

Additional Data/Spec Sheet

BMT Series Geroler Gear Type – Hydraulic Orbital Motors – Distribution Motors

Flange 4 = Ø14 Square-flange Ø160, pilot Ø125x9 – Shaft M = Ø40 Cylindrical Shaft, parallel key 12x8x70

BMT SERIES HYDRAULIC MOTOR

BMT series motor adapt the advanced Geroler gear set design with disc distribution flow and high pressure. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

- * Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.
- * The output shaft adapts in tapered roller bearings that permit high axial and radial forces. Can offer capacities of high pressure and high torque in the wide of applications.
- * Advanced design in disc distribution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.

Main Specification

Type		BMT 160	BMT 200	BMT 230	BMT 250	BMT 315	BMT 400	BMT 500	BMT 630	BMT 800
Geometric displacement (cm 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)	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
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
Max.int.		614	611	606	598	590	582	570
	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
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
100		99	227	286	344	471	580	712
		493	490	486	482	475	467	460
Max.cont.	125	84	208	276	333	459	566	697
Max.int.		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
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
Max.int.		495	492	488	483	476	469	454
	150	88	242	320	397	522	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
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
Max.int.		380	378	375	371	367	362	349
	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
Max.cont.	100	150 242	339 240	538 238	708 234	896 228	1067 224	1252 218
	125	135 302	309 300	524 298	688 294	873 289	1045 285	1221 278
	Max.int.	126 364	292 362	508 358	666 354	852 350	1020 346	1197 339

BMT 500 [523.6cm³/rev.]

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
Max.cont.	100	194 189	420 188	680 187	901 185	1063 183	1224 181	1383 177
	125	182 237	398 236	641 235	877 233	1024 231	1199 229	1352 225
	Max.int.	147 284	369 283	618 282	853 280	1004 278	1167 276	1325 272

BMT 630 [629.1cm³/rev.]

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
Max.cont.	100	208 156	522 155	832 153	945 152	1156 150	1303 147	1488 142
	125	201 196	499 196	810 194	931 192	1137 191	1292 187	1472 183
	Max.int.	174 233	492 232	785 231	921 230	1121 227	1277 223	1454 217

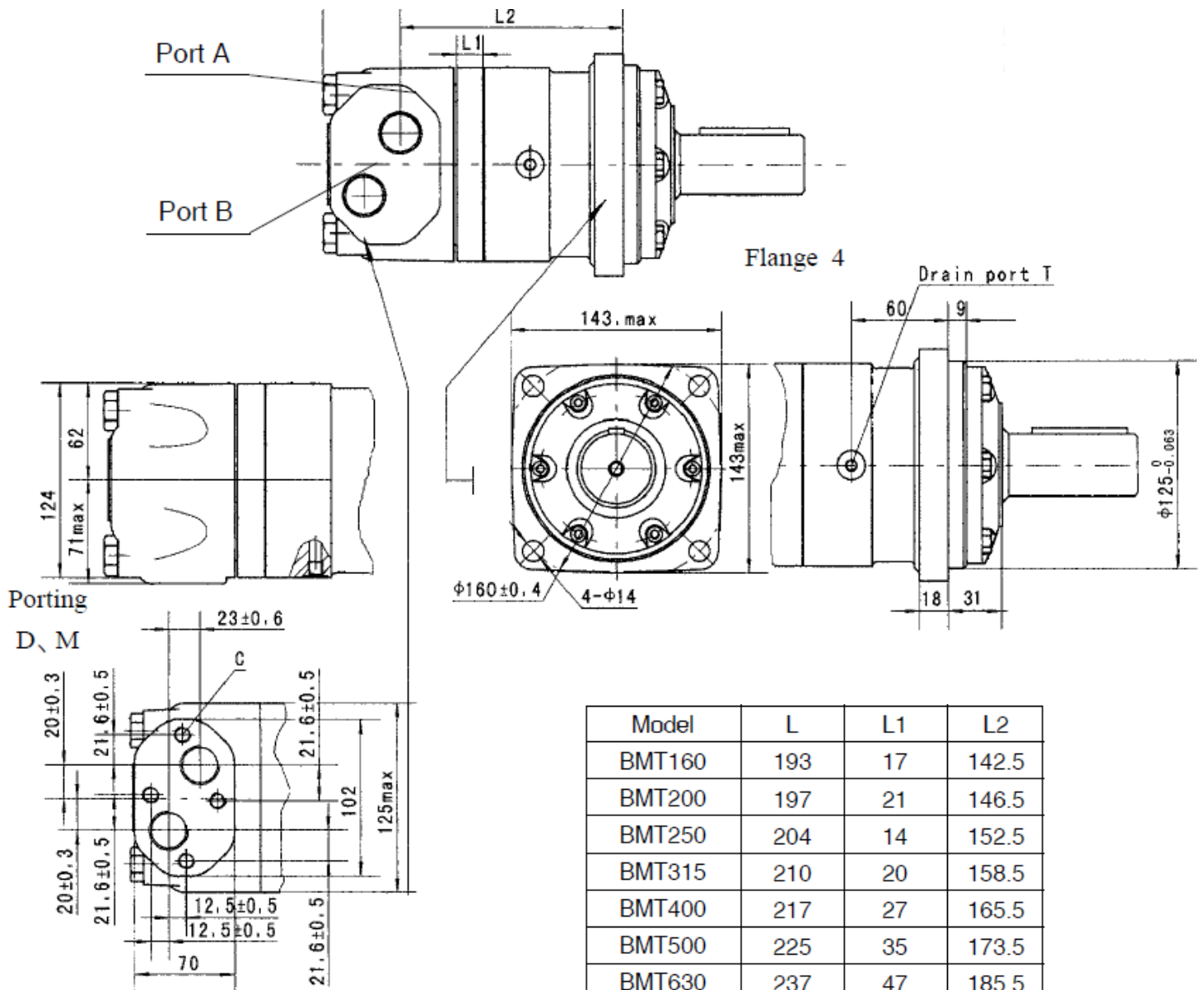
BMT 800 [801.8cm³/rev.]

