

## PGP/PGM315 Series Coding

Tandem: Repeat if Necessary

|     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (6) | (7) | (10) |
| P   | G   |     | 3   | 1   | 5   |     |     |     |     |     |      |

### Pump/Motor (1)

- P** Pump (PE for fluorocarbon seals)  
**M** Motor (no tandem motors available)

### Unit (2)

- A** Single Unit  
**B** Tandem Unit (flush studs)  
**L** Unit with Extended Studs

### Shaft End Cover (3)

- 1** Pump, cw w/o O.B. bearing  
**2** Pump, ccw w/o O.B. bearing  
**4** Pump, cw with O.B. bearing (Code 490 Only)  
**5** Pump, ccw with O.B. bearing (Code 590 Only)  
**9** Motor, bi-rot w/o O.B. bearing + 1/4" ODT drain

### Shaft End Cover (4)

- 89** SAE 2 bolt for clutch  
**93** SAE "A" 2 bolt  
**95** Pad Mount for Clutch  
**96** SAE "B" 2 bolt

### Gear Housing (6)

- AB** Pump  
**EB** Motor

### Port End Cover (5)

#### (Side Ported)

| IN                             | OUT  | CW | CCW |
|--------------------------------|------|----|-----|
| •                              | •    | •  | •   |
| <b>SAE Split Flange (pump)</b> |      |    |     |
| 1"                             | 3/4" | EJ | JE  |
| 1"                             | 1/2" | EK | KE  |
| 3/4"                           | 3/4" | EL | LE  |
| 3/4"                           | 1/2" | EM | ME  |
| 1"                             | -    | OE | EO  |
| 3/4"                           | -    | OF | FO  |
| -                              | 3/4" | OJ | JO  |
| -                              | 1/2" | OL | LO  |

#### SAE Split Flange (motor)

|      |      |           |
|------|------|-----------|
| 1"   | 1"   | DR-Double |
| 3/4" | 3/4" | DS-Double |

#### Unported (pump)

**BI** Unported

#### OD Tube Porting (pump)

|        |      |    |    |
|--------|------|----|----|
| 1-1/4" | 1"   | FB | BF |
| 1-1/4" | 7/8" | FC | CF |
| 1-1/4" | 3/4" | FG | GF |
| 1-1/4" | 5/8" | FJ | JF |
| 1"     | 1"   | FL | LF |
| 1"     | 7/8" | FV | VF |
| 1"     | 3/4" | FW | WF |
| 1"     | 5/8" | FX | XF |
| 7/8"   | 7/8" | FY | YF |
| 7/8"   | 3/4" | FZ | ZF |
| 7/8"   | 5/8" | BC | CB |
| 7/8"   | 1/2" | BG | GB |
| 3/4"   | 3/4" | BJ | JB |
| 3/4"   | 5/8" | BL | LB |
| 3/4"   | 1/2" | BN | NB |
| 1 1/4" | -    | BV | VB |
| 1"     | -    | BW | WB |
| 7/8"   | -    | BX | XB |
| 3/4"   | -    | BY | YB |
| -      | 1"   | BZ | ZB |
| -      | 7/8" | PD | DP |
| -      | 3/4" | PE | EP |
| -      | 5/8" | PM | MP |
| -      | 1/2" | PN | NP |

#### (Side Ported) (cont.)

| IN                             | OUT  | CW        | CCW |
|--------------------------------|------|-----------|-----|
| •                              | •    | •         | •   |
| <b>OD Tube Porting (motor)</b> |      |           |     |
| 1"                             | 1"   | VN-Double |     |
| 3/4"                           | 3/4" | VR-Double |     |
| 1/2"                           | 1/2" | VQ-Double |     |

#### (Rear Ported)

| IN                            | OUT  | CW | CCW |
|-------------------------------|------|----|-----|
| •                             | •    | •  | •   |
| <b>OD Tube Porting (pump)</b> |      |    |     |
| 1-1/4"                        | 1"   | UC | CU  |
| 1-1/4"                        | 7/8" | UF | FU  |
| 1-1/4"                        | 3/4" | UN | NU  |
| 1"                            | 1"   | UD | DU  |
| 1"                            | 7/8" | UP | PU  |
| 1"                            | 3/4" | UQ | QU  |
| 1"                            | 5/8" | UR | RU  |
| 7/8"                          | 7/8" | LN | NL  |
| 7/8"                          | 3/4" | LP | PL  |
| 7/8"                          | 5/8" | LQ | QL  |
| 3/4"                          | 3/4" | LR | RL  |
| 3/4"                          | 5/8" | LS | SL  |
| 3/4"                          | 1/2" | LT | TL  |

#### OD Tube Porting (motor)

|      |      |           |
|------|------|-----------|
| 1"   | 1"   | RN-Double |
| 3/4" | 3/4" | RQ-Double |
| 1/2" | 1/2" | RS-Double |

## PGP/PGM315 Series Coding

Tandem: Repeat if Necessary

|     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (6) | (7) | (10) |
| P   | G   |     | 3   | 1   | 5   |     |     |     |     |     |      |

### Gear Width (7)

|    | Gear Width | in. <sup>3</sup> /rev. | cm <sup>3</sup> /rev. | Max Pressure      |
|----|------------|------------------------|-----------------------|-------------------|
| 05 | 1/2"       | .62                    | 10.2                  | 3500psi (241 bar) |
| 07 | 3/4"       | .93                    | 15.2                  | 3500psi (241 bar) |
| 10 | 1"         | 1.24                   | 20.3                  | 3500psi (241 bar) |
| 12 | 1-1/4"     | 1.55                   | 25.4                  | 3500psi (241 bar) |
| 15 | 1-1/2"     | 1.86                   | 30.5                  | 3300psi (228 bar) |
| 17 | 1-3/4"     | 2.17                   | 35.6                  | 2900psi (200 bar) |
| 20 | 2"         | 2.48                   | 40.6                  | 2500psi (172 bar) |

### Shaft Type (8)

(For Single or Tandem Units -unless noted)

|    |                                                                                                    |
|----|----------------------------------------------------------------------------------------------------|
| 97 | SAE "A" Keyed                                                                                      |
| 96 | SAE "A" Splined                                                                                    |
| 66 | SAE "B" Keyed                                                                                      |
| 65 | SAE "B" Splined                                                                                    |
| 56 | Clutch Pump Tapered, 5/16 - 24 thd. (internal),<br>#6 Woodruff Keyed (single unit only); 1:4 taper |

### Bearing Carriers (9)

#### (Dual Outlet - Pump Only)

Outlets: for clockwise porting the top port number comes first; for counter-clockwise porting the bottom port number comes first.

| IN                      | OUT  | CW   | CCW   |
|-------------------------|------|------|-------|
| •                       | •    | •    | •     |
| <b>SAE Split Flange</b> |      |      |       |
| 1-1/4"                  | 3/4" | 3/4" | CA AC |
| 1-1/4"                  | 3/4" | 1/2" | DA AD |
| 1-1/4"                  | 1/2" | 1/2" | EA AE |
| 1"                      | 3/4" | 3/4" | FA AF |
| 1"                      | 3/4" | 1/2" | GA AG |
| 1"                      | 1/2" | 1/2" | HA AH |

#### OD Tube Porting

|        |      |      |       |
|--------|------|------|-------|
| 1-1/2" | 1"   | 1"   | JG GJ |
| 1-1/2" | 1"   | 7/8" | KG GK |
| 1-1/2" | 7/8" | 7/8" | LG GL |
| 1-1/2" | 1"   | 3/4" | MG GM |
| 1-1/2" | 3/4" | 3/4" | NG GN |
| 1-1/4" | 1"   | 1"   | PG GP |
| 1-1/4" | 1"   | 7/8" | QG GQ |
| 1-1/4" | 7/8" | 7/8" | RG GR |
| 1-1/4" | 1"   | 3/4" | SG GS |
| 1-1/4" | 3/4" | 3/4" | TG GT |
| 1-1/4" | 3/4" | 5/8" | UG GU |
| 1-1/4" | 3/4" | 1/2" | VG GV |
| 1-1/4" | 5/8" | 5/8" | WG GW |
| 1-1/4" | 1/2" | 1/2" | XG GX |
| 1"     | 1"   | 1"   | YG GY |
| 1"     | 1"   | 7/8" | ZG GZ |
| 1"     | 7/8" | 7/8" | RC CR |
| 1"     | 1"   | 3/4" | SC CS |
| 1"     | 3/4" | 3/4" | TC CT |
| 1"     | 3/4" | 5/8" | VC CV |
| 1"     | 3/4" | 1/2" | WC CW |
| 1"     | 5/8" | 5/8" | XC CX |
| 1"     | 1/2" | 1/2" | YC CY |

#### (Single Outlet - Pump Only)

Outlet for front section.

| IN                      | OUT    | CW | CCW   |
|-------------------------|--------|----|-------|
| •                       | •      | •  | •     |
| <b>SAE Split Flange</b> |        |    |       |
| 1-1/4"                  | 1-1/4" |    | CJ JC |
| 1-1/4"                  | 1"     |    | CL LC |
| 1-1/4"                  | 3/4"   |    | CM MC |
| 1-1/4"                  | 1/2"   |    | HB BH |
| 1"                      | 1"     |    | HC CH |
| 1"                      | 3/4"   |    | HF FH |
| 1"                      | 1/2"   |    | HL LH |
| 3/4"                    | 3/4"   |    | HM MH |
| 3/4"                    | 1/2"   |    | HN NH |

#### OD Tube Porting

|        |        |       |
|--------|--------|-------|
| 1-1/2" | 1-1/2" | KB BK |
| 1-1/2" | 1-1/4" | KC CK |
| 1-1/2" | 1"     | KF FK |
| 1-1/2" | 7/8"   | KL LK |
| 1-1/2" | 3/4"   | KM MK |
| 1-1/4" | 1-1/4" | KN NK |
| 1-1/4" | 1"     | KO OK |
| 1-1/4" | 7/8"   | KP PK |
| 1-1/4" | 3/4"   | KQ QK |
| 1-1/4" | 5/8"   | MB BM |
| 1-1/4" | 1/2"   | ML LM |
| 1"     | 1"     | MN NM |
| 1"     | 7/8"   | MQ QM |
| 1"     | 3/4"   | MR RM |
| 1"     | 5/8"   | MS SM |
| 1"     | 1/2"   | MT TM |
| 3/4"   | 3/4"   | MU UM |
| 3/4"   | 5/8"   | MV VM |
| 3/4"   | 1/2"   | MW WM |

#### Common Inlet Passage

No Ports C D

### Connecting Shaft (10)

For connecting tandem units.

