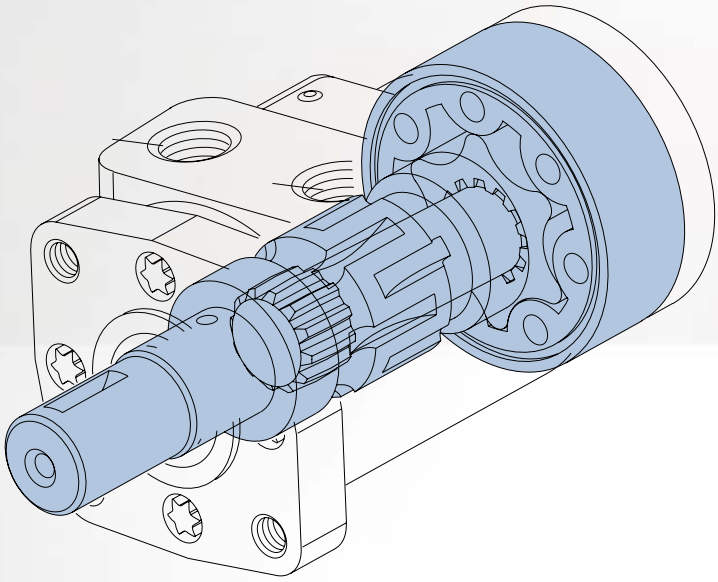
FLUITRONICS
hydraulic systems

# Spool Valve Hydraulic Motors
# **Series H**

11.2014



*inspired hydraulics.*

english

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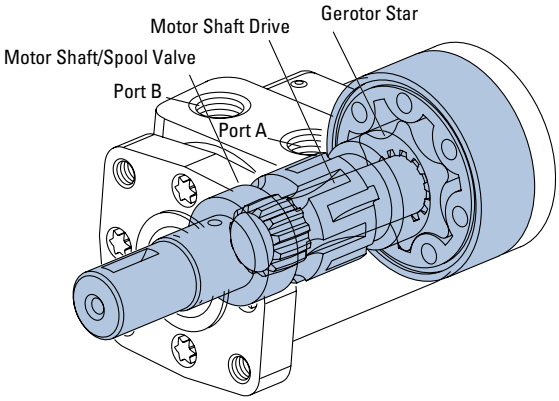
## H Series (101-)

### Highlights




**Features:**

- Time-tested Char-Lynn drive set
- Three moving components (gerotor-star, drive, and shaft)
- Optimized drive running angle
- Three-zone pressure design (inlet, return and case)
- Variety of displacements, shafts and mounts
- Special options to meet customer needs

**Benefits:**

- High efficiency
- Powerful compact package
- Design flexibility
- Extended leak-free performance

**Applications:**

- Agricultural augers, harvesters, seeders
- Car wash brushes
- Food processing
- Railroad maintenance equipment
- Machine tools
- Conveyors
- Industrial sweepers and floor polishers
- Saw mill works
- Turf equipment
- Concrete and asphalt equipment
- Skid steer attachments
- Many more

**Description**

Designed for medium duty applications, these motors use industry-proven spool valve technology combined with state-of-the-art gerotors. In addition, a wide variety of mounting flanges, shafts, Ports and valving options provide design flexibility. Direction of shaft rotation and shaft speed can be controlled easily and smoothly throughout the speed range of the motor, and equipment can be driven direct, eliminating costly mechanical components.

**Specifications**

| | |
|---|---|
| Gerotor Element | 13 Displacements |
| Flow l/min [GPM] | 57 [15] Continuous*** |
| | 76 [20] Intermittent** |
| Speed | Up to 1100 RPM |
| Pressure bar [PSI] | 125 [1800] Cont.*** |
| | 165 [2400] Inter.** |
| Torque Nm [lb-in] | 407 [3604] Cont.*** |
| | 520 [4600] Inter.** |

*** Continuous— (Cont.) Continuous rating, motor may be run continuously at these ratings.
** Intermittent— (Inter.) Intermittent operation, 10% of every minute.


Conveyer


Combine


Sweeper


Salt and Sand Spreader



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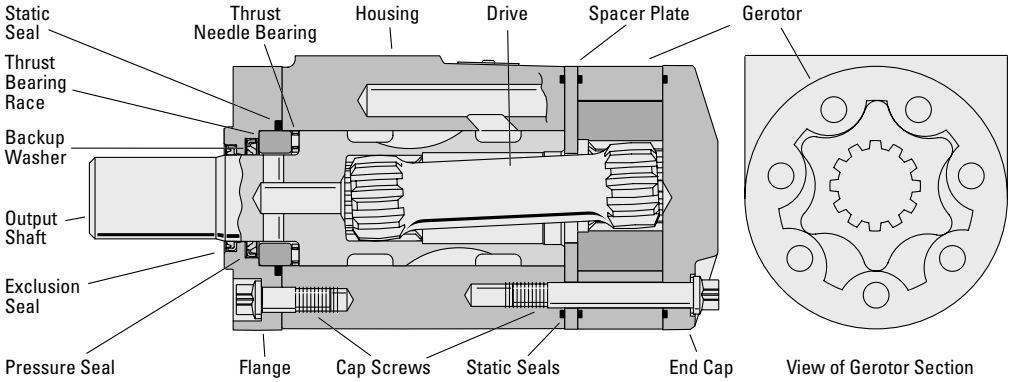
# H Series (101-)

## Specifications




**SPECIFICATION DATA — H MOTORS**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Displ. cm³/r [in³/r] | | 36 [2.2] | 46 [2.8] | 59 [3.6] | 74 [4.5] | 97 [5.9] | 120 [7.3] | 146 [8.9] | 159 [9.7] | 185 [11.3] | 231 [14.1] | 293 [17.9] | 370 [22.6] | 739 [45.1] |
| Max. Speed (RPM) @ Continuous Flow | | 1021 | 969 | 953 | 760 | 585 | 469 | 385 | 353 | 304 | 243 | 192 | 152 | 74 |
| Flow LPM [GPM] | Continuous | 38 [10] | 45 [12] | 57 [15] | 57 [15] | 57 [15] | 57 [15] | 57 [15] | 57 [15] | 57 [15] | 57 [15] | 57 [15] | 57 [15] | 57 [15] |
| | Intermittent | 38 [10] | 53 [14] | 64 [17] | 68 [18] | 68 [18] | 76 [20] | 76 [20] | 76 [20] | 76 [20] | 76 [20] | 76 [20] | 76 [20] | 76 [20] |
| Torque Nm [lb-in] | Continuous | 56 [497] | 73 [650] | 91 [802] | 118 [1044] | 155 [1368] | 192 [1699] | 221 [1954] | 233 [2059] | 265 [2343] | 302 [2669] | 351 [3110] | 407 [3604] | 389 [3440] |
| | Intermittent | 75 [668] | 99 [876] | 122 [1076] | 158 [1401] | 207 [1829] | 257 [2278] | 300 [2653] | 319 [2824] | 356 [3151] | 415 [3671] | 466 [4121] | 484 [4283] | 520 [4600] |
| Min. Starting Torque Nm [lb-in] | @ Cont. Pressure | 46 [410] | 59 [520] | 76 [670] | 95 [840] | 124 [1100] | 154 [1360] | 176 [1560] | 186 [1650] | 211 [1870] | 238 [2110] | 282 [2500] | 330 [2920] | 316 [2800] |
| | @ Int. Pressure | 63 [560] | 81 [720] | 104 [920] | 130 [1150] | 171 [1510] | 2102 [1860] | 46 [2180] | 262] [2320 | 293 [2590] | 339 [3000] | 388 [3430] | 408 [3610] | 434 [3840] |
| Pressure ΔBar [Δ PSI] | Continuous | 124 [1800] | 124 [1800] | 124 [1800] | 124 [1800] | 124 [1800] | 124 [1800] | 117 [1700] | 114 [1650] | 110 [1600] | 100 [1450] | 93 [1350] | 86 [1250] | 41 [600] |
| | Intermittent | 165 [2400] | 165 [2400] | 165 [2400] | 165 [2400] | 165 [2400] | 165 [2400] | 159 [2300] | 155 [2250] | 148 [2150] | 138 [2000] | 124 [1800] | 103 [1500] | 55 [800] |
| End Ported Units Only | | | | | | | | | | | | | | |
| Δ Bar [Δ PSI] | Cont. Pressure | 83 [1200] | 83 [1200] | 76 [1100] | 76 [1100] | 76 [1100] | 69 [1000] | 69 [1000] | 69 [1000] | 62 [900] | 55 [800] | 48 [700] | 57 [825] | 27 [396] |
| | Intermittent | 117 [1700] | 117 [1700] | 110 [1600] | 110 [1600] | 110 [1600] | 103 [1500] | 103 [1500] | 103 [1500] | 91 [1400] | 90 [1300] | 83 [1200] | 68 [990] | 36 [528] |
| Weight kg [lb] | | 5,1 [11.2] | 5,1 [11.2] | 5,2 [11.5] | 5,2 [11.5] | 5,4 [11.8] | 5,5 [12.1] | 5,6 [12.4] | 5,7 [12.5] | 5,8 [12.8] | 6,0 [13.3] | 6,3 [14.0] | 6,7 [14.7] | 8,4 [18,6] |

A simultaneous maximum torque and maximum speed NOT recommended.

**Note:**

To assure best motor life, run motor for approximately one hour at 30% of rated pressure before application to full load. Be sure motor is filled with fluid prior to any load applications.

**Note:**

Δ pressure is derated for end ported units.

**Maximum Inlet Pressure:**

172 Bar [2500 PSI] without regard to Δ Bar [Δ PSI] and/ or back pressure ratings or combination thereof.

6B splined or Tapered shafts are recommended whenever operation above 282 NM [2500 lb-in] of torque, especially for those applications subject to frequent reversals.

