Quality assured company - ISO 9001 *certified*

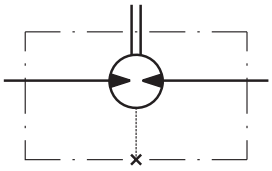
M+S HYDRAULIC

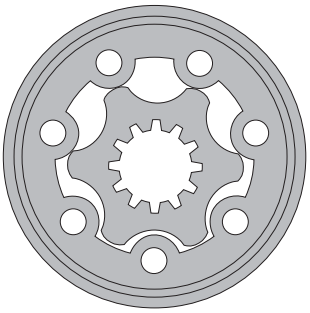
Product Tech News

Hydraulic motors type CMP

APPLICATION

» Conveyors
» Feeding mechanism of robots and manipulators
» Metal working machines
» Textile machines
» Agriculture machines
» Food industries
» Grass cutting machinery etc.





OPTIONS

» Model- Spool valve, gerotor
» Flange mount-oval mount, two holes
» Side ports
» Shaft: - ø25 straight, parallel key A8x7x32
- ø1" straight, Parallel key 1/4"x1/4"x1 1/4" Bs46
- ø1" splined BS 2059 (SAE 6B)
» Port connection - G 1/2 ; Drain Port - G 1/4 - BSPP (ISO 288)
» Pilot diameter - ø82.5
» High pressure shaft seal
» Suitable for medium and low dutyl

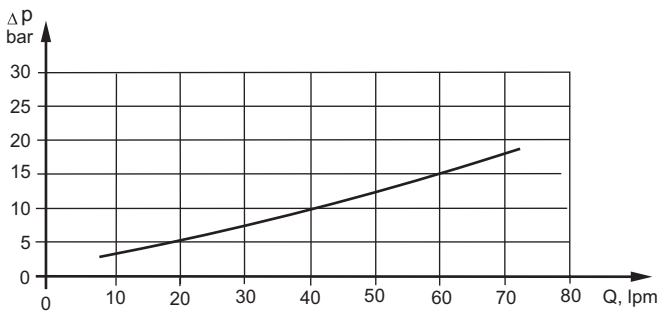
GENERAL

Max. Displacement,	cm^3/rev	396
Max. Speed,	RPM	1100
Max. Torque,	daNm	cont. 30,2 int. 40,0
Max. Output,	kW	11,7
Max. Pressure Drop,	bar	cont. 125 int. 140
Max. Oil Flow,	lpm	75
Min. Speed,	RPM	10
Pressure fluid		Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range,	^oC	-40÷140
Optimal Viscosity range,	mm^2/s	20÷75
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 micron)

Oil flow in drain line

Pressure drop [bar]	Viscosity [mm^2/s]	Oil flow in drain line [lpm]
100	20	2,5
	35	1,8
140	20	3,5
	35	2,8

