

## BMV Series

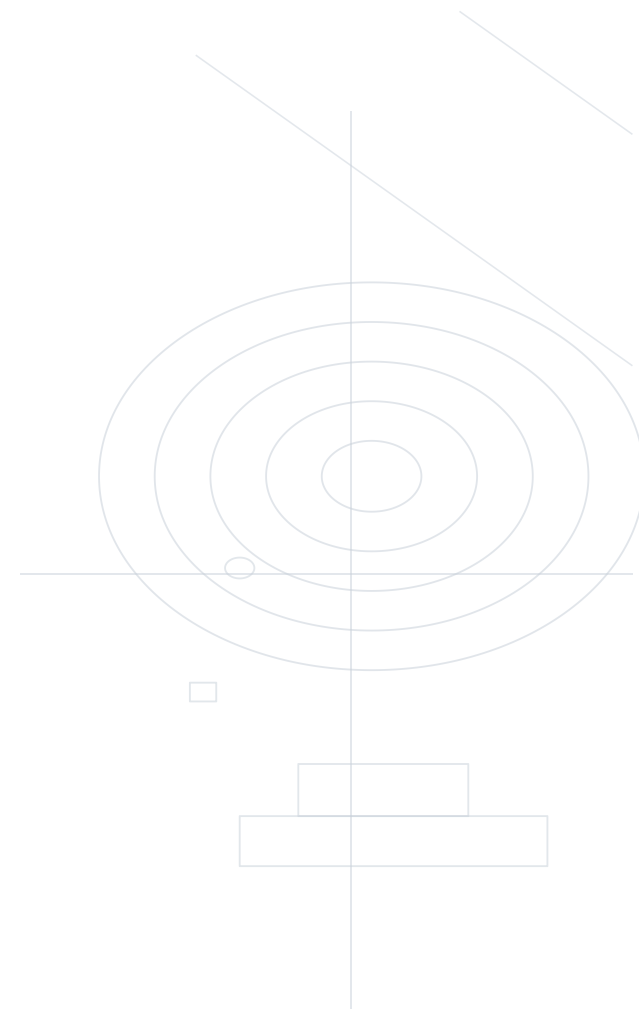
### BMV Series Orbital Hydraulic Motor

Professional hydraulic components for  
mobile machinery and industrial systems.

Category: Orbital Hydraulic Motors

Application:

Compact Mobile Machinery / Industrial Hydraulic  
Systems



## BMV Series Orbital Hydraulic Motor

BMV Series Orbital Hydraulic Motor is an advanced end-face distribution hydraulic motor. This series uses a column-mounted gerotor pair and features high working pressure, high efficiency, good efficiency retention, and long service life. Multi-function variants can be designed based on the standard structure according to customer requirements. Features:

\*Features advanced rotor-stator parameter design, resulting in low starting pressure, high efficiency, and excellent performance stability.

\*High operating pressure and high output torque. The tapered roller bearing design provides strong resistance to axial and radial loads, enabling the motor to directly drive working mechanisms and expanding its range of applications.

\*An advanced end-face distribution structure ensures high distribution accuracy and strong automatic wear compensation, guaranteeing high volumetric efficiency and a long service life, as well as stable motor speed and load-speed characteristics.

### Main Technical Parameters

Type		BMV 315	BMV 400	BMV 500	BMV 630	BMV 800	BMV 1000
Actual Displacement(cm <sup>3</sup> /rev.)		337	426.7	535.8	672.1	853.1	1012.3
Max. Speed (rpm)	Rated	315	250	200	163	125	105
	Continuous	465	460	365	290	230	193
	Intermittent	585	560	443	353	278	235
Max. Torque (N.m)	Rated	735	980	1220	1450	1680	2050
	Continuous	930	1200	1500	1680	2000	2050
	Intermittent	1110	1430	1800	1950	2235	2320
	Peak	1300	1650	2120	2220	2600	2450
Max. Output Power (KW)	Continuous	38	47	47	40	33	28.6
	Intermittent	46	56	56	56	44	40
Max. Working Pressure Difference (MPa)	Rated	16	16	16	16	14	14
	Continuous	20	20	20	18	16	14
	Intermittent	24	24	24	21	18	16
	Peak	28	28	28	24	21	18
Max. Flow (L/min)	Rated	110	110	110	110	110	110
	Continuous	160	200	200	200	200	200
	Intermittent	200	240	240	240	240	240
Max. Inlet Pressure (MPa)	Rated	21	21	21	21	21	21
	Continuous	21	21	21	21	21	21
	Intermittent	25	25	25	25	25	25
	Peak	30	30	30	30	30	30

