

MHP11

HYDRAULIC MOTORS



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



MHP MOTORS

The new MHP hydraulic motors represent the keystone of the High Performance system proposed by Poclain Hydraulics.

Thanks to their innovative design, the MHP motors will offer superior performances (higher speed and power, working pressure of 500 bar) compared to conventional cam-lobe motors. These characteristics make these components suitable for any applications requiring highly performing hydraulic drives, such as agricultural machines, drilling rigs or industrial applications.

But besides their performance, the MHP motors will also allow improvement of the global efficiency of the transmission resulting in lower fuel consumption for the machine, while ensuring higher robustness and reliability, which are required for the most demanding applications.

From
900 cc
to **3 500 cc**

Up to
520 rpm

Up to
24 kN.m

Up to
280 kW

Up to
500 bar

Up to
4 speeds



HIGH PERFORMANCE



CONTENT



MODEL CODE	6
MODULARITY	8

Model code and Modularity

WHEEL MOTOR	11
Dimensions for standard (1610) motor	11
Support types	11
Load curves	12

Wheel motor

WHEEL MOTOR WITH SERVICE BRAKE	13
Dimensions for standard (U710) motor	13
Dimensions for standard (Y710) motor	14
Support types	15
Load curves	16

Wheel motor +S17™ brake

WHEEL MOTOR WITH PARKING BRAKE	17
Dimensions for standard (R710) motor	17
Dimensions for standard (S710) motor	18
Support types	19
Load curves	20

Wheel motor +P17™ brake

SHAFT MOTOR	21
Dimensions for standard (2A10 / 2A50) motor	21
Splined coupling	22
Load curves	23

Shaft motor

BRAKES	25
S17™ Service brake	25
P17™ Parking brake	26
Boosted brake™	27

Brakes

INSTALLATION	29
Customer's chassis and wheel rim mountings	29
Hydraulic connections	30
Orientation	31
Motor orientation and balancing during handling	31
Speed shifting logic	32


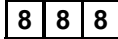
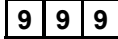
Installation

OPTIONS	33
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Options



MHP11

								
Max. pressure		bar [PSI]	450 [6 527]			450 [6 527]		
			1	2	3	1	2	3
1C Distribution	Displacement	cm ³ /rev [in ³ /rev.]	933 [56.9]			1 050 [64.1]		
	Max. speed	rpm	324			291		
	Max. power	kW [HP]	95 [127]			99 [133]		
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	1 483 [754]			1 670 [849]		
2C Distribution (6/2)	Displacement	cm ³ /rev [in ³ /rev.]	933 [56.9]	311 [18.9]		1 050 [64.1]	350 [21.4]	
	Max. speed	rpm	289	318		260	286	
	Max. power (preferred direction)	kW [HP]	98 [131]	71 [95]		102 [137]	72 [97]	
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	1 483 [754]	494 [251]		1 670 [849]	557 [283]	
3C Distribution (6/4/2)	Displacement	cm ³ /rev [in ³ /rev.]	933 [56.9]	622 [37.9]	311 [18.9]	1 050 [64.1]	700 [42.7]	350 [21.4]
	Max. speed	rpm	277	284	293	249	256	263
	Max. power (preferred direction)	kW [HP]	97 [130]	93 [125]	65 [87]	101 [135]	97 [130]	66 [89]
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	1 483 [754]	989 [503]	494 [251]	1 670 [849]	1 113 [566]	557 [283]

1 First displacement **2** Second displacement **3** Third displacement



The maximum motor speed can be impacted by the type of bearing support. For a precise calculation, please consult your Poclain Hydraulics application engineer.



The maximum motor power is obtained at maximum speed. In non-preferred rotation direction of 2/3-displacement, the maximum power is reduced. For a precise calculation, please consult your Poclain Hydraulics application engineer.



CHARACTERISTICS

		C			0 0 0			1 1 1			2 2 2		
Max. pressure		bar [PSI]			450 [6 527]			450 [6 527]			450 [6 527]		
		1	2	3	1	2	3	1	2	3	1	2	3
1C Distribution	Displacement	cm³/rev [in³/rev.]	1 167 [71.2]			1 284 [78.4]			1 401 [85.5]				
	Max. speed	rpm	264			241			222				
	Max. power	kW [HP]	102 [137]			104 [139]			104 [139]				
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	1 856 [944]			2 042 [1 038]			2 228 [1 133]				
2C Distribution (6/2)	Displacement	cm³/rev [in³/rev.]	1 167 [71.2]	389 [23.7]		1 284 [78.4]	428 [26.1]		1 401 [85.5]	467 [28.5]			
	Max. speed	rpm	236	260		215	238		198	219			
	Max. power (preferred direction)	kW [HP]	105 [141]	72 [97]		106 [142]	73 [98]		106 [142]	73 [98]			
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	1 856 [944]	619 [315]		2 042 [1 038]	681 [346]		2 228 [1 133]	743 [378]			
3C Distribution (6/4/2)	Displacement	cm³/rev [in³/rev.]	1 167 [71.2]	778 [47.5]	389 [23.7]	1 284 [78.4]	856 [52.2]	428 [26.1]	1 401 [85.5]	934 [56.9]	467 [28.5]		
	Max. speed	rpm	226	232	239	207	212	219	190	195	202		
	Max. power (preferred direction)	kW [HP]	104 [139]	100 [134]	67 [89]	105 [141]	100 [134]	67 [89]	105 [141]	100 [134]	68 [91]		
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	1 856 [944]	1 237 [629]	619 [315]	2 042 [1 038]	1 361 [692]	681 [346]	2 228 [1 133]	1 485 [755]	743 [378]		

1 First displacement 2 Second displacement 3 Third displacement



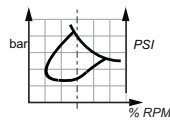
The maximum motor speed can be impacted by the type of bearing support. For a precise calculation, please consult your Poclain Hydraulics application engineer.



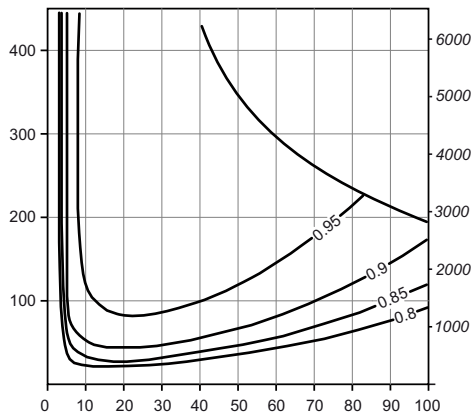
The maximum motor power is obtained at maximum speed. In non-preferred rotation direction of 2/3-displacement, the maximum power is reduced. For a precise calculation, please consult your Poclain Hydraulics application engineer.

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].

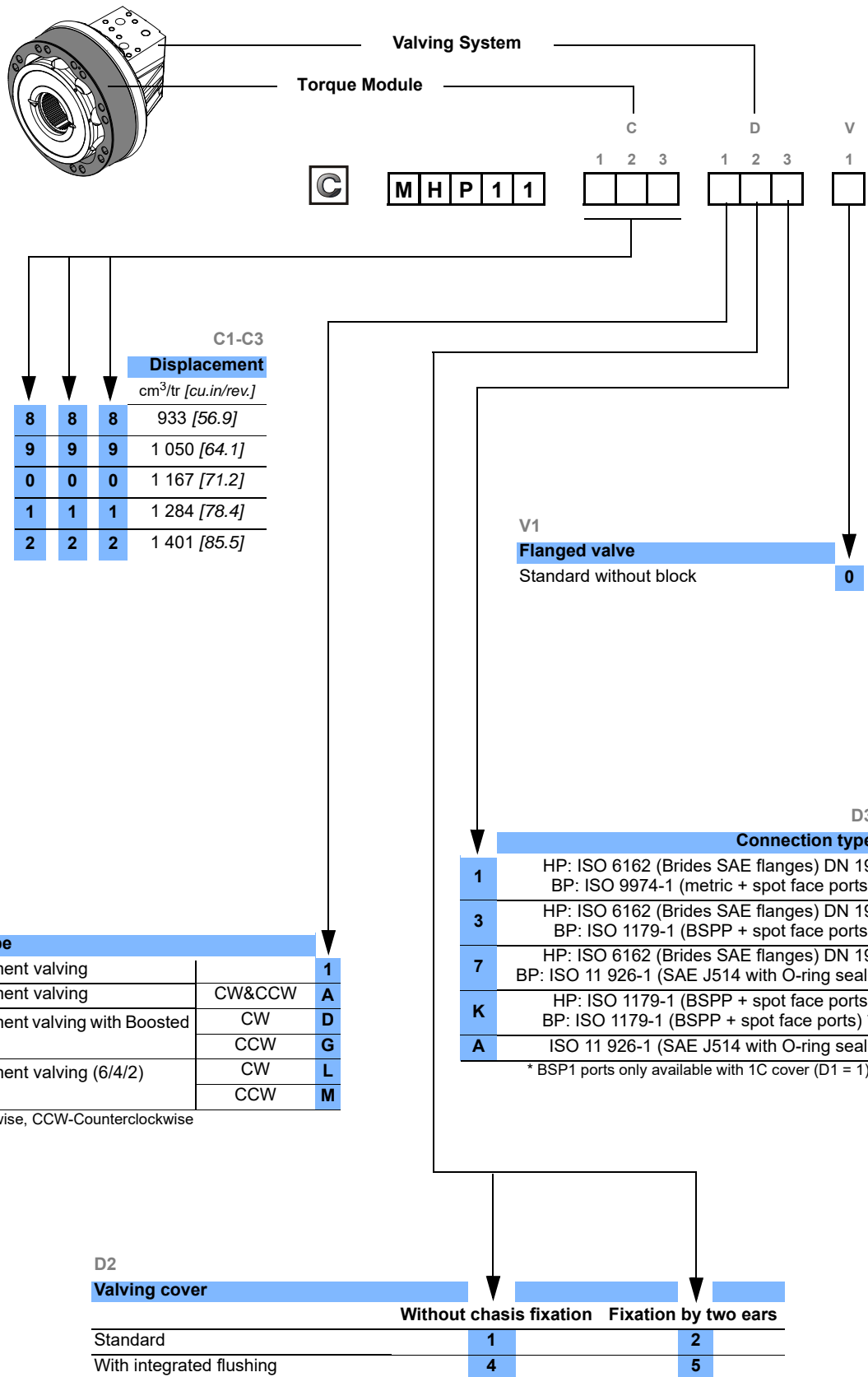


The starting torque is taken to be approximately 85% of the first value for available pressure. For a precise calculation, consult your Poclain Hydraulics application engineer.



