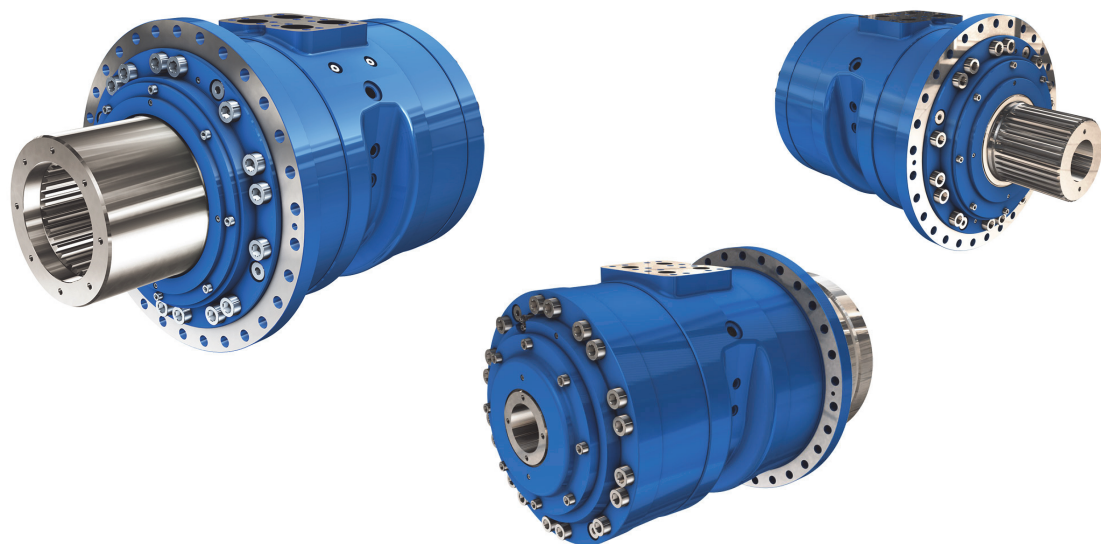


MI250

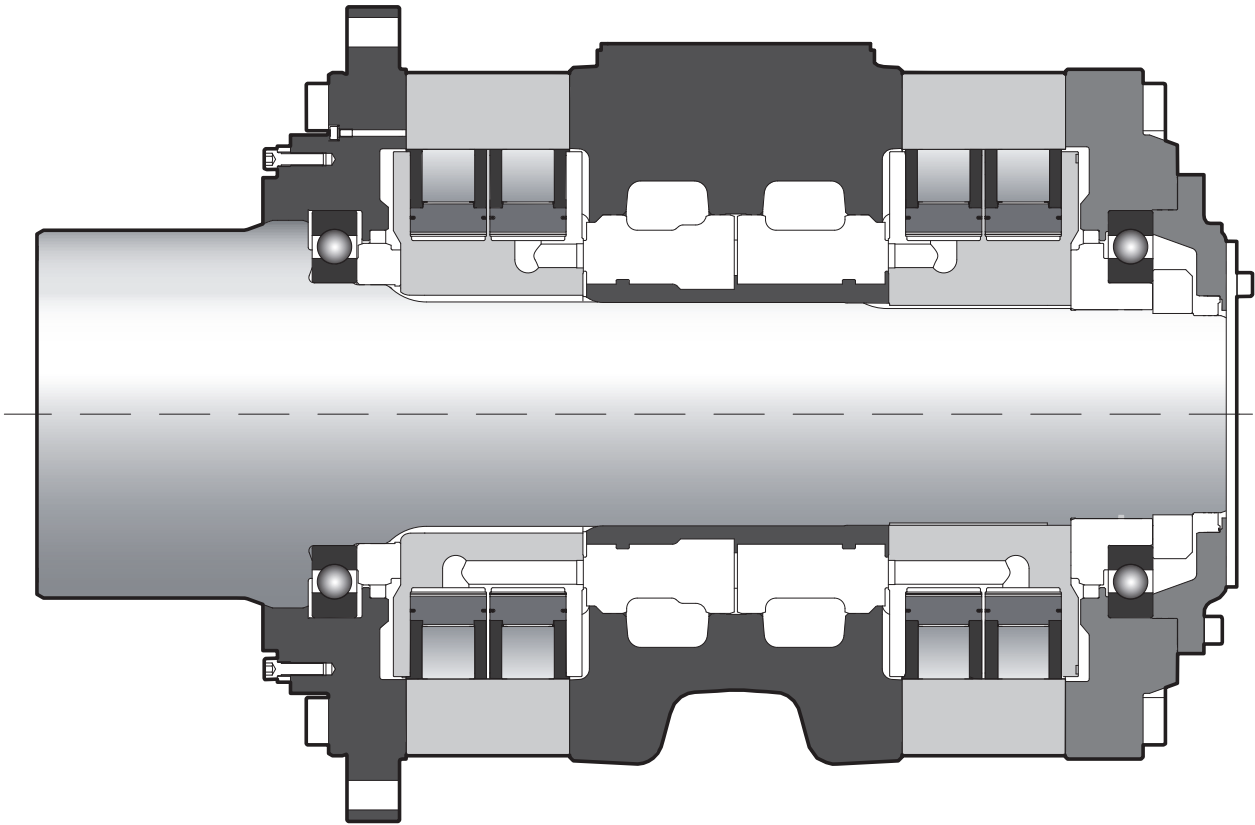
HYDRAULIC MOTORS



T E C H N I C A L C A T A L O G



CHARACTERISTICS



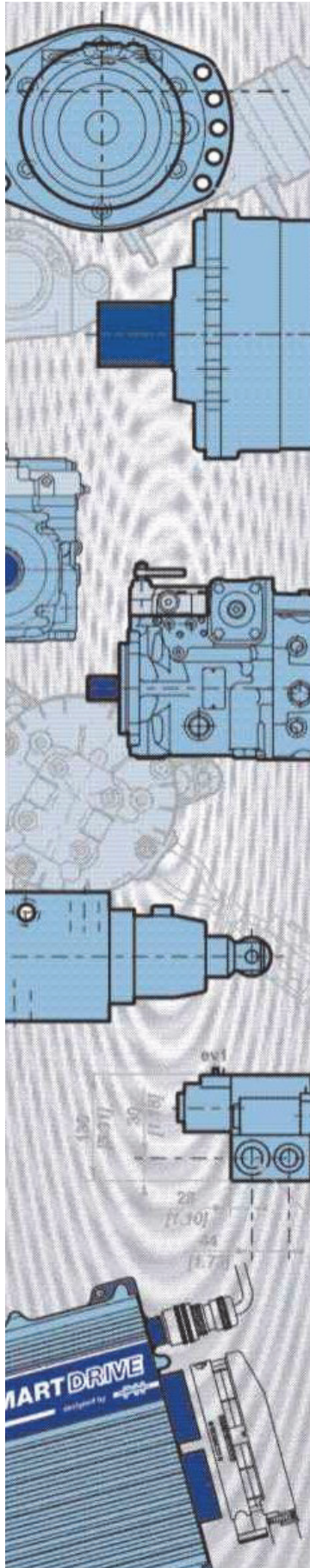
C	cm ³ /tr [cu.in/rev.]	Theoretical torque		Max.power kW [HP]	Max.speed [RPM]	Pressure max. bar [PSI]
		at ΔP 100 bar Nm	at ΔP 1000 PSI [lb.ft]			
7	17500 [1 067,3]	27825	[14 150]	500 [671]	100	450 [6 527]
8	20000 [1 219,8]	31800	[16 171]		90	450 [6 527]
9	22500 [1 372,3]	35775	[18 193]		80	450 [6 527]
0	25000 [1 524,8]	39750	[20 214]		72	415 [6 019]
1	27500 [1 677,2]	43725	[22 235]		65	380 [5 511]
2	30000 [1 829,7]	47700	[24 257]		60	350 [5 076]

Motor inertia = 0.01 kg.m²

Noise emissions = 60 dBA



CONTENT



MODEL CODE

4

Model code

MOTORS

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Motors

- Motor with splined shaft 7
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INSTALLATION

