

Part number:

HYDROMA
HYDRAULICKÉ SYSTÉMY

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SYSTEMS
UKŁADY HYDRAULICZNE

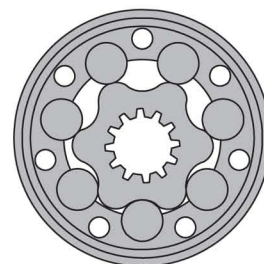
HYDROMA
ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

HYDRAULIC MOTOR-BRAKE B/MR



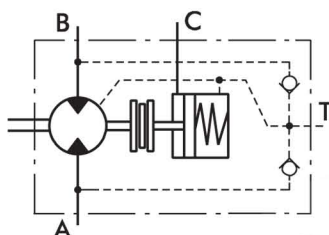
APPLICATION

- » Conveyors
- » Feeding mechanism of robots and manipulators
- » Metal working machines
- » Textile machines
- » Agricultural machines
- » Food industries
- » Mining machinery etc.



CONTENTS

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OPTIONS

- » Model - Spool valve, roll-gerotor
- » Fully integrated friction disk brake
- » Side port
- » Shaft - straight
- » BSPP ports

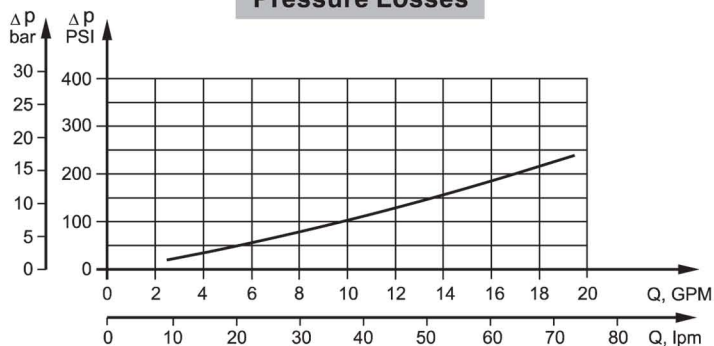
GENERAL

Max. Displacement, cm ³ /rev [in ³ /rev]	199,8 [12.19]
Max. Speed, [RPM]	600
Max. Torque, daNm [lb-in]	cont.: 45 [3980] int.: 50 [4425]
Max. Output, kW [HP]	13 [17.4]
Max. Pressure Drop, bar [PSI]	cont.: 175 [2540] int.: 200 [2900]
Max. Oil Flow, lpm [GPM]	75 [19.8]
Min. Speed, [RPM]	10
Permissible Shaft Loads, daN [lb-in]	P _a =200 [450]
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range, °C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range, mm ² /s [SUS]	20÷75 [98÷347]
Filtration	ISO code 20/16 (Min. recommended fluid filtration of 25 microns)

Oil flow in drain line

Pressure drop bar [PSI]	Viscosity mm ² /s [SUS]	Oil flow in drain line lpm [GPM]
100 [1450]	20 [98]	2,5 [.660]
	35 [164]	1,8 [.476]
140 [2030]	20 [98]	3,5 [.925]
	35 [164]	2,8 [.740]

