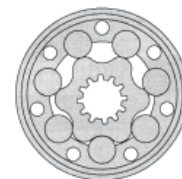
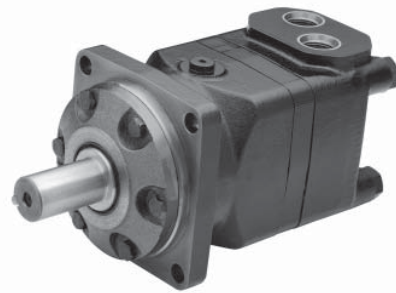




FLUID COMPONENTS, INC.

Hydraulic Motor BMT



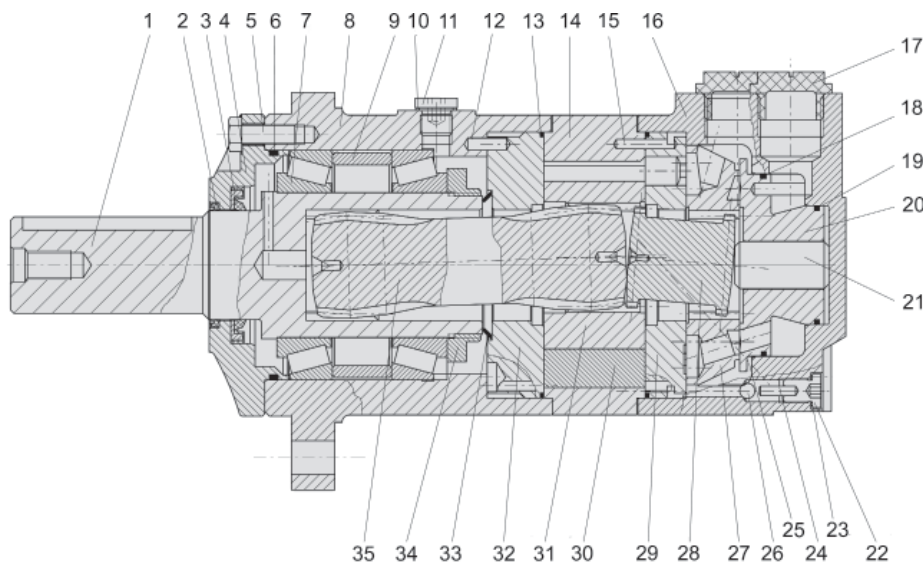
The BMT series motors adapt the advanced **ROLORTORC™** gear set design with **DISC** distribution flow and high pressure. These motors can be supplied with various options for multifunctional operations in accordance with the application requirements. The output shaft tapered roller bearings permit high axial and radial forces offering a smooth operation during low pressure start up and high pressure operation.

These low weight advanced construction design motors are manufactured in accordance with the requirements of the ISO 9000-2000 quality system.

Technical Specifications

MODEL		BMT 160	BMT 200	BMT 250	BMT 315	BMT 400	BMT 500	BMT 630	BMT 800
Displacement	<i>in³/rev</i>	9.83	12.29	15.36	19.91	25.07	31.95	38.39	48.93
	<i>(cm³/rev)</i>	(161.1)	(201.4)	(251.8)	(326.3)	(410.9)	(523.6)	(629.1)	(801.8)
Max Speed	Cont	614	615	495	380	302	237	196	154
	Int.	770	743	592	458	364	284	233	185
Max Torque	Cont	4168	5213	6434	8514	9691	11018	11664	12956
	Int.	5071	6354	7859	10213	11231	12470	13257	13452
Max Differential	Cont	2944	2944	2944	2944	2650	2355	2060	1840
	Int.	3533	3533	3533	3533	3091	2650	2355	1914
Max Flow	Cont	26.42	33.02	33.02	33.02	33.02	33.02	33.02	33.02
	Int.	33.02	39.63	39.63	39.63	39.63	39.63	39.63	39.63
Weight		44.09 lbs	46.30 lbs	46.30 lbs	46.30 lbs	50.71 lbs	52.91 lbs	55.11 lbs	57.32 lbs

