



whitedriveproducts



SERIES

- 155 -
- 156 -
- 157 -
- 158 -



LIGHT DUTY
Hydraulic Motor

WP

OVERVIEW

The WP motor series is an economical alternative to more complex geroler designs that 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

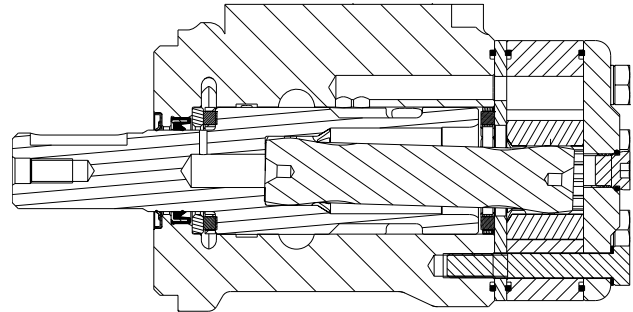
- Built-in check valves offer versatility and increased seal life.
- A variety of mounts and shafts provide flexibility in application design.
- Spool valve design gives superior performance and smooth operation over a wide speed and torque range.
- Standard high pressure shaft seals offer superior seal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

TYPICAL APPLICATIONS

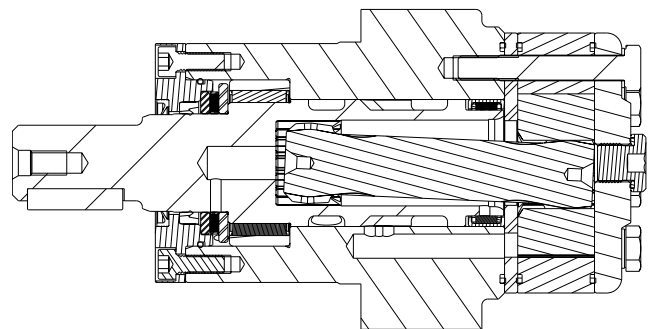
agriculture equipment, conveyors, carwashes, sweepers, food processing, grain augers, spreaders, feed rollers, augers, brush drives and more

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	154 [9.4]	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		Pressure - bar [psi]						Max. Cont.		Max. Inter.					
		30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]								
		25 cm ³ [1.5 in ³] / rev						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	Theoretical rpm				
	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]	5 [44] 1570	15 [133] 1503	22 [195] 1476	31 [274] 1432	36 [319] 1394	41 [363] 1359			1600					
	45 [11.9]		13 [115] 1687	20 [177] 1636	28 [248] 1600	34 [301] 1558	39 [345] 1516			1800					
			Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>												
		Theoretical Torque - Nm [lb-in]													
		4.1 [1.160]		12 [106]		24 [211]		32 [282]		40 [352]		48 [423]		56 [493]	
		mm [in]						Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]							

032		Pressure - bar [psi]						Max. Cont.		Max. Inter.					
		30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]								
		32 cm ³ [2.0 in ³] / rev						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	Theoretical rpm				
	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]	5 [44] 1550	16 [142] 1526	24 [212] 1500	31 [274] 1478	40 [354] 1452	46 [407] 1418			1563					
55 [14.5]		12 [106] 1674	20 [177] 1641	28 [248] 1617	34 [301] 1584	39 [345] 1555			1719						
		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>													
		Theoretical Torque - Nm [lb-in]													
		5.1 [1.200]		15 [135]		31 [271]		41 [361]		51 [451]		61 [541]		71 [631]	
		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.

DISPLACEMENT PERFORMANCE

040		Pressure - bar [psi]					Max. Cont.	Max. Inter.	
		30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]		
40 cm ³ [2.5 in ³] / rev									
Flow - lpm [gpm]		Torque - Nm [lb-in], Speed rpm					Intermittent Ratings - 10% of Operation		
		5 [1.3]	10 [2.6]	20 [5.3]	30 [7.9]	40 [10.6]	50 [13.2]	60 [15.8]	70 [18.5]
15 [133]	31 [274]	38 [336]	48 [425]	56 [496]				250	
14 [124]	31 [274]	41 [363]	54 [478]	62 [549]	70 [619]			500	
13 [115]	32 [283]	41 [363]	53 [469]	65 [575]	74 [655]			750	
12 [106]	30 [265]	39 [345]	51 [451]	63 [558]	74 [655]			1000	
10 [88]	27 [239]	39 [345]	51 [451]	61 [540]	72 [637]			1250	
7 [62]	25 [221]	37 [327]	49 [434]	59 [522]	71 [628]			1500	
4 [35]	23 [204]	34 [301]	46 [407]	56 [496]	68 [602]			2000	
16 [142]	30 [265]	41 [363]	52 [460]	64 [566]					
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>							
6.6 [260] mm [in]		Theoretical Torque - Nm [lb-in]							
		19 [168]	38 [336]	50 [442]	64 [566]	76 [673]	89 [788]		
Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]									

050		Pressure - bar [psi]					Max. Cont.	Max. Inter.		
		30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	160 [2320]	175 [2540]	
50 cm ³ [3.0 in ³] / rev										
Flow - lpm [gpm]		Torque - Nm [lb-in], Speed rpm					Intermittent Ratings - 10% of Operation			
		5 [1.3]	10 [2.6]	20 [5.3]	30 [7.9]	40 [10.6]	50 [13.2]	60 [15.8]	70 [18.5]	75 [19.8]
19 [168]	39 [345]	48 [425]	62 [549]	75 [664]					202	
20 [177]	38 [336]	50 [442]	63 [558]	78 [690]	92 [814]	102 [903]	107 [947]		404	
18 [159]	38 [336]	52 [460]	64 [566]	78 [690]	90 [796]	104 [920]	108 [956]		606	
15 [133]	37 [327]	50 [442]	64 [566]	77 [681]	89 [788]	103 [912]	107 [947]		808	
12 [106]	31 [274]	45 [398]	59 [522]	73 [646]	87 [770]	99 [876]	106 [938]		1010	
9 [80]	27 [239]	41 [363]	55 [487]	68 [602]	84 [743]	98 [867]	105 [929]		1212	
6 [53]	24 [212]	37 [327]	53 [469]	64 [566]	82 [726]	95 [841]	102 [903]		1414	
3 [27]	17 [150]	32 [283]	44 [389]	58 [513]	80 [708]	93 [823]	98 [867]		1515	
15 [133]	30 [265]	40 [354]	56 [496]	77 [681]	88 [779]	93 [823]				
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>								
6.6 [260] mm [in]		Theoretical Torque - Nm [lb-in]								
		24 [212]	47 [416]	63 [558]	79 [699]	95 [841]	110 [973]	126 [1115]	138 [1221]	
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.



DISPLACEMENT PERFORMANCE

060
59 cm³ [3.6 in³] / rev

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

30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	160 [2320]	175 [2540]
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Torque - Nm [lb-in], Speed rpm Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	5 [1.3]	20 [177] 83	46 [407] 79	65 [575] 72	80 [708] 64	95 [841] 51	112 [991] 38			Theoretical rpm
	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	
Max. Cont.	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	170
	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	339
Max. Inter.	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	509
	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	678
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	848
	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	1017
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	1186
										1271

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

Rotor Width

8.0 [314]	28 [249]	56 [499]	75 [665]	94 [831]	113 [998]	132 [1164]	150 [1330]	164 [1455]
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 mm [in]

Theoretical Torque - Nm [lb-in]

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

080
78 cm³ [4.8 in³] / rev

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

30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	160 [2320]	175 [2540]
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Torque - Nm [lb-in], Speed rpm Intermittent Ratings - 10% of Operation

Flow - lpm [gpm]	5 [1.3]	32 [283] 60	62 [549] 56	80 [708] 50	106 [938] 42	125 [1106] 30				Theoretical rpm
	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	
Max. Cont.	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	128
	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	256
Max. Inter.	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	385
	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	513
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	641
	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	769
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	897
										962

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

Rotor Width

10.4 [410]	37 [327]	75 [664]	100 [885]	125 [1106]	149 [1319]	174 [1540]	199 [1761]	218 [1929]
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 mm [in]

Theoretical Torque - Nm [lb-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.

