

MOMT SERIES HYDRAULIC MOTOR

MOMT 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 Specifaion

Type	MOMT 160	MOMT 200	MOMT 230	MOMT 250	MOMT 315	MOMT 400	MOMT 500	MOMT 630	MOMT 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

MOMT 160 [161.1cm³/rev.]

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

MOMT 200 [201.4cm³/rev.]

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

MOMT 250 [251.8cm³/rev.]

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

MOMT 315 [326.3cm³/rev.]

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

Torque (N•m) 552
Speed (rpm) 572



Performance Data

MOMT 400 [410.9cm³/rev.]

Pressure (MPa)

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

MOMT 500 [523.6cm³/rev.]

Pressure (MPa)

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

MOMT 630 [629.1cm³/rev.]

Pressure (MPa)

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

MOMT 800 [801.8cm³/rev.]

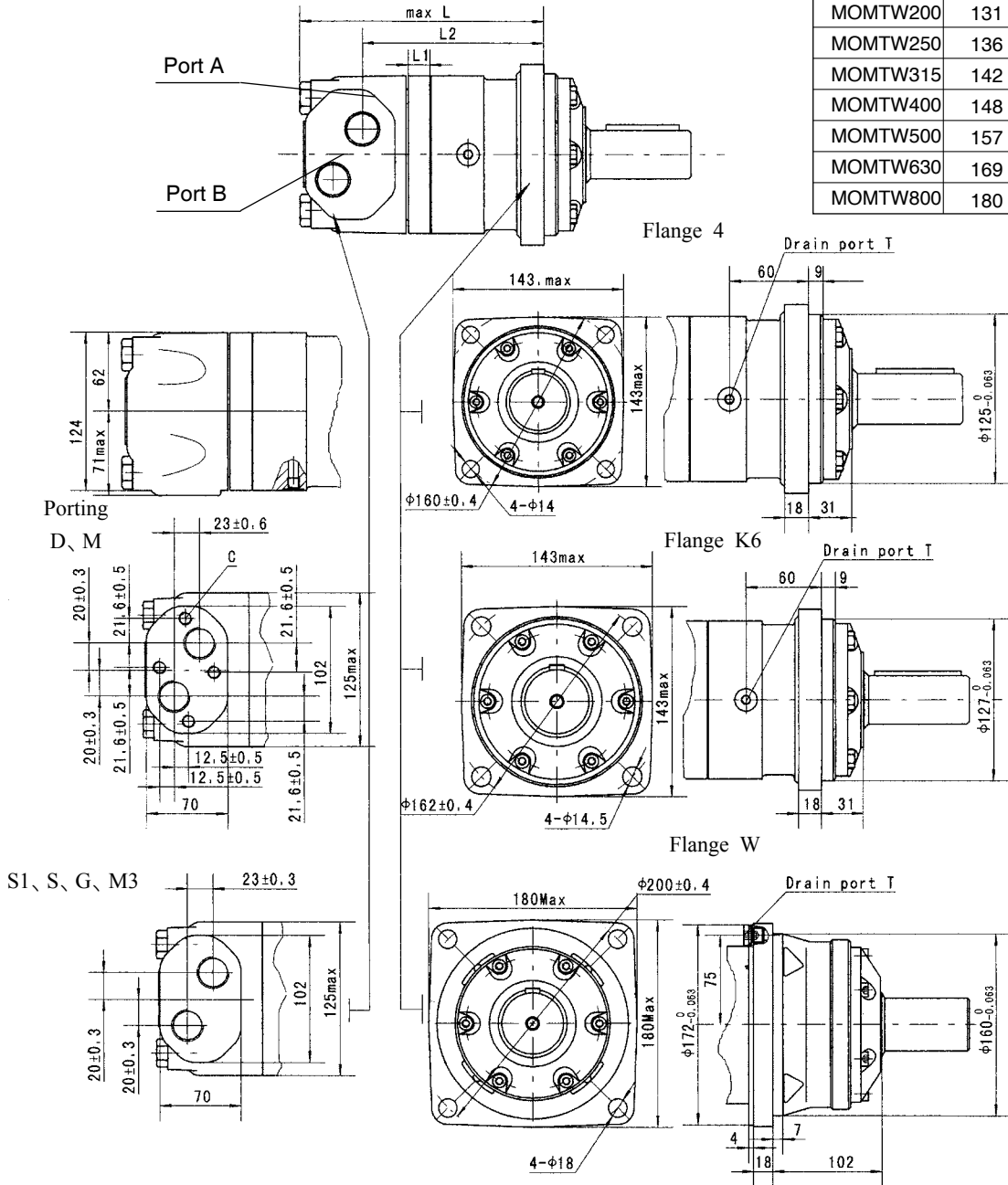
Pressure (MPa)

		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	
Max.cont.	80	332	686	1050	1226	1464	1514	
		99	98	98	96	93	86	
Max.int.	100	305	654	1025	1207	1445	1506	
		125	123	123	121	118	110	
	125	280	622	989	1181	1422	1487	
		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

