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BMR Series Geroler Gear Type – Hydraulic Orbital Motors – Axil Distribution Motors – 4 Hole Square

Flange H5 = 4-M10 Square-flange, pilot Ø44.4x2.8 – Shaft C = Ø25.4 Cylindrical Shaft, parallel key 6.35x6.35x31.75

BMR SERIES HYDRAULIC MOTOR

BMR series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

Characteristic features:

*Advanced manufacturing devices for the Gerolor gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.

*Shaft seal can bear high pressure of back and the motor can be used in parallel or in series.

*Special design in the driver-linker and prolong operating life

*Special design for distribution system can meet the requirement of low noise of unit.

*Compact volume and easy installation

Main Specification

Technical data for BMR with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Type		BMR BMRS 36	BMR BMRS 50	BMR BMRS 80	BMR BMRS 100	BMR BMRS 125	BMR BMRS 160	BMR BMRS 200	BMR BMRS 250	BMR BMRS 315	BMR BMRS 375
Geometric displacement (cm^3/rev.)		36	51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	cont.	1085	960	750	600	475	378	310	240	190	155
	int.	1220	1150	940	750	600	475	385	300	240	190
Max. torque (N•m)	cont.	72	100	195	240	300	360	360	390	390	365
	int.	83	126	220	280	340	430	440	490	535	495
	peak	105	165	270	320	370	460	560	640	650	680
Max. output (kW)	cont.	8.5	9.5	12.5	13.0	12.5	12.5	10.0	7.0	6.0	5.0
	int.	9.8	11.2	15.0	15.0	14.5	14.0	13.0	9.5	9.0	8.0
Max. pressure drop (MPa)	cont.	14.0	14	17.5	17.5	17.5	16.5	13	11	9	7
	int.	16.5	17.5	20	20	20	20	17.5	15	13	10
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	17.5	15
Max. flow (L/min)	cont.	40	50	60	60	60	60	60	60	60	60
	int.	45	60	75	75	75	75	75	75	75	75
Weight (kg)		6.5	6.7	6.9	7	7.3	7.6	8.0	8.5	9.0	9.5

* 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

BMR 125 [127.2cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16	17.5	20
	76	110	145	167	189				
5	**36**	**31**	**25**	**19**	**13**				
	84	118	155	176	202	228	253		
10	**73**	**70**	**60**	**48**	**36**	**25**	**19**		
	82	117	153	174	200	230	259	294	332
20	**153**	**151**	**148**	**144**	**138**	**128**	**117**	**104**	**73**
	79	116	151	171	198	228	257	292	329
30	**231**	**228**	**224**	**218**	**210**	**201**	**183**	**168**	**137**
	72	114	148	168	196	226	256	290	327
40	**309**	**307**	**303**	**298**	**292**	**280**	**270**	**252**	**218**
	62	105	143	165	195	223	254	287	323
50	**389**	**386**	**382**	**378**	**370**	**360**	**344**	**328**	**292**
	52	98	136	160	191	220	250	282	319
Max.cont. 60	**467**	**463**	**459**	**456**	**448**	**427**	**410**	**399**	**352**
	41	90	130	156	187	215	242	278	313
70	**545**	**542**	**538**	**534**	**529**	**520**	**508**	**486**	**430**
	32	79	126	148	180	208	234	262	300
Max.int. 75	**586**	**583**	**578**	**570**	**560**	**546**	**532**	**520**	**480**

Max.cont. Max.int.

BMR 160 [157.2cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16	17.5	20
	104	146	190	210	245				
5	**26**	**23**	**20**	**16**	**10**				
	107	150	195	216	250	290	335		
10	**59**	**56**	**50**	**45**	**37**	**30**	**22**		
	102	151	198	220	257	298	342	370	420
20	**121**	**118**	**115**	**113**	**108**	**102**	**97**	**90**	**78**
	97	146	190	217	256	295	340	368	416
30	**184**	**178**	**173**	**170**	**164**	**155**	**143**	**128**	**103**
	89	140	185	210	252	290	335	363	412
40	**246**	**241**	**235**	**228**	**220**	**210**	**194**	**177**	**150**
	72	128	179	202	244	284	327	358	409
50	**310**	**307**	**300**	**295**	**287**	**278**	**262**	**247**	**210**
	60	116	170	198	240	279	321	352	400
Max.cont. 60	**374**	**367**	**359**	**354**	**346**	**338**	**323**	**306**	**265**
	49	107	164	193	233	271	309	344	390
70	**437**	**430**	**421**	**415**	**403**	**393**	**381**	**365**	**318**
	36	98	152	185	226	265	300	334	379
Max.int. 75	**472**	**463**	**450**	**441**	**431**	**420**	**405**	**389**	**365**

Max.cont. Max.int.

