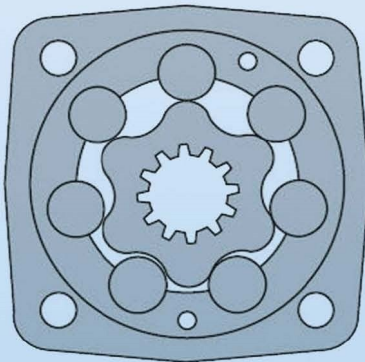
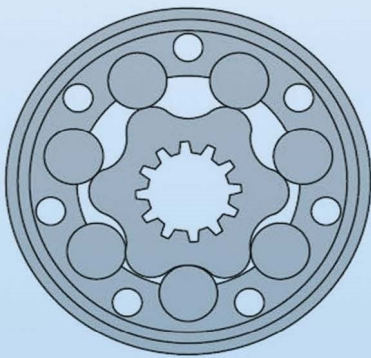




**HAN JIU**

# 石家庄寒九科技有限公司

SHIJIAZHUANG HANJIU TECHNOLOGY CO.,LTD.



中国 河北 石家庄

**Shijiazhuang, Hebei, China**

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## Usage Guide

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

1. Oil temperature :normal 20℃~60℃ upper limit 90℃ (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 mm<sup>2</sup>/s at 40℃ of oil temperature ,according to the condition to choose an applicable hydraulic oil.
4. The motors can be operated in parallel or in series. When the pressure of the back exceeds 2MPa,it is necessary to install an external drain line to the tank.
- 5.1 For BMM and BMP and BMR series motors,the type of output shaft may be chosen in demand.
  - 5.1.1 The output shaft permits a radial force with the radial bearing.
  - 5.1.2 The output shaft doesn' t permit the radial force without the radial bearing.When the radial force acts on the shaft,the force must be discharged.
- 5.2 For BMK2、BMSY、BMT 、BMV and BMK6 series motors, the output shaft permit high axial and radial forces.
6. The optimal operation situation should be at the 1/3~2/3 of the rated operation situation.
7. 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 Motors

Distribution type	Model	Displacement (cm <sup>3</sup> /rev.)	Max. operating pressure (MPa)	Speed range (rpm)	Max. output power (kW)
Axial distribution	BMM	8~50	14	30-1950	3.2
	BMP	36~400	16.5	30~879	10
	BMR	36~375	20	30~970	15
	BMH	200~500	20	30~430	17

## Specification Data of Hydraulic Motor

Distribution type	Model	Displacement (cm <sup>3</sup> /rev.)	Max. operating pressure (MPa)	Speed range (rpm)	Max. output power (kW)
Disc distribution	BMSY	80~475	22.5	8~800	24
	BMT	160~800	24	10~705	35
	BMV	315~800	28	10~446	43



## BMM SERIES HYDRAULIC MOTOR

BMM series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

### Characteristic features:

- \* Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
- \* Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
- \* Advanced construction design, high power and low weight.

### Main Specification

Type		BMM 8	BMM 12.5	BMM 20	BMM 32	BMM 40	BMM 50
Geometric displacement (cm <sup>3</sup> /rev.)		8.2	12.9	19.9	31.6	39.8	50.3
Max. speed (rpm)	cont.	1950	1550	1000	630	500	400
	int.	2450	1940	1250	800	630	500
Max. torque (N·m)	cont.	11	16	25	40	45	46
	int.	15	23	35	57	70	88
	peak	21	33	51	64	82	100
Max. output (kW)	cont.	1.8	2.4	2.4	2.4	2.2	1.8
	int.	2.6	3.2	3.2	3.2	3.2	3.2
Max. pressure drop (MPa)	cont.	10	10	10	10	9	7
	int.	14	14	14	14	14	14
	peak	20	20	20	16	16	16
Max. flow (L/min)	cont.	16	20	20	20	20	20
	int.	20	25	25	25	25	25
Weight (kg)		1.9	2	2.1	2.2	2.3	2.4

Type		Max.inlet pressure
BMM8-50 (MPa)	cont.	17.5
	int.	22.5

- \* 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

BMM8 [8.2 cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

		3.5		5		7		10		12		14	
Flow (L/min)	2	3	5	8	10	12	14						
	4	<b>228</b>	<b>218</b>	<b>206</b>	<b>156</b>	<b>111</b>	<b>58</b>						
	8	<b>474</b>	<b>471</b>	<b>463</b>	<b>426</b>	<b>391</b>	<b>331</b>						
	12	<b>953</b>	<b>946</b>	<b>926</b>	<b>884</b>	<b>855</b>	<b>816</b>						
Max.cont.	15		2	5	7	10	13	15					
	20			4	7	10	12	14					
Max.int.	20				6	10	11	14					
	25						<b>2395</b>	<b>2350</b>	<b>2328</b>	<b>2281</b>			

BMM12.5 [12.9 cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

		3.5		5		7		10		12		14	
Flow (L/min)	2	6	8	11	16	19							
	4	<b>140</b>	<b>136</b>	<b>119</b>	<b>68</b>	<b>35</b>							
	8	<b>296</b>	<b>289</b>	<b>274</b>	<b>229</b>	<b>200</b>	<b>145</b>						
	12	<b>605</b>	<b>596</b>	<b>583</b>	<b>543</b>	<b>514</b>	<b>469</b>						
Max.cont.	15	5	8	11	16	20	24						
	20	5	8	11	16	20	24						
Max.int.	25	5	7	11	16	19	23						
	30	3	7	10	15	19	22						

BMM20 [19.9 cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

		1.7		3.5		5		7		10		12		14	
Flow (L/min)	2	3	9	14	19	26	30								
	4	<b>99</b>	<b>96</b>	<b>89</b>	<b>74</b>	<b>42</b>	<b>21</b>								
	8	<b>197</b>	<b>191</b>	<b>182</b>	<b>178</b>	<b>134</b>	<b>112</b>	<b>74</b>							
	12	<b>398</b>	<b>395</b>	<b>391</b>	<b>377</b>	<b>340</b>	<b>319</b>	<b>288</b>							
Max.cont.	15	3	8	13	18	26	31	37							
	20	3	8	12	17	25	30	36							
Max.int.	25	1	6	11	19	24	29	35							
	30			4	9	14	23	28	33						

BMM32 [31.6 cc/rev.]

Pressure (MPa) Max.cont. Max.int.

		2		3.5		5		7		10		12		14	
Flow (L/min)	2	7	15	21	28	40									
	4	<b>61</b>	<b>57</b>	<b>52</b>	<b>47</b>	<b>16</b>									
	8	<b>126</b>	<b>121</b>	<b>114</b>	<b>106</b>	<b>82</b>	<b>67</b>	<b>49</b>							
	12	<b>250</b>	<b>244</b>	<b>239</b>	<b>231</b>	<b>207</b>	<b>194</b>	<b>167</b>							
Max.cont.	15	6	13	20	28	40	48	58							
	20	4	12	18	27	39	47	57							
Max.int.	25	3	10	17	25	37	46	55							
	30	1	8	15	23	35	43	52							

BMM40 [39.8 cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

		3		5		7		8.5		10		12	
Flow (L/min)	2	16	27	36	44	51							
	4	<b>45</b>	<b>40</b>	<b>34</b>	<b>28</b>	<b>17</b>							
	8	<b>96</b>	<b>93</b>	<b>85</b>	<b>79</b>	<b>65</b>	<b>52</b>						
	12	<b>197</b>	<b>195</b>	<b>182</b>	<b>176</b>	<b>166</b>	<b>154</b>						
Max.cont.	15	14	25	35	43	51	62						
	20	13	24	34	42	50	62						
Max.int.	25	10	21	31	39	48	59						
	30	7	19	29	37	44	56						

BMM50 [50.3 cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

		1.5		3		5		7		10	
Flow (L/min)	2	11	23	36	50						
	4	<b>37</b>	<b>33</b>	<b>27</b>	<b>22</b>						
	8	<b>76</b>	<b>73</b>	<b>68</b>	<b>63</b>	<b>55</b>					
	12	<b>157</b>	<b>154</b>	<b>149</b>	<b>145</b>	<b>137</b>					
Max.cont.	15	11	21	35	50	71					
	20	11	20	33	49	71					
Max.int.	25	10	18	32	47	69					
	30	8	14	29	44	64					

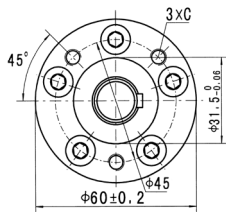
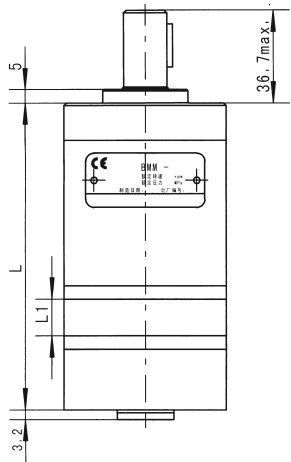
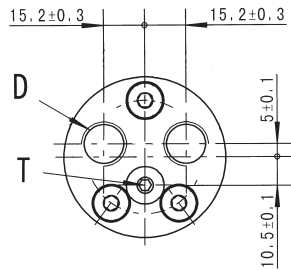
Torque (N·m) 37  
Speed (rpm) 607

cont.  
 int.

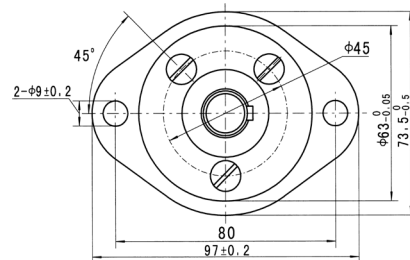
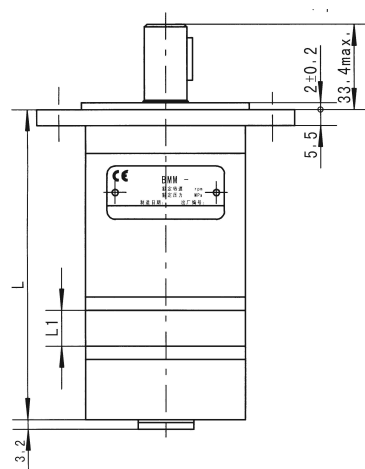
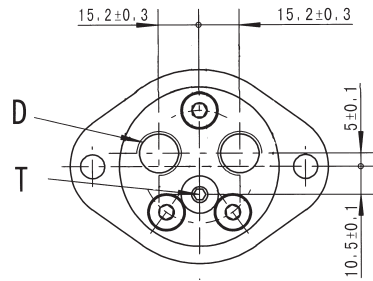
## BMM END PORT DIMENSIONS AND MOUNTING DATA

### MOUNTING

Flange M、U



Flange F



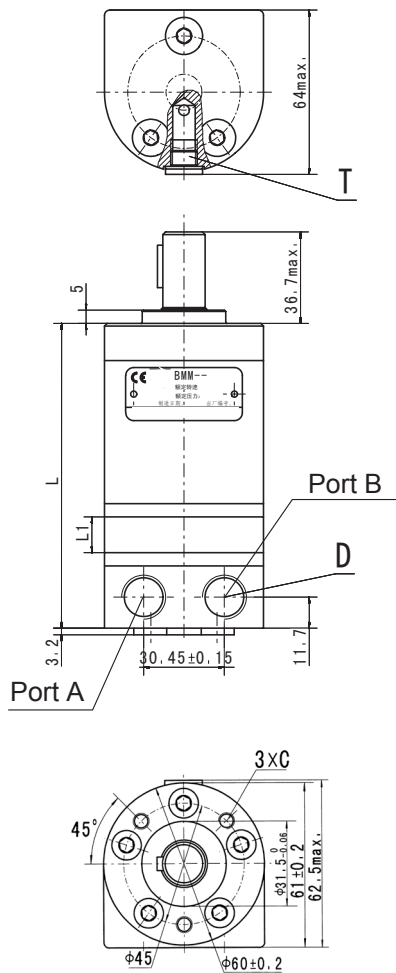
Model	M、U Flange		F Flange	
	L	L1	L	L1
BMM8	104	3.5	107.5	3.5
BMM12.5	106	5.5	109.5	5.5
BMM20	109	8.5	112.5	8.5
BMM32	114	13.5	117.5	13.5
BMM40	117.5	17	121	17
BMM50	122	21.5	125.5	21.5

Mounting	M、U Flange		F Flange	
	1E (depth)	1U (depth)	1E (depth)	1U (depth)
C	[M]3-M6 (10)	[U]3-1/4-28UNF-2B(10)	[M]--	[U]--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

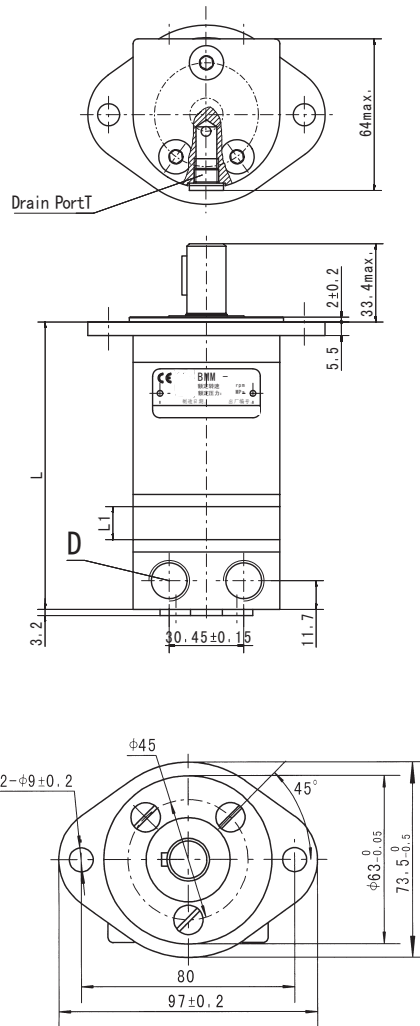
BMM SIDE PORT DIMENSIONS AND MOUNTING DATA

MOUNTING

Flange M、U



Flange F

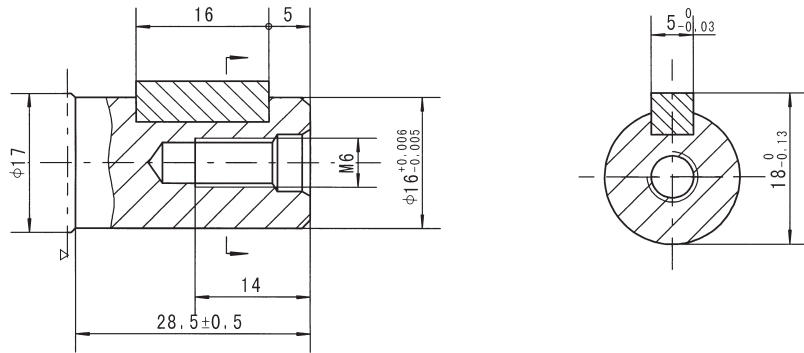


Model	M、U Flange		F Flange	
	L	L1	L	L1
BMM8	105	3.5	108.5	3.5
BMM12.5	107	5.5	110.5	5.5
BMM20	110	8.5	113.5	8.5
BMM32	115	13.5	118.5	13.5
BMM40	118.5	17	122	17
BMM50	123	21.5	126.5	21.5

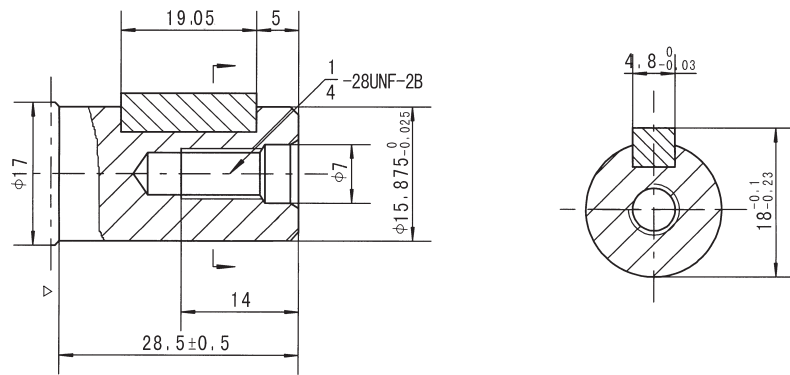
Code	M、U Flange		F Flange	
	E (depth)	U (depth)	E (depth)	U (depth)
C	[M]3-M6 (10)	[U]3-1/4-28UNF-2B(10)	[M]--	[U]--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

BMM SHAFT EXTENSIONS FOR BMM MOTORS

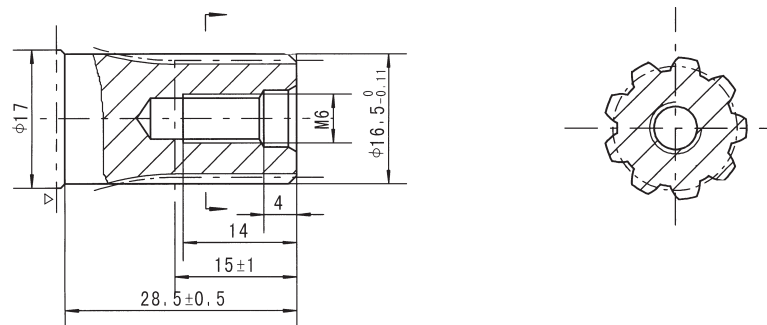
Shaft A: Cylindrical shaft  $\varnothing 16$   
Parallel key 5x5x16



Shaft B: Cylindrical shaft  $\varnothing 15.875$   
Parallel key 4.8x4.8x19.05



Shaft C: Involute splind shaft  
B17x14 DIN5482

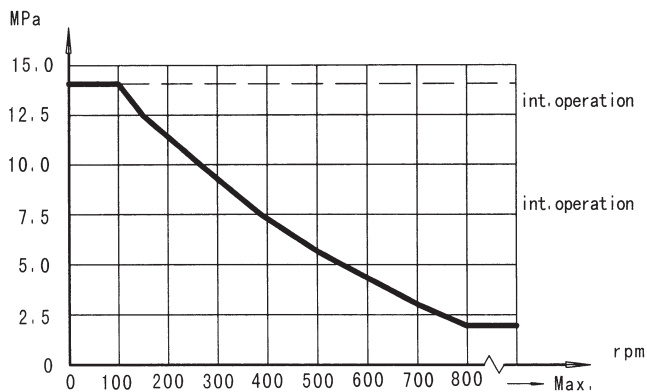
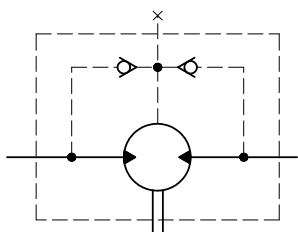


▷ Motor Mounting Surface



## BMM Series Hydraulic Motor

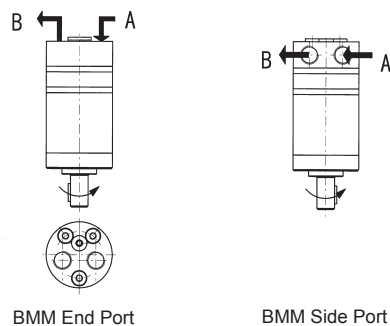
### Permissible shaft seal pressure



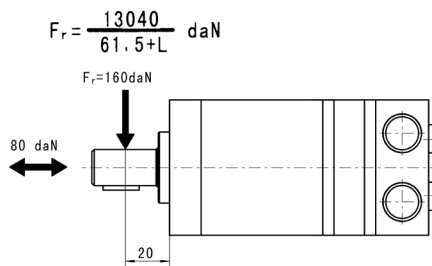
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

### Direction of shaft rotation: Standard

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



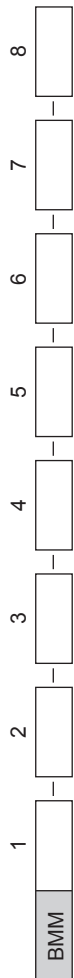
### Status of the shaft's radial force



$F_r = \frac{13040}{61.5 + L} \text{ daN}$   
 $F_r = 160 \text{ daN}$   
 $80 \text{ daN}$   
 $L = 20 \text{ mm}$

$F_r$  = Radial Force (daN)  
 $L$  = Distance (mm)  
 $n$  = Speed (rpm)  
 Max. force load  
 Rhomb-flange  $L = 15 \text{ mm}$   
 Square-flange  $L = 20 \text{ mm}$

### Order Information



Pos.1	2	3	4	5	6	7	8
Code	Displacement	Flange	Output shaft	Ports and drain port	Rotation direction	Paint	Unusually function
	8						
	12.5	M	A	E		00	
	20	U	B	U	Omit Standard	Omit	Omit
	32	F	C	1E	R	B	0
	40			1U		S	No case drain
	50						

Note: When the table is used, please fill the code of left rows in the table 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.



## BMP SERIES HYDRAULIC MOTOR

BMP series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

### Characteristic features:

- \* Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
- \* Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
- \* Advanced construction design, high power and low weight.

### Main Specification

Technical data for BMP with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Type		BMP BMPH BMPW 36	BMP BMPH BMPW 50	BMP BMPH BMPW 80	BMP BMPH BMPW 100	BMP BMPH BMPW 125	BMP BMPH BMPW 160	BMP BMPH BMPW 200	BMP BMPH BMPW 250	BMP BMPH BMPW 315	BMP BMPH BMPW 400	BMP BMPH BMPW 500
	Geometric displacement (cm <sup>3</sup> /rev.)		36	51.7	77.7	96.2	120.2	157.2	194.5	240.3	314.5	389.5
Max. speed (rpm)	cont.	1500	1150	770	615	490	383	310	250	192	155	120
	int.	1650	1450	960	770	615	475	385	310	240	190	150
Max. torque (N·m)	cont.	55	100	146	182	236	302	360	380	375	360	385
	int.	76	128	186	227	290	370	440	460	555	525	560
	peak	96	148	218	264	360	434	540	550	650	680	680
Max. output (kW)	cont.	8.0	10.0	10.0	11.0	10.0	10.0	10.0	8.5	7.0	6.0	5.0
	int.	11.5	12.0	12.0	13.0	12.0	12.0	12.0	10.5	8.5	7.0	6.0
Max. pressure drop (MPa)	cont.	12.5	14	14	14	14	14	14	11	9	7	6
	int.	16.5	17.5	17.5	17.5	17.5	17.5	17.5	14	14	10.5	9
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	18	16	14	12
Max. flow (L/min)	cont.	55	60	60	60	60	60	60	60	60	60	60
	int.	60	75	75	75	75	75	75	75	75	75	75
Weight (kg)		5.6	5.6	5.7	5.9	6.0	6.2	6.4	6.7	6.9	7.4	8

\* 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.

## Main Specification

### Technical data for BMP with 31.75 and 32 shaft

Type		BMP 36	BMP 50	BMP 80	BMP 100	BMP 125	BMP 160	BMP 200	BMP 250	BMP 315	BMP 400	BMP 500
Geometric displacement (cm <sup>3</sup> /rev.)		36	51.7	77.7	96.2	120.2	157.2	194.5	240.3	314.5	389.5	486.5
Max. speed (rpm)	cont.	1500	1150	770	615	490	383	310	250	192	155	120
	int.	1650	1450	960	770	615	475	385	310	240	190	150
Max. torque (N·m)	cont.	55	100	146	182	236	302	360	460	475	490	430
	int.	76	128	186	227	290	370	440	570	555	580	560
	peak	96	148	218	264	360	434	540	670	840	840	780
Max. output (kW)	cont.	8.0	10.0	10.0	11.0	10.0	10.0	10.0	8.5	7.0	6.0	6.0
	int.	11.5	12.0	12.0	13.0	12.0	12.0	12.0	10.5	8.5	7.0	7.0
Max. pressure drop (MPa)	cont.	12.5	14	14	14	14	14	14	14	12	9.5	7
	int.	16.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	14	11.5	9
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	18	13
Max. flow (L/min)	cont.	55	60	60	60	60	60	60	60	60	60	60
	int.	60	75	75	75	75	75	75	75	75	75	75
Weight (kg)		5.6	5.6	5.7	5.9	6.0	6.2	6.4	6.7	6.9	7.4	8.0

\* 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

BMP 36 [36cm³/rev.]

Pressure (MPa)

	3	6	7	8	10	11	12.5	16.5
--	---	---	---	---	----	----	------	------

Flow (L/min)	Max.cont.								Max.int.	
	3	6	7	8	10	11	12.5	16.5		
8	13	25	29	34	43	48				
15	214	205	200	194	187	179				
20	13	24	29	34	43	48	56	76		
30	541	534	528	521	513	500	486	458		
35	12	24	29	34	43	48	56	76		
40	814	804	792	778	763	749	726	701		
45	12	23	28	32	41	47	55	75		
55	1090	1078	1064	1048	1024	998	977	943		
60	11	22	26	32	41	46	54	74		
75	1232	1218	1196	1175	1149	1118	1080	1044		
Max.cont.	6	15	22	28	37	44	52	71		
Max.int.	3	11	18	20	30	38	49	67		
Max.int.	1650	1640	1626	1603	1571	1536	1502	1446		

BMP 50 [51.7cm³/rev.]

Pressure (MPa)

	3	6	8	10	12.5	14	16	17.5
--	---	---	---	----	------	----	----	------

Flow (L/min)	Max.cont.								Max.int.	
	3	6	8	10	12.5	14	16	17.5		
8	20	41	56	69	89	95				
15	151	134	115	90	56	42				
20	19	40	56	71	91	100	112	120		
30	286	274	261	243	204	182	139	102		
35	18	39	55	71	92	101	117	128		
40	382	373	361	348	318	309	287	251		
45	17	38	55	71	91	98	116	124		
55	573	568	558	535	503	488	462	440		
60	17	38	54	69	89	98	117	124		
75	670	661	652	640	606	589	562	548		
Max.cont.	14	36	53	67	88	98	114	123		
Max.int.	12	33	50	65	85	96	111	121		
Max.int.	1055	1042	1028	1010	979	963	947	920		
Max.int.	10	32	47	64	83	94	108	119		
Max.int.	6	25	42	56	76	87	101	112		
Max.int.	1150	1143	1126	1111	1079	1065	1043	1015		
Max.int.	1440	1430	1416	1395	1367	1351	1335	1312		

BMP 80 [77.7cm³/rev.]

Pressure (MPa)

	3	6	8	10	12.5	14	16	17.5
--	---	---	---	----	------	----	----	------

Flow (L/min)	Max.cont.								Max.int.	
	3	6	8	10	12.5	14	16	17.5		
8	32	62	85	104	129	144				
15	97	87	74	55	33	22				
20	32	63	84	107	126	144	165			
30	186	181	170	154	132	118	86			
35	31	63	84	107	132	146	168	185		
40	251	243	236	225	207	196	178	155		
45	31	62	83	106	131	146	168	186		
55	381	379	368	355	332	316	285	263		
60	30	59	81	102	130	144	167	185		
75	443	435	426	415	397	383	361	342		
Max.cont.	25	58	79	100	126	142	165	182		
Max.int.	23	57	78	97	124	140	161	179		
Max.int.	696	685	672	656	643	630	602	579		
Max.int.	20	53	75	94	120	137	160	177		
Max.int.	761	753	744	736	720	706	681	660		
Max.int.	14	44	67	87	112	151	169	169		
Max.int.	948	940	931	920	906	890	871	854		

Torque (N·m) 87  
Speed (rpm) 920

BMP 100 [96.2cm³/rev.]

Pressure (MPa)

	3	6	8	10	12.5	14	16	17.5
--	---	---	---	----	------	----	----	------

Flow (L/min)	Max.cont.								Max.int.	
	3	6	8	10	12.5	14	16	17.5		
8	40	77	105	130	161	180				
15	81	75	69	57	36	24				
20	39	77	106	130	160	180	208			
30	152	149	145	140	122	103	81			
35	36	74	104	128	161	179	205	227		
40	204	200	195	190	177	166	148	133		
45	33	72	103	125	160	177	203	225		
55	308	304	298	290	280	268	255	231		
60	30	70	98	122	159	176	202	224		
75	360	352	343	331	320	306	294	275		
Max.cont.	29	67	95	118	155	174	200	220		
Max.int.	25	64	93	116	152	170	198	217		
Max.int.	566	558	549	540	529	515	498	478		
Max.int.	22	60	91	114	149	167	194	213		
Max.int.	618	611	601	589	580	570	558	540		
Max.int.	15	54	83	106	141	160	186	205		
Max.int.	771	763	755	744	735	724	708	693		

□ cont.  
■ int.

Performance Data

BMP 125 [120.2cm<sup>3</sup>/rev.]

Pressure (MPa)		Max.cont.						Max.int.	
		3	6	8	10	12.5	14	16	17.5

Flow (L/min)	Pressure (MPa)								
	3	6	8	10	12.5	14	16	17.5	
8	51	98	137	168	208	236			
	<b>63</b>	<b>60</b>	<b>55</b>	<b>47</b>	<b>28</b>	<b>15</b>			
15	51	101	138	168	209	236	267		
	<b>121</b>	<b>116</b>	<b>110</b>	<b>102</b>	<b>89</b>	<b>73</b>	<b>48</b>		
20	48	98	135	167	211	237	269	290	
	<b>162</b>	<b>158</b>	<b>153</b>	<b>148</b>	<b>137</b>	<b>128</b>	<b>109</b>	<b>94</b>	
30	46	96	132	164	209	232	264	287	
	<b>243</b>	<b>239</b>	<b>234</b>	<b>227</b>	<b>216</b>	<b>202</b>	<b>189</b>	<b>176</b>	
35	42	92	130	160	206	229	260	284	
	<b>284</b>	<b>279</b>	<b>274</b>	<b>269</b>	<b>259</b>	<b>247</b>	<b>231</b>	<b>222</b>	
45	37	89	125	157	201	224	261	281	
	<b>370</b>	<b>362</b>	<b>355</b>	<b>348</b>	<b>340</b>	<b>327</b>	<b>310</b>	<b>296</b>	
55	33	84	122	152	196	218	252	275	
	<b>452</b>	<b>446</b>	<b>438</b>	<b>431</b>	<b>420</b>	<b>412</b>	<b>402</b>	<b>384</b>	
Max.cont.	29	78	117	146	191	215	248	272	
Max.int.	<b>490</b>	<b>482</b>	<b>475</b>	<b>468</b>	<b>459</b>	<b>448</b>	<b>439</b>	<b>427</b>	
	18	66	107	133	179	202	236	260	
	<b>615</b>	<b>606</b>	<b>598</b>	<b>586</b>	<b>575</b>	<b>563</b>	<b>549</b>	<b>528</b>	

BMP 160 [157.2cm<sup>3</sup>/rev.]

Pressure (MPa)		Max.cont.						Max.int.	
		3	6	8	10	12.5	14	16	17.5

Flow (L/min)	Pressure (MPa)								
	3	6	8	10	12.5	14	16	17.5	
8	62	120	170	212	263	290			
	<b>49</b>	<b>48</b>	<b>46</b>	<b>42</b>	<b>26</b>	<b>14</b>			
15	60	122	172	215	264	294	340		
	<b>93</b>	<b>91</b>	<b>88</b>	<b>85</b>	<b>76</b>	<b>68</b>	<b>48</b>		
20	57	120	170	214	262	290	340	371	
	<b>125</b>	<b>123</b>	<b>120</b>	<b>117</b>	<b>110</b>	<b>106</b>	<b>92</b>	<b>81</b>	
30	53	115	164	206	259	288	335	368	
	<b>187</b>	<b>184</b>	<b>181</b>	<b>178</b>	<b>175</b>	<b>168</b>	<b>155</b>	<b>139</b>	
35	49	110	160	202	255	284	328	362	
	<b>220</b>	<b>216</b>	<b>213</b>	<b>209</b>	<b>205</b>	<b>202</b>	<b>192</b>	<b>176</b>	
45	44	102	154	196	248	278	321	358	
	<b>283</b>	<b>280</b>	<b>276</b>	<b>272</b>	<b>267</b>	<b>260</b>	<b>250</b>	<b>238</b>	
55	40	99	148	191	243	272	316	351	
	<b>345</b>	<b>342</b>	<b>340</b>	<b>336</b>	<b>331</b>	<b>328</b>	<b>320</b>	<b>303</b>	
Max.cont.	33	94	144	188	236	267	308	345	
	<b>377</b>	<b>374</b>	<b>371</b>	<b>367</b>	<b>363</b>	<b>359</b>	<b>353</b>	<b>342</b>	
Max.int.	19	80	124	170	216	252	296	325	
	<b>473</b>	<b>469</b>	<b>465</b>	<b>459</b>	<b>453</b>	<b>447</b>	<b>440</b>	<b>424</b>	

BMP 200 [194.5cm<sup>3</sup>/rev.]

Pressure (MPa)		Max.cont.						Max.int.	
		3	6	8	10	12.5	14	16	17.5

Flow (L/min)	Pressure (MPa)								
	3	6	8	10	12.5	14	16	17.5	
8	79	164	207	250	320	360			
	<b>40</b>	<b>39</b>	<b>38</b>	<b>35</b>	<b>28</b>	<b>22</b>			
15	78	162	205	250	322	361	410		
	<b>76</b>	<b>75</b>	<b>74</b>	<b>71</b>	<b>66</b>	<b>61</b>	<b>51</b>		
20	76	158	203	247	320	358	403	422	
	<b>100</b>	<b>98</b>	<b>97</b>	<b>95</b>	<b>92</b>	<b>89</b>	<b>73</b>	<b>57</b>	
30	70	153	200	245	315	350	398	417	
	<b>151</b>	<b>149</b>	<b>147</b>	<b>145</b>	<b>142</b>	<b>139</b>	<b>131</b>	<b>120</b>	
35	66	149	194	232	297	343	386	415	
	<b>177</b>	<b>175</b>	<b>173</b>	<b>171</b>	<b>168</b>	<b>166</b>	<b>160</b>	<b>149</b>	
45	63	146	190	230	294	340	383	410	
	<b>228</b>	<b>226</b>	<b>224</b>	<b>221</b>	<b>218</b>	<b>215</b>	<b>210</b>	<b>198</b>	
55	54	140	181	224	286	334	371	400	
	<b>280</b>	<b>278</b>	<b>276</b>	<b>274</b>	<b>271</b>	<b>269</b>	<b>263</b>	<b>250</b>	
Max.cont.	38	127	164	212	270	325	356	395	
	<b>304</b>	<b>302</b>	<b>300</b>	<b>297</b>	<b>294</b>	<b>291</b>	<b>286</b>	<b>272</b>	
Max.int.	22	96	145	192	235	293	321	367	
	<b>382</b>	<b>378</b>	<b>374</b>	<b>371</b>	<b>368</b>	<b>364</b>	<b>360</b>	<b>350</b>	

BMP 250 [240.3cm<sup>3</sup>/rev.]

Pressure (MPa)		Max.cont.						Max.int.	
		3	6	8	10	12.5	14	16	17.5

Flow (L/min)	Pressure (MPa)								
	3	6	8	10	12.5	14	16	17.5	
8	96	190	268	326	403				
	<b>30</b>	<b>28</b>	<b>24</b>	<b>21</b>	<b>11</b>				
15	98	194	270	327	405	450	510		
	<b>60</b>	<b>58</b>	<b>54</b>	<b>50</b>	<b>40</b>	<b>30</b>	<b>12</b>		
20	92	188	267	325	405	456	514	565	
	<b>82</b>	<b>80</b>	<b>77</b>	<b>76</b>	<b>69</b>	<b>64</b>	<b>52</b>	<b>38</b>	
30	85	180	259	320	400	448	513	561	
	<b>123</b>	<b>120</b>	<b>118</b>	<b>114</b>	<b>106</b>	<b>98</b>	<b>87</b>	<b>76</b>	
35	77	176	252	311	389	436	504	557	
	<b>143</b>	<b>141</b>	<b>139</b>	<b>135</b>	<b>128</b>	<b>122</b>	<b>112</b>	<b>101</b>	
45	70	168	243	300	377	428	495	543	
	<b>185</b>	<b>182</b>	<b>178</b>	<b>174</b>	<b>168</b>	<b>161</b>	<b>152</b>	<b>139</b>	
55	63	159	237	290	369	417	483	531	
	<b>226</b>	<b>223</b>	<b>218</b>	<b>213</b>	<b>209</b>	<b>202</b>	<b>193</b>	<b>185</b>	
Max.cont.	60	150	228	280	358	407	473	520	
	<b>248</b>	<b>246</b>	<b>243</b>	<b>239</b>	<b>233</b>	<b>226</b>	<b>215</b>	<b>207</b>	
Max.int.	34	128	202	264	342	387	448	488	
	<b>309</b>	<b>306</b>	<b>302</b>	<b>297</b>	<b>292</b>	<b>286</b>	<b>278</b>	<b>264</b>	

□ cont.  
■ int.

Torque (N·m) 128  
Speed (rpm) 306

Performance Data

BMP 315 [314.5cm³/rev.]

Pressure (MPa)		Max.cont.		Max.int.		
3	5	7	9	10	12.5	14

Flow (L/min)	Pressure (MPa)						Max.cont.	Max.int.
	3	5	7	9	10	12.5	14	
8	123 <b>25</b>	215 <b>23</b>	292 <b>21</b>	368 <b>17</b>	405 <b>11</b>			
15	118 <b>47</b>	211 <b>46</b>	287 <b>44</b>	367 <b>40</b>	404 <b>28</b>	495 <b>21</b>	568 <b>10</b>	
20	110 <b>62</b>	205 <b>61</b>	278 <b>60</b>	360 <b>57</b>	395 <b>46</b>	494 <b>40</b>	566 <b>36</b>	
30	101 <b>94</b>	196 <b>93</b>	271 <b>91</b>	349 <b>88</b>	388 <b>76</b>	490 <b>68</b>	565 <b>65</b>	
35	96 <b>109</b>	188 <b>107</b>	264 <b>106</b>	341 <b>104</b>	382 <b>96</b>	478 <b>89</b>	557 <b>84</b>	
45	89 <b>141</b>	180 <b>140</b>	254 <b>138</b>	337 <b>135</b>	372 <b>127</b>	468 <b>120</b>	553 <b>115</b>	
55	76 <b>173</b>	166 <b>172</b>	239 <b>170</b>	325 <b>167</b>	362 <b>160</b>	457 <b>152</b>	548 <b>143</b>	
Max.cont. 60	65 <b>188</b>	154 <b>186</b>	227 <b>184</b>	308 <b>182</b>	348 <b>178</b>	443 <b>172</b>	529 <b>163</b>	
Max.int. 75	40 <b>236</b>	120 <b>234</b>	201 <b>232</b>	279 <b>228</b>	323 <b>226</b>	418 <b>223</b>	497 <b>214</b>	

BMP 400 [389.5cm³/rev.]

Pressure (MPa)		Max.cont.		Max.int.		
3	4.5	5.5	6.5	8	10	12.5

Flow (L/min)	Pressure (MPa)						Max.cont.	Max.int.
	3	4.5	5.5	6.5	8	10	12.5	
8	166 <b>20</b>	232 <b>19</b>	287 <b>18</b>	340 <b>16</b>	418 <b>12</b>			
15	165 <b>38</b>	228 <b>36</b>	277 <b>35</b>	337 <b>33</b>	417 <b>31</b>	496 <b>27</b>	612 <b>21</b>	
20	162 <b>50</b>	223 <b>49</b>	273 <b>49</b>	331 <b>48</b>	413 <b>45</b>	495 <b>41</b>	608 <b>35</b>	
30	154 <b>76</b>	216 <b>75</b>	266 <b>74</b>	318 <b>73</b>	405 <b>71</b>	486 <b>67</b>	600 <b>60</b>	
35	146 <b>88</b>	210 <b>87</b>	256 <b>87</b>	312 <b>86</b>	395 <b>83</b>	480 <b>80</b>	588 <b>75</b>	
45	132 <b>114</b>	197 <b>113</b>	243 <b>112</b>	300 <b>110</b>	383 <b>108</b>	464 <b>106</b>	576 <b>99</b>	
55	117 <b>139</b>	184 <b>137</b>	227 <b>136</b>	283 <b>135</b>	363 <b>135</b>	450 <b>132</b>	552 <b>123</b>	
Max.cont. 60	102 <b>153</b>	163 <b>152</b>	215 <b>150</b>	272 <b>148</b>	347 <b>146</b>	436 <b>143</b>	532 <b>138</b>	
Max.int. 75	53 <b>191</b>	128 <b>189</b>	182 <b>187</b>	234 <b>185</b>	318 <b>183</b>	391 <b>180</b>	484 <b>176</b>	

Torque (N·m) 234  
Speed (rpm) 185

BMP500[486.5cm³/rev.]

Pressure (MPa)		Max.cont.		Max.int.		
1.5	3	4.5	6	7	8	9

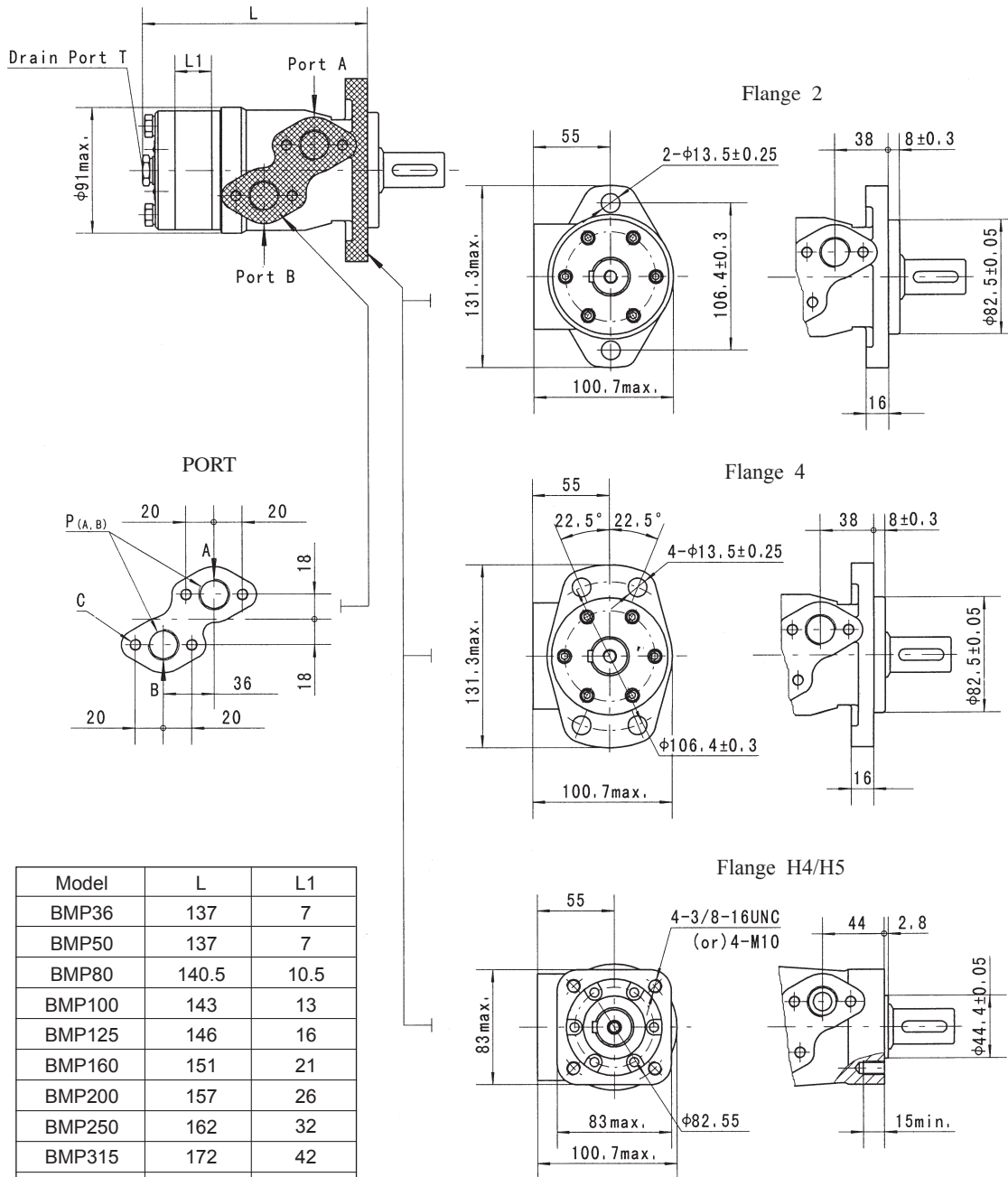
Flow (L/min)	Pressure (MPa)						Max.cont.	Max.int.
	1.5	3	4.5	6	7	8	9	
4	96 <b>7</b>	194 <b>6</b>	285 <b>4</b>					
8	98 <b>15</b>	201 <b>15</b>	304 <b>14</b>	391 <b>14</b>	443 <b>12</b>	512 <b>9</b>	574 <b>7</b>	
15	96 <b>30</b>	192 <b>30</b>	284 <b>29</b>	380 <b>28</b>	421 <b>26</b>	496 <b>23</b>	550 <b>22</b>	
20	96 <b>40</b>	191 <b>40</b>	280 <b>40</b>	372 <b>39</b>	418 <b>37</b>	493 <b>33</b>	546 <b>31</b>	
30	91 <b>61</b>	185 <b>60</b>	272 <b>60</b>	360 <b>58</b>	412 <b>56</b>	486 <b>53</b>	541 <b>50</b>	
40	86 <b>81</b>	172 <b>80</b>	261 <b>80</b>	343 <b>79</b>	408 <b>76</b>	480 <b>73</b>	538 <b>70</b>	
50	78 <b>102</b>	160 <b>101</b>	241 <b>100</b>	332 <b>98</b>	391 <b>96</b>	466 <b>93</b>	528 <b>90</b>	
Max.cont. 60	66 <b>122</b>	134 <b>121</b>	213 <b>120</b>	305 <b>119</b>	371 <b>117</b>	438 <b>114</b>	496 <b>110</b>	
70	52 <b>143</b>	111 <b>142</b>	189 <b>141</b>	292 <b>139</b>	344 <b>137</b>	418 <b>135</b>	475 <b>131</b>	
Max.int. 75	35 <b>153</b>	83 <b>152</b>	154 <b>151</b>	241 <b>150</b>	312 <b>149</b>	389 <b>147</b>	448 <b>144</b>	

cont.  
int.

Torque (N·m) 389  
Speed (rpm) 147

### BMP DIMENSIONS AND MOUNTING DATA

#### MOUNTING



Model	L	L1
BMP36	137	7
BMP50	137	7
BMP80	140.5	10.5
BMP100	143	13
BMP125	146	16
BMP160	151	21
BMP200	157	26
BMP250	162	32
BMP315	172	42
BMP400	182	52
BMP500	195	65

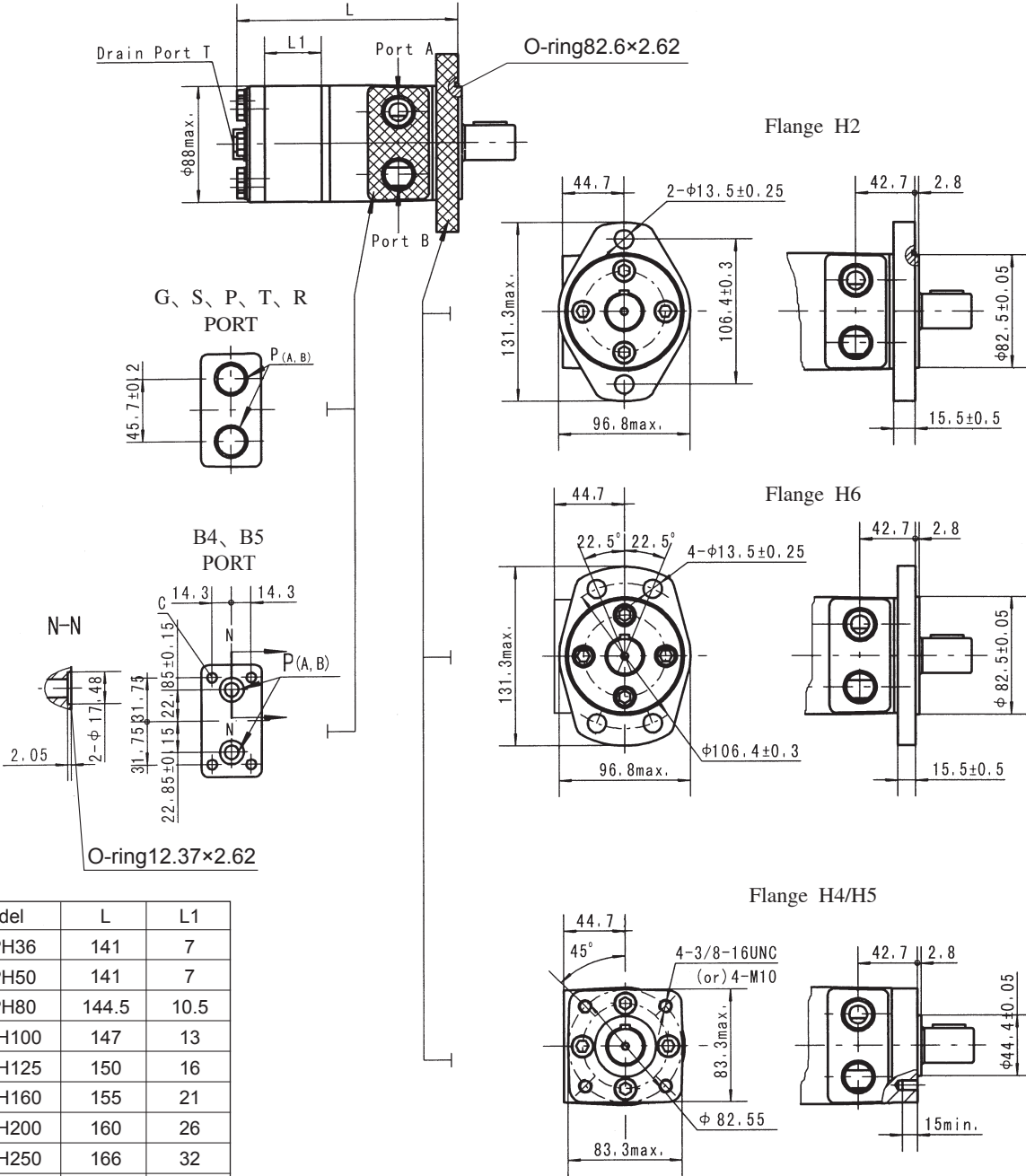
Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)





**BMPH DIMENSIONS AND MOUNTING DATA**

**MOUNTING**

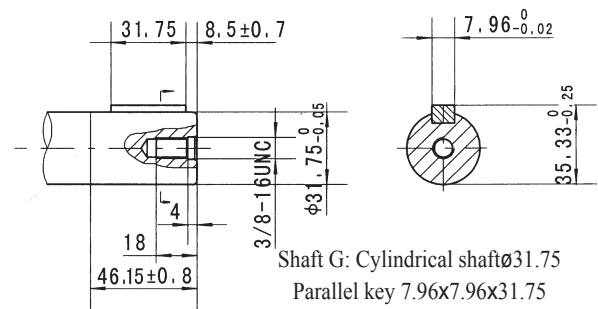
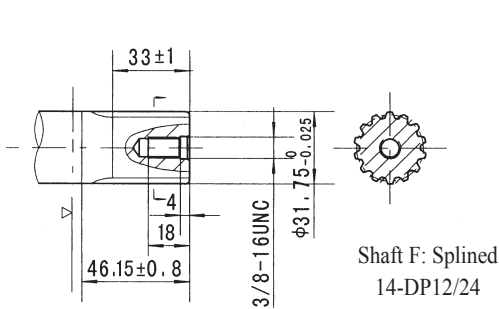
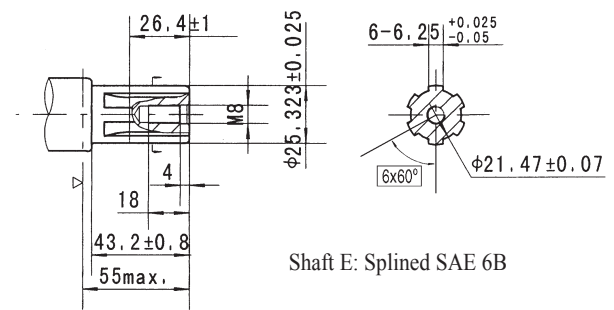
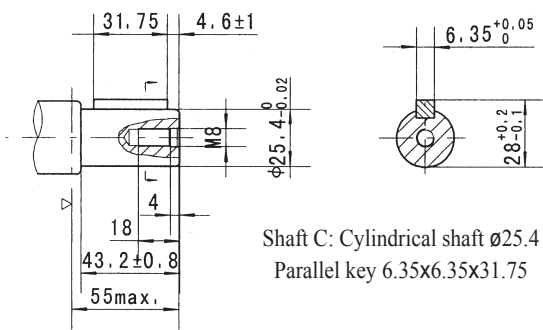
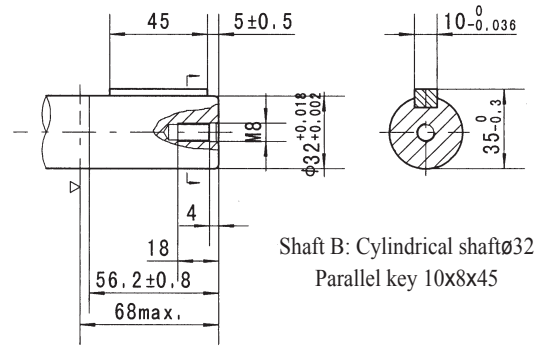
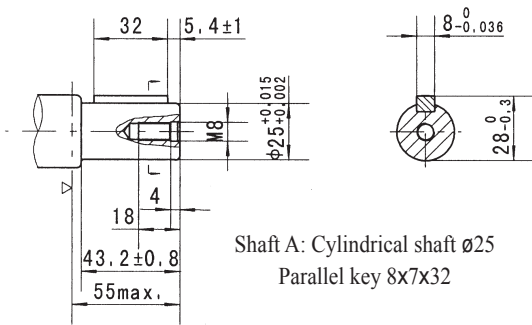


Model	L	L1
BMPH36	141	7
BMPH50	141	7
BMPH80	144.5	10.5
BMPH100	147	13
BMPH125	150	16
BMPH160	155	21
BMPH200	160	26
BMPH250	166	32
BMPH315	176	42
BMPH400	186	52
BMPH500	199	65

Note: The size L of the BMPH N1 should be increased by 2mm.

