

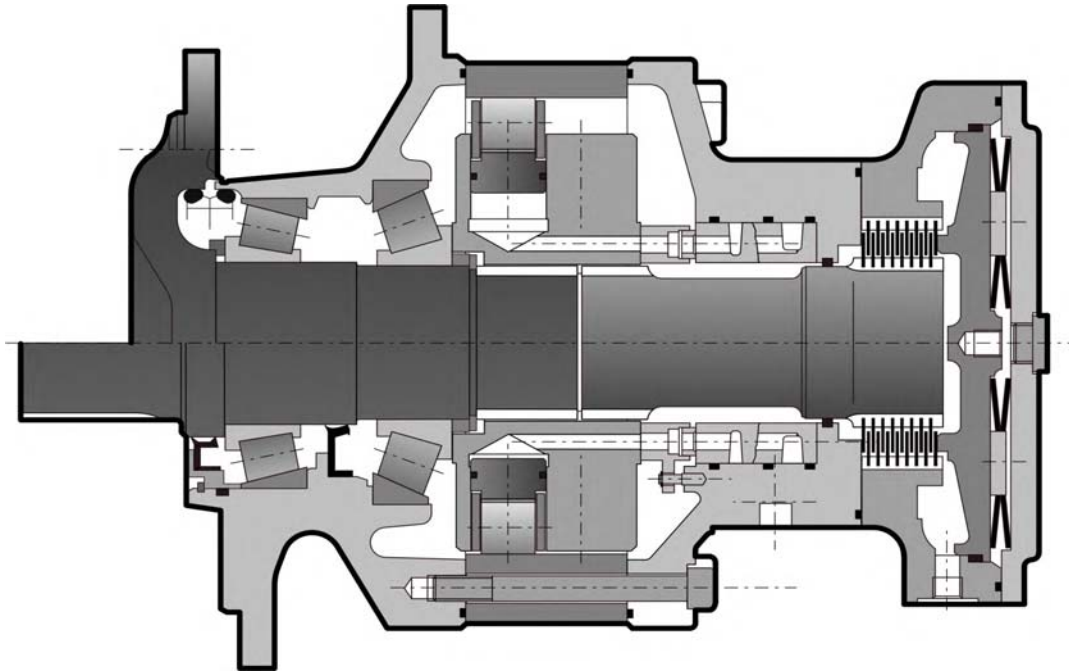
MS83

HYDRAULIC MOTORS





CHARACTERISTICS



Motor inertia 2 kg.m²

| | C | Displacement | | Theoretical torque | | Max. power * | | Max. speed [RPM] | | Max. pressure bar [PSI] | |
|-------------------------|---|---------------------------------------|---------------------------------------|-----------------------|-----------------------------|--------------|--------------|------------------|------------------|----------------------------|-------------|
| | | ① cm ³ /tr [cu.in/rev.] | ② cm ³ /tr [cu.in/rev.] | ① at 100 bar Nm | ① at 1000 PSI [lb.ft] | ① kW [HP] | ② kW [HP] | ① speed 1C | ② speed 2C | | |
| Cams with equal lobes | 8 | 6 679 [407,4] | 3 340 [203,7] | 10 620 | [5 400] | 200 [268] | 135 [181] | 200 | 125 | 145 | 450 [6 527] |
| | 0 | 8 328 [507,9] | 4 164 [254,0] | 13 242 | [6 734] | | | 160 | 100 | 125 | |
| | 2 | 10 019 [611,1] | 5 010 [305,5] | 15 930 | [8 101] | | | 130 | 85 | 100 | |
| Cams with unequal lobes | Q | 6 658 [406,1] | 4 164 [254,0] | 10 586 | [5 383] | 200 [268] | 135 [181] | 180 | 90 | 105 | 450 [6 527] |
| | | | 2 494 [152,1] | | | | | | | | |
| | A | 8 349 [509,2] | 5 009 [305,5] | 13 275 | [6 751] | | | 150 | 100 | 110 | |
| | | | 3 340 [203,7] | | | | | | | | |

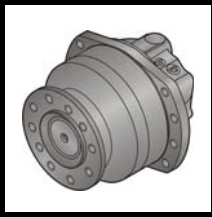
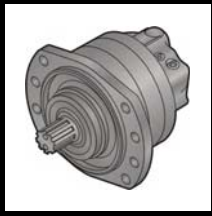
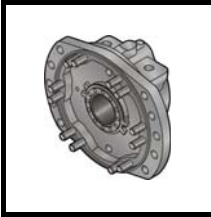
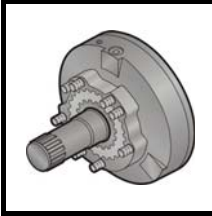
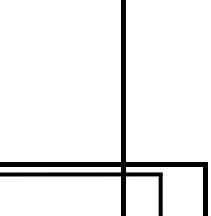
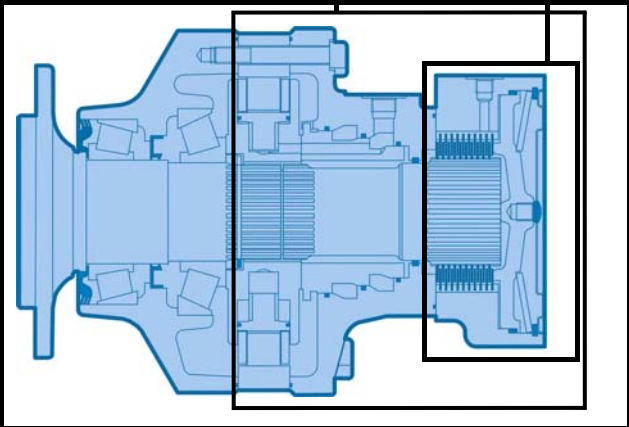
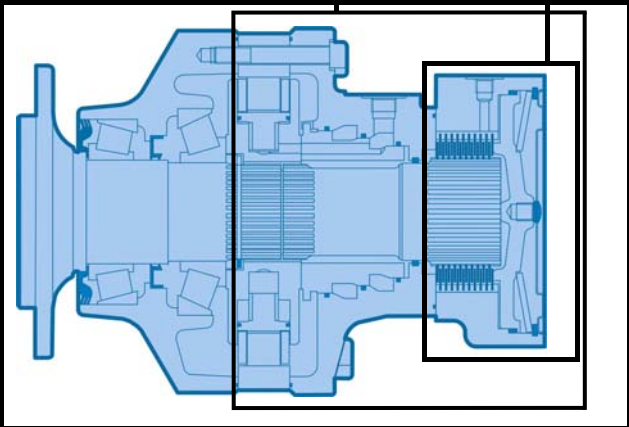
- ① First displacement
- ② Second displacement



* For higher power value, please consult your Poclain Hydraulics application engineer.

