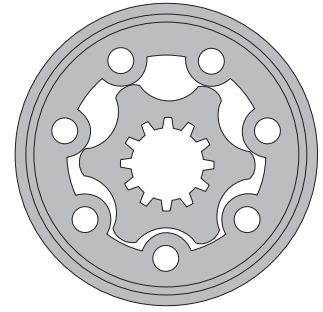


# HYDRAULIC MOTORS EPM



## 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.

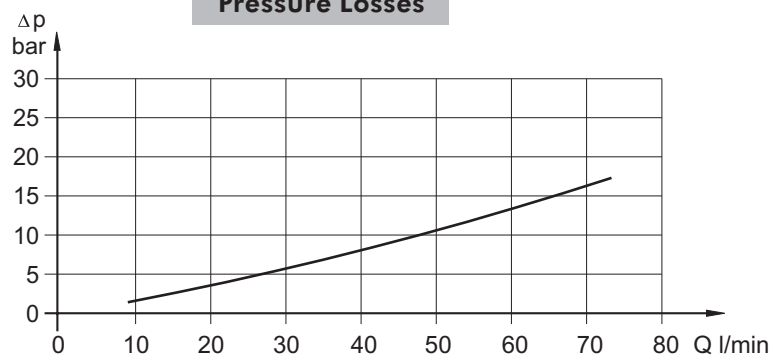
## GENERAL

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	

\* 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(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
	int.*	175	175	140	140	115	115	90	80
	peak**	225	225	225	225	180	180	130	110
Max. Oil Flow [l/min]	cont.	60	60	60	60	60	60	60	60
	int.*	75	75	75	75	75	75	75	75
Max. Inlet Pressure [bar]	cont.	175	175	175	175	175	175	140	140
	int.*	200	200	200	200	200	200	175	175
	peak**	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	100	150	100	150	100	150	150
	cont. 100-300 RPM	75	30	75	30	75	30	75	-
	cont. 300-600 RPM	-	-	-	-	-	-	-	-
	cont. >600 RPM	-	-	-	-	-	-	-	-
Max. Return Pressure with Drain Line [bar]	int.* 0-max. RPM	150	100	150	100	150	100	150	150
	cont.	175	175	175	175	175	175	140	140
	int.*	200	200	200	200	200	200	175	175
peak**	225	225	225	225	225	225	225	225	
Max. Starting Pressure with Unloaded Shaft, [bar]	6	6	5	5	5	5	5	5	
Min. Starting Torque [daNm]	at max. press drop cont.	33,6	42,8	34,4	45,8	34,5	46,8	36	41,5
	at max. press. drop int.*	54,2	54,2	61,9	61,9	60,8	60,8	54	62
Min. Speed***, [RPM]		10	10	10	10	10	10	10	10
Weight, avg. [kg]	EPM(F)	6,8		7,1		7,6		8,9	9,5
	EPM(F)(E)...B...		6,9(7,4)		7,2(7,7)		7,7(8,2)		
	EPMQ(N)	6,2		6,5		6,8		8,3	9,0
	EPM(F)(N)E	7,3		7,6		8,1		9,3	10
	EPMW(N)	6,5		6,8		7,2			
	EPMQ(N)E	6,7		7,0		7,3		8,8	8,5

\* 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 for EPM...LSV**

**Low Speed Valve (LSV)** "LSV" Series hydraulic motors have been designed to operate with normal pressure drop and to ensure smooth run at low speed (up to 200 RPM), as the best security for operation is guaranteed at frequency of rotation 20 ÷ 50 RPM . They have an increased starting pressure drop and are not recommended for using at pressure less than 40 bar.

Look at specification data for hydraulic motors standard version. The modification concerns only the following parameters: maximum speed , maximum output, maximum Oil flow and maximum starting pressure.

Type		EPM 25	EPM 32	EPM 40	EPM 50	EPM 80	EPM 100	EPM 125	EPM 160	EPM 200	EPM 250	EPM 315	EPM 400	EPM 500	EPM 630
<b>Max. Speed</b> [RPM]	Cont.	200	200	200	200	200	200	200	200	200	200	190	150	80	64
	Int.*	250	250	250	250	250	250	250	250	250	250	236	190	101	80
<b>Max. Output</b> [kW]	Cont.	0,7	0,9	1,2	2,0	3	3,8	4,9	6,1	7,0	5,2	4,2	3,4	2,9	2,6
	Int.*	1,2	1,5	2,0	3,2	5	6,0	7,2	9,5	9,8	9,1	7,2	6,0	5,0	4,2
<b>Max. Oil Flow</b> [lpm]	Cont.	9,0	11,0	11	15	22	24	30	34	40	40	40	40	40	40
	Int.*	13,5	16,5	14	20	29	33	38	46	50	50	50	50	50	50
<b>Max. Starting Pressure with unloaded Shaft, [bar]</b>		25	25	25	20	20	20	20	15	15	15	12	12	10	10

**SPECIFICATION DATA for EPM...LL**

**Low Leakage (LL)** "LL" Series hydraulic motors have been designed to operate at the whole standard range of working conditions (pressure drop and frequency of rotation ) , but with considerable decreased volumetric losses in the drainage ports. Their main purpose is to operate as series-connected motors in hydraulic systems.

For this version is permissible decreasing of the maximal torque with up to 5% (at middle speed) and up to 10% (at high speed) in comparison to the standard versions of motors.

Look at specification data for hydraulic motors series EPM standard version. The modification concerns only the parameters: maximum torque, maximum output, minimum starting torque.

Type		EPM 25	EPM 32	EPM 40	EPM 50	EPM 80	EPM 100	EPM 125	EPM 160	EPM 200	EPM 250	EPM 315	EPM 400	EPM 500	EPM 630
<b>Max. Torque</b> [daNm]	Cont.	3,1	4,1	5,8	9,0	14,4	18,4	22,5	29,8	34,8	44,6	46,2	47,5	38	42,8
	Int.*	4,3	5,8	7,8	11,3	18,5	22,5	28,3	36,0	43,3	55,4	53,2	56,0	55	62,0
<b>Max. Output</b> [kW]	Cont.	4,3	5,6	8,2	10	10,1	10,4	9,9	10	9,9	9,4	7,5	6,1	3,4	3,2
	Int.*	6,0	7,7	11,5	12	12,3	12,6	11,8	12	11,8	11,8	8,9	7,7	7,1	5,5
<b>Max. Pressure Drop</b> [bar]	Cont.	100	100	120	140	140	140	140	140	140	140	120	95	60	55
	Int.*	140	140	155	175	175	175	175	175	175	175	140	115	90	80
<b>Min. Starting Torque</b> [daNm]	Cont.	4,5	5,7	6,8	7,4	12,5	15,8	19,6	26,8	31,8	40,7	43,5	44,5	46	50
	Int.*	6,0	7,0	8,0	9,5	16,0	20,0	25,2	33,7	40,5	51,5	58,8	57,8	52	60

**SPECIFICATION DATA for EPM...FR**

**Free Running** version "FR" these are the hydraulic motors with reduced mechanical losses , for wich at disengaged condition / unconnected with driving mechanism / the rotation of the shaft could be realized by means of small torque. This advantage is especially usefull at operating with high frequencies of rotation /over than 300 min<sup>-1</sup>/ and low pressure drop , which is inbred for types with displacements of up to 200 cm<sup>3</sup>. It is normal for these for the different condition of operation to have high torque , as well as high volume losses : the values of the volumetric efficiency are lower ( up to 5 % for middle and up to 10 % for high values of the pressure drop ) , than these of the normal versions. That's why the recommended operating for "FR version is for applications with pressure drop up to 100 bar.

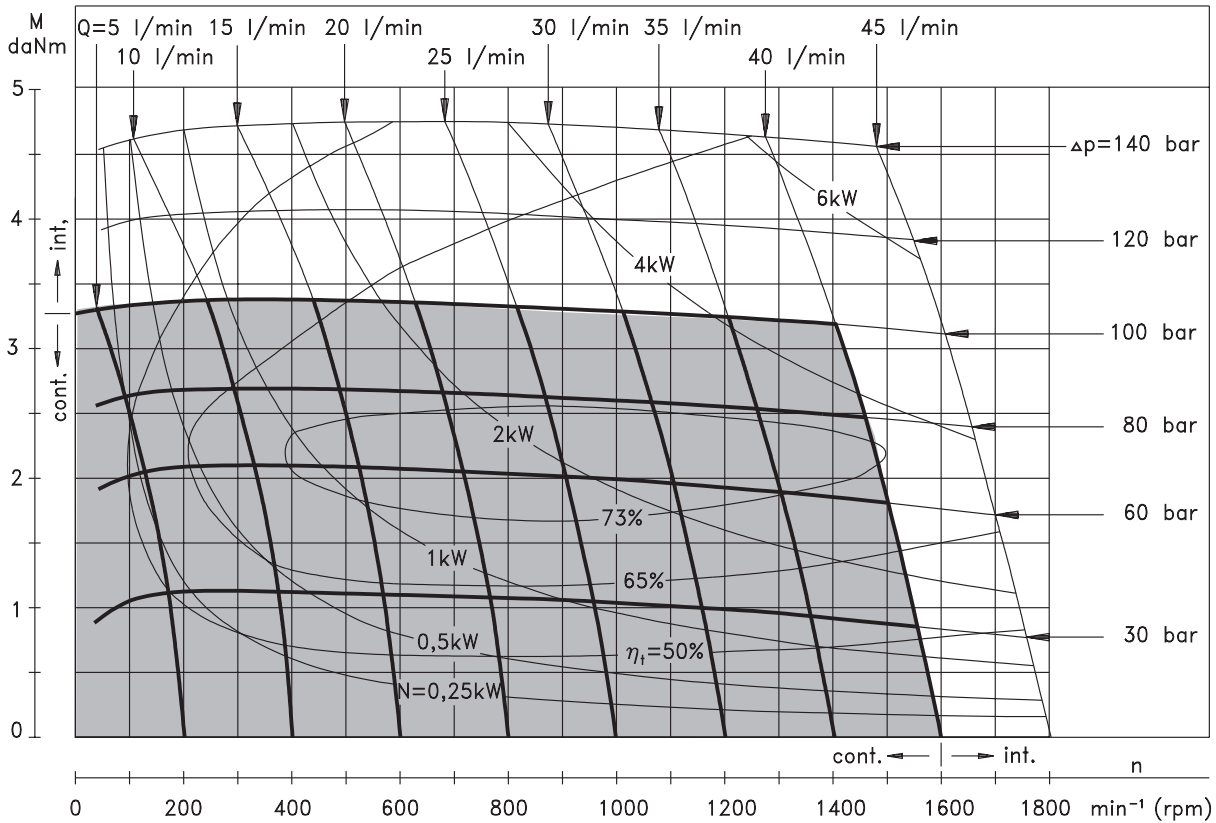
Additional advantages of "FR" version are prolonging of the life of the hydraulic motors at high frequencies of rotation, as well as the possibility to use them in systems with big variation of the loading.

