



whitedriveproducts



SERIES

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MEDIUM DUTY
Hydraulic Motor & Brake

RE



OVERVIEW

RE Series motors offer the perfect compromise between price and performance by producing work horse power at a reasonable cost. Although these motors perform well in a wide range of applications, they are especially suited for low flow, high pressure applications. During startup, pressure causes the balance plate to flex toward the rotor, vastly improving volumetric efficiency. As the motor reaches operating pressure, the balance plate relaxes, allowing the rotor to turn freely which translates into higher mechanical efficiencies. Transmitting this power to the output shaft is the most durable drive link in its class. Four bearing options, combined with standard mounting flanges and output shafts, allow the motor to be configured to suit nearly any application.

FEATURES / BENEFITS

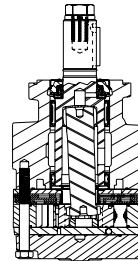
- High Pressure Shaft Seal offers superior seal life and performance and eliminates need for case drain.
- Three Bearing Options allow load carrying capability of motor to be matched to application.
- Heavy-Duty Drive Link is the most durable in its class and receives full flow lubrication to provide long life.
- Valve-In-Rotor Design provides cost effective, efficient distribution of oil and reduces overall motor length.
- Pressure-Compensated Balance Plate improves volumetric efficiency at low flows and high pressure.

TYPICAL APPLICATIONS

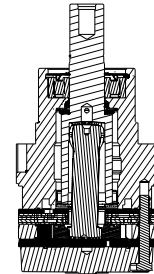
Medium-duty wheel drives, augers, mixers, winch drives, swing drives, grapple heads, feed rollers, broom drives and more

SERIES DESCRIPTIONS

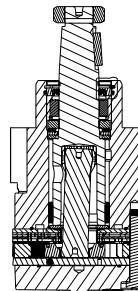
500/501 - Hydraulic Motor
Standard



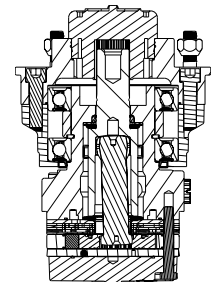
520/521 - Hydraulic Motor
With Medium Duty Bearing



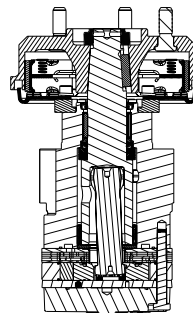
530/531 - Hydraulic Motor
With Heavy Duty Bearing



540/541 - Hydraulic Motor
With Wheel Hub



510/511 - Hydraulic Motor
With Integral Drum Brake



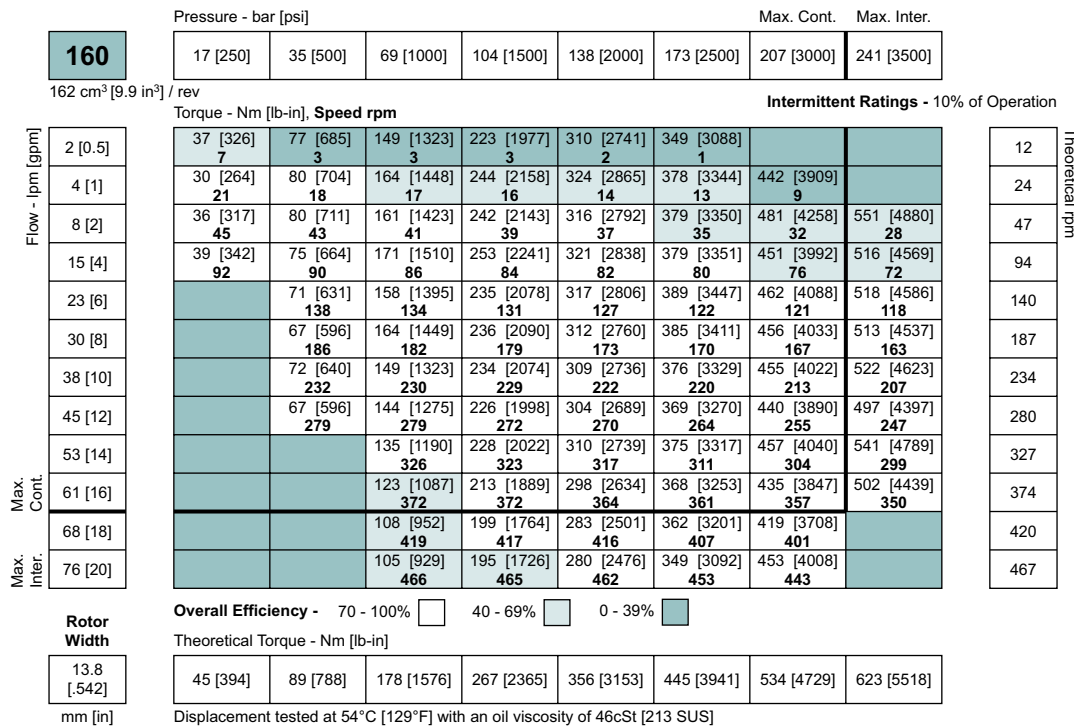
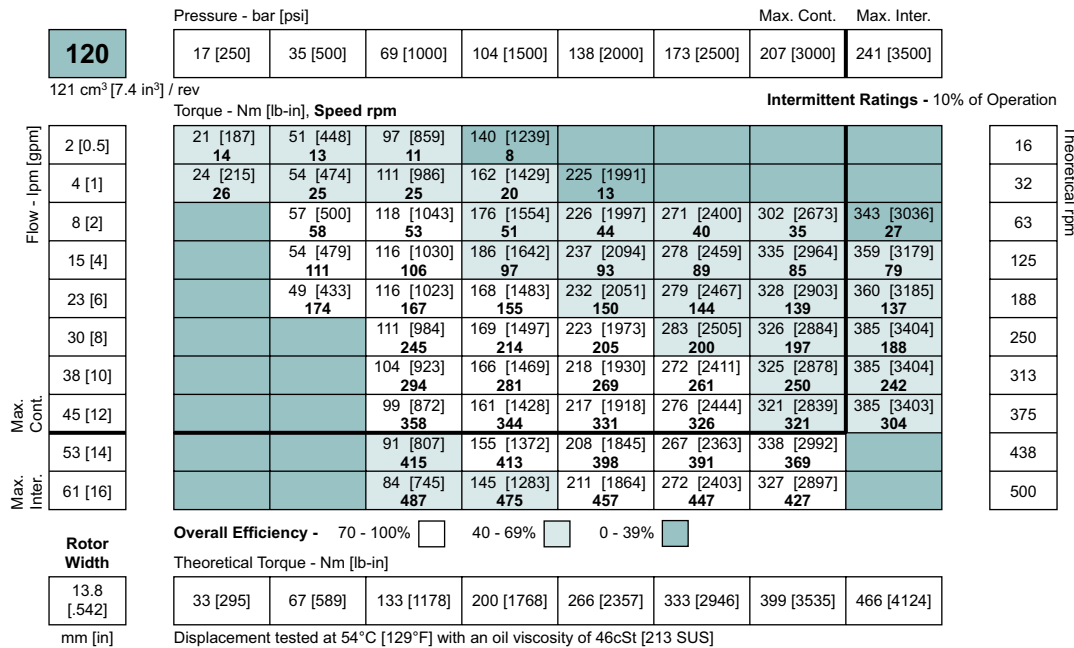
SPECIFICATIONS

CODE	Displacement cm ³ [in ³ /rev]	Max. Speed rpm		Max. Flow lpm [gpm]		Max. Torque Nm [lb-in]		Max. Pressure bar [psi]		
		cont.	inter.	cont.	inter.	cont.	inter.	cont.	inter.	peak
120	121 [7.4]	360	490	45 [12]	61 [16]	327 [2900]	383 [3400]	207 [3000]	241 [3500]	276 [4000]
160	162 [9.9]	370	470	61 [16]	76 [20]	475 [4200]	542 [4800]	207 [3000]	241 [3500]	276 [4000]
200	204 [12.4]	300	370	68 [18]	83 [22]	542 [4800]	633 [5600]	207 [3000]	241 [3500]	276 [4000]
230	232 [14.2]	260	320	68 [18]	83 [22]	644 [5700]	712 [6300]	207 [3000]	241 [3500]	276 [4000]
260	261 [15.9]	260	350	76 [20]	91 [24]	712 [6300]	791 [7000]	207 [3000]	241 [3500]	276 [4000]
300	300 [18.3]	250	320	83 [22]	95 [25]	825 [7300]	938 [8300]	207 [3000]	241 [3500]	276 [4000]
350	348 [21.2]	220	270	83 [22]	95 [25]	921 [8150]	1045 [9250]	207 [3000]	241 [3500]	276 [4000]
375	375 [22.8]	200	250	76 [20]	91 [24]	1006 [8900]	1158 [10250]	207 [3000]	241 [3500]	276 [4000]
470	465 [28.3]	160	200	76 [20]	91 [24]	1096 [9700]	1184 [10475]	172 [2500]	189 [2750]	207 [3000]
540	536 [32.7]	140	170	76 [20]	91 [24]	983 [8700]	1243 [11000]	138 [2000]	172 [2500]	207 [3000]
750	748 [45.6]	100	130	76 [20]	91 [24]	1062 [9400]	1237 [10950]	103 [1500]	121 [1750]	138 [2000]

► 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



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



DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]							Max. Cont.	Max. Inter.
200		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]	
204 cm ³ [12.4 in ³] / rev		Intermittent Ratings - 10% of Operation								
		Torque - Nm [lb-in], Speed rpm								
Flow - lpm [gpm]	2 [0.5]	40 [358] 7	91 [808] 4	133 [1181] 4	294 [2602] 4	375 [3323] 3				10
	4 [1]	43 [376] 16	85 [753] 13	200 [1769] 12	276 [2442] 11	373 [3304] 10	442 [3915] 9	526 [4656] 6		19
	8 [2]	44 [385] 34	93 [851] 31	195 [1727] 29	299 [2646] 27	374 [3311] 27	461 [4079] 25	542 [4792] 23	616 [5451] 20	38
	15 [4]	39 [347] 72	94 [834] 69	198 [1752] 67	305 [2701] 63	401 [3549] 60	477 [4222] 58	544 [4818] 55	629 [5568] 51	75
	23 [6]		82 [724] 111	191 [1694] 109	284 [2518] 107	389 [3446] 103	463 [4098] 100	553 [4894] 99	636 [5628] 90	112
	30 [8]		80 [704] 148	188 [1661] 145	285 [2518] 141	402 [3556] 136	458 [4053] 134	543 [4802] 130	628 [5554] 124	150
	38 [10]		66 [581] 185	180 [1592] 181	276 [2445] 176	364 [3224] 173	458 [4051] 170	535 [4737] 164	615 [5441] 160	187
	45 [12]			165 [1462] 221	261 [2312] 214	362 [3200] 210	450 [3982] 207	535 [4731] 198	618 [5471] 196	224
	53 [14]			150 [1328] 257	273 [2413] 256	368 [3253] 247	449 [3975] 244	558 [4936] 241	602 [5328] 235	261
	61 [16]			134 [1183] 296	253 [2242] 292	335 [2969] 284	435 [3850] 277	524 [4639] 273	598 [5292] 269	299
Max. Cont.	68 [18]			121 [1068] 334	232 [2056] 330	339 [3003] 327	416 [3686] 320	512 [4532] 313	599 [5299] 308	336
	76 [20]			110 [970] 372	206 [1823] 372	308 [2725] 365	401 [3552] 357	507 [4484] 352		373
Max. Inter.	83 [22]				191 [1689] 407	285 [2520] 403	379 [3353] 397	486 [4303] 388		410
Rotor Width		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☒								
17.3 [682] mm [in]		Theoretical Torque - Nm [lb-in]								
		56 [494]	112 [987]	223 [1975]	335 [2962]	446 [3949]	558 [4936]	669 [5924]	781 [6911]	
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]								

