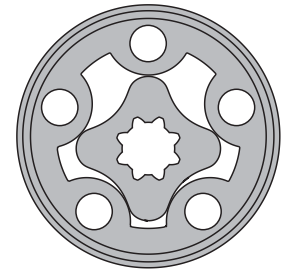


# HYDRAULIC MOTORS EPMM



## APPLICATION

- » Conveyors;
- » Textile machines;
- » Mining machinery;
- » Machine tools;
- » Ventilators;
- » Construction plant equipment and access platforms etc.



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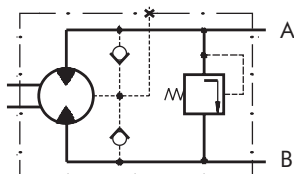
## OPTIONS

- » Model- Spool valve, gerotor;
- » With or without flange;
- » Side and rear ports;
- » Series with pressure valve(s)
- » Shafts- straight and splined;
- » Metric and BSPP ports;
- » Other special features.

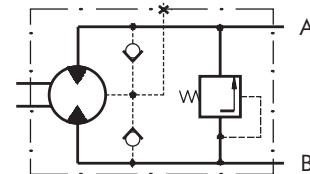
## GENERAL

Displacement,	[cm <sup>3</sup> /rev.]	8,2÷50
Max. Speed,	[RPM]	1950÷400
Max. Torque,	[daNm]	1,1÷4,5
Max. Output,	[kW]	1,8÷2,4
Max. Pressure Drop,	[bar]	100÷70
Max. Oil Flow,	[l/min]	16÷20
Min. Speed,	[RPM]	50÷20
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)	
Temperature range,	[°C]	-30÷90
Optimal Viscosity range,	[mm <sup>2</sup> /s]	20÷75
Filtration	ISO code 20/16 (Min. recommended fluid filtration of 25 micron)	

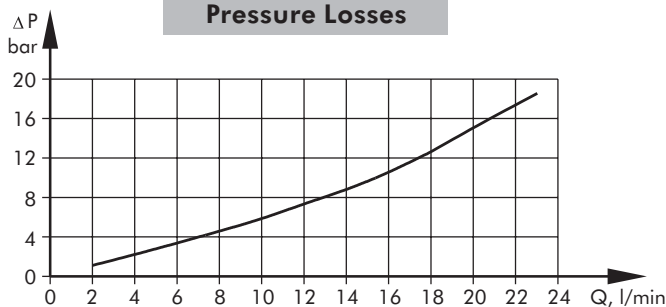
**EPMMP Series with Integrated Internal Crossover Relief Valve**  
**A → B, Δp= 100 bar (50 bar)**



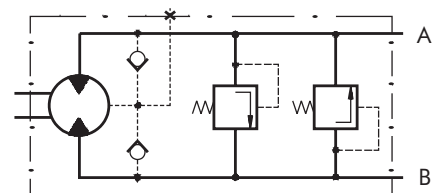
**EPMMP Series with Integrated Internal Crossover Relief Valve**  
**B → A, Δp= 100 bar (50 bar)**



**Pressure Losses**



**EPMMD Series with Integrated Internal Crossover Relief Valves**  
**A ↔ B, Δp= 100 bar (50 bar)**



## SPECIFICATION DATA

Type	EPMM 8	EPMM 12,5	EPMM 20	EPMM 32	EPMM 40	EPMM 50	
Displacement [cm <sup>3</sup> /rev.]	8,2	12,9	20	31,8	40	50	
Max. Speed, [RPM]	cont.	1950	1550	1000	630	500	400
	int.*	2440	1940	1250	790	625	500
Max. Torque [daNm]	cont.	1,1	1,6	2,5	4	4,1	4,5
	int.*	1,5	2,3	3,5	5,7	5,7	5,8
	peak**	2,1	3,3	5,1	6,4	6,6	8
Max. Output [kW]	cont.	1,8	2,4	2,4	2,4	1,8	1,7
	int.*	2,6	3,2	3,2	3,2	3,0	2,1
Max. Pressure Drop [bar]	cont.	100	100	100	100	80	70
	int.*	140	140	140	140	110	90
	peak**	200	200	200	200	140	125
Max. Oil Flow [l/min]	cont.	16	20	20	20	20	20
	int.*	20	25	25	25	25	25
Max. Inlet Pressure, [bar]	cont.	140	140	140	140	140	140
	int.*	175	175	175	175	175	175
	peak**	225	225	225	225	225	225
Max. Return Pressure w/o Drain Line or Max. Pressure in Drain Line, [bar]	cont. 0-100 RPM	140	140	140	140	140	140
	cont. 100-400 RPM	100	100	100	100	100	100
	cont. 400-800 RPM	50	50	50	50	50	-
	cont. >800 RPM	20	20	20	-	-	-
	int.* 0-max. RPM	140	140	140	140	140	140
Max. Return Pressure with Drain Line [bar]	cont.	140	140	140	140	140	140
	int.*	175	175	175	175	175	175
	peak**	225	225	225	225	225	225
Max. Starting Pressure with Unloaded Shift, [bar]	4	4	4	4	4	4	
Min. Starting Torque [daNm]	at max. press. drop cont.	0,7	1,2	2,1	3,4	3,3	3,7
	at max. press. drop int.*	1,0	1,7	2,9	4,8	4,6	4,8
Min. Speed***, [RPM]	50	40	30	30	25	20	
Weight, avg. [kg]	EPMM	1,9	2	2,1	2,2	2,3	2,5
	EPMMF(S)	2,3	2,4	2,5	2,6	2,7	2,9
	EPMMFS	2,7	2,8	2,9	3,0	3,1	3,3
	EPMMF	2,5	2,6	2,7	2,8	2,9	3,1
	EPMMPF	2,7	2,8	2,9	3,0	3,1	3,3
	EPMMD	2,6	2,7	2,8	2,9	3,0	3,2
	EPMMDF	2,8	2,9	3,0	3,1	3,2	3,4