Pressure Losses



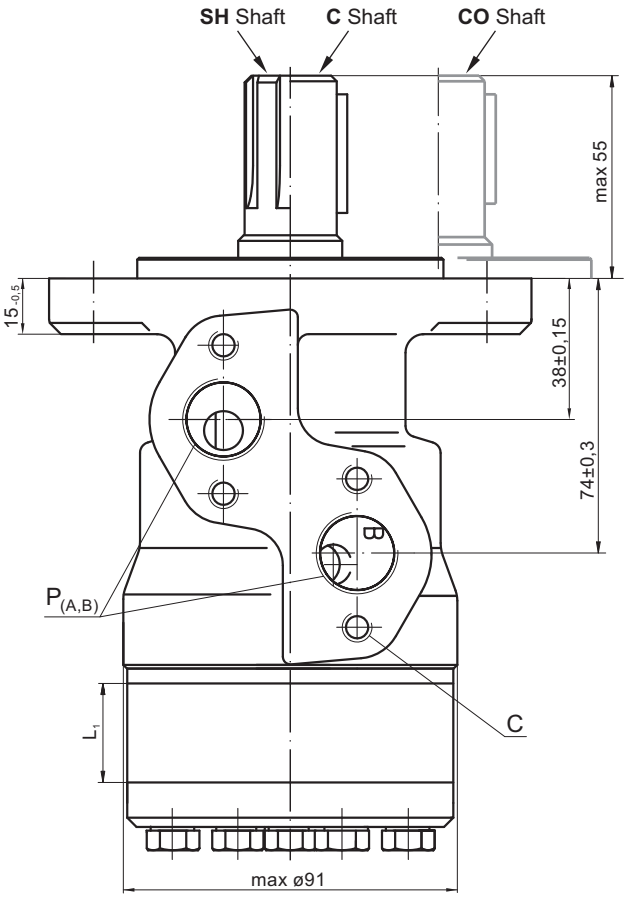
SPECIFICATION DATA

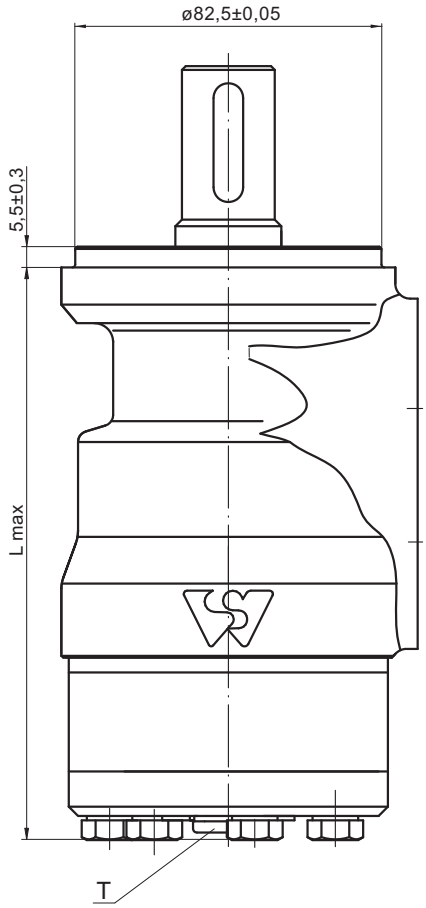
Type		CMP 50	CMP 80	CMP 100	CMP 125	CMP 160	CMP 200	CMP 250	CMP 315	CMP 400
Displacement, cm^3/rev		49,5	79,2	99	123,8	158,4	198	247,5	316,8	396
Max. Speed,	Cont.	1010	755	605	486	378	303	242	190	150
[RPM]	Int.*	1100	945	755	605	472	378	303	236	189
Max. Torque,	Cont.	7,8	12,6	15,7	19,7	24,2	29,0	28,3	30,2	30,2
daNm	Int.*	8,8	14,2	17,7	22,1	26,2	32,8	39,4	38,3	40,0
	Peak**	11,0	17,5	21,8	27,4	30,3	37,5	44,0	52,0	50,0
Max. Output,	Cont.	7,4	9,1	9,0	8,9	8,5	8,3	6,2	5,5	4,4
kW	Int.*	8,5	11,7	11,5	11,3	10,8	10,8	10,5	8,0	6,7
Max. Pressure	Cont.	125	125	125	125	120	115	90	75	60
Drop, bar	Int.*	140	140	140	140	130	130	125	95	80
	Peak**	175	175	175	175	150	150	140	130	100
Max. Inlet	Cont.	140	140	140	140	140	140	140	140	140
Pressure, bar	Int.*	160	160	160	160	160	160	160	160	160
	Peak**	175	175	175	175	175	175	175	175	175
Max. Oil Flow,	Cont.	50	60	60	60	60	60	60	60	60
lpm	Int.*	55	75	75	75	75	75	75	75	75
Max. Return	Cont.	140	140	140	140	140	140	140	140	140
Pressure with	Int.*	160	160	160	160	160	160	160	160	160
Drain Line, bar	Peak**	175	175	175	175	175	175	175	175	175
Max. Starting Pressure with Unloaded Shaft, bar		10	10	10	10	10	7	7	7	6
Min. Starting Torque, daNm	at max. pressure drop Cont.	6,3	10,1	12,6	15,8	19,4	23,2	22,7	24,2	24,2
	at max. pressure drop Int.*	7,1	11,3	14,1	17,7	21,0	26,0	31,0	30,5	32,0
Min. Speed***, RPM		10	10	10	10	10	10	10	10	10
Weight, kg		5,5	5,7	5,9	6,0	6,1	6,3	6,5	6,9	6,9

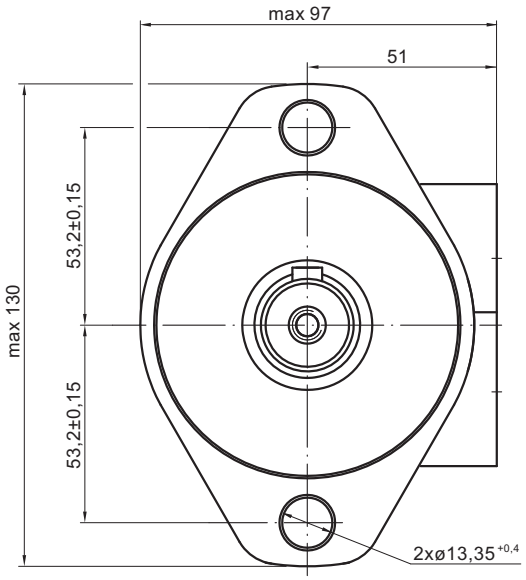
* Intermittent operation: the permissible values may occur for max. 10% of every minute.
** Peak load: the permissible values may occur for max. 1% of every minute.
*** For speeds lower than given, consult factory or your regional manager.

