YEOSHE

P-MS50

Hydraulic Motors



www.yeoshehydraulic.com

Efficient Performance

Innovative Technology

Reliable Quality and Service

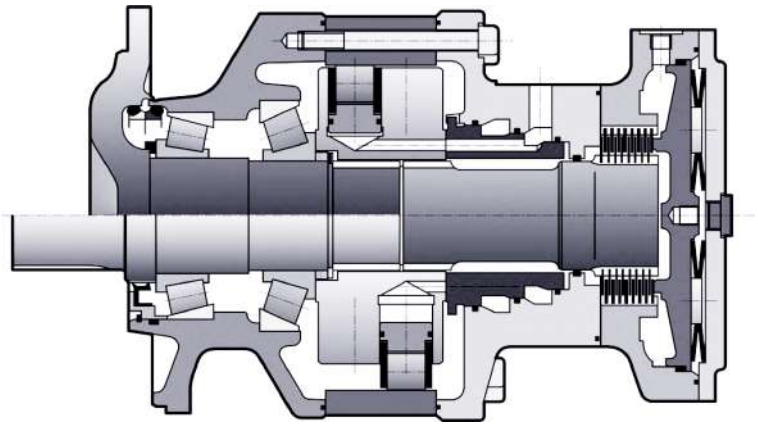
YEOSHE HYDRAULICS CO.,LTD.

characteristics



- **P-MS50 Max. pressure**

Cams with equal lobes	450 bar *[6,527 PSI]*
Cams with unequal lobes	450 bar *[6,527 PSI]*



	C		Cams with equal lobes						Cams with unequal lobes			
			7	8	9	0	1	2	K		A	
	1	cm³/tr *[cu.in/rev.]*	3,500 *[213.5]*	4,008 *[244.4]*	4,498 *[274.3]*	4,997 *[304.8]*	5,504 *[335.7]*	6,011 *[366.6]*	4,252 *[259.3]*		5,010 *[305.6]*	
	2	cm³/tr *[cu.in/rev.]*	1,750 *[106.7]*	2,004 *[122.2]*	2,249 *[137.2]*	2,499 *[152.4]*	2,752 *[167.8]*	3,006 *[183.3]*	2,752 *[167.8]*	1,500 *[91.5]*	3,006 *[183.3]*	2,004 *[122.2]*
Theoretical torque	1	at 100 bar Nm	5,565	6,373	7,152	7,945	8,751	9,557	4,770		1,666	
		at 1000 PSI *[lb.ft]*	*[2,830]*	*[3,241]*	*[3,637]*	*[4,040]*	*[4,450]*	*[4,860]*	*[2,426]*		*[847]*	
Max. power	1	kW *[HP]*	140 *[188]*									
	2	preferred kW *[HP]*	93 *[125]*									
	2	non-preferred kW *[HP]*	70 *[94]*									
Max. speed	1	1C tr/min *[RPM]*	205	180	160	145	132	122	135		122	
	1	1C tr/min *[RPM]*	200	180	160	145	130	120	130		120	
	2		225	200	175	160	150	135	150	185	135	200

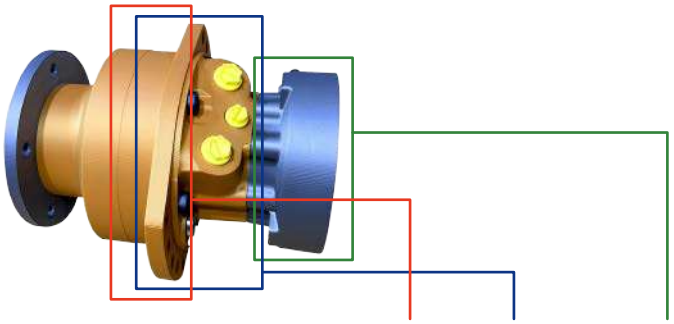
1 First displacement
2 Second displacement

Motor inertia = 1 kg.m²

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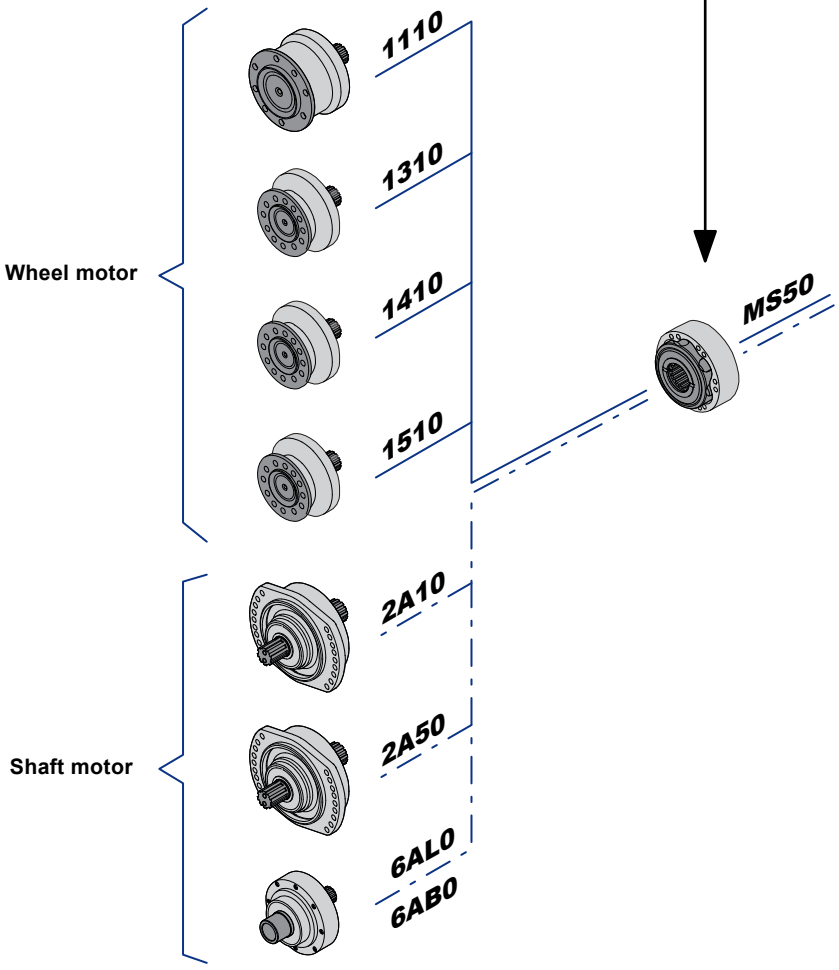
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Modularity

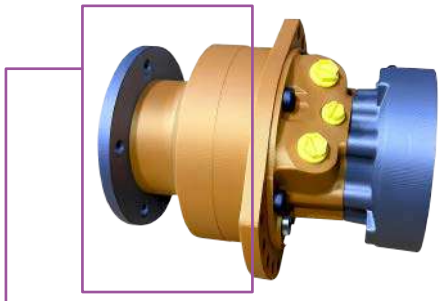


C	P-M	S	5	0	C	D			F			P				S					
					1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
															0						

