whitedriveproducts

SERIES

600 -
610 -
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640 -

MEDIUM DUTY
Hydraulic Motor & Brake

DR

DR (All Series)

For Medium Duty Applications

whitedriveproducts

OVERVIEW

Due to its case drain design, the DR Series motor is an excellent medium size motor for applications with high- duty cycles or frequent direction reversal. The case drain design produces a number of benefits including reduction of pressure on the shaft seal and the ability to provide a cooling loop for the system. The case flow also lubricates the vital drive components, extending motor life. An internal drain option is also available. A laminated manifold and three-zone orbiting valve are used to produce higher overall efficiencies and more usable power. A steel faced seal in the orbiting valve also reduces the risk of the seal extruding or melting, which is possible in competitive designs.

FEATURES / BENEFITS

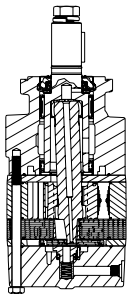
- Four Bearing Options allow load carrying capabilities of motor to be matched to application.
- Heavy-Duty Drive Link is the most durable in its class and receives case flow lubri-cation for reduced wear and increased life.
- Three-Zone Orbiting Valve precisely meters oil to produce exceptional volumetric efficiency.
- Rubber Energized Steel Face Seal does not extrude or melt under high pressure or high temperature.
- Standard Case Drain increases shaft seal life by reducing pressure on seal.

TYPICAL APPLICATIONS

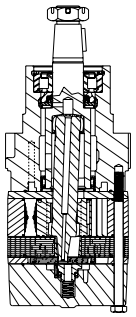
Medium-duty wheel drives, augers, mixers, winch drives, swing drives, grapple heads, feed rollers, broom drives, chippers, mining equipment, forrestry equipment and more

SERIES DESCRIPTIONS

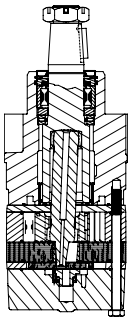
600 - Hydraulic Motor
Standard



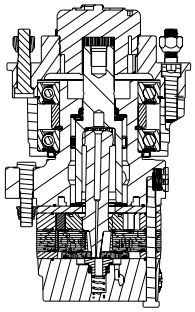
620 - Hydraulic Motor
With Medium Duty Bearing



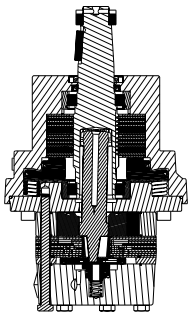
630 - Hydraulic Motor
With Heavy Duty Bearing



640 - Hydraulic Motor
With Wheel Hub



610 - Hydraulic Motor
With Integral Hydraulic Brake



SPECIFICATIONS

CODE	Displacement cm^3 [in^3/rev]	Max. Speed rpm		Max. Flow lpm [gpm]		Max. Torque Nm [lb-in]		Max. Pressure bar [psi]		
		cont.	inter.	cont.	inter.	cont.	inter.	cont.	inter.	peak
200	204 [12.4]	470	560	95 [25]	114 [30]	554 [4900]	644 [5700]	207 [3000]	241 [3500]	276 [4000]
260	261 [15.9]	360	440	95 [25]	114 [30]	745 [6590]	859 [7600]	207 [3000]	241 [3500]	276 [4000]
300	300 [18.3]	320	380	95 [25]	114 [30]	842 [7450]	972 [8600]	207 [3000]	241 [3500]	276 [4000]
350	348 [21.2]	270	320	95 [25]	114 [30]	972 [8600]	1107 [9800]	207 [3000]	241 [3500]	276 [4000]
375	375 [22.8]	250	300	95 [25]	114 [30]	1085 [9600]	1243 [11000]	207 [3000]	241 [3500]	276 [4000]
470	465 [28.3]	200	240	95 [25]	114 [30]	1107 [9800]	1316 [11650]	172 [2500]	207 [3000]	241 [3500]
540	536 [32.7]	180	210	95 [25]	114 [30]	1034 [9150]	1277 [11300]	138 [2000]	172 [2500]	207 [3000]
750	748 [45.6]	130	150	95 [25]	114 [30]	1040 [9200]	1390 [12300]	103 [1500]	138 [2000]	172 [2500]

▶ Performance data is typical. Performance of production units varies slightly from one motor to another. Running at intermittent ratings should not exceed 10% of every minute of operation.

DISPLACEMENT PERFORMANCE

200

204 cm³ [12.4 in³] / rev

Pressure - bar [psi]

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000] Max. Cont.	241 [3500] Max. Inter.

Torque - Nm [lb-in], **Speed rpm**

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]									Theoretical rpm
2 [0.5]	38 [335] **7**	77 [683] **4**							10
4 [1]	39 [342] **16**	85 [748] **15**	174 [1543] **13**	258 [2284] **9**	329 [2913] **5**				19
8 [2]	38 [339] **35**	90 [795] **34**	178 [1579] **32**	271 [2396] **28**	361 [3192] **23**	454 [4016] **16**	519 [4594] **11**	562 [4977] **3**	38
15 [4]	36 [323] **73**	85 [749] **72**	178 [1576] **69**	283 [2506] **64**	378 [3346] **57**	459 [4059] **54**	555 [4909] **44**	636 [5625] **35**	75
23 [6]		78 [690] **110**	177 [1562] **106**	273 [2413] **101**	362 [3202] **97**	462 [4085] **89**	551 [4880] **80**	645 [5711] **70**	112
30 [8]		74 [654] **148**	172 [1518] **145**	268 [2368] **141**	357 [3156] **133**	469 [4154] **126**	558 [4936] **117**	653 [5778] **105**	150
38 [10]			168 [1491] **184**	260 [2301] **178**	349 [3091] **174**	444 [3933] **167**	541 [4783] **156**	638 [5646] **144**	187
45 [12]			156 [1381] **221**	255 [2256] **215**	350 [3096] **209**	450 [3985] **204**	542 [4793] **199**	634 [5607] **179**	224
53 [14]			150 [1332] **259**	251 [2219] **254**	330 [2919] **250**	435 [3850] **241**	526 [4653] **231**	638 [5643] **213**	261
61 [16]			133 [1180] **297**	241 [2129] **293**	336 [2970] **286**	430 [3803] **278**	522 [4616] **276**	613 [5423] **256**	299
68 [18]			122 [1082] **335**	227 [2012] **332**	328 [2899] **325**	417 [3692] **319**	510 [4510] **310**	602 [5329] **298**	336
76 [20]			112 [993] **372**	214 [1897] **371**	309 [2732] **365**	401 [3547] **356**	496 [4391] **348**	587 [5198] **337**	373
83 [22]				199 [1757] **409**	303 [2680] **404**	384 [3401] **396**	493 [4358] **384**	579 [5121] **374**	410
91 [24]				184 [1625] **447**	285 [2526] **443**	380 [3366] **433**	474 [4192] **423**	562 [4970] **417**	448
Max. Inter. 95 [25]				166 [1472] **465**	277 [2453] **461**	367 [3244] **454**	463 [4101] **443**	560 [4953] **432**	466
Max. Cont. 114 [30]					219 [1935] **558**	332 [2934] **553**			559

Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐

Rotor Width

Theoretical Torque - Nm [lb-in]

17.3 [.682] mm [in]	56 [494]	112 [987]	223 [1975]	335 [2962]	446 [3949]	558 [4936]	669 [5924]	781 [6911]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

260

261 cm³ [15.9 in³] / rev

Pressure - bar [psi]

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000] Max. Cont.	241 [3500] Max. Inter.

Torque - Nm [lb-in], **Speed rpm**

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]									Theoretical rpm
2 [0.5]	47 [417] **5**	109 [962] **4**							8
4 [1]	51 [454] **13**	110 [972] **11**	238 [2104] **11**	355 [3139] **8**	460 [4074] **5**				15
8 [2]	52 [462] **28**	113 [1004] **27**	242 [2145] **25**	367 [3244] **22**	485 [4292] **18**	603 [5334] **14**	715 [6323] **11**		30
15 [4]	49 [430] **57**	111 [985] **56**	239 [2115] **54**	367 [3247] **51**	491 [4343] **45**	619 [5474] **41**	746 [6598] **36**	859 [7600] **30**	59
23 [6]	44 [391] **87**	107 [950] **86**	234 [2067] **83**	364 [3225] **78**	487 [4311] **72**	617 [5458] **67**	738 [6530] **60**	854 [7557] **54**	88
30 [8]		100 [884] **115**	228 [2016] **113**	355 [3146] **107**	478 [4230] **103**	612 [5418] **95**	733 [6487] **89**	868 [7677] **82**	117
38 [10]		90 [797] **145**	220 [1947] **143**	348 [3080] **138**	468 [4143] **132**	605 [5351] **123**	734 [6498] **115**	852 [7541] **107**	146
45 [12]		84 [748] **174**	212 [1877] **172**	340 [3011] **168**	463 [4094] **162**	596 [5272] **152**	722 [6390] **143**	845 [7481] **133**	175
53 [14]		71 [631] **203**	205 [1813] **201**	330 [2921] **198**	452 [4004] **185**	587 [5195] **179**	706 [6244] **173**	846 [7491] **163**	204
61 [16]			191 [1688] **231**	317 [2807] **228**	444 [3927] **223**	574 [5077] **214**	703 [6221] **203**	824 [7291] **196**	233
68 [18]			174 [1540] **261**	305 [2698] **256**	429 [3798] **251**	560 [4952] **246**	690 [6111] **230**	815 [7214] **220**	262
76 [20]			156 [1383] **290**	289 [2558] **289**	418 [3700] **282**	544 [4817] **268**	675 [5977] **262**	810 [7166] **247**	291
83 [22]			143 [1270] **319**	275 [2431] **317**	405 [3585] **313**	533 [4717] **300**	659 [5828] **293**	787 [6961] **277**	320
91 [24]			131 [1158] **348**	255 [2253] **346**	387 [3421] **342**	515 [4554] **333**	613 [5421] **322**	769 [6805] **311**	349
Max. Inter. 95 [25]				239 [2115] **362**	373 [3301] **357**	505 [4471] **348**	628 [5559] **342**	772 [6832] **328**	364
Max. Cont. 114 [30]				157 [1388] **434**	298 [2637] **432**	426 [3768] **427**			436

Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐

Rotor Width

Theoretical Torque - Nm [lb-in]

22.1 [.872] mm [in]	72 [633]	143 [1266]	286 [2532]	429 [3798]	572 [5064]	715 [6330]	858 [7596]	1001 [8861]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another.

DISPLACEMENT PERFORMANCE

300

300 cm³ [18.3 in³] / rev

Pressure - bar [psi]

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000] Max. Cont.	241 [3500] Max. Inter.

