OVERVIEW

The WP motor series is an economical alternative to more complex roller gerotor designs and still provides high efficiency across a wide performance range. These motors are intended for light-duty applications requiring high torque in a compact package and are suitable for industrial and mobile applications including car wash brushes, food processing equipment, conveyors, machine tools, agricultural equipment, sweepers, skid steer attachments, and more.

FEATURES / BENEFITS

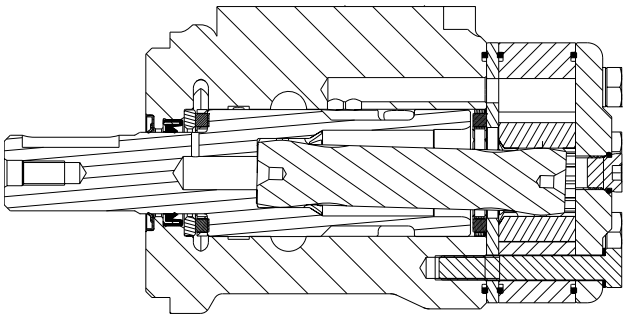
- Built-in check valves offer versatility and increased seal life.
- A variety of mounts and shafts provide flexibility in application design.
- Spool valve design gives superior performance and smooth operation over a wide speed and torque range.
- Standard high pressure shaft seals offer superior seal life and performance.

TYPICAL APPLICATIONS

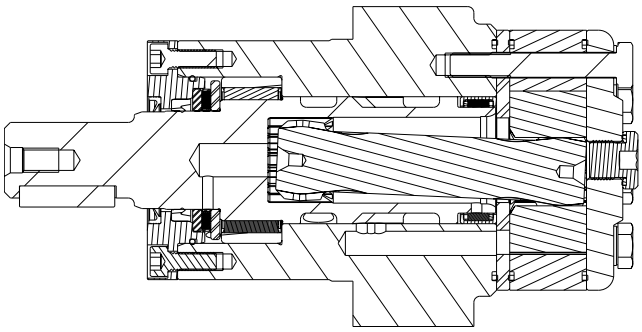
agriculture equipment, conveyors, carwashes, sweepers, food processing, grain augers, spreaders, feed rollers, augers, brush drives and more

SERIES DESCRIPTIONS

155/156 - Hydraulic Motor
Standard



157/158 - Hydraulic Motor
With Needle Bearings



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
025	25 [1.5]	1570	1687	40 [11]	45 [12]	35 [310]	48 [425]	100 [1450]	140 [2030]	225 [3260]
032	32 [2.0]	1550	1674	50 [13]	55 [15]	45 [398]	57 [504]	100 [1450]	140 [2030]	225 [3260]
040	40 [2.5]	1471	1670	60 [16]	70 [19]	65 [575]	74 [655]	100 [1450]	140 [2030]	225 [3260]
050	50 [3.0]	1208	1500	60 [16]	75 [20]	91 [805]	108 [956]	140 [2030]	175 [2540]	240 [3480]
060	59 [3.6]	1185	1271	60 [16]	75 [20]	125 [1106]	136 [1204]	160 [2320]	175 [2540]	240 [3480]
080	78 [4.8]	896	960	60 [16]	75 [20]	164 [1451]	183 [1620]	160 [2320]	175 [2540]	240 [3480]
100	96 [5.9]	728	780	60 [16]	75 [20]	195 [1726]	213 [1885]	160 [2320]	175 [2540]	240 [3480]
125	125 [7.6]	559	599	60 [16]	75 [20]	258 [2285]	278 [2460]	160 [2320]	175 [2540]	240 [3480]
160	159 [9.7]	452	483	60 [16]	75 [20]	321 [2840]	362 [3205]	160 [2320]	175 [2540]	240 [3480]
200	190 [11.6]	367	385	60 [16]	75 [20]	380 [3365]	420 [3720]	150 [2180]	175 [2540]	240 [3480]
250	240 [14.6]	291	312	60 [16]	75 [20]	445 [3940]	557 [4930]	140 [2030]	175 [2540]	240 [3480]
315	303 [18.5]	228	245	60 [16]	75 [20]	460 [4071]	602 [5330]	120 [1740]	160 [2320]	200 [2900]
400	388 [23.7]	155	189	60 [16]	75 [20]	488 [4320]	625 [5532]	95 [1380]	125 [1810]	180 [2610]

▶ 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

025

25 cm³ [1.5 in³] / rev

Pressure - bar [psi] | Max. Cont. | Max. Inter.

30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]

Intermittent Ratings - 10% of Operation

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

Flow - lpm [gpm]

5 [1.3]	9 [80] **186**	18 [159] **160**	25 [221] **134**	32 [283] **101**	35 [310] **106**		200
10 [2.6]	10 [88] **386**	18 [159] **352**	26 [230] **323**	34 [301] **280**	37 [327] **255**	48 [425] **210**	400
15 [4.0]	9 [80] **568**	19 [168] **537**	26 [230] **505**	35 [310] **467**	38 [336] **431**	44 [389] **390**	600
20 [5.3]	8 [71] **777**	19 [168] **736**	25 [221] **692**	33 [292] **660**	39 [345] **608**	45 [398] **566**	800
25 [6.6]	7 [62] **972**	18 [159] **920**	26 [230] **870**	32 [283] **840**	39 [345] **803**	45 [398] **756**	1000
30 [7.9]	6 [53] **1167**	17 [150] **1122**	25 [221] **1088**	32 [283] **1055**	39 [345] **998**	44 [389] **976**	1200
35 [9.2]	5 [44] **1360**	16 [142] **1318**	24 [212] **1282**	31 [274] **1258**	37 [327] **1216**	43 [381] **1160**	1400
40 [10.6] Max. Cont.	5 [44] **1570**	15 [133] **1503**	22 [195] **1476**	31 [274] **1432**	36 [319] **1394**	41 [363] **1359**	1600
45 [11.9] Max. Inter.		13 [115] **1687**	20 [177] **1636**	28 [248] **1600**	34 [301] **1558**	39 [345] **1516**	1800

Theoretical rpm

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

Rotor Width

4.1 [.160] mm [in]

Theoretical Torque - Nm [lb-in]

12 [106]	24 [211]	32 [282]	40 [352]	48 [423]	56 [493]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

032

32 cm³ [2.0 in³] / rev

Pressure - bar [psi] | Max. Cont. | Max. Inter.

30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]

Intermittent Ratings - 10% of Operation

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

Flow - lpm [gpm]

5 [1.3]	11 [97] **149**	24 [212] **135**	35 [310] **114**	37 [327] **94**			156
10 [2.6]	12 [106] **308**	27 [239] **284**	37 [327] **270**	43 [381] **250**	46 [407] **240**	56 [496] **211**	313
15 [4.0]	11 [97] **465**	26 [230] **444**	36 [319] **429**	45 [398] **398**	48 [425] **378**	57 [504] **355**	469
20 [5.3]	10 [88] **624**	25 [221] **589**	35 [310] **575**	44 [389] **557**	46 [407] **544**	56 [496] **524**	625
25 [6.6]	9 [80] **780**	24 [212] **771**	34 [301] **751**	42 [372] **735**	45 [398] **719**	54 [478] **695**	781
30 [7.9]	8 [71] **931**	23 [204] **908**	32 [283] **895**	40 [354] **876**	45 [398] **857**	52 [460] **822**	938
35 [9.2]	7 [62] **1086**	20 [177] **1066**	29 [257] **1051**	39 [345] **1030**	43 [381] **1012**	51 [451] **981**	1094
40 [10.6]	7 [62] **1240**	19 [168] **1212**	27 [239] **1190**	38 [336] **1178**	43 [381] **1145**	50 [442] **1121**	1250
45 [11.9]	6 [53] **1400**	18 [159] **1382**	26 [230] **1366**	35 [310] **1340**	42 [372] **1314**	48 [425] **1280**	1406
50 [13.2] Max. Cont.	5 [44] **1550**	16 [142] **1526**	24 [212] **1500**	31 [274] **1478**	40 [354] **1452**	46 [407] **1418**	1563
55 [14.5] Max. Inter.		12 [106] **1674**	20 [177] **1641**	28 [248] **1617**	34 [301] **1584**	39 [345] **1555**	1719

Theoretical rpm

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

Rotor Width

5.1 [.200] mm [in]

Theoretical Torque - Nm [lb-in]

15 [135]	31 [271]	41 [361]	51 [451]	61 [541]	71 [631]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product tesing please refer to page 6.

DISPLACEMENT PERFORMANCE

040

40 cm³ [2.5 in³] / rev

Flow - lpm [gpm]	Pressure - bar [psi] 30 [435]	60 [870]	80 [1160]	100 [1450]	Max. Cont. 120 [1740]	Max. Inter. 140 [2030]	Theoretical rpm
	Torque - Nm [lb-in], **Speed rpm**				**Intermittent Ratings -** 10% of Operation		
5 [1.3]	15 [133] **113**	31 [274] **98**	38 [336] **83**	48 [425] **60**	56 [496] **48**		125
10 [2.6]	14 [124] **238**	31 [274] **222**	41 [363] **204**	54 [478] **182**	62 [549] **161**	70 [619] **114**	250
20 [5.3]	13 [115] **482**	32 [283] **458**	41 [363] **442**	53 [469] **423**	65 [575] **402**	74 [655] **381**	500
30 [7.9]	12 [106] **730**	30 [265] **704**	39 [345] **687**	51 [451] **668**	63 [558] **646**	74 [655] **624**	750
40 [10.6]	10 [88] **968**	27 [239] **949**	39 [345] **928**	51 [451] **908**	61 [540] **892**	72 [637] **870**	1000
50 [13.2]	7 [62] **1219**	25 [221] **1191**	37 [327] **1173**	49 [434] **1150**	59 [522] **1127**	71 [628] **1107**	1250
Max. Inter. Cont. 60 [15.8]	4 [35] **1471**	23 [204] **1428**	34 [301] **1411**	46 [407] **1387**	56 [496] **1369**	68 [602] **1341**	1500
70 [18.5]		16 [142] **1670**	30 [265] **1653**	41 [363] **1627**	52 [460] **1612**	64 [566] **1598**	2000

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

Rotor Width	Theoretical Torque - Nm [lb-in]					
6.6 [.260]	19 [168]	38 [336]	50 [442]	64 [566]	76 [673]	89 [788]

mm [in]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

050

50 cm³ [3.0 in³] / rev

Flow - lpm [gpm]	Pressure - bar [psi] 30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	Max. Cont. 140 [2030]	160 [2320]	Max. Inter. 175 [2540]	Theoretical rpm
	Torque - Nm [lb-in], **Speed rpm**					**Intermittent Ratings -** 10% of Operation			
5 [1.3]	19 [168] **100**	39 [345] **85**	48 [425] **75**	62 [549] **64**	75 [664] **48**				101
10 [2.6]	20 [177] **197**	38 [336] **196**	50 [442] **174**	63 [558] **159**	78 [690] **146**	92 [814] **127**	102 [903] **101**	107 [947] **97**	202
20 [5.3]	18 [159] **400**	38 [336] **386**	52 [460] **371**	64 [566] **355**	78 [690] **341**	90 [796] **314**	104 [920] **292**	108 [956] **290**	404
30 [7.9]	15 [133] **600**	37 [327] **585**	50 [442] **571**	64 [566] **560**	77 [681] **540**	89 [788] **516**	103 [912] **499**	107 [947] **495**	606
40 [10.6]	12 [106] **808**	31 [274] **800**	45 [398] **790**	59 [522] **770**	73 [646] **766**	87 [770] **733**	99 [876] **703**	106 [938] **697**	808
50 [13.2]	9 [80] **1009**	27 [239] **1006**	41 [363] **986**	55 [487] **982**	68 [602] **964**	84 [743] **956**	98 [867] **930**	105 [929] **872**	1010
Max. Cont. 60 [15.8]	6 [53] **1208**	24 [212] **1200**	37 [327] **1196**	53 [469] **1188**	64 [566] **1176**	82 [726] **1160**	95 [841] **1140**	102 [903] **963**	1212
70 [18.5]	3 [27] **1410**	17 [150] **1396**	32 [283] **1382**	44 [389] **1370**	58 [513] **1358**	80 [708] **1347**	93 [823] **1334**	98 [867] **1315**	1414
Max. Inter. 75 [19.8]		15 [133] **1500**	30 [265] **1488**	40 [354] **1473**	56 [496] **1457**	77 [681] **1439**	88 [779] **1412**	93 [823] **1388**	1515

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

Rotor Width	Theoretical Torque - Nm [lb-in]							
6.6 [.260]	24 [212]	47 [416]	63 [558]	79 [699]	95 [841]	110 [973]	126 [1115]	138 [1221]

mm [in]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product tesing please refer to page 6.

