



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

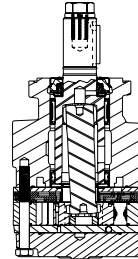
**SPECIFICATIONS**

| CODE | Displacement<br>cm <sup>3</sup> [in <sup>3</sup> /rev] | Max. Speed<br>rpm |        | Max. Flow<br>lpm [gpm] |         | Max. Torque<br>Nm [lb-in] |              | Max. Pressure<br>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] |

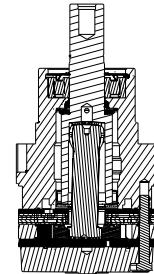
► Performance data is typical. Performance of production units varies slightly from one motor to another. Running at intermittent ratings should not exceed 10% of every minute of operation.

**SERIES DESCRIPTIONS**

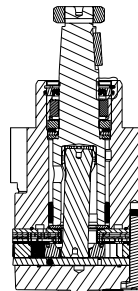
**500/501** - Hydraulic Motor  
*Standard*



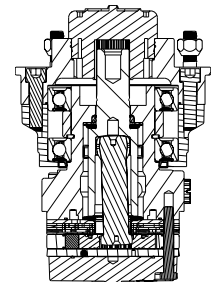
**520/521** - Hydraulic Motor  
*With Medium Duty Bearing*



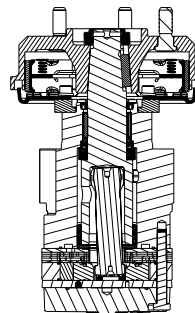
**530/531** - Hydraulic Motor  
*With Heavy Duty Bearing*



**540/541** - Hydraulic Motor  
*With Wheel Hub*



**510/511** - Hydraulic Motor  
*With Integral Drum Brake*





**DISPLACEMENT PERFORMANCE**

|  |             |                                       |                 |                   |                   |  |                   |   |                   |            |  |            |  |            |  |
|--|-------------|---------------------------------------|-----------------|-------------------|-------------------|--|-------------------|---|-------------------|------------|--|------------|--|------------|--|
| <b>120</b>                                       |             | Pressure - bar [psi]                  |                 |                   |                   |  |                   | Max. Cont.                              | Max. Inter.       |            |  |            |  |            |  |
|  |             | 17 [250]                              | 35 [500]        | 69 [1000]         | 104 [1500]        | 138 [2000]   | 173 [2500]        | 207 [3000]                              | 241 [3500]        |            |  |            |  |            |  |
| 121 cm <sup>3</sup> [7.4 in <sup>3</sup> ] / rev |             |                                       |                 |                   |                   |  |                   |   |                   |            |  |            |  |            |  |
| Flow - lpm [gpm]                                 |             | Torque - Nm [lb-in], <b>Speed rpm</b> |                 |                   |                   |  |                   | Intermittent Ratings - 10% of Operation |                   |            |  |            |  |            |  |
|  |             | 21 [187]<br>14                        | 51 [448]<br>13  | 97 [859]<br>11    | 140 [1239]<br>8   |  |                   |   |                   | 16         |  |            |  |            |  |
| Max. Cont.                                       | 4 [1]       | 24 [215]<br>26                        | 54 [474]<br>25  | 111 [986]<br>25   | 162 [1429]<br>20  | 225 [1991]<br>13   |                   |   | 32                |            |  |            |  |            |  |
|  | 8 [2]       |                                       | 57 [500]<br>58  | 118 [1043]<br>53  | 176 [1554]<br>51  | 226 [1997]<br>44   | 271 [2400]<br>40  | 302 [2673]<br>35                        | 343 [3036]<br>27  | 63         |  |            |  |            |  |
|  | 15 [4]      |                                       | 54 [479]<br>111 | 116 [1030]<br>106 | 186 [1642]<br>97  | 237 [2094]<br>93   | 278 [2459]<br>89  | 335 [2964]<br>85                        | 359 [3179]<br>79  | 125        |  |            |  |            |  |
|  | 23 [6]      |                                       | 49 [433]<br>174 | 116 [1023]<br>167 | 168 [1483]<br>155 | 232 [2051]<br>150  | 279 [2467]<br>144 | 328 [2903]<br>139                       | 360 [3185]<br>137 | 188        |  |            |  |            |  |
|  | 30 [8]      |                                       |                 | 111 [984]<br>245  | 169 [1497]<br>214 | 223 [1973]<br>205  | 283 [2505]<br>200 | 326 [2884]<br>197                       | 385 [3404]<br>188 | 250        |  |            |  |            |  |
|  | 38 [10]     |                                       |                 | 104 [923]<br>294  | 166 [1469]<br>281 | 218 [1930]<br>269  | 272 [2411]<br>261 | 325 [2878]<br>250                       | 385 [3404]<br>242 | 313        |  |            |  |            |  |
|  | 45 [12]     |                                       |                 | 99 [872]<br>358   | 161 [1428]<br>344 | 217 [1918]<br>331  | 276 [2444]<br>326 | 321 [2839]<br>321                       | 385 [3403]<br>304 | 375        |  |            |  |            |  |
|  | 53 [14]     |                                       |                 | 91 [807]<br>415   | 155 [1372]<br>413 | 208 [1845]<br>398  | 267 [2363]<br>391 | 338 [2992]<br>369                       |                   | 438        |  |            |  |            |  |
|  | 61 [16]     |                                       |                 | 84 [745]<br>487   | 145 [1283]<br>475 | 211 [1864]<br>457  | 272 [2403]<br>447 | 327 [2897]<br>427                       |                   | 500        |  |            |  |            |  |
|  | Rotor Width | 13.8 [542]                            |                 | mm [in]           |                   | Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/> |                   | 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]

|  |            |                                       |                  |                   |  |                   |                                 |   |                   |     |            |  |            |  |            |
|--|------------|---------------------------------------|------------------|-------------------|--|-------------------|---------------------------------|---|-------------------|-----|------------|--|------------|--|------------|
| <b>160</b>                                       |            | Pressure - bar [psi]                  |                  |                   |  |                   |                                 | Max. Cont.                              | Max. Inter.       |     |            |  |            |  |            |
|  |            | 17 [250]                              | 35 [500]         | 69 [1000]         | 104 [1500]   | 138 [2000]        | 173 [2500]                      | 207 [3000]                              | 241 [3500]        |     |            |  |            |  |            |
| 162 cm <sup>3</sup> [9.9 in <sup>3</sup> ] / rev |            |                                       |                  |                   |  |                   |                                 |   |                   |     |            |  |            |  |            |
| Flow - lpm [gpm]                                 |            | Torque - Nm [lb-in], <b>Speed rpm</b> |                  |                   |  |                   |                                 | Intermittent Ratings - 10% of Operation |                   |     |            |  |            |  |            |
|  |            | 37 [326]<br>7                         | 77 [685]<br>3    | 149 [1323]<br>3   | 223 [1977]<br>3  | 310 [2741]<br>2   | 349 [3088]<br>1                 |   |                   | 12  |            |  |            |  |            |
| Max. Cont.                                       | 4 [1]      | 30 [264]<br>21                        | 80 [704]<br>18   | 164 [1448]<br>17  | 244 [2158]<br>16   | 324 [2865]<br>14  | 378 [3344]<br>13                | 442 [3909]<br>9                         |                   | 24  |            |  |            |  |            |
|  | 8 [2]      | 36 [317]<br>45                        | 80 [711]<br>43   | 161 [1423]<br>41  | 242 [2143]<br>39   | 316 [2792]<br>37  | 379 [3350]<br>35                | 481 [4258]<br>32                        | 551 [4880]<br>28  | 47  |            |  |            |  |            |
|  | 15 [4]     | 39 [342]<br>92                        | 75 [664]<br>90   | 171 [1510]<br>86  | 253 [2241]<br>84   | 321 [2838]<br>82  | 379 [3351]<br>80                | 451 [3992]<br>76                        | 516 [4569]<br>72  | 94  |            |  |            |  |            |
|  | 23 [6]     |                                       | 71 [631]<br>138  | 158 [1395]<br>134 | 235 [2078]<br>131  | 317 [2806]<br>127 | 389 [3447]<br>122               | 462 [4088]<br>121                       | 518 [4586]<br>118 | 140 |            |  |            |  |            |
|  | 30 [8]     |                                       | 67 [596]<br>186  | 164 [1449]<br>182 | 236 [2090]<br>179  | 312 [2760]<br>173 | 385 [3411]<br>170               | 456 [4033]<br>167                       | 513 [4537]<br>163 | 187 |            |  |            |  |            |
|  | 38 [10]    |                                       | 72 [640]<br>232  | 149 [1323]<br>230 | 234 [2074]<br>229  | 309 [2736]<br>222 | 376 [3329]<br>220               | 455 [4022]<br>213                       | 522 [4623]<br>207 | 234 |            |  |            |  |            |
|  | 45 [12]    |                                       | 67 [596]<br>279  | 144 [1275]<br>279 | 226 [1998]<br>272  | 304 [2689]<br>270 | 369 [3270]<br>264               | 440 [3890]<br>255                       | 497 [4397]<br>247 | 280 |            |  |            |  |            |
|  | 53 [14]    |                                       |                  | 135 [1190]<br>326 | 228 [2022]<br>323  | 310 [2739]<br>317 | 375 [3317]<br>311               | 457 [4040]<br>304                       | 541 [4789]<br>299 | 327 |            |  |            |  |            |
|  | 61 [16]    |                                       |                  | 123 [1087]<br>372 | 213 [1889]<br>372  | 298 [2634]<br>364 | 368 [3253]<br>361               | 435 [3847]<br>357                       | 502 [4439]<br>350 | 374 |            |  |            |  |            |
|  | 68 [18]    |                                       |                  | 108 [952]<br>419  | 199 [1764]<br>417  | 283 [2501]<br>416 | 362 [3201]<br>407               | 419 [3708]<br>401                       |                   | 420 |            |  |            |  |            |
| 76 [20]  |            |                                       | 105 [929]<br>466 | 195 [1726]<br>465 | 280 [2476]<br>462  | 349 [3092]<br>453 | 453 [4008]<br>443               |   | 467               |     |            |  |            |  |            |
| Rotor Width                                      | 13.8 [542] |                                       | mm [in]          |                   | Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/> |                   | 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]