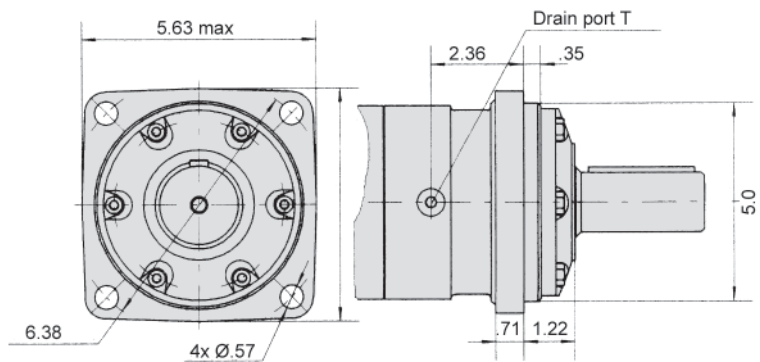
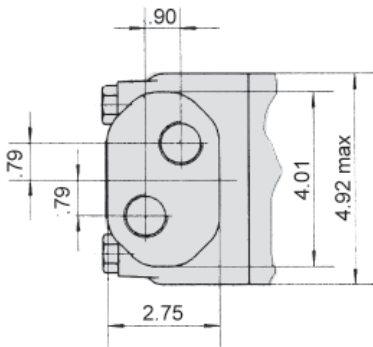
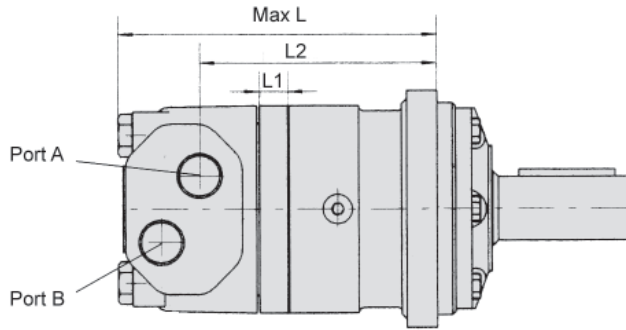
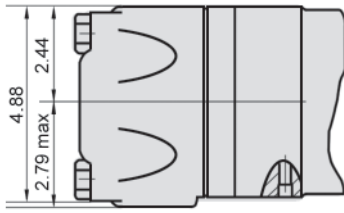
Continuous = maximum of continuous operation. Intermittent = maximum operating range for 6 seconds per minute



BMT Diagram Key

- | | |
|------------------|-----------------------|
| 1 Output Shaft | 19 "O" Ring |
| 2 Dust Seal | 20 Balance Plate |
| 3 Shaft Seal | 21 Spacer |
| 4 Front Cover | 22 Drain Plug |
| 5 Bolt | 23 Washer |
| 6 "O" Ring | 24 Pin |
| 7 Bearing | 25 Butterfly Ring |
| 8 Housing | 26 Ball Check |
| 9 Spacer Bearing | 27 Distributor Plate |
| 10 Washer | 28 Coupling |
| 11 Drain Plug | 29 Channel Plate |
| 12 Pin | 30 Rolortorc™ set |
| 13 "O" Ring | 31 Rotor |
| 14 Stator | 32 Intermediate Plate |
| 15 Rotor | 33 Butterfly Washer |
| 16 End Cover | 34 Lock Nut |
| 17 Drain Plug | 35 Drive Shaft |
| 18 "O" Ring | |