MOMT DIMENSIONS AND MOUNTING DATA

Model	L	L1	L2
MOMTW160	127	17	77
MOMTW200	131	21	81
MOMTW250	136	14	86
MOMTW315	142	20	91
MOMTW400	148	27	98
MOMTW500	157	35	106
MOMTW630	169	47	118
MOMTW800	180	58	129

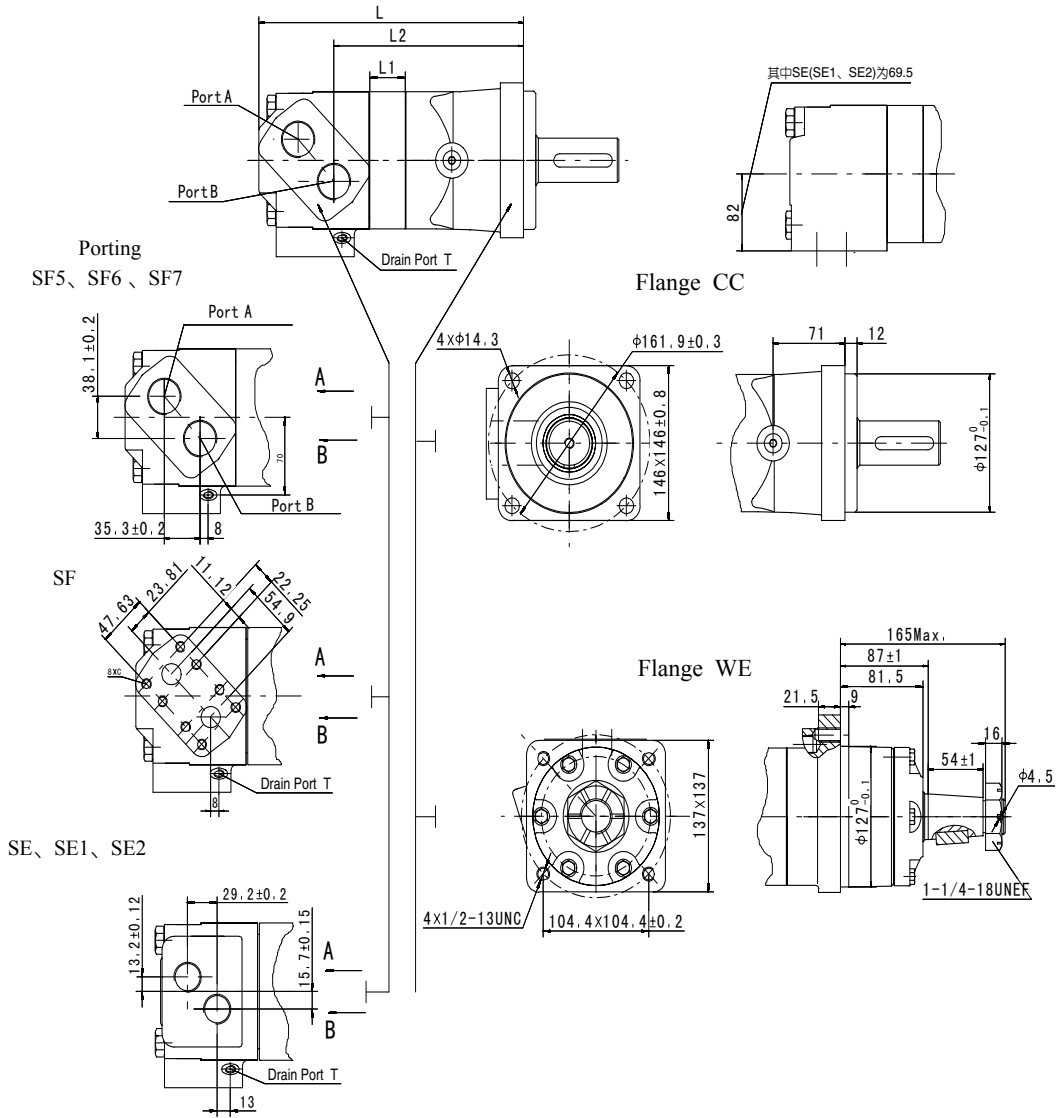


Model	L	L1	L2
MOMT160	193	17	142.5
MOMT200	197	21	146.5
MOMT250	204	14	152.5
MOMT315	210	20	158.5
MOMT400	217	27	165.5
MOMT500	225	35	173.5
MOMT630	237	47	185.5
MOMT800	248	58	196.5