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Installation

- Torque arms mounting 15
- Recommended torque arm design for MI250 15

OPTIONS

17

Options

ACCESSORIES

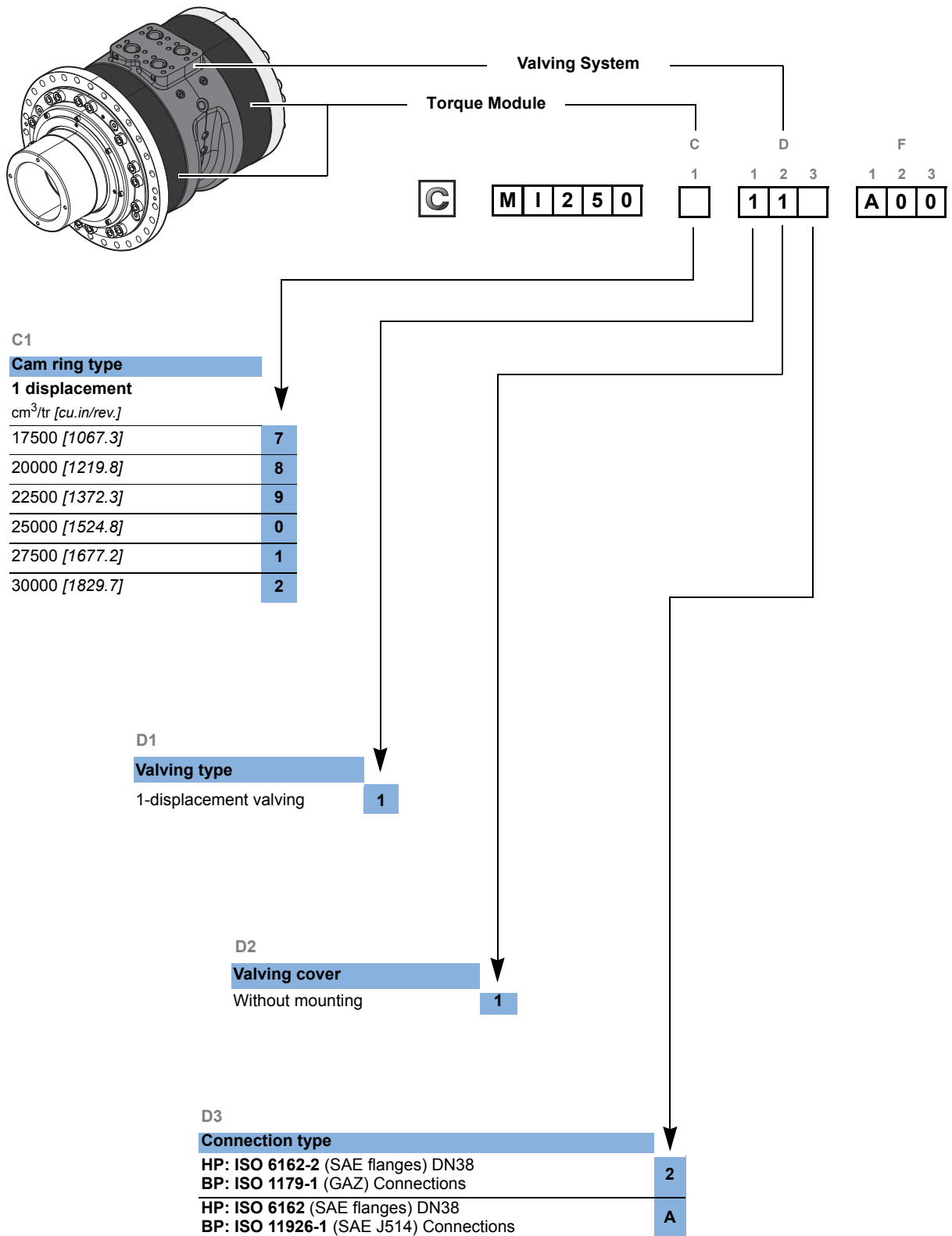
21

Accessories

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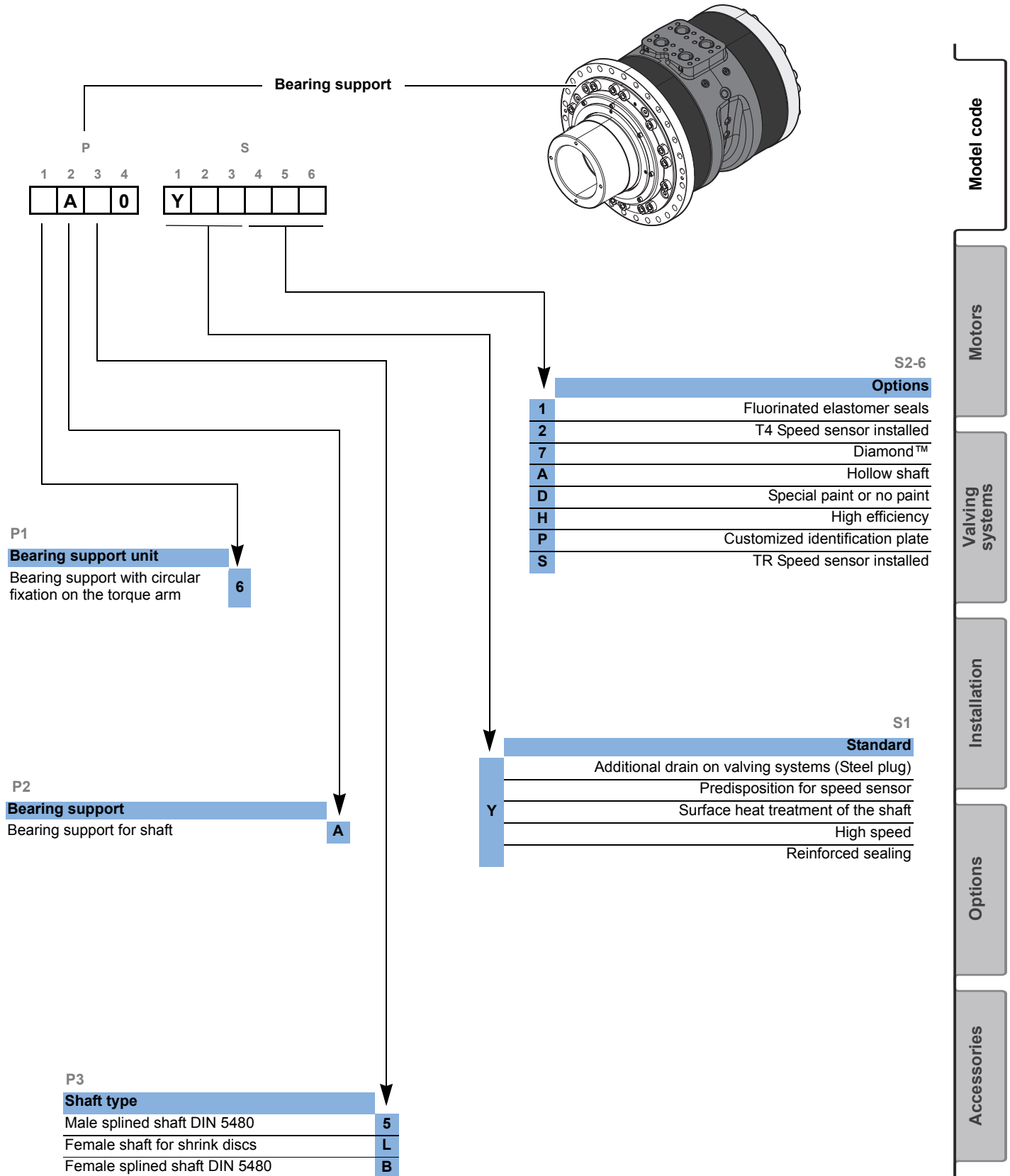


MODEL





CODE