DISPLACEMENT PERFORMANCE

100		Pressure - bar [psi]							Max. Cont.	Max. Inter.		
		30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	160 [2320]	175 [2540]			
96 cm ³ [5.9 in ³] / rev		Torque - Nm [lb-in], Speed rpm							Intermittent Ratings - 10% of Operation			
Max. Cont.	Flow - lpm [gpm]	5 [1.3]	10 [2.6]	20 [5.3]	30 [7.9]	40 [10.6]	50 [13.2]	60 [15.8]	70 [18.5]	75 [19.8]	Theoretical rpm	
	Max. Inter.	43 [381]	82 [726]	109 [965]	131 [1159]							52
		51	42	35	25							104
		43 [381]	84 [743]	108 [956]	133 [1177]	152 [1345]	180 [1593]	197 [1743]				208
		99	93	84	72	62	48	24				313
		41 [363]	79 [699]	107 [947]	127 [1124]	154 [1363]	178 [1575]	200 [1770]	212 [1876]			417
		205	202	197	192	182	172	140	118			521
		39 [345]	74 [655]	101 [894]	126 [1115]	152 [1345]	176 [1558]	198 [1752]	213 [1885]			625
311		307	301	294	283	271	258	240		729		
29 [257]	63 [558]	93 [823]	121 [1071]	150 [1327]	172 [1522]	195 [1726]	208 [1841]		781			
413	410	406	399	388	379	368	347					
20 [177]	52 [460]	85 [752]	115 [1018]	148 [1310]	169 [1496]	193 [1708]	203 [1796]					
519	515	510	503	492	480	464	446					
17 [150]	53 [469]	83 [735]	111 [982]	138 [1221]	165 [1460]	183 [1619]	193 [1708]					
624	620	615	608	600	582	565	548					
11 [97]	42 [372]	73 [646]	93 [823]	126 [1115]	159 [1407]	172 [1522]	183 [1619]					
728	726	723	714	706	684	668	646					
6 [53]	35 [310]	61 [540]	89 [788]	118 [1044]	145 [1283]	156 [1381]	176 [1558]					
780	771	764	755	736	724	712	699					
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>										
13.0 [510]		Theoretical Torque - Nm [lb-in]										
mm [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		Pressure - bar [psi]							Max. Cont.	Max. Inter.		
		30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	160 [2320]	175 [2540]			
125 cm ³ [7.6 in ³] / rev		Torque - Nm [lb-in], Speed rpm							Intermittent Ratings - 10% of Operation			
Max. Cont.	Flow - lpm [gpm]	5 [1.3]	10 [2.6]	20 [5.3]	30 [7.9]	40 [10.6]	50 [13.2]	60 [15.8]	70 [18.5]	75 [19.8]	Theoretical rpm	
	Max. Inter.	52 [460]	95 [841]	135 [1195]	168 [1487]							40
		38	35	32	27							80
		50 [442]	98 [867]	138 [1221]	172 [1522]	190 [1681]	234 [2071]	258 [2283]				160
		78	74	69	62	54	45	35				240
		50 [442]	96 [850]	132 [1168]	168 [1487]	202 [1788]	236 [2088]	256 [2265]	278 [2460]			320
		158	152	144	135	124	110	94	78			400
		44 [389]	92 [814]	126 [1115]	164 [1451]	198 [1752]	232 [2053]	262 [2319]	268 [2372]			480
238		232	225	215	210	198	168	155		560		
35 [310]	82 [726]	118 [1044]	160 [1416]	193 [1708]	226 [2000]	252 [2230]	266 [2354]		600			
319	316	312	308	300	288	262	238					
31 [274]	77 [681]	108 [956]	155 [1372]	182 [1611]	220 [1947]	238 [2106]	262 [2319]					
399	396	392	383	368	354	338	326					
15 [133]	64 [566]	97 [858]	146 [1292]	166 [1469]	210 [1858]	224 [1982]	256 [2265]					
479	478	475	470	463	454	443	434					
8 [71]	50 [442]	90 [796]	140 [1239]	162 [1434]	204 [1805]	209 [1850]	236 [2088]					
559	555	548	538	524	516	500	488					
	40 [354]	71 [628]	128 [1133]	158 [1398]	192 [1699]	199 [1761]	224 [1982]					
	599	594	588	576	565	536	524					
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>										
16.8 [660]		Theoretical Torque - Nm [lb-in]										
mm [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.



DISPLACEMENT PERFORMANCE

160	Pressure - bar [psi]								Max. Cont.	Max. Inter.
	30 [435]	60 [870]	80 [1160]	100 [1450]	120 [1740]	140 [2030]	160 [2320]	175 [2540]		
159 cm ³ [9.4 in ³] / rev										
Torque - Nm [lb-in], Speed rpm										
Intermittent Ratings - 10% of Operation										
Flow - lpm [gpm]	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
Max. Cont.	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
Max. Inter.	40 [10.6]	48 [425] 257	113 [1000] 255	155 [1372] 152	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
Theoretical rpm	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
	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
Rotor Width										
Theoretical Torque - Nm [lb-in]										
20.8 [820]	74 [651]	147 [1302]	196 [1736]	245 [2170]	282 [2496]	343 [3038]	392 [3472]	429 [3798]		
mm [in]										
Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]										

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

Theoretical Torque - Nm [lb-in]

200	Pressure - bar [psi]								Max. Cont.	Max. Inter.
	30 [435]	60 [870]	80 [1160]	100 [1450]	115 [1670]	140 [2030]	150 [2180]	175 [2540]		
190 cm ³ [11.6 in ³] / rev										
Torque - Nm [lb-in], Speed rpm										
Intermittent Ratings - 10% of Operation										
Flow - lpm [gpm]	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
Max. Cont.	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
Max. Inter.	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
Theoretical rpm	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
	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
Rotor Width										
Theoretical Torque - Nm [lb-in]										
25.9 [1.020]	91 [803]	182 [1611]	242 [2142]	303 [2677]	348 [3079]	424 [3748]	454 [4016]	529 [4685]		
mm [in]										
Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]										

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

Theoretical Torque - Nm [lb-in]

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

DISPLACEMENT PERFORMANCE

250		Pressure - bar [psi]							Max. Cont.	Max. Inter.	
		30 [435]	60 [870]	85 [1230]	100 [1450]	125 [1810]	140 [2030]	160 [2320]	175 [2540]		
240 cm ³ [14.6 in ³] / rev		Intermittent Ratings - 10% of Operation									
		Torque - Nm [lb-in], Speed rpm									
Max. Cont.	Flow - lpm [gpm]	5 [1.3]	10 [2.6]	20 [5.3]	30 [7.9]	40 [10.6]	50 [13.2]	60 [15.8]	70 [18.5]	75 [19.8]	Theoretical rpm
	89 [788]	194 [1717]	264 [2336]	326 [2885]						21	
	19	16	10	6						42	
	92 [814]	196 [1735]	268 [2372]	329 [2912]	394 [3487]					83	
	40	36	32	21	10					125	
	90 [796]	192 [1699]	264 [2336]	321 [2841]	397 [3513]	445 [3938]	510 [4513]	554 [4903]		167	
	81	77	72	65	50	42	36	23		208	
	86 [761]	185 [1637]	256 [2265]	314 [2779]	392 [3469]	439 [3855]	502 [4442]	557 [4929]		250	
124	121	115	106	94	84	76	61		292		
82 [726]	179 [1584]	248 [2195]	305 [2699]	384 [3398]	431 [3814]	486 [4301]	545 [4823]		313		
165	162	158	153	144	135	125	113				
69 [611]	169 [1496]	243 [2150]	293 [2593]	378 [3345]	421 [3726]	475 [4204]	526 [4655]				
207	203	195	189	183	170	157	138				
48 [425]	152 [1345]	230 [2035]	282 [2496]	364 [3221]	407 [3602]	456 [4035]	508 [4496]				
250	247	243	236	222	216	205	188				
37 [327]	139 [1230]	219 [1938]	263 [2327]	343 [3035]	386 [3416]	441 [3903]	496 [4389]				
291	285	278	271	256	249	234	221				
26 [230]	128 [1133]	205 [1814]	245 [2168]	328 [2903]	374 [3310]	428 [3788]	481 [4257]				
312	310	307	302	294	270	254	242				
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>									
Theoretical Torque - Nm [lb-in]											
32.5 [1.280]		115 [1018]	229 [2027]	325 [2875]	382 [3381]	478 [4230]	535 [4735]	611 [5407]	669 [5920]		
mm [in]		Displacement tested at 45°C [113°F] with an oil viscosity of 46cSt [213 SUS]									