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

**DISPLACEMENT PERFORMANCE**

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

|  |            |   |                |                   |                   |   |                   |                   |                   |                 |                   |     |
|--|------------|---|----------------|-------------------|-------------------|---|-------------------|-------------------|-------------------|-----------------|-------------------|-----|
| <b>230</b>   |            | Pressure - bar [psi]  |                |                   |                   |   |                   | Max. Cont.        | Max. Inter.       |                 |                   |     |
|  |            | 17 [250]  | 35 [500]       | 69 [1000]         | 104 [1500]        | 138 [2000]                              | 173 [2500]        | 207 [3000]        | 241 [3500]        |                 |                   |     |
| 233 cm <sup>3</sup> [14.2 in <sup>3</sup> ] / rev                            |            |   |                |                   |                   |   |                   |                   |                   |                 |                   |     |
| Torque - Nm [lb-in], <b>Speed rpm</b>  |            |   |                |                   |                   | Intermittent Ratings - 10% of Operation |                   |                   |                   |                 |                   |     |
| Flow - lpm [gpm]   | Max. Cont. | 2 [0.5]   | 45 [397]<br>6  | 92 [813]<br>4     | 184 [1628]<br>3   | 293 [2590]<br>2                         | 375 [3323]<br>1   |                   | 9                 | Theoretical rpm |                   |     |
|  |            | 4 [1]   | 48 [429]<br>14 | 101 [890]<br>12   | 223 [1972]<br>11  | 316 [2793]<br>11                        | 414 [3660]<br>9   | 493 [4366]<br>7   | 560 [4955]<br>4   |                 | 17                |     |
|  |            | 8 [2]   | 51 [453]<br>30 | 105 [926]<br>27   | 215 [1899]<br>25  | 329 [2911]<br>25                        | 425 [3760]<br>23  | 524 [4637]<br>20  | 618 [5468]<br>17  |                 | 710 [6286]<br>12  | 33  |
|  |            | 15 [4]  | 43 [384]<br>63 | 108 [960]<br>59   | 209 [1851]<br>55  | 326 [2884]<br>54                        | 435 [3846]<br>52  | 539 [4771]<br>47  | 655 [5799]<br>42  |                 | 721 [6381]<br>39  | 66  |
|  |            | 23 [6]  |                | 102 [603]<br>93   | 213 [1889]<br>88  | 339 [3001]<br>85                        | 428 [3789]<br>82  | 536 [4747]<br>77  | 628 [5559]<br>73  |                 | 718 [6355]<br>69  | 98  |
|  |            | 30 [8]  |                | 89 [789]<br>127   | 207 [1830]<br>122 | 316 [2793]<br>120                       | 425 [3762]<br>115 | 521 [4612]<br>110 | 639 [5653]<br>107 |                 | 717 [6341]<br>98  | 131 |
|  |            | 38 [10]   |                | 78 [690]<br>161   | 198 [1750]<br>157 | 311 [2752]<br>151                       | 436 [3856]<br>148 | 527 [4660]<br>143 | 612 [5420]<br>140 |                 | 703 [6218]<br>132 | 163 |
|  |            | 45 [12]   |                |                   | 189 [1669]<br>191 | 296 [2624]<br>186                       | 425 [3764]<br>182 | 510 [4517]<br>176 | 599 [5304]<br>170 |                 | 689 [6098]<br>163 | 196 |
|  |            | 53 [14]   |                |                   | 177 [1565]<br>224 | 293 [2596]<br>216                       | 388 [3434]<br>214 | 495 [4384]<br>208 | 587 [5197]<br>205 |                 | 680 [6017]<br>198 | 228 |
|  |            | 61 [16]   |                |                   | 150 [1326]<br>256 | 272 [2408]<br>255                       | 397 [3509]<br>249 | 484 [4280]<br>245 | 574 [5077]<br>237 |                 | 669 [5925]<br>227 | 261 |
|  |            | 68 [18]   |                |                   | 142 [1261]<br>292 | 264 [2333]<br>286                       | 355 [3140]<br>282 | 493 [4366]<br>276 | 569 [5032]<br>274 |                 | 655 [5799]<br>259 | 293 |
|  |            | 76 [20]   |                |                   | 122 [1083]<br>324 | 237 [2096]<br>321                       | 347 [3068]<br>316 | 453 [4009]<br>309 | 571 [5057]<br>305 |                 |                   | 326 |
| 83 [22]  |            |   |                | 210 [1855]<br>357 | 338 [2987]<br>351 | 464 [4104]<br>345                       | 550 [4864]<br>339 |                   | 358               |                 |                   |     |
| <b>Rotor Width</b>   |            | Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/> |                |                   |                   |   |                   |                   |                   |                 |                   |     |
| 19.7 [777]<br>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

Table for 260 series showing displacement performance metrics including pressure, torque, speed, and efficiency. Includes a color-coded efficiency legend and theoretical torque table.

Table for 300 series showing displacement performance metrics including pressure, torque, speed, and efficiency. Includes a color-coded efficiency legend and theoretical torque table.

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



**DISPLACEMENT PERFORMANCE**

|   |         |  |                   |                   |                   |                   |                   |                   |                    |             |
|---|---------|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------|
|   |         | Pressure - bar [psi]   |                   |                   |                   |                   |                   |                   | Max. Cont.         | Max. Inter. |
| <b>350</b>  |         | 17 [250]   | 35 [500]          | 69 [1000]         | 104 [1500]        | 138 [2000]        | 173 [2500]        | 207 [3000]        | 241 [3500]         |             |
| 348 cm <sup>3</sup> [21.2 in <sup>3</sup> ] / rev   |         |  |                   |                   |                   |                   |                   |                   |                    |             |
| <b>Intermittent Ratings - 10% of Operation</b>  |         |  |                   |                   |                   |                   |                   |                   |                    |             |
|   |         | Torque - Nm [lb-in], <b>Speed rpm</b>  |                   |                   |                   |                   |                   |                   |                    |             |
| Flow - lpm [gpm]  | 2 [0.5] | 64 [566]<br>4  | 134 [1183]<br>4   | 272 [2404]<br>3   | 399 [3532]<br>2   |                   |                   |                   |                    | 6           |
|   | 4 [1]   | 64 [570]<br>10   | 134 [1189]<br>9   | 296 [2619]<br>8   | 437 [3869]<br>8   |                   |                   |                   |                    | 11          |
|   | 8 [2]   | 69 [607]<br>21   | 145 [1285]<br>20  | 312 [2764]<br>19  | 462 [4092]<br>18  | 600 [5308]<br>18  | 742 [6571]<br>17  | 855 [7569]<br>14  |                    | 22          |
|   | 15 [4]  | 71 [627]<br>42   | 151 [1340]<br>41  | 313 [2767]<br>40  | 471 [4169]<br>39  | 630 [5577]<br>37  | 772 [6834]<br>35  | 889 [7869]<br>34  | 993 [8785]<br>28   | 44          |
|   | 23 [6]  | 62 [549]<br>64   | 149 [1618]<br>63  | 315 [2788]<br>62  | 474 [4191]<br>60  | 630 [5577]<br>57  | 768 [6796]<br>54  | 925 [8182]<br>51  | 1032 [9137]<br>45  | 66          |
|   | 30 [8]  | 53 [472]<br>86   | 139 [1233]<br>85  | 307 [2713]<br>84  | 459 [4058]<br>82  | 626 [5537]<br>79  | 768 [6793]<br>75  | 928 [8210]<br>69  | 1051 [9300]<br>65  | 88          |
|   | 38 [10] |  | 113 [1004]<br>108 | 298 [2639]<br>108 | 431 [3814]<br>108 | 601 [5317]<br>102 | 745 [6593]<br>100 | 910 [8056]<br>93  | 1062 [9399]<br>87  | 109         |
|   | 45 [12] |  | 98 [869]<br>130   | 265 [2346]<br>129 | 445 [3936]<br>128 | 581 [5144]<br>125 | 740 [6552]<br>117 | 891 [7889]<br>109 | 1044 [9237]<br>104 | 131         |
|   | 53 [14] |  | 86 [758]<br>152   | 252 [2226]<br>151 | 422 [3738]<br>150 | 570 [5044]<br>147 | 723 [6398]<br>139 | 881 [7794]<br>133 | 1031 [9126]<br>120 | 153         |
|   | 61 [16] |  | 63 [560]<br>173   | 235 [2079]<br>173 | 409 [3619]<br>173 | 549 [4859]<br>170 | 720 [6375]<br>163 | 850 [7522]<br>155 | 1012 [8952]<br>147 | 175         |
|   | 68 [18] |  |                   | 220 [1948]<br>195 | 394 [3490]<br>194 | 571 [5054]<br>190 | 693 [6134]<br>187 | 839 [7428]<br>175 | 986 [8727]<br>164  | 197         |
|   | 76 [20] |  |                   | 208 [1843]<br>217 | 375 [3320]<br>216 | 513 [4544]<br>214 | 683 [6044]<br>213 | 835 [7385]<br>195 | 975 [8632]<br>188  | 218         |
|   | 83 [22] |  |                   | 179 [1583]<br>239 | 352 [3112]<br>239 | 554 [4906]<br>238 | 685 [6064]<br>233 | 813 [7198]<br>221 | 958 [8482]<br>215  | 240         |
|   | 91 [24] |  |                   | 172 [1526]<br>261 | 360 [3186]<br>261 | 534 [4724]<br>260 | 666 [5890]<br>256 |                   |                    | 262         |
|   | 95 [25] |  |                   |                   | 369 [3264]<br>271 | 529 [4682]<br>270 | 647 [5730]<br>265 |                   |                    | 273         |
| Max. Cont.  |         |  |                   |                   |                   |                   |                   |                   |                    |             |
| Max. Inter.   |         |  |                   |                   |                   |                   |                   |                   |                    |             |
| Theoretical rpm   |         |  |                   |                   |                   |                   |                   |                   |                    |             |
| Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/> |         |  |                   |                   |                   |                   |                   |                   |                    |             |
| <b>Rotor Width</b>  |         | 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. |
| <b>375</b>  |            | 17 [250]   | 35 [500]          | 69 [1000]         | 104 [1500]        | 138 [2000]        | 173 [2500]        | 207 [3000]        | 241 [3500]         |             |
| 375 cm <sup>3</sup> [22.8 in <sup>3</sup> ] / rev   |            |  |                   |                   |                   |                   |                   |                   |                    |             |
| <b>Intermittent Ratings - 10% of Operation</b>  |            |  |                   |                   |                   |                   |                   |                   |                    |             |
|   |            | Torque - Nm [lb-in], <b>Speed rpm</b>  |                   |                   |                   |                   |                   |                   |                    |             |
| Flow - lpm [gpm]  | 2 [0.5]    | 76 [674]<br>3  |                   |                   |                   |                   |                   |                   |                    | 6           |
|   | 4 [1]      | 84 [745]<br>8  | 162 [1432]<br>7   | 329 [2911]<br>6   | 490 [4337]<br>6   | 639 [5652]<br>5   | 763 [6756]<br>3   |                   |                    | 11          |
|   | 8 [2]      | 82 [724]<br>18   | 171 [1510]<br>17  | 361 [3196]<br>16  | 537 [4754]<br>16  | 689 [6095]<br>14  | 836 [7399]<br>12  | 955 [8449]<br>9   |                    | 21          |
|   | 15 [4]     | 77 [680]<br>39   | 163 [1439]<br>37  | 358 [3164]<br>37  | 537 [4756]<br>36  | 695 [6151]<br>32  | 857 [7587]<br>29  | 989 [8750]<br>25  | 1121 [9923]<br>20  | 41          |
|   | 23 [6]     | 67 [595]<br>60   | 158 [1398]<br>59  | 354 [3130]<br>56  | 527 [4661]<br>56  | 695 [6155]<br>52  | 864 [7642]<br>47  | 1011 [8951]<br>40 | 1168 [10334]<br>36 | 61          |
|   | 30 [8]     | 57 [508]<br>80   | 149 [1321]<br>80  | 340 [3010]<br>78  | 510 [4512]<br>77  | 695 [6154]<br>71  | 845 [7476]<br>65  | 1009 [8930]<br>60 | 1156 [10229]<br>51 | 82          |
|   | 38 [10]    |  | 134 [1187]<br>100 | 322 [2849]<br>99  | 495 [4383]<br>96  | 681 [6024]<br>93  | 836 [7399]<br>87  | 1007 [8913]<br>80 | 1157 [10235]<br>71 | 102         |
|   | 45 [12]    |  | 115 [1013]<br>121 | 301 [2661]<br>120 | 480 [4249]<br>118 | 645 [5711]<br>113 | 809 [7159]<br>108 | 980 [8674]<br>98  | 1141 [10098]<br>92 | 122         |
|   | 53 [14]    |  | 93 [819]<br>141   | 280 [2475]<br>140 | 477 [4218]<br>138 | 633 [5602]<br>134 | 795 [7036]<br>128 | 949 [8402]<br>120 | 1117 [9887]<br>105 | 142         |
|   | 61 [16]    |  | 73 [646]<br>161   | 261 [2314]<br>161 | 429 [3797]<br>160 | 598 [5296]<br>155 | 770 [6817]<br>151 | 934 [8267]<br>141 | 1085 [9605]<br>130 | 163         |
|   | 68 [18]    |  |                   | 236 [2091]<br>181 | 434 [3843]<br>181 | 597 [5282]<br>177 | 765 [6771]<br>168 | 907 [8026]<br>161 | 1080 [9554]<br>150 | 183         |
|   | 76 [20]    |  |                   | 209 [1851]<br>202 | 384 [3396]<br>201 | 561 [4969]<br>198 | 740 [6549]<br>191 | 877 [7764]<br>183 | 1027 [9091]<br>168 | 203         |
|   | 83 [22]    |  |                   | 178 [1576]<br>222 | 374 [3309]<br>221 | 530 [4694]<br>218 | 696 [6160]<br>213 | 840 [7431]<br>205 |                    | 223         |
|   | 91 [24]    |  |                   | 141 [1246]<br>242 | 319 [2822]<br>241 | 511 [4523]<br>239 | 662 [5860]<br>233 |                   |                    | 244         |
|   | Max. Cont. |  |                   |                   |                   |                   |                   |                   |                    |             |
| Max. Inter.   |            |  |                   |                   |                   |                   |                   |                   |                    |             |
| Theoretical rpm   |            |  |                   |                   |                   |                   |                   |                   |                    |             |
| Overall Efficiency - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input checked="" type="checkbox"/> |            |  |                   |                   |                   |                   |                   |                   |                    |             |
| <b>Rotor Width</b>  |            | 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.