Look at specification data for hydraulic motors series EPM standard version. Only the parameter Starting Pressure is modified.

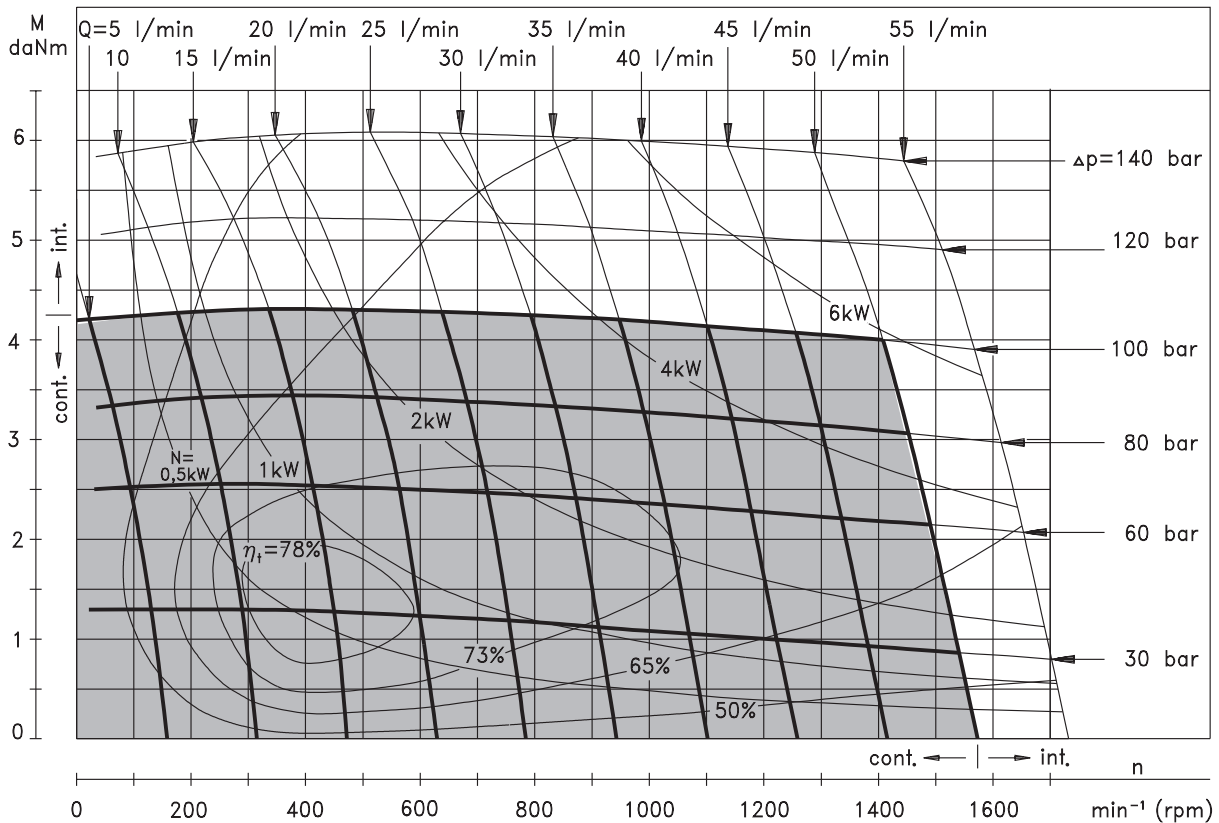
Type	EPM 25	EPM 32	EPM 40	EPM 50	EPM 80	EPM 100	EPM 125	EPM 160	EPM 200
<b>Max. Starting Pressure with Unloaded Shaft, [bar]</b>	8	8	8	8	8	8	7,5	6,5	5,5

**FUNCTION DIAGRAMS**

**EPM 25**



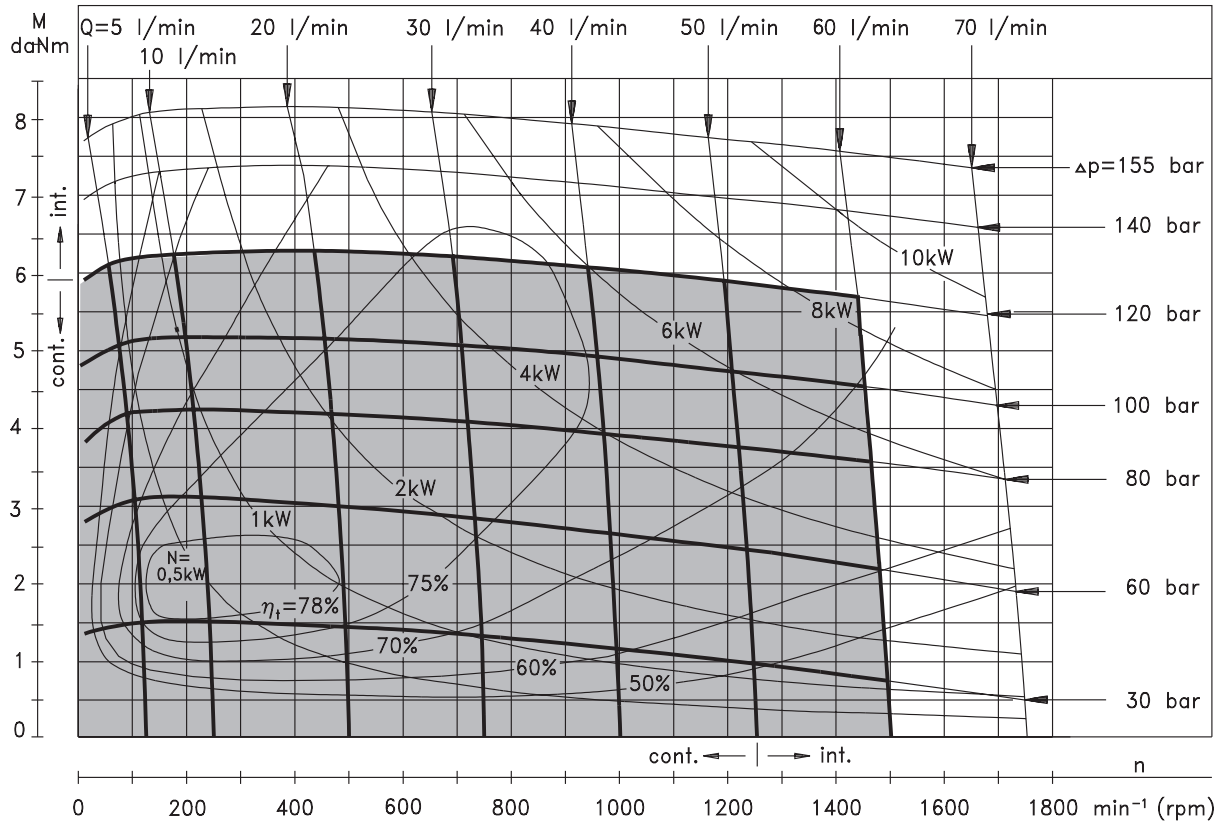
**EPM 32**



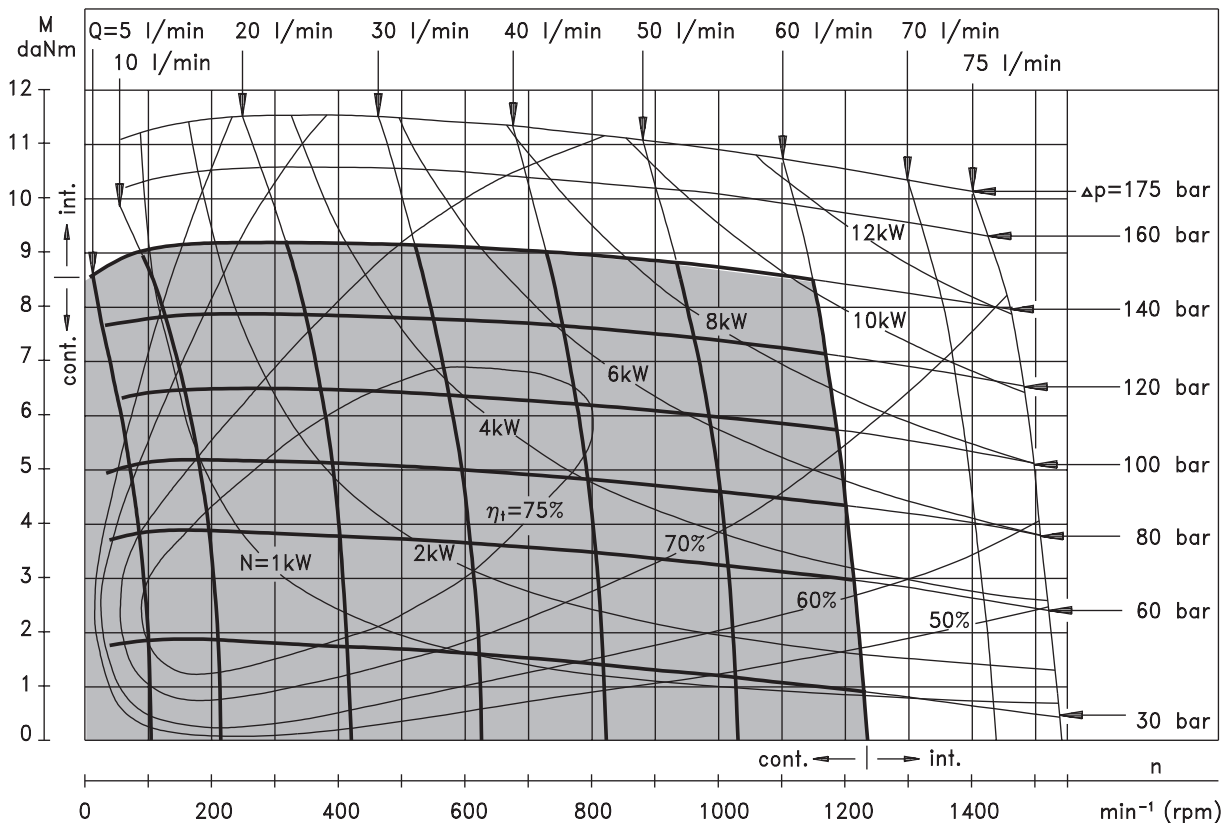
The function diagrams data was collected at back pressure  $5 \div 10$  bar and oil with viscosity of  $32 \text{ mm}^2/\text{s}$  at  $50^\circ \text{ C}$ .

