CATALOG 2023

HC Hydro Custom

MOTORS

LOW SPEED, HIGH TORQUE MOTORS

These hydraulic motors have the advantage to provide high torque at low speed.
They can be used in a wide field of application such as: construction, agricultural, mining, forestry, marine, stationary machine, etc.

BMM is a mini-motor with high speed capabilities. Page 4

BM1 is a small size, spool valve gerolor motor. Page 9

BM2 is a medium size, spool valve gerolor motor, that can bear higher pressure than BM1.
Speed sensor option shown on page 67 Page 17

BM2W is a BM2 motor with wheel motor design. Designed to bear bigger side load. Page 25

BME - BMEW - BMER is our largest size gerolor motor. They are suited for high pressure, high efficiency, low speed applications. BMEW is the wheel motor design. BMER is a wheel motor with extra bearings. Page 29

BM5 - BM5W is a medium size, disc valve, high pressure motor. Radial ball bearings design to bear greater load. BMEW is the wheel motor design. Page 37

BM5S is a BM5 motor without bearing. It is a shorter motor perferct for direct mounting application such as gear box assemblies Page 46

BM6 is a large disc valve, high pressure motor. Radial ball bearings design to bear greater load than BM5. It also has higher torque capabilities than our BM5 motors Page 50

BMT is a large disc valve high pressure motor. Radial ball bearings design which can bear greater load and is shorter than our BM6. Page 57

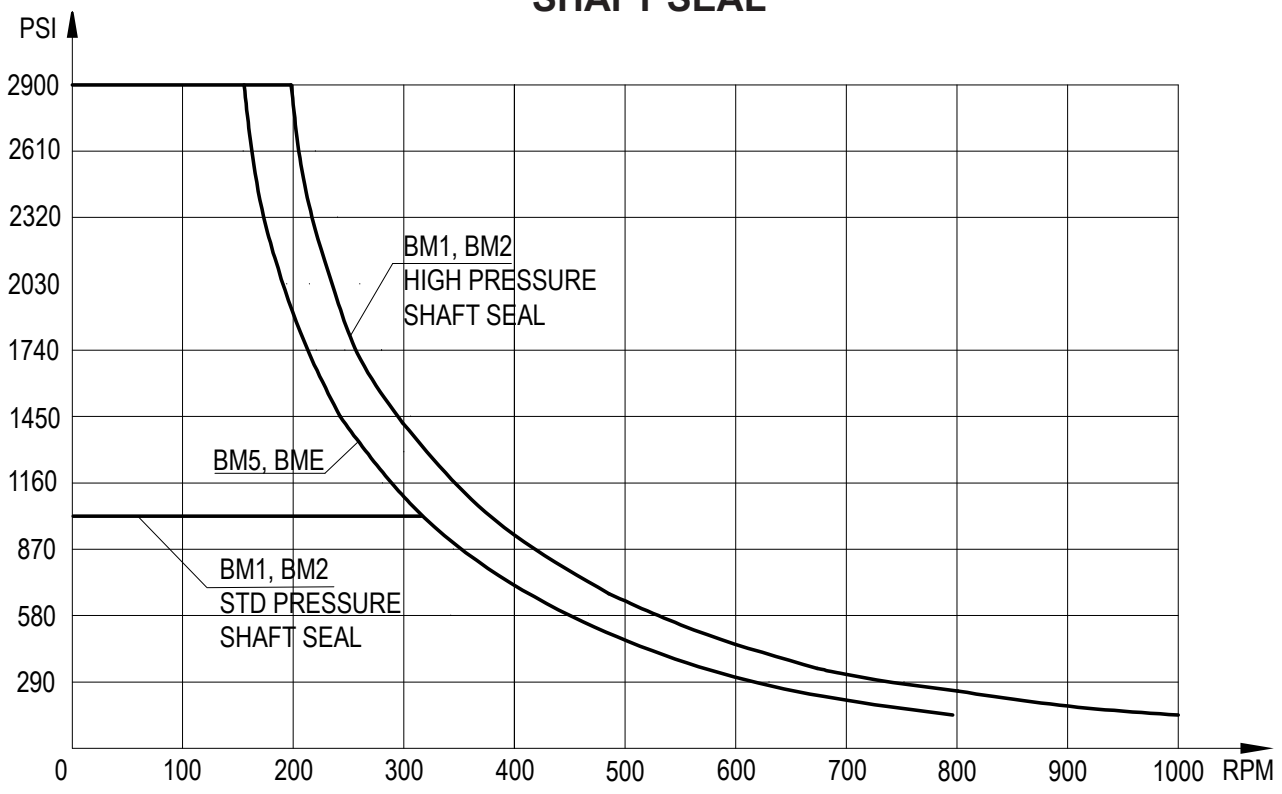
BMV is our largest disc valve, high pressure motor. Radial ball bearings design and efficient performance which can bear greater load than BMT. Page 62

Cross-Over Relief Valves helps to protect the motor against pressure peaks Page 68

In order to make the hydraulic motor work in optimal situations, we recommend the following:

1. A simultaneous max speed and max pressure is not recommended.
   Please always refers to the performance charts.
2. The motors can be used in parallel or series. Installation of a drain line will be necessary when back pressure exceed shaft seal maximum pressure.
3. A return filter should be installed in the system with a rating of 10 - 30 microns.
   The ISO level of the oil is to be no more than 19/16.
4. The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.
5. Make sure the motor is always filled with oil before operating.
6. To assure best motor life, we recommend to run the motor at first for 30 minutes under 30% of rated pressure.
7. Maximum operating temperature: 180°F / 80°C
8. Recommended fluid: Anti-wear type hydraulic oil of not less than 70 SUS at operating pressure.

MAXIMUM PRESSURE SHAFT SEAL



The BMM series motor is a mini-motor with high speed capabilities, very compact design and economical

CHARACTERISTIC FEATURES

- Compact design of spool and gear set, which provide mini volume, high power density 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.

Main Specifications

Displacement per revolution	cm3 (cc)	8.2	12.9	19.9	31.6	39.8	50.3
	in3	0.50	0.79	1.22	1.93	2.44	3.00
Flow (GPM)	Cont.	4.2	5.2	5.2	5.2	5.2	5.2
	Int.	5.2	6.6	6.6	6.6	6.6	6.6
Speed (RPM)	Cont.	1950	1550	1000	630	500	400
	Int.	2450	1940	1250	800	630	500
Pressure (PSI)	Cont.	1450	1450	1450	1450	1305	1015
	Int.	2030	2030	2030	2030	2030	2030
Torque (in-lbs)	Cont.	97	141	221	354	398	407
	Int.	132	203	309	504	619	778

Notes
1. **Continuous: Motor can run continuously at these ratings.**
2. **Intermittent: Intermittent operation, 10% of every minute.**
3. **A simultaneous maximum rpm and pressure is not recommended.**
4. **The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.**
5. **Shaft seal maximum pressure of 1085 PSI**

BMM-8

ΔP (PSI)

Flow (GPM)	510	725	1015	1450	1740	2030
0.5	27 216	44 206	71 195	88 148	106 105	124 55
1	27 449	44 446	62 438	97 403	115 370	133 313
2	27 902	44 895	62 876	97 836	115 809	133 772
3	18 1366	44 1349	62 1327	88 1287	115 1253	133 1219
4	-	35 1930	62 1918	88 1878	106 1850	124 1797
5	-	27 2301	53 2266	88 2224	97 2203	124 2158

Torque 97 in-lbs
Speed 2203 rpm

BMM-12

ΔP (PSI)

Flow (GPM)	510	725	1015	1450	1740	2030
0.5	53 132	71 129	97 113	141 64	168 33	-
1	53 280	71 273	106 259	150 217	168 189	203 137
2	44 572	71 564	106 552	150 514	177 486	212 444
3	44 863	71 856	97 874	141 813	177 789	212 742
4	44 1163	62 1155	97 1147	141 1112	168 1088	203 1046
5	27 1459	62 1450	88 1439	133 1419	168 1402	194 1360
7	18 1807	53 1789	80 1777	124 1749	159 1730	194 1692

BMM-20

ΔP (PSI)

Flow (GPM)	250	510	725	1015	1450	1740	2030
0.5	27 94	80 91	124 84	168 70	230 45	265 20	-
1	35 186	80 181	124 172	168 168	230 127	274 106	318 70
2	35 377	80 374	115 370	168 357	239 322	274 302	318 273
3	27 564	71 562	106 556	159 548	230 516	274 495	327 467
4	27 752	71 748	106 745	150 735	221 701	265 690	318 666
5	9 944	53 942	97 938	168 932	212 910	256 867	309 837
7	-	35 1322	80 1319	124 1316	203 1260	248 1251	292 1246

BMM-32

ΔP (PSI)

Flow (GPM)	290	510	725	1015	1450	1740
0.5	62 58	133 54	186 49	248 44	354 15	-
1	62 119	133 114	186 108	256 100	362 78	424 63
2	62 237	133 231	186 227	256 219	362 196	433 184
3	53 358	115 354	177 349	248 343	354 320	424 305
4	35 480	106 476	159 472	239 466	345 445	415 433
5	27 599	88 596	150 593	221 586	327 569	407 554
7	9 838	71 836	133 834	203 830	309 812	248 1251

BMM-40

ΔP (PSI)

Flow (GPM)	250	510	725	1015	1450	1740
0.5	141 43	239 38	318 32	424 26	451 16	-
1	141 91	239 88	327 80	389 75	460 62	548 49
2	141 186	239 185	327 172	389 167	460 157	548 146
3	124 277	221 272	309 267	380 262	451 254	548 243
4	124 374	221 368	309 363	380 358	451 350	548 341
5	88 470	186 466	274 461	345 454	424 447	522 438
7	88 659	186 654	274 649	345 643	424 636	522 626

BMM-50

ΔP (PSI)

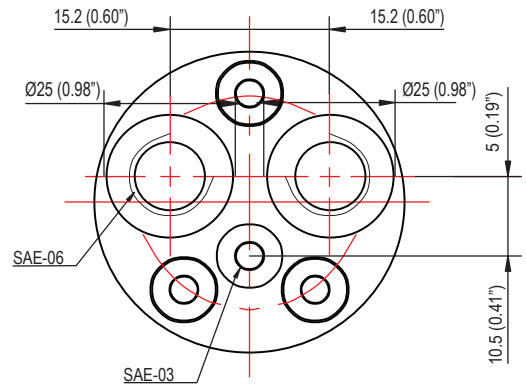
Flow (GPM)	220	435	725	1015	1450
0.5	97 35	203 31	318 26	442 21	-
1	97 72	194 69	318 64	442 60	619 52
2	97 149	194 146	318 141	442 137	619 130
3	97 224	177 221	292 219	433 214	628 206
4	97 299	177 298	292 297	433 291	628 285
5	71 374	124 374	256 372	389 369	566 361
7	71 528	124 526	256 524	389 519	566 513

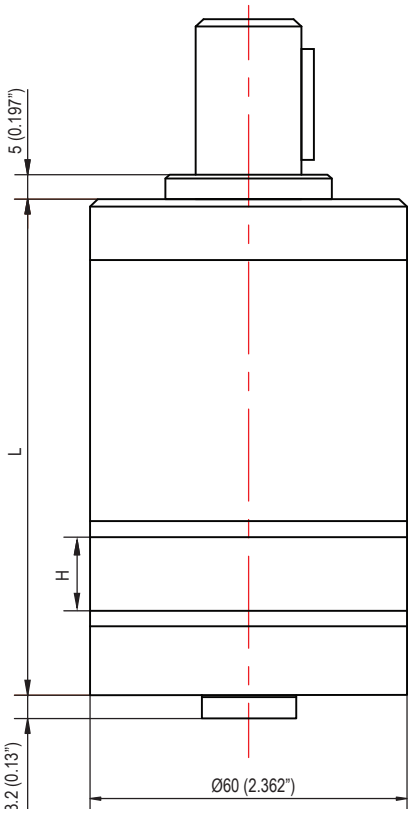
CONT.	INT.

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

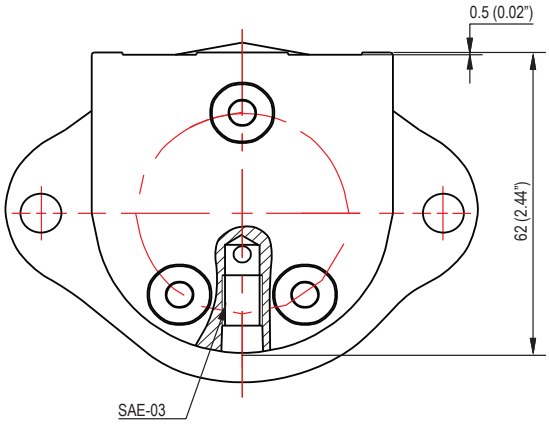
CONFIGURATION

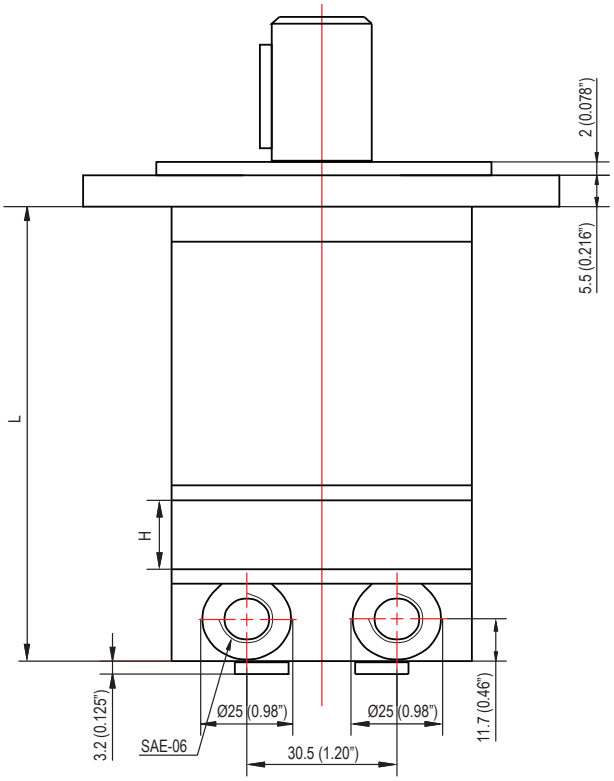
A - REAR PORTS
MOUNTING FLANGE B SHOWN





B - SIDE PORTS
MOUNTING FLANGE C SHOWN

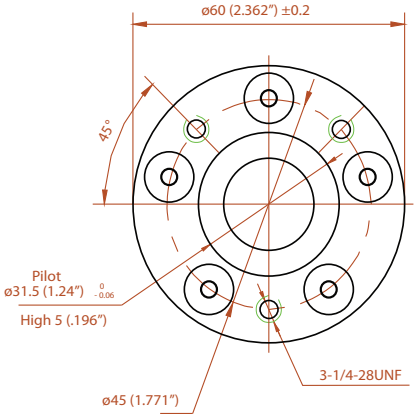




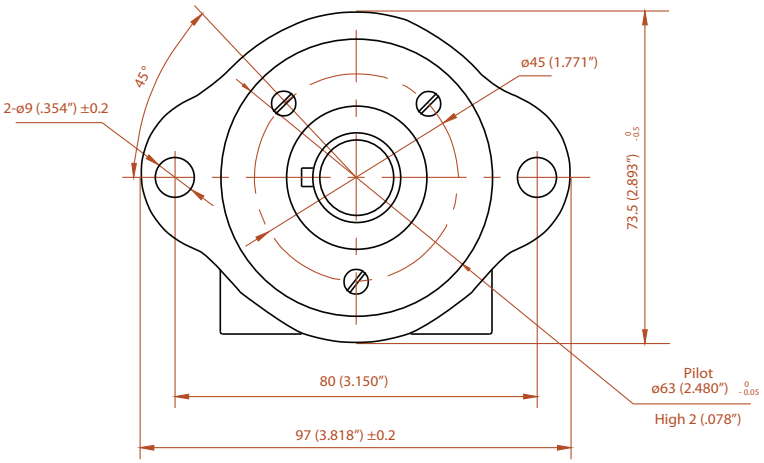
MODEL	L	H
BMM-8	107.8 (4.24")	5.8 (0.23")
BMM-12	111 (4.37")	9 (0.35")
BMM-20	116.5 (4.59")	14.5 (0.57")
BMM-32	121 (4.76")	23 (0.90")
BMM-40	131 (5.16")	29 (1.14")
BMM-50	139 (5.47")	37 (1.46")

MOUNTING FLANGE

FLANGE B

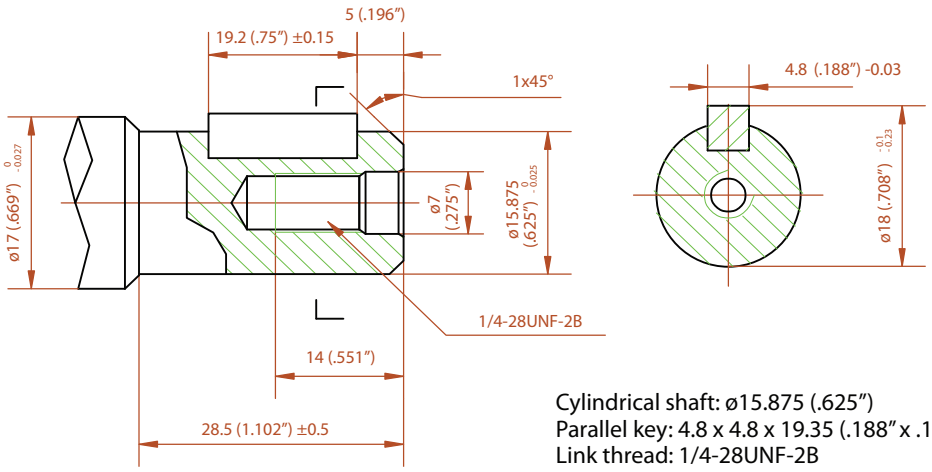


FLANGE C



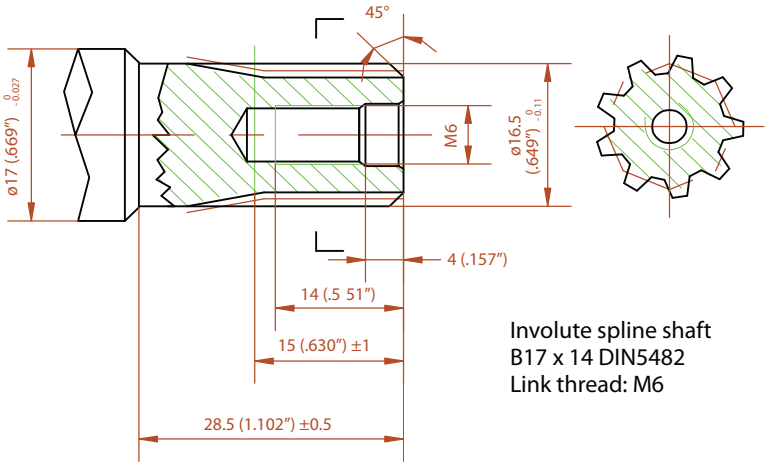
OUTPUT SHAFT

SHAFT B



Cylindrical shaft: ø15.875 (.625")
Parallel key: 4.8 x 4.8 x 19.35 (.188" x .188" x .761")
Link thread: 1/4-28UNF-2B

SHAFT C



Involute spline shaft
B17 x 14 DIN5482
Link thread: M6

Choose an option for each category

BMM [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

A - Rear ports **B** - Side ports

DISPLACEMENT (CC)

A - 8 **B** - 12.5 **C** - 16 **D** - 20

E - 32 **F** - 40 **G** - 50

MOUNTING FLANGE

B - Round, ø1.240” pilot, 3x 1/4-28UNF bolts, ø1.771” bolt circle

C - Rhombus, ø2.480” pilot, ø0.35” holes(2), 3.150” bolt center

OUTPUT SHAFT

B - Straight ø5/8”, Parallel key, 1/4-28UNF link thread

C - Spline, ø17mm, 9 tooth, 17x14 DIN5482, Link thread: M6

PORTS

B - SAE-06

DRAIN PORT

A - None **C** - SAE-03

SPECIAL

A - None

Order example: BMMACBBBAA

Other configuration and/or mounting types are available upon request.

The BM1 series motor is a small volume, spool valve gerolor gearset, 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.

Main Specifications

Displacement per revolution	cm3 (cc)	50	63	80	100	125	160	200	250	315	400
	in3	3.0	3.8	4.8	6.1	7.6	9.7	12.2	15.2	19.2	24.4
Flow (GPM)	Cont.	15	15	15	15	15	15	15	15	15	15
	Int.	20	20	20	20	20	20	20	20	20	20
Speed (RPM)	Cont.	1100	820	750	550	450	360	280	220	189	140
	Int.	1350	980	900	673	560	430	350	270	236	180
Pressure (PSI)	Cont.	2030	2030	2030	2030	2030	2030	2030	1595	1305	1015
	Int.	2537	2537	2537	2537	2537	2537	2537	2030	2030	1522
	Peak	3262	3262	3262	3262	3262	3262	3262	2610	2320	2030
Torque (in-lbs)	Cont.	734	919	1140	1423	1812	2166	2519	3182	3589	3845
	Int.	955	1193	1503	1874	2343	3014	3448	4022	4464	4694
	Peak	1014	1374	1630	1990	2681	3441	3967	4113	4885	4922

Notes
1. **Continuous: Motor can run continuously at these ratings.**
2. **Intermittent: Intermittent operation, 10% of every minute.**
3. **A simultaneous maximum rpm and pressure is not recommended.**
4. **The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.**
5. **Shaft seal maximum pressure of 1085 PSI. Higher pressure shaft seal available on request.**

BM1-50

ΔP (PSI)

Flow (GPM)	435	870	1015	1160	1450	1595	1810	2390
2	159	318	371	422	530	636	698	902
	142	139	136	132	130	120	115	85
4	168	327	380	424	539	645	734	928
	293	288	286	279	278	267	258	232
6	150	327	371	442	548	636	707	946
	441	437	433	426	422	414	400	377
8	133	318	371	442	557	619	716	955
	589	583	575	571	565	560	551	521
10	133	309	371	442	557	601	707	937
	735	730	725	716	707	699	692	660
12	124	301	354	424	548	619	707	964
	886	876	871	864	857	848	838	805
13	115	309	354	424	557	610	698	-
	955	945	940	935	927	920	910	

Torque 698 In-lbs
Speed 910 rpm

BM1-63

ΔP (PSI)

Flow (GPM)	435	870	1015	1160	1450	1595	1810	2390
2	194	407	477	548	672	804	866	1114
	118	117	116	114	112	110	107	68
4	194	407	477	530	672	804	919	1167
	235	233	231	229	226	224	221	187
6	177	407	477	557	690	796	884	1185
	352	351	349	346	342	338	334	299
8	177	398	469	557	698	778	902	1193
	469	467	466	464	461	459	455	413
10	168	389	469	557	698	743	884	1176
	587	584	583	581	576	574	571	523
12	159	371	442	530	690	778	884	1185
	712	709	707	705	701	699	695	639
13	141	389	442	530	698	725	857	-
	769	766	764	762	758	756	752	

BM1-80

ΔP (PSI)

Flow (GPM)	435	870	1015	1160	1450	1595	1810	2390
2	248	530	619	707	884	972	1132	1485
	92	88	87	84	79	76	71	47
4	248	539	619	707	884	1008	1132	1503
	186	183	180	176	171	168	161	141
6	239	530	619	707	884	990	1140	1503
	279	276	273	270	266	261	253	233
8	230	530	610	698	884	972	1132	1503
	373	369	366	363	357	353	348	326
10	221	513	592	681	884	972	1114	1503
	467	461	459	454	449	444	438	416
12	203	469	575	681	840	955	1096	1485
	559	555	551	546	541	535	529	508
14	177	486	575	663	840	928	1087	1485
	653	644	642	639	635	628	620	593
16	168	469	548	663	840	955	1078	1485
	748	739	734	729	724	719	714	681
20	141	415	530	619	796	919	1070	-
	833	828	823	818	816	812	802	

BM1-100

ΔP (PSI)

Flow (GPM)	435	870	1015	1160	1450	1595	1810	2390
2	309	654	778	884	1114	1238	1414	1856
	74	71	69	66	61	64	53	33
4	309	654	751	884	1114	1238	1414	1874
	151	146	145	142	138	134	130	111
6	301	654	778	884	1105	1282	1423	1874
	224	221	219	216	215	208	202	182
8	292	628	751	840	1087	1220	1397	1874
	298	297	296	293	291	286	282	261
10	256	619	716	840	1061	1193	1370	1874
	375	373	372	370	364	362	357	335
12	265	583	707	822	1061	1176	1370	1839
	449	447	446	443	439	436	430	409
14	221	583	698	822	1043	185	1344	1830
	528	525	522	520	514	509	504	483
16	194	575	663	822	1025	1167	1344	1830
	605	600	594	592	589	582	578	553
20	177	513	663	778	999	1140	1326	-
	680	672	669	666	661	659	654	

CONT.	INT.

