

MHP20/MHP27

HYDRAULIC MOTORS



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



MHP MOTORS

The new MHP20 and MHP27 hydraulic motors represent the keystone of the High Performance system proposed by Poclain Hydraulics.

Thanks to their innovative design, the MHP20 and MHP27 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.

But besides their performance, the MHP20 and MHP27 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
1 430 cc
to **3 500 cc**

Up to
520 rpm

Up to
24 kN.m

Up to
280 kW

Up to
500 bar

Up to
3 speeds



HIGH PERFORMANCE
HIGH PERFORMANCE



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Model code
and Modularity

Wheel motor

Wheel motor
+C27™ brake

Wheel motor
+P27™ brake

Shaft motor

Shaft motor
+P27™ brake

Brakes

Installation

Options

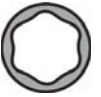


MHP20

		C	7 7 7			8 8 8			9 9 9		
Max. Pressure		bar [PSI]	500 [7 252]			500 [7 252]			500 [7 252]		
			1	2	3	1	2	3	1	2	3
1C Distribution	Displacement	cm ³ /rev [in ³ /rev.]	1 416 [86.4]			1 630 [99.5]			1 821 [111.1]		
	Max. Speed	rpm	505			420			395		
	Max. Power⁽¹⁾	kW [HP]	200 [268]			185 [248]			178 [239]		
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	2 254 [1145]			2 594 [1318]			2 898 [1472]		
2C Distribution	Displacement	cm ³ /rev [in ³ /rev.]	1 416 [86.4]	531 [32.4]		1 630 [99.5]	611 [37.3]		1 821 [111.1]	683 [41.7]	
	Max. Speed	rpm	420	520		350	430		330	410	
	Max. Power⁽¹⁾	kW [HP]	190 [255]	160 [215]		180 [241]	155 [207]		175 [235]	150 [201]	
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	2 254 [1145]	845 [429]		2 594 [1318]	972 [494]		2 898 [1472]	1 087 [552]	
3C Distribution (8/5/3)	Displacement	cm ³ /rev [in ³ /rev.]	1 416 [86.4]	885 [54.0]	531 [32.4]	1 630 [99.5]	1 019 [62.2]	611 [37.3]	1 821 [111.1]	1 138 [69.4]	683 [41.7]
	Max. Speed	rpm	380	440	480	320	365	400	300	350	380
	Max. Power⁽¹⁾	kW [HP]	175 [235]	165 [221]	155 [208]	165 [221]	155 [208]	145 [194]	160 [215]	150 [201]	140 [188]
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	2 254 [1 145]	1 409 [716]	845 [429]	2 594 [1 318]	1 622 [824]	972 [494]	2 898 [1 472]	1 811 [920]	1 087 [552]
3C Distribution (8/5/2)	Displacement	cm ³ /rev [in ³ /rev.]	1 416 [86.4]	885 [54.0]	354 [21.6]	1 630 [99.5]	1 019 [62.2]	408 [24.9]	1 821 [111.1]	1 138 [69.4]	455 [27.8]
	Max. Speed	rpm	380	435	485	320	365	405	300	345	380
	Max. Power⁽¹⁾	kW [HP]	175 [235]	165 [221]	135 [181]	165 [221]	155 [208]	130 [174]	160 [215]	150 [201]	125 [168]
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	2 254 [1 145]	1 409 [716]	563 [286]	2 594 [1 318]	1 622 [824]	649 [330]	2 898 [1 472]	1 811 [920]	724 [368]

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

⁽¹⁾Max. power obtained at maximum speed.



CHARACTERISTICS

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

Installation

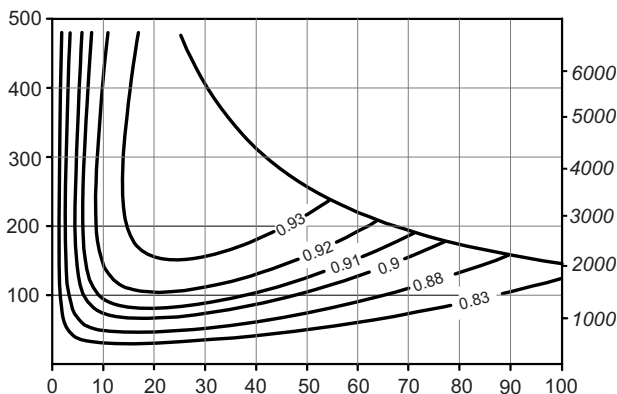
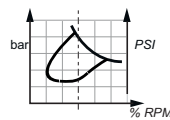
Options

		C			0 0 0			1 1 1			2 2 2		
Max. Pressure		bar [PSI]			500 [7 252]			500 [7 252]			500 [7 252]		
		1	2	3	1	2	3	1	2	3	1	2	3
1C Distribution	Displacement	cm³/rev [in³/rev.]	2 029 [123.8]			2 228 [135.9]			2 427 [148.1]				
	Max. Speed	rpm	345			325			290				
	Max. Power ⁽¹⁾	kW [HP]	170 [228]			160 [215]			150 [201]				
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	3 229 [1 640]			3 546 [1 801]			3 863 [1 962]				
2C Distribution	Displacement	cm³/rev [in³/rev.]	2 029 [123.8]	761 [46.4]		2 228 [135.9]	836 [51.0]		2 427 [148.1]	910 [55.5]			
	Max. Speed	rpm	285	355		270	340		240	300			
	Max. Power ⁽¹⁾	kW [HP]	160 [215]	140 [188]		155 [208]	135 [181]		140 [188]	125 [168]			
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	3 229 [1 640]	1 211 [615]		3 546 [1 801]	1 331 [676]		3 863 [1 962]	1 448 [736]			
3C Distribution (8/5/3)	Displacement	cm³/rev [in³/rev.]	2 029 [123.8]	1 268 [77.4]	761 [46.4]	2 228 [135.9]	1 393 [85.0]	836 [51.0]	2 427 [148.1]	1 517 [92.6]	910 [55.5]		
	Max. Speed	rpm	260	300	325	245	285	315	220	255	280		
	Max. Power ⁽¹⁾	kW [HP]	145 [194]	140 [188]	130 [174]	140 [188]	135 [181]	125 [168]	130 [174]	125 [168]	115 [154]		
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	3 229 [1 640]	2 018 [1 025]	1 211 [615]	3 546 [1 801]	2 217 [1 126]	1 331 [676]	3 863 [1 962]	2 414 [1 227]	1 448 [736]		
3C Distribution (8/5/2)	Displacement	cm³/rev [in³/rev.]	2 029 [123.8]	1 268 [77.4]	507 [30.9]	2 228 [135.9]	1 393 [85.0]	557 [33.9]	2 427 [148.1]	1 517 [92.6]	607 [37.0]		
	Max. Speed	rpm	260	300	325	245	285	315	220	255	280		
	Max. Power ⁽¹⁾	kW [HP]	145 [194]	140 [188]	115 [154]	140 [188]	135 [181]	110 [148]	130 [174]	125 [168]	105 [141]		
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	3 229 [1 640]	2 018 [1 025]	807 [410]	3 546 [1 801]	2 217 [1 126]	886 [450]	3 863 [1 962]	2 414 [1 227]	966 [491]		

1 First displacement **2** Second displacement **3** Third displacement ⁽¹⁾Max. power obtained at maximum speed.

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.



MHP27

		C	7 7 7			8 8 8			9 9 9			0 0 0		
Max. Pressure		bar [PSI]	500 [7 252]			500 [7 252]			500 [7 252]			500 [7 252]		
			1	2	3	1	2	3	1	2	3	1	2	3
1C Distribution	Displacement	cm ³ /rev [in ³ /rev.]	1 893 [115.5]			2 179 [132.9]			2 434 [148.5]			2 712 [165.5]		
	Max. Speed	rpm	340			310			280			245		
	Max. Power ⁽¹⁾	kW [HP]	280 [375]			250 [335]			230 [308]			210 [282]		
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	3 013 [1 531]			3 468 [1 762]			3 874 [1 968]			4 316 [2 193]		
2C Distribution	Displacement	cm ³ /rev [in ³ /rev.]	1 893 [115.5]	710 [43.3]		2 179 [132.9]	817 [49.9]		2 434 [148.5]	913 [55.7]		2 712 [165.5]	1 017 [62.1]	
	Max. Speed	rpm	290	345		265	320		235	285		205	250	
	Max. Power ⁽¹⁾	kW [HP]	230 [308]	195 [261]		220 [295]	195 [261]		210 [282]	185 [248]		200 [268]	175 [235]	
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	3 013 [1 531]	1 130 [574]		3 468 [1 762]	1 300 [661]		3 874 [1 968]	1 453 [738]		4 316 [2 193]	1 619 [822]	
3C Distribution (8/5/3)	Displacement	cm ³ /rev [in ³ /rev.]	1893 [115.5]	1183 [72.2]	710 [43.3]	2179 [132.9]	1362 [83.1]	817 [49.9]	2434 [148.5]	1521 [92.8]	913 [55.7]	2712 [165.5]	1695 [103.4]	1017 [62.1]
	Max. Speed	rpm	265	300	325	240	275	295	215	250	265	190	215	230
	Max. Power ⁽¹⁾	kW [HP]	215 [288]	200 [268]	185 [248]	205 [275]	195 [261]	185 [248]	195 [261]	185 [248]	175 [235]	185 [248]	175 [235]	160 [215]
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	3 013 [1 531]	1 883 [956]	1 130 [574]	3 468 [1 762]	2 168 [1 101]	1 300 [661]	3 874 [1 968]	2 421 [1 230]	1 453 [738]	4 316 [2 193]	2 698 [1 370]	1 619 [822]
3C Distribution (8/5/2)	Displacement	cm ³ /rev [in ³ /rev.]	1 893 [115.5]	1 183 [72.2]	473 [28.9]	2 179 [132.9]	1 362 [83.1]	545 [33.3]	2 434 [148.5]	1 521 [92.8]	608 [37.1]	2 712 [165.5]	1 695 [103.4]	678 [41.4]
	Max. Speed	rpm	265	300	330	240	270	300	215	245	270	190	215	235
	Max. Power ⁽¹⁾	kW [HP]	215 [288]	200 [268]	125 [168]	205 [275]	195 [261]	125 [167]	195 [261]	185 [248]	125 [168]	185 [248]	175 [235]	125 [168]
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	3 013 [1 531]	1 883 [956]	753 [382]	3 468 [1 762]	2 168 [1 101]	867 [441]	3 874 [1 968]	2 421 [1 230]	968 [492]	4 316 [2 193]	2 698 [1 370]	1 079 [548]

1 First displacement **2** Second displacement **3** Third displacement ⁽¹⁾Max. power obtained at maximum speed.



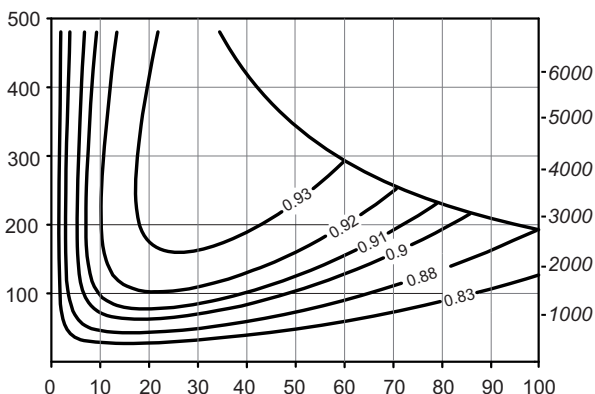
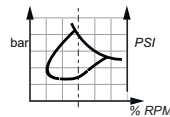
CHARACTERISTICS

		C			1 1 1			2 2 2			3 3 3		
	Max. Pressure	bar [PSI]											
		500 [7 252]			500 [7 252]			500 [7 252]					
		1	2	3	1	2	3	1	2	3			
1C Distribution	Displacement	cm ³ /rev [in ³ /rev.]	2 978 [181.7]			3 245 [198]			3 526 [215.2]				
	Max. Speed	rpm	230			210			190				
	Max. Power ⁽¹⁾	kW [HP]	200 [268]			190 [255]			180 [241]				
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	4 740 [2 408]			5 165 [2 624]			5 612 [2 851]				
2C Distribution	Displacement	cm ³ /rev [in ³ /rev.]	2 978 [181.7]	1 117 [68.2]		3 245 [198]	1 217 [74.3]		3 526 [215.2]	1 322 [80.7]			
	Max. Speed	rpm	195	235		180	215		165	195			
	Max. Power ⁽¹⁾	kW [HP]	190 [255]	165 [221]		180 [241]	155 [208]		170 [228]	140 [188]			
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	4 740 [2 408]	1 778 [903]		5 165 [2 624]	1 937 [984]		5 612 [2 851]	2 104 [1 069]			
3C Distribution (8/5/3)	Displacement	cm ³ /rev [in ³ /rev.]	2 978 [181.7]	1 861 [113.6]	1 117 [68.2]	3 245 [198]	2 028 [123.8]	1 217 [74.3]	3 526 [215.2]	2 204 [134.5]	1 322 [80.7]		
	Max. Speed	rpm	180	205	220	165	185	200	145	165	180		
	Max. Power ⁽¹⁾	kW [HP]	175 [235]	170 [228]	155 [208]	165 [221]	155 [208]	145 [194]	150 [201]	145 [194]	135 [181]		
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	4 740 [2 408]	2 962 [1 505]	1 778 [903]	5 165 [2 624]	3 228 [1 640]	1 937 [984]	5 612 [2 851]	3 508 [1 782]	2 104 [1 069]		
3C Distribution (8/5/2)	Displacement	cm ³ /rev [in ³ /rev.]	2 978 [181.7]	1 861 [113.6]	745 [45.5]	3 245 [198]	2 028 [123.8]	811 [49.5]	3 526 [215.2]	2 204 [134.5]	881 [53.8]		
	Max. Speed	rpm	175	200	220	160	185	200	145	165	185		
	Max. Power ⁽¹⁾	kW [HP]	175 [235]	170 [228]	125 [168]	165 [221]	155 [208]	125 [168]	150 [201]	145 [194]	120 [161]		
	Th. torque at 100 bar [1000 PSI]	Nm [Lb.ft]	4 740 [2 408]	2 962 [1 505]	1 186 [602]	5 165 [2 624]	3 228 [1 640]	1 291 [656]	5 612 [2 851]	3 508 [1 782]	1 402 [712]		

