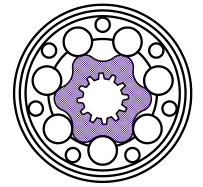


HYDRAULIC MOTORS EPRM

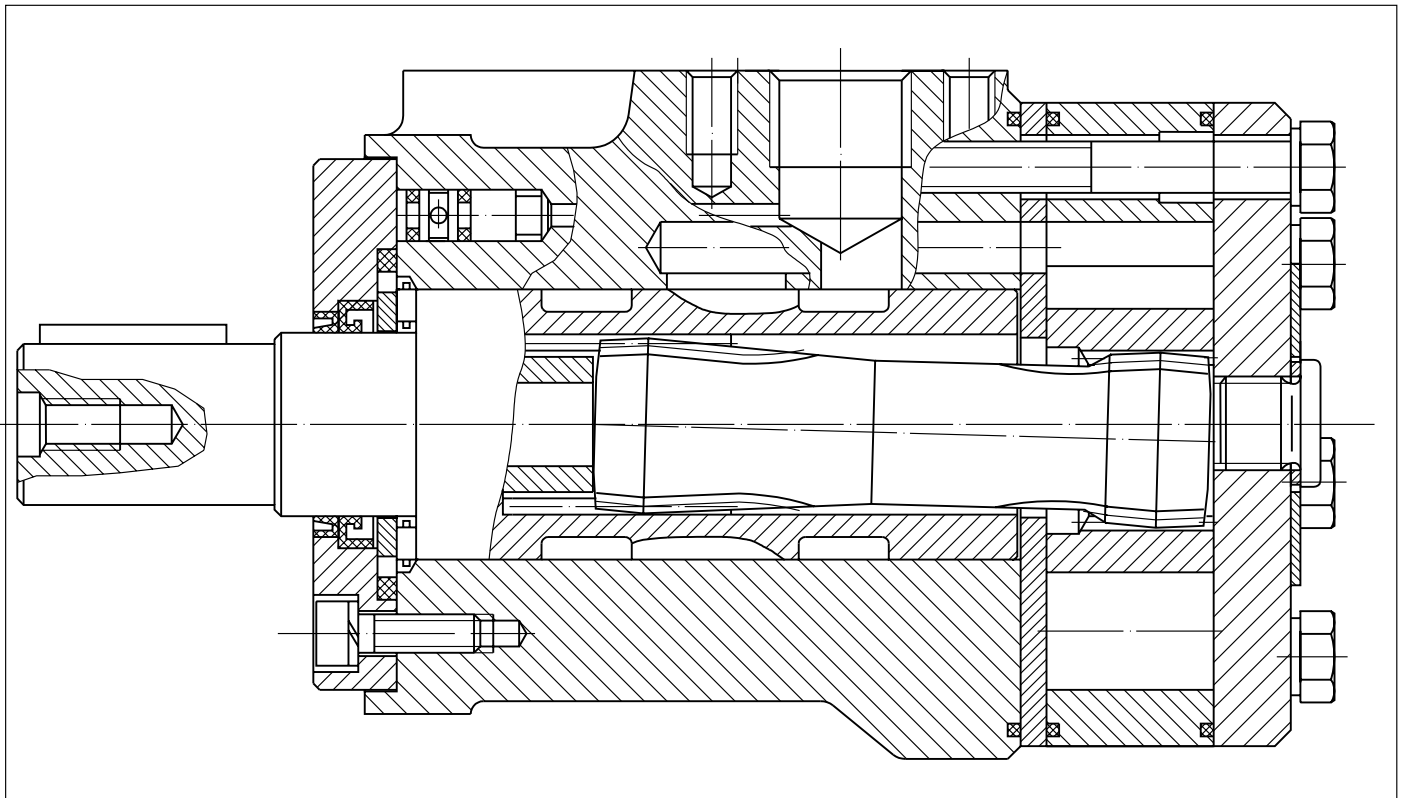


The series of EPRM motors have a low speed, high torque capability. Converting hydraulic energy into mechanical energy they are used extensively in the mobile, agriculture and industrial equipment markets.

These units provide high output torque from relatively small packages. The motors are available in displacements from 51,5 cm³/rev. to 397 cm³/rev. with speeds up to 1000 RPM.

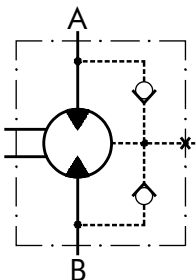
The EPRM motors are fixed displacement, geroler type units that are known for dependability and performance.

All EPRM motors have built-in check valves assuring pressure on the shaft seal never exceeds pressure levels seen in the return time.

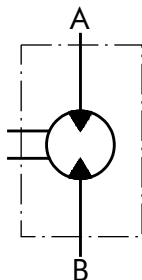


Cutaway of EPRM Motor

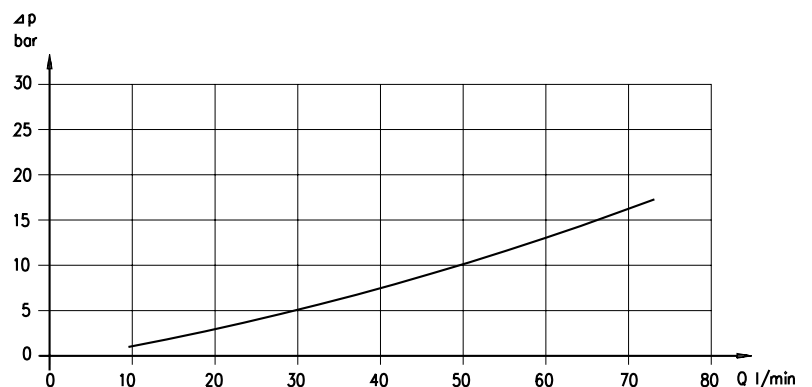
**EPRM, EPRMW(N)
Series with
Check Valves**



**EPRM...U Series
without Check
Valves and Drain**



Pressure Losses



SPECIFICATION DATA

Type	EPRM 50	EPRM 50...B	EPRMW 50	EPRM 80	EPRM 80...B	EPRMW 80
Displacement, [cm ³ /u]	51,5	51,5	51,5	80,3	80,3	80,3
Max. Speed, [RPM]	cont.	775	775	750	750	750
	int.*	970	970	970	940	940
Max. Torque [daNm]	cont.	10,1	10,1	10,1	19,5	19,5
	int.*	13	13	13	22	22
	peak**	17	17	17	27	27
Max. Output, [kW]	cont.	7	7	7	12,5	12,5
	int.*	8,5	8,5	8,5	15	15
Max. Pressure Drop [bar]	cont.	140	140	140	175	175
	int.*	175	175	175	200	200
	peak**	225	225	225	225	225
Max. Oilflow [l/min]	cont.	40	40	40	60	60
	int.*	50	50	50	75	75
Max. Inlet Pressure [bar]	cont.	175	175	175	175	175
	int.*	200	200	200	200	200
	peak**	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	100	150	100
	cont.100-300 RPM	75	30	50	75	30
	cont.300-600 RPM	50	15	25	50	15
	cont.>600 RPM	20	-	15	20	-
	int.* 0-max. RPM	150	100	100	150	100
Max. Return Pressure with Drain Line [bar]	cont.	175	175	175	175	175
	int.*	200	200	200	200	200
	peak**	225	225	225	225	225
Max. Starting Pressure with Unloaded Shaft, [bar]	10	10	10	10	10	10
Min. Starting Torque [daNm]	at max. press. drop cont.	8	8	8	15	15
	at max. press. drop int.*	10	10	10	17	17
Min. Speed***, [RPM]	10	10	10	10	10	10
Weight, avg., [kg]	EPRM (F)	6,8	6,9		6,9	7,0
	EPRMW	6,2			6,3	
	EPRMQ			10,4		10,5

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

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

*** For speeds of 10 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. 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 mm²/s at operating temperatures.
5. Recommended maximum system operating temperature - 82°C.
6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 min.

