

MSW Hydraulic Orbit Motor



Technical data for MSW*										
Type		MSW 80	MSW 100	MSW 125	MSW 160	MSW 200	MSW 250	MSW 315	MSW 400	MSW 475
Displacement (cm ³ /rev.)		80.6	100.8	125	154	194	243	311	394	475
Max. speed (RPM)	cont.	800	748	600	470	375	300	240	185	155
	int	988	900	720	560	450	360	280	225	185
Max. Torque (Nm)	cont.	225	290	365	485	586	708	880	880	910
	int	305	390	480	590	705	860	1000	980	990
Max. Output (kW)	cont.	16	18	18	18.1	18.1	18	17	11	9
	int	20	22	23	25	24	23.8	20.2	12	11
Max. Pressure Drop (Bar)	cont.	205	205	205	210	210	200	200	160	140
	int	275	275	275	260	250	250	240	190	150
	Peak	295	295	295	280	270	270	260	210	175
Max Oil Flow (L/min)	cont.	65	75	75	75	75	75	75	75	75
	int	80	90	90	90	90	90	90	90	90
Max. Inlet Pressure (Bar)	cont.	250	250	250	250	250	250	250	250	250
	int	300	300	300	300	300	300	300	300	300
Weight (kg)		9.8	10	10.3	10.7	11.1	11.6	12.3	13.2	14.3

*All engines are reinforced

*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

MS series motor adapt the advanced Geroler gear set designed with disc distribution flow and high pressure.

The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.



CHARACTERISTICS FEATURES

- Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- The output shaft adapts in tapered roller bearings that permit high axial and radial forces. The case can offer capacities of high pressure and high torque in the wide of applications.
- Advanced design in disc distribution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.
- The new series motor is suitable for vehicles with greater loads and pressure drop.



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PERFORMANCE DATA

MSW80 [80.6cm³/rev.]

Pressure (MPa)

	Max.cont. Max.int.						
	3.5	7	10.5	14	17.5	20.5	22.5
15	35	80	120	158	195	228	249
	180	174	168	164	158	151	143
30	35	80	120	158	195	232	260
	362	352	346	338	330	322	310
40	35	79	119	155	193	227	250
	487	480	468	457	446	438	425
50	30	77	117	153	192	224	248
	612	603	592	581	572	558	542
60	28	77	117	153	192	224	243
	735	726	718	703	687	673	646
Max.cont. 65	26	75	116	151	188	217	236
	794	786	773	760	744	722	706
Max.int. 80	24	72	109	142	176	206	227
	981	968	955	925	893	870	832

MSW100 [100.8cm³/rev.]

Pressure (MPa)

	Max.cont. Max.int.						
	3.5	7	10.5	14	17.5	20.5	22.5
15	48	95	150	200	250	282	310
	146	144	139	135	130	120	105
30	45	94	146	198	250	290	317
	291	289	278	274	269	258	242
40	43	89	142	196	248	288	316
	387	384	374	359	350	335	320
50	40	88	135	194	247	286	315
	486	483	473	462	450	430	420
60	37	88	132	185	244	283	312
	588	584	574	562	550	538	520
Max.cont. 75	35	80	130	180	240	279	310
	740	735	720	705	696	676	653
Max.int. 90	30	75	124	170	236	271	303
	850	840	810	787	770	750	747

MSW125 [125cm³/rev.]

Pressure (MPa)

	Max.cont. Max.int.						
	3.5	7	10.5	14	17.5	20.5	22.5
15	55	120	176	245	309	345	375
	115	113	110	104	98	90	84
30	55	120	175	250	315	364	404
	231	228	223	214	202	188	172
40	53	118	178	250	315	364	403
	312	309	290	289	278	262	235
50	50	115	176	248	315	362	397
	391	386	378	365	352	339	308
60	45	113	171	241	308	358	397
	469	461	450	437	425	400	372
Max.cont. 75	45	110	167	240	306	352	389
	588	574	560	544	526	505	481
Max.int. 90	40	105	162	237	301	343	378
	710	696	680	661	646	628	610

MSW160 [154cm³/rev.]

Pressure (MPa)

	Max.cont. Max.int.						
	3.5	7	10.5	14	17.5	21	22.5
15	70	142	215	298	372	435	476
	93	91	89	85	80	76	58
30	73	151	225	312	382	456	492
	189	187	181	176	170	162	153
40	75	152	228	314	383	454	488
	252	250	246	239	234	228	212
50	70	148	225	305	372	445	480
	313	310	306	298	293	285	272
60	68	143	218	296	370	442	480
	378	376	370	362	353	346	332
Max.cont. 75	62	140	211	291	365	439	475
	475	469	461	450	441	432	414
Max.int. 90	59	131	202	286	357	425	460
	567	561	554	543	532	520	509

TORQUE(N·m) 301
SPEED (r/min) 646

□ cont.
■ int.

