

- **Three-piece cast iron construction**  
High efficiency and long life in severe operating environments.
- **Low friction bushing**  
Provides strength in heavy duty applications.
- **Balanced thrust plates**  
Optimize pump efficiency.
- **Largest journal bearings available**  
for high pressure and long life.



| Product Features           | Description  |
|----------------------------|--|
| <b>Pump Type</b>           | Heavy-duty, cast iron, external gear   |
| <b>Mounting</b>            | SAE standard flanges, ZF, others   |
| <b>Ports</b>               | SAE split flanges and other types of threaded ports, see Specifications  |
| <b>Shaft Style</b>         | SAE splined, keyed, and others, see Specifications   |
| <b>Maximum Speed</b>       | 2,400 RPM  |
| <b>Theor. displacement</b> | See Specifications   |
| <b>Drive</b>               | Clockwise, counterclockwise, double. Direct drive with flexible coupling is recommended. Pumps subject to radial loads must be specified with an outboard bearing. Axial loading is not allowed. |
| <b>Inlet pressure</b>      | 30 psia (15psig) maximum pressure / 5 in. Hg maximum vacuum at operating temperature   |
| <b>Outlet pressure</b>     | See Specifications   |
| <b>Hydraulic fluids</b>    | Mineral oil, fire resistant fluids: water-oil emulsions 60/40, MFB; water-glycol, HFC; phosphate-esters, HFD (FPM seals required)  |

| Product Features  | Description   |
|---|---|
| <b>Fluid viscosity</b>                                    | From 7.5 to 1600 cSt (50 to 7500 sus). Recommended 15 to 75 cSt.  |
| <b>Fluid temperature</b>                                  | Mineral oil with standard seals: 0°F to 180°F (-20°C to 80°C); Fire resistant fluids HFB, HFC: 0°F to 150°F (-20°C to 65°C)   |
| <b>Filtration</b>   | ISO 4406 code:<br><ul style="list-style-type: none"> <li>• 19/16 at 2000 psi/140 bar</li> <li>• 17/14 at 3000 psi/210 bar</li> <li>• 15/12 at 4000 psi/275 bar</li> </ul> |
| <b>Direction of rotation (looking at the drive shaft)</b> | CW, CCW, Bi-Rotational  |
| <b>Multiple pump assemblies</b>                           | Up to 6 gear selections of the same model, even with different gear widths  |
| <b>Separate or common inlet capability</b>                | Common  |

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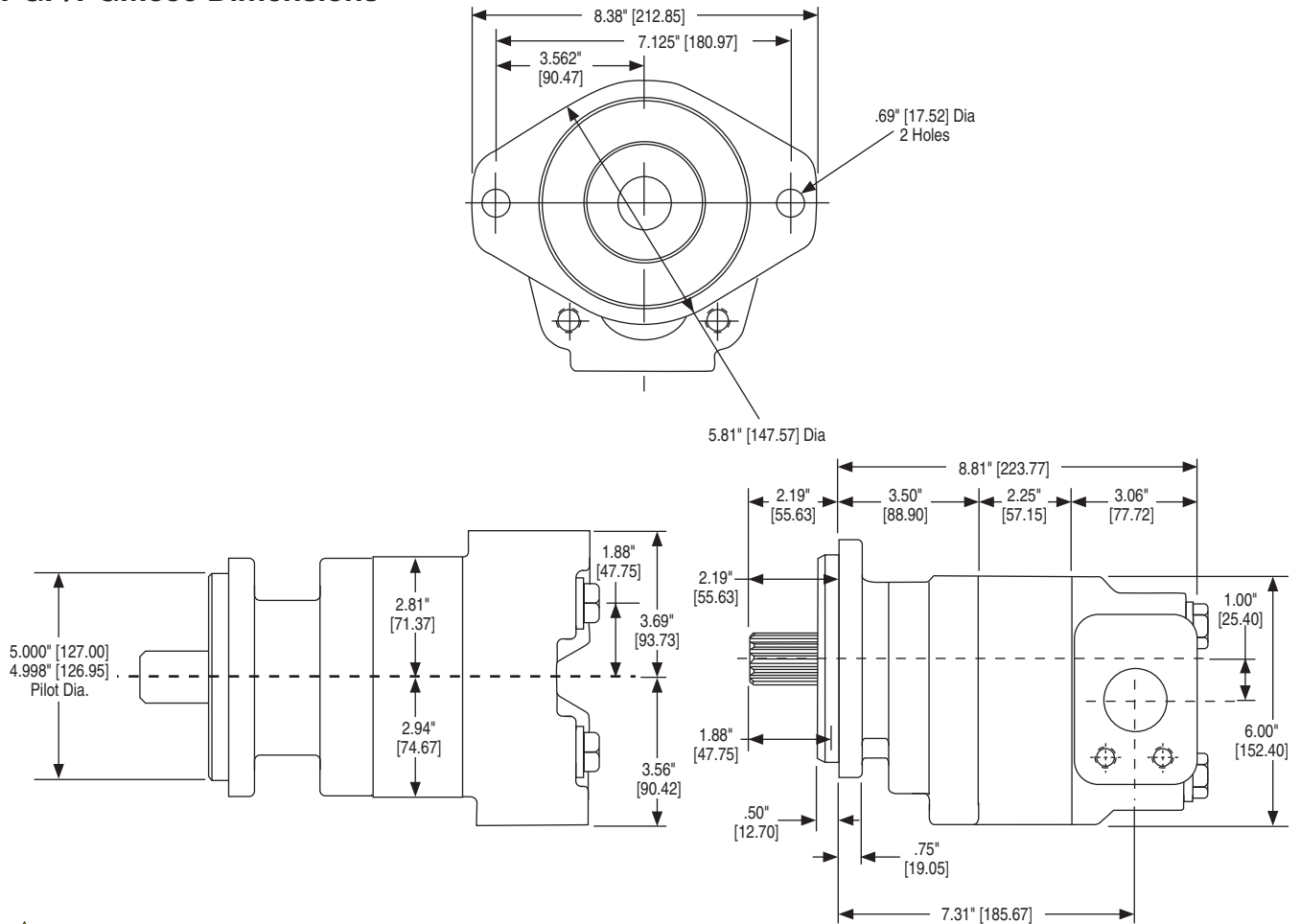
PGP/PGM350 Specifications/Dimensions