Torque - Nm [lb-in], **Speed rpm**

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]									Theoretical rpm
2 [0.5]	58 [509] **5**	117 [1039] **4**	253 [2236] **4**						7
4 [1]	58 [517] **12**	122 [1081] **11**	266 [2353] **11**	384 [3396] **11**	509 [4501] **9**	633 [5599] **9**			13
8 [2]	58 [516] **25**	128 [1134] **24**	267 [2360] **24**	404 3572] **23**	553 [4893] **22**	683 [6045] **21**	813 [7198] **20**	917 [8112] **20**	26
15 [4]	56 [491] **50**	132 [1173] **49**	274 [2425] **49**	417 [3691] **48**	553 [4890] **47**	703 [6225] **44**	836 [7397] **43**	962 [8513] **42**	51
23 [6]	53 [466] **75**	123 [1092] **75**	269 [2384] **74**	406 [3590] **73**	559 [4949] **71**	701 [6207] **69**	831 [7356] **66**	954 [8445] **63**	76
30 [8]	44 [386] **100**	117 [1036] **99**	256 [2263] **97**	419 [3710] **96**	548 [4847] **95**	707 [6256] **93**	846 [7485] **88**	974 [8619] **85**	101
38 [10]		107 [947] **126**	251 [2222] **126**	390 [3448] **125**	561 [4961] **121**	691 [6119] **119**	836 [7396] **113**	976 [8637] **109**	127
45 [12]		95 [841] **151**	238 [2108] **150**	400 [3538] **150**	529 [4685] **149**	696 [6160] **144**	833 [7371] **140**	969 [8573] **135**	152
53 [14]		84 [748] **176**	232 [2053] **175**	366 [3237] **174**	530 [4688] **173**	676 [5978] **168**	825 [7302] **164**	964 [8533] **158**	177
61 [16]		71 [629] **201**	217 [1920] **200**	370 [3277] **198**	508 [4494] **197**	654 [5786] **196**	803 [7104] **187**	952 [8428] **182**	202
68 [18]			202 [1792] **227**	339 [2996] **226**	503 [4448] **226**	645 [5712] **221**	781 [6914] **214**	933 [8253] **211**	228
76 [20]			184 [1631] **252**	326 [2887] **251**	467 [4129] **249**	635 [5619] **244**	772 [6831] **236**	927 [8205] **230**	253
83 [22]			164 [1449] **277**	308 [2726] **275**	446 [3943] **274**	604 [5346] **271**	745 [6592] **269**	896 [7926] **267**	278
91 [24]			147 [1304] **302**	286 [2535] **301**	437 [3871] **300**	580 [5137] **296**	723 [6401] **293**	861 [7620] **285**	303
95 [25] Max. Inter.			116 [1024] **315**	291 [2574] **314**	441 [3902] **312**	575 [5085] **310**	707 [6255] **309**	848 [7500] **302**	316
114 [30] Max. Cont.				204 [1805] **378**	347 [3067] **376**	499 [4416] **370**			379

Overall Efficiency - 70 - 100% ☐ 40 - 69% ▒ 0 - 39% ■

Rotor Width

Theoretical Torque - Nm [lb-in]

25.4 [1.000] mm [in]	82 [729]	165 [1457]	329 [2914]	494 [4371]	659 [5828]	823 [7285]	988 [8742]	1152 [10199]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

350

348 cm³ [21.2 in³] / rev

Pressure - bars [psi]

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000] Max. Cont.	241 [3500] Max. Inter.

Torque - Nm [lb-in], **Speed rpm**

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]									Theoretical rpm
2 [0.5]	69 [606] **4**	140 [1243] **3**	262 [2318] **2**						6
4 [1]	75 [660] **10**	153 [1350] **9**	309 [2733] **7**	454 [4014] **6**					11
8 [2]	75 [667] **21**	158 [1395] **20**	325 [2880] **17**	489 [4326] **16**	647 [5727] **14**	784 [6937] **13**	917 [8119] **11**		22
15 [4]	73 [648] **43**	159 [1405] **42**	333 [2943] **38**	502 [4443] **36**	677 [5988] **33**	830 [7342] **31**	984 [8704] **29**	1123 [9935] **26**	44
23 [6]	67 [594] **65**	152 [1346] **63**	328 [2901] **61**	502 [4439] **55**	670 [5926] **51**	841 [7444] **49**	1010 [8940] **49**	1155 [10220] **46**	66
30 [8]	56 [494] **87**	143 [1268] **85**	317 [2808] **83**	494 [4368] **78**	678 [6002] **72**	833 [7376] **67**	1018 [9010] **65**	1172 [10367] **65**	88
38 [10]		129 [1141] **108**	305 [2700] **105**	477 [4219] **99**	655 [5798] **92**	830 [7345] **88**	994 [8801] **85**	1159 [10260] **83**	109
45 [12]		121 [1068] **130**	291 [2578] **128**	465 [4113] **122**	641 [5672] **115**	817 [7231] **107**	991 [8766] **101**	1169 [10342] **100**	131
53 [14]		103 [907] **151**	275 [2437] **148**	452 [4001] **145**	630 [5572] **136**	815 [7212] **130**	972 [8604] **123**	1162 [10284] **115**	153
61 [16]		85 [755] **174**	258 [2281] **172**	431 [3818] **168**	609 [5390] **161**	790 [6991] **152**	983 [8696] **144**	1141 [10099] **136**	175
68 [18]		66 [587] **196**	246 [2174] **193**	432 [3823] **190**	583 [5161] **185**	768 [6800] **171**	944 [8355] **164**	1131 [10012] **159**	197
76 [20]			223 [1969] **217**	391 [3459] **211**	568 [5026] **206**	750 [6637] **196**	925 [8186] **185**	1101 [9742] **176**	218
83 [22]			193 [1704] **239**	372 [3293] **236**	545 [4825] **230**	724 [6408] **219**	909 [8049] **209**	1092 [9666] **198**	240
91 [24]			169 [1492] **261**	349 [3085] **257**	537 [4755] **253**	698 [6179] **243**			262
95 [25] Max. Inter.				325 [2874] **272**	507 [4491] **265**	687 [6082] **254**			273
114 [30] Max. Cont.				255 [2258] **326**	429 [3796] **320**	605 [5354] **315**			327

Overall Efficiency - 70 - 100% ☐ 40 - 69% ▒ 0 - 39% ■

Rotor Width

Theoretical Torque - Nm [lb-in]

39.4 [1.553] mm [in]	95 [844]	191 [1688]	381 [3376]	572 [5064]	763 [6752]	954 [8439]	1144 [10127]	1335 [11815]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another.

DISPLACEMENT PERFORMANCE

375

375 cm³ [22.8 in³] / rev

Pressure - bar [psi]

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000] Max. Cont.	241 [3500] Max. Inter.

Torque - Nm [lb-in], **Speed rpm**

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]									Theoretical rpm
2 [0.5]	69 [611] **4**								6
4 [1]	74 [651] **9**	161 [1425] **8**	330 [2920] **8**	494 [4369] **7**	653 [5783] **6**	823 [7283] **5**			11
8 [2]	76 [676] **20**	173 [1527] **19**	354 [3133] **18**	518 [4582] **17**	685 [6065] **15**	860 [7611] **13**	1021 [9038] **13**		21
15 [4]	73 [649] **40**	158 [1399] **40**	350 [3098] **38**	535 [4731] **37**	706 [6250] **34**	883 [7814] **32**	1032 [9130] **30**	1191 [10541] **30**	41
23 [6]	66 [588] **60**	159 [1407] **60**	346 [3058] **59**	547 [4841] **57**	712 [6300] **54**	899 [7956] **49**	1080 [9561] **47**	1231 [10898] **45**	61
30 [8]	57 [502] **81**	147 [1301] **80**	337 [2980] **79**	537 [4749] **77**	700 [6192] **74**	898 [7948] **70**	1088 [9628] **65**	1236 [10941] **62**	82
38 [10]		134 [1190] **101**	323 [2856] **100**	510 [4512] **99**	694 [6139] **95**	887 [7849] **90**	1066 [9437] **85**	1246 [11029] **79**	102
45 [12]		124 [1097] **121**	309 [2730] **120**	496 [4385] **119**	679 [6009] **114**	883 [7817] **109**	1073 [9493] **104**	1244 [11010] **99**	122
53 [14]		109 [961] **141**	290 [2563] **140**	477 [4217] **138**	680 [6016] **136**	854 [7556] **130**	1041 [9214] **123**	1230 [10888] **117**	142
61 [16]		82 [728] **162**	267 [2362] **161**	453 [4005] **159**	637 [5641] **157**	846 [7489] **150**	1041 [9209] **144**	1209 [10702] **136**	163
68 [18]			248 [2198] **182**	434 [3842] **180**	619 [5474] **175**	812 [7190] **171**	1002 [8864] **165**	1148 [10161] **162**	183
76 [20]			229 [2026] **202**	416 [3685] **201**	600 [5309] **199**	790 [6994] **192**	979 [8664] **183**	1145 [10137] **180**	203
83 [22]			199 [1764] **222**	385 [3406] **221**	572 [5065] **219**	761 [6738] **215**	953 [8435] **210**	1111 [9834] **201**	223
91 [24]			168 [1490] **243**	362 [3204] **241**	566 [5007] **240**	731 [6471] **235**			244
95 [25]				347 [3073] **253**	554 [4905] **250**	721 [6384] **245**			254
Max. Max. Inter. Cont. 114 [30]				261 [2314] **303**	440 [3891] **301**	623 [5514] **300**			304

Overall Efficiency - 70 - 100% ☐ 40 - 69% ▒ 0 - 39% ▒

Rotor Width

Theoretical Torque - Nm [lb-in]

31.8 [1.252] mm [in]	103 [908]	205 [1815]	410 [3631]	615 [5446]	821 [7261]	1026 [9076]	1231 [10892]	1436 [12707]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

470

465 cm³ [28.3 in³] / rev

Pressure - bar [psi]

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500] Max. Cont.	207 [3000] Max. Inter.

Torque - Nm [lb-in], **Speed rpm**

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]								Theoretical rpm
2 [0.5]	92 [815] **3**	195 [1723] **2**	374 [3306] **1**					5
4 [1]	109 [967] **7**	188 [1661] **6**	418 [3701] **5**	615 [5447] **4**				9
8 [2]	99 [875] **15**	217 [1924] **14**	440 [3892] **13**	668 [5910] **12**	871 [7709] **9**	1066 [9436] **7**	1227 [10855] **5**	17
15 [4]	93 [825] **32**	213 [1887] **30**	441 [3906] **29**	688 [6086] **28**	907 [8027] **25**	1131 [10008] **22**	1343 [11886] **18**	33
23 [6]	85 [751] **48**	200 [1771] **48**	434 [3841] **46**	686 [6074] **44**	906 [8017] **40**	1141 [10098] **35**	1362 [12056] **30**	49
30 [8]	72 [635] **65**	186 [1645] **64**	422 [3738] **63**	659 [5834] **61**	889 [7871] **58**	1142 [10106] **50**	1352 [11963] **45**	66
38 [10]	53 [472] **81**	169 [1493] **80**	404 [3579] **79**	639 [5657] **77**	874 [7734] **74**	1115 [9871] **66**	1351 [11958] **59**	82
45 [12]		152 [1348] **97**	402 [3561] **96**	608 [5377] **94**	855 [7563] **89**	1111 [9836] **82**	1340 [11861] **76**	98
53 [14]		133 [1175] **114**	364 [3221] **113**	598 [5292] **112**	833 [7374] **107**	1090 [9643] **98**	1319 [11673] **90**	115
61 [16]		103 [910] **130**	333 [2947] **129**	569 [5037] **128**	803 [7110] **123**	1063 [9410] **114**	1294 [11450] **104**	131
68 [18]		75 [661] **146**	305 [2701] **144**	555 [4908] **143**	764 [6765] **141**	1021 [9033] **133**	1267 [11214] **124**	147
76 [20]			281 [2489] **163**	507 [4490] **162**	745 [6597] **156**	985 [8719] **150**	1236 [10940] **141**	164
83 [22]			227 [2011] **179**	473 [4189] **178**	714 [6322] **176**	948 [8391] **168**	1182 [10462] **162**	180
91 [24]			193 [1705] **194**	432 [3827] **192**	687 [6079] **191**	915 [8093] **186**		196
95 [25]				423 [3743] **204**	651 [5759] **201**	896 [7928] **191**		205
Max. Max. Inter. Cont. 114 [30]				321 [2840] **244**	538 [4761] **242**	784 [6938] **238**		245

Overall Efficiency - 70 - 100% ☐ 40 - 69% ▒ 0 - 39% ▒

Rotor Width

Theoretical Torque - Nm [lb-in]

39.4 [1.553] mm [in]	127 [1127]	255 [2253]	509 [4506]	764 [6760]	1018 [9013]	1273 [11266]	1528 [13519]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another.

DISPLACEMENT PERFORMANCE

540

536 cm³ [32.7 in³] / rev

Pressure - bar [psi]

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]
				Max. Cont.	Max. Inter.