1 Connecting Shaft

## PGP/PGM330 Series Coding

Tandem: Repeat if Necessary

|     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (6) | (7) | (10) |
| P   | G   |     | 3   | 3   | 0   |     |     |     |     |     |      |

### Pump/Motor (1)

**P** Pump  
**M** Motor

### Unit (2)

**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

### Shaft End Cover (3)

**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 w/ O.B.  
bearing + 1/4" ODT drain  
**9** Motor, bi-rot w/o O.B.  
bearing + 1/4" ODT drain

### Shaft End Cover (4)

**42** SAE "B" 4 bolt  
**78** SAE "C" 4 bolt  
**97** SAE "B" 2 bolt

### Port End Cover (5)

| (Side Ported) | (Side Ported) |
|---------------|---------------|
| IN OUT CW CCW | IN OUT CW CCW |
| • • • •       | • • • •       |

#### SAE Split Flange (pump)

|              |           |           |
|--------------|-----------|-----------|
| 1-1/2"1-1/4" | <b>EJ</b> | <b>JE</b> |
| 1-1/2" 1"    | <b>EK</b> | <b>KE</b> |
| 1-1/4"1-1/4" | <b>EL</b> | <b>LE</b> |
| 1-1/4" 1"    | <b>EM</b> | <b>ME</b> |
| 1" 1"        | <b>EN</b> | <b>NE</b> |
| 1-1/2" -     | <b>OF</b> | <b>FO</b> |
| 1-1/4" -     | <b>OG</b> | <b>GO</b> |
| 1" -         | <b>OJ</b> | <b>JO</b> |
| - 1-1/4"     | <b>OM</b> | <b>MO</b> |
| - 1"         | <b>ON</b> | <b>NO</b> |

#### SAE Split Flange (motor)

|              |                   |
|--------------|-------------------|
| 1-1/4"1-1/4" | <b>CS</b> -Double |
| 1" 1"        | <b>CT</b> -Double |
| 3/4" 3/4"    | <b>CV</b> -Double |

#### OD Tube Porting (pump)

|           |           |           |
|-----------|-----------|-----------|
| 1-1/4" 1" | <b>FJ</b> | <b>JF</b> |
| 1" 1"     | <b>FL</b> | <b>LF</b> |
| 1-1/4" -  | <b>BG</b> | <b>GB</b> |
| 1" -      | <b>BJ</b> | <b>JB</b> |
| - 1"      | <b>BN</b> | <b>NB</b> |

#### OD Tube Porting (motor)

|              |                   |
|--------------|-------------------|
| 1 1/4"1 1/4" | <b>VC</b> -Double |
| 1" 1"        | <b>VN</b> -Double |
| 3/4" 3/4"    | <b>VR</b> -Double |

### Gear Housing (6)

**AB** Pump  
**EB** Motor

## PGP/PGM330 Series Coding

Tandem: Repeat if Necessary

|     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (6) | (7) | (10) |
| P   | G   |     | 3   | 3   | 0   |     |     |     |     |     |      |

### Gear Width (7)

|    | Gear Width | in. <sup>3</sup> /rev. | cm <sup>3</sup> /rev. | Max Pressure      |
|----|------------|------------------------|-----------------------|-------------------|
| 05 | 1/2"       | .99                    | 16.1                  | 3500psi (241 bar) |
| 07 | 3/4"       | 1.48                   | 24.2                  | 3500psi (241 bar) |
| 10 | 1"         | 1.97                   | 32.3                  | 3500psi (241 bar) |
| 12 | 1-1/4"     | 2.46                   | 40.4                  | 3500psi (241 bar) |
| 15 | 1-1/2"     | 2.96                   | 48.4                  | 3500psi (241 bar) |
| 17 | 1-3/4"     | 3.45                   | 56.5                  | 3250psi (224 bar) |
| 20 | 2"         | 3.94                   | 64.6                  | 3000psi (207 bar) |

### Shaft Type (8)

(For Single or Tandem Units -unless noted)

|    |                                 |
|----|---------------------------------|
| 7  | SAE "C" Spline (two-piece only) |
| 25 | SAE "B" Spline                  |
| 30 | SAE "B" Keyed                   |
| 98 | SAE "BB" Splined                |
| 43 | SAE "BB" Keyed                  |

### Bearing Carriers (9)

#### (Dual Outlet - Pump Only)

Outlets: for clockwise porting the top port number comes first; for counter-clockwise porting the bottom port number comes first.

| IN | OUT | CW | CCW |
|----|-----|----|-----|
| •  | •   | •  | •   |

#### SAE Split Flange

|         |        |        |    |    |
|---------|--------|--------|----|----|
| 2"      | 1-1/4" | 1-1/4" | AM | MA |
| 2"      | 1-1/4" | 1"     | AN | NA |
| 2"      | 1"     | 1"     | AP | PA |
| 1-1/2"  | 1-1/4" | 1-1/4" | AT | TA |
| 1-1/2"  | 1-1/4" | 1"     | AU | UA |
| 1-1/2"  | 1"     | 1"     | AV | VA |
| 1-1/4"  | 1-1/4" | 1-1/4" | AW | WA |
| 1-1/4"  | 1-1/4" | 1"     | AX | XA |
| *1-1/4" | 1"     | 1"     | AY | YA |
| 1"      | 1"     | 1"     | AZ | ZA |

#### OD Tube Porting

|        |    |    |    |    |
|--------|----|----|----|----|
| 1-1/2" | 1" | 1" | GV | VG |
| 1-1/4" | 1" | 1" | GY | YG |
| 1"     | 1" | 1" | GZ | ZG |

#### (Single Outlet - Pump Only)

Outlet for front section.

| IN | OUT | CW | CCW |
|----|-----|----|-----|
| •  | •   | •  | •   |

#### SAE Split Flange

|        |        |    |    |
|--------|--------|----|----|
| 2"     | 1-1/2" | HB | BH |
| 2"     | 1-1/4" | HC | CH |
| 2"     | 1"     | HF | FH |
| 1-1/2" | 1-1/2" | HL | LH |
| 1-1/2" | 1-1/4" | HM | MH |
| 1-1/2" | 1"     | HN | NH |
| 1-1/4" | 1-1/4" | HO | OH |
| 1-1/4" | 1"     | HP | PH |
| 1"     | 1"     | HQ | QH |
| 1-1/4" | 1"     | RS | SR |

#### OD Tube Porting

|        |        |   |    |    |
|--------|--------|---|----|----|
| 1 1/2" | 1 1/4" | - | KM | MK |
| 1 1/2" | 1"     | - | KN | NK |
| 1 1/4" | 1 1/4" | - | KO | OK |
| 1 1/4" | 1"     | - | KP | PK |
| 1"     | 1"     | - | KQ | QK |

#### (Combined Outlet)

Outlet for front section.

| IN | OUT | CW | CCW |
|----|-----|----|-----|
| •  | •   | •  | •   |

#### SAE Split Flange (pump)

|        |        |    |    |
|--------|--------|----|----|
| 2"     | 1-1/2" | UN | NU |
| 2"     | 1-1/4" | UO | OU |
| 1-1/2" | 1-1/2" | UP | PU |
| 1-1/2" | 1-1/4" | UQ | QU |
| 1-1/4" | 1-1/4" | UR | RU |

#### SAE Split Flange (motor)

|        |        |           |
|--------|--------|-----------|
| 1-1/2" | 1-1/2" | BB-Double |
| 1-1/4" | 1-1/4" | CC-Double |
| 1"     | 1"     | EE-Double |
| 3/4"   | 3/4"   | FF-Double |

#### OD Tube Porting (pump)

|        |        |    |    |
|--------|--------|----|----|
| 1-1/2" | 1-1/4" | PQ | QP |
| 1-1/4" | 1-1/4" | PR | RP |

#### OD Tube Porting (motor)

|        |        |           |
|--------|--------|-----------|
| 1-1/4" | 1-1/4" | NN-Double |
| 1"     | 1"     | QQ-Double |
| 3/4"   | 3/4"   | RR-Double |

#### Common Inlet Passage (pump)

|          |   |   |
|----------|---|---|
| No Ports | C | D |
|----------|---|---|

### Connecting Shaft (10)

For connecting tandem units.  
1 Connecting Shaft

\* Outlet port for rear section.

