

Additional Data/Spec Sheet

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

Flange E4 = Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5x6.3 – Shaft B = Ø32 Cylindrical Shaft, parallel key 10x8x45

BMS SERIES HYDRAULIC MOTOR

BMS 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. The case can offers 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 Specificaion

Type		BMS BMSE 80	BMS BMSE 100	BMS BMSE 125	BMS BMSE 160	BMS BMSE 200	BMS BMSE 250	BMS BMSE 315	BMS BMSE 375
Geometric displacement (cm ³ /rev.)		80.6	100.8	125	157.2	200	252	314.5	370
Max. speed (rpm)	cont.	800	748	600	470	375	300	240	200
	int.	988	900	720	560	450	360	280	240
Max. torque (N•m)	cont.	190	240	310	316	400	450	560	536
	int.	240	300	370	430	466	540	658	645
	peak	260	320	400	472	650	690	740	751
Max. output (kW)	cont.	15.9	18.8	19.5	15.6	15.7	14.1	14.1	11.8
	int.	20.1	23.5	23.2	21.2	18.3	17.0	18.9	17
Max. pressure drop (MPa)	cont.	17.5	17.5	17.5	15	14	12.5	12	10
	int.	21	21	21	21	16	16	14	12
	peak	22.5	22.5	22.5	22.5	22.5	20	18.5	14
Max. flow (L/min)	cont.	65	75	75	75	75	75	75	75
	int.	80	90	90	90	90	90	90	90
Max. inlet pressure (MPa)	cont.	25	25	25	25	25	25	25	25
	int.	30	30	30	30	30	30	30	30
Weight (kg)		9.8	10	10.3	10.7	11.1	11.6	12.3	12.6

- * 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

BMS 80 [80.6cm³/rev.]

Pressure (MPa)

					Max.cont.		Max.int.	
		3.5	7	10.5	14	17.5	21	22.5
Flow (L/min)	15	35	80	120	158	195	235	249
		180	174	168	164	158	151	143
	30	35	80	120	158	195	240	260
		362	352	346	338	330	322	310
Max.cont.	40	35	79	119	155	193	234	250
		482	473	464	453	444	434	415
Max.int.	50	30	77	117	153	192	232	248
		602	594	587	569	560	551	522
Max.cont.	60	28	77	117	153	192	232	247
		724	713	707	683	673	664	629
Max.int.	65	25	75	114	152	190	230	245
		790	785	770	760	742	720	704
Max.int.	80	22	70	110	140	170	200	220
		980	965	950	920	891	860	830

BMS 100 [100.8cm³/rev.]

Pressure (MPa)

					Max.cont.		Max.int.	
		3.5	7	10.5	14	17.5	21	22.5
Flow (L/min)	15	48	95	150	200	250	289	310
		146	144	139	135	130	120	105
	30	45	94	146	198	250	295	317
		291	289	278	274	269	258	242
Max.cont.	40	43	89	142	196	248	293	316
		387	384	374	359	350	335	320
Max.int.	50	40	88	135	194	247	292	315
		486	483	473	462	450	430	420
Max.cont.	60	37	88	132	185	244	289	312
		588	584	574	562	550	538	520
Max.int.	75	35	80	130	180	240	286	310
		740	735	720	705	696	676	653
Max.int.	90	30	75	124	170	236	277	303
		850	840	810	787	770	750	747

BMS 125 [125cm³/rev.]

Pressure (MPa)

					Max.cont.		Max.int.	
		3.5	7	10.5	14	17.5	21	22.5
Flow (L/min)	15	55	120	176	245	309	349	375
		112	110	103	96	93	90	84
	30	55	120	175	250	324	375	408
		222	220	217	208	200	199	190
Max.cont.	40	55	120	175	250	324	370	408
		302	298	292	284	276	268	260
Max.int.	50	50	115	176	248	320	370	406
		379	373	368	363	350	339	328
Max.cont.	60	45	113	171	245	324	368	406
		456	448	443	439	425	406	393
Max.int.	75	45	110	167	240	314	370	401
		570	563	555	546	533	515	503
Max.int.	90	40	105	162	237	309	365	398
		685	676	670	659	644	625	610

BMS 160 [157.2cm³/rev.]

