

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

Rotation same as Dynamic

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, which 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)								
		508	1015	1530	2030	2465	2980	3480	3990	4495
Flow (GPM)	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

Torque 5790 In-lbs
Speed 703 rpm

BM6-245

		ΔP (PSI)								
		508	1015	1530	2030	2465	2980	3480	3990	4495
Flow (GPM)	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)								
		508	1015	1530	2030	2465	2980	3480	3990	4495
Flow (GPM)	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)								
		508	1015	1530	2030	2465	2980	3480	3990	4495
Flow (GPM)	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	8371 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)

		508	1015	1530	2030	2465	2973	3480	3988
Flow (GPM)	4	2077 30	4296 29	6409 28	8504 27	10564 25	12447 21	14524 17	16619 12
	8	2077 61	4296 60	6489 58	8601 55	10723 51	12747 45	14851 38	-
	12	2077 92	4287 90	6480 88	8610 85	10767 80	12818 72	-	-
	16	2069 121	4243 120	6436 117	8601 113	10758 108	12871 99	-	-
	20	1989 151	4155 149	6391 146	8592 143	10758 138	-	-	-
	24	1945 184	4146 181	6356 180	8557 176	10696 171	-	-	-
	28	1848 214	4058 211	6259 208	8460 204	10652 198	-	-	-
	32	1715 244	3960 241	6188 237	8371 232	10608 226	-	-	-
	36	1547 276	3828 273	6038 266	8283 260	10343 255	-	-	-
	40	1414 307	3739 304	5949 296	8106 291	10122 285	-	-	-
	50	1149 383	3218 380	5198 365	7576 362	-	-	-	-
	60	-	2855 454	4827 442	7072 435	-	-	-	-

BM6-625

ΔP (PSI)

		508	725	1015	1233	1523	1740	2030	2465
Flow (GPM)	4	2431 24	3757 24	5039 23	6268 22	7505 21	8433 18	9397 16	10520 15
	8	2608 45	3978 44	5339 44	6665 43	8159 42	9662 39	11200 37	11978 36
	12	2608 73	3960 72	5384 72	6754 71	8115 69	9927 67	11731 65	12155 64
	16	2519 93	3934 92	5339 91	6710 90	8080 88	9883 86	11695 84	12111 82
	20	2475 119	3881 118	5251 117	6665 116	8080 115	9883 112	11704 110	12128 107
	24	2334 143	3792 142	5171 140	6577 139	7991 138	9795 135	11642 132	12067 130
	28	2254 168	3660 166	5074 165	6489 164	7894 162	9751 159	11598 156	12022 153
	32	2122 192	3536 190	4942 188	6356 187	7762 185	9618 182	11465 179	11890 176
	36	1945 216	3350 214	4765 213	6170 212	7541 210	9255 207	-	-
	40	1768 241	3182 240	4588 239	6002 238	7364 237	8946 234	-	-
	50	-	2740 298	4146 296	5560 294	6966 290	-	-	-
	60	-	2245 355	3801 353	5198 350	6559 345	-	-	-

BM6-800

ΔP (PSI)

		508	725	1015	1233	1523	1740	2030
Flow (GPM)	4	3837 18	5366 17	7408 17	8999 16	10944 15	12173 14	14551 13
	8	3704 36	3492 35	7320 35	8867 34	10944 33	12482 31	14197 29
	12	3350 56	4986 56	7019 55	8575 55	10493 53	12005 51	-
	16	2997 74	4588 73	6701 71	8283 70	10316 69	-	-
	20	2864 93	4402 92	6436 90	7929 89	10033 87	-	-
	24	2776 111	7437 110	6170 109	7576 108	9512 105	-	-
	28	2732 129	3960 128	5728 127	7045 125	8981 123	-	-
	32	2466 148	3704 146	5375 145	6595 143	-	-	-
	36	2378 166	3518 165	4835 165	6144 164	-	-	-
	40	2201 184	3076 183	4393 182	5578 180	-	-	-
	50	-	2643 230	3872 228	5092 225	-	-	-
	60	-	-	3342 276	4561 273	-	-	-

BM6-985

ΔP (PSI)