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

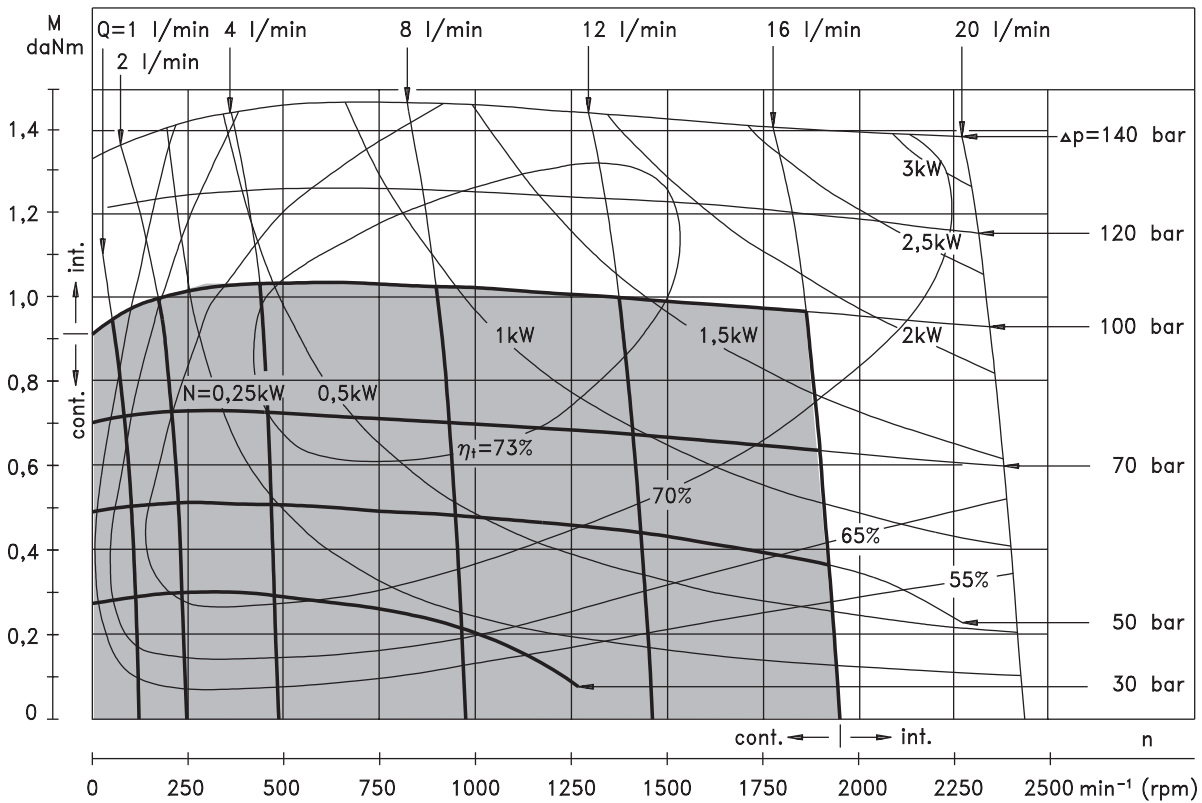
\*\* Peak load: the permissible values may occur for max. 1% of every minute.

\*\*\* For speeds of 30 RPM or lower, consult factory or your regional manager.

