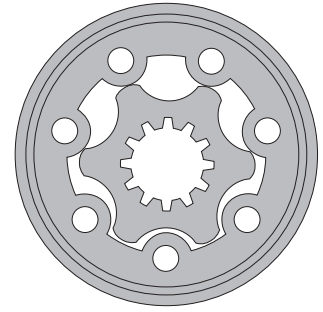


# HYDRAULIC MOTORS EPM



## APPLICATION

- » Conveyors;
- » Feeding mechanism of robots and manipulators;
- » Metal working machines;
- » Textile machines;
- » Machines for agriculture;
- » Food industries;
- » Grass cutting machinery etc.



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## OPTIONS

- » Model- Spool valve, gerotor;
- » Flange and wheel mount;
- » Motor with needle bearing
- » Side and rear ports;
- » Shafts- straight, splined and tapered;
- » Shaft seal for high and low pressure;
- » Metric and BSPP ports;
- » Other special features.

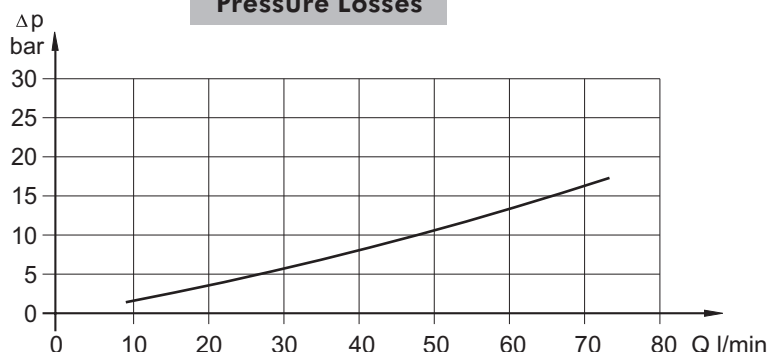
## GENERAL

Displacement, [cm <sup>3</sup> /rev.]	25 ÷ 623,6
Max. Speed, [RPM]	1600 ÷ 95
Max. Torque, [daNm]	3,3 ÷ 50
Max. Output, [kW]	3,3 ÷ 10,5
Max. Pressure Drop, [bar]	140 ÷ 55
Max. Oil Flow, [l/min]	40 ÷ 60
Min. Speed, [RPM]	10
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)

### Oil flow in drain line

Pressure drop (bar)	Viscosity (mm <sup>2</sup> /s)	Oil flow in drain line (l/min)
100	20	2,5
	35	1,8
140	20	3,5
	35	2,8

### Pressure Losses



**SPECIFICATION DATA**

Type	EPM 25	EPM 32	EPM 40	EPM(W) 50	EPM 50...B...	EPM(W) 80	EPM 80...B...	EPM(W) 100	EPM 100...B...	
Displacement [cm <sup>3</sup> /rev.]	25	32,0	40,0	49,5	49,5	79,2	79,2	99	99	
Max. Speed, [RPM]	cont.	1600	1560	1500	1210	1210	755	755	605	605
	int.*	1800	1720	1750	1515	1515	945	945	755	755
Max. Torque, [daNm]	cont.	3,3	4,3	6,2	9,4	9,4	15,1	15,1	19,3	19,3
	int.*	4,7	6,1	8,2	11,9	11,9	19,5	19,5	23,7	23,7
	peak**	6,7	8,6	10,7	14,3	14,3	22,4	22,4	27,5	27,5
Max. Output, [kW]	cont.	4,5	5,8	8,4	10,1	10,1	10,2	10,2	10,5	10,5
	int.*	6,1	7,8	11,6	12,2	12,2	12,5	12,5	12,8	12,8
Max. Pressure Drop, [bar]	cont.	100	100	120	140	140	140	140	140	140
	int.*	140	140	155	175	175	175	175	175	175
	peak**	225	225	225	225	225	225	225	225	225
Max. Oil Flow, [lpm]	cont.	40	50	60	60	60	60	60	60	60
	int.*	45	55	70	75	75	75	75	75	75
Max. Inlet Pressure, [bar]	cont.	175	175	175	175	175	175	175	175	175
	int.*	200	200	200	200	200	200	200	200	200
	peak**	225	225	225	225	225	225	225	225	225
Max. Return Pressure w/o Drain Line or Max. Pressure in Drain Line, [bar]	cont. 0-100 RPM	150	150	150	150	100	150	100	150	100
	cont. 100-300 RPM	75	75	75	75	30	75	30	75	30
	cont. 300-600 RPM	50	50	50	50	15	50	15	50	15
	cont. >600 RPM	20	20	20	20	-	20	-	20	-
Max. Return Pressure with Drain Line, [bar]	cont.	175	175	175	175	175	175	175	175	175
	int.*	200	200	200	200	200	200	200	200	200
	peak**	225	225	225	225	225	225	225	225	225
Max. Starting Pressure with Unloaded Shaft [bar]	10	10	10	10	10	10	10	10	10	
Min. Starting Torque [daNm]	at max. press. drop cont.	3	4	5,4	7,8	7,8	13,2	13,2	16,6	16,6
	at max. press. drop int.*	4,2	5,6	6,9	10	10	16,8	16,8	21	21
Min. Speed [RPM]	20	15	10	10	10	10	10	10	10	
Weight [kg]	EPM(F)	5,6	5,6	5,7	5,8		5,9		6,1	
	EPM(F)(E)...B...					5,9(6,4)		6(6,5)		6,2(6,7)
	EPMQ(N)				5,2		5,3		5,5	
	EPM(F)(N)E				6,3		6,4		6,6	
	EPMW(N)				5,5		5,6		5,8	
	EPMQ(N)E				5,7		5,8		6,0	

