

HYDRAULIC
MOTORS
LD | MD | HD

HYDRAULIC
MOTOR | BRAKE
UNITS

STEERING
UNITS

HYDRAULIC
BRAKES

HYDRAULIC
PUMPS

FLOW
DIVIDERS

HYDRAULIC MOTORS

Medium Duty Series



Delivering The Power To Get Work Done



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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

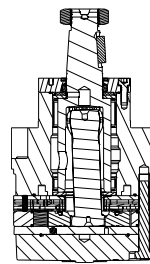
- High Pressure Shaft Seal offers superior seal life and performance and eliminates need for case drain.
- Three Bearing Options allow load carrying capability of motor to be matched to application.
- Heavy-Duty Drive Link is the most durable in its class and receives full flow lubrication to provide 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

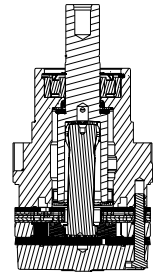
Medium-duty wheel drives, augers, mixers, winch drives, swing drives, grapple heads, feed rollers, broom drives and more

SERIES DESCRIPTIONS

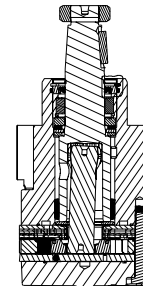
505/506 - Hydraulic Motor
Standard



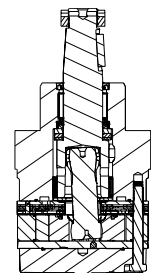
520/521 - Hydraulic Motor
With Medium Duty Bearing



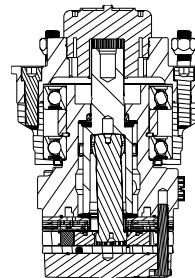
530/531 - Hydraulic Motor
With Heavy Duty Bearing



535/536 - Hydraulic Motor
Compact, Heavy Duty Bearing



540/541 - Hydraulic Motor
With Wheel Hub



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]	173 [2500]	207 [3000]
620	631 [38.5]	120	150	76 [20]	91 [24]	1014 [8976]	1291 [11421]	121 [1750]	155 [2250]	173 [2500]
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

		Pressure - bar [psi]						Max. Cont.	Max. Inter.
120		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]
121 cm ³ [7.4 in ³] / rev									
		Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	2 [0.5]	21 [187] 14	51 [448] 13	97 [859] 11	140 [1239] 8				16
	4 [1]	24 [215] 26	54 [474] 25	111 [986] 25	162 [1429] 20	225 [1991] 13			32
	8 [2]		57 [500] 58	118 [1043] 53	176 [1554] 51	226 [1997] 44	271 [2400] 40	302 [2673] 35	343 [3036] 27
	15 [4]		54 [479] 111	116 [1030] 106	186 [1642] 97	237 [2094] 93	278 [2459] 89	335 [2964] 85	359 [3179] 79
	23 [6]		49 [433] 174	116 [1023] 167	168 [1483] 155	232 [2051] 150	279 [2467] 144	328 [2903] 139	360 [3185] 137
	30 [8]			111 [984] 245	169 [1497] 214	223 [1973] 205	283 [2505] 200	326 [2884] 197	385 [3404] 188
	38 [10]			104 [923] 294	166 [1469] 281	218 [1930] 269	272 [2411] 261	325 [2878] 250	385 [3404] 242
	45 [12]			99 [872] 358	161 [1428] 344	217 [1918] 331	276 [2444] 326	321 [2839] 321	385 [3403] 304
	53 [14]			91 [807] 415	155 [1372] 413	208 [1845] 398	267 [2363] 391	338 [2992] 369	
	61 [16]			84 [745] 487	145 [1283] 475	211 [1864] 457	272 [2403] 447	327 [2897] 427	
		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☒							
		Theoretical Torque - Nm [lb-in]							
		33 [295]	67 [589]	133 [1178]	200 [1768]	266 [2357]	333 [2946]	399 [3535]	466 [4124]
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							
Rotor Width									
13.8 [.542]									
mm [in]									

