



BMV 系列液压马达 BMV SERIES HYDRAULIC MOTOR

BMV 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.

Characteristic features:

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

Main Specificaion

Type		BMV 315	BMV 400	BMV 500	BMV 630	BMV 800	BMV 1000
Geometric displacement (cm ³ /rev.)		333	419	518	666	801	990
Max. speed (rpm)	cont.	510	500	400	320	250	200
	int.	630	600	480	380	300	240
Max. torque (N•m)	cont.	920	1180	1460	1660	1880	2015
	int.	1110	1410	1760	1940	2110	2280
	peak	1290	1640	2050	2210	2470	2400
Max. output (kW)	cont.	38.0	47.0	47.0	40.0	33.0	28.6
	int.	46.0	56.0	56.0	56.0	44.0	40.0
Max. pressure drop (MPa)	cont.	20	20	20	18	16	14
	int.	24	24	24	21	18	16
	peak	28	28	28	24	21	18
Max. flow (L/min)	cont.	160	200	200	200	200	200
	int.	200	240	240	240	240	240
Weight (kg)		31.8	32.6	33.5	34.9	36.5	38.6

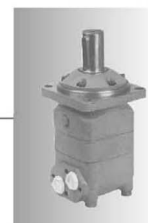
- * Continuous pressure: Max. value of operating motor continuously.
- * Intermittent pressure: Max. value of operating motor in 6 seconds per minute.
- * Peak pressure: Max. value of operating motor in 0.6 second per minute.



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Performance Data

		BMV 315 [333cm³/rev.]							
		Pressure (MPa)							
		3.5	7	10	14	18	20	24	
Flow (L/min)	10	140	294	440	610	742	845	1000	
	20	26	24	23	22	20	17	14	
	50	153	314	466	636	787	895	1070	
	75	149	312	465	654	815	935	1112	
	100	145	144	142	140	137	133	127	
Max.cont.	125	143	304	458	642	816	940	1119	
	150	220	218	215	211	207	202	195	
	175	136	297	452	636	810	936	1108	
	200	294	292	290	287	283	278	270	
	240	123	286	442	626	799	921	1093	
Max.int.	125	368	366	364	361	357	352	345	
	150	114	275	435	615	788	906	1078	
	175	445	443	441	437	430	422	410	
	200	107	268	430	608	780	895	1070	
	240	475	473	470	466	460	452	439	
Max.int.	125	82	249	412	593	758	871	1047	
	150	596	594	590	584	576	565	544	
	175								
	200								
	240								

		BMV 400 [419cm³/rev.]							
		Pressure (MPa)							
		3.5	7	10	14	18	20	24	
Flow (L/min)	10	183	385	568	776	968	1101	1292	
	20	20	20	19	18	17	16	14	
	50	196	398	590	815	1010	1152	1346	
	75	44	44	43	42	40	39	37	
	100	200	402	603	842	1040	1186	1430	
Max.cont.	125	114	113	113	112	110	108	103	
	150	195	394	596	838	1043	1188	1432	
	175	175	173	170	166	163	1579	152	
	200	172	385	593	827	1036	1184	1425	
	240	236	235	233	231	227	223	215	
Max.int.	125	167	374	583	816	1021	1177	1413	
	150	296	294	291	288	282	275	268	
	175	158	361	559	801	1008	1165	1390	
	200	355	354	352	349	344	335	324	
	240	143	346	553	784	989	1145	1377	
Max.int.	125	416	414	411	407	403	396	388	
	150	118	331	536	770	969	1128	1356	
	175	475	473	469	463	455	448	439	
	200	82	301	506	740	943	1104	1332	
	240	571	569	565	548	539	530	520	

		BMV 500 [518cm³/rev.]							
		Pressure (MPa)							
		3.5	7	10	14	18	20	24	
Flow (L/min)	10	242	468	696	959	1190	1353	1607	
	20	17	17	16	16	15	13	11	
	50	245	501	738	1003	1232	1394	1658	
	75	36	35	35	34	33	32	29	
	100	240	500	758	1025	1270	1449	1743	
Max.cont.	125	93	92	91	90	88	85	80	
	150	233	498	752	1030	1288	1475	1766	
	175	140	139	137	135	132	127	120	
	200	228	491	748	1026	1289	1472	1760	
	240	189	187	185	182	178	173	166	
Max.int.	125	220	483	742	1014	1260	1460	1745	
	150	237	236	234	231	227	223	216	
	175	201	465	723	1008	1250	1429	1736	
	200	287	286	284	281	276	270	260	
	240	182	446	711	997	1238	1406	1715	
Max.int.	125	335	334	332	329	325	320	310	
	150	161	423	676	974	1218	1385	1697	
	175	384	383	381	378	374	366	354	
	200	120	378	622	921	1172	1340	1650	
	240	461	459	457	454	450	444	432	