## PGP/PGM350 Series Coding

Tandem: Repeat if Necessary

|     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (6) | (7) | (10) |
| P   | G   |     | 3   | 5   | 0   |     |     |     |     |     |      |

### Pump/Motor (1)

**P** Pump  
**M** Motor

### Unit (2)

**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

### Shaft End Cover (3)

**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 w/ O.B. bearing + 1/4" ODT drain  
**9** Motor, bi-rot w/o O.B. bearing + 1/4" ODT drain

### Shaft End Cover (4)

**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

### Port End Cover (5)

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

### Gear Housing (6)

**AB** Pump  
**EB** Motor

## PGP/PGM350 Series Coding

Tandem: Repeat if Necessary

|     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (6) | (7) | (10) |
| P   | G   |     | 3   | 5   | 0   |     |     |     |     |     |      |

### Gear Width (7)

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

### Shaft Type (8)

(For Single, Tandem or Two-piece Shaft -unless noted)

7 SAE "C" Spline  
11 SAE "C" Keyed  
25 SAE "B" Spline  
43 SAE "BB" Keyed  
98 SAE "BB" Splined (tandem only)

### Bearing Carriers (9)

#### (Dual Outlet - Pump Only)

Outlets: for clockwise porting the top port number comes first; for counter-clockwise porting the bottom port number comes first.

| IN                      | OUT    | CW     | CCW   |
|-------------------------|--------|--------|-------|
| •                       | •      | •      | •     |
| <b>SAE Split Flange</b> |        |        |       |
| 2-1/2"                  | 1-1/4" | 1-1/4" | AF FA |
| 2-1/2"                  | 1-1/4" | 1"     | AG GA |
| 2-1/2"                  | 1"     | 1"     | AH HA |
| 2"                      | 1-1/4" | 1-1/4" | AM MA |
| 2"                      | 1-1/4" | 1"     | AN NA |
| 2"                      | 1"     | 1"     | AP PA |
| 1-1/2"                  | 1-1/4" | 1-1/4" | AT TA |
| 1-1/2"                  | 1-1/4" | 1"     | AU UA |
| 1-1/2"                  | 1"     | 1"     | AV VA |
| 1-1/4"                  | 1-1/4" | 1-1/4" | AW WA |
| 1-1/4"                  | 1-1/4" | 1"     | AX XA |
| 1-1/4"                  | 1"     | 1"     | AY YA |
| 1"                      | 1"     | 1"     | AZ ZA |

#### OD Tube Porting

|        |        |        |       |
|--------|--------|--------|-------|
| 2"     | 1-1/4" | 1-1/4" | GM MG |
| 2"     | 1-1/4" | 1"     | GN NG |
| 2"     | 1"     | 1"     | GP PG |
| 1-1/2" | 1-1/4" | 1-1/4" | GT TG |
| 1-1/2" | 1-1/4" | 1"     | GU UG |
| 1-1/2" | 1"     | 1"     | GV VG |
| 1-1/4" | 1-1/4" | 1-1/4" | GW WG |
| 1-1/4" | 1-1/4" | 1"     | GX XG |
| 1-1/4" | 1"     | 1"     | GY YG |
| 1"     | 1"     | 1"     | GZ ZG |

#### (Single Outlet - Pump Only)

Outlet for front section.

| IN                      | OUT    | CW | CCW |
|-------------------------|--------|----|-----|
| •                       | •      | •  | •   |
| <b>SAE Split Flange</b> |        |    |     |
| 2"                      | 1-1/2" | HB | BH  |
| 2"                      | 1-1/4" | HC | CH  |
| 2"                      | 1"     | HF | FH  |
| 1-1/2"                  | 1-1/2" | HL | LH  |
| 1-1/2"                  | 1-1/4" | HM | MH  |
| 1-1/2"                  | 1"     | HN | NH  |
| 1-1/4"                  | 1-1/4" | HO | OH  |
| 1-1/4"                  | 1"     | HP | PH  |
| * 1"                    | 1"     | HQ | QH  |
| 1-1/4"                  | 1"     | RS | SR  |

#### OD Tube Porting

|        |        |    |    |
|--------|--------|----|----|
| 2"     | 1-1/2" | KB | BK |
| 2"     | 1-1/4" | KC | CK |
| 2"     | 1"     | KF | FK |
| 1-1/2" | 1-1/2" | KL | LK |
| 1-1/2" | 1-1/4" | KM | MK |
| 1-1/2" | 1"     | KN | NK |
| 1-1/4" | 1-1/4" | KO | OK |
| 1-1/4" | 1"     | KP | PK |
| 1"     | 1"     | KQ | QK |

#### Combined Outlet

Outlet for front section.

| IN                             | OUT    | CW | CCW |
|--------------------------------|--------|----|-----|
| •                              | •      | •  | •   |
| <b>SAE Split Flange (pump)</b> |        |    |     |
| 2"                             | 1-1/2" | UN | NU  |
| 2"                             | 1-1/4" | UO | OU  |
| 1-1/2"                         | 1-1/2" | UP | PU  |
| 1-1/2"                         | 1-1/4" | UQ | QU  |
| 1-1/4"                         | 1-1/4" | UR | RU  |

#### SAE Split Flange (motor)

|        |        |           |
|--------|--------|-----------|
| 2"     | 2"     | AA-Double |
| 1-1/2" | 1-1/2" | BB-Double |
| 1-1/4" | 1-1/4" | CC-Double |
| 1"     | 1"     | EE-Double |
| 3/4"   | 3/4"   | FF-Double |

#### OD Tube Porting (pump)

|        |        |    |    |
|--------|--------|----|----|
| 2"     | 1-1/2" | PE | EP |
| 2"     | 1-1/4" | PM | MP |
| 1-1/2" | 1-1/2" | PN | NP |
| 1-1/2" | 1-1/4" | PQ | QP |
| 1-1/4" | 1-1/4" | PR | RP |

#### OD Tube Porting (motor)

|        |        |           |
|--------|--------|-----------|
| 1-1/2" | 1-1/2" | MM-Double |
| 1-1/4" | 1-1/4" | NN-Double |
| 1"     | 1"     | QQ-Double |
| 3/4"   | 3/4"   | RR-Double |

#### Common Inlet Passage

No Ports C D

### Connecting Shaft (10)

For connecting tandem units.

1 Connecting Shaft

\* Outlet port for rear section.

## PGP/PGM365 Series Coding

Tandem: Repeat if Necessary

|     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (6) | (7) | (10) |
| P   | G   |     | 3   | 6   | 5   |     |     |     |     |     |      |

### Pump/Motor (1)

**P** Pump  
**M** Motor

### Unit (2)

**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

### Shaft End Cover (3)

**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 w/ O.B. bearing + 1/4" ODT drain  
**9** Motor, bi-rot w/o O.B. bearing + 1/4" ODT drain

### Shaft End Cover (4)

**42** SAE "B" 4 bolt  
**78** SAE "C" 4 bolt  
**97** SAE "B" 2 bolt  
**98** SAE "C" 2 bolt

### Port End Cover (5)

#### (Side Ported)

**IN OUT CW CCW**

#### SAE Split Flange (pump)

|               |        |           |           |
|---------------|--------|-----------|-----------|
| 2"            | 1-1/2" | <b>EC</b> | <b>CE</b> |
| 2"            | 1-1/4" | <b>EF</b> | <b>FE</b> |
| 2"            | 1"     | <b>EG</b> | <b>GE</b> |
| 1-1/2" 1-1/2" |        | <b>EH</b> | <b>HE</b> |
| 1-1/2" 1-1/4" |        | <b>EJ</b> | <b>JE</b> |
| 1-1/2" 1"     |        | <b>EK</b> | <b>KE</b> |
| 1-1/4" 1-1/4" |        | <b>EL</b> | <b>LE</b> |
| 1-1/4" 1"     |        | <b>EM</b> | <b>ME</b> |
| 1" 1"         |        | <b>EN</b> | <b>NE</b> |
| 2" -          |        | <b>OE</b> | <b>EO</b> |
| 1-1/2" -      |        | <b>OF</b> | <b>FO</b> |
| 1-1/4" -      |        | <b>OG</b> | <b>GO</b> |
| 1" -          |        | <b>OJ</b> | <b>JO</b> |
| - 1-1/2"      |        | <b>OL</b> | <b>LO</b> |
| - 1-1/4"      |        | <b>OM</b> | <b>MO</b> |
| - 1"          |        | <b>ON</b> | <b>NO</b> |

#### SAE Split Flange (motor)

|               |                   |
|---------------|-------------------|
| 1-1/2" 1-1/2" | <b>CR</b> -Double |
| 1-1/4" 1-1/4" | <b>CS</b> -Double |
| 1" 1"         | <b>CT</b> -Double |
| 3/4" 3/4"     | <b>CV</b> -Double |

#### (Side Ported)

**IN OUT CW CCW**

#### OD Tube Porting (pump)

|               |           |           |
|---------------|-----------|-----------|
| 1-1/2" 1-1/4" | <b>FB</b> | <b>BF</b> |
| 1-1/2" 1"     | <b>FC</b> | <b>CF</b> |
| 1-1/4" 1-1/4" | <b>FG</b> | <b>GF</b> |
| 1-1/4" 1"     | <b>FJ</b> | <b>JF</b> |
| 1" 1"         | <b>FL</b> | <b>LF</b> |
| 1-1/2" -      | <b>BC</b> | <b>CB</b> |
| 1-1/4" -      | <b>BG</b> | <b>GB</b> |
| 1" -          | <b>BJ</b> | <b>JB</b> |
| - 1-1/4"      | <b>BL</b> | <b>LB</b> |
| - 1"          | <b>BN</b> | <b>NB</b> |

#### OD Tube Porting (motor)

|               |                   |
|---------------|-------------------|
| 1-1/4" 1-1/4" | <b>VC</b> -Double |
| 1" 1"         | <b>VN</b> -Double |
| 3/4" 3/4"     | <b>VR</b> -Double |

#### Unported (pump)

Unported **BI** **IB**

#### Unported (motor)

**BA** Unported

### Gear Housing (6)

**AB** Pump  
**EB** Motor

## PGP/PGM365 Series Coding

Tandem: Repeat if Necessary

|     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (6) | (7) | (10) |
| P   | G   |     | 3   | 6   | 5   |     |     |     |     |     |      |