315		Pressure - bar [psi]							Max. Cont.	Max. Inter.	
		30 [435]	50 [725]	70 [1015]	85 [1230]	100 [1450]	120 [1740]	140 [2030]	160 [2320]		
303 cm ³ [18.5 in ³] / rev		Intermittent Ratings - 10% of Operation									
		Torque - Nm [lb-in], Speed rpm									
Max. Cont.	Flow - lpm [gpm]	5 [1.3]	10 [2.6]	20 [5.3]	30 [7.9]	40 [10.6]	50 [13.2]	60 [15.8]	70 [18.5]	75 [19.8]	Theoretical rpm
	123 [1089]	200 [1770]	282 [2496]	344 [3044]						17	
	16	13	10	6						33	
	117 [1035]	194 [1717]	277 [2451]	342 [3027]	399 [3531]					66	
	31	29	25	21	17					99	
	112 [991]	196 [1735]	275 [2434]	340 [3009]	397 [3513]	460 [4071]	526 [4655]	605 [5354]		132	
	64	62	58	54	49	43	32	23		165	
	104 [920]	183 [1620]	267 [2363]	322 [2850]	390 [3452]	448 [3965]	520 [4602]	602 [5328]		198	
98	94	90	85	79	70	62	56		231		
86 [761]	168 [1487]	252 [2230]	304 [2690]	365 [3230]	440 [3894]	515 [4558]	588 [5204]		248		
129	126	122	118	113	106	99	76				
73 [646]	156 [1381]	238 [2106]	288 [2549]	350 [3098]	424 [3752]	500 [4425]	571 [5053]				
164	160	155	150	144	136	127	119				
60 [531]	140 [1239]	223 [1974]	270 [2390]	325 [2876]	396 [3505]	480 [4248]	546 [4832]				
195	192	188	183	176	170	164	157				
37 [327]	122 [1080]	186 [1646]	254 [2248]	309 [2735]	368 [3257]	455 [4027]	527 [4664]				
228	226	223	218	212	206	196	188				
23 [204]	100 [885]	174 [1540]	237 [2097]	293 [2593]	359 [3177]	444 [3929]	516 [4567]				
245	242	238	233	228	222	215	206				
Rotor Width		Overall Efficiency - 60 - 100% <input type="checkbox"/> 40 - 59% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>									
Theoretical Torque - Nm [lb-in]											
40.9 [1.610]		145 [1283]	241 [2133]	338 [2991]	410 [3628]	482 [4265]	579 [5124]	675 [5973]	772 [6832]		
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.



DISPLACEMENT PERFORMANCE

400		Pressure - bar [psi]								Max. Cont.		Max. Inter.								
		30 [435]	45 [650]	55 [800]	65 [940]	80 [1160]	95 [1380]	110 [1595]	125 [1810]											
388 cm ³ [23.7 in ³] / rev																				
Torque - Nm [lb-in], Speed rpm																				
Intermittent Ratings - 10% of Operation																				
Flow - lpm [gpm]	5 [1.3]	144 [1274] 11	220 [1947] 10	270 [2389] 7	338 [2991] 5							13	Theoretical rpm							
	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								
	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% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>																				
Rotor Width																				
52.1 [2.050] mm [in]		<table border="1"> <tr> <td>185 [1640]</td> <td>278 [2460]</td> <td>340 [3007]</td> <td>402 [3554]</td> <td>494 [4374]</td> <td>587 [5194]</td> <td>680 [6014]</td> <td>772 [6834]</td> </tr> </table>											185 [1640]	278 [2460]	340 [3007]	402 [3554]	494 [4374]	587 [5194]	680 [6014]	772 [6834]
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]																				

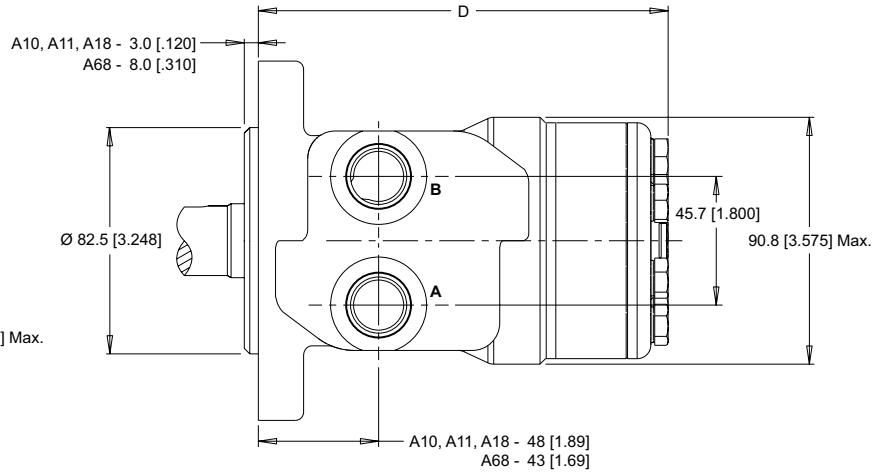
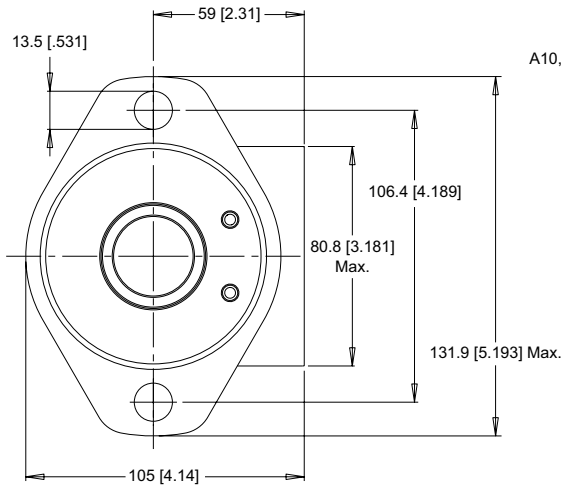
► Performance data is typical. Performance of production units varies slightly from one motor to another.

HOUSINGS

► Dimensions shown are without paint. Paint thickness can be up to 0.13 [0.005].

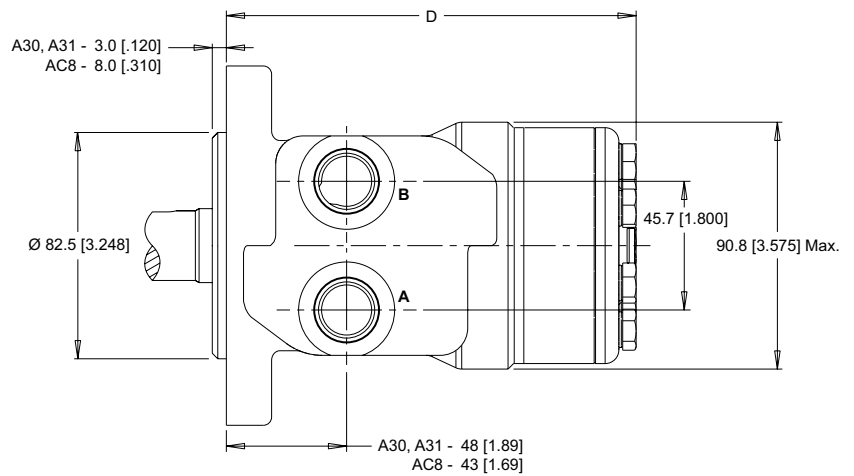
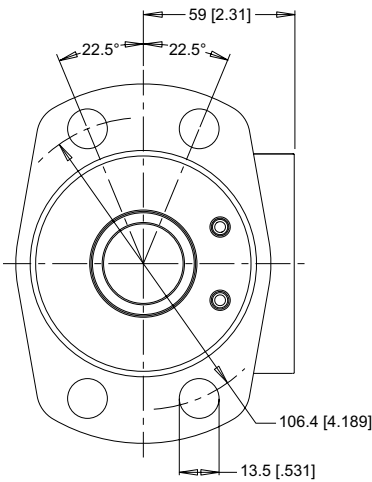
2-HOLE, SAE A MOUNT, ALIGNED PORTS

