



whitedriveproducts



## SERIES

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**LIGHT DUTY**  
Hydraulic Motor





**OVERVIEW**

The White Drive Products tradition of providing motors that excel in demanding applications continues with the WG series. WG motors provide an exceptionally solid platform for any light-duty application where sideload may present a concern. The WG incorporates our Roller Stator® design which reduces friction and extends motor life. With displacements ranging from 41 - 404 cm<sup>3</sup> [2.5 - 24.4 in<sup>3</sup>] per revolution and a choice of mounting, shaft, and port options, this motor is made to satisfy a variety of applications. The WG is a perfect fit when you require improved performance and long motor life at an affordable price.

**FEATURES / BENEFITS**

- Needle Roller Bearing is in optimum location to allow load to be placed as close to the center line of bearing as possible.
- High Pressure Buna® Shaft Seal offers superior seal life and performance and eliminates the need for a case drain.
- Heavy-Duty Drive Link receives full flow lubrication to provide long life.
- Roller Stator® Motor Design increases efficiency and life by using roller contact versus solid, sliding contact design.
- Rubber Energized Steel Face Seal does not extrude or melt under high pressure or high temperature.

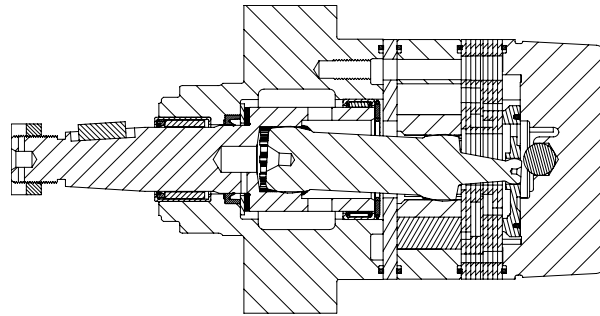
**TYPICAL APPLICATIONS**

conveyors, carwashes, positioners, light to medium-duty wheel drives, sweepers, grain augers, spreaders, feed rollers, screw drives, brush drives and more

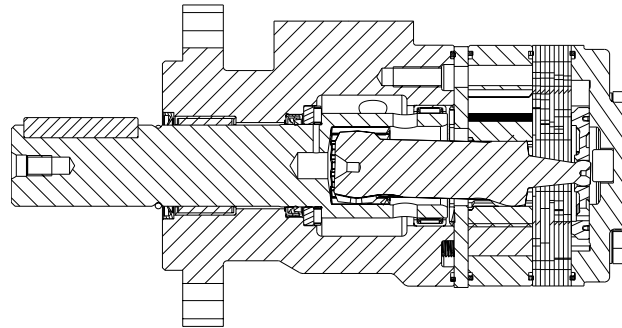
**SERIES DESCRIPTIONS**

**275/276** - Hydraulic Motor  
*Standard*

**277/278** - Hydraulic Motor  
*Modified Port Locations*



**280/281** - Hydraulic Motor  
*With Larger Dia. Shafts*



**SPECIFICATIONS**

CODE	Displacement cm <sup>3</sup> [in <sup>3</sup> /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
040	41 [2.5]	830	1020	34 [9]	42 [11]	71 [630]	100 [870]	138 [2000]	190 [2750]	207 [3000]
045	44 [2.7]	770	940	34 [9]	42 [11]	78 [685]	108 [955]	138 [2000]	190 [2750]	207 [3000]
060	60 [3.6]	760	950	45 [12]	57 [15]	107 [950]	150 [1320]	138 [2000]	190 [2750]	207 [3000]
070	70 [4.3]	650	810	45 [12]	57 [15]	127 [1120]	176 [1560]	138 [2000]	190 [2750]	207 [3000]
090	88 [5.4]	520	650	45 [12]	57 [15]	162 [1430]	224 [1985]	138 [2000]	190 [2750]	207 [3000]
100	100 [6.1]	450	570	45 [12]	57 [15]	185 [1640]	257 [2275]	138 [2000]	190 [2750]	207 [3000]
130	129 [7.9]	350	440	45 [12]	57 [15]	241 [2135]	334 [2960]	138 [2000]	190 [2750]	207 [3000]
160	161 [9.8]	280	350	45 [12]	57 [15]	304 [2690]	421 [3730]	138 [2000]	190 [2750]	207 [3000]
200	200 [12.2]	220	280	45 [12]	57 [15]	379 [3350]	525 [4650]	138 [2000]	190 [2750]	207 [3000]
230	231 [14.1]	240	330	57 [15]	76 [20]	380 [3380]	529 [4680]	121 [1750]	165 [2400]	200 [2900]
320	322 [19.7]	175	235	57 [15]	76 [20]	458 [4050]	600 [5300]	103 [1500]	134 [1950]	169 [2450]
400	404 [24.4]	140	185	57 [15]	76 [20]	548 [4850]	758 [6710]	100 [1450]	135 [1960]	170 [2460]

► 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**

<b>040</b>		Pressure - bar [psi]			Max. Cont.	Max. Inter.	
		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]	
41 cm <sup>3</sup> [2.5 in <sup>3</sup> ] / rev							
Flow - lpm [gpm]		Torque - Nm [lb-in], <b>Speed rpm</b>			Intermittent Ratings - 10% of Operation		
		2 [0.5]	13 [117] 37	29 [259] 25	45 [401] 4		47
Max. Max. Inter. Cont.	4 [1]	14 [126] 85	31 [276] 72	48 [427] 51	65 [577] 21	93	
	8 [2]	15 [134] 179	33 [293] 166	51 [453] 144	69 [612] 113	96 [852] 49	
	11 [3]	15 [136] 273	34 [299] 260	52 [462] 237	71 [625] 205	98 [869] 138	
	15 [4]	15 [136] 368	34 [300] 354	52 [464] 330	71 [628] 296	99 [874] 227	
	19 [5]	15 [134] 462	34 [298] 448	52 [462] 423	71 [626] 388	98 [872] 316	
	27 [7]	15 [129] 650	33 [291] 636	51 [454] 609	70 [617] 572	97 [861] 493	
	34 [9]	14 [122] 835	32 [283] 824	50 [445] 796	69 [607] 755	96 [849] 671	
	42 [11]	13 [115] 1021	31 [276] 1012	49 [437] 982	68 [599] 939		
	Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>						
	Rotor Width		Theoretical Torque - Nm [lb-in]				
8.1 [.317]		22 [198]	45 [396]	67 [595]	90 [793]	123 [1090]	
mm [in]		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]					

<b>045</b>		Pressure - bar [psi]			Max. Cont.	Max. Inter.	
		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]	
44 cm <sup>3</sup> [2.7 in <sup>3</sup> ] / rev							
Flow - lpm [gpm]		Torque - Nm [lb-in], <b>Speed rpm</b>			Intermittent Ratings - 10% of Operation		
		2 [0.5]	15 [131] 34	32 [285] 23	50 [438] 4		43
Max. Max. Inter. Cont.	4 [1]	16 [140] 78	34 [303] 66	53 [467] 47	71 [631] 19	86	
	8 [2]	17 [148] 165	36 [322] 153	56 [496] 133	76 [669] 104	105 [930] 45	
	11 [3]	17 [151] 252	37 [328] 240	57 [506] 219	77 [683] 189	107 [950] 127	
	15 [4]	17 [150] 339	37 [329] 326	57 [508] 304	78 [687] 273	108 [955] 209	
	19 [5]	17 [147] 426	37 [326] 413	57 [505] 390	77 [685] 358	108 [953] 291	
	27 [7]	16 [140] 599	36 [318] 586	56 [496] 562	76 [674] 527	106 [942] 455	
	34 [9]	15 [131] 770	35 [308] 760	55 [485] 734	75 [662] 696	105 [928] 619	
	42 [11]	14 [121] 942	34 [298] 933	54 [475] 906	74 [652] 866		
	Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>						
	Rotor Width		Theoretical Torque - Nm [lb-in]				
8.7 [.344]		24 [215]	49 [430]	73 [645]	97 [860]	134 [1182]	
mm [in]		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]					

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

**DISPLACEMENT PERFORMANCE**

<b>060</b>		Pressure - bar [psi]			Max. Cont.	Max. Inter.	
		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]	
60 cm <sup>3</sup> [3.6 in <sup>3</sup> ] / rev							
Flow - lpm [gpm]		Torque - Nm [lb-in], Speed rpm			Intermittent Ratings - 10% of Operation		
		2 [0.5]	22 [191] 26	45 [400] 17	69 [608] 3		32
Max. Max. Inter. Cont.	4 [1]	23 [203] 58	48 [425] 49	73 [648] 35	98 [870] 14	64	
	8 [2]	24 [213] 122	51 [450] 113	78 [687] 98	104 [924] 77	145 [1280] 34	127
	11 [3]	24 [214] 187	52 [458] 178	79 [702] 162	107 [945] 140	148 [1310] 94	191
	15 [4]	24 [211] 251	52 [458] 242	80 [704] 226	107 [950] 203	149 [1320] 155	254
	19 [5]	23 [205] 316	51 [453] 306	79 [700] 289	107 [948] 265	149 [1319] 216	318
	27 [7]	21 [190] 445	49 [437] 435	77 [685] 417	105 [932] 391	147 [1304] 337	445
	34 [9]	19 [170] 572	47 [417] 563	75 [664] 544	103 [912] 517	145 [1282] 459	572
	45 [12]	15 [136] 762	43 [384] 756	71 [632] 735	99 [879] 705	141 [1251] 641	762
	57 [15]	11 [98] 952	39 [349] 949	68 [599] 926	96 [850] 893		952
	<b>Rotor Width</b> 11.8 [463] mm [in]						
	Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>						
Theoretical Torque - Nm [lb-in] 33 [292]    65 [580]    98 [869]    131 [1159]    180 [1594]							
Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							

<b>070</b>		Pressure - bar [psi]			Max. Cont.	Max. Inter.	
		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]	
70 cm <sup>3</sup> [4.3 in <sup>3</sup> ] / rev							
Flow - lpm [gpm]		Torque - Nm [lb-in], Speed rpm			Intermittent Ratings - 10% of Operation		
		2 [0.5]	26 [231] 22	54 [474] 15	81 [718] 2		28
Max. Max. Inter. Cont.	4 [1]	28 [244] 50	57 [504] 42	86 [765] 30	116 [1025] 12	55	
	8 [2]	29 [255] 105	60 [534] 97	92 [812] 84	123 [1090] 66	170 [1507] 29	109
	11 [3]	29 [256] 160	61 [542] 152	94 [829] 139	126 [1115] 120	175 [1544] 81	164
	15 [4]	28 [251] 215	61 [541] 207	94 [831] 193	127 [1121] 174	176 [1557] 133	218
	19 [5]	27 [243] 271	60 [535] 262	93 [827] 248	126 [1119] 227	176 [1556] 185	272
	27 [7]	25 [222] 381	58 [514] 372	91 [807] 357	124 [1100] 335	174 [1539] 289	381
	34 [9]	22 [196] 490	55 [488] 483	88 [781] 466	121 [1073] 442	171 [1512] 393	490
	45 [12]	17 [149] 653	50 [443] 648	83 [736] 630	116 [1030] 604	166 [1470] 549	653
	57 [15]	11 [96] 816	44 [393] 813	78 [690] 793	111 [986] 765		816
	<b>Rotor Width</b> 13.8 [542] mm [in]						
	Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>						
Theoretical Torque - Nm [lb-in] 38 [338]    76 [667]    115 [1015]    153 [1354]    210 [1861]							
Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							