**FUNCTION DIAGRAMS**

**EPM 40**



**EPM 50**

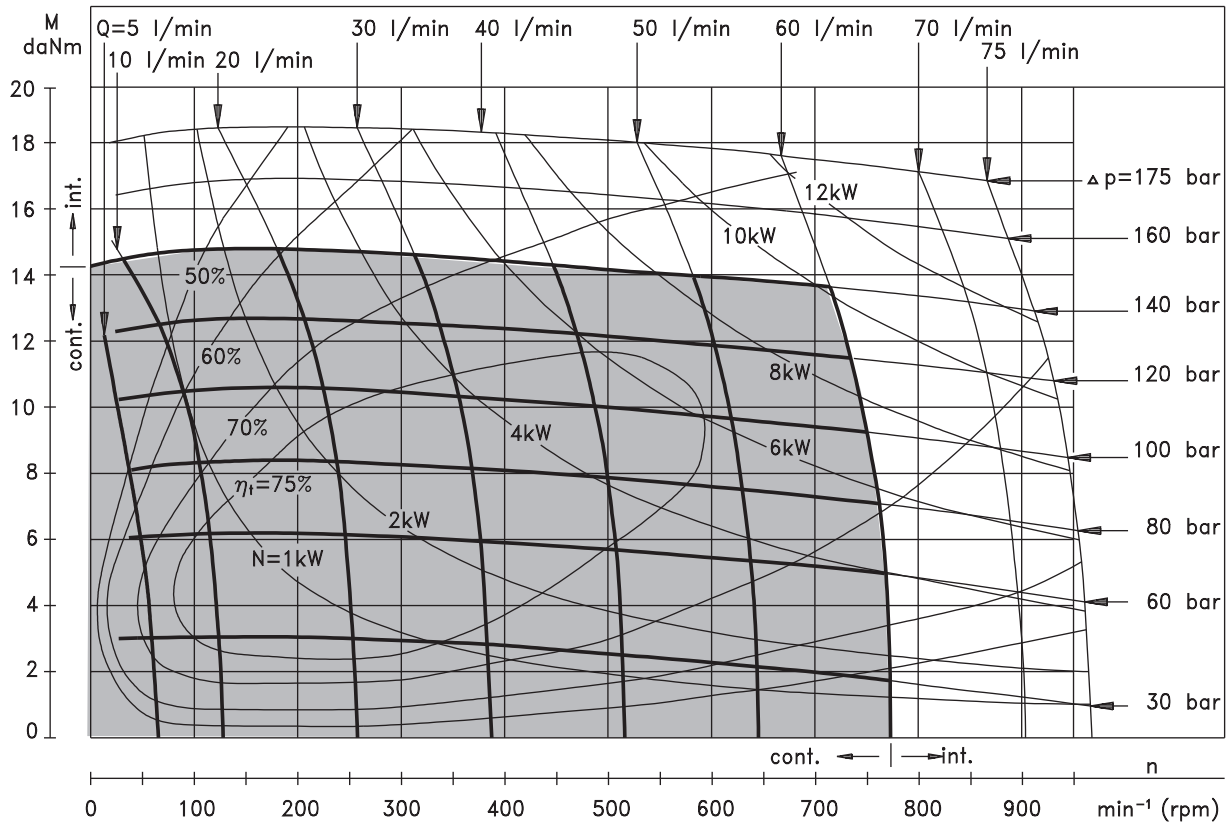


The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm<sup>2</sup>/s at 50° C.

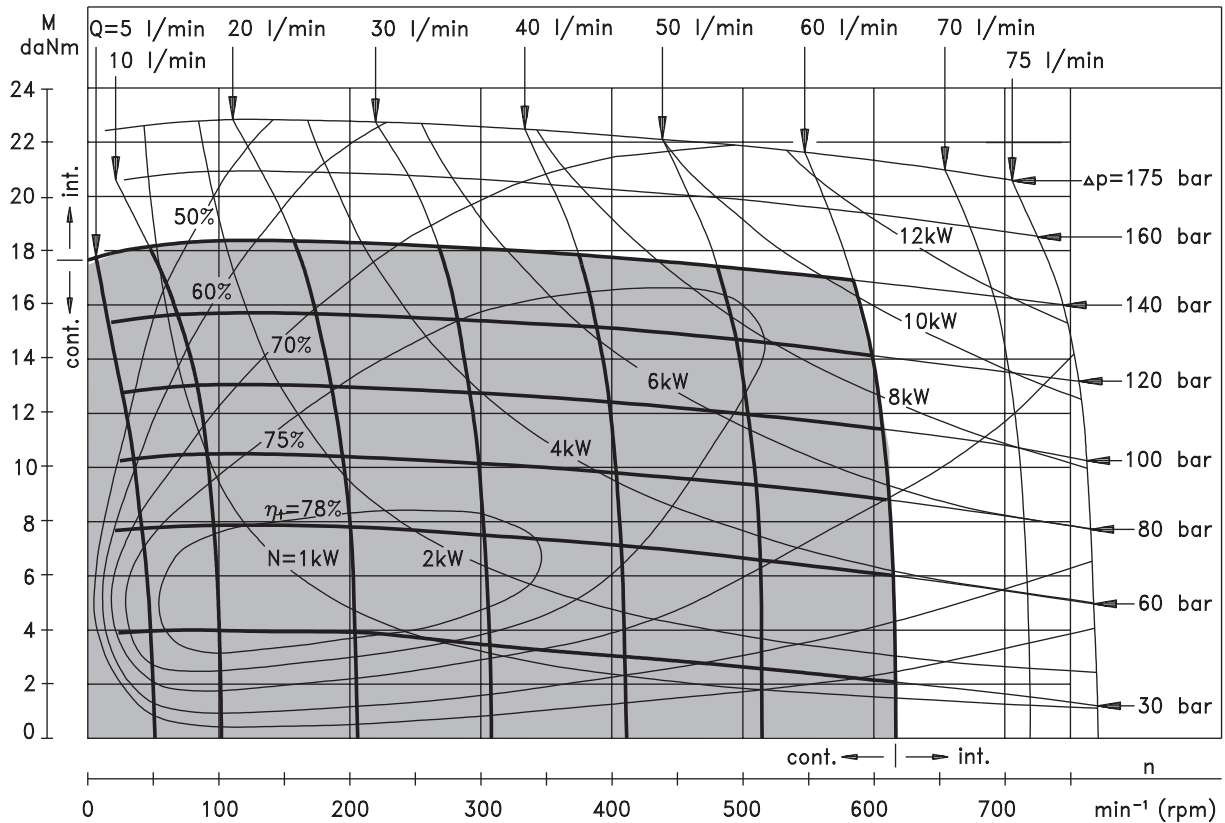


**FUNCTION DIAGRAMS**

**EPM 80**



**EPM 100**

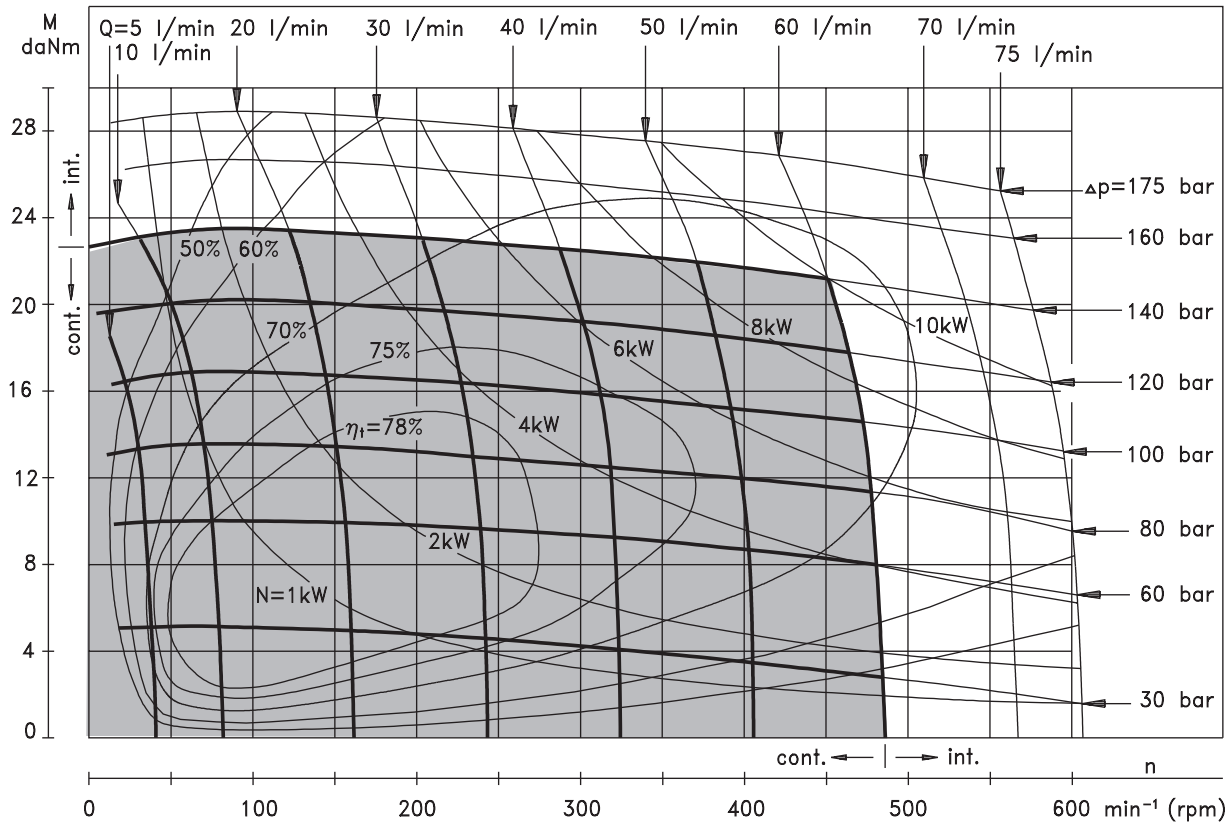


The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm<sup>2</sup>/s at 50° C.