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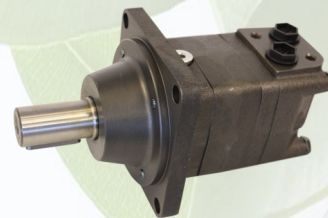
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PERFORMANCE DATA (continued)

MSW200 [194cm³/rev.]

Pressure (MPa)		Max.cont.		Max.int.		
3.5	7	10.5	14	17.5	21	22.5

Flow (L/min)	15	87 74	179 73	273 71	371 68	471 64	562 60	610 48
	30	91 150	190 148	288 143	386 140	489 134	572 128	618 119
40	94 198	193 195	296 192	394 188	498 183	584 178	645 167	
50	90 248	191 246	292 241	389 236	493 230	580 223	634 212	
60	85 300	185 295	279 288	382 281	483 273	575 263	622 251	
Max.cont. 75	78 374	176 370	271 364	370 360	472 352	561 340	610 331	
Max.int. 90	68 443	163 440	265 435	361 428	456 424	545 413	599 400	

MSW250 [243cm³/rev.]

Pressure (MPa)		Max.cont.		Max.int.		
3.5	7	10.5	14	17.5	20	22.5

Flow (L/min)	15	110 59	231 58	351 56	462 53	585 50	681 46	778 35
	30	116 119	236 117	359 114	475 108	597 102	700 92	790 80
40	118 162	241 159	363 156	480 150	599 143	706 134	796 121	
50	111 203	234 201	352 197	472 191	591 182	693 173	788 158	
60	106 244	224 242	345 237	462 230	582 220	685 208	772 194	
Max.cont. 75	101 303	214 299	340 294	454 285	570 272	670 260	760 244	
Max.int. 90	93 363	209 359	335 354	447 348	559 340	657 328	749 303	

MSW315 [311cm³/rev.]

Pressure (MPa)		Max.cont.		Max.int.		
3.5	7	10.5	14	17.5	20	22.5

Flow (L/min)	15	148 48	304 47	456 45	613 43	762 41	879 39	978 27
	30	155 95	314 93	465 91	635 89	778 86	884 82	988 67
40	160 127	321 125	479 121	650 117	796 115	906 109	997 91	
50	155 159	314 157	465 153	638 149	780 145	886 142	988 128	
60	151 187	306 185	453 181	620 176	765 169	886 157	976 143	
Max.cont. 75	146 238	300 236	445 232	613 227	755 224	875 220	966 196	
Max.int. 90	135 286	284 283	436 278	601 272	740 265	863 257	952 232	

MSW400 [394cm³/rev.]

Pressure (MPa)		Max.cont.		Max.int.	
3.5	7	10.5	14	16	17.5

Flow (L/min)	15	186 37	379 36	578 35	779 33	896 31	986 29
	30	190 75	388 73	590 71	791 68	905 65	991 61
40	195 99	394 97	596 95	797 93	912 90	998 85	
50	191 125	388 123	587 118	785 114	904 109	983 102	
60	186 149	388 146	587 142	785 137	904 131	983 122	
Max.cont. 75	181 187	372 183	576 177	770 171	891 164	973 153	
Max.int. 90	176 226	367 221	571 214	766 208	883 199	965 183	

TORQUE (N·m) 766
SPEED (rpm) 208

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PERFORMANCE DATA (continued)

MSW475 [475cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

		3.5	7	10.5	14	15
Flow (L/min)	15	218 30	439 29	661 28	892 27	995 25
	30	223 61	450 60	676 58	910 56	1002 53
	40	228 82	461 80	689 77	927 74	1017 68
	50	224 103	456 101	682 97	920 92	1008 86
	60	220 123	451 121	677 118	913 112	998 105
	Max.cont. 75	212 155	443 153	664 147	901 140	980 132
Max.int. 90	196 186	421 184	643 178	877 170	959 157	

cont.
 int.

