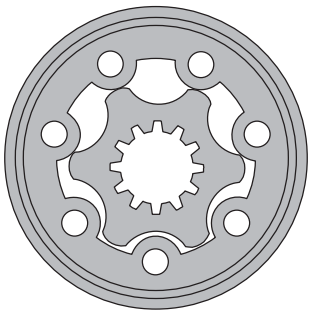
HYDRAULIC MOTORS MLHP



APPLICATION

- » Conveyors
- » Feeding mechanism of robots and manipulators
- » Metal working machines
- » Textile machines
- » Agricultural machines
- » 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
- » SAE, Metric and BSPP ports
- » Speed sensoring
- » Other special features

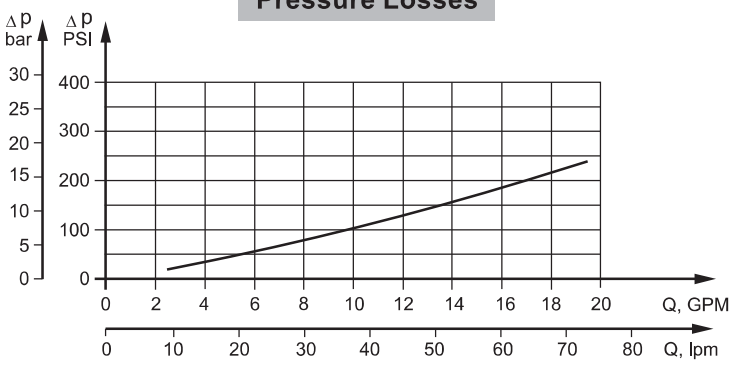
GENERAL

Max. Displacement, in^3/rev [cm^3/rev]	38.05 [623,6]
Max. Speed, [RPM]	1815
Max. Torque, lb-in [daNm]	cont.:4415 [50] int.: 5565 [64]
Max. Output, HP [kW]	17.1 [12,8]
Max. Pressure Drop, PSI [bar]	cont.:2030 [140] int.:2540 [175]
Max. Oil Flow, GPM [lpm]	19.8 [75]
Min. Speed, [RPM]	10
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range, ^{o}F [^{o}C]	-40÷284 [-40÷140]
Optimal Viscosity range, SUS [mm^2/s]	98÷347 [20÷75]
Filtration	ISO code 20/16 (Min. recommended fluid filtration of 25 microns)

Oil flow in drain line

Pressure drop PSI [bar]	Viscosity SUS [mm^2/s]	Oil flow in drain line GPM [lpm]
1450 [100]	98 [20]	.660 [2,5]
	164 [35]	.476 [1,8]
2030 [140]	98 [20]	.925 [3,5]
	164 [35]	.740 [2,8]

Pressure Losses



SPECIFICATION DATA

Specification Data for MLHP... motors with **C, D, G, H, M, S** and **T** shafts.
(1.124 [28,56] sealing diameter)

Type		MLHP 25	MLHP 32	MLHP 40	MLHP 50	MLHP 80	MLHP 100	MLHP 125
Displacement, in³/rev [cm³/rev]		1.73 [28,4]	2.1 [34,5]	2.47 [40,5]	3.02 [49,5]	4.83 [79,2]	6.04 [99]	7.55 [123,8]
Max. Speed,	Cont.	1408	1450	1480	1210	755	605	486
[RPM]	Int.*	1584	1594	1555	1515	945	755	605
Max. Torque	Cont.	290 [3,3]	380 [4,3]	550 [6,2]	835 [9,4]	1340 [15,1]	1710 [19,3]	2100 [23,7]
lb-in [daNm]	Int.*	415 [4,7]	540 [6,1]	730 [8,2]	1050 [11,9]	1725 [19,5]	2100 [23,7]	2640 [29,8]
	Peak**	595 [6,7]	760 [8,6]	950 [10,7]	1285 [14,3]	1985 [22,4]	2435 [27,5]	3235 [36,5]
Max. Output	Cont.	6.0 [4,5]	7.8 [5,8]	11.5 [8,4]	13.5 [10,1]	13.7 [10,2]	14.1 [10,5]	13.7 [10,2]
HP [kW]	Int.*	8.2 [6,1]	10.5 [7,8]	15.5 [11,6]	16.1 [12,2]	16.8 [12,5]	17.1 [12,8]	16.1 [12]
Max. Pressure Drop	Cont.	1450 [100]	1450 [100]	1750 [120]	2030 [140]	2030 [140]	2030 [140]	2030 [140]
PSI [bar]	Int.*	2030 [140]	2030 [140]	2250 [155]	2540 [175]	2540 [175]	2540 [175]	2540 [175]
	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]
Max. Oil Flow	Cont.	10.5 [40]	13.2 [50]	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]
GPM [lpm]	Int.*	11.9 [45]	14.5 [55]	18.5 [70]	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]
Max. Inlet Pressure	Cont.	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]
PSI [bar]	Int.*	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]
	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]
Max. Return Pres-	Cont.	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]
sure with Drain Line	Int.*	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]
PSI [bar]	Peak**	3260 [225]	3260[225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]
Max. Starting Pressure with Unloaded Shaft, PSI [bar]		145 [10]	145 [10]	145 [10]	145 [10]	145 [10]	145 [10]	131 [9]
Min. Starting Torque	At max.press. drop Cont.	265 [3,0]	355 [4,0]	480 [5,4]	690 [7,8]	1170 [13,2]	1470 [16,6]	1830 [20,7]
lb-in [daNm]	At max.press. drop Int.*	370 [4,2]	500 [5,6]	600 [6,8]	885 [10]	1490 [16,8]	1860 [21]	2360 [26,6]
Min. Speed*, [RPM]**		20	15	10	10	10	10	10
Weight, lb [kg]	MLHP(F)(N)	12.3 [5,6]	12.4 [5,6]	12.6 [5,7]	12.8 [5,8]	13.2 [5,9]	13.5 [6,1]	13,7 [6,2]
For rear ports	MLHPW(N)	11.7 [5,3]	11.7 [5,3]	11.9 [5,4]	12.1 [5,5]	12.4 [5,6]	12.8 [5,8]	13 [5,9]
+.992 [0,450]	MLHPQ(M)(N)	11.1 [5,0]	11.1 [5,0]	11.2 [5,1]	11.5 [5,2]	11.7 [5,3]	12.1 [5,5]	12.3 [5,6]

* 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 mm²/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.

SPECIFICATION DATA (continued)

Specification Data for MLHP... motors with **C, D, G, H, M, S** and **T** shafts.
(1.124 [28,56] sealing diameter)

Type		MLHP 160	MLHP 200	MLHP 250	MLHP 315	MLHP 400	MLHP 500	MLHP 630
Displacement, in³/rev [cm³/rev]		9.66 [158,4]	12.1 [198]	15.1 [247,5]	19.3 [316,8]	24.16 [396]	30.2 [495]	38.05 [623,6]
Max. Speed,	Cont.	378	303	242	190	150	120	95
[RPM]	Int.*	472	378	303	236	189	150	120
Max. Torque	Cont.	2770 [31,3]	3240 [36,6]	3360 [38]	3360 [38]	3190 [36]	3452 [39]	3895 [44]
lb-in [daNm]	Int.*	3345 [37,8]	4035 [45,6]	5160 [58,3]	4960 [56]	5240 [59]	5045 [57]	5665 [64]
	Peak**	3880 [43,8]	4870 [55]	6060 [68,5]	7505 [85]	7560 [85,4]	6903 [78]	7257 [82]
Max. Output	Cont.	13.5 [10,1]	13.5 [10]	10 [7,5]	7.9 [5,8]	6.2 [4,6]	4.7 [3,5]	4.4 [3,3]
HP [kW]	Int.*	16.2 [12,1]	16.1 [12]	16.1 [12]	12.1 [9]	10.5 [7,8]	9,7 [7,2]	7.5 [5,6]
Max. Pressure Drop	Cont.	2030 [140]	2030 [140]	1600 [110]	1300 [90]	1015 [70]	870 [60]	800 [55]
PSI [bar]	Int.*	2540 [175]	2540 [175]	2540 [175]	2030 [140]	1665 [115]	1305 [90]	1160 [80]
	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	2610 [180]	1885 [130]	1740 [110]
Max. Oil Flow	Cont.	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]
GPM [lpm]	Int.*	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]
Max. Inlet Pressure	Cont.	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2030 [140]	2030 [140]
PSI [bar]	Int.*	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2540 [175]	2540 [175]
	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]
Max. Return Pres-	Cont.	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2030 [140]	2030 [140]
sure with Drain Line	Int.*	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2540 [175]	2540 [175]
PSI [bar]	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3262 [225]	3260 [225]	3260 [225]
Max. Starting Pressure with Unloaded Shaft, PSI [bar]		116 [8]	100 [7]	87 [6]	73 [5]	73 [5]	73 [5]	73 [5]
Min. Starting Torque	At max.press. drop Cont.	2500 [28,2]	2950 [33,5]	2970 [33,6]	3045 [34,4]	3050 [34,5]	3180 [36]	3670 [41,5]
lb-in [daNm]	At max.press. drop Int.*	3140 [35,5]	3770 [42,6]	4795 [54,2]	5480 [61,9]	5390 [60,8]	4780 [54]	5480 [62]
Min. Speed*, [RPM]**		10	10	10	10	10	10	10
Weight, lb [kg]	MLHP(F)(N)	14.1 [6,4]	14.6 [6,6]	15 [6,8]	15.6 [7,1]	16.8 [7,6]	20 [8,9]	21.4 [9,5]
For rear ports	MLHPW(N)	13.5 [6,1]	13.9 [6,3]	14.3 [6,5]	15 [6,8]	15.9 [7,2]	19.0 [8,6]	20.3 [9,2]
+.992 [0,450]	MLHPQ(M)(N)	12.8 [5,8]	13.2 [6]	13.7 [6,2]	14.3 [6,5]	15 [6,8]	18.3 [8,3]	19.8 [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 mm²/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.

