



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 mm²/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 BMS、BMSY、BMT and BMV 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 ³ /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 ³ /rev.)	Max. operating pressure (MPa)	Speed range (rpm)	Max. output power (kW)
Disc distribution	BMS	80~375	22.5	30~800	20
	BMSY	80~475	22.5	8~800	24
	BMT	160~800	24	30~705	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 ³ /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.

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	228	218	206	156	111	58
	8	474	471	463	426	391	331
	12	953	946	926	884	855	816
	15	1444	1426	1402	1360	1324	1288
	20	1912	1900	1861	1833	1780	
Max.int.		0	6	10	11	14	
Max.cont.		2432	2395	2350	2328	2281	

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	140	136	119	68	35	
	8	296	289	274	229	200	145
	12	605	596	583	543	514	469
	15	912	905	895	859	834	784
	20	1152	1144	1136	1102	1078	1036
Max.int.		3	7	10	15	19	22
Max.cont.		1542	1532	1521	1500	1482	1437
Max.int.		2	6	9	14	18	22
Max.cont.		1910	1891	1878	1848	1828	1788

BMM20 [19.9 cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		1.7	3.5	5	7	10	12
Flow (L/min)	2	3	9	14	19	26	30
	4	99	96	89	74	42	21
	8	197	191	182	178	134	112
	12	398	395	391	377	340	319
	15	596	594	588	579	545	523
	20	745	741	738	728	695	684
Max.int.		1	6	11	19	24	29
Max.cont.		998	995	991	985	962	916
Max.int.		4	9	14	23	28	33
Max.cont.		1247	1245	1242	1189	1180	1176

BMM32 [31.6 cc/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		2	3.5	5	7	10	12
Flow (L/min)	2	7	15	21	28	40	
	4	61	57	52	47	16	
	8	126	121	114	106	82	67
	12	250	244	239	231	207	194
	15	378	374	369	362	338	322
	20	476	472	468	462	441	429
Max.int.		3	10	17	25	37	46
Max.cont.		633	630	627	619	601	585
Max.int.		1	8	15	23	35	43
Max.cont.		791	789	787	783	766	753

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	45	40	34	28	17	
	8	96	93	85	79	65	52
	12	197	195	182	176	166	154
	15	293	287	282	277	268	257
	20	371	365	360	355	347	338
Max.int.		10	21	31	39	48	59
Max.cont.		497	492	487	480	472	463
Max.int.		7	19	29	37	44	56
Max.cont.		622	617	612	607	600	591

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	37	33	27	22	
	8	76	73	68	63	55
	12	115	114	109	104	97
	15	157	154	149	145	137
	20	197	195	194	188	182
Max.int.		8	14	29	44	64
Max.cont.		395	395	393	390	381
Max.int.		4	10	25	40	59
Max.cont.		498	496	494	490	484

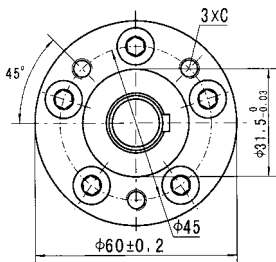
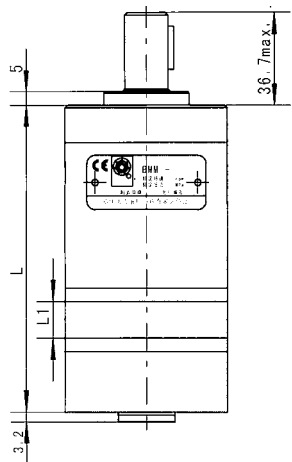
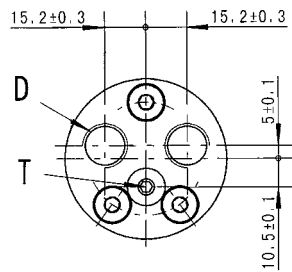
Torque (N•m) 37
Speed (rpm) 607

cont.
int.

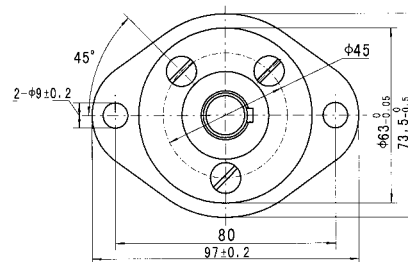
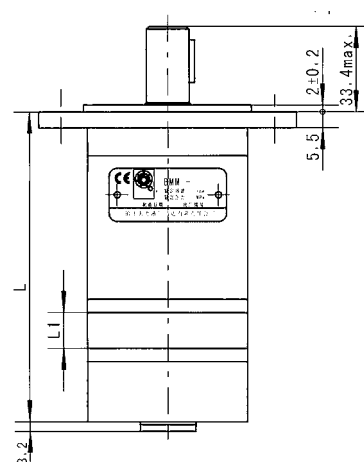
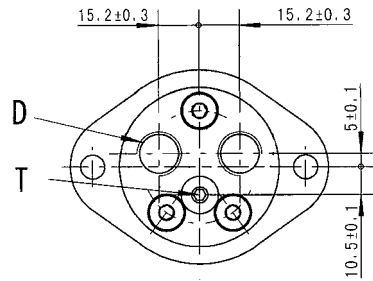
BMM END PORT DIMENSIONS AND MOUNTING DATA

MOUNTING

Flange M、U



Flange F



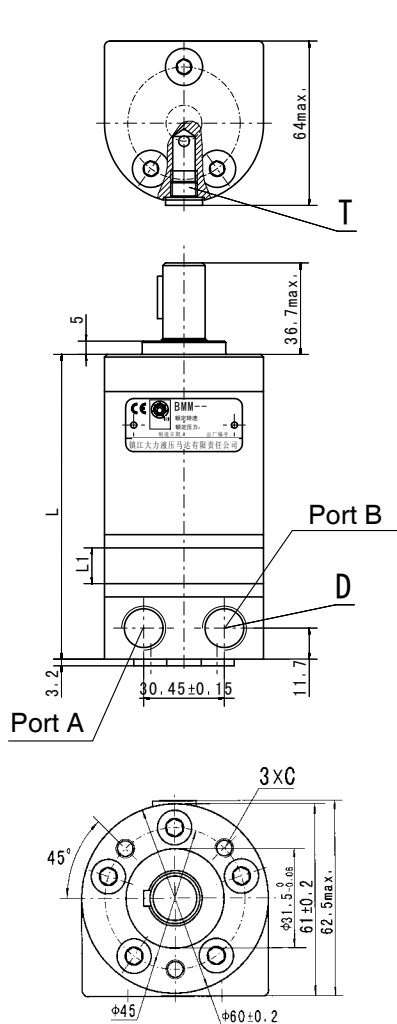
	M、U Flange		F Flange	
Model	L	L1	L	L1
BMM8	104	3.5	107.5	3.5
BMM12.5	106	5.5	109.5	5.5
BMM20	109	8.5	112.5	8.5
BMM32	114	13.5	117.5	13.5
BMM40	117.5	17	121	17
BMM50	122	21.5	125.5	21.5

	M、U Flange		F Flange	
Code	1E (depth)	1U (depth)	1E (depth)	1U (depth)
Mounting				
C	3-M6 (10)	3-1/4-28UNF-2B(10)	--	--
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)

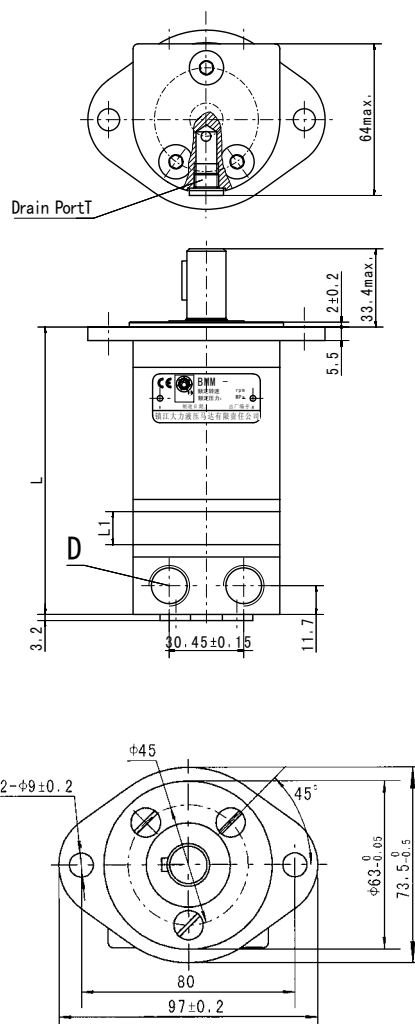
BMM SIDE PORT DIMENSIONS AND MOUNTING DATA

MOUNTING

Flange M、U



Flange F

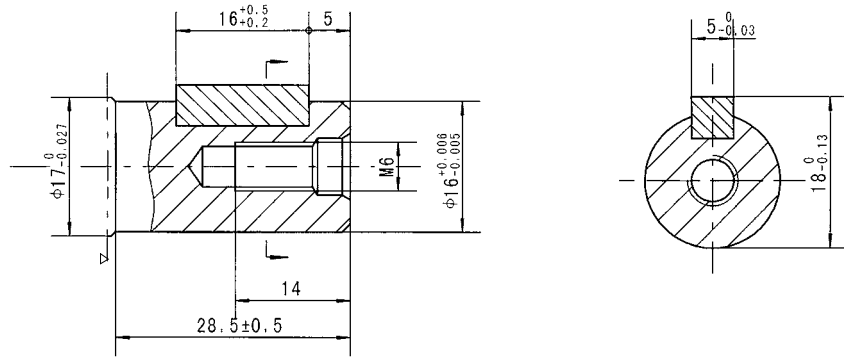


	M、U Flange		F Flange	
Model	L	L1	L	L1
BMM8	105	3.5	108.5	3.5
BMM12.5	107	5.5	110.5	5.5
BMM20	110	8.5	113.5	8.5
BMM32	115	13.5	118.5	13.5
BMM40	118.5	17	122	17
BMM50	123	21.5	126.5	21.5

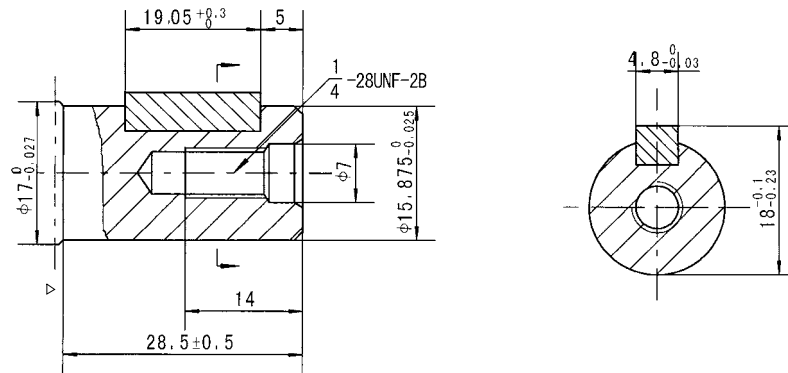
	M、U Flange		F Flange	
Code	E (depth)	U (depth)	E (depth)	U (depth)
C	3-M6 (10)	3-1/4-28UNF-2B(10)	--	--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

BMM SHAFT EXTENSIONS FOR BMM MOTORS

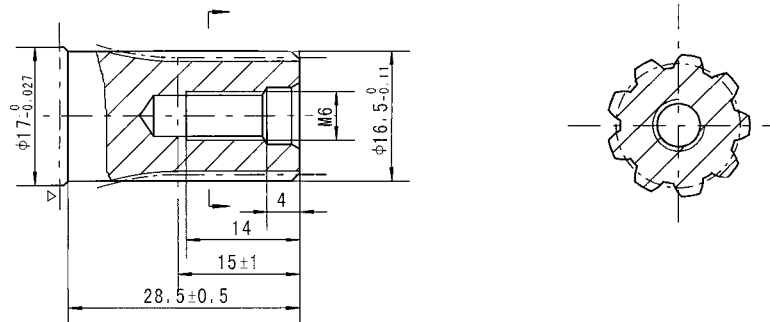
Shaft A: Cylindrical shaft $\varnothing 16$
Parallel key 5x5x16



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



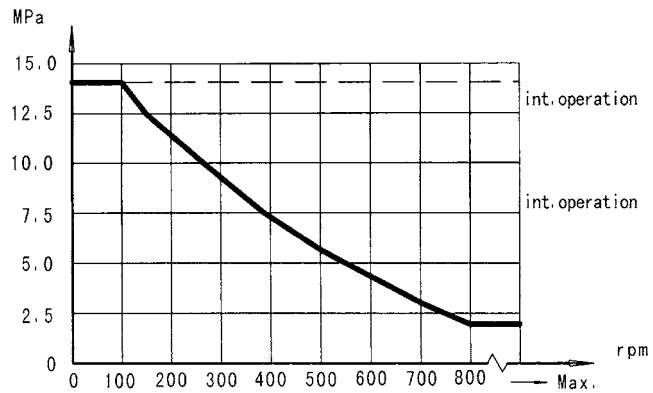
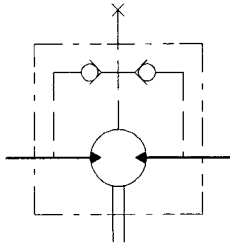
Shaft C: Involute splind shaft
B17x14 DIN5482



▷ Motor Mounting Surface

BMM Series Hydraulic Motor

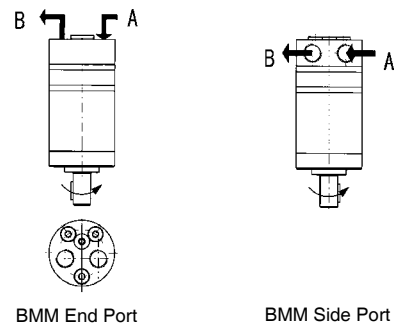
Permissible shaft seal pressure



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.

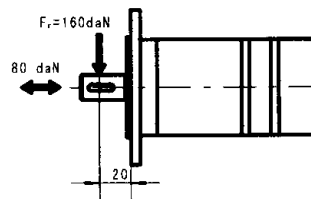
Direction of shaft rotation: Standard

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 = 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

1

2

3

4

5

6

7

8

BMM

Pos.1	2	3	4	5	6	7	8
Code	Displace ment	Flange	Output shaft	Port and drain port	Rotation direction	Paint	Unusually function
	8						
	12.5						
	16	M	A	E			
	20	U	B	U	Omit	No paint	Omit
	32	F	C	1E	Standard	Blue	Standard
	40			1U	R	Black	O
	50				Opposite	Silver grey	No case drain

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
Geometric displacement (cm ³ /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
	int.	1650	1450	960	770	615	475	385	310	240	190
Max. torque (N•m)	cont.	55	100	146	182	236	302	360	380	375	360
	int.	76	128	186	227	290	370	440	460	555	525
	peak	96	148	218	264	360	434	540	550	650	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
	int.	11.5	12.0	12.0	13.0	12.0	12.0	12.0	10.5	8.5	7.0
Max. pressure drop (MPa)	cont.	12.5	14	14	14	14	14	14	11	9	7
	int.	16.5	17.5	17.5	17.5	17.5	17.5	17.5	14	14	10.5
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	18	16	14
Max. flow (L/min)	cont.	55	60	60	60	60	60	60	60	60	60
	int.	60	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	7	6.9	7.4

- * 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.



Main Specification

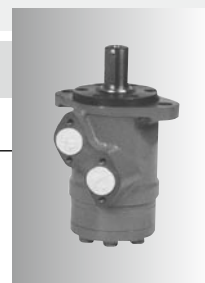
Technical data for BMP with 31.75 and 32 shaft

Type		BMP BMPH 36	BMP BMPH 50	BMP BMPH 80	BMP BMPH 100	BMP BMPH 125	BMP BMPH 160	BMP BMPH 200	BMP BMPH 250	BMP BMPH 315	BMP BMPH 400
Geometric displacement (cm ³ /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
	int.	1650	1450	960	770	615	475	385	310	240	190
Max. torque (N·m)	cont.	55	100	146	182	236	302	360	460	475	490
	int.	76	128	186	227	290	370	440	570	555	580
	peak	96	148	218	264	360	434	540	670	840	840
Max. output (kW)	cont.	8.0	10.0	10.0	11.0	10.0	10.0	10.0	8.5	7.0	6.0
	int.	11.5	12.0	12.0	13.0	12.0	12.0	12.0	10.5	8.5	7.0
Max. pressure drop (MPa)	cont.	12.5	14	14	14	14	14	14	14	12	9.5
	int.	16.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	14	11.5
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	18
Max. flow (L/min)	cont.	55	60	60	60	60	60	60	60	60	60
	int.	60	75	75	75	75	75	75	75	75	75
Weight (kg)		5.6	6	5.7	5.9	6.0	6.2	6.4	7	6.9	7.4

* 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.



Performance Data

BMP 36 [36cm³/rev.]

Pressure (MPa)

	3	6	7	8	10	11	12.5	16.5
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Flow (L/min)	8	13	25	29	34	43	48		
		214	205	200	194	187	179		
15		13	25	29	34	43	48	56	75
		406	398	391	383	374	366	353	324
20		13	24	29	34	43	48	56	76
		541	534	528	521	513	500	486	458
30		12	24	29	34	43	48	56	76
		814	804	792	778	763	749	726	701
35		12	23	28	34	43	48	56	76
		952	944	930	913	897	879	858	833
40		12	23	28	32	41	47	55	75
		1090	1078	1064	1048	1024	998	977	943
45		11	22	26	32	41	46	54	74
		1232	1218	1196	1175	1149	1118	1080	1044
Max.cont.	55	6	15	22	28	37	44	52	71
		1505	1494	1480	1466	1438	1406	1367	1309
Max.int.	60	3	11	18	20	30	38	49	67
		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
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Flow (L/min)	8	20	41	56	69	89	95		
		151	134	115	90	56	42		
15		19	40	56	71	91	100	112	120
		286	274	261	243	204	182	139	102
20		18	39	55	71	92	101	117	128
		382	373	361	348	318	309	287	251
30		17	38	55	71	91	98	116	124
		573	568	558	535	503	488	462	440
35		17	38	54	69	89	98	117	124
		670	661	652	640	606	589	562	548
45		14	36	53	67	88	98	114	123
		863	858	849	837	807	788	764	746
55		12	33	50	65	85	96	111	121
		1055	1042	1028	1010	979	963	947	920
Max.cont.	60	10	32	47	64	83	94	108	119
		1150	1143	1126	1111	1079	1065	1043	1015
Max.int.	75	6	25	42	56	76	87	101	112
		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
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Flow (L/min)	8	32	62	85	104	129	144		
		97	87	74	55	33	22		
15		32	63	84	107	126	144	165	
		186	181	170	154	132	118	86	
20		31	63	84	107	132	146	168	185
		251	243	236	225	207	196	178	155
30		31	62	83	106	131	146	168	186
		381	379	368	355	332	316	285	263
35		30	59	81	102	130	144	167	185
		443	435	426	415	397	383	361	342
45		25	58	79	100	126	142	165	182
		570	564	554	543	526	509	483	458
55		23	57	78	97	124	140	161	179
		696	685	672	656	643	630	602	579
Max.cont.	60	20	53	75	94	120	137	160	177
		761	753	744	736	720	706	681	660
Max.int.	75	14	44	67	87	112	151	169	169
		948	940	931	920	906	890	871	854

Torque (N•m) 87
Speed (rpm) 920

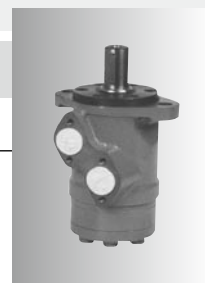
BMP 100 [96.2cm³/rev.]

Pressure (MPa)

	3	6	8	10	12.5	14	16	17.5
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Flow (L/min)	8	40	77	105	130	161	180		
		81	75	69	57	36	24		
15		39	77	106	130	160	180	208	
		152	149	145	140	122	103	81	
20		36	74	104	128	161	179	205	227
		204	200	195	190	177	166	148	133
30		33	72	103	125	160	177	203	225
		308	304	298	290	280	268	255	231
35		30	70	98	122	159	176	202	224
		360	352	343	331	320	306	294	275
45		29	67	95	118	155	174	200	220
		462	458	451	443	433	419	402	383
55		25	64	93	116	152	170	198	217
		566	558	549	540	529	515	498	478
Max.cont.	60	22	60	91	114	149	167	194	213
		618	611	601	589	580	570	558	540
Max.int.	75	15	54	83	106	141	160	186	205
		771	763	755	744	735	724	708	693

□ cont.
■ int.



Performance Data

BMP 125 [120.2cm³/rev.]

Pressure (MPa)

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

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

BMP 160 [157.2cm³/rev.]

Pressure (MPa)

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

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

BMP 200 [194.5cm³/rev.]

Pressure (MPa)

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

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

BMP 250 [240.3cm³/rev.]

Pressure (MPa)

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

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

□ cont.
■ int.

Torque (N•m) 128
Speed (rpm) 306



Performance Data

BMP 315 [314.5cm³/rev.]

Pressure (MPa)

	3	5	7	9	10	Max.cont.	Max.int.
	3	5	7	9	10	12.5	14

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

cont.
int.

BMP 400 [386.2cm³/rev.]

Pressure (MPa)

	3	4.5	5.5	6.5	8	Max.cont.	Max.int.
	3	4.5	5.5	6.5	8	10	12.5

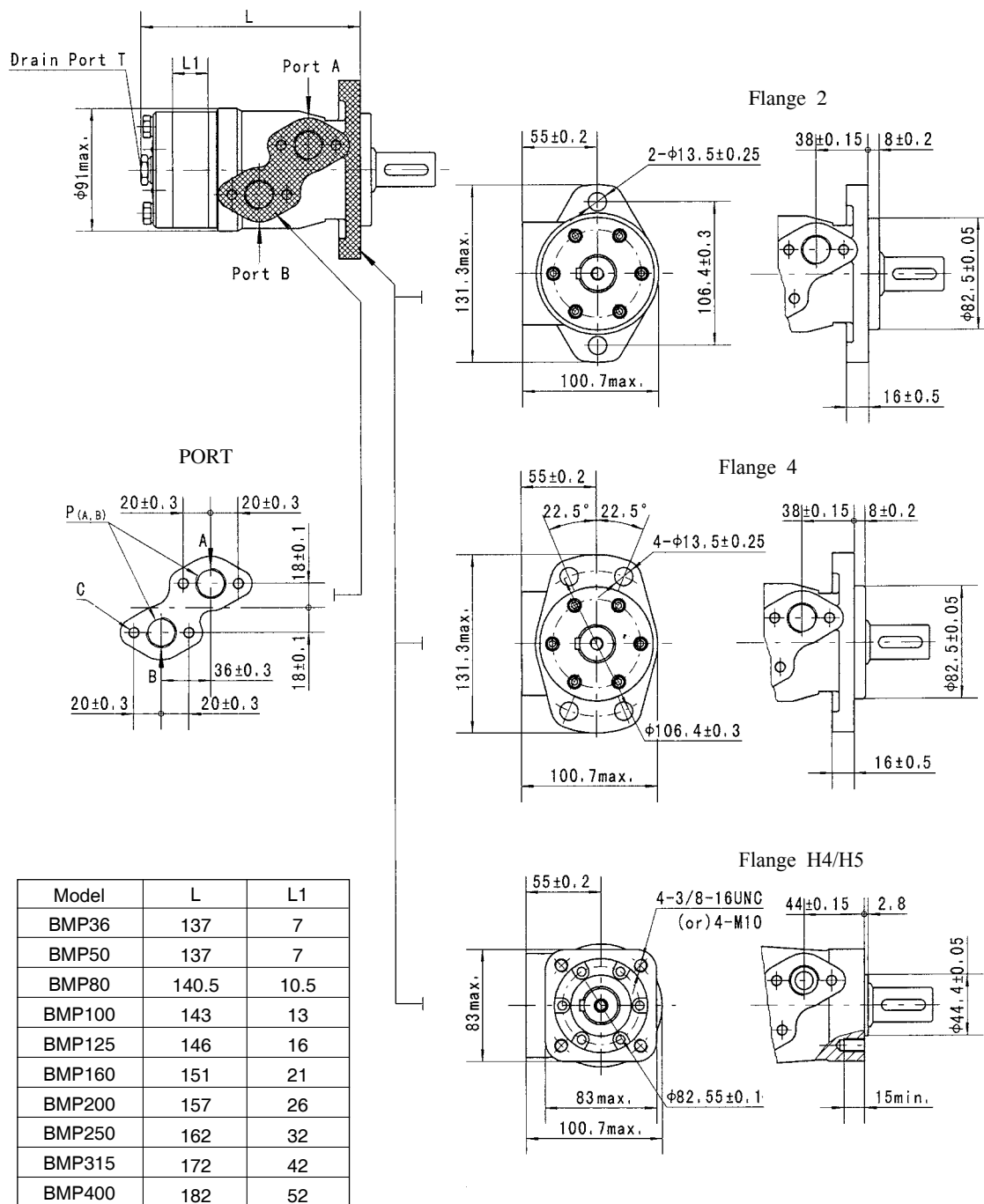
Flow (L/min)	8	166 20	232 19	287 18	340 16	418 12		
	15	165 38	228 36	277 35	337 33	417 31	496 27	612 21
20	162 50	223 49	273 49	331 48	413 45	495 41	608 35	
	30	154 76	216 75	266 74	318 73	405 71	486 67	600 60
35	146 88	210 87	256 87	312 86	395 83	480 80	588 75	
	45	132 114	197 113	243 112	300 110	383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

Torque (N·m) 234
Speed (rpm) 185



BMP DIMENSIONS AND MOUNTING DATA

MOUNTING

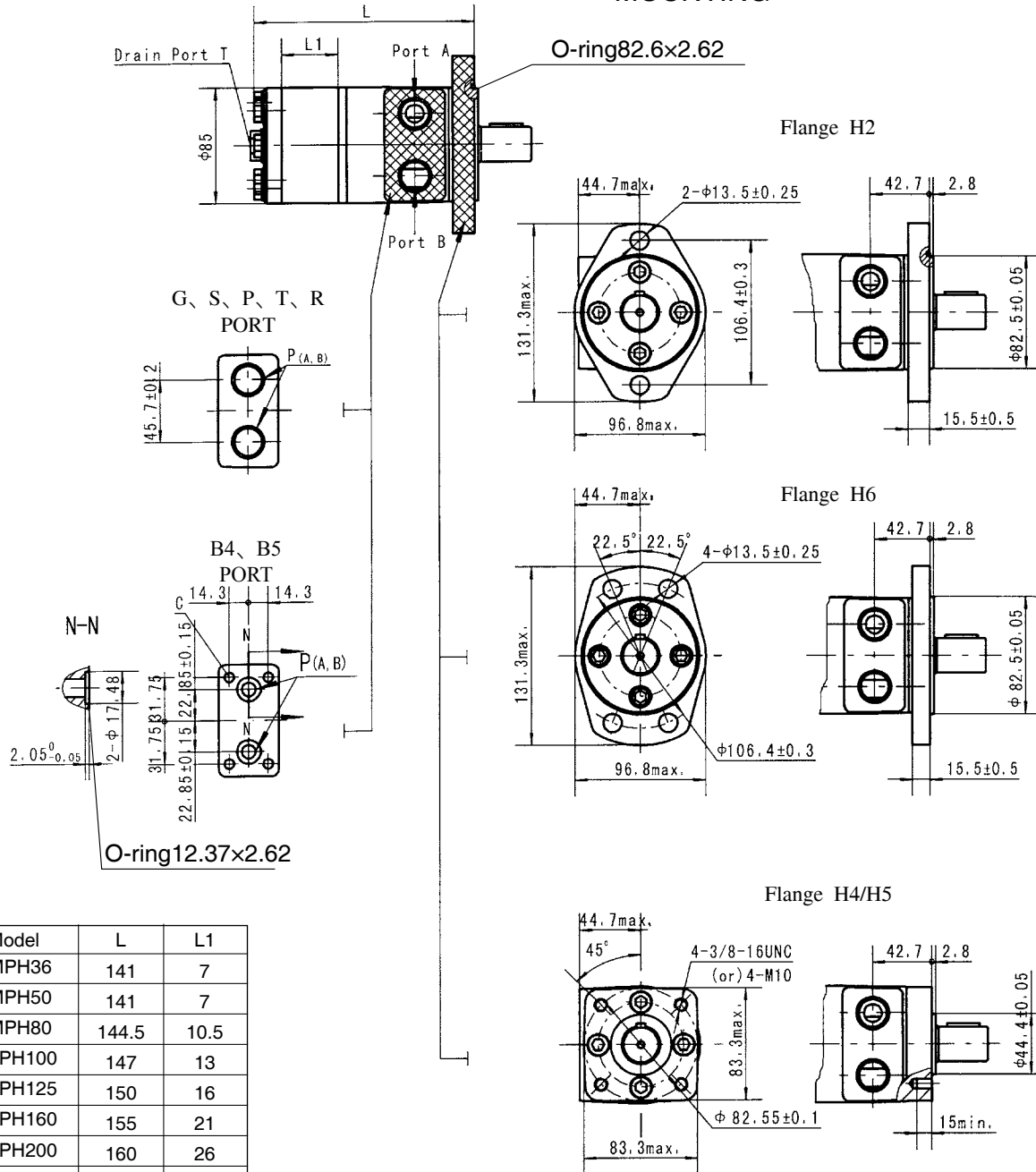


Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)



BMPH DIMENSIONS AND MOUNTING DATA

MOUNTING

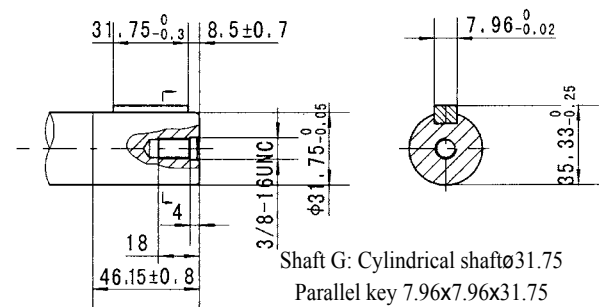
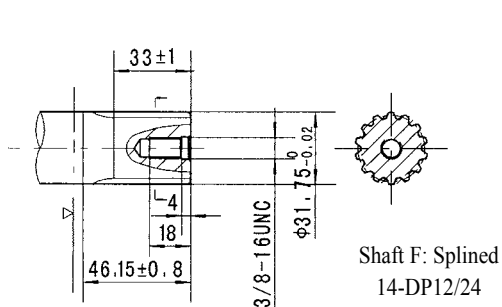
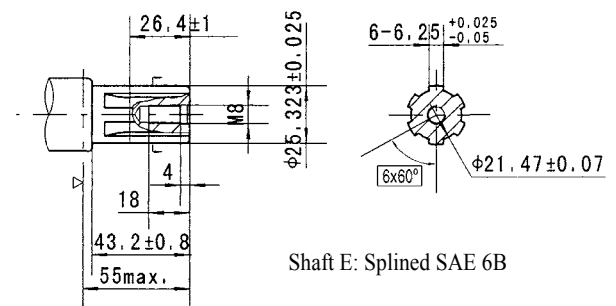
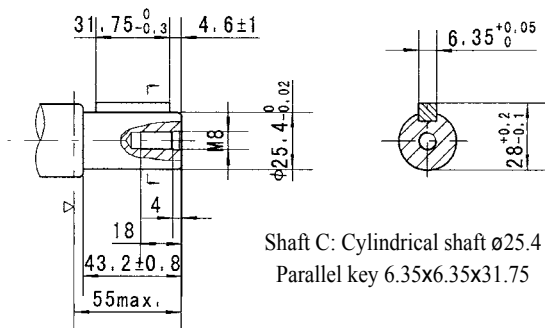
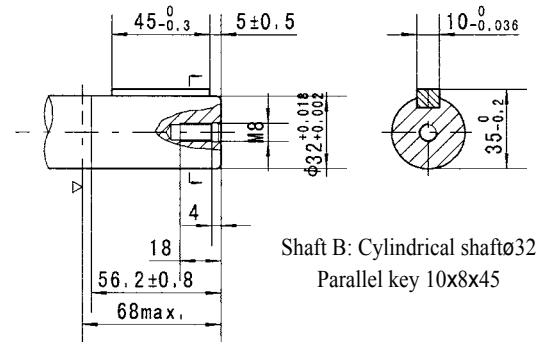
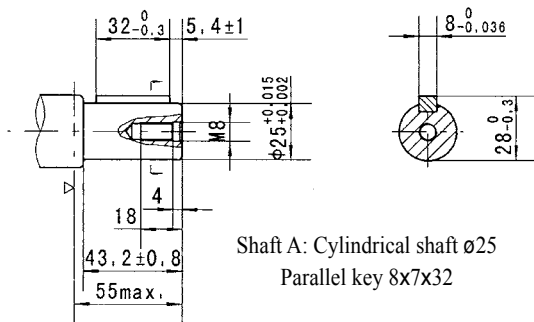


Model	L	L1
BMPH36	141	7
BMPH50	141	7
BMPH80	144.5	10.5
BMPH100	147	13
BMPH125	150	16
BMPH160	155	21
BMPH200	160	26
BMPH250	166	32
BMPH315	176	42
BMPH400	186	52

Code	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)



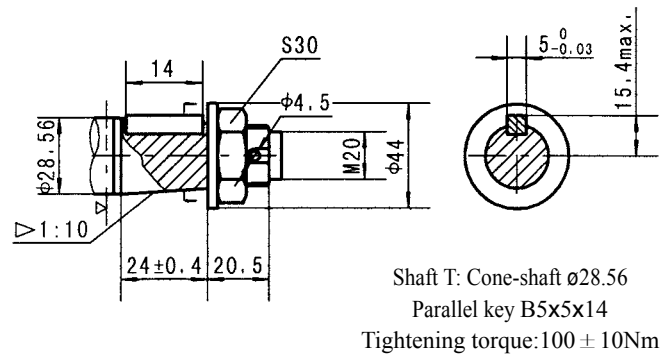
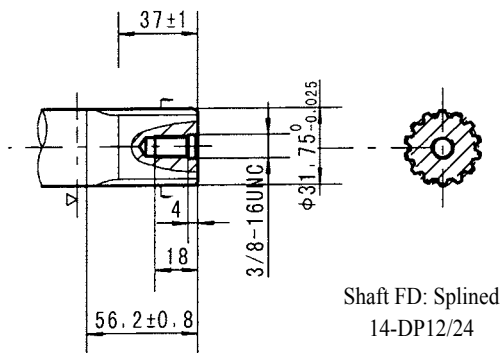
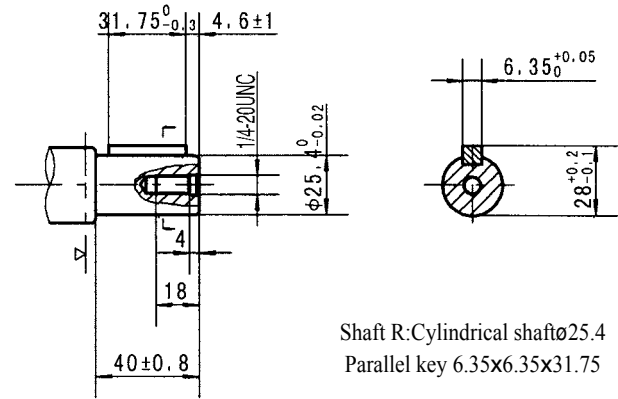
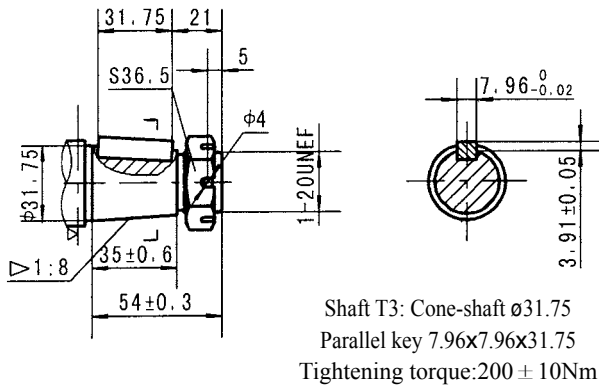
BMP SHAFT EXTENSIONS DIMENSIONS DATA