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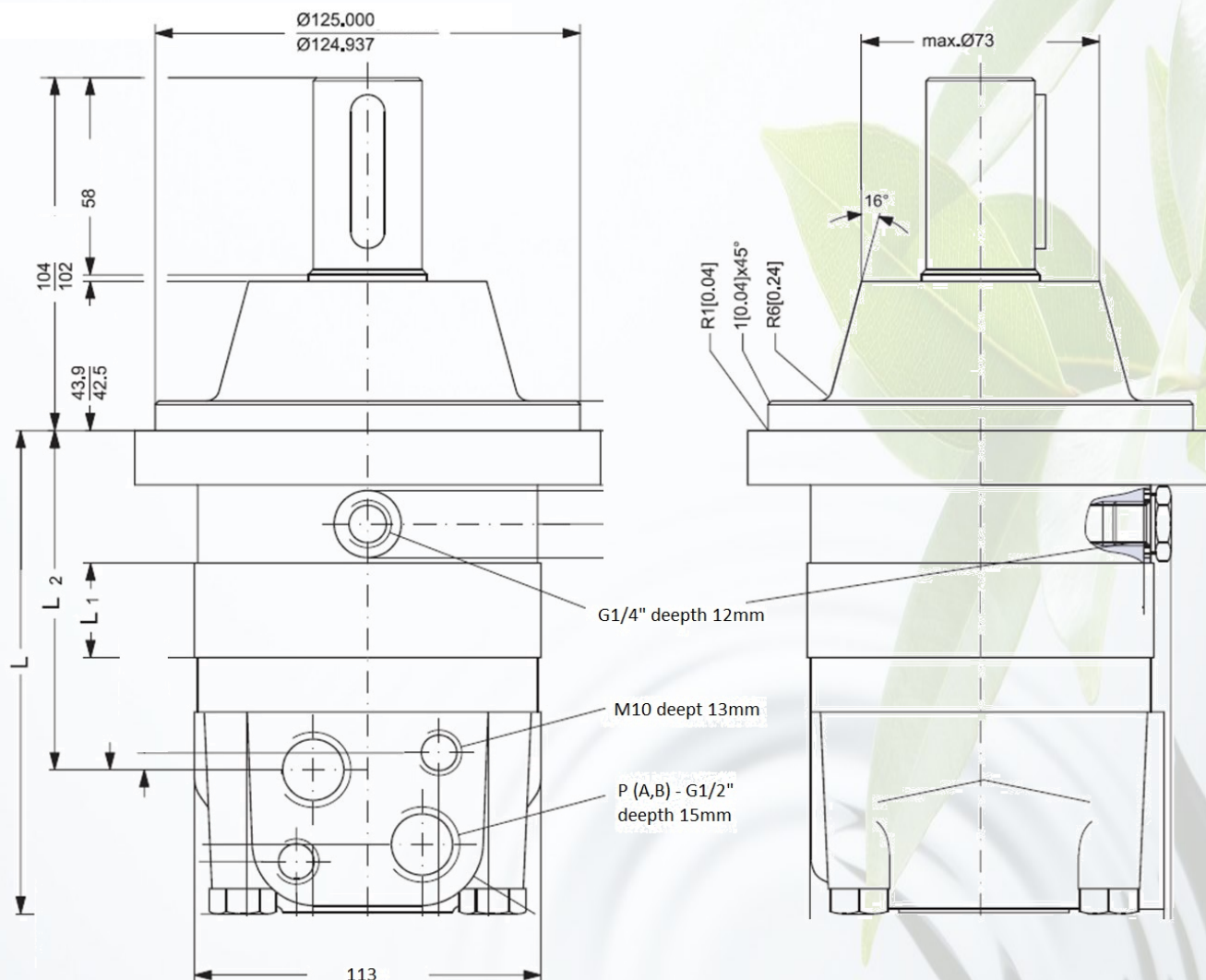
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OVERVIEW DRAWING



Model	MSW 80	MSW 100	MSW 125	MSW 160	MSW 200	MSW 250	MSW 315	MSW 400	MSW 475
L	132,5mm	136,5mm	141,5mm	143,5mm	150,5mm	158,5mm	170,5mm	185,5mm	199,5mm
L1	16mm	20mm	25mm	27mm	34mm	42mm	54mm	69mm	83mm
L2	89mm	93mm	98mm	100mm	107mm	115mm	127mm	142mm	156mm