**Δ Pressure:**

The true Δ bar [Δ PSI] difference between inlet port and outlet port

**Continuous Rating:**

Motor may be run continuously at these ratings

**Intermittent Operation:**

10% of every minute

**Recommended Fluids:**

Recommended Fluids — Premium quality, anti-wear type hydraulic oil. Minimum oil viscosity (at operating temperature) should be the highest of the following: 100 SUS or

$$\left[\frac{300 \times \text{Bar}}{\text{RPM}} = \text{SUS}\right.$$

$$\left.\frac{20 \times \text{PSI}}{\text{RPM}} = \text{SUS}\right]$$

**Recommended Maximum System Operating Temp.:**

82°C [180°F]

**Recommended Filtration:**

per ISO Cleanliness Code 4406, level 20/18/13



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## H Series (101-)

### Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

Continuous

Intermittent

**36 cm³/r [2.2 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | [1600] 110 | [1800] 124 | Max. Continuous [2400] 165 |
|---|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [49] 6 204 | [103] 12 201 | [162] 18 198 | [189] 21 194 | [270] 31 189 | [325] 37 184 | [379] 43 177 | [432] 49 170 | [489] 55 162 | [650] 73 122 |
| [4] 15,1 | [47] 5 408 | [106] 12 407 | [160] 18 402 | [191] 22 399 | [274] 31 394 | [327] 37 387 | [384] 43 381 | [439] 50 373 | [495] 56 365 | [654] 74 323 |
| [6] 22,7 | [44] 5 613 | [102] 12 612 | [158] 18 609 | [188] 21 604 | [272] 31 599 | [328] 37 591 | [383] 43 586 | [440] 50 576 | [496] 56 565 | [661] 75 523 |
| [8] 30,3 | [40] 5 817 | [97] 11 817 | [153] 17 814 | [184] 21 807 | [270] 31 799 | [326] 37 793 | [383] 43 785 | [440] 50 776 | [497] 56 762 | [668] 75 721 |
| Max. Continuous [10] 37,9 | [36] 4 1021 | [90] 10 1021 | [148] 17 1015 | [180] 20 1008 | [265] 30 1001 | [322] 36 991 | [380] 43 981 | [438] 49 969 | [495] 56 959 | [664] 75 920 |

[90] 10 1021 } Torque [lb-in] Nm Speed RPM

**46 cm³/r [2.8 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | [1600] 110 | [1800] 124 | Max. Continuous [2400] 165 |
|---|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [64] 7 161 | [136] 15 158 | [212] 24 156 | [284] 32 153 | [355] 40 148 | [426] 48 145 | [497] 56 139 | [567] 64 133 | [641] 72 127 | [852] 96 95 |
| [4] 15,1 | [61] 7 323 | [139] 16 320 | [209] 24 316 | [286] 32 314 | [359] 41 310 | [429] 48 304 | [503] 57 300 | [576] 65 293 | [649] 73 287 | [857] 97 253 |
| [6] 22,7 | [58] 7 486 | [134] 15 481 | [207] 23 479 | [282] 32 475 | [356] 40 471 | [430] 49 464 | [502] 57 461 | [577] 65 453 | [650] 73 444 | [867] 98 410 |
| [8] 30,3 | [52] 6 648 | [128] 14 643 | [200] 23 640 | [276] 31 635 | [354] 40 628 | [428] 48 623 | [502] 57 617 | [577] 65 610 | [651] 74 599 | [876] 99 566 |
| [10] 37,9 | [47] 5 808 | [118] 13 803 | [194] 22 798 | [269] 30 793 | [347] 39 787 | [423] 48 779 | [498] 56 771 | [575] 65 761 | [649] 73 753 | [871] 98 722 |
| Max. Continuous [12] 45,4 | [36] 4 969 | [109] 12 964 | [188] 21 960 | [260] 29 952 | [340] 38 946 | [417] 47 938 | [492] 56 931 | [567] 64 922 | [643] 73 914 | [864] 98 877 |
| Max. Intermittent [14] 53,0 | [25] 3 1127 | [98] 11 1123 | [175] 20 1115 | [249] 28 1108 | [327] 37 1100 | [404] 46 1093 | [484] 55 1086 | [559] 63 1079 | [634] 72 1068 | |





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# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

Continuous

Intermittent

**59 cm³/r [3.6 in³/r]**

Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | [1600] 110 | [1800] 124 | Max. Continuous [2400] 165 |
|---|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [79] 9 127 | [169] 19 125 | [260] 29 123 | [305] 34 121 | [437] 49 117 | [526] 59 114 | [616] 70 109 | [704] 80 103 | [796] 90 96 | [1055] 119 65 |
| [4] 15,1 | [76] 9 254 | [168] 19 254 | [257] 29 251 | [307] 35 249 | [441] 50 246 | [529] 60 241 | [620] 70 236 | [710] 80 230 | [800] 90 224 | [1065] 120 193 |
| [6] 22,7 | [73] 8 381 | [161] 18 381 | [252] 28 380 | [303] 34 377 | [439] 50 373 | [529] 60 368 | [618] 70 364 | [709] 80 358 | [802] 91 349 | [1069] 121 319 |
| [8] 30,3 | [64] 7 508 | [151] 17 508 | [243] 27 508 | [294] 33 504 | [428] 48 500 | [519] 59 496 | [609] 69 491 | [701] 79 484 | [794] 90 476 | [1076] 122 446 |
| [10] 37,9 | [57] 6 635 | [141] 16 635 | [234] 26 634 | [283] 32 630 | [419] 47 626 | [512] 58 621 | [602] 68 614 | [693] 78 608 | [786] 89 601 | [1071] 121 571 |
| [12] 45,4 | [45] 5 762 | [131] 15 762 | [227] 26 762 | [274] 31 757 | [409] 46 753 | [505] 57 747 | [593] 67 741 | [684] 77 734 | [778] 88 728 | [1058] 120 694 |
| [14] 53,0 | [33] 4 889 | [118] 13 889 | [213] 24 887 | [266] 30 882 | [396] 45 877 | [492] 56 872 | [583] 66 866 | [676] 76 860 | [770] 87 851 | [1055] 119 813 |
| Max. Continuous [15] 56,8 | [29] 3 953 | [111] 13 953 | [205] 23 951 | [260] 29 945 | [389] 44 940 | [486] 55 935 | [576] 65 929 | [670] 76 921 | [765] 86 913 | [1055] 119 872 |
| Max. Intermittent [20] 75,7 | [17] 2 1080 | [98] 11 1080 | [192] 22 1077 | [252] 28 1071 | [377] 43 1067 | [475] 54 1062 | [567] 64 1055 | [660] 75 1049 | [757] 86 1040 | |

[111] Torque [lb-in]
13 Nm
953 Speed RPM

**74 cm³/r [4.5 in³/r]**

Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | [1600] 110 | [1800] 124 | Max. Continuous [2400] 165 |
|---|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [103] 12 101 | [220] 25 99 | [339] 38 98 | [454] 51 96 | [569] 64 93 | [685] 77 90 | [801] 91 86 | [916] 103 81 | [1036] 117 76 | [1373] 155 51 |
| [4] 15,1 | [99] 11 203 | [219] 25 201 | [335] 38 199 | [457] 52 197 | [574] 65 194 | [689] 78 191 | [808] 91 187 | [925] 105 182 | [1042] 118 177 | [1386] 157 153 |
| [6] 22,7 | [94] 11 305 | [210] 24 303 | [328] 37 301 | [451] 51 298 | [571] 65 296 | [689] 78 292 | [805] 91 288 | [924] 104 283 | [1044] 118 276 | [1392] 157 252 |
| [8] 30,3 | [86] 10 406 | [196] 22 404 | [319] 36 402 | [438] 49 399 | [558] 63 396 | [676] 76 393 | [793] 90 388 | [913] 103 383 | [1033] 117 377 | [1401] 158 352 |
| [10] 37,9 | [74] 8 507 | [183] 21 505 | [310] 35 502 | [422] 48 499 | [545] 62 496 | [667] 75 492 | [784] 89 486 | [903] 102 482 | [1024] 116 476 | [1394] 158 452 |
| [12] 45,4 | [58] 7 608 | [171] 19 606 | [295] 33 603 | [408] 46 600 | [533] 60 596 | [657] 74 591 | [773] 87 587 | [891] 101 581 | [1013] 114 576 | [1377] 156 549 |
| [14] 53,0 | [43] 5 709 | [154] 17 706 | [277] 31 702 | [396] 45 698 | [515] 58 694 | [640] 72 691 | [760] 86 686 | [880] 99 681 | [1002] 113 674 | [1374] 155 643 |
| Max. Continuous [15] 56,8 | [36] 4 760 | [145] 16 757 | [268] 30 753 | [387] 44 749 | [506] 57 744 | [632] 71 740 | [750] 85 735 | [873] 99 729 | [996] 113 723 | [1373] 155 690 |
| Max. Intermittent [20] 75,7 | [14] 2 904 | [121] 14 902 | [233] 26 898 | [351] 40 895 | [482] 54 891 | [609] 69 887 | [725] 82 882 | [856] 97 877 | [981] 111 869 | |

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# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

Continuous

Intermittent

**97 cm³/r [5.9 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | [1600] 110 | [1800] 124 | Max. Continuous [2400] 165 |
|---|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [134] 15 78 | [292] 33 76 | [442] 50 75 | [593] 67 73 | [746] 84 71 | [899] 102 68 | [1054] 119 65 | [1209] 137 61 | [1365] 154 55 | [1806] 204 33 |
| [4] 15,1 | [131] 15 156 | [281] 32 155 | [436] 49 153 | [596] 67 151 | [750] 85 149 | [903] 102 147 | [1059] 120 143 | [1212] 137 139 | [1367] 154 134 | [1828] 207 113 |
| [6] 22,7 | [126] 14 234 | [269] 30 233 | [425] 48 231 | [588] 66 230 | [747] 84 228 | [900] 102 224 | [1054] 119 221 | [1206] 136 217 | [1368] 155 210 | [1823] 206 189 |
| [8] 30,3 | [110] 12 312 | [246] 28 311 | [408] 46 310 | [566] 64 308 | [718] 81 305 | [873] 99 303 | [1023] 116 300 | [1177] 133 295 | [1339] 151 291 | [1829] 207 269 |
| [10] 37,9 | [96] 11 390 | [231] 26 389 | [392] 44 387 | [539] 61 385 | [699] 79 383 | [859] 97 380 | [1005] 114 376 | [1156] 131 373 | [1318] 149 368 | [1821] 206 346 |
| [12] 45,4 | [77] 9 468 | [218] 25 467 | [378] 43 465 | [522] 59 463 | [681] 77 460 | [844] 95 457 | [990] 112 453 | [1142] 129 449 | [1301] 147 445 | [1792] 202 421 |
| [14] 53,0 | [60] 7 546 | [197] 22 544 | [358] 40 542 | [513] 58 539 | [662] 75 537 | [828] 94 535 | [973] 110 531 | [1131] 128 526 | [1293] 146 521 | [1776] 201 499 |
| Max. Continuous [15] 56,8 | [52] 6 585 | [189] 21 583 | [346] 39 581 | [495] 56 578 | [651] 74 575 | [819] 93 573 | [963] 109 569 | [1126] 127 564 | [1286] 145 559 | [1778] 201 536 |
| Max. Intermittent [20] 75,7 | [25] 3 701 | [157] 18 700 | [311] 35 697 | [455] 51 694 | [625] 71 691 | [790] 89 688 | [941] 106 684 | [1110] 125 681 | [1272] 144 674 | |

[189] Torque [lb-in]
21 Nm
583 Speed RPM

**120 cm³/r [7.3 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | [1600] 110 | [1800] 124 | Max. Continuous [2400] 165 |
|---|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [162] 18 62 | [357] 40 61 | [544] 61 61 | [736] 83 59 | [927] 105 58 | [1116] 126 55 | [1305] 147 53 | [1498] 169 49 | [1687] 191 45 | [2231] 252 26 |
| [4] 15,1 | [160] 18 125 | [348] 39 124 | [539] 61 123 | [736] 83 121 | [930] 105 120 | [1119] 126 119 | [1316] 149 116 | [1506] 170 114 | [1698] 192 110 | [2268] 256 90 |
| [6] 22,7 | [155] 18 188 | [338] 38 187 | [530] 60 186 | [729] 82 185 | [923] 104 183 | [1116] 126 180 | [1310] 148 178 | [1500] 169 175 | [1699] 192 170 | [2271] 257 152 |
| [8] 30,3 | [139] 16 250 | [319] 36 250 | [515] 58 249 | [710] 80 247 | [901] 102 245 | [1094] 124 243 | [1283] 145 241 | [1476] 167 237 | [1673] 189 233 | [2278] 257 216 |
| [10] 37,9 | [121] 14 313 | [303] 34 312 | [497] 56 311 | [686] 78 309 | [883] 100 308 | [1081] 122 306 | [1267] 143 302 | [1460] 165 300 | [1655] 187 296 | [2268] 256 278 |
| [12] 45,4 | [102] 12 375 | [288] 33 374 | [480] 54 373 | [664] 75 371 | [862] 97 370 | [1060] 120 367 | [1246] 141 365 | [1440] 163 361 | [1640] 185 358 | [2232] 252 338 |
| [14] 53,0 | [78] 9 438 | [263] 30 437 | [458] 52 435 | [652] 74 433 | [841] 95 431 | [1041] 118 430 | [1228] 139 427 | [1420] 160 423 | [1616] 183 419 | [2213] 250 401 |
| Max. Continuous [15] 56,8 | [67] 8 469 | [253] 29 468 | [446] 50 466 | [632] 71 464 | [828] 94 462 | [1030] 116 460 | [1214] 137 458 | [1411] 159 454 | [1608] 182 450 | [2205] 249 430 |
| Max. Intermittent [20] 75,7 | [20] 2 626 | [202] 23 624 | [384] 43 621 | [581] 66 618 | [778] 88 617 | [971] 110 614 | [1169] 132 611 | [1356] 153 609 | [1559] 176 606 | |

# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

Continuous

Intermittent

**146 cm³/r [8.9 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | [1600] 110 | Max. Continuous [1700] 117 | Max. Intermittent [2300] 159 |
|---|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [198] 22 51 | [435] 49 50 | [664] 75 50 | [897] 101 49 | [1130] 128 47 | [1361] 154 45 | [1591] 180 43 | [1827] 206 40 | [1942] 219 39 | [2611] 295 24 |
| [4] 15,1 | [196] 22 103 | [424] 48 102 | [657] 74 101 | [898] 101 99 | [1133] 128 99 | [1365] 154 97 | [1604] 181 95 | [1836] 207 93 | [1954] 221 92 | [2648] 299 78 |
| [6] 22,7 | [189] 21 154 | [412] 47 153 | [646] 73 152 | [889] 100 151 | [1125] 127 150 | [1361] 154 148 | [1598] 181 146 | [1829] 207 143 | [1951] 220 141 | [2653] 300 128 |
| [8] 30,3 | [169] 19 205 | [389] 44 205 | [628] 71 204 | [866] 98 203 | [1098] 124 201 | [1333] 151 200 | [1564] 177 197 | [1799] 203 195 | [1919] 217 193 | [2649] 299 180 |
| [10] 37,9 | [148] 17 257 | [369] 42 256 | [605] 68 255 | [836] 94 253 | [1076] 122 252 | [1318] 149 251 | [1544] 174 248 | [1780] 201 246 | [1899] 215 244 | [2789] 315 231 |
| [12] 45,4 | [125] 14 308 | [351] 40 307 | [586] 66 306 | [810] 92 305 | [1051] 119 303 | [1293] 146 301 | [1519] 172 299 | [1756] 198 296 | [1878] 212 295 | [2606] 294 281 |
| [14] 53,0 | [95] 11 359 | [321] 36 358 | [558] 63 357 | [795] 90 355 | [1026] 116 354 | [1290] 146 352 | [1497] 169 350 | [1731] 196 347 | [1851] 209 346 | [2580] 292 331 |
| Max. Continuous [15] 56,8 | [82] 9 85 | [308] 35 384 | [544] 61 383 | [771] 87 381 | [1010] 114 379 | [1256] 142 378 | [1480] 167 375 | [1720] 194 373 | [1840] 208 371 | [2569] 290 356 |
| Max. Intermittent [20] 75,7 | [24] 3 513 | [246] 28 512 | [468] 53 509 | [708] 80 507 | [948] 107 506 | [1184] 134 504 | [1425] 161 501 | [1653] 187 499 | [1780] 201 498 | |

**159 cm³/r [9.7 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | [1600] 110 | Max. Continuous [1650] 134 | Max. Intermittent [2250] 155 |
|---|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [209] 24 47 | [465] 53 46 | [715] 81 46 | [973] 110 45 | [1228] 139 44 | [1478] 167 42 | [1724] 195 40 | [1981] 224 38 | [2046] 231 37 | [2764] 312 23 |
| [4] 15,1 | [210] 24 94 | [460] 52 94 | [710] 80 93 | [971] 110 91 | [1229] 139 91 | [1480] 167 90 | [1745] 197 89 | [1996] 226 87 | [2059] 233 87 | [2813] 318 76 |
| [6] 22,7 | [205] 23 141 | [454] 51 141 | [704] 80 140 | [965] 109 139 | [1216] 137 138 | [1477] 167 136 | [1738] 196 134 | [1991] 225 132 | [2055] 232 132 | [2824] 319 119 |
| [8] 30,3 | [186] 21 188 | [440] 50 188 | [693] 78 187 | [951] 107 186 | [1205] 136 185 | [1461] 165 183 | [1716] 194 181 | [1973] 223 179 | [2038] 230 178 | [2808] 317 166 |
| [10] 37,9 | [164] 19 235 | [422] 48 234 | [671] 76 234 | [930] 105 232 | [1189] 134 232 | [1451] 164 230 | [1702] 192 228 | [1965] 219 226 | [2032] 230 225 | [2789] 315 213 |
| [12] 45,4 | [144] 16 282 | [404] 46 281 | [652] 74 281 | [900] 102 279 | [1163] 131 279 | [1421] 161 277 | [1674] 189 275 | [1937] 219 273 | [2004] 226 272 | [2770] 313 260 |
| [14] 53,0 | [109] 12 330 | [374] 42 329 | [623] 70 328 | [883] 100 327 | [1140] 129 325 | [1396] 158 323 | [1653] 187 322 | [1900] 215 319 | [1963] 222 319 | [2727] 308 306 |
| Max. Continuous [15] 56,8 | [92] 10 353 | [359] 41 352 | [612] 69 351 | [861] 97 350 | [1123] 127 348 | [1381] 156 347 | [1633] 185 345 | [1886] 213 343 | [1950] 220 342 | [2712] 306 330 |
| Max. Intermittent [20] 75,7 | [26] 3 471 | [268] 30 470 | [510] 58 467 | [772] 87 465 | [1034] 117 464 | [1290] 146 462 | [1553] 175 460 | [1802] 204 458 | [1865] 211 458 | |

[359] 41 352 } Torque [lb-in] Nm Speed RPM



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## H Series (101-)

### Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

Continuous

Intermittent

**185 cm³/r [11.3 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | Max. Continuous [1600] 110 | Max. Intermittent [2150] 148 |
|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [257] 29 40 | [554] 63 40 | [847] 96 39 | [1150] 130 38 | [1447] 163 37 | [1739] 196 36 | [2035] 230 33 | [2320] 262 29 | [3103] 351 12 |
| [4] 15,1 | [254] 29 81 | [546] 62 81 | [845] 95 80 | [1145] 129 79 | [1448] 164 78 | [1744] 197 77 | [2049] 232 76 | [2343] 265 74 | [3147] 356 63 |
| [6] 22,7 | [246] 28 121 | [540] 61 121 | [834] 94 120 | [1137] 128 120 | [1434] 162 119 | [1736] 196 117 | [2036] 230 115 | [2337] 264 112 | [3151] 356 100 |
| [8] 30,3 | [224] 25 162 | [520] 59 162 | [820] 93 161 | [1117] 126 160 | [1414] 160 159 | [1716] 194 157 | [2014] 228 155 | [2315] 262 152 | [3133] 354 140 |
| [10] 37,9 | [202] 23 202 | [499] 56 202 | [793] 90 201 | [1095] 124 201 | [1394] 158 200 | [1699] 192 198 | [1997] 226 196 | [2299] 260 193 | [3112] 352 181 |
| [12] 45,4 | [176] 20 243 | [475] 54 242 | [767] 87 242 | [1063] 120 241 | [1368] 155 240 | [1664] 188 238 | [1969] 222 236 | [2268] 256 234 | [3088] 349 222 |
| [14] 53,0 | [140] 16 283 | [443] 50 283 | [735] 83 282 | [1035] 117 281 | [1340] 151 280 | [1637] 185 279 | [1936] 219 277 | [2227] 252 274 | [3051] 345 262 |
| Max. Continuous [15] 56,8 | [120] 14 304 | [425] 48 303 | [719] 81 302 | [1014] 115 301 | [1320] 149 300 | [1618] 183 299 | [1914] 216 297 | [2205] 249 294 | [3023] 342 283 |
| Max. Intermittent [20] 75,7 | [27] 3 405 | [321] 36 404 | [612] 69 402 | [911] 103 401 | [1211] 137 400 | [1504] 170 398 | [1795] 203 397 | | |

**231 cm³/r [14.1 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1400] 97 | Max. Continuous [1450] 100 | Max. Intermittent [2000] 138 |
|---|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [338] 38 32 | [707] 80 32 | [1074] 121 31 | [1456] 165 30 | [1827] 206 30 | [2192] 248 28 | [2572] 291 26 | [2657] 300 25 | |
| [4] 15,1 | [328] 37 65 | [695] 79 65 | [1076] 122 64 | [1447] 163 63 | [1827] 206 62 | [2201] 249 62 | [2577] 291 60 | [2669] 302 60 | [3671] 415 50 |
| [6] 22,7 | [317] 36 97 | [687] 78 97 | [1057] 119 97 | [1434] 162 96 | [1811] 205 95 | [2186] 247 94 | [2555] 289 92 | [2650] 299 91 | [3668] 414 80 |
| [8] 30,3 | [289] 33 130 | [659] 74 130 | [1038] 117 130 | [1406] 159 129 | [1777] 201 128 | [2160] 244 127 | [2531] 286 124 | [2625] 297 124 | [3644] 412 112 |
| [10] 37,9 | [265] 30 162 | [631] 71 162 | [1004] 113 162 | [1381] 156 162 | [1751] 198 160 | [2131] 241 158 | [2510] 284 156 | [2602] 294 156 | [3608] 408 145 |
| [12] 45,4 | [230] 26 195 | [599] 68 195 | [968] 109 194 | [1345] 152 194 | [1722] 195 193 | [2088] 236 192 | [2480] 280 189 | [2571] 290 189 | [3571] 403 178 |
| [14] 53,0 | [191] 22 227 | [563] 64 227 | [927] 105 227 | [1299] 147 226 | [1686] 190 226 | [2058] 233 224 | [2428] 274 222 | [2519] 285 221 | [3532] 399 212 |
| Max. Continuous [15] 56,8 | [167] 19 243 | [538] 61 243 | [904] 102 243 | [1279] 145 242 | [1661] 188 242 | [2030] 229 240 | [2404] 272 238 | [2493] 282 238 | [3488] 394 229 |
| Max. Intermittent [20] 75,7 | [29] 3 324 | [411] 46 324 | [785] 89 323 | [1152] 130 322 | [1520] 172 322 | [1877] 212 320 | [2222] 251 319 | [2318] 262 318 | |

[538] 61 243 } Torque [lb-in] Nm Speed RPM



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# H Series (101-)

## Performance Data

Motors run with high efficiency in all areas designated with a number for torque and speed, however for best motor life select a motor to run with a torque and speed range printed in the light shaded area.

Performance data is typical at 120 SUS. Actual data may vary slightly from unit to unit in production.