SPECIFICATION DATA (continued)

Specification Data for MLHP... motors with **B, K, R** and **L** shafts.
(1.378 [35] sealing diameter)

Type		MLHP 80	MLHP 100	MLHP 125	MLHP 160	MLHP 200
Displacement, in³/rev [cm³/rev]		4.83 [79,2]	6.04 [99]	7.55 [123,8]	9.66 [158,4]	12.1 [198]
Max. Speed, [RPM]	Cont.	755	605	486	378	303
	Int.*	945	755	605	472	378
Max. Torque lb-in [daNm]	Cont.	1340 [15,15]	1710 [19,3]	2100 [23,7]	2770 [31,3]	3240 [36,6]
	Int.*	1725 [19,5]	2100 [23,7]	2640 [29,8]	3345 [37,8]	4035 [45,6]
	Peak**	1985 [22,4]	2435 [27,5]	3235 [36,5]	3875 [43,8]	4870 [55]
Max. Output HP [kW]	Cont.	13.7 [10,2]	14.1 [10,5]	13.7 [10,2]	13.5 [10,1]	13.5 [10]
	Int.*	16.8 [12,5]	17.1 [12,8]	16.1 [12]	16.2 [12,1]	16.1 [12]
Max. Pressure Drop PSI [bar]	Cont.	2030 [140]	2030 [140]	2030 [140]	2030 [140]	2030 [140]
	Int.*	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]
	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]
Max. Oil Flow GPM [lpm]	Cont.	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]
	Int.*	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]
Max. Inlet Pressure PSI [bar]	Cont.	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]
	Int.*	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]
	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]
Max. Return Pressure with Drain Line PSI [bar]	Cont.	2540 [175]	2540 [175]	2540 [175]	2540 [175]	2540 [175]
	Int.*	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2900 [200]
	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]
Max. Starting Pressure with Unloaded Shaft, PSI [bar]		145 [10]	145 [10]	131 [9]	116 [8]	100 [7]
Min. Starting Torque lb-in [daNm]	At max.press. drop Cont.	1170 [13,2]	1470 [16,6]	1830 [20,7]	2500 [28,2]	2950 [33,5]
	At max.press. drop Int.*	1490 [16,8]	1860 [21]	2360 [26,6]	3140 [35,5]	3770 [42,6]
Min. Speed*, [RPM]**		10	10	10	10	10
Weight, lb [kg]	MLHP(F)	13.2 [6]	13.7 [6,2]	13.9 [6,3]	14.3 [6,5]	14.8 [6,7]
For rear ports: +.992 [0,450]						

* 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 mm²/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.

SPECIFICATION DATA (continued)

Specification Data for MLHP... motors with **B, K, R** and **L** shafts.
(1.378 [35] sealing diameter)

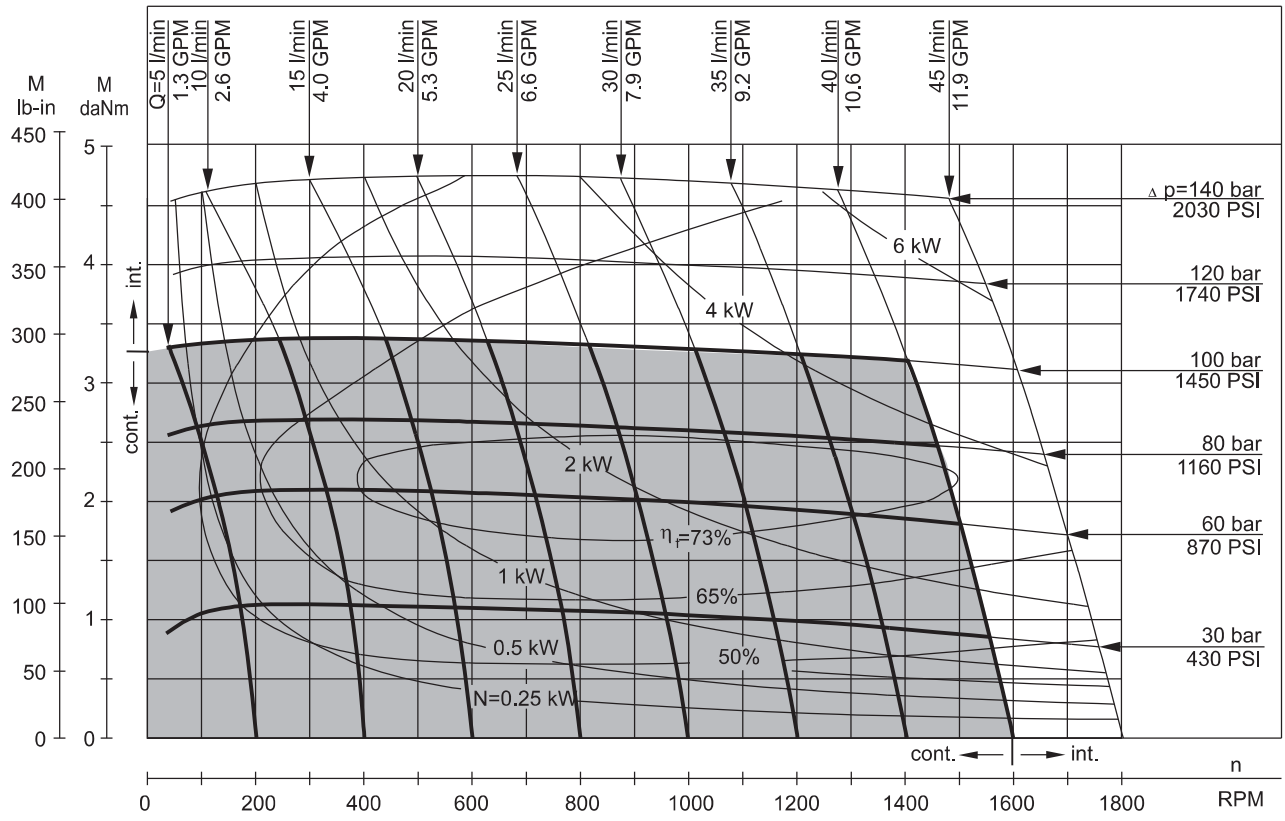
Type		MLHP 250	MLHP 315	MLHP 400	MLHP 500	MLHP 630
Displacement, in³/rev [cm³/rev]		15.1 [247,5]	19.3 [316,8]	24.16 [396]	30.2 [495]	38.05 [623,6]
Max. Speed, [RPM]	Cont.	242	190	150	120	95
	Int.*	303	236	189	150	120
Max. Torque lb-in [daNm]	Cont.	4160 [47]	4360 [48]	4415 [50]	3452 [39]	3895 [44]
	Int.*	5160 [58,3]	4960 [56]	5240 [59]	5045 [57]	5665 [64]
	Peak**	6060 [68,5]	7505 [85]	7560 [85,4]	6903 [78]	7257 [82]
Max. Output HP [kW]	Cont.	12.1 [9]	10.2 [7,6]	8.3 [6,2]	4.7 [3,5]	4.4 [3,3]
	Int.*	16.1 [12]	12.1 [9]	10.5 [7,8]	9,7 [7,2]	7.5 [5,6]
Max. Pressure Drop PSI [bar]	Cont.	3030 [140]	1740 [120]	1400 [95]	870 [60]	800 [55]
	Int.*	2540 [175]	2030 [140]	1670 [115]	1305 [90]	1160 [80]
	Peak**	3260 [225]	3260 [225]	2610 [180]	1885 [130]	1740 [110]
Max. Oil Flow GPM [lpm]	Cont.	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]	15.9 [60]
	Int.*	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]	19.8 [75]
Max. Inlet Pressure PSI [bar]	Cont.	2540 [175]	2540 [175]	2540 [175]	2030 [140]	2030 [140]
	Int.*	2900 [200]	2900 [200]	2900 [200]	2540 [175]	2540 [175]
	Peak**	3260 [225]	3260 [225]	3260 [225]	3260 [225]	3260 [225]
Max. Return Pressure with Drain Line PSI [bar]	Cont.	2540 [175]	2540 [175]	2540 [175]	2030 [140]	2030 [140]
	Int.*	2900 [200]	2900 [200]	2900 [200]	2540 [175]	2540 [175]
	Peak**	3260 [225]	3260 [225]	3262 [225]	3260 [225]	3260 [225]
Max. Starting Pressure with Unloaded Shaft, PSI [bar]		87 [6]	73 [5]	73 [5]	73 [5]	73 [5]
Min. Starting Torque lb-in [daNm]	At max.press. drop Cont.	3790 [42,8]	4050 [45,8]	4140 [46,8]	3180 [36]	3670 [41,5]
	At max.press. drop Int.*	4795 [54,2]	5480 [61,9]	5390 [60,8]	4780 [54]	5480 [62]
Min. Speed*, [RPM]**		10	10	10	10	10
Weight, lb [kg] For rear ports: +.992 [0,450]	MLHP(F)	15.2 [6,9]	15.9 [7,2]	17 [7,7]	19.9 [9,0]	21.2 [9,6]

* 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.

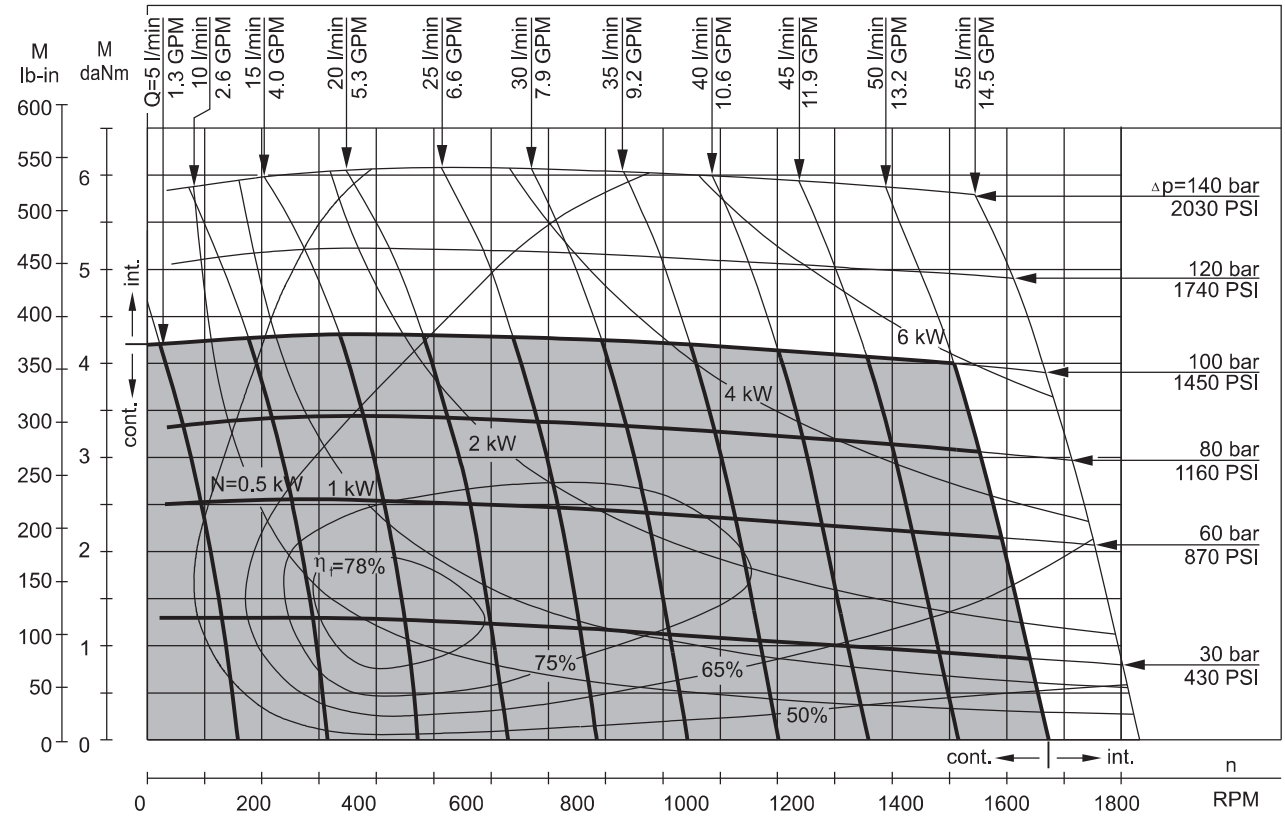
1. Intermittent speed and intermittent pressure drop must not occur simultaneously.
2. Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) or HM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
4. Recommended minimum oil viscosity 70 SUS [13 mm²/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.