		Pressure - bar [psi]						Max. Cont.	Max. Inter.
160		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]
162 cm ³ [9.9 in ³] / rev									
		Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	2 [0.5]	37 [326] 7	77 [685] 3	149 [1323] 3	223 [1977] 3	310 [2741] 2	349 [3088] 1		12
	4 [1]	30 [264] 21	80 [704] 18	164 [1448] 17	244 [2158] 16	324 [2865] 14	378 [3344] 13	442 [3909] 9	24
	8 [2]	36 [317] 45	80 [711] 43	161 [1423] 41	242 [2143] 39	316 [2792] 37	379 [3350] 35	481 [4258] 32	47
	15 [4]	39 [342] 92	75 [664] 90	171 [1510] 86	253 [2241] 84	321 [2838] 82	379 [3351] 80	451 [3992] 76	516 [4569] 72
	23 [6]		71 [631] 138	158 [1395] 134	235 [2078] 131	317 [2806] 127	389 [3447] 122	462 [4088] 121	518 [4586] 118
	30 [8]		67 [596] 186	164 [1449] 182	236 [2090] 179	312 [2760] 173	385 [3411] 170	456 [4033] 167	513 [4537] 163
	38 [10]		72 [640] 232	149 [1323] 230	234 [2074] 229	309 [2736] 222	376 [3329] 220	455 [4022] 213	522 [4623] 207
	45 [12]		67 [596] 279	144 [1275] 279	226 [1998] 272	304 [2689] 270	369 [3270] 264	440 [3890] 255	497 [4397] 247
	53 [14]			135 [1190] 326	228 [2022] 323	310 [2739] 317	375 [3317] 311	457 [4040] 304	541 [4789] 299
	61 [16]			123 [1087] 372	213 [1889] 372	298 [2634] 364	368 [3253] 361	435 [3847] 357	502 [4439] 350
Max. Inter.	68 [18]			108 [952] 419	199 [1764] 417	283 [2501] 416	362 [3201] 407	419 [3708] 401	
	76 [20]			105 [929] 466	195 [1726] 465	280 [2476] 462	349 [3092] 453	453 [4008] 443	
		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☒							
		Theoretical Torque - Nm [lb-in]							
		45 [394]	89 [788]	178 [1576]	267 [2365]	356 [3153]	445 [3941]	534 [4729]	623 [5518]
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							
Rotor Width									
13.8 [.542]									
mm [in]									

► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product testing please refer to page 7.

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 cm³ [12.4 in³] / rev									Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]	Torque - Nm [lb-in], Speed rpm									
	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
Max. Cont.	61 [16]			134 [1183] 296	253 [2242] 292	335 [2969] 284	435 [3850] 277	524 [4639] 273	598 [5292] 269	299
	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% ☒								
Theoretical Torque - Nm [lb-in]										
17.3 [682]		56 [494]	112 [987]	223 [1975]	335 [2962]	446 [3949]	558 [4936]	669 [5924]	781 [6911]	
mm [in]		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 cm³ [14.2 in³] / 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
	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% ☒								
Theoretical Torque - Nm [lb-in]										
19.7 [777]		64 [565]	128 [1131]	256 [2261]	383 [3392]	511 [4522]	639 [5653]	767 [6783]	894 [7914]	
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. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product testing please refer to page 7.

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

Max. Cont. Max. Inter.

Max. Cont.	76 [20]			201 [1204]	201 [2460]	236 [3464]	247 [4614]	240 [5628]	232 [6516]	291
				290	289	285	277	274	263	
Max. Inter.	83 [22]			132 [1168]	263 [2325]	374 [3314]	512 [5435]	615 [5442]		320
				319	319	315	311	301		
	91 [24]			82 [722]	227 [2009]	361 [3190]	496 [4386]			349
				348	347	345	340			

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

Max. Cont.	76 [20]			201 [1204]	201 [2460]	236 [3464]	247 [4614]	240 [5628]	232 [6516]	291
				290	289	285	277	274	263	
Max. Inter.	83 [22]			132 [1168]	263 [2325]	374 [3314]	512 [5435]	615 [5442]		320
				319	319	315	311	301		
	91 [24]			82 [722]	227 [2009]	361 [3190]	496 [4386]			349
				348	347	345	340			

22.1 [.872]	72 [633]	143 [1266]	286 [2532]	429 [3798]	572 [5064]	715 [6330]	858 [7596]	1001 [8861]
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Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]

Max. Cont.	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] 161	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
Max. Inter.	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
	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
	95 [25]			105 [928] 315	262 [2319] 314	434 [3838] 311	553 [4894] 294	707 [6257] 294		316

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

Max. Cont.	76 [20]		172 [1522] 251	327 [2895] 251	480 [4247] 247	611 [5410] 240	745 [6596] 232	910 [8051] 217	253
	83 [22]		144 [1276] 277	321 [2836] 276	466 [4127] 269	575 [5084] 263	732 [6474] 254		278
Max. Inter.	91 [24]		119 [1049] 302	281 [2483] 301	435 [3853] 300	559 [4943] 291	703 [6223] 280		303
	95 [25]		105 [928] 315	262 [2319] 314	434 [3838] 311	553 [4894] 307	707 [6257] 294		316

25.4 [1,000]	82 [729]	165 [1457]	329 [2914]	494 [4371]	659 [5828]	823 [7285]	988 [8742]	1152 [10199]
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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. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product testing please refer to page 7.

