

MH Hydraulic Orbit Motor



PERFORMANCE DATA

Type		MH 200	MH 250	MH 315	MH 400	MH 500
Geometric displacement (cc/rev)		203,2	255,9	316,1	406,4	489,2
Max speed (rpm)	Cont.	366	290	236	183	155
	Int.	439	348	282	220	184
Max Torque (Nm)	Cont.	510	621	740	850	830
	Int.	579	702	827	990	1040
	Peak	651	790	980	1092	1170
Max output (kW)	Cont.	16	16	14	12,5	11
	Int.	18,5	18,5	15,5	15	14
Max pressuredrop (bar)	Cont.	175	175	175	155	125
	Int.	200	200	200	190	160
	Peak	225	225	225	210	180
Max flow (L/min)	Cont	75	75	75	75	75
	Int.	90	90	90	90	90
Weigth (kg)		10,5	11	11,5	12,3	13

Type		Max inlet pressure	Max return pressure drain line
MH 200-500 (bar)	Cont.	200	175
	Int.	225	200
	Peak	250	225

* Continuous pressure: Max. value of operating motor continuously.

* Intermittent pressure: Max. value of operating motor in 6 seconds per minute.

* Peak pressure: Max. value of operating motor in 0.6 second per minute.

* Technical data BMH with 35mm cylindrical, 1 1/4 in splined and 35mm tapered shaft.

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Performance data

MH 200 [203.2cm³/rev.]

Flow (L/min)	Pressure (MPa)					
	3.5	7	10.5	14	17.5	20
5	98	194	284			
10	101	204	301	391	482	
20	99	201	304	402	509	576
30	97	197	300	402	510	579
40	90	190	292	399	507	578
50	82	183	284	392	500	571
60	73	174	274	384	493	563
70	63	163	264	374	481	554
75	59	157	259	366	475	547
80	53	150	253	358	466	538
90	39	140	241	348	456	526

MH 250 [255.9cm³/rev.]

Flow (L/min)	Pressure (MPa)						
	3.5	7	9	12	14.5	17.5	20
5	121	246	318	398			
10	130	258	331	425	515	595	
20	130	258	332	432	520	621	702
30	122	251	327	429	520	621	700
40	115	240	323	422	513	616	698
50	105	232	314	411	505	606	687
60	94	220	302	401	496	596	676
70	81.4	209	288	389	484	582	666
75	72	203	280	381	475	574	659
80	66	194	273	371	467	566	651
90	49	178	256	355	453	552	634

MH 315 [316.1cm³/rev.]

Flow (L/min)	Pressure (MPa)						
	3.5	7.5	10	13.5	15.5	17.5	20
5	155	325					
10	163	342	454	556			
20	169	349	469	582	664	733	809
30	165	344	470	580	669	740	824
40	154	337	465	577	663	737	827
50	141	325	455	568	656	728	824
60	121	312	440	555	643	715	812
70	103	298	425	541	631	703	800
75	94	287	417	529	623	696	792
80	82	277	406	518	611	688	784
90	62	256	386	496	593	669	767

MH 400 [406.4cm³/rev.]

Flow (L/min)	Pressure (MPa)					
	3.5	6	10.5	12.5	15.5	19
5	196	348	516			
10	205	363	546	702	859	
20	209	366	543	708	874	988
30	201	357	542	706	864	984
40	195	346	532	701	858	973
50	173	332	518	687	848	958
60	154	319	501	668	833	944
70	138	305	480	649	814	925
75	128	294	466	637	802	911
80	113	277	451	621	786	899
90	90	256	433	595	767	881

Torque (N·m) 593
Speed (rpm) 248

cont.
int.



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Performance data

MH 500 [489.2cm³/rev.]

	Pressure (MPa)					
	2.5	5	8.5	10	12.5	16
5	165	317	516			
	11	11	8			
10	178	335	555	669	791	969
	20	19	17	15	13	9
20	177	331	559	673	799	988
	42	42	41	38	36	29
30	172	320	553	663	792	983
	64	63	61	57	53	47
40	163	309	541	654	783	971
	85	85	83	79	75	67
50	146	296	523	635	768	954
	103	103	103	97	93	85
60	121	275	502	614	747	934
	124	124	123	117	113	103
70	97	256	482	597	729	917
	148	148	148	140	134	122
Max.cont.	79	240	469	582	714	902
	155	155	155	152	144	130
80	60	226	453	570	701	884
	166	166	166	159	153	139
Max.int.	34	201	421	550	673	869
	184	183	182	177	166	155

cont.
 int.

