



P-MS05.MSE05

Hydraulic Motors



www.yeoshehydraulic.com

Efficient Performance
Innovative Technology
Reliable Quality and
Service

YEOSHE HYDRAULICS CO.,LTD.

Introduction

M

1

P-MS05.MSE05 series



- **P-MS05.MSE05 Classic**

MS working pressure	450 bar [6 526 PSI]
MSE working pressure	400 bar [5 801 PSI]

- **P-MS05.MSE05 High Flow**

MS working pressure	450 bar [6 526 PSI]
MSE working pressure	400 bar [5 801 PSI]

Features

Given their optimized and modular design capable of delivering high performance, motors from the MS Classic range have established themselves as a benchmark on the hydraulic motor market.

MS Classic range can be characterize by :

1. **Compacity**
2. **Optimized cost**
3. **Power density**

The MS HighFlow motor range has all the qualities that have made the MS Classic range such a success : they are modular and robust, offering performance advantages (speed and power) at the same time. MS HighFlow motor range is different by :

MS High Flow motor range is different by :

1. **New closed cover**
2. **Integrated exchange valve**
3. **New ports geometry**
4. **New valving**



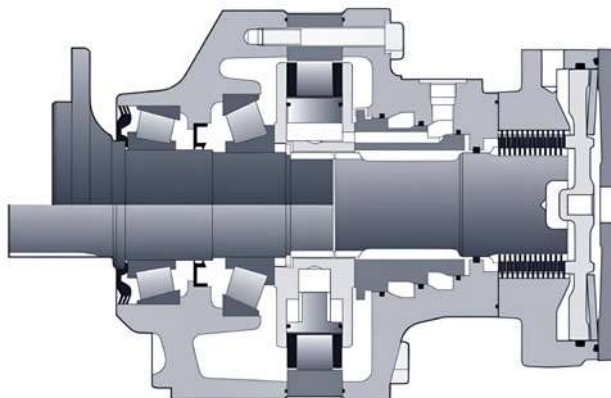


Characteristics

M

2

P-MS05.MSE05 series



High Flow

Max.power

1C motor	2C motor, 1 st displacement	2C motor, 2 nd displacement
50 kW	50 kW	30 kW

C		Cams with equal lobes									
		MS05					MSE05				
		6	8	0	1	2	8	0	1	2	
Motor High Flow 1C Max. speed*	1	cm³/tr [cu.in/rev.]	260 [15.9]	376 [22.9]	468 [28.5]	515 [31.4]	560 [34.2]	503 [30.7]	625 [38.1]	688 [42.0]	750 [45.7]
	2	cm³/tr [cu.in/rev.]	130 [7.9]	188 [11.5]	234 [14.3]	258 [15.7]	280 [17.1]	252 [15.4]	313 [19.1]	344 [21.0]	375 [22.9]
	1	tr/min [RPM]	700	520	420	370	340	380	300	270	250
	1	tr/min [RPM]	630	455	370	330	300	330	270	240	220
2	630		520	430	400	350	370	300	270	240	
Motor HighFlow 2C Max. speed*											

1 First displacement

2 Second displacement

Motor inertia = 0.03 kg.m²* Based on nominal no-load Δp of 20 bar [290 PSI].

Max. power obtained at max speed, with Peek bushings.

Classic

Max.power

1C motor	2C motor, 1 st displacement	2C motor, 2 nd displacement
29 kW	19 kW	15 kW

C		Cams with equal lobes									
		MS05					MSE05				
		6	8	0	1	2	8	0	1	2	
Motor High Flow 1C Max. speed*	1	cm³/tr [cu.in/rev.]	260 [15.9]	376 [22.9]	468 [28.5]	515 [31.4]	560 [34.2]	503 [30.7]	625 [38.1]	688 [42.0]	750 [45.7]
	2	cm³/tr [cu.in/rev.]	130 [7.9]	188 [11.5]	234 [14.3]	258 [15.7]	280 [17.1]	252 [15.4]	313 [19.1]	344 [21.0]	375 [22.9]
	1	tr/min [RPM]	300	250	210	200	180	230	190	170	155
	1	tr/min [RPM]	350	310	260	240	220	250	220	180	160
2	360		320	275	250	230	300	250	210	190	
Motor HighFlow 2C Max. speed*											

1 First displacement

2 Second displacement

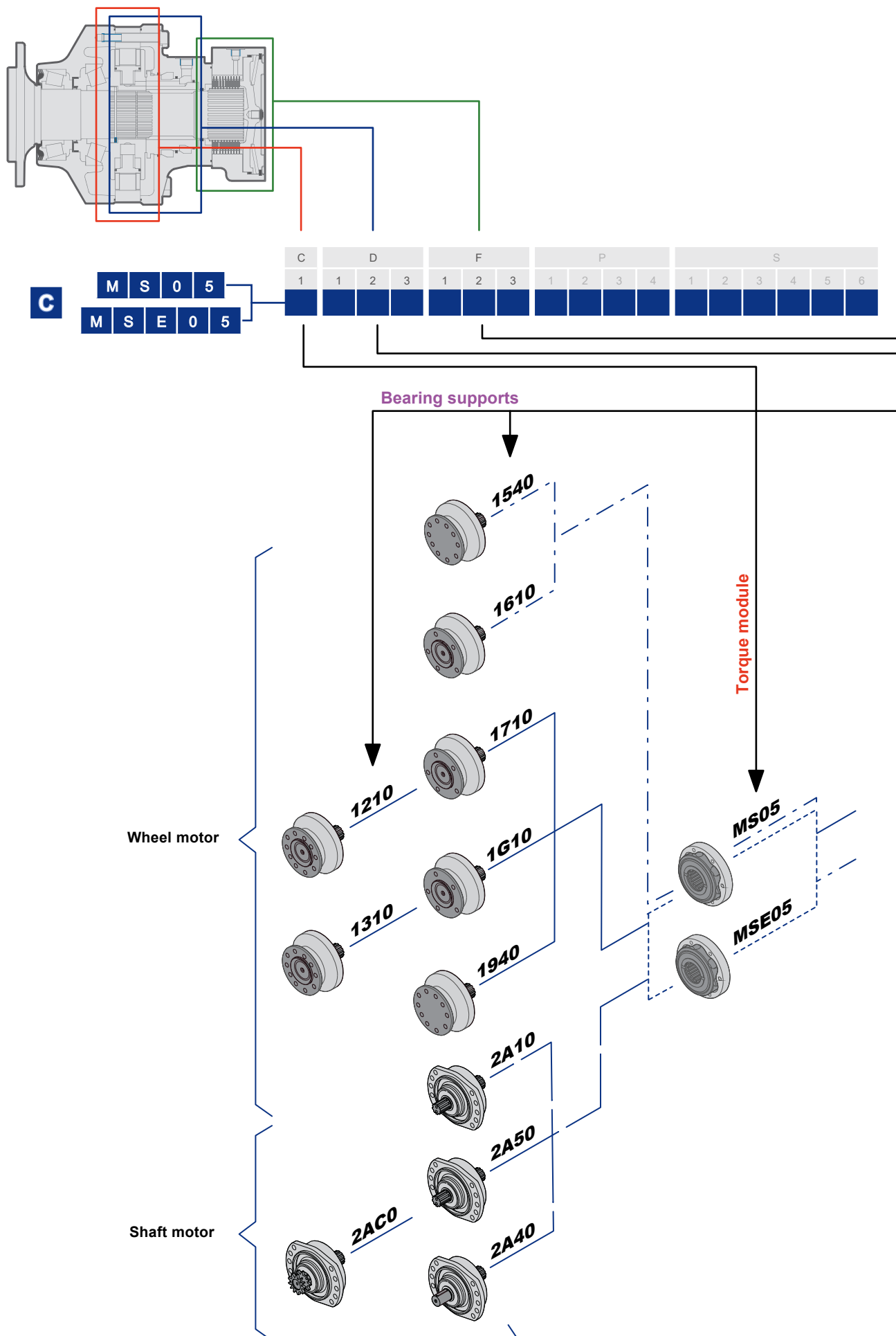
Motor inertia = 0.03 kg.m²

Modularity

M

3

P-MS05.MSE05 series



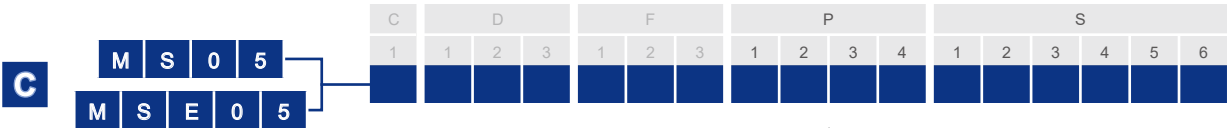
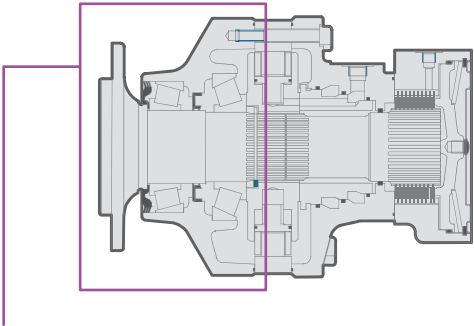
Modularity