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



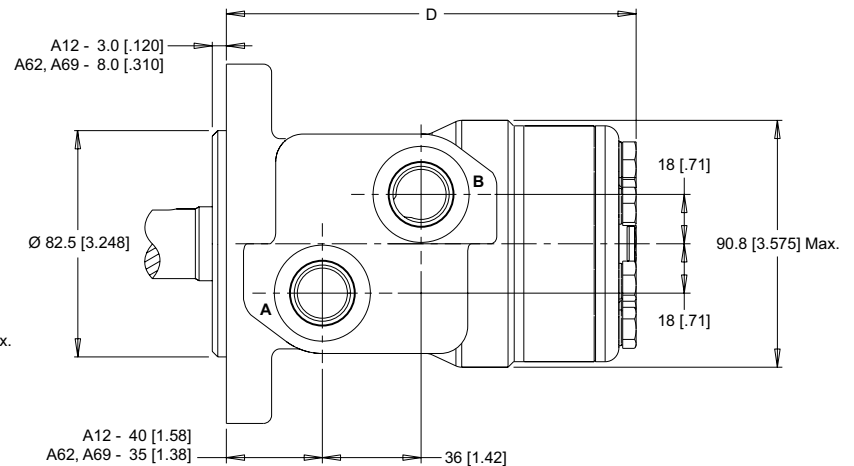
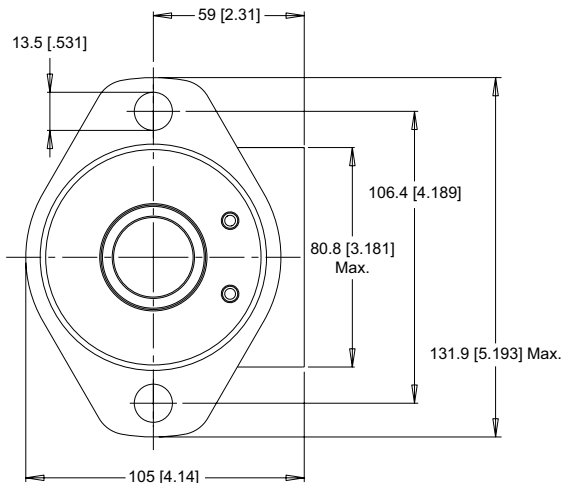
4-HOLE, MAGNETO MOUNT, ALIGNED PORTS

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)



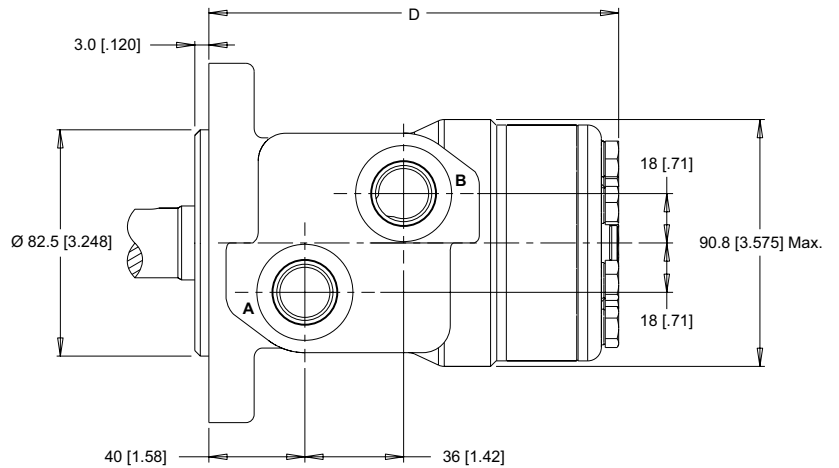
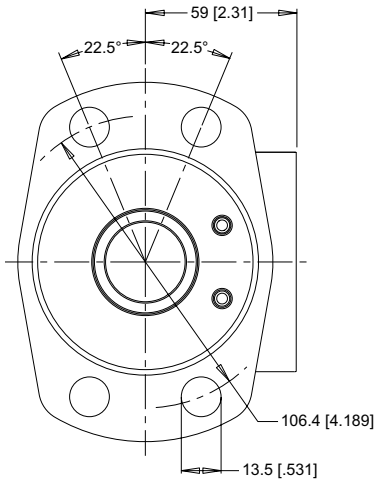
► Dimension D is charted on page 15. ► (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

HOUSINGS

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

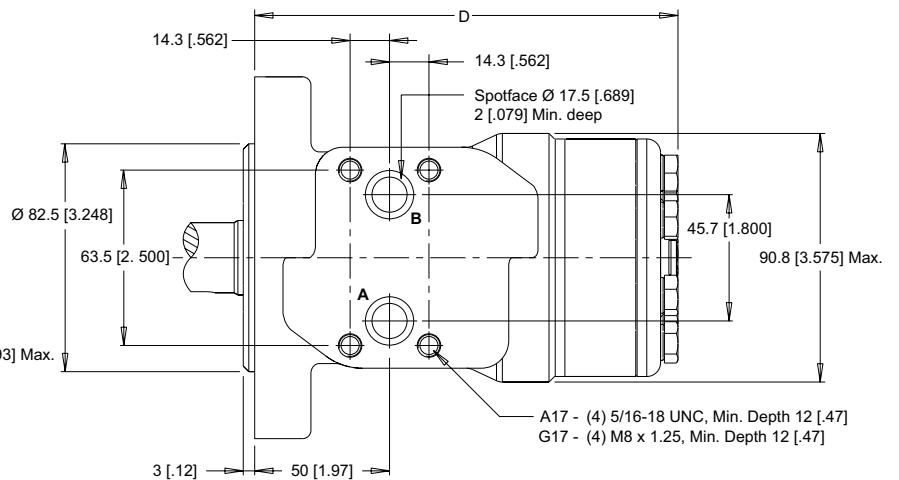
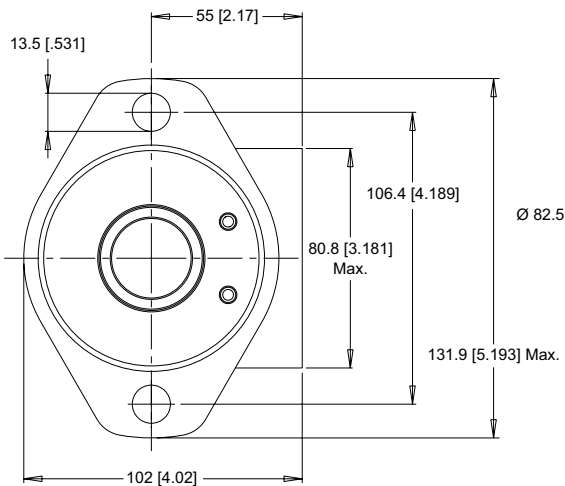
4-HOLE, MAGNETO MOUNT, OFFSET PORTS

A32 G 1/2



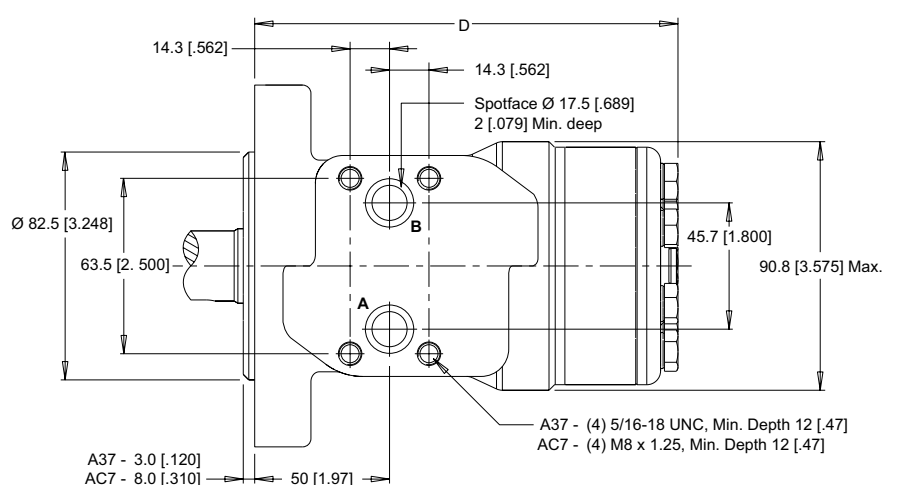
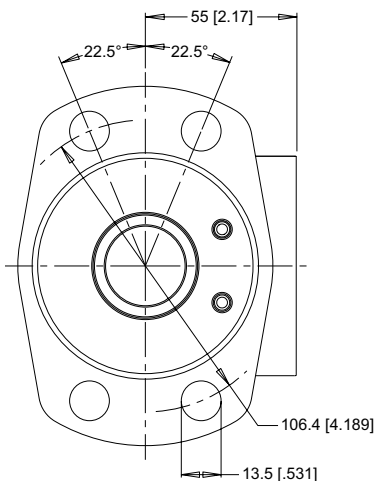
2-HOLE, SAE A MOUNT, ALIGNED MANIFOLD PORTS

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 15. ► (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