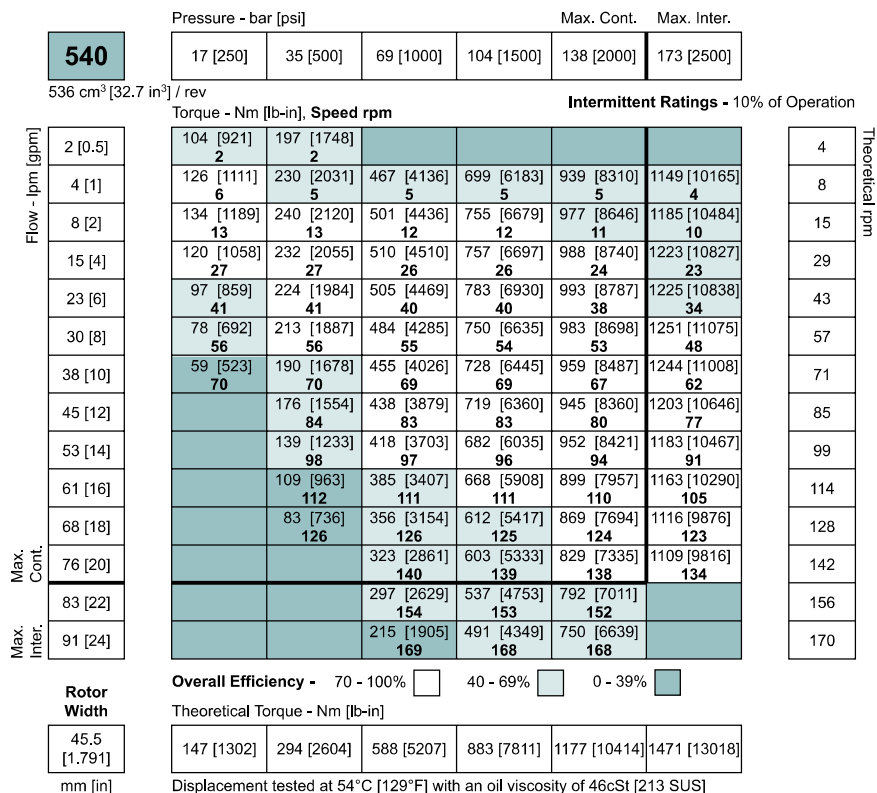
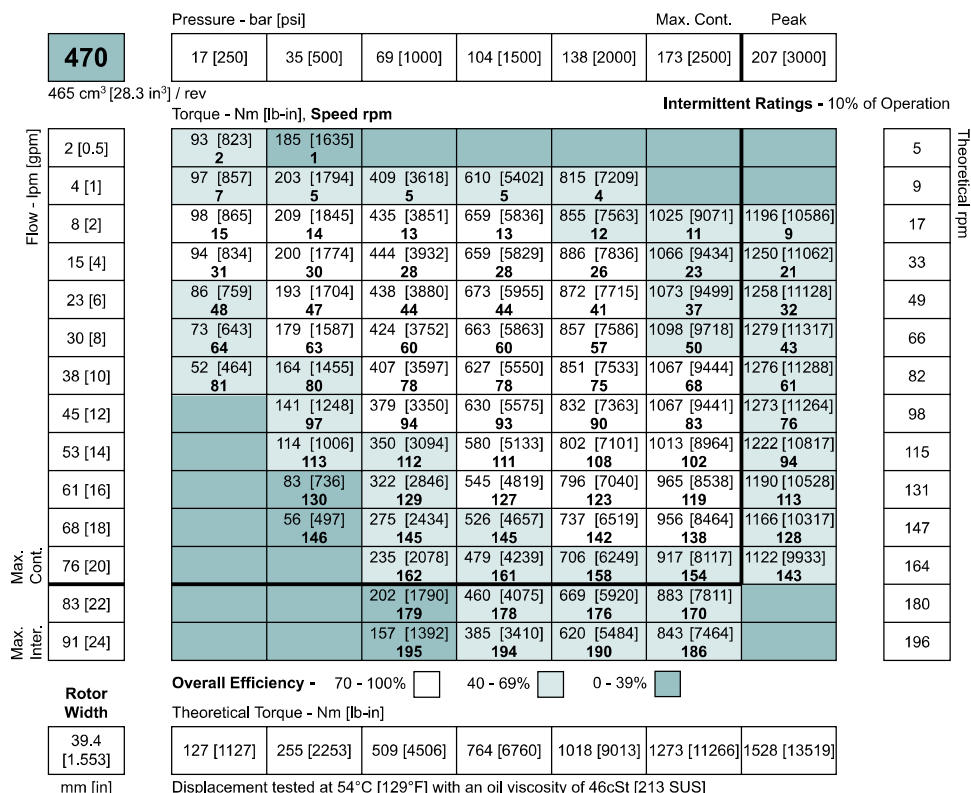
DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]							Max. Cont.	Max. Inter.
		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]	
		348 cm ³ [21.2 in ³] / rev							Intermittent Ratings - 10% of Operation	
		Torque - Nm [lb-in], Speed rpm								
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
		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐								
		Theoretical Torque - Nm [lb-in]								
		39.4 [1.553]	95 [844]	191 [1688]	381 [3376]	572 [5064]	763 [6752]	954 [8439]	1144 [10127]	1335 [11815]
		mm [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 cm ³ [22.8 in ³] / rev							Intermittent Ratings - 10% of Operation	
		Torque - Nm [lb-in], Speed rpm								
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
		Overall Efficiency - 70 - 100% ☐ 40 - 69% ☐ 0 - 39% ☐								
		Theoretical Torque - Nm [lb-in]								
		31.8 [1.252]	103 [908]	205 [1815]	410 [3631]	615 [5446]	821 [7261]	1026 [9076]	1231 [10892]	1436 [12707]
		mm [in]								
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]								