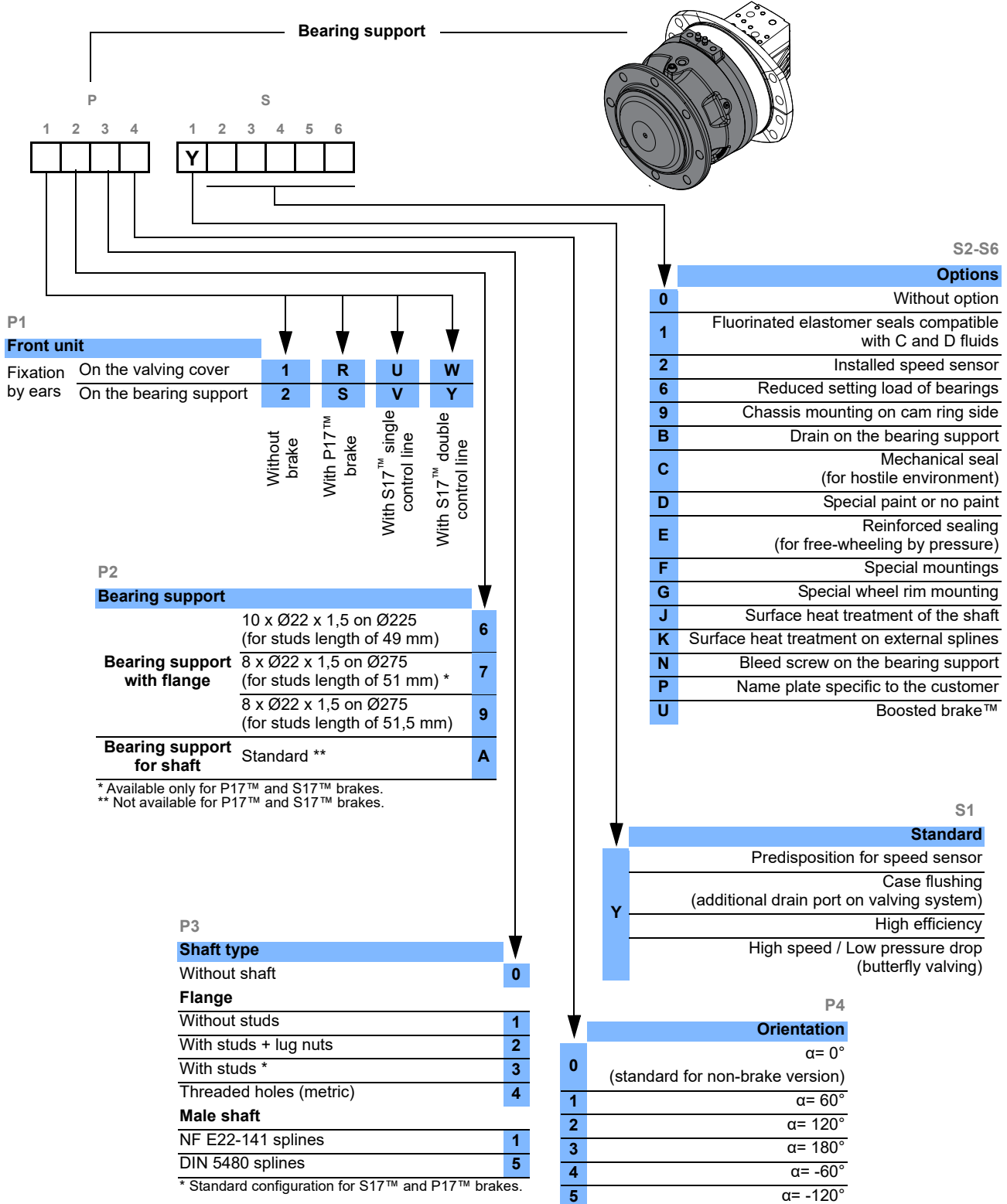


MODEL





CODE



Look at page 31 for more info about motor orientation.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

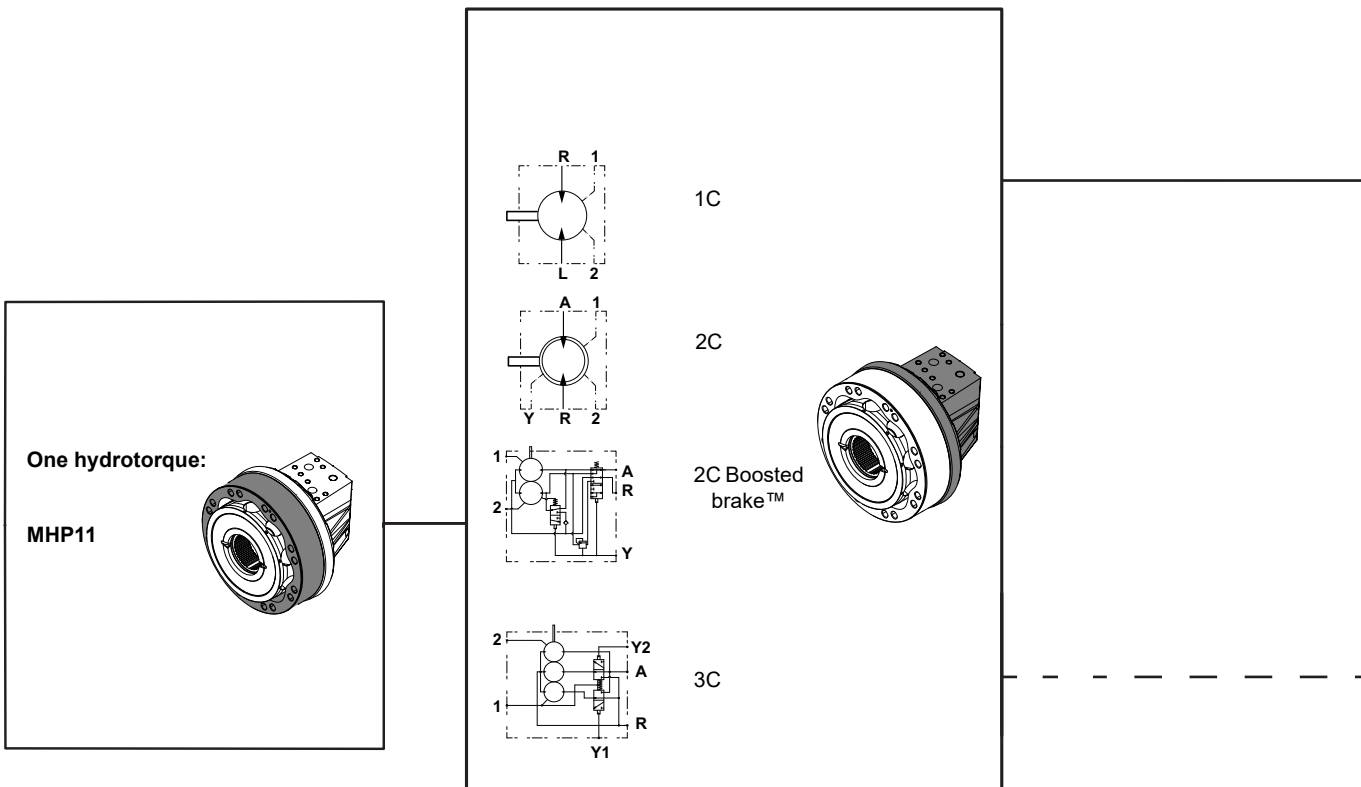
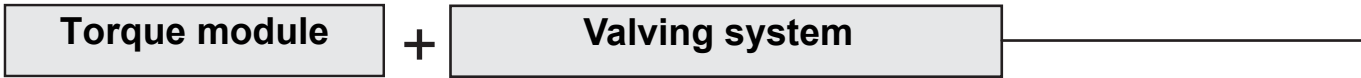
Brakes