BMR 200 [194.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16	17.5	20
	132	181	238	262	310				
5	**24**	**22**	**18**	**13**	**10**				
	135	186	240	264	315	356	403		
10	**49**	**47**	**45**	**43**	**38**	**33**	**24**		
	131	183	238	260	314	358	404	438	498
20	**99**	**97**	**94**	**92**	**88**	**83**	**74**	**64**	**56**
	126	178	233	254	311	355	402	431	486
30	**149**	**147**	**144**	**141**	**135**	**126**	**113**	**105**	**91**
	112	169	228	250	307	352	400	426	477
40	**200**	**197**	**194**	**191**	**185**	**174**	**160**	**151**	**127**
	95	156	221	246	300	350	398	421	470
50	**252**	**249**	**246**	**243**	**238**	**228**	**212**	**194**	**161**
	78	145	213	238	289	342	386	412	459
Max.cont. 60	**304**	**301**	**298**	**294**	**286**	**276**	**262**	**243**	**218**
	67	135	206	228	277	336	375	408	453
70	**355**	**353**	**349**	**340**	**329**	**316**	**300**	**288**	**257**
	58	125	197	220	270	321	360	398	442
Max.int. 75	**382**	**379**	**373**	**362**	**350**	**337**	**322**	**312**	**278**

Max.cont. Max.int.

BMR 250 [253.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16	17.5	20
	175	243	304	342	407				
5	**17**	**16**	**14**	**12**	**10**				
	178	246	310	344	409	465	525		
10	**37**	**35**	**31**	**28**	**23**	**18**	**11**		
	175	244	308	340	408	463	520	558	636
20	**75**	**73**	**72**	**70**	**66**	**58**	**53**	**50**	**42**
	162	235	304	332	400	455	516	550	621
30	**114**	**111**	**108**	**106**	**100**	**92**	**83**	**77**	**65**
	143	223	300	329	396	447	512	546	617
40	**154**	**152**	**150**	**147**	**143**	**132**	**120**	**110**	**90**
	124	208	289	323	384	440	503	535	600
50	**193**	**190**	**187**	**174**	**168**	**160**	**149**	**140**	**116**
	103	192	280	314	371	426	489	514	578
Max.cont. 60	**233**	**230**	**227**	**224**	**218**	**205**	**190**	**181**	**155**
	88	178	264	301	356	418	479	498	560
70	**273**	**270**	**267**	**263**	**252**	**242**	**226**	**209**	**173**
	62	165	256	288	347	412	474	486	542
Max.int. 75	**294**	**291**	**287**	**283**	**274**	**263**	**249**	**236**	**211**

Max.cont. Max.int.

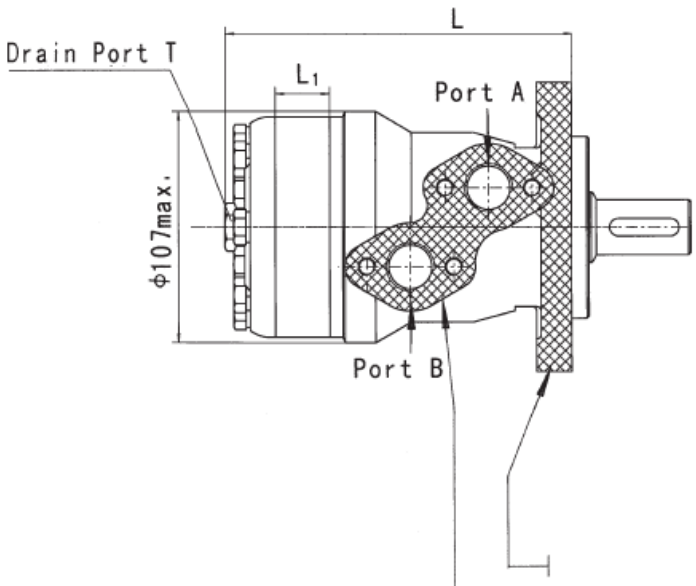
Torque (N•m) 256
Speed (rpm) **287**

cont.
int.