		Pressure - bar [psi]							Max. Cont.	Max. Inter.
230		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]	
233 cm ³ [14.2 in ³] / rev		Intermittent Ratings - 10% of Operation								
		Torque - Nm [lb-in], Speed rpm								
Flow - lpm [gpm]	2 [0.5]	45 [397] 6	92 [813] 4	184 [1628] 3	293 [2590] 2	375 [3323] 1				9
	4 [1]	48 [429] 14	101 [890] 12	223 [1972] 11	316 [2793] 11	414 [3660] 9	493 [4366] 7	560 [4955] 4		17
	8 [2]	51 [453] 30	105 [926] 27	215 [1899] 25	329 [2911] 25	425 [3760] 23	524 [4637] 20	618 [5468] 17	710 [6286] 12	33
	15 [4]	43 [384] 63	108 [960] 59	209 [1851] 55	326 [2884] 54	435 [3846] 52	539 [4771] 47	655 [5799] 42	721 [6381] 39	66
	23 [6]		102 [603] 93	213 [1889] 88	339 [3001] 85	428 [3789] 82	536 [4747] 77	628 [5559] 73	718 [6355] 69	98
	30 [8]		89 [789] 127	207 [1830] 122	316 [2793] 120	425 [3762] 115	521 [4612] 110	639 [5653] 107	717 [6341] 98	131
	38 [10]		78 [690] 161	198 [1750] 157	311 [2752] 151	436 [3856] 148	527 [4660] 143	612 [5420] 140	703 [6218] 132	163
	45 [12]			189 [1669] 191	296 [2624] 186	425 [3764] 182	510 [4517] 176	599 [5304] 170	689 [6098] 163	196
	53 [14]			177 [1565] 224	293 [2596] 216	388 [3434] 214	495 [4384] 208	587 [5197] 205	680 [6017] 198	228
	61 [16]			150 [1326] 256	272 [2408] 255	397 [3509] 249	484 [4280] 245	574 [5077] 237	669 [5925] 227	261
Max. Cont.	68 [18]			142 [1261] 292	264 [2333] 286	355 [3140] 282	493 [4366] 276	569 [5032] 274	655 [5799] 259	293
	76 [20]			122 [1083] 324	237 [2096] 321	347 [3068] 316	453 [4009] 309	571 [5057] 305		326
Max. Inter.	83 [22]				210 [1855] 357	338 [2987] 351	464 [4104] 345	550 [4864] 339		358
Rotor Width		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☒								
19.7 [777] mm [in]		Theoretical Torque - Nm [lb-in]								
		64 [565]	128 [1131]	256 [2261]	383 [3392]	511 [4522]	639 [5653]	767 [6783]	894 [7914]	
		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.
		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]	
260										
		261 cm ³ [15.9 in ³] / rev							Intermittent Ratings - 10% of Operation	
		Torque - Nm [lb-in], Speed rpm								
Flow - lpm [gpm]	2 [0.5]	49 [432] 5	112 [989] 2							8
	4 [1]	54 [475] 12	113 [998] 11	240 [2125] 10	365 [3230] 9	478 [4227] 8	578 [5112] 7	648 [5736] 5		15
	8 [2]	54 [474] 27	115 [1021] 25	247 [2184] 24	367 [3244] 22	488 [4318] 21	591 [5230] 19	703 [6223] 16		30
	15 [4]	49 [429] 57	114 [1010] 55	261 [2307] 51	363 [3214] 51	486 [4300] 48	595 [5268] 46	697 [6171] 43	807 [7143] 39	59
	23 [6]	45 [397] 86	115 [1016] 83	236 [2090] 80	364 [3221] 78	497 [4398] 76	590 [5225] 71	721 [6379] 68	802 [7096] 63	88
	30 [8]		94 [833] 114	227 [2008] 109	348 [3078] 109	477 [4224] 105	592 [5239] 101	692 [6128] 96	794 [7027] 88	117
	38 [10]		85 [752] 145	231 [2044] 144	340 [3013] 141	470 [4155] 138	585 [5180] 133	685 [6063] 127	796 [7048] 119	146
	45 [12]		78 [692] 173	217 [1919] 173	354 [3135] 168	464 [4108] 166	567 [5018] 161	672 [5945] 153	802 [7095] 144	175
	53 [14]		64 [563] 202	198 [1754] 202	326 [2886] 200	445 [3941] 196	568 [5026] 184	668 [5908] 181	765 [6771] 176	204
	61 [16]			182 [1608] 231	299 [2644] 229	448 [3965] 221	552 [4884] 219	651 [5763] 216	752 [6659] 209	233
	68 [18]			160 [1417] 261	304 [2693] 261	417 [3690] 256	550 [4870] 247	643 [5689] 240	740 [6551] 232	262
	76 [20]			136 [1204] 290	278 [2460] 289	391 [3464] 285	521 [4614] 277	636 [5628] 274	736 [6516] 263	291
Max. Cont.	83 [22]			132 [1168] 319	263 [2325] 319	374 [3314] 315	512 [4535] 311	615 [5442] 301		320
	91 [24]			82 [722] 348	227 [2009] 347	361 [3190] 345	496 [4386] 340			349
		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐								
Rotor Width										
		22.1 [872] mm [in]								
			72 [633]	143 [1266]	286 [2532]	429 [3798]	572 [5064]	715 [6330]	858 [7596]	1001 [8861]
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]								

		Pressure - bar [psi]							Max. Cont.	Max. Inter.
		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]	
300										
		300 cm ³ [18.3 in ³] / rev							Intermittent Ratings - 10% of Operation	
		Torque - Nm [lb-in], Speed rpm								
Flow - lpm [gpm]	2 [0.5]	51 [452] 3	95 [839] 1							7
	4 [1]	63 [557] 11	145 [1282] 10	302 [2675] 9	433 [3829] 8	510 [4513] 7	627 [5552] 4			13
	8 [2]	62 [551] 22	158 [1400] 20	308 [2722] 19	437 [3866] 19	571 [5056] 16	679 [6011] 13	768 [6796] 9	830 [7346] 5	26
	15 [4]	66 [588] 48	145 [1281] 47	316 [2793] 45	430 [3805] 43	577 [5107] 38	680 [6015] 33	820 [7258] 28	908 [8040] 21	51
	23 [6]	58 [511] 75	140 [1241] 75	290 [2566] 72	424 [3755] 69	546 [4830] 65	690 [6105] 57	801 [7088] 49	946 [8372] 40	76
	30 [8]	46 [405] 100	128 [1136] 100	305 [2699] 99	391 [3460] 96	571 [5056] 87	700 [6199] 82	826 [7313] 71	930 [8233] 62	101
	38 [10]		111 [981] 125	282 [2493] 124	409 [3623] 121	503 [4447] 115	683 [6043] 106	794 [7028] 98	919 [8131] 88	127
	45 [12]		92 [814] 150	261 [2313] 150	388 [3435] 148	472 [4177] 143	641 [5676] 133	783 [6927] 122	881 [7794] 113	152
	53 [14]		77 [684] 176	245 [2165] 175	391 [3464] 175	530 [4687] 173	661 [5848] 163	809 [7157] 151	949 [8398] 138	177
	61 [16]		63 [553] 201	224 [1983] 201	366 [3243] 199	508 [4498] 192	633 [5599] 187	796 [7044] 173	916 [8103] 163	202
	68 [18]			201 [1780] 225	339 [2999] 225	467 [4135] 222	666 [5898] 211	804 [7115] 199	899 [7955] 194	228
	76 [20]			172 [1522] 251	327 [2895] 251	480 [4247] 247	611 [5410] 240	745 [6596] 232	910 [8051] 217	253
Max. Cont.	83 [22]			144 [1276] 277	321 [2836] 276	466 [4127] 269	575 [5084] 263	732 [6474] 254		278
	91 [24]			119 [1049] 302	281 [2483] 301	435 [3853] 300	559 [4943] 291	703 [6223] 280		303
Max. Inter.	95 [25]			105 [928] 315	262 [2319] 314	434 [3838] 311	553 [4894] 307	707 [6257] 294		316
		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐								
Rotor Width										
		25.4 [1.000] mm [in]								
			82 [729]	165 [1457]	329 [2914]	494 [4371]	659 [5828]	823 [7285]	988 [8742]	1152 [10199]
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]								

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



DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]							Max. Cont.	Max. Inter.
		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]	
350										
348 cm ³ [21.2 in ³] / rev										
		Torque - Nm [lb-in], Speed rpm							Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	2 [0.5]	64 [566] 4	134 [1183] 4	272 [2404] 3	399 [3532] 2					6
	4 [1]	64 [570] 10	134 [1189] 9	296 [2619] 8	437 [3869] 8					11
	8 [2]	69 [607] 21	145 [1285] 20	312 [2764] 19	462 [4092] 18	600 [5308] 18	742 [6571] 17	855 [7569] 14		22
	15 [4]	71 [627] 42	151 [1340] 41	313 [2767] 40	471 [4169] 39	630 [5577] 37	772 [6834] 35	889 [7869] 34	993 [8785] 28	44
	23 [6]	62 [549] 64	149 [1618] 63	315 [2788] 62	474 [4191] 60	630 [5577] 57	768 [6796] 54	925 [8182] 51	1032 [9137] 45	66
	30 [8]	53 [472] 86	139 [1233] 85	307 [2713] 84	459 [4058] 82	626 [5537] 79	768 [6793] 75	928 [8210] 69	1051 [9300] 65	88
	38 [10]		113 [1004] 108	298 [2639] 108	431 [3814] 108	601 [5317] 102	745 [6593] 100	910 [8056] 93	1062 [9399] 87	109
	45 [12]		98 [869] 130	265 [2346] 129	445 [3936] 128	581 [5144] 125	740 [6552] 117	891 [7889] 109	1044 [9237] 104	131
	53 [14]		86 [758] 152	252 [2226] 151	422 [3738] 150	570 [5044] 147	723 [6398] 139	881 [7794] 133	1031 [9126] 120	153
	61 [16]		63 [560] 173	235 [2079] 173	409 [3619] 172	549 [4859] 170	720 [6375] 163	850 [7522] 155	1012 [8952] 147	175
Max. Cont.	68 [18]			220 [1948] 195	394 [3490] 194	571 [5054] 190	693 [6134] 187	839 [7428] 175	986 [8727] 164	197
	76 [20]			208 [1843] 217	375 [3320] 216	513 [4544] 214	683 [6044] 213	835 [7385] 195	975 [8632] 188	218
	83 [22]			179 [1583] 239	352 [3112] 239	554 [4906] 238	685 [6064] 233	813 [7198] 221	958 [8482] 215	240
Max. Inter.	91 [24]			172 [1526] 261	360 [3186] 261	534 [4724] 260	666 [5890] 256			262
	95 [25]				369 [3264] 271	529 [4682] 270	647 [5730] 265			273
Rotor Width										
39.4 [1.553]										
mm [in]										
		Theoretical Torque - Nm [lb-in]								
		95 [844]	191 [1688]	381 [3376]	572 [5064]	763 [6752]	954 [8439]	1144 [10127]	1335 [11815]	
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]								

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

Theoretical Torque - Nm [lb-in]

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

		Pressure - bar [psi]							Max. Cont.	Max. Inter.
		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]	
375										
375 cm ³ [22.8 in ³] / rev										
		Torque - Nm [lb-in], Speed rpm							Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	2 [0.5]	76 [674] 3								6
	4 [1]	84 [745] 8	162 [1432] 7	329 [2911] 6	490 [4337] 6	639 [5652] 5	763 [6756] 3			11
	8 [2]	82 [724] 18	171 [1510] 17	361 [3196] 16	537 [4754] 16	689 [6095] 14	836 [7399] 12	955 [8449] 9		21
	15 [4]	77 [680] 39	163 [1439] 37	358 [3164] 37	537 [4756] 36	695 [6151] 32	857 [7587] 29	989 [8750] 25	1121 [9923] 20	41
	23 [6]	67 [595] 60	158 [1398] 59	354 [3130] 56	527 [4661] 56	695 [6155] 52	864 [7642] 47	1011 [8951] 40	1168 [10334] 36	61
	30 [8]	57 [508] 80	149 [1321] 80	340 [3010] 78	510 [4512] 77	695 [6154] 71	845 [7476] 65	1009 [8930] 60	1156 [10229] 51	82
	38 [10]		134 [1187] 100	322 [2849] 99	495 [4383] 96	681 [6024] 93	836 [7399] 87	1007 [8913] 80	1157 [10235] 71	102
	45 [12]		115 [1013] 121	301 [2661] 120	480 [4249] 118	645 [5711] 113	809 [7159] 108	980 [8674] 98	1141 [10098] 92	122
	53 [14]		93 [819] 141	280 [2475] 140	477 [4218] 138	633 [5602] 134	795 [7036] 128	949 [8402] 120	1117 [9887] 105	142
	61 [16]		73 [646] 161	261 [2314] 161	429 [3797] 160	598 [5296] 155	770 [6817] 151	934 [8267] 141	1085 [9605] 130	163
Max. Cont.	68 [18]			236 [2091] 181	434 [3843] 181	597 [5282] 177	765 [6771] 168	907 [8026] 161	1080 [9554] 150	183
	76 [20]			209 [1851] 202	384 [3396] 201	561 [4969] 198	740 [6549] 191	877 [7764] 183	1027 [9091] 168	203
	83 [22]			178 [1576] 222	374 [3309] 221	530 [4694] 218	696 [6160] 213	840 [7431] 205		223
Max. Inter.	91 [24]			141 [1246] 242	319 [2822] 241	511 [4523] 239	662 [5860] 233			244
Rotor Width										
31.8 [1.252]										
mm [in]										
		Theoretical Torque - Nm [lb-in]								
		103 [908]	205 [1815]	410 [3631]	615 [5446]	821 [7261]	1026 [9076]	1231 [10892]	1436 [12707]	
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]								

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

Theoretical Torque - Nm [lb-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**