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

BM1-125

ΔP (PSI)

Flow (GPM)	435	870	1015	1160	1450	1595	1810	2390
2	389 57	831 56	990 55	1132 53	1397 50	1591 47	1768 43	2325 24
4	389 119	840 117	981 116	1123 115	1414 111	1574 109	1812 106	2343 86
6	389 181	840 178	981 177	1123 174	1414 170	1574 165	1812 161	2343 146
8	354 238	813 237	955 235	1105 232	1379 227	1574 222	1750 220	2343 208
10	354 244	813 295	955 295	1105 294	1379 290	1574 284	1750 283	2343 267
12	327 358	751 355	902 354	1061 352	1344 348	1529 344	1715 342	2343 325
14	327 419	751 415	902 413	1061 411	1344 408	1529 407	1715 403	2343 387
16	283 480	734 474	866 472	1034 469	1308 465	1459 463	1688 458	2290 440
20	221 600	663 593	840 590	972 587	1255 582	1414 575	1635 570	-

Torque 1635 In-lbs
Speed 570 rpm

BM1-160

ΔP (PSI)

Flow (GPM)	435	870	1015	1160	1450	1595	2030	2390
2	495 44	1061 44	1264 43	1414 42	1768 40	1998 38	2166 36	2953 23
4	495 94	1061 94	1193 93	1414 91	1786 89	1998 87	2166 84	3014 76
6	495 136	1061 134	1193 133	1414 132	1786 131	1998 129	2166 129	3014 118
8	477 187	1043 186	1238 185	1414 183	1768 180	1989 178	2139 177	3006 165
10	477 231	1043 230	1238 229	1414 228	1768 225	1989 224	2139 222	3006 212
12	460 280	990 278	1193 277	1379 276	1750 273	1945 271	2104 267	2961 258
14	460 326	990 325	1193 323	1379 321	1750 318	1945 316	2104 314	2961 305
16	389 371	397 369	1149 368	1326 367	1697 365	1892 363	2033 360	2908 350
20	283 466	840 462	1061 461	1255 460	1618 457	1812 455	1954 452	-

BM1-200

ΔP (PSI)

Flow (GPM)	435	870	1015	1160	1450	1595	2175
2	633 36	1370 35	1574 34	1803 33	2254 31	2502 27	3403 11
4	636 75	1344 73	1591 72	1821 71	2290 69	2343 67	3448 58
6	628 112	1335 111	1574 110	1812 108	2254 107	2519 103	3448 92
8	619 149	1291 148	1520 147	1768 146	2210 143	2475 139	3430 127
10	601 187	1291 186	1520 185	1768 182	2210 178	2475 176	3386 167
12	557 222	1255 221	1503 220	1724 218	2192 215	2458 213	3377 202
14	513 260	1220 258	1467 256	1724 255	2139 252	2413 250	3342 238
16	495 298	1193 297	1459 296	1680 295	2122 292	2387 289	3315 279
20	371 373	1078 368	1326 367	1574 365	1998 362	-	-

BM1-250

ΔP (PSI)

Flow (GPM)	435	870	1015	1160	1450	1595	2030
2	831 28	1724 27	1989 26	2290 26	2882 24	3156 23	-
4	796 61	1706 60	1989 59	2298 58	2882 56	3182 53	4022 48
6	787 89	1688 89	1989 87	2281 86	2829 84	3138 83	4022 74
8	743 119	1662 118	1945 118	2210 117	2829 115	3129 113	3996 104
10	725 145	1627 145	1927 143	2228 142	2793 137	3094 135	3960 130
12	698 211	1582 208	1901 207	2175 206	2740 203	3050 202	3907 195
14	654 211	1538 208	1856 207	2148 206	2705 203	2988 202	3872 195
16	619 238	1512 237	1821 237	2113 236	2652 232	2970 230	3819 224
20	486 300	1370 298	1680 298	1954 297	2475 295	2758 294	-

CONT. | **INT.**

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

BM1-315

Flow (GPM) \ ΔP (PSI)	435	870	1015	1160	1450	1810
2	1017 24	2157 23	2493 21	2758 16	3430 12	-
4	1025 46	2148 46	2511 45	2864 43	3589 40	4447 20
6	1008 70	2139 70	2493 69	2873 65	3580 65	4464 50
8	964 94	2104 94	2440 93	2829 91	3536 89	4420 77
10	928 118	2051 117	2413 116	2776 114	3518 111	4402 101
12	884 141	1989 141	2369 139	2740 137	3448 136	4332 126
14	813 165	1927 164	2316 163	2705 162	3395 159	4296 148
16	787 190	1901 189	2281 188	2652 186	3342 182	4226 172
20	610 238	1724 237	2086 235	2458 234	3138 230	-

BM1-400

Flow (GPM) \ ΔP (PSI)	435	870	1015	1160	1450	1810
2	1299 18	2696 17	3138 16	-	-	-
4	1299 38	2723 37	3174 35	3589 33	3845 32	4694 26
6	1273 56	2696 56	3165 53	3607 51	3845 49	4508 42
8	1211 74	2652 74	3112 73	3536 71	3828 69	4668 64
10	1193 92	2599 92	3050 91	3492 89	3757 88	4641 79
12	1149 111	2528 111	2997 109	3448 107	3713 106	4553 101
14	1034 131	2458 131	2917 129	3377 127	3624 126	4447 120
16	990 149	2422 149	2882 148	3342 147	3554 146	4420 139
20	778 187	2175 187	2634 186	3094 184	3324 182	-

Part Numbers Quick Reference

Type S - 1” Woodruff Key Shaft

DISPLACEMENT PER REVOLUTION	cc	50	80	100	125	160	200	250	315	400
	in3	3.05	4.9	6.1	7.6	9.7	12.2	15.2	19.2	24.4
2 BOLT FLANGE	SAE-10	313-0400	313-0402	313-0403	313-0409	313-0404	313-0405	313-0406	313-0408	313-0407
	1/2 NPT	313-0390	313-0392	313-0393	313-0399	313-0394	313-0395	313-0396	313-0398	313-0397
4 BOLT FLANGE	SAE-10	313-0500	313-0502	313-0503	313-0509	313-0504	313-0505	313-0506	313-0508	313-0507
	1/2 NPT	313-0420	313-0422	313-0423	313-0429	313-0424	313-0425	313-0426	313-0428	313-0427
4 BOLT FLANGE C/W SIDE LOAD BEARING	SAE-10	317-0500	317-0502	317-0503	317-0509	317-0504	317-0505	317-0506	317-0508	317-0507

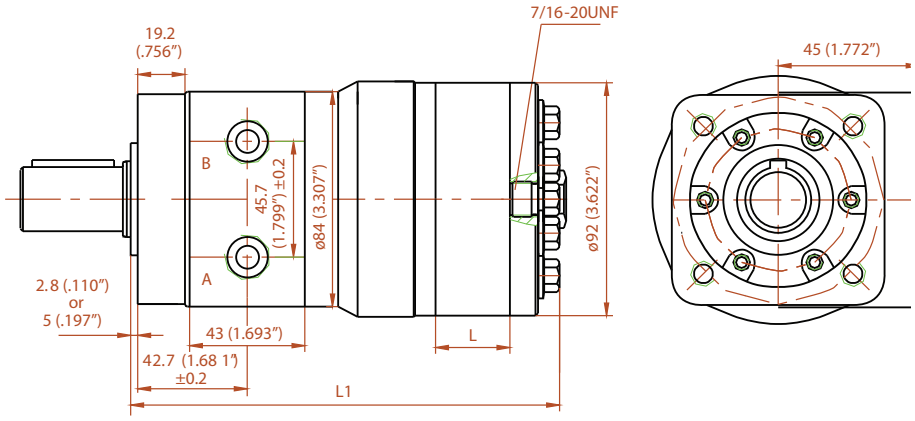
Part Numbers Interchanges

Type S - 1” Woodruff Key Shaft, 1/2 NPT

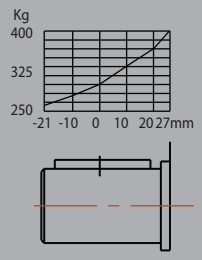
DISPLACEMENT PER REVOLUTION	cc	50	80	100	125	160	200	250	315	400
	in3	3.05	4.9	6.1	7.6	9.7	12.2	15.2	19.2	24.4
HYDRO CUSTOM	2 BOLT	313-0309	313-0392	313-0393	313-0399	313-0394	313-0395	313-0396	313-0398	313-0397
	4 BOLT	313-0420	313-0422	313-0423	313-0429	313-0424	313-0425	313-0426	313-0428	313-0427
CHAR-LYNN H/101 SERIE	2 BOLT	101-1025	101-1026	101-1027	101-1706	101-1028	101-1029	101-1030	101-1031	101-1032
	4 BOLT	101-1001	101-1002	101-1003	-	101-1004	101-1005	101-1006	101-1007	101-1008
DANFOSS DH SERIE	2 BOLT	151-2081	151-2082	151-2083	151-2084	151-2085	151-2086	151-2087	151-2088	151-2089
	4 BOLT	151-2121	151-2122	151-2123	151-2124	151-2125	151-2126	151-2127	151-2128	151-2129

CONFIGURATION

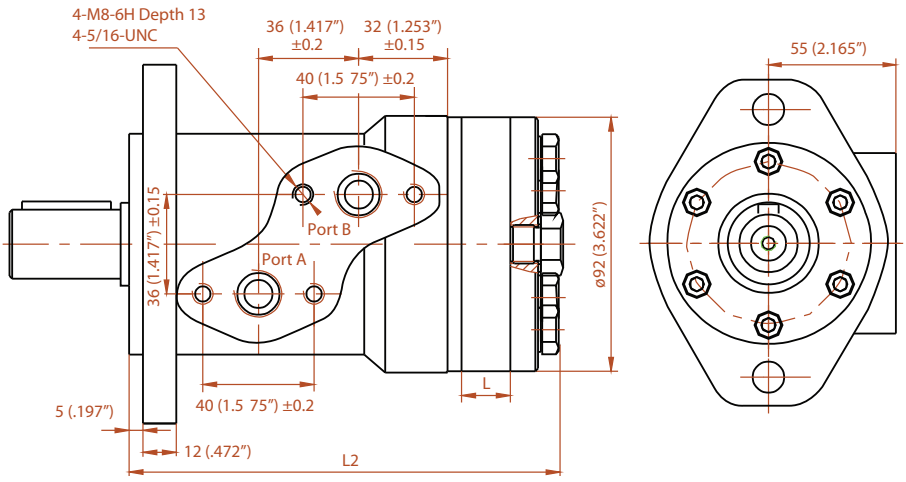
H TYPE



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



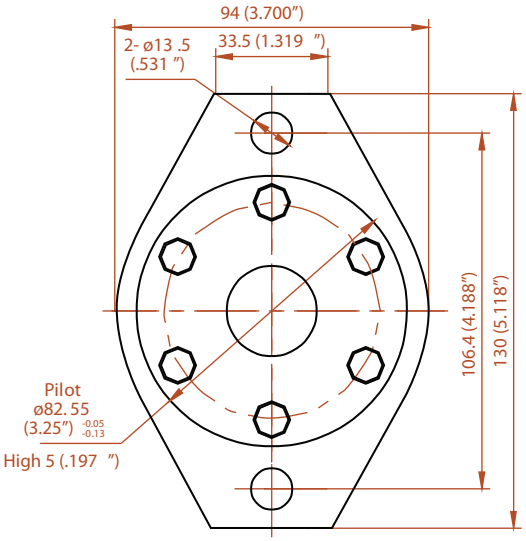
S TYPE



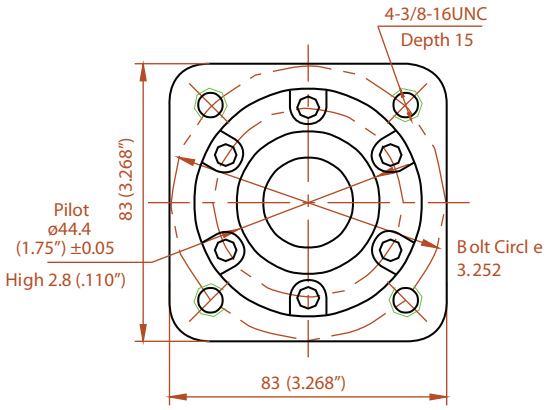
Displacement	50		63		80		100		125		160		200		250		315		400	
L	9	0.354	11.3	0.445	14.5	0.571	17.8	0.701	23	0.906	29	1.142	37	1.457	46	1.811	57	2.244	72	2.835
L1	143	5.630	146	5.748	147.5	5.807	151	5.945	156	6.142	162	6.378	170	6.693	179.5	7.067	190.5	7.500	205	8.071
L2	148	5.827	151	5.945	152.5	6.004	156	6.142	161	6.339	167	6.575	175	6.890	184.5	7.264	195.5	7.697	210	8.268

MOUNTING FLANGE

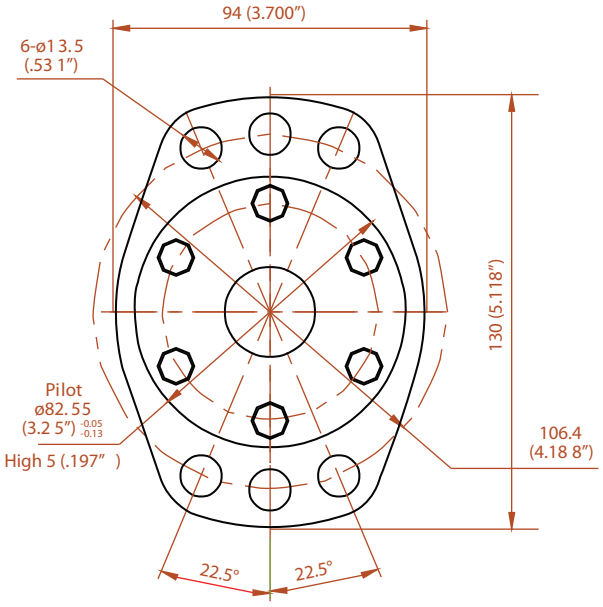
FLANGE A



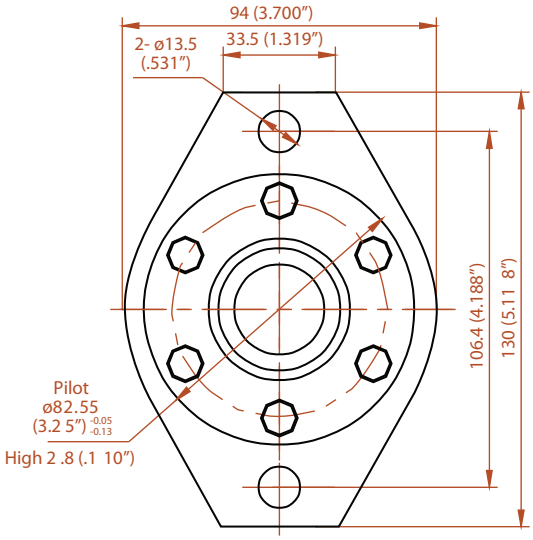
FLANGE B



FLANGE C



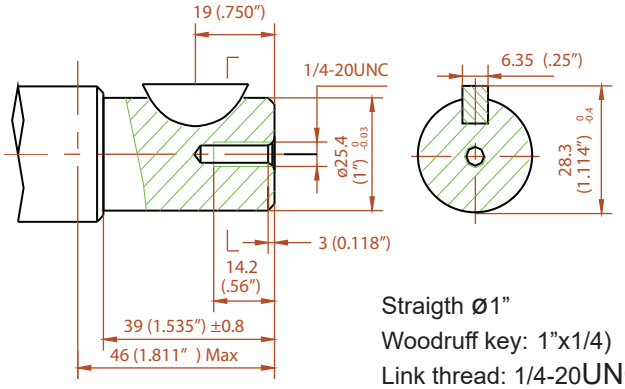
FLANGE H



Same as A flange, good for installing with gearbox, pilot is thinner

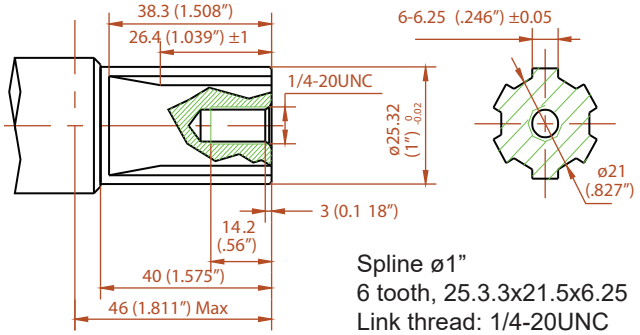
OUTPUT SHAFT

SHAFT A



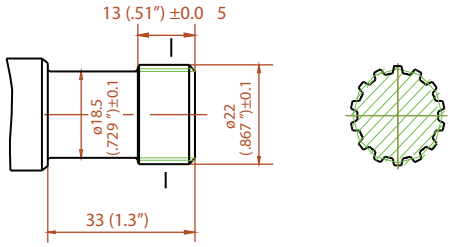
Straigth Ø1”
Woodruff key: 1”x1/4)
Link thread: 1/4-20UNC

SHAFT C



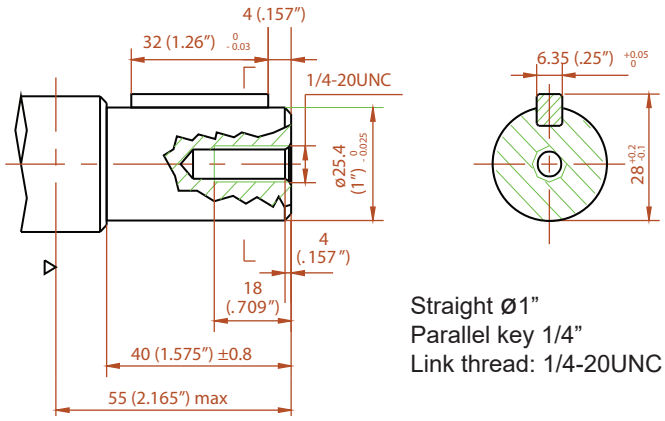
Spline ø1”
6 tooth, 25.3.3x21.5x6.25
Link thread: 1/4-20UNC

SHAFT D



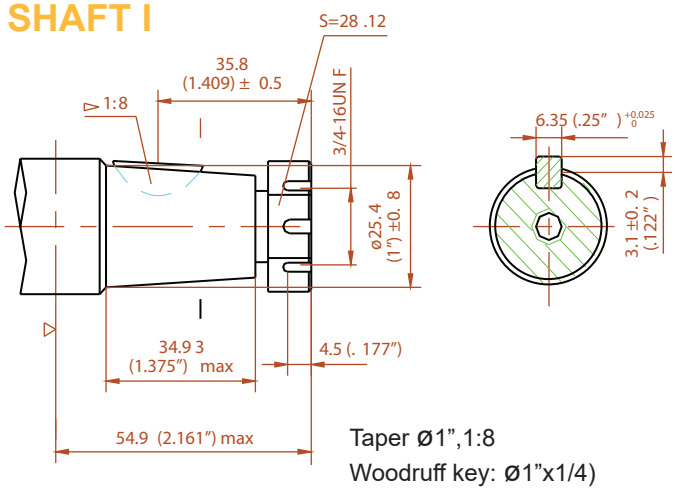
Spline ø7/8”
13 teeth, DP12/24

SHAFT E



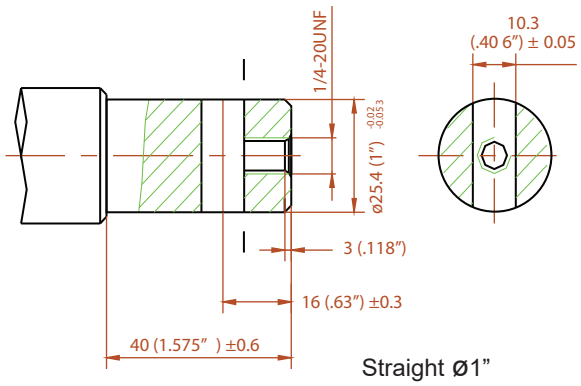
Straight Ø1”
Parallel key 1/4”
Link thread: 1/4-20UNC

SHAFT I



Taper Ø1”,1:8
Woodruff key: Ø1”x1/4)

SHAFT J



Straight Ø1”
Pin hole: Ø0.406”

Choose an option for each category

BM1 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

H - Parallel Ports **S** - Staggered ports

DISPLACEMENT (CC)

A - 50 **B** - 63 **C** - 80 **D** - 100 **E** - 125
F - 160 **G** - 200 **H** - 250 **I** - 315 **J** - 400

MOUNTING FLANGE

A - Rhombus, SAE-A 2 bolt (ø3.25" pilot) x 0.197", ø0.531" holes (2), 4.188" bolt center
B - Square, SAE-AA 4 bolt (ø1.748" pilot), 4 x 3/8-16UNC, ø3.25" bolt circle
C - Rhombus, SAE-A 6 bolt (ø3.25" pilot), ø0.531" holes (6), ø4.188" bolt circle
H - Rhombus, SAE-A 2 bolt (ø3.25" pilot) x 0.110", ø0.531" holes (2), 4.188" bolt center

OUTPUT SHAFT

A - Straight ø1", Woodruff key, 1/4-20 UNC link thread
C - Spline ø1", 6 tooth, 1/4-20UNC link thread
D - Spline ø7/8", 13 tooth
E - Straight ø1", Parallel key, 1/4-20 UNC link thread
I - Taper ø1", 1:8, Woodruff key, 3/4-16UNF link thread
J - Straight ø1", ø0.406" Pin hole

PORTS

C - SAE-10 **D** - 1/2 NPT

LINK THREAD ON PORT SURFACE

A - None **C** - 5/16-18UNC

DRAIN PORT

A - None **D** - SAE-04

SPECIAL

A - Standard **B** - Radial bearing Add **HPSS** - High pressure shaft seal (2900 PSI)

Order example: BM1HACCDCCB

Other configuration and/or mounting types are available upon request.

The BM2 series motor is a medium, spool valve type motor, that can bear higher pressure than BM1.

CHARACTERISTIC FEATURES

- It adopts the gerolor design. Has higher efficiency than our BM1 series.
- Credible design for shaft seal , which can bear high pressure and be used in parallel or in series application.
- Direction of shaft speed can be controlled easily and smoothly.
- Best efficacy and economy in medium load applications.

Main Specifications

Displacement per revolution	cm3 (cc)	50	63	80	100	125	160	200	250	315	400	500
	in3	3.0	3.8	4.8	6.1	7.6	9.7	12.2	15.2	19.2	24.4	30.4
Flow (GPM)	Cont.	10.5	10.5	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
	Int.	13.2	13.2	20	20	20	20	20	20	20	20	20
Speed (RPM)	Cont.	755	630	750	600	475	375	300	240	190	160	110
	Int.	970	790	940	750	600	470	375	300	240	200	128
Pressure (PSI)	Cont.	2030	2030	2030	2030	2030	2390	1558	1595	1235	1235	1160
	Int.	2537	2537	2900	2900	2900	2900	2900	2900	1667	1667	1305
Torque (in-lbs)	Cont.	884	1105	1414	1759	2210	2829	2917	3403	3403	4287	5613
	Int.	1105	1388	1680	2122	2581	3359	3960	4844	4880	5923	6674

Notes

1. **Continuous: Motor can run continuously at these ratings.**
2. **Intermittent: Intermittent operation, 10% of every minute.**
3. **A simultaneous maximum rpm and pressure is not recommended.**
4. **The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.**
5. **Shaft seal maximum pressure of 1085 PSI. Higher pressure shaft seal available on request.**

BM2-50

ΔP (PSI)

Flow (GPM)	725	1015	1305	1450	1740	2030	2320	2540
1	309 72	398 64	530 57	583 56	690 53	787 34	-	-
3	318 210	398 199	557 187	601 184	698 170	840 148	937 125	1061 97
4	309 285	433 279	575 267	663 262	778 252	884 232	972 212	1061 187
5	301 355	398 354	575 345	610 341	751 326	840 312	972 291	1105 260
7	301 503	398 494	530 488	610 477	707 462	866 445	964 419	1105 382
8	309 580	398 575	530 566	601 557	707 546	840 536	964 505	1105 469
9	283 647	371 645	522 638	583 637	707 618	822 606	946 582	1105 545
11	565 791	362 789	513 784	583 781	698 768	813 755	928 729	1078 697
12	256 863	354 863	513 858	575 853	690 843	769 822	928 807	1061 789

Torque 928 In-lbs
Speed 807 rpm

BM2-63

ΔP (PSI)

Flow (GPM)	725	1015	1305	1450	1740	2030	2320	2540
1	362 58	530 51	672 45	734 44	866 42	990 27	-	-
3	398 166	539 157	681 148	751 142	893 136	1043 116	1167 99	1326 76
4	380 224	539 220	707 211	813 204	972 192	1105 161	1220 146	1326 131
5	380 279	504 278	725 273	769 269	928 257	1061 232	1140 211	1344 185
7	424 397	495 390	672 385	760 376	884 331	1078 348	1149 270	1353 217
8	389 458	495 454	654 447	751 435	884 431	1061 423	1202 399	1388 370
9	354 511	469 509	654 503	734 502	884 488	1034 479	1185 459	1379 430
11	327 625	460 622	645 618	725 616	866 607	1017 595	1167 576	1353 551
12	248 681	424 681	619 677	707 673	822 665	884 649	1105 638	1282 623

BM2-80

ΔP (PSI)

Flow (GPM)	725	1015	1305	1450	1740	2030	2320	2540
3	495 131	690 123	866 119	946 114	1149 103	1308 85	1503 60	1591 51
5	442 225	725 222	928 214	1043 211	1167 197	1414 185	1591 164	1662 153
8	424 367	663 363	849 359	1017 348	1149 333	1326 323	1874 303	1680 286
11	398 507	636 502	857 494	928 491	1132 479	1317 464	1565 437	1671 426
13	371 605	619 605	796 596	866 589	1105 581	1299 559	1512 538	1653 526
16	354 747	557 731	751 727	840 722	1043 712	1255 694	1494 674	1635 663
18	318 837	513 829	725 818	796 815	990 798	1229 788	1459 769	1582 755
20	256 934	495 924	681 918	751 907	972 894	1176 878	1432 863	1565 845

BM2-100

ΔP (PSI)

Flow (GPM)	725	1015	1305	1450	1740	2030	2320	2540
3	645 112	875 108	1087 98	1229 97	1414 85	1618 70	1856 59	1971 51
5	601 188	840 185	1087 177	1264 172	1459 166	1759 154	1945 142	2104 131
8	575 302	840 297	1061 291	1238 288	1459 281	1715 265	1945 251	2122 237
11	522 416	778 414	1052 403	1193 401	1423 396	1697 381	1927 364	2104 350
13	486 491	751 487	1043 480	1105 476	1388 476	1635 456	1918 444	2077 429
16	424 605	698 601	972 592	1052 590	1326 584	1591 573	1909 555	2077 541
18	380 680	619 674	884 669	990 665	1255 661	1503 650	1768 628	2024 619
20	345 755	557 747	866 744	928 742	1238 727	1476 722	1750 701	2007 692

CONT. | **INT.**

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

BM2-125

ΔP (PSI)

Flow (GPM)	725	1015	1305	1450	1740	2030	2320	2540
3	796 82	1087 81	1414 74	1547 72	1812 62	2095 48	2290 25	2387 16
5	751 147	1052 144	1397 142	1520 137	1839 131	2210 115	2458 103	2581 85
8	672 238	955 237	1397 235	1459 227	1821 220	2139 208	2449 194	2572 172
11	698 323	928 325	1326 322	1423 320	1812 314	2104 310	2431 284	2555 264
13	663 393	840 389	1282 387	1397 384	1733 374	2104 362	2343 349	2519 332
16	530 479	840 479	1229 474	1370 472	1618 467	1971 454	2245 432	2246 420
18	530 540	734 537	1105 535	1326 534	1574 530	1874 524	2228 501	2316 487
20	486 601	707 599	1078 596	1282 590	1520 587	1812 582	2166 557	2307 542

Torque 2166 In-lbs
Speed 557 rpm

BM2-160

ΔP (PSI)

Flow (GPM)	725	1015	1305	1450	1740	2030	2320	2540
3	1017 65	1414 64	1812 59	1945 57	2316 49	2652 43	3006 39	3200 31
5	1017 113	1414 109	1821 104	2033 102	2343 97	2829 90	3138 79	3359 72
8	928 186	1397 182	1786 179	1945 174	2307 167	2696 154	3041 165	3342 131
11	884 257	1282 255	1724 248	1927 246	2263 239	2643 226	3006 207	3315 193
13	813 302	1255 300	1662 295	1848 293	2210 285	2608 276	2970 257	3235 240
16	743 372	1211 370	1591 368	1759 364	2122 358	2528 345	2917 337	3182 307
18	575 424	1061 423	1459 419	1591 416	1971 404	2493 391	2829 327	3094 356
20	530 469	1034 466	1397 463	1547 460	1945 451	2404 436	2776 419	3023 399

BM2-200

ΔP (PSI)

Flow (GPM)	725	1015	1305	1523	1740	2030	2538
3	1317 57	1812 55	2254 51	2564 49	2900 45	3271 34	3916 26
5	1238 94	1786 91	2210 88	2855 85	2917 80	3633 74	3960 62
8	1149 151	1697 149	2139 141	2714 137	2873 132	3324 123	3934 106
11	1105 208	1644 204	2060 201	2696 196	2776 188	3448 177	3854 155
13	1061 246	1565 243	1989 238	2608 234	2696 227	3377 215	3775 189
16	972 303	1467 298	1945 293	2519 291	2581 285	3297 271	3704 238
18	866 341	1326 339	1812 333	2157 329	2458 321	2917 310	3624 274
20	751 379	1246 375	1759 369	2077 365	2369 359	2855 345	3536 313

BM2-250

ΔP (PSI)

Flow (GPM)	435	725	1015	1160	1450	1595	2030	2538
3	1017 45	1609 44	2228 43	2608 40	3094 36	3359 34	4155 26	4729 18
5	972 76	1574 75	2228 71	2608 71	3112 65	3403 63	4155 54	4844 45
8	884 121	1503 120	2210 117	2519 116	3085 111	3359 107	4146 96	4827 81
11	769 165	1406 162	2051 161	2378 159	2917 156	3235 153	4066 135	4685 114
13	707 197	1380 195	1909 192	2228 191	2829 159	3112 157	4005 150	4597 145
16	663 242	1149 242	1768 240	2077 238	2696 234	3006 230	3828 212	4464 182
18	442 273	1034 271	1680 271	1945 268	2564 263	2829 260	3642 243	4376 209
20	371 303	928 302	1591 301	1856 300	2475 297	5392 291	3580 275	4296 241

CONT.	INT.