**DISPLACEMENT PERFORMANCE**

|   |                                       |                |                   |                   |                   |                   |                    |                 |                     |
|---|---------------------------------------|----------------|-------------------|-------------------|-------------------|-------------------|--------------------|-----------------|---------------------|
| 470   | Pressure - bar [psi]                  |                |                   |                   |                   |                   | Max. Cont.         | Peak            |                     |
|   | 17 [250]                              | 35 [500]       | 69 [1000]         | 104 [1500]        | 138 [2000]        | 173 [2500]        | 207 [3000]         |                 |                     |
| 465 cm <sup>3</sup> [28.3 in <sup>3</sup> ] / rev   |                                       |                |                   |                   |                   |                   |                    |                 |                     |
| <b>Intermittent Ratings - 10% of Operation</b>  |                                       |                |                   |                   |                   |                   |                    |                 |                     |
| Flow - lpm [gpm]  | Torque - Nm [lb-in], <b>Speed rpm</b> |                |                   |                   |                   |                   |                    | Theoretical rpm |                     |
|   | 2 [0.5]                               | 93 [823]<br>2  | 185 [1635]<br>1   |                   |                   |                   |                    |                 | 5                   |
|   | 4 [1]                                 | 97 [857]<br>7  | 203 [1794]<br>5   | 409 [3618]<br>5   | 610 [5402]<br>5   | 815 [7209]<br>4   |                    |                 | 9                   |
|   | 8 [2]                                 | 98 [865]<br>15 | 209 [1845]<br>14  | 435 [3851]<br>13  | 659 [5836]<br>13  | 855 [7563]<br>12  | 1025 [9071]<br>11  |                 | 1196 [10586]<br>9   |
|   | 15 [4]                                | 94 [834]<br>31 | 200 [1774]<br>30  | 444 [3932]<br>28  | 659 [5829]<br>28  | 886 [7836]<br>26  | 1066 [9434]<br>23  |                 | 1250 [11062]<br>21  |
|   | 23 [6]                                | 86 [759]<br>48 | 193 [1704]<br>47  | 438 [3880]<br>44  | 673 [5955]<br>44  | 872 [7715]<br>41  | 1073 [9499]<br>37  |                 | 1258 [11128]<br>32  |
|   | 30 [8]                                | 73 [643]<br>64 | 179 [1587]<br>63  | 424 [3752]<br>60  | 663 [5863]<br>60  | 857 [7586]<br>57  | 1098 [9718]<br>50  |                 | 1279 [11317]<br>43  |
|   | 38 [10]                               | 52 [464]<br>81 | 164 [1455]<br>80  | 407 [3597]<br>78  | 627 [5550]<br>78  | 851 [7533]<br>75  | 1067 [9444]<br>68  |                 | 1276 [11288]<br>61  |
|   | 45 [12]                               |                | 141 [1248]<br>97  | 379 [3350]<br>94  | 630 [5575]<br>93  | 832 [7363]<br>90  | 1067 [9441]<br>83  |                 | 1273 [11264]<br>76  |
|   | 53 [14]                               |                | 114 [1006]<br>113 | 350 [3094]<br>112 | 580 [5133]<br>111 | 802 [7101]<br>108 | 1013 [8964]<br>102 |                 | 1222 [10817]<br>94  |
|   | 61 [16]                               |                | 83 [736]<br>130   | 322 [2846]<br>129 | 545 [4819]<br>127 | 796 [7040]<br>123 | 965 [8538]<br>119  |                 | 1190 [10528]<br>113 |
|   | 68 [18]                               |                | 56 [497]<br>146   | 275 [2434]<br>145 | 526 [4657]<br>145 | 737 [6519]<br>142 | 956 [8464]<br>138  |                 | 1166 [10317]<br>128 |
|   | 76 [20]                               |                |                   | 235 [2078]<br>162 | 479 [4239]<br>161 | 706 [6249]<br>158 | 917 [8117]<br>154  |                 | 1122 [9933]<br>143  |
|   | 83 [22]                               |                |                   | 202 [1790]<br>179 | 460 [4075]<br>178 | 669 [5920]<br>176 | 883 [7811]<br>170  |                 |                     |
| 91 [24]   |                                       |                | 157 [1392]<br>195 | 385 [3410]<br>194 | 620 [5484]<br>190 | 843 [7464]<br>186 |                    |                 |                     |
| <b>Overall Efficiency</b> - 70 - 100% <input type="checkbox"/> 40 - 69% <input type="checkbox"/> 0 - 39% <input type="checkbox"/> |                                       |                |                   |                   |                   |                   |                    |                 |                     |
| Theoretical Torque - Nm [lb-in]   |                                       |                |                   |                   |                   |                   |                    |                 |                     |
|   | 39.4 [1.553]                          | 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]

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

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

**DISPLACEMENT PERFORMANCE**

|   |            | Pressure - bar [psi] |                     |                  |                   |                   | Max. Cont.         | Peak      |                 |
|---|------------|----------------------|---------------------|------------------|-------------------|-------------------|--------------------|-----------|-----------------|
| <b>750</b>  |            | 17 [250]             | 35 [500]            | 69 [1000]        | 104 [1500]        | 138 [2000]        |                    |           |                 |
| 748 cm <sup>3</sup> [45.6 in <sup>3</sup> ] / rev   |            |                      |                     |                  |                   |                   |                    |           |                 |
| Torque - Nm [lb-in], Speed rpm <span style="float: right;">Intermittent Ratings - 10% of Operation</span> |            |                      |                     |                  |                   |                   |                    |           |                 |
| Flow - lpm [gpm]  | Max. Cont. | Max. Inter.          | Torque - Nm [lb-in] |                  |                   |                   |                    | Speed rpm | Theoretical rpm |
|   |            |                      | 1                   | 2                | 3                 | 4                 | 5                  |           |                 |
| 2 [0.5]   |            |                      | 147 [1299]<br>2     | 281 [2487]<br>1  |                   |                   |                    | 3         |                 |
| 4 [1]   |            |                      | 156 [1379]<br>4     | 322 [2852]<br>4  | 652 [5768]<br>4   | 967 [8554]<br>3   | 1308 [11571]<br>3  | 6         |                 |
| 8 [2]   |            |                      | 158 [1403]<br>9     | 339 [3003]<br>9  | 693 [6134]<br>9   | 1027 [9088]<br>8  | 1360 [12033]<br>7  | 11        |                 |
| 15 [4]  |            |                      | 153 [1350]<br>19    | 331 [2933]<br>19 | 705 [6241]<br>19  | 1064 [9419]<br>18 | 1416 [12534]<br>16 | 21        |                 |
| 23 [6]  |            |                      | 135 [1194]<br>29    | 321 [2840]<br>29 | 697 [6166]<br>28  | 1059 [9373]<br>28 | 1408 [12462]<br>26 | 31        |                 |
| 30 [8]  |            |                      | 114 [1008]<br>40    | 304 [2690]<br>40 | 678 [6002]<br>39  | 1039 [9197]<br>38 | 1421 [12573]<br>34 | 41        |                 |
| 38 [10]   |            |                      | 82 [722]<br>50      | 271 [2395]<br>49 | 648 [5733]<br>49  | 1015 [8980]<br>48 | 1371 [12130]<br>47 | 51        |                 |
| 45 [12]   |            |                      | 54 [477]<br>60      | 249 [2207]<br>60 | 616 [5452]<br>59  | 983 [8699]<br>59  | 1345 [11902]<br>56 | 61        |                 |
| 53 [14]   |            |                      |                     | 197 [1739]<br>70 | 577 [5104]<br>69  | 946 [8372]<br>68  | 1311 [11600]<br>67 | 71        |                 |
| 61 [16]   |            |                      |                     | 150 [1325]<br>80 | 533 [4718]<br>79  | 905 [8008]<br>78  | 1271 [11249]<br>76 | 82        |                 |
| 68 [18]   |            |                      |                     | 105 [927]<br>90  | 494 [4374]<br>90  | 860 [7614]<br>89  | 1225 [10843]<br>88 | 92        |                 |
| 76 [20]   |            |                      |                     | 62 [552]<br>100  | 423 [3741]<br>100 | 805 [7123]<br>99  | 1173 [10385]<br>98 | 102       |                 |
| 83 [22]   |            |                      |                     |                  | 385 [3404]<br>110 | 747 [6608]<br>110 |                    | 112       |                 |
| 91 [24]   |            |                      |                     |                  | 302 [2669]<br>121 | 670 [5932]<br>120 |                    | 122       |                 |

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]

Rotor Width  
63.5 [2.501]  
mm [in]

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



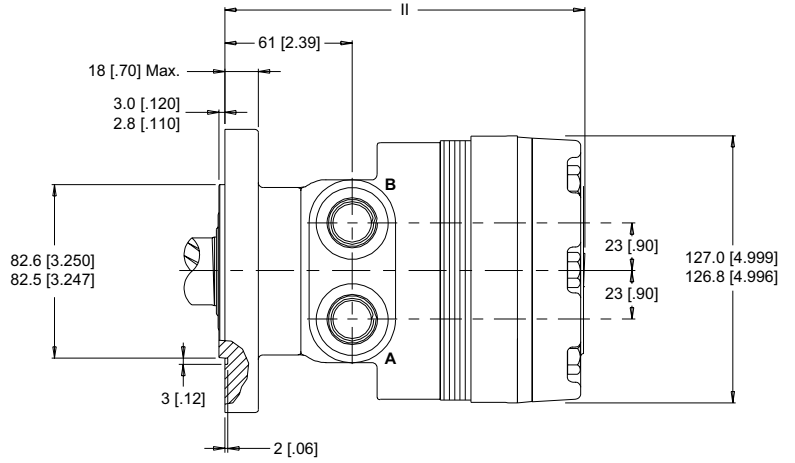
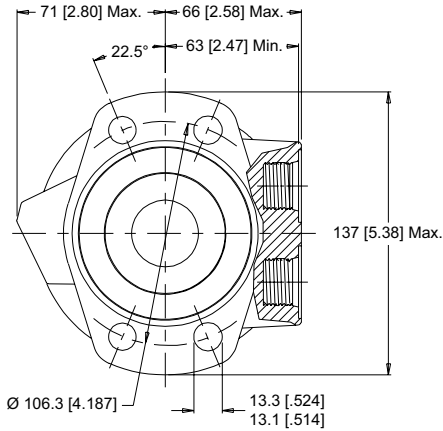
**HOUSINGS**

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

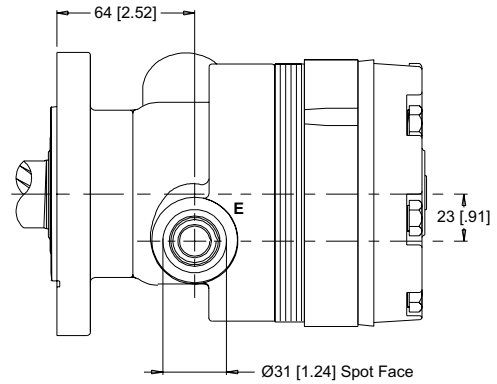
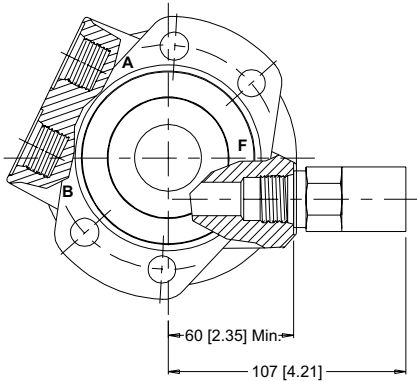
**4-HOLE, MAGNETO MOUNT, ALIGNED PORTS**

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

STANDARD



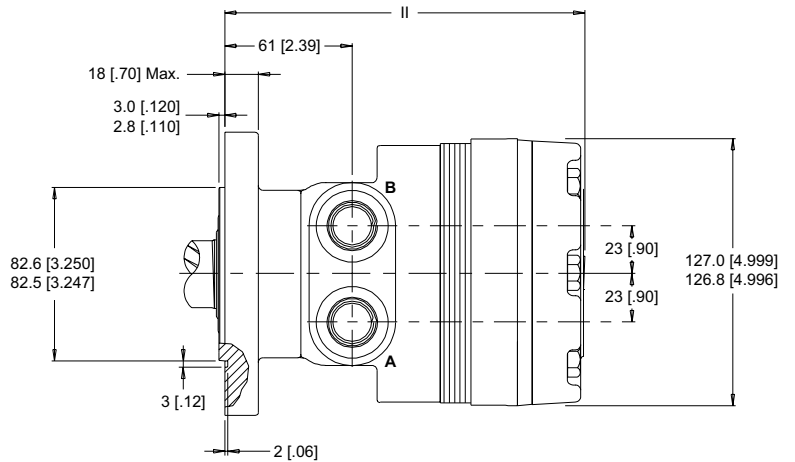
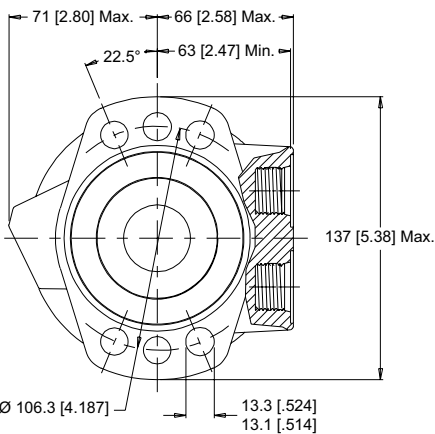
OPTIONAL VALVE CAVITY



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.

