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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 distrbution 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 (cm³/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.

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Performance Data

BMT 250 [251.8cm³/rev.]

Pressure (MPa)

Flow (L/min)	4	8	10	12	16 (Max.cont.)	20	24 (Max.int.)
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**

Torque (N•m) 552
Speed (rpm) **572**

BMT 315 [326.3cm³/rev.]

Pressure (MPa)

Flow (L/min)	4	8	10	12	16 (Max.cont.)	20	24 (Max.int.)
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**

BMT 400 [410.9cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	9	12	15 (Max.cont.)	18	21 (Max.int.)
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**
80	166	353	553	719	912	1084	1263
	193	**191**	**188**	**184**	**180**	**176**	**170**
100	150	339	538	708	896	1067	1252
	242	**240**	**238**	**234**	**228**	**224**	**218**
Max.cont. 125	135	309	524	688	873	1045	1221
	302	**300**	**298**	**294**	**289**	**285**	**278**
Max.int. 150	126	292	508	666	852	1020	1197
	364	**362**	**358**	**354**	**350**	**346**	**339**

BMT 500 [523.6cm³/rev.]

Pressure (MPa)

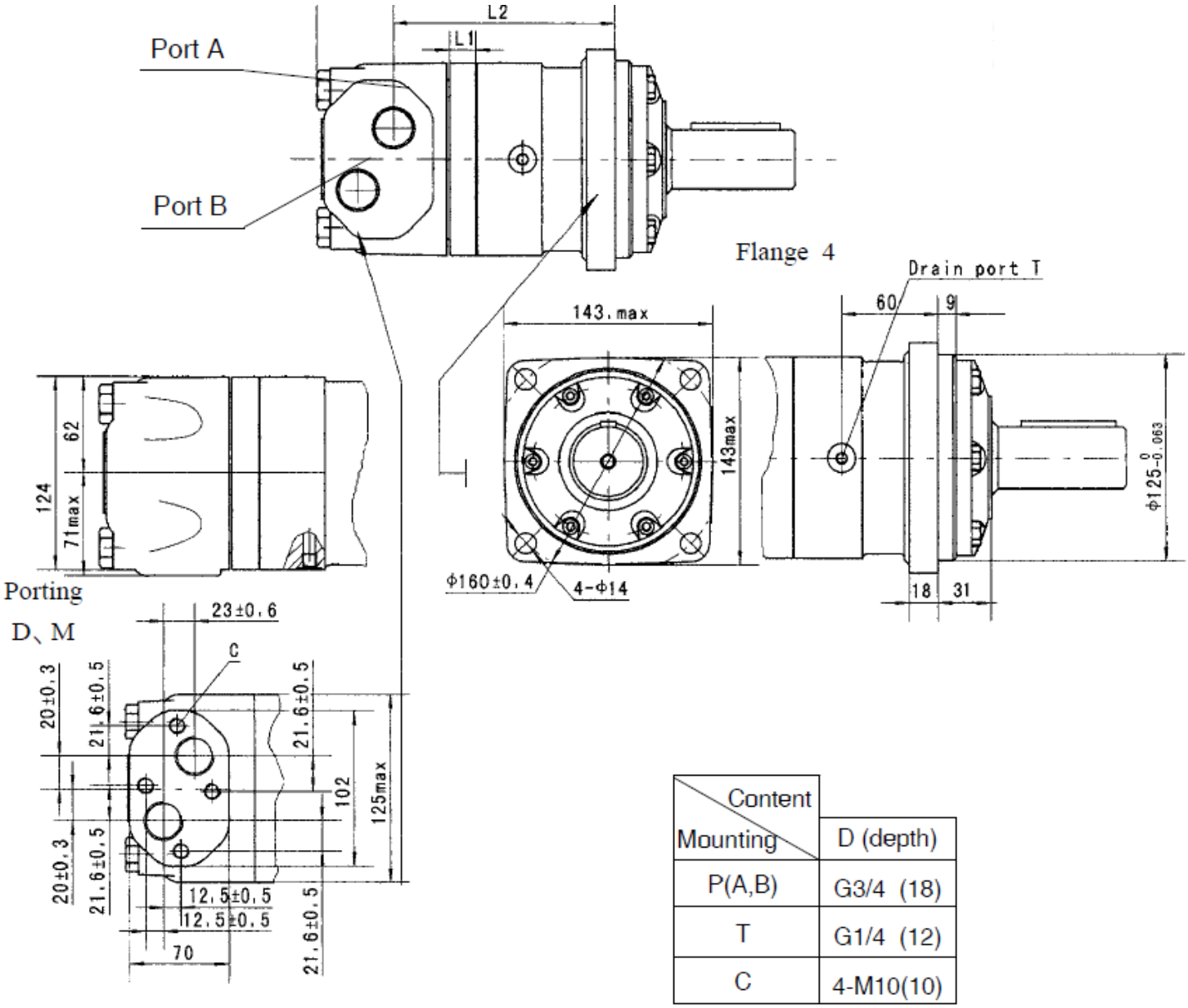
Flow (L/min)	3	6	9	12	14 (Max.cont.)	16	18 (Max.int.)
10	222	451	692	892	1050	1193	1340
	18	**18**	**18**	17	**16**	**15**	**13**
20	231	464	714	918	1070	1220	1377
	37	**36**	**35**	34	**33**	**32**	**30**
40	230	466	727	941	1094	1244	1422
	75	**74**	**73**	72	**70**	**68**	**64**
60	225	457	714	941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