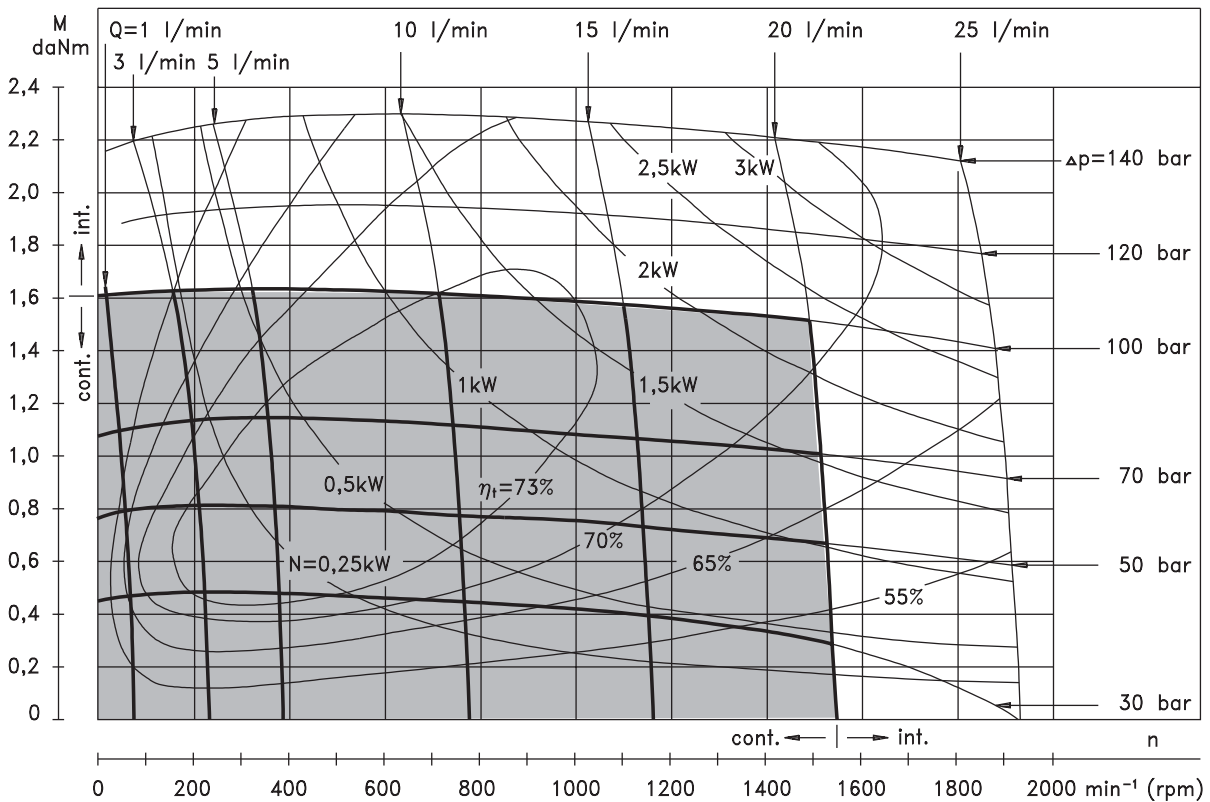
1. Intermittent speed and intermittent pressure drop must not occur simultaneously.
2. Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) or HM (ISO 6743/4).  
If using synthetic fluids consult the factory for alternative seal materials.
4. Recommended minimum oil viscosity 13 mm<sup>2</sup>/s at operating temperature 50°C.
5. Recommended maximum system operating temperature is 82°C.
6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 15-30 min.