M

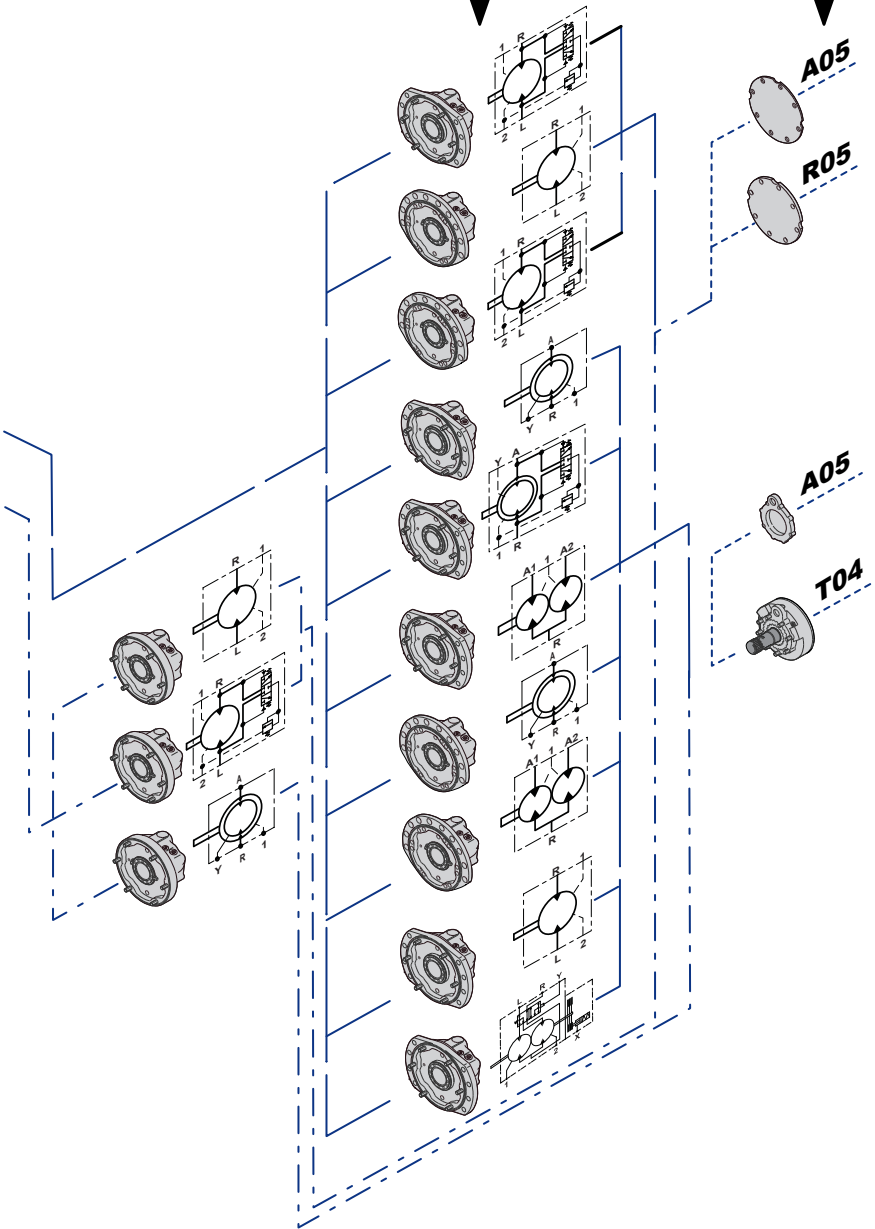
4

P-MS05.MSE05 series



Valving systems

Brakes



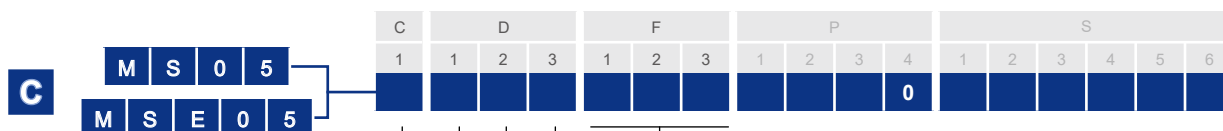
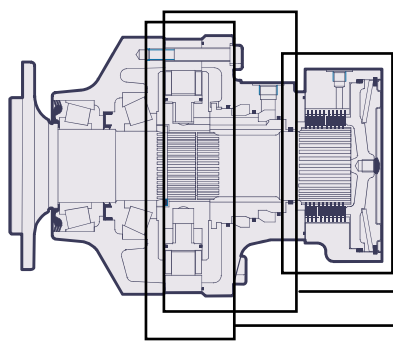
Hydrobases

Modelcode

M

5

P-MS05.MSE05 series



Cam ring type

C1			1 displacement 2 displacements cm ³ /tr [cu.in/rev.]		
Cams with equal lobes	MS05	260 [15.9]	130 [7.9]	6	
		376 [22.9]	188 [11.5]	8	
		468 [28.6]	234 [14.3]	0	
		515 [31.4]	258 [15.7]	1	
		560 [34.2]	280 [17.1]	2	
	MSE05	503 [30.7]	251 [15.3]	8	
		625 [38.1]	313 [19.1]	0	
		688 [42.0]	344 [21.0]	1	
		750 [45.7]	375 [22.9]	2	

Valving cover

D2	Classic motor	Without mounting	1	4	-
		Lug fixing	2	-	E
		Horseshoe fixing	8	9	G
	High Flow motor	Without mounting	B	L	-
		Lug fixing	C	N	-

1 Displacement
2 Displacement
Exchange
Twin-Lock

Valving type

D1	1-displacement valving			1
	2-displacement symmetrical valving	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	

Connection type

D3	ISO 11926-1	connection	1" 1/16-12 UNF	A
	ISO 1179-1	connection	G3/4	3
	ISO 9974-1	connection	M27 x 2	4
	ISO 9974-1	connection	M18 x 1.5	8

Rear brake

F1 F3	Without brake (simple plate)				A05
	Without brake (closed cover)*				M05
	Brake	Bearing mounting or valving cover mounting	Parking brake	Screwed enviromental cover**	T04
	Without brake (reinforced plate)				R05

* Mandatory for High Flow valving without brake
**Only with HighFlow valving

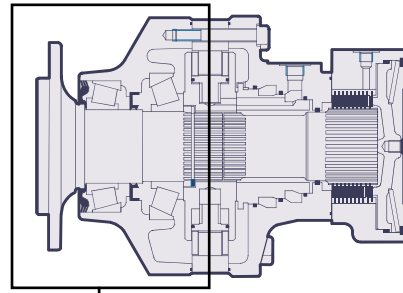


Modelcode

M

6

P-MS05.MSE05 series



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

Front unit

P1	Without bearing support	0
	Without mounting	1
	Lug mounting	2

Bearing support

P2	Without shaft	0
	10 x Ø18 on Ø140	2
	5+3 x Ø18 on Ø140	3
	10 x M12 on Ø100	5
	5 x Ø18 on Ø140	6
	6 x Ø20 on Ø205	7
	10 x M12 on Ø100	9
	Support without drum brake	F
		G
	For male shaft bearing support	A

Shaft Specifications

P3	Shaft type	
	Without studs	1
	With studs + nuts	2
	With studs	3
	M threaded holes	4
	Male shafts	
	NF E22-141 splines	1
	Cylindrical with key	4
	DIN 5480 splines	5
	Dual sprocket for chain	C

Options

S1 S6	Without Options or Adaptations	0
	Fluorinated elastomer seals	1
	T4 speed sensor (without rotation direction)	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
	Abrasive environment	C
	Special paint or no paint	D
	Reinforced sealing	E
	Special wheel rim mounting	G
	High efficiency	H
	Surface heat treatment of the shaft	J
	High speed	M
	TD speed sensor (two phase shifted frequencies)	Q
	TR speed sensor (digital rotation direction)	S
	Soft Shift	T

Methodology

M

7

P-MS05.MSE05 series

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.



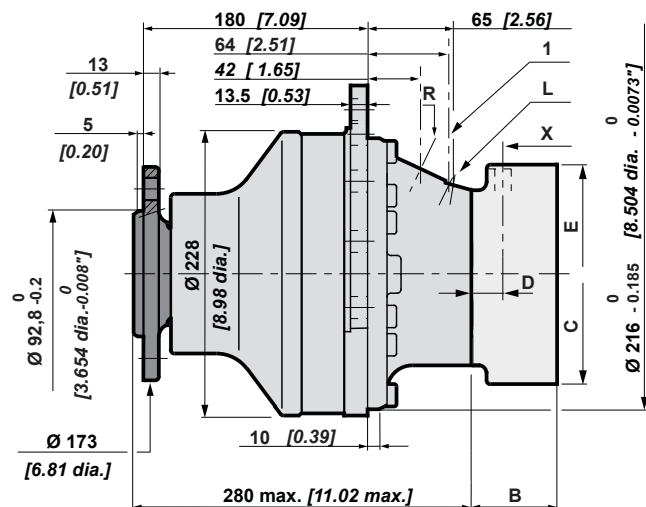
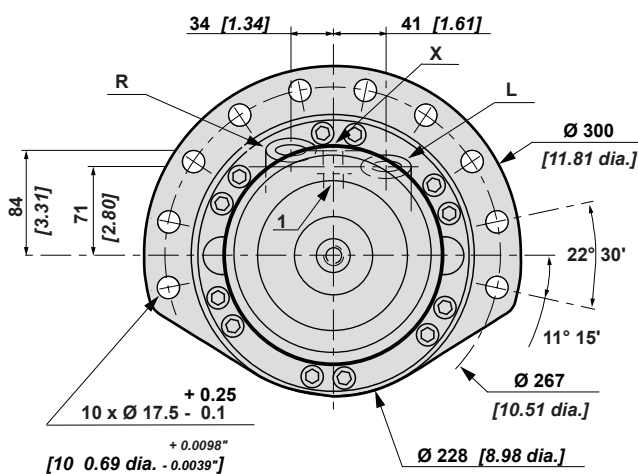
Information intended for personnel.