		BMV 630 [666cm³/rev.]							
		Pressure (MPa)							
		3.5	6	9	12	15	18	21	
Flow (L/min)	10	280	522	812	1100	1268	1549	1784	
	20	14	13	13	12	12	11	10	
	50	288	552	839	1101	1315	1607	1864	
	75	28	28	27	27	26	24	22	
	100	289	555	868	1137	1364	1682	1956	
Max.cont.	125	72	72	71	69	68	66	62	
	150	270	548	863	1120	1352	1680	1964	
	175	109	108	106	104	102	99	94	
	200	264	538	856	1093	1350	1674	1965	
	240	251	516	837	1071	1336	1659	1950	
Max.int.	125	184	183	181	179	177	173	168	
	150	240	495	817	1063	1330	1650	1928	
	175	221	220	219	217	215	212	205	
	200	210	485	796	1052	1300	1636	1908	
	240	259	258	257	254	250	246	241	
Max.int.	125	182	469	751	1018	1280	1611	1883	
	150	297	297	295	293	290	284	273	
	175	130	416	712	978	1237	1563	1835	
	200	358	357	355	351	346	340	332	
	240								

Torque (N·m) 1340
Speed (rpm) 444

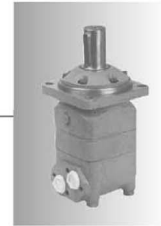
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Performance Data

		BMV 800 [801cm³/rev.]						
		Pressure (MPa)						
		2.5	5	8	10	13	16	18
Flow (L/min)	10	278	565	830	1095	1405	1712	1915
		11	10	10	9	8	8	7
20		282	571	845	1150	1456	1783	1994
		23	22	22	21	20	18	16
50		288	582	856	1162	1463	1790	2001
		60	59	57	56	54	52	48
75		269	580	855	1165	1465	1786	1993
		91	90	89	87	84	81	77
100		251	566	840	1140	1448	1767	1985
		122	121	120	118	115	111	105
125		242	535	824	1118	1427	1739	1976
		153	152	150	147	143	139	133
150		236	526	808	1102	1401	1714	1959
		185	183	181	178	174	169	163
175		215	504	793	1079	1377	1698	1936
		216	214	212	209	206	203	196
Max.cont.	200	197	468	765	1063	1362	1681	1913
		247	245	243	240	237	232	225
Max.int.	240	118	388	713	1020	1318	1637	1838
		297	296	295	293	288	283	277

□ cont.
■ int.

		BMV 1000 [990cm³/rev.]					
		Pressure (MPa)					
		2.5	5	7	10	14	16
Flow (L/min)	10	312	640	971	1400	1978	2259
		9	9	9	8	7	6
20		320	648	978	1410	1980	2270
		28	27	26	25	23	21
50		326	655	992	1422	2015	2280
		47	46	45	43	41	38
75		318	642	987	1425	2003	2276
		72	71	70	68	66	63
100		309	634	983	1418	1994	2243
		98	97	95	93	90	86
125		303	624	975	1409	1988	2224
		123	122	120	117	114	110
150		278	602	961	1368	1963	2208
		149	148	146	144	140	133
175		264	580	946	1338	1925	2159
		174	172	170	166	162	155
Max.cont.	200	230	556	912	1300	1891	2105
		199	196	193	190	185	178
Max.int.	240	166	513	867	1267	1825	2034
		240	237	233	229	225	218

