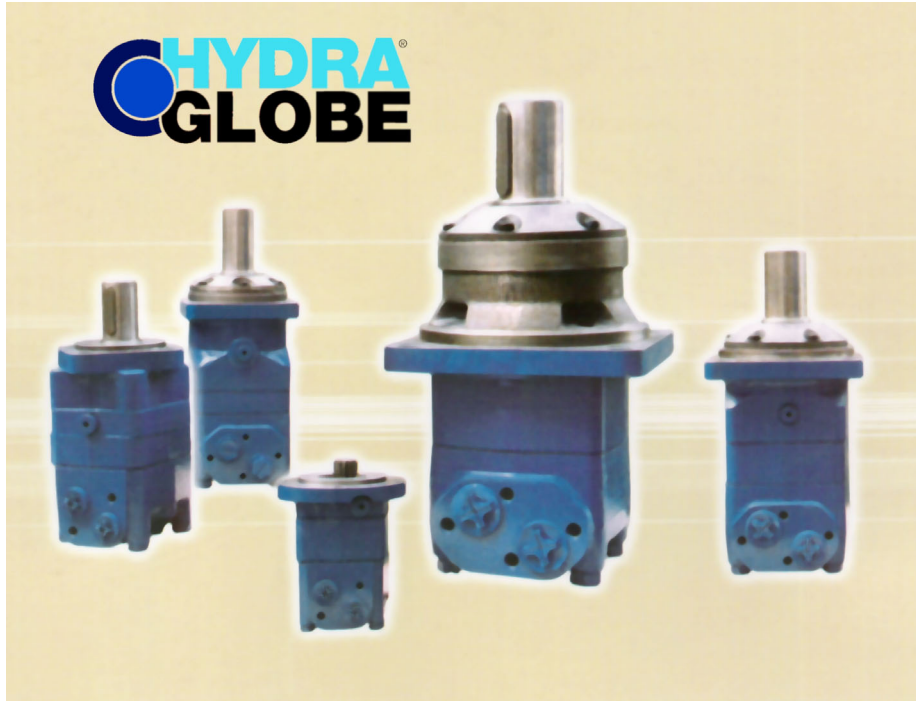


BMS-BMT-BMV



Usage Guide

In order to make the motors working in optimal situation, we recommend the following:

1. Oil temperature :normal 20°C~60°C upper limit 90°C (no more than one hour).
2. Filtering and oil cleanliness :a return filter should be installed in the system with a fineness in the range of 10~30µm and a piece of magnet should be installed at the bottom of the tank to prevent grits into the system. The max solid contamination grade of the oil is no more than 19/16.
3. Viscosity: 42~74 mm²/s at 40°C of oil temperature ,according to the condition to choose an applicable hydraulic oil.
4. The motors can be operated in parallel or series. When the pressure of the back exceeds 2MPa,it is necessary to install an external drain line to the tank.
5. For BMS、BMT and BMV series motors, the output shaft permit high axial and radial forces. The optimal operation situation should be at the 1/3~2/3 of the rated operation situation.
6. In order to obtain a longer life of operating motor should operate motors at first for one hour under 30% of rated pressure. In any case, be sure to fill up with hydraulic oil inside motor before increasing load.

Specification Data of Hydraulic Motor

distribution type	model	displacement (cm ³ /rev.)	Max. operating pressure (MPa)	speed range (rpm)	Max. output power (kW)
disc distribution	BMS	80~375	22.5	30~800	20
	BMT	160~800	24	30~705	35
	BMV	315~800	28	10~446	43

- NOTICE -

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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 Specification

Type		BMV 315	BMV 400	BMV 500	BMV 630	BMV 800
Geometric displacement (cm ³ /rev.)		333	419	518	666	801
Max. speed (rpm)	rated	335	270	215	170	140
	cont.	446	354	386	223	185
	int.	649	526	425	331	275
Max. torque (N*m)	rated	730	1020	1210	1422	1590
	cont.	925	1220	1450	1640	1810
	int.	1100	1439	1780	2000	2110
	peak	1349	1700	2121	2338	2470
Max. output (kW)	rated	25.6	28.8	27.2	25.3	23.3
	cont.	43	45.2	58.6	38.3	35.1
	int.	52	52	52	46	40
Max. pressure drop (MPa)	rated	16	16	16	16	14
	cont.	20	20	20	18	16
	int.	24	24	24	21	18
	peak	28	28	28	24	21
Max. flow (L/min)	rated	110	110	110	110	110
	cont.	150	150	150	150	150
	int.	225	225	225	225	225
Max. inlet pressure (MPa)	rated	21	21	21	21	21
	cont.	21	21	21	21	21
	int.	25	25	25	25	25
	peak	30	30	30	30	30
Weight (kg)		31.8	32.6	33.5	34.9	36.5