Continuous

Intermittent

**293 cm³/r [17.9 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | Max. Continuous [1350] 93 | Max. Intermittent [1800] 124 |
|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [427] 48 26 | [893] 101 25 | [1361] 154 25 | [1829] 207 24 | [2293] 259 22 | [2672] 302 16 | [2977] 336 13 | |
| [4] 15,1 | [419] 47 51 | [886] 100 51 | [1362] 154 51 | [1833] 207 50 | [2305] 260 49 | [2771] 313 47 | [3110] 351 44 | [4107] 464 22 |
| [6] 22,7 | [402] 45 77 | [872] 99 77 | [1342] 152 76 | [1819] 206 76 | [2291] 259 74 | [2757] 312 71 | [3098] 350 68 | [4121] 466 54 |
| [8] 30,3 | [367] 41 102 | [838] 95 102 | [1316] 149 102 | [1785] 202 101 | [2252] 254 100 | [2723] 308 98 | [3070] 347 95 | [4086] 462 84 |
| [10] 37,9 | [332] 38 128 | [803] 91 128 | [1276] 144 128 | [1749] 198 127 | [2215] 250 126 | [2684] 303 123 | [3034] 343 120 | [4061] 459 108 |
| [12] 45,4 | [289] 33 153 | [760] 86 153 | [1230] 139 153 | [1706] 193 153 | [2177] 246 151 | [2634] 298 149 | [2989] 338 146 | [4012] 453 135 |
| [14] 53,0 | [241] 27 179 | [712] 80 179 | [1176] 133 179 | [1650] 186 179 | [2126] 240 177 | [2592] 293 175 | [2935] 332 172 | [3963] 448 161 |
| Max. Continuous [15] 56,8 | [211] 24 192 | [683] 77 192 | [1149] 130 192 | [1623] 183 191 | [2096] 237 190 | [2558] 289 188 | [2905] 328 185 | [3914] 442 174 |
| Max. Intermittent [20] 75,7 | [43] 5 256 | [527] 60 256 | [1001] 113 255 | [1463] 165 255 | [1919] 217 254 | [2375] 268 252 | [2720] 307 249 | |

**370 cm³/r [22.6 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | [800] 55 | [1000] 69 | [1200] 83 | [1250] 86 | Max. Continuous [1500] 103 |
|---|---|---|---|---|---|---|---|---|
| [2] 7,6 | [537] 61 20 | [1121] 127 20 | [1715] 194 20 | [2285] 258 19 | [2862] 323 16 | | | |
| [4] 15,1 | [532] 60 40 | [1123] 127 40 | [1715] 194 40 | [2308] 261 39 | [2893] 327 38 | [3467] 392 36 | [3604] 407 35 | [4274] 483 27 |
| [6] 22,7 | [508] 57 61 | [1100] 124 61 | [1693] 191 61 | [2294] 259 60 | [2884] 326 58 | [3458] 391 55 | [3598] 407 53 | [4283] 484 47 |
| [8] 30,3 | [463] 52 81 | [1060] 120 81 | [1661] 188 81 | [2255] 255 80 | [2840] 321 79 | [3414] 386 76 | [3557] 402 74 | [4254] 481 68 |
| [10] 37,9 | [414] 47 101 | [1017] 115 101 | [1613] 182 101 | [2203] 249 101 | [2788] 315 99 | [3363] 380 96 | [3506] 396 94 | [4212] 476 88 |
| [12] 45,4 | [363] 41 121 | [960] 108 121 | [1553] 175 121 | [2152] 243 121 | [2737] 309 119 | [3305] 373 116 | [3446] 389 115 | [4152] 469 109 |
| [14] 53,0 | [303] 34 142 | [897] 101 142 | [1484] 168 142 | [2086] 236 142 | [2667] 301 140 | [3246] 367 137 | [3386] 383 136 | [4092] 462 130 |
| Max. Continuous [15] 56,8 | [266] 30 152 | [862] 97 152 | [1452] 164 152 | [2050] 232 152 | [2630] 297 150 | [3206] 362 148 | [3347] 378 147 | [4054] 458 140 |
| Max. Intermittent [20] 75,7 | [61] 7 202 | [671] 76 202 | [1269] 143 202 | [1847] 209 202 | [2410] 272 202 | [2987] 337 199 | [3119] 352 198 | |

[862] 97 152 } Torque [lb-in] Nm Speed RPM

**739 cm³/r [45.1 in³/r]**

Δ Pressure Bar [PSI]

| Flow LPM [GPM] | Continuous [200] 14 | [400] 28 | [600] 41 | Max. Continuous [800] 55 |
|---|---|---|---|---|
| [2] 7,6 | [1080] 122 10 | [2250] 254 10 | [3440] 389 10 | [4570] 516 9 |
| [4] 15,1 | [1070] 121 20 | [2250] 254 20 | [3440] 389 19 | [4600] 520 18 |
| [6] 22,7 | [1020] 115 30 | [2200] 249 30 | [3390] 383 29 | [4590] 519 27 |
| [8] 30,3 | [ 945] 107 40 | [2135] 241 40 | [3330] 376 39 | [4515] 510 37 |
| [10] 37,9 | [ 840] 95 50 | [2050] 232 50 | [3250] 367 48 | [4430] 501 46 |
| [12] 45,4 | [ 740] 84 60 | [1945] 220 59 | [3130] 354 58 | [4320] 488 55 |
| [14] 53,0 | [ 630] 71 69 | [1820] 206 68 | [3005] 340 68 | [4195] 474 66 |
| Max. Continuous [15] 56,8 | [ 540] 61 74 | [1735] 196 74 | [2905] 328 73 | [4130] 467 72 |
| Max. Intermittent [20] 75,7 | [ 143] 16 99 | [1350] 153 98 | [2565] 290 97 | [3705] 419 96 |



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# H Series (101-)

## Dimensions

(Refer to pages B-4-19 thru B-4-22 for shaft and port dimensions.)

**Standard Rotation Viewed from Shaft End**

Port A Pressurized — CW

Port B Pressurized — CCW

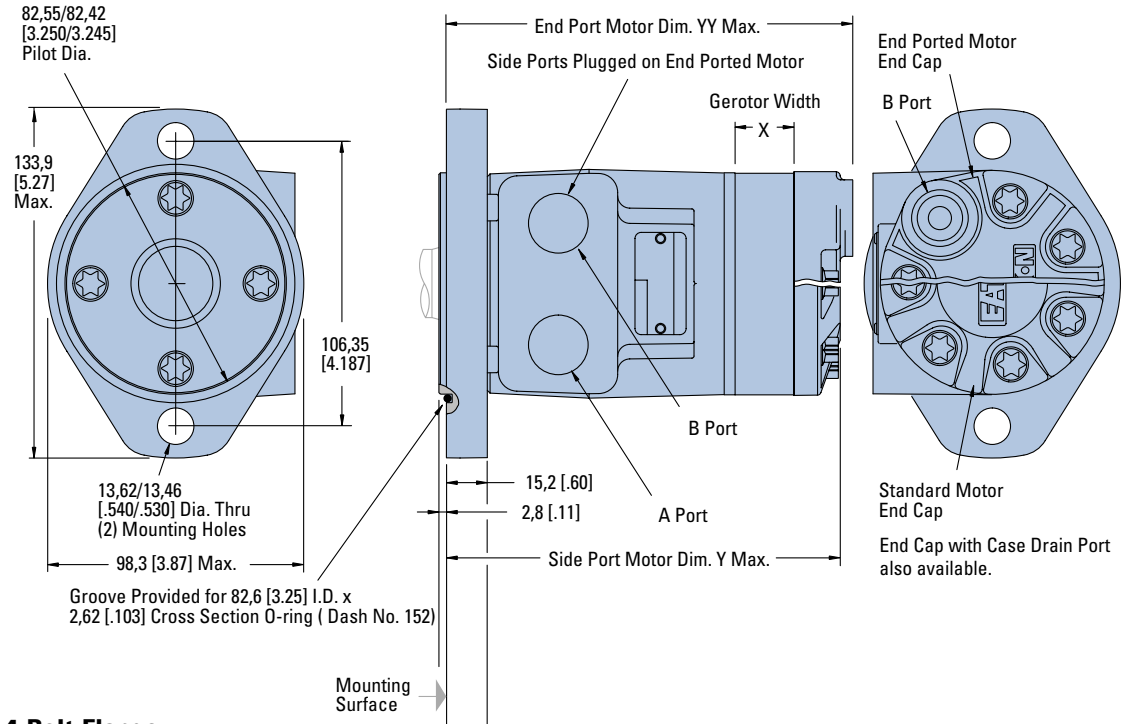
**Note:**

Mounting surface flatness requirement is ▱ ,13 mm [.005 inch] Max.

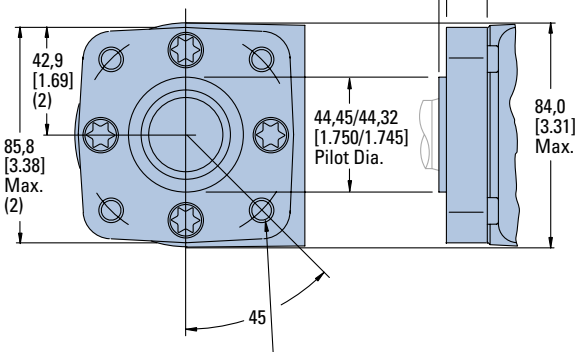
**Note:**

End ported motor pressure is derated. Reference page B-2-2 for ratings.

### 2 Bolt Flange




### 4 Bolt Flange




3/8-16 UNC (15,2 [.60] Max. Bolt Thread Engagement ) Mounting Holes (4) Equally Spaced on 82,6 [3.25] Dia. Bolt Circle
or
M10 x 1,5 (15,2 [.60] Max. Bolt Thread Engagement ) Mounting Holes (4) Equally Spaced on 82,6 [3.25] Dia. Bolt Circle

**2 AND 4 BOLT FLANGE**

| Displacement cm³/r [in³/r] | X mm [inch] | Y mm [inch] | YY mm [inch] |
|---|---|---|---|
| 36 [ 2.2] | 6,4 [ .25] | 132,1 [5.20] | 138,5 [5.45] |
| 46 [ 2.8] | 6,4 [ .25] | 132,1 [5.20] | 138,5 [5.45] |
| 59 [ 3.6] | 10,2 [ .40] | 135,9 [5.35] | 142,3 [5.60] |
| 74 [ 4.5] | 10,2 [ .40] | 135,9 [5.35] | 142,3 [5.60] |
| 97 [ 5.9] | 13,2 [ .52] | 139,0 [5.47] | 145,3 [5.72] |
| 120 [ 7.3] | 16,5 [ .65] | 142,3 [5.60] | 148,6 [5.85] |
| 146 [ 8.9] | 20,1 [ .79] | 145,8 [5.74] | 152,2 [5.99] |
| 159 [ 9.7] | 21,9 [ .86] | 147,6 [5.81] | 154,0 [6.06] |
| 185 [11.3] | 25,4 [1.00] | 151,2 [5.95] | 157,5 [6.20] |
| 231 [14.1] | 31,8 [1.25] | 157,5 [6.20] | |
| 293 [17.9] | 40,4 [1.59] | 166,2 [6.54] | |
| 370 [22.6] | 50,8 [2.00] | 176,6 [6.95] | |
| 739 [45.1] | 101,6 [4.00] | 227,4 [8.95] | |

# H Series (101-)

## Product Numbers

Use digit prefix —101- plus four digit number from charts for complete product number—Example 101-1001. Orders will not be accepted without three digit prefix.