1 First displacement 2 Second displacement 3 Third displacement ⁽¹⁾Max. power obtained at maximum speed.

Overall efficiency

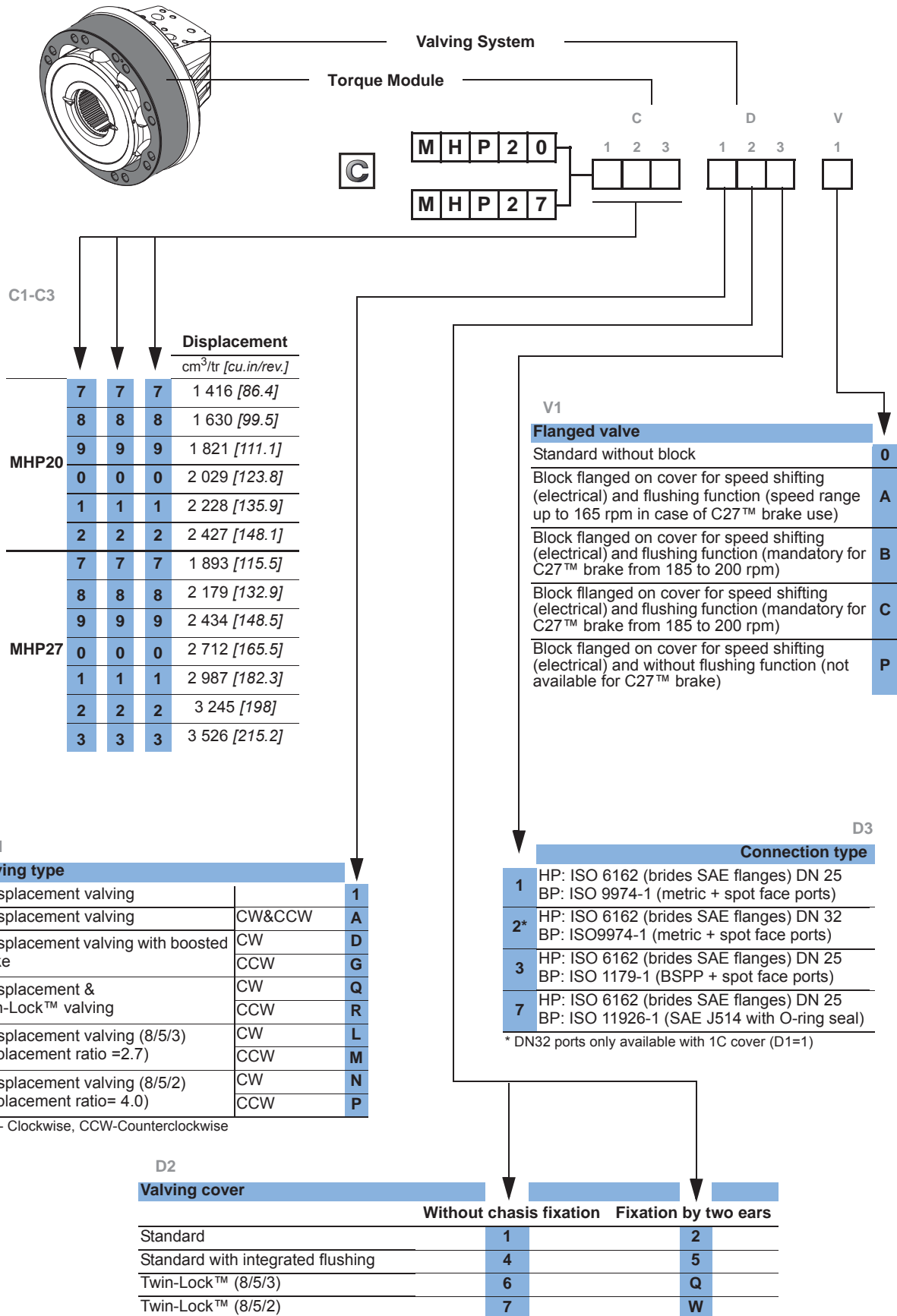
Average values given for guidance for code 0 displacement after 100 hours of operation with HV46 hydraulic fluid at 50°C [122°F].

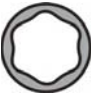


The starting torque is taken to be approximately 85% of the first value for available pressure. For a precise calculation, consult your Poclain Hydraulics application engineer.

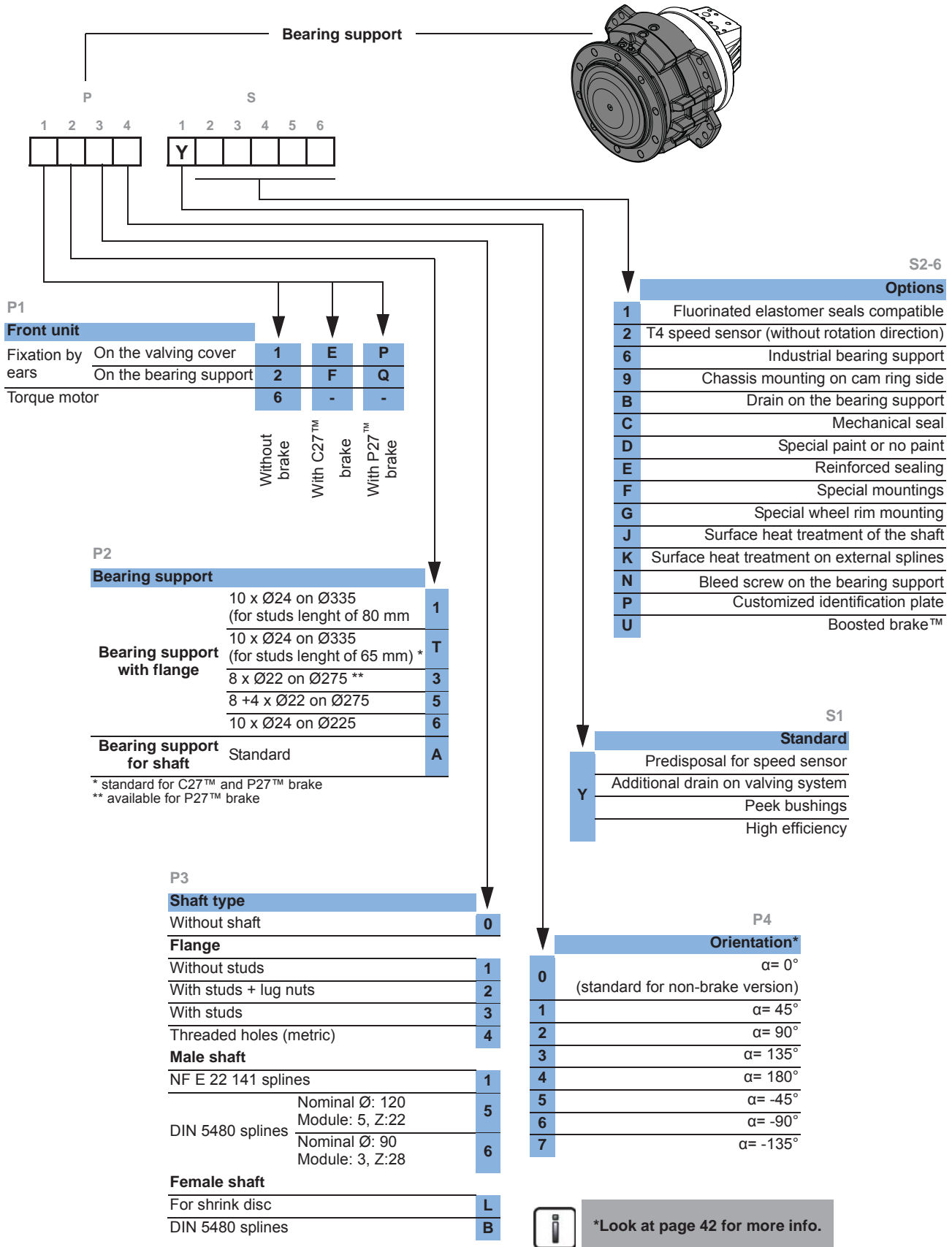


MODEL





CODE



Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

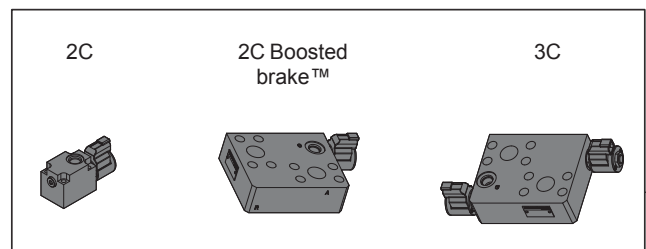
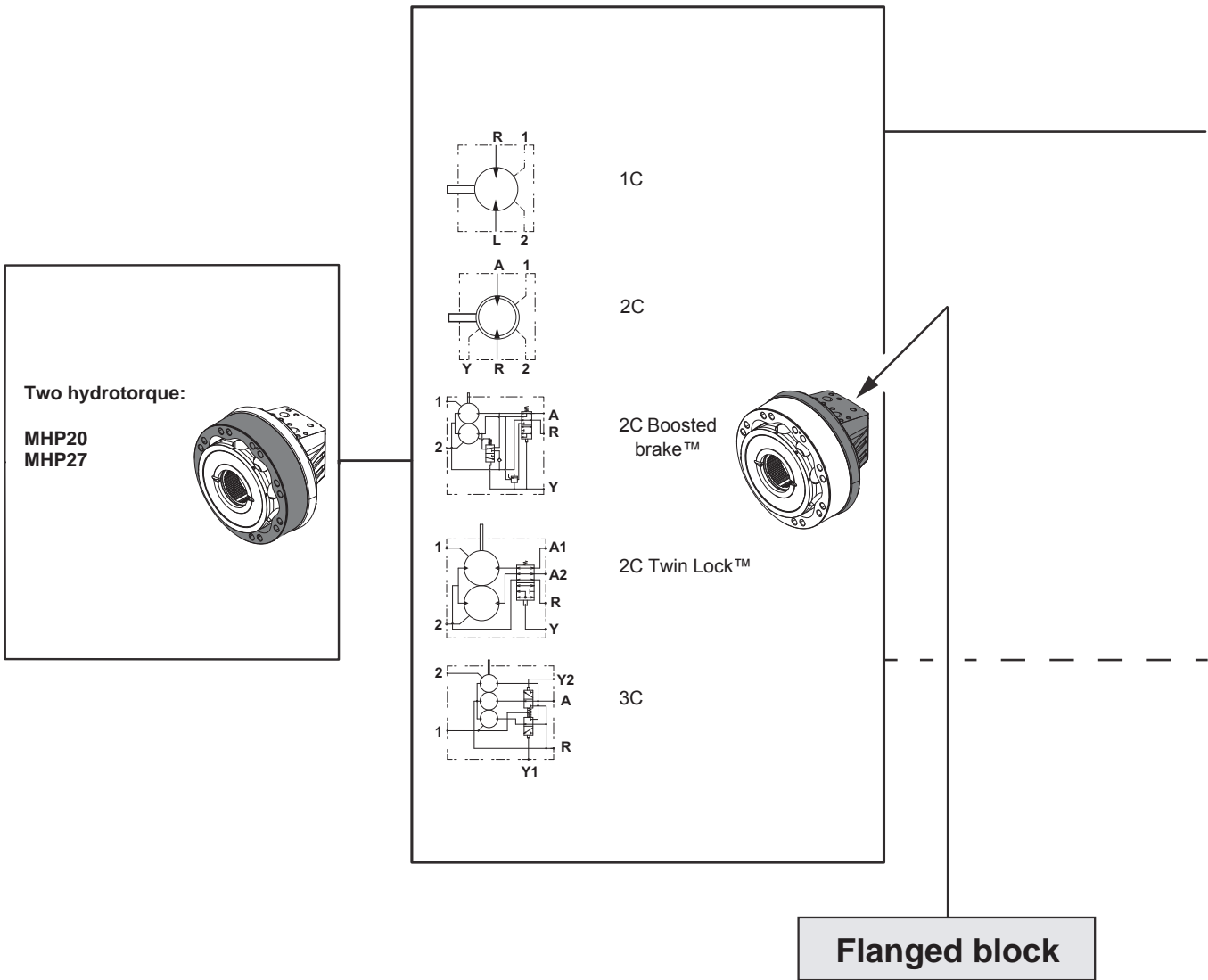
Installation

Options

*Look at page 42 for more info.