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.Information on the model code.



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 between brackets and italic)

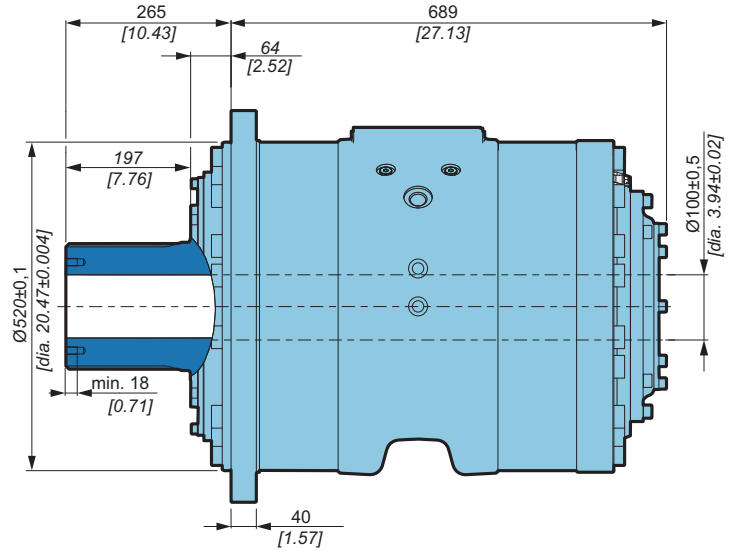
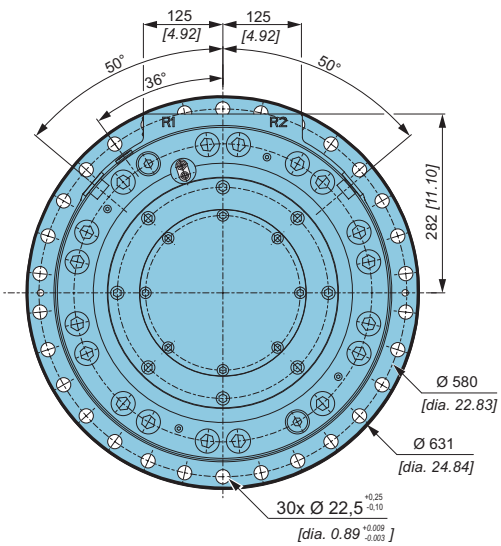




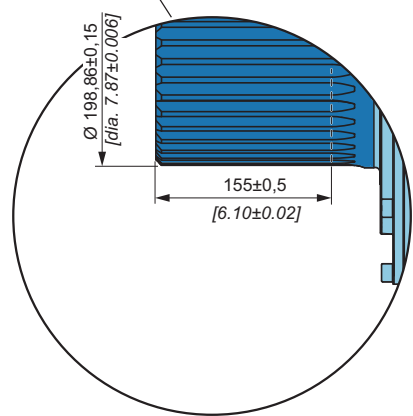
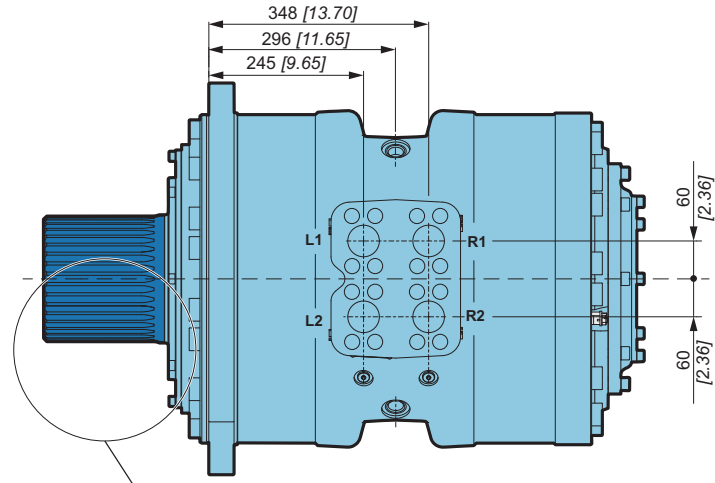
MOTORS