Bearing supports



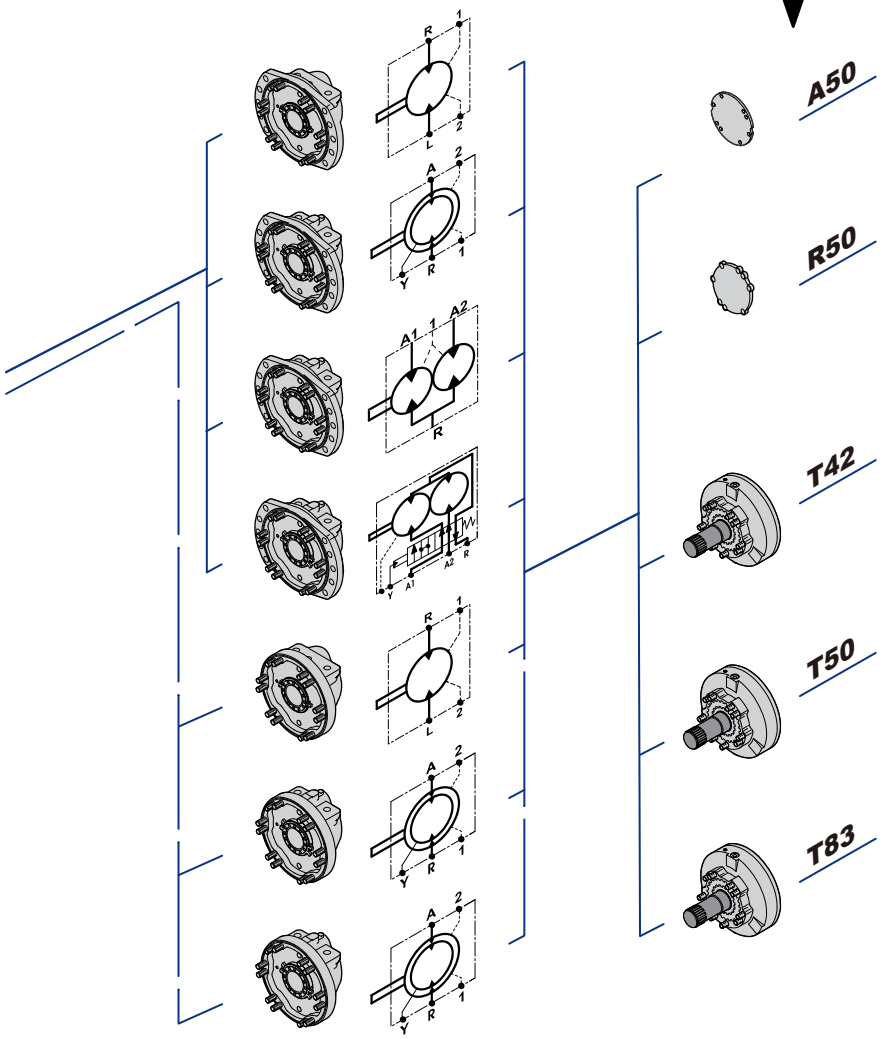
Modularity



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

Valving systems

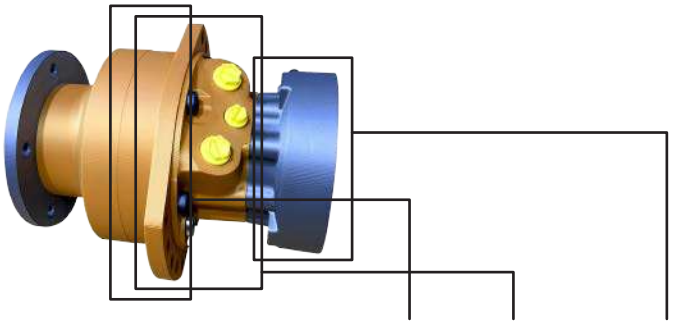
Brakes



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Modelcode



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

Came type

		1 cm³/tr [cu.in/rev.]	2	
C1	Cams with equal lobes	3,500 [213.5]	1,750 [106.7]	7
		4,008 [244.4]	2,004 [122.2]	8
		4,498 [274.3]	2,249 [137.2]	9
		4,997 [304.8]	2,499 [152.4]	0
		5,504 [335.7]	2,752 [167.8]	1
		6,011 [366.6]	3,006 [183.3]	2
	Cams with unequal lobes	4,252 [259.3]	2,752 [167.8]	K
			1,500 [91.5]	
		5,010 [305.6]	3,006 [183.3]	A
			2,004 [122.2]	

1 First displacement
2 Dual displacement

Valving cover

D2	Without mounting	1	1	D	K
	Lug fixing	2	2	E	V
		1-displacement	2-displacement	Twin-Lock	Twin-Lock or 2-displacement

Connection type

D3	Without cover		0
	ISO 6162 **ISO 9974-1**	DN 25 SAE flanges metric connections	1
	ISO 6162 **ISO 9974-1**	DN 32 SAE flanges metric connections	6
	ISO 6162 **ISO 11926-1**	DN 25 SAE flanges connections	7

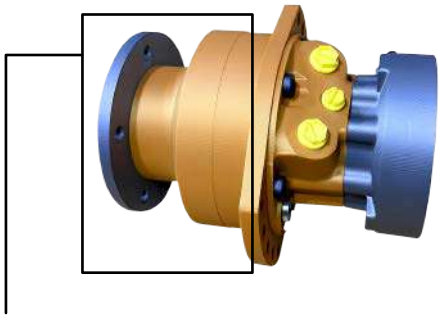
Valving type

D1	1-displacement valving		1
	2-displacement valving (No special direction)	Ratio 2	A
		Ratio < 2	B
		Ratio > 2	C
	2-displacement & Twin-Lock valving (Clockwise)	Ratio 2	D
		Ratio < 2	E
		Ratio > 2	F
	2-displacement & Twin-Lock valving (Counterclockwise)	Ratio 2	G
		Ratio < 2	H
		Ratio > 2	J

Rear brake

F1 ~ F3	Without brake	Simple plate	A50
		Reinforced plate	R50
	Brakes	Screwed environmental cover	T42
			T50
			T83

Modelcode



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

Front unit

P1	Without bearing support	0
	Without mounting	1
	Lug mounting	2
	Motor torque	6
	Fixation on the spindle	8

Shaft Specifications

P3	**Flange**	
	Without studs	1
	With studs + nuts	2
	With studs	3
	Spline (if P2 = A)	
	NF E22-141 splines	1
	DIN 5480 splines	5
	Female splines DIN 5480	B
	Shrink disks (if P2 = A)	
	Shaft for shrink disks	L

Bearing support

P2	Without shaft	0
	12 x Ø26 on Ø425	1
	10 x Ø24 on Ø335	3
	10 x Ø24 on Ø335	4
	12 x Ø22 on Ø275	5
	Bearing support for shaft	A

Options

S1 ~ S6	Without Options or Adaptations	0
	Fluorinated elastomer seals	1
	T4 Speed sensor installed	2
	Drainage	5
	Industrial bearing support	6
	Diamond	7
	Predisposition for speed sensor	8
	Double-centering valving cover	9
	Hollow shaft	A
	Drain on the bearing support	B
	Hostile environment	C
	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
	For vertical mounting (shaft upward)	N

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Methodology

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

Important notes and warnings are indicated

Safety comment.

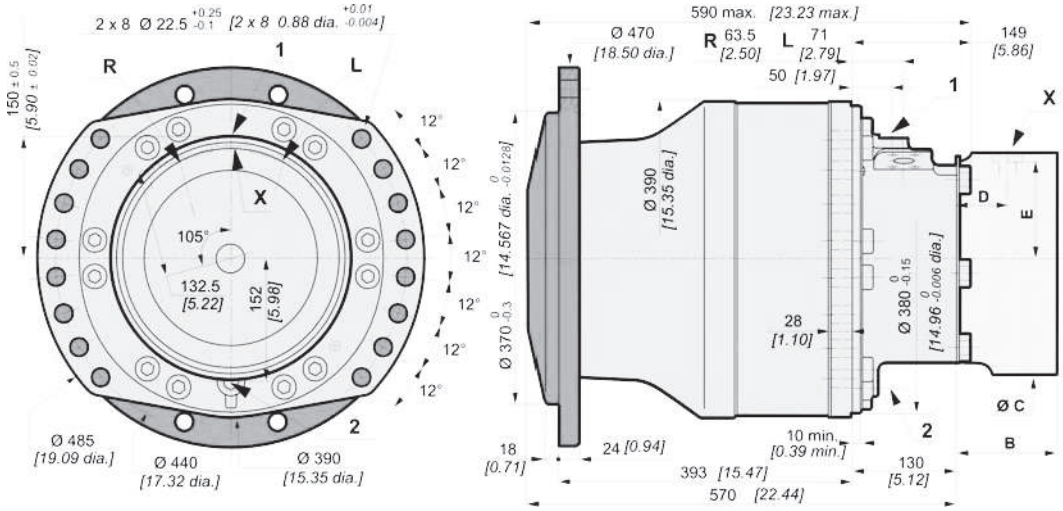
This document also includes essential operating instructions for the product and general information.

Expressed as follows

- Essential instructions.
- General information.
- Information on the model number.
- Weight of component without oil.
- Volume of oil.
- Units.
- Tightening torque.
- Screws.
- Information intended for 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).

Dimensions for standard (1110) 1-displacement motor

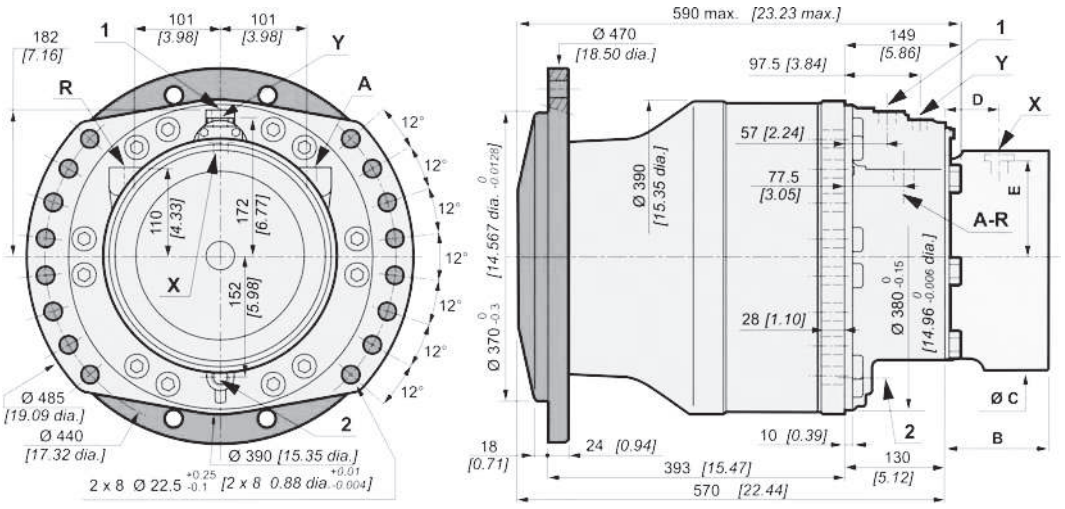


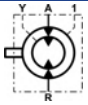
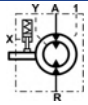
KG	310 kg *[682 lb]*	415 kg *[913 lb]*
	6 L *[360 cu.in]*	4.5 L *[270 cu.in]*



