

Heizmann

Schlauchtechnik - Hydraulik - Antriebstechnik

Medium DUTY "Hydraulic Motor & Brake"

SERIES

500 -

501 -



MEDIUM DUTY
Hydraulic Motor & Brake

RE

Medium DUTY "Hydraulic Motor & Brake"

RE (All Series)

For Medium Duty Applications

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

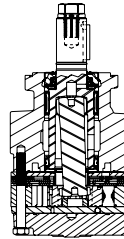
SPECIFICATIONS

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]

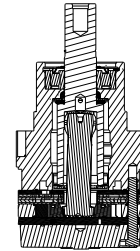
► Performance data is typical. Performance of production units varies slightly from one motor to another. Running at intermittent ratings should not exceed 10% of every minute of operation.

SERIES DESCRIPTIONS

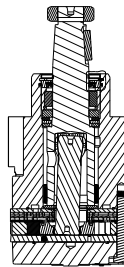
500/501 - Hydraulic Motor
Standard



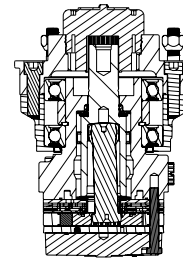
520/521 - Hydraulic Motor
With Medium Duty Bearing



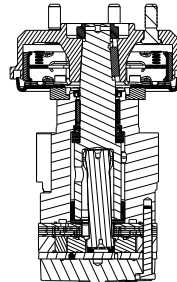
530/531 - Hydraulic Motor
With Heavy Duty Bearing



540/541 - Hydraulic Motor
With Wheel Hub



510/511 - Hydraulic Motor
With Integral Drum Brake



Medium DUTY "Hydraulic Motor & Brake"

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						Intermittent Ratings - 10% of Operation				
		Torque - Nm [lb-in], Speed rpm										
Flow - lpm [gpm]	2 [0.5]	21 [187] 14	51 [448] 13	97 [859] 11	140 [1239] 8						16	Theoretical rpm
	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		63	
	15 [4]		54 [479] 111	116 [1030] 106	186 [1642] 97	237 [2094] 93	278 [2459] 89	335 [2964] 85	359 [3179] 79		125	
	23 [6]		49 [433] 174	116 [1023] 167	168 [1483] 155	232 [2051] 150	279 [2467] 144	328 [2903] 139	360 [3185] 137		188	
	30 [8]			111 [984] 245	169 [1497] 214	223 [1973] 205	283 [2505] 200	326 [2884] 197	385 [3404] 188		250	
	38 [10]			104 [923] 294	166 [1469] 281	218 [1930] 269	272 [2411] 261	325 [2878] 250	385 [3404] 242		313	
	45 [12]			99 [872] 358	161 [1428] 344	217 [1918] 331	276 [2444] 326	321 [2839] 321	385 [3403] 304		375	
	53 [14]			91 [807] 415	155 [1372] 413	208 [1845] 398	267 [2363] 391	338 [2992] 369			438	
	61 [16]			84 [745] 487	145 [1283] 475	211 [1864] 457	272 [2403] 447	327 [2897] 427			500	
		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>										
		Rotor Width										
13.8 [542]		Theoretical Torque - Nm [lb-in]										
		33 [295]	67 [589]	133 [1178]	200 [1768]	266 [2357]	333 [2946]	399 [3535]	466 [4124]			
		mm [in]						Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]				