		508	725	1015	1233	1523	1740	2030
Flow (GPM)	4	4279 15	6842 15	8522 14	10635 14	12756 13	13852 13	15788 12
	8	4367 30	6621 30	8787 29	10900 28	13057 27	14471 26	16540 25
	12	4367 45	6621 45	8840 44	11032 43	13189 42	14993 41	-
	16	4323 61	6533 61	8796 60	10988 59	13233 58	-	-
	20	4199 77	6453 76	8690 76	10900 75	13092 74	-	-
	24	4066 92	6223 92	8478 91	10758 90	12959 89	-	-
	28	3925 107	6188 107	8389 106	10581 105	12783 103	-	-
	32	3757 123	5958 122	8159 121	10219 120	-	-	-
	36	3483 138	5702 138	7894 137	9901 135	-	-	-
	40	3227 153	5384 152	7638 151	9547 150	-	-	-
	50	2873 191	5171 190	7328 189	9255 188	-	-	-
	60	-	4641 230	7152 229	9017 226	-	-	-

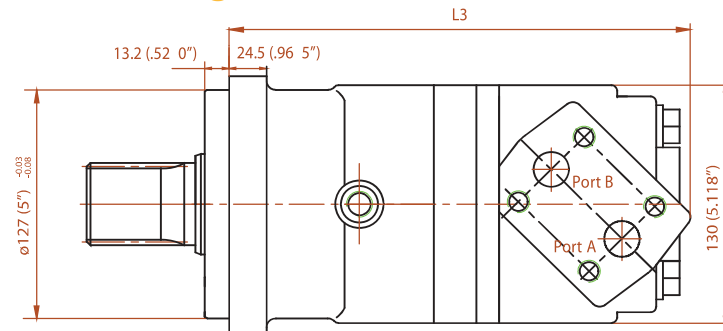
CONT.

INT.

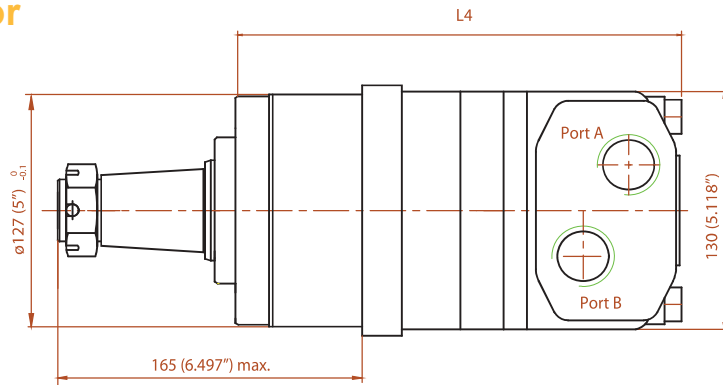
All the datas were tested at 50°C with anti-wear hydraulic oil.
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Configuration