Installation

Options

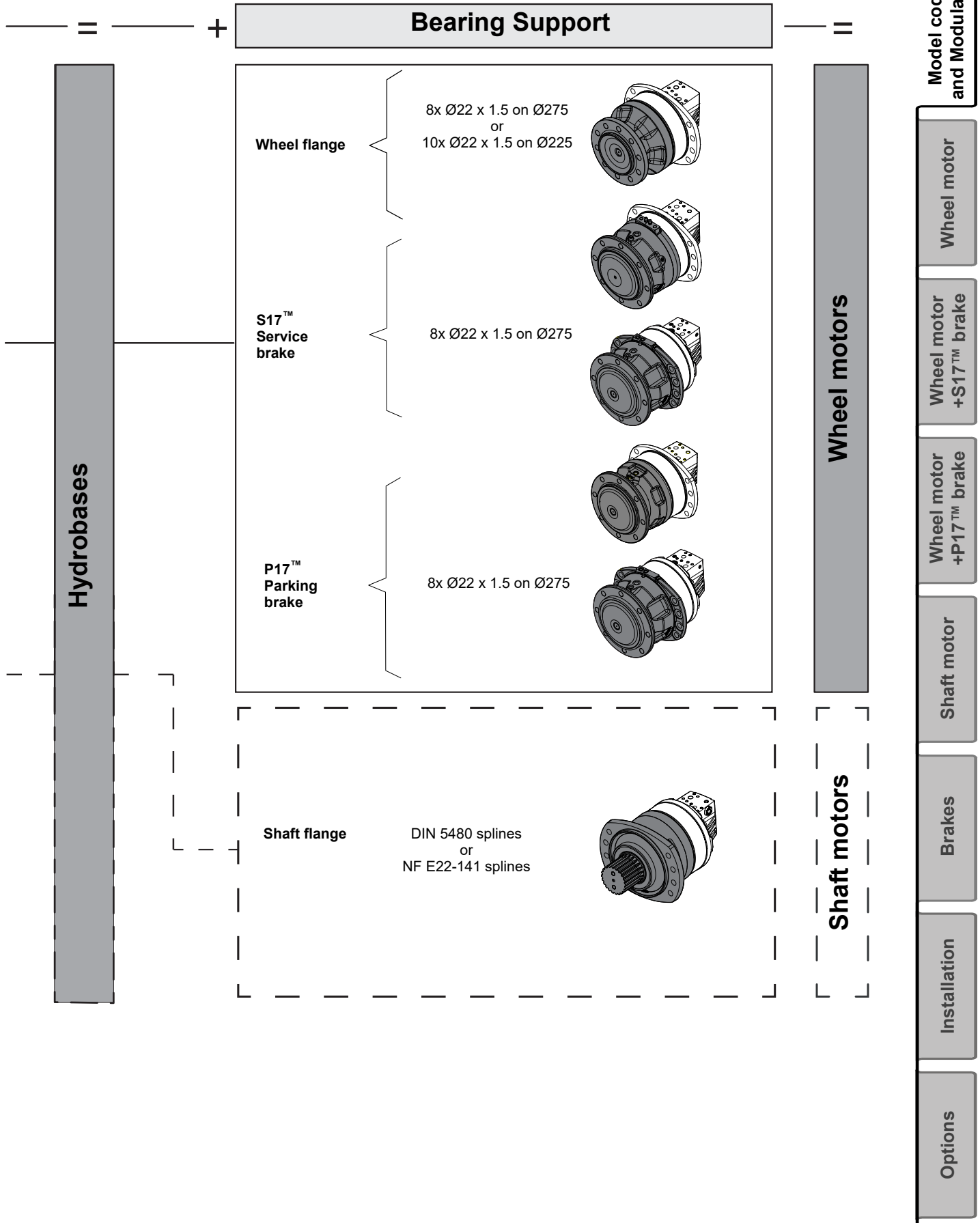


MODUL





ARITY





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 italics).

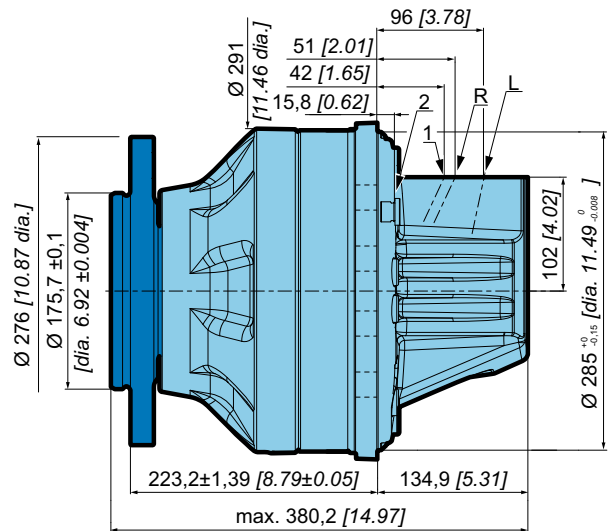
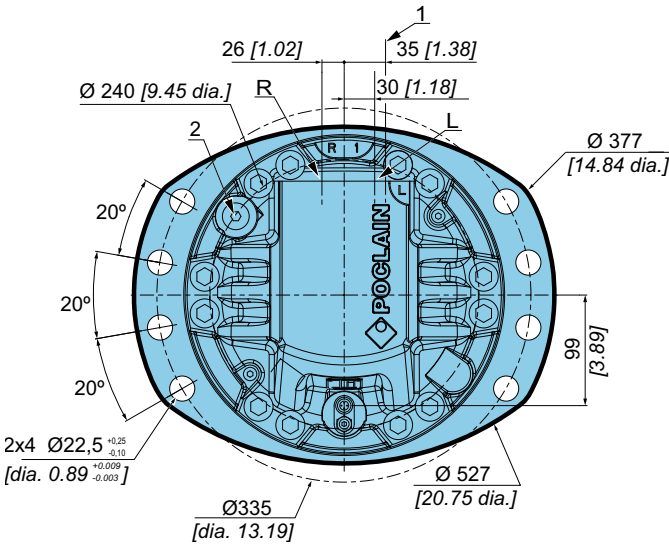




WHEEL MOTOR

Dimensions for standard (1610) motor

110 kg [242 lb]



See page 30 for detailed info about hydraulic connections.

Support types



	A	B	C	D	E	N	Wheel rim mountings	L
	mm [in]	mm [in]	mm [in]	mm [in]	mm [in]	mm [in]		mm [in]
	Ø 175,7 [6,92 dia.]	Ø 225 [8,86 dia.]	Ø 276 [10,87 dia.]	223,2 [8,79]	Ø 291 [11,46 dia.]	Ø 22 [0,87 dia.]	10 x M20x1.5	21 [0,83]
	Ø 220,7 [8,69 dia.]	Ø 275 [10,83 dia.]	Ø 318 [12,52 dia.]	223,7 [8,81]	Ø 291 [11,46 dia.]	Ø 22 [0,87 dia.]	8 x M20x1.5	18,5 [0,73]

Studs

		P	C min.	C max.	D		Class
		mm [in]	mm [in]	mm [in]	mm [in]		
Various studs	M20 x 1.5	70 [2,76]	5 [0,20]	26 [1,02]	25,0 [0,98]		12,9
Screws	M20 x 1.5	-	-	-	23,0 [0,91]		10,9



See generic installation motors N°B59689D.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation

Options



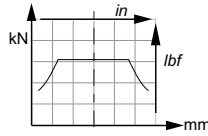
Load curves

Permissible radial loads

Test conditions :

Static : 0 tr/min [0 RPM] 0 bar [0 PSI]

Dynamic : 0 tr/min [0 RPM], code 0 displacement, without axial load at max. torque

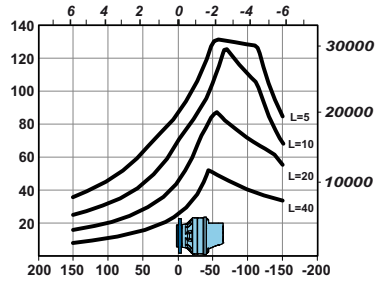
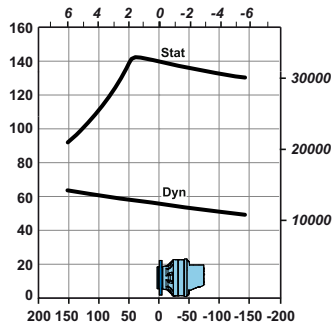


Service life of bearings

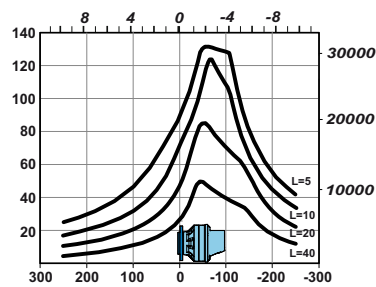
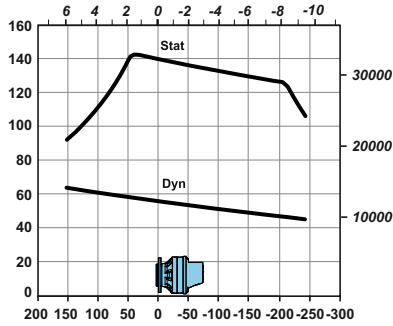
Test conditions :

L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

1 6 1 0
1 2 3 4
P



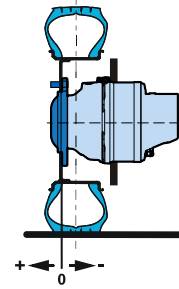
1 9 1 0
1 2 3 4
P



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.



Warn the end user in the user documentation to perform an inspection of the shaft after any abnormal shock at wheel.

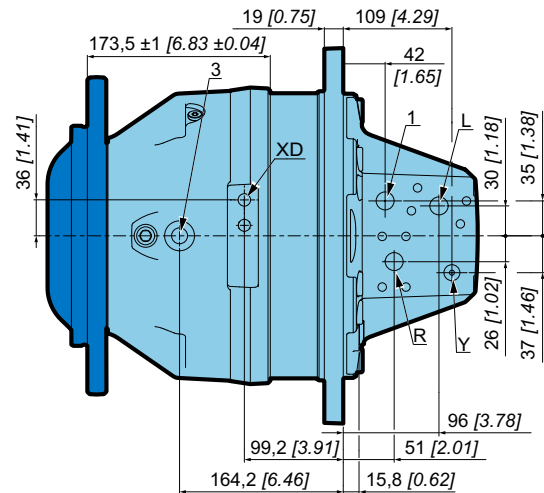
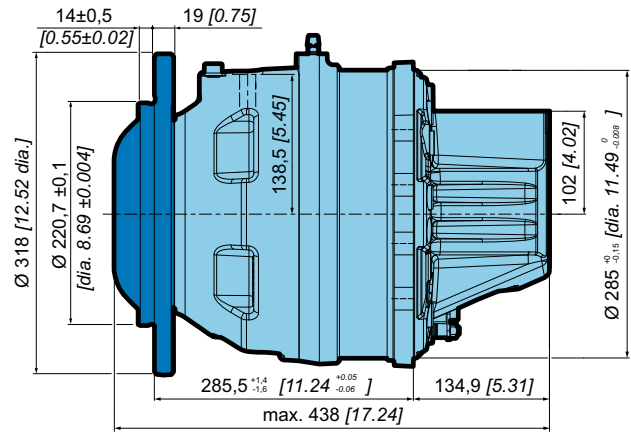
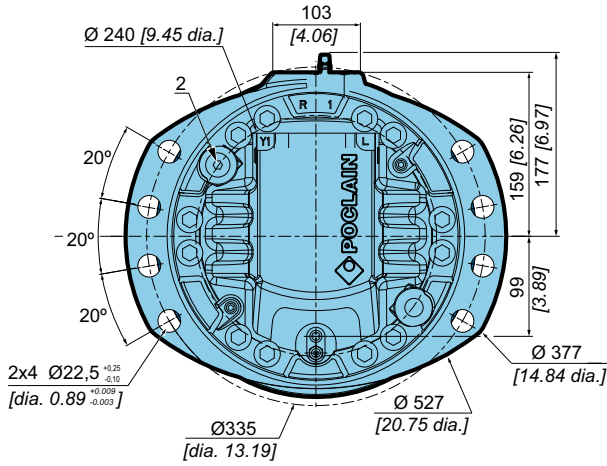