		Pressure - bar [psi]				Max. Cont.	Peak	
		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]
		470						
		465 cm ³ [28.3 in ³] / rev						
		Torque - Nm [lb-in], Speed rpm				Intermittent Ratings - 10% of Operation		
Flow - lpm [gpm]	2 [0.5]	93 [823] 2	185 [1635] 1					5
	4 [1]	97 [857] 7	203 [1794] 5	409 [3618] 5	610 [5402] 5	815 [7209] 4		9
	8 [2]	98 [865] 15	209 [1845] 14	435 [3851] 13	659 [5836] 13	855 [7563] 12	1025 [9071] 11	17
	15 [4]	94 [834] 31	200 [1774] 30	444 [3932] 28	659 [5829] 28	886 [7836] 26	1066 [9434] 23	33
	23 [6]	86 [759] 48	193 [1704] 47	438 [3880] 44	673 [5955] 44	872 [7715] 41	1073 [9499] 37	49
	30 [8]	73 [643] 64	179 [1587] 63	424 [3752] 60	663 [5863] 60	857 [7586] 57	1098 [9718] 50	66
	38 [10]	52 [464] 81	164 [1455] 80	407 [3597] 78	627 [5550] 78	851 [7533] 75	1067 [9444] 68	82
	45 [12]		141 [1248] 97	379 [3350] 94	630 [5575] 93	832 [7363] 90	1067 [9441] 83	98
	53 [14]		114 [1006] 113	350 [3094] 112	580 [5133] 111	802 [7101] 108	1013 [8964] 102	115
	61 [16]		83 [736] 130	322 [2846] 129	545 [4819] 127	796 [7040] 123	965 [8538] 119	131
	68 [18]		56 [497] 146	275 [2434] 145	526 [4657] 145	737 [6519] 142	956 [8464] 138	147
	Max. Cont.	76 [20]			235 [2078] 162	479 [4239] 161	706 [6249] 158	917 [8117] 154
83 [22]				202 [1790] 179	460 [4075] 178	669 [5920] 176	883 [7811] 170	180
91 [24]				157 [1392] 195	385 [3410] 194	620 [5484] 190	843 [7464] 186	196
Max. Inter.	Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐							
	Theoretical Torque - Nm [lb-in]							
		127 [1127]	255 [2253]	509 [4506]	764 [6760]	1018 [9013]	1273 [11266]	1528 [13519]
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]						
		Rotor Width						
		39.4 [1.553]						
		mm [in]						

		Pressure - bar [psi]				Max. Cont.	Max. Inter.		
		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]		
		540							
		536 cm ³ [32.7 in ³] / rev							
		Torque - Nm [lb-in], Speed rpm				Intermittent Ratings - 10% of Operation			
Flow - lpm [gpm]	2 [0.5]	104 [921] 2	197 [1748] 2					Theoretical rpm	4
	4 [1]	126 [1111] 6	230 [2031] 5	467 [4136] 5	699 [6183] 5	939 [8310] 5	1149 [10165] 4		8
	8 [2]	134 [1189] 13	240 [2120] 13	501 [4436] 12	755 [6679] 12	977 [8646] 11	1185 [10484] 10		15
	15 [4]	120 [1058] 27	232 [2055] 27	510 [4510] 26	757 [6697] 26	988 [8740] 24	1223 [10827] 23		29
	23 [6]	97 [859] 41	224 [1984] 41	505 [4469] 40	783 [6930] 40	993 [8787] 38	1225 [10838] 34		43
	30 [8]	78 [692] 56	213 [1887] 56	484 [4285] 55	750 [6635] 54	983 [8698] 53	1251 [11075] 48		57
	38 [10]	59 [523] 70	190 [1678] 70	455 [4026] 69	728 [6445] 69	959 [8487] 67	1244 [11008] 62		71
	45 [12]		176 [1554] 84	438 [3879] 83	719 [6360] 83	945 [8360] 80	1203 [10646] 77		85
	53 [14]		139 [1233] 98	418 [3703] 97	682 [6035] 96	952 [8421] 94	1183 [10467] 91		99
	61 [16]		109 [963] 112	385 [3407] 111	668 [5908] 111	899 [7957] 110	1163 [10290] 105		114
	68 [18]		83 [736] 126	356 [3154] 126	612 [5417] 125	869 [7694] 124	1116 [9876] 123		128
	76 [20]			323 [2861] 140	603 [5333] 139	829 [7335] 138	1109 [9816] 134		142
Max. Cont.	83 [22]			297 [2629] 154	537 [4753] 153	792 [7011] 152		156	
	91 [24]			215 [1905] 169	491 [4349] 168	750 [6639] 168		170	
Rotor Width		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☒							
		Theoretical Torque - Nm [lb-in]							
		147 [1302]	294 [2604]	588 [5207]	883 [7811]	1177 [10414]	1471 [13018]		
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							
		Rotor Width							
		45.5 [1.791]							
		mm [in]							

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



DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]			Max. Cont.	Peak
750		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]
748 cm ³ [45.6 in ³] / rev		Intermittent Ratings - 10% of Operation				
		Torque - Nm [lb-in], Speed rpm				
Flow - lpm [gpm]	2 [0.5]	147 [1299] 2	281 [2487] 1			3
	4 [1]	156 [1379] 4	322 [2852] 4	652 [5768] 4	967 [8554] 3	1308 [11571] 3
	8 [2]	158 [1403] 9	339 [3003] 9	693 [6134] 9	1027 [9088] 8	1360 [12033] 7
	15 [4]	153 [1350] 19	331 [2933] 19	705 [6241] 19	1064 [9419] 18	1416 [12534] 16
	23 [6]	135 [1194] 29	321 [2840] 29	697 [6166] 28	1059 [9373] 28	1408 [12462] 26
	30 [8]	114 [1008] 40	304 [2690] 40	678 [6002] 39	1039 [9197] 38	1421 [12573] 34
	38 [10]	82 [722] 50	271 [2395] 49	648 [5733] 49	1015 [8980] 48	1371 [12130] 47
	45 [12]	54 [477] 60	249 [2207] 60	616 [5452] 59	983 [8699] 59	1345 [11902] 56
	53 [14]		197 [1739] 70	577 [5104] 69	946 [8372] 68	1311 [11600] 67
	61 [16]		150 [1325] 80	533 [4718] 79	905 [8008] 78	1271 [11249] 76
	68 [18]		105 [927] 90	494 [4374] 90	860 [7614] 89	1225 [10843] 88
	76 [20]		62 [552] 100	423 [3741] 100	805 [7123] 99	1173 [10385] 98
Max. Inter.	83 [22]			385 [3404] 110	747 [6608] 110	
	91 [24]			302 [2669] 121	670 [5932] 120	
		Theoretical rpm				
		3				
		6				
		11				
		21				
		31				
		41				
		51				
		61				
		71				
		82				
		92				
		102				
		112				
		122				

Rotor Width

63.5
[2.501]

mm [in]

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

Theoretical Torque - Nm [lb-in]

205 [1815] 410 [3631] 821 [7261] 1231 [10892] 1641 [14522]

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.



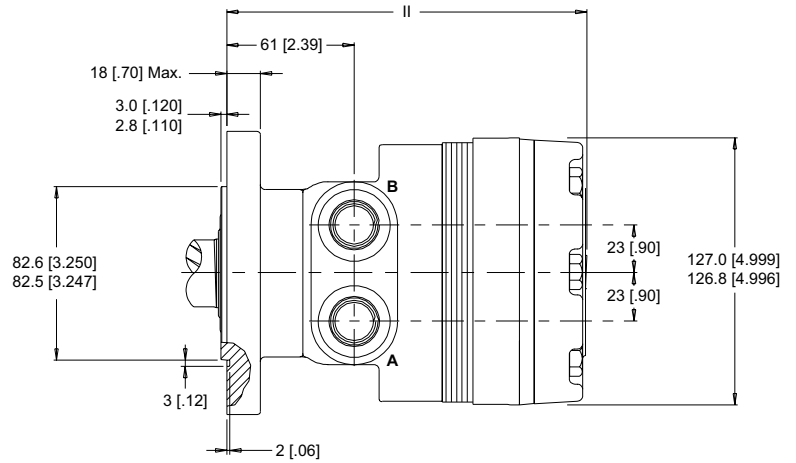
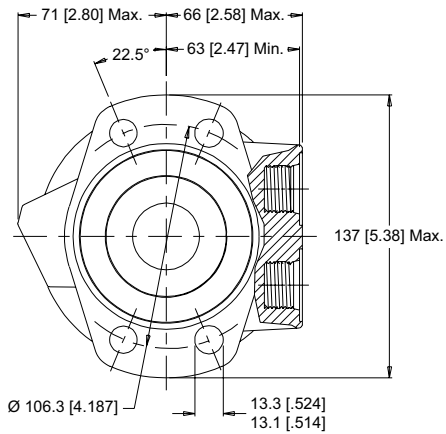
HOUSINGS

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

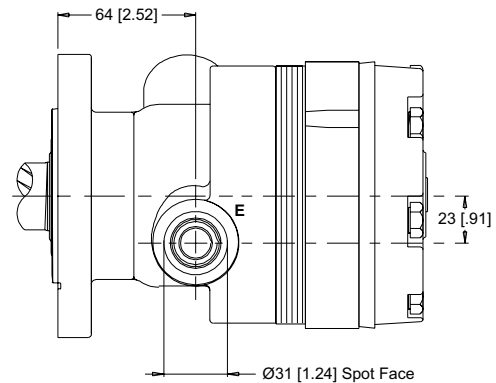
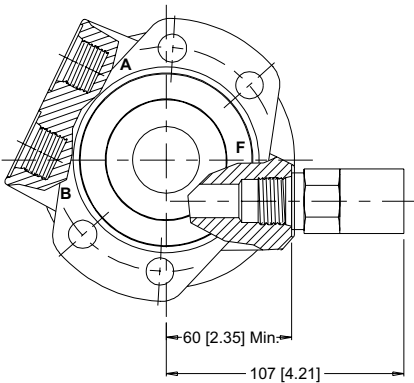
4-HOLE, MAGNETO MOUNT, ALIGNED PORTS

A31 7/8-14 UNF **A38** G 1/2

STANDARD



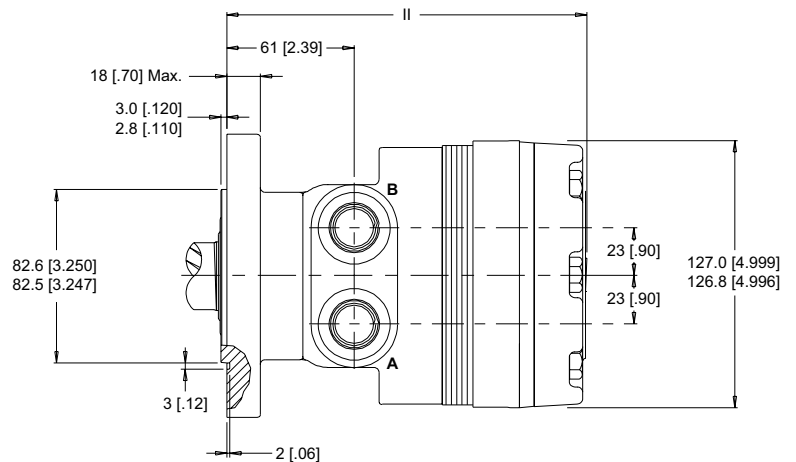
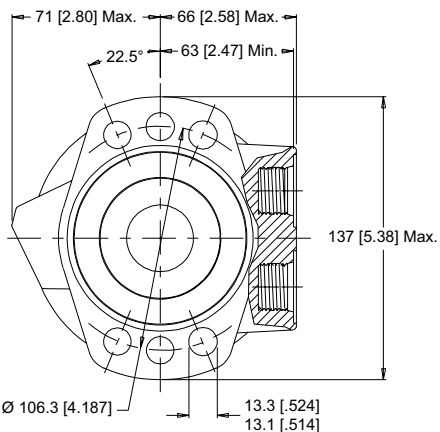
OPTIONAL VALVE CAVITY



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

6-HOLE, SAE A MOUNT, ALIGNED PORTS

A51 7/8-14 UNF **A58** G 1/2



► Dimension II is charted on page 11.



HOUSINGS

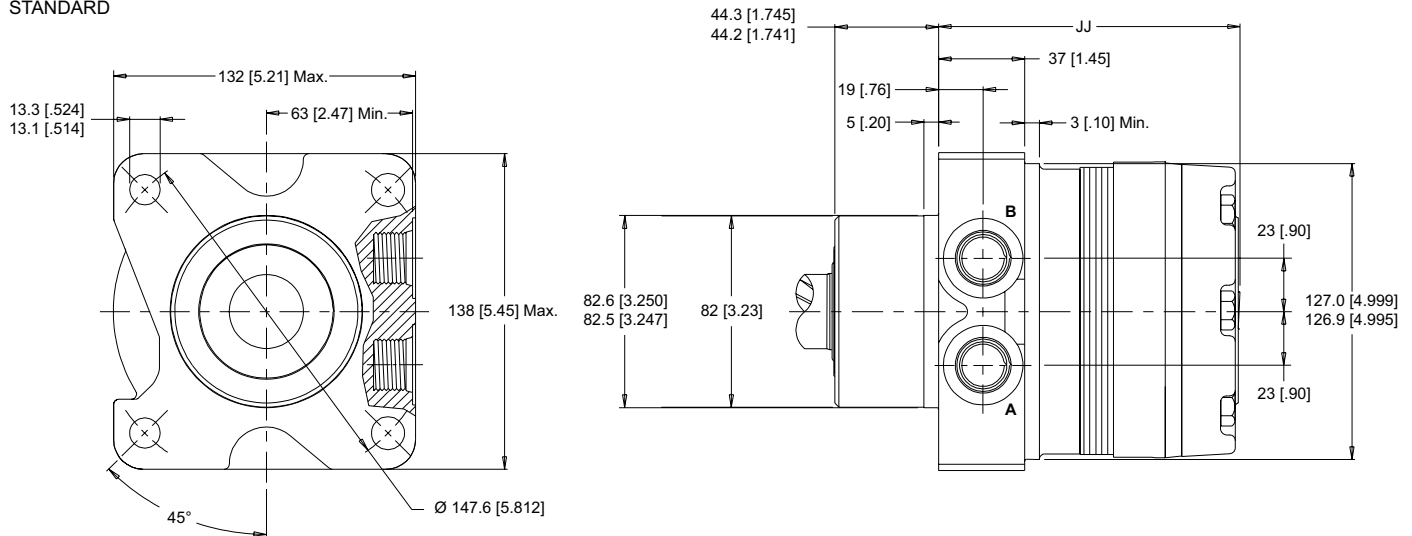
► Dimensions shown are without paint. Paint thickness can be up to 0.13 [0.005].

