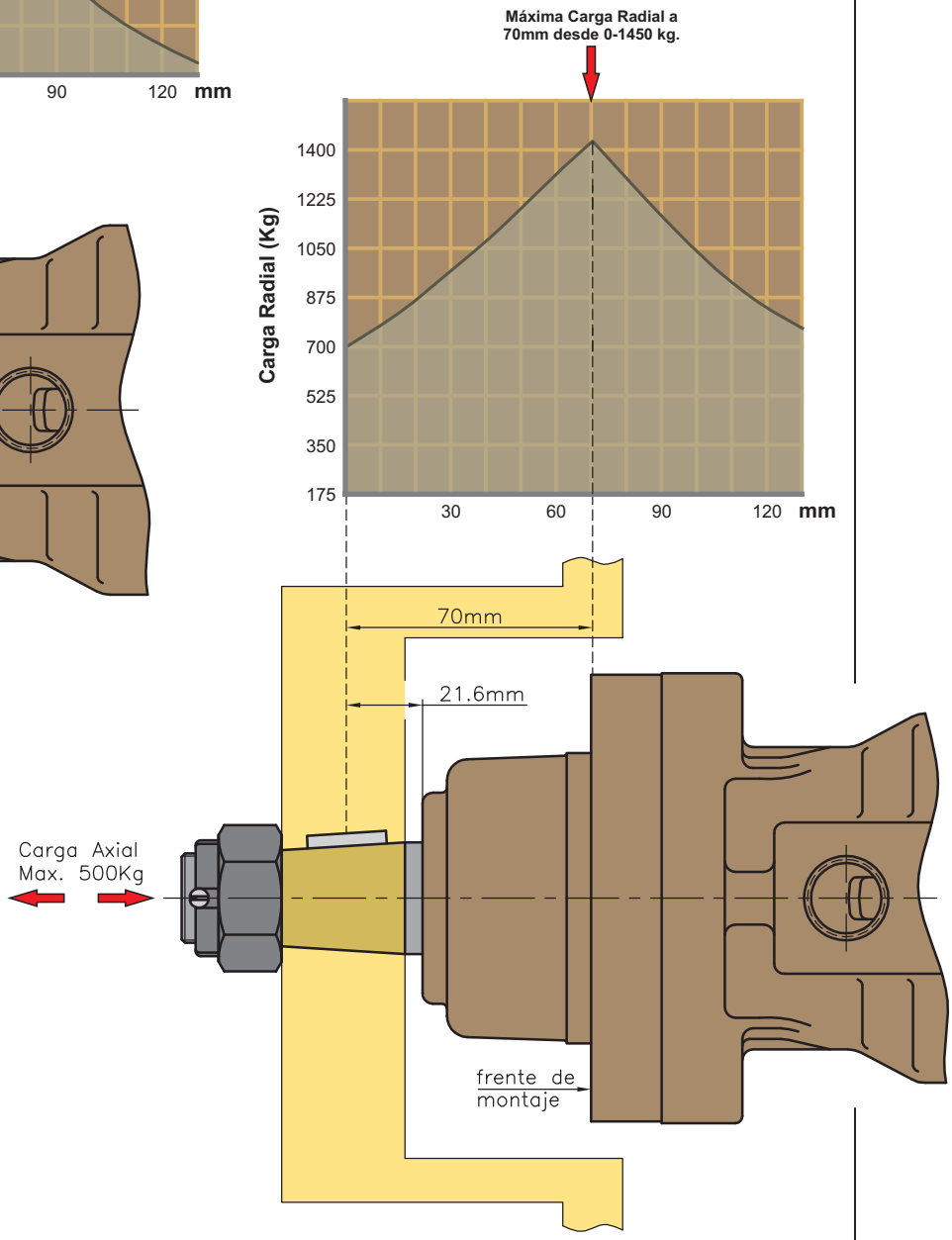
# APENDICE

# DIAGRAMAS DE CARGAS

## MOTOR MOR-AS



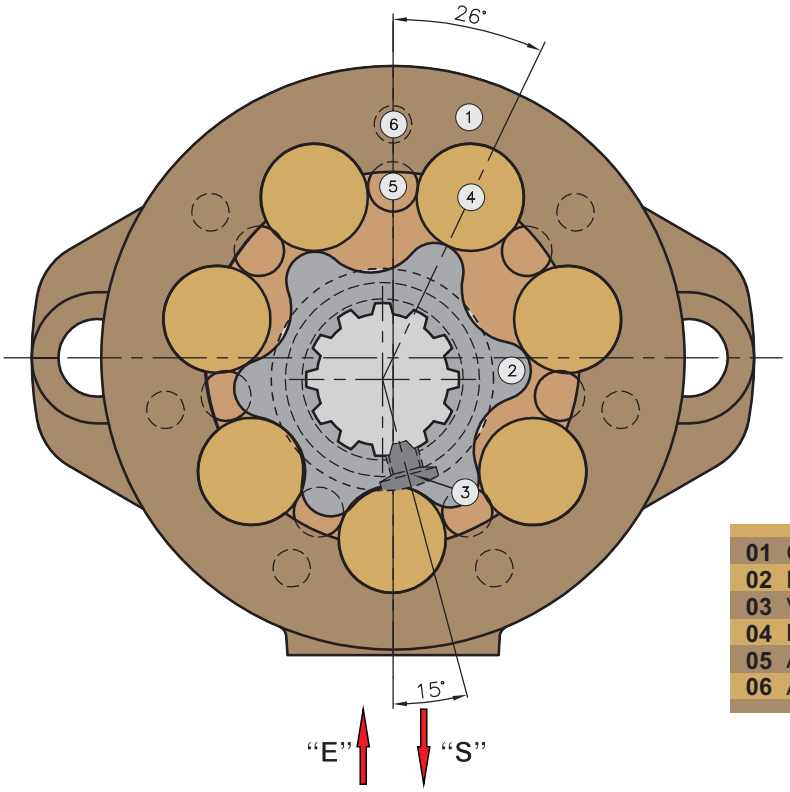

## MOTOR MOR-AS-R





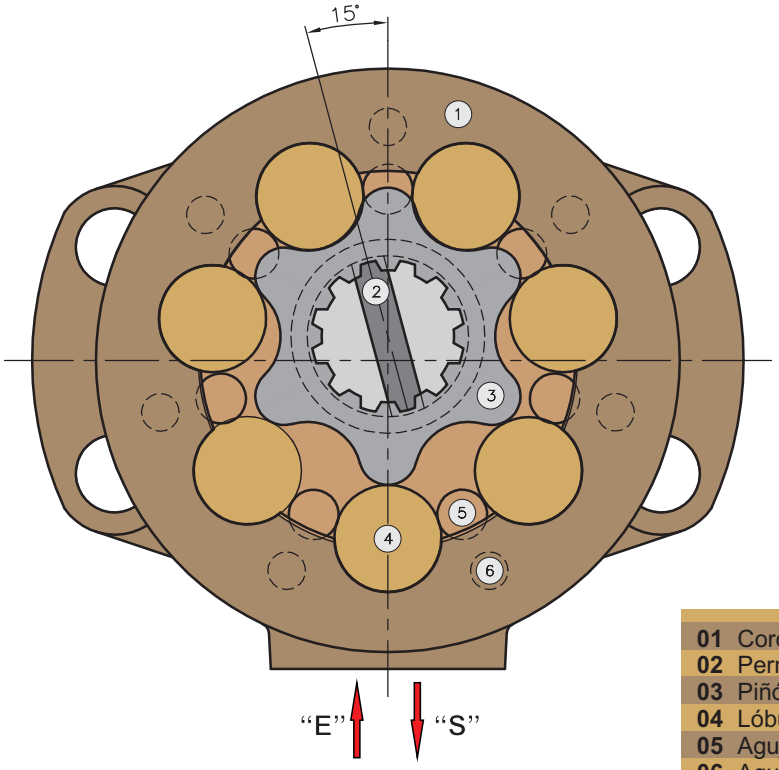

pilmhor
oleohidráulica

## MOTOR MOS-L




| | |
|---|---|
| **01** | Corona Convertidor |
| **02** | Piñón |
| **03** | Válvula de Retención |
| **04** | Lóbulos |
| **05** | Agujeros de pasaje de Aceite |
| **06** | Agujeros de Pasaje de Tornillos |

