BMV 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 distrbution 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	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.

Performance Data

BMV 315 [333cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10	14	18	20 (Max.cont.)	24 (Max.int.)
10	140	294	440	610	742	845	1000
	26	**24**	**23**	**22**	**20**	**17**	**14**
20	153	314	466	636	787	895	1070
	55	**54**	**53**	**52**	**51**	**48**	**44**
50	149	312	465	654	815	935	1112
	145	**144**	**142**	**140**	**137**	**133**	**127**
75	143	304	458	642	816	940	1119
	220	**218**	**215**	**211**	**207**	**202**	**195**
100	136	297	452	636	810	936	1108
	294	**292**	**290**	**287**	**283**	**278**	**270**
125	123	286	442	626	799	921	1093
	368	**366**	**364**	**361**	**357**	**352**	**345**
150 (Max.cont.)	114	275	435	615	788	906	1078
	445	**443**	**441**	**437**	**430**	**422**	**410**
160	107	268	430	608	780	895	1070
	475	**473**	**470**	**466**	**460**	**452**	**439**
200 (Max.int.)	82	249	412	593	758	871	1047
	596	**594**	**590**	**584**	**576**	**565**	**544**

BMV 400 [419cm³/rev.]

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

BMV 500 [518cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10	14	18	20 (Max.cont.)	24 (Max.int.)
10	242	468	696	959	1190	1353	1607
	17	**17**	**16**	**16**	**15**	**13**	**11**
20	245	501	738	1003	1232	1394	1658
	36	**35**	**35**	**34**	**33**	**32**	**29**
50	240	500	758	1025	1270	1449	1743
	93	**92**	**91**	**90**	**88**	**85**	**80**
75	233	498	752	1030	1288	1475	1766
	140	**139**	**137**	**135**	**132**	**127**	**120**
100	228	491	748	1026	1289	1472	1760
	189	**187**	**185**	**182**	**178**	**173**	**166**
125	220	483	742	1014	1280	1460	1745
	237	**236**	**234**	**231**	**227**	**223**	**216**
150	201	465	723	1008	1250	1429	1736
	287	**286**	**284**	**281**	**276**	**270**	**260**
175	182	446	711	997	1238	1406	1715
	335	**334**	**332**	**329**	**325**	**320**	**310**
200 (Max.cont.)	161	423	676	974	1218	1385	1697
	384	**383**	**381**	**378**	**374**	**366**	**354**
240 (Max.int.)	120	378	622	921	1172	1340	1650
	461	**459**	**457**	**454**	**450**	**444**	**432**

Torque (N•m) 1340
Speed (rpm) **444**

BMV 630 [666cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	6	9	12	15	18 (Max.cont.)	21 (Max.int.)
10	280	522	812	1100	1268	1549	1784
	14	**13**	**13**	**12**	**12**	**11**	**10**
20	288	552	839	1101	1315	1607	1864
	28	**28**	**27**	**27**	**26**	**24**	**22**
50	289	555	868	1137	1364	1682	1956
	72	**72**	**71**	**69**	**68**	**66**	**62**
75	270	548	863	1120	1352	1680	1964
	109	**108**	**106**	**104**	**102**	**99**	**94**
100	264	538	856	1093	1350	1674	1965
	146	**145**	**143**	**141**	**138**	**135**	**130**
125	251	516	837	1071	1336	1659	1950
	184	**183**	**181**	**179**	**177**	**173**	**168**
150	240	495	817	1063	1330	1650	1928
	221	**220**	**219**	**217**	**215**	**212**	**205**
175	210	485	796	1052	1300	1636	1908
	259	**258**	**257**	**254**	**250**	**246**	**241**
200 (Max.cont.)	182	469	751	1018	1280	1611	1883
	297	**297**	**295**	**293**	**290**	**284**	**273**
240 (Max.int.)	130	416	712	978	1237	1563	1835
	358	**357**	**355**	**351**	**346**	**340**	**332**

cont.
int.

Performance Data

BMV 800 [801cm³/rev.]

Flow (L/min)	Pressure (MPa) 2.5	5	8	10	13	16	18
							Max.cont. / Max.int.
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**

BMV 1000 [990cm³/rev.]