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

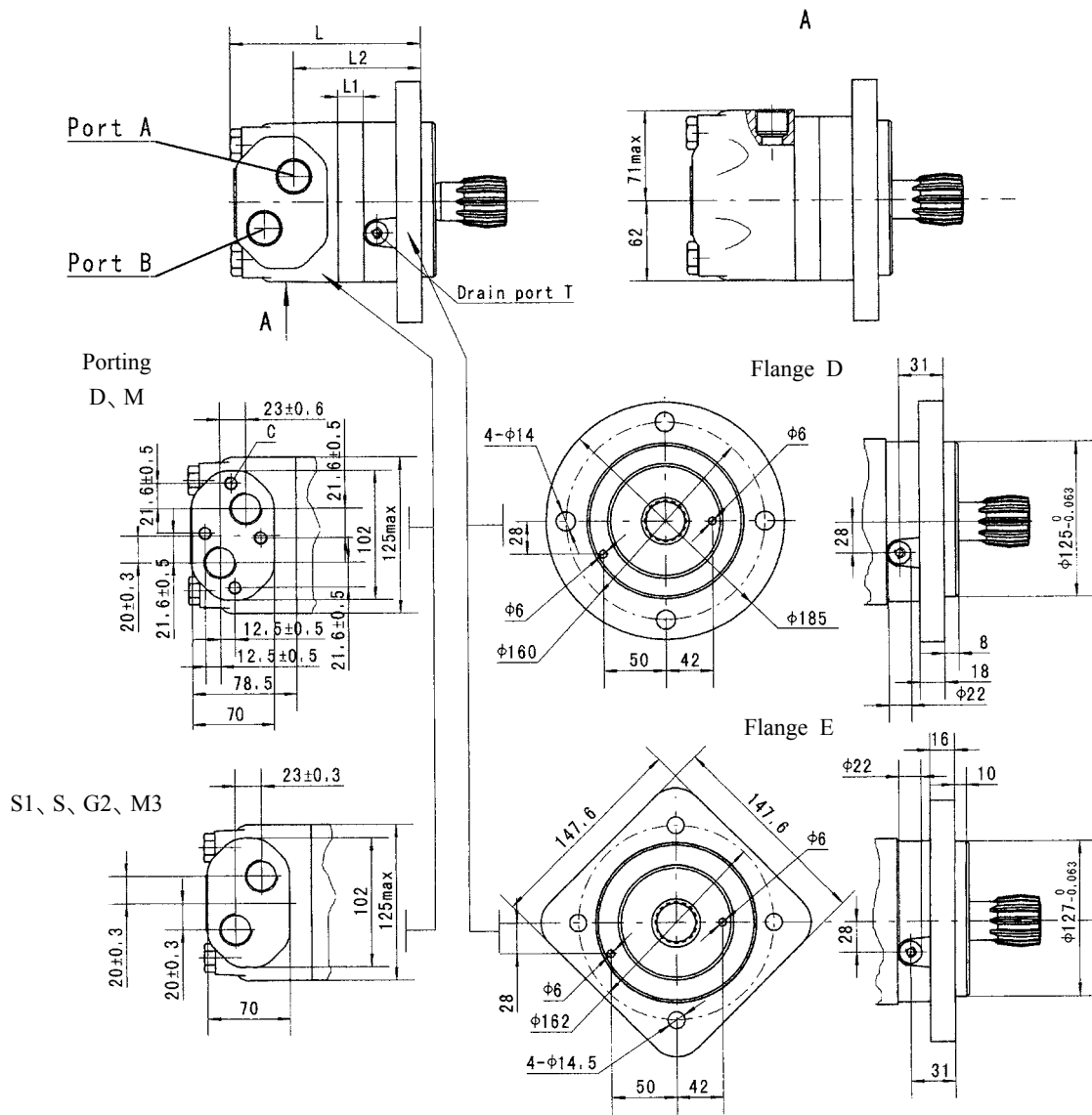


Model	L	L1	L2
BMTE230	238.5	12	164.5
BMTE250	240.5	14	166.5
BMTE315	246.5	20	172.5
BMTE400	253.5	27	179.5
BMTE500	261.5	35	187.5
BMTE630	273.5	47	199.5
BMTE800	284.5	58	210.5

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						
	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	--	--	--

MOMTS DIMENSIONS AND MOUNTING DATA

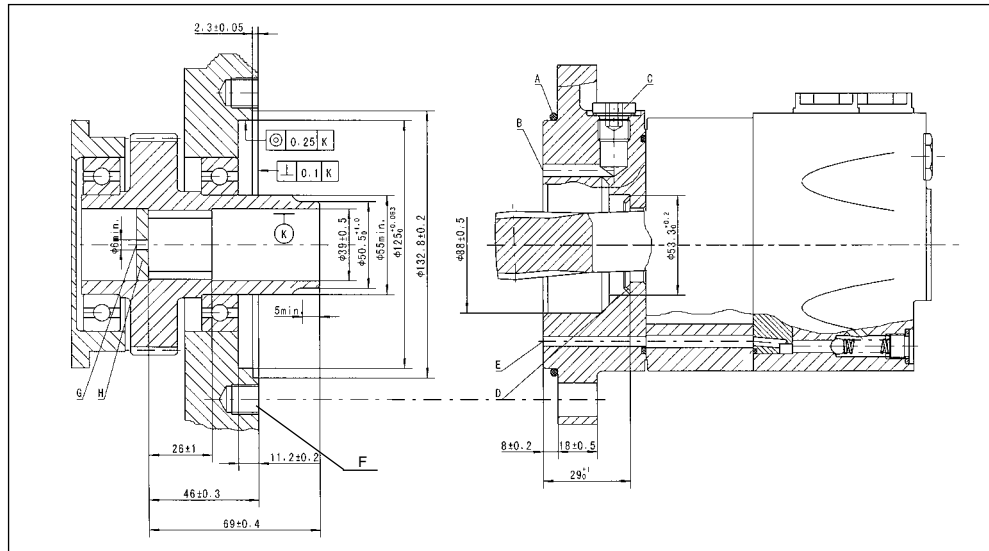


Model	L	L1	L2
MOMT160	148	17	96.5
MOMT200	152	21	100.5
MOMT250	157	14	109
MOMT315	163	20	115
MOMT400	170	27	122
MOMT500	178	35	130
MOMT630	190	47	142
MOMT800	201	58	153