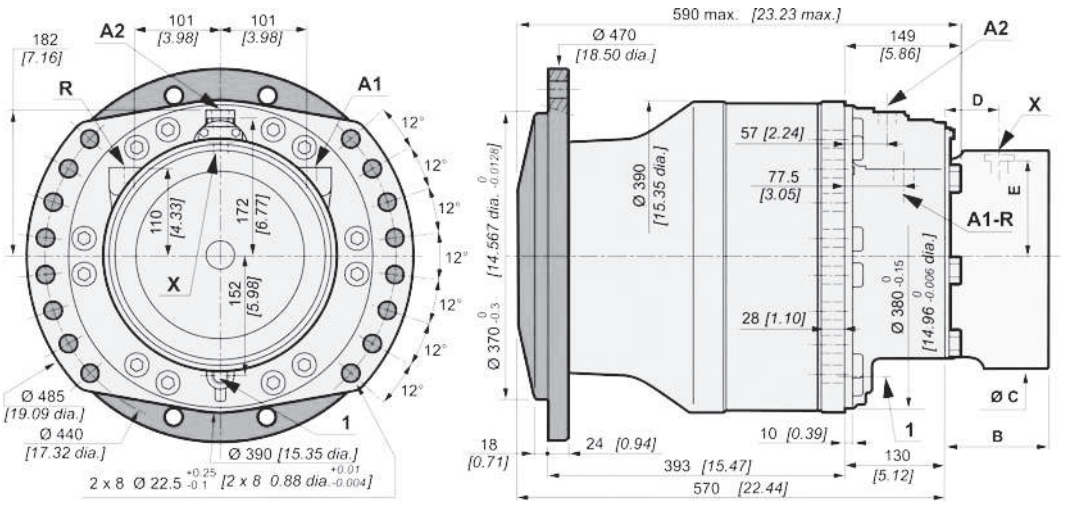
Wheel Motor

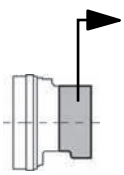
Dimensions for standard (1110) 2-displacement motor



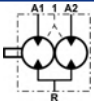
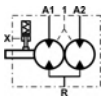
KG	310 kg *[682 lb]*	415 kg *[913 lb]*
	6 L *[360 cu.in]*	4.5 L *[270 cu.in]*
		

Dimensions for standard (1110) Twin-Lock motor





C	T 4 2	T 5 0	T 8 3
B	148 *[5.83]*	157.5 *[6.20]*	159 *[6.26]*
ØC *[dia.]*	375 *[14.76]*	375 *[14.76]*	375 *[14.76]*
D	63.5 *[2.50]*	63.5 *[2.50]*	63.5 *[2.50]*
E	183.5 *[7.22]*	183.5 *[7.22]*	183.5 *[7.22]*

KG	310 kg *[682 lb]*	415 kg *[913 lb]*
	6 L *[360 cu.in]*	4.5 L *[270 cu.in]*
		

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

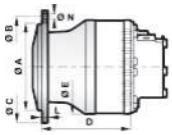
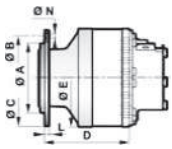
Also see "Brake" section (thumbnail opposite).

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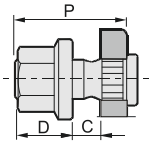
Wheel Motor

Support types

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

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 1 2 3 4 **1 1 1 0**	Ø 370 *[14.57 dia.]*	Ø 425 *[16.73 dia.]*	Ø 472 *[18.58 dia.]*	393 *[15.47]*	Ø 390 *[15.35 dia.]*	Ø 26 *[1.02 dia.]*	10 x M22x1.5	17 *[0.67]*	
P 1 2 3 4 **1 3 1 0**	Ø 280.7 *[11.05 dia.]*	Ø 335 *[13.19 dia.]*	Ø 379 *[14.92 dia.]*	335 *[13.19]*	Ø 390 *[15.35 dia.]*	Ø 24 *[0.94 dia.]*	12 x M24x2	24 *[0.94]*	
P 1 2 3 4 **1 4 1 0**	Ø 280.7 *[11.05 dia.]*	Ø 335 *[13.19 dia.]*	Ø 379 *[14.92 dia.]*	296 *[11.65]*	Ø 390 *[15.35 dia.]*	10 x Ø 24 *[10 x 0.94 dia.]*	-	17 *[0.67]*	
P 1 2 3 4 **1 5 1 0**	Ø 220.7 *[8.69 dia.]*	Ø 275 *[10.83 dia.]*	Ø 314.5 *[12.38 dia.]*	348 *[13.70]*	Ø 390 *[15.35 dia.]*	(8+4) x Ø 22 *[0.87 dia.]*	-	17 *[0.67]*	

Studs



		P mm *[in]*	C min. mm *[in]*	C max. mm *[in]*	D mm *[in]*	Class
Various studs	M22 x 1.5	80 *[3.15]*	5 *[0.20]*	36 *[1.42]*	26 *[1.02]*	12.9
	M24 x 2	95 *[3.74]*		38 *[1.50]*	30 *[1.18]*	
Screws	M20	-	-	-	-	12.9

See generic installation motors N°B59689D.

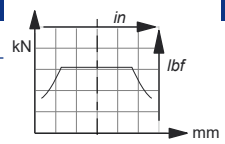
Wheel Motor

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

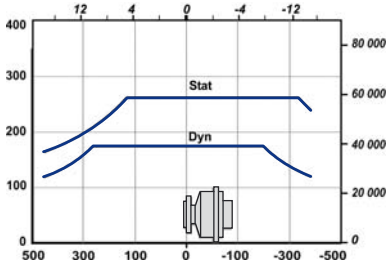


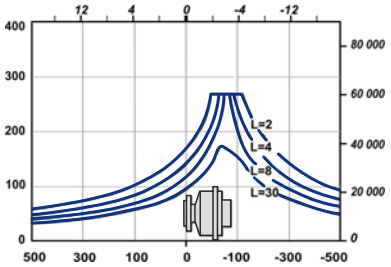
Service life of bearings

Test conditions :

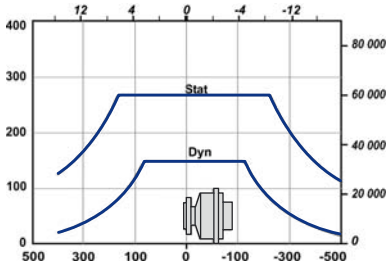
L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

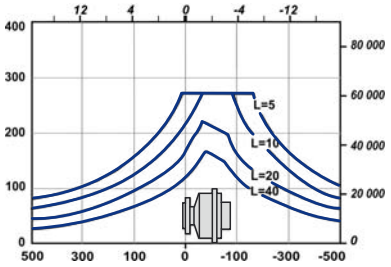
P			
1	2	3	4
1	1	1	0



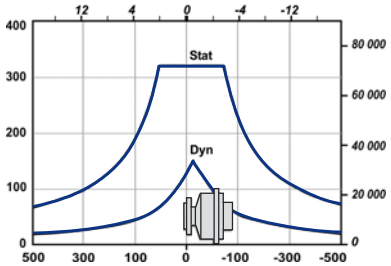


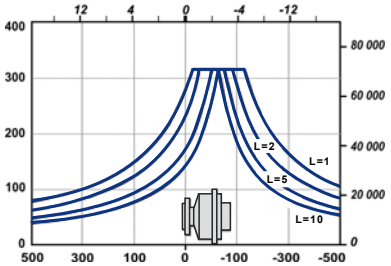
P			
1	2	3	4
1	3	1	0



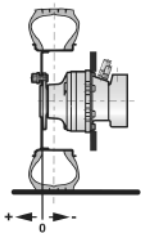


P			
1	2	3	4
1	4	1	0
1	5	1	0





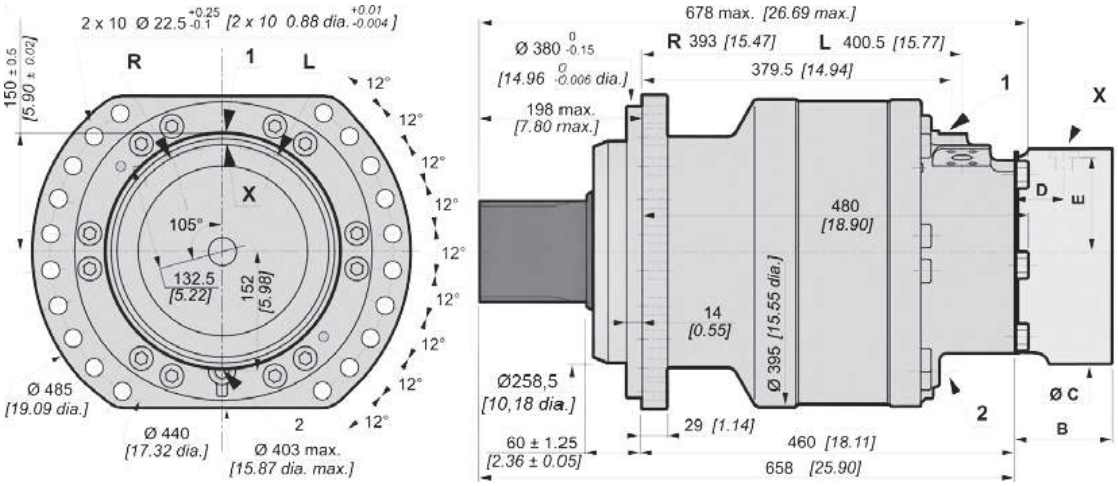
The service life of the components is influenced by the pressure.You must check that the combination of forces applied (Axial load / Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application's specifications.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

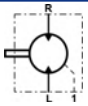
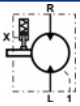