Torque - Nm [lb-in], **Speed rpm**

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	Theoretical rpm
2 [0.5]	108 [953] **3**	215 [1900] **2**					4
4 [1]	107 [946] **6**	225 [1995] **6**	476 [4212] **5**	710 [6284] **5**	920 [8138] **3**		8
8 [2]	113 [998] **13**	241 [2133] **12**	498 [4403] **11**	748 [6620] **11**	980 [8674] **9**	1220 [10798] **8**	15
15 [4]	115 [1014] **28**	242 [2137] **27**	508 [4491] **26**	779 [6893] **25**	1038 [9188] **24**	1266 [11201] **20**	29
23 [6]	102 [902] **42**	234 [2067] **42**	505 [4465] **40**	771 [6821] **38**	1019 [9022] **36**	1274 [11275] **32**	43
30 [8]	89 [792] **56**	222 [1962] **56**	494 [4373] **55**	764 [6759] **52**	1020 [9029] **48**	1280 [11325] **43**	57
38 [10]	71 [630] **70**	201 [1782] **70**	477 [4224] **68**	750 [6639] **66**	1016 [8994] **62**	1277 [11299] **57**	71
45 [12]	47 [417] **84**	188 [1661] **84**	455 [4027] **84**	729 [6455] **81**	1001 [8858] **76**	1288 [11394] **69**	85
53 [14]		158 [1397] **98**	430 [3803] **97**	702 [6214] **96**	995 [8803] **89**	1264 [11184] **82**	99
61 [16]		132 [1170] **113**	403 [3564] **112**	670 [5930] **110**	944 [8353] **106**	1240 [10970] **98**	114
68 [18]		97 [856] **127**	366 [3236] **127**	640 [5664] **126**	935 [8276] **120**	1193 [10557] **113**	128
76 [20]		63 [554] **141**	335 [2962] **140**	604 [6345] **139**	878 [7767] **135**	1156 [10228] **129**	142
83 [22]			303 [2680] **155**	562 [4972] **153**	838 [7420] **152**	1115 [9868] **145**	156
91 [24]			242 [2141] **169**	522 [4622] **167**	813 [7194] **164**	1075 [9517] **161**	170
95 [25]			226 [1998] **176**	490 [4338] **175**	772 [6832] **174**	1075 [9514] **165**	177
114 [30]			98 [864] **211**	380 [3365] **210**	659 [5834] **209**		212

Max. Max. Inter. Cont.

Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐

Rotor Width	Theoretical Torque - Nm [lb-in]					
45.5 [1.791]	147 [1302]	294 [2604]	588 [5207]	883 [7811]	1177 [10414]	1471 [13018]

mm [in]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

750

748 cm³ [45.6 in³] / rev

Pressure - bar [psi]

17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]
			Max. Cont.	Max. Inter.

Torque - Nm [lb-in], **Speed rpm**

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	Theoretical rpm
2 [0.5]	126 [1118] **1**	277 [2450] **1**				3
4 [1]	156 [1378] **4**	287 [2537] **3**	627 [5552] **3**	922 [8155] **2**		6
8 [2]	153 [1357] **9**	322 [2853] **9**	664 [5873] **8**	986 [8722] **7**	1308 [11579] **6**	11
15 [4]	148 [1312] **20**	327 [2898] **19**	686 [6071] **18**	1027 [9085] **17**	1374 [12161] **16**	21
23 [6]	139 [1230] **30**	323 [2860] **29**	691 [6113] **28**	1040 [9200] **27**	1393 [12328] **25**	31
30 [8]	123 [1085] **40**	306 [2712] **40**	681 [6026] **39**	1040 [9207] **36**	1380 [12211] **34**	41
38 [10]	99 [874] **50**	291 [2571] **49**	666 [5897] **48**	1035 [9162] **47**	1399 [12382] **45**	51
45 [12]	75 [664] **60**	274 [2423] **59**	643 [5688] **58**	1018 [9012] **57**	1392 [12318] **55**	61
53 [14]	46 [408] **70**	239 [2113] **70**	616 [5451] **69**	996 [8814] **68**	1372 [12146] **64**	71
61 [16]		190 [1682] **81**	575 [5089] **80**	958 [8479] **78**	1327 [11742] **76**	82
68 [18]		150 [1325] **91**	535 [4738] **90**	921 [8150] **88**	1299 [11494] **86**	92
76 [20]		107 [949] **101**	486 [4298] **100**	878 [7771] **100**	1253 [11090] **97**	102
83 [22]			449 [3978] **111**	822 [7273] **110**	1198 [10598] **108**	112
91 [24]			384 [3401] **121**	761 [6736] **120**	1143 [10117] **117**	122
95 [25]			369 [3268] **126**	737 [6523] **125**	1111 [9830] **124**	127
114 [30]			116 [1025] **151**	494 [4374] **149**		152

Max. Max. Inter. Cont.

Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐

Rotor Width	Theoretical Torque - Nm [lb-in]				
63.5 [2.501]	205 [1815]	410 [3631]	821 [7261]	1231 [10892]	1641 [14522]

mm [in]

Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another.

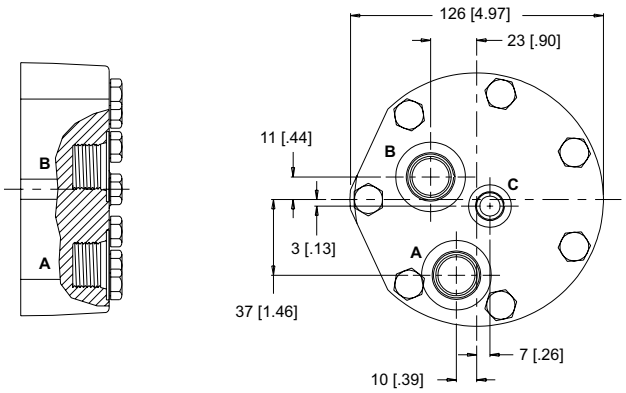
PORTING

▶ Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

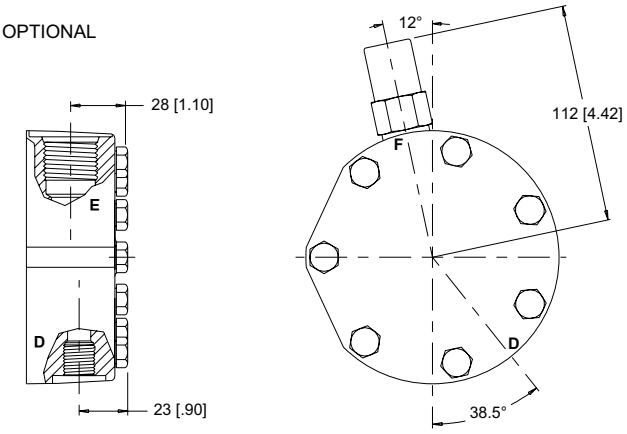
END PORTED - OFFSET

1 Main Ports **A, B**: 7/8-14 UNF
Drain Port **C**: 7/16-20 UNF

STANDARD



OPTIONAL



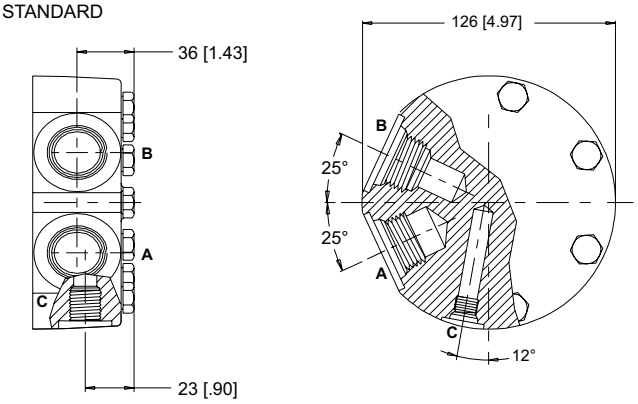
D: Internal Drain **E**: 10 Series/2-Way Valve Cavity 7/8-14 UNF **F**: Valve Cartridge Installed

SIDE PORTED - RADIAL

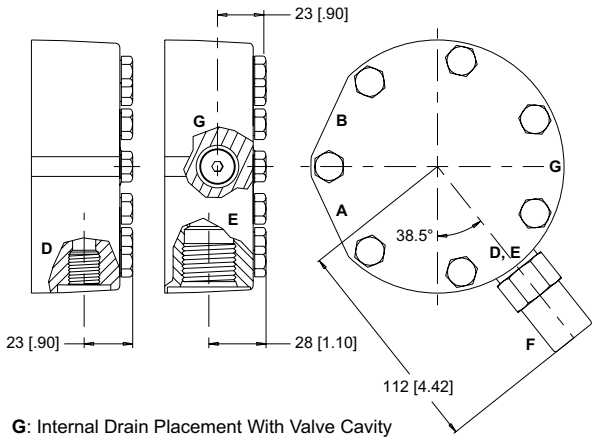
2 Main Ports **A, B**: G 3/4
Drain Port **C**: G 1/4

5 Main Ports **A, B**: 1 1/16-20 UN
Drain Port **C**: 7/16-20 UNF

STANDARD



OPTIONAL



D: Internal Drain **E**: 10 Series/2-Way Valve Cavity 7/8-14 UNF **F**: Valve Cartridge Installed **G**: Internal Drain Placement With Valve Cavity

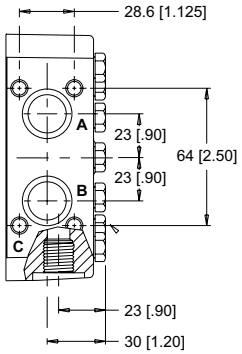
PORTING

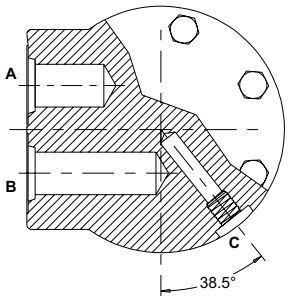
▶ Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

SIDE PORTED - MANIFOLD ALIGNED

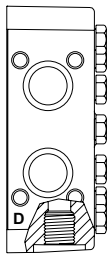
3 Main Ports **A, B**: 11/16" Drilled
Drain Port **C**: 7/16-20 UNF

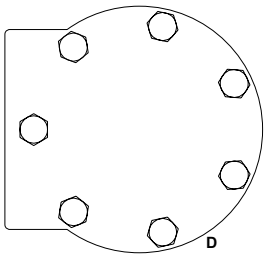
STANDARD





OPTIONAL





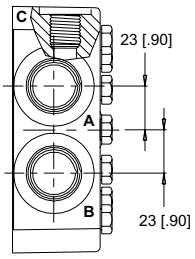
D: Internal Drain

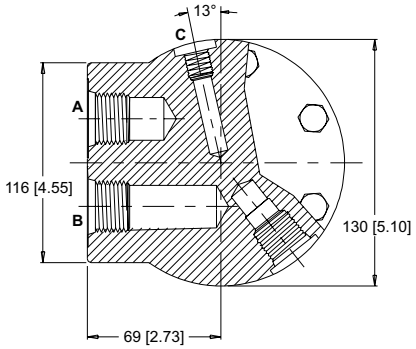
SIDE PORTED - ALIGNED

6 Main Ports **A, B**: 1 1/16-20 UN
Drain Port **C**: 7/16-20 UNF

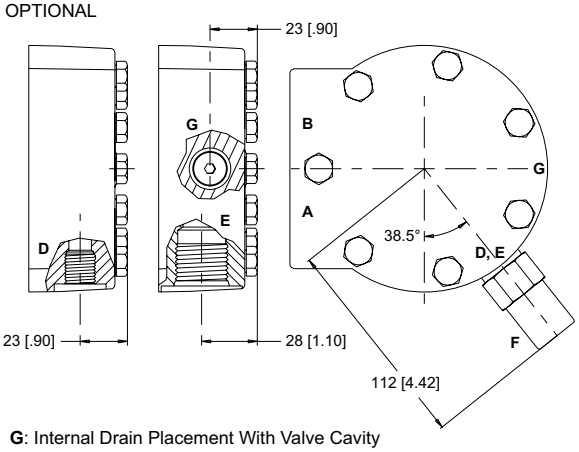
7 Main Ports **A, B**: G 3/4
Drain Port **C**: G 1/4