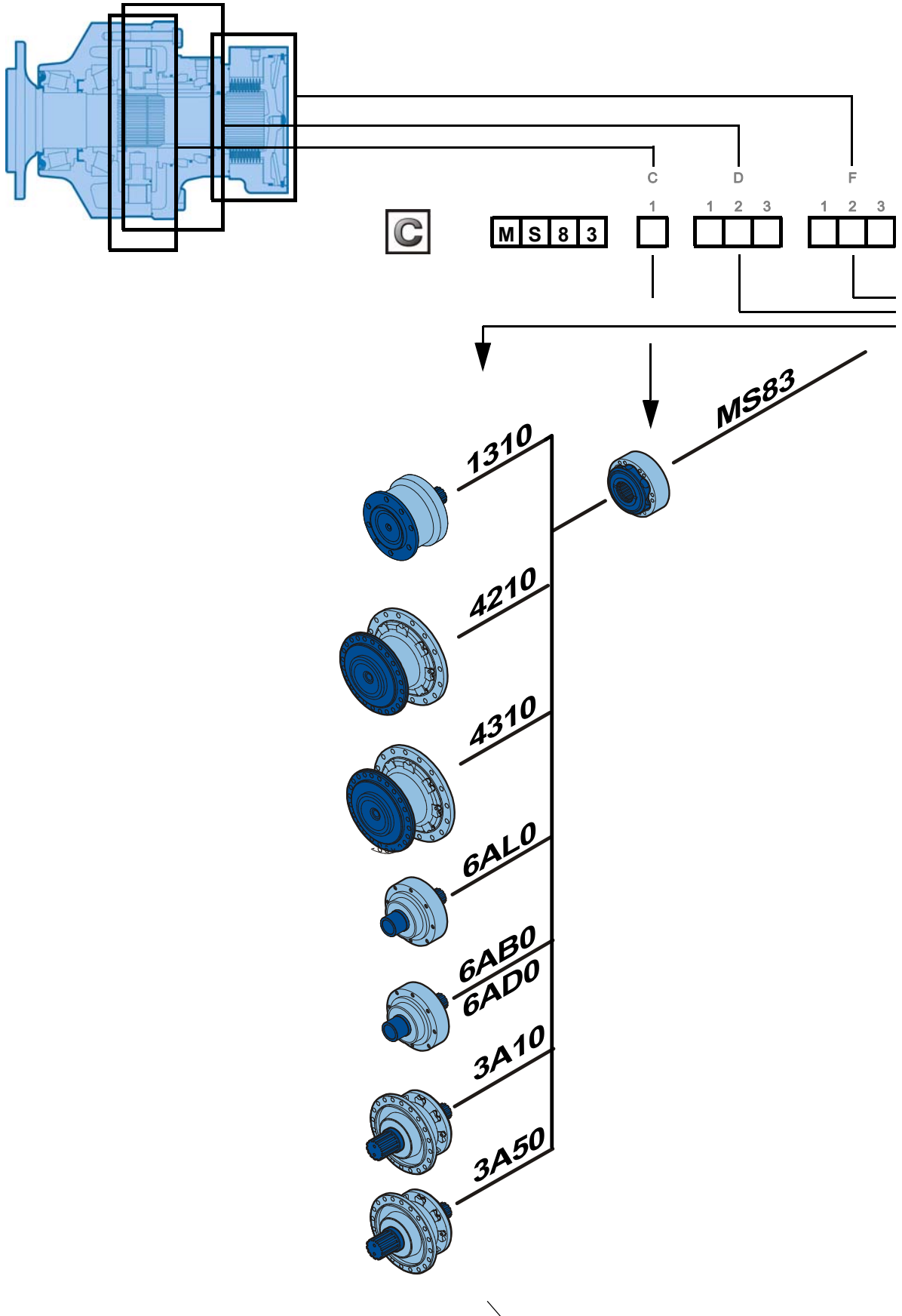


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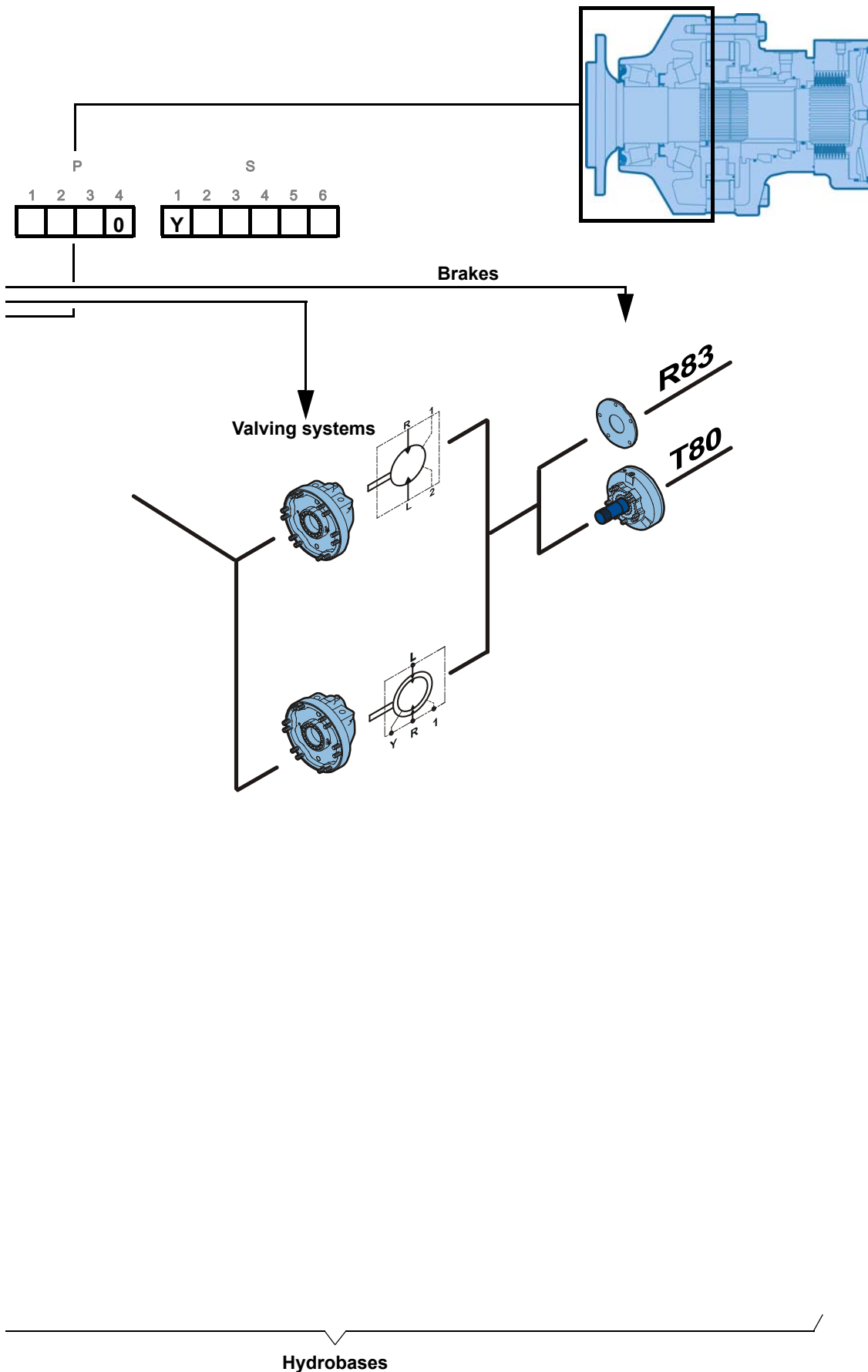


MODUL





MODULARITY

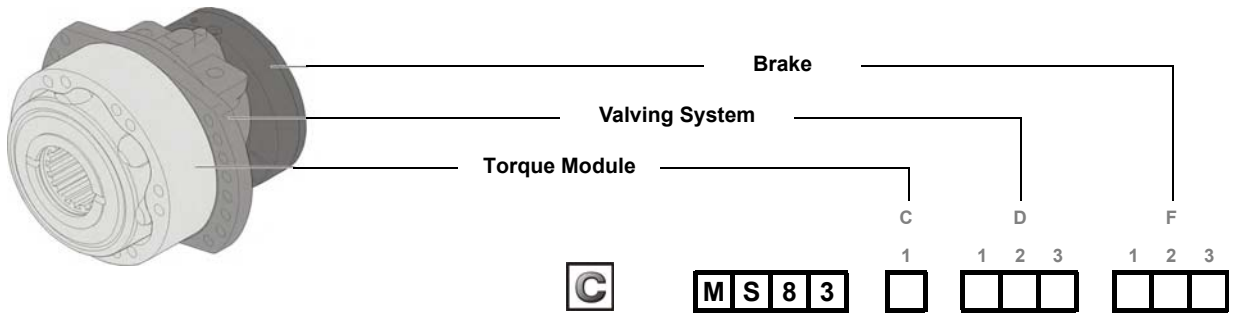


Modularity and Model code

- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories



MODEL



C1
Cam ring type

| | 1 displacement 2 displacements | | |
|-------------------------|----------------------------------|---------------|----------|
| | cm ³ /tr [cu.in/rev.] | | |
| Cams with equal lobes | 6 679 [407.4] | 3 340 [203.7] | 8 |
| | 8 328 [507.9] | 4 164 [254.0] | 0 |
| | 10 019 [611.1] | 5 010 [305.5] | 2 |
| Cams with unequal lobes | 6 658 [406.1] | 4 164 [254.0] | Q |
| | | 2 494 [152.1] | |
| | 8 349 [509.2] | 5 009 [305.5] | A |
| | 3 340 [203.7] | | |

D1
Valving type

| | | |
|------------------------------------|----------|----------|
| 1-displacement valving | | 1 |
| | Ratio 2 | A |
| 2-displacement symmetrical valving | Ratio <2 | B |
| | Ratio >2 | C |

D2
Valving cover

| | | |
|------------------------|------------------|----------|
| HighFlow™ distribution | Without mounting | B |
| | Lug fixing | C |

D3
Connection type

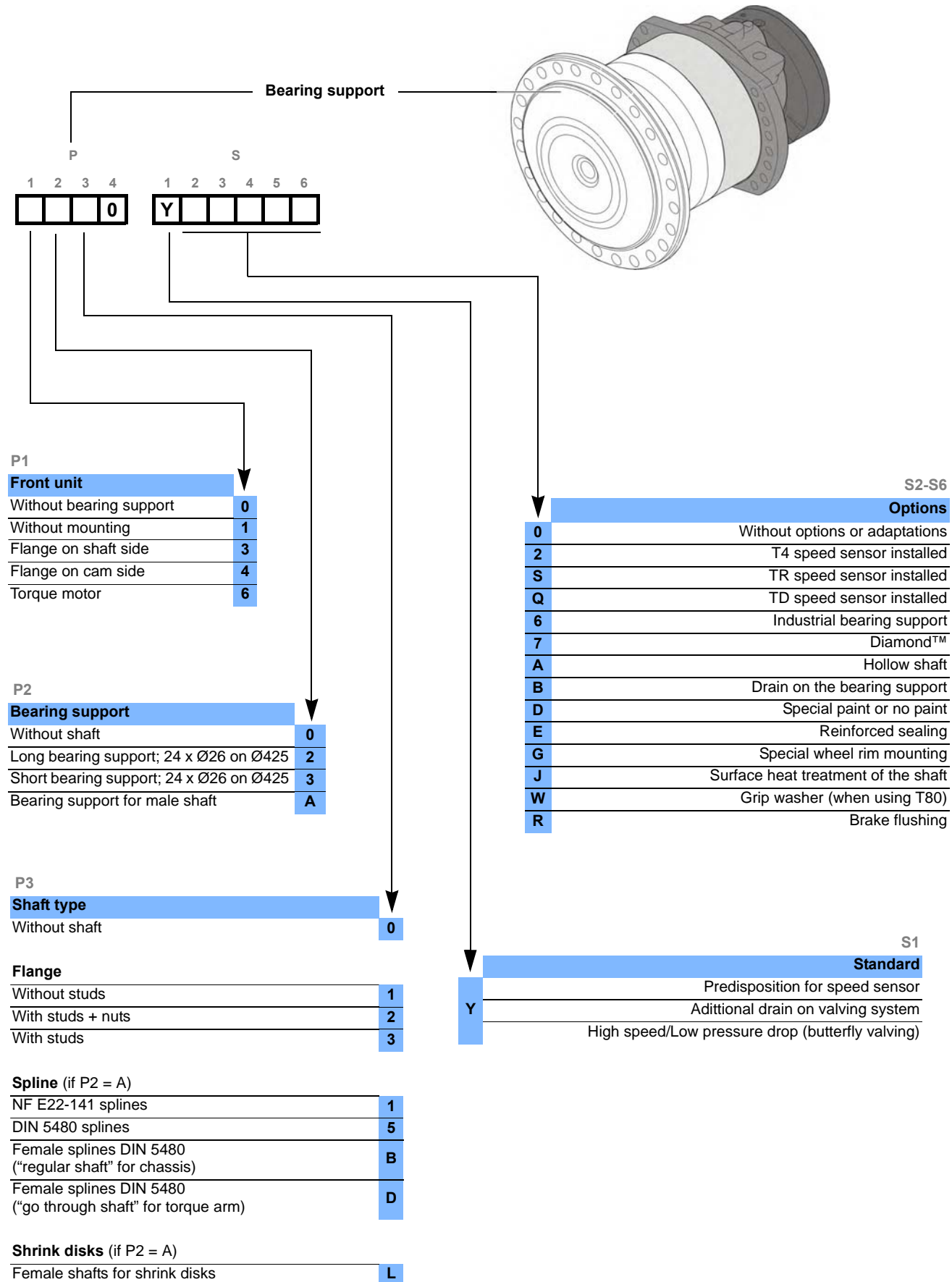
| | |
|---|----------|
| Without cover | 0 |
| HP: ISO 6162 (SAE flanges) DN 32 BP: ISO 9974-1 (Metric ports) | J |
| HP: ISO 6162 (SAE flanges) DN 32 BP: ISO 1179-1 (GAZ ports) | K |

F1-F3
Rear brake

| | |
|-------------------------------------|--------------|
| Brake (screwed environmental cover) | T 8 0 |
| Without brake (reinforced plate) | R 8 3 |



CODE



- Modularity and Model code
- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories



Methodology :

This document is intended for manufacturers of machines that incorporate Poclain Hydraulics products. It describes the technical characteristics of Poclain Hydraulics products and specifies installation conditions that will ensure optimum operation. This document includes important comments concerning safety. They are indicated in the following way:



Safety comment.

This document also includes essential operating instructions for the product and general information. These are indicated in the following way:



Essential instructions.



General information .



Information on the model number.



Weight of component without oil.



Volume of oil.



Units.



Tightening torque.



Screws.



Information intended for Poclain-Hydraulics personnel.