\*Rated speed and torque refer to output values under rated flow and pressure.

\*Continuous values refer to the maximum values at which this displacement motor can operate continuously.

\*Intermittent values refer to the maximum values at which this displacement motor operates for 6 seconds within 1 minute.

\*Peak values refer to the maximum values at which this displacement motor operates for 0.6 seconds within 1 minute.

Performance Parameters

		BMV-315 [333cm <sup>3</sup> /rev.] Pressure (MPa)						Max. Continuous Max. Intermittent	
		3.5	7	10	14	18	20	24	
Flow (L/min)	10	142 26	297 24	445 23	617 22	751 20	855 17	1012 14	
	20	155 54	318 53	472 52	644 51	796 50	906 47	1083 43	
	50	151 143	316 142	470 140	662 138	825 135	946 131	1125 125	
	75	145 217	308 215	464 212	650 208	826 205	951 200	1132 193	
	100	138 291	301 288	457 286	644 284	820 280	947 275	1121 267	
	125	124 364	289 362	447 360	634 357	809 353	932 348	1106 341	
Max. Continuous	150	115 440	278 438	440 436	622 432	797 425	917 417	1091 405	
	160	108 469	271 467	435 464	615 460	789 454	906 447	1083 434	
Max. Intermittent	200	83 589	252 587	417 583	600 577	767 569	881 558	1060 537	

		BMV-400 [426.7cm <sup>3</sup> /rev.] Pressure (MPa)						Max. Continuous Max. Intermittent	
		3.5	7	10	14	18	20	24	
Flow (L/min)	10	186 20	392 20	578 19	790 18	986 17	1121 16	1316 14	
	20	200 43	405 43	601 42	830 41	1028 39	1173 38	1371 36	
	50	204 112	409 111	614 111	857 110	1059 108	1208 106	1456 101	
	75	198 172	401 170	607 166	853 163	1062 160	1210 154	1458 149	
	100	175 232	392 231	604 229	842 227	1055 223	1206 219	1451 211	
	125	170 291	381 289	594 286	831 283	1040 277	1199 270	1439 263	
Max. Continuous	150	161 349	368 348	569 356	816 343	1026 338	1186 329	1415 318	
	175	146 408	352 406	563 403	798 400	1007 396	1166 389	1402 381	
Max. Intermittent	200	120 466	337 464	546 460	774 455	987 447	1149 440	1381 431	
	240	84 561	306 559	515 555	754 538	960 529	1124 520	1356 511	

		BMV-500 [535.8cm <sup>3</sup> /rev.] Pressure (MPa)						Max. Continuous Max. Intermittent	
		3.5	7	10	14	18	20	24	
Flow (L/min)	10	250 16	484 16	720 15	992 15	1231 15	1399 13	1662 11	
	20	253 35	518 34	763 34	1037 33	1274 32	1442 31	1715 28	
	50	248 90	517 89	784 88	1060 87	1314 85	1499 82	1803 77	
	75	241 135	515 134	778 132	1065 130	1332 128	1526 123	1827 116	
	100	236 183	508 181	774 179	1061 176	1333 172	1522 167	1820 160	
	125	228 229	500 228	767 226	1049 223	1324 219	1510 216	1805 209	
Max. Continuous	150	208 277	481 276	748 274	1043 272	1293 267	1478 261	1796 251	
	175	188 324	461 323	735 321	1031 318	1280 314	1454 309	1774 300	
Max. Intermittent	200	167 371	437 370	699 368	1007 365	1260 361	1432 354	1755 342	
	240	124 446	391 444	643 442	953 439	1212 435	1386 429	1707 418	