STANDARD





OPTIONAL



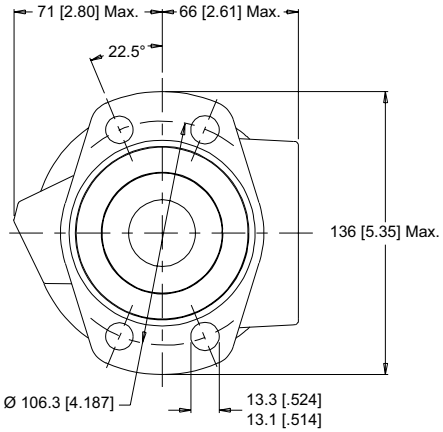
D: Internal Drain **E**: 10 Series/2-Way Valve Cavity 7/8-14 UNF **F**: Valve Cartridge Installed **G**: Internal Drain Placement With Valve Cavity

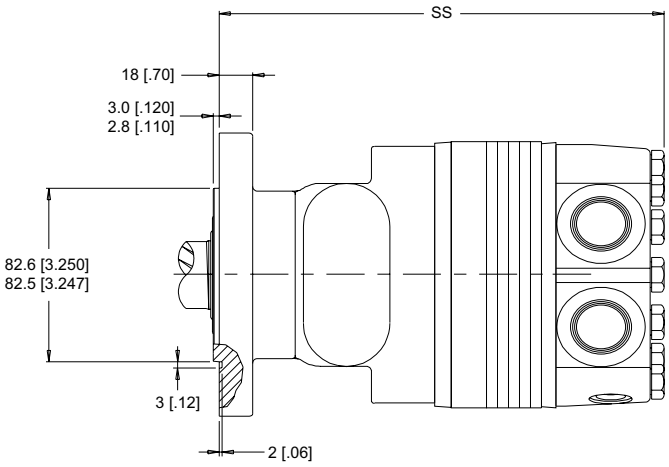
HOUSINGS

▶ Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

4-HOLE, MAGNETO MOUNT

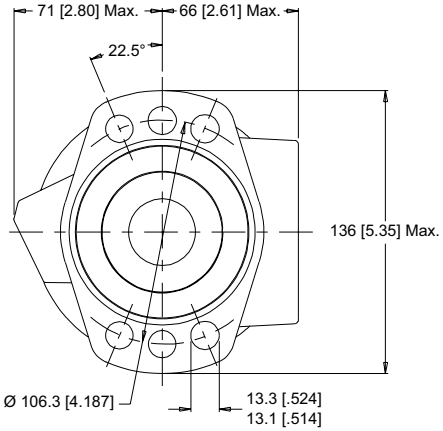
A2 End Ports **A8** Side Ports

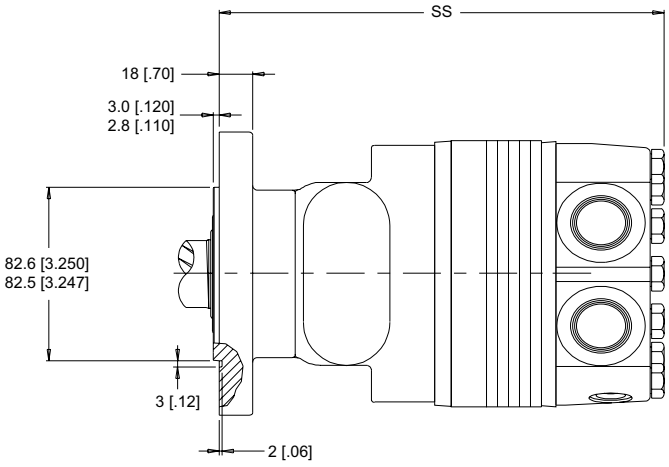




6-HOLE, SAE A MOUNT

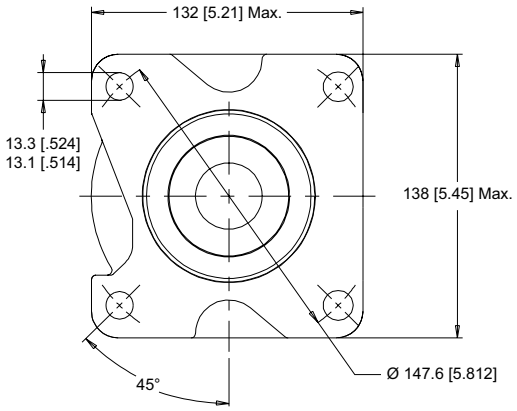
A4 End Ports **A9** Side Ports

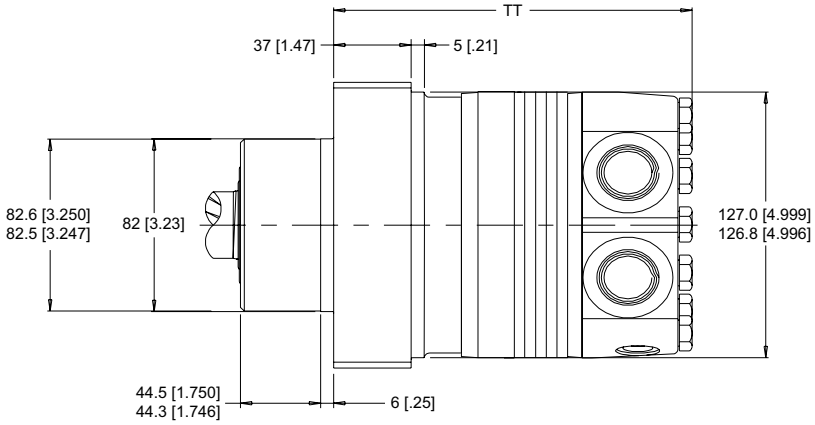




4-HOLE, WHEEL MOUNT

W2 End Ports **W8** Side Ports





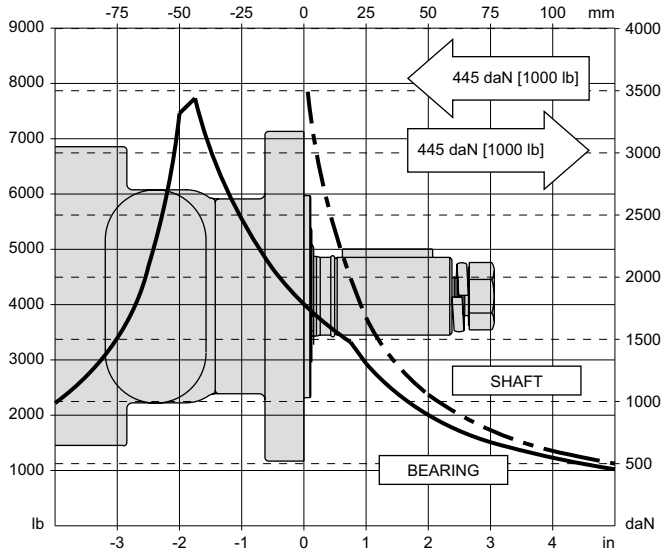
▶ Dimensions SS & TT are charted on page 10. Porting options listed on pages 7-8.

TECHNICAL INFORMATION

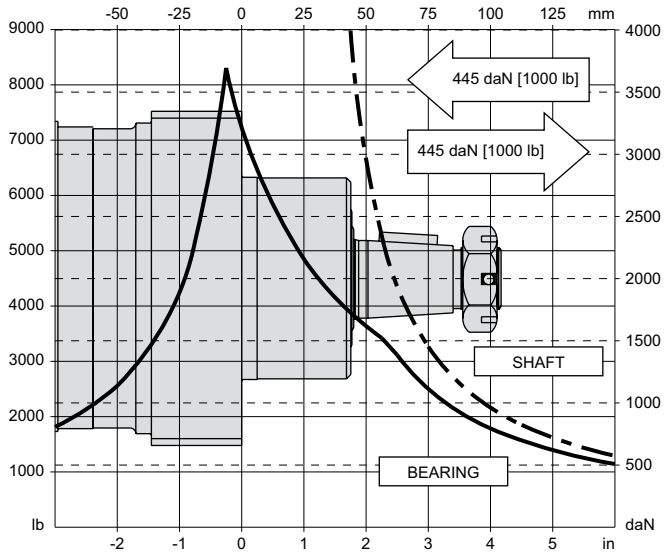
ALLOWABLE SHAFT LOAD / BEARING CURVE

The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an L_{10} life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table below.

MAGNETO & SAE A MOUNTS



WHEEL MOUNTS



LENGTH & WEIGHT CHART

Dimensions SS & TT are the overall motor lengths from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on page 9.

SS	Endcovers on pg. 7	Endcovers on pg. 8	Weight
#	mm [in]	mm [in]	kg [lb]
200	205 [8.08]	208 [8.19]	15.9 [35.0]
260	210 [8.26]	213 [8.37]	16.3 [36.0]
300	213 [8.39]	216 [8.50]	16.6 [36.6]
350	227 [8.95]	230 [9.06]	17.8 [39.2]
375	219 [8.75]	222 [8.75]	17.1 [37.8]
470	227 [8.95]	230 [9.06]	17.8 [39.2]
540	233 [9.18]	236 [9.29]	18.3 [40.3]
750	251 [9.89]	254 [10.00]	19.7 [43.5]

TT	Endcovers on pg. 7	Endcovers on pg. 8	Weight
#	mm [in]	mm [in]	kg [lb]
200	163 [6.42]	166 [6.53]	13.4 [29.6]
260	168 [6.61]	171 [6.72]	13.9 [30.6]
300	171 [6.74]	174 [6.85]	14.6 [32.2]
350	185 [7.29]	188 [7.40]	15.7 [34.7]
375	177 [6.99]	180 [7.10]	15.2 [33.4]
470	185 [7.29]	188 [7.40]	15.7 [34.7]
540	191 [7.53]	194 [7.64]	16.2 [35.8]
750	209 [8.24]	212 [8.35]	17.7 [39.1]

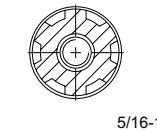
▶ All DR series motor weights can vary ± 0.9 kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.