Gear Pumps & Motors

| PGP350 Frame Size   | 05             | 07             | 10             | 12             | 15             | 17             | 20             | 22             | 25              |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| Displacement – cm <sup>3</sup> /rev<br>(in <sup>3</sup> /rev) | 20.9<br>(1.28) | 31.3<br>(1.91) | 41.8<br>(2.55) | 52.2<br>(3.19) | 62.7<br>(3.83) | 73.1<br>(4.46) | 83.6<br>(5.10) | 94.0<br>(5.74) | 104.5<br>(6.38) |
| Max continuous pressure – bar<br>(psi)                        | 241<br>(3,500) | 241<br>(3,500) | 241<br>(3,500) | 241<br>(3,500) | 241<br>(3,500) | 224<br>(3,250) | 207<br>(3,000) | 190<br>(2,750) | 172<br>(2,500)  |
| Max Speed – RPM   | 2,400          | 2,400          | 2,400          | 2,400          | 2,400          | 2,400          | 2,400          | 2,400          | 2,400           |
| Approximate Weight – Lbs.<br>[kg]                             | 48<br>[21.8]   | 49.5<br>[22.4] | 51<br>[23.1]   | 52.5<br>[23.8] | 54.0<br>[24.5] | 55.5<br>[25.2] | 57.0<br>[25.9] | 58.5<br>[26.5] | 60.0<br>[27.2]  |

| PGM350 Frame Size   | 05             | 07             | 10             | 12             | 15             | 17             | 20             | 22             | 25              |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| Displacement – cm <sup>3</sup> /rev<br>(in <sup>3</sup> /rev) | 20.9<br>(1.28) | 31.3<br>(1.91) | 41.8<br>(2.55) | 52.2<br>(3.19) | 62.7<br>(3.83) | 73.1<br>(4.46) | 83.6<br>(5.10) | 94.0<br>(5.74) | 104.5<br>(6.38) |
| Max continuous pressure – bar<br>(psi)                        | 241<br>(3,500) | 241<br>(3,500) | 241<br>(3,500) | 241<br>(3,500) | 241<br>(3,500) | 224<br>(3,250) | 207<br>(3,000) | 190<br>(2,750) | 172<br>(2,500)  |
| Max Speed – RPM   | 2,400          | 2,400          | 2,400          | 2,400          | 2,400          | 2,400          | 2,400          | 2,400          | 2,400           |
| Approximate Weight – Lbs.<br>[kg]                             | 48<br>[21.8]   | 49.5<br>[22.4] | 51<br>[23.1]   | 52.5<br>[23.8] | 54.0<br>[24.5] | 55.5<br>[25.2] | 57.0<br>[25.9] | 58.5<br>[26.5] | 60.0<br>[27.2]  |

PGP/PGM350 Dimensions



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**PGP/PGM350 Performance Data**

**PGP350 Pump Performance Data**

| Speed RPM | Output Flow<br>Input Power | Gear Widths |      |      |        |        |        |      |        |        |
|-----------|----------------------------|-------------|------|------|--------|--------|--------|------|--------|--------|
|           |                            | 1/2"        | 3/4" | 1"   | 1-1/4" | 1-1/2" | 1-3/4" | 2"   | 2-1/4" | 2-1/2" |
| 900       | GPM                        | 4.0         | 6.4  | 8.8  | 11.2   | 13.7   | 16.1   | 18.6 | 21.0   | 23.4   |
|           | LPM                        | 15          | 24   | 33   | 42     | 52     | 61     | 70   | 79     | 89     |
|           | HP                         | 11          | 17   | 22   | 28     | 33     | 36     | 38   | 39     | 40     |
|           | kW                         | 8           | 12   | 17   | 21     | 25     | 27     | 28   | 29     | 30     |
| 1200      | GPM                        | 5.6         | 8.8  | 12.1 | 15.4   | 18.7   | 21.9   | 25.2 | 28.4   | 31.7   |
|           | LPM                        | 21          | 33   | 46   | 58     | 71     | 83     | 95   | 108    | 120    |
|           | HP                         | 15          | 22   | 30   | 37     | 44     | 48     | 51   | 52     | 53     |
|           | kW                         | 11          | 17   | 22   | 28     | 33     | 36     | 38   | 39     | 39     |
| 1500      | GPM                        | 7.3         | 11.3 | 15.5 | 19.5   | 23.6   | 27.7   | 31.8 | 35.9   | 40.0   |
|           | LPM                        | 28          | 43   | 59   | 74     | 89     | 105    | 120  | 136    | 151    |
|           | HP                         | 18          | 28   | 37   | 46     | 55     | 60     | 63   | 65     | 66     |
|           | kW                         | 14          | 21   | 28   | 34     | 41     | 45     | 47   | 49     | 49     |
| 1800      | GPM                        | 8.9         | 13.8 | 18.8 | 23.6   | 28.6   | 33.5   | 38.4 | 43.3   | 48.3   |
|           | LPM                        | 34          | 52   | 71   | 89     | 108    | 127    | 145  | 164    | 183    |
|           | HP                         | 22          | 33   | 44   | 55     | 67     | 72     | 76   | 78     | 79     |
|           | kW                         | 17          | 25   | 33   | 41     | 50     | 54     | 57   | 58     | 59     |
| 2100      | GPM                        | 10.6        | 16.3 | 22.1 | 27.8   | 33.6   | 39.3   | 45.1 | 50.8   | 56.6   |
|           | LPM                        | 40          | 62   | 84   | 105    | 127    | 149    | 171  | 192    | 214    |
|           | HP                         | 26          | 39   | 52   | 65     | 78     | 84     | 89   | 91     | 92     |
|           | kW                         | 19          | 29   | 39   | 48     | 58     | 63     | 66   | 68     | 69     |
| 2400      | GPM                        | 12.2        | 18.8 | 25.4 | 31.9   | 38.5   | 45.1   | 51.7 | 58.2   | 64.8   |
|           | LPM                        | 46          | 71   | 96   | 121    | 146    | 171    | 196  | 220    | 245    |
|           | HP                         | 30          | 44   | 59   | 74     | 89     | 96     | 101  | 105    | 106    |
|           | kW                         | 22          | 33   | 44   | 55     | 66     | 72     | 76   | 78     | 79     |