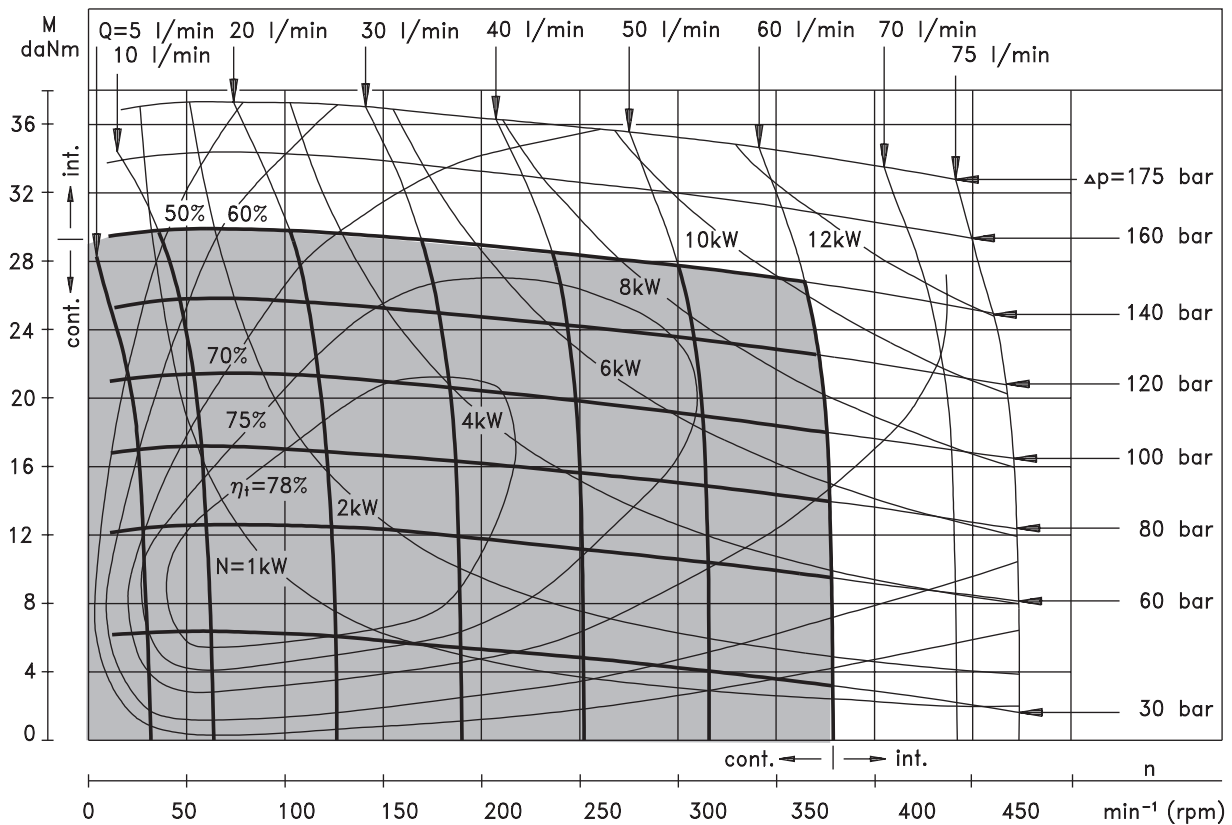


**FUNCTION DIAGRAMS**

**EPM 125**



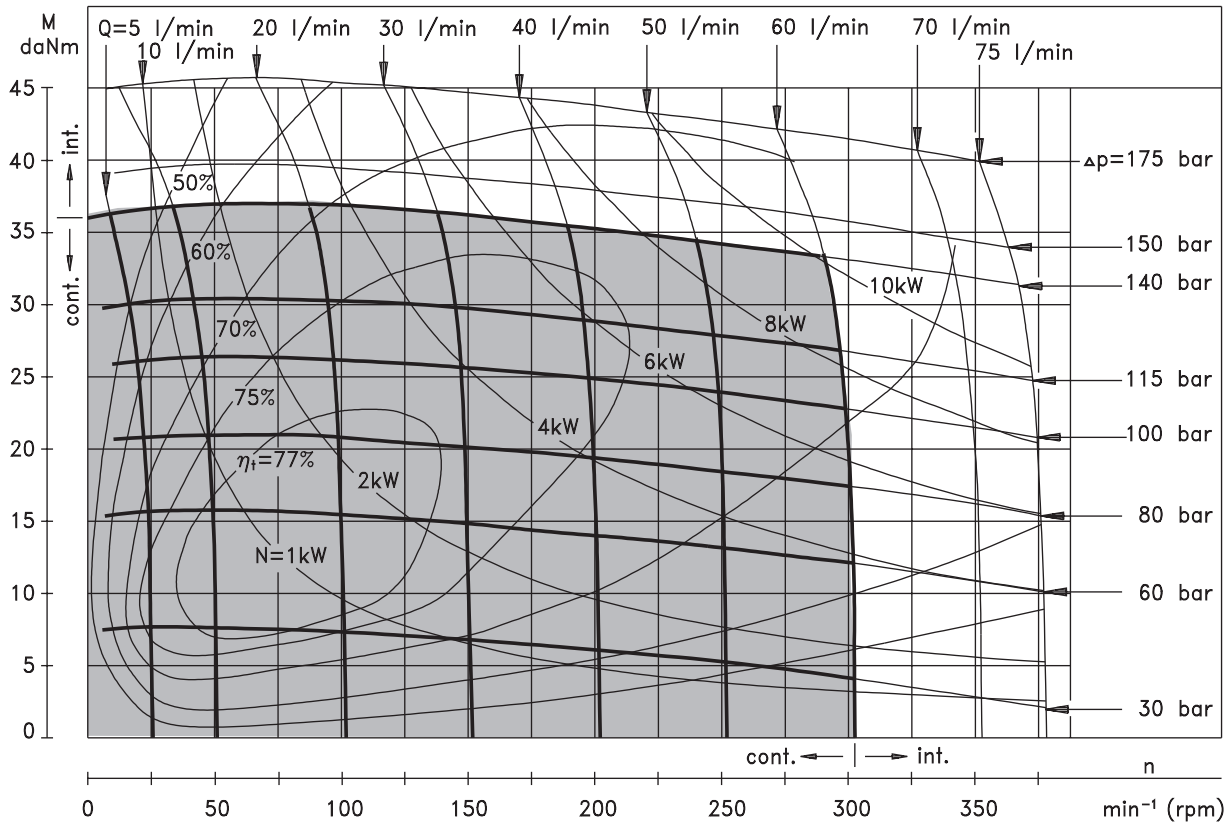
**EPM 160**



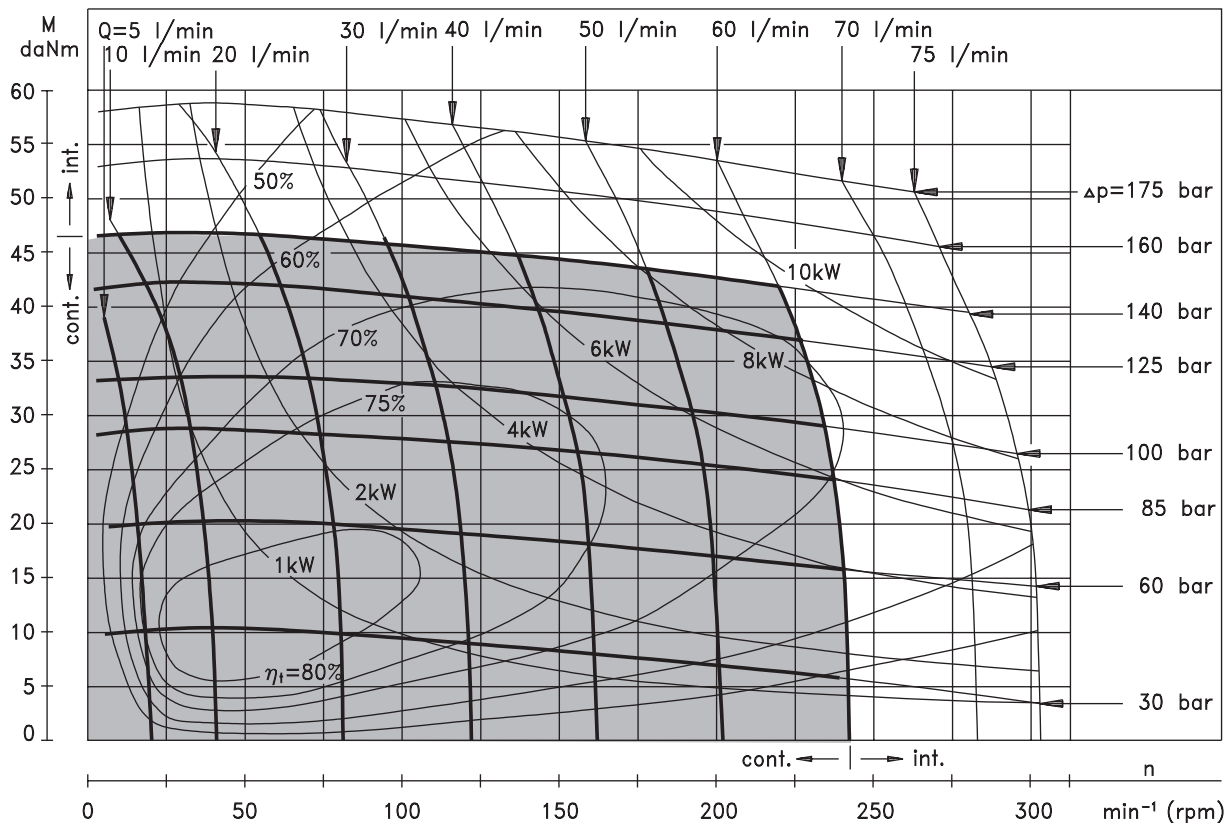
The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm<sup>2</sup>/s at 50° C.