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



DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]			Max. Cont.	Max. Inter.		
<b>090</b>		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]		
88 cm <sup>3</sup> [5.4 in <sup>3</sup> ] / rev		Torque - Nm [lb-in], <b>Speed rpm</b>			Intermittent Ratings - 10% of Operation			
Flow - lpm [gpm]	2 [0.5]	34 [301] 17	69 [609] 12	104 [917] 2			22	Theoretical rpm
	4 [1]	36 [318] 39	73 [647] 33	110 [967] 24	147 [1305] 10		44	
	8 [2]	37 [331] 83	77 [684] 77	117 [1036] 67	157 [1388] 52	217 [1917] 23	87	
	11 [3]	37 [331] 127	78 [694] 121	120 [1058] 110	161 [1421] 95	222 [1966] 64	130	
	15 [4]	37 [323] 171	78 [692] 165	120 [1061] 154	162 [1430] 138	224 [1984] 106	173	
	19 [5]	35 [312] 215	77 [683] 208	119 [1055] 197	161 [1427] 181	224 [1984] 147	216	
	27 [7]	32 [280] 303	74 [654] 296	116 [1028] 284	158 [1402] 266	222 [1962] 230	303	
	34 [9]	27 [242] 389	70 [616] 383	112 [990] 370	154 [1365] 351	218 [1926] 312	389	
	45 [12]	20 [173] 519	62 [549] 515	105 [925] 500	147 [1301] 480	211 [1864] 436	519	
	57 [15]	11 [94] 648	53 [473] 646	96 [853] 630	139 [1232] 608		648	
Max. Max. Inter. Cont.		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>						
Rotor Width		Theoretical Torque - Nm [lb-in]						
17.3 [.682] mm [in]		48 [426]	96 [852]	144 [1278]	193 [1704]	265 [2343]		
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]						

		Pressure - bar [psi]			Max. Cont.	Max. Inter.		
<b>100</b>		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]		
100 cm <sup>3</sup> [6.1 in <sup>3</sup> ] / rev		Torque - Nm [lb-in], <b>Speed rpm</b>			Intermittent Ratings - 10% of Operation			
Flow - lpm [gpm]	2 [0.5]	40 [350] 15	79 [701] 10	119 [1052] 2			19	Theoretical rpm
	4 [1]	42 [369] 35	84 [744] 29	128 [1120] 21	169 [1496] 9		38	
	8 [2]	43 [383] 73	89 [786] 68	134 [1189] 59	180 [1592] 46	248 [2196] 20	76	
	11 [3]	43 [382] 112	90 [798] 106	137 [1214] 97	184 [1630] 83	255 [2254] 56	114	
	15 [4]	42 [372] 150	90 [795] 144	138 [1218] 135	185 [1641] 121	257 [2275] 93	152	
	19 [5]	40 [358] 189	89 [784] 183	137 [1211] 173	185 [1637] 158	257 [2276] 129	190	
	27 [7]	36 [320] 266	85 [749] 260	133 [1178] 249	182 [1607] 233	254 [2251] 201	266	
	34 [9]	31 [273] 341	79 [703] 336	128 [1133] 325	177 [1564] 308	250 [2209] 274	341	
	45 [12]	21 [190] 455	70 [622] 451	119 [1053] 439	168 [1485] 421	241 [2133] 383	455	
	57 [15]	10 [93] 569	60 [528] 566	109 [964] 553	158 [1399] 533		569	
Max. Max. Inter. Cont.		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>						
Rotor Width		Theoretical Torque - Nm [lb-in]						
19.7 [.777] mm [in]		55 [486]	110 [971]	165 [1457]	220 [1943]	302 [2671]		
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]						

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

**DISPLACEMENT PERFORMANCE**

<b>130</b>		Pressure - bar [psi]			Max. Cont.	Max. Inter.	
		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]	
129 cm <sup>3</sup> [7.9 in <sup>3</sup> ] / rev							
Flow - lpm [gpm]		Torque - Nm [lb-in], Speed rpm			Intermittent Ratings - 10% of Operation		
		2 [0.5]	52 [463] 12	104 [917] 8	155 [1370] 1		15
Max. Max. Inter. Cont.	4 [1]	55 [487] 27	110 [972] 23	165 [1458] 16	220 [1943] 7	30	
	8 [2]	57 [505] 57	116 [1026] 53	175 [1548] 46	234 [2069] 36	59	
	11 [3]	57 [502] 87	118 [1041] 82	179 [1580] 75	240 [2120] 65	89	
	15 [4]	55 [488] 116	117 [1037] 112	179 [1586] 105	241 [2134] 94	118	
	19 [5]	53 [413] 146	115 [1021] 142	178 [1576] 134	241 [2130] 123	147	
	27 [7]	47 [413] 206	110 [972] 201	173 [1531] 193	239 [2091] 181	206	
	34 [9]	39 [347] 265	103 [908] 261	166 [1469] 252	229 [2030] 239	325 [2872] 213	265
	45 [12]	26 [228] 353	89 [792] 350	153 [1355] 341	217 [1919] 326	312 [2764] 297	353
	57 [15]	10 [89] 441	74 [657] 440	138 [1224] 429	202 [1792] 414		441
	Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>				
25.4 [1.002]		Theoretical Torque - Nm [lb-in]					
mm [in]		71 [626]	141 [1252]	212 [1877]	283 [2503]	389 [3442]	
Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							

<b>160</b>		Pressure - bar [psi]			Max. Cont.	Max. Inter.	
		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]	
161 cm <sup>3</sup> [9.8 in <sup>3</sup> ] / rev							
Flow - lpm [gpm]		Torque - Nm [lb-in], Speed rpm			Intermittent Ratings - 10% of Operation		
		2 [0.5]	67 [590] 9	131 [1158] 6	195 [1726] 1		12
Max. Max. Inter. Cont.	4 [1]	70 [620] 21	139 [1228] 18	207 [1836] 13	276 [2445] 5	24	
	8 [2]	72 [641] 45	146 [1295] 42	220 [1949] 36	294 [2604] 29	47	
	11 [3]	72 [636] 69	148 [1313] 66	225 [1991] 60	301 [2668] 52	71	
	15 [4]	70 [617] 93	148 [1307] 90	226 [1997] 84	304 [2687] 75	94	
	19 [5]	67 [590] 117	145 [1287] 113	224 [1984] 107	303 [2682] 98	118	
	27 [7]	59 [518] 165	138 [1222] 161	218 [1927] 154	297 [2631] 145	165	
	34 [9]	49 [429] 212	128 [1137] 209	208 [1845] 202	288 [2552] 191	408 [3614] 170	212
	45 [12]	31 [271] 282	111 [982] 280	191 [1693] 272	272 [2404] 261	392 [3471] 237	282
	57 [15]	10 [85] 353	90 [800] 351	171 [1516] 343	252 [2231] 331		353
	Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/>				
31.8 [1.252]		Theoretical Torque - Nm [lb-in]					
mm [in]		88 [783]	177 [1565]	265 [2348]	354 [3131]	486 [4305]	
Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							

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



**DISPLACEMENT PERFORMANCE**

		Pressure - bar [psi]			Max. Cont.	Max. Inter.		
<b>200</b>		35 [500]	69 [1000]	104 [1500]	138 [2000]	190 [2750]		
200 cm <sup>3</sup> [12.2 in <sup>3</sup> ] / rev		Intermittent Ratings - 10% of Operation						
		Torque - Nm [lb-in], <b>Speed rpm</b>						
Flow - lpm [gpm]	2 [0.5]	84 [742] 8	164 [1447] 5	243 [2152] 1				10
	4 [1]	88 [778] 17	173 [1534] 15	259 [2289] 10	344 [3045] 4			19
	8 [2]	91 [804] 37	183 [1617] 34	275 [2430] 29	367 [3244] 23	504 [4464] 10		38
	11 [3]	90 [796] 56	185 [1639] 53	280 [2482] 48	376 [3325] 42	519 [4589] 28		57
	15 [4]	87 [772] 75	184 [1631] 72	281 [2490] 67	378 [3349] 61	524 [4638] 46		76
	19 [5]	83 [736] 94	181 [1605] 91	280 [2474] 86	378 [3343] 79	525 [4646] 64		95
	27 [7]	73 [643] 133	172 [1522] 130	271 [2400] 124	371 [3279] 117	519 [4597] 101		133
	34 [9]	60 [528] 171	159 [1411] 168	259 [2295] 163	359 [3178] 154	509 [4503] 137		171
	45 [12]	36 [322] 228	137 [1210] 226	237 [2098] 220	337 [2985] 210	488 [4317] 192		228
	57 [15]	9 [80] 285	110 [973] 283	211 [1865] 277	312 [2758] 267			285
Max. Max. Inter. Cont.								
<b>Rotor Width</b>		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>						
39.4 [1.552]		Theoretical Torque - Nm [lb-in]						
mm [in]		110 [971]	219 [1941]	329 [2912]	439 [3882]	603 [5338]		
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]						

		Pressure - bar [psi]			Max. Cont.	Max. Inter.		
<b>230</b>		35 [500]	69 [1000]	104 [1500]	121 [1750]	138 [2000]	166 [2400]	
231 cm <sup>3</sup> [14.1 in <sup>3</sup> ] / rev		Intermittent Ratings - 10% of Operation						
		Torque - Nm [lb-in], <b>Speed rpm</b>						
Flow - lpm [gpm]	2 [0.5]	98 [864] 7	190 [1678] 4	282 [2493] 1				9
	4 [1]	102 [905] 15	201 [1779] 13	300 [2652] 9	349 [3089] 7	398 [3526] 4		17
	8 [2]	106 [934] 32	212 [1875] 29	318 [2816] 25	371 [3286] 23	425 [3757] 20	510 [4509] 14	33
	11 [3]	104 [925] 48	215 [1900] 46	325 [2876] 42	380 [3363] 39	435 [3851] 36	523 [4631] 30	50
	15 [4]	101 [895] 65	214 [1890] 63	326 [2885] 58	382 [3382] 56	438 [3880] 52	528 [4675] 46	66
	19 [5]	96 [853] 82	210 [1860] 79	324 [2866] 75	381 [3369] 72	438 [3872] 69	529 [4677] 62	83
	27 [7]	84 [743] 115	199 [1761] 112	314 [2780] 108	372 [3289] 105	429 [3798] 101	521 [4612] 94	115
	34 [9]	69 [607] 148	184 [1631] 146	300 [2655] 141	358 [3167] 137	416 [3679] 134	508 [4498] 126	148
	45 [12]	41 [364] 197	157 [1393] 196	274 [2422] 190	332 [2936] 186	390 [3451] 182	483 [4274] 174	197
	57 [15]	9 [76] 247	125 [1111] 245	242 [2145] 240	301 [2662] 236	359 [3180] 231	453 [4007] 222	247
76 [20]		62 [551] 328	181 [1600] 322	240 [2124] 317			329	
Max. Max. Inter. Cont.								
<b>Rotor Width</b>		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>						
45.5 [1.791]		Theoretical Torque - Nm [lb-in]						
mm [in]		127 [1121]	253 [2242]	380 [3363]	443 [3924]	507 [4484]	608 [5381]	
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]						