### Gear Width (7)

|    | Gear Width | in. <sup>3</sup> /rev. | cm <sup>3</sup> /rev. | Max Pressure      |
|----|------------|------------------------|-----------------------|-------------------|
| 07 | 3/4"       | 2.70                   | 44.3                  | 3500psi (241 bar) |
| 10 | 1"         | 3.60                   | 59.0                  | 3500psi (241 bar) |
| 12 | 1-1/4"     | 4.50                   | 73.8                  | 3500psi (241 bar) |
| 15 | 1-1/2"     | 5.40                   | 88.5                  | 3500psi (241 bar) |
| 17 | 1-3/4"     | 6.30                   | 103.3                 | 3500psi (241 bar) |
| 20 | 2"         | 7.20                   | 118.0                 | 3500psi (241 bar) |
| 22 | 2-1/4"     | 8.10                   | 132.8                 | 3250psi (224 bar) |
| 25 | 2-1/2"     | 9.00                   | 147.5                 | 3000psi (207 bar) |

### Shaft Type (8)

- 7 SAE "C" Spline
- 11 SAE "C" Keyed
- 25 SAE "B" Spline (single only)

### Bearing Carriers (9)

#### (Dual Outlet - Pump Only)

Outlets: for clockwise porting the top port number comes first; for counter-clockwise porting the bottom port number comes first.

| IN                      | OUT    | CW     | CCW   |
|-------------------------|--------|--------|-------|
| •                       | •      | •      | •     |
| <b>SAE Split Flange</b> |        |        |       |
| 2-1/2"                  | 1-1/2" | 1-1/2" | AC CA |
| 2-1/2"                  | 1-1/2" | 1-1/4" | AD DA |
| 2-1/2"                  | 1-1/2" | 1"     | AE EA |
| 2-1/2"                  | 1-1/4" | 1-1/4" | AF FA |
| 2-1/2"                  | 1-1/4" | 1"     | AG GA |
| 2-1/2"                  | 1"     | 1"     | AH HA |
| 2"                      | 1-1/2" | 1-1/2" | AJ JA |
| 2"                      | 1-1/2" | 1-1/4" | AK KA |
| 2"                      | 1-1/2" | 1"     | AL LA |
| 2"                      | 1-1/4" | 1-1/4" | AM MA |
| 2"                      | 1-1/4" | 1"     | AN NA |
| 2"                      | 1"     | 1"     | AP PA |
| 1-1/2"                  | 1-1/2" | 1-1/2" | AQ QA |
| 1-1/2"                  | 1-1/2" | 1-1/4" | AR RA |
| 1-1/2"                  | 1-1/2" | 1"     | AS SA |
| 1-1/2"                  | 1-1/4" | 1-1/4" | AT TA |
| 1-1/2"                  | 1-1/4" | 1"     | AU UA |
| 1-1/2"                  | 1"     | 1"     | AV VA |
| 1-1/4"                  | 1-1/4" | 1-1/4" | AW WA |
| 1-1/4"                  | 1-1/4" | 1"     | AX XA |
| 1-1/4"                  | 1"     | 1"     | AY YA |
| 1"                      | 1"     | 1"     | AZ ZA |

#### OD Tube Porting

|        |        |        |       |
|--------|--------|--------|-------|
| 2"     | 1-1/2" | 1 1/2" | GJ JG |
| 2"     | 1-1/2" | 1 1/4" | GK KG |
| 2"     | 1-1/2" | 1"     | GL LG |
| 2"     | 1-1/4" | 1 1/4" | GM MG |
| 2"     | 1-1/4" | 1"     | GN NG |
| 2"     | 1"     | 1"     | GP PG |
| 1-1/2" | 1-1/2" | 1 1/2" | GQ QG |
| 1-1/2" | 1-1/2" | 1 1/4" | GR RG |
| 1-1/2" | 1-1/2" | 1"     | GS SG |
| 1-1/2" | 1-1/4" | 1 1/4" | GT TG |
| 1-1/2" | 1-1/4" | 1"     | GU UG |
| 1-1/2" | 1"     | 1"     | GV VG |
| 1-1/4" | 1-1/4" | 1 1/4" | GW WG |
| 1-1/4" | 1-1/4" | 1"     | GX XG |
| 1-1/4" | 1"     | 1"     | GY YG |
| 1"     | 1"     | 1"     | GZ ZG |

#### (Single Outlet - Pump Only)

Outlet for front section.

| IN                      | OUT    | CW | CCW |
|-------------------------|--------|----|-----|
| •                       | •      | •  | •   |
| <b>SAE Split Flange</b> |        |    |     |
| 2-1/2"                  | 1-1/2" | CJ | JC  |
| 2-1/2"                  | 1-1/4" | CL | LC  |
| 2-1/2"                  | 1"     | CM | MC  |
| 2"                      | 1-1/2" | HB | BH  |
| 2"                      | 1-1/4" | HC | CH  |
| 2"                      | 1"     | HF | FH  |
| 1-1/2"                  | 1-1/2" | HL | LH  |
| 1-1/2"                  | 1-1/4" | HM | MH  |
| 1-1/2"                  | 1"     | HN | NH  |
| 1-1/4"                  | 1-1/4" | HO | OH  |
| 1-1/4"                  | 1"     | HP | PH  |
| 1"                      | 1"     | HQ | QH  |
| 2-1/2"                  | 1-1/2" | NR | RN  |
| 1-1/4"                  | 1"     | RS | SR  |

#### OD Tube Porting

|        |        |    |    |
|--------|--------|----|----|
| 2"     | 1-1/2" | KB | BK |
| 2"     | 1-1/4" | KC | CK |
| 2"     | 1"     | KF | FK |
| 1-1/2" | 1-1/2" | KL | LK |
| 1-1/2" | 1-1/4" | KM | MK |
| 1-1/2" | 1"     | KN | NK |
| 1-1/4" | 1-1/4" | KO | OK |
| 1-1/4" | 1"     | KP | PK |
| 1"     | 1"     | KQ | QK |

#### (Combined Outlet)

Outlet for front section.

| IN                              | OUT    | CW        | CCW |
|---------------------------------|--------|-----------|-----|
| •                               | •      | •         | •   |
| <b>SAE Split Flange (pump)</b>  |        |           |     |
| 2-1/2"                          | 1-1/2" | UC        | CU  |
| 2-1/2"                          | 1-1/4" | UF        | FU  |
| 2"                              | 1-1/2" | UN        | NU  |
| 2"                              | 1-1/4" | UO        | OU  |
| 1-1/2"                          | 1-1/2" | UP        | PU  |
| 1-1/2"                          | 1-1/4" | UQ        | QU  |
| 1-1/4"                          | 1-1/4" | UR        | RU  |
| <b>SAE Split Flange (motor)</b> |        |           |     |
| 2"                              | 2"     | AA-Double |     |
| 1-1/2"                          | 1-1/2" | BB-Double |     |
| 1-1/4"                          | 1-1/4" | CC-Double |     |
| 1"                              | 1"     | EE-Double |     |
| 3/4"                            | 3/4"   | FF-Double |     |
| <b>OD Tube Porting (pump)</b>   |        |           |     |
| 2"                              | 1-1/2" | PE        | EP  |
| 2"                              | 1-1/4" | PM        | MP  |
| 1-1/2"                          | 1-1/2" | PN        | NP  |
| 1-1/2"                          | 1-1/4" | PQ        | QP  |
| 1-1/4"                          | 1-1/4" | PR        | RP  |
| <b>OD Tube Porting (motor)</b>  |        |           |     |
| 1-1/2"                          | 1-1/2" | MM-Double |     |
| 1-1/4"                          | 1-1/4" | NN-Double |     |
| 1"                              | 1"     | QQ-Double |     |
| 3/4"                            | 3/4"   | RR-Double |     |

### Connecting Shaft (10)

For connecting tandem units.

- 1 Connecting Shaft

\* Outlet port for rear section.

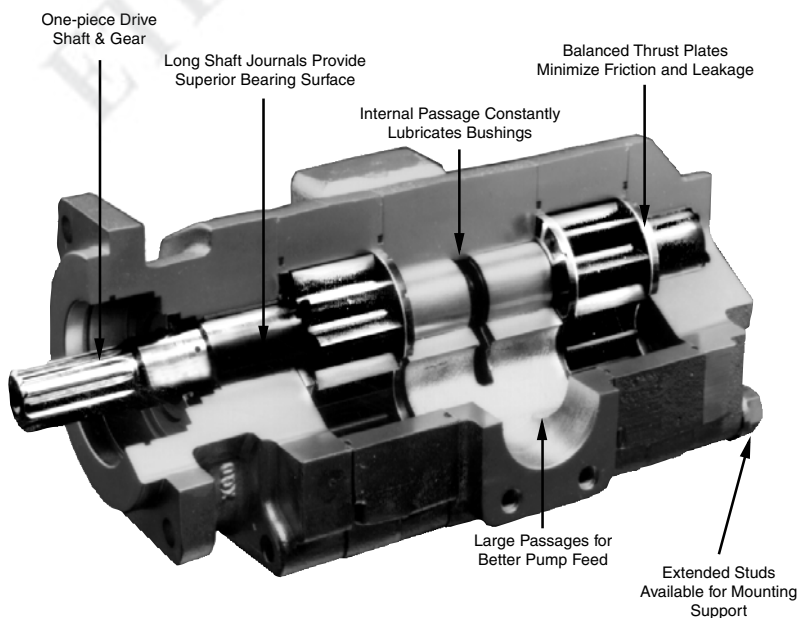
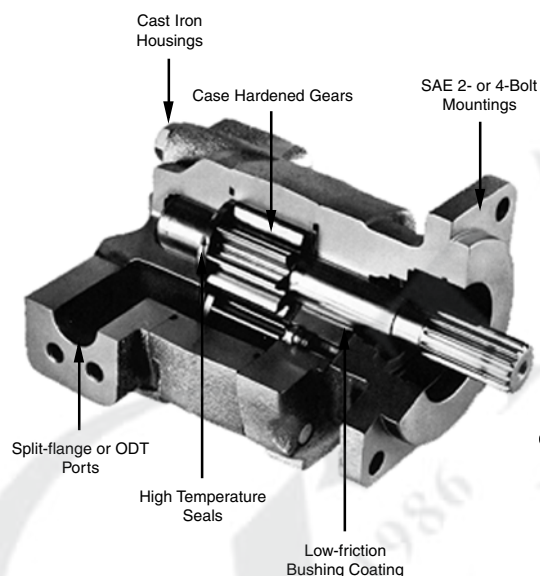
## PL Factor

Each section of a multiple pump or motor should be regarded as a single unit with corresponding delivery and power input requirements. Since the entire input horsepower is fed through a common drive shaft, the power delivered to or from the unit is limited by the physical strength of the shaft. This limit is defined as a "PL" factor; "P" being the operating pressure and "L" the summation of gear widths.