- * Rated speed and rated torque: output value of speed and torque under rated flow and rated pressure.
- * 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)

	7	10	14	16	18	20	21	24
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Flow (L/min)	Max.cont.								Max.int.
	7	10	14	16	18	20	21	24	24
30	305	435	605	718	790	892	942	1060	
	89	85	79	71	70	68	62	55	
60	303	445	625	736	828	925	968	1097	
	183	179	174	168	163	160	154	148	
90	300	440	625	730	826	922	962	1082	
	275	272	266	258	254	248	242	235	
105	295	435	620	726	822	917	958	1078	
	325	320	312	306	300	292	290	285	
120	290	431	610	720	820	912	952	1070	
	371	366	359	350	345	337	332	325	
150	278	411	602	716	802	904	942	1057	
Max.cont.	464	459	454	445	435	428	422	412	
Max.int.	260	392	588	710	795	892	930		
	595	588	582	575	568	562	555		

BMV 400 [419cm³/rev.]

Pressure (MPa)

	7	10	14	16	18	20	21	24
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Flow (L/min)	Max.cont.								Max.int.
	7	10	14	16	18	20	21	24	24
30	392	592	812	995	1050	1180	1195	1385	
	71	70	68	63	60	56	52	47	
60	402	614	822	1020	1070	1220	1235	1425	
	146	142	138	132	127	124	120	118	
90	396	606	815	1015	1065	1210	1225		
	240	238	232	228	222	217	212		
105	390	600	805	1010	1062	1205	1220		
	270	266	261	258	254	250	248		
120	384	594	798	1005	1055	1200	1210		
	294	290	286	284	280	276	272		
150	375	582	792	1002	1040				
Max.cont.	370	365	360	358	355				
Max.int.	360	574	787	987	1025				
	485	480	475	472	470				

BMV 500 [518cm³/rev.]

Pressure (MPa)

	7	10	14	16	18	20	21	24
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Flow (L/min)	Max.cont.								Max.int.
	7	10	14	16	18	20	21	24	24
30	442	675	998	1180	1260	1410	1485	1759	
	57	55	53	52	50	48	44	40	
60	455	685	1025	1210	1265	1445	1510	1780	
	117	115	111	106	101	97	95	90	
90	450	678	1020	1205	1260	1450	1520	1786	
	186	184	183	180	178	173	170	166	
105	445	672	1012	1200	1255	1446	1513		
	205	202	198	194	192	187	186		
120	440	668	1005	1194	1250	1399	1510		
	240	238	235	232	230	226	225		
150	435	663	1000	1186	1246				
Max.cont.	294	290	286	282	278				
Max.int.	428	658	993						
	373	368	362						

BMV 630 [666cm³/rev.]

Pressure (MPa)

	7	10	14	16	18	20	21	24
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Flow (L/min)	Max.cont.								Max.int.
	7	10	14	16	18	20	21	24	24
30	610	880	1280	1404	1616	1780	1843	1986	
	43	41	38	36	34	31	30	29	
60	615	888	1336	1412	1628	1800			
	90	87	84	82	81	77			
90	608	878	1331	1422	1640	1810			
	140	138	136	134	132	128			
105	600	872	1326	1415	1632	1790			
	164	162	158	155	153	149			
120	595	865	1310	1405	1625	1780			
	186	183	180	177	174	171			
150	590	855	1302	1398					
Max.cont.	235	232	228	224					
Max.int.	586	846							
	298	292							

Torque (N·m) 1399
Speed (rpm) 226

BMV 800 [801cm³/rev.]