Content	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M3 (depth)	S1 (depth)
Mounting						
P(A,B)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (18)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (18)
T	G1/4 (12)	M14 x 1.5 (12)	9/16-18UNF (12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)
C	4-M10(10)	4-M10(10)	--	--	--	--

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

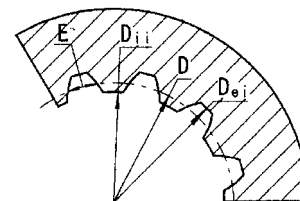
MOMTS MOUNTING DATA



- 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

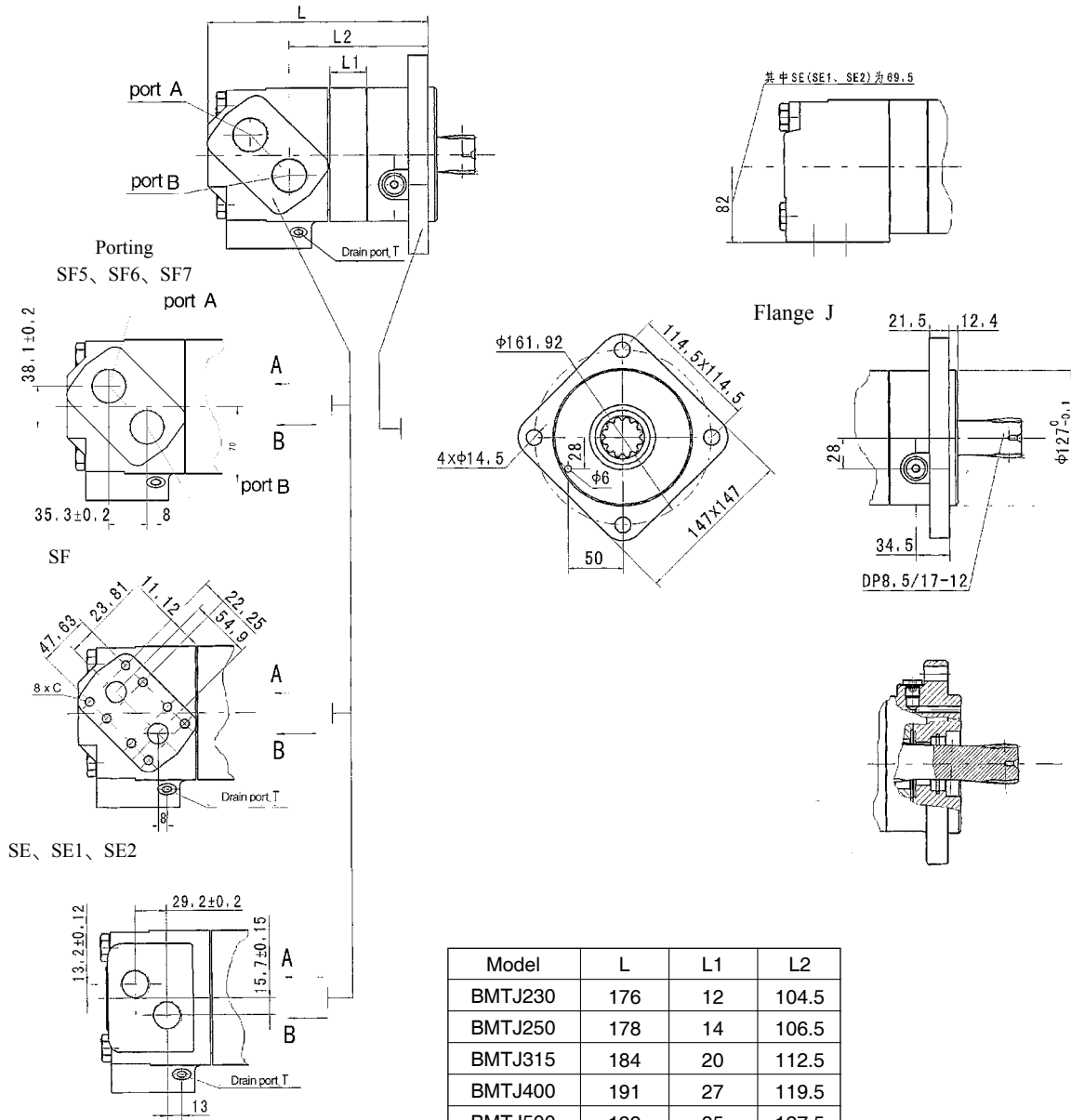
INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

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_{ii}	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