DISPLACEMENT PERFORMANCE

060

59 cm³ [3.6 in³] / rev

Flow - lpm [gpm]	Pressure - bar [psi] 30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	Max. Cont. 160 [2320]	Max. Inter. 175 [2540]	Theoretical rpm
	Torque - Nm [lb-in], **Speed rpm**						**Intermittent Ratings -** 10% of Operation		
5 [1.3]	20 [177] **83**	46 [407] **79**	65 [575] **72**	80 [708] **64**	95 [841] **51**	112 [991] **38**			85
10 [2.6]	22 [195] **169**	47 [416] **164**	66 [584] **155**	81 [717] **142**	96 [850] **135**	113 [1000] **124**	125 [1106] **108**	136 [1204] **88**	170
20 [5.3]	20 [177] **338**	45 [398] **332**	64 [566] **320**	80 [708] **309**	93 [823] **290**	111 [982] **276**	123 [1088] **245**	134 [1186] **222**	339
30 [7.9]	17 [150] **507**	43 [381] **502**	62 [549] **493**	76 [673] **482**	89 [788] **468**	109 [965] **454**	121 [1071] **424**	131 [1159] **400**	509
40 [10.6]	14 [124] **678**	41 [363] **669**	58 [513] **660**	73 [646] **645**	87 [770] **630**	105 [929] **616**	117 [1035] **594**	127 [1124] **582**	678
50 [13.2]	10 [88] **845**	37 [327] **841**	55 [487] **833**	70 [619] **818**	84 [743] **805**	102 [903] **792**	113 [1000] **770**	122 [1080] **754**	848
Max. Cont. 60 [15.8]	7 [62] **1014**	34 [301] **1005**	52 [460] **999**	66 [584] **992**	82 [726] **982**	99 [876] **968**	109 [965] **956**	118 [1044] **933**	1017
70 [18.5]	4 [35] **1185**	27 [239] **1182**	47 [416] **1180**	62 [549] **1175**	76 [673] **1158**	93 [823] **1144**	104 [920] **1128**	114 [1009] **1112**	1186
Max. Inter. 75 [19.8]		22 [195] **1271**	43 [381] **1265**	58 [513] **1256**	73 [646] **1241**	86 [761] **1228**	100 [885] **1212**	110 [973] **1196**	1271

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

Rotor Width	Theoretical Torque - Nm [lb-in]							
8.0 [.314]	28 [249]	56 [499]	75 [665]	94 [831]	113 [998]	132 [1164]	150 [1330]	164 [1455]

mm [in]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

080

78 cm³ [4.8 in³] / rev

Flow - lpm [gpm]	Pressure - bar [psi] 30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	Max. Cont. 160 [2320]	Max. Inter. 175 [2540]	Theoretical rpm
	Torque - Nm [lb-in], **Speed rpm**						**Intermittent Ratings -** 10% of Operation		
5 [1.3]	32 [283] **60**	62 [549] **56**	80 [708] **50**	106 [938] **42**	125 [1106] **30**				64
10 [2.6]	31 [274] **125**	64 [566] **118**	84 [743] **112**	104 [920] **104**	120 [1062] **98**	142 [1257] **82**	162 [1434] **67**	175 [1549] **50**	128
20 [5.3]	26 [230] **254**	60 [531] **245**	84 [743] **236**	102 [903] **228**	125 [1106] **215**	144 [1274] **204**	164 [1451] **190**	183 [1619] **175**	256
30 [7.9]	24 [212] **384**	56 [496] **374**	81 [717] **366**	100 [885] **358**	122 [1080] **346**	142 [1257] **335**	160 [1416] **318**	175 [1549] **305**	385
40 [10.6]	19 [168] **512**	53 [469] **505**	75 [664] **494**	96 [850] **483**	118 [1044] **473**	140 [1239] **462**	158 [1398] **450**	170 [1504] **438**	513
50 [13.2]	14 [124] **638**	46 [407] **630**	70 [619] **625**	92 [814] **615**	110 [973] **606**	135 [1195] **593**	156 [1381] **580**	168 [1487] **568**	641
Max. Cont. 60 [15.8]	10 [88] **768**	42 [372] **762**	66 [584] **756**	86 [761] **748**	106 [938] **738**	128 [1133] **728**	150 [1327] **717**	164 [1451] **694**	769
70 [18.5]	6 [53] **896**	36 [319] **890**	56 [496] **882**	78 [690] **872**	98 [867] **860**	118 [1044] **846**	140 [1239] **830**	160 [1416] **816**	897
Max. Inter. 75 [19.8]	3 [27] **960**	27 [239] **955**	50 [442] **948**	74 [655] **938**	92 [814] **926**	113 [1000] **916**	133 [1177] **896**	148 [1310] **802**	962

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

Rotor Width	Theoretical Torque - Nm [lb-in]							
10.4 [.410]	37 [327]	75 [664]	100 [885]	125 [1106]	149 [1319]	174 [1540]	199 [1761]	218 [1929]

mm [in]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product tesing please refer to page 6.

DISPLACEMENT PERFORMANCE

100

96 cm³ [5.9 in³] / rev

Pressure - bar [psi]

30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	Max. Cont. 160 [2320]	Max. Inter. 175 [2540]

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

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]									Theoretical rpm
5 [1.3]	43 [381] **51**	82 [726] **42**	109 [965] **35**	131 [1159] **25**					52
10 [2.6]	43 [381] **99**	84 [743] **93**	108 [956] **84**	133 [1177] **72**	152 [1345] **62**	180 [1593] **48**	197 [1743] **24**		104
20 [5.3]	41 [363] **205**	79 [699] **202**	107 [947] **197**	127 [1124] **192**	154 [1363] **182**	178 [1575] **172**	200 [1770] **140**	212 [1876] **118**	208
30 [7.9]	39 [345] **311**	74 [655] **307**	101 [894] **301**	126 [1115] **294**	152 [1345] **283**	176 [1558] **271**	198 [1752] **258**	213 [1885] **240**	313
40 [10.6]	29 [257] **413**	63 [558] **410**	93 [823] **406**	121 [1071] **399**	150 [1327] **388**	172 [1522] **379**	195 [1726] **368**	208 [1841] **347**	417
50 [13.2]	20 [177] **519**	52 [460] **515**	85 [752] **510**	115 [1018] **503**	148 [1310] **492**	169 [1496] **480**	193 [1708] **464**	203 [1796] **446**	521
Max. Cont. 60 [15.8]	17 [150] **624**	53 [469] **620**	83 [735] **615**	111 [982] **608**	138 [1221] **600**	165 [1460] **582**	183 [1619] **565**	193 [1708] **548**	625
70 [18.5]	11 [97] **728**	42 [372] **726**	73 [646] **723**	93 [823] **714**	126 [1115] **706**	159 [1407] **684**	172 [1522] **668**	183 [1619] **646**	729
Max. Inter. 75 [19.8]	6 [53] **780**	35 [310] **771**	61 [540] **764**	89 [788] **755**	118 [1044] **736**	145 [1283] **724**	156 [1381] **712**	176 [1558] **699**	781

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

Rotor Width

13.0 [.510] mm [in]

Theoretical Torque - Nm [lb-in]

46 [407]	92 [814]	122 [1080]	153 [1354]	183 [1623]	214 [1894]	245 [2168]	268 [2372]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

125

125 cm³ [7.6 in³] / rev

Pressure - bar [psi]

30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	Max. Cont. 160 [2320]	Max. Inter. 175 [2540]

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

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]									Theoretical rpm
5 [1.3]	52 [460] **38**	95 [841] **35**	135 [1195] **32**	168 [1487] **27**					40
10 [2.6]	50 [442] **78**	98 [867] **74**	138 [1221] **69**	172 [1522] **62**	190 [1681] **54**	234 [2071] **45**	258 [2283] **35**		80
20 [5.3]	50 [442] **158**	96 [850] **152**	132 [1168] **144**	168 [1487] **135**	202 [1788] **124**	236 [2088] **110**	256 [2265] **94**	278 [2460] **78**	160
30 [7.9]	44 [389] **238**	92 [814] **232**	126 [1115] **225**	164 [1451] **215**	198 [1752] **210**	232 [2053] **198**	262 [2319] **168**	268 [2372] **155**	240
40 [10.6]	35 [310] **319**	82 [726] **316**	118 [1044] **312**	160 [1416] **308**	193 [1708] **300**	226 [2000] **288**	252 [2230] **262**	266 [2354] **238**	320
50 [13.2]	31 [274] **399**	77 [681] **396**	108 [956] **392**	155 [1372] **383**	182 [1611] **368**	220 [1947] **354**	238 [2106] **338**	262 [2319] **326**	400
Max. Cont. 60 [15.8]	15 [133] **479**	64 [566] **478**	97 [858] **475**	146 [1292] **470**	166 [1469] **463**	210 [1858] **454**	224 [1982] **443**	256 [2265] **434**	480
70 [18.5]	8 [71] **559**	50 [442] **555**	90 [796] **548**	140 [1239] **538**	162 [1434] **524**	204 [1805] **516**	209 [1850] **500**	236 [2088] **488**	560
Max. Inter. 75 [19.8]		40 [354] **599**	71 [628] **594**	128 [1133] **588**	158 [1398] **576**	192 [1699] **565**	199 [1761] **536**	224 [1982] **524**	600

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

Rotor Width

16.8 [.660] mm [in]

Theoretical Torque - Nm [lb-in]

60 [531]	119 [1053]	159 [1407]	199 [1761]	239 [2115]	279 [2469]	318 [2814]	348 [3080]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product tesing please refer to page 6.

DISPLACEMENT PERFORMANCE

160

159 cm³ [9.7 in³] / rev

Pressure - bar [psi]

30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	Max. Cont. 160 [2320]	Max. Inter. 175 [2540]

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

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	Max. Cont. 160 [2320]	Max. Inter. 175 [2540]	Theoretical rpm
5 [1.3]	56 [496] **30**	112 [991] **25**	154 [1363] **18**	201 [1779] **10**					32
10 [2.6]	58 [513] **63**	115 [1018] **60**	156 [1381] **56**	205 [1814] **52**	245 [2168] **48**	285 [2522] **37**			65
20 [5.3]	60 [532] **128**	123 [1089] **125**	162 [1434] **121**	202 [1788] **116**	242 [2142] **110**	282 [2496] **100**	327 [2894] **86**	360 [3186] **78**	130
30 [7.9]	50 [443] **193**	117 [1035] **190**	157 [1389] **187**	197 [1743] **183**	238 [2106] **179**	278 [2460] **173**	322 [2850] **160**	358 [3168] **144**	194
40 [10.6]	48 [425] **257**	113 [1000] **255**	155 [1372] **252**	195 [1726] **248**	236 [2089] **244**	273 [2416] **239**	318 [2814] **224**	355 [3142] **211**	258
50 [13.2]	32 [283] **323**	106 [938] **320**	149 [1319] **316**	188 [1664] **312**	235 [2080] **306**	267 [2363] **299**	313 [2770] **288**	352 [3115] **275**	323
Max. Cont. 60 [15.8]	23 [204] **387**	88 [779] **384**	133 [1177] **380**	178 [1575] **375**	212 [1876] **371**	260 [2301] **366**	308 [2726] **358**	342 [3027] **346**	387
70 [18.5]	16 [142] **452**	82 [726] **451**	128 [1133] **448**	170 [1505] **444**	206 [1823] **436**	255 [2257] **430**	302 [2673] **423**	331 [2929] **412**	453
Max. Inter. 75 [19.8]	10 [89] **483**	79 [699] **481**	124 [1097] **477**	164 [1451] **472**	201 [1779] **466**	248 [2195] **460**	296 [2620] **450**	319 [2823] **436**	485

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

Rotor Width 20.8 [.820] mm [in]

Theoretical Torque - Nm [lb-in]

74 [651]	147 [1302]	196 [1736]	245 [2170]	282 [2496]	343 [3038]	392 [3472]	429 [3798]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

200

190 cm³ [11.6 in³] / rev

Pressure - bar [psi]

30 [435]	60 [870]	80 [1160]	100 [1450]	115 [1670]	140 [2030]	Max. Cont. 150 [2180]	Max. Inter. 175 [2540]

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

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	30 [435]	60 [870]	80 [1160]	100 [1450]	115 [1670]	140 [2030]	Max. Cont. 150 [2180]	Max. Inter. 175 [2540]	Theoretical rpm
5 [1.3]	75 [664] **25**	158 [1398] **22**	200 [1770] **20**	241 [2133] **10**					26
10 [2.6]	78 [690] **51**	160 [1416] **49**	204 [1805] **45**	252 [2230] **39**	291 [2575] **35**	348 [3080] **29**	377 [3336] **22**		53
20 [5.3]	74 [655] **104**	156 [1381] **102**	200 [1770] **99**	246 [2177] **95**	293 [2593] **89**	354 [3133] **83**	380 [3363] **76**	416 [3681] **65**	105
30 [7.9]	70 [619] **157**	152 [1345] **155**	196 [1735] **152**	240 [2124] **148**	290 [2566] **143**	352 [3115] **137**	378 [3345] **130**	420 [3717] **118**	158
40 [10.6]	65 [575] **210**	147 [1301] **208**	190 [1681] **205**	228 [2018] **200**	286 [2531] **193**	340 [3009] **186**	376 [3327] **178**	418 [3699] **168**	211
50 [13.2]	54 [478] **262**	142 [1257] **260**	180 [1593] **258**	222 [1965] **254**	277 [2451] **249**	333 [2947] **243**	356 [3150] **235**	402 [3558] **223**	263
Max. Cont. 60 [15.8]	36 [319] **315**	128 [1133] **313**	166 [1469] **309**	210 [1858] **305**	266 [2354] **299**	322 [2850] **293**	350 [3097] **284**	400 [3540] **268**	316
70 [18.5]	15 [133] **367**	102 [903] **365**	158 [1398] **362**	202 [1788] **358**	254 [2248] **352**	302 [2673] **336**	327 [2894] **330**	376 [3327] **316**	368
Max. Inter. 75 [19.8]		94 [832] **394**	146 [1292] **390**	194 [1717] **385**	230 [2035] **380**	290 [2566] **374**	317 [2805] **365**	364 [3221] **352**	395

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

Rotor Width 25.9 [1.020] mm [in]

Theoretical Torque - Nm [lb-in]

91 [803]	182 [1611]	242 [2142]	303 [2677]	348 [3079]	424 [3748]	454 [4016]	529 [4685]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product tesing please refer to page 6.