SPECIFICATION DATA (continued)

Type	EPRM 100	EPRM 100...B	EPRMW 100	EPRM 125	EPRM 125...B	EPRMW 125
Displacement, [cm ³ /u]	99,8	99,8	99,8	125,7	125,7	125,7
Max. Speed, [RPM]	cont.	600	600	475	475	475
	int.*	750	750	600	600	600
Max. Torque [daNm]	cont.	24	24	30	30	30
	int.*	28	28	34	34	34
	peak**	32	32	32	37	37
Max. Output, [kW]	cont.	13	13	12,5	12,5	12,5
	int.*	15	15	15	14,5	14,5
Max. Pressure Drop [bar]	cont.	175	175	175	175	175
	int.*	200	200	200	200	200
	peak**	225	225	225	225	225
Max. Oilflow [l/min]	cont.	60	60	60	60	60
	int.*	75	75	75	75	75,7
Max. Inlet Pressure [bar]	cont.	175	175	175	175	175
	int.*	200	200	200	200	200
	peak**	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	100	150	100
	cont.100-300 RPM	75	30	50	75	30
	cont.300-600 RPM	50	15	25	50	15
	cont.>600 RPM	20	-	15	-	-
	int.* 0-max. RPM	150	100	100	150	100
Max. Return Pressure with Drain Line [bar]	cont.	175	175	175	175	175
	int.*	200	200	200	200	200
	peak**	225	225	225	225	225
Max. Starting Pressure with Unloaded Shaft, [bar]	10	10	10	9	9	9
Min. Starting Torque [daNm]	at max. press. drop cont.	20	20	20	25	25
	at max. press. drop int.*	23	23	23	28	28
Min. Speed***, [RPM]		10	10	10	10	9
Weight, avg., [kg]	EPRM (F)	7,2	7,3		7,3	7,4
	EPRMW	6,6			6,8	
	EPRMQ			10,6		10,8

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

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

*** For speeds of 10 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. 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 mm²/s at operating temperatures.
5. Recommended maximum system operating temperature - 82°C.
6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 min.

SPECIFICATION DATA (continued)

Type	EPRM 160	EPRM 160...B	EPRMW 160	EPRM 200	EPRM 200...B	EPRMW 200
Displacement, [cm ³ /u]	159,6	159,6	159,6	199,8	199,8	199,8
Max. Speed, [RPM]	cont.	375	375	300	300	300
	int.*	470	470	470	375	375
Max. Torque [daNm]	cont.	39	39	38,5	45	45
	int.*	43	43	43	46	50
	peak**	46	46	46	56	56
Max. Output, [kW]	cont.	11,5	11,5	9	11	11
	int.*	14	14	14	11,5	13
Max. Pressure Drop [bar]	cont.	175	175	175	140	175
	int.*	200	200	200	175	200
	peak**	225	225	225	225	225
Max. Oilflow [l/min]	cont.	60	60	60	60	60
	int.*	75	75	75	75	75
Max. Inlet Pressure [bar]	cont.	175	175	175	175	175
	int.*	200	200	200	200	200
	peak**	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	100	150	100
	cont.100-300 RPM	75	30	50	75	30
	cont.300-600 RPM	50	15	25	50	15
	int.* 0-max. RPM	150	100	100	150	100
Max. Return Pressure with Drain Line [bar]	cont.	175	175	175	175	175
	int.*	200	200	200	200	200
	peak**	225	225	225	225	225
Max. Starting Pressure with Unloaded Shaft, [bar]	7	7	7	5	5	5
Min. Starting Torque [daNm]	at max. press. drop cont.	32	32	32	33	41
	at max. press. drop int.*	37	37	37	40	46
Min. Speed***, [RPM]	10	10	7	10	10	5
Weight, avg., [kg]	EPRM (F)	7,5	7,6		8	8,1
	EPRMW	7,6			7,2	
	EPRMQ			11,1		

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

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

*** For speeds of 10 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. 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 mm²/s at operating temperatures.
5. Recommended maximum system operating temperature - 82°C.
6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 min.

SPECIFICATION DATA (continued)

Type	EPRM 250	EPRM 250...B	EPRMW 250	EPRM 315	EPRM 315...B	EPRMW 315	EPRM 400	EPRM 400...B	EPRMW 400	
Displacement, [cm ³ /u]	250,1	250,1	250,1	315,7	315,7	315,7	397	397	397	
Max. Speed, [RPM]	cont.	240	240	240	190	190	190	150	150	150
	int.*	300	300	300	240	240	240	190	190	190
Max. Torque [daNm]	cont.	39	54	54	39	55	55	38	61	61
	int.*	58	61	61	57	63	63	60	69	69
	peak**	71	71	71	83	83	83	87	87	87
Max. Output, [kW]	cont.	6,5	10	10	6	9	9	4,8	7,8	7,8
	int.*	10,5	12	12	9,6	11	11	8,8	10,6	10,6
Max. Pressure Drop [bar]	cont.	110	175	175	90	135	135	70	115	115
	int.*	175	200	200	140	160	160	115	140	140
	peak**	225	225	225	210	210	210	175	175	175
Max. Oilflow [l/min]	cont.	60	60	60	60	60	60	60	60	60
	int.*	75	75	75	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	100	100	150	100	100	150	100	100
	cont. 100-300 RPM	75	30	50	75	30	50	75	30	50
	int.* 0-max. RPM	150	100	100	150	100	100	150	100	100
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]	4	4	5	3	3	5	3	3	5	
Min. Starting Torque [daNm]	at max. press. drop cont.	31	50	50	33	50	50	30	49	49
	at max. press. drop int.*	48	55	55	58	66	66	50	61	61
Min. Speed***, [RPM]	10	10	6	10	10	5	10	10	5	
Weight, avg., [kg]	EPRM (F)	8,4	8,5		9,1	9,2		9,8	9,9	
	EPRMW	7,8			8,6			9,3		
	EPRMQ			12,1			12,6			13,3