The views in this document are created using metric standards.

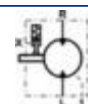
The dimensional data is given in mm and in inches (inches are given in brackets in italics).



Dimensions for Classic (1210) 1-displacement motor



	40 kg [88 lb]	50 kg [110 lb]
	0.50 L [30 cu.in]	1.00 L [60 cu.in]





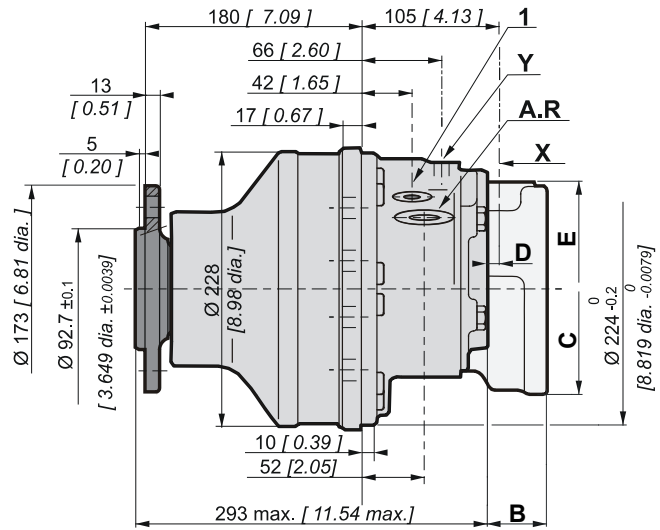
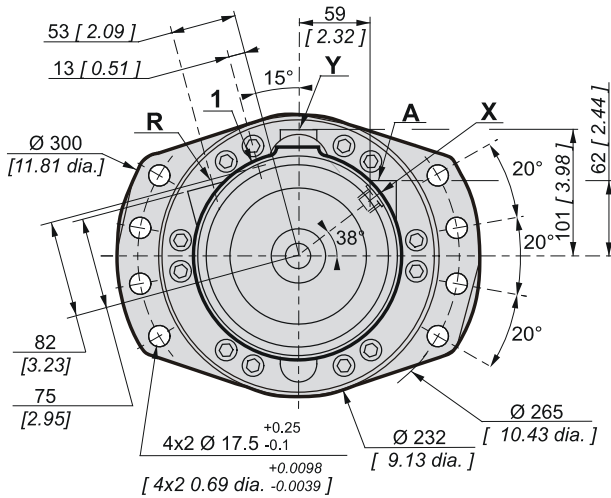
Wheel Motor Classic

Dimensions for Classic (1210) 2-displacement motor

M

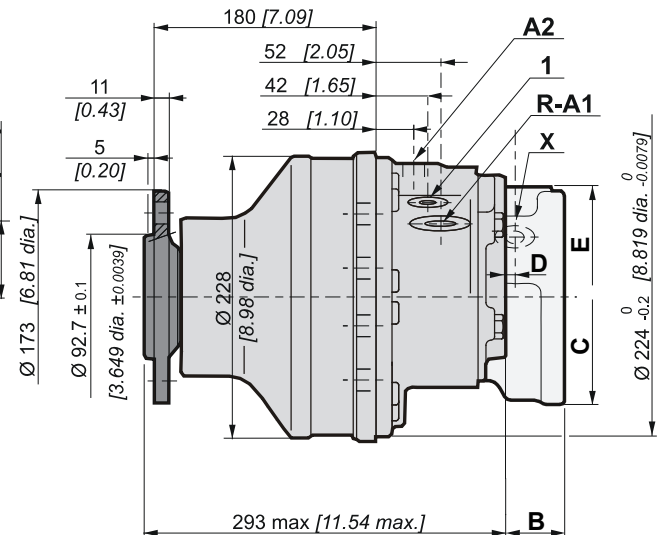
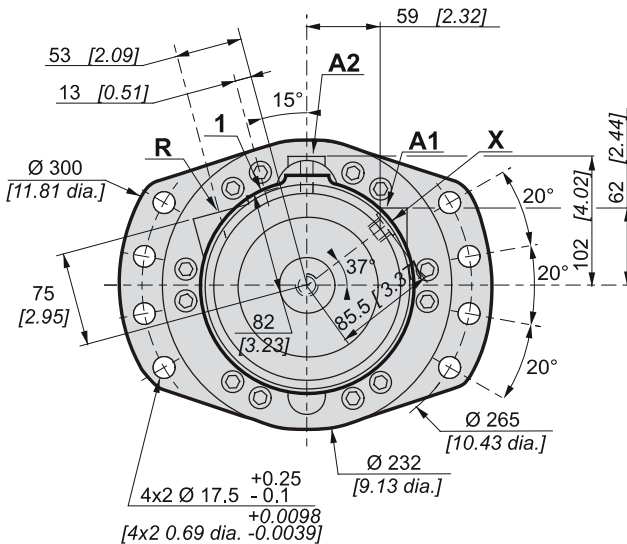
8

P-MS05.MSE05 series

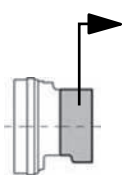


	41 kg [90 lb]	52 kg [114 lb]
	0.50 L [30 cu.in.]	1.00 L [60 cu.in.]
		

Dimensions for Classic (1210) Twin-Lock



	41 kg [90 lb]	52 kg [114 lb]
	0.50 L [30 cu.in.]	1.00 L [60 cu.in.]
		



C	T 0 4
B	68.5 [2.70]
C	Ø200 [7.87 dia.]
D	28.0 [1.10]
E	87.5 [3.44]



Also see "Brake" section.
(thumbnail opposite).



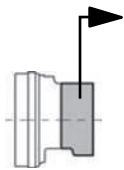
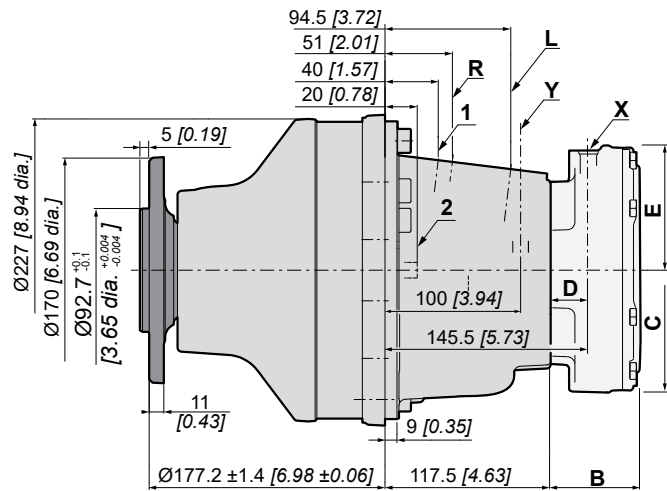
Also see 'Valving systems and hydrobases' section
(thumbnail opposite).

M

P-MS05.MSE05 series

Technical drawing of a mechanical part, likely a flange or end plate, showing dimensions and tolerances. The part is circular with a central hole and a ring of 24 holes. Key dimensions include:

- Outer diameter: $\varnothing 302$ [11.89 dia.]
- Inner diameter: $\varnothing 265$ [10.43 dia.]
- Central hole diameter: $\varnothing 234$ [9.21 dia.]
- Thickness: 13 [0.51]
- Central hole diameter: 80 [3.15]
- Inner hole diameter: 88.5 [3.48]
- Outer hole diameter: $2 \times 4 \varnothing 17.5$ $\begin{matrix} +0.25 \\ -0.10 \end{matrix}$ [2x4 dia. 0.69 $\begin{matrix} +0.008 \\ -0.004 \end{matrix}$]
- Angles: 20°, 10°, 20°
- Coordinate system: X, Y, L



C	T 0 4
B	68.5 [2.70]
C	Ø200 [7.87 dia.]
D	28.0 [1.10]
E	87.5 [3.44]

 0.50 L [30 cu.in]

Also see “Brake” section.
(thumbnail opposite).