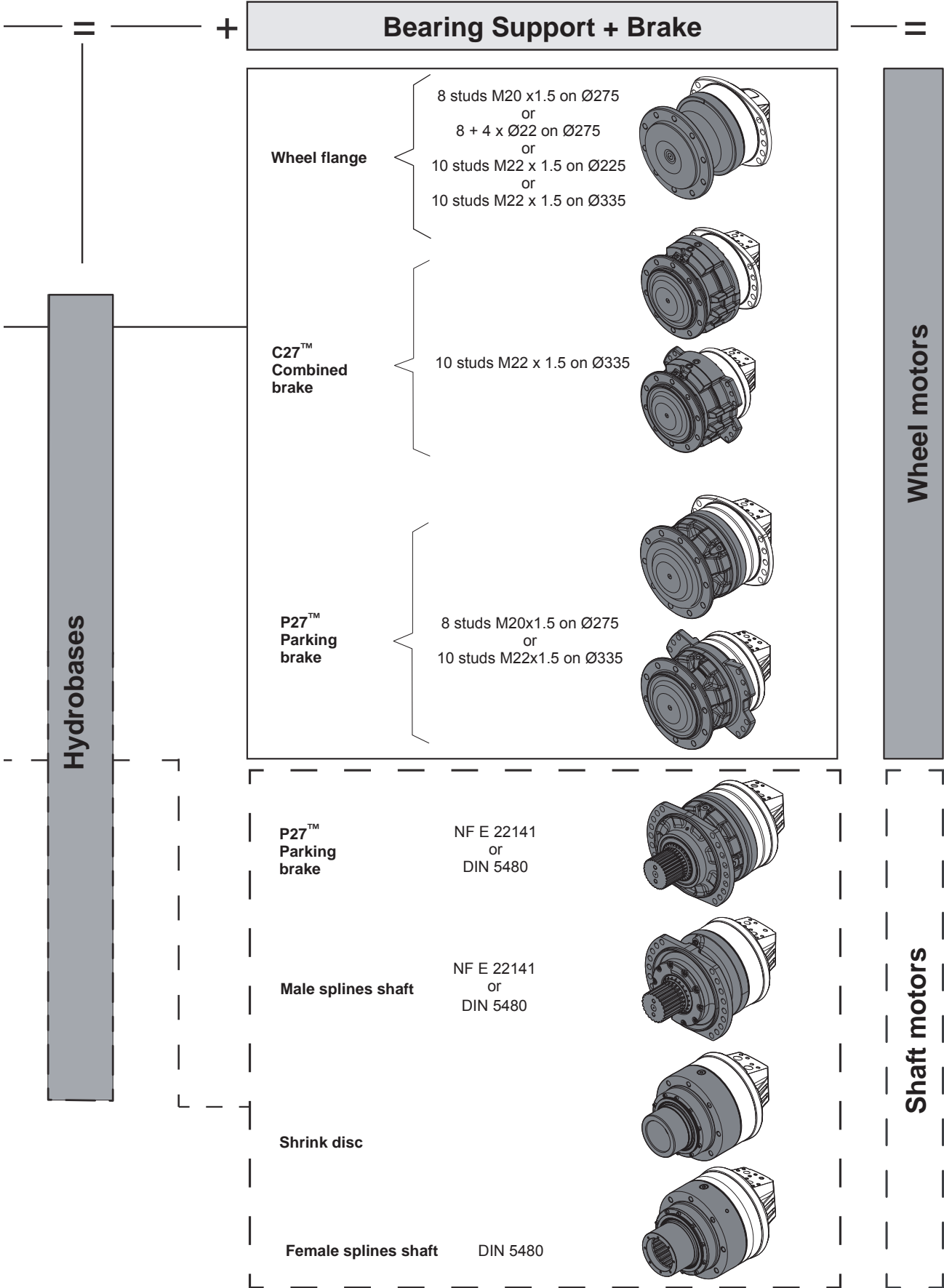


MODUL





ARITY



Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

Installation

Options



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)



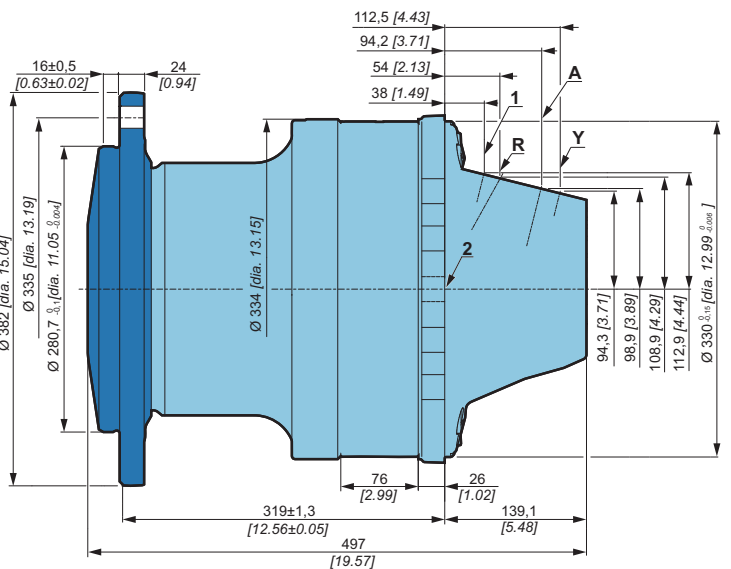
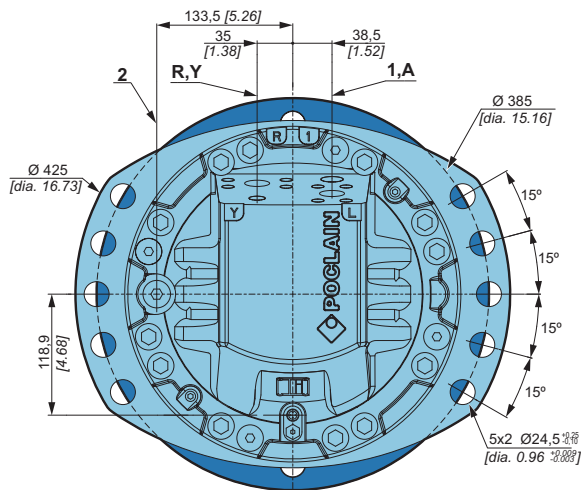


WHEEL MOTOR

Dimensions



170 kg [375 lb]



See page 42 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

Installation

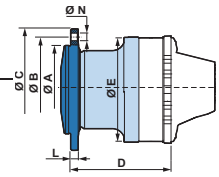
Options



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 280,7 [11,05 dia.]	Ø 335 [13,19 dia.]	Ø 382 [15,04 dia.]	319 [12,56]	Ø 334 [13,15 dia.]	Ø 24 [0,94 dia.]	10 x M22x1.5	24 [0,94]
	Ø 220,7 [8,69 dia.]	Ø 275 [10,83 dia.]	Ø 314 [12,36 dia.]	282,3 [11,11]	Ø 334 [13,15 dia.]	Ø 22 [0,87 dia.]	8 x M20x1.5	14 [0,55]
	Ø 220,7 [8,69 dia.]	Ø 275 [10,83 dia.]	Ø 314 [12,36 dia.]	282 [11,10]	Ø 334 [13,15 dia.]	Ø 22 [0,87 dia.]	(8+4) x M20x1.5	14 [0,55]
	Ø 175,7 [6,92 dia.]	Ø 225 [8,86 dia.]	Ø 265 [10,43 dia.]	282 [11,10]	Ø 334 [13,15 dia.]	Ø 24 [0,94 dia.]	10 x M22x1.5	14 [0,55]



Studs

		P	C min.	C max.	D	Class					
		mm [in]	mm [in]	mm [in]	mm [in]		N.m [lb.ft]	N.m [lb.ft]			
Various studs	M16 x 1.5	50 [1,97]	5 [0,20]		21,0 [0,83]		300 [221,3]	380 [280,3]			
	M20 x 1.5	60 [2,36]			25,0 [0,98]				12,9	600 [442,5]	770 [567,9]
	M20 x 1.5	70 [2,76]			26,0 [1,02]						
	M22 x 1.5	64 [2,52]									
Screws	M16 x 1.5	-	-		23,0 [0,91]						

(*) The tightening torques are given for the indicated loads.

(1) **Wheel rim** : Suggested tightening torque for wheel rim mountings (Re steel disc > 240 N/mm² [>34 800 PSI]).

(2) **Standard** : Suggested tightening torque in other cases (Re steel flange > 360 N/mm² [>52 215 PSI]).



See generic installation motors N°801478197L.



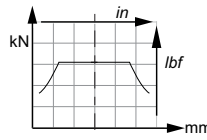
Load curves

Permissible radial loads

Test conditions :

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

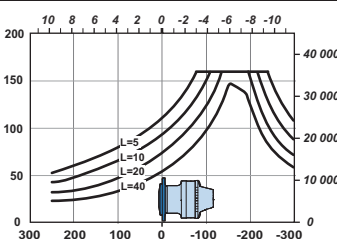
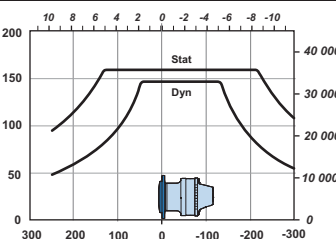
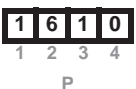
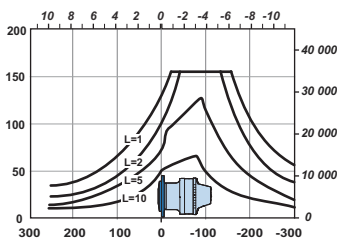
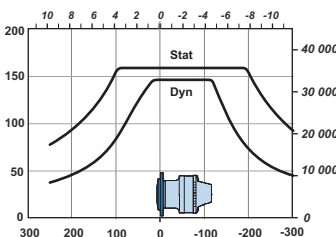
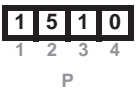
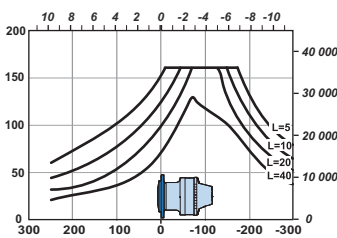
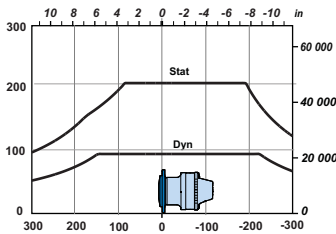
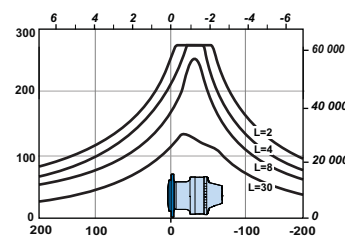
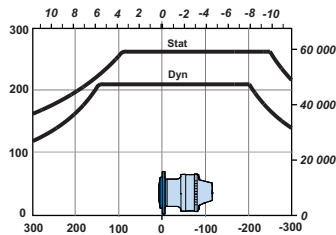
Dynamic : 0 tr/min [0 RPM], code 0 displacement, without axial load at max. torque



Service life of bearings

Test conditions :

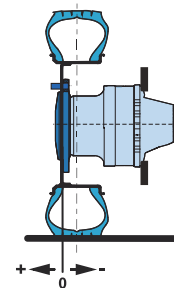
L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.



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.



Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes


Installation

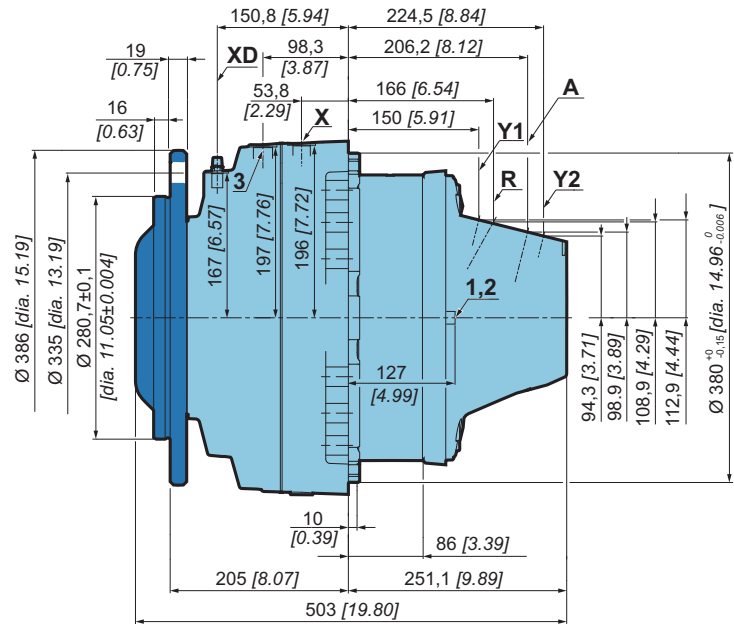
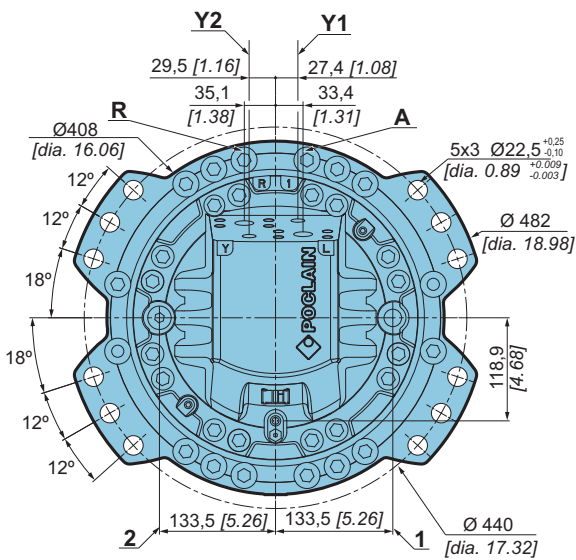
Options



Dimensions



 240 kg [529 lb]

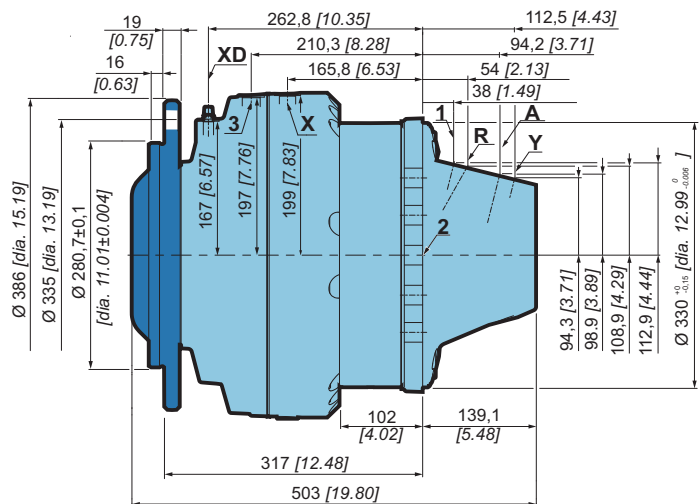
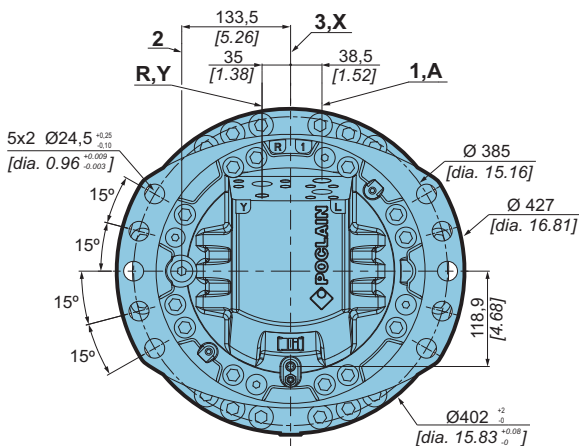
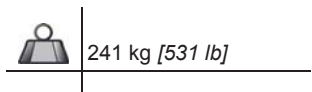


See page 42 for detailed info about hydraulic connections.