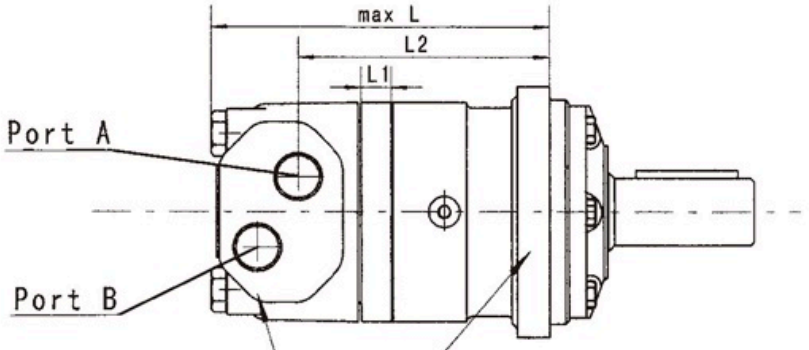
Flow (L/min)	Pressure (MPa) 2.5	5	7	10	14	16
					Max.cont.	Max.int.
10	312	640	971	1400	1978	2259
	9	**9**	**9**	**8**	**7**	**6**
20	320	648	978	1410	1980	2270
	28	**27**	**26**	**25**	**23**	**21**
50	326	655	992	1422	2015	2280
	47	**46**	**45**	**43**	**41**	**38**
75	318	642	987	1425	2003	2276
	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**

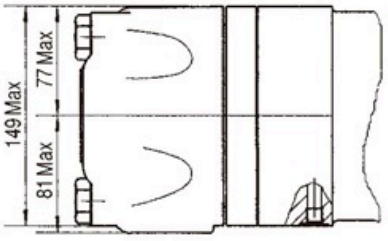
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int.

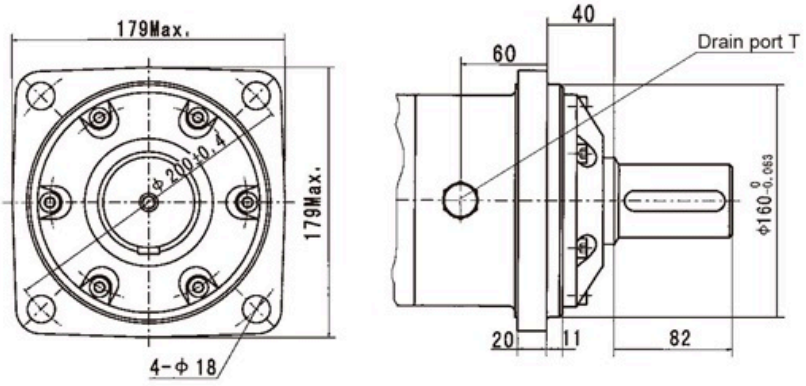
BMV DIMINSIONS AND MOUNTING DATA



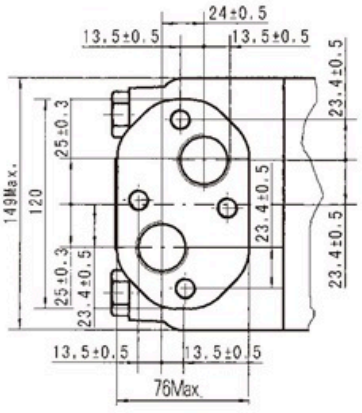
Model	L	L1	L2
BMV315	217	20	161.5
BMV400	224	27	168.5
BMV500	232	35	176.5
BMV630	244	47	188.5
BMV800	255	58	199.5
BMV1000	271	74	215.5