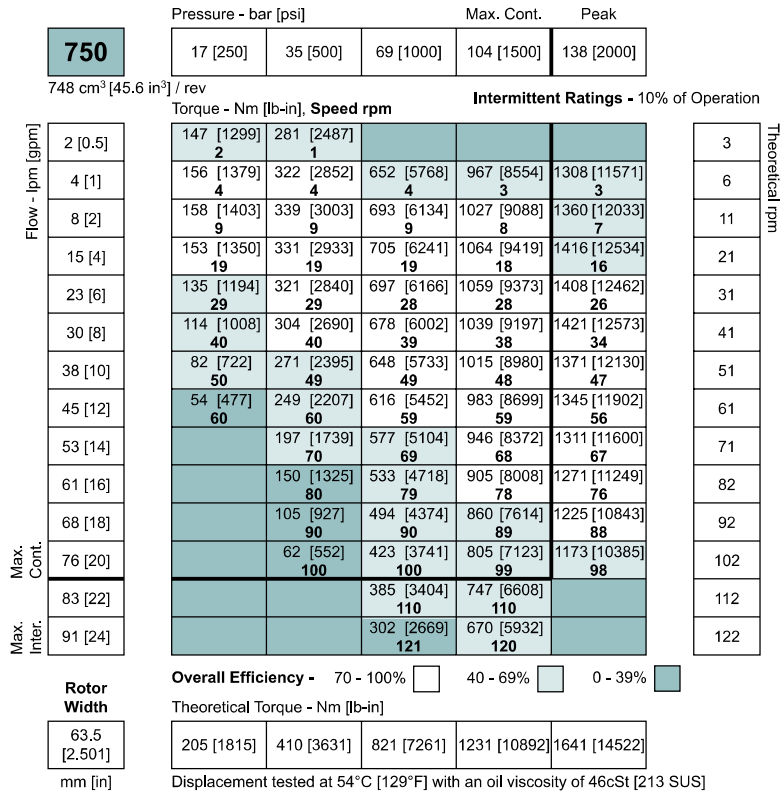
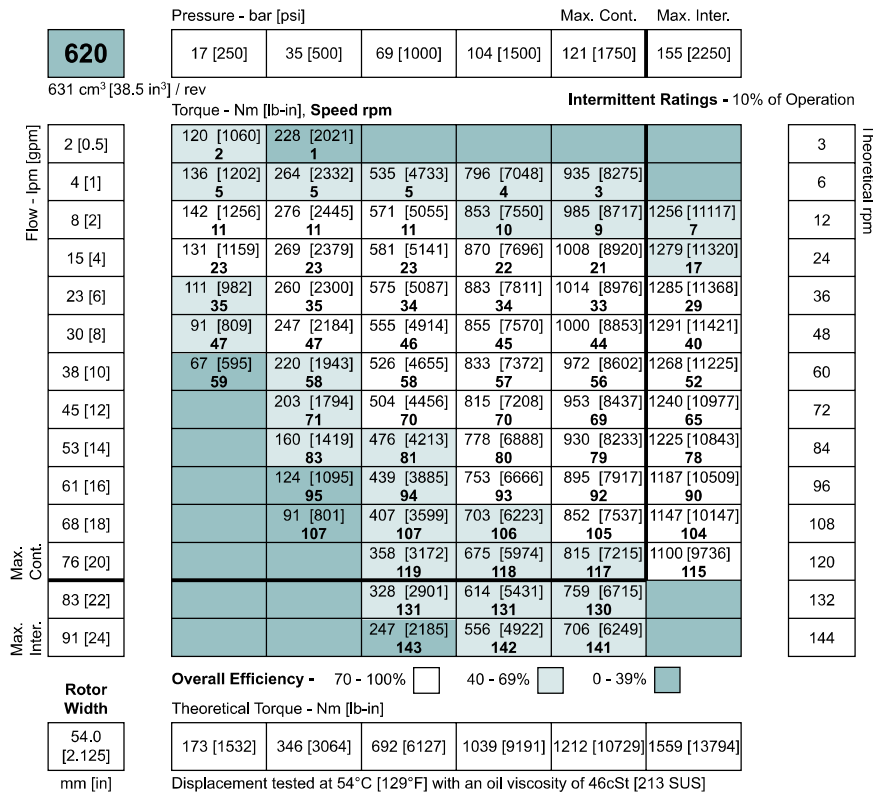
► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product testing please refer to page 7.

DISPLACEMENT PERFORMANCE



► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product testing please refer to page 7.

DISPLACEMENT PERFORMANCE



► Performance data is typical. Performance of production units varies slightly from one motor to another. Operating at maximum continuous pressure and maximum continuous flow simultaneously is not recommended. For additional information on product testing please refer to page 7.