DISPLACEMENT PERFORMANCE

250

240 cm³ [14.6 in³] / rev

Pressure - bar [psi] | Max. Cont. | Max. Inter.

30 [435]	60 [870]	85 [1230]	100 [1450]	125 [1810]	140 [2030]	160 [2320]	175 [2540]

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

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	30 [435]	60 [870]	85 [1230]	100 [1450]	125 [1810]	140 [2030]	160 [2320]	175 [2540]	Theoretical rpm
5 [1.3]	89 [788] **19**	194 [1717] **16**	264 [2336] **10**	326 [2885] **6**					21
10 [2.6]	92 [814] **40**	196 [1735] **36**	268 [2372] **32**	329 [2912] **21**	394 [3487] **10**				42
20 [5.3]	90 [796] **81**	192 [1699] **77**	264 [2336] **72**	321 [2841] **65**	397 [3513] **50**	445 [3938] **42**	510 [4513] **36**	554 [4903] **23**	83
30 [7.9]	86 [761] **124**	185 [1637] **121**	256 [2265] **115**	314 [2779] **106**	392 [3469] **94**	439 [3855] **84**	502 [4442] **76**	557 [4929] **61**	125
40 [10.6]	82 [726] **165**	179 [1584] **162**	248 [2195] **158**	305 [2699] **153**	384 [3398] **144**	431 [3814] **135**	486 [4301] **125**	545 [4823] **113**	167
50 [13.2]	69 [611] **207**	169 [1496] **203**	243 [2150] **195**	293 [2593] **189**	378 [3345] **183**	421 [3726] **170**	475 [4204] **157**	526 [4655] **138**	208
Max. Cont. 60 [15.8]	48 [425] **250**	152 [1345] **247**	230 [2035] **243**	282 [2496] **236**	364 [3221] **222**	407 [3602] **216**	456 [4035] **205**	508 [4496] **188**	250
70 [18.5]	37 [327] **291**	139 [1230] **285**	219 [1938] **278**	263 [2327] **271**	343 [3035] **256**	386 [3416] **249**	441 [3903] **234**	496 [4389] **221**	292
Max. Inter. 75 [19.8]	26 [230] **312**	128 [1133] **310**	205 [1814] **307**	245 [2168] **302**	328 [2903] **294**	374 [3310] **270**	428 [3788] **254**	481 [4257] **242**	313

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

Rotor Width

32.5 [1.280] mm [in]

Theoretical Torque - Nm [lb-in]

115 [1018]	229 [2027]	325 [2875]	382 [3381]	478 [4230]	535 [4735]	611 [5407]	669 [5920]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

315

303 cm³ [18.5 in³] / rev

Pressure - bar [psi] | Max. Cont. | Max. Inter.

30 [435]	50 [725]	70 [1015]	85 [1230]	100 [1450]	120 [1740]	140 [2030]	160 [2320]

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

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	30 [435]	50 [725]	70 [1015]	85 [1230]	100 [1450]	120 [1740]	140 [2030]	160 [2320]	Theoretical rpm
5 [1.3]	123 [1089] **16**	200 [1770] **13**	282 [2496] **10**	344 [3044] **6**					17
10 [2.6]	117 [1035] **31**	194 [1717] **29**	277 [2451] **25**	342 [3027] **21**	399 [3531] **17**				33
20 [5.3]	112 [991] **64**	196 [1735] **62**	275 [2434] **58**	340 [3009] **54**	397 [3513] **49**	460 [4071] **43**	526 [4655] **32**	605 [5354] **23**	66
30 [7.9]	104 [920] **98**	183 [1620] **94**	267 [2363] **90**	322 [2850] **85**	390 [3452] **79**	448 [3965] **70**	520 [4602] **62**	602 [5328] **56**	99
40 [10.6]	86 [761] **129**	168 [1487] **126**	252 [2230] **122**	304 [2690] **118**	365 [3230] **113**	440 [3894] **106**	515 [4558] **99**	588 [5204] **76**	132
50 [13.2]	73 [646] **164**	156 [1381] **160**	238 [2106] **155**	288 [2549] **150**	350 [3098] **144**	424 [3752] **136**	500 [4425] **127**	571 [5053] **119**	165
Max. Cont. 60 [15.8]	60 [531] **195**	140 [1239] **192**	223 [1974] **188**	270 [2390] **183**	325 [2876] **176**	396 [3505] **170**	480 [4248] **164**	546 [4832] **157**	198
70 [18.5]	37 [327] **228**	122 [1080] **226**	186 [1646] **223**	254 [2248] **218**	309 [2735] **212**	368 [3257] **206**	455 [4027] **196**	527 [4664] **188**	231
Max. Inter. 75 [19.8]	23 [204] **245**	100 [885] **242**	174 [1540] **238**	237 [2097] **233**	293 [2593] **228**	359 [3177] **222**	444 [3929] **215**	516 [4567] **206**	248

Overall Efficiency - 60 - 100% ☐ 40 - 59% ☐ 0 - 39% ☐

Rotor Width

40.9 [1.610] mm [in]

Theoretical Torque - Nm [lb-in]

145 [1283]	241 [2133]	338 [2991]	410 [3628]	482 [4265]	579 [5124]	675 [5973]	772 [6832]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product tesing please refer to page 6.

DISPLACEMENT PERFORMANCE

400

388 cm³ [23.7 in³] / rev

Pressure - bar [psi] | Max. Cont. | Max. Inter.

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

Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	30 [435]	45 [650]	55 [800]	65 [940]	80 [1160]	95 [1380]	110 [1595]	125 [1810]	Theoretical rpm
5 [1.3]	144 [1274] **11**	220 [1947] **10**	270 [2389] **7**	338 [2991] **5**					13
10 [2.6]	146 [1292] **25**	223 [1973] **23**	272 [2407] **20**	340 [3009] **16**	412 [3646] **10**	488 [4319] **6**			26
20 [5.3]	145 [1283] **51**	219 [1938] **50**	269 [2381] **48**	333 [2347] **45**	408 [3611] **40**	484 [4283] **35**	548 [4850] **27**		52
30 [7.9]	138 [1221] **76**	215 [1903] **75**	262 [2319] **73**	322 [2850] **70**	402 [3558] **67**	472 [4177] **59**	546 [4832] **47**	625 [5531] **36**	77
40 [10.6]	120 [1062] **103**	204 [1805] **102**	250 [2212] **100**	310 [2743] **96**	393 [3478] **89**	458 [4053] **82**	535 [4735] **73**	618 [5469] **62**	103
50 [13.2]	100 [885] **129**	186 [1646] **128**	238 [2106] **125**	295 [2611] **123**	374 [3310] **119**	446 [3947] **112**	520 [4602] **102**	600 [5310] **91**	129
Max. Cont. 60 [15.8]	76 [673] **155**	166 [1469] **153**	222 [1965] **150**	282 [2496] **148**	358 [3168] **143**	427 [3779] **139**	496 [4389] **130**	576 [5097] **121**	155
70 [18.5]	50 [442] **179**	145 [1283] **177**	194 [1717] **174**	250 [2212] **170**	334 [2956] **165**	402 [3558] **158**	472 [4177] **152**	540 [4779] **144**	180
Max. Inter. 75 [19.8]	42 [372] **189**	135 [1195] **187**	176 [1558] **184**	226 [2000] **180**	306 [2708] **175**	373 [3301] **167**	445 [3938] **160**	520 [4602] **150**	190

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

Rotor Width

52.1 [2.050] mm [in]

Theoretical Torque - Nm [lb-in]

185 [1640]	278 [2460]	340 [3007]	402 [3554]	494 [4374]	587 [5194]	680 [6014]	772 [6834]

Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]

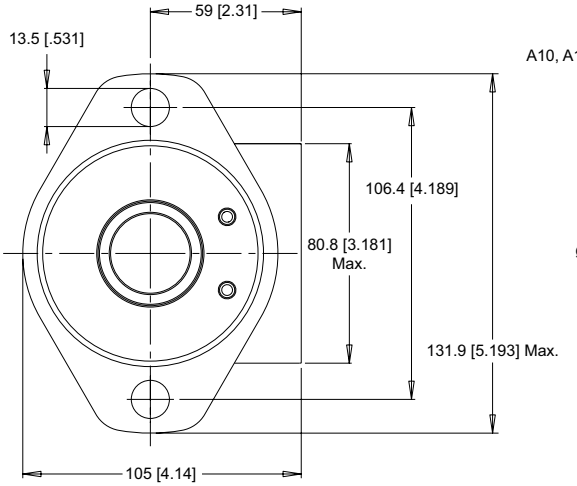
► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product tesing please refer to page 6.

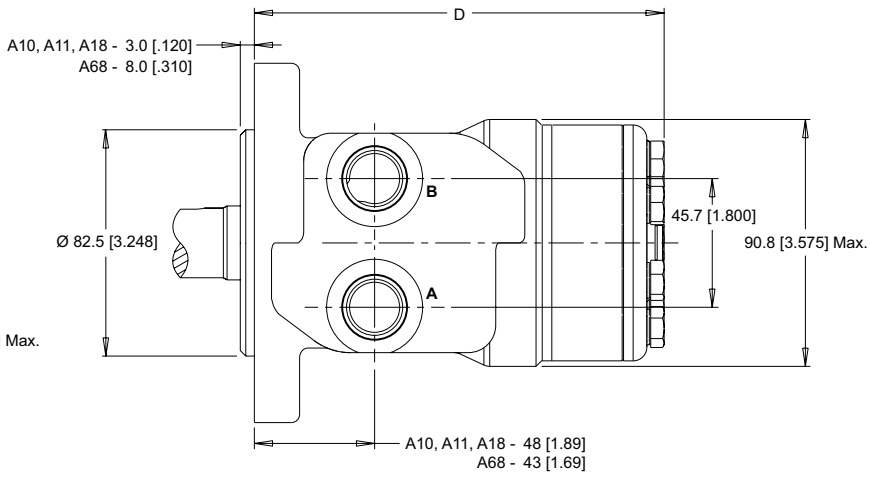
HOUSINGS

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

2-HOLE, SAE A MOUNT, ALIGNED PORTS

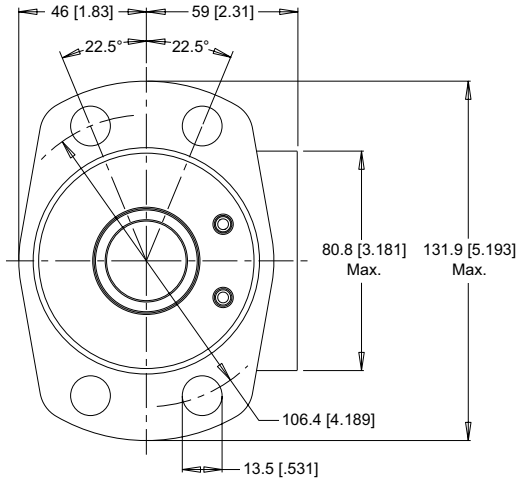
A10 1/2-14 NPT **A11** 7/8-14 UNF **A18** G 1/2 **A68** G 1/2 (TP)

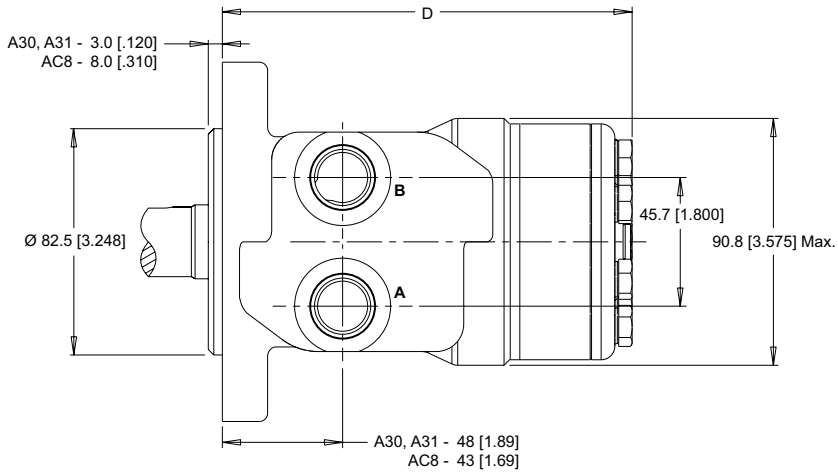




4-HOLE, MAGNETO MOUNT, ALIGNED PORTS

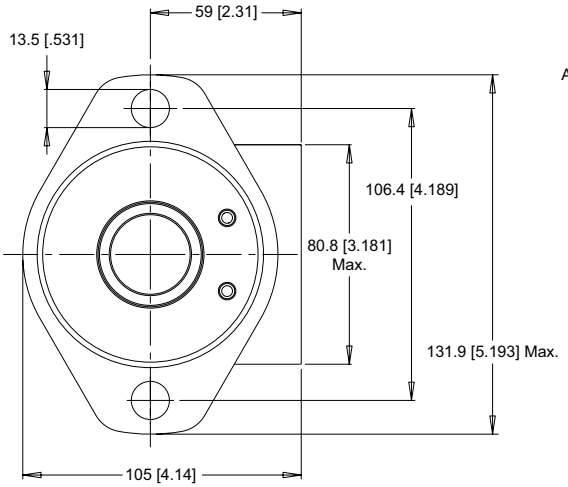
A30 1/2-14 NPT **A31** 7/8-14 UNF **AC8** G 1/2 (TP)