		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						Intermittent Ratings - 10% of Operation				
		Torque - Nm [lb-in], Speed rpm										
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	Theoretical rpm
	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	551 [4880] 28		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		94	
	23 [6]		71 [631] 138	158 [1395] 134	235 [2078] 131	317 [2806] 127	389 [3447] 122	462 [4088] 121	518 [4586] 118		140	
	30 [8]		67 [596] 186	164 [1449] 182	236 [2090] 179	312 [2760] 173	385 [3411] 170	456 [4033] 167	513 [4537] 163		187	
	38 [10]		72 [640] 232	149 [1323] 230	234 [2074] 229	309 [2736] 222	376 [3329] 220	455 [4022] 213	522 [4623] 207		234	
	45 [12]		67 [596] 279	144 [1275] 279	226 [1998] 272	304 [2689] 270	369 [3270] 264	440 [3890] 255	497 [4397] 247		280	
	53 [14]			135 [1190] 326	228 [2022] 323	310 [2739] 317	375 [3317] 311	457 [4040] 304	541 [4789] 299		327	
	61 [16]			123 [1087] 372	213 [1889] 372	298 [2634] 364	368 [3253] 361	435 [3847] 357	502 [4439] 350		374	
68 [18]			108 [952] 419	199 [1764] 417	283 [2501] 416	362 [3201] 407	419 [3708] 401			420		
76 [20]			105 [929] 466	195 [1726] 465	280 [2476] 462	349 [3092] 453	453 [4008] 443			467		
		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>										
		Rotor Width										
13.8 [542]		Theoretical Torque - Nm [lb-in]										
		45 [394]	89 [788]	178 [1576]	267 [2365]	356 [3153]	445 [3941]	534 [4729]	623 [5518]			
		mm [in]						Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]				

Medium DUTY "Hydraulic Motor & Brake"

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	63
	15 [4]		54 [479] 111	116 [1030] 106	186 [1642] 97	237 [2094] 93	278 [2459] 89	335 [2964] 85	359 [3179] 79	125
	23 [6]		49 [433] 174	116 [1023] 167	168 [1483] 155	232 [2051] 150	279 [2467] 144	328 [2903] 139	360 [3185] 137	188
	30 [8]			111 [984] 245	169 [1497] 214	223 [1973] 205	283 [2505] 200	326 [2884] 197	385 [3404] 188	250
	38 [10]			104 [923] 294	166 [1469] 281	218 [1930] 269	272 [2411] 261	325 [2878] 250	385 [3404] 242	313
	45 [12]			99 [872] 358	161 [1428] 344	217 [1918] 331	276 [2444] 326	321 [2839] 321	385 [3403] 304	375
	53 [14]			91 [807] 415	155 [1372] 413	208 [1845] 398	267 [2363] 391	338 [2992] 369		438
	61 [16]			84 [745] 487	145 [1283] 475	211 [1864] 457	272 [2403] 447	327 [2897] 427		500
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>								
13.8 [0.542]		Theoretical Torque - Nm [lb-in]								
mm [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]										

		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	551 [4880] 28	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	94
	23 [6]		71 [631] 138	158 [1395] 134	235 [2078] 131	317 [2806] 127	389 [3447] 122	462 [4088] 121	518 [4586] 118	140
	30 [8]		67 [596] 186	164 [1449] 182	236 [2090] 179	312 [2760] 173	385 [3411] 170	456 [4033] 167	513 [4537] 163	187
	38 [10]		72 [640] 232	149 [1323] 230	234 [2074] 229	309 [2736] 222	376 [3329] 220	455 [4022] 213	522 [4623] 207	234
	45 [12]		67 [596] 279	144 [1275] 279	226 [1998] 272	304 [2689] 270	369 [3270] 264	440 [3890] 255	497 [4397] 247	280
	53 [14]			135 [1190] 326	228 [2022] 323	310 [2739] 317	375 [3317] 311	457 [4040] 304	541 [4789] 299	327
	61 [16]			123 [1087] 372	213 [1889] 372	298 [2634] 364	368 [3253] 361	435 [3847] 357	502 [4439] 350	374
68 [18]			108 [952] 419	199 [1764] 417	283 [2501] 416	362 [3201] 407	419 [3708] 401		420	
76 [20]			105 [929] 466	195 [1726] 465	280 [2476] 462	349 [3092] 453	453 [4008] 443		467	
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>								
13.8 [0.542]		Theoretical Torque - Nm [lb-in]								
mm [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]										

Medium DUTY "Hydraulic Motor & Brake"

DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]						Max. Cont.	Max. Inter.
260		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]
261 cm ³ [15.9 in ³] / rev									
		Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]		49 [432] 5	112 [989] 2						
	2 [0.5]								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 [5288] 46	697 [6171] 43	59
	23 [6]	45 [397] 86	115 [1016] 83	236 [2090] 80	364 [3221] 78	497 [4398] 76	590 [5225] 71	721 [6379] 68	88
	30 [8]		94 [833] 114	227 [2008] 109	348 [3078] 109	477 [4224] 105	592 [5239] 101	692 [6128] 96	117
	38 [10]		85 [752] 145	231 [2044] 144	340 [3013] 141	470 [4155] 138	585 [5180] 133	685 [6063] 127	146
	45 [12]		78 [692] 173	217 [1919] 173	354 [3135] 168	464 [4108] 166	567 [5018] 161	672 [5945] 153	175
	53 [14]		64 [563] 202	198 [1754] 202	326 [2886] 200	445 [3941] 196	568 [5026] 184	668 [5908] 181	204
	61 [16]			182 [1608] 231	299 [2644] 229	448 [3965] 221	552 [4884] 219	651 [5763] 216	233
	68 [18]			160 [1417] 261	304 [2693] 261	417 [3690] 256	550 [4870] 247	643 [5689] 240	262
Max. Cont.	76 [20]			136 [1204] 290	278 [2460] 289	391 [3464] 285	521 [4614] 277	636 [5628] 274	291
	83 [22]			132 [1168] 319	263 [2325] 319	374 [3314] 315	512 [4535] 311	615 [5442] 301	320
Max. Inter.	91 [24]			82 [722] 348	227 [2009] 347	361 [3190] 345	496 [4386] 340		349
Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>									
Rotor Width		Theoretical Torque - Nm [lb-in]							
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.
300		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	241 [3500]
300 cm ³ [18.3 in ³] / rev									
		Torque - Nm [lb-in], Speed rpm						Intermittent Ratings - 10% of Operation	
Flow - lpm [gpm]		51 [452] 3	95 [839] 1						
	2 [0.5]								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	26
	15 [4]	66 [588] 48	145 [1281] 47	316 [2793] 45	430 [3805] 43	577 [5107] 38	680 [6015] 33	820 [7258] 28	51
	23 [6]	58 [511] 75	140 [1241] 75	290 [2566] 72	424 [3755] 69	546 [4830] 65	690 [6105] 57	801 [7088] 49	76
	30 [8]	46 [405] 100	128 [1136] 100	305 [2699] 99	391 [3460] 96	571 [5056] 87	700 [6199] 82	826 [7313] 71	101
	38 [10]		111 [981] 125	282 [2493] 124	409 [3623] 121	503 [4447] 115	683 [6043] 106	794 [7028] 98	127
	45 [12]		92 [814] 150	261 [2313] 150	388 [3435] 148	472 [4177] 143	641 [5676] 133	783 [6927] 122	152
	53 [14]		77 [684] 176	245 [2165] 175	391 [3464] 175	530 [4687] 173	661 [5848] 163	809 [7157] 151	177
	61 [16]		63 [553] 201	224 [1983] 201	366 [3243] 199	508 [4498] 192	633 [5599] 187	796 [7044] 173	202
	68 [18]			201 [1780] 225	339 [2999] 225	467 [4135] 222	666 [5898] 211	804 [7115] 199	228
	76 [20]			172 [1522] 251	327 [2895] 251	480 [4247] 247	611 [5410] 240	745 [6596] 232	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
Max. Inter.	95 [25]			105 [928] 315	262 [2319] 314	434 [3838] 311	553 [4894] 307	707 [6257] 294	316
Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>									
Rotor Width		Theoretical Torque - Nm [lb-in]							
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]									

Medium DUTY "Hydraulic Motor & Brake"