▷ Motor Mounting Surface



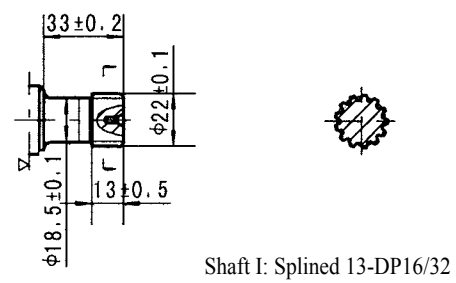
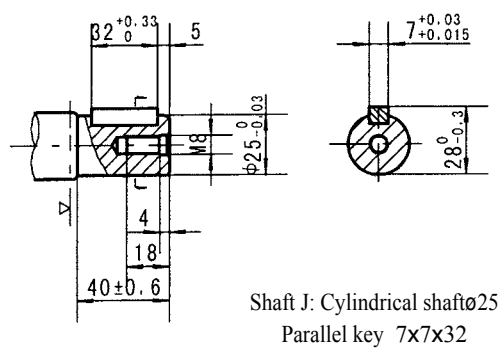
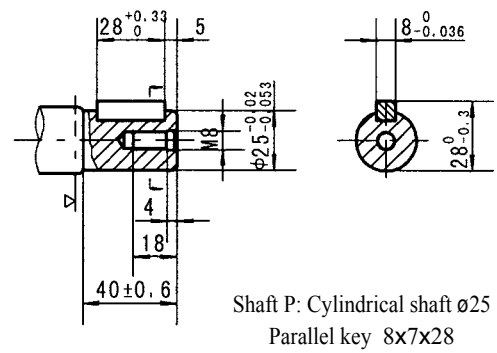
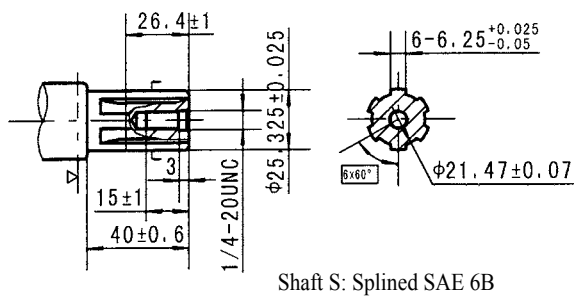
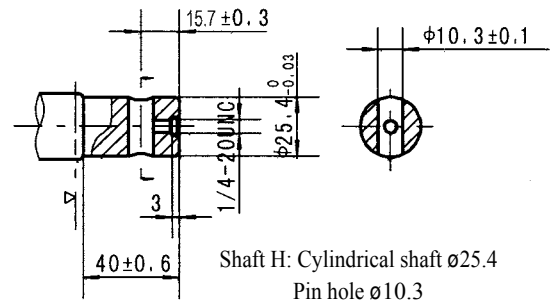
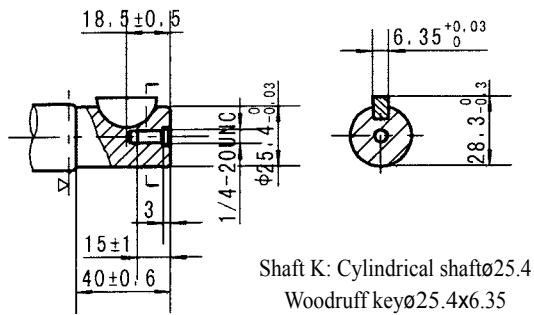
BMP SHAFT EXTENSIONS DIMENSIONS DATA



▷ Motor Mounting Surface



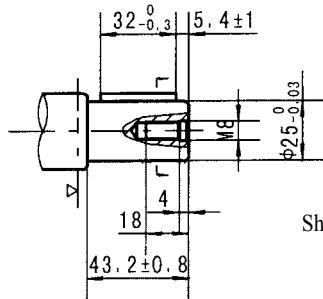
BMPH SHAFT EXTENSIONS DIMENSIONS DATA



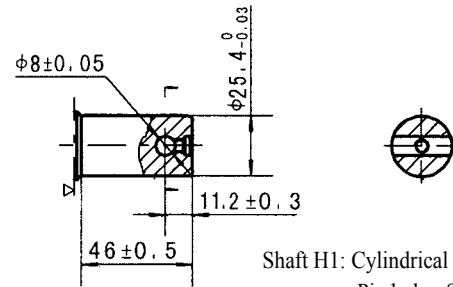
▷ Motor Mounting Surface



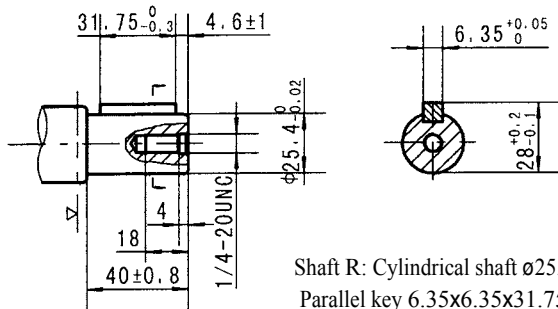
BMPH SHAFT EXTENSIONS DIMENSIONS DATA



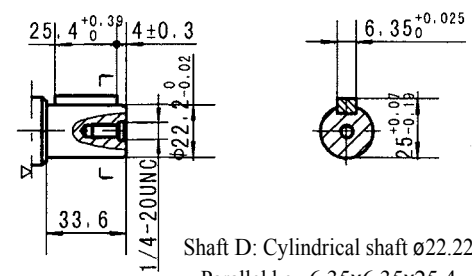
Shaft A: Cylindrical shaft $\phi 25$
Parallel key 8x7x32



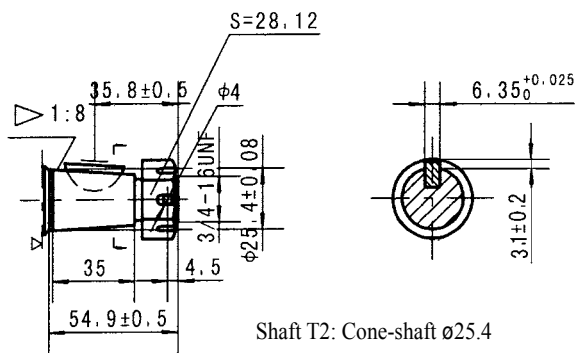
Shaft H1: Cylindrical shaft $\phi 25.4$
Pin hole $\phi 8$



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



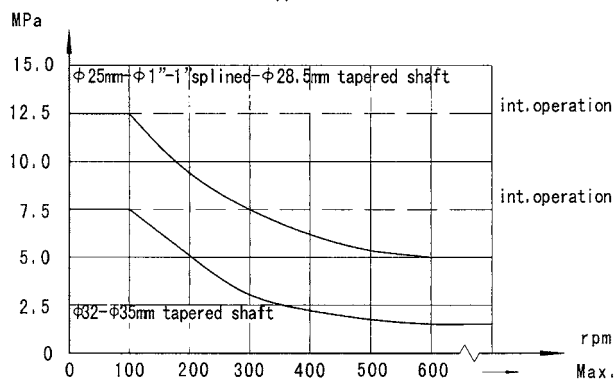
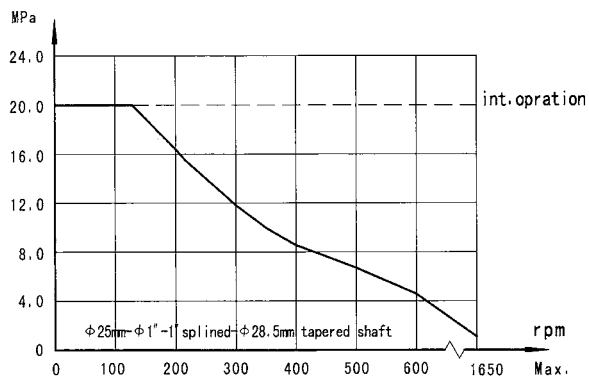
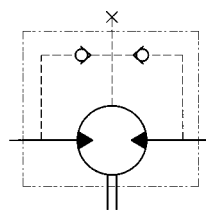
Shaft T2: Cone-shaft $\phi 25.4$
Parallel key $\phi 25.4 \times 6.35$
Tightening torque: $200 \pm 10 \text{ Nm}$

▷ Motor Mounting Surface



BMP、BMPH Series Hydraulic Motor

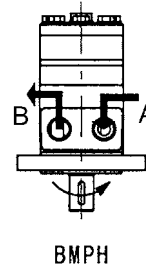
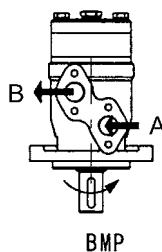
Permissible shaft seal pressure



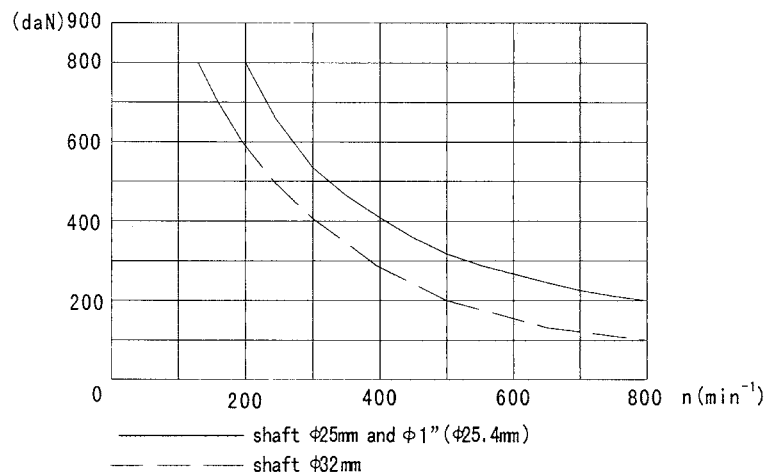
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Direction of shaft rotation: Standard

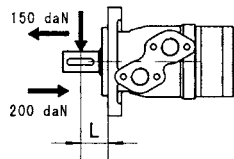
When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized.
Counter-clockwise when port "B" is pressurized.



Status of the shaft's radial force



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



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

Order Information

1 2 3 4 5 6 7 8
BMP - - - - - - - -

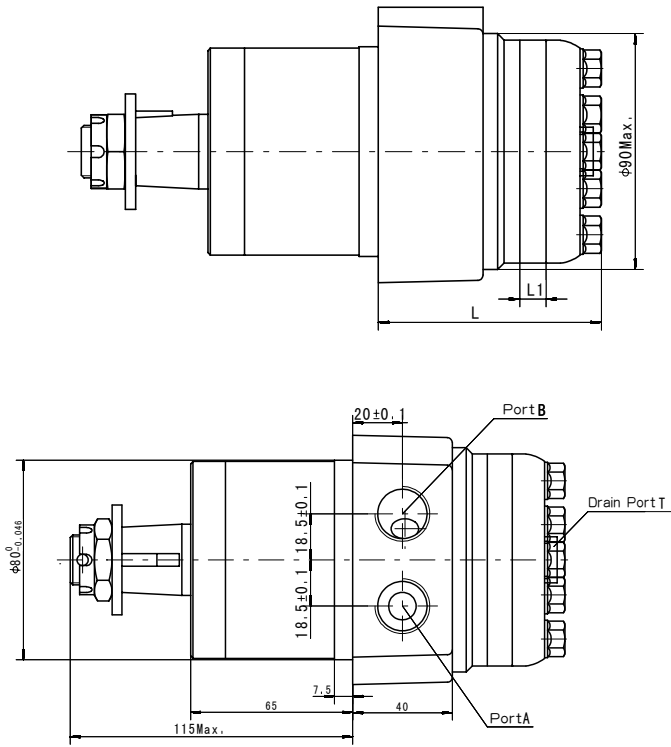
Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMP	36	2	A Shaft Ø25, parallel key 8x7x32	D G1/2 Manifold Mount	Omit Standard R Opposite	00 Omit Blue Black Silver grey	Omit N 0 F LS Standard Big radial force No case drain Free Running Low Speed
	50		B Shaft Ø32, parallel key 10x8x45	4 × M8, G1/4			
	80	4	C Shaft Ø25.4, parallel key 6.35x6.35x31.75	M22 × 1.5 Manifold Mount			
	100		E Shaft Ø25.4, splined tooth SEA 6B	4 × M8, M14 × 1.5			
	125		R Short shaft Ø25.4, parallel key 6.35x6.35x31.75	7/8-14 O-ring manifold			
	160	H4	F Shaft Ø31.75, splined tooth 14-DP12/24	4x5/16-18UNC, 7/16-20UNF			
	200		FD Long shaft Ø31.75, splined tooth 14-DP12/24	1/2-14 NPTF			
	250	H5	G Shaft Ø31.75, parallel key 7.96x7.96x31.75	Manifold 4x5/16-18UNC,			
	315		T Cone shaft Ø28.56, parallel key B5x5x14	7/16-20UNF			
	400		T3 Cone shaft Ø31.75, parallel key 7.96x7.96x25.4	PT (Rc) 1/2 Manifold 4xM8, PT (Rc) 1/4			

1 2 3 4 5 6 7 8
BMPH - - - - - - - -

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMPH	36	H2	K Shaft Ø25.4, woodruff key Ø25.4 × 6.35	G G1/2, G1/4 S 7/8-14 O-ring, 7/16-20UNF P 1/2-14 NPTF, 7/16-20UNF T 3/4-16 O-ring, 7/16-20UNF R PT (Rc) 1/2, PT (Rc) 1/4 B4 Ø10 O-ring manifold B5 4x5/16-18UNC, 7/16-20UNF 7/16-20UNF	Omit Standard R Opposite	00 Omit Blue Black Silver grey	Omit N 0 F LS Standard Big radial force No case drain Free Running Low Speed
	50		S Shaft Ø25.4, splined tooth SEA 6B				
	80		A Shaft Ø25, parallel key 8 × 7 × 32				
	100	H6	R Shaft Ø25.4, parallel key 6.35 × 6.35 × 31.75				
	125		H Shaft Ø25.4, pin hole Ø10.3				
	160	H4	H1 Shaft Ø25.4, pin hole Ø8				
	200		D Shaft Ø22.22, parallel key 6.35 × 6.35 × 25.4				
	250	H5	I Shaft Ø22.22, splined tooth 13-DP16/32				
	315		T2 Cone shaft Ø25.4, woodruff key Ø25.4 × 6.35				
	400		P Shaft Ø25, parallel key 8 × 7 × 28				

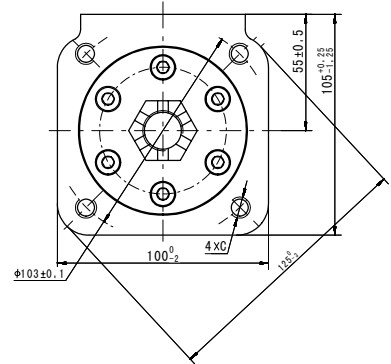
Note: When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

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

Code Mounting	G (depth)	S (depth)	M (depth)
P(A,B)	G1/2 (15)	7/8-14 O-ring (17)	M22x1.5 (15)
T	G1/4 (12)	7/16-20UNF (12)	M14x1.5 (12)
C	4xM10(20)	4x3/8-16UNC(20)	4xM10(20)



1	BMPW	—		2	—		3	—		4	—		5	—		6	—		7	—		8	
---	------	---	--	---	---	--	---	---	--	---	---	--	---	---	--	---	---	--	---	---	--	---	--

Pos.1	2	3	4	5	6	7	8
Code	Flange		Output shaft	Port and drain port	Rotation direction	Paint	Unusually function
BMPW	50	Wheel-flange Ø80 × 7.5 Omit	A	G		No paint	Omit
	80		C	S		Blue	N
	100		E	S		Black	O
	125		T	M		Silver grey	
	160						
	200						
	250						
	315						
400							

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.



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 ³ /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	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.	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.



Main Specification

Technical data for BMR with 31.75 and 32 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 ³ /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 [36cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

	2	3	5	7	9	10	12.5	14.0	16.5
4	10 105	16 100	25 92	37 80	46 71	50 58			
8	9 208	15 200	25 188	37 175	47 158	50 149	63 134	71 120	83 108
15	8 403	14 392	23 380	36 365	45 348	51 326	64 318	72 302	82 274
20	6 540	13 531	22 518	35 500	44 483	50 462	64 450	72 435	82 412
30	6 810	12 798	21 780	32 763	42 742	47 722	63 705	70 694	80 668
40	5 1092	11 1080	19 1069	30 1056	41 1042	45 1028	61 1011	68 984	79 957
Max.cont. 45	4 1230	10 1215	17 1194	29 1170	40 1150	44 1128	59 1100	66 1070	77 1020
Max.int. 55		8 1500	15 1478	26 1450	35 1420	40 1387	55 1356	61 1329	72 1299

BMR 50 [51.7cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

	5	7	9	10	12	14	16	17.5
5	35 93	45 84	61 76	67 73	77 69	88 46		
10	36 186	46 178	62 166	69 162	80 153	95 136	108 118	120 97
15	35 283	49 277	63 269	73 261	88 250	100 230	109 211	123 185
20	34.5 377	47 375	61 365	69 361	83 346	96 330	109 302	126 270
30	33 576	44 569	60 561	67 554	80 542	95 531	108 500	126 465
40	30 760	41 758	58 753	66 750	79 738	92 724	106 700	122 670
45	29.5 856	40 853	57 849	65 845	78 835	90 815	105 796	121 770
Max.cont. 50	26 950	37 940	53 925	60 906	73 880	85 852	99 832	114 801
Max.int. 60	20 1138	33 1124	48 1100	56 1075	69 1056	81 1028	95 1006	109 970

BMR 80 [81.5cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

	5	7	9	10	12	14	16	17.5	20
5	50 59	64 56	88 50	108 44	133 38				
10	54 118	77 113	99 106	108 97	129 86	150 79	173 56		
20	57 238	78.0 234	102 227	111 216	134 203	155 190	177 178	196 154	225 135
30	54 360	75 352	100 340	108 332	131 316	152 302	176 290	195 274	223 250
40	48 480	73 470	96 458	105 445	127 430	148 418	172 403	190 388	220 359
50	42 604	70 595	93 582	102 570	124 556	147 540	170 521	188 504	218 487
Max.cont. 60	37 726	66 715	89 704	98 692	121 678	144 663	166 647	184 622	213 594
70	32 845	60 834	83 820	95 802	116 789	140 767	160 754	177 730	208 705
Max.int. 75	21 910	50 895	78 881	90 867	111 852	135 830	154 806	171 787	200 756

BMR 100 [102cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

	5	7	9	10	12	14	16	17.5	20
5	66 45	92 42	120 38	135 34	156 27				
10	68 93	96 90	125 86	138 81	159 74	188 57	212 42		
20	65 189	94.0 185	123 180	137 173	155 165	186 158	210 150	238 139	274 118
30	63 286	92 281	120 275	133 266	153 257	185 246	209 237	235 225	270 207
40	57 385	88 378	117 365	130 355	152 345	185 332	208 320	233 314	267 297
50	48 482	79 477	110 470	123 460	150 448	183 435	204 420	228 405	260 389
Max.cont. 60	38 580	70 572	105 560	120 548	144 535	178 523	200 510	220 500	252 478
70	32 678	65 670	100 660	118 648	141 638	176 626	197 615	215 606	246 580
Max.int. 75	23 728	59 720	93 710	111 695	136 681	170 667	192 650	210 634	240 618

Torque (N•m) 135
Speed (rpm) 830

cont.
int.



Performance Data

BMR 125 [127.2cm³/rev.]

Pressure (MPa)

Max.cont.

Max.int.

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

BMR 160 [157.2cm³/rev.]

Pressure (MPa)

Max.cont.

Max.int.

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

BMR 200 [194.5cm³/rev.]

Pressure (MPa)

Max.cont.

Max.int.

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

BMR 250 [253.5cm³/rev.]

Pressure (MPa)

Max.cont.

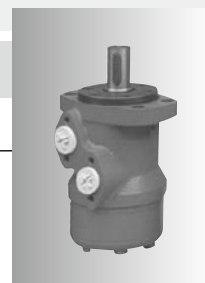
Max.int.

5	7	9	10	12	14	16	17.5	20
---	---	---	----	----	----	----	------	----

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

cont.
int.

Torque (N•m) 256
Speed (rpm) 287



Performance Data

BMR 315 [317.5cm³/rev.]

Pressure (MPa)

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

Torque (N•m) 481
Speed (rpm) 200

BMR 375 [381.4cm³/rev.]

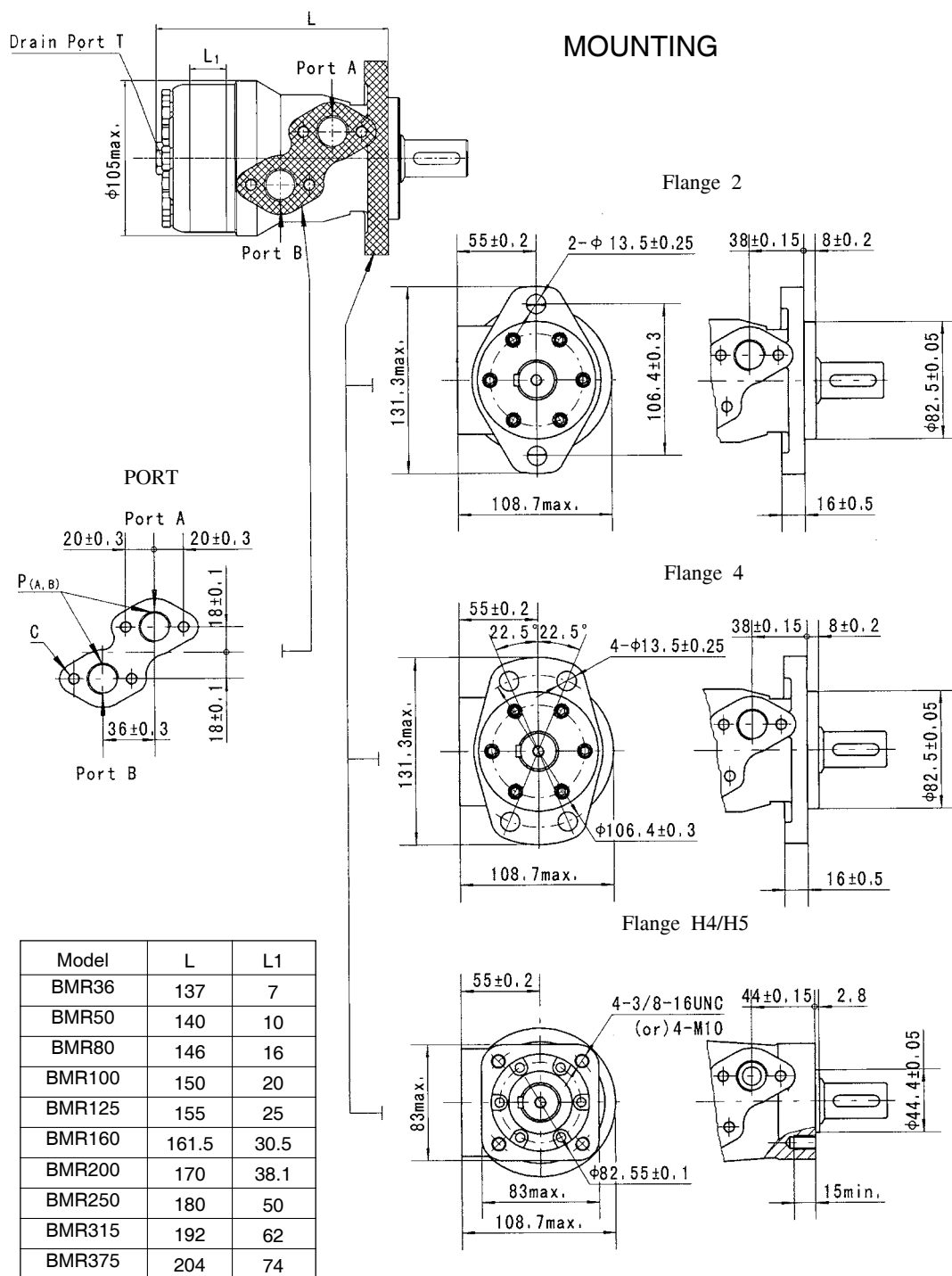
Pressure (MPa)

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

☐ cont.
☐ int.



BMR DIMENSIONS AND MOUNTING DATA

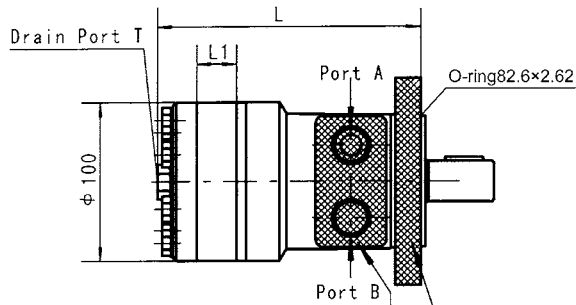


Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
Mounting					
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)

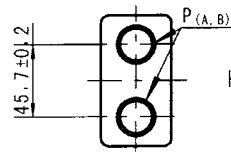


BMRS DIMENSIONS AND MOUNTING DATA

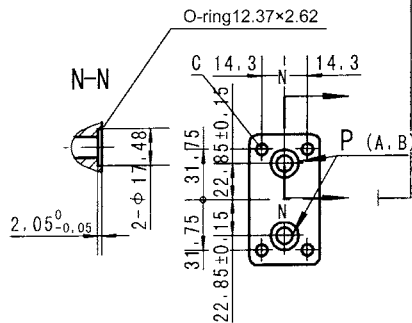
MOUNTING



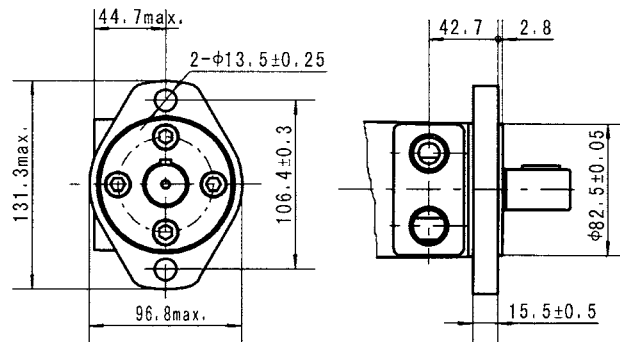
PORT: G, S, P, R, M1, M2, M3



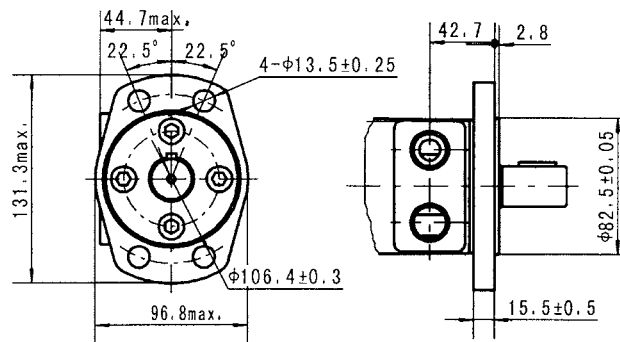
PORT: B4, B5



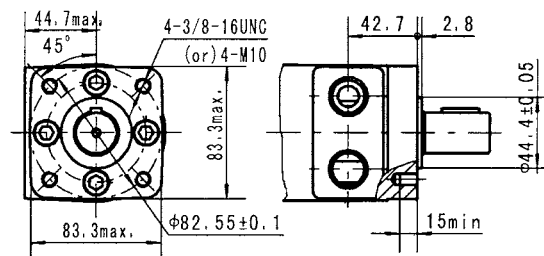
Flange H2



Flange H6



Flange H4/H5

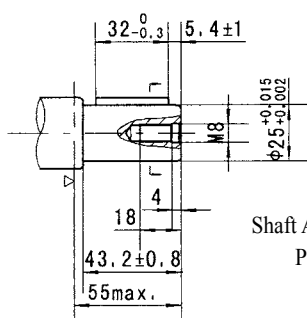


Model	L	L1
BMRS36	141	7
BMRS50	144	10
BMRS80	150	16
BMRS100	154	20
BMRS125	159	25
BMRS160	165.5	30.5
BMRS200	174	38.1
BMRS250	184	50
BMRS315	196	62
BMRS375	208	74

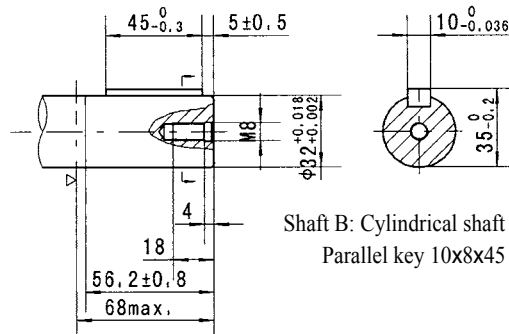
Code Mounting	G (depth)	S (depth)	P (depth)	R (depth)	M1 (depth)	M2 (depth)	M3 (depth)	B4 (depth)	B5 (depth)
P(A,B)	G1/2 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)	M18 x 1.5 (15)	M20 x 1.5 (15)	M22 x 1.5 (15)	ø10	ø10
T	G1/4 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)	M10 x 1 (12)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



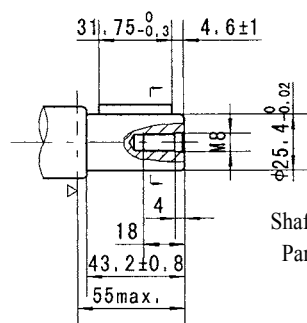
BMR SHAFT EXTENSIONS DIMENSIONS DATA



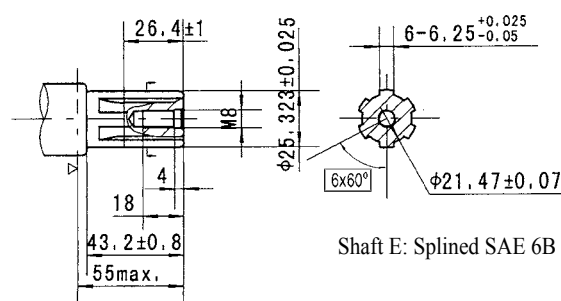
Shaft A: Cylindrical shaft Ø25
Parallel key 8x7x32



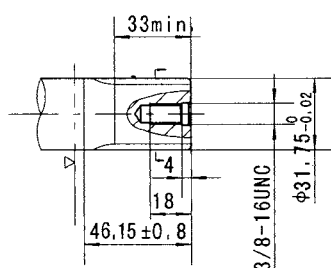
Shaft B: Cylindrical shaft Ø32
Parallel key 10x8x45



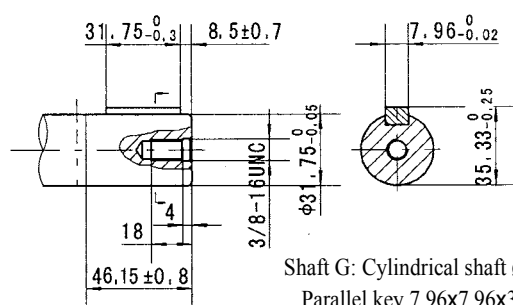
Shaft C: Cylindrical shaft Ø25.4
Parallel key 6.35x6.35x31.75



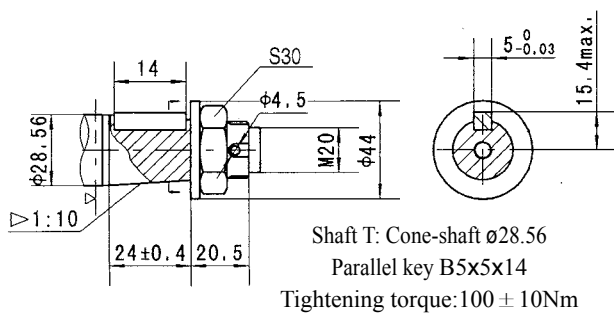
Shaft E: Splined SAE 6B



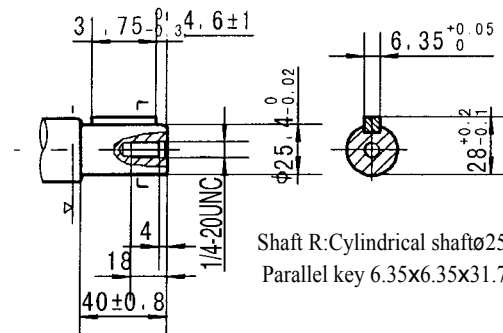
Shaft F: Splined
14-DP12/24



Shaft G: Cylindrical shaft Ø31.75
Parallel key 7.96x7.96x31.75



Shaft T: Cone-shaft Ø28.56
Parallel key B5x5x14
Tightening torque: 100 ± 10Nm

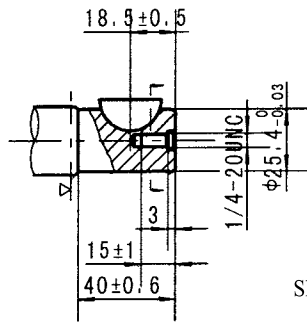


Shaft R: Cylindrical shaft Ø25.4
Parallel key 6.35x6.35x31.75

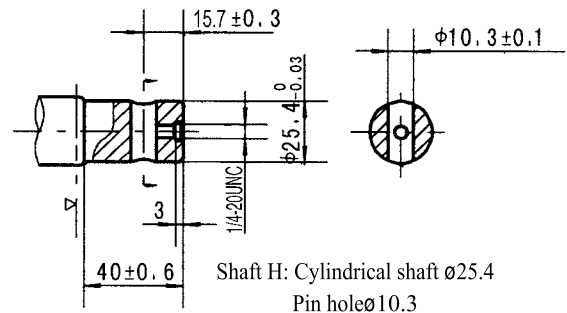
▷ Motor Mounting Surface



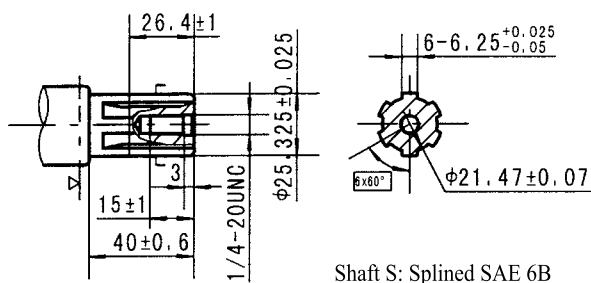
BMRS SHAFT EXTENSIONS DIMENSIDNS DATA



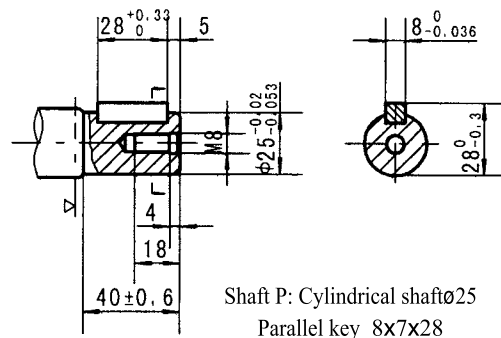
Shaft K: Cylindrical shaft ø25.4
Woodruff key ø25.4x6.35



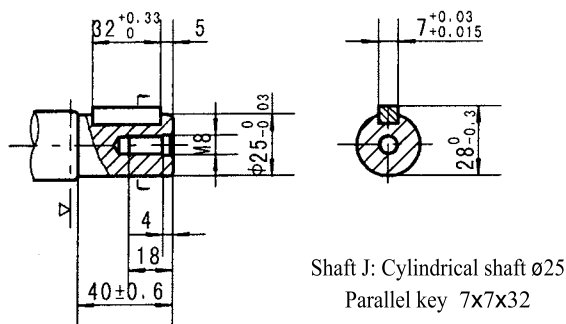
Shaft H: Cylindrical shaft ø25.4
Pin hole ø10.3



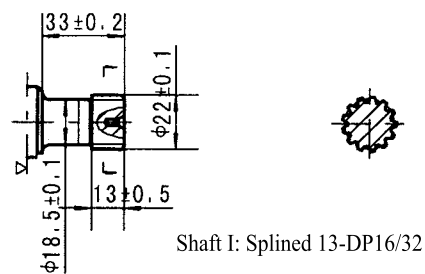
Shaft S: Splined SAE 6B



Shaft P: Cylindrical shaft ø25
Parallel key 8x7x28

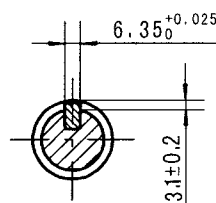
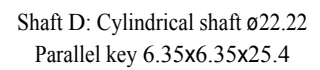
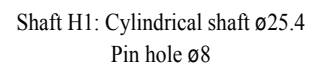


Shaft J: Cylindrical shaft ø25
Parallel key 7x7x32



Shaft I: Splined 13-DP16/32

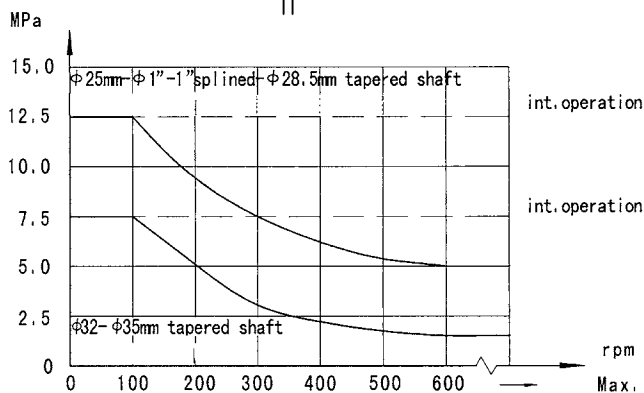
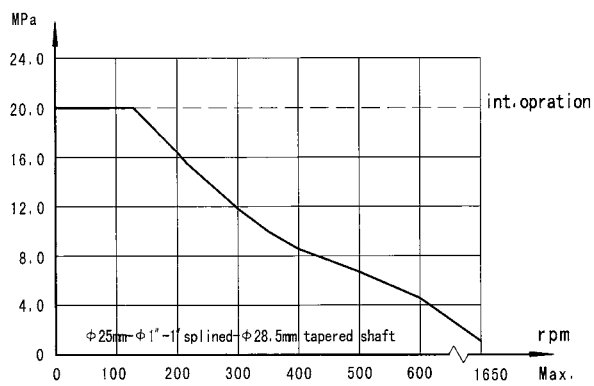
▷ Motor Mounting Surface





BMR、BMRS Series Hydraulic Motor

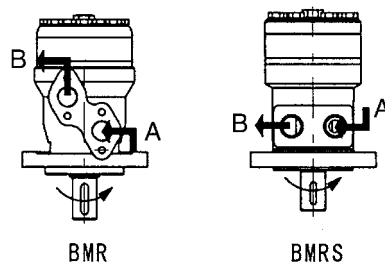
Permissible shaft seal pressure



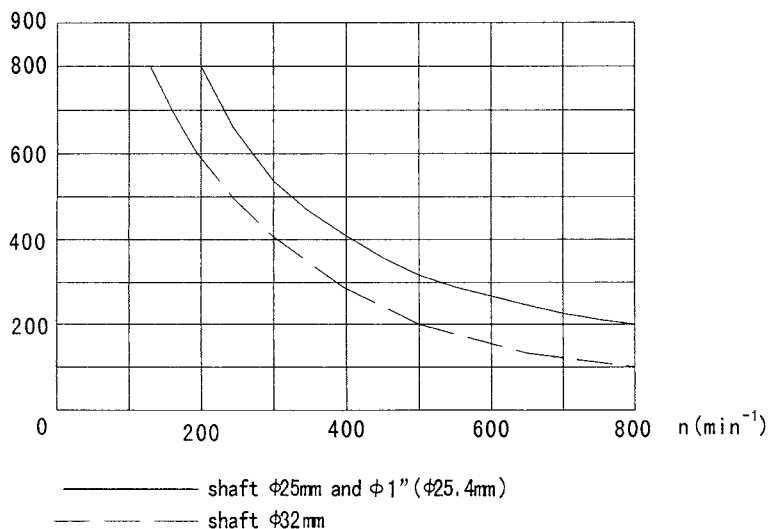
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Direction of shaft rotation: Standard

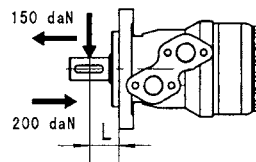
When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized.
Counter-clockwise when port "B" is pressurized.