Pressure Losses



SPECIFICATION DATA

Type		B/MR 80	B/MR 100	B/MR 125	B/MR 160	B/MR 160 CB	B/MR 200	B/MR 200 CB
Displacement, cm³/rev [in³/rev]		80,3 [4.90]	99,8 [6.09]	125,7 [7.67]	159,6 [9.74]		199,8 [12.19]	
Max. Speed, [RPM]	Cont.	500	500	475	375		300	
	Int.*	600	600	600	470		375	
Max. Torque, daNm [lb-in]	Cont.	19,5 [1725]	24 [2125]	30 [2655]	30 [2655]	39 [3450]	30 [2655]	45 [3980]
	Int.*	22[1947]	28 [2480]	34 [3010]	39 [3450]	43 [3805]	39 [3450]	50 [4425]
	Peak**	27 [2390]	32 [2832]	37 [3275]	46 [4070]	46 [4070]	56 [4960]	56 [4955]
Max. Output, kW [HP]	Cont.	8,4 [11.2]	10,8 [14.5]	12,5 [16.8]	10 [13.4]	11,5 [15.4]	7,8 [10.5]	11 [14.75]
	Int.*	9,6 [12.9]	12 [16.1]	14,5 [19.5]	12,5 [16.8]	14 [18.8]	12,4 [16.6]	13 [17.4]
Max. Pressure Drop, bar [PSI]	Cont.	175 [2540]	175 [2540]	175 [2540]	135 [1960]	175 [2540]	105 [1523]	175 [2540]
	Int.*	200 [2900]	200 [2900]	200 [2900]	175 [2540]	200 [2900]	145 [2103]	200 [2900]
	Peak**	225 [3263]	225 [3263]	225 [3263]	225 [3263]	225 [3263]	225 [3263]	225 [3263]
Max. Oil Flow, l/min [GPM]	Cont.	40 [10.5]	50 [13.2]	60 [15.9]	60 [15.9]		60 [15.9]	
	Int.*	48 [12.7]	60 [15.9]	75 [19.8]	75 [19.8]		75 [19.8]	
Max. Inlet Pressure, bar [PSI]	Cont.	175 [2540]						
	Int.*	200 [2900]						
	Peak**	225 [3260]						
Max. Starting Pressure, bar [PSI]		10 [145]	10 [145]	9 [130]	7 [102]		5 [73]	
Min. Starting Torque, daNm [lb-in]	At max.press.drop Cont	15 [1330]	20 [1770]	25 [2215]	24 [2124]	32 [2832]	26 [2301]	41 [3628]
	At max.press.drop Int.*	17 [1505]	23 [2035]	28 [2480]	32 [2832]	37 [3275]	33 [2920]	46 [4071]
Min. Speed***, [RPM]		10	10	10	10	10	10	10
Static Torque of Brake, daNm [lb-in]		55 [4868]						
Min. Brake Release Pressure****, bar [PSI]		13 [190]						
Max.Opening Pressure, bar [PSI]		200 [2900]						
Weight, kg [lb]		11,0 [24.3]	11,2 [24.7]	11,4 [25.2]	11,6 [25.6]	11,7 [25.8]	12,2 [26.9]	12,3 [27.12]

* Intermittent operation: the permissible values may occur for max. 10% of every minute.

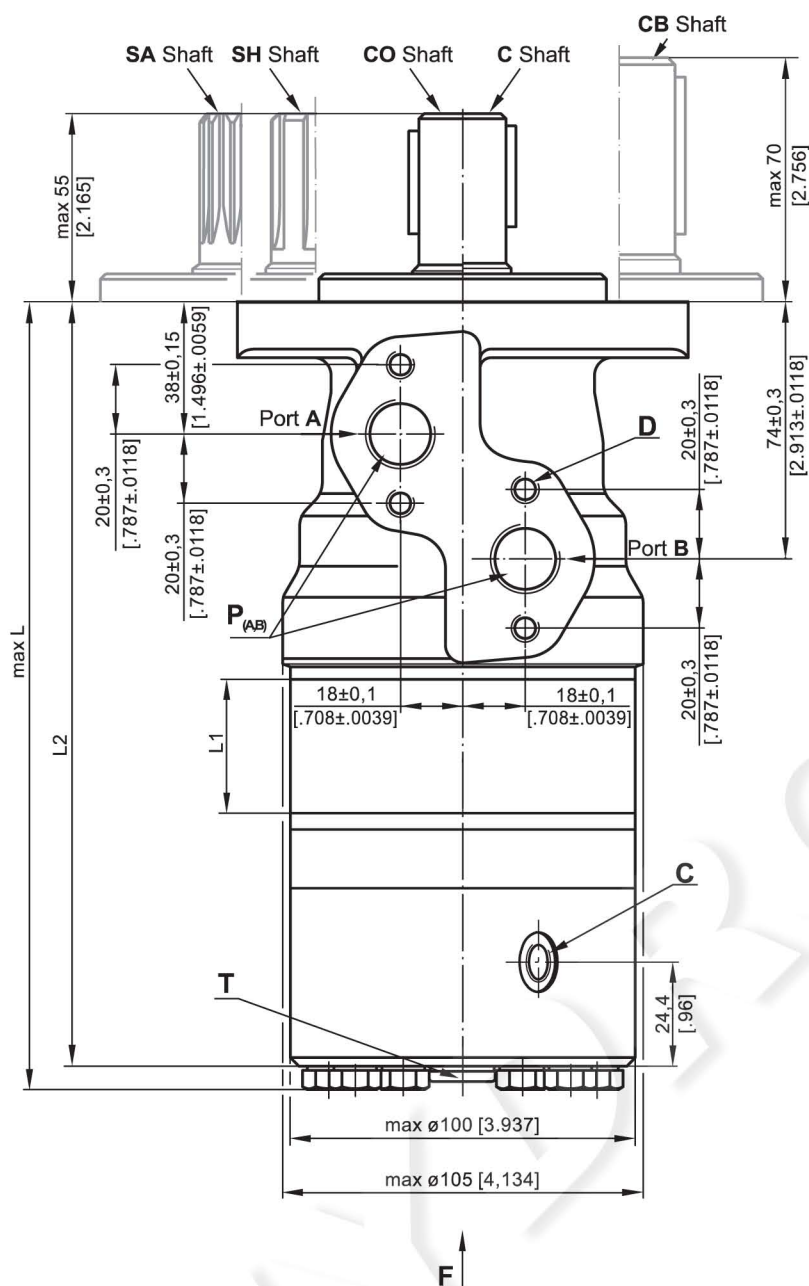
** Peak load: the permissible values may occur for max. 1% of every minute.