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

BM2-315

ΔP (PSI)

Flow (GPM)	435	725	943	1160	1305	1885	1958
3	1193 36	1901 32	2466 30	3032 28	3403 27	4553 26	4862 25
5	1193 57	1909 56	3546 55	3094 54	3359 53	4491 49	4880 47
8	1105 94	1812 92	2431 91	3006 90	3315 89	4367 81	4800 80
11	1017 127	1724 125	2351 124	2961 123	3235 122	4287 109	4650 108
13	796 151	1503 150	2228 149	2829 146	3112 144	4190 135	4517 130
16	707 192	1414 187	2033 192	2696 180	2953 177	4040 161	4349 157
18	513 216	1193 214	1901 210	2519 206	2829 200	3907 185	4155 175
20	486 236	1105 234	1812 232	2378 229	2723 227	3766 210	4146 202

Torque 3766 In-lbs
Speed 210 rpm

BM2-400

ΔP (PSI)

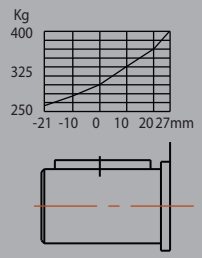
Flow (GPM)	435	725	943	1160	1305	1885	1958
3	1503 27	2228 26	3271 25	3890 23	4287 22	5260 19	5481 18
5	1503 45	2484 44	3227 43	3854 42	4243 40	5216 38	5437 34
8	1361 73	2458 71	3138 69	3766 67	4155 64	5127 61	5392 60
11	1273 99	2413 98	3094 94	3624 86	4119 83	5092 79	5357 73
13	1211 119	2378 117	3041 114	3589 110	4066 106	5039 99	5304 93
16	1193 146	2343 141	2917 135	3448 131	3934 119	4906 111	5923 106
18	1061 165	2166 164	2785 161	3271 156	3845 150	4818 146	5746 141
20	1017 182	2077 178	2652 172	3094 167	3757 164	4641 159	5569 154

BM2-500

ΔP (PSI)

Flow (GPM)	435	725	943	1160	1350	1885
3	1768 33	3050 31	4084 30	5145 27	5613 25	6674 23
5	1759 37	3006 36	4022 35	5083 34	5525 32	6586 28
8	1680 60	2900 59	3951 58	5003 57	5534 55	6533 50
11	1662 81	2820 80	3863 79	4915 78	5445 76	6444 73
13	1591 95	2740 94	3775 93	4827 93	5357 92	6347 89
16	1547 119	2652 118	3677 116	3819 115	5277 113	6206 111
18	1503 134	2564 133	3651 131	3722 129	5180 128	6100 127
20	1414 159	2458 158	3554 156	3633 153	5083 151	5994 150

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

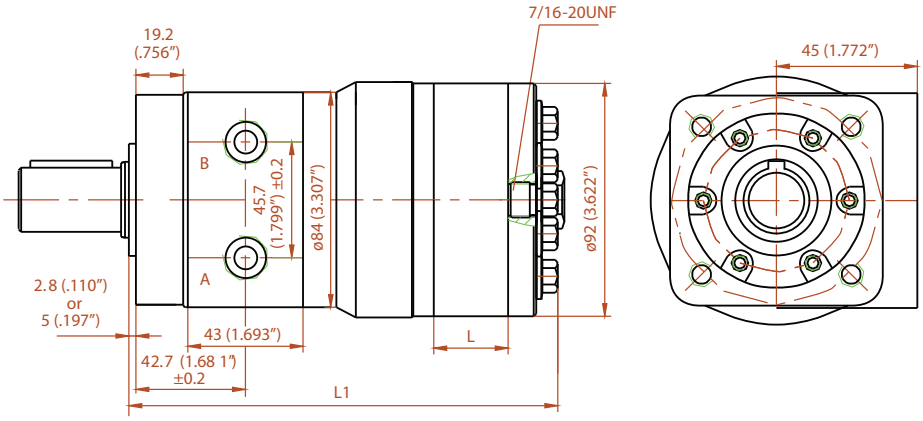


CONT.	INT.

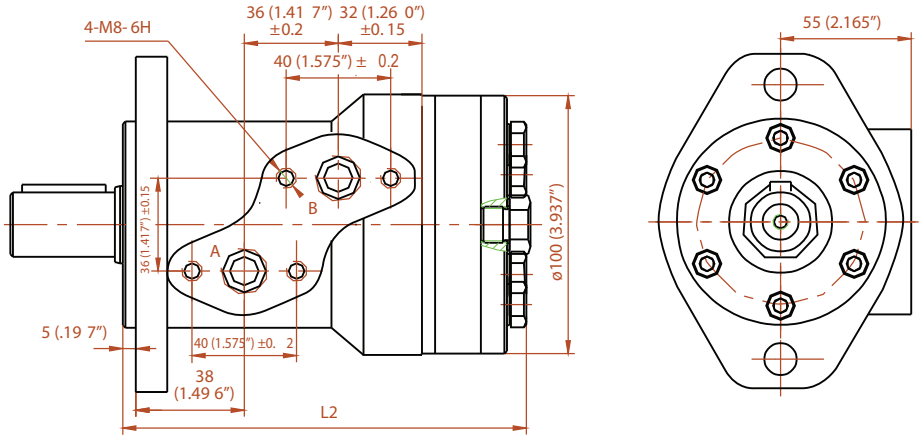
All the datas were tested at 50°C with anti-wear hydraulic oil.
Actual data may vary slightly from different unit in production.

CONFIGURATION

H TYPE



S TYPE



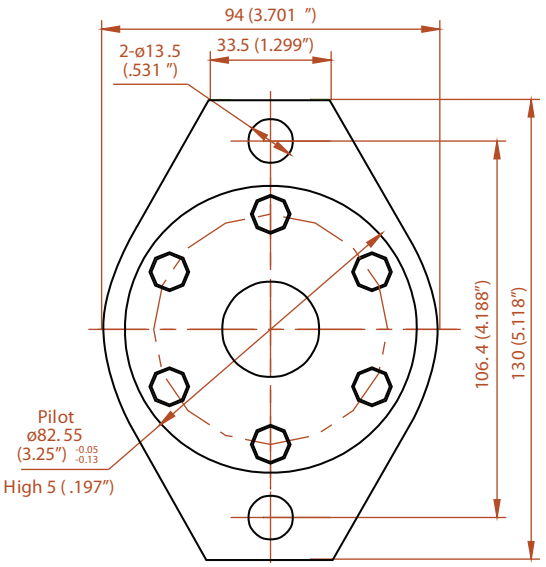
Displacement

	50		63		80		100		125		160		200		250		315		400		500	
L	9	0.354	11.3	0.445	14.5	0.571	17.8	0.701	23	0.906	29	1.142	37	1.457	46	1.811	57	2.244	72	2.835	90	3.543
L1	146	5.748	148.3	5.839	151.5	5.965	154.8	6.094	160	6.299	166	6.535	174	6.850	183	7.205	194	7.638	209	8.228	227	8.937
L2	151	5.945	153.3	6.035	156.5	6.161	159.8	6.291	165	6.496	171	6.732	179	7.047	188	7.402	199	7.835	214	8.425	232	9.134

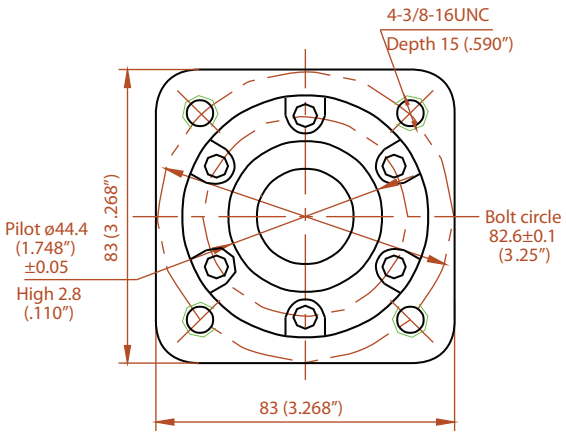
Other configuration and/or mounting types are available upon request.

MOUNTING FLANGE

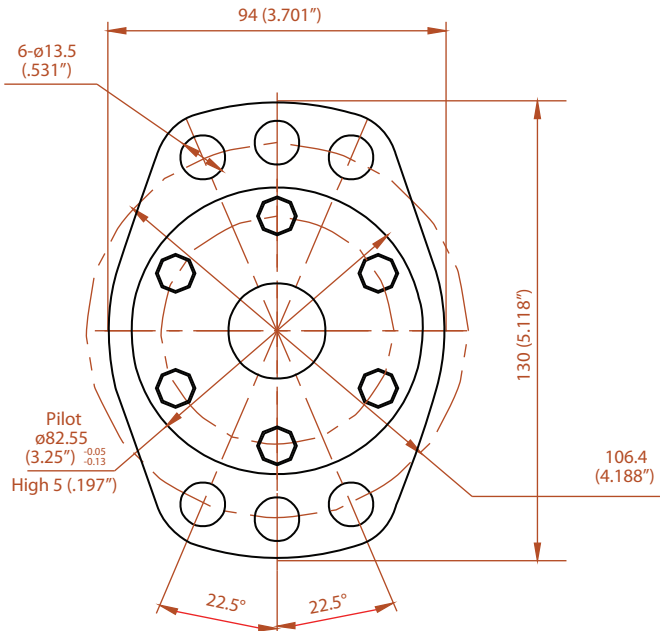
FLANGE A



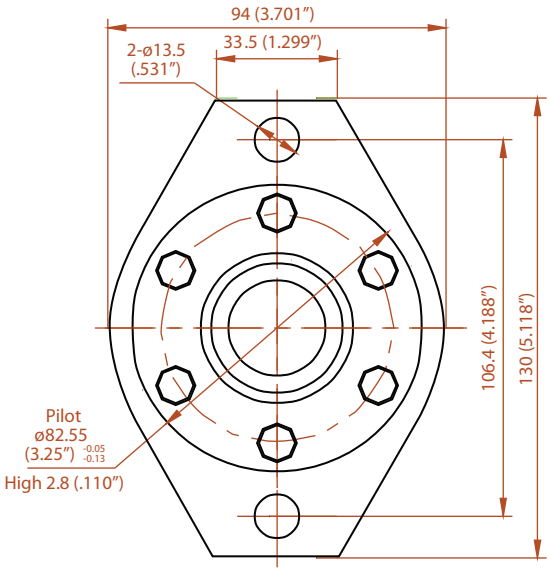
FLANGE B



FLANGE C



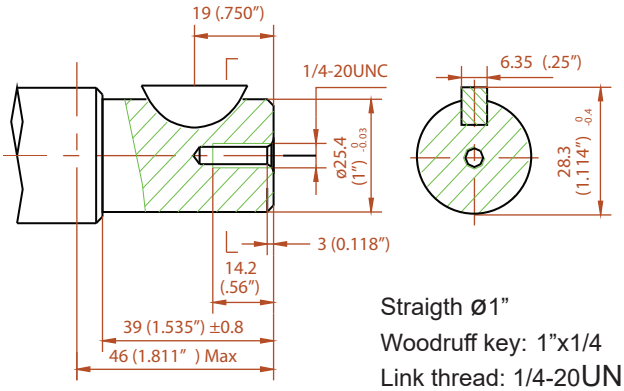
FLANGE H



H flange is good for installing on a gearbox, pilot being thinner. 2.8 mm versus 5 mm like the A flange.

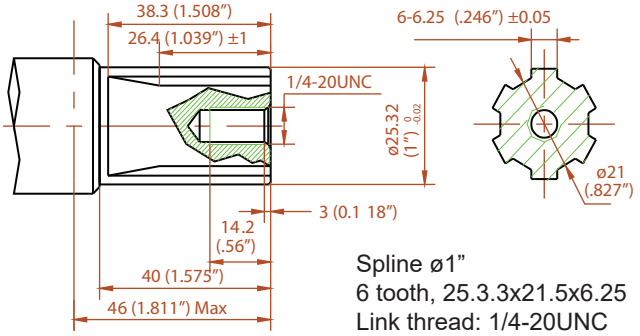
OUTPUT SHAFT

SHAFT A



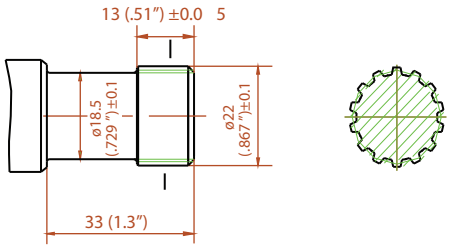
Straigth ø1"
Woodruff key: 1"x1/4
Link thread: 1/4-20UNC

SHAFT C



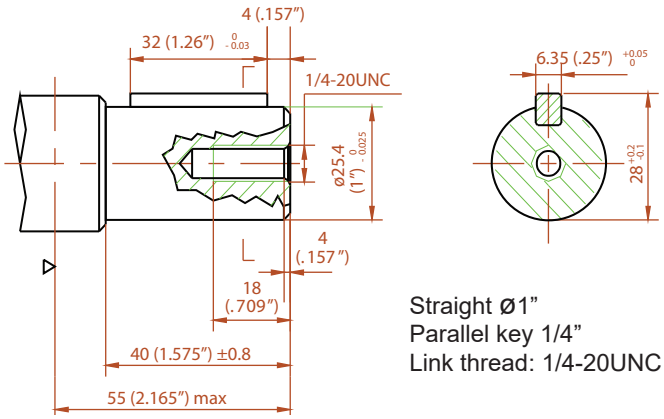
Spline ø1"
6 tooth, 25.3.3x21.5x6.25
Link thread: 1/4-20UNC

SHAFT D



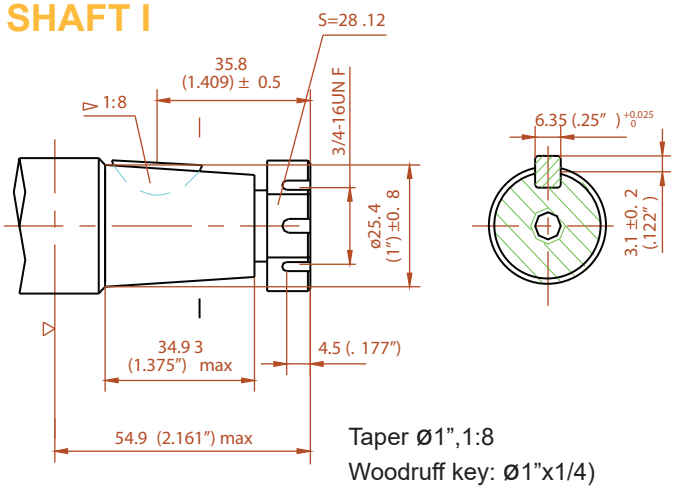
Spline ø7/8"
13 tooth, DP12/24

SHAFT E



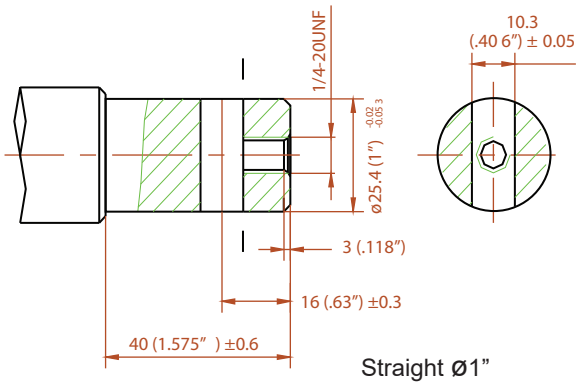
Straight Ø1"
Parallel key 1/4"
Link thread: 1/4-20UNC

SHAFT I



Taper Ø1",1:8
Woodruff key: Ø1"x1/4)

SHAFT J



Straight Ø1"
Pin hole: Ø0.406"

Choose an option for each category

BM2 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

H - Parallel ports **S** - Staggered ports

DISPLACEMENT (CC)

A - 50 **B** - 63 **C** - 80 **D** - 100 **E** - 125
F - 160 **G** - 200 **H** - 250 **I** - 315 **J** - 400 **K** - 500

MOUNTING FLANGE

A - Rhombus, SAE-A 2 bolt (ø3.25" pilot) x 0.197", ø0.531" holes (2), 4.188" bolt center
B - Square, SAE-AA 4 bolt (ø1.748" pilot), 4 x 3/8-16UNC, ø3.25" bolt circle
C - Rhombus, SAE-A 6 bolt (ø3.25" pilot), ø0.531" holes (6), ø4.188" bolt circle
H - Rhombus, SAE-A 2 bolt (ø3.25" pilot) x 0.110", ø0.531" holes (2), 4.188" bolt center

OUTPUT SHAFT

A - Straight ø1", Woodruff key, 1/4-20UNC link thread
C - Spline ø1", 6 tooth, 1/4-20UNC link thread
D - Spline ø7/8", 13 tooth
E - Straight ø1", Parallel key, 1/4-20 UNC link thread
I - Taper ø1", 1:8, Woodruff key, 3/4-16UNF link thread
J - Straight ø1", ø0.406" Pin hole

PORTS

C - SAE-10 **D** - 1/2 NPT

LINK THREAD ON PORT SURFACE

A - None **C** - 5/16-18UNC

DRAIN PORT

A - None **D** - SAE-04

SPECIAL

A - Standard **B -** Radial bearing **C** - Add **HPSS** - High pressure shaft seal (2900 PSI)

Order example: BM2HABCDCCB

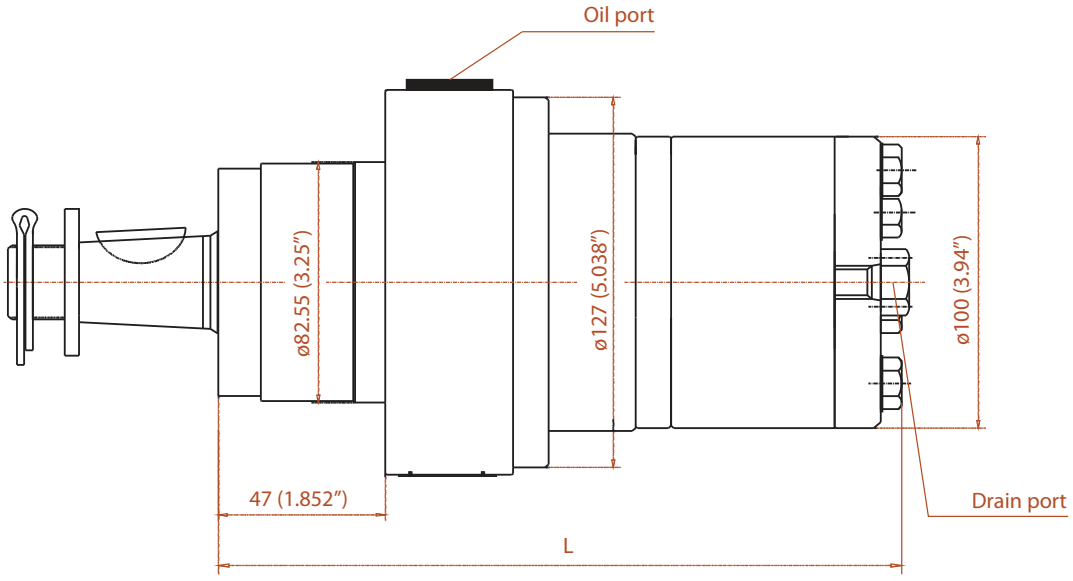
Other configuration and/or mounting types are available upon request.

The BM2W series motor is a wheel motor with radial bearing which can bear bigger radial forces.

CHARACTERISTIC FEATURES

- It adopts the gerolor design. Has higher efficiency .
- Credible design for shaft seal , which can bear high pressure and be used in parallel or in series applications.
- Direction of shaft speed can be controlled easily and smoothly.
- Best efficacy and economy in medium load applications.