Motor with splined shaft

					C	D			F			P				S					
1	2	3	4	5	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M	I	2	5	0		1	1		A	0	0	6	A	5	0	Y					



	920 kg [2028 lb]
	20 l [1220 cu.in]



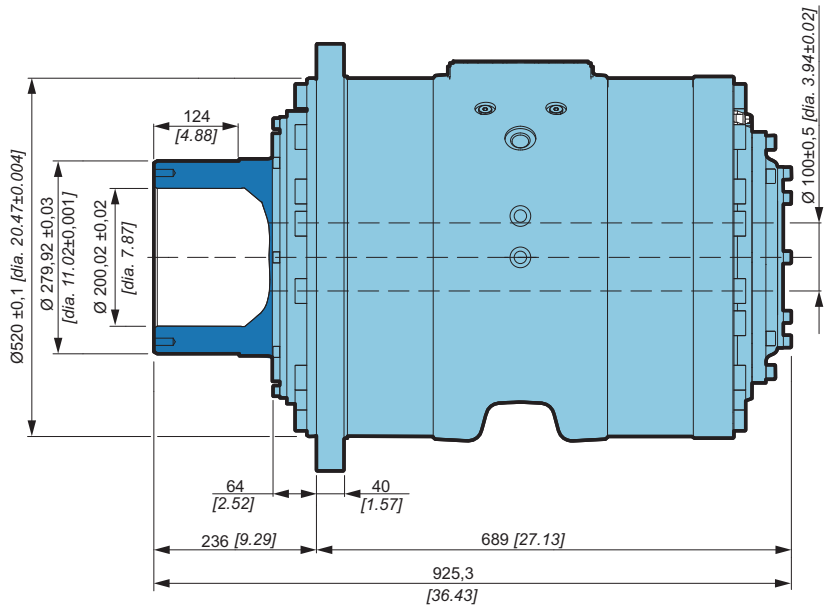
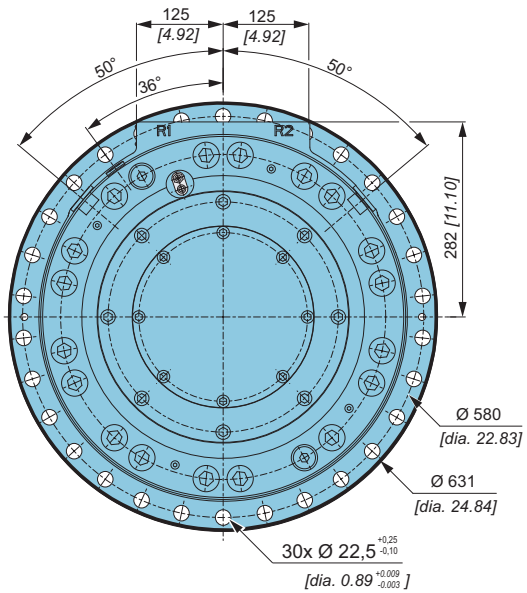
Pinion characteristics	
Norme	DIN 5480
Module	5
Number of teeth	38
Pitch diameter (mm [in])	190 [7.48]
Pressure angle	30°

- Model code
- Motors
- Valving systems
- Installation
- Options
- Accessories



Motor with shrink disc

					C		D		F		P		S								
1	2	3	4	5	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M	I	2	5	0		1	1		A	0	0	6	A	L	0	Y					



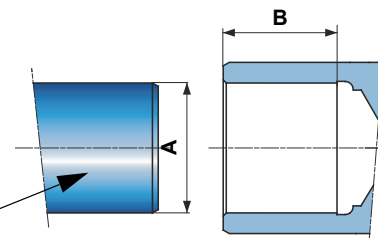
	940 kg [2070 lb]
	20 l [1220 cu.in]

Coupling for shrink discs

C	A (1)	B
	mm [in]	mm [in]
6 A L 0	Ø 200 [7,87 dia.]	127 [5,00]
1 2 3 4		
P		

(1) - 0,015 [+0.0006]
- 0,061 [- 0.002]

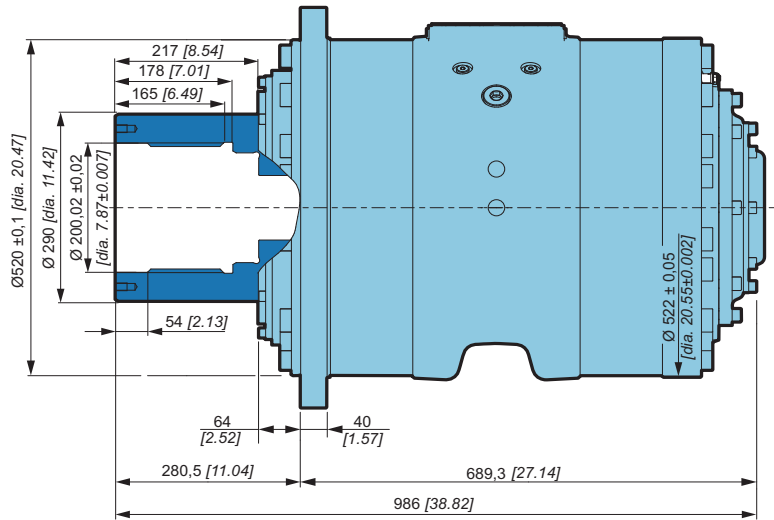
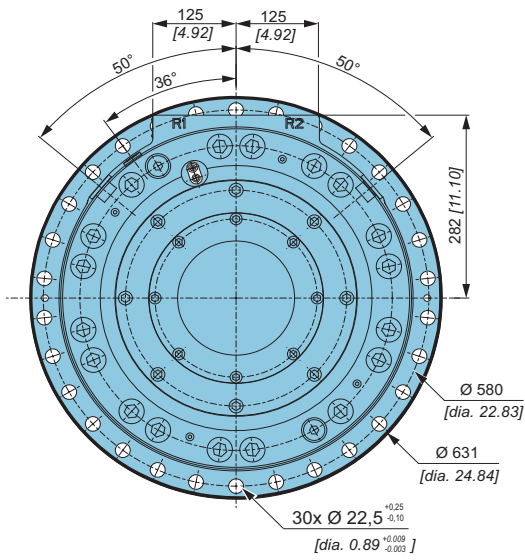
R min. : 640 N/mm² [132 800 PSI]