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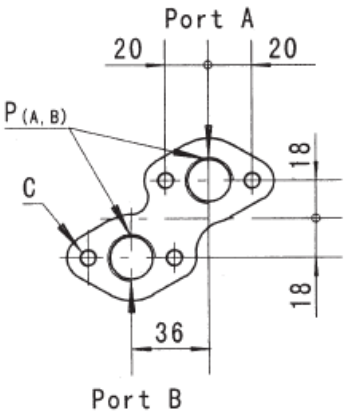
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BMR DIMENSIONS AND MOUNTING DATA

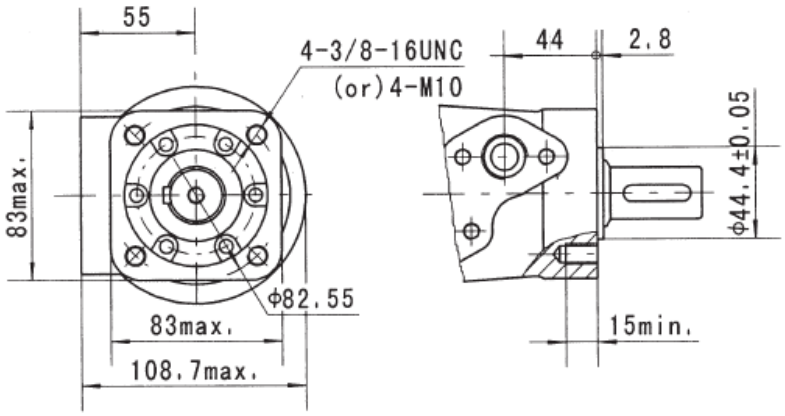


Model	L	L1
BMR36	137	7
BMR50	140	10
BMR80	146	16
BMR100	150	20
BMR125	155	25
BMR160	161.5	30.5
BMR200	170	38.1
BMR250	180	50
BMR315	192	62
BMR375	204	74

PORT

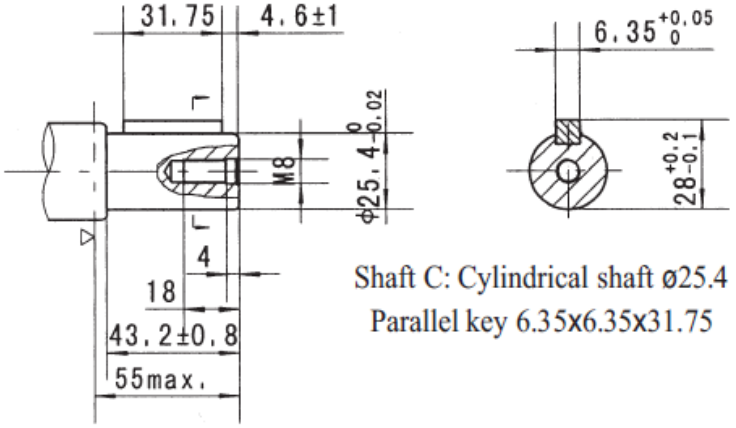


Flange H5



Mounting \ Code	D (depth)
P(A,B)	G1/2 (15)
C	4-M8 (13)
T	G1/4 (12)