**PGM350 Motor Performance Data**

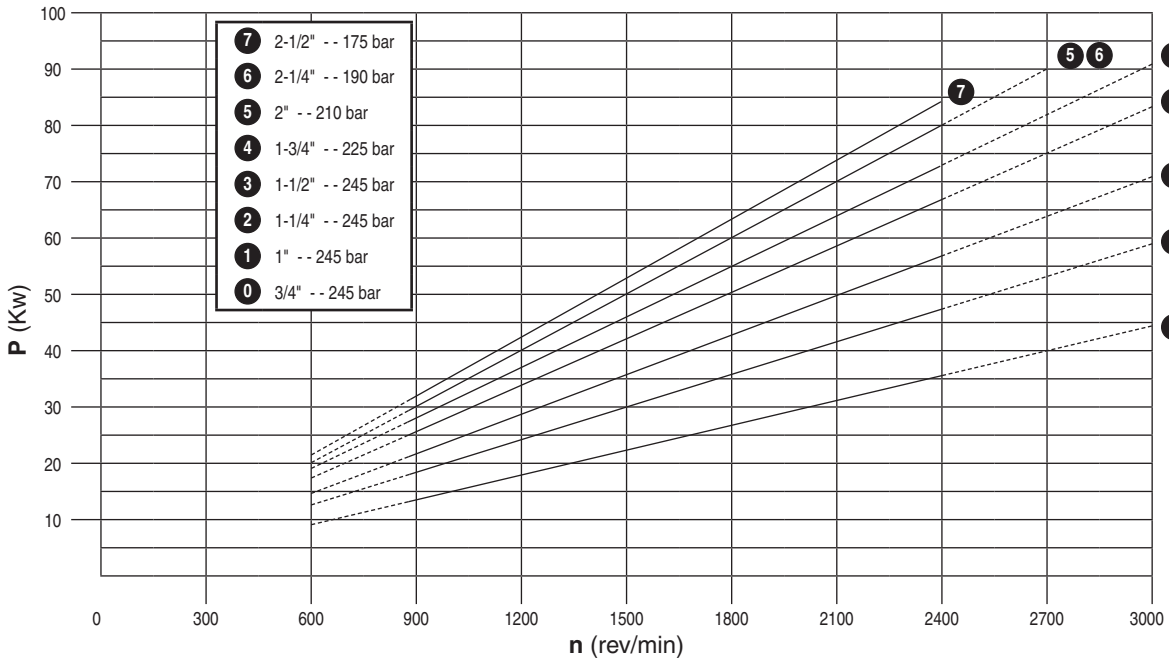
| Speed RPM | Output Torque | Gear Widths |       |                 |       |                 |       |                 |       |             |       |                 |       |                 |       |
|-----------|---------------|-------------|-------|-----------------|-------|-----------------|-------|-----------------|-------|-------------|-------|-----------------|-------|-----------------|-------|
|           |               | 1" 3500 psi |       | 1-1/4" 3500 psi |       | 1-1/2" 3500 psi |       | 1-3/4" 3250 psi |       | 2" 3000 psi |       | 2-1/4" 2750 psi |       | 2-1/2" 2500 psi |       |
|           |               | A           | B     | A               | B     | A               | B     | A               | B     | A           | B     | A               | B     | A               | B     |
| 900       | in/lbs        | 13.4        | 1320  | 16.0            | 1670  | 18.6            | 2025  | 21.2            | 2225  | 23.8        | 2350  | 26.4            | 2425  | 28.9            | 2450  |
|           | Nm            | 51          | 149.1 | 61              | 188.7 | 70              | 228.8 | 80              | 251.4 | 90          | 265.5 | 100             | 274.0 | 110             | 276.8 |
| 1200      | in/lbs        | 16.9        | 1315  | 20.4            | 1660  | 23.8            | 2015  | 27.2            | 2215  | 30.6        | 2340  | 34.0            | 2410  | 37.4            | 2435  |
|           | Nm            | 64          | 148.6 | 77              | 187.6 | 90              | 227.7 | 103             | 250.3 | 116         | 264.4 | 129             | 272.3 | 142             | 275.1 |
| 1500      | in/lbs        | 20.5        | 1300  | 24.7            | 1640  | 28.9            | 1990  | 33.2            | 2195  | 37.4        | 2315  | 41.7            | 2385  | 45.9            | 2410  |
|           | Nm            | 77          | 146.9 | 93              | 185.3 | 110             | 224.8 | 126             | 248.0 | 142         | 261.6 | 158             | 269.5 | 174             | 272.3 |
| 1800      | in/lbs        | 24.0        | 1295  | 29.0            | 1635  | 34.1            | 1980  | 39.2            | 2180  | 44.2        | 2300  | 49.3            | 2375  | 54.4            | 2395  |
|           | Nm            | 91          | 146.3 | 110             | 184.7 | 129             | 223.7 | 148             | 246.3 | 167         | 259.9 | 187             | 268.3 | 206             | 270.6 |
| 2100      | in/lbs        | 27.5        | 1285  | 33.4            | 1620  | 39.3            | 1965  | 45.2            | 2165  | 51.1        | 2285  | 57.0            | 2355  | 62.9            | 2380  |
|           | Nm            | 104         | 145.2 | 126             | 183.0 | 149             | 222.0 | 171             | 244.6 | 193         | 258.2 | 216             | 266.1 | 238             | 268.9 |
| 2400      | in/lbs        | 31.0        | 1265  | 37.7            | 1600  | 44.4            | 1940  | 51.2            | 2135  | 57.9        | 2255  | 64.6            | 2325  | 71.3            | 2350  |
|           | Nm            | 117         | 142.9 | 143             | 180.8 | 168             | 219.2 | 194             | 241.2 | 219         | 254.8 | 245             | 262.7 | 270             | 265.5 |

A: Input Flow GPM/LPM; B: Output Torque IN/LBS/Nm

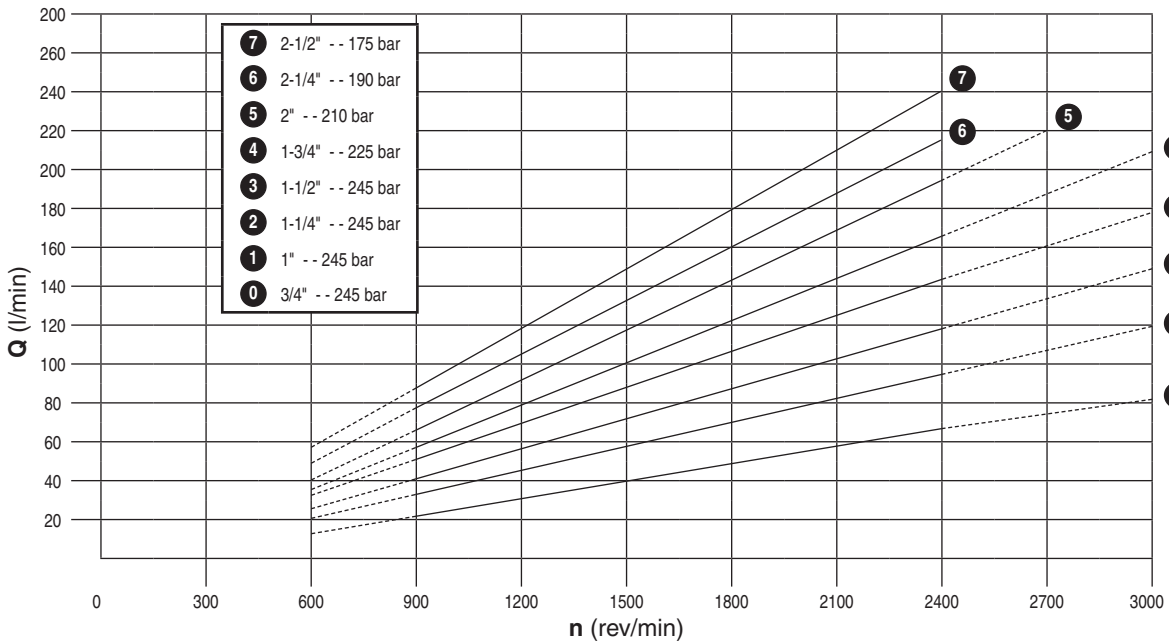
Note: In accordance with our policy of continuing product development, we reserve the right to change specification shown in this catalog without notice.