4-HOLE, WHEEL MOUNT, ALIGNED PORTS

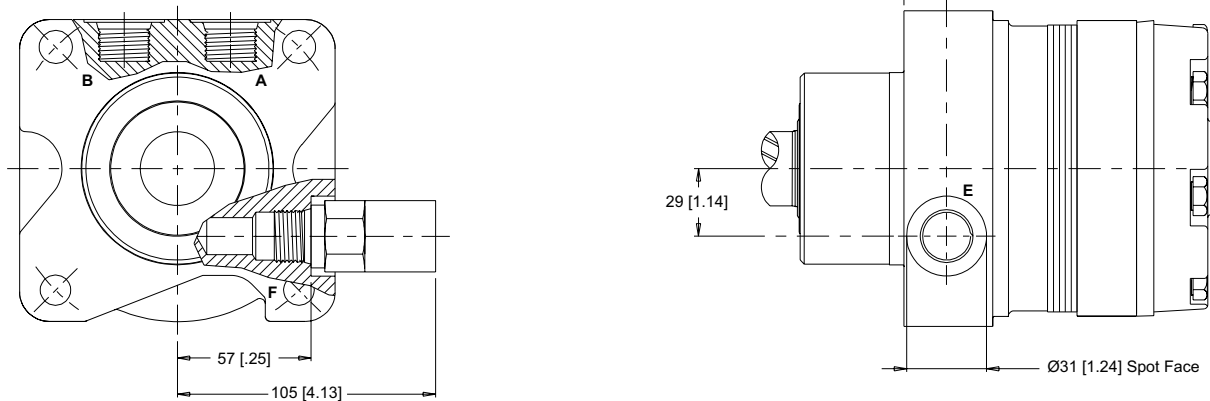
W31 7/8-14 UNF

W38 G 1/2

STANDARD



OPTIONAL VALVE CAVITY

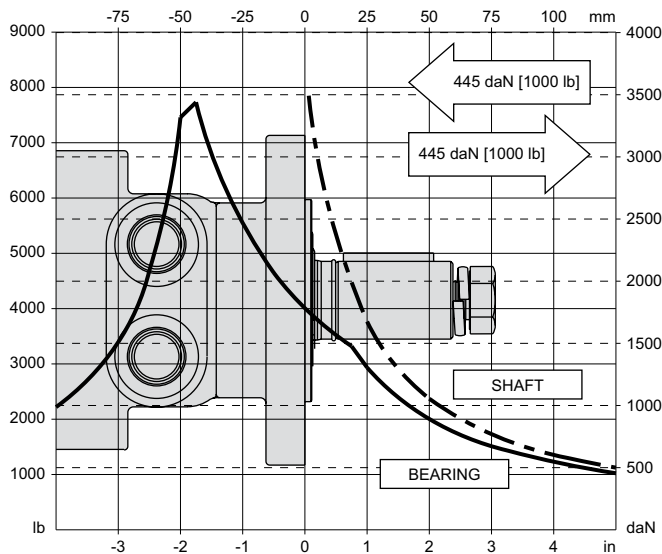
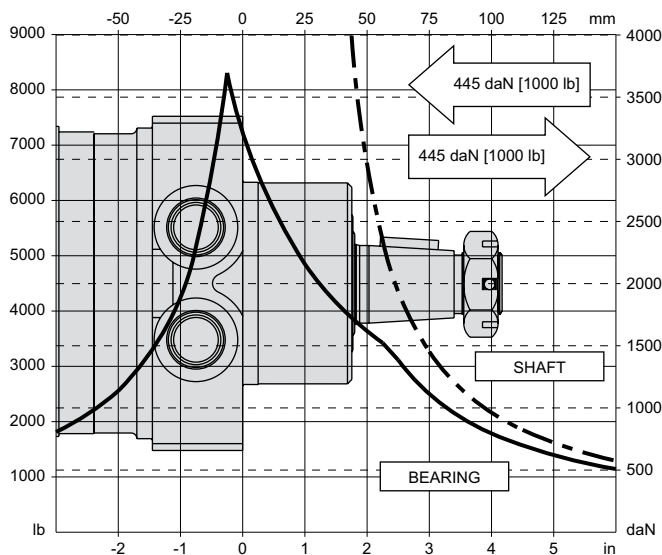


E: 10 Series/2-Way Valve Cavity 7/8-14 UNF **F:** Valve Cartridge Installed

► Dimension JJ is 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.

MAGNETO & SAE A MOUNTS**WHEEL MOUNTS****LENGTH & WEIGHT CHART**

Dimensions II & JJ are the overall motor lengths from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on pages 9 & 10.

II	Length	Weight
#	mm [in]	kg [lb]
120	162 [6.37]	10.6 [23.4]
160	162 [6.37]	10.6 [23.4]
200	165 [6.51]	11.0 [24.2]
230	168 [6.61]	11.1 [24.4]
260	170 [6.70]	11.3 [25.0]
300	174 [6.83]	11.7 [25.8]
350	187 [7.38]	12.8 [28.2]
375	180 [7.08]	12.2 [27.0]
470	187 [7.38]	12.8 [28.2]
540	194 [7.62]	13.3 [29.4]
750	212 [8.33]	14.8 [32.5]

JJ	Length	Weight
#	mm [in]	kg [lb]
120	120 [4.72]	11.7 [25.8]
160	120 [4.72]	11.7 [25.8]
200	123 [4.86]	12.1 [26.6]
230	126 [4.95]	12.2 [26.8]
260	128 [5.05]	12.4 [27.4]
300	132 [5.18]	12.8 [28.2]
350	146 [5.73]	13.9 [30.6]
375	138 [5.43]	13.3 [29.4]
470	146 [5.73]	13.9 [30.6]
540	152 [5.97]	14.4 [31.8]
750	170 [6.68]	15.8 [34.9]

► All RE series motor weights can vary ± 0.5 kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

BEARING LOAD MULTIPLICATION FACTOR TABLE

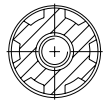
RPM	FACTOR	RPM	FACTOR
50	1.23	500	0.62
100	1.00	600	0.58
200	0.81	700	0.56
300	0.72	800	0.50
400	0.66		



SHAFTS

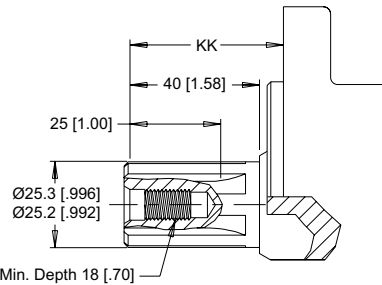
02 1" 6B Spline

6B Spline
SAE J499 Standard

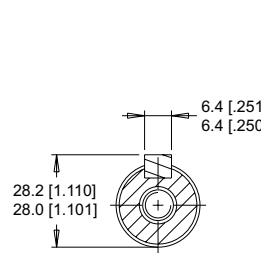


5/16-18 UNC, Min. Depth 18 [.70]

03 1" 6B Spline Extended

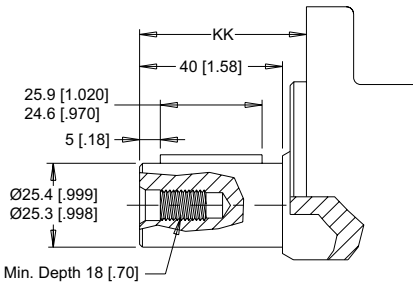


10 1" Straight



5/16-18 UNC, Min. Depth 18 [.70]

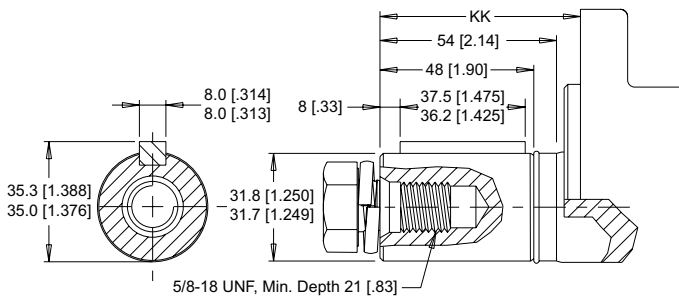
15 1" Straight Extended



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

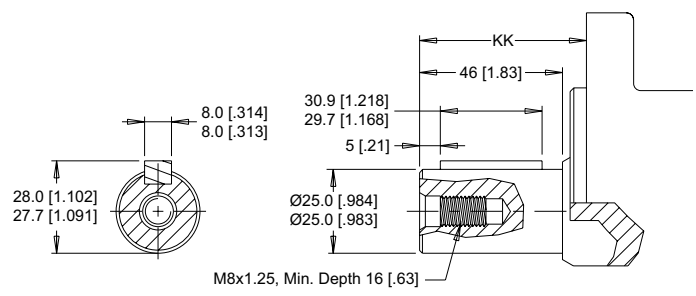
Max. Torque: 655 Nm [5800 lb-in]

07 1-1/4" Straight Extended



20 1-1/4" Straight

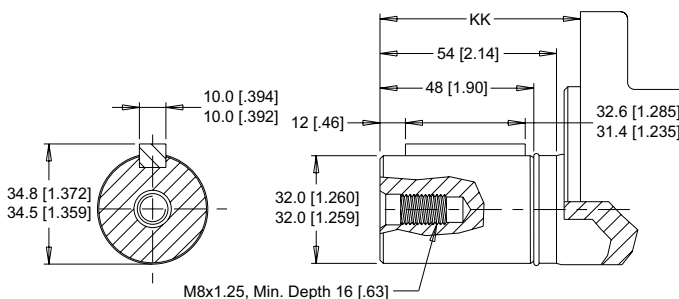
12 25mm Straight



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

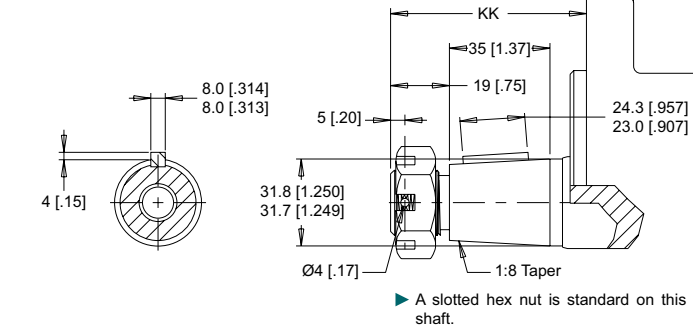
Max. Torque: 678 Nm [6000 lb-in]

08 32mm Straight Extended



21 32mm Straight

22 1-1/4" Tapered



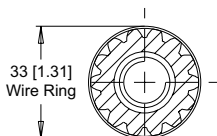
25 1-1/4" Tapered Extended

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

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

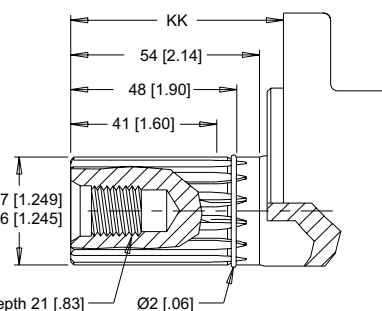
09 14 Tooth Spline Extended

14 Tooth Spline 12/24 Pitch
Standard ANSI B92.1-1996 Spline



5/8-18 UNF, Min. Depth 21 [.83]

23 14 Tooth Spline



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

MOUNTING / SHAFT LENGTH CHART

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

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

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



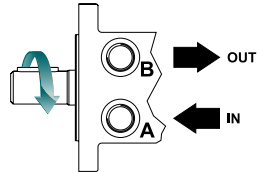
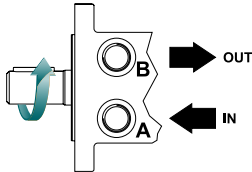
ORDERING INFORMATION

1		2		3		4		5		6		7		8	

1. CHOOSE SERIES DESIGNATION

500 Counterclockwise Rotation

501 Clockwise Rotation



► The 500 & 501 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

120	121 cm ³ /rev [7.4 in ³ /rev]	350	348 cm ³ /rev [21.2 in ³ /rev]
160	162 cm ³ /rev [9.9 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
200	204 cm ³ /rev [12.4 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
230	232 cm ³ /rev [14.2 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]		