*** For speeds lower than given, consult factory or your regional manager.

**** Motor-brakes must always have a drain line. The brake release pressure is the difference between the pressure in the brake release line and the pressure in the drain line.

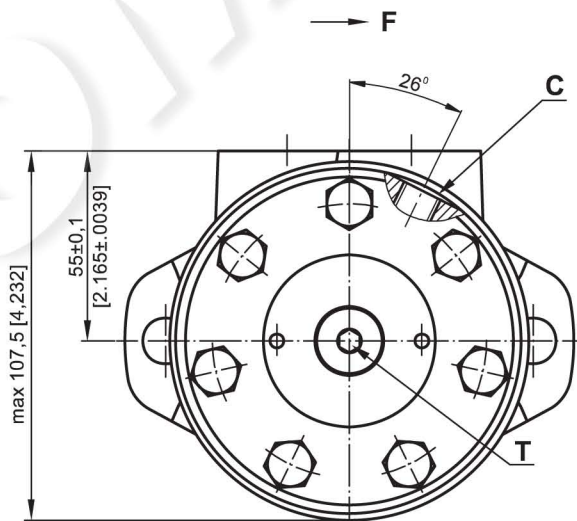
- Intermittent speed and intermittent pressure must not occur simultaneously.
- Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
- Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) or HM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
- Recommended minimum oil viscosity 13 mm²/s [70 SUS] at 50°C [122°F].
- Recommended maximum system operating temperature is 82°C [180°F].
- To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

DIMENSIONS and MOUNTING DATA



Shaft Dim.
See Page 24

Flange Dim.
See Page 24



- D** : 4xM8 - 13 mm [.51 in] depth
C : G1/4 - 12 [.47 in] mm depth
P_(A,B) : 2xG1/2 - 15 [.59 in] mm depth
T : G1/4 - 10 mm [.393 in] depth

Type	L ₁ , mm [in]	L ₂ , mm [in]	L, mm [in]
B/MR 80	14,0 [.551]	205,5 [8.091]	213,5 [8.405]
B/MR 100	17,4 [.685]	209,0 [8.228]	217,0 [8.543]
B/MR 125	21,8 [.858]	213,5 [8.405]	221,5 [8.720]
B/MR 160	27,8 [1.095]	219,5 [8.642]	227,5 [8.957]
B/MR 200	34,8 [1.37]	226,5 [8.917]	234,5 [9.232]

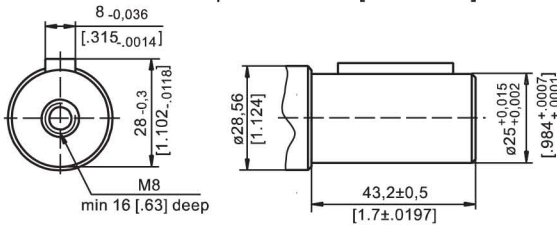


Standard Rotation
 Viewed from Shaft End
 Port A Pressurized - **CW**
 Port B Pressurized - **CCW**

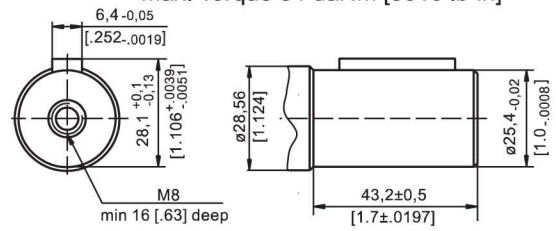
Reverse Rotation
 Viewed from Shaft End
 Port A Pressurized - **CCW**
 Port B Pressurized - **CW**