Pressure (MPa)

	7	10	14	16
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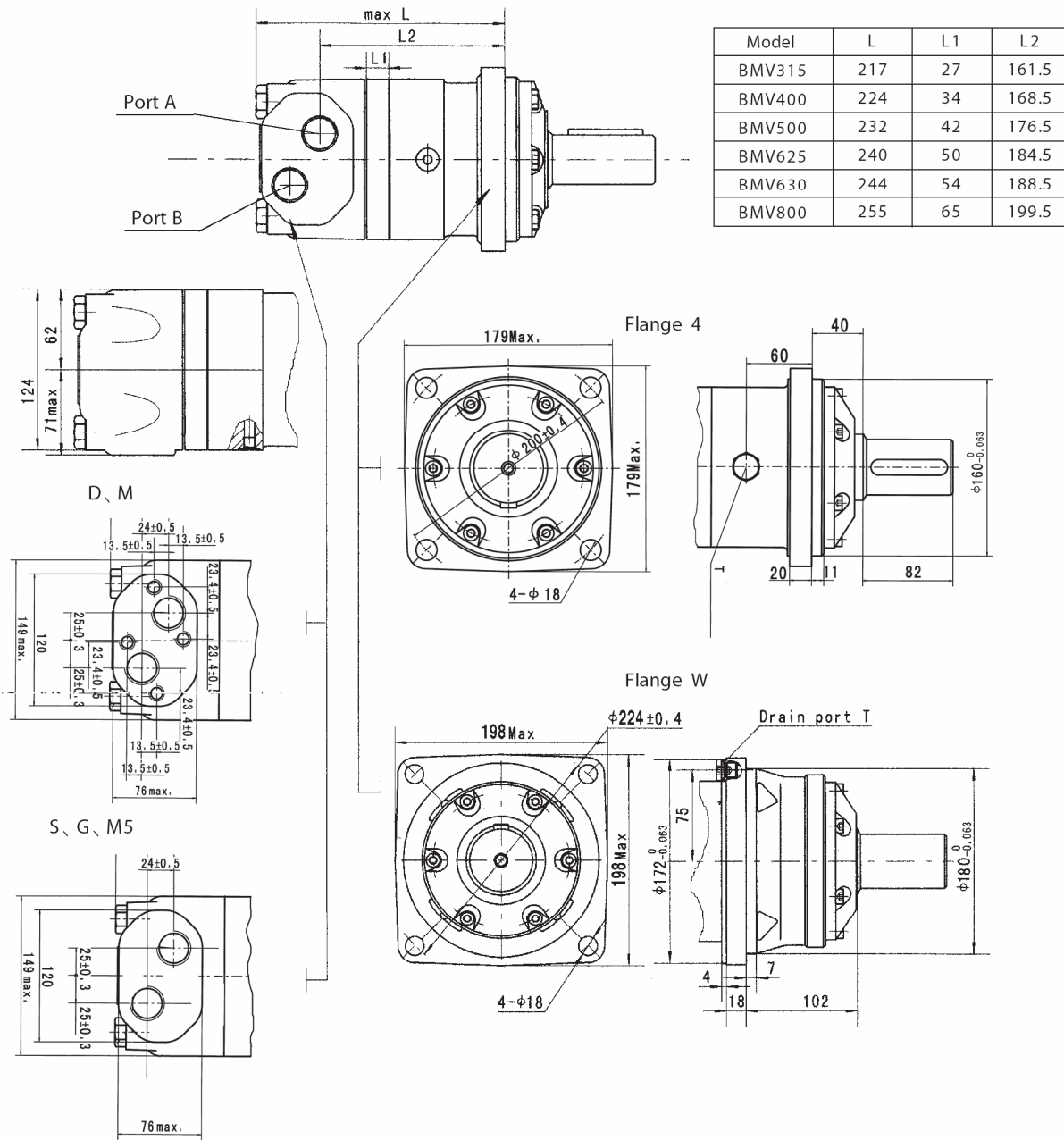
Flow (L/min)	Max.cont.			
	7	10	14	16
30	790	1137	1582	1790
	35	33	30	28
60	802	1142	1590	1810
	68	66	62	60
90	795	1135	1580	1800
	110	107	102	100
105	787	1130	1576	1792
	129	125	120	117
120	782	1124	1549	1760
	146	142	136	132
150	776	1106	1529	
Max.cont.	184	180	176	
Max.int.	768	1100		
	233	229		

□ cont.
■ int.

