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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 featutres:

* 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 distrbution 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 (cm³/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.

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Performance Data

BMS 80 [80.6cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5 (Max.cont.)	21	22.5 (Max.int.)
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**
40	35	79	119	155	193	234	250
	482	**473**	**464**	**453**	**444**	**434**	**415**
50	30	77	117	153	192	232	248
	602	**594**	**587**	**569**	**560**	**551**	**522**
60 (Max.cont.)	28	77	117	153	192	232	247
	724	**713**	**707**	**683**	**673**	**664**	**629**
65	25	75	114	152	190	230	245
	790	**785**	**770**	**760**	**742**	**720**	**704**
80 (Max.int.)	22	70	110	140	170	200	220
	980	**965**	**950**	**920**	**891**	**860**	**830**

BMS 100 [100.8cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5 (Max.cont.)	21	22.5 (Max.int.)
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**
40	43	89	142	196	248	293	316
	387	**384**	**374**	**359**	**350**	**335**	**320**
50	40	88	135	194	247	292	315
	486	**483**	**473**	**462**	**450**	**430**	**420**
60	37	88	132	185	244	289	312
	588	**584**	**574**	**562**	**550**	**538**	**520**
75 (Max.cont.)	35	80	130	180	240	286	310
	740	**735**	**720**	**705**	**696**	**676**	**653**
90 (Max.int.)	30	75	124	170	236	277	303
	850	**840**	**810**	**787**	**770**	**750**	**747**

BMS 125 [125cm³/rev.]

Pressure (MPa)

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

Torque (N•m) 309
Speed (rpm) **644**

BMS 160 [157.2cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5 (Max.cont.)	21	22.5 (Max.int.)
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**
40	70	150	215	320	378	425	488
	248	**244**	**239**	**229**	**224**	**217**	**204**
50	65	145	215	316	378	425	482
	312	**308**	**304**	**294**	**288**	**280**	**270**
60	65	145	214	315	375	424	482
	375	**371**	**365**	**357**	**346**	**336**	**323**
75 (Max.cont.)	60	138	208	311	375	420	
	470	**465**	**458**	**447**	**436**	**426**	
90 (Max.int.)	56	130	200	308	370	414	
	564	**559**	**551**	**541**	**526**	**517**	

cont.
int.

40 Industry Road, Paarden Eiland, Cape Town, Western Cape Tell: 021 511 0590

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Performance Data

BMS 200 [200cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10.5	14 (Max.cont.)	17.5	22.5 (Max.int.)
15	89 / **73**	190 / **71**	295 / **68**	400 / **64**	484 / **60**	608 / **52**
30	87 / **148**	190 / **146**	294 / **143**	399 / **140**	485 / **135**	600 / **127**
40	86 / **193**	188 / **191**	292 / **189**	397 / **186**	483 / **181**	594 / **172**
50	80 / **247**	184 / **245**	290 / **243**	395 / **240**	480 / **235**	590 / **226**
60	74 / **298**	178 / **295**	286 / **293**	390 / **290**	475 / **284**	582 / **273**
75 (Max.cont.)	58 / **372**	160 / **369**	275 / **365**	375 / **362**	460 / **358**	570 / **346**
90 (Max.int.)	49 / **440**	148 / **435**	260 / **430**	355 / **422**	445 / **411**	555 / **401**

BMS 250 [252cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10.5	14 (Max.cont.)	17.5	22.5 (Max.int.)
15	117 / **58**	230 / **55**	355 / 350	**52** / **51**	450 / **47**	554 / **46**	652
30	117 / **118**	225 / **117**	**112** / 348	446 / **109**	560 / **107**	657 / **106**
40	115 / **160**	225 / **156**	**152** / 345	442 / **150**	552 / **146**	650 / **142**
50	110 / **202**	220 / **200**	**198** / 340	438 / **196**	546 / **195**	645 / **192**
60	105 / **242**	220 / **239**	**237** / 338	435 / **234**	542 / **231**	642 / **229**
75 (Max.cont.)	95 / **300**	215 / **296**	**293** / 332	430 / **286**	537 / **282**	638 / **278**
90 (Max.int.)	90 / **360**	205 / **354**	**348**	420 / **340**	530 / **332**	632 / **326**