### 2 Bolt Flange

| SHAFT | PORT SIZE | DISPL. cm³/r [in³/r] / PRODUCT NUMBER | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 36 [ 2.2] | 46 [ 2.8] | 59 [ 3.6] | 74 [ 4.5] | 97 [ 5.9] | 120 [ 7.3] | 146 [ 8.9] | 159 [ 9.7] | 185 [11.3] | 231 [14.1] | 293 [17.9] | 370 [22.6] | 740 [45.0] |
| 1 in. Straight w/Woodruff key | 7/8-14 O-Ring | 101-1700 | -1033 | -1701 | -1034 | -1035 | -1702 | -1703 | -1036 | -1037 | -1038 | -1039 | -1040 | — |
| | 1/2 NPTF | 101-1704 | -1025 | -1705 | -1026 | -1027 | -1706 | -1707 | -1028 | -1029 | -1030 | -1031 | -1032 | — |
| | Manifold* | 101-1708 | -1041 | -1709 | -1042 | -1043 | -1710 | -1711 | -1044 | -1045 | -1046 | -1047 | -1048 | — |
| 1 in. SAE 6B Splined | 7/8-14 O-Ring | 101-1721 | -1081 | -1722 | -1082 | -1083 | -1723 | -1724 | -1084 | -1085 | -1086 | -1087 | -1088 | — |
| | 1/2 NPTF | 101-1725 | -1073 | -1726 | -1074 | -1075 | -1727 | -1728 | -1076 | -1077 | -1078 | -1079 | -1080 | — |
| | Manifold* | 101-1729 | -1089 | -1730 | -1090 | -1091 | -1731 | -1732 | -1092 | -1093 | -1094 | -1095 | -1096 | — |
| 1 in. Straight w/ .31 Dia. Crosshole | 7/8-14 O-Ring | 101-1796 | -1797 | -1798 | -1799 | -1800 | -1801 | -1802 | -1803 | — | — | — | — | — |
| | 1/2 NPTF | 101-1804 | -1805 | -1806 | -1807 | -1808 | -1870 | -1809 | -1810 | — | — | — | — | — |
| | Manifold* | 101-1811 | -1812 | -1813 | -1814 | -1815 | -1816 | -1817 | -1818 | — | — | — | — | — |
| 1 in. Straight w/ .40 Dia. Crosshole | 7/8-14 O-Ring | 101-1819 | -1323 | -1820 | -1324 | -1325 | -1821 | -1822 | -1326 | — | — | — | — | — |
| | 1/2 NPTF | 101-1823 | -1319 | -1824 | -1320 | -1825 | -1826 | -1827 | -1828 | — | — | — | — | — |
| | Manifold* | 101-1829 | -1463 | -1830 | -1831 | -1832 | -1833 | -1834 | -1871 | — | — | — | — | — |

101-1834

### 4 Bolt Flange

| SHAFT | PORT SIZE | DISPL. cm³/r [in³/r] / PRODUCT NUMBER | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 36 [ 2.2] | 46 [ 2.8] | 59 [ 3.6] | 74 [ 4.5] | 97 [ 5.9] | 120 [ 7.3] | 146 [ 8.9] | 159 [ 9.7] | 185 [11.3] | 231 [14.1] | 293 [17.9] | 370 [22.6] | 740 [45.0] |
| 1 in. Straight w/Woodruff key | 7/8-14 O-Ring | 101-1749 | -1009 | -1750 | -1010 | -1011 | -1751 | -1752 | -1012 | -1013 | -1014 | -1015 | -1016 | — |
| | 1/2 NPTF | 101-1753 | -1001 | -1754 | -1002 | -1003 | -1755 | -1756 | -1004 | -1005 | -1006 | -1007 | -1008 | — |
| | Manifold* | 101-1757 | -1017 | -1758 | -1018 | -1019 | -1759 | -1760 | -1020 | -1021 | -1022 | -1023 | -1024 | — |
| 1 in. SAE 6B Splined | 7/8-14 O-Ring | 101-1761 | -1057 | -1762 | -1058 | -1059 | -1872 | -1763 | -1060 | -1061 | -1062 | -1063 | -1064 | — |
| | 1/2 NPTF | 101-1764 | -1049 | -1765 | -1050 | -1051 | -1766 | -1767 | -1052 | -1053 | -1054 | -1055 | -1056 | — |
| | Manifold* | 101-1768 | -1065 | -1769 | -1066 | -1067 | -1770 | -1771 | -1068 | -1069 | -1070 | -1071 | -1072 | — |
| 1 in. Straight w/ .31 Dia. Crosshole | 7/8-14 O-Ring | 101-1835 | -1836 | -1837 | -1838 | -1839 | -1840 | -1841 | -1842 | — | — | — | — | — |
| | 1/2 NPTF | 101-1843 | -1497 | -1844 | -1449 | -1352 | -1845 | -1846 | -1847 | — | — | — | — | — |
| | Manifold* | 101-1848 | -1466 | -1849 | -1459 | -1850 | -1851 | -1852 | -1853 | — | — | — | — | — |
| 1 in. Straight w/ .40 Dia. Crosshole | 7/8-14 O-Ring | 101-1854 | -1311 | -1855 | -1856 | -1857 | -1858 | -1859 | -1860 | — | — | — | — | — |
| | 1/2 NPTF | 101-1861 | -1313 | -1862 | -1312 | -1314 | -1863 | -1864 | -1315 | — | — | — | — | — |
| | Manifold* | 101-1865 | -1305 | -1866 | -1306 | -1307 | -1867 | -1868 | -1869 | — | — | — | — | — |

101-1868

### 4 Bolt Flange with Corrosion Protection

| SHAFT | PORT SIZE | DISPL. cm³/r [in³/r] / PRODUCT NUMBER | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 36 [ 2.2] | 46 [ 2.8] | 59 [ 3.6] | 74 [ 4.5] | 97 [ 5.9] | 120 [ 7.3] | 146 [ 8.9] | 159 [ 9.7] | 185 [11.3] | 231 [14.1] | 293 [17.9] | 370 [22.6] | 740 [45.0] |
| 1 in. Straight w/ Woodruff Key | 1/2 NPTF | 101-2032 | -2014 | -2093 | -2027 | -2013 | -2094 | -2095 | -2015 | -2028 | -2029 | -2030 | -2031 | — |
| | Manifold* | | -2067 | | | | | | | -2068 | -2069 | | | |

*Manifold product numbers shown are for motors with four 5/16-18 port face mounting threads. Manifold, manifold mounting O-Rings and bolts are NOT included.

For H Series Motors with a configuration Not Shown in the charts above: Use the model code system on page B-2-11 to specify the product in detail.

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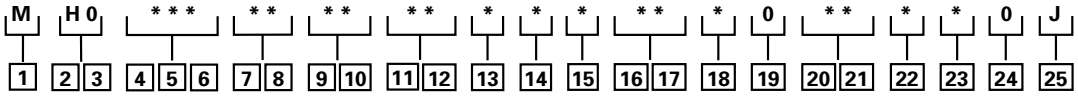
# H Series (101-)

## Model Code

The following 25-digit coding system has been developed to identify all of the configuration options for the H motor. Use this model code to specify a motor with the desired features. All 25-digits of the code must be present when ordering. You may want to photocopy the matrix below to ensure that each number is entered in the correct box.




**1 Product**

**M - Motor**

**2, 3 Series**

**H0 - H Motor**

**4, 5, 6 Displacement cm³/r [in³/r]**

**022 – 36 [2.2]†**

**028 – 46 [2.8]**

**035 – 58 [3.5]†**

**045 – 74 [4.5]**

**059 – 96 [5.9]**

**073 – 120 [7.3]**

**089 – 146 [8.9]**

**097 – 159 [9.7]**

**113 – 185 [11.3]**

**141 – 231 [14.1]**

**179 – 294 [17.9]**

**226 – 370 [22.6]**

451 – 739 [45.1]

†The H Series motors with displacement code "**022**" or "**035**" must also specify free running gerotor (option "**AA**" in position **11,12**).

**7, 8 Mounting Type**

**AA – 2 Bolt (Standard) 82.50 [3.248] Dia. x 3.05 [.120] Pilot, 13.59 [.535] Dia. Mounting Holes on 106.35 [4.187] Dia. B.C.**

**BA – 4 Bolt (Standard) 44.40 [1.748] Dia. x 3.05 [.120] Pilot, .375-16 UNC-2B Mounting Holes on 82.55 [3.250] Dia. B.C.**

CA – 2 Bolt (Standard) 82.50 [3.248] Dia. x 6.10 [.240] Pilot, 10.41 [.410] Dia. Mounting Holes on 106.35 [4.187] Dia. B.C. (SAE A)

DD – 2 Bolt (Standard) 101.60 [4.000] Dia. x 6.10 [.240] Pilot, 14.35 [.565] Dia. Mounting Holes on 146.05 [5.750] Dia. B.C. (SAE B)

**FA – 4 Bolt (Standard) 44.40 [1.748] Dia. x 3.05 [.120] Pilot, M10 x 1.5-6H Mounting Holes on 82.55 [3.250] Dia. B.C.**

GA – 4 Bolt (Round) 82.50 [3.248] Dia. x 6.35 [.250] Pilot, 19.05 [.750] Dia. Mounting Holes on 109.48 [4.310] Dia. B.C.

**9, 10 Output Shaft**

**01 – 25.4 [1.00] Dia. Straight, Woodruff Key, .250-20 UNC-2B Hole in Shaft End**

**02 – 25.4 [1.00] Dia. SAE 6B Spline, .250-20 UNC-2B Hole in Shaft End**

07 – 25.4 [1.00] Dia. Straight, 8.03 [.316] Dia. Cross Hole 11.2 [.44] from End, 5.6 [.22] Extra Length

**08 – 25.4 [1.00] Dia. Straight, 10.31 [.406] Dia. Cross Hole 15.7 [.62] from End, .250-20 UNC-2B Hole in Shaft End**

**16 – 22.22 [.875] Dia. SAE 13 Tooth Spline (SAE B)**

17 – 22.22 [.875] Dia. Straight, 6.4 [.25] x 19.0 [.75] Square Key (SAE B)

18 – 25.4 [1.00] Dia. Tapered, Woodruff Key and Nut, 34.92 [1.375] Taper Length

**24 – 25.00 [.984] Dia. Straight, 8.00 [.315] KEY, M8 x 1.25-6H Hole in Shaft End**

**11, 12 Ports**

**AA – .875-14 UNF-2B SAE O-Ring Ports**

**AB – .500-14 NPTF Dry Seal Pipe Thread Ports**

**AC – Manifold Ports (.3125-18 UNC-2B Mounting Holes)**

AD – Manifold Ports (M8 x 1.25-6H Mounting Holes)

**AF – G 1/2 BSP Straight Thread Ports**

EB†† – End Ports: .750-16 UNF-2B SAE O-Ring Ports

EC†† – End Ports: G 1/2 BSP Straight Thread Ports

†† Note: End ported motor pressure is derated. Reference page B-2-2 for ratings.

**13 Case Flow Options**

**0 – None**

**1 – .4375-20 UNF-2B SAE O-Ring Port (End Cap)**

**2 – G 1/4 BSP Straight THD Port (End Cap)**

**A – Internal Check Valves**

**14 Gerotor Options**

**0 – None**

A – Free Running

**15 Shaft Options**

**0 – None**

N – Electroless Nickel Plated

**16, 17 Seal Options**

**00 – Standard Seals**

02 – Seal Guard

03 – Viton Seals

**04 – Viton Shaft Seal**

05 – Vented Two-Stage Seal

**07 – High Pressure Shaft Seal**

**18 Speed Sensor Options**

**0 – None**

A – Digital Speed Pickup (15 Pulse), No Lead Wire with M12 Connector (A=Power, B=Common, C=Signal)

B – Magnetic Speed Pickup (60 Pulse by Quadrature), No Lead Wire with M12 Connector (A=Power, B=Common, C=Signal)

**19 Manifold Block Options**

**0 – None**

* – Contact your Eaton Sales Representative for available options.