Status of the shaft's radial force



$$F_r = \frac{800,25000}{n} \text{ daN}$$



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

Order Information

1 2 3 4 5 6 7 8
BMR - - - - - - - -

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMR	36	2	A	D	Standard	00	Omit
	50		B	M			
	80	4	C	S	Opposite	B	F
	100		E	P			
	125	H4	R	PT(Rc)1/2	R	S	LS
	160		F	PT(Rc)1/4			
	200	H5	FD	PT(Rc)1/2	Standard	No paint	Standard
	250		G	PT(Rc)1/4			
	315	H5	T	PT(Rc)1/4	Opposite	Black	Free Running
	375						

1 2 3 4 5 6 7 8
BMRS - - - - - - - -

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMRS	36	H2	K	G	Standard	00	Omit
	50		S	S			
	80	H6	A	P	Opposite	B	F
	100		R	T			
	125	H4	H	R	R	S	LS
	160		H1	B4			
	200	H5	D	B5	Standard	No paint	Standard
	250		I	M1			
	315	H5	T2	M2	Opposite	Black	Free Running
	375		P	M3			

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.



BMH SERIES HYDRAULIC MOTOR

BMH 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 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 Specificaion

Type		BMH 200	BMH 250	BMH 315	BMH 400	BMH 500
Geometric displacement (cm ³ /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	166
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.	11.2	9.2	9.8	7.4	6.5
	int.	17	15	13	13	11
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.	200	175
	int.	225	200
	peak	250	225

- * 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, 1¹/₄ 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		
Flow (L/min)	5	98	194	284					
		25	25	22					
	10	101	204	301	391	482			
		43	41	36	29	14			
	20	99	201	304	402	509	576		
		100	97	93	85	69	56		
	30	97	197	300	402	510	579		
		145	143	139	130	114	101		
	40	90	190	292	399	507	578		
		200	200	200	188	168	153		
Max.cont.	50	82	183	284	392	500	571		
		248	246	244	235	213	199		
	60	73	174	274	384	493	563		
		292	290	287	279	260	244		
	70	63	163	264	374	481	554		
		352	350	349	338	318	301		
	75	59	157	259	366	475	547		
		366	365	363	355	335	319		
	80	53	150	253	358	466	538		
		381	381	380	371	352	338		
Max.int.	90	39	140	241	348	456	526		
		443	437	434	426	407	392		

BMH 250 [255.9cm³/rev.]

		Pressure (MPa)						Max.cont.	Max.int.
		3.5	7	9	12	14.5	17.5	20	
Flow (L/min)	5	121	246	318	398				
		19	19	18	14				
	10	130	258	331	425	515	595		
		34	33	31	29	23	12		
	20	130	258	332	432	520	621	702	
		78	77	76	73	65	53	42	
	30	122	251	327	429	520	621	700	
		115	113	111	105	96	84	75	
	40	115	240	323	422	513	616	698	
		157	157	156	150	139	127	114	
Max.cont.	50	105	232	314	411	505	606	687	
		196	195	192	185	173	159	147	
	60	94	220	302	401	496	596	676	
		232	230	226	218	206	192	180	
	70	81.4	209	288	389	484	582	666	
		274	274	274	266	252	238	222	
	75	72	203	280	381	475	574	659	
		290	289	287	279	266	251	236	
	80	66	194	273	371	467	566	651	
		303	302	298	290	279	264	249	
Max.int.	90	49	178	256	355	453	552	634	
		348	347	345	337	325	309	292	

BMH 315 [316.1cm³/rev.]

		Pressure (MPa)						Max.cont.	Max.int.
		3.5	7.5	10	13.5	15.5	17.5	20	
Flow (L/min)	5	155	325						
		16	13						
	10	163	342	454	556				
		27	24	18	14				
	20	169	349	469	582	664	733	809	
		63	61	55	48	40	32	19	
	30	165	344	470	580	669	740	824	
		93	89	82	77	67	59	46	
	40	154	337	465	577	663	737	827	
		126	126	119	111	99	88	73	
Max.cont.	50	141	325	455	568	656	728	824	
		159	155	148	139	126	115	98	
	60	121	312	440	555	643	715	812	
		187	186	179	169	154	143	124	
	70	103	298	425	541	631	703	800	
		222	222	215	205	187	176	157	
	75	94	287	417	529	623	696	792	
		236	233	224	215	196	184	166	
	80	82	277	406	518	611	688	784	
		246	244	236	228	210	197	174	
Max.int.	90	62	256	386	496	593	669	767	
		282	280	275	266	248	234	209	

BMH 400 [406.4cm³/rev.]

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

Torque (N·m) 593
Speed (rpm) 248

cont.
int.



Performance Data

BMH 500 [500cm³/rev.]

Pressure (MPa)

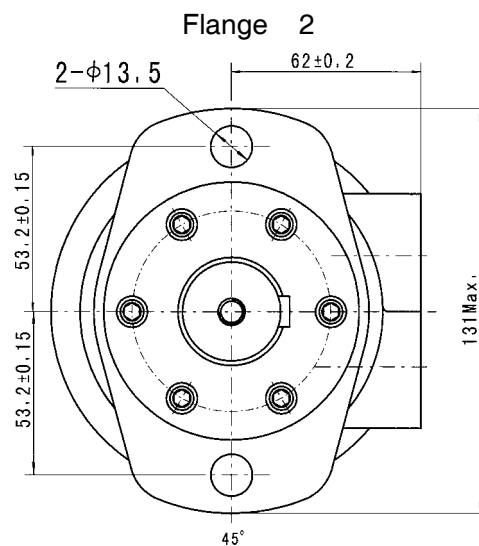
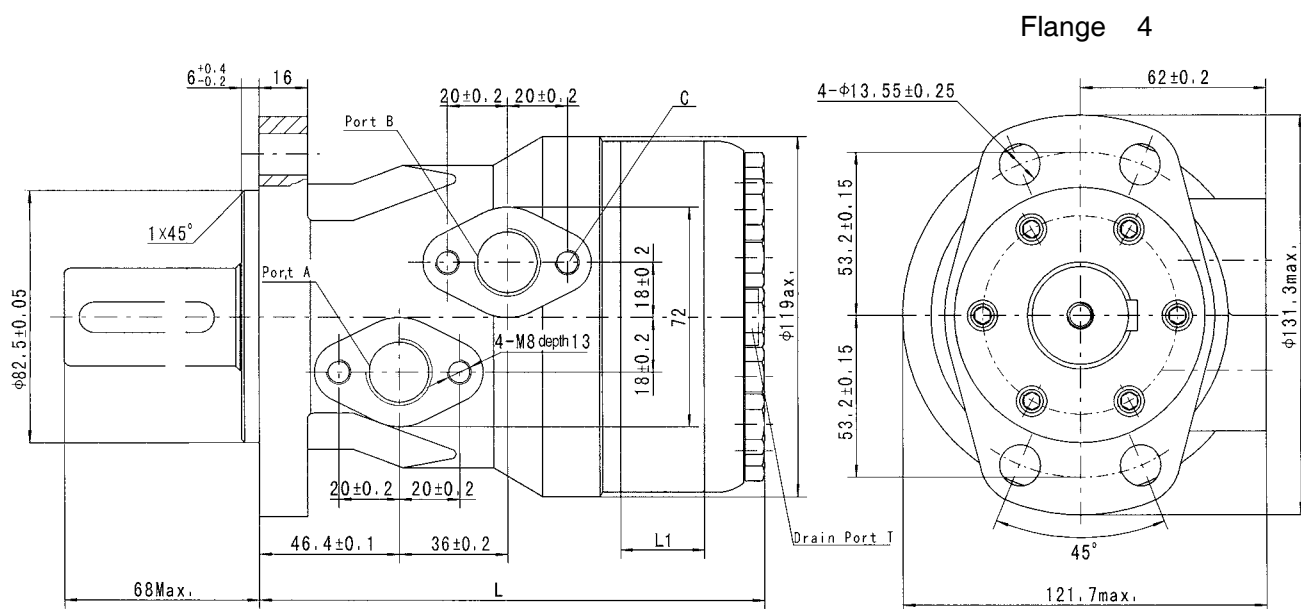
				Max.cont.	Max.int.	
	2.5	5	8.5	10	12.5	16
Flow (L/min)	5	165 11	317 11	516 8		
	10	178 20	335 19	555 17	669 15	791 13
	20	177 42	331 42	559 41	673 38	799 36
	30	172 64	320 63	553 61	663 57	792 53
	40	163 85	309 85	541 83	654 79	783 75
	50	146 103	296 103	523 103	635 97	768 93
	60	121 124	275 124	502 123	614 117	747 113
	70	97 148	256 148	482 148	597 140	729 134
	75	79 155	240 155	469 155	582 152	714 144
	80	60 166	226 166	453 166	570 159	701 153
Max.int.	90	34 166	201 165	421 164	550 157	673 156

cont.
 int.

Torque (N•m) 673
Speed (rpm) 156



BMH DIMENSIONS AND MOUNTING DATA

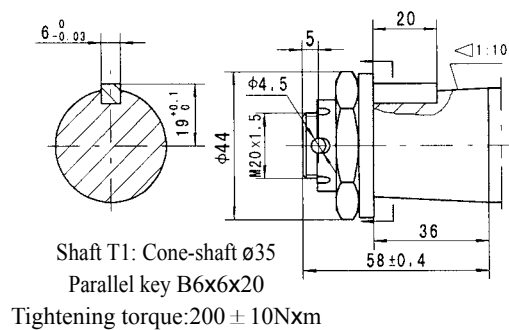
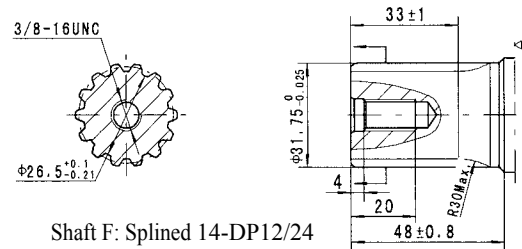
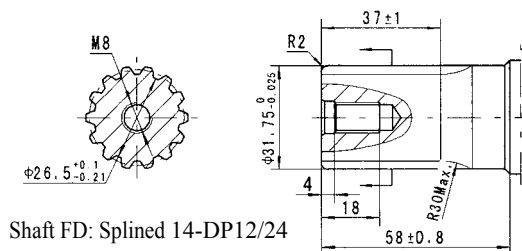
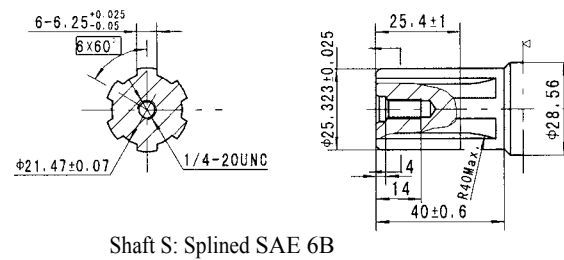
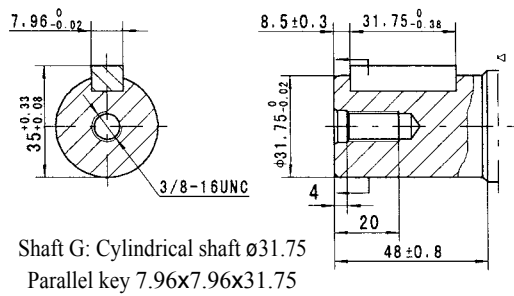
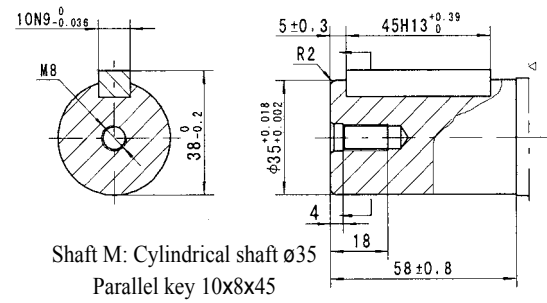
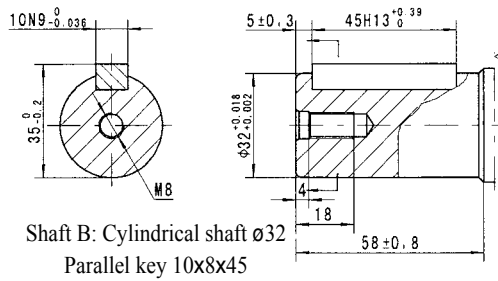


Model	L	L1
BMH-200	168	27
BMH-250	175	34
BMH-315	184	42
BMH-400	195	54
BMH-500	206	65

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-M8 (13)	4-M8 (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

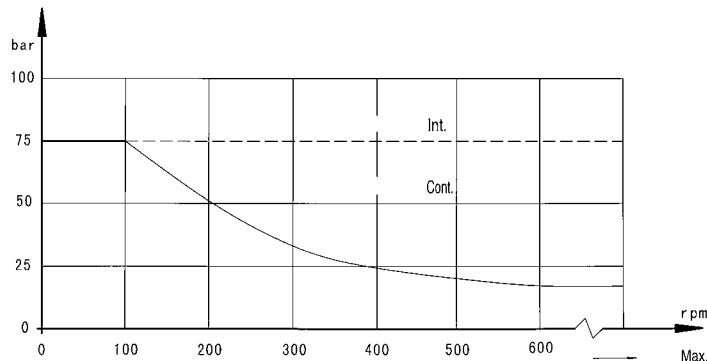
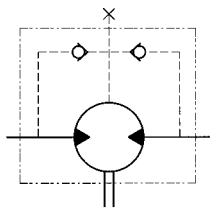




BMH series Hydraulic Motor

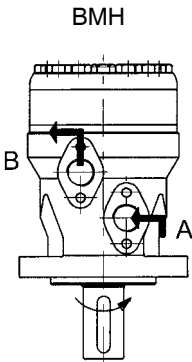
Permissible shaft seal pressure

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

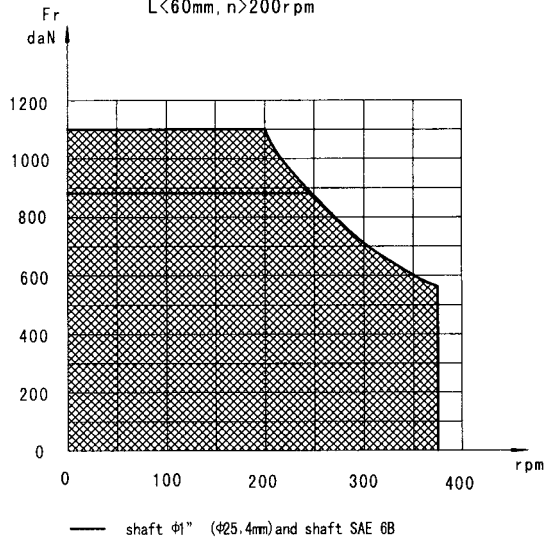
When facing shaft end of motor, shaft to rotate:
 Clockwise when port "A" is pressurized.
 Counter-clockwise when port "B" is pressurized.



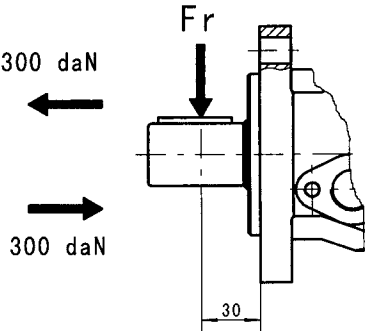
Status of the shaft's radial force

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

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



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



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

Order Information

1 2 3 4 5 6 7 8

BMH

Pos.1	2	3	4	5	6	7	8
Code		Flange	Output shaft	Port and drain port	Rotation direction	Paint	Unusually function
Omit	200	4 4 × Ø13.5 Rhomb × flange Pilot Ø82.5 × 6 2 2 × Ø13.5 Rhomb × flange Pilot Ø82.5 × 6	B Shaft Ø32 , parallel key 10 × 8 × 45	D G1/2 Manifold mount 4 × M8, G1/4	Omit Standard R Opposite	00 Omit B S No paint Blue Black Silver grey	Omit 0 F LS Standard No drain Free Running Low Speed
	250		M Shaft Ø35, parallel key 10 × 8 × 45	M M22 × 1.5 Manifold mount 4 × M8, M14 × 1.5			
	315		F Shaft Ø31.75, splined key 14-DP12/24	S 7/8-14 O × ring Manifold mount 4 × M8, 7/16-20UNF			
	400		FD Long Shaft Ø31.75, splined key 14-DP12/24	P 1/2-14 NPTF Manifold mount 4 × M8, 7/16-20UNF			
	500		G Shaft Ø32 , parallel key 7.96 × 7.96 × 31.75 T1 Cone shaft Ø35, parallel key B6 × 6 × 20 S Shaft Ø25.4 , parallel key SAE 6B	R PT(Rc) 1/2 Manifold mount 4 × M8, PT(Rc)1/4			

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.



BMS SERIES HYDRAULIC MOTOR

BMS 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. 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		BMS BMSE 80	BMS BMSE 100	BMS BMSE 125	BMS BMSE 160	BMS BMSE 200	BMS BMSE 250	BMS BMSE 315	BMS BMSE 375
Geometric displacement (cm ³ /rev.)		80.6	100.8	125	157.2	200	252	314.5	370
Max. speed (rpm)	cont.	800	748	600	470	375	300	240	200
	int.	988	900	720	560	450	360	280	240
Max. torque (N•m)	cont.	190	240	310	316	400	450	560	536
	int.	240	300	370	430	466	540	658	645
	peak	260	320	400	472	650	690	740	751
Max. output (kW)	cont.	15.9	18.8	19.5	15.6	15.7	14.1	14.1	11.8
	int.	20.1	23.5	23.2	21.2	18.3	17.0	18.9	17
Max. pressure drop (MPa)	cont.	17.5	17.5	17.5	15	14	12.5	12	10
	int.	21	21	21	21	16	16	14	12
	peak	22.5	22.5	22.5	22.5	22.5	20	18.5	14
Max. flow (L/min)	cont.	65	75	75	75	75	75	75	75
	int.	80	90	90	90	90	90	90	90
Max. inlet pressure (MPa)	cont.	25	25	25	25	25	25	25	25
	int.	30	30	30	30	30	30	30	30
Weight (kg)		9.8	10	10.3	10.7	11.1	11.6	12.3	12.6

- * 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

BMS 80 [80.6cm³/rev.]

Pressure (MPa)

		3.5	7	10.5	14	Max.cont. 17.5	21	Max.int. 22.5
Flow (L/min)	15	35	80	120	158	195	235	249
	30	180	174	168	164	158	151	143
	40	35	80	120	158	195	240	260
	50	362	352	346	338	330	322	310
	60	35	79	119	155	193	234	250
Max.cont.	40	482	473	464	453	444	434	415
	50	30	77	117	153	192	232	248
	60	602	594	587	569	560	551	522
Max.int.	60	28	77	117	153	192	232	247
	65	724	713	707	683	673	664	629
	80	25	75	114	152	190	230	245
Max.int.	65	790	785	770	760	742	720	704
	80	22	70	110	140	170	200	220
Max.int.	80	980	965	950	920	891	860	830

BMS 100 [100.8cm³/rev.]

Pressure (MPa)

		3.5	7	10.5	14	Max.cont. 17.5	21	Max.int. 22.5
Flow (L/min)	15	48	95	150	200	250	289	310
	30	146	144	139	135	130	120	105
	40	45	94	146	198	250	295	317
	50	291	289	278	274	269	258	242
	60	43	89	142	196	248	293	316
Max.cont.	40	387	384	374	359	350	335	320
	50	40	88	135	194	247	292	315
	60	486	483	473	462	450	430	420
Max.int.	60	37	88	132	185	244	289	312
	75	588	584	574	562	550	538	520
	90	35	80	130	180	240	286	310
Max.int.	75	740	735	720	705	696	676	653
	90	30	75	124	170	236	277	303
Max.int.	90	850	840	810	787	770	750	747

BMS 125 [125cm³/rev.]

Pressure (MPa)

		3.5	7	10.5	14	Max.cont. 17.5	21	Max.int. 22.5
Flow (L/min)	15	55	120	176	245	309	349	375
	30	112	110	103	96	93	90	84
	40	55	120	175	250	324	375	408
	50	222	220	217	208	200	199	190
	60	55	120	175	250	324	370	408
Max.cont.	40	302	298	292	284	276	268	260
	50	50	115	176	248	320	370	406
	60	379	373	368	363	350	339	328
Max.int.	60	45	113	171	245	324	368	406
	75	456	448	443	439	425	406	393
	90	45	110	167	240	314	370	401
Max.int.	75	570	563	555	546	533	515	503
	90	40	105	162	237	309	365	398
Max.int.	90	685	676	670	659	644	625	610

BMS 160 [157.2cm³/rev.]

Pressure (MPa)

		3.5	7	10.5	14	Max.cont. 17.5	21	Max.int. 22.5
Flow (L/min)	15	70	140	205	305	371	430	473
	30	91	88	84	78	76	74	58
	40	75	150	214	321	380	427	490
	50	185	182	176	168	164	162	152
	60	70	150	215	320	378	425	488
Max.cont.	40	248	244	239	229	224	217	204
	50	65	145	215	316	378	425	482
	60	312	308	304	294	288	280	270
Max.int.	60	65	145	214	315	375	424	482
	75	375	371	365	357	346	336	323
	90	60	138	208	311	375	420	
Max.int.	75	470	465	458	447	436	426	
	90	56	130	200	308	370	414	
Max.int.	90	564	559	551	541	526	517	

Torque (N•m) 309
Speed (rpm) 644

cont.
int.



Performance Data

BMS 200 [200cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	10.5	14	17.5	22.5
Flow (L/min)	15	89	190	295	400	484	608
		73	71	68	64	60	52
	30	87	190	294	399	485	600
		148	146	143	140	135	127
	40	86	188	292	397	483	594
		193	191	189	186	181	172
Max.cont.	50	80	184	290	395	480	590
		247	245	243	240	235	226
	60	74	178	286	390	475	582
		298	295	293	290	284	273
	75	58	160	275	375	460	570
		372	369	365	362	358	346
Max.int.	90	49	148	260	355	445	555
		440	435	430	422	411	401

BMS 250 [252cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	10.5	14	17.5	22.5
Flow (L/min)	15	117	230	355	52	450	554
		58	55	350	51	47	46
	30	117	225	350	112	446	560
		118	117	348	109	107	106
	40	115	225	345	152	442	552
		160	156	345	150	146	142
Max.cont.	50	110	220	340	198	438	546
		202	200	340	196	195	192
	60	105	220	338	237	435	542
		242	239	338	234	231	229
	75	95	215	332	293	430	537
		300	296	332	286	282	278
Max.int.	90	90	205	348	420	530	632
		360	354		340	332	326

BMS 315 [314.5cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	10.5	12	14	18.5
Flow (L/min)	15	160	320	465	555	650	748
		48	47	45	43	40	38
	30	165	322	468	560	658	752
		94	92	90	89	86	85
	40	160	310	457	546	642	741
		125	123	120	118	116	115
Max.cont.	50	155	305	450	538	637	736
		158	156	153	150	147	145
	60	152	302	442	532	632	732
		175	174	170	164	162	159
	75	145	295	436	525	628	726
		236	234	230	227	225	222
Max.int.	90	132	280	430	520	622	723
		285	282	280	276	273	270

BMS 375 [370cm³/rev.]

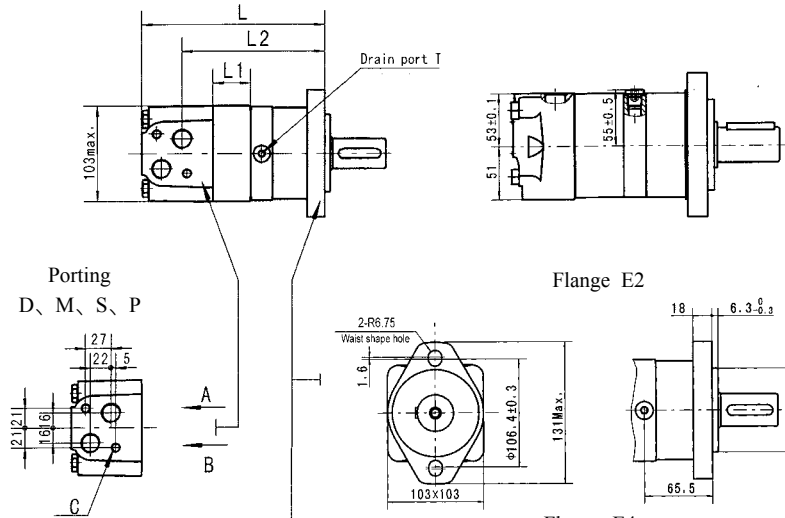
		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	9	10	12	14
Flow (L/min)	15	185	362	474	512	588	660
		40	39	38	37	35	33
	30	184	364	475	514	590	661
		80	78	77	76	74	72
	40	180	362	473	513	588	659
		106	104	103	102	100	97
Max.cont.	50	160	360	472	511	586	658
		133	131	130	129	128	125
	60	150	359	471	510	585	657
		157	156	155	154	152	150
	75	130	353	465	504	584	651
		200	198	196	195	194	193
Max.int.	90	105	350	462	500	580	647
		238	235	234	232	230	227

Torque (N•m) 520
Speed (rpm) 276

cont.
int.



BMS DIMENSIONS AND MOUNTING DATA



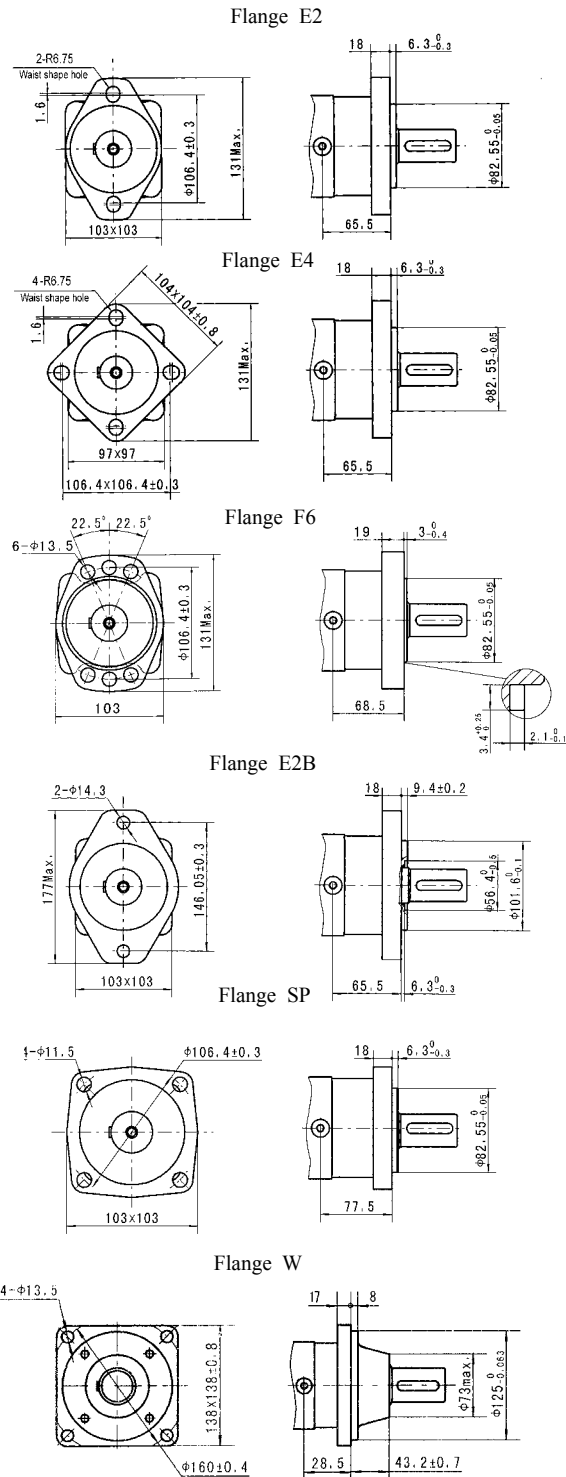
Model	L	L1	L2
BMS-80	167	13	123.2
BMS-100	171	17	127.2
BMS-125	176	22	132.2
BMS-160	181.5	27.5	137.7
BMS-200	189	35.1	145.2
BMS-250	201	47	157.2
BMS-315	213	59	169.2
BMS-375	225	71	181.2

Model	L	L1	L2
BMS-80-W	129.4	13	86
BMS-100-W	133.4	17	90
BMS-125-W	138.4	22	95
BMS-160-W	143.9	27.5	100.5
BMS-200-W	151.4	35.1	108
BMS-250-W	163.4	47	120
BMS-315-W	175.4	59	132
BMS-375-W	187.4	71	144

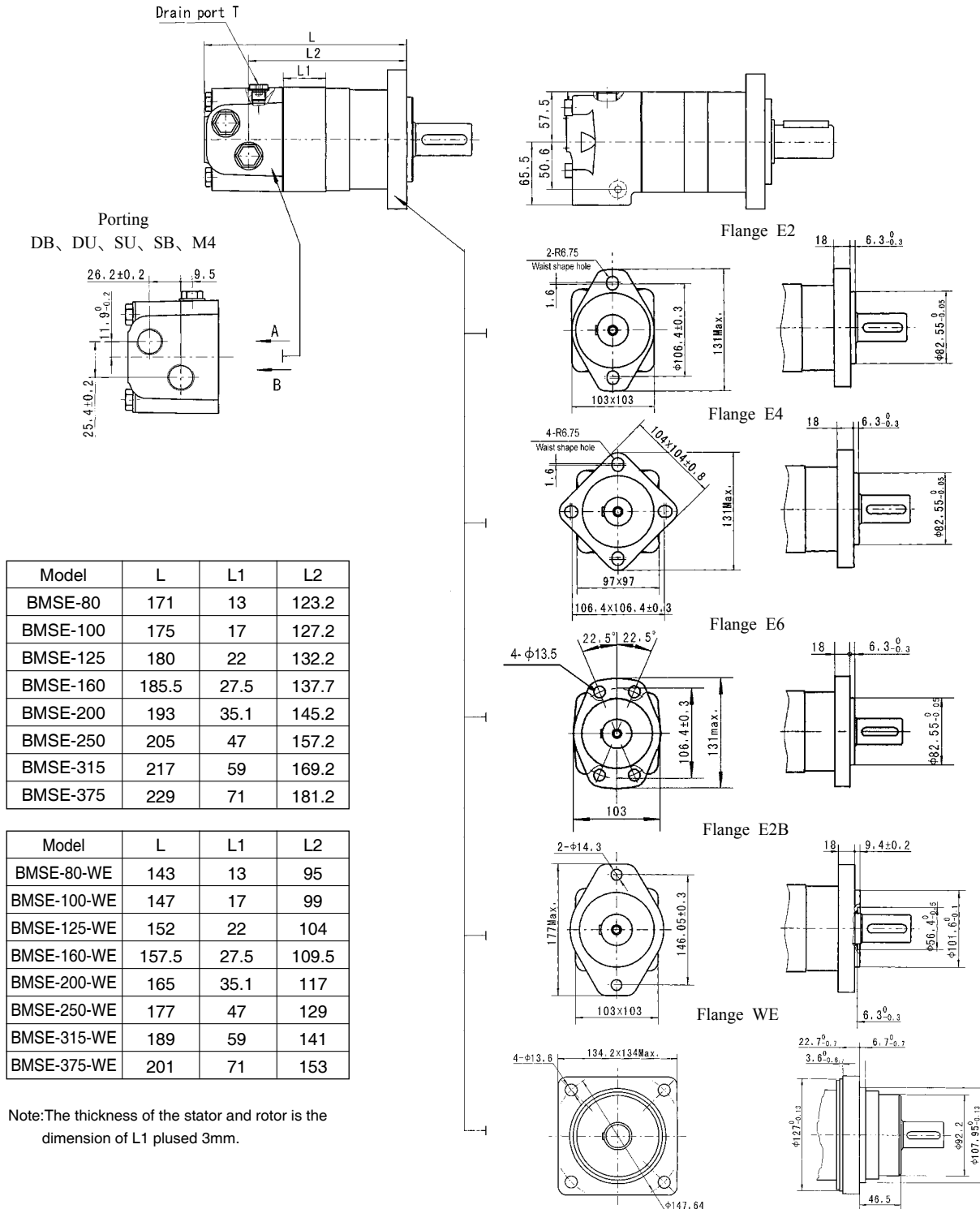
Note:1) If the mounting SP is used, the dimensions of L and L2 should plus 12mm.