WHEEL MOTOR WITH SERVICE BRAKE

Dimensions for standard (U710) motor

132 kg [291 lb]



See page 30 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

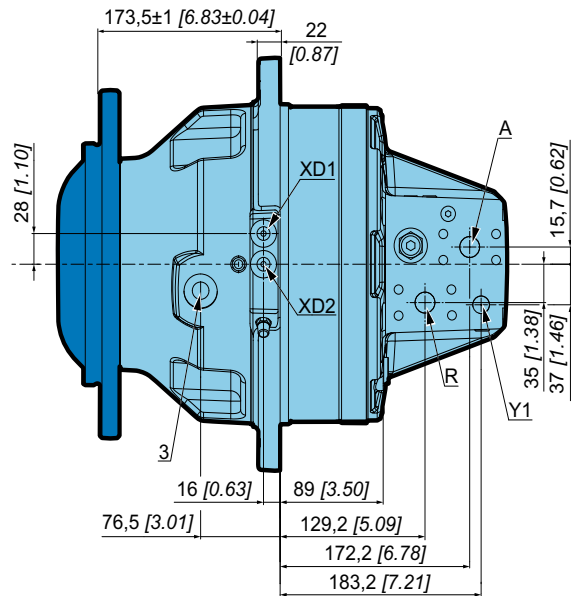
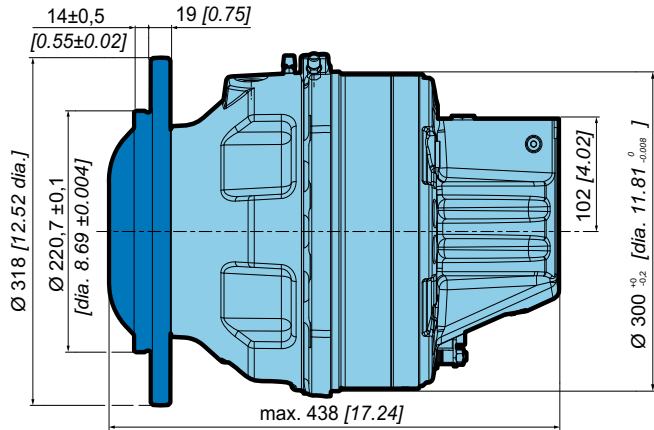
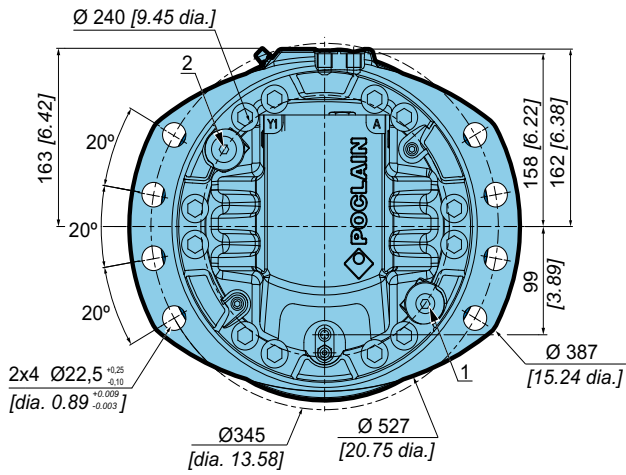
Installation

Options



Dimensions for standard (Y710) motor

132 kg [291 lb]



See page 30 for detailed info about hydraulic connections.



Support types

M	H	P	1	1	C			D			V	P				S						
					1	2	3	1	2	3	1	1	2	3	4	1	2	3	4	5	6	
																Y						



	A mm [in]	B mm [in]	C mm [in]	D mm [in]	E mm [in]	N mm [in]	Wheel rim mountings	L mm [in]									
<table border="1"> <tr><td>U</td><td>7</td><td>1</td><td>0</td></tr> <tr><td>W</td><td>7</td><td>1</td><td>0</td></tr> </table> <p>1 2 3 4 P</p>	U	7	1	0	W	7	1	0	Ø 220,7 [8,69 dia.]	Ø 275 [10,83 dia.]	Ø 318 [12,52 dia.]	256,7 [10,11]	Ø 285 [11,22 dia.]	Ø 22 [0,87 dia.]	8 x M20x1.5	19 [0,75]	
U	7	1	0														
W	7	1	0														
	Also see "Brake" section (thumbnail opposite).																
<table border="1"> <tr><td>V</td><td>7</td><td>1</td><td>0</td></tr> <tr><td>Y</td><td>7</td><td>1</td><td>0</td></tr> </table> <p>1 2 3 4 P</p>	V	7	1	0	Y	7	1	0	Ø 220,7 [8,69 dia.]	Ø 275 [10,83 dia.]	Ø 318 [12,52 dia.]	173,5 [6,83]	Ø 300 [11,81 dia.]	Ø 22 [0,87 dia.]	8 x M20x1.5	19 [0,75]	
V	7	1	0														
Y	7	1	0														
	Also see "Brake" section (thumbnail opposite).																

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation

Options

Studs

		P mm [in]	C min. mm [in]	C max. mm [in]	D mm [in]		Class
Various studs	M20 x 1.5	70 [2,76]	5 [0,20]	26 [1,02]	25,0 [0,98]		12,9
Screws	M20 x 1.5	-	-	-	23,0 [0,91]		10,9



See generic installation motors N°B59689D.



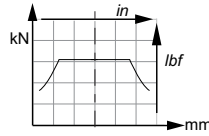
Load curves

Permissible radial loads

Test conditions :

Static : 0 tr/min [0 RPM] 0 bar [0 PSI]

Dynamic : 0 tr/min [0 RPM], code 0 displacement, without axial load at max. torque



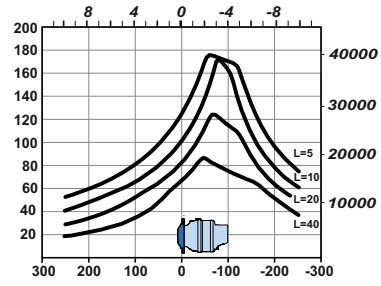
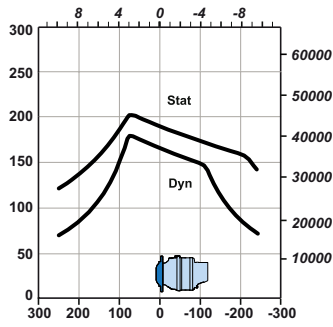
Service life of bearings

Test conditions :

L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

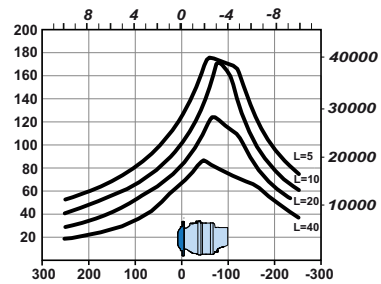
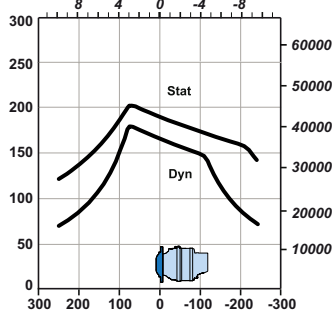
U	7	1	0
W	7	1	0
1	2	3	4

P



V	7	1	0
Y	7	1	0
1	2	3	4

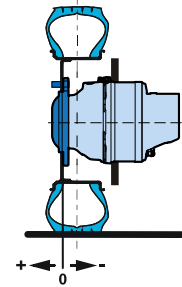
P



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.



Warn the end user in the user documentation to perform an inspection of the shaft after any abnormal shock at wheel.

