

Additional Data/Spec Sheet

BMPW Series Gerotor Gear Type – Hydraulic Orbital Motors – Axil Distribution Motors

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	BMP BMPH BMPW 500
	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	120
	int.	1650	1450	960	770	615	475	385	310	240	190	150
Max. torque (N•m)	cont.	55	100	146	182	236	302	360	380	375	360	385
	int.	76	128	186	227	290	370	440	460	555	525	560
	peak	96	148	218	264	360	434	540	550	650	680	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	5.0
	int.	11.5	12.0	12.0	13.0	12.0	12.0	12.0	10.5	8.5	7.0	6.0
Max. pressure drop (MPa)	cont.	12.5	14	14	14	14	14	14	11	9	7	6
	int.	16.5	17.5	17.5	17.5	17.5	17.5	17.5	14	14	10.5	9
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	18	16	14	12
Max. flow (L/min)	cont.	55	60	60	60	60	60	60	60	60	60	60
	int.	60	75	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	6.7	6.9	7.4	8

- * 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 50 [51.7cm³/rev.]

Pressure (MPa)

	3	6	8	10	12.5	14	16	17.5
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Flow (L/min)	Max.cont.								Max.int.	
	3	6	8	10	12.5	14	16	17.5		
8	20	41	56	69	89	95				
15	151	134	115	90	56	42				
20	19	40	56	71	91	100	112	120		
30	286	274	261	243	204	182	139	102		
35	18	39	55	71	92	101	117	128		
45	382	373	361	348	318	309	287	251		
55	17	38	55	71	91	98	116	124		
Max.cont.	573	568	558	535	503	488	462	440		
60	17	38	54	69	89	98	117	124		
75	670	661	652	640	606	589	562	548		
	14	36	53	67	88	98	114	123		
	863	858	849	837	807	788	764	746		
	12	33	50	65	85	96	111	121		
	1055	1042	1028	1010	979	963	947	920		
	10	32	47	64	83	94	108	119		
	1150	1143	1126	1111	1079	1065	1043	1015		
	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)	Max.cont.								Max.int.	
	3	6	8	10	12.5	14	16	17.5		
8	32	62	85	104	129	144				
15	97	87	74	55	33	22				
20	32	63	84	107	126	144	165			
30	186	181	170	154	132	118	86			
35	31	63	84	107	132	146	168	185		
45	251	243	236	225	207	196	178	155		
55	31	62	83	106	131	146	168	186		
Max.cont.	381	379	368	355	332	316	285	263		
60	30	59	81	102	130	144	167	185		
75	443	435	426	415	397	383	361	342		
	25	58	79	100	126	142	165	182		
	570	564	554	543	526	509	483	458		
	23	57	78	97	124	140	161	179		
	696	685	672	656	643	630	602	579		
	20	53	75	94	120	137	160	177		
	761	753	744	736	720	706	681	660		
	14	44	67	87	112	151	169	169		
	948	940	931	920	906	890	871	854		

Torque (N•m) 87
Speed (rpm) 920

BMP 160 [157.2cm³/rev.]

Pressure (MPa)

	3	6	8	10	12.5	14	16	17.5
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Flow (L/min)	Max.cont.								Max.int.	
	3	6	8	10	12.5	14	16	17.5		
8	62	120	170	212	263	290				
15	49	48	46	42	26	14				
20	60	122	172	215	264	294	340			
30	93	91	88	85	76	68	48			
35	57	120	170	214	262	290	340	371		
45	125	123	120	117	110	106	92	81		
55	53	115	164	206	259	288	335	368		
Max.cont.	187	184	181	178	175	168	155	139		
60	49	110	160	202	255	284	328	362		
75	220	216	213	209	205	202	192	176		
	44	102	154	196	248	278	321	358		
	283	280	276	272	267	260	250	238		
	40	99	148	191	243	272	316	351		
	345	342	340	336	331	328	320	303		
	33	94	144	188	236	267	308	345		
	377	374	371	367	363	359	353	342		
	19	80	124	170	216	252	296	325		
	473	469	465	459	453	447	440	424		