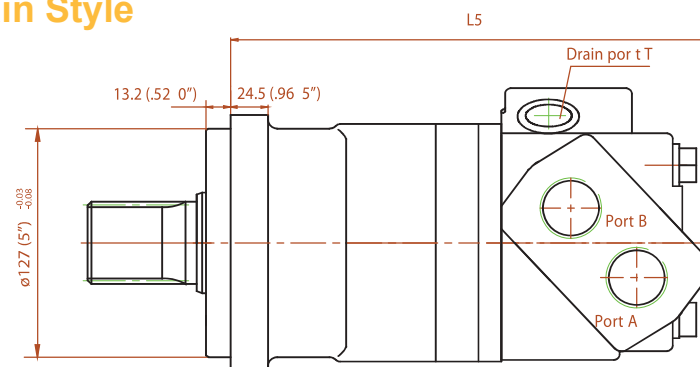
C - Rhombus Back Housing



D - Wheel Motor



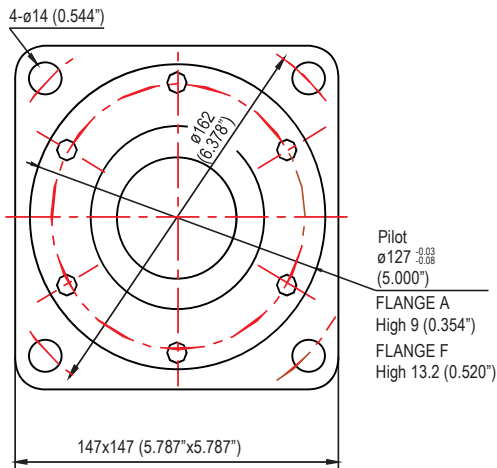
E - Internal Drain Style



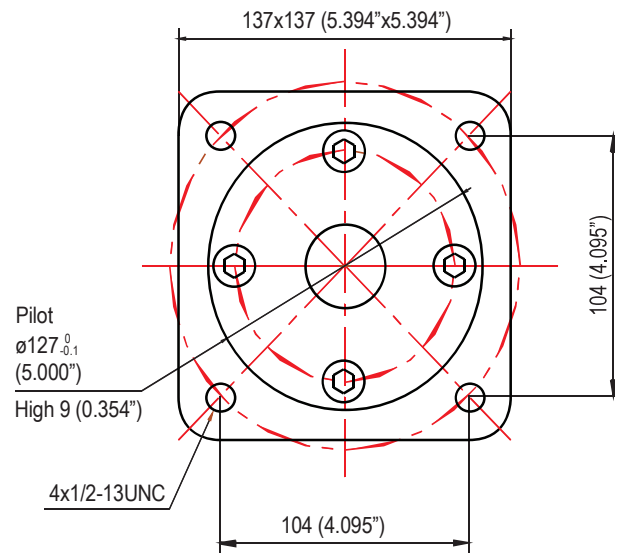
Displacement	195		245		310		395		490		625		800		985	
L1	230	9.055	25.5	1.004	243	9.961	263	10.354	263	10.354	277	10.906	298	11.732	317	12.480
L2	245	9.646	250.5	9.862	257.7	10.146	268	10.551	277.5	10.925	292	11.496	313	12.323	332	13.071
L3	258	10.157	263	10.354	270	10.630	280	11.024	290	11.417	305	12.008	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

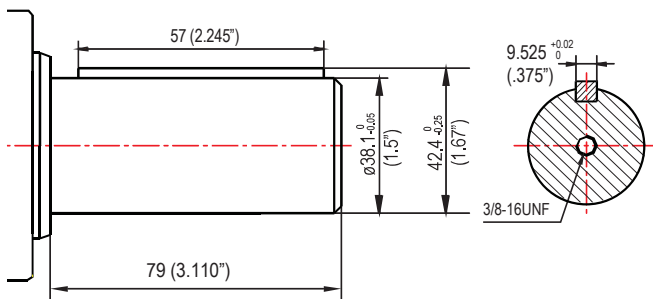


FLANGE D



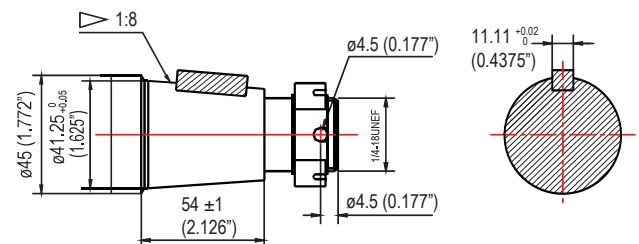
OUTPUT SHAFT

SHAFT A



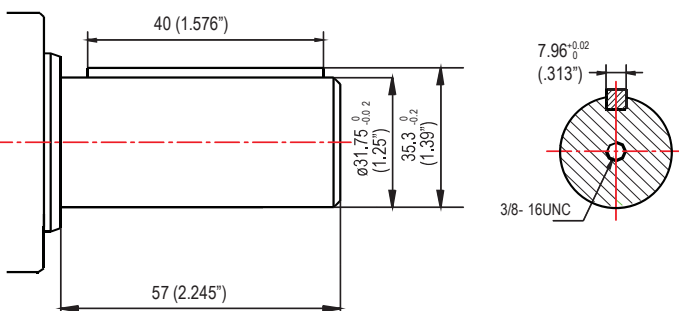
Straight, $\phi 1 \frac{1}{2}$ "
Parallel key: 3/8"x57mm

SHAFT D



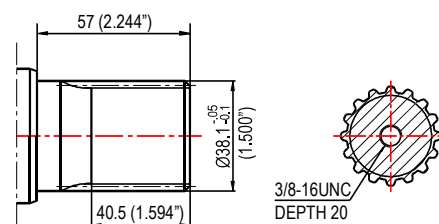
Taper, $\phi 1 \frac{3}{4}$ ", 1:8
Parallel key: 7/16"x32mm
Link thread: 1 1/4-18UNEF