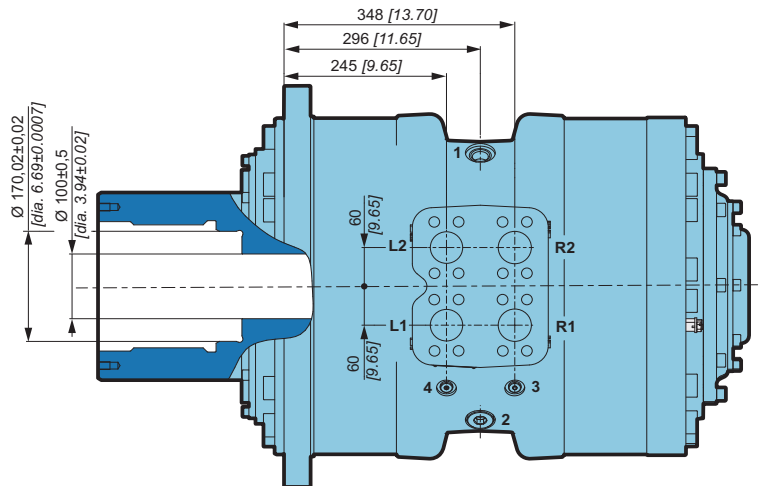


Motor with female splines

					C	D			F			P				S					
1	2	3	4	5	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M	I	2	5	0		1	1		A	0	0	6	A	B	0	Y					



	975 kg [2149 lb]
	21 l [1281 cu.in]



Model code

Motors

Valving systems

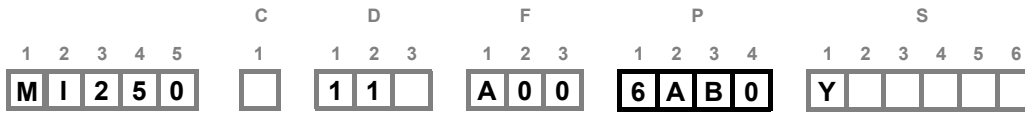
Installation

Options

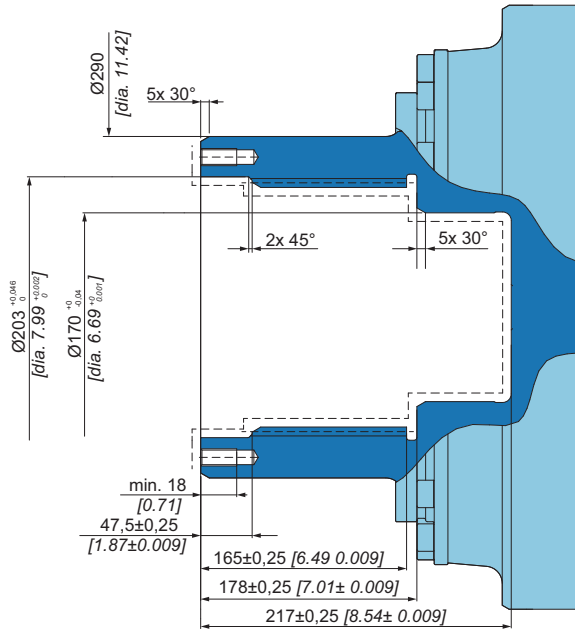
Accessories



Coupling for female splines



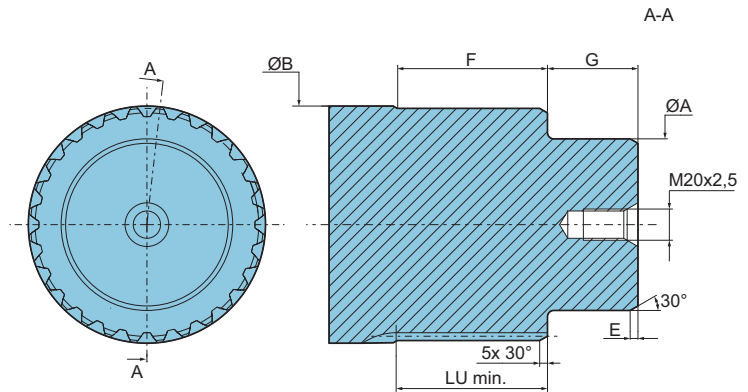
Splined DIN 5480
 Pressure angle: 30°
 Nominal diameter: 200
 Teeth quantity: 38
 Modulus: 5
 Tolerance class: 8



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

	Torque arm motor	Flange mounted motor
A ⁽¹⁾	Ø170 [6,69 dia.]	Ø170 [6,69 dia.]
B ⁽²⁾	Ø205 [8,07 dia.]	Ø205 [8,07 dia.]
E	10,0 [0,39]	5,0 [0,20]
F	130,0 [5,12]	130,0 [5,12]
G	44,0 [1,73]	39,0 [1,54]
LU	131,0 [5,16]	131,0 [5,16]

1) - 0.01 [-0.0004] 2) - 0.11 [+0.004] 3) - 0 [+0]
 - 0.03 [-0.001] - 0.13 [-0.005] - 0.25 [-0.009]



For torque arm mounting, both motor and customer shafts must be in axial contact (no axial play) + must have sealing between motor and customer shafts.



For chassis mounting, an axial play must be ensured between motor and customer shafts.

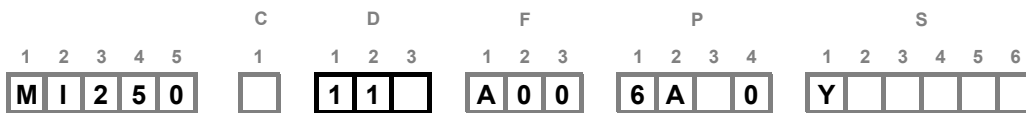
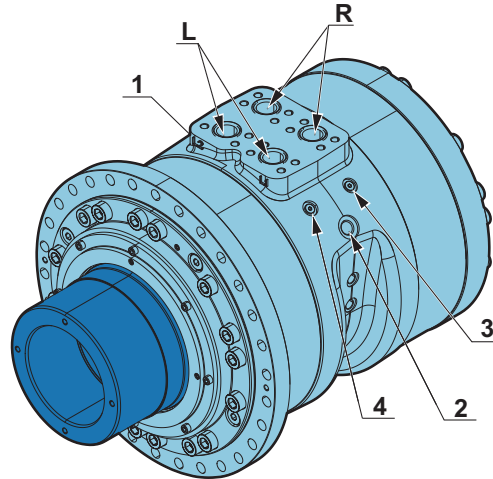


Consult your Poclain Hydraulics application engineer.



