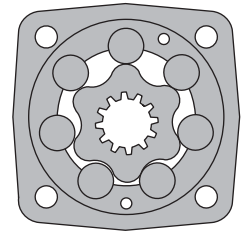
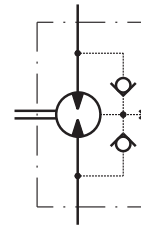


HYDRAULIC MOTORS MLHSEM



APPLICATION

- » Sawmill machines
- » Woodworking machines
- » Metal working machines
- » Agricultural machines
- » Road building machines
- » Mining machinery
- » Food industries
- » Special vehicles etc.



CONTENTS

Specification data	5
Dimensions and mounting	6
Permissible shaft loads	6
Order code	7

OPTIONS

- » Model - Disc valve, roll-gerotor
- » Wheel mount
- » Side ports
- » Shaft - tapered
- » SAE and Metric ports
- » Other special features

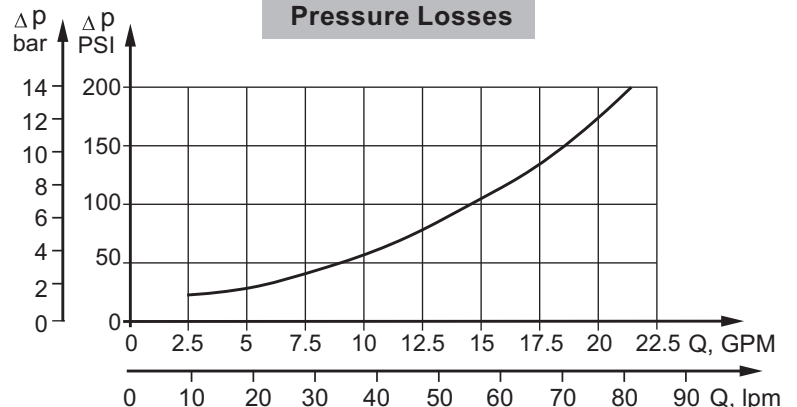
GENERAL

Max. Displacement, in ³ /rev [cm ³ /rev]	397 [24.2]
Max. Speed, [RPM]	560
Max. Torque, lb-in [daNm]	cont.: 90 [7965] int: 110 [9735]
Max. Output, HP [kW]	24 [32.2]
Max. Pressure Drop, PSI [bar]	cont.: 200 [2900] int: 225 [3270]
Max. Oil Flow, GPM [lpm]	90 [24]
Min. Speed, [RPM]	5
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range, °F [°C]	-40÷140 [-40÷284]
Optimal Viscosity range, SUS [mm²/s]	20÷75 [98÷347]
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]
2030 [140]	98 [20]	.396 [1,5]
	164 [35]	.264 [1]
3045 [210]	98 [20]	.793 [3]
	164 [35]	.528 [2]

Pressure Losses



SPECIFICATION DATA

Type	MLHSEM 160	MLHSEM 200	MLHSEM 250	MLHSEM 315	MLHSEM 400	
Displacement, in³/rev [cm³/rev]	9.74 [159,7]	12.2 [200]	15.3 [250]	314,9 [19,2]	24.2 [397]	
Max. Speed, [RPM]	cont.	470	375	300	240	185
	Int.*	560	450	360	285	225
Max. Torque lb-in [daNm]	cont.	4070 [46]	5010 [56,6]	6270 [70,8]	7965 [90,0]	7965 [90,0]
	Int.*	4560 [51,5]	5710 [64,5]	7135 [80,6]	8500 [96,0]	8585 [97,0]
	peak**	4560 [51,5]	5755 [65]	7135 [80,6]	9560 [108]	9735 [110]
Max. Output HP [kW]	cont.	24.9 [18,6]	24.3 [18,1]	24.1 [18,0]	22.8 [17,0]	14.7 [11,0]
	int.*	32.2 [24,0]	32.2 [24,0]	31.9 [23,8]	27.1 [20,2]	16.1 [12]
Max. Pressure Drop PSI [bar]	cont.	2900 [200]	2900 [200]	2900 [200]	2900 [200]	2320 [160]
	Int.*	3270 [225]	3270 [225]	3270 [225]	3190 [220]	2540 [175]
	peak**	3270 [225]	3270 [225]	3270 [225]	3270 [225]	2900 [200]
Max. Oil Flow GPM [lpm]	cont.	20 [75]	20 [75]	20 [75]	20 [75]	20 [75]
	Int.*	24 [90]	24 [90]	24 [90]	24 [90]	24 [90]
Max. Inlet Pressure PSI [bar]	cont.	3045 [210]	3045 [210]	3045 [210]	3045 [210]	3045 [210]
	Int.*	3625 [250]	3625 [250]	3625 [250]	3625 [250]	3625 [250]
	peak**	4350 [300]	4350 [300]	4350 [300]	4350 [300]	4350 [300]
Max. Return Pressure with Drain Line 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**	3045 [210]	3045 [210]	3045 [210]	3045 [210]	3045 [210]
Max. Starting Pressure with Unloaded Shaft, PSI [bar]	145 [10]	145 [10]	145 [10]	145 [10]	145 [10]	
Min. Starting Torque lb-in [daNm]	3270 [36,9]	4090 [46,2]	5135 [58,0]	6530 [73,8]	6370 [72,0]	
Min. Speed***, [RPM]	6	6	6	5	5	