3. SELECT A MOUNT & PORT OPTION

A31	4-Hole, Magneto Mount, Aligned Ports, 7/8-14 UNF
A38	4-Hole, Magneto Mount, Aligned Ports, G 1/2
A51	6-Hole, SAE A Mount, Aligned Ports, 7/8-14 UNF
A58	6-Hole, SAE A Mount, Aligned Ports, G 1/2
W31	4-Hole, Wheel Mount, Aligned Ports, 7/8-14 UNF
W38	4-Hole, Wheel Mount, Aligned Ports, G 1/2

► Speed sensor option is not available with wheel mounts

4. SELECT A SHAFT OPTION

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

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

5. SELECT A PAINT OPTION

A	Black
B	Black, Unpainted Mounting Surface
C	No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

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

► Valve cavity is not available on the A51 & A58 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

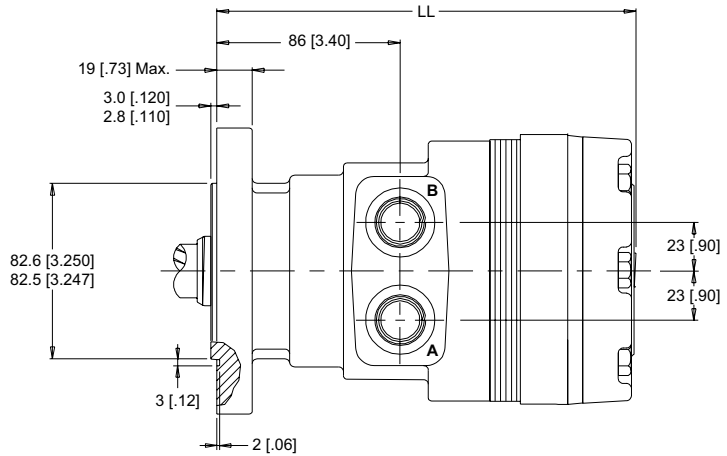
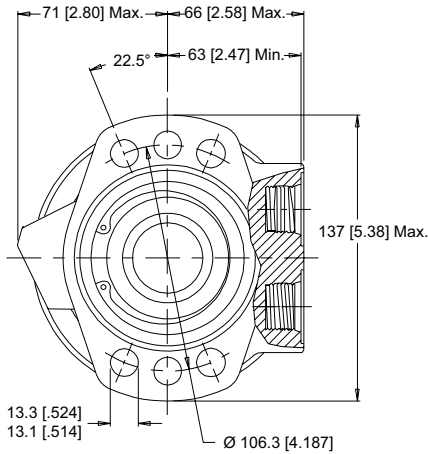
AA	None
AC	Freeturning Rotor
AE	Hydraulic Declutch With Freeturning Rotor

HOUSINGS

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

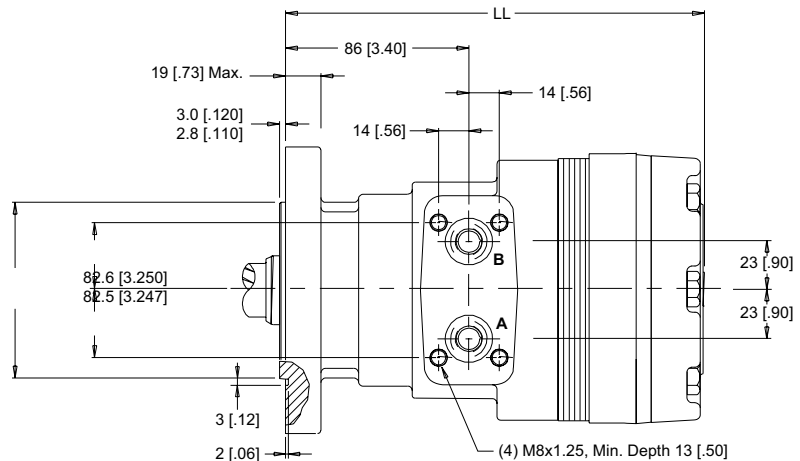
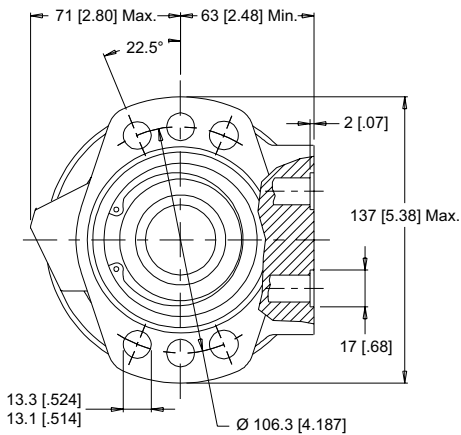
6-HOLE, SAE A MOUNT, ALIGNED PORTS

A51 7/8-14 UNF **A58** G 1/2



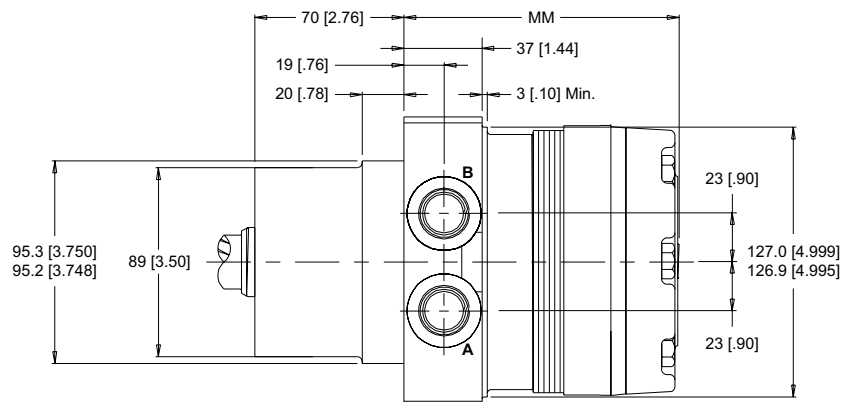
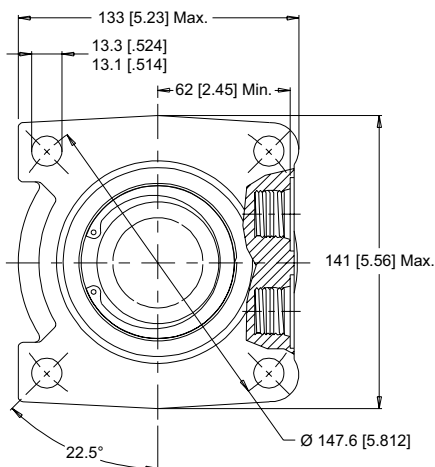
6-HOLE, SAE A MOUNT, ALIGNED MANIFOLD PORTS

A57 1/2" Drilled



4-HOLE, WHEEL MOUNT, ALIGNED PORTS

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



► Dimensions LL & MM are charted on page 15.

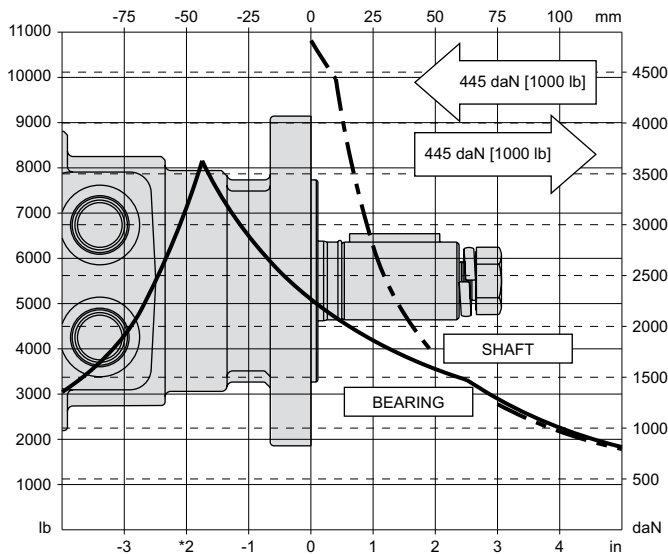


TECHNICAL INFORMATION

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.

SAE A MOUNTS



LENGTH & WEIGHT CHART

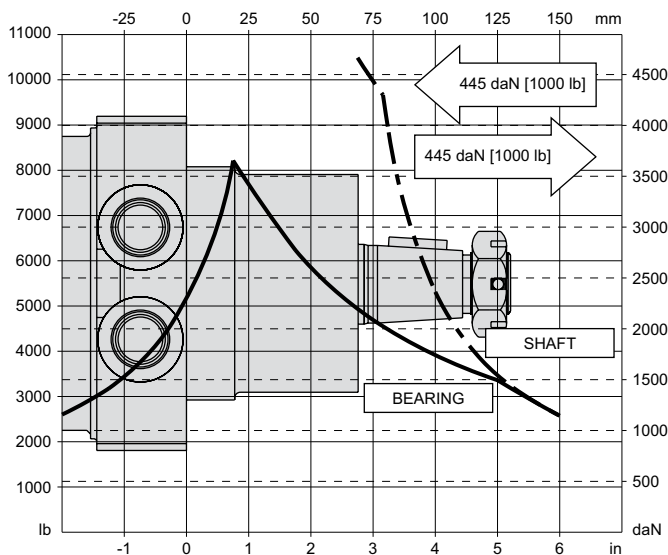
Dimensions LL & MM are the overall motor lengths from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on page 14.

LL	Length	Weight
#	mm [in]	kg [lb]
120	187 [7.37]	13.3 [29.4]
160	187 [7.37]	13.3 [29.4]
200	191 [7.51]	13.7 [30.2]
230	193 [7.61]	13.8 [30.4]
260	196 [7.70]	14.1 [31.0]
300	199 [7.83]	14.4 [31.8]
350	213 [8.38]	15.5 [34.2]
375	205 [8.08]	15.0 [33.0]
470	213 [8.38]	15.5 [34.2]
540	219 [8.62]	16.1 [35.4]
750	237 [9.33]	17.5 [38.5]

MM	Length	Weight
#	mm [in]	kg [lb]
120	120 [4.72]	12.9 [28.4]
160	120 [4.72]	12.9 [28.4]
200	123 [4.86]	13.2 [29.2]
230	126 [4.95]	13.3 [29.4]
260	128 [5.05]	13.6 [30.0]
300	132 [5.18]	14.0 [30.8]
350	146 [5.73]	15.1 [33.2]
375	138 [5.43]	14.5 [32.0]
470	146 [5.73]	15.1 [33.2]
540	152 [5.97]	15.6 [34.4]
750	170 [6.68]	17.0 [37.5]

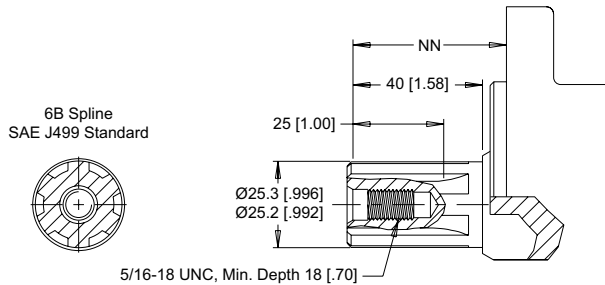
► All RE series motor weights can vary ± 0.5 kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

WHEEL MOUNTS



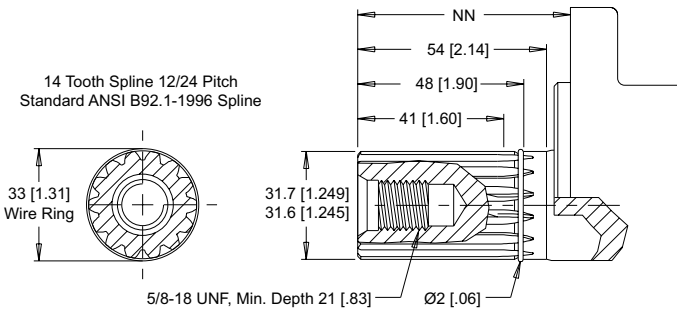
SHAFTS

03 1" 6B Spline



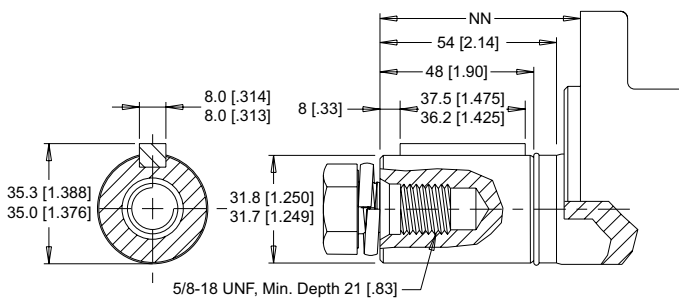
Max. Torque: 678 Nm [6000 lb-in]

09 14 Tooth Spline



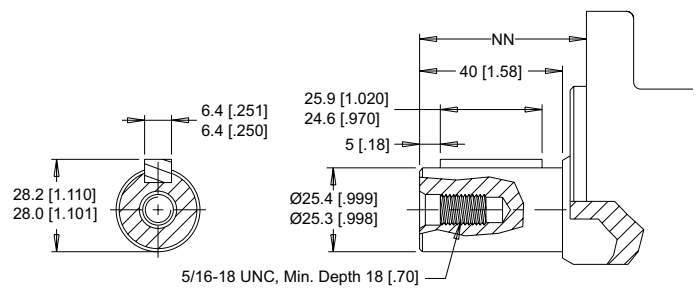
Max. Torque: 1200 Nm [10600 lb-in]

