

HYDRAULIC MOTOR

D

Hydraulic Motor	D1
BM1	D1



ORDERING CODE

BM1 - * *

Series name Displacement

BM1 series motor is a small volume, spool valve, economical type motor.

Characteristic features:

- **Compact design of spool and gear set, which provide small volume, high power and low weight..**
- **Credible design for shaft seal , which can bear high pressure and be used in parallel or in series.**
- **Direction of shaft rotation and speed can be controlled easily and smoothly.**
- **Best combination of efficiency and economy in medium load applications.**

Displacement (ml/r)		50	63	80	100	125	160	200	250	315	400
Flow (LPM)	Cont.	45	45	60	60	60	60	60	60	60	60
	Int..	50	50	75	75	75	75	75	75	75	75
Speed (RPM)	Cont.	879	720	740	589	475	370	296	237	189	149
	Int..	975	755	827	673	594	463	370	297	236	185
Pressure (MPa)	Cont.	12.5	12.5	12.5	12.5	12.5	12.5	11	11	11	10
	Int..	16.5	16.5	16.5	16.5	16.5	16.5	16.5	14	12.5	10.5
Torque (N*m)	Cont.	81	101	129	161	202	245	286	360	406	435
	Int..	108	134	171	213	268	342	390	456	505	533

Note: 1.Continuous data: The Max. Value of operating motor continuously.

2.Intermittent Data: The Max. Value of operating motor in 6 seconds per minute.

3.A simultaneous max. RPM and max. pressure is not recommended.

4.The Conversion Factors is on the page 4, consult it please

5.Optimum operating situation should be at the 1/3 ~ 2/3 of the continuous operating situation.

□ cont.
■ Int.

Bm1-50 50ml/r

Flow (LPM)	ΔP (Mpa)							
	3	6	7	8	10	11	12.5	16.5
8	18	36	42	50	60	72	79	102
	150	147	144	140	137	127	122	90
15	19	37	43	48	61	73	83	105
	290	285	283	276	275	265	256	230
20	17	37	42	50	62	72	80	107
	388	385	381	375	372	365	352	332
30	15	36	42	50	63	70	81	108
	584	578	570	566	560	555	546	516
35	15	35	42	50	63	68	80	106
	680	675	670	662	654	646	640	610
45	14	34	40	48	62	70	80	107
	878	868	863	856	849	840	830	798
50	13	35	40	48	63	69	79	
	970	960	955	950	942	935	925	

Bm1-63 63ml/r

Flow (LPM)	ΔP (Mpa)							
	3	6	7	8	10	11	12.5	16.5
8	22	46	54	62	76	91	98	126
	125	124	123	121	118	116	113	72
15	22	46	54	60	76	91	104	132
	233	231	229	227	224	222	219	185
20	20	46	54	63	78	90	100	134
	310	309	307	305	301	298	294	263
30	20	45	53	63	79	88	102	135
	465	463	462	460	457	455	451	409
35	19	44	53	63	79	84	100	133
	543	540	539	537	533	531	528	484
45	18	42	50	60	78	88	100	134
	705	702	700	698	695	693	689	633
50	16	44	50	60	79	82	97	
	781	778	776	774	770	768	764	

Bm1-80 80ml/r

Flow (LPM)	ΔP (Mpa)							
	3	6	7	8	10	11	12.5	16.5
8	28	60	70	80	100	110	128	168
	97	93	92	89	84	80	75	50
15	28	61	70	80	100	114	128	170
	184	181	178	174	169	166	160	140
20	27	60	70	80	100	112	129	170
	246	243	240	238	234	230	223	205
30	26	60	69	79	100	110	128	170
	370	366	363	360	354	350	345	323
35	25	58	67	77	100	110	126	170
	432	426	424	420	415	411	405	385
45	23	53	65	77	95	108	124	168
	554	550	546	541	536	530	524	503
50	20	55	65	75	95	105	123	168
	616	608	606	603	599	593	585	560
60	19	53	62	75	95	108	122	168
	741	732	727	722	717	712	707	675
75	16	47	60	70	90	104	121	
	825	820	815	810	808	804	795	

Bm1-100 100ml/r

Flow (LPM)	ΔP (Mpa)							
	3	6	7	8	10	11	12.5	16.5
8	35	74	88	100	126	140	160	210
	78	75	73	70	64	68	56	35
15	35	74	85	100	126	140	160	212
	150	145	144	141	137	133	129	110
20	34	74	88	100	125	145	161	212
	197	195	193	190	189	183	178	160
30	33	71	85	95	123	138	158	212
	295	294	293	290	288	283	279	259
35	29	70	81	95	120	135	155	212
	347	345	344	342	337	335	330	310
45	30	66	80	93	120	133	155	208
	445	443	442	439	435	432	426	405
50	25	66	79	93	118	134	152	207
	498	495	493	491	485	480	476	456
60	22	65	75	93	116	132	152	207
	599	594	589	587	584	577	573	548
75	20	58	75	88	113	129	150	
	674	666	663	660	655	653	648	