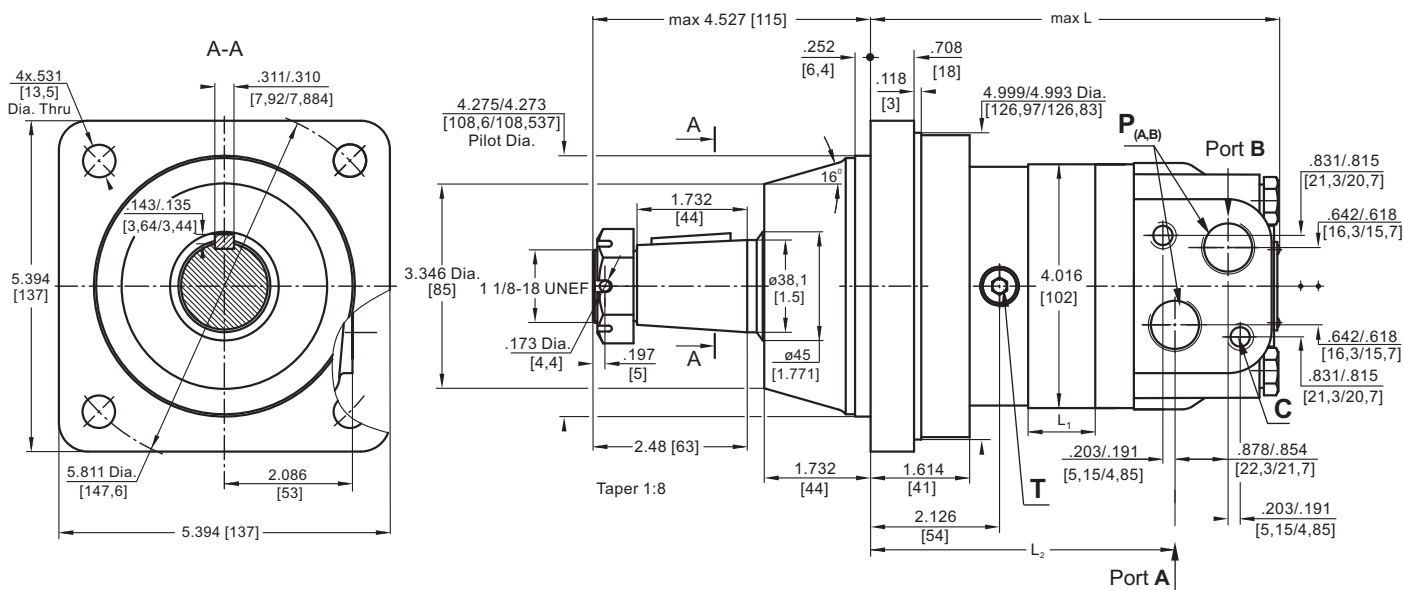
* Intermittent operation: the permissible values may occur for max. 10% of every minute.

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

*** For speeds lower than given, consult factory or your regional manager.

1. Intermittent speed and intermittent pressure 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 122°F [50°C].
5. Recommended maximum system operating temperature is 180°F [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.