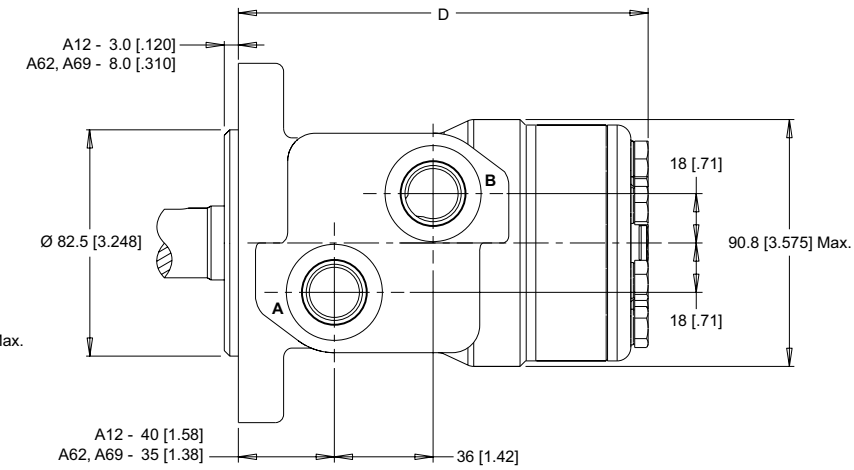




2-HOLE, SAE A MOUNT, OFFSET PORTS

A12 G 1/2 **A62** G 1/2 (TP) **A69** 7/8-14 UNF (TP)





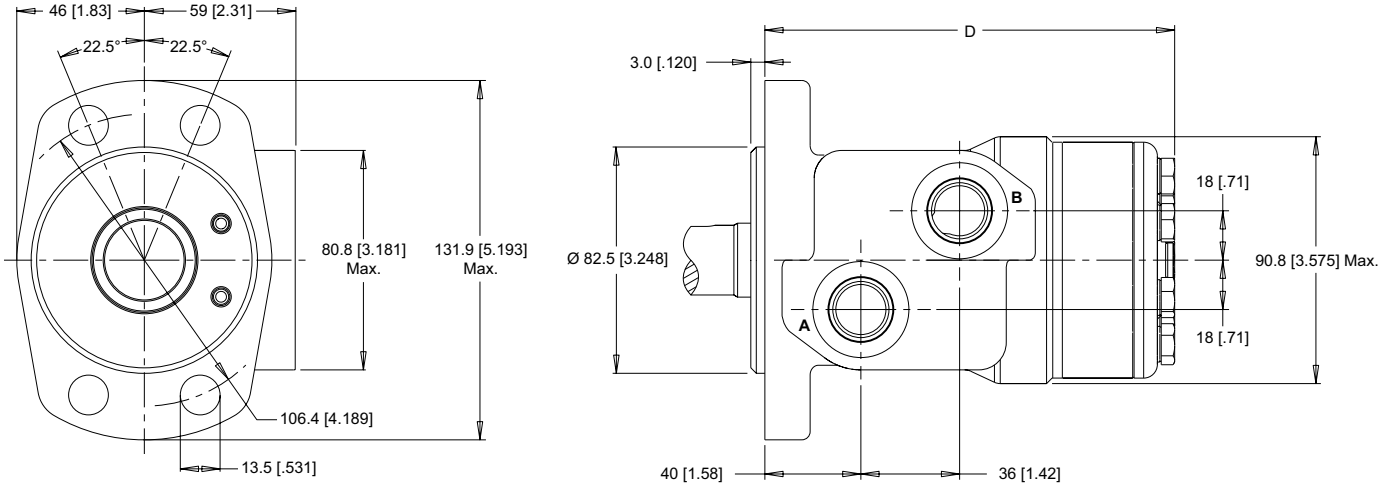
▶ Dimension D is charted on page 46. ▶ (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

HOUSINGS

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

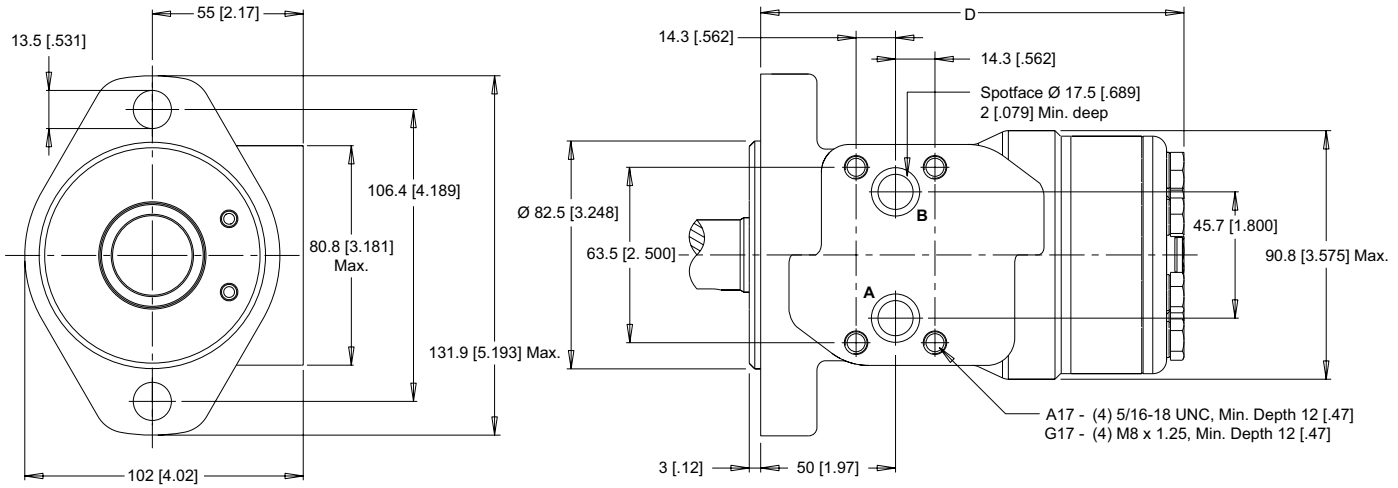
4-HOLE, MAGNETO MOUNT, OFFSET PORTS

A32 G 1/2



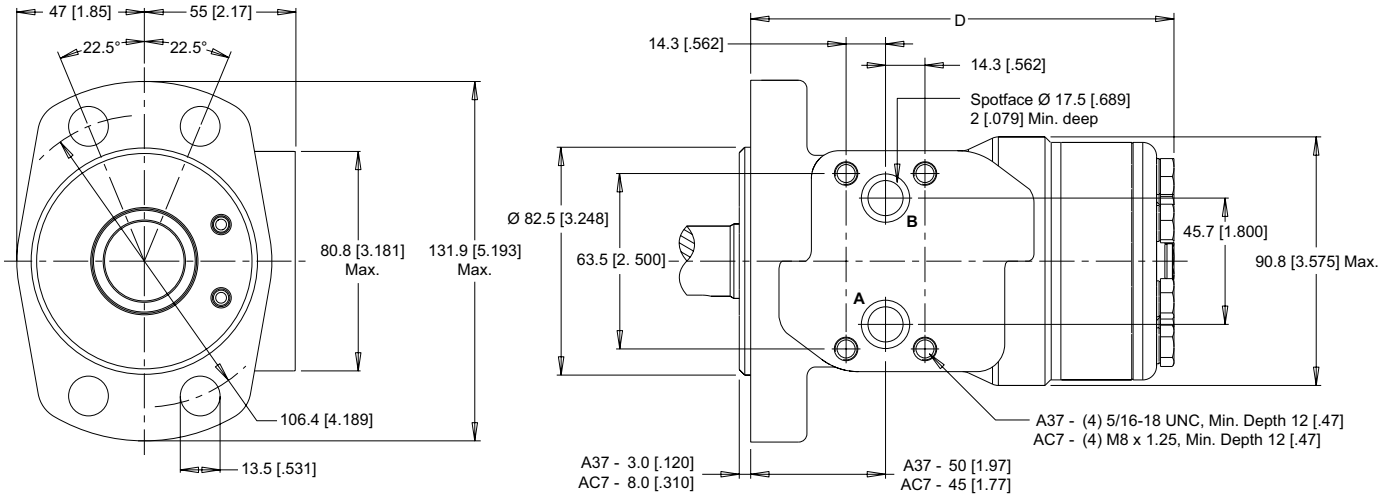
2-HOLE, SAE A MOUNT, ALIGNED MANIFOLD PORTS

A17 1/2" Drilled **G17** 1/2" Drilled



4-HOLE, MAGNETO MOUNT, ALIGNED MANIFOLD PORTS

A37 1/2" Drilled **AC7** 1/2" Drilled (TP)



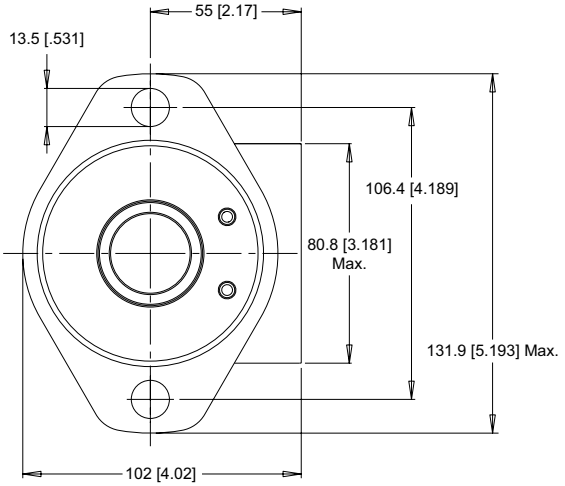
▶ Dimension D is charted on page 46. ▶ (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

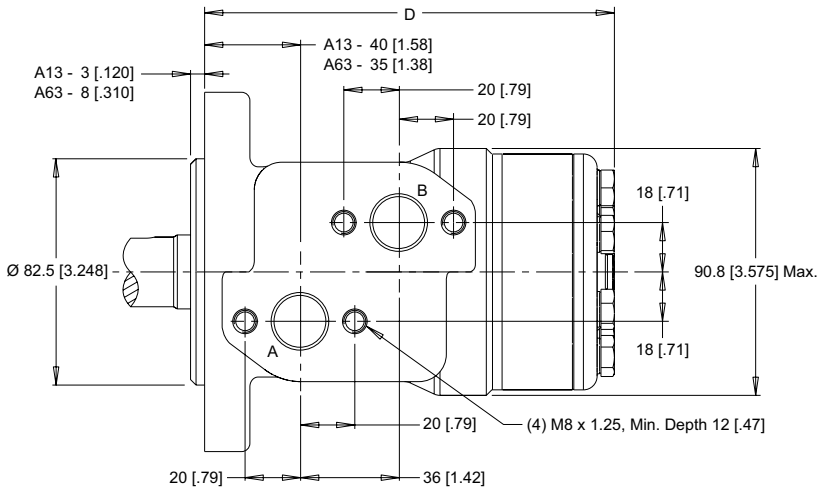
HOUSINGS

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

2-HOLE, SAE A MOUNT, OFFSET MANIFOLD PORTS

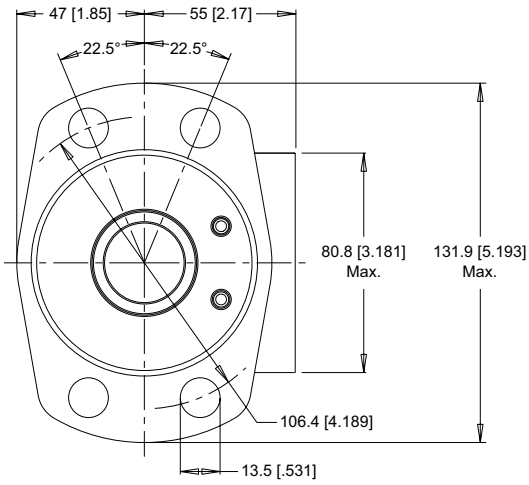
A13 G 1/2 **A63** G 1/2 (TP)