2) The thickness of the stator and rotor is the dimension of L1 plused 3mm.

Code Mounting	D (depth)	M (depth)	S (depth)	P (depth)
P(A,B)	G1/2(18)	M22x1.5(18)	7/8-14 O-ring (18)	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)

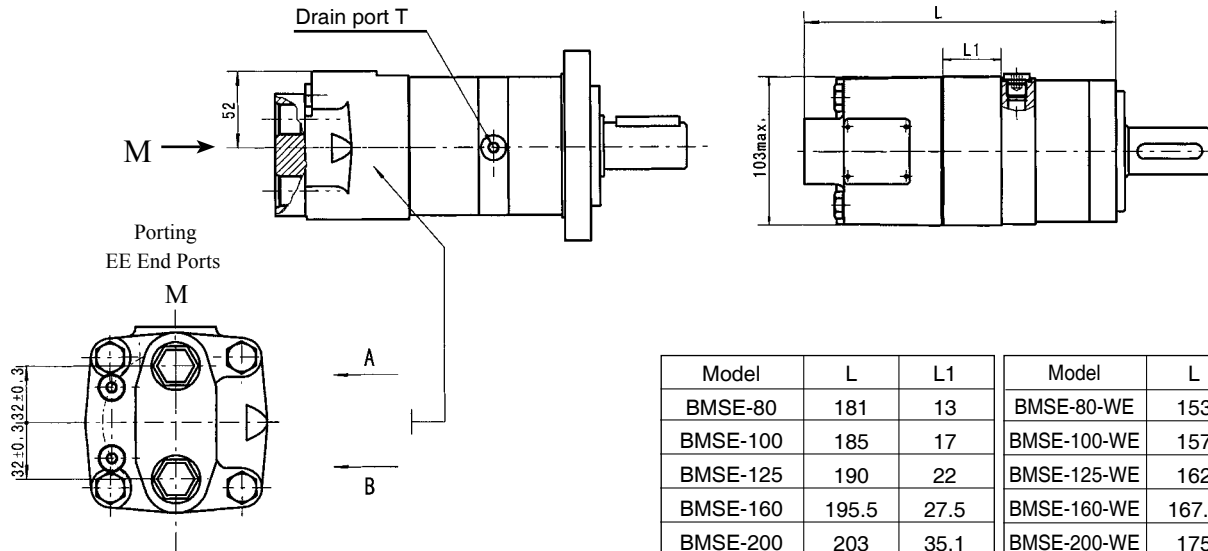


BMSE DIMENSIONS AND MOUNTING DATA



Code Mounting	DB (depth)	DU (depth)	SU (depth)	SB (depth)	M4 (depth)
P(A,B)	G1/2 (18)	G1/2 (18)	7/8-14 O-ring (18)	7/8-14 O-ring (18)	M22 x 1.5 (18)
T	G1/4 (12)	7/16-20UNF(12)	7/16-20UNF(12)	G1/4 (12)	M14 x 1.5 (12)

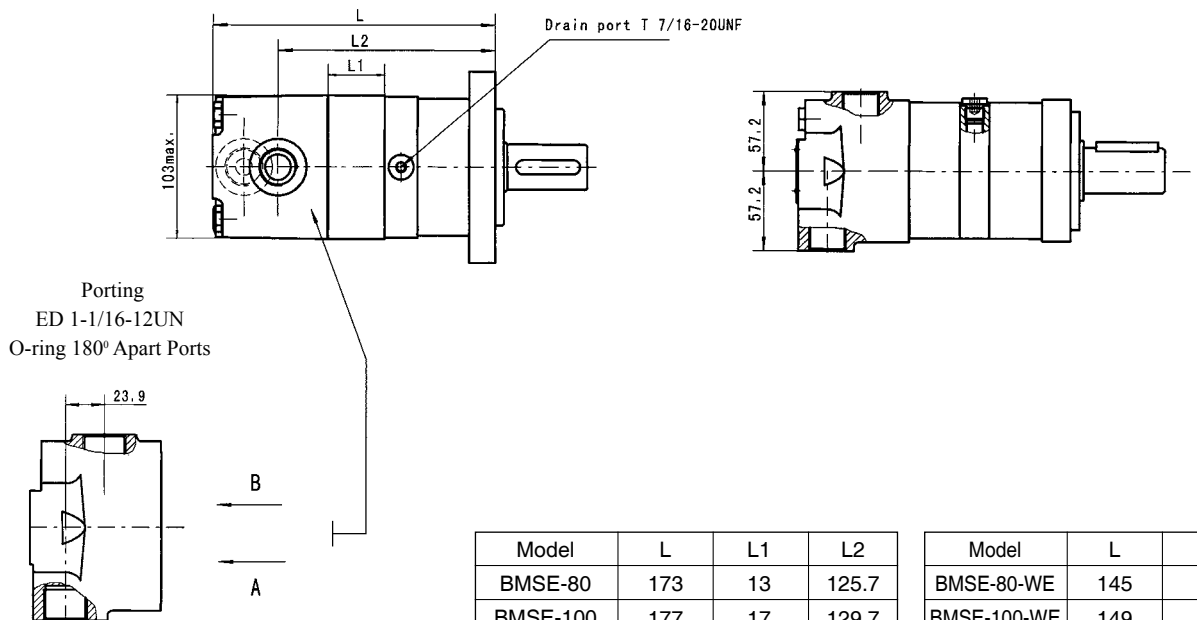
BMSE DIMENSIONS AND MOUNTING DATA



Code Mounting	EE-D (depth)	EE-M2 (depth)	EE-S2 (depth)
P(A,B)	G1/2 (18)	M22 x 1.5 (18)	7/8-14 O-ring (18)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)

Model	L	L1	Model	L	L1
BMSE-80	181	13	BMSE-80-WE	153	13
BMSE-100	185	17	BMSE-100-WE	157	17
BMSE-125	190	22	BMSE-125-WE	162	22
BMSE-160	195.5	27.5	BMSE-160-WE	167.5	27.5
BMSE-200	203	35.1	BMSE-200-WE	175	35.1
BMSE-250	215	47	BMSE-250-WE	187	47
BMSE-315	227	59	BMSE-315-WE	199	59
BMSE-375	239	71	BMSE-375-WE	211	71

Note: The thickness of the stator and rotor is the dimension of L1 plus 3mm.



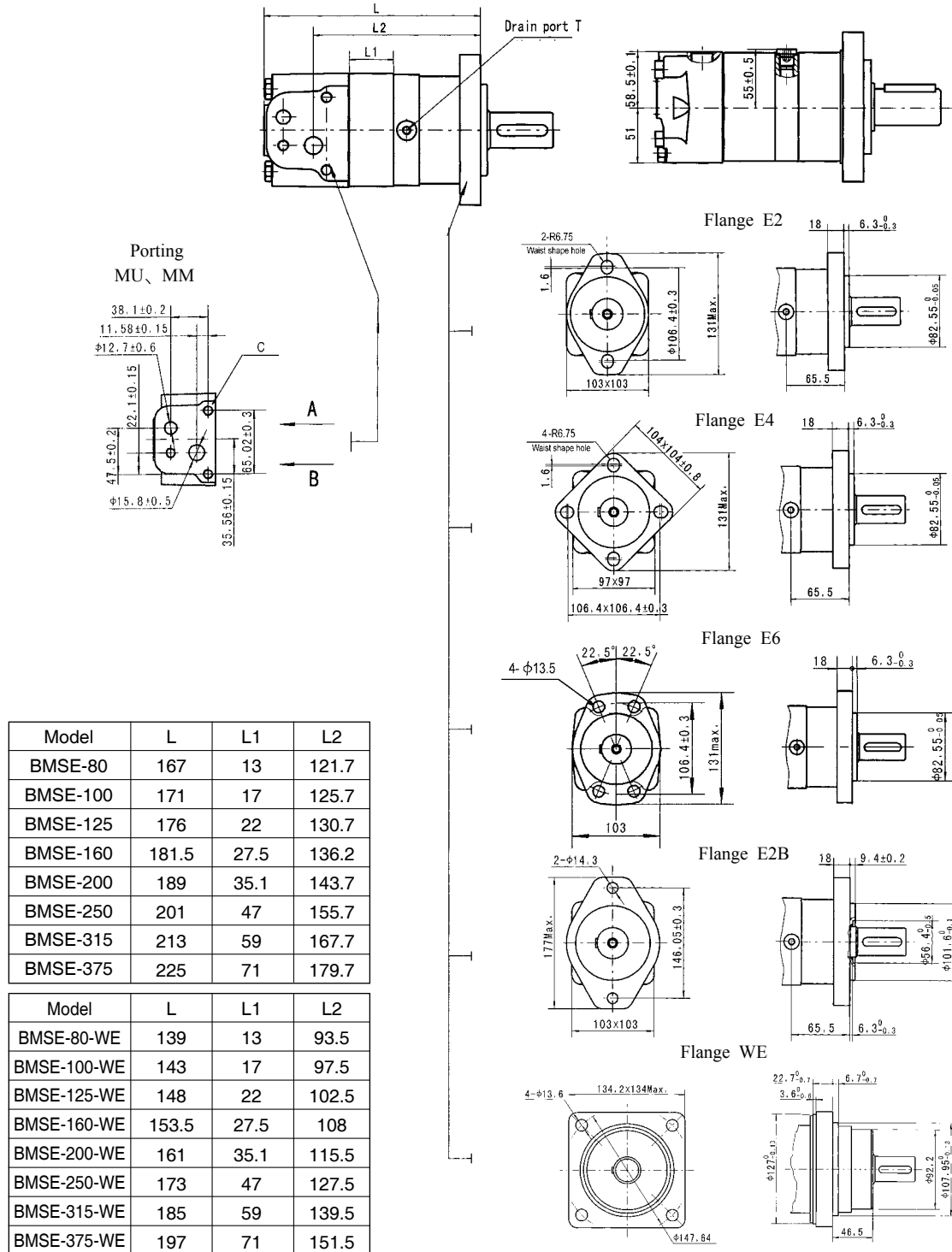
Code Mounting	ED (depth)
P(A,B)	1-1/16-12UN O-ring (18)
T	7/16-20UNF(12)

Model	L	L1	L2
BMSE-80	173	13	125.7
BMSE-100	177	17	129.7
BMSE-125	182	22	134.7
BMSE-160	187.5	27.5	140.2
BMSE-200	195	35.1	147.7
BMSE-250	207	47	159.7
BMSE-315	219	59	171.7
BMSE-375	231	71	183.7

Model	L	L1	L2
BMSE-80-WE	145	13	97.5
BMSE-100-WE	149	17	101.5
BMSE-125-WE	153	22	106.5
BMSE-160-WE	158.5	27.5	112
BMSE-200-WE	166	35.1	119.5
BMSE-250-WE	179	47	131.5
BMSE-315-WE	191	59	143.5
BMSE-375-WE	203	71	155.5

Note: The thickness of the stator and rotor is the dimension of L1 plus 3mm.

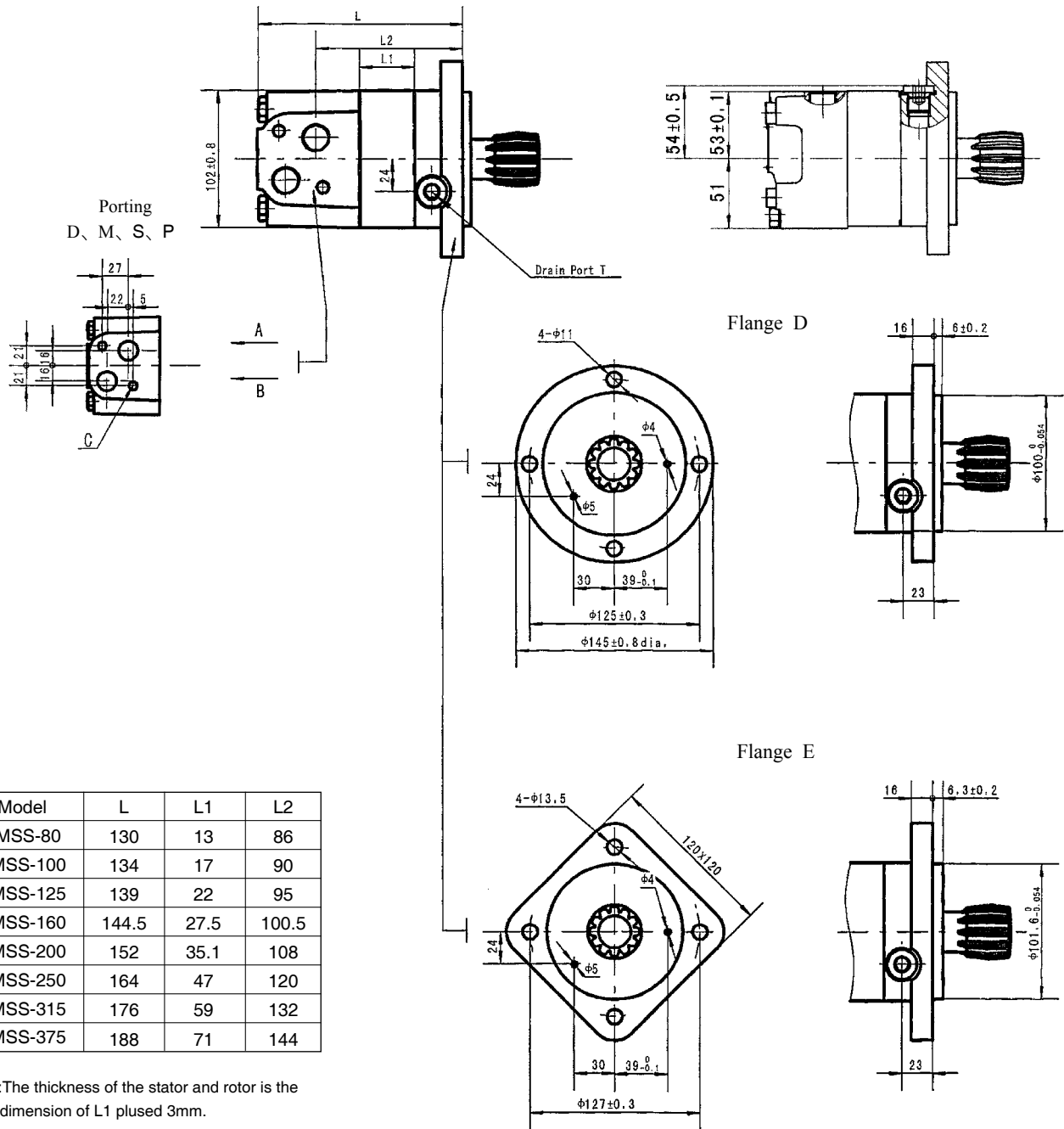
BMSE DIMENSIONS AND MOUNTING DATA



Note:1) If the porting G、M2、S2 is used, the dimensions of L2 should plus 1.5mm.
2) The thickness of the stator and rotor is the dimension of L1 plus 3mm.

Code	MU	MM
Mounting		
P(A,B)	ø12.7、ø15.8	ø12.7、ø15.8
T	7/16-20UNF(12)	G1/4 (12)
C	3 x 3/8-16UNC	3 x M10

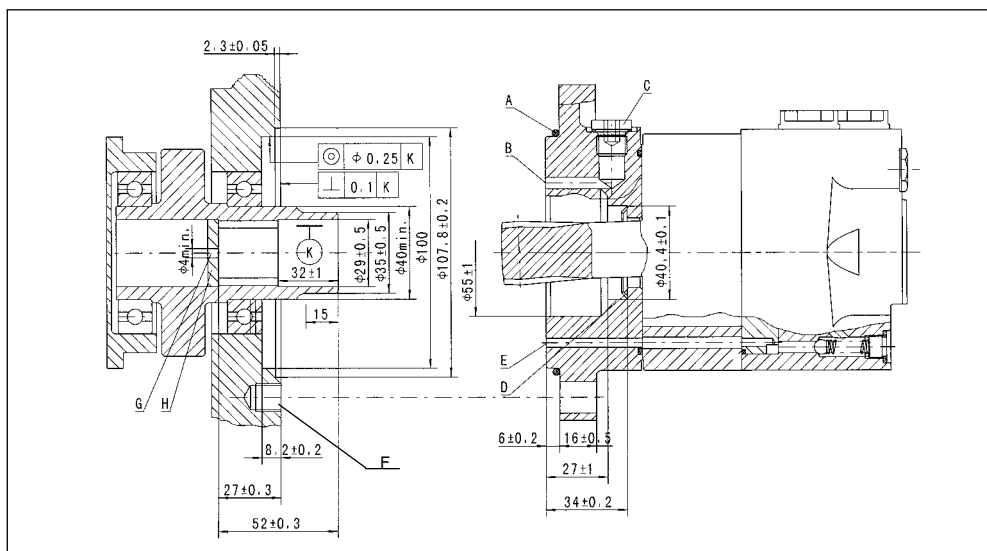
BMSS DIMENSIONS AND MOUNTING DATA



Code Mounting	D (depth)	M (depth)	S (depth)	P (depth)
P(A,B)	G1/2 (18)	M22 x 1.5 (18)	7/8-14 O-ring (18)	1/2-14NPTF (15)
T	G1/4 (12)	M14 x 1.5 (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)



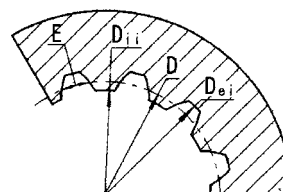
BMSS DIMENSIONS AND MOUNTING DATA



- 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

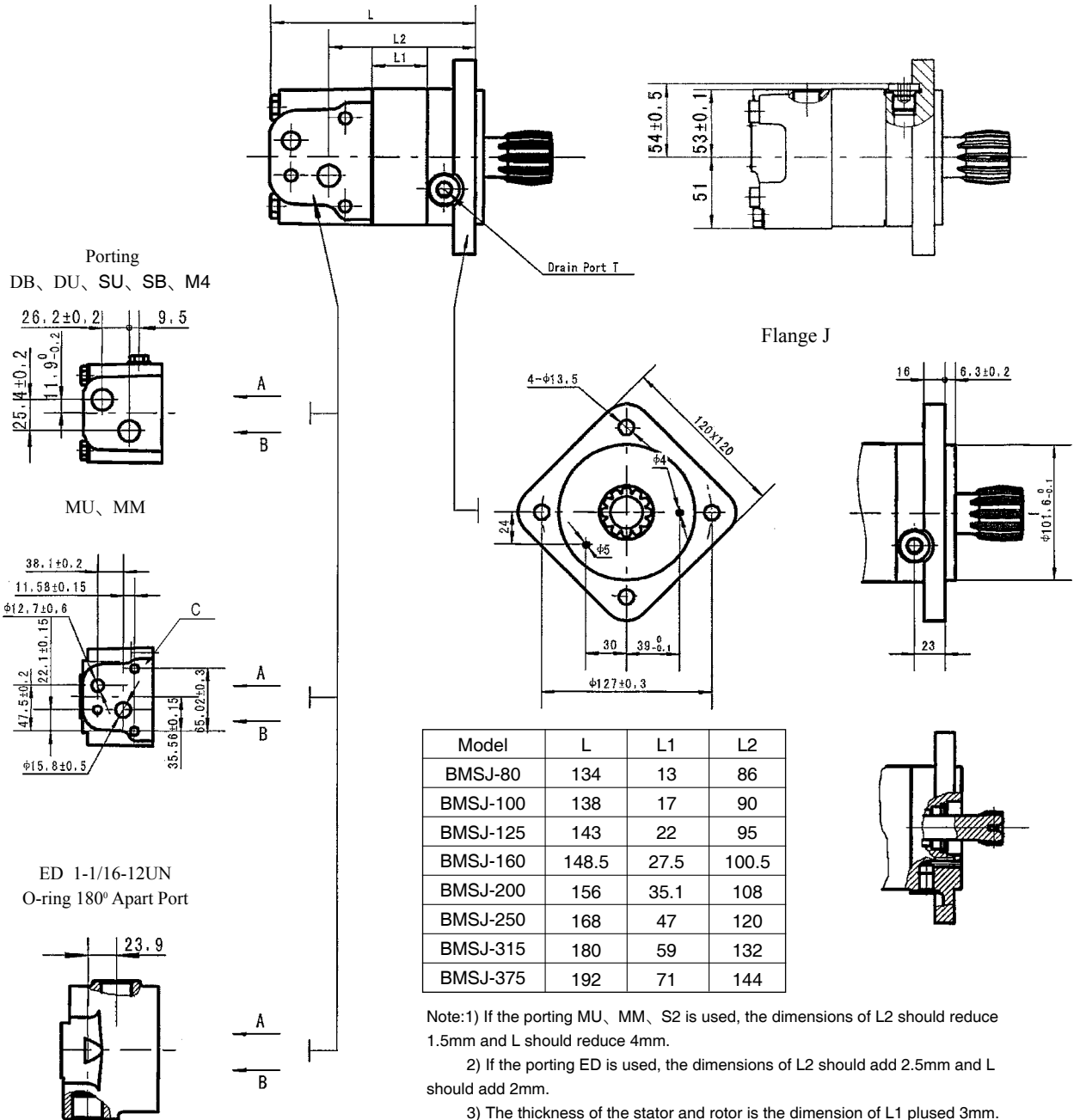
INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

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



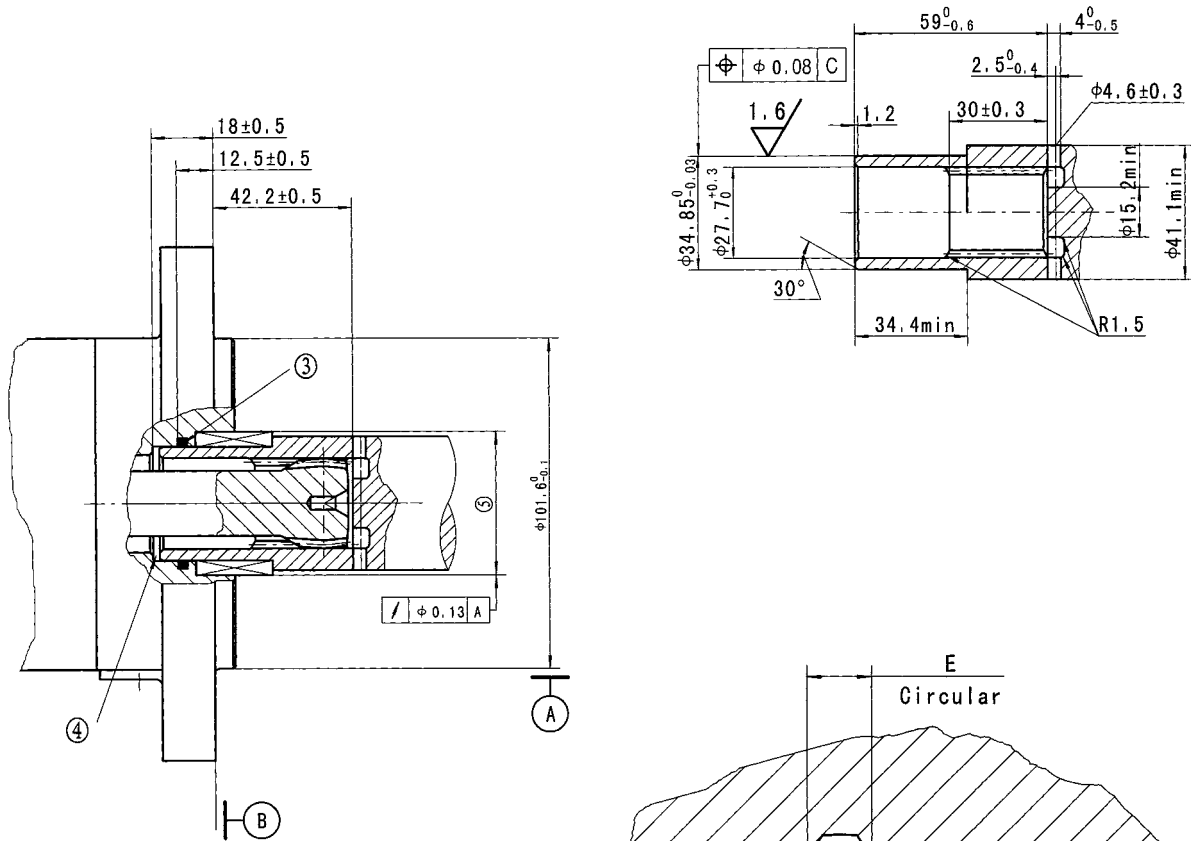
Hardening Specification: HRC 62 ± 2
Effective case depth 0.7 ± 0.2

BMSJ DIMENSIONS AND MOUNTING DATA



Code Mounting	DB (depth)	DU (depth)	SU (depth)	SB (1depth)	M4 (depth)	MU	MM	ED (depth)
P(A,B)	G1/2 (18)	G1/2 (18)	7/8-14 O-ring (18)	7/8-14 O-ring (18)	M22 x 1.5 (18)	φ12.7, φ15.8	φ12.7, φ15.8	1-1/16-12UN (18)
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)	7/16-20UNF(12)
C			--			3 x 3/8-16UNC	3 x M10	--

BMSJ DIMENSIONS AND MOUNTING DATA



INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

Fillet Root Side Fit		mm
Number of Teeth	Z	12
Diametral Pitch	DP	12/24
Pressure Angle	α_D	30°
Pitch Dia.	D	ø25.4
Major Dia.	D_{ei}	ø27.6 ^{+0.14} ₀
Minor Dia.	D_{ii}	ø23.1 ^{+0.12} ₀
Space Width [Circular]	E	4.282±0.036
Dimension between two pins(ø3.38)	M_e	19.02-19.19

① Internal spline in mating part to be per data. Specification material to be ASTM A304, 8620H. Vacuum degassed alloy steel carburize to a hardness of 58-62HRC 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.

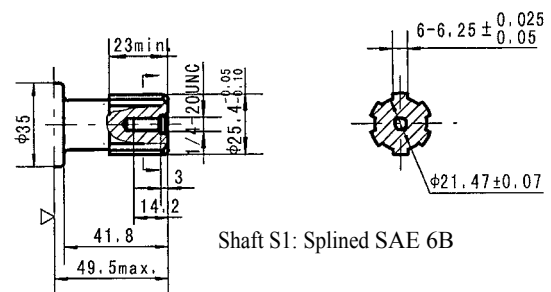
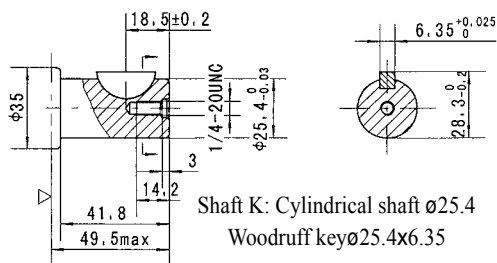
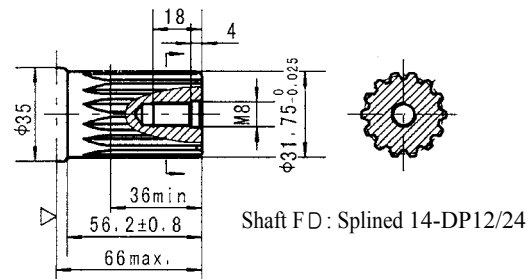
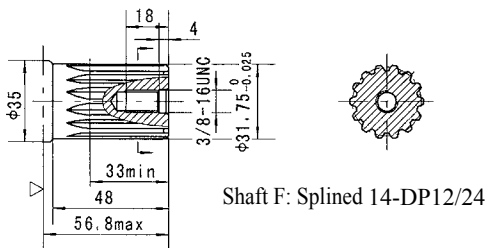
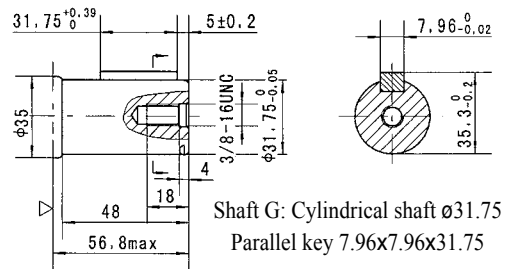
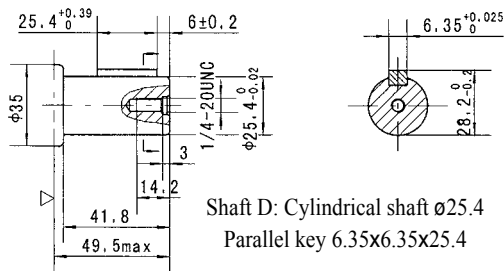
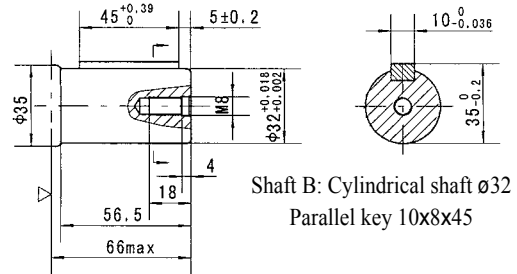
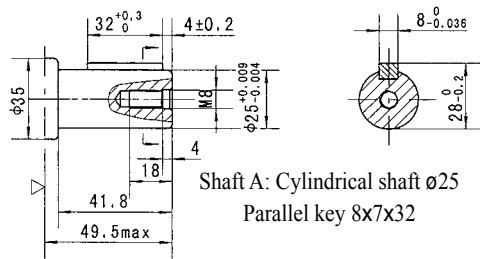
③ Some means of maintaining clearance between shaft and mounting flange must be provided.

④ Seal to be furnished with motor for proper oil circulation thru splines.

⑤ Counterbore designed to adapt to a standard sleeve bearing 35.010-35.040 [1.3784-1.3795] ID by 44.040-44.070 [1.7339-1.7350] O.D.(Oilite Bronze Sleeve Bearing AAM3544-22).

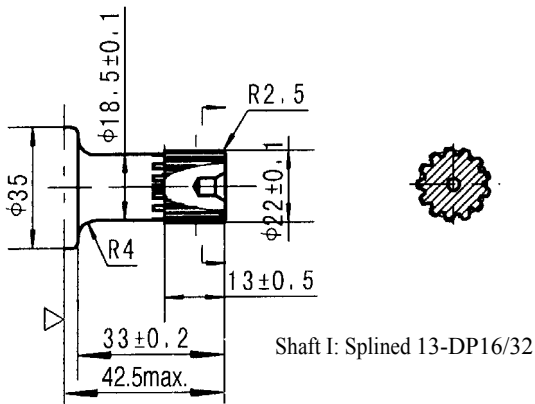
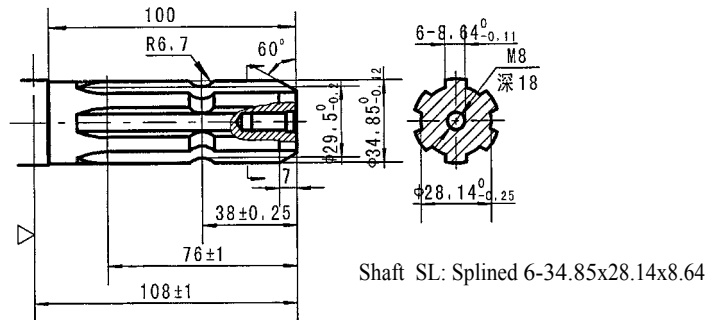
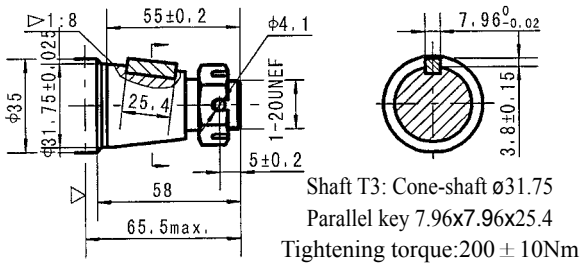
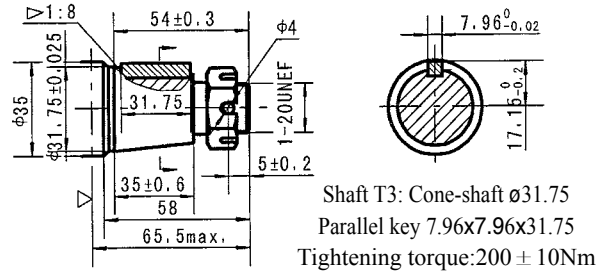
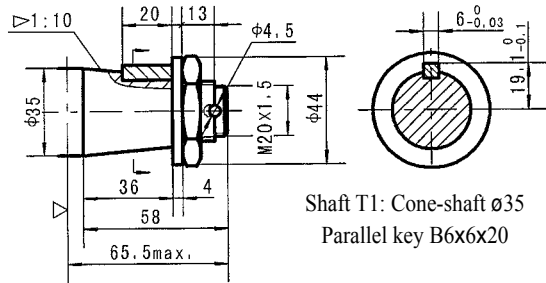
C This surface to be diameter of output shaft.

SHAFT EXTENSIONS FOR BMS(E) MOTORS



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

SHAFT EXTENSIONS FOR BMS(E) MOTORS

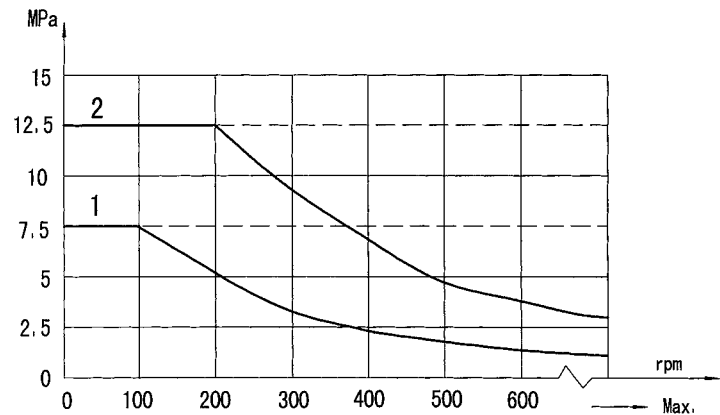
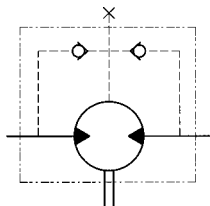


- ▷ Motor Mounting Surface(Dimension corresponding mounting E2, by analogy with others)
Note: Mounting SP is the same with shaft mode T1、D、B、F and G.