MOMTJ DIMENSIONS AND MOUNTING DATA

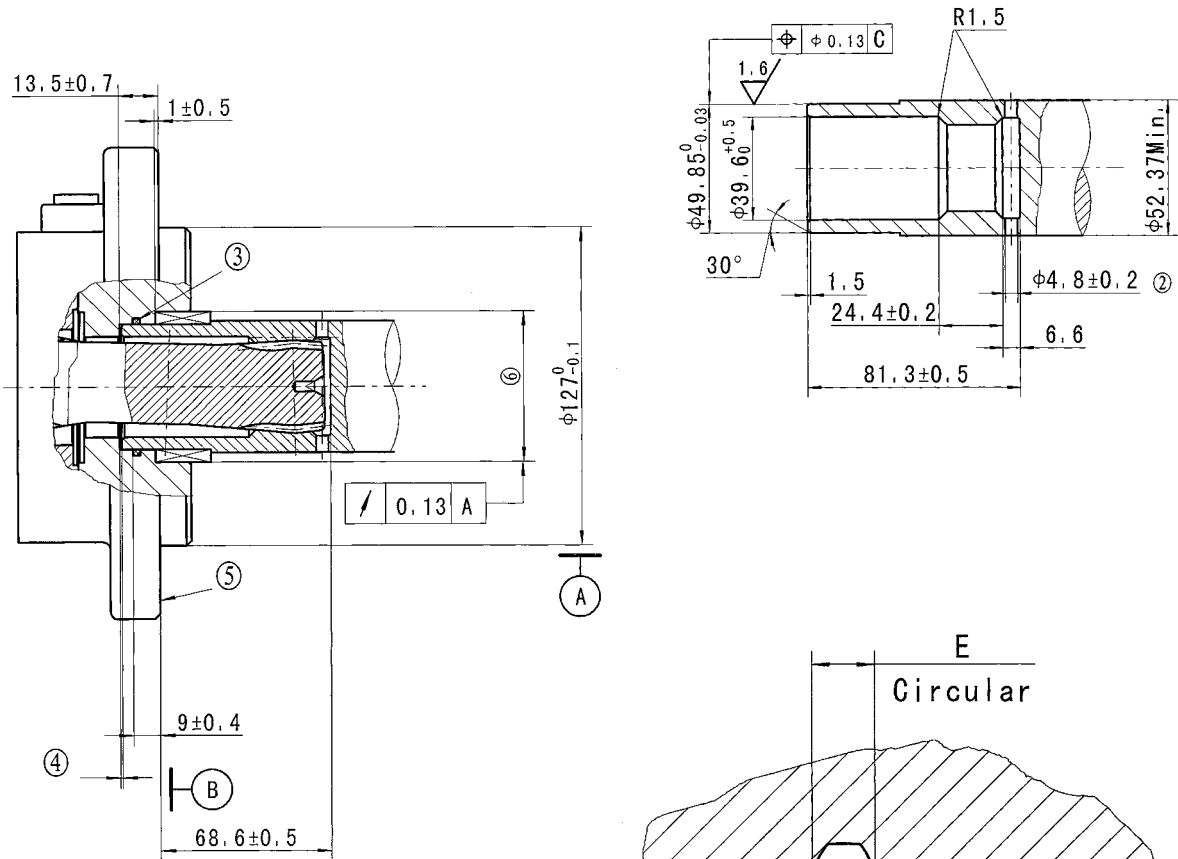


Model	L	L1	L2
BMTJ230	176	12	104.5
BMTJ250	178	14	106.5
BMTJ315	184	20	112.5
BMTJ400	191	27	119.5
BMTJ500	199	35	127.5
BMTJ630	211	47	139.5
BMTJ800	222	58	150.5

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

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

BMTJ DIMENSIONS AND MOUNTING DATA

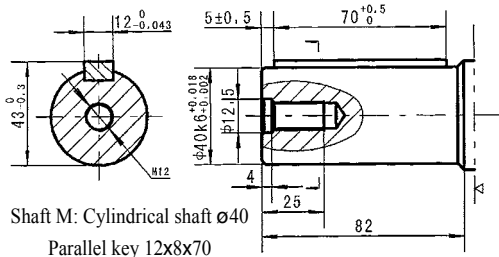


INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

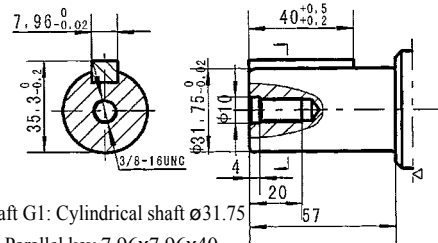
Fillet Root Side Fit		mm
Number of Teeth	Z	12
Diametral Pitch	DP	8.5/17
Pressure Angle	D	30°
Pitch Dia.	α_D	$\phi 35.858823$
Major Dia.	D_{ei}	$\phi 38.97_0^{+0.20}$
Minor Dia.	D_i	$\phi 33.3_0^{+0.18}$
Space Width [Circular]	E	5.866 ± 0.032
Dimension between two pins($\phi 4$)	M_e	$26.929-27.084$

- 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.