HOUSINGS

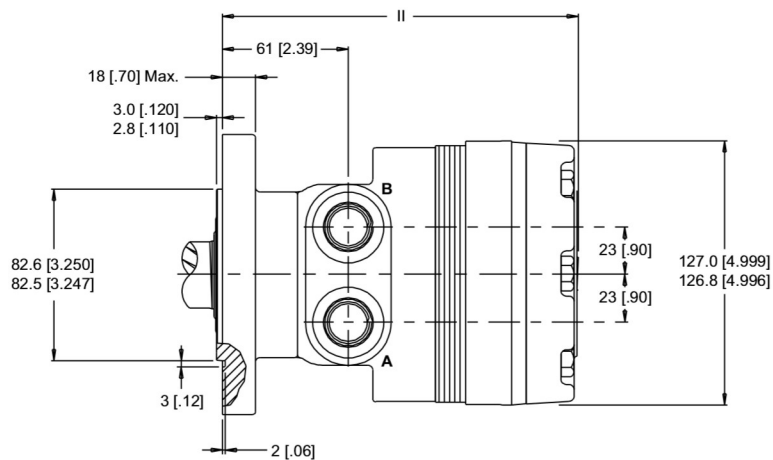
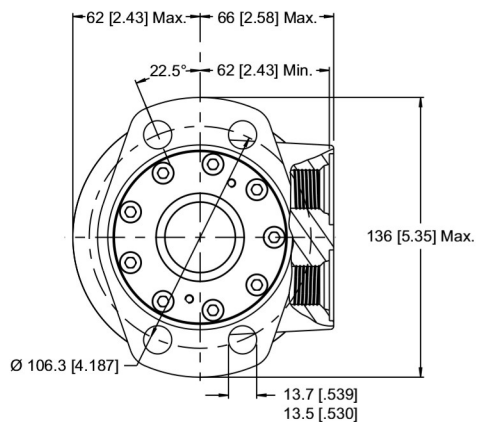
► Dimensions shown are without paint. Paint thickness can be up to 0.13 [.005].

4-HOLE, MAGNETO MOUNT, ALIGNED PORTS

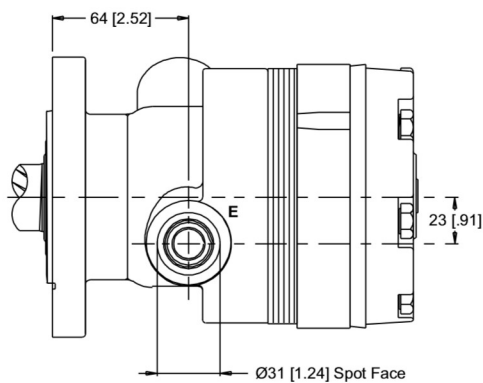
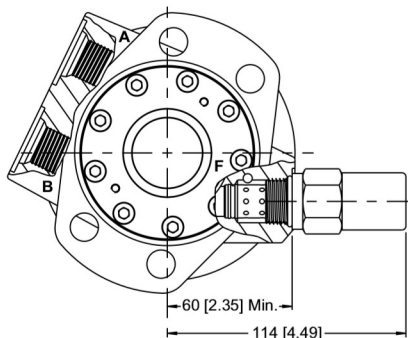
A31 7/8-14 UNF

A38 G 1/2

STANDARD



OPTIONAL VALVE CAVITY

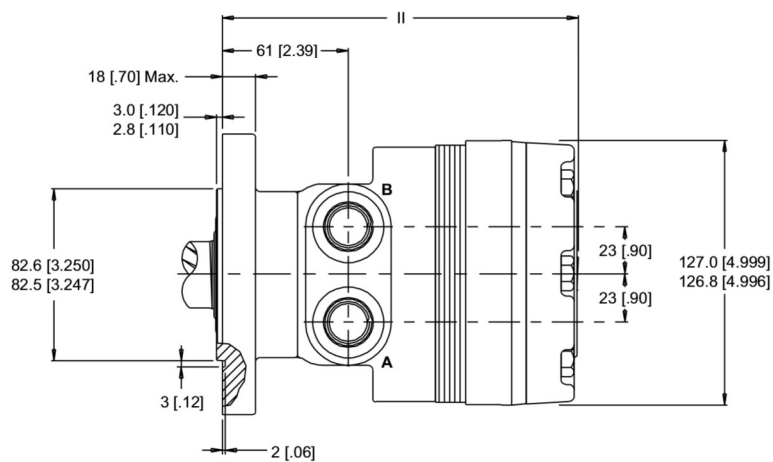
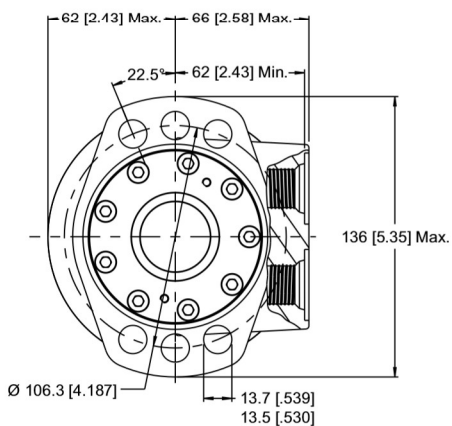


E: 10 Series/2-Way Valve Cavity 7/8-14 UNF F: Valve Cartridge Installed

6-HOLE, SAE A MOUNT, ALIGNED PORTS

A51 7/8-14 UNF

A58 G 1/2



► Dimension II is charted on page 76.