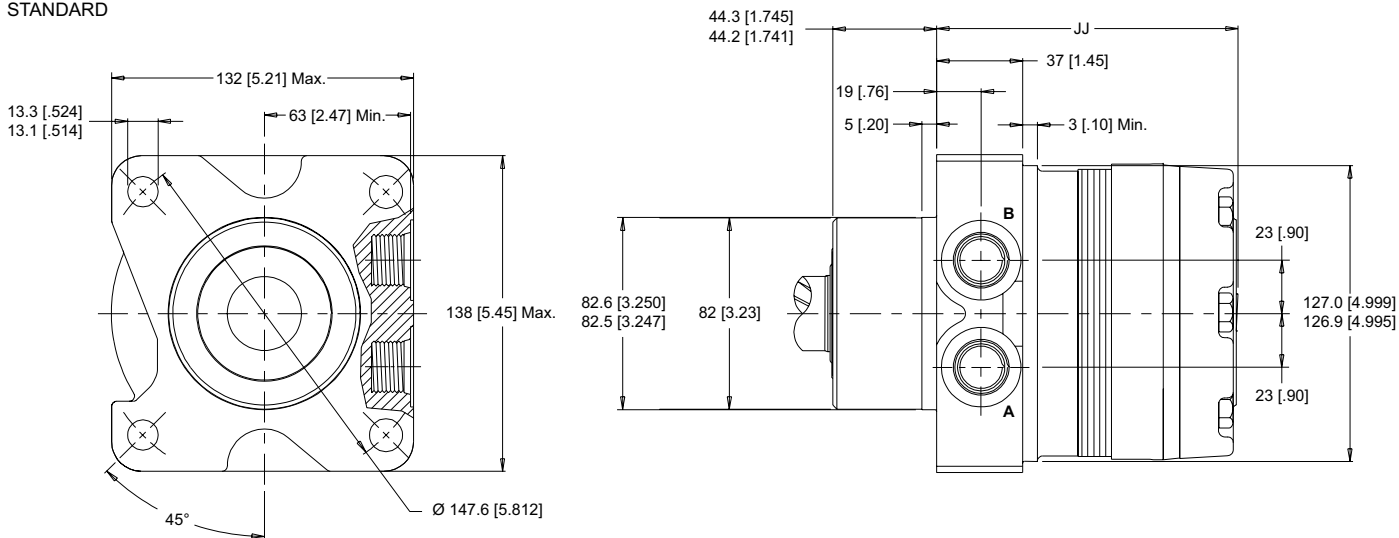
**HOUSINGS**

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

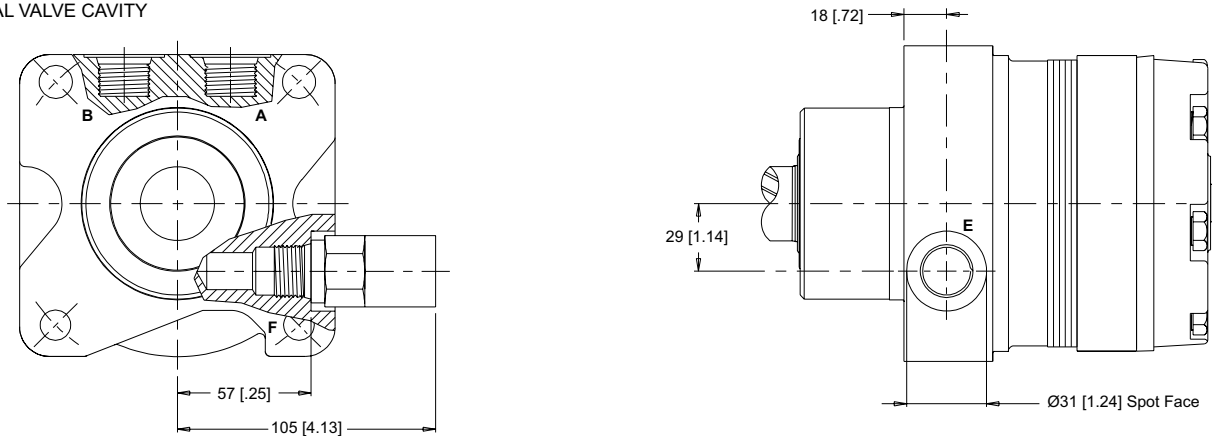
**4-HOLE, WHEEL MOUNT, ALIGNED PORTS**

**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

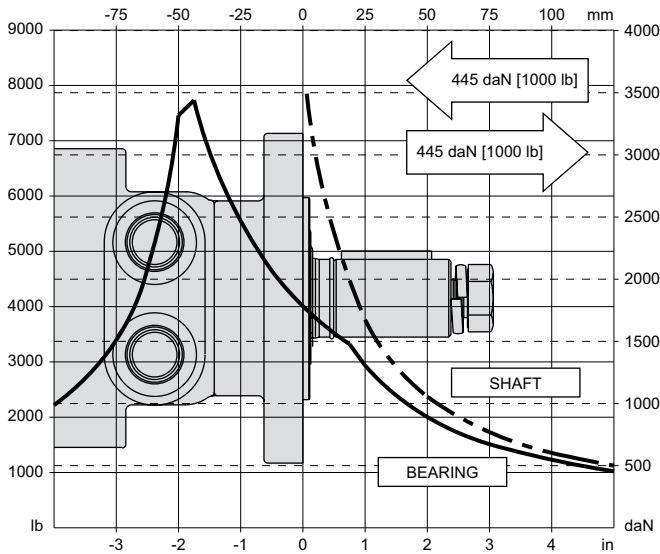
► Dimension JJ is charted on page 11.

**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**



**LENGTH & WEIGHT CHART**

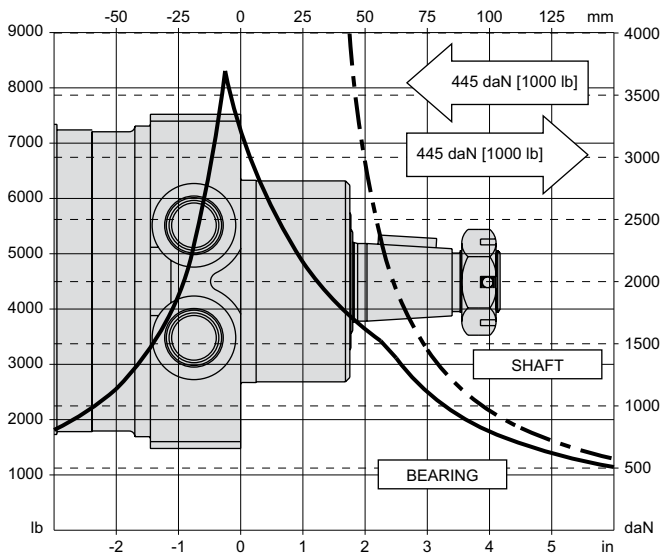
Dimensions II & JJ are the overall motor lengths from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on pages 9 & 10.

| II # | Length mm [in] | Weight 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 mm [in] | Weight 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  $\pm 0.5$  kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

**WHEEL MOUNTS**

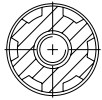


| BEARING LOAD MULTIPLICATION FACTOR TABLE |        |     |        |
|--|--------|-----|--------|
| RPM                                      | FACTOR | RPM | FACTOR |
| 50                                       | 1.23   | 500 | 0.62   |
| 100                                      | 1.00   | 600 | 0.58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

**SHAFTS**

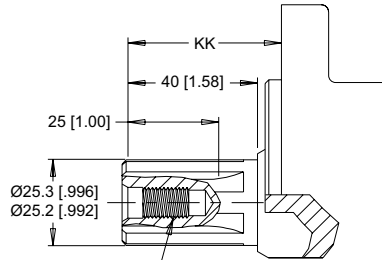
**02** 1" 6B Spline

6B Spline  
SAE J499 Standard



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

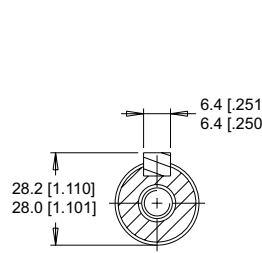
**03** 1" 6B Spline Extended



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

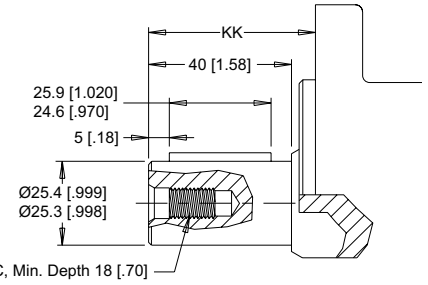
Max. Torque: 678 Nm [6000 lb-in]

**10** 1" Straight

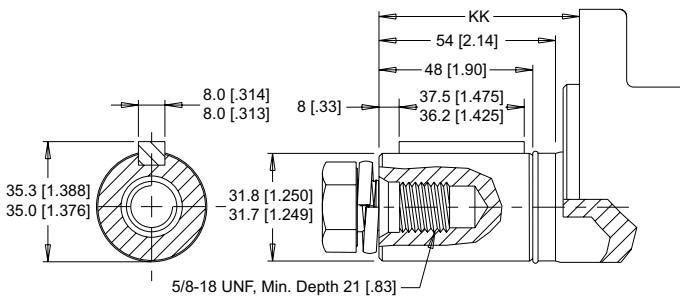


Max. Torque: 655 Nm [5800 lb-in]

**15** 1" Straight Extended



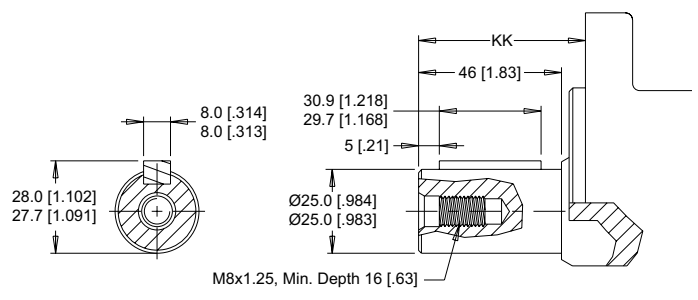
**07** 1-1/4" Straight Extended



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

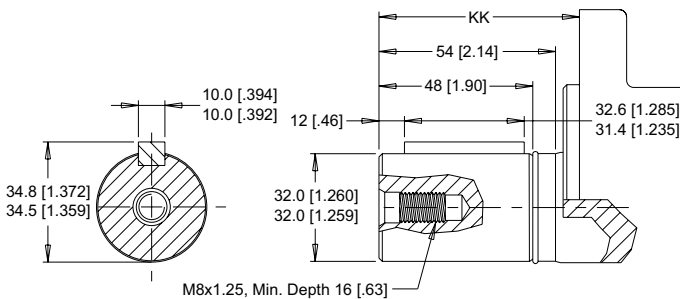
**20** 1-1/4" Straight

**12** 25mm Straight



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

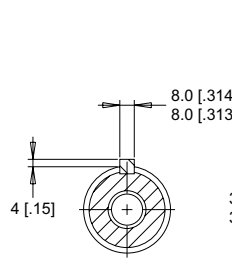
**08** 32mm Straight Extended



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

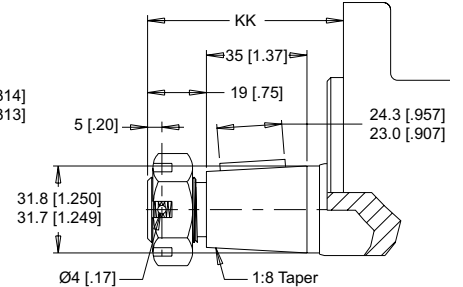
**21** 32mm Straight

**22** 1-1/4" Tapered



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

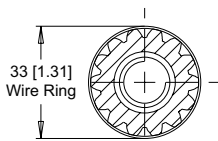
**25** 1-1/4" Tapered Extended



▶ A slotted hex nut is standard on this shaft.