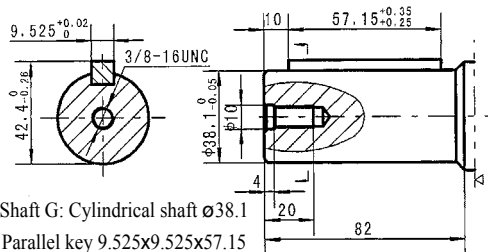
SHAFT EXTENSIONS FOR BMT(E) MOTORS



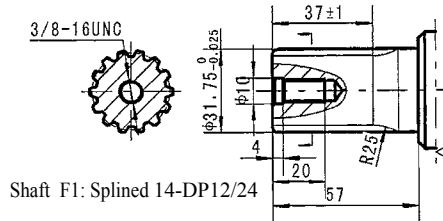
Shaft M: Cylindrical shaft $\phi 40$
Parallel key 12x8x70



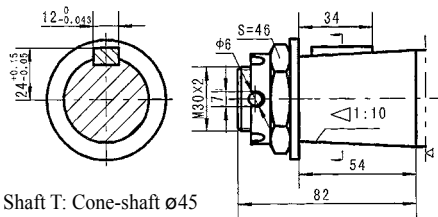
Shaft G1: Cylindrical shaft $\phi 31.75$
Parallel key 7.96x7.96x40



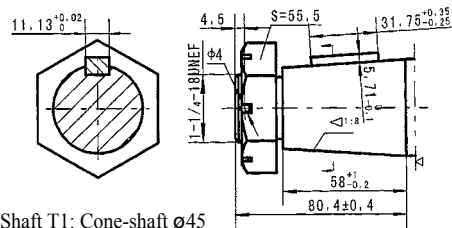
Shaft G: Cylindrical shaft $\phi 38.1$
Parallel key 9.525x9.525x57.15



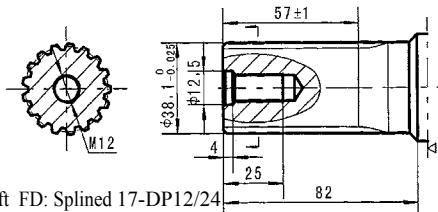
Shaft F1: Splined 14-DP12/24



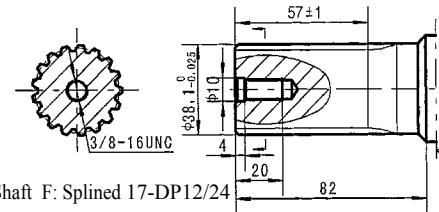
Shaft T: Cone-shaft $\phi 45$
Parallel key B12x8x28
Tightening torque: $500 \pm 10\text{Nm}$



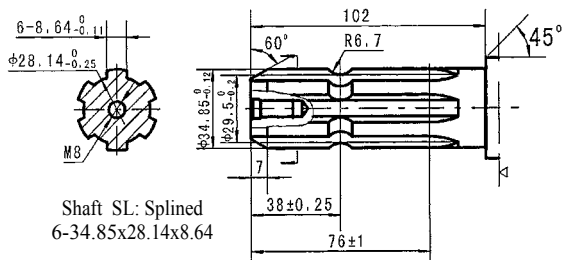
Shaft T1: Cone-shaft $\phi 45$
Parallel key 11.13x11.13x31.75
Tightening torque: $500 \pm 10\text{Nm}$



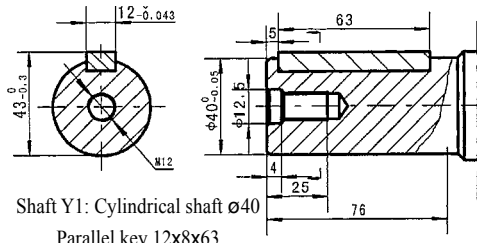
Shaft FD: Splined 17-DP12/24



Shaft F: Splined 17-DP12/24



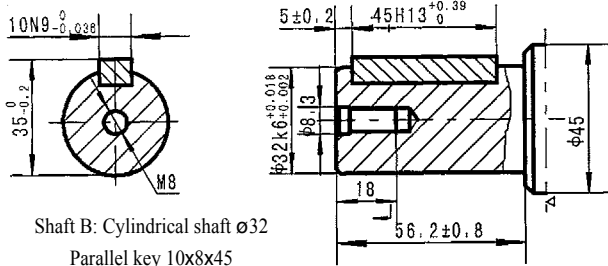
Shaft SL: Splined
6-34.85x28.14x8.64



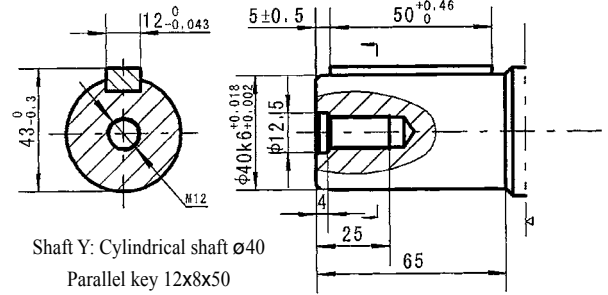
Shaft Y1: Cylindrical shaft $\phi 40$
Parallel key 12x8x63