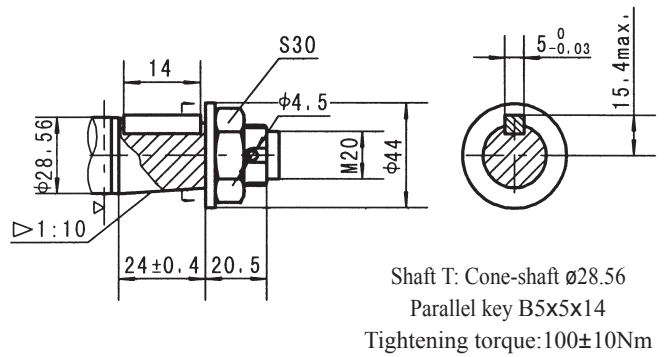
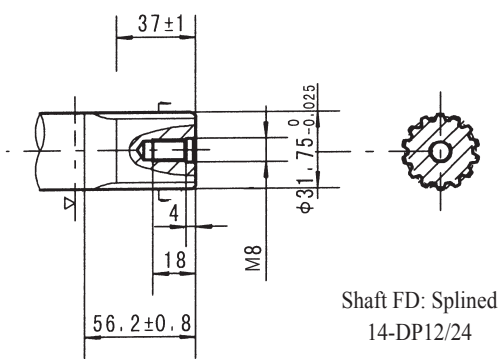
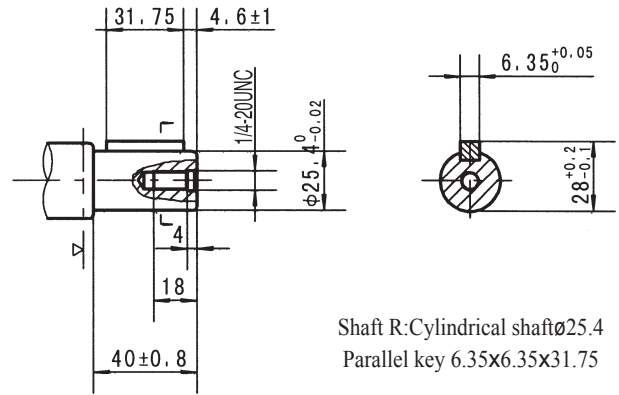
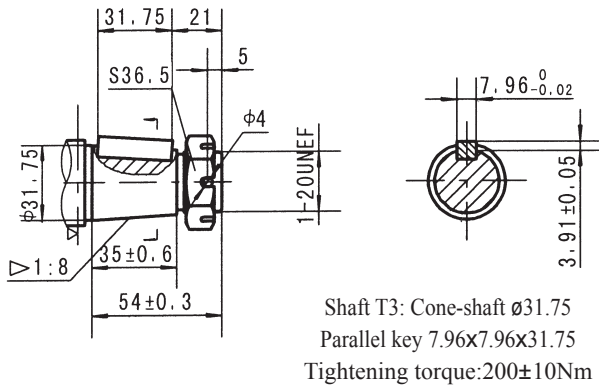
Code	Mounting						
	G (depth)	S (depth)	P (depth)	T (depth)	R (depth)	B4 (depth)	B5 (depth)
P(A,B)	G1/2 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	3/4-16 O-ring (15)	PT(RC)1/2 (15)	ø10	ø10
T	G1/4 (12)	7/16-20UNF (12)	7/16-20UNF (12)	7/16-20UNF(12)	PT(RC)1/4 (9.7)	7/16-20UNF(12)	G1/4(12)
C	-	-	-	-	-	4-5/16-18UNC(13)	4-M8(13)

**BMP SHAFT EXTENSIONS DIMENSIONS DATA**



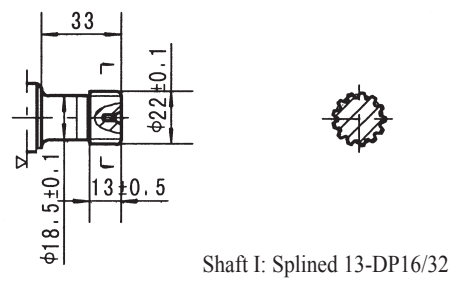
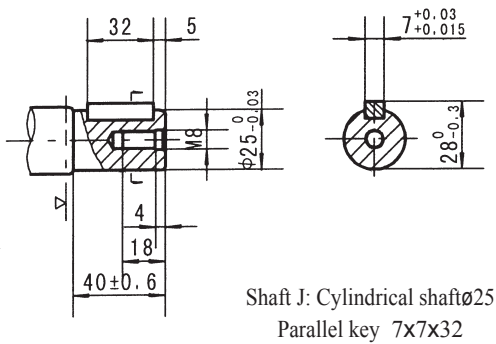
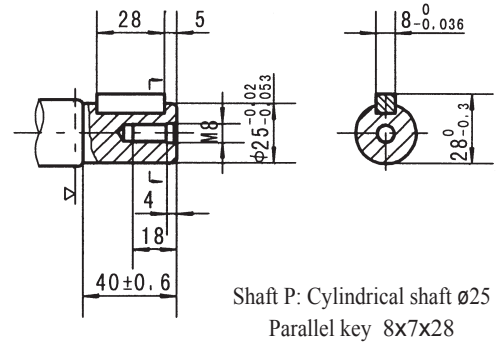
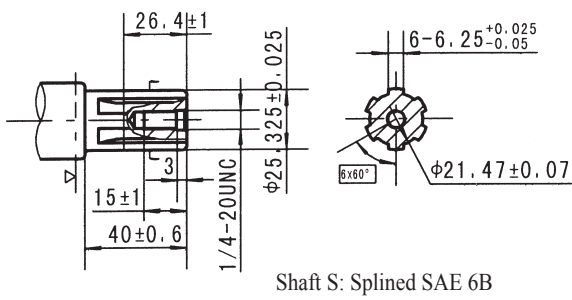
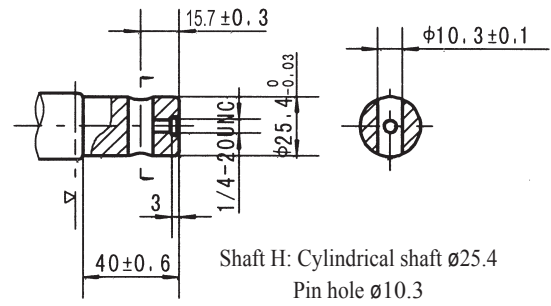
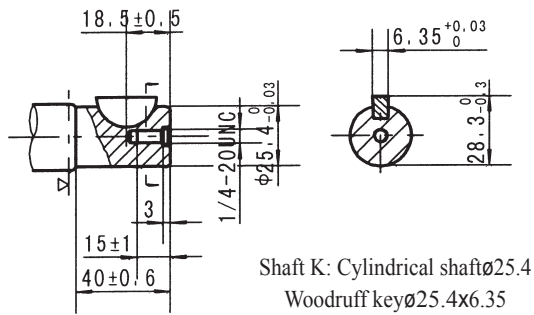
▷ Motor Mounting Surface

**BMP SHAFT EXTENSIONS DIMENSIONS DATA**



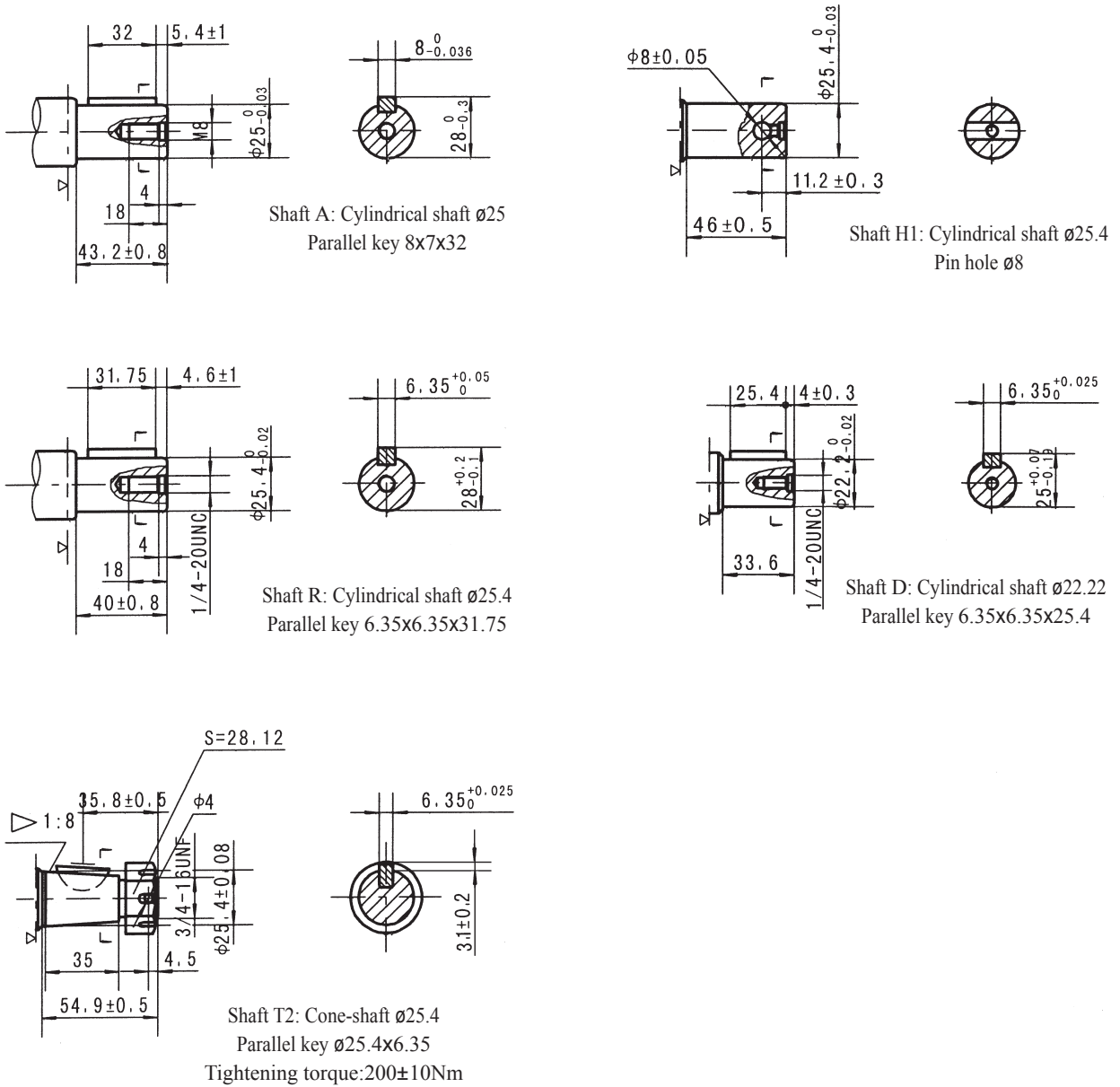
▷ Motor Mounting Surface

**BMPH SHAFT EXTENSIONS DIMENSIONS DATA**



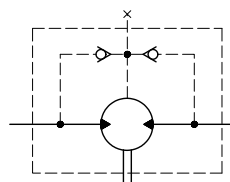
▷ Motor Mounting Surface

**BMPH SHAFT EXTENSIONS DIMENSIONS DATA**

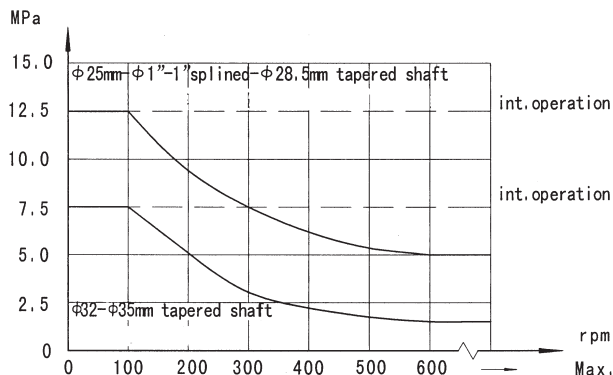
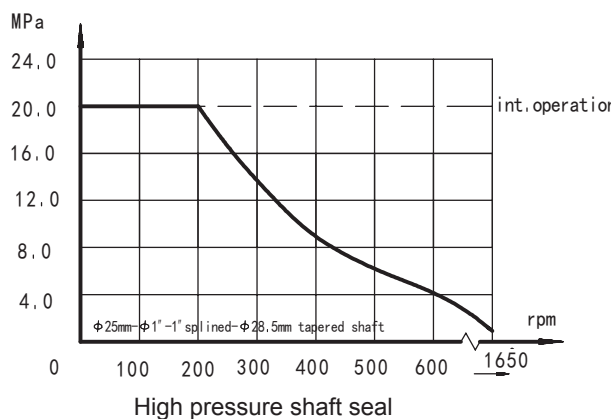


▷ Motor Mounting Surface

## BMP、BMPH Series Hydraulic Motor



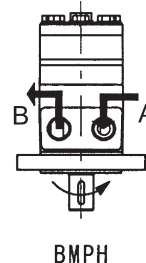
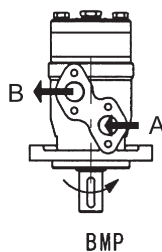
### Permissible shaft seal pressure



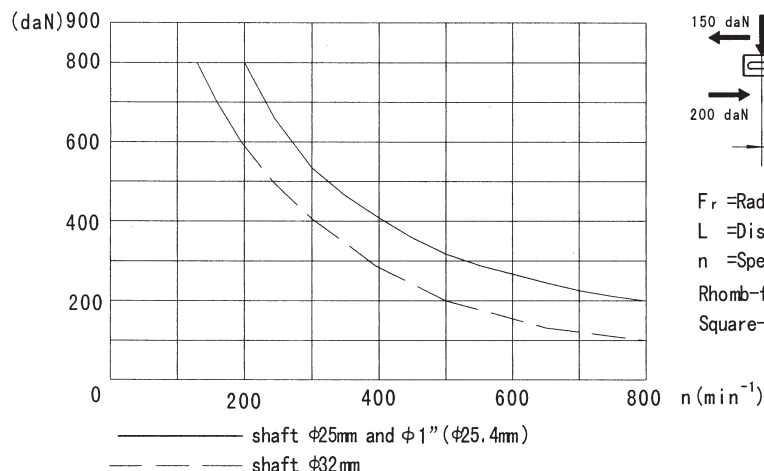
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

### Direction of shaft rotation: Standard

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



### Status of the shaft's radial force (Standard motor with journal bearing)



### Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm <sup>2</sup> /s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

### Order Information

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
BMP	36	2-Ø13.5 Rhomb-flange , pilot Ø82.5x8	A Shaft Ø25,parallel key 8x7x32	D G1/2 Manifold Mount 4xM8, G1/4	Omit Standard Opposite R	00 Omit Blue Black Silver grey	Omit N1 0 F LS
	50	4-Ø13.5 Rhomb-flange , pilot Ø82.5x8	C Shaft Ø25.4,parallel key 6.35x6.35x31.75	M M22x1.5 Manifold Mount 4xM8, M14x1.5			
	80	4-Ø13.5 Rhomb-flange , pilot Ø82.5x8	E Shaft Ø25.4,splined tooth SEA 6B	S 7/8-14 O-ring manifold 4x5/16-18UNC, 7/16-20UNF			
	100	4-3/8-16 Square-flange , pilot Ø44.4x2.8	R Short shaft Ø25.4,parallel key 6.35x6.35x31.75	P 1/2-14 NPTF Manifold 4x5/16-18UNC, 7/16-20UNF			
	125	4-M10 Square-flange , pilot Ø44.4x2.8	T Cone shaft Ø28.56,parallel key B5x5x14	R PT(Rc)1/2 Manifold 4xM8, PT(Rc)1/4			
	160		B Shaft Ø32,parallel key 10x8x45				
	200		F Shaft Ø31.75,splined tooth 14-DP12/24				
	250		FD Long shaft Ø31.75,splined tooth14-DP12/24				
	315		G Shaft Ø31.75, parallel key 7.96x7.96x31.75				
	400		T3 Cone shaft Ø31.75,parallel key 7.96x7.96x25.4				
	500						

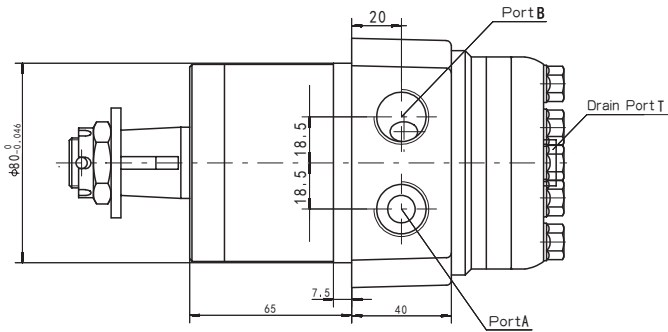
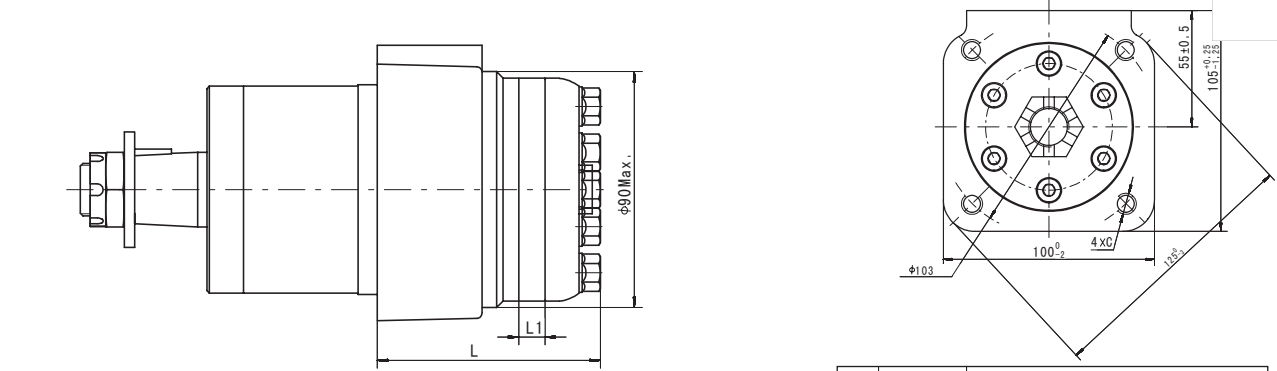
Note:The shafts of B\F\FD\G\I\T1\T3 are only suitable for flanges of 2 and 4.

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
BMPH	36	2-Ø13.5 Rhomb-flange , pilot Ø82.5x2.8	K Shaft Ø25.4, woodruff key Ø25.4x6.35	G G1/2, G1/4	Omit Standard Opposite R	00 Omit Blue Black Silver grey	Omit N1 0 F LS
	50	4-Ø13.5 Rhomb-flange , pilot Ø82.5x2.8	S Shaft Ø25.4 , splined tooth SEA 6B	S 7/8-14 O-ring ,7/16-20UNF			
	80	4-Ø13.5 Rhomb-flange , pilot Ø82.5x2.8	A Shaft Ø25.4 , parallel key 8x7x32	P 1/2-14 NPTF, 7/16-20UNF			
	100	4-3/8-16 Square-flange , pilot Ø44.4x2.8	R Shaft Ø25.4, parallel key 6.35x6.35x31.75	T 3/4-16 O-ring, 7/16-20UNF			
	125	4-M10 Square-flange , pilot Ø44.4x2.8	H Shaft Ø25.4, pin hole Ø10.3	R PT(Rc)1/2 ,PT(Rc)1/4			
	160		H1 Shaft Ø25.4, pin hole Ø8	B4 Ø10 O-ring manifold 4x5/16-18UNC,7/16-20UNF			
	200		D Shaft Ø22.22, parallel key 6.35x6.35x25.4	B5 Ø10 O-ring manifold 4xM8, 7/16-20UNF			
	250		I Shaft Ø22.22, splined tooth 13-DP16/32				
	315		T2 Cone shaft Ø25.4 , woodruff key Ø25.4x6.35				
	400		P Shaft Ø25 , parallel key 8x7x28				
	500		J Shaft Ø25 , parallel key 7x7x32				

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.



**BMPW DIMENSIONS AND MOUNTING DATA**



Model	L	L1
BMPW50	81	7
BMPW80	84.5	10.5
BMPW100	87	13
BMPW125	90	16
BMPW160	95	21
BMPW200	100	26
BMPW250	106	32
BMPW315	116	42
BMPW400	126	52
BMPW500	139	65

Mounting	Code		
	G (depth)	S (depth)	M (depth)
P(A,B)	G1/2 (15)	7/8-14 O-ring (17)	M22×1.5 (15)
T	G1/4 (12)	7/16-20UNF (12)	M14×1.5 (12)
C	4×M10(20)	4×3/8-16UNC(20)	4×M10(20)



**Order Information**

Pos.1	2	3	4	5	6	7	8
Code	Flange	Output shaft	Ports and drain port	Rotation direction	Paint	Unusually function	
50	A Wheel-flange C Wheel-flange E Flat Ø80×7.5 T Omit	A Shaft Ø25x6 ,Parallel key 8x7x32 C Shaft Ø25.4 ,Parallel key 6.35x6.35x31.75 E Shaft Ø25.4 ,Splined key SAE 6B T Cone shaft Ø28.56 ,Parallel key B5x5x14	G G 1/2, G1/4 S 7/8-14 O-ring, M 7/16-20UNF M22×1.5,M14×1.5	Omit Standard R Opposite	00 No paint Omit Blue B Black S Silver grey	Omit Standard N1 Big radial force 0 No case drain	
80							
100							
125							
160							
200							
250							
315							
400							
500							

Note:When the table is used, please fill the code of left rows in the table 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.





## OZ SERIES HYDRAULIC MOTOR

OZ series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

### Characteristic features:

- \* Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
- \* Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
- \* Advanced construction design, high power and low weight.

### Main Specification

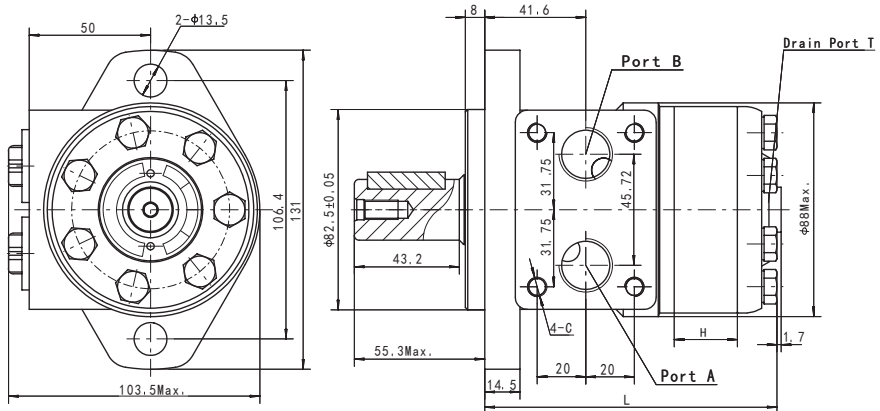
Technical data for OZ with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Code	Displacement [cm <sup>3</sup> /rev]	Max.Speed [rpm]		Max.Torque [Nm]		Max.output [kW]		Max.pressure [MPa]		Max.Oil Flow[L/min]
		cont.		cont.	int.	cont.	int.	cont.	int.	
OZ 36	36	1081		51	68	5.2	8.6	10.5	14	40
OZ 50	51.7	774		73	96	5.2	8.6	10.5	14	40
OZ 80	77.7	515		106	143	5.2	8.6	10.5	14	40
OZ 100	96.2	416		140	178	5.2	8.6	10.5	14	40
OZ 125	120.2	339		162	218	5.2	8.6	10.5	14	40
OZ 160	157.2	257		216	288	5.2	8.6	10.5	14	40
OZ 200	194.5	211		264	351	5.2	8.6	10.5	14	40
OZ 250	240.3	173		281	351	4.6	7	9	11.5	40
OZ 315	314.5	128		312	433	3.4	5.8	7	10.5	40
OZ 400	389.5	104		392	582	3.4	5.8	7	10.5	40

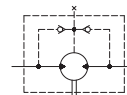
\* Intermittent operation: the permissible values may occur for max.10% of every minute

### OZ DIMENSIONS AND MOUNTING DATA

Type	H	L
OZ36	7	101
OZ50	7	101
OZ80	10.5	104.5
OZ100	13	107
OZ125	16	110
OZ160	21	115
OZ200	26	120
OZ250	32	126
OZ315	42	136
OZ400	52	146

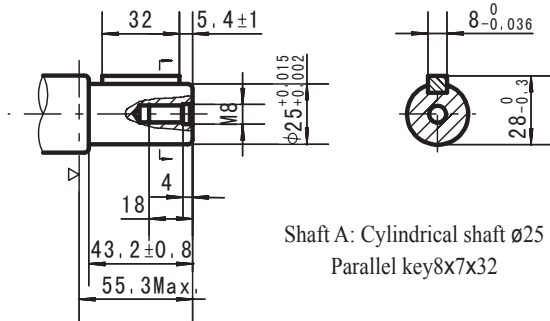


Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (16.7)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)

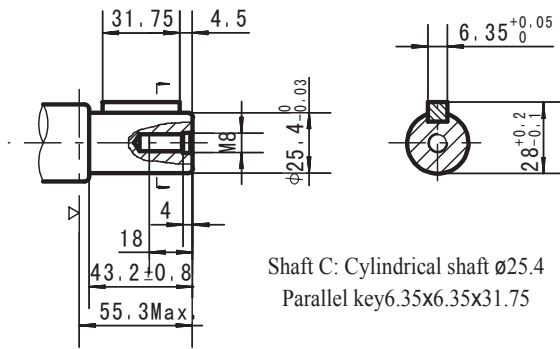


Direction of shaft rotation: Standard  
When facing shaft end of motor, shaft to rotate:  
Clockwise when port "A" is pressurized.  
Counter-clockwise when port "B" is pressurized.

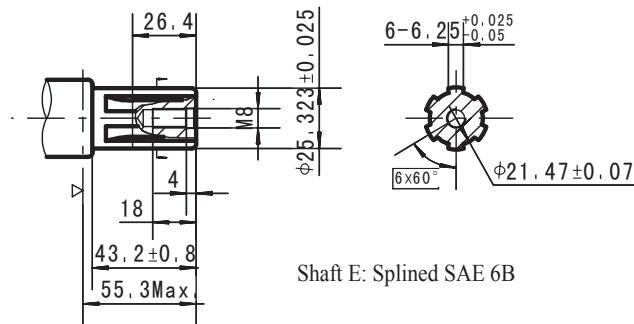
SHAFT EXTENSIONS FOR OZ MOTORS



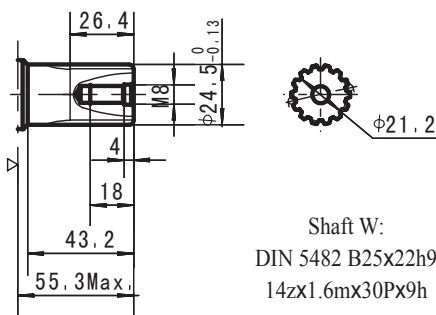
Shaft A: Cylindrical shaft ø25  
Parallel key 8x7x32



Shaft C: Cylindrical shaft ø25.4  
Parallel key 6.35x6.35x31.75



Shaft E: Splined SAE 6B



Shaft W:  
DIN 5482 B25x22h9  
14z x 1.6m x 30Px9h

▷ Motor Mounting Surface

Order Information

OZ - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
36	50	2-ø13.5 Rhomb-flange, pilot ø82.5x8	A Shaft ø25, parallel key 8x7x32 C Shaft ø25.4, parallel key 6.35x6.35x31.75 E Shaft ø25.4, splined key SEA 6B W Shaft ø24.5, splined B25X22 T Cone shaft ø28.56, parallel key B5x5x14	D G1/2 Manifold 4xM8, G1/4 M M22x1.5 Manifold 4xM8, M14x1.5 S 7/8-14 O-ring manifold P 4x5/16-18UNC, 7/16-20UNF R 1/2-14NPTF manifold PT(Rc) 1/2 manifold 4xM8, PT(Rc)1/4	Omit R	Omit Blue Black Silver grey	Standard Free Running No case drain
125	160						



## BMR SERIES HYDRAULIC MOTOR

BMR series motor adapt the advanced Gerolor gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

### Characteristic features:

- \*Advanced manufacturing devices for the Gerolor gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- \*Shaft seal can bear high pressure of back and the motor can be used in parallel or in series.
- \*Special design in the driver-linker and prolong operating life
- \*Special design for distribution system can meet the requirement of low noise of unit.
- \*Compact volume and easy installation

### Main Specification

Technical data for BMR with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Type		BMR BMRS 36	BMR BMRS 50	BMR BMRS 80	BMR BMRS 100	BMR BMRS 125	BMR BMRS 160	BMR BMRS 200	BMR BMRS 250	BMR BMRS 315	BMR BMRS 375
Geometric displacement (cm <sup>3</sup> /rev.)		36	51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	cont.	1085	960	750	600	475	378	310	240	190	155
	int.	1220	1150	940	750	600	475	385	300	240	190
Max. torque (N·m)	cont.	72	100	195	240	300	360	360	390	390	365
	int.	83	126	220	280	340	430	440	490	535	495
	peak	105	165	270	320	370	460	560	640	650	680
Max. output (kW)	cont.	8.5	9.5	12.5	13.0	12.5	12.5	10.0	7.0	6.0	5.0
	int.	9.8	11.2	15.0	15.0	14.5	14.0	13.0	9.5	9.0	8.0
Max. pressure drop (MPa)	cont.	14.0	14	17.5	17.5	17.5	16.5	13	11	9	7
	int.	16.5	17.5	20	20	20	20	17.5	15	13	10
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	17.5	15
Max. flow (L/min)	cont.	40	50	60	60	60	60	60	60	60	60
	int.	45	60	75	75	75	75	75	75	75	75
Weight (kg)		6.5	6.7	6.9	7	7.3	7.6	8.0	8.5	9.0	9.5

\* 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.

## Main Specification

Technical data for BMR with 31.75 and 32 shaft

Type		BMR 36	BMR 50	BMR 80	BMR 100	BMR 125	BMR 160	BMR 200	BMR 250	BMR 315	BMR 375
Geometric displacement (cm <sup>3</sup> /rev.)		36	51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	cont.	1250	960	750	600	475	378	310	240	190	155
	int.	1520	1150	940	750	600	475	385	300	240	190
Max. torque (N·m)	cont.	72	100	195	240	300	380	450	540	550	580
	int.	83	126	220	280	340	430	500	610	690	690
	peak	105	165	270	320	370	460	560	710	840	830
Max. output (kW)	cont.	8.5	9.5	12.5	13.0	12.5	12.5	11.0	10.0	9.0	7.5
	int.	9.8	11.2	15.0	15.0	14.5	14.0	13.0	12.0	10.0	9.0
Max. pressure drop (MPa)	cont.	14.0	14	17.5	17.5	17.5	17.5	17.5	17.5	13.5	11.5
	int.	16.5	17.5	20	20	20	20	20	20	17.5	15
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	21	17.5
Max. flow (L/min)	cont.	45	50	60	60	60	60	60	60	60	60
	int.	55	60	75	75	75	75	75	75	75	75
Weight (kg)		6.5	6.7	6.9	7	7.3	7.6	8.0	8.5	9.0	9.5

\* 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

BMR 36 [36cm<sup>3</sup>/rev.]

		Pressure (MPa)								
		2	3	5	7	9	10	12.5	14.0	16.5
Flow (L/min)	4	10	16	25	37	46	50			
	8	9	15	25	37	47	50	63	71	83
	15	8	14	23	36	45	51	64	72	82
	20	6	13	22	35	44	50	64	72	82
	30	6	12	21	32	42	47	63	70	80
	40	5	11	19	30	41	45	61	68	79
	45	4	10	17	29	40	44	59	66	77
	Max.cont.	1092	1080	1069	1056	1042	1028	1011	984	957
	Max.int.	1230	1215	1194	1170	1150	1128	1100	1070	1020

BMR 50 [51.7cm<sup>3</sup>/rev.]

		Pressure (MPa)							
		5	7	9	10	12	14	16	17.5
Flow (L/min)	5	35	45	61	67	77	88		
	10	36	46	62	69	80	95	108	120
	15	35	49	63	73	88	100	109	123
	20	34.5	47	61	69	83	96	109	126
	30	33	44	60	67	80	95	108	126
	40	30	41	58	66	79	92	106	122
	45	29.5	40	57	65	78	90	105	121
	Max.cont.	950	940	925	906	880	852	832	801
	Max.int.	1138	1124	1100	1075	1056	1028	1006	970

BMR 80 [81.5cm<sup>3</sup>/rev.]

		Pressure (MPa)								
		5	7	9	10	12	14	16	17.5	20
Flow (L/min)	5	50	64	88	108	133				
	10	54	77	99	108	129	150	173		
	20	57	78.0	102	111	134	155	177	196	225
	30	54	75	100	108	131	152	176	195	223
	40	48	73	96	105	127	148	172	190	220
	50	42	70	93	102	124	147	170	188	218
	60	37	66	89	98	121	144	166	184	213
	70	32	60	83	95	116	140	160	177	208
	Max.cont.	726	715	704	692	678	663	647	622	594
	Max.int.	910	895	881	867	852	830	806	787	756

BMR 100 [102cm<sup>3</sup>/rev.]

		Pressure (MPa)								
		5	7	9	10	12	14	16	17.5	20
Flow (L/min)	5	66	92	120	135	156				
	10	68	96	125	138	159	188	212		
	20	65	94.0	123	137	155	186	210	238	274
	30	63	92	120	133	153	185	209	235	270
	40	57	88	117	130	152	185	208	233	267
	50	48	79	110	123	150	183	204	228	260
	60	38	70	105	120	144	178	200	220	252
	70	32	65	100	118	141	176	197	215	246
	Max.cont.	580	572	560	548	535	523	510	500	478
	Max.int.	728	720	710	695	681	667	650	634	618

Torque (N·m) 135  
Speed (rpm) 830

□ cont.  
■ int.

Performance Data

BMR 125 [127.2cm<sup>3</sup>/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5	20
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Flow (L/min)	Max.cont.									Max.int.
	5	7	9	10	12	14	16	17.5	20	
5	76 36	110 31	145 25	167 19	189 13					
10	84 73	118 70	155 60	176 48	202 36	228 25	253 19			
20	82 153	117 151	153 148	174 144	200 138	230 128	259 117	294 104	332 73	
30	79 231	116 228	151 224	171 218	198 210	228 201	257 183	292 168	329 137	
40	72 309	114 307	148 303	168 298	196 292	226 280	256 270	290 252	327 218	
50	62 389	105 386	143 382	165 378	195 370	223 360	254 344	287 328	323 292	
60	52 467	98 463	136 459	160 456	191 448	220 427	250 410	282 399	319 352	
70	41 545	90 542	130 538	156 534	187 529	215 520	242 508	278 486	313 430	
75	32 586	79 583	126 578	148 570	180 560	208 546	234 532	262 520	300 480	

BMR 160 [157.2cm<sup>3</sup>/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5	20
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Flow (L/min)	Max.cont.									Max.int.
	5	7	9	10	12	14	16	17.5	20	
5	104 26	146 23	190 20	210 16	245 10					
10	107 59	150 56	195 50	216 45	250 37	290 30	335 22			
20	102 121	151 118	198 115	220 113	257 108	298 102	342 97	370 90	420 78	
30	97 184	146 178	190 173	217 170	256 164	295 155	340 143	368 128	416 103	
40	89 246	140 241	185 235	210 228	252 220	290 210	335 194	363 177	412 150	
50	72 310	128 307	179 300	202 295	244 287	284 278	327 262	358 247	409 210	
60	60 374	116 367	170 359	198 354	240 346	279 338	321 323	352 306	400 265	
70	49 437	107 430	164 421	193 415	233 403	271 393	309 381	344 365	390 318	
75	36 472	98 463	152 450	185 441	226 431	265 420	300 405	334 389	379 365	

BMR 200 [194.5cm<sup>3</sup>/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5	20
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Flow (L/min)	Max.cont.									Max.int.
	5	7	9	10	12	14	16	17.5	20	
5	132 24	181 22	238 18	262 13	310 10					
10	135 49	186 47	240 45	264 43	315 38	356 33	403 24			
20	131 99	183 97	238 94	260 92	314 88	358 83	404 74	438 64	498 56	
30	126 149	178 147	233 144	254 141	311 135	355 126	402 113	431 105	486 91	
40	112 200	169 197	228 194	250 191	307 185	352 174	400 160	426 151	477 127	
50	95 252	156 249	221 246	246 243	300 238	350 228	398 212	421 194	470 161	
60	78 304	145 301	213 298	238 294	289 286	342 276	386 262	412 243	459 218	
70	67 355	135 353	206 349	228 340	277 329	336 316	375 300	408 288	453 257	
75	58 382	125 379	197 373	220 362	270 350	321 337	360 322	398 312	442 278	

BMR 250 [253.5cm<sup>3</sup>/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5	20
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Flow (L/min)	Max.cont.									Max.int.
	5	7	9	10	12	14	16	17.5	20	
5	175 17	243 16	304 14	342 12	407 10					
10	178 37	246 35	310 31	344 28	409 23	465 18	525 11			
20	175 75	244 73	308 72	340 70	408 66	463 58	520 53	558 50	636 42	
30	162 114	235 111	304 108	332 106	400 100	455 92	516 83	550 77	621 65	
40	143 154	223 152	300 150	329 147	396 143	447 132	512 120	546 110	617 90	
50	124 193	208 190	289 187	323 174	384 168	440 160	503 149	535 140	600 116	
60	103 233	192 230	280 227	314 224	371 218	426 205	489 190	514 181	578 155	
70	88 273	178 270	264 267	301 263	356 252	418 242	479 226	498 209	560 173	
75	62 294	165 291	256 287	288 283	347 274	412 263	474 249	486 236	542 211	

cont.  
int.

Torque (N·m) 256  
Speed (rpm) 287

Performance Data

BMR 315 [317.5cm<sup>3</sup>/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5
--	---	---	---	----	----	----	----	------

Flow (L/min)	Max.cont.								Max.int.							
	5	7	9	10	12	14	16	17.5	5	7	9	10	12	14	16	17.5
5	215	302							13	11						
10	218	305	383	422	488	551	622		28	27	25	24	21	18	13	
20	215	303	380	418	485	549	620	660	60	59	57	55	52	49	45	42
30	204	296	375	413	480	542	613	654	91	89	86	84	81	78	72	67
40	196	287	368	410	477	539	609	650	122	120	117	112	106	100	94	85
50	176	270	356	393	461	526	597	645	154	151	147	140	131	120	109	100
60	162	246	339	374	446	511	586	628	185	182	177	172	163	152	140	134
70	143	235	324	358	430	493	562	614	217	213	208	201	190	178	166	158
75	125	212	303	339	417	481	543	582	232	228	222	216	208	200	183	171

BMR 375 [381.4cm<sup>3</sup>/rev.]

Pressure (MPa)

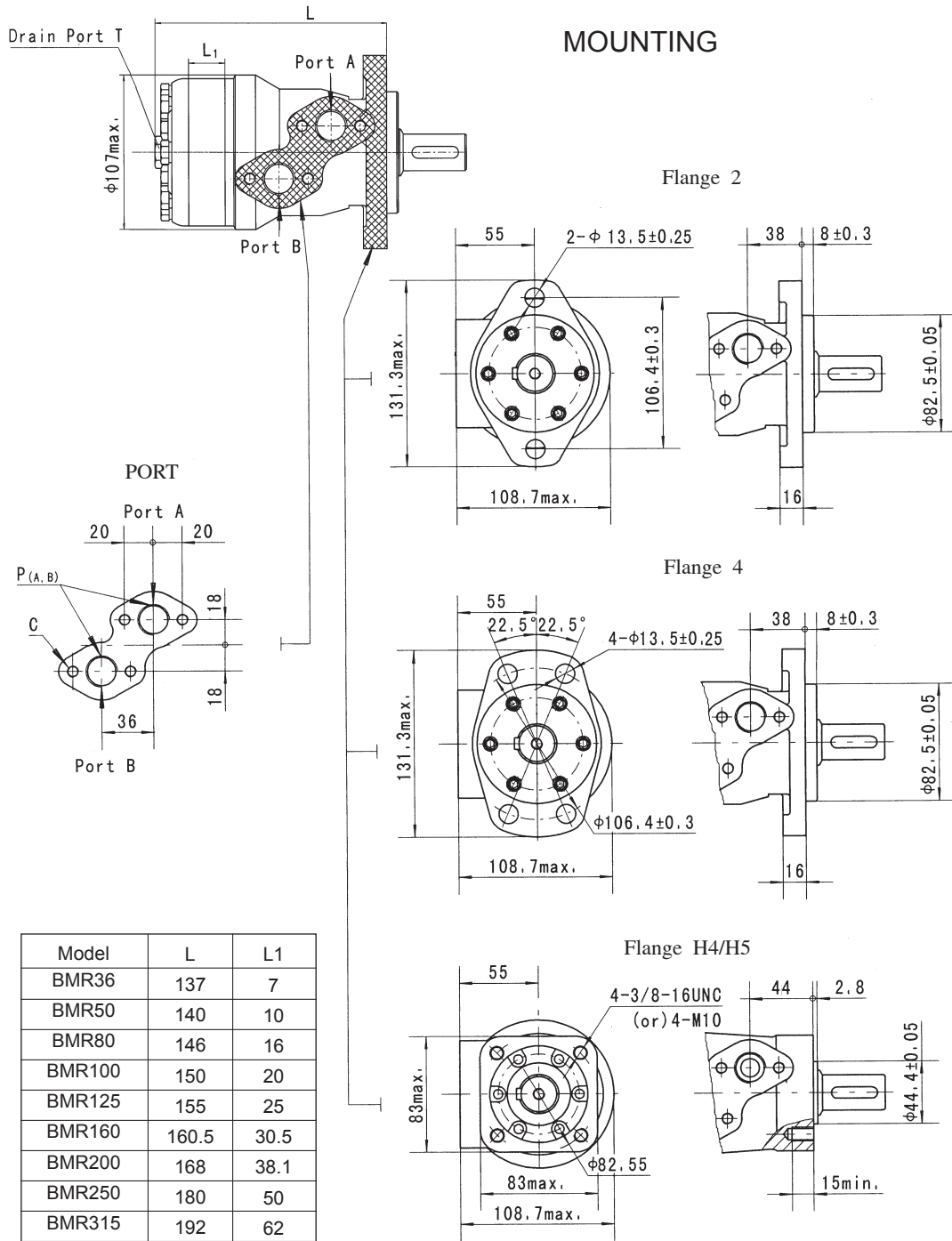
	3	4.5	5.5	6.5	8	10	12.5	14
--	---	-----	-----	-----	---	----	------	----

Flow (L/min)	Max.cont.								Max.int.							
	3	4.5	5.5	6.5	8	10	12.5	14	3	4.5	5.5	6.5	8	10	12.5	14
5	153	232							12	10						
10	157	236	284	337	406	497	612	668	24	23	22	21	19	17	15	12
20	150	232	280	332	401	490	606	660	49	48	47	46	44	41	38	32
30	142	215	274	327	398	483	603	652	76	75	74	73	71	67	63	50
40	126	212	268	320	393	477	593	635	103	101	99	97	95	92	88	70
50	105	187	242	302	376	455	583	608	128	126	124	121	118	115	111	96
60	90	167	229	281	362	444	566	600	154	152	150	148	145	138	130	121
70	90	149	200	258	341	425	546	580	180	179	178	176	173	168	160	148
75	56	125	182	241	320	408	524	565	195	194	193	191	189	185	178	170

Torque (N·m) 481  
Speed (rpm) 200

cont.  
int.

**BMR DIMENSIONS AND MOUNTING DATA**



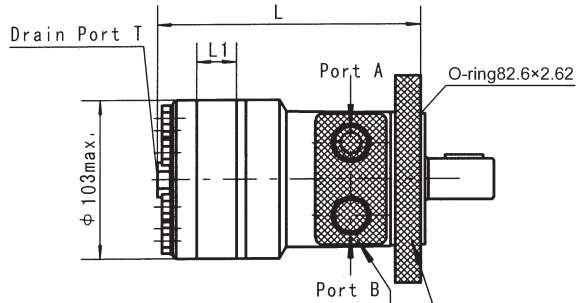
Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)



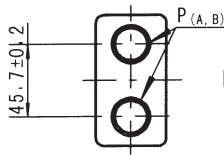


**BMRS DIMENSIONS AND MOUNTING DATA**

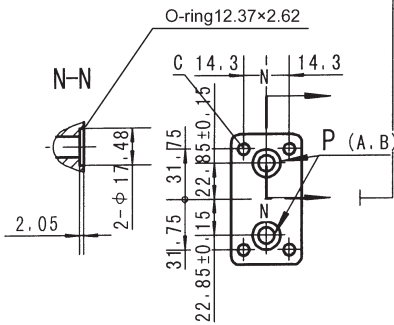
**MOUNTING**



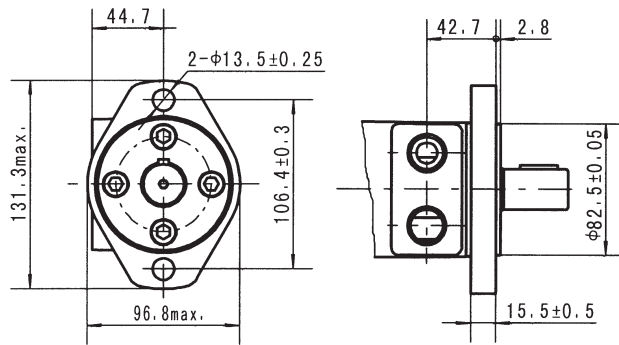
PORT: G、S、P、R、M1、M2、M3



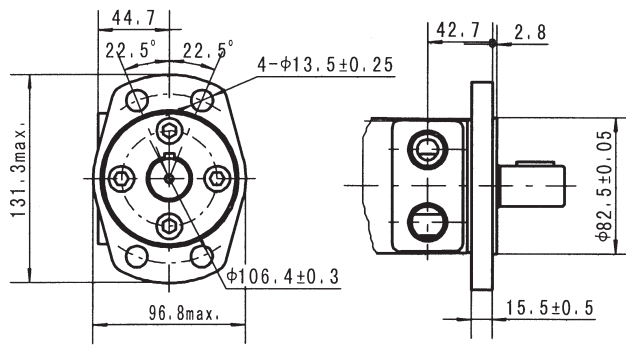
PORT: B4、B5



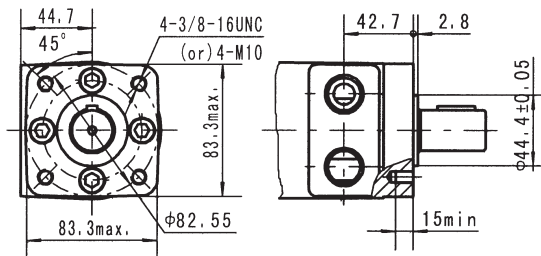
Flange H2



Flange H6



Flange H4/H5

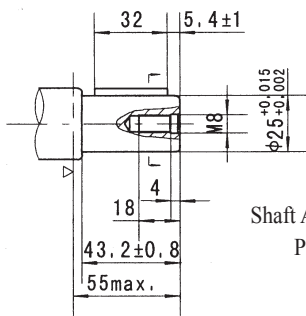


Model	L	L1
BMRS36	143	7
BMRS50	146	10
BMRS80	152	16
BMRS100	156	20
BMRS125	161	25
BMRS160	166.5	30.5
BMRS200	174	38.1
BMRS250	186	50
BMRS315	198	62
BMRS375	210	74

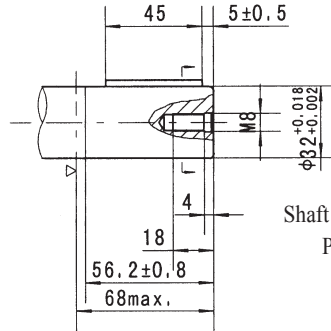
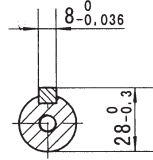
Note: The size L of the BMRS N1 should be increased by 2mm.

Code Mounting	G (depth)	S (depth)	P (depth)	R (depth)	M1 (depth)	M2 (depth)	M3 (depth)	B4 (depth)	B5 (depth)
P(A,B)	G1/2 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)	M18 x 1.5 (15)	M20 x 1.5 (15)	M22 x 1.5 (15)	ø10	ø10
T	G1/4 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)	M10 x 1 (12)	M10 x 1 (12)	M10 x 1 (12)	7/16-20UNF(12)	G1/4(12)
C	-	-	-	-	-	-	-	4-5/16-18UNC(13)	4-M8(13)

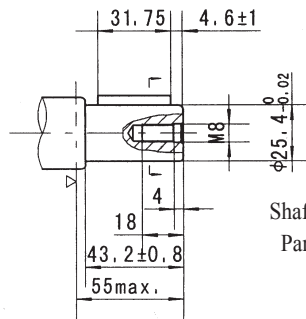
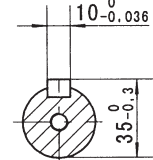
**BMR SHAFT EXTENSIONS DIMENSIONS DATA**



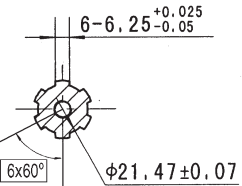
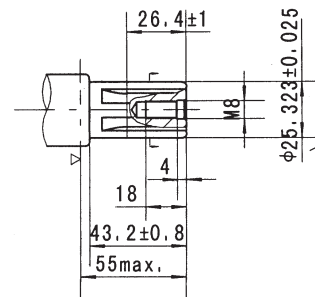
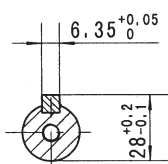
Shaft A: Cylindrical shaft  $\phi 25$   
Parallel key 8x7x32



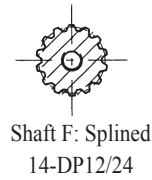
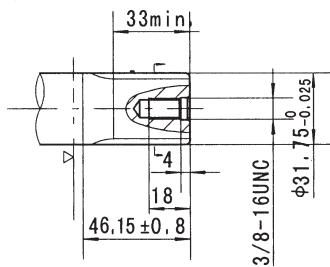
Shaft B: Cylindrical shaft  $\phi 32$   
Parallel key 10x8x45



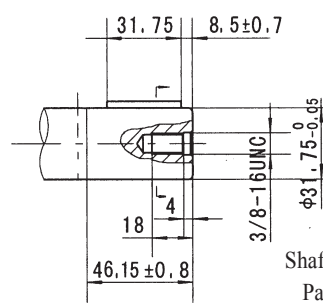
Shaft C: Cylindrical shaft  $\phi 25.4$   
Parallel key 6.35x6.35x31.75



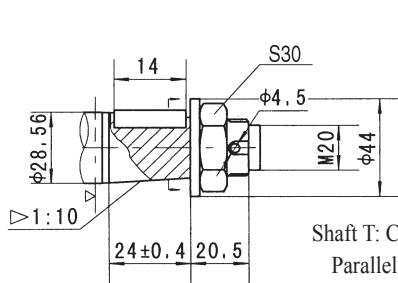
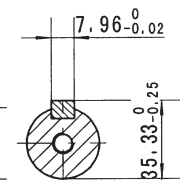
Shaft E: Splined SAE 6B



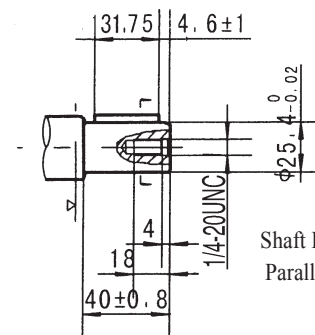
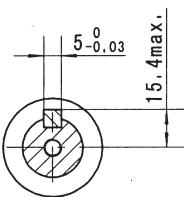
Shaft F: Splined  
14-DP12/24



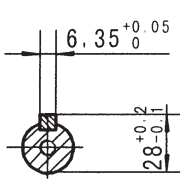
Shaft G: Cylindrical shaft  $\phi 31.75$   
Parallel key 7.96x7.96x31.75



Shaft T: Cone-shaft  $\phi 28.56$   
Parallel key B5x5x14  
Tightening torque: 100±10Nm

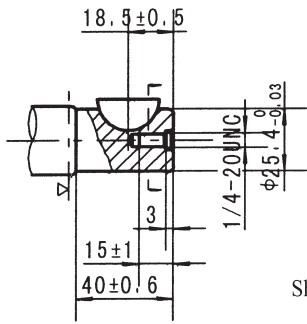


Shaft R: Cylindrical shaft  $\phi 25.4$   
Parallel key 6.35x6.35x31.75

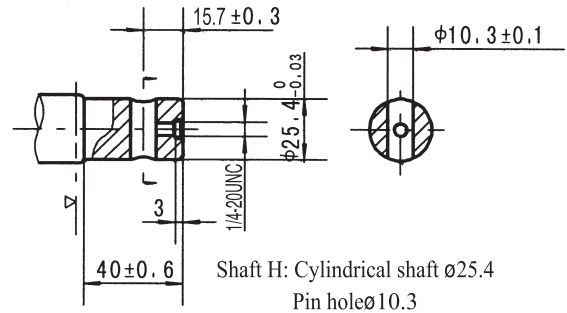
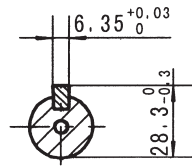


▷ Motor Mounting Surface

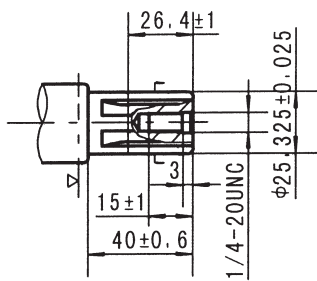
**BMRS SHAFT EXTENSIONS DIMENSIDNS DATA**



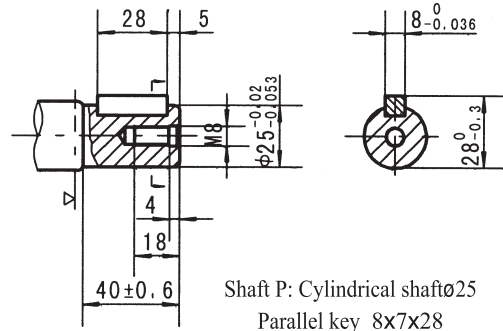
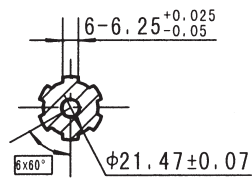
Shaft K: Cylindrical shaft  $\phi 25.4$   
Woodruff key  $\phi 25.4 \times 6.35$



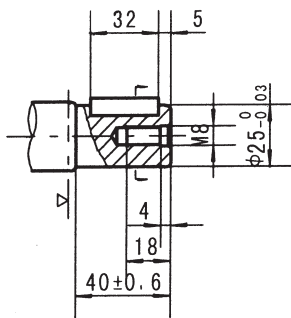
Shaft H: Cylindrical shaft  $\phi 25.4$   
Pin hole  $\phi 10.3$



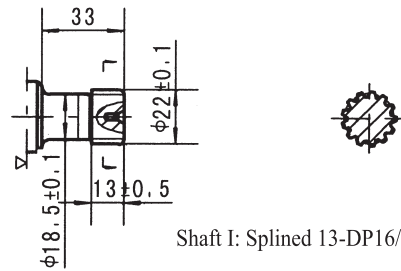
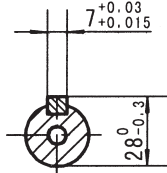
Shaft S: Splined SAE 6B



Shaft P: Cylindrical shaft  $\phi 25$   
Parallel key  $8 \times 7 \times 28$



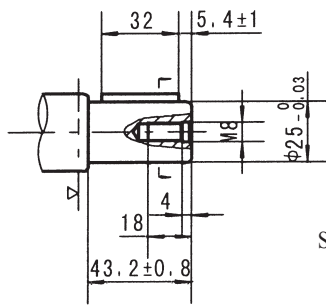
Shaft J: Cylindrical shaft  $\phi 25$   
Parallel key  $7 \times 7 \times 32$



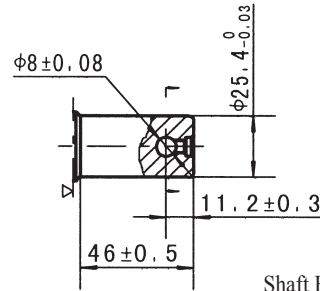
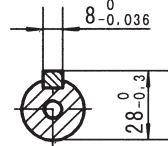
Shaft I: Splined 13-DP16/32

▷ Motor Mounting Surface

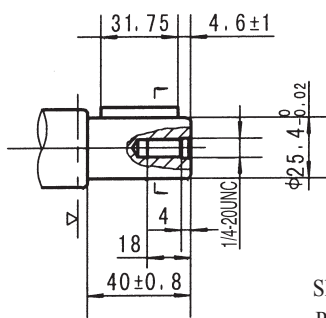
**BMRS SHAFT EXTENSIONS DIMENSIONS DATA**



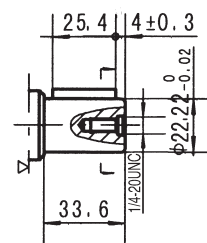
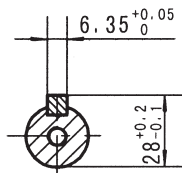
Shaft A: Cylindrical shaft  $\phi 25$   
Parallel key 8x7x32



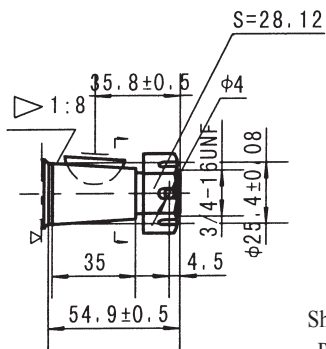
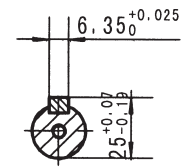
Shaft H1: Cylindrical shaft  $\phi 25.4$   
Pin hole  $\phi 8$



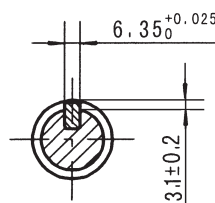
Shaft R: Cylindrical shaft  $\phi 25.4$   
Parallel key 6.35x6.35x31.75



Shaft D: Cylindrical shaft  $\phi 22.22$   
Parallel key 6.35x6.35x25.4

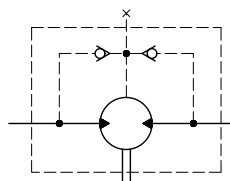


Shaft T2: Cone-shaft  $\phi 25.4$   
Parallel key  $\phi 25.4 \times 6.35$   
Tightening torque:  $200 \pm 10 \text{ Nm}$

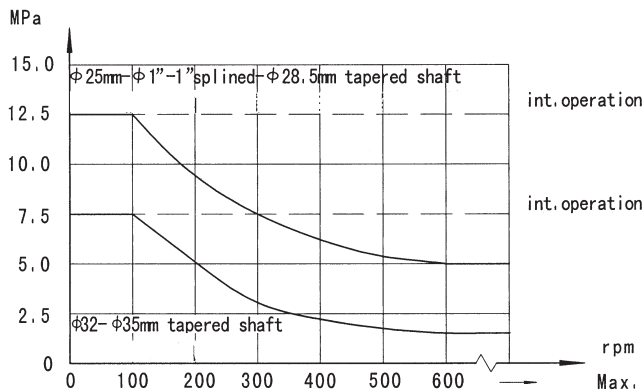
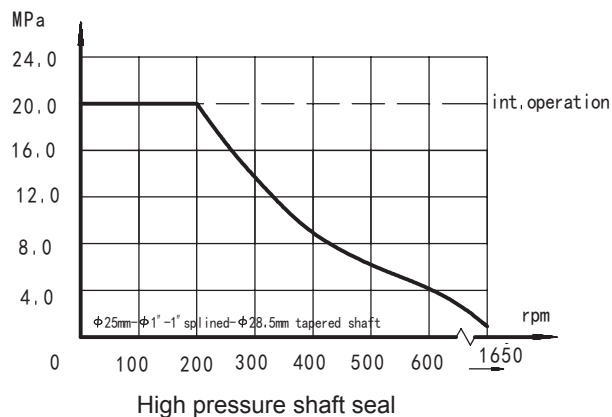


▷ Motor Mounting Surface

**BMR、BMRS Series Hydraulic Motor**



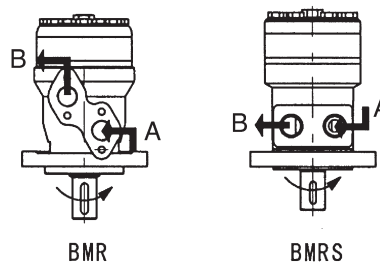
**Permissible shaft seal pressure**



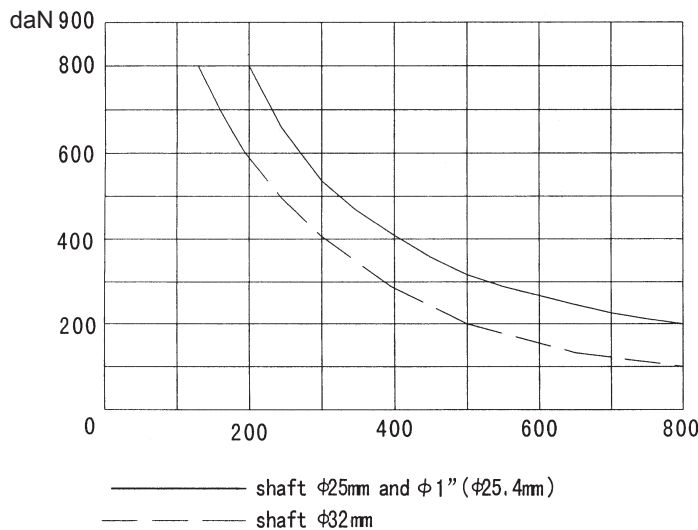
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

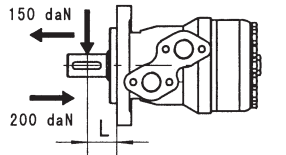
**Direction of shaft rotation : Standard**

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



**Status of the shaft's radial force  
(Standard motor with journal bearing)**



$$F_r = \frac{800 \cdot 25000}{n \cdot 95 + L} \text{ daN}$$


$F_r$  =Radial Force (daN)  
 $L$  =Distance (mm)  
 $n$  =Speed (rpm)  
Rhomb-flange  $L=30\text{mm}$   
Square-flange  $L=24\text{mm}$

$n (\text{min}^{-1})$

**Oil flow in drain line**

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm <sup>2</sup> /s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8



Order Information

Pos.1	2	3	4	5	6	7	8
			BMR				
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
	36	2-Ø13.5Rhomb-flange, pilot Ø82.5x8	A Shaft Ø25,parallel Key 8x7x32	D G1/2 Manifold Mount 4-M8, G1/4	Omit	00	Standard
	50		C Shaft Ø25.4,parallel Key 6.35x6.35x31.75				
	80	4-Ø13.5Rhomb-flange, pilot Ø82.5x8	E Shaft Ø25.4, splined tooth SAE 6B	S 7/8-14 O-ring manifold	R	Omit	Big radial force
	100		R Short shaft Ø25.4,parallel key 6.35x6.35x31.75				
	125	4-3/8-16 Square-flange, pilot Ø44.4x2.8	T Cone-Shaft Ø28.56,parallel Key B5x5x14	P 1/2-14 NPTF	Opposite	B	No case drain
	160		B Shaft Ø32,parallel Key 10x8x45				
	200	4-M10 Square-flange, pilot Ø44.4x2.8	F Shaft Ø31.75, splined tooth 14-DP12/24	Manifold 4-5/16-18UNC, 7/16-20UNF	S	S	Free Running
	250		FD Long shaft Ø31.75, splined tooth 14-DP12/24				
	315	4-M10 Square-flange, pilot Ø44.4x2.8	G Shaft Ø31.75, parallel Key 7.96x7.96x31.75	R	Opposite	LS	Low Speed
	375						

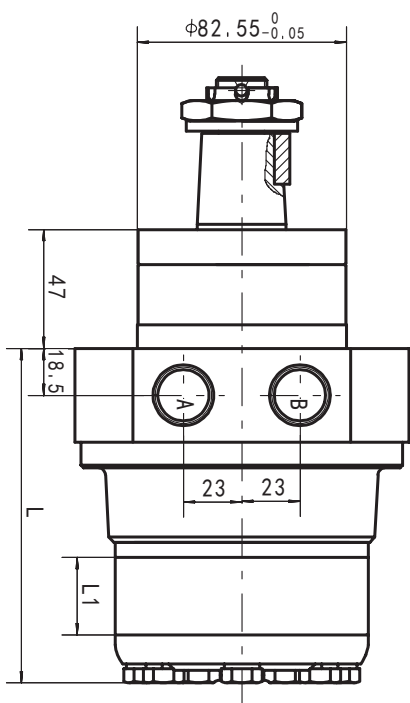
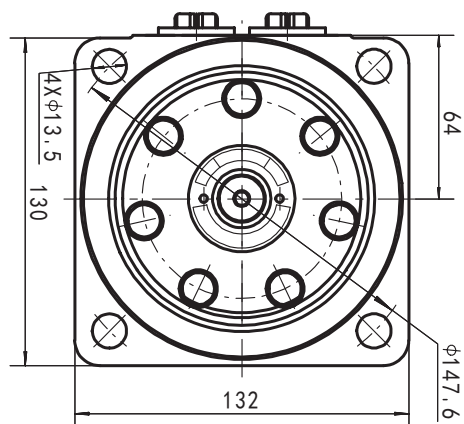
Note: The shafts of B\F\FD\G\T1\T3 are only suitable for flanges of 2 and 4.