Pressure (MPa)

					Max.cont.		Max.int.	
		3.5	7	10.5	14	17.5	21	22.5
Flow (L/min)	15	70	140	205	305	371	430	473
		91	88	84	78	76	74	58
	30	75	150	214	321	380	427	490
		185	182	176	168	164	162	152
Max.cont.	40	70	150	215	320	378	425	488
		248	244	239	229	224	217	204
Max.int.	50	65	145	215	316	378	425	482
		312	308	304	294	288	280	270
Max.cont.	60	65	145	214	315	375	424	482
		375	371	365	357	346	336	323
Max.int.	75	60	138	208	311	375	420	
		470	465	458	447	436	426	
Max.int.	90	56	130	200	308	370	414	
		564	559	551	541	526	517	

Torque (N•m) 309
Speed (rpm) 644

□ cont.
■ int.

Performance Data

BMS 200 [200cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	10.5	14	17.5	22.5
Flow (L/min)	15	89	190	295	400	484	608
	30	73	71	68	64	60	52
	40	148	146	143	140	135	127
	50	86	188	292	397	483	594
	60	193	191	189	186	181	172
Max.cont.	75	80	184	290	395	480	590
	75	247	245	243	240	235	226
	75	74	178	286	390	475	582
Max.int.	75	298	295	293	290	284	273
	90	58	160	275	375	460	570
	90	372	369	365	362	358	346
	90	49	148	260	355	445	555
	90	440	435	430	422	411	401

BMS 250 [252cm³/rev.]

		Pressure (MPa)						
		Max.cont.			Max.int.			
		3.5	7	10.5	14	17.5	22.5	
Flow (L/min)	15	117	230	355	52	450	554	652
	30	58	55	350	51	47	46	
	40	118	117	348	109	107	106	
	50	115	225	112	446	560	657	
	60	160	156	345	150	146	142	
Max.cont.	75	110	220	198	438	546	645	
	75	202	200	340	196	195	192	
	75	105	220	237	435	542	642	
Max.int.	75	242	239	338	234	231	229	
	90	95	215	293	430	537	638	
	90	300	296	332	286	282	278	
	90	90	205	348	420	530	632	
	90	360	354	340	332	326		

BMS 315 [314.5cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	10.5	12	14	18.5
Flow (L/min)	15	160	320	465	555	650	748
	30	48	47	45	43	40	38
	40	94	92	90	89	86	85
	50	160	310	457	546	642	741
	60	125	123	120	118	116	115
Max.cont.	75	155	305	450	538	637	736
	75	158	156	153	150	147	145
	75	152	302	442	532	632	732
Max.int.	75	175	174	170	164	162	159
	90	145	295	436	525	628	726
	90	236	234	230	227	225	222
	90	132	280	430	520	622	723
	90	285	282	280	276	273	270