SHAFT G



Straight, $\phi 1 \frac{1}{4}$ "
Parallel key: 5/16"x40mm

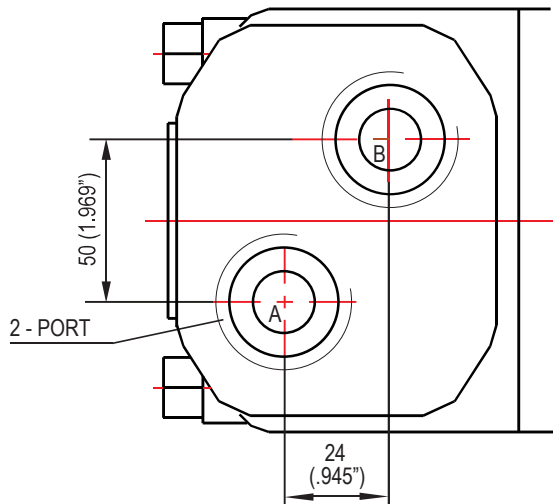
SHAFT R



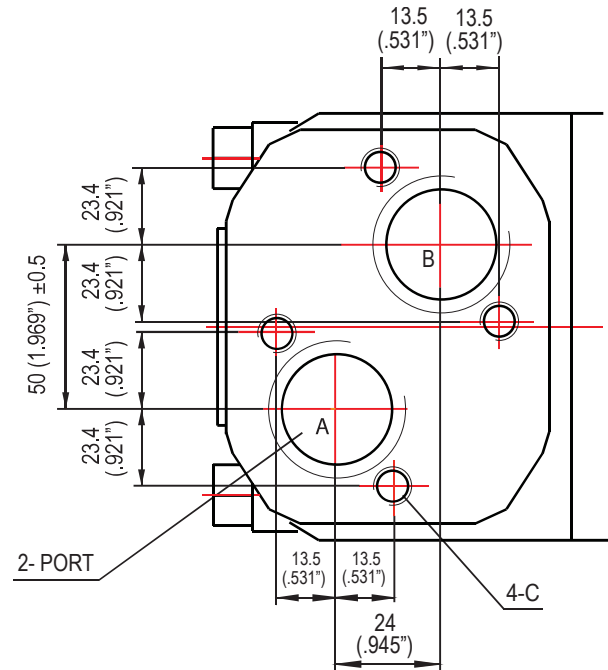
Spline, $\phi 1 \frac{1}{2}$ "
17 tooth - DP12/24
Link thread: 3/8-16UNC

BACK HOUSING

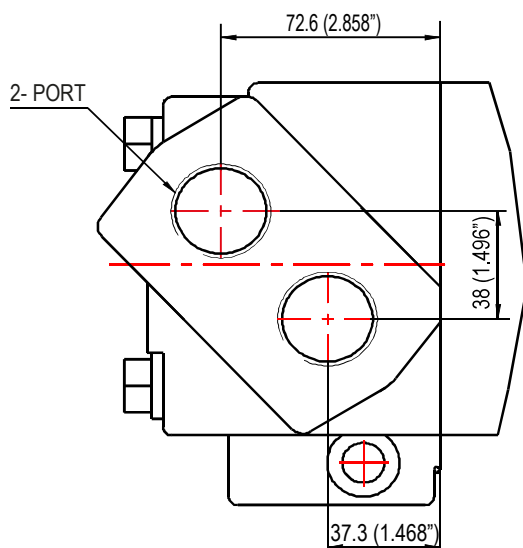
BACK HOUSING A



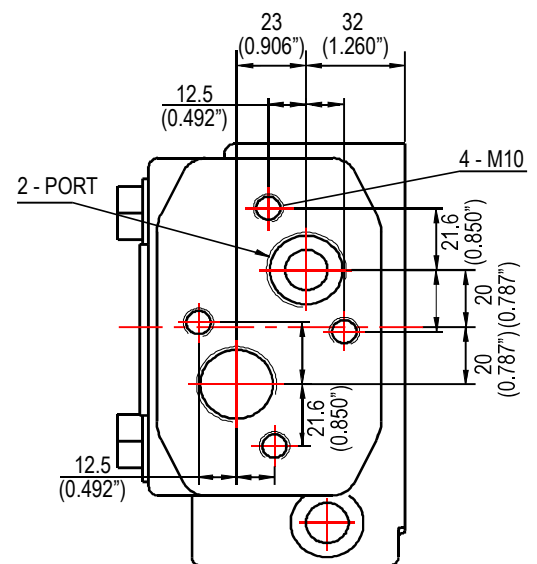
BACK HOUSING B



BACK HOUSING G



BACK HOUSING H



Choose an option for each category

BM6

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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.