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

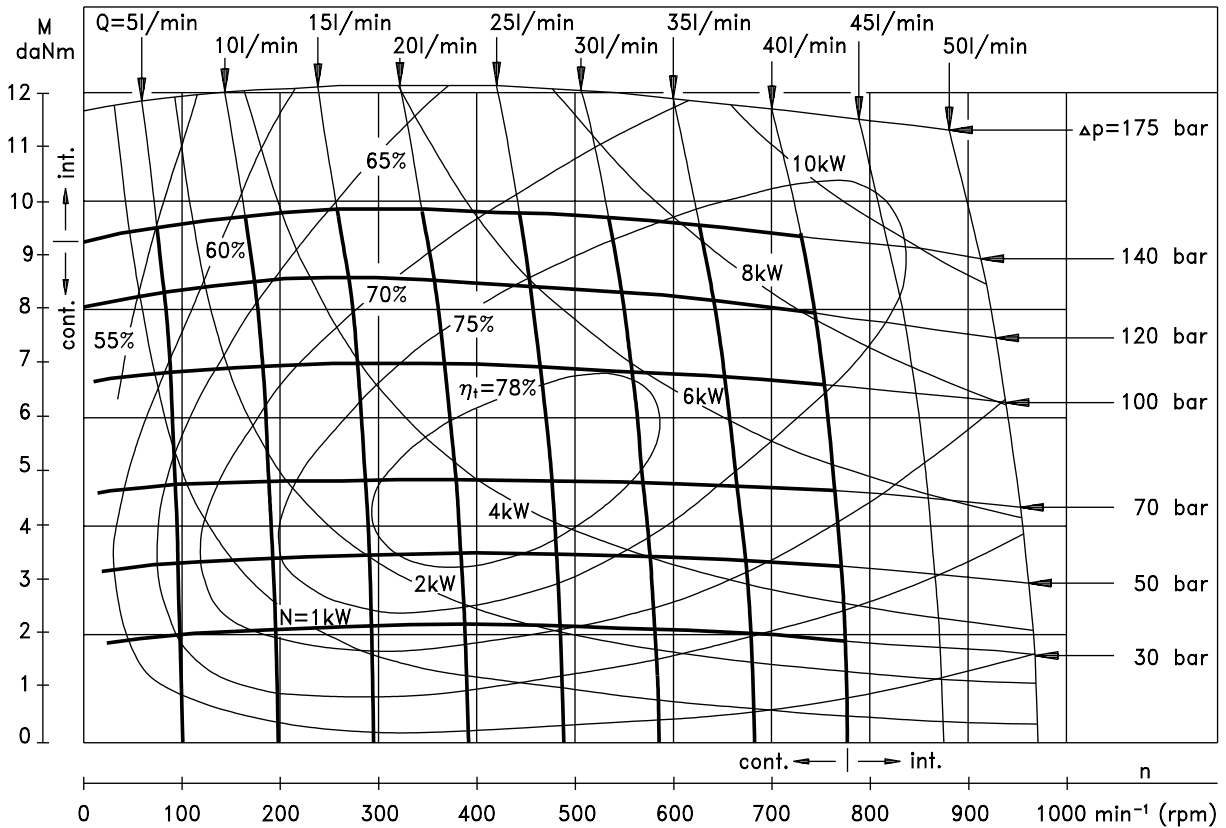
** Peak load: the permissible values may occur for max. 1% for every minute.

*** For speeds of 10 RPM or lower, consult factory or your regional manager.

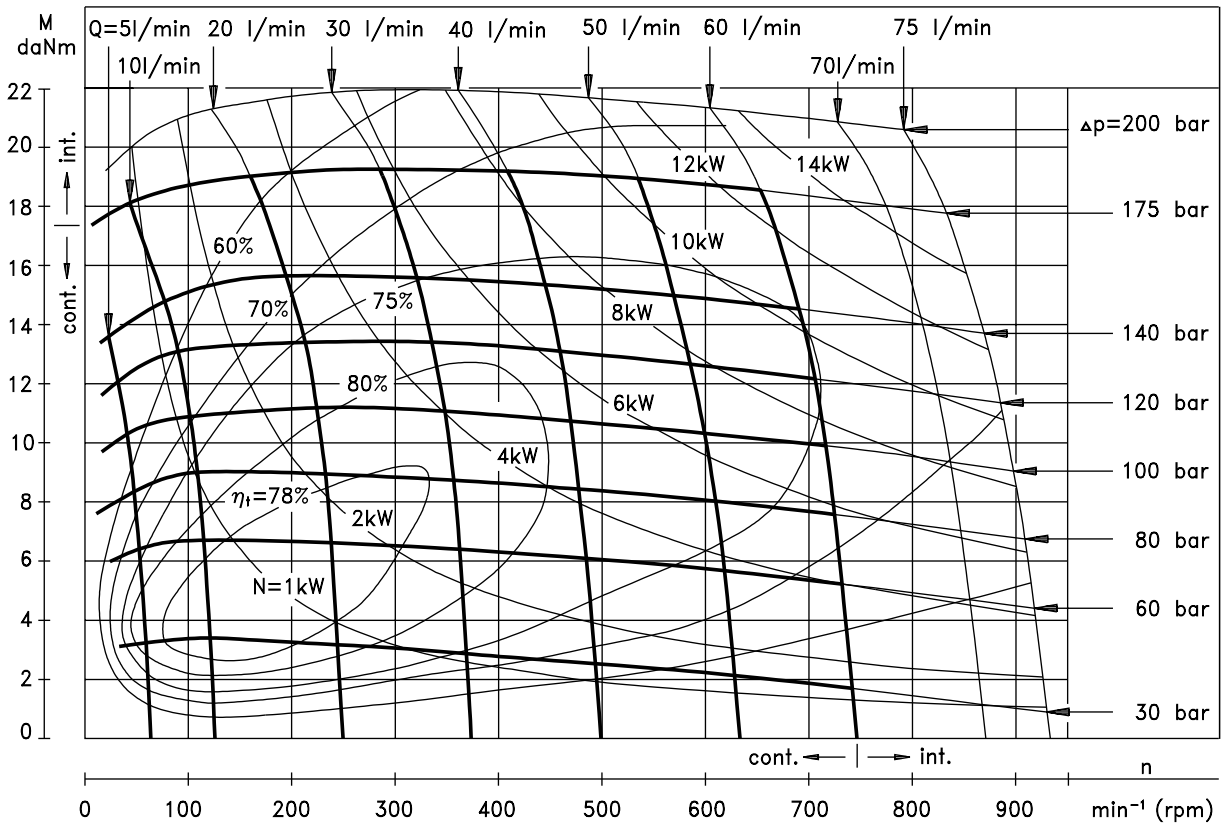
1. Intermittent speed and intermittent pressure drop must not occur simultaneously!
2. Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
3. Recommended using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) or HM (ISO 6743/4).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