**FUNCTION DIAGRAMS**

**EPMM 8**



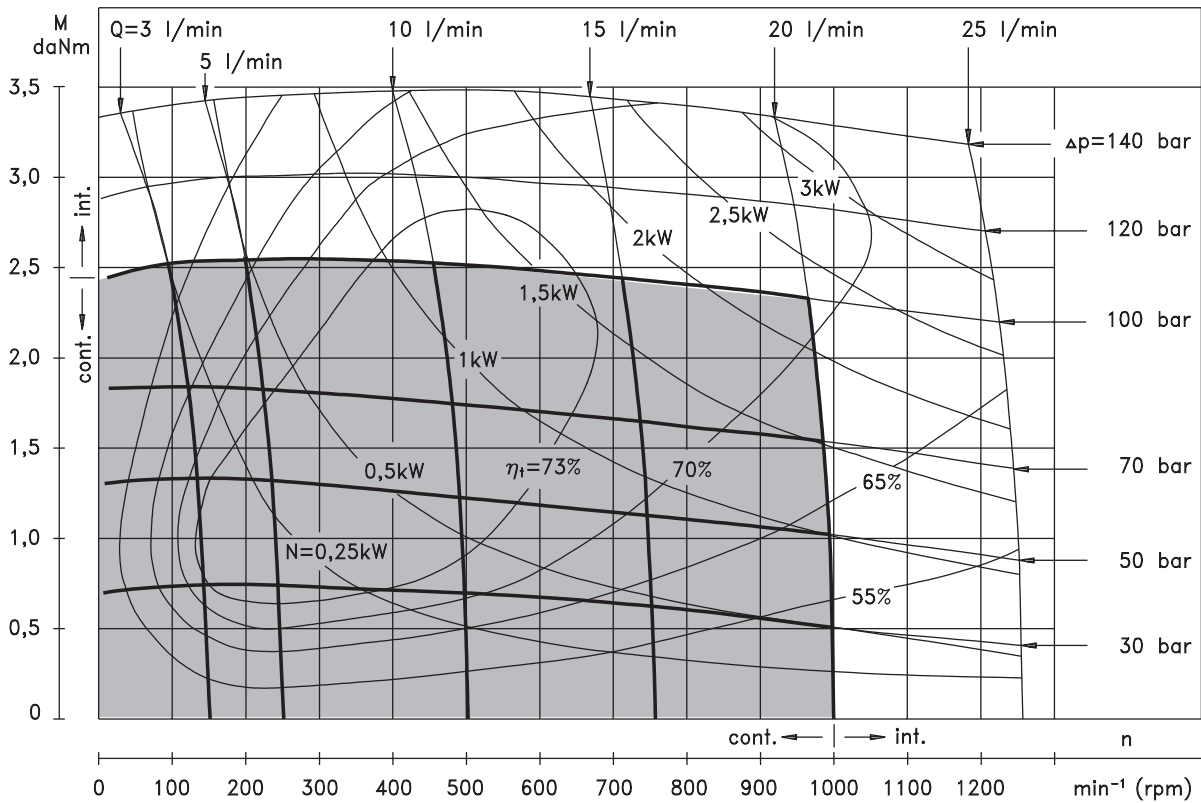
**EPMM 12,5**



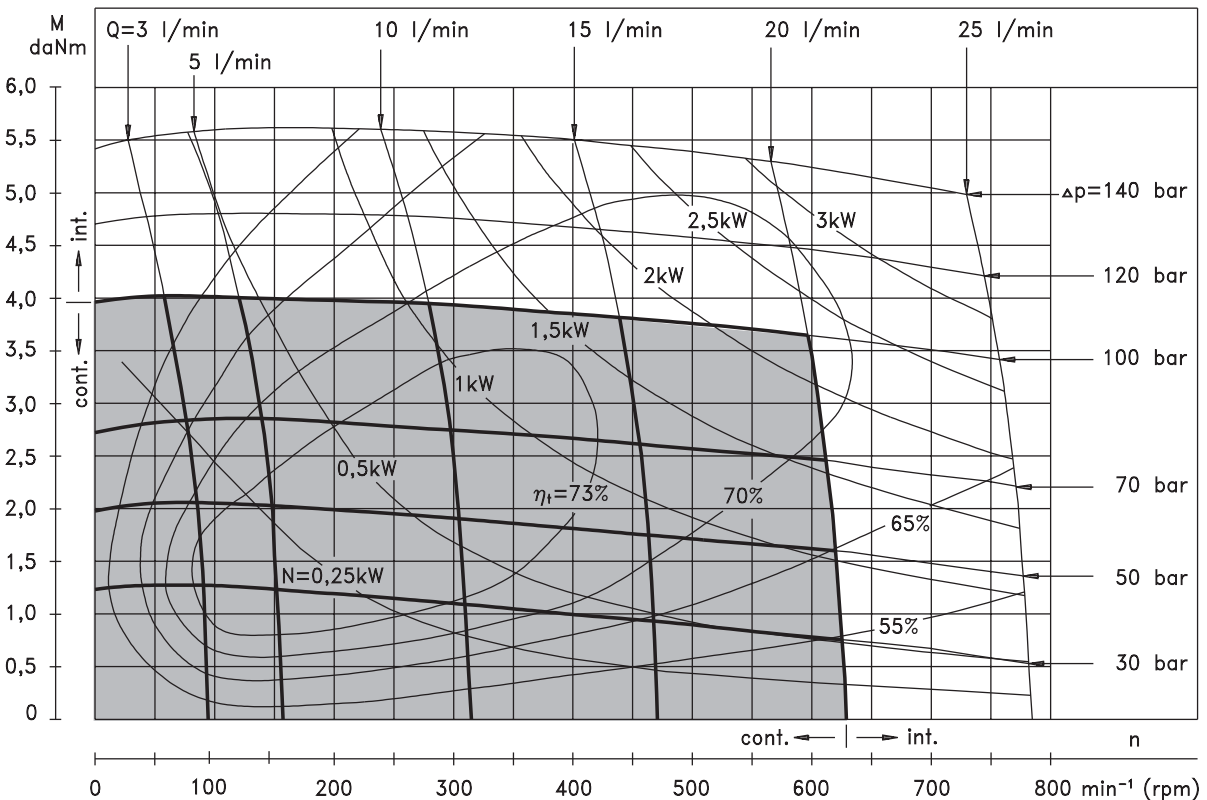
The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm<sup>2</sup>/s at 50° C.