BMS(E) Series Hydraulic Motor

Permissible shaft seal pressure

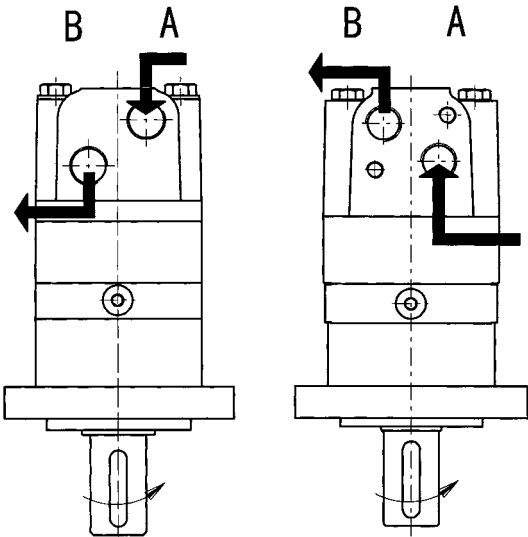


Note: 1. Chart for standard shaft seal;
2. Chart for high pressure shaft seal.

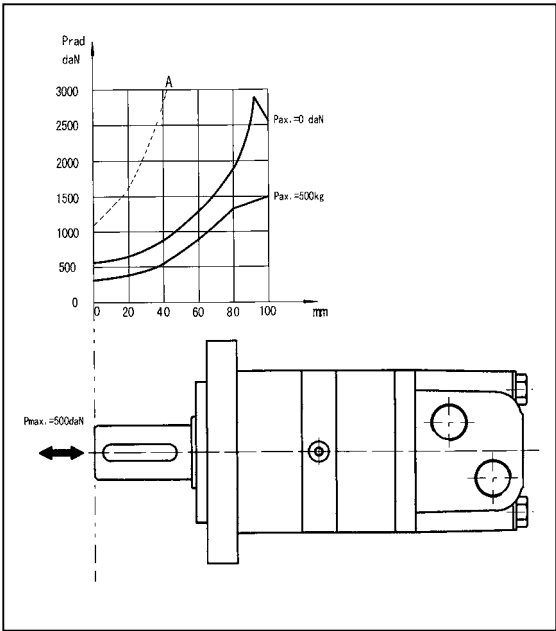
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Standard direction of shaft rotation: Standard

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



Axial and Radial forces



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

Order Information

1	2	3	4	5	6	7	8
BMS							

1	2	3	4	5	6	7	8
BMSS							

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMS	80	E2 2-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	A Shaft Ø25, parallel key 8 × 7 × 32	D G1/2 Manifold Mount 2-M10, G1/4 M22 × 1.5 Manifold Mount 2-M10, M14 × 1.5 7/8-14UNF O-ring manifold 2-3/8-16, 7/16-20UNF 1/2-14NPTF manifold 2-3/8-16UNC, 7/16-20UNF	Omit Standard Opposite R	No paint Blue Black Silver grey	Omit LL F LS Standard Low Leakage Free Running Low Speed
			B Shaft Ø32, parallel key 10 × 8 × 45				
	100	E4 4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	D parallel key 6.35 × 6.35 × 25.4				
			G Shaft Ø31.75,				
	125	F6 6-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	parallel key 7.96 × 7.96 × 31.75				
			F Shaft Ø31.75,				
	160	W 4-Ø13.5 Wheel-flange Ø160, pilot Ø125 × 8	FD Long Shaft Ø31.75,				
			splined tooth 14-DP12/24				
	200	E2B 2-Ø14.3 Rhomb-flange Ø146.05, pilot Ø101.6 × 9.4	SL shaft Ø34.85, Splined key				
			6-34.85 × 28.14 × 8.64				
BMSS	250	SP 4-Ø11.5 Square-flange Ø106.4, pilot Ø82.5 × 6.3	T1 Cone-shaft Ø35, parallel key B6 × 6 × 20				
			T3 Cone-shaft Ø31.75,				
	315	D 4-Ø11 Circle-flange Ø125, pilot Ø100 × 6	parallel key 7.96 × 7.96 × 31.75				
			S1 Shaft Ø25.4, splined tooth SAE 6B				
BMSS	375	E 4-Ø13.5 Square-flange Ø127, pilot Ø101.6 × 6.3	I Sub-shaft Ø22, splined tooth 13-DP16/32				
			Omit Short shaft 12-DP12/24				

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. SP for T1, D, B, F, G.

Order Information

1 2 3 4 5 6 7 8

BMSE - - - - -

1 2 3 4 5 6 7 8

BMSJ - - - - -

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMSE	80	E2 2-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	A Shaft Ø25 , parallel key 8 × 7 × 32 B Shaft Ø32 , parallel key 10 × 8 × 45 K Shaft Ø25.4 ,	MU 1/2" ,5/8" Crosshole Manifold 3 × 3/8-16UNC,7/16-20UNF	Omit Standard Opposite R	00 Omit B S No paint Blue Black Silver grey	Omit LL F LS Standard Low Leakage Free Running Low Speed
	100	E4 4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	G Shaft Ø31.75 , Woodruff key Ø25.4 × 6.35	MM 1/2" ,5/8" Crosshole Manifold 3 × M10,G1/4			
	125	E2B 2-Ø14.3 Rhomb-flange Ø146.05, pilot Ø101.6 × 9.4	F parallel key 7.96 × 7.96 × 31.75 Shaft Ø31.75 ,	EE-D G1/2,G1/4 EE-M2 M22 × 1.5,M14 × 1.5			
	160	E6 4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	T4 splined tooth 14-DP12/24 Cone-shaftØ31.75 ,	EE-S2 7/8-14UNF O-ring,7/16-20 UNF			
	200	WE 4-Ø13.6Wheel-flangeØ147.6, pilot Ø107.95×6.4	parallel key 7.96 × 7.96 × 25.4 S1 Shaft Ø25.4 ,splined tooth SAE 6B	ED 1-1/16-12UN O-ring,7/16-20 UNF DB G1/2,G1/4			
	250		I Sub-shaft Ø22 , splined tooth 13-DP16/32	DU G1/2,7/16-20 UNF SB 7/8-14UNF O-ring,G1/4 SU 7/8-14UNF O-ring,7/16-20 UNF M4 M22 × 1.5,M14 × 1.5			
	315						
BMSJ	375	J 4-Ø13.5 Square-flange Ø127 , pilot Ø101.6 × 6.3	Omit Short shaft12- DP12/24				

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 features:

- * The motor has the same dimensions and mounting data as the hydraulic motors type BMS.
- * The motor is described with 15-20% higher technical data (Max. torque and Max. pressure drop), thereby higher power. The new motor is suitable for vehicles with greater loads and pressure drop.

Main Specification

Type		BMSY 80	BMSY 100	BMSY 125	BMSY 160	BMSY 200	BMSY 250	BMSY 315	BMSY 400	BMSY 475
Geometric displacement (cm ³ /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.	250	320	400	540	645	806	960	960	960
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.	22.5	22.5	22.5	22.5	22.5	22.5	22.5	17.5	15
	peak	29.5	29.5	29.5	22.5	22.5	22.5	22.5	20	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)	15	35	80	120	158	195	228	249
		180	174	168	164	158	151	143
	30	35	80	120	158	195	232	260
		362	352	346	338	330	322	310
	40	35	79	119	155	193	227	250
		487	480	468	457	446	438	425
	50	30	77	117	153	192	224	248
		612	603	592	581	572	558	542
Max.cont.	60	28	77	117	153	192	224	243
		735	726	718	703	687	673	646
	65	26	75	116	151	188	217	236
Max.int.		794	786	773	760	744	722	706
	80	24	72	109	142	176	206	227
		981	968	955	925	893	870	832

BMSY100 [100.8cm³/rev.]

Pressure (MPa)

	3.5	7	10.5	14	17.5	20.5	22.5
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Flow (L/min)	15	48	95	150	200	250	282	310
		146	144	139	135	130	120	105
	30	45	94	146	198	250	290	317
		291	289	278	274	269	258	242
	40	43	89	142	196	248	288	316
		387	384	374	359	350	335	320
	50	40	88	135	194	247	286	315
		486	483	473	462	450	430	420
Max.cont.	60	37	88	132	185	244	283	312
		588	584	574	562	550	538	520
	75	35	80	130	180	240	279	310
Max.int.		740	735	720	705	696	676	653
	90	30	75	124	170	236	271	303
		850	840	810	787	770	750	747

BMSY125 [125cm³/rev.]

Pressure (MPa)

	3.5	7	10.5	14	17.5	20.5	22.5
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Flow (L/min)	15	55	120	176	245	309	345	375
		115	113	110	104	98	90	84
	30	55	120	175	250	315	364	404
		231	228	223	214	202	188	172
	40	53	118	178	250	315	364	403
		312	309	290	289	278	262	235
	50	50	115	176	248	315	362	397
		391	386	378	365	352	339	308
Max.cont.	60	45	113	171	241	308	358	397
		469	461	450	437	425	400	372
	75	45	110	167	240	306	352	389
Max.int.		588	574	560	544	526	505	481
	90	40	105	162	237	301	343	378
		710	696	680	661	646	628	610

TORQUE(N•m) 301
SPEED (r/min) 646

BMSY160 [154cm³/rev.]

Pressure (MPa)

	3.5	7	10.5	14	17.5	21	22.5
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Flow (L/min)	15	70	142	215	298	372	435	476
		93	91	89	85	80	76	58
	30	73	151	225	312	382	456	492
		189	187	181	176	170	162	153
	40	75	152	228	314	383	454	488
		252	250	246	239	234	228	212
	50	70	148	225	305	372	445	480
		313	310	306	298	293	285	272
Max.cont.	60	68	143	218	296	370	442	480
		378	376	370	362	353	346	332
	75	62	140	211	291	365	439	475
Max.int.		475	469	461	450	441	432	414
	90	59	131	202	286	357	425	460
		567	561	554	543	532	520	509

cont.
int.

Performance Data

BMSY200 [194cm³/rev.]

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

BMSY250 [243cm³/rev.]

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

BMSY315 [311cm³/rev.]

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

BMSY400 [394cm³/rev.]

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

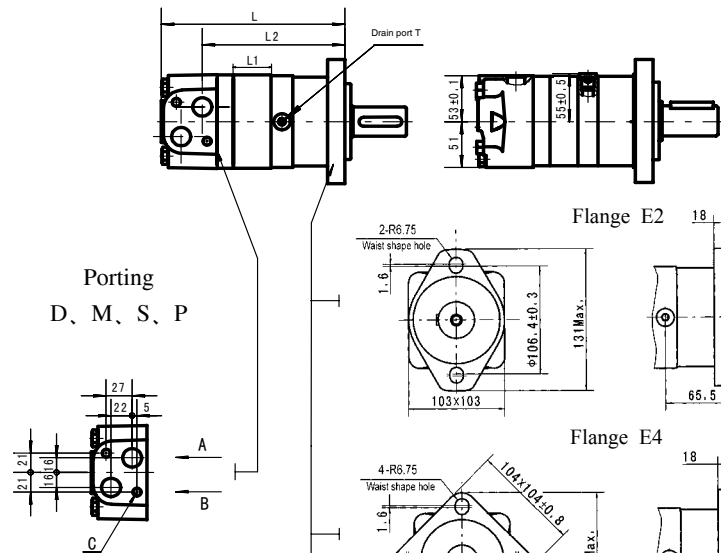
TORQUE (N•m) 766
SPEED (rpm) 208

BMSY475 [475cm³/rev.]

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

cont.
int.

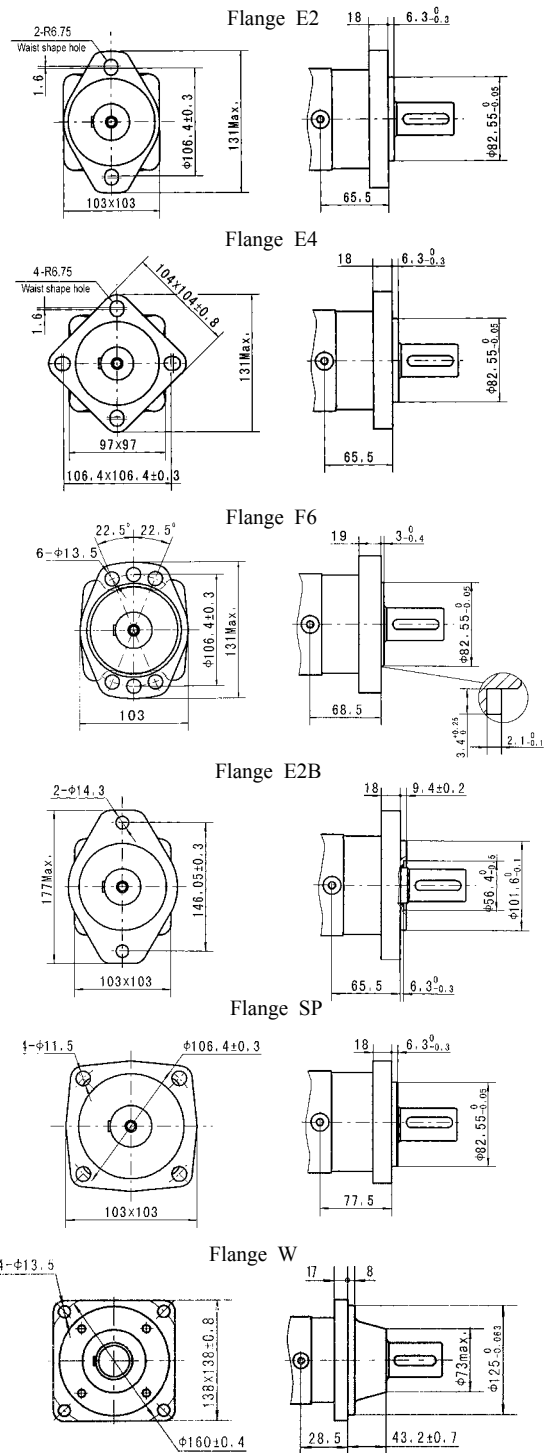
BMSY DIMENSIONS AND MOUNTING DATA



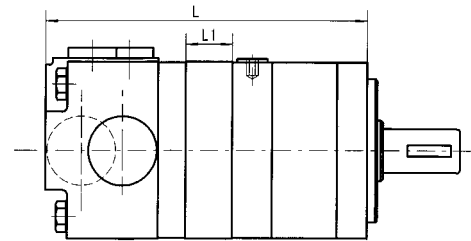
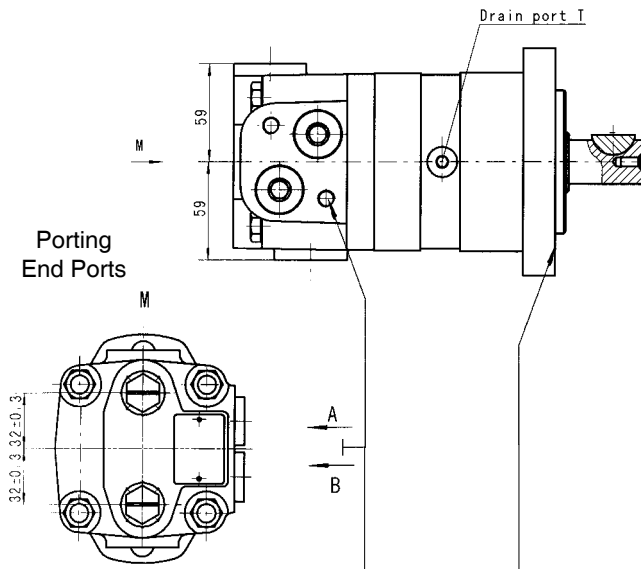
Model	L	L1	L2
BMSY-80	170	16	126.5
BMSY-100	174	20	130.5
BMSY-125	179	25	135.5
BMSY-160	181	27	137.5
BMSY-200	188	34	144.5
BMSY-250	196	42	152.5
BMSY-315	208	54	164.5
BMSY-400	223	69	179.5
BMSY-475	237	83	193.5

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

Code Mounting	D (depth)	M (depth)	S (depth)	P (depth)
P(A,B)	G1/2(18)	M22x1.5(18)	7/8-14 O-ring (18)	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

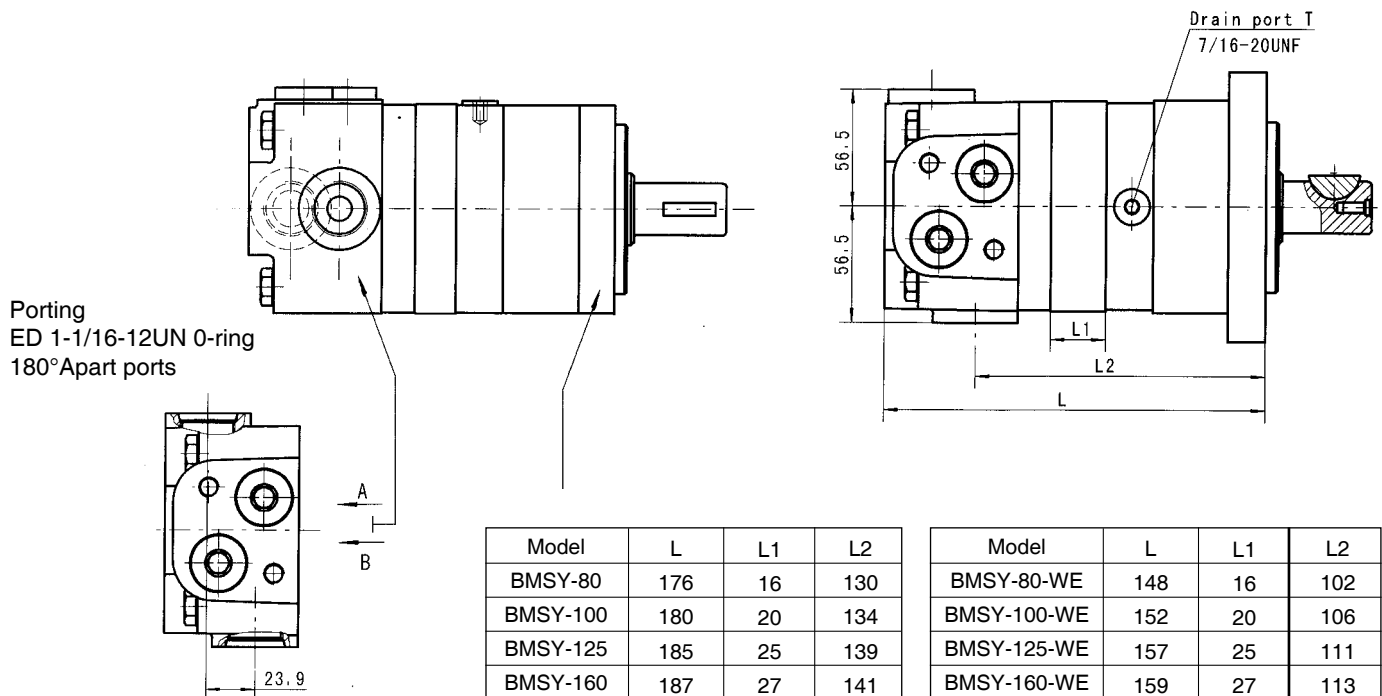


End Ports P(A\B)

Model	L	L1
BMSY-80	176	16
BMSY-100	180	20
BMSY-125	185	25
BMSY-160	187	27
BMSY-200	194	34
BMSY-250	202	42
BMSY-315	214	54
BMSY-400	229	69
BMSY-475	243	83

Model	L	L1
BMSY-80-WE	148	16
BMSY-100-WE	152	20
BMSY-125-WE	157	25
BMSY-160-WE	159	27
BMSY-200-WE	166	34
BMSY-250-WE	174	42
BMSY-315-WE	186	54
BMSY-400-WE	201	69
BMSY-475-WE	215	83

Code Mounting	EE-D (depth)	EE-M2 (depth)	EE-S2 (depth)
P(A,B)	G1/2 (18)	M22 x 1.5 (18)	7/8-14 O-ring (18)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)



Code Mounting	ED (depth)
P(A,B)	G1/2 (18)
T	G1/4 (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

Order Information

1	2	3	4	5	6	7	8
BMSY							

Pos.1	2	3		4	5		6	7	8
Code	Disp.	Flange , Pilot , Port		Output Shaft	Port and Drain Port		Rotation direction	Paint	Unusually function
Omit	80	E2	2-Ø13.5 Rhomb-flange Ø106.4, Pilot Ø82.5 × 6.3	A Shaft Ø25 Parallel key 8 × 7 × 32 B Shaft Ø32 Parallel key 10 × 8 × 45 D Shaft Ø25.4, Parallel key 6.35 × 6.35 × 25.4	D G1/2 Manifold Mount 2-M10,G1/4				
	100	E4	4-Ø13.5 Rhomb-flange Ø106.4, Pilot Ø82.5 × 6.3	G Parallel key 7.96 × 7.96 × 31.75 F Shaft Ø31.75 Splined key 14-DP12/24	M M22 × 1.5 Manifold Mount 2-M10, M14 × 1.5				
	125	F6	6-Ø13.5 Rhomb-flange Ø106.4, Pilot Ø82.5 × 6.3	FD Long Shaft Ø31.75, Splined key 14-DP12/24	S 7/8-14UNF O-ring manifold 2-3/8-16,7/16-20UNF				
	160	W	4-Ø13.5 Wheel-flange Ø160, Pilot Ø125 × 8	SL Shaft Ø34.85, Splined key 6-34.85 × 28.14 × 8.64	P 1/2-14NPTF manifold 2-3/8-16UNC,7/16-20UNF				
	250	E2B	2-Ø14.3 Rhomb-flange Ø146.05, Pilot Ø101.6 × 9.4	T1 Cone-shaft Ø35,parallel key B6 × 6 × 20 T3 Cone-shaft Ø31.75, Parallel key 7.96 × 7.96 × 31.75	EE-D G1/2,G1/4 EE-M2 M22 × 1.5,M14 × 1.5				
	400	SP	4-Ø11.5 Square-flange Ø106.4, Pilot Ø82.5 × 6.3	S1 Shaft Ø25.4, Splined key SAE 6B I Sub-shaft Ø22, Splined key 13-DP16/32	ED 1-1/16-12UN O-ring,7/16-20 UNF				
	475								

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 informations of mounting flange,output shaft and frotrs 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 Specificaion

Type		BMT 160	BMT 200	BMT 230	BMT 250	BMT 315	BMT 400	BMT 500	BMT 630	BMT 800
Geometric displacement (cm ³ /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)	rated	80	100	100	100	100	100	100	100	100
	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 [161.1cm³/rev.]

Pressure (MPa)

Max.cont.

Max.int.

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

BMT 200 [201.4cm³/rev.]

Pressure (MPa)

Max.cont.

Max.int.

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

BMT 250 [251.8cm³/rev.]

Pressure (MPa)

Max.cont.

Max.int.

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

BMT 315 [326.3cm³/rev.]

Pressure (MPa)

Max.cont.

Max.int.

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

Torque (N·m) 552
Speed (rpm) 572



Performance Data

BMT 400 [410.9cm³/rev.]

Pressure (MPa)

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

BMT 500 [523.6cm³/rev.]

Pressure (MPa)

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

BMT 630 [629.1cm³/rev.]

Pressure (MPa)

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

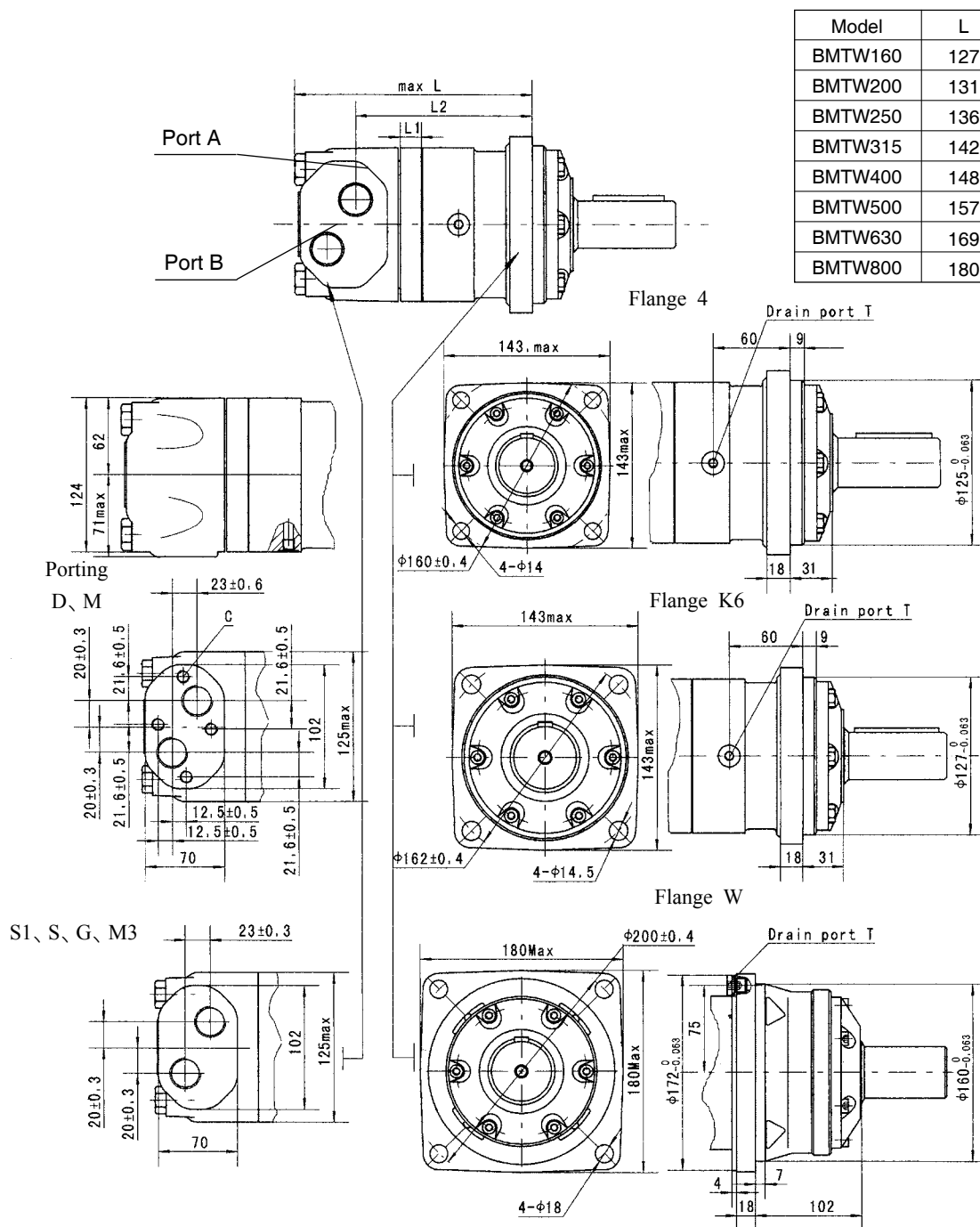
BMT 800 [801.8cm³/rev.]

Pressure (MPa)

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

Torque (N•m) 1121
Speed (rpm) 227

BMT DIMENSIONS AND MOUNTING DATA



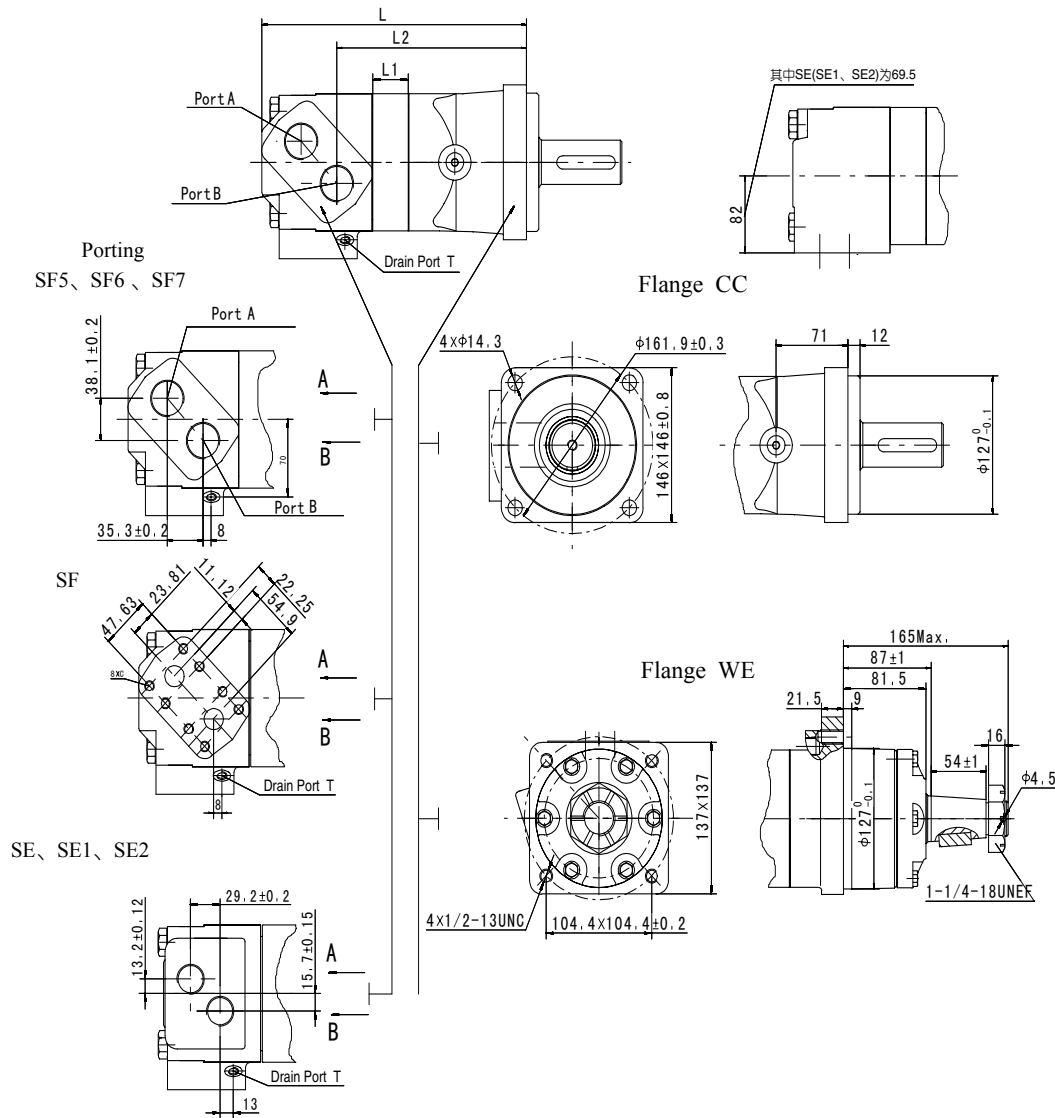
Model	L	L1	L2
BMTW160	127	17	77
BMTW200	131	21	81
BMTW250	136	14	86
BMTW315	142	20	91
BMTW400	148	27	98
BMTW500	157	35	106
BMTW630	169	47	118
BMTW800	180	58	129

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

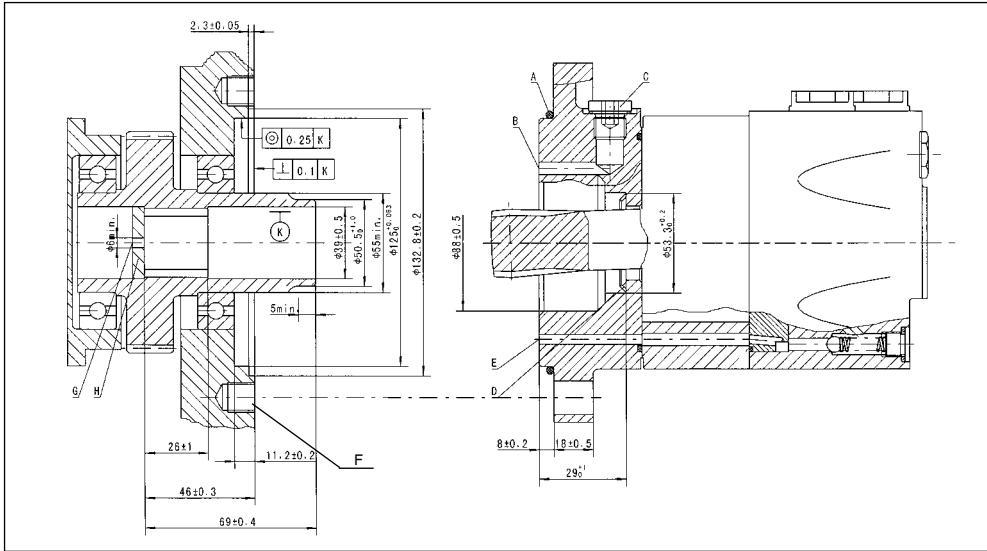
Note:1)The data for the port of SF (SF5 and SF6and sf7)

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						
Mounting	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	--	--	--

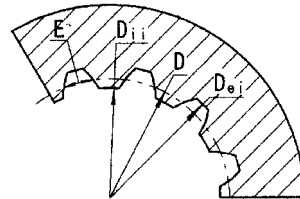
BMTS MOUNTING DATA



- 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

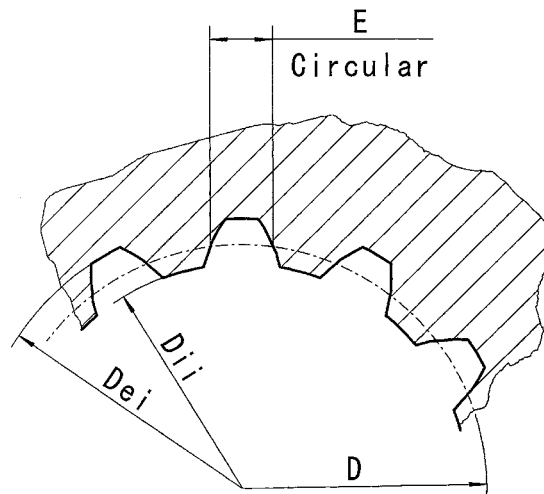
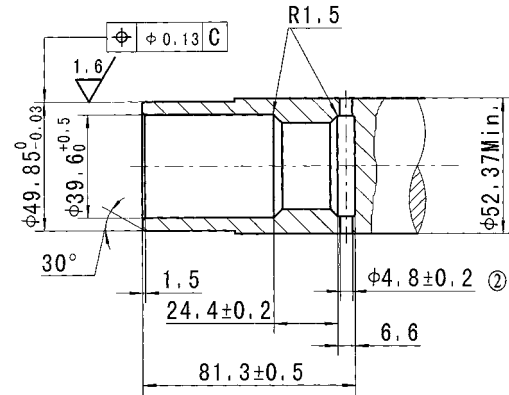
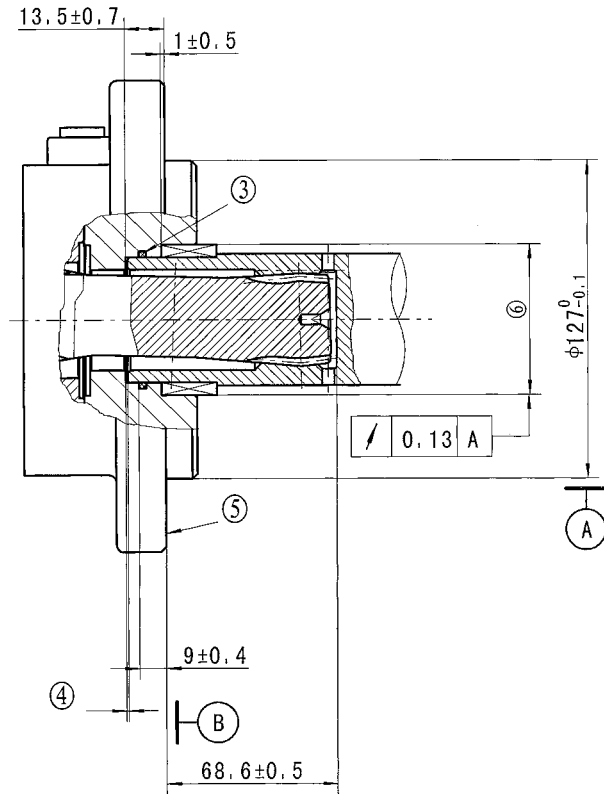
INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

Fillet Root Side Fit		mm
Number of Teeth	Z	16
Diametral Pitch	DP	12/24
Pressure Angle	α_D	30°
Pitch Dia.	D	ø33.8656
Major Dia.	D_{ei}	ø38.4 ^{+0.25} ₀
Minor Dia.	D_i	ø32.15 ^{+0.04} ₀
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



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.	α_D	$\phi 35.858823$
Major Dia.	D_{ei}	$\phi 38.97^{+0.20}_0$
Minor Dia.	D_{ii}	$\phi 33.3^{+0.18}_0$
Space Width [Circular]	E	5.866 ± 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.