		BMV-630 [666cm <sup>3</sup> /rev.] Pressure (MPa)						Max. Continuous Max. Intermittent	
		3.5	6	9	12	15	18	21	
Flow (L/min)	10	282 14	527 13	819 13	1110 12	1280 12	1563 11	1800 10	
	20	291 28	557 28	847 27	1111 27	1327 26	1622 24	1881 22	
	50	292 71	560 71	876 70	1147 68	1376 67	1697 65	1974 61	
	75	272 108	553 107	871 105	1130 103	1364 101	1695 98	1982 93	
	100	266 145	543 144	864 142	1103 140	1362 137	1689 134	1983 129	
	125	253 182	521 181	845 179	1081 177	1348 175	1674 171	1968 166	
Max. Continuous	150	242 219	500 218	824 217	1073 215	1342 213	1665 210	1946 203	
	175	212 257	489 256	803 255	1062 252	1312 248	1651 244	1925 239	
Max. Intermittent	200	184 294	473 294	758 292	1027 290	1292 287	1626 281	1900 270	
	240	131 355	420 354	718 352	987 348	1248 343	1577 337	1853 329	

Torque (N·m) 953  
Speed (rpm) 439

Continuous / Intermittent

Performance Parameters

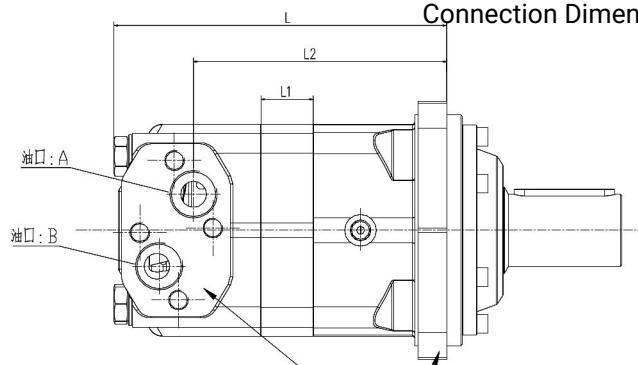
		BMV-800 [853.1cm <sup>3</sup> /rev.] Pressure (MPa)						Max. Continuous Max. Intermittent		
		2.5	5	8	10	13	16	18		
Flow (L/min)	10	296 10	602 9	884 9	1166 8	1496 8	1823 8	2040 7		
	20	300 22	608 21	900 22	1225 20	1551 19	1899 17	2124 15		
	50	307 56	620 55	912 54	1237 53	1558 51	1906 49	2131 45		
	75	286 85	618 84	911 83	1241 82	1560 79	1902 76	2123 72		
	100	267 114	603 113	895 113	1214 110	1542 108	1882 104	2114 98		
	125	258 144	570 143	877 141	1191 138	1520 134	1852 130	2104 125		
	150	251 174	560 172	860 170	1174 167	1492 163	1825 159	2086 153		
	Max. Continuous	175	229 203	537 201	845 199	1149 196	1466 193	1808 191	2062 184	
	200	210 232	498 230	815 228	1132 225	1450 222	1790 218	2037 211		
	Max. Intermittent	240	126 279	413 278	759 277	1086 275	1404 270	1743 266	1957 260	

Torque(N•m) 1086  
Speed (rpm) 275

		BMV-1000 [1012.3cm <sup>3</sup> /rev.] Pressure (MPa)						
		2.5	5	7	10	14	16	
Flow (L/min)	10	319 9	654 9	993 9	1431 8	2022 7	2310 6	
	30	327 27	662 26	1000 25	1442 24	2025 22	2321 21	
	50	333 46	670 45	1014 44	1454 42	2060 40	2331 37	
	75	325 70	656 69	1009 68	1457 67	2048 65	2327 62	
	100	316 96	648 95	1005 93	1450 91	2039 88	2293 84	
	125	310 120	638 119	997 117	1441 114	2033 111	2274 107	
	150	284 146	615 145	982 143	1399 141	2007 137	2258 130	
	Max. Continuous	175	270 170	593 168	967 166	1368 162	1968 158	2208 151
	200	235 195	568 192	932 189	1329 186	1933 181	2152 174	
	Max. Intermittent	240	170 235	524 232	886 228	1295 224	1866 220	2080 213