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



**DISPLACEMENT PERFORMANCE**

**320**

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

35 [500]	69 [1000]	104 [1500]	134 [1950]
----------	-----------	------------	------------

322 cm<sup>3</sup> [19.7 in<sup>3</sup>] / rev

**Intermittent Ratings**  
10% of Operation

Flow - lpm [gpm]	Torque - Nm [lb-in], Speed rpm				Theoretical rpm
	1	2	3	4	
4 [1]	145 [1280] 11	283 [2501] 9			12
8 [2]	149 [1319] 23	298 [2635] 21	447 [3951] 18	580 [5136] 15	24
11 [3]	147 [1304] 35	302 [2670] 33	456 [4036] 30	595 [5265] 26	36
15 [4]	142 [1260] 47	300 [2654] 45	457 [4049] 42	599 [5303] 38	48
19 [5]	135 [1199] 59	295 [2610] 57	454 [4021] 54	598 [5291] 50	59
27 [7]	117 [1039] 82	279 [2468] 81	440 [3897] 77	586 [5184] 73	83
34 [9]	95 [841] 106	258 [2279] 104	420 [3717] 101	566 [5012] 96	106
45 [12]	55 [485] 142	218 [1931] 140	382 [3377] 136	529 [4678] 131	142
57 [15]	7 [64] 177	171 [1517] 176	336 [2970] 172	483 [4277] 166	177
76 [20]		78 [692] 235	244 [2160] 231		236

Max. Max. Inter. Cont.

**Rotor Width**

63.5 [2.501]
--------------

mm [in]

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

Theoretical Torque - Nm [lb-in]

177 [1564]	354 [3129]	530 [4693]	689 [6102]
------------	------------	------------	------------

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

**400**

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

35 [500]	69 [1000]	104 [1500]	134 [1950]
----------	-----------	------------	------------

404 cm<sup>3</sup> [24.4 in<sup>3</sup>] / rev

**Intermittent Ratings**  
10% of Operation

Flow - lpm [gpm]	Torque - Nm [lb-in], Speed rpm				Theoretical rpm
	1	2	3	4	
2 [0.5]	171 [1513] 3	341 [3018] 3			5
4 [1]	210 [1858] 12	353 [3124] 11	537 [4752] 7	687 [6080] 5	12
8 [2]	211 [1867] 22	373 [3301] 18	548 [4850] 16	693 [6133] 13	25
11 [3]	207 [1832] 34	386 [3416] 32	546 [4832] 28	732 [6478] 24	37
15 [4]	192 [1699] 45	377 [3336] 44	531 [4699] 37	753 [6664] 29	50
19 [5]	188 [1664] 60	370 [3274] 55	545 [4823] 45	758 [6708] 36	62
27 [7]	176 [1558] 71	365 [3230] 69	534 [4726] 58	737 [6522] 49	74
34 [9]	144 [1274] 95	327 [2894] 91	513 [4540] 86	719 [6363] 79	99
45 [12]	112 [991] 119	293 [2593] 117	476 [4212] 112	688 [6088] 109	124
57 [15]	85 [752] 139	266 [2354] 138	433 [3832] 135	643 [5690] 133	141
76 [20]	11 [97] 186	180 [1593] 184	337 [2982] 183		186

Max. Max. Inter. Cont.

**Rotor Width**

63.5 [2.501]
--------------

mm [in]

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

Theoretical Torque - Nm [lb-in]

225 [1991]	450 [3982]	643 [5690]	868 [7681]
------------	------------	------------	------------

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

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

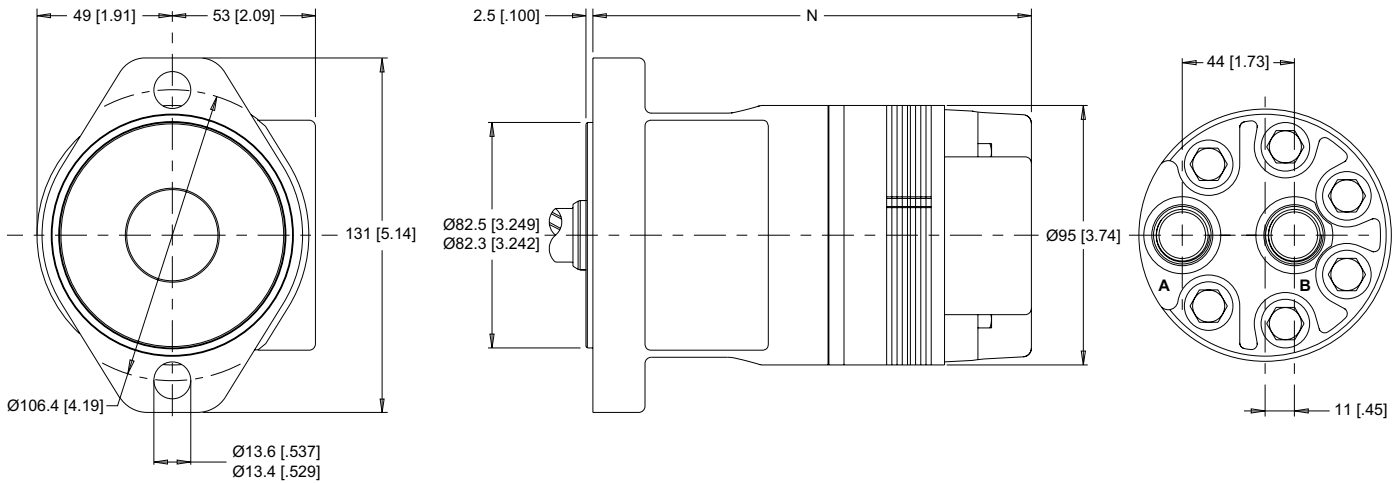


**HOUSINGS**

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

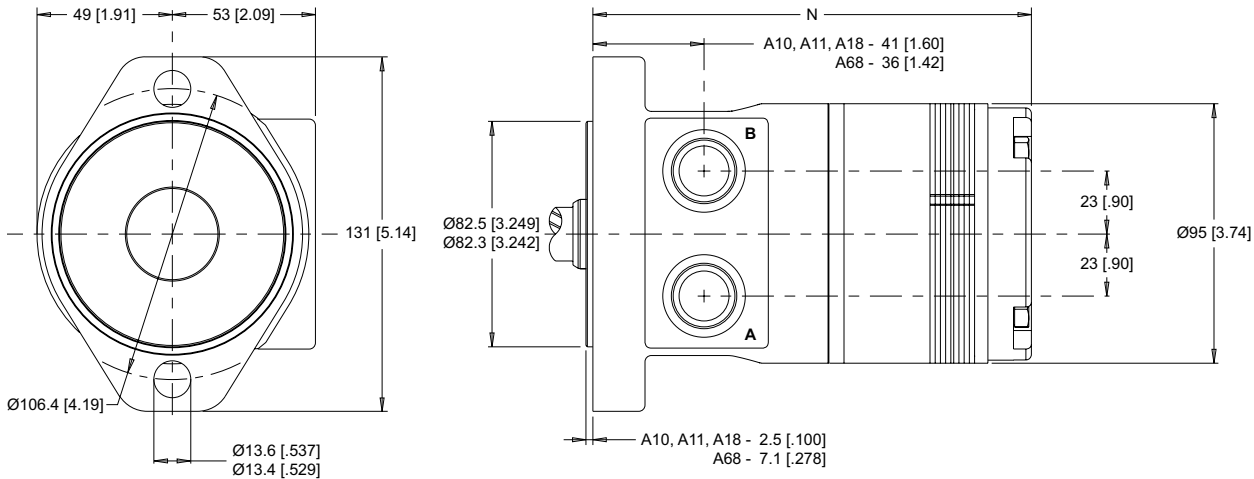
**2-HOLE, SAE A MOUNT, ALIGNED END PORTS**

**A06** 3/4-16 UNF    **A0B** G 3/8



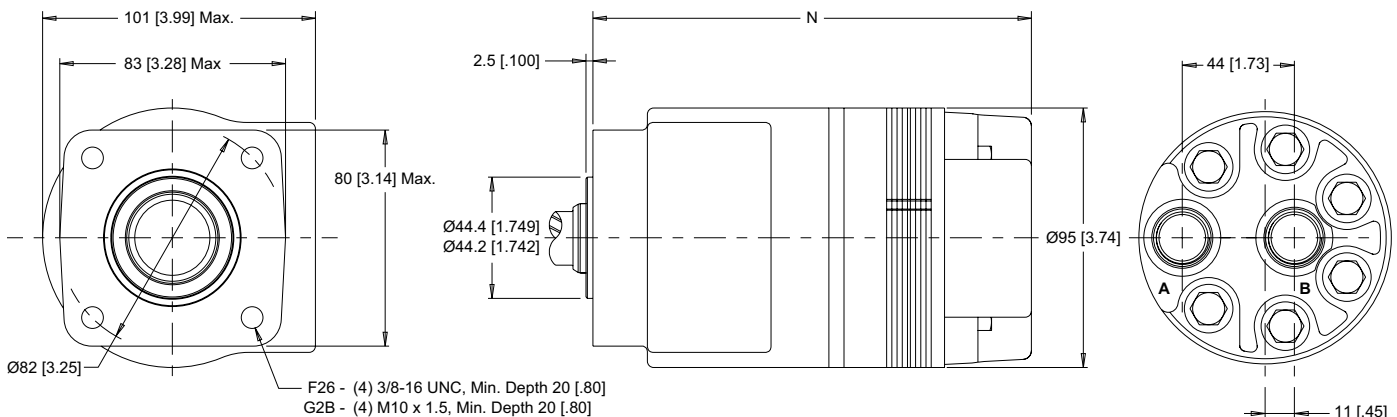
**2-HOLE, SAE A MOUNT, ALIGNED PORTS**

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



**4-HOLE, SQUARE MOUNT, ALIGNED END PORTS**

**F26** 3/4-16 UNF    **G2B** G 3/8



► Dimension N is charted on page 11.