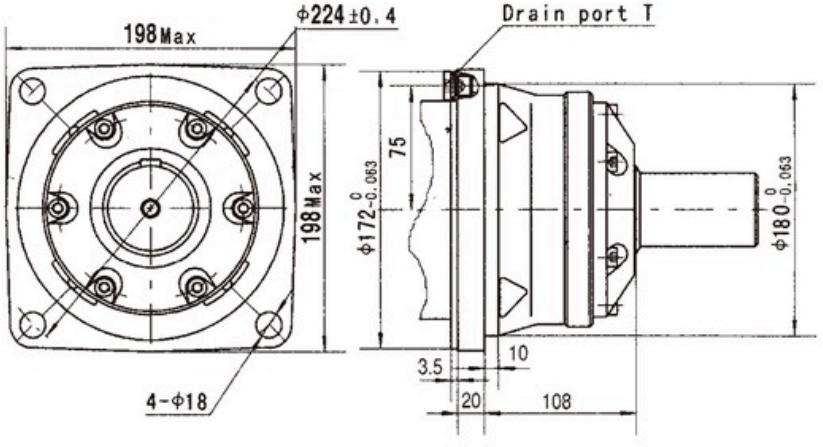
Flange 4



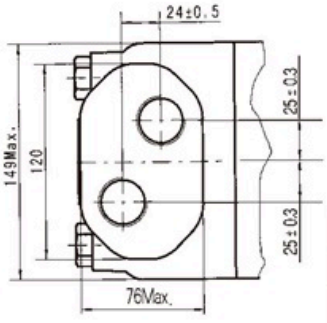
Porting
D、M



Flange W



S、G、M5、S1

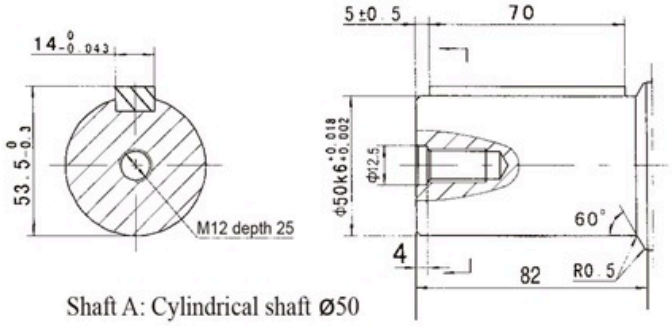


Model	L	L1	L2
BMVW315	148.5	20	93.5
BMVW400	155.5	27	100.5
BMVW500	163.5	35	108.5
BMVW630	175.5	47	120.5
BMVW800	186.5	58	131.5
BMVW1000	202.5	74	147.5

Note:The thickness of the stator and rotor is the dimension of L1adding on 7mm.

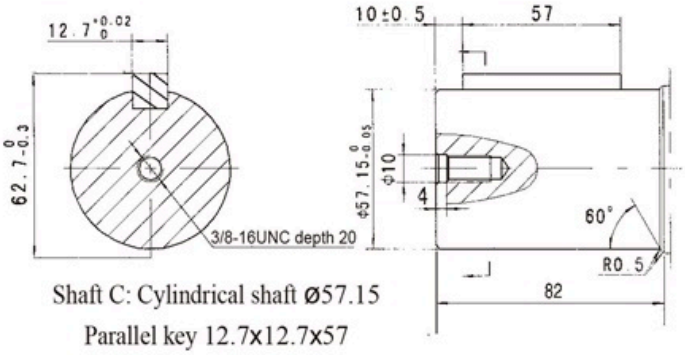
Content / Mounting	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M5 (depth)	S1 (depth)
P(A,B)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)
T	G1/4 (12)	M14 x 1.5 (12)	9/16-18UNF(12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)
C	4-M12 (10)	4-M12 (10)	--	--	--	--