07 1-1/4" Straight



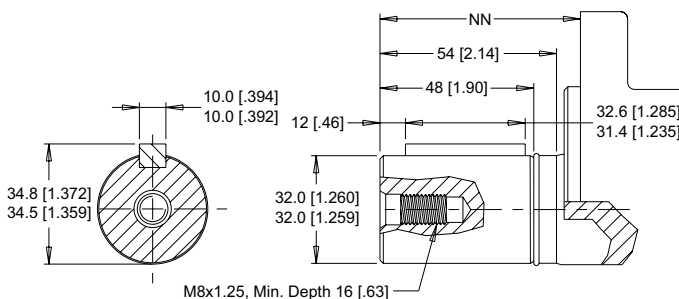
Max. Torque: 1200 Nm [10600 lb-in]

15 1" Straight



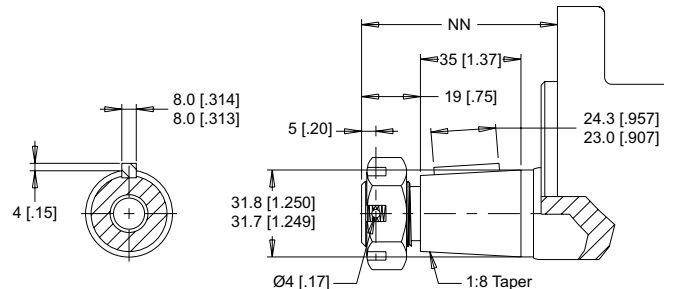
Max. Torque: 655 Nm [5800 lb-in]

08 32mm Straight



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

25 1-1/4" Tapered



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

MOUNTING / SHAFT LENGTH CHART

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

NN	SAE A Mounts	Wheel Mounts
#	mm [in]	mm [in]
03	51 [2.02]	119 [4.69]
07	63 [2.47]	131 [5.15]
08	62 [2.47]	130 [5.15]
09	63 [2.47]	131 [5.15]
15	51 [2.02]	119 [4.69]
25	67 [2.63]	135 [5.31]

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

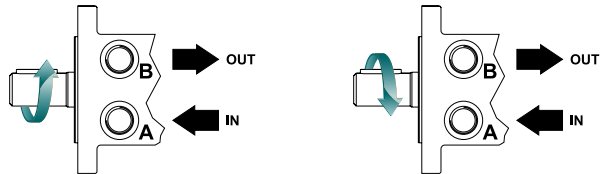


ORDERING INFORMATION

	1			2			3			4		5	6	7	8

1. CHOOSE SERIES DESIGNATION

520 Counterclockwise Rotation **521** Clockwise Rotation



► The 520 & 521 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

120	121 cm ³ /rev [7.4 in ³ /rev]	350	348 cm ³ /rev [21.2 in ³ /rev]
160	162 cm ³ /rev [9.9 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
200	204 cm ³ /rev [12.4 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
230	232 cm ³ /rev [14.2 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]		

3. SELECT A MOUNT & PORT OPTION

A51	6-Hole, SAE A Mount, Aligned Ports, 7/8-14 UNF
A57	6-Hole, SAE A Mount, Aligned Manifold Ports, 1/2" Drilled
A58	6-Hole, SAE A Mount, Aligned Ports, G 1/2
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

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

5. SELECT A PAINT OPTION

A	Black
B	Black, Unpainted Mounting Surface
Z	No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A	None
----------	------

7. SELECT AN ADD-ON OPTION

A	Standard
B	Lock Nut
C	Solid Hex Nut

8. SELECT A MISCELLANEOUS OPTION

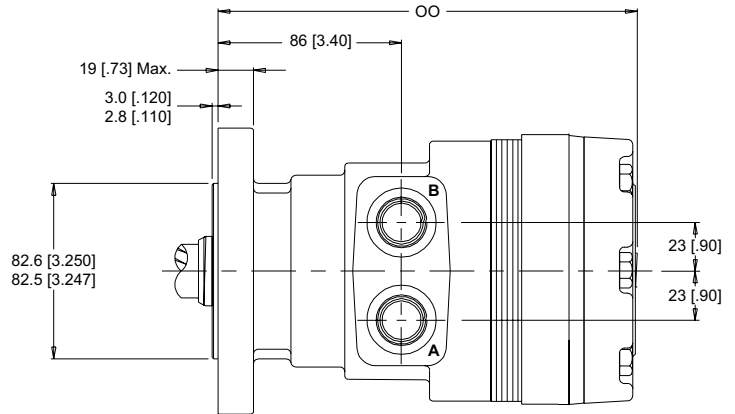
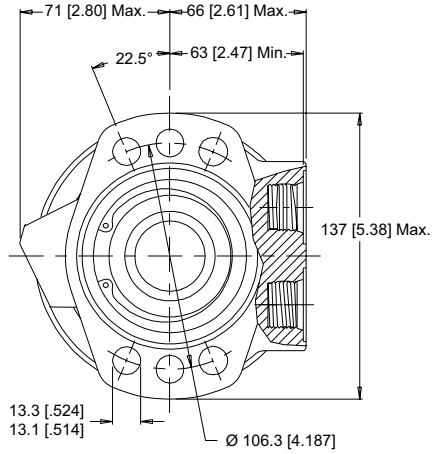
AA	None
AC	Freeturning Rotor
AE	Hydraulic Declutch With Freeturning Rotor

HOUSINGS

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

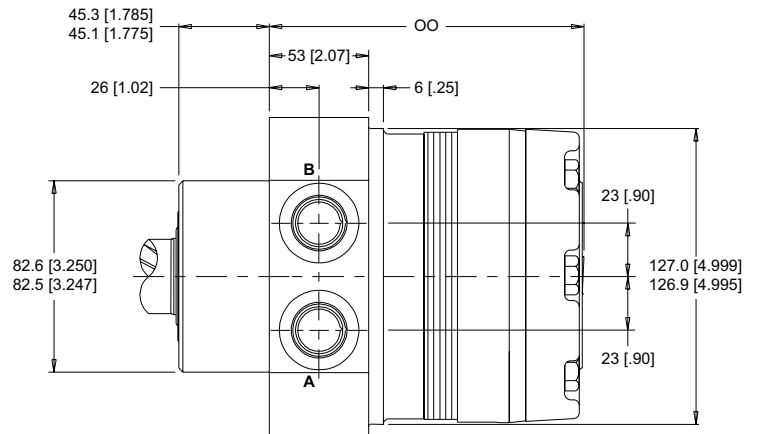
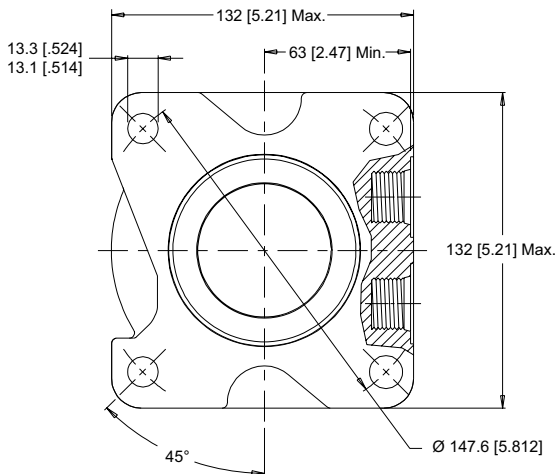
6-HOLE, SAE A MOUNT, ALIGNED PORTS

A51 7/8-14 UNF **A58** G 1/2



4-HOLE, WHEEL MOUNT, ALIGNED PORTS *

T31 7/8-14 UNF **T38** G 1/2 **W31** 7/8-14 UNF **W38** G 1/2



► Dimension OO is charted on page 19. *The W31 & W38 housings offer a higher side load capacity. Refer to the bearing curves listed on page 19.

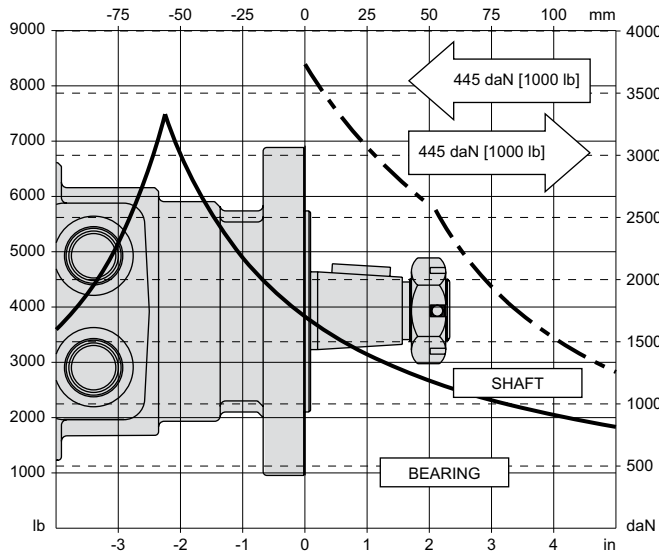


TECHNICAL INFORMATION

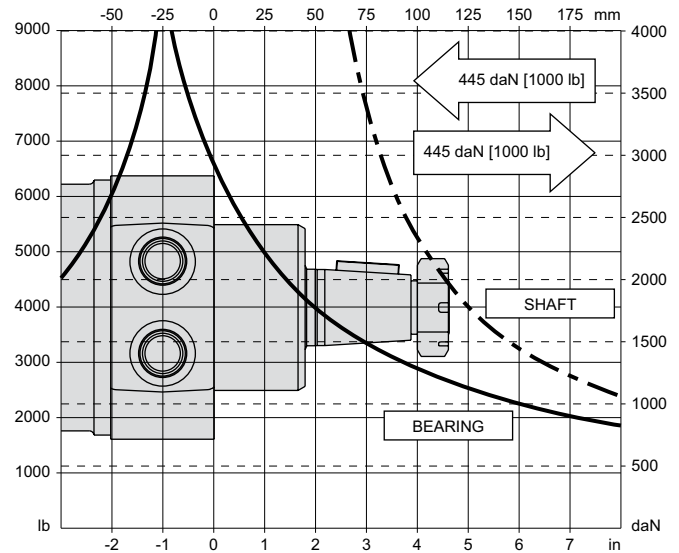
ALLOWABLE SHAFT LOAD / BEARING CURVE

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.

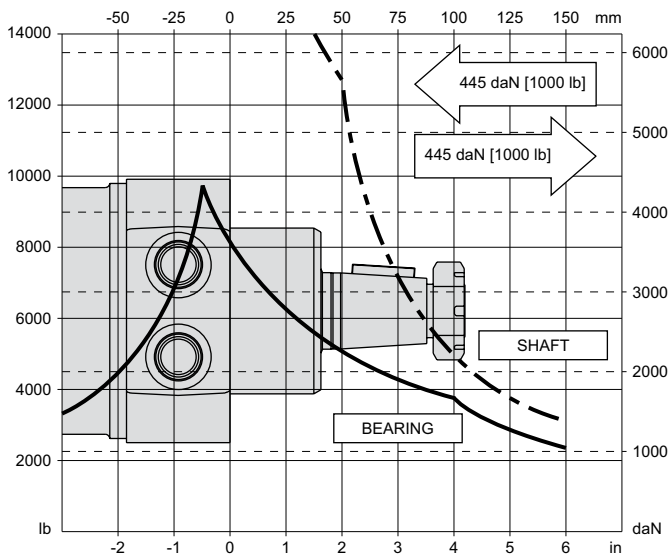
SAE A MOUNTS



T31 & T38 WHEEL MOUNTS



W31 & W38 WHEEL MOUNTS



LENGTH & WEIGHT CHART

Dimension OO is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on page 18.

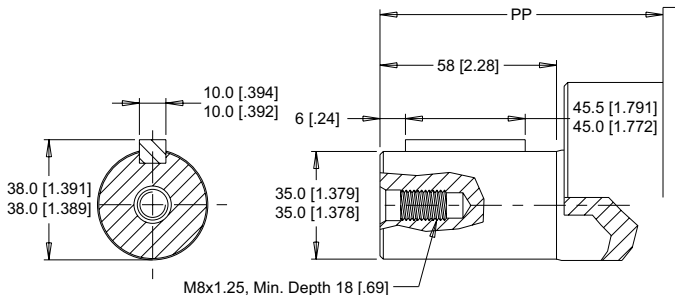
OO	SAE A Mounts	Wheel Mounts	Weight
#	mm [in]	mm [in]	kg [lb]
120	187 [7.37]	156 [6.15]	13.3 [29.4]
160	187 [7.37]	156 [6.15]	13.3 [29.4]
200	191 [7.51]	159 [6.29]	13.7 [30.2]
230	193 [7.61]	162 [6.38]	13.8 [30.4]
260	196 [7.70]	165 [6.48]	14.1 [31.0]
300	199 [7.83]	168 [6.61]	14.4 [31.8]
350	213 [8.38]	182 [7.16]	15.5 [34.2]
375	205 [8.08]	174 [6.86]	15.0 [33.0]
470	213 [8.38]	182 [7.16]	15.5 [34.2]
540	219 [8.62]	188 [7.40]	16.1 [35.4]
750	237 [9.33]	206 [8.11]	17.5 [38.5]

► All RE series motor weights can vary ± 0.5 kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.