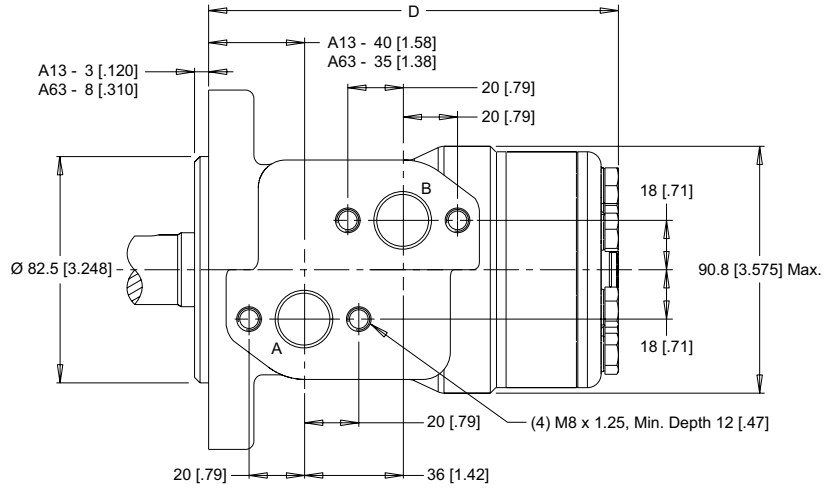
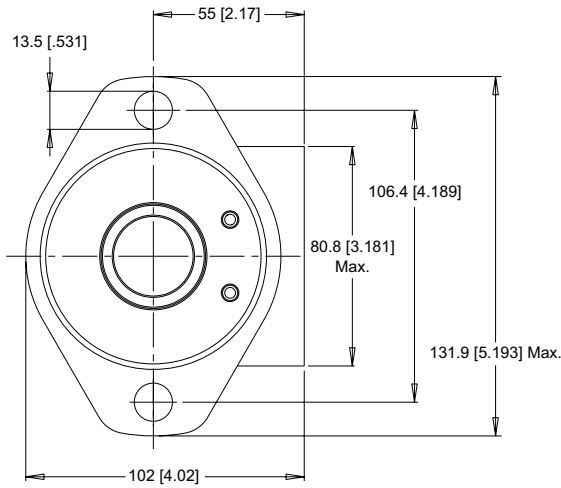
HOUSINGS

► Dimensions shown are without paint. Paint thickness can be up to 0.13 [0.005].

2-HOLE, SAE A MOUNT, OFFSET MANIFOLD PORTS

A13 G 1/2

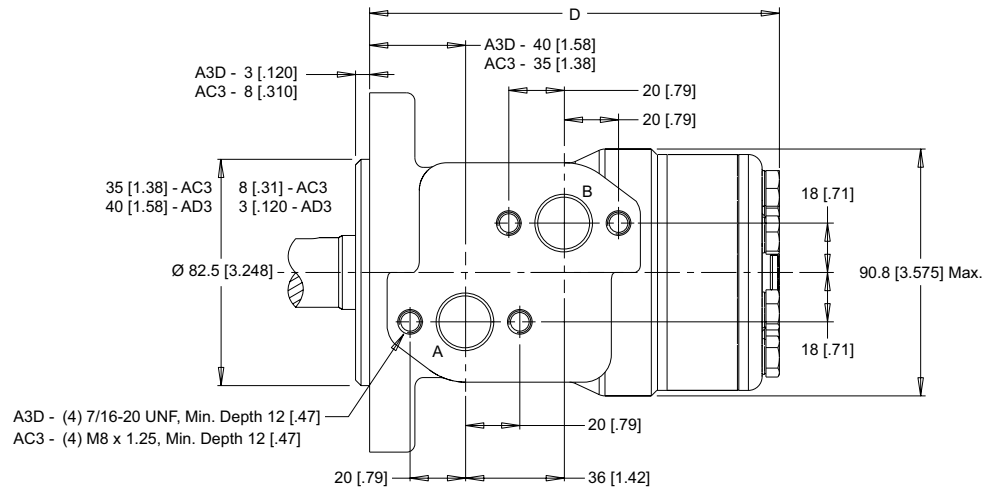
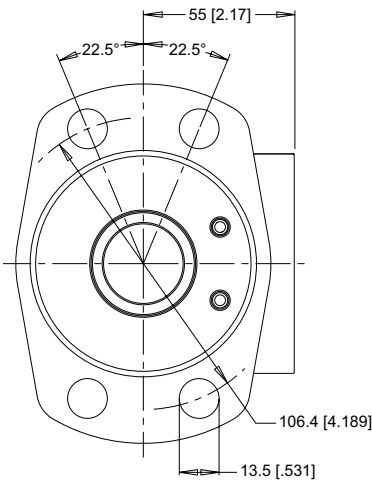
A63 G 1/2 (TP)



4-HOLE, MAGNETO MOUNT, OFFSET MANIFOLD PORTS

A3D 7/8-14 UNF

AC3 G 1/2 (TP)

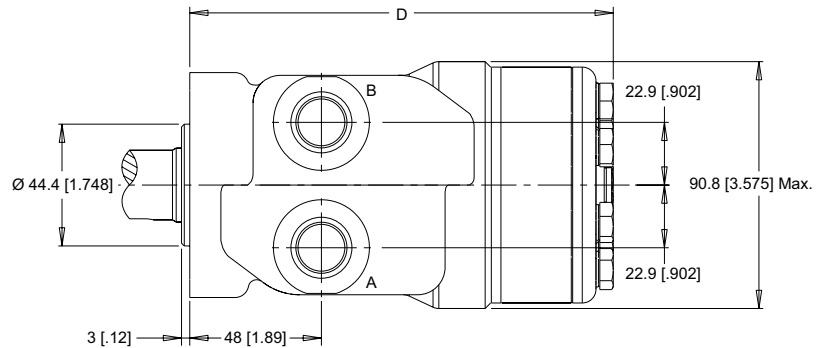
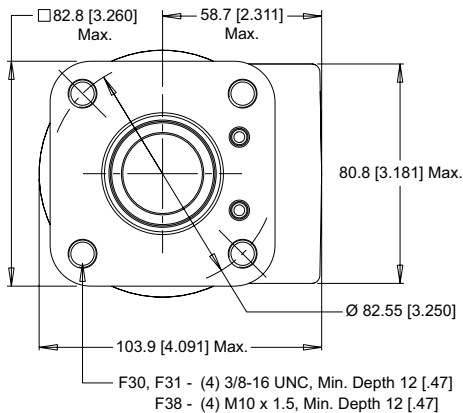


4-HOLE, SQUARE MOUNT, ALIGNED PORTS

F30 1/2-14 NPT

F31 7/8-14 UNF

F38 G 1/2



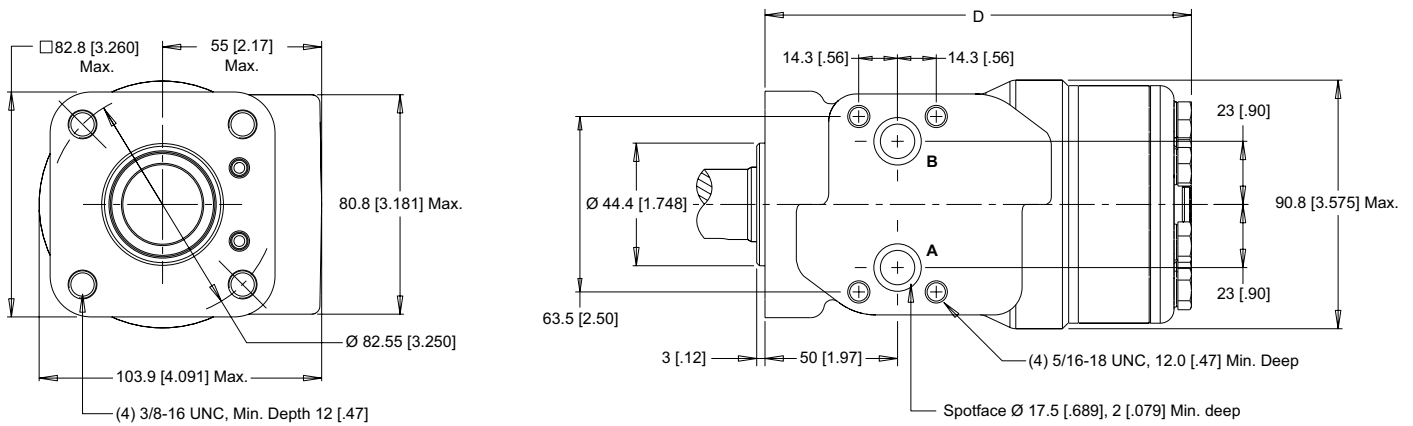
F30, F31 - (4) 3/8-16 UNC, Min. Depth 12 [0.47]
F38 - (4) M10 x 1.5, Min. Depth 12 [0.47]

► Dimension D is charted on page 15. ► (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