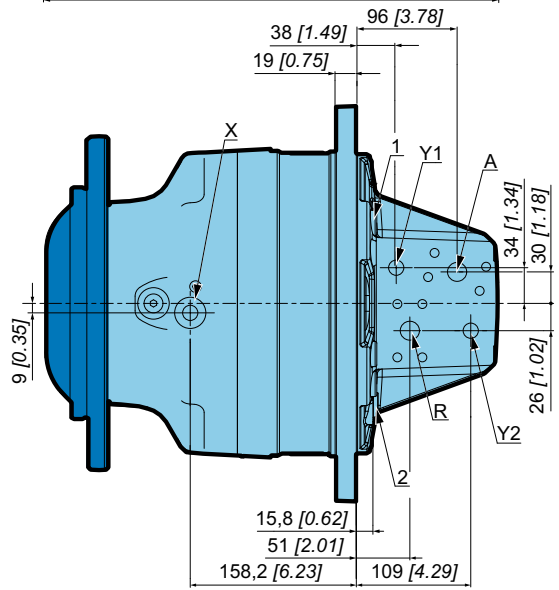
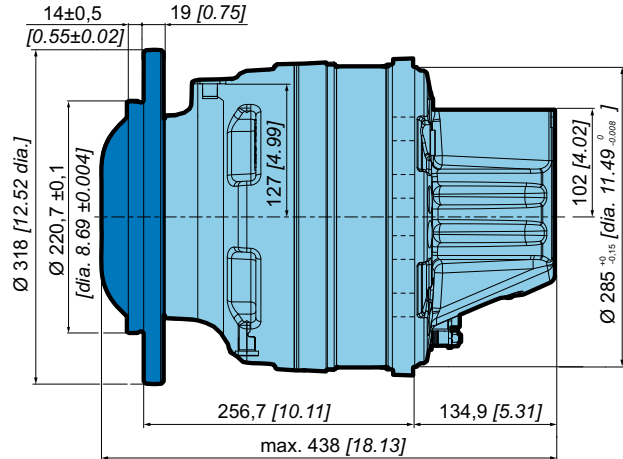
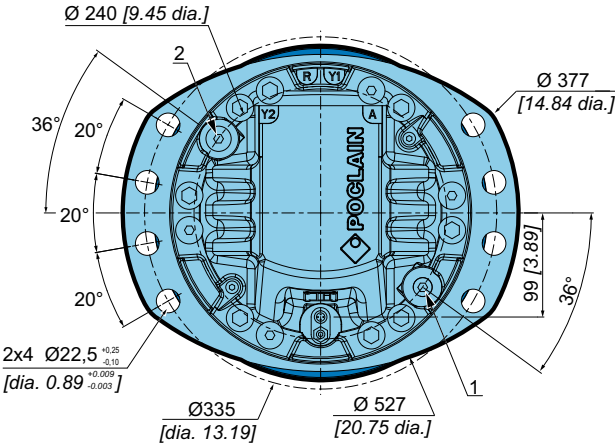




WHEEL MOTOR WITH PARKING BRAKE

Dimensions for standard (R710) motor

132 kg [291 lb]



See page 30 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

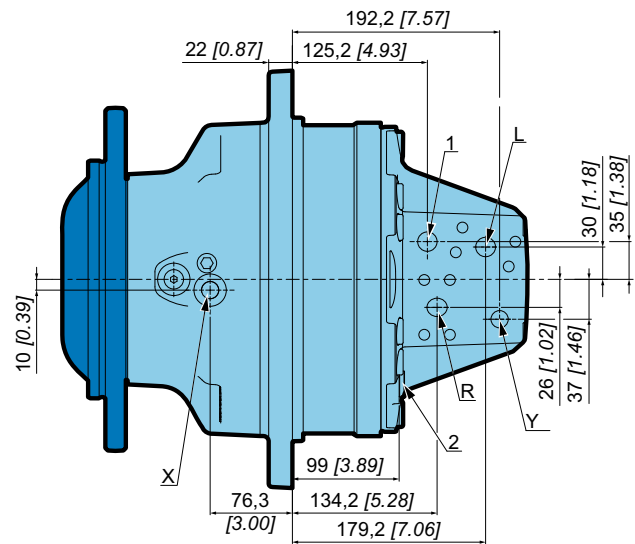
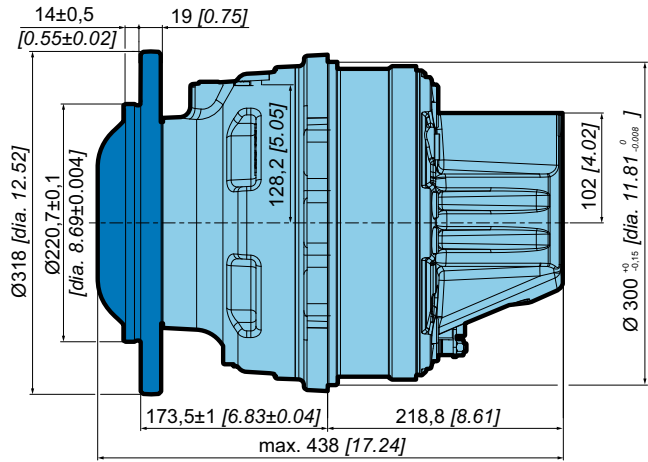
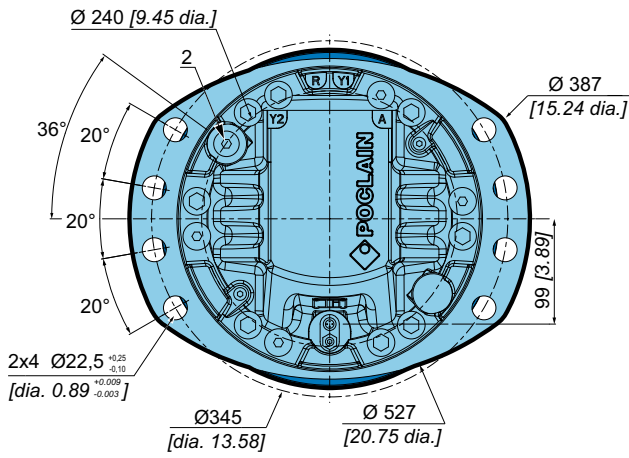
Installation

Options



Dimensions for standard (S710) motor

132 kg [291 lb]



See page 30 for detailed info about hydraulic connections.



Support types

				C			D			V	P				S					
				1	2	3	1	2	3	1	1	2	3	4	1	2	3	4	5	6
M H P 1 1															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]											
R 7 1 0 1 2 3 4 P	Ø 220,7 [8,69 dia.]	Ø 275 [10,83 dia.]	Ø 318 [12,52 dia.]	256,7 [10,11]	Ø 285 [11,22 dia.]	Ø 22 [0,87 dia.]	8 x M20x1.5		19 [0,75]											
	Also see "Brake" section (thumbnail opposite).																			
S 7 1 0 1 2 3 4 P	Ø 220,7 [8,69 dia.]	Ø 275 [10,83 dia.]	Ø 318 [12,52 dia.]	173,5 [6,83]	Ø 300 [11,81 dia.]	Ø 22 [0,87 dia.]	8 x M20x1.5		19 [0,75]											
	Also see "Brake" section (thumbnail opposite).																			

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation

Options

Studs

		P mm [in]	C min. mm [in]	C max. mm [in]	D mm [in]		Class
Various studs	M20 x 1.5	70 [2,76]	5 [0,20]	26 [1,02]	25,0 [0,98]		12,9
Screws	M20 x 1.5	-	-	-	23,0 [0,91]		10,9



See generic installation motors N°B59689D.



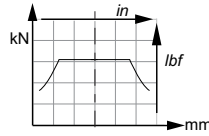
Load curves

Permissible radial loads

Test conditions :

Static : 0 tr/min [0 RPM] 0 bar [0 PSI]

Dynamic : 0 tr/min [0 RPM], code 0 displacement, without axial load at max. torque

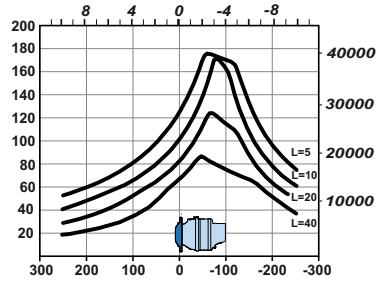
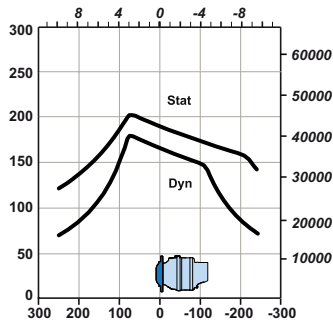


Service life of bearings

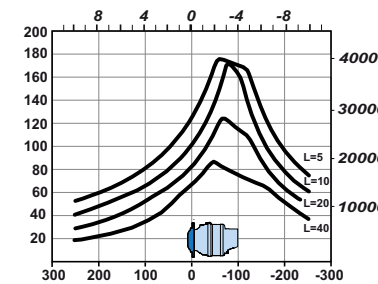
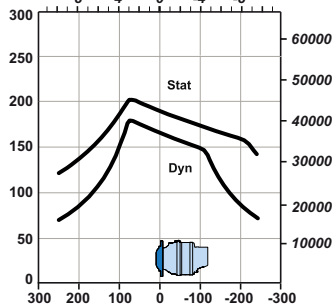
Test conditions :

L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

R 7 1 0
1 2 3 4
P



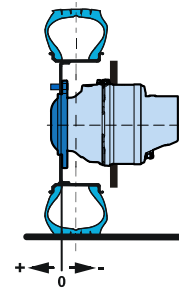
S 7 1 0
1 2 3 4
P



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.



Warn the end user in the user documentation to perform an inspection of the shaft after any abnormal shock at wheel.