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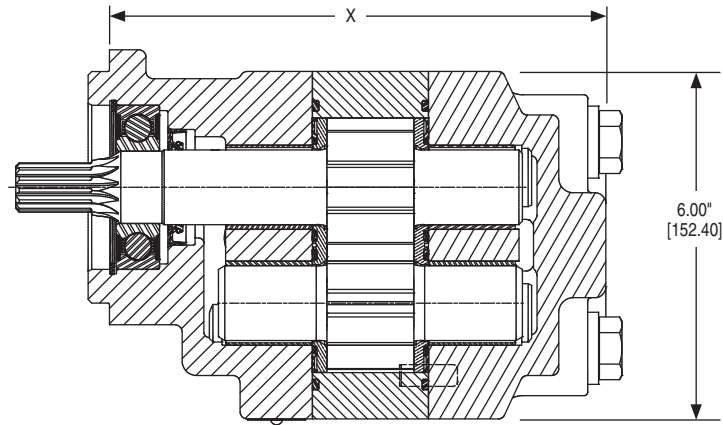
**Input**



**Output**

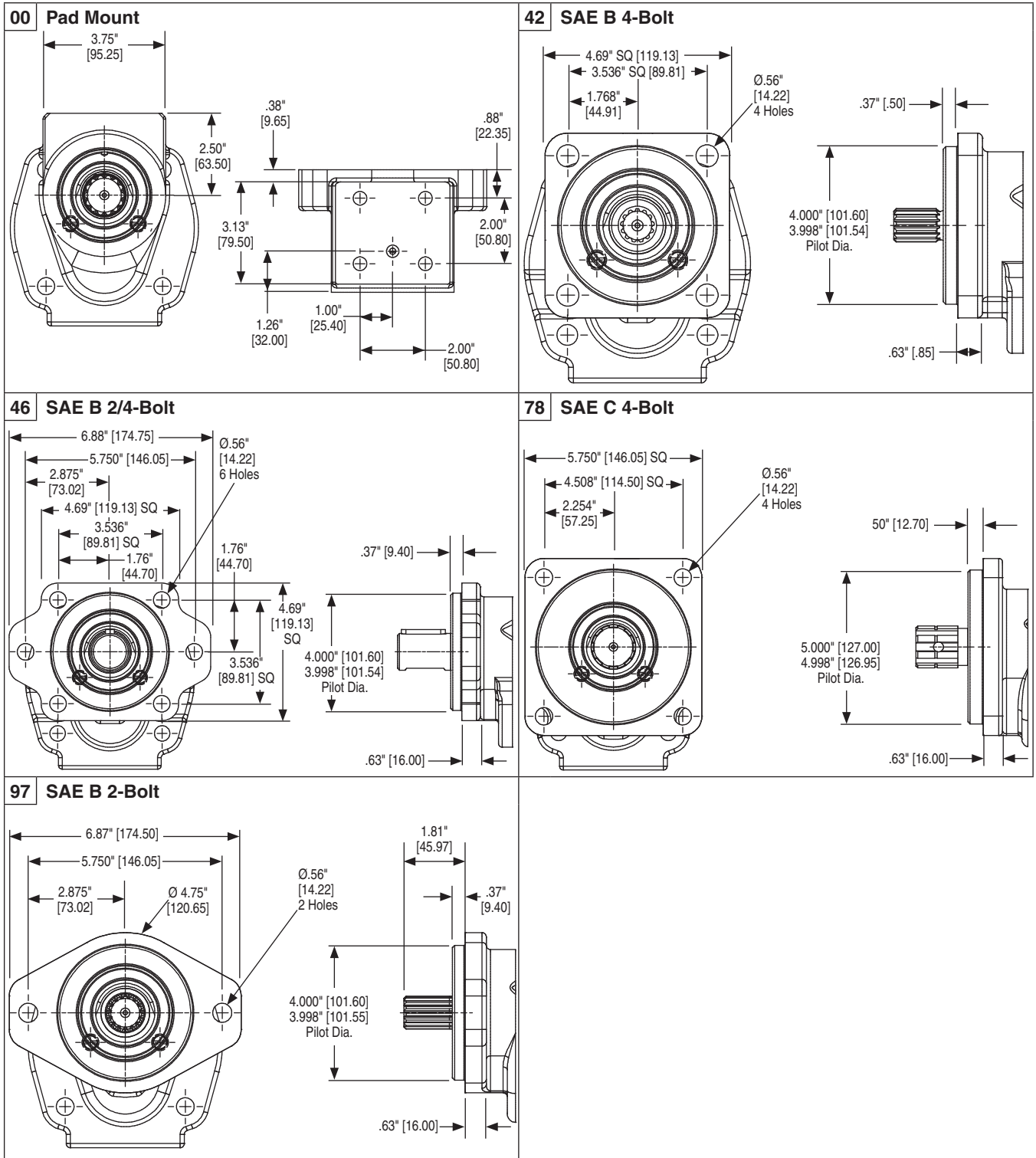


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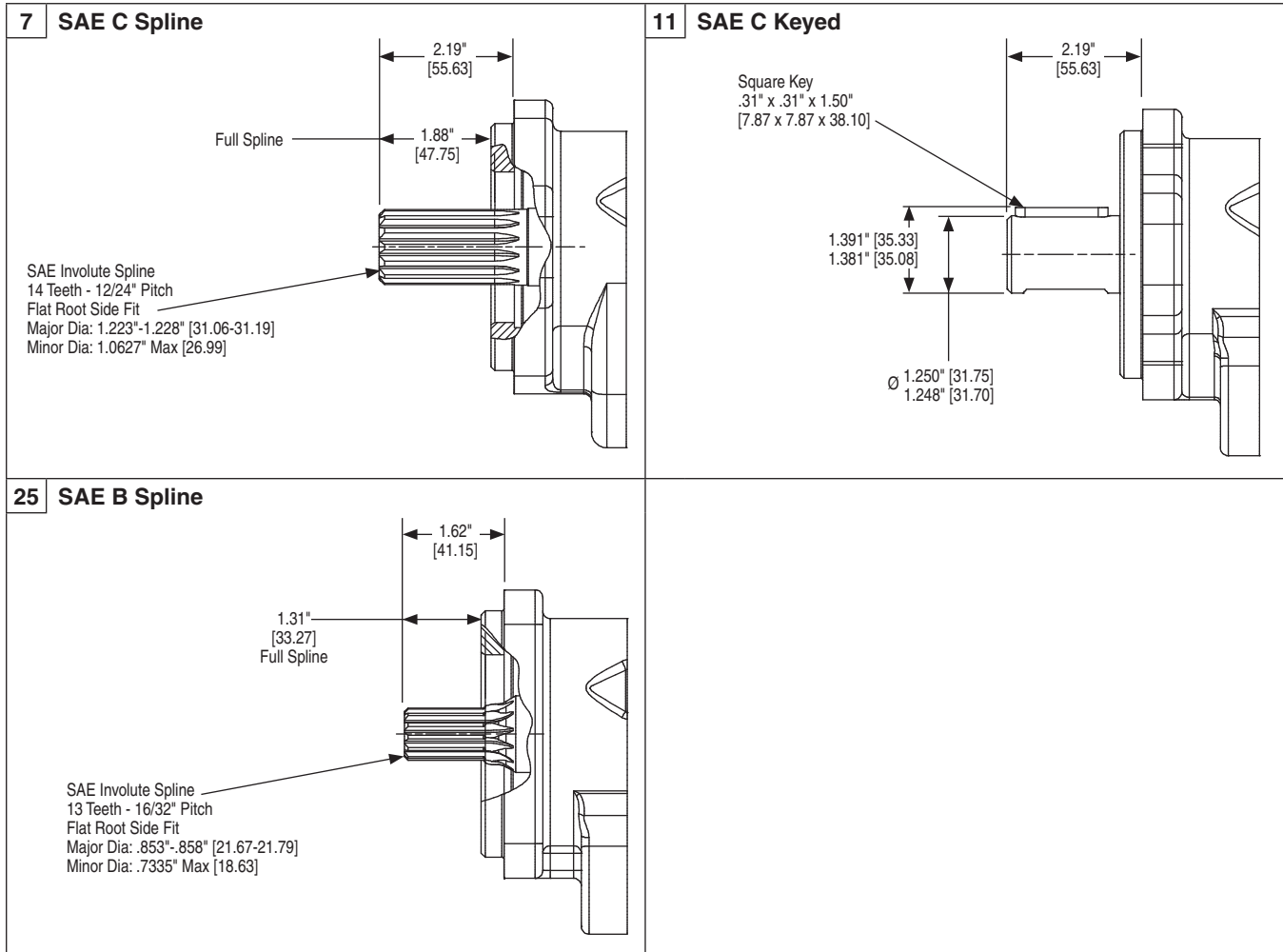


| X DIMENSION |                   |                   |                   |                   |                   |                   |                   |                   |
|-------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| SEC CODE    | 07                | 10                | 12                | 15                | 17                | 20                | 22                | 25                |
| 00          | 8.06"<br>[204.72] | 8.31"<br>[211.07] | 8.56"<br>[217.42] | 8.81"<br>[223.77] | 9.06"<br>[230.12] | 9.31"<br>[236.47] | 9.56"<br>[242.82] | 9.81"<br>[249.17] |
| 42          | 7.81"<br>[198.37] | 8.06"<br>[204.72] | 8.31"<br>[211.07] | 8.56"<br>[217.42] | 8.81"<br>[223.77] | 9.06"<br>[230.12] | 9.31"<br>[236.47] | 9.56"<br>[242.82] |
| 46          | 7.81"<br>[198.37] | 8.06"<br>[204.72] | 8.31"<br>[211.07] | 8.56"<br>[217.42] | 8.81"<br>[223.77] | 9.06"<br>[230.12] | 9.31"<br>[236.47] | 9.56"<br>[242.82] |
| 78          | 7.81"<br>[198.37] | 8.06"<br>[204.72] | 8.31"<br>[211.07] | 8.56"<br>[217.42] | 8.81"<br>[223.77] | 9.06"<br>[230.12] | 9.31"<br>[236.47] | 9.56"<br>[242.82] |