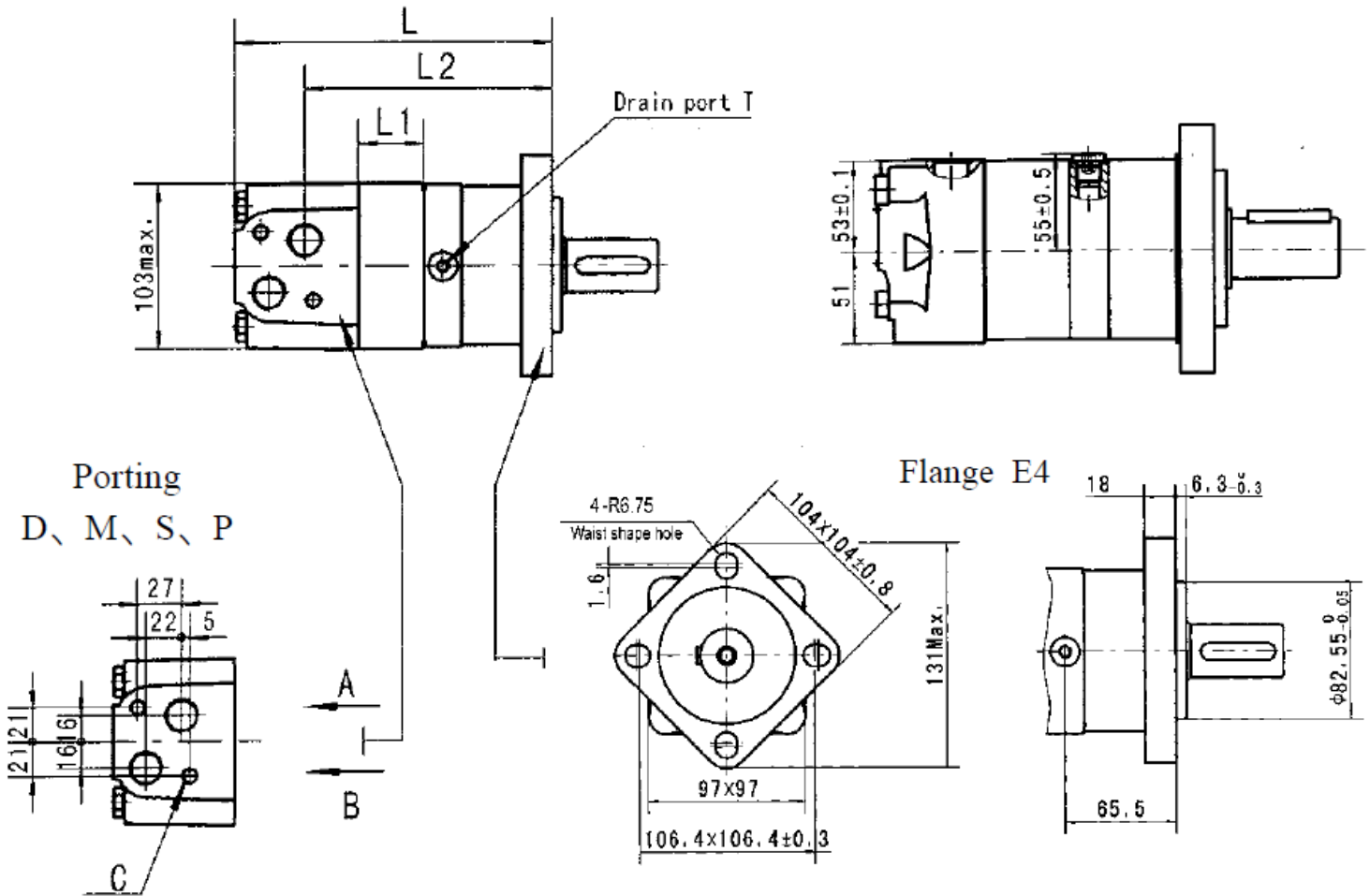
BMS 375 [370cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	9	10	12	14
Flow (L/min)	15	185	362	474	512	588	660
	30	40	39	38	37	35	33
	40	80	78	77	76	74	72
	50	180	362	473	513	588	659
	60	106	104	103	102	100	97
Max.cont.	75	160	360	472	511	586	658
	75	133	131	130	129	128	125
	75	150	359	471	510	585	657
Max.int.	75	157	156	155	154	152	150
	90	130	353	465	504	584	651
	90	200	198	196	195	194	193
	90	105	350	462	500	580	647
	90	238	235	234	232	230	227

Torque (N•m) 520
Speed (rpm) 276

cont.
int.

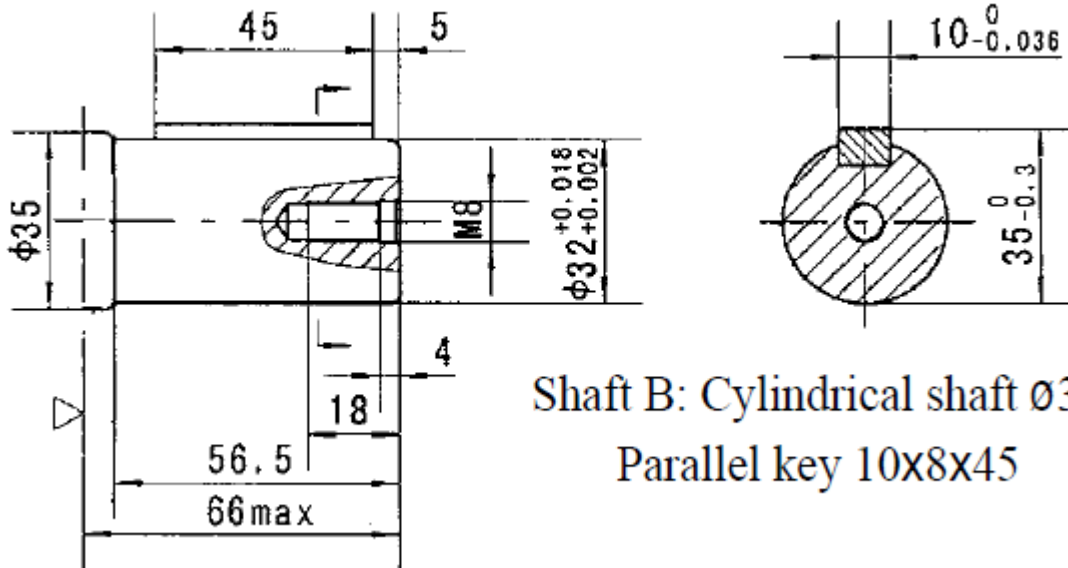
BMS DIMENSIONS AND MOUNTING DATA



Model	L	L1	L2
BMS-80	167	13	123.2
BMS-100	171	17	127.2
BMS-125	176	22	132.2
BMS-160	181.5	27.5	137.7
BMS-200	189	35.1	145.2
BMS-250	201	47	157.2
BMS-315	213	59	169.2
BMS-375	225	71	181.2