WHEEL MOTOR WITH COMBINED BRAKE

Dimensions



See page 42 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

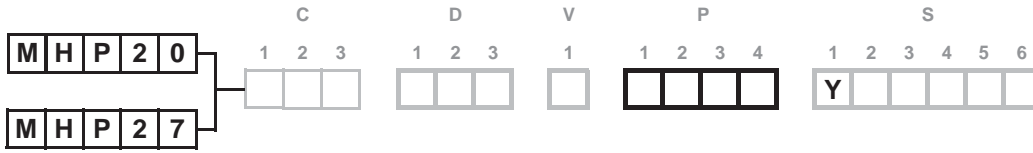
Brakes

Installation

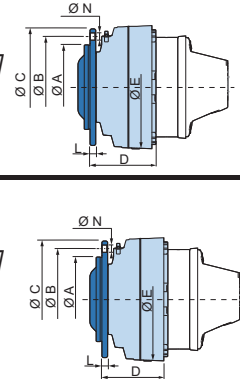
Options



Support types (continued)



	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 2 3 4 P	Ø 280,7 [11,05 dia.]	Ø 335 [13,19 dia.]	Ø 386 [15,20 dia.]	317 [12,48]	Ø 402 [15,83 dia.]	Ø 24 [0,94 dia.]	10 x M22x1.5	19 [0,75]
Also see "Brake" section (thumbnail opposite).								
 1 2 3 4 P	Ø 280,7 [11,05 dia.]	Ø 335 [13,19 dia.]	Ø 386 [15,20 dia.]	205 [8,07]	Ø 402 [15,83 dia.]	Ø 24 [0,94 dia.]	10 x M22x1.5	19 [0,75]
Also see "Brake" section (thumbnail opposite).								



Studs

Various studs		P mm [in]	C min. mm [in]	C max. mm [in]	D mm [in]		Class	(1)* N.m [lb.ft]	(2)* N.m [lb.ft]
	M22 x 1.5	64 [2,52]	5 [0,20]		26,0 [1,02]		12,9	695 [512,6]	1 050 [774,4]

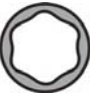
(*) The tightening torques are given for the indicated loads.

(1) **Wheel rim** : Suggested tightening torque for wheel rim mountings (Re steel disc > 240 N/mm² [>34 800 PSI]).

(2) **Standard** : Suggested tightening torque in other cases (Re steel flange > 360 N/mm² [>52 215 PSI]).



See generic installation motors N°801478197L.



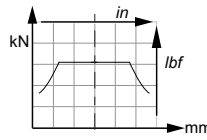
Load curves (continued)

Permissible radial loads

Test conditions :

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

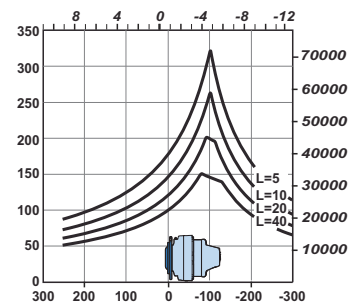
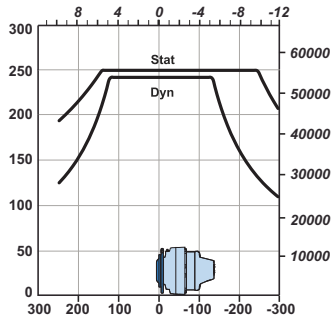
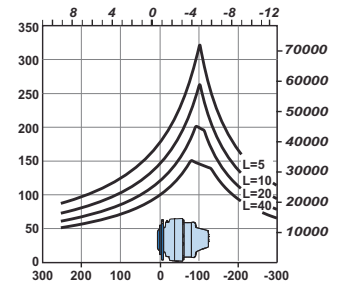
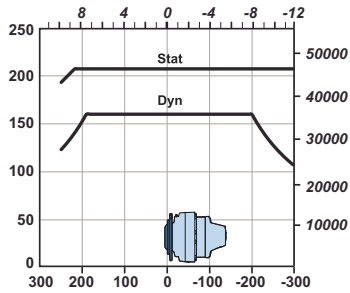
Dynamic : 0 tr/min [0 RPM], code 0 displacement, without axial load at max. torque



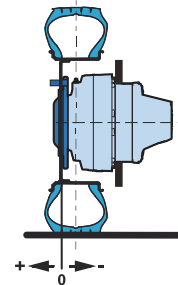
Service life of bearings

Test conditions :

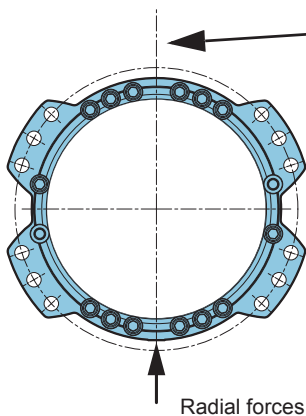
L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.



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.



Brake bearing support orientation



Recommended orientation:
Radial forces to be oriented along the brake bearing support axis.

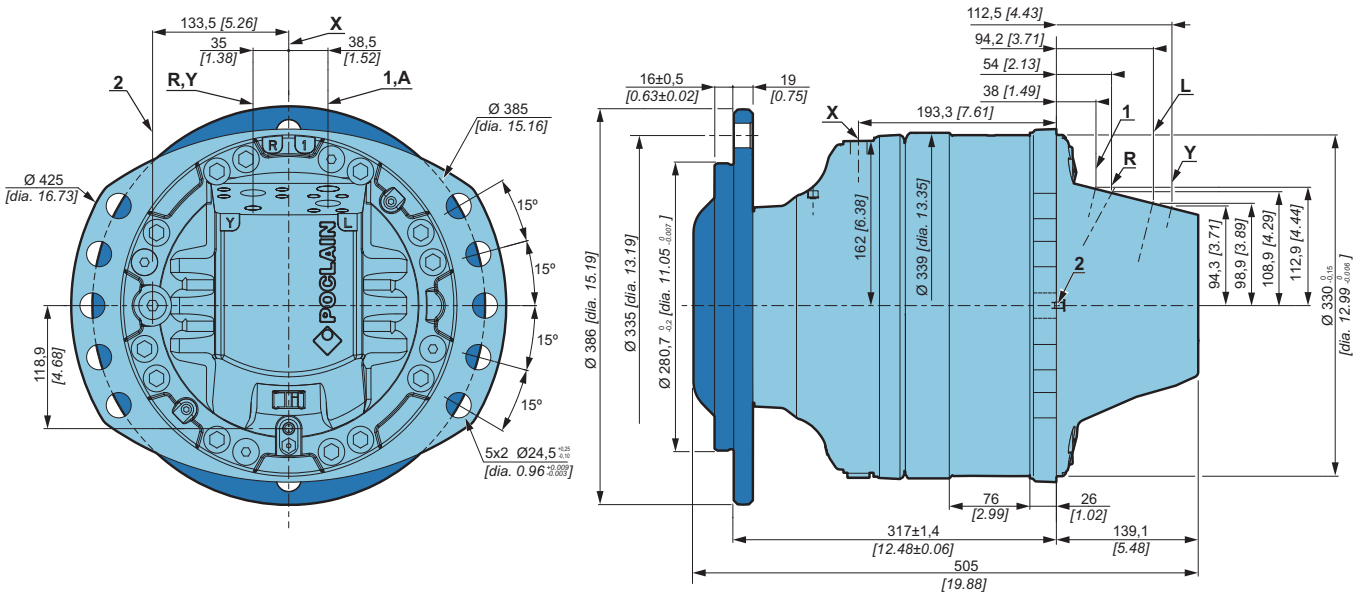
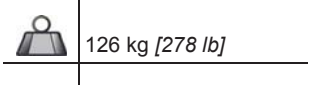


Warn the end user in the user documentation to perform an inspection of the shaft after any abnormal shock at wheel.



WHEEL MOTOR WITH PARKING BRAKE

Dimensions



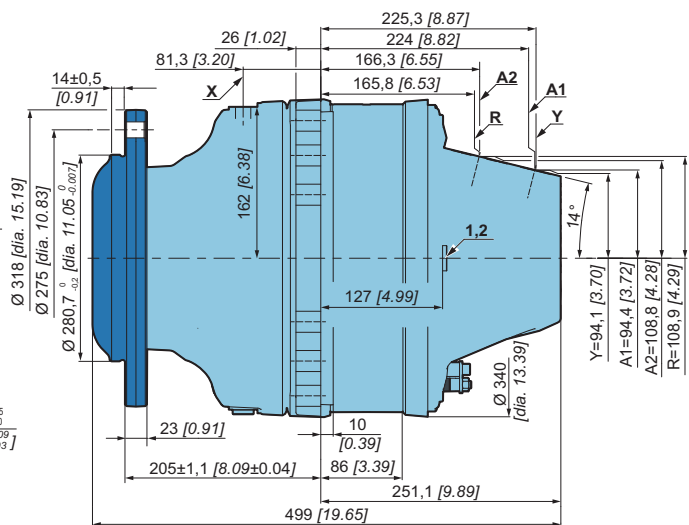
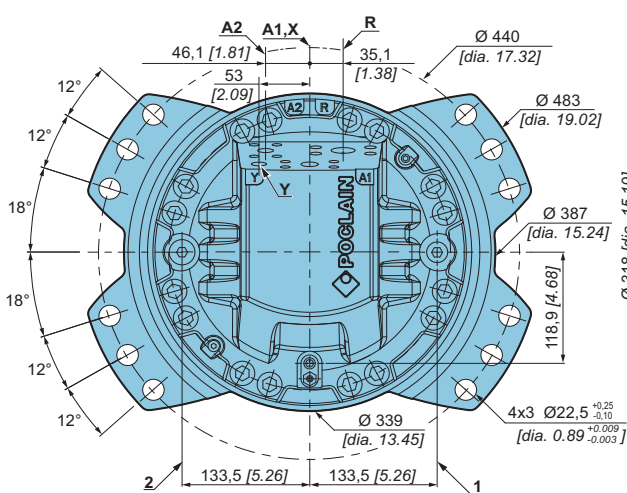
See page 42 for detailed info about hydraulic connections.



Dimensions



231 kg [509 lb]



See page 42 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

Installation

Options



Support types (continued)



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]
P T X 0 1 2 3 4 P	Ø 280,7 [11,05 dia.]	Ø 335 [13,19 dia.]	Ø 336 [13,23 dia.]	317 [12,48]	Ø 339 [13,35 dia.]	Ø 24 [0,94 dia.]	10 x M22x1.5	19 [0,75]
	Also see "Brake" section (thumbnail opposite).							
Q 3 X 0 1 2 3 4 P	Ø 220,7 [8,69 dia.]	Ø 275 [10,83 dia.]	Ø 318 [12,52 dia.]	205 [8,07]	Ø 339 [13,35 dia.]	Ø 24 [0,94 dia.]	8 x M22x1.5	23 [0,91]
	Also see "Brake" section (thumbnail opposite).							

Studs

Various studs	P mm [in]	C min. mm [in]	C max. mm [in]	D mm [in]	Class	(1)* N.m [lb.ft]	(2)* N.m [lb.ft]
M22 x 1.5	64 [2,52]	5 [0,20]		26,0 [1,02]	12,9	695 [512,6]	1 050 [774,4]

(*) The tightening torques are given for the indicated loads.

(1) **Wheel rim** : Suggested tightening torque for wheel rim mountings (Re steel disc > 240 N/mm² [>34 800 PSI]).

(2) **Standard** : Suggested tightening torque in other cases (Re steel flange > 360 N/mm² [>52 215 PSI]).



See generic installation motors N°801478197L.



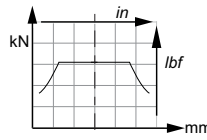
Load curves (continued)

Permissible radial loads

Test conditions :

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

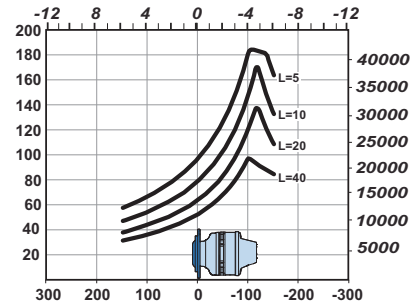
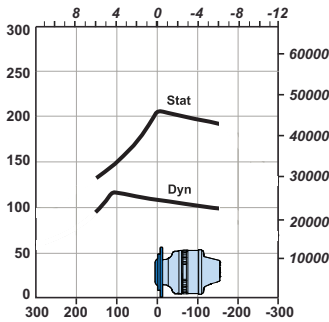
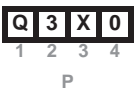
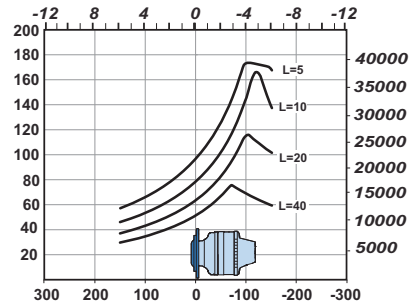
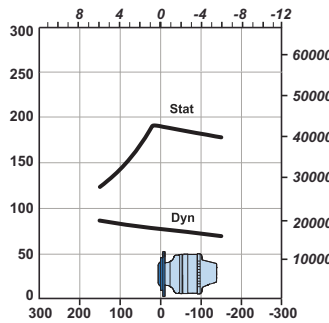
Dynamic : 0 tr/min [0 RPM], code 0 displacement, without axial load at max. torque



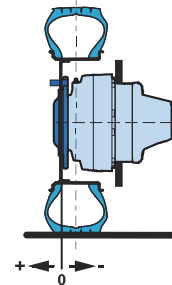
Service life of bearings

Test conditions :

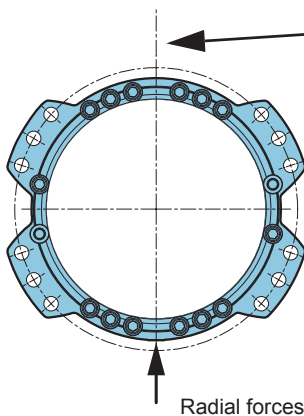
L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.