**FUNCTION DIAGRAMS**

**EPMM 20**



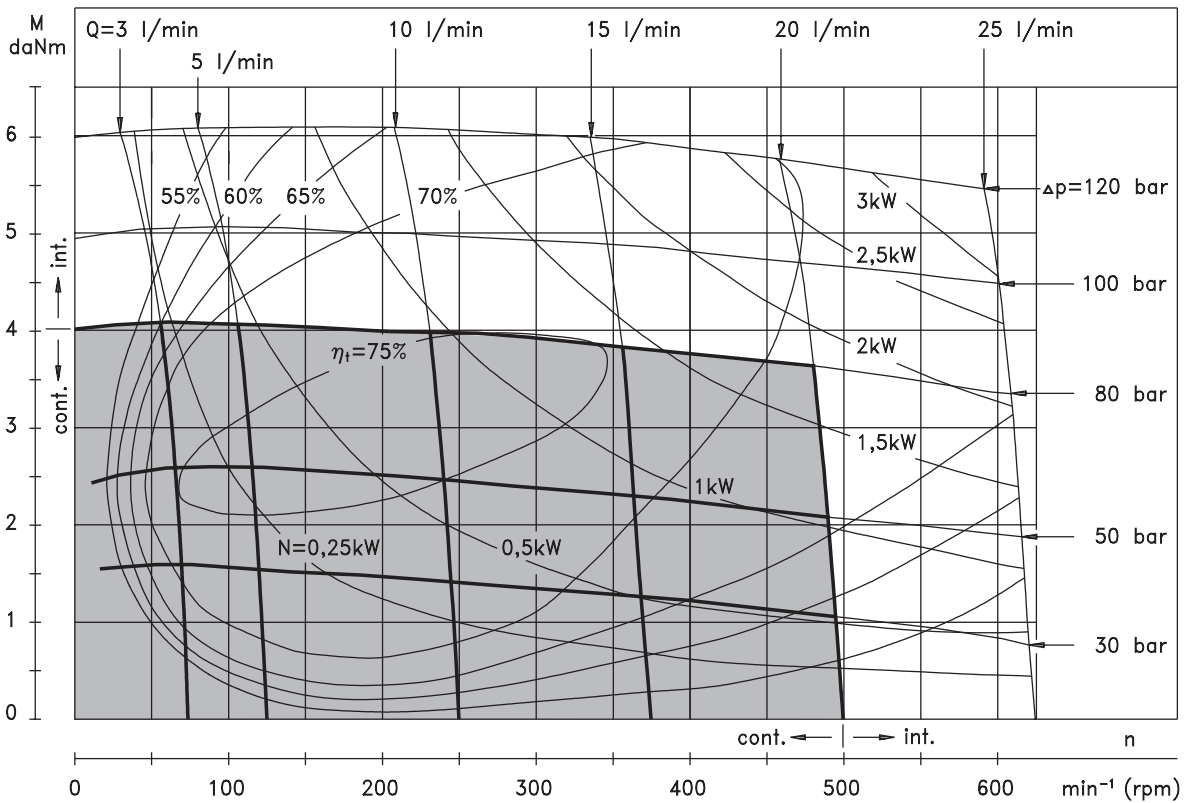
**EPMM 32**



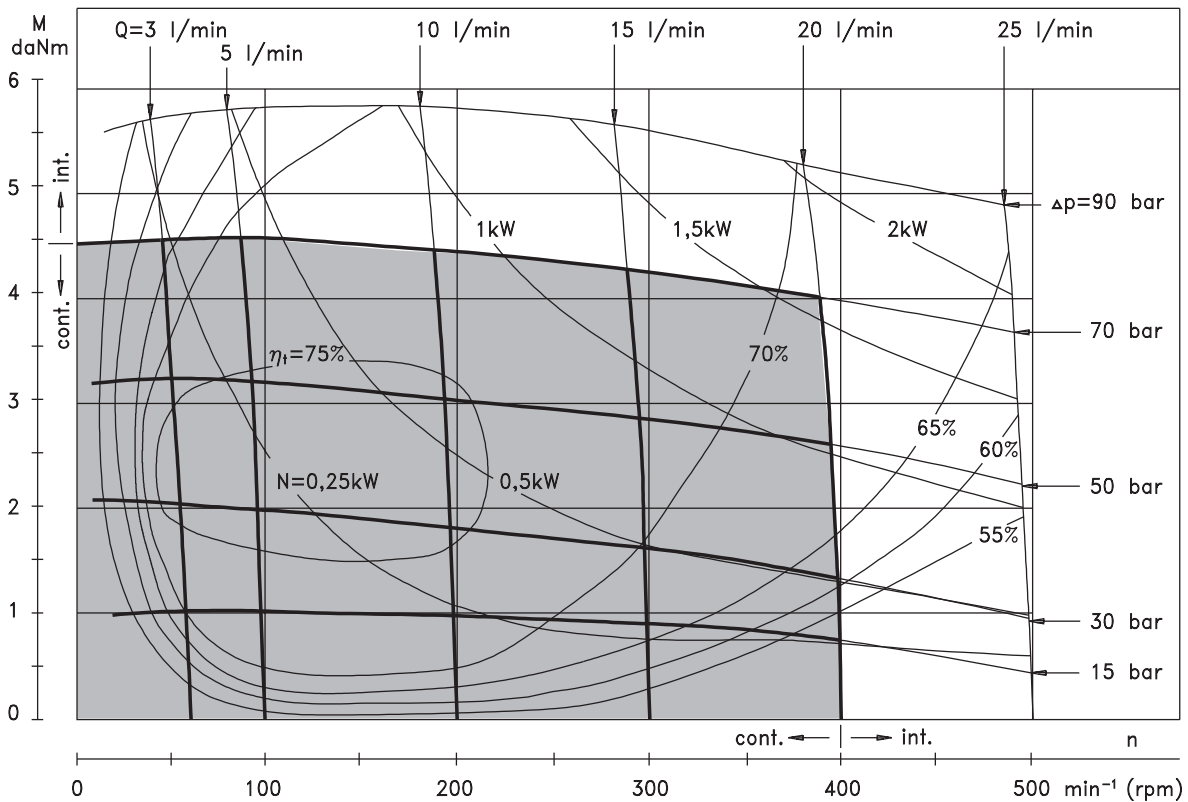
The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm<sup>2</sup>/s at 50° C.