Pos.1	2	3	4	5	6	7	8
			BMRS				
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
	36	2-Ø13.5Rhomb-flange, pilot Ø82.5x2.8	K Shaft Ø25.4, Woodruff Key Ø25.4x6.35	G G1/2, G1/4	Omit	00	Standard
	50		S Sub-shaft Ø25.4, splined tooth				
	80	4-Ø13.5Rhomb-flange, pilot Ø82.5x2.8	A Shaft Ø25 , parallel key 8x7x32	P (G1/4)	R	Omit	Big radial force
	100		R Shaft Ø25.4, parallel key				
	125	4-3/8-16 Square-flange, pilot Ø44.4x2.8	H 6.35x6.35x31.75	T 3/4-16 O-ring, 7/16-20UNF	Opposite	B	No case drain
	160		H1 Sub-shaft Ø25.4, Pin hole Ø10.3				
	200	4-M10 Square-flange, pilot Ø44.4x2.8	D Shaft Ø25.4, pin hole Ø8	B4 Ø10 O-ring manifold 4x5/16- 18, 7/16-20UNF	S	S	Free Running
	250		I Shaft Ø22.22, splined tooth				
	315	4-M10 Square-flange, pilot Ø44.4x2.8	T2 Cone shaft Ø25.4 , woodruff key Ø25.4x6.35	M1 M18x1.5, M10x1	Opposite	LS	Low Speed
	375		P Shaft Ø25,parallel Key 8x7x28				
			J Shaft Ø25,parallel Key 7x7x32	M3 M22x1.5, M10x1			

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.



**BMRWN DIMENSIONS MOUNTING DATA**



Model	L	L1
BMRWN-50	113	10
BMRWN-80	119	16
BMRWN-100	123	20
BMRWN-125	128	25
BMRWN-160	133.5	30.5
BMRWN-200	141	38.1
BMRWN-250	153	50
BMRWN-315	165	62
BMRWN-375	177	74



**Order Information**

Pos.1	2	3	4	5	6	7	8
Code	Flange	Output shaft	Ports and drain port	Rotation direction	Paint	Unusually function	
BMRWN	50 80 100 125 160 200 250 315 375	Omit 4-Ø13.5 Wheel Mount , Ø82.5x9.4	T1 B F FD G	D M S P	Omit Standard Opposite R	00 Omit B S	Omit Standard
			1:10Cone shaft Ø35, parallel key B6x6x20 Shaft Ø32 , parallel key 10x8x4 Shaft Ø31.75, splined key 14-DP12/2 Long Shaft Ø31.75, splined key14-DP12/24 Shaft Ø31.75, parallel key 7.96x7.96x31.75	G1/2, G1/4 M22x1.5, M14x1.5 7/8-14 O-ring, 7/16-20UNF 1/2-14NPTF, 7/16-20UNF	No paint Blue Black Silver grey		

Note: When the table is used, please fill the code of right rows in the table 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.

Code	G(depth)	M(depth)	S(depth)	P(depth)
P(A,B)	G1/2(15)	M22x1.5(15)	7/8-14O-ring(17)	1/2-14NPTF(15)
C	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)



## BMR-BK01 SERIES HYDRAULIC MOTOR WITH BRAKE

BMR-BK01 Series hydraulic motor with brake extending BMR series motor range. This motor has an integrated holding brake.

### Characteristic features:

- \*Advanced manufacturing devices for the Geroler gear set , which use low pressure of start-up , provide smooth , reliable operation and high efficiency .
- \*Shaft seal can bear high pressure of back and the motor can be use in parallel or in series .
- \*Special design in the driver-linker and prolong operating life .
- \*Special design for distribution system can meet the requirement of low noise of unit .
- \*Compact volume and easy installation .
- \*Small volume and radial dimension,high holding torque,power brake,low weight and easy to install.

### Main Specification

Type		BMR -BK01 50	BMR -BK01 80	BMR -BK01 100	BMR -BK01 125	BMR -BK01 160	BMR -BK01 200	BMR -BK01 250	BMR -BK01 315	BMR -BK01 375
Geometric displacement (cm <sup>3</sup> /rev.)		51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	rated	490	479	478	421	341	276	212	169	141
	cont.	509	502	497	459	372	301	231	184	166
	int.	603	598	574	574	465	376	289	230	192
Max. torque (N·m)	rated	104	164	205	256	316	335	437	456	465
	cont.	103	203	254	317	391	359	437	456	465
	int.	88.6	160	200	250	308	333	473	502	520
Max. output (KW)	rated	5.3	8.2	10.3	11.3	11.3	9.7	9.7	8.1	6.9
	cont.	5.5	10.7	13.2	15.2	15.2	11.3	10.6	8.8	8.1
	int.	5.6	10	12	15	15	13.1	14.3	12.1	10.5
Max. Pressure drop (MPa)	rated	14	14	14	14	14	12	12	10	8.5
	cont.	14	17.5	17.5	17.5	17.5	13	12	10	8.5
	int.	17.5	20	20	20	20	17.5	13	11	9.5
Max. Flow (L/min)	rated	26	40	50	55	55	55	55	55	55
	cont.	27	42	52	60	60	60	60	60	65
	int.	32	50	60	75	75	75	75	75	75
Min. opening pressure (MPa)		1.7—2.2								
Max. inlet pressure (MPa)		25								
Max. brake release port pressure (MPa)		25								
Max. static torque (Nm)		500—550								
Weight (kg)		11.7	11.9	11.9	12.2	12.5	13	13.5	14	14.5

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

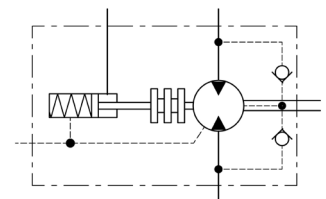
\*Continuous pressure:Max. value of operating motor continuously.

\*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.

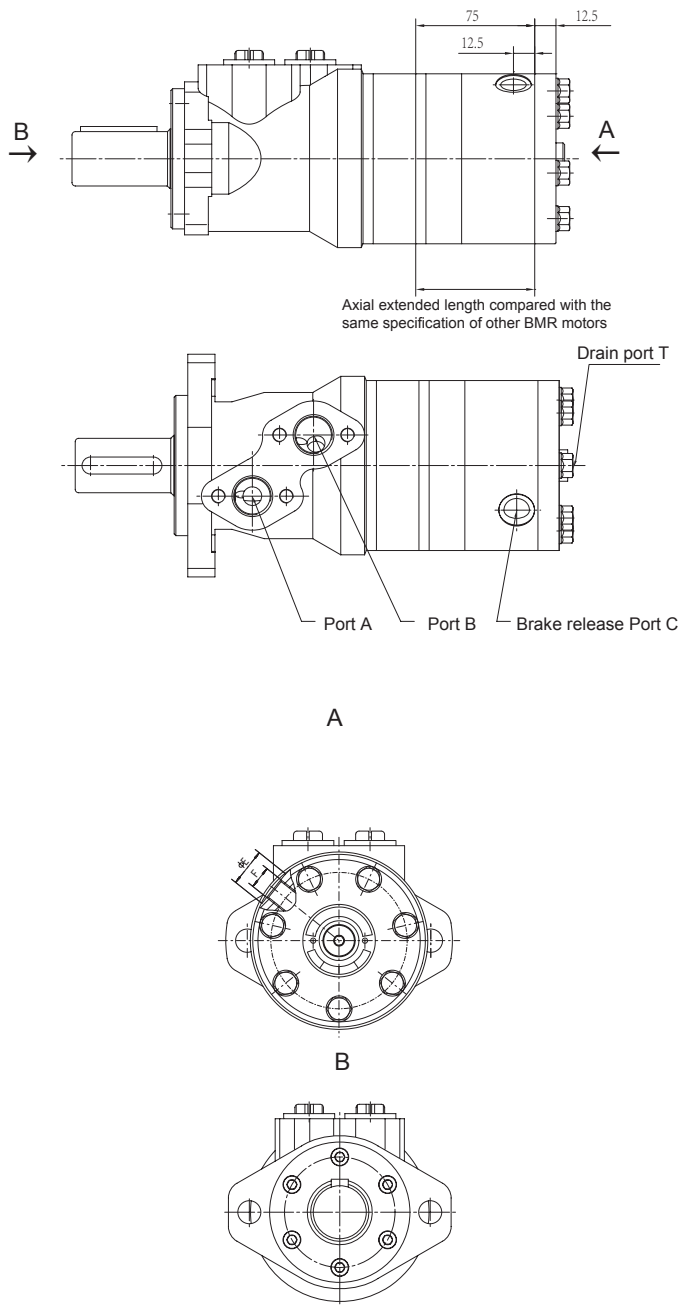
\*Such kind of brake is only used in static paring brake.Dynamic braking in not recommended.

When the motor integrated with brake is working, the pressure at releasing port must be more than 2.2MPa. In the status of braking, the pressure at releasing port must be less than 1.7 MPa, optimally 0 MPa. It is attention in use that the back pressure of the oil circuit is the best 0 MPa.





**BMR-BK01 DIMENSIONS AND MOUNTING DATA**



Model	Port C	ΦE	F
	G	22	G1/4 Depth 9

Note: The mount data is completely referred to BMR series motor. The axial extended length reduces 75mm as picture. Port C is brake releasing port, the position is as picture.

**Order information**

Pos.1	2	3	4	5	6	7	8	9
	BMR-BK01							
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Brake release Port	Rotation Direction	Paint	Unusually Function
	50	2-Ø13.5Rhomb-flange, pilot	A Shaft Ø25,parallel Key 8x7x32	D G1/2 Manifold Mount 4xM8, G1/4 M22x1.5 Manifold Mount 4xM8, M14x1.5	G	Omit Standard	00 No paint	N1 Big radial force
	80	Ø82.5x8	C Shaft Ø25.4,parallel Key 6.35x6.35x31.75					
	100	4-Ø13.5Rhomb-flange, pilot	E Shaft Ø25.4,spined tooth SAE 6B	S 7/8-14 O-ring manifold	Depth 9	R Opposite	Blue Black	S Silver grey
	125	Ø82.5x8	R Short shaft Ø25.4,parallel Key 6.35x6.35x31.75					
	160	4-3/8-16Square-flange, pilot	B Shaft Ø32,parallel Key 10x8x45	P 4x5/16-18UNC, 7/16-20UNF 1/2-14 NPTF	facing Ø22			
	200	Ø44.4x2.8	F Shaft Ø31.75,spined tooth 14-DP12/24					
	250	4-M10Square-flange, pilot	FD Long shaft Ø31.75,spined tooth 14-DP12/24	R Manifold 4x5/16-18UNC, 7/16-20UNF PT(Rc)1/2 Manifold 4xM8, PT(Rc)1/4				
	315	Ø44.4x2.8	G Shaft Ø31.75,parallel Key 7.96x7.96x31.75					
	375		T Cone-Shaft Ø28.56,parallel Key B5x5x14					

Note:When the table is used , please fill the code of right rows in the table 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 .

Note:The shafts of B1FVDIGIT1T3 are only suitable for flanges of 2 and 4.



## OK SERIES HYDRAULIC MOTOR

OK series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

Characteristic features:

- \*Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- \*Shaft seal can bear high pressure of back and the motor can be used in parallel or in series.
- \*Special design in the driver-linker and prolong operating life
- \*Special design for distribution system can meet the requirement of low noise of unit.
- \*Compact volume and easy installation

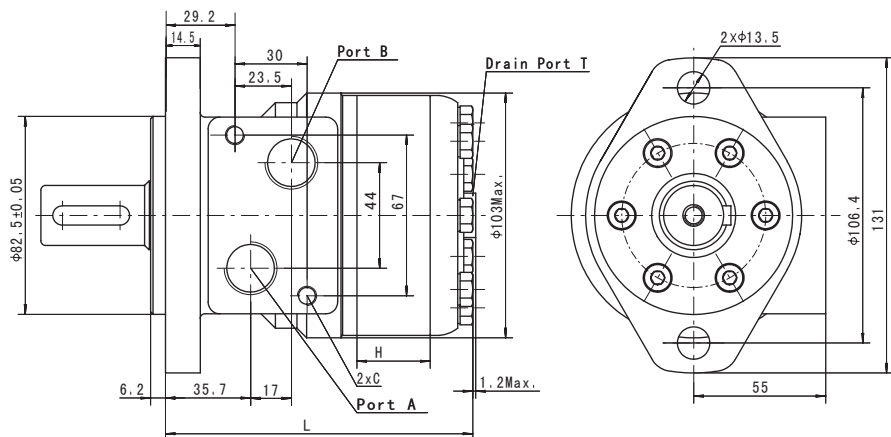
### Main Specification

Technical data for OK with 25 and 1 in and 1 in splined and 28.56 tapered shaft

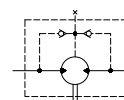
Code	Displacement [cm/rev]	Max.Speed [rpm]	Max.Torque [Nm]		Max.output [kW]		Max.pressure [MPa]		Max.Oil Flow[L/min]
		cont.	cont.	int.	cont.	int.	cont.	int.	cont.
OK 36	36	1111	66	83	9	10.4	14	17.5	40
OK 50	51.7	780	100	129	9	10.4	14	17.5	40
OK 80	81.5	744	158	196	10.4	12.6	14	17.5	60
OK 100	102	595	200	242	10.8	12.8	14	17.5	60
OK 125	127.2	480	248	298	10.8	12.5	14	17.5	60
OK 160	157.2	382	315	384	10.4	11.5	14	17.5	60
OK 200	194.5	301	339	419	8.8	10.2	12.5	15.5	60
OK 250	253.3	238	403	474	8.1	9.4	11	14	60
OK 315	317.5	191	398	498	7.4	7.8	9	12.5	60
OK 375	381.4	162	373	466	6.2	7.1	7.5	9	60

\* Intermittent operation: the permissible values may occur for max.10% of every minute

Type	H	L
OK36	7	105
OK50	10	108
OK80	16	114
OK100	20	118
OK125	25	123
OK160	30.5	128.5
OK200	38.1	136
OK250	50	148
OK315	62	160
OK375	74	172

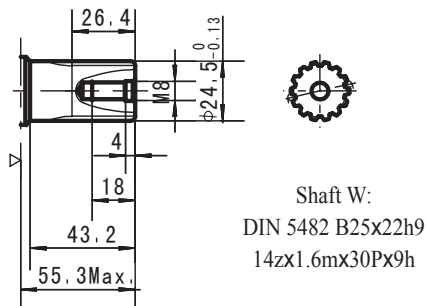
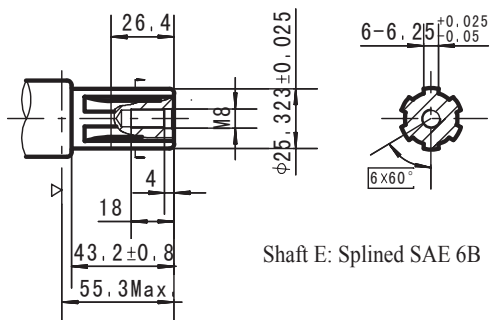
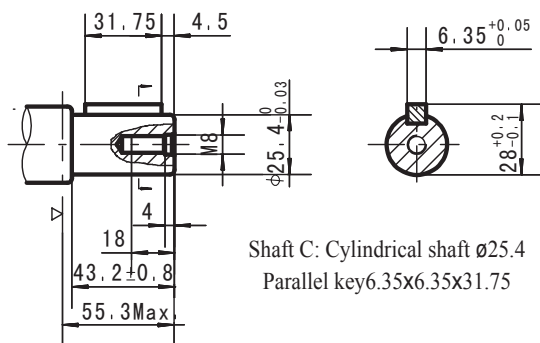
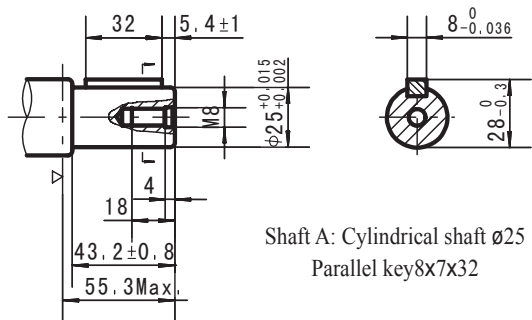


Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (16.7)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)



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

SHAFT EXTENSIONS FOR OK MOTORS



▷ Motor Mounting Surface

Order Information

OK	1	2	3	4	5	6	7	8
Pos.1	2	3	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function	
36	50	2- $\phi 13.5$ Rhomb-flange, pilot $\phi 82.5 \times 6.2$	A Shaft $\phi 25$ , parallel key 8x7x32	D G1/2 Manifold 4xM8, G1/4	Omit Standard Opposite	OO Omit B S	Omit F O	Standard Free Running No case drain
80	100		C Shaft $\phi 25.4$ , parallel key 6.35x6.35x31.75	M M22x1.5 Manifold 4xM8, M14x1.5				
125	160		E Shaft $\phi 25.4$ , splined key SEA 6B	S 7/8-14 O-ring manifold				
200	250		W Shaft $\phi 24.5$ , splined B25X22	P 4x5/16-18UNC, 7/16-20UNF				
315	375		T Cone shaft $\phi 28.56$ , parallel key B5x5x14	R 1/2-14NPTF manifold 4x5/16-18UNC, 7/16-20UNF PT(Rc)1/2 manifold 4xM8, PT(Rc)1/4				



## BMH SERIES HYDRAULIC MOTOR

BMH series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

### Characteristic features:

- \*Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- \*Shaft seal can bear high pressure of back and the motor can be used in parallel or series.
- \*Special design in the driver-linker and prolong operating life.
- \*Special design for distribution system can meet the requirement of low noise of unit.
- \*Compact volume and easy installation.

## Main Specification

Type		BMH 200	BMH 250	BMH 315	BMH 400	BMH 500
Geometric displacement (cm <sup>3</sup> /rev.)		203.2	255.9	316.1	406.4	489.2
Max. speed (rpm)	cont.	366	290	236	183	155
	int.	439	348	282	220	184
Max. torque (N·m)	cont.	510	621	740	850	830
	int.	579	702	827	990	1040
	peak	651	790	980	1092	1170
Max. output (kW)	cont.	16	16	14	12.5	11
	int.	18.5	18.5	15.5	15	14
Max. pressure drop (MPa)	cont.	17.5	17.5	17.5	15.5	12.5
	int.	20	20	20	19	16
	peak	22.5	22.5	22.5	21	18
Max. flow (L/min)	cont.	75	75	75	75	75
	int.	90	90	90	90	90
Weight (kg)		10.5	11	11.5	12.3	13

Type		Max.inlet pressure	Max.return pressure with drain line
BMH200-500 (MPa)	cont.	20	17.5
	int.	22.5	20
	peak	25	22.5

- \* 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.
- \* Technical data BMH with 35mm cylindrical, 1<sup>1</sup>/<sub>4</sub> in splined and 35mm tapered shaft.

Performance Data

BMH 200 [203.2cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

3.5	7	10.5	14	17.5	20
-----	---	------	----	------	----

5	98	194	284			
	<b>25</b>	<b>25</b>	<b>22</b>			
10	101	204	301	391	482	
	<b>43</b>	<b>41</b>	<b>36</b>	<b>29</b>	<b>14</b>	
20	99	201	304	402	509	576
	<b>100</b>	<b>97</b>	<b>93</b>	<b>85</b>	<b>69</b>	<b>56</b>
30	97	197	300	402	510	579
	<b>145</b>	<b>143</b>	<b>139</b>	<b>130</b>	<b>114</b>	<b>101</b>
40	90	190	292	399	507	578
	<b>200</b>	<b>200</b>	<b>200</b>	<b>188</b>	<b>168</b>	<b>153</b>
50	82	183	284	392	500	571
	<b>248</b>	<b>246</b>	<b>244</b>	<b>235</b>	<b>213</b>	<b>199</b>
60	73	174	274	384	493	563
	<b>292</b>	<b>290</b>	<b>287</b>	<b>279</b>	<b>260</b>	<b>244</b>
70	63	163	264	374	481	554
	<b>352</b>	<b>350</b>	<b>349</b>	<b>338</b>	<b>318</b>	<b>301</b>
75 (Max.cont.)	59	157	259	366	475	547
	<b>366</b>	<b>365</b>	<b>363</b>	<b>355</b>	<b>335</b>	<b>319</b>
80	53	150	253	358	466	538
	<b>381</b>	<b>381</b>	<b>380</b>	<b>371</b>	<b>352</b>	<b>338</b>
90 (Max.int.)	39	140	241	348	456	526
	<b>439</b>	<b>437</b>	<b>434</b>	<b>426</b>	<b>407</b>	<b>392</b>

BMH 250 [255.9cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

3.5	7	9	12	14.5	17.5	20
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5	121	246	318	398		
	<b>19</b>	<b>19</b>	<b>18</b>	<b>14</b>		
10	130	258	331	425	515	595
	<b>34</b>	<b>33</b>	<b>31</b>	<b>29</b>	<b>23</b>	<b>12</b>
20	130	258	332	432	520	621
	<b>78</b>	<b>77</b>	<b>76</b>	<b>73</b>	<b>65</b>	<b>53</b>
30	122	251	327	429	520	621
	<b>115</b>	<b>113</b>	<b>111</b>	<b>105</b>	<b>96</b>	<b>84</b>
40	115	240	323	422	513	616
	<b>157</b>	<b>157</b>	<b>156</b>	<b>150</b>	<b>139</b>	<b>127</b>
50	105	232	314	411	505	606
	<b>196</b>	<b>195</b>	<b>192</b>	<b>185</b>	<b>173</b>	<b>159</b>
60	94	220	302	401	496	596
	<b>232</b>	<b>230</b>	<b>226</b>	<b>218</b>	<b>206</b>	<b>192</b>
70	81.4	209	288	389	484	582
	<b>274</b>	<b>274</b>	<b>274</b>	<b>266</b>	<b>252</b>	<b>238</b>
75 (Max.cont.)	72	203	280	381	475	574
	<b>290</b>	<b>289</b>	<b>287</b>	<b>279</b>	<b>266</b>	<b>251</b>
80	66	194	273	371	467	566
	<b>303</b>	<b>302</b>	<b>298</b>	<b>290</b>	<b>279</b>	<b>264</b>
90 (Max.int.)	49	178	256	355	453	552
	<b>348</b>	<b>347</b>	<b>345</b>	<b>337</b>	<b>325</b>	<b>309</b>

BMH 315 [316.1cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

3.5	7.5	10	13.5	15.5	17.5	20
-----	-----	----	------	------	------	----

5	155	325				
	<b>16</b>	<b>13</b>				
10	163	342	454	556		
	<b>27</b>	<b>24</b>	<b>18</b>	<b>14</b>		
20	169	349	469	582	664	733
	<b>63</b>	<b>61</b>	<b>55</b>	<b>48</b>	<b>40</b>	<b>32</b>
30	165	344	470	580	669	740
	<b>93</b>	<b>89</b>	<b>82</b>	<b>77</b>	<b>67</b>	<b>59</b>
40	154	337	465	577	663	737
	<b>126</b>	<b>126</b>	<b>119</b>	<b>111</b>	<b>99</b>	<b>88</b>
50	141	325	455	568	656	728
	<b>159</b>	<b>155</b>	<b>148</b>	<b>139</b>	<b>126</b>	<b>115</b>
60	121	312	440	555	643	715
	<b>187</b>	<b>186</b>	<b>179</b>	<b>169</b>	<b>154</b>	<b>143</b>
70	103	298	425	541	631	703
	<b>222</b>	<b>222</b>	<b>215</b>	<b>205</b>	<b>187</b>	<b>176</b>
75 (Max.cont.)	94	287	417	529	623	696
	<b>236</b>	<b>233</b>	<b>224</b>	<b>215</b>	<b>196</b>	<b>184</b>
80	82	277	406	518	611	688
	<b>246</b>	<b>244</b>	<b>236</b>	<b>228</b>	<b>210</b>	<b>197</b>
90 (Max.int.)	62	256	386	496	593	669
	<b>282</b>	<b>280</b>	<b>275</b>	<b>266</b>	<b>248</b>	<b>234</b>

BMH 400 [406.4cm³/rev.]

Pressure (MPa) Max.cont. Max.int.

3.5	6	10.5	12.5	15.5	19
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5	196	348	516			
	<b>13</b>	<b>13</b>	<b>10</b>			
10	205	363	546	702	859	
	<b>22</b>	<b>21</b>	<b>21</b>	<b>17</b>	<b>11</b>	
20	209	366	543	708	874	988
	<b>50</b>	<b>49</b>	<b>46</b>	<b>41</b>	<b>36</b>	<b>31</b>
30	201	357	542	706	864	984
	<b>73</b>	<b>72</b>	<b>70</b>	<b>63</b>	<b>56</b>	<b>51</b>
40	195	346	532	701	858	973
	<b>99</b>	<b>98</b>	<b>96</b>	<b>86</b>	<b>77</b>	<b>71</b>
50	173	332	518	687	848	958
	<b>123</b>	<b>122</b>	<b>118</b>	<b>107</b>	<b>97</b>	<b>90</b>
60	154	319	501	668	833	944
	<b>146</b>	<b>144</b>	<b>141</b>	<b>128</b>	<b>115</b>	<b>106</b>
70	138	305	480	649	814	925
	<b>174</b>	<b>173</b>	<b>169</b>	<b>156</b>	<b>141</b>	<b>130</b>
75 (Max.cont.)	128	294	466	637	802	911
	<b>183</b>	<b>181</b>	<b>177</b>	<b>163</b>	<b>149</b>	<b>138</b>
80	113	277	451	621	786	899
	<b>192</b>	<b>191</b>	<b>188</b>	<b>174</b>	<b>158</b>	<b>144</b>
90 (Max.int.)	90	256	433	595	767	881
	<b>220</b>	<b>220</b>	<b>215</b>	<b>202</b>	<b>183</b>	<b>165</b>

Torque (N·m) **593**  
Speed (rpm) **248**

□ cont.  
■ int.

Performance Data

BMH 500 [489.2cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.cont. Max.int.

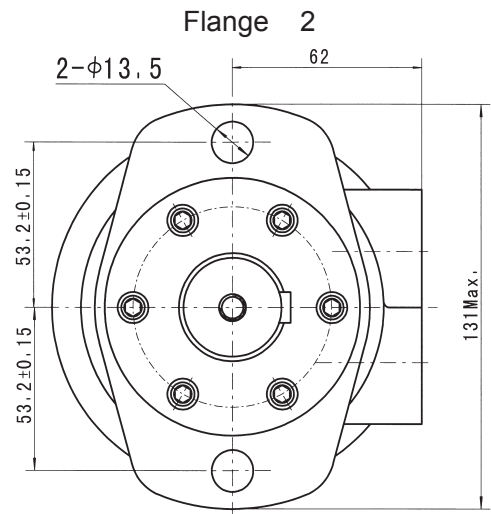
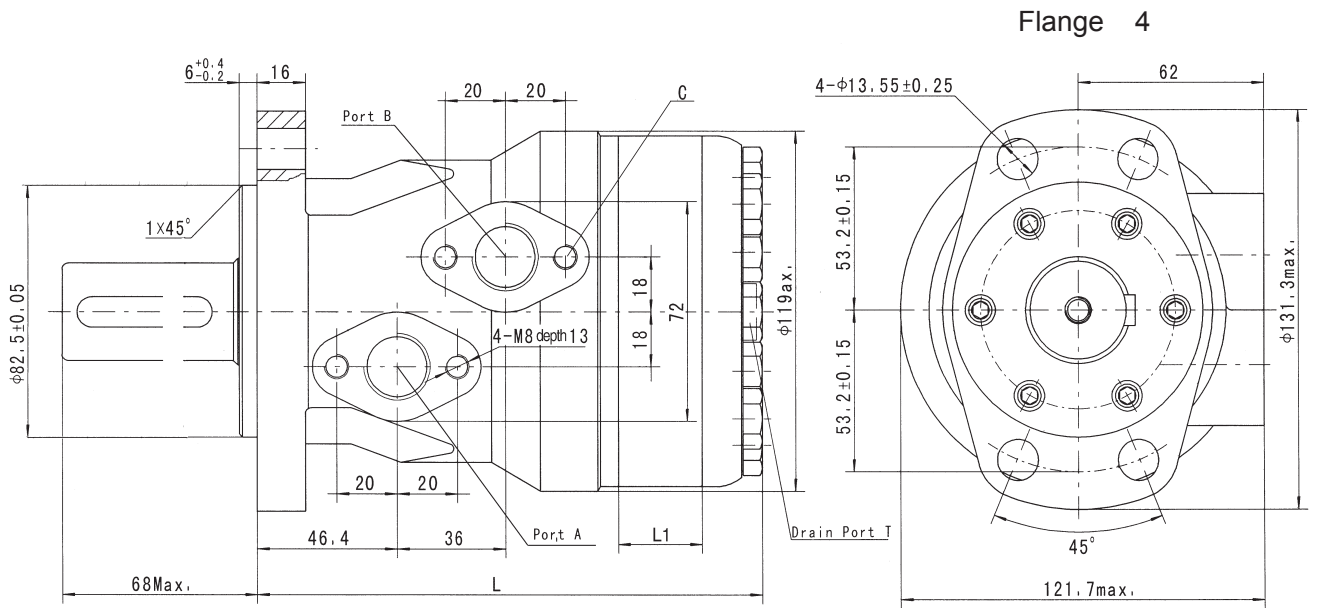
2.5	5	8.5	10	12.5	16
-----	---	-----	----	------	----

Flow (L/min)	5	165 <b>11</b>	317 <b>11</b>	516 <b>8</b>				
	10	178 <b>20</b>	335 <b>19</b>	555 <b>17</b>	669 <b>15</b>	791 <b>13</b>	969 <b>9</b>	
	20	177 <b>42</b>	331 <b>42</b>	559 <b>41</b>	673 <b>38</b>	799 <b>36</b>	988 <b>29</b>	
	30	172 <b>64</b>	320 <b>63</b>	553 <b>61</b>	663 <b>57</b>	792 <b>53</b>	983 <b>47</b>	
	40	163 <b>85</b>	309 <b>85</b>	541 <b>83</b>	654 <b>79</b>	783 <b>75</b>	971 <b>67</b>	
	50	146 <b>103</b>	296 <b>103</b>	523 <b>103</b>	635 <b>97</b>	768 <b>93</b>	954 <b>85</b>	
	60	121 <b>124</b>	275 <b>124</b>	502 <b>123</b>	614 <b>117</b>	747 <b>113</b>	934 <b>103</b>	
	70	97 <b>148</b>	256 <b>148</b>	482 <b>148</b>	597 <b>140</b>	729 <b>134</b>	917 <b>122</b>	
	Max.cont.	75	79 <b>155</b>	240 <b>155</b>	469 <b>155</b>	582 <b>152</b>	714 <b>144</b>	902 <b>130</b>
		80	60 <b>166</b>	226 <b>166</b>	453 <b>166</b>	570 <b>159</b>	701 <b>153</b>	884 <b>139</b>
Max.int.	80	34 <b>184</b>	201 <b>183</b>	421 <b>182</b>	550 <b>177</b>	673 <b>166</b>	869 <b>155</b>	
	90							

cont.  
int.

Torque (N·m) 673  
Speed (rpm) 166

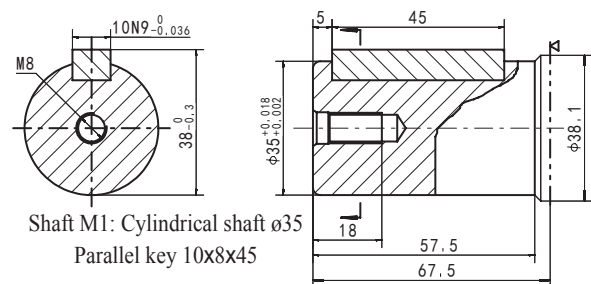
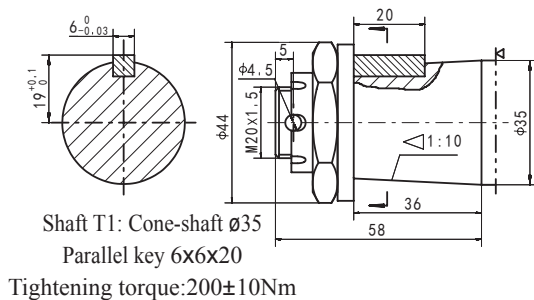
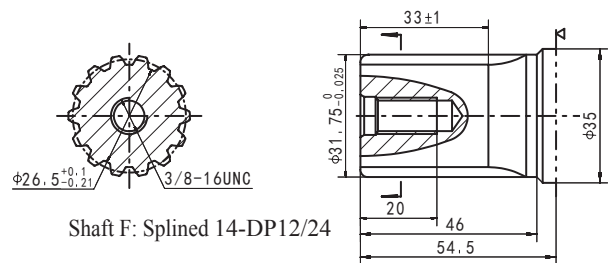
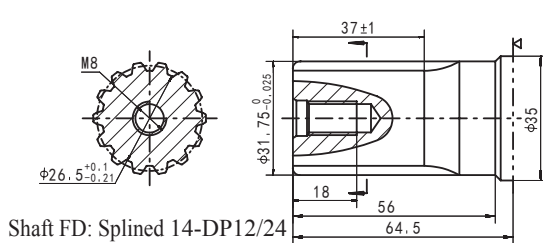
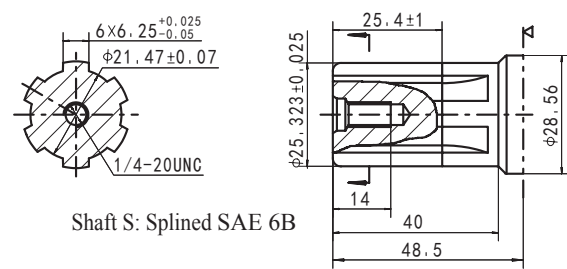
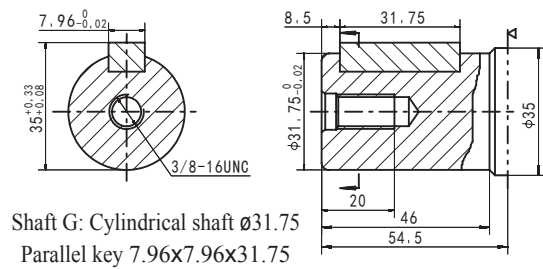
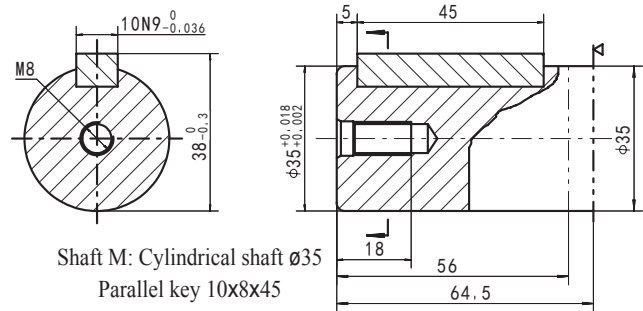
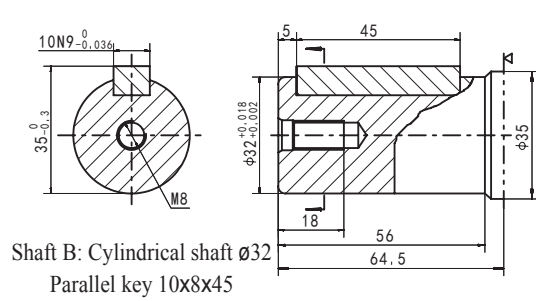
**BMH DIMENSIONS AND MOUNTING DATA**



Model	L	L1
BMH-160	162	21
BMH-200	168	27
BMH-250	175	34
BMH-315	183	42
BMH-400	195	54
BMH-500	206	65

Code Mounting	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (15)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)	7/16-20UNF (12)	PT(RC)1/4 1/4

**BMH SHAFT EXTENSIONS DIMINSIONS DATA**

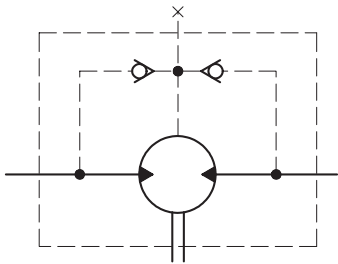


▷ Motor Mounting Surface

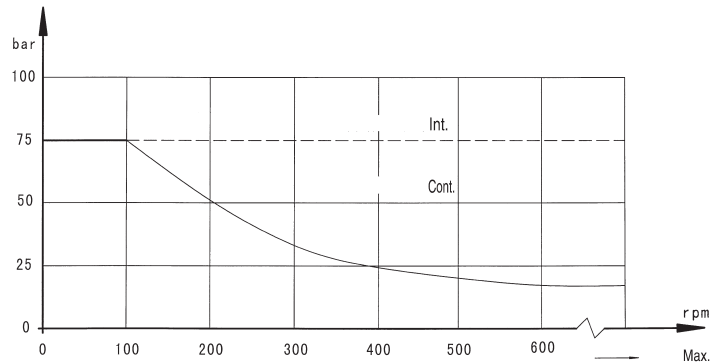


## BMH series Hydraulic Motor

### Permissible shaft seal pressure

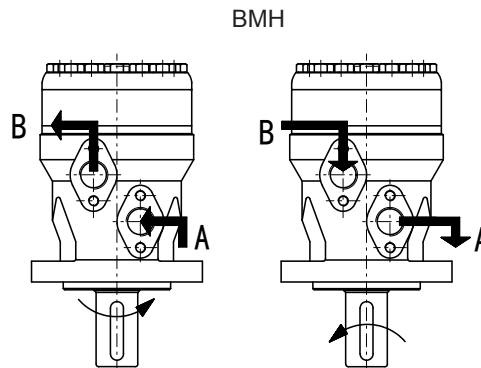


In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.



### Direction of shaft rotation: Standard

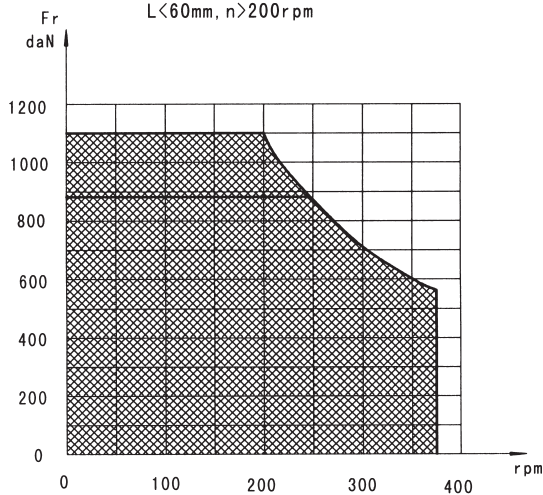
When facing shaft end of motor, shaft to rotate:  
Clockwise when port "A" is pressurized.  
Counter-clockwise port "B" is pressurized.



Status of the shaft's radial force

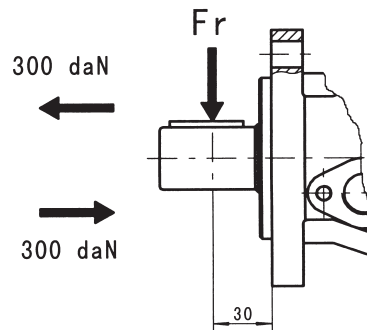
$$F_r = \frac{1100}{n} \times \frac{25000}{103.5+L} \text{ daN}$$

$L < 60\text{mm}, n > 200\text{rpm}$



— shaft  $\phi 1"$  ( $\phi 25.4\text{mm}$ ) and shaft SAE 6B

The drawing is the Possible load when  $L=30\text{mm}$ .



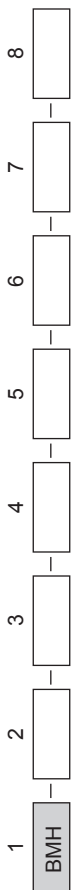
$F_r$  =Radial Force (daN)  
 $L$  =Distance (mm)  
 $n$  =Speed (rpm)

### Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm <sup>2</sup> /s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

### Order Information



Pos.1	2	3	4	5	6	7	8
Code	Flange		Output shaft	Ports and drain port	Rotation direction	Paint	Unusually function
160	4	4xØ13.5 Rhombxflange	B	D	Omit	00	Standard
200			B Shaft Ø32 , parallel key 10x8x45				
250	2	2xØ13.5 Rhombxflange	M1	M	R	B	No drain
315			Pilot Ø82.5x6	F Shaft Ø35, parallel key 10x8x45	M22x1.5 Manifold mount 4xM8,	Opposite	Blue
400	Pilot Ø82.5x6	Pilot Ø82.5x6	F	S		S	Running
470			FD	Long Shaft Ø31.75, splined key 14-DP12/24	7/8-14 O-ring Manifold mount 4x5/16-18UNC,7/16-20UNF		Silver grey
500			G	P			Big radial force
			T1	R			
			S				
			M				

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.



## BMSY SERIES HYDRAULIC MOTOR

BMSY new 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 featutres:

- \* 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 offers 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.

## Main Specification

Type		BMSY BMSYS 80	BMSY BMSYS 100	BMSY BMSYS 125	BMSY BMSYS 160	BMSY BMSYS 200	BMSY BMSYS 250	BMSY BMSYS 315	BMSY BMSYS 400	BMSY BMSYS 475
Geometric displacement (cm <sup>3</sup> /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 (N•m)	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 (MPa)	cont.	20.5	20.5	20.5	21	21	20	20	16	14
	int.	27.5	27.5	27.5	26	25	25	24	19	15
	peak	29.5	29.5	29.5	28	27	27	26	21	17.5
Max. 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 (MPa)	cont.	25	25	25	25	25	25	25	25	25
	int.	30	30	30	30	30	30	30	30	30
Weight (kg)		9.8	10	10.3	10.7	11.1	11.6	12.3	13.2	14.3

\* 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

BMSY80 [80.6cm³/rev.]

Pressure (MPa)

	3.5	7	10.5	14	17.5	20.5	22.5
--	-----	---	------	----	------	------	------

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

BMSY100 [100.8cm³/rev.]

Pressure (MPa)

	3.5	7	10.5	14	17.5	20.5	22.5
--	-----	---	------	----	------	------	------

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

BMSY125 [125cm³/rev.]

Pressure (MPa)

	3.5	7	10.5	14	17.5	20.5	22.5
--	-----	---	------	----	------	------	------

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

BMSY160 [154cm³/rev.]

Pressure (MPa)

	3.5	7	10.5	14	17.5	21	22.5
--	-----	---	------	----	------	----	------

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

TORQUE(N·m) 301  
SPEED (r/min) 646

□ cont.  
■ int.

Performance Data

BMSY200 [194cm<sup>3</sup>/rev.]

		Pressure (MPa)						Max.cont. Max.int.		
		3.5	7	10.5	14	17.5	21	22.5		
Flow (L/min)	15	87	179	273	371	471	562	610		
		<b>74</b>	<b>73</b>	<b>71</b>	<b>68</b>	<b>64</b>	<b>60</b>	<b>48</b>		
	30	91	190	288	386	489	572	618		
		<b>150</b>	<b>148</b>	<b>143</b>	<b>140</b>	<b>134</b>	<b>128</b>	<b>119</b>		
	40	94	193	296	394	498	584	645		
		<b>198</b>	<b>195</b>	<b>192</b>	<b>188</b>	<b>183</b>	<b>178</b>	<b>167</b>		
	50	90	191	292	389	493	580	634		
	<b>248</b>	<b>246</b>	<b>241</b>	<b>236</b>	<b>230</b>	<b>223</b>	<b>212</b>			
	60	85	185	279	382	483	575	622		
	<b>300</b>	<b>295</b>	<b>288</b>	<b>281</b>	<b>273</b>	<b>263</b>	<b>251</b>			
Max.cont.	75	78	176	271	370	472	561	610		
	<b>374</b>	<b>370</b>	<b>364</b>	<b>360</b>	<b>352</b>	<b>340</b>	<b>331</b>			
Max.int.	90	68	163	265	361	456	545	599		
	<b>443</b>	<b>440</b>	<b>435</b>	<b>428</b>	<b>424</b>	<b>413</b>	<b>400</b>			

BMSY250 [243cm<sup>3</sup>/rev.]

		Pressure (MPa)						Max.cont. Max.int.		
		3.5	7	10.5	14	17.5	20	22.5		
Flow (L/min)	15	110	231	351	462	585	681	778		
		<b>59</b>	<b>58</b>	<b>56</b>	<b>53</b>	<b>50</b>	<b>46</b>	<b>35</b>		
	30	116	236	359	475	597	700	790		
		<b>119</b>	<b>117</b>	<b>114</b>	<b>108</b>	<b>102</b>	<b>92</b>	<b>80</b>		
	40	118	241	363	480	599	706	796		
		<b>162</b>	<b>159</b>	<b>156</b>	<b>150</b>	<b>143</b>	<b>134</b>	<b>121</b>		
	50	111	234	352	472	591	693	788		
	<b>203</b>	<b>201</b>	<b>197</b>	<b>191</b>	<b>182</b>	<b>173</b>	<b>158</b>			
	60	106	224	345	462	582	685	772		
	<b>244</b>	<b>242</b>	<b>237</b>	<b>230</b>	<b>220</b>	<b>208</b>	<b>194</b>			
Max.cont.	75	101	214	340	454	570	670	760		
	<b>303</b>	<b>299</b>	<b>294</b>	<b>285</b>	<b>272</b>	<b>260</b>	<b>244</b>			
Max.int.	90	93	209	335	447	559	657	749		
	<b>363</b>	<b>359</b>	<b>354</b>	<b>348</b>	<b>340</b>	<b>328</b>	<b>303</b>			

BMSY315 [311cm<sup>3</sup>/rev.]

		Pressure (MPa)						Max.cont. Max.int.		
		3.5	7	10.5	14	17.5	20	22.5		
Flow (L/min)	15	148	304	456	613	762	879	978		
		<b>48</b>	<b>47</b>	<b>45</b>	<b>43</b>	<b>41</b>	<b>39</b>	<b>27</b>		
	30	155	314	465	635	778	884	988		
		<b>95</b>	<b>93</b>	<b>91</b>	<b>89</b>	<b>86</b>	<b>82</b>	<b>67</b>		
	40	160	321	479	650	796	906	997		
		<b>127</b>	<b>125</b>	<b>121</b>	<b>117</b>	<b>115</b>	<b>109</b>	<b>91</b>		
	50	155	314	465	638	780	886	988		
	<b>159</b>	<b>157</b>	<b>153</b>	<b>149</b>	<b>145</b>	<b>142</b>	<b>128</b>			
	60	151	306	453	620	765	886	976		
	<b>187</b>	<b>185</b>	<b>181</b>	<b>176</b>	<b>169</b>	<b>157</b>	<b>143</b>			
Max.cont.	75	146	300	445	613	755	875	966		
	<b>238</b>	<b>236</b>	<b>232</b>	<b>227</b>	<b>224</b>	<b>220</b>	<b>196</b>			
Max.int.	90	135	284	436	601	740	863	952		
	<b>286</b>	<b>283</b>	<b>278</b>	<b>272</b>	<b>265</b>	<b>257</b>	<b>232</b>			

BMSY400 [394cm<sup>3</sup>/rev.]

		Pressure (MPa)						Max.cont. Max.int.	
		3.5	7	10.5	14	16	17.5		
Flow (L/min)	15	186	379	578	779	896	986		
		<b>37</b>	<b>36</b>	<b>35</b>	<b>33</b>	<b>31</b>	<b>29</b>		
	30	190	388	590	791	905	991		
		<b>75</b>	<b>73</b>	<b>71</b>	<b>68</b>	<b>65</b>	<b>61</b>		
	40	195	394	596	797	912	998		
		<b>99</b>	<b>97</b>	<b>95</b>	<b>93</b>	<b>90</b>	<b>85</b>		
	50	191	388	587	785	904	983		
	<b>125</b>	<b>123</b>	<b>118</b>	<b>114</b>	<b>109</b>	<b>102</b>			
	60	186	388	587	785	904	983		
	<b>149</b>	<b>146</b>	<b>142</b>	<b>137</b>	<b>131</b>	<b>122</b>			
Max.cont.	75	181	372	576	770	891	973		
	<b>187</b>	<b>183</b>	<b>177</b>	<b>171</b>	<b>164</b>	<b>153</b>			
Max.int.	90	176	367	571	766	883	965		
	<b>226</b>	<b>221</b>	<b>214</b>	<b>208</b>	<b>199</b>	<b>183</b>			

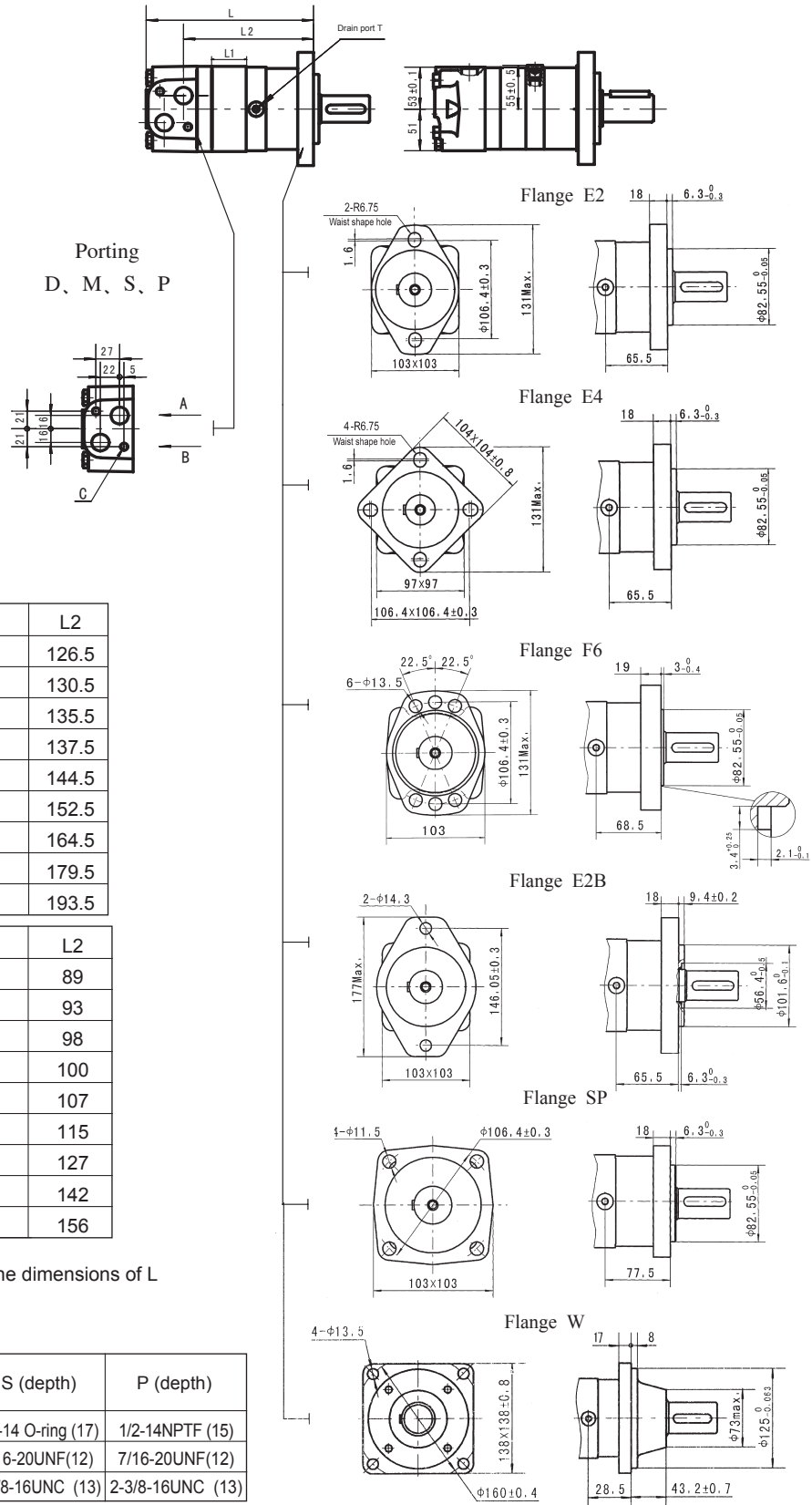
TORQUE (N·m) 766  
SPEED (rpm) 208

BMSY475 [475cm<sup>3</sup>/rev.]

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

□ cont.  
■ int.

**BMSY DIMENSIONS AND MOUNTING DATA**



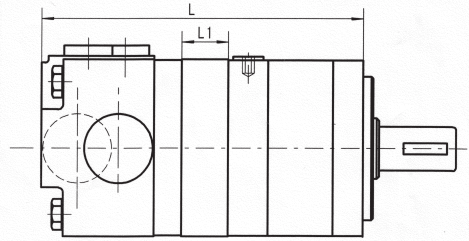
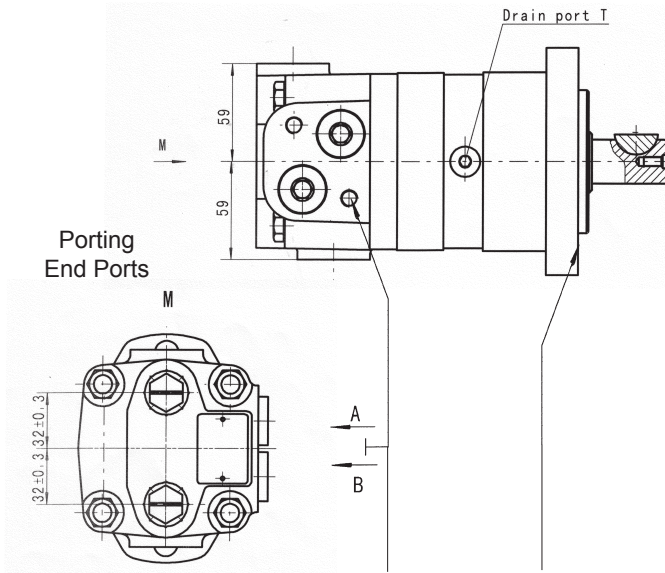
Model	L	L1	L2
BMSY-80	170	16	126.5
BMSY-100	174	20	130.5
BMSY-125	179	25	135.5
BMSY-160	181	27	137.5
BMSY-200	188	34	144.5
BMSY-250	196	42	152.5
BMSY-315	208	54	164.5
BMSY-400	223	69	179.5
BMSY-475	237	83	193.5

Model	L	L1	L2
BMSY-80-W	132.5	16	89
BMSY-100-W	136.5	20	93
BMSY-125-W	141.5	25	98
BMSY-160-W	143.5	27	100
BMSY-200-W	150.5	34	107
BMSY-250-W	158.5	42	115
BMSY-315-W	170.5	54	127
BMSY-400-W	185.5	69	142
BMSY-475-W	199.5	83	156

Note: If the mounting SP is used, the dimensions of L and L2 should plus 12mm.