FUNCTION DIAGRAMS

MLHP 25



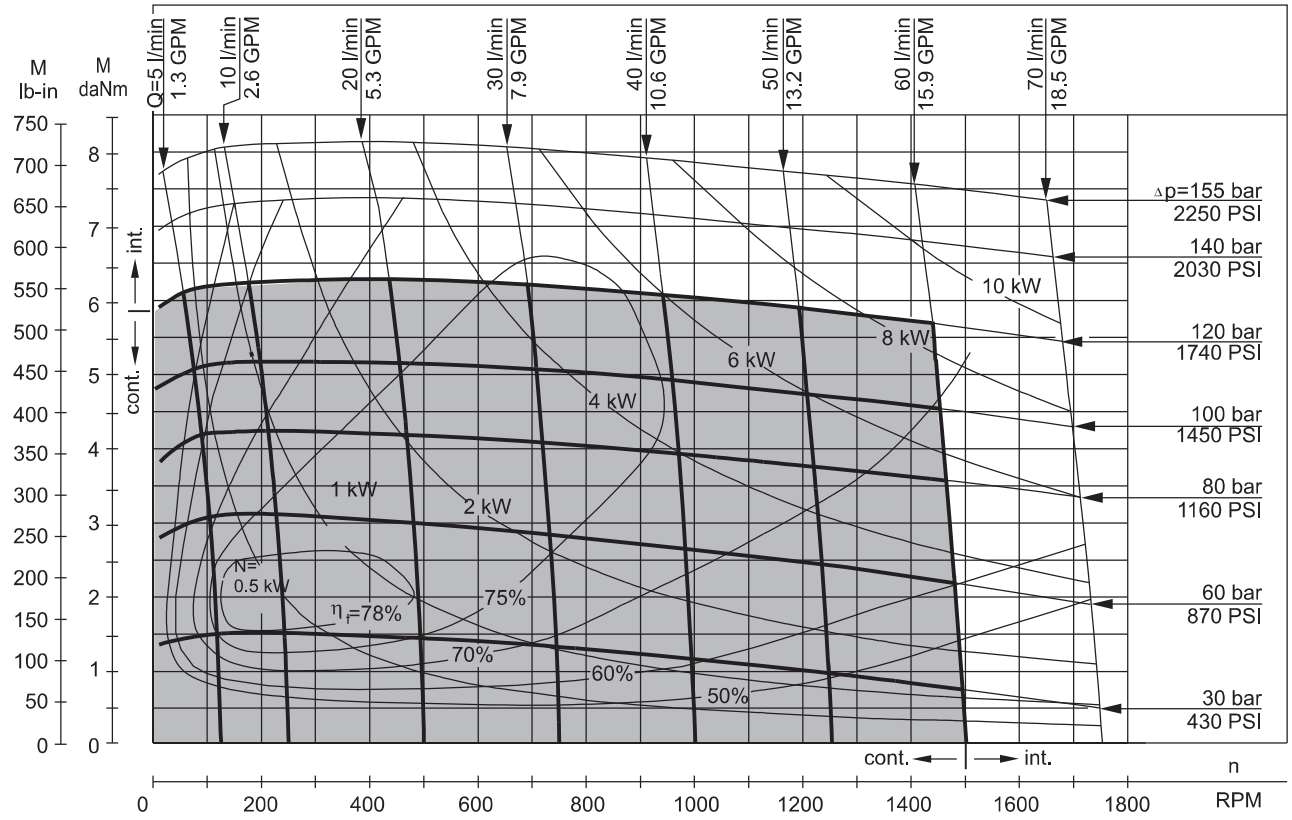
MLHP 32



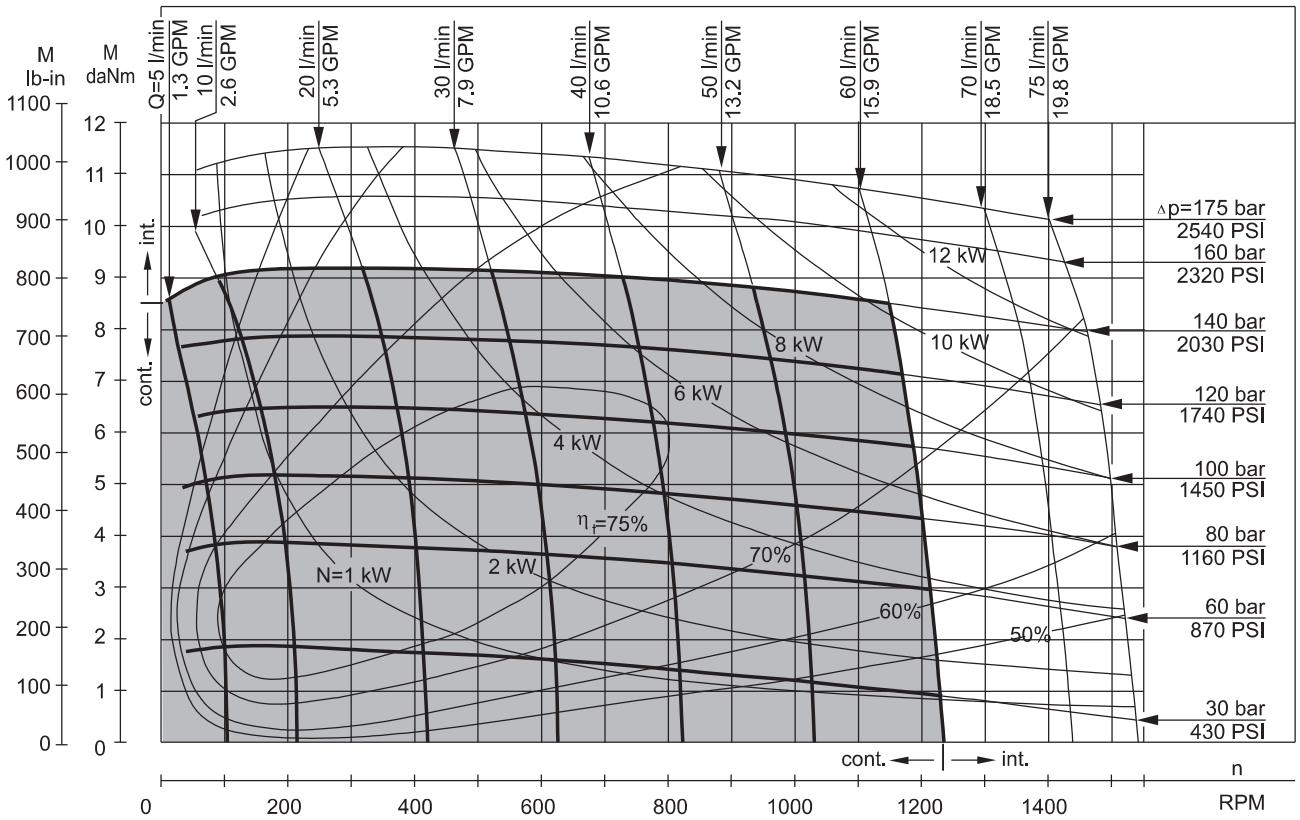
The function diagrams data is for average performance of randomly selected motors at back pressure 72.5÷145 PSI [5÷10 bar] and oil with viscosity of 150 SUS [32 mm²/s] at 122°F [50°C].