Wheel Motor High Flow

Bearing support for Classic and HighFlow motor

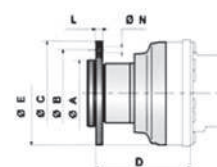
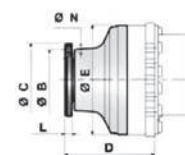
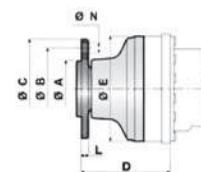
M

11

P-MS05.MSE05 series

C				D				F			P				S					
1	2	3	4	1	2	3	4	1	2	3	1	2	3	4	1	2	3	4	5	6
M	S	0	5																	
M	S	E	0	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]													
<table><tr><td colspan="4">P</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>1</td><td>2</td><td>1</td><td>0</td></tr></table>	P				1	2	3	4	1	2	1	0	Ø 92.7 [3.65 dia.]	Ø 140 [5.51 dia.]	Ø 170 [6.69 dia.]	178.6 [7.03]	Ø 228 [8.98 dia.]	Ø 18 [0.71 dia.]	10 x M14x1.5	11 [0.43]	
P																					
1	2	3	4																		
1	2	1	0																		
<table><tr><td colspan="4">P</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>1</td><td>7</td><td>1</td><td>0</td></tr></table>	P				1	2	3	4	1	7	1	0	Ø 160.7 [6.33 dia.]	Ø 205 [8.07 dia.]	Ø 245 [9.65 dia.]	178.5 [7.03]	Ø 228 [8.98 dia.]	Ø 20 [0.79 dia.]	6 x M18x1.5	14 [0.55]	
P																					
1	2	3	4																		
1	7	1	0																		
<table><tr><td colspan="4">P</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>1</td><td>3</td><td>1</td><td>0</td></tr></table>	P				1	2	3	4	1	3	1	0	Ø 95.7 [3.77 dia.]	Ø 140 [5.51 dia.]	Ø 180 [7.09 dia.]	145.4 [5.72]	Ø 228 [8.98 dia.]	Ø 18 [0.71 dia.]	5 x M14x1.5	10.5 [0.41]	
P																					
1	2	3	4																		
1	3	1	0																		
<table><tr><td colspan="4">P</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>1</td><td>6</td><td>1</td><td>0</td></tr></table> —	P				1	2	3	4	1	6	1	0	Ø 92.7 [3.65 dia.]	Ø 140 [5.51 dia.]	Ø 180 [7.09 dia.]	145.4 [5.72]	Ø 228 [8.98 dia.]	Ø 18 [0.71 dia.]	5 x M14x1.5	10.5 [0.41]	
P																					
1	2	3	4																		
1	6	1	0																		
<table><tr><td colspan="4">P</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>1</td><td>5</td><td>4</td><td>0</td></tr></table> —	P				1	2	3	4	1	5	4	0	-	Ø 100 [3.94 dia.]	Ø 120 h7 [4.72 dia.]	145.4 [5.72]	Ø 228 [8.98 dia.]	10 x M12x1.75	-	11.3 [0.44]	
P																					
1	2	3	4																		
1	5	4	0																		
<table><tr><td colspan="4">P</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>1</td><td>9</td><td>4</td><td>0</td></tr></table>	P				1	2	3	4	1	9	4	0	-	Ø 100 [3.94 dia.]	Ø 120 h7 [4.72 dia.]	178.7 [7.04]	Ø 228 [8.98 dia.]	10 x M12x1.75	-	11.25 [0.44]	
P																					
1	2	3	4																		
1	9	4	0																		
<table><tr><td colspan="4">P</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>1</td><td>G</td><td>1</td><td>0</td></tr></table>	P				1	2	3	4	1	G	1	0	Ø 92.7 [3.65 dia.]	Ø 140 [5.51 dia.]	Ø 170 [6.69 dia.]	201.2 [7.92]	Ø 228 [8.98 dia.]	Ø 18 [0.71 dia.]	10 x M14x1.5	-	
P																					
1	2	3	4																		
1	G	1	0																		
<table><tr><td colspan="4">P</td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>1</td><td>F</td><td>1</td><td>0</td></tr></table>	P				1	2	3	4	1	F	1	0	Ø 160.7 [6.33 dia.]	Ø 205 [8.07 dia.]	Ø 245 [9.65 dia.]	201.2 [7.92]	Ø 228 [8.98 dia.]	Ø 20 [0.79 dia.]	6 x M18x1.5	-	
P																					
1	2	3	4																		
1	F	1	0																		

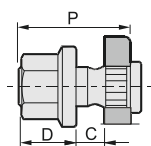


The supports in gray must not be assembled with an MSE hydrobase.



For stronger bearings, consult with YEOSHE.

Studs



		P mm [in]	C min. mm [in]	C max. mm [in]	D mm [in]	Class
Various studs	M14x1.5	45 [1.77]	5 [0.20]	18 [0.71]	16.5 [0.65]	12.9
	M14x1.5	50 [1.97]		23 [0.91]		
	M14x1.5	62 [2.44]		33 [1.30]		
	M18x1.5	65 [2.56]		28 [1.10]	23.0 [0.91]	
Screws	M12x1.75	-	-	-	-	10.9
	1/2"-20 UNF	-	-	-	-	8.8



See generic installation motors N°B59689D.

Wheel Motor High Flow

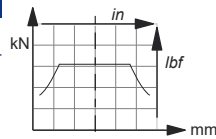
Load curves for Classic and HighFlow motor

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

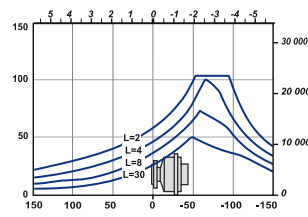
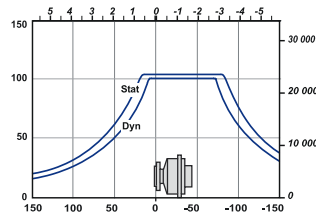


Service life of bearings

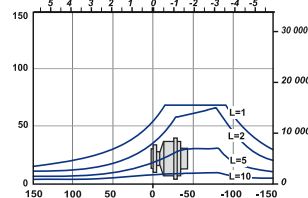
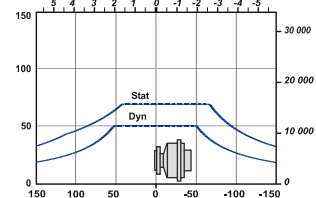
Test conditions :

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

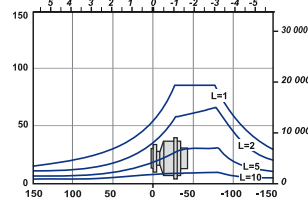
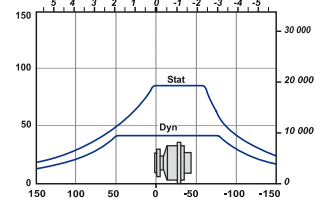
P			
1	2	3	4
1	2	1	0



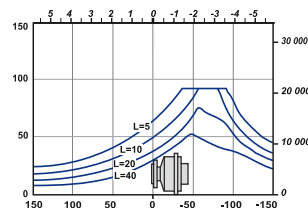
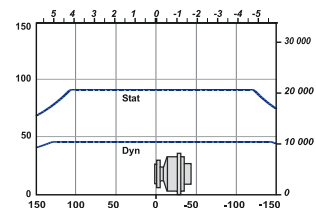
P			
1	2	3	4
1	3	1	0
1	6	1	0



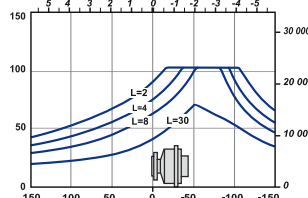
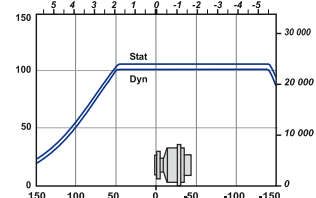
P			
1	2	3	4
1	5	4	0



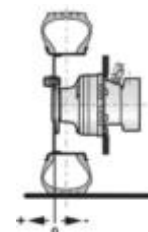
P			
1	2	3	4
1	9	4	0



P			
1	2	3	4
1	F	1	0
1	G	1	0

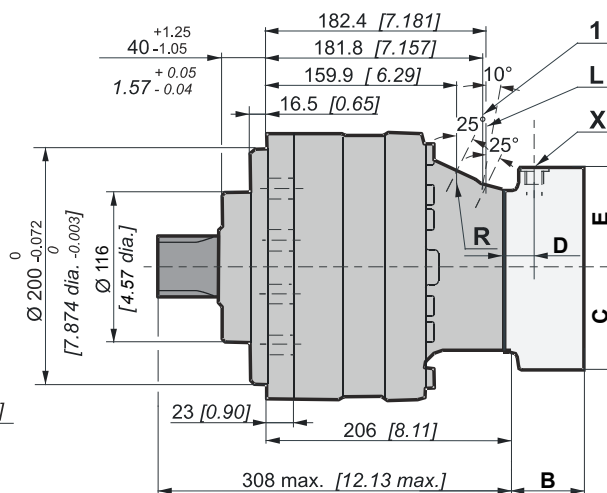
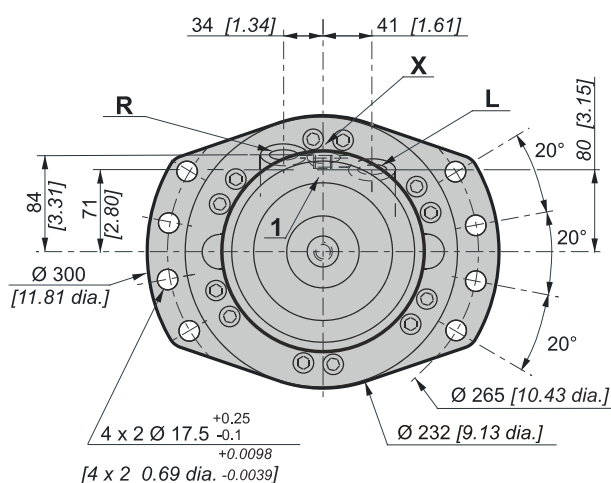