Code Mounting	D (depth)	M (depth)	S (depth)	P (depth)
P(A,B)	G1/2(15)	M22x1.5(15)	7/8-14 O-ring (17)	1/2-14NPTF (15)
T	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)
C	2-M10(13)	2-M10 (13)	2-3/8-16UNC (13)	2-3/8-16UNC (13)

**BMSY DIMENSIONS AND MOUNTING DATA**

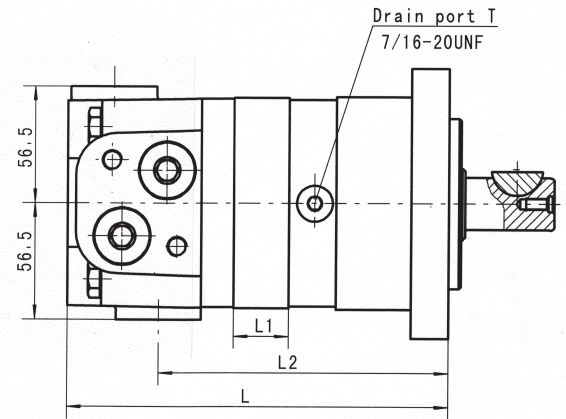
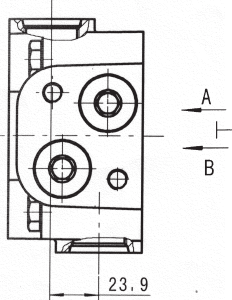


End Ports P(A) B)

Model	L	L1	Model	L	L1
BMSY-80	176	16	BMSY-80-WE	148	16
BMSY-100	180	20	BMSY-100-WE	152	20
BMSY-125	185	25	BMSY-125-WE	157	25
BMSY-160	187	27	BMSY-160-WE	159	27
BMSY-200	194	34	BMSY-200-WE	166	34
BMSY-250	202	42	BMSY-250-WE	174	42
BMSY-315	214	54	BMSY-315-WE	186	54
BMSY-400	229	69	BMSY-400-WE	201	69
BMSY-475	243	83	BMSY-475-WE	215	83

Code	EE-D (depth)	EE-M2 (depth)	EE-S2 (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)

Porting  
ED 1-1/16-12UN O-ring  
180° Apart ports

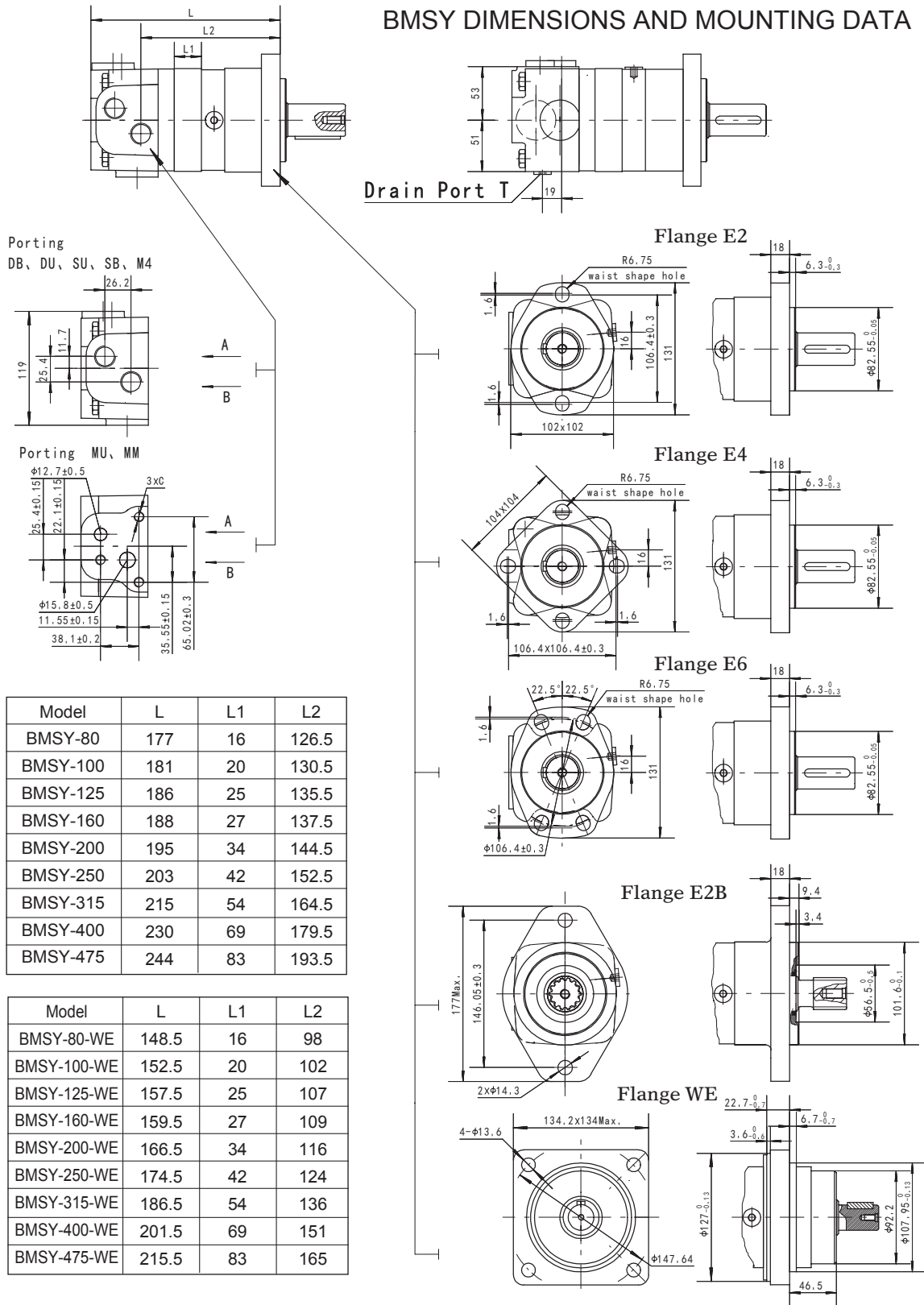


Code	ED (depth)
P(A,B)	1-1/16-12UN (18)
T	7/16-20UNF (12)

Model	L	L1	L2
BMSY-80	176	16	130
BMSY-100	180	20	134
BMSY-125	185	25	139
BMSY-160	187	27	141
BMSY-200	194	34	148
BMSY-250	202	42	156
BMSY-315	214	54	168
BMSY-400	229	69	183
BMSY-475	243	83	197

Model	L	L1	L2
BMSY-80-WE	148	16	102
BMSY-100-WE	152	20	106
BMSY-125-WE	157	25	111
BMSY-160-WE	159	27	113
BMSY-200-WE	166	34	119
BMSY-250-WE	178	42	127
BMSY-315-WE	190	54	139
BMSY-400-WE	205	69	154
BMSY-475-WE	219	83	168

**BMSY DIMENSIONS AND MOUNTING DATA**



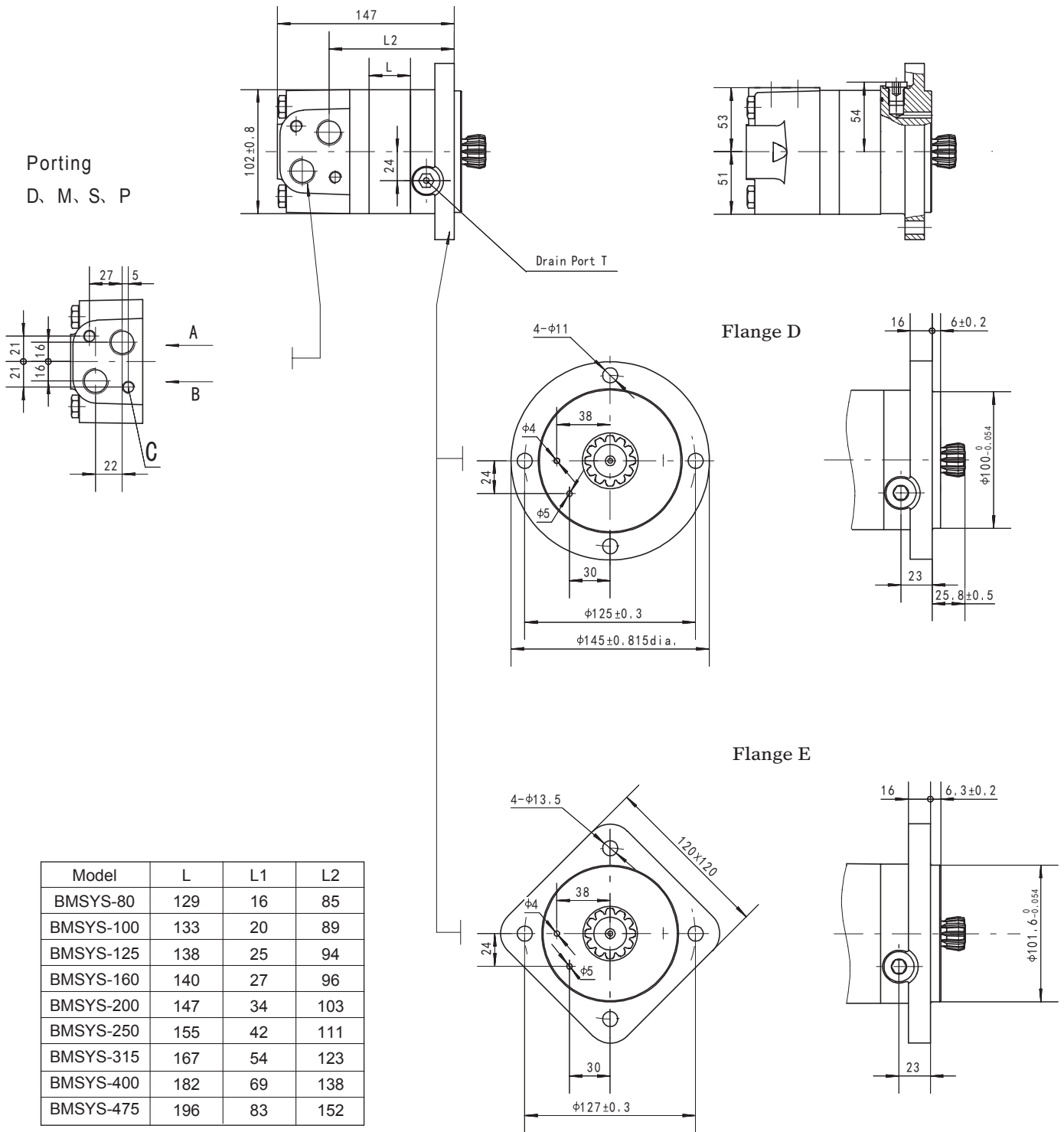
Model	L	L1	L2
BMSY-80	177	16	126.5
BMSY-100	181	20	130.5
BMSY-125	186	25	135.5
BMSY-160	188	27	137.5
BMSY-200	195	34	144.5
BMSY-250	203	42	152.5
BMSY-315	215	54	164.5
BMSY-400	230	69	179.5
BMSY-475	244	83	193.5

Model	L	L1	L2
BMSY-80-WE	148.5	16	98
BMSY-100-WE	152.5	20	102
BMSY-125-WE	157.5	25	107
BMSY-160-WE	159.5	27	109
BMSY-200-WE	166.5	34	116
BMSY-250-WE	174.5	42	124
BMSY-315-WE	186.5	54	136
BMSY-400-WE	201.5	69	151
BMSY-475-WE	215.5	83	165

Code	DB(depth)	DU (depth)	SU (depth)	SB (depth)	M4 (depth)	MU	MM
P(A,B)	G1/2(15)	G1/2(15)	7/8-14O-ring(17)	7/8-14O-ring(17)	M22x1.5(15)	Φ12.7,Φ15.8	Φ12.7,Φ15.8
T	G1/4(12)	7/16-20UNF(12)	7/16-20UNF(12)	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	G1/4(12)
C						3/8-16UNC	M10

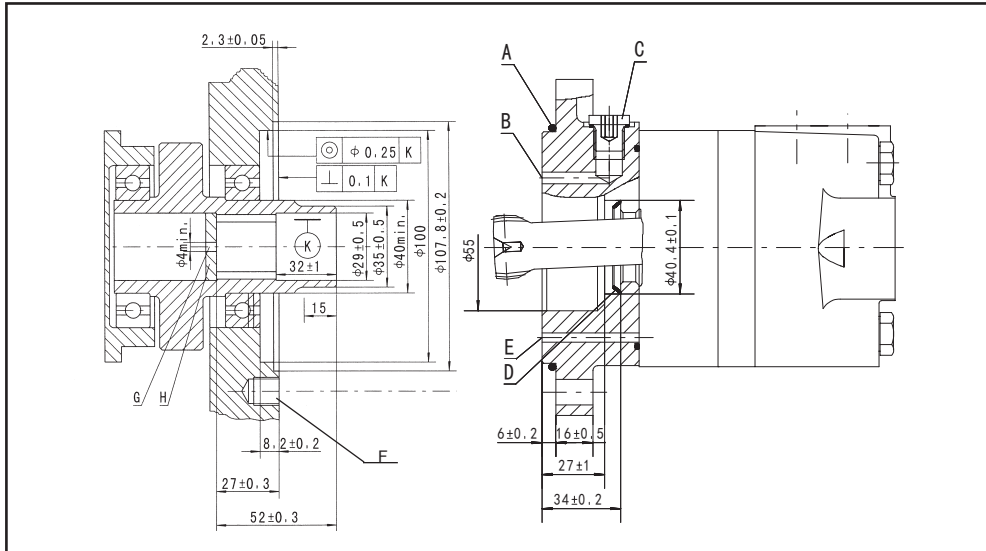


**BMSYS DIMENSIONS AND MOUNTING DATA**



Code	D (depth)	M (depth)	S (depth)	P (depth)
P(A,B)	G1/2(15)	M22x1.5(15)	7/8-14O-ring(17)	1/2-14NPTF(15)
T	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)
C	2-M10(13)	2-M10(13)	2-3/8-16UNC(13)	2-3/8-16UNC(13)

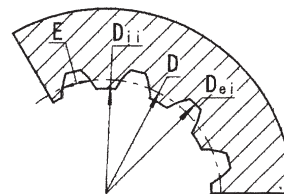
**BMSYS DIMENSIONS AND MOUNTING DATA**



- A: O-ring:100x3
- B: External drain channel
- C: Drain connection G 1/4;12 mm deep
- D: Conical seal ring
- E: Internal drain channel
- F: M10;min. 15mm deep
- G: Oil circulation hole
- H: Hardened stop plate

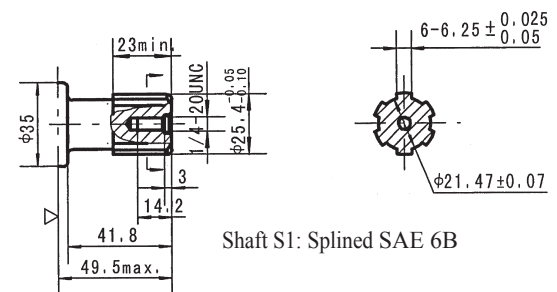
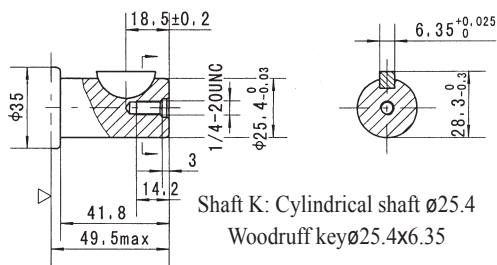
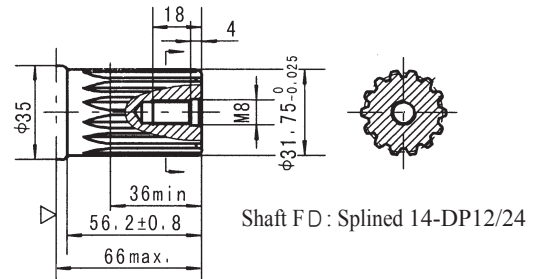
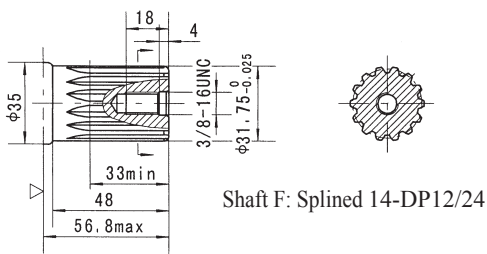
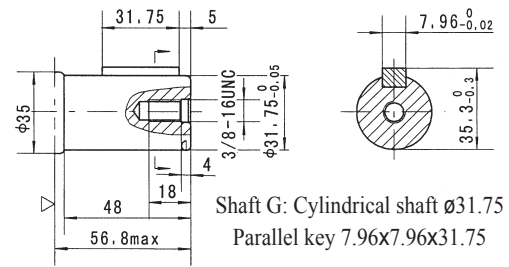
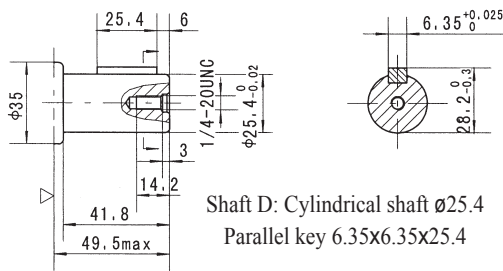
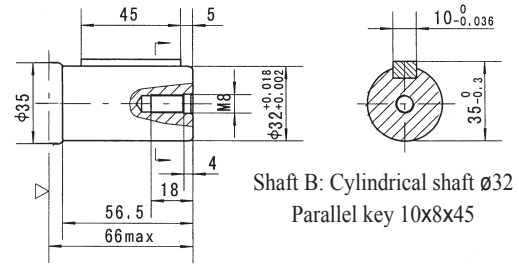
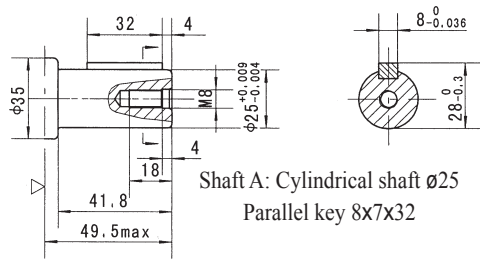
**INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT**

Fillet Root Side Fit		mm
Number of Teeth	Z	12
Diametral Pitch	DP	12/24
Pressure Angle	$\alpha_D$	30°
Pitch Dia.	D	ø25.4
Major Dia.	$D_{ei}$	ø28 <sup>0</sup> <sub>-0.1</sub>
Minor Dia.	$D_{ii}$	ø23 <sup>+0.033</sup> <sub>0</sub>
Space Width [Circular]	E	4.308±0.02



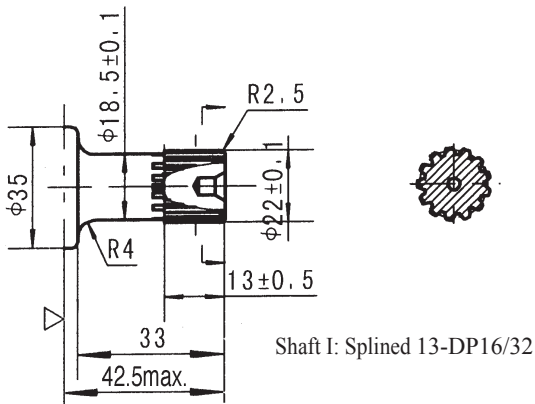
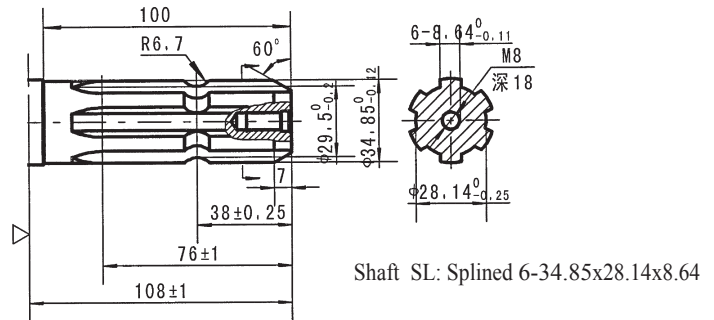
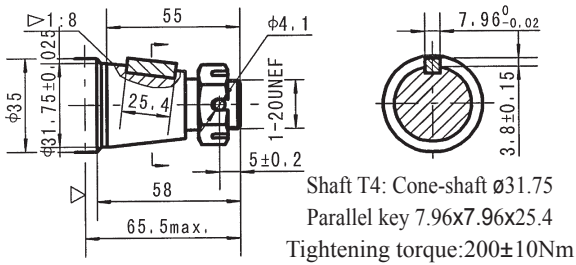
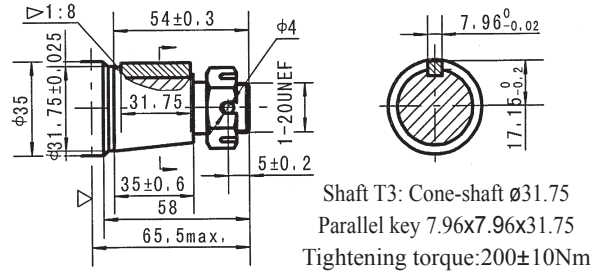
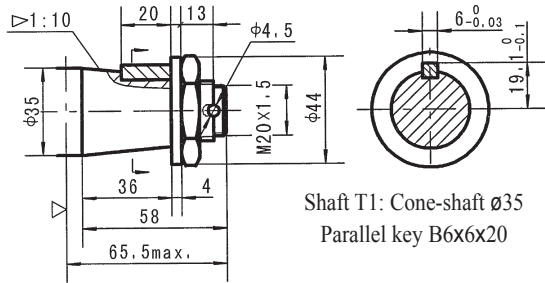
Hardening Specification: HRC 62±2  
Effective case depth 0.7±0.2

SHAFT EXTENSIONS FOR BMSY MOTORS



▷ Motor Mounting Surface(Dimension corresponding mounting E2, by analogy with others)

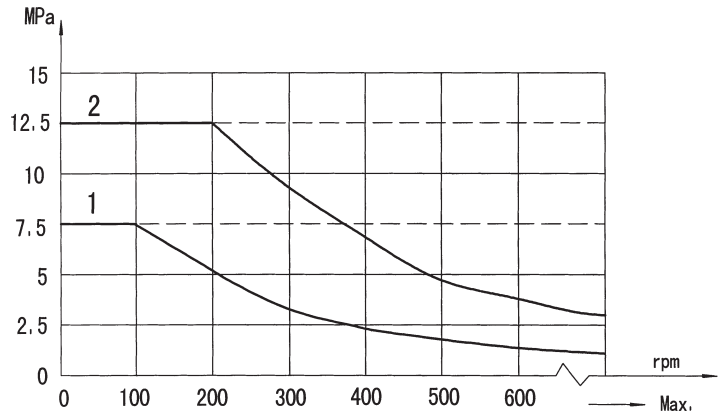
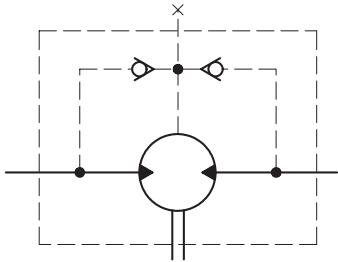
SHAFT EXTENSIONS FOR BMSY MOTORS



- ▷ Motor Mounting Surface(Dimension corresponding mounting E2, by analogy with others)  
Note:Mounting SP is the same with shaft mode T1、D、B、F and G.

### BMSY Series Hydraulic Motor

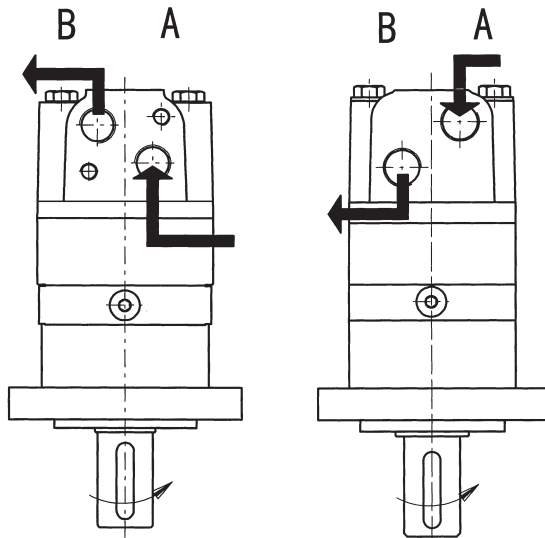
#### Permissible shaft seal pressure



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

#### 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.



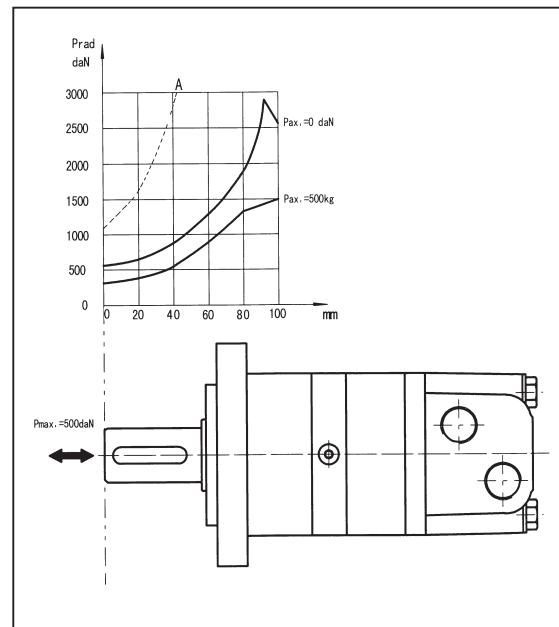
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

#### Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm <sup>2</sup> /s)	Oil flow in the drain line (L/min.)
14	20	1.5
	35	1
21	20	3
	35	2

#### 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.

Order Information

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
S	E2	2-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5x6.3	A Shaft Ø25.4, parallel key 8x7x32	EE-D G1/2, G1/4			
	E4	4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5x6.3	B Shaft Ø32, parallel key 10x8x45	EE-M 2M22x1.5, M14x1.5			
	E6	4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5x6.3	D Shaft Ø25.4, parallel key 6.35x6.35x25.4	EE-S2 7/8-14UNF O-ring, 7/16-20 UNF	D G1/2 Manifold Mount		
	80	4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5x6.3	F Shaft Ø31.75, splined key 14-DP12/24	ED 1-1/16-12UN O-ring, 7/16-20 UNF	2-M10, G1/4		
	100	6-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5x2.6	FD Long Shaft Ø31.75, splined key 14-DP12/24	DB G1/2, G1/4	G1/2, G1/4		
	125	4-Ø13.5 Wheel-flange Ø160, pilot Ø125x8	FE Shaft Ø31.75, splined key 14-DP12/24	DU G1/2, 7/16-20 UNF	G1/2, 7/16-20 UNF		
	160	2-Ø14.3 Rhomb-flange Ø146.05, pilot Ø101.6x9.4	G Shaft Ø31.75, splined key 14-DP12/24	SU 7/8-14UNF O-ring, 7/16-20 UNF	M22x1.5, M14x1.5		
	200	4-Ø11.5 Square-flange Ø106.4, pilot Ø82.5x6.3	K Shaft Ø25.4, Woodruff key Ø25.4x6.35	MU 1/2", 5/8" Crosshole Manifold 3x3/8-16UNC, 7/16-20UNF	1/2", 5/8" Crosshole Manifold 3xM10, G1/4	00 No paint	
	250	4-Ø13.6 Wheel-flange Ø147.6, pilot Ø107.95x6.4	T4 Cone-shaft Ø31.75, parallel key 7.96x7.96x25.4	MM M22x1.5 Manifold Mount	Omit Standard	Blue	Omit
	315		SL shaft Ø34.85, Splined key 6-34.85x28.14x8.64	M 2-M10, M14x1.5	Omit Standard	Blue	Omit
	400		T1 Cone-shaft Ø35, parallel key B6x6x20	S 7/8-14UNF O-ring manifold	R Opposite	Black	F Free Running
	475		T3 Cone-shaft Ø31.75, parallel key 7.96x7.96x31.75	P Cone-shaft Ø35, parallel key B6x6x20	S Opposite	Black	LS Low Speed
			S1 Shaft Ø25.4, splined key SAE 6B	G Cone-shaft Ø31.75, parallel key 7.96x7.96x31.75	G G1/2, G1/4	S Silver gray	
			I Sub-shaft Ø22, splined key 13-DP16/32	M2 Shaft Ø25.4, splined key SAE 6B	M22x1.5, M14x1.5		
				Omit Short shaft 12-DP12/24	S2 7/8-14UNF O-ring, 7/16-20 UNF		

Note: When the table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. The information of mounting flange, output shaft and ports are the same as BMS series. The SP flange afflies to shafts of T1, D, B, F, G. If the specification is not in the table or you have specific requirements, please contact us.



## BMT SERIES HYDRAULIC MOTOR

BMT series motor adapt the advanced Geroler gear set design 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. 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		BMT 160	BMT 200	BMT 230	BMT 250	BMT 315	BMT 400	BMT 500	BMT 630	BMT 800
Geometric displacement (cm <sup>3</sup> /rev.)		161.1	201.4	232.5	251.8	326.3	410.9	523.6	629.1	801.8
Max. speed (rpm)	cont.	625	625	536	500	380	305	240	196	154
	int.	780	750	643	600	460	365	285	233	185
Max. torque (N·m)	cont.	470	590	670	730	950	1080	1220	1318	1464
	int.	560	710	821	880	1140	1260	1370	1498	1520
	peak	669	838	958	1036	1346.3	1450.3	1643.8	1618.8	1665
Max. output (kW)	cont.	27.7	34.9	34.7	34.5	34.9	31.2	28.8	25.3	22.2
	int.	32	40	40	40	40	35	35	27.5	26.8
Max. pressure drop (MPa)	cont.	20	20	20	20	20	18	16	14	12.5
	int.	24	24	24	24	24	21	18	16	13
	peak	28	28	28	28	28	24	21	19	16
Max. flow (L/min)	cont.	100	125	125	125	125	125	125	125	125
	int.	125	150	150	150	150	150	150	150	150
Max. inlet pressure (MPa)	cont.	21	21	21	21	21	21	21	21	21
	int.	25	25	25	25	25	25	25	25	25
	peak	30	30	30	30	30	30	30	30	30
Weight (kg)		19.5	20	20.4	20.5	21	22	23	24	25

\* 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

BMT 160 [161.1cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.cont. Max.int.

	4	8	10	12	16	20	24
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Flow (L/min)	Pressure (MPa)						
	4	8	10	12	16	20	24
10	88 <b>60</b>	176 <b>59</b>	228 <b>58</b>	275 <b>56</b>	361 <b>54</b>	447 <b>50</b>	535 <b>44</b>
20	89 <b>121</b>	181 <b>120</b>	234 <b>117</b>	277 <b>114</b>	372 <b>109</b>	459 <b>103</b>	557 <b>95</b>
40	91 <b>249</b>	180 <b>246</b>	235 <b>243</b>	277 <b>236</b>	381 <b>230</b>	471 <b>223</b>	573 <b>212</b>
60	82 <b>371</b>	178 <b>367</b>	235 <b>362</b>	277 <b>356</b>	381 <b>349</b>	470 <b>340</b>	572 <b>330</b>
80	78 <b>492</b>	173 <b>489</b>	229 <b>485</b>	276 <b>478</b>	379 <b>470</b>	466 <b>462</b>	567 <b>447</b>
Max.cont. 100	70 <b>614</b>	160 <b>611</b>	218 <b>606</b>	269 <b>598</b>	370 <b>590</b>	455 <b>582</b>	558 <b>570</b>
Max.int. 125	58 <b>770</b>	148 <b>764</b>	211 <b>758</b>	261 <b>750</b>	359 <b>741</b>	448 <b>731</b>	552 <b>715</b>

BMT 200 [201.4cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.cont. Max.int.

	4	8	10	12	16	20	24
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Flow (L/min)	Pressure (MPa)						
	4	8	10	12	16	20	24
10	124 <b>47</b>	233 <b>46</b>	289 <b>45</b>	340 <b>42</b>	454 <b>39</b>	560 <b>37</b>	669 <b>33</b>
20	125 <b>95</b>	239 <b>94</b>	298 <b>92</b>	347 <b>90</b>	468 <b>87</b>	576 <b>84</b>	696 <b>75</b>
40	120 <b>195</b>	241 <b>193</b>	296 <b>191</b>	352 <b>187</b>	475 <b>183</b>	589 <b>178</b>	716 <b>167</b>
60	116 <b>297</b>	237 <b>295</b>	295 <b>292</b>	352 <b>287</b>	478 <b>282</b>	589 <b>276</b>	718 <b>263</b>
80	108 <b>395</b>	231 <b>393</b>	289 <b>389</b>	350 <b>384</b>	474 <b>377</b>	586 <b>370</b>	716 <b>359</b>
100	99 <b>493</b>	227 <b>490</b>	286 <b>486</b>	344 <b>482</b>	471 <b>475</b>	580 <b>467</b>	712 <b>460</b>
Max.cont. 125	84 <b>615</b>	208 <b>611</b>	276 <b>607</b>	333 <b>602</b>	459 <b>595</b>	566 <b>588</b>	697 <b>572</b>
Max.int. 150	70 <b>743</b>	194 <b>740</b>	260 <b>735</b>	324 <b>727</b>	447 <b>717</b>	554 <b>706</b>	682 <b>682</b>

BMT 250 [251.8cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.cont. Max.int.

	4	8	10	12	16	20	24
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Flow (L/min)	Pressure (MPa)						
	4	8	10	12	16	20	24
10	138 <b>38</b>	286 <b>38</b>	355 <b>37</b>	419 <b>36</b>	559 <b>34</b>	689 <b>32</b>	824 <b>31</b>
20	143 <b>76</b>	296 <b>75</b>	364 <b>74</b>	432 <b>72</b>	580 <b>70</b>	708 <b>67</b>	853 <b>62</b>
40	139 <b>156</b>	301 <b>154</b>	372 <b>152</b>	440 <b>149</b>	593 <b>146</b>	723 <b>142</b>	884 <b>134</b>
60	132 <b>237</b>	294 <b>236</b>	372 <b>233</b>	441 <b>229</b>	592 <b>224</b>	727 <b>219</b>	888 <b>207</b>
80	128 <b>317</b>	283 <b>316</b>	364 <b>314</b>	433 <b>308</b>	587 <b>303</b>	721 <b>299</b>	887 <b>284</b>
100	126 <b>396</b>	282 <b>394</b>	355 <b>391</b>	427 <b>387</b>	582 <b>381</b>	716 <b>373</b>	879 <b>359</b>
Max.cont. 125	116 <b>495</b>	260 <b>492</b>	340 <b>488</b>	414 <b>483</b>	568 <b>476</b>	703 <b>469</b>	864 <b>454</b>
Max.int. 150	88 <b>592</b>	242 <b>589</b>	320 <b>585</b>	397 <b>580</b>	552 <b>572</b>	686 <b>565</b>	847 <b>545</b>

BMT 315 [326.3cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.cont. Max.int.

	4	8	10	12	16	20	24
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Flow (L/min)	Pressure (MPa)						
	4	8	10	12	16	20	24
10	184 <b>30</b>	363 <b>29</b>	453 <b>28</b>	545 <b>27</b>	734 <b>26</b>	891 <b>25</b>	1062 <b>23</b>
20	189 <b>60</b>	380 <b>59</b>	472 <b>58</b>	562 <b>56</b>	757 <b>54</b>	917 <b>52</b>	1109 <b>50</b>
40	191 <b>121</b>	381 <b>120</b>	484 <b>118</b>	570 <b>115</b>	774 <b>112</b>	954 <b>109</b>	1149 <b>104</b>
60	189 <b>183</b>	376 <b>181</b>	493 <b>179</b>	573 <b>175</b>	772 <b>172</b>	962 <b>168</b>	1154 <b>158</b>
80	179 <b>244</b>	369 <b>242</b>	479 <b>239</b>	565 <b>236</b>	768 <b>231</b>	954 <b>227</b>	1153 <b>217</b>
100	169 <b>305</b>	357 <b>304</b>	467 <b>301</b>	562 <b>298</b>	758 <b>294</b>	942 <b>289</b>	1143 <b>276</b>
Max.cont. 125	147 <b>380</b>	336 <b>378</b>	447 <b>375</b>	544 <b>371</b>	745 <b>367</b>	920 <b>362</b>	1127 <b>349</b>
Max.int. 150	119 <b>458</b>	318 <b>456</b>	432 <b>453</b>	526 <b>449</b>	713 <b>444</b>	894 <b>431</b>	1097 <b>425</b>

Torque (N·m) 552  
Speed (rpm) 572



Performance Data

BMT 400 [410.9cm<sup>3</sup>/rev.]

Pressure (MPa)

	Max.cont.				Max.int.		
	3	6	9	12	15	18	21

Flow (L/min)	Pressure (MPa)						
	3	6	9	12	15	18	21
10	176 <b>24</b>	367 <b>23</b>	560 <b>22</b>	715 <b>21</b>	885 <b>20</b>	1050 <b>19</b>	1209 <b>18</b>
20	179 <b>49</b>	370 <b>48</b>	565 <b>47</b>	726 <b>44</b>	899 <b>42</b>	1071 <b>40</b>	1236 <b>38</b>
40	176 <b>96</b>	370 <b>95</b>	567 <b>93</b>	733 <b>90</b>	919 <b>87</b>	1091 <b>83</b>	1263 <b>79</b>
60	174 <b>145</b>	361 <b>143</b>	563 <b>139</b>	729 <b>135</b>	920 <b>131</b>	1095 <b>127</b>	1269 <b>121</b>
80	166 <b>193</b>	353 <b>191</b>	553 <b>188</b>	719 <b>184</b>	912 <b>180</b>	1084 <b>176</b>	1263 <b>170</b>
100	150 <b>242</b>	339 <b>240</b>	538 <b>238</b>	708 <b>234</b>	896 <b>228</b>	1067 <b>224</b>	1252 <b>218</b>
Max.cont. 125	135 <b>302</b>	309 <b>300</b>	524 <b>298</b>	688 <b>294</b>	873 <b>289</b>	1045 <b>285</b>	1221 <b>278</b>
Max.int. 150	126 <b>364</b>	292 <b>362</b>	508 <b>358</b>	666 <b>354</b>	852 <b>350</b>	1020 <b>346</b>	1197 <b>339</b>

BMT 500 [523.6cm<sup>3</sup>/rev.]

Pressure (MPa)

	Max.cont.				Max.int.			
	3	6	9	12	14	16	18	

Flow (L/min)	Pressure (MPa)							
	3	6	9	12	14	16	18	
10	222 <b>18</b>	451 <b>18</b>	692 <b>18</b>	892 17	1050 <b>16</b>	1193 <b>15</b>	1340 <b>13</b>	
20	231 <b>37</b>	464 <b>36</b>	714 <b>35</b>	918 34	1070 <b>33</b>	1220 <b>32</b>	1377 <b>30</b>	
40	230 <b>75</b>	466 <b>74</b>	727 <b>73</b>	941 72	1094 <b>70</b>	1244 <b>68</b>	1422 <b>64</b>	
60	225 <b>113</b>	457 <b>112</b>	714 <b>111</b>	941 109	1088 <b>107</b>	1245 <b>105</b>	1409 <b>101</b>	
80	213 <b>151</b>	431 <b>150</b>	696 <b>149</b>	927 147	1076 <b>145</b>	1244 <b>143</b>	1401 <b>138</b>	
100	194 <b>189</b>	420 <b>188</b>	680 <b>187</b>	901 185	1063 <b>183</b>	1224 <b>181</b>	1383 <b>177</b>	
Max.cont. 125	182 <b>237</b>	398 <b>236</b>	641 <b>235</b>	877 233	1024 <b>231</b>	1199 <b>229</b>	1352 <b>225</b>	
Max.int. 150	147 <b>284</b>	369 <b>283</b>	618 <b>282</b>	853 280	1004 <b>278</b>	1167 <b>276</b>	1325 <b>272</b>	

BMT 630 [629.1cm<sup>3</sup>/rev.]

Pressure (MPa)

	Max.cont.				Max.int.		
	3	6	9	10.5	12	14	16

Flow (L/min)	Pressure (MPa)						
	3	6	9	10.5	12	14	16
10	233 <b>14</b>	520 <b>14</b>	795 <b>13</b>	902 <b>13</b>	1074 <b>13</b>	1194 <b>11</b>	1363 <b>11</b>
20	237 <b>28</b>	554 <b>27</b>	837 <b>27</b>	953 <b>26</b>	1117 <b>26</b>	1239 <b>24</b>	1407 <b>22</b>
40	239 <b>62</b>	553 <b>62</b>	860 <b>61</b>	987 <b>60</b>	1171 <b>59</b>	1308 <b>56</b>	1483 <b>54</b>
60	223 <b>94</b>	544 <b>94</b>	863 <b>92</b>	978 <b>91</b>	1172 <b>90</b>	1318 <b>86</b>	1498 <b>82</b>
80	220 <b>123</b>	537 <b>122</b>	854 <b>121</b>	965 <b>119</b>	1172 <b>118</b>	1314 <b>114</b>	1497 <b>110</b>
100	208 <b>156</b>	522 <b>155</b>	832 <b>153</b>	945 <b>152</b>	1156 <b>150</b>	1303 <b>147</b>	1488 <b>142</b>
Max.cont. 125	201 <b>196</b>	499 <b>196</b>	810 <b>194</b>	931 <b>192</b>	1137 <b>191</b>	1292 <b>187</b>	1472 <b>183</b>
Max.int. 150	174 <b>233</b>	492 <b>232</b>	785 <b>231</b>	921 <b>230</b>	1121 <b>227</b>	1277 <b>223</b>	1454 <b>217</b>

BMT 800 [801.8cm<sup>3</sup>/rev.]

Pressure (MPa)

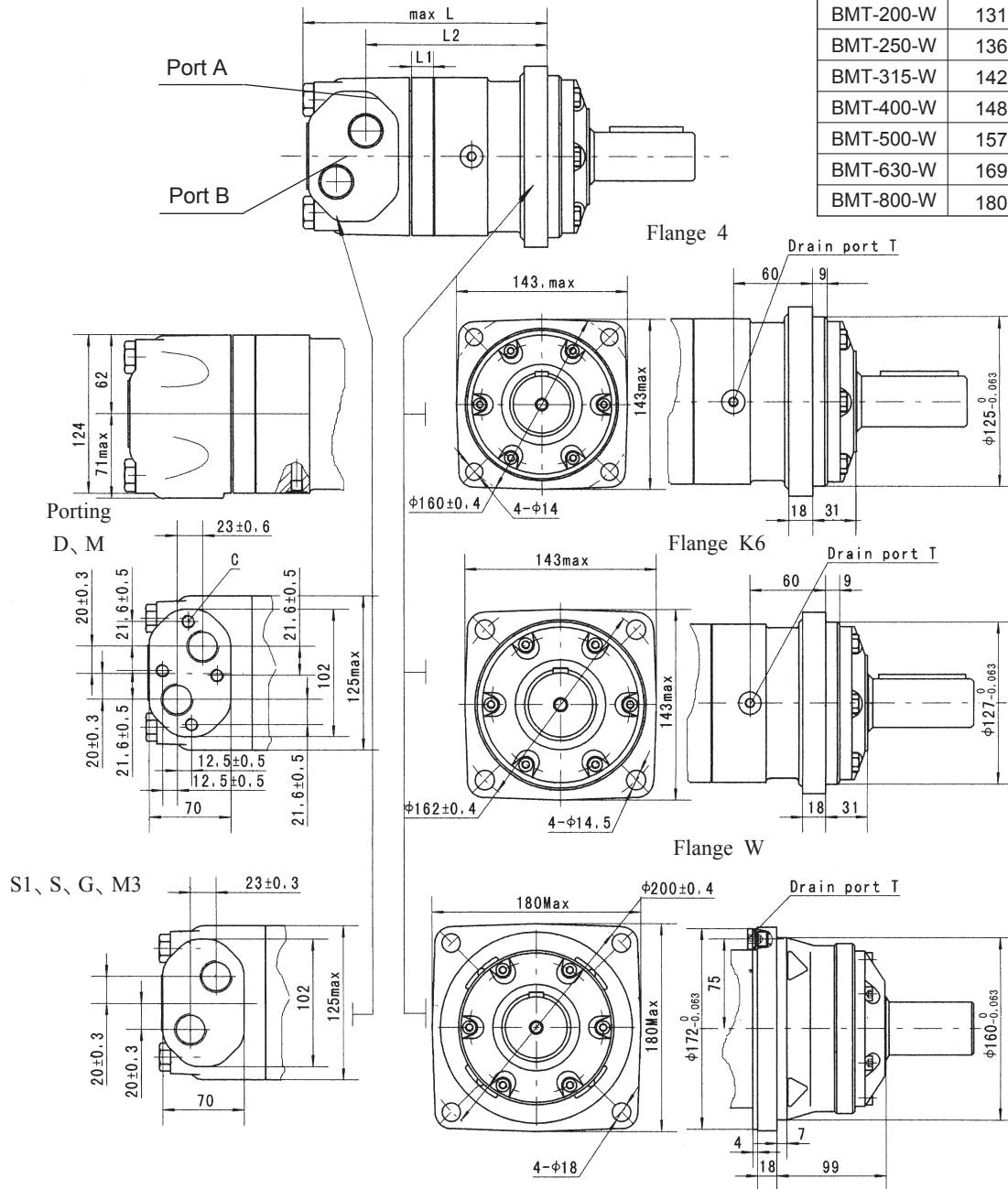
	Max.cont.				Max.int.		
	3	6	9	10.5	12.5	13	

Flow (L/min)	Pressure (MPa)						
	3	6	9	10.5	12.5	13	
10	346 <b>12</b>	677 <b>12</b>	1003 <b>11</b>	1159 <b>11</b>	1365 <b>11</b>	1390 <b>10</b>	
20	356 <b>24</b>	692 <b>24</b>	1034 <b>24</b>	1183 <b>23</b>	1404 <b>22</b>	1458 <b>18</b>	
40	365 <b>50</b>	703 <b>50</b>	1066 <b>49</b>	1236 <b>48</b>	1459 <b>46</b>	1516 <b>40</b>	
60	354 <b>74</b>	703 <b>73</b>	1060 <b>71</b>	1237 <b>71</b>	1464 <b>68</b>	1520 <b>63</b>	
80	332 <b>99</b>	686 <b>98</b>	1050 <b>98</b>	1226 <b>96</b>	1464 <b>93</b>	1514 <b>86</b>	
100	305 <b>125</b>	654 <b>123</b>	1025 <b>123</b>	1207 <b>121</b>	1445 <b>118</b>	1506 <b>110</b>	
Max.cont. 125	280 <b>154</b>	622 <b>153</b>	989 <b>153</b>	1181 <b>150</b>	1422 <b>149</b>	1487 <b>140</b>	
Max.int. 150	247 <b>185</b>	590 <b>184</b>	953 <b>183</b>	1156 <b>181</b>	1406 <b>179</b>	1476 <b>172</b>	

Torque (N·m) 1121  
Speed (rpm) 227

**BMT DIMENSIONS AND MOUNTING DATA**

Model	L	L1	L2
BMT-160-W	127	17	77
BMT-200-W	131	21	81
BMT-250-W	136	14	86
BMT-315-W	142	20	91
BMT-400-W	148	27	98
BMT-500-W	157	35	106
BMT-630-W	169	47	118
BMT-800-W	180	58	129

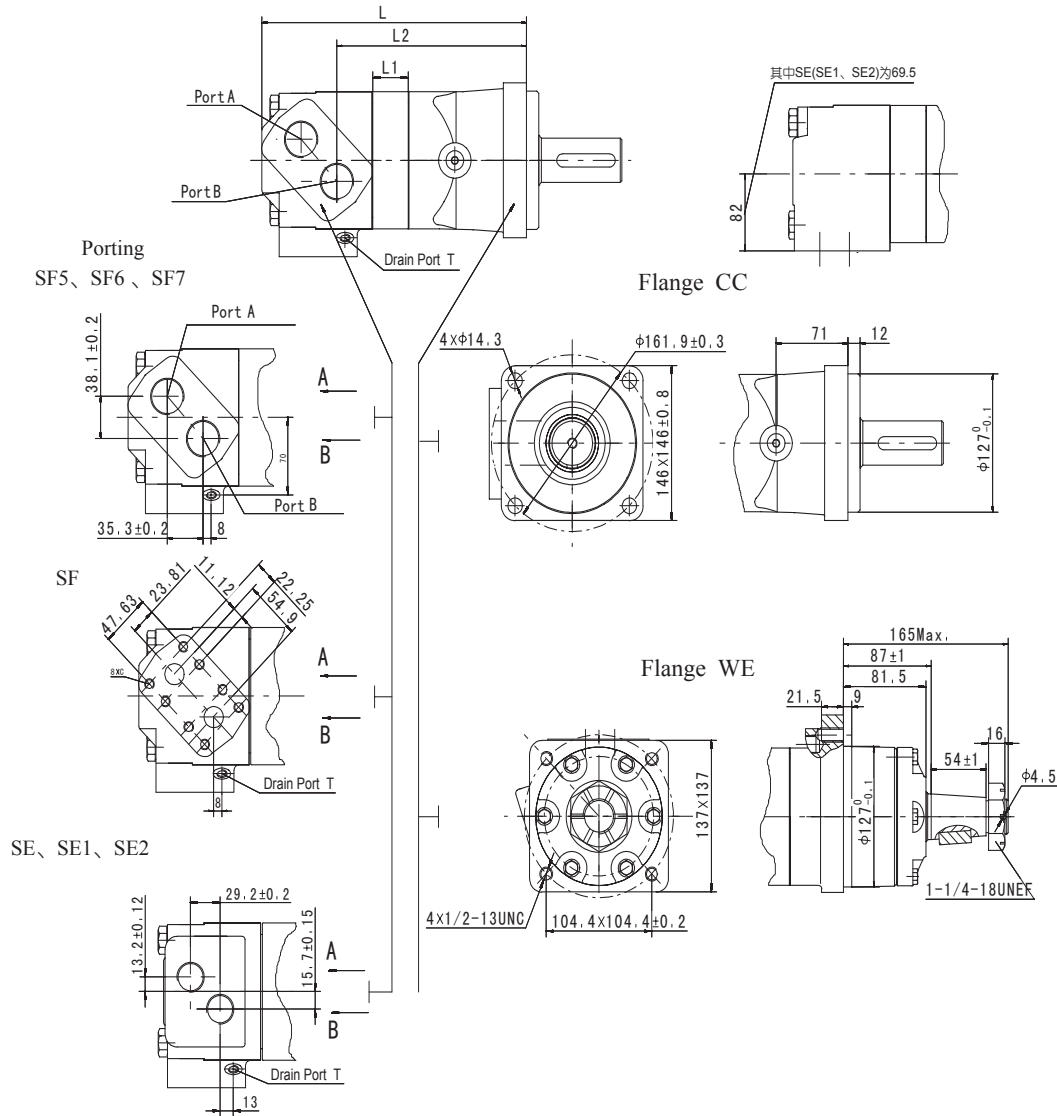


Model	L	L1	L2
BMT160	193	17	142.5
BMT200	197	21	146.5
BMT250	204	14	152.5
BMT315	210	20	158.5
BMT400	217	27	165.5
BMT500	225	35	173.5
BMT630	237	47	185.5
BMT800	248	58	196.5

Content	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M3 (depth)	S1 (depth)
P(A,B)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (18)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (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-M10(10)	4-M10(10)	--	--	--	--

Note: 1) The thickness of the stator and rotor for disp. from 160 to 200 is the dimension of L1 adding on 3mm.  
2) The thickness of the stator and rotor for disp. from 250 to 800 is the dimension of L1 adding on 7mm.

**BMTE DIMENSIONS AND MOUNTING DATA**

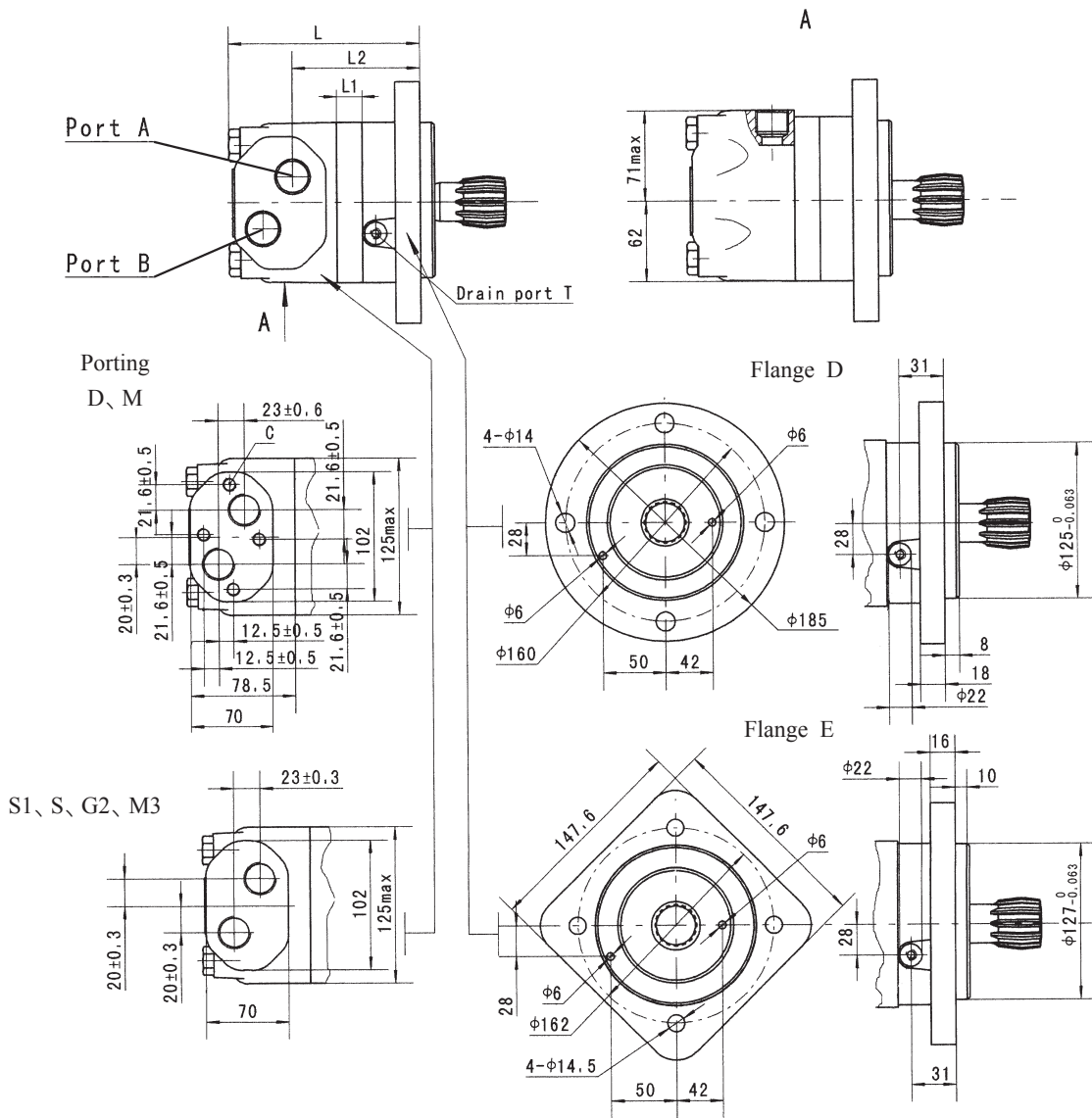


Model	L	L1	L2
BMTE230	238.5	12	164.5
BMTE250	240.5	14	166.5
BMTE315	246.5	20	172.5
BMTE400	253.5	27	179.5
BMTE500	261.5	35	187.5
BMTE630	273.5	47	199.5
BMTE800	284.5	58	210.5

Note: 1) The data for the port of SF (SF5 and SF6 and SF7)  
 2) The data for the port of SE (SE1 and SE2) and flange WE: L-70 and L2-59.  
 3) The thickness of the stator and rotor for disp. from 315 to 800 is the dimension of L1 adding on 7mm.