1. Intermittent speed and intermittent pressure drop must not occur simultaneously.
2. Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
3. 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.
4. Recommended minimum oil viscosity 70 SUS [13 mm^2/s] at 122ºF [50ºC].
5. Recommended maximum system operating temperature is 180ºF [82ºC].
6. 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







Type	L_{max}, mm	L_1, mm
CMP 50	135,5	6,67
CMP 80	139,5	10,67
CMP 100	142,0	13,33
CMP 125	145,0	16,67
CMP 160	150,0	21,33
CMP 200	155,5	26,67
CMP 250	162,0	33,33
CMP 315	171,5	42,67
CMP 400	182,0	53,33

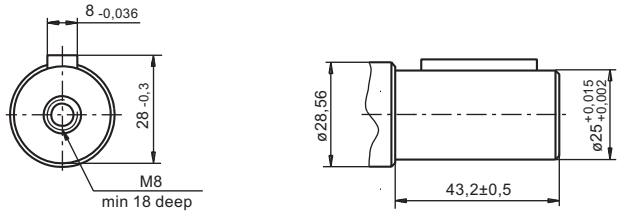
C : 4xM8 - 13 mm depth
$P_{(A, B)}$: 2xG1/2 - 16 mm depth
T : G1/4 - 12 mm depth (plugged)

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

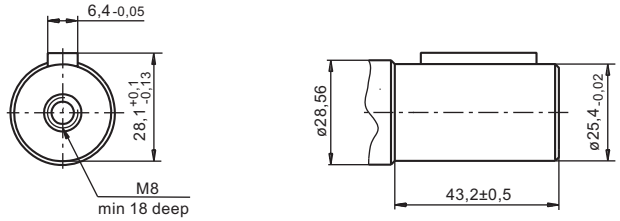
Reverse Rotation
Viewed from Shaft End
Port **A** Pressurized - **CCW**
Port **B** Pressurized - **CW**

SHAFT EXTENSIONS

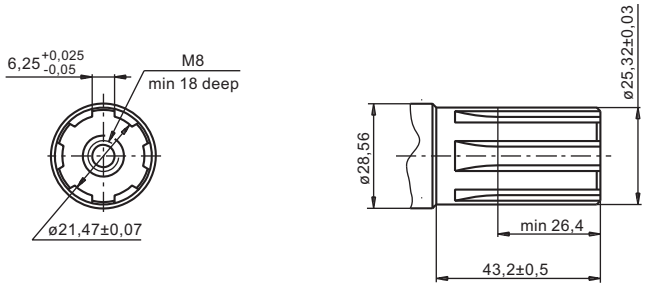
C - ø25 straight, Parallel key A8x7x32 DIN 6885
Max. Torque 34 daNm



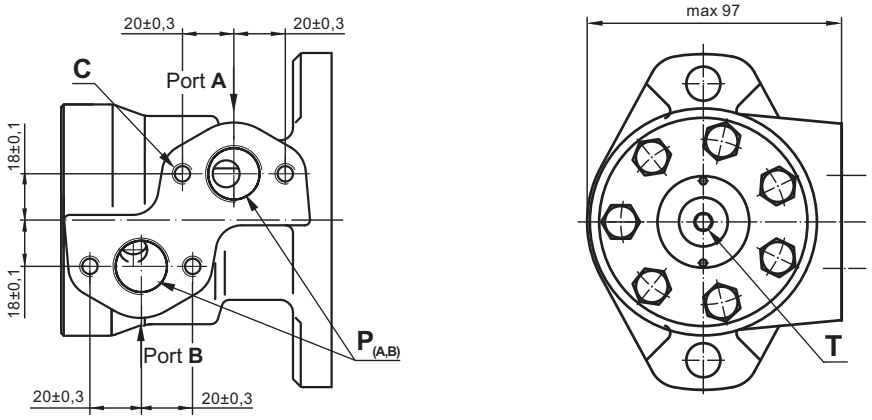
CO - ø1" straight, Parallel key ¼"x¼"x1¼" BS46
Max. Torque 34 daNm