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BMV Mounting Data



Model	L	L1	L2
BMV315	217	27	161.5
BMV400	224	34	168.5
BMV500	232	42	176.5
BMV625	240	50	184.5
BMV630	244	54	188.5
BMV800	255	65	199.5

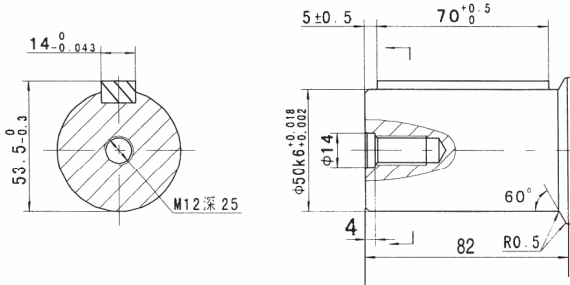
Model	L	L1	L2
BMVW315	148.5	27	93.5
BMVW400	155.5	34	100.5
BMVW500	163.5	42	108.5
BMVW625	171.5	50	116.5
BMVW630	175.5	54	120.5
BMVW800	186.5	65	131.5

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

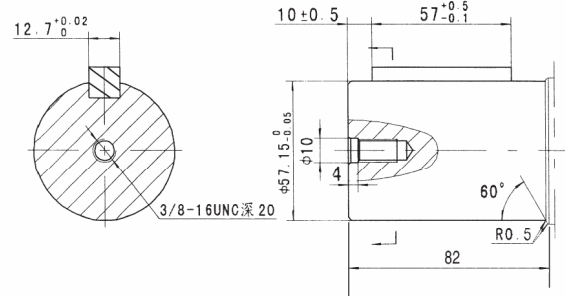
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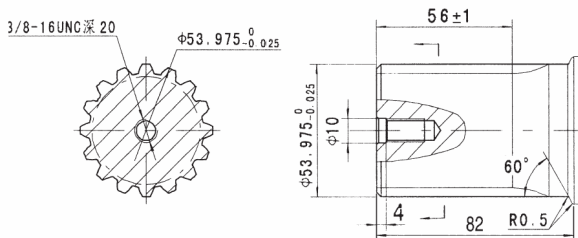
BMV Mounting Data



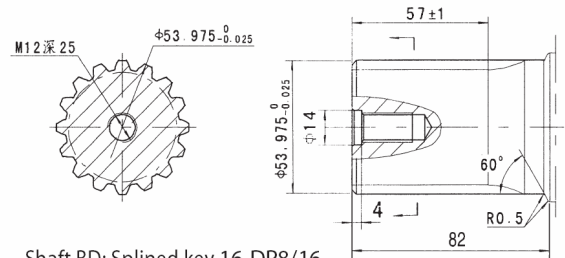
Shaft A: Cylindrical shaft Ø50
Parallel key 14x9x70



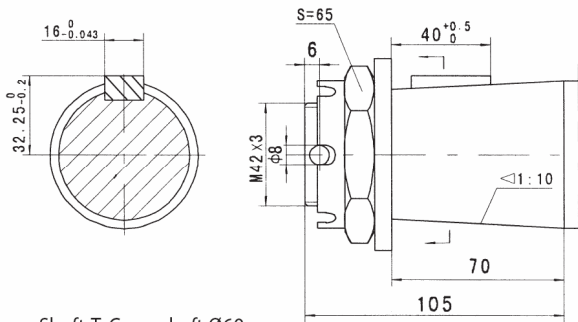
Shaft C: Cylindrical shaft Ø57.15
Parallel key 12.7x12.7x57