FUNCTION DIAGRAMS

MLHP 40



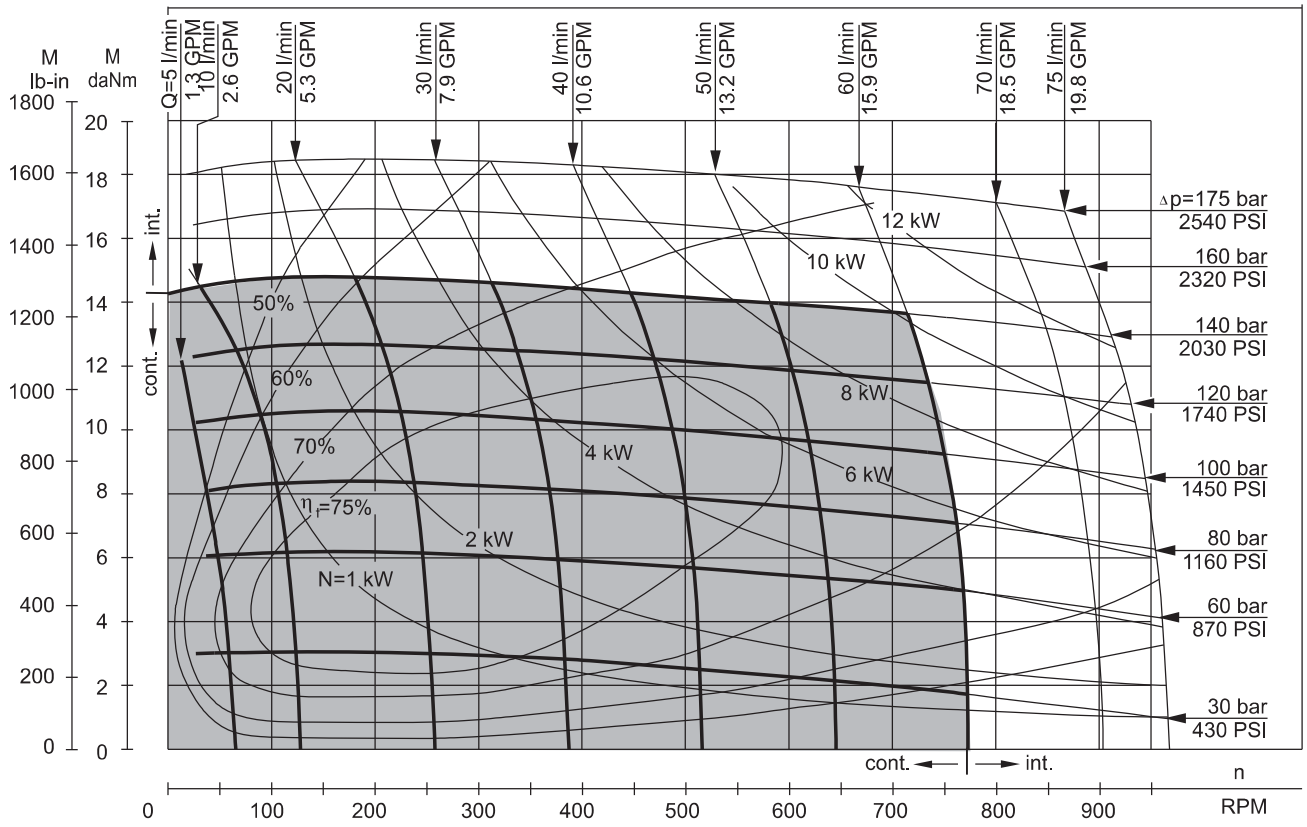
MLHP 50



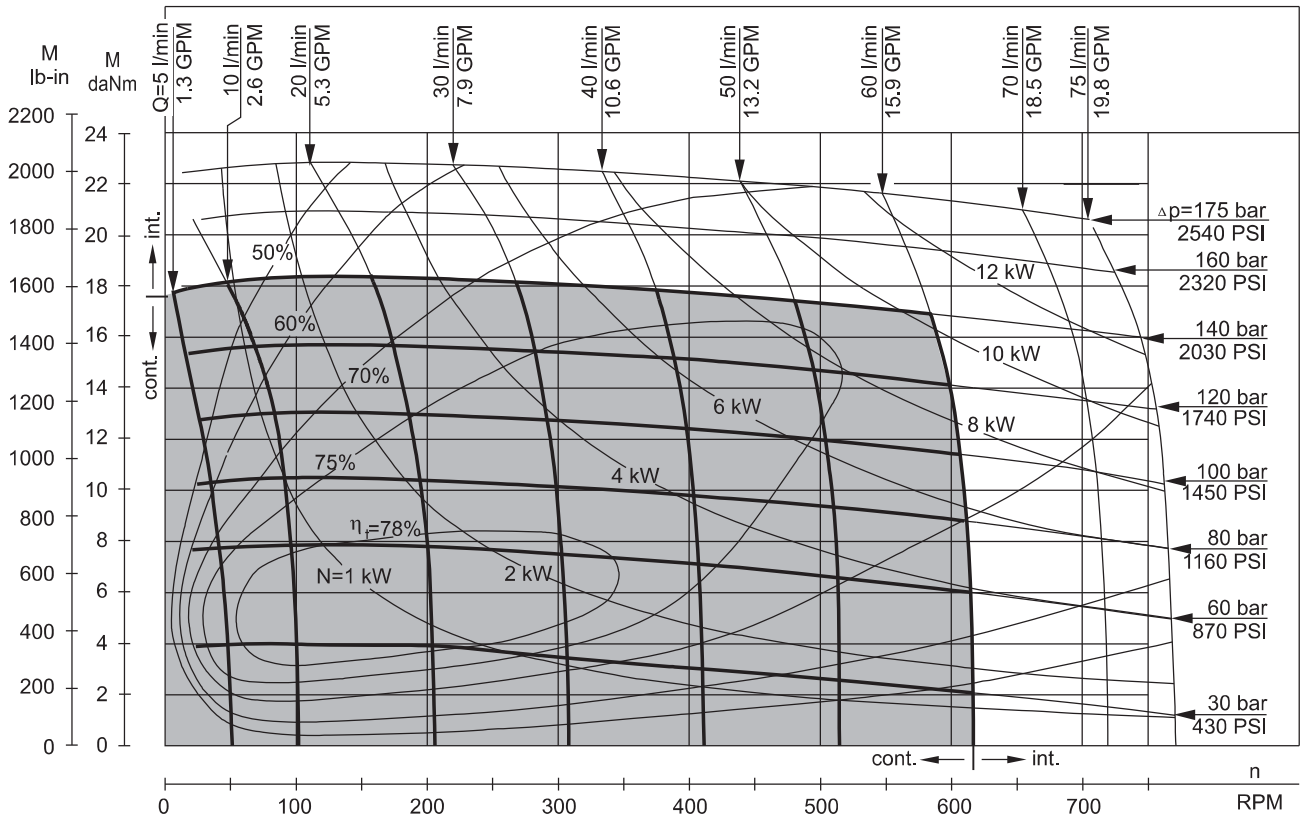
The function diagrams data is for average performance of randomly selected motors at back pressure 72.5÷145 PSI [5÷10 bar] and oil with viscosity of 150 SUS [32 mm²/s] at 122°F [50°C].

FUNCTION DIAGRAMS

MLHP 80



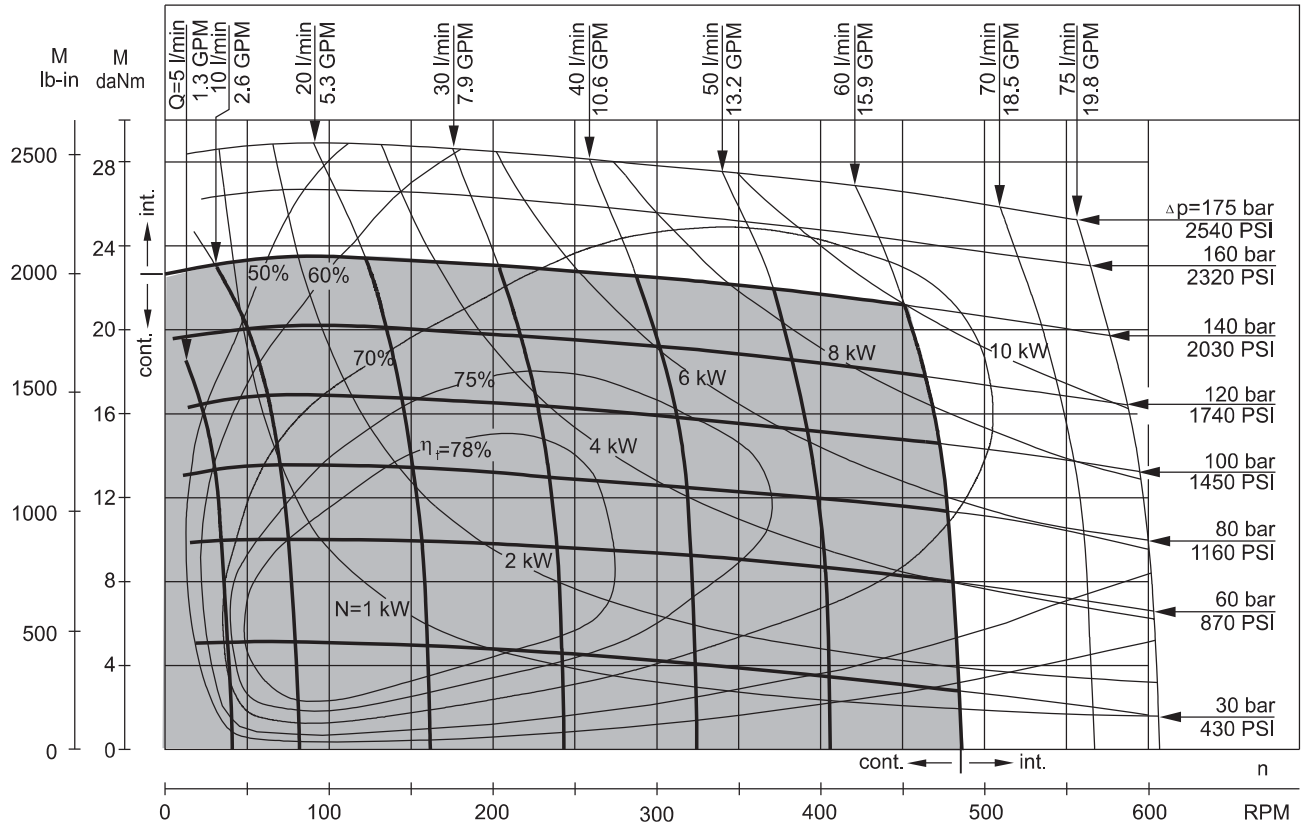
MLHP 100



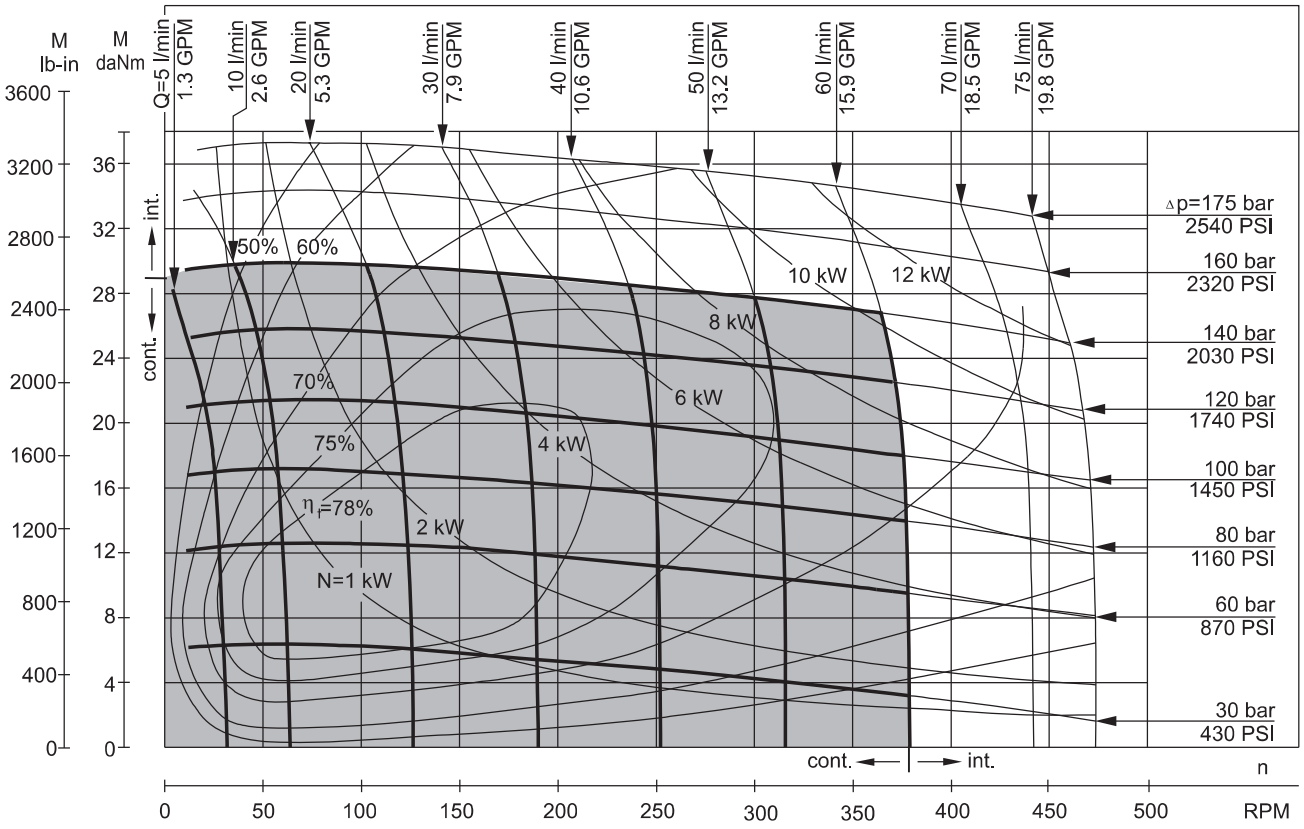
The function diagrams data is for average performance of randomly selected motors at back pressure 72.5÷145 PSI [5÷10 bar] and oil with viscosity of 150 SUS [32 mm²/s] at 122°F [50°C].