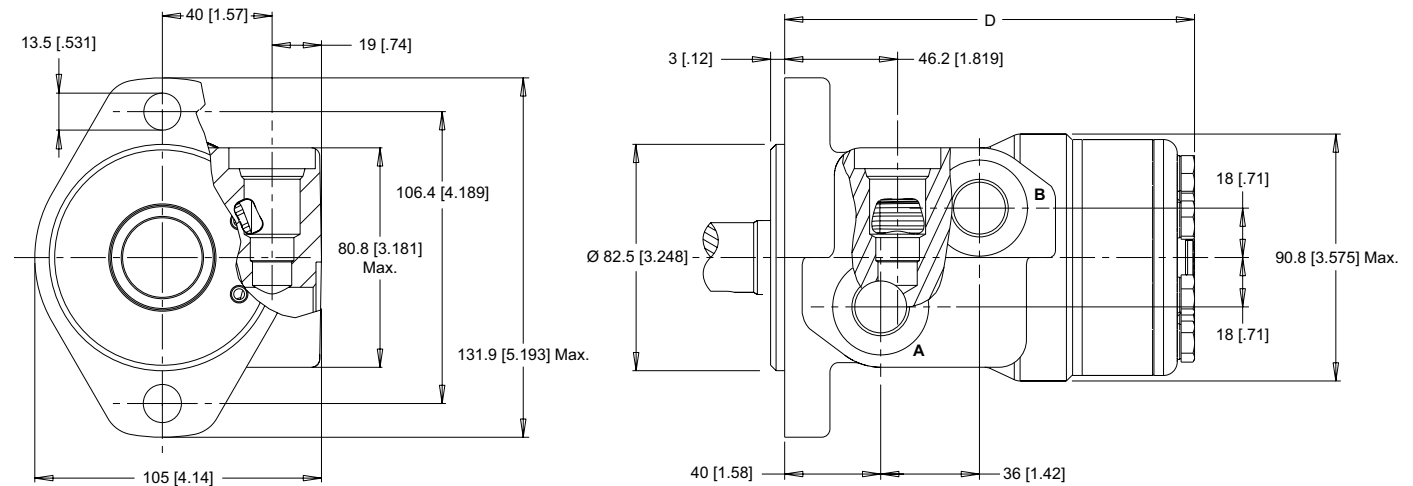
HOUSINGS

► 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

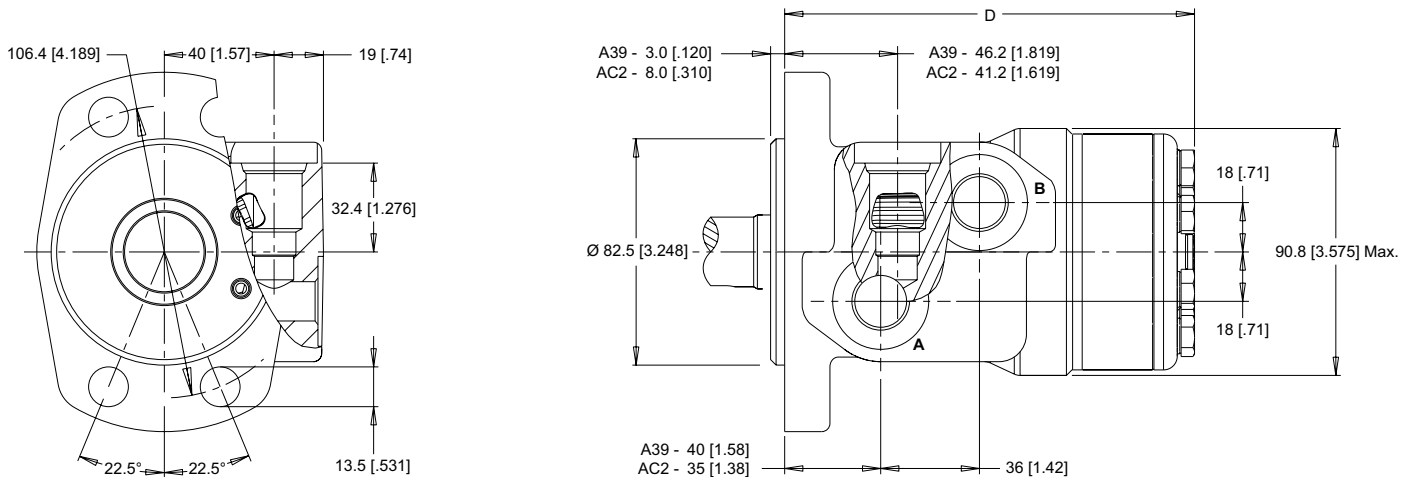


2-HOLE, SAE A MOUNT, OFFSET PORTS, VALVE CAVITY **A19** 7/8-14 UNF



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

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



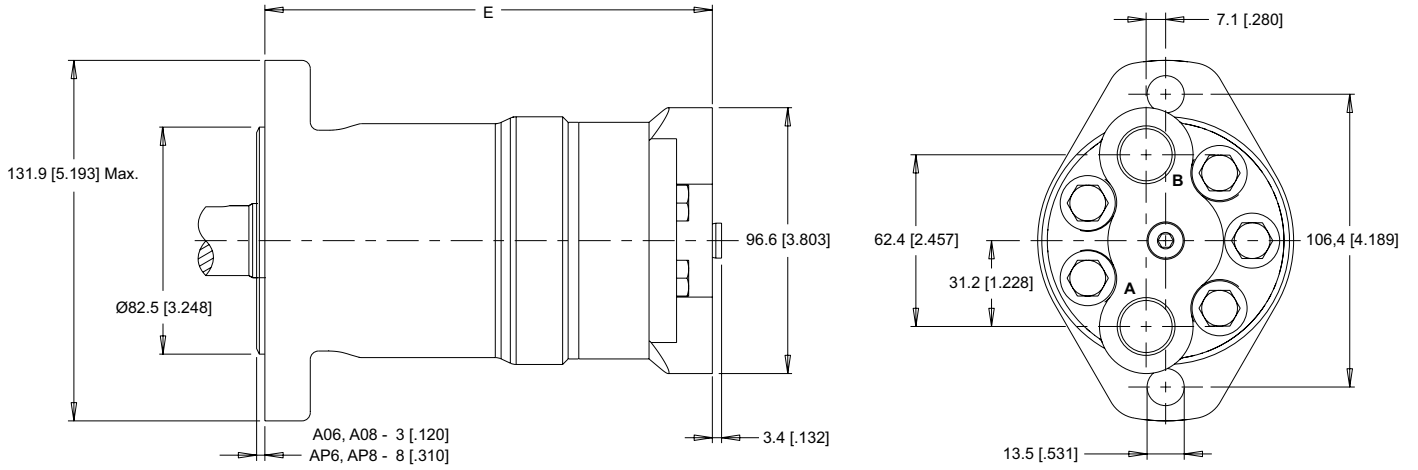
► Dimension D is charted on page 15. ► (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

HOUSINGS

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

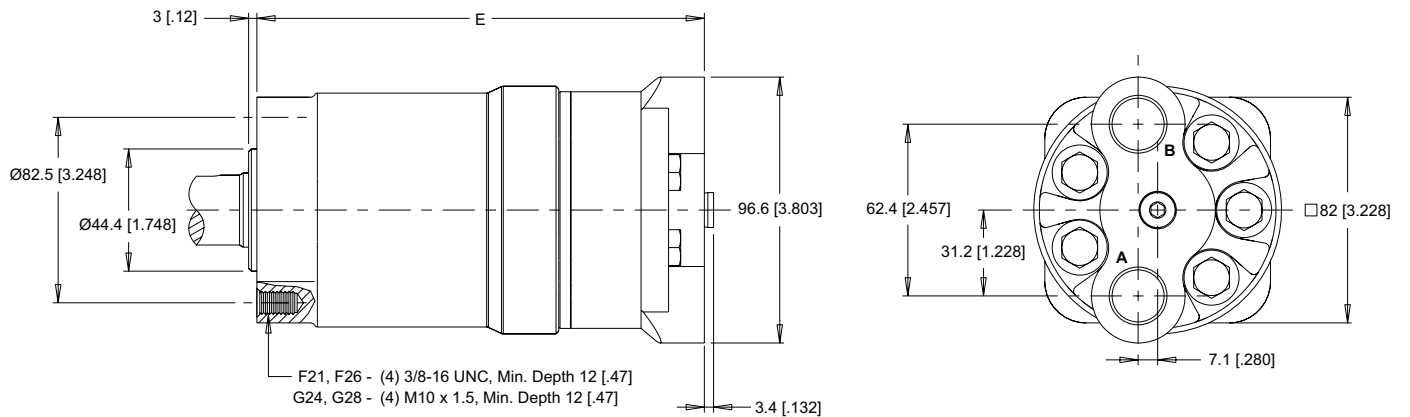
2-HOLE, SAE A MOUNT, ALIGNED END PORTS

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

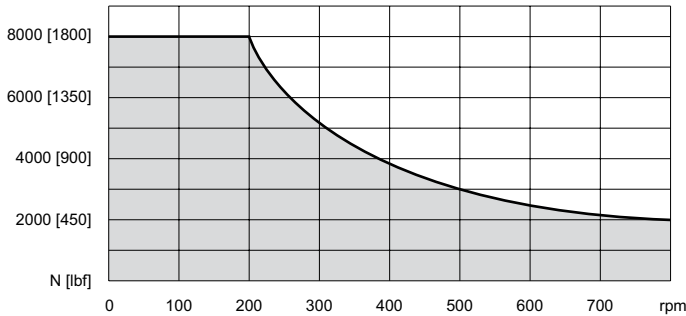


► Dimension E is charted on page 15. ► (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