BMT Installation Data

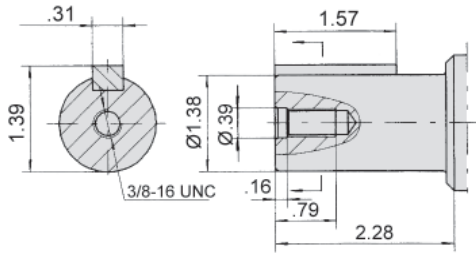


MODEL	L	L1	L2
BMT 160	7.60"	0.67"	5.61"
BMT 200	7.76"	0.83"	5.77"
BMT 250	8.03"	0.55"	6.00"
BMT 315	8.27"	0.79"	6.24"
BMT 400	8.54"	1.06"	6.52"
BMT 500	8.86"	1.38"	6.83"
BMT 630	9.33"	1.85"	7.30"
BMT 800	9.76"	2.28"	7.73"

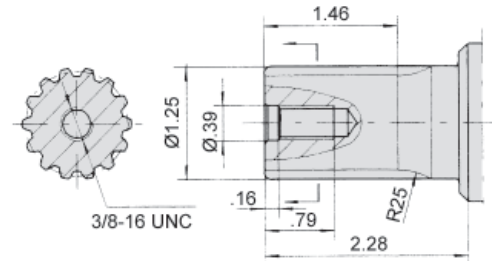
Port	Port Size
P (A, B)	1 1/16-12 SAE
T	7/16-20 SAE

BMT Drive Shaft Data

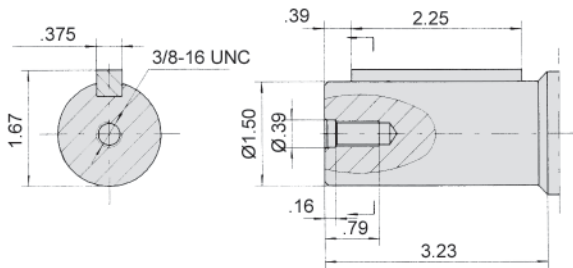
G1 - 1 1/4" Parallel Key



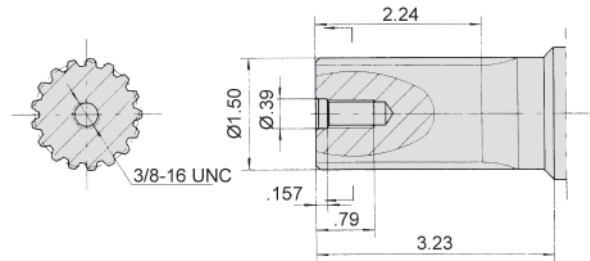
F1 - 1 1/4" - 14-Tooth DP Spline



G - 1 1/2" Parallel Key



F - 1 1/2" - 17-Tooth DP Spline



Ordering Example: BMT - 400 K6 - G - S1 -

Model	Frame Size	Mounting Flange**	Drive Shaft**	Port Size	Options
BMT	160 (9.83) 200 (12.29) 250 (15.36) 315 (19.91) 400 (25.07) 500 (31.95) 630 (38.39) 800 (48.93)	K6 = 4-Bolt	G1 = 1 1/4" Parallel Key G = 1 1/2" Parallel Key F1 = 1 1/4" - 14 DP Spline F = 1 1/2" - 17 DP Spline	S1 = 1 1/16" - 12 SAE	1* = Free Running

* Special Order

** Additional flange and drive shaft options available. Please consult factory.

Seal kits for BMT Motors are available for purchase. Order seal kit using item description: "BMT Seal Kit".