In multiple units the "PL" must be calculated for the first connecting shaft as well as the drive shaft. Each style or type of shaft has a unique "PL" factor as noted in the table to the right.

$$\text{Pressure} \times \text{Total Gear Width} = \text{PL}$$

PL MUST NOT EXCEED NUMBER SHOWN IN CHART FOR APPROPRIATE SHAFT.



| PL Chart                        |                       |                 |
|---------------------------------|-----------------------|-----------------|
| Shaft Style                     | Integral Shaft & Gear | Two-Piece Style |
| <b>PGP/PGM315</b>               |                       |                 |
| SAE "A" Spline (up to 1.25" GW) | 4,450                 | --              |
| SAE "A" Key                     | 3,600                 | --              |
| SAE "B" Spline                  | 13,400                | --              |
| SAE "B" Key                     | 9,900                 | --              |
| Connecting Shaft                | --                    | 5,550           |
| <b>PGP/PGM330</b>               |                       |                 |
| SAE "B" Spline                  | 8,450                 | 6,250           |
| SAE "B" Key                     | 6,250                 | 6,250           |
| SAE "B-B" Spline                | 13,000                | 6,250           |
| SAE "B-B" Key                   | 9,300                 | 6,250           |
| SAE "C" Spline                  | --                    | 6,250           |
| SAE "C" Key                     | --                    | 6,250           |
| Connecting Shaft                | --                    | 6,250           |
| <b>PGP/PGM350</b>               |                       |                 |
| SAE "B" Spline                  | 6,450                 | 6,450           |
| SAE "B" Key                     | 4,750                 | 4,750           |
| SAE "B-B" Spline                | 9,900                 | 9,000           |
| SAE "B-B" Key                   | 7,100                 | 7,100           |
| SAE "C" Spline                  | 19,100                | 9,000           |
| SAE "C" Key                     | 13,900                | 9,000           |
| Connecting Shaft                | --                    | 9,000           |
| <b>PGP/PGM365</b>               |                       |                 |
| SAE "B" Spline                  | 5,050                 | 5,050           |
| SAE "B" Key                     | 3,700                 | 3,700           |
| SAE "B-B" Spline                | 7,750                 | 5,350           |
| SAE "B-B" Key                   | 5,550                 | 5,550           |
| SAE "C" Spline                  | 14,900                | 11,950          |
| SAE "C" Key                     | 10,800                | 10,800          |
| Connecting Shaft                | --                    | 11,950          |

## General Data

### Pump Type

Heavy duty, cast iron, external gear pump

### Mounting

SAE standard flanges

### Porting

SAE split flanges and straight thread o-ring

### Shaft Style

SAE splined, keyed, and others

### Drive

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.

### Recommended Speed Range

PGP315 and PGP330 600 to 3000 rpm

PGP350 and PGP365 600 to 2400 rpm

### Theoretical Displacements

(Detailed with Gear Width on Code Page)

### Maximum radial loads with outboard bearing

PGP/PGM330 785 lb.

PGP/PGM350 1125 lb.

PGP/PGM365 1460 lb.

### Pump Inlet Pressure

30 psia (15psig) maximum pressure/5 in. Hg maximum vacuum at operating temperature

### Outlet Pressure

(Detailed on Code Page)

### Hydraulic Fluids

Mineral oil, fire resistant fluids:

- water-oil emulsions 60/40, HFB
- water-glycol, HFC
- phosphate-esters, HFD  
(FKM-VITON seals required)

### Fluid temperature

Mineral oil with standard seals:

0° to 180° F (-20° C to +80° C)

Fire resistant fluids HFB, HFC

0° to 150° F (-20° C to +65° C)

### Fluid Viscosity

From 7.5 to 1600 cSt (50 to 7500 SUS)

Recommended 15 to 75 cSt (80 to 350 SUS)

### Filtration

According to ISO 4406 code:

- 20/18/15 at 2000 psi/ 140 bar
- 19/17/14 at 3000 psi/ 210 bar
- 17/15/12 at 4000 psi/ 275 bar

### Flow Velocity

Mineral oil and HFD:

- Inlet up to 8 fps/ 2.5 m/s
- Outlet up to 18 fps/ 6.0 m/s  
Fire resistant fluids HFB, HFC
- Inlet up to 5 fps/ 1.5 m/s
- Outlet up to 13 fps/ 4.0 m/s

### Multiple Pump Assemblies

Up to 6 gear sections of the same model, even with different gear widths

### Piggyback Assemblies

Several models can be mounted together, one at the rear of the other. Fluids will intermix even with separate reservoirs: PGP330/315, PGP350/315, PGP365/330, PGP365/330/315

### Pumps With Priority Outlet Load Sensing Availability

Available for models PGP315, PGP330, PGP350

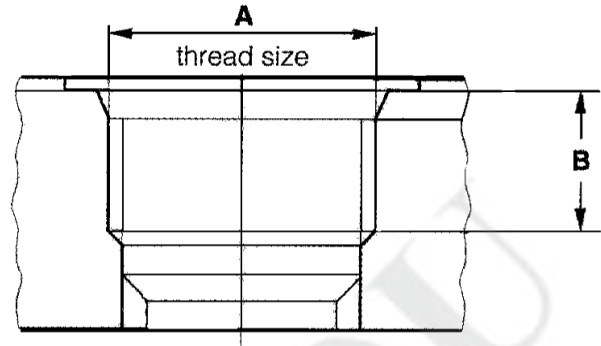
### General Notes

- For operation outside given parameters, please consult Product Support.
- The smallest gear width of each model is not recommended for single units at the maximum rated pressure

## Porting

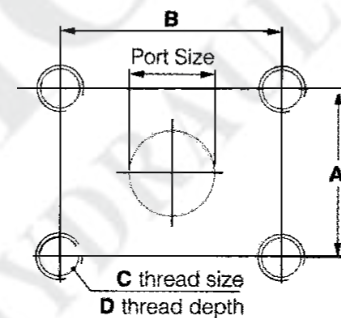
### SAE Straight Thread O-Ring (ODT)

| Normal ODT | SAE Dash Size | "A" Thread Size | "B" Full Thread Min. - in (mm) |
|------------|---------------|-----------------|--------------------------------|
| 1/2"       | - 8           | 3/4" - 16 UNF   | 0.56 (14.3)                    |
| 5/8"       | - 10          | 7/8" - 14 UNF   | 0.66 (16.7)                    |
| 3/4"       | -12           | 1-1/16"-12 UNF  | 0.75 (19.1)                    |
| 1"         | -16           | 1-5/16"-12 UNF  | 0.75 (19.1)                    |
| 1-1/4"     | -20           | 1-5/8"-12 UNF   | 0.75 (19.1)                    |
| 1-1/2"     | -24           | 1-7/8"-12 UNF   | 0.75 (19.1)                    |
| 2"         | -32           | 2-1/2"-12 UNF   | 0.75 (19.1)                    |



### SAE Split Flanged (Code 61) Ports UNC Thread (SSS)

| Port Size |      | A    |      | B    |      | C        | D    |      |
|-----------|------|------|------|------|------|----------|------|------|
| 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 | 22.2 | 1.88 | 47.6 | 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      | 36.1 | 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 |



## Drive Shaft

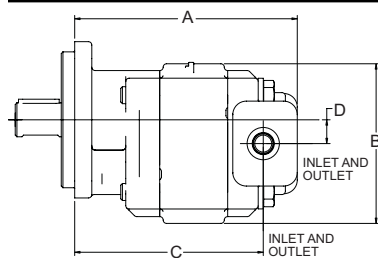
### Maximum Input Torque

| Shaft Style      |                    | • integral: 1<br>• 2 pieces: 2 | 315<br>lb-ft Nm | 330<br>lb-ft Nm | 350<br>lb-ft Nm | 365<br>lb-ft Nm |
|------------------|--------------------|--------------------------------|-----------------|-----------------|-----------------|-----------------|
| SAE A            | splined - 9 teeth  | 1                              | 80 109          | -               | -               | -               |
|                  |                    | 2                              | -               | -               | -               | -               |
|                  | 5/8" keyed         | 1                              | 62 84           | -               | -               | -               |
|                  |                    | 2                              | -               | -               | -               | -               |
| SAE B            | splined - 13 teeth | 1                              | 242 328         | 242 328         | 242 328         | 242 328         |
|                  |                    | 2                              | -               | 159 215         | 242 328         | 242 328         |
|                  | 7/8" keyed         | 1                              | 167 226         | 167 226         | 167 226         | 167 226         |
|                  |                    | 2                              | -               | 159 215         | 167 226         | 167 226         |
| SAE BB           | splined - 15 teeth | 1                              | -               | 371 503         | 371 503         | 371 503         |
|                  |                    | 2                              | -               | 159 215         | 300 407         | 371 503         |
|                  | 1" keyed           | 1                              | -               | 250 339         | 250 339         | 250 339         |
|                  |                    | 2                              | -               | 159 215         | 250 339         | 250 339         |
| SAE C            | splined - 14 teeth | 1                              | -               | -               | 708 960         | 708 960         |
|                  |                    | 2                              | -               | 159 215         | 300 407         | 533 723         |
|                  | 1.25" keyed        | 1                              | -               | -               | 500 678         | 500 678         |
|                  |                    | 2                              | -               | 159 215         | 300 407         | 500 678         |
|                  |                    |                                | -               | -               |                 | -               |
| Connecting Shaft |                    |                                | 90 122          | 159 215         | 300 407         | 533 723         |