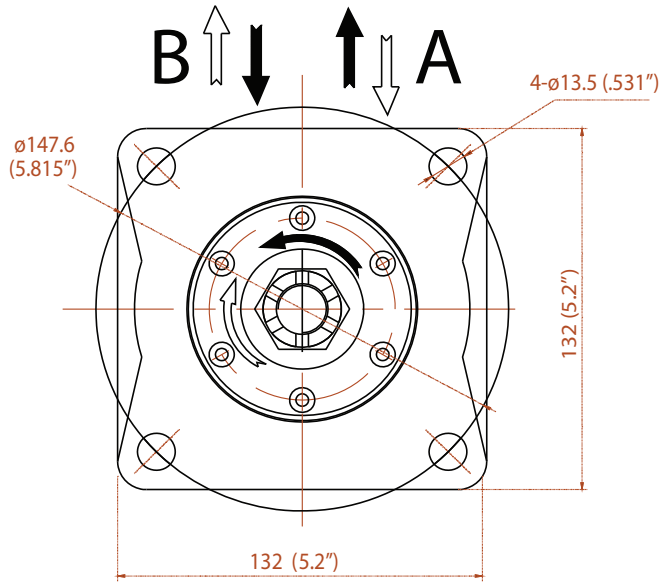
CONFIGURATION



Displacement	50	63	80	100	125	160	200	250	315	400	500
L	157	160	163	166	171	177	185	194	205	220	238
	6.181	6.299	6.417	6.535	6.732	6.969	7.283	7.638	8.070	8.661	9.370

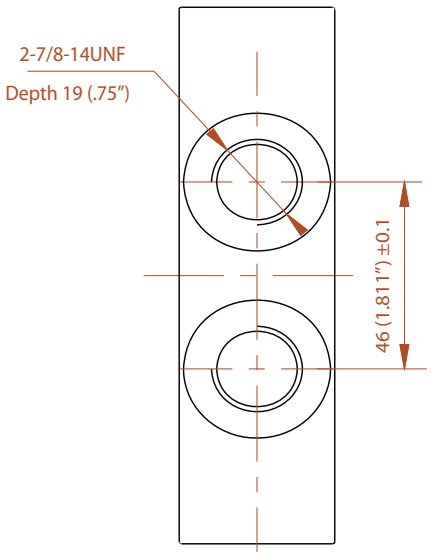
MOUNTING FLANGE

FLANGE A

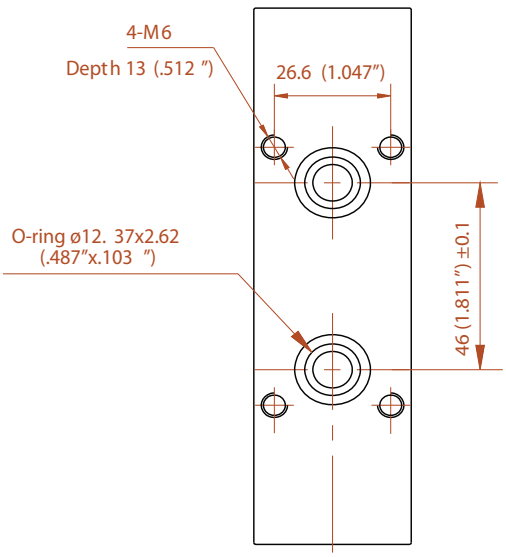


PORTS

PORTS A

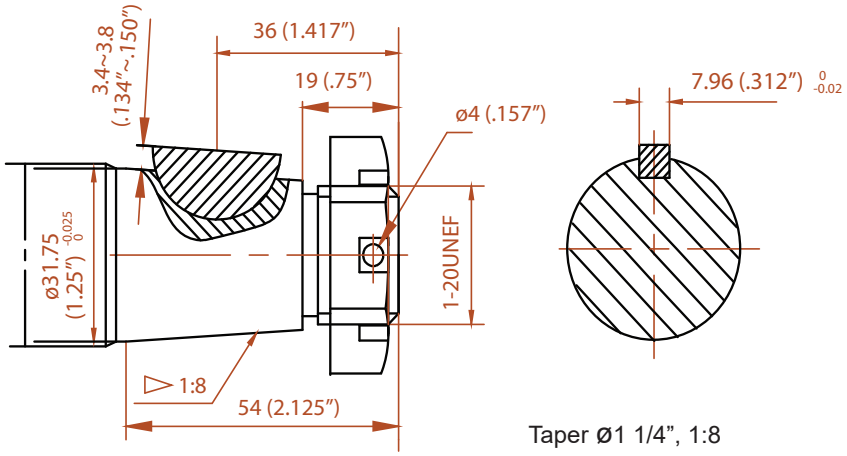


PORTS B



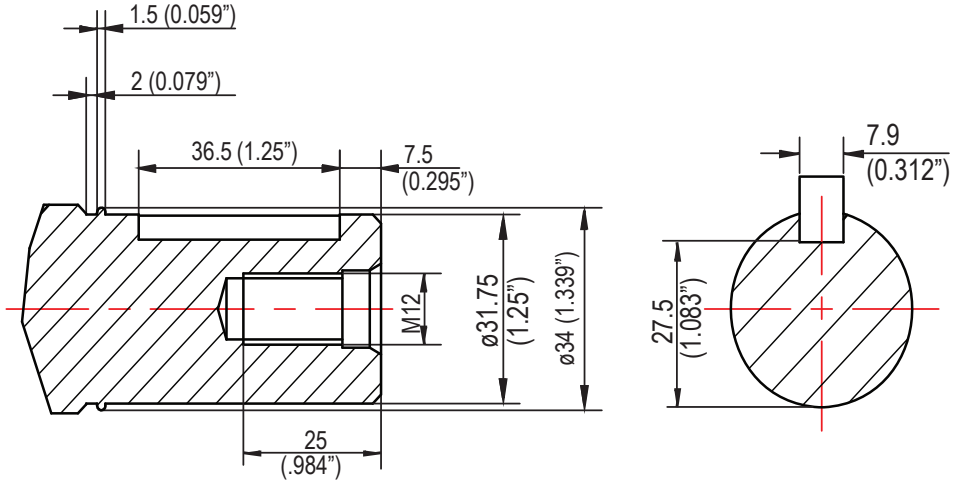
OUTPUT SHAFT

SHAFT A



Taper ø1 1/4", 1:8
Woodruff key ø1"x5/16
Link thread: 1"-20UNEF

SHAFT C



Straight ø1 1/4"
Parallel key 5/16"
Link thread: M12

Choose an option for each category

BM2W [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

H - Standard, wheel mount

DISPLACEMENT (CC)

A - 50 **B** - 63 **C** - 80 **D** - 100

E - 125 **F** - 160 **G** - 200 **H** - 250

I - 315 **J** - 400 **K** - 500

MOUNTING FLANGE

A - Wheel Motor

OUTPUT SHAFT

A - Taper ø1 1/4", 1:8, Woodruff key, 1-20UNEF Link thread

C - Straight ø1 1/4", Parallel key, M12x1.5UNF Link thread

PORTS

A - SAE-10 **C** - Manifold mount

LINK THREAD ON PORT SURFACE

A - None **C** - M6

DRAIN PORT

A - None **D** - SAE-04

SPECIAL

A - None Add **HPSS** - High pressure shaft seal (2900 PSI)

Order example: BM2WHDACAADA

Other configuration and/or mounting types are available upon request.

The BME series motor has advanced geroler gear set design,they are suited for high pressure high efficiency,low speed applications. It can Keep high volume efficiency,long working life .

CHARACTERISTIC FEATURES

- Advanced geroler gear set design, low pressure of start-up, high efficiency.
- High pressure applications, high torque, has needle bearings design, it can bear high axial and radial forces.
- Advance high speed distribution flow design, automatically compensate in operating,high volume efficiency, run smoothly at low speed.

Main Specifications

Displacement per revolution	cm3 (cc)	125	160	200	230	250	300	350	375	475	540	750
	in3	7.75	9.94	12.2	13.73	15.8	18.0	21.3	22.7	28.86	32.95	45.46
Flow (GPM)	Cont.	11.8	15.8	18.4	18.4	19.8	21.1	21.1	19.8	19.8	19.8	19.8
	Int.	15.8	19.8	22.4	22.4	23.7	25.1	25.1	23.7	23.7	23.7	23.7
Speed (RPM)	Cont.	336	350	330	290	290	250	215	200	150	140	100
	Int.	450	440	425	365	350	315	365	240	180	170	120
Pressure (PSI)	Cont.	3000	3000	3000	3000	3000	3000	3000	3000	2540	2030	1520
	Int.	3480	3480	3480	3480	3480	3480	3480	3480	2750	2540	1740
Torque (in-lbs)	Cont.	3088	4159	4708	5531	6195	7169	8009	8762	9824	8673	9293
	Int.	3611	4850	5328	6284	6992	8231	9160	10089	10691	10974	10443

Notes

1. **Continuous: Motor can run continuously at these ratings.**
2. **Intermittent: Intermittent operation, 10% of every minute.**
3. **A simultaneous maximum rpm and pressure is not recommended.**
4. **Conversion factors available on page 3.**
5. **The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.**

BME-125

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973	3481
0,5	186 14	451 13	841 11	1204 7	-	-	-	-
1,1	221 28	478 26	991 24	1460 19	1938 13	-	-	-
2,1	-	496 60	1009 54	1522 50	1983 45	2337 39	2620 35	2992 26
4,0	-	487 115	1027 110	1602 100	2080 96	2452 90	2877 84	3098 76
6,6	-	416 194	956 185	1460 173	2018 168	2399 160	2850 155	3107 149
9,0	-	-	947 276	1452 260	1938 244	2434 232	2770 225	3293 217
11,9	-	-	876 362	1425 350	1885 342	2381 325	2735 322	3257 303
14,0	-	-	788 123	1319 418	1850 404	2337 399	2708 371	-
15,9	-	-	708 488	1257 472	1806 455	2292 442	2638 421	-

BME-160

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973	3481
0,5	319 8	664 4	1283 3	1912 3	2620 2	-	-	-
1,1	248 22	682 19	1372 18	2080 16	2788 14	3266 13	3762 8	-
2,1	310 47	673 44	1381 42	2080 40	2744 37	3293 34	3983 32	4673 27
4,0	336 93	664 90	1372 86	2080 84	2753 82	3248 79	3886 75	4585 69
6,6	-	593 155	1337 151	1991 147	2708 142	3231 137	3850 131	4434 124
9,0	-	611 214	1337 213	1991 210	2708 204	3213 198	3850 191	4399 184
11,9	-	575 282	1283 280	1930 275	2611 268	3178 263	3771 256	4248 245
14,0	-	-	1186 330	1921 327	2602 322	2266 315	3717 306	4204 296
15,9	-	-	1062 379	1814 376	2505 368	3098 362	3700 356	4142 345
18,0	-	-	974 423	1752 419	2399 414	3036 406	1372 345	-
19,8	-	-	912 472	1637 466	2390 270	2974 450	1390 337	-

BME-200

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973	3481
0,5	354 8	770 4	1151 4	2549 3	3257 2	-	-	-
1,1	363 16	761 14	1637 13	2381 11	3204 10	3762 9	4470 6	-
2,1	389 35	788 32	1717 29	2567 28	3222 27	3983 25	4691 23	5319 19
4,0	345 74	805 71	1744 68	2629 64	3355 60	4080 58	4673 55	5319 50
6,6	-	735 124	1682 121	2514 117	3319 113	4027 108	4656 103	5337 92
9,0	-	690 170	1629 169	2390 167	3195 160	3939 154	4541 146	5222 135
11,9	-	-	1425 223	2301 218	3098 212	3894 208	4532 199	5240 189
14,0	-	-	1337 260	2257 258	3089 254	3912 248	4443 241	5134 230
15,9	-	-	1159 299	2204 292	2983 284	3815 276	4417 272	5080 263
18,0	-	-	1062 336	2045 332	2912 327	3638 319	4293 310	5063 301
19,8	-	-	965 375	1832 372	2770 365	3558 358	4266 350	-
22,5	-	-	-	1637 425	2469 420	3346 411	4063 390	-

BME-230

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973	3481
0,5	398 6	788 4	1584 3	2567 2	3328 1	-	-	-
1,1	416 15	876 13	1894 11	2762 11	3558 9	4293 7	4868 3	-
2,1	434 31	929 29	1868 27	2823 25	3735 23	4567 20	5328 16	6205 10
4,0	398 63	929 61	1850 58	2832 55	3788 52	4664 47	5523 41	6284 34
6,6	-	885 103	1868 100	2850 96	3806 92	4700 87	5505 81	6231 71
9,0	-	788 145	1832 143	2788 139	3709 133	4629 126	5496 120	6222 109
11,9	-	-	1637 192	2611 187	3717 182	4479 176	4957 170	6081 160
14,0	-	-	1531 226	2558 221	3470 215	4399 208	5151 203	5992 194
15,9	-	-	1354 256	2372 253	3461 248	4284 242	5045 235	5859 222
18,0	-	-	1221 292	2337 288	3133 283	4248 278	4992 273	5691 256
19,8	-	-	1106 324	2098 321	3054 344	3939 308	4868 300	-
22,5	-	-	-	1814 366	2956 360	3948 351	4824 338	-

CONT. | INT.

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

Torque 3948 In-lbs
Speed 351 rpm

BME-250

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973	3481
0,5	4345	10002	-	-	-	-	-	-
1,1	48712	99111	208010	31869	41518	50546	40983	-
2,1	46927	102726	214224	324822	427520	517818	610714	-
4,0	42557	97456	227554	323151	431948	521345	611643	704537
6,6	38995	100093	214290	320486	430282	524077	620572	690463
9,0	-	823129	1991125	309812	424816	521311	608910	686096
11,9	-	673174	1921173	307117	412516	504516	597415	692143
14,0	-	575203	1788202	285920	399219	497419	583318	666517
15,9	-	-	1602232	260229	389422	485922	567315	654202
18,0	-	-	1407262	262026	369125	485925	562024	647028
19,8	-	-	1204290	241628	345238	461128	544327	640826
22,5	-	-	1142328	232832	329332	449616	536407	-
23,8	-	-	743348	200034	315134	431936	-	-

BME-300

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973	3481
0,5	4603	8141	-	-	-	-	-	-
1,1	53111	123010	23469	37798	44347	54434	-	-
2,1	54922	128321	261120	383219	501016	593013	67189	72225
4,0	57548	125747	269145	378843	505439	592133	715228	792220
6,6	54082	123981	254980	370976	486871	600164	697556	823144
9,0	416113	116812	264611	348710	495702	608996	709986	822373
11,9	-	832150	236314	339014	467314	562013	663812	777112
14,0	-	690177	212417	338117	466417	557616	669115	794813
15,9	-	575200	197419	323119	447019	556718	663817	788616	2
18,0	-	-	175222	292122	416922	559421	664720	778019	4
19,8	-	-	154925	283225	411646	542624	653223	770921	5
22,5	-	-	1221285	2788284	4001278	5036270	6426257	-
25,1	-	-	947316	2284314	3788311	4868307	6213292	-

BME-350

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973	3481
0,5	5404	11864	-	-	-	-	-	-
1,1	57510	12139	25588	38777	-	-	-	-
2,1	61121	128320	272620	402719	345218	652316	747912	-
4,0	65542	158441	278840	416039	552337	677135	771732	871826
6,6	54970	133769	276268	416966	557663	675360	787755	900146
9,0	47897	119596	268295	403693	549689	671885	798478	913468
11,9	-	894129	2328128	393927	514225	649711	786012	910801
14,0	-	770152	2204150	371714	501914	632013	781532	908118
15,9	-	566171	2036170	360216	485016	628416	743515	880714
18,0	-	-	1938195	344319	481519	615118	729317	865616
19,8	-	-	1841215	327514	453215	599220	724919	853218
22,5	-	-	1584243	3151242	4541239	6028234	7160227	-
25,1	-	-	-	3107272	4496269	5727265	-	-

BME-375

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973	3481
0,5	6823	-	-	-	-	-	-	-
1,1	7268	14348	29397	43026	56475	67633	-	-
2,1	71718	151417	313317	465616	602814	725812	83739	93915
4,0	66439	141638	316937	473535	606332	746129	866525	977218
6,6	61165	139064	308962	464759	601055	755948	881644	1004635
9,0	50590	128389	298387	450583	608977	745371	877163	1015253
11,9	-	1062120	2691119	4240117	5771113	7178108	8585100	1005590
14,0	-	823141	2487140	4116138	5550134	6957128	8240120	9754105
15,9	-	655161	2363161	3771160	5266158	6798155	8169151	9506141
18,0	-	-	2036182	3753180	5142176	6665169	8001161	9426148
20,6	-	-	1814201	3346200	4930556	6541190	7665181	8966165
22,5	-	-	1558228	3284226	4629221	3523216	7391206	-
23,8	-	-	1301242	2823240	4443237	5797226	-	-

BME-475

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466	2973
0,5	8412	16291	-	-	-	-	-
1,1	8597	17976	35945	53735	71254	-	-
2,1	87615	184114	378813	579713	748812	887810	104718
4,0	85031	180630	392128	578028	775326	931123	109312
6,6	82352	179751	391248	580645	773643	932939	109403
9,0	65572	162071	370068	585165	750661	962155	111974
11,9	-	124896	337295	553293	736490	942684	111887
14,0	-	1044113	3054112	5080111	7001107	8904102	10745 90
15,9	-	717128	2797128	4788127	6975124	8621119	10480110
18,0	-	522146	2425145	4594144	6576141	8453136	10241125
19,8	-	-	2009161	4266160	6205702	8169153	9842140
21,9	-	-	1752182	4036180	5886177	7745168	-
25,1	-	-	1337194	3310193	5435190	7453182	-

BME-540

ΔP (PSI)

Flow (GPM)	254	508	1015	1450	2031	2466
0,5	9382	17612	-	-	-	-
1,1	11246	20715	41785	60634	82584	100463
2,1	119513	208913	438112	660311	854111	103918
4,0	107127	204526	444326	664725	866524	107631
6,6	90344	201843	443442	686841	870939	107835
9,0	69962	189461	427560	661258	863054	110194
11,9	-	154082	385082	633781	827679	105575
14,0	-	127597	370997	598396	827694	103289
15,9	-	929110	3346110	5886109	7913108	10258106
18,0	-	770125	3151124	5435124	7692123	9780120
19,8	-	-	2797138	5319137	7302826	9754132
22,5	-	-	2602154	4771153	6921152	-
25,1	-	-	1903169	4293168	6700168	-

CONT.	INT.

Torque 6700 In-lbs
Speed 168 rpm

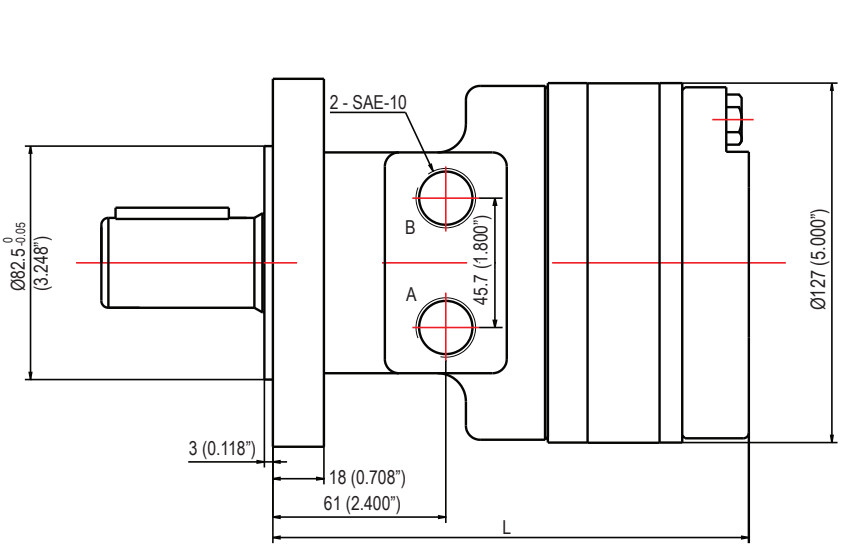
BME-750

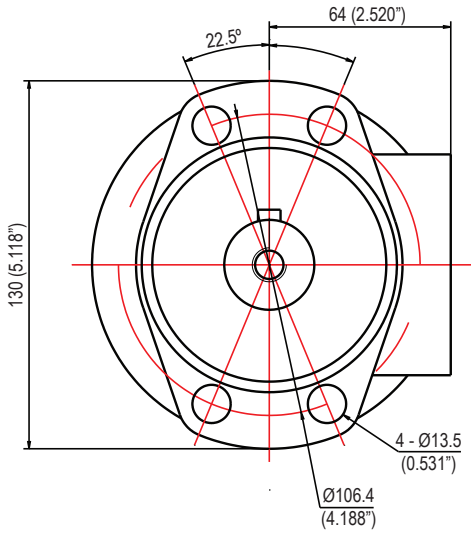
ΔP (PSI)

Flow (GPM)	254	508	1015	1450	1740	2031
0,5	13012	24871	-	-	-	-
1,1	14254	28504	58064	84883	98513	115952
2,1	14439	29749	60819	90638	102418	119317
4,0	137219	290319	615118	925818	1049717	1216116
6,6	126632	280631	607230	924930	1044429	1217027
9,0	99144	253144	579742	905541	1032940	1206437
11,9	62060	216859	547959	871858	1014358	1191355
14,0	-	179770	499269	832068	975467	1155166
15,9	-	124879	465678	793077	962176	1139174
18,0	-	89490	429390	755089	917088	1108187
19,8	-	56699	374499	720598	869297	1045396
21,9	-	-	3505110	6585109	8010108	-
25,1	-	-	2611120	5859119	7090117	-

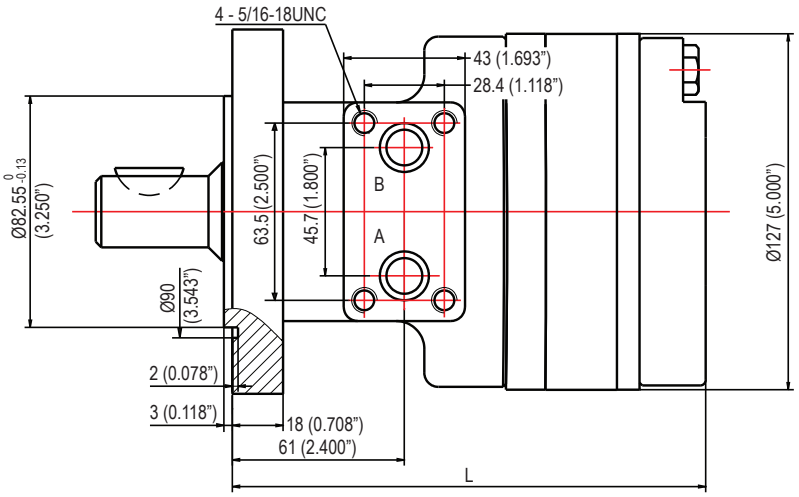
MOUNTING FLANGE

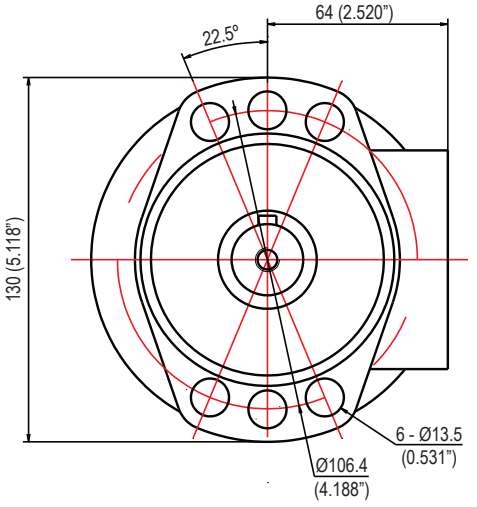
A TYPE





B TYPE



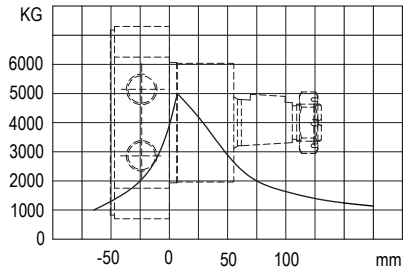


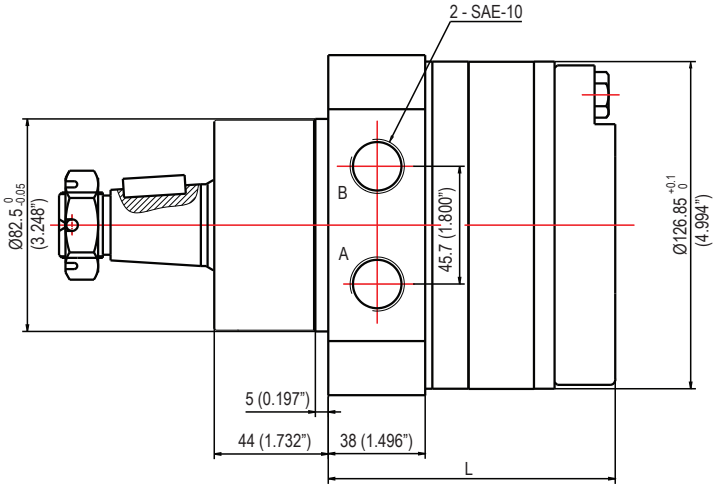
Displacement	125	160	200	230	250	300	350	375	475	540	750
L	154	158	161	163	166	170	174	176	185	191	209
	6.062	6.220	6.338	6.417	6.535	6.692	6.850	6.929	7.283	7.519	8.228

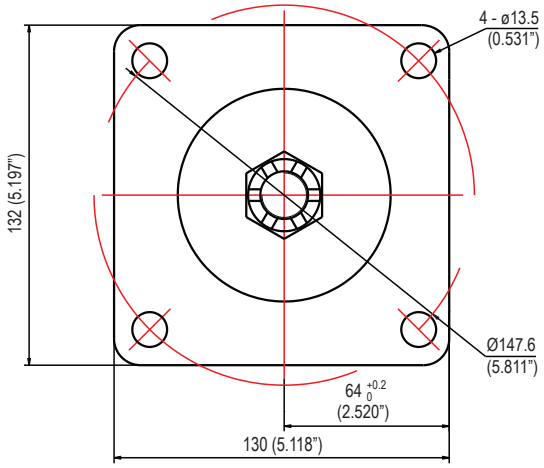
MOUNTING FLANGE

FLANGE W - BMEW

ADMISSIBLE SIDE LOAD

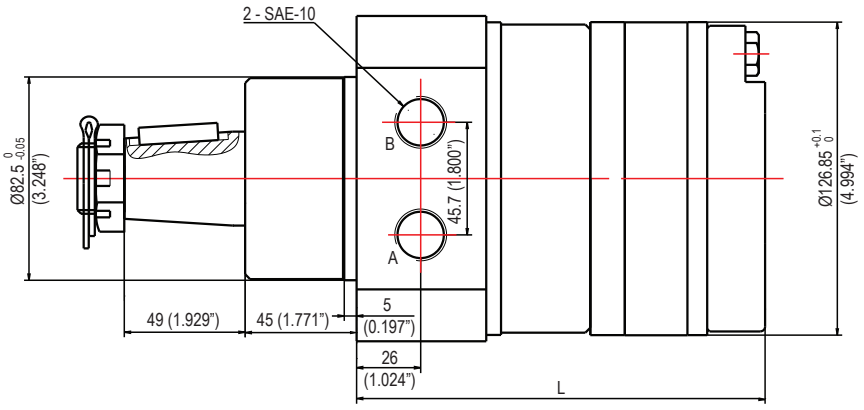


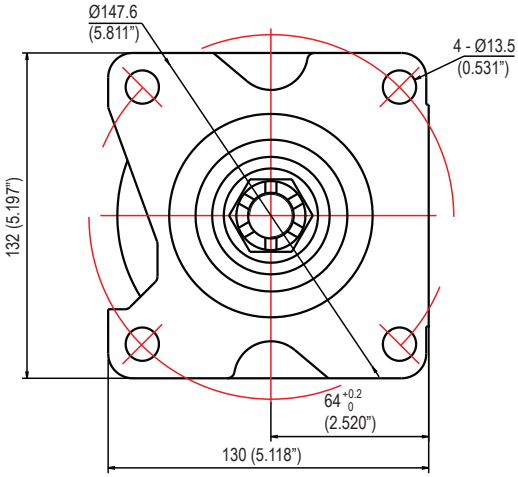




Displacement	125	160	200	230	250	300	350	375	475	540	750
L	112.6	115.8	119	121.3	124.3	127.5	132.3	134.3	143.3	149	167.3
	4.433	4.559	4.685	4.756	4.893	5.020	5.209	5.287	5.641	5.866	6.587