BMT Flow Data

BMT 160		9.83 in ³ /rev (161.1 cm ³ /rev)					Max Cont.	Max Int.
Pressure (psi →)		588	1175	1470	1766	2355	2950	3535
FLOW	(gpm ↓)	Torque (in·lbf) Speed Specification						
	2.64	780	1558	2081	2434	3195	3956	4735
		60 rpm	59 rpm	58 rpm	56 rpm	54 rpm	50 rpm	44 rpm
	5.28	788	1602	2071	2451	3292	4062	4929
		121 rpm	120 rpm	117 rpm	114 rpm	109 rpm	103 rpm	95 rpm
	10.57	805	1593	2080	2451	3372	4168	5071
		249 rpm	246 rpm	243 rpm	236 rpm	230 rpm	223 rpm	212 rpm
	15.85	726	1575	2080	2451	3372	4160	5063
		371 rpm	367 rpm	362 rpm	356 rpm	349 rpm	340 rpm	330 rpm
	21.13	690	1531	2027	2443	3356	4124	5018
492 rpm		489 rpm	485 rpm	478 rpm	470 rpm	462 rpm	447 rpm	
26.42 <i>Max Cont.</i>	620	1416	1929	2380	3275	4026	4938	
	614 rpm	611 rpm	606 rpm	598 rpm	590 rpm	582 rpm	570 rpm	
33.02 <i>Max Int.</i>	513	1309	1867	2310	3177	3965	4885	
	770 rpm	764 rpm	758 rpm	750 rpm	741 rpm	731 rpm	715 rpm	

BMT 200		12.29 in ³ /rev (201.4 cm ³ /rev)					Max Cont.	Max Int.
Pressure (psi →)		588	1175	1470	1766	2355	2950	3535
FLOW	(gpm ↓)	Torque (in·lbf) Speed Specification						
	2.64	1097	2062	2558	340	454	560	669
		47 rpm	46 rpm	45 rpm	42 rpm	39 rpm	37 rpm	33 rpm
	5.28	1106	2715	2637	347	468	576	696
		95 rpm	94 rpm	92 rpm	90 rpm	87 rpm	84 rpm	75 rpm
	10.57	1062	2133	2620	352	475	589	716
		195 rpm	193 rpm	191 rpm	187 rpm	183 rpm	178 rpm	167 rpm
	15.85	1027	2097	2611	352	478	589	718
		297 rpm	295 rpm	292 rpm	287 rpm	282 rpm	276 rpm	263 rpm
	21.13	956	2044	2558	350	474	586	716
395 rpm		393 rpm	389 rpm	384 rpm	377 rpm	370 rpm	259 rpm	
26.42	871	2009	2531	344	471	580	712	
	493 rpm	490 rpm	486 rpm	482 rpm	475 rpm	467 rpm	460 rpm	
33.02 <i>Max Cont.</i>	743	1841	2443	333	459	566	697	
	615 rpm	611 rpm	607 rpm	602 rpm	595 rpm	588 rpm	572 rpm	
39.63 <i>Max Int.</i>	620	1717	2301	324	447	554	682	
	743 rpm	740 rpm	735 rpm	727 rpm	717 rpm	706 rpm	682 rpm	

BMT 250		15.36 in ³ /rev (251.8 cm ³ /rev)					Max Cont.	Max Int.
Pressure (psi →)		588	1175	1470	1766	2355	2950	3535
F L O W	(gpm ↓)	Torque (in•lbf) Speed Specification						
	2.64	1221	2531	3142	3708	4947	6098	7292
		38 rpm	38 rpm	37 rpm	36 rpm	34 rpm	32 rpm	31 rpm
	5.28	1266	2620	3221	3823	5133	6266	7550
		76 rpm	75 rpm	74 rpm	72 rpm	70 rpm	67 rpm	62 rpm
	10.57	1230	2664	3297	3894	5248	6400	7823
		156 rpm	154 rpm	152 rpm	149 rpm	146 rpm	142 rpm	134 rpm
	15.85	1168	2602	3292	3903	5239	6434	7860
		237 rpm	236 rpm	233 rpm	229 rpm	224 rpm	219 rpm	207 rpm
	21.13	1133	2505	3221	3832	5195	6381	7850
317 rpm		316 rpm	314 rpm	308 rpm	303 rpm	299 rpm	284 rpm	
26.42	1115	2496	3142	3779	5151	6337	7779	
	396 rpm	394 rpm	391 rpm	387 rpm	381 rpm	373 rpm	359 rpm	
33.02 Max Cont.	1027	2301	3010	3665	5027	6222	7646	
	485 rpm	492 rpm	488 rpm	483 rpm	476 rpm	469 rpm	454 rpm	
39.63 Max Int.	779	2142	2832	3513	4885	6071	7496	
	592 rpm	589 rpm	585 rpm	580 rpm	572 rpm	565 rpm	545 rpm	