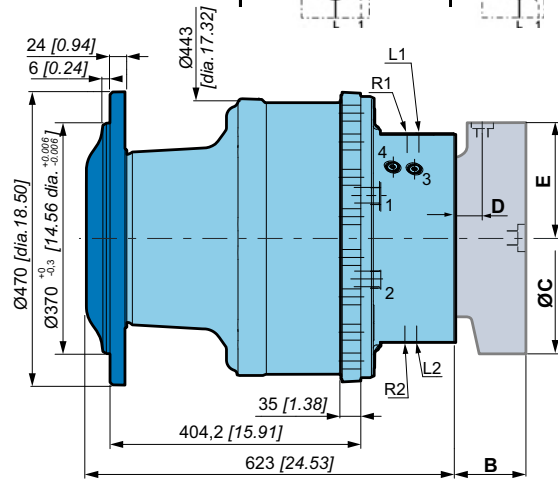
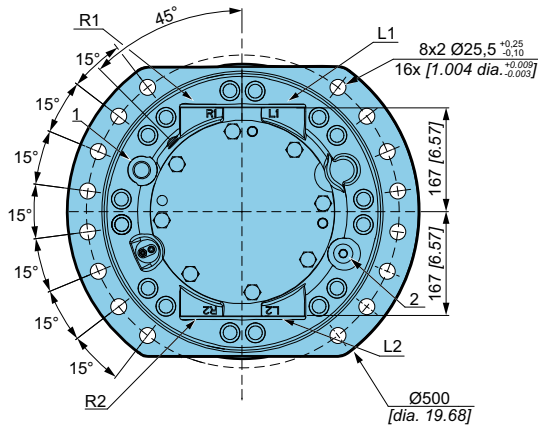
The views in this document are created using metric standards.
The dimensional data is given in mm and in inches (inches are given in brackets in italic)





WHEEL MOTOR

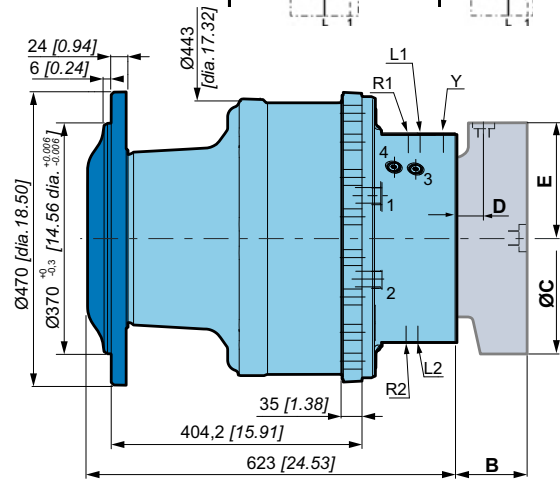
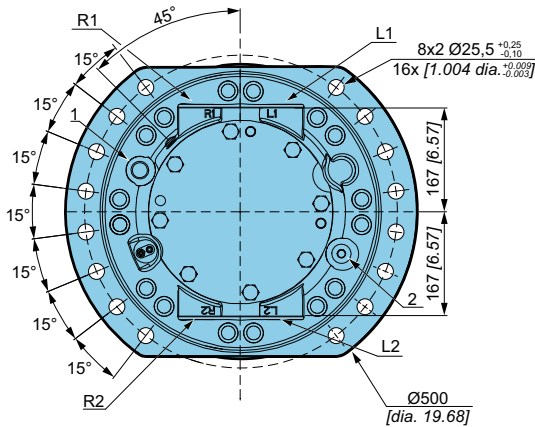
Dimensions for standard (1310) 1-displacement motor



| | | |
|--|---------------------|--------------------|
| | 450 kg [990 lb] | 610 kg [1 342 lb] |
| | 11,00 L [660 cu.in] | 9,00 L [540 cu.in] |



Dimensions for standard (1310) 2-displacement motor



| | | |
|--|---------------------|--------------------|
| | 450 kg [990 lb] | 610 kg [1 342 lb] |
| | 11,00 L [660 cu.in] | 9,00 L [540 cu.in] |



Also see 'Valving systems and hydrobases' section (thumbnail opposite).

| | | |
|----------|-------------------|--------------|
| | C | T 8 0 |
| B | 189,0 [7,44] | |
| C | Ø376 [14,80 dia.] | |
| D | 44,0 [1,73] | |
| E | 181,0 [7,13] | |



Also see "Brake" section (thumbnail opposite).



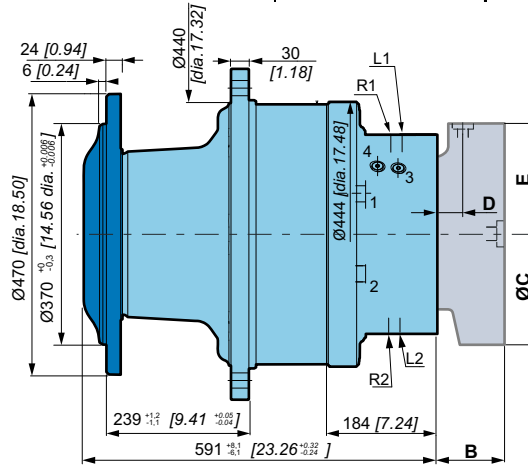
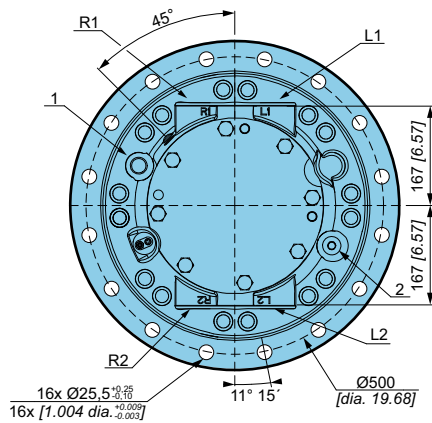
For speed ≥ 90 rpm, the bearing support must be flushed: motor must be ordered with drain on the bearing support (option B).

- Modularity and Model code
- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories



Dimensions for standard (4310) 1-displacement motor

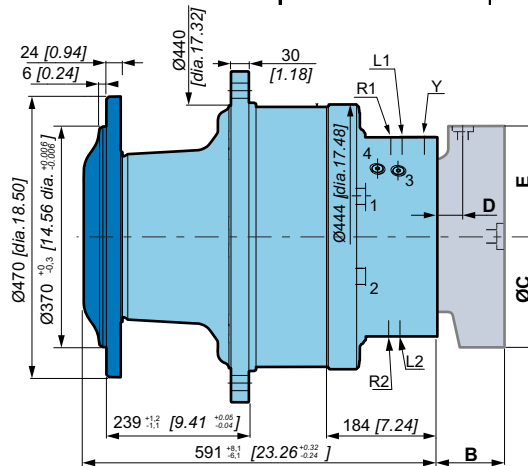
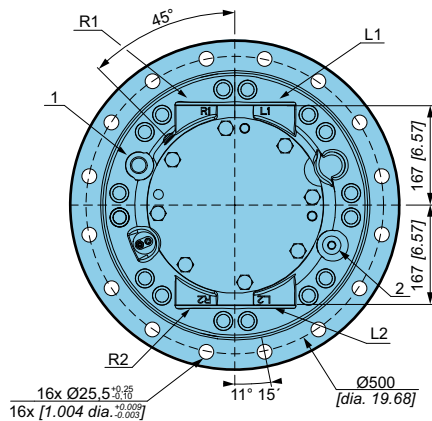
| | | |
|--|---------------------|--------------------|
| | 450 kg [990 lb] | 600 kg [1 320 lb] |
| | 11,00 L [660 cu.in] | 9,00 L [540 cu.in] |
| | | |



Dimensions for standard (4310) 2-displacement motor

For a small displacement, there is no preferred orientation for this motor.

| | | |
|--|---------------------|--------------------|
| | 450 kg [990 lb] | 600 kg [1 320 lb] |
| | 11,00 L [660 cu.in] | 9,00 L [540 cu.in] |
| | | |



Also see 'Valving systems and hydrobases' section (thumbnail opposite).

| | | |
|--|----------|-------------------|
| | C | T 8 0 |
| | B | 189,0 [7,44] |
| | C | Ø376 [14,80 dia.] |
| | D | 44,0 [1,73] |
| | E | 181,0 [7,13] |



Also see "Brake" section (thumbnail opposite).



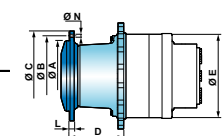
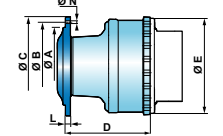
For speed ≥ 90 rpm, the bearing support must be flushed: motor must be ordered with drain on the bearing support (option B).




Support types

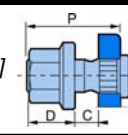
| | | | | | |
|--|----------------|-------|-------|----------|-------------|
| | C | D | F | P | S |
| | 1 | 1 2 3 | 1 2 3 | 1 2 3 4 | 1 2 3 4 5 6 |
| | M S 8 3 | | | 0 | Y |

| C | A mm [in] | B mm [in] | C mm [in] | D mm [in] | E mm [in] | N mm [in] | Wheel rim mountings | L mm [in] |
|--------------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|
| 1 3 1 0 1 2 3 4 P | Ø 370 [14,57 dia.] | Ø 425 [16,73 dia.] | Ø 470 [18,50 dia.] | 404,2 [15,91] | Ø 444 [17,48 dia.] | Ø 26 [1,02 dia.] | 24 x M24x2 | 24 [0,94] |
| 4 2 1 0 1 2 3 4 P | Ø 370 [14,57 dia.] | Ø 425 [16,73 dia.] | Ø 470 [18,50 dia.] | 284 [11,18] | Ø 444 [17,48 dia.] | Ø 26 [1,02 dia.] | 24 x M24x2 | 25 [0,98] |
| 4 3 1 0 1 2 3 4 P | Ø 370 [14,57 dia.] | Ø 425 [16,73 dia.] | Ø 470 [18,50 dia.] | 239 [9,41] | Ø 444 [17,48 dia.] | Ø 26 [1,02 dia.] | 24 x M24x2 | 24 [0,94] |



Studs

| |  | P mm [in] | C min. mm [in] | C max. mm [in] | D mm [in] | Class |
|--------|---|-------------------------|--------------------------|--------------------------|---------------------|-------------|
| Studs | M24 x 2 | 95 [3,74] 115 [4,53] | 5 [0,20] | 39 [1,54] 59 [2,32] | 30 [1,18] | 12,9 |
| Screws | M24 x 2 | - | - | - | - | |



See generic installation motors N°B51352L.

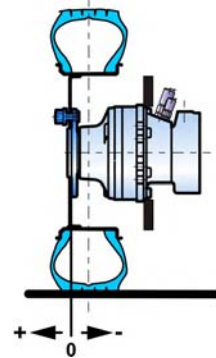
- Modularity and Model code
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- Accessories



Radial load and service life of bearings curves



The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load / Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application's specifications. For an accurate calculation, consult your Poclair Hydraulics application engineer.



Permissible radial loads

Max. permissible loads: 0 tr/min [0 RPM]; 0 bar [0 PSI].

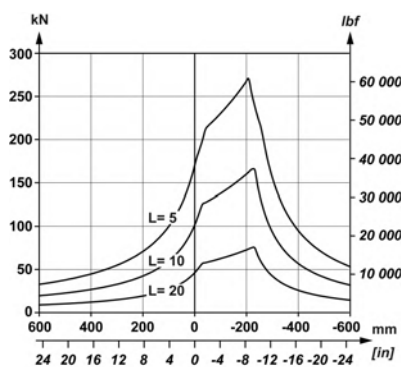
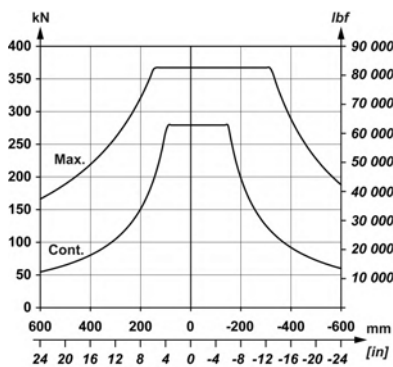
Continuous permissible loads: > 0 tr/min [> 0 RPM]; 275 bar [3 988 PSI].

Test conditions: code 0 displacement, without axial load, shaft treated (option J), class 10.9 and 12.9 chassis mountings class 12.9 wheel rim mountings.