BEARING LOAD MULTIPLICATION FACTOR TABLE

RPM	FACTOR	RPM	FACTOR
50	1.23	**500**	0.62
100	1.00	**600**	0.58
200	0.81	**700**	0.56
300	0.72	**800**	0.50
400	0.66		

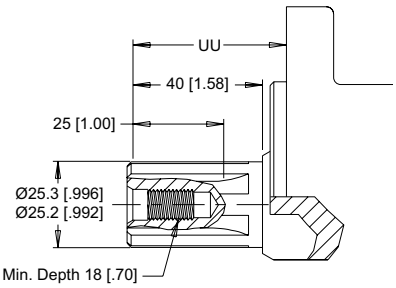
SHAFTS

02 1" 6B Spline

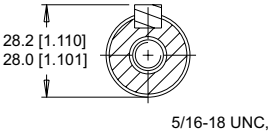


Max. Torque: 678 Nm [6000 lb-in]

03 1" 6B Spline Extended

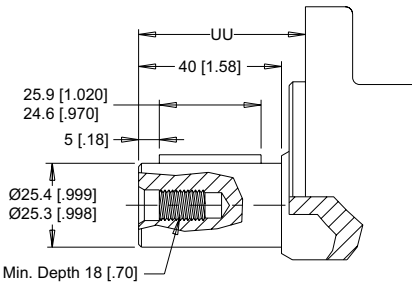


10 1" Straight

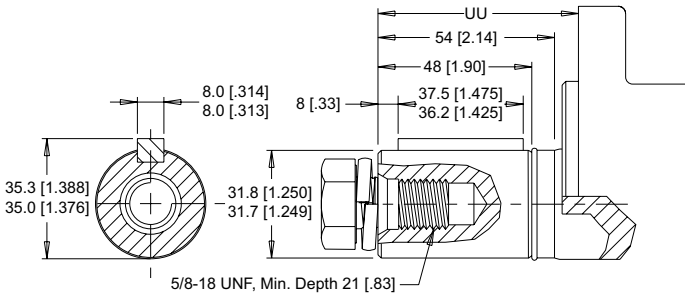


Max. Torque: 655 Nm [5800 lb-in]

15 1" Straight Extended



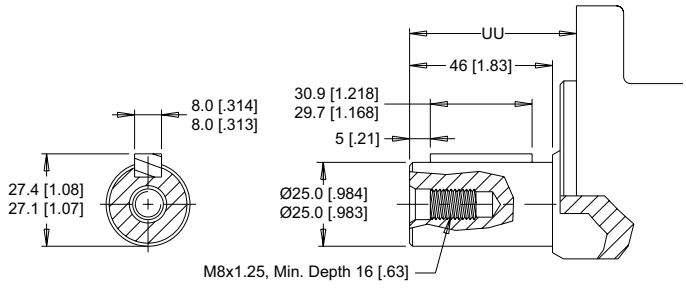
07 1-1/4" Straight Extended



Max. Torque: 1200 Nm [10600 lb-in]

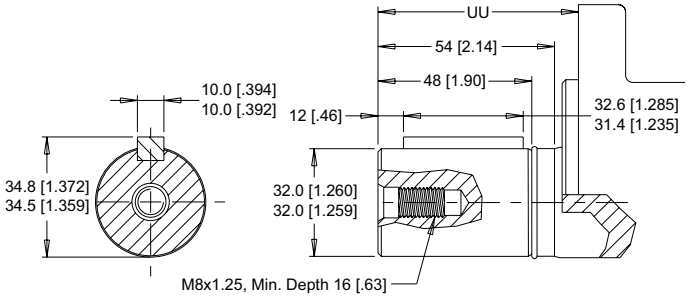
20 1-1/4" Straight

12 25mm Straight



Max. Torque: 678 Nm [6000 lb-in]

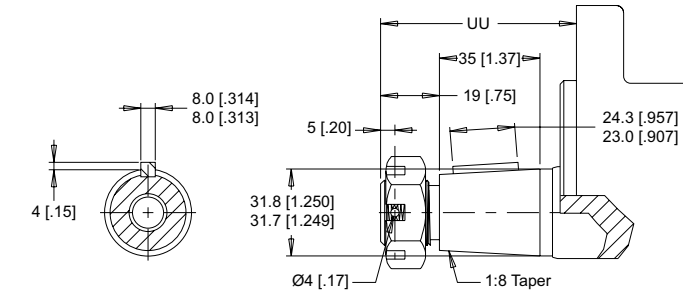
08 32mm Straight Extended



Max. Torque: 1200 Nm [10600 lb-in]

21 32mm Straight

22 1-1/4" Tapered

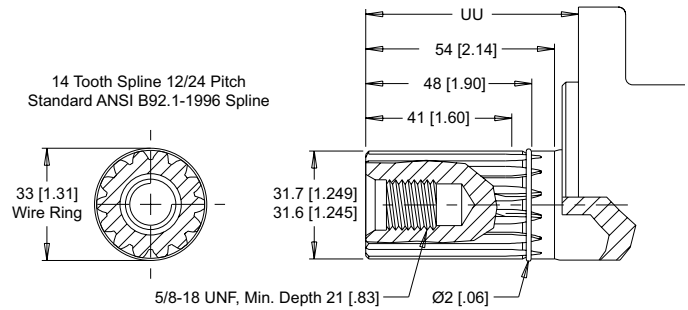


▶ A slotted hex nut is standard on this shaft.

Max. Torque: 1200 Nm [10600 lb-in]

25 1-1/4" Tapered Extended

09 14 Tooth Spline Extended



Max. Torque: 1200 Nm [10600 lb-in]

23 14 Tooth Spline

MOUNTING / SHAFT LENGTH CHART

Dimension UU is the overall distance from the motor mounting surface to the end of the shaft and is referenced on detailed shaft drawings above.

UU	Magneto & A Mounts	Wheel Mounts
#	mm [in]	mm [in]
02	50 [1.97]	91 [3.60]
03	76 [3.01]	118 [4.64]
07	88 [3.45]	129 [5.09]
08	88 [3.45]	129 [5.09]
09	88 [3.45]	129 [5.09]
10	50 [1.97]	91 [3.60]
12	56 [2.21]	98 [3.84]
15	76 [3.01]	118 [4.64]
20	61 [2.41]	103 [4.05]
21	61 [2.41]	103 [4.05]
22	66 [2.58]	107 [4.22]
23	61 [2.41]	103 [4.05]
25	92 [3.62]	134 [5.26]

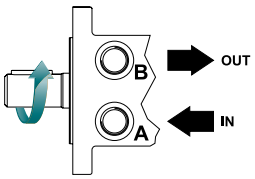
▶ Shaft lengths vary ± 0.8 mm [.030 in.]

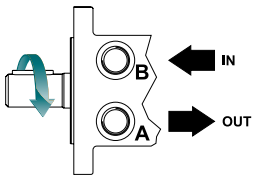
ORDERING INFORMATION

1			2			3a		3b		4	5	6	7	8	

1. CHOOSE SERIES DESIGNATION

600	Standard Motor





▶ The 600 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm^3/rev [12.4 in^3/rev]	**375**	375 cm^3/rev [22.8 in^3/rev]
260	261 cm^3/rev [15.9 in^3/rev]	**470**	465 cm^3/rev [28.3 in^3/rev]
300	300 cm^3/rev [18.3 in^3/rev]	**540**	536 cm^3/rev [32.7 in^3/rev]
350	348 cm^3/rev [21.2 in^3/rev]	**750**	748 cm^3/rev [45.6 in^3/rev]

3a. SELECT MOUNT TYPE

▼ **END MOUNTS**

A2	4-Hole, Magneto Mount
A4	6-Hole, SAE A Mount
W2	4-Hole, Wheel Mount

▼ **SIDE MOUNTS**

A8	4-Hole, Magneto Mount
A9	6-Hole, SAE A Mount
W8	4-Hole, Wheel Mount

3b. SELECT PORT SIZE

▼ **END PORT OPTIONS**

1	7/8-14 UNF Offset

▼ **SIDE PORT OPTIONS**

2	G 3/4, Radial
3	11/16" Hole, Aligned Manifold
5	1 1/16-20 UN, Radial
6	1 1/16-20 UN, Aligned
7	G 3/4, Radial

▶ Speed sensor option is not available on wheel mounts.

4. SELECT A SHAFT OPTION

02	1" 6B Spline	**15**	1" Straight Extended
03	1" 6B Spline Extended	**20**	1-1/4" Straight
07	1-1/4" Straight Extended	**21**	32mm Straight
08	32mm Straight Extended	**22**	1-1/4" Tapered
09	14 Tooth Spline Extended	**23**	14 Tooth Spline
10	1" Straight	**25**	1-1/4" Tapered Extended
12	25mm Straight		

▶ Extended shafts are designed for use with one of the speed sensor options listed in STEP 7.

5. SELECT A PAINT OPTION

A	Black
B	Black, Unpainted Mounting Surface
Z	No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A	None	**F**	121 bar [1750 psi] Relief
B	Valve Cavity Only	**G**	138 bar [2000 psi] Relief
C	69 bar [1000 psi] Relief	**J**	173 bar [2500 psi] Relief
D	86 bar [1250 psi] Relief	**L**	207 bar [3000 psi] Relief
E	104 bar [1500 psi] Relief		

▶ Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

A	Standard
B	Lock Nut
C	Solid Hex Nut
W	Speed Sensor, Dual, 4-Pin Male Weatherpack Connector
X	Speed Sensor, Dual, 4-Pin M12 Male Connector
Y	Speed Sensor, Single, 3-Pin Male Weatherpack Connector
Z	Speed Sensor, Single, 4-Pin M12 Male Connector

8. SELECT A MISCELLANEOUS OPTION

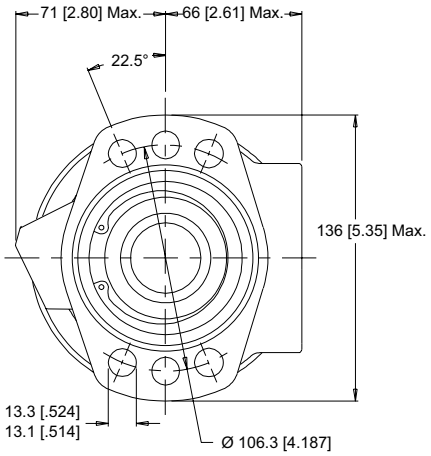
AA	None
AB	Internal Drain
AC	Freeturning Rotor
AD	Internal Drain & Freeturning Rotor

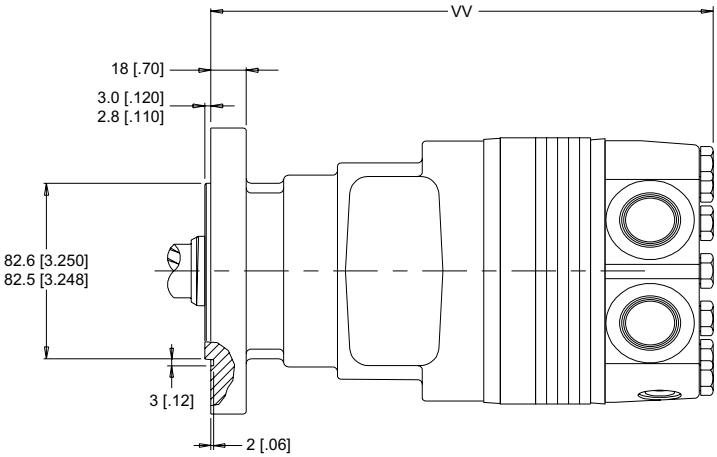
HOUSINGS

▶ Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

6-HOLE, SAE A MOUNT

A4 End Ports **A9** Side Ports





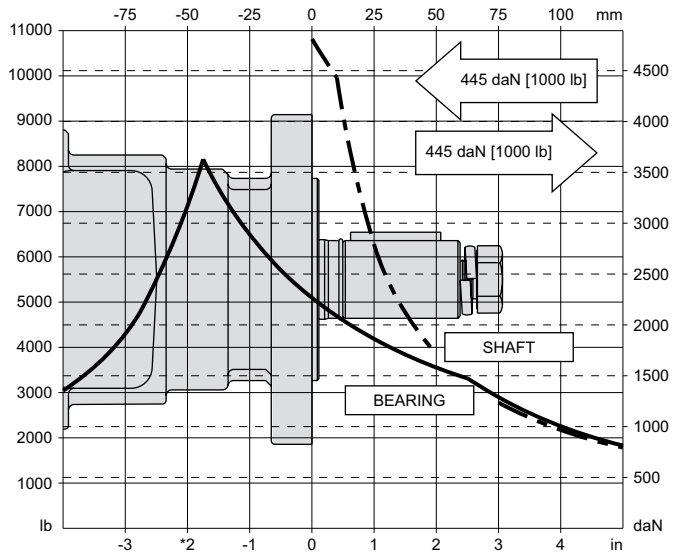
▶ Porting options listed on pages 7-8.

TECHNICAL INFORMATION

ALLOWABLE SHAFT LOAD / BEARING CURVE

The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an L_{10} life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table on page 10.