Torque (N·m) 673
 Speed (rpm) 166

CHARACTERISTIC FEATURES

MH series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency, and long life.

Characteristic features:

*Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.

*Shaft seal can bear high pressure of back and the motor can be used in parallel or series.

*Special design in the driver-linker and prolong operating life.

*Special design for distribution system can meet the requirement of low noise of unit.

*Compact volume and easy installation.



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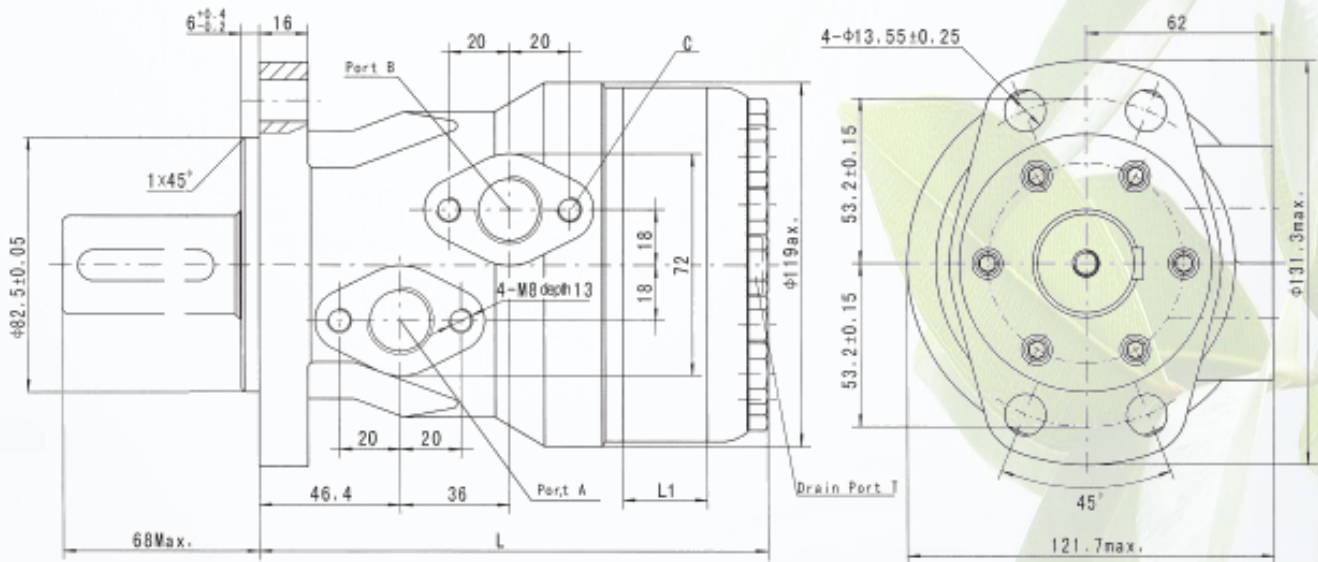
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OVERVIEW DRAWING



P(A,B) - G1/2" (depth 15mm)

C—4 x M8 (depth 13mm)

T—G1/4" (depth 12mm)