TECHNICAL INFORMATION

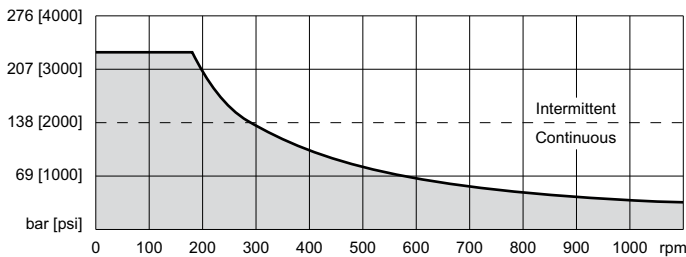
ALLOWABLE SHAFT LOAD / BEARING CURVE

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.



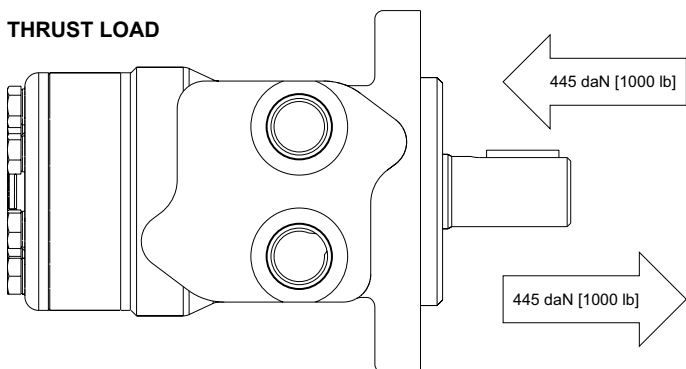
PERMISSIBLE SHAFT SEAL PRESSURE

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 10-13.

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]

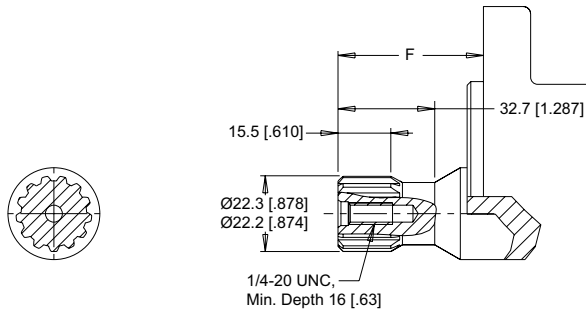
Dimension E is the overall motor length from the rear of the motor to the mounting flange surface and is referenced on detailed housing drawings listed on pages 14.

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.

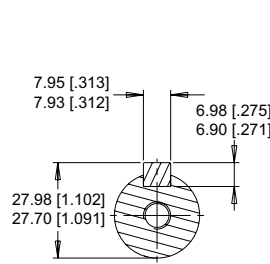
SHAFTS

01 7/8" 13 Tooth Spline



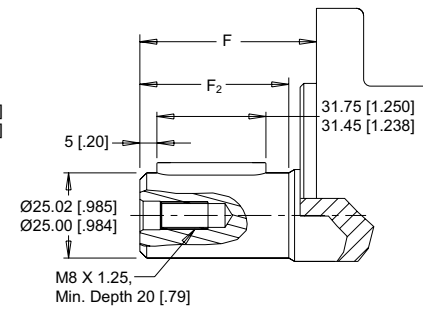
Max. Torque: 170 Nm [1500 lb-in]

12 25mm Straight



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

16 25mm Straight Extended

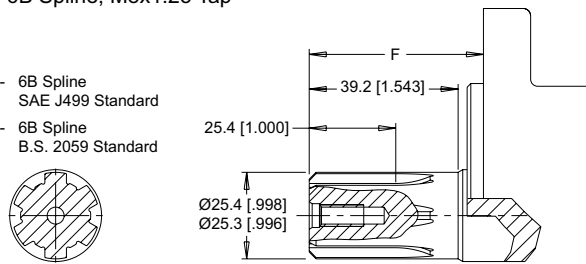


02 1" 6B Spline, 1/4-20 Tap

04 1" 6B Spline, M8x1.25 Tap

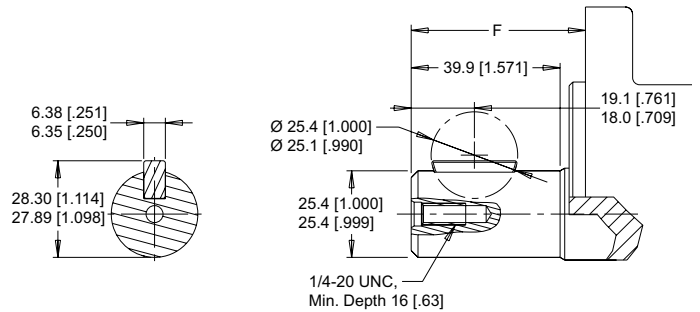
F3 1" 6B Spline, M8x1.25 Tap

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

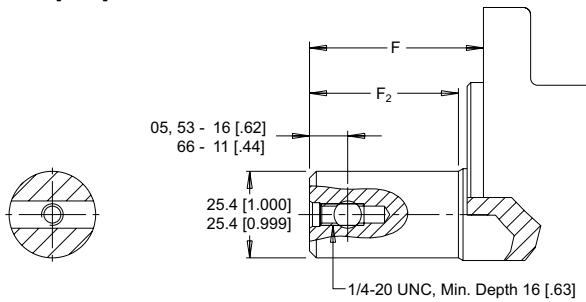


Max. Torque: 655 Nm [5800 lb-in]

05 1" - 9.5 [.375] Pinhole

53 1" - 10.3 [.406] Pinhole

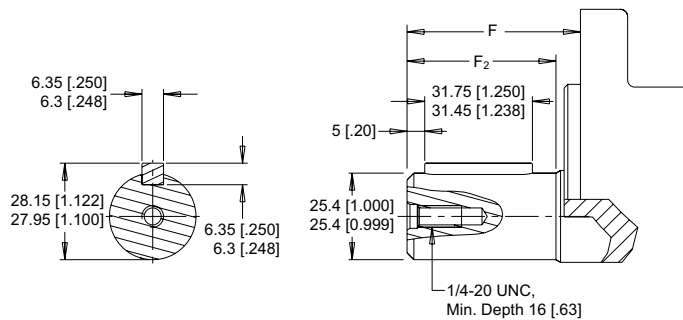
66 1" - 8.0 [.315] Pinhole



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

10 1" Straight

15 1" Straight Extended



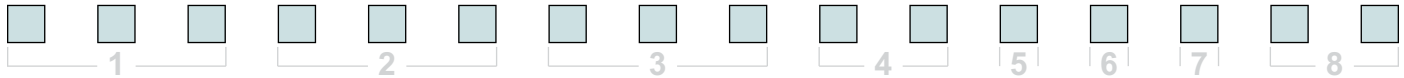
Max. Torque: 655 Nm [5800 lb-in]

MOUNTING / SHAFT LENGTH CHART

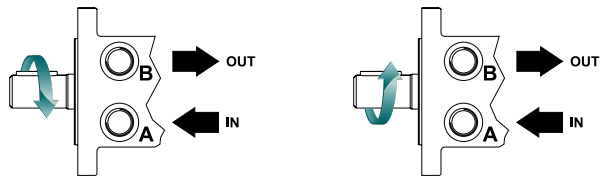
Dimension F is the overall distance from the motor mounting surface to the end of the shaft.