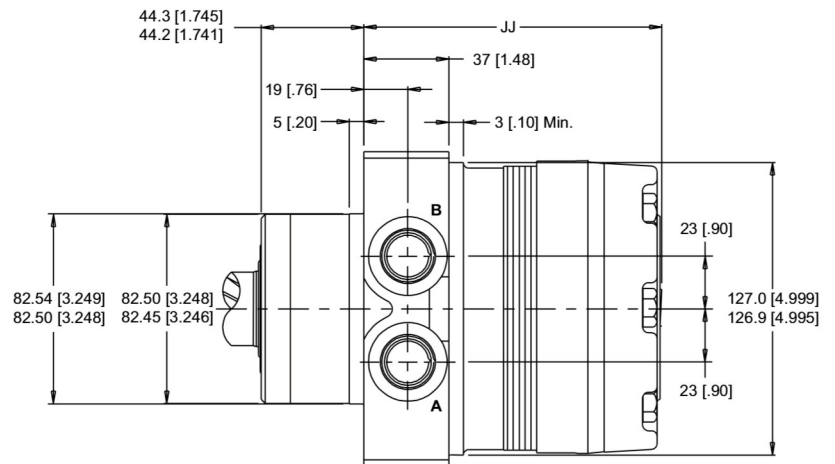
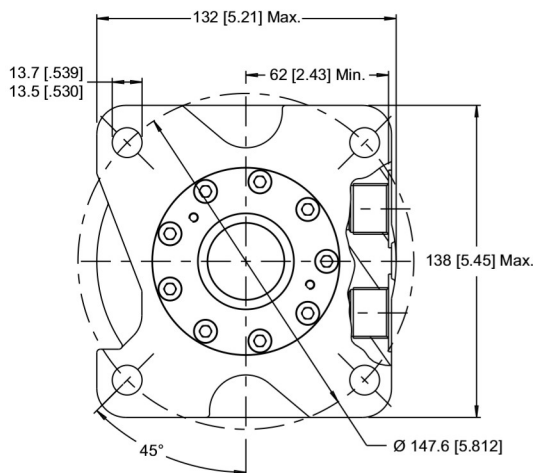
HOUSINGS

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

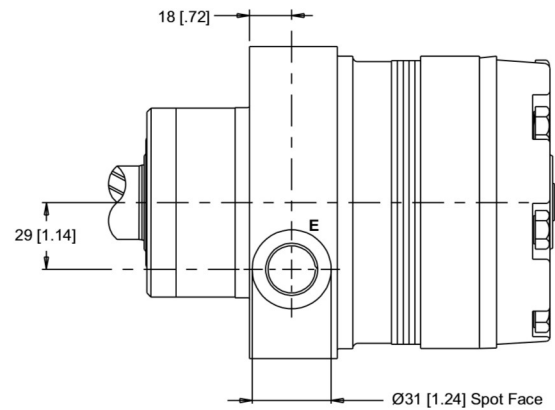
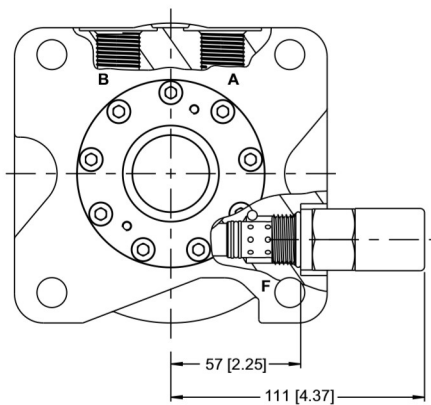
4-HOLE, WHEEL MOUNT, ALIGNED PORTS

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

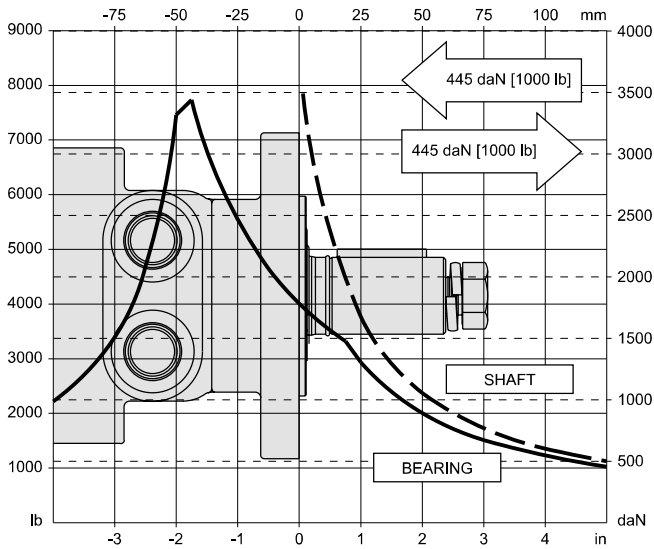
► Dimension JJ is charted on page 76.