\* 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 10 RPM or lower, consult factory or your regional manager.

- Intermittent speed and intermittent pressure drop must not occur simultaneously.
- Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
- Recommended 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 mm<sup>2</sup>/s at operating temperatures.
- Recommended maximum system operating temperature is 82°C.
- To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

### SPECIFICATION DATA (continued)

Type		EPM 125 EPMW 125	EPM 125...B...	EPM 160 EPMW 160	EPM 160...B...	EPM 200 EPMW 200	EPM 200...B...
Displacement, [cm <sup>3</sup> /rev.]		123,8	123,8	158,4	158,4	198	198
Max. Speed, [RPM]	cont.	486	486	378	378	303	303
	int.*	605	605	472	472	378	378
Max. Torque [daNm]	cont.	23,7	23,7	31,3	31,3	36,6	36,6
	int.*	29,8	29,8	37,8	37,8	45,6	45,6
	peak**	36,5	36,5	43,8	43,8	55	55
Max. Output, [kW]	cont.	10	10	10,1	10,1	10	10
	int.*	12	12	12,1	12,1	12	12
Max. Pressure Drop [bar]	cont.	140	140	140	140	140	140
	int.*	175	175	175	175	175	175
	peak**	225	225	225	225	225	225
Max. Oil Flow [l/min]	cont.	60	60	60	60	60	60
	int.*	75	75	75	75	75	75
Max. Inlet Pressure [bar]	cont.	175	175	175	175	175	175
	int.*	200	200	200	200	200	200
	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	150	100	150	100	150	100
	cont. 100-300 RPM	75	30	75	30	75	30
	cont. 300-600 RPM	50	15	50	15	50	15
	cont. >600 RPM	-	-	-	-	-	-
	int.* 0-max. RPM	150	100	150	100	150	100
Max. Return Pressure with Drain Line [bar]	cont.	175	175	175	175	175	175
	int.*	200	200	200	200	200	200
	peak**	225	225	225	225	225	225
Max. Starting Pressure with Unloaded Shaft, [bar]		9	9	8	8	7	7
Min. Starting Torque [daNm]	at max. press drop cont.	20,7	20,7	28,2	28,2	33,5	33,5
	at max. press. drop int.*	26,6	26,6	35,5	35,5	42,6	42,6
Min. Speed***, [RPM]		10	10	10	10	10	10
Weight, avg. [kg]	EPM(F)	6,2		6,4		6,6	
	EPM(F)(E)...B...		6,3(6,8)		6,5(6,9)		6,7(7,2)
	EPMQ(N)	5,6		5,8		6,0	
	EPM(F)(N)E	6,7		6,9		7,1	
	EPMW(N)	5,9		6,1		6,3	
	EPMQ(N)E	6,1		6,3		6,5	

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3. Recommended 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 temperatures.
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 10-15 minutes.