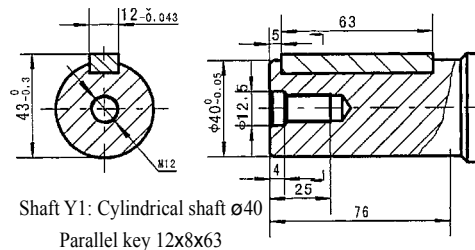
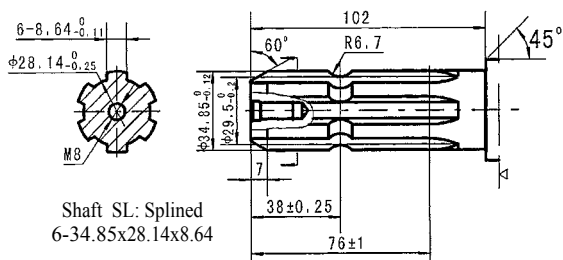
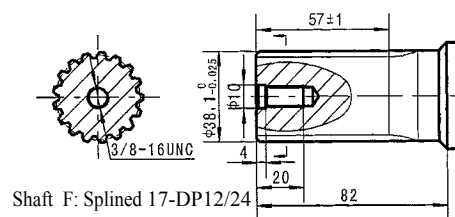
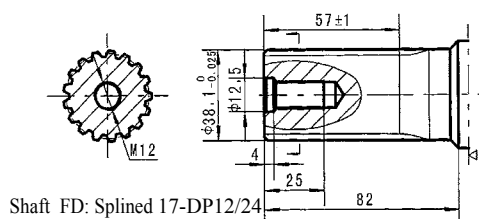
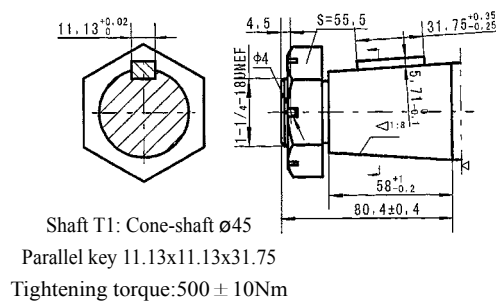
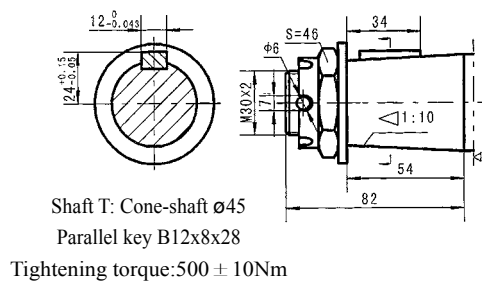
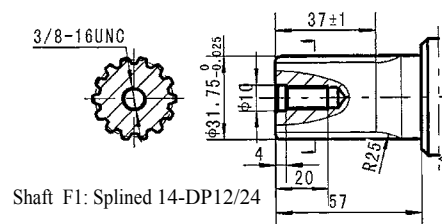
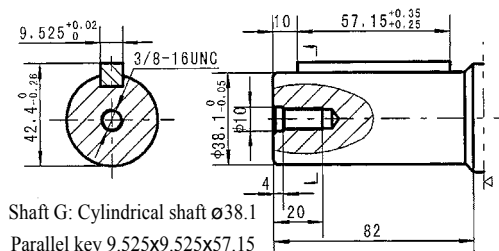
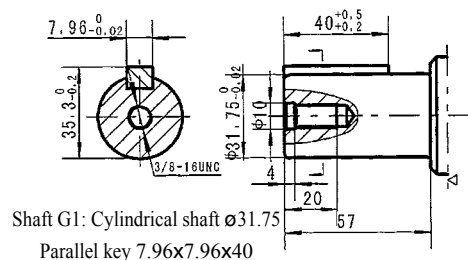
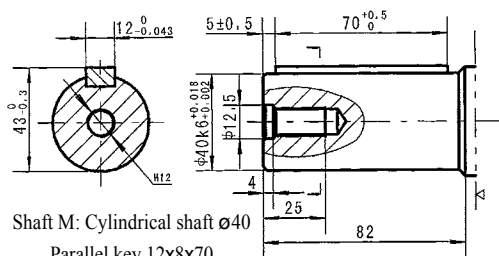
④ Seal to be furnished with motor for proper oil circulation thru splines.

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).

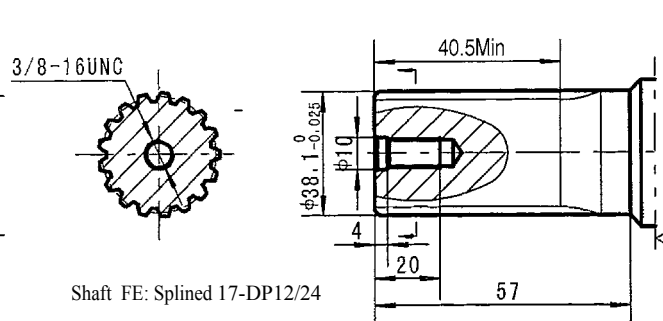
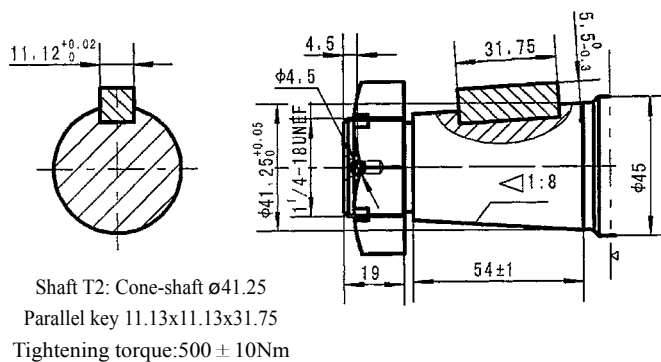
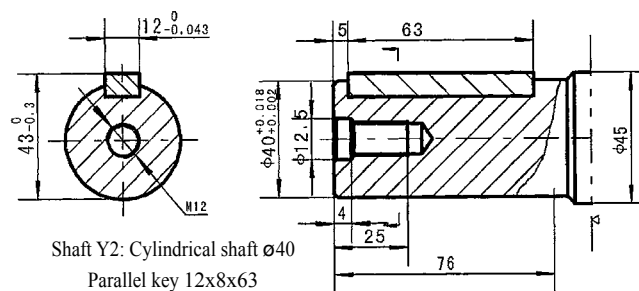
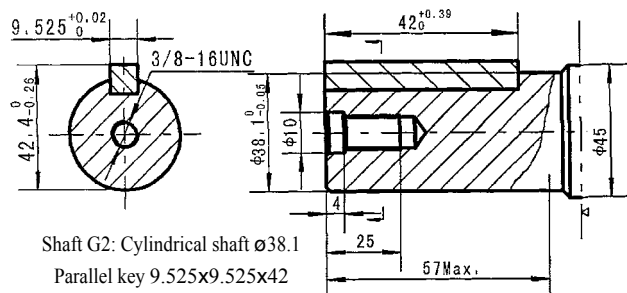
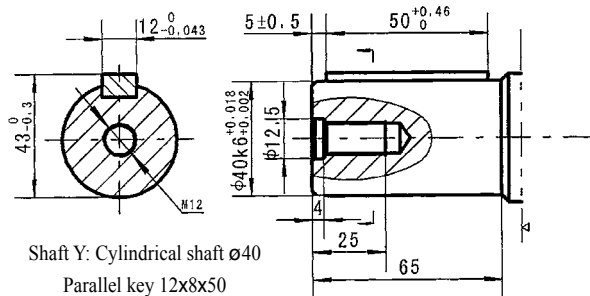
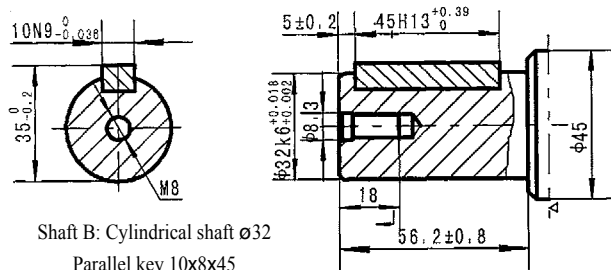
C This surface to be diameter of output shaft.

SHAFT EXTENSIONS FOR BMT(E) MOTORS



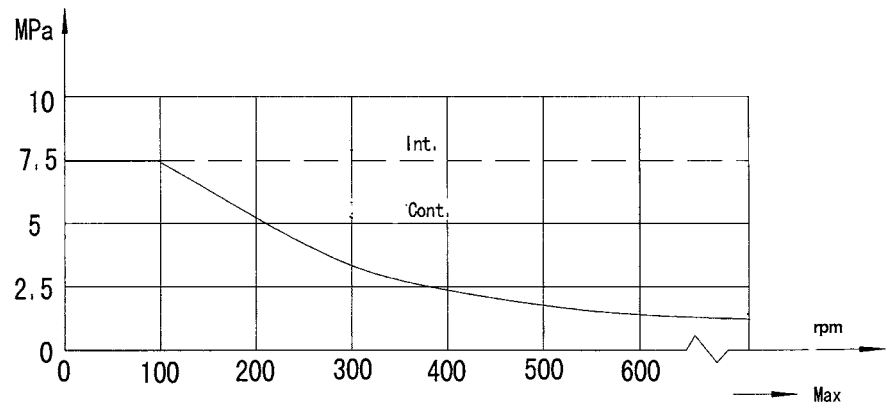
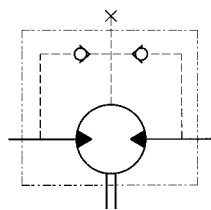
▷ Motor Mounting Surface

SHAFT EXTENSIONS FOR BMT(E) MOTORS



BMT Series Hydraulic Motor

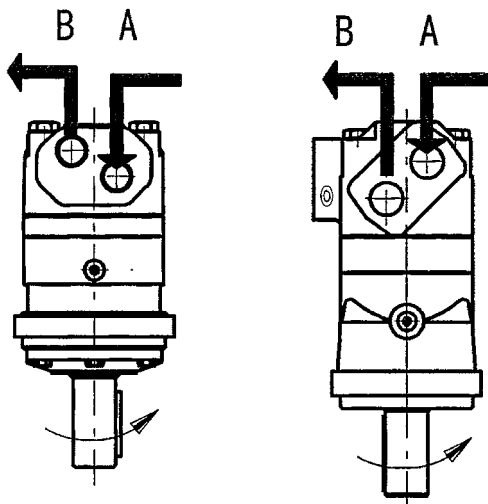
Permissible shaft seal pressure



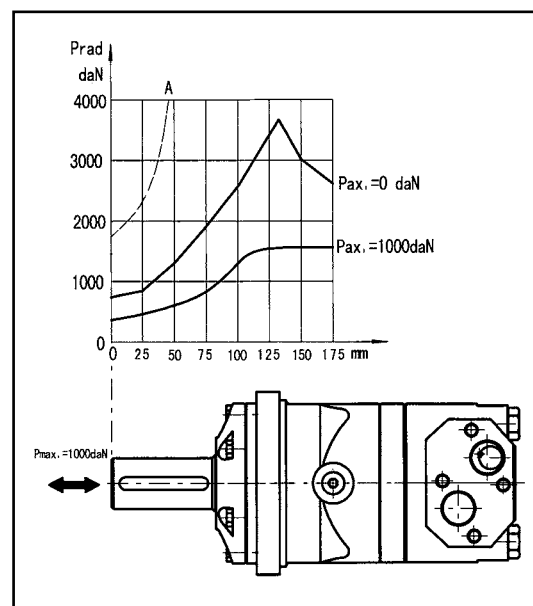
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Standard direction of shaft rotation: Standard

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



Axial and Radial forces



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

Order Information

1	2	3	4	5	6	7	8
BMT							
1	2	3	4	5	6	7	8
BMTS							

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMT	160 200 250 315 400 500 630 800	4 4-Ø14 Square-flange Ø160, pilot Ø125 × 9	M	D G3/4 Manifold Mount, 4-M10, G1/4 M M27 × 2 Manifold Mount, 4-M10, M14 × 1.5 S 1-1/16-12UN O-ring, 9/16-18UNF S1 1-1/16-12UN O-ring, 7/16-20UNF G G3/4, G1/4 M3 M27 × 2, M14 × 1.5	Omit Standard R Opposite	00 Omit B S No paint Blue Black Silver grey	Omit LL F LS Standard Low Leakage Free Running Low Speed
			G				
			F				
			FD				
			T				
			T1				
			SL				
			G1				
			F1				
BMTS		D 4-Ø14 Circle-flange Ø160, pilot Ø125 × 8	Omit Short shaft 16-DP12/24				
		E 4-Ø14.5 Square-flange Ø162, pilot Ø127 × 10					

Order Information

1	2	3	4	5	6	7	8
BMTE							

1	2	3	4	5	6	7	8
BMTJ							

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMTE	230	CC 4-Ø14.3 Square-flange Ø161.9, pilot Ø127 × 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	00 Omit B S No paint Blue Black Silver grey	Omit LL F LS Standard Low Leakage 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	WE 4-1/2-13UNC Wheel- flangeØ147.6, pilotØ127 × 9	T3 Cone-shaft 1:8 Ø41.25 , parallel key 11.13 × 11.13 × 31.75				
BMTJ	800						
		J 4-Ø14.5 Square-flange Ø161.9 pilot Ø127 × 12.4	Omit 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 Specifikaion

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

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



Performance Data

BMV 315 [333cm³/rev.]

Pressure (MPa)							Max.cont.	Max.int.
3.5	7	10	14	18	20	24		

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

BMV 400 [419cm³/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
		20	20	19	18	17	16	14
	20	196	398	590	815	1010	1152	1346
		44	44	43	42	40	39	37
	50	200	402	603	842	1040	1186	1430
		114	113	113	112	110	108	103
	75	195	394	596	838	1043	1188	1432
		175	173	170	166	163	1579	152
	100	172	385	593	827	1036	1184	1425
		236	235	233	231	227	223	215
Max.cont.	125	167	374	583	816	1021	1177	1413
		296	294	291	288	282	275	268
	150	158	361	559	801	1008	1165	1390
		355	354	352	349	344	335	324
	175	143	346	553	784	989	1145	1377
		416	414	411	407	403	396	388
	200	118	331	536	770	969	1128	1356
		475	473	469	463	455	448	439
Max.int.								

BMV 500 [518cm³/rev.]

Pressure (MPa)							Max.cont.	Max.int.
3.5	7	10	14	18	20	24		

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

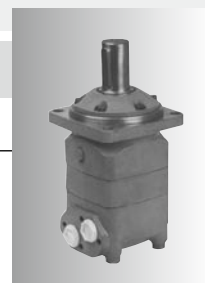
BMV 630 [666cm³/rev.]

Pressure (MPa)							Max.cont.	Max.int.
3.5	6	9	12	15	18	21		

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

Torque (N•m) 1340
Speed (rpm) 444

cont.
int.



Performance Data

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

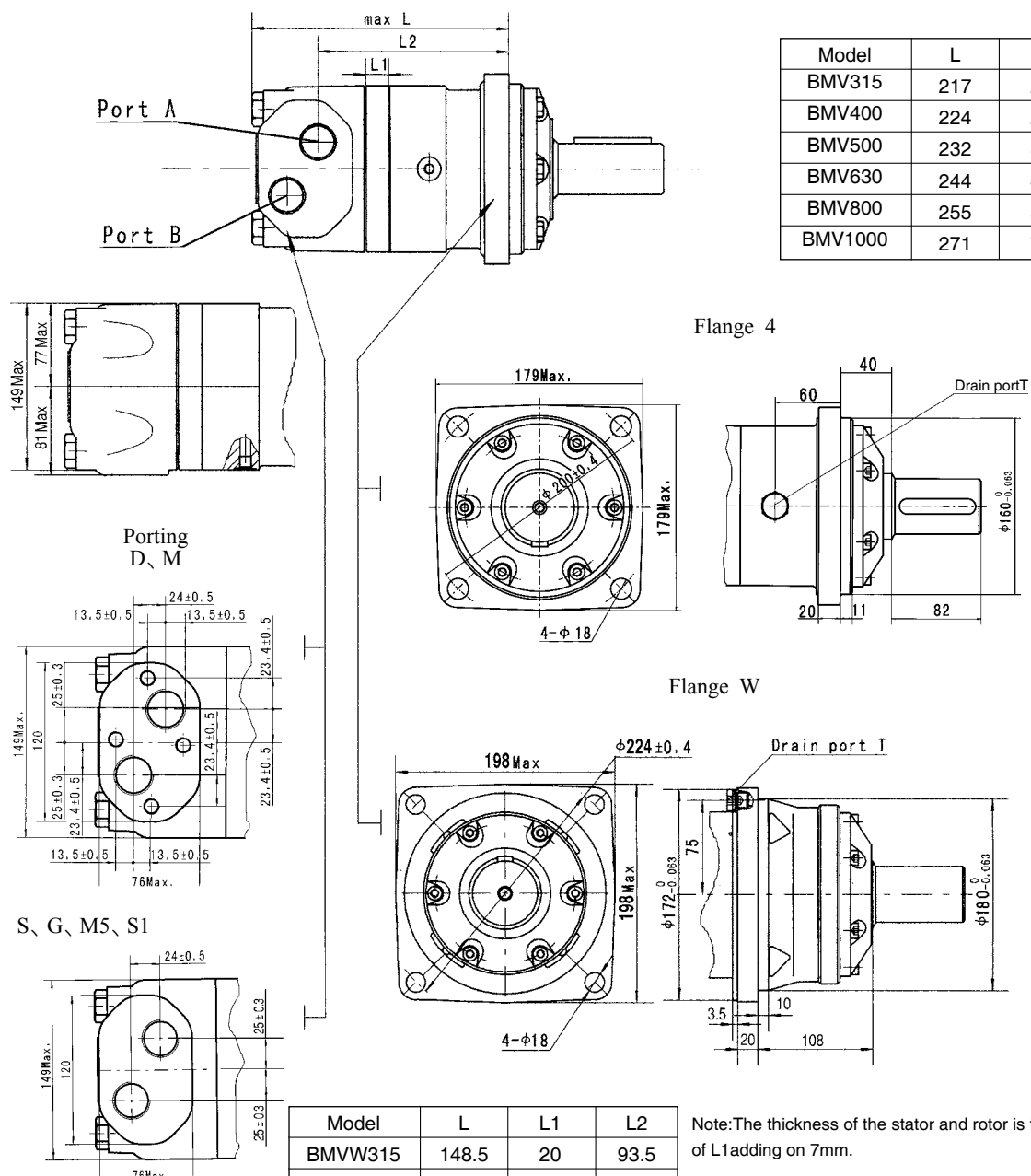
☐ cont.
☐ int.

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

Torque (N•m) 1825
 Speed (rpm) 225



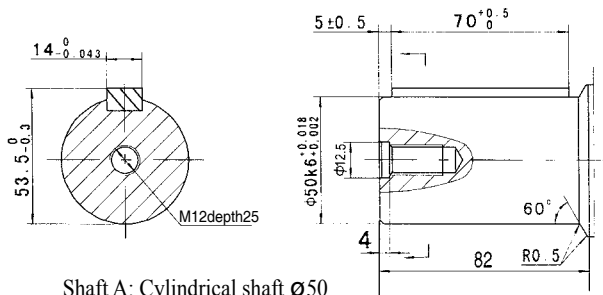
BMV DIMINSIONS AND MOUNTING DATA



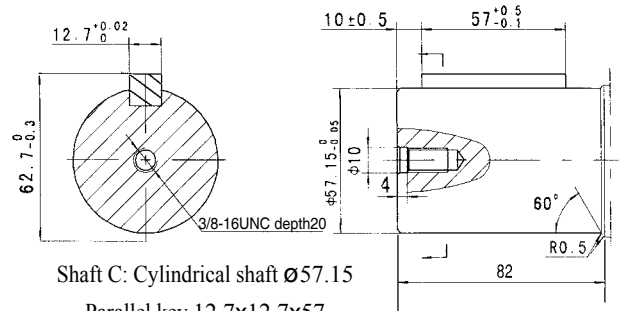
Content	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M5 (depth)	S1 (depth)
P(A,B)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)
T	G1/4 (12)	M14 x 1.5 (12)	9/16-18UNF(12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)
C	4-M12 (10)	4-M12 (10)	--	--	--	--



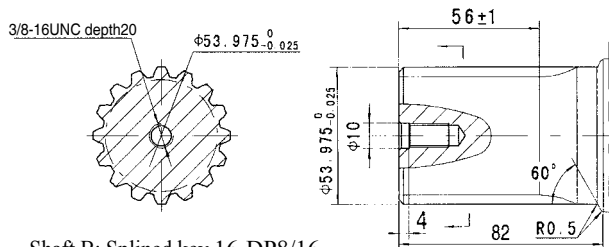
BMV SHAFT EXTENSIONS DIMENSIONS DATA



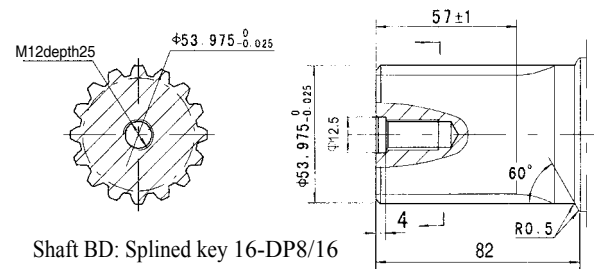
Shaft A: Cylindrical shaft Ø50
Parallel key 14x9x70



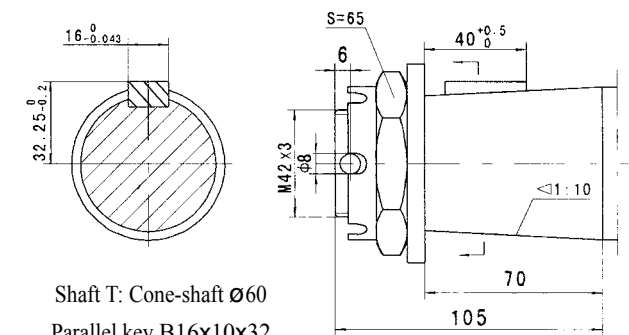
Shaft C: Cylindrical shaft Ø57.15
Parallel key 12.7x12.7x57



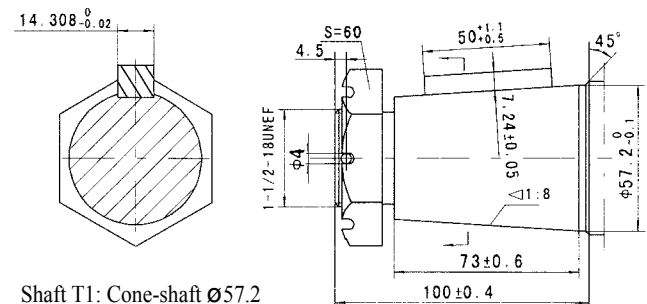
Shaft B: Splined key 16-DP8/16



Shaft BD: Splined key 16-DP8/16



Shaft T: Cone-shaft Ø60
Parallel key B16x10x32
Tightening torque: 750 ± 50Nm

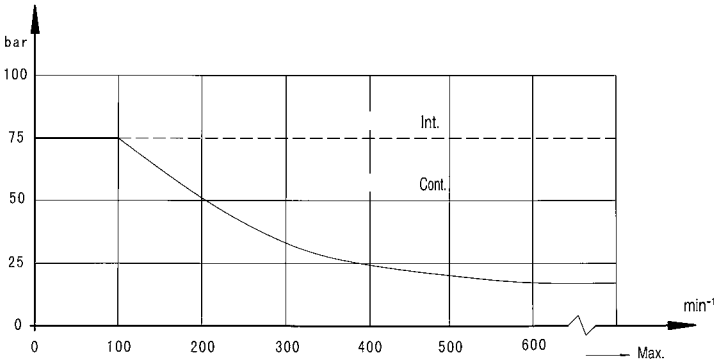
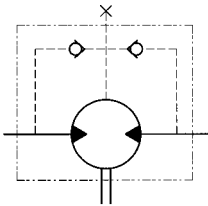


Shaft T1: Cone-shaft Ø57.2
Parallel key 14.308x14.308x50
Tightening torque: 750 ± 50Nm



BMV Series Hydraulic Motor

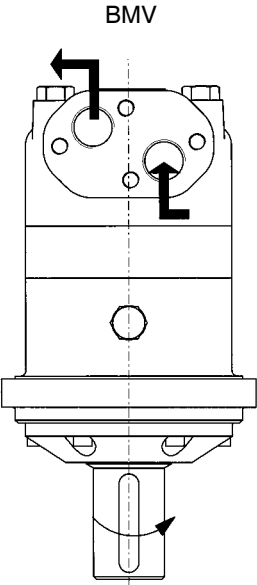
Permissible shaft seal pressure



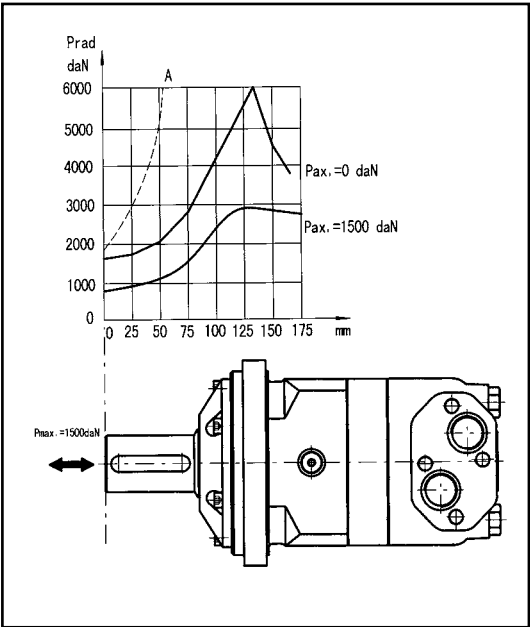
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Standard direction of shaft rotation: Standard

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



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

1	2	3	4	5	6	7	8
BMV							

Pos.1	2	3	4	5	6	7	8
Code	Displacement	Flange	Output shaft	Port and drain port	Rotation direction	Paint	Unusually function
Omit	315	4 4-Ø18 Square-flange Ø200, pilot Ø160 × 11	A Shaft Ø50 , parallel key 14 × 9 × 70	D G1 Manifold 4 × M12, G1/4	Omit Standard R Opposite	00 No paint Omit Blue B Black S Silver grey	Omit Standard
	400		BD Shaft Ø53.975, splined key 16-DP8/16	M M33 × 2 Manifold 4 × M12, M14 × 1.5			
	500		B Shaft Ø53.975, splined key 16-DP8/16	S 1-5/16-12UN, 9/16-18UNF			
	630	W 4-Ø18 Wheel-flange Ø224, pilot Ø180 × 10	C Shaft Ø57.15, parallel key 12.7 × 12.7 × 57.15	G G1, G1/4			
	800		T Cone shaft Ø60, parallel key B16 × 10 × 32	M5 M33 × 2, M14 × 1.5			
	1000		T1 Cone shaft Ø60, parallel key 14.308 × 14.308 × 50.8	S1 1-5/16-12UN(18), 7/16-20UNF(12)			

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 ³ /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 cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

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

BME2 80 [81.3 cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

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

BME2 100 [101.6 cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

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

BME2 125 [127 cm³/rev.]

Pressure (MPa)

Max.cont. Max.int.

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

Torque (N•m) 158
Speed (rpm) 527

cont.
int.

Performance Data

BME2 160 [157.2 cm³/rev.]

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

BME2 200 [193.6 cm³/rev.]

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

BME2 230 [226 cm³/rev.]

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

BME2 250 [257 cm³/rev.]

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

Torque (N•m) 250
Speed (rpm) 311

cont.
int.

Performance Data

BME2 295[287.8 cm³/rev.]

Pressure (MPa)

Max.int.

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

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

Torque (N•m) 506
Speed (rpm) 231

BME2 315[314.5 cm³/rev.]

Pressure (MPa)

Max.int.

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

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

BME2 375[370 cm³/rev.]

Pressure (MPa)

Max.int.

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

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

cont.
int.

BME2 DIMENSIONS AND MOUNTING DATA

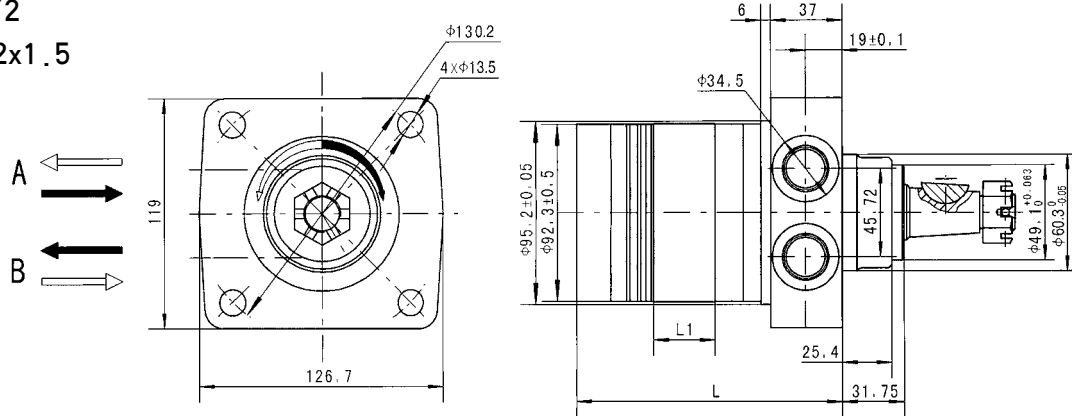
Wheel Mount

Code: Port A、B

WS 7/8-14 O-ring

WD G1/2

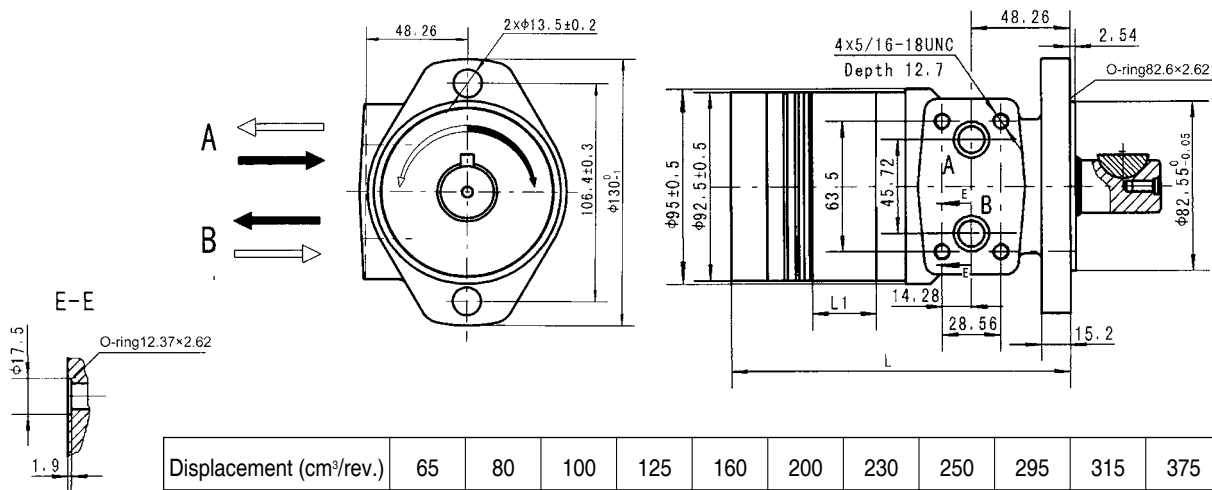
WM M22x1.5



Displacement (cm ³ /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 ³ /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

