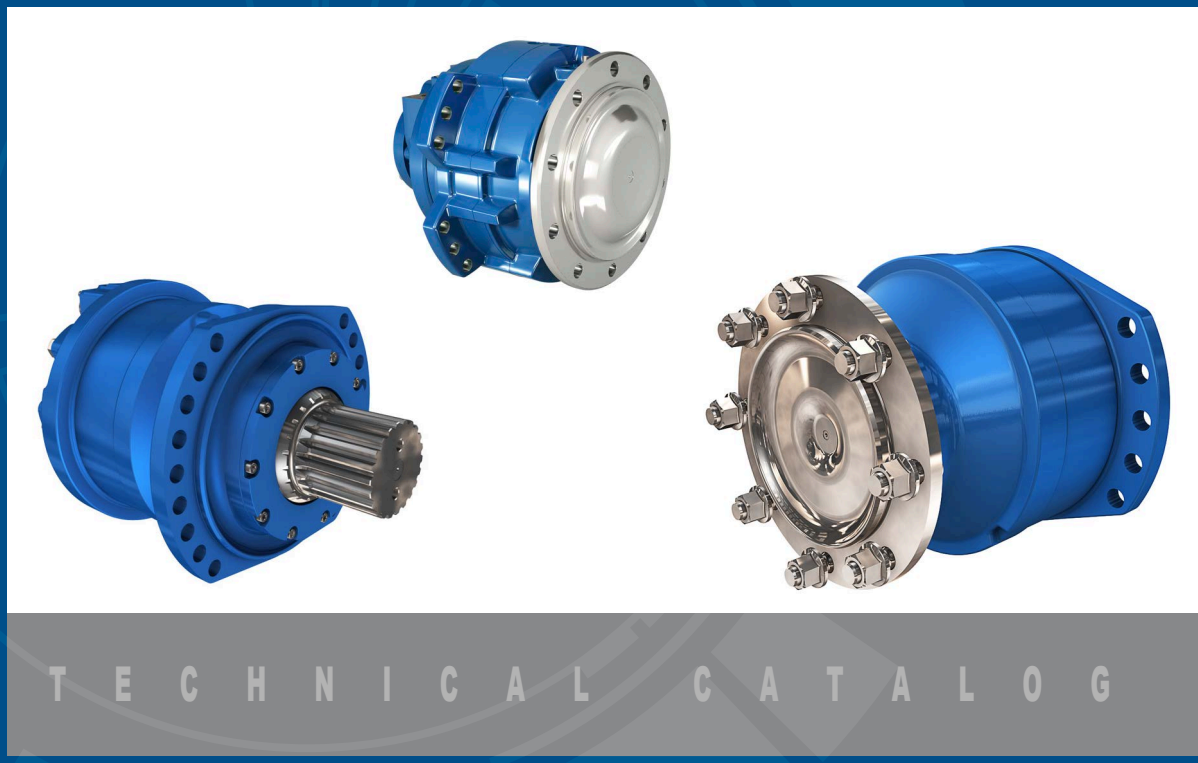
MS35

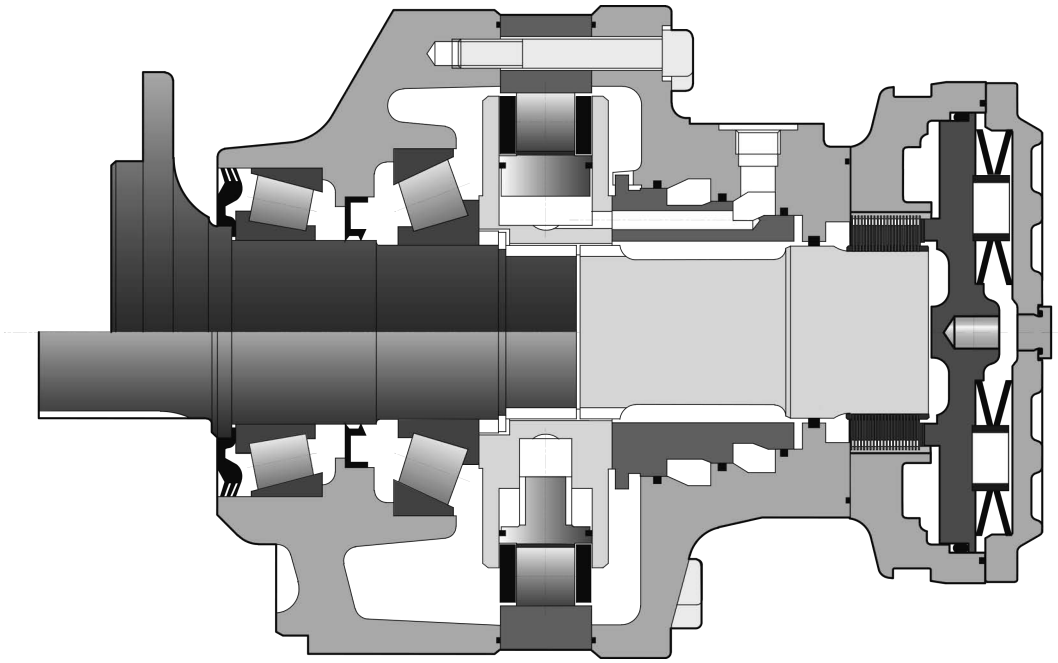
HYDRAULIC MOTORS



TECHNICAL CATALOG

POCLAIN Hydraulics

CHARACTERISTICS



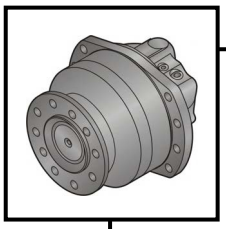
Motor inertia **0.4 kg.m²**

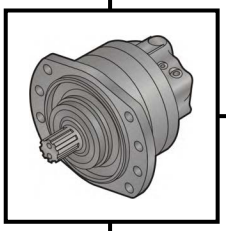
		❶ cm³/tr *[cu.in/rev.]*	❷ cm³/tr *[cu.in/rev.]*	Theoretical torque ❶ at 100 bar Nm	*at 1000 PSI [lb.ft]*	❶ kW *[HP]*	Max.power ❷ preferred kW *[HP]*	❷ non-preferred kW *[HP]*	Max. speed ❶ tr/min	❷ *[RPM]*	Max. pressure bar *[PSI]*
Cams with equal lobes	**7**	2,439 *[148.8]*	1,220 *[74.4]*	3,878	*[1,972]*	110 *[148]*	73 *[98]*	55 *[74]*	140	140	450 *[6,527]*
	9	3,143 *[191.7]*	1,572 *[95.8]*	4,997	*[2,541]*				140	140	
	0	3,494 *[213.1]*	1,747 *[106.5]*	5,555	*[2,825]*				130	130	
	2	4,198 *[256.0]*	2,099 *[128.0]*	6,675	*[3,394]*				110	110	
Cams with unequal lobes	**K**	3,000 *[183.0]*	1,911 *[116.6]* / 1,091 *[66.5]*	4,770	*[2,426]*	110 *[148]*	73 *[98]*	55 *[74]*	120	120	
	A	3,494 *[213.1]*	2,099 *[128.0]* / 1,395 *[85.1]*	5,555	*[2,825]*				110	110	

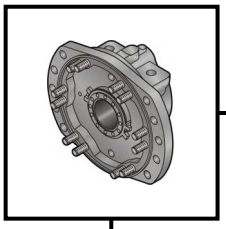
❶ **First displacement**

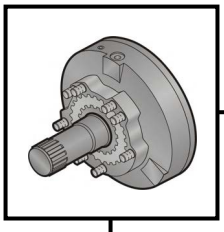
❷ **Second displacement**

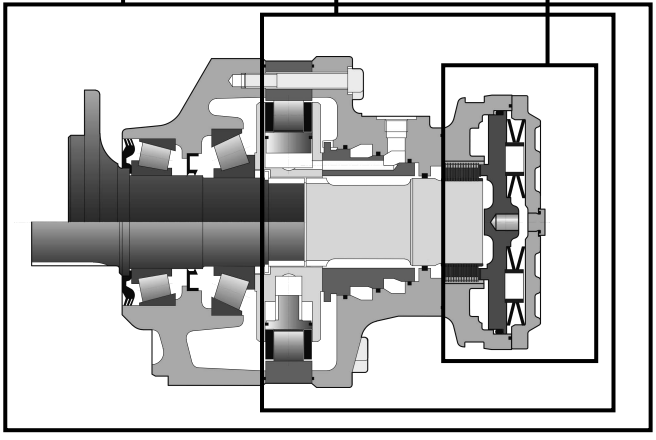
CONTENT











MODULARITY 4
MODEL CODE 6

WHEEL MOTOR 8
Dimensions for standard (1110) 1-displacement motor 9
Dimensions for standard (1110) 2-displacement motor 9
Support types 10
Studs 10
Load curves 11
Support types (continued) 12
Load curves (continued) 13
Load curves (continued) 14

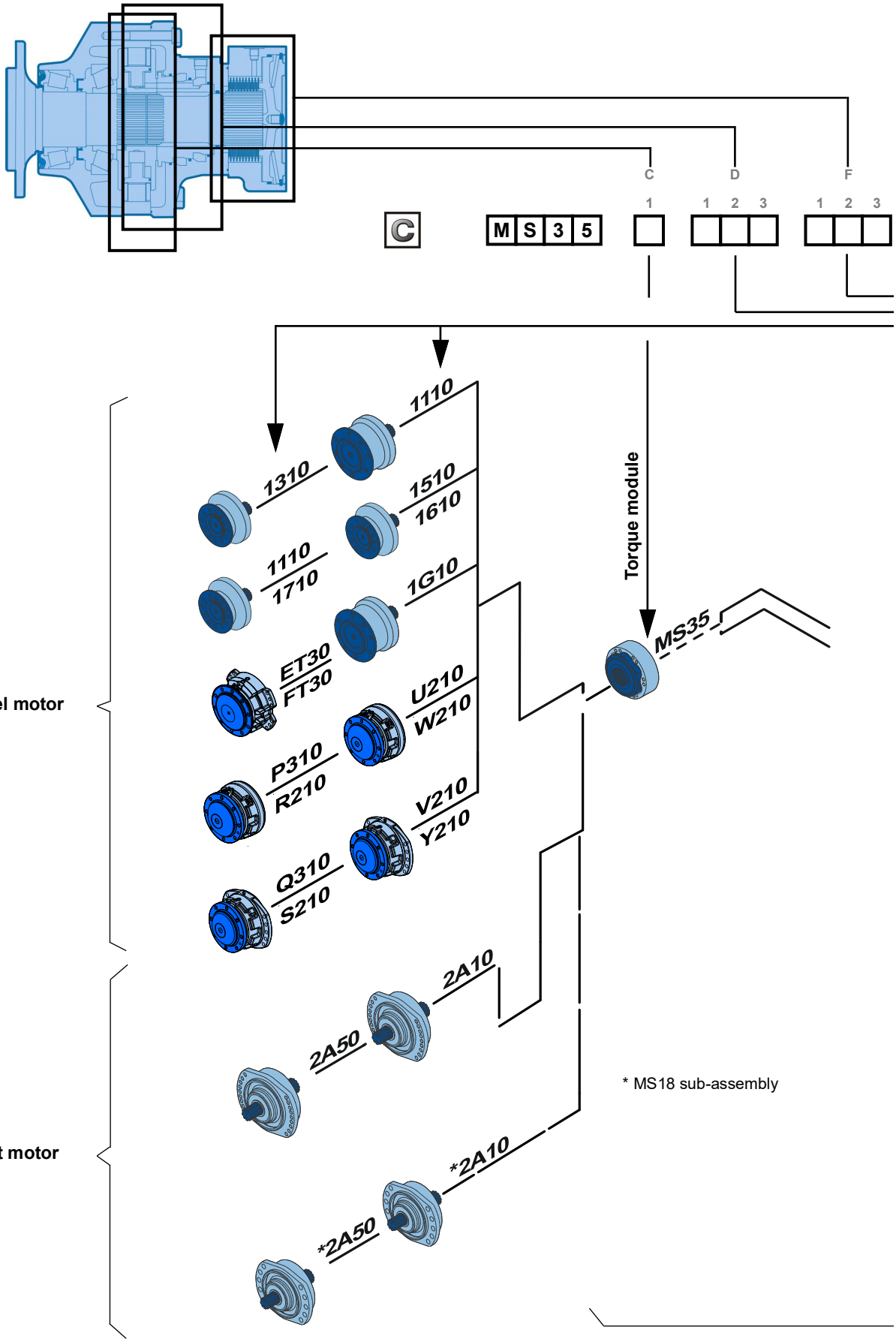
SHAFT MOTOR 15
Dimensions for standard (2A50) 1-displacement motor 15
Dimensions for standard (2A50) 2-displacement motor 15
Support types 16
Splined coupling 16

VALVING SYSTEMS AND HYDROBASES 19
Dimensions for 1-displacement valving 19
Dimensions for 2-displacement valving 20
Dimensions for *Twin-Lock*™ valving 23
Hydraulic connections 24
Chassis mountings 26