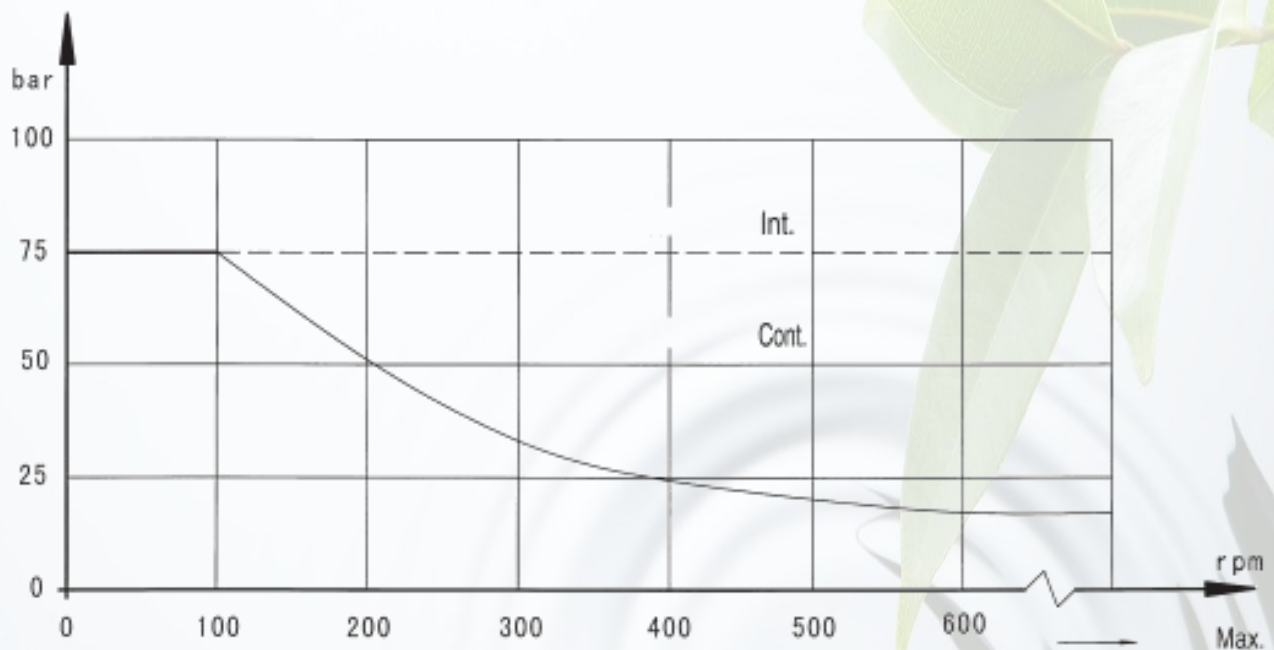
Model	L	L1
MH 200	168	27
MH 250	175	34
MH 315	183	42
MH 400	195	54
MH 500	206	65

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PERMISSIBLE SHAFT SEAL PRESSURE

In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.



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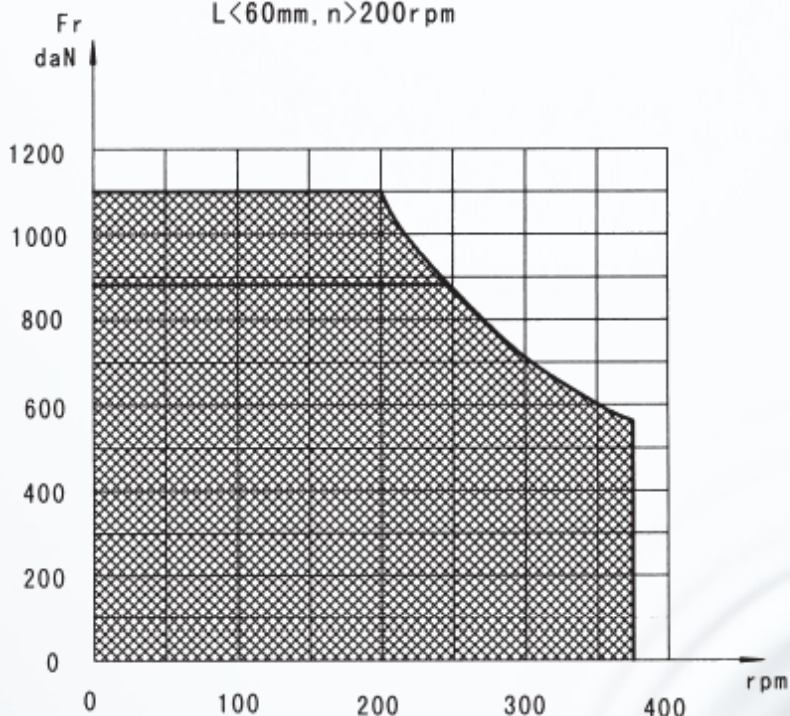