**20, 21 Special Features (Hardware)**

**00 – None**

AB – Low Speed Valving

SS – Stainless Steel Flange Bolts

**22 Special Features (Assembly)**

**0 – None**

1 – Reverse Rotation

2 – Flange Rotated 90°

**23 Paint/ Special Packaging**

**0 – No Paint**

**A – Painted Low Gloss Black**

D – Environmental Coated Gloss White

F – Environmental Coated Black

**24 Eaton Assigned Code when Applicable**

**0 – Assigned Code**

**25 Eaton Assigned Design Code**

**J – Nine (9)**

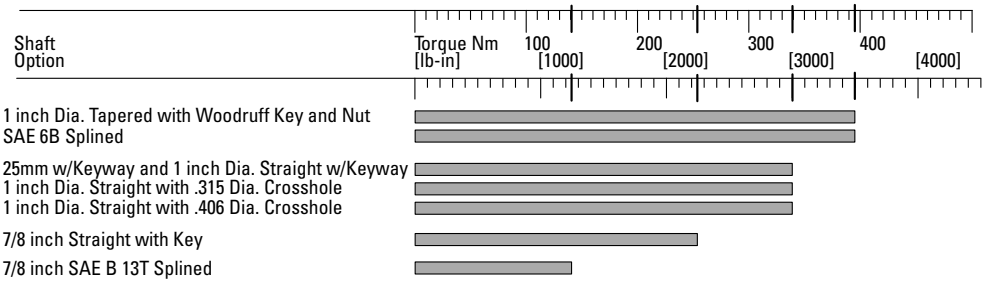
Feature in **bold** are preferred and allow for shorter lead time.

# H, S and T Series (101, 103- 158, 185)

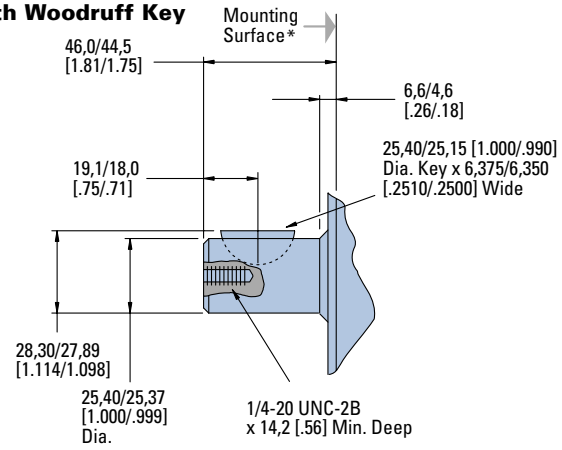
## Dimensions

Shafts

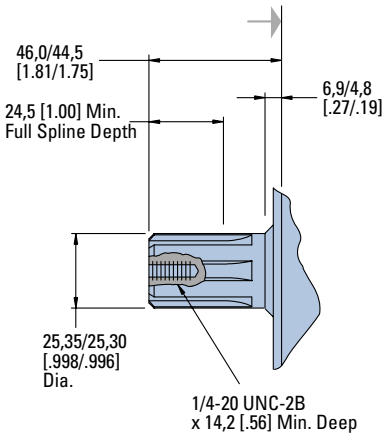
**Shaft Size Motor Torque Combination Limit Guide**



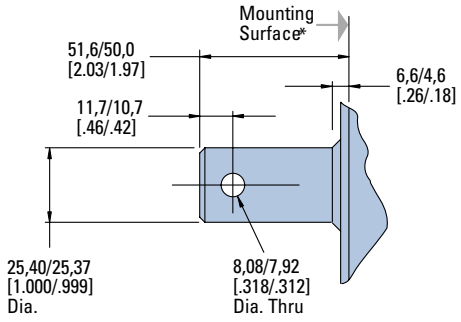

### 1 in. Dia. Straight with Woodruff Key



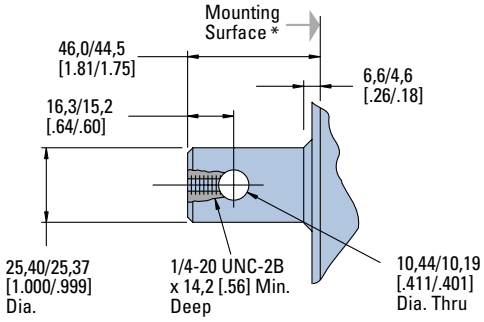

### SAE 6B Splined Shaft




### 1 in. Dia. Straight Shaft with .315 Dia. Crosshole




### 1 in. Dia. Straight Shaft with .406 Dia. Crosshole



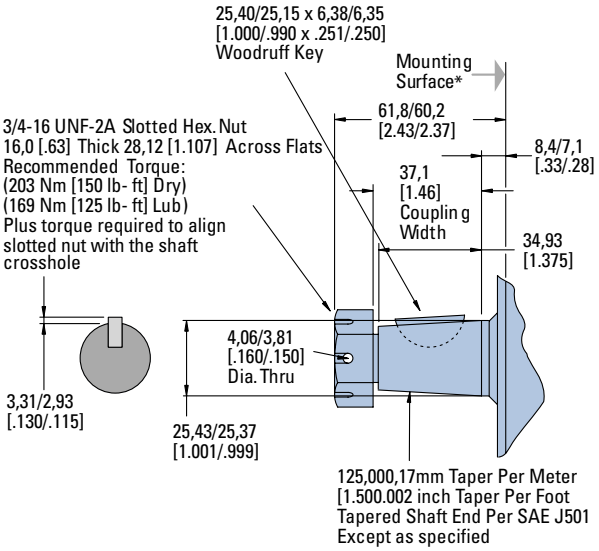

* 2 Bolt SAE B mounting flange has a greater pilot thickness and a thinner mounting plate (end of shaft to flange, add 3,3 [.13]).

# H, S and T Series (101-, 103- 158-, 185-)

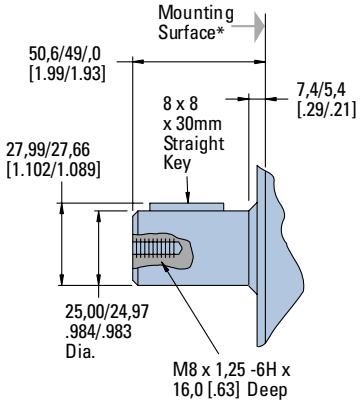
## Dimensions

Shafts

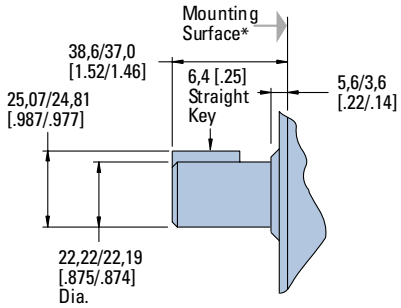
### 1 in. Dia. Tapered Shaft with Woodruff Key and Nut



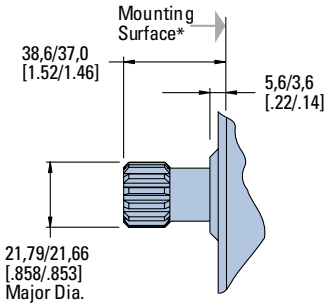

### 25mm Dia. Straight Shaft with 8mm Keyway




### 7/8 in. Dia. Straight Shaft with Key




### 7/8 in. Dia. SAE B Shaft 13 T Spline d



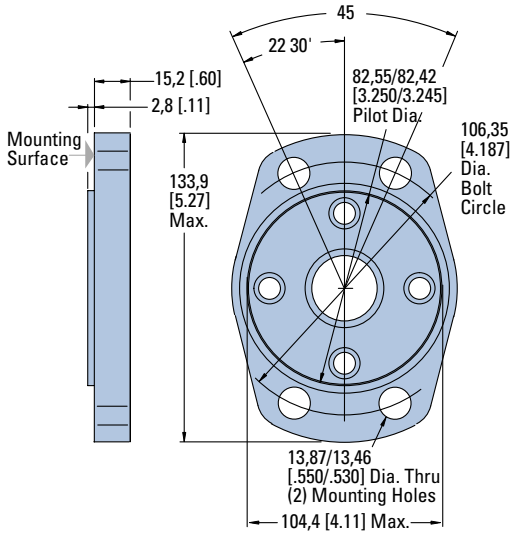

* 2 Bolt SAE B mounting flange has a greater pilot thickness and a thinner mounting plate (end of shaft to flange, add 3,3 [.13]).

# H, S and T Series (101-, 103- 158-, 185-)

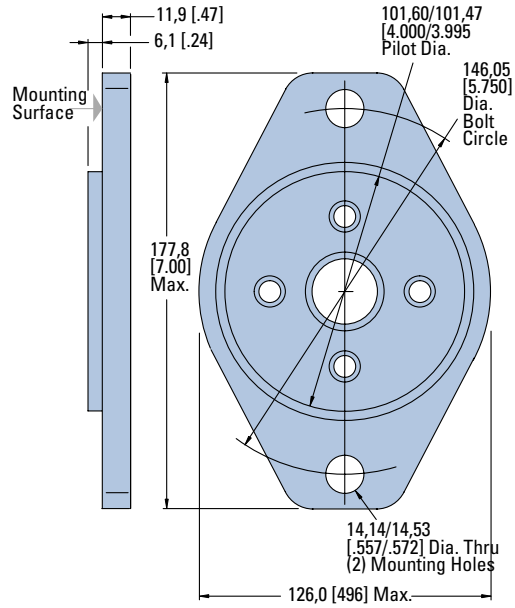
## Mounting Options

**Note:**
Mounting Surface Flatness Requirement is ⏥,13mm [.005 inch] Max.

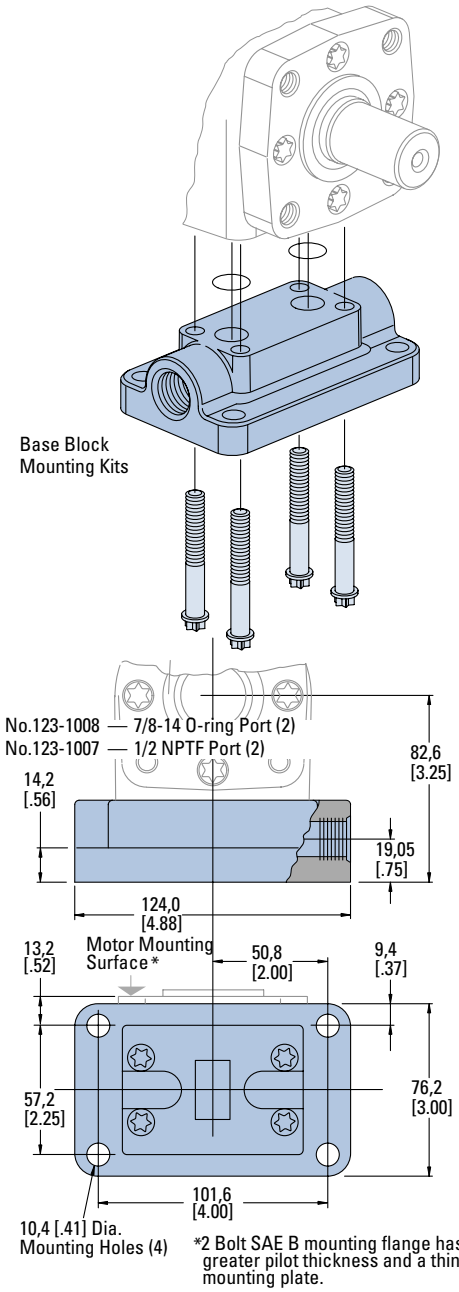
### 4 Bolt Magneto




### 2 Bolt SAE B




### Base Bock Mounting Kits




*2 Bolt SAE B mounting flange has a greater pilot thickness and a thinner mounting plate.