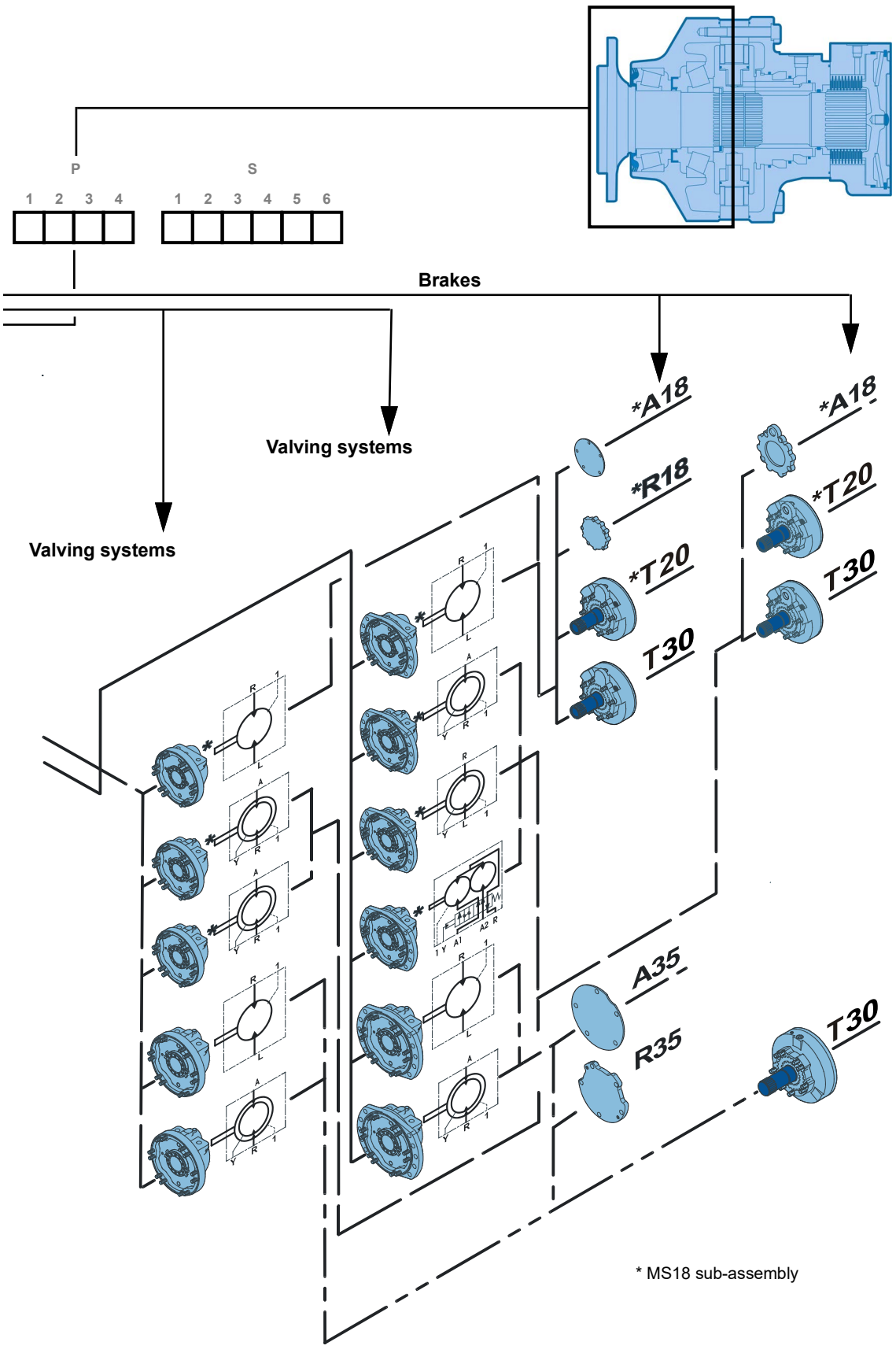
BRAKES 29
Rear brake 29
Rear brake 30
C27™ Combined brake 31
P27™ Parking brake 32
P20™ Parking brake 33
S20™ Service brake 34

OPTIONS 35

MODUL

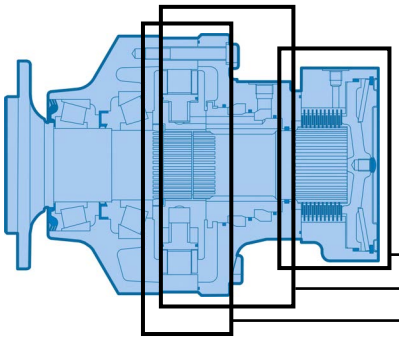

C
D
F
1
1 2 3
1 2 3
C
M S 3 5
Torque module
MS35
Wheel motor
1110
1310
1510
1610
1110
1710
1G10
ET30
FT30
U210
W210
P310
R210
V210
Y210
Q310
S210
Shaft motor
2A10
2A50
*2A10
*2A50
* MS18 sub-assembly

ARITY



Hydrobases

MODEL



C D F

1 1 2 3 1 2 3

C M S 3 5 | | | | | | |

		❶ cm³/tr [cu.in/rev.]	❷ cm³/tr [cu.in/rev.]
Cams with equal lobes	7	2 439 [148,8]	1 220 [74,4]
	9	3 143 [191,7]	1 572 [95,8]
	0	3 494 [213,1]	1 747 [106,5]
	2	4 198 [256,0]	2 099 [128,0]
Cams with unequal lobes	K	3 000 [183,0]	1 911 [116,6] / 1 091 [66,5]
	A	3 494 [213,1]	2 099 [128,0] / 1 395 [85,1]

❶ **First displacement**
❷ **Dual displacement**

D1

Valving type		
1-displacement valving	1	
Symmetrical	A	Ratio 2
	B	Ratio <2
	C	Ratio >2
2-displacement & Twin-Lock™ valving (Clockwise)	D*	Ratio 2
	E	Ratio <2
	F*	Ratio >2
2-displacement & Twin-Lock™ valving (Counterclockwise)	G	Ratio 2
	H*	Ratio <2
	J*	Ratio >2

* For Boosted Braking™ (option **U** becomes mandatory).

D2

Valving cover		Standard	Twin-Lock™ or 2-displacement
S18	Without mounting	1	D P
	Lug fixing	2	E Q
S35	Without mounting	B	–
	Lug fixing	C	–

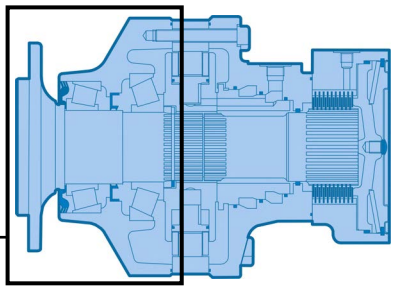
D3

Connection type		
No transmission cover		0
ISO DP6162 flanges **ISO 9974-1** connections	DN25	1
ISO DP6162 flanges **ISO 1179-1** connections		2
ISO 9974-1 connections		4
ISO DP6162 flanges **ISO 11926-1** connections		7
ISO DP6162 flanges **ISO 9974-1** connections	DN32	9
ISO 11926-1 connections		A

F1 - F3

Rear brake							
Valving S18	Without brake	Standard plate			A	1	8
		Reinforced plate			R	1	8
	Brakes	Bearing mounting or valving cover mounting	Parking brake	Screwed environmental cover	T	2	0
Valving S35	Without brake	Standard plate			A	3	5
		Reinforced plate			R	3	5
	Brakes	Bearing mounting or valving cover mounting	Parking brake	Screwed environmental cover	T	3	0

CODE



P S

1 2 3 4 | 1 2 3 4 5 6

0

P1

			Front unit	
0			Without bearing support	
1			Without mounting	
2			Lug mounting	
E	Brakes	C27™	valving cover fixation	
F			chassis fixation	
P		P27™	valving cover fixation	
Q			chassis fixation	
R		P20™	valving cover fixation	
S			chassis fixation	
U		S20™	valving cover fixation	single control command
V			chassis fixation	
W			valving cover fixation	double control command
Y			chassis fixation	

S1 - S6

Options	
Without options or adaptations	0
Fluorinated elastomer seals	1
T4 Speed sensor installed	2
Brake environmental cover without plug	3
Drainage	5
Industrial bearing support	6
Diamond™	7
Predisposition for speed sensor	8
Hollow shaft	A
Drain on the bearing support	B
Reinforced sealing	E
Special wheel rim mounting	G
Surface heat treatment of the shaft	J
TD Speed sensor (two phase shifted frequencies)	Q
TR Speed sensor installed	S
Boosted Braking™	U

P2

Bearing support	
Without shaft	0
10 x Ø24 on Ø335	1
8 x Ø22 on Ø275 (Standard for S20/P20™ brake)	2
8 x Ø22 on Ø275 (Standard for P27™ brake)	3
8 + 4 x Ø22 on Ø275 (for studs length of 80 mm)	5
10 x Ø24 on Ø335 (Standard for C27™ brake) (for studs length of 65 mm)	T
10 x Ø24 on Ø225	6
12 x Ø24 on Ø335	7
Support without drum brake	G
For male shaft bearing support	A

P3

Shaft type	
Without studs	1
With studs + nuts	2
With studs	3
M threaded holes	4

Male shafts	
NF E22-141 splines	1
DIN 5480 splines	5

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.

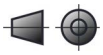
This document includes important comments concerning safety as well as the installation guide that must be read before any installation (https://poclain.com/resources). Important comments are indicated in the following way:

	**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.**

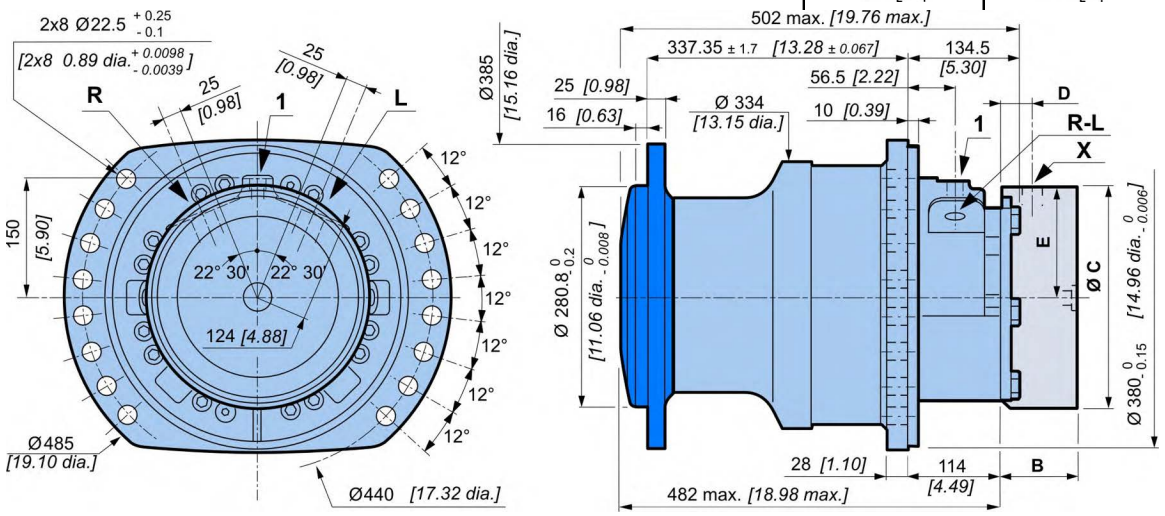
The views in this document are created using metric standards.
The dimensional data is given in mm and in inches (inches are given in brackets in italics).



WHEEL MOTOR

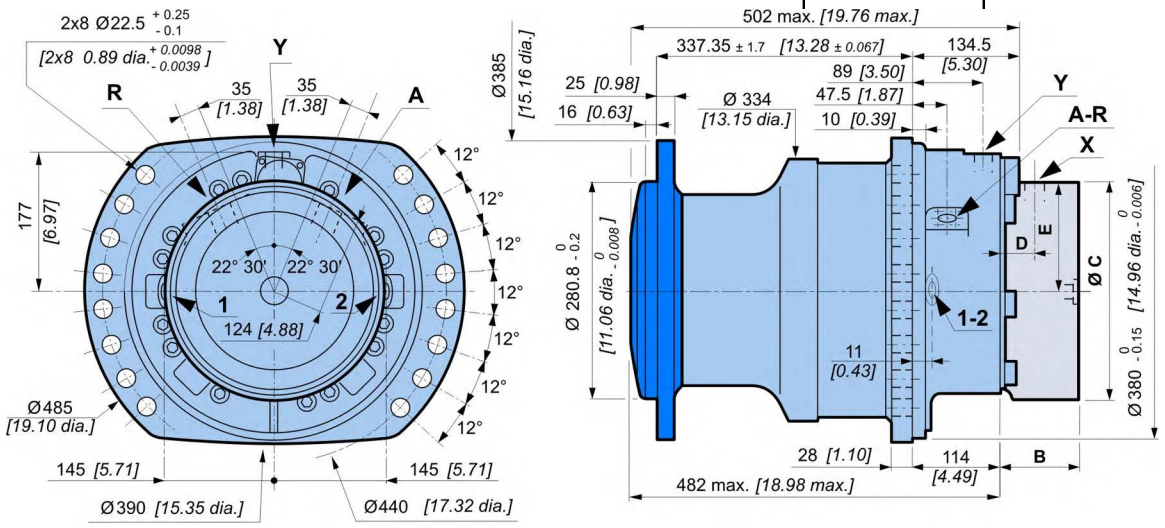
Dimensions for standard (1110) 1-displacement motor

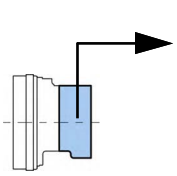
	209 kg *[460 lb]*	269 kg *[592 lb]*
	5.00 L *[300 cu.in]*	4.00 L *[240 cu.in]*



Dimensions for standard (1110) 2-displacement motor

	209 kg *[460 lb]*	269 kg *[592 lb]*
	5.00 L *[300 cu.in]*	4.00 L *[240 cu.in]*





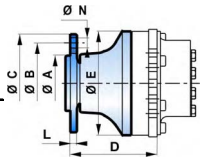
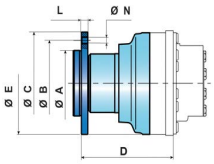
C	T 2 0 *	T 3 0
B	115.0 *[4.53]*	137.0 *[5.39]*
C	Ø274 *[10.77 dia.]*	Ø375 *[14.76 dia.]*
D	45.0 *[1.77]*	49.5 *[1.95]*
E	128.5 *[5.06]*	183.5 *[7.22]*

* MS18 sub-assembly

Also see "Brake" section (thumbnail opposite).