Content	Code						
	SF5 (depth)	SF6 (depth)	SF7 (depth)	SF (depth)	SE (depth)	SE1 (depth)	SE2 (depth)
P(A,B)	1-5/16-12UN (18)	M33 x 2 (18)	G1 (18)	3/4" (18)	1-1/16-12UN (18)	1-1/16-12UN (18)	G3/4 (18)
T	7/16-20UNF (12)	M14 x 1.5 (12)	G1/4 (12)	7/16-20UNF (12)	9/16-18UNF (12)	7/16-20UNF (12)	G1/4 (12)
C	--	--	--	8 x 3/8-16UNC	--	--	--

**BMTS DIMENSIONS AND MOUNTING DATA**

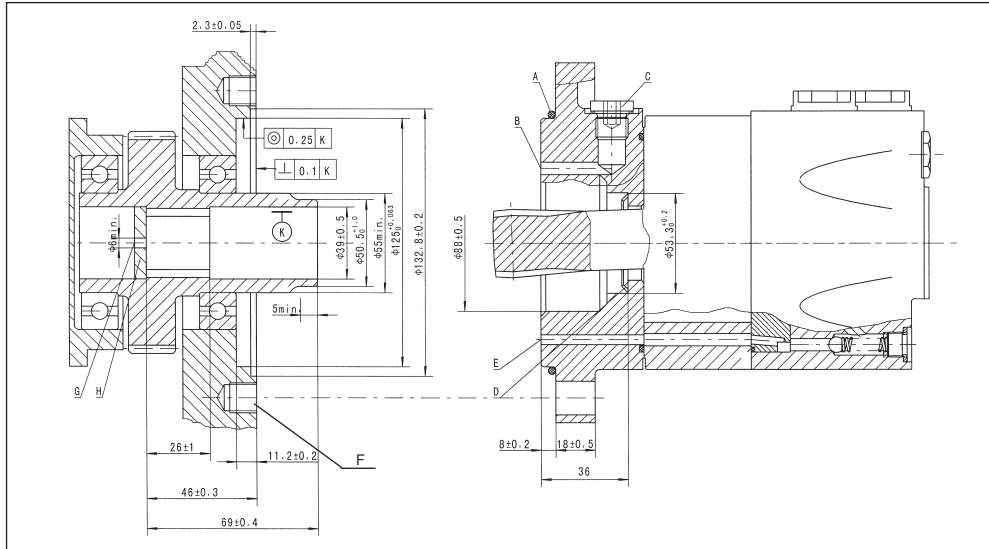


Model	L	L1	L2
BMT160	148	17	96.5
BMT200	152	21	100.5
BMT250	157	14	109
BMT315	163	20	115
BMT400	170	27	122
BMT500	178	35	130
BMT630	190	47	142
BMT800	201	58	153

Content	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M3 (depth)	S1 (depth)
Mounting P(A,B)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (18)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (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-M10(10)	4-M10(10)	--	--	--	--

Note: 1)The thickness of the stator and rotor for disp.from 160 to 200 is the dimension of L1 adding on 3mm.  
2)The thickness of the stator and rotor for disp.from 250 to 800 is the dimension of L1 adding on 7mm.

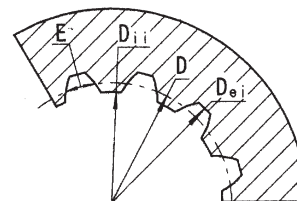
**BMTS MOUNTING DATA**



- A: O-ring:125x3
- B: External drain channel
- C: Drain connection G 1/4;12 mm deep
- D: Conical seal ring
- E: Internal drain channel
- F: M12;min. 18mm deep
- G: Oil circulation hole
- H: Hardened stop plate

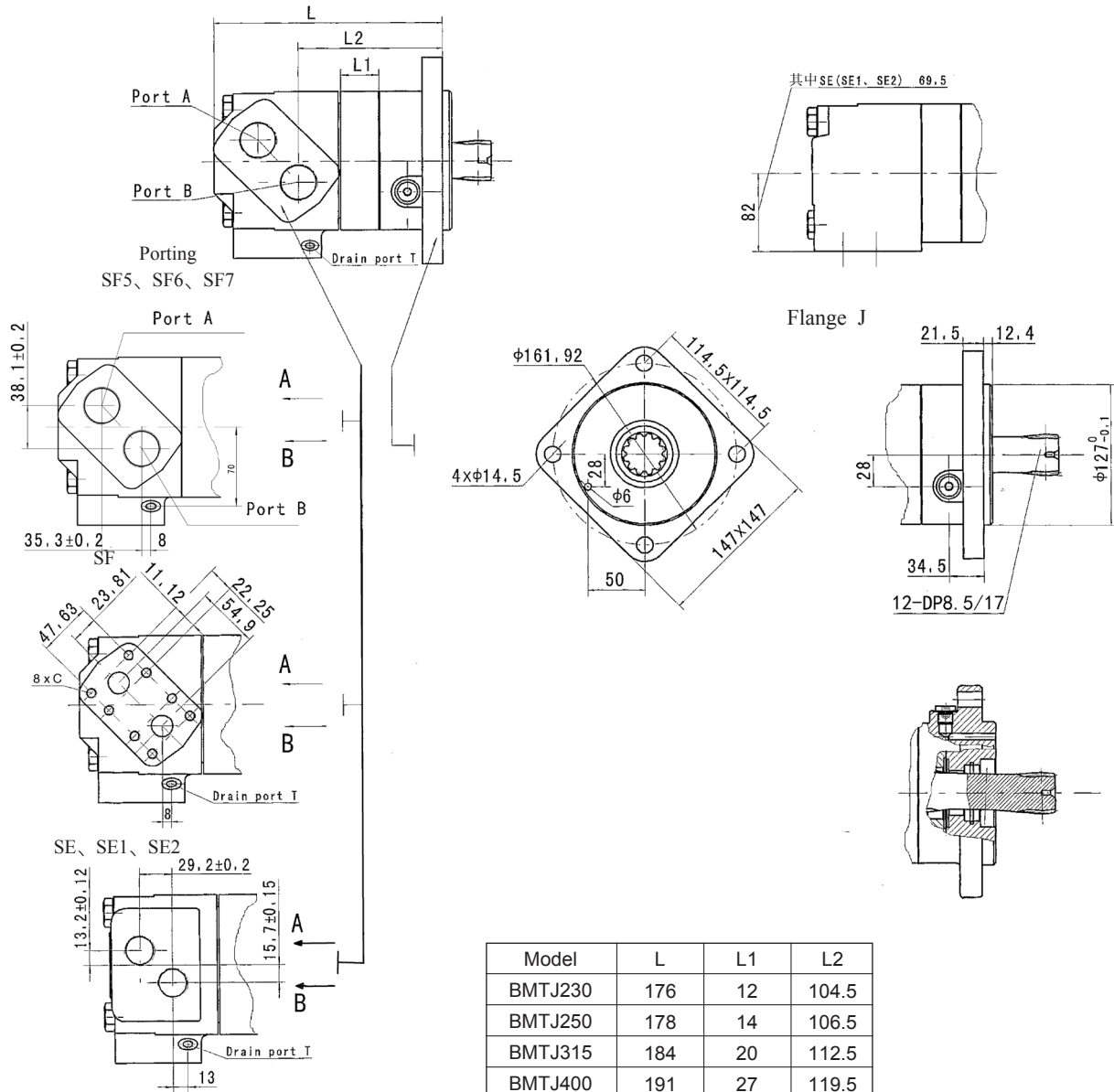
**INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT**

Fillet Root Side Fit		mm
Number of Teeth	Z	16
Diametral Pitch	DP	12/24
Pressure Angle	$\alpha_D$	30°
Pitch Dia.	D	ø33.8656
Major Dia.	$D_{ei}$	ø38.4 <sup>+0.25</sup> / <sub>0</sub>
Minor Dia.	$D_{ii}$	ø32.15 <sup>+0.04</sup> / <sub>0</sub>
Space Width [Circular]	E	4.516±0.037



Hardening Specification: HRC 62±2  
Effective case depth 0.7±0.2

**BMTJ DIMENSIONS AND MOUNTING DATA**

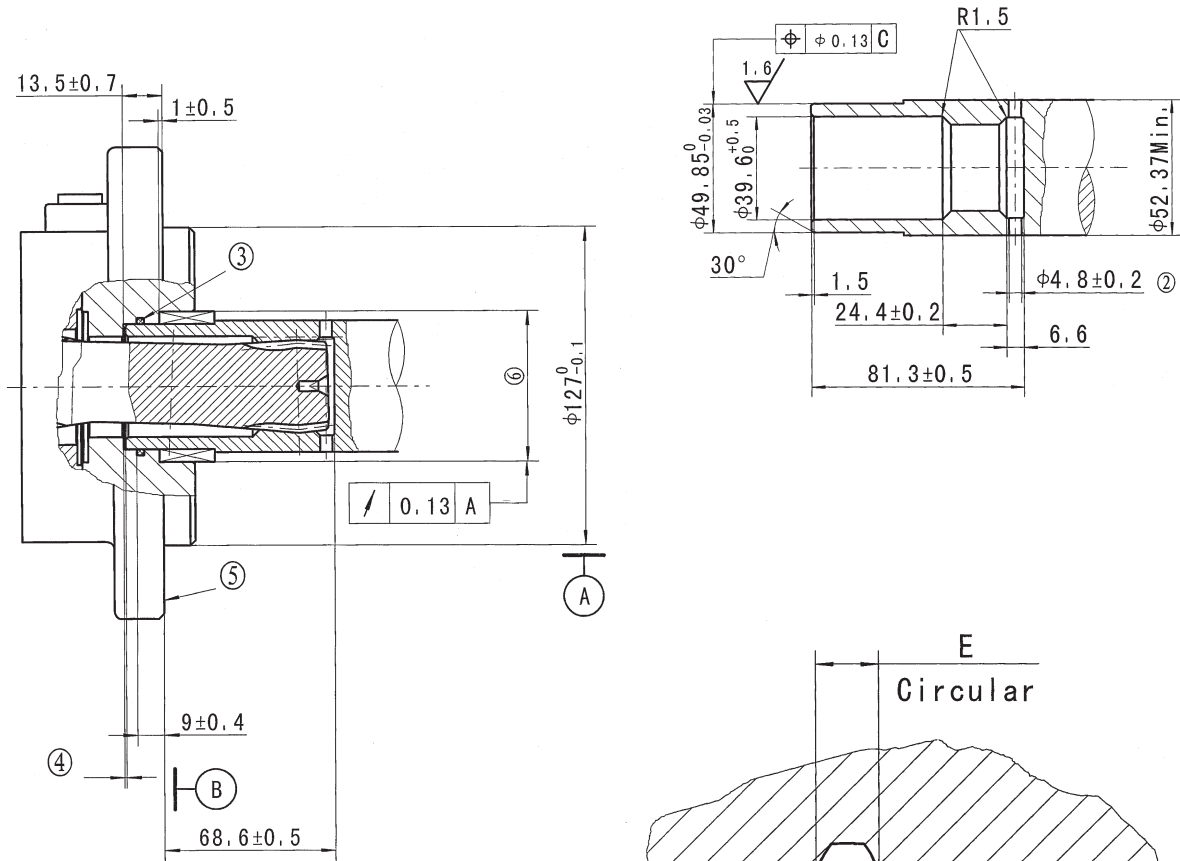


Model	L	L1	L2
BMTJ230	176	12	104.5
BMTJ250	178	14	106.5
BMTJ315	184	20	112.5
BMTJ400	191	27	119.5
BMTJ500	199	35	127.5
BMTJ630	211	47	139.5
BMTJ800	222	58	150.5

Note: 1) The data for the port of SF (SF5 and SF6 and SF7).  
 2) The data for the port of SE (SE1 and SE2) and flange WE: L-70 and L2-59.  
 3) The thickness of the stator and rotor is the dimension of L1 adding on 7mm.

Content	Code						
	SF5 (depth)	SF6 (depth)	SF7 (depth)	SF (depth)	SE (depth)	SE1 (depth)	SE2 (depth)
P(A,B)	1-5/16-12UN (18)	M33 x 2 (18)	G1 (18)	3/4" (18)	1-1/16-12UN (18)	1-1/16-12UN (18)	G3/4 (18)
T	7/16-20UNF (12)	M14 x 1.5 (12)	G1/4 (12)	7/16-20UNF (12)	9/16-18UNF (12)	7/16-20UNF (12)	G1/4 (12)
C	--	--	--	8 x 3/8-16UNC	--	--	--

**BMTJ DIMENSIONS AND MOUNTING DATA**

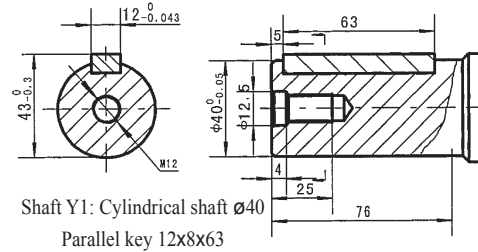
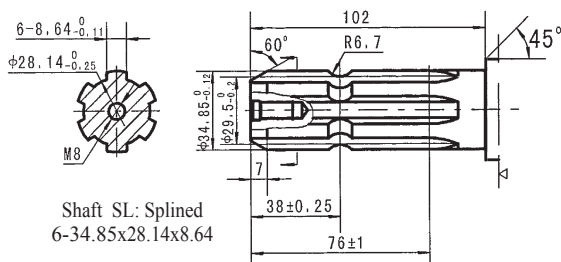
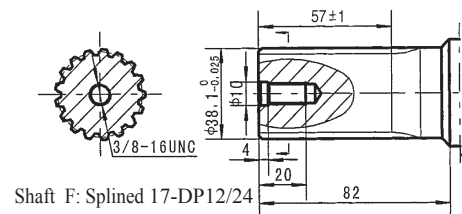
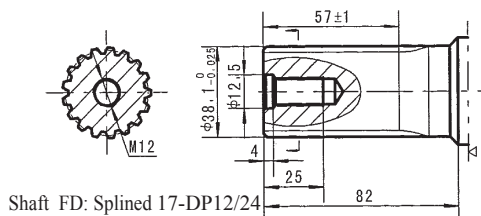
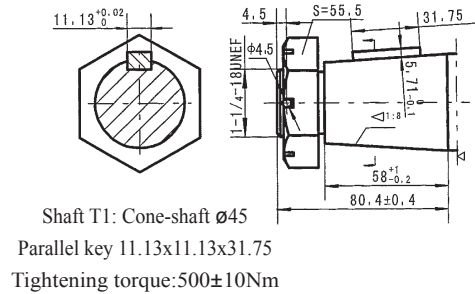
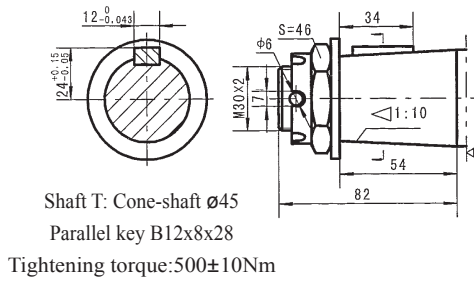
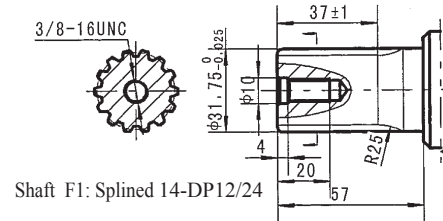
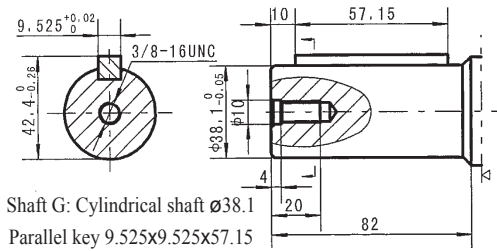
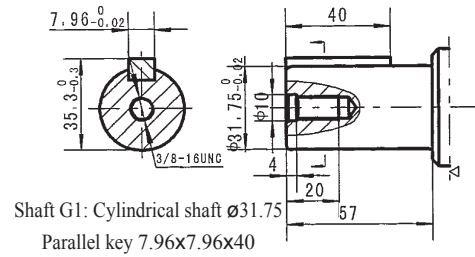
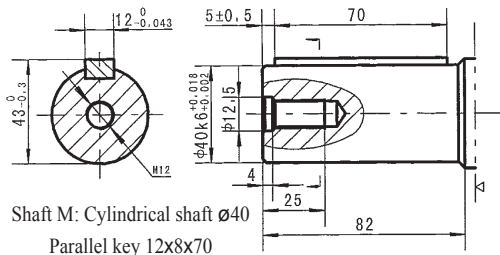


**INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT**

Fillet Root Side Fit		mm
Number of Teeth	Z	12
Diametral Pitch	DP	8.5/17
Pressure Angle	D	30°
Pitch Dia.	$\alpha_D$	$\phi 35.858823$
Major Dia.	$D_{ei}$	$\phi 38.97_0^{+0.20}$
Minor Dia.	$D_{ii}$	$\phi 33.3_0^{+0.18}$
Space Width [Circular]	E	$5.866 \pm 0.032$
Dimension between two pins( $\phi 4$ )	$M_e$	$26.929-27.084$

- ① Internal spline in mating part to be as follows: Material to be ASTM A304, 8620H. Carborize to a hardness of 60-64HRC with case depth (to 50HRC) of 0.75-1 [ .030-.040 ] (dimensions apply after heat treat).
- ② Mating part to have critical dimensions as shown, Oil holes must be provided and open for proper oil circulation.
- ③ Some means of maintaining clearance between shaft and mounting flange must be provided.
- ④ Seal to be furnished with motor for proper oil circulation thru splines.
- ⑤ Similar to SAE "C" Four Bolt Flange
- ⑥ Counterbore designed to adapt to a standard sleeve bearing 50.010-50.038 [ 1.9689-1.9700 ] ID by 60.51-60.079 [ 2.3642-2.3653 ] O.D.(Oilite bronze sleeve bearing).
- C This surface to be diameter of output shaft.

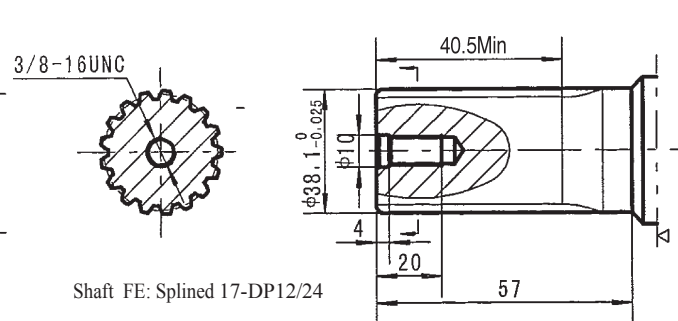
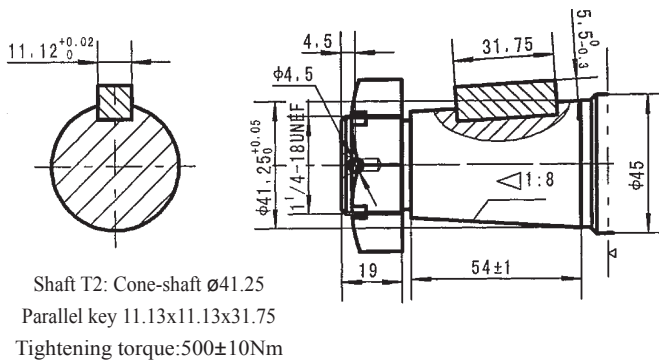
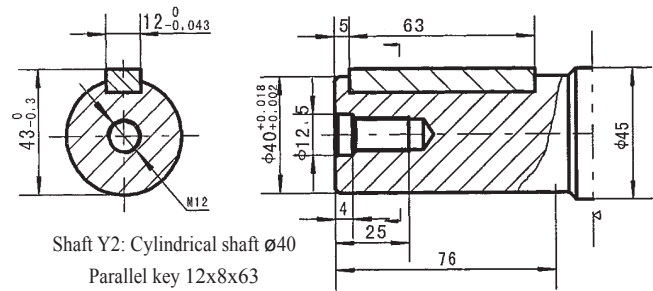
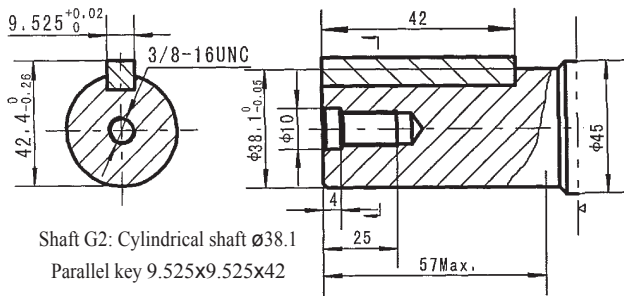
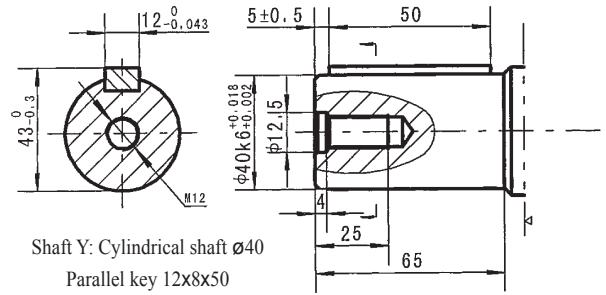
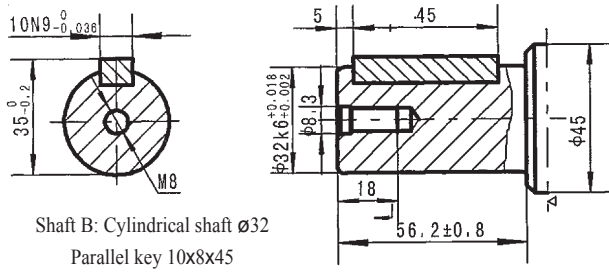
### SHAFT EXTENSIONS FOR BMT(E) MOTORS



▷ Motor Mounting Surface



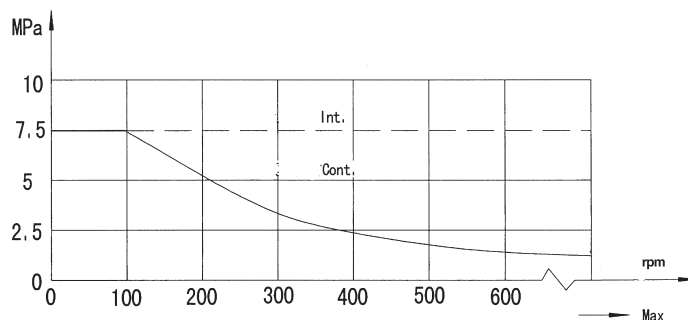
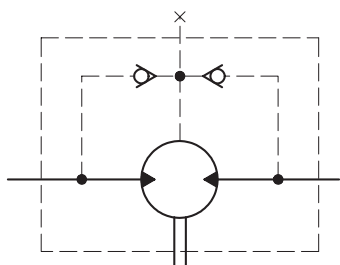
SHAFT EXTENSIONS FOR BMT(E) MOTORS



▷ Motor Mounting Surface

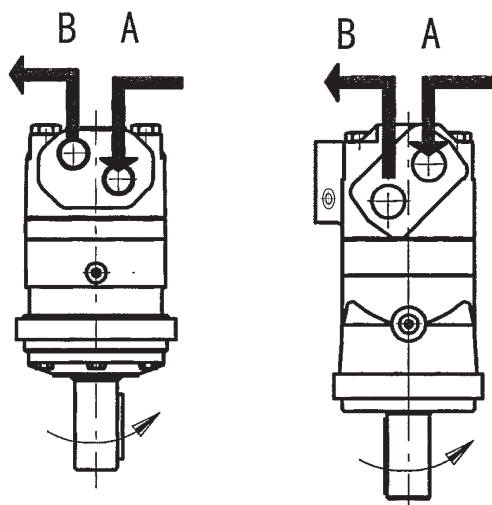
## BMT Series Hydraulic Motor

### Permissible shaft seal pressure



### 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.

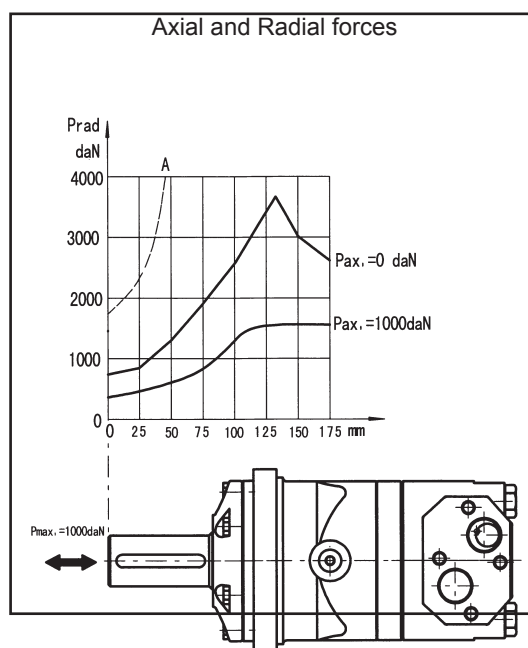


In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

### Oil flow in drain line

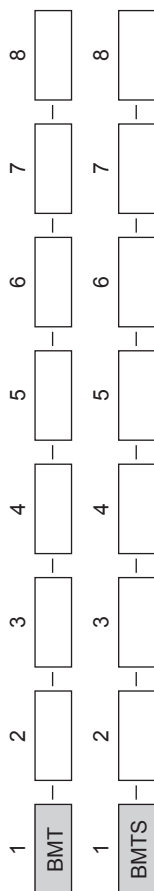
The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm <sup>2</sup> /s)	Oil flow in the drain line (L/min.)
14	20	2.5
	35	1.5
21	20	5
	35	3



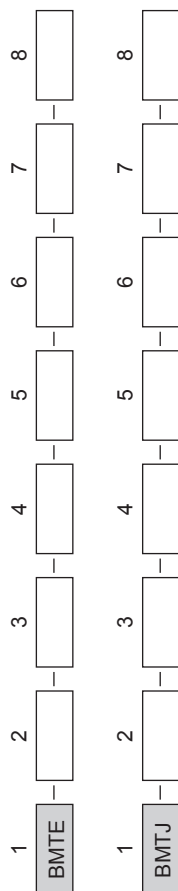
The output shaft runs in tapered bearings that permit high axial and radial forces, Curve "A" shows max radial shaft load, Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage, The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

Order Information



Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
BMT	160	4	M Shaft $\varnothing 40$ , parallel key $12 \times 8 \times 70$	D		00	Omit
	200		G Shaft $\varnothing 38.1$ , parallel key $9.52 \times 9.52 \times 57.15$	M	G3/4 Manifold Mount, 4-M10, G1/4	Blue	F
	250	K6	F Shaft $\varnothing 38.1$ , splined tooth 17-DP12/24	S	M27 $\times$ 2 Manifold Mount, 4-M10, M14 $\times$ 1.5	Black	LS
	315		FD Shaft $\varnothing 38.1$ , splined tooth 17-DP12/24	S1	1-1/16-12UN O-ring, 9/16-18UNF	Silver grey	
	400	W	T Cone-shaft 1:10 $\varnothing 45$ , parallel key $B12 \times 8 \times 28$	G	1-1/16-12UN O-ring, 7/16-20UNF		
	500		T1 parallel key $11.13 \times 11.13 \times 31.75$	M3	G3/4, G1/4		
	630		SL shaft $\varnothing 34.85$ , Splined key				
800	D	G1 pilot $\varnothing 160 \times 7$	F1 parallel key $7.96 \times 7.96 \times 40$				
BMTS		E	Short shaft 16-DP12/24				
			Omit				

Order Information



Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
BMTE	230	CC: 4-Ø14.3 Square-flange Ø161.9, pilotØ127 × 12	G2 Shaft Ø38.1 ,parallel key 9.52 × 9.52 × 42	SF 3/4" ,Manifold Mount,8-3/8-16UNC, 7/16-20UNF SF5 1-5/16-12UN O-ring,7/16-20 UNF SF6 M33 × 2,M14 × 1.5 SF7 G1,G1/4 SE 1-1/16-12UN O-ring,9/16-18UNF SE1 1-1/16-12UN O-ring,7/16-20 UNF SE2 G3/4,G1/4	Omit R Standard Opposite	No paint Blue Black Silver grey	Omit Standard Free Running Low Speed
	250		FE Shaft Ø38.1 ,splined tooth 17-DP12/24				
	315		Y1 ShaftØ40,parallel key 12 × 8 × 63				
	400	Y2 ShaftØ40,parallel key 12 × 8 × 63					
	500	T2 Cone-shaft 1:8 Ø41.25 , parallel key 11.13 × 11.13 × 31.75					
	630	T3 Cone-shaft 1:8 Ø41.25 , parallel key 11.13 × 11.13 × 31.75					
BMTJ	800	WE 4-1/2-13UNC Wheel-flangeØ147.6, pilotØ127 × 9	Omit				
		J 4-Ø14.5 Square-flange Ø161.9 pilot Ø127 × 12.4	Short shaft 12-DP8.5/17				

Note:When the table is used, please fill the code of left rows in the table 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 .



## 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	BMV 1000
Geometric displacement (cm <sup>3</sup> /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 [333cm<sup>3</sup>/rev.]

Pressure (MPa) Max.cont. Max.int.

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

BMV 400 [419cm<sup>3</sup>/rev.]

Pressure (MPa) Max.cont. Max.int.

3.5	7	10	14	18	20	24
-----	---	----	----	----	----	----

Flow (L/min)	10	183	385	568	776	968	1101	1292
		<b>20</b>	<b>20</b>	<b>19</b>	<b>18</b>	<b>17</b>	<b>16</b>	<b>14</b>
20	196	398	590	815	1010	1152	1346	
	<b>44</b>	<b>44</b>	<b>43</b>	<b>42</b>	<b>40</b>	<b>39</b>	<b>37</b>	
50	200	402	603	842	1040	1186	1430	
	<b>114</b>	<b>113</b>	<b>113</b>	<b>112</b>	<b>110</b>	<b>108</b>	<b>103</b>	
75	195	394	596	838	1043	1188	1432	
	<b>175</b>	<b>173</b>	<b>170</b>	<b>166</b>	<b>163</b>	<b>157</b>	<b>152</b>	
100	172	385	593	827	1036	1184	1425	
	<b>236</b>	<b>235</b>	<b>233</b>	<b>231</b>	<b>227</b>	<b>223</b>	<b>215</b>	
125	167	374	583	816	1021	1177	1413	
	<b>296</b>	<b>294</b>	<b>291</b>	<b>288</b>	<b>282</b>	<b>275</b>	<b>268</b>	
150	158	361	559	801	1008	1165	1390	
	<b>355</b>	<b>354</b>	<b>352</b>	<b>349</b>	<b>344</b>	<b>335</b>	<b>324</b>	
175	143	346	553	784	989	1145	1377	
	<b>416</b>	<b>414</b>	<b>411</b>	<b>407</b>	<b>403</b>	<b>396</b>	<b>388</b>	
Max.cont.	118	331	536	770	969	1128	1356	
	<b>475</b>	<b>473</b>	<b>469</b>	<b>463</b>	<b>455</b>	<b>448</b>	<b>439</b>	
Max.int.	82	301	506	740	943	1104	1332	
	<b>571</b>	<b>569</b>	<b>565</b>	<b>548</b>	<b>539</b>	<b>530</b>	<b>520</b>	

BMV 500 [518cm<sup>3</sup>/rev.]

Pressure (MPa) Max.cont. Max.int.

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

BMV 630 [666cm<sup>3</sup>/rev.]

Pressure (MPa) Max.cont. Max.int.

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

Torque (N·m) 1340  
Speed (rpm) 444

□ cont.  
■ int.

Performance Data

BMV 800 [801cm<sup>3</sup>/rev.]  
Pressure (MPa)

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

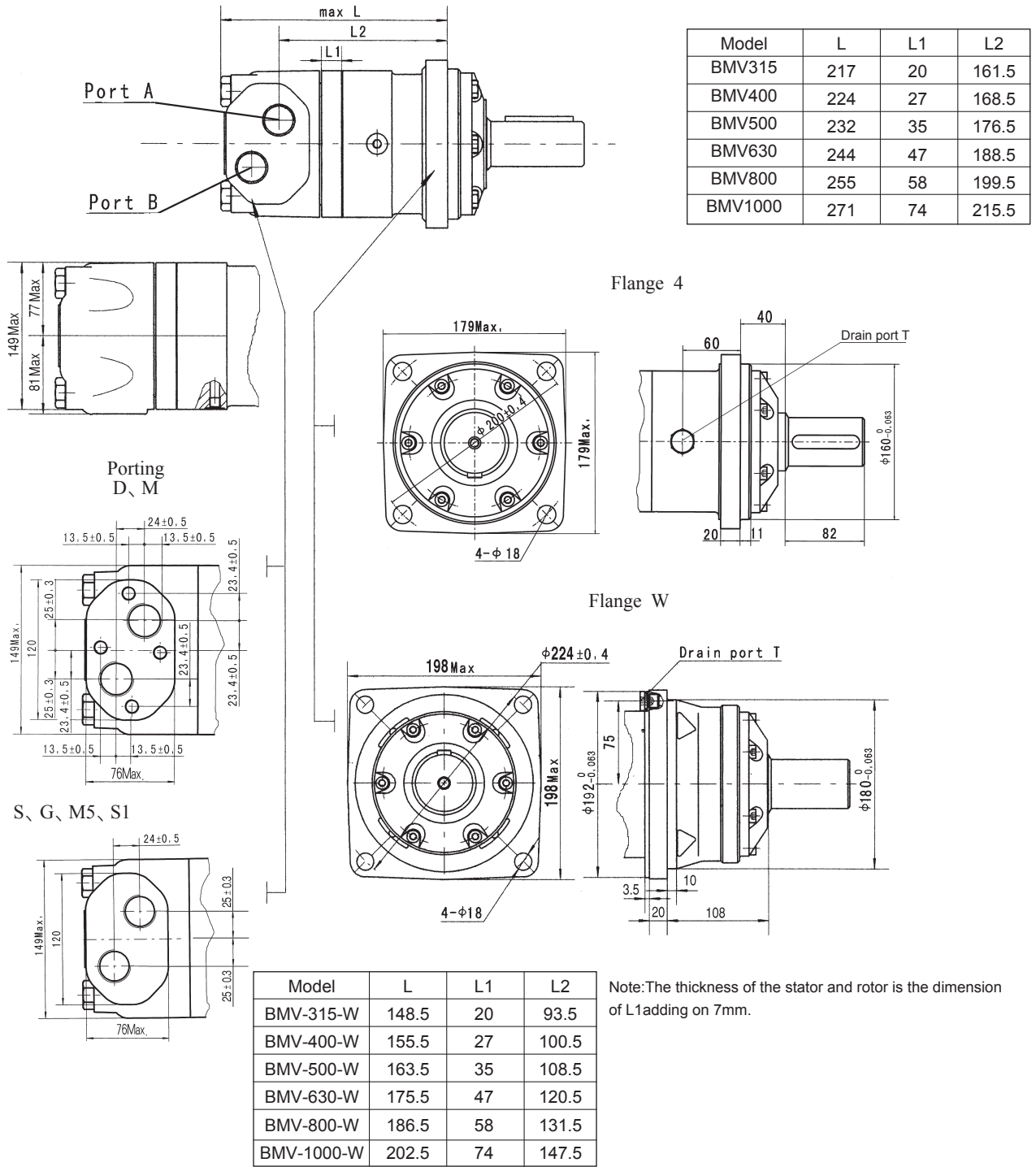
BMV 1000 [990cm<sup>3</sup>/rev.]  
Pressure (MPa)

	2.5	5	7	10	14	16	
Flow (L/min)	10	312 <b>9</b>	640 <b>9</b>	971 <b>9</b>	1400 <b>8</b>	1978 <b>7</b>	2259 <b>6</b>
	30	320 <b>28</b>	648 <b>27</b>	978 <b>26</b>	1410 <b>25</b>	1980 <b>23</b>	2270 <b>21</b>
	50	326 <b>47</b>	655 <b>46</b>	992 <b>45</b>	1422 <b>43</b>	2015 <b>41</b>	2280 <b>38</b>
	75	318 <b>72</b>	642 <b>71</b>	987 <b>70</b>	1425 <b>68</b>	2003 <b>66</b>	2276 <b>63</b>
	100	309 <b>98</b>	634 <b>97</b>	983 <b>95</b>	1418 <b>93</b>	1994 <b>90</b>	2243 <b>86</b>
	125	303 <b>123</b>	624 <b>122</b>	975 <b>120</b>	1409 <b>117</b>	1988 <b>114</b>	2224 <b>110</b>
	150	278 <b>149</b>	602 <b>148</b>	961 <b>146</b>	1368 <b>144</b>	1963 <b>140</b>	2208 <b>133</b>
	175	264 <b>174</b>	580 <b>172</b>	946 <b>170</b>	1338 <b>166</b>	1925 <b>162</b>	2159 <b>155</b>
	Max.cont. 200	230 <b>199</b>	556 <b>196</b>	912 <b>193</b>	1300 <b>190</b>	1891 <b>185</b>	2105 <b>178</b>
	Max.int. 240	166 <b>240</b>	513 <b>237</b>	867 <b>233</b>	1267 <b>229</b>	1825 <b>225</b>	2034 <b>218</b>

□ cont.  
■ int.

Torque (N·m) 1825  
Speed (rpm) 225

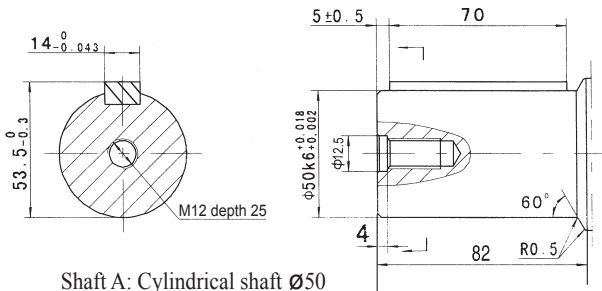
**BMV DIMINSIONS AND MOUNTING DATA**



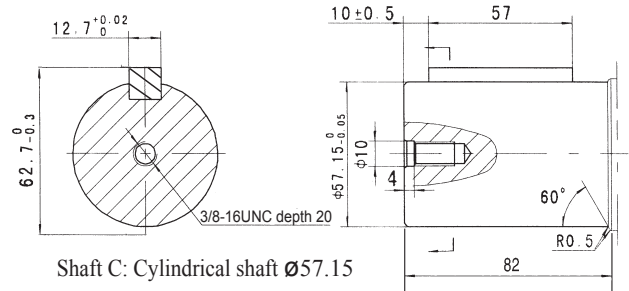
Content	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M5 (depth)	S1 (depth)
P(A,B)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)
T	G1/4 (12)	M14 x 1.5 (12)	9/16-18UNF(12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)
C	4-M12 (10)	4-M12 (10)	--	--	--	--



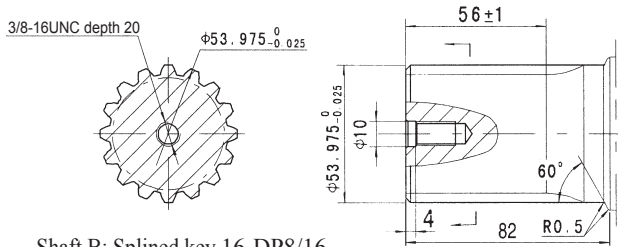
**BMV SHAFT EXTENSIONS DIMENSIONS DATA**



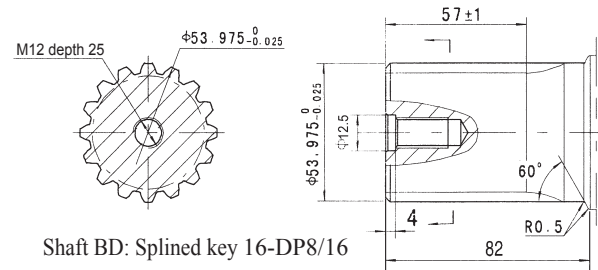
Shaft A: Cylindrical shaft Ø50  
Parallel key 14x9x70



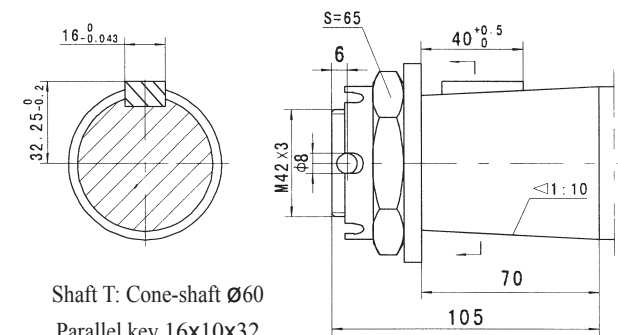
Shaft C: Cylindrical shaft Ø57.15  
Parallel key 12.7x12.7x57



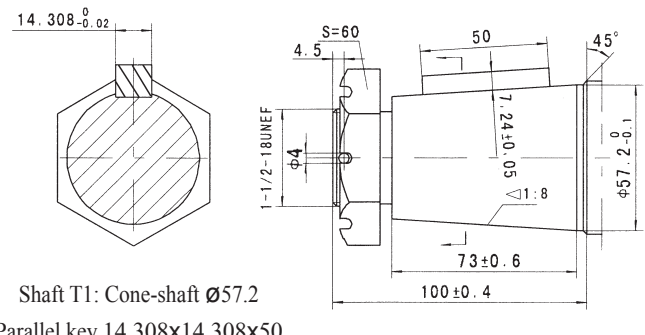
Shaft B: Splined key 16-DP8/16



Shaft BD: Splined key 16-DP8/16



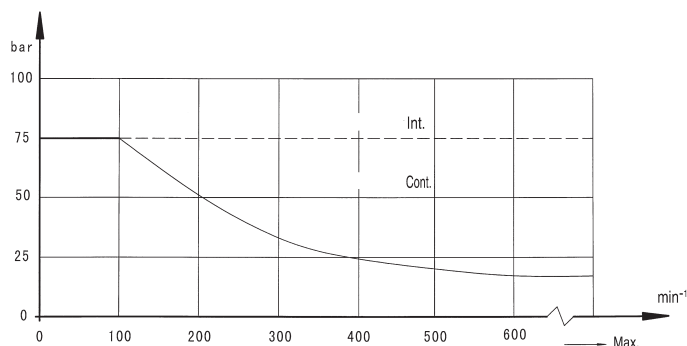
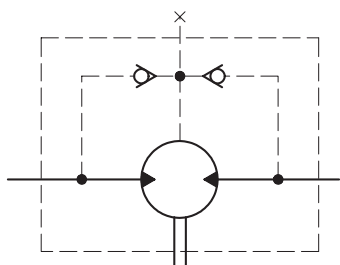
Shaft T: Cone-shaft Ø60  
Parallel key 16x10x32  
Tightening torque: 750±50Nm



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

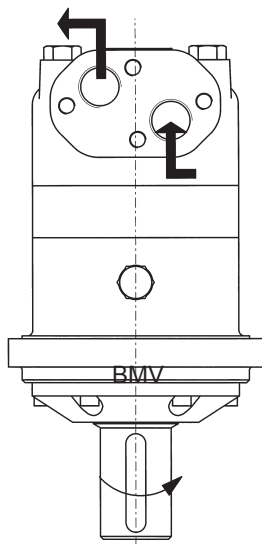
## BMV Series Hydraulic Motor

### Permissible shaft seal pressure



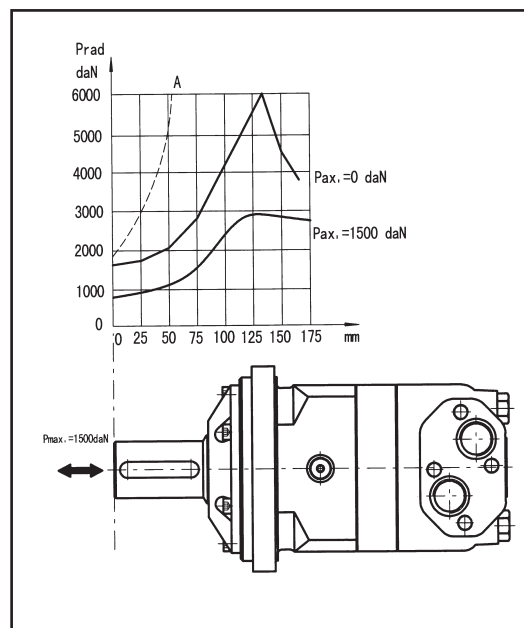
### Standard direction of shaft rotation: Standard

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



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.

### Axial and Radial forces



### Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm <sup>2</sup> /s)	Oil flow in the drain line (L/min.)
14	20	3
	35	2
21	20	6
	35	4

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.

Order Information



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

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.



## BMK2 SERIES HYDRAULIC MOTOR

BMK2 new 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 offers 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.

### Main Specification

Type		BMK2 65	BMK2 80	BMK2 100	BMK2 125	BMK2 160	BMK2 200	BMK2 250	BMK2 315	BMK2 400	BMK2 475	
Geometric displacement	(cm <sup>3</sup> /rev.)	65	80	100.9	129.8	156.8	193.4	242.5	304.3	390.8	485	
Max.speed	(rpm)	cont.	835	800	742	576	477	385	308	246	191	153
		int.	990	980	924	720	713	577	462	365	287	230
Max.torque	(N•m)	cont.	185	235	295	385	455	540	660	765	775	845
		int.	245	345	445	560	570	665	820	885	925	930
Max.pressure drop	(MPa)	cont.	20.5	21	21	21	20.5	20.5	20.5	21	15.5	12
		int.	27.5	31	31	31	26	26	26	24	17	14
		peak.	31	31	31	31	31	31	31	31	20.5	17
Max.flow	(L/min)	cont.	55	65	75	75	75	75	75	75	75	75
		int.	65	80	95	95	115	115	115	115	115	115
Weight	(kg)	9.2	9.4	9.7	10	10.2	10.5	11	11.5	12	12.4	

- \* 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.





石家庄寒九科技有限公司

SHIJIAZHUANG HANJIU TECHNOLOGY CO.,LTD.

BMK2 160 [156.8 cm<sup>3</sup>/rev.]  
Pressure ( MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24	26
Flow (L/min)	2	28 9	55 7	110 5	175 3				
	4	32 22	63 21	125 19	170 13	250 13	315 8	370 3	
Max.cont.	8	37 47	68 45	130 42	200 39	260 36	325 34	390 32	450 27
	15	35 93	68 92	135 89	210 85	275 80	370 76	420 70	500 60
	22	35 138	75 136	140 133	215 128	285 122	370 116	440 110	515 102
	30	35 190	75 187	145 184	220 178	290 172	370 167	440 164	520 154
Max.int.	38	37 240	70 237	150 234	225 230	310 225	380 218	450 202	525 193
	45	32 285	70 283	150 280	225 275	310 268	380 259	450 247	525 236
	55	28 348	66 346	145 242	220 338	305 332	375 324	450 314	525 300
	65	25 412	63 410	140 406	215 400	285 393	370 383	440 370	515 370
	75	22 476	60 474	135 470	215 464	295 454	370 445	440 435	
85	18 540	55 536	130 532	210 524	290 514	365 502	435 485		
95	15 600	50 595	125 590	205 580	285 565	360 555	430 545		
115		40 715	115 705	200 695	280 685	350 670	425 655		

BMK2 200 [193.4 cm<sup>3</sup>/rev.]  
Pressure ( MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24	26
Flow (L/min)	2	32 9	68 7	110 5	145 3				
	4	40 18	75 16	150 14	195 11	300 7	360 4		
Max.cont.	8	45 37	80 36	160 34	240 30	315 26	405 21	500 17	570 13
	15	48 75	90 74	170 72	255 68	335 64	425 60	510 56	590 50
	22	46 112	90 110	175 108	265 105	350 101	440 97	520 91	605 86
	30	45 153	90 151	180 148	270 145	360 141	450 135	530 128	615 122
Max.int.	38	45 193	90 191	180 188	275 184	370 178	455 172	540 166	625 158
	45	40 230	85 228	180 226	275 222	370 218	460 210	545 202	
	55	38 280	82 278	180 275	275 270	375 264	465 255	550 248	
	65	35 332	80 330	175 328	270 322	370 315	465 306	545 295	
	75	30 384	72 382	170 378	265 370	360 365	455 356	540 346	
85	25 436	70 434	165 430	260 260	355 260	450 410	540 390		
95	20 488	60 485	155 478	255 470	350 458	445 448	530 438		
115		50 580	140 572	240 562	330 550	440 538	520 520		

BMK2 250 [242.5 cm<sup>3</sup>/rev.]  
Pressure ( MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24	26
Flow (L/min)	2	45 4	95 2						
	4	50 14	100 13	210 11	310 9	410 6	510 4	610 3	
Max.cont.	8	55 29	105 28	215 26	320 23	420 20	530 17	620 14	730 11
	15	55 59	110 58	220 56	330 53	440 50	550 47	650 45	755 43
	22	50 88	115 87	225 85	340 82	455 78	560 74	665 69	770 65
	30	50 122	115 121	230 118	350 113	465 109	570 104	680 100	785 92
Max.int.	38	48 154	112 152	235 149	355 145	475 140	580 135	695 130	795 122
	45	45 183	110 182	230 180	350 176	475 170	590 165	700 158	
	55	42 224	105 223	230 221	345 218	470 212	580 205		
	65	35 266	100 265	220 263	340 258	460 252	565 242		
	75	32 307	95 306	210 303	330 298	455 290	560 280		
85	30 348	85 346	200 342	320 336	450 330	555 320			
95	25 386	70 384	190 378	315 372	440 365	540 355			
115		65 465	180 458	300 450	430 442				

BMK2 315 [304.3 cm<sup>3</sup>/rev.]  
Pressure ( MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24
Flow (L/min)	2	45 4	95 2					
	4	65 12	130 11	250 10	380 8	490 6		
Max.cont.	8	70 24	135 23	260 22	390 20	510 18	630 15	875 10
	15	75 48	140 48	275 47	410 45	535 42	670 38	920 34
	22	70 71	140 70	285 69	425 66	555 62	685 56	940 50
	30	70 97	145 97	290 96	430 93	565 88	695 80	820 70
Max.int.	38	66 123	140 122	290 120	435 117	570 112	715 102	835 90
	45	62 147	135 146	290 144	435 142	575 135	720 125	840 118
	55	58 180	130 179	285 176	430 172	575 165	720 155	
	65	52 213	120 212	275 210	425 205	570 200	715 190	
	75	40 246	110 245	260 242	415 236	560 225	710 212	
85	30 278	100 277	250 274	405 270	540 260			
95	20 311	90 310	245 307	380 303	515 296			
115		80 365	225 361	350 355				

□ cont.  
■ int.

Torque (N·m) 225  
Speed (rpm) 361

BMK2 400 [390.8 cm<sup>3</sup>/rev.]  
Pressure ( MPa)

	1.75	3.5	7	10.5	14	15.5	17.5	19
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Flow (L/min)	Max.cont.								Max.int.	
	1.75	3.5	7	10.5	14	15.5	17.5	19		
2	70	145								
4	80	170	345	500	660	740				
8	85	175	355	520	680	765	830	910		
15	90	185	370	550	720	810	880			
22	95	190	380	565	750	830	900			
30	92	188	385	570	760	835	905			
38	90	185	385	575	765	840	930			
45	85	180	380	570	760					
55	80	175	380	570	760					
65	75	170	370	560	750					
75	68	160	360	555	740					
85	65	150	355	550	730					
95	50	135	340	530	710					
115		125	310	510						

□ cont.  
■ int.