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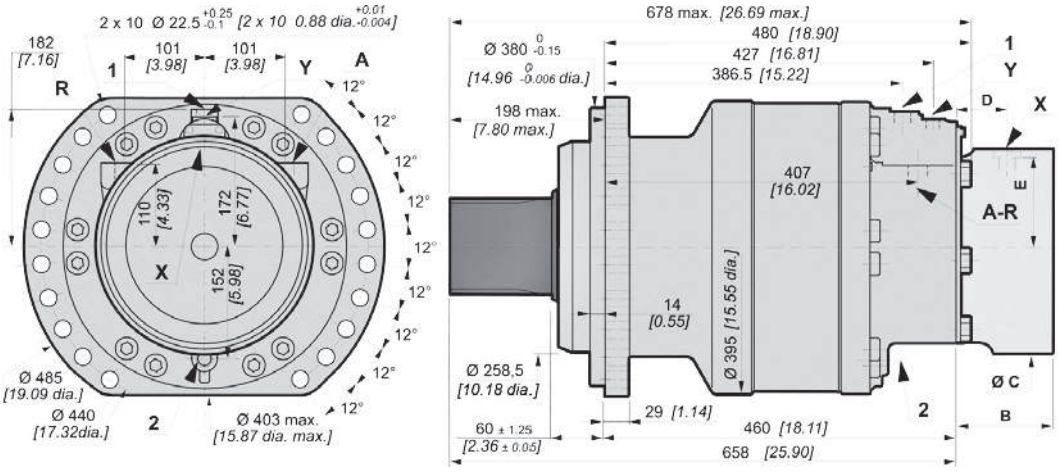
Shaft Motor

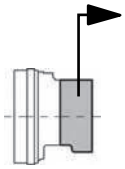
Dimensions for standard (2A50) 1-displacement motor



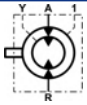
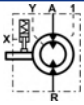
KG	265 kg *[583 lb]*	370 kg *[814 lb]*
	6 L *[360 cu.in]*	4.5 L *[270 cu.in]*
		

Dimensions for standard (2A50) 2-displacement motor





C	T 4 2	T 5 0	T 8 3
B	148 *[5.83]*	157.5 *[6.20]*	159 *[6.26]*
ØC *[dia.]*	375 *[14.76]*	375 *[14.76]*	375 *[14.76]*
D	63.5 *[2.50]*	63.5 *[2.50]*	63.5 *[2.50]*
E	183.5 *[7.22]*	183.5 *[7.22]*	183.5 *[7.22]*

KG	265 kg *[583 lb]*	370 kg *[814 lb]*
	6 L *[360 cu.in]*	4.5 L *[270 cu.in]*
		

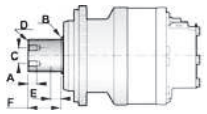
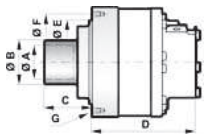
Also see 'Valving systems and hydrobases' section (thumbnail opposite).

Also see "Brake" section (thumbnail opposite).

Shaft Motor

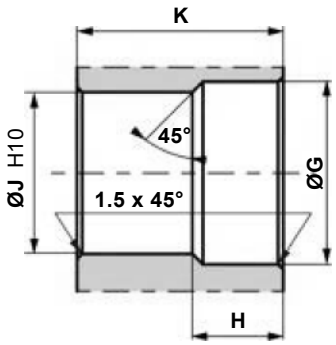
Support types

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

C			A mm *[in]*	B mm *[in]*	C mm *[in]*	D mm *[in]*	E mm *[in]*	F mm *[in]*	
P 1 2 3 4 **2 A 5 0**	**DIN 5480** splines								
	Nominal Ø	130 *[5.12]*	40 *[1.57]*	R 4 *[R 0.16]*	60 *[2.36]*	2 x M16	32 *[1.26]*	136 *[5.35]*	
	Module	5							
	Z	24							
P 1 2 3 4 **2 A 1 0**	**NF E22-141** splines								
	Nominal Ø	130 *[5.12]*	40 *[1.57]*	R 4 *[R 0.16]*	60 *[2.36]*	2 x M16	32 *[1.26]*	136 *[5.35]*	
	Module	3.75							
	Z	33							
P 1 2 3 4 **6 A L 0**			Ø 115 *[4.53 dia.]*	Ø 155 *[6.10 dia.]*	170 *[6.69]*	388 *[15.28]*	Ø 258.5 *[10.18 dia.]*	Ø 340 *[13.39 dia.]*	
P 1 2 3 4 **6 A B 0**	**NF E22-141** splines								
	Nominal Ø	120 *[4.72]*	Ø 122 *[4.80 dia.]*	Ø 159 *[6.26 dia.]*	166 *[6.54]*	373.2 *[14.69]*	Ø 258.5 *[10.18 dia.]*	Ø 340 *[13.39 dia.]*	
	Module	5							
	Z	22							

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

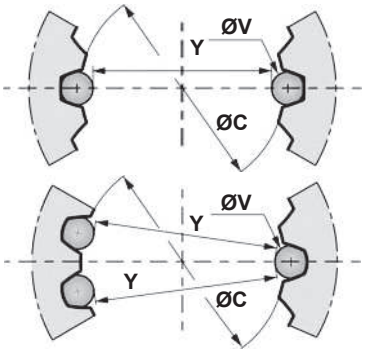
Splined coupling



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	H	Ø J	K	N	Mo	Z	Offset	Ø C (H10)	Ø V	Y	Tolerance µm *[µin]*
P 1 2 3 4 **2 A 5 0**	132 *[5.20]*	33 *[1.30]*	120 *[4.72]*	135 *[5.31]*	130 *[5.12]*	5	24	2.25 *[0.09]*	120 *[4.72]*	9 *[0.35]*	111.104 *[4.37]*	+87 / 0 *[+3.425 / 0]*
P 1 2 3 4 **2 A 1 0**	131 *[5.16]*	33 *[1.30]*	122.5 *[4.82]*	135 *[5.31]*	130 *[5.12]*	3.75	33	2,373 *[0.093]*	122.5 *[4.82]*	7.5 *[0.30]*	115.081 *[4.53]*	+ 113 / 0 *[+4.448 / 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]*.

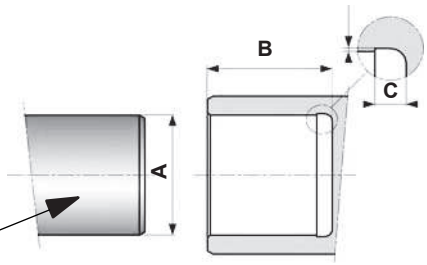
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Shaft Motor

Cylindrical bushed coupling

C	A mm *[in]*	B mm *[in]*	C mm *[in]*	D mm *[in]*
6 A L 0	Ø 115 *[4.53 dia.]*	105 *[4.13]*	10 *[0.394]*	0.5 *[0.0197]*

R min. :
640 N/mm² [132 800 PSI]

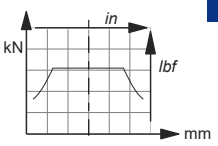


Load curves

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]*.

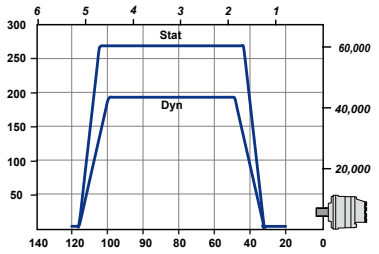


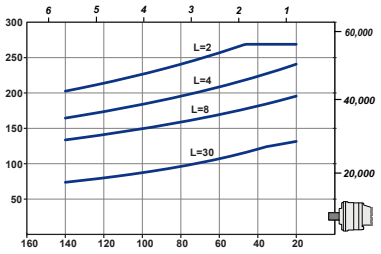
Service life of bearings

Test conditions :

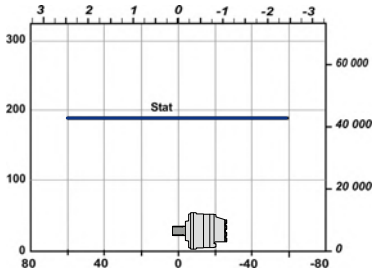
L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

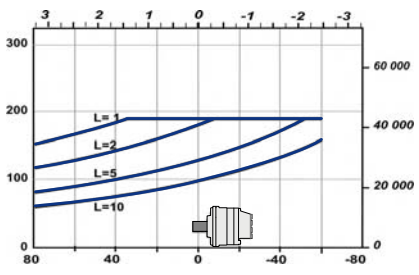
P			
1	2	3	4
1	4	1	0
1	5	1	0



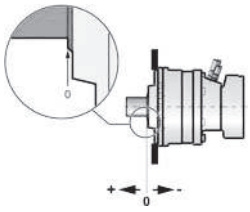


P			
1	2	3	4
1	4	1	0
1	5	1	0





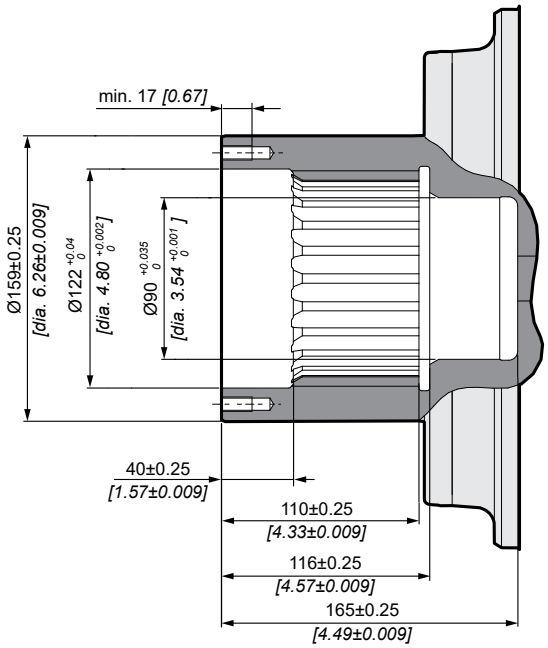
The service life of the components is influenced by the pressure.You must check that the combination of forces applied (Axial load / Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application's specifications.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