SHAFT EXTENSIONS

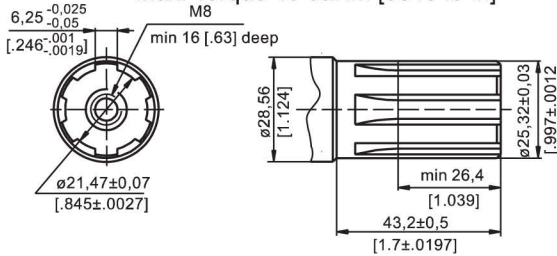
C - $\varnothing 25$ straight, Parallel key A8x7x32 DIN 6885
Max. Torque 34 daNm [3010 lb-in]



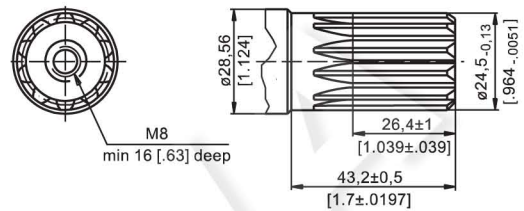
CO - $\varnothing 1$ " straight, Parallel key $\frac{1}{4}$ "x $\frac{1}{4}$ "x $\frac{1}{4}$ " BS46
Max. Torque 34 daNm [3010 lb-in]



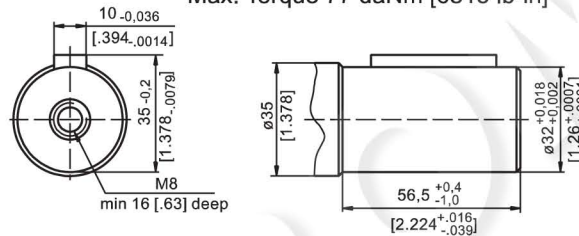
SH - splined, BS 2059 (SAE 6B)
Max. Torque 40 daNm [3540 lb-in]



SA - splined, B25x22h9 DIN 5482
Max. Torque 40 daNm [3540 lb-in]

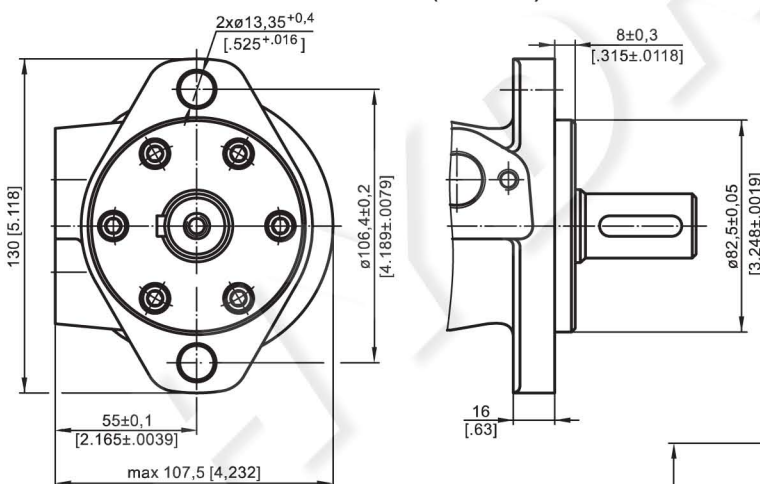


CB - $\varnothing 32$ straight, Parallel key A10x8x45 DIN 6885
Max. Torque 77 daNm [6815 lb-in]

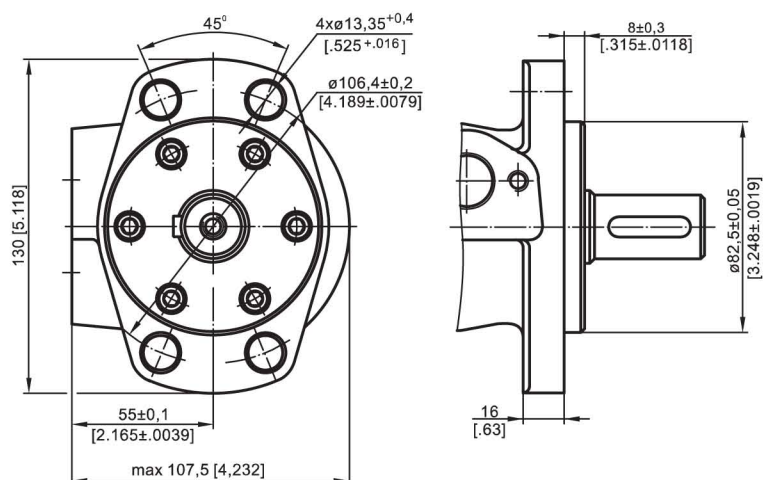


MOUNTING

Oval Mount (2 Holes)