The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load / Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application's specifications.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



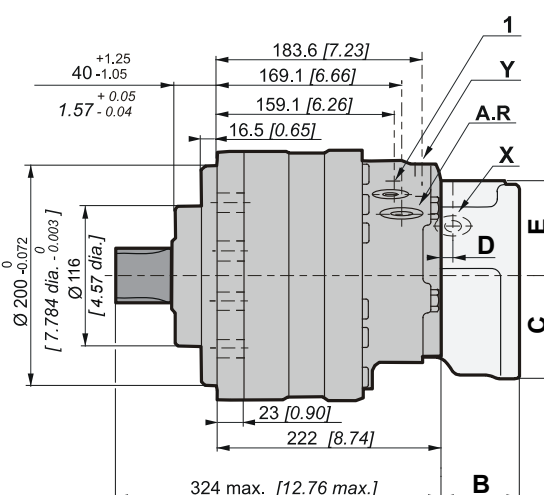
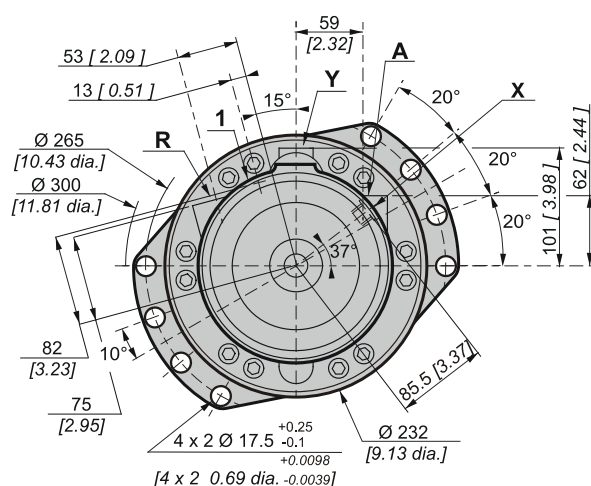
Shaft Motor Classic

Dimensions for Classic (2A50) 1-displacement motor

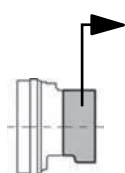


 41 kg [90 lb]	47 kg [103 lb]
 0.50 L [30 cu.in]	1.00 L [60 cu.in]
	

Dimensions for Classic (2A50) 2-displacement motor



 45 kg [99 lb]	55 kg [121 lb]
 1.00 L [60 cu.in]	1.00 L [60 cu.in]
	



C	T 0 4
B	68.5 [2.70]
C	Ø200 [7.87 dia.]
D	28.0 [1.10]
E	87.5 [3.44]

 Also see "Brake" section (thumbnail opposite).

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



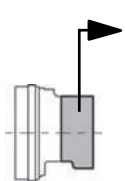
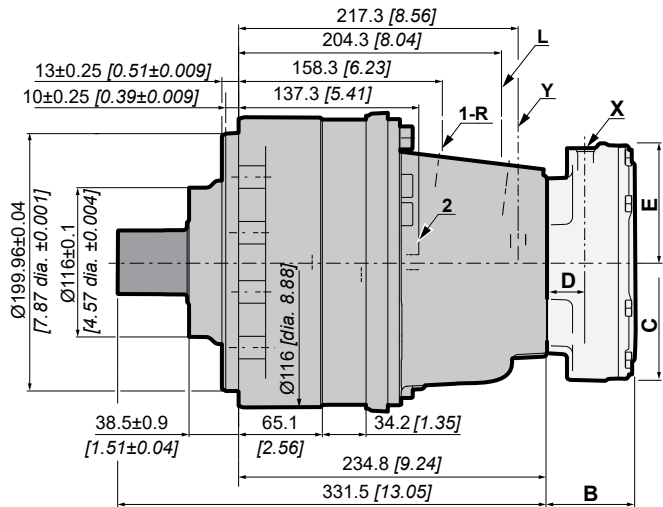
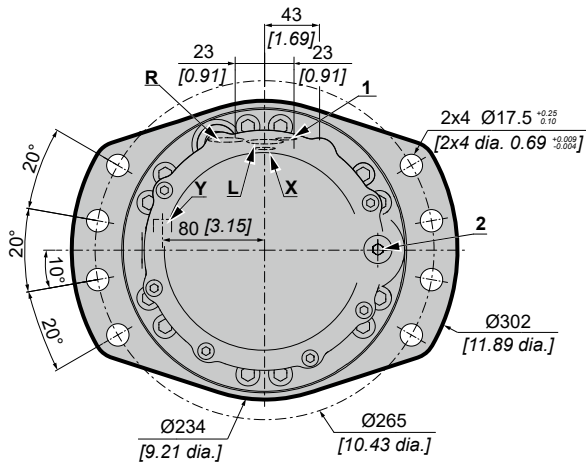
Shaft Motor - Highflow Motor

Dimensions for HighFlow (2A50) 1-displacement motor

M

14

P-MS05.MSE05 series



C	T 0 4
B	68.5 [2.70]
C	Ø200 [7.87 dia.]
D	28.0 [1.10]
E	87.5 [3.44]

55 kg [121 lb]	64 kg [141 lb]
1.00 L [60 cu.in]	1.00 L [60 cu.in]



Also see "Brake" section (thumbnail opposite).

Shaft Motor

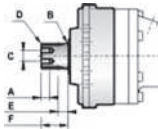
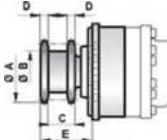
M

15

P-MS05.MSE05 series

Bearing support for Classic and HighFlow motor

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

C														A	B	C	D	E	F	G	
P				NF E22-141 splines										15 [0.59]	R 2.3 [R 0.09]	23.8 [0.94]	2 x M10	20 [0.79]	54 [2.13]	-	
1	2	3	4	Nominal Ø 50 [1.97]																	
2	A	1	0	Module 1,667																	
				Number of teeth 28																	
P				DIN 5480 splines										15 [0.59]	R 2.3 [R 0.09]	23.8 [0.94]	2 x M10	23 [0.91]	60 [2.36]	-	
1	2	3	4	Nominal Ø 55 [2.17]																	
2	A	5	0	Module 3																	
				Number of teeth 17																	
P				ANSI B29-1 or ISO 606 pinion										137.5 [5.41]	75 [1.97]	45 [1.77]	17.0 [0.67]	117 [4.61]	-	-	
1	2	3	4	Chain no. 100																	
2	A	C	0	Number of teeth 12																	
				Pitch 31.8																	
				Pitch Ø 123 [4.84]																	

NF E22-141 splines

Nominal Ø 50 [1.97]

Module 1,667

Number of teeth 28

DIN 5480 splines

Nominal Ø 55 [2.17]

Module 3

Number of teeth 17

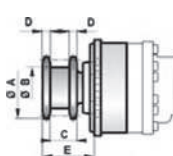
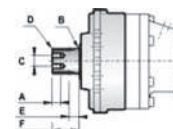
ANSI B29-1 or ISO 606 pinion

Chain no. 100

Number of teeth 12

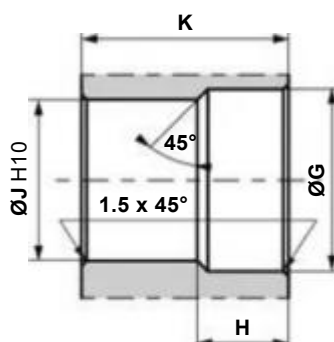
Pitch 31.8

Pitch Ø 123 [4.84]



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).

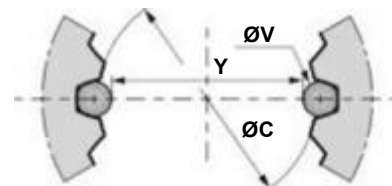
Standard DIN 5480

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]
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
2	A	1	0	51 [2.01]	23 [0.91]	46.7 [1.84]	53 [2.09]	50 [1.97]	1.667	28	+1.333 [+0.052]	46.7 [1.84]	3.333 [0.1312]	43.446 [1.71]	+ 86 / 0 [+3.386 / 0]
2	A	5	0	56.5 [2.22]	24 [0.94]	49 [1.93]	59 [2.32]	55 [2.17]	3	17	+0.35 [+0.0138]	49 [1.93]	5.25 [0.21]	43.807 [1.7247]	+ 78 / 0 [+3.071 / 0]

General tolerances : ± 0.25 [±0.0098].

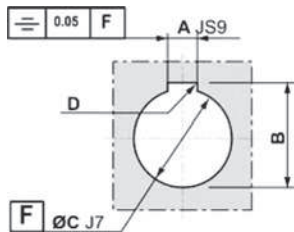
Material : Ex : 42CrMo4.

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



Shaft Motor

Cylindrical keyed coupling



C				A	B	Ø C	D
P				14 ± 0.021	+0.2 53 0	50	0.5
[0.55] [± 0.0008]					[2.07] +0.007 0	[1.97]	[0.02]
1	2	3	4				
2	A	4	0				

Torque limitation : 800 N.m [590 lb.ft]

Load curves for Classic and HighFlow motor

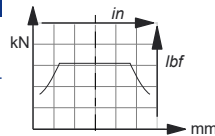
Permissible radial loads

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].