FUNCTION DIAGRAMS

MLHP 125



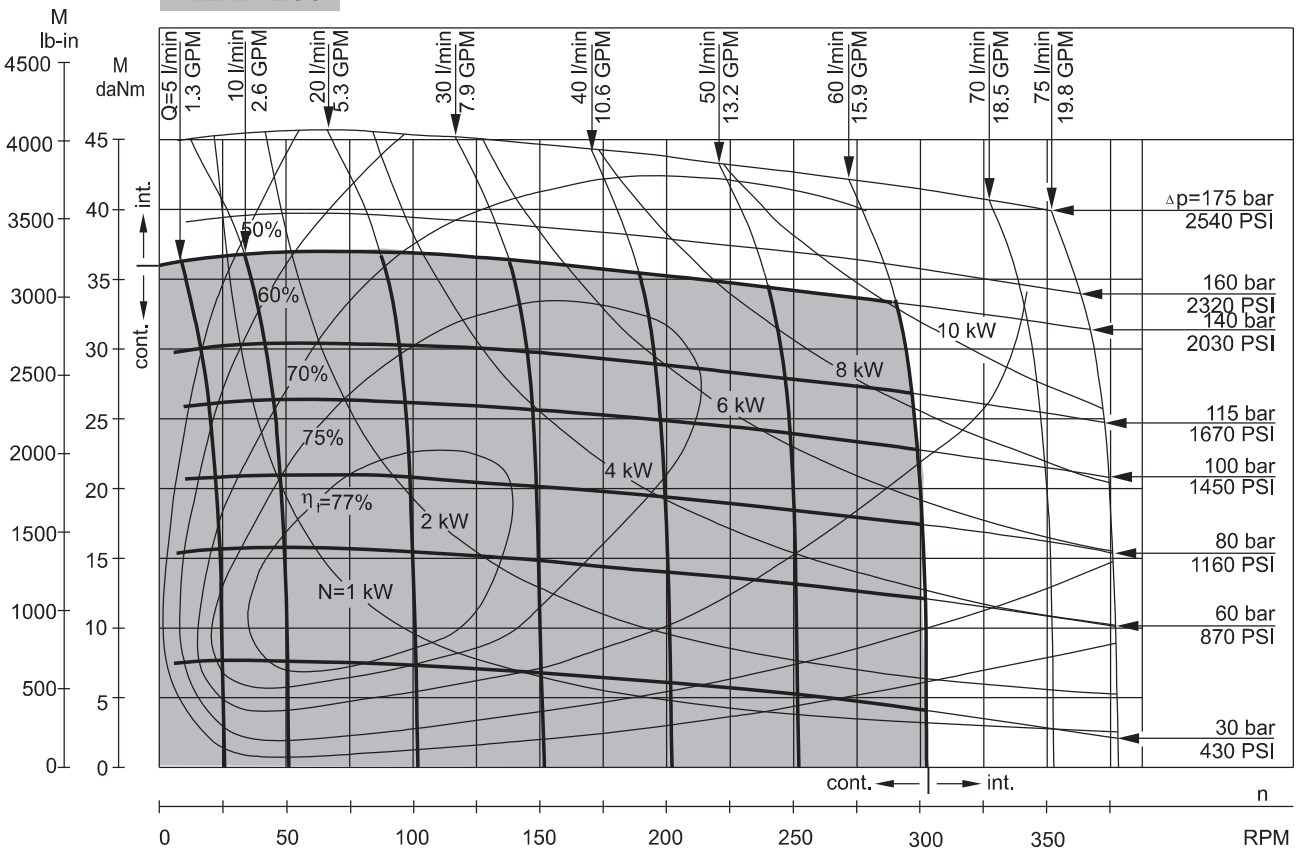
MLHP 160



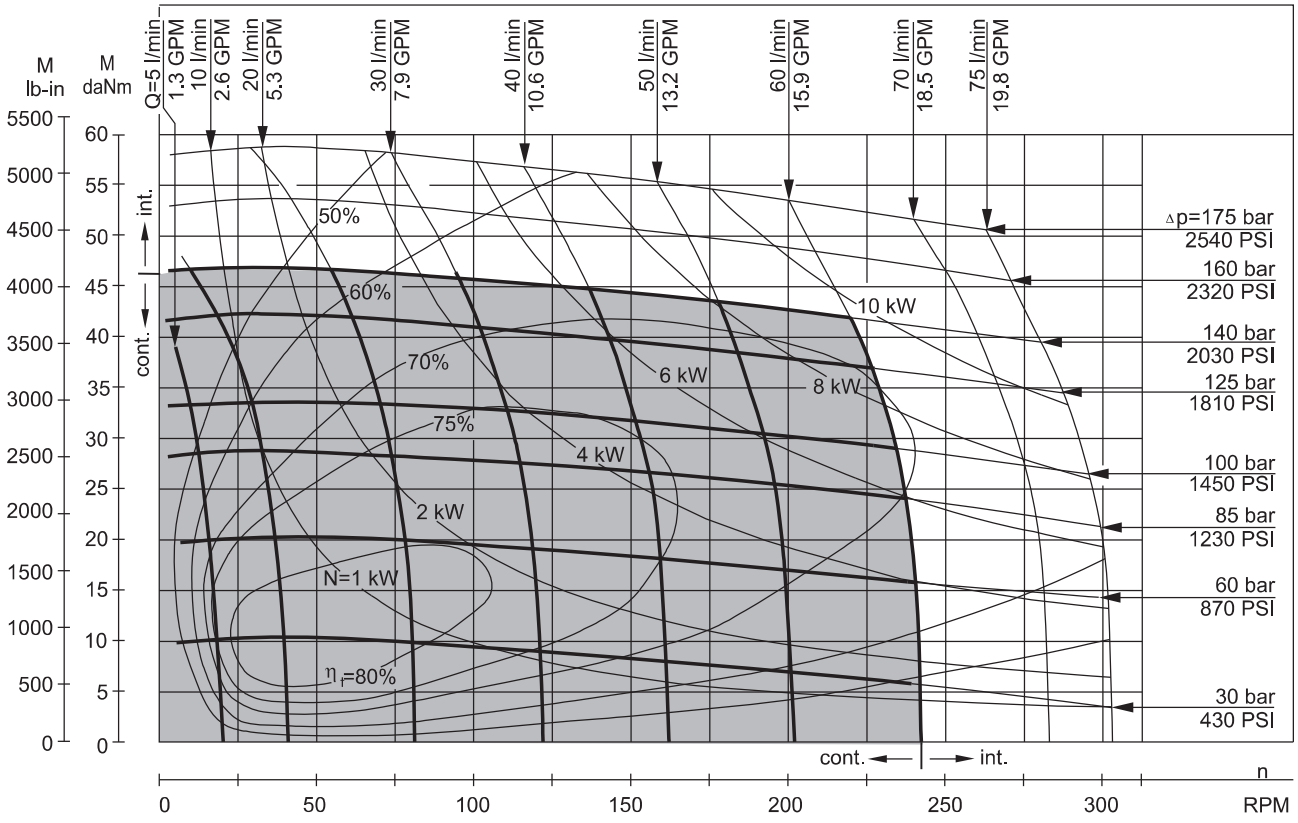
The function diagrams data is for average performance of randomly selected motors at back pressure 72.5÷145 PSI [5÷10 bar] and oil with viscosity of 150 SUS [32 mm²/s] at 122°F [50°C].