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						Intermittent Ratings - 10% of Operation				
		Torque - Nm [lb-in]						Speed rpm				
Flow - lpm [gpm]	2 [0.5]	64 [566]	134 [1183]	272 [2404]	399 [3532]							6
	4 [1]	64 [570]	134 [1189]	296 [2619]	437 [3869]							11
	8 [2]	69 [607]	145 [1285]	312 [2764]	462 [4092]	600 [5308]	742 [6571]	855 [7569]				22
	15 [4]	71 [627]	151 [1340]	313 [2767]	471 [4169]	630 [5577]	772 [6834]	889 [7869]	993 [8785]			44
	23 [6]	62 [549]	149 [1618]	315 [2788]	474 [4191]	630 [5577]	768 [6796]	925 [8182]	1032 [9137]			66
	30 [8]	64 [549]	139 [1233]	307 [2713]	459 [4058]	626 [5537]	768 [6793]	928 [8210]	1051 [9300]			88
	38 [10]	64 [549]	113 [1004]	298 [2639]	431 [3814]	601 [5317]	745 [6593]	910 [8056]	1062 [9399]			109
	45 [12]	64 [549]	98 [869]	265 [2346]	445 [3936]	581 [5144]	740 [6552]	891 [7889]	1044 [9237]			131
	53 [14]	64 [549]	86 [758]	252 [2226]	422 [3738]	570 [5044]	723 [6398]	881 [7794]	1031 [9126]			153
	61 [16]	64 [549]	63 [560]	235 [2079]	409 [3619]	549 [4859]	720 [6375]	850 [7522]	1012 [8952]			175
	68 [18]	64 [549]	63 [560]	220 [1948]	394 [3490]	571 [5054]	693 [6134]	839 [7428]	986 [8727]			197
	76 [20]	64 [549]	63 [560]	208 [1843]	375 [3320]	513 [4544]	683 [6044]	835 [7385]	975 [8632]			218
	83 [22]	64 [549]	63 [560]	179 [1583]	352 [3112]	554 [4906]	685 [6064]	813 [7198]	958 [8482]			240
	91 [24]	64 [549]	63 [560]	172 [1526]	360 [3186]	534 [4724]	666 [5890]					262
95 [25]	64 [549]	63 [560]	261 [230]	369 [3264]	529 [4682]	647 [5730]					273	
		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>										
		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]										

		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						Intermittent Ratings - 10% of Operation				
		Torque - Nm [lb-in]						Speed rpm				
Flow - lpm [gpm]	2 [0.5]	76 [674]									6	
	4 [1]	84 [745]	162 [1432]	329 [2911]	490 [4337]	639 [5652]	763 [6756]				11	
	8 [2]	82 [724]	171 [1510]	361 [3196]	537 [4754]	689 [6095]	836 [7399]	955 [8449]			21	
	15 [4]	77 [680]	163 [1439]	358 [3164]	537 [4756]	695 [6151]	857 [7587]	989 [8750]	1121 [9923]		41	
	23 [6]	67 [595]	158 [1398]	354 [3130]	527 [4661]	695 [6155]	864 [7642]	1011 [8951]	1168 [10334]		61	
	30 [8]	60 [528]	149 [1321]	340 [3010]	510 [4512]	695 [6154]	845 [7476]	1009 [8930]	1156 [10229]		82	
	38 [10]	60 [528]	134 [1187]	322 [2849]	495 [4383]	681 [6024]	836 [7399]	1007 [8913]	1157 [10235]		102	
	45 [12]	60 [528]	115 [1013]	301 [2661]	480 [4249]	645 [5711]	809 [7159]	980 [8674]	1141 [10098]		122	
	53 [14]	60 [528]	93 [819]	280 [2475]	477 [4218]	633 [5602]	795 [7036]	949 [8402]	1117 [9887]		142	
	61 [16]	60 [528]	73 [646]	261 [2314]	429 [3797]	598 [5296]	770 [6817]	934 [8267]	1085 [9605]		163	
	68 [18]	60 [528]	60 [528]	236 [2091]	434 [3843]	597 [5282]	765 [6771]	907 [8026]	1080 [9554]		183	
	76 [20]	60 [528]	60 [528]	209 [1851]	384 [3396]	561 [4969]	740 [6549]	877 [7764]	1027 [9091]		203	
	83 [22]	60 [528]	60 [528]	178 [1576]	374 [3309]	530 [4694]	696 [6160]	840 [7431]			223	
	91 [24]	60 [528]	60 [528]	141 [1246]	319 [2822]	511 [4523]	662 [5860]				244	
		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>										
		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]										

Medium DUTY "Hydraulic Motor & Brake"