| 97          | 7.81"<br>[198.37] | 8.06"<br>[204.72] | 8.31"<br>[211.07] | 8.56"<br>[217.42] | 8.81"<br>[223.77] | 9.06"<br>[230.12] | 9.31"<br>[236.47] | 9.56"<br>[242.82] |

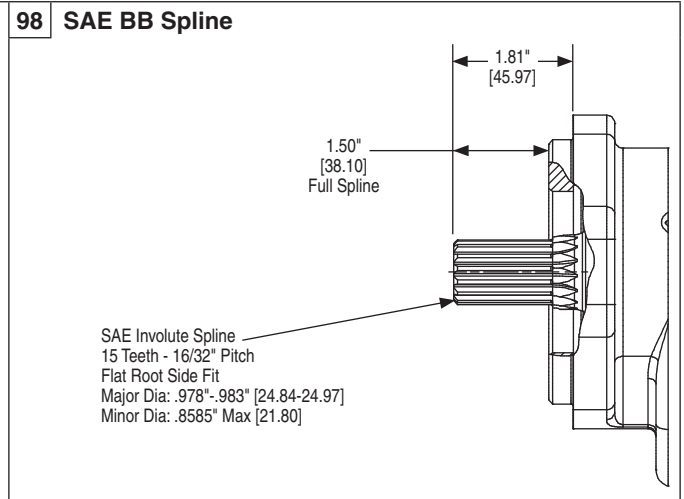
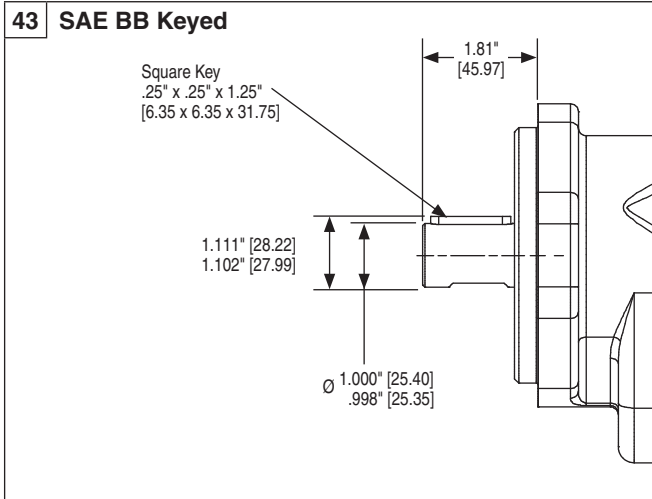
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| Shaft Style      |                    | Integral: 1<br>2 pieces: 2 | Maximum Torque |     |
|------------------|--------------------|----------------------------|----------------|-----|
|                  |                    |                            | lb-ft          | Nm  |
| SAE B            | Splined - 13 Teeth | 1                          | 242            | 328 |
|                  |                    | 2                          | 242            | 328 |
| SAE BB           | Splined - 15 Teeth | 1                          | 371            | 503 |
|                  |                    | 2                          | 300            | 407 |
| SAE C            | Splined - 14 Teeth | 1                          | 708            | 960 |
|                  |                    | 2                          | 300            | 407 |
|                  | 1.25" Keyed        | 1                          | 500            | 678 |
|                  |                    | 2                          | 300            | 407 |
| Connecting Shaft |                    |                            | 300            | 407 |