### SPECIFICATION DATA (continued)

Type		EPM(W) 250	EPM 250...B...	EPM(W) 315	EPM 315...B...	EPM(W) 400	EPM 400...B...	EPM 500	EPM 630
Displacement, [cm <sup>3</sup> /rev.]		247,5	247,5	316,8	316,8	396	396	495	623,6
Max. Speed, [RPM]	cont.	242	242	190	190	150	150	120	95
	int.*	303	303	236	236	189	189	150	120
Max. Torque [daNm]	cont.	38	47	38	48,6	36	50	39	44
	int.*	58,3	58,3	56	56	59	59	57	64
	peak**	68,5	68,5	85	85	85,4	85,4	78	82
Max. Output, [kW]	cont.	7,5	9,5	5,7	7,6	4,6	6,2	3,5	3,3
	int.*	12	12	9	9	7,8	7,8	7,2	5,6
Max. Pressure Drop [bar]	cont.	110	140	90	120	70	95	60	55
Max. Oil Flow [l/min]	int.*	175	175	140	140	115	115	90	80
	peak**	225	225	225	225	180	180	130	110
	cont.	60	60	60	60	60	60	60	60
Max. Inlet Pressure [bar]	int.*	75	75	75	75	75	75	75	75
	cont.	175	175	175	175	175	175	140	140
	peak**	200	200	200	200	200	200	175	175
Max. Return Pressure w/o Drain Line or Max. Pressure in Drain Line, [bar]	cont.	225	225	225	225	225	225	225	225
	cont.	150	100	150	100	150	100	150	150
	cont.	75	30	75	30	75	30	75	-
	cont.	-	-	-	-	-	-	-	-
	cont.	-	-	-	-	-	-	-	-
Max. Return Pressure with Drain Line [bar]	cont.	150	100	150	100	150	100	150	150
	int.*	175	175	175	175	175	175	140	140
	peak**	200	200	200	200	200	200	175	175
Max. Starting Pressure with Unloaded Shaft, [bar]		225	225	225	225	225	225	225	225
Min. Starting Torque [daNm]	at max. press drop cont.	6	6	5	5	5	5	5	5
	at max. press. drop int.*	33,6	42,8	34,4	45,8	34,5	46,8	36	41,5
Min. Speed***, [RPM]		54,2	54,2	61,9	61,9	60,8	60,8	54	62
Weight, avg. [kg]	EPM(F)	10	10	10	10	10	10	10	10
	EPM(F)(E)...B...								
	EPMQ(N)	6,8		7,1		7,6		8,9	9,5
	EPM(F)(N)E		6,9(7,4)		7,2(7,7)		7,7(8,2)		
	EPMW(N)	6,2		6,5		6,8		8,3	9,0
	EPMQ(N)E	7,3		7,6		8,1		9,3	10
		6,5		6,8		7,2			
		6,7		7,0		7,3		8,8	8,5