BMV SHAFT EXTENSIONS DIMENSIONS DATA



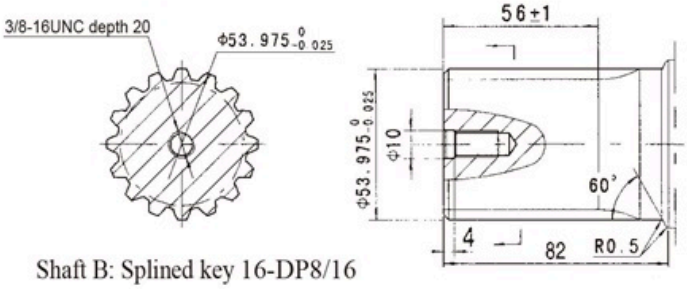
Shaft A: Cylindrical shaft Ø50

Parallel key 14x9x70

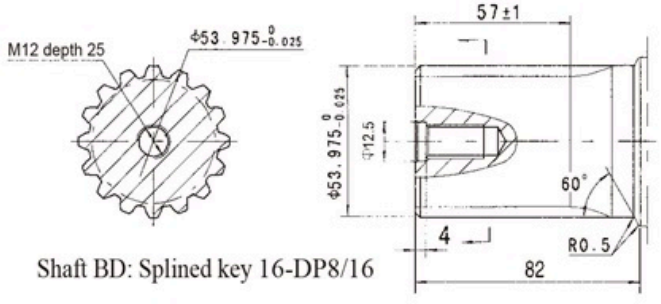


Shaft C: Cylindrical shaft Ø57.15

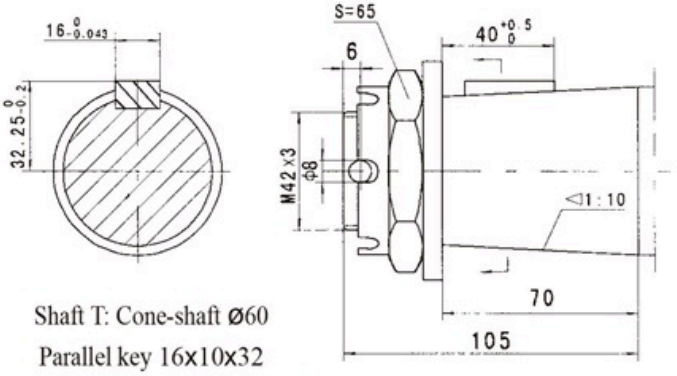
Parallel key 12.7x12.7x57



Shaft B: Splined key 16-DP8/16



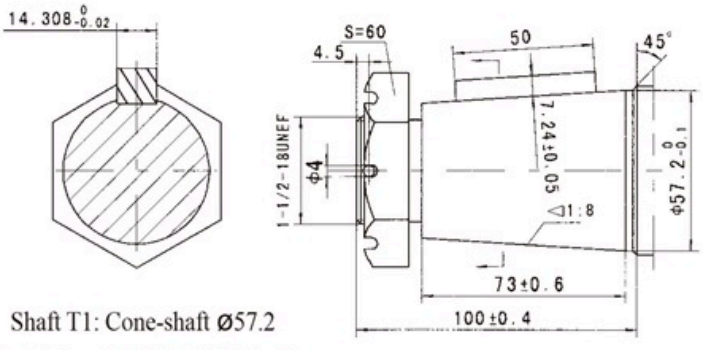
Shaft BD: Splined key 16-DP8/16



Shaft T: Cone-shaft Ø60

Parallel key 16x10x32

Tightening torque: 750±50Nm



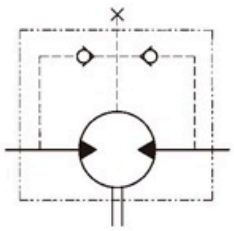
Shaft T1: Cone-shaft Ø57.2

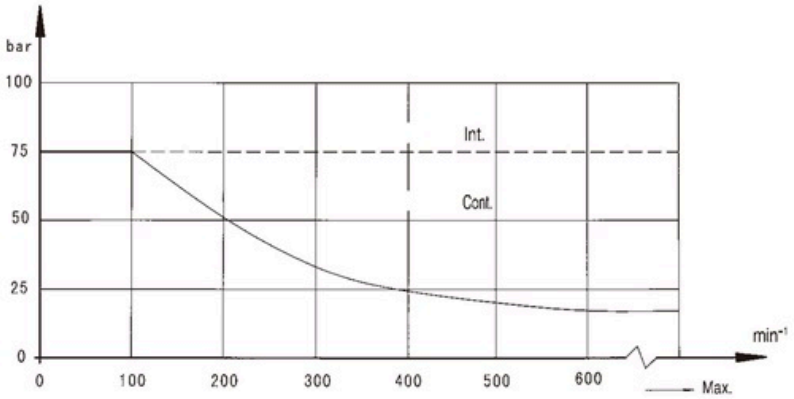
Parallel key 14.308x14.308x50

Tightening torque: 750±50Nm

BMV Series Hydraulic Motor

Permissible shaft seal pressure



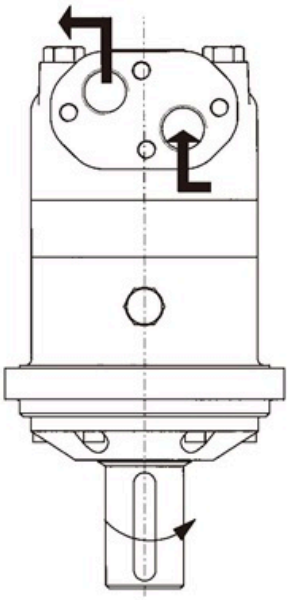


In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

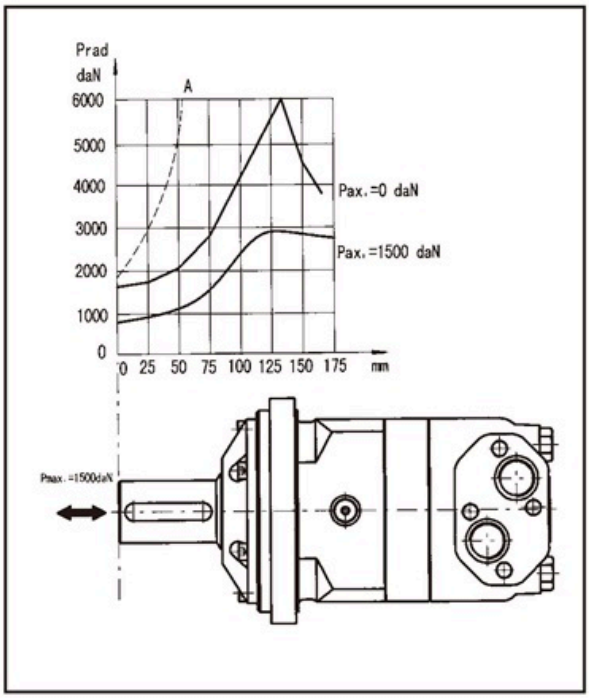
Standard direction of shaft rotation: Standard

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

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.