DISPLACEMENT PERFORMANCE

		Pressure - bar [psi]						Max. Cont.	Peak
470		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]	207 [3000]	
		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	1196 [10586] 9	17
	15 [4]	94 [834] 31	200 [1774] 30	444 [3932] 28	659 [5829] 28	886 [7836] 26	1066 [9434] 23	1250 [11062] 21	33
	23 [6]	86 [759] 48	193 [1704] 47	438 [3880] 44	673 [5955] 44	872 [7715] 41	1073 [9499] 37	1258 [11128] 32	49
	30 [8]	73 [643] 64	179 [1587] 63	424 [3752] 60	663 [5863] 60	857 [7586] 57	1098 [9718] 50	1279 [11317] 43	66
	38 [10]	52 [464] 81	164 [1455] 80	407 [3597] 78	627 [5550] 78	851 [7533] 75	1067 [9444] 68	1276 [11288] 61	82
	45 [12]		141 [1248] 97	379 [3350] 94	630 [5575] 93	832 [7363] 90	1067 [9441] 83	1273 [11264] 76	98
	53 [14]		114 [1006] 113	350 [3094] 112	580 [5133] 111	802 [7101] 108	1013 [8964] 102	1222 [10817] 94	115
	61 [16]		83 [736] 130	322 [2846] 129	545 [4819] 127	796 [7040] 123	965 [8538] 119	1190 [10528] 113	131
	68 [18]		56 [497] 146	275 [2434] 145	526 [4657] 145	737 [6519] 142	956 [8464] 138	1166 [10317] 128	147
	76 [20]			235 [2078] 162	479 [4239] 161	706 [6249] 158	917 [8117] 154	1122 [9933] 143	164
	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. Cont.									
Max. Inter.									
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>							
		Theoretical Torque - Nm [lb-in]							
		127 [1127]	255 [2253]	509 [4506]	764 [6760]	1018 [9013]	1273 [11266]	1528 [13519]	
		mm [in]							
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							

		Pressure - bar [psi]						Max. Cont.	Max. Inter.
540		17 [250]	35 [500]	69 [1000]	104 [1500]	138 [2000]	173 [2500]		
		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					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	
	83 [22]			297 [2629] 154	537 [4753] 153	792 [7011] 152		156	
	91 [24]			215 [1905] 169	491 [4349] 168	750 [6639] 168		170	
Max. Cont.									
Max. Inter.									
Rotor Width		Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/>							
		Theoretical Torque - Nm [lb-in]							
		147 [1302]	294 [2604]	588 [5207]	883 [7811]	1177 [10414]	1471 [13018]		
		mm [in]							
		Displacement tested at 54°C [129°F] with an oil viscosity of 46cSt [213 SUS]							

Medium DUTY "Hydraulic Motor & Brake"

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

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

Rotor Width

63.5 [2.501]	205 [1815]	410 [3631]	821 [7261]	1231 [10892]	1641 [14522]
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mm [in]

Theoretical Torque - Nm [lb-in]

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

Medium DUTY "Hydraulic Motor & Brake"

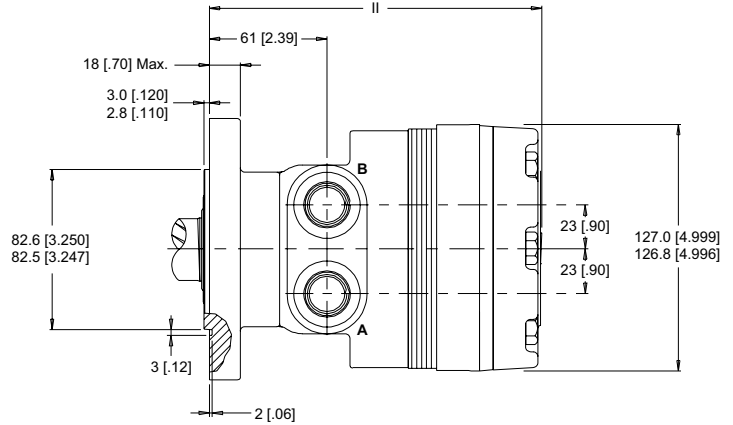
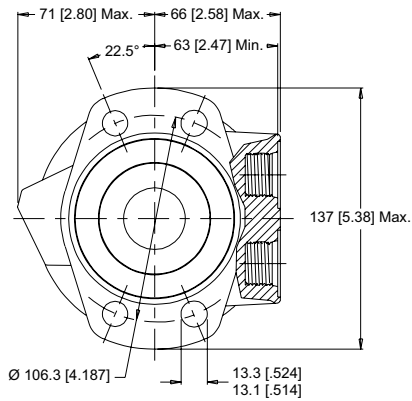
HOUSINGS