▷ Motor Mounting Surface

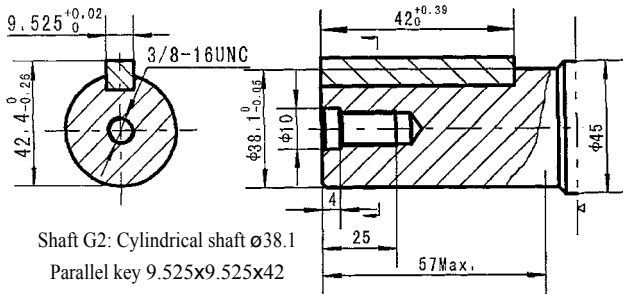
SHAFT EXTENSIONS FOR BMT(E) MOTORS



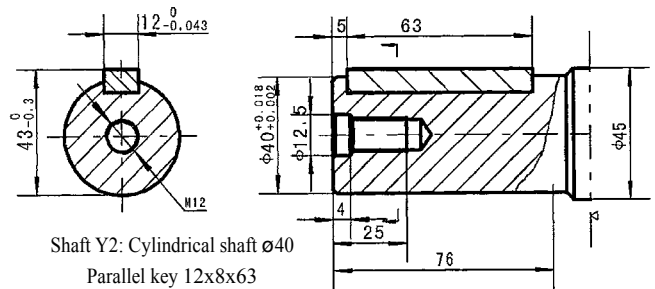
Shaft B: Cylindrical shaft ø32
Parallel key 10x8x45



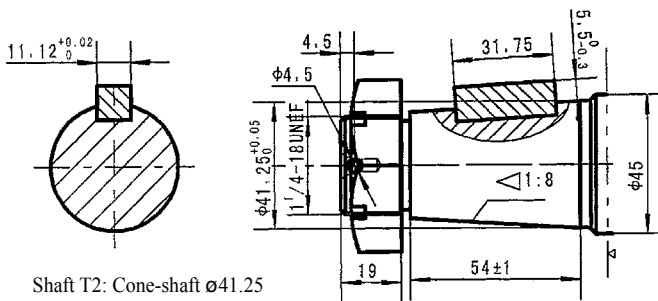
Shaft Y: Cylindrical shaft ø40
Parallel key 12x8x50



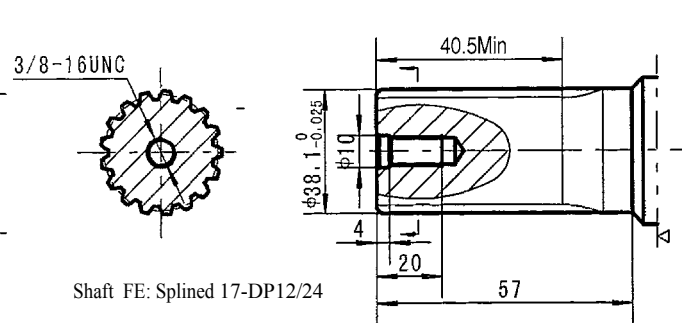
Shaft G2: Cylindrical shaft ø38.1
Parallel key 9.525x9.525x42



Shaft Y2: Cylindrical shaft ø40
Parallel key 12x8x63



Shaft T2: Cone-shaft ø41.25
Parallel key 11.13x11.13x31.75
Tightening torque: 500 ± 10Nm

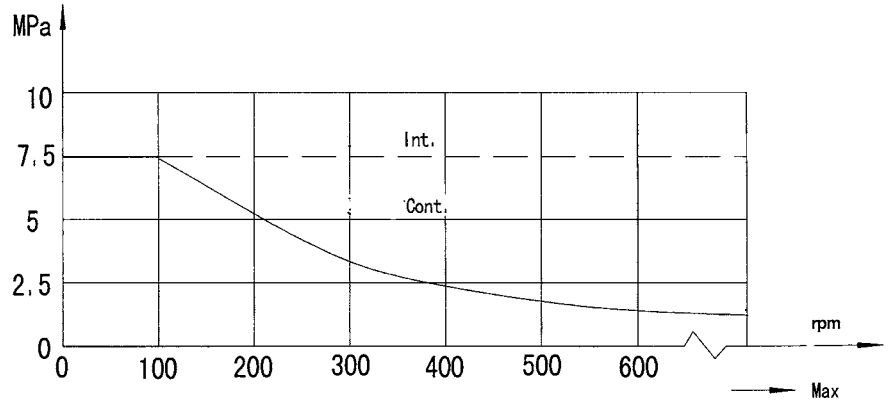
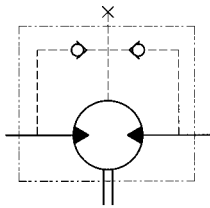