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.



Brake bearing support orientation



Recommended orientation: Radial forces to be oriented along the brake bearing support axis.



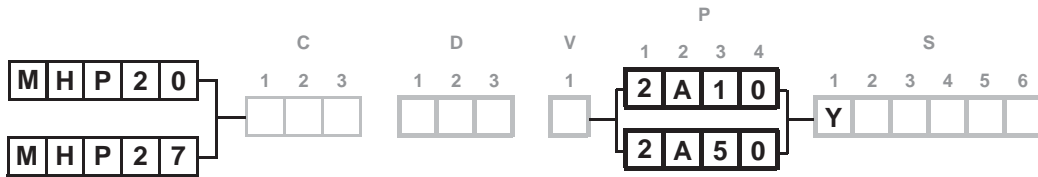
Warn the end user in the user documentation to perform an inspection of the shaft after any abnormal shock at wheel.



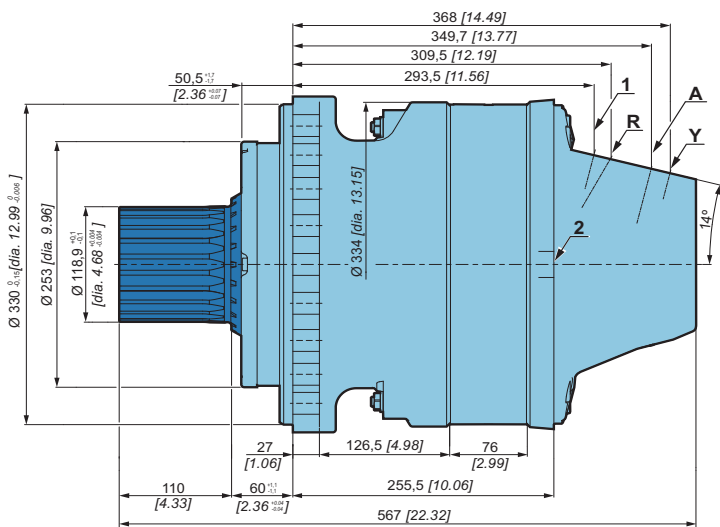
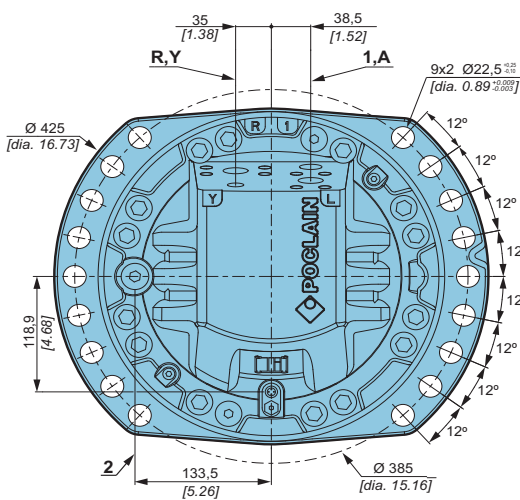


SHAFT MOTOR

Dimensions



136 kg [299 lb]



See page 42 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

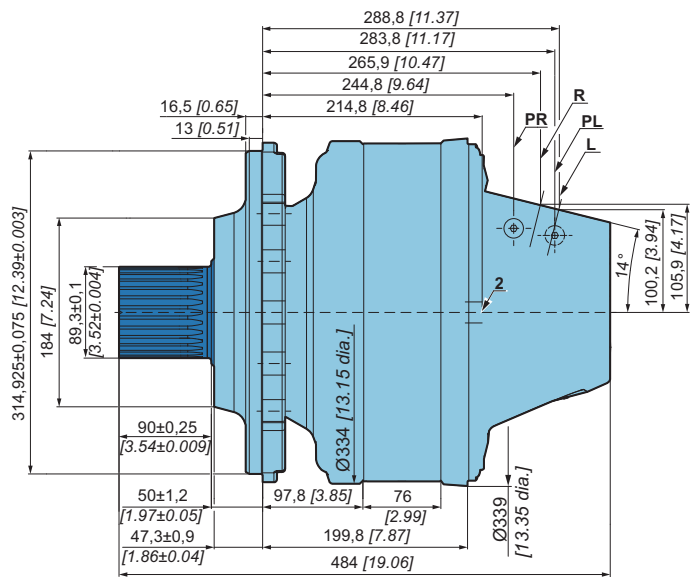
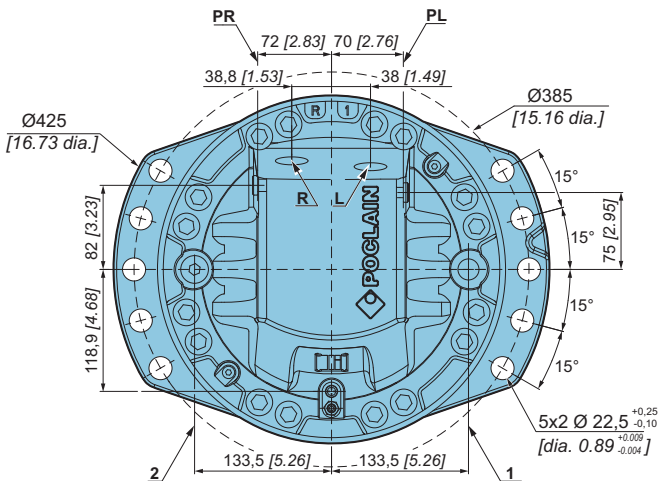
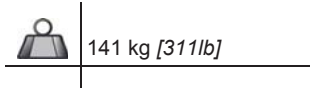
Brakes

Installation

Options



Dimensions



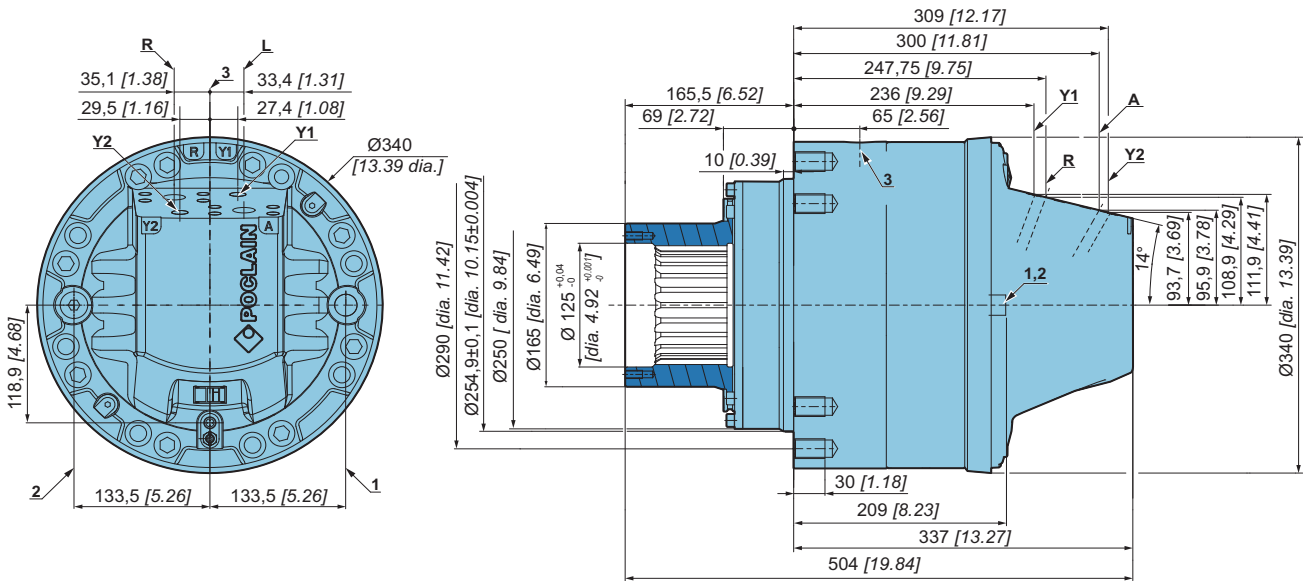
See page 42 for detailed info about hydraulic connections.



Dimensions



157 kg [346 lb]



See page 42 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

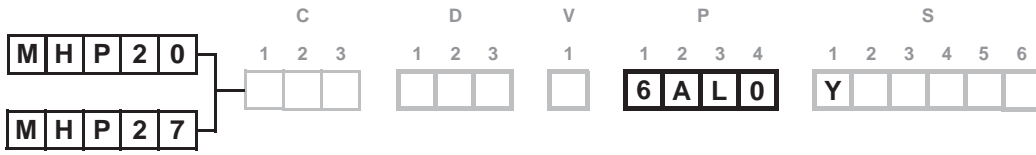
Brakes


Installation

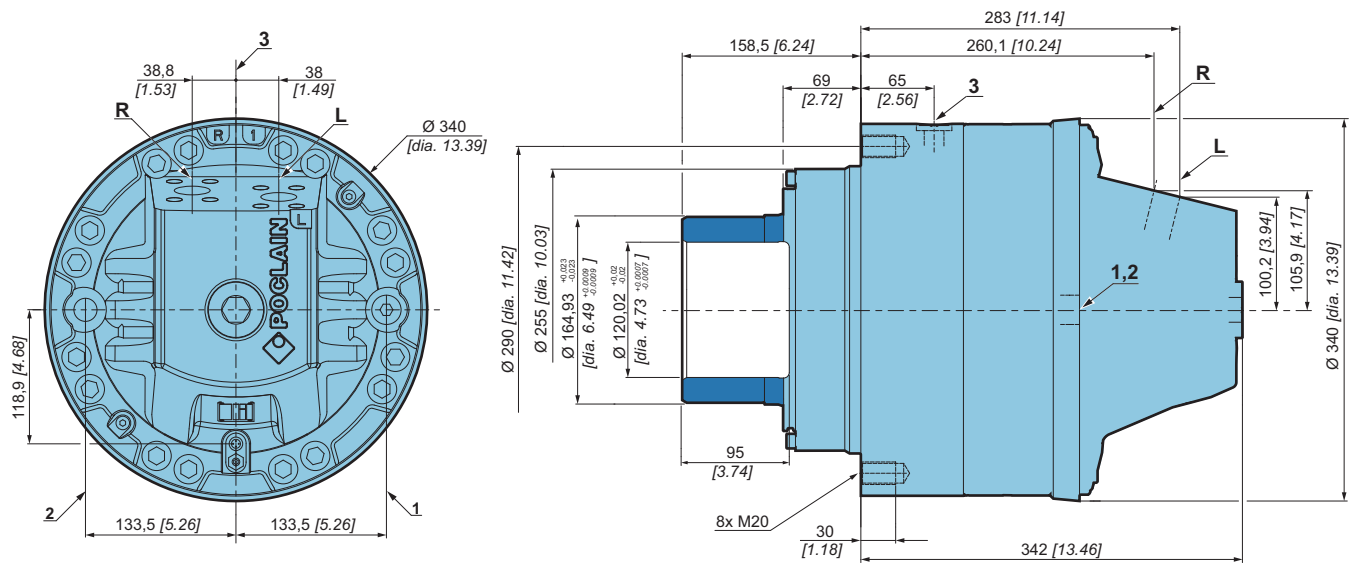
Options



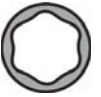
Dimensions



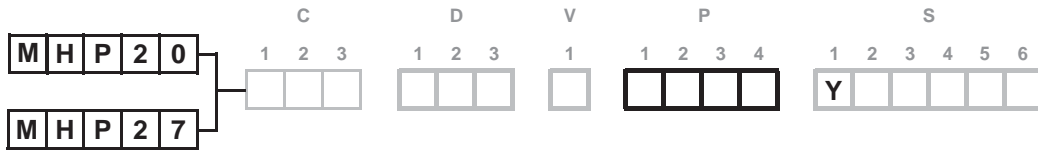
 157 kg [346 lb]

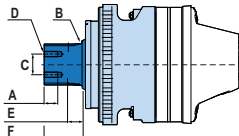
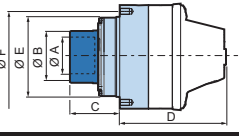
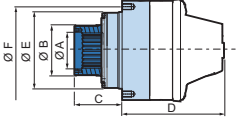


See page 42 for detailed info about hydraulic connections.



Support types



		A	B	C	D	E	F		
		mm [in]	mm [in]	mm [in]	mm [in]	mm [in]	mm [in]		
C	DIN 5480 splines								
	2 A 5 0 1 2 3 4 P	Nominal Ø 120 [4,72] Module 5 Z 22	40 [1,57]	R 4 [R 0,16]	60 [2,36]	2 x M16	28 [1,10]	110 [4,33]	
	DIN 5480 splines								
	2 A 6 0 1 2 3 4 P	Nominal Ø 90 [3,54] Module 3 Z 28	23 [0,91]	R 3 [R 0,12]	35 [1,38]	2 x M14	23 [0,91]	90 [3,54]	
	NF-E22-141 splines								
	2 A 1 0 1 2 3 4 P	Nominal Ø 120 [4,72] Module 3,75 Z 30	40 [1,57]	R 4 [R 0,16]	60 [2,36]	2 x M16	28 [1,10]	110 [4,33]	
	6 A L 0 1 2 3 4 P	Ø 120 [4,72 dia.] Ø 165 [6,49 dia.] 159 [6,24] 342 [13,46] Ø 255 [10,04 dia.] Ø 290 [11,42 dia.]							
	DIN 5480 splines								
	6 A B 0 1 2 3 4 P	Nominal Ø 120 [4,72] Module 5 Z 22	Ø 125 [4,92 dia.] Ø 165 [6,50 dia.] 165,5 [6,52] 337 [13,27] Ø 254,9 [10,04 dia.] Ø 290 [11,42 dia.]						