# H, S and T Series (101-, 103-, 158-, 185-)

## Dimensions

Ports

**Ports**

End Ports — H Series only
G 1/2 (BSP) (2)
or 3/4-16 O-Ring (2)

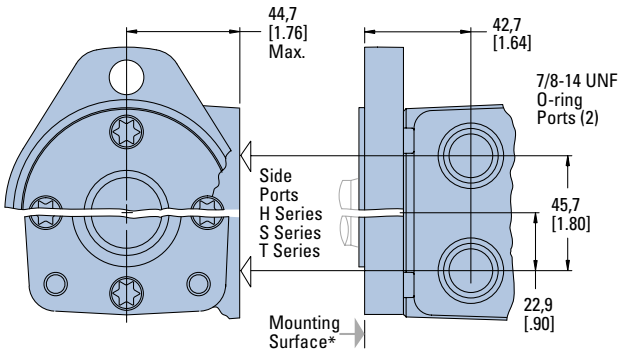
**Standard Rotation Viewed from Drive End**

Port A Pressurized — CW
Port B Pressurized — CCW

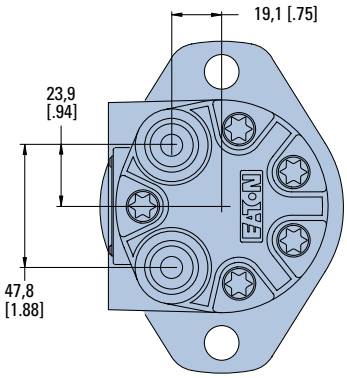
**Note:**

End ported motor pressure is derated. Reference page B-2-2 for ratings.

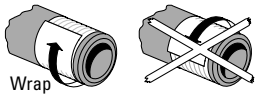
**7/8-14 ports**




**End Ports (H Series only)**




Use of Teflon Tape Sealant/ Lubricant (with 1/2 14 NPTF Port Connectors only).

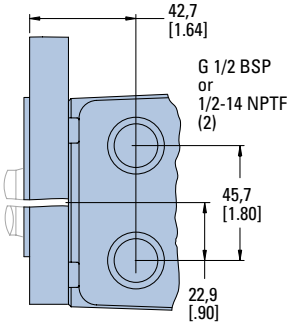



When using fittings with Teflon tape, be careful when taping and tightening. Over tightening or improperly taped fittings can cause damage to housing or leakage.

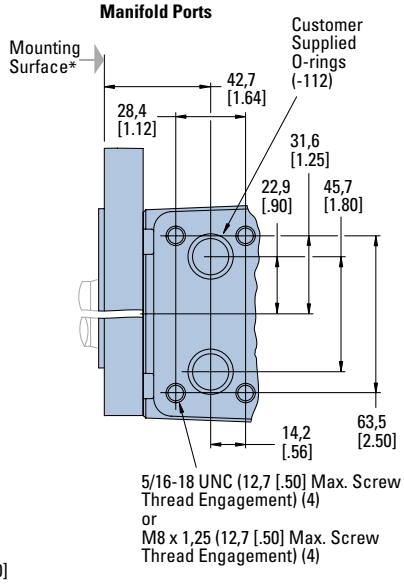
**Use the following procedures:**

- Wrap approx. 1 1/2 Turns of 13 mm [1/2 in.] wide Teflon Tape around fitting threads — start tape 2 threads up from end of fitting.
- Tighten threads to a Maximum of 34 Nm [25 lb-ft]. — Do Not Tighten Further —
- If fittings leak when tightened to maximum torque, either retape, reseal, or replace fittings.

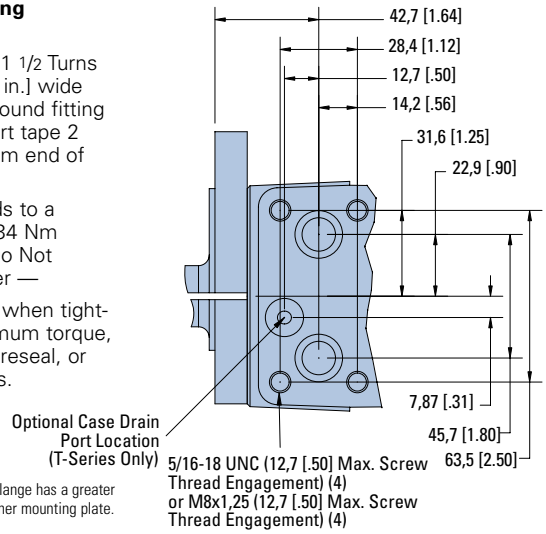
**6-1/2 or 1/2 NPTF ports**




**Manifold Ports**




**Manifold Ports w/manifold case port**




**Note:**

End ported motor option is derated to 1400 continuous, 1700 psi intermittent.

*2 Bolt SAE B mounting flange has a greater pilot thickness and a thinner mounting plate.

| Order Numbers | | |
|---|---|---|
| **FT Article Number** | **Eaton Code** | **Type** |
| 1248318 | 101-1001 | CHAR-LYNN MOTOR SERIE H |
| 1248319 | 101-1002 | CHAR-LYNN MOTOR SERIE H |
| 1248320 | 101-1003 | CHAR-LYNN MOTOR SERIE H |
| 1248321 | 101-1004 | CHAR-LYNN MOTOR SERIE H |
| 1248322 | 101-1005 | CHAR-LYNN MOTOR SERIE H |
| 1248323 | 101-1006 | CHAR-LYNN MOTOR SERIE H |
| 1248324 | 101-1007 | CHAR-LYNN MOTOR SERIE H |
| 1248325 | 101-1008 | CHAR-LYNN MOTOR SERIE H |
| 1248326 | 101-1009 | CHAR-LYNN MOTOR SERIE H |
| 1410749 | 101-1010 | CHAR-LYNN MOTOR SERIE H |
| 1248328 | 101-1011 | CHAR-LYNN MOTOR SERIE H |
| 1248331 | 101-1015 | CHAR-LYNN MOTOR SERIE H |
| 1248332 | 101-1016 | CHAR-LYNN MOTOR SERIE H |
| 1428763 | 101-1018 | CHAR-LYNN MOTOR SERIE H |
| 1248335 | 101-1019 | CHAR-LYNN MOTOR SERIE H |
| 1430332 | 101-1024 | CHAR-LYNN MOTOR SERIE H |
| 1248336 | 101-1025 | CHAR-LYNN MOTOR SERIE H |
| 1420035 | 101-1026 | CHAR-LYNN MOTOR SERIE H |
| 1248338 | 101-1027 | CHAR-LYNN MOTOR SERIE H |
| 1417864 | 101-1028 | CHAR-LYNN MOTOR SERIE H |
| 1248340 | 101-1029 | CHAR-LYNN MOTOR SERIE H |
| 1248341 | 101-1030 | CHAR-LYNN MOTOR SERIE H |
| 1424181 | 101-1032 | CHAR-LYNN MOTOR SERIE H |
| 1248343 | 101-1033 | CHAR-LYNN MOTOR SERIE H |
| 1248345 | 101-1035 | CHAR-LYNN MOTOR SERIE H |
| 1323974 | 101-1040 | CHAR-LYNN MOTOR SERIE H |
| 1422635 | 101-1042 | CHAR-LYNN MOTOR SERIE H |
| 1248346 | 101-1045 | CHAR-LYNN MOTOR SERIE H |
| 1422113 | 101-1049 | CHAR-LYNN MOTOR SERIE H |
| 1317902 | 101-1050 | CHAR-LYNN MOTOR SERIE H |
| 1420757 | 101-1051 | CHAR-LYNN MOTOR SERIE H |
| 1422059 | 101-1052 | CHAR-LYNN MOTOR SERIE H |
| 1339724 | 101-1059 | CHAR-LYNN MOTOR SERIE H |
| 1430933 | 101-1065 | CHAR-LYNN MOTOR SERIE H |
| 1248347 | 101-1066 | CHAR-LYNN MOTOR SERIE H |
| 1434645 | 101-1074 | CHAR-LYNN MOTOR SERIE H |
| 1426733 | 101-1077 | CHAR-LYNN MOTOR SERIE H |
| 1423761 | 101-1082 | CHAR-LYNN MOTOR SERIE H |
| 1420724 | 101-1084 | CHAR-LYNN MOTOR SERIE H |
| 1418659 | 101-1088 | CHAR-LYNN MOTOR SERIE H |
| 1420682 | 101-1090 | CHAR-LYNN MOTOR SERIE H |
| 1420758 | 101-1266 | CHAR-LYNN MOTOR SERIE H |
| 1428202 | 101-1268 | CHAR-LYNN MOTOR SERIE H |
| 1248350 | 101-1270 | CHAR-LYNN MOTOR SERIE H |
| 1284348 | 101-1272 | CHAR-LYNN MOTOR SERIE H |
| 1420900 | 101-1281 | CHAR-LYNN MOTOR SERIE H |
| 1248351 | 101-1290 | CHAR-LYNN MOTOR SERIE H |
| 1428762 | 101-1291 | CHAR-LYNN MOTOR SERIE H |
| 1248352 | 101-1293 | CHAR-LYNN MOTOR SERIE H |
| 1432973 | 101-1306 | CHAR-LYNN MOTOR SERIE H |
| 1428958 | 101-1315 | CHAR-LYNN MOTOR SERIE H |
| 1248353 | 101-1405 | CHAR-LYNN MOTOR SERIE H |