**FUNCTION DIAGRAMS**

**EPM 200**



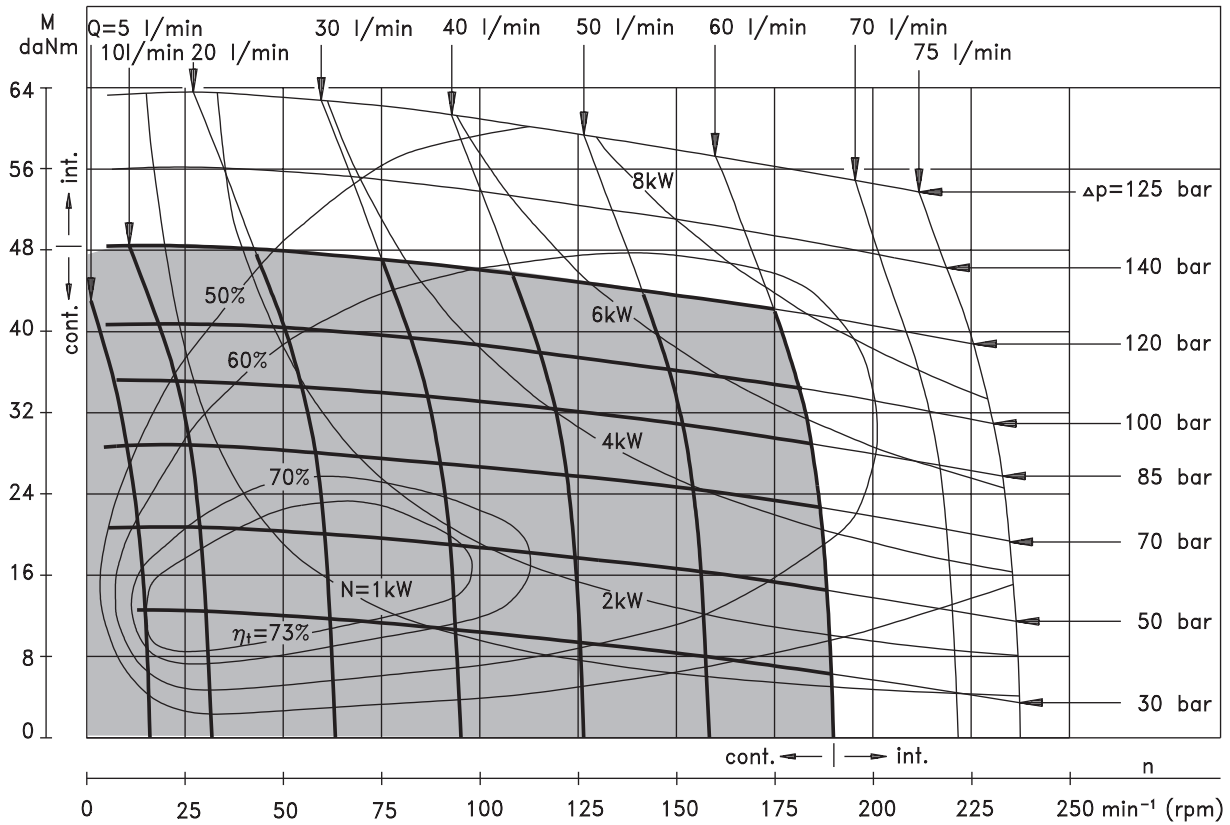
**EPM 250**



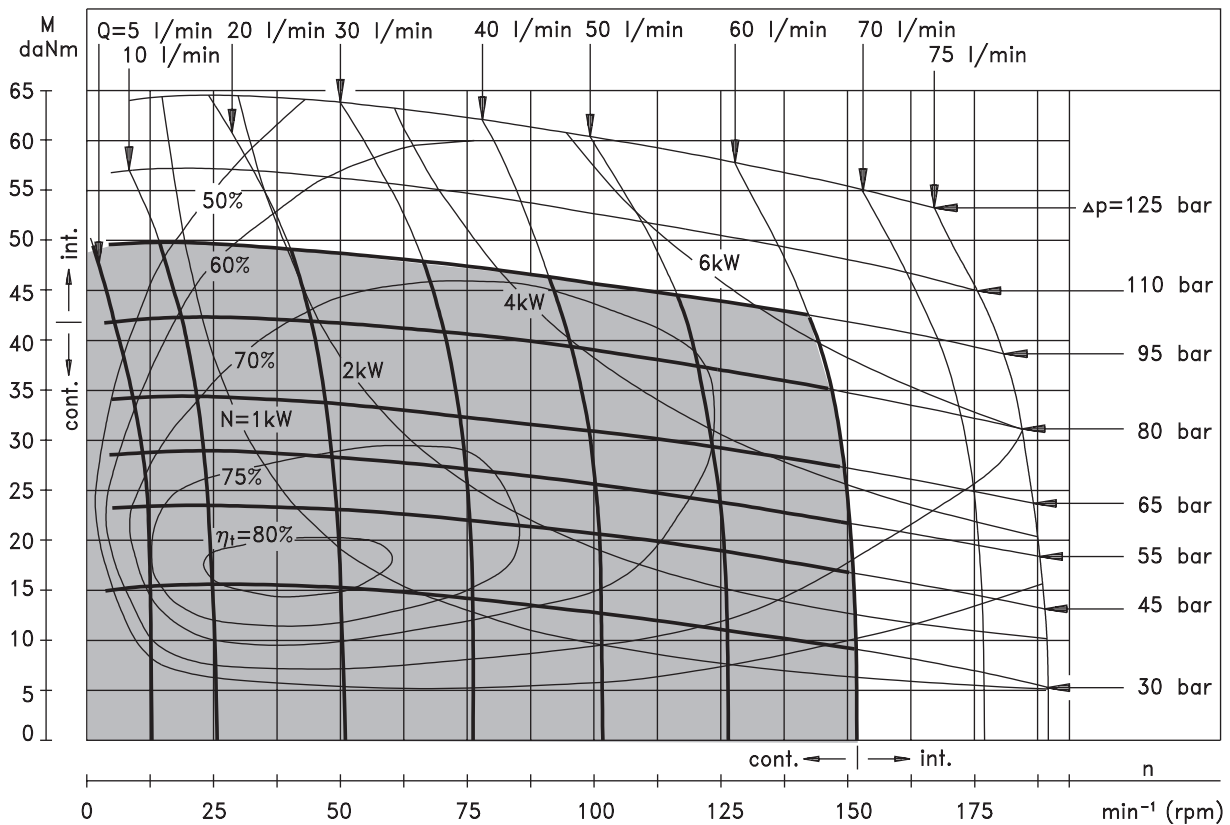
The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm<sup>2</sup>/s at 50° C.