FLANGE W - BMER

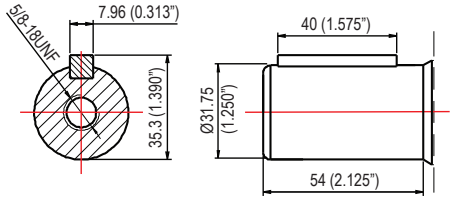




Displacement	125	160	200	230	250	300	350	375	475	540	750
L	151.6	154.8	158.1	160.3	163.3	166.5	171.3	173.3	182.3	188.1	206.3
	5.969	6.094	6.224	6.311	6.429	6.555	6.744	6.823	7.177	7.405	8.122

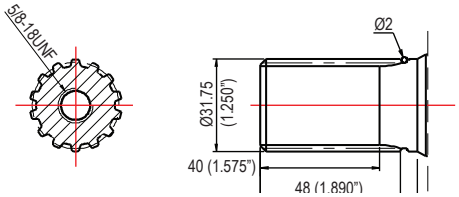
OUTPUT SHAFT

SHAFT A



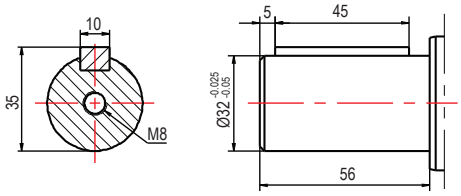
Straight, ø1 1/4"
Parallel key: 5/16" X 40mm
Link thread: 5/8-18UNF

SHAFT B



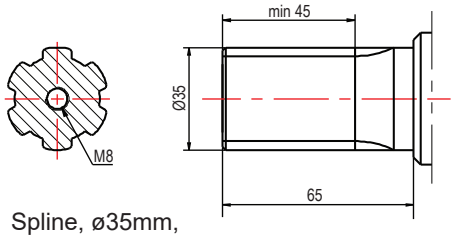
Spline, ø1 1/4"
14 tooth, DP12/24

SHAFT C



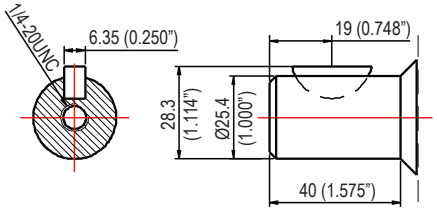
Straight, ø32mm
Parallel key: 10x8x45
Link thread: M8

SHAFT D



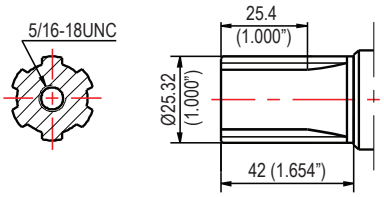
Spline, ø35mm,
6 tooth - 35x29x10
Link thread: M8

SHAFT E



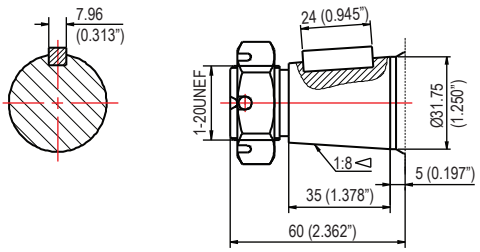
Straight, ø1"
Woodruff key: ø1"x1/4
Link thread: 1/4-20UNC

SHAFT F



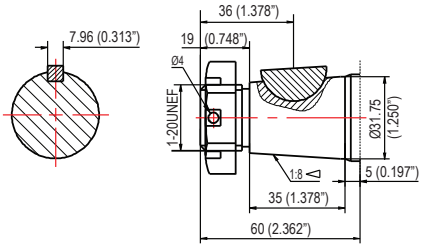
Spline, ø1"
6 tooth - 25.3x21x6.25
Link thread: 5/16-18UNF

SHAFT G



Taper, ø1 1/4", 1:8
Parallel Key: 5/16"x24mm
Link thread: 1-20UNEF

SHAFT H



Taper, ø1 1/4", 1:8
Woodruff key: ø1"x1/4
Link thread: 1-20UNEF

Choose an option for each category

BME [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

A - BME **B - BMEW** **C - BMER**

DISPLACEMENT (CC)

A - 125 **B** - 160 **C** - 200 **D** - 230 **E** - 250 **F**- 300

G - 350 **H** - 375 **I** - 475 **J** - 540 **K** - 750

MOUNTING FLANGE

A - Magneto, SAE-A (ø3.250" pilot), ø0.531" holes (4), 4.188" bolt center

B - Magneto, SAE-A (ø3.250" pilot), ø0.531" holes (6), 4.188" bolt center

W - Wheel, ø3.250" pilot on front, ø5.000" pilot on back ø0.531" holes (4), 5.81" bolt center

OUTPUT SHAFT

A - Straight ø1 1/4", Parallel key, Link thread: 5/8-18UNF

B - Spline ø1 1/4", 14 tooth, DP12/24, Link thread: 5/8-18UNF

C - Straight ø32mm, Parallel key, M8 Link thread

D - Spline ø35mm, 6 tooth, M8 Link thread

E - Straight ø1", Woodruff key, 1/4-20UNC Link thread

F - Spline: ø1", 6 tooth, 5/16-18UNC Link thread

G - Taper ø1 1/4", 1:8, Parallel key, 1-20UNEF Link thread

H - Taper ø1 1/4", 1:8, Woodruff key, 1-20UNEF Link thread

BACK HOUSING

A - Refer to drawing page

PORTS

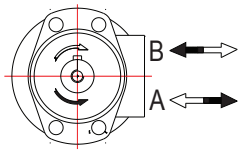
B - SAE-10 (7/8-14UNF)

LINK THREAD ON PORT SURFACE

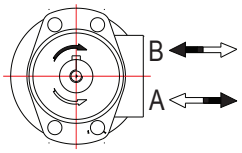
A - None **B** - 5/16-18UNC (4)

TIMING

OMIT - STANDARD



F - REVERSE



Order example: BMEAAAABA

Other configuration and/or mounting types are available upon request.

The BM5 is a large volume, disc valve, high pressure motor with radial bearings desing and can bear greater load.

CHARACTERISTIC FEATURES

- Advanced design in disc distributing flow, which can provide better performance at low speed.
- The valve can automatically compensate for the wear, so the volumetric efficiency is higer.
- Double taper roller bearings permit high radial loads. The motors can be used on heavier vehicules in traction drive applications.

Main Specifications

Displacement per revolution	cm3 (cc)	80	100	125	160	200	250	280	305	400	500
	in3	4.8	6.1	7.6	9.7	12.2	15.2	17.0	18.59	24.4	30.4
Flow (GPM)	Cont.	20	20	20	20	20	20	20	20	20	20
	Int.	22	25	25	30	30	30	30	30	30	30
Speed (RPM)	Cont.	799	742	576	460	365	294	270	246	183	148
	Int.	908	924	720	713	577	462	420	365	287	230
Pressure (PSI)	Cont.	2980	3045	3045	3045	3045	2900	2900	2900	2320	1740
	Int.	4350	4350	4350	3770	3770	3770	3480	3480	2465	2030
	Peak	4350	4350	4350	4350	4350	4350	4350	4350	2900	2465
Torque (in-lbs)	Cont.	2033	2564	3182	4058	4791	5658	5481	5967	7337	7470
	Int.	2555	3359	4243	4685	5622	6895	6294	6851	8044	8398
	Peak	2917	3713	4774	4818	5834	7205	7426	8212	8840	9061

Notes

1. **Continuous: Motor can run continuously at these ratings.**
2. **Intermittent: Intermittent operation, 10% of every minute.**
3. **A simultaneous maximum rpm and pressure is not recommended.**
4. **The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.**
5. **Shaft seal maximum pressure of 1085 PSI. Higher pressure shaft seal available on request.**

BM5-80

ΔP (PSI)

Flow (GPM)	510	1015	1450	2030	2465	2980	3480	3990	4350
1	309 44	663 40	911 36	1282 33	1556 28	1839 22	1945 13	2033 2	-
2	309 92	663 85	928 81	1344 79	1591 74	1909 65	2086 57	2272 46	2652 42
4	309 185	663 177	928 172	1326 168	1644 161	1918 153	2201 140	2343 125	2740 114
6	309 269	663 265	928 255	1344 249	1662 244	1962 232	2263 220	2555 199	2785 187
8	309 367	663 360	911 351	1370 341	1680 340	2033 326	2343 310	2537 284	2829 235
12	265 543	619 540	893 535	1317 523	1644 515	2016 487	2316 474	2493 434	2917 414
16	265 727	619 723	857 717	1299 685	1618 676	2024 641	2281 605	2458 574	2873 555
20	221 907	575 886	840 868	1291 864	1582 850	1954 808	2139 763	2378 730	2829 717
22	194 937	530 929	796 907	1238 887	1520 875	1927 867	1989 835	-	-

BM5-100

ΔP (PSI)

Flow (GPM)	510	1015	1450	2030	2465	3045	3480	3990	4350
1	398 31	787 30	1149 28	1547 23	1839 15	2175 6	-	-	-
2	407 71	796 68	1193 64	1591 52	1901 50	2219 36	2458 28	2696 15	3006 6
4	407 144	822 142	1238 138	1635 132	1945 121	2378 106	2608 94	2740 78	3182 67
6	407 218	822 213	1238 206	1662 201	2042 190	2387 167	2696 163	3094 142	3488 128
8	371 298	822 293	1255 284	1644 274	2060 260	2458 227	2740 225	3227 213	3536 194
12	354 444	769 439	1246 430	1680 414	2016 404	2519 371	3006 358	3359 343	3713 330
16	309 586	769 578	1220 566	1635 556	2033 534	2564 506	2917 486	3263 472	3713 457
20	309 732	751 723	1202 709	1574 684	2016 666	2475 647	2785 628	3147 609	3669 596
22	283 803	707 798	1149 789	1556 776	1989 762	2431 744	2714 696	-	-
25	212 916	663 914	1087 897	1494 884	1989 866	2369 839	2740 805	-	-

BM5-125

ΔP (PSI)

Flow (GPM)	510	1015	1450	2030	2465	3045	3480	3990	4350
1	486 27	1017 24	1520 20	1954 16	2475 13	2873 9	3182 4	-	-
2	504 58	1017 55	1520 49	1954 44	2519 40	2882 28	3200 29	3624 24	3978 15
4	495 117	1025 114	1538 110	2077 104	2608 100	3050 94	3350 88	3943 79	4332 68
6	513 175	1043 173	1591 167	2104 157	2670 146	3112 141	3554 132	4208 119	4597 104
8	486 233	1061 227	1591 222	2122 218	2758 210	3191 206	3607 199	4243 189	4685 172
12	442 359	1017 343	1547 338	2086 333	2740 324	3182 314	3589 301	4155 289	4774 278
16	398 464	999 459	1529 454	2122 452	2652 449	3182 444	3713 442	4155 440	-
20	371 565	972 563	1503 560	2033 557	2564 555	3050 553	3624 550	4066 545	-
22	354 629	928 627	1414 622	2033 617	2652 615	3138 612	3669 607	-	-
25	283 727	769 724	1370 722	1945 720	2519 717	3094 715	3536 712	-	-

CONT. | INT.

Torque 3094 In-lbs
Speed 715 rpm

BM5-160

ΔP (PSI)

Flow (GPM)	510	1015	1450	2030	2465	3045	3480	3770
1	575 22	1158 19	1688 18	2298 12	2811 9	3395 3	3784 2	-
2	619 44	1193 43	1733 40	2343 34	2961 34	3571 32	4066 26	4685 21
4	619 93	1238 90	1839 86	2528 80	3182 79	3890 74	4438 47	4729 43
6	654 137	1282 134	1909 132	2590 121	3288 118	3978 110	4606 101	4774 102
8	654 187	1326 185	1945 181	2652 170	3297 172	4058 166	4650 152	4818 150
12	619 285	1326 282	1954 279	2696 267	3359 256	4049 242	4685 238	-
16	575 373	1282 371	1856 368	2652 365	3315 363	4022 358	-	-
20	530 463	1193 460	1812 457	2652 455	3315 453	-	-	-
22	486 509	1149 507	1768 505	2564 504	3271 502	-	-	-
25	442 578	1132 576	1768 573	2564 570	2343 568	-	-	-
30	309 689	1061 671	1680 662	2475 652	-	-	-	-

BM5-200

ΔP (PSI)

Flow (GPM)	510	1015	1450	2030	2465	3045	3480	3770
1	698 15	1414 13	1750 11	2696 7	3271 5	3890 2	4332 1	4597 1
2	760 35	1459 32	2166 32	2873 26	3713 23	4614 19	5304 13	5392 11
4	769 74	1547 72	2263 71	3050 64	3872 62	4623 57	5481 50	5613 44
6	804 110	1591 108	2369 107	3182 99	3960 97	4791 93	5534 85	5746 79
8	804 151	1635 148	2387 146	3280 142	4066 138	4862 129	5622 123	5834 114
12	804 228	1644 224	2475 221	3324 217	4119 211	4862 204	-	-
16	707 307	1644 303	2396 296	3315 289	4111 283	4862 275	-	-
20	663 386	1556 380	2369 373	3271 364	4066 353	-	-	-
22	601 416	1485 411	2298 404	3182 400	4049 392	-	-	-
25	530 480	1414 474	2263 468	3138 457	3934 447	-	-	-
30	389 571	1282 563	2077 557	2917 542	-	-	-	-

BM5-250

ΔP (PSI)

Flow (GPM)	510	1015	1450	2030	2465	2900	3480	3770
1	928 12	1856 10	2758 9	3624 6	4632 4	5437 3	6321 1	-
2	964 27	1901 26	2829 24	3757 20	4818 18	5481 14	6542 11	6939 9
4	1017 60	1989 54	2970 54	3978 49	4995 48	5658 46	6718 44	7205 42
6	1017 89	2033 85	3023 82	4111 77	5127 73	5746 68	6895 62	-
8	1017 122	2077 118	3147 114	4199 109	5304 106	5622 99	-	-
12	972 185	2077 182	3147 178	4243 172	5304 167	-	-	-
16	840 242	2033 238	3094 236	4155 232	5127 222	-	-	-
20	769 306	1901 303	2970 299	4111 293	-	-	-	-
22	707 333	1856 329	2873 323	4022 313	-	-	-	-
25	663 383	1768 377	2829 374	3934 364	-	-	-	-
30	530 457	1635 452	2696 450	3784 442	-	-	-	-

BM5-280

ΔP (PSI)

Flow (GPM)	510	1015	1450	2030	2465	2900	3480
1	1096 12	2113 10	3129 9	4058 7	4950 1	-	-
2	1096 26	2192 24	3165 22	4217 20	5198 15	6011 11	7072 8
4	1140 54	2272 52	3324 49	4420 45	5481 42	6294 35	7426 28
6	1176 79	2351 78	3412 74	4544 68	5684 62	5834 58	6895 53
8	1176 107	2396 105	3474 103	4668 94	5764 88	-	-
12	1140 161	2396 158	3448 156	4703 146	5843 136	-	-
16	1017 215	2281 209	3430 204	4623 194	-	-	-
20	893 267	2148 259	3315 255	4544 242	-	-	-
22	840 294	2095 289	3103 283	4385 277	-	-	-
25	769 334	2033 326	2917 322	4075 315	-	-	-
30	610 394	1848 388	2776 385	-	-	-	-

BM5-305

ΔP (PSI)

Flow (GPM)	510	1015	1450	2030	2465	2900	3480
1	1193 11	2298 9	3412 9	4420 6	5392 1	-	-
2	1193 24	2387 22	3448 20	4597 18	5658 14	6365 10	7691 8
4	1238 49	2475 47	3624 45	4818 42	5967 38	6851 32	8212 27
6	1282 73	2564 71	3713 68	4950 62	6188 57	6011 53	7426 47
8	1282 98	2608 97	3784 95	5083 86	6276 80	-	-
12	1238 148	2608 145	3757 143	5127 134	6365 125	-	-
16	1105 197	2484 192	3739 187	5039 178	-	-	-
20	972 245	2243 238	3607 234	4950 222	-	-	-
22	919 269	2281 265	3377 260	4774 255	-	-	-
25	840 306	2210 299	3174 295	4438 289	-	-	-
30	663 361	2016 356	3023 353	-	-	-	-

CONT.	INT.

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

BM5-400

Flow (GPM)	510	1015	1450	2030	2320	2465	2900
1	1547 9	3094 8	4385 7	5879 6	6895 4	-	-
2	1591 18	3182 17	4508 16	6144 13	7337 10	7868 8	8752 8
4	1680 37	3315 35	4791 34	6453 32	7072 27	8044 24	8796 24
6	1680 55	3403 53	4862 51	6630 47	7196 44	7956 38	8840 40
8	1980 76	3448 74	4950 70	6763 66	-	-	-
12	1680 114	3448 113	4950 109	6674 103	-	-	-
16	1591 151	3359 149	4791 145	-	-	-	-
20	1459 190	3271 188	4703 182	-	-	-	-
22	1361 207	3165 206	4614 204	-	-	-	-
25	1238 237	3006 235	4526 231	-	-	-	-
30	1061 284	2829 280	4402 274	-	-	-	-

Torque 4402 In-lbs
Speed 274 rpm

BM5-500

Flow (GPM)	510	1015	1450	1740	2030	2465
1	1989 6	3890 5	3801 5	-	-	-
2	2077 13	4066 11	6321 9	6984 10	7956 9	8990 8
4	2122 28	4243 26	6365 25	7381 24	8398 23	9017 17
6	2122 43	4287 41	6409 38	7470 37	8221 34	9061 30
8	2122 57	4332 55	6453 52	7558 49	8177 47	-
12	1989 89	4243 88	4950 87	6453 86	-	-
16	1856 118	4111 116	6321 115	-	-	-
20	1680 143	3934 141	3934 139	-	-	-
22	1547 158	3845 156	6055 153	-	-	-
25	1459 181	3713 178	5967 175	-	-	-
30	1105 227	3403 274	4508 221	-	-	-

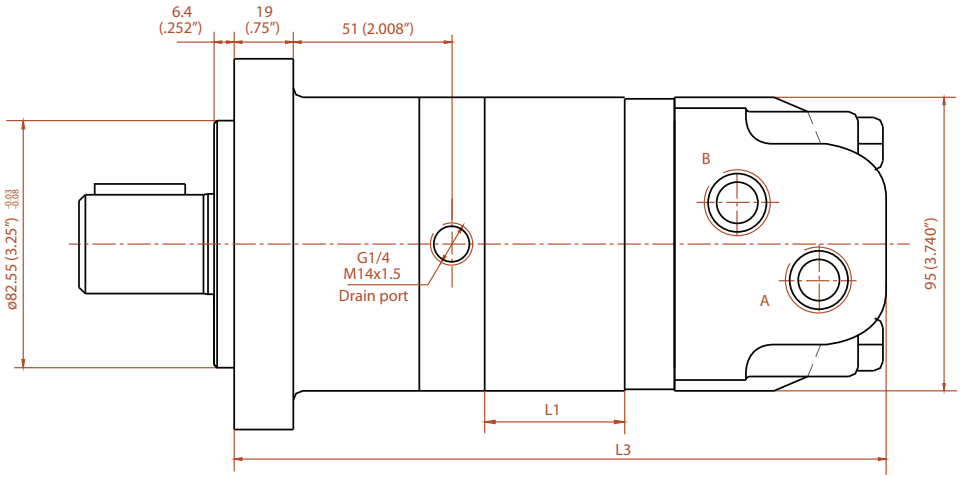
CONT.	INT.

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

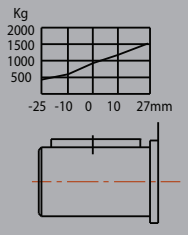
CONFIGURATION

BM5

A :STANDARD TYPE

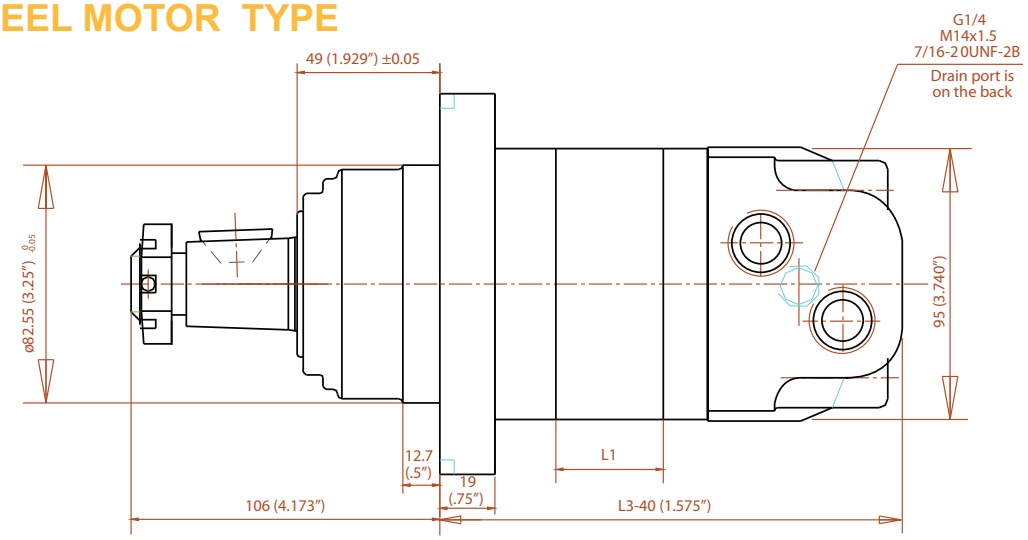


Shaft Load Capacity
Radial Load: 1500Kg Max.
25.4 (1.00")



BM5W

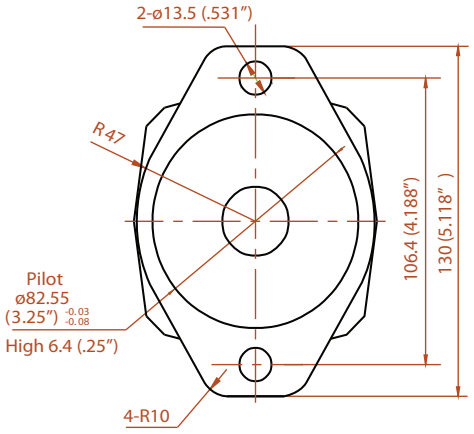
B: WHEEL MOTOR TYPE



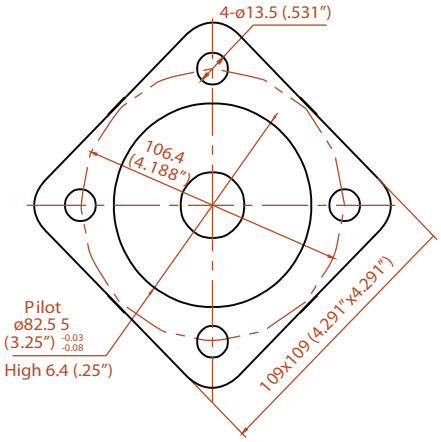
Displacement	80		100		125		160		200		250		280		305		400	
L	15	0.591	18.5	0.728	23	0.906	29	1.142	36	1.417	45	1.772	51.2	2.016	56	2.205	72	2.835
L1	208	8.189	212	8.346	216.5	8.524	222.5	8.760	229.5	9.035	238.5	9.390	245	9.646	249.5	9.823	265.5	10.453
L2	180	7.087	183.5	7.224	188	7.402	194	7.638	201	7.913	210	8.268	216	8.504	221	8.701	237	9.331

MOUNTING FLANGE

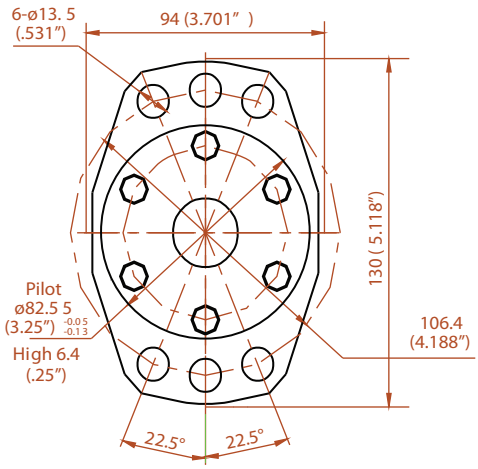
FLANGE A



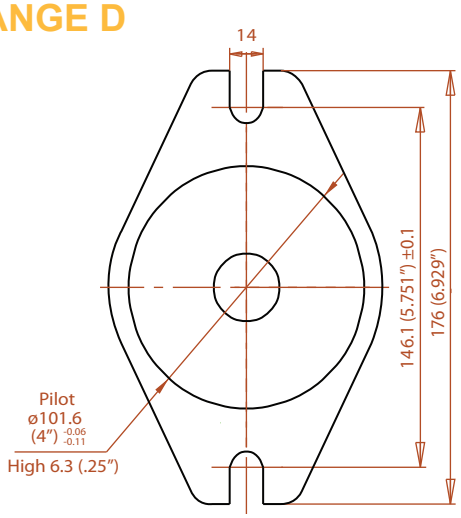
FLANGE B



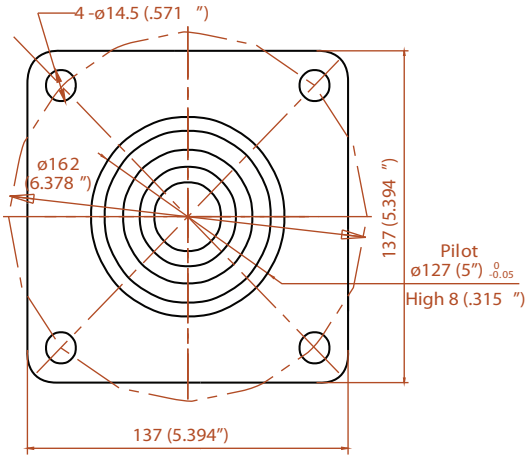
FLANGE C



FLANGE D

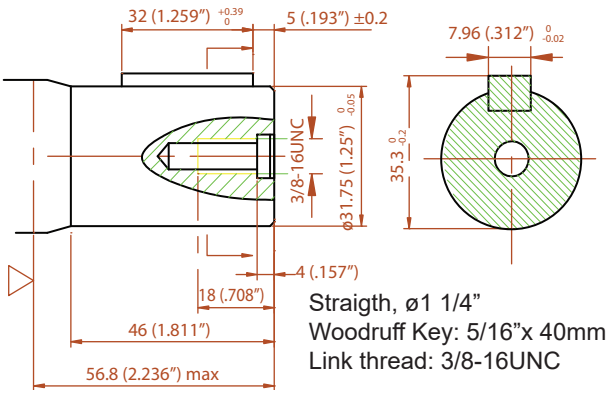


FLANGE I



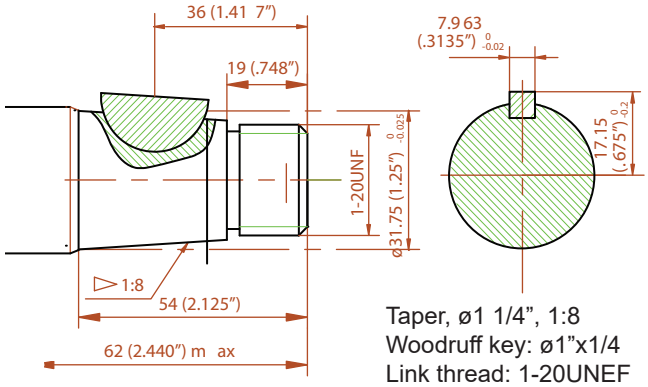
OUTPUT SHAFT

SHAFT C



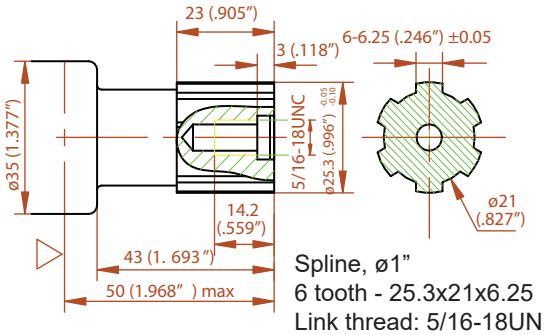
Straigth, ø1 1/4”
Woodruff Key: 5/16”x 40mm
Link thread: 3/8-16UNC