BMT 315		19.91 in ³ /rev (326.3 cm ³ /rev)					Max Cont.	Max Int.
Pressure (psi →)		588	1175	1470	1766	2355	2950	3535
F L O W	(gpm ↓)	Torque (in•lbf) Speed Specification						
	2.64	1628	3213	4009	4823	6496	7885	9399
		30 rpm	29 rpm	28 rpm	27 rpm	26 rpm	25 rpm	23 rpm
	5.28	1673	3363	4177	4975	6700	8115	9815
		60 rpm	59 rpm	58 rpm	56 rpm	54 rpm	52 rpm	50 rpm
	10.57	1690	3372	4283	5045	6850	8445	10170
		121 rpm	120 rpm	118 rpm	115 rpm	112 rpm	109 rpm	104 rpm
	15.85	1673	3328	4363	5070	6832	8514	10213
		183 rpm	181 rpm	179 rpm	175 rpm	172 rpm	168 rpm	158 rpm
	21.13	1584	3266	4240	5000	6797	8443	10204
244 rpm		242 rpm	239 rpm	236 rpm	231 rpm	227 rpm	217 rpm	
26.42	1496	3160	4133	4975	6708	8357	10116	
	305 rpm	304 rpm	301 rpm	298 rpm	294 rpm	289 rpm	276 rpm	
33.02 Max Cont.	1301	2975	3955	4815	6595	8145	9975	
	380 rpm	378 rpm	375 rpm	371 rpm	367 rpm	362 rpm	349 rpm	
39.63 Max Int.	1053	8950	3825	4655	6310	7912	9710	
	458 rpm	456 rpm	453 rpm	449 rpm	444 rpm	431 rpm	425 rpm	

BMT 400		25.07 in ³ /rev (410.9 cm ³ /rev)					Max Cont.	Max Int.
Pressure (psi →)		440	880	1325	1766	2208	2652	3090
F L O W	(gpm ↓)	Torque (in•lbf) Speed Specification						
	2.64	1558	3248	4956	6328	7833	9293	10701
		24 rpm	23 rpm	22 rpm	21 rpm	20 rpm	19 rpm	18 rpm
	5.28	1584	3275	5001	6426	7957	9479	10940
		49 rpm	48 rpm	47 rpm	44 rpm	42 rpm	40 rpm	38 rpm
	10.57	1558	3275	5018	6488	8134	9656	11178
		96 rpm	95 rpm	93 rpm	90 rpm	87 rpm	83 rpm	79 rpm
	15.85	1540	3195	4983	6452	8143	9692	11232
		145 rpm	143 rpm	139 rpm	135 rpm	131 rpm	127 rpm	121 rpm
	21.13	1469	3124	4894	6364	8072	9594	11178
193 rpm		191 rpm	188 rpm	184 rpm	180 rpm	1761 rpm	170 rpm	
26.42	1328	3000	4762	6266	7930	9444	11081	
	242 rpm	240 rpm	238 rpm	234 rpm	228 rpm	224 rpm	218 rpm	
33.02 Max Cont.	1195	2735	4638	6089	7727	9249	10807	
	302 rpm	300 rpm	298 rpm	294 rpm	289 rpm	285 rpm	178 rpm	
39.63 Max Int.	1115	2584	4496	5895	7541	9028	10594	
	364 rpm	362 rpm	358 rpm	354 rpm	350 rpm	346 rpm	339 rpm	