BMS 315 [314.5cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10.5	12 (Max.cont.)	14	18.5 (Max.int.)
15	160 / **48**	320 / **47**	465 / **45**	555 / **43**	650 / **40**	748 / **38**
30	165 / **94**	322 / **92**	468 / **90**	560 / **89**	658 / **86**	752 / **85**
40	160 / **125**	310 / **123**	457 / **120**	546 / **118**	642 / **116**	741 / **115**
50	155 / **158**	305 / **156**	450 / **153**	538 / **150**	637 / **147**	736 / **145**
60	152 / **175**	302 / **174**	442 / **170**	532 / **164**	632 / **162**	732 / **159**
75 (Max.cont.)	145 / **236**	295 / **234**	436 / **230**	525 / **227**	628 / **225**	726 / **222**
90 (Max.int.)	132 / **285**	280 / **282**	430 / **280**	520 / **276**	622 / **273**	723 / **270**

Torque (N•m) 520
Speed (rpm) **276**

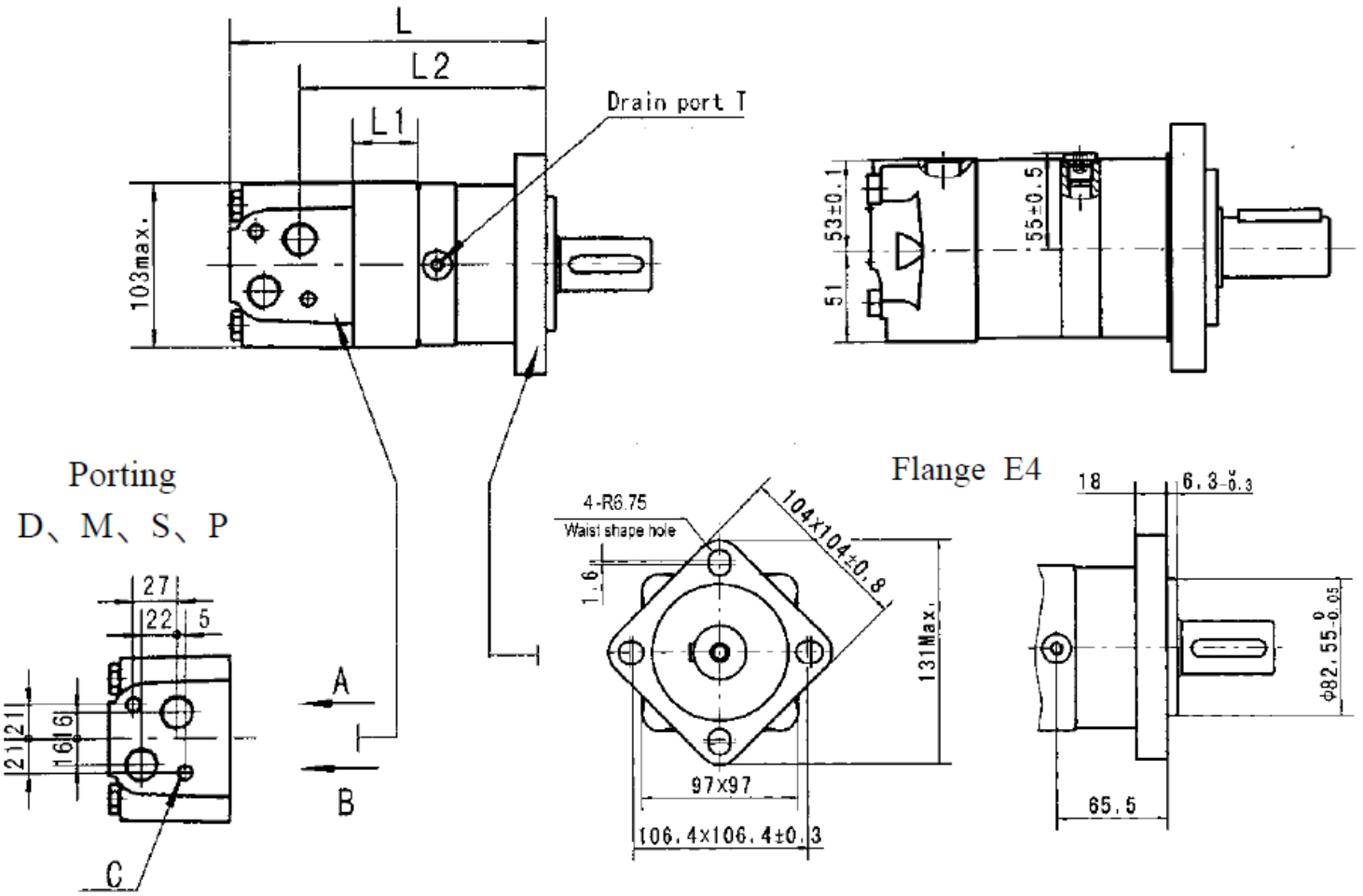
BMS 375 [370cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	9	10 (Max.cont.)	12	14 (Max.int.)
15	185 / **40**	362 / **39**	474 / **38**	512 / **37**	588 / **35**	660 / **33**
30	184 / **80**	364 / **78**	475 / **77**	514 / **76**	590 / **74**	661 / **72**
40	180 / **106**	362 / **104**	473 / **103**	513 / **102**	588 / **100**	659 / **97**
50	160 / **133**	360 / **131**	472 / **130**	511 / **129**	586 / **128**	658 / **125**
60	150 / **157**	359 / **156**	471 / **155**	510 / **154**	585 / **152**	657 / **150**
75 (Max.cont.)	130 / **200**	353 / **198**	465 / **196**	504 / **195**	584 / **194**	651 / **193**
90 (Max.int.)	105 / **238**	350 / **235**	462 / **234**	500 / **232**	580 / **230**	647 / **227**