VALVING SYSTEM

Hydraulic connections



		Power supply	Case drain	Pressure gauge
		R-L	1 - 2	3 - 4
			GAZ (BSPP)	GAZ (BSPP)
2		ISO 6162-2	ISO 1179-1	ISO 1179-1
		DN 38	G1	G1/4
	A	ISO 6162-2	ISO 11926-1	ISO 11926-1
		DN 38	1" 1/16-12 UNF	9/16"-18 UNF
Max. pressure	bar [PSI]	450 [6 527]	2,5 [36]	450 [6 527]
Peak pressure	bar [PSI]	-	15 [218]	-



You are strongly advised to use the fluids specified in brochure "Installation guide" N° 801478197L.



To find the connections' tightening torques, see the brochure "Installation guide" N° 801478197L.

Model code

Motors

Valving systems

Installation

Options

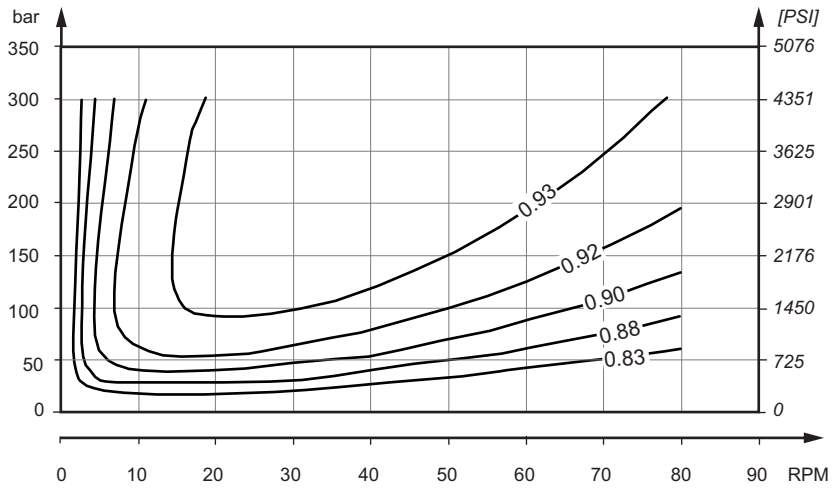
Accessories



Efficiency curves

Overall efficiency

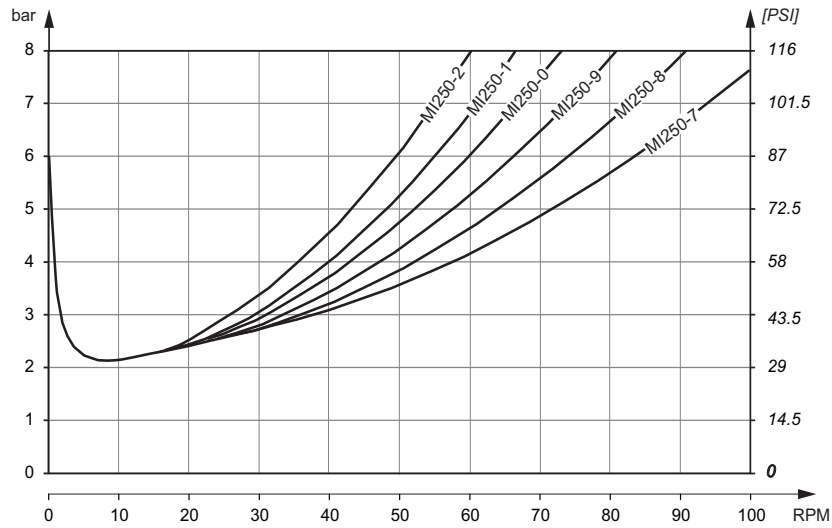
Average values given for guidance for code 0 displacement after 100 hours of operation with HV46 hydraulic fluid at 50°C [122°F].



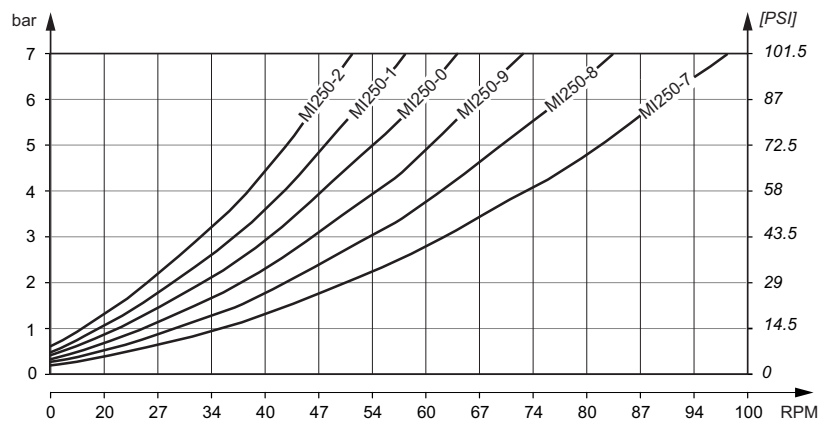


Pressure drop and charge pressure

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)



Model code

Motors

Valving systems

Installation

Options

Accessories







OPTIONS

					C	D			F			P				S					
1	2	3	4	5	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M	I	2	5	0		1	1		A	0	0	6	A		0	Y					

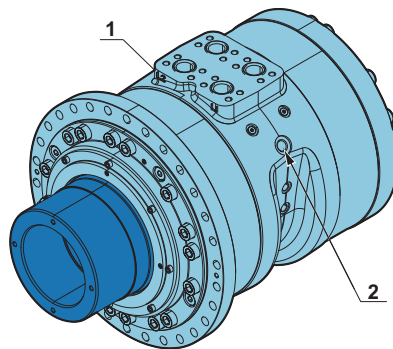


You can accumulate more than one optional part. Consult your Poclain Hydraulics sales engineer.

Y Standard option

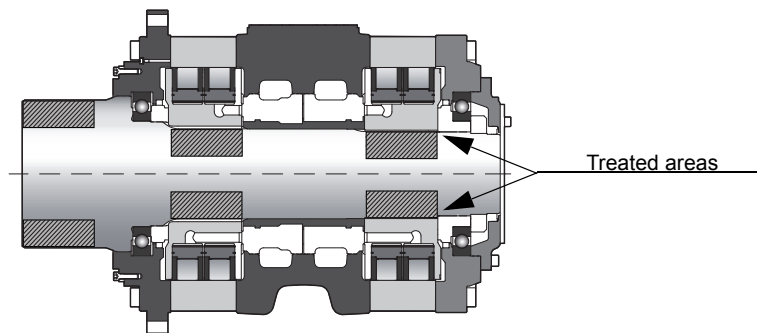
- Additional drain on valving system (steel plug)
- Predisposition for speed sensor
- Surface heat treatment on the shaft
- High speed
- Reinforced sealing