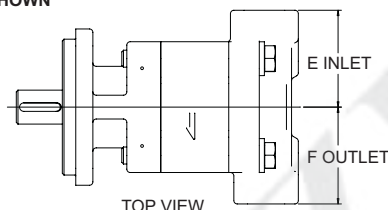
## Dimensional Data

### Single Pumps & Motors

| Dimensional Data: Single Section Pumps and Motors (GW = gear width (inch)) |       |                       |                       |              |      |                   |            |                    |
|----------------------------------------------------------------------------|-------|-----------------------|-----------------------|--------------|------|-------------------|------------|--------------------|
| Model                                                                      | Units | A<br>(Overall Length) | B<br>(Overall Height) | C            | D    | Port Locations    |            |                    |
|                                                                            |       |                       |                       |              |      | Pump <sup>1</sup> |            | Motor <sup>1</sup> |
|                                                                            |       |                       |                       |              |      | E (Inlet)         | F (Outlet) | E & F              |
| 315                                                                        | inch  | 4.27+GW               | 4.75                  | 3.27+GW      | 0.75 | 2.31              | 2.19       | 2.31               |
|                                                                            | mm    | 108.5+25.4GW          | 120.7                 | 83.1+25.4GW  | 19.1 | 58.7              | 55.6       | 58.7               |
| 330                                                                        | inch  | 6.19+GW               | 5.88                  | 4.94+GW      | 0.88 | 3.56              | 3.56       | 3.50               |
|                                                                            | mm    | 157.2+25.4GW          | 149.4                 | 125.5+25.4GW | 22.4 | 90.4              | 90.4       | 88.9               |
| 350                                                                        | inch  | 7.06+GW               | 6.00                  | 5.56+GW      | 1.00 | 3.69              | 3.69       | 3.69               |
|                                                                            | mm    | 179.3+25.4GW          | 152.4                 | 141.2+25.4GW | 25.4 | 93.7              | 93.7       | 93.7               |
| 365                                                                        | inch  | 7.31+GW               | 7.25                  | 5.81+GW      | 1.12 | 3.81              | 3.81       | 3.81               |
|                                                                            | mm    | 185.7+25.4GW          | 184.2                 | 147.6+25.4GW | 28.4 | 96.8              | 96.8       | 96.8               |



CW ROTATION  
PUMP SHOWN

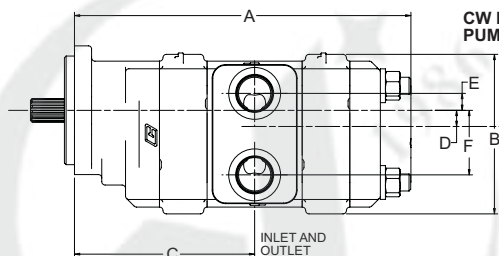


TOP VIEW

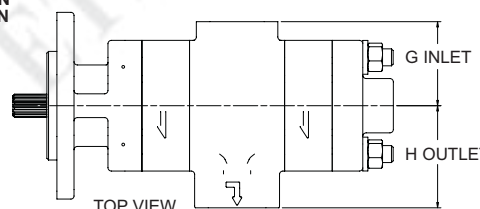
<sup>1</sup>These values are for SAE Straight Thread O-Ring ports only. Split Flange port dimensions will be 0.125 inch (3.18 mm) less.

### Tandem Pumps & Motors

| Dimensional Data: Tandem Pumps and Motors (GWS = sum of gear widths (inch) GW1=First Section Gear Width (inch)) |       |                       |                       |               |      |                |                |                        |                         |                    |
|-----------------------------------------------------------------------------------------------------------------|-------|-----------------------|-----------------------|---------------|------|----------------|----------------|------------------------|-------------------------|--------------------|
| Model                                                                                                           | Units | A<br>(Overall Length) | B<br>(Overall Height) | C             | D    | Port Locations |                |                        |                         | Motor <sup>2</sup> |
|                                                                                                                 |       |                       |                       |               |      | Pump           |                |                        |                         |                    |
|                                                                                                                 |       |                       |                       |               |      | E <sup>1</sup> | F <sup>1</sup> | G <sup>2</sup> (Inlet) | H <sup>2</sup> (Outlet) | G & H              |
| 315                                                                                                             | inch  | 7.05+GWS              | 4.75                  | 3.59+GW1      | 0.75 | 0.34           | 1.84           | 2.38                   | 2.81                    | N/A                |
|                                                                                                                 | mm    | 179.1+25.4GWS         | 120.7                 | 91.2+25.4GW1  | 19.1 | 8.6            | 46.7           | 60.5                   | 71.4                    | N/A                |
| 330                                                                                                             | inch  | 9.88+GWS              | 5.88                  | 5.38+GW1      | 0.88 | 0.62           | 2.38           | 3.22                   | 3.75                    | 3.22               |
|                                                                                                                 | mm    | 250.9+25.4GWS         | 149.4                 | 136.7+25.4GW1 | 22.4 | 15.7           | 60.5           | 81.8                   | 95.3                    | 81.8               |
| 350                                                                                                             | inch  | 10.25+GWS             | 6.00                  | 5.75+GW1      | 1.00 | 0.50           | 2.50           | 3.69                   | 4.15                    | 3.69               |
|                                                                                                                 | mm    | 260.4+25.4GWS         | 152.4                 | 146.1+25.4GW1 | 25.4 | 12.7           | 63.5           | 93.7                   | 105.4                   | 93.7               |
| 365                                                                                                             | inch  | 11.38+GWS             | 7.25                  | 6.25+GW1      | 1.12 | 0.63           | 2.88           | 3.81                   | 4.71                    | 3.81               |
|                                                                                                                 | mm    | 289.1+25.4GWS         | 184.2                 | 158.8+25.4GW1 | 28.4 | 15.9           | 73.2           | 96.8                   | 119.6                   | 96.8               |



CW ROTATION  
PUMP SHOWN



TOP VIEW

<sup>1</sup>These dimensions apply to pumps only. Tandem PGM315 motors are not available and all other models have motors that are available with only single outlet ports.

<sup>2</sup>These values are for SAE Straight Thread O-Ring ports only. Split Flange port dimensions will be 0.125 inch (3.18 mm) less.

### Weights

| Weights of Pump and Motor Assemblies |       |                   |      |      |      |      |      |      |      |      |
|--------------------------------------|-------|-------------------|------|------|------|------|------|------|------|------|
| Model                                | Units | Gear Width (inch) |      |      |      |      |      |      |      |      |
|                                      |       | 0.50              | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 |
| 315                                  | lb    | 16                | 17   | 18   | 19   | 20   | 21   | 22   | N/A  | N/A  |
|                                      | kg    | 7                 | 8    | 8    | 9    | 9    | 10   | 10   | N/A  | N/A  |
| 330                                  | lb    | 34                | 35   | 36   | 37   | 39   | 40   | 41   | N/A  | N/A  |
|                                      | kg    | 15                | 16   | 16   | 17   | 17   | 18   | 19   | N/A  | N/A  |
| 350                                  | lb    | 48                | 50   | 51   | 53   | 54   | 56   | 57   | 59   | 60   |
|                                      | kg    | 22                | 22   | 23   | 24   | 24   | 25   | 26   | 27   | 27   |
| 365                                  | lb    | N/A               | 54   | 56   | 59   | 61   | 64   | 66   | 69   | 71   |
|                                      | kg    | N/A               | 24   | 25   | 27   | 28   | 29   | 30   | 31   | 32   |

Note: The weight of a single section unit is the value shown for the corresponding gear width. The weight of a multiple section unit will be the sum of the weights of each of the corresponding gear widths. All weights are approximate. The actual weight of an assembly will depend upon the porting and the type of flange and shaft specified.

## PGP315 Pump Performance Data

| speed<br>rpm | output flow<br>input power | Gear Widths |      |      |        |        |        |      |
|--------------|----------------------------|-------------|------|------|--------|--------|--------|------|
|              |                            | 1/2"        | 3/4" | 1"   | 1-1/4" | 1-1/2" | 1-3/4" | 2"   |
| 900          | GPM                        | 2.0         | 3.2  | 4.4  | 5.5    | 6.7    | 7.9    | 9.0  |
|              | LPM                        | 8           | 12   | 17   | 21     | 26     | 30     | 34   |
|              | HP                         | 5           | 8    | 11   | 13     | 15     | 15     | 15   |
|              | kW                         | 4           | 6    | 8    | 10     | 11     | 11     | 11   |
| 1200         | GPM                        | 2.8         | 4.4  | 6.0  | 7.6    | 9.2    | 10.7   | 12.2 |
|              | LPM                        | 11          | 17   | 23   | 29     | 35     | 40     | 46   |
|              | HP                         | 7           | 11   | 14   | 18     | 20     | 21     | 20   |
|              | kW                         | 5           | 8    | 11   | 13     | 15     | 15     | 15   |
| 1500         | GPM                        | 3.6         | 5.6  | 7.7  | 9.6    | 11.6   | 13.5   | 15.4 |
|              | LPM                        | 14          | 21   | 29   | 36     | 44     | 51     | 58   |
|              | HP                         | 9           | 13   | 18   | 22     | 25     | 26     | 25   |
|              | kW                         | 7           | 10   | 13   | 16     | 19     | 19     | 19   |
| 1800         | GPM                        | 4.4         | 6.8  | 9.3  | 11.6   | 14.0   | 16.3   | 18.6 |
|              | LPM                        | 17          | 26   | 35   | 44     | 53     | 62     | 70   |
|              | HP                         | 11          | 16   | 21   | 27     | 30     | 31     | 30   |
|              | kW                         | 8           | 12   | 16   | 20     | 22     | 23     | 23   |
| 2100         | GPM                        | 5.2         | 8.1  | 10.9 | 13.6   | 16.4   | 19.1   | 21.8 |
|              | LPM                        | 20          | 30   | 41   | 51     | 62     | 72     | 83   |
|              | HP                         | 12          | 19   | 25   | 31     | 35     | 36     | 35   |
|              | kW                         | 9           | 14   | 18   | 23     | 26     | 27     | 26   |
| 2400         | GPM                        | 6.0         | 9.3  | 12.5 | 15.6   | 18.8   | 21.9   | 25.1 |
|              | LPM                        | 23          | 35   | 47   | 59     | 71     | 83     | 95   |
|              | HP                         | 14          | 21   | 28   | 35     | 40     | 41     | 40   |
|              | kW                         | 11          | 16   | 21   | 26     | 30     | 31     | 30   |
| 3000         | GPM                        | 7.7         | 11.7 | 15.7 | 19.6   | 23.7   | 27.6   | 31.5 |
|              | LPM                        | 29          | 44   | 59   | 74     | 90     | 104    | 119  |
|              | HP                         | 18          | 27   | 35   | 44     | 50     | 51     | 51   |
|              | kW                         | 13          | 20   | 26   | 33     | 37     | 38     | 38   |

Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with the oil reservoir temperature at 120°F and viscosity 150 SUS at 100°F.

Note: Pump output flow is at the maximum rated pressure. See Gear Width on page 5.

## PGM315 Motor Performance Data

| Speed<br>RPM | Gear Widths    |      |                    |      |                    |       |                    |       |                |       |
|--------------|----------------|------|--------------------|------|--------------------|-------|--------------------|-------|----------------|-------|
|              | 1"<br>3500 psi |      | 1-1/4"<br>3500 psi |      | 1-1/2"<br>3300 psi |       | 1-3/4"<br>2900 psi |       | 2"<br>2500 psi |       |
|              | A              | B    | A                  | B    | A                  | B     | A                  | B     | A              | B     |
| 900          | 7.1            | 665  | 8.3                | 830  | 9.6                | 940   | 10.9               | 965   | 12.2           | 950   |
|              | 27             | 75.1 | 32                 | 93.8 | 37                 | 106.2 | 41                 | 109.0 | 46             | 107.3 |
| 1200         | 8.8            | 665  | 10.5               | 830  | 12.2               | 940   | 13.8               | 965   | 15.5           | 950   |
|              | 33             | 75.1 | 40                 | 93.8 | 46                 | 106.2 | 52                 | 109.0 | 59             | 107.3 |
| 1500         | 10.6           | 660  | 12.6               | 825  | 14.7               | 935   | 16.7               | 955   | 18.8           | 945   |
|              | 40             | 74.6 | 48                 | 93.2 | 56                 | 105.6 | 63                 | 107.9 | 71             | 106.8 |
| 1800         | 12.3           | 655  | 14.7               | 820  | 17.2               | 930   | 19.6               | 950   | 22.1           | 940   |
|              | 46             | 74.0 | 56                 | 92.6 | 65                 | 105.1 | 74                 | 107.3 | 84             | 106.2 |
| 2100         | 14.0           | 655  | 16.8               | 820  | 19.7               | 930   | 22.5               | 950   | 25.4           | 940   |
|              | 53             | 74.0 | 64                 | 92.6 | 75                 | 105.1 | 85                 | 107.3 | 96             | 106.2 |
| 2400         | 15.7           | 640  | 18.9               | 800  | 22.2               | 910   | 25.4               | 930   | 28.8           | 920   |
|              | 59             | 72.3 | 72                 | 90.4 | 84                 | 102.8 | 96                 | 105.1 | 109            | 103.9 |
| 3000         | 19.0           | 640  | 23.0               | 800  | 27.2               | 905   | 31.2               | 925   | 35.3           | 915   |
|              | 72             | 72.3 | 87                 | 90.4 | 103                | 102.3 | 118                | 104.5 | 134            | 103.4 |

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 specifications shown in this catalog without notice.

## PGP330 Pump Performance Data

| speed<br>rpm | output flow<br>input power | Gear Widths |      |      |        |        |        |      |
|--------------|----------------------------|-------------|------|------|--------|--------|--------|------|
|              |                            | 1/2"        | 3/4" | 1"   | 1-1/4" | 1-1/2" | 1-3/4" | 2"   |
| 900          | GPM                        | 3.2         | 5.1  | 7.0  | 8.8    | 10.6   | 12.4   | 14.3 |
|              | LPM                        | 12          | 19   | 26   | 33     | 40     | 47     | 54   |
|              | HP                         | 9           | 13   | 17   | 21     | 26     | 28     | 29   |
|              | kW                         | 6           | 10   | 13   | 16     | 19     | 21     | 22   |
| 1200         | GPM                        | 4.5         | 7.0  | 9.5  | 12.0   | 14.5   | 16.9   | 19.4 |
|              | LPM                        | 17          | 26   | 36   | 45     | 55     | 64     | 73   |
|              | HP                         | 11          | 17   | 23   | 28     | 34     | 37     | 39   |
|              | kW                         | 8           | 13   | 17   | 21     | 25     | 28     | 29   |
| 1500         | GPM                        | 5.8         | 8.9  | 12.1 | 15.2   | 18.3   | 21.4   | 24.5 |
|              | LPM                        | 22          | 34   | 46   | 57     | 69     | 81     | 93   |
|              | HP                         | 14          | 21   | 28   | 35     | 43     | 46     | 49   |
|              | kW                         | 11          | 16   | 21   | 26     | 32     | 34     | 36   |
| 1800         | GPM                        | 7.1         | 10.8 | 14.7 | 18.4   | 22.1   | 25.9   | 29.6 |
|              | LPM                        | 27          | 41   | 55   | 70     | 84     | 98     | 112  |
|              | HP                         | 17          | 26   | 34   | 43     | 51     | 55     | 58   |
|              | kW                         | 13          | 19   | 25   | 32     | 38     | 41     | 44   |
| 2100         | GPM                        | 8.4         | 12.7 | 17.2 | 21.6   | 26.0   | 30.3   | 34.7 |
|              | LPM                        | 32          | 48   | 65   | 82     | 98     | 115    | 131  |
|              | HP                         | 20          | 30   | 40   | 50     | 60     | 65     | 68   |
|              | kW                         | 15          | 22   | 30   | 37     | 44     | 48     | 51   |
| 2400         | GPM                        | 9.6         | 14.7 | 19.8 | 24.8   | 29.8   | 34.8   | 39.8 |
|              | LPM                        | 36          | 55   | 75   | 94     | 113    | 132    | 151  |
|              | HP                         | 23          | 34   | 45   | 57     | 68     | 74     | 78   |
|              | kW                         | 17          | 25   | 34   | 42     | 51     | 55     | 58   |
| 3000         | GPM                        | 12.2        | 18.5 | 24.9 | 31.2   | 37.5   | 43.8   | 50.1 |
|              | LPM                        | 46          | 70   | 94   | 118    | 142    | 166    | 190  |
|              | HP                         | 28          | 43   | 57   | 71     | 85     | 92     | 97   |
|              | kW                         | 21          | 32   | 42   | 53     | 64     | 69     | 73   |

Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with the oil reservoir temperature at 120°F and viscosity 150 SUS at 100°F.

Note: Pump output flow is at the maximum rated pressure. See Gear Width on page 7.

## PGM330 Motor Performance Data

| Speed<br>RPM | Gear Widths    |       |                    |       |                    |       |                    |       |                |       |
|--------------|----------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|----------------|-------|
|              | 1"<br>3500 psi |       | 1-1/4"<br>3500 psi |       | 1-1/2"<br>3500 psi |       | 1-3/4"<br>3250 psi |       | 2"<br>3000 psi |       |
|              | A              | B     | A                  | B     | A                  | B     | A                  | B     | A              | B     |
| 900          | 10.1           | 1010  | 12.3               | 1270  | 14.5               | 1530  | 16.7               | 1665  | 19.0           | 1770  |
|              | 38             | 114.1 | 47                 | 143.5 | 55                 | 172.9 | 63                 | 188.1 | 72             | 200.0 |
| 1200         | 12.8           | 1005  | 15.7               | 1265  | 18.6               | 1525  | 21.4               | 1660  | 24.3           | 1760  |
|              | 49             | 113.6 | 59                 | 142.9 | 70                 | 172.3 | 81                 | 187.6 | 92             | 198.9 |
| 1500         | 15.6           | 1000  | 19.1               | 1255  | 22.6               | 1515  | 26.1               | 1650  | 29.6           | 1750  |
|              | 59             | 113.0 | 72                 | 141.8 | 85                 | 171.2 | 99                 | 186.4 | 112            | 197.7 |
| 1800         | 18.4           | 995   | 22.5               | 1250  | 26.6               | 1505  | 30.8               | 1640  | 34.9           | 1740  |
|              | 69             | 112.4 | 85                 | 141.2 | 101                | 170.0 | 116                | 185.3 | 132            | 196.6 |
| 2100         | 21.1           | 990   | 25.9               | 1240  | 30.7               | 1495  | 35.4               | 1625  | 40.2           | 1720  |
|              | 80             | 111.9 | 98                 | 140.1 | 116                | 168.9 | 134                | 183.6 | 152            | 194.3 |
| 2400         | 23.9           | 985   | 29.3               | 1235  | 34.7               | 1480  | 40.1               | 1605  | 45.5           | 1695  |
|              | 90             | 111.3 | 111                | 139.5 | 131                | 167.2 | 152                | 181.3 | 172            | 191.5 |
| 3000         | 29.2           | 980   | 35.9               | 1230  | 42.6               | 1475  | 49.3               | 1595  | 56.0           | 1685  |
|              | 110            | 110.7 | 136                | 139.0 | 161                | 166.7 | 186                | 180.2 | 212            | 190.4 |

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 specifications shown in this catalog without notice.