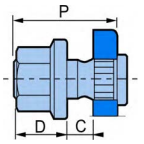
Support types

	C	D	F	P	S
	1	1 2 3	1 2 3	1 2 3 4	1 2 3 4 5 6
M S 3 5					

C	A mm *[in]*	B mm *[in]*	C mm *[in]*	D mm *[in]*	E mm *[in]*	N mm *[in]*	**Wheel rim mountings**	L mm *[in]*	
1 1 1 0	Ø 280.8 *[11.06 dia.]*	Ø 335 *[13.19 dia.]*	Ø 386 *[15.20 dia.]*	319 *[12.56]*	Ø 334 *[13.15 dia.]*	Ø 24 *[0.94 dia.]*	10 x M22x1.5	24 *[0.94]*	
1 3 1 0	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 x M20x1.5	14 *[0.55]*	
1 4 1 0	Ø 152.27 *[5.99 dia.]*	Ø 235 *[9.25 dia.]*	Ø 280 *[11.02 dia.]*	213 *[8.39]*	Ø 334 *[13.15 dia.]*	Ø 17.5 *[0.69 dia.]*	-	15 *[0.59]*	
1 5 1 0	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]*	
1 6 1 0	Ø 175.7 *[6.92 dia.]*	Ø 225 *[8.86 dia.]*	Ø 276 *[10.87 dia.]*	282 *[11.10]*	Ø 334 *[13.15 dia.]*	Ø 24 *[0.94 dia.]*	10 x M22x1.5	15 *[0.59]*	
1 G 1 0	Ø 280.7 *[11.05 dia.]*	Ø 335 *[13.19 dia.]*	Ø 385 *[15.16 dia.]*	352.0 *[13.86]*	Ø 334.0 *[13.15 dia.]*	24.0 *[0.94]*	10 x M22x1.5	17 *[0.67]*	

Studs

		P mm *[in]*	C min. mm *[in]*	C max. mm *[in]*	D mm *[in]*		Class
Various studs	M16 x 1.5	50 *[1.97]*	5 *[0.20]*		21.0	*[0.83]*	**12.9**
	M20 x 1.5	60 *[2.36]*			25.0	*[0.98]*	
	M20 x 1.5	70 *[2.76]*					
	M22 x 1.5	64 *[2.52]*			26.0	*[1.02]*	
	M22 x 1.5	80 *[3.15]*					
Screws	M16 x 1.5	-	-		23.0	*[0.91]*	**10.9**



See generic installation motors N°B59689D.

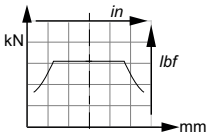
Load curves

Permissible radial loads

Test conditions :

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

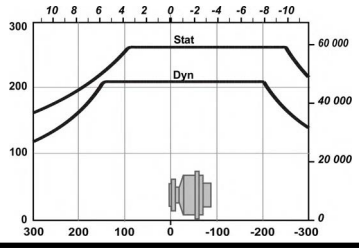
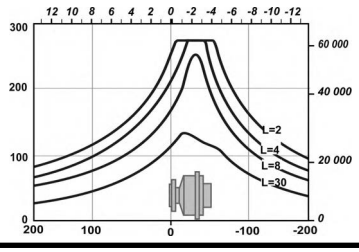
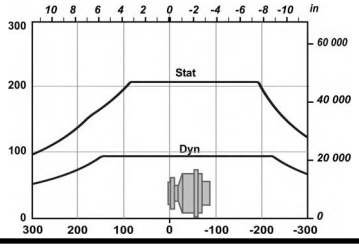
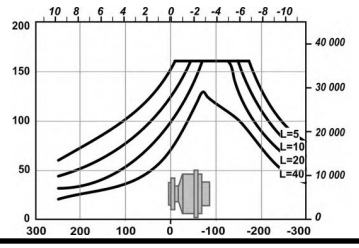
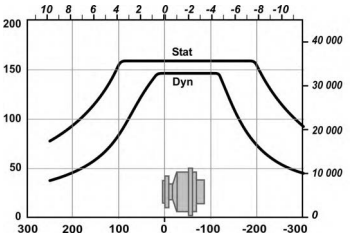
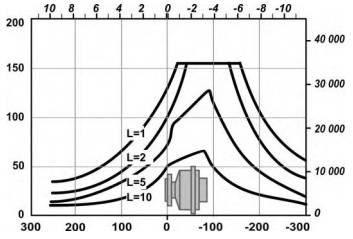
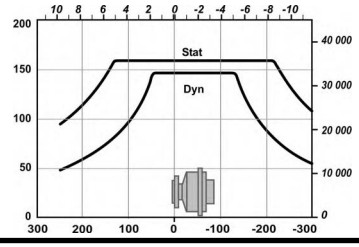
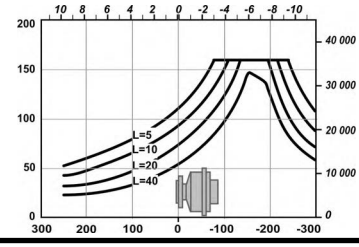
Dynamic : 0 tr/min *[0 RPM]*, code 0 displacement, without axial load at max. torque



Service life of bearings

Test conditions :

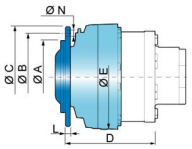
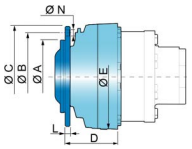
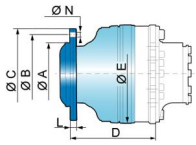
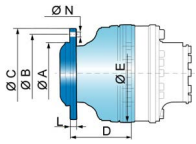
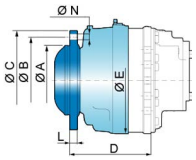
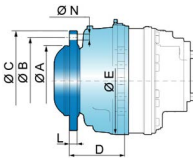
L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

1 1 1 0 1 2 3 4 P		
1 3 1 0 1 2 3 4 P		
1 5 1 0 1 2 3 4 P		
1 6 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.

Support types (continued)

	C	D	F	P	S
	1	1 2 3	1 2 3	1 2 3 4	1 2 3 4 5 6
M S 3 5					

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]*	
E T 3 0	Ø 280.7 *[11.05 dia.]*	Ø 335 *[13.19 dia.]*	Ø 386 *[15.20 dia.]*	317 *[12.48]*	Ø 405 *[15.94 dia.]*	Ø 24 *[0.94 dia.]*	10 x M22x1.5	19 *[0.75]*	
F T 3 0	Ø 280.7 *[11.05 dia.]*	Ø 335 *[13.19 dia.]*	Ø 392 *[15.43 dia.]*	205 *[8.07]*	Ø 408 *[16.06 dia.]*	Ø 24 *[0.94 dia.]*	10 x M22x1.5	19 *[0.75]*	
P 3 1 0	Ø 220.7 *[8.69 dia.]*	Ø 275 *[10.83 dia.]*	Ø 313 *[12.34 dia.]*	288.2 *[11.34]*	Ø 338 *[13.31 dia.]*	Ø 22 *[0.87 dia.]*	8 x M20x1.5	23 *[0.91]*	
Q 3 1 0	Ø 220.7 *[8.69 dia.]*	Ø 275 *[10.83 dia.]*	Ø 318 *[12.52 dia.]*	205 *[8.07]*	Ø 338 *[13.31 dia.]*	Ø 22 *[0.87 dia.]*	8 x M20x1.5	23 *[0.91]*	
R 2 1 0	Ø 220.7 *[8.69 dia.]*	Ø 275 *[10.83 dia.]*	Ø 314 *[12.36 dia.]*	304.8 *[12.00]*	Ø 338 *[13.31 dia.]*	Ø 22 *[0.87 dia.]*	8 x M20x1.5	31 *[1.22]*	
U 2 1 0 W 2 1 0	Ø 220.7 *[8.69 dia.]*	Ø 275 *[10.83 dia.]*	Ø 314 *[12.36 dia.]*	305.1 *[12.01]*	Ø 338 *[13.31 dia.]*	Ø 22 *[0.87 dia.]*	8 x M20x1.5	31 *[1.22]*	
S 2 1 0	Ø 220.7 *[8.69 dia.]*	Ø 275 *[10.83 dia.]*	Ø 314 *[12.36 dia.]*	177.6 *[6.99]*	Ø 338 *[13.31 dia.]*	Ø 22 *[0.87 dia.]*	8 x M20x1.5	31 *[1.22]*	
V 2 1 0 Y 2 1 0	Ø 220.7 *[8.69 dia.]*	Ø 275 *[10.83 dia.]*	Ø 314 *[12.36 dia.]*	177.6 *[6.99]*	Ø 338 *[13.31 dia.]*	Ø 22 *[0.87 dia.]*	8 x M20x1.5	31 *[1.22]*	

Also see “Brake” section (thumbnail opposite).

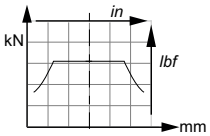
Load curves (continued)

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

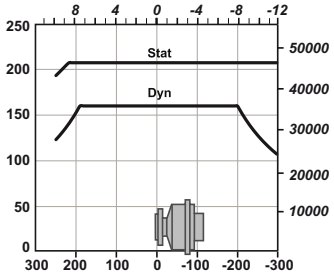


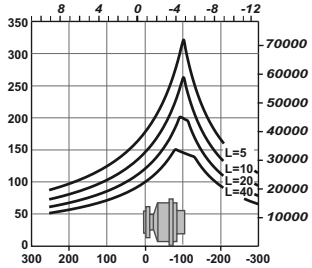
Service life of bearings

Test conditions :

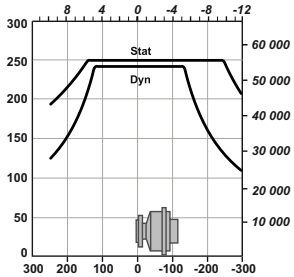
L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

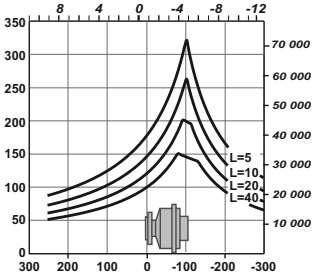
E T 3 0 (1 2 3 4)



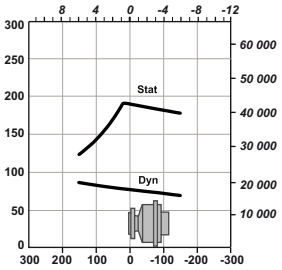


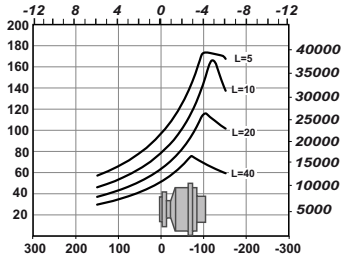
F T 3 0 (1 2 3 4) P



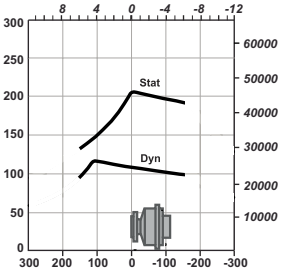


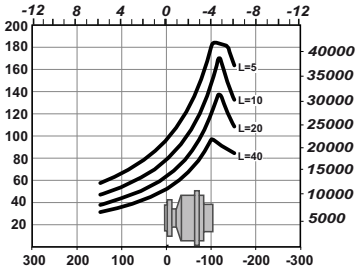
P 3 1 0 (1 2 3 4) P



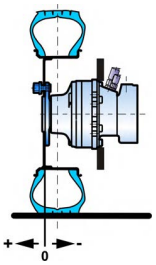


Q 3 1 0 (1 2 3 4) P





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.



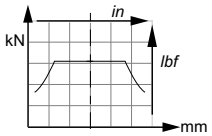
Load curves (continued)

Permissible radial loads

Test conditions :

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

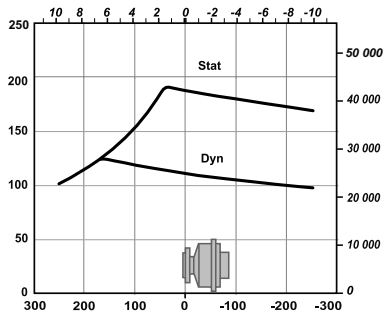
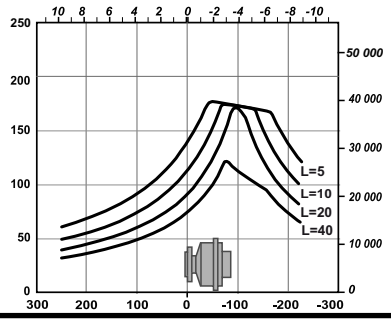
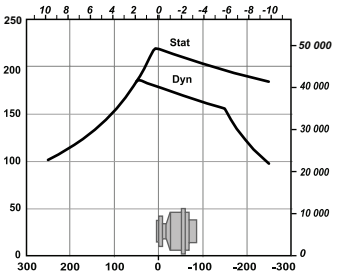
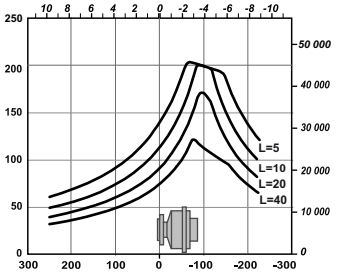
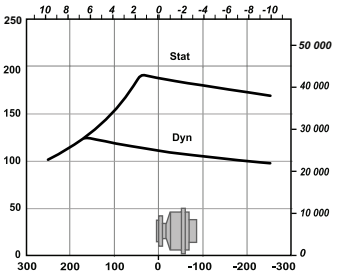
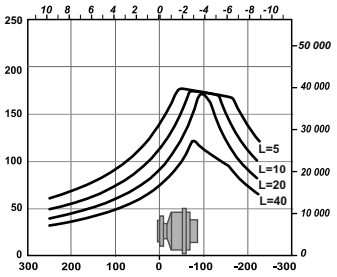
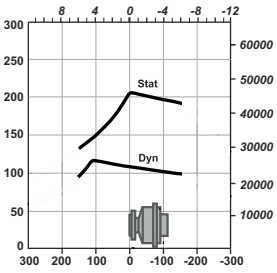
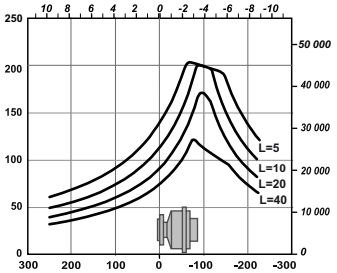
Dynamic : 0 tr/min *[0 RPM]*, code 0 displacement, without axial load at max. torque