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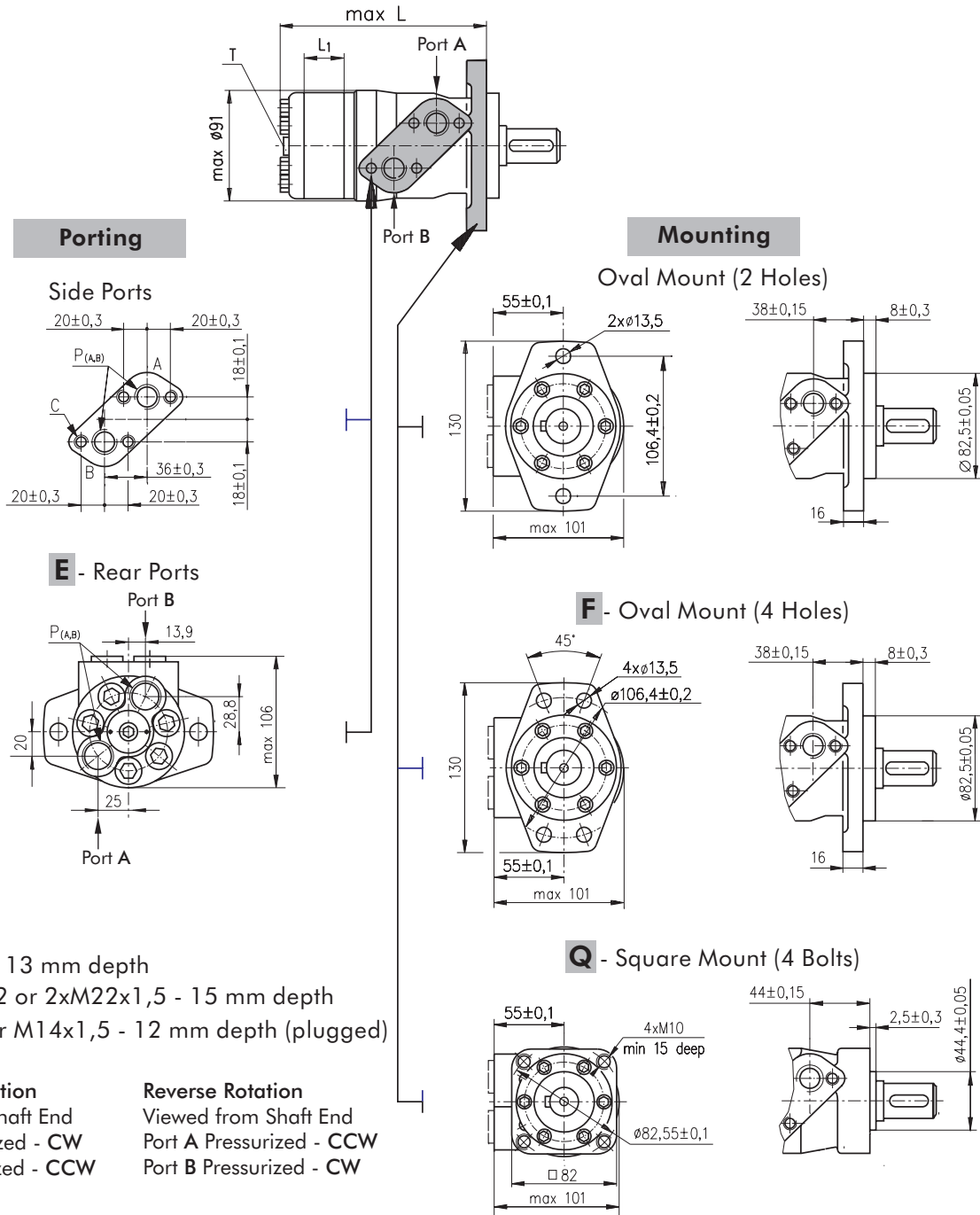
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5. Recommended maximum system operating temperature is 82°C.

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**DIMENSIONS AND MOUNTING DATA**



**C** : 4xM8 - 13 mm depth  
**P<sub>(A,B)</sub>**: 2xG1/2 or 2xM22x1,5 - 15 mm depth  
**T** : G1/4 or M14x1,5 - 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

Type	L, mm	Type	L, mm	Type	L, mm	Type	L, mm	L <sub>1</sub> , mm
EPM(F) 25	133,2	EPMQ 25	139,4	EPM(F)E 25	151,2	EPMQE 25	157,4	4,60
EPM(F) 32	134,5	EPMQ 32	140,7	EPM(F)E 32	152,5	EPMQE 32	158,7	5,90
EPM(F) 40	135,2	EPMQ 40	141,4	EPM(F)E 40	153,2	EPMQE 40	159,4	7,40
EPM(F) 50	135,6	EPMQ 50	141,8	EPM(F)E 50	155,8	EPMQE 50	162,0	6,67
EPM(F) 80	139,6	EPMQ 80	145,8	EPM(F)E 80	159,8	EPMQE 80	166,0	10,67
EPM(F) 100	142,2	EPMQ 100	148,4	EPM(F)E 100	162,4	EPMQE 100	168,6	13,33
EPM(F) 125	145,6	EPMQ 125	151,8	EPM(F)E 125	165,8	EPMQE 125	172,0	16,67
EPM(F) 160	150,2	EPMQ 160	156,4	EPM(F)E 160	170,4	EPMQE 160	176,6	21,33
EPM(F) 200	155,6	EPMQ 200	161,8	EPM(F)E 200	175,8	EPMQE 200	182,0	26,67
EPM(F) 250	162,2	EPMQ 250	168,4	EPM(F)E 250	182,4	EPMQE 250	188,6	33,33
EPM(F) 315	171,6	EPMQ 315	177,8	EPM(F)E 315	191,8	EPMQE 315	198,0	42,67
EPM(F) 400	182,2	EPMQ 400	188,4	EPM(F)E 400	202,4	EPMQE 400	208,6	53,33
EPM(F) 500	193,0	EPMQ 500	199,0	EPM(F)E 500	213,0	EPMQE 500	219,0	66,63
EPM(F) 630	210,5	EPMQ 630	216,5	EPM(F)E 630	230,5	EPMQE 630	236,5	84,00