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

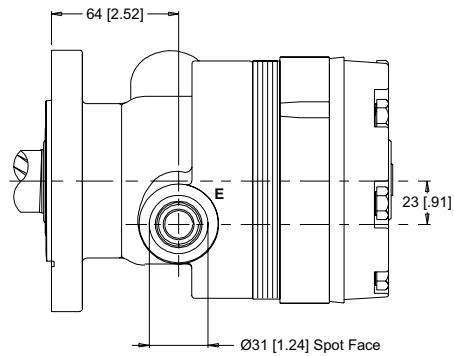
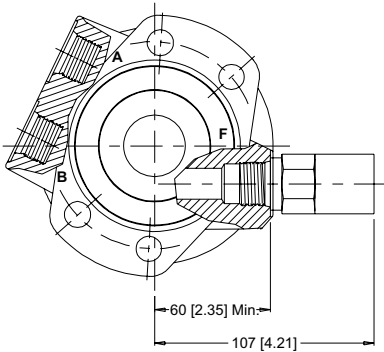
4-HOLE, MAGNETO MOUNT, ALIGNED PORTS

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

STANDARD



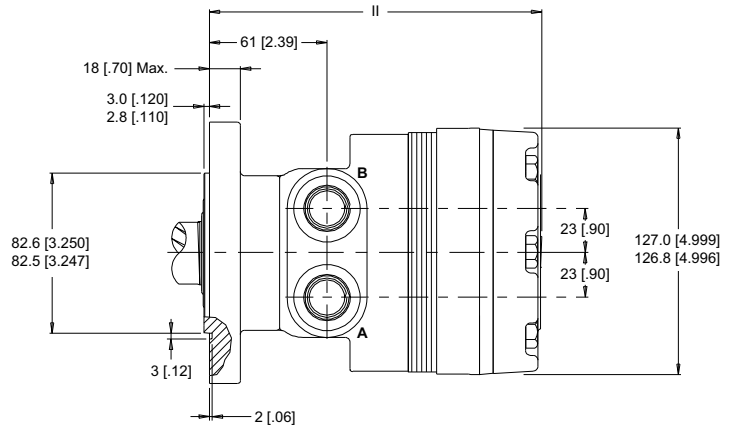
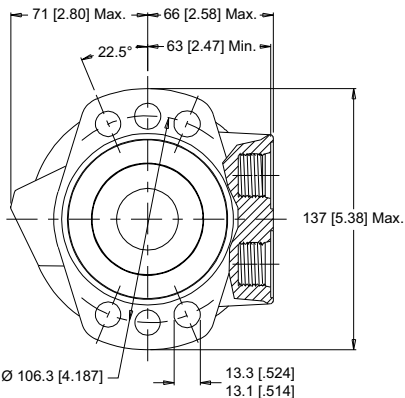
OPTIONAL VALVE CAVITY



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.

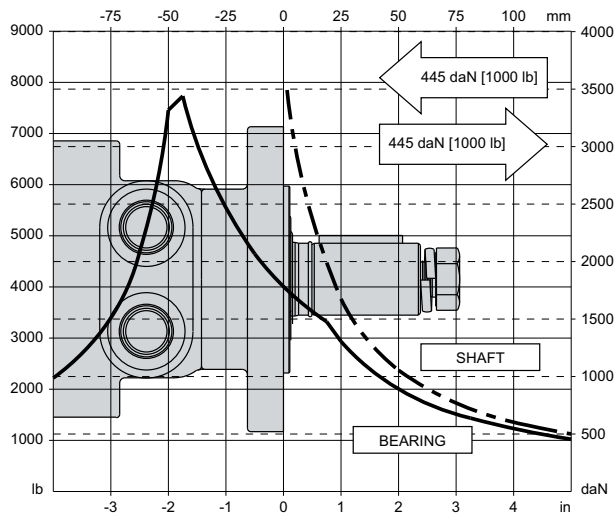
Medium DUTY "Hydraulic Motor & Brake"