FUNCTION DIAGRAMS

MLHP 200



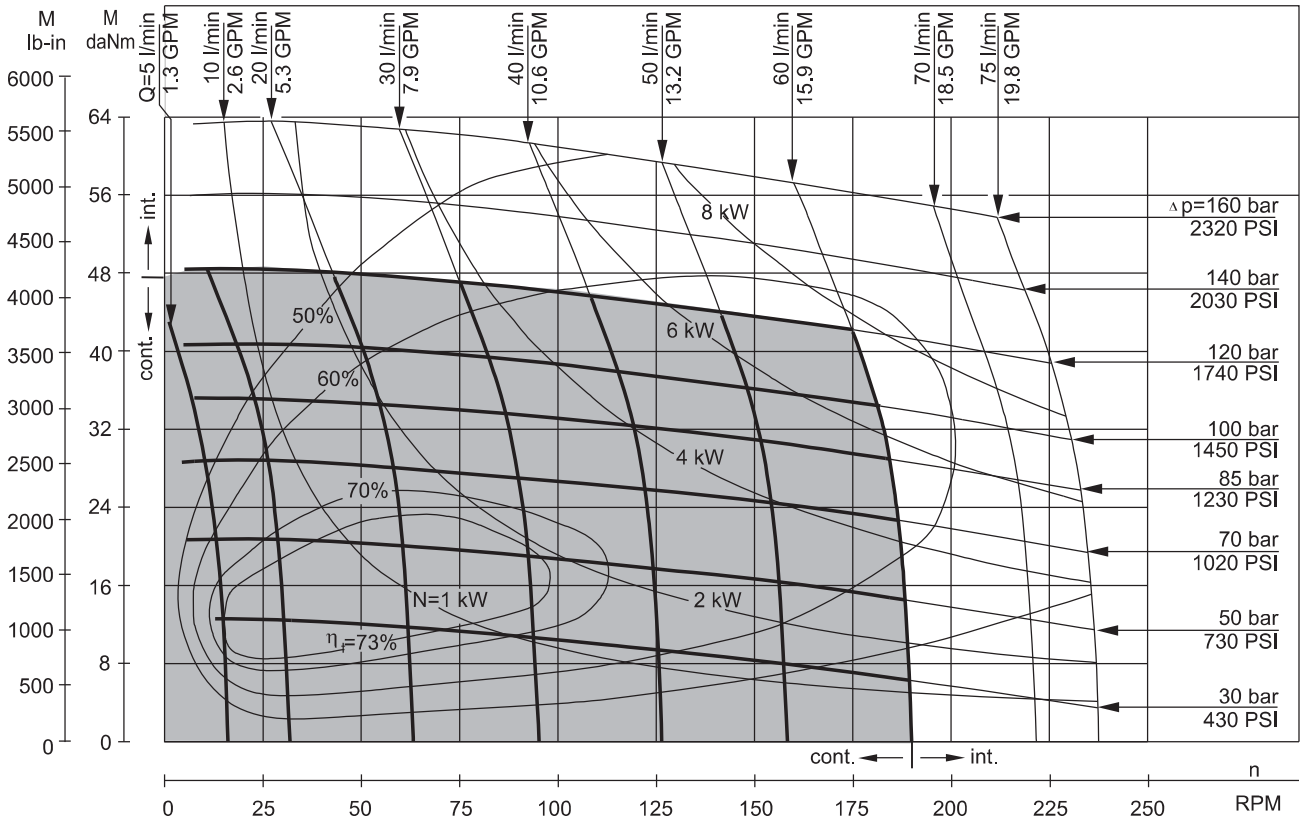
MLHP 250



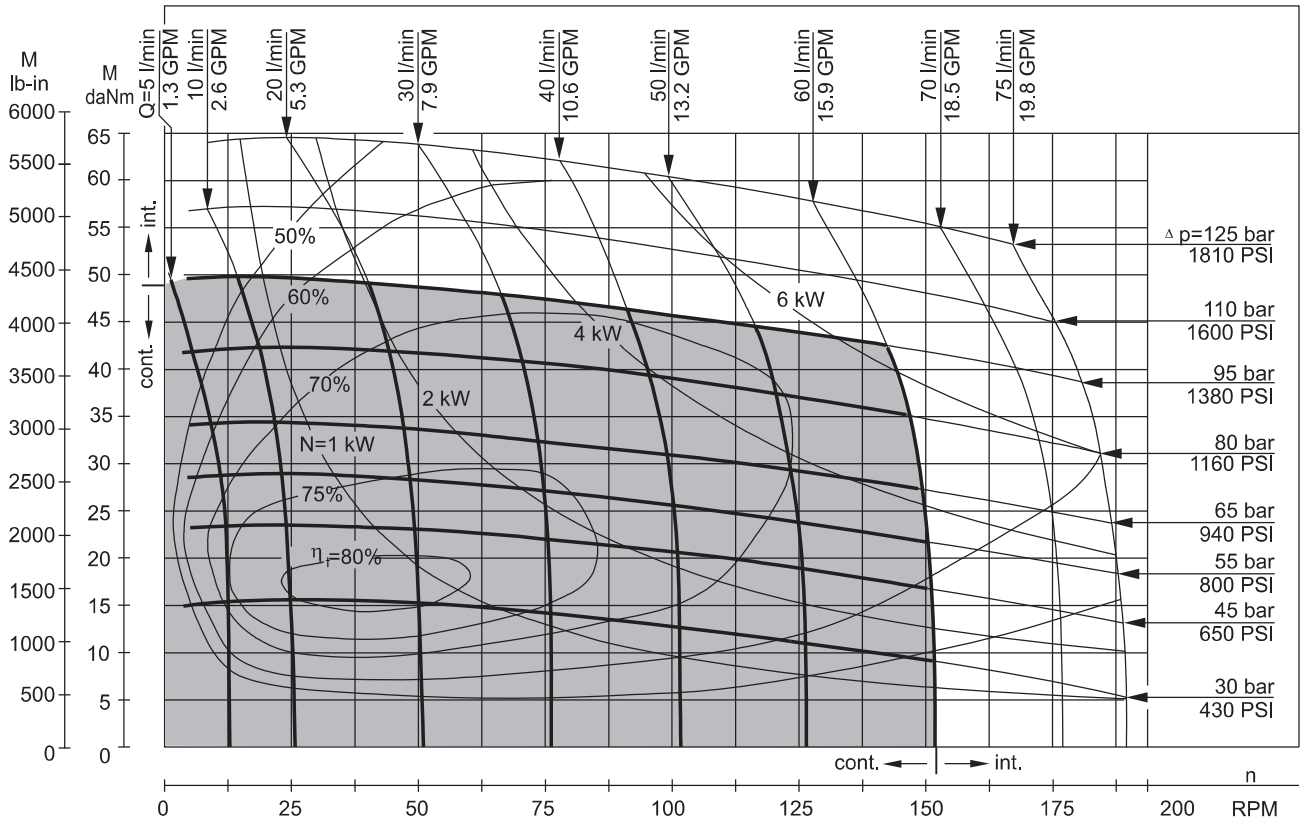
The function diagrams data is for average performance of randomly selected motors at back pressure 72.5÷145 PSI [5÷10 bar] and oil with viscosity of 150 SUS [32 mm²/s] at 122°F [50°C].

FUNCTION DIAGRAMS

MLHP 315



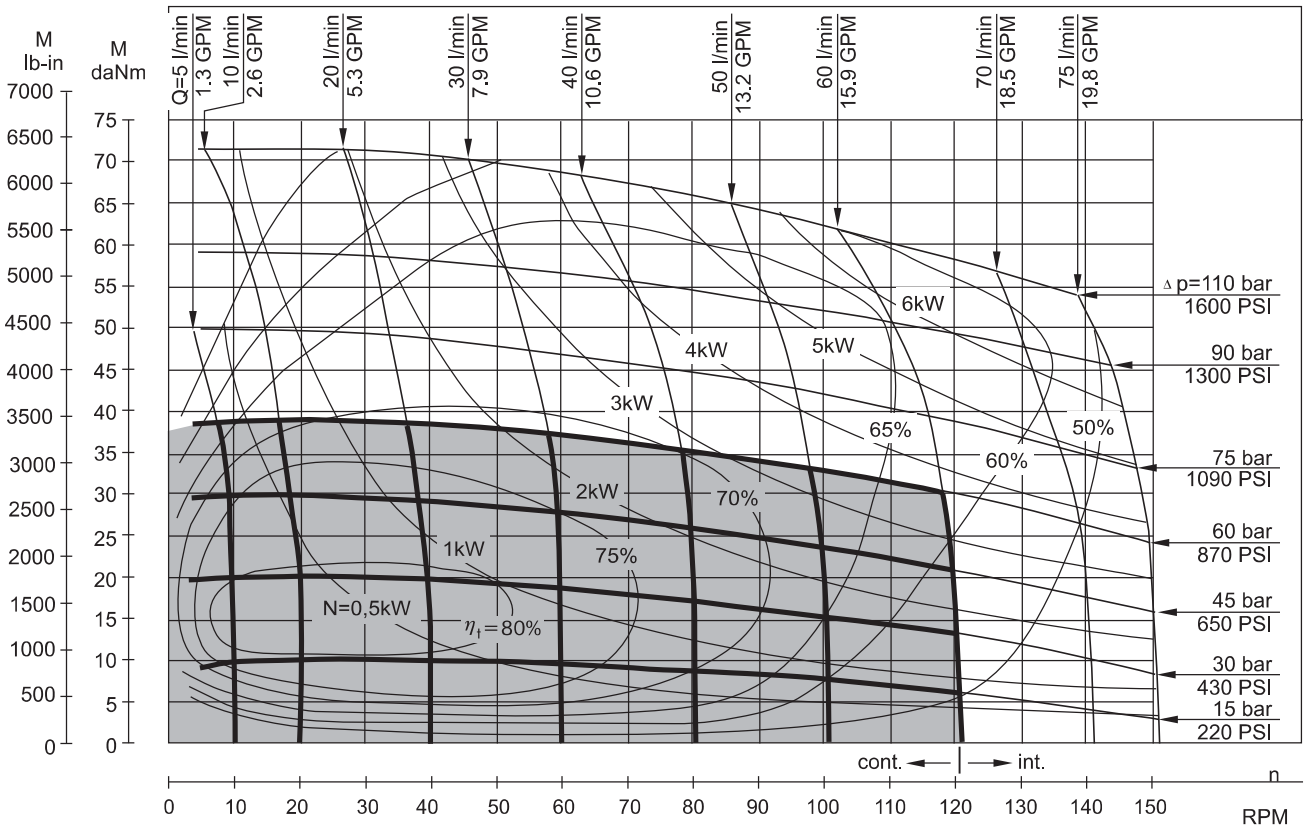
MLHP 400



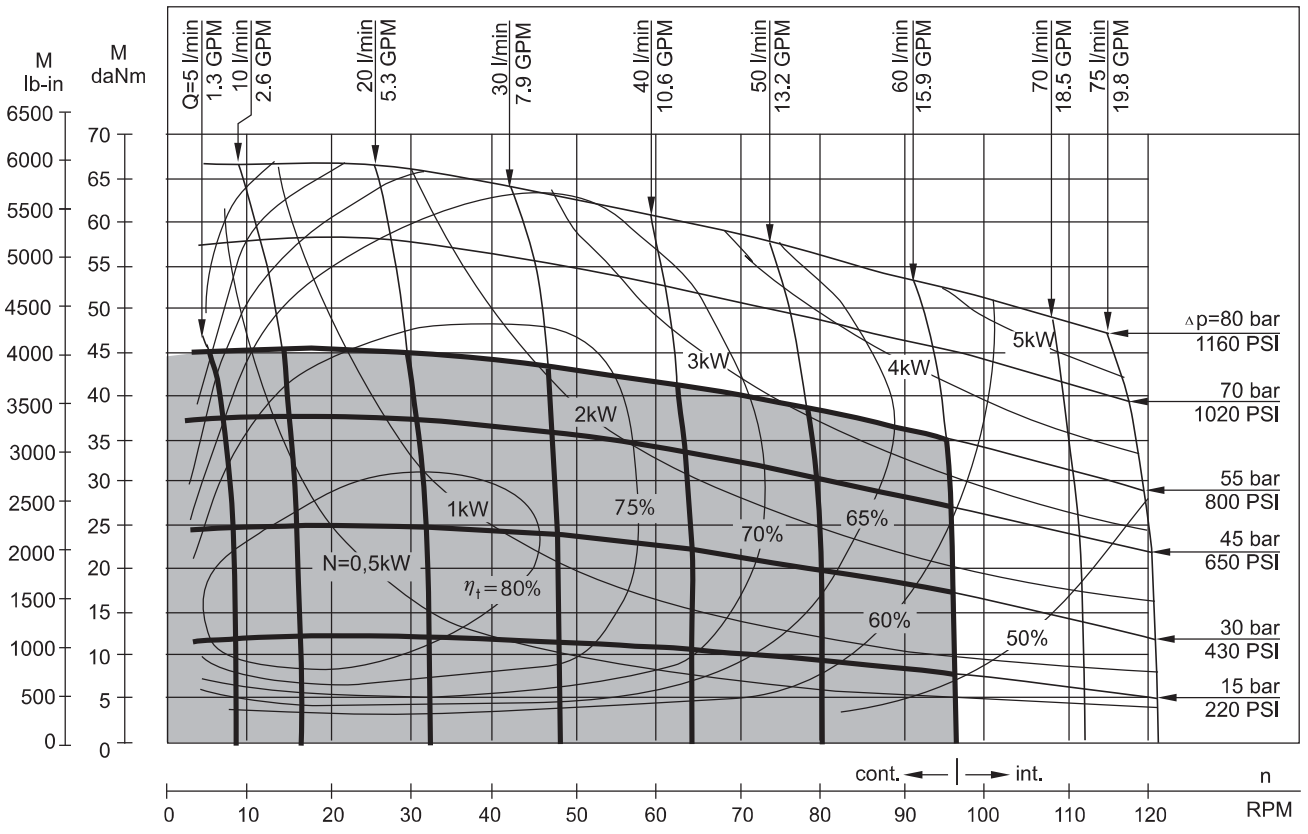
The function diagrams data is for average performance of randomly selected motors at back pressure 72.5÷145 PSI [5÷10 bar] and oil with viscosity of 150 SUS [32 mm²/s] at 122°F [50°C].