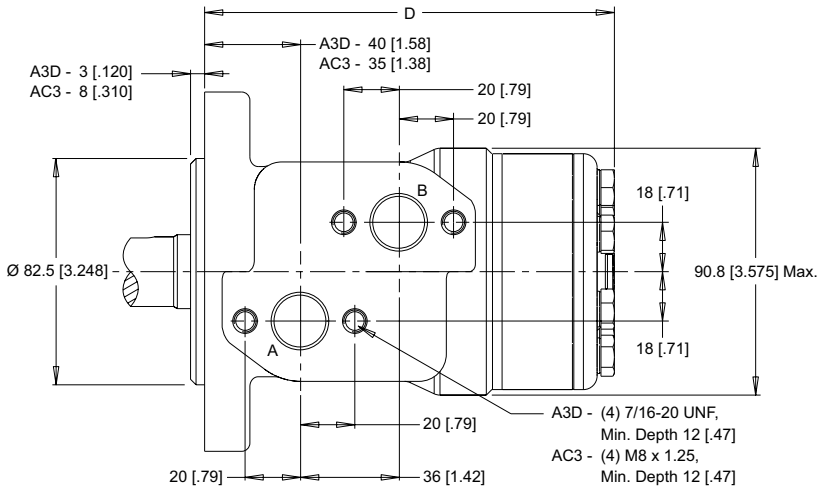




4-HOLE, MAGNETO MOUNT, OFFSET MANIFOLD PORTS

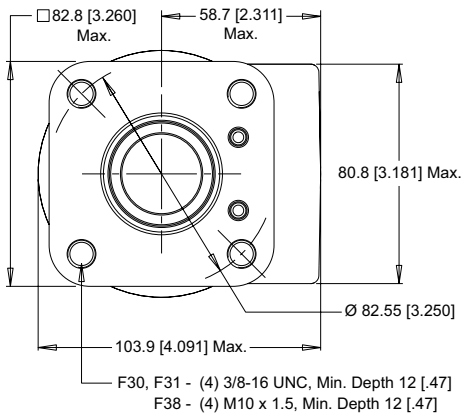
A3D 7/8-14 UNF **AC3** G 1/2 (TP)

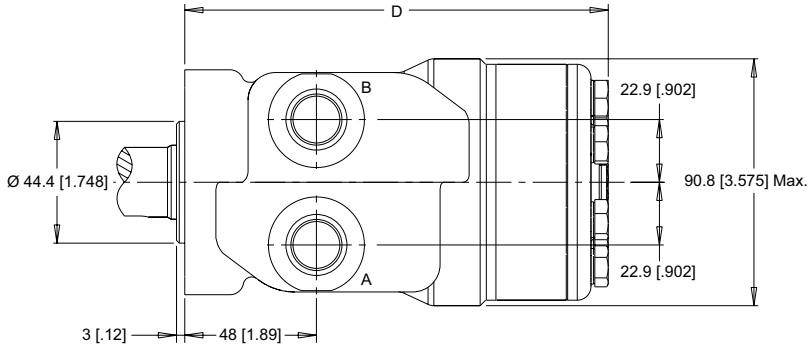




4-HOLE, SQUARE MOUNT, ALIGNED PORTS

F30 1/2-14 NPT **F31** 7/8-14 UNF **F38** G 1/2



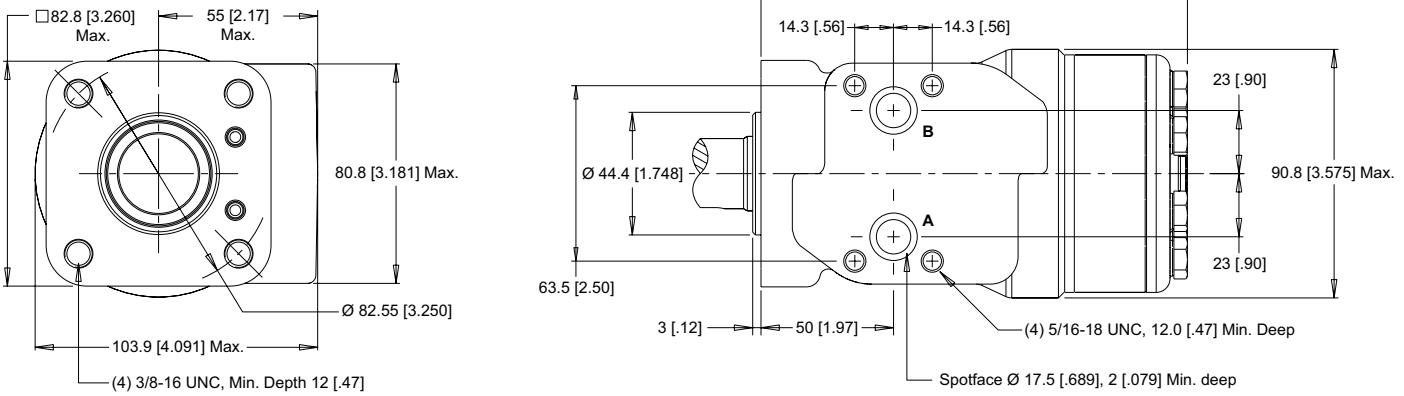


▶ Dimension D is charted on page 46. ▶ (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

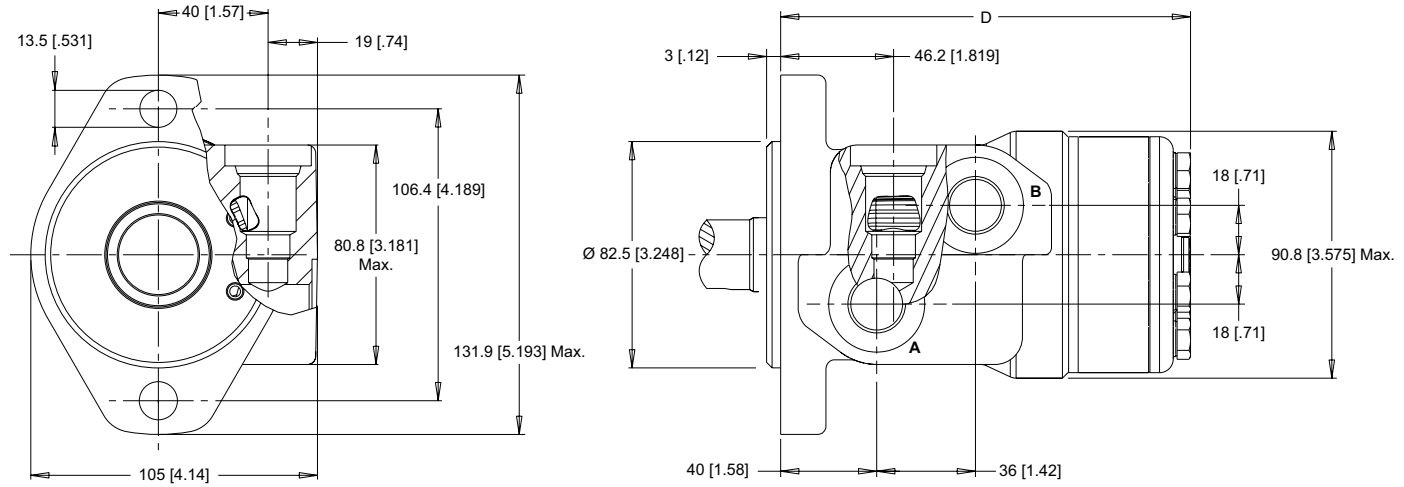
HOUSINGS

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

4-HOLE, SQUARE MOUNT, ALIGNED MANIFOLD PORTS **F37** 1/2" Drilled

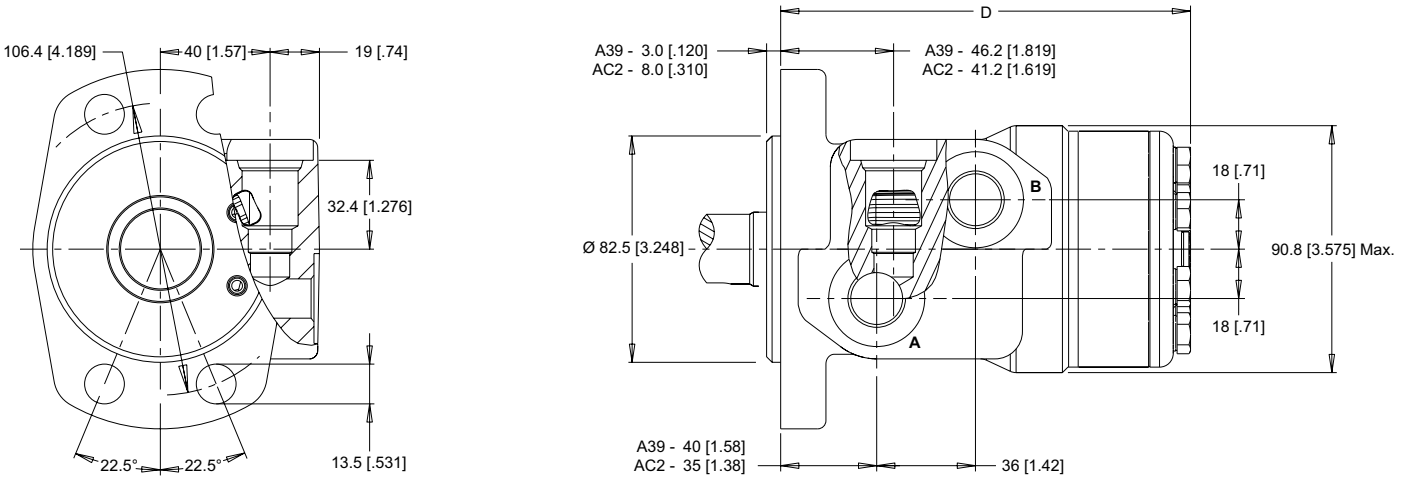


2-HOLE, SAE A MOUNT, OFFSET PORTS, VALVE CAVITY **A19** 7/8-14 UNF



4-HOLE, MAGNETO MOUNT, OFFSET PORTS, VALVE CAVITY

A39 7/8-14 UNF **AC2** G 1/2 (TP)



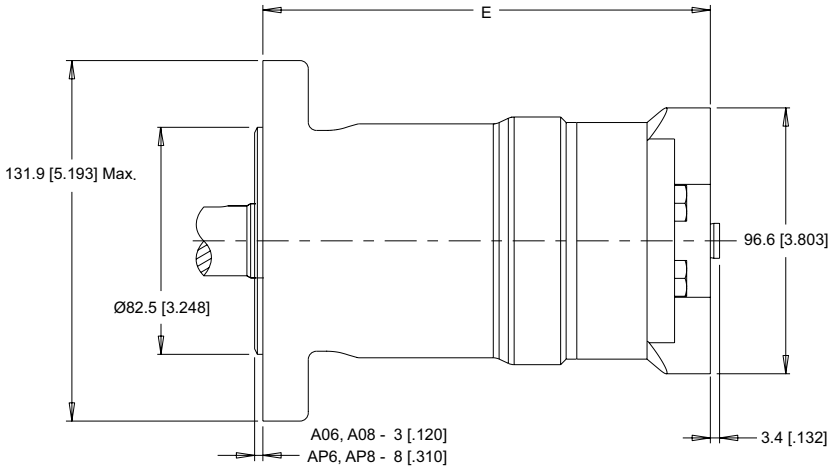
▶ Dimension D is charted on page 46. ▶ (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

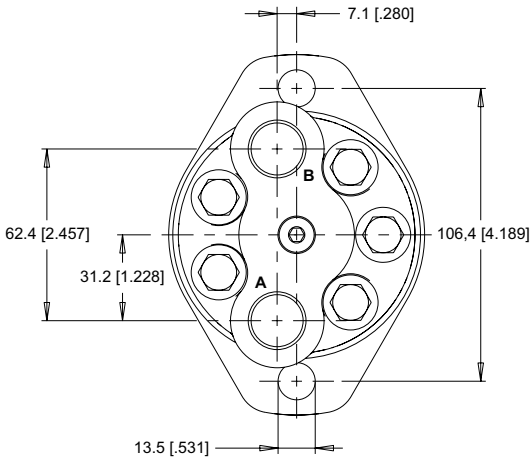
HOUSINGS

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

2-HOLE, SAE A MOUNT, ALIGNED END PORTS

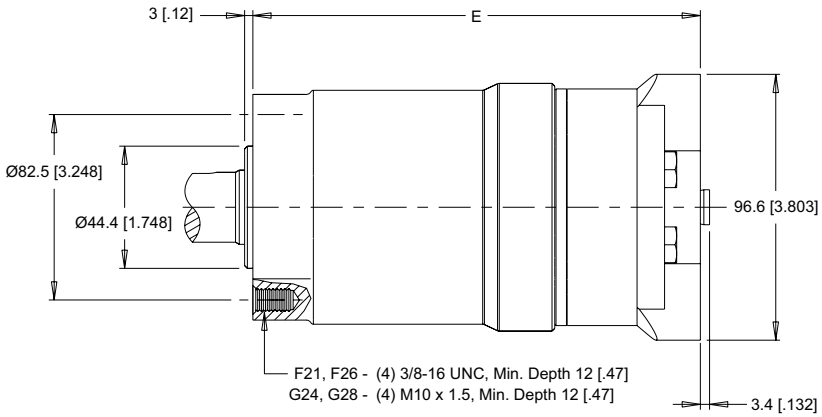
A06 3/4-16 UNF **A08** G 1/2 **AP6** 3/4-16 UNF (TP) **AP8** G 1/2 (TP)