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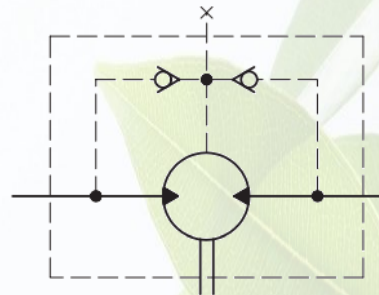
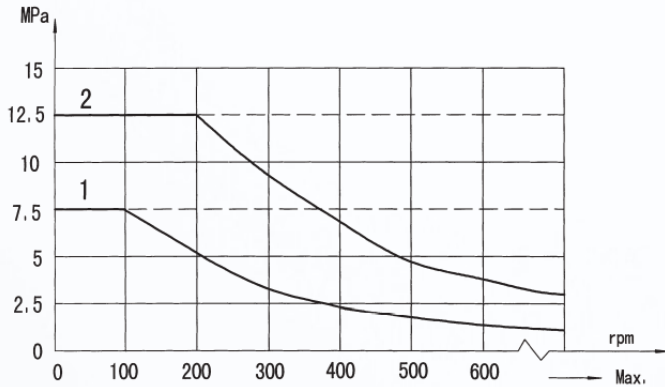
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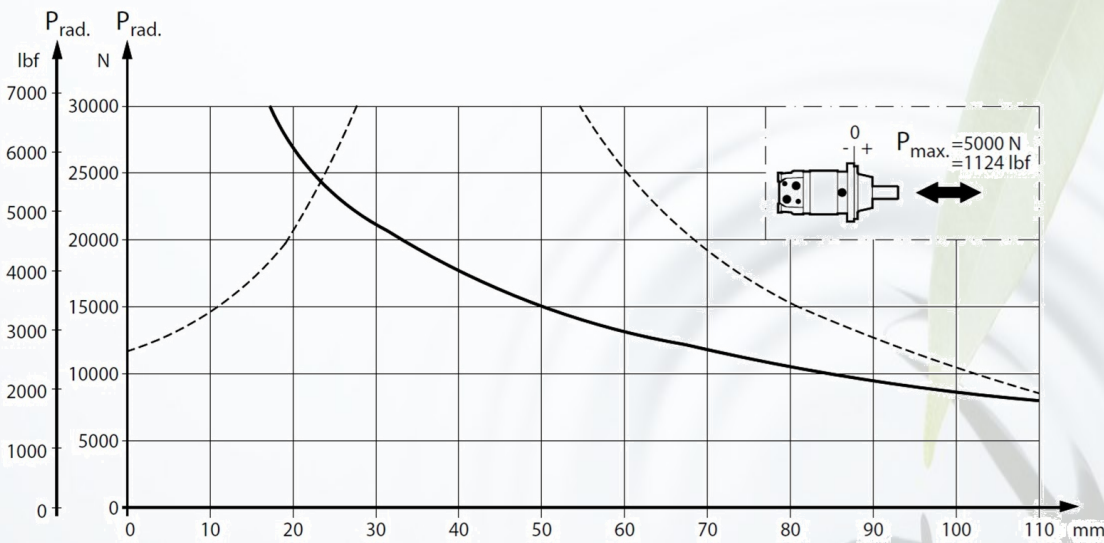


PERMISSIBLE SHAFT SEAL PRESSURE



Note: 1. Chart for standard shaft seal;
2. Chart for high pressure shaft seal.

AXIAL AND RADIAL FORCES



OIL FLOW IN DRAIN LINE

The table shows the max. oil flow in the drain line at the re-turn pressure less than 5-10 Bar.

Pressure drop (Bar)	Viscosity (mm ² /s)	Oil flow in the drain line (L/min.)
140	20	1.5
	35	1
210	20	3
	35	2



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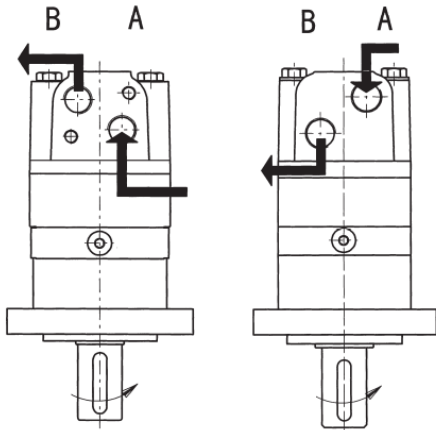
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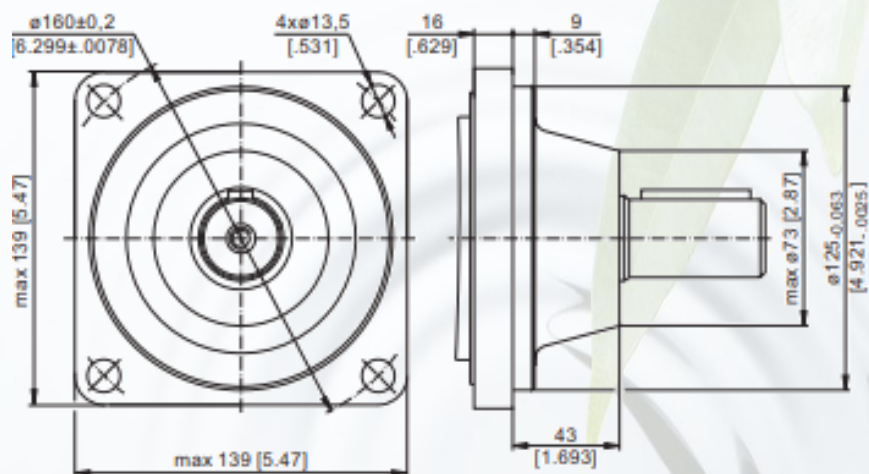
STANDARD DIRECTION OF SHAFT ROTATION



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

MOUNTING

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SHAFT EXTENSIONS