Shaft B: Splined key 16-DP8/16

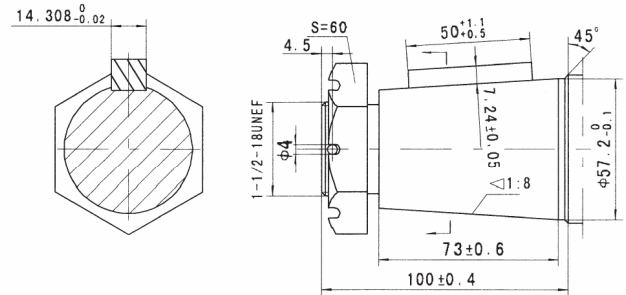


Shaft BD: Splined key 16-DP8/16



Shaft T: Cone-shaft Ø60
Parallel key B16x10x32

Tightening torque: 750 ± 50Nm



Shaft T1: Cone-shaft Ø57.2
Parallel key 14.308x14.308x50

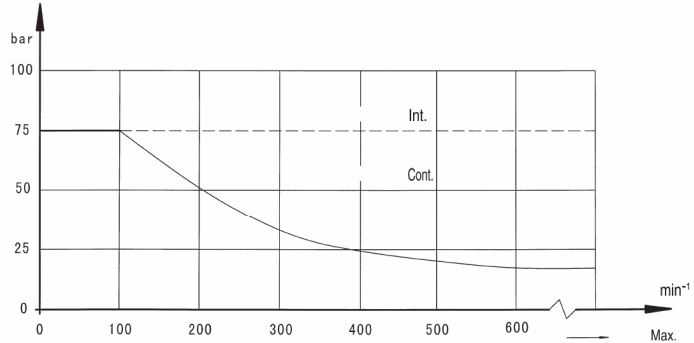
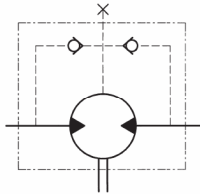
Tightening torque: 750 ± 50Nm

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BMV Series Hydraulic Motor

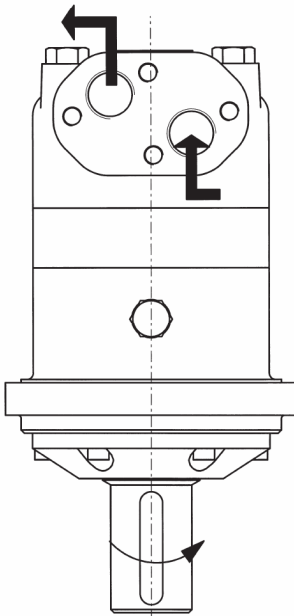
Permissible shaft seal pressure



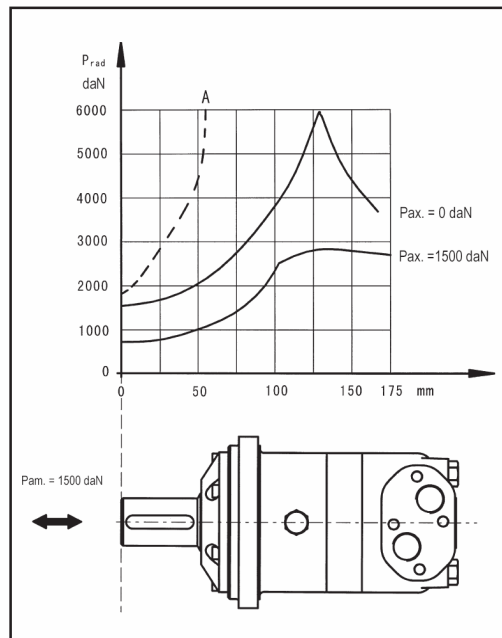
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Direction of shaft rotation

BMV



Axial and Radial forces

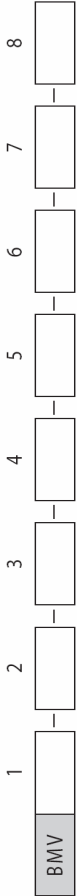


The output shaft runs in tapered bearings that permit high axial and radial forces, Curve "A" shows max radial shaft load, Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage, The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

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Order Information



Pos.1	2	3	4	5	6	7	8
Code	Displacement	Flange	Output shaft	Port and drain port	Rotation direction	Paint	Unusually function
None	315	4-Ø14.5 Square-flange, pilot Ø160 × 11 4-Ø18 Wheel-flange Ø224, pilot Ø180 × 10	A Shaft Ø50 , paralllel key 14 × 9 × 70	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	None Standard R Opposite S	No paint Blue Black Silver grey	
	400		BD Shaft Ø53.975, splined key 16-DP8/16				
	500		B Shaft Ø53.975, splined key 16-DP8/16				
	630		C Shaft Ø57.15, paralllel key 12.7 × 12.7 × 57				
	800		T Cone shaft Ø60, paralllel key B16 × 10 × 32				
			T1 Cone shaft Ø60, paralllel key 14.308 × 14.308 × 50				

Note: When the table is used, please fill the code of left rows in dash area and give us, which the code information 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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