Shaft Motor

Coupling for female splines

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

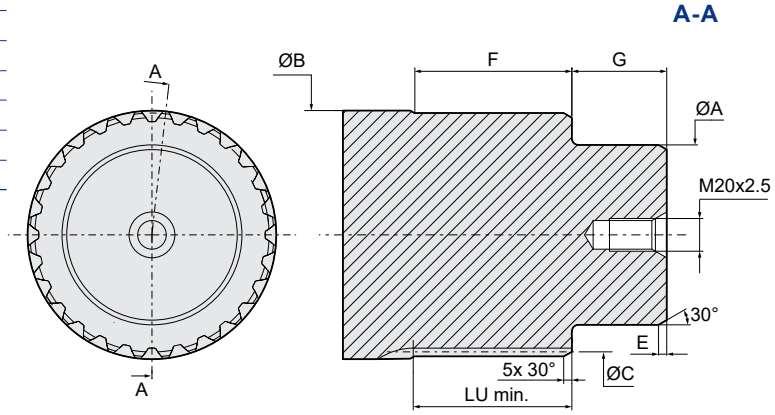


Splined DIN 5480
Pressure angle: 30°
Nominal diameter: 120
Teeth quantity: 22
Modulus: 5
Tolerance class:8

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

	Torque arm motor	Flange mounted motor
A(1)	Ø90 *[3.54 dia.]*	Ø90 *[3.54 dia.]*
B(2)	Ø122 *[4.80 dia.]*	Ø122 *[4.80 dia.]*
C	DIN 5480 W120x5x30x22x8f	
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) -0.012 *[-0.0004]* -0.034 *[- 0.001]* (2) -0.114 *[-0.004]* -0.139 *[- 0.005]*



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

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

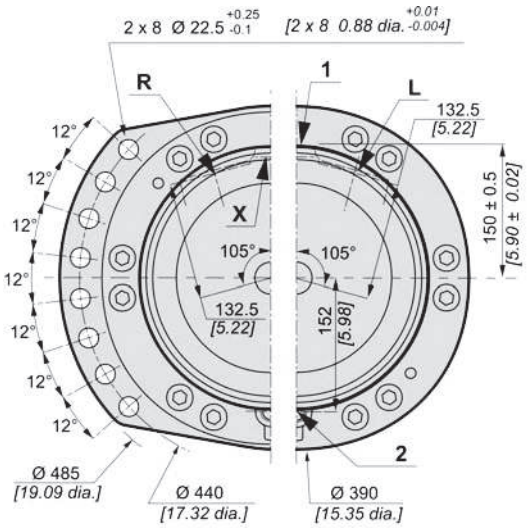
Consult YEOSHE application engineer.

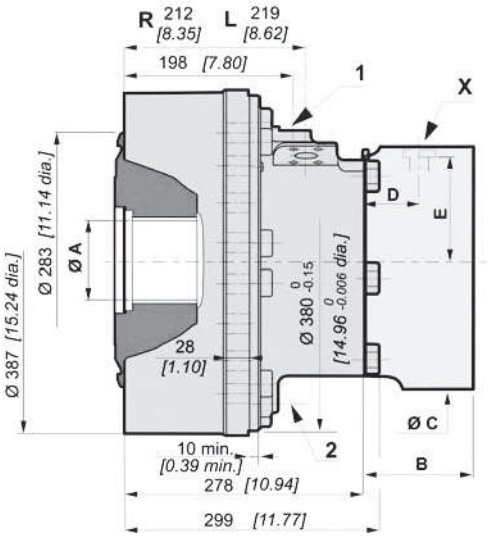
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Valving Systems and Hydrobases

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

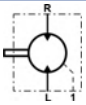
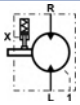
Dimensions for 1-displacement valving

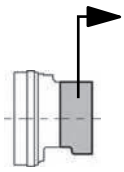




D		
1	2	3
1	2	

D		
1	2	3
1	1	

KG	145 kg *[318 lb]*	230 kg *[505 lb]*
	2.20 L *[132 cu.in]*	2.50 L *[150 cu.in]*
		



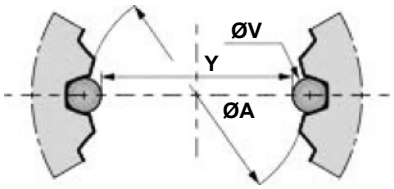
C	T 4 2	T 5 0	T 8 3
B	148 *[5.83]*	157.5 *[6.20]*	159 *[6.26]*
ØC *[dia.]*	375 *[14.76]*	375 *[14.76]*	375 *[14.76]*
D	63.5 *[2.50]*	63.5 *[2.50]*	63.5 *[2.50]*
E	183.5 *[7.22]*	183.5 *[7.22]*	183.5 *[7.22]*

Also see "Brake" section.
(thumbnail opposite)

Cylinder block splines

(as per standard NF E22-141)

			Dimension on 2 pins	
ØA	Module	Z	Y	ØV
100 *[3.937]*	2.5	38	90.169 *[3.550]*	5 *[0.197]*

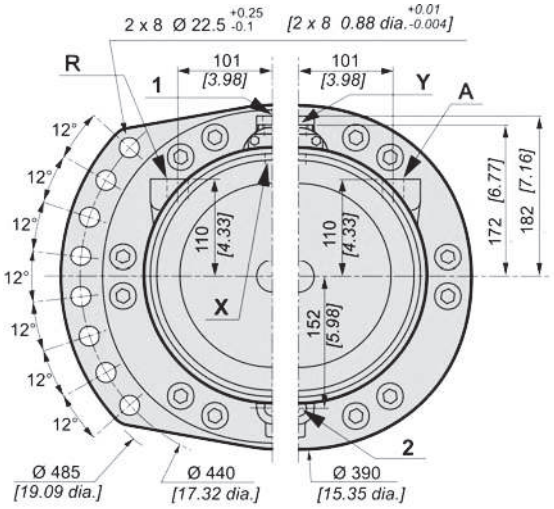


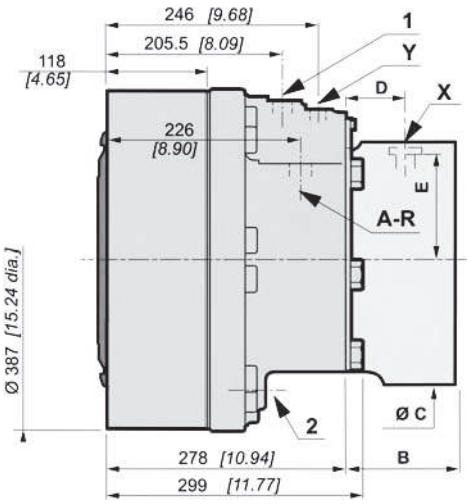
You are advised to have the installation validated by YEOSHE application engineer before using the hydraulic unit in an application.

We must provide you with a detailed plan of the interface for any hydraulic unit use, consult YEOSHE .

Valving Systems and Hydrobases

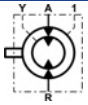
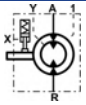
Dimensions for 2-displacement valving





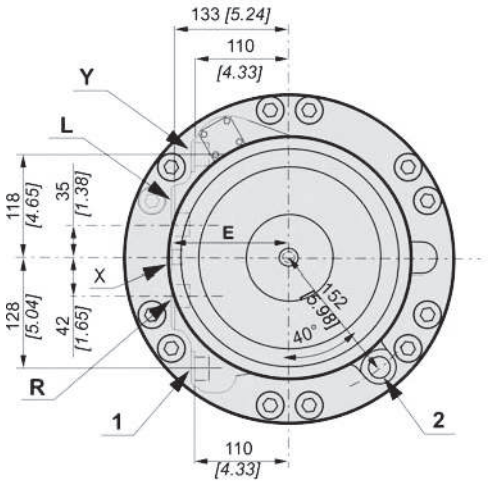
D		
1	2	3
	2	

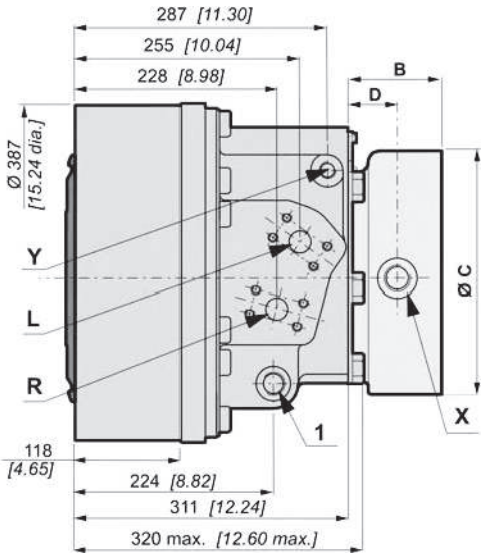
D		
1	2	3
	1	

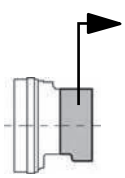
KG	160 kg *[352 lb]*	246 kg *[541 lb]*
	2.20 L *[132 cu.in]*	2.50 L *[150 cu.in]*
		

Dimensions for 2-displacement symetrical valving

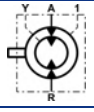
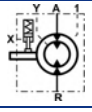
For a small displacement, there is no preferred orientation for this motor.