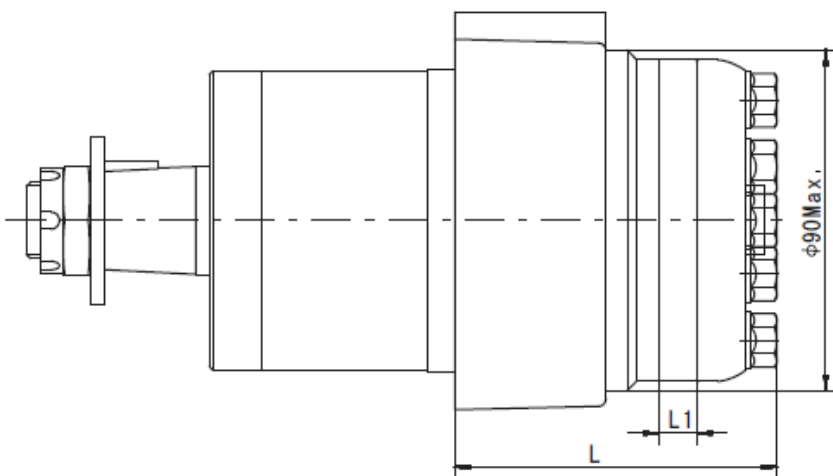
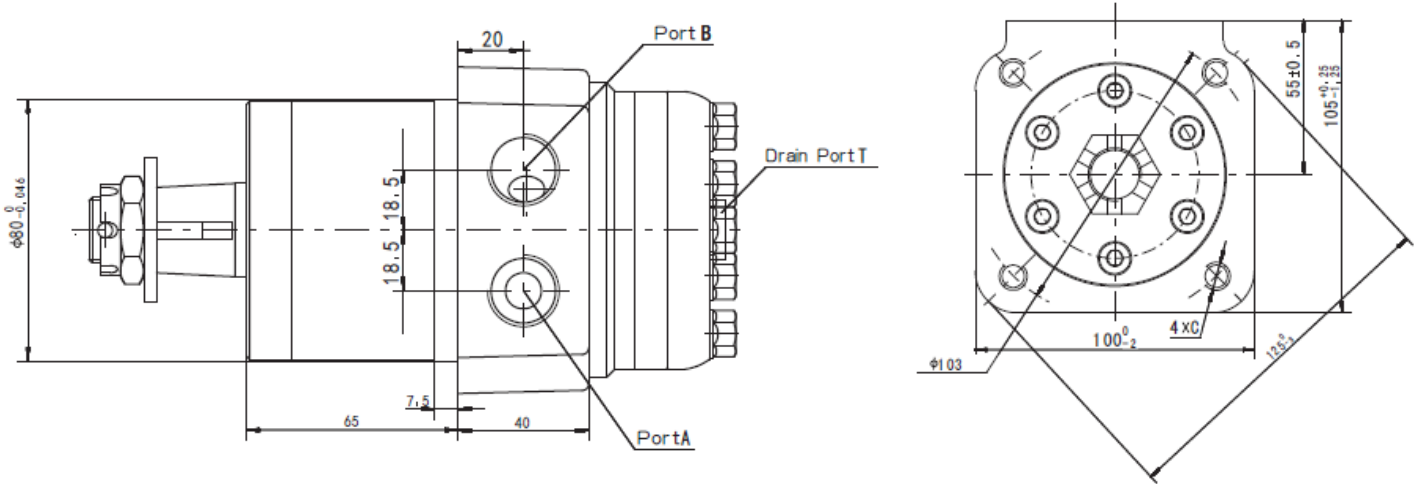
BMP 315 [314.5cm³/rev.]

Pressure (MPa)

	3	5	7	9	10	12.5	14
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Flow (L/min)	Max.cont.							Max.int.	
	3	5	7	9	10	12.5	14		
8	123	215	292	368	405				
15	25	23	21	17	11				
20	118	211	287	367	404	495	568		
30	47	46	44	40	28	21	10		
35	110	205	278	360	395	494	566		
45	62	61	60	57	46	40	36		
55	101	196	271	349	388	490	565		
Max.cont.	94	93	91	88	76	68	65		
60	96	188	264	341	382	478	557		
75	109	107	106	104	96	89	84		
	89	180	254	337	372	468	553		
	141	140	138	135	127	120	115		
	76	166	239	325	362	457	548		
	173	172	170	167	160	152	143		
	65	154	227	308	348	443	529		
	188	186	184	182	178	172	163		
	40	120	201	279	323	418	497		
	236	234	232	228	226	223	214		

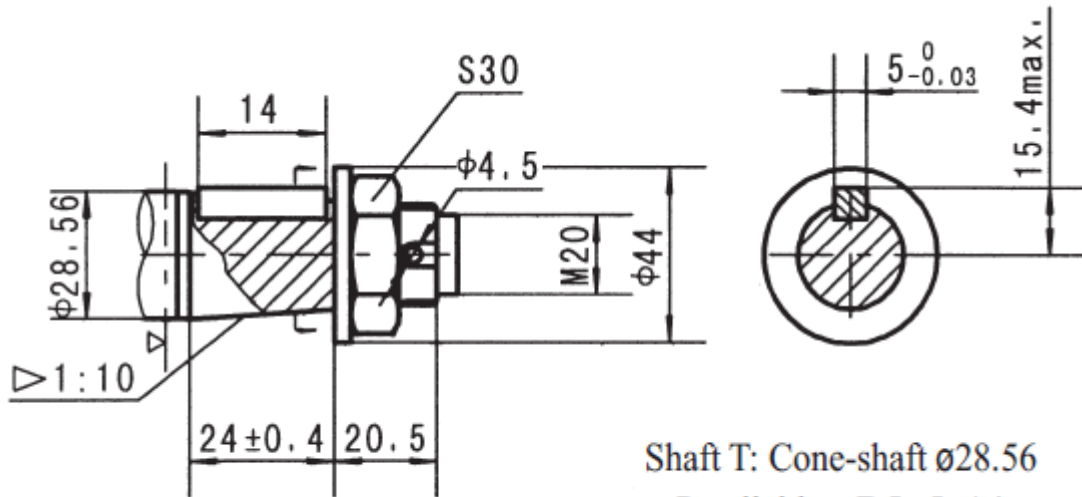
BMPW DIMENSIONS AND MOUNTING DATA



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
BMPW500	139	65

Mounting \ Code	G (depth)
P(A,B)	G1/2 (15)
T	G1/4 (12)
C	4xM10(20)