SAE A MOUNTS



LENGTH & WEIGHT CHART

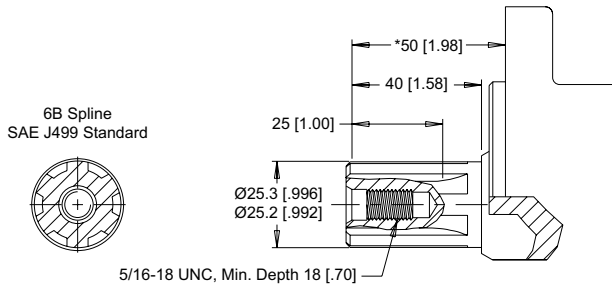
Dimension VV is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed above.

VV	Endcovers on pg. 7	Endcovers on pg. 8	Weight
#	mm [in]	mm [in]	kg [lb]
200	231 [9.08]	234 [9.19]	16.1 [35.4]
260	235 [9.27]	238 [9.38]	16.2 [35.6]
300	239 [9.40]	242 [9.51]	16.9 [37.2]
350	253 [9.95]	256 [10.06]	18.0 [39.6]
375	245 [9.65]	248 [9.76]	17.4 [38.3]
470	253 [9.95]	256 [10.06]	18.0 [39.6]
540	259 [10.19]	262 [10.30]	18.5 [40.7]
750	277 [10.90]	280 [11.01]	20.0 [44.0]

▶ All DR series motor weights can vary ± 0.9 kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.

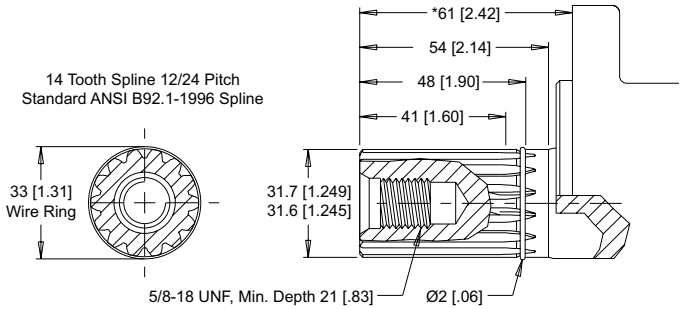
SHAFTS

03 1" 6B Spline



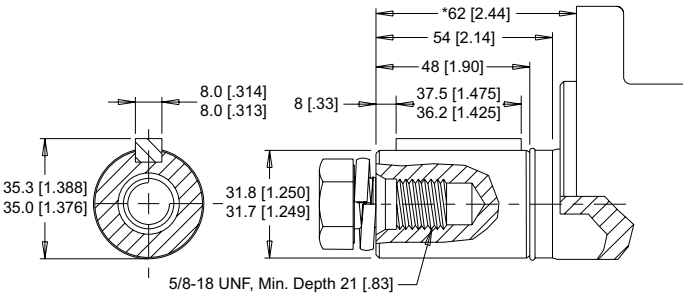
Max. Torque: 678 Nm [6000 lb-in]

09 14 Tooth Spline



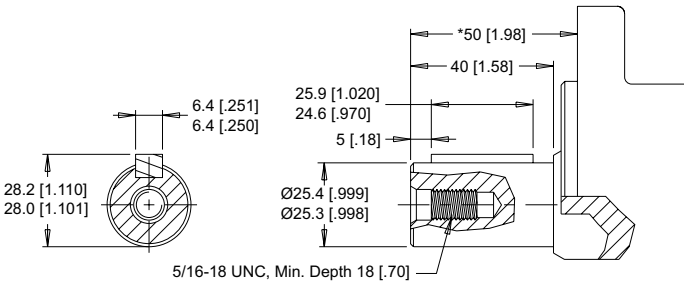
Max. Torque: 1200 Nm [10600 lb-in]

07 1-1/4" Straight



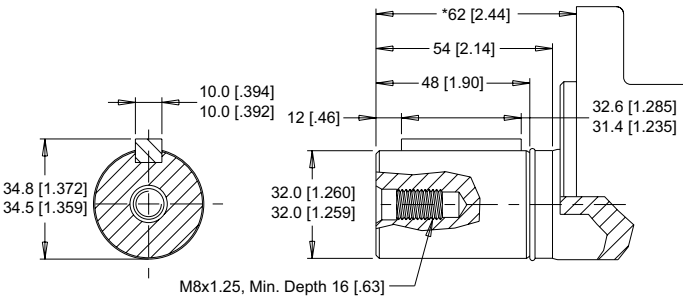
Max. Torque: 1200 Nm [10600 lb-in]

15 1" Straight



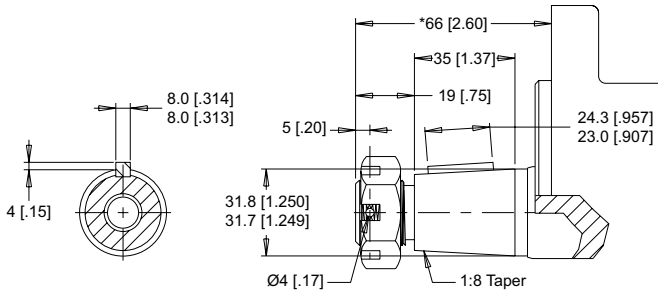
Max. Torque: 655 Nm [5800 lb-in]

08 32mm Straight



Max. Torque: 1200 Nm [10600 lb-in]

25 1-1/4" Tapered



▶ A slotted hex nut is standard on this shaft.

Max. Torque: 1200 Nm [10600 lb-in]

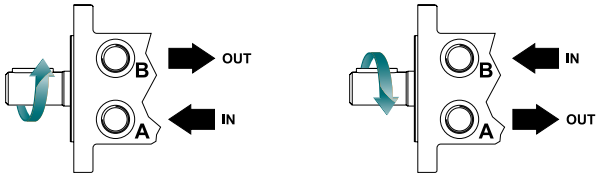
▶ *Shaft lengths vary ± 0.8 mm [.030 in.]

ORDERING INFORMATION

	1			2			3a		3b		4	5	6	7	8

1. CHOOSE SERIES DESIGNATION

620	Hydraulic Motor With Medium Duty Bearing



▶ The 620 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm^3/rev [12.4 in^3/rev]	**375**	375 cm^3/rev [22.8 in^3/rev]
260	261 cm^3/rev [15.9 in^3/rev]	**470**	465 cm^3/rev [28.3 in^3/rev]
300	300 cm^3/rev [18.3 in^3/rev]	**540**	536 cm^3/rev [32.7 in^3/rev]
350	348 cm^3/rev [21.2 in^3/rev]	**750**	748 cm^3/rev [45.6 in^3/rev]

3a. SELECT MOUNT TYPE

▼ **END MOUNTS**

A4	6-Hole, SAE A Mount

▼ **SIDE MOUNTS**

A9	6-Hole, SAE A Mount

3b. SELECT PORT SIZE

▼ **END PORT OPTIONS**

1	7/8-14 UNF Offset

▼ **SIDE PORT OPTIONS**

2	G 3/4, Radial
3	11/16” Hole, Aligned Manifold
5	1 1/16-20 UN, Radial
6	1 1/16-20 UN, Aligned
7	G 3/4, Radial

4. SELECT A SHAFT OPTION

03	1” 6B Spline	**09**	14 Tooth Spline
07	1-1/4” Straight	**15**	1” Straight
08	32mm Straight	**25**	1-1/4” Tapered

5. SELECT A PAINT OPTION

A	Black
B	Black, Unpainted Mounting Surface
Z	No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A	None	**F**	121 bar [1750 psi] Relief
B	Valve Cavity Only	**G**	138 bar [2000 psi] Relief
C	69 bar [1000 psi] Relief	**J**	173 bar [2500 psi] Relief
D	86 bar [1250 psi] Relief	**L**	207 bar [3000 psi] Relief
E	104 bar [1500 psi] Relief		

▶ Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

A	Standard
B	Lock Nut
C	Solid Hex Nut

8. SELECT A MISCELLANEOUS OPTION

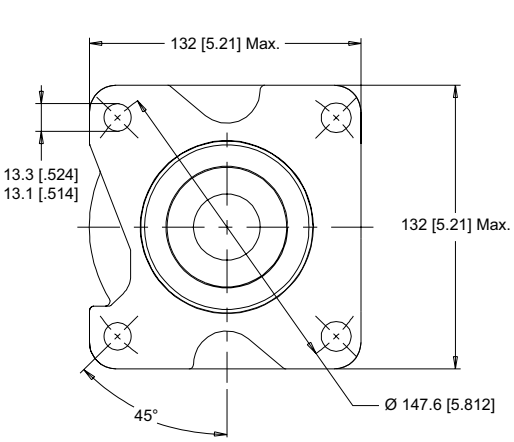
AA	None
AB	Internal Drain
AC	Freeturning Rotor
AD	Internal Drain & Freeturning Rotor

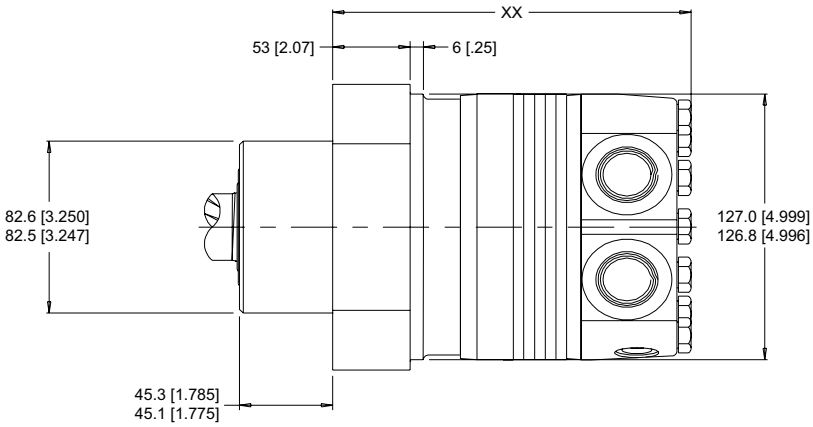
HOUSINGS

▶ Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

4-HOLE, WHEEL MOUNT

W2 End Ports **W8** Side Ports





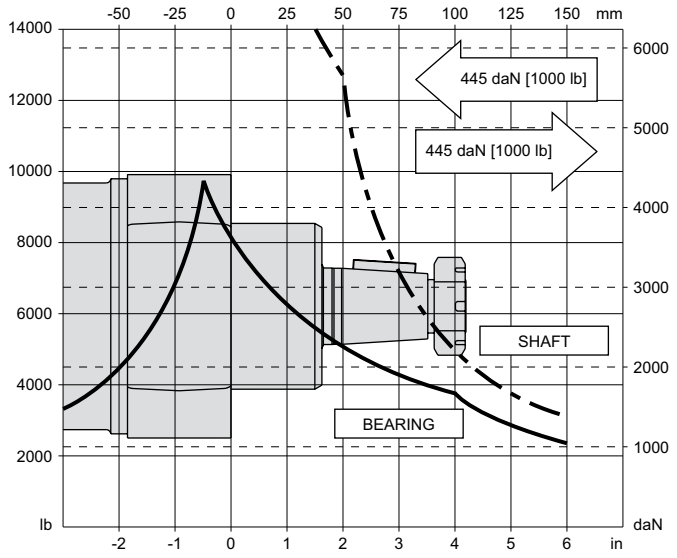
▶ Porting options listed on pages 7-8.

TECHNICAL INFORMATION

ALLOWABLE SHAFT LOAD / BEARING CURVE

The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an L_{10} life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table on page 10.

WHEEL MOUNTS



LENGTH & WEIGHT CHART

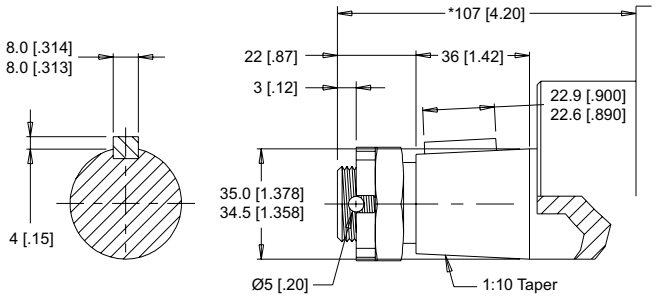
Dimension XX is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed above.