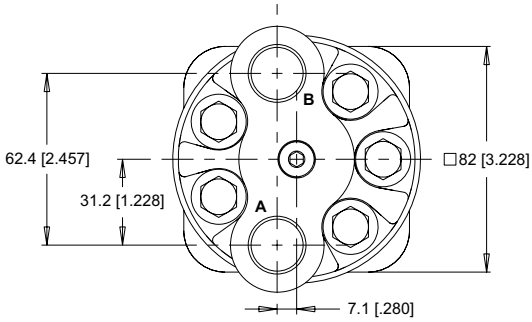




4-HOLE, SQUARE MOUNT, ALIGNED END PORTS

F21 7/8-14 UNF **F26** 3/4-16 UNF **G24** M22 x 1.5 **G28** G 1/2



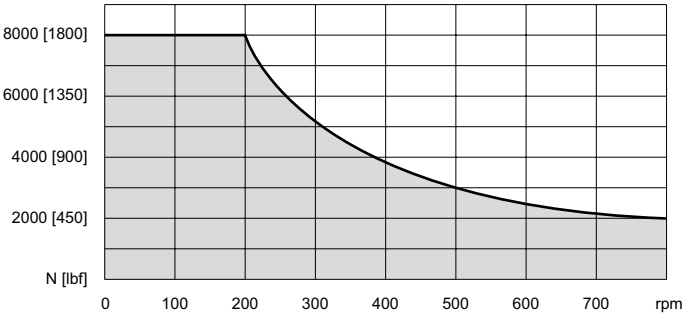


▶ Dimension E is charted on page 46. ▶ (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

TECHNICAL INFORMATION

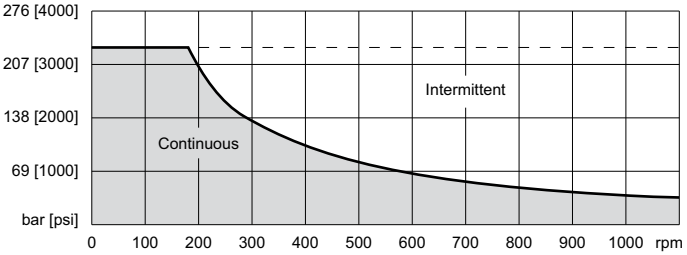
ALLOWABLE SHAFT LOAD / BEARING CURVE

The bearing curve below represents the side load capacity of the motor at the centerline of the key for various motor speeds. Operating conditions within the shaded area will maintain acceptable oil film lubrication with recommended fluids. Operating conditions outside the shaded area are susceptible to motor failure due to oil starvation and/or excessive heat generation. Fluids with low lubricity or low viscosity may require the maximum load and speed ratings to be derated to provide acceptable motor life and performance.

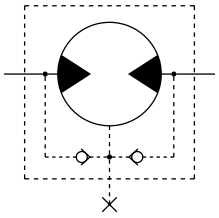


PERMISSIBLE SHAFT SEAL PRESSURE

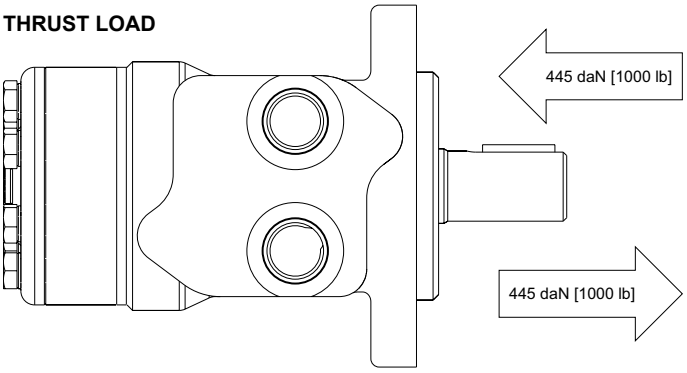
The curve below represents allowable seal pressure at various speeds. Operation in the gray area results in maintaining the rated life of the shaft seal. Actual shaft seal pressure depends on motor configuration.



- With check valves and drain connection, the shaft seal pressure equals pressure in the drain line. With check valves and no drain connection, shaft seal pressure is identical to output pressure. No check valves and no drain connection, the shaft seal pressure is identical to the average value of input and output pressure.



THRUST LOAD



LENGTH & WEIGHT CHARTS

Dimension D is the overall motor length from the rear of the motor to the mounting flange surface and is referenced on detailed housing drawings listed on pages 41-44.

D	3mm Pilot	8mm Pilot	Weight
#	mm [in]	mm [in]	kg [lb]
025	133 [5.24]	128 [5.04]	6.3 [13.9]
032	134 [5.28]	129 [5.08]	6.4 [14.1]
040	136 [5.34]	131 [5.16]	6.5 [14.2]
050	136 [5.34]	131 [5.16]	6.5 [14.2]
060	137 [5.40]	132 [5.20]	6.5 [14.3]
080	139 [5.49]	134 [5.28]	6.6 [14.5]
100	142 [5.59]	137 [5.39]	6.7 [14.7]
125	146 [5.74]	141 [5.55]	6.8 [14.9]
160	150 [5.90]	145 [5.71]	6.9 [15.2]
200	155 [6.10]	150 [5.91]	7.1 [15.6]
250	162 [6.36]	157 [6.18]	7.3 [16.1]
315	170 [6.69]	165 [6.50]	7.6 [16.7]
400	181 [7.13]	176 [6.93]	7.9 [17.5]

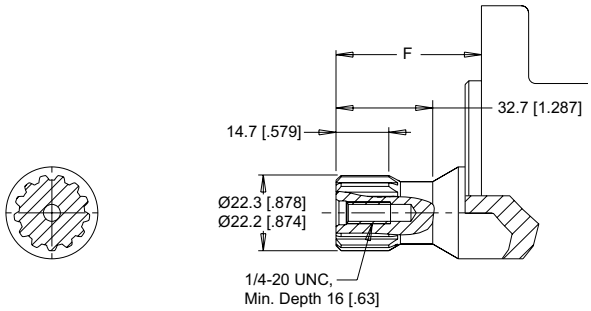
Dimension E is the overall motor length from the rear of the motor to the mounting flange surface and is referenced on detailed housing drawings listed on pages 45.

E	3mm Pilot	8mm Pilot	Weight
#	mm [in]	mm [in]	kg [lb]
025	144 [5.67]	139 [5.47]	5.9 [13.0]
032	145 [5.71]	140 [5.51]	6.0 [13.2]
040	146 [5.75]	141 [5.55]	6.1 [13.4]
050	146 [5.75]	141 [5.55]	6.1 [13.4]
060	148 [5.83]	143 [5.63]	6.1 [13.4]
080	150 [5.91]	145 [5.71]	6.2 [13.6]
100	153 [6.02]	148 [5.83]	6.3 [13.9]
125	157 [6.18]	152 [5.98]	6.4 [14.1]
160	161 [6.33]	156 [6.14]	6.5 [14.3]
200	166 [6.54]	161 [6.34]	6.7 [14.7]
250	173 [6.81]	168 [6.61]	6.9 [15.2]
315	181 [7.13]	176 [6.93]	7.2 [15.8]
400	192 [7.56]	187 [7.36]	7.5 [16.5]

- The overall motor weights listed in each chart above were calculated using the heaviest of the housing options associated with that mounting flange to end of motor dimension. 155 & 156 series motor weights can vary ± 0.5 kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

SHAFTS

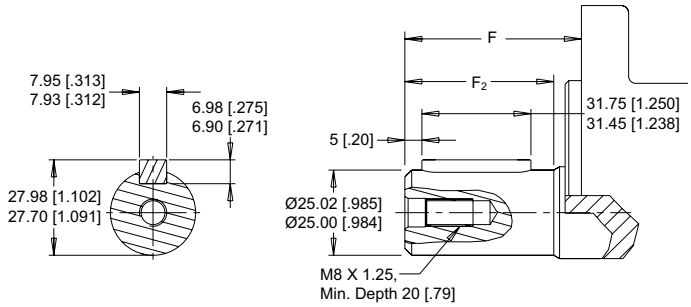
01 7/8” 13 Tooth Spline



Max. Torque: 170 Nm [1500 lb-in]

12 25mm Straight

16 25mm Straight Extended



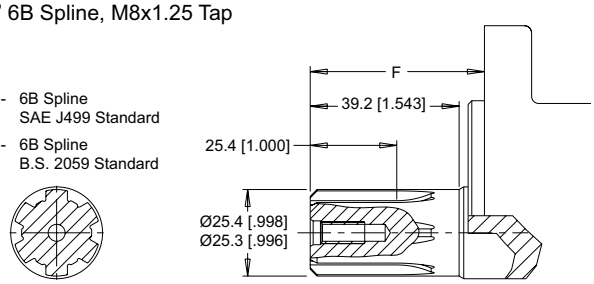
Max. Torque: 655 Nm [5800 lb-in]

02 1” 6B Spline, 1/4-20 Tap

04 1” 6B Spline, M8x1.25 Tap

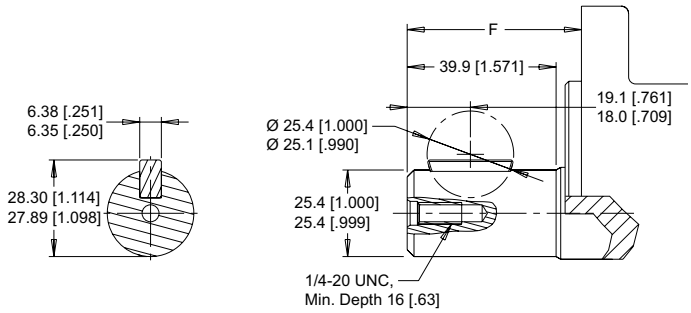
F3 1” 6B Spline, M8x1.25 Tap

02, 04 - 6B Spline
SAE J499 Standard
F3 - 6B Spline
B.S. 2059 Standard



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

B1 1” Straight, Woodruff Key

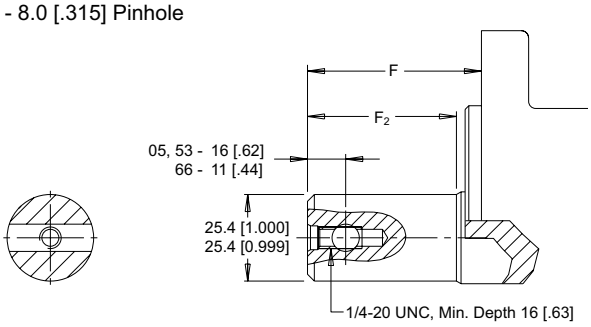


Max. Torque: 655 Nm [5800 lb-in]

05 1” - 9.5 [.375] Pinhole

53 1” - 10.3 [.406] Pinhole

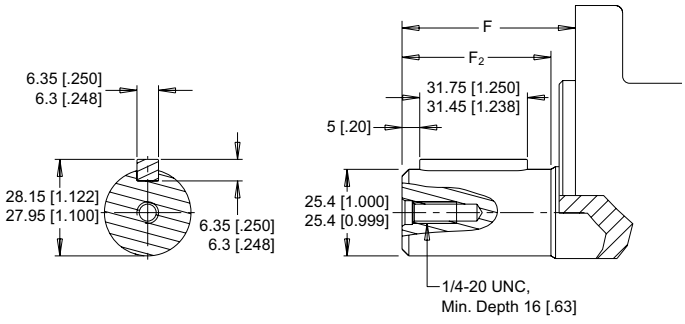
66 1” - 8.0 [.315] Pinhole



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

10 1” Straight

15 1” Straight Extended



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

MOUNTING / SHAFT LENGTH CHART

Dimension F is the overall distance from the motor mounting surface to the end of the shaft.

Additional shaft length information, if necessary, is noted as F_2 and does not increase or decrease the listed F dimensions in this chart. The overall shaft lengths are already factored into the overall distance from the mounting surface to the end of the shaft.

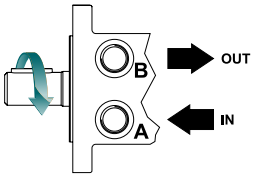
F	3mm Pilot	8mm Pilot	F_2
#	mm [in]	mm [in]	mm [in]
01	43.3 [1.705]	48.3 [1.902]	N/A
02	45.3 [1.783]	50.3 [1.980]	N/A
04	45.3 [1.783]	50.3 [1.980]	N/A
05	45.3 [1.783]	50.3 [1.980]	39.2 [1.543]
10	45.3 [1.783]	50.3 [1.980]	39.2 [1.543]
12	50.3 [1.980]	55.3 [2.177]	44.2 [1.740]
15	62.1 [2.445]	67.1 [2.642]	56.0 [2.205]
16	62.6 [2.464]	67.6 [2.661]	56.5 [2.225]
53	45.3 [1.783]	50.3 [1.980]	39.2 [1.543]
66	50.3 [1.980]	55.3 [2.177]	44.2 [1.740]
B1	45.3 [1.783]	50.3 [1.980]	N/A

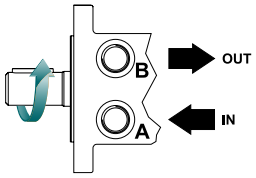
ORDERING INFORMATION

1 2 3 4 5 6 7 8

1. CHOOSE SERIES DESIGNATION

155	Standard Rotation
156	Reverse Rotation





▶ The 155 & 156 series are bi-directional.