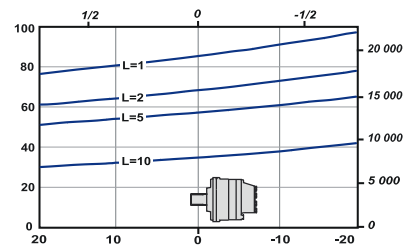
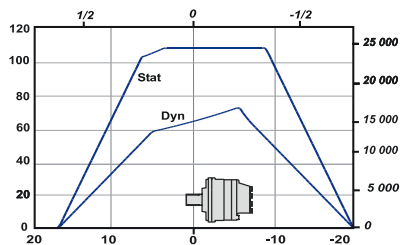


Service life of bearings

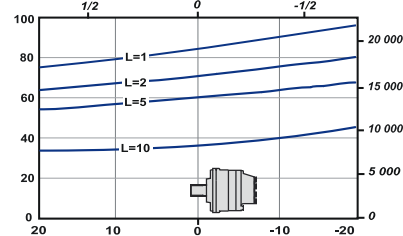
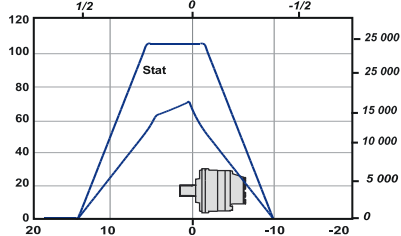
Test conditions :

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

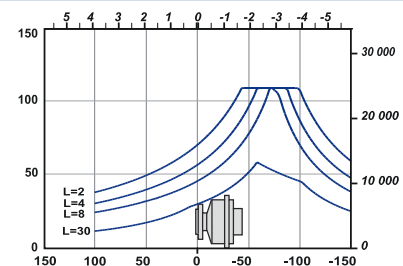
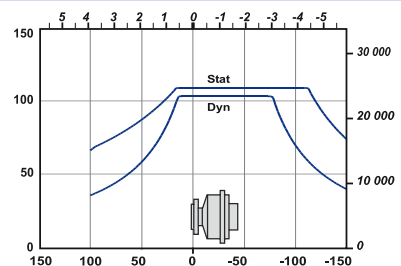
P			
1	2	3	4
2	A	5	0



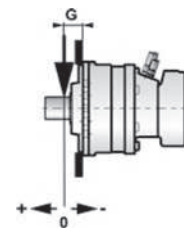
P			
1	2	3	4
2	A	1	0
2	A	4	0



P			
1	2	3	4
2	A	C	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.



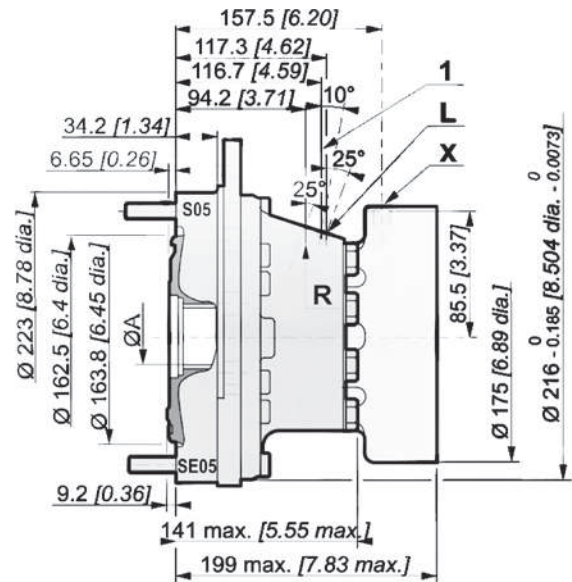
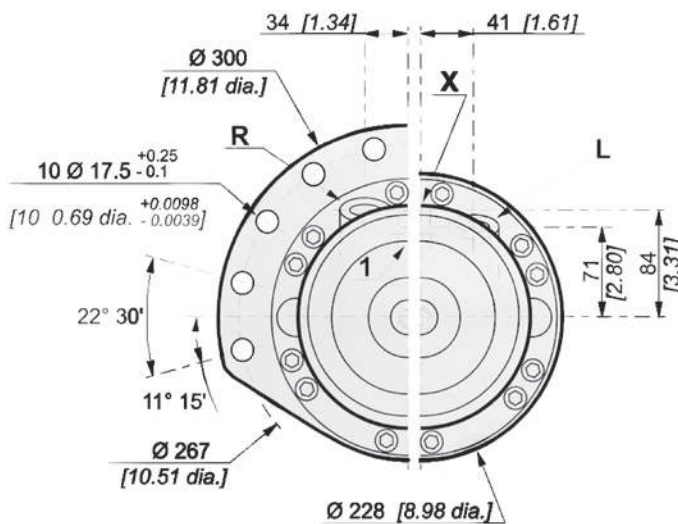
C				G
2	A	1	0	77.25 [3.04]
2	A	5	0	81.75 [3.22]
2	A	C	0	61.45 [2.42]

Valving Systems And Hydrobases

for Classic motor on demand for HighFlow motor

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

Dimensions for 1-displacement valving



D		
1	2	3
1	1	

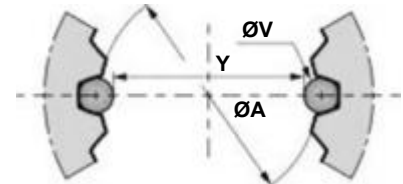
 27.6 kg [61 lb]	35.2 kg [77 lb]
 0.50 L [30 cu.in.]	1.00 L [60 cu.in.]



Cylinder block splines

(as per standard NF E22-141)

Dimension on 2 pins				
ØA	Module	Z	Y	ØV
50 [1.968]	1.667	28	43.446 [1.710]	3.33 [0.131]



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 .

M

P-MS05.MSE05 series

 27.6 kg [61 lb]	35.2 kg [77 lb]
 0.50 L [30 cu.in]	1.00 L [60 cu.in]
	

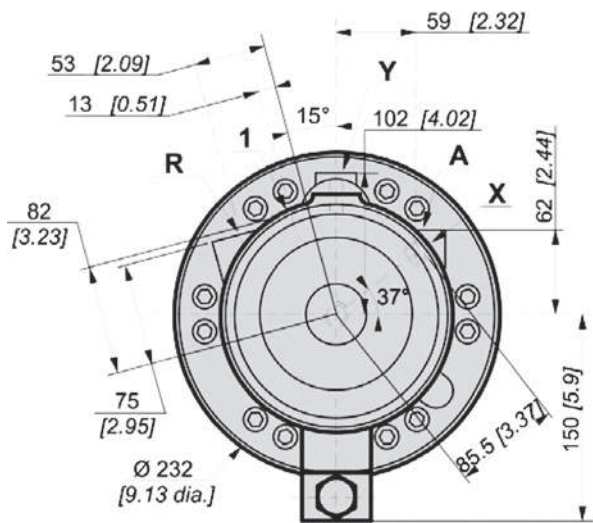
[illegible]

 23.7 kg [52 lb]	31.7 kg [70 lb]
 0.50 L [30 cu.in]	1.00 L [60 cu.in]
	

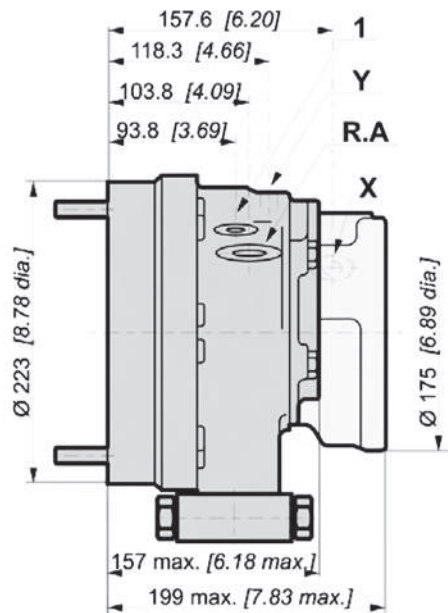


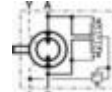
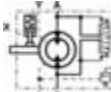
Valving Systems And Hydrobases

Dimensions for 2-displacement valving with add-on exchange



D		
1	2	3
	4	



 27.6 kg [61 lb]	35.2 kg [77 lb]
 0.50 L [30 cu.in.]	1.00 L [60 cu.in.]
	

Exchange

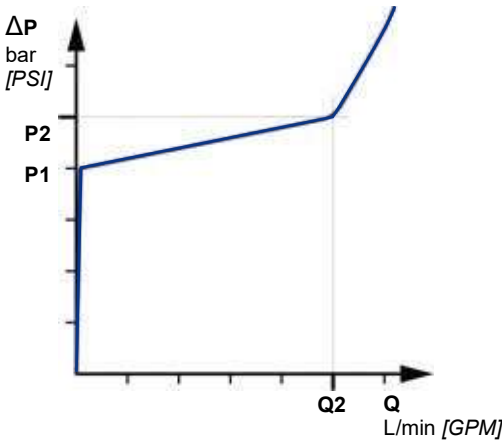
When a coding request is made, you must specify information on the threshold of the selector and the valve.