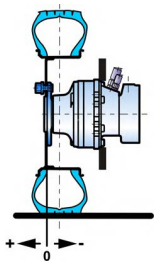
Service life of bearings

Test conditions :

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

R 2 1 0 1 2 3 4		
S 2 1 0 1 2 3 4 P		
U 2 1 0 W 2 1 0 1 2 3 4 P		
V 2 1 0 Y 2 1 0 1 2 3 4 P		

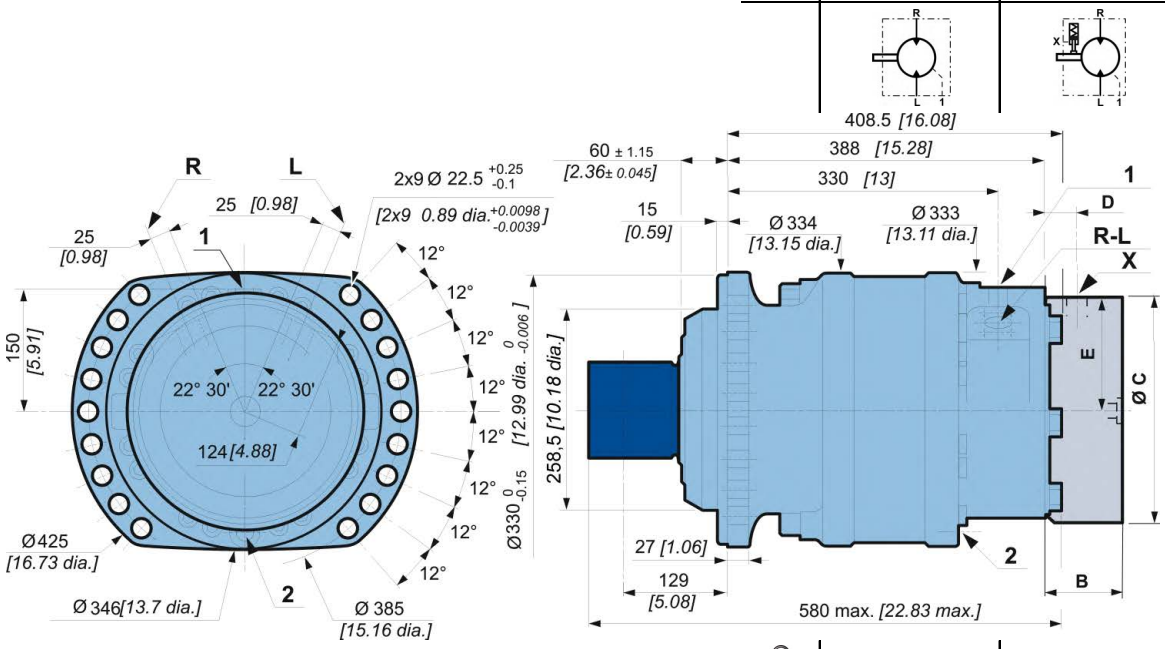
The service life of the components is influenced by the pressure.You must check that the combination of forces applied (Axial load / Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application's specifications.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



SHAFT MOTOR

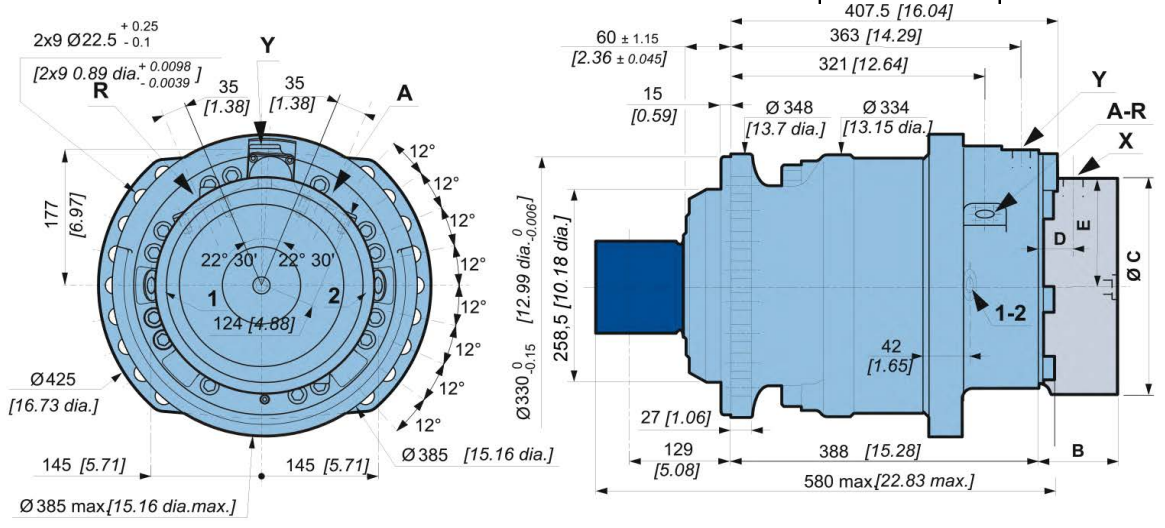
Dimensions for standard (2A50) 1-displacement motor

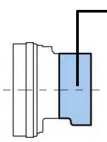
	188 kg *[414 lb]*	248 kg *[546 lb]*
	5.00 L *[300 cu.in]*	4.00 L *[240 cu.in]*



Dimensions for standard (2A50) 2-displacement motor

	198 kg *[436 lb]*	152 kg *[334 lb]*
	3.00 L *[180 cu.in]*	2.50 L *[150 cu.in]*





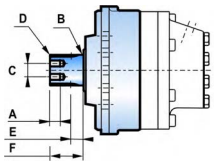
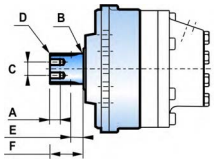
C	T 2 0 *	T 3 0
B	115.0 *[4.53]*	137.0 *[5.39]*
C	Ø274 *[10.77 dia.]*	Ø375 *[14.76 dia.]*
D	45.0 *[1.77]*	49.5 *[1.95]*
E	128.5 *[5.06]*	183.5 *[7.22]*

* MS18 sub-assembly

Also see "Brake" section (thumbnail opposite).

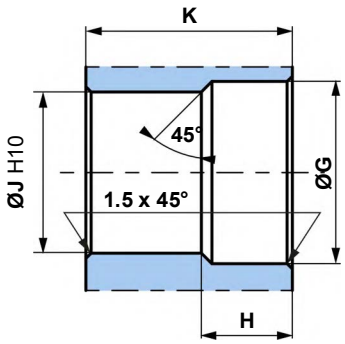
Support types

	C	D		F			P				S					
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
MS35																	

C		A mm *[in]*	B mm *[in]*	C mm *[in]*	D mm *[in]*	E mm *[in]*	F mm *[in]*	
2A50	**DIN 5480** splines Nominal Ø 120 *[4.72]* Module 5 Z 22	40 *[1.57]*	R 3 *[R 0.12]*	60 *[2.36]*	2 x M16	28 *[1.10]*	110 *[4.33]*	
2A10	**NF E22-141** splines Nominal Ø 120 *[4.72]* Module 3.75 Z 30	40 *[1.57]*	R 3 *[R 0.12]*	60 *[2.36]*	2 x M16	28 *[1.10]*	110 *[4.33]*	
2A50 * MS18 bearing	**DIN 5480** splines 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]*	
2A10 * MS18 bearing	**NF E22-141** splines Nominal Ø 90 *[3.54]* Module 2.5 Z 34	23 *[0.91]*	R 3 *[R 0.12]*	35 *[1.38]*	2 x M14	27 *[1.06]*	90 *[3.54]*	

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

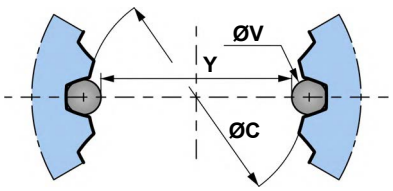
Splined coupling



Standard NF E22-141
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.

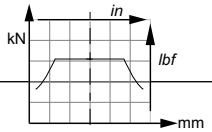


C	Ø G mm *[in]*	H mm *[in]*	Ø J mm *[in]*	K mm *[in]*	N mm *[in]*	Mo	Z	Offset mm *[in]*	ØC (H10) mm *[in]*	Ø V mm *[in]*	Y mm *[in]*	Tolerance µm *[µin]*
2A50	122 *[4.80]*	29 *[1.14]*	110 *[4.33]*	109 *[4.29]*	120 *[4.72]*	5	22	2.25 *[0.09]*	110 *[4.33]*	9 *[0.35]*	101.104 *[3.98]*	+ 87 / 0 *[+3.425 / 0]*
2A10	121 *[4.76]*	29 *[1.14]*	112.5 *[4.43]*	109 *[4.29]*	120 *[4.72]*	3.75	30	3 *[0.1181]*	112.5 *[4.43]*	7.5 *[0.30]*	105.253 *[4.14]*	+ 104 / 0 *[+4.094 / 0]*
2A50 * MS18 bearing	91.5 *[3.60]*	25 *[0.98]*	84 *[3.31]*	89 *[3.50]*	90 *[3.54]*	3	28	1.35 *[0.05]*	84 *[3.31]*	5.25 *[0.21]*	79.110 *[3.11]*	+68 / 0 *[+2.874 / 0]*
2A10 * MS18 bearing	91 *[3.58]*	28 *[1.10]*	85.0 *[3.35]*	89 *[3.50]*	90 *[3.54]*	2.5	34	2 *[0.0787]*	85 *[3.35]*	5 *[0.20]*	80.169 *[3.16]*	+ 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]*.

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]*.

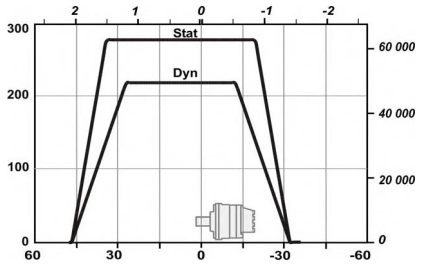
Service life of bearings

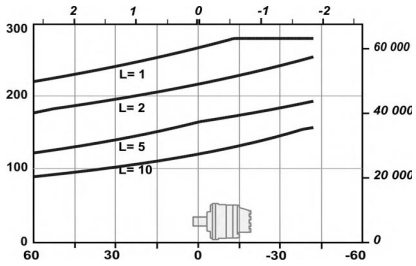
Test conditions :

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

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

P

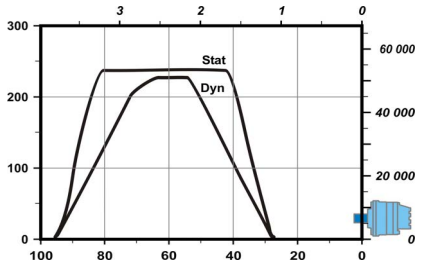


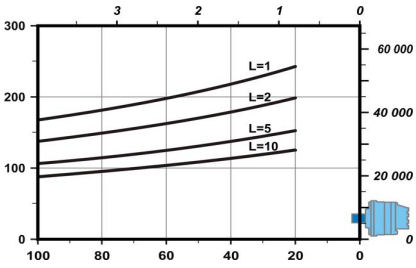


2	A	5	0
2	A	1	0
1	2	3	4

P

* MS18 bearing



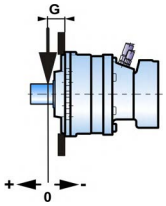


The service life of the components is influenced by the pressure.You must check that the combination of forces applied (Axial load / Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application's specifications.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

C	G mm *[in]*
2 A 1 0	129 *[5.08]*
2 A 5 0	129 *[5.08]*

C	G mm *[in]*
2 A 1 0	108.5 *[4.272]*
2 A 5 0	106.5 *[4.193]*

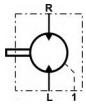
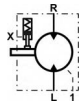
* MS18 bearing



VALVING SYSTEMS AND HYDROBASES

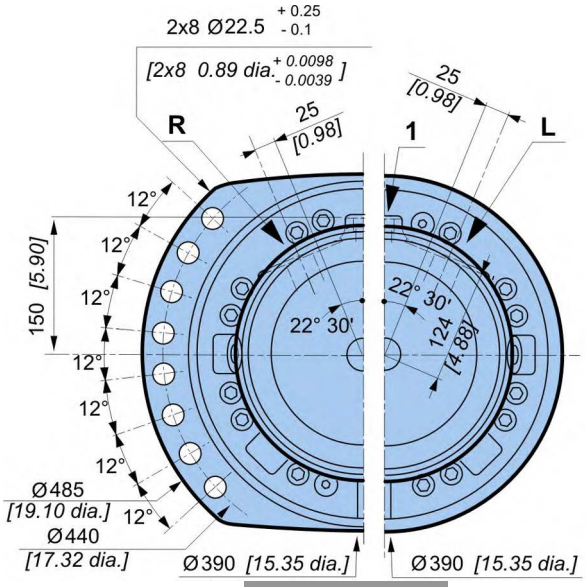
	C	D		F		P			S					
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M S 3 5																	

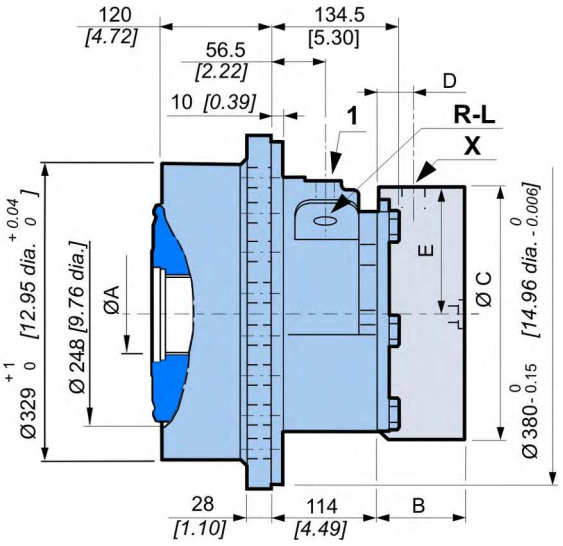
Dimensions for 1-displacement valving

	100 kg *[221 lb]*	140 kg *[307 lb]*
	2.70 L *[162 cu.in]*	3.40 L *[204 cu.in]*
		

D: 1 2 3 — 1 C 9

D: 1 2 3 — 1 B 9





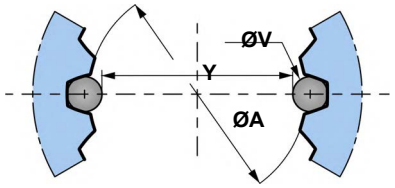
C	T 2 0 *	T 3 0
B	115.0 *[4.53]*	137.0 *[5.39]*
C	Ø274 *[10.77 dia.]*	Ø375 *[14.76 dia.]*
D	45.0 *[1.77]*	49.5 *[1.95]*
E	128.5 *[5.06]*	183.5 *[7.22]*

* MS18 sub-assembly

Also see "Brake" section (thumbnail opposite).