Torque (N·m) 1825
Speed (rpm) 225

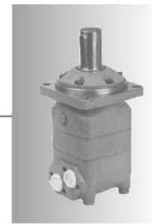
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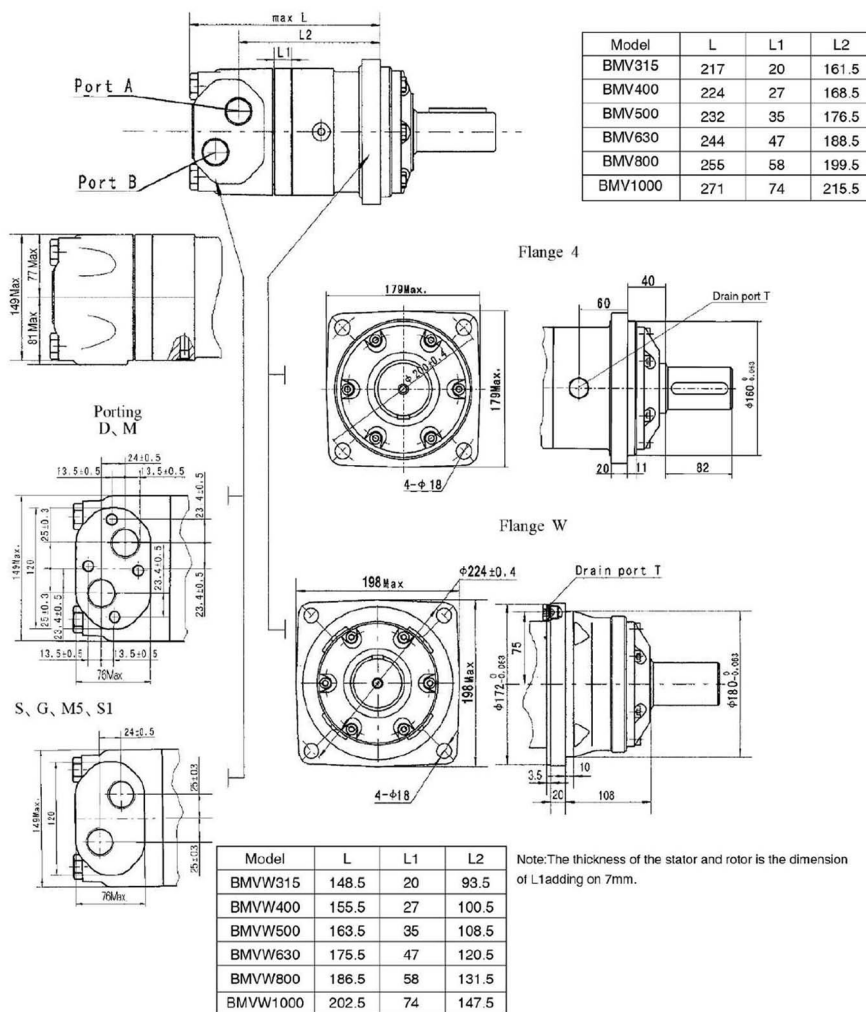
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BMV DIMENSIONS AND MOUNTING DATA



Content	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M5 (depth)	S1 (depth)
P(A,B)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)
T	G1/4 (12)	M14 x 1.5 (12)	9/16-18UNF(12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)
C	4-M12 (10)	4-M12 (10)	--	--	--	--

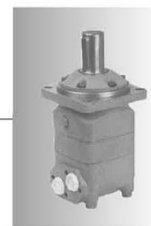
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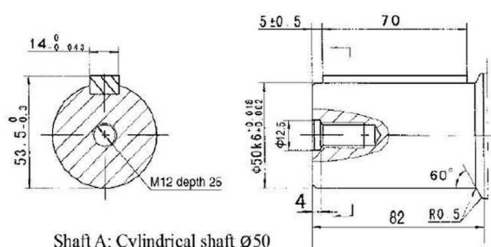
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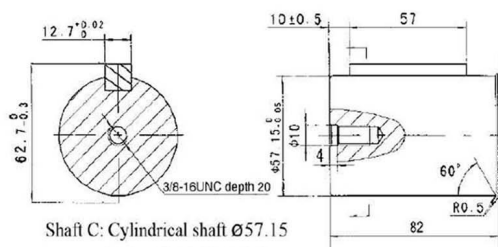


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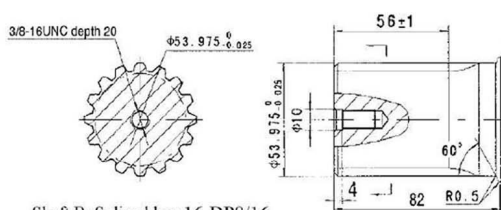
BMV SHAFT EXTENSIONS DIMENSIONS DATA



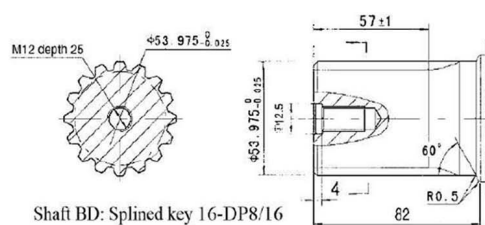
Shaft A: Cylindrical shaft Ø50
Parallel key 14x9x70