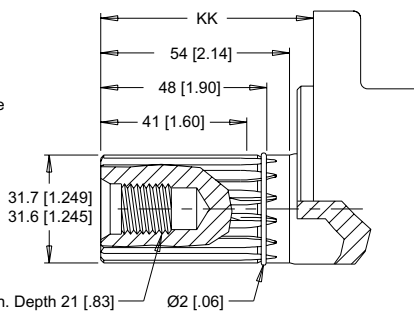
**09** 14 Tooth Spline Extended

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



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

**23** 14 Tooth Spline



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

**MOUNTING / SHAFT LENGTH CHART**

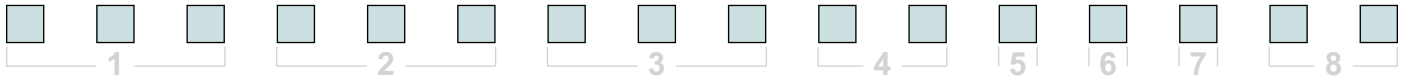
Dimension KK is the overall distance from the motor mounting surface to the end of the shaft and is referenced on detailed shaft drawings above.

| 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.]

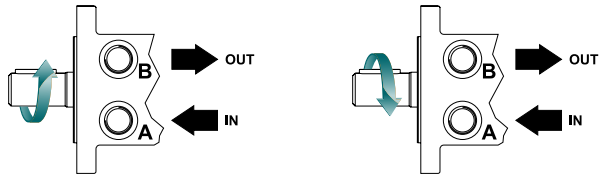


**ORDERING INFORMATION**



**1. 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**

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

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

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

► Speed sensor option is not available with wheel mounts

**4. SELECT A SHAFT OPTION**

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

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| <b>A</b> None                     | <b>E</b> 104 bar [1500 psi] Relief |
| <b>B</b> Valve Cavity Only        | <b>F</b> 121 bar [1750 psi] Relief |
| <b>C</b> 69 bar [1000 psi] Relief | <b>G</b> 138 bar [2000 psi] Relief |
| <b>D</b> 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**

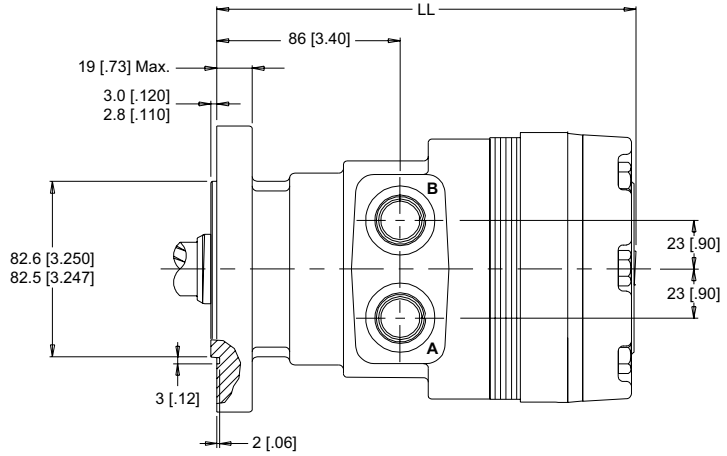
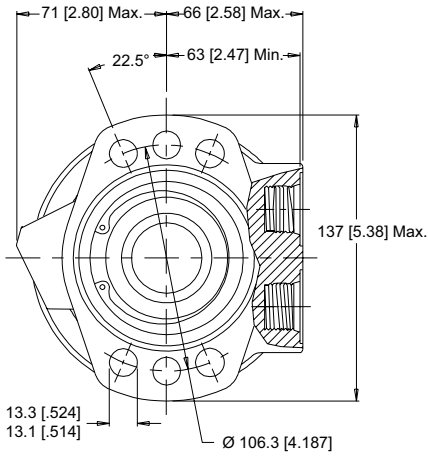
- AA** None
- AC** Freeturning Rotor
- AE** Hydraulic Declutch With Freeturning Rotor

**HOUSINGS**

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

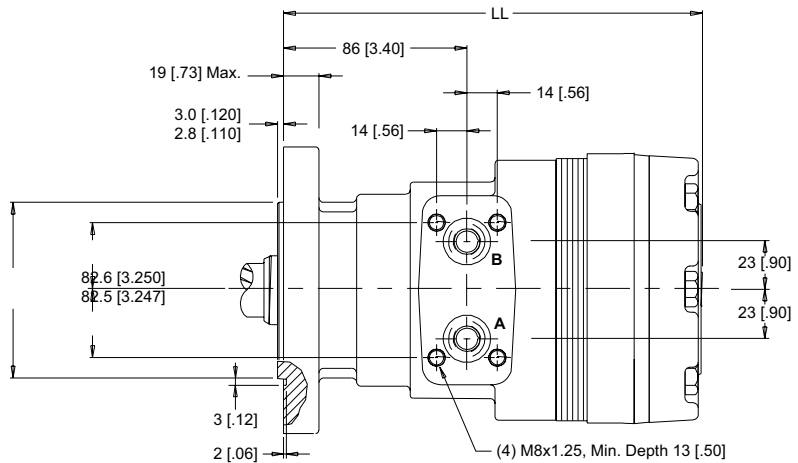
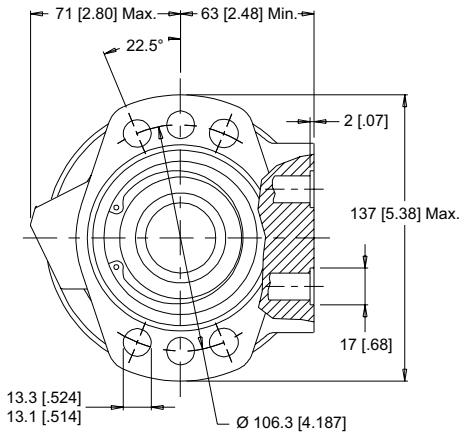
**6-HOLE, SAE A MOUNT, ALIGNED PORTS**

**A51** 7/8-14 UNF    **A58** G 1/2



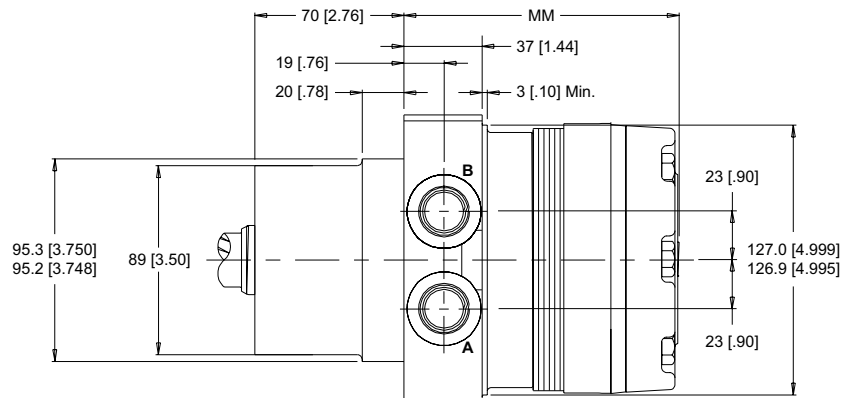
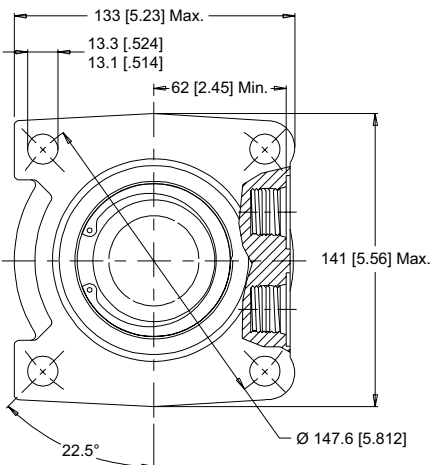
**6-HOLE, SAE A MOUNT, ALIGNED MANIFOLD PORTS**

**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.

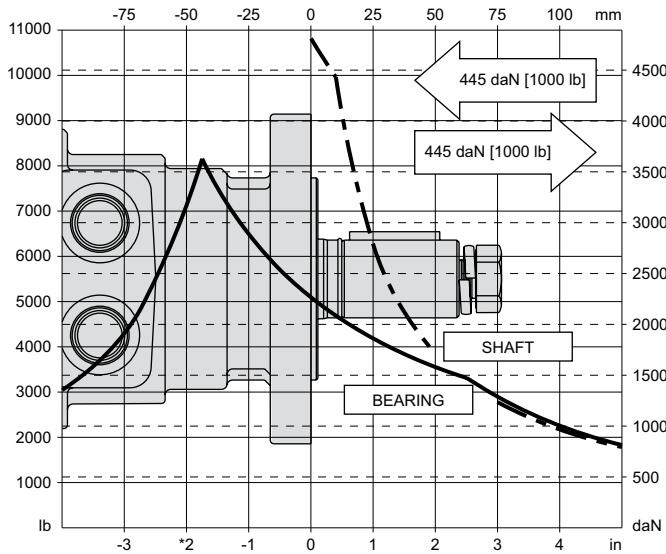


**TECHNICAL INFORMATION**

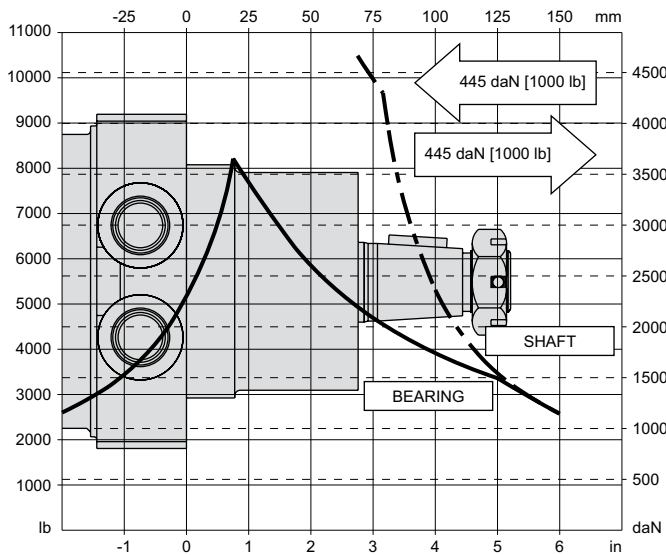
**ALLOWABLE SHAFT LOAD / BEARING CURVE**

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**



**WHEEL 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.

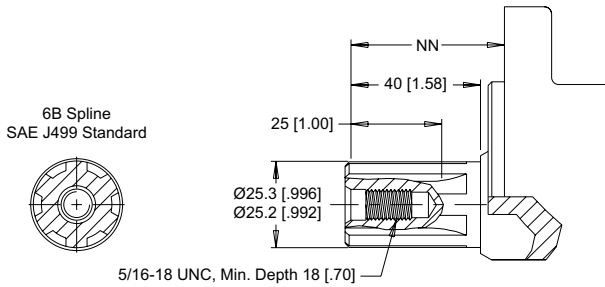
| LL # | Length mm [in] | Weight kg [lb] |
|------|----------------|----------------|
| 120  | 187 [7.37]     | 13.3 [29.4]    |
| 160  | 187 [7.37]     | 13.3 [29.4]    |
| 200  | 191 [7.51]     | 13.7 [30.2]    |
| 230  | 193 [7.61]     | 13.8 [30.4]    |
| 260  | 196 [7.70]     | 14.1 [31.0]    |
| 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 mm [in] | Weight 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  $\pm 0.5$  kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

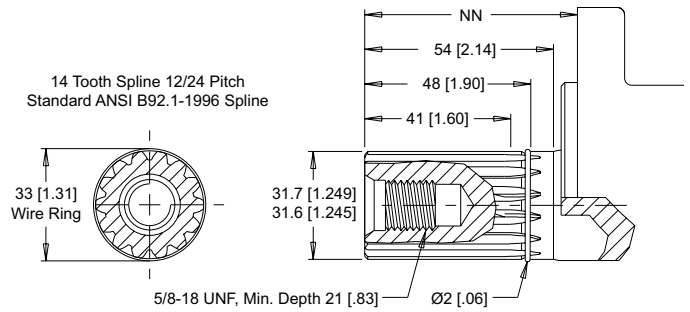
**SHAFTS**

**03** 1" 6B Spline



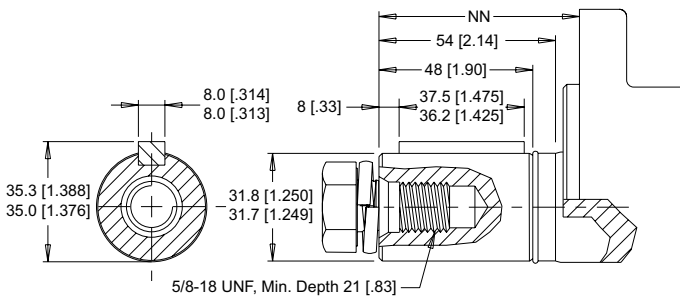
Max. Torque: 678 Nm [6000 lb-in]