SHAFT D



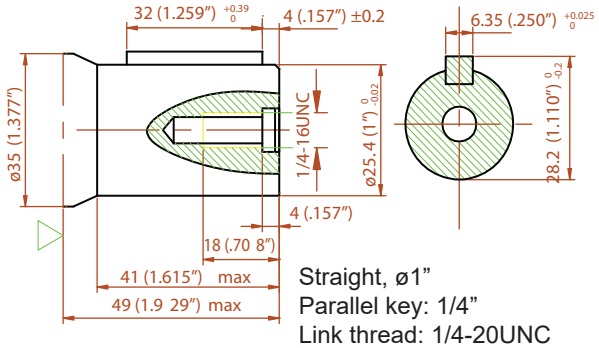
Taper, ø1 1/4”, 1:8
Woodruff key: ø1”x1/4
Link thread: 1-20UNEF

SHAFT E



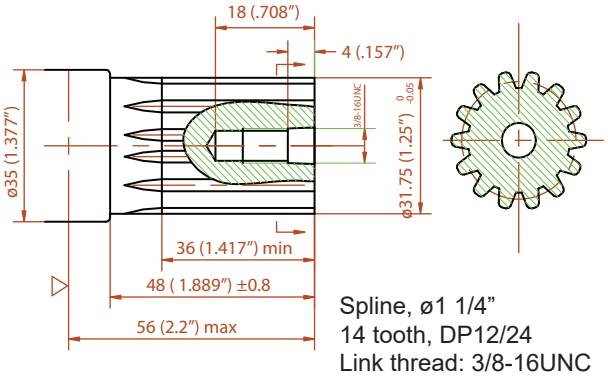
Spline, ø1”
6 tooth - 25.3x21x6.25
Link thread: 5/16-18UNF

SHAFT H



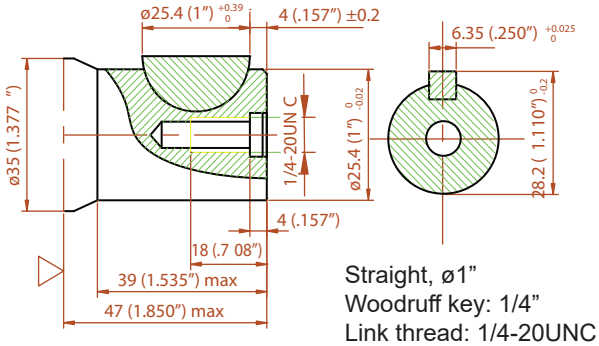
Straight, ø1”
Parallel key: 1/4”
Link thread: 1/4-20UNC

SHAFT I



Spline, ø1 1/4”
14 tooth, DP12/24
Link thread: 3/8-16UNC

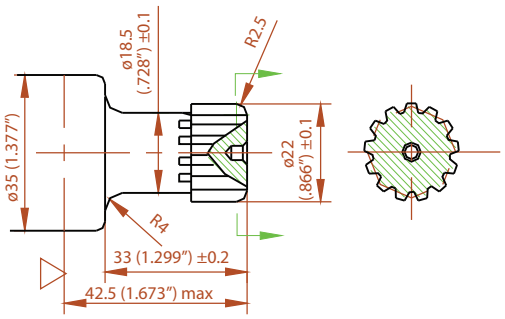
SHAFT J



Straight, ø1”
Woodruff key: 1/4”
Link thread: 1/4-20UNC

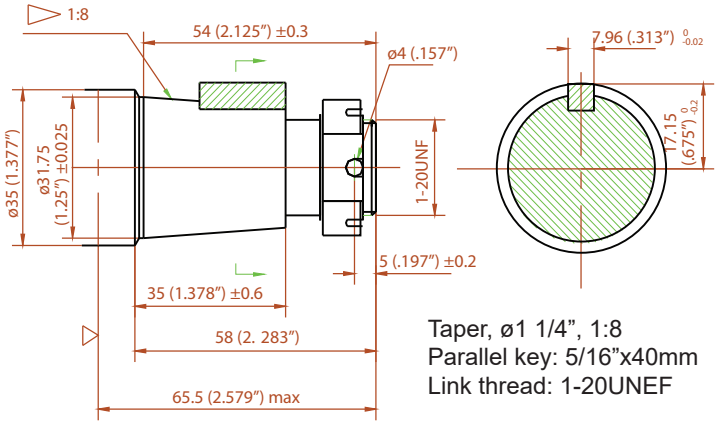
SHAFT TYPE

SHAFT M



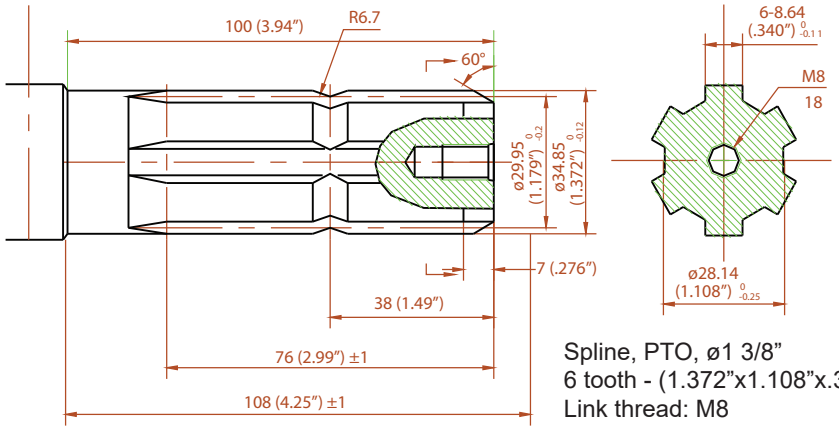
Spline, ø7/8"
13 tooth - DP16/32

SHAFT O



Taper, ø1 1/4", 1:8
Parallel key: 5/16"x40mm
Link thread: 1-20UNEF

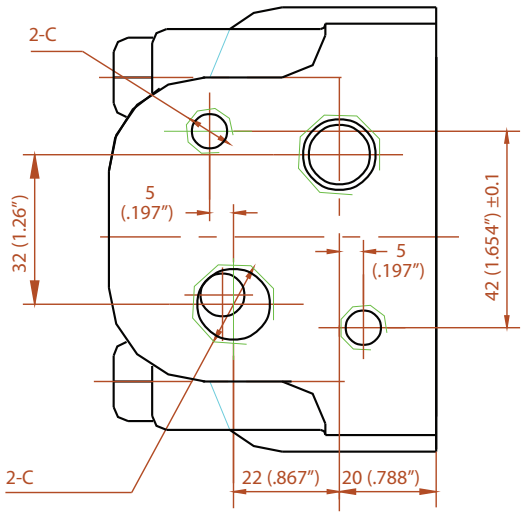
SHAFT P



Spline, PTO, ø1 3/8"
6 tooth - (1.372"x1.108"x.340")
Link thread: M8

BACK HOUSING

BACK HOUSING B



Choose an option for each category

BM5 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

A - Standard **B** - Wheel Motor

DISPLACEMENT (CC)

A - 80 **B -** 100 **C -** 125 **D -** 160

E - 200 **F -** 305 **G -** 400 **H -** 500

MOUNTING FLANGE

A - Rhombus, SAE-A 2 bolt (ø3.250" pilot) x 0.250", ø0.531" holes (2), 4.188" bolt center

B - Square, SAE-A 4 bolt (ø3.250" pilot) x 0.250", ø0.531" holes (4), 4.188" bolt center

C - Magneto, SAE-A 2/4 bolt (ø3.250" pilot) x 0.250", ø0.531" holes (2), 4.188" bolt center

D - Rhombus, SAE-B 2 bolt (ø4.000"pilot) 0,250", ø0.550" holes (2), 5.750" bolt center

I - Wheel, ø3.250" pilot on front, ø5.000" pilot on back ø0.531" holes (4), 5.81" bolt center

OUTPUT SHAFT

C - Straight ø1 1/4", Parallel key, Link thread: 5/8-18UNF

D - Taper ø1 1/4", 1:8, Woodruff key, 1-20UNEF Link thread

E - Spline: ø1", 6 tooth, 5/16-18UNC Link thread

H - Straight ø1", Parallel key, 1/4-20UNC Link thread

I - Spline ø1 1/4", 14 tooth, DP12/24, Link thread: 5/8-18UNF

J - Straight ø1", Woodruff key, 1/4-20UNC Link thread

M - Spline ø7/8", 13 tooth

O - Taper ø1 1/4", 1:8, Parallel key, 1-20UNEF Link thread

P - Spline tractor PTO, ø1 3/8", 6 tooth, M8 Link thread

BACK HOUSING

A - No link thread **B-** Link thread

PORTS

D - SAE-10 **F -** SAE-12

LINK THREAD ON PORT SURFACE

A - None **C** - 3/8-16UNC (2)

DRAIN PORT

A - None **D -** SAE-04 Add -**HPSS** - High pressure shaft seal (2900 psi)

Order example: BM5WHDACAADA

Other configuration and/or mounting types are available upon request.

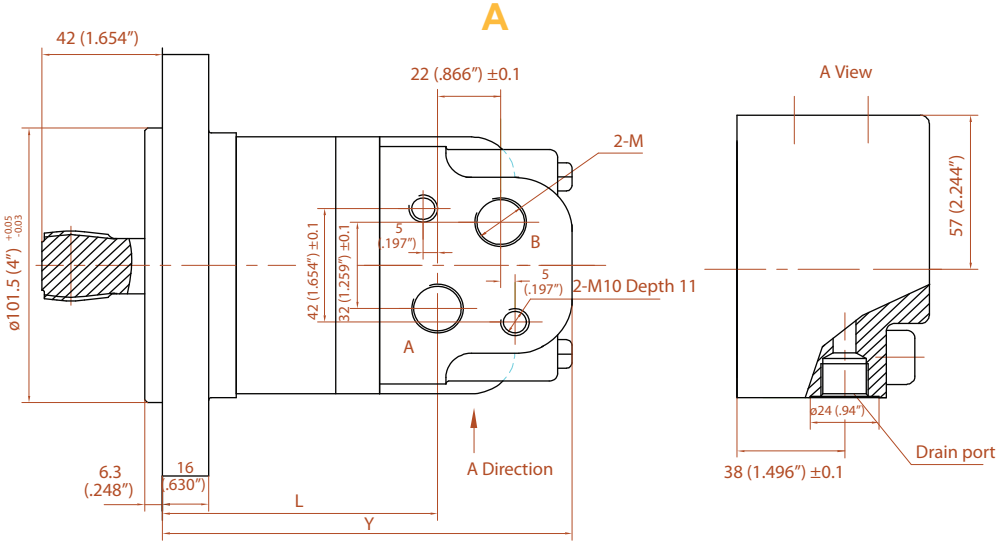
The BM5S is the bearingless motor of BM5 family, large volume disc valve, high pressure motor.

CHARACTERISTIC FEATURES

- Advanced design in disc distributing flow, wihch can provide better performance at low speed.
- The valve can automatically compensate for wear, so a higher volumetric efficiency can be obtained.

CONFIGURATION

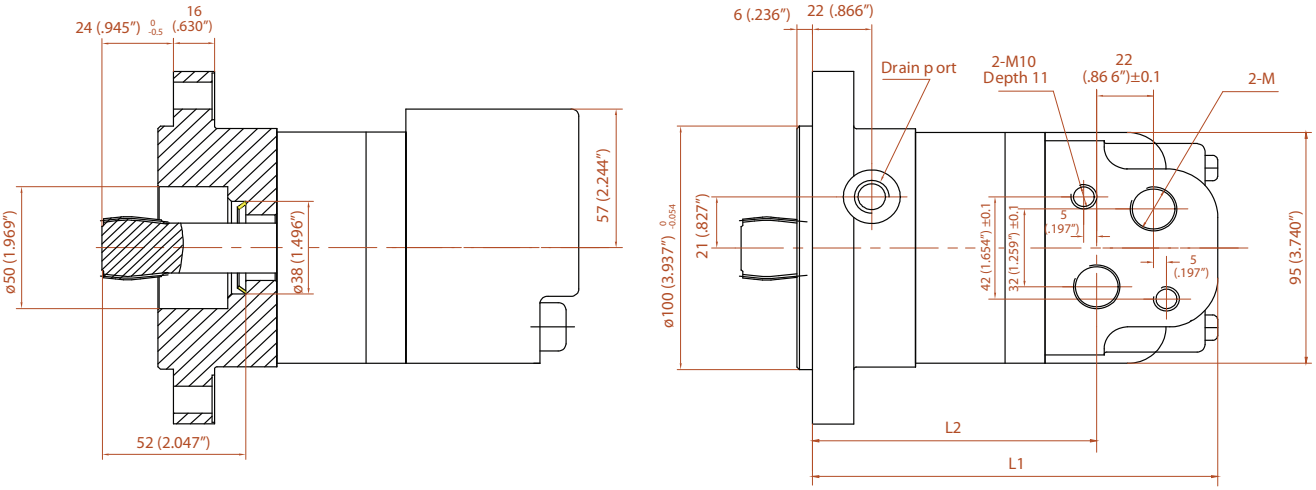
A



Displacement	80	100	160	200	250	280	305	400	500
Y	123.5	125.5	138	146	155	160.2	164	181	199
	4.862	4.980	5.433	5.748	6.102	6.307	6.457	7.126	7.835
L	75.5	78.5	90	98	107	112.2	116	123	151
	2.972	3.091	3.543	3.858	4.213	4.417	4.567	4.843	5.945

CONFIGURATION

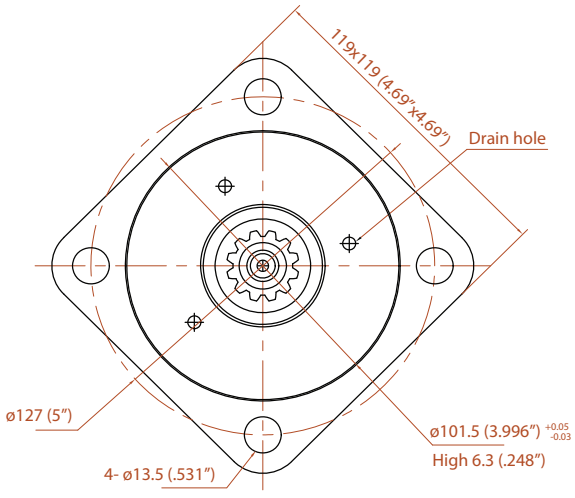
B



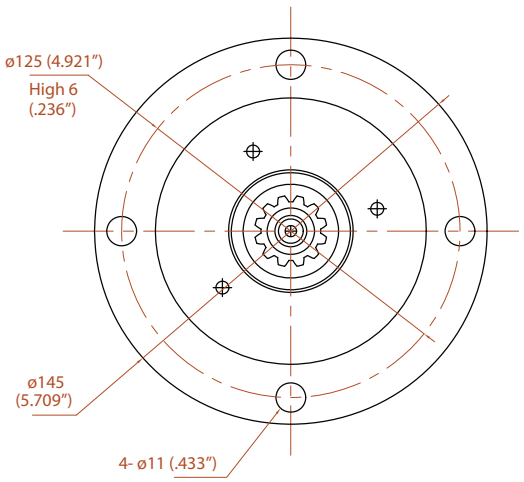
Displacement	80	100	160	200	250	280	305	400	500
L1	138	141	152.5	160.5	169.5	174.5	178.5	195.5	213.5
	5.433	5.551	6.004	6.319	6.673	6.870	7.028	7.697	8.406
L2	90	93	104.5	112.5	121.5	126.5	130.5	137.5	165.5
	3.543	3.661	4.114	4.429	4.783	4.980	5.138	5.413	6.516

MOUNTING FLANGE

FLANGE A

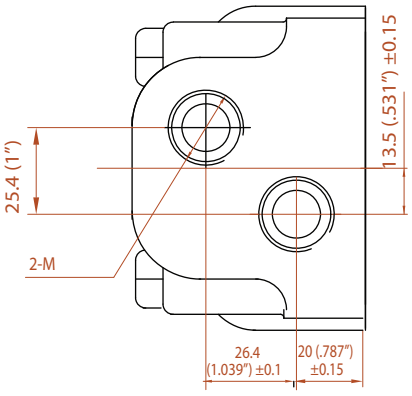


FLANGE B

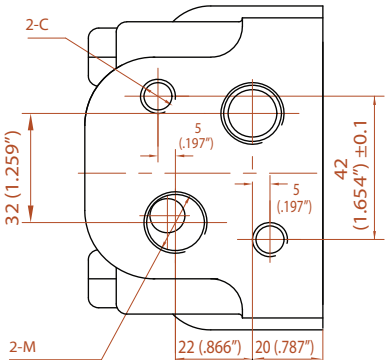


BACK HOUSING

A



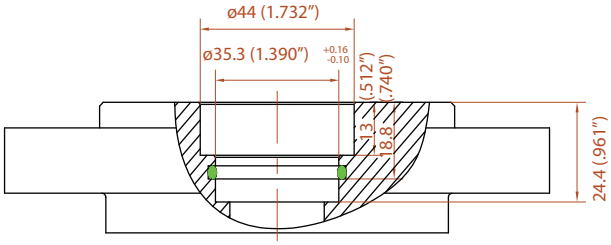
B



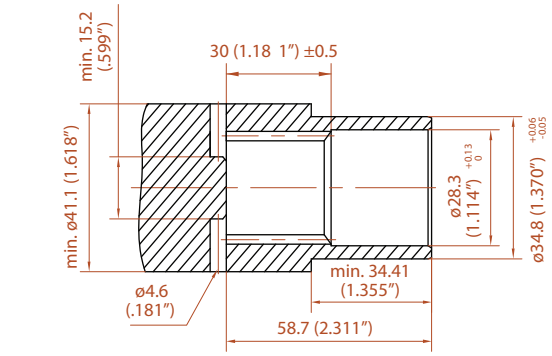
OUTPUT SHAFT

A

Pich	12/24
Pressure angle	30°
Number of teeth	12
Pich diameter	ø25.4 (1")
Major diameter	Ø26.6 $^{+0.20}_{0}$ (1.047 $^{+0.008}_{0}$)
Minor diameter	Ø2 $^{+0.20}_{0}$ (0.866 $^{+0.008}_{0}$)
Tooth thickness	4.3 $^{-0.124}_{-0.162}$ (0170 $^{-0.005}_{-0.006}$)
Pin diameter	ø3.087 (0.122")
Measurement between pins	30.1 $^{+0.118}_{+0.064}$ (1.185 $^{+0.005}_{+0.003}$)

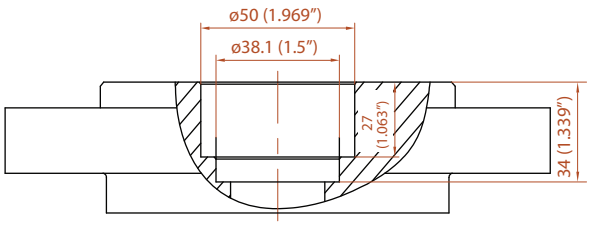


Dimensions of the attached component

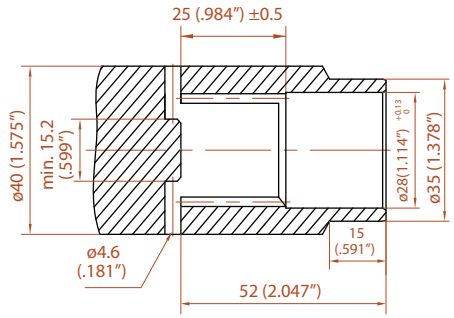


B

Pich	12/24
Pressure angle	30°
Number of teeth	12
Pich diameter	ø25.4 (1")
Major diameter	Ø26.6 $^{+0.20}_{0}$ (1.047 $^{+0.008}_{0}$)
Minor diameter	Ø2 $^{+0.20}_{0}$ (0.866 $^{+0.008}_{0}$)
Tooth thickness	4.3 $^{-0.124}_{-0.162}$ (0170 $^{-0.005}_{-0.006}$)
Pin diameter	ø3.087 (0.122")
Measurement between pins	30.1 $^{+0.118}_{+0.064}$ (1.185 $^{+0.005}_{+0.003}$)



Dimensions of the attached component



Choose an option for each category

BM5S [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

A - Refer to drawing **B** - Refer to drawing

DISPLACEMENT (CC)

A - 80 **B** - 100 **C** - 125 **D** - 160

E - 200 **F** - 305 **G** - 400 **H** - 500

MOUNTING FLANGE

A - Configuration A, Square, SAE-B 4 bolt (ø4.000" pilot) ø0.531" holes (4), 5.000" bolt circle

B - Configuration B, Circular, ø100mm pilot, ø11mm holes (4), 125mm bolt circle

OUTPUT SHAFT

A - Refer to configuration A **B** - Refer to configuration B

BACK HOUSING

A- No Link thread **B** - Link thread

PORTS

D - SAE-16

LINK THREAD ON PORT SURFACE

A - None **C** - 3/8-16UNC (2)

DRAIN PORT

D - SAE-04

Order example: BM5SBCBBAABA

Other configuration and/or mounting types are available upon request.

The BM6 is a large volume, disc valve, hight pressure motor with a radial ball-bearings design and can bear greater load and has higher torque rating than our BM5.

CHARACTERISTIC FEATURES

- The motor can be used in high pressure, so it's max. torque is higher than our BM5.
- Advanced design in disc distribution flow, wich provides improved performance at low speed.
- The valve can automatically compensate for wear, so the volumetric efficiency is higher.
- Double taper roller bearings permit high radial loads. The motors can be used on heavier vehicles in traction drive applications.