TECHNICAL INFORMATION

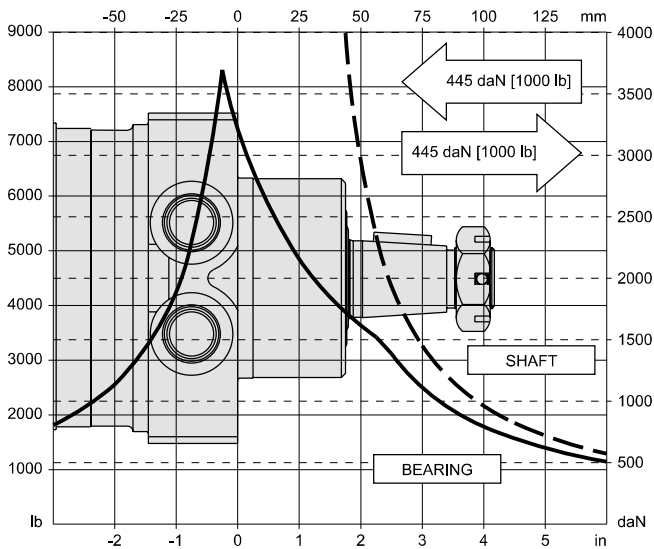
ALLOWABLE SHAFT LOAD / BEARING CURVE

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 8.

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 74 & 75.

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]
620	202 [7.95]	14.1 [30.9]
750	212 [8.33]	14.8 [32.5]

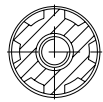
JJ	Length	Weight
#	mm [in]	kg [lb]
120	120 [4.72]	11.7 [25.8]
160	120 [4.72]	11.7 [25.8]
200	123 [4.86]	12.1 [26.6]
230	126 [4.95]	12.2 [26.8]
260	128 [5.05]	12.4 [27.4]
300	132 [5.18]	12.8 [28.2]
350	146 [5.73]	13.9 [30.6]
375	138 [5.43]	13.3 [29.4]
470	146 [5.73]	13.9 [30.6]
540	152 [5.97]	14.4 [31.8]
620	161 [6.35]	15.1 [33.4]
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.

SHAFTS

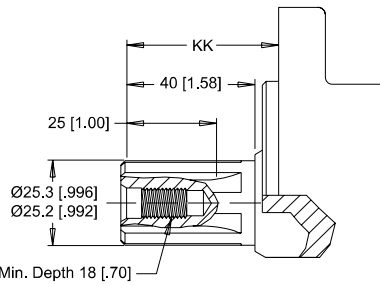
02 1" 6B Spline

6B Spline
SAE J499 Standard



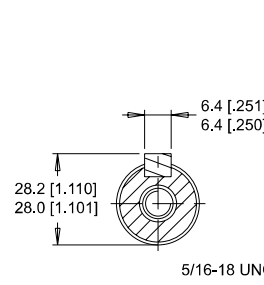
5/16-18 UNC, Min. Depth 18 [.70]

03 1" 6B Spline Extended



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

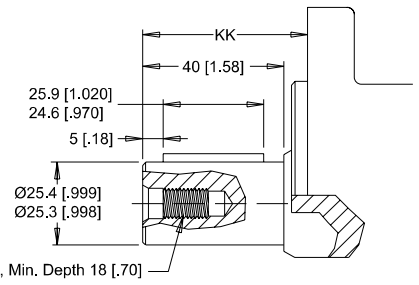
10 1" Straight



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

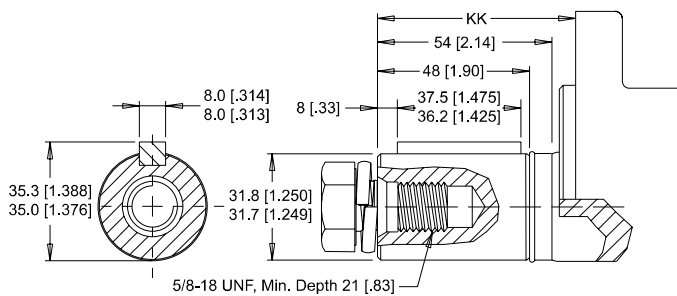
Max. Torque: 655 Nm [5800 lb-in]