FUNCTION DIAGRAMS

MLHP 500



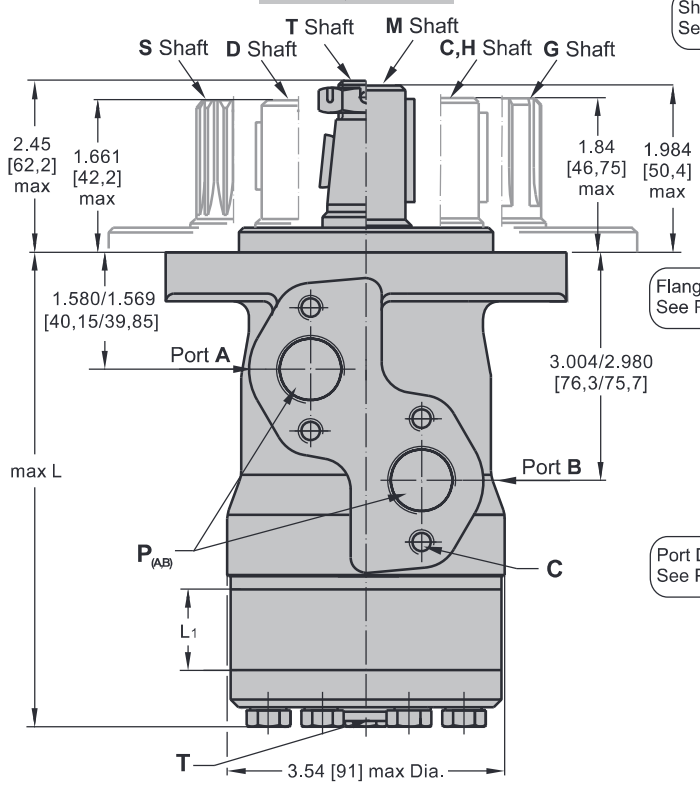
MLHP 630



The function diagrams data is for average performance of randomly selected motors at back pressure 72.5÷145 PSI [5÷10 bar] and oil with viscosity of 150 SUS [32 mm²/s] at 122°F [50°C].

DIMENSIONS AND MOUNTING DATA

MLHP, MLHPF

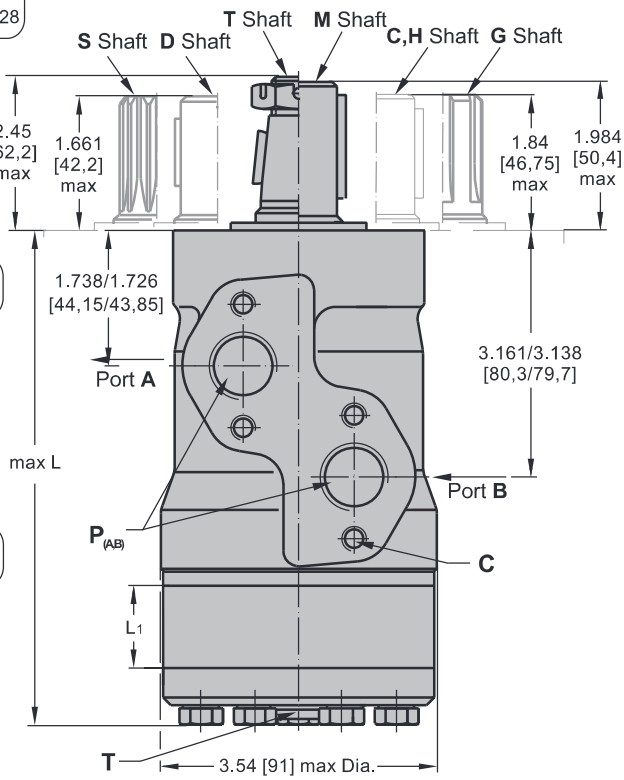


Shaft Dim. See Page 28

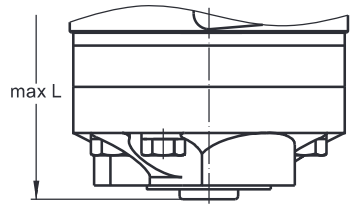
Flange Dim. See Page 26

Port Dim. See Page 26

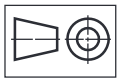
MLHPQ, MLHPM

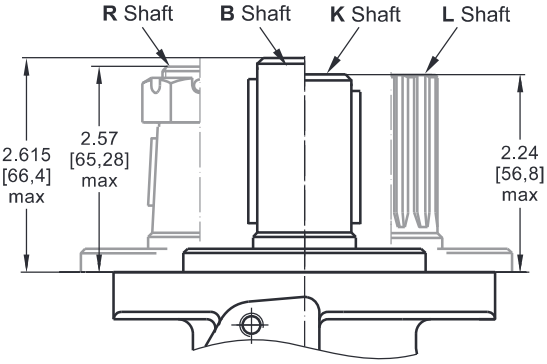


Version 6 7 8 9
Rear ports



in [mm]





	Versions			
	2 , 6	3 , 9	4 , 7	5 , 8
C	4xM8	4xM8	4x5/16-18 UNC	4x5/16-18 UNC
P(A,B)	2xG½	2xM22x1,5	2x7/8-14 UNF	2x½-14 NPTF
T	G¼	M14x1,5	7/16-20 UNF	7/16-20 UNF

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

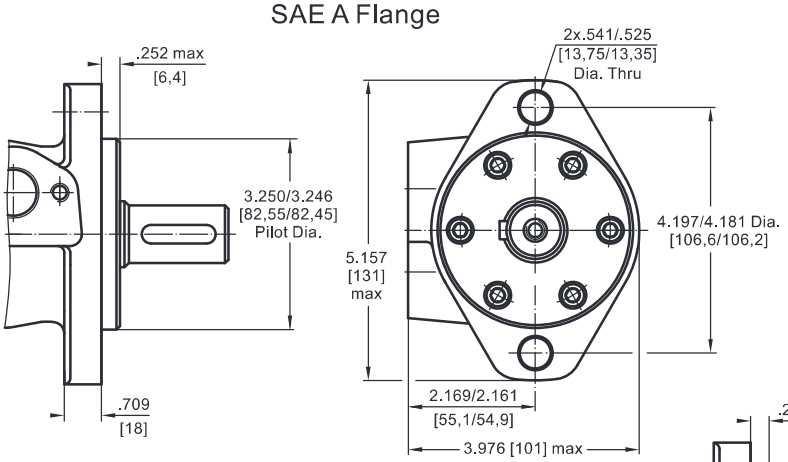
Reverse Rotation
Viewed from Shaft End
Port **A** Pressurized - **CCW**
Port **B** Pressurized - **CW**

Type	L max, in [mm]		Type	L max, in [mm]		L1, in [mm]
	Versions 2,3,4,5	*Versions 6,7,8,9		Versions 2,3,4,5	*Versions 6,7,8,9	
MLHP(F) 25	5.35 [136,0]	5.91 [150,0]	MLHPQ(M) 25	5.53 [140,5]	6.08 [154,5]	.21 [5,20]
MLHP(F) 32	5.39 [137,0]	5.96 [151,5]	MLHPQ(M) 32	5.57 [141,5]	6.12 [155,5]	.25 [6,30]
MLHP(F) 40	5.45 [138,5]	6.00 [152,5]	MLHPQ(M) 40	5.61 [142,5]	6.16 [156,5]	.29 [7,40]
MLHP(F) 50	5.41 [137,5]	5.96 [151,5]	MLHPQ(M) 50	5.59 [142,0]	6.14 [156,0]	.26 [6,67]
MLHP(F) 80	5.57 [141,5]	6.12 [155,5]	MLHPQ(M) 80	5.75 [146,0]	6.29 [160,0]	.42 [10,67]
MLHP(F) 100	5.67 [144,0]	6.24 [158,5]	MLHPQ(M) 100	5.85 [148,5]	6.39 [162,5]	.52 [13,33]
MLHP(F) 125	5.81 [147,5]	6.36 [161,5]	MLHPQ(M) 125	5.98 [152,0]	6.54 [166,0]	.66 [16,67]
MLHP(F) 160	5.98 [152,0]	6.56 [166,5]	MLHPQ(M) 160	6.16 [156,5]	6.71 [170,5]	.84 [21,33]
MLHP(F) 200	6.20 [157,5]	6.75 [171,5]	MLHPQ(M) 200	6.38 [162,0]	6.93 [176,0]	1.05 [26,67]
MLHP(F) 250	6.46 [164,0]	7.03 [178,5]	MLHPQ(M) 250	6.63 [168,5]	7.19 [182,5]	1.31 [33,33]
MLHP(F) 315	6.83 [173,5]	7.38 [187,5]	MLHPQ(M) 315	7.01 [178,0]	7.56 [192,0]	1.68 [42,67]
MLHP(F) 400	7.24 [184,0]	7.81 [198,5]	MLHPQ(M) 400	7.42 [188,5]	7.97 [202,5]	2.10 [53,33]
MLHP(F) 500	7.78 [197,5]	8.33 [211,5]	MLHPQ(M) 500	7.95 [202,0]	8.50 [216,0]	2.62 [66,63]
MLHP(F) 630	8.47 [215,0]	9.02 [229,0]	MLHPQ(M) 630	8.62 [219,0]	9.17 [233,0]	3.31 [84,00]

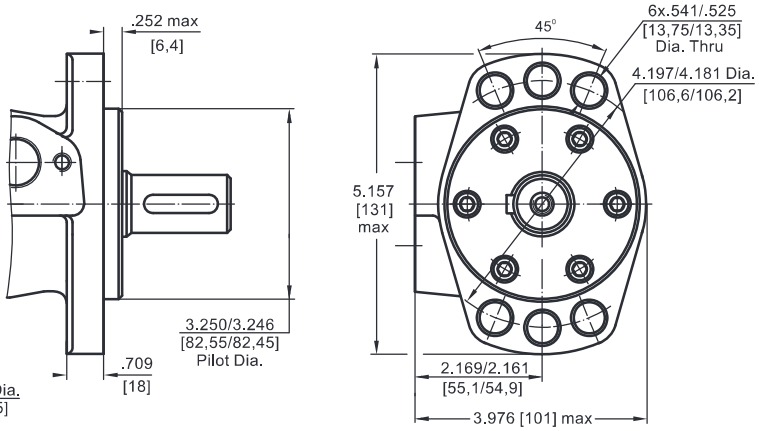
* - For Rear Ported Motors.