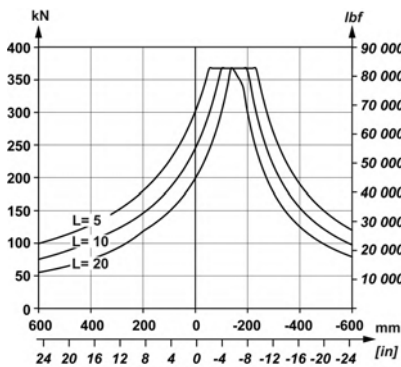
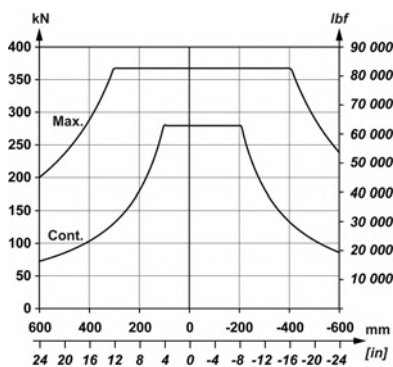
Service life of bearings

L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid.

| | | | |
|---|---|---|---|
| P | | | |
| 1 | 2 | 3 | 4 |
| 1 | 3 | 1 | 0 |
| 4 | 3 | 1 | 0 |



| | | | |
|---|---|---|---|
| P | | | |
| 1 | 2 | 3 | 4 |
| 4 | 2 | 1 | 0 |

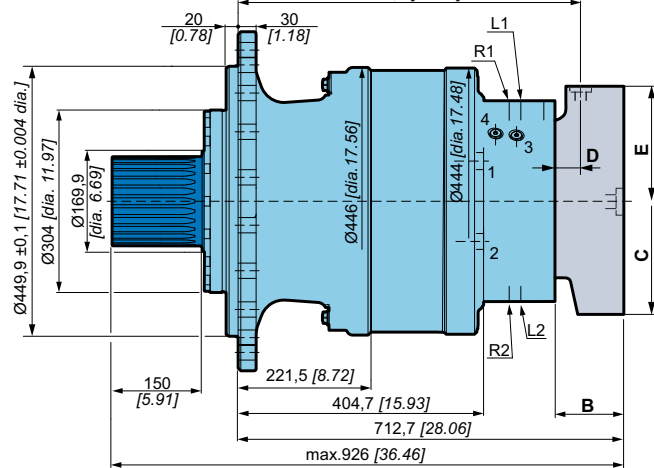
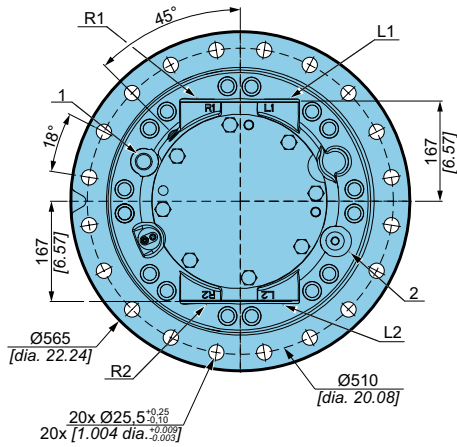




SHAFT MOTOR

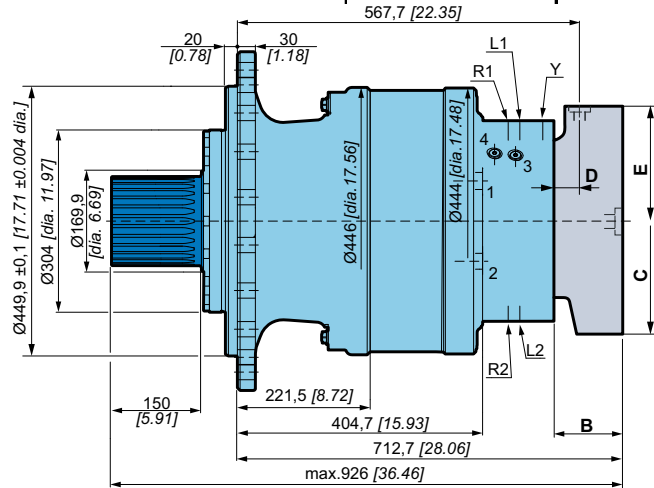
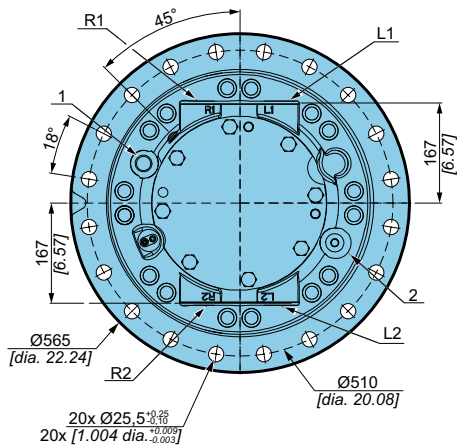
Dimensions for standard (3A50) 1-displacement motor

| | | |
|--|---------------------|--------------------|
| | 435 kg [957 lb] | 585 kg [1 287 lb] |
| | 11,00 L [660 cu.in] | 9,00 L [540 cu.in] |
| | | |



Dimensions for standard (3A50) 2-displacement motor

| | | |
|--|---------------------|--------------------|
| | 435 kg [957 lb] | 585 kg [1 287 lb] |
| | 11,00 L [660 cu.in] | 9,00 L [540 cu.in] |
| | | |



Also see 'Valving systems and hydrobases' section (thumbnail opposite).

| | | |
|----------|-------------------|--------------|
| | C | T 8 0 |
| B | 189,0 [7,44] | |
| C | Ø376 [14,80 dia.] | |
| D | 44,0 [1,73] | |
| E | 181,0 [7,13] | |



Also see "Brake" section (thumbnail opposite).



For speed ≥ 90 rpm, the bearing support must be flushed: motor must be ordered with drain on the bearing support (option B).

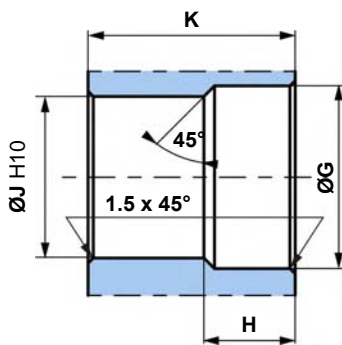
- Modularity and Model code
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Support types

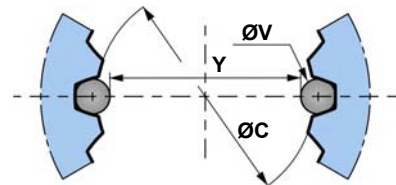
| C | D | | | | F | | | P | | | | S | | | | | |
|----------------|--|-------------|----------|----------|--------------|--------------|----------|---|---|---|----------|----------|---|---|---|---|---|
| | 1 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 5 | 6 |
| M S 8 3 | | | | | | | | | | | 0 | Y | | | | | |
| C | A | B | C | D | E | F | G | | | | | | | | | | |
| | mm [in] | mm [in] | mm [in] | mm [in] | mm [in] | mm [in] | mm [in] | | | | | | | | | | |
| 3 A 1 0 | NF E22-141 splines Nominal Ø 150 [5,91] Module 3.75 Z 38 | | | | | | | | | | | | | | | | |
| | 40 | R 4 | 60 | 2 x | 31 | 150 | - | | | | | | | | | | |
| | [1,57] | [R 0,16] | [2,36] | M16 | [1,22] | [5,91] | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 3 A 5 0 | DIN 5480 splines Nominal Ø 150 [5,91] Module 5 Z 28 | | | | | | | | | | | | | | | | |
| | 40 | R 4 | 60 | 2 x | 32 | 150 | - | | | | | | | | | | |
| | [1,57] | [R 0,16] | [2,36] | M16 | [1,26] | [5,91] | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 6 A L 0 | Ø 140 | Ø 185 | 230 | 426 | Ø 340 | Ø 380 | 16 x | | | | | | | | | | |
| | [5,51 dia.] | [7,28 dia.] | [9,06] | [16,77] | [13,39 dia.] | [14,96 dia.] | M20 | | | | | | | | | | |
| | DIN 5480 splines Nominal Ø 150 [5,91] Module 5 Z 26 | | | | | | | | | | | | | | | | |
| | Ø 142 | Ø 199 | 190 | 432 | Ø 340 | Ø 380 | 16 x | | | | | | | | | | |
| | [5,59 dia.] | [7,83 dia.] | [7,48] | [17,01] | [13,39 dia.] | [14,96 dia.] | M20 | | | | | | | | | | |
| | DIN 5480 splines Nominal Ø 150 [5,91] Module 5 Z 26 | | | | | | | | | | | | | | | | |
| | Ø 142 | Ø 199 | 190 | 438 | Ø 340 | Ø 380 | 16 x | | | | | | | | | | |
| | [5,59 dia.] | [7,83 dia.] | [7,48] | [17,24] | [13,39 dia.] | [14,96 dia.] | M20 | | | | | | | | | | |

Coupling for male splines



Standard DIN 5480
 Pressure angle 30°.
 Centering on flanks.
 Slide fit (7H quality).

N : Nominal Ø.
Mo : Module.
Z : Number of teeth.



| C | Ø G | H | Ø J | K | N | Mo | Z | Offset | Ø C (H10) | Ø V | Y | Tolerance (Y) |
|----------------|---------|---------|---------|---------|---------|------|----|----------|-----------|---------|---------|---------------|
| | mm [in] | mm [in] | mm [in] | mm [in] | mm [in] | | | mm [in] | mm [in] | mm [in] | mm [in] | µm [µin] |
| 3 A 1 0 | 151 | 32 | 142,5 | 149 | 150 | 3,75 | 38 | 3 | 142,5 | 7,5 | 135,254 | + 104 / 0 |
| | [5,94] | [1,26] | [5,61] | [5,87] | [5,91] | | | [0,12] | [5,61] | [0,30] | [5,32] | [+4.094 / 0] |
| 3 A 5 0 | 152 | 33 | 140 | 149 | 150 | 5 | 28 | 2,25 | 140 | 9 | 131,104 | + 87 / 0 |
| | [5,98] | [1,30] | [5,51] | [5,87] | [5,91] | | | [0,0886] | [5,51] | [0,35] | [5,16] | [+3.425 / 0] |

General tolerances : ± 0.25 [±0.0098].

Material: Ex: 42CrMo4.

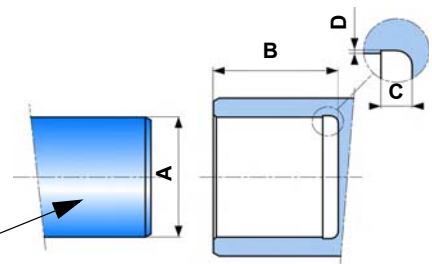
Hardening treatment to obtain R = 800 to 900 N/mm² [R = 116 030 to 130 533 PSI].