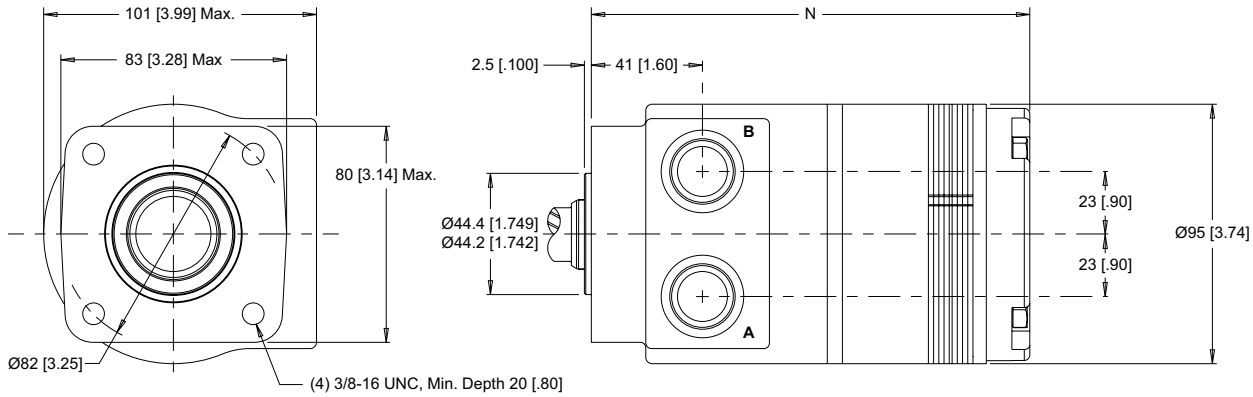
► (TP) - Taller Pilot Height. Refer to detailed drawing for dimensional differences.

**HOUSINGS**

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

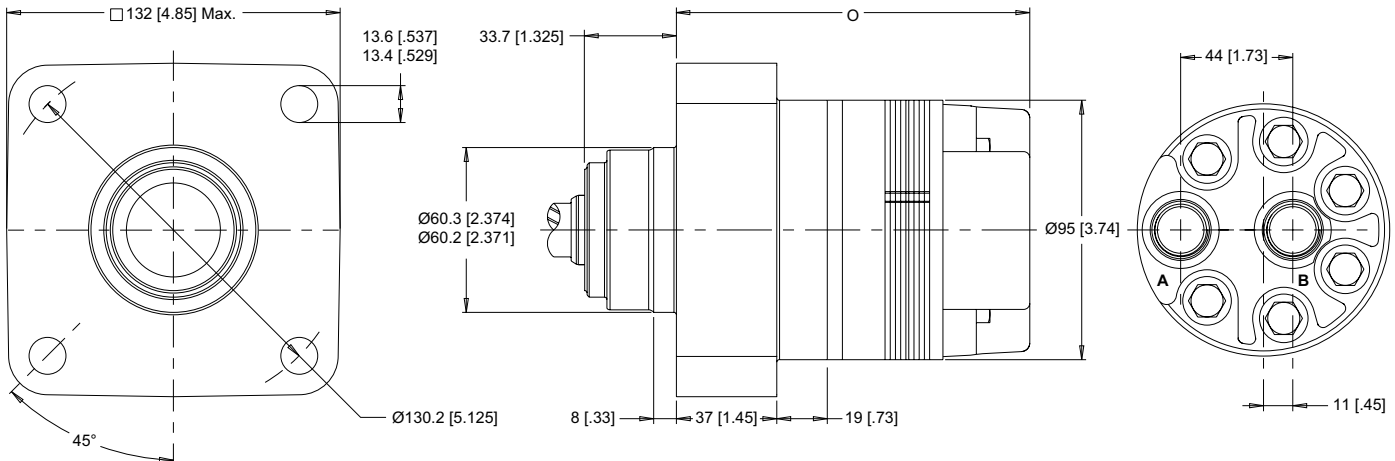
**4-HOLE, SQUARE MOUNT, ALIGNED PORTS**

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



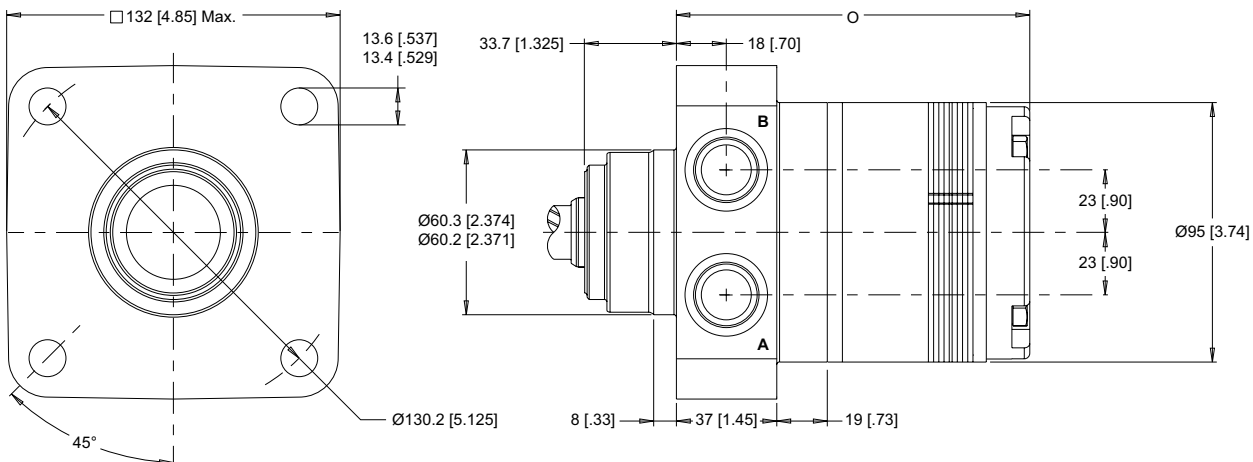
**4-HOLE, WHEEL MOUNT, ALIGNED END PORTS**

**W26** 3/4-16 UNF    **W2B** G 3/8



**4-HOLE, WHEEL MOUNT, ALIGNED PORTS**

**W30** 1/2-14 NPT    **W31** 7/8-14 UNF    **W38** G 1/2



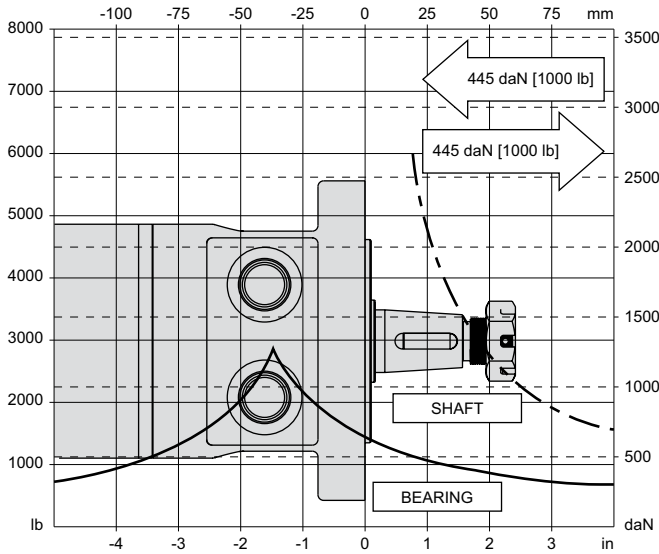
► Dimensions N & O are charted on page 11.

**TECHNICAL INFORMATION**

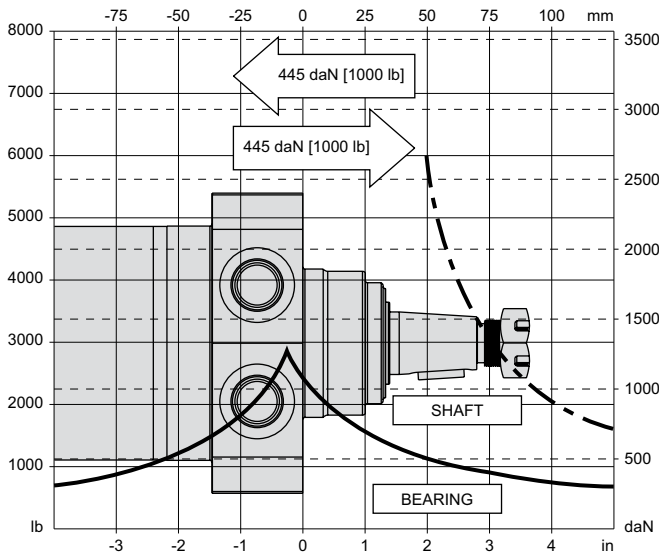
**ALLOWABLE SHAFT LOAD / BEARING CURVE**

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.

**SAE A & SQUARE MOUNTS**



**WHEEL MOUNTS**



**LENGTH & WEIGHT CHART**

Dimension N 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 9-10.

N	Side Ports	End Ports	Weight
#	mm [in]	mm [in]	kg [lb]
040	137 [5.39]	156 [6.16]	7.3 [15.9]
045	138 [5.43]	157 [6.19]	7.3 [16.0]
060	141 [5.55]	160 [6.31]	7.4 [16.3]
070	143 [5.63]	162 [6.38]	7.5 [16.4]
090	147 [5.79]	166 [6.52]	7.6 [16.8]
100	149 [5.87]	168 [6.62]	7.7 [17.0]
130	155 [6.10]	174 [6.84]	8.0 [17.5]
160	161 [6.34]	180 [7.09]	8.2 [18.0]
200	169 [6.65]	188 [7.39]	8.5 [18.7]
230	175 [6.89]	194 [7.63]	8.7 [19.2]
320	193 [7.60]	212 [8.34]	9.5 [20.8]
400	193 [7.60]	212 [8.34]	9.5 [20.8]

► If figuring dimension N and using an A68 housing, subtract 4.5 [.178] from the dimension.

Dimension O 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 page 10.