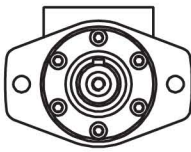
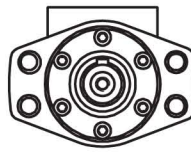


F - Oval Mount (4 Holes)



PERMISSIBLE SHAFT LOADS

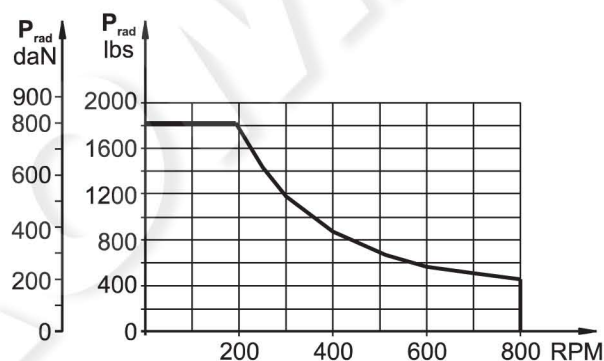
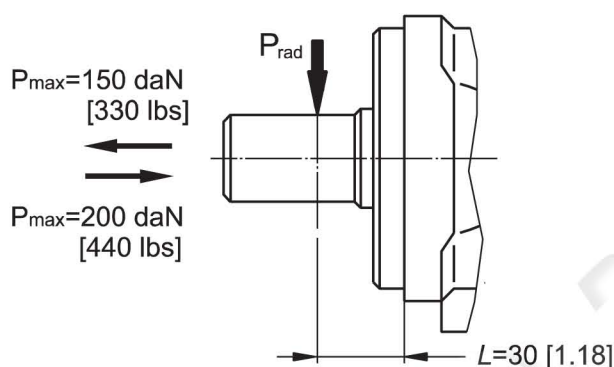
The permissible radial shaft load P_{rad} depends on the speed n , RPM; distance L from the point of load to the mounting flange and shaft version.

Mounting Flange		
Shaft Version	cylindrical - C, CO splined - SH, SA	cylindrical - CB
Radial Shaft Load P_{rad} , in mm	$\frac{800}{n} \times \frac{25000}{95+L}, \text{ daN}^*$	$\frac{800}{n} \times \frac{18750}{95+L}, \text{ daN}^*$
Radial Shaft Load P_{rad} , in inch	$\frac{800}{\text{RPM}} \times \frac{2215}{3.74+L}, \text{ lbs}^*$	$\frac{800}{\text{RPM}} \times \frac{1660}{3.74+L}, \text{ lbs}^*$

* $n \leq 200$ RPM; max P_{rad} =800 daN [1800 lbs]

$n \geq 200$ RPM; $L < 55$ mm [2.2 in]

Radial Shaft Load P_{rad} for C, CO Shaft Extensions by $L=30$ mm [1.18 in]



ORDER CODE

	1	2	3	4	5
B / M R					

Pos.1 - Mounting Flange

omit - Oval mount, two holes

F - Oval mount, four holes

Pos.2 - Displacement code

80 - 80,3 cm³/rev [4.90 in³/rev]

100 - 99,8 cm³/rev [6.09 in³/rev]

125 - 125,7 cm³/rev [7.67 in³/rev]

160 - 159,6 cm³/rev [9.74 in³/rev]

200 - 199,8 cm³/rev [12.19 in³/rev]

Pos.3 - Shaft Extensions*

C - ø25 straight, Parallel key A8x7x32 DIN6885

CO - ø1" straight, Parallel key ¼"x¼"x1¼" BS46

SH - ø25,32 splined BS 2059 (SAE 6B)

SA - ø24,5 splined B 25x22 DIN 5482

CB - ø32 straight, Parallel key A10x8x45 DIN 6885

Pos.4 - Special Features (see page 72)

Pos.5 - Design Series

omit - Factory specified

NOTES: * The permissible output torque for shafts must not be exceeded!

The motor-brakes are mangano-phosphatized as standard.