Pressure (MPa)

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

Torque (N•m) 1121
Speed (rpm) 227

BMT DIMENSIONS AND MOUNTING DATA

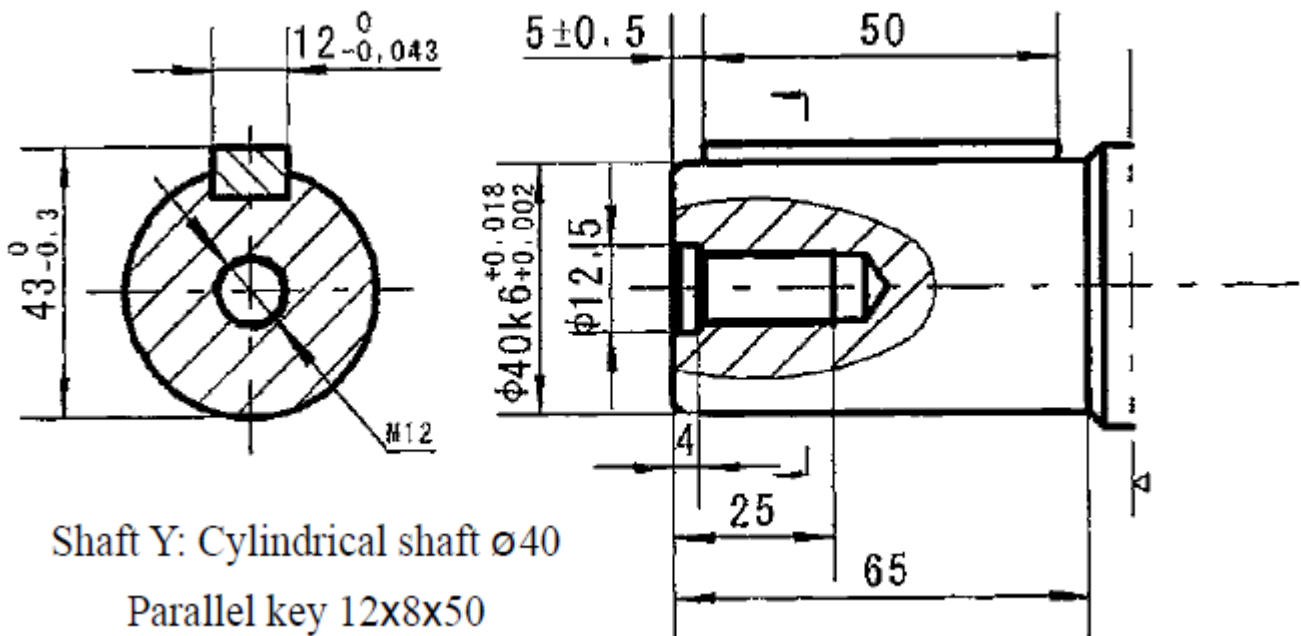
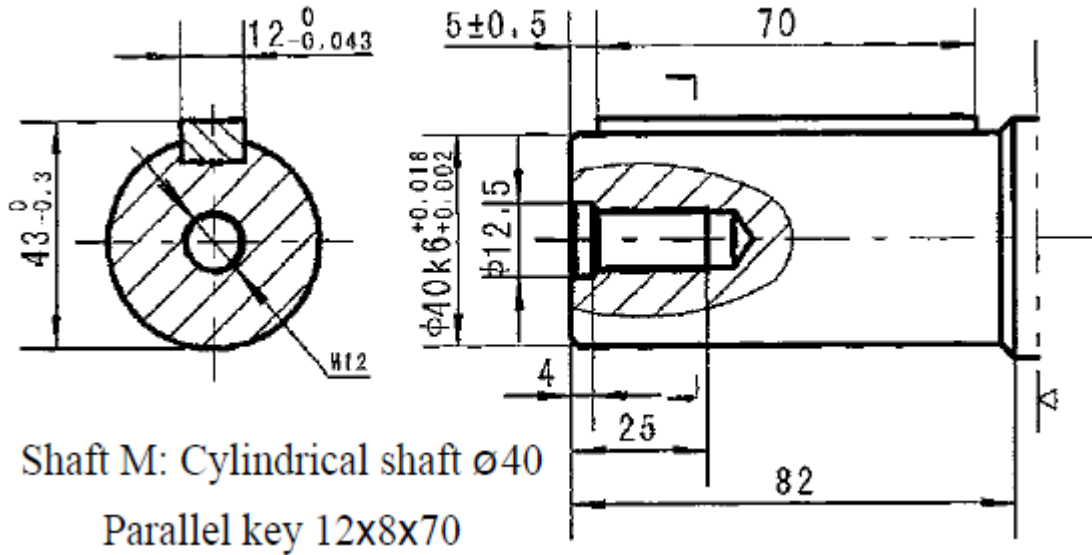