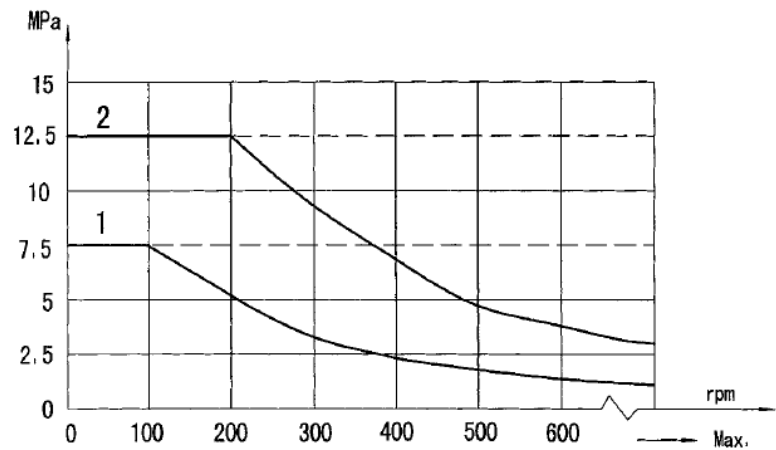
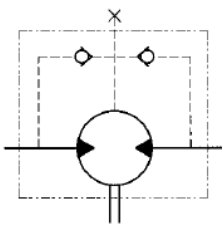
Code	D (depth)
P(A,B)	G1/2(18)
T	G1/4(12)
C	2-M10(13)

BMS SHAFT EXTENSIONS DIMENSIONS DATA



Shaft B: Cylindrical shaft $\varnothing 32$
Parallel key 10x8x45

Permissible shaft seal pressure

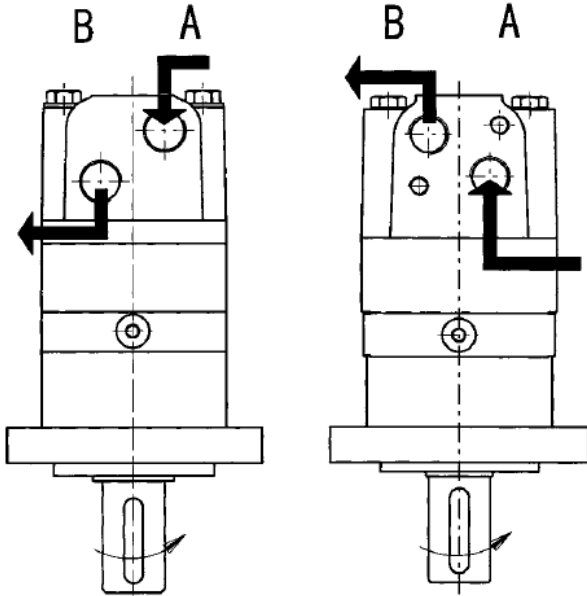


Note: 1. Chart for standard shaft seal;
2. Chart for high pressure shaft seal.

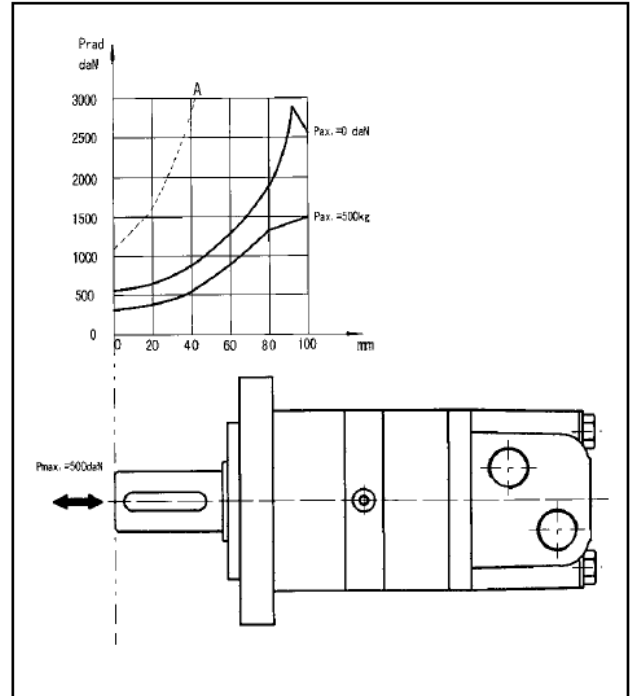
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.