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake


Shaft motor

Shaft motor +P27™ brake

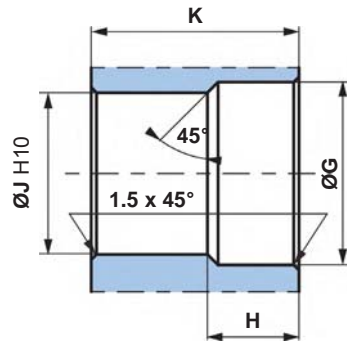
Brakes

Installation

Options

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

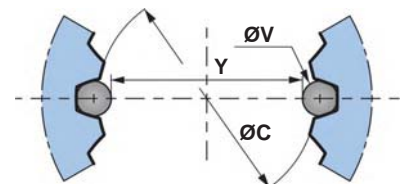
Splined coupling



Standard NF E 22-141
Pressure angle 20°. Centering on flanks. Slide fit (7H quality).

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

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



		Ø G	H	Ø J	K	N	Mo	Z	Offset	Ø C (H10)	Ø V	Y	Tolerance
		mm [in]	mm [in]	mm [in]	mm [in]	mm [in]			mm [in]	mm [in]	mm [in]	µm [µin]	
C	2 A 5 0 1 2 3 4 P	122 [4,80] [4,80]	29 [1,14] [1,14]	110 [4,33] [4,33]	109 [4,29] [4,29]	120 [4,72] [4,72]	5	22	2,25 [0,09] [0,09]	110 [4,33] [4,33]	9 [0,35] [0,35]	101,104 [3,98] [3,98]	+ 87 / 0 [+3.425 / 0]
	2 A 6 0 1 2 3 4 P	91,5 [3,60] [3,60]	25 [0,98] [0,98]	84,0 [3,31] [3,31]	89 [3,50] [3,50]	90 [3,54] [3,54]	3	28	1,35 [0,0531] [0,0531]	84 [3,31] [3,31]	5,25 [0,21] [0,21]	79,110 [3,11] [3,11]	+ 68 / 0 [+2.677 / 0]
	2 A 1 0 1 2 3 4 P	121 [4,76] [4,76]	29 [1,14] [1,14]	112,5 [4,43] [4,43]	109 [4,29] [4,29]	120 [4,72] [4,72]	3,75	30	3 [0,1181] [0,1181]	112,5 [4,43] [4,43]	7,5 [0,30] [0,30]	105,253 [4,14] [4,14]	+ 104 / 0 [+4.094 / 0]

General tolerances: ± 0.25 [±0.0098].

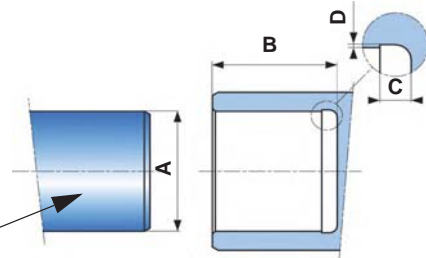
Material: Ex: 42CrMo4.

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

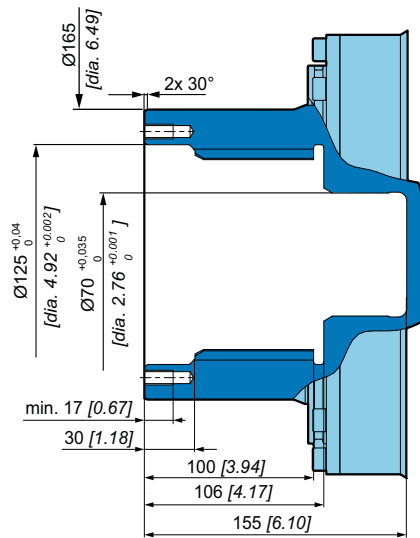
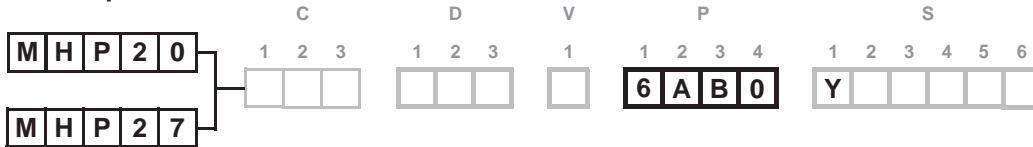


Cylindrical bushed coupling

C				A	B	C	D
				mm [in]	mm [in]	mm [in]	mm [in]
6	A	L	0	Ø 120	95	10	0,5
1	2	3	4	[4,72 dia.]	[3,74]	[0,394]	[0,0197]



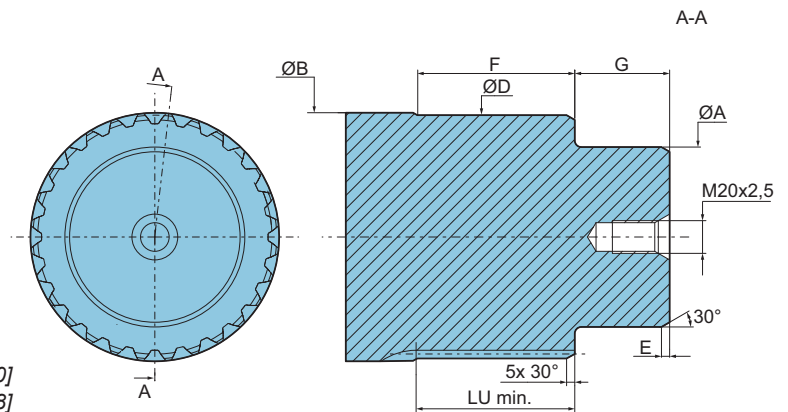
Coupling for female splines



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

	Torque arm motor	Flange mounted motor
A ⁽¹⁾	Ø70 [2,76 dia.]	Ø70 [2,76 dia.]
B ⁽²⁾	Ø125 [4,92 dia.]	Ø125 [4,92 dia.]
C ⁽³⁾	DIN 5480 W120x5x30x22x8f	
D	Ø119 [4,69 dia.]	Ø119 [4,69 dia.]
E	10,0 [0,39]	5,0 [0,20]
F	78,0 [3,07]	78,0 [3,07]
G	52,0 [2,05]	49,0 [1,93]
LU	79,0 [3,11]	79,0 [3,11]

(1) - 0,01 [-0.0004] (2) - 0,114 [-0.004] (3) - 0 [-0.000]
 - 0,029 [-0.001] - 0,139 [-0.005] - 0,220 [-0.008]



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 Poclair Hydraulics application engineer.

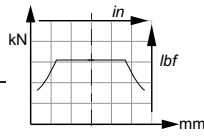


Load curves

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].



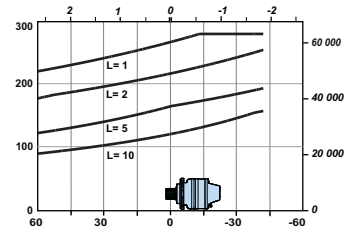
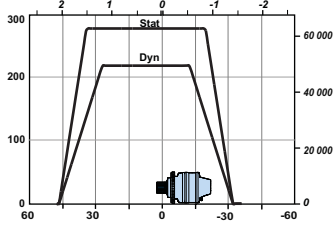
Service life of bearings

Test conditions :

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

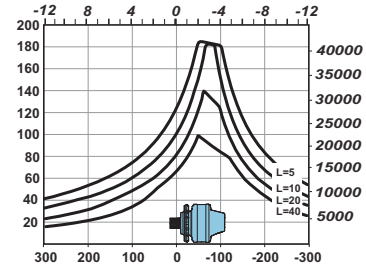
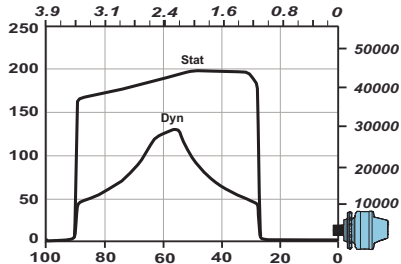
2	A	1	0
2	A	5	0
1	2	3	4

P



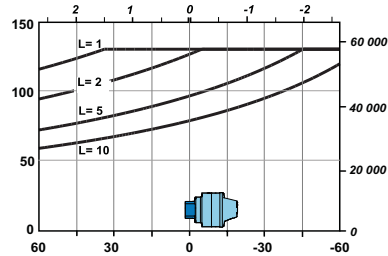
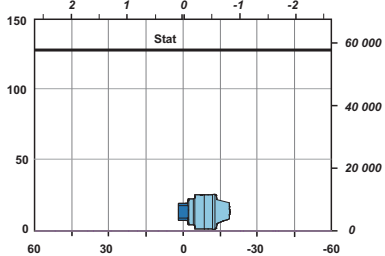
2	A	6	0
1	2	3	4

P



6	A	B	0
6	A	L	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.



G mm [in]

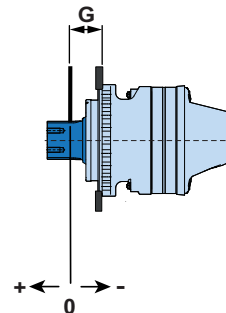
2	A	1	0
2	A	5	0
2	A	6	0
6	A	L	0

129 [5,08]

129 [5,08]

106,5 [4,19]

38,75 [1,53]



Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

Installation

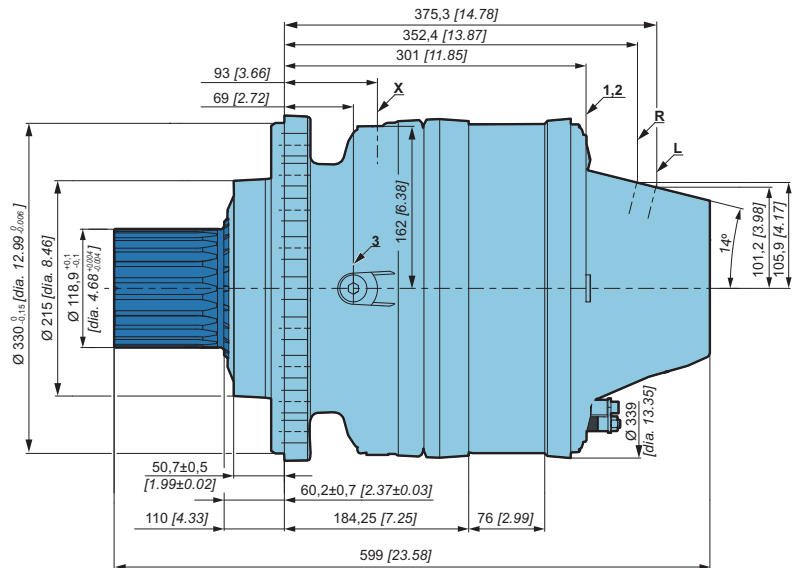
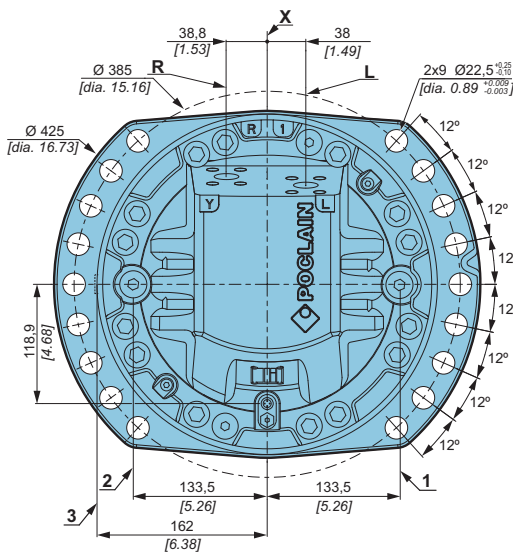
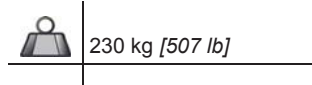
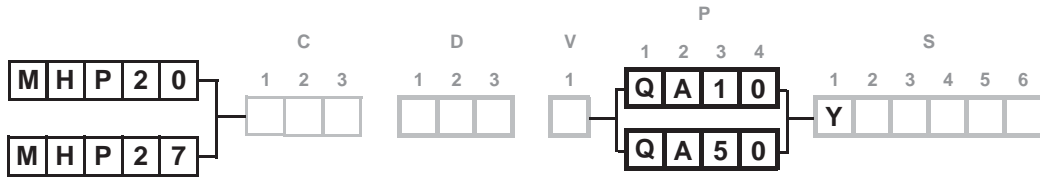
Options





SHAFT MOTOR WITH PARKING BRAKE

Dimensions



See page 42 for detailed info about hydraulic connections.

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

Installation

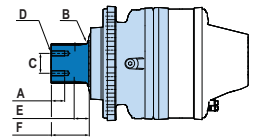
Options



Support types (continued)

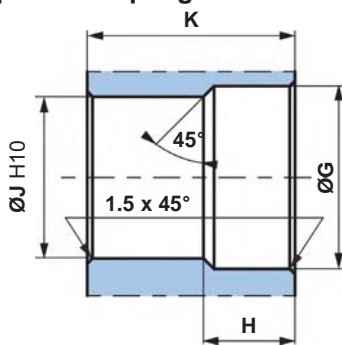


C				A	B	C	D	E	F
				mm [in]	mm [in]	mm [in]	mm [in]	mm [in]	mm [in]
DIN 5480 splines									
Q	A	5	0	40	R 4	60	2 X M16	28	110
1	2	3	4	[1,57]	[R 0,16]	[2,36]		[1,10]	[4,33]
Nominal Ø 120 [4,72]									
Module 5									
Z 22									
P									
				Also see "Brake" section (thumbnail opposite).					
NF E22-141 splines									
Q	A	1	0	40	R 4	60	2 x M16	28	110
1	2	3	4	[1,57]	[R 0,16]	[2,36]		[1,10]	[4,33]
Nominal Ø 120 [4,72]									
Module 3,75									
Z 30									
P									
				Also see "Brake" section (thumbnail opposite).					