Torque 82Nm
Speed 768 rpm

Bm1-125 125ml/r

Flow (LPM)	ΔP (Mpa)							
	3	6	7	8	10	11	12.5	16.5
8	44	94	112	128	158	180	200	263
	60	59	58	56	53	50	45	25
15	44	95	111	127	160	178	205	265
	118	116	115	114	110	108	105	85
20	42	95	108	128	158	175	202	268
	159	157	156	153	150	145	142	129
30	40	92	108	125	156	178	198	265
	236	235	233	230	225	220	218	206
35	38	87	107	122	154	174	195	268
	226	223	223	222	268	265	262	247
45	37	85	102	120	152	173	194	265
	355	352	351	349	345	341	339	322
50	33	85	98	120	149	170	192	260
	395	392	390	388	385	384	380	365
60	32	83	98	117	148	165	191	259
	476	470	468	465	461	459	454	436
75	25	75	95	110	142	160	185	
	594	588	585	582	577	570	565	

Bm1-160 160ml/r

Flow (LPM)	ΔP (Mpa)							
	3	6	7	8	10	11	14	16.5
8	56	120	143	160	200	226	245	334
	47	46	45	44	42	40	38	24
15	56	120	135	160	202	226	245	341
	93	93	92	90	88	86	83	75
20	55	120	143	160	203	226	245	343
	120	118	117	116	115	114	114	104
30	54	118	140	160	200	225	242	340
	185	184	183	181	178	176	175	163
35	53	115	138	157	199	220	242	337
	214	213	212	211	208	207	205	196
45	52	112	135	156	198	220	238	335
	277	275	274	273	270	268	265	256
50	45	110	132	153	195	215	233	330
	308	307	305	303	300	298	296	288
60	44	106	130	150	192	214	230	329
	368	366	365	364	362	360	357	347
75	32	95	120	142	183	205	221	
	462	458	457	456	453	451	448	

□ cont.
■ Int.

Bm1-200 200ml/r ΔP (Mpa)

3	6	7	8	10	11	15
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Flow (LPM)		ΔP (Mpa)					
		3	6	7	8	10	11
8		75	155	178	204	255	283
		38	37	36	35	33	29
15		72	152	180	206	259	265
		74	72	71	70	68	66
20		71	151	178	205	255	285
		99	98	97	95	94	91
30		70	149	175	200	254	285
		148	147	146	145	142	138
35		68	146	172	200	250	280
		173	172	171	168	165	163
45		63	142	170	195	248	278
		220	219	218	216	213	211
50		58	138	166	195	242	273
		245	243	242	241	238	236
60		56	135	165	190	240	270
		295	294	293	292	289	286
75		42	122	150	178	226	
		370	365	364	362	359	

Bm1-250 250ml/r ΔP (Mpa)

3	6	7	8	10	11	14
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Flow (LPM)		ΔP (Mpa)					
		3	6	7	8	10	11
8		94	195	225	259	326	357
		30	29	28	27	25	24
15		90	193	225	260	326	360
		60	59	58	57	55	53
20		89	191	225	258	320	355
		78	78	77	76	74	73
30		84	188	220	250	320	354
		118	117	117	116	114	112
35		82	184	218	252	316	350
		135	134	132	131	127	125
45		79	179	215	246	310	345
		179	178	177	176	174	172
50		74	174	210	243	306	338
		199	196	195	194	192	191
60		70	171	206	239	300	336
		236	235	235	234	230	228
75		55	155	190	221	280	312
		297	295	295	294	292	291

Bm1-315 315ml/r ΔP (Mpa)

3	6	7	8	10	12.5
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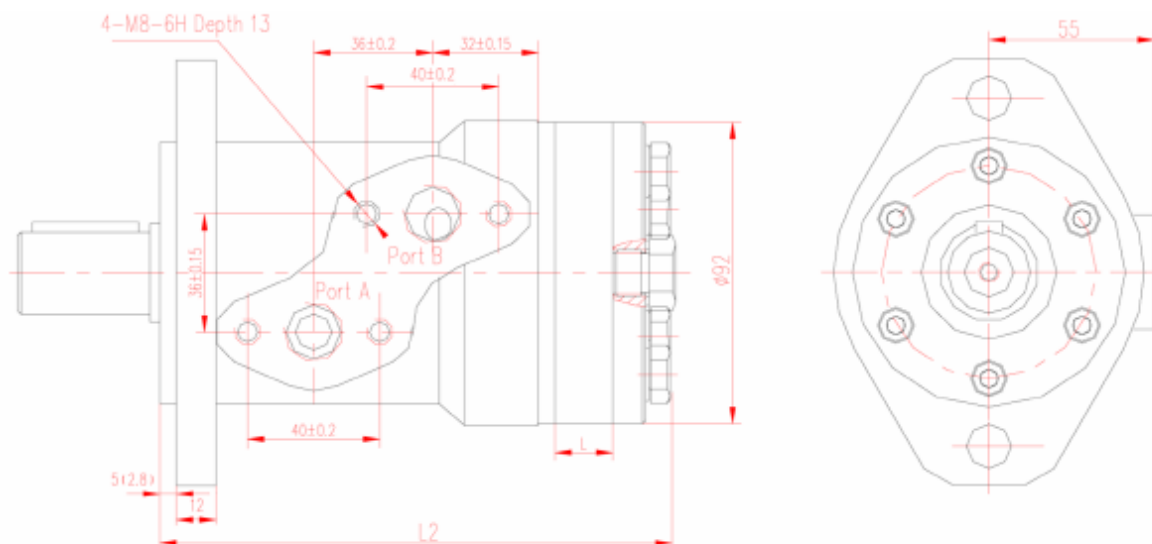
Flow (LPM)		ΔP (Mpa)				
		3	6	7	8	10
8		115	244	282	312	388
		25	24	22	17	13
15		116	243	284	324	406
		46	46	45	43	40
20		114	242	282	325	405
		62	62	61	57	56
30		109	238	276	320	400
		93	93	92	90	88
35		105	232	273	314	398
		109	108	107	105	103
45		100	225	268	310	390
		140	140	138	136	135
50		92	218	262	306	384
		156	155	154	153	150
60		89	215	258	300	378
		188	187	186	184	180
75		69	195	236	278	355
		236	235	233	232	228