Continuous / Intermittent

BMV Mounting and Connection Dimensions

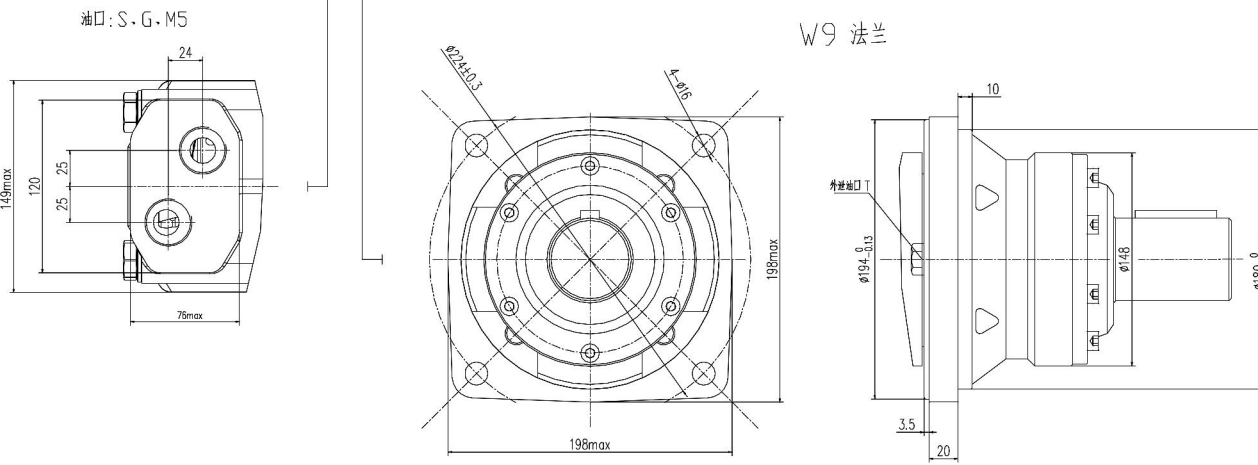
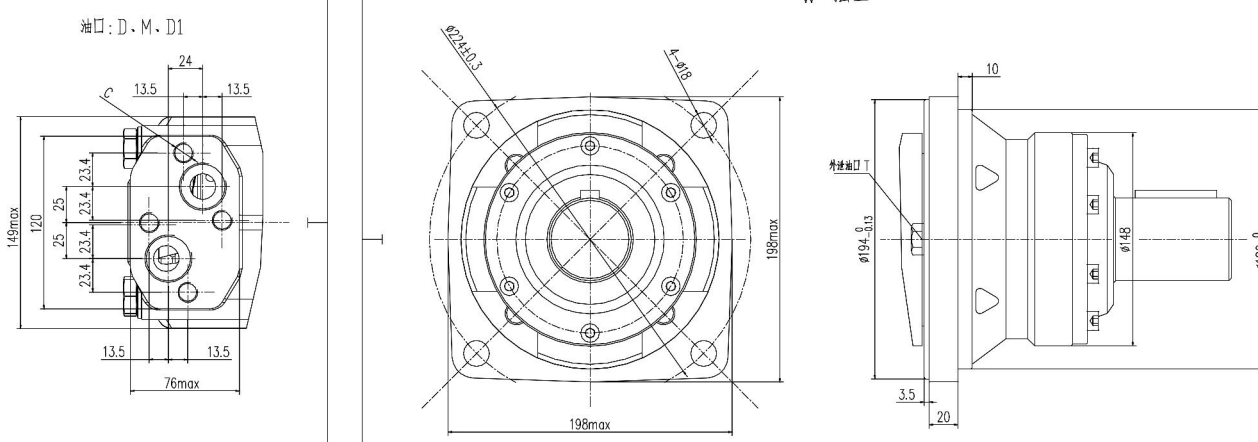
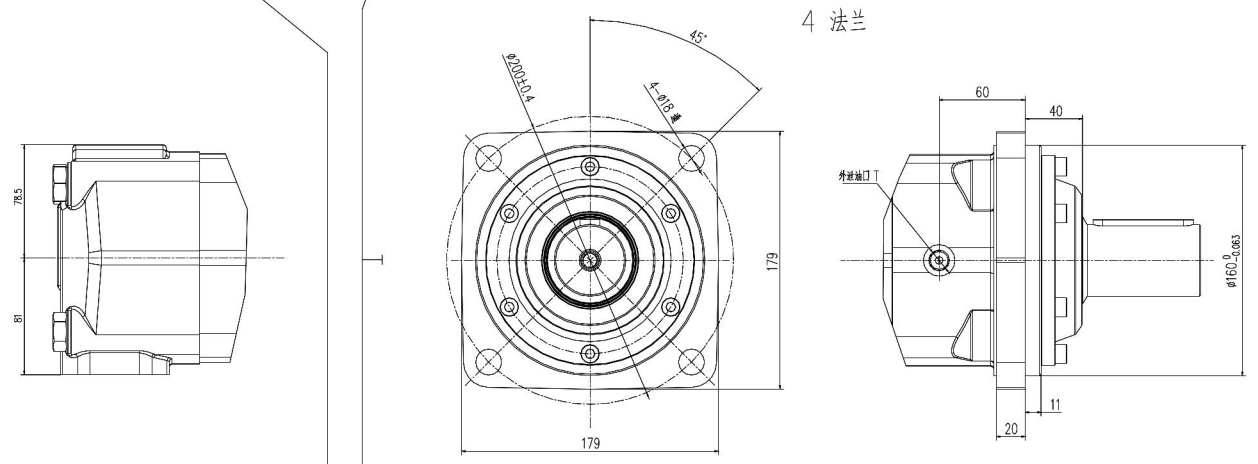