Selector spool

Selector threshold bar [PSI]	Opening pressure of selector bar [PSI]
8 [116]	9.9 ±1.2 [144 ±17]

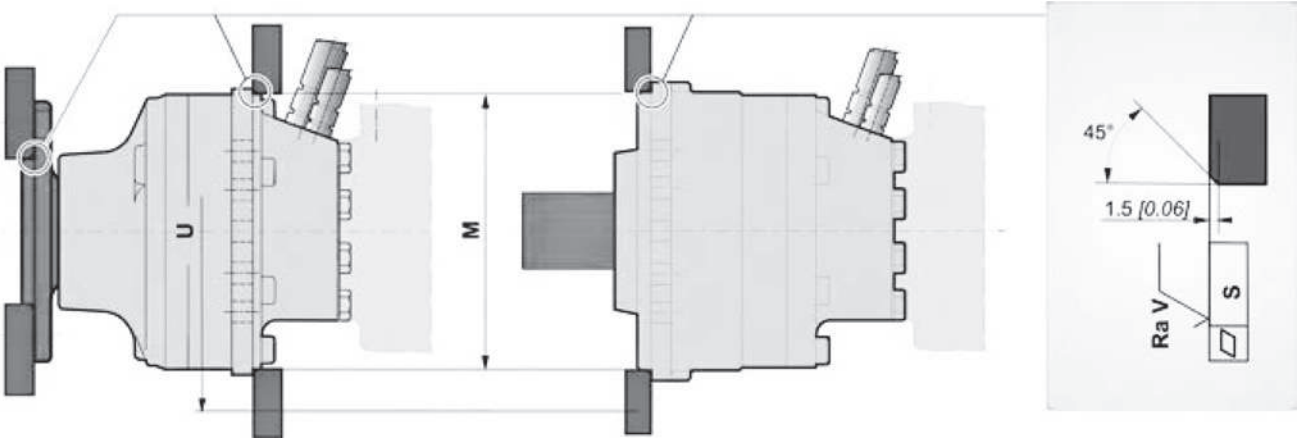
Fitted valve

P1 bar [PSI]	Q2 L/min [GPM]	P2 bar [PSI]
13.5 [195]	14 [3.7]	16 [232]
18 [261]	15 [3.9]	21 [305]
22 [319]	16 [4.2]	25 [363]



Valving Systems And Hydrobases

Chassis mountings



Take care over the immediate environment of the connections.

MS05 / MSE05	ØM ⁽¹⁾	ØU	S	Ra V		Class
P	200 [7.87]	265 [10.43]	0.2 [0.008]	12.5µm [0.49µin]	2 x 4 M16 x 2	8.8
R 	216 [8.50]	267 [10.51]			10 M16 x 2	
R 	224 [8.82]	265 [10.43]			2 x 4 M16 x 2	
P	200 [7.87]	265 [10.43]			2 x 4 M16 x 2	
R 	216 [8.50]	267 [10.51]			10 M16 x 2	
R 	224 [8.82]	265 [10.43]			2 x 4 M16 x 2	

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



See generic installation motors N°B59689D.



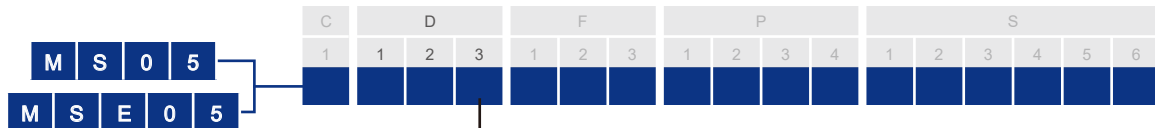
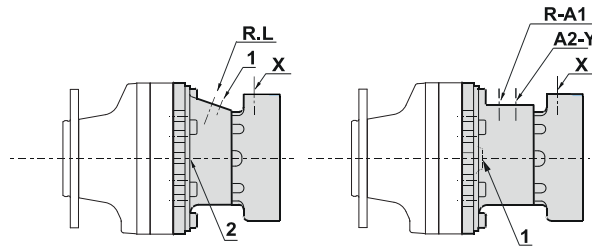
Valving Systems And Hydrobases

Hydraulic connections

M

22

P-MS05.MSE05 series



	Standards	Power supply		Standards	Case drain	2 nd displacement control	Control of parking brake
		R - L			1 - 2		X
	A ISO 11 926-1	1" 1/16-12 UNF		ISO 11926	3/4"-16 UNF		9/16"-18 UNF
	3 ISO 1179	BSP 3/4		ISO 1179	BSP 3/8		M16 x 1.5
	8 ISO 9974-1	M18 x 1.5		ISO 9974-1	M16 x 1.5		BSP 3/8
	1* ISO 6162	SAE 6000PSI 1/2"		ISO 9974-1	M16 x 1.5		M16 x 1.5
	E* ISO 6162	SAE 6000PSI 1/2"		ISO 9974-1	M16 x 1.5		M16 x 1.5
		R - A			1 - 2	Y	X
	A ISO 11 926	1" 1/16-12 UNF		ISO 11 926	3/4"-16 UNF	3/4"-16 UNF	9/16"-18 UNF
	3 ISO 1 179	BSP 3/4		ISO 1179	BSP 3/8	BSP 1/4	M16 x 1.5
	4 ISO 9 974-1	M27 x 2		ISO 9974-1	M16 x 1.5	M14 x 1.5	M16 x 1.5
	1* ISO 6162	SAE 6000PSI 1/2"		ISO 9974-1	M16 x 1.5	M14 x 1.5	M16 x 1.5
		R - A1	A2		1 - 2		X
	A ISO 11926	1" 1/16-12 UNF	3/4"-16 UNF	ISO 11926	3/4"-16 UNF		9/16"-18 UNF
	3 ISO 1179	BSP 3/4	BSP 1/2	ISO 1179	BSP 3/8		BSP 1/4
	4 ISO 9974-1	M27 x 2	M22 x 1.5	ISO 9974-1	M16 x 1.5		M16 x 1.5
Max. pressures	MS bar [PSI]	450 [6,527]	450 [6,527]		1 [15]	30 [435]	30 [435]
	MSE	400 [5,802]	400 [5,802]				

*only for 1C&2C HighFlow valving

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

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

✓ Do not put either a check valve or a poppet valve on the pilot lines (parking brake and displacement change) between the charge pump and the pilot valve. Do not use a piloting valve with integrated check valve.

Valving Systems And Hydrobases

M

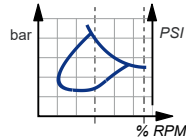
23

P-MS05.MSE05 series

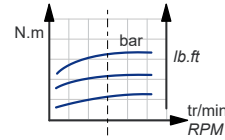
Efficiency for Classic and HighFlow motor

Overall efficiency

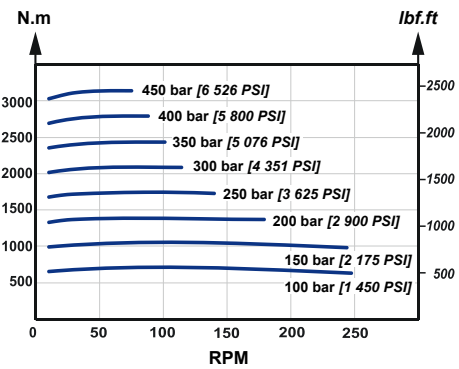
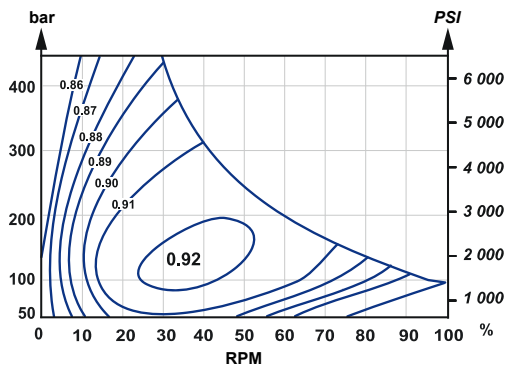
Average values given for guidance for code 0 displacement after 100 hours of operation with HV46 hydraulic fluid at 50°C [122°F].



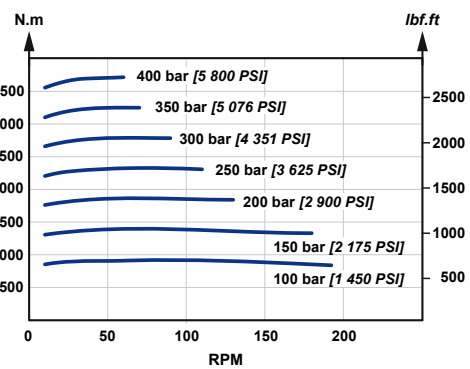
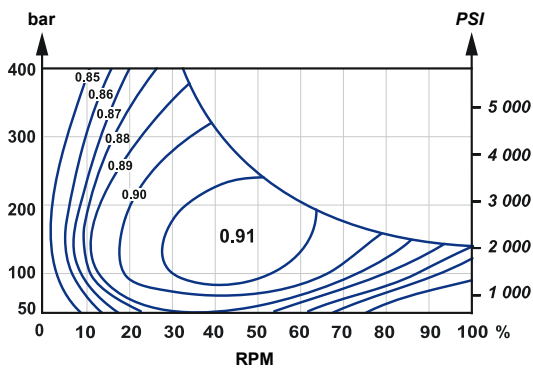
Actual output torque



MS05



MSE05



For a precise calculation, consult YEOSHE.