15 1" Straight Extended



07 1-1/4" Straight Extended

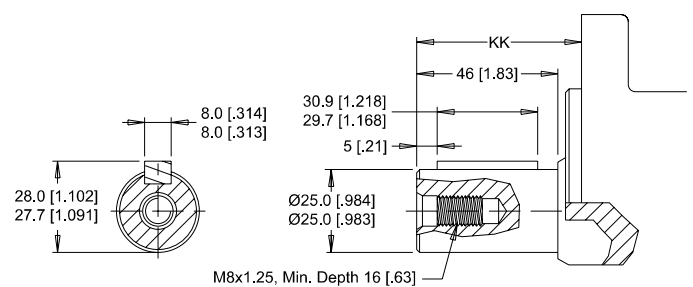
20 1-1/4" Straight



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

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

12 25mm Straight

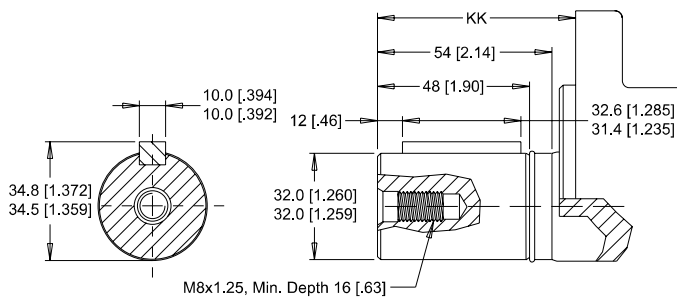


M8x1.25, Min. Depth 16 [.63]

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

08 32mm Straight Extended

21 32mm Straight

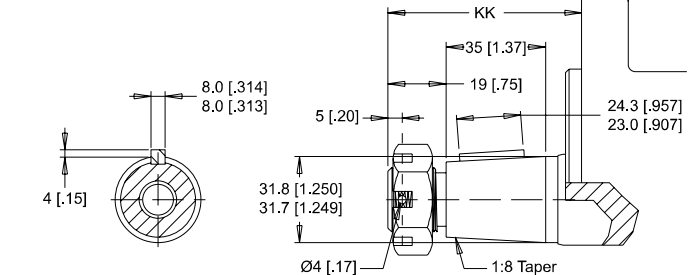


M8x1.25, Min. Depth 16 [.63]

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

22 1-1/4" Tapered

25 1-1/4" Tapered Extended



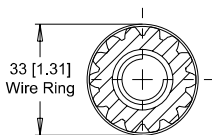
► A slotted hex nut is standard on this shaft.

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

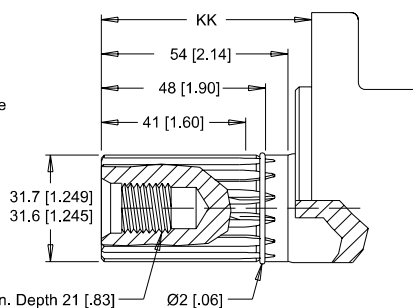
09 14 Tooth Spline Extended

23 14 Tooth Spline

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



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



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 mm [in]	Wheel Mounts 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.]

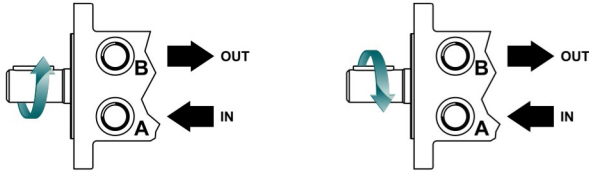
ORDERING INFORMATION

1	2	3	4	5	6	7	8								

1. CHOOSE SERIES DESIGNATION

505 Standard Rotation

506 Reverse Rotation



► The 505 & 506 series are bi-directional. 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]	620	631 cm ³ /rev [38.5 in ³ /rev]
300	300 cm ³ /rev [18.3 in ³ /rev]	750	748 cm ³ /rev [45.6 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
Z	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

DISCLAIMER

This catalog provides product options for further investigation by customers having technical expertise with respect to the use of such products. It is solely the responsibility of the customer to thoroughly analyze all aspects of the customer's application and to review the information concerning the product in the current product catalog. Due to the diversity of possible applications, the customer is solely responsible for making the final selection of the product(s) to be used and to assure that all performance, safety and warning requirements of the application are met. The customer is further solely responsible for all testing to verify acceptable life and performance of White Drive Products, Inc.'s products under actual operating conditions.

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Roller Stator® is the registered trademark (tradename) assigned to White Drive Products' patented rotor design. Found at the heart of every White Drive Products motor, this revolutionary rotor design is what sets White Drive Products motors apart from all other gerotor style hydraulic motors. Although other rotors may appear similar to the Roller Stator® design, closer examination reveals critical differences. The most important difference between White Drive Products motors and other designs lies in the profile of the rotor.

Through exhaustive analysis and testing, it was discovered that minute modifications to the profile of a standard rotor lead to increases in the life and efficiency of the motor. At any given point of rotor rotation, it is necessary for only three points on the rotor to maintain contact with the sealing rollers to isolate the high and low pressure areas of the motor from each other. Full contact by the remaining four rollers is functionally unnecessary, and robs power from the motor by producing additional friction. By making small dimensional changes to the rotor profile, measured in mere microns, the contact pressure of the rotor on the four rollers in noncritical positions was reduced, bringing about some very positive benefits to overall motor performance.

Reducing pressure on the four noncritical rollers leads to a reduction in drag, which increases the mechanical efficiency of the motor over the entire operating range, producing more usable power at the output shaft. Equally important, allowing the rollers in the noncritical sealing points to relax provides them the opportunity to rebuild the oil film, which is critical in reducing wear and extending motor life. These two key benefits give the Roller Stator® motor the technological edge over competitive designs, providing customers with motors that excel in efficiency and durability.

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