排量(ml/r)	BMV-315	400	500	630	800	1000
L1(mm)	20.3	27.5	36.5	47.5	62	75
L2(mm)	160.3	167.5	176.5	187.5	202	215
L(mm)	215.8	223	232	243	257.5	270.5

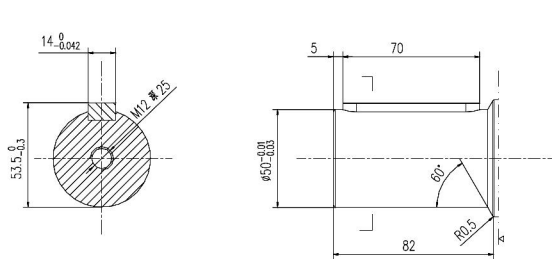
排量(ml/r)	BMV-315W	400	500	630	800	1000
L1(mm)	20.3	27.5	36.5	47.5	62	75
L2(mm)	91.3	98.5	107.5	118.5	133	146
L(mm)	146.8	154	163	174	188.5	201.5

注: 轴突子轴厚度为: L1+7

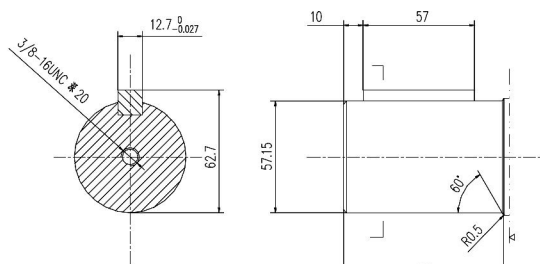
连接形式	P(A/B)	4-C	T
D(英寸)	G1(18)	M12(12)	G1/4(12)
M(英寸)	M33X2(18)	M12(12)	M14X1.5(12)
S(英寸)	1-5/16-12UNF 1/2-ring(18)	/	9/16-18UNF 1/2-ring(12)
G(英寸)	G1(18)	/	G1/4(12)
M5(英寸)	M33X2(18)	/	M14X1.5(12)
D1(英寸)	G3/4(18)	M12(12)	G1/4(12)