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BMS DIMENSIONS AND MOUNTING DATA

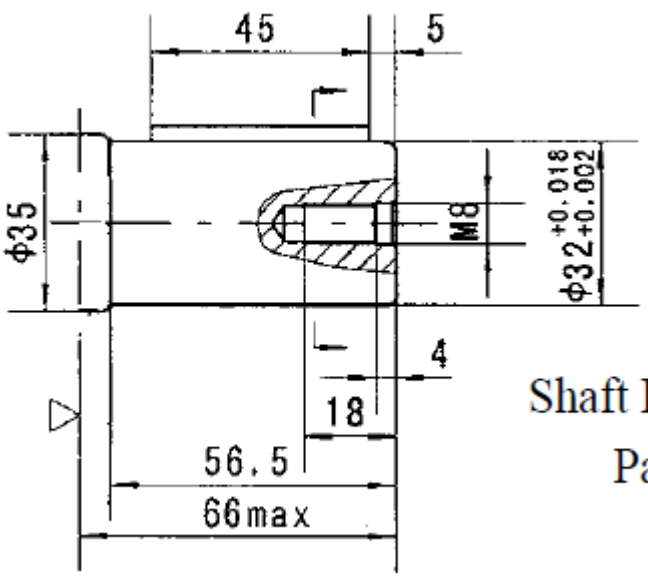


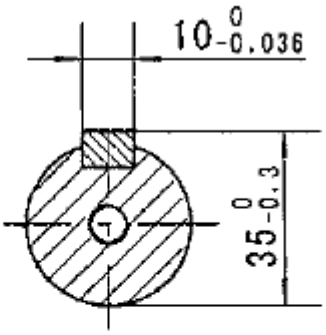
Model	L	L1	L2
BMS-80	167	13	123.2
BMS-100	171	17	127.2
BMS-125	176	22	132.2
BMS-160	181.5	27.5	137.7
BMS-200	189	35.1	145.2
BMS-250	201	47	157.2
BMS-315	213	59	169.2
BMS-375	225	71	181.2

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

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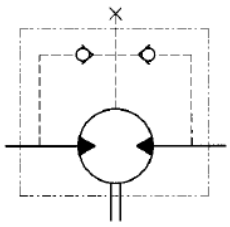
BMS SHAFT EXTENSIONS DIMENSIONS DATA