XX	Endcovers on pg. 7	Endcovers on pg. 8	Weight
#	mm [in]	mm [in]	kg [lb]
200	199 [7.75]	202 [7.86]	17.5 [38.5]
260	204 [8.04]	207 [8.15]	17.9 [39.5]
300	207 [8.17]	210 [8.28]	18.2 [40.1]
350	221 [8.72]	224 [8.83]	19.3 [42.6]
375	214 [8.42]	217 [8.53]	18.7 [41.2]
470	221 [8.72]	224 [8.83]	19.3 [42.6]
540	227 [8.96]	230 [9.07]	19.8 [43.7]
750	245 [9.67]	248 [9.78]	21.3 [47.0]

▶ All DR series motor weights can vary ± 0.9 kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.

SHAFTS

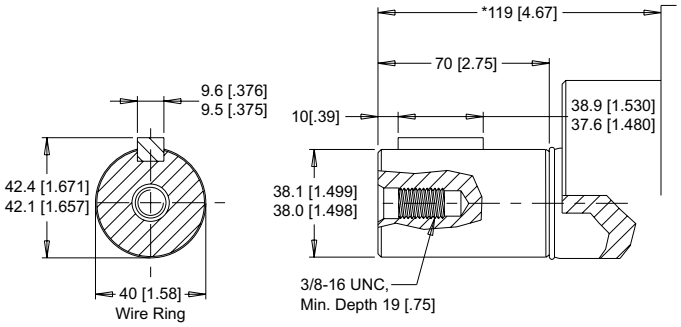
28 35mm Tapered



▶ A slotted hex nut is standard on this shaft.

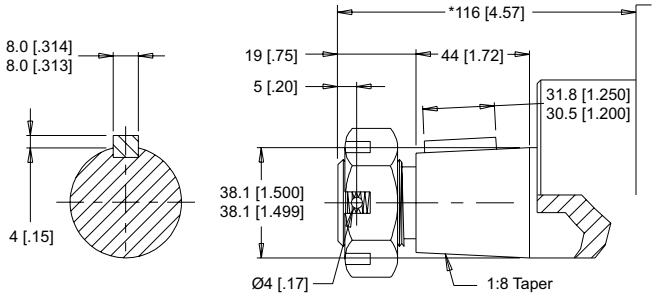
Max. Torque: 1200 Nm [10600 lb-in]

30 1-1/2" Straight



Max. Torque: 1200 Nm [10600 lb-in]

31 1-1/2" Tapered



▶ A slotted hex nut is standard on this shaft.

Max. Torque: 1200 Nm [10600 lb-in]

▶ *Shaft lengths vary ± 0.8 mm [.030 in.]

DR (630 Series)

Hydraulic Motor With Heavy Duty Bearing

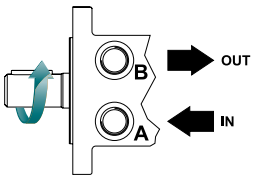
whitedriveproducts

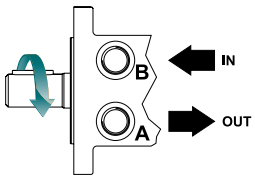
ORDERING INFORMATION

1			2			3a		3b		4	5	6	7	8	

1. CHOOSE SERIES DESIGNATION

630	Hydraulic Motor With Heavy Duty Bearing





▶ The 630 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm^3/rev [12.4 in^3/rev]	375	375 cm^3/rev [22.8 in^3/rev]
260	261 cm^3/rev [15.9 in^3/rev]	470	465 cm^3/rev [28.3 in^3/rev]
300	300 cm^3/rev [18.3 in^3/rev]	540	536 cm^3/rev [32.7 in^3/rev]
350	348 cm^3/rev [21.2 in^3/rev]	750	748 cm^3/rev [45.6 in^3/rev]

3a. SELECT MOUNT TYPE

▼ **END MOUNTS**

W2	4-Hole, Wheel Mount

▼ **SIDE MOUNTS**

W8	4-Hole, Wheel Mount

3b. SELECT PORT SIZE

▼ **END PORT OPTIONS**

1	7/8-14 UNF Offset

▼ **SIDE PORT OPTIONS**

2	G 3/4, Radial
3	11/16” Hole, Aligned Manifold
5	1 1/16-20 UN, Radial
6	1 1/16-20 UN, Aligned
7	G 3/4, Radial

4. SELECT A SHAFT OPTION

28	35mm Tapered
30	1-1/2” Straight
31	1-1/2” Tapered

5. SELECT A PAINT OPTION

A	Black
B	Black, Unpainted Mounting Surface
Z	No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A	None	F	121 bar [1750 psi] Relief
B	Valve Cavity Only	G	138 bar [2000 psi] Relief
C	69 bar [1000 psi] Relief	J	173 bar [2500 psi] Relief
D	86 bar [1250 psi] Relief	L	207 bar [3000 psi] Relief
E	104 bar [1500 psi] Relief		

▶ Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

A	Standard
B	Lock Nut
C	Solid Hex Nut

8. SELECT A MISCELLANEOUS OPTION

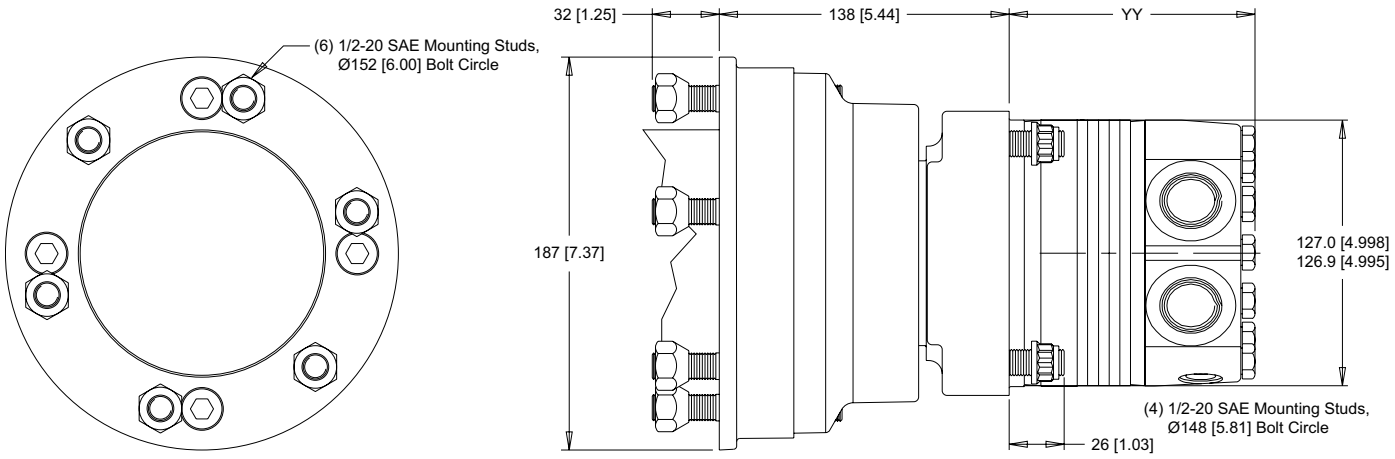
AA	None
AB	Internal Drain
AC	Freeturning Rotor
AD	Internal Drain & Freeturning Rotor

HOUSINGS

▶ Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

4-HOLE, WHEEL HUB MOUNT

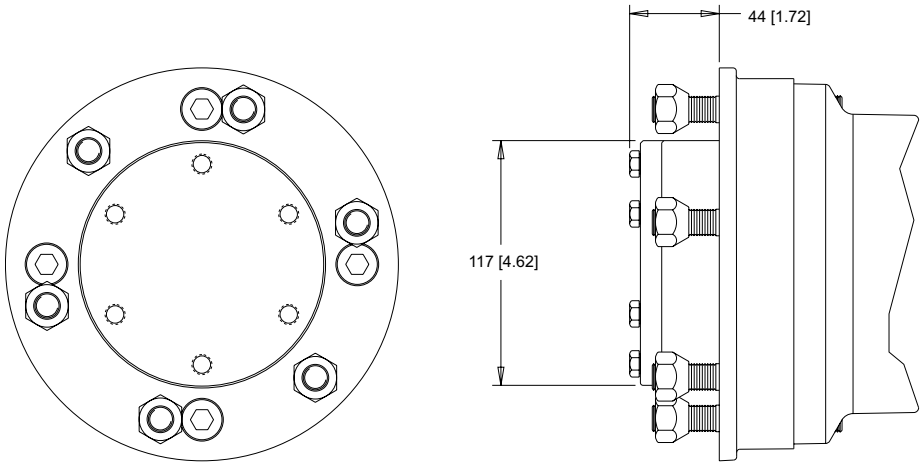
W2 End Ports **W8** Side Ports



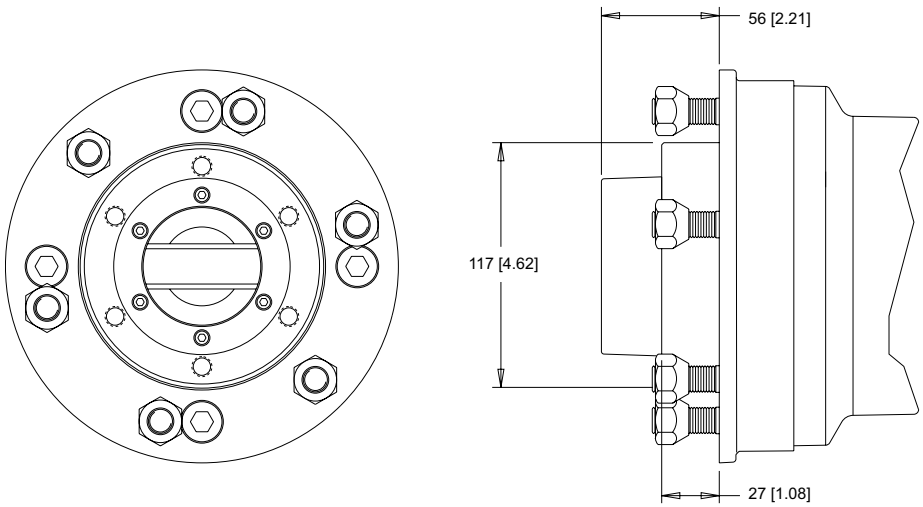
▶ Dimension YY is charted on page 20. Porting options listed on pages 7-8.

HUB OPTION DETAILS

STANDARD HUB



LOCKING HUB

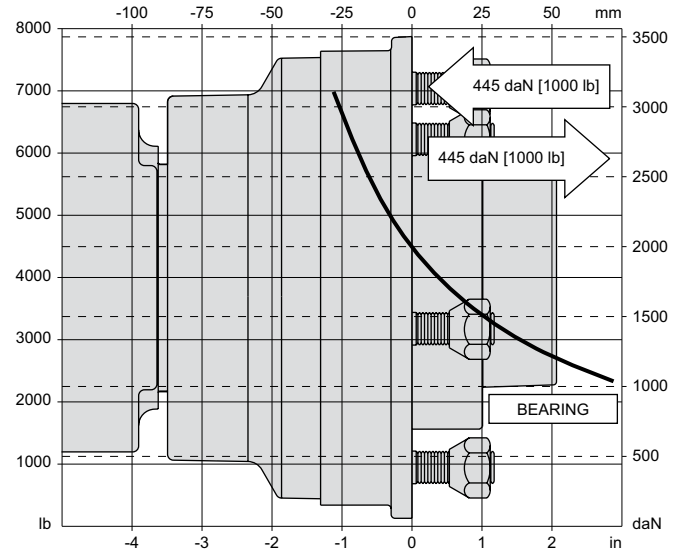


TECHNICAL INFORMATION

ALLOWABLE SHAFT LOAD / BEARING CURVE

The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an L_{10} life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table on page 10.