Coupling for shrink discs

| C | | | | A | B | C | D |
|---|---|---|---|-------------|---------|---------|----------|
| | | | | mm [in] | mm [in] | mm [in] | mm [in] |
| 6 | A | L | 0 | ∅ 140 | 140 | 10 | 0,5 |
| 1 | 2 | 3 | 4 | [5,51 dia.] | [5,51] | [0,394] | [0,0197] |
| P | | | | | | | |

R min. : 640 N/mm² [132 800 PSI]

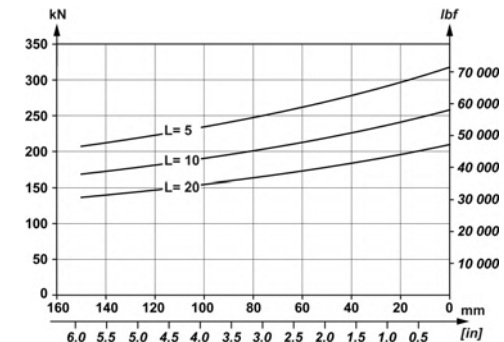
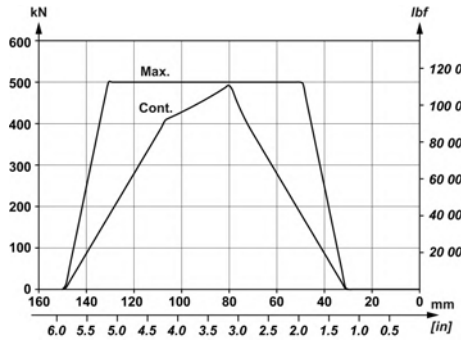


Radial load and service life of bearings curves

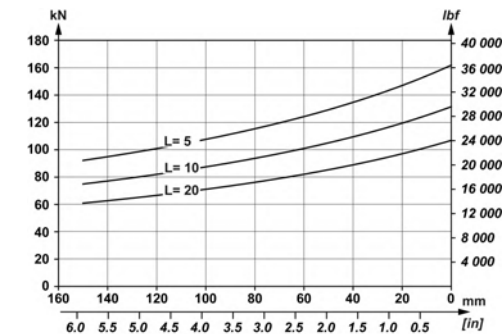
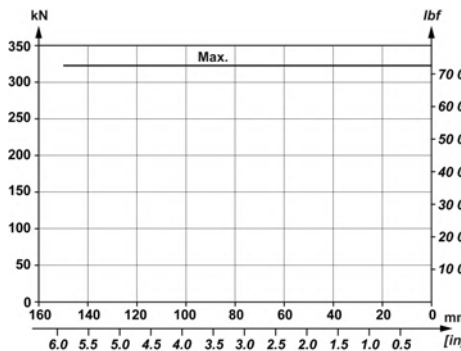
| Permissible radial loads | Service life of bearings |
|---|--|
| <p>Max. permissible loads: 0 tr/min [0 RPM]; 0 bar [0 PSI].</p> <p>Continuous permissible loads: > 0 tr/min [> 0 RPM]; 275 bar [3 988 PSI].</p> | <p>L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid.</p> |

Test conditions: code 0 displacement, without axial load, shaft treated (option J), class 10.9 and 12.9 chassis mountings.

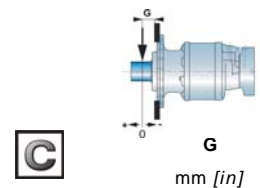
| P | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 3 | A | 1 | 0 |
| 3 | A | 5 | 0 |



| P | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 6 | A | L | 0 |
| 6 | A | B | 0 |
| 6 | A | D | 0 |



The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load / Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application's specifications. For an accurate calculation, consult your Poclain Hydraulics application engineer.

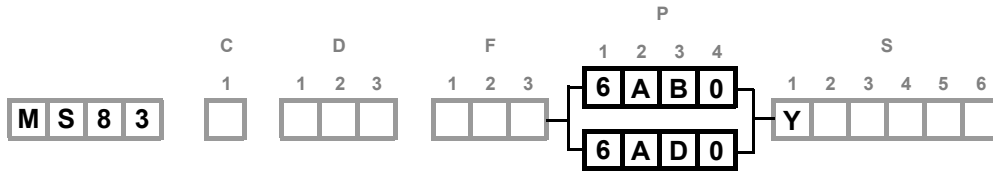


| C | | G | | |
|---|---|---------|---|---------------|
| | | mm [in] | | |
| 3 | A | 1 | 0 | 151 [5,94] |
| 3 | A | 5 | 0 | 151 [5,94] |
| 6 | D | L | 0 | 65,75 [2,589] |
| 6 | A | B | 0 | 65,75 [2,589] |
| 6 | A | D | 0 | 65,75 [2,589] |

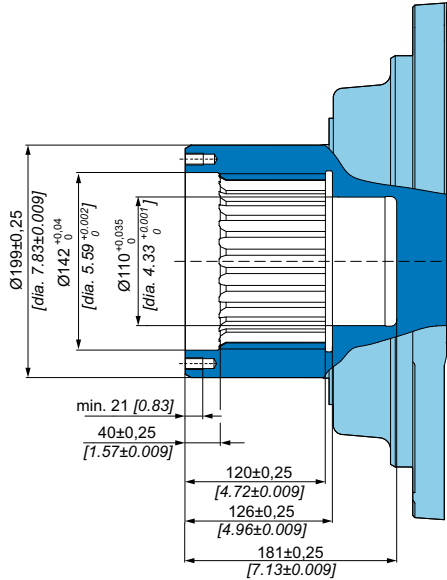
- Modularity and Model code
- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories



Coupling for female splines



Splined DIN 5480
 Pressure angle: 30°
 Nominal diameter: 140
 Number of Teeth: 26
 Modulus: 5
 Tolerance class:8

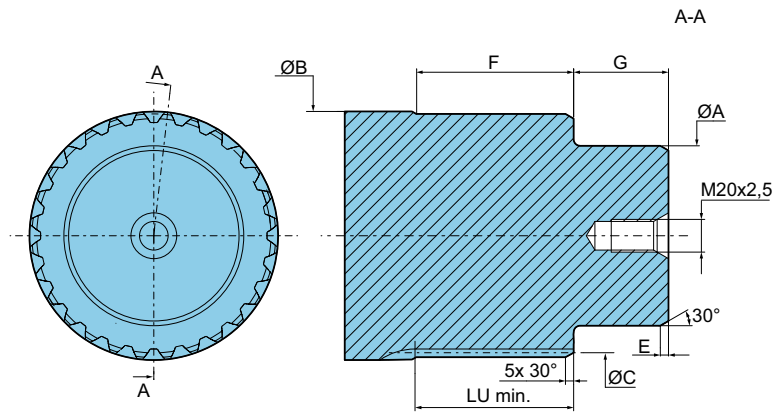


Recommended customer shaft design to be used with bearing support 6AB0 and 6AD0

| | Torque arm motor | Flange mounted motor |
|--------------|----------------------------------|----------------------|
| A (1) | Ø110 [4,33 dia.] | Ø110 [4,33 dia.] |
| B (2) | Ø142 [5,59 dia.] | Ø142 [5,59 dia.] |
| C | DIN 5480 W140 x 5 x 30 x 26 x 8f | |
| E | 10,0 [0,39] | 5,0 [0,20] |
| F | 88,0 [3,46] | 88,0 [3,46] |
| G | 58,0 [2,28] | 55,0 [2,17] |
| LU | 89,0 [3,50] | 89,0 [3,50] |

(1) - 0.01 [-0.0004]
 - 0.03 [-0.001]

(2) - 0.11 [+0.004]
 - 0.13 [-0.005]



For torque arm mounting, use bearing support 6AD0. Both motor and customer shaft must be in axial contact (no axial play) and must have sealing between motor and customer shaft.



For chassis mounting, use bearing support 6AB0. An axial play must be ensured between motor and customer shaft.



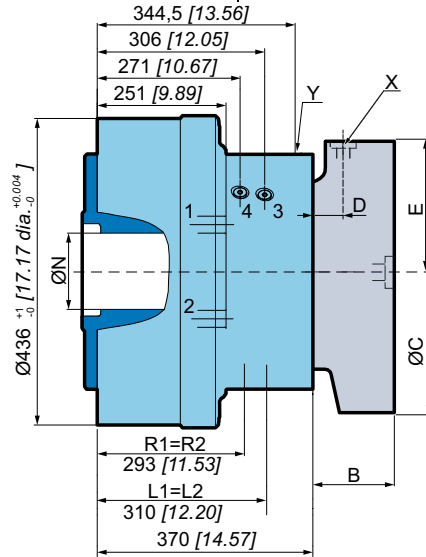
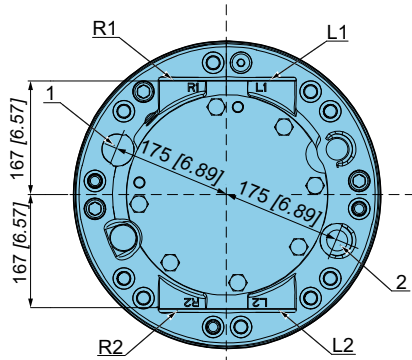
Consult your Poclair Hydraulics application engineer.



Dimensions for 2-displacement symmetrical valving

For a small displacement, there is no preferred orientation for this motor.

| | | |
|--|--------------------|--------------------|
| | 301 kg [662 lb] | 399 kg [878 lb] |
| | 4,50 L [270 cu.in] | 4,00 L [240 cu.in] |
| | | |



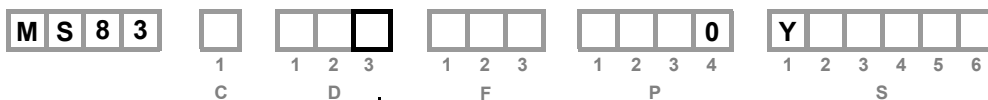
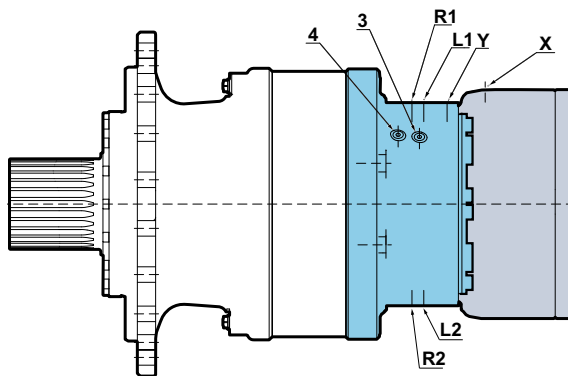
| | | |
|--|----------|-------------------|
| | C | T 8 0 |
| | B | 189,0 [7,44] |
| | C | Ø376 [14,80 dia.] |
| | D | 44,0 [1,73] |
| | E | 181,0 [7,13] |



Also see "Brake" section (thumbnail opposite).



Hydraulic connections



| | | Standards | Power supply | Case drain | 2 nd displacement control | Pressure measurement points | Control of parking brake | |
|-----------------------|---|------------|--------------|-------------|--------------------------------------|-----------------------------|--------------------------|----------|
| | | | R-L | 1, 2 | | 3,4 | X | |
| | J | Metric | ISO 9974-1 | M27x2 | | M14x1.5 | M18x1.5 | |
| | K | Gaz (BSPP) | ISO 1179-1 | Ø27 | | Ø13 | Ø17 | |
| | | | R-A | 1, 2 | Y | 3,4 | X | |
| | J | Metric | ISO 9974-1 | M27x2 | M18x1.5 | M14x1.5 | M18x1.5 | |
| | K | Gaz (BSPP) | ISO 1179-1 | Ø27 | Ø17 | Ø13 | Ø17 | |
| Max. pressures | | MS | bar [PSI] | 450 [6 527] | 1 [15] | 30 [435] | 450 [6 527] | 30 [435] |



You are strongly advised to use the fluids specified in brochure "Installation guide" N° B61352L.



To find the connections' tightening torques, see the brochure "Installation guide" N° B61352L.