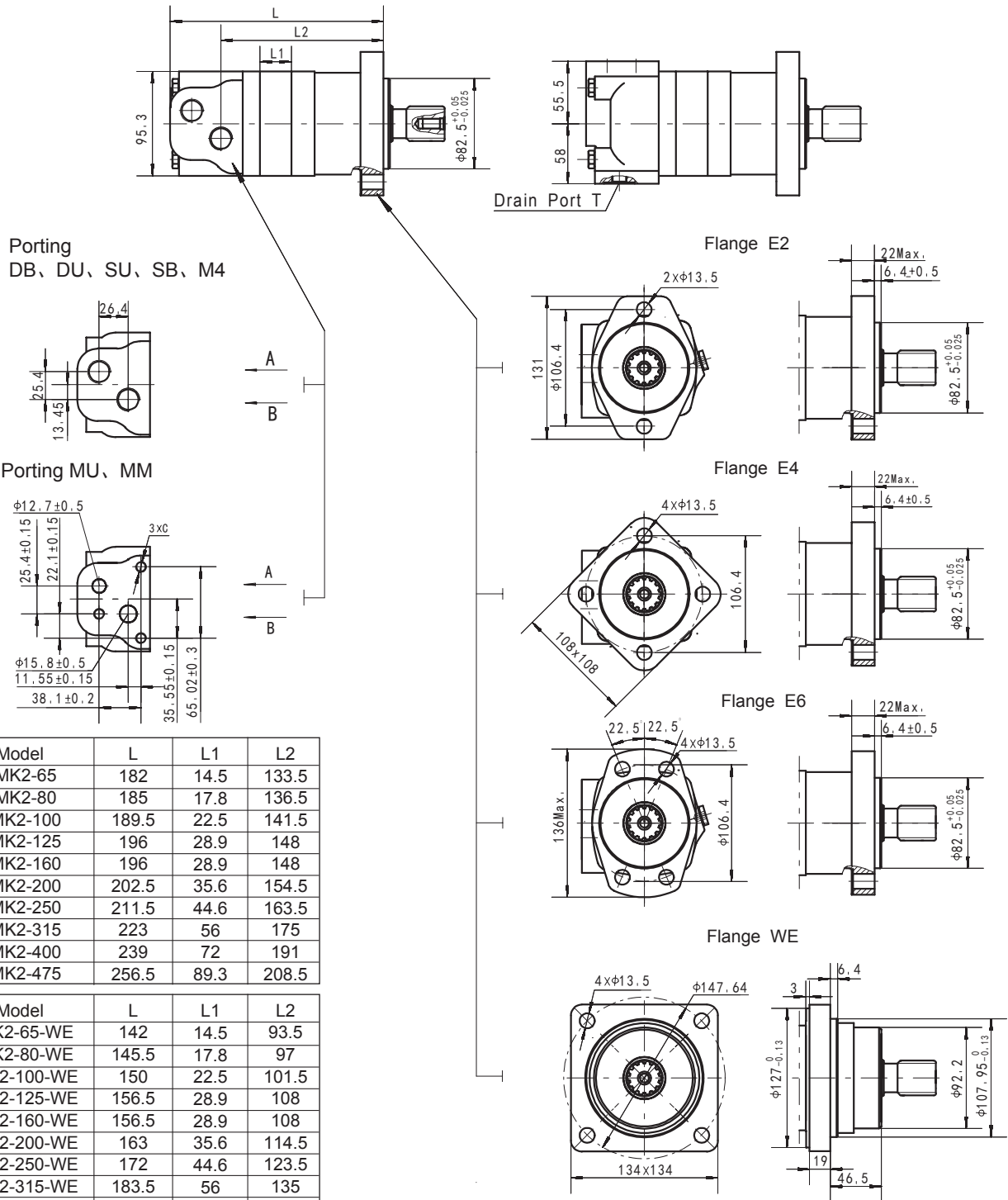
BMK2 475 [485 cm<sup>3</sup>/rev.]  
Pressure ( MPa)

	1.75	3.5	7	10.5	12	14
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Flow (L/min)	Max.cont.						Max.int.	
	1.75	3.5	7	10.5	12	14		
2	75	175						
4	110	220	430	540				
8	110	225	450	700				
15	105	235	470	710	825	895		
22	105	240	480	720	835	915		
30	110	240	485	725	840	935		
38	110	235	480	720	840	930		
45	100	220	470	715	825			
55	95	210	460	710	820			
65	85	200	445	700	810			
75	70	185	440	690	800			
85	60	175	430	680	785			
95	40	150	405	655				
115		130	380	625				

Torque (N·m) 130  
Speed (rpm) 230

**BMK2 DIMENSIONS AND MOUNTING DATA**



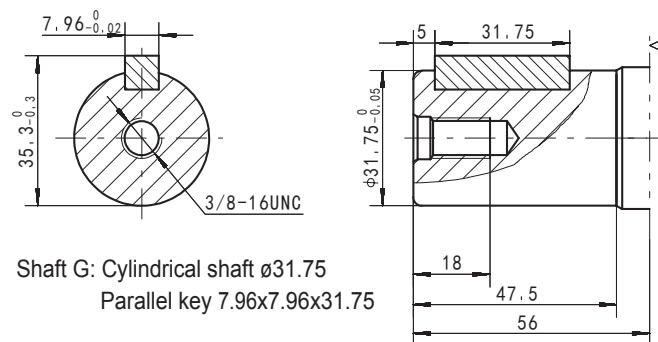
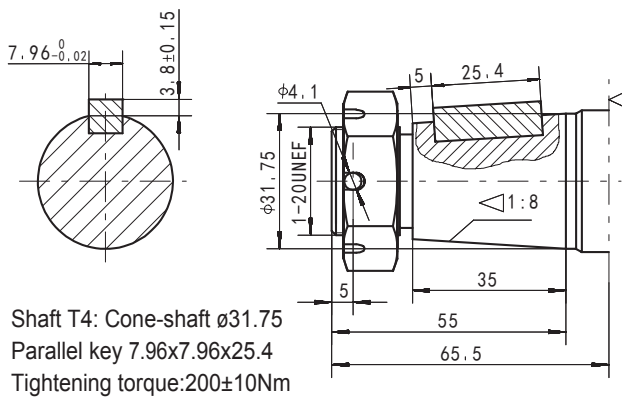
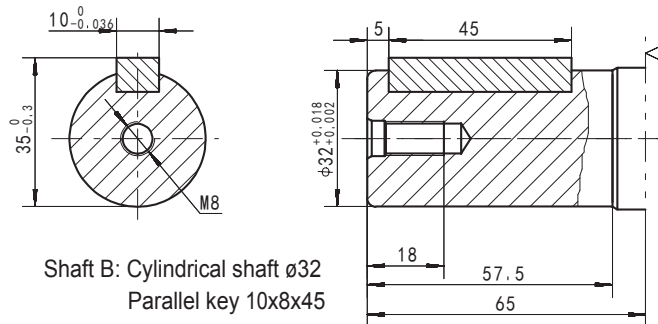
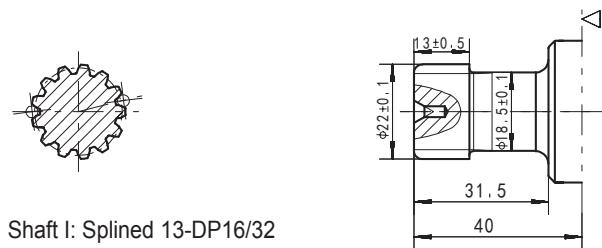
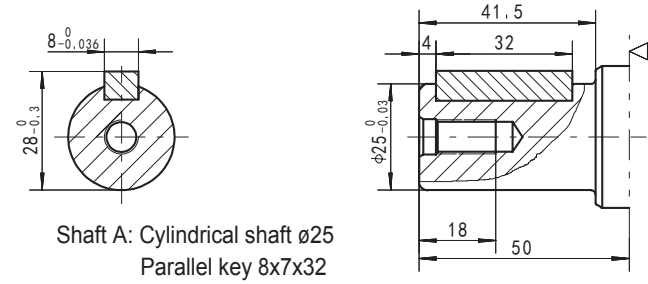
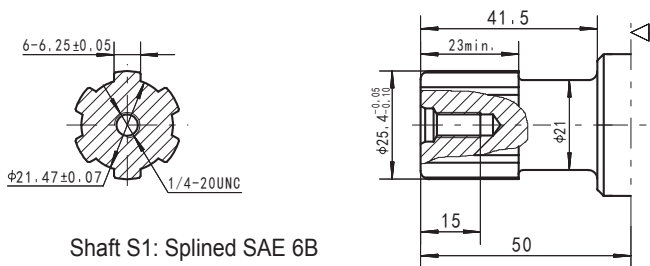
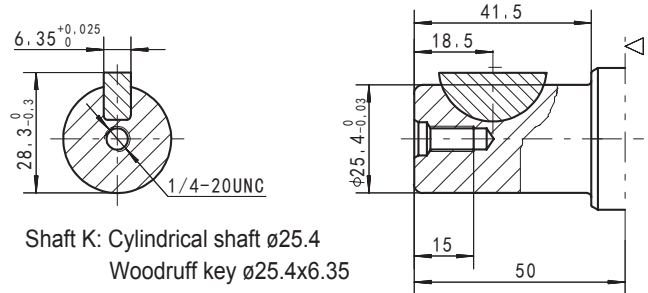
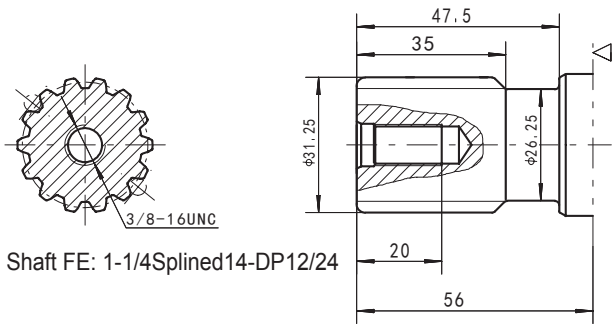
Model	L	L1	L2
BMK2-65	182	14.5	133.5
BMK2-80	185	17.8	136.5
BMK2-100	189.5	22.5	141.5
BMK2-125	196	28.9	148
BMK2-160	196	28.9	148
BMK2-200	202.5	35.6	154.5
BMK2-250	211.5	44.6	163.5
BMK2-315	223	56	175
BMK2-400	239	72	191
BMK2-475	256.5	89.3	208.5

Model	L	L1	L2
BMK2-65-WE	142	14.5	93.5
BMK2-80-WE	145.5	17.8	97
BMK2-100-WE	150	22.5	101.5
BMK2-125-WE	156.5	28.9	108
BMK2-160-WE	156.5	28.9	108
BMK2-200-WE	163	35.6	114.5
BMK2-250-WE	172	44.6	123.5
BMK2-315-WE	183.5	56	135
BMK2-400-WE	199.5	72	151
BMK2-475-WE	217	89.3	168.5

Code	DB (Depth)	DU (Depth)	SU (Depth)	SB (Depth)	M4 (Depth)	MU	MM
P(A,B)	G1/2 (15)	G1/2 (15)	7/8-14 O-ring (17)	7/8-14 O-ring (17)	M22 x 1.5 (15)	φ12.7, φ15.8	φ12.7, φ15.8
T	G1/4 (12)	7/16-20UNF(12)	7/16-20UNF(12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)	G1/4 (12)
C			--			3/8-16UNC(15)	M10(15)

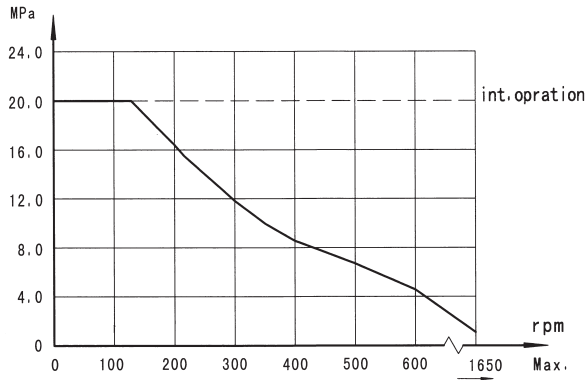


SHAFT EXTENSIONS FOR BMK2 MOTORS

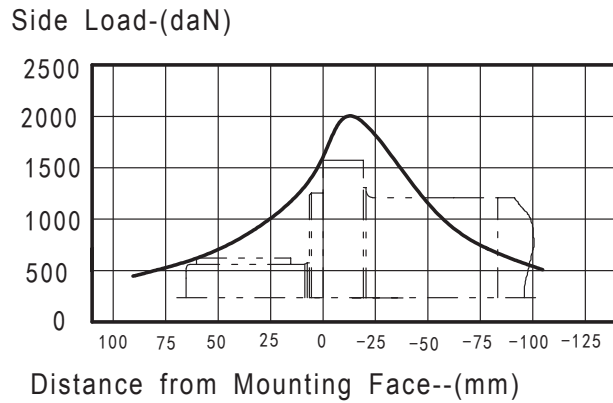


◁ Motor Mounting Surface E2 Flange

Permissible shaft seal pressure



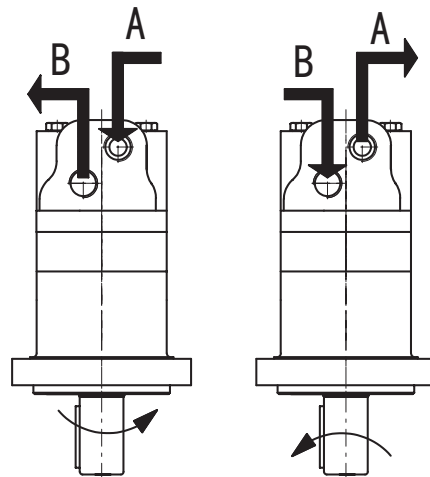
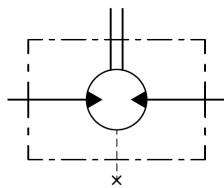
BMK2 Standard Mounting Flange[E2]Radial Forces



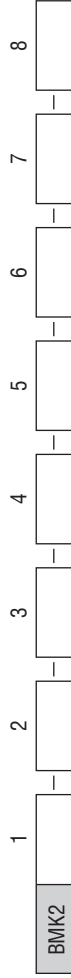
The bearing curve represents allowable bearing loads for an  $B_{10}$  bearing life (2000 hours or  $12 \times 10^6$  revolutions at 100rpm) at rated output torque.

Direction of shaft rotation: Standard

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



Order Information



Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
65	E2	2×φ13.5 Rhomb-flange φ106.4, pilot φ82.5×6.4	A Shaft φ25 , parallel key 8×7×32 B Shaft φ32 , parallel key 10×8×45 K Shaft φ25.4 , Woodruff key φ25.4×6.35	DB DU	G1/2, G1/4 G1/2, 7/16-20 UNF	No paint	Omit Standard
80	E4	4×φ13.5 Rhomb-flange φ106.4, pilot φ82.5×6.4	G Shaft φ31.75 , parallel key 7.96×7.96×31.75	SB SU	7/8-14UNF O-ring, G1/4 7/8-14UNF O-ring, 7/16-20 UNF	00	Omit Standard
100	E6	4×φ13.5 Rhomb-flange φ106.4, pilot φ82.5×6.4	FE Shaft φ31.75 , splined 14-DP12/24	M4 MU	M22×1.5, M14×1.5 1/2", 5/8" Crosshole Manifold 3×3/8-	Omit B	Omit Standard
125	WE	4×φ13.6 Wheel-flange φ147.6, pilot φ107.95×6.4	S1 Shaft φ25.4 , splined SAE 6B I Sub-shaft φ22 , splined 13-DP16/32	MM	16UNC, 7/16-20UNF 1/2", 5/8" Crosshole Manifold 3×M10, G1/4	S	Free Running
160			T4 Cone-shaft φ31.75 , parallel key 7.96×7.96×25.4			Silver grey	
200							
250							
315							
400							
475							

Note: When the table is used , please fill the code of right rows in the table 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 .



## BMK6 SERIES HYDRAULIC MOTOR

BMK6 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.
- \* Advanced design in disc distribution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.
- \* Shaft seal can bear high pressure of back.
- \* The output shaft adapts in tapered roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.

### Main Specification

Type		BMK6 200	BMK6 250	BMK6 315	BMK6 400	BMK6 500	BMK6 630	BMK6 800	BMK6 1000
Geometric displacement (cm <sup>3</sup> /rev.)		195.6	246.1	311.6	391.3	490.8	623	802.4	981.6
Max. speed (rpm)	cont.	765	610	480	382	304	240	186	152
	int.	865	830	690	570	455	360	280	230
Max. torque (N·m)	cont.	565	710	920	1160	1445	1480	1580	1675
	int.	840	1080	1325	1625	1880	1890	1880	1860
Max. pressure drop (MPa)	cont.	20	20	20	20	20	17.5	14	14
	int.	30	30	30	30	27.5	22.5	15.5	14
	peak.	30	30	30	30	30	24	17.5	17
Max. flow (L/min)	cont.	150	150	150	150	150	150	150	150
	int.	170	205	225	225	225	225	225	225
Weight (kg)		26.3	26.8	27.3	28	28.8	29.6	30.5	32

- \*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.



石家庄寒九科技有限公司

SHIJIAZHUANG HANJIU TECHNOLOGY CO.,LTD.

Performance Data

BMK6 200 [195.6cm³/rev.] Pressure (MPa)

Max.cont. Max.int. Peak

Table with 12 rows (Flow: 2, 8, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 170) and 10 columns (Pressure: 1.75, 3.5, 7, 10.5, 14, 17.5, 20, 24, 27.5, 30). Values range from 30 to 850.

BMK6 250 [246.1cm³/rev.] Pressure (MPa)

Max.cont. Max.int. Peak

Table with 12 rows (Flow: 2, 8, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 170, 185, 205) and 10 columns (Pressure: 1.75, 3.5, 7, 10.5, 14, 17.5, 20, 24, 27.5, 30). Values range from 46 to 1180.

BMK6 315 [311.6cm³/rev.] Pressure (MPa)

Max.cont. Max.int. Peak

Table with 13 rows (Flow: 2, 8, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 190, 225) and 10 columns (Pressure: 1.75, 3.5, 7, 10.5, 14, 17.5, 20, 24, 27.5, 30). Values range from 65 to 1325.

BMK6 400 [391.3cm³/rev.] Pressure (MPa)

Max.cont. Max.int. Peak

Table with 13 rows (Flow: 2, 8, 15, 30, 45, 60, 75, 90, 105, 120, 135, 150, 190, 225) and 10 columns (Pressure: 1.75, 3.5, 7, 10.5, 14, 17.5, 20, 24, 27.5, 30). Values range from 90 to 1625.



HAN JIU

石家庄寒九科技有限公司  
SHIJIAZHUANG HANJIU TECHNOLOGY CO.,LTD.

BMK6 500 [490.8cm³/rev.]  
Pressure (MPa)

Flow (L/min)	Pressure (MPa)								
	1.75	3.5	7	10.5	14	17.5	20	24	27.5
4	120	230	470	685					
8	125	240	475	705	940	1165	1375		
15	125	235	480	720	960	1190	1400	1625	1880
30	125	235	485	735	975	1215	1445	1685	
45	125	235	485	735	975	1215	1450		
60	120	235	480	730	975	1220	1460		
75	110	225	470	725	970	1220			
90	100	220	465	720	965	1215			
105	95	205	460	710	960	1210			
120	90	195	450	700	950	1205			
135	85	175	435	680	935	1170			
Max.cont.	70	155	420	665	920	1150			
Max.int.	304	303	301	292	287	280			
190		130	360	580	865				
		385	382	373	365				
225			320	555	800				
			455	440	432				

BMK6 630 [623cm³/rev.]  
Pressure (MPa)

Flow (L/min)	Pressure (MPa)								
	1.75	3.5	7	10.5	14	17.5	20	22.5	
4	130	245	500	750					
8	135	265	540	805	1050				
15	140	280	585	865	1085	1425			
30	145	295	605	925	1270	1480	1780	1890	
45	145	295	610	920	1330	1465	1770		
60	135	285	605	915	1330	1465			
75	130	275	595	915	1325				
90	115	260	585	905	1310				
105	100	255	575	895	1305				
120	85	235	560	880	1280				
135	75	220	540	855					
Max.cont.	50	200	525	84					
Max.int.	240	239	236	233					
190			465	795					
			300	293					
225			430	740					
			360	348					

BMK6 800 [802.4cm³/rev.]  
Pressure (MPa)

Flow (L/min)	Pressure (MPa)									
	1.75	3.5	5	7	8.5	10.5	12	14	15.5	17.5
4	172	345	530	690	860					
8	180	355	540	725	955	1080	1275	1360		
15	185	370	565	758	980	1130	1265	1420	1655	1880
30	190	385	590	795	1005	1200	1330	1580	1740	
45	190	385	590	800	1015	1200	1380	1550		
60	185	380	580	790	1015	1200	1345			
75	176	370	575	782	1000	1185	1365			
90	165	360	560	765	990	1170				
105	150	340	555	750	972	1155				
120	132	325	545	735	945	1130				
135	105	302	525	710	911					
Max.cont.	168	167	165	162	158					
Max.int.	80	270	500	680	880					
190		300	475	660	855					
		235	233	230	226					
225			423	612	830					
			280	276	272					

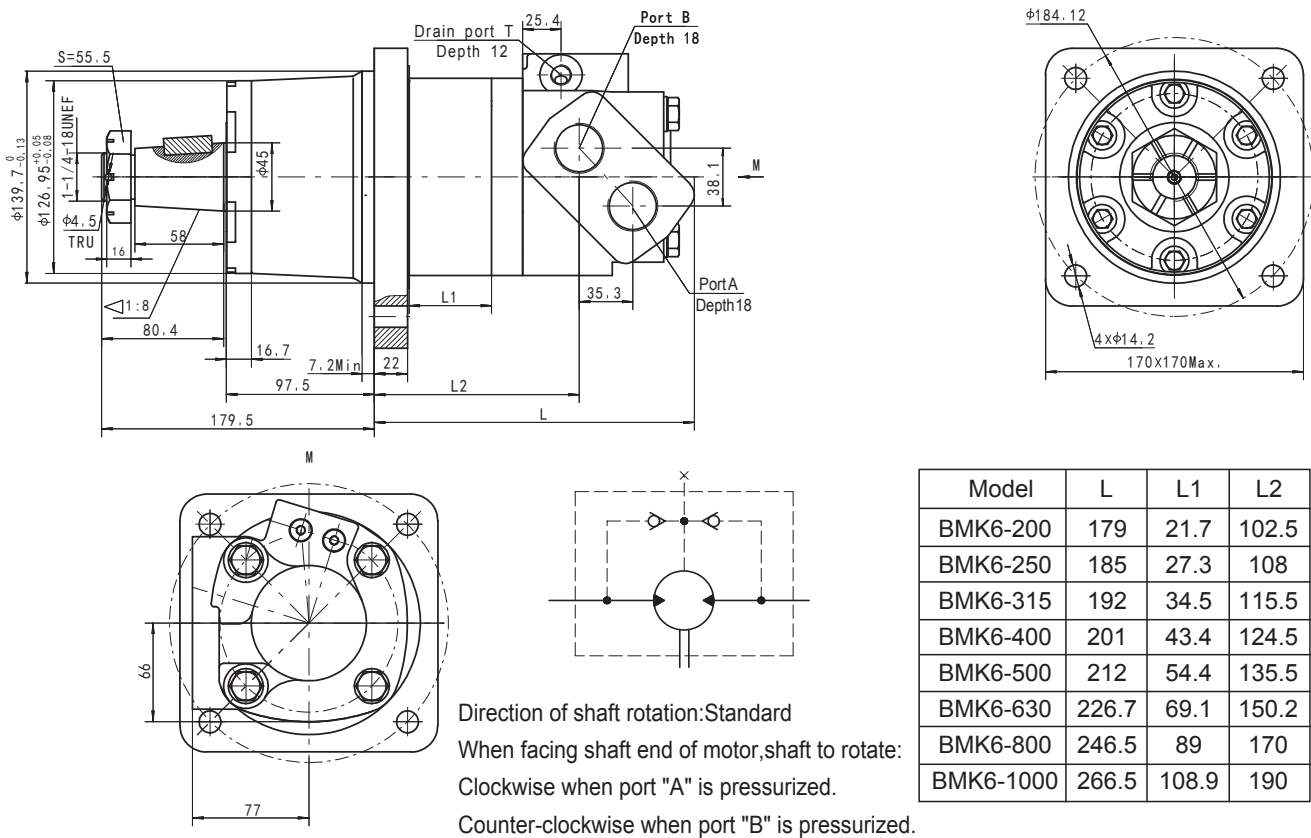
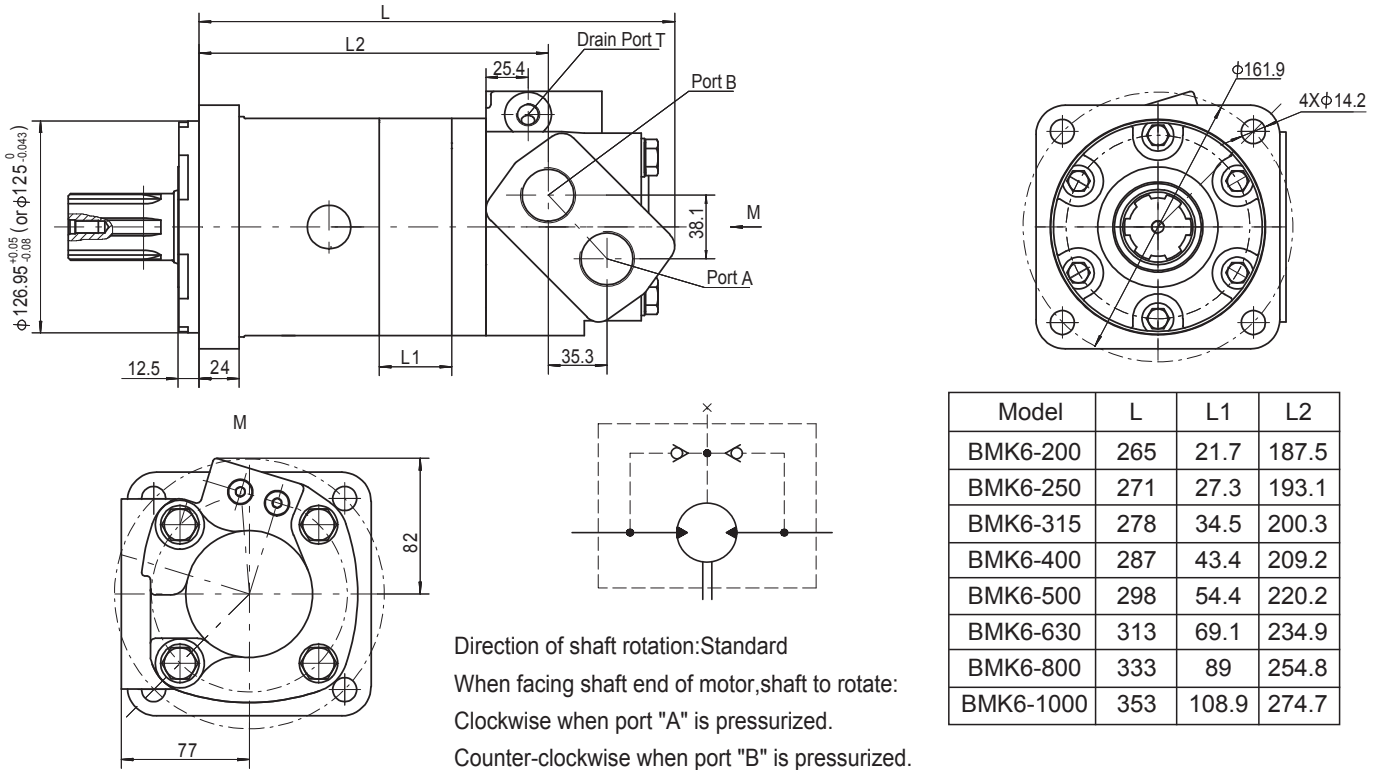
BMK6 1000 [981.6cm³/rev.]  
Pressure (MPa)

Flow (L/min)	Pressure (MPa)								
	1.75	3.5	5	7	8.5	10.5	12	14	
4	225	460	640	875	1085				
8	230	470	695	945	1170	1415	1560	1675	
15	240	485	715	965	1200	1445	1580	1780	
30	240	495	720	995	1235	1480	1640	1860	
45	240	495	720	1000	1250	1490	1700		
60	235	490	715	990	1245	1500			
75	225	475	710	980	1230	1485			
90	215	460	705	960	1215	1465			
105	200	445	690	940	1195	1440			
120	185	420	665	920	1155				
135	150	390	635	890	1120				
Max.cont.	110	360	605	860	1080				
Max.int.	152	151	150	148	145				
190		320	575	820	1045				
		192	190	188	185				
225			515	800	1020				
			230	228	224				

Torque (N·m) 423  
Speed (rpm) 280

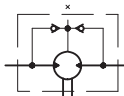
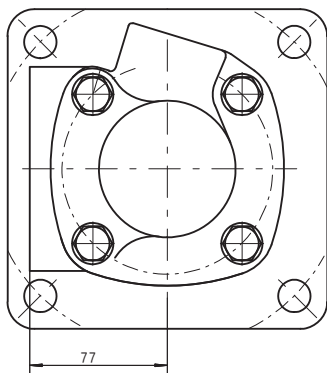
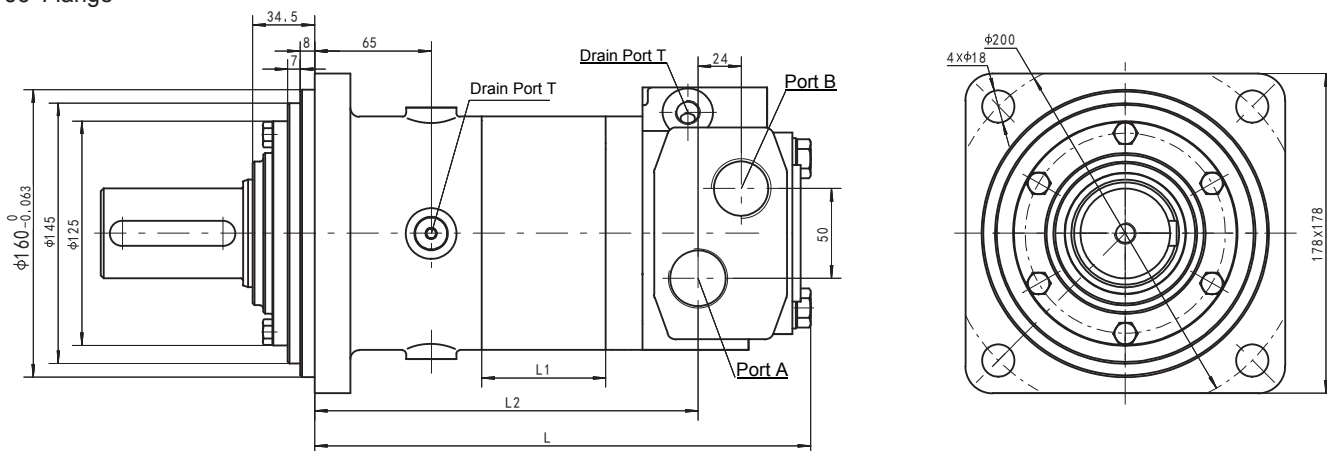
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**BMK6 DIMENSIONS MOUNTING DATA**



### BMK6 DIMENSION AND MOUNTING DATA

#### J6 Flange



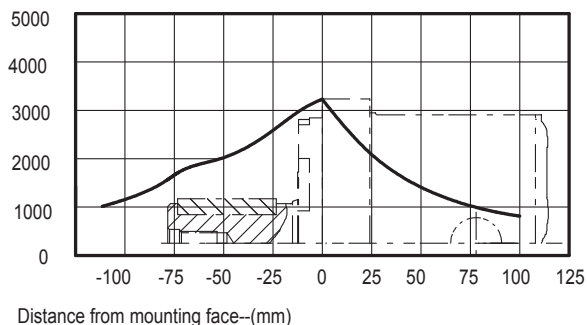
#### Rotation direction of output shaft: standard

When facing the depth of the motor shaft and the "A" port is high pressure oil, the output shaft rotates clockwise; otherwise, it rotates counterclockwise. Without check valve, the "M14xM15 drain" port must be connected back to the tank.

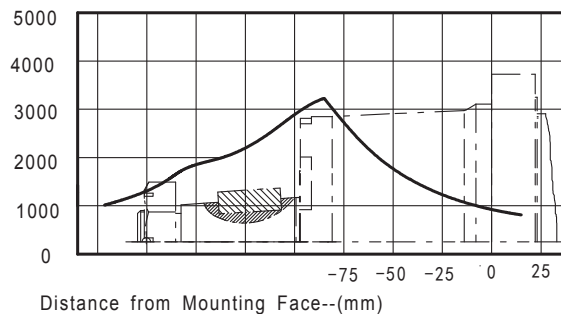
Model	L	L1	L2
BMK6-200	230	21.7	166
BMK6-250	236	27.3	172
BMK6-315	243	34.5	179
BMK6-400	252	43.4	188
BMK6-500	263	54.4	199
BMK6-630	277.5	69.1	213.5
BMK6-800	297.5	89	233.5
BMK6-1000	317.5	108.9	253.5

### BMK6 for CC And W Mounting Radial forces

Radial forces-(daN)



Side Load-(daN)



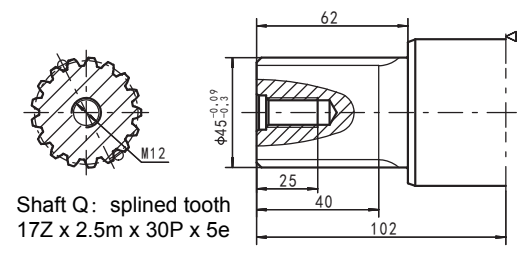
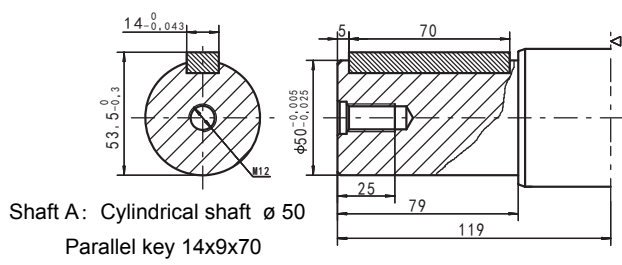
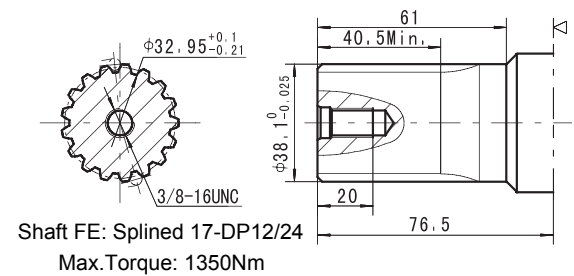
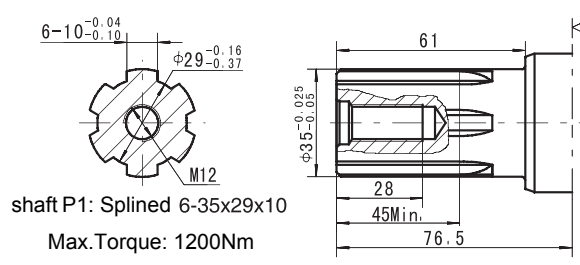
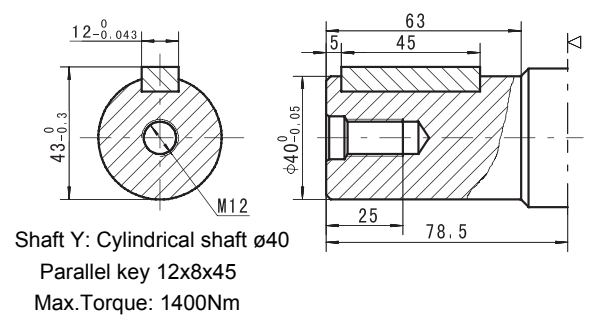
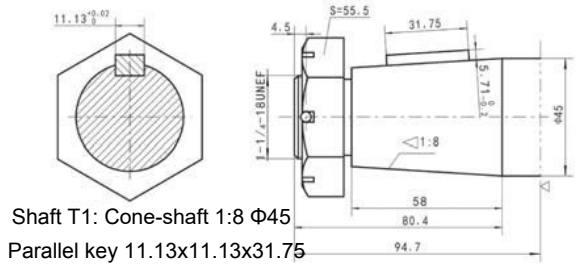
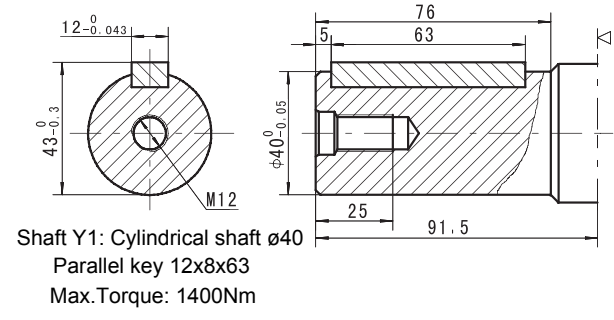
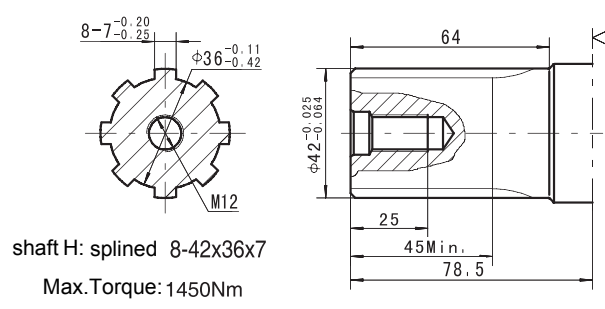
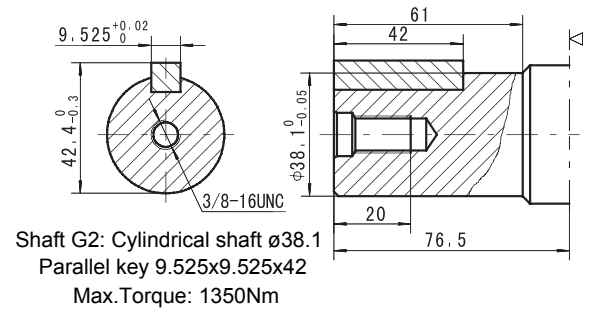
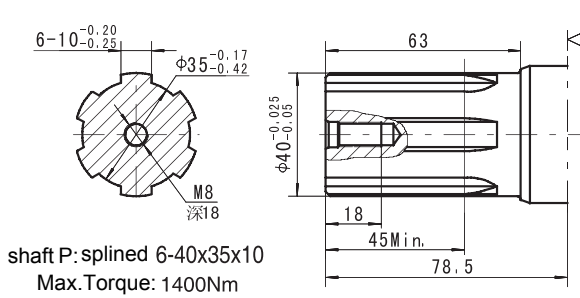
The bearing curve represents allowable bearing loads for an B10 bearing life (2000 hours or 12x10<sup>6</sup> revolutions at 100rpm) at rated output torque. Other speed load multiply a load values.

The maximum load curve is defined by bearing static load capacity.

This curve should not be exceeded at any time including shock loads.

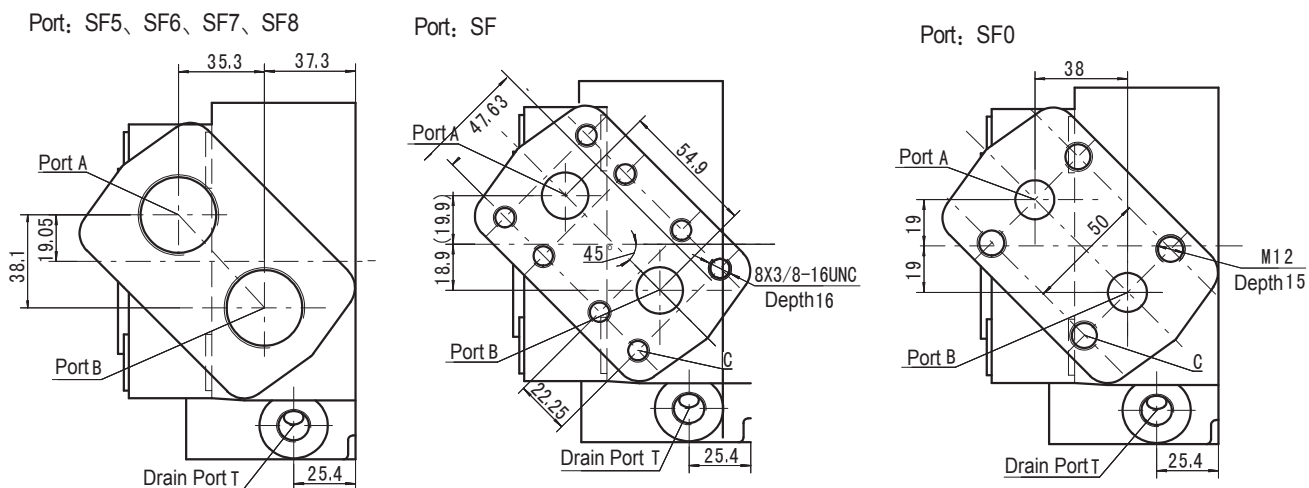


**BMK6 Shaft Extensions For Dimensions Data**



◁ Motor Mounting Surface CC Flange

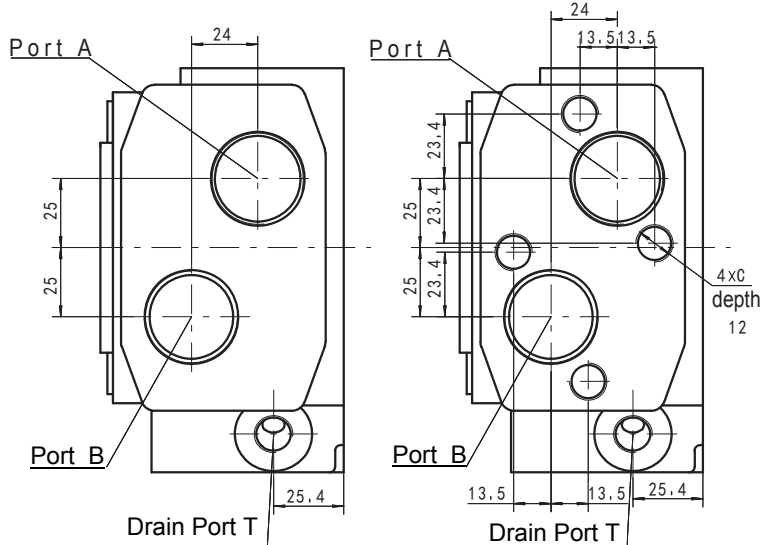
**DIMENSIONS of PORTS FOR BMK6**



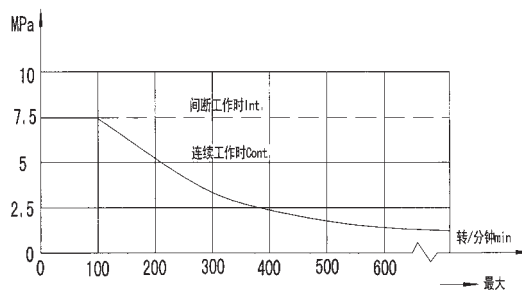
Code	Type					
	SF5 (depth)	SF6 (depth)	SF7 (depth)	SF8 (depth)	SF (depth)	SF0 (depth)
P(A,B)	1-5/16-12UN(18)	M33X2(18)	G1(18)	G3/4(18)	Φ 19.05	Φ 16
T	7/16-20UNF(12)	M14X1.5(12)	G1/4(12)	G1/4(12)	7/16-20UNF(12)	M14X1.5(12)
C	-	-	-	-	8X3/8-16UNC	4XM12

Porting: S1、M 5、G

Porting: D、D 1、M



**BMK6 Series The allowable pressure of the standard motor output shaft seal**



In the use without an external oil drain pipe, the pressure on the output shaft sealing ring is slightly higher than the pressure in the oil pipeline. When the external drain pipe is used, the pressure on the output shaft sealing ring is the same as the pressure in the external drain pipe.

Content	Code					
	S1(Depth)	M5(Depth)	G(Depth)	D(Depth)	D1(Depth)	M (Depth)
P(A,B)	1-5/16-12UN(18)	M33X2(18)	G1(18)	G1(18)	G3/4(18)	M33X2(18)
T	7/16-20UNF(12)	M14X1.5(12)	G1/4(12)	G1/4(12)	G1/4(12)	M14X1.5(12)
C	-	-	-	4XM12	4XM12	4XM12

订货信息

Order information



1	2	3	4	5	6	7	8	
Code	Disp.	Flange, pilot	Output Shaft	Ports and Drain	Rotation Direction	Paint	Unusually Function	
	200	4-φ14.2 Square-flange φ161.9, pilot φ127×12.5	G2 FE Y1	SF SF0 SF5 SF6 SF7 SF8	3/4" Manifold Mount 8×3/8-16UNC, 7/16-20UNF φ16 Manifold Mount 4×M12, M14×1.5 1-5/16-12UN, 7/16-20UNF M33×2, M14×1.5 G1, G1/4 G3/4, G1/4			
	250	4-φ14.2 Square-flange φ161.9, pilot φ125×12.5	H H1	SF0 SF5 SF6 SF7 SF8	3/4" Manifold Mount 8×3/8-16UNC, 7/16-20UNF φ16 Manifold Mount 4×M12, M14×1.5 1-5/16-12UN, 7/16-20UNF M33×2, M14×1.5 G1, G1/4 G3/4, G1/4			
	315	4-φ14.2 Wheel-flange φ184.12, Pilot 139.7	P P1 T1	Shaft φ38.1, parallel key 9.52×9.52×42 Shaft φ38.1, splined tooth 17-DP12/24 Shaft φ40, parallel key 12×8×63 Shaft φ40, parallel key 12×8×45 Shaft φ42, splined tooth 8-42×36×7 Shaft φ40, splined tooth 6-40×35×10 Shaft φ35, splined tooth 6-35×29×10 Cone-shaft 1:8 φ45, parallel key 1.13X11.13X31.75	1-5/16-12UNC, 7/16-20UNF M33×2, M14×1.5 G1, G1/4 G1 Manifold Mount 4×M12, G1/4 G3/4 Manifold Mount 4×M12, G1/4 M33×2 Manifold Mount 4×M12, M14×1.4			
	400							
	500							
	630							
	800							
	1000							

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.



## BME2 SERIES HYDRAULIC MOTOR

BME2 series motor adapt the advanced Geroler gear set designed with high speed distribution flow and high pressure, and have good stability in low speed , and can keep high volume efficiency. 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 needle roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.

\* Advanced design in high speed distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.

\* Lowest leakage rate, most accurate timing methods. Commutator rotates 6x faster than shaft speed. It make the distribution in a high precision reduces life-cycle cost, maintain high volume efficiencies and can run very smoothly at low speed, gear box not required.

### Main Specification

Type		BME2 65	BME2 80	BME2 100	BME2 125	BME2 160	BME2 200	BME2 230	BME2 250	BME2 295	BME2 315	BME2 375
Geometric displacement (cm <sup>3</sup> /rev.)		66.8	81.3	101.6	127	157.2	193.6	226	257	287.8	314.5	370
Max. speed (rpm)	cont.	667	543	439	350	283	229	247	216	196	178	152
	int.	842	689	553	441	355	289	328	287	254	235	199
Max. torque (N·m)	cont.	126	157	191	245	307	382	378	381	393	448	439
	int.	176	215	268	335	422	520	528	543	547	587	613
Max. output (kW)	cont.	8.3	8.8	7.9	8.9	8.9	9	9.9	9.3	8.7	8	7.6
	int.	13.9	14.4	13.5	14.1	15.6	15.7	17.9	16.5	15.6	14.3	14
Max. pressure drop (MPa)	cont.	14	14	14	14	14	14	12	11	10	10	9
	int.	19	19	19	19	19	19	165	15.5	14.5	13.5	12.5
	peak	20	20	20	20	20	20	18	18	17	16	16
Max. flow (L/min)	cont.	45	45	45	45	45	45	57	57	57	57	57
	int.	57	57	57	57	57	57	75	75	75	75	75

\* 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

BME2 65 [66.8 cm<sup>3</sup>/rev.]  
Pressure (MPa) Max.cont. Max.int.

	3.5	7	10.5	14	19	
Flow (L/min)	2	26 <b>22</b>	54 <b>16</b>	83 <b>4</b>		
	5	27 <b>69</b>	56 <b>62</b>	87 <b>53</b>	118 <b>42</b>	
	10	29 <b>145</b>	60 <b>141</b>	91 <b>132</b>	123 <b>122</b>	171 <b>95</b>
	15	30 <b>221</b>	62 <b>216</b>	94 <b>207</b>	126 <b>196</b>	176 <b>149</b>
	20	28 <b>295</b>	58 <b>290</b>	91 <b>279</b>	122 <b>261</b>	174 <b>232</b>
Max.cont.	25	24 <b>368</b>	55 <b>365</b>	90 <b>352</b>	121 <b>341</b>	172 <b>312</b>
	34	22 <b>501</b>	54 <b>493</b>	89 <b>478</b>	119 <b>457</b>	171 <b>423</b>
	45	20 <b>667</b>	52 <b>660</b>	85 <b>642</b>	115 <b>621</b>	168 <b>587</b>
Max.int.	57	15 <b>842</b>	46 <b>835</b>	80 <b>814</b>	112 <b>789</b>	163 <b>735</b>

BME2 80 [81.3 cm<sup>3</sup>/rev.]  
Pressure (MPa) Max.cont. Max.int.

	3.5	7	10.5	14	19	
Flow (L/min)	2	33 <b>18</b>	70 <b>14</b>	106 <b>4</b>		
	5	35 <b>55</b>	72 <b>51</b>	111 <b>44</b>	150 <b>25</b>	
	10	36 <b>121</b>	75 <b>118</b>	114 <b>113</b>	155 <b>107</b>	215 <b>88</b>
	15	37 <b>181</b>	77 <b>178</b>	116 <b>171</b>	157 <b>162</b>	215 <b>148</b>
	20	35 <b>242</b>	74 <b>238</b>	112 <b>231</b>	151 <b>223</b>	206 <b>205</b>
Max.cont.	25	35 <b>303</b>	71 <b>298</b>	108 <b>289</b>	148 <b>275</b>	202 <b>261</b>
	34	31 <b>411</b>	69 <b>407</b>	105 <b>396</b>	145 <b>382</b>	198 <b>373</b>
	45	23 <b>543</b>	62 <b>537</b>	100 <b>521</b>	139 <b>513</b>	12 <b>501</b>
Max.int.	57	18 <b>689</b>	55 <b>681</b>	98 <b>665</b>	134 <b>649</b>	186 <b>618</b>

BME2 100 [101.6 cm<sup>3</sup>/rev.]  
Pressure (MPa) Max.cont. Max.int.

	3.5	7	10.5	14	19	
Flow (L/min)	2	40 <b>15</b>	82 <b>11</b>	126 <b>4</b>		
	5	41 <b>44</b>	83 <b>36</b>	150 <b>28</b>	206 <b>12</b>	
	10	42 <b>97</b>	91 <b>95</b>	138 <b>94</b>	177 <b>81</b>	230 <b>54</b>
	15	42 <b>147</b>	91 <b>144</b>	138 <b>137</b>	185 <b>124</b>	257 <b>93</b>
	20	38 <b>195</b>	88 <b>192</b>	136 <b>182</b>	180 <b>169</b>	244 <b>138</b>
Max.cont.	25	39 <b>244</b>	89 <b>241</b>	142 <b>230</b>	191 <b>221</b>	268 <b>194</b>
	34	31 <b>331</b>	79 <b>328</b>	131 <b>323</b>	179 <b>308</b>	250 <b>273</b>
	45	21 <b>439</b>	70 <b>436</b>	119 <b>433</b>	168 <b>419</b>	241 <b>383</b>
Max.int.	57	10 <b>553</b>	60 <b>545</b>	109 <b>534</b>	158 <b>527</b>	232 <b>491</b>

BME2 125 [127 cm<sup>3</sup>/rev.]  
Pressure (MPa) Max.cont. Max.int.

	3.5	7	10.5	14	19	
Flow (L/min)	2	52 <b>12</b>	150 <b>9</b>	158 <b>3</b>		
	5	55 <b>35</b>	112 <b>31</b>	170 <b>22</b>	221 <b>15</b>	290 <b>10</b>
	10	57 <b>78</b>	117 <b>75</b>	180 <b>69</b>	242 <b>63</b>	335 <b>46</b>
	15	56 <b>116</b>	118 <b>113</b>	180 <b>109</b>	245 <b>99</b>	331 <b>76</b>
	20	55 <b>155</b>	117 <b>153</b>	178 <b>147</b>	242 <b>136</b>	331 <b>110</b>
Max.cont.	25	52 <b>593</b>	111 <b>188</b>	177 <b>182</b>	238 <b>172</b>	325 <b>151</b>
	34	43 <b>264</b>	105 <b>262</b>	169 <b>254</b>	231 <b>244</b>	326 <b>220</b>
	45	38 <b>350</b>	95 <b>348</b>	159 <b>346</b>	219 <b>331</b>	314 <b>301</b>
Max.int.	57	21 <b>441</b>	176 <b>439</b>	141 <b>431</b>	280 <b>417</b>	302 <b>384</b>

Torque (N·m) 158  
Speed (rpm) 527

□ cont.  
■ int.

### Performance Data

BME2 160 [157.2 cm<sup>3</sup>/rev.]

		Pressure (MPa)					
					Max.cont.	Max.int.	
		3.5	7	10.5	14	19	
Flow (L/min)	2	64 <b>10</b>	132 <b>8</b>	199 <b>2</b>			
	5	68 <b>28</b>	138 <b>26</b>	208 <b>19</b>	281 <b>10</b>		
	10	71 <b>62</b>	147 <b>60</b>	221 <b>56</b>	303 <b>53</b>	419 <b>38</b>	
	15	72 <b>93</b>	148 <b>91</b>	225 <b>87</b>	307 <b>79</b>	426 <b>61</b>	
	20	71 <b>126</b>	148 <b>123</b>	223 <b>118</b>	305 <b>110</b>	422 <b>95</b>	
	25	62 <b>157</b>	140 <b>155</b>	218 <b>152</b>	296 <b>141</b>	415 <b>129</b>	
	34	56 <b>214</b>	134 <b>211</b>	211 <b>206</b>	287 <b>197</b>	408 <b>181</b>	
	Max.cont.	45	47 <b>283</b>	127 <b>281</b>	205 <b>275</b>	281 <b>266</b>	391 <b>241</b>
	Max.int.	57	36 <b>355</b>	97 <b>352</b>	182 <b>346</b>	260 <b>336</b>	370 <b>311</b>

BME2 200 [193.6 cm<sup>3</sup>/rev.]

		Pressure (MPa)					
					Max.cont.	Max.int.	
		3.5	7	10.5	14	19	
Flow (L/min)	2	80 <b>9</b>	163 <b>7</b>	245 <b>3</b>			
	5	88 <b>23</b>	178 <b>21</b>	266 <b>18</b>	352 <b>12</b>		
	10	89 <b>49</b>	181 <b>48</b>	275 <b>43</b>	378 <b>39</b>	517 <b>27</b>	
	15	91 <b>76</b>	188 <b>73</b>	280 <b>68</b>	382 <b>63</b>	520 <b>44</b>	
	20	89 <b>101</b>	182 <b>98</b>	275 <b>95</b>	374 <b>86</b>	517 <b>69</b>	
	25	78 <b>127</b>	170 <b>125</b>	271 <b>121</b>	376 <b>113</b>	518 <b>101</b>	
	34	64 <b>173</b>	158 <b>171</b>	268 <b>165</b>	363 <b>156</b>	502 <b>143</b>	
	Max.cont.	45	51 <b>229</b>	157 <b>227</b>	252 <b>221</b>	351 <b>212</b>	494 <b>196</b>
	Max.int.	57	36 <b>289</b>	138 <b>286</b>	231 <b>279</b>	330 <b>271</b>	469 <b>256</b>

BME2 230 [226 cm<sup>3</sup>/rev.]

		Pressure (MPa)					
					Max.cont.	Max.int.	
		3.5	7	10.5	12	16.5	
Flow (L/min)	2	97 <b>7</b>	191 <b>4</b>	280 <b>2</b>			
	5	101 <b>18</b>	199 <b>14</b>	301 <b>8</b>	348 <b>4</b>		
	10	103 <b>43</b>	214 <b>42</b>	325 <b>40</b>	378 <b>36</b>	527 <b>29</b>	
	15	104 <b>65</b>	215 <b>63</b>	327 <b>59</b>	375 <b>52</b>	528 <b>47</b>	
	20	101 <b>86</b>	210 <b>84</b>	321 <b>81</b>	371 <b>75</b>	524 <b>66</b>	
	25	95 <b>108</b>	201 <b>106</b>	316 <b>102</b>	364 <b>94</b>	511 <b>87</b>	
	34	82 <b>147</b>	188 <b>145</b>	308 <b>141</b>	358 <b>135</b>	501 <b>128</b>	
	45	55 <b>197</b>	158 <b>195</b>	276 <b>191</b>	329 <b>186</b>	485 <b>176</b>	
	Max.cont.	57	19 <b>247</b>	130 <b>244</b>	256 <b>240</b>	301 <b>230</b>	451 <b>221</b>
	Max.int.	75		65 <b>328</b>	183 <b>323</b>	250 <b>311</b>	401 <b>303</b>

BME2 250 [257 cm<sup>3</sup>/rev.]

		Pressure (MPa)					
					Max.cont.	Max.int.	
		3.5	7	10.5	11	15.5	
Flow (L/min)	2	112 <b>6</b>	207 <b>3</b>	309 <b>1</b>			
	5	115 <b>18</b>	218 <b>14</b>	320 <b>8</b>	348 <b>4</b>		
	10	113 <b>39</b>	235 <b>38</b>	358 <b>35</b>	379 <b>31</b>	543 <b>23</b>	
	15	113 <b>58</b>	234 <b>56</b>	357 <b>53</b>	381 <b>45</b>	542 <b>3</b>	
	20	111 <b>77</b>	233 <b>75</b>	356 <b>72</b>	376 <b>65</b>	541 <b>48</b>	
	25	109 <b>97</b>	228 <b>95</b>	354 <b>89</b>	371 <b>81</b>	532 <b>69</b>	
	34	91 <b>131</b>	213 <b>128</b>	346 <b>123</b>	364 <b>116</b>	521 <b>103</b>	
	45	89 <b>174</b>	211 <b>172</b>	345 <b>165</b>	361 <b>157</b>	518 <b>135</b>	
	Max.cont.	57	73 <b>216</b>	208 <b>213</b>	339 <b>205</b>	342 <b>197</b>	487 <b>184</b>
	Max.int.	75		74 <b>287</b>	198 <b>284</b>	301 <b>278</b>	441 <b>267</b>

Torque (N·m) 250  
Speed (rpm) 311

□ cont.  
■ int.

### Performance Data

BME2 295[287.8 cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.int.

3.5	7	11	14.5
-----	---	----	------

Flow (L/min)	5	121 <b>15</b>	243 <b>14</b>	368 <b>10</b>	509 <b>5</b>
	10	125 <b>33</b>	253 <b>31</b>	381 <b>27</b>	529 <b>20</b>
	15	129 <b>51</b>	261 <b>50</b>	393 <b>47</b>	547 <b>41</b>
	20	127 <b>68</b>	259 <b>67</b>	390 <b>63</b>	545 <b>55</b>
	25	126 <b>86</b>	255 <b>84</b>	386 <b>80</b>	539 <b>69</b>
	34	123 <b>116</b>	248 <b>114</b>	380 <b>110</b>	531 <b>98</b>
	45	115 <b>154</b>	234 <b>153</b>	368 <b>148</b>	522 <b>136</b>
	Max.cont.	108 <b>196</b>	227 <b>194</b>	359 <b>187</b>	514 <b>176</b>
	Max.int.	75	211 <b>254</b>	349 <b>246</b>	506 <b>231</b>

BME2 315[314.5 cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.int.

3.5	7	11	13.5
-----	---	----	------

Flow (L/min)	5	136 <b>11</b>	281 <b>8</b>	427 <b>3</b>	
	10	139 <b>30</b>	287 <b>29</b>	438 <b>26</b>	574 <b>20</b>
	15	141 <b>47</b>	295 <b>46</b>	448 <b>43</b>	587 <b>40</b>
	20	138 <b>62</b>	287 <b>61</b>	442 <b>58</b>	587 <b>53</b>
	25	131 <b>78</b>	280 <b>75</b>	431 <b>71</b>	567 <b>66</b>
	34	117 <b>106</b>	269 <b>104</b>	423 <b>98</b>	557 <b>91</b>
	45	114 <b>141</b>	253 <b>138</b>	397 <b>132</b>	535 <b>125</b>
	Max.cont.	86 <b>178</b>	219 <b>173</b>	383 <b>168</b>	505 <b>162</b>
	Max.int.	75	108 <b>235</b>	287 <b>231</b>	416 <b>219</b>

BME2 375[370 cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.int.

3.5	7	9	12.5
-----	---	---	------

Flow (L/min)	5	151 <b>10</b>	315 <b>7</b>	412 <b>3</b>	
	10	155 <b>25</b>	324 <b>24</b>	427 <b>21</b>	606 <b>18</b>
	15	162 <b>40</b>	331 <b>39</b>	439 <b>37</b>	613 <b>32</b>
	20	158 <b>53</b>	326 <b>52</b>	434 <b>49</b>	602 <b>45</b>
	25	151 <b>67</b>	316 <b>65</b>	424 <b>62</b>	589 <b>58</b>
	34	141 <b>91</b>	309 <b>89</b>	417 <b>85</b>	580 <b>80</b>
	45	138 <b>121</b>	300 <b>119</b>	408 <b>115</b>	572 <b>107</b>
	Max.cont.	118 <b>152</b>	281 <b>150</b>	393 <b>144</b>	550 <b>136</b>
	Max.int.	75	258 <b>199</b>	369 <b>191</b>	518 <b>183</b>

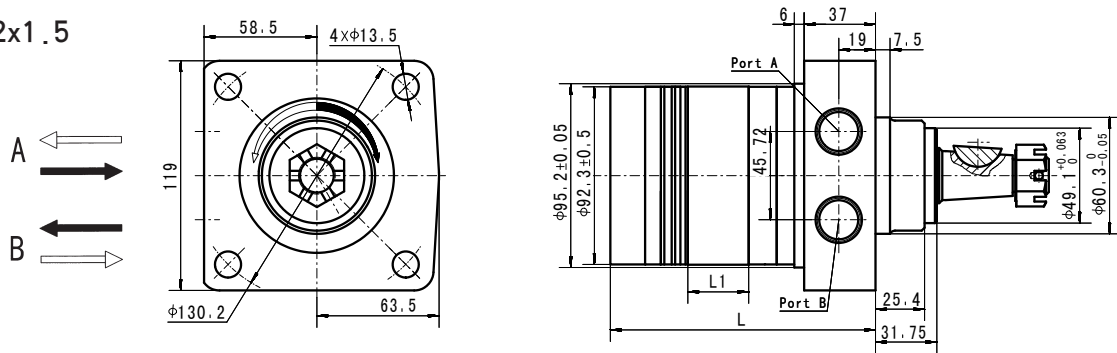
Torque (N·m) 506  
Speed (rpm) 231

cont.  
int.