Cylinder block splines
(as per standard NF E22-141)

ØA mm *[in]*	Module	Z	Dimension on 2 pins Y mm *[in]*	ØV mm *[in]*
90 *[3.543]*	2.5	34	80.169 *[3.156]*	5 *[0.197]*

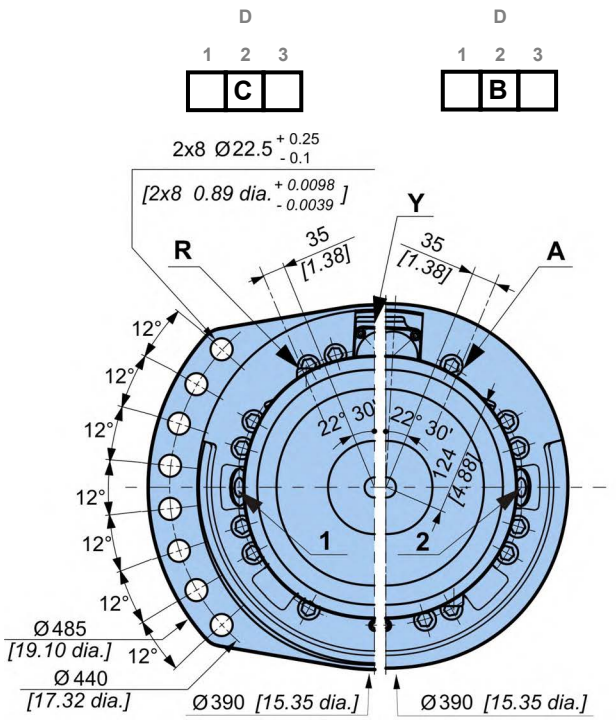


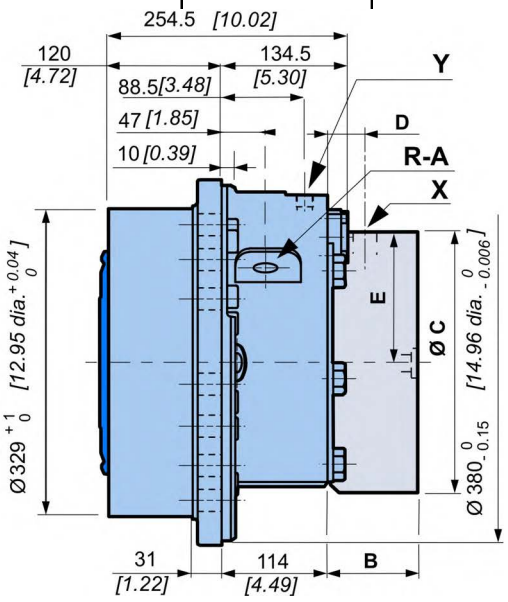
You are advised to have the installation validated by your Poclain Hydraulics application engineer before using the hydraulic unit in an application.

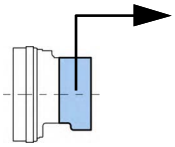
We must provide you with a detailed plan of the interface for any hydraulic unit use, consult your Poclain Hydraulics sales engineer.

Dimensions for 2-displacement valving

	98 kg *[215 lb]*	136 kg *[299 lb]*
	2.82 L *[169 cu.in]*	3.32 L *[199 cu.in]*







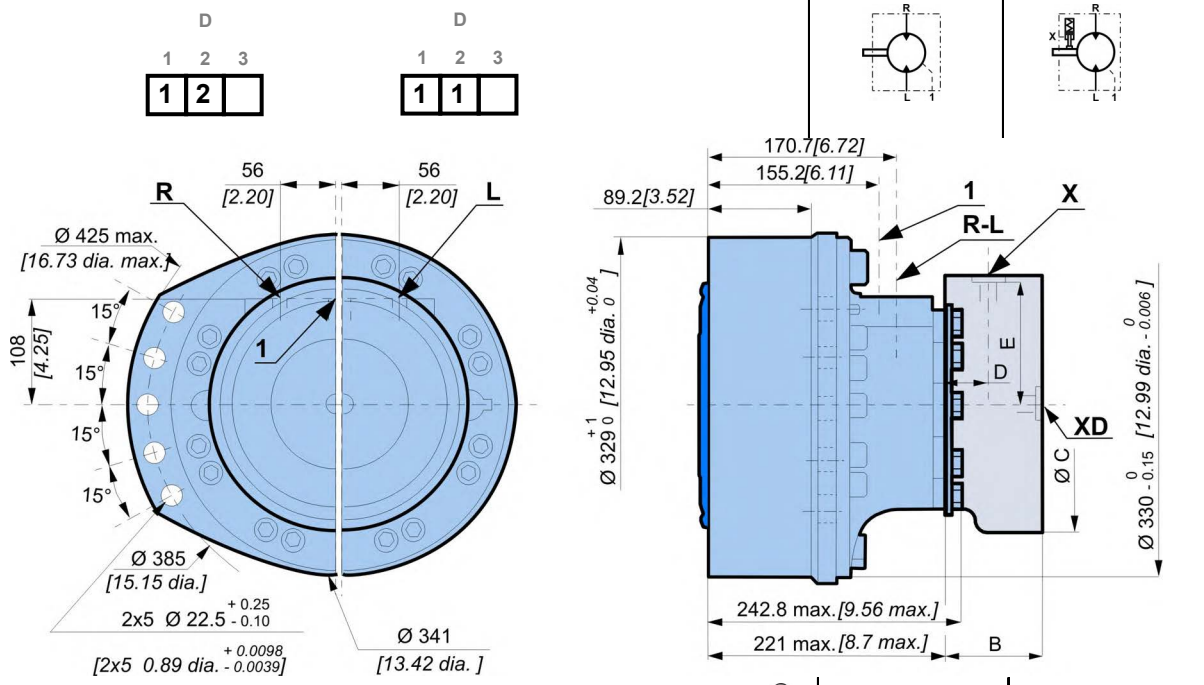
C	T20 *	T30
B	115.0 *[4.53]*	137.0 *[5.39]*
C	Ø274 *[10.77 dia.]*	Ø375 *[14.76 dia.]*
D	45.0 *[1.77]*	49.5 *[1.95]*
E	128.5 *[5.06]*	183.5 *[7.22]*

* MS18 sub-assembly

Also see “Brake” section (thumbnail opposite).

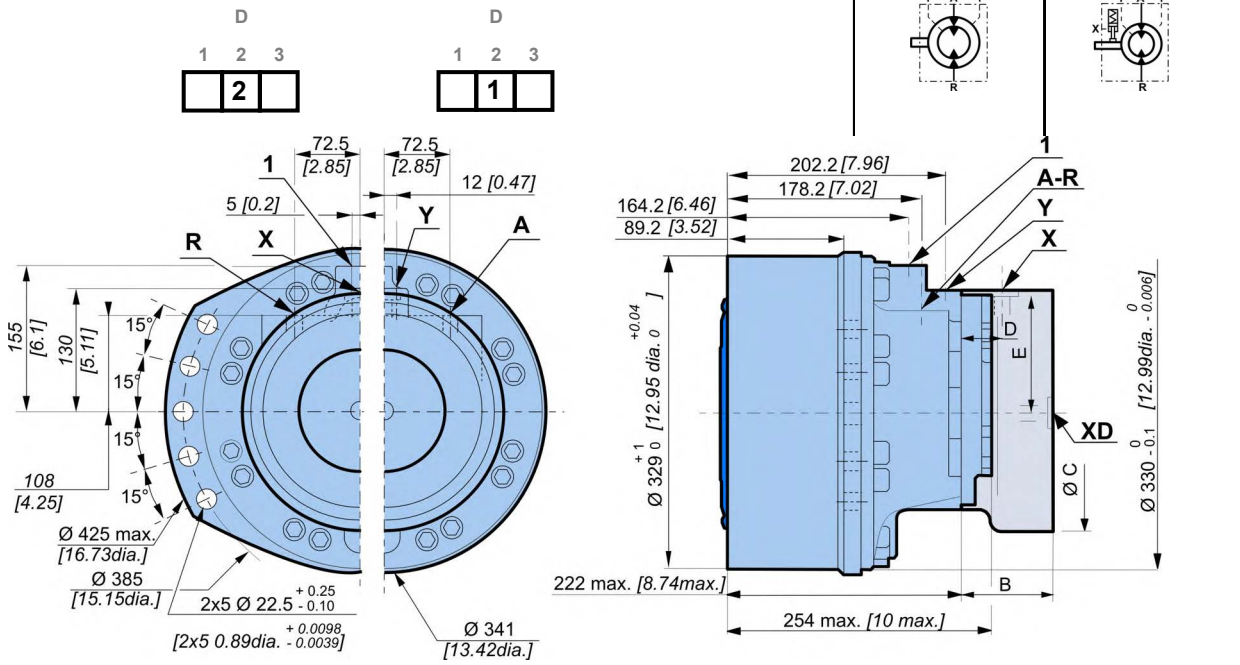
Dimensions for 1-displacement (MS18) valving

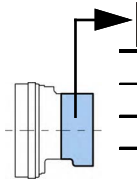
	82 kg *[180 lb]*	92 kg *[202 lb]*
	1.95 L *[117 cu.in]*	2.12 L *[127 cu.in]*



Dimensions for 2-displacement (MS18) valving

	91 kg *[200 lb]*	111 kg *[245 lb]*
	1.95 L *[117 cu.in]*	2.12 L *[127 cu.in]*





C	T20
B	115 *[4.53]*
Ø C	282 *[11.10]*
D	45 *[1.77]*
E	128.5 *[5.06]*

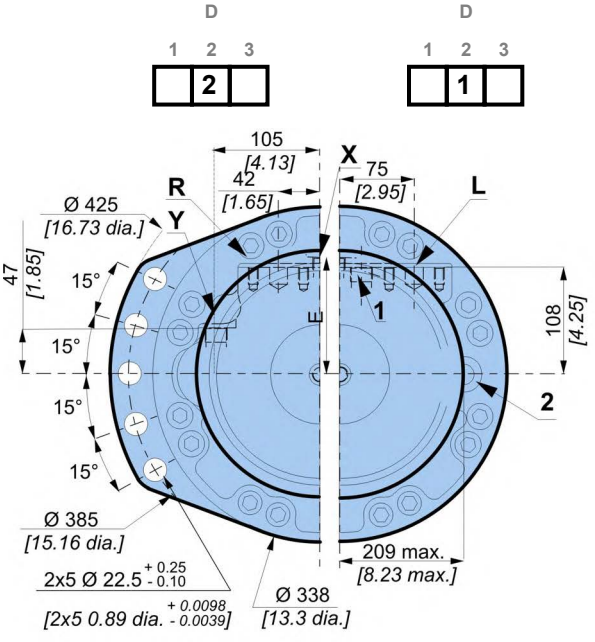
Also see "Brake" section (thumbnail opposite).

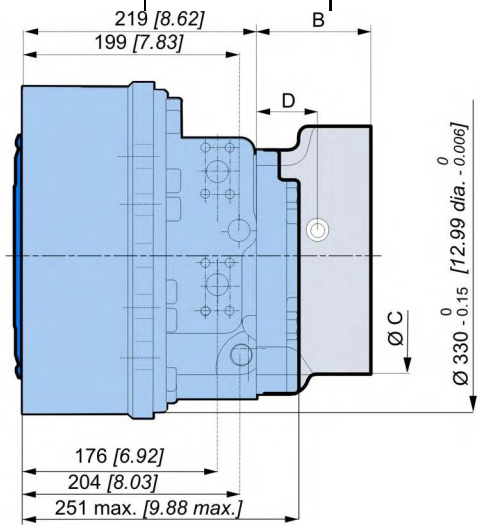
Dimensions for 2-displacement (MS18) symetrical valving

	19 kg *[42 lb]*	25.1 kg *[55 lb]*
	0.40 L *[24 cu.in]*	0.50 L *[30 cu.in]*



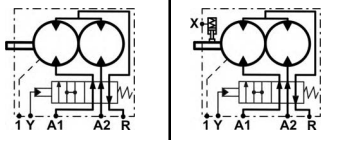
For a small displacement, there is no preferred orientation for this motor.