Torque (lb-ft) =  $\frac{\text{Pressure (PSI)} \times \text{Displacement (in}^3\text{/rev)}}{75.4}$

Torque (Nm) =  $\frac{\text{Pressure (Bar)} \times \text{Displacement (cc/rev)}}{62.8}$

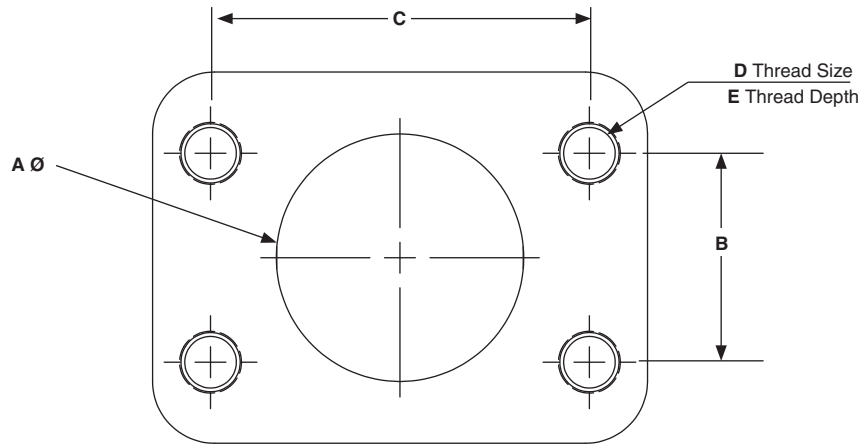


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**SAE Flanged Ports UNC Thread (SSS)**

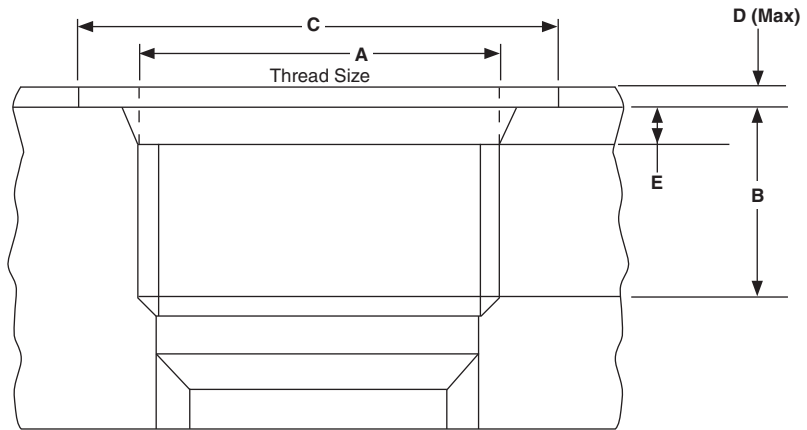
| A    |      | B    |      | C    |      | D        | E    |      |
|------|------|------|------|------|------|----------|------|------|
| inch | mm   | inch | mm   | inch | mm   | UNC      | inch | mm   |
| 0.50 | 12.7 | 0.69 | 17.5 | 1.50 | 38.1 | 5/16"-18 | 0.94 | 23.9 |
| 0.75 | 19.1 | 0.88 | 22.3 | 1.88 | 47.7 | 3/8"-16  | 0.88 | 22.4 |
| 1.00 | 25.4 | 1.03 | 26.2 | 2.06 | 52.2 | 3/8"-16  | 0.88 | 22.4 |
| 1.25 | 31.8 | 1.19 | 30.2 | 2.31 | 58.7 | 7/16"-14 | 1.12 | 28.4 |
| 1.50 | 38.1 | 1.41 | 35.7 | 2.75 | 69.9 | 1/2"-13  | 1.06 | 26.9 |
| 2.00 | 50.8 | 1.69 | 42.9 | 3.06 | 77.8 | 1/2"-13  | 1.06 | 26.9 |
| 2.50 | 63.5 | 2.00 | 50.8 | 3.50 | 88.9 | 1/2"-13  | 1.19 | 30.2 |



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**SAE Straight Thread (ODT)**

| ODT    | A<br>UNF   | B    |      | C    |      | D    |     | E    |      |
|--------|------------|------|------|------|------|------|-----|------|------|
|        |            | inch | mm   | inch | mm   | inch | mm  | inch | mm   |
| 1/2"   | 3/4"-16    | .56  | 14.3 | 1.19 | 30.2 | .09  | 2.4 | .10  | 2.55 |
| 5/8"   | 7/8"-14    | .66  | 16.7 | 1.34 | 34.1 | .09  | 2.4 | .10  | 2.55 |
| 3/4"   | 1-1/16"-12 | .75  | 19.1 | 1.62 | 41.3 | .09  | 2.4 | .13  | 3.30 |
| 1"     | 1-5/16"-12 | .75  | 19.1 | 1.91 | 48.5 | .09  | 2.4 | .13  | 3.30 |
| 1-1/4" | 1-5/8"-12  | .75  | 19.1 | 2.27 | 57.7 | .09  | 2.4 | .13  | 3.35 |
| 1-1/2" | 1-7/8"-12  | .75  | 19.1 | 2.56 | 65.0 | .09  | 2.4 | .13  | 3.35 |
| 2"     | 2-1/2"-12  | .75  | 19.1 | 3.48 | 88.4 | .09  | 2.4 | .13  | 3.35 |



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Tandem: Repeat if Necessary

|    |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| PG | 1 | 350 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 6 | 6 | 7 | 7 | 10 |
|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

| Code | 1 – Type |
|------|----------|
| P    | Pump     |
| M    | Motor    |

| Code | 2 – Unit  |
|------|---|
| A    | Single Unit   |
| B    | Tandem Unit (flush studs)                                     |
| C    | Single or Tandem with two-piece shaft (O.B. bearing required) |
| L    | Unit with Extended Studs                                      |

| Code | 3 – Shaft End Cover   |
|------|---|
| 1    | Pump, cw w/o O.B. bearing                                       |
| 2    | Pump, ccw w/o O.B. bearing                                      |
| 4    | Pump, cw with O.B. bearing                                      |
| 5    | Pump, ccw with O.B. bearing                                     |
| 8    | Motor, bi-rot with O.B. bearing + 1/4" ODT drain                |
| 9    | Motor, bi-rot w/o O.B. bearing + 1/4" ODT drain                 |
| 18   | Motor, bi-rot with O.B. bearing + 1/4" BSPP drain (78 only)     |
| 19   | Motor, bi-rot w/o O.B. bearing + 1/4" BSPP drain (42 & 78 only) |