**09** 14 Tooth Spline



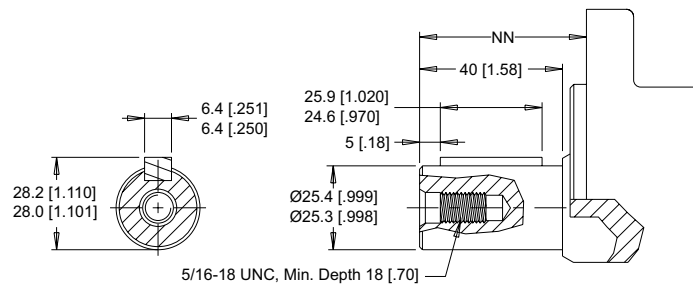
Max. Torque: 1200 Nm [10600 lb-in]

**07** 1-1/4" Straight



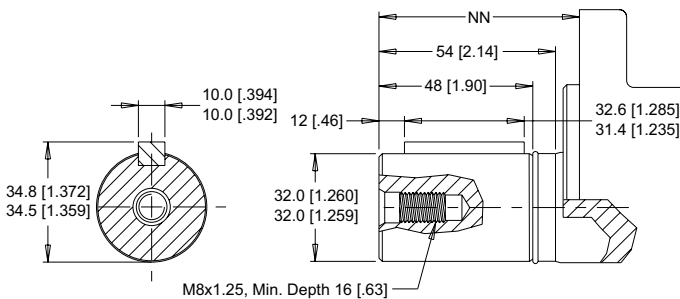
Max. Torque: 1200 Nm [10600 lb-in]

**15** 1" Straight



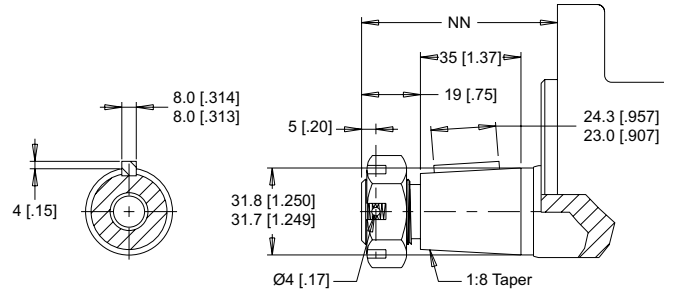
Max. Torque: 655 Nm [5800 lb-in]

**08** 32mm Straight



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

**25** 1-1/4" Tapered



► A slotted hex nut is standard on this shaft.

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

**MOUNTING / SHAFT LENGTH CHART**

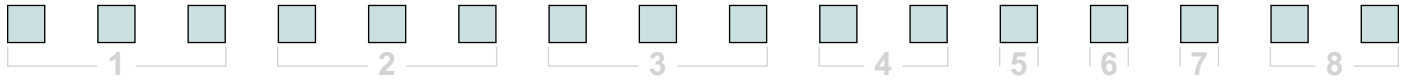
Dimension NN is the overall distance from the motor mounting surface to the end of the shaft and is referenced on detailed shaft drawings above.

| 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 [0.030 in.]

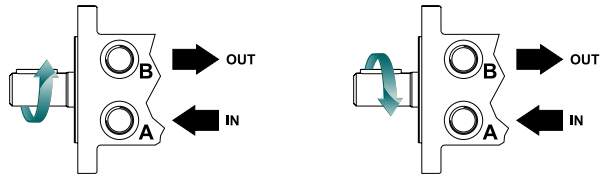


**ORDERING INFORMATION**



**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**

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

- |                           |                           |
|---------------------------|---------------------------|
| <b>03</b> 1" 6B Spline    | <b>09</b> 14 Tooth Spline |
| <b>07</b> 1-1/4" Straight | <b>15</b> 1" Straight     |
| <b>08</b> 32mm Straight   | <b>25</b> 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**

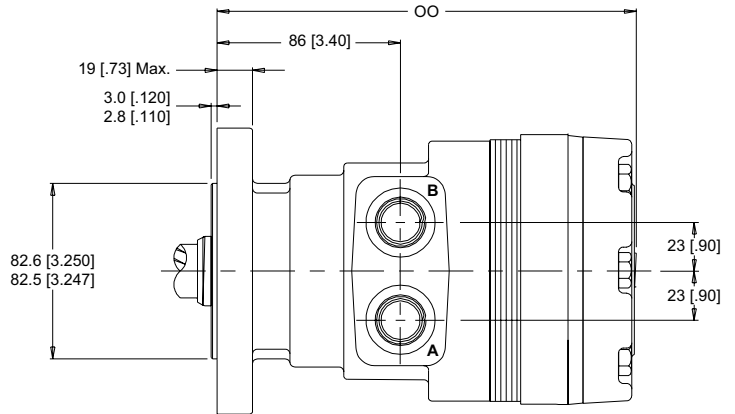
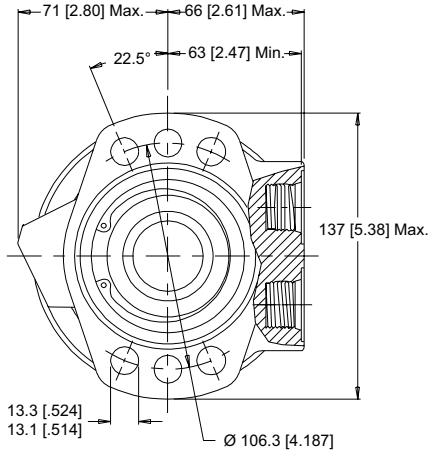
- AA** None
- AC** Freeturning Rotor
- AE** Hydraulic Declutch With Freeturning Rotor

**HOUSINGS**

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

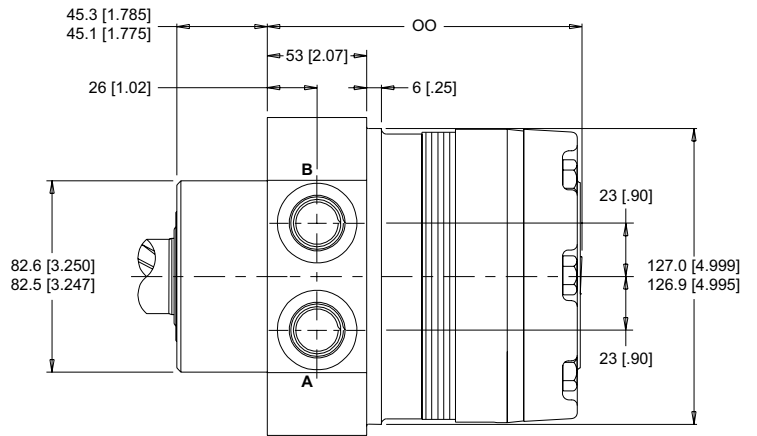
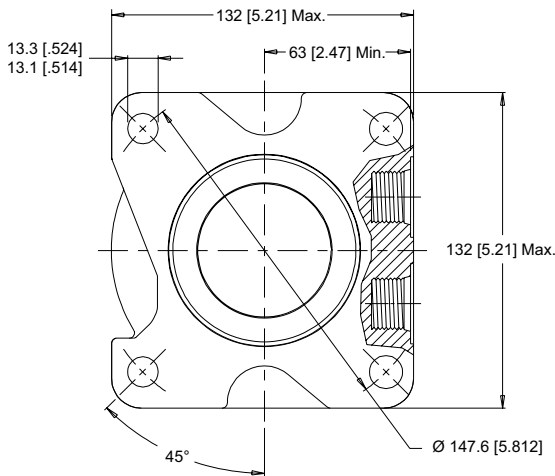
**6-HOLE, SAE A MOUNT, ALIGNED PORTS**

**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.

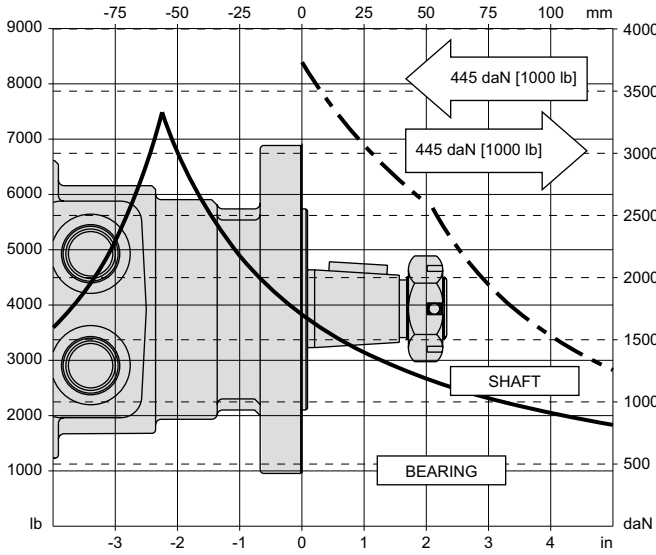


**TECHNICAL INFORMATION**

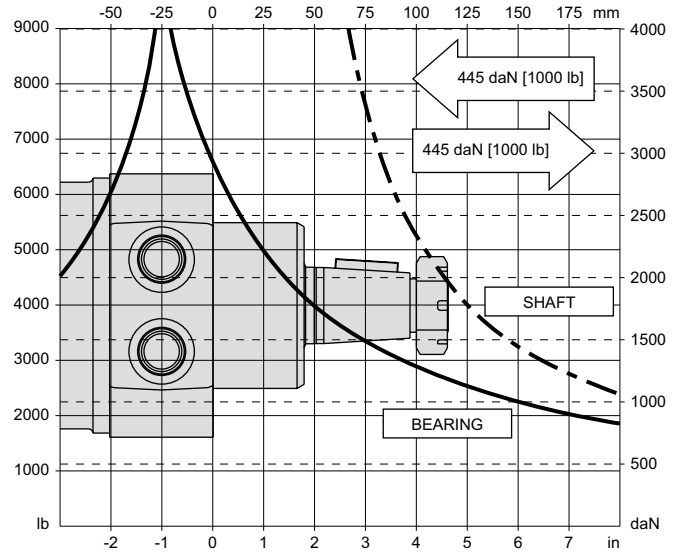
**ALLOWABLE SHAFT LOAD / BEARING CURVE**

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.