C	T 4 2	T 5 0	T 8 3
B	148 *[5.83]*	157.5 *[6.20]*	159 *[6.26]*
ØC *[dia.]*	375 *[14.76]*	375 *[14.76]*	375 *[14.76]*
D	63.5 *[2.50]*	63.5 *[2.50]*	63.5 *[2.50]*
E	183.5 *[7.22]*	183.5 *[7.22]*	183.5 *[7.22]*

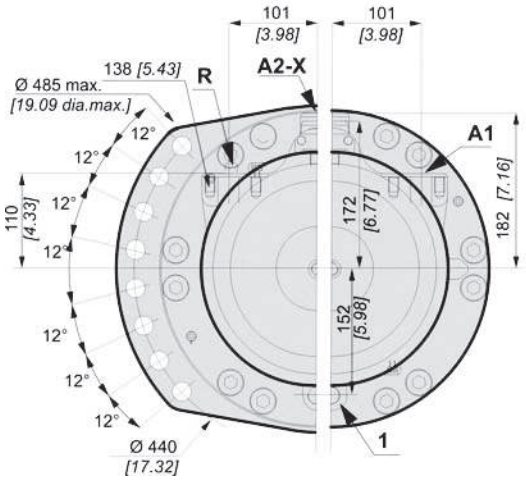
KG	173 kg *[380 lb]*	258 kg *[568 lb]*
	2.20 L *[132 cu.in]*	2.50 L *[150 cu.in]*
		

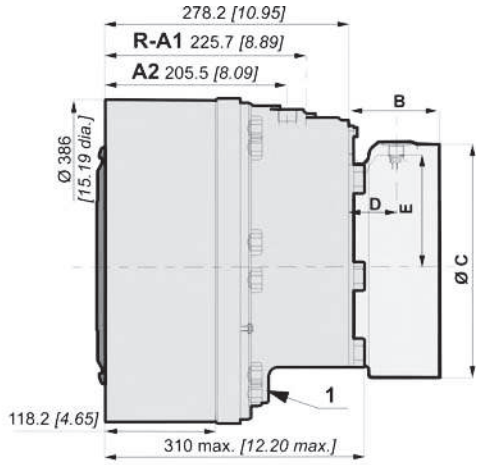
Also see “Brake” section
(thumbnail opposite).

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Valving Systems and Hydrobases

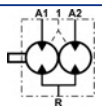
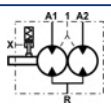
Dimensions for Twin-Lock valving



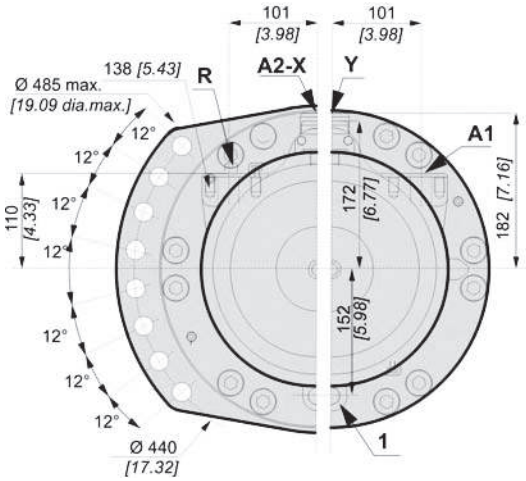


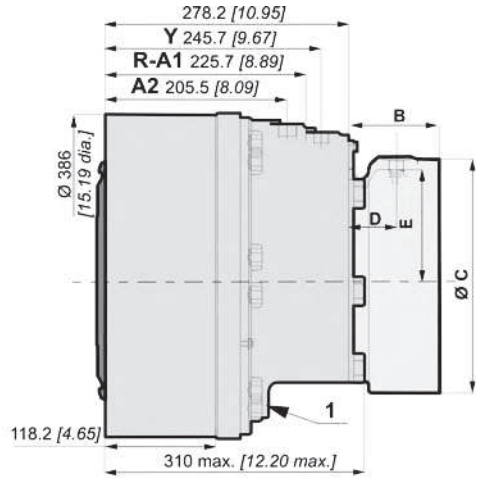
D		
1	2	3
	E	

D		
1	2	3
	D	

KG	160 kg *[352 lb]*	246 kg *[541 lb]*
	2.20 L *[132 cu.in]*	2.50 L *[150 cu.in]*
		

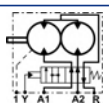
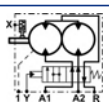
Dimensions for Twin-Lock / 2-displacement valving

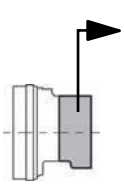




D		
1	2	3
	V	

D		
1	2	3
	K	

KG	160 kg *[352 lb]*	246 kg *[541 lb]*
	2.20 L *[132 cu.in]*	2.50 L *[150 cu.in]*
		

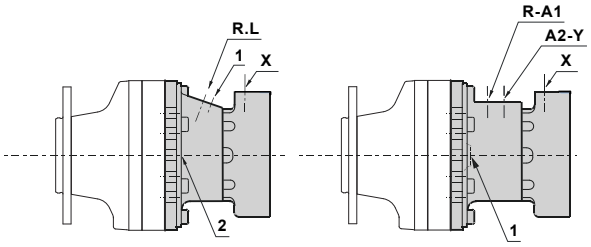


C	T 4 2	T 5 0	T 8 3
B	148 *[5.83]*	157.5 *[6.20]*	159 *[6.26]*
ØC *[dia.]*	375 *[14.76]*	375 *[14.76]*	375 *[14.76]*
D	63.5 *[2.50]*	63.5 *[2.50]*	63.5 *[2.50]*
E	183.5 *[7.22]*	183.5 *[7.22]*	183.5 *[7.22]*

Also see “Brake” section
(thumbnail opposite).

Valving Systems and Hydrobases

Hydraulic connections



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

		Old standards	Standards	Power supply		Case drain	2nd displacement control	Control of parking brake
				R - L		**1 、2**		**X**
	**1**	ISO 6 162 DIN 3 852	ISO 6 162 ISO 9 974-1	DN25 PN400		M22 x 1.5		M18 x 1.5
	6	DIN 3 852 NF E48 050	ISO 6 162 ISO 9 974-1	DN32 PN400		M22 x 1.5		M18 x 1.5
	7	ISO 6 162 SAE J514	ISO 6 162 ISO 11 926-1	DN25 PN400		7/8"-14 UNF		9/16"-18 UNF
				R - A		**1 、2**	**Y**	**X**
	1	ISO 6 162 DIN 3 852	ISO 6 162 ISO 9 974-1	DN25 PN400		M22 x 1.5	M18 x 1.5	M18 x 1.5
	**1**+	ISO 6 162 DIN 3 852	ISO 6 162 ISO 9 974-1	DN25 PN400		M27 x 2	M20 x 1.5	M18 x 1.5
	7+	ISO 6 162 SAE J514	ISO 6 162 ISO 9 974-1	DN25 PN400		1"1/16 -12 UNF	3/4" -16 UNF	9/16 -18 UNF
				R - A1	**A2**	**1 、2**	**Y**	**X**
	**1**	ISO 6 162 DIN 3 852	ISO 6 162 ISO 9 974-1	DN25 PN400	M27x2	M22 x 1.5	M18 x 1.5	M18 x 1.5
			ISO 9 974-1					
Max. pressures			**P-MS** bar *[PSI]*	450 *[6,527]*		1 *[15]*	30 *[435]*	30 *[435]*

+ 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.

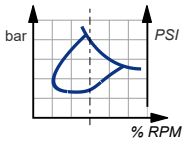
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Valving Systems and Hydrobases

Efficiency

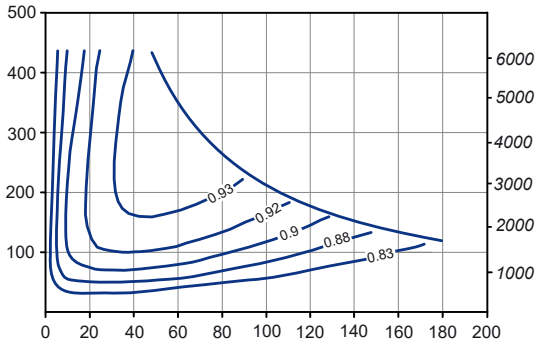
Overall efficiency

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

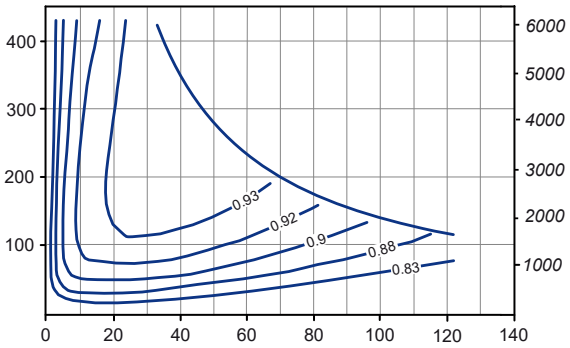


	C	D			F			P				S					
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
P-M S 5 0																	