Shaft FE: Splined 17-DP12/24

▷ Motor Mounting Surface

MOMT Series Hydraulic Motor

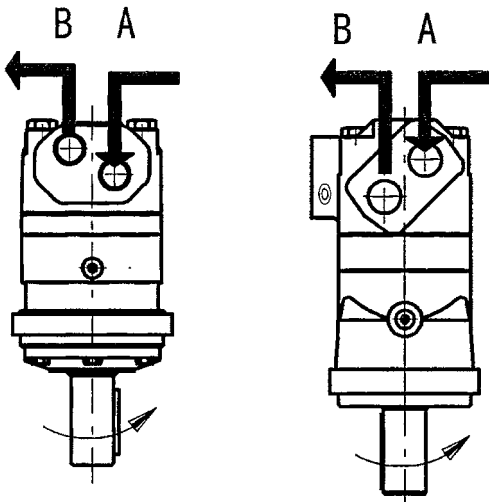
Permissible shaft seal pressure



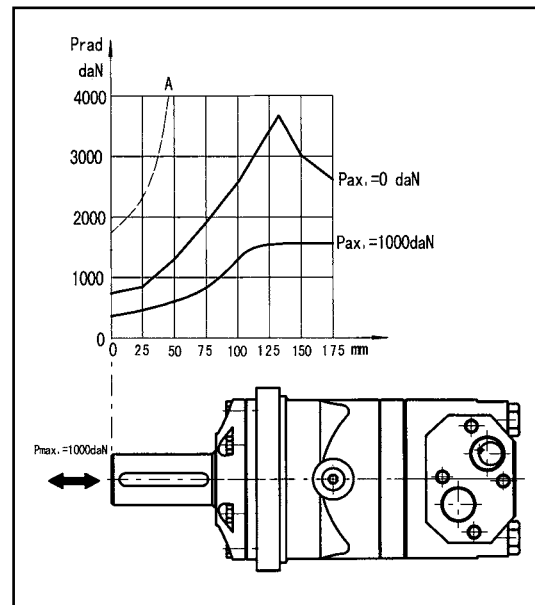
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.

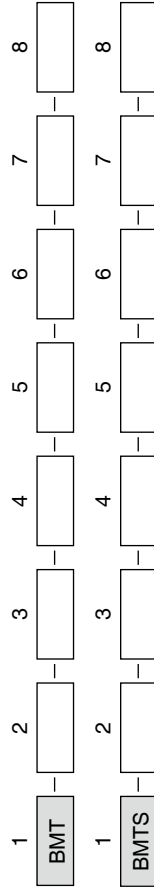


Axial and Radial forces



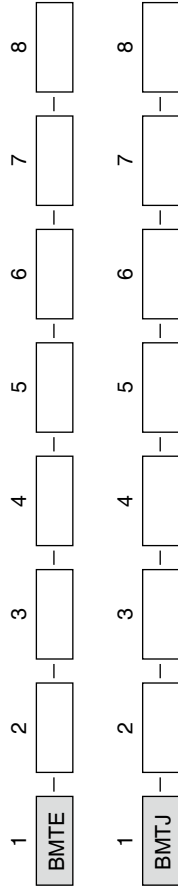
The output shaft runs in tapered bearings that permit high axial and radial forces, Curve "A" shows max radial shaft load, Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage, The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

Order Information



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	4	M Shaft Ø40 , parallel key 12 × 8 × 70 G Shaft Ø38.1 ,parallel key 9.52 × 9.52 × 57.15 F Shaft Ø38.1 ,splined tooth 17-DP12/24 FD Shaft Ø38.1 ,splined tooth 17-DP12/24 T Cone-shaft 1:10 Ø45 ,parallel key B12 × 8 × 28 T1 Cone-shaft 1:8 Ø45 , parallel key 11.13 × 11.13 × 31.75	D	G3/4 Manifold Mount, 4-M10 , G1/4	Omit	00	Omit
	200	K6	4-Ø14 Square-flange Ø160, pilot Ø125 × 9	G Shaft Ø34.85,Splined key Splined key 6-34.85 × 28.14 × 8.64	M	M27 × 2 Manifold Mount, 4-M10, M14 × 1.5	LL	
	250		4-Ø14.5 Square-flange Ø162, pilot Ø127 × 9	SL shaft Ø34.85,Splined key	S	1-1/16-12UN O-ring, 9/16-18UNF	Blue	
	315	W	4-Ø18 Wheel-flange Ø200, pilot Ø160 × 7	G1 shaft Ø31.75 , parallel key 7.96 × 7.96 × 40	S1	1-1/16-12UN O-ring, 7/16-20UNF	Black	
	400			F1 Shaft Ø31.75,splined tooth 14-DP12/24	G	G3/4,G1/4	Black	
	500					S	Silver grey	
	630							
	800							
	BMTS		D	4-Ø14 Circle-flange Ø160, pilot Ø125 × 8	M3	M27 × 2,M14 × 1.5		
			E	4-Ø14.5 Square-flange Ø162, pilot Ø127 × 10	Omit	Short shaft 16-DP12/24		

Order Information



Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
BMTJ	230	CC: 4-Ø14.3 Square-flange Ø161.9, pilotØ127 × 12	G2 Shaft Ø38.1 ,parallel key 9.52 × 9.52 × 42	SF 3/4" ,Manifold Mount,8-3/8-16UNC, 7/16-20UNF SF5 1-5/16-12UN O-ring,7/16-20 UNF SF6 M33 × 2,M14 × 1.5 SF7 G1,G1/4 SE 1-1/16-12UN O-ring,9/16-18UNF SE1 1-1/16-12UN O-ring,7/16-20 UNF SE2 G3/4,G1/4	Omit R Standard Opposite	No paint Blue Black Silver grey	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		T3 Cone-shaft 1:8 Ø41.25 , parallel key 11.13 × 11.13 × 31.75				
800	WE flangeØ147.6, pilotØ127 × 9						
BMTJ		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 .