**BME2 DIMENSIONS AND MOUNTING DATA**

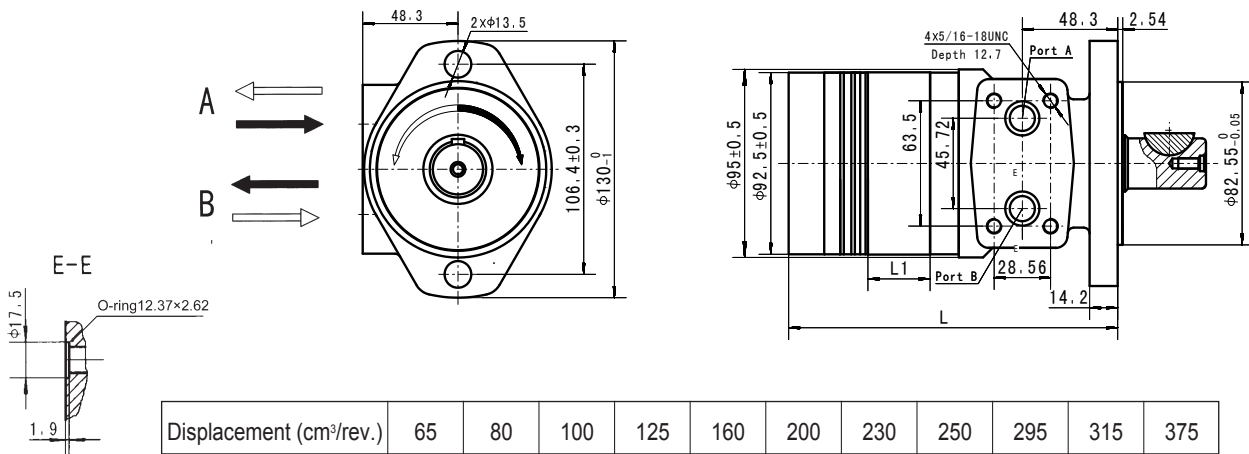
**Wheel Mount**

Code: Port A、B  
WS 7/8-14 O-ring  
WD G1/2  
WM M22x1.5



Displacement (cm <sup>3</sup> /rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	119	122	126	131	136.5	144	150	156	162	168	180
Weight(kg)	7.4	7.5	7.8	8	8.3	8.7	9.2	9.6	10	10.3	10.8

Code:HM Manifold  
A、B Port  $\phi 12.7$

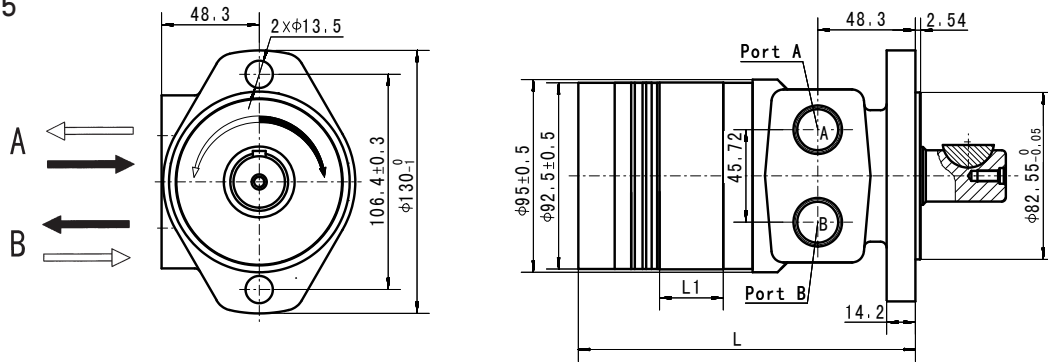


Displacement (cm <sup>3</sup> /rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	149	152	156	161	166.5	174	180	186	192	198	210
Weight(kg)	6.4	6.5	6.8	7	7.3	7.7	8.2	8.6	9	9.3	9.8



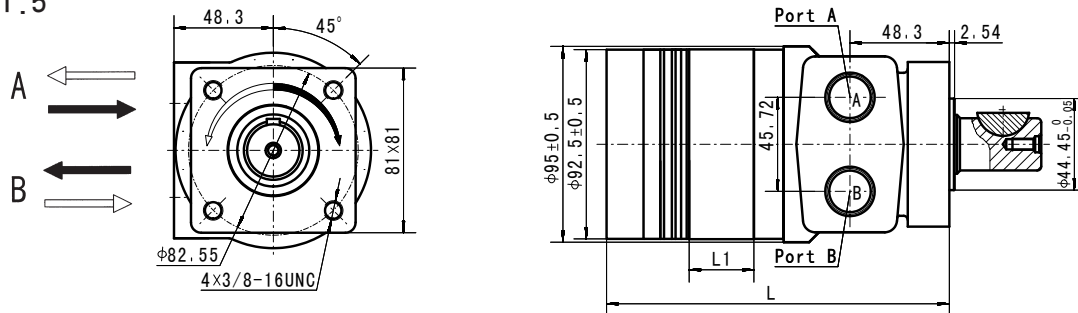
**BME2 DIMENSIONS AND MOUNTING DATA**

Code: Port A、B  
HS 7/8-14UNF  
HP 1/2-14NPTF  
HD G1/2  
HG M22x1.5



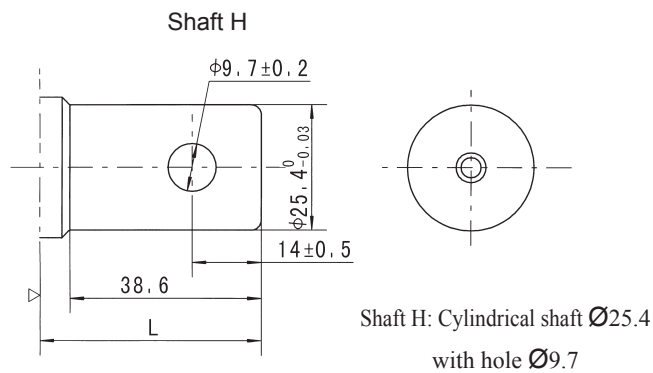
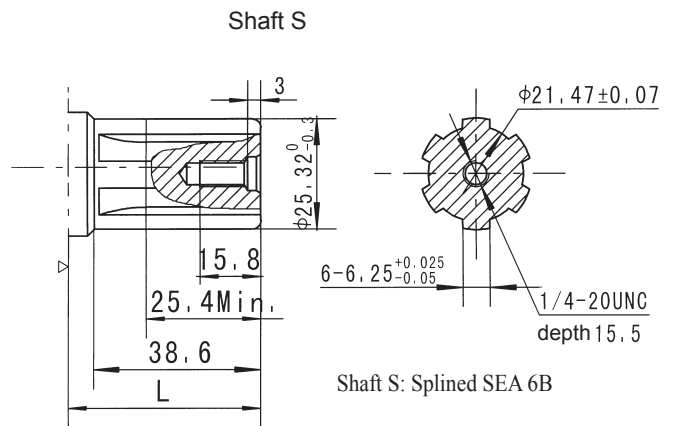
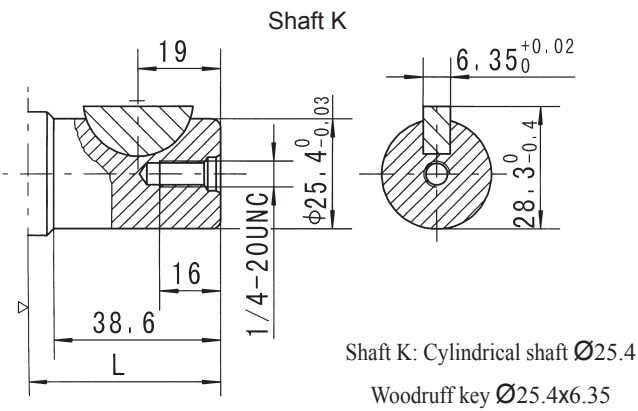
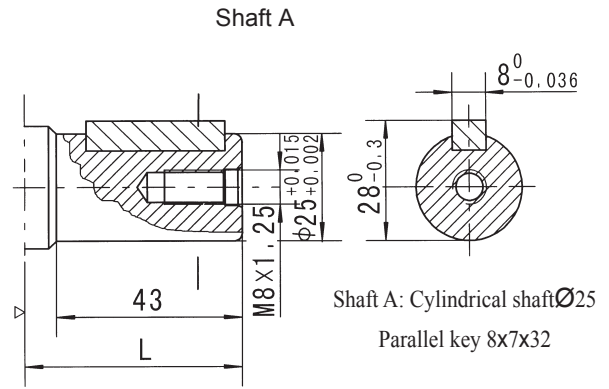
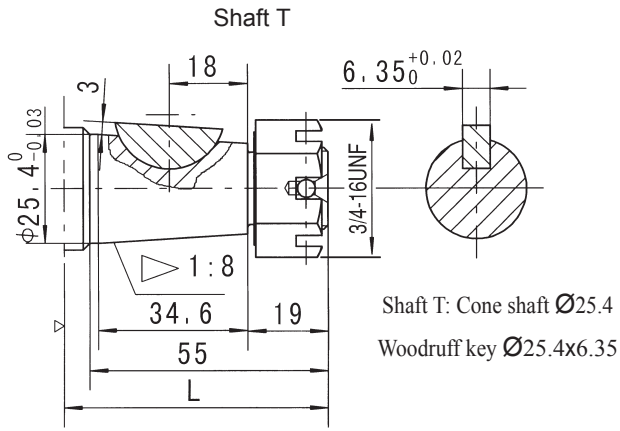
Displacement (cm <sup>3</sup> /rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	149	152	156	161	166.5	174	180	186	192	198	210
Weight(kg)	6.4	6.5	6.8	7	7.3	7.7	8.2	8.6	9	9.3	9.8

Code: Port A、B  
H4S 7/8-14UNF  
H4P 1/2-14NPTF  
H4D G1/2  
H4G M22x1.5



Displacement (cm <sup>3</sup> /rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	149	152	156	161	166.5	174	180	186	192	198	210
Weight(kg)	6.4	6.5	6.8	7	7.3	7.7	8.2	8.6	9	9.3	9.8

**BME2 SHAFT EXTENSIONS DIMENSIONS DATA**



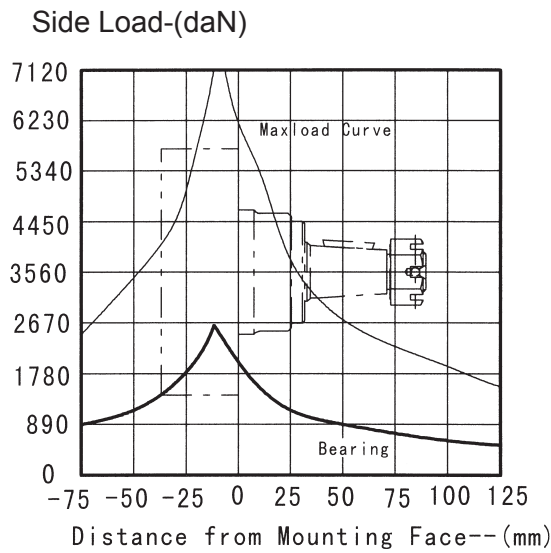
Dimension L

Shaft Mounting	T	A	K	S	H
WS	90.2	78.2	73.9	73.9	73.9
HS/HP					
H4S/H4P	61	49	44.7	44.7	44.7
HM					

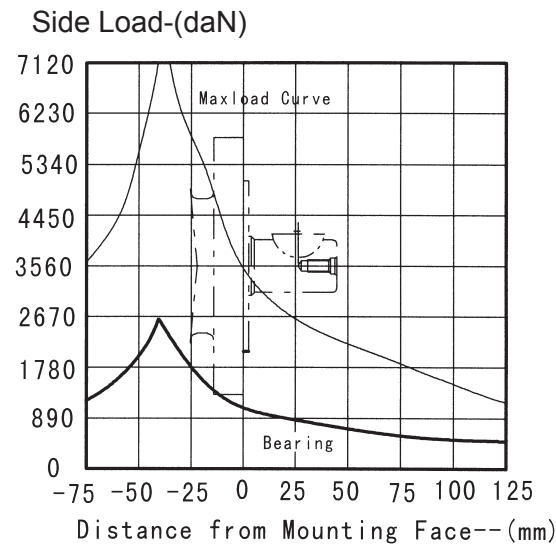
▷ Motor Mounting Surface

Permissible Shaft Loads

BME2 for Wheel Mounting



BME2 for Other Mounting



The bearing curve represents allowable bearing loads for an  $L_{10}$  bearing life at  $3 \times 10^6$  revolutions,  
The maximum load curve is defined by bearing static load capacity, This curve should not be exceeded at any time including shock loads.

Order Information

1  2  3  4  5  6  7

BME2

Pos.1	2	3	4	5	6	7
Code	Disp.	Flange,Pilot,Ports	Output Shaft	Rotation Direction	Paint	Unusually Function
WS		4-Ø13.5 Wheel - flange,Pilot Ø60.3×7 Port 7/8-14 O-ring	T Cone-Shaft Ø25.4,Woodruff key Ø25.4×6.35 A Cylindrical Shaft Ø25, Parallel key 8×7×32 K Cylindrical Shaft Ø25.4, Woodruff key Ø25.4×6.35 S Shaft Ø25.4, Splined key SAE 6B H Cylindrical Shaft Ø25.4,Pin Hole Ø9.7	Omit Standard R Opposite	00 No paint Omit Blue B Black S Silver grey	
WD		4-Ø13.5 Wheel -flange,Pilot Ø60.3×7 Port G1/2				
WM		4-Ø13.5 Wheel -flange,Pilot Ø60.3×7 Port M22×1.5				
HM	65	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port 1/2" Manifold mount 4×5/8-18				
HS	100	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port 7/8-14 O-ring				
HP	125	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port 1/2-14 NPFT Pipe				
HD	160	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port G1/2				
HG	200	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port M22×1.5				
H4S	230	4-3/8-16 Square- flange,Pilot Ø44.4×2.54 Port 7/8-14 O-ring				
H4P	250	4-3/8-16 Square- flange,Pilot Ø44.4×2.54 Port 1/2-14 NPFT Pipe				
H4D	295	4-3/8-16 Square- flange,Pilot Ø44.4×2.54 Port G1/2				
H4G	315	4-3/8-16 Square- flange,Pilot Ø44.4×2.54 Port M22×1.5				
	375					

Note:When the table is used, please fill the code of left rows in the table 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 contract us.



## BMJ SERIES HYDRAULIC MOTOR

BMJ series motor adapt the advanced Geroler gear set designed with high speed distribution flow and high pressure, and have good stability in low speed , and can keep high volume efficiency. 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 needle roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.

\* Advanced design in high speed distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.

\* Lowest leakage rate, most accurate timing methods. Commutator rotates 6x faster than shaft speed. It make the distribution in a high precision reduces life-cycle cost, maintain high volume efficiencies and can run very smoothly at low speed, gear box not required.

### Main Specification

Type		BMJ 65	BMJ 80	BMJ 100	BMJ 125	BMJ 160	BMJ 200	BMJ 230	BMJ 250	BMJ 295	BMJ 315	BMJ 375
Geometric displacement (cm <sup>3</sup> /rev.)		66.8	81.3	101.6	127	157.2	193.6	226	257	287.8	314.5	370
Max. speed (rpm)	cont.	667	543	439	350	283	229	247	216	196	178	152
	int.	842	689	553	441	355	289	328	287	254	235	199
Max. torque (N·m)	cont.	126	157	191	245	307	382	378	381	393	448	439
	int.	176	215	268	335	422	520	528	543	547	587	613
Max. output (kW)	cont.	8.3	8.8	7.9	8.9	8.9	9	9.9	9.3	8.7	8	7.6
	int.	13.9	14.4	13.5	14.1	15.6	15.7	17.9	16.5	15.6	14.3	14
Max. pressure (MPa)	cont.	14	14	14	14	14	14	12	11	10	10	9
	int.	19	19	19	19	19	19	165	15.5	14.5	13.5	12.5
	peak	20	20	20	20	20	20	18	18	17	16	16
Max. flow (L/min)	cont.	45	45	45	45	45	45	57	57	57	57	57
	int.	57	57	57	57	57	57	75	75	75	75	75

\* 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.

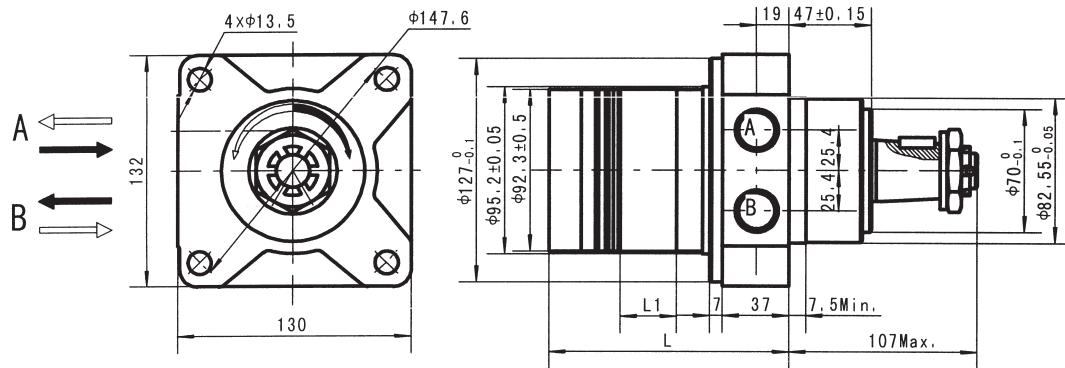
**BMJ DIMENSIONS MOUNTING DATA**

Wheel Mount

Code : WS Ports A、B 7/8-14 O-Ring

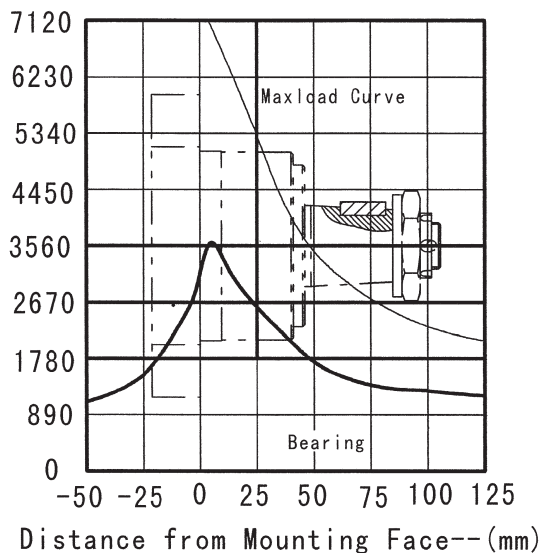
Code : WD Ports A、B G1/2

Code : WM Ports A、B M22x1.5



Displacement (cm <sup>3</sup> /rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	115	118	122	127	132.5	140	146	152	158	164	176
Weight(kg)	9	9.1	10.4	10.6	10.9	11.3	11.8	12.2	12.6	12.9	13.4

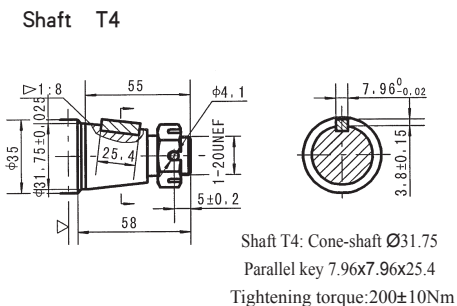
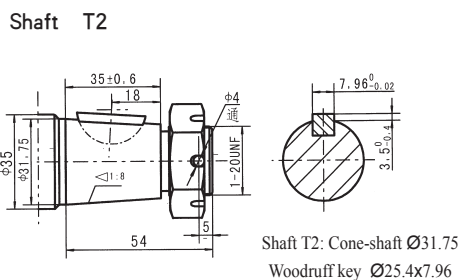
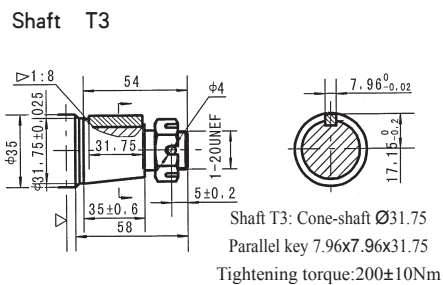
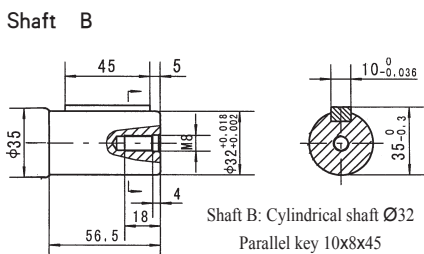
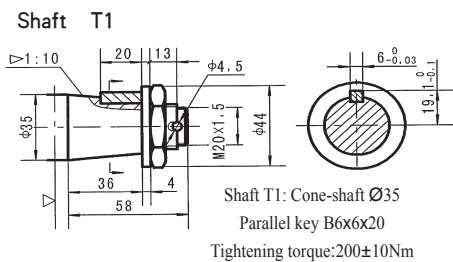
Side Load-(daN)



The bearing curve represents allowable bearing loads for an L<sub>10</sub> bearing life at 3×10<sup>6</sup> revolutions.

The maximum load curve is defined by bearing static load capacity, This curve should not be exceeded at any time including shock loads.

### BMJ Shaft Extensions For Dimensions Data



▷ Motor Mounting Surface

### Order Information

1  2  3  4  5  6  7

BMJ

Pos.1	2	3	4	5	6	7
Code	Disp.	Flange , Pilot , Ports	Output Shaft	Rotation direction	Paint	Unusually function
65	WS	4-Ø13.5 Wheel-flange, Pilot Ø82.55x7, Port 7/8-14 O-ring	T1 Cone-Shaft Ø35, Parallel key B6x6x20	Standard	No paint	
80	WD	4-Ø13.5 Wheel-flange, Pilot Ø82.55x7, Port G1/2	T2 Cone-Shaft Ø31.75, Woodruff key Ø25.4x7.96	Opposite	Blue	Omit
100	WM	4-Ø13.5 Wheel-flange, Pilot Ø82.55x7, Port M22x1.5	T3 Cone-Shaft Ø31.75, Parallel key 7.96x7.96x31.75	R	Black	Standard
125			T4 Cone-Shaft Ø31.75, Parallel key 7.96x7.96x25.4		Silver Grey	
160			B Cylindrical Shaft Ø32, Parallel key 10x8x45			
200						
230						
250						
295						
315						
375						

Note: When the table is used, please fill the code of left rows in the table 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.



## BMER SERIES HYDRAULIC MOTOR

BMER series motor adapt the advanced Geroler gear set designed with high speed distribution flow and high pressure, and have good stability in low speed , and can keep high volume efficiency. 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 needle roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.

\* Advanced design in high speed distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.

\* Lowest leakage rate, most accurate timing methods. Commutator rotates 6x faster than shaft speed. It make the distribution in a high precision reduces life-cycle cost, maintain high volume efficiencies and can run very smoothly at low speed, gear box not required.

## Main Specification

Type		BMER 125	BMER 160	BMER 200	BMER 230	BMER 250	BMER 300	BMER 350	BMER 375	BMER 400	BMER 475	BMER 540	BMER 650	BMER 750
Geometric displacement (cm <sup>3</sup> /rev.)		118	156	196	228	257	296	345	371	405	462	540	647	745
Max. speed (rpm)	cont.	360	375	330	290	290	250	220	200	185	160	140	115	100
	int.	490	470	425	365	350	315	270	240	220	195	170	138	120
Max. torque (N•m)	cont.	325	450	530	625	700	810	905	990	1010	1085	980	1015	1050
	int.	380	525	600	710	790	930	1035	1140	1180	1180	1240	1250	1180
	peak	450	590	750	870	980	1120	1285	1360	1360	1260	1380	1380	1370
Max. output (kW)	cont.	12.0	15.0	15.5	16.0	17.5	18.0	17.5	16.5	15.5	14.5	11.5	10.0	8.0
	int.	14.0	17.5	18.0	19.0	20.0	21.0	20.0	19.0	18.0	16.5	15.0	12.0	10.0
Max. pressure drop (MPa)	cont.	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	19	17.5	14	12	10.5
	int.	24	24	24	24	24	24	24	24	22.5	19	17.5	15.5	12
	peak	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	25	20.5	20.5	17.5	14
Max. flow (L/min)	cont.	45	60	70	70	75	80	80	75	75	75	75	75	75
	int.	60	75	85	85	90	95	95	90	90	90	90	90	90

\*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

BMER125 [118cm³/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24
--	------	-----	---	------	----	------	------	----

Flow (L/min)	Pressure (MPa)							
	1.75	3.5	7	10.5	14	17.5	20.5	24
2	20 <b>14</b>	50 <b>13</b>	96 <b>11</b>	137 <b>7</b>				
4	24 <b>28</b>	53 <b>26</b>	110 <b>24</b>	166 <b>19</b>	221 <b>13</b>			
8		55 <b>60</b>	113 <b>54</b>	174 <b>50</b>	225 <b>45</b>	266 <b>39</b>	294 <b>35</b>	336 <b>26</b>
15		53 <b>115</b>	114 <b>110</b>	180 <b>100</b>	234 <b>96</b>	275 <b>90</b>	326 <b>84</b>	348 <b>76</b>
25		48 <b>194</b>	110 <b>185</b>	164 <b>173</b>	226 <b>168</b>	272 <b>160</b>	323 <b>155</b>	352 <b>149</b>
34			108 <b>276</b>	166 <b>260</b>	220 <b>244</b>	278 <b>232</b>	315 <b>225</b>	373 <b>217</b>
45			98 <b>362</b>	160 <b>350</b>	215 <b>342</b>	271 <b>325</b>	308 <b>322</b>	369 <b>303</b>
Max.cont. 53			90 <b>423</b>	152 <b>418</b>	208 <b>404</b>	265 <b>399</b>	304 <b>371</b>	
Max.int. 60			82 <b>488</b>	141 <b>472</b>	205 <b>455</b>	260 <b>442</b>	300 <b>421</b>	

BMER160 [156cm³/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24
--	------	-----	---	------	----	------	------	----

Flow (L/min)	Pressure (MPa)							
	1.75	3.5	7	10.5	14	17.5	20.5	24
2	35 <b>8</b>	74 <b>4</b>	146 <b>3</b>	218 <b>3</b>	298 <b>2</b>			
4	29 <b>22</b>	78 <b>19</b>	157 <b>18</b>	235 <b>16</b>	316 <b>14</b>	370 <b>13</b>	424 <b>8</b>	
8		35 <b>47</b>	78 <b>44</b>	158 <b>42</b>	236 <b>40</b>	312 <b>37</b>	373 <b>34</b>	450 <b>32</b>
15		37 <b>93</b>	74 <b>90</b>	155 <b>86</b>	234 <b>84</b>	310 <b>82</b>	368 <b>79</b>	440 <b>75</b>
25			68 <b>155</b>	152 <b>151</b>	227 <b>147</b>	308 <b>142</b>	364 <b>137</b>	436 <b>131</b>
34			68 <b>214</b>	152 <b>213</b>	227 <b>210</b>	308 <b>204</b>	364 <b>198</b>	436 <b>191</b>
45			64 <b>282</b>	143 <b>280</b>	218 <b>275</b>	296 <b>268</b>	360 <b>263</b>	425 <b>256</b>
53				135 <b>330</b>	216 <b>327</b>	293 <b>322</b>	357 <b>315</b>	421 <b>306</b>
Max.cont. 60				122 <b>379</b>	207 <b>376</b>	284 <b>368</b>	350 <b>362</b>	416 <b>356</b>
68				109 <b>423</b>	196 <b>419</b>	273 <b>414</b>	345 <b>406</b>	396 <b>394</b>
Max.int. 75				104 <b>472</b>	188 <b>466</b>	270 <b>460</b>	337 <b>450</b>	390 <b>436</b>

BMER200 [196cm³/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24
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Flow (L/min)	Pressure (MPa)							
	1.75	3.5	7	10.5	14	17.5	20.5	24
2	39 <b>8</b>	88 <b>4</b>	132 <b>4</b>	286 <b>3</b>	370 <b>2</b>			
4	42 <b>16</b>	85 <b>14</b>	188 <b>13</b>	270 <b>11</b>	361 <b>10</b>	427 <b>9</b>	506 <b>6</b>	
8		43 <b>35</b>	90 <b>32</b>	192 <b>29</b>	291 <b>28</b>	367 <b>27</b>	450 <b>25</b>	529 <b>23</b>
15		38 <b>74</b>	92 <b>71</b>	196 <b>68</b>	298 <b>64</b>	381 <b>60</b>	462 <b>58</b>	530 <b>55</b>
25			82 <b>124</b>	188 <b>121</b>	283 <b>117</b>	377 <b>113</b>	456 <b>108</b>	528 <b>103</b>
34			79 <b>170</b>	183 <b>169</b>	270 <b>167</b>	362 <b>160</b>	447 <b>154</b>	515 <b>146</b>
45				163 <b>223</b>	259 <b>218</b>	352 <b>212</b>	441 <b>208</b>	510 <b>199</b>
53				149 <b>260</b>	256 <b>258</b>	350 <b>254</b>	440 <b>248</b>	501 <b>241</b>
60				132 <b>299</b>	248 <b>292</b>	336 <b>284</b>	432 <b>276</b>	497 <b>272</b>
Max.cont. 68				120 <b>336</b>	230 <b>332</b>	330 <b>327</b>	412 <b>319</b>	486 <b>310</b>
75				108 <b>375</b>	208 <b>372</b>	311 <b>365</b>	403 <b>358</b>	480 <b>350</b>
Max.int. 85				184 <b>425</b>	280 <b>420</b>	380 <b>411</b>	462 <b>390</b>	

BMER230 [228cm³/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24
--	------	-----	---	------	----	------	------	----

Flow (L/min)	Pressure (MPa)							
	1.75	3.5	7	10.5	14	17.5	20.5	24
2	44 <b>6</b>	90 <b>4</b>	182 <b>3</b>	291 <b>2</b>	374 <b>1</b>			
4	48 <b>15</b>	100 <b>13</b>	216 <b>11</b>	310 <b>11</b>	405 <b>9</b>	484 <b>7</b>	549 <b>3</b>	
8		50 <b>31</b>	104 <b>29</b>	212 <b>27</b>	320 <b>25</b>	421 <b>23</b>	518 <b>20</b>	603 <b>16</b>
15		44 <b>63</b>	106 <b>61</b>	207 <b>58</b>	318 <b>55</b>	426 <b>52</b>	529 <b>47</b>	623 <b>41</b>
25			101 <b>103</b>	209 <b>100</b>	324 <b>96</b>	428 <b>92</b>	532 <b>87</b>	620 <b>81</b>
34			88 <b>145</b>	205 <b>143</b>	316 <b>139</b>	421 <b>133</b>	522 <b>126</b>	623 <b>120</b>
45				186 <b>192</b>	294 <b>187</b>	422 <b>182</b>	507 <b>176</b>	595 <b>170</b>
53				175 <b>226</b>	290 <b>221</b>	393 <b>215</b>	496 <b>208</b>	584 <b>203</b>
60				152 <b>256</b>	270 <b>253</b>	390 <b>248</b>	485 <b>242</b>	569 <b>235</b>
Max.cont. 68				140 <b>292</b>	265 <b>288</b>	351 <b>283</b>	482 <b>278</b>	563 <b>273</b>
75				124 <b>324</b>	235 <b>321</b>	344 <b>316</b>	448 <b>308</b>	552 <b>300</b>
Max.int. 85				207 <b>366</b>	335 <b>360</b>	442 <b>351</b>	546 <b>338</b>	

Torque (N·m) 380  
Speed (rpm) 411

cont.  
int.

BMER250 [257cm³/rev.]

Pressure (MPa)

		Max.cont.							Max.int.
		1.75	3.5	7	10.5	14	17.5	20.5	24

Flow (L/min)		Max.cont.							Max.int.
		1.75	3.5	7	10.5	14	17.5	20.5	24
2		48 5	111 2						
4		54 12	113 11	237 10	362 9	471 8	570 6	642 3	
8		54 27	115 26	244 24	366 22	482 20	587 18	688 14	
15		50 57	113 56	256 54	367 51	485 48	591 45	692 43	794 37
25		44 95	114 93	241 90	360 86	488 82	593 77	699 72	782 63
34			95 129	226 125	348 121	481 116	590 111	686 106	774 96
45			77 174	215 173	346 170	468 166	572 161	674 155	779 143
53			66 203	200 202	325 200	448 196	564 190	657 184	756 175
60				180 232	296 229	438 225	550 220	642 215	741 202
68				162 262	294 261	415 257	548 250	637 241	730 228
75	Max.cont.			137 290	274 289	388 285	520 280	618 273	726 260
85				130 328	261 326	370 322	509 316	604 307	
90	Max.int.			85 348	224 347	358 344	490 336		

BMER300 [296cm³/rev.]

Pressure (MPa)

		Max.cont.							Max.int.	
		1.75	3.5	7	10.5	14	17.5	20.5	24	

Flow (L/min)		Max.cont.							Max.int.	
		1.75	3.5	7	10.5	14	17.5	20.5	24	
2		50 3	93 1							
4		62 11	141 10	294 9	429 8	502 7	618 4			
8		63 22	147 21	298 20	432 19	565 16	667 13	761 9	819 5	
15		66 48	144 47	305 45	427 43	568 39	671 33	810 28	894 20	
25		59 82	138 81	289 80	420 76	552 71	676 64	791 56	932 44	
34		48 113	130 112	297 110	393 107	562 102	689 96	805 86	926 73	
45			96 150	268 149	385 148	527 143	636 135	753 124	880 112	
53			76 177	242 176	383 175	524 173	631 165	758 152	900 138	
60			64 200	225 199	362 198	506 193	627 186	753 174	892 162	
68				200 225	333 224	470 222	630 212	750 201	882 194	
75	Max.cont.			178 251	322 250	464 247	610 240	741 232	870 215	
85				140 285	316 284	455 278	570 270	728 257		
95	Max.int.			106 316	260 314	431 311	552 307	700 292		

BMER350 [345cm³/rev.]

Pressure (MPa)

		Max.cont.							Max.int.
		1.75	3.5	7	10.5	14	17.5	20.5	24

Flow (L/min)		Max.cont.							Max.int.
		1.75	3.5	7	10.5	14	17.5	20.5	24
2		63 4	133 4						
4		64 10	135 9	290 8	440 7				
8		68 21	146 20	310 20	458 19	589 18	735 16	847 12	
15		72 42	150 41	314 40	468 39	627 37	769 35	880 32	984 26
25		63 70	148 69	313 68	470 66	628 63	765 60	892 55	1018 46
34		52 97	133 96	304 95	455 93	619 89	760 85	905 78	1034 68
45			100 129	261 128	442 127	583 125	736 118	887 112	1028 101
53			85 152	247 150	418 148	566 145	715 139	880 132	1024 118
60			65 171	233 170	410 169	550 167	712 162	842 155	996 143
68				218 195	387 194	543 190	696 185	825 175	976 162
75	Max.cont.			206 215	373 214	515 212	680 206	822 197	966 183
85				176 243	355 242	510 239	679 234	808 227	
95	Max.int.			353 272	509 269	645 265			

BMER375 [371cm³/rev.]

Pressure (MPa)

		Max.cont.							Max.int.	
		1.75	3.5	7	10.5	14	17.5	20.5	24	

Flow (L/min)		Max.cont.							Max.int.	
		1.75	3.5	7	10.5	14	17.5	20.5	24	
2		75 3								
4		83 8	160 8	330 7	488 6	636 5	761 3			
8		81 18	170 17	356 17	527 16	679 14	822 12	948 9	1060 5	
15		76 39	162 38	356 37	533 35	683 32	845 29	978 25	1102 18	
25		68 65	156 64	350 62	524 59	680 55	857 48	994 44	1138 35	
34		58 90	148 89	339 87	506 83	690 77	841 71	993 63	1145 53	
45			121 120	302 119	478 117	650 113	813 108	972 100	1134 90	
53			95 141	282 140	466 138	628 134	785 128	934 120	1103 105	
60			75 161	264 161	428 160	592 158	766 155	925 151	1070 141	
68				232 182	422 180	585 176	756 169	901 161	1066 148	
75	Max.cont.			207 201	380 200	556 197	738 190	865 181	1012 165	
85				175 228	370 226	526 221	700 216	832 206		
90	Max.int.			148 242	316 240	500 237	654 226			

Torque (N·m) 645  
Speed (rpm) 265

cont.  
int.



HAN JIU

石家庄寒九科技有限公司  
SHIJIAZHUANG HANJIU TECHNOLOGY CO.,LTD.

BMER400 [405cm<sup>3</sup>/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	19	22.5
						Max.cont.	Peak	

Flow (L/min)	Pressure (MPa)							
	1.75	3.5	7	10.5	14	17.5	19	22.5
2	85 3	170 2						
4	90 8	182 7	368 6	540 5	715 4	885 3		
8	93 17	190 16	385 15	575 14.4	750 13	895 10	950 9	1155 7
15	88 36	180 35	380 34	575 33	750 31	905 28	980 24	1165 20
25	88 60	180 59	380 58	575 56	750 53	915 49	1010 44	1165 40
34	75 83	165 83	365 82	560 81	750 77	915 72	1000 68	1180 60
45		150 110	350 110	545 109	735 106	900 102	980 94	1165 86
53		125 130	330 129	525 128	720 125	885 120	960 112	1150 100
60		100 147	305 147	505 146	680 145	860 142	940 138	1125 130
68			275 167	480 167	660 164	845 158	925 150	1100 140
75			250 184	455 183	635 180	820 176	900 170	1065 158
85			225 209	415 208	600 206	785 202	865 194	
90			160 220	365 218	575 216	770 210		

BMER475 [462cm<sup>3</sup>/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5
						Max.cont.	Peak

Flow (L/min)	Pressure (MPa)						
	1.75	3.5	7	10.5	14	17.5	20.5
2	93 2	186 1					
4	98 7	202 6	405 5	608 5	805 4		
8	98 15	206 14	430 13	652 13	844 12	1005 10	1180 8
15	94 31	202 30	441 28	654 28	875 26	1056 23	1238 20
25	94 52	202 51	441 48	654 45	875 43	1056 39	1238 35
34	75 72	180 71	420 68	660 65	850 61	1085 55	1266 44
45		144 96	380 95	627 93	835 90	1062 84	1261 73
53		116 113	346 112	573 111	795 107	1008 102	1212 90
60		82 128	318 128	539 127	790 124	975 119	1186 110
68		58 146	272 145	520 144	740 141	955 136	1156 125
75			230 161	480 160	702 158	920 153	1116 140
85			200 182	454 180	662 177	876 168	
90			150 194	378 193	615 190	840 182	

BMER540 [540cm<sup>3</sup>/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	
						Max.cont.	Max.int.

Flow (L/min)	Pressure (MPa)					
	1.75	3.5	7	10.5	14	17.5
2	105 2	198 2				
4	125 6	231 5	470 5	688 4	932 4	1136 3
8	134 13	238 13	496 12	749 11	966 11	1175 8
15	122 27	230 26	505 26	750 25	981 24	1218 21
25	100 44	225 43	500 42	774 41	986 97	1220 35
34	80 62	212 61	481 60	748 58	939 54	1243 49
45		173 82	437 82	714 81	936 79	1190 75
53		142 97	416 97	678 96	938 94	1170 89
60		106 110	380 110	664 109	896 108	1158 106
68		85 125	357 124	616 124	870 123	1108 120
75			318 138	600 137	826 135	1100 132
85			292 154	538 153	780 152	
90			214 169	486 168	755 168	

Torque (N·m) 486  
Speed (rpm) 168

BMER650 [647cm<sup>3</sup>/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	12	15.5
						Peak

Flow (L/min)	Pressure (MPa)					
	1.75	3.5	7	10.5	12	15.5
2	119 2	230 1				
4	135 5	268 5	552 4	805 4	940 3	
8	145 11	285 11	574 10	825 10	955 9	1255 7
15	140 22	280 22	595 21	875 21	982 20	1276 16
25	130 37	275 36	590 36	886 35	1005 34	1302 30
34	115 51	260 51	580 50	890 49	1015 47	1310 44
45		235 69	555 68	870 67	995 66	1280 63
53		200 80	520 80	850 79	975 78	1250 76
60		170 91	490 91	825 90	935 89	1215 88
68		145 104	430 103	775 102	880 101	1185 99
75			420 114	730 113	855 112	1130 110
83			380 130	660 129	795 128	
90			290 138	585 137	730 136	

BMER750 [745cm<sup>3</sup>/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	12	14
						Peak

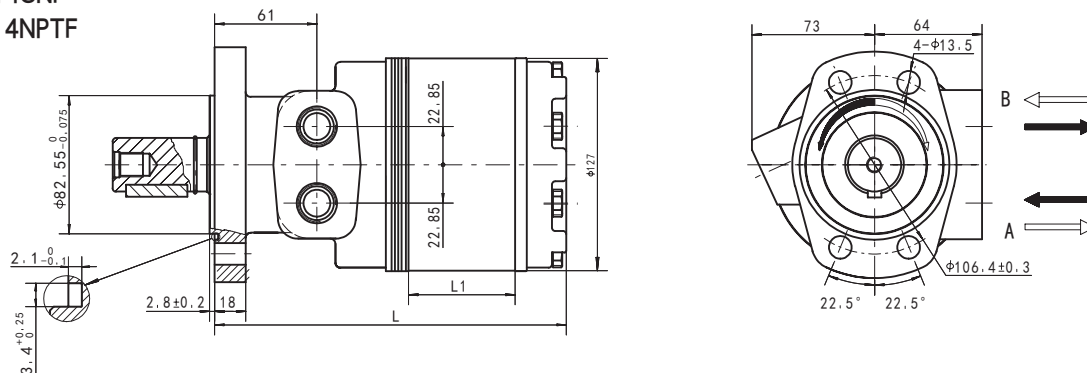
Flow (L/min)	Pressure (MPa)					
	1.75	3.5	7	10.5	12	14
2	145 2	280 1				
4	160 4	321 4	654 4	960 3	1115 3	1312 2
8	162 9	335 9	688 9	1026 8	1159 8	1347 7
15	156 19	330 19	694 18	1047 18	1184 17	1376 16
25	142 32	320 31	688 30	1046 30	1179 29	1373 27
34	110 44	288 44	658 42	1021 41	1169 40	1366 37
45		71 60	242 59	620 59	982 58	1143 55
53		202 70	568 69	941 68	1105 67	1308 66
60		140 79	527 78	898 77	1086 76	1286 74
68		100 90	486 90	852 89	1034 88	1251 87
75		65 99	425 99	812 98	980 97	1178 96
83			395 110	745 109	906 108	
90			298 120	660 119	800 117	

cont.  
int.

**BMER-2 DIMENSIONS MOUNTING DATA**

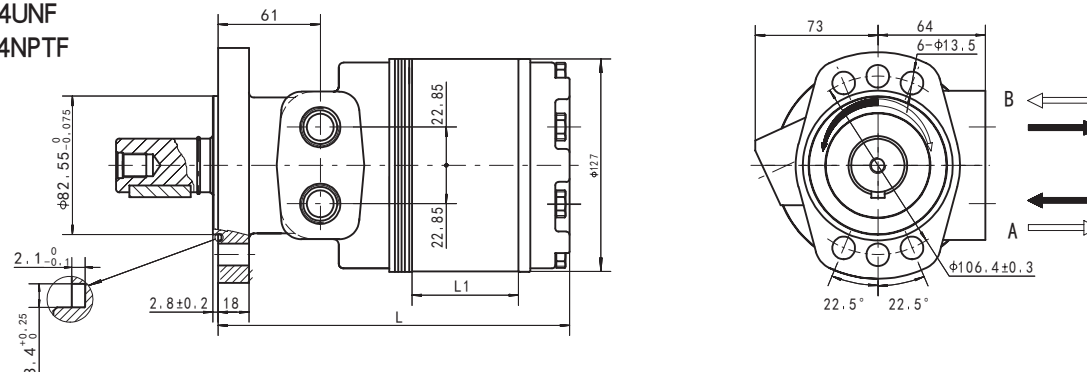
**Magneto Mount 4-Hole**

Code: Port A、B  
MS 7/8-14UNF  
MP 1/2-14NPTF  
MD G1/2



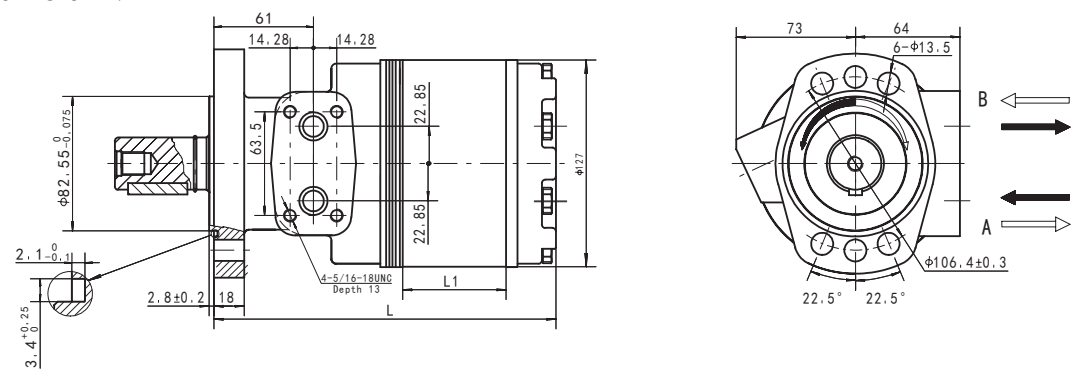
**Magneto Mount 6-Hole**

Code: Port A、B  
FS 7/8-14UNF  
FP 1/2-14NPTF  
FD G1/2



**Magneto Mount 6-Hole**

Code: Manifold Port A、B  
FH  $\phi 12.7$

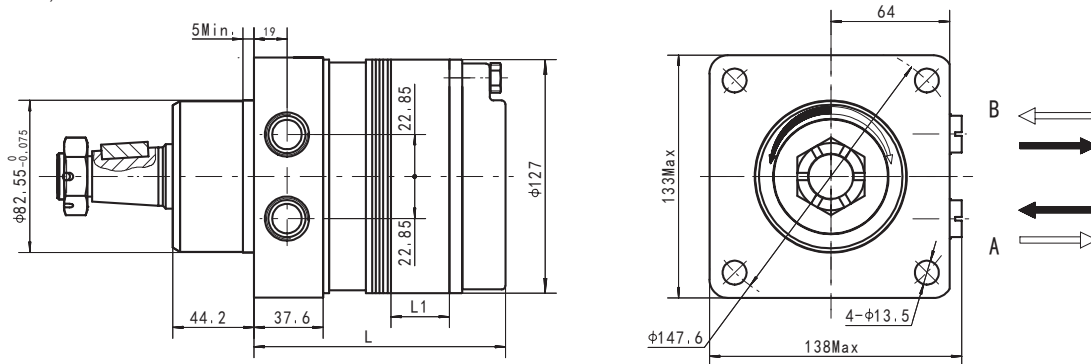


Displacement (cm <sup>3</sup> /rev.)	125	160	200	230	250	300	350	375	400	475	540	650	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	35.5	39.4	47.3	57	63.5
L(mm)	157	160	163.5	166	168.5	172	176	178.5	182	186	194	204	210
Weight(kg)	10.6	10.9	11.2	11.3	11.4	11.6	12	12.5	12.7	13	13.5	14.5	15

**BMER-2 DIMENSIONS MOUNTING DATA**

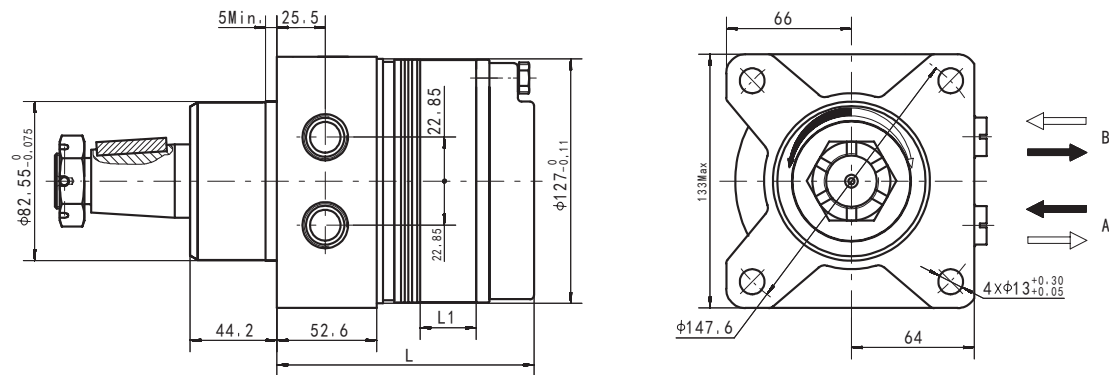
**Wheel Mount**

Code: Port A、B  
WS 7/8-14UNF  
WP 1/2-14NPTF  
WD G1/2



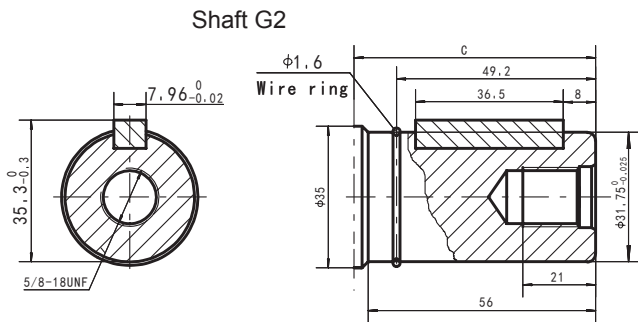
**Wheel Mount**

Code: Port A、B  
TS 7/8-14UNF  
TP 1/2-14NPTF  
TD G1/2

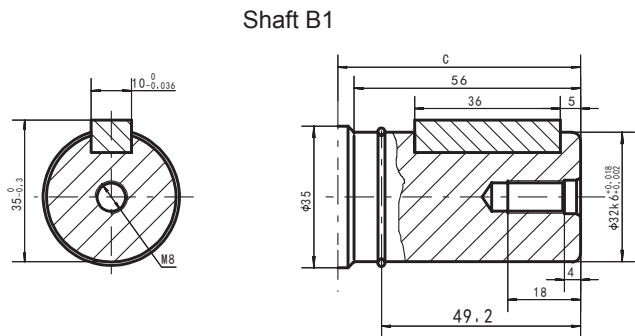


Displacement (cm <sup>3</sup> /rev.)	125	160	200	230	250	300	350	375	400	475	540	650	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	35.5	39.4	47.3	57	63.5
L(mm)	119	122	125.5	128	130.5	134.5	138	140.5	144	148	156	166	173
Weight(kg)	12	12.1	12.3	12.4	12.6	13	13.2	13.5	13.7	14	14.6	15.5	16

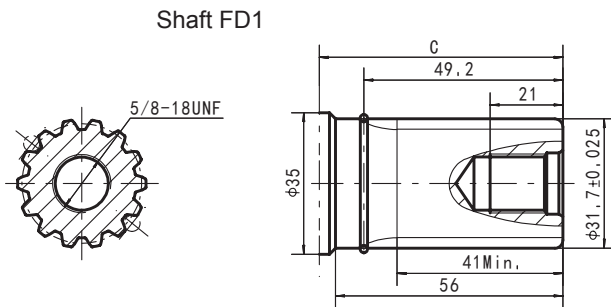
**BMER-2 SHAFT EXTENSIONS DIMENSIONS DATA**



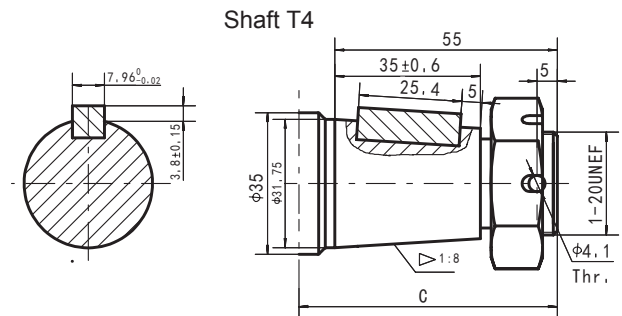
Shaft G2: Cylindrical shaft  $\varnothing 31.75$   
Parallel key 7.96x7x36.5



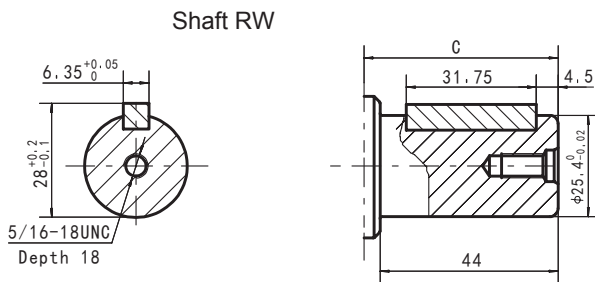
Shaft B1: Cylindrical shaft  $\varnothing 32$   
Parallel key 10x8x36



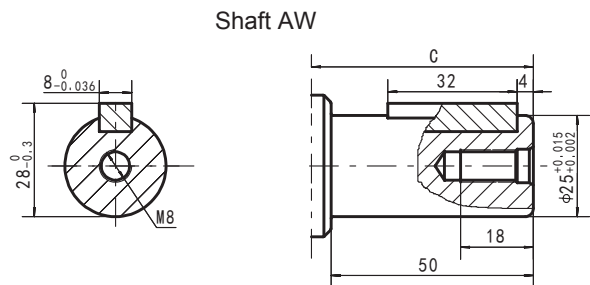
Shaft FD1: Splined 14-DP12/24  
Flat root side fit  
to fit ANSI B92.1 1996



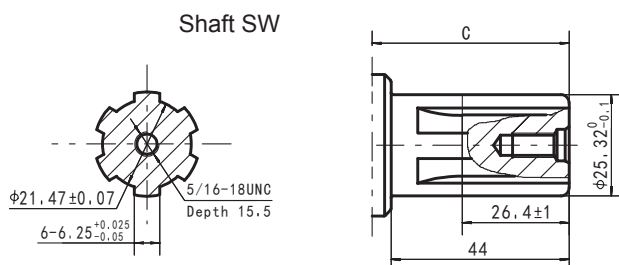
Shaft T4: Cone-shaft  $\varnothing 31.75$   
Parallel key 7.96x7.96x25.4  
Tightening torque:200±10Nm



Shaft RW: Cylindrical shaft  $\varnothing 25.4$   
Parallel key 6.35x6.35x31.75



Shaft AW: Cylindrical shaft  $\varnothing 25$   
Parallel key 8x7x32



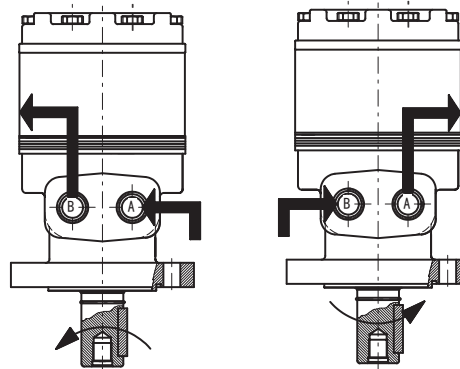
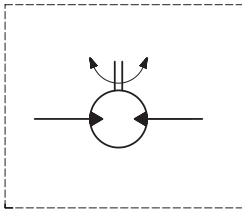
Shaft SW: Splined SAE 6B

From Mounting Flange to Shaft End		
Dimension C		
Shaft Code	Magneto Mount (mm)	Wheel Mount (mm)
G2	61	103
B1	61	103
FD1	61	103
T4	65	107
RW	50	91
AW	56	97
SW	50	91

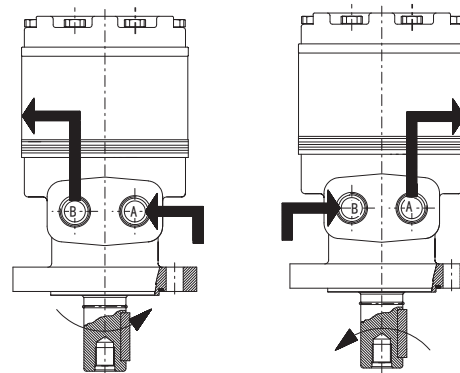
BMER-2 can be configured  $\varnothing 38.1$  shaft seal. Shaft type T31 and M1 and G32. Please consult the sales manager.

### BMER-2 Series Hydraulic Motor

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

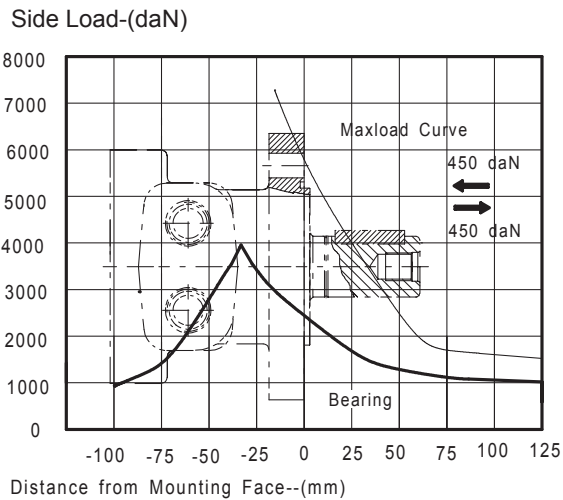


Direction of shaft rotation: Standard  
When facing shaft end of motor, shaft to rotate:  
Clockwise when port "A" is pressurized.  
Counter-clockwise when port "B" is pressurized.