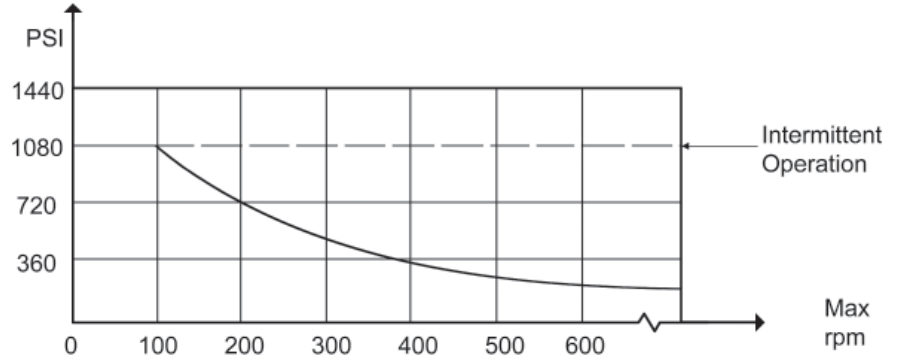
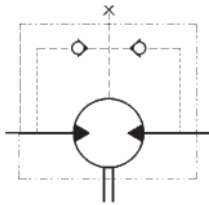
BMT 500		31.95 in³/rev (523.6 cm³/rev)					<i>Max Cont.</i>	<i>Max Int.</i>
Pressure (psi →)		440	880	1325	1766	2060	2355	2652
FLOW	(gpm ↓)	Torque (in·lbf) Speed Specification						
	2.64	1965	3992	6125	7895	9293	10559	11860
		18 rpm	18 rpm	18 rpm	17 rpm	16 rpm	15 rpm	13 rpm
	5.28	2045	4107	6319	8125	9470	10798	12187
		37 rpm	36 rpm	35 rpm	34 rpm	33 rpm	32 rpm	30 rpm
	10.57	2036	4124	6434	8329	9683	11010	12586
		75 rpm	74 rpm	73 rpm	72 rpm	70 rpm	68 rpm	64 rpm
	15.85	1991	4045	6319	8329	9630	11019	12471
		113 rpm	112 rpm	111 rpm	109 rpm	107 rpm	105 rpm	101 rpm
	21.13	1885	3815	6160	8205	9523	11010	12400
151 rpm		150 rpm	149 rpm	147 rpm	145 rpm	143 rpm	138 rpm	
26.42	1717	3717	6019	7978	9408	10833	12241	
	189 rpm	188 rpm	187 rpm	185 rpm	183 rpm	181 rpm	177 rpm	
33.02 <i>Max Cont.</i>	1611	3523	5673	7762	9063	10612	11966	
	237 rpm	236 rpm	235 rpm	233 rpm	231 rpm	229 rpm	225 rpm	
39.63 <i>Max Int.</i>	1301	3266	5470	7550	8886	10239	11727	
	284 rpm	283 rpm	282 rpm	280 rpm	278 rpm	276 rpm	272 rpm	

BMT 630		38.39 in³/rev (629.1 cm³/rev)					<i>Max Cont.</i>	<i>Max Int.</i>
Pressure (psi →)		440	880	1325	1546	1766	2060	2355
FLOW	(gpm ↓)	Torque (in·lbf) Speed Specification						
	2.64	2062	4602	7036	7983	9505	10567	12063
		14 rpm	14 rpm	13 rpm	13 rpm	13 rpm	11 rpm	11 rpm
	5.28	2097	4903	7407	8434	9885	10965	12452
		28 rpm	27 rpm	27 rpm	26 rpm	26 rpm	24 rpm	22 rpm
	10.57	2115	4894	7611	8735	10364	11576	13125
		62 rpm	62 rpm	61 rpm	60 rpm	59 rpm	56 rpm	54 rpm
	15.85	1974	4814	7638	8655	10372	11664	13257
		94 rpm	94 rpm	92 rpm	91 rpm	90 rpm	86 rpm	82 rpm
	21.13	1947	5071	7558	8540	10372	11629	13248
123 rpm		123 rpm	121 rpm	119 rpm	118 rpm	114 rpm	110 rpm	
26.42	1841	4620	7363	8363	10231	10231	13169	
	156 rpm	155 rpm	153 rpm	152 rpm	150 rpm	147 rpm	142 rpm	
33.02 <i>Max Cont.</i>	1779	4416	7169	8239	10062	11435	13028	
	196 rpm	196 rpm	194 rpm	192 rpm	191 rpm	187 rpm	183 rpm	
39.63 <i>Max Int.</i>	1540	4354	6947	8151	9912	11301	12868	
	233 rpm	232 rpm	231 rpm	230 rpm	227 rpm	223 rpm	217 rpm	