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

Splined coupling



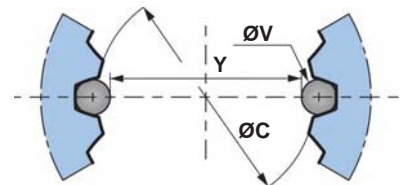
Standard NF E 22-141

Pressure angle 20°.
Centering on flanks.
Slide fit (7H quality).

Standard DIN 5480

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

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

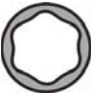


C				Ø G	H	Ø J	K	N	Mo	Z	Offset	Ø C (H10)	Ø V	Y	Tolerance
				mm [in]	mm [in]	mm [in]	mm [in]	mm [in]			mm [in]	mm [in]	mm [in]	µm [µin]	
Q	A	5	0	122	29	110	109	120	5	22	2,25	110	9	101,104	+ 87 / 0
1	2	3	4	[4,80]	[1,14]	[4,33]	[4,29]	[4,72]			[0,09]	[4,33]	[0,35]	[3,98]	[+3.425 / 0]
P															
Q	A	1	0	121	29	112,5	109	120	3,75	30	3	112,5	7,5	105,253	+ 104 / 0
1	2	3	4	[4,76]	[1,14]	[4,43]	[4,29]	[4,72]			[0,1181]	[4,43]	[0,30]	[4,14]	[+4.094 / 0]
P															

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].

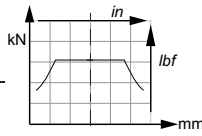


Load curves (continued)

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].



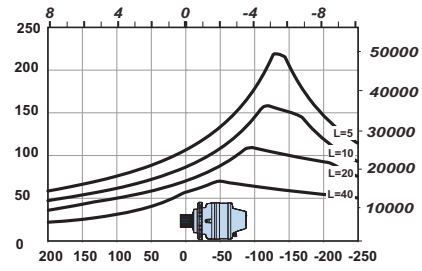
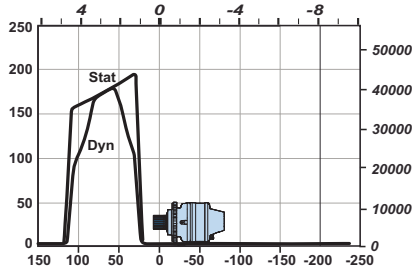
Service life of bearings

Test conditions :

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

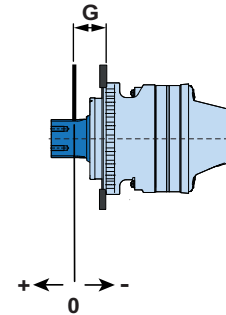
Q	A	1	0
Q	A	5	0
1	2	3	4

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 Poclain Hydraulics application engineer.

C	G
	mm [in]
Q A 1 0	88,3 [3,48]
Q A 5 0	88,3 [3,48]



Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

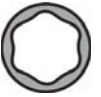
Shaft motor +P27™ brake

Brakes

Installation

Options





BRAKES

C27™ Combined brake



Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

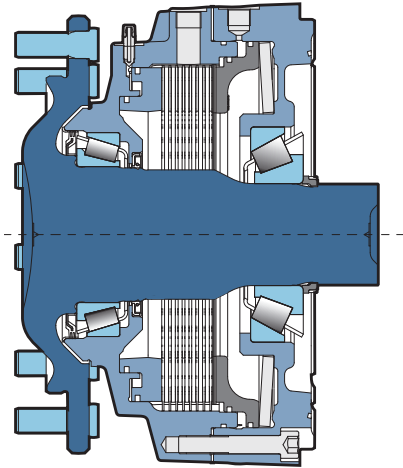
Shaft motor

Shaft motor +P27™ brake

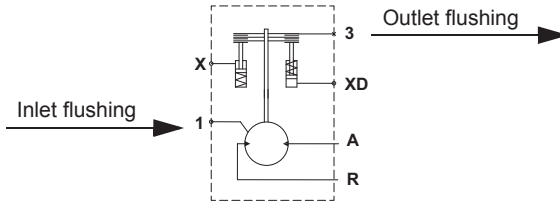
Brakes

Installation

Options



Brake schematics



The dynamic brake must be flushed according to the brake schematics (flushing flow always goes of the bearing support).



Correct flushing flow is ensured when using motor with flanged valve (see page 43).



Without flanged valve, restrictor must be used on the hydraulic circuit to ensure correct flushing flow in port 1.

Brake operation

This multi-disc brake operates in two distinct ways:

Either by an absence of pressure (static braking): The spring applies a force to the static piston that is transmitted to the dynamic piston, which damps the fixed and free discs, preventing the shaft from turning.

Or by 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.

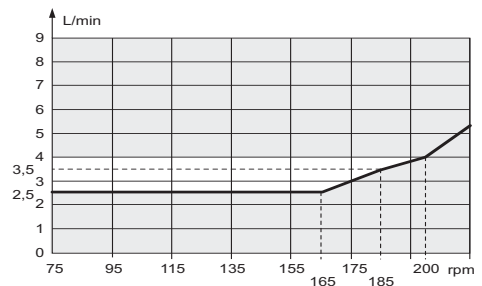


Hydraulically controlled dynamic braking

Max. torque during dynamic braking	35 000 Nm [25 810 lb.ft]
Average torque during dynamic braking	32 000 Nm [23 600 lb.ft]
Pressure to obtain max. permissible brake torque	70 bar [1 015 PSI]
Volume required for braking	74 cm³ [4,5 cu.in]
Max. rotation speed	200 rpm

Hydraulically controlled parking brake

Parking brake torque (new brakes)*	18 000 Nm [13 280 lb.ft]
Parking brake torque (used brakes)*	13 000 Nm [9 590 lb.ft]
Min. release brake pressure	100 bar [1 450 PSI]
Max. release brake pressure	130 bar [1 885 PSI]
Volume of brake release	48 cm³ [2,9 cu.in]
Number of parking brake application	1 000 000
Emergency dynamic braking torque at 0 bar to the case	24 000 Nm [17 700 lb.ft]
Max. energy dissipation	1000 kJ



C27™ brake requires mandatory flushing.
 Example: 2,5 to 4 L/min at 115 rpm
 3,5 to 4 L/min at 185rpm

*Consult your Poclair Hydraulics application engineer.

Indicative values coming from fly-wheel test bench with mineral oil HV 46. Braking performance must be performed on machine by the manufacturer.



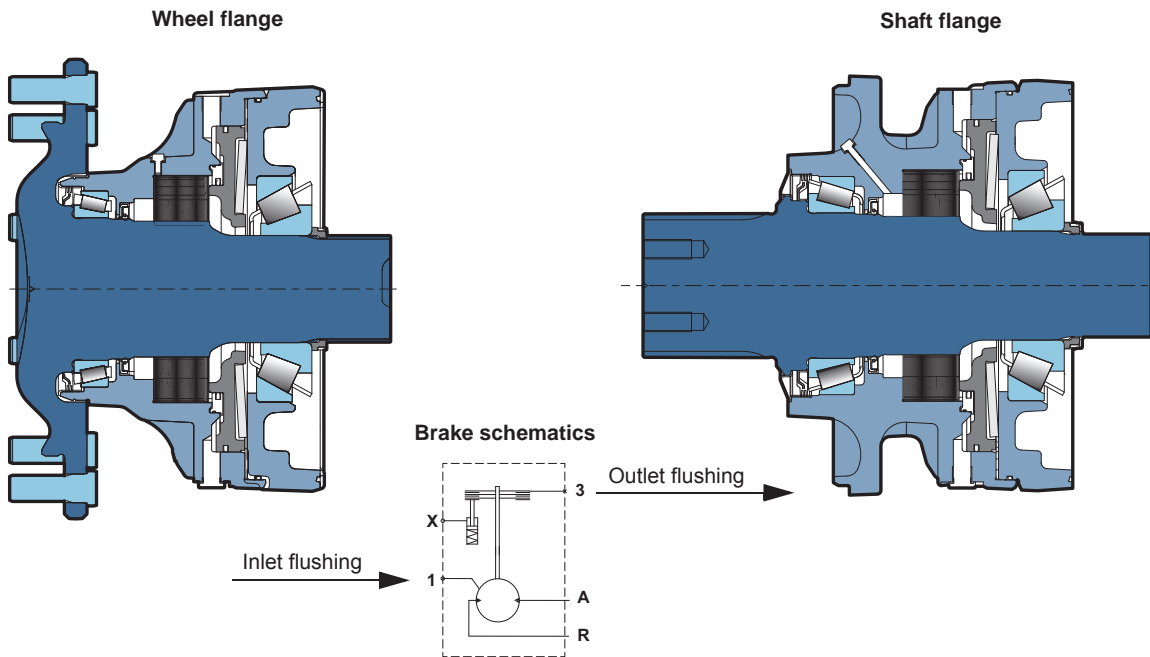
Brake release pressure vented.



The use of certain oils, may not offer the characteristics stated above. Consult your Poclair Hydraulics sales engineer.

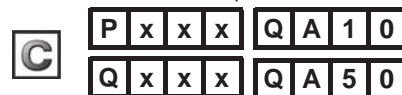


P27™ Parking brake



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	200 rpm
Max. parking brake torque at 1,5 bar [21.8 PSI] in the case (new brake)	29 200 Nm [21 540 lb.ft]
Min. parking brake torque at 0 bar in the case (new brake)	21 700 Nm [16 010 lb.ft]
Residual parking braking at 0 bar in the case (after emergency brake has been used)	18 600 - 21 700 Nm [13 720 - 16 010 lb.ft]
Min. brake release pressure	16 bar [232 PSI]
Max. brake release pressure	30 bar [435 PSI]
Volume of brake release	88 cm ³ [5,4 cu.in]
Max. energy dissipation	200 kJ



Do not run-in the multidisc brakes.



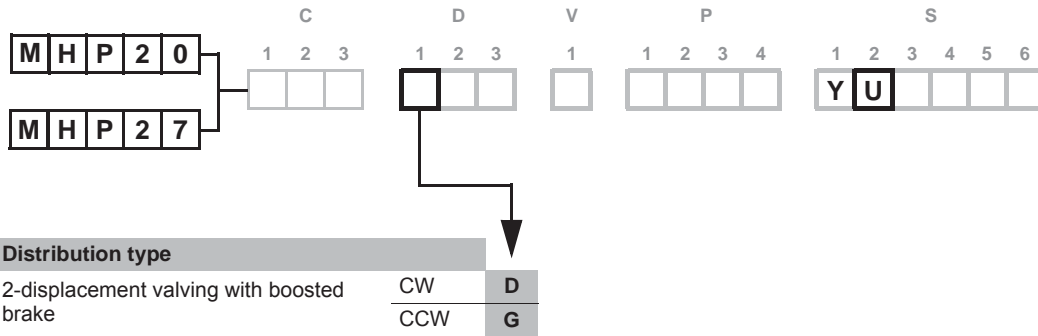
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake). For all vehicles capable of speeds over 25 km/hour, please contact your Poclain Hydraulics application engineer.



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



Boosted brake™

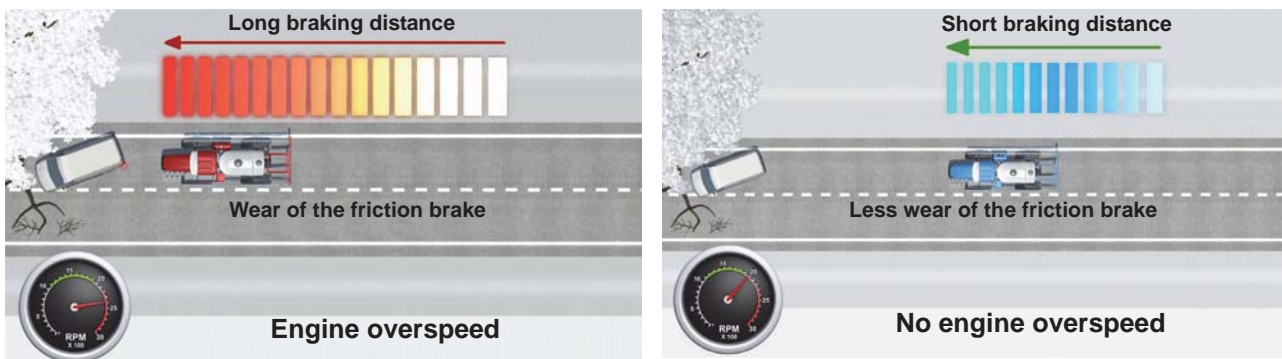


Why Boosted Brake™ function?

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 Poclain Hydraulics application engineer.

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

Installation

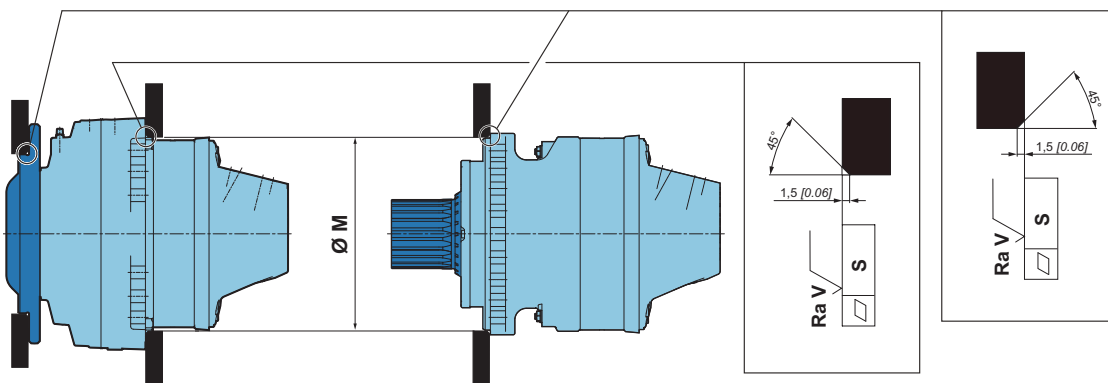
Options







INSTALLATION

Customer's chassis and wheel rim mountings



Take care over the immediate environment of the connections.