O	Side Ports	End Ports	Weight
#	mm [in]	mm [in]	kg [lb]
040	106 [4.17]	125 [4.93]	7.6 [16.7]
045	106 [4.17]	125 [4.95]	7.6 [16.8]
060	110 [4.33]	129 [5.07]	7.7 [17.0]
070	112 [4.41]	131 [5.15]	7.8 [17.2]
090	115 [4.53]	134 [5.29]	8.0 [17.5]
100	118 [4.65]	137 [5.39]	8.0 [17.7]
130	123 [4.84]	142 [5.61]	8.3 [18.2]
160	130 [5.12]	149 [5.86]	8.5 [18.8]
200	137 [5.39]	156 [6.16]	8.9 [19.5]
230	144 [5.67]	163 [6.40]	9.1 [20.0]
320	162 [6.38]	181 [7.11]	9.8 [21.6]
400	162 [6.38]	181 [7.11]	9.8 [21.6]

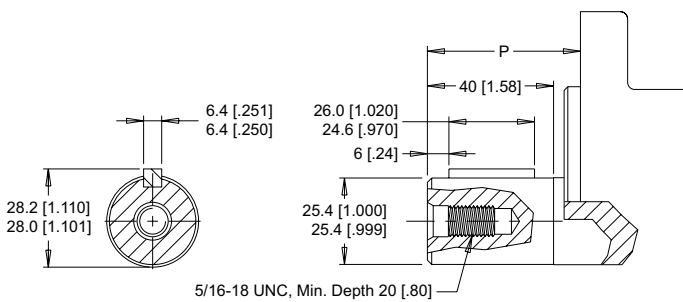
► The overall motor weights listed in both charts above are referencing the end ported options, which are the heavier of the two. 275 & 276 series motor weights can vary  $\pm .5$  kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

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



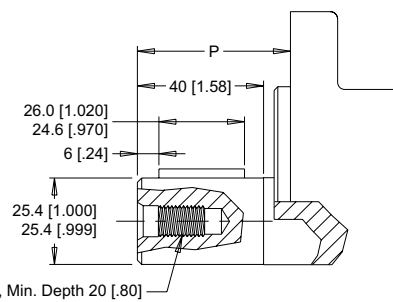
**SHAFTS**

**10** 1" Straight

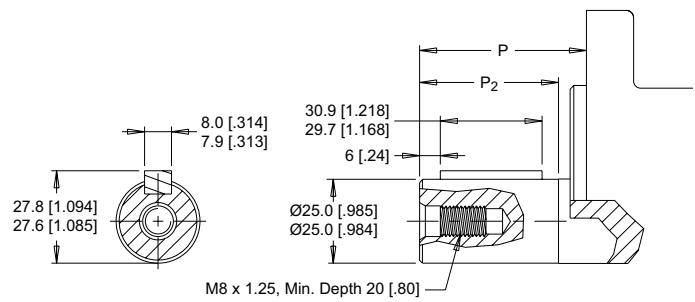


Max. Torque: 655 Nm [5800 lb-in]

**15** 1" Straight Extended

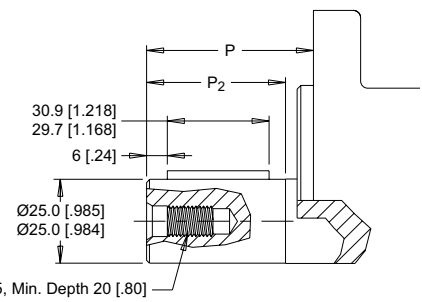


**12** 25mm Straight

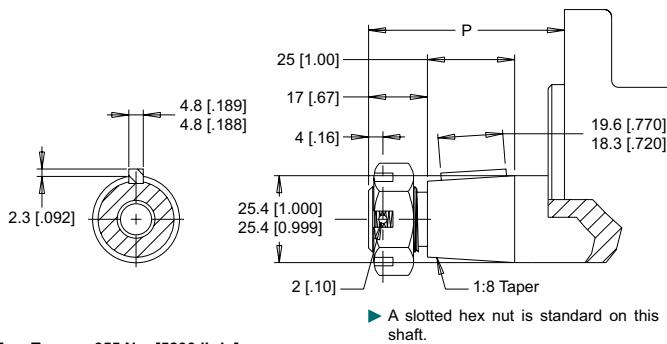


Max. Torque: 678 Nm [6000 lb-in]

**89** 25mm Straight Stepdown

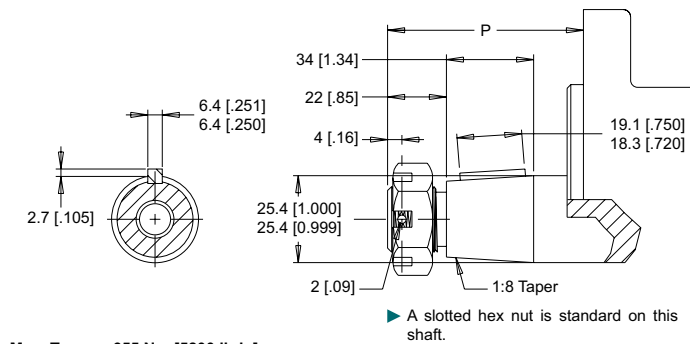


**13** 1" Tapered



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

**14** 1" Tapered (SAE Standard)



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

**MOUNTING / SHAFT LENGTH CHART**

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

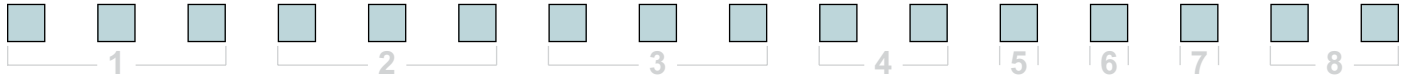
Additional shaft length information, if necessary, is noted as P<sub>2</sub> and does not increase or decrease the listed M dimensions in this chart. The overall shaft lengths are already factored into the overall distance from the mounting surface to the end of the shaft.

P	Square & A Mounts	Wheel Mounts	P <sub>2</sub>
#	mm [in]	mm [in]	mm [in]
10	45 [1.77]	76 [2.99]	N/A
12	49 [1.94]	80 [3.16]	43 [1.70]
13	56 [2.21]	87 [3.43]	N/A
14	61 [2.41]	92 [3.63]	N/A
15	64 [2.50]	95 [3.77]	N/A
89	51 [2.00]	82 [3.22]	45 [1.78]

► Add 4.5 [.178] to shaft dimension P when a A68 housing is used.

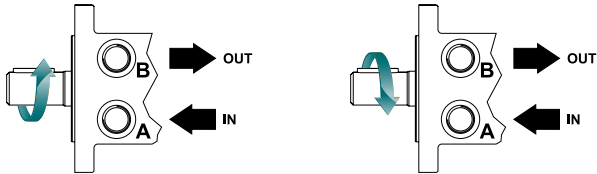


ORDERING INFORMATION



1. CHOOSE SERIES DESIGNATION

- 275** Counterclockwise Rotation
- 276** Clockwise Rotation



► The 275 & 276 series are bi-directional. Reversing the inlet hose will reverse shaft rotation. For applications requiring the motor to rotate in only one direction, shaft seal life may be prolonged by pressurizing the A port of the motor.

2. SELECT A DISPLACEMENT OPTION

<b>040</b>	41 cm <sup>3</sup> /rev [2.5 in <sup>3</sup> /rev]	<b>130</b>	129 cm <sup>3</sup> /rev [7.9 in <sup>3</sup> /rev]
<b>045</b>	44 cm <sup>3</sup> /rev [2.7 in <sup>3</sup> /rev]	<b>160</b>	161 cm <sup>3</sup> /rev [9.8 in <sup>3</sup> /rev]
<b>060</b>	60 cm <sup>3</sup> /rev [3.6 in <sup>3</sup> /rev]	<b>200</b>	200 cm <sup>3</sup> /rev [12.2 in <sup>3</sup> /rev]
<b>070</b>	70 cm <sup>3</sup> /rev [4.3 in <sup>3</sup> /rev]	<b>230</b>	231 cm <sup>3</sup> /rev [14.1 in <sup>3</sup> /rev]
<b>090</b>	88 cm <sup>3</sup> /rev [5.4 in <sup>3</sup> /rev]	<b>320</b>	322 cm <sup>3</sup> /rev [19.7 in <sup>3</sup> /rev]
<b>100</b>	100 cm <sup>3</sup> /rev [6.1 in <sup>3</sup> /rev]	<b>400</b>	404 cm <sup>3</sup> /rev [24.4 in <sup>3</sup> /rev]

3. SELECT A MOUNT & PORT OPTION

<b>A06</b>	2-Hole, SAE A Mount, Aligned End Ports, 3/4-16 UNF
<b>A10</b>	2-Hole, SAE A Mount, Aligned Ports, 1/2-14 NPT
<b>A11</b>	2-Hole, SAE A Mount, Aligned Ports, 7/8-14 UNF
<b>A18</b>	2-Hole, SAE A Mount, Aligned Ports, G 1/2
<b>A68</b>	2-Hole, SAE A Mount, Aligned Ports, G 1/2 (TP)
<b>F26</b>	4-Hole, Square Mount, Aligned End Ports, 3/4-16 UNF
<b>F30</b>	4-Hole, Square Mount, Aligned Ports, 1/2-14 NPT
<b>F31</b>	4-Hole, Square Mount, Aligned Ports, 7/8-14 UNF
<b>F38</b>	4-Hole, Square Mount, Aligned Ports, G 1/2

► (TP) - Tall pilot. The speed sensor option is not available on tall pilot or wheel mount housings.

3. SELECT A MOUNT & PORT OPTION

<b>W26</b>	4-Hole, Wheel Mount, Aligned End Ports, 3/4-16 UNF
<b>W30</b>	2-Hole, Wheel Mount, Aligned Ports, 1/2-14 NPT
<b>W31</b>	2-Hole, Wheel Mount, Aligned Ports, 7/8-14 UNF
<b>W38</b>	2-Hole, Wheel Mount, Aligned Ports, G 1/2

4. SELECT A SHAFT OPTION

<b>10</b>	1" Straight	<b>13</b>	1" Tapered (SAE Standard)
<b>12</b>	25mm Straight	<b>15</b>	1" Straight Extended
<b>13</b>	1" Tapered	<b>89</b>	25mm Straight Stepdown

► The 15 extended shaft is designed for use with one of the speed sensor options listed in STEP 7.

5. SELECT A PAINT OPTION

<b>A</b>	Black
<b>B</b>	Black, Unpainted Mounting Surface

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

<b>A</b>	None
----------	------

7. SELECT AN ADD-ON OPTION

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

8. SELECT A MISCELLANEOUS OPTION

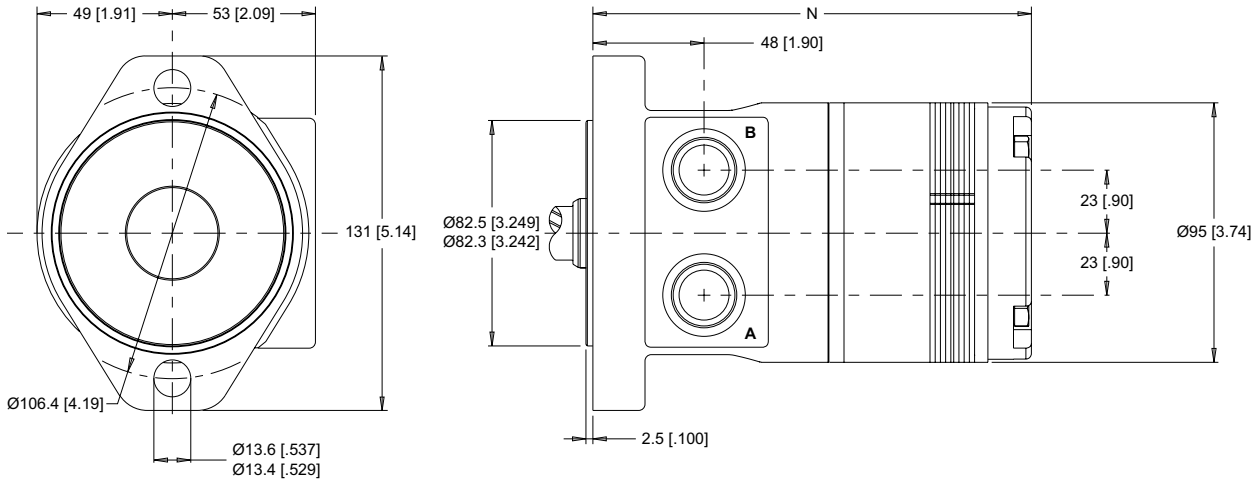
<b>AA</b>	None
<b>AC</b>	Freeturning Rotor