FUNCTION DIAGRAMS

EPRM 50



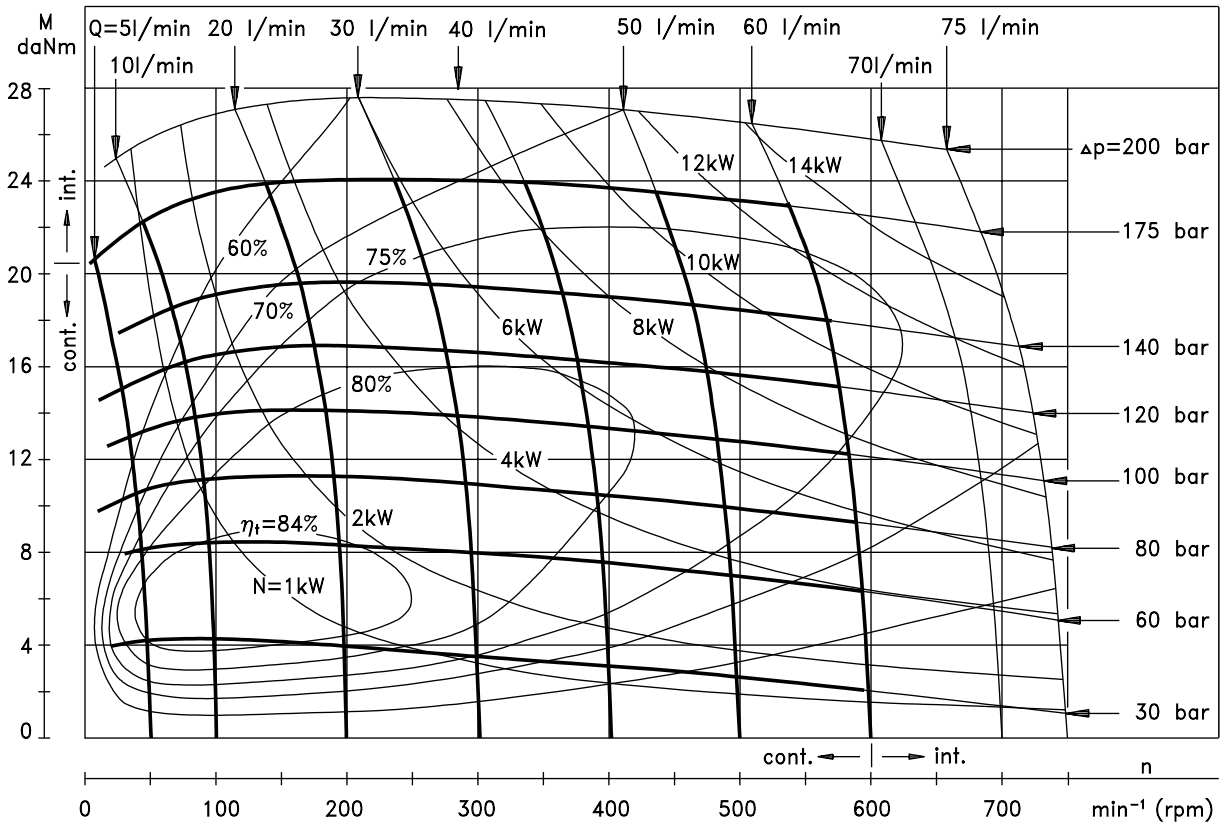
EPRM 80



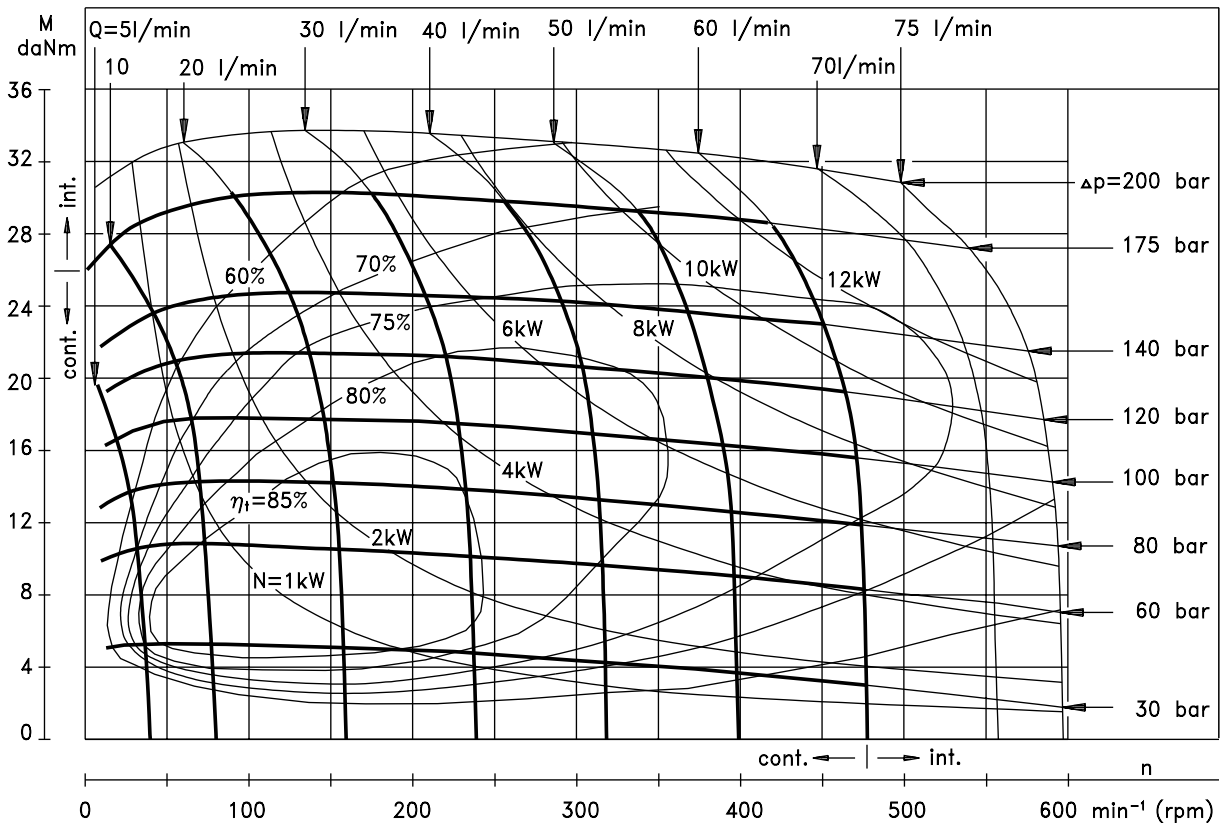
The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm²/s at 50° C.