2. SELECT A DISPLACEMENT OPTION

025	25 cm^3/rev	[1.5 in^3/rev]	**125**	125 cm^3/rev	[7.6 in^3/rev]
032	32 cm^3/rev	[2.0 in^3/rev]	**160**	154 cm^3/rev	[9.4 in^3/rev]
040	40 cm^3/rev	[2.5 in^3/rev]	**200**	190 cm^3/rev	[11.6 in^3/rev]
050	50 cm^3/rev	[3.0 in^3/rev]	**250**	240 cm^3/rev	[14.6 in^3/rev]
060	59 cm^3/rev	[3.6 in^3/rev]	**315**	303 cm^3/rev	[18.5 in^3/rev]
080	78 cm^3/rev	[4.8 in^3/rev]	**400**	388 cm^3/rev	[23.7 in^3/rev]
100	96 cm^3/rev	[5.9 in^3/rev]			

3. SELECT A MOUNT & PORT OPTION

A06	2-Hole, SAE A Mount, Aligned End Ports, 3/4-16 UNF
A08	2-Hole, SAE A Mount, Aligned End Ports, G 1/2
AP6	2-Hole, SAE A Mount, Aligned End Ports, 3/4-16 UNF (TP)
AP8	2-Hole, SAE A Mount, Aligned End Ports, G 1/2 (TP)
A10	2-Hole, SAE A Mount, Aligned Ports, 1/2-14 NPT
A11	2-Hole, SAE A Mount, Aligned Ports, 7/8-14 UNF
A12	2-Hole, SAE A Mount, Offset Ports, G 1/2
A13	2-Hole, SAE A Mount, Offset Manifold Ports, G 1/2
A17	2-Hole, SAE A Mount, Aligned Manifold Ports, 1/2” Drilled
A18	2-Hole, SAE A Mount, Aligned Ports, G 1/2
A19	2-Hole, SAE A Mount, Offset Ports, Valve Cavity 7/8-14 UNF
A30	4-Hole, Magneto Mount, Aligned Ports, 1/2-14 NPT
A31	4-Hole, Magneto Mount, Aligned Ports, 7/8-14 UNF
A32	4-Hole, Magneto Mount, Offset Ports, G 1/2
A37	4-Hole, Magneto Mount, Aligned Manifold Ports, 1/2” Drilled
A39	4-Hole, Magneto Mount, Offset Ports, Valve Cavity 7/8-14 UNF
A3D	4-Hole, Magneto Mount, Offset Manifold Ports, 7/8-14 UNF
A62	2-Hole, SAE A Mount, Offset Ports, G 1/2 (TP)
A63	2-Hole, SAE A Mount, Offset Manifold Ports, G 1/2 (TP)
A68	2-Hole, SAE A Mount, Aligned Ports, G 1/2 (TP)
A69	2-Hole, SAE A Mount, Offset Ports, 7/8-14 UNF (TP)
AC2	4-Hole, Magneto Mount, Offset Ports, G 1/2 (TP)
AC3	4-Hole, Magneto Mount, Offset Manifold Ports, G 1/2 (TP)
AC7	4-Hole, Magneto Mount, Aligned Manifold Ports, 1/2” Drilled (TP)

▶ (TP) - Tall pilot. Speed sensor option is not available on tall pilot housings.

3. SELECT A MOUNT & PORT OPTION

AC8	4-Hole, Magneto Mount, Aligned Ports, G 1/2 (TP)
F21	4-Hole, Square Mount, Aligned End Ports, 7/8-14 UNF
F26	4-Hole, Square Mount, Aligned End Ports, 3/4-16 UNF
F30	4-Hole, Square Mount, Aligned Ports, 1/2-14 NPT
F31	4-Hole, Square Mount, Aligned Ports, 7/8-14 UNF
F37	4-Hole, Square Mount, Aligned Manifold Ports, 1/2” Drilled
F38	4-Hole, Square Mount, Aligned Ports, G 1/2
G17	2-Hole, SAE A Mount, Aligned Manifold Ports, 1/2” Drilled
G24	4-Hole, Square Mount, Aligned End Ports, M22 x 1.5
G28	4-Hole, Square Mount, Aligned End Ports, G 1/2

4. SELECT A SHAFT OPTION

01	7/8” 13 Tooth Spline	**15**	1” Straight Extended
02	1” 6B Spline, 1/4-20 Tap	**16**	25mm Straight Extended
04	1” 6B Spline, M8x1.25 Tap	**53**	1” - 10.3 [.406] Pinhole
05	1” - 9.5 [.375] Pinhole	**66**	1” - 8.0 [.315] Pinhole
10	1” Straight	**B1**	1” Straight, Woodruff Key
12	25mm Straight	**F3**	1” 6B Spline, M8x1.25 Tap

▶ The 15 & 16 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

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

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

▶ Valve cavity is only available on the A19, A39 & AC2 housings.

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

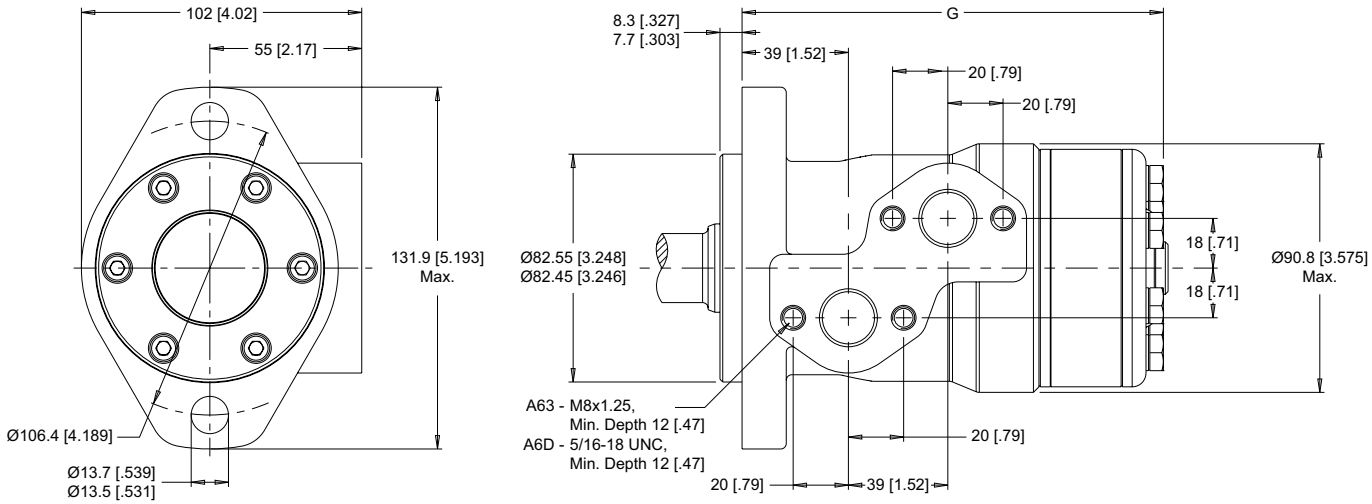
AA	None	**DS**	Groove In Mounting Flange
AC	Freeturning Rotor	**FB**	No Check Valves Installed
BE	Slinger Seal		

HOUSINGS

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

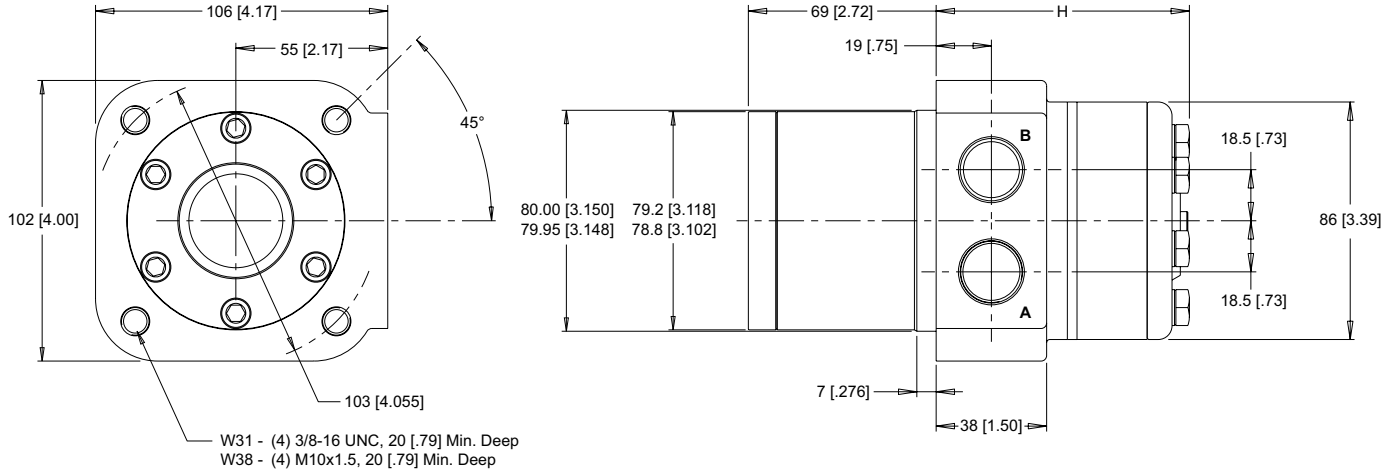
2-HOLE, SAE A MOUNT, OFFSET MANIFOLD PORTS

A63 G 1/2 **A6D** 7/8-14 UNF



4-HOLE, WHEEL MOUNT, ALIGNED PORTS

W31 7/8-14 UNF **W38** G 1/2



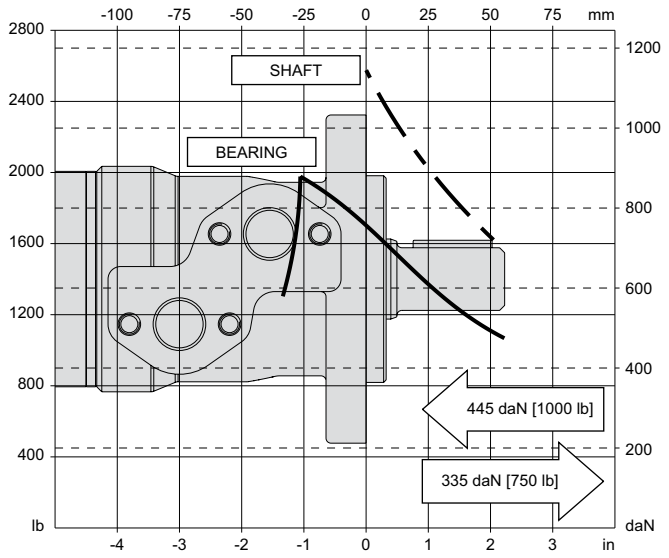
▶ Dimensions G & H are charted on page 50.

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 7.

SAE A MOUNT

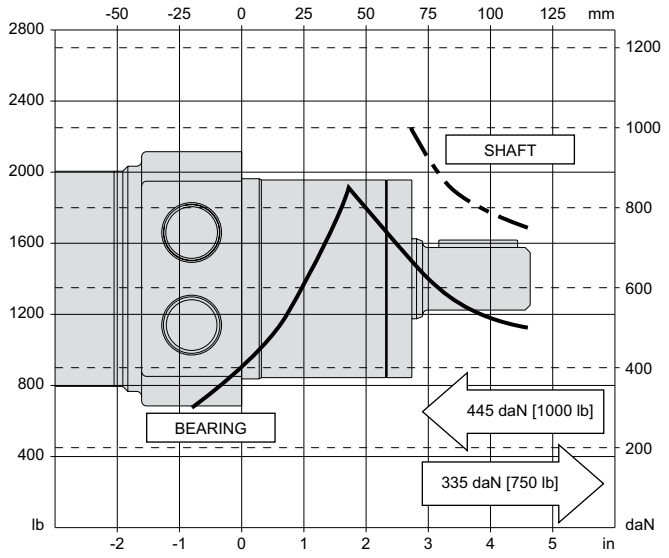


LENGTH & WEIGHT CHART

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

G	Length	Weight
#	mm [in]	kg [lb]
025	133 [5.24]	6.0 [13.3]
032	134 [5.28]	6.1 [13.4]
040	136 [5.33]	6.1 [13.5]
050	136 [5.33]	6.1 [13.5]
060	137 [5.39]	6.2 [13.6]
080	139 [5.48]	6.2 [13.6]
100	142 [5.59]	6.3 [13.9]
125	146 [5.74]	6.4 [14.2]
160	150 [5.89]	6.6 [14.5]
200	155 [6.09]	6.7 [14.9]
250	161 [6.35]	7.0 [15.3]
315	170 [6.69]	7.2 [15.9]
400	181 [7.13]	7.6 [16.8]