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BMT DIMENSIONS AND MOUNTING DATA

Model	L	L1	L2
BMT250	204	14	152.5
BMT400	217	27	165.5

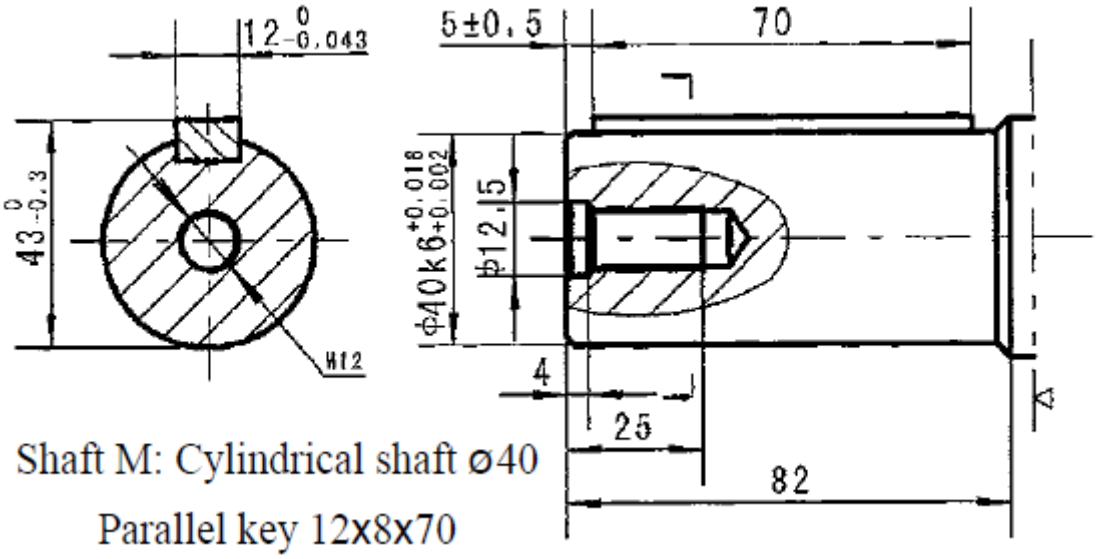


Mounting \ Content	D (depth)
P(A,B)	G3/4 (18)
T	G1/4 (12)
C	4-M10(10)

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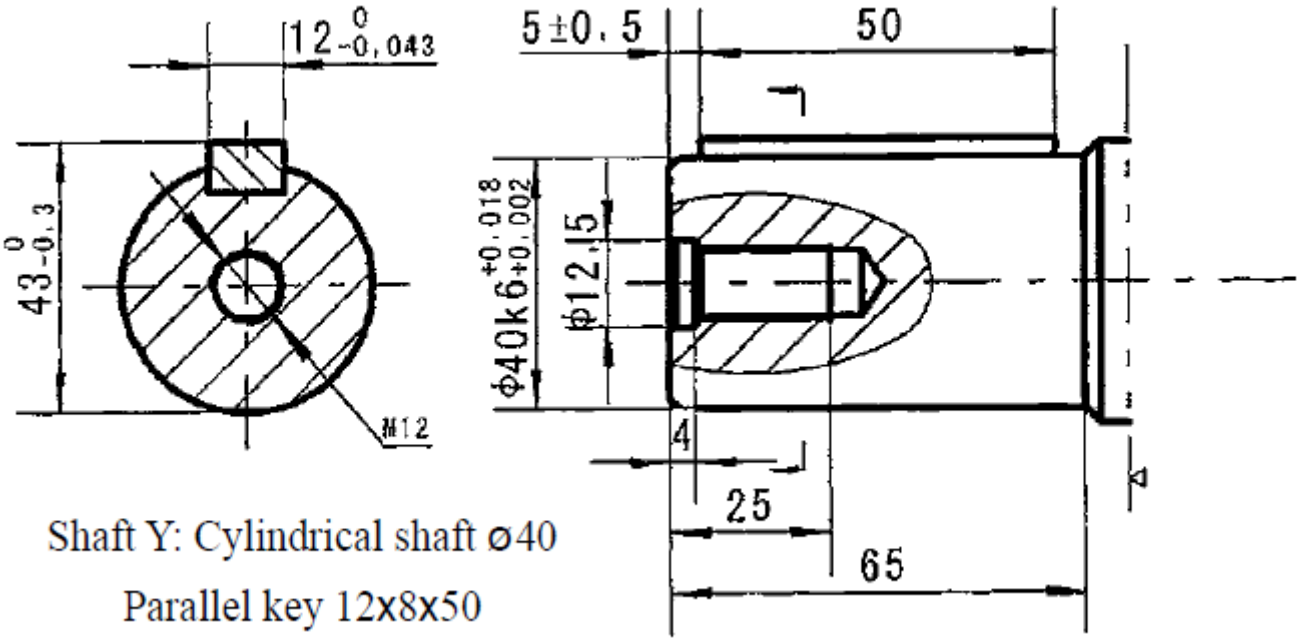
BMT SHAFT EXTENSIONS DIMENSIONS DATA