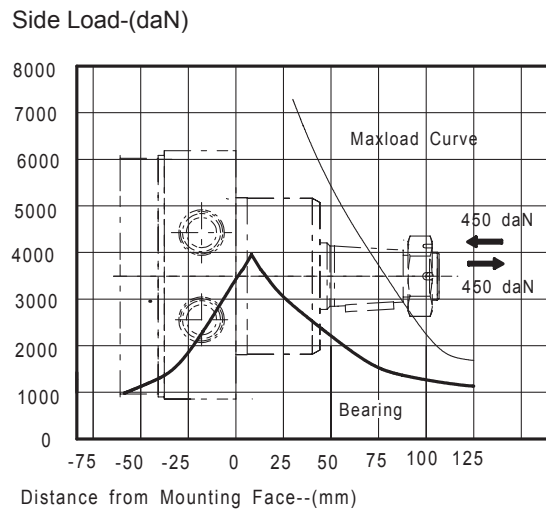


### Axial and Radial forces

BMER-2 or M#/F# Mounting



BMER-2 for W# Mounting



The bearing curve represents allowable bearing loads for an  $L_{10}$  bearing life at  $12 \times 10^6$  revolutions.  
The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

Order Information



Pos.1	2	3	4	5	6	7						
Code	Disp.	Flange , Pilot , Ports	Output Shaft	Rotation direction	Paint	Unusually function						
2	MS	4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 7/8-14 O-ring	G2 Shaft Ø31.75 , parallel key 7.96x7x36.5 B1 ShaftØ32, Parallel key 10×8×45 FD1 Shaft Ø31.75, splined key 14-DP 12/24 T4 Cone-Shaft Ø31.75, Parallel key 7.96×7.96×25.4 RW Shaft Ø25.4 , parallel key 6.35×6.35×31.75 AW Shaft Ø25 , parallel key 8×7×32 SW Shaft Ø25.4 ,splined key SAE 6B	None R	00 None B S	No paint Blue Black Silver Grey	Standard None					
	MP	4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 1/2-14NPTF										
	MD	4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports G1/2										
	FS	6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 7/8-14 O-ring										
	FP	6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 1/2-14NPTF										
	FD	6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports G1/2										
	FH	6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Manifold Ports 1/2										
	WS	4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports 7/8-14 O-ring										
	WP	4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports 1/2-14NPTF										
	WD	4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports G1/2										
	TS	4-Ø13.5 Wheel Mount,Pilot Ø82.55×5, Ports 7/8-14 O-ring										
	TP	4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports 1/2-14NPTF										
	TD	4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports G1/2										
		M1						ShaftØ35, Parallel key 10×8×45 Cone-Shaft Ø38.1, Parallel key 7.96×7×36.5 Shaft Ø38.1 , parallel key 9.525×9.525×42	Standard Reverse Timed	None B S	No paint Blue Black Silver Grey	Standard None
		T31										
		G32										

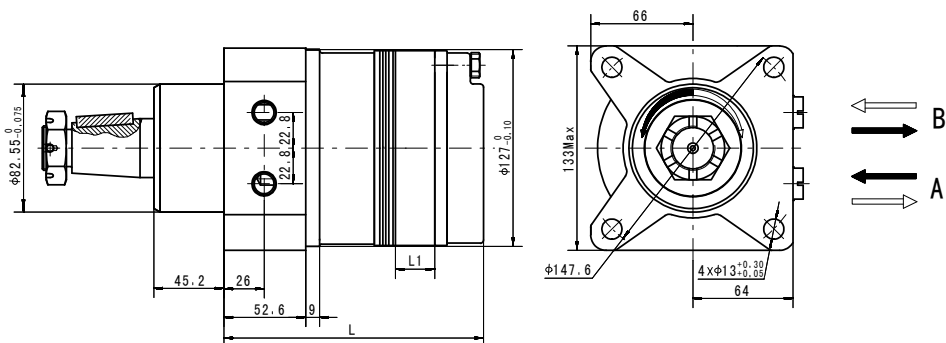
Note: When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

BMER-2 Motor: The dimensions 44.2 is replaced by 45.7 with shaft M1, T31, G32 of Ø38.1 shaft seal in flange w# and T#.



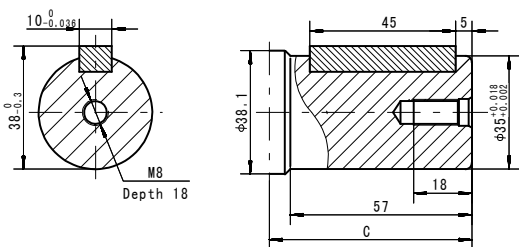
**BMER-3 SHAFT EXTENSIONS DIMENSIONS DATA**

Wheel Mount  
Code : Port A、B  
WS 7/8-14UNF  
WP 1/2-14NPTF  
WD G1/2



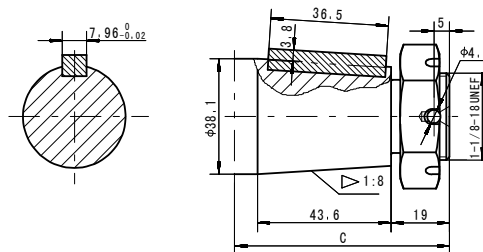
Displacement (cm <sup>3</sup> /rev.)	125	160	200	230	250	300	350	375	400	475	540	650	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	35.5	39.4	47.3	57	63.5
L(mm)	153	156	159.5	162	164.5	168	172	174.5	178	182	190	199.5	206
Weight(kg)	13.2	13.5	13.8	14	14.2	14.5	14.9	15.2	15.5	15.7	16.5	17.3	17.8

Shaft M31



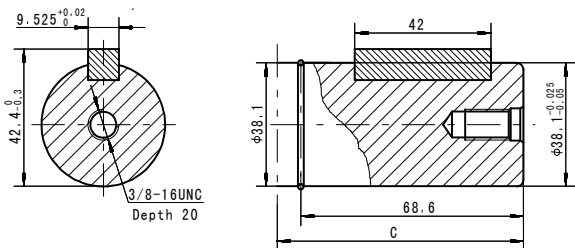
Shaft M31: Cylindrical shaft  $\phi 35$   
Parallel key 10x8x45

Shaft T31



Shaft T31: Cone-shaft  $\phi 38.1$   
Parallel key 7.96x7x36.5  
Tightening torque: 410~510Nm

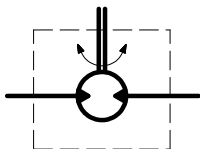
Shaft G31



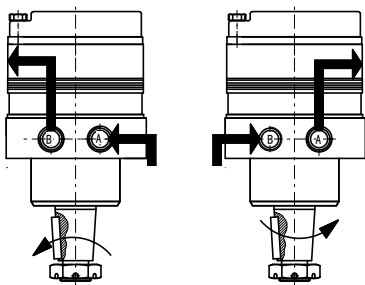
Shaft G31: Cylindrical shaft  $\phi 38.1$   
Parallel key 9.525x9.525x42

From Mounting Flange to Shaft End		
Dimension C		
Shaft Code	Magneto Mount (mm)	Wheel Mount (mm)
M31	—	105
T31	—	117
G31	—	119

### BMER-3 Series Hydraulic Motors

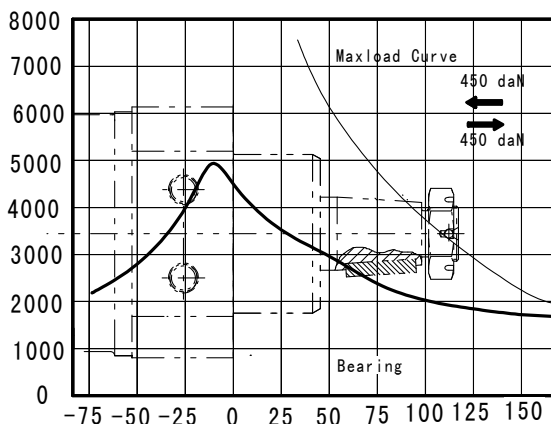


Direction of shaft rotation: Reverse timed  
When facing shaft end of motor, shaft to rotate:  
Clockwise when port " B " is pressurized.  
Counter-clockwise when port " A " is pressurized.



#### BMER-3 for W# Mounting

Side Load-(daN)



The bearing curve represents allowable bearing loads for an  $L_{10}$  bearing life at  $12 \times 10^6$  revolutions. The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

#### Order Information

1  2  3  4  5  6  7

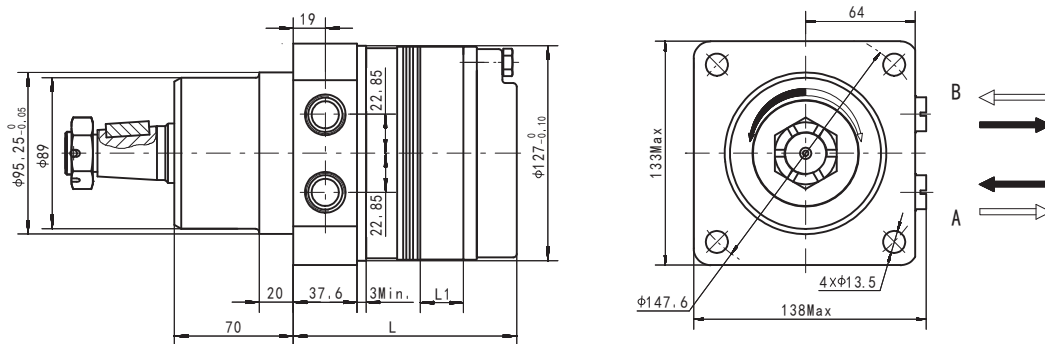
F

Pos.1	2	3	4	5	6	7
Code	Disp.	Mount Flange, Pilot, Port	Output Shaft	Rotation direction	Paint	Unusually function
3	125	WS 4- $\phi$ 13.5 Wheel Mount, Pilot $\phi$ 82.55, Ports 7/8-14 O-ring WP 4- $\phi$ 13.5 Wheel Mount, Pilot $\phi$ 82.55, Ports 1/2-14NPTF WD 4- $\phi$ 13.5 Wheel Mount, Pilot $\phi$ 82.55, Ports G1/2	Shaft $\phi$ 35, Parallel key 10 $\times$ 8 $\times$ 45 Cone-Shaft $\phi$ 38.1, Parallel key 7.96 $\times$ 7 $\times$ 36.5 Shaft $\phi$ 38.1, parallel key 9.525 $\times$ 9.525 $\times$ 42	None Standard Reverse timed	No paint Blue Black Silver Grey	None Standard
	160					
	200					
	230					
250	M31	M31 T31 G31	None R	00 None B S	None	
300						
350						
375						
400						
475						
540						
650						
750						

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.

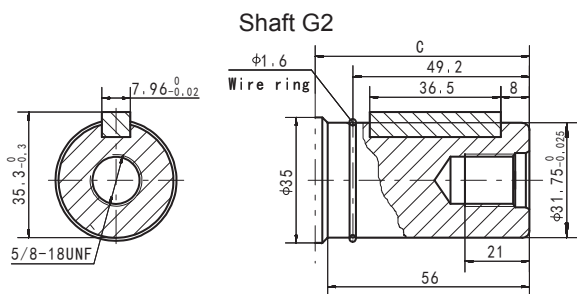
**BMER-4 DIMENSIONS MOUNTING DATA**

Wheel Mount  
Code : Port A、B  
WS 7/8-14UNF  
WP 1/2-14NPTF  
WD G1/2

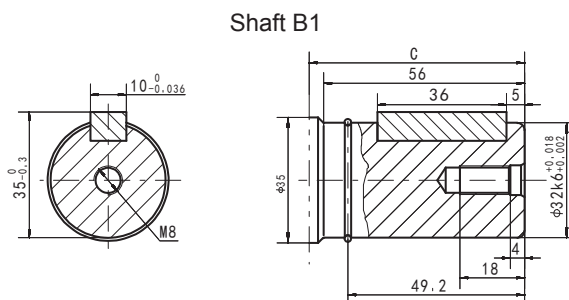


Displacement (cm <sup>3</sup> /rev.)	125	160	200	230	250	300	350	375	400	475	540	650	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	35.5	39.4	47.3	57	63.5
L(mm)	119	122	125.5	128	130.5	134.5	138	140.5	144.5	148	156	165.5	172
Weight(kg)	12.8	13.1	13.4	13.6	13.8	14.1	14.5	14.8	15.2	15.6	16.1	16.9	17.4

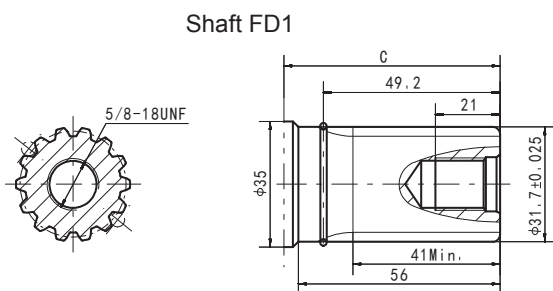
### Shaft Extensions For BMER-4 Motors



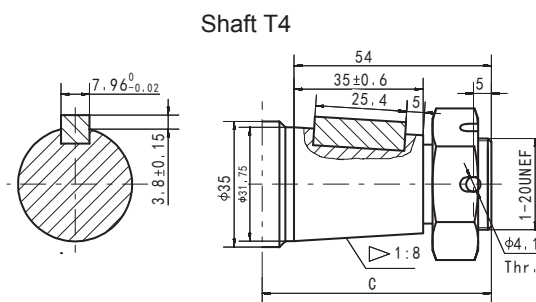
Shaft G2:Cylindrical shaft  $\varnothing 31.75$   
Parallel key 7x96x7x36x5



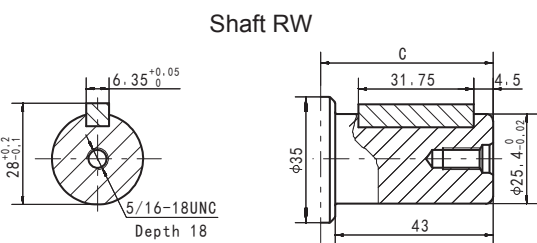
Shaft B1:Cylindrical shaft  $\varnothing 32$   
Parallel key 10x8x36



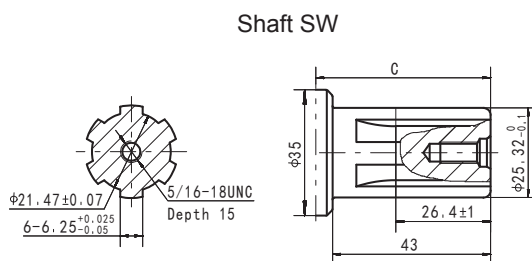
Shaft FD1:Splined 14-DP12/24  
Flat root side fit  
to fit ANSI B92.1 1996



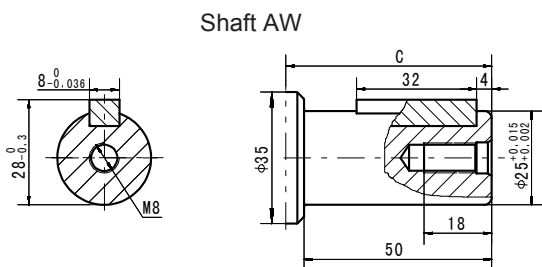
Shaft T4:Cone-shaft  $\varnothing 31.75$   
Parallel key 7.96x7.96x25.4  
Tightening torque:200±10Nm



Shaft RW:Cylindrical shaft  $\varnothing 25.4$   
Parallel key 6.35x6.35x31.75



Shaft SW:Splined SAE 6B

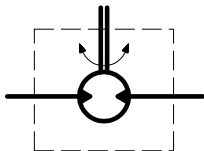


Shaft AW:Cylindrical shaft  $\varnothing 25$   
Parallel key 8x7x32

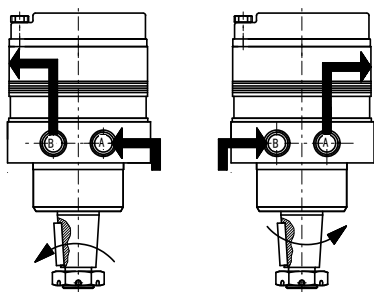
From Mounting Flange to Shaft End	
Dimension C	
Shaft Code	Wheel Mount (mm)
G2	131
B1	130
FD1	131
T4	135
RW	119
SW	119
AW	125

BMER-4 can be configured Shaft type of  $\varnothing 38.1$  shaft seal. Please consult the sales manager.

### BMER-4 Series Hydraulic Motors

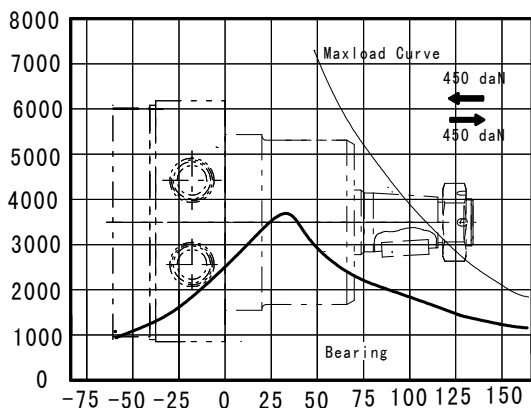


Direction of shaft rotation: Reverse timed  
When facing shaft end of motor, shaft to rotate:  
Clockwise when port " B " is pressurized.  
Counter-clockwise when port " A " is pressurized.



### BMER-4 for W# Mounting

Side Load-(daN)



The bearing curve represents allowable bearing loads for an  $L_{10}$  bearing life at  $12 \times 10^6$  revolutions. The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

### Order Information

1  2  3  4  5  6  7

F

Pos.1	2	3	4	5	6	7
Code	Disp.	Mount Flange, Pilot, Port	Output Shaft	Rotation direction	Paint	Unusually function
4	125	WS 4- $\phi$ 13.5 Wheel Mount, Pilot $\phi$ 82.55x5, Ports 7/8-14 O-ring WP 4- $\phi$ 13.5 Wheel Mount, Pilot $\phi$ 82.55x5, Ports 1/2-14NPTF WD 4- $\phi$ 13.5 Wheel Mount, Pilot $\phi$ 82.55x5, Ports G1/2	G2 Shaft $\phi$ 31.75 , parillel key 7.96x7x36.5 B1 Shaft $\phi$ 32, Parallel key 10x8x45 FD1 Shaft $\phi$ 31.75, splined key 14-DP12/24 T4 Cone-Shaft $\phi$ 31.75, Parallel key 7.96x7.96x25.4 RW Shaft $\phi$ 25.4 , parillel key 6.35x6.35x31.75 SW Shaft $\phi$ 25.4 ,splined key SAE 6B AW Shaft $\phi$ 25 , parillel key 8x7x32	None	00	None
	160			Standard	Blue	
	200			Reverse timed	Black	None
	230				Sliver Grey	
	250					None
	300					
	350					None
	375					
400			None			
475				None		
540			None			
650				None		
750			None			

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.



## BK10 Series Static Wet Hydraulic Brake

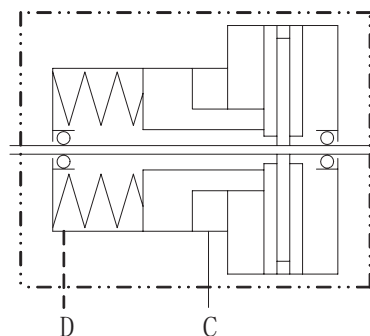
BK10 series static wet hydraulic brake is suitable for lower speed application of scissors type aerial work platform and agricultural machinery and others with wheel mounting. The feature:

- \* The output shaft adopts the same heavy duty roller bearing in front and behind, which is bigger ability on radial load.
- \* It adopts optimized disc brake piece and spring load, for reliable braking and good endurance.
- \* Optimizing piston and loading mechanism, to provide the minimum dimension of wheel connection method.
- \* With double braking release port, in order to discharge the braking cylinder gas or external brake fluid.
- \* Big braking torque, suitable for static braking.

### Main Specification

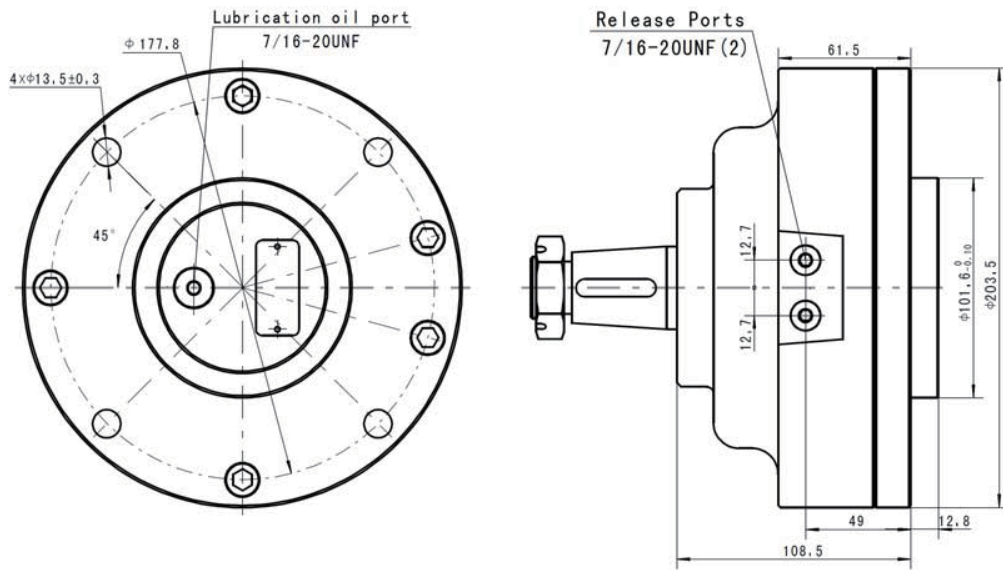
Item	BK10-1	BK10-2
Min. Static Torque [Nm]	1150	1700
Release Pressure [MPa]	2.8	
Max. Release Pressure [MPa]	21	
Max. Speed [rpm]	300	
Release Volume [cm <sup>3</sup> ]	12	
Oil Volume [cm <sup>3</sup> ]	100~120	
Max. Pressure of Lubrication oil port [MPa]	0.05	
Weight [kg]	18	20

### Hydraulic systems



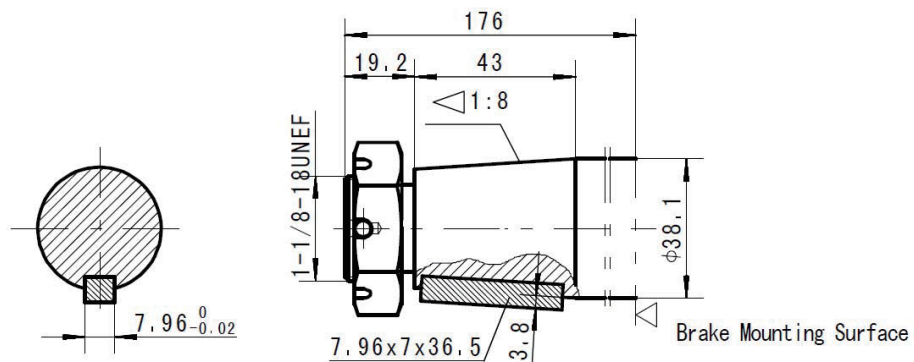
### BK10-1 DIMENSIONS AND MOUNTING DATA

#### S1 Flange and Pilot and Brake Pors

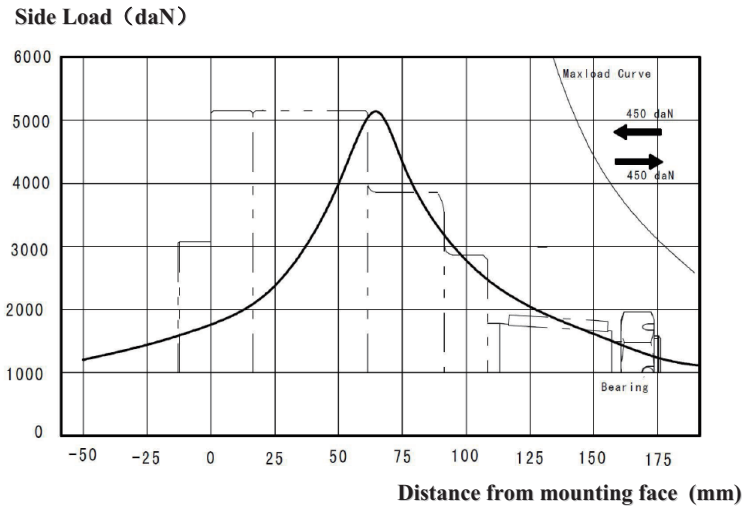


### BK10-1 DIMENSIONS OF SHAFT EXTENTSIONS

#### T31 $\phi 38.1$ Cone—shaft 1:8



### BK10-1 Mounting Flange Radial Forces



The bearing curve represents allowable bearing loads for an L bearing life at  $12 \times 10^6$  revolutions. The maximum load curve is defined by bearing static load capacity This curve should not be exceeded at any time including shock loads.

### Order Information

BK10-  1  2  3  4  5  6  7  8

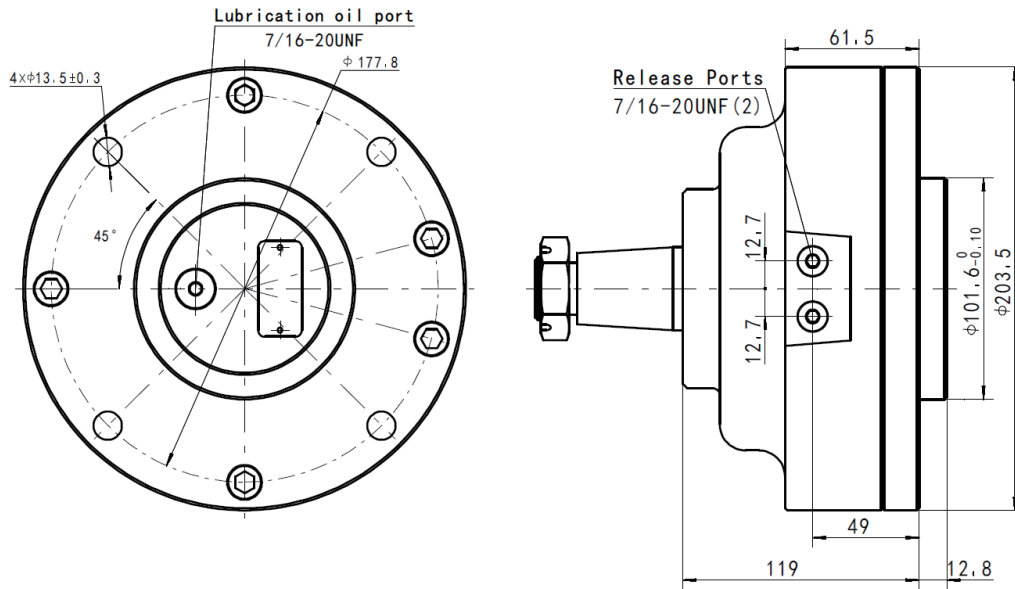
Pos.1	2	3	4	5	6	7	8
Code	Brake Torque	Output shaft	Flange and Pilot and Brake Ports	Lubrication Port	Paint	Design Code	Nut Code
1	1150	Ø38.1 Cone-Shaft 1:8. Parallel key 7.96x7x36.5	S1 Round Flange 4x Ø13.5, Ø177.8,Pilot Ø101.6x12.8, Brake Ports 7/16-20UNF	Omit 7/16-20UNF	B Black S Silver Grey 00 No paint Omit Blue	02 002	N N-Type thick Nut

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, output shaft, Flange and Pilot and Brake Ports, Lubrication Port etc... If the specification is not in the table or you have specific requirements, please contact us.



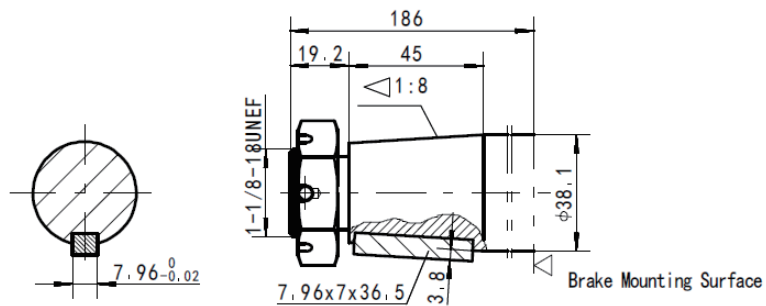
**BK10-2 DIMENSIONS AND MOUNTING DATA**

**S1 Flange and Pilot and Brake Pors**

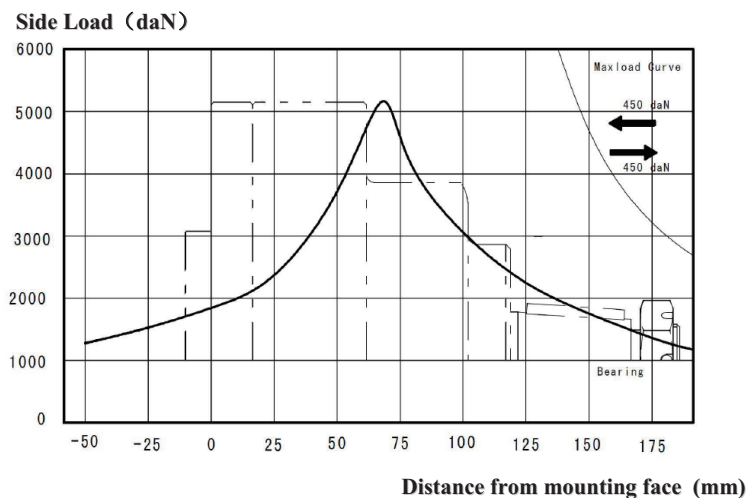


**BK10-2 DIMENSIONS OF SHAFT EXTENSIONS**

**T31  $\phi 38.1$  Cone—shaft 1:8**



### BK10-2 Mounting Flange Radial Forces



The bearing curve represents allowable bearing loads for an L bearing life at  $12 \times 10^6$  revolutions. The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

### Order Information

Pos.1	2	3	4	5	6	7	8
Code	Brake Torque	Output shaft	Flange and Pilot and Brake Ports	Lubrication Port	Paint	Design Code	Nut Code
2	1700	Ø38.1 Cone-Shaft 1:8. Parallel key 7.96x7x36.5	Round Flange 4x Ø13.5, Ø177.8, Pilot Ø101.6x12.8, Brake Ports 7/16-20UNF	Omit 7/16-20UNF	B Black S Silver Grey 00 No paint Omit Blue	02 002	N-Type thick Nut N

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, output shaft, Flange and Pilot and Brake Ports, Lubrication Port etc.. If the specification is not in the table or you have specific requirements, please contact us.



## BK2 SERIES HYDRAULIC BRAKE

### Introduction

BK2 series brake is one kind of hydraulic wet disc brake. The brake force is caused by the spring, and hydraulic pressure releases the brake force.

Features as follows:

- \* BK2 series adopts the special friction disc and high strength spring design: long life endurance, low noise, high braking reliability.
- \* with 4 Drain port design, the brake can be used in different applications.
- \* compact structure, easy mounting.
- \* it can be used preferentially together with BMP, BMR, BMS series hydraulic motor.

### Application

BK2 series hydraulic brake stays in braking condition since delivery out of the factory. During normal operation, there exists the braking force in the brake disc, only if the pressure of hydraulic system, that the brake links, is lower than the pressure required by the release of brake, the spring force shall keep the brake in braking condition.

BK2 series hydraulic brake is widely used in heavy duty machinery, such as engineering machinery, cranes, off-highway machinery vehicles, construction machinery, material handling machinery, agricultural machinery, mining, sanitation machinery, timber industries. They are also used in winches and in hydrostatic drive systems for automatization engines.

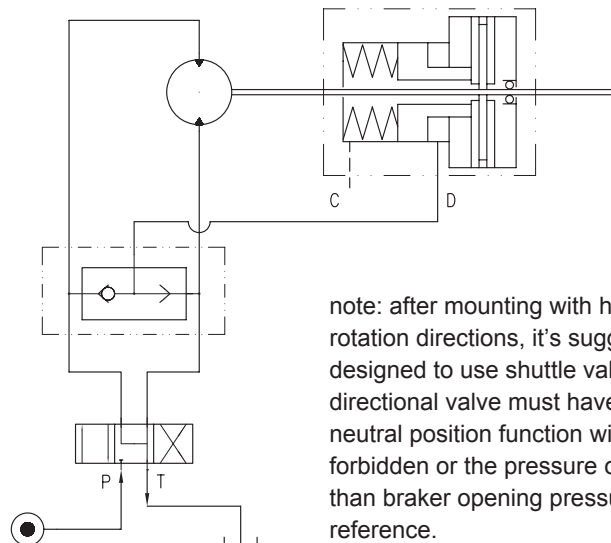
**Special Note: such kind of brake is only used in static parking brake. Dynamic braking is not recommended.**

### Intruction Manual

一、 In order to make the BK2 series brake work under the best situation, we recommend the normal requirements as follows:

- 1.Assembly: 1st of all, we have to mount the brake BK2 with hydraulic motor, and then fill the brake with lubrication oil through the drain port, and then mount with other parts.
- 2.Fluid type: Mineral based-HM(GB/T763.2-87) (ISO6743/4) or HLP(DIN51524).
- 3.Temperature range:normal -20°C-90°Cthe best optimal situation 20°C-60°C
- 4.Viscosity range: 20~75mm<sup>2</sup>/s; the best optimal situation 42~74mm<sup>2</sup>/s at 40°C.
- 5.Filtration: nominal filtration of 25 micron, ISO code 20/16.
- 6.Maintenance: changed after the first 50~100h; then after every 500~1000h.

#### Typical Applications Drawing

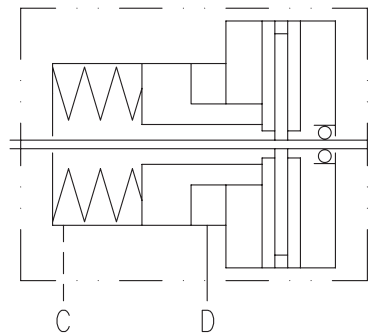


note: after mounting with hydraulic motor, if the motor needs both rotation directions, it's suggested that the hydraulic system is designed to use shuttle valve, and the neutral position of the directional valve must have off-load function(type Y or H), the neutral position function without off-load function (type O) is forbidden or the pressure of the outlet port in the system is larger than braker opening pressure. Please check the drawing for reference.

Specification Data

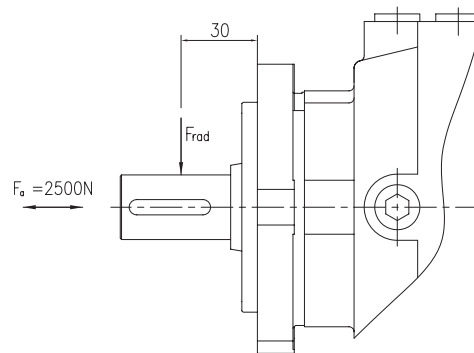
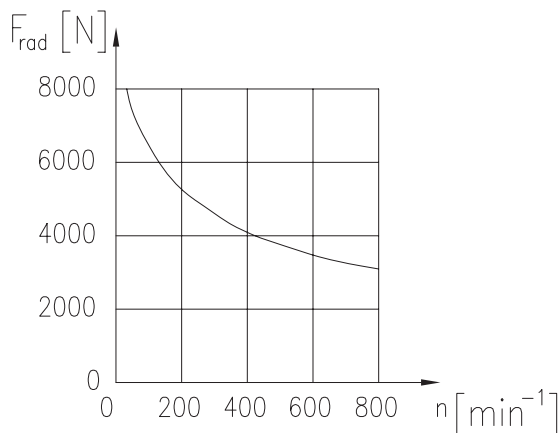
Item	BK2-1	
Min. static Torque [Nm]	200~230	410~450
Min. Opening Pressure [MPa]	1.7~2.3	
Max. Opening Pressure [MPa]	30	
Min.oil quantity for brake releasing[cm <sup>3</sup> ]	7~8	
Oil volume [cm <sup>3</sup> ]	50~120	
Max. pressure in drain space [MPa]	0.05	
Weight [kg]	9	

\*Static torque is obtained at working pressure 0 MPa

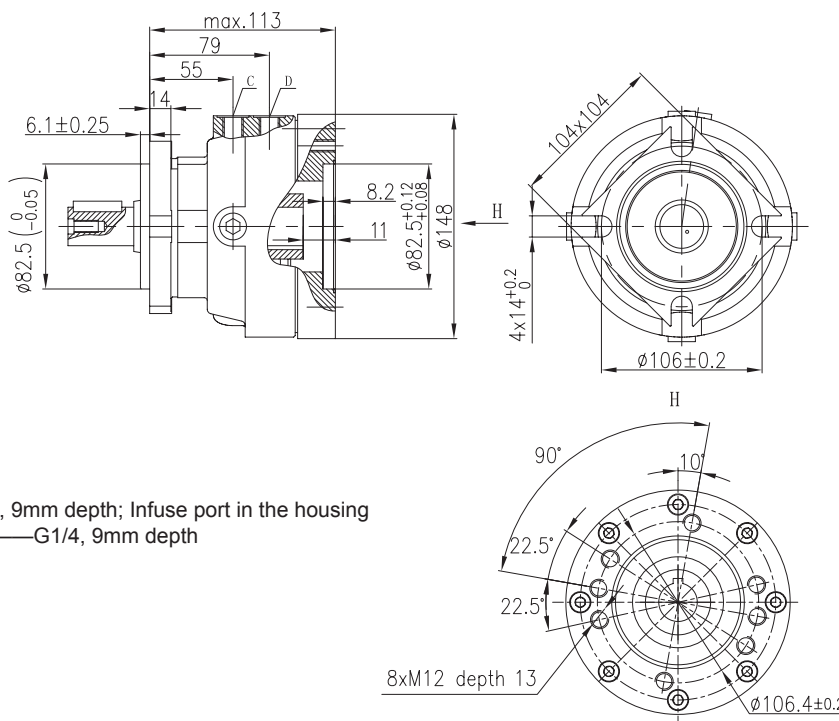


symble drawing

Load Curve

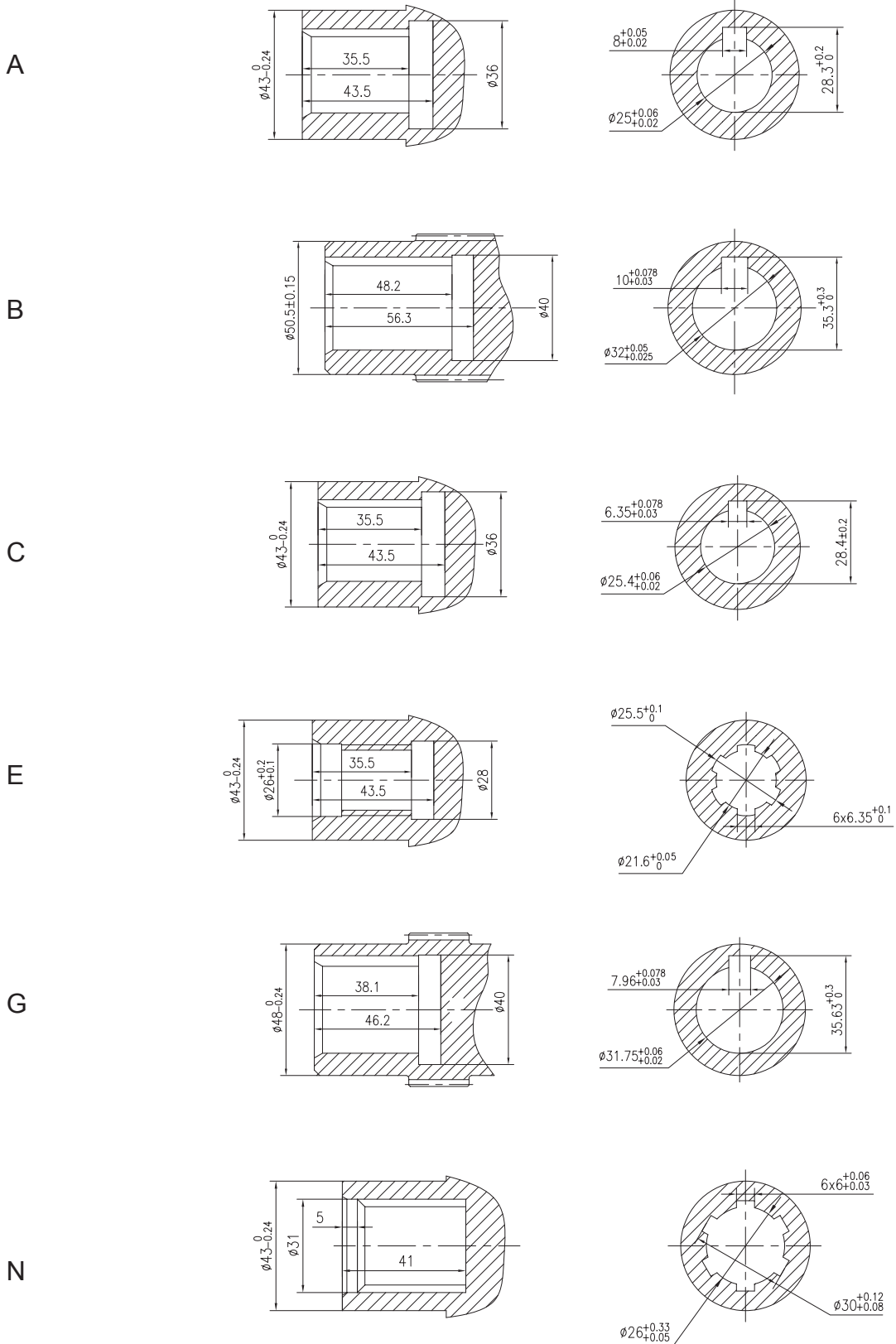


Mounting Data  
Model BK2-1



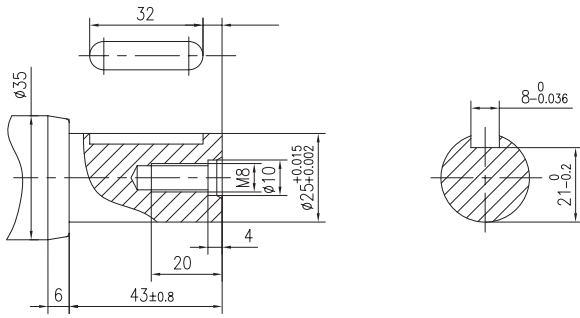
C Drain port—G1/4, 9mm depth; Infuse port in the housing  
D Brake release port—G1/4, 9mm depth

INPUT & OUTPUT SHAFT DATA  
INPUT SHAFT HOLES

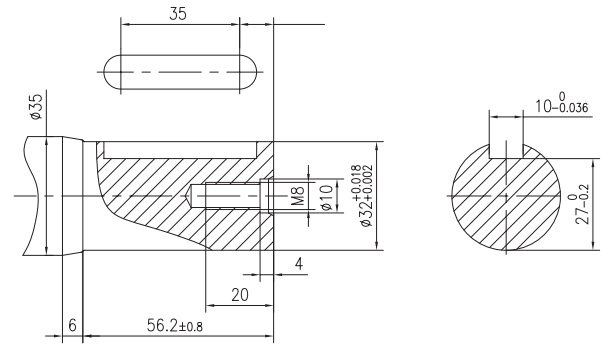


OUTPUT SHAFT EXTENSIONS

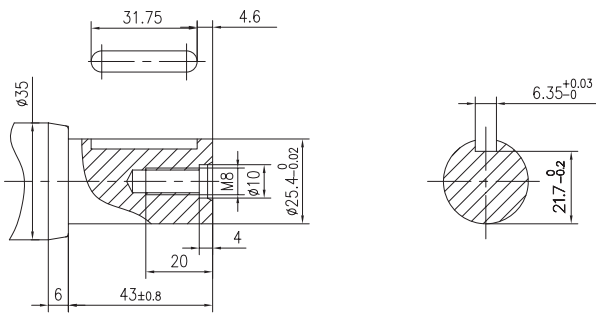
A



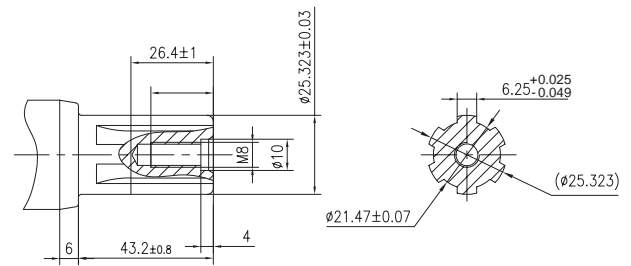
B



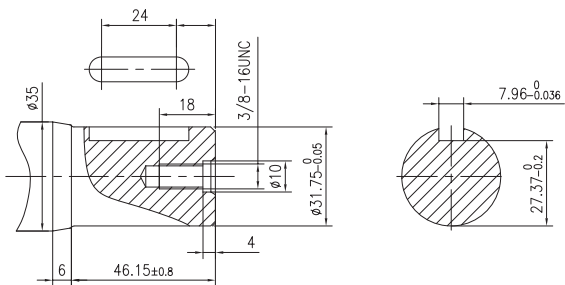
C



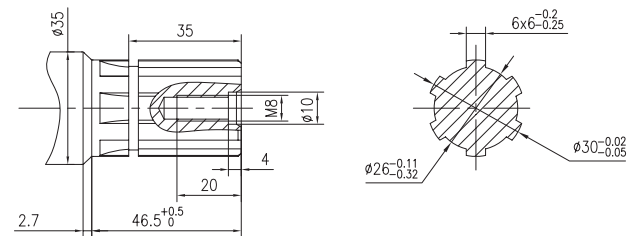
E



G



N

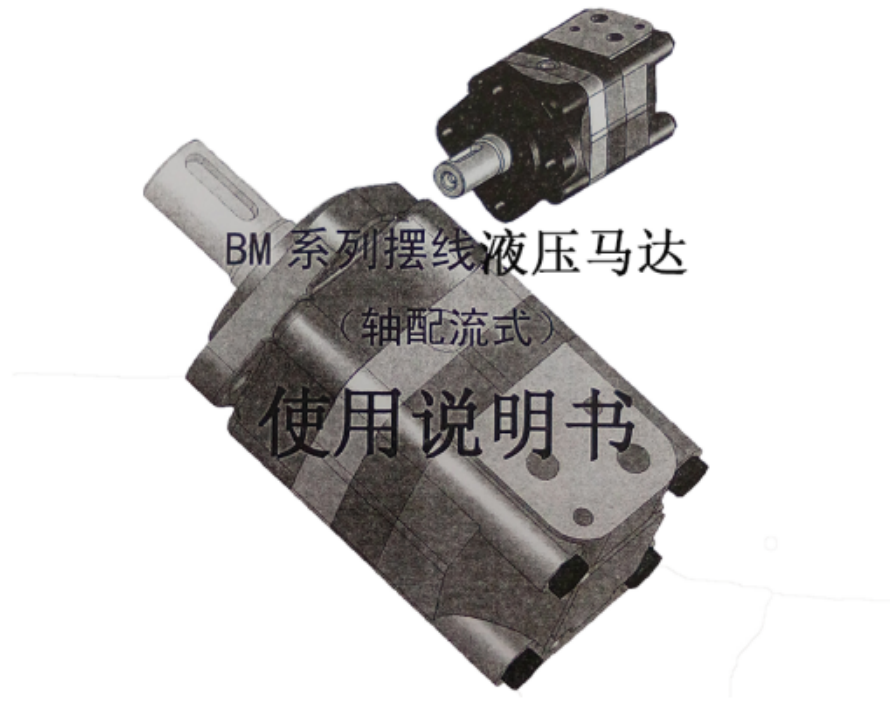


Order Information



Pos.1	2	3	4	5	6	7
Series Structure Code	Torque	Input Shaft holes	Output Shaft extensions	Paint	Unusually function	
2	Torque200--230Nm	210	A Shaft $\Phi$ 25, Parallel key 8×7×32 B Shaft holes $\Phi$ 32, Parallel key 10×8×45	A Shaft $\Phi$ 25, Parallel key 8×7×32 B Shaft $\Phi$ 32, Parallel key 10×8×45	No Paint Blue Black Silver Grey	omit Standard omit
	Torque410--450Nm	430	C Shaft holes $\Phi$ 25.4, Parallel key 6.35×6.35×31.75 E Shaft holes $\Phi$ 25.4, splined key SAE 6B G Shaft holes $\Phi$ 31.75, Parallel key 7.96×7.96×31.75	C Shaft $\Phi$ 25.4, Parallel Key6.35×6.35×31.75 E Shaft $\Phi$ 25.4, splined key SAE 6B G Shaft $\Phi$ 31.75, Parallel Key7.96×7.96×31.75	omit B S	

Note: When the table is used, pls fill the code with right rows in the table and give us, which the code information is consist of construction, torque, input Shaft holes, output Shaft extensions, Paint .if the specification is not in the table or you have specific requirements, please contact us.



## 1. Matters needing attention

### 1.1 Output steering (with photos)



1.2 The correct use of the motor will directly affect the working life. Therefore, the following basic requirements must be met.



### 1.2.1 System requirements

The system should be equipped with a corresponding oil filter to ensure the cleanliness of the system oil.  
The hydraulic circuit must be equipped with a cooling system to prevent excessive oil temperature.  
Pressure gauges and thermometers must be installed in the oil inlet lines.  
A pressure gauge should be installed in the hydraulic circuit of the hydraulic pump.

### 1.2.2 System hydraulic oil requirements

According to the different ambient temperature and usage, the oil used should have good viscosity-temperature performance, good defoaming properties, anti-oxidation, anti-rust, high flash point, etc. During the operation of the motor, its viscosity is between  $(25-70) \times 10^{-6} \text{m}^2/\text{s}$ , and the water, alkali and mechanical impurities in the oil must not exceed the allowable value.

It is recommended to use YB-N46, YB-N68 anti-wear hydraulic oil.

The filtration accuracy of the system is better than  $20\mu\text{m}$ .

Normal working oil temperature is  $25-55^\circ\text{C}$ , short-term working oil temperature is not higher than  $65^\circ\text{C}$ .

## 2. Motor installation

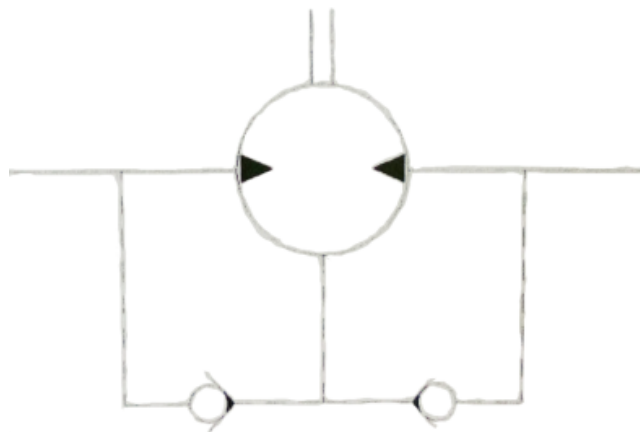
Before installation, check whether the motor is damaged. The motor oil stored for a long time needs to be drained and rinsed to prevent the internal moving parts from sticking.

The motor mounting bracket must have sufficient rigidity to prevent shock and vibration during rotation.

The mounting bolts must be tightened evenly.

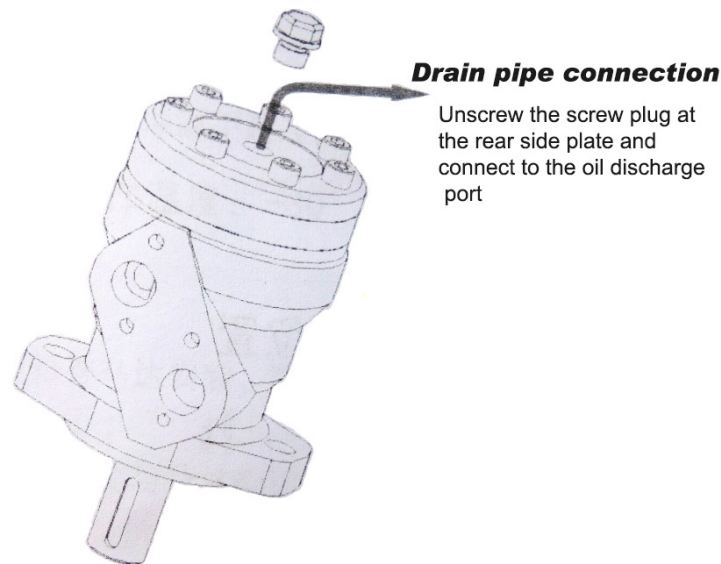
Connection method of drain pipe:

The BMR motor has two built-in check valves, and the leaked oil can return to the oil return pipe through the check valve, (with photos)



A) When the oil return pressure is  $\leq 1\text{Mpa}$ , there is no need to connect the drain pipe;

B) When the oil return pressure is greater than  $1\text{Mpa}$ , the drain pipe must be connected. (Drain pipe location diagram)



The motor is unstable when running at low speed, and can be eliminated by applying back pressure, the back pressure value is not less than 0.2Mpa.

This type of motor can not be operated under the pump working conditions, nor can it be used as a pump.

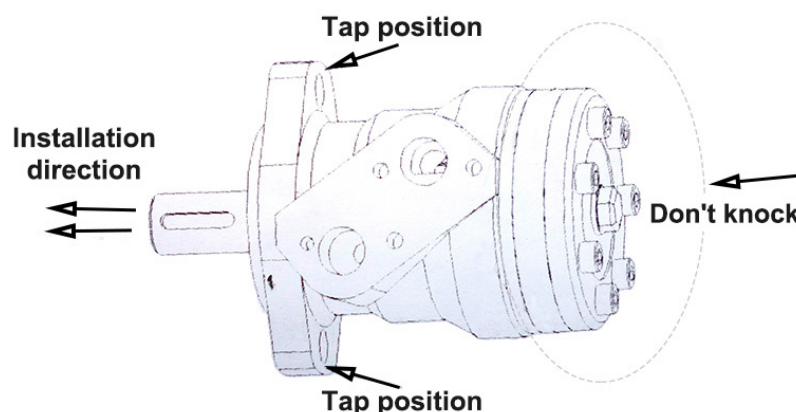
The installation surface should be flat.

The installation should determine the connection flange, the stop, and the output connection shaft size is accurate.

Ensure that the output shaft and the device connected to the transmission have good concentricity. When the output shaft is installed, it is necessary to prevent the axial thrust of the output shaft and the interlocking device.(The cycloidal motor BMR bears a small radial force.)

During the installation process, the smoothness and parallelism of the connecting plate part of the oil inlet and outlet are protected to prevent the oil sealing effect caused by the bumps from being bad, resulting in oil leakage.

**WARNING** The screws and the rear cover of the rear of the motor must not be hit during installation.If you want to tap, please tap the mounting flange (with photos)



The motor cannot be installed forcefully or twisted.

Do not remove the plastic plugs above the pipelines and oil pipes before they are installed.

When the system is connected, the relationship between the installation position of the motor inlet and outlet on the installation drawing and the rotation of the motor should be recognized. During the installation, it was found that the oil inlet and outlet are not suitable for the corresponding positive and negative rotation directions of the output shaft. Replacing the installation of the oil inlet and outlet pipes for the A and B chambers can achieve the opposite effect to the original working rotation direction.

### 3. Use of the motor

#### 3.1 Use of motor

The pressure, flow, and output power of the motor must not exceed the specified values. When running for a long time, the oil temperature does not exceed 65 °C.

Motor limit working temperature: -30 °C -70 °C

#### 3.2 Commissioning

Before starting, check the motor installation, whether the connection is correct and firm, and the system is correct.

Check whether the oil inlet and outlet directions and motor rotation direction meet the requirements of working conditions.

The pressure of the relief valve of the oil supply line is adjusted to the lowest value, and gradually adjusted to the required pressure after operation. Tighten the inlet and outlet pipes and the drain pipe.

After running the motor under no load for at least 10 minutes, gradually increase the pressure to the working pressure, and observe whether the motor is running normally at any time during the operation.

During operation, the working conditions of the motor and system should be checked frequently. If abnormal temperature rise, leakage, vibration and noise or abnormal pulsation of pressure are found, the machine should be stopped immediately to find out the cause.



During use, when the temperature of the oil inlet is  $\geq 65$  °C, please check whether the cooler works normally. To ensure the normal working temperature of the motor surface.

Motor transportation should be equipped with appropriate wooden boxes and cardboard boxes according to the size of the motor, and plastic paper packaging on the surface of the motor to prevent the moisture and moisture from invading the motor and causing the motor to rust and cause motor failure.



Avoid placing the motor directly on the ground. No need to apply anti-rust oil for a long time.

Motor storage environment: 10-9%RH, -20-65S C.

During transportation and storage, the motor should avoid moisture, moisture and any.

What corrosive gas.

## 4. Motor troubleshooting

The motor is a precision component, which needs to be installed, commissioned and repaired by professionals. Without our company's consent, it is not allowed to dismantle and repair it by yourself. If the user unit has the conditions for dismantling and inspection with the permission of our company, after reading the instructions carefully, you can dismantle and inspect it yourself, but you must pay attention to the following three points:

When disassembling, be careful not to knock the parts and scratch the hair, especially to protect the moving surface and sealing surface of the parts. The disassembled parts are placed in a clean container to avoid collision with each other. It is forbidden to strike with a hammer during disassembly and assembly.

The removed parts should be carefully inspected, and the worn parts are basically replaced without repairing by themselves. In principle, all seals are replaced.

Before assembling, all parts should be cleaned and dried. Do not use cotton yarn or rags to wipe the parts. The assembly place and the tools used should be clean, and the output shaft should be rotated after assembly. It should be flexible and free of jams.

### Troubleshooting

Serial number	Fault phenomenon	The Reason	Exclude
1.	The motor does not rotate	Hydraulic pump does not start	Turn on the hydraulic pump
		Insufficient oil in the tank	oil
		Directional valve in neutral	Open the directional valve
		System overflow valve fully open	The system pressure is adjusted to the specified value
		Motor torque is not enough	Replace the motor
2.	There is abnormal noise when the motor is running	There is air in the hydraulic system	Find out the reason for the intake air and discharge the air in the oil
		Vacuum	Increase fuel supply
		Motor failure	Replace the motor
		Support bearing is broken	Replace bearing
3.	Motor leakage	Damaged seal	Replace the seal
		Parts have pores, trachoma, cracks, etc.	Replacement parts
4.	Motor heat	Hydraulic oil temperature is too high	Increase cooling capacity
		Low motor efficiency	Replace wearing parts
		Abnormal wear	Replace the motor
5.	Increased oil leakage at the outer drain hole	Abnormal wear at the distribution shaft	Replacement parts
		Wear of the needle column group of the cycloid wheel stator body	

#### 5. Motor maintenance and post-processing

Regularly check the accessories in the hydraulic system, the accuracy of pressure gauges, thermometers, etc.

Check hydraulic oil regularly:

It is not allowed to use mixed oils of different types of hydraulic oils, and the period of renewal of new oils varies according to different industries and mines.

Under normal circumstances: the hydraulic oil is changed every six months.

Disposal of waste oil after motor use:

Should be sent to a special waste oil treatment unit for centralized treatment of waste oil.

If the motor is not used for a long time:

The cavity should be filled with oil, and the oil ports should be sealed. Grease on the surface of the output shaft should be wrapped with a cloth or sleeve.

## **Admonish**

The manufacturer is not responsible for the consequences caused by the user not following the above recommendations or using the motor incorrectly.

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