**FUNCTION DIAGRAM**

**EPM 315**



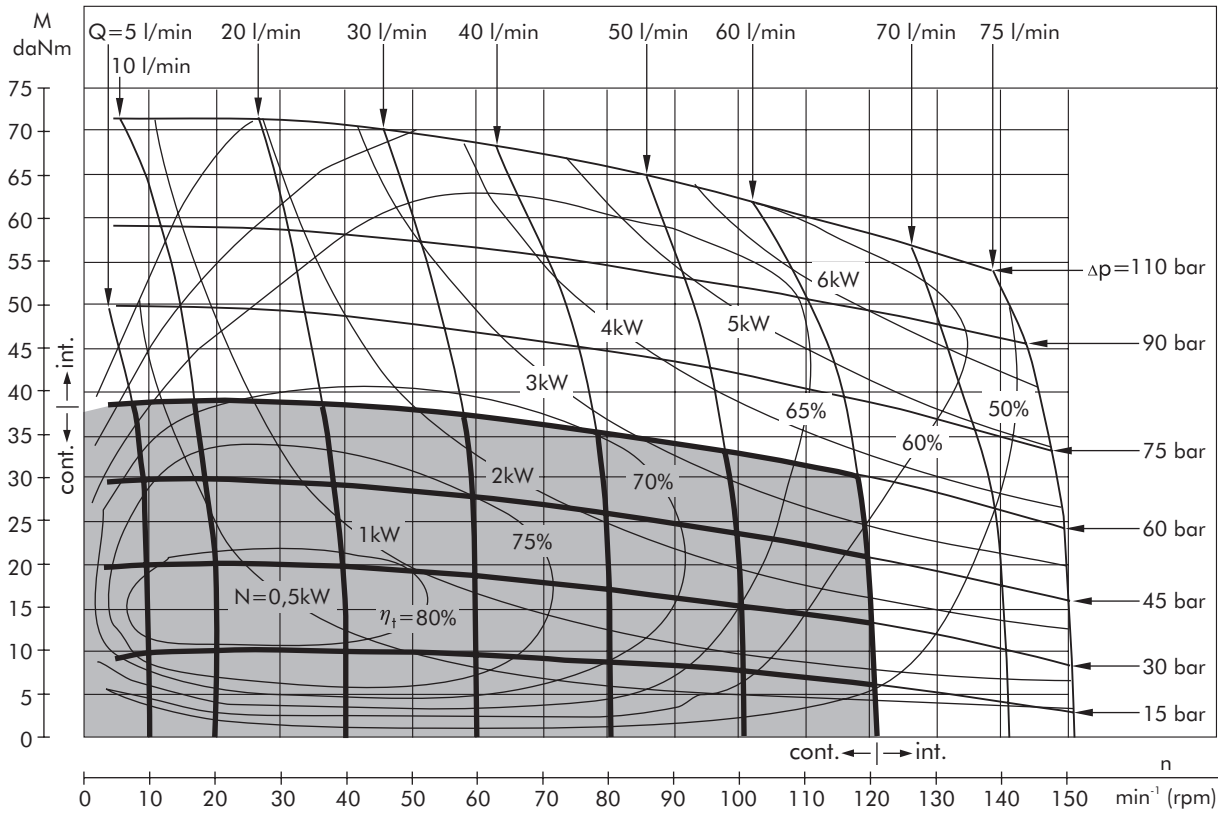
**EPM 400**



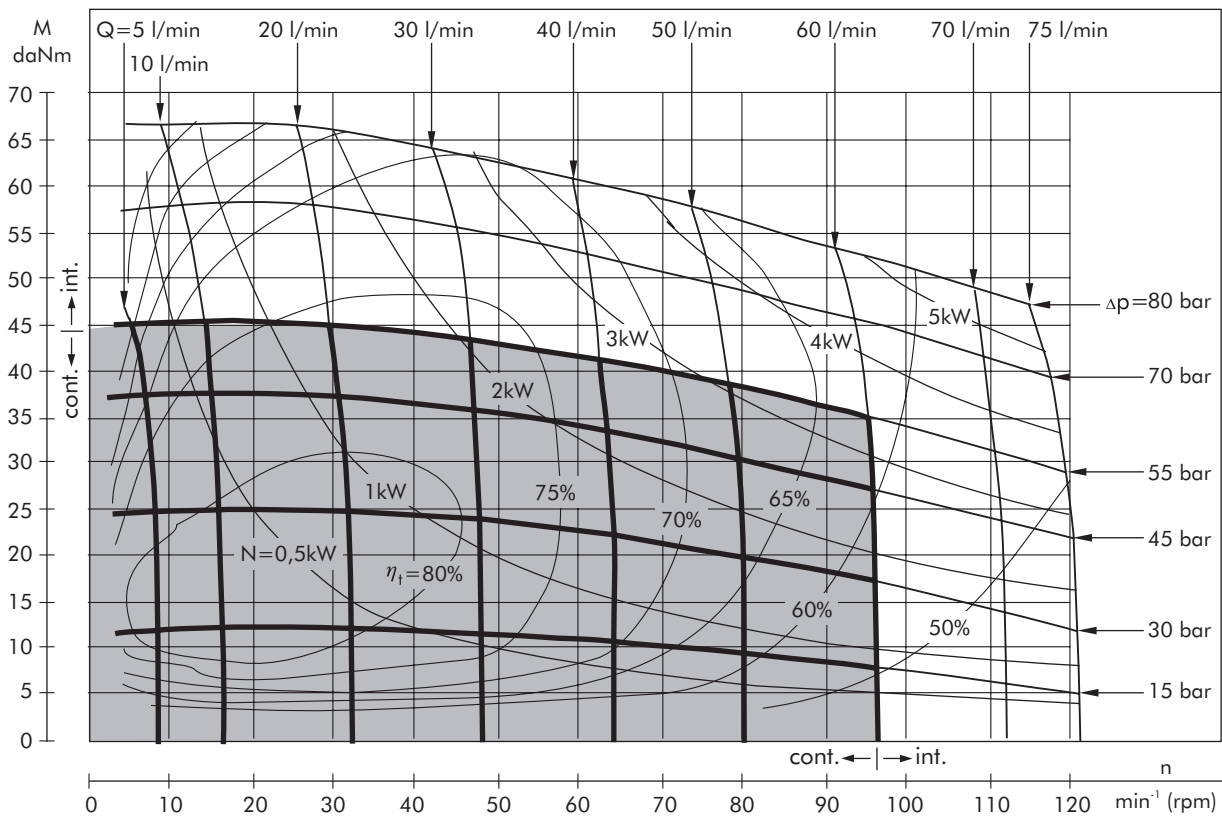
The function diagram data was collected at back pressure  $5 \div 10$  bar and oil with viscosity of  $32 \text{ mm}^2/\text{s}$  at  $50^\circ \text{C}$ .

**FUNCTION DIAGRAM**

**EPM 500**

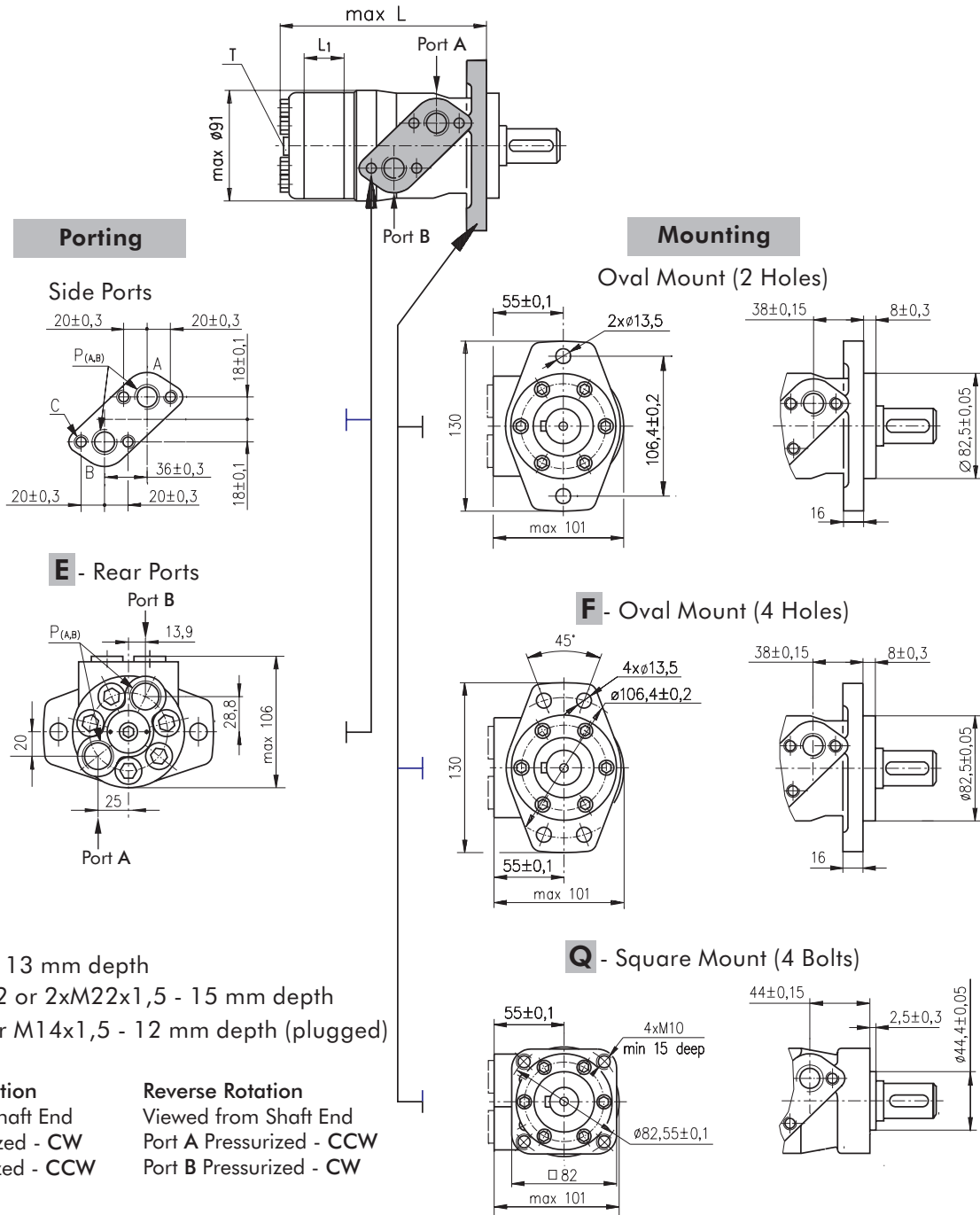


**EPM 630**



The function diagram 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**



**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)

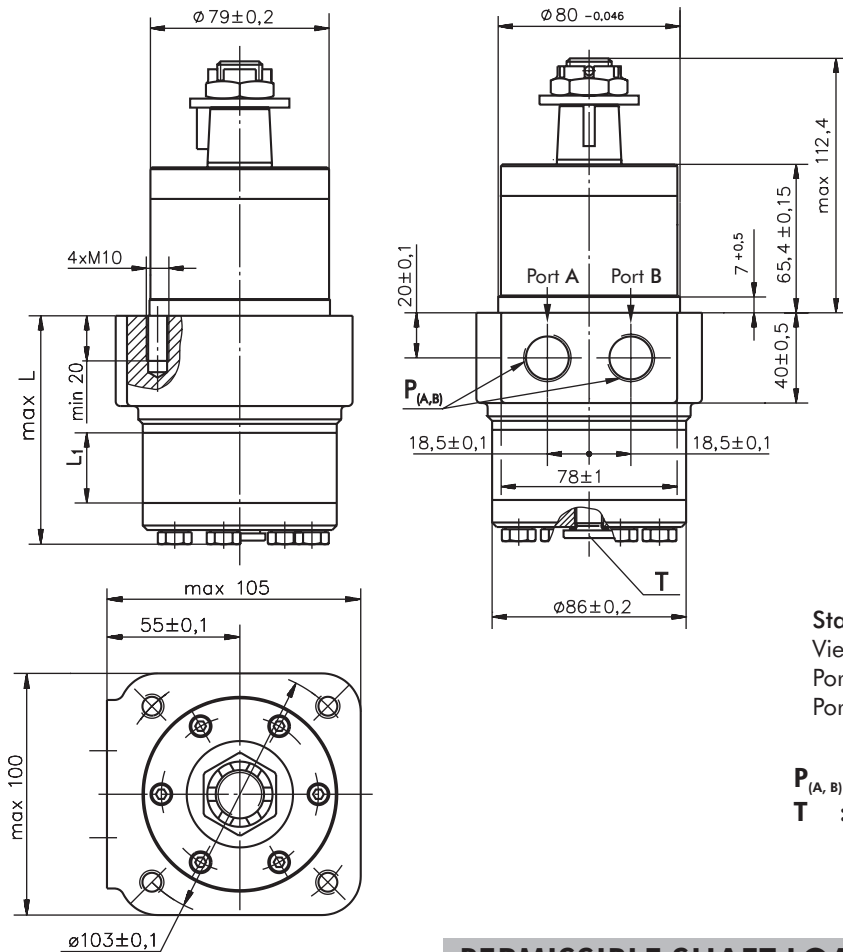
**Standard Rotation**  
 Viewed from Shaft End  
 Port A Pressurized - CW  
 Port B Pressurized - CCW