Main specifications

Displacement per revolution	cm3 (cc)	195	245	310	395	490	625	800	985
	in3	11.8	14.9	18.9	24.0	29.8	38.1	48.7	60.0
Flow (GPM)	Cont.	40	40	40	40	40	40	40	40
	Int.	45	55	60	60	60	60	60	60
Speed (RPM)	Cont.	775	615	485	383	307	241	184	153
	Int.	866	834	689	563	454	355	276	230
Pressure (PSI)	Cont.	2975	2975	2975	2975	2450	2030	1740	1740
	Int.	4500	4500	4500	4500	3990	2465	2030	2030
Torque (in-lbs)	Cont.	5083	6497	8212	10051	10723	11731	12483	13852
	Int.	7602	10440	11934	14453	16619	12155	14551	16540

Notes
1. **Continuous: Motor can run continuously at these ratings.**
2. **Intermittent: Intermittent operation, 10% of every minute.**
3. **A simultaneous maximum rpm and pressure is not recommended.**
4. **Conversion factors available on page 3.**
5. **The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.**

BM6-195

ΔP (PSI)

Flow (GPM)	508	1015	1530	2030	2465	2980	3480	3990	4495
4	707 77	1547 75	2396 72	3235 66	4013 63	4606 45	5207 32	5781 18	-
8	760 154	1582 149	2422 145	3280 131	4102 120	4818 117	5534 100	6223 83	6886 66
12	751 232	1591 228	2466 223	3306 214	4208 204	4995 188	5781 170	6639 149	7293 119
16	698 305	152 301	2475 298	3324 288	4199 281	5074 256	5870 234	6718 212	7470 180
20	707 383	1582 378	2484 372	3359 364	4243 254	5074 331	5932 304	6798 279	7602 245
24	707 461	1538 455	2422 449	3315 438	4190 429	5083 411	5914 387	6807 362	-
28	654 539	1556 532	2396 525	3315 513	4190 502	5039 475	5914 448	6807 420	-
32	619 618	1494 610	2378 603	3262 591	4155 576	5039 542	5923 511	6745 480	-
36	619 693	1441 685	2334 675	3218 661	4111 646	4995 601	5870 565	6745 528	-
40	619 772	1450 761	2307 747	3218 735	4119 719	4942 668	5834 626	-	-
45	575 868	1423 856	2290 846	3182 827	4075 810	4906 750	5790 703	-	-

Torque 5790 In-lbs
Speed 703 rpm

BM6-245

ΔP (PSI)

Flow (GPM)	508	1015	1530	2030	2465	2980	3480	3990	4495
4	937 61	2007 57	3059 55	4075 48	5101 42	5684 39	6639 30	7541 12	8486 6
8	972 121	2095 117	3129 114	4199 105	5269 96	6197 82	7072 68	8000 48	8999 35
12	972 184	2077 181	3182 177	4261 167	5366 158	6374 142	7426 124	8442 108	9503 91
16	990 242	2086 238	3182 234	4305 226	5401 219	6453 201	7461 183	8486 162	10440 143
20	928 305	2051 300	3129 296	4287 286	5428 276	6497 255	7541 237	8663 216	9724 196
24	919 364	2042 360	3147 356	4261 347	5410 337	6497 313	7611 289	8654 270	-
28	902 426	2007 421	3112 416	4270 403	5401 375	6480 355	7558 335	8663 320	-
32	804 489	1909 481	3059 474	4155 461	5304 447	6409 422	7514 395	8619 370	-
36	707 551	1856 545	2953 538	4066 525	5127 511	6276 481	7426 455	-	-
40	707 689	1786 683	2917 675	4031 686	5127 641	6188 607	7072 572	-	-
50	-	1724 759	2793 750	3898 732	4906 711	5923 676	-	-	-
60	-	1866 835	2749 825	3810 805	4871 784	5879 743	-	-	-

BM6-310

ΔP (PSI)

Flow (GPM)	508	1015	1530	2030	2465	2980	3480	3990	4495
4	1202 47	2581 45	3810 42	5065 38	6047 32	7081 24	8257 17	9017 10	9459 3
8	1238 96	2652 93	3987 88	5269 82	6471 74	7691 64	8707 55	9724 44	10917 32
12	1238 144	2705 141	4075 136	5410 130	6718 121	8036 111	9238 100	10431 89	11757 76
16	1238 191	2670 187	4084 183	5437 177	6816 166	8133 153	9370 139	10608 123	11934 108
20	1193 240	2617 235	4040 231	5454 225	6824 215	8177 199	9503 181	10785 165	-
24	1149 288	2617 282	4031 278	5428 273	6842 260	8212 248	9530 232	10838 215	-
28	1149 336	2564 333	3978 327	5384 320	6789 308	8204 295	9485 276	10785 257	-
32	1105 384	2519 381	3925 375	5304 367	6745 354	8115 341	9370 320	-	-
36	1061 431	2440 422	3837 417	5216 411	6612 397	8062 384	9282 361	-	-
40	1017 479	2396 467	3748 462	5110 457	6568 442	7974 428	9149 404	-	-
50	972 598	2166 583	3395 577	4623 571	6029 552	7390- 535	-	-	-
60	-	1945 698	3218 691	4535 684	5719 661	7037- 641	-	-	-

BM6-395

ΔP (PSI)

Flow (GPM)	508	1015	1530	2030	2465	2980	3480	3990	4495
4	1662 37	3342 36	4977 34	6568 32	8159 28	9574 21	11280 13	12120 5	14453 1
8	1662 76	3386 74	5110 72	6745 68	8425 65	10051 55	11633 44	12871 32	14453 20
12	1662 115	3430 112	5154 109	6833 105	8557 100	10184 91	11854 81	13614 78	-
16	1618 152	3386 149	5154 145	6833 142	8557 130	10219 124	11890 114	-	-
20	1618 191	3386 187	5154 185	6878 180	8601 173	10263 160	11987 150	-	-
24	1529 228	3297 228	5065 224	6789 219	8557 211	10219 203	-	-	-
28	1485 267	3253 265	5021 260	6745 254	8513 247	10175 235	-	-	-
32	1441 305	3165 303	4933 298	6657 691	8371 681	10131 268	-	-	-
36	1397 346	3032 340	4844 336	6480 329	6480 317	9998 301	-	-	-
40	1353 386	2900 380	4756 375	6480 368	8106 359	-	-	-	-
50	1176 482	2679 475	4579 469	6480 460	8071 449	-	-	-	-
60	-	2502 569	4438 561	6374 551	7876 537	-	-	-	-

CONT.	INT.

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

BM6-490

ΔP (PSI)

Flow (GPM)	508	1015	1530	2030	2465	2973	3480	3988
4	207730	429629	640928	850427	1056425	1244721	1452417	1661912
8	207761	429660	648958	860155	1072351	1274745	1485138	-
12	207792	428790	648088	861085	1076780	1281872	-	-
16	206912	424320	643617	860113	1075808	1287199	-	-
20	198915	415549	639146	859243	1075838	-	-	-
24	194584	414681	635680	855776	1069671	-	-	-
28	184814	405811	625908	846004	1065298	-	-	-
32	171524	396041	618837	837132	1060826	-	-	-
36	154727	382873	603866	828360	1034355	-	-	-
40	141407	373904	594996	810691	1012285	-	-	-
50	114983	321880	519865	757662	-	-	-	-
60	-	285554	482742	707235	-	-	-	-

BM6-625

ΔP (PSI)

Flow (GPM)	508	725	1015	1233	1523	1740	2030	2465
4	243124	375724	503923	626822	750521	843318	939716	1052015
8	260845	397844	533944	666543	815942	966239	1120037	1197836
12	260873	396072	538472	675471	811569	992767	1173165	1215564
16	251993	393492	533991	671090	808088	988386	1169584	1211182
20	247511	388111	525117	666116	808011	988312	1170412	1212810
24	233414	379242	517140	657739	799138	979535	1164232	1206731
28	225416	366066	507465	648964	789462	975159	1159856	1202253
32	212192	353690	494288	635687	776285	961882	1146579	1189076
36	194521	335014	476513	617012	754110	925507	-	-
40	176824	318240	458839	600238	736437	894634		-
50	-	274098	414660	556060	696690	-	-	-
60	-	224535	380142	519842	655945	-	-	-

BM6-800

ΔP (PSI)

Flow (GPM)	508	725	1015	1233	1523	1740	2030
4	383718	536617	740817	899916	1094415	1217314	1455113
8	370436	349235	732035	886734	1094433	1248231	1419729
12	335056	498656	701955	857555	1049353	1200551	-
16	299774	458873	670171	828370	1031669	-	-
20	286493	440292	643690	792989	1003387	-	-
24	277711	743710	617109	757608	951205	-	-
28	273212	396012	572827	704525	898123	-	-
32	246614	370414	537545	659543	-	-	-
36	237816	351815	483565	614464	-	-	-
40	220118	307616	439382	557880	-	-	-
50	-	264330	387228	509225	-	-	-
60	-	-	334227	456173	-	-	-

BM6-985

ΔP (PSI)

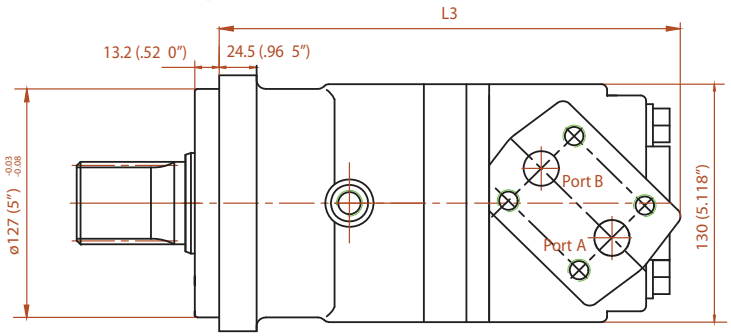
Flow (GPM)	508	725	1015	1233	1523	1740	2030
4	427915	684215	852214	1063514	1275613	1385213	1578812
8	436730	662130	878729	1090028	1305727	1447126	1654025
12	436745	662145	884044	1103243	1318942	1499341	-
16	432361	653361	879660	1098859	1323358	-	-
20	419977	645376	869076	1090075	1309274	-	-
24	406692	622392	847891	1075890	1295989	-	-
28	392507	618807	838906	1058105	1278303	-	-
32	375707	595822	815921	1021920	-	-	-
36	348307	570238	789437	990135	-	-	-
40	322753	538452	763851	954750	-	-	-
50	287391	517190	732889	925588	-	-	-
60	-	464123	715229	901726	-	-	-

CONT.	INT.

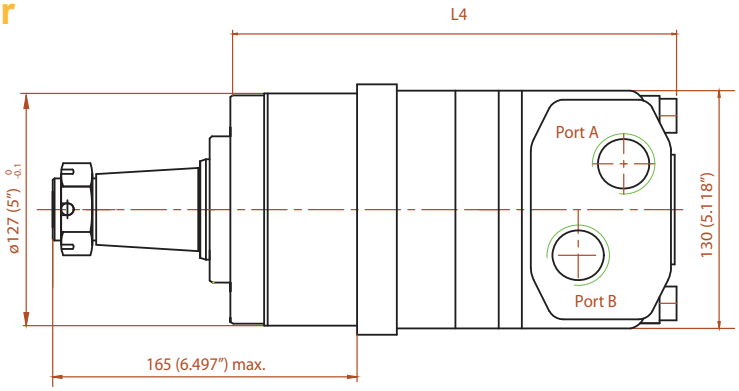
All the datas were tested at 50°C with anti-wear hydraulic oil.
Actual data may vary slightly from different units in production.

Configuration

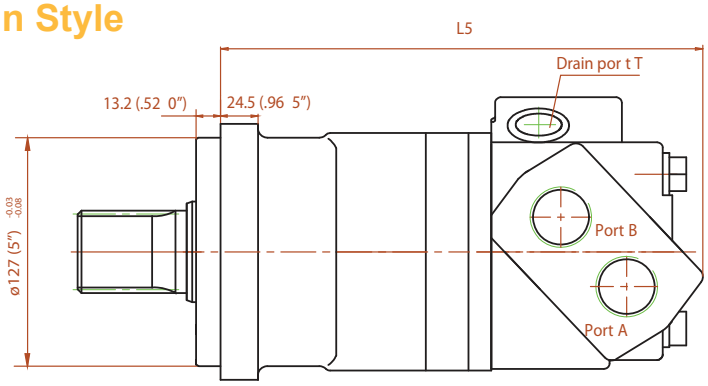
C - Rhombus Back Housing



D - Wheel Motor



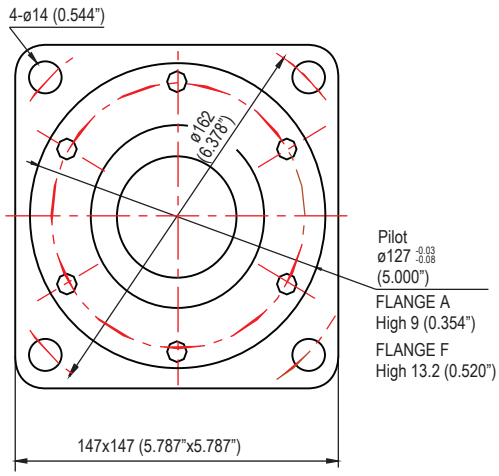
E - Internal Drain Style



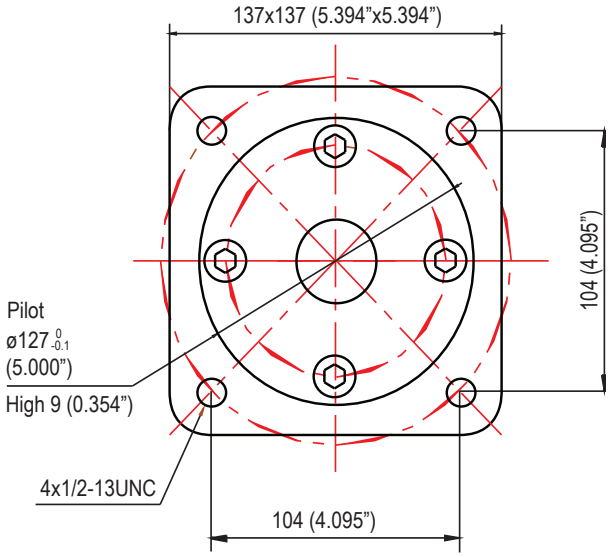
Displacement	195		245		310		395		490		625		800		985	
L1	230	9.055	25.5	1.004	243	9.961	263	10.354	263	10.354	277	10.906	298	11.732	317	12.480
L2	245	9.646	250.5	9.862	257.7	10.146	268	10.551	277.5	10.925	292	11.496	313	12.323	332	13.071
L3	258	10.157	263	10.354	270	10.630	280	11.024	290	11.417	305	12.008	326	12.835	345	13.583
L4	254.7	10.028	260.3	10.248	267.6	10.535	276.4	10.882	287.4	11.315	302.1	11.894	323	12.717	341.8	13.457
L5	266	10.472	271	10.669	278	10.945	288	11.339	298	11.732	313	12.323	333	13.110	352	13.858

MOUNTING FLANGE

FLANGE A & F

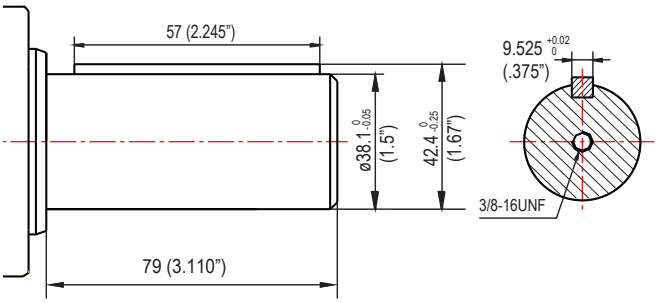


FLANGE D



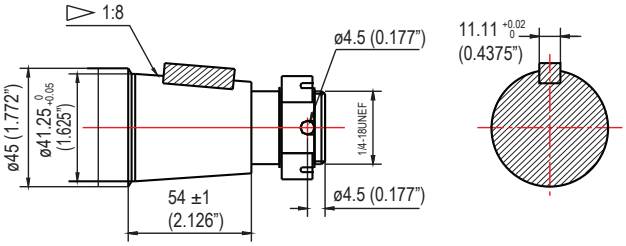
OUTPUT SHAFT

SHAFT A



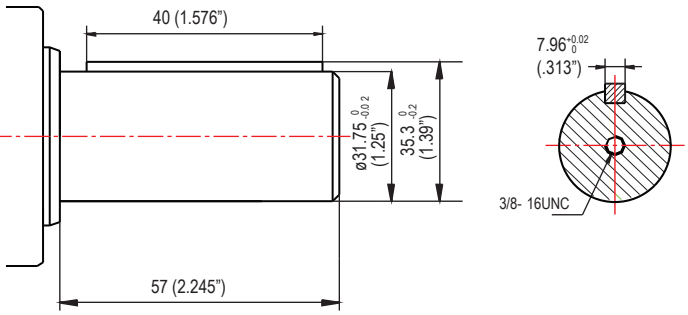
Straight, ø1 1/2"
Parallel key: 3/8"x57mm

SHAFT D



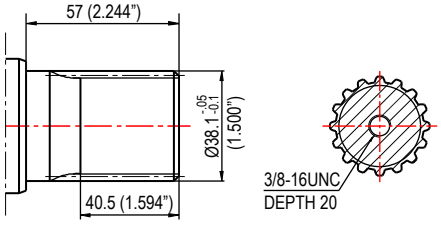
Taper, ø1 3/4", 1:8
Parallel key: 7/16"x32mm
Link thread: 1 1/4-18UNEF

SHAFT G



Straight, ø1 1/4"
Parallel key: 5/16"x40mm

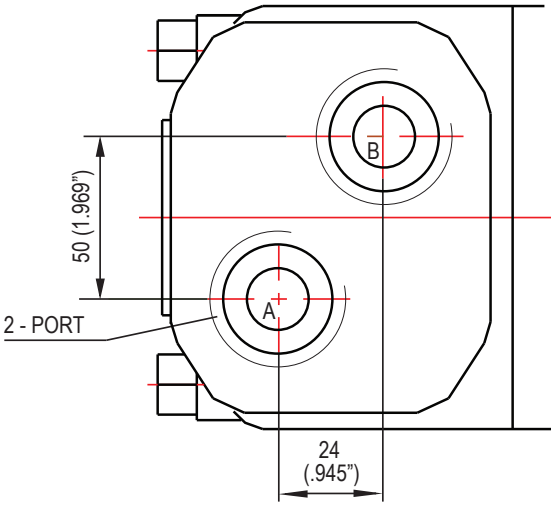
SHAFT R



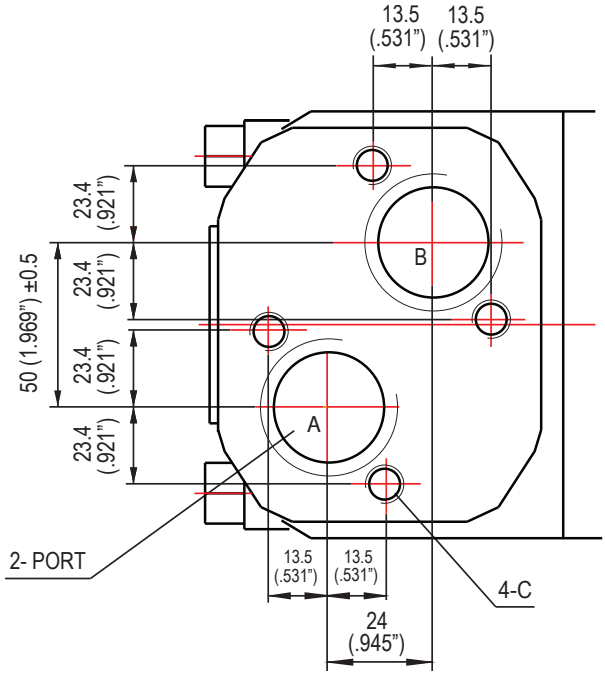
Spline, ø1 1/2"
17 tooth - DP12/24
Link thread: 3/8-16UNC

BACK HOUSING

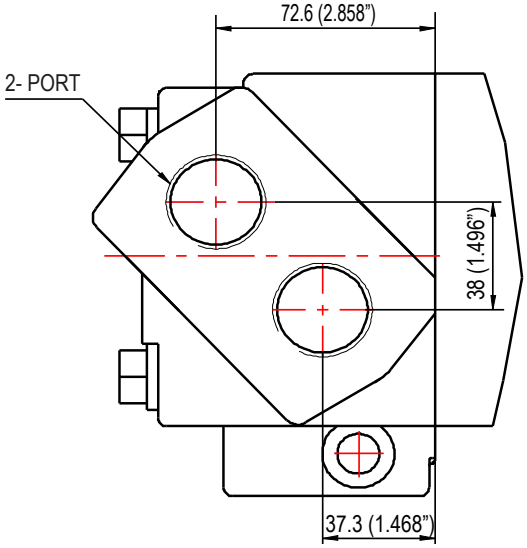
BACK HOUSING A



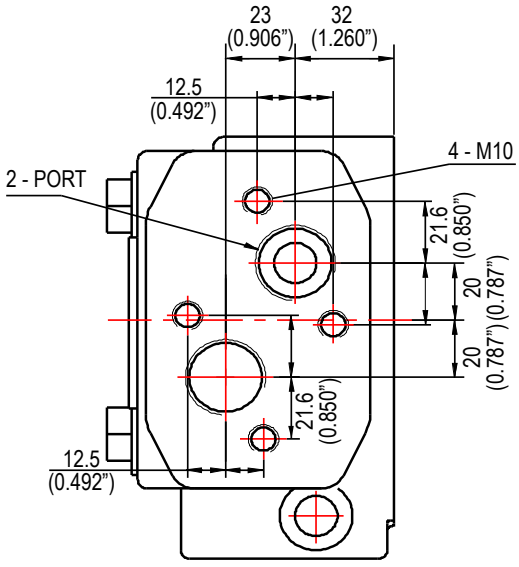
BACK HOUSING B



BACK HOUSING G



BACK HOUSING H



Choose an option for each category

BM6 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

CONFIGURATION

C - Drain on housing

D - Wheel Motor Type

E - Drain on back cover

DISPLACEMENT (CC)

A - 195 **B** - 245 **C** - 310 **D** - 395

E - 490 **F** - 625 **G** - 800 **H** - 985

MOUNTING FLANGE

A - Square, SAE-C 4 bolt (ø5.000" pilot) x 0.350" ø0.570" holes (4), 6.375" bolt circle

D - Square, SAE-C 4 bolt (ø5.000" pilot) x 0.520" ø0.570" holes (4), 6.375" bolt circle

F - Wheel square, 4 bolt (ø5.000" pilot) x 0.350", 1/2-13UNC thread (4), 4.095 bolt center

OUTPUT SHAFT

A - Straight, ø1 1/2", Parallel key, 3/8-16UNC Link thread

D - Taper, ø1 3/4", 1:8, Parallel key, 1 1/4-18UNEF Link thread

G - Straight, ø1 1/4", Parallel key, 3/8-16UNC Link thread

R - Spline, ø1 1/2", 17 tooth, 3/8-16UNC Link thread

BACK HOUSING

A - No Link thread **B** - Link thread

G - No Link thread, Drain **H** - Link thread, Drain

OIL PORT

D - SAE-12 **F** - SAE-16

LINK THREAD ON PORT SURFACE

A - None **B** - M12 **C** - M10

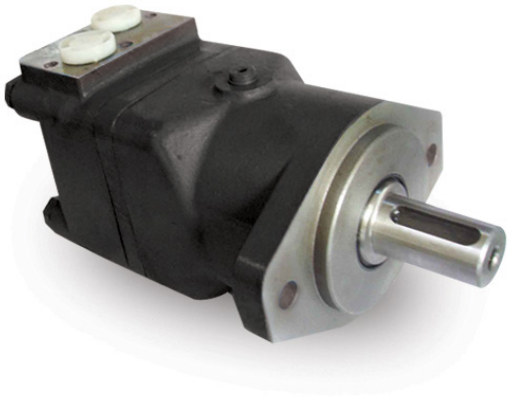
DRAIN PORT

A - None **D** - SAE-04

Order example: BM6CAADCACD

Other configuration and/or mounting types are available upon request.

The BMT is a large volume disc valve, high pressure motor, with radial ball-bearings design, and can bear greater load.



CHARACTERISTIC FEATURES

- The motor can be used in high pressure and high torque
- Advanced design in disc distribution flow,which can provide improved performance at low speed.
- The valve can automatically compensate for the wear, so the volumetric efficiency is high.
- Double taper roller bearings permit high radial loads. The motors can be used on heavier vehicles in traction drive applications.

Main Specifications

Displacement per revolution	cm3 (cc)	250	315	400	500	630	800
	in3	15.2	19.2	24.3	30.4	38.4	48.7
Flow (GPM)	Cont.	33	33	33	33	33	33
	Int.	40	40	40	40	40	40
Speed (RPM)	Cont.	495	380	302	237	196	154
	Int.	592	458	364	284	233	185
Pressure (PSI)	Cont.	2900	2900	2600	2320	2030	1812
	Int.	3480	3480	3045	2610	2320	1885
Torque (in-lbs)	Cont.	6435	8515	9691	11020	11665	12958
	Int.	7860	10214	11231	12471	13258	13453

Notes
1. **Continuous: Motor can run continuously at these ratings.**
2. **Intermittent: Intermittent operation, 10% of every minute.**
3. **A simultaneous maximum rpm and pressure is not recommended.**
4. **Conversion factors available on page 3.**
5. **The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.**

BMT-250 (cc)

Flow (GPM) \ ΔP (PSI)	580	1160	1450	1740	2610	2900	3480
3	1221 38	2531 38	3142 37	3708 36	4948 34	6098 32	7293 31
5	1265 76	2620 75	3222 74	3824 72	5133 70	6266 67	7550 62
11	1230 156	2664 154	3292 152	3894 149	5249 146	6399 142	7824 134
16	1168 237	2602 236	3292 233	3903 229	5240 224	6434 219	7859 207
21	1133 317	2505 316	3222 314	3832 308	5195 303	6381 299	7851 284
26	1115 396	2496 394	3142 391	3779 387	5151 381	6337 373	7780 359
33	1027 495	2301 492	3009 488	3664 483	5027 476	6222 469	7647 454
40	779 592	2142 589	2832 585	3514 580	4885 572	6072 565	7497 545

BMT-315 (cc)

Flow (GPM) \ ΔP (PSI)	580	1160	1450	1740	2610	2900	3480
3	1629 30	3213 29	4009 28	4824 27	6496 26	7886 25	9399 23
5	1673 60	3363 59	4178 58	4974 56	6700 54	8116 52	9815 50
11	1690 121	3372 120	4284 118	5045 115	6850 112	8444 109	10170 104
16	1673 183	3328 181	4363 179	5071 175	6833 172	8514 168	10214 158
21	1584 244	3266 242	4240 239	5001 236	6797 231	8444 227	10205 217
26	1496 305	3160 304	4133 301	4974 298	6709 294	8337 289	10116 276
33	1301 380	2974 378	3956 375	4815 371	6594 367	8143 362	9975 349
40	1053 458	2815 456	3824 453	4655 449	6311 444	7913 431	9709 425

Torque 6311 In-lbs
Speed 444 rpm

BMT-400

Flow (GPM) \ ΔP (PSI)	435	870	1305	1740	2175	2610	3045
3	1558 24	3248 23	4956 22	6328 21	7833 20	9293 19	10701 18
5	1584 49	3275 48	5001 47	6426 44	7957 42	9479 40	10931 38
11	1558 96	3275 95	5018 93	6488 90	8125 87	9656 83	11178 79
16	1540 145	3195 143	4983 139	6452 135	8143 131	9700 127	11232 121
21	1469 193	3124 191	4894 188	6364 184	8072 180	9594 176	11178 170
26	1328 242	3000 240	4762 238	6266 234	7930 228	9444 224	11081 218
33	1195 302	2735 300	4638 298	6089 294	7718 289	9249 285	10807 278
40	1115 364	2584 362	4496 358	5895 354	7532 350	9028 346	10594 339

BMT-500

Flow (GPM) \ ΔP (PSI)	435	870	1305	1740	2030	2610	2935
3	1965 18	3992 18	6134 18	7895 17	9293 16	10559 15	11860 13
5	2045 37	4107 36	6319 35	8125 34	9470 33	10798 32	12187 30
11	2036 75	4124 74	6434 73	8329 72	9683 70	11010 68	12586 64
16	1991 113	4045 112	6319 111	8329 109	9630 107	11019 105	12471 64
21	1885 151	3815 150	6160 149	8205 147	9523 145	11010 143	12400 138
26	1717 189	3717 188	6019 187	7975 185	9408 183	10833 181	12241 177
33	1611 237	3523 236	5673 235	7762 233	9063 231	10612 229	11966 225
40	1301 284	3266 283	5470 282	7550 280	8886 278	10329 276	11727 272

CONT.	INT.