	Ø M ⁽¹⁾ mm [in]	S mm [in]	Ra V µm [µin]		Class	 *
Wheel motor (1110)	330,0 [12,99]	0,2 [0.008]	12,5 [0.492]	2 x 5 M22 x 2,5	10.9	780 N.m [585 lb.ft]
Wheel motor (ET30)	380,0 [14,96]			4 x 3 M20 x 2		580 N.m [428 lb.ft]
Wheel motor (FT30)	330,0 [12,99]	2 x 8 M20 x 2				
Shaft motor (2A50)						

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

* Min. values for torque and load to be transmitted



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.



For more information see technical catalogue "Installation guide" N° 801478197L.

Speed shifting logic

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



Prohibition to pilot Y1 and Y2 in the same time.

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

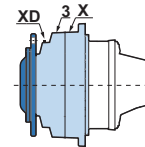
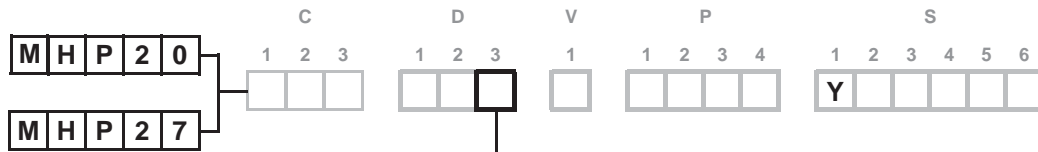
Brakes

Installation

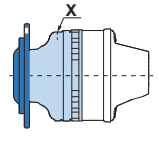
Options



Hydraulic connections



C27™ combined brake

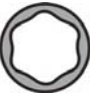


P27™ parking brake

	Standards	Power supply		Standards	Case drain	2 nd , 3 rd displacement control	Control of parking brake	Control of service brake	Flushing	Control of parking brake	
		R-L	1-2								X
1 st Displacement	1	ISO 6162	SAE 6000PSI 1"	ISO 9 974-1	M22x1.5		M16x1.5	M14x1.5	M22x1.5	M16x1.5	
	2	ISO 6162	SAE 6000PSI 1 1/4"	ISO 9 974-1	M22x1.5		M16x1.5	M14x1.5	M22x1.5	M16x1.5	
	3	ISO 6162	SAE 6000PSI 1"	ISO 1179	BSP 1/2		BSP 3/8	BSP 1/4	BSP 1/2	BSP 3/8	
	7	ISO 6162	SAE 6000PSI 1"	ISO 11 926	7/8"-14 UNF		3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF	9/16"-18 UNF	
2 nd Displacement			R-A		1-2	Y	X	XD	3	X	
	1	ISO 6162	SAE 6000PSI 1"	ISO 9 974-1	M22x1.5	M16x1.5	M16x1.5	M14x1.5	M22x1.5	M16x1.5	
	3	ISO 6162	SAE 6000PSI 1"	ISO 1179	BSP 1/2	BSP 3/8	BSP 3/8	BSP 1/4	BSP 1/2	BSP 3/8	
7	ISO 6162	SAE 6000PSI 1"	ISO 11 926	7/8"-14 UNF	3/4"-16 UNF	3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF	9/16"-18 UNF		
Twin-Lock™			R	A1-A2	1-2	Y	X	XD	3	X	
	1	ISO 6162	SAE 6000PSI 1"	SAE 6000PSI 3/4"	ISO 9 974-1	M22x1.5	M16x1.5	M16x1.5	M14x1.5	M22x1.5	M16x1.5
	3	ISO 6162	SAE 6000PSI 1"	SAE 6000PSI 3/4"	ISO 1179	BSP 1/2	BSP 3/8	BSP 3/8	BSP 1/4	BSP 1/2	BSP 3/8
7	ISO 6162	SAE 6000PSI 1"	SAE 6000PSI 3/4"	ISO 11 926	7/8"-14 UNF	3/4"-16 UNF	3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF	9/16"-18 UNF	
3 rd Displacement			R-A		1-2	Y1-Y2	X	XD	3	X	
	1	ISO 6162	SAE 6000PSI 1"		ISO 9 974-1	M22x1.5	M16x1.5	M16x1.5	M14x1.5	M22x1.5	M16x1.5
	3	ISO 6162	SAE 6000PSI 1"		ISO 1179	BSP 1/2	BSP 3/8	BSP 3/8	BSP 1/4	BSP 1/2	BSP 3/8
7	ISO 6162	SAE 6000PSI 1"		ISO 11 926	7/8"-14 UNF	3/4"-16 UNF	3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF	9/16"-18 UNF	
Max pressure	bar [PSI]	500 [7 250]	(1)				-	-	-	-	
			(2)	1 [14.5]	30 [435]	130 [1 885]	70 [1 015]	*	-		
			(3)			-	-	-	30 [435]		

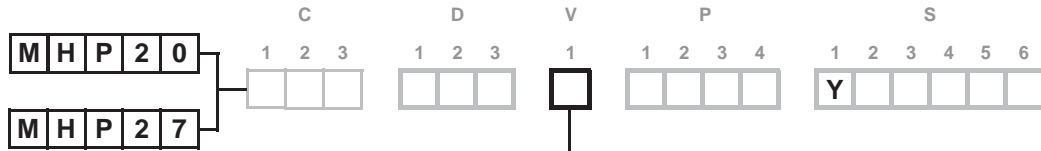
(1) Unbraked bearing support
 (2) With C27™ bearing support
 (3) With P27™ bearing support

* See case pressure port

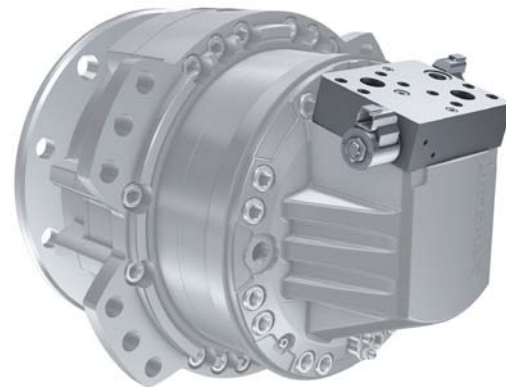


Flanged valve

Designed with flat ports surface, the MHP20 and MHP27 motors can receive valves blocks, which can be flanged on top of their cover in order to enhance the control (electrical command for shifting) and facilitate the plumbing.



Flanged valve	
Standard without block	0
Block flanged on cover for speed shifting (electrical) and flushing function (speed range up to 165 rpm in case of C27™ brake use)	A
Block flanged on cover for speed shifting (electrical) and flushing function (mandatory for C27™ brake from 185 to 200 rpm)	B
Block flanged on cover for speed shifting (electrical) and flushing function (mandatory for C27™ brake from 185 to 200 rpm)	C
Block flanged on cover for speed shifting (electrical) and without flushing function (not available for C27™ brake)	P



Flanged valve can be proposed on the following versions:

	C	D	V	P	S
MHP20	1 2 3	1 2 3	1	1 2 3 4	1 2 3 4 5 6
MHP27	1 2 3	1 2 3	1	1 2 3 4	1 2 3 4 5 6

	A	B	C	P
A	2 nd displacement			
D	2 nd displacement valving with boosted brake			
G				
L				
M	3 rd displacement valving			
N				
P				

	A	B	C	P
2C Speed shifting management	Flushing			
2C Speed shifting management (for boosted brake)	Flushing			
3C Speed shifting management	Flushing			
2C Speed shifting management Without Flushing function				
2C Speed shifting management (for boosted brake) Without Flushing function				
3C Speed shifting management Without Flushing function				

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

Brakes

Installation

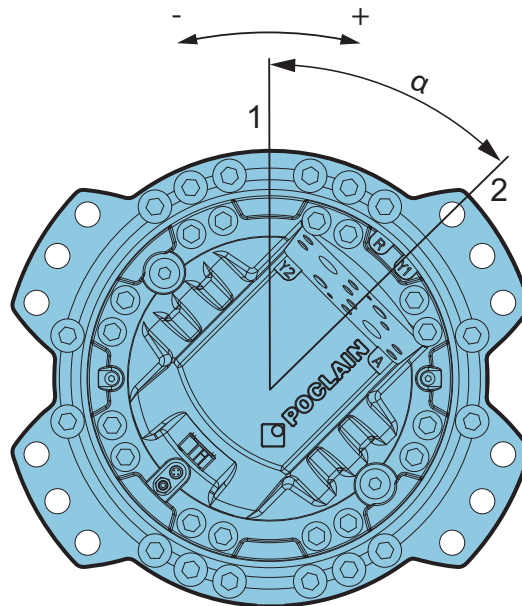
Options



Orientation



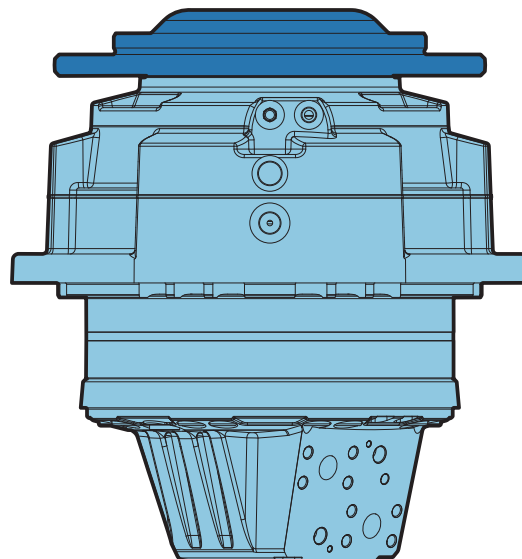
Distribution angular deviation [°]	
0°	0
45°	1
90°	2
135°	3
180°	4
-45°	5
-90°	6
-135°	7



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)





OPTIONS



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

Y Standard option

- Predisposal for speed sensor
- Case flushing (additional drain on the valving cover)
- Peek bushings
- High efficiency

1 Fluorinated elastomer seals

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



Consult your Poclain Hydraulics sales engineer.

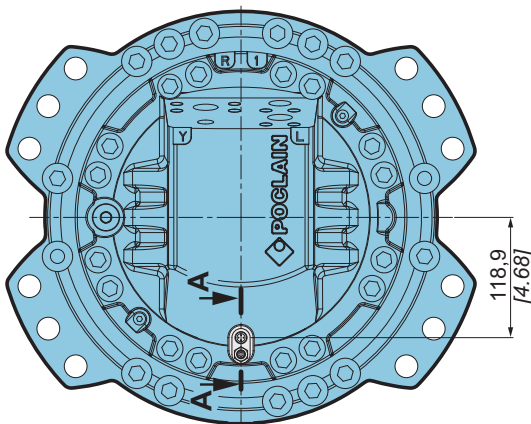
2 Installed speed sensor

Designation

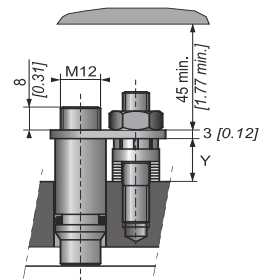
T4 speed sensor (without rotation direction) installed



2



A-A



Max. length Y = 21,5 [0.85]

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.



6 Industrial support

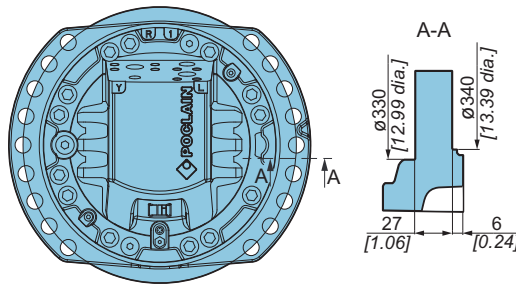
Reduction of around 50% from the rated value in the bearings' preload value. Without external loads, increases the lifetime of the bearing support.



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

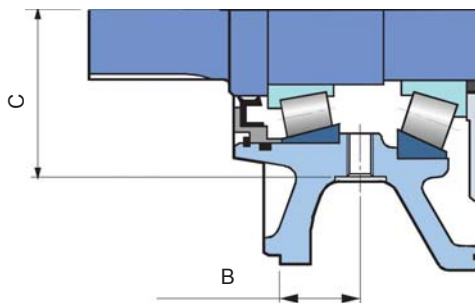
9 Chassis mounting on cam ring side

Only available for shaft motors.



B Drain on the bearing support

Only available for shaft motors.



		B	C
Shaft motor		mm [in]	mm [in]
	M22x1,5	193 [7.60]	56 [2.20]

C Abrasive environments

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

Mechanical seal



Consult your Poclain 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

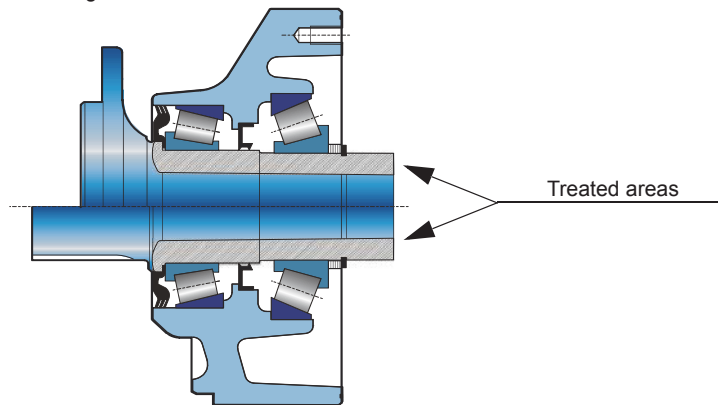
Enables certain combinations different from the standard mountings defined on page 14.



Consult your Poclain Hydraulics application engineer.

J Surface heat treatment of the shaft

Heat treatment on the indicated bearing radius.



K Treatment on external splines

N Bleed screw on the bearing support

P Customized identification plate

Your part number can be engraved on the plate.



Consult your Poclain Hydraulics application engineer for other possibilities.

R Brake cooling

U Boosted brake™



Consult your Poclain Hydraulics application engineer (see page 39).

Model code and Modularity

Wheel motor

Wheel motor +C27™ brake

Wheel motor +P27™ brake

Shaft motor

Shaft motor +P27™ brake

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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-  Not available
-  B33972A
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