**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

**DIMENSIONS AND MOUNTING DATA - EPMW**

**W - Wheel Mount**



Type	L, mm	L <sub>1</sub> , mm
EPMW(N) 25	76,5	4,6
EPMW(N) 32	78,0	5,9
EPMW(N) 40	79,5	7,4
EPMW(N) 50	78,0	6,67
EPMW(N) 80	82,0	10,67
EPMW(N) 100	85,0	13,33
EPMW(N) 125	88,0	16,67
EPMW(N) 160	93,0	21,33
EPMW(N) 200	98,0	26,67
EPMW(N) 250	105,0	33,33
EPMW(N) 315	114,0	42,67
EPMW(N) 400	125,0	53,33

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

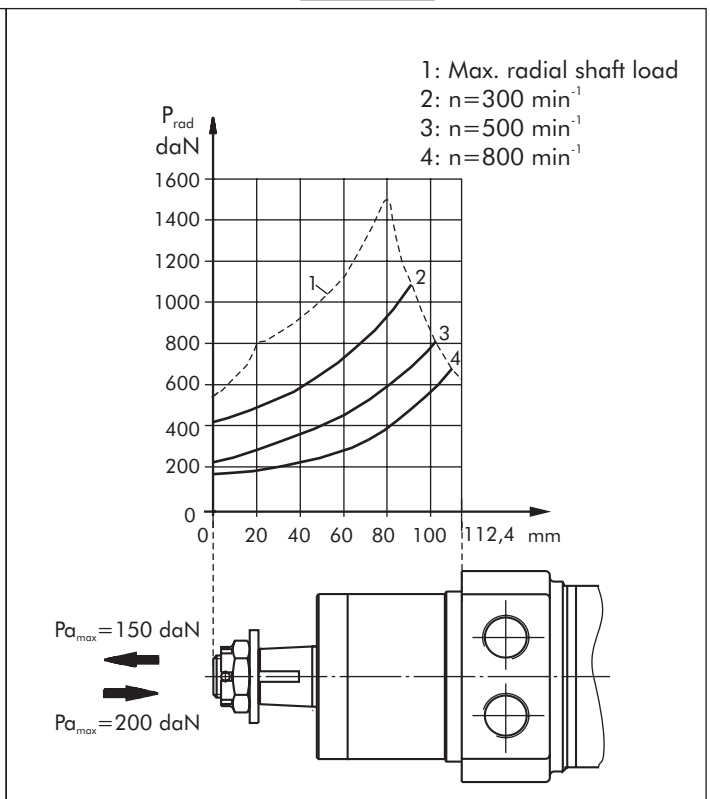
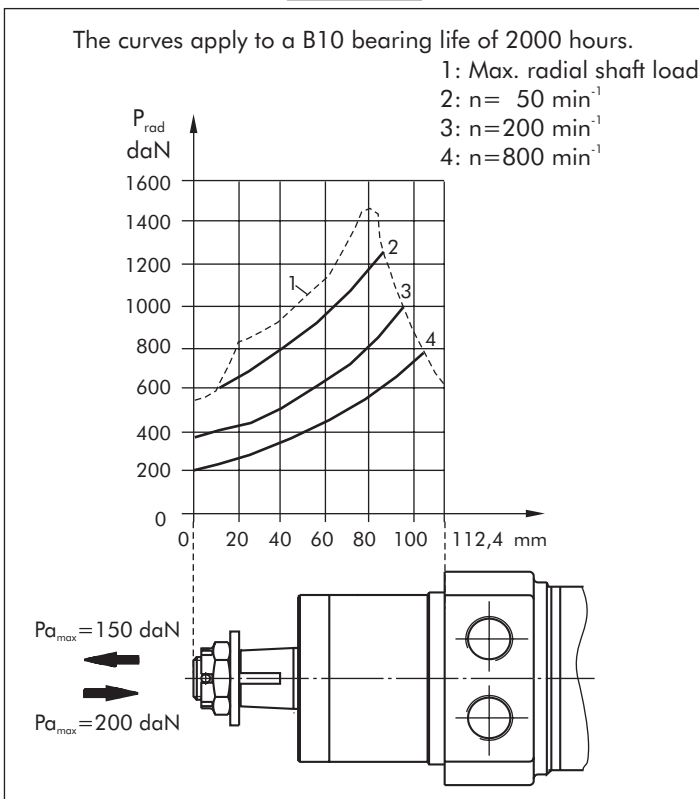
**Reverse Rotation** Viewed from Shaft End  
 Port A Pressurized - CCW  
 Port B Pressurized - CW

**P<sub>(A, B)</sub>**: 2xG1/2 or 2xM22x1,5 - 15 mm depth  
**T** : G1/4 or M14x1,5 - 12 mm depth (plugged)

**PERMISSIBLE SHAFT LOADS**

**EPMWN**

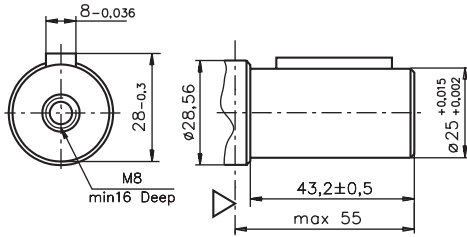
**EPMW**



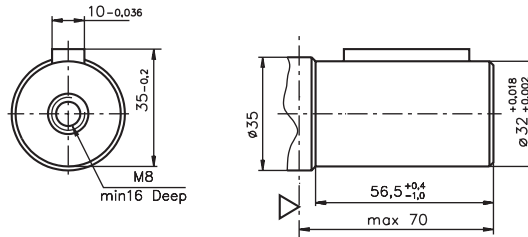


**SHAFT EXTENSIONS FOR EPM AND EPRM MOTORS**

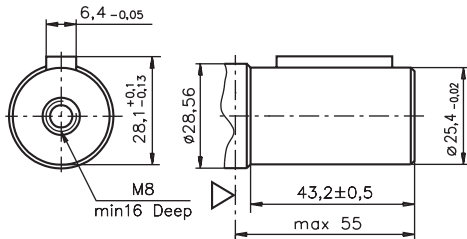
**C** -  $\varnothing 25$  straight, Parallel key A8x7x32 DIN 6885  
Max. Torque 44 daNm



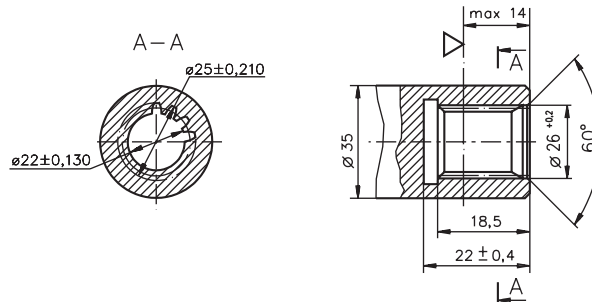
**CB** -  $\varnothing 32$  straight, Parallel key A10x8x45 DIN 6885  
Max. Torque 77 daNm



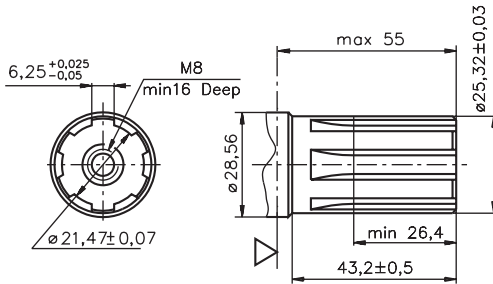
**CO** -  $\varnothing 1"$  straight, Parallel key  $\frac{1}{4}" \times \frac{1}{4}" \times 1\frac{1}{4}"$  BS46  
Max. Torque 44 daNm



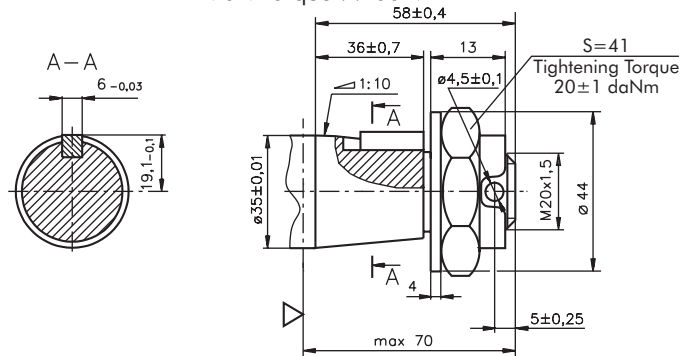
**SB** - splined A25x22xH10 DIN 5482  
Max. Torque 44 daNm



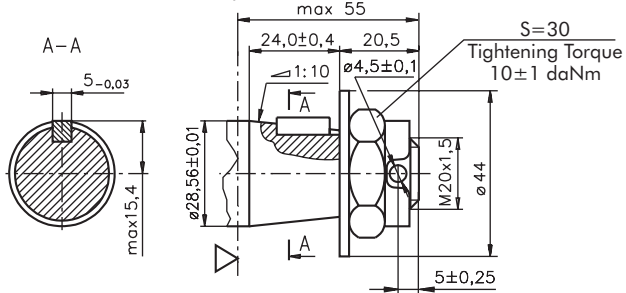
**SH** - splined, BS 2059 (SAE 6B)  
Max. Torque 44 daNm



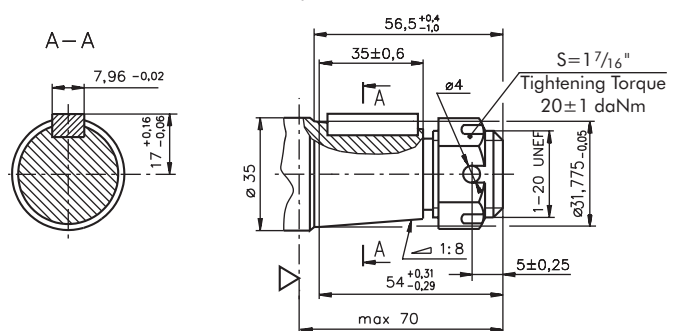
**KB** - tapered 1:10, Parallel key B6x6x20 DIN 6885  
Max. Torque 77 daNm