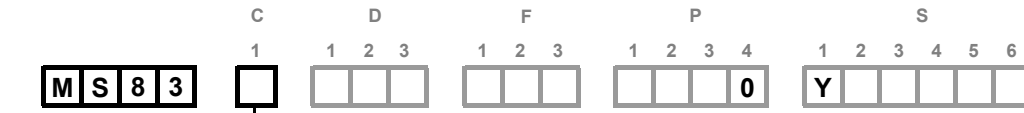
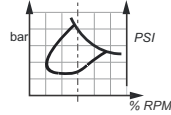
- Modularity and Model code
- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories



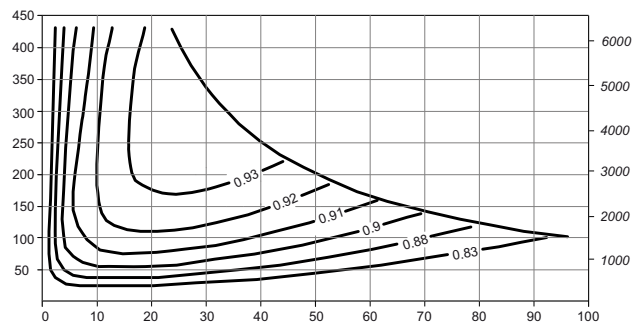
Efficiency

Overall efficiency

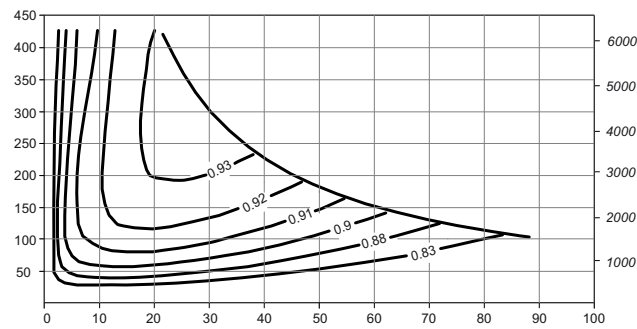
Average values given for guidance for code 0 displacement after 100 hours of operation with HV46 hydraulic fluid at 50°C [122°F].



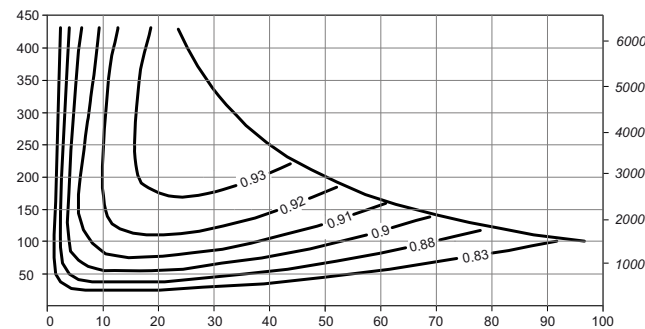
8



0



2

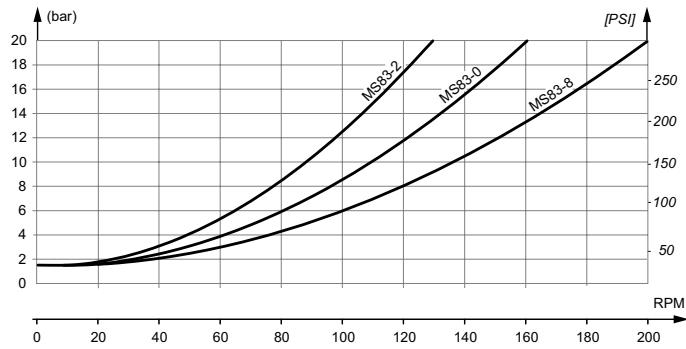


For a precise calculation, consult your Poclair Hydraulics application engineer.

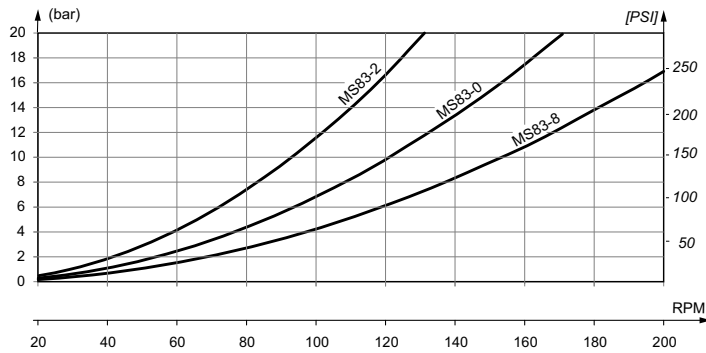


Pressure drop and charge pressure

Pressure drop (With HV46 hydraulic fluid at 50 °C [122 °F],oil viscosity 30 cSt)



Charge pressure (With HV46 hydraulic fluid at 50 °C [122 °F],oil viscosity 30 cSt)



Pressure drop and charge pressure curves are corresponding to 1st displacement motor.

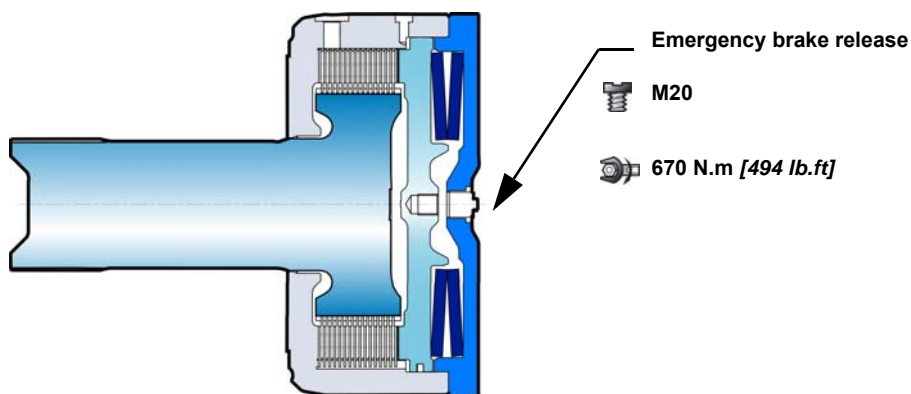
- Modularity and Model code
- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories





BRAKES

Rear brake



Brake principle

This is a multidisc brake which functions through the absence of pressure. The spring exerts a force on the piston, which acts on the fixed and mobile discs, and thus immobilizes the shaft. The braking torque decreases in linear proportion to the brake release pressure.

C

T 8 0

Parking brake information

| | |
|--|----------------------------------|
| Parking brake torque at 0 bars on housing (new brake) | 72 000 Nm [53 100 lb.ft] |
| Dynamic emergency braking torque at 0 bars on housing (max. 10 uses of emergency brakes) | 62 400 Nm [46 020 lb.ft] |
| Residual parking braking at 0 bars on housing (After emergency brake has been used) | 54 000 Nm [39 830 lb.ft] |
| Min. brake release pressure | 20 bar [290 PSI] |
| Max. brake release pressure | 30 bar [435 PSI] |
| Oil capacity | 450 cm ³ [27,5 cu.in] |
| Volume for brake release | 135 cm ³ [8,2 cu.in] |

Dynamic brake information

T80 negative brake, along with option R, can be also used as dynamic brake under specific conditions. See page 29 for more information.



Do not run-in the multidisc brakes.



A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake). For all vehicles capable of speeds over 25 km/h, please contact your Poclair Hydraulics application engineer.

Modularity and Model code

Wheel motor

Shaft motor

Valving systems and hydrobases

Brake

Installation

Options

Accessories

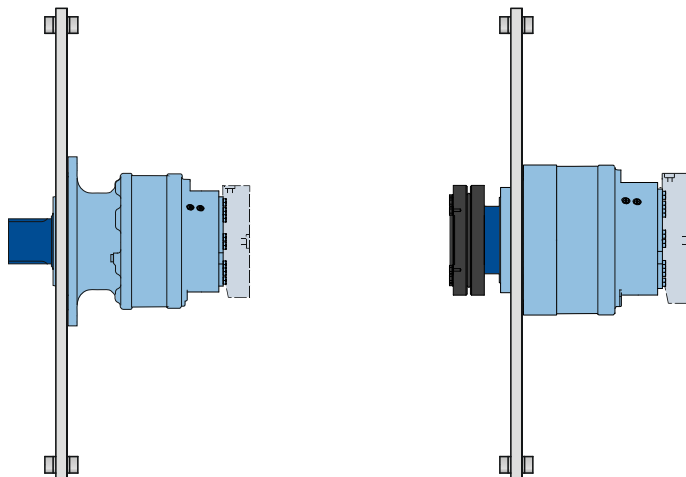




INSTALLATION

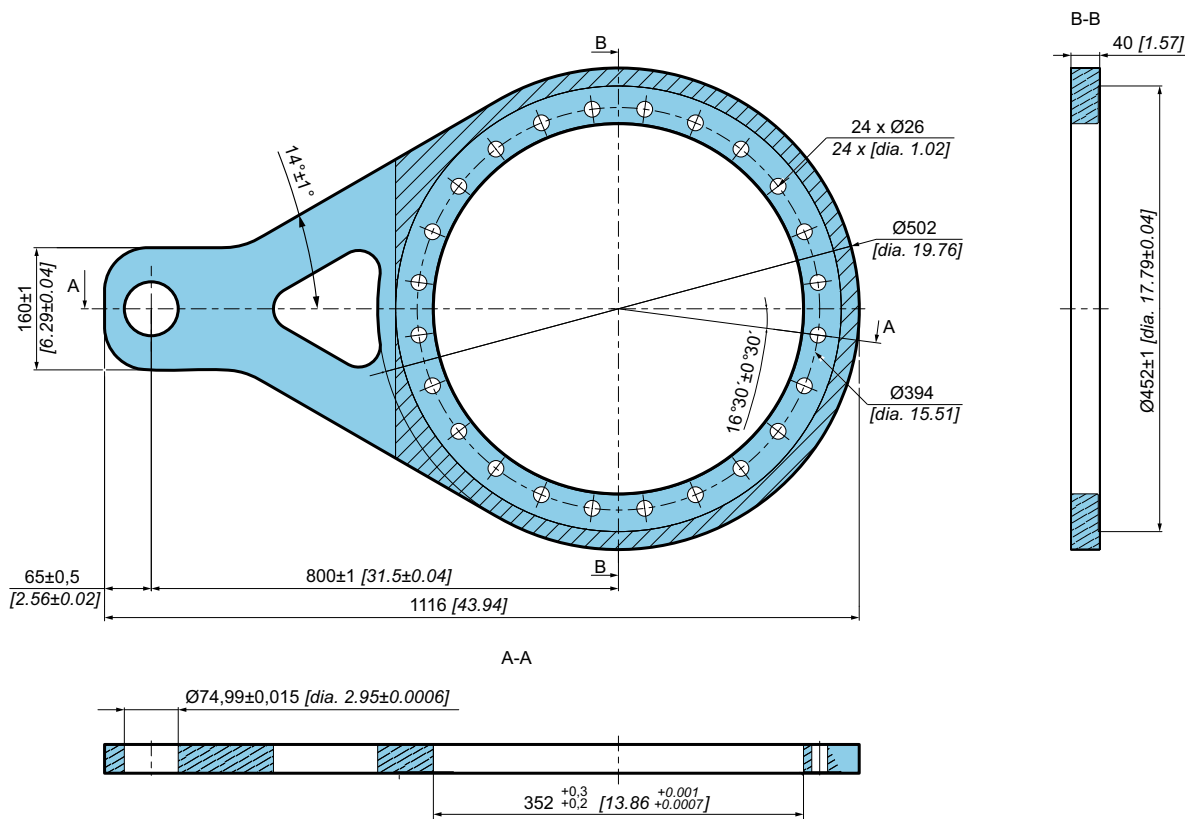
Torque arm mounting

We recommend a length of the torque arm of 800 mm [31.5 in].
 In order to avoid residual forces due to misalignment and twisting, the end of the arms must retain freedom of movement in 2 axis.