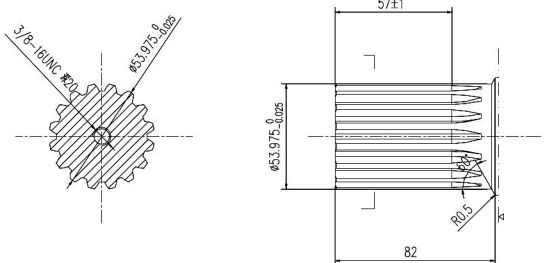
### BMV Shaft Extension Dimensions



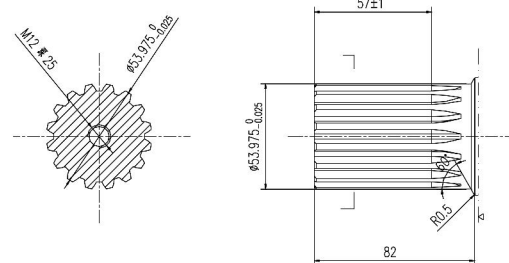
A轴: 圆柱轴  $\phi 50$ , 平键 14X9X70



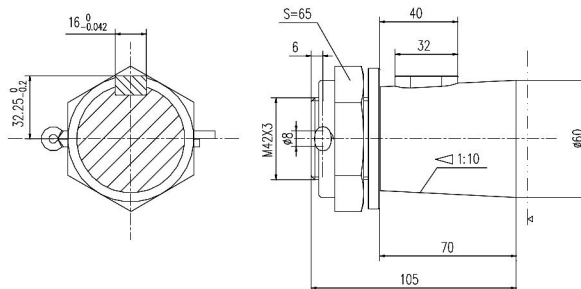
C轴: 圆柱轴  $\phi 57.15$ , 平键 12.7X12.7X57



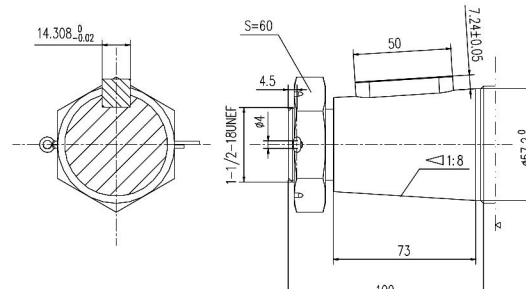
B轴: 花键 16-DP8/16



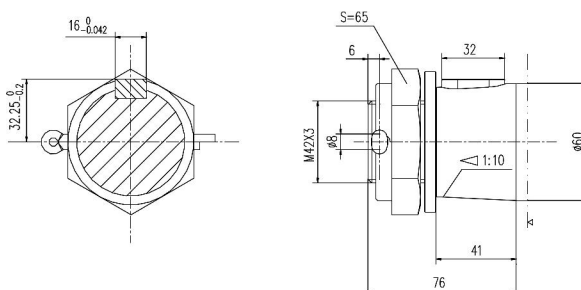
BD轴: 花键 16-DP8/16



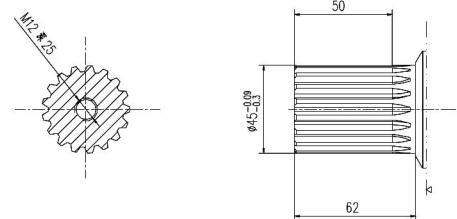
T轴: 锥轴  $\phi 60$ , 锥长 70, 平键 16X10X32  
螺母拧紧力矩: 750±50Nm