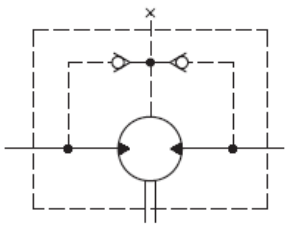
BMR SHAFT EXTENSIONS DIMENSIONS DATA



Shaft C: Cylindrical shaft ø25.4
Parallel key 6.35x6.35x31.75

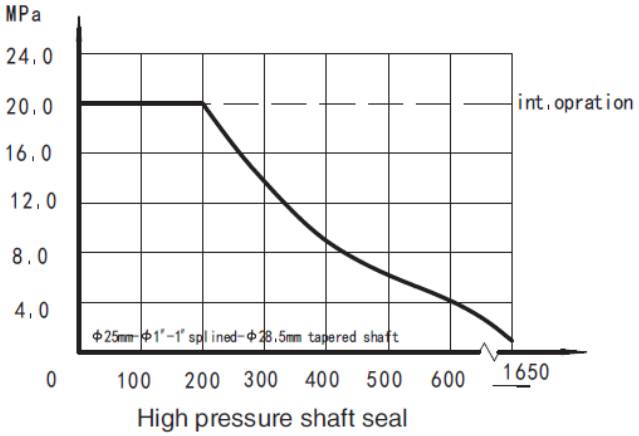
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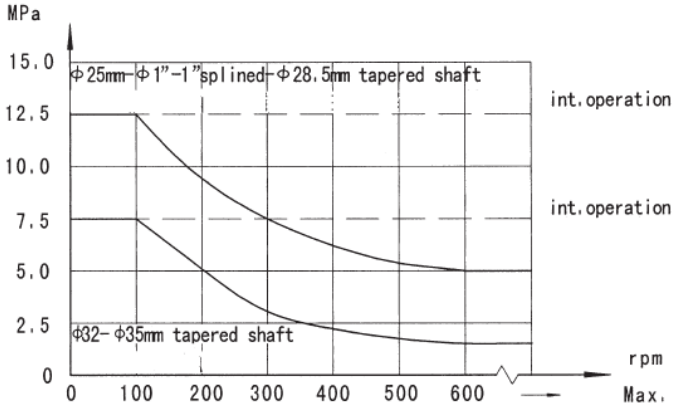


BMR、BMRS Series Hydraulic Motor

Permissible shaft seal pressure



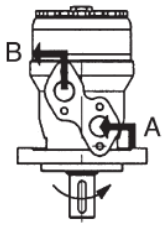
High pressure shaft seal



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.

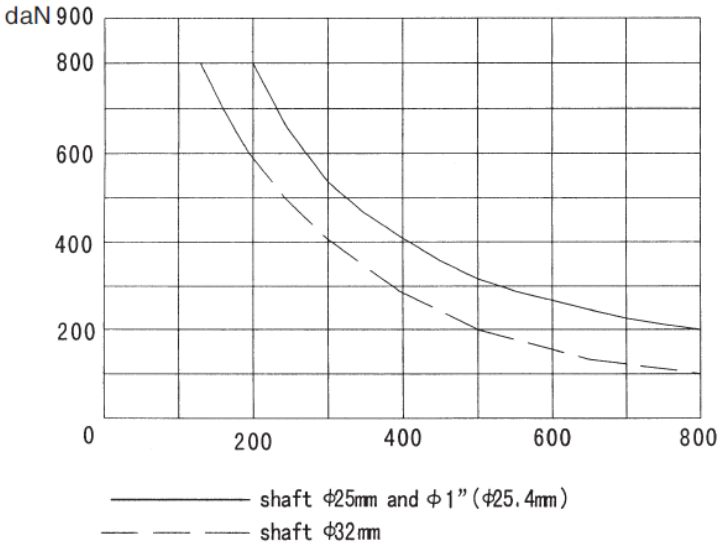
Direction of shaft ration : Standard

When facing shaft end of motor,shaft to rotate:
Clockwise when port "A" is pressurized.
Counter-clockwise port "B" is pressurized.

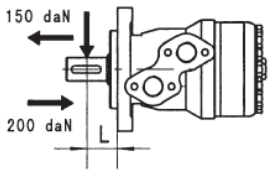


BMR

Status of the shaft's radial force
(Standard motor with journal bearing)



$$F_r = \frac{800}{n} \cdot \frac{25000}{95+L} \text{ daN}$$



F_r =Radial Force (daN)
L =Distance (mm)
n =Speed (rpm)
Rhomb-flange L=30mm
Square-flange L=24mm

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 (mm2/s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

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