Drain on the valving system



Surface heat treatment on the shaft

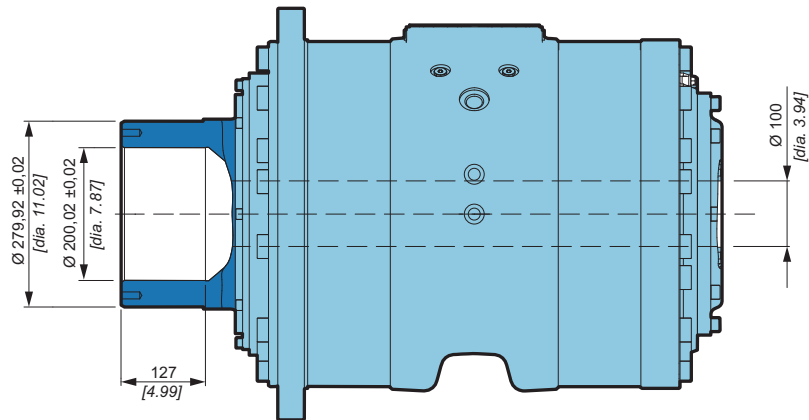
Heat treatment on the indicated bearing radius and splines.



- Model code
- Motors
- Valving systems
- Installation
- Options
- Accessories



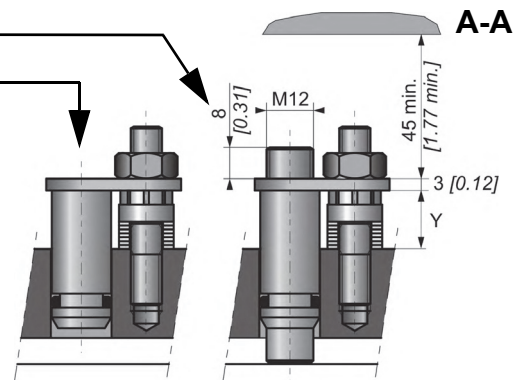
A Hollow shaft



2 S 8 Installed speed sensor or predisposition

Designation

T4 Speed sensor installed	2
TR Speed sensor installed (direction of rotation)	S
Predisposition for speed sensor	8



Max. length Y = 18,65 [0.73]

Standard number of pulses per revolution = 120



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

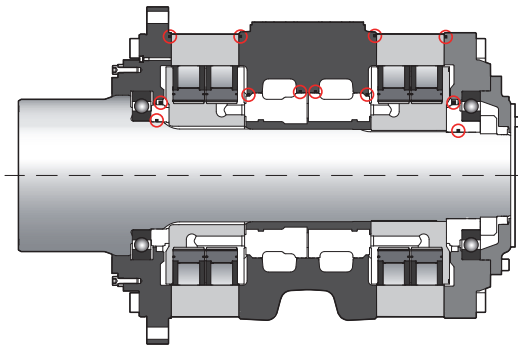


To install the sensor, see the "Installation guide" brochure No. 801478197L.



1 Fluorinated elastomer seals

Nitrile seals marked in the figure below replaced by fluorinated elastomer seals.



Consult your Poclair Hydraulics sales 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.

D Special paint or no paint

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



Consult your Poclair Hydraulics application engineer for other colors of primer or topcoat.

H High efficiency

Reinforced piston sealing to improve volumetric efficiency.



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

P Customized identification plate

Your part number can be engraved on the plate.



Consult your Poclair Hydraulics application engineer for other possibilities.

- Model code
- Motors
- Valving systems
- Installation
- Options
- Accessories

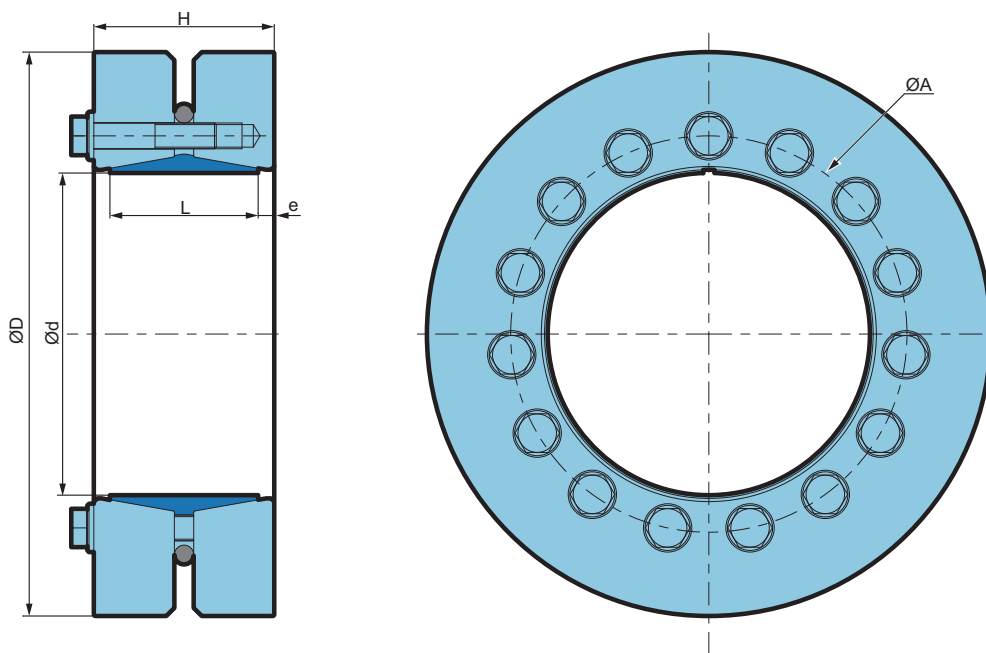




ACCESSORIES

Shrink disc

Shrink disc can be supplied for motor MI250 using bearing support 6AL0.



Version	d mm [in]	D mm [in]	H mm [in]	L mm [in]	e mm [in]	A mm [in]	Screws	Mt-max Nm [lbf]	Mass kg [lbs]
C	280 [11,02]	460 [18,11]	134 [5,28]	114 [4,49]	10 [0,39]	346 [13,62]	16x M20x100	217 000 [48 783]	102 [225]

Model code

Motors

Valving systems

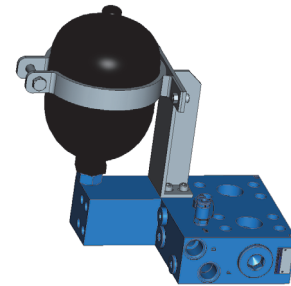
Installation

Options

Accessories

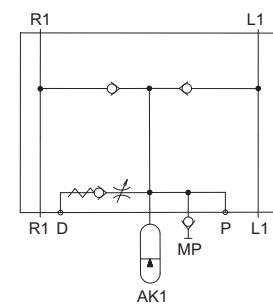
**Anticavitation valve (VAC)**

- Flanged on MI250 flat ports
- Protect motor against cavitation risk
- Available with two positions of accumulator

**Description**

This valve, which is directly flanged on the MI250, 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).