BMT 800		48.93 in³/rev (801.8 cm³/rev)					<i>Max Cont.</i>	<i>Max Int.</i>
Pressure (psi →)		440	880	1325	1546	1840	1914	
FLOW	(gpm ↓)	Torque (in·lbf) Speed Specification						
	2.64	3062	5991	8877	10257	12080	12302	
		12 rpm	12 rpm	11 rpm	11 rpm	11 rpm	10 rpm	
	5.28	3151	6124	9151	10470	12425	12903	
		24 rpm	24 rpm	24 rpm	23 rpm	22 rpm	18 rpm	
	10.57	3220	6222	9434	10939	12912	13417	
		50 rpm	50 rpm	49 rpm	48 rpm	46 rpm	40 rpm	
	15.85	3133	6222	9381	10947	12956	13417	
		74 rpm	73 rpm	71 rpm	71 rpm	68 rpm	63 rpm	
	21.13	2938	6071	9293	10850	12956	13399	
99 rpm		98 rpm	98 rpm	96 rpm	93 rpm	86 rpm		
26.42	3699	5788	9071	10682	12788	13328		
	125 rpm	123 rpm	123 rpm	121 rpm	118 rpm	110 rpm		
33.02 <i>Max Cont.</i>	2478	5505	8753	10452	12585	13160		
	154 rpm	153 rpm	153 rpm	150 rpm	149 rpm	140 rpm		
39.63 <i>Max Int.</i>	2186	5222	8454	10231	12443	13663		
	185 rpm	184 rpm	183 rpm	181 rpm	179 rpm	172 rpm		

BMT Technical Data

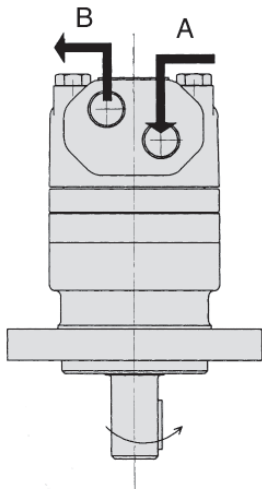
Shaft Seal Rated Pressure



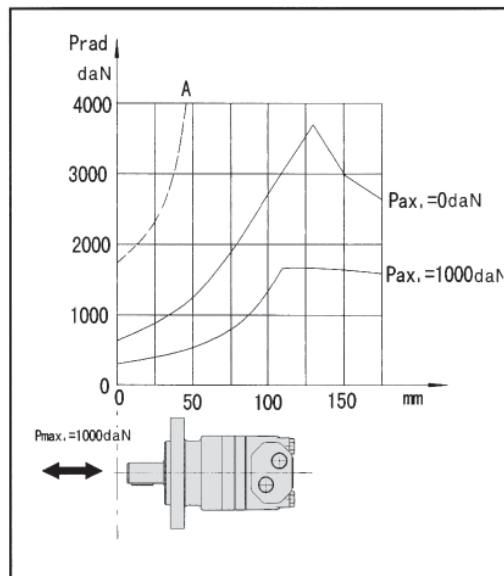
Case Drain

In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

Shaft Rotation Direction



Axial and Radial forces



The output shaft runs 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 risk of breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 rpm.