**HOUSINGS**

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

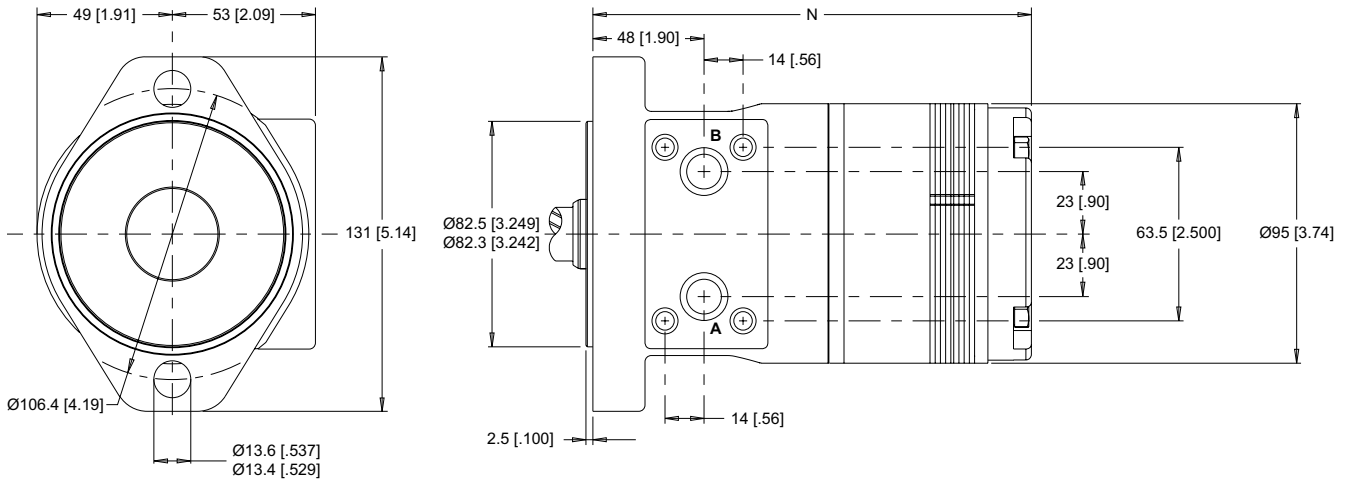
**2-HOLE, SAE A MOUNT, ALIGNED END PORTS**

**A10** 1/2-14 NPT    **A11** 7/8-14 UNF



**2-HOLE, SAE A MOUNT, ALIGNED MANIFOLD PORTS**

**A17** 1/2" Drilled



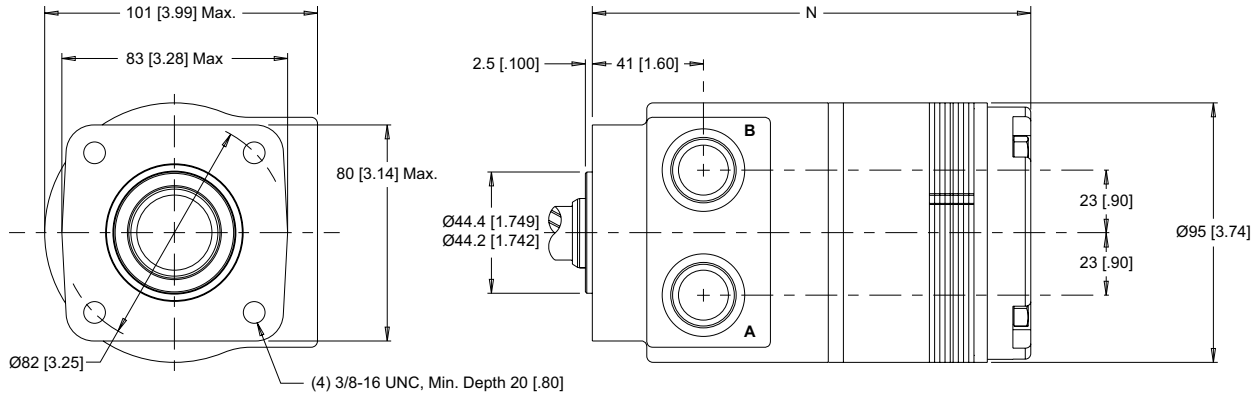
► Dimension N and allowable sideload information is found on page 11.

**HOUSINGS**

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

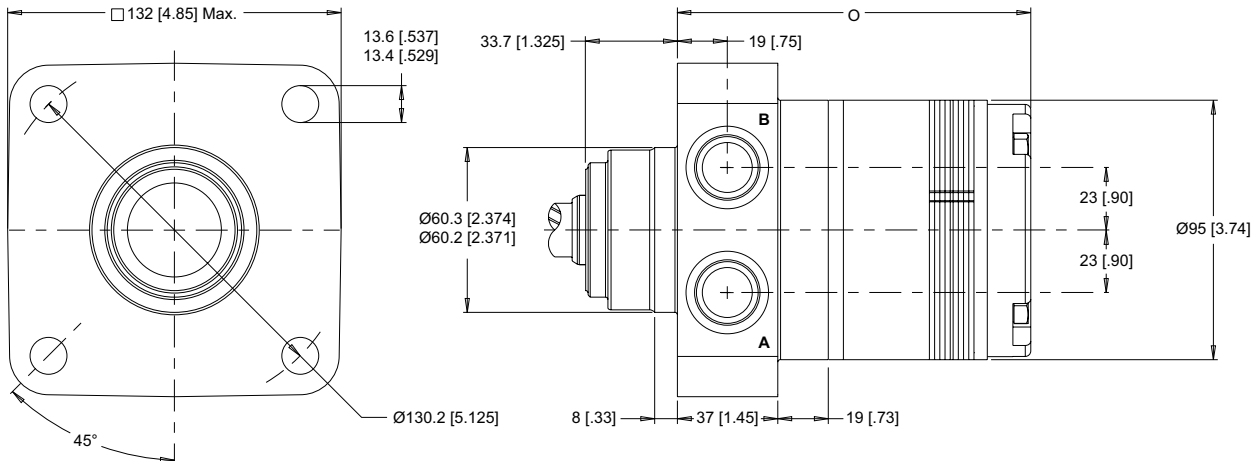
**4-HOLE, SQUARE MOUNT, ALIGNED PORTS**

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



**4-HOLE, WHEEL MOUNT, ALIGNED PORTS**

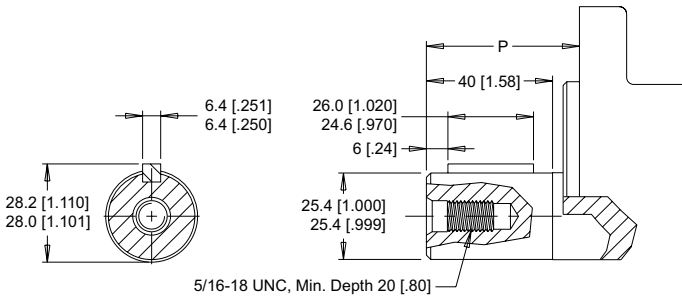
**W30** 1/2-14 NPT



► Dimensions N & O and allowable sildeload information is found on page 11.

**SHAFTS**

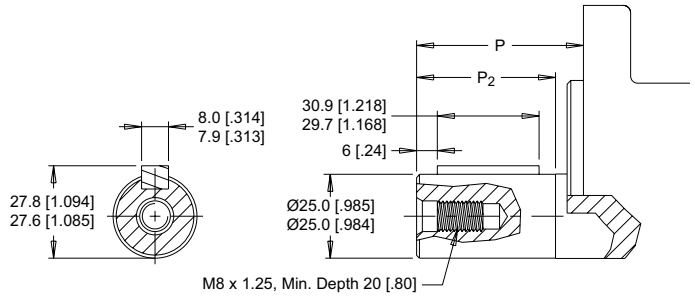
**10** 1" Straight



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

**15** 1" Straight Extended

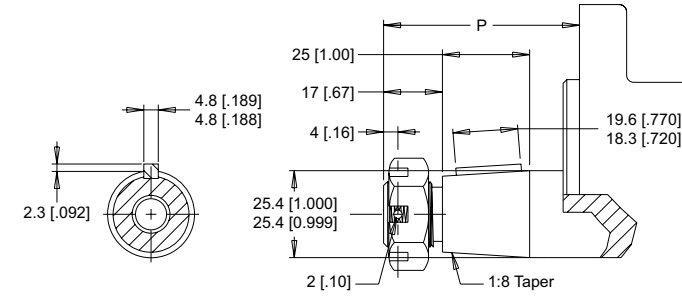
**12** 25mm Straight



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

**89** 25mm Straight Stepdown

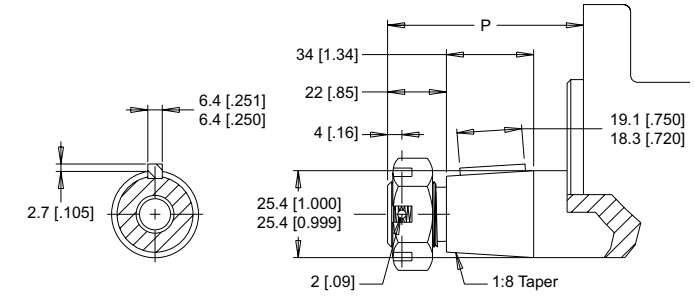
**13** 1" Tapered



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

► A slotted hex nut is standard on this shaft.

**14** 1" Tapered (SAE Standard)



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

► A slotted hex nut is standard on this shaft.

**MOUNTING / SHAFT LENGTH CHART**

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

Additional shaft length information, if necessary, is noted as P<sub>2</sub> and does not increase or decrease the listed M 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.

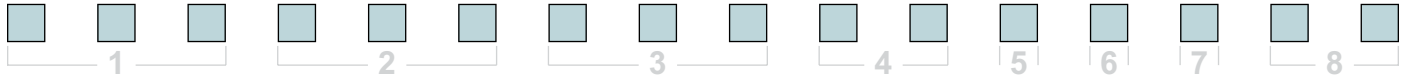
P	Square & A Mounts	Wheel Mounts	P <sub>2</sub>
#	mm [in]	mm [in]	mm [in]
10	45 [1.77]	76 [2.99]	N/A
12	49 [1.94]	80 [3.16]	43 [1.70]
13	56 [2.21]	87 [3.43]	N/A
14	61 [2.41]	92 [3.63]	N/A
15	64 [2.50]	95 [3.77]	N/A
89	51 [2.00]	82 [3.22]	45 [1.78]

► Add 4.5 [.178] to shaft dimension P when a A68 housing is used.