| Code | 4 – Shaft End Cover |
|------|---------------------|
| 00   | Clutch Shaft        |
| 42   | SAE B 4-Bolt        |
| 46   | SAE B 2/4-Bolt      |
| 78   | SAE C 4-Bolt        |
| 97   | SAE B 2-Bolt        |
| 98   | SAE C 2-Bolt        |

| Code                            | 5 – Port End Cover |          |        |     |
|---------------------------------|--------------------|----------|--------|-----|
| <b>SIDE PORTED</b>              |                    |          |        |     |
|                                 | CW                 | CCW      | IN     | OUT |
| <b>SAE Split Flange (pump)</b>  |                    |          |        |     |
| EC                              | CE                 | 2"       | 1-1/2" |     |
| EF                              | FE                 | 2"       | 1-1/4" |     |
| EG                              | GE                 | 2"       | 1"     |     |
| EH                              | HE                 | 1-1/2"   | 1-1/2" |     |
| EJ                              | JE                 | 1-1/2"   | 1-1/4" |     |
| EK                              | KE                 | 1-1/2"   | 1"     |     |
| EL                              | LE                 | 1-1/4"   | 1-1/4" |     |
| EM                              | ME                 | 1-1/4"   | 1"     |     |
| EN                              | NE                 | 1"       | 1"     |     |
| OE                              | EO                 | 2"       | -      |     |
| OF                              | FO                 | 1-1/2"   | -      |     |
| OG                              | GO                 | 1-1/4"   | -      |     |
| OJ                              | JO                 | 1"       | -      |     |
| OL                              | LO                 | -        | 1-1/2" |     |
| OM                              | MO                 | -        | 1-1/4" |     |
| ON                              | NO                 | -        | 1"     |     |
| <b>SAE Split Flange (motor)</b> |                    |          |        |     |
| CR-Double                       |                    | 1-1/2"   | 1-1/2" |     |
| CS-Double                       |                    | 1-1/4"   | 1-1/4" |     |
| CT-Double                       |                    | 1"       | 1"     |     |
| CV-Double                       |                    | 3/4"     | 3/4"   |     |
| <b>OD Tube Porting (pump)</b>   |                    |          |        |     |
| FB                              | BF                 | 1-1/2"   | 1-1/4" |     |
| FC                              | CF                 | 1-1/2"   | 1"     |     |
| FG                              | GF                 | 1-1/4"   | 1-1/4" |     |
| FJ                              | JF                 | 1-1/4"   | 1"     |     |
| FL                              | LF                 | 1"       | 1"     |     |
| BC                              | CB                 | 1-1/2"   | -      |     |
| BG                              | GB                 | 1-1/4"   | -      |     |
| BJ                              | JB                 | 1"       | -      |     |
| BL                              | LB                 | -        | 1-1/4" |     |
| BN                              | NB                 | -        | 1"     |     |
| <b>OD Tube Porting (motor)</b>  |                    |          |        |     |
| VC-Double                       |                    | 1-1/4"   | 1-1/4" |     |
| VN-Double                       |                    | 1"       | 1"     |     |
| VR-Double                       |                    | 3/4"     | 3/4"   |     |
| <b>Unported (pump)</b>          |                    |          |        |     |
| BI                              | IB                 | Unported |        |     |
| <b>Unported (motor)</b>         |                    |          |        |     |
| BA                              |                    | Unported |        |     |

| Code | 6 – Gear Housing |
|------|------------------|
| AB   | Pump             |
| EB   | Motor            |

| Code | 7 – Gear Width |                        |                       |              |     |
|------|----------------|------------------------|-----------------------|--------------|-----|
|      | Gear Width     | in. <sup>3</sup> /rev. | cm <sup>3</sup> /rev. | Max Pressure |     |
|      |                |                        |                       | psi          | bar |
| 05   | 1/2"           | 1.28                   | 20.9                  | 3500         | 241 |
| 07   | 3/4"           | 1.91                   | 31.3                  | 3500         | 241 |
| 10   | 1"             | 2.55                   | 41.8                  | 3500         | 241 |
| 12   | 1-1/4"         | 3.19                   | 52.2                  | 3500         | 241 |
| 15   | 1-1/2"         | 3.83                   | 62.7                  | 3500         | 241 |
| 17   | 1-3/4"         | 4.46                   | 73.1                  | 3250         | 224 |
| 20   | 2"             | 5.10                   | 83.6                  | 3000         | 207 |
| 22   | 2-1/4"         | 5.74                   | 94.0                  | 2750         | 190 |
| 25   | 2-1/2"         | 6.38                   | 104.5                 | 2500         | 172 |

| Code | 8 – Shaft Type |
|------|----------------|
| 7    | SAE C Spline   |
| 11   | SAE C Keyed    |
| 25   | SAE B Spline   |
| 43   | SAE BB Keyed   |
| 98   | SAE BB Splined |

For Single or Tandem Units - unless noted

**WARNING:** This product can expose you to chemicals including lead or DEHP which are known to the state of California to cause cancer, birth defects, and other reproductive harm. [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

Tandem: Repeat if Necessary

|    |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| PG | 1 | 350 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 6 | 6 | 7 | 7 | 10 |
|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

| Code   | 9 – Bearing Carriers |           |            |        |
|--|----------------------|-----------|------------|--------|
| <b>DUAL OUTLET - PUMP ONLY</b>   |                      |           |            |        |
| Outlets: for clockwise porting the top port number comes first; for counter-clockwise porting the bottom port number comes first |                      |           |            |        |
| <b>CW</b>  | <b>CCW</b>           | <b>IN</b> | <b>OUT</b> |        |
| <b>SAE Split Flange</b>  |                      |           |            |        |
| <b>AF</b>  | <b>FA</b>            | 2-1/2"    | 1-1/4"     | 1-1/4" |
| <b>AG</b>  | <b>GA</b>            | 2-1/2"    | 1-1/4"     | 1"     |
| <b>AH</b>  | <b>HA</b>            | 2-1/2"    | 1"         | 1"     |
| <b>AM</b>  | <b>MA</b>            | 2"        | 1-1/4"     | 1-1/4" |
| <b>AN</b>  | <b>NA</b>            | 2"        | 1-1/4"     | 1"     |
| <b>AP</b>  | <b>PA</b>            | 2"        | 1"         | 1"     |
| <b>AT</b>  | <b>TA</b>            | 1-1/2"    | 1-1/4"     | 1-1/4" |
| <b>AU</b>  | <b>UA</b>            | 1-1/2"    | 1-1/4"     | 1"     |
| <b>AV</b>  | <b>VA</b>            | 1-1/2"    | 1"         | 1"     |
| <b>AW</b>  | <b>WA</b>            | 1-1/4"    | 1-1/4"     | 1-1/4" |
| <b>AX</b>  | <b>XA</b>            | 1-1/4"    | 1-1/4"     | 1"     |
| <b>AY</b>  | <b>YA</b>            | 1-1/4"    | 1"         | 1"     |
| <b>AZ</b>  | <b>ZA</b>            | 1"        | 1"         | 1"     |
| <b>OD Tube Porting</b>   |                      |           |            |        |
| <b>GM</b>  | <b>MG</b>            | 2"        | 1-1/4"     | 1-1/4" |
| <b>GN</b>  | <b>NG</b>            | 2"        | 1-1/4"     | 1"     |
| <b>GP</b>  | <b>PG</b>            | 2"        | 1"         | 1"     |
| <b>GT</b>  | <b>TG</b>            | 1-1/2"    | 1-1/4"     | 1-1/4" |
| <b>GU</b>  | <b>UG</b>            | 1-1/2"    | 1-1/4"     | 1"     |
| <b>GV</b>  | <b>VG</b>            | 1-1/2"    | 1"         | 1"     |
| <b>GW</b>  | <b>WG</b>            | 1-1/4"    | 1-1/4"     | 1-1/4" |
| <b>GX</b>  | <b>XG</b>            | 1-1/4"    | 1-1/4"     | 1"     |
| <b>GY</b>  | <b>YG</b>            | 1-1/4"    | 1"         | 1"     |
| <b>GZ</b>  | <b>ZG</b>            | 1"        | 1"         | 1"     |