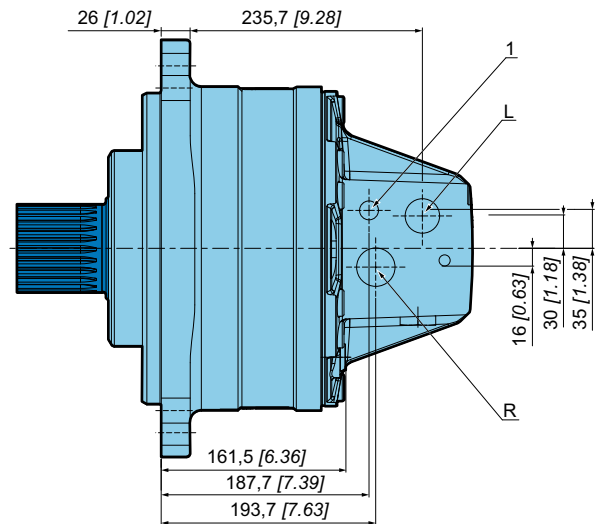
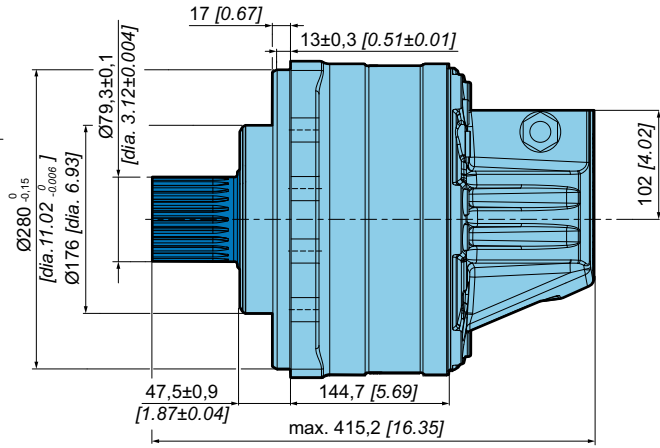
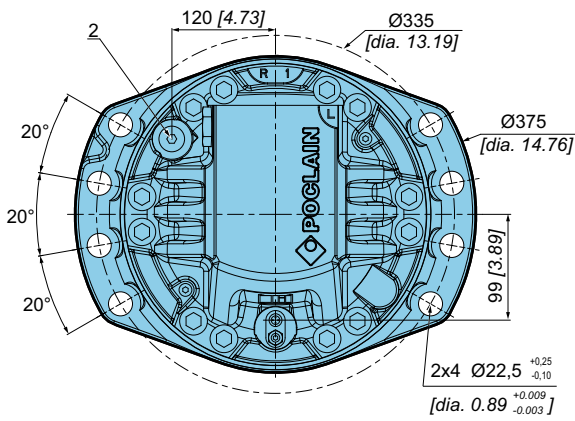




SHAFT MOTOR

Dimensions for standard (2A10 / 2A50) motor

96 kg [212 lb]



See page 30 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation

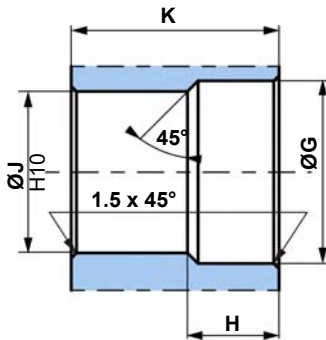
Options



Support types

				C			D			V	P				S									
				1	2	3	1	2	3	1	1	2	3	4	Y	1	2	3	4	5	6			
<div style="border: 1px solid black; padding: 2px; display: inline-block;">M H P 1 3</div>																								
<div style="border: 1px solid black; padding: 2px; display: inline-block;">M H P 1 7</div>																								
C																								
				A			B			C			D			E			F					
				mm [in]			mm [in]			mm [in]			mm [in]			mm [in]			mm [in]					
<div style="border: 1px solid black; padding: 2px; display: inline-block;">2 A 1 0</div>				NF E22-141 splines Nominal Ø 75 [2,95] Module 2,5 Z 25			14 [0,55]			R 3 [R 0,12]			35 [1,38]			2 x M10 23 [0,91]			80 [3,15]					
														Also see "Brake" section (thumbnail opposite).										
<div style="border: 1px solid black; padding: 2px; display: inline-block;">2 A 5 0</div>				DIN 5480 splines Nominal Ø 80 [3,15] Module 3 Z 25			14 [0,55]			R 3 [R 0,12]			35 [1,38]			2 x M10 23 [0,91]			80 [3,15]					
														Also see "Brake" section (thumbnail opposite).										
														Also see "Valving systems and hydrobases" section (thumbnail opposite).										

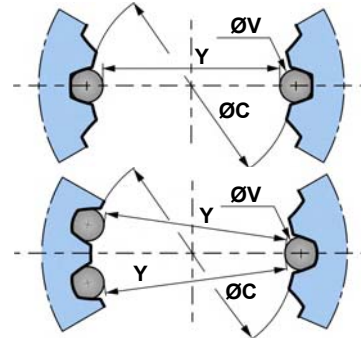
Splined coupling



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

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

Standard NF E22-141
 Pressure angle 20°. Centering on flanks. Slide fit (7H quality).



				Ø G	H	Ø J	K	N	Mo	Z	Offset	Ø C (H10)	Ø V	Y	Tolerance µm [µin]
<div style="border: 1px solid black; padding: 2px; display: inline-block;">2 A 1 0</div>				76 [2.99]	25 [0.98]	70 [2.76]	69 [2.72]	75 [2.95]	2.5	28	2 [0.08]	70 [2.76]	5 [0.20]	65.169 [2.57]	+ 103 / 0 [+4.055 / 0]
<div style="border: 1px solid black; padding: 2px; display: inline-block;">2 A 5 0</div>				81.5 [3.21]	25 [0.98]	74 [2.91]	79 [3.11]	80 [3.15]	3	25	0.85 [0.0335]	74 [2.91]	5.25 [0.21]	68.957 [2.71]	+ 71 / 0 [+2.795 / 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].



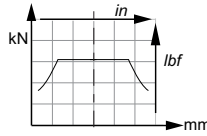
Load curves

Permissible radial loads

Test conditions :

Static : 0 tr/min [0 RPM] 0 bar [0 PSI]

Dynamic : 0 tr/min [0 RPM], code 0 displacement, without axial load at max. torque

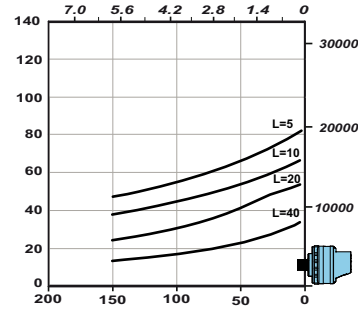
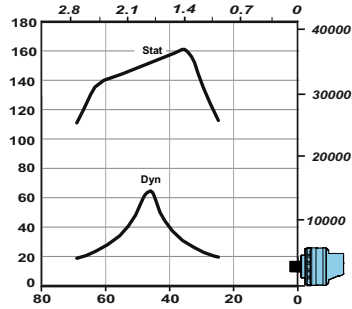


Service life of bearings

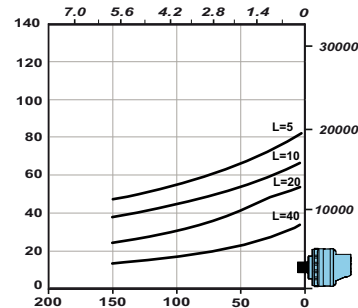
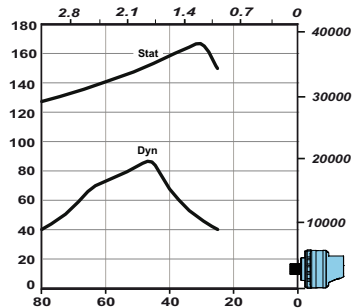
Test conditions :

L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

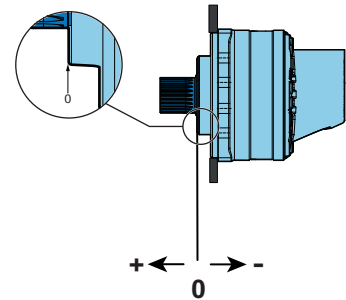
2 A 1 0
1 2 3 4
P



2 A 5 0
1 2 3 4
P



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.



Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation

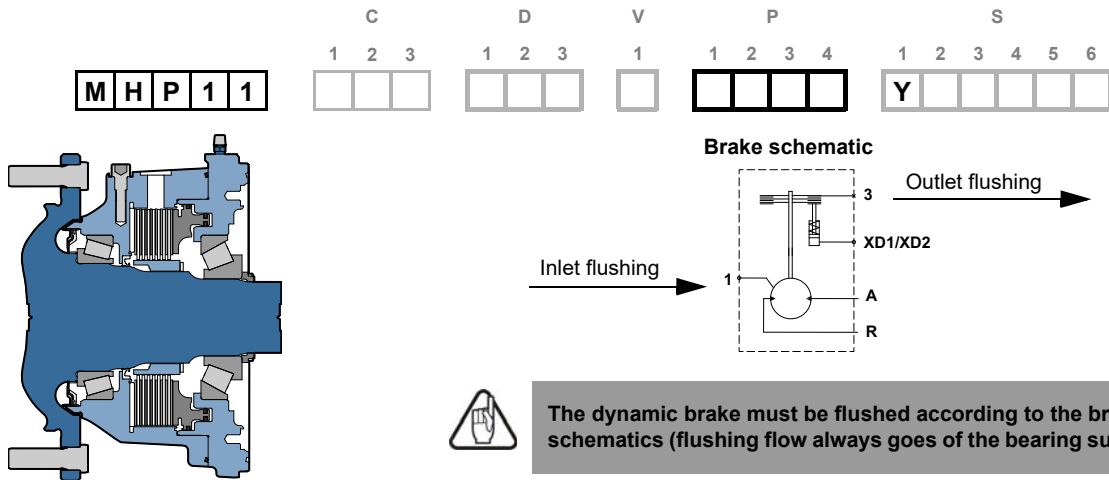
Options





BRAKES

S17™ Service brake



Brake operation

This multi-disc brake is activated by a braking pressure (dynamic braking). The braking command creates a pressure on the dynamic braking piston, which damps the fixed and free discs, preventing the shaft from turning. Braking torque increases linearly as a function of the piloting pressure.