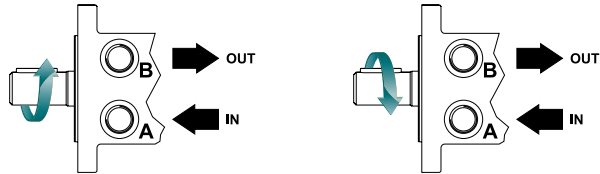


**ORDERING INFORMATION**



**1. CHOOSE SERIES DESIGNATION**

- 277** Counterclockwise Rotation
- 278** Clockwise Rotation



► The 277 & 278 series are bi-directional. Reversing the inlet hose will reverse shaft rotation. For applications requiring the motor to rotate in only one direction, shaft seal life may be prolonged by pressurizing the A port of the motor.

**2. SELECT A DISPLACEMENT OPTION**

<b>040</b>	41 cm <sup>3</sup> /rev [2.5 in <sup>3</sup> /rev]	<b>130</b>	129 cm <sup>3</sup> /rev [7.9 in <sup>3</sup> /rev]
<b>045</b>	44 cm <sup>3</sup> /rev [2.7 in <sup>3</sup> /rev]	<b>160</b>	161 cm <sup>3</sup> /rev [9.8 in <sup>3</sup> /rev]
<b>060</b>	60 cm <sup>3</sup> /rev [3.6 in <sup>3</sup> /rev]	<b>200</b>	200 cm <sup>3</sup> /rev [12.2 in <sup>3</sup> /rev]
<b>070</b>	70 cm <sup>3</sup> /rev [4.3 in <sup>3</sup> /rev]	<b>230</b>	231 cm <sup>3</sup> /rev [14.1 in <sup>3</sup> /rev]
<b>090</b>	88 cm <sup>3</sup> /rev [5.4 in <sup>3</sup> /rev]	<b>320</b>	322 cm <sup>3</sup> /rev [19.7 in <sup>3</sup> /rev]
<b>100</b>	100 cm <sup>3</sup> /rev [6.1 in <sup>3</sup> /rev]	<b>400</b>	404 cm <sup>3</sup> /rev [24.4 in <sup>3</sup> /rev]

**3. SELECT A MOUNT & PORT OPTION**

<b>A10</b>	2-Hole, SAE A Mount, Aligned Ports, 1/2-14 NPT
<b>A11</b>	2-Hole, SAE A Mount, Aligned Ports, 7/8-14 UNF
<b>A17</b>	2-Hole, SAE A Mount, Aligned Manifold Ports, 1/2" Drilled
<b>F30</b>	4-Hole, Square Mount, Aligned Ports, 1/2-14 NPT
<b>F31</b>	4-Hole, Square Mount, Aligned Ports, 7/8-14 UNF
<b>W31</b>	4-Hole, Wheel Mount, Aligned Ports, 7/8-14 UNF

► The speed sensor option is not available on wheel mount housings.

**4. SELECT A SHAFT OPTION**

<b>10</b>	1" Straight	<b>13</b>	1" Tapered (SAE Standard)
<b>12</b>	25mm Straight	<b>15</b>	1" Straight Extended
<b>13</b>	1" Tapered	<b>89</b>	25mm Straight Stepdown

► The 15 extended shaft is designed for use with one of the speed sensor options listed in STEP 7.

**5. SELECT A PAINT OPTION**

<b>A</b>	Black
<b>B</b>	Black, Unpainted Mounting Surface

**6. SELECT A VALVE CAVITY / CARTRIDGE OPTION**

<b>A</b>	None
----------	------

**7. SELECT AN ADD-ON OPTION**

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

**8. SELECT A MISCELLANEOUS OPTION**

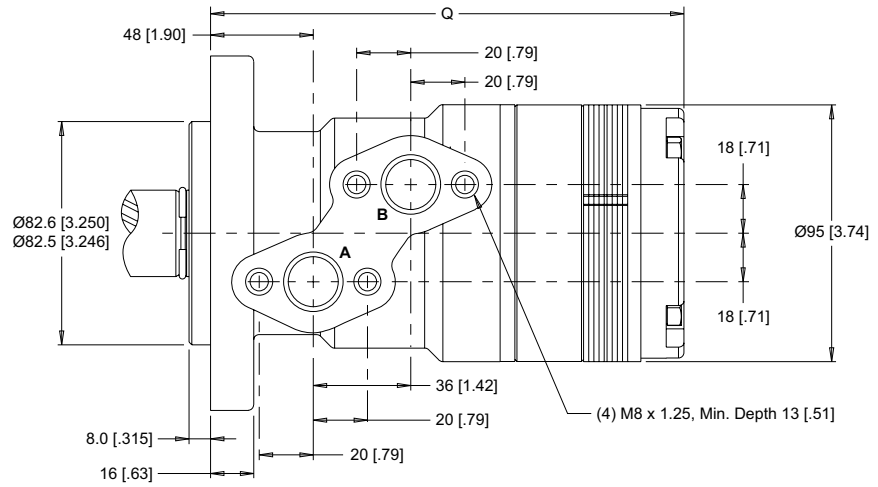
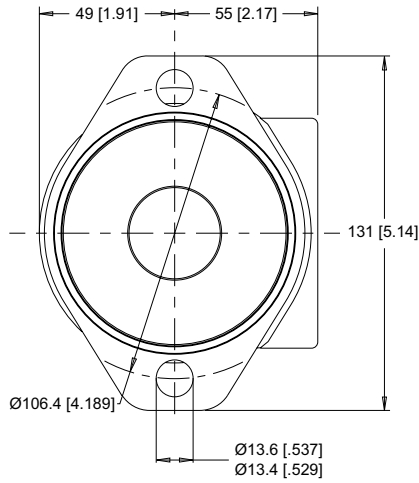
<b>AA</b>	None
<b>AC</b>	Freeturning Rotor

**HOUSINGS**

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

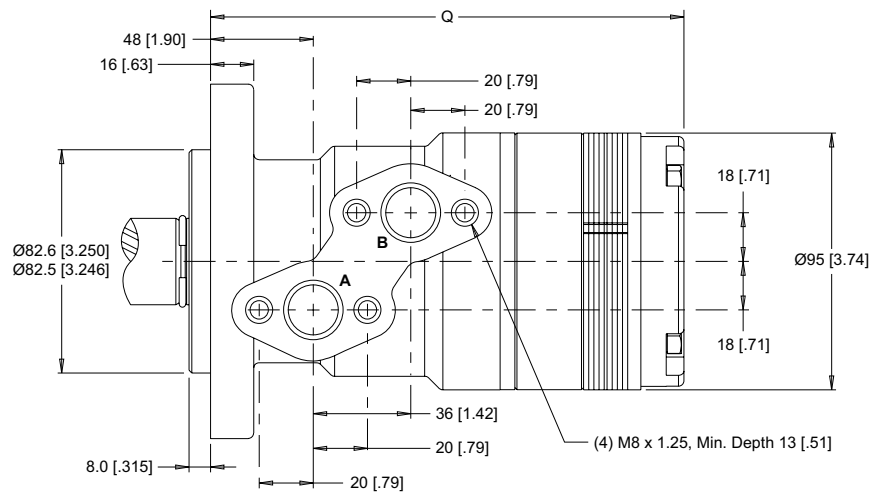
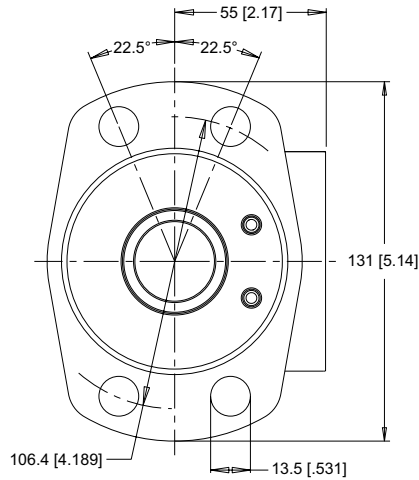
**2-HOLE, SAE A MOUNT, OFFSET MANIFOLD PORTS**

**A63** G 1/2



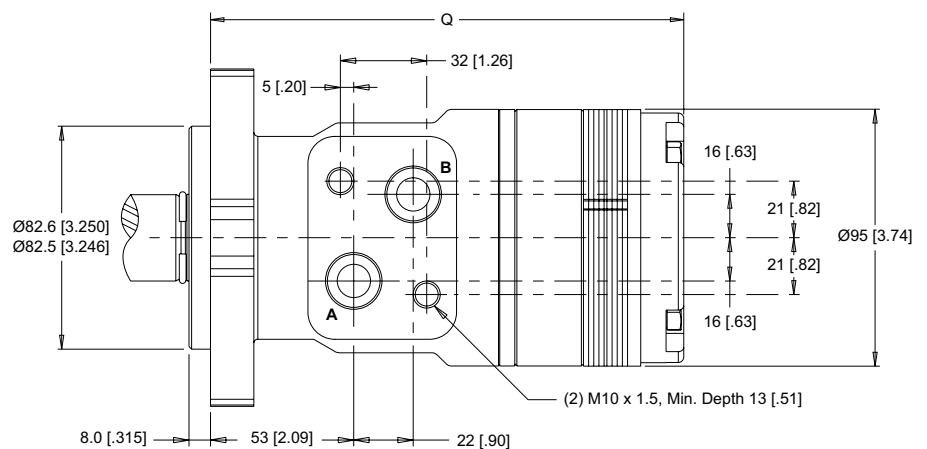
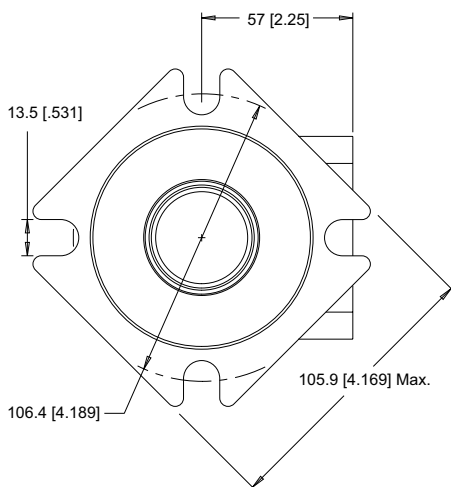
**4-HOLE, MAGNETO MOUNT, OFFSET MANIFOLD PORTS**

**AC3** G 1/2



**4-HOLE, SAE A MOUNT, OFFSET MANIFOLD PORTS**

**AG3** G 1/2



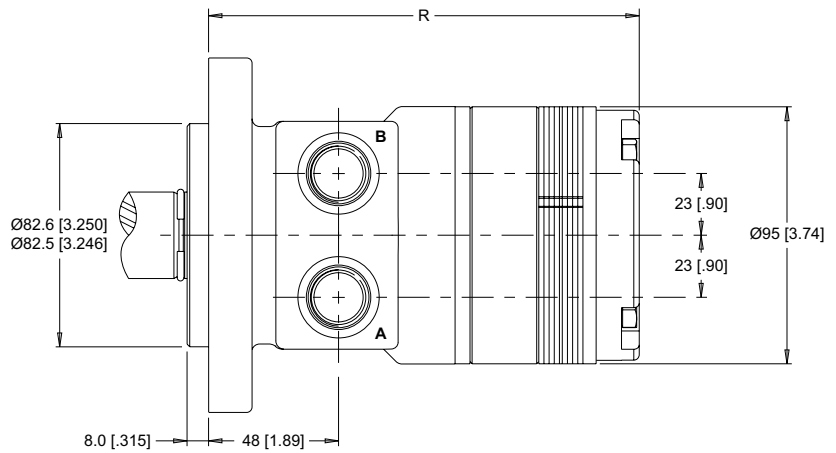
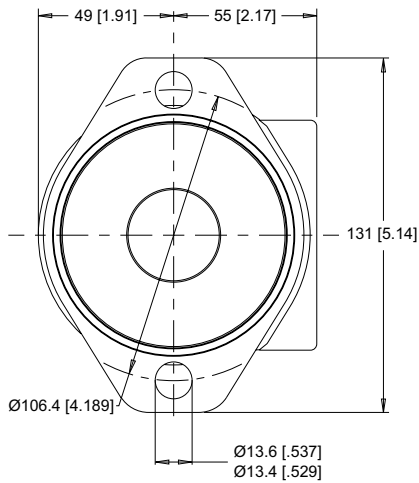
► Dimension Q is found on page 20.