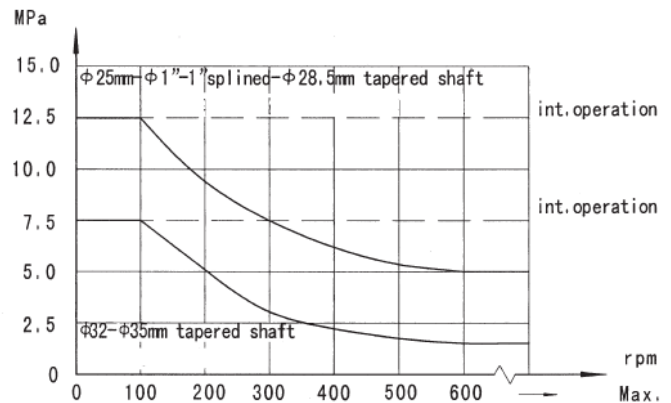
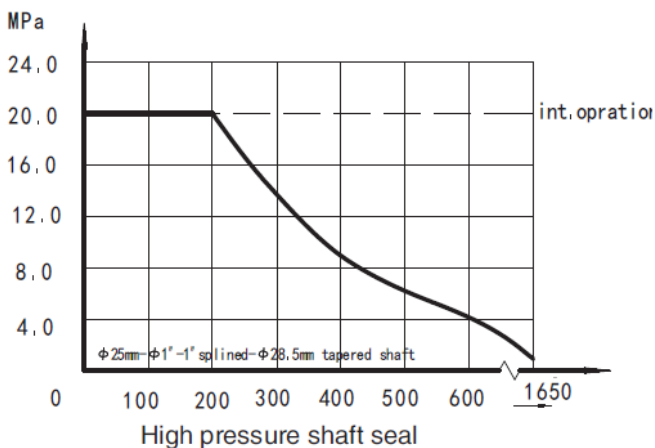
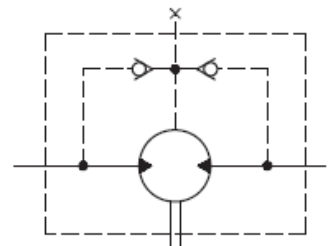
BMPW SHAFT EXTENSION DIMENSION DATA



Shaft T: Cone-shaft $\phi 28.56$
Parallel key B5x5x14
Tightening torque: 100 ± 10 Nm

BMP, BMPH Series Hydraulic Motor

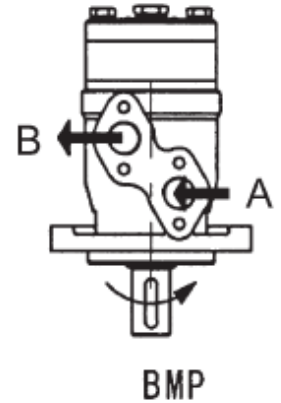
Permissible shaft seal pressure



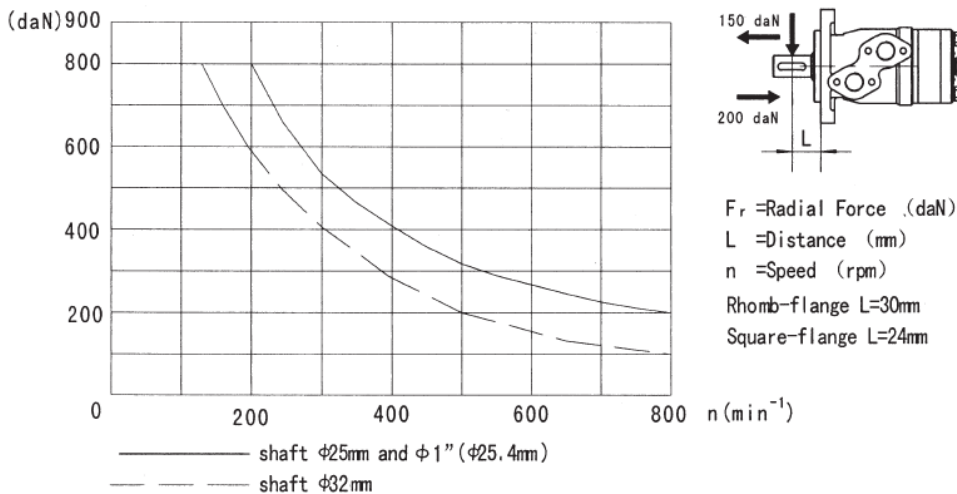
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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 (Standard motor with journal bearing)



Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm ² /s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8