DIMENSIONS AND MOUNTING DATA



	Versions	
	2	4
C	2xM10	2x3/8-16UNC
P_(A,B)	2xG1/2	2x7/8-14UNF
T	G1/4	7/16-20UNF

Type	L, in [mm]	L ₂ , in [mm]	L ₁ , in [mm]
MLHSEM 160	6.71 [170,5]	5.09 [129,3]	1.09 [27,8]
MLHSEM 200	6.99 [177,5]	5.37 [136,3]	1.37 [34,8]
MLHSEM 250	7.32 [186,0]	5.71 [145,0]	1.71 [43,5]
MLHSEM 315	7.78 [197,5]	6.19 [157,3]	2.16 [54,8]
MLHSEM 400	8.35 [212,0]	6.73 [171,0]	2.73 [69,4]

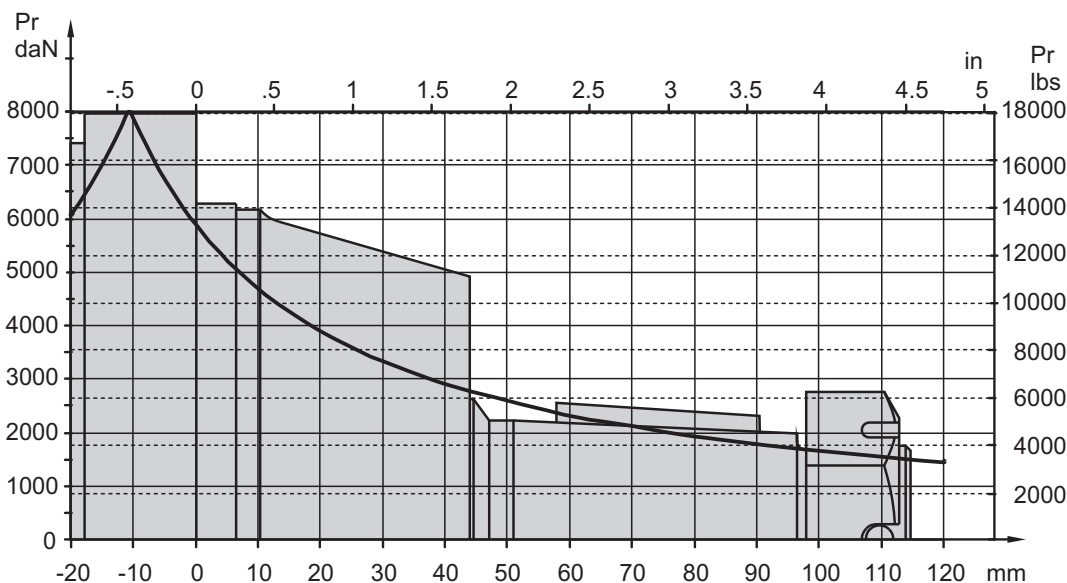
Standard Rotation
 Viewed from Shaft End
 Port A Pressurized - **CW**
 Port B Pressurized - **CCW**

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



PERMISSIBLE SHAFT LOADS

The output shaft runs in tapered bearings that permit high axial and radial forces. Curve shows max. radial shaft load at bearing life of 2000 hours at 100 RPM.



ORDER CODE

	1	2	3	4	5
M L H S E M					

Pos.1 - Displacement code

160	- 9.74 in ³ /rev [159,7 cm ³ /rev]
200	- 12.20 in ³ /rev [200,0 cm ³ /rev]
250	- 15.30 in ³ /rev [250,0 cm ³ /rev]
315	- 19.20 in ³ /rev [314,9 cm ³ /rev]
400	- 24.20 in ³ /rev [397,0 cm ³ /rev]

Pos.2 - Shaft Extensions

T - 1½"[38,1] Tapered, Parallel key 5/16"x5/16"x1¼" BS46

Pos.3 - Port Size/Type [standard manifold to each]

2	- side ports, 2xG1/2, G1/4, BSP thread, ISO 228
4	- side ports, 2x7/8-14 UNF, O-ring, 7/16-20 UNF

Pos.4 - Special Features [see page 48]

Pos.5 - Design Series

omit - Factory specified

The hydraulic motors are mangano phosphatized as standard.