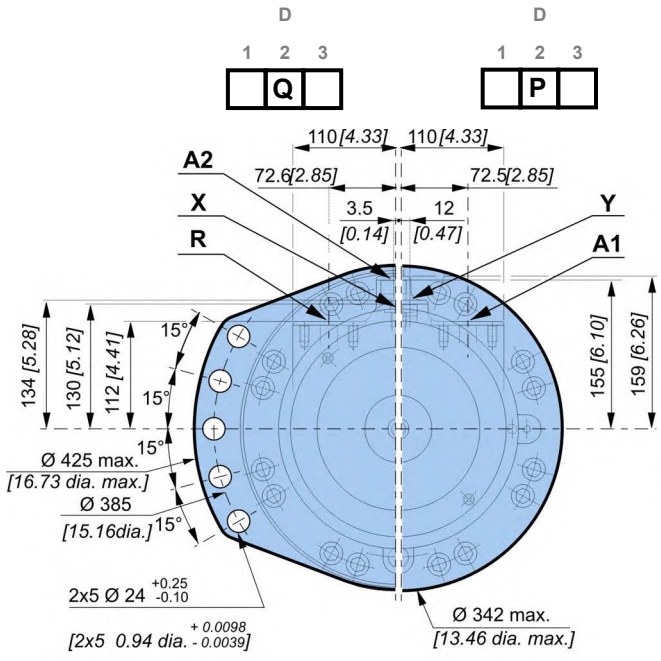


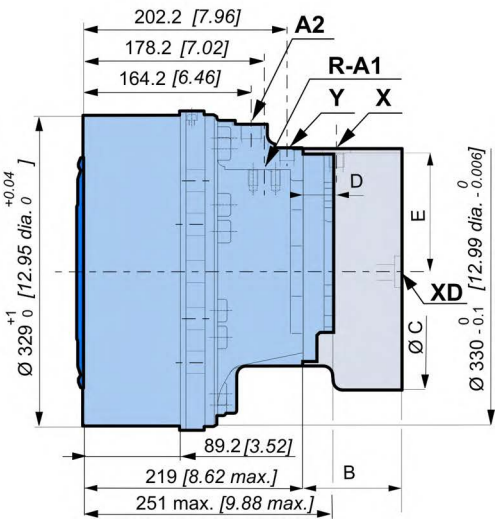


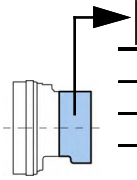
Dimensions for Twin-Lock™ / 2-displacement (MS18) valving

	19 kg *[42 lb]*	25.1 kg *[55 lb]*
	0.40 L *[24 cu.in]*	0.50 L *[30 cu.in]*







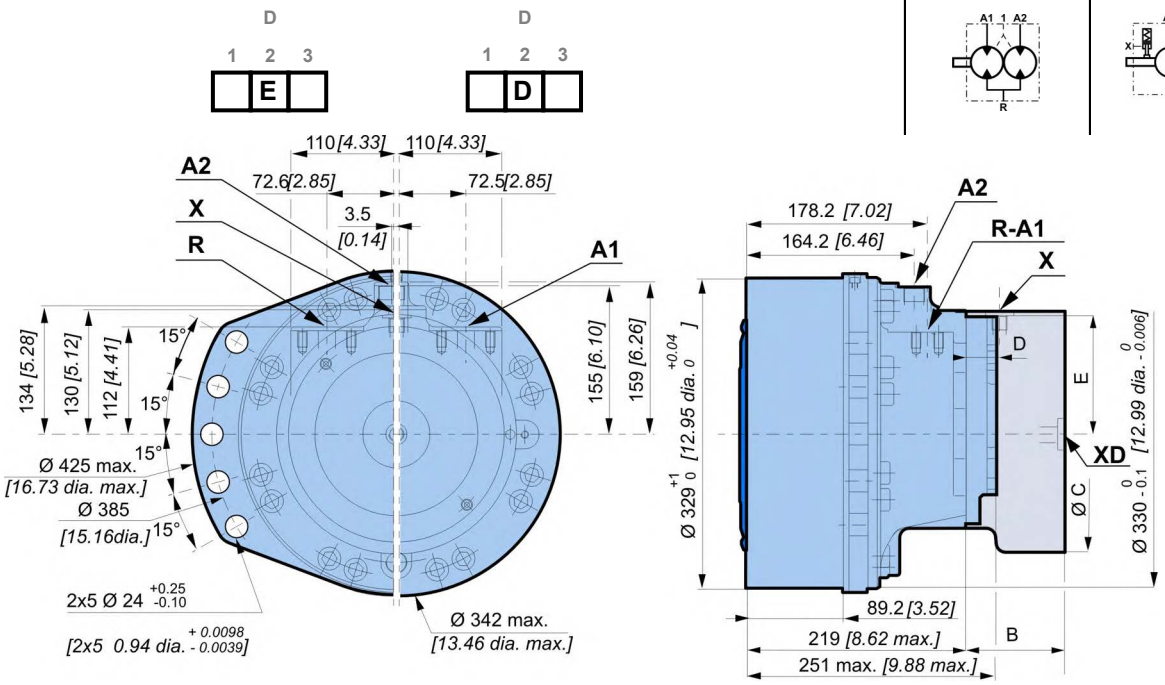


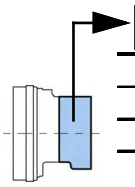
C	T20
B	115 *[4.53]*
Ø C	282 *[11.10]*
D	45 *[1.77]*
E	128.5 *[5.06]*

Also see “Brake” section
(thumbnail opposite).

Dimensions for Twin-Lock™ valving

	19 kg *[42 lb]*	25.1 kg *[55 lb]*
	0.40 L *[24 cu.in]*	0.50 L *[30 cu.in]*

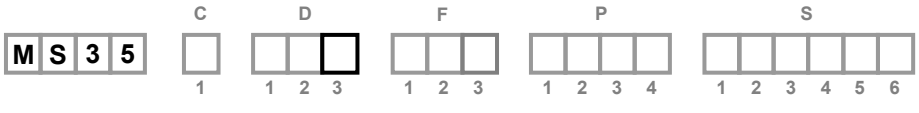




C	T20
B	115 *[4.53]*
Ø C	282 *[11.10]*
D	45 *[1.77]*
E	128.5 *[5.06]*

Also see “Brake” section (thumbnail opposite).

Hydraulic connections

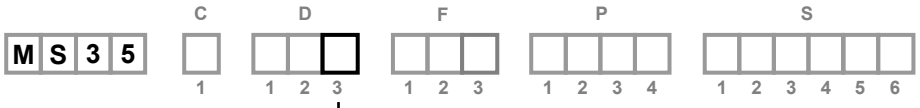


						P27™ Parking brake	C27™ Combined brake		
		Standards	Power supply	Case drain	2nd displacement control	Control of parking brake	Control of parking brake	Control of service brake	Flushing
S35			**R-L**	**1, 2**		**X**	**X**	**XD**	**3**
1C	9	ISO 6162 ISO 9974-1	DN32 PN400	M 22x1.5		M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
			R-A	**1, 2**	**Y**	**X**	**X**	**XD**	**3**
2C	1	ISO 6162 ISO 9974-1	DN25 PN400	M 22x1.5	M 18x1.5	M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
	7	ISO 6162 ISO 11926-1	DN25	1"1/16-12 UNF	9/16"-18 UNF	9/16"-18 UNF 3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
S18			**R-L**	**1, 2**		**X**	**X**	**XD**	**3**
1 Displacement	A	ISO 11926-1	1"1/16-12 UNF	7/8"-14 UNF		9/16"-18 UNF 3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
	1	ISO 6162 ISO 9974-1	DN19 PN400	M 22x1.5		M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
	2	ISO 6162 ISO 1179-1	DN19 PN400	Ø21 *[1/2" dia.]*		Ø17 *[3/8" dia.]*	M 20x1.5	M 14x1.5	M 22x1.5
	4	ISO 9974-1	M 27x2	M 22x1.5		M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
	7	ISO 6162 ISO 11926-1	DN19 PN400	7/8"-14 UNF		9/16"-18 UNF 3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
			R-A	**1, 2**	**Y**	**X**	**X**	**XD**	**3**
2 Displacement	A	ISO 11926-1	1"1/16-12	7/8"-14 UNF	3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
	1	ISO 6162 ISO 9974-1	DN19 PN400	M 22x1.5	M 16x1.5	M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
	1*	ISO 6162 ISO 9974-1	DN19 PN400	M 22x1.5	M 22x1.5	M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
	4	ISO 9974-1	M 27x2	M 22x1.5	M 16x1.5	M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
	4*	ISO 9974-1	M 27x2	M 22x1.5	M 22x1.5	M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
	7	ISO 6162 ISO 11926-1	DN19 PN400	7/8"-14 UNF	3/4"-16 UNF	9/16"-18 UNF 3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
	7*	ISO 6162 ISO 11926-1	DN19 PN400	7/8"-14 UNF	7/8"-14 UNF	9/16"-18 UNF 3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
			R-A1	**A2**	**1, 2**	**Y**	**X**	**X**	**XD**	**3**
Twin-Lock™	A	ISO 11926-1	1"1/16-12 UNF	1"1/16-12 UNF	3/4"-16 UNF 7/8"-14 UNF	9/16"-18 UNF 3/4"-16 UNF	9/16"-18 UNF 3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
	1	ISO 6162 ISO 9974-1	DN19 PN400	M 27x2	M 22x1.5	M 16x1.5	M 16x1.5	M 20x1.5	M 14x1.5	M 22x1.5
	7	ISO 6162 ISO 11926-1	DN19 PN400	1"1/16-12 UNF	3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF 3/4"-16 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
		ISO 9974-1						X	XD	3
Max. pressures		**MS** bar **MSE** *[PSI]*	450 *[6,527]* 400 *[5,802]*	450 *[6,527]* 400 *[5,802]*	1 *[15]*	30 *[435]*	30 *[435]*	30 *[435]*	120 *[1740]*	120 *[1740]*

***** : Only symmetrical valving

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

Hydraulic connections



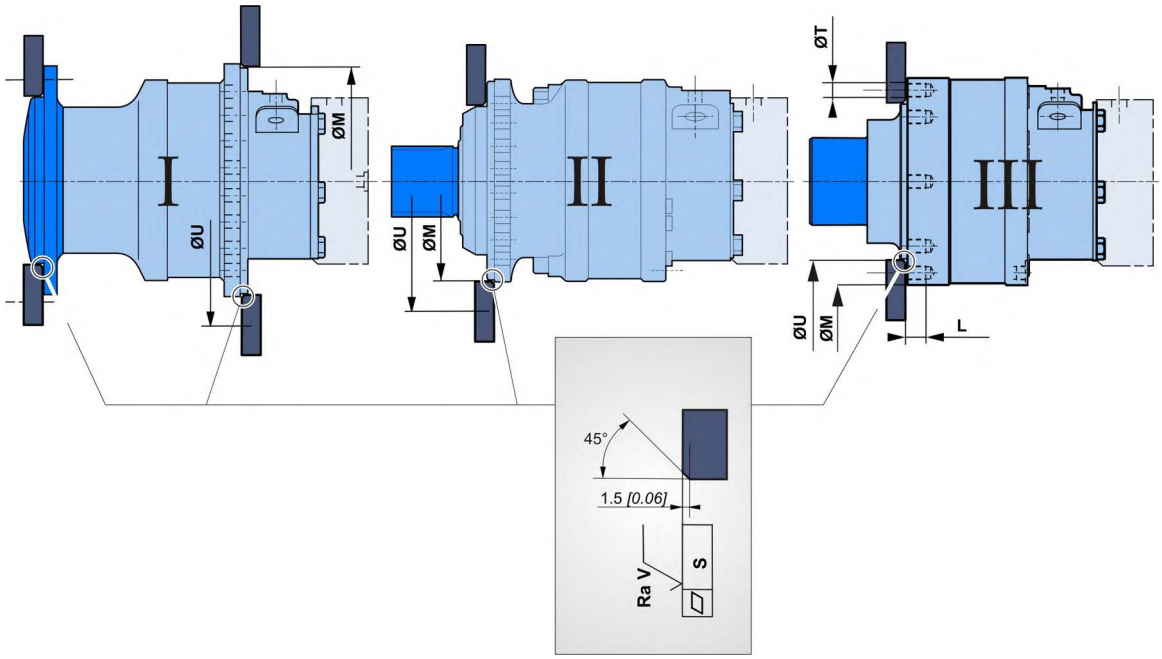
		Standards	Power supply		Case drain	2nd displacement control	Control of parking brake	Control of service brake	Flushing
							P20™ brake	S20™ Service brake	
S35			**R-L**		**1, 2**		**X**	**XD**	**3**
1C	9	**ISO 6 162 ISO 9 974-1**	DN32 PN400		M 22x1.5		M 16x1.5	M 14x1.5	M 22x1.5
			R-A		**1, 2**	**Y**	**X**	**XD**	**3**
2C	1	**ISO 6 162 ISO 9 974-1**	DN25 PN400		M 22x1.5	M 18x1.5	M 16x1.5	M 14x1.5	M 22x1.5
	7	**ISO 6 162 ISO 11 926-1**	DN25		1"1/16-12 UNF	9/16"-18 UNF	9/16"-18 UNF	9/16"-18 UNF	3/4"-16 UNF
S18			**R-L**		**1, 2**		**X**	**XD**	**3**
1 Displacement	A	**ISO 11 926-1**	1"1/16-12 UNF		7/8"-14 UNF		3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF
	1	**ISO 6 162 ISO 9 974-1**	DN19 PN400		M 22x1.5		M 16x1.5	M 14x1.5	M 22x1.5
	2	**ISO 6 162 ISO 1 179-1**	DN19 PN400		Ø21 *[1/2" dia.]*		M 16x1.5	M 14x1.5	M 22x1.5
	4	**ISO 9 974-1**	M 27x2		M 22x1.5		M 16x1.5	M 14x1.5	M 22x1.5
	7	**ISO 6 162 ISO 11 926-1**	DN19 PN400		7/8"-14 UNF		3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF
			R-A		**1, 2**	**Y**	**X**	**XD**	**3**
2 Displacement	A	**ISO 11 926-1**	1"1/16-12		7/8"-14 UNF	3/4"-16 UNF	3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF
	1	**ISO 6 162 ISO 9 974-1**	DN19 PN400		M 22x1.5	M 16x1.5	M 16x1.5	M 14x1.5	M 22x1.5
	1*	**ISO 6 162 ISO 9 974-1**	DN19 PN400		M 22x1.5	M 22x1.5	M 16x1.5	M 14x1.5	M 22x1.5
	4	**ISO 9 974-1**	M 27x2		M 22x1.5	M 16x1.5	M 16x1.5	M 14x1.5	M 22x1.5
	4*	**ISO 9 974-1**	M 27x2		M 22x1.5	M 22x1.5	M 16x1.5	M 14x1.5	M 22x1.5
	7	**ISO 6 162 ISO 11 926-1**	DN19 PN400		7/8"-14 UNF	3/4"-16 UNF	3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF
	7*	**ISO 6 162 ISO 11 926-1**	DN19 PN400		7/8"-14 UNF	7/8"-14 UNF	3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF
			R-A1	**A2**	**1, 2**	**Y**	**X**	**XD**	**3**
Twin-Lock™	A	**ISO 11 926-1**	1"1/16-12 UNF	1"1/16-12 UNF	3/4"-16 UNF 7/8"-14 UNF	9/16"-18 UNF 3/4"-16 UNF	3/4"-16 UNF	9/16"-18 UNF	7/8-14 UNF
	1	**ISO 6 162 ISO 9 974-1**	DN19 PN400	M 27x2	M 22x1.5	M 16x1.5	M 16x1.5	M 14x1.5	M 22x1.5
	7	**ISO 6 162 ISO 11 926-1**	DN19 PN400	1"1/16-12 UNF	3/4"-16 UNF	9/16"-18 UNF	3/4"-16 UNF	9/16"-18 UNF	7/8"-14 UNF
		ISO 9 974-1					**X**	**XD**	**3**
Max. pressures		**M S** bar **M SE** *[PSI]*	450 *[6,527]* 400 *[5,802]*	450 *[6,527]* 400 *[5,802]*	1 *[15]*	30 *[435]*	30 *[435]*	120 *[1740]*	120 *[1740]*