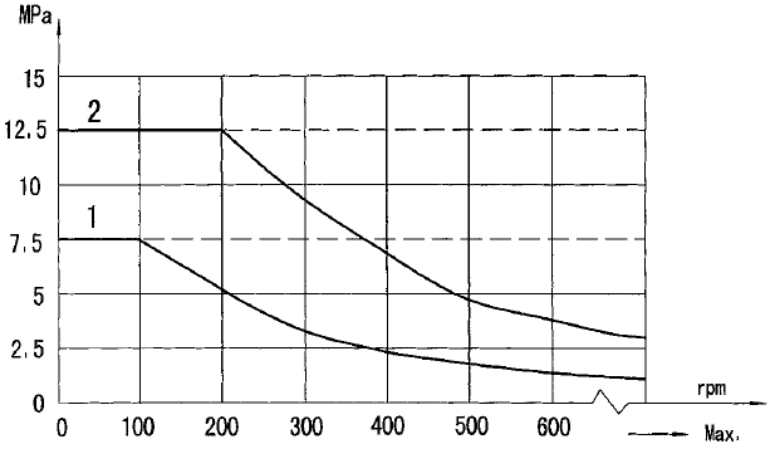




Shaft B: Cylindrical shaft Ø32
Parallel key 10x8x45

Permissible shaft seal pressure





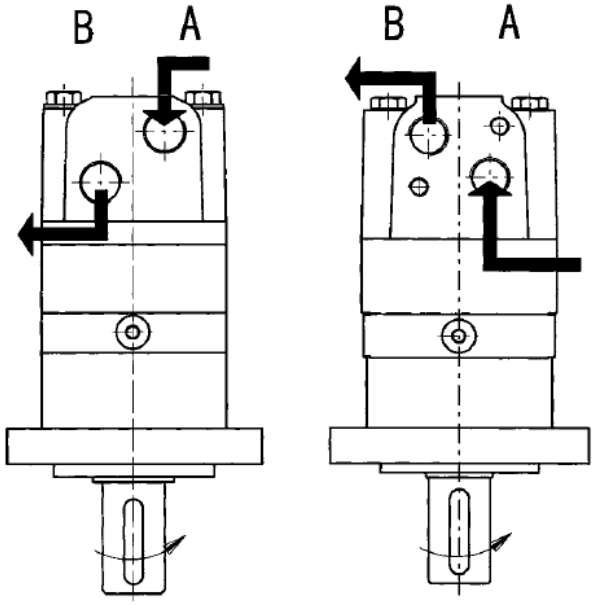
Note:1.Chart for standard shaft seal;
2.Chart for high pressure shaft seal.

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.

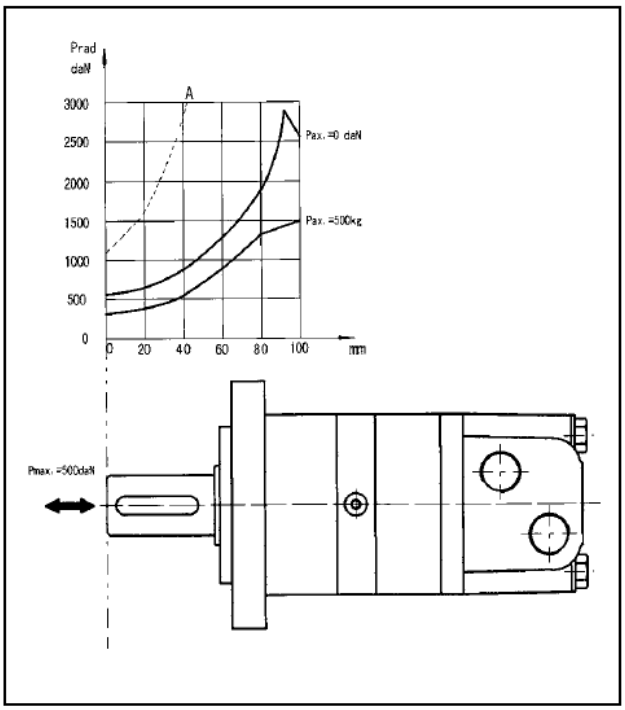
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Standard direction of shaft rotation: Standard

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.