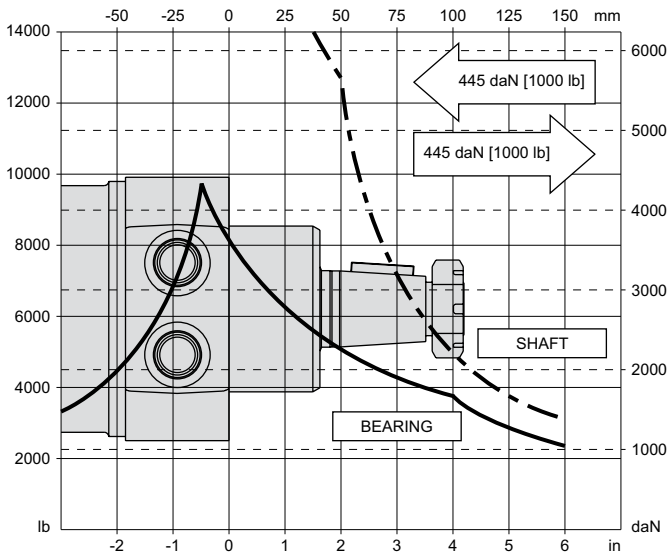
**SAE A MOUNTS**



**T31 & T38 WHEEL MOUNTS**



**W31 & W38 WHEEL MOUNTS**



**LENGTH & WEIGHT CHART**

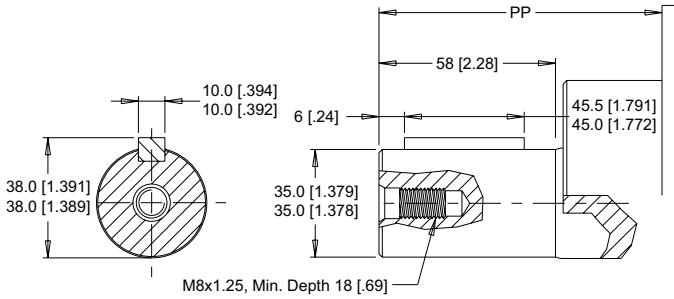
Dimension OO is the overall motor length from the rear of the motor to the mounting flange surface and are referenced on detailed housing drawings listed on page 18.

| 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  $\pm 0.5$  kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

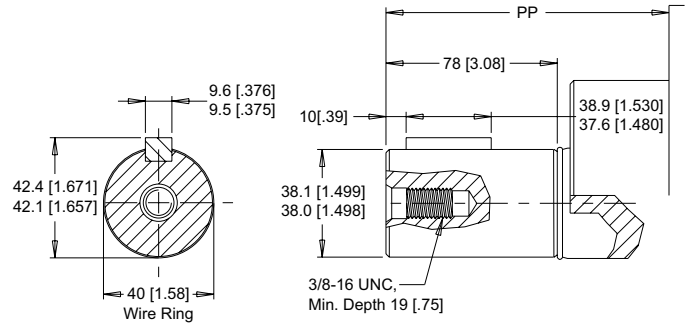
**SHAFTS**

**27** 35mm Straight



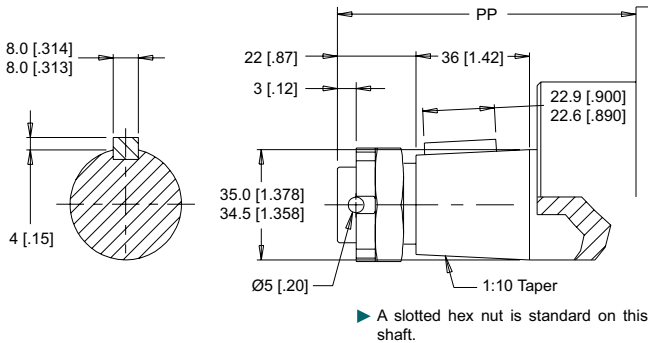
Max. Torque: 1200 Nm [10600 lb-in]

**30** 1-1/2" Straight



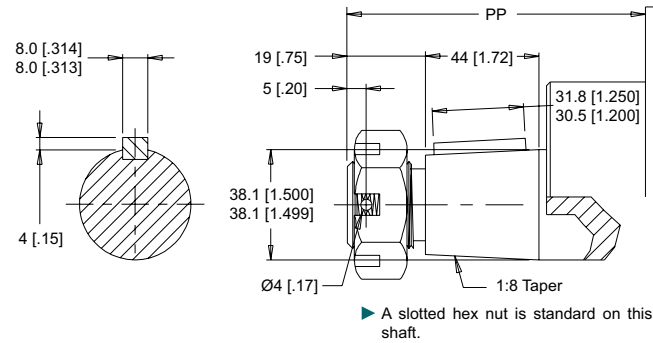
Max. Torque: 1200 Nm [10600 lb-in]

**28** 35mm Tapered



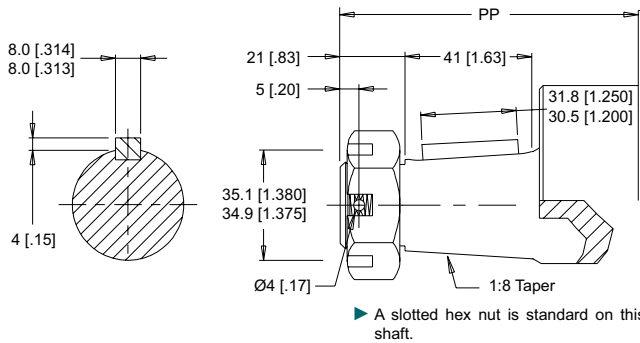
Max. Torque: 1200 Nm [10600 lb-in]

**31** 1-1/2" Tapered



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

**M4** 1-3/8" Tapered



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.

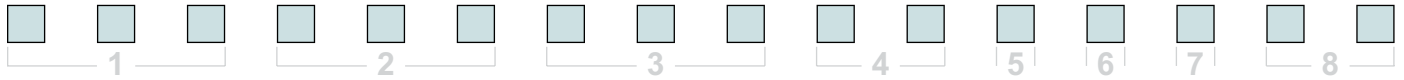
► Shaft lengths vary ± 0.8 mm [.030 in.]

| PP # | SAE A Mounts<br>mm [in] | Wheel Mounts<br>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]              |



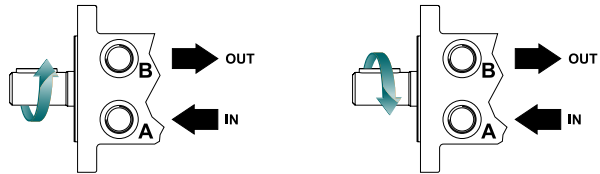


**ORDERING INFORMATION**



**1. 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**

|            |  |            |  |
|------------|--|------------|--|
| <b>120</b> | 121 cm <sup>3</sup> /rev [7.4 in <sup>3</sup> /rev]  | <b>350</b> | 348 cm <sup>3</sup> /rev [21.2 in <sup>3</sup> /rev] |
| <b>160</b> | 162 cm <sup>3</sup> /rev [9.9 in <sup>3</sup> /rev]  | <b>375</b> | 375 cm <sup>3</sup> /rev [22.8 in <sup>3</sup> /rev] |
| <b>200</b> | 204 cm <sup>3</sup> /rev [12.4 in <sup>3</sup> /rev] | <b>470</b> | 465 cm <sup>3</sup> /rev [28.3 in <sup>3</sup> /rev] |
| <b>230</b> | 232 cm <sup>3</sup> /rev [14.2 in <sup>3</sup> /rev] | <b>540</b> | 536 cm <sup>3</sup> /rev [32.7 in <sup>3</sup> /rev] |
| <b>260</b> | 261 cm <sup>3</sup> /rev [15.9 in <sup>3</sup> /rev] | <b>750</b> | 748 cm <sup>3</sup> /rev [45.6 in <sup>3</sup> /rev] |
| <b>300</b> | 300 cm <sup>3</sup> /rev [18.3 in <sup>3</sup> /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
- 28** 35mm Tapered
- 30** 1-1/2" Straight
- 31** 1-1/2" Tapered
- M4** 1-3/8" Tapered

► 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**

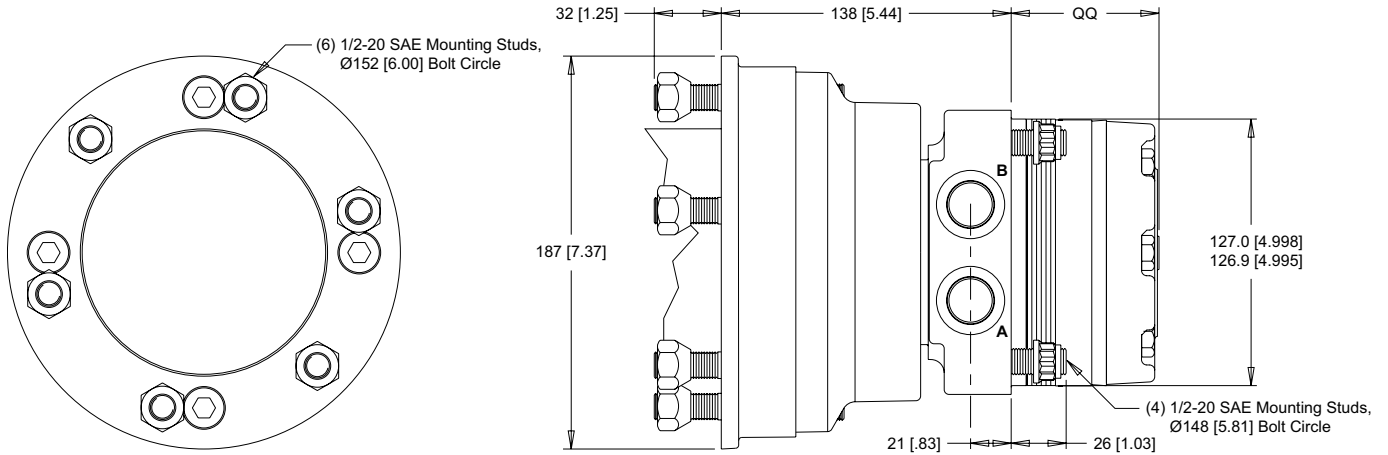
- AA** None
- AC** Freeturning Rotor
- AE** Hydraulic Declutch With Freeturning Rotor

**HOUSINGS**

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

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

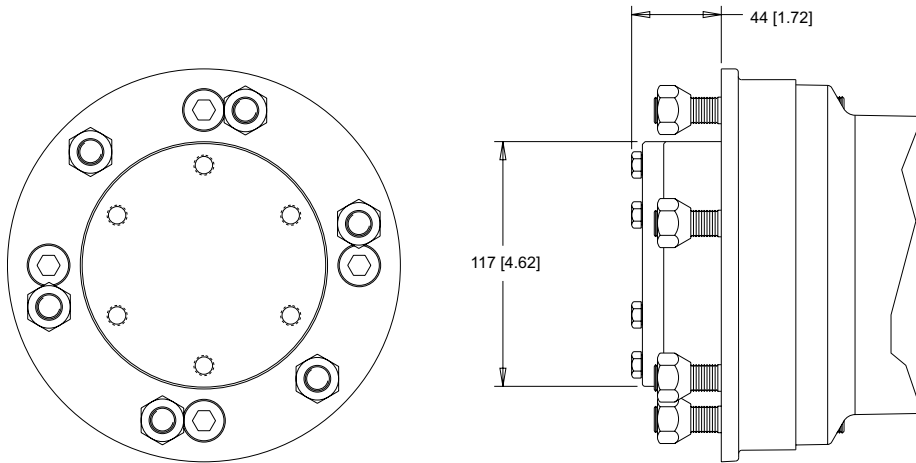
**W31** 7/8-14 UNF



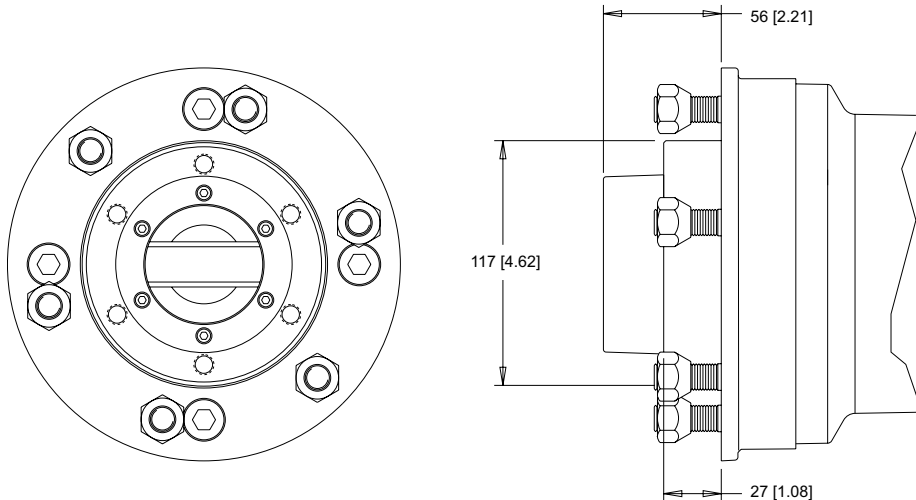
► Dimension QQ is charted on page 23.