***** : Only symmetrical valving.

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.

Chassis mountings



Take care over the immediate environment of the connections.

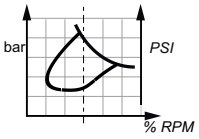
		ØM (1) mm *[in]*	ØU mm *[in]*	ØT mm *[in]*	L mm *[in]*	S mm *[in]*	Ra V µm *[µin]*		Class
MS18	I	330 *[12,99]*	385 *[15,16]*	-	-	0,2 *[0,008]*	12,5 *[0,49]*	2 x 5 M 20 x 2	8,8
	II	315 *[12,40]*		-	-				
MS35	I	380 *[14,96]*	485 *[19,09]*	-	-			2 x 8 M 20 x 2	
	II	330 *[12,99]*		-	-				
	III	250 *[9,84]*		22,5 *[0,886]*	30 *[1,181]*			8 x M 20 x 2	

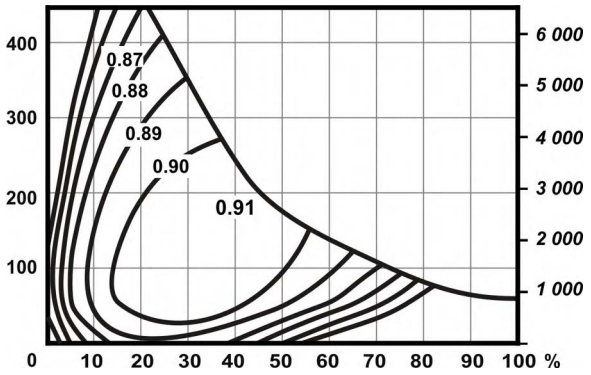
(1) +0,3 *[+0,012]*
+0,2 *[+0,008]*

Efficiency

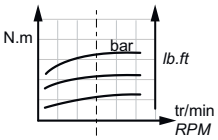
Overall efficiency

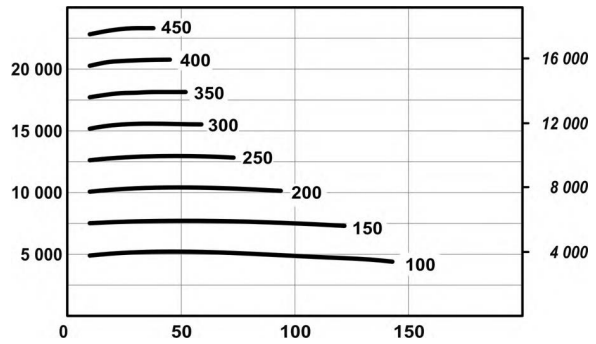
Average values given for guidance for code 0 displacement after 100 hours of operation with HV46 hydraulic fluid at 50°C *[122°F]*.





Actual output torque



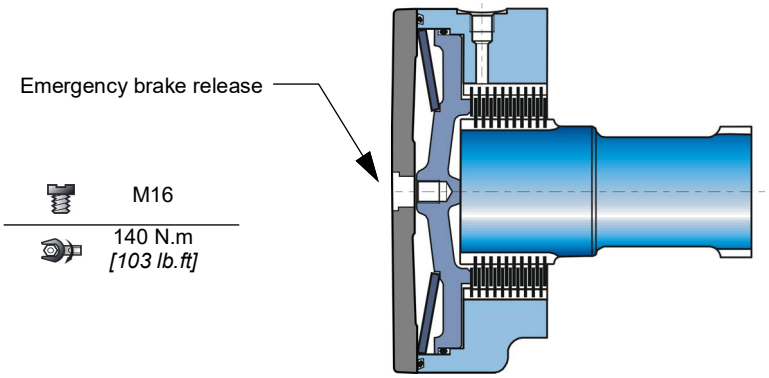


For a precise calculation, consult your Poclain Hydraulics application engineer.

BRAKES

Rear brake

	C	D	F	P	S
	1	1 2 3	1 2 3	1 2 3 4	1 2 3 4 5 6
M S 3 5			T 2 0		



Brake principle
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.

C	T 2 0
Parking brake torque at 0 bars on housing (new brake)	18,600 Nm *[13,720 lb.ft]*
Dynamic emergency braking torque at 0 bars on housing(max. 10 uses of emergency brakes)	12,800 Nm *[9,440 lb.ft]*
Residual parking braking at 0 bars on housing *	13,940 Nm *[10,280 lb.ft]*
Min. brake release pressure	12 bar *[174 PSI]*
Max. brake release pressure	30 bar *[435 PSI]*
Oil capacity	180 cm³ *[11.0 cu.in]*
Volume for brake release	70 cm³ *[4.3 cu.in]*
Max. energy dissipation	193 033 J

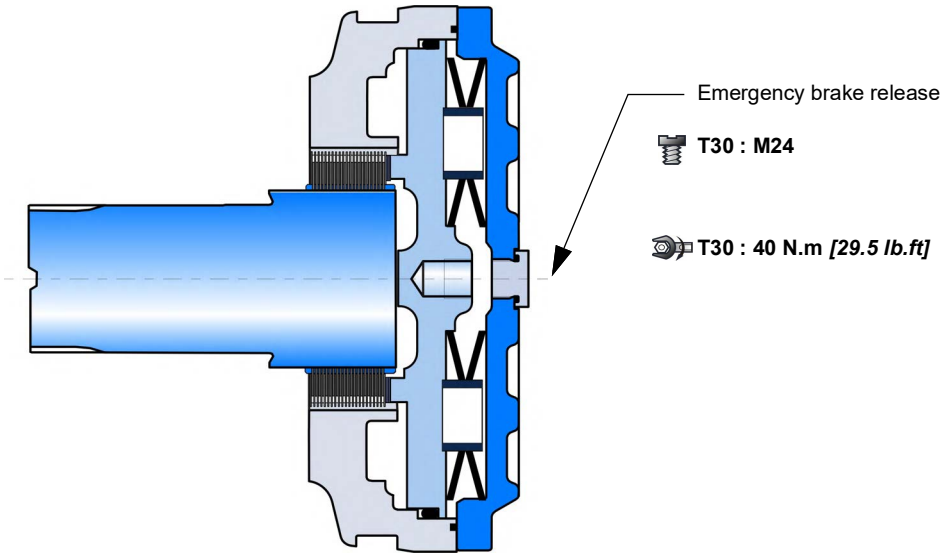
* After emergency brake has been used.

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.

Rear brake

	C	D		F		P		S		
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M S 3 5					T	3	0										



Brake principle

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

C	T 3 0
Parking brake torque at 0 bars on housing (new brake)	30,000 Nm *[22,130 lb.ft]*
Dynamic emergency braking torque at 0 bars on housing (max. 10 uses of emergency brakes)	16,250 Nm *[11,990 lb.ft]*
Residual parking braking at 0 bars on housing *	18,750 Nm *[13,830 lb.ft]*
Min. brake release pressure	10 bar *[145 PSI]*
Max. brake release pressure	30 bar *[435 PSI]*
Oil capacity	450 cm³ *[27.5 cu.in]*
Volume for brake release	96 cm³ *[5.9 cu.in]*

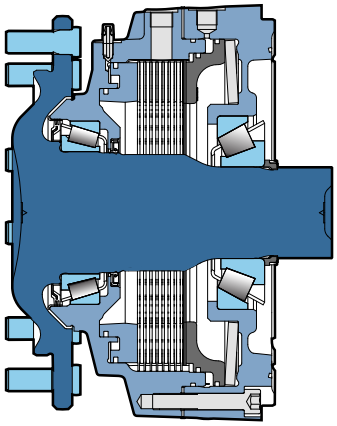
After emergency brake has been used.

Do not run-in the multidisc brakes.

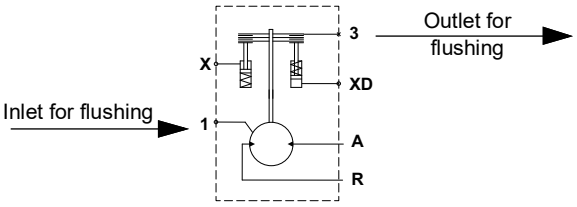
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake). For all vehicles capable of speeds over 25 km/h, please contact your Poclain Hydraulics application engineer.

C27™ Combined brake

	C	D	F	P	S
	1	1 2 3	1 2 3	1 2 3 4	1 2 3 4 5 6
M S 3 5					



Brake schematics



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

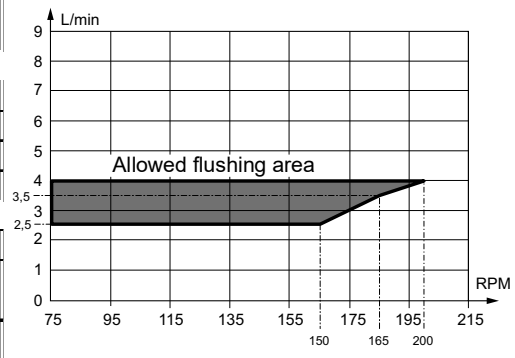
Brake operation

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.

C | E T 3 0 / F T 3 0

General information	
Max. rotation speed	200 rpm
Max. energy dissipation for 1 braking (maintenance needed)	1000 kJ
Dynamic brake information	
Max. permissible torque during dynamic braking	32 000 Nm *[23 600 lb.ft]*
Pressure to obtain max. permissible braking	70 bar *[1 015 PSI]*
Piston chamber piloting volume, worn brake	74 cm³ *[4,5 cu.in]*
Service brake max. allowed energy	500 kJ
Parking brake information	
Min. parking brake torque	18 000 Nm *[13 280 lb.ft]*
Min. dynamic brake torque in case of emergency brake with new brake	24 000 Nm *[17 700 lb.ft]*
Min. dynamic brake torque in case of emergency brake with worn brake	13 000 Nm *[9 590 lb.ft]*
Release brake pressure (min. / max.)	100 *[1 450]* / 135 *[1 958]*
Piston chamber piloting volume (worn brake)	48 cm³ *[2,9 cu.in]*
Number of parking brake applications	1 000 000

Flushing flow vs Rotation speed

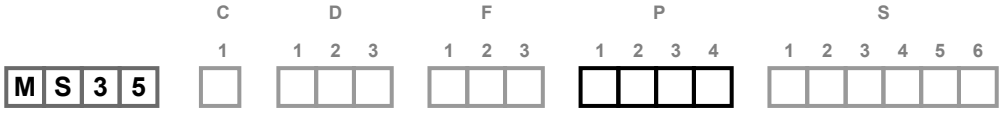


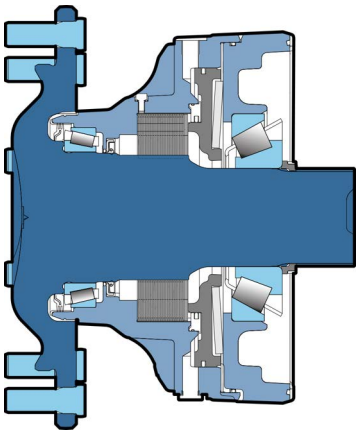
Brake release pressure vented.