SH - splined, BS 2059 (SAE 6B)
Max. Torque 40 daNm



PORTS



C : 4xM8 - 13 mm depth
P$_{(A, B)}$: 2xG1/2 - 16 mm depth
T : G1/4 - 12 mm depth (plugged)

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**

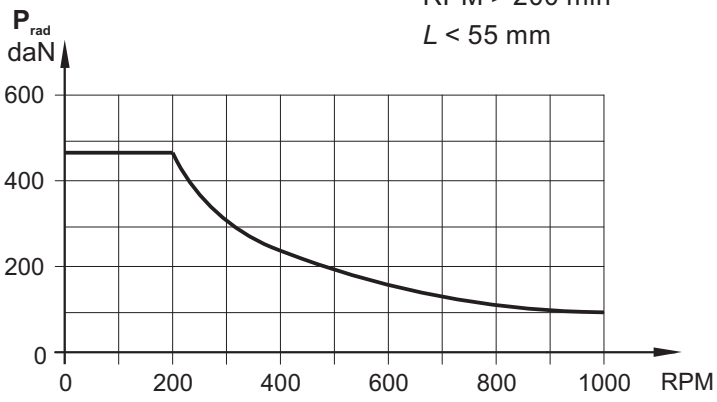
PERMISSIBLE SHAFT LOADS FOR CMP MOTORS

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

Radial Shat Load $P_{rad} = \frac{800}{RPM} \times \frac{15000}{95+L}$, daN*

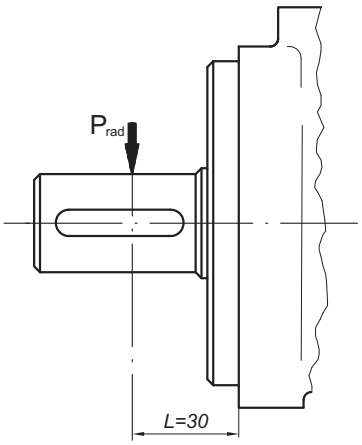
RPM > 200 min^{-1}

L < 55 mm

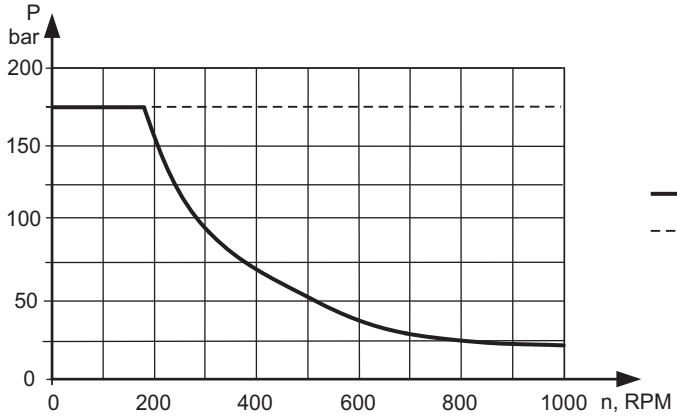


$P_a$max=150 daN

$P_a$max=200 daN



MAX. PERMISSIBLE SHAFT SEAL PRESSURE



——— - continuous operations

- - - - - - intermittent operations

ORDER CODE

	1	2	3	4
C M P				

Pos.1 - Displacement code

50	- 49,5 cm^3/rev
80	- 79,2 cm^3/rev
100	- 99,0 cm^3/rev
125	- 123,8 cm^3/rev
160	- 158,4 cm^3/rev
200	- 198,0 cm^3/rev
250	- 247,5 cm^3/rev
315	- 316,8 cm^3/rev
400	- 396,0 cm^3/rev

Pos.2 - Shaft Extensions*

C	- ø25 straight, Parallel key A 8x7x32 DIN 6885
CO	- ø1" straight, Parallel key 1/4"x1/4"x1 1/4" BS46
SH	- ø1" splined BS 2059 (SAE 6B)

Pos.3 - Option (Paint)**

omit	- no Paint
P	- Painted
PC	- Corrosion Protected Paint
PS	- Special Paint***
PCS	- Special Paint***

Pos.4 - Design Series

omit - Factory specified

Notes:

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

** Colour at customer's request.

*** Non painted feeding surfaces, colour at customer's request.

The hydraulic motors are mangano-phosphatized as standard.

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