AXIAL AND RADIAL FORCES

Status of the shaft's radial force

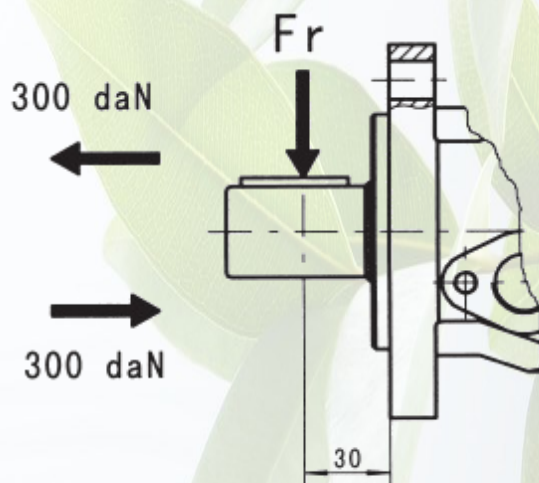
$$F_r = \frac{1100}{n} \times \frac{25000}{103.5+L} \text{ daN}$$

$L < 60\text{mm}, n > 200\text{rpm}$



— shaft $\phi 1''$ ($\phi 25.4\text{mm}$) and shaft SAE 6B

The drawing is the Possible load when $L=30\text{mm}$.



F_r =Radial Force (daN)
 L =Distance (mm)
 n =Speed (rpm)

OIL FLOW IN DRAIN LINE

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

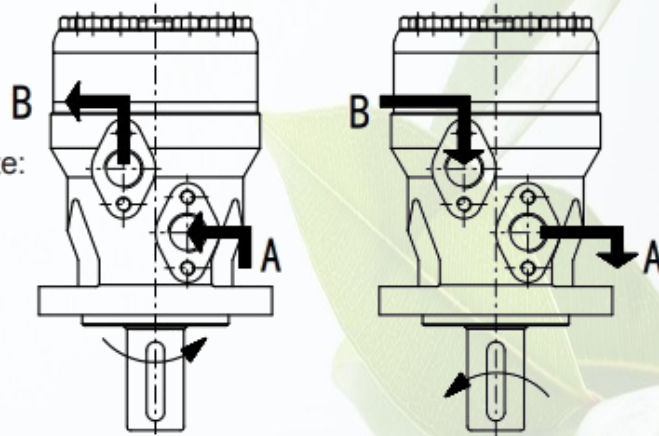
Pressure drop (MPa)	Viscosity (mm ² /s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

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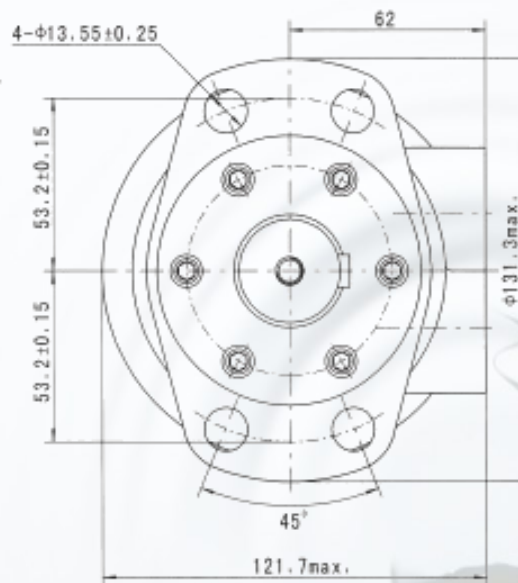


STANDARD DIRECTION OF SHAFT ROTATION

When facing shaft end of motor, shaft to rotate:
 Clockwise when port "A" is pressurized.
 Counter-clockwise when port "B" is pressurized.

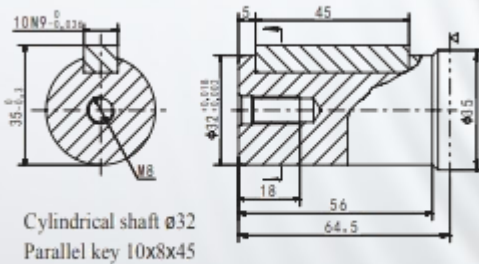


MOUNTING

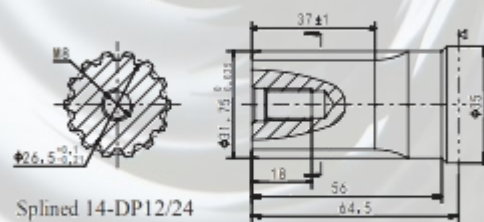


SHAFT EXTENSIONS

SHAFT - C



SHAFT - SH



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