Model	L	L1	L2
BMT160	193	17	142.5
BMT200	197	21	146.5
BMT250	204	14	152.5
BMT315	210	20	158.5
BMT400	217	27	165.5
BMT500	225	35	173.5
BMT630	237	47	185.5
BMT800	248	58	196.5

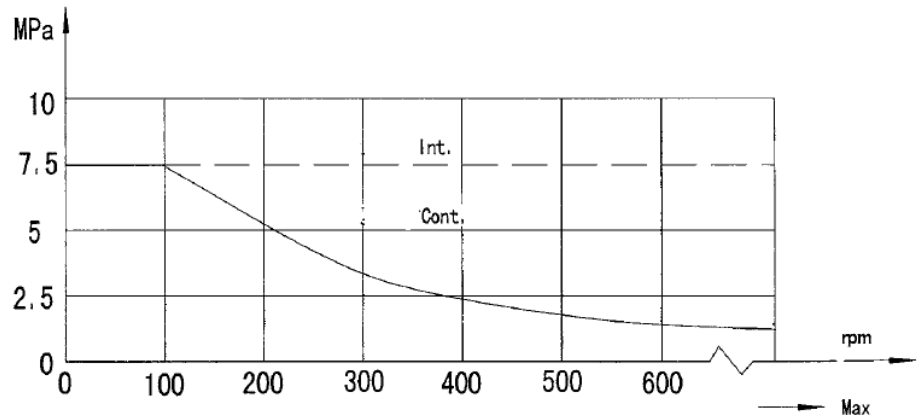
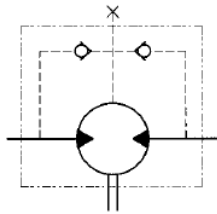
Content	D (depth)
P(A,B)	G3/4 (18)
T	G1/4 (12)
C	4-M10(10)

BMT SHAFT EXTENSIONS DIMENSIONS DATA

We generally stock the M shaft, however depending on availability we can also stock the Y Shaft.



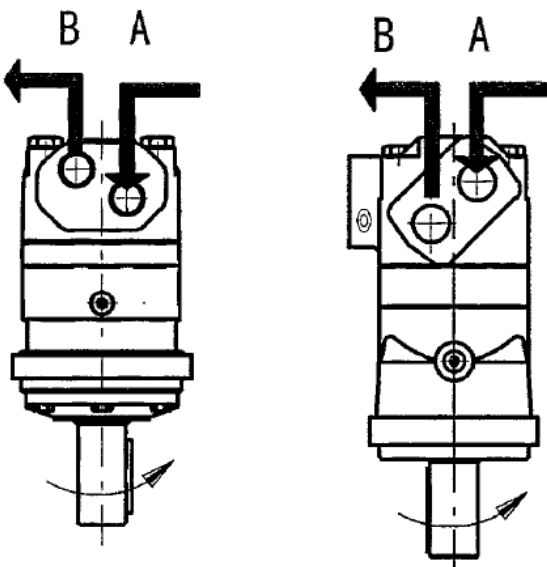
Permissible shaft seal pressure



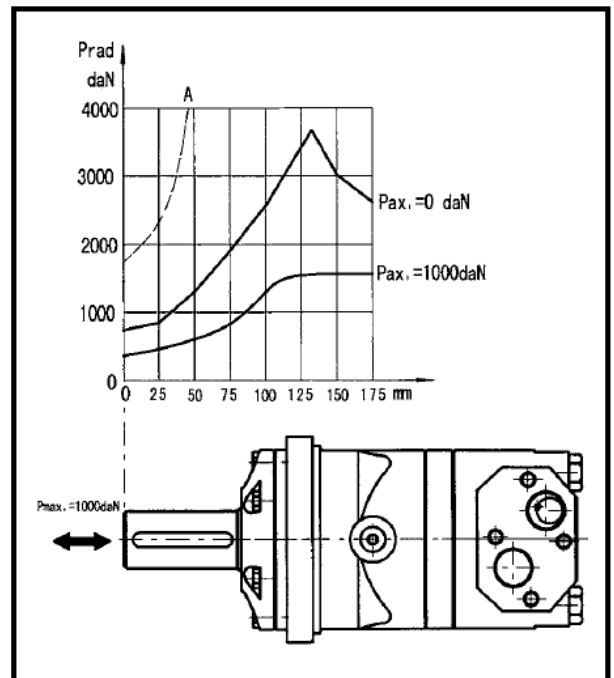
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.