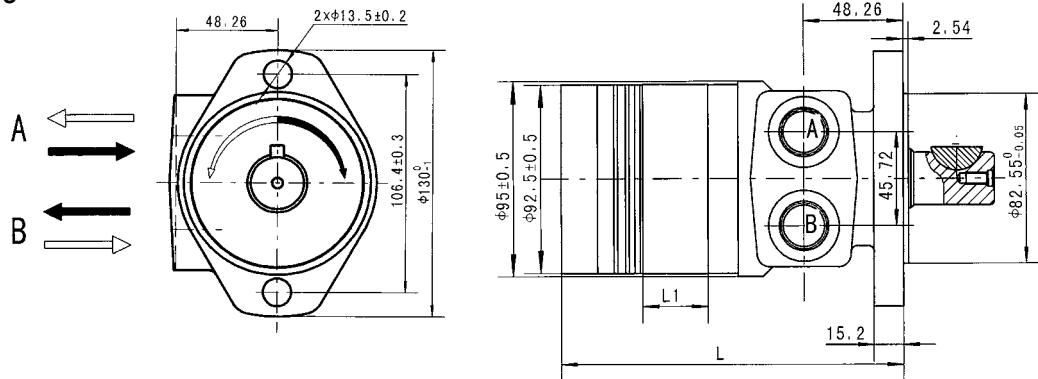
Code: Port A、B

HS 7/8-14UNF

HP 1/2-14NPTF

HD G1/2

HG M22x1.5



Displacement (cm ³ /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

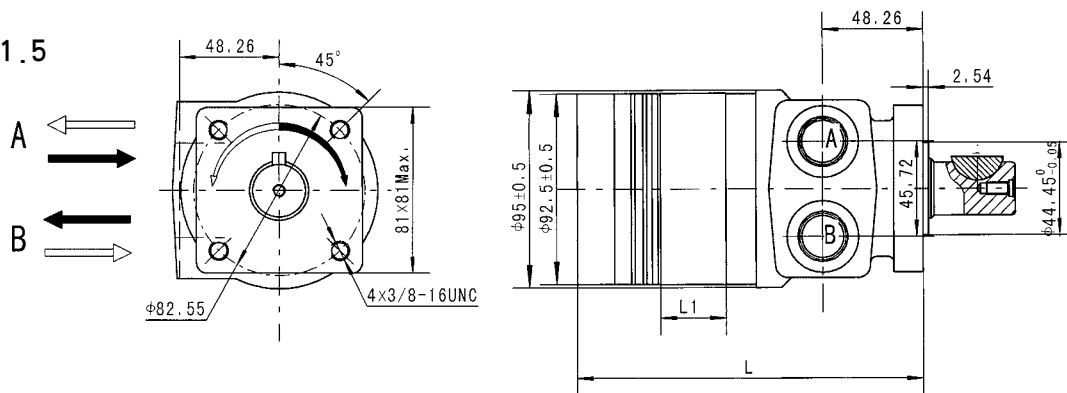
Code: Port A、B

H4S 7/8-14UNF

H4P 1/2-14NPTF

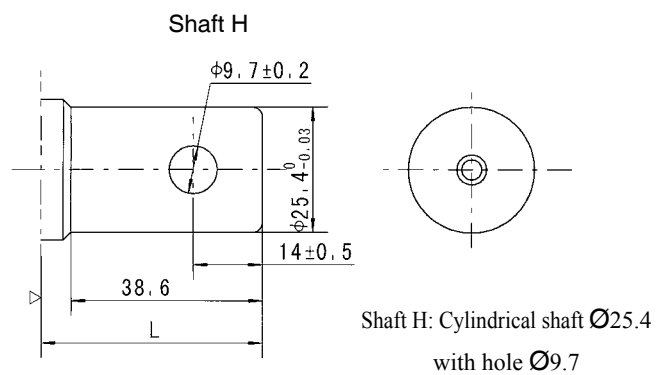
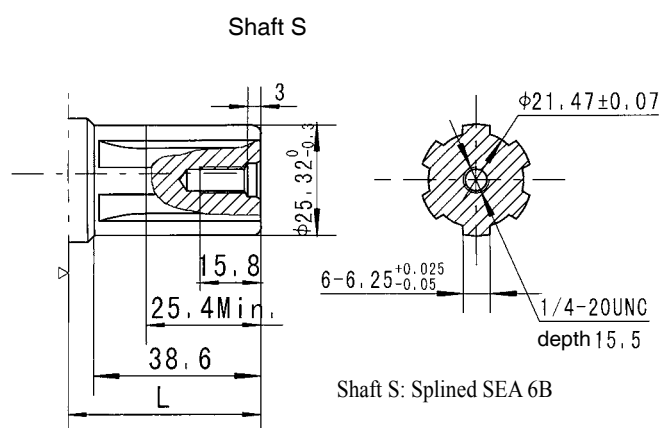
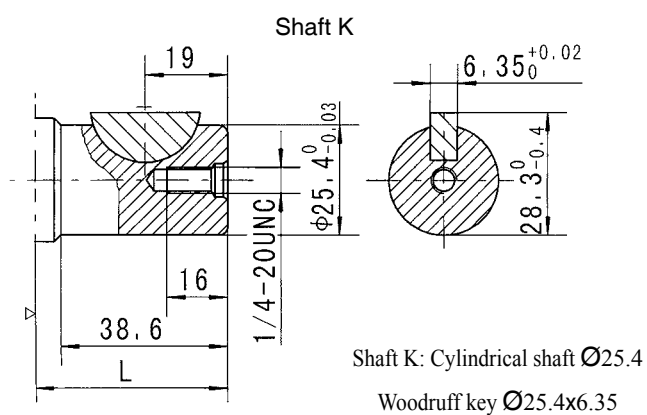
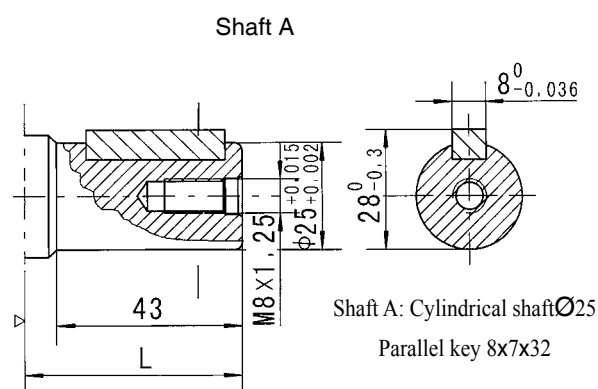
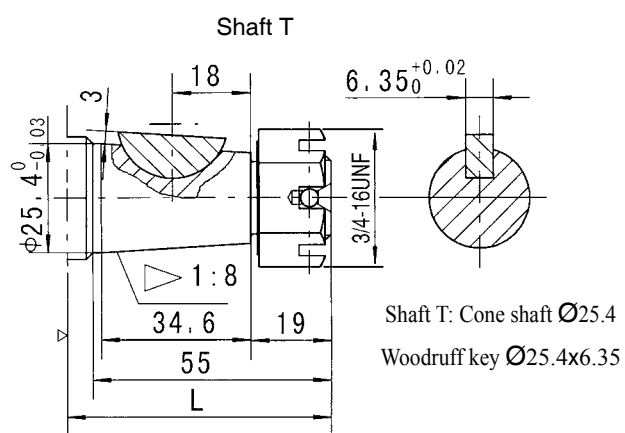
H4D G1/2

H4G M22x1.5



Displacement (cm ³ /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



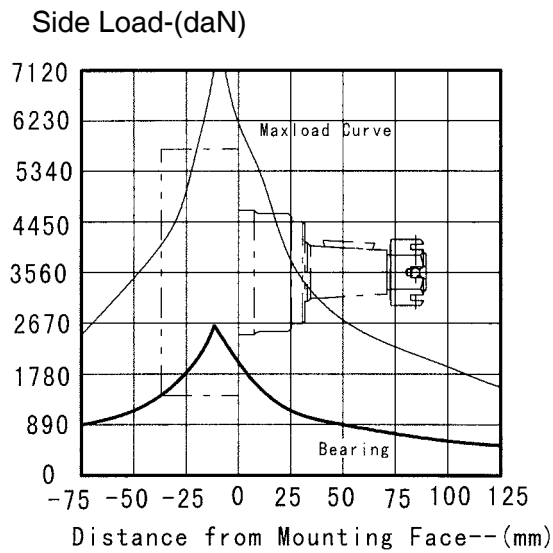
Dimension L

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					

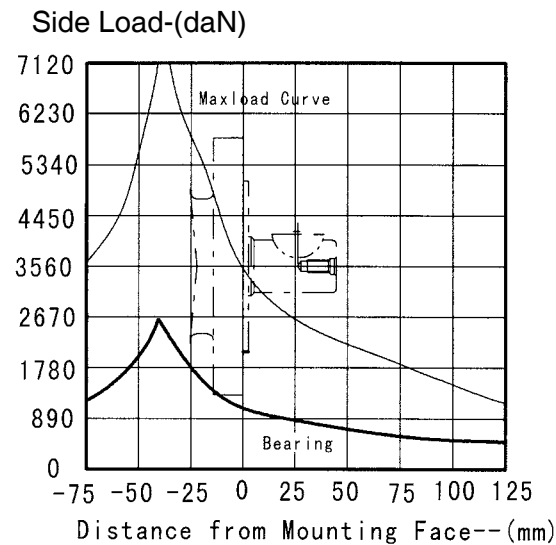
▷ Motor Mounting Surface

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 3×10^6 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,Port	Output Shaft	Rotation Direction	Paint	Unusually Function
Omit	WS	4-Ø13.5 Wheel - flange,Pilot Ø60.3 × 7	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 Omit B S No paint Blue Black Silver grey	Omit Standard
	WD	Port 7/8-14 O-ring				
	WM	4-Ø13.5 Wheel -flange,Pilot Ø60.3 × 7				
	65	Port M22×1.5				
	80	2-Ø13.5 Rhomb-flange,Pilot Ø82.5 × 2.54				
	100	Port 1/2" Manifold mount 4 × 5/8-18				
	125	2-Ø13.5 Rhomb-flange,Pilot Ø82.5 × 2.54				
	160	Port 7/8-14 O-ring				
	200	2-Ø13.5 Rhomb-flange,Pilot Ø82.5 × 2.54				
	230	Port 1/2-14 NPFT Pipe				
	250	2-Ø13.5 Rhomb-flange,Pilot Ø82.5 × 2.54				
	295	Port G1/2				
	315	2-Ø13.5 Rhomb-flange,Pilot Ø82.5 × 2.54				
	375	Port M22x1.5				
	H4S	4-3/8-16 Square- flange,Pilot Ø44.4 × 2.54				
	H4P	Port 7/8-14 O-ring				
	H4D	4-3/8-16 Square- flange,Pilot Ø44.4 × 2.54				
	H4G	Port 1/2-14 NPFT Pipe				
		4-3/8-16 Square- flange,Pilot Ø44.4 × 2.54				
		Port G1/2				
		4-3/8-16 Square- flange,Pilot Ø44.4 × 2.54				
		Port M22x1.5				

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 ³ /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.

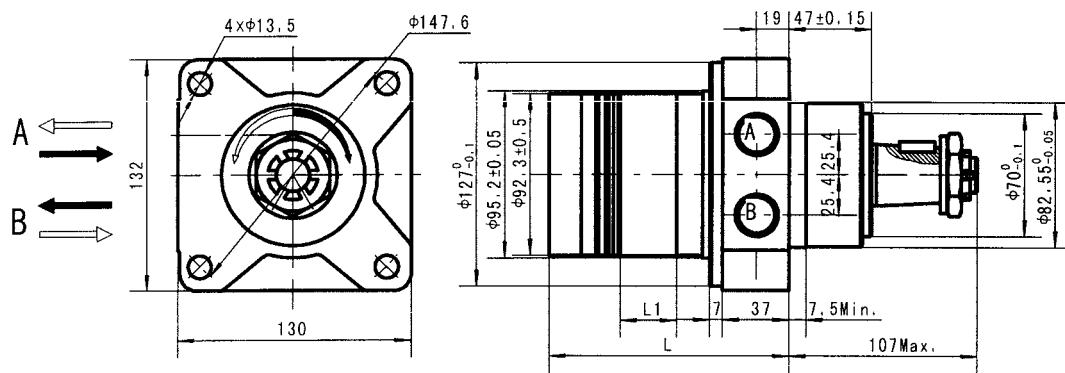
BMJ DIMENSIONS MOUNTING DATA

Wheel Mount

Code : WS Ports A、B 7/8-14 O-Ring

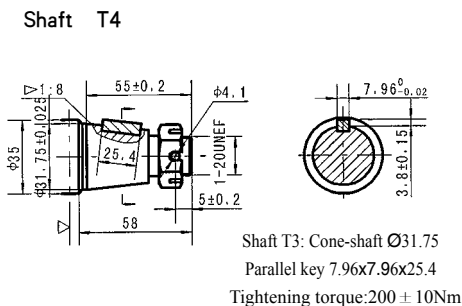
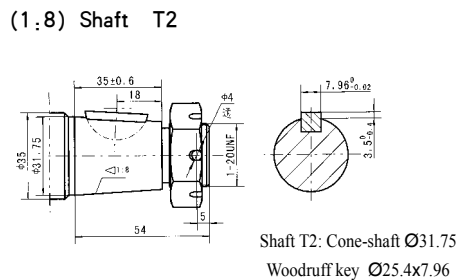
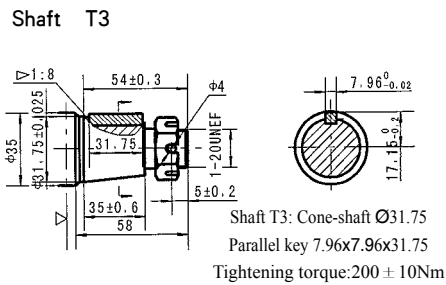
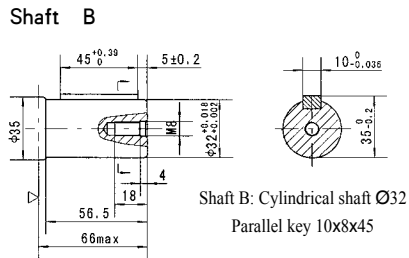
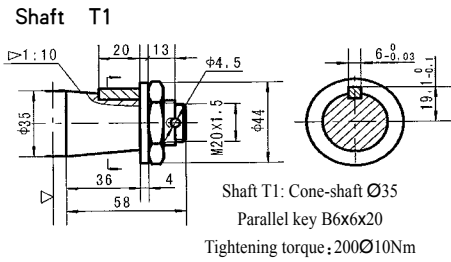
Code : WD Ports A、B G1/2

Code : WM Ports A、B M22x1.5



Displacement (cm ³ /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	174
Weight(kg)	9	9.1	10.4	10.6	10.9	11.3	11.8	12.2	12.6	12.9	13.4

BMJ Shaft Extensions For Dimensions Data



▷ Motor Mounting Surface

Order Information

BMJ 1 2 3 4 5 6 7

Pos.1	2	3	4	5	6	7
Code	Disp.	Flange , Pilot , Port	Output Shaft	Rotation direction	Paint	Unusually function
65	WS	4-Ø13.5 Wheel-flange, Pilot Ø82.55 × 7,	T1	Omit	00	
80		Port 7/8-14 O-ring	T2	Standard	No paint	
100	WD	4-Ø13.5 Wheel-flange, Pilot Ø82.55 × 7,	T3	Opposite	Blue	
125		Port G1/2	T4	R	Black	
160	WM	4-Ø13.5 Wheel-flange, Pilot Ø82.55 × 7,	B		Silver Grey	
200		Port M22x1.5				Standard
230						Omit
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 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.



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.

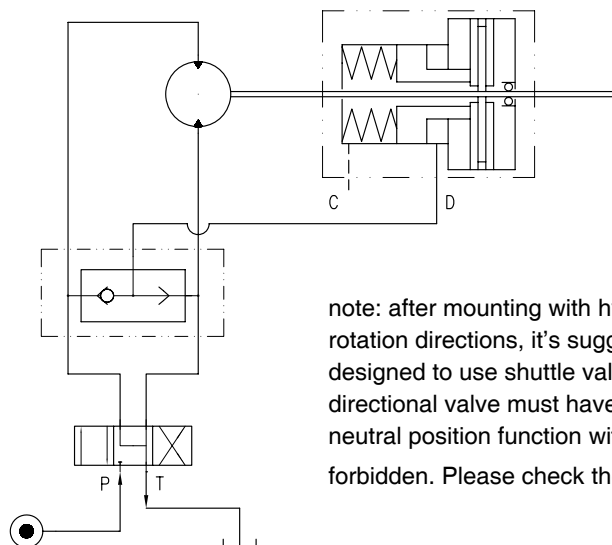
Special Note: such kind of brake is only used in static parking brake. Dynamic braking is not recommended.

Intruction Manual

—、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: 20~75mm²/s; the best optimal situation 42~74mm²/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

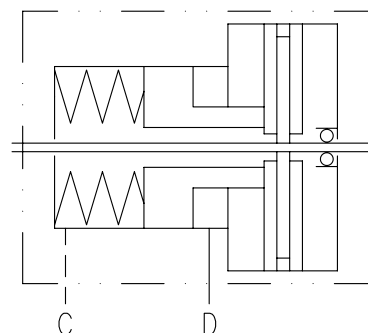


note: after mounting with hydraulic motor, if the motor needs both rotation directions, it's suggested that the hydraulic system is designed to use shuttle valve, and the neutral position of the directional valve must have off-load function(type Y or H), the neutral position function without off-load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

Specification Data

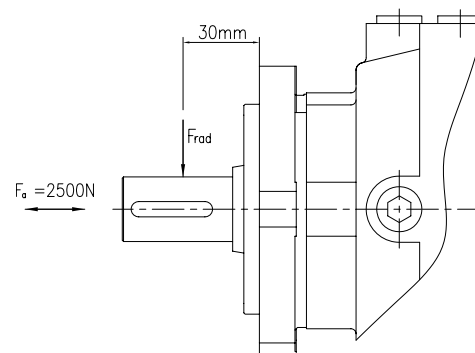
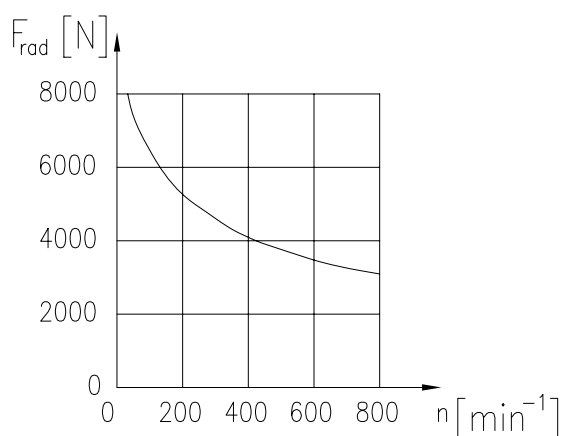
Item	BK2-1	BK2-2
Min. static Torque [Nm]	200~230	410~450
Min. Opening Pressure [MPa]	1.7~2.3	
Max. Opening Pressure [MPa]	30	
Min.oil quantity for brake releasing[cm ³]	7~8	
Oil volume [cm ³]	50~120	
Max. pressure in drain space [MPa]	0.05	
Weight [kg]	9	9.5

*Static torque is obtained at working pressure 0 MPa

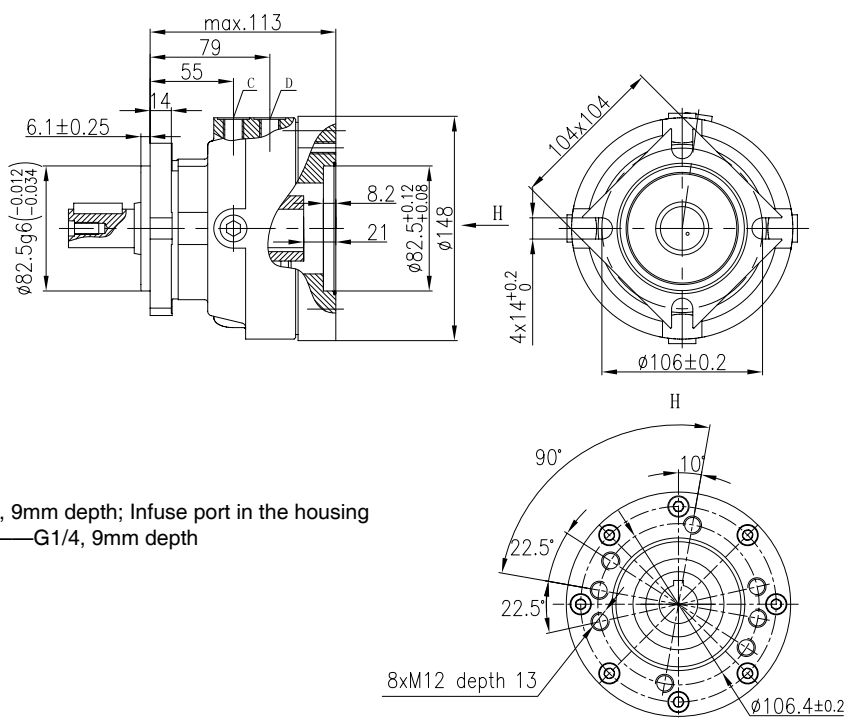


symble drawing

Load Curve

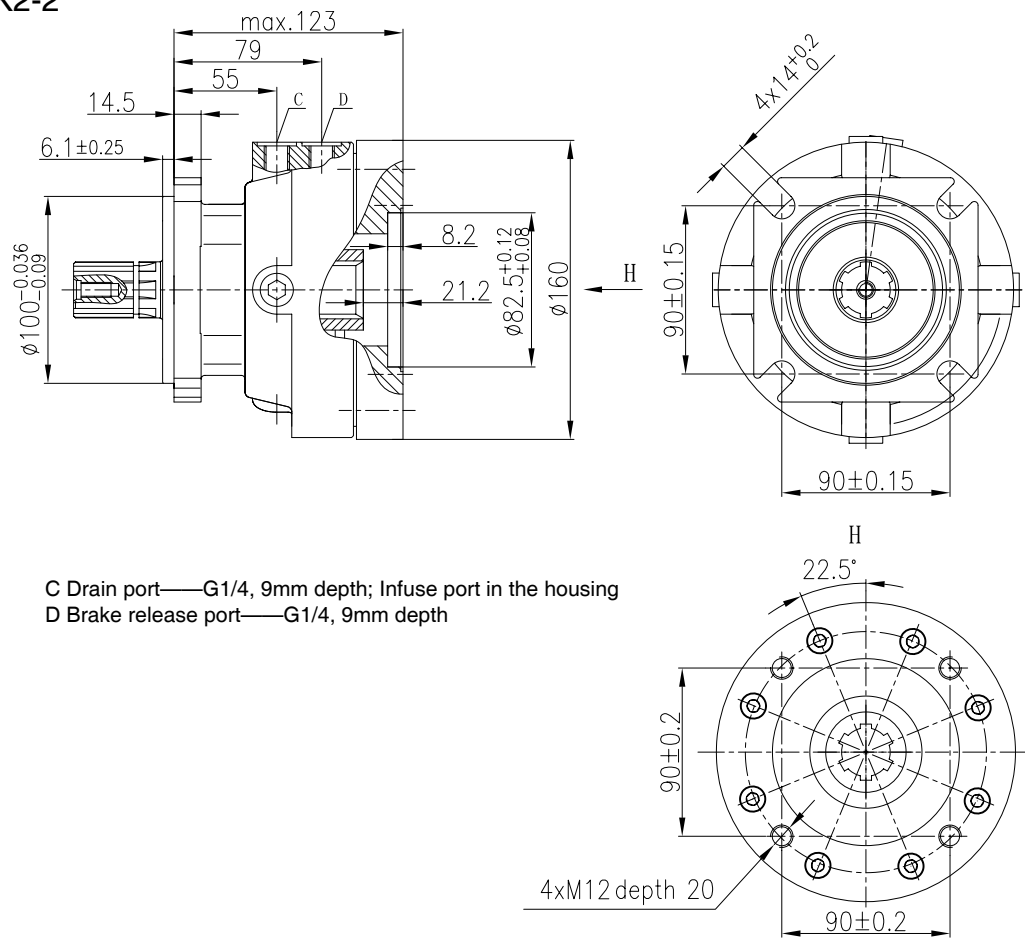


Mounting Data Model BK2-1



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

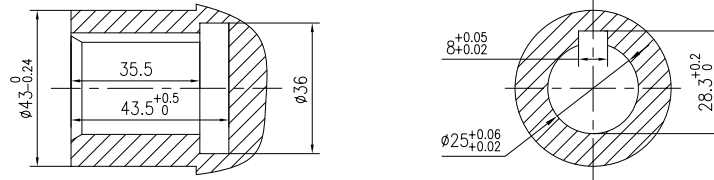
Model BK2-2



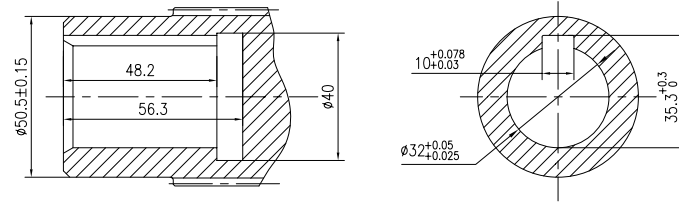
INPUT & OUTPUT SHAFT DATA

INPUT SHAFT HOLES

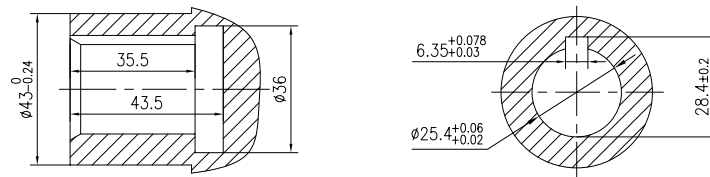
A



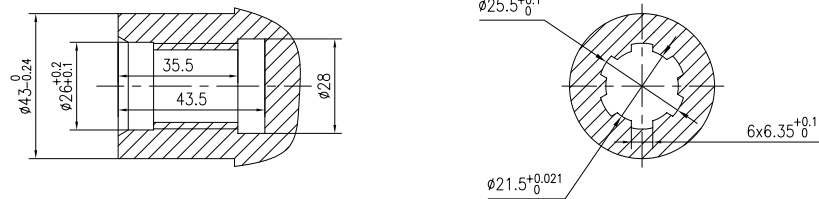
B



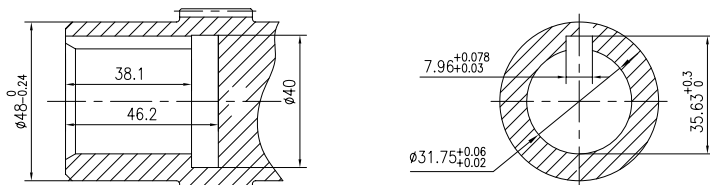
C



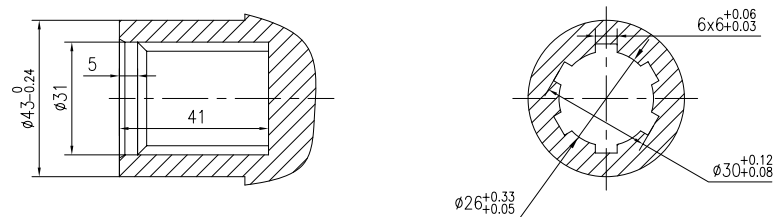
E



G

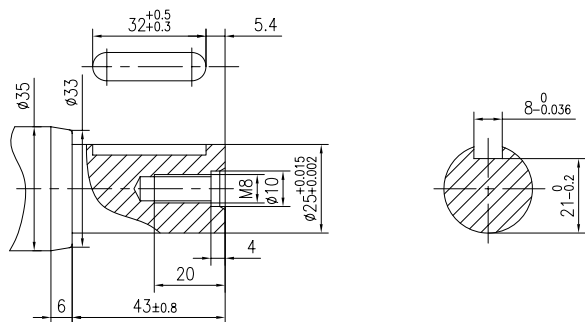


N

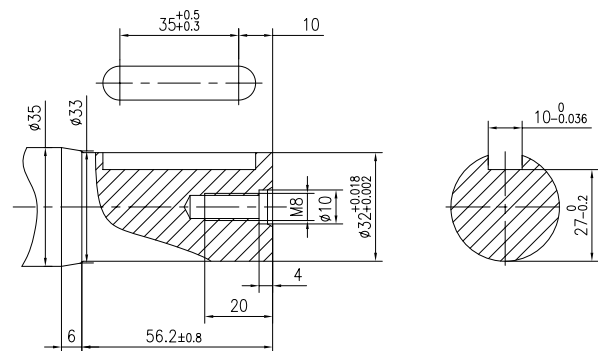


OUTPUT SHAFT EXTENSIONS

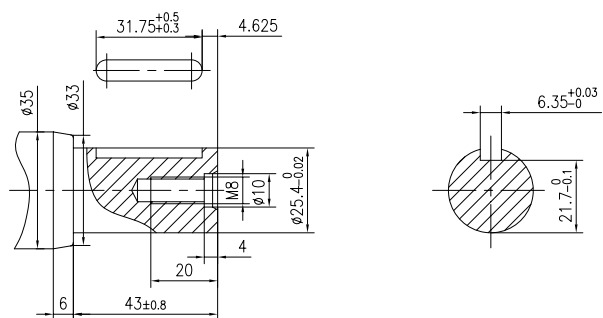
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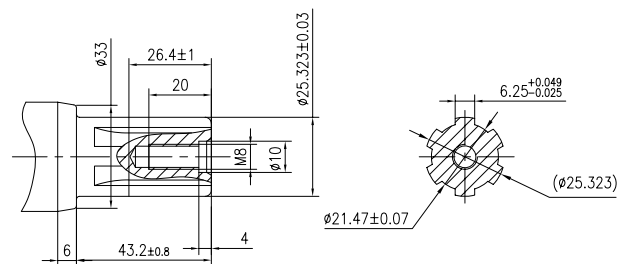
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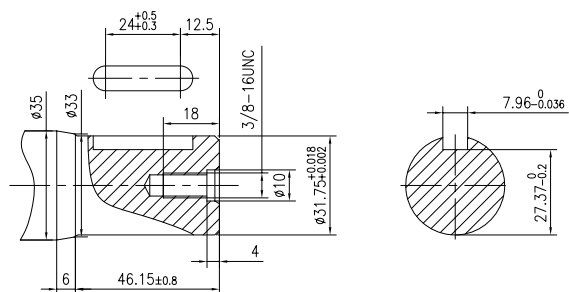
C



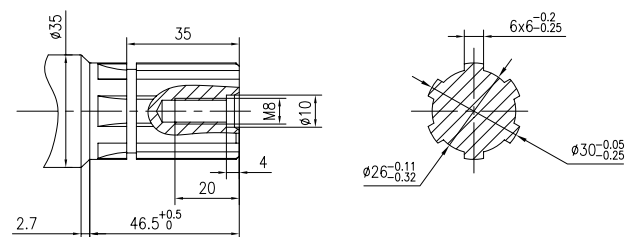
E



G



N

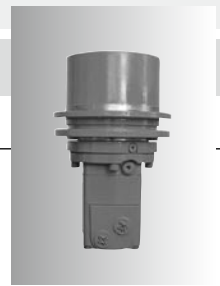


Order Information

BK	1	2	3	4	5	6	7

Pos.1	2	3	4	5	6	7
Series Structure Code	Torque	Input Shaft holes		Output Shaft extensions	Paint	Unusually function
1	Torque200--230Nm	210	Shaft holes Φ 25, Parallel key 8x7x32 Shaft holes Φ 32, Parallel key 10x8x45 Shaft holes Φ 25.4, Parallel key 6.35x6.35x31.75	A B C	No Paint Blue Black Sliver Grey	omit B S
	Torque410--450Nm		Shaft holes Φ 25.4, splined key SAE 6B Shaft holes Φ 31.75, Parallel key 7.96x7.96x31.75	E G		
2	Torque410--450Nm	430	Shaft holes Splined 6-30x26x6	N		Standard

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.



WGB SERIES PLANETARY GEARBOX

Introduction

WGB Series planetary gearbox is used in tracklayers , wheel driving vehicles , different kinds of self-mobile machineries, and such kind of transmission & lifting machinery as winches, cylinder machinery , etc. By adopting special orbital motor and compact structure design, the planetary gearbox can be installed inside the wide groove of the pedrail or wheel, or inside the drum of the winches or the cylinder machinery; the design is simple with reasonable space, and easy mounting. WGB Series planetary gearbox is suitable for open and close hydraulic loop system.

WGB Series planetary gearbox is widely used in self-mobile equipment, such as engineering machinery, lifting machinery, road machinery vehicles, construction machinery, convey machinery, agricultural machinery, mine machinery, sweeping & cleaning machinery, wood machinery, etc., it's also used in winches, and automatization engine's static hydraulic driving system. The features are shown as follows:

- * Adopt special sealing system. Special design of composite sealing, being used in the radial and axial sealing in & between rotating and fixed parts;
- * Adopt built-in multi-disk parking brake system which is also the spring-load parking brake ,hydraulic pressure releases brake force; on the condition that the pressure of hydraulic system decreases lower than the required pressure of the release brake, it will safely stop rotation completely.
- * Compact structure, easy mounting.
- * To be preemptively used together with BMR, BMS series hydraulic orbital motors.

Instruction Manual

In order to keep the hydraulic system operating under optimal condition, the normal requirements are shown as follows:

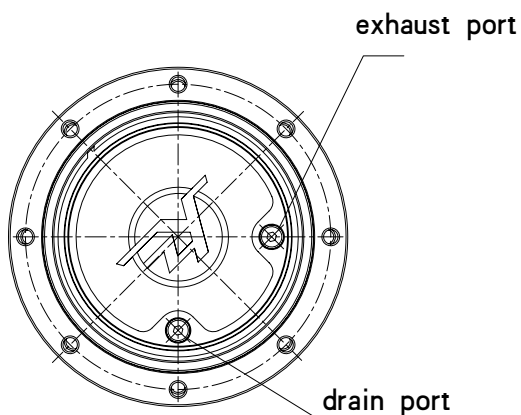
1. Hydraulic oil: HM mineral oil(ISO 6743/4)(GB/T763.2-87) or HLP mineral oil(DIN 51524).
2. Oil temperature: normal operation temperature: $-20^{\circ}\text{C}\sim 90^{\circ}\text{C}$; optimal temperature scope : $20^{\circ}\text{C}\sim 60^{\circ}\text{C}$;
3. Oil viscosity: $20\sim 75\text{mm}^2/\text{s}$; optimal viscosity scope : $42\sim 74\text{mm}^2/\text{s}$ at the temperature of 40°C ;
4. Oil cleanness: oil filtration precision: $25\mu\text{m}$; solid contamination level has to be lower than 20/16;

In order to keep the planetary gearbox operating under the best condition, the normal requirements are shown as follows:

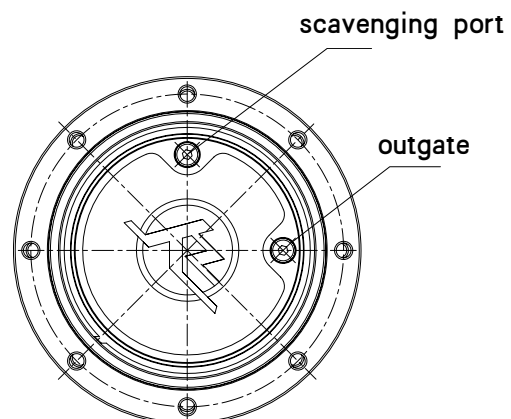
1. Lubrication oil: CKC220 mineral gear oil(ISO 12925-1)(GB/T5903);
2. Oil viscosity: $220\text{mm}^2/\text{s}$ at the temperature of 40°C ;
3. Maintenance period: 1st maintenance should be carried out 50-200 hours after initial operation; afterwards normal maintenance should be carried out every 500~1000 hours.
4. We suggest that MOBIL GEAR630, ESSO SPARTAN EP220, SHELL OMALA EP220 be used.

How to change the oil for planetary gearbox:

1. As shown in Drawing A, dismantle two port plugs , discharge the lubrication oil out of the planetary gearbox. and then clean the planetary housing with the detergent supplied by lubrication oil supplier.
2. As shown in Drawing B, fill more hydraulic oil. More oil till lubrication oil flows out of the drain port; fasten two plugs till the ports are sealed.