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

BMT-630

ΔP (PSI)

Flow (GPM)	435	870	1305	1520	1740	2030	2610
3	2062 14	4602 14	7036 13	7983 13	9506 13	10568 11	12064 11
5	2098 28	4903 27	7408 27	8435 26	9886 26	10966 24	12453 22
11	2115 62	4894 62	7612 61	8736 60	10364 59	11577 56	13126 54
16	1974 94	4815 94	7629 92	8656 91	10373 90	11665 86	13258 82
21	1947 123	4753 122	7559 121	8541 119	10373 118	11630 114	13250 110
26	1841 156	4620 155	7364 153	8364 152	10231 150	11533 147	13170 142
33	1779 196	4417 196	7169 194	8240 192	10063 191	11435 187	13028 183
40	1540 233	4355 232	6948 231	8152 230	9922 227	11302 223	12869 217

BMT-800

ΔP (PSI)

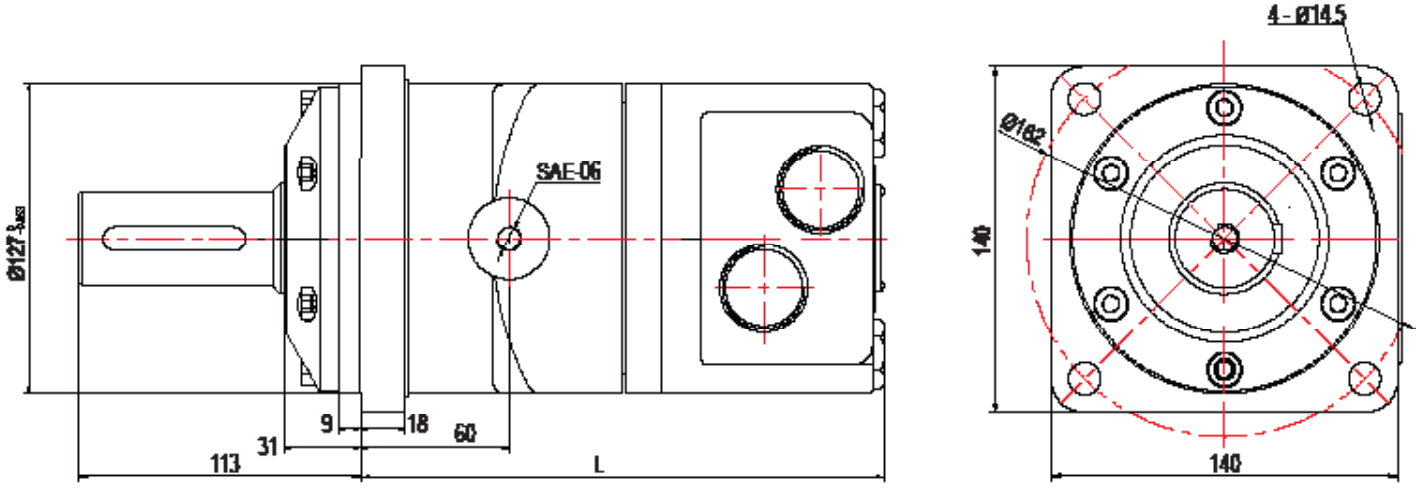
Flow (GPM)	435	870	1305	1520	1815	1885
3	3062 12	5992 12	8877 11	10258 11	12081 11	12303 10
5	3151 24	6125 24	9152 24	10470 23	12426 22	12904 18
11	3231 50	6222 50	9435 49	10940 48	12913 46	13418 40
16	3133 74	6222 73	9382 71	10948 71	12957 68	13453 63
21	2938 99	6072 98	9293 98	10851 96	12940 93	13400 86
26	2699 125	5788 123	9072 123	10683 121	12789 118	13329 11
33	2478 154	5505 153	8753 153	10453 150	12586 149	13161 140
40	2186 185	5222 184	8435 183	10231 181	12444 179	13064 172

CONT. | INT.

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

Torque 12444 In-lbs
Speed 179 rpm

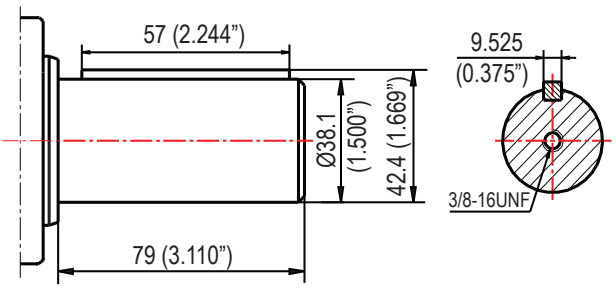
CONFIGURATION - MOUNTING FLANGE



Displacement	250		315		400		500		630		800	
L	227.5	8.956	233.5	9.192	240.5	9.458	248.5	9.783	259.5	10.216	275	10.826
L1	178	7.007	183.5	7.224	191	7.519	199	7.834	209.5	8.248	225	8.858
L2	14.7	0.578	20.3	0.799	27.5	1.082	35.5	1.397	47.4	1.866	62	2.440

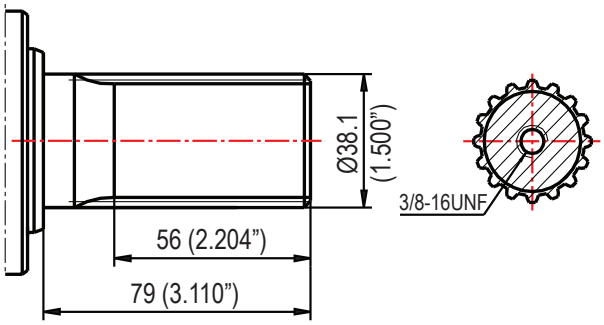
OUTPUT SHAFT

SHAFT A



Straight, ø1 1/2"
Parallel key: 3/8" x 57mm
Link thread: 3/8-16UNC

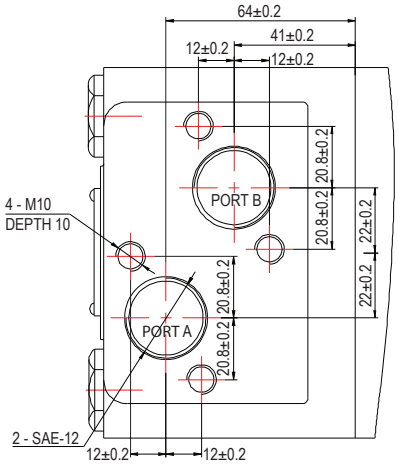
SHAFT B



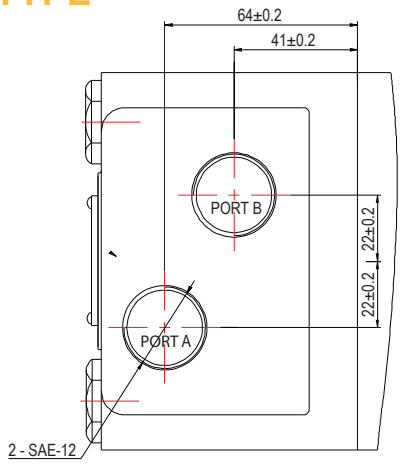
Spline: ø1 1/2"
17 tooth, DP12/21
Link thread: 3/8-16UNC

BACK HOUSING

A TYPE



B TYPE



Choose an option for each category

BMT [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

A - Standard Type

DISPLACEMENT (CC)

A - 250 **B** - 315 **C** - 400

D - 500 **E** - 630 **F** - 800

MOUNTING FLANGE

E - Square, SAE-C 4 bolt (ø5.000" pilot), ø0.570" holes (4), 6.375" bolt center

OUTPUT SHAFT

A - Straight, ø1 1/2", Parallel key, 3/8-16UNC Link thread

B - Spline, ø1 1/2", 17 tooth, 3/8-16UNC Link thread

BACK HOUSING

A - Link thread (M10) **B** - No Link thread

PORTS

D - SAE-12

LINK THREAD ON PORT SURFACE

A - NONE **D** - M10

DRAIN PORT

E - SAE-06

Order example: BMTAABCBAAB

Other configuration and/or mounting types are available upon request.

The BMV is a disc valve, high pressure motor with radial ball-bearings design and efficient performance that can bear a greater load than the BMT. Its volume is bigger than the BMT.

CHARACTERISTIC FEATURES

- The motor can be used in high pressure and high torque.
- Advanced design in disc distribution flow,which can provide improved performance at low speed.
- The valve can automatically compensate for the wear, so the volumetric efficiency is high.
- Double taper roller bearings permit high radial loads. The motors can be used on heavier vehicles in traction drive applications.

Main Specifications

Displacement per revolution	cm3 (cc)	315	400	500	630	800	1000
	in3	19.2	24.3	30.4	38.4	48.7	61.0
Flow (GPM)	Cont.	42	53	53	53	53	53
	Int.	53	63	63	63	63	63
Speed (RPM)	Cont.	510	500	400	320	250	200
	Int.	630	600	480	380	300	240
Pressure (PSI)	Cont.	3045	3045	3045	3045	3045	3045
	Int.	3625	3625	3625	3625	3625	3625
Torque (In-Lbs)	Cont.	7213	10502	13039	14869	15824	17813
	Int.	9892	12659	15611	17371	17689	20155

Notes
1. **Continuous: Motor can run continuously at these ratings.**
2. **Intermittent: Intermittent operation, 10% of every minute.**
3. **A simultaneous maximum rpm and pressure is not recommended.**
4. **Conversion factors available on page 3.**
5. **The optimum operating situation should be at the 1/3 - 2/3 of the continuous operating situation.**

BMV-315 315(cc)

ΔP (PSI)

Flow (GPM)	508	1015	1450	2030	2610	2900	3480
3	1238 30	2599 27	3890 26	5392 25	6559 23	7470 19	8840 16
5	1353 52	2776 51	4119 50	5622 49	6957 48	7912 45	9459 42
13	1317 143	2758 142	4111 140	5781 138	7205 135	8265 131	9830 125
20	1264 222	2687 220	4049 217	5675 213	7213 219	8310 204	9892 197
26	1202 289	2625 287	3996 285	5622 282	7160 279	8274 274	9795 266
33	1087 368	2528 366	3907 364	5534 361	7063 357	8142 352	9662 345
40	1008 449	2431 447	3845 445	5437 441	6966 434	8009 426	9530 414
42	946 472	2369 470	3801 467	5375 463	6895 457	7912 449	9459 436
53	725 598	2201 596	3642 592	5242 586	6701 578	7700 567	9255 546

Torque 7700 In-lbs
Speed 567 rpm

BMV-400 400(cc)

ΔP (PSI)

Flow (GPM)	508	1015	1450	2030	2610	2900	3480
3	1618 23	3403 23	5021 22	6860 20	8557 19	9733 18	11421 16
5	1733 42	3518 42	5216 41	7205 40	8928 38	10154 37	11899 35
13	1768 112	3554 111	5331 111	7443 110	9194 108	10484 106	12641 101
20	1724 177	3483 175	5269 172	7408 168	9220 165	10502 1594	12659 153
26	1520 232	3403 231	5242 229	7311 227	9158 223	10467 219	12597 212
33	1476 296	3306 294	5154 291	7213 288	9026 282	10405 275	12491 268
40	1397 358	3191 357	4942 355	7081 352	8911 347	10299 338	12288 327
46	1264 414	3059 412	4889 409	6931 405	8743 401	10122 394	12173 386
53	1043 476	2926 474	4738 470	6807 464	8566 456	9972 449	11987 440
63	725 567	2661 565	4473 561	6542 544	8336 536	9759 527	11775 517

BMV-500

ΔP (PSI)

Flow (GPM)	508	1015	1450	2030	2610	2900	3480
3	2139 19	4137 19	6153 18	8478 18	10520 17	11961 15	14206 12
5	2166 34	4429 33	6524 33	8867 32	10891 31	12323 30	14657 27
13	2122 92	4420 91	6701 90	9061 89	11227 87	12809 84	15408 79
20	2060 141	4402 140	6648 138	9105 136	11386 133	13039 128	15611 121
26	2016 186	4340 184	6612 182	9070 179	11395 475	13012 170	15558 163
33	1945 237	4270 236	6559 234	8964 231	11315 227	12906 223	15426 216
40	1777 290	4111 289	6391 287	8911 284	11050 279	12632 273	15346 262
46	1609 333	3943 332	6285 330	8813 327	10944 323	12429 318	15161 308
53	1423 385	3739 384	5976 382	8610 379	10767 375	12243 367	15001 355
63	1061 458	3342 456	5498 454	8142 451	10360 447	11846 441	14586 429

BMV-630

ΔP (PSI)

Flow (GPM)	508	870	1350	1740	2175	2610	3045
3	2475 16	4614 15	7178 15	9724 14	11209 14	13693 12	15771 11
5	2546 26	4880 26	7417 26	9733 26	11525 25	14206 23	16478 21
13	2555 71	4906 71	7673 70	10051 68	12058 67	14869 65	17291 61
20	2387 110	4844 109	7629 107	9901 105	11952 103	14851 100	17362 95
26	2334 144	4756 143	7567 141	9662 139	11934 136	14798 133	17371 128
33	2219 184	4561 183	7399 181	9468 179	11810 177	14666 173	17238 168
40	2122 223	4376 222	7222 221	9397 219	11757 217	14586 214	17044 207
46	1856 258	4287 257	7037 256	9300 253	11792 249	14462 245	16867 240
53	1609 298	4146 298	6639 296	8999 294	11315 291	14241 285	16646 274
63	1149 356	3677 355	6294 353	8646 349	10935 344	13817 338	16221 330

CONT.	INT.

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

BMV-800

ΔP (PSI)

Flow (GPM)	363	725	1160	1450	1885	2320	2610
3	2458 11	4995 10	7337 10	9680 9	12420 8	15134 8	16929 7
5	2493 23	5048 22	7470 22	10166 21	12871 20	15762 18	17627 16
13	2546 60	5145 59	7567 57	10272 56	12933 54	15824 52	17689 48
20	2378 91	5127 90	7558 89	10299 87	12951 84	15788 81	17618 77
26	2219 122	5003 121	7426 120	10078 118	12800 115	15620 111	17547 105
33	2139 153	4729 152	7284 150	9883 147	12615 143	15373 139	17468 133
40	2086 185	4650 183	7143 181	9742 178	12385 174	15152 169	17318 163
46	1901 216	4455 214	7010 212	9538 209	12173 206	15010 203	17114 196
53	1741 247	4137 245	6763 243	9397 240	12040 237	14860 232	16911 225
63	1043 297	3430 296	6303 295	9017 293	11651 288	14471 283	16248 277

BMV-1000

ΔP (PSI)

Flow (GPM)	363	725	1015	1450	2030	2320
3	2758 9	5658 9	8584 9	12376 8	17486 7	16670 6
5	2829 28	5728 27	8646 26	12464 25	17503 23	20067 21
13	2882 47	5790 46	8769 45	12570 43	17813 41	20155 38
20	2811 72	5675 71	8725 70	12597 68	17707 66	20120 63
26	2732 98	5605 97	8690 95	12535 93	17627 90	19828 86
33	2679 123	5516 122	8619 120	12456 117	17574 114	19660 110
40	2458 149	5322 148	8495 146	12093 144	17353 140	19519 133
46	2334 174	5127 172	8363 170	11828 166	17017 162	19086 155
53	2033 199	4915 196	8062 193	11492 190	16716 185	18608 178
63	1467 240	4535 237	7664 233	11200 229	16133 225	17981 218

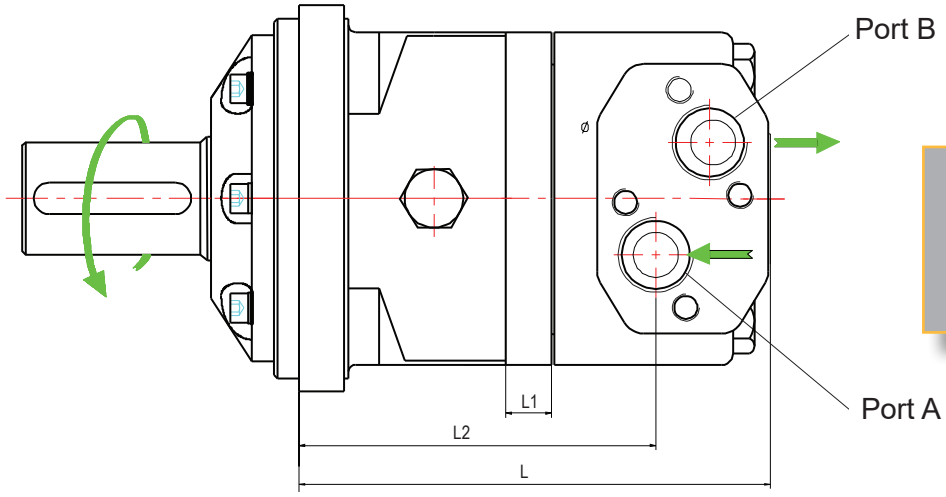
CONT. | INT.

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

Torque 16133 In-lbs
Speed 225 rpm

CONFIGURATION

CONFIGURATION A



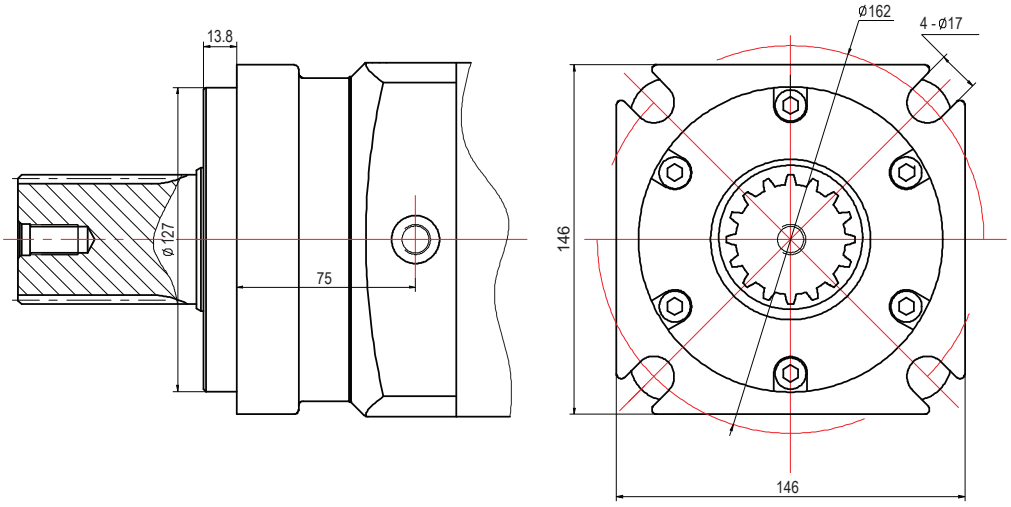
Standard rotation viewed from shaft end

Port A pressurized .....CW
Port B pressurized.....CCW

Displacement	315		400		500		630		800		1000	
L1	23.8	0.937	31	1.220	39	1.535	50.9	2.004	65.5	2.579	81.5	3.209
L2	161.8	6.370	169	6.654	177	6.969	188.9	7.437	203.5	8.012	219.5	8.642
L3	212.8	8.378	220	8.661	228	8.976	239.9	9.445	254.5	10.020	270.5	10.650

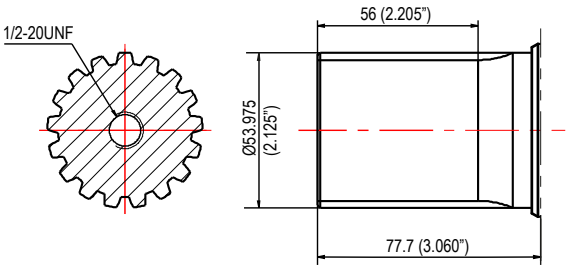
MOUNTING FLANGE

FLANGE C

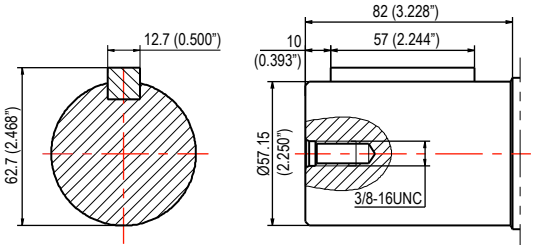


OUTPUT SHAFT

SHAFT G

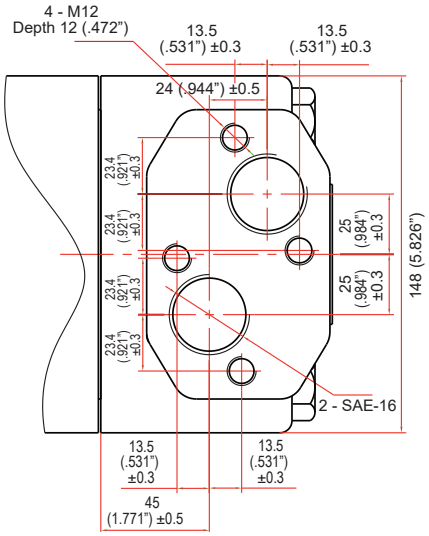


SHAFT I

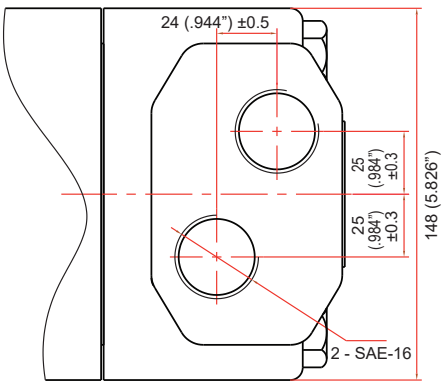


BACK HOUSING

A TYPE



B TYPE



Choose an option for each category

BMV [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

CONFIGURATION

A - Standard

DISPLACEMENT (CC)

A - 315 **B** - 400 **C** - 500

D - 630 **E** - 800 **F** - 1000

MOUNTING FLANGE

C - Square, SAE-C 4 bolt (ø5.000" pilot), ø0.670" holes (4), 6.375" bolt center

OUTPUT SHAFT

G - Spline, ø2 1/8", 16 tooth, 1/2-20UNC Link thread

I - Straight, ø2 1/4", Parallel key, 3/8-16UNC Link thread

BACK HOUSING

A - Link thread

B - No Link thread

PORTS

F - SAE-16

LINK THREAD ON PORT SURFACE

A - M12

C - NONE

DRAIN PORT

E - SAE-06

Order example: BMVAAACBAAB

Other configuration and/or mounting types are available upon request.

On request, BM2 motor serie is offered with speed sensor.

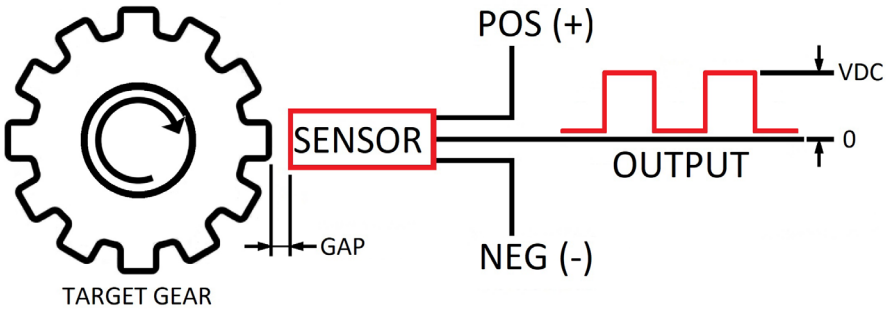
Add “-EM” at the end of the BM2 model code

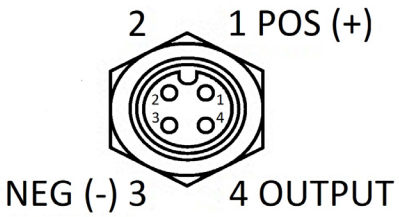
CHARACTERISTIC FEATURES

- BM2 serie specifications
- Designed for mobile equipment to resist vibration
- Hall effect sensor type that gives reliable signal
- Standard voltage signal output
- The sensor can be installed and replaced easily

Main specifications

- Voltage range: 4.5 - 24 VDC
- Temperature range: -20 - 80°C (-4 - 175°F)
- Frequency range : 0 - 1000 Hz
- Max sink current: 4-20 mA
- Sensor output: 30 pulse / revolution (can be doubled electronically)
- Signal output: NPN Open collector
- Connection: M12, 4 Pin polarized

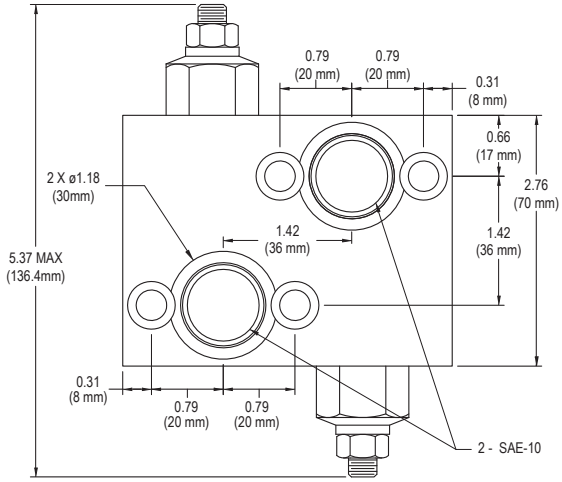


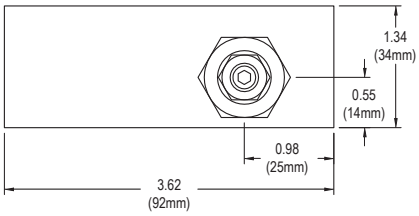


Part Numbers

FITS	PART NO	PRESURE RANGE
BM1 & BM2 MOTORS	460-2090	725 - 1450 PSI
	460-2210	725 - 3000 PSI
BM5 MOTORS	465-1210	725 - 3000 PSI

BM1 & BM2 Motors





BM5 Motors