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



LENGTH & WEIGHT CHART

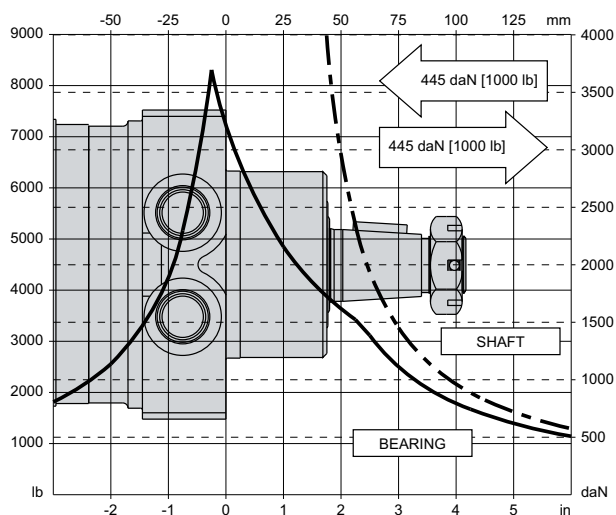
Dimensions II & JJ are the overall motor lengths from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on pages 9 & 10.

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.

WHEEL MOUNTS



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		

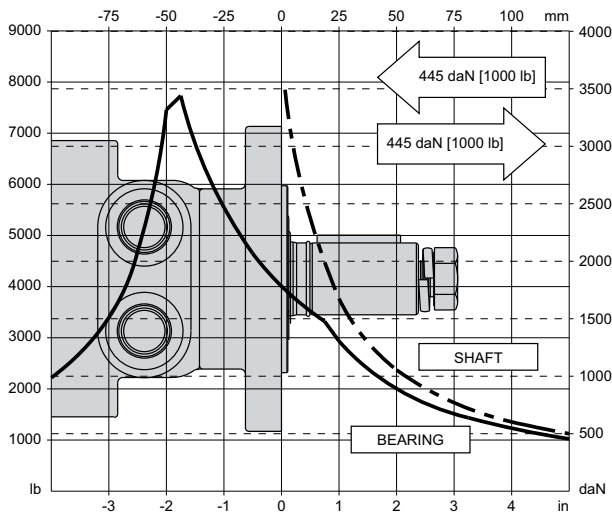
Medium DUTY "Hydraulic Motor & Brake"

TECHNICAL INFORMATION

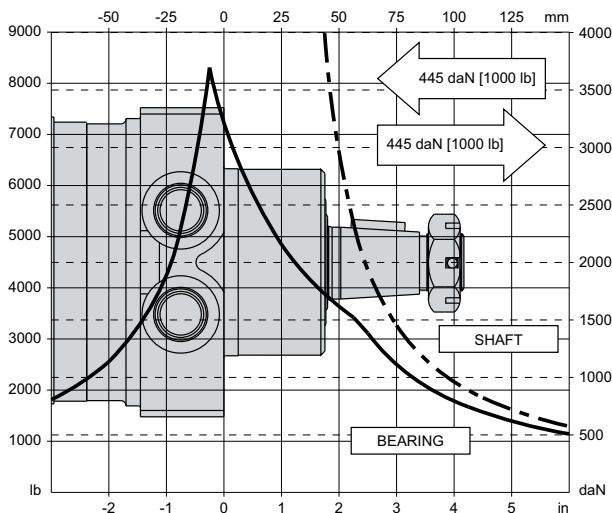
ALLOWABLE SHAFT LOAD / BEARING CURVE

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		

Medium DUTY "Hydraulic Motor & Brake"

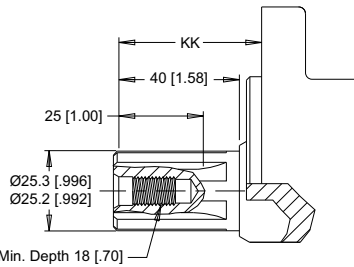
SHAFTS

02 1" 6B Spline

6B Spline
SAE J499 Standard

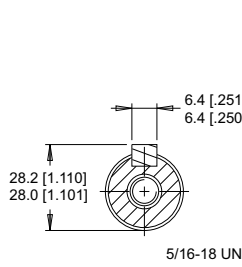


03 1" 6B Spline Extended



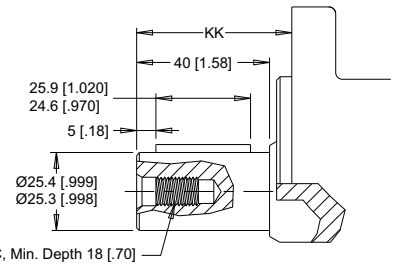
Max. Torque: 678 Nm [6000 lb-in]