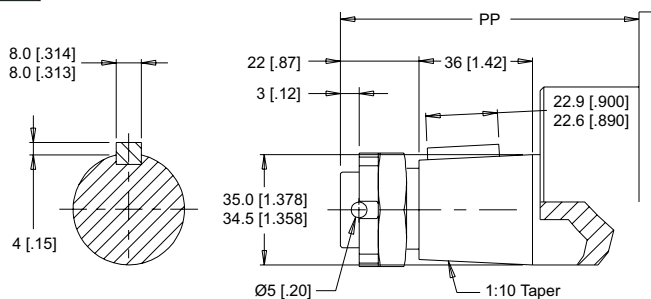
SHAFTS

27 35mm Straight



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

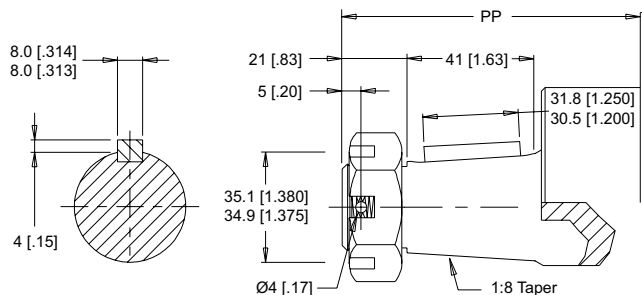
28 35mm" Tapered



► A slotted hex nut is standard on this shaft.

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

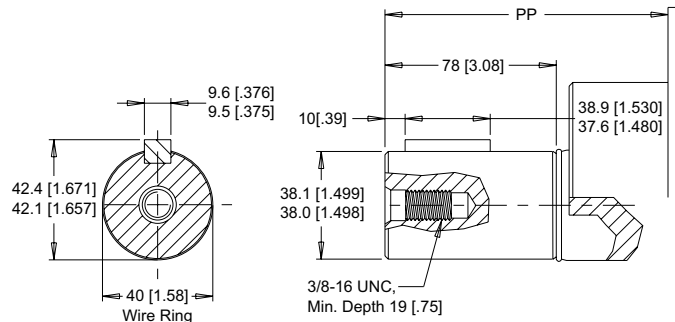
M4 1-3/8" Tapered



► A slotted hex nut is standard on this shaft.

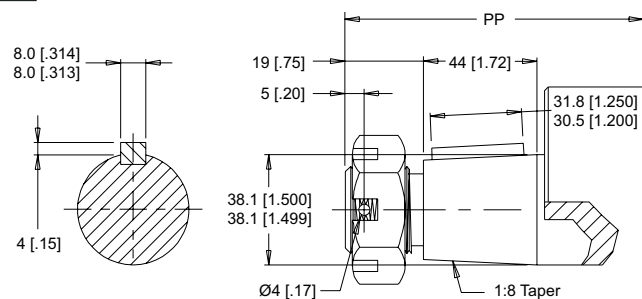
Max. Torque: 1200 Nm [10600 lb-in]

30 1-1/2" Straight



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

31 1-1/2" Tapered



► A slotted hex nut is standard on this shaft.

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

MOUNTING / SHAFT LENGTH CHART

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

► Shaft lengths vary ± 0.8 mm [0.030 in.]

PP	SAE A Mounts	Wheel Mounts
#	mm [in]	mm [in]
27	N/A	104 [3.97]
28	N/A	105 [4.14]
30	87 [3.42]	118 [4.63]
31	84 [3.32]	115 [4.53]
M4	83 [3.28]	114 [4.49]

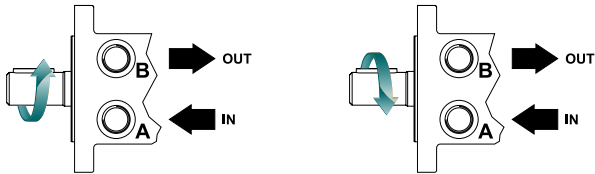


ORDERING INFORMATION

1	2	3	4	5	6	7	8							

1. CHOOSE SERIES DESIGNATION

530 Counterclockwise Rotation **531** Clockwise Rotation



► The 530 & 531 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

120	121 cm ³ /rev [7.4 in ³ /rev]	350	348 cm ³ /rev [21.2 in ³ /rev]
160	162 cm ³ /rev [9.9 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
200	204 cm ³ /rev [12.4 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
230	232 cm ³ /rev [14.2 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]		

3. SELECT A MOUNT & PORT OPTION

A51	6-Hole, SAE A Mount, Aligned Ports, 7/8-14 UNF
A58	6-Hole, SAE A Mount, Aligned Ports, G 1/2
T31	4-Hole, Wheel Mount, Aligned Ports, 7/8/14 UNF
T38	4-Hole, Wheel Mount, Aligned Ports, G 1/2
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

27	35mm Straight	31	1-1/2" Tapered
28	35mm Tapered	M4	1-3/8" Tapered
30	1-1/2" Straight		

► The 27 & 28 shafts are not available with SAE A mounts. The M4 shaft is only available with the "T" mount wheel motors.

5. SELECT A PAINT OPTION

A	Black
B	Black, Unpainted Mounting Surface
Z	No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A	None
----------	------

7. SELECT AN ADD-ON OPTION

A	Standard
B	Lock Nut
C	Solid Hex Nut

8. SELECT A MISCELLANEOUS OPTION

AA	None
AC	Freeturning Rotor
AE	Hydraulic Declutch With Freeturning Rotor

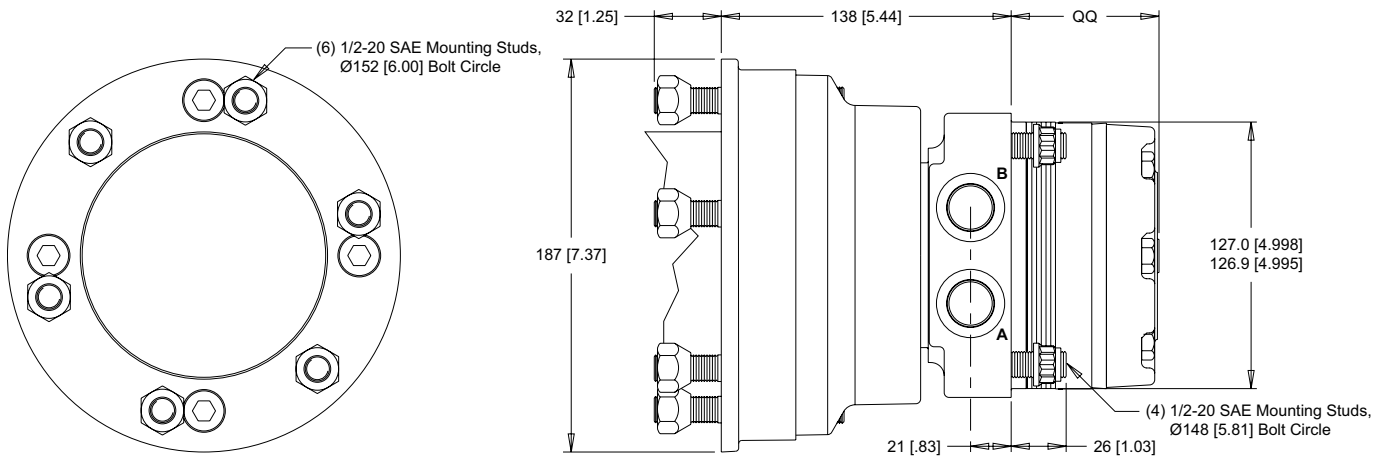


HOUSINGS

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

4-HOLE, WHEEL HUB MOUNT, ALIGNED PORTS

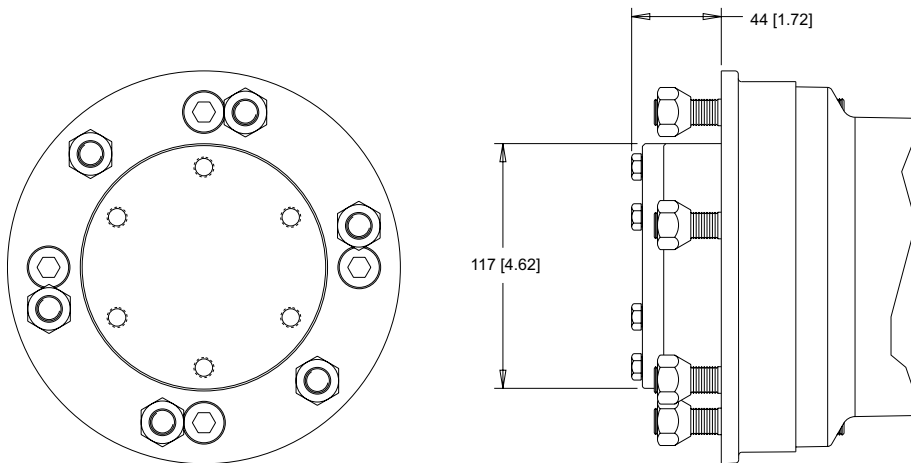
W31 7/8-14 UNF



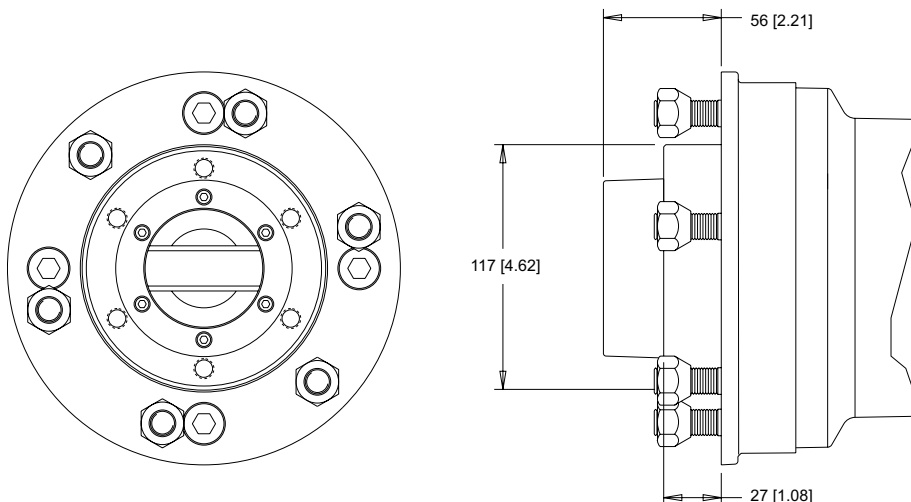
► Dimension QQ is charted on page 23.

HUB OPTION DETAILS

STANDARD HUB



LOCKING HUB



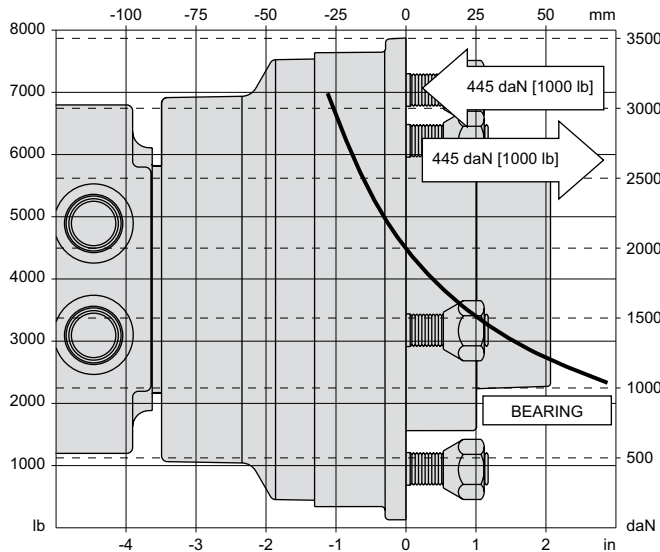


TECHNICAL INFORMATION

ALLOWABLE SHAFT LOAD / BEARING CURVE

The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an L_{10} life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table on page 11.

WHEEL HUB MOUNTS



LENGTH & WEIGHT CHART

Dimension QQ is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on page 22.