## MOTOR MOR-AS / MOR-AS-R

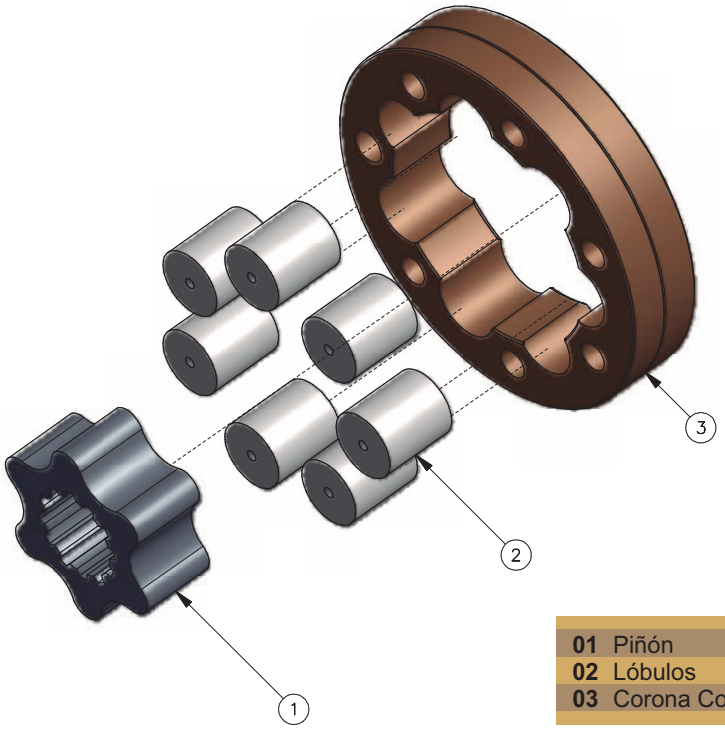



| | |
|---|---|
| **01** | Corona Convertidor |
| **02** | Perno de Arrastre |
| **03** | Piñón |
| **04** | Lóbulos |
| **05** | Agujeros de pasaje de Aceite |
| **06** | Agujeros de Pasaje de Tornillos |

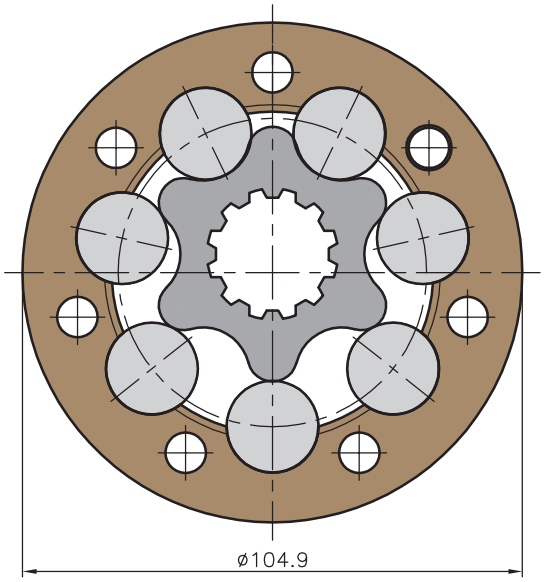


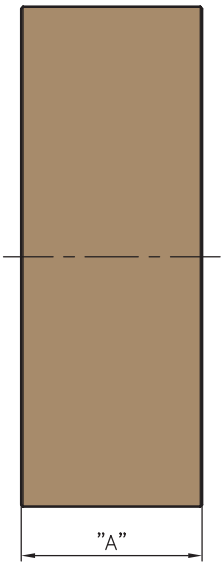
pilmhor®
oleohidráulica

# CONJUNTO CONVERTIDOR




**01** Piñón
**02** Lóbulos
**03** Corona Convertidor



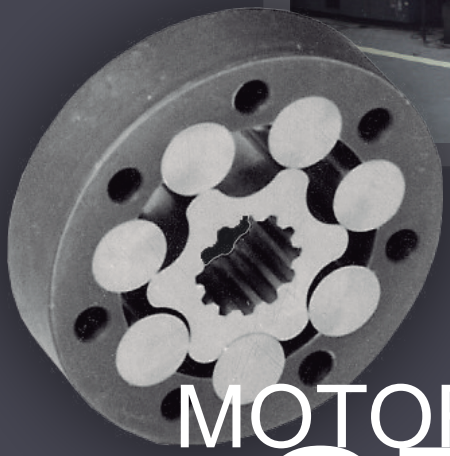




| MODELO | COTA "A" (mm) | CILINDRADA ($cm^3$/rev.) |
|---|---|---|
| MOTOR-6 | 6 | 46.5 |
| MOTOR-10 | 10 | 77.4 |
| MOTOR-13 | 13 | 100.6 |
| MOTOR-16 | 16 | 124.5 |
| MOTOR-22 | 22 | 160.6 |
| MOTOR-25 | 25 | 185.5 |
| MOTOR-31 | 31 | 228.8 |
| MOTOR-38 | 38 | 281.1 |
| MOTOR-51 | 51 | 378.4 |
| MOTOR-64 | 64 | 479.0 |



pilmhor
oleohidráulica

www.pilmhor.com.ar



# MOTORES ORBITALES

pilmhor®
oleohidráulica

Francisco de Arteaga 2225
Bº Villa Adela
(X5011CXG) Córdoba - Argentina
Tel./Fax: líneas rotativas (+54 - 351) 465-0012