**HUB OPTION DETAILS**

**STANDARD HUB**



**LOCKING HUB**

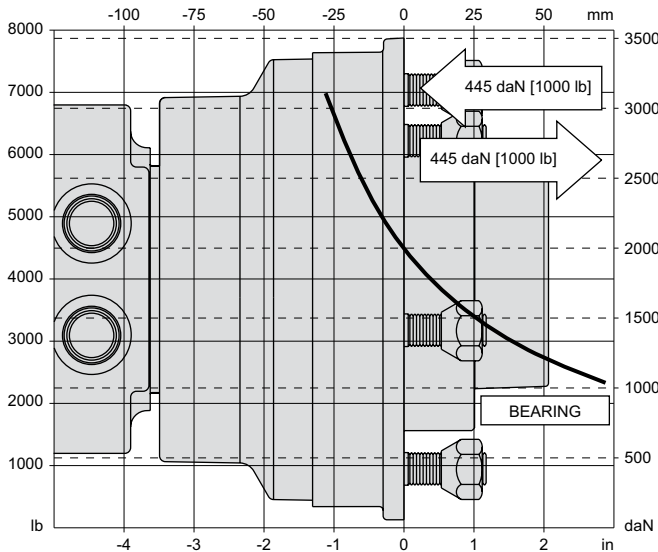


**TECHNICAL INFORMATION**

**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**



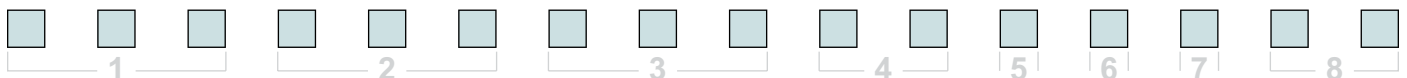
**LENGTH & WEIGHT CHART**

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]    |

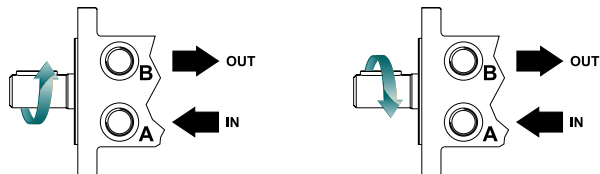
► All RE series motor weights can vary  $\pm 0.5$  kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

**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**

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

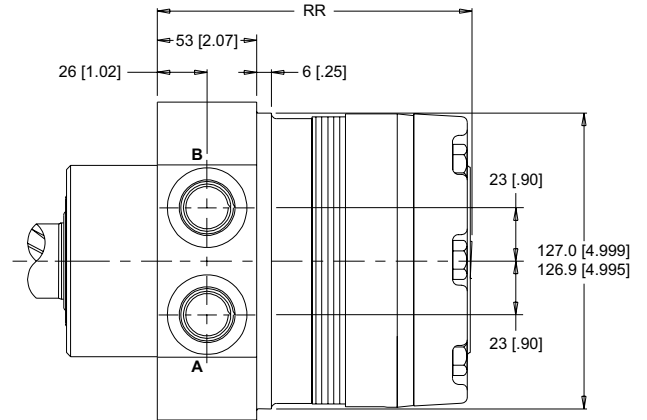
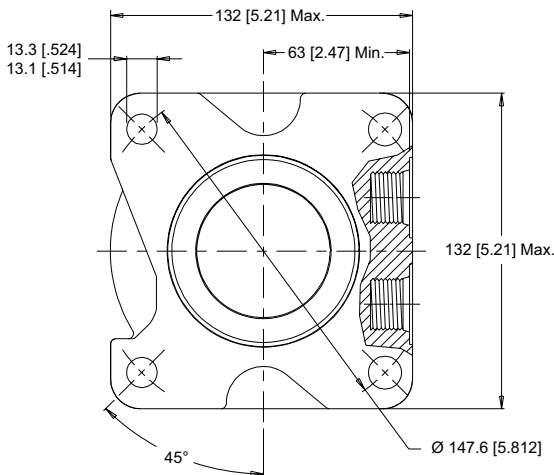
- AA** None
- AC** Freeturning Rotor
- AE** Hydraulic Declutch With Freeturning Rotor

**HOUSINGS**

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

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

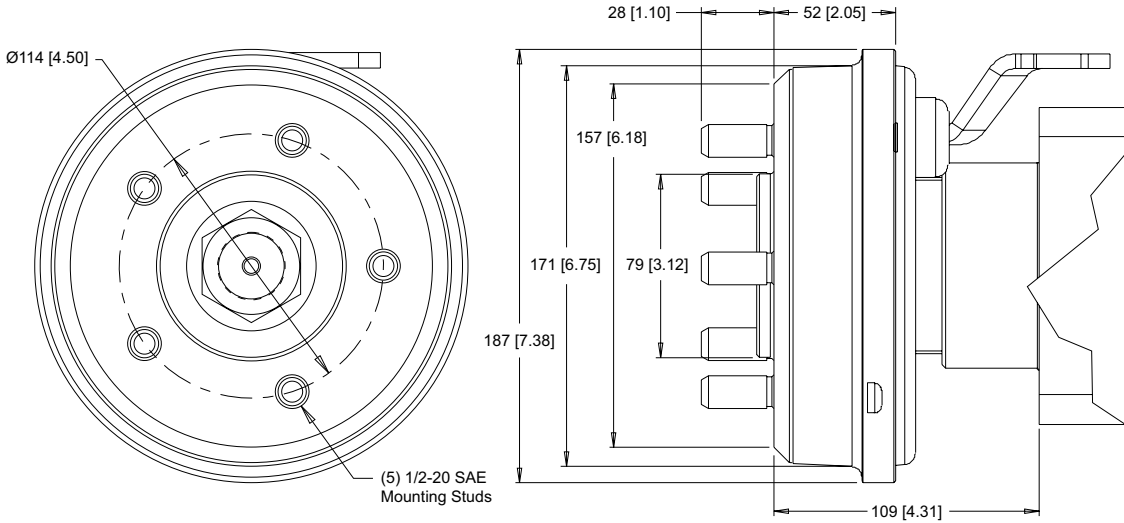
**X31** 7/8-14 UNF    **X38** G 1/2



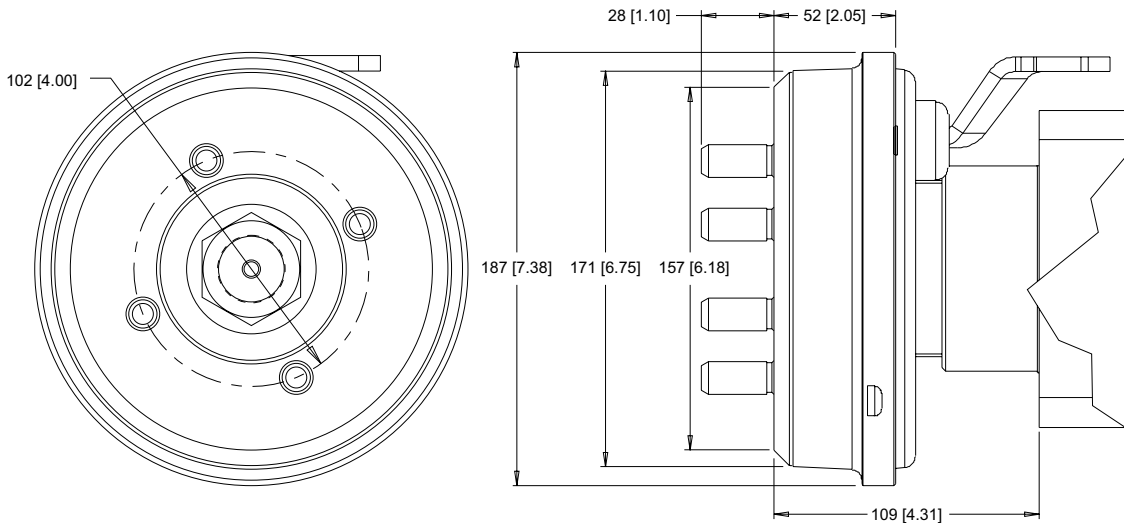
► Dimension RR is charted on page 25.

**HUB OPTION DETAILS**

**5-BOLT, WHEEL HUB**

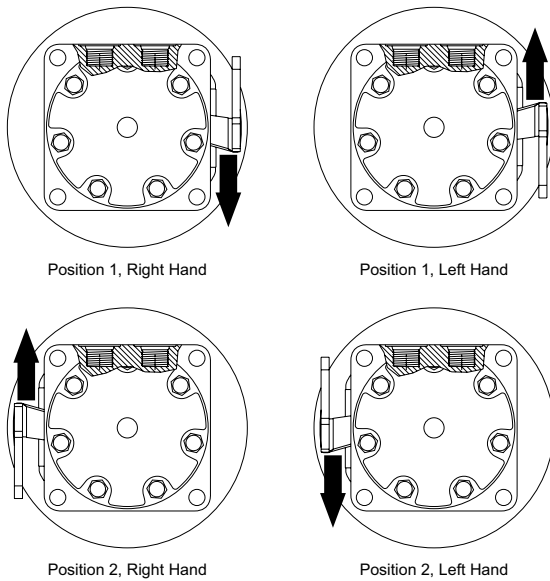


**4-BOLT, WHEEL HUB**

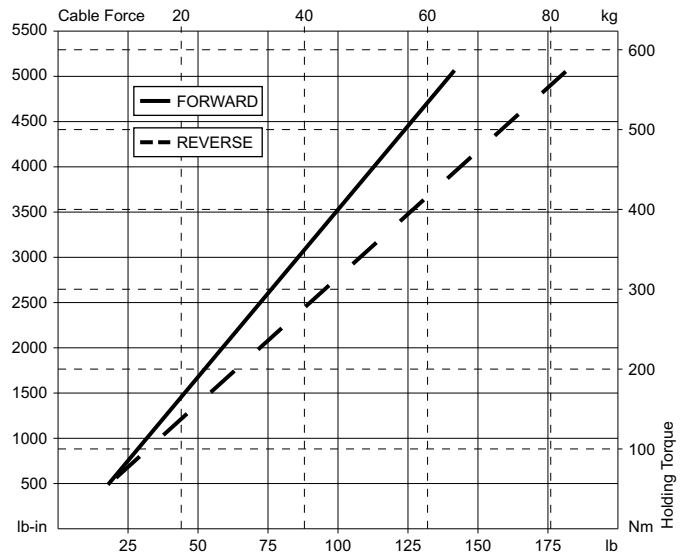


**TECHNICAL INFORMATION**

**BRAKE LEVER POSITION & PULL DIRECTION**



**BRAKE HOLDING TORQUE**



**ALLOWABLE SHAFT LOAD / BEARING CURVE**

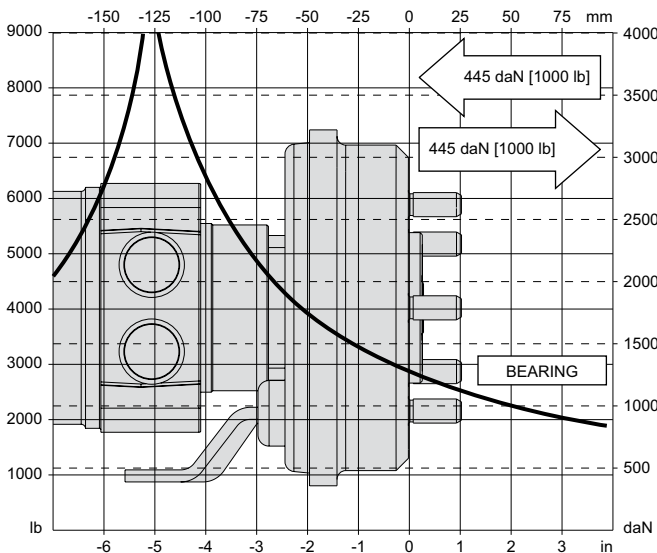
The bearing curve represents allowable bearing loads based on ISO 281 bearing capacity for an  $L_{10}$  life of 2,000 hours at 100 rpm. Radial loads for speeds other than 100 rpm may be calculated using the multiplication factor table on page 11.

**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.

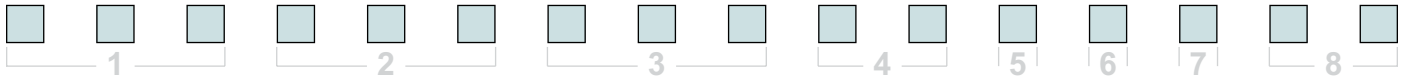
| RR # | Length mm [in] | Weight kg [lb] |
|------|----------------|----------------|
| 120  | 156 [6.15]     | 14.9 [42.9]    |
| 160  | 156 [6.15]     | 14.9 [42.9]    |
| 200  | 159 [6.29]     | 15.2 [43.7]    |
| 230  | 162 [6.38]     | 15.3 [43.9]    |
| 260  | 165 [6.48]     | 15.6 [44.5]    |
| 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]    |

**MOTOR BRAKE**



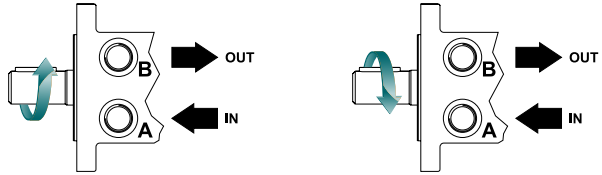
► 510/511 motor/brake weights can vary  $\pm 0.5$  kg [1 lb] depending on model configurations such as housing, shaft, endcover, options etc.

**ORDERING INFORMATION**



**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**

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