FUNCTION DIAGRAMS

EPRM 100



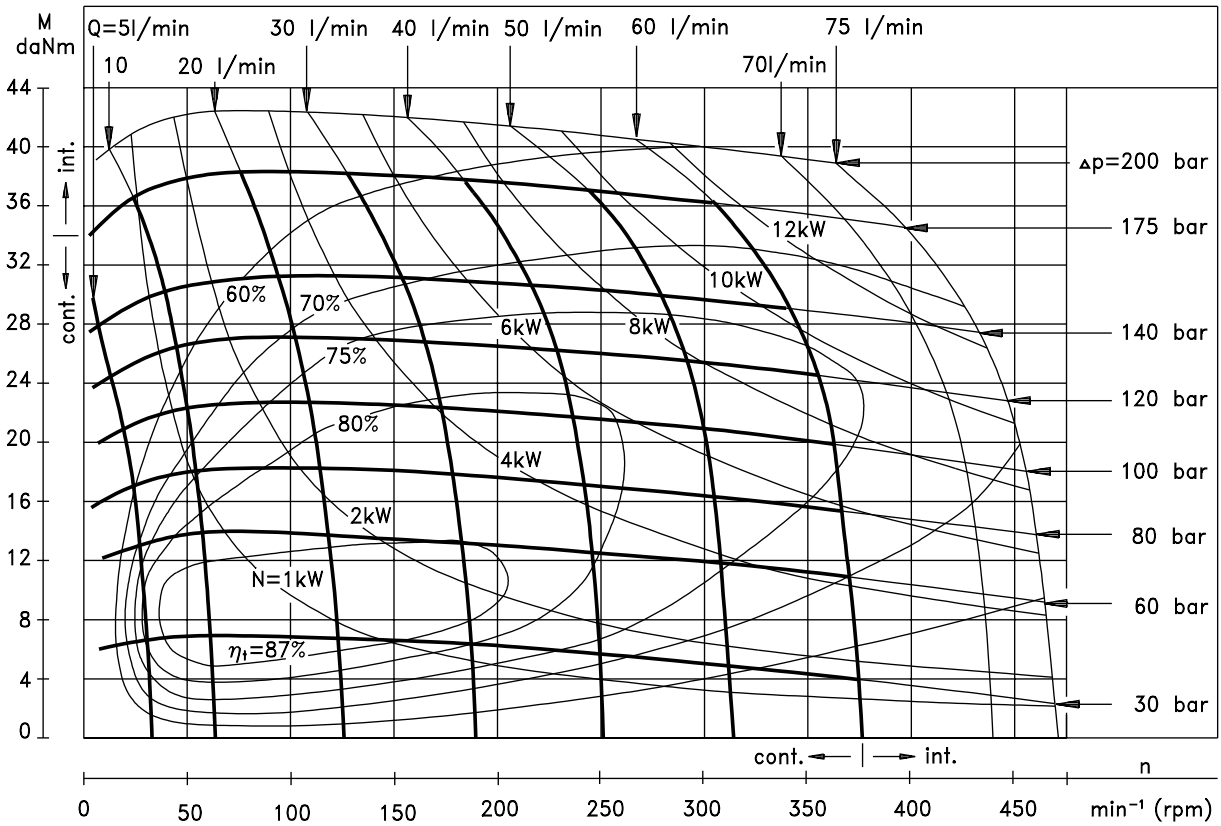
EPRM 125



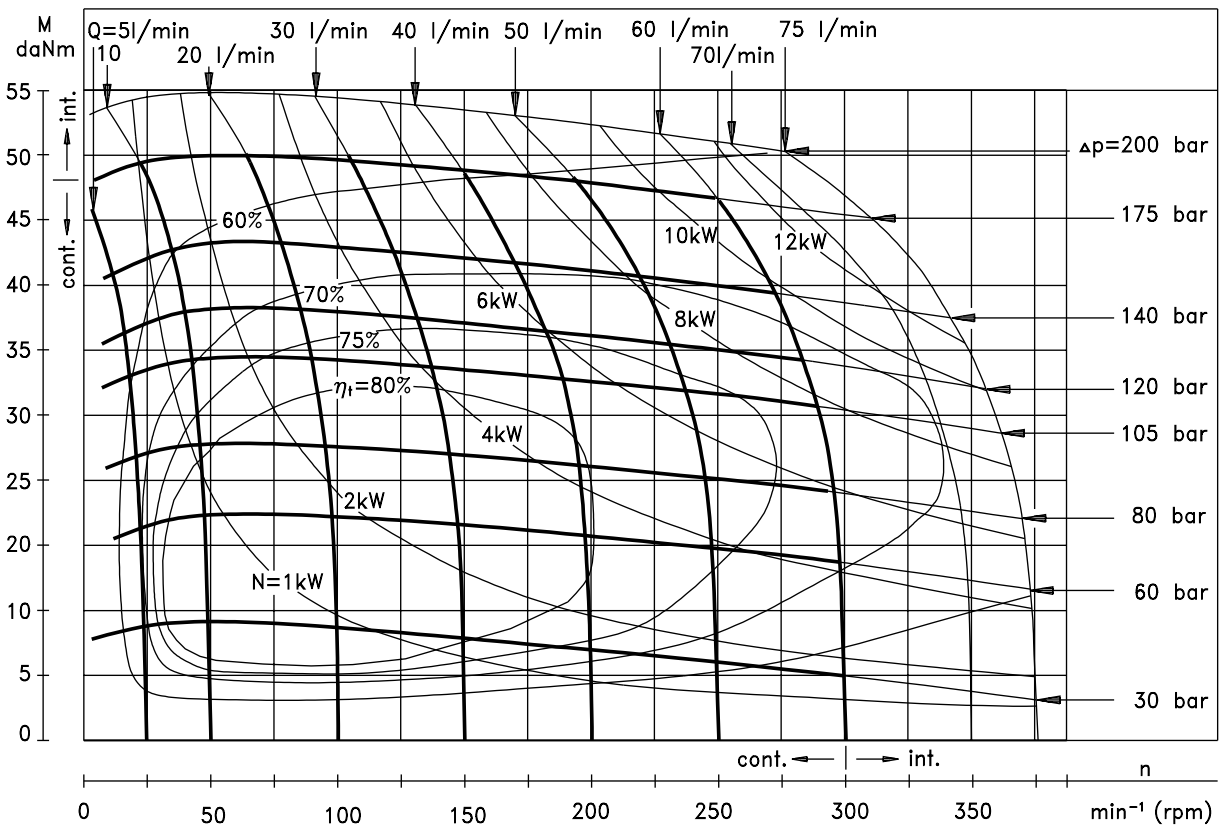
The function diagrams data was collected at back pressure $5 \div 10 \text{ bar}$ and oil with viscosity of $32 \text{ mm}^2/\text{s}$ at 50°C .