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| Order Numbers | | |
|---|---|---|
| **FT Article Number** | **Eaton Code** | **Type** |
| 1248355 | 101-1449 | CHAR-LYNN MOTOR SERIE H |
| 1248356 | 101-1459 | CHAR-LYNN MOTOR SERIE H |
| 1248358 | 101-1478 | CHAR-LYNN MOTOR SERIE H |
| 1422413 | 101-1497 | CHAR-LYNN MOTOR SERIE H |
| 1248359 | 101-1516 | CHAR-LYNN MOTOR SERIE H |
| 1248360 | 101-1522 | CHAR-LYNN MOTOR SERIE H |
| 1422172 | 101-1548 | CHAR-LYNN MOTOR SERIE H |
| 1248361 | 101-1572 | CHAR-LYNN MOTOR SERIE H |
| 1248362 | 101-1573 | CHAR-LYNN MOTOR SERIE H |
| 1248363 | 101-1574 | CHAR-LYNN MOTOR SERIE H |
| 1248365 | 101-1580 | CHAR-LYNN MOTOR SERIE H |
| 1270399 | 101-1582 | CHAR-LYNN MOTOR SERIE H |
| 1296570 | 101-1583 | CHAR-LYNN MOTOR SERIE H |
| 1248366 | 101-1596 | CHAR-LYNN MOTOR SERIE H |
| 1416616 | 101-1597 | CHAR-LYNN MOTOR SERIE H |
| 1248367 | 101-1598 | CHAR-LYNN MOTOR SERIE H |
| 1253664 | 101-1599 | CHAR-LYNN MOTOR SERIE H |
| 1339725 | 101-1602 | CHAR-LYNN MOTOR SERIE H |
| 1248368 | 101-1613 | CHAR-LYNN MOTOR SERIE H |
| 1339140 | 101-1620 | CHAR-LYNN MOTOR SERIE H |
| 1248370 | 101-1622 | CHAR-LYNN MOTOR SERIE H |
| 1248371 | 101-1623 | CHAR-LYNN MOTOR SERIE H |
| 1248372 | 101-1628 | CHAR-LYNN MOTOR SERIE H |
| 1248373 | 101-1629 | CHAR-LYNN MOTOR SERIE H |
| 1428427 | 101-1629 | CHAR-LYNN MOTOR SERIE H |
| 1248374 | 101-1630 | CHAR-LYNN MOTOR SERIE H |
| 1427425 | 101-1630 | CHAR-LYNN MOTOR SERIE H |
| 1428339 | 101-1630 | CHAR-LYNN MOTOR SERIE H |
| 1248375 | 101-1631 | CHAR-LYNN MOTOR SERIE H |
| 1428426 | 101-1631 | CHAR-LYNN MOTOR SERIE H |
| 1248376 | 101-1632 | CHAR-LYNN MOTOR SERIE H |
| 1297671 | 101-1633 | CHAR-LYNN MOTOR SERIE H |
| 1420110 | 101-1634 | CHAR-LYNN MOTOR SERIE H |
| 1248377 | 101-1635 | CHAR-LYNN MOTOR SERIE H |
| 1428428 | 101-1635 | CHAR-LYNN MOTOR SERIE H |
| 1427968 | 101-1636 | CHAR-LYNN MOTOR SERIE H |
| 1248378 | 101-1637 | CHAR-LYNN MOTOR SERIE H |
| 1417838 | 101-1639 | CHAR-LYNN MOTOR SERIE H |
| 1248379 | 101-1640 | CHAR-LYNN MOTOR SERIE H |
| 1427969 | 101-1643 | CHAR-LYNN MOTOR SERIE H |
| 1248380 | 101-1644 | CHAR-LYNN MOTOR SERIE H |
| 1248381 | 101-1645 | CHAR-LYNN MOTOR SERIE H |
| 1248382 | 101-1646 | CHAR-LYNN MOTOR SERIE H |
| 1248383 | 101-1647 | CHAR-LYNN MOTOR SERIE H |
| 1248384 | 101-1648 | CHAR-LYNN MOTOR SERIE H |
| 1248385 | 101-1649 | CHAR-LYNN MOTOR SERIE H |
| 1248386 | 101-1650 | CHAR-LYNN MOTOR SERIE H |
| 1248387 | 101-1651 | CHAR-LYNN MOTOR SERIE H |
| 1248388 | 101-1652 | CHAR-LYNN MOTOR SERIE H |
| 1248389 | 101-1653 | CHAR-LYNN MOTOR SERIE H |
| 1248390 | 101-1654 | CHAR-LYNN MOTOR SERIE H |
| 1248391 | 101-1655 | CHAR-LYNN MOTOR SERIE H |

| Order Numbers | | |
|---|---|---|
| **FT Article Number** | **Eaton Code** | **Type** |
| 1248392 | 101-1656 | CHAR-LYNN MOTOR SERIE H |
| 1248393 | 101-1657 | CHAR-LYNN MOTOR SERIE H |
| 1418555 | 101-1658 | CHAR-LYNN MOTOR SERIE H |
| 1248395 | 101-1659 | CHAR-LYNN MOTOR SERIE H |
| 1248396 | 101-1660 | CHAR-LYNN MOTOR SERIE H |
| 1248397 | 101-1661 | CHAR-LYNN MOTOR SERIE H |
| 1248398 | 101-1662 | CHAR-LYNN MOTOR SERIE H |
| 1248399 | 101-1663 | CHAR-LYNN MOTOR SERIE H |
| 1248400 | 101-1664 | CHAR-LYNN MOTOR SERIE H |
| 1248401 | 101-1665 | CHAR-LYNN MOTOR SERIE H |
| 1248402 | 101-1666 | CHAR-LYNN MOTOR SERIE H |
| 1248403 | 101-1667 | CHAR-LYNN MOTOR SERIE H |
| 1426568 | 101-1688 | CHAR-LYNN MOTOR SERIE H |
| 1432811 | 101-1700 | CHAR-LYNN MOTOR SERIE H |
| 1430824 | 101-1704 | CHAR-LYNN MOTOR SERIE H |
| 1248404 | 101-1705 | CHAR-LYNN MOTOR SERIE H |
| 1421911 | 101-1732 | CHAR-LYNN MOTOR SERIE H |
| 1428856 | 101-1735 | CHAR-LYNN MOTOR SERIE H |
| 1248405 | 101-1737 | CHAR-LYNN MOTOR SERIE H |
| 1248406 | 101-1738 | CHAR-LYNN MOTOR SERIE H |
| 1248407 | 101-1739 | CHAR-LYNN MOTOR SERIE H |
| 1248408 | 101-1740 | CHAR-LYNN MOTOR SERIE H |
| 1248411 | 101-1743 | CHAR-LYNN MOTOR SERIE H |
| 1248412 | 101-1744 | CHAR-LYNN MOTOR SERIE H |
| 1248413 | 101-1745 | CHAR-LYNN MOTOR SERIE H |
| 1248414 | 101-1746 | CHAR-LYNN MOTOR SERIE H |
| 1248415 | 101-1747 | CHAR-LYNN MOTOR SERIE H |
| 1248416 | 101-1748 | CHAR-LYNN MOTOR SERIE H |
| 1424425 | 101-1749 | CHAR-LYNN MOTOR SERIE H |
| 1248417 | 101-1755 | CHAR-LYNN MOTOR SERIE H |
| 1428857 | 101-1766 | CHAR-LYNN MOTOR SERIE H |
| 1248418 | 101-1776 | CHAR-LYNN MOTOR SERIE H |
| 1248419 | 101-1788 | CHAR-LYNN MOTOR SERIE H |
| 1277863 | 101-1789 | CHAR-LYNN MOTOR SERIE H |
| 1428335 | 101-1790 | CHAR-LYNN MOTOR SERIE H |
| 1248421 | 101-1792 | CHAR-LYNN MOTOR SERIE H |
| 1248422 | 101-1793 | CHAR-LYNN MOTOR SERIE H |
| 1248423 | 101-1794 | CHAR-LYNN MOTOR SERIE H |
| 1248426 | 101-1850 | CHAR-LYNN MOTOR SERIE H |
| 1428206 | 101-2012 | CHAR-LYNN MOTOR SERIE H |
| 1420111 | 101-2015 | CHAR-LYNN MOTOR SERIE H |
| 1418264 | 101-2023 | CHAR-LYNN MOTOR SERIE H |
| 1339726 | 101-2027 | CHAR-LYNN MOTOR SERIE H |
| 1248428 | 101-2030 | CHAR-LYNN MOTOR SERIE H |
| 1248429 | 101-2036 | CHAR-LYNN MOTOR SERIE H |
| 1413719 | 101-2038 | CHAR-LYNN MOTOR SERIE H |
| 1412965 | 101-2085 | CHAR-LYNN MOTOR SERIE H |
| 1433720 | 101-2110 | CHAR-LYNN MOTOR SERIE H |
| 1429052 | 101-2116 | CHAR-LYNN MOTOR SERIE H |
| 1248432 | 101-2124 | CHAR-LYNN MOTOR SERIE H |
| 1248433 | 101-2125 | CHAR-LYNN MOTOR SERIE H |
| 1248434 | 101-2148 | CHAR-LYNN MOTOR SERIE H |



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|---|---|---|
| **FT Article Number** | **Eaton Code** | **Type** |
| 1248435 | 101-2149 | CHAR-LYNN MOTOR SERIE H |
| 1248436 | 101-2150 | CHAR-LYNN MOTOR SERIE H |
| 1248437 | 101-2158 | CHAR-LYNN MOTOR SERIE H |
| 1248438 | 101-2159 | CHAR-LYNN MOTOR SERIE H |
| 1248439 | 101-2160 | CHAR-LYNN MOTOR SERIE H |
| 1248440 | 101-2161 | CHAR-LYNN MOTOR SERIE H |
| 1424141 | 101-2161 | CHAR-LYNN MOTOR SERIE H |
| 1248441 | 101-2162 | CHAR-LYNN MOTOR SERIE H |
| 1248442 | 101-2163 | CHAR-LYNN MOTOR SERIE H |
| 1248443 | 101-2164 | CHAR-LYNN MOTOR SERIE H |
| 1416695 | 101-2253 | CHAR-LYNN MOTOR SERIE H |
| 1248444 | 101-2254 | CHAR-LYNN MOTOR SERIE H |
| 1248445 | 101-2255 | CHAR-LYNN MOTOR SERIE H |
| 1417755 | 101-2344 | CHAR-LYNN MOTOR SERIE H |
| 1430536 | 101-2368 | CHAR-LYNN MOTOR SERIE H |
| 1337487 | 101-2378 | CHAR-LYNN MOTOR SERIE H |
| 1248446 | 101-2398 | CHAR-LYNN MOTOR SERIE H |
| 1434472 | 101-2403 | CHAR-LYNN MOTOR SERIE H |
| 1291402 | 101-2428 | CHAR-LYNN MOTOR SERIE H |
| 1417137 | 101-2452 | CHAR-LYNN MOTOR SERIE H |
| 1248449 | 101-2489 | CHAR-LYNN MOTOR SERIE H |
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| 1248451 | 101-2545 | CHAR-LYNN MOTOR SERIE H |
| 1248452 | 101-2546 | CHAR-LYNN MOTOR SERIE H |
| 1299771 | 101-254X | CHAR-LYNN MOTOR SERIE H |
| 1419726 | 101-2551 | CHAR-LYNN MOTOR SERIE H |
| 1248453 | 101-2559 | CHAR-LYNN MOTOR SERIE H |
| 1431214 | 101-2574 | CHAR-LYNN MOTOR SERIE H |
| 1248454 | 101-2592 | CHAR-LYNN MOTOR SERIE H |
| 1248455 | 101-2593 | CHAR-LYNN MOTOR SERIE H |
| 1248456 | 101-2594 | CHAR-LYNN MOTOR SERIE H |
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| 1426025 | 101-2639 | CHAR-LYNN MOTOR SERIE H |
| 1430689 | 101-2654 | CHAR-LYNN MOTOR SERIE H |
| 1422229 | 101-2664 | CHAR-LYNN MOTOR SERIE H |
| 1227067 | 101-2693 | CHAR-LYNN MOTOR SERIE H |
| 1430844 | 101-2776 | CHAR-LYNN MOTOR SERIE H |
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| 1424228 | 101-2874 | CHAR-LYNN MOTOR SERIE H |
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| 1433474 | 101-2903 | CHAR-LYNN MOTOR SERIE H |
| 1433819 | 101-2906 | CHAR-LYNN MOTOR SERIE H |
| 1428453 | 101-2999 | CHAR-LYNN MOTOR SERIE H |
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| 1433753 | 101-3248 | CHAR-LYNN MOTOR SERIE H |
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