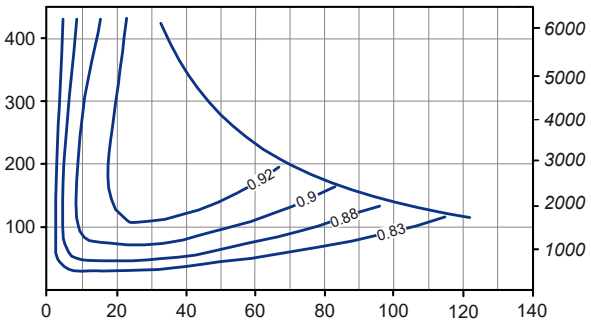
8



0



2

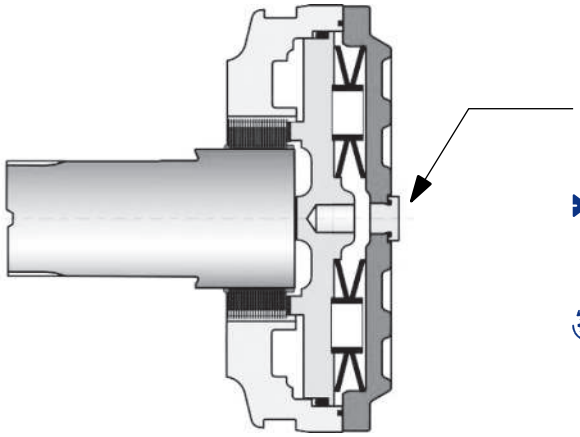


For a precise calculation, consult YEOSHE.

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
P-M S 2 5					T	4	2										
					T	5	0										
					T	8	3										



Emergency brake release

T42 : M16
T50 : M20
T83 : M20

T42 : 340 N.m *[251 lb.ft]*
T50 : 440 N.m *[324 lb.ft]*
T83 : 540 N.m *[398 lb.ft]*

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 4 2	T 5 0	T 8 3
Parking brake torque at 0 bars on housing (new brake)	25,000 Nm *[18,440 lb.ft]*	30,000 Nm *[22,130 lb.ft]*	42,000 Nm *[30,980 lb.ft]*
Dynamic emergency braking torque at 0 bars on housing	16,250 Nm *[11,990 lb.ft]*	19,500 Nm *[14,380 lb.ft]*	27,300 Nm *[20,140 lb.ft]*
Residual parking braking at 0 bars on housing +	18,750 Nm *[13,830 lb.ft]*	22,500 Nm *[16,600 lb.ft]*	31,500 Nm *[23,230 lb.ft]*
Min. brake release pressure	12 bar *[174 PSI]*	12 bar *[174 PSI]*	14 bar *[203 PSI]*
Max. brake release pressure	30 bar *[435 PSI]*	30 bar *[435 PSI]*	30 bar *[435 PSI]*
Oil capacity	400 cm³ *[24.4 cu.in]*	450 cm³ *[27.5 cu.in]*	450 cm³ *[27.5 cu.in]*
Volume for brake release	135 cm³ *[8.2 cu.in]*	135 cm³ *[8.2 cu.in]*	135 cm³ *[8.2 cu.in]*

+ After emergency brake has been used

Do not run-in the multidisc brakes.

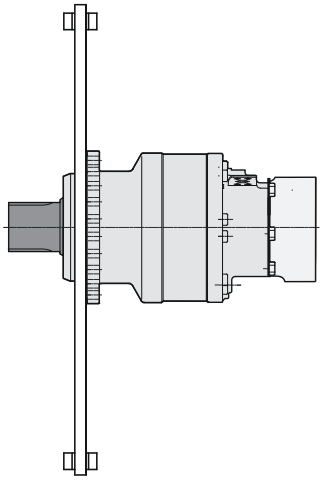
A functional check of the parking brake must be carried out each time it is used as an auxiliary brake (or emergency brake). For all vehicles capable of speeds over 25 km/h, please contact YEOSHE.

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Installation

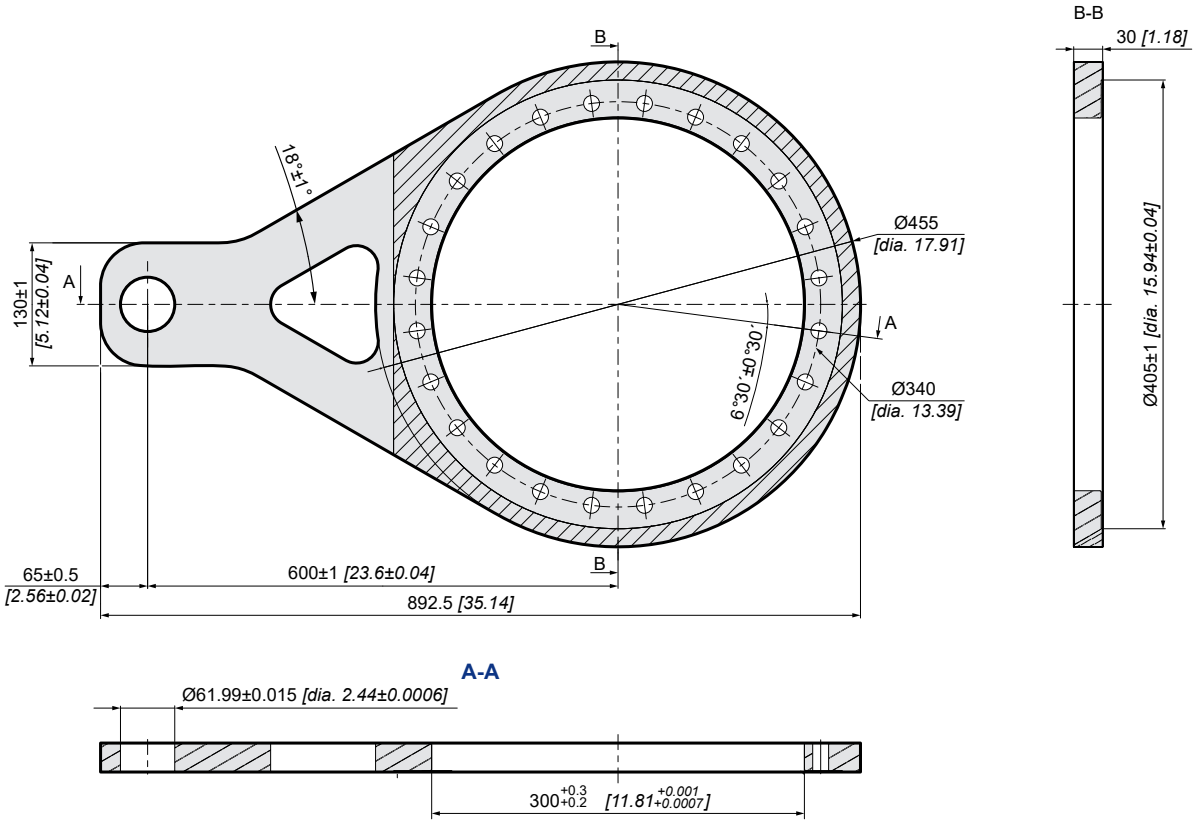
Torque arms mounting

We recommend a length of the torque arm of 600 mm *[23.6 in]*.
In order to avoid residual forces due to misalignment and twisting, the end of the arms must retain freedom of movement in 2 axis.



Recommended torque arm design

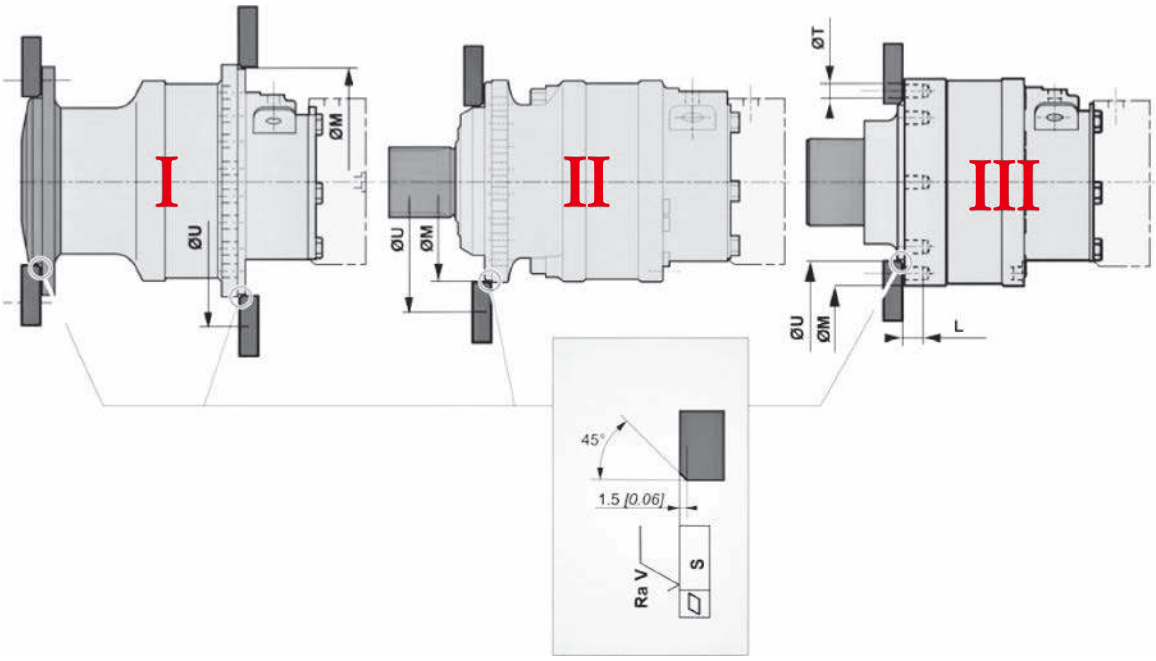
Torque arm can be supplied by Poclain Hydraulics. It must be ordered separately.