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



Shaft M: Cylindrical shaft ø40

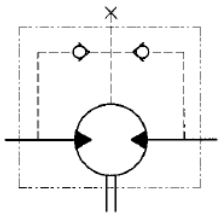
Parallel key 12x8x70

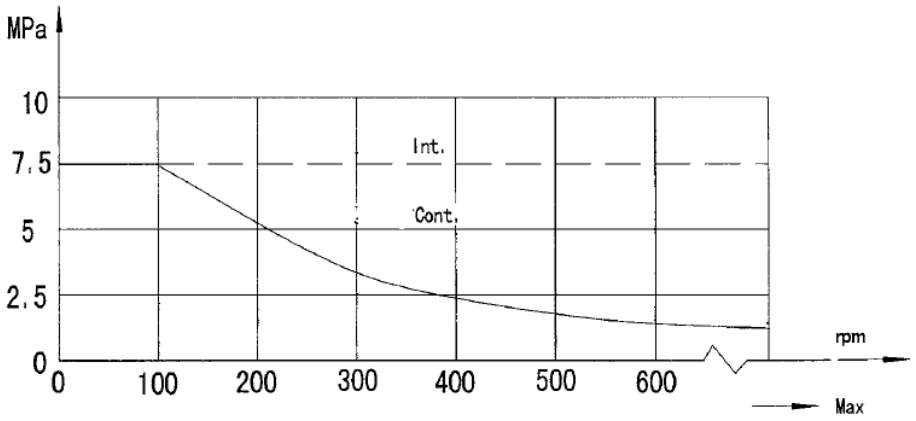


Shaft Y: Cylindrical shaft ø40

Parallel key 12x8x50

Permissible shaft seal pressure

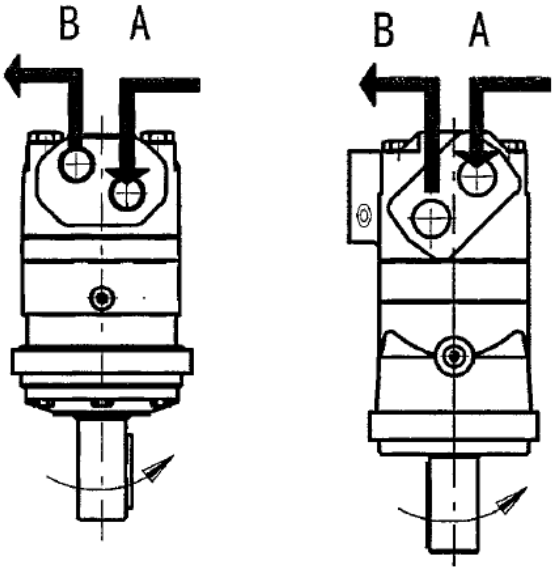




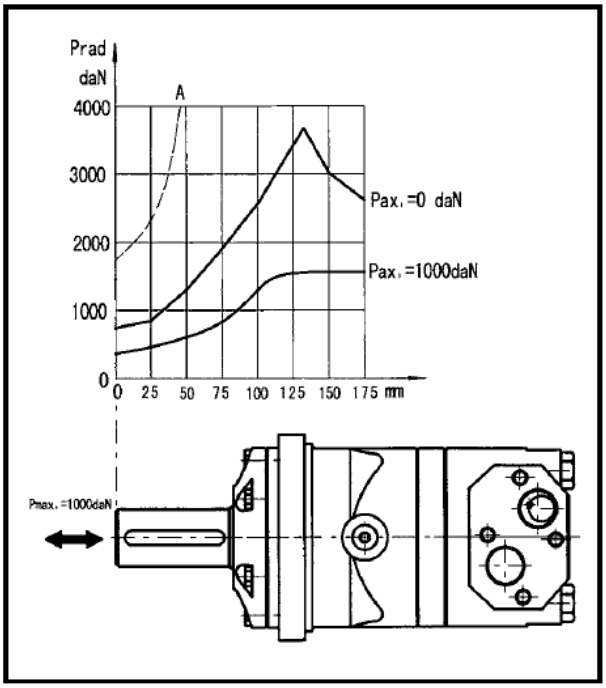
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.