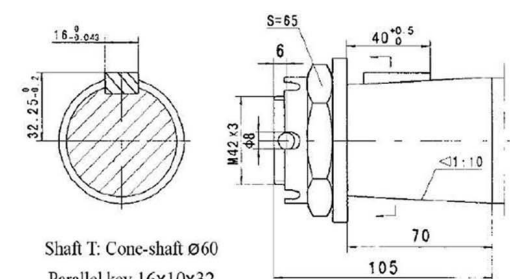
Shaft C: Cylindrical shaft Ø57.15
Parallel key 12.7x12.7x57



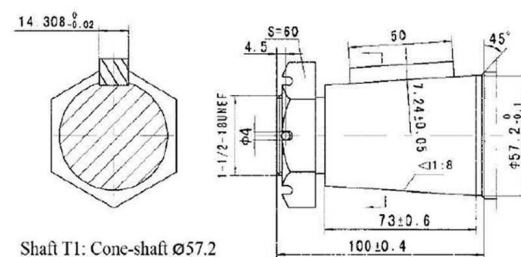
Shaft B: Splined key 16-DP8/16



Shaft BD: Splined key 16-DP8/16



Shaft T: Cone-shaft Ø60
Parallel key 16x10x32
Tightening torque: 750 ± 50Nm



Shaft T1: Cone-shaft Ø57.2
Parallel key 14.308x14.308x50
Tightening torque: 750 ± 50Nm

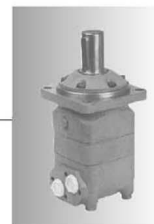
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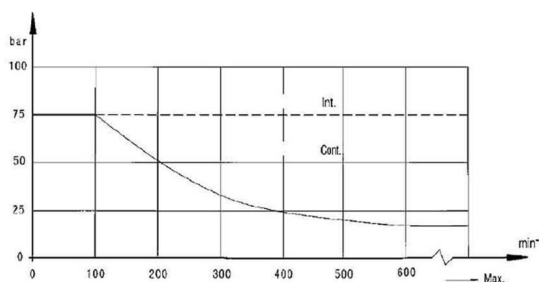
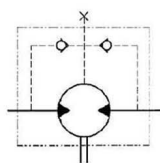
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BMV Series Hydraulic Motor

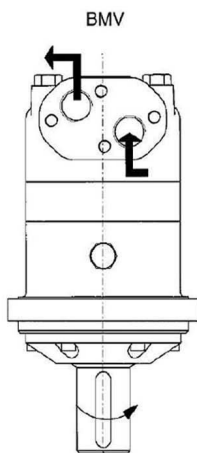
Permissible shaft seal pressure



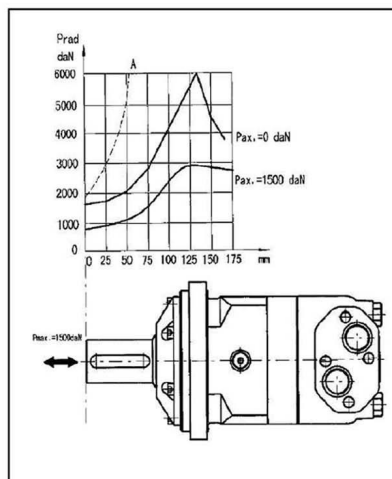
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Standard direction of shaft rotation: Standard

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



Axial and Radial forces



The output shaft runs in tapered bearings that permit high axial and radial forces. Curve "A" shows max radial shaft load. Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

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Order Information

1 2 3 4 5 6 7 8

BMV - - - - - - - -

Pos.1	2	3	4	5	6	7	8
Code	Displacement	Flange	Output shaft	Ports and drain port	Rotation direction	Paint	Unusually function
Omit	315 400 500 630 800 1000	4 4-Ø18 Square-flangeØ200, pilot Ø160 × 11 W 4-Ø18 Wheel-flange Ø224, pilot Ø180 × 10	A Shaft Ø50 , parallel key 14 × 9 × 70 BD Shaft Ø53.975, splined key 16-DP8/16 B Shaft Ø53.975, splined key 16-DP8/16 C Shaft Ø57.15, parallel key 12.7 × 12.7 × 57.15 T Cone shaft Ø60, parallel key 16 × 10 × 32 T1 Cone shaft Ø60, parallel key 14.308 × 14.308 × 50.8	D G1 Manifold 4 × M12, G1/4 M M33 × 2 Manifold 4 × M12, M14 × 1.5 S 1-5/16-12UN, 9/16-18UNF G G1, G1/4 M5 M33 × 2, M14 × 1.5 S1 1-5/16-12UN(18), 7/16-20UNF(12)	Omit Standard R Opposite	Omit 00 No paint B Blue S Black Silver grey	Omit Standard

Note:When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

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