**FUNCTION DIAGRAMS**

**EPMM 40**

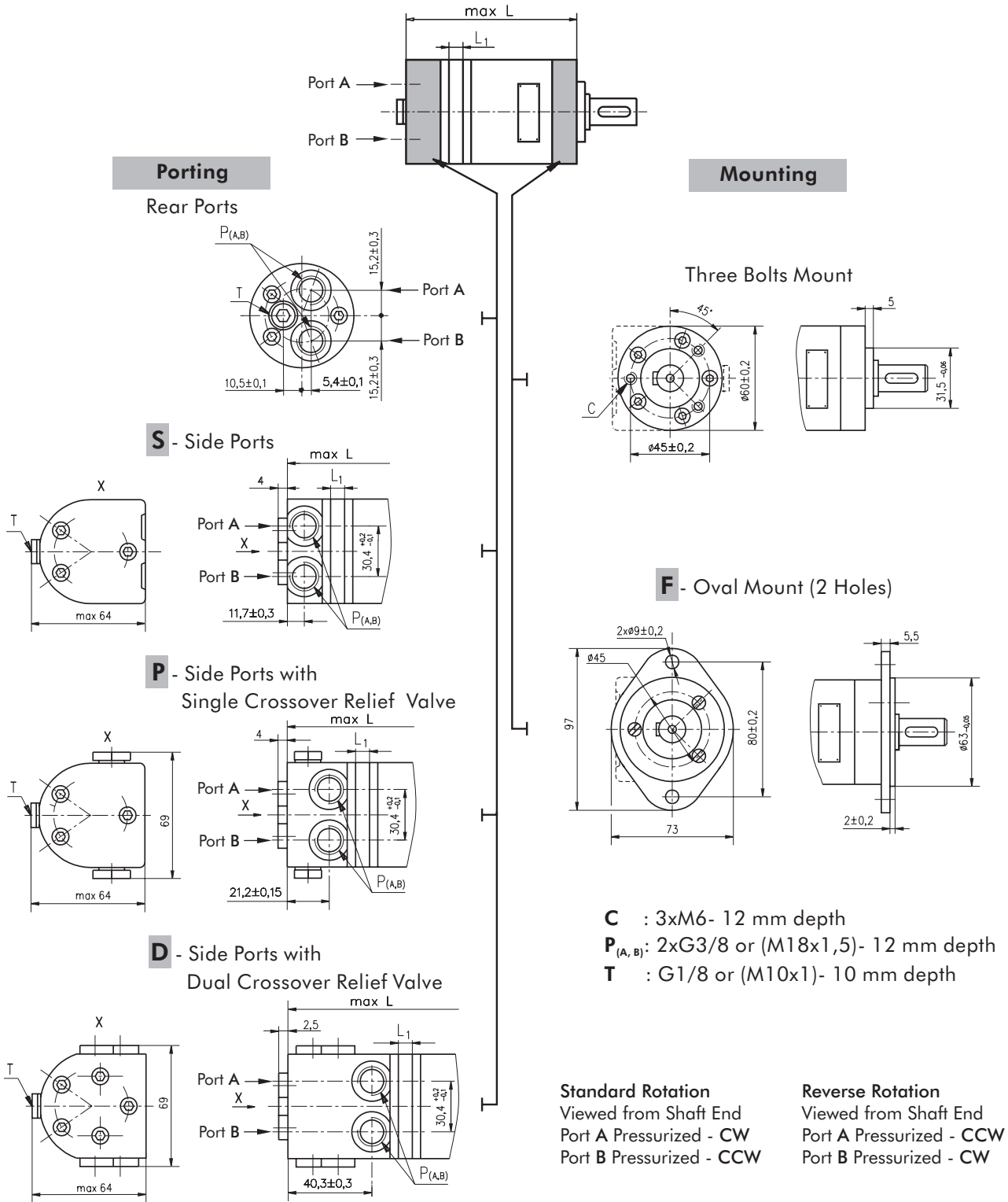


**EPMM 50**



The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm<sup>2</sup>/s at 50° C.

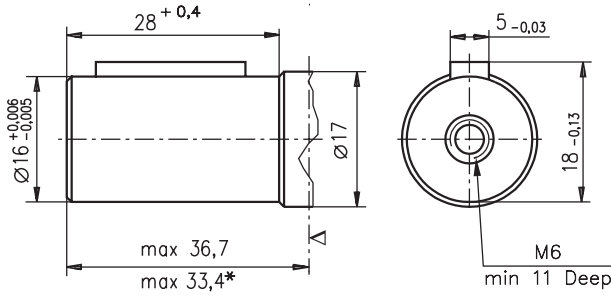
**DIMENSIONS AND MOUNTING DATA**



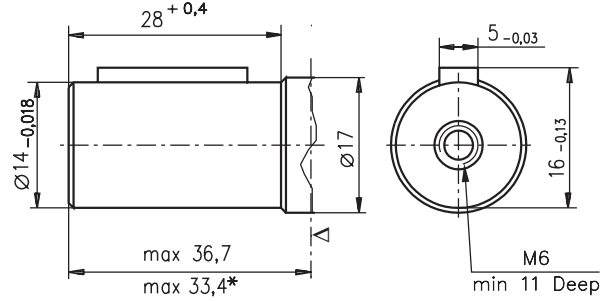
Type	L,mm	Type	L,mm	Type	L,mm	Type	L,mm	L <sub>1</sub> ,mm
EPMM 8	104	EPMMS 8	105	EPMMP 8	115	EPMMD 8	134	3,5