WHEEL MOUNT



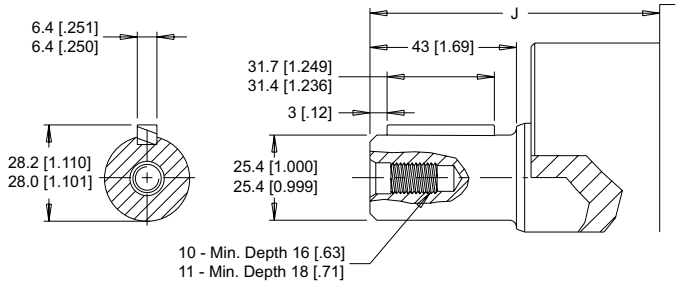
LENGTH & WEIGHT CHART

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

H	Length	Weight
#	mm [in]	kg [lb]
025	72 [2.83]	6.4 [14.1]
032	73 [2.87]	6.5 [14.4]
040	75 [2.95]	6.6 [14.5]
050	75 [2.95]	6.6 [14.5]
060	76 [2.99]	6.7 [14.8]
080	78 [3.07]	6.8 [15.0]
100	81 [3.19]	6.9 [15.2]
125	85 [3.35]	7.0 [15.5]
160	89 [3.50]	7.1 [15.6]
200	94 [3.70]	7.2 [15.9]
250	100 [3.94]	7.4 [16.4]
315	109 [4.29]	7.7 [17.0]
400	120 [4.72]	8.1 [17.8]

SHAFTS

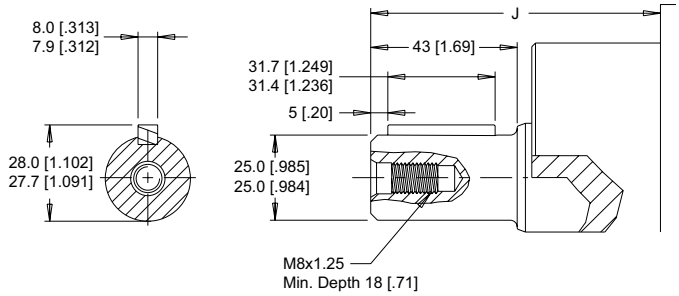
10 1” Straight, 1/4-20 Tap



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

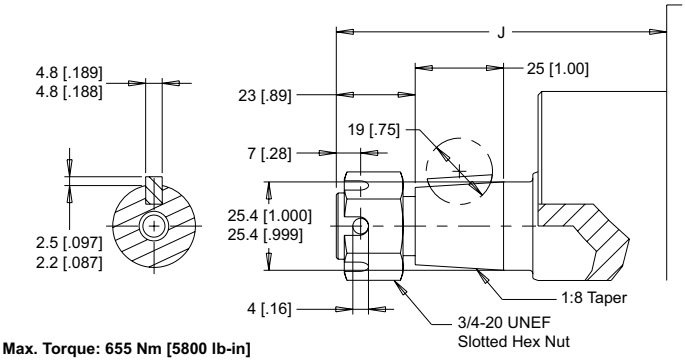
11 1” Straight, M8x1.25 Tap

12 25mm Straight



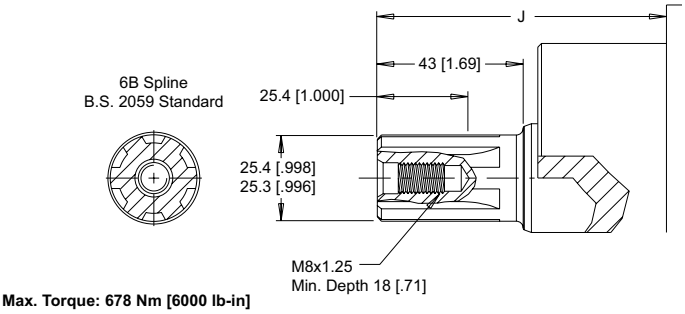
Max. Torque: 655 Nm [5800 lb-in]

13 1” Tapered



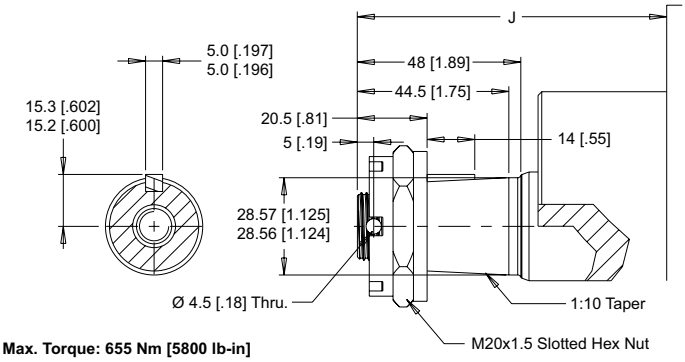
Max. Torque: 655 Nm [5800 lb-in]

F3 1” 6B Spline



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

N9 28.5mm Tapered



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

MOUNTING / SHAFT LENGTH CHART

Dimension J is the overall distance from the motor mounting surface to the end of the shaft.

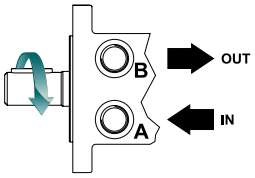
J	SAE A Mounts	Wheel Mounts
#	mm [in]	mm [in]
10	55 [2.18]	116 [4.57]
11	55 [2.18]	116 [4.57]
12	55 [2.18]	116 [4.57]
13	66 [2.60]	127 [5.00]
F3	55 [2.18]	116 [4.57]
N9	58 [2.29]	119 [4.69]

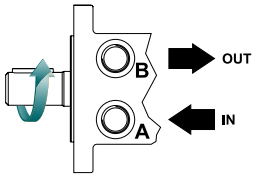
ORDERING INFORMATION

1	2	3	4	5	6	7	8

1. CHOOSE SERIES DESIGNATION

157	Clockwise Rotation
158	Counterclockwise Rotation





▶ The 157 & 158 series are bi-directional. Reversing the inlet hose will reverse shaft rotation.

2. SELECT A DISPLACEMENT OPTION

025	25 cm^3/rev	[1.5 in^3/rev]
032	32 cm^3/rev	[2.0 in^3/rev]
040	40 cm^3/rev	[2.5 in^3/rev]
050	50 cm^3/rev	[3.0 in^3/rev]
060	59 cm^3/rev	[3.6 in^3/rev]
080	78 cm^3/rev	[4.8 in^3/rev]
100	96 cm^3/rev	[5.9 in^3/rev]
125	125 cm^3/rev	[7.6 in^3/rev]
160	154 cm^3/rev	[9.4 in^3/rev]
200	190 cm^3/rev	[11.6 in^3/rev]
250	240 cm^3/rev	[14.6 in^3/rev]
315	303 cm^3/rev	[18.5 in^3/rev]
400	388 cm^3/rev	[23.7 in^3/rev]

3. SELECT A MOUNT & PORT OPTION

A63	2-Hole, SAE A Mount, Offset Manifold Ports, G 1/2
A6D	2-Hole, SAE A Mount, Offset Manifold Ports, 7/8-14 UNF
W31	4-Hole, Wheel Mount, Aligned Ports, 7/8-14 UNF
W38	4-Hole, Wheel Mount, Aligned Ports, G 1/2

4. SELECT A SHAFT OPTION

10	1” Straight, 1/4-20 Tap	**13**	1” Tapered
11	1” Straight, M8x1.25 Tap	**F3**	1” 6B Spline
12	25mm Straight	**N9**	28.5mm Tapered

5. SELECT A PAINT OPTION

A	Black
B	Black, Unpainted Mounting Surface

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

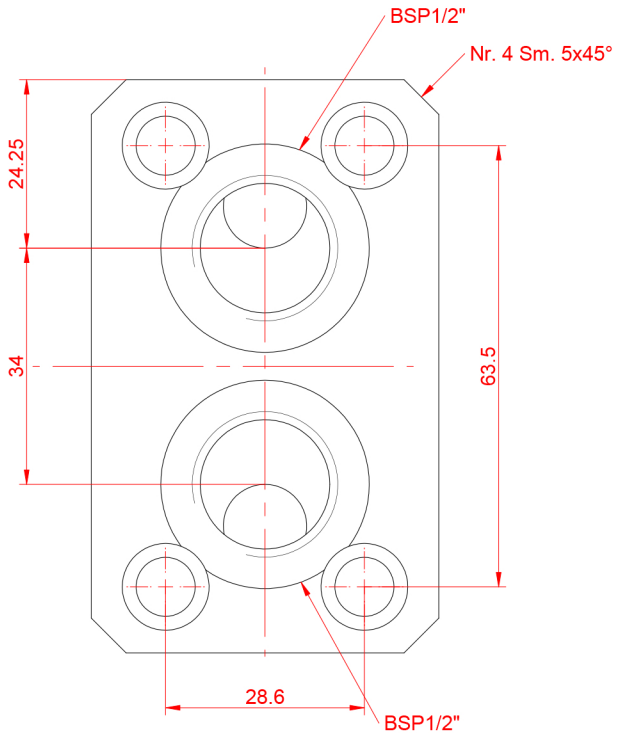
A	None

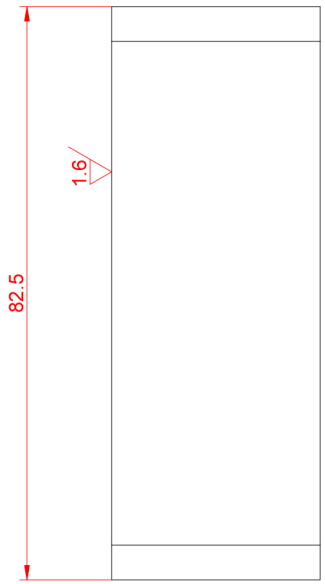
7. SELECT AN ADD-ON OPTION

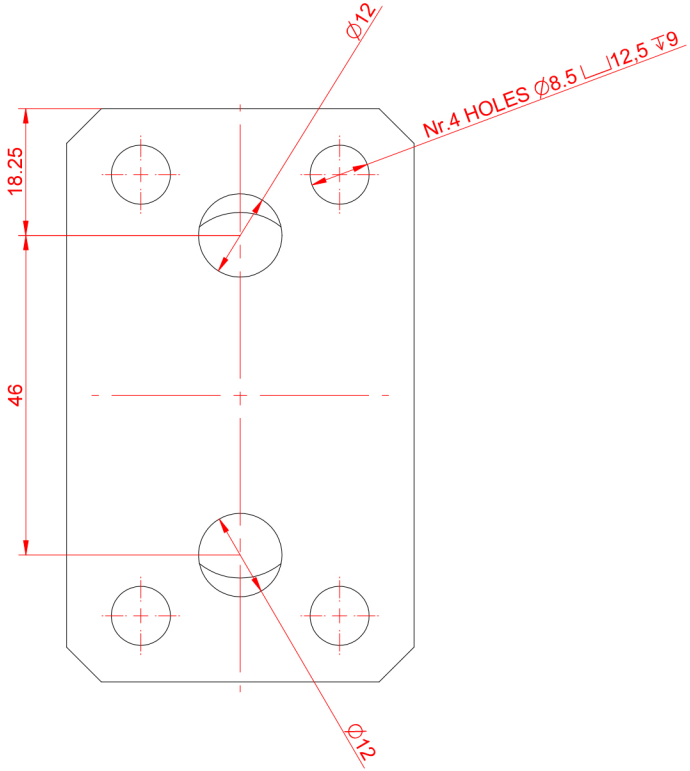
A	Standard

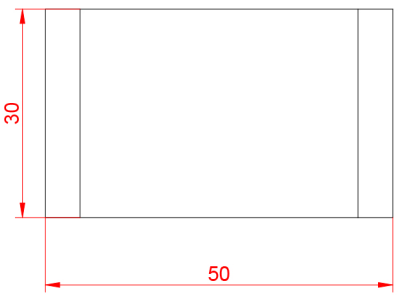
8. SELECT A MISCELLANEOUS OPTION

AA	None
AC	Freeturning Rotor









01	14/05/2019	MODIFIED BLOCK PROFILE	M. COLOMBO
REV.	DATA REV.	DESCRIZIONE REVISIONE	FIRMA

TOLLERANZA DI CARPENTERIA ±1/1000 NON CUMULABILE

TOLLERANZE GENERALI PER LAVORAZ. DI MACCHINA

DA / A	0 / 6	6 / 30	30 / 120	120 / 315	315 / 1000	1000 / 2000	2000 / 4000	OLTRE 4000	1° / 360°
ALBERI	0 -0.1	0 -0.2	0 -0.3	0 -0.4	0 -0.6	0 -1	0 -2	0 -3	20'
FORI	0 +0.1	0 +0.2	0 +0.3	0 +0.4	0 +0.6	0 +1	0 +2	0 +3	
ALTRE	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5	±1	±1.5	

ELIMINARE SPIGOLI VIVI

SPIGOLI SMUSSATI O RAGG.	0.1-0.4
RACCORDI CONCAVI	0.2-0.8
PARTI CON ASSI COMUNI	0.2/360
⊥ e // SUPERFICI-ASSI	0.1/100
⊥ e // SUPERFICI-SUPERFICI	0.2/100
PLANARITA'	0.1/100

DIMENSIONI DEL GREZZO: -

TIPO MATERIALE: -

TRATTAMENTI TERMICI:

PROF.T.T.A PEZZO FINITO: -

DUREZZA: -

TRATTAMENTO SUPERFICIALE:

DATA: 07/05/2019

PESO FINITO: -

DIS.: UTM

VERIFICATO: -

DENOMINAZIONE DEL PARTICOLARE: SPACER MANIFOLD

-

GRUPPO: -

SCALA: 1:

FORM. UNI: A3

DISEGNO: PJ19206

REV.: 01