Bm1-400 400ml/r ΔP (Mpa)

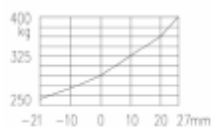
3	6	7	8	8.5	12.5
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Flow (LPM)		ΔP (Mpa)				
		3	6	7	8	8.5
8		147	305	355		
		19	18	17		
15		147	308	359	406	435
		38	37	35	33	32
20		144	305	358	408	435
		49	49	47	45	43
30		137	300	352	400	433
		73	73	72	70	68
35		135	294	345	395	425
		85	85	84	82	81
45		130	286	339	390	420
		110	110	108	106	105
50		117	278	330	382	410
		124	124	122	120	119
60		112	274	326	378	402
		148	148	147	146	145
75		88	246	298	350	376
		185	185	184	182	180

All the datas were tested at 50°C with anti-wear hydraulic oil,
Actual data may vary slightly from unit to unit in production.



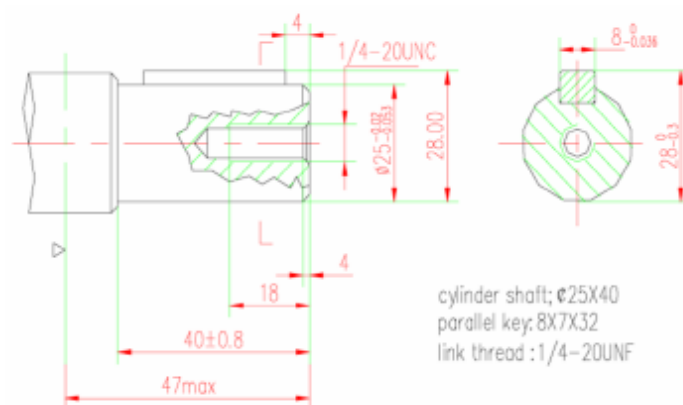
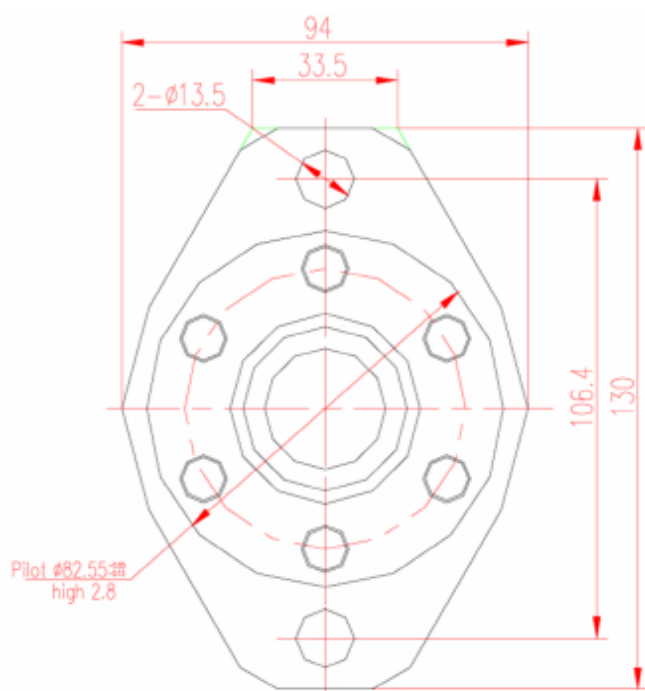
Shaft Load Capacity:
Radial Load: 400Kg Max.
Axis Load: 200Kg Max.



Displacement	50	63	80	100	125	160	200	250	315	400
L	9	11.3	14.5	17.8	23	29	37	46	57	72
L1	14.3	146	147.5	151	156	162	170	179.5	190.5	205
L2	148	151	152.5	156	161	167	175	184.5	195.5	210

Standard Direction of The Motor Rotation:

CW----When A Port pressurized, Viewed From the Shaft End.



cylinder shaft: $\phi 25 \times 40$
parallel key: 8X7X32
link thread: 1/4-20UNF