EPMM12,5	106	EPMMS12,5	107	EPMMP12,5	117	EPMMD12,5	136	5,5
EPMM 20	109	EPMMS 20	110	EPMMP 20	120	EPMMD 20	139	8,5
EPMM 32	114	EPMMS 32	115	EPMMP 32	125	EPMMD 32	144	13,5
EPMM 40	117,5	EPMMS 40	118,5	EPMMP 40	128,5	EPMMD 40	147,5	17
EPMM 50	121,5	EPMMS 50	122,5	EPMMP 50	132,5	EPMMD 50	151,5	21

**SHAFT EXTENSIONS**

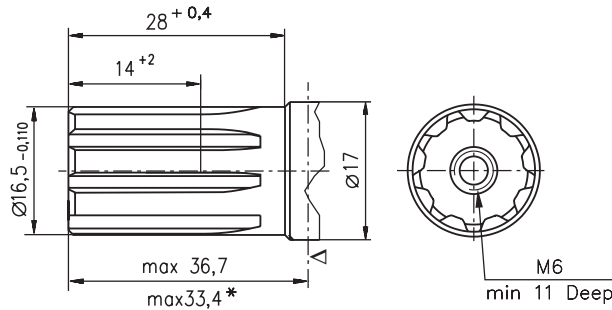
**C** -  $\varnothing 16$  straight, Parallel key 5x5x16 DIN 6885  
Max. Torque 3,9 daNm