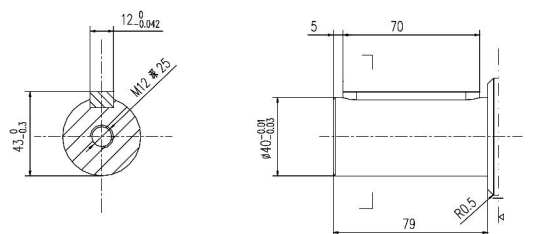
T1轴: 锥轴  $\phi 57.2$ , 锥长 73, 平键 14.308X14.308X50  
螺母拧紧力矩: 750±50Nm



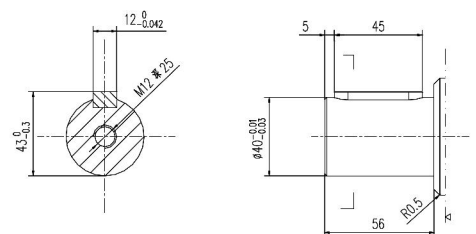
T2轴: 锥轴  $\phi 60$ , 锥长 41, 平键 16X10X32  
螺母拧紧力矩: 750±50Nm



Q轴: 花键 17Z-2.5mX30PX5e



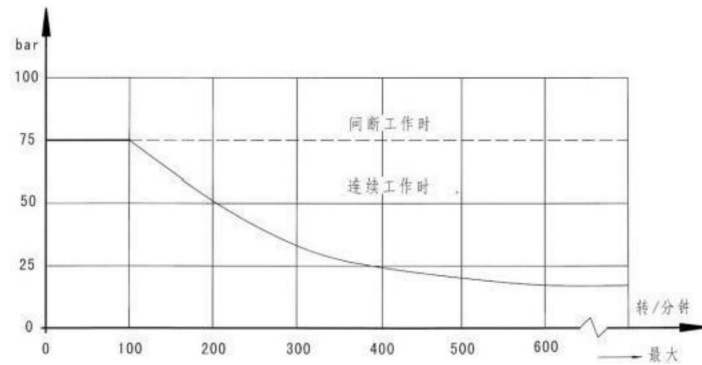
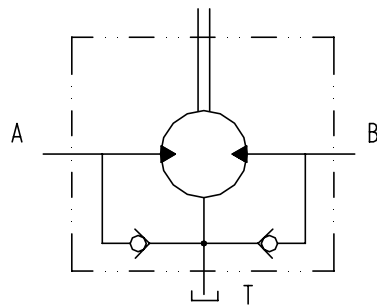
M轴: 圆柱轴  $\phi 40$ , 平键 12X8X70



Y轴: 圆柱轴  $\phi 40$ , 平键 12X8X45

BMV Series Orbital Hydraulic Motor

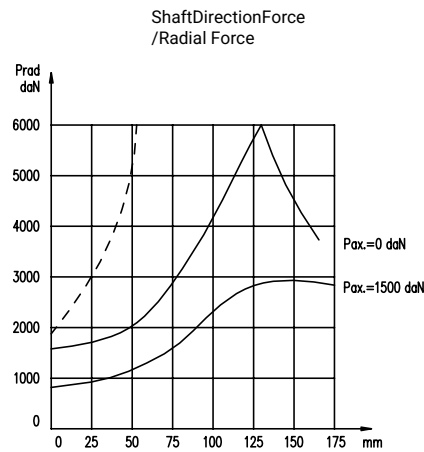
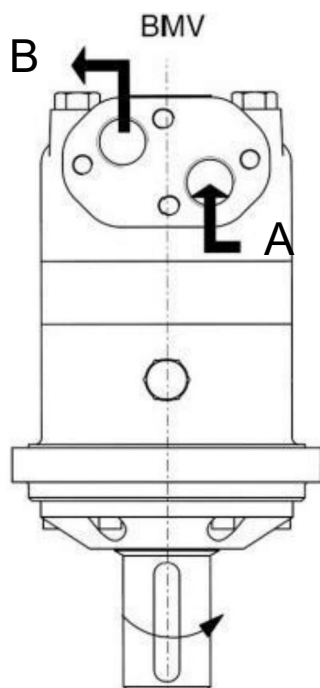
Allowable Pressure on Output Shaft Seal



None External Drain Line , OutputShaftPressureOilPressure .External Drain Line , OutputShaftPressureExternal Drain LinePressure.