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

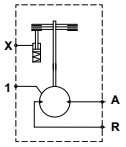
When using the Boosted brake™ option, the C27™ bearing support might not be able to withstand the combination of maximum hydrostatic torque and maximum service brake torque. Please contact your Poclain Hydraulics application engineer for a detailed calculation.

P27™ Parking brake





Brake schematic



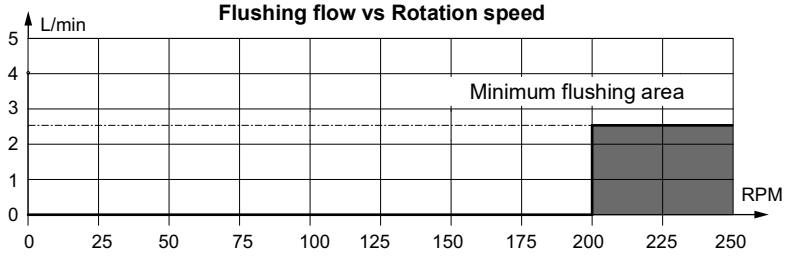
Brake principle

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.
This is a multidisc brake which is activated by a lack of pressure.

C | Q 3 1 0 / P 3 1 0

Max. rotation speed	200 rpm
Max. energy dissipation	200 kJ
Number of parking brake applications	1,000,000
Release brake pressure (min/max)	16 *[232]* / 30 *[435]*
Min. parking brake torque	19,800 Nm *[14,600 lb.ft]*
Min. static brake torque (after emergency braking)	16,400 Nm *[12,100 lb.ft]*
Min. dynamic brake torque in case of emergency braking with new brake	14,500 Nm *[10,690 lb.ft]*

Flushing flow vs Rotation speed



Do not run-in the multidisc brakes.

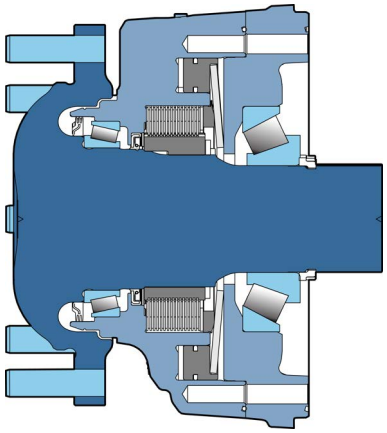
The use of certain oils may not offer the characteristics stated above. Consult your Poclain Hydraulics application engineer.

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.

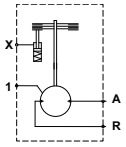
When using the Boosted brake™ option, the P27™ bearing support might not be able to withstand the combination of maximum hydrostatic torque and maximum service brake torque. Please contact your Poclain Hydraulics application engineer for a detailed calculation.

P20™ Parking brake

	C	D		F			P				S					
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M S 3 5																	



Brake schematic



Brake principle
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.

	C	R 2 1 0 / S 2 1 0
Max. rotation speed		200 rpm
Max. energy dissipation		200 kJ
Number of parking brake applications		1,000,000
Release brake pressure (min/max)		16 bar *[232 PSI]* / 30 bar *[435 PSI]*
Min. parking brake torque		20,000 Nm *[14,750 lb.ft]*
Min. static brake torque (after emergency braking)		15,000 Nm *[11,060 lb.ft]*
Min. dynamic brake torque in case of emergency braking with new brake		13,000 Nm *[9,590 lb.ft]*

Do not run-in the multidisc brakes.

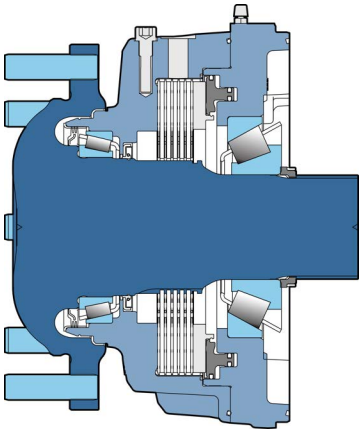
The use of certain oils may not offer the characteristics stated above. Consult your Poclain Hydraulics application engineer.

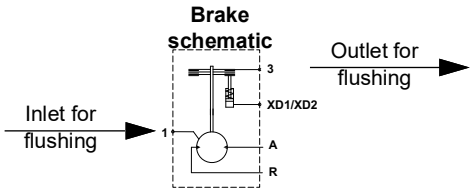
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake). For all vehicles capable of speeds over 25 km/h, please contact your Poclain Hydraulics application engineer.

When using the Boosted brake™ option, the P20™ 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.

S20™ Service brake

	C	D		F			P				S					
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M S 3 5																	

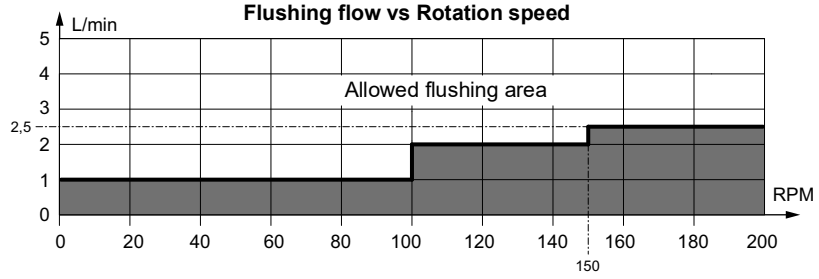




The dynamic brake must be flushed according to the brake schematics (flushing flow always goes of the bearing support).

Brake principle
This is a multidisc brake which 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 2 1 0 / V 2 1 0	W 2 1 0 / Y 2 1 0
Max. rotation speed	200 rpm	
Max. energy dissipation	1 250 kJ	
Permissible torque during dynamic braking	25 000 Nm *[18 440 lb.ft]*	
Pressure to obtain max. permissible braking	120 bar	
Piston chamber piloting volume, worn brake	97 cm³	
Service brake max. allowed energy	850 kJ	



Do not run-in the multidisc brakes.

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

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.

When using the Boosted brake™ option, the S20™ 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.

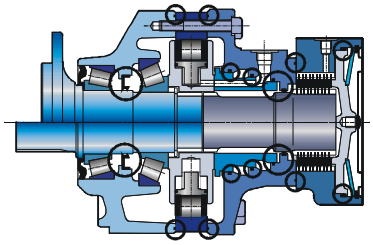
OPTIONS

	C	D		F			P				S					
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M S 3 5																	

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

1 - Fluorinated elastomer seals

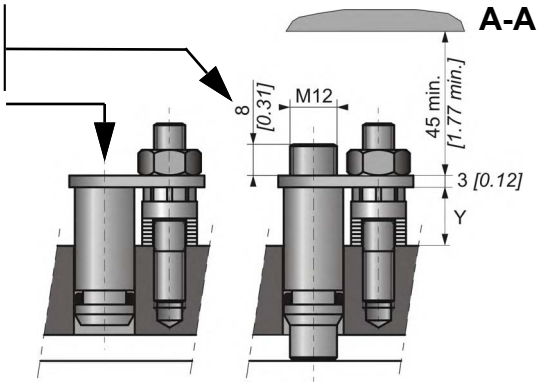
Nitrile seals marked in the figure below replaced by fluorinated elastomer seals.



Consult your Poclain Hydraulics sales engineer.

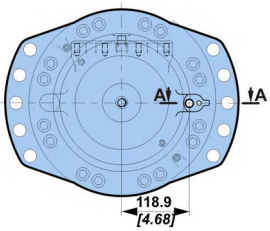
2 - S - Q - 8 - Installed speed sensor or predisposition

Designation	C
T4 Speed sensor (without rotation direction)	2
TR Speed sensor (digital rotation direction)	S
TD Speed sensor (two phase shifted frequencies)	Q
Predisposition for Speed sensor	8

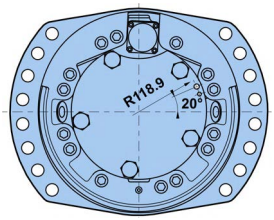


Max. length Y= 15.6

Standard number of pulses per revolution= 56



MS18



MS35

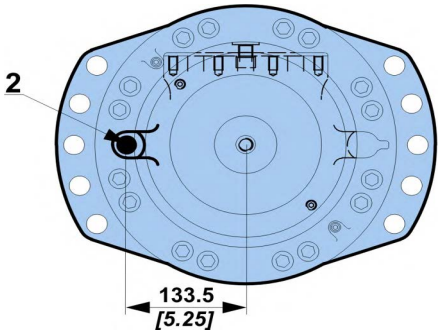
Look at the "Mobile Electronic" N° A01889D technical catalogue for the sensor specifications and its connection.

To install the sensor, see the "Installation guide" brochure No. B59689D.

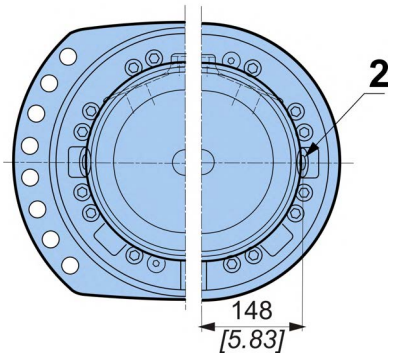
5 - Drainage

Additional drain in the cover.

MS18



MS35 1 C



6 - Industrial support

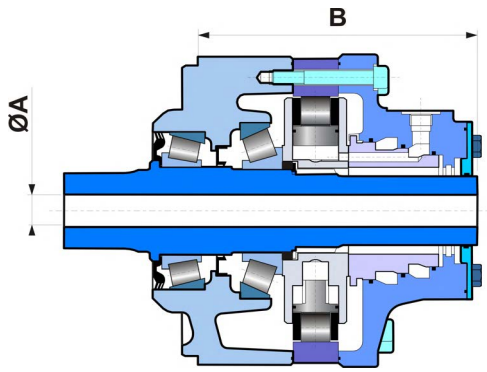
Reduction of around 50% from the rated value in the bearings' preload value.

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

7 - Diamond™

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

A - Hollow shaft

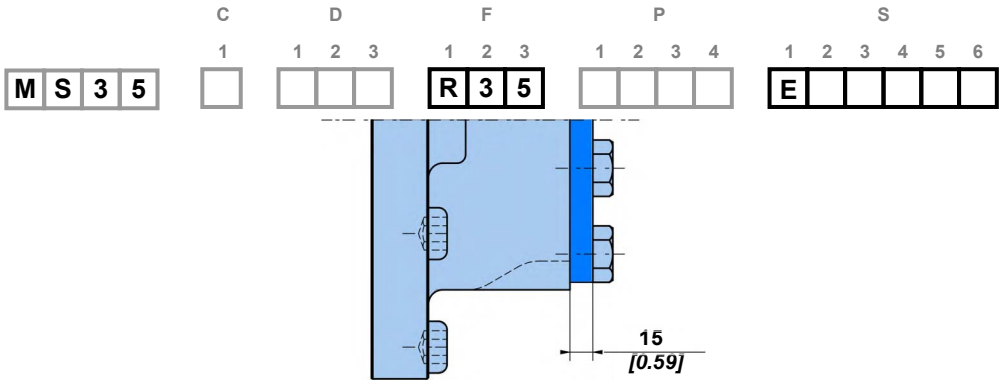


A mm *[in]*	B mm *[in]*
Ø 60 *[2.36 dia.]*	668 *[26.30]*

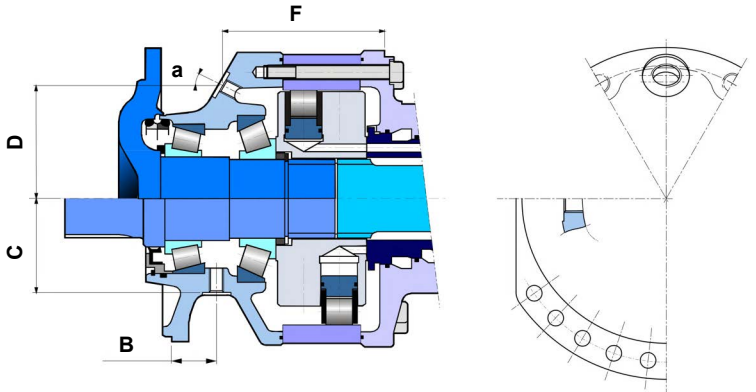
Radial load x 0.75
No torque transmittable to the rear

E - Reinforced sealing

Requires reinforced seals and, for an unbraked motor, a rear reinforced plate (**R35** - 15 *[0.59]*thick, instead of 6 *[0.236]*).



B - Drain on the bearing support



		B	C	D	F	a
		mm *[in]*	mm *[in]*	mm *[in]*	mm *[in]*	
Shaft motor	**M22 x 1.5**	193 *[7.60]*	56 *[2.20]*			
Wheel motor						

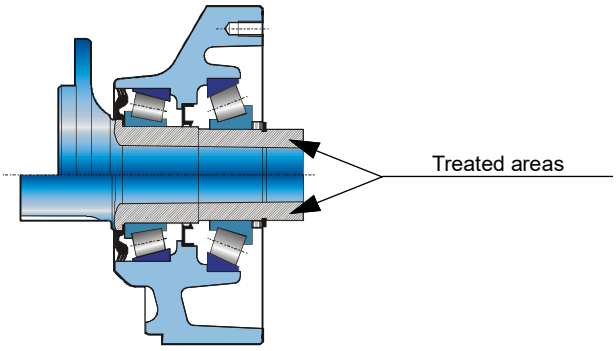
G - Special wheel rim mounting

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

Consult your Poclain Hydraulics sales engineer.

J - Treated shaft

Heat treatment on the indicated bearing radius and splines.



U - Boosted braking™

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

POCLAIN
Hydraulics

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.
The Poclain Hydraulics brand is the property of Poclain Hydraulics S.A.

02/06/2026
801 478 123F
801 478 193G
801 578 106H
801 578 118V
801 578 130J
A07447U
Not available
A14245J

www.poclain.com