FUNCTION DIAGRAMS

EPRM 160



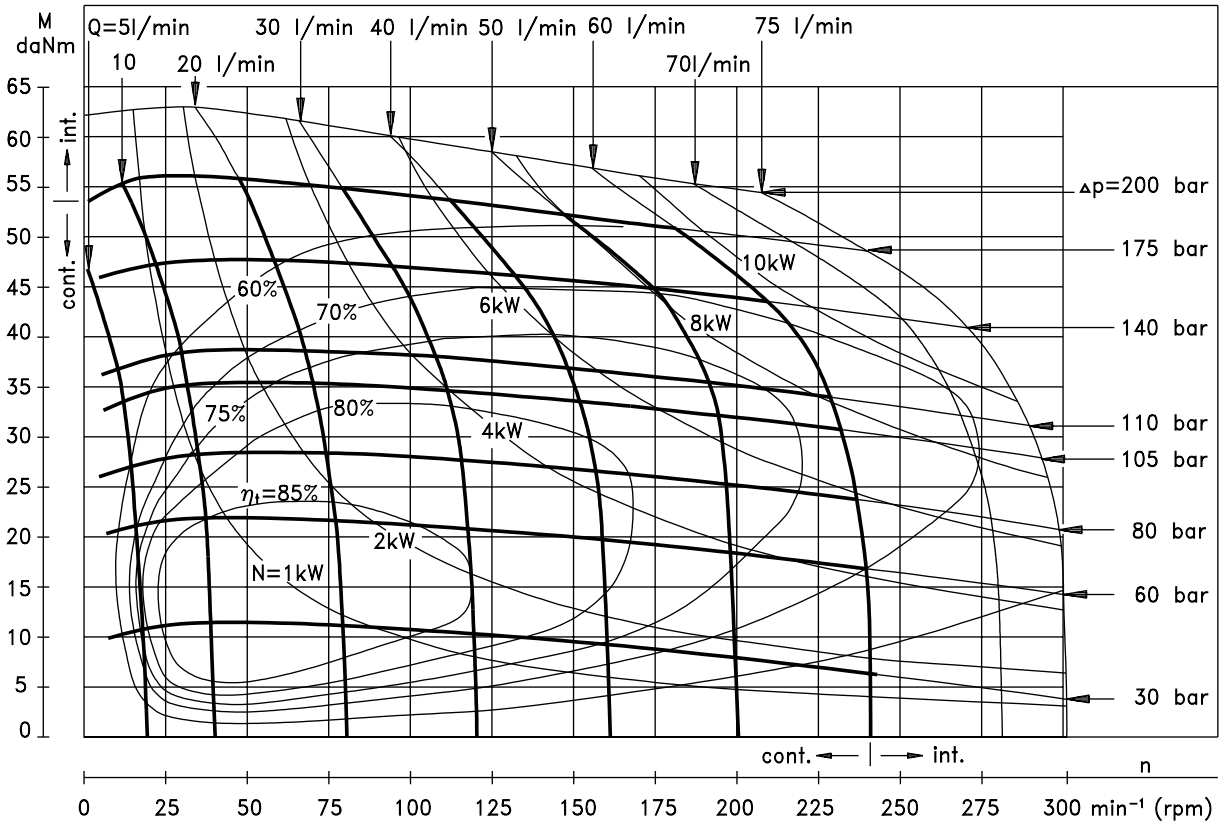
EPRM 200



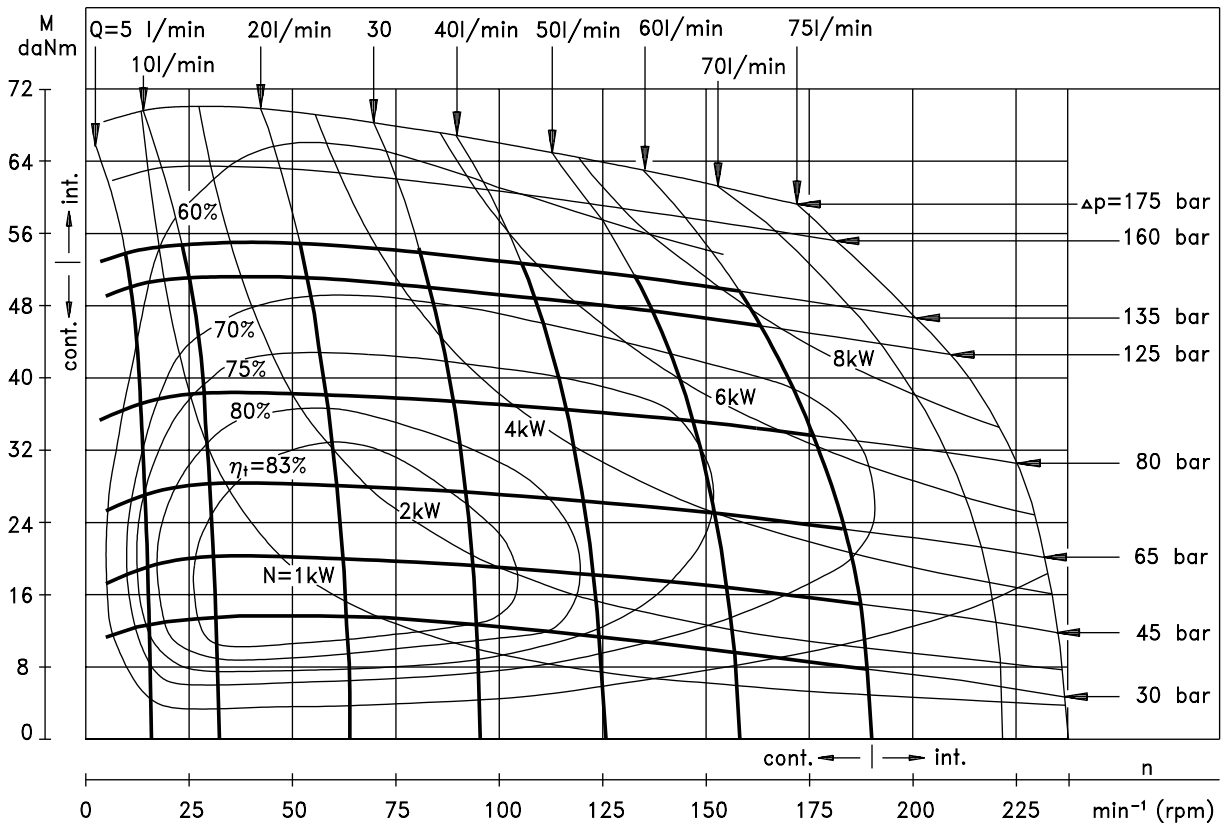
The function diagrams data was collected at back pressure $5 \div 10$ bar and oil with viscosity of $32 \text{ mm}^2/\text{s}$ at 50°C .

FUNCTION DIAGRAMS

EPRM 250



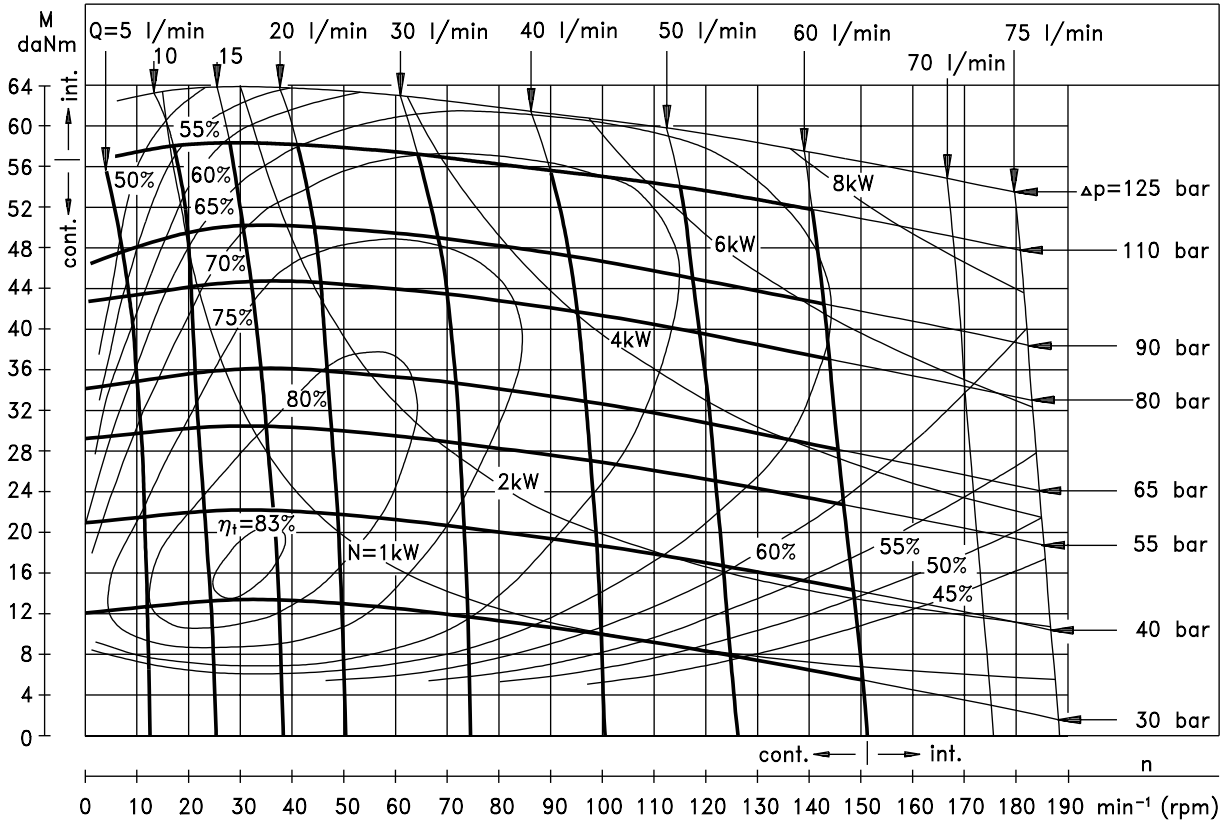
EPRM 315



The function diagrams data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm²/s at 50° C.

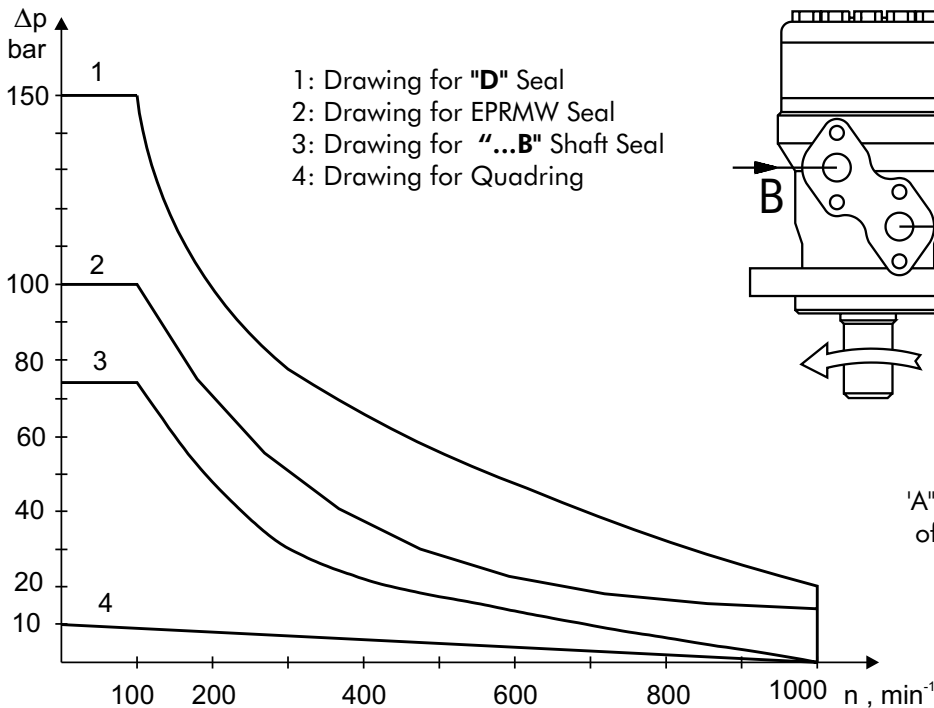
FUNCTION DIAGRAM

EPRM 400



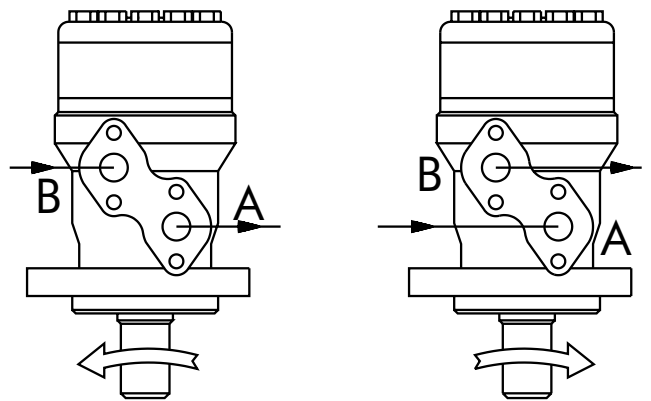
The function diagram data was collected at back pressure 5 ÷ 10 bar and oil with viscosity of 32 mm²/s at 50° C.