\* Outlet port for rear section

| Code                             | 9 – Bearing Carriers (cont.) |           |            |  |
|----------------------------------|------------------------------|-----------|------------|--|
| <b>SINGLE OUTLET - PUMP ONLY</b> |                              |           |            |  |
| Outlet for front section         |                              |           |            |  |
| <b>CW</b>                        | <b>CCW</b>                   | <b>IN</b> | <b>OUT</b> |  |
| <b>SAE Split Flange</b>          |                              |           |            |  |
| <b>HB</b>                        | <b>BH</b>                    | 2"        | 1-1/2"     |  |
| <b>HC</b>                        | <b>CH</b>                    | 2"        | 1-1/4"     |  |
| <b>HF</b>                        | <b>FH</b>                    | 2"        | 1"         |  |
| <b>HL</b>                        | <b>LH</b>                    | 1-1/2"    | 1-1/2"     |  |
| <b>HM</b>                        | <b>MH</b>                    | 1-1/2"    | 1-1/4"     |  |
| <b>HN</b>                        | <b>NH</b>                    | 1-1/2"    | 1"         |  |
| <b>HO</b>                        | <b>OH</b>                    | 1-1/4"    | 1-1/4"     |  |
| <b>HP</b>                        | <b>PH</b>                    | 1-1/4"    | 1"         |  |
| <b>HQ</b>                        | <b>QH</b>                    | * 1"      | 1"         |  |
| <b>RS</b>                        | <b>SR</b>                    | 1-1/4"    | 1"         |  |
| <b>OD Tube Porting</b>           |                              |           |            |  |
| <b>KB</b>                        | <b>BK</b>                    | 2"        | 1-1/2"     |  |
| <b>KC</b>                        | <b>CK</b>                    | 2"        | 1-1/4"     |  |
| <b>KF</b>                        | <b>FK</b>                    | 2"        | 1"         |  |
| <b>KL</b>                        | <b>LK</b>                    | 1-1/2"    | 1-1/2"     |  |
| <b>KM</b>                        | <b>MK</b>                    | 1-1/2"    | 1-1/4"     |  |
| <b>KN</b>                        | <b>NK</b>                    | 1-1/2"    | 1"         |  |
| <b>KO</b>                        | <b>OK</b>                    | 1-1/4"    | 1-1/4"     |  |
| <b>KP</b>                        | <b>PK</b>                    | 1-1/4"    | 1"         |  |
| <b>KQ</b>                        | <b>QK</b>                    | 1"        | 1"         |  |

\* Outlet port for rear section

| Code                            | 9 – Bearing Carriers (cont.) |           |            |  |
|---------------------------------|------------------------------|-----------|------------|--|
| <b>COMBINED OUTLET</b>          |                              |           |            |  |
| Outlet for front section        |                              |           |            |  |
| <b>CW</b>                       | <b>CCW</b>                   | <b>IN</b> | <b>OUT</b> |  |
| <b>SAE Split Flange (pump)</b>  |                              |           |            |  |
| <b>UN</b>                       | <b>NU</b>                    | 2"        | 1-1/2"     |  |
| <b>UO</b>                       | <b>OU</b>                    | 2"        | 1-1/4"     |  |
| <b>UP</b>                       | <b>PU</b>                    | 1-1/2"    | 1-1/2"     |  |
| <b>UQ</b>                       | <b>QU</b>                    | 1-1/2"    | 1-1/4"     |  |
| <b>UR</b>                       | <b>RU</b>                    | 1-1/4"    | 1-1/4"     |  |
| <b>SAE Split Flange (motor)</b> |                              |           |            |  |
| <b>AA-Double</b>                |                              | 2"        | 2"         |  |
| <b>BB-Double</b>                |                              | 1-1/2"    | 1-1/2"     |  |
| <b>CC-Double</b>                |                              | 1-1/4"    | 1-1/4"     |  |
| <b>EE-Double</b>                |                              | 1"        | 1"         |  |
| <b>FF-Double</b>                |                              | 3/4"      | 3/4"       |  |
| <b>OD Tube Porting (pump)</b>   |                              |           |            |  |
| <b>PE</b>                       | <b>EP</b>                    | 2"        | 1-1/2"     |  |
| <b>PM</b>                       | <b>MP</b>                    | 2"        | 1-1/4"     |  |
| <b>PN</b>                       | <b>NP</b>                    | 1-1/2"    | 1-1/2"     |  |
| <b>PQ</b>                       | <b>QP</b>                    | 1-1/2"    | 1-1/4"     |  |
| <b>PR</b>                       | <b>RP</b>                    | 1-1/4"    | 1-1/4"     |  |
| <b>OD Tube Porting (motor)</b>  |                              |           |            |  |
| <b>MM-Double</b>                |                              | 1-1/2"    | 1-1/2"     |  |
| <b>NN-Double</b>                |                              | 1-1/4"    | 1-1/4"     |  |
| <b>QQ-Double</b>                |                              | 1"        | 1"         |  |
| <b>RR-Double</b>                |                              | 3/4"      | 3/4"       |  |
| <b>Common Inlet Passage</b>     |                              |           |            |  |
| <b>C</b>                        | <b>D</b>                     | No Ports  |            |  |

| Code                        | 10 – Connecting Shaft |
|-----------------------------|-----------------------|
| <b>1</b>                    | Connecting Shaft      |
| For connecting tandem units |                       |

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