C	U 7 1 0	V 7 1 0
	W 7 1 0	Y 7 1 0

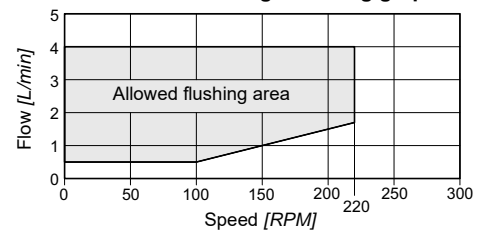
General information

Max. rotation speed	220 rpm
Max. energy dissipation for 1 braking (maintenance needed)	995 kJ

Dynamic brake information

Average torque during dynamic braking	22 000 Nm [16 230 lb.ft]
Pressure to obtain max. permissible braking	120 bar [1 740 PSI]
Piston chamber piloting volume, worn brake	100 cm³ [6,1 cu.in]
Service brake max. allowed energy	480 kJ

S17™ wheel flange flushing graph



- Brake S17™ requires mandatory flushing.
- Brake release pressure vented.
- The use of certain oils may not offer the characteristics stated above. Consult your Poclain Hydraulics application engineer.
- When using the Boosted brake™ option, the S17™ bearing support might not be able to withstand the combination of maximum hydrostatic torque and maximum service brake torque. Please contact your Poclain Hydraulics application engineer for a detailed calculation.
- It is essential to connect the brake valve return line directly to the tank. Any counterpressure on the return brake line can cause premature brake wear without any use of the pedal.
- Service brake declared data are only valuable for decreasing energy brakings.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

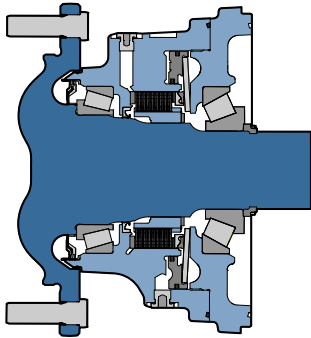
Brakes

Installation

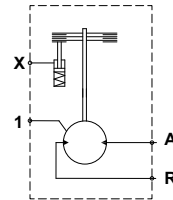
Options



P17™ Parking brake



Brake schematic



Brake operation

This is a multidisc brake which is activated by a lack of pressure. The spring exerts a force on the piston, which presses on the fixed and mobile discs, and immobilizes the shaft. The braking torque decreases in linear proportion to the brake release pressure.



Max. rotation speed	220 rpm
Max. energy dissipation	225 kJ
Number of parking brake applications	1,000,000
Release brake pressure (min/max)	16 [232] / 30 [435]
Min. parking brake torque	16,000 Nm [11,800 lb.ft]
Min. static brake torque (after emergency braking)	15,600 Nm [11,510 lb.ft]
Min. dynamic brake torque in case of emergency brake with new brake	14,000 Nm [10,330 lb.ft]



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 Poclain Hydraulics application engineer.



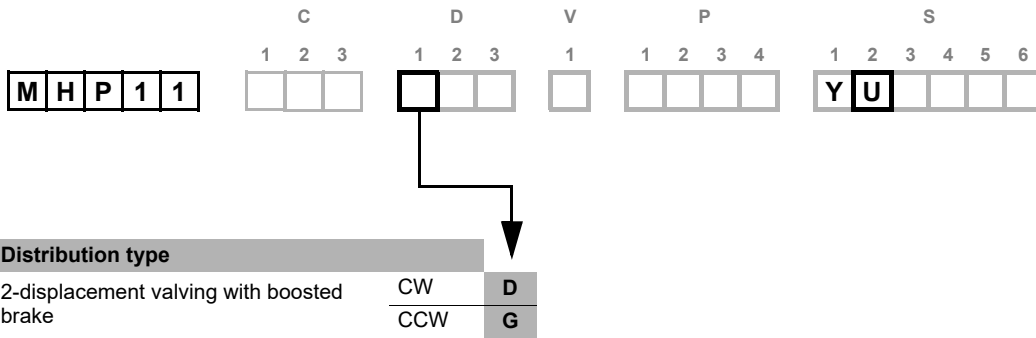
The use of certain oils may not offer the characteristics stated above. Consult your Poclain Hydraulics application engineer.



When using the Boosted brake™ option, the P17™ bearing support might not be able to withstand the combination of maximum hydrostatic torque and maximum service brake torque. Please contact your Poclain Hydraulics application engineer for a detailed calculation.



Boosted brake™

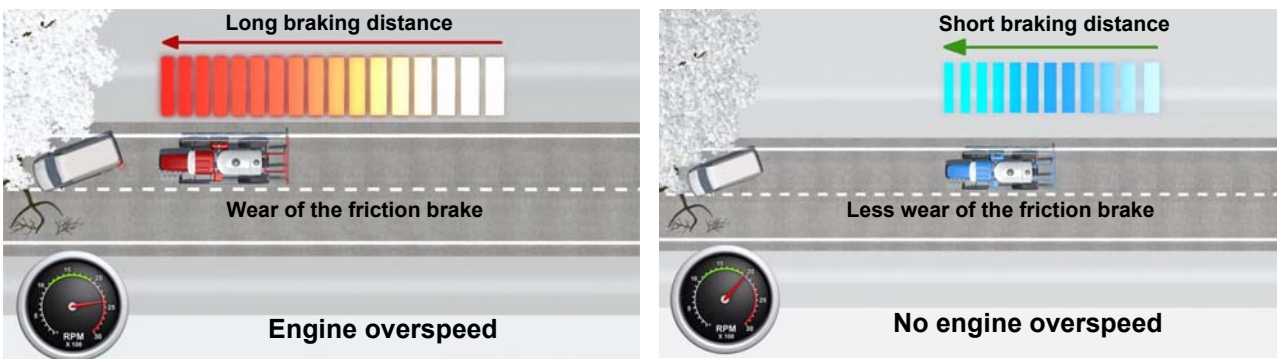


Why Boosted brake™ function?

Boosted brake™ provides increased hydrostatic braking capabilities. It enables regulation requirements to be met in terms of braking distances, whilst reducing the use of the friction brakes. Boosted brake™ complements the diesel engine's retardation capacity. It also avoids engine over-speed when braking. Using the principles of hydrostatic braking through the hydraulic motor's entire displacement capacity and not just the partial displacement that is active when braking occurs, it converts the machine's kinetic energy into heat in the oil in the hydrostatic transmission system. This heat is then evacuated in the cooler. Boosted brake™ is especially interesting for all machines subject to high and/or repeated deceleration, both on the road and in the field. It is recommended for machines with diesel engines with a low retardation capacity.



The braking is more efficient and engine is preserved: that is an essential point to ensure the lifetime of the machine.



Consult your Poclair Hydraulics application engineer.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation

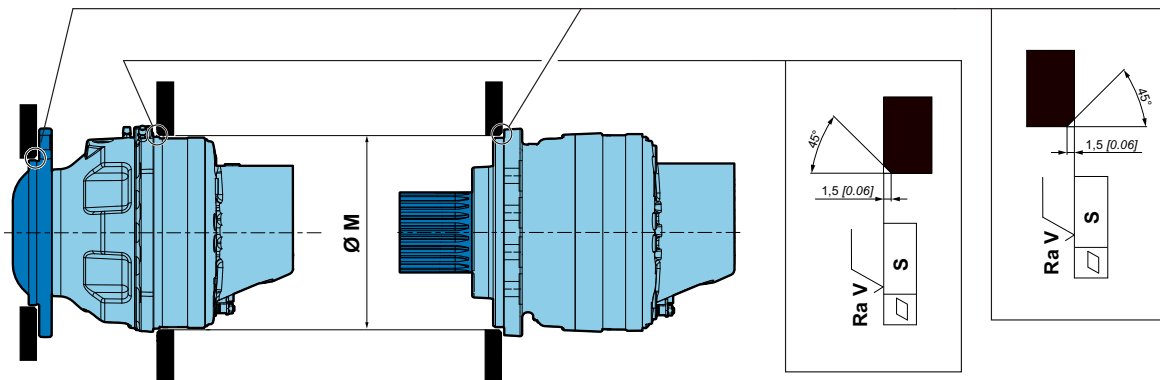
Options






INSTALLATION

Customer's chassis and wheel rim mountings



Take care over the immediate environment of the connections.

P		P		ØM ⁽¹⁾ mm [in]	S mm [in]	Ra V µm [µin]		Class (min)
1 2 3 4 1 R U	1 2 3 4 W 7	285 [11,22]						
1 2 3 4 S V	1 2 3 4 Y 7	300 [11.81]	0,2 [0.008]	12,5 [0.492]	2 x 4 M20 x 2,5		10/9	
1 2 3 4 2 A		280.0 [11.02]						

(1) +0.3 [+0.000]
+0.2 [+0.000]



You are strongly advised to use the fluids specified in brochure "Installation guide" N° B59689D.



To find the connections' tightening torques, see the brochure "Installation guide" N° B59689D.



For more information, see the brochure "Installation guide" N° B59689D.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

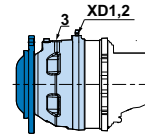
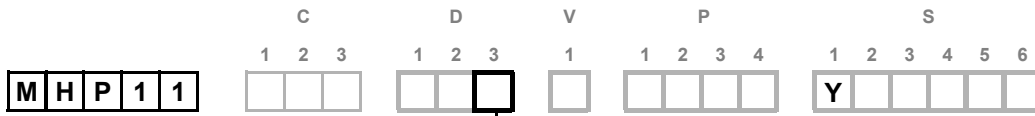
Brakes