WHEEL HUB MOUNTS



LENGTH & WEIGHT CHART

Dimension YY is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on page 19.

YY	Endcovers on pg. 7	Endcovers on pg. 8	Weight
#	mm [in]	mm [in]	kg [lb]
200	109 [4.31]	112 [4.42]	24.4 [53.9]
260	114 [4.50]	117 [4.61]	24.8 [54.7]
300	117 [4.63]	120 [4.74]	25.2 [55.5]
350	131 [5.18]	134 [5.29]	26.3 [57.9]
375	124 [4.88]	127 [4.99]	25.7 [56.7]
470	131 [5.18]	134 [5.29]	26.3 [57.9]
540	138 [5.42]	141 [5.53]	26.8 [59.1]
750	156 [6.21]	159 [6.24]	28.2 [62.2]

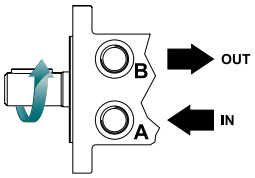
▶ All DR series motor weights can vary ± 0.9 kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.

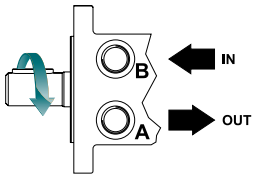
ORDERING INFORMATION

1	2	3a	3b	4	5	6	7	8

1. CHOOSE SERIES DESIGNATION

640	Hydraulic Motor With Wheel Hub





▶ The 640 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm^3/rev [12.4 in^3/rev]	375	375 cm^3/rev [22.8 in^3/rev]
260	261 cm^3/rev [15.9 in^3/rev]	470	465 cm^3/rev [28.3 in^3/rev]
300	300 cm^3/rev [18.3 in^3/rev]	540	536 cm^3/rev [32.7 in^3/rev]
350	348 cm^3/rev [21.2 in^3/rev]	750	748 cm^3/rev [45.6 in^3/rev]

3a. SELECT MOUNT TYPE

▼ **END MOUNTS**

W2	4-Hole, Wheel Mount

▼ **SIDE MOUNTS**

W8	4-Hole, Wheel Mount

3b. SELECT PORT SIZE

▼ **END PORT OPTIONS**

1	7/8-14 UNF Offset

▼ **SIDE PORT OPTIONS**

2	G 3/4, Radial
3	11/16" Hole, Aligned Manifold
5	1 1/16-20 UN, Radial
6	1 1/16-20 UN, Aligned
7	G 3/4, Radial

4. SELECT A SHAFT OPTION

61	6-Bolt Wheel Flange

5. SELECT A PAINT OPTION

A	Black
Z	No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A	None	F	121 bar [1750 psi] Relief
B	Valve Cavity Only	G	138 bar [2000 psi] Relief
C	69 bar [1000 psi] Relief	J	173 bar [2500 psi] Relief
D	86 bar [1250 psi] Relief	L	207 bar [3000 psi] Relief
E	104 bar [1500 psi] Relief		

▶ Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

A	Standard
H	Locking Hub

8. SELECT A MISCELLANEOUS OPTION

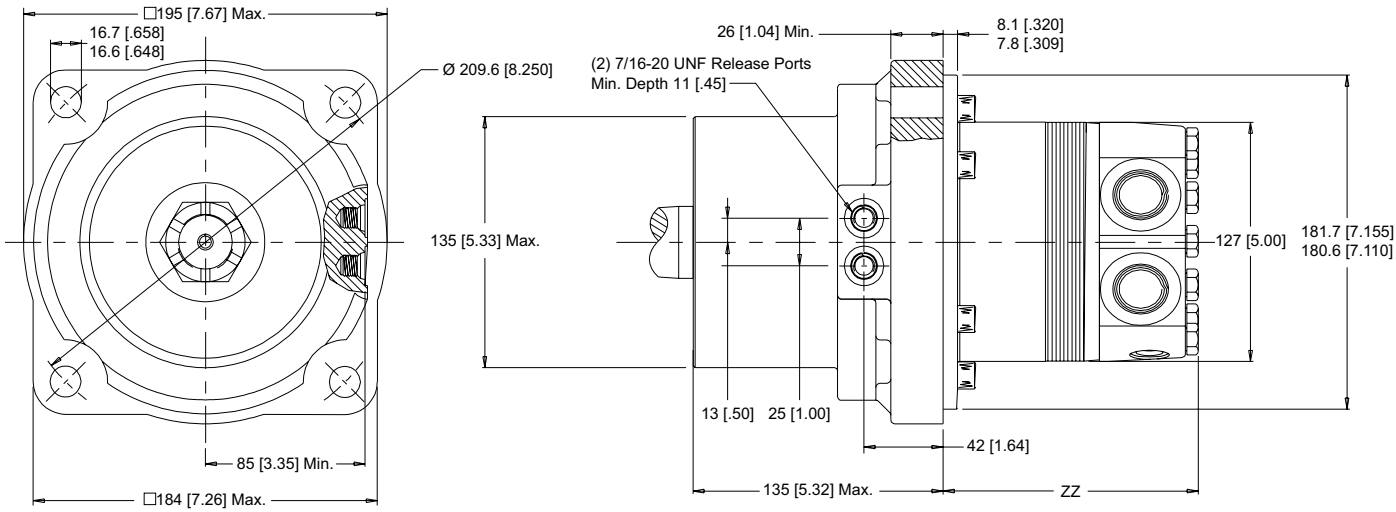
AA	None
AB	Internal Drain
AC	Freeturning Rotor
AD	Internal Drain & Freeturning Rotor

HOUSINGS

▶ Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

4-HOLE, WHEEL BRAKE MOUNT

W2 End Ports **W8** Side Ports



▶ Porting options listed on pages 7-8.

TECHNICAL INFORMATION

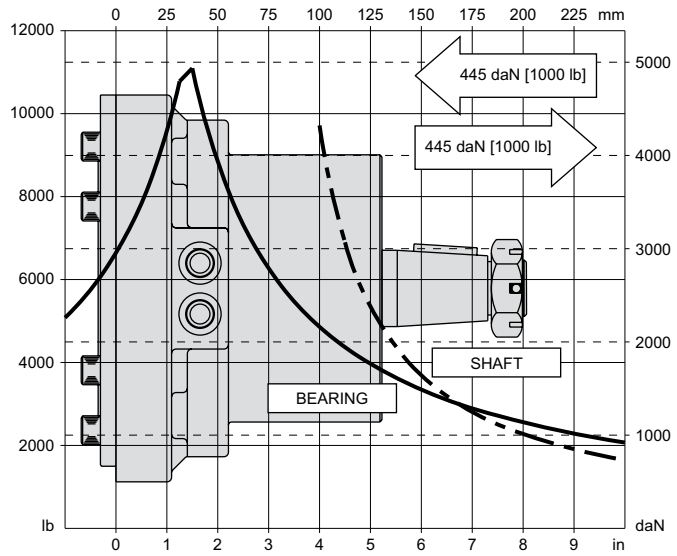
ALLOWABLE SHAFT LOAD / BEARING CURVE

The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an L_{10} life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table on page 10.

SPECIFICATIONS

Rated brake torque.....1582 Nm [14000 lb-in]
Initial release pressure .....19 bar [275 psi]
Full release pressure .....33 bar [475 psi]
Maximum release pressure .....207 bar [3000 psi]
Release volume.....13-16 cm^3 [0.8 - 1.0 in^3]

WHEEL BRAKE MOUNTS



LENGTH & WEIGHT CHART

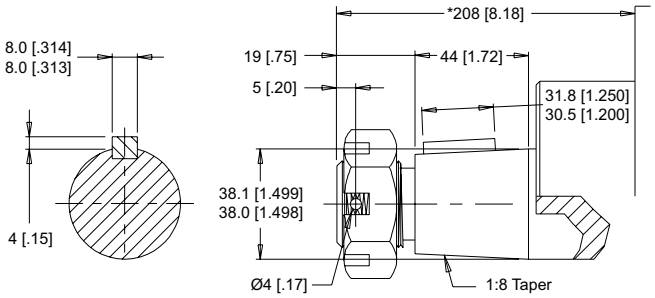
Dimension ZZ is the overall motor length from the rear of the motor to the mounting surface.

ZZ	Endcovers on pg. 7	Endcovers on pg. 8	Weight
#	mm [in]	mm [in]	kg [lb]
200	104 [4.11]	107 [4.22]	26.5 [58.4]
260	109 [4.30]	112 [4.41]	26.9 [59.4]
300	112 [4.43]	115 [4.54]	27.2 [60.0]
350	126 [4.98]	129 [5.09]	28.3 [62.5]
375	119 [4.68]	122 [4.79]	27.7 [61.1]
470	126 [4.98]	129 [5.09]	28.3 [62.5]
540	132 [5.22]	135 [5.33]	28.8 [63.6]
750	150 [5.93]	153 [6.04]	30.3 [66.9]

▶ 610 series motor/brake weights can vary ± 1kg [2 lb] depending on model configurations such as housing, shaft, endcover, options etc.

SHAFTS

31 1-1/2" Tapered



▶ A slotted hex nut is standard on this shaft.

Max. Torque: 1200 Nm [10600 lb-in]

▶ *Shaft lengths vary ± 0.8 mm [.030 in.]

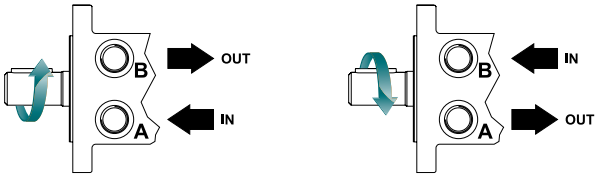
ORDERING INFORMATION

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

1 2 3a 3b 4 5 6 7 8

1. CHOOSE SERIES DESIGNATION

610 Hydraulic Motor With Integral Hydraulic Brake



▶ The 610 series is bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

200	204 cm^3/rev [12.4 in^3/rev]	**375**	375 cm^3/rev [22.8 in^3/rev]
260	261 cm^3/rev [15.9 in^3/rev]	**470**	465 cm^3/rev [28.3 in^3/rev]
300	300 cm^3/rev [18.3 in^3/rev]	**540**	536 cm^3/rev [32.7 in^3/rev]
350	348 cm^3/rev [21.2 in^3/rev]	**750**	748 cm^3/rev [45.6 in^3/rev]

3a. SELECT MOUNT TYPE

▼ **END MOUNTS**

W2 4-Hole, Wheel Mount

▼ **SIDE MOUNTS**

W8 4-Hole, Wheel Mount

3b. SELECT PORT SIZE

▼ **END PORT OPTIONS**

1 7/8-14 UNF Offset

▼ **SIDE PORT OPTIONS**

2 G 3/4, Radial
3 11/16" Hole, Aligned Manifold
5 1 1/16-20 UN, Radial
6 1 1/16-20 UN, Aligned
7 G 3/4, Radial

4. SELECT A SHAFT OPTION

31 1-1/2" Tapered

5. SELECT A PAINT OPTION

A Black
Z No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A	None	**F**	121 bar [1750 psi] Relief
B	Valve Cavity Only	**G**	138 bar [2000 psi] Relief
C	69 bar [1000 psi] Relief	**J**	173 bar [2500 psi] Relief
D	86 bar [1250 psi] Relief	**L**	207 bar [3000 psi] Relief
E	104 bar [1500 psi] Relief		

▶ Valve cavity is not available on port option 3.

7. SELECT AN ADD-ON OPTION

A Standard
C Solid Hex Nut

8. SELECT A MISCELLANEOUS OPTION

AA None
AC Freeturning Rotor

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