Additional shaft length information, if necessary, is noted as F₂ 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. CHOOSE SERIES DESIGNATION

- 155** Clockwise Rotation **156** Counterclockwise Rotation



► The 155 & 156 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]	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	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 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

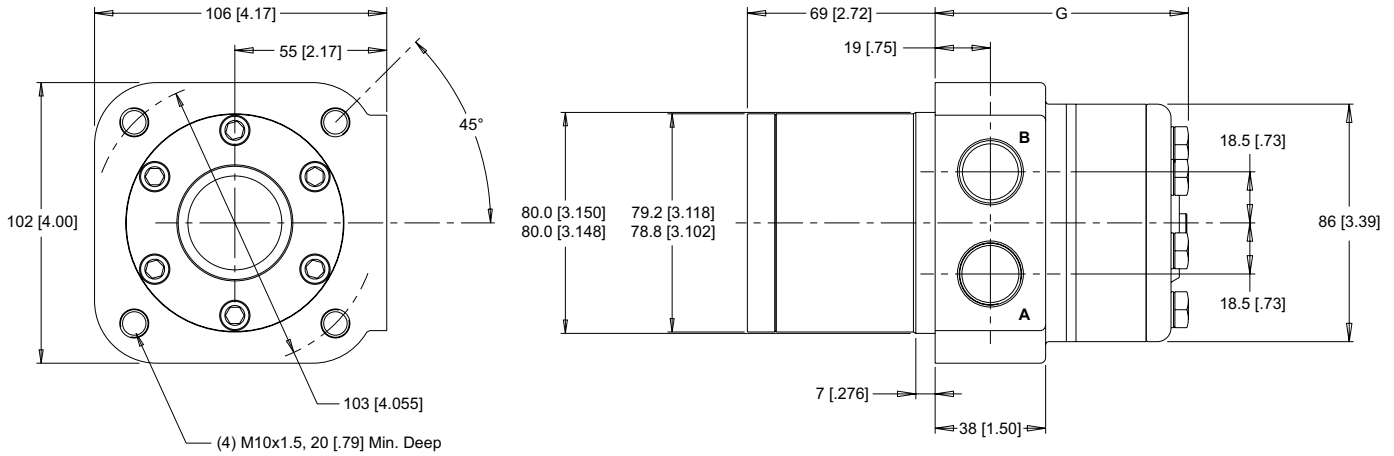
AA	None	FB	No Check Valves Installed
AC	Freeturning Rotor		

HOUSINGS

► Dimensions shown are without paint. Paint thickness can be up to 0.13 [0.005].

4-HOLE, WHEEL MOUNT, ALIGNED PORTS

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

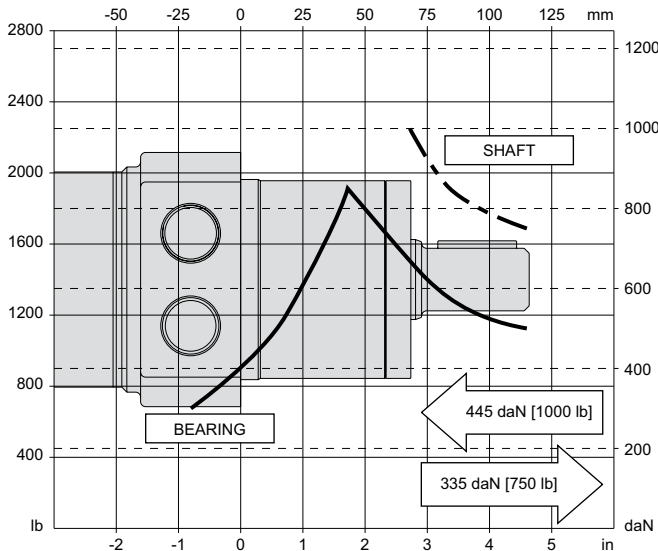


TECHNICAL INFORMATION

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.

WHEEL MOUNT



LENGTH & WEIGHT CHARTS

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

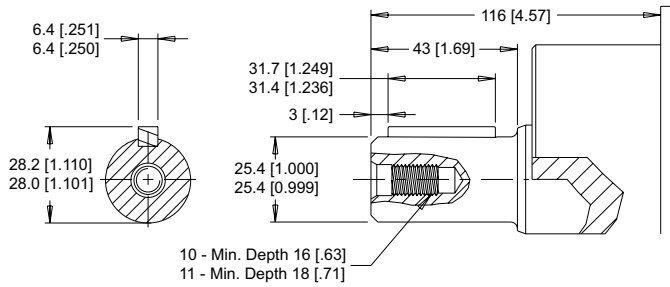
G	Length	Weight
#	mm [in]	kg [lb]
025	72 [2.83]	6.4 [14.1]
032	73 [2.87]	6.5 [14.4]
040	75 [2.95]	6.6 [14.5]
050	75 [2.95]	6.6 [14.5]
060	76 [2.99]	6.7 [14.8]
080	78 [3.07]	6.8 [15.0]
100	81 [3.19]	6.9 [15.2]
125	85 [3.35]	7.0 [15.5]
160	89 [3.50]	7.1 [15.6]
200	94 [3.70]	7.2 [15.9]
250	100 [3.94]	7.4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

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

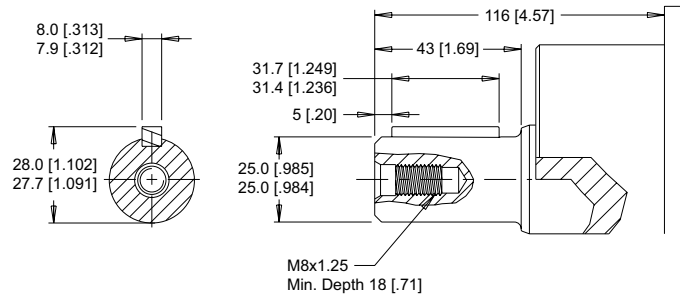
10 1" Straight, 1/4-20 Tap



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

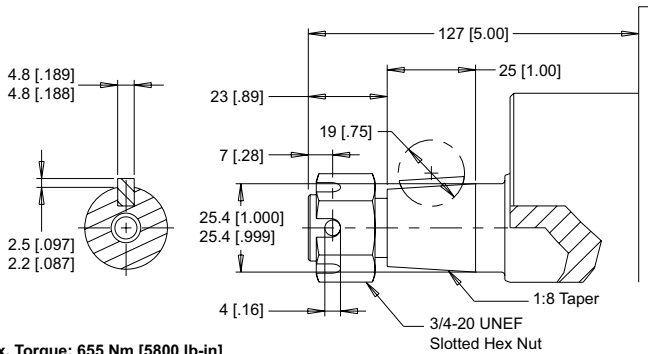
11 1" Straight, M8x1.25 Tap

12 25mm Straight



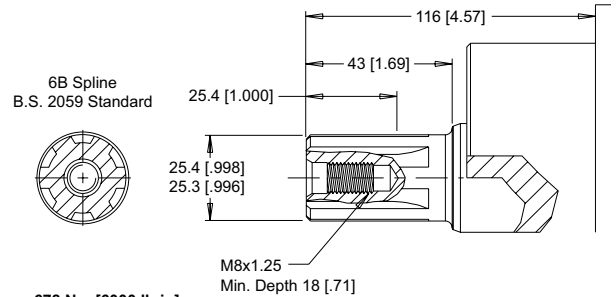
Max. Torque: 655 Nm [5800 lb-in]

13 1" Tapered



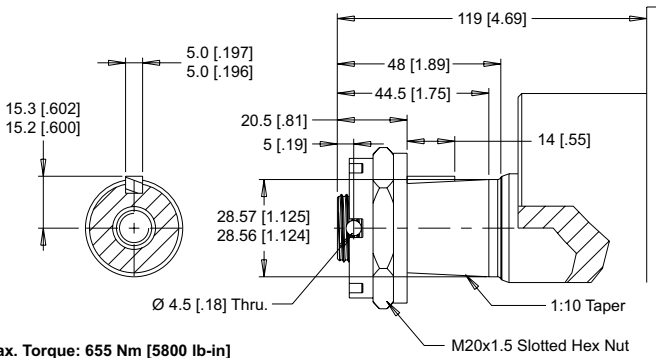
Max. Torque: 655 Nm [5800 lb-in]

F3 1" 6B Spline



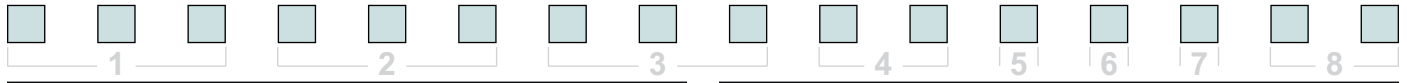
Max. Torque: 678 Nm [6000 lb-in]

N9 28.5mm Tapered



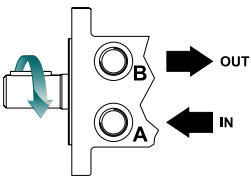
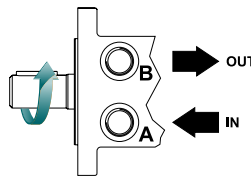
Max. Torque: 655 Nm [5800 lb-in]

ORDERING INFORMATION



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]	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

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

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