MOUNTING

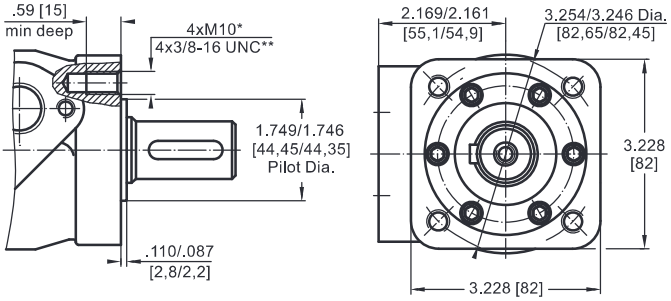
SAE A Flange



F - Magneto Flange



M and Q - Square Flange

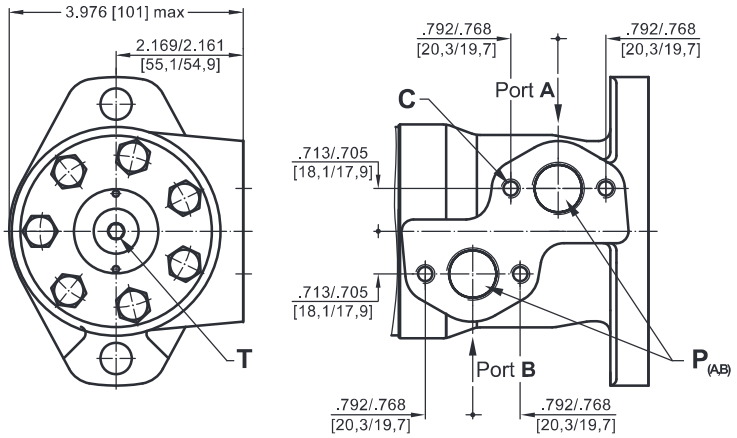


* For **M** Flange
** For **Q** Flange

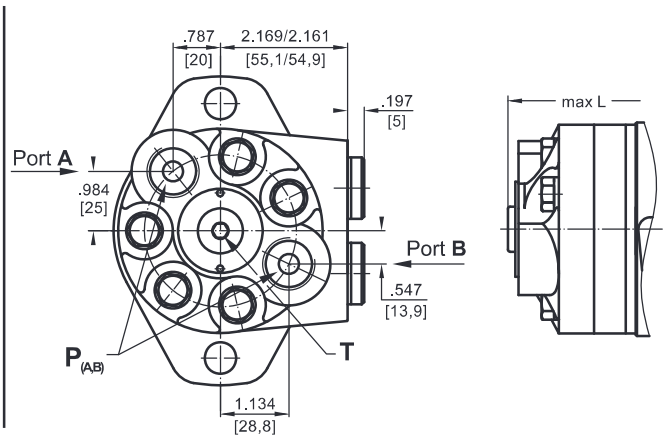
in [mm]

PORTS

Side Ports
Version 2 3 4 5



Rear Ports
Version 6 7 8 9

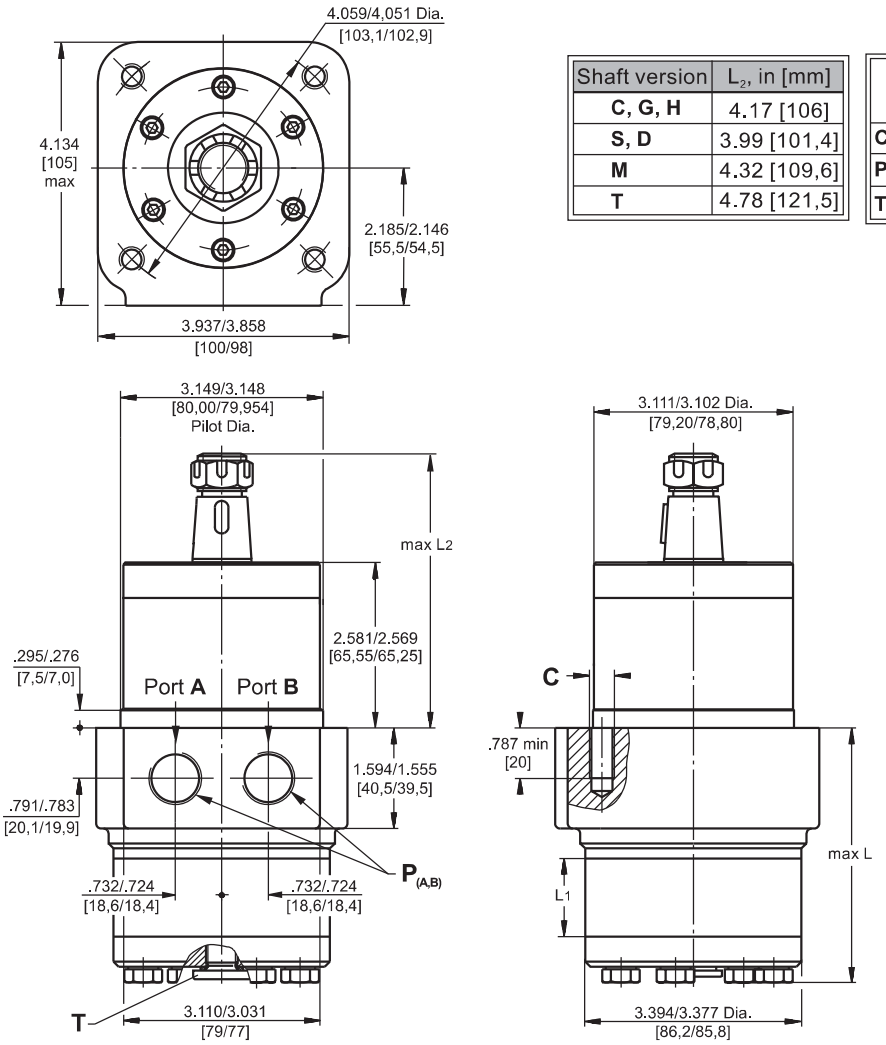


Standard Rotation
Viewed from Shaft End
Port **A** Pressurized **- CW**
Port **B** Pressurized - **CCW**

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

	Versions			
	2 , 6	3 , 9	4 , 7	5 , 8
C	4xM8	4xM8	4x5/16-18 UNC	4x5/16-18 UNC
P(A,B)	2xG½	2xM22x1,5	2x7/8-14 UNF	2x½-14 NPTF
T	G¼	M14x1,5	7/16-20 UNF	7/16-20 UNF

DIMENSIONS AND MOUNTING DATA - MLHPW (WHEEL MOTOR)



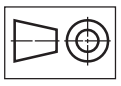
Shaft version	L_2, in [mm]
C, G, H	4.17 [106]
S, D	3.99 [101,4]
M	4.32 [109,6]
T	4.78 [121,5]

	Versions			
	2	3	4	5
C	4xM10	4xM10	3/8-16 UNC	3/8-16 UNC
$P_{(A,B)}$	2xG1/2	2xM22x1,5	2x7/8-14 UNF	2x1/2-14 NPTF
T	G1/4	M14x1,5	7/16-20 UNF	7/16-20 UNF

Type	L, in [mm]	L_1, in [mm]
MLHPW(N) 25	3.01 [76,5]	.21 [5,20]
MLHPW(N) 32	3.07 [78,0]	.25 [6,30]
MLHPW(N) 40	3.13 [79,5]	.29 [7,40]
MLHPW(N) 50	3.07 [78,0]	.26 [6,67]
MLHPW(N) 80	3.23 [82,0]	.42 [10,67]
MLHPW(N) 100	3.35 [85,0]	.52 [13,33]
MLHPW(N) 125	3.47 [88,0]	.66 [16,67]
MLHPW(N) 160	3.66 [93,0]	.84 [21,33]
MLHPW(N) 200	3.86 [98,0]	1.05 [26,67]
MLHPW(N) 250	4.13 [105,0]	1.31 [33,33]
MLHPW(N) 315	4.51 [114,5]	1.68 [42,67]
MLHPW(N) 400	4.92 [125,0]	2.10 [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**



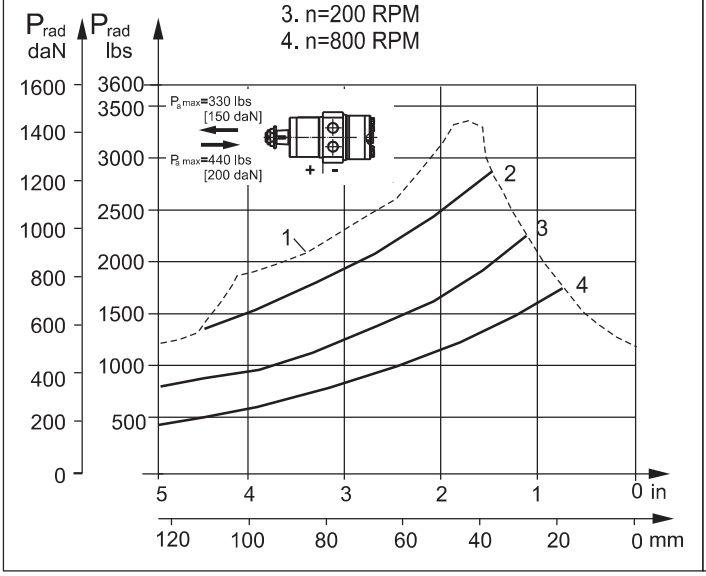
in [mm]

PERMISSIBLE SHAFT LOADS

MLHPWN

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

1. Max. radial shaft load
2. n= 50 RPM
3. n=200 RPM
4. n=800 RPM



MLHPW

1. Max. radial shaft load
2. n=300 RPM
3. n=500 RPM
4. n=800 RPM