Brakes

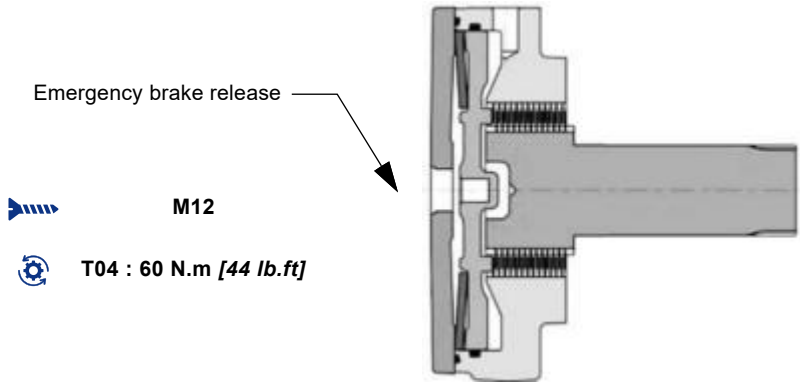
M

24

P-MS05.MSE05 series

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

Rear brake



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 0 4
Parking brake torque at 0 bars on housing (new brake)	4,220 Nm [3,110 lb.ft]
Dynamic emergency braking torque at 0 bars on housing (max.10 uses of emergency brakes)	2,740 Nm [2,020 lb.ft]
Residual parking braking at 0 bars on housing *	3,165 Nm [2,330 lb.ft]
Min. brake release pressure	12 bar [174 PSI]
Max. brake release pressure	30 bar [435 PSI]
Oil capacity	70 cm ³ [4.3 cu.in]
Volume for brake release	32 cm ³ [2.0 cu.in]
Max. energy dissipation	85 902 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 YEOSHE.
-  The use of certain oils may not offer the characteristics stated above. Consult YEOSHE.

Options

M

25

P-MS05.MSE05 series

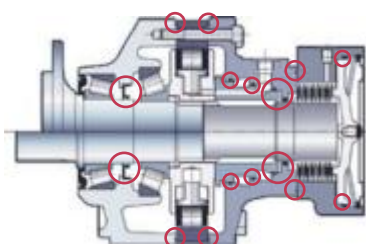
M S 0 5					C	D			F			P				S					
M	S	0	5		1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
M	S	E	0	5																	



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.

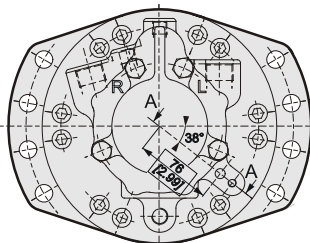
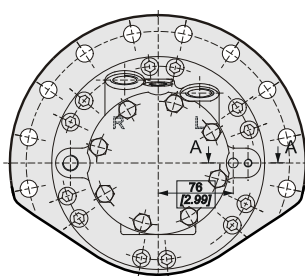


Consult YEOSHE sales engineer.

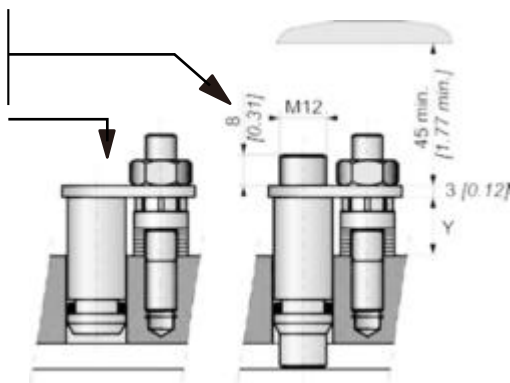
2 S Q 8 Installed speed sensor or predisposition

Designation

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



A-A



Max. length Y = 20.7

Standard number of pulses per revolution = 56



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



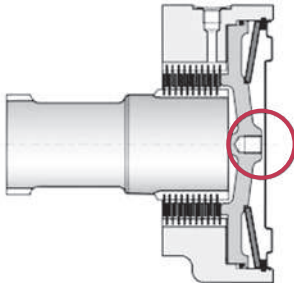
To install the sensor, see the "Installation guide" brochure No. B61352L.



Options

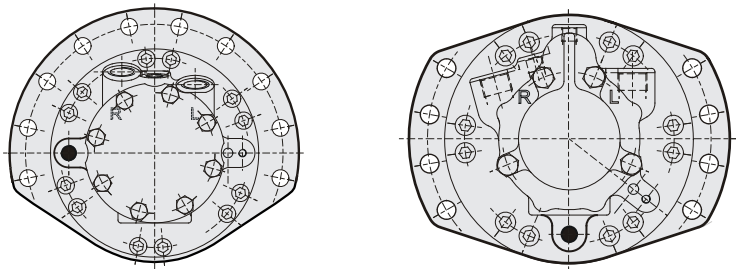
3 Brake environmental cover without plug

No plug or hole in the cover.



5 Drainage

Additional drain in the cover.



6 Industrial support

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

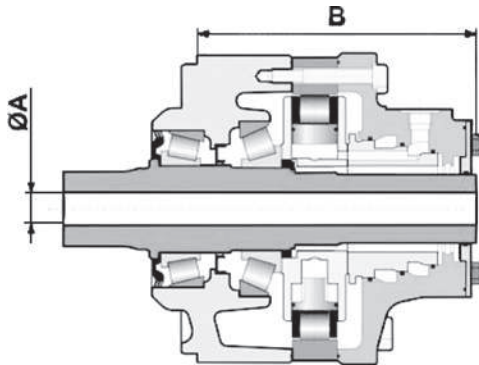


For a precise calculation, consult YEOSHE.

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 25 [0.98 dia.]	214.2 [8.43]

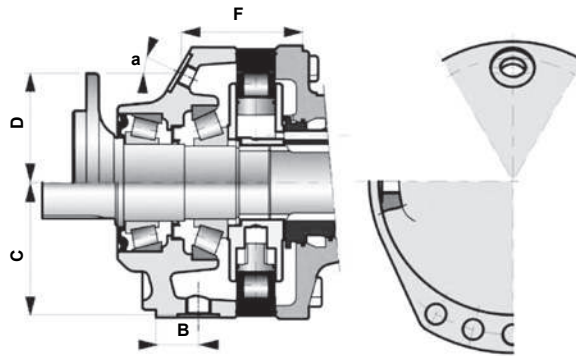
Radial load x 0.75
No torque allowed towards the rear

Options

M

27

P-MS05.MSE05 series

B Drain on the bearing support

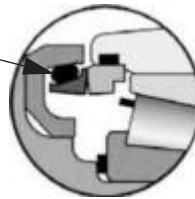
	BSPP	B mm [in]	C mm [in]	D mm [in]	a	F mm [in]	a
Shaft motor	Ø 17	25 [1.0]	111 [4.37]		25°		
Wheel motor	Ø 17			87.5 [3.44]		84.0 [3.31]	36°

C Abrasive environments

(mechanical seal)

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

Mechanical seal

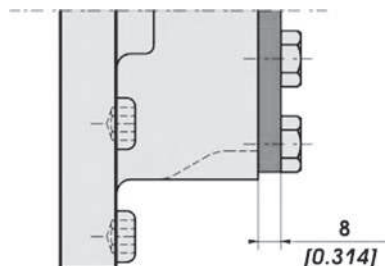


Consult YEOSHE sales engineer.

E Reinforced sealing

Reinforced seals and, for an unbraked motor, a rear reinforced plate (R02 - 8 mm thick, instead of 2 mm).

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

**G** Special wheel rim mounting

Enables certain combinations different from the standard mountings defined on page 11 are possible.



Consult YEOSHE sales engineer.



Options

H High efficiency

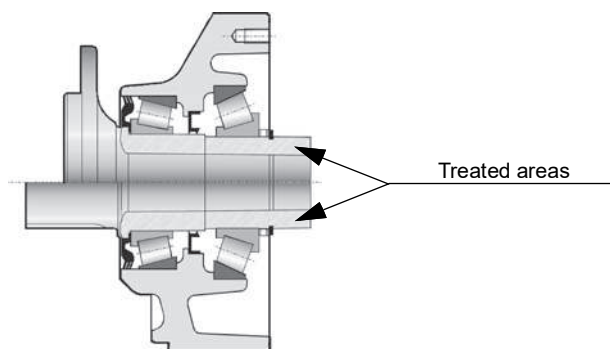
Reinforced piston sealing to improve volumetric efficiency.



For a precise calculation, consult YEOSHE application engineer.

J Treated shaft

Heat treatment on the indicated bearing radius and splines.



M High speed

Under certain conditions, an increase in the maximum speed of 30% above the values indicated in the table on page 2 is possible.



For a precise calculation, consult YEOSHE application engineer.



Option "M" becomes mandatory when selecting the HighFlow valving.

M

28

P-MS05.MSE05 series

YEOSHE BEST CHOICE
Innovative Technology

Efficient Performance
Reliable Quality and Service



油聖液壓科技有限公司

YEOSHE HYDRAULICS TECHNOLOGY CO.,LTD.

413 台灣台中市霧峰區霧工一路68號

No.68, Wugong 1st Rd., Wufong Dist., Taichung City, Taiwan, 413

TEL +886-4-23332339 **FAX** +886-4-23333817 **E-mail** yeoshe@yeoshe.com.tw

東莞辦事處 Dongguan

CP +86-13600266957 (Miss Zhong)

E-mail yeoshe@yeoshe.com.tw

上海辦事處 Shanghai

CP +86-15021931394 (Mr. Wu)

CP +86-18939716986 (Mr. Chen)

經銷商 Distributor



www.yeoshehydraulic.com

版權所有 翻印必究
Copyright ©2025 by YEOSHE