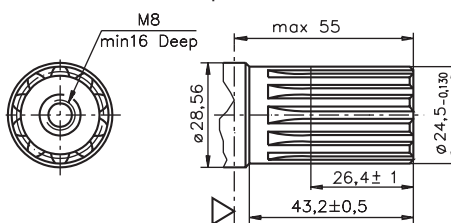
**K** - tapered 1:10, Parallel key B5x5x14 DIN 6885  
Max. Torque 40 daNm



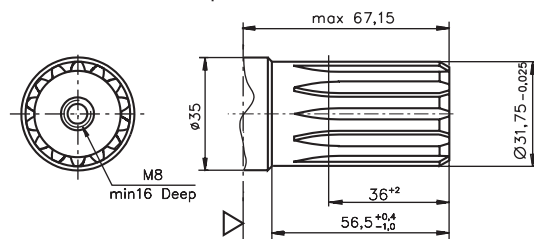
**OB** - tapered 1:8 SAEJ 501, Parallel key  $\frac{5}{16}" \times \frac{5}{16}" \times 1\frac{1}{4}"$  BS46  
Max. Torque 77 daNm



**SA** - splined, B25x22h9 DIN 5482  
Max. Torque 40 daNm



**HB** -  $\varnothing 1\frac{1}{4}"$  splined 14T, ANSI B92.1-1976 Norm  
Max. Torque 77 daNm

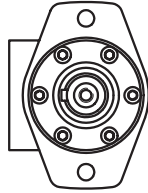
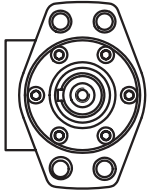
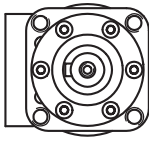


∇ - Motor Mounting Surface



**PERMISSIBLE SHAFT LOADS FOR EPM AND EPRM 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.

Mounting Flange			
Shaft Version	cylindrical - C, CO tapered - K, splined - SH	splined - HB cylindrical - CB	cylindrical - C, CO
Radial Shaft Load $P_{rad}^*$	$\frac{800}{n} \times \frac{25000}{95+L}$ , daN	$\frac{800}{n} \times \frac{18750}{95+L}$ , daN	$\frac{800}{n} \times \frac{25000}{101+L}$ , daN

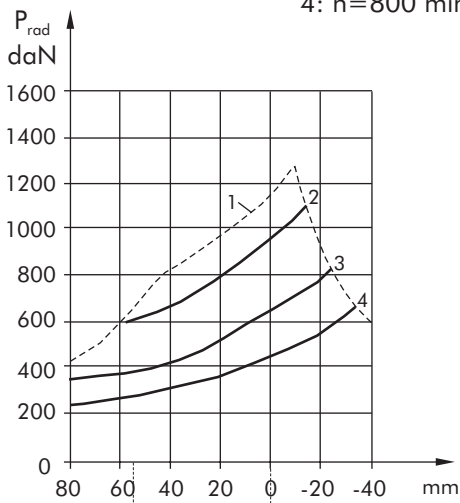
$n < 200 \text{ min}^{-1}$ ; max  $P_{rad} = 800 \text{ daN}$

\* $n \geq 200 \text{ min}^{-1}$ ;  $L < 55 \text{ mm}$

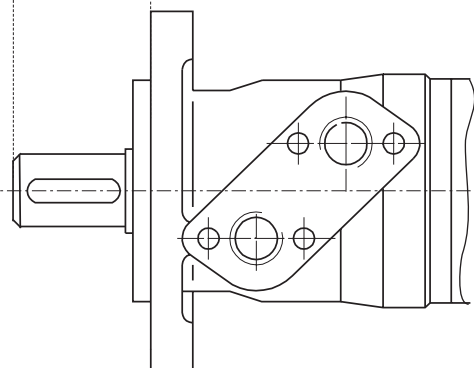
**EPMN and EPRMN**

The curves apply to a B10 bearing life of 2000 hours.

- 1: Max. radial shaft load
- 2:  $n = 50 \text{ min}^{-1}$
- 3:  $n = 200 \text{ min}^{-1}$
- 4:  $n = 800 \text{ min}^{-1}$

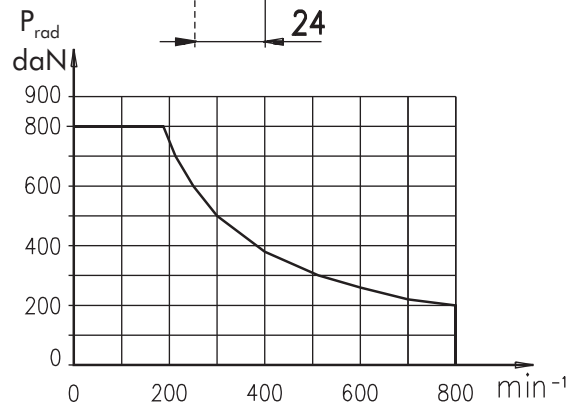
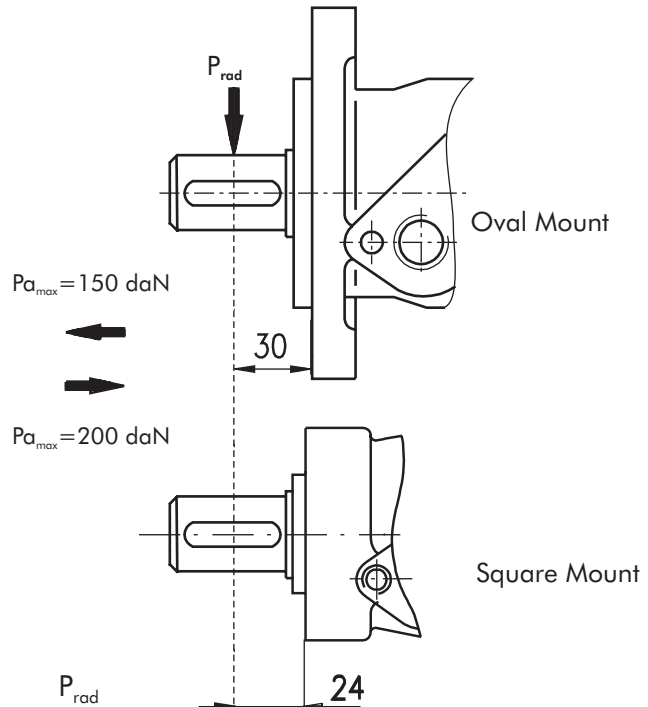


$P_{a_{max}} = 150 \text{ daN}$   
 $P_{a_{max}} = 200 \text{ daN}$



**EPM and EPRM**

Radial Shaft Load  $P_{rad}$  for C, CO Shaft Extensions  
by  $L = 30 \text{ (24) mm}$



**ORDER CODE**

	1	2	3	4	5	6	7	8	9	10	11	12
<b>E P M</b>												

**Pos.1 - Mounting Flange**

omit - Oval mount, two holes

**F** - Oval mount, four holes

**Q** - Square mount, four bolts

**W** - Wheel mount

**Pos.2 - Option (needle bearings)**

omit - none

**N\*** - with needle bearings

**Pos.3 - Port type**

omit - Side ports

**E** - Rear ports

**Pos.4 - Displacement code**

**25\*** - 25,0 [cm<sup>3</sup>/rev]

**32\*** - 32,0 [cm<sup>3</sup>/rev]

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

**50** - 49,5 [cm<sup>3</sup>/rev]

**80** - 79,2 [cm<sup>3</sup>/rev]

**100** - 99,0 [cm<sup>3</sup>/rev]

**125** - 123,8 [cm<sup>3</sup>/rev]

**160** - 158,4 [cm<sup>3</sup>/rev]

**200** - 198,0 [cm<sup>3</sup>/rev]

**250** - 247,5 [cm<sup>3</sup>/rev]

**315** - 316,8 [cm<sup>3</sup>/rev]

**400** - 396,0 [cm<sup>3</sup>/rev]

**500** - 495,0 [cm<sup>3</sup>/rev]

**630** - 623,6 [cm<sup>3</sup>/rev]

**Pos.5 - Shaft Extensions\*\* (see page 26)**

**C** - ø25 straight, Parallel key A8x7x32 DIN6885

**VC** - ø25 straight, Parallel key A8x7x32 DIN6885 with corrosion resistant bushing

**CO** - ø1" straight, Parallel key 1/4"x1/4"x1 1/4" BS46

**VCO** - ø1" straight, Parallel key 1/4"x1/4"x1 1/4" BS46 with corrosion resistant bushing

**SH** - ø25,32 splined BS 2059 (SAE 6B)

**VSH** - ø25,32 splined BS 2059 (SAE 6B) with corrosion resistant bushing

**K** - ø28,56 tapered 1:10, Parallel key B5x5x14 DIN6885

**SA** - ø24,5 splined B 25x22 DIN 5482

**VSA** - ø24,5 splined B 25x22 DIN 5482 with corrosion resistant bushing

**CB** - ø32 straight, Parallel key A10x8x45 DIN6885

**KB** - ø35 tapered 1:10, Parallel key B6x6x20 DIN6885

**SB** - splined A 25x22 DIN 5482

**OB** - ø1 1/4" tapered 1:8, Parallel key 5/16"x5/16"x1 1/4" BS46

**HB** - ø1 1/4" splined 14T ANSI B92.1 - 1976

**Pos. 6 - Shaft Seal Version (see page 38)**

omit - Low pressure seal or Seal for "...B" shaft

**D** - High pressure seal

**Pos. 7 - Case Drain**

omit - with internal drain

**1** - without case drain

**Pos. 8 - Ports**

omit - BSPP (ISO 228)

**M** - Metric (ISO 262)

**Pos. 9 - Special Features (see Specification data on page 16)**

omit - none

**LL** - Low Leakage

**LSV** - Low Speed Valve

**FR** - Free Running

**Pos.10 - Rotation**

omit - Standard Rotation

**R** - Reverse Rotation

**Pos.11 - Option (Paint)\*\*\***

omit - no Paint

**P** - Painted

**PC** - Corrosion Protected Paint

**Pos.12 - Design Series**

omit - Factory specified

**NOTES:**

\* Only with "D" Shaft Seal Versions!

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

The following combinations are not allowed- **Q, W, N** options with "...B" shafts.

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

The hydraulic motors are mangano-phosphatized as standard.