QQ #	Length mm [in]	Weight kg [lb]
120	70 [2.77]	22.3 [49.1]
160	70 [2.77]	22.3 [49.1]
200	74 [2.90]	22.6 [49.9]
230	76 [2.99]	22.7 [50.1]
260	79 [3.09]	23.0 [50.7]
300	82 [3.22]	23.4 [51.5]
350	96 [3.77]	24.4 [53.9]
375	88 [3.47]	23.9 [52.7]
470	96 [3.77]	24.4 [53.9]
540	102 [4.01]	25.0 [55.1]
750	120 [4.72]	26.4 [58.2]

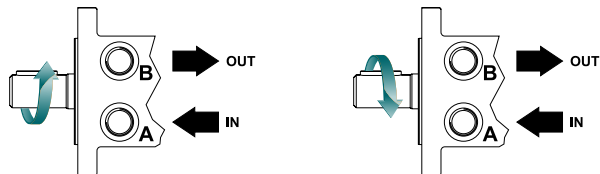
► All RE series motor weights can vary ± 0.5 kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

ORDERING INFORMATION



1. CHOOSE SERIES DESIGNATION

540 Counterclockwise Rotation **541** Clockwise Rotation



► The 540 & 541 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

120	121 cm ³ /rev [7.4 in ³ /rev]	350	348 cm ³ /rev [21.2 in ³ /rev]
160	162 cm ³ /rev [9.9 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
200	204 cm ³ /rev [12.4 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
230	232 cm ³ /rev [14.2 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]		

3. SELECT A MOUNT & PORT OPTION

W31 4-Hole, Wheel Hub Mount, Aligned Ports, 7/8-14 UNF

4. SELECT A SHAFT OPTION

61 6-Bolt Wheel Flange

5. SELECT A PAINT OPTION

A Black
Z No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A None

7. SELECT AN ADD-ON OPTION

A Standard
H Locking Hub

8. SELECT A MISCELLANEOUS OPTION

AA None
AC Freeturning Rotor
AE Hydraulic Declutch With Freeturning Rotor

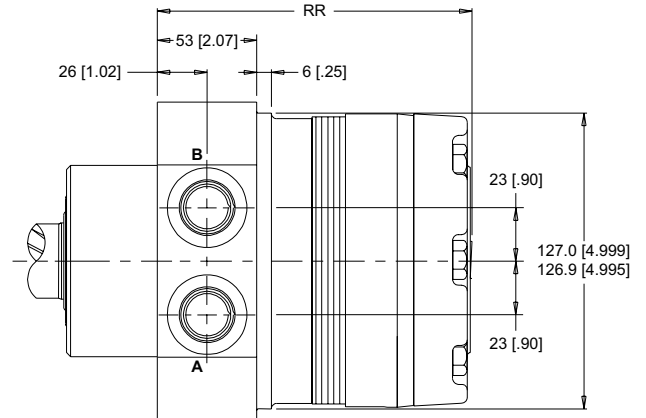
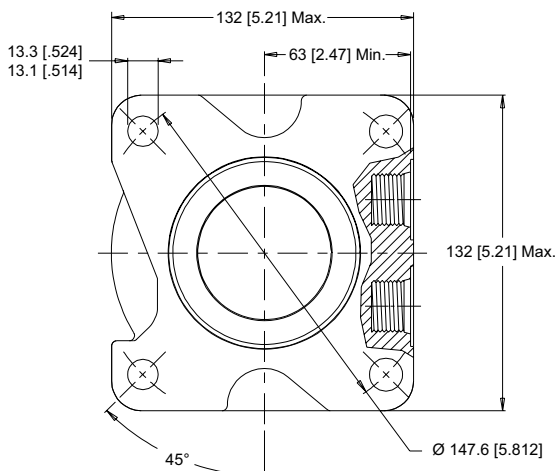
HOUSINGS

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

4-HOLE, WHEEL BRAKE MOUNT, ALIGNED PORTS

X31 7/8-14 UNF

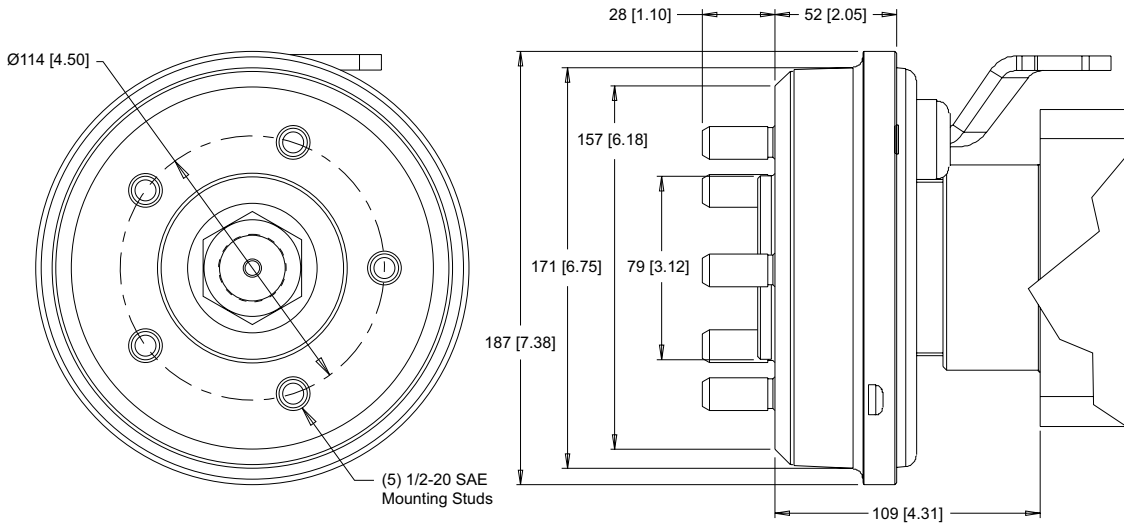
X38 G 1/2



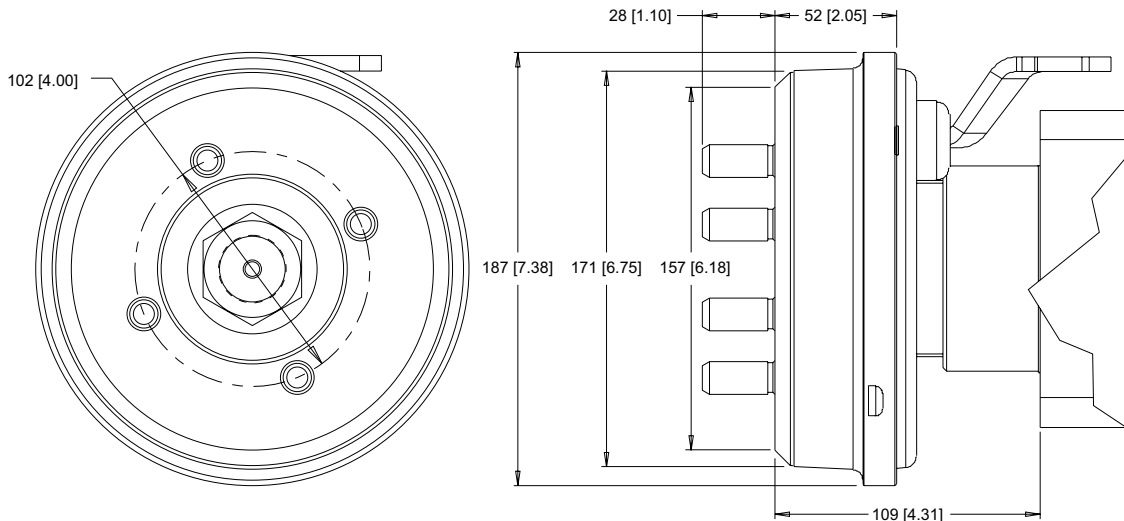
► Dimension RR is charted on page 25.

HUB OPTION DETAILS

5-BOLT, WHEEL HUB



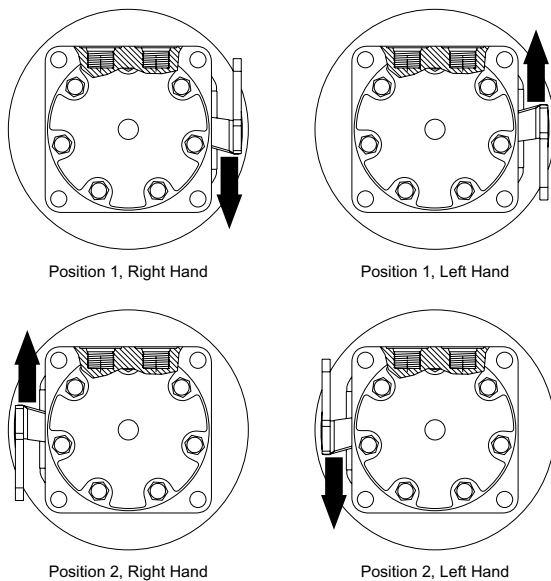
4-BOLT, WHEEL HUB



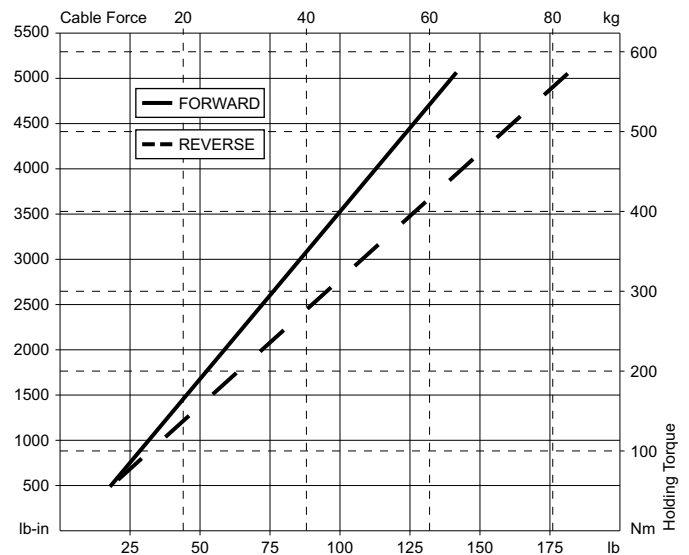


TECHNICAL INFORMATION

BRAKE LEVER POSITION & PULL DIRECTION



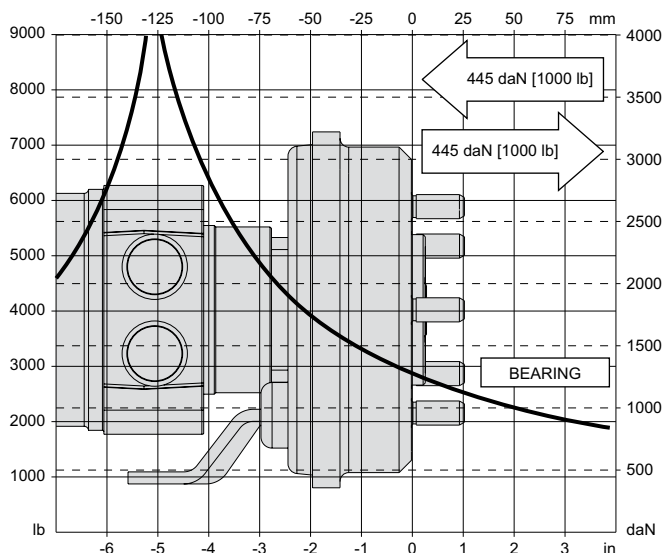
BRAKE HOLDING TORQUE



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.

MOTOR BRAKE



LENGTH & WEIGHT CHART

Dimension RR 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 24.

RR	Length	Weight
#	mm [in]	kg [lb]
120	156 [6.15]	14.9 [42.9]
160	156 [6.15]	14.9 [42.9]
200	159 [6.29]	15.2 [43.7]
230	162 [6.38]	15.3 [43.9]
260	165 [6.48]	15.6 [44.5]
300	168 [6.61]	16.0 [45.3]
350	182 [7.16]	17.1 [47.7]
375	174 [6.86]	16.5 [46.5]
470	182 [7.16]	17.1 [47.7]
540	188 [7.40]	17.6 [49.0]
750	206 [8.11]	19.0 [52.0]

► 510/511 motor/brake weights can vary ± 0.5 kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

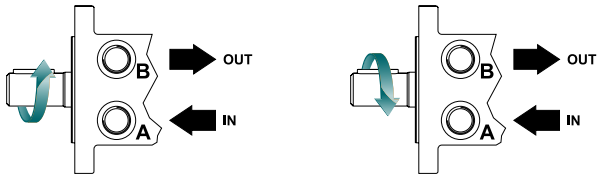


ORDERING INFORMATION

	1		2		3		4		5		6		7	8

1. CHOOSE SERIES DESIGNATION

510 Counterclockwise Rotation **511** Clockwise Rotation



► The 510 & 511 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

120	121 cm ³ /rev [7.4 in ³ /rev]	350	348 cm ³ /rev [21.2 in ³ /rev]
160	162 cm ³ /rev [9.9 in ³ /rev]	375	375 cm ³ /rev [22.8 in ³ /rev]
200	204 cm ³ /rev [12.4 in ³ /rev]	470	465 cm ³ /rev [28.3 in ³ /rev]
230	232 cm ³ /rev [14.2 in ³ /rev]	540	536 cm ³ /rev [32.7 in ³ /rev]
260	261 cm ³ /rev [15.9 in ³ /rev]	750	748 cm ³ /rev [45.6 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]		

3. SELECT A MOUNT & PORT OPTION

X31	4-Hole, Wheel Brake Mount, Aligned Ports, 7/8-14 UNF
X38	4-Hole, Wheel Brake Mount, Aligned Ports, G 1/2

4. SELECT A SHAFT OPTION

31 1-1/2" Tapered

5. SELECT A PAINT OPTION

A Black
Z No Paint

6. SELECT A VALVE CAVITY / CARTRIDGE OPTION

A None

7. SELECT AN ADD-ON OPTION

A Standard

8. SELECT A MISCELLANEOUS OPTION

YA	5 Bolt Hub, Position 2, Right Hand
YB	5 Bolt Hub, Position 2, Left Hand
YE	4 Bolt Hub, Position 2, Right Hand
YF	4 Bolt Hub, Position 2, Left Hand
ZA	5 Bolt Hub, Position 1, Left Hand
ZB	5 Bolt Hub, Position 1, Right Hand
ZE	4 Bolt Hub, Position 1, Left Hand
ZF	4 Bolt Hub, Position 1, Right Hand

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