10 1" Straight

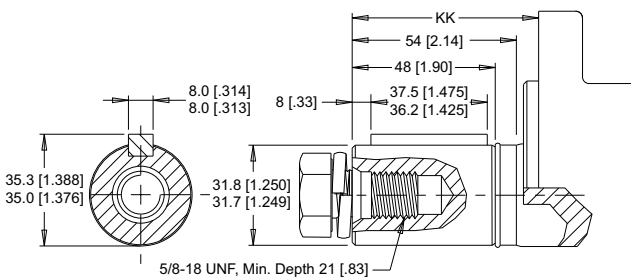


Max. Torque: 655 Nm [5800 lb-in]

15 1" Straight Extended



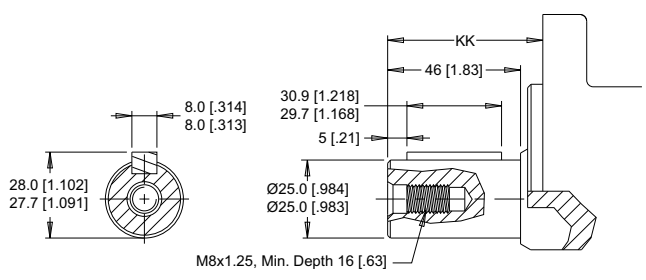
07 1-1/4" Straight Extended



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

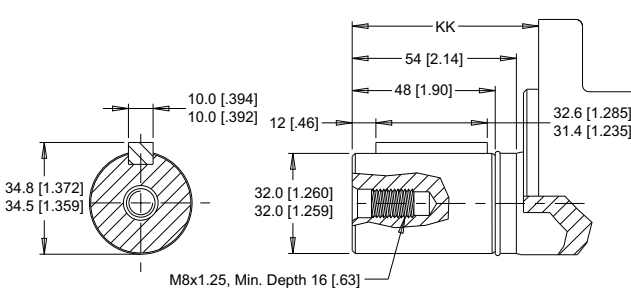
20 1-1/4" Straight

12 25mm Straight



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

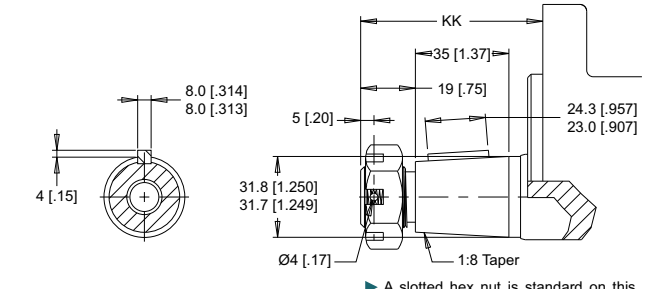
08 32mm Straight Extended



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

21 32mm Straight

22 1-1/4" Tapered



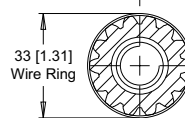
Max. Torque: 1200 Nm [10600 lb-in]

25 1-1/4" Tapered Extended

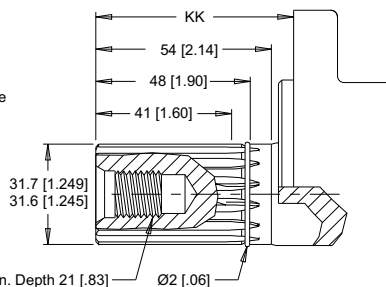
► A slotted hex nut is standard on this shaft.

09 14 Tooth Spline Extended

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



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 [5.28]

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

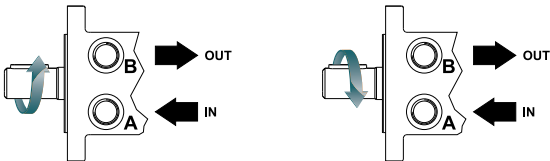
Medium DUTY "Hydraulic Motor & Brake"

ORDERING INFORMATION



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