Recommended torque arm design

Torque arm can be supplied by Poclain Hydraulics. It must be ordered separately.



For a precise calculation, consult your Poclain Hydraulics application engineer.

Modularity and Model code

Wheel motor

Shaft motor

Valving systems and hydrobases

Brake

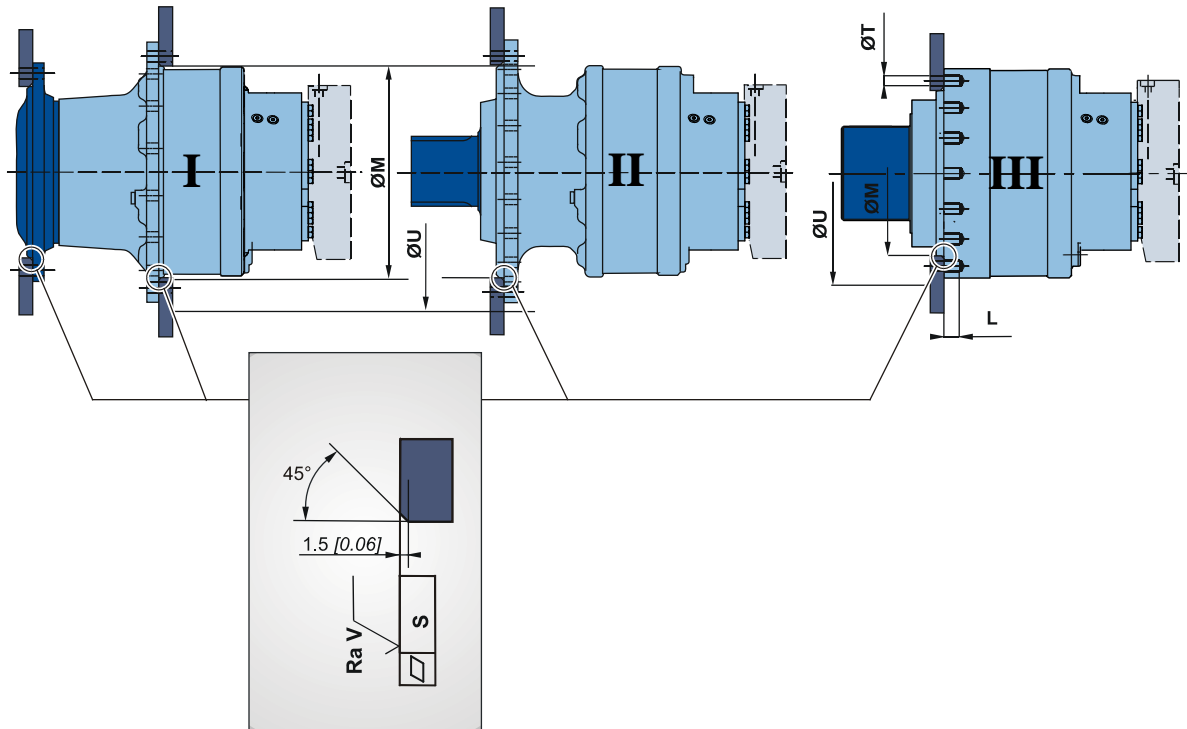
Installation

Options



Accessories



Chassis mountings



Take care over the immediate environment of the connections.

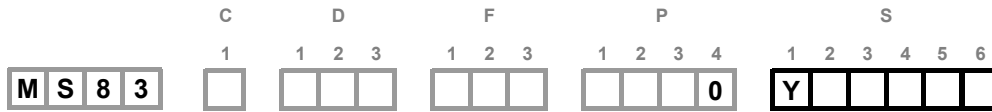
| | $\varnothing M$ ⁽¹⁾ mm [in] | $\varnothing U$ mm [in] | $\varnothing T$ mm [in] | L mm [in] | S mm [in] | Ra V μm [μin] |  | Class |  * N.m [lb.ft] |
|------------|---|----------------------------|----------------------------|---------------|----------------|------------------------------|---|-------------|--|
| I | 450 [17,72] | 565 [22,24] | - | - | 0,2 [0,008] | 12,5 [0,49] | 16 x M24 | 12,9 | 1 200 [885, 1] |
| II | | | | | | | 20 x M24 | | |
| III | 352 [13,86] | 446 [17,56] | 25,5 [1,004] | 35 [1,378] | 16 x M20 | 1200 [885, 1] | | | |

(1) +0,3 [+0,012]
+0,2 [+0,008]

* : Min. values for torque and load to be transmitted.



OPTIONS



You can accumulate more than one optional part. Consult your Poclain Hydraulics sales engineer.

Y - Standard option

Designation



Predisposition for speed sensor

Additional drain on valving system

Y

High speed/Low pressure drop (Butterfly valving)

2 - S - Q Installed speed sensor

Designation



T4 Speed sensor (without rotation direction)

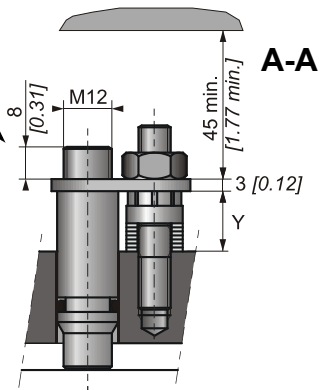
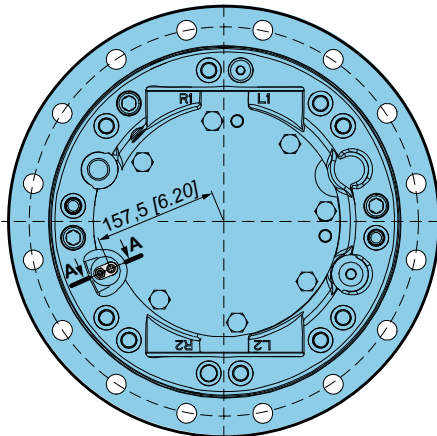
2

TR Speed sensor (digital rotation direction)

S

TD speed sensor (two phase shifted frequencies)

Q



Max. length Y= 14.8

Standard number of pulses per revolution= 60



Look at the "Mobile Electronic" N° A01889D technical catalogue for the sensor specifications and its connection.



To install the sensor, see the "Installation guide" brochure No. B61352L.

Modularity and Model code

Wheel motor

Shaft motor

Valving systems and hydrobases

Brake

Installation

Options

Accessories



6 - Industrial support

Reduction of around 50% from the rated value in the bearings' preload value.

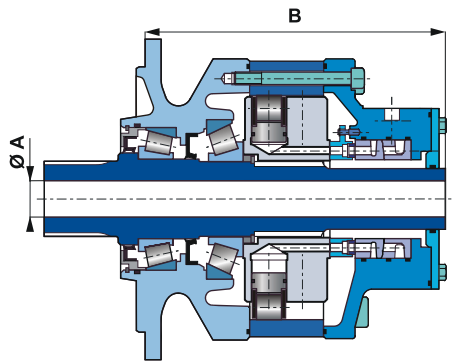


For a precise calculation, consult your Poclain Hydraulics application engineer.

7 - Diamond™

Special treatment of the motor core which considerably increases its strength, making the motor much more tolerant to temporary instances of the operating conditions being exceeded.

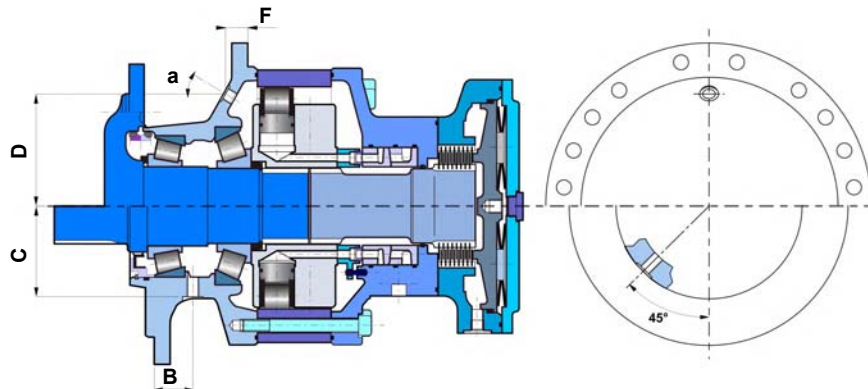
A - Hollow shaft



| A | B |
|---------------------|----------------|
| mm [in] | mm [in] |
| Ø 75 [2,95 dia.] | 634 [24,97] |

Radial load x 0.75
No torque transmittable to the rear

B - Drain on the bearing support



| | B | C | D | F | a |
|-------------|-----------|------------|------------|-----------|-----|
| | mm [in] | mm [in] | mm [in] | mm [in] | |
| Shaft motor | - | - | 173 [6,81] | 40 [1,57] | 36° |
| Wheel motor | 70 [2,76] | 185 [7,28] | - | - | - |

D - Special paint or no paint

The motors are delivered with Poclain Hydraulics yellow ochre primer as standard.

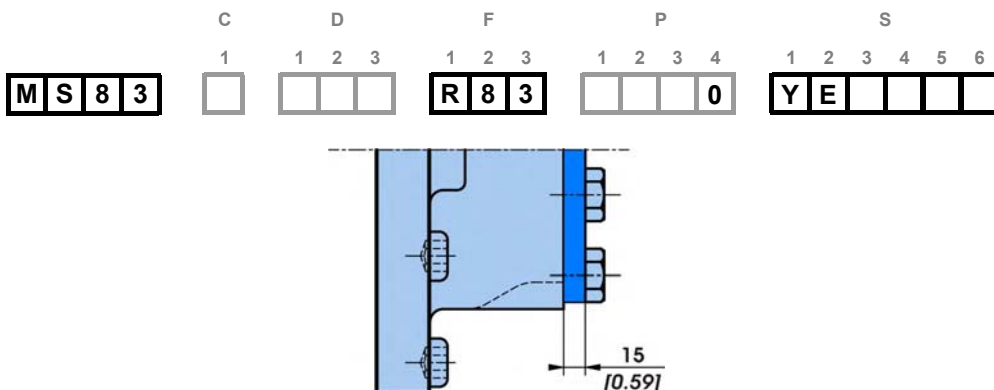


Consult your Poclain Hydraulics application engineer for other colors of primer or to-pcoat.



E - Reinforced sealing

Requires reinforced seals and, for an unbraked motor, a rear reinforced plate (**R83** - 15 [0.594] thick, instead of 6 [0.237]).



G - Special wheel rim mounting

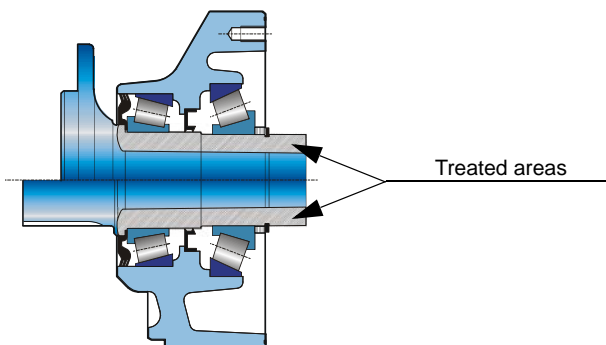
Enables certain combinations different from the standard mountings defined on page 10.



Consult your Poclair Hydraulics sales engineer.