Max. Permissible Shaft Seal Pressure for EPM and EPRM Motors



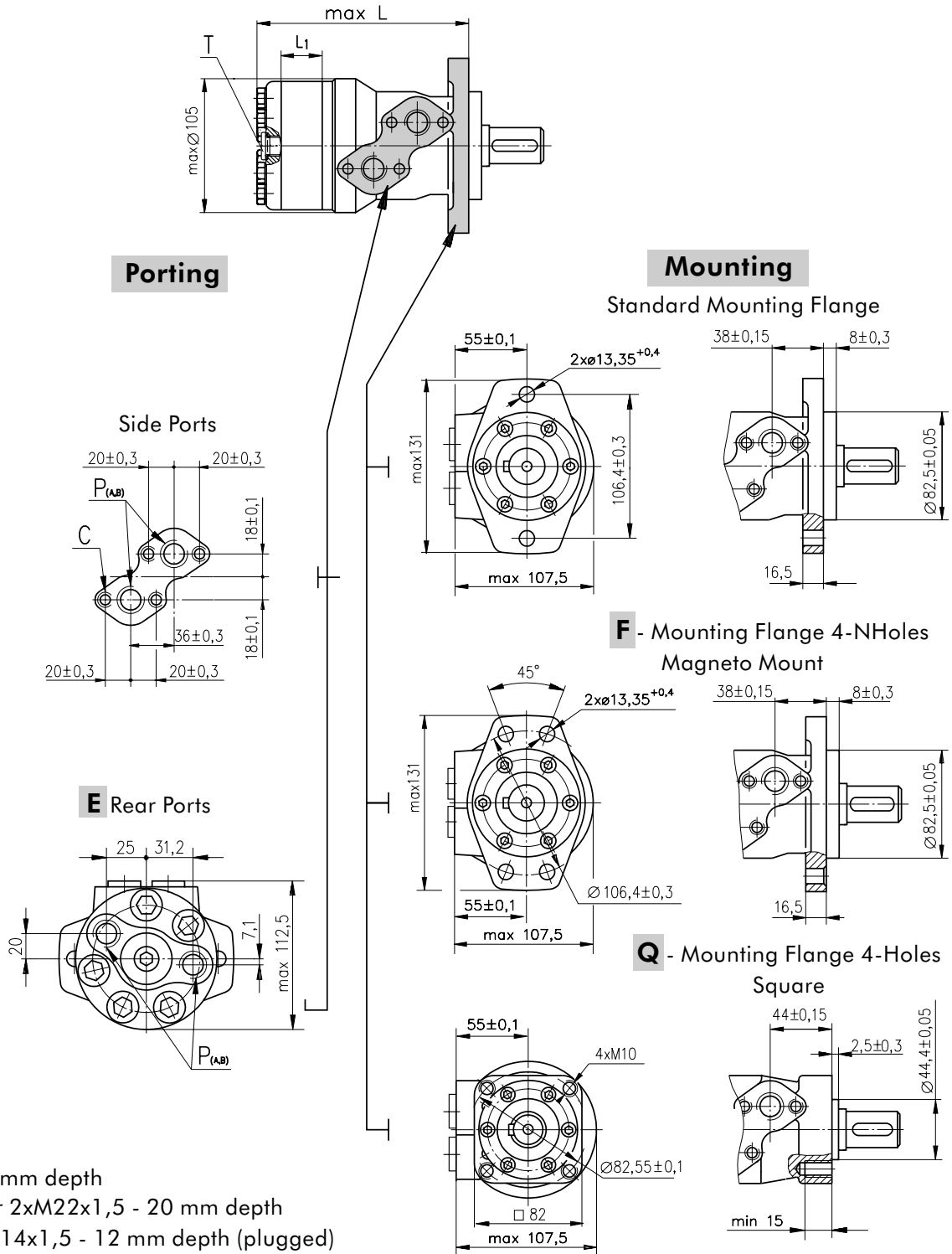
- 1: Drawing for "D" Seal
- 2: Drawing for EPRMW Seal
- 3: Drawing for "...B" Shaft Seal
- 4: Drawing for Quadring

Direction Of Shaft Rotation



'A' and 'B' are indicated on the end of motor valve housing

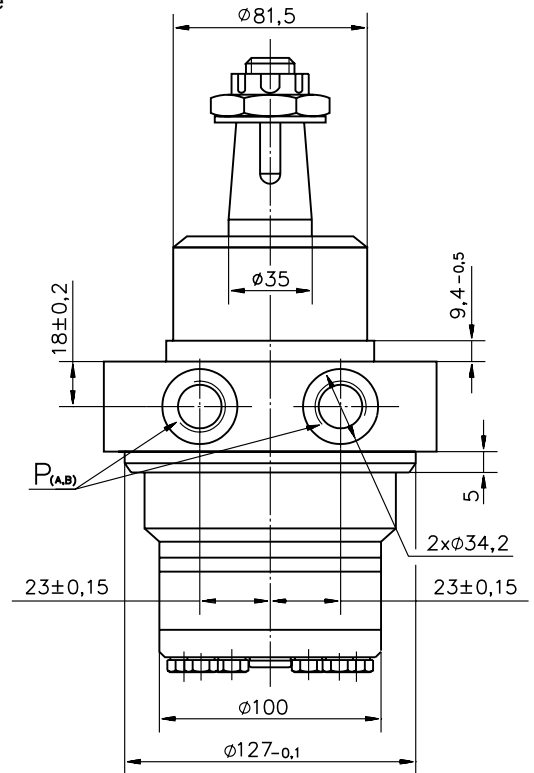
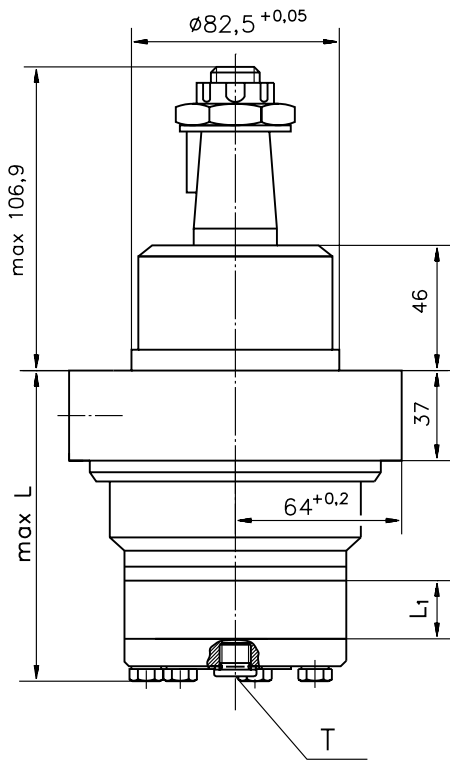
DIMENSIONS AND MOUNTING DATA