This valve is available with 2 positions for the accumulator (0° or 90°).

Hydraulic symbol**Features**

Max. pressureMax. Druck	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:

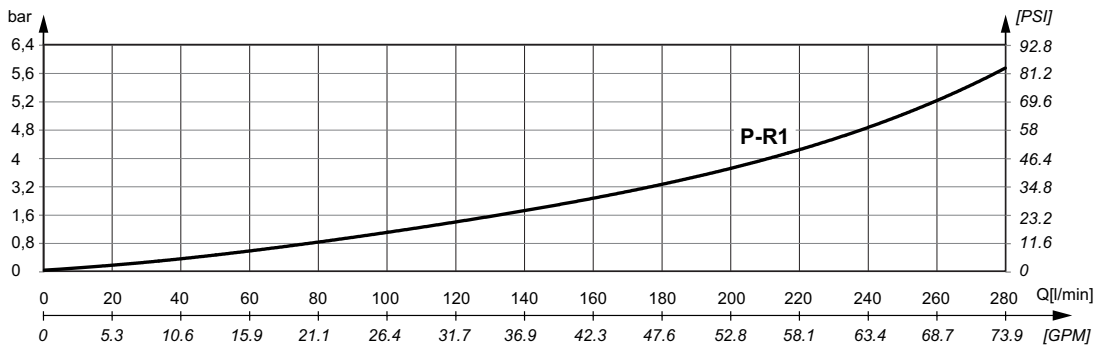
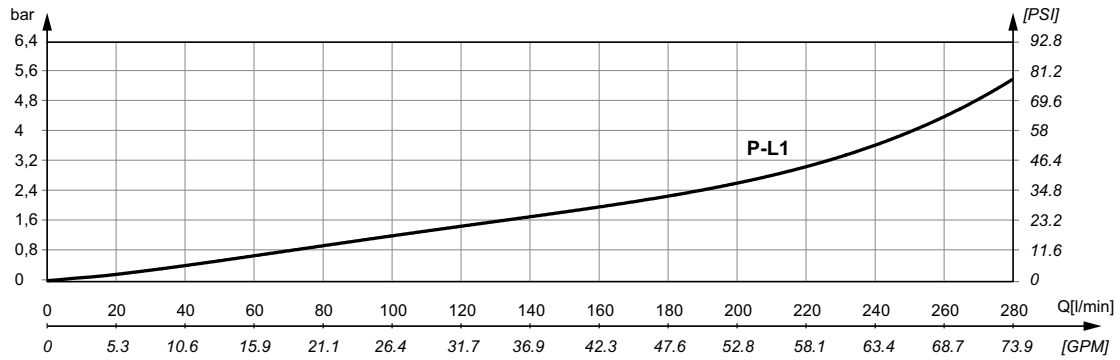
Precharge pressure	bar [PSI]	12 [174]
Volume	l [GPM]	2 [0.53]

Hydraulic connections

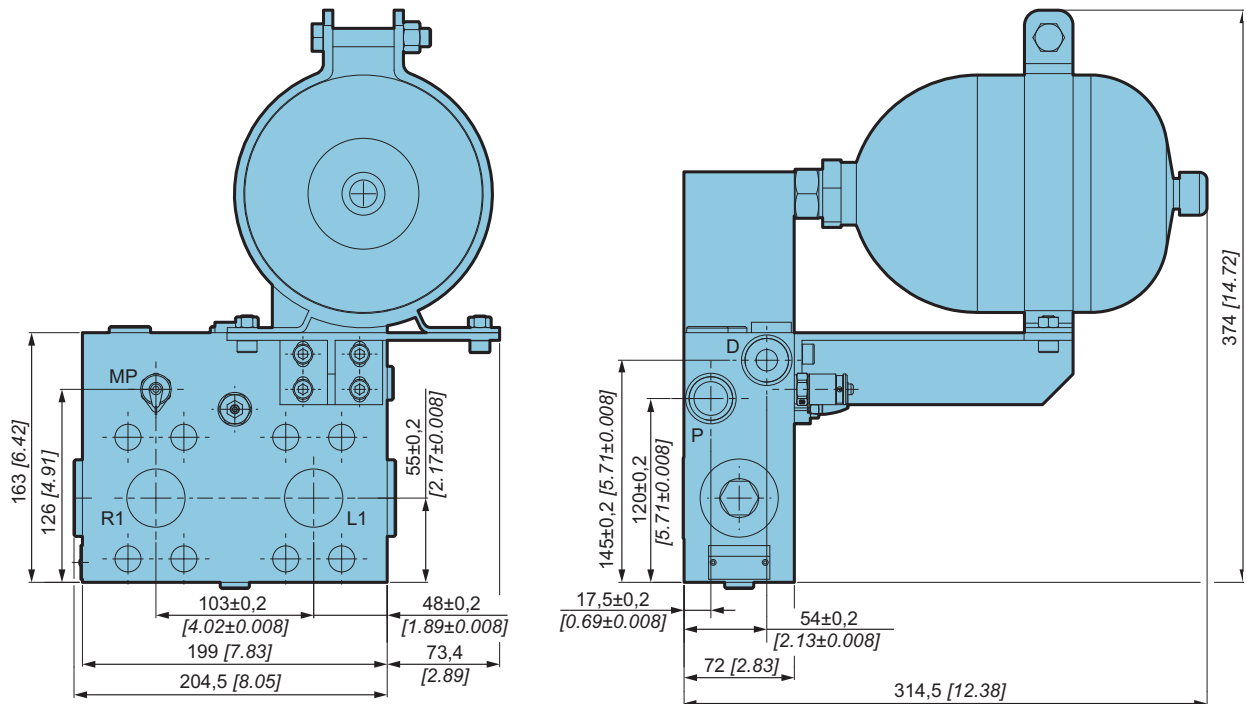
PortPort	Function	Connections		Pressure max bar [PSI]
		GAZ ISO 1179-1	ISO 6162-2	
P	Pressure line	G3/4	-	30 [435]
D	Drain			30 [435]
L1	Motor line - L1	-	PN400 DN38	450 [6 527]
R1	Motor line - R1			450 [6 527]



Pressure drop



Dimension




- Model code
- Motors
- Valving systems
- Installation
- Options
- Accessories




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 03/02/2017



 B15766L

 B35256V



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