For a precise calculation, consult YEOSHE.

Installation

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
I	380 *[14.96]*	440 *[17.32]*	-	-	0.2 *[0.008]*	12.5µm *[0.49µin]*	2 x 8 M20 x 2	**8.8**
II		485 *[19.09]*	-	-				
II	300 *[11.81]*	392 *[15.43]*	22.5 *[0.886]*	30 *[1.181]*			12 x M20 x 2	

(1)
+0.3 *[+0.012]*
+0.2 *[+0.008]*

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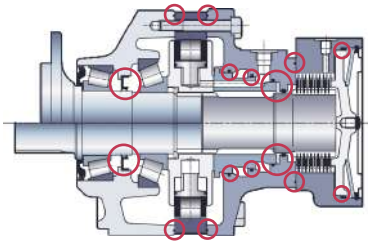
Options

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

You can accumulate more than one optional part.
Consult YEOSHE .

1 Fluorinated elastomer seals

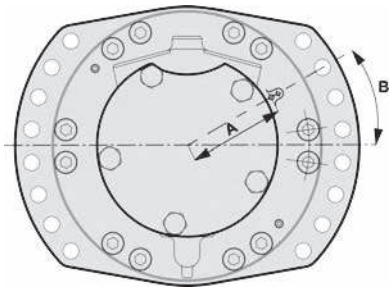
Nitrile seals marked in the figure below replaced by fluorinated elastomer seals.



Consult YEOSHE sales engineer.

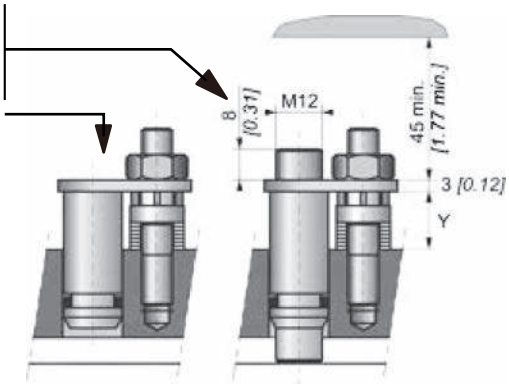
2 S Q 8 Installed speed sensor or predisposition

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



	mm *[in]*	mm *[in]*
A	118.9 *[4.68]*	118.9 *[4.68]*
B	0°	20°
	2-displacement	1-displacement

A-A



Max. length Y = 17.3

Standard number of pulses per revolution = 56

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

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

Options

6 Industrial support

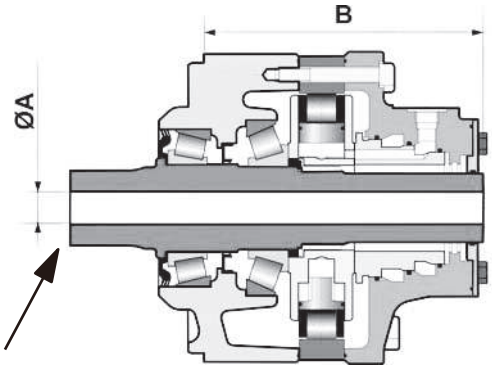
Reduction of around 50% from the rated value in the bearings' preload value.

For a precise calculation, consult YEOSHE.

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

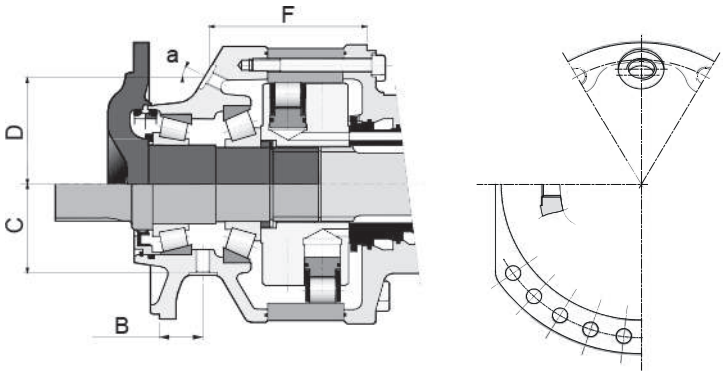


A mm *[in]*	B mm *[in]*
Ø 60 *[2.36 dia.]*	480 *[18.90]*

Radial load x 0.75
No torque transmittable to the rear

2 M8 screws :
Ø 80mm *[3.14"dia.]* diametrically opposite.
Threaded depth 12 mm min *[0.47"min.]*.

B Drain on the bearing support



	ISO	B mm *[in]*	C mm *[in]*	D mm *[in]*	F mm *[in]*	a
Shaft motor	M22 x 1.5	56 *[2.20]*	133 *[5.24]*			
Wheel motor				159 *[6.26]*	221 *[8.70]*	45°

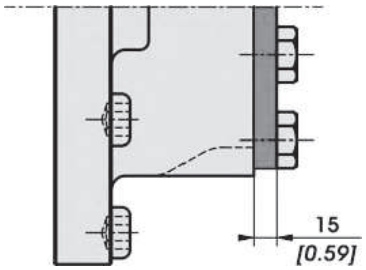
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Options

E Reinforced sealing

Requires reinforced seals and, for an unbraked motor, a rear reinforced plate (**R50** - 15 *[0.594]* thick, instead of 6 *[0.237]*).

	C	D			F			P				S					
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
P-MS50					R	5	0					E					



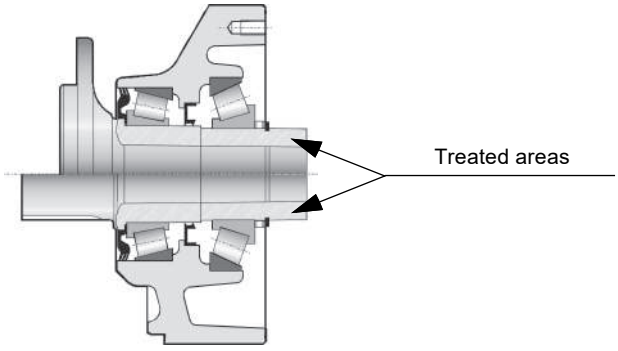
G Special wheel rim mounting

Enables certain combinations different from the standard mountings.

Consult YEOSHE sales engineer.

J Treated shaft

Heat treatment on the indicated bearing radius and splines.



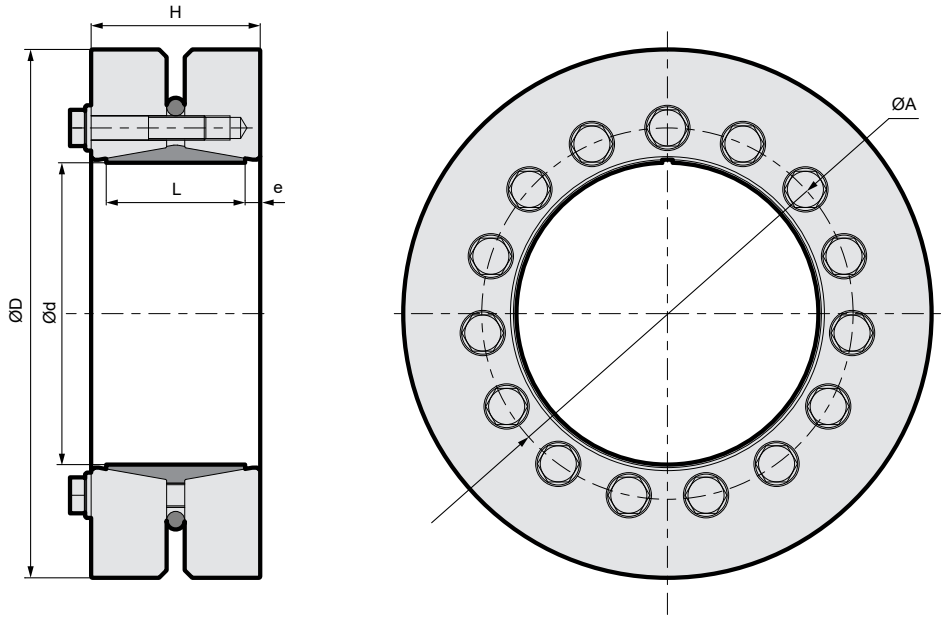
N Drain on the bearing

A purge screw enables the motor to be mounted vertically, the shaft oriented upward.

Accessories

Shrink disc

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



d mm *[in]*	D mm *[in]*	H mm *[in]*	L mm *[in]*	e mm *[in]*	A mm *[in]*		Mt-max Nm *[lbf]*	kg *[lbs]*
155 *[6.10]*	265 *[10.43]*	80 *[3.15]*	66 *[2.60]*	7 *[0.28]*	198 *[7.80]*	15 x M12x60	40,100 *[29,600]*	20 *[44]*

Consult YEOSHE sales engineer.

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Innovative Technology Reliable Quality and Service



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