J - Treated shaft

Heat treatment on the indicated bearing radius and splines.

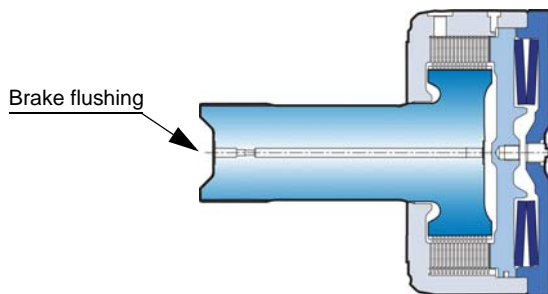


W - Grip washer

Mandatory for T80 brake (page 23).

R - Brake flushing

T80 negative brake, along with option R for brake flushing, can be used as dynamic brake under specific conditions.



| | |
|---|--------------------------|
| Min. internal irrigation flow rate (at 20 bar brake release pressure) | 1,7 L/min [0,45 gal/min] |
| Max. internal irrigation flow rate (at 30 bar brake release pressure) | 3,1 L/min [0,82 gal/min] |



Consult your Poclair Hydraulics application engineer.

- Modularity and Model code
- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories

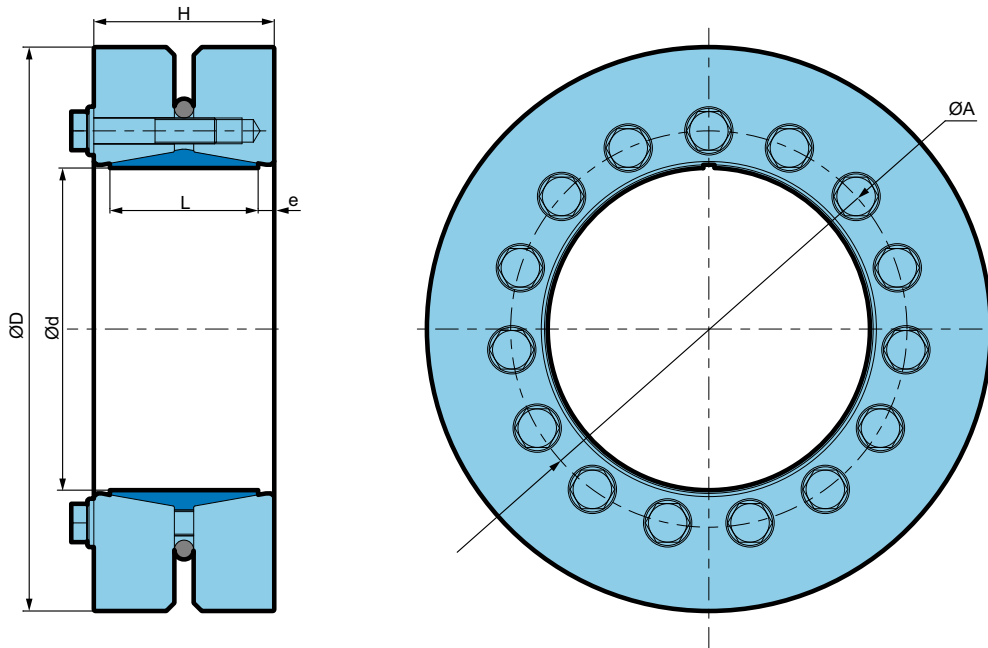






ACCESSORIES

Shrink disc

Shrink disc can be supplied for motor MS83 using bearing support 6AL0.

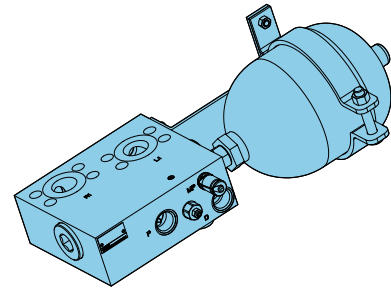


| d | D | H | L | e | A |  | Mt-max |  |
|---------------|----------------|---------------|--------------|--------------|---------------|---|--------------------|---|
| mm [in] | mm [in] | mm [in] | mm [in] | mm [in] | mm [in] | | Nm [lbf] | kg [lbs] |
| 185 [7,28] | 330 [12,99] | 112 [4,41] | 92 [3,62] | 10 [0,39] | 236 [9,29] | 14x M16x80 | 81 700 [60 300] | 46 [101] |

- Modularity and Model code
- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories

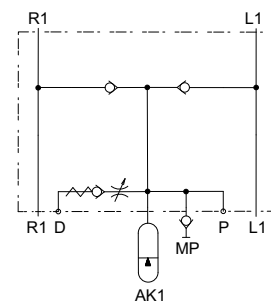
**Anticavitation valve (VAC)**

- Flanged on MS83 flat ports
- Protect motor against cavitation risk
- Available with two positions of accumulator

**Description**

This valve, which is directly flanged on the MS83, will offer enhanced protection of the motor against possible cavitation during operation, by ensuring sufficient back pressure on the motor (additional flow provided by the accumulator).

Accumulator only available in 0° position.

Hydraulic symbol**Features**

| | | |
|----------------------------------|--------------------------|---------------------------|
| Max. pressure | bar [PSI] | 450 [6 526] |
| Fluid viscosity | mm ² /s [ssu] | 15 to 380 [69.5 to 1 760] |
| Required fluid filtration | ISO 4406 | 18/16/13 |
| Surface protection | DIN 50979 | Fe/ZN8/Cn/T2 |

Accumulator

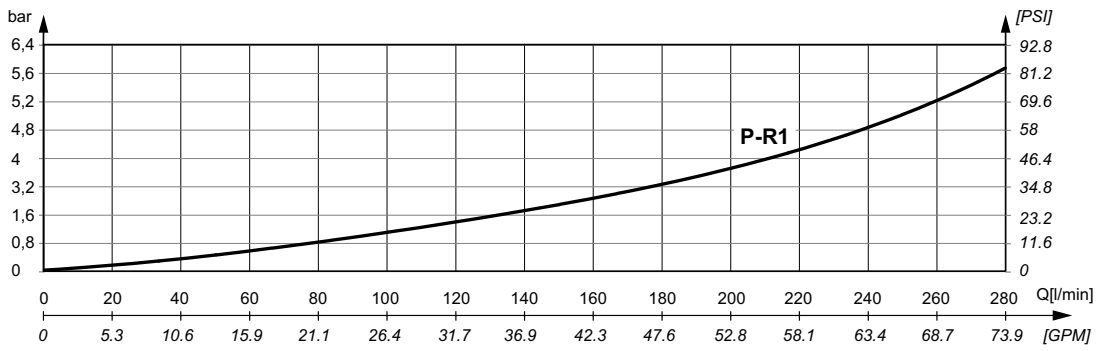
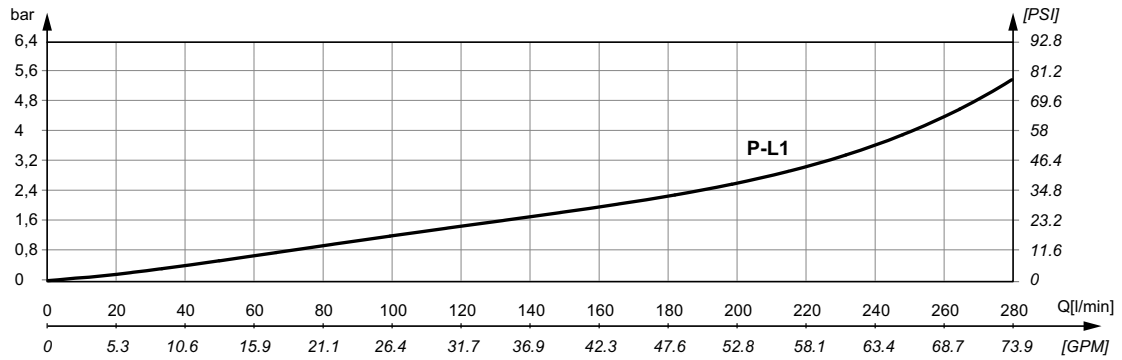
| | | |
|---------------------------|-----------|----------|
| Precharge pressure | bar [PSI] | 12 [174] |
| Volume | l [GPM] | 2 [0.53] |

Hydraulic connections

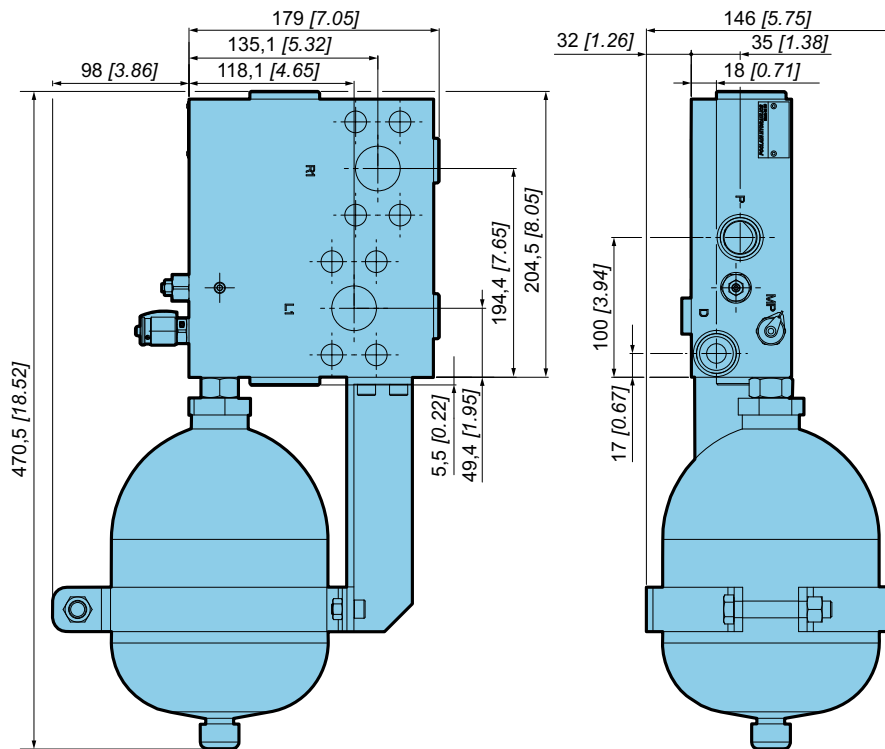
| Port | Function | Connections | | Max. pressure bar [PSI] |
|------|-----------------|-------------------|------------|----------------------------|
| | | GAZ ISO 1179-1 | ISO 6162-2 | |
| P | Pressure line | G3/4 | - | 30 [435] |
| D | Drain | | | 30 [435] |
| L1 | Motor line - L1 | - | PN400 DN32 | 450 [6 526] |
| R1 | Motor line - R1 | | | 450 [6 526] |



Pressure drop



Dimensions



- Modularity and Model code
- Wheel motor
- Shaft motor
- Valving systems and hydrobases
- Brake
- Installation
- Options
- Accessories





Modularity and
Model code

Wheel motor

Shaft motor

Valving systems
and hydrobases

Brake

Installation

Options










Accessories



Poclain Hydraulics reserves the right to make any modifications it deems necessary to the products described in this document without prior notification. The information contained in this document must be confirmed by Poclain Hydraulics before any order is submitted.

Illustrations are not binding.

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-  28/02/2020
-  801 478 125H
-  801 478 195J
-  801 578 108K
-  801 578 120X
-  801 578 132L
-  A50154Q
-  Not available
-  A14247L