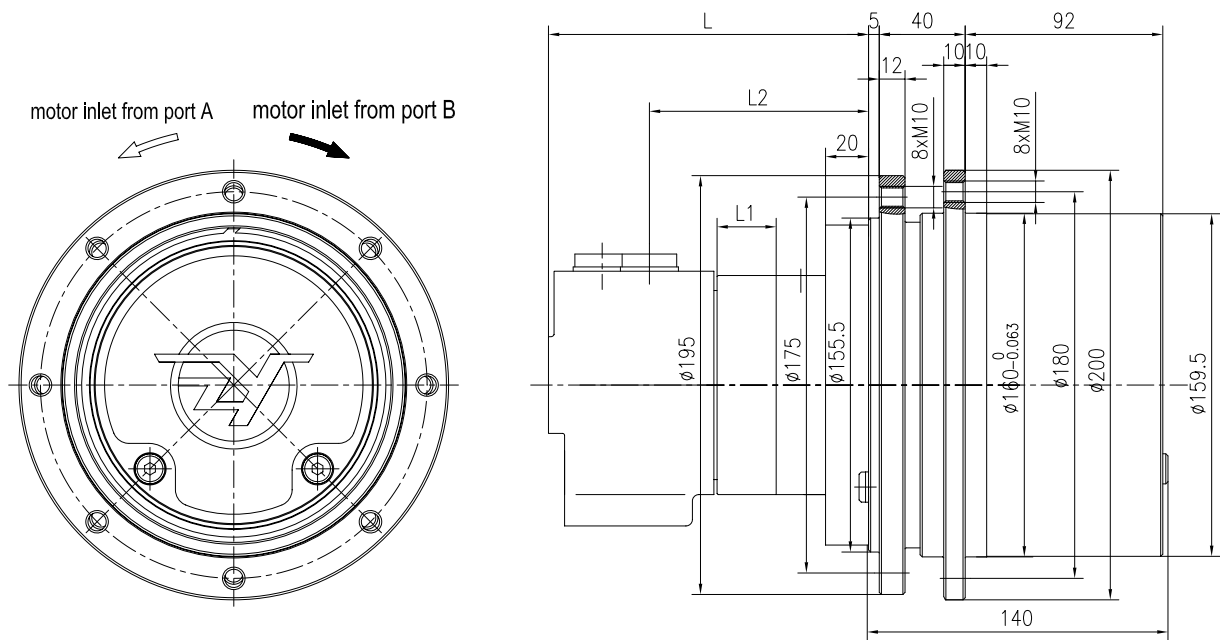
Drawing A



Drawing B

WGB150 Series

Main Specifications:



Motor information

	BMS80	BMS100	BMS125	BMS160	BMS200	BMS250	BMS315	BMS375
L1(mm)	13	17	22	27.5	35.1	47	59	71
L2(mm)	69	73	78	83.5	91.1	103	115	127
L(mm)	134.5	138.5	143.5	149	157	169	181	193

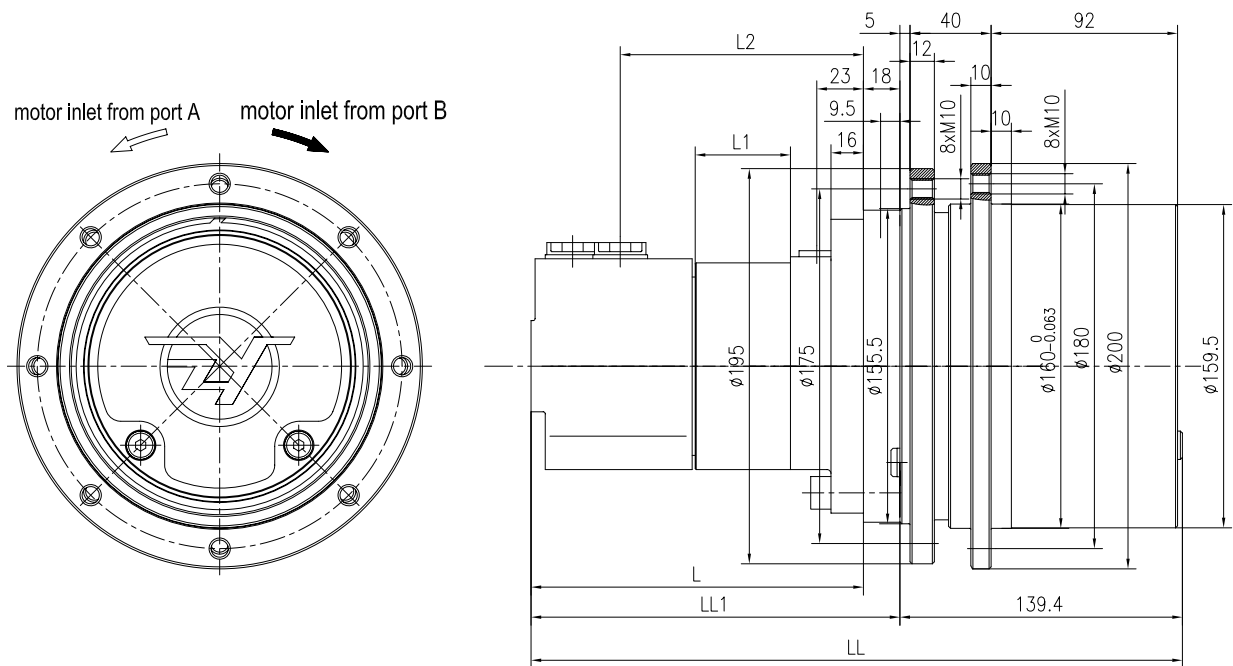
WGB150 WITH BMS 125, Main specifications as follows

Main specifications of WGB 150

WGB150		5.75	4.6	3.28
specification Motor	Motor BMS125	125	125	125
	pressure drop MPa	15.4	15.4	16.2
	flow L/min	73.3	73.3	69.7
	torque N·m	260.9	260.9	274.4
	speed rpm	539.5	539.5	512.9
Output speed rpm		93.8	117.3	156.4
Output torque N·m		1500	1200	900
Output power kW		14	14	14

Main specifications of the non-standard motor with WGB150 will be calculated upon hydraulic motor.
The max. output torque of WGB 150 is 1500 Nm, the max. output power is 14 kW.

WGB300 Series



Motor information

	BMSS80	BMSS100	BMSS125	BMSS160	BMSS200	BMSS250	BMSS315	BMSS375
L1(mm)	13	17	22	27.5	35.1	47	59	71
L2(mm)	82	86	91	96.5	104.1	116	128	140
L (mm)	127	131	136	141.5	149	161	173	185
LL1(mm)	145	149	154	159.5	167	179	191	203
LL(mm)	248.4	288.4	293.4	298.9	306.4	318.4	330.4	342.4

WGB 300 WITH BMSS 250, Main specifications as follows

Main specifications of WGB 300

WGB300		5.75	4.6	3.28
specification Motor	Motor BMSS250	252	252	252
	pressure drop MPa	15.3	15.3	15.2
	flow L/min	95.0	95.0	95.6
	torque N·m	521.7	521.7	518.3
	speed rpm	346.8	346.8	349.1
Output speed rpm		60.3	75.4	106.4
Output torque N·m		3000	2400	1700
Output power kW		18	18	18

Main specifications of the non-standard motor with WGB 300 will be calculated upon hydraulic motor.
The max. output torque of WGB 300 is 3000 Nm, the max. output power is 18 kW.

Order Information

1	2	3	4	5	6	7	8
WGB							

Pos.1	2	3	4	5	6	7	8
Series Code	Ratio	Brake	Motor code	Motor Displacement	Port and drain port	Paint	Unusually function
1500N·m	3.28 4.6 5.75	With brake No brakes	BK Omit	80 100 125 160	G1/2 manifold mount 2xM10,G1/4 M22x1.5 manifold mount2xM10,M14x1.5	No paint Blue Black Silver grey	00 Omit B Standard Omit
3000N·m	3.28 4.6 5.75	With brake No brakes	BK Omit	200 250 315 375	7/8-14UNF O-ring manifold mount 2x3/8-16,7/16-20UNF 1/2-14NPTF manifold mount 2x3/8-16,7/16-20UNF		

Note: from the order code, please choose the colorful code in the right column, and provide us with the information in regard to brake structure, torque, ratio, brake, motor code, displacement, port and drain port and the paint, etc. If the specification is not in the table or you have special requirements, please contact us.

HGB SERIES PLANETARY GEARBOX

Introduction

HGB series planetary gearbox is one speed reducer for various machinery, adopting the compact design of combining hydraulic orbital motor and speed reducer, design structure is simple, with reasonable mounting space, easy for mounting. This kind of gearbox fits all kinds of hydraulic loop system.

HGB series planetary gearbox is widely used various machinery, such as engineering machinery, lifting machinery, road machinery vehicles, construction machinery, convey machinery, agricultural machinery, mine machinery, sweeping & cleaning machinery, wood machinery, etc., it's also used in winches, and automatization engine's static hydraulic driving system. The features are shown as follows:

- * Compact structure, easy mounting.
- * Small volume, strong power.
- * To be preemptively used together with BMR, BMH, BMS series hydraulic orbital motors.

Instruction Manual

In order to keep the hydraulic system operating under optimal condition, the normal requirements are shown as follows:

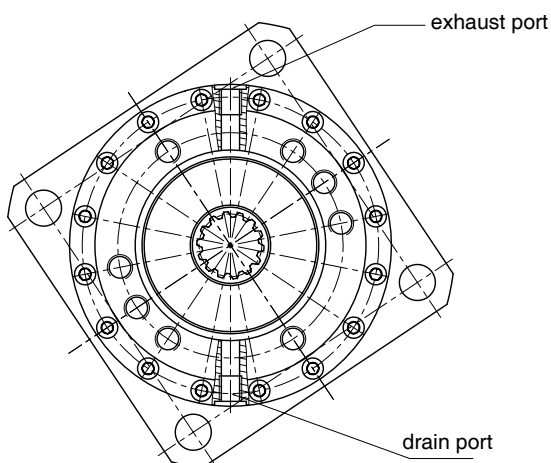
1. Hydraulic oil: HM mineral oil(ISO 6743/4)(GB/T763.2-87) or HLP mineral oil(DIN 51524).
2. Oil temperature: normal operation temperature: $-20^{\circ}\text{C}\sim 90^{\circ}\text{C}$; optimal temperature scope : $20^{\circ}\text{C}\sim 60^{\circ}\text{C}$;
3. Oil viscosity: $20\sim 75\text{mm}^2/\text{s}$; optimal viscosity scope : $42\sim 74\text{mm}^2/\text{s}$ at the temperature of 40°C ;
4. Oil cleanness: oil filtration precision: $25\mu\text{m}$; solid contamination level has to be lower than 20/16;

In order to keep the planetary gearbox operating under the best condition, the normal requirements are shown as follows:

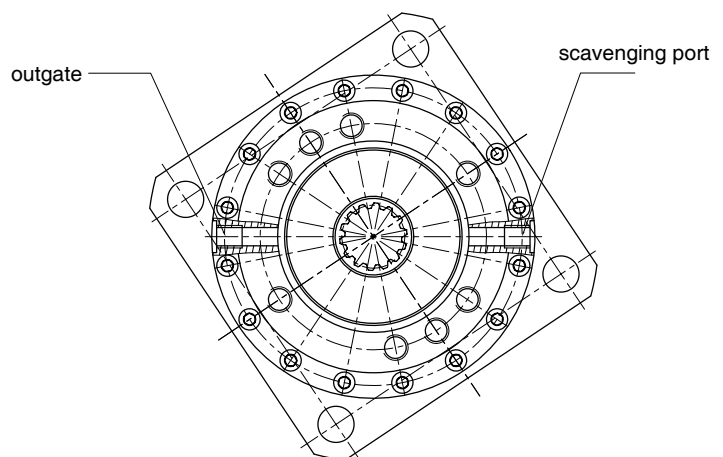
1. Lubrication oil: CKC220 mineral gear oil(ISO 12925-1)(GB/T5903);
2. Oil viscosity: $220\text{mm}^2/\text{s}$ at the temperature of 40°C ;
3. Maintenance period: 1st maintenance should be carried out 50-200 hours after initial operation; afterwards normal maintenance should be carried out every 500~1000 hours.
4. We suggest that MOBIL GEAR630, ESSO SPARTAN EP220, SHELL OMALA EP220 be used.

How to change the oil for planetary gearbox:

1. As shown in Drawing A, dismantle two port plugs , discharge the lubrication oil out of the planetary gearbox. and then clean the planetary housing with the detergent supplied by lubrication oil supplier.
2. As shown in the Drawing , fill more hydraulic oil till lubrication oil flows out of the drain port; fasten two plugs till the ports are sealed.

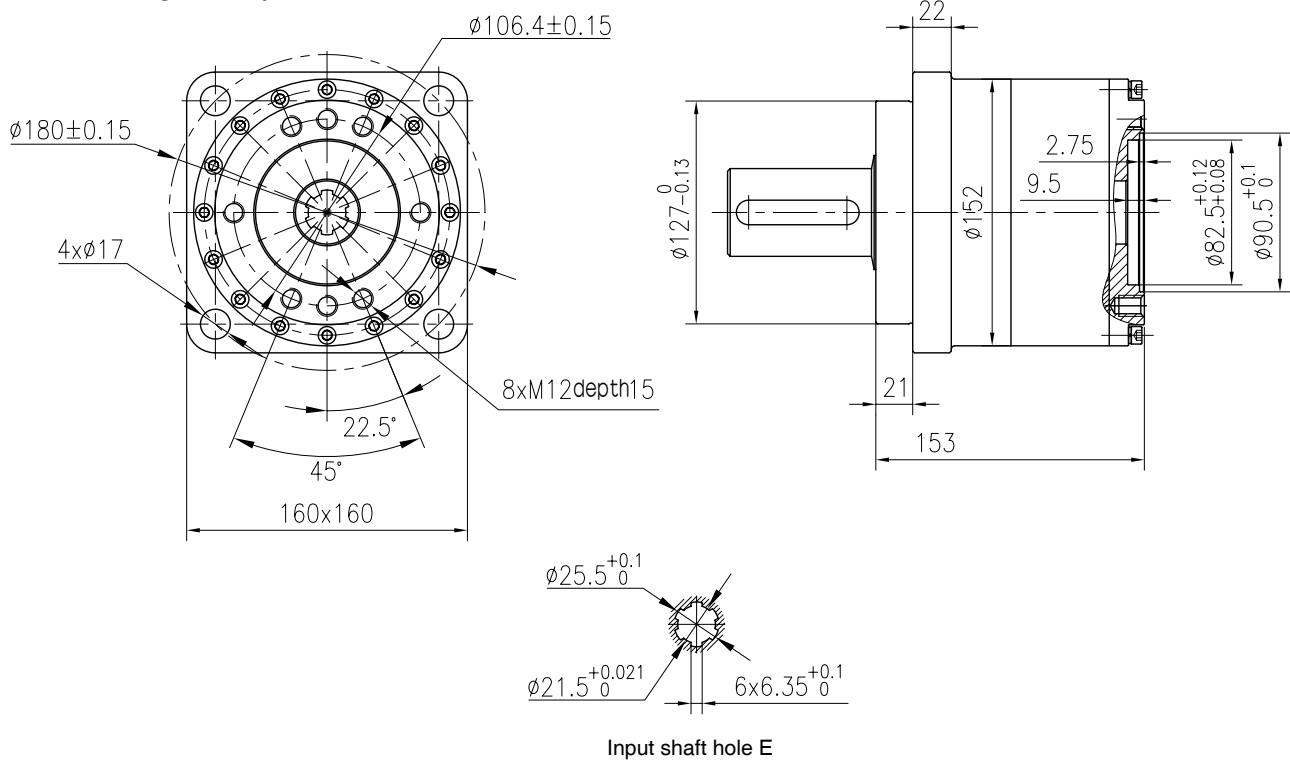


Drawing A



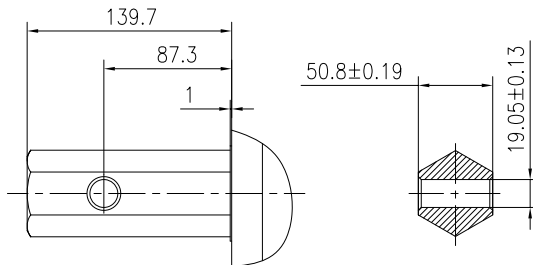
Drawing B

Main mounting and specification data

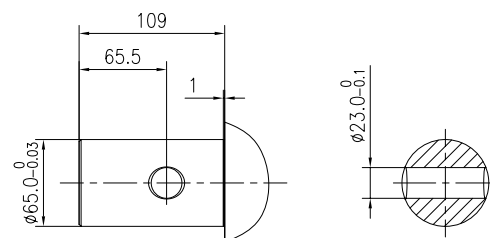


Output shaft extensions

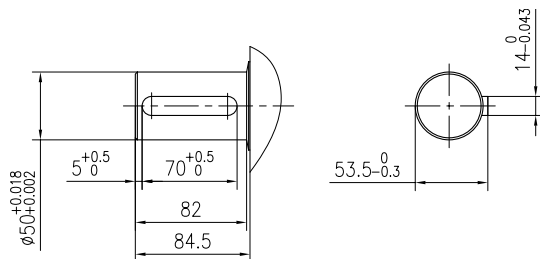
shaft H1



shaft H2



shaft A



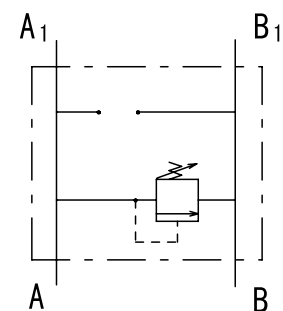
Main specifications of the BMR,BMP,BMH and BMS motor with HGB will be calculated upon hydraulic motor.

The rotation direction of input and output of HGB planetary gearbox is reverse. The speed reduction ratio is 3.65. The max. output torque of HGB is 2000 Nm, the max. output power is 15 kW.

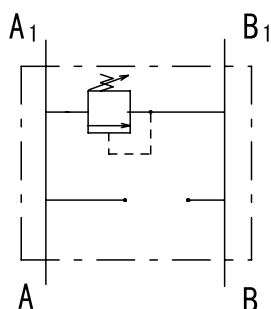
[illegible]

Note: from the order code , please choose the colorful code in the right column, and provide us with the information in regard to structure, ratio,input shaft hole, output shaft extension,motor code, displacement code,motor port & drain port code and the paint , etc. If the specification is not in the table or you have special requirements, please contact us.

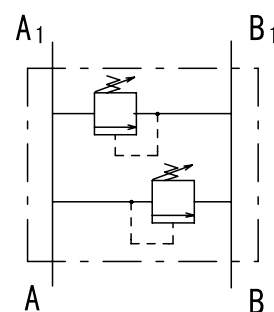
CROSSOVER RELIEF VALVE



single crossover relief valve
type FY*A



single crossover relief valve
type FY*B

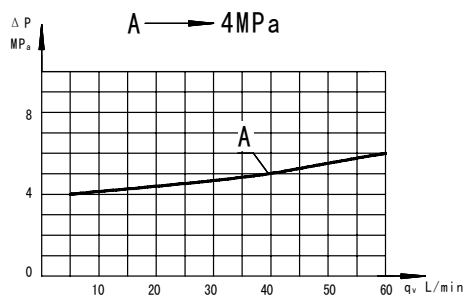


dual crossover relief valve type
FY*B

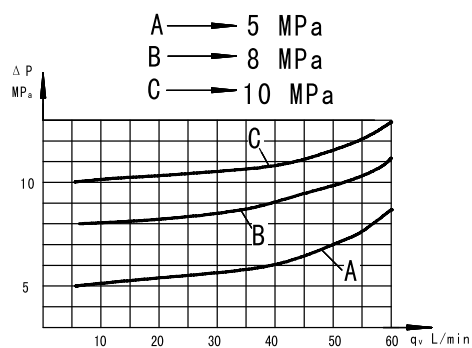
Specification data

Parameters	Type				
	FYRHD	FYSHD	FYSD	FYRH	FYSH
Flow Rate (L/min)	60				
Pressure Range (MPa)	[0.5-4];[3-10];[8-25]				
Weight (kg)	1.7	1.8	1.8	1.55	1.65

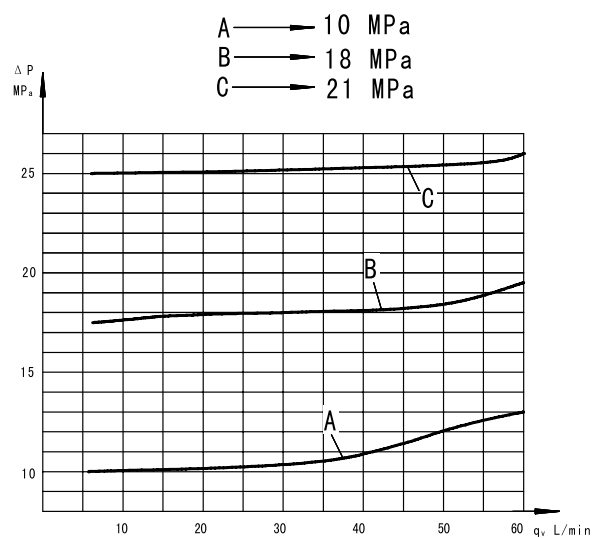
Rated Pressure 4MPa



Rated pressure 3-10MPa

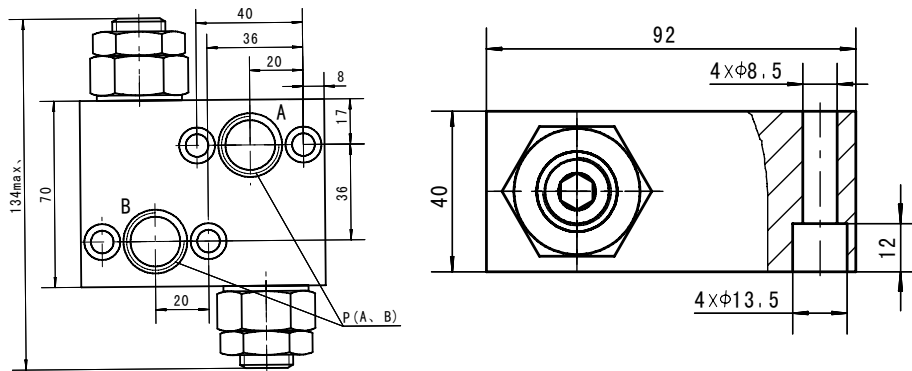


Rated pressure 8-25MPa



GROSSOVER RELIEF VALVES FOR BMR SERIES HYFRANLIC MOTORS

Dual grossover relief valve type FYRHD



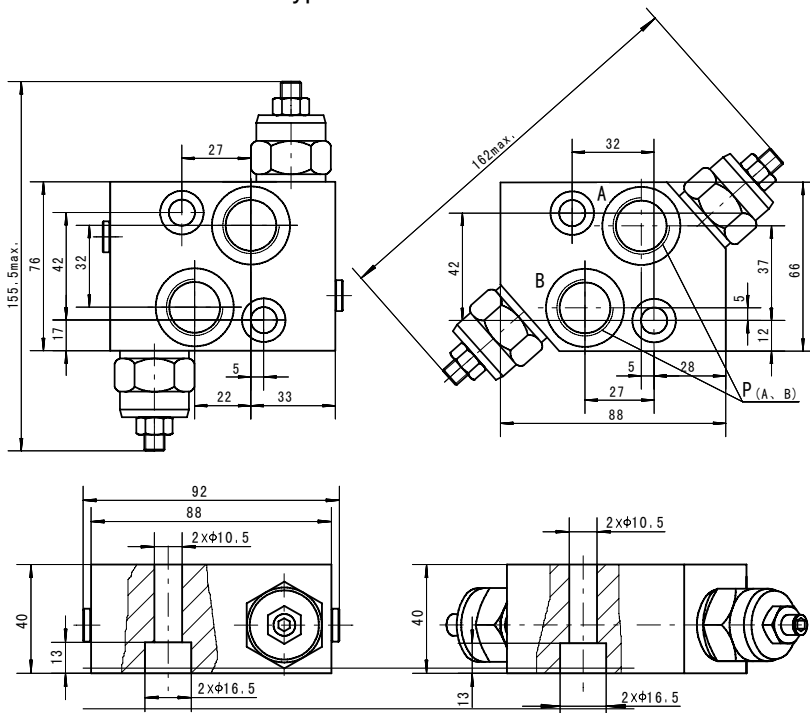
Code	P(A, B)(depth)
D	G1/2(18)
M	M22×1.5(18)
S	7/8-14UNF(18)
P	1/2-14NPTF(18)

Note:FYRHD Blocks are installed directly on BMR and BMP Motors with four bolts 5/16-18UNC,40mm long or M8×40-8.8,DIN912.

GROSSOVER RELIEF VALVES FOR BMS SERIES HYFRANLIC MOTORS

Dual crossover relief valve type FYSD

Dual crossover relief valve type FYSHD



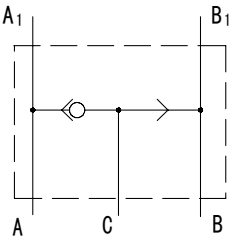
Code	P(A, B)(depth)
D	G1/2(18)
M	M22×1.5(18)
S	7/8-14UNF(18)

Note:FYSHD Blocks are installed directly on BMS Motors with two bolts 3/8-16UNC,40mm long or M10×40-8.8,DIN912.

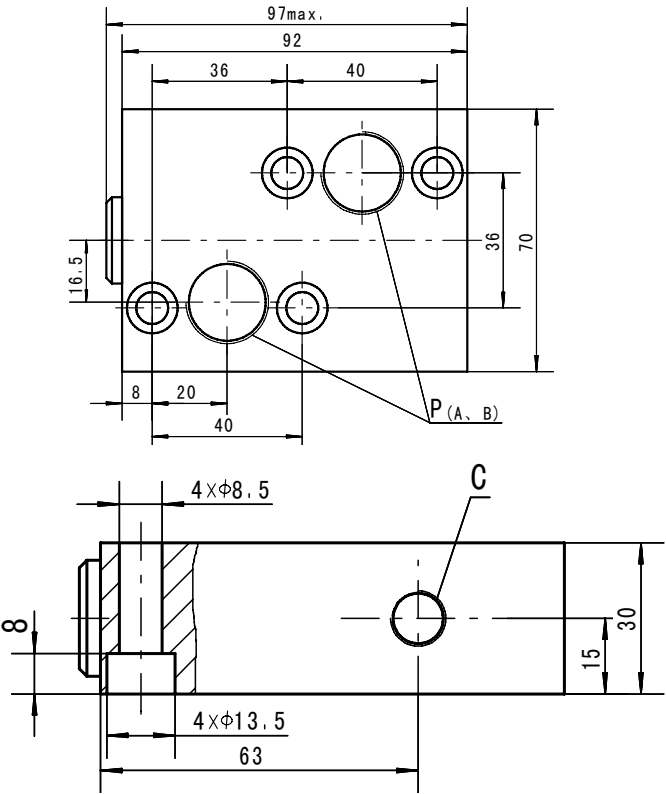
SWITCH VALVE

Specification Data

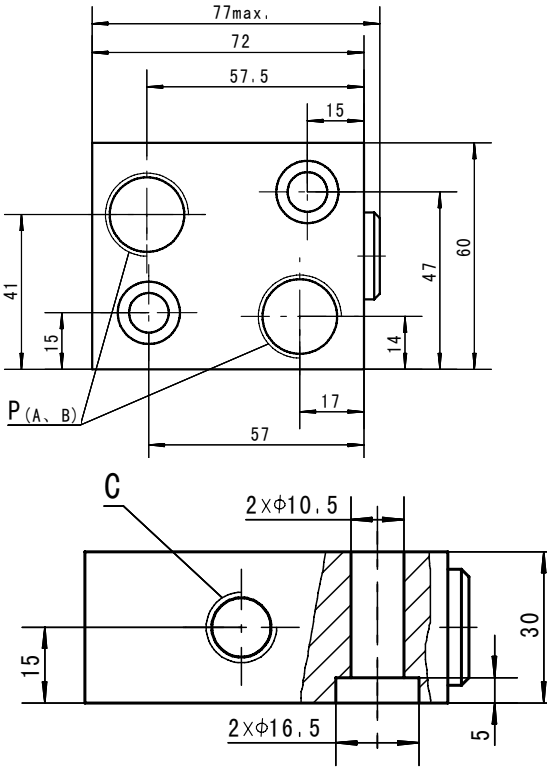
Parameters	Type	
	FSR	FSS
FlowRate (L/min)	60	
RatedPressure (MPa)	25	
Weight (Kg)	0.9	0.7



Switch valve FSR



Switch valve FSS



Code	P(A, B)(depth)	C(depth)
D	G1/2(17)	G1/4(14)
M	M22×1.5(17)	M14×1.5(14)
S	7/8-14UNF(17)	7/16-20UNF(12.7)

Note:FSR Blocks are installed directly on BMR and BMP Motors with four bolts 5/16-18UNC, 35mm long orM835-8.8;FSS Blocks are installed directly on BMS Motors with two bolts3/8-16UNC,35mm long or M1040-8.8DIN912

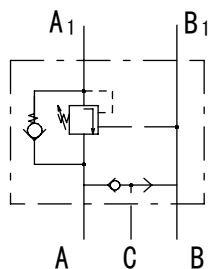
Order Information

1	2	3	4	5	6	7
F						

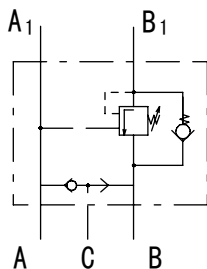
Pos.1	2	3	4	5	6	7
Type	Housing Type	Number of Spool	Pressure settings MPa	Flow Rate L/min	Ports	Paint
Y Crossover Relief Valves	RH SH S	A Ports A one valve-single B Port B one valve-single D Two valves-dual	4 0.5-4 standard settings 4MPa 10 3-10 standard settings 10MPa 21 8-21 standard settings 21MPa	Omit 60	D G1/2 M M22x1.5 S 7/8-14UNF P 1/2-14NPTF	00 No Paint Omit Blue B Black S Silver grey
S Switch Valve	R S					

Note: from the order code , please choose the right code for valve type, motor housing type, number of spool, pressure settings, flow rate, ports and paint information. If you can't find any specification here, or if you have special requirements, please contact us.

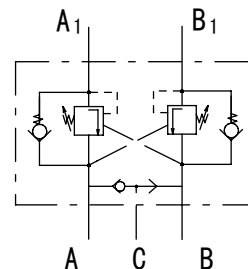
OVERCENTER VALVE WITH BRAKE PORT



Overcenter Valve FPRA



Overcenter Valve FPRB

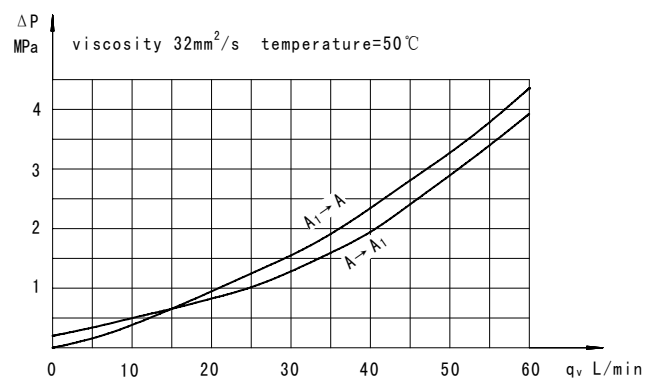


Overcenter Valve FPRD

Specifications

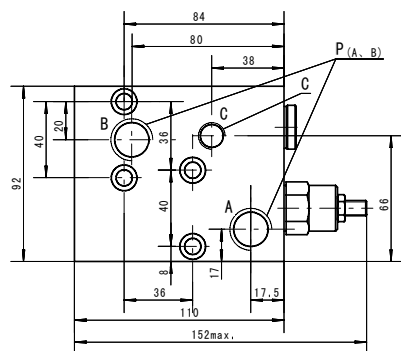
Specifications	model	
	FPRA(B)	FPRD
flow (L/min)	60	
pressure (Mpa)	7-25	
pilot ratio	4.25:1	
weight (kg)	3.30	3.35

pressure drop

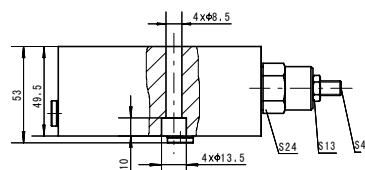
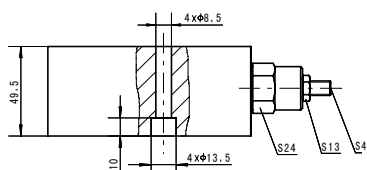
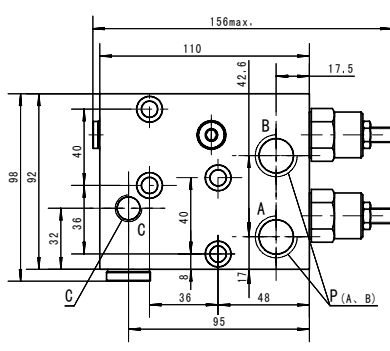


OVERCENTER VALVE FOR BMR MOTOR

Overcenter valve FPRA



Overcenter valve FPRD



code	P(A, B)(depth)	C(depth)
D	G1/2(18)	G1/4(14)
M	M22×1.5(18)	M14×1.5(14)
S	7/8-14UNF(18)	7/16-20UNF(14)

Note: Valve FPR(D) is used together with BMP or BMR motor, 4 bolts thread; 5/16-18UNC or M8×50 grade 8.8

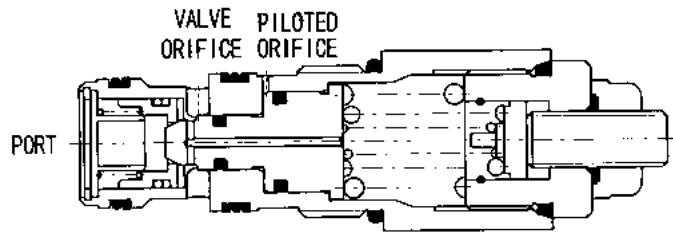
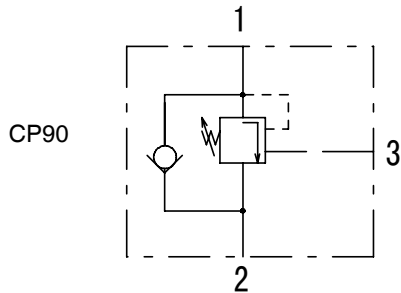
Order Information

1	2	3	4	5	6	7
F	-	-	-	-	-	-

Pos.1	2	3	4	5	6	7
Type	Motor housing Type	Number of spool	Pressure settings MPa	Flow Rate L/min	Ports,Brake port	Paint
P	R	A	7-25	Omit	G1/2,G1/4 M22x1.5,M14x1.5 7/8-14UNF,7/16-20UNF	00 Omit B S
		Port A one valve-single				No Paint Blue Black Silver grey
		Port B one valve-single		60		
		Two valves-dual				

Note: from the order code , please choose the right code for valve type, motor housing type, number of spool, pressure settings, port braking port and paint information. If you can't find any specification here or if you have special requirements, please contact us.

CARTRIDGE TYPE OVERCENTER VALVE



OPERATION

The check valve allows free flow from port ② to port ① while a direct-acting, pilot-assisted relief valve controls flow from port ① to port ②. Pilot assist at port ③ lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

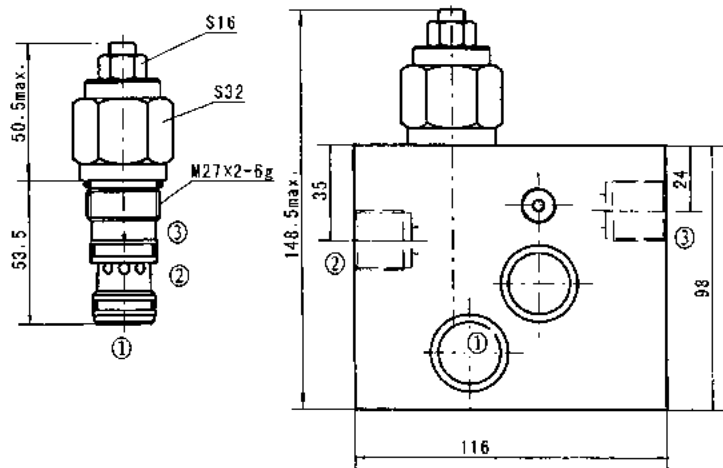
FEATURES

Counterbalance valves should be set at least 13 times the maximum load induced pressure. Backpressure at port ② adds to the effective relief setting at a ratio of ① plus the pilot ratio times the backpressure.

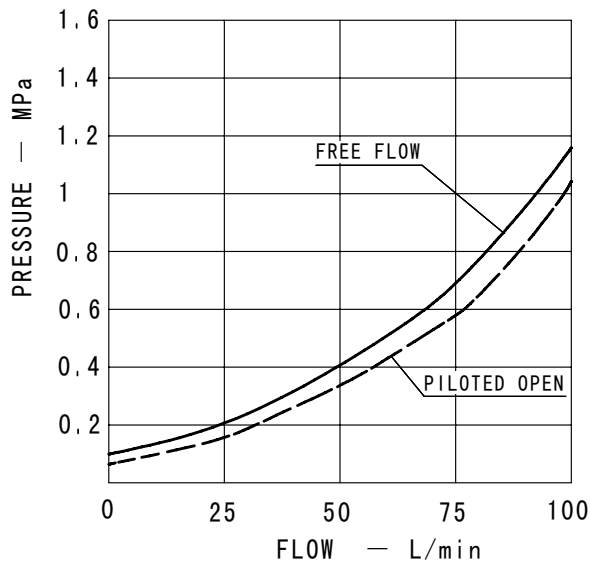
SPECIFICATIONS

Maximum Pressure: 27 MPa
Relief valve setting: 35 MPa
Rated Flow: 90 L/min
Leakage: 5 drops/min
Temperature: -20°C ~ 90°C

DIMENSIONS



PRESSURE DROP CURVE



ORDER INFORMATION