OutputShaftStandardRotationDirection

MotorShaft ExtensionDirection, A Oil PortPressureOil, OutputShaftDirectionRotation ; Reverse, DirectionRotation.



AMax.Radial Force, Shaft Bearing B 1 0 ( 200rpm,3000hSpeed), ShaftDirection/radial load.

Drain Port Leakage Flow The following table listsStandardMotor, ExternalDrain PortOilPressure0 .51MPa, ExternalDrain PortMax.ExternalDrainFlow.

Working Pressure Difference (MPa)	Oil Kinematic Viscosity (mm <sup>2</sup> /s)	ExternalDrain PortExternalDrainFlow (L/min.)
14	20	3
	35	2
21	20	6
	35	4

# Ordering Information

1
2
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BMV

POS. 1	2	3		4		5		6		7		8						
Structure Code	Displacement	Flange / Pilot		Shaft Extension		Oil Port / Drain Port		Rotation Direction		Paint Option		Special Function						
BMV	315	4	4-φ18Square Flange, φ200 , Pilotφ160X11	A	Straight Shaftφ50 , Length82 , Parallel Key14X9X70,ShaftthreadM12	D	G1,G1/4,Subplate4-M12	None	Standard Reverse	00	Unpainted Blue Paint Black Paint Silver Gray Paint	None	Standard					
	400			BD	Straight Shaftφ53.975 , Length82 , Key16-DP8/16,ShaftthreadM12	M	M33X2,M14X1 .5,Subplate4-M12											
	500	W9	4-φ18Square Flange, φ224 , Pilotφ180X10	B	Straight Shaftφ53.975 , Length82 , Key16-DP8/16,Shaftthread3/8-16UNC	S	1-5/16-12UN 'O'-ring,9/16-18UNF 'O'-ring											
	630			C	Straight Shaftφ57.15 , Length82 , Parallel Key12 .7X12 .7X57.15,Shaftthread3/8-16UNC	G	G1,G1/4											
	800	1000	4-φ16.5Square Flange, φ224 , Pilot φ180X10	T	Tapered Shaftφ60 , taper1:10 , taper length70 , Parallel Key16X10X32,M42X3	M5	M33X2,M14X1.5											
	800			T1	Tapered Shaftφ57.2 , taper1:8 , taper length73 , Parallel Key14 .3X14 .3X50, 1-1/2- 18UNEF	D1	G3/4,G1/4,Subplate4-M12											
	1000			T2	Tapered Shaftφ60 , taper1:10 , taper length41 , Parallel Key16X10X32,M42X3													
					Q	Straight Shaftφ45 , Length62 , Key17ZX2 .5mX30PX5e,ShaftthreadM12												
					M	Straight Shaftφ40 , Length79 , Parallel Key12X8X70,ShaftthreadM12												
					Y	Straight Shaftφ40 , Length56 , Parallel Key12X8X45,ShaftthreadM12												

Note: When using the ordering information, select the codes for motor structure, displacement, mounting flange, shaft extension, inlet/outlet ports, etc. from the colored positions on the left and write them to us in the above format. If the selected specification is not listed above or special requirements are needed, please contact us.

# CONTACT

# YUNLINK HYDRAULICS

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For product selection, quotation and OEM/ODM inquiries, please contact us.

## COMPANY

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**Hebei Yunlink Industrial Co., Ltd.**

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**WhatsApp:** +86 155 3213 6555

**Website:** [www.yunlinkhydraulic.com](http://www.yunlinkhydraulic.com)

**LinkedIn:** [linkedin.com/in/peterbai-hydraulics](https://www.linkedin.com/in/peterbai-hydraulics)

### Location:

No. 5 Yucai Street, North Industrial Zone  
Ningjin County, Xingtai City  
Hebei Province, China

## WHEN SENDING AN INQUIRY, PLEASE INCLUDE:

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1. Product model
2. Thread size / connection type
3. Required pressure and flow rate
4. Quantity
5. Application or equipment model