**CK** -  $\varnothing 14$  Straight, Parallel key 5x5x16 DIN 6885  
Max. Torque 3 daNm

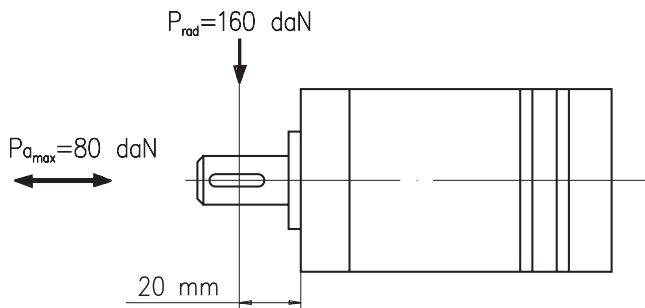


**SH** -  $\varnothing 16,5$  Splined, B17x14 DIN 5482  
Max. Torque 4,4 daNm



▽ - Motor Mounting Surface  
\* For **F** Mounting

**PERMISSIBLE SHAFT LOAD**



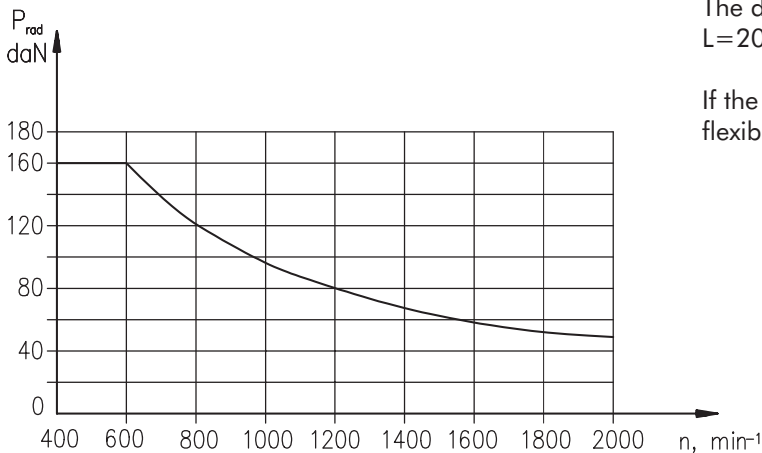
The permissible radial shaft load [P<sub>rad</sub>] is calculated from the distance [L] between the point of load application and the mounting surface:

$$P_{rad} = \frac{13040}{(61,5+L)}, \text{ [daN]}$$

[L in mm; L ≤ 80]

The drawing shows the permissible radial load when L=20 mm.

If the calculated shaft load exceeds the permissible, a flexible coupling must be used.



## ORDER CODE

	1	2	3	4	5	6	7	8	9	10	11
<b>E P M M</b>											

### Pos.1 - Adjustment Option

omit - without valve

**P** - Side ports with single crossover relief valve

**D** - Side ports with dual crossover relief valve

### Pos.2 - Mounting Flange

omit - Three bolts mount

**F** - Oval mount, two holes

### Pos.3 - Port type (not valid for P and D version)

omit - Rear ports

**S** - Side ports

### Pos.4 - Displacement code

**8** - 8,2 [cm<sup>3</sup>/rev]

**12,5** - 12,9 [cm<sup>3</sup>/rev]

**20** - 20,0[cm<sup>3</sup>/rev]

**32** - 31,8[cm<sup>3</sup>/rev]

**40** - 40,0[cm<sup>3</sup>/rev]

**50** - 50,0[cm<sup>3</sup>/rev]

### Pos. 5 - Shaft Extensions\*

**C** - ø16 straight, Parallel key 5x5x16 DIN 6885

**VC** - ø16 straight, Parallel key 5x5x16 DIN 6885  
with corrosion resistant bushing

**CK** - ø14 straight, Parallel key 5x5x16 DIN 6885

**SH** - ø16,5 splined, B17x14 DIN 5482

### Pos. 6 - Ports

omit - BSPP (ISO 228)

**M** - Metric (ISO 262)

### Pos. 7 - Line to controlled \*\* (see page 4)

**L** - B→A (left running)

**R** - A→B (right running)

### Pos. 8 - Valve Rated Pressure \*\*\*

**/50** - Δp=50 bar

**/100** - Δp=100 bar

### Pos. 9 - Rotation

omit - Standard Rotation

**R** - Reverse Rotation

### Pos.10 - Option (Paint)\*\*\*\*

omit - no paint

**P** - Painted

**PC** - Corrosion Protected Paint

### Pos.11 - Design Series

omit - Factory specified

#### NOTES:

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

\*\* For "P" option useful only.

\*\*\* For "P" and "D" option useful only.

\*\*\*\* Color at customer's request.

The hydraulic motors are mangano-phosphatized as standard.