**HOUSINGS**

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

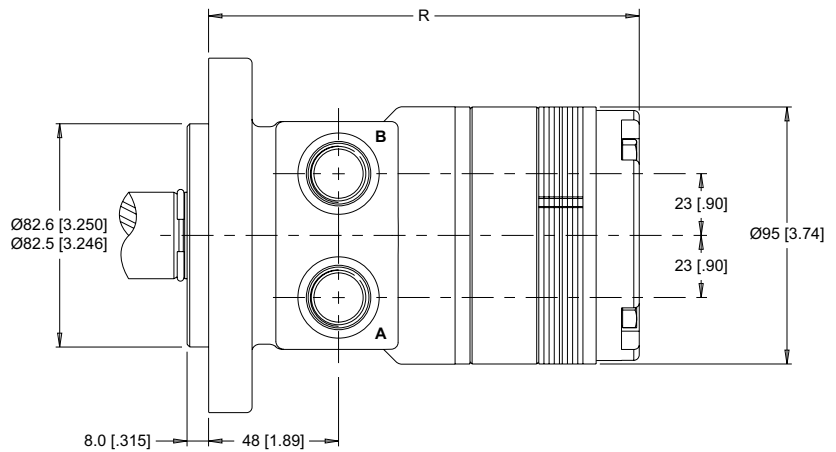
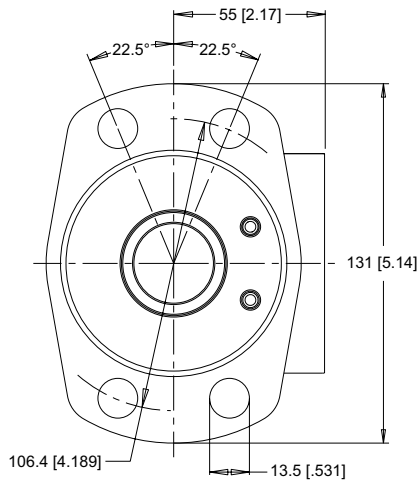
**2-HOLE, SAE A MOUNT, ALIGNED PORTS**

**A68** G 1/2



**4-HOLE, MAGNETO MOUNT, ALIGNED PORTS**

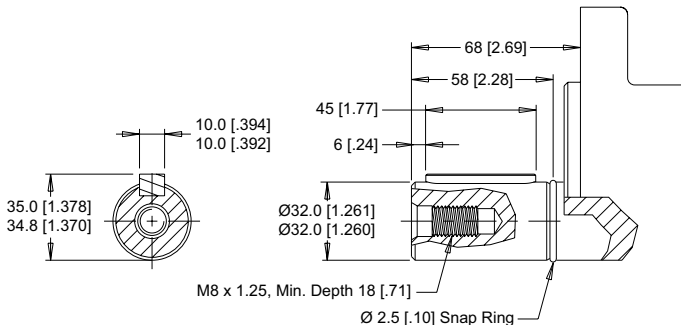
**AC8** G 1/2



► Dimension 20 is found on page 100.

**SHAFTS**

**21** 32mm Straight



Max. Torque: 882 Nm [7804 lb-in]

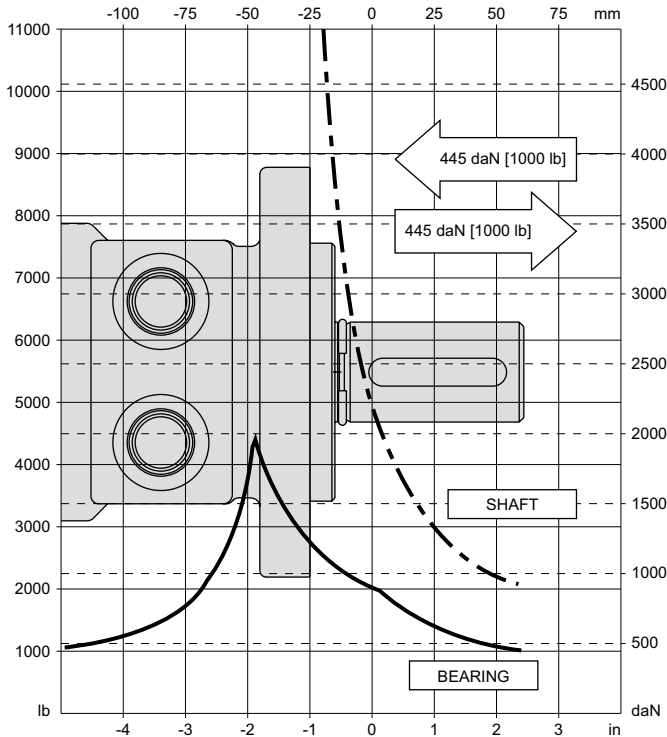


**TECHNICAL INFORMATION**

**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 11.

**ALL 280 & 281 SERIES MOUNTS**



**LENGTH & WEIGHT CHART**

Dimension Q 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 page 18.

Q #	Length mm [in]	A63 & AC3 Weight kg [lb]	AG3 Weight kg [lb]
040	157 [6.18]	6.1 [13.4]	6.4 [14.1]
045	158 [6.22]	6.2 [13.6]	6.4 [14.1]
060	161 [6.34]	6.3 [13.9]	6.6 [14.5]
070	163 [6.42]	6.4 [14.1]	6.7 [14.7]
090	166 [6.54]	6.6 [14.5]	6.9 [15.2]
100	169 [6.65]	6.7 [14.7]	7.0 [15.4]
130	175 [6.89]	7.0 [15.4]	7.2 [15.8]
160	181 [7.13]	7.3 [16.1]	7.5 [16.5]
200	189 [7.44]	7.6 [16.7]	7.9 [17.4]
230	195 [7.68]	7.9 [17.4]	8.2 [18.0]
320	213 [8.39]	8.6 [18.9]	9.0 [19.8]
400	213 [8.39]	8.6 [18.9]	9.0 [19.8]

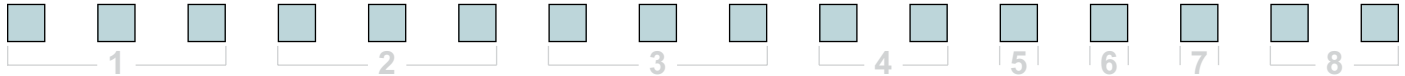
Dimension R is the overall motor length from the rear of the motor to the mounting flange surface and is referenced on detailed housing drawings listed on page 19.

R #	Length mm [in]	Weight kg [lb]
040	141 [5.55]	5.6 [12.3]
045	142 [5.59]	5.6 [12.3]
060	145 [5.71]	5.8 [12.8]
070	147 [5.79]	5.9 [13.0]
090	150 [5.91]	6.1 [13.4]
100	153 [6.02]	6.2 [13.6]
130	159 [6.26]	6.5 [14.3]
160	165 [6.50]	6.8 [15.0]
200	173 [6.81]	7.1 [15.6]
230	179 [7.05]	7.4 [16.3]
320	197 [7.76]	8.2 [18.0]
400	197 [7.76]	8.2 [18.0]

► 280 & 281 series motor weights can vary ± .5 kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

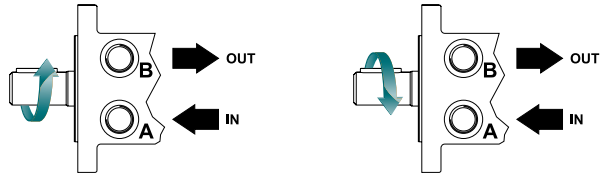


**ORDERING INFORMATION**



**1. CHOOSE SERIES DESIGNATION**

- 280** Counterclockwise Rotation
- 281** Clockwise Rotation



► The 280 & 281 series are bi-directional. Reversing the inlet hose will reverse shaft rotation. For applications requiring the motor to rotate in only one direction, shaft seal life may be prolonged by pressurizing the A port of the motor.

**2. SELECT A DISPLACEMENT OPTION**

<b>040</b>	41 cm <sup>3</sup> /rev [2.5 in <sup>3</sup> /rev]	<b>130</b>	129 cm <sup>3</sup> /rev [7.9 in <sup>3</sup> /rev]
<b>045</b>	44 cm <sup>3</sup> /rev [2.7 in <sup>3</sup> /rev]	<b>160</b>	161 cm <sup>3</sup> /rev [9.8 in <sup>3</sup> /rev]
<b>060</b>	60 cm <sup>3</sup> /rev [3.6 in <sup>3</sup> /rev]	<b>200</b>	200 cm <sup>3</sup> /rev [12.2 in <sup>3</sup> /rev]
<b>070</b>	70 cm <sup>3</sup> /rev [4.3 in <sup>3</sup> /rev]	<b>230</b>	231 cm <sup>3</sup> /rev [14.1 in <sup>3</sup> /rev]
<b>090</b>	88 cm <sup>3</sup> /rev [5.4 in <sup>3</sup> /rev]	<b>320</b>	322 cm <sup>3</sup> /rev [19.7 in <sup>3</sup> /rev]
<b>100</b>	100 cm <sup>3</sup> /rev [6.1 in <sup>3</sup> /rev]	<b>400</b>	404 cm <sup>3</sup> /rev [24.4 in <sup>3</sup> /rev]

**3. SELECT A MOUNT & PORT OPTION**

- A63** 2-Hole, SAE A Mount, Offset Manifold Ports, G 1/2
- A68** 2-Hole, SAE A Mount, Aligned Ports, G 1/2
- AC3** 4-Hole, Magneto Mount, Offset Manifold Ports, G 1/2
- AC8** 4-Hole, Magneto Mount, Aligned Ports, G 1/2
- AG3** 4-Hole, SAE A Mount, Offset Manifold Ports, G 1/2

**4. SELECT A SHAFT OPTION**

- 21** 32mm Straight

**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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