Type	L, mm	Type	L, mm	Type	L, mm	Type	L, mm	L ₁ , mm
EPRM(F) 50	138,0	EPRMQ 50	143,5	EPRM(F)E 50	157,5	EPRMQE 50	163,5	9,0
EPRM(F) 80	143,0	EPRMQ 80	148,5	EPRM(F)E 80	162,5	EPRMQE 80	168,5	14,0
EPRM(F) 100	146,0	EPRMQ 100	152,0	EPRM(F)E 100	165,5	EPRMQE 100	171,5	17,4
EPRM(F) 125	150,5	EPRMQ 125	156,5	EPRM(F)E 125	170,0	EPRMQE 125	176,0	21,8
EPRM(F) 160	156,5	EPRMQ 160	162,5	EPRM(F)E 160	176,0	EPRMQE 160	182,0	27,8
EPRM(F) 200	163,5	EPRMQ 200	169,5	EPRM(F)E 200	183,0	EPRMQE 200	189,0	34,8
EPRM(F) 250	172,0	EPRMQ 250	179,0	EPRM(F)E 250	192,0	EPRMQE 250	198,0	43,5
EPRM(F) 315	183,0	EPRMQ 315	189,0	EPRM(F)E 315	204,0	EPRMQE 315	210,0	54,8
EPRM(F) 400	198,0	EPRMQ 400	204,0	EPRM(F)E 400	218,0	EPRMQE 400	224,0	69,4

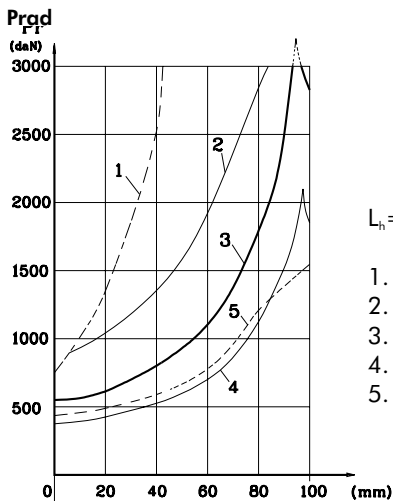
DIMENSIONS AND MOUNTING DATA -WHEEL MOTOR TYPE EPRMW-Series 2

W Mounting Flange



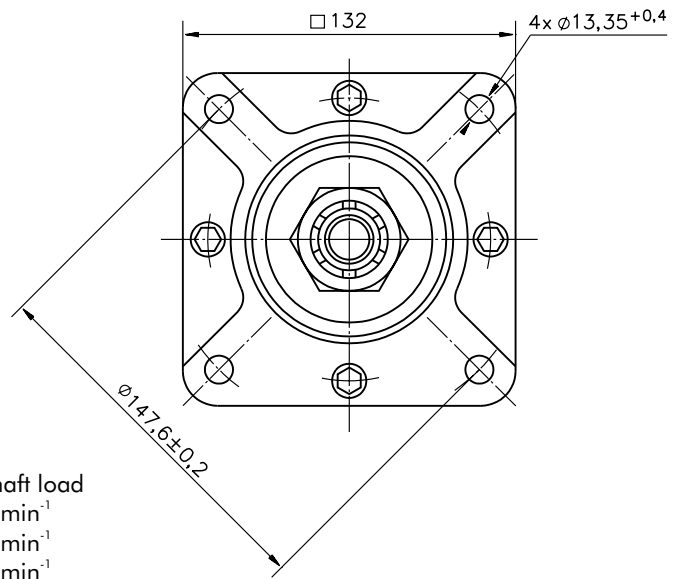
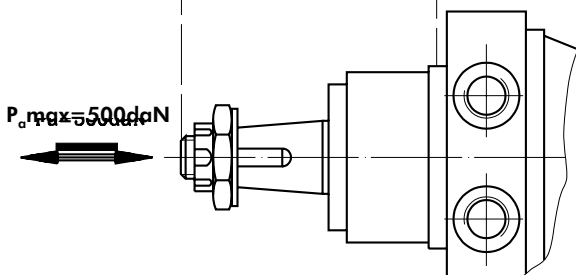
$P_{(A,B)}$: 2xG1/2 or 2xM22x1,5 - 20 mm depth
T : G1/4 or M14x1,5 - 12 mm depth (plugged)

Permissible Shaft Loads EPRMW



$L_h = 2500$ h

1. Permissible radial shaft load
2. Drawing by $n = 50 \text{ min}^{-1}$
3. Drawing by $n = 200 \text{ min}^{-1}$
4. Drawing by $n = 800 \text{ min}^{-1}$
5. Drawing by $n = 200 \text{ min}^{-1}$ and $P_o \text{ max} = 500 \text{ daN}$



Type	L, mm	L ₁ , mm
EPRMW 50	108,0	9,0
EPRMW 80	113,0	14,0
EPRMW 100	116,5	17,4
EPRMW 125	121,0	21,8
EPRMW 160	127,0	27,8
EPRMW 200	134,0	34,8
EPRMW 250	142,5	43,5
EPRMW 315	154,0	54,8
EPRMW 400	168,5	69,4



ORDERING INFORMATION

E	P	R	M																
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Euro	
Planetary	
Gear Set Version- Geroler set	
Motor	
Mounting Flange	
no symbol	- SAE A, two holes
F	- magneto, four holes
Q	- square, four bolts
W	- wheel motor with bearings
Option	
no symbol	- without needle bearings
N *	- with needle bearings (not valid for EPRMW)
Porting	
no symbol	- side ports
E	- rear ports
Displacement code	
50	125
80	160
100	200
	250
	315
	400
Shaft (see page 24) **	
C	- ø25, straight key A8x7x32 DIN6885
VC	- ø25, straight key A8x7x32 DIN6885 with corrosion resistant bushing
CO	- ø1" , straight key 1/4"x1/4"x1 1/4" BS46
VCO	- ø1" , straight key 1/4"x1/4"x1 1/4" BS46 with corrosion resistant bushing
SH	- splined BS 2059 (SAE 6B)
VSH	- splined BS 2059 (SAE 6B) with corrosion resistant bushing
K	- tapered 1:10, (ø28,56 under seal)
SA	- splined B 25x22 DIN 5482
VSA	- splined B 25x22 DIN 5482 with corrosion resistant bushing
CB	- ø32, straight key A10x8x45 DIN6885
KB	- tapered 1:10, (ø35 under seal)
SB	- splined A 25x22 DIN 5482
OB	- tapered 1:8, (ø35 under seal)
HB	- splined 14T ANS B92.1 - 1976
Shaft Seal Version (see page 36)	
no symbol	- with QUAD RING Seal for Max. Return pressure 10 bar.
	- with Seal ring for "...B" shafts- Max. Return pressure 75 bar.
	- with Seal ring for EPRMW Motor - Max. Return pressure 100 bar.
D	- with Seal ring for Max. Return pressure 150 bar.
Threaded Ports	
no symbol	- Cilindrical seal thread - ISO 228
M	- Metric thread - ISO 262
Options (see page 25)	
U***	- for high pressure (up to 200 bar) in the motor, without check valve and drain.

NOTES:

- * Only with "D" Shaft Seal Versions!
- ** 1) The permissible output torque for shafts must be not exceeded!
- 2) The following combinations are not allowed- **Q**, **N** versions with "...B" shafts.
- 3) EPRMW is only available with **CB** and **KB** shafts.
- *** The following combinations are not allowed: **Q** and **W** flange, "...B"- shafts and **N** options with **U** option.

The hidraulic motors are mangano-phosphatized as standard. Upon customer request they can be additionally protected (painted).