Installation

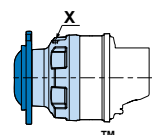
Options



Hydraulic connections



S17™ Service brake

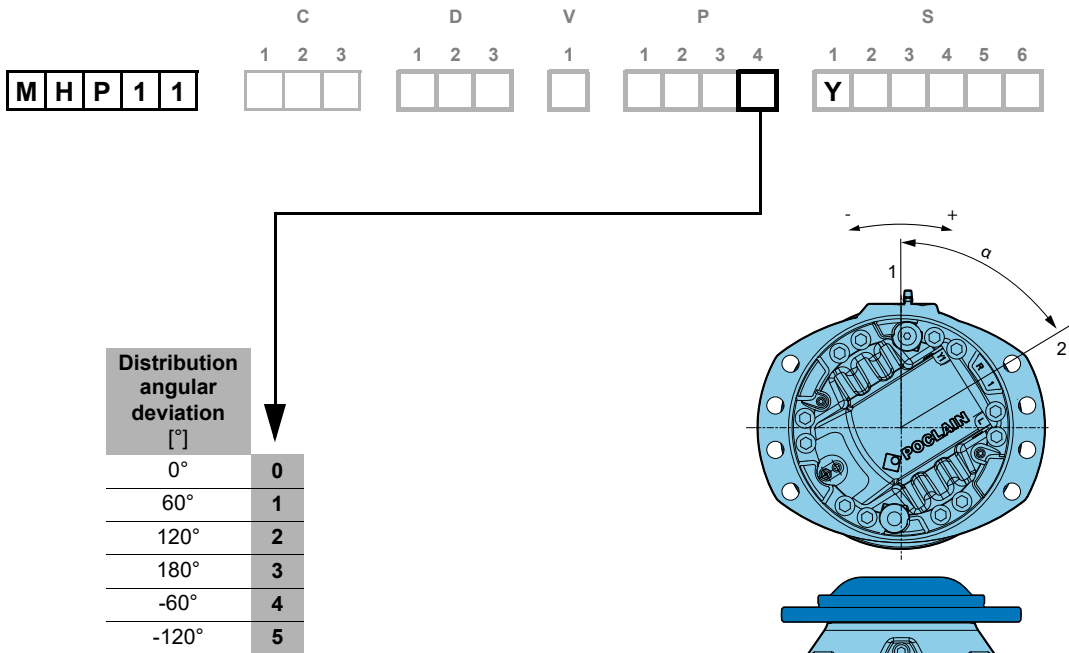


P17™ Parking brake

	Standards	Power supply	Standards	Case drain	2 nd , 3 rd displacement	Control of service brake	Control of service brake	Control of parking brake	Control of parking brake	
		R-L		1-2		XD1	XD2	3	X	
1 st Displacement	1	ISO 6162	SAE 6000PSI 3/4"	ISO 9 974-1	M 18x15		M 14x15	M 14x15	M 18x15	M 16x15
	3	ISO 6162	SAE 6000PSI 3/4"	ISO 1179	BSP 3/8		BSP 14	BSP 14	BSP 3/8	BSP 3/8
	7	ISO 6162	SAE 6000PSI 3/4"	ISO 11 926	7/8"-14 UNF		9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF	9/16"-18 UNF
	K	ISO 1179	BSP 1"	ISO 1179	BSP 3/8		BSP 14	BSP 14	BSP 3/8	BSP 3/8
2 nd Displacement			R-L		1-2	Y	XD1	XD2	3	X
	1	ISO 6162	SAE 6000PSI 3/4"	ISO 9 974-1	M 18x15	M 16x15	M 14x15	M 14x15	M 18x15	M 16x15
	3	ISO 6162	SAE 6000PSI 3/4"	ISO 1179	BSP 3/8	BSP 3/8	BSP 14	BSP 14	BSP 3/8	BSP 3/8
	7	ISO 6162	SAE 6000PSI 3/4"	ISO 11 926	7/8"-14 UNF	3/4"-16 UNF	9/16"-16 UNF	9/16"-18 UNF	3/4"-16 UNF	9/16"-18 UNF
3 rd Displacement			R-A		1-2	Y1-Y2	XD1	XD2	3	X
	1	ISO 6162	SAE 6000PSI 3/4"	ISO 9 974-1	M 18x15	M 16x15	M 14x15	M 14x15	M 18x15	M 16x15
	3	ISO 6162	SAE 6000PSI 3/4"	ISO 1179	BSP 3/8	BSP 3/8	BSP 14	BSP 14	BSP 3/8	BSP 3/8
	7	ISO 6162	SAE 6000PSI 3/4"	ISO 11 926	7/8"-14 UNF	3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF	9/16"-18 UNF
Max pressure	bar [PSI]	450 [6 527]		1 [14.5]	30 [435]	120 [1740]	120 [1740]		30 [435]	

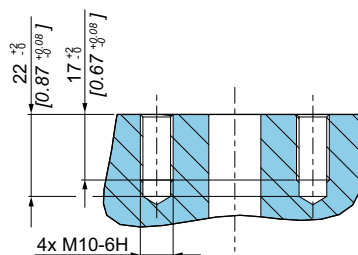


Orientation



- 1: Reference axis: supply orifice of braking bearing support
- 2: Axis on cover: supply orifices axis
- α : Angle between ports on the bearing support (brake) and ports on the cover (power supply)

Motor orientation and balancing during handling



Use R port connections for motor orientation and balancing during handling.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation

Options



Speed shifting logic

2 displacements motor

	Y1
1 st displacement	0
2 nd displacement	1

3 displacements motor

	Y1	Y2
1 st displacement	1	0
2 nd displacement	0	0
3 rd displacement	0	1



It's prohibited to pilot Y1 and Y2 at the same time while using 3-displacement valving.



OPTIONS



Y Standard option

- Predisposition for speed sensor
- Case flushing (additional drain on the valving cover)
- High efficiency (piston with special ring)
- High speed/Low pressure drop (Butterfly valving)

1 Fluorinated elastomer seals

Compatible with C and D fluids.



Consult your Poclain Hydraulics sales engineer.

2 Installed speed sensor

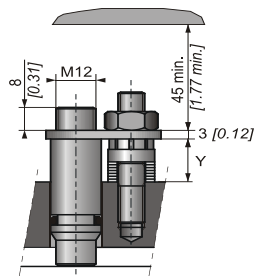
Designation

T4 speed sensor installed (without rotation direction)



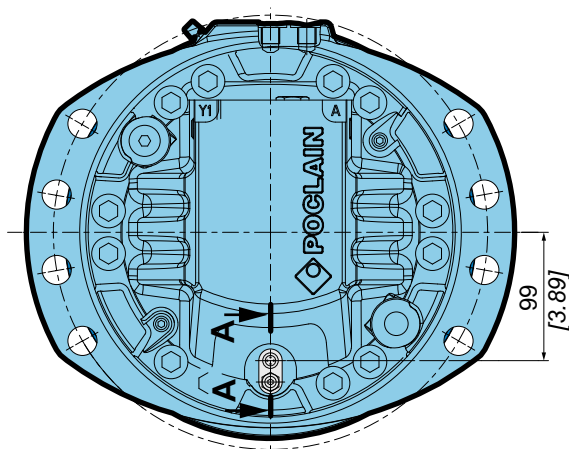
2

A-A



Max. length Y = 21,5 [0.85]

Standard number of pulses per revolution = 80



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. B59689D.

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation

Options



6 Reduced preload setting of bearing

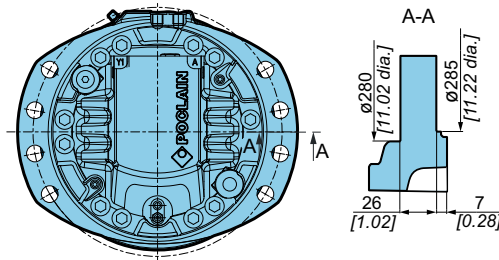
Reduction of around 50% from the rated value in the bearings' preload value. Without external loads, increases the lifetime of the bearing support.



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

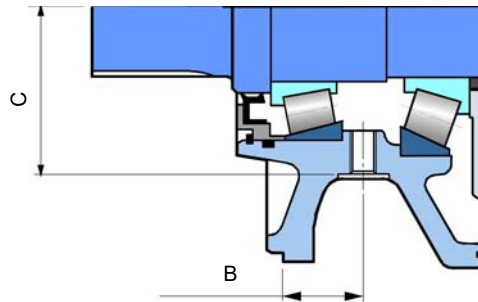
9 Chassis mounting on cam ring side


Only available for shaft motors.



B Drain on the bearing support

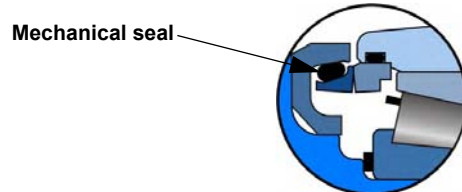
Only available for shaft motors.



		B mm [in]	C mm [in]
Shaft motor	M18x1,5	60 [2.36]	128,2 [5.05]

C Mechanical seal

Some environments can be very harmful. The mirror seal gives reinforced motor sealing.



Consult your Poclair Hydraulics sales engineer.



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 topcoat.

E Reinforced sealing

For free-wheeling by pressure.

G Special wheel rim mounting

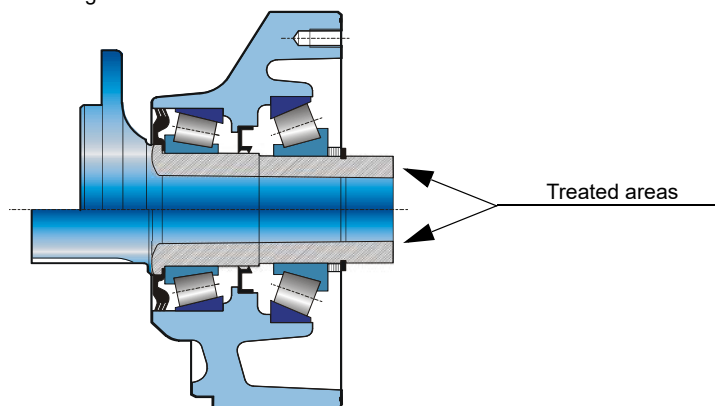
Enables certain combinations different from the standard mountings defined on page 14.



Consult your Poclain Hydraulics application engineer.

J Surface heat treatment of the shaft

Heat treatment on the indicated bearing raius.



K Surface heat treatment on external splines

N Bleed screw on the bearing support

P Name plate specific to the customer

Your part number can be engraved on the plate.



Consult your Poclain Hydraulics application engineer for other possibilities.

F Special mountings

U Boosted brake™



Consult your Poclain Hydraulics application engineer (see page 27).

Model code and Modularity

Wheel motor

Wheel motor +S17™ brake

Wheel motor +P17™ brake

Shaft motor

Brakes

Installation










Options



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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-  Not available
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