## PGP350 Pump Performance Data

| speed<br>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     |

Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with the oil reservoir temperature at 120°F and viscosity 150 SUS at 100°F.

Note: Pump output flow is at the maximum rated pressure. See Gear Width on page 9.

## PGM350 Motor Performance Data

| Speed<br>RPM | Gear Widths |       |          |       |          |       |          |       |          |       |          |       |          |       |
|--------------|-------------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
|              | 1"          |       | 1-1/4"   |       | 1-1/2"   |       | 1-3/4"   |       | 2"       |       | 2-1/4"   |       | 2-1/2"   |       |
|              | 3500 psi    |       | 3500 psi |       | 3500 psi |       | 3500 psi |       | 3500 psi |       | 3250 psi |       | 3000 psi |       |
| 900          | A           | B     | A        | B     | A        | B     | A        | B     | A        | B     | A        | B     | A        | B     |
|              | 18.4        | 1865  | 22.0     | 2355  | 25.6     | 2860  | 29.2     | 3370  | 32.9     | 3850  | 36.5     | 4020  | 40.1     | 4125  |
| 1200         | 70          | 210.7 | 83       | 266.1 | 97       | 323.1 | 111      | 380.8 | 124      | 435.0 | 138      | 454.2 | 152      | 466.1 |
|              | 23.3        | 1845  | 28.1     | 2330  | 32.9     | 2830  | 37.6     | 3335  | 42.4     | 3810  | 47.2     | 3980  | 52.0     | 4080  |
| 1500         | 88          | 208.5 | 106      | 263.3 | 124      | 319.7 | 142      | 376.8 | 160      | 430.5 | 179      | 449.7 | 197      | 461.0 |
|              | 28.2        | 1815  | 34.1     | 2295  | 40.1     | 2780  | 46.0     | 3280  | 52.0     | 3750  | 57.9     | 3915  | 63.8     | 4020  |
| 1800         | 107         | 205.1 | 129      | 259.3 | 152      | 314.1 | 174      | 370.6 | 197      | 423.7 | 219      | 442.3 | 242      | 454.2 |
|              | 33.1        | 1805  | 40.2     | 2280  | 47.3     | 2765  | 54.4     | 3265  | 61.5     | 3730  | 68.6     | 3895  | 75.7     | 3995  |
| 2100         | 125         | 203.9 | 152      | 257.6 | 179      | 312.4 | 206      | 368.9 | 233      | 421.4 | 260      | 440.1 | 287      | 451.4 |
|              | 37.9        | 1755  | 46.2     | 2220  | 54.4     | 2690  | 62.8     | 3160  | 71.1     | 3610  | 79.3     | 3770  | 87.6     | 3865  |
| 2400         | 144         | 198.3 | 175      | 250.8 | 206      | 303.9 | 238      | 357.0 | 269      | 407.9 | 300      | 426.0 | 332      | 436.7 |
|              | 42.8        | 1705  | 52.3     | 2155  | 61.7     | 2615  | 71.2     | 3055  | 80.6     | 3490  | 90.1     | 3645  | 99.5     | 3740  |
|              | 162         | 192.6 | 198      | 243.5 | 234      | 295.5 | 269      | 345.2 | 305      | 394.3 | 341      | 411.8 | 377      | 422.6 |

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 specifications shown in this catalog without notice.

## PGP365 Pump Performance Data

| speed<br>rpm | output<br>input | Gear Widths |      |        |        |        |      |        |        |
|--------------|-----------------|-------------|------|--------|--------|--------|------|--------|--------|
|              |                 | 3/4"        | 1"   | 1-1/4" | 1-1/2" | 1-3/4" | 2"   | 2-1/4" | 2-1/2" |
| 900          | GPM             | 8.0         | 11.5 | 14.9   | 18.4   | 21.8   | 25.4 | 28.8   | 32.3   |
|              | LPM             | 30          | 44   | 57     | 70     | 83     | 96   | 109    | 122    |
|              | HP              | 24          | 31   | 39     | 47     | 55     | 63   | 66     | 67     |
|              | kW              | 18          | 23   | 29     | 35     | 41     | 47   | 49     | 50     |
| 1200         | GPM             | 11.5        | 16.2 | 20.8   | 25.5   | 30.0   | 34.7 | 39.3   | 44.0   |
|              | LPM             | 44          | 61   | 79     | 96     | 114    | 131  | 149    | 166    |
|              | HP              | 31          | 42   | 52     | 63     | 73     | 84   | 88     | 90     |
|              | kW              | 23          | 31   | 39     | 47     | 55     | 63   | 65     | 67     |
| 1500         | GPM             | 15.0        | 20.9 | 26.6   | 32.5   | 38.2   | 44.1 | 49.8   | 55.6   |
|              | LPM             | 57          | 79   | 101    | 123    | 145    | 167  | 188    | 211    |
|              | HP              | 39          | 52   | 66     | 79     | 92     | 105  | 110    | 112    |
|              | kW              | 29          | 39   | 49     | 59     | 68     | 78   | 82     | 84     |
| 1800         | GPM             | 18.5        | 25.6 | 32.5   | 39.5   | 46.4   | 53.4 | 60.3   | 67.3   |
|              | LPM             | 70          | 97   | 123    | 149    | 176    | 202  | 228    | 255    |
|              | HP              | 47          | 63   | 79     | 94     | 110    | 126  | 131    | 135    |
|              | kW              | 35          | 47   | 59     | 70     | 82     | 94   | 98     | 101    |
| 2100         | GPM             | 22.0        | 30.2 | 38.3   | 46.5   | 54.6   | 62.8 | 70.8   | 79.0   |
|              | LPM             | 83          | 114  | 145    | 176    | 207    | 238  | 268    | 299    |
|              | HP              | 55          | 73   | 92     | 110    | 128    | 147  | 153    | 157    |
|              | kW              | 41          | 55   | 68     | 82     | 96     | 110  | 114    | 117    |
| 2400         | GPM             | 25.6        | 34.9 | 44.2   | 53.5   | 62.8   | 72.1 | 81.4   | 90.7   |
|              | LPM             | 97          | 132  | 167    | 203    | 238    | 273  | 308    | 343    |
|              | HP              | 63          | 84   | 105    | 126    | 147    | 168  | 175    | 180    |
|              | kW              | 47          | 63   | 78     | 94     | 110    | 125  | 131    | 134    |

Performance data shown are the average results based on a series of laboratory tests of production units and are not necessarily representative of any one unit. Tests were run with the oil reservoir temperature at 120°F and viscosity 150 SUS at 100°F.

Note: Pump output flow is at the maximum rated pressure (see page 19). See Gear Width on page 11.

## PGM365 Motor Performance Data

| Speed<br>RPM | Gear Widths |       |          |       |          |       |          |       |          |       |          |       |          |       |
|--------------|-------------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
|              | 1"          |       | 1-1/4"   |       | 1-1/2"   |       | 1-3/4"   |       | 2"       |       | 2-1/4"   |       | 2-1/2"   |       |
|              | 3500 psi    |       | 3500 psi |       | 3500 psi |       | 3250 psi |       | 3000 psi |       | 2750 psi |       | 2500 psi |       |
| 900          | A           | B     | A        | B     | A        | B     | A        | B     | A        | B     | A        | B     | A        | B     |
|              | 13.4        | 1320  | 16.0     | 1670  | 18.6     | 2025  | 21.2     | 2225  | 23.8     | 2350  | 26.4     | 2425  | 28.9     | 2450  |
| 1200         | 51          | 149.1 | 61       | 188.7 | 70       | 228.8 | 80       | 251.4 | 90       | 265.5 | 100      | 274.0 | 110      | 276.8 |
|              | 16.9        | 1315  | 20.4     | 1660  | 23.8     | 2015  | 27.2     | 2215  | 30.6     | 2340  | 34.0     | 2410  | 37.4     | 2435  |
| 1500         | 64          | 148.6 | 77       | 187.6 | 90       | 227.7 | 103      | 250.3 | 116      | 264.4 | 129      | 272.3 | 142      | 275.1 |
|              | 20.5        | 1300  | 24.7     | 1640  | 28.9     | 1990  | 33.2     | 2195  | 37.4     | 2315  | 41.7     | 2385  | 45.9     | 2410  |
| 1800         | 77          | 146.9 | 93       | 185.3 | 110      | 224.8 | 126      | 248.0 | 142      | 261.6 | 158      | 269.5 | 174      | 272.3 |
|              | 24.0        | 1295  | 29.0     | 1635  | 34.1     | 1980  | 39.2     | 2180  | 44.2     | 2300  | 49.3     | 2375  | 54.4     | 2395  |
| 2100         | 91          | 146.3 | 110      | 184.7 | 129      | 223.7 | 148      | 246.3 | 167      | 259.9 | 187      | 268.3 | 206      | 270.6 |
|              | 27.5        | 1285  | 33.4     | 1620  | 39.3     | 1965  | 45.2     | 2165  | 51.1     | 2285  | 57.0     | 2355  | 62.9     | 2380  |
| 2400         | 104         | 145.2 | 126      | 183.0 | 149      | 222.0 | 171      | 244.6 | 193      | 258.2 | 216      | 266.1 | 238      | 268.9 |
|              | 31.0        | 1265  | 37.7     | 1600  | 44.4     | 1940  | 51.2     | 2135  | 57.9     | 2255  | 64.6     | 2325  | 71.3     | 2350  |
|              | 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 specifications shown in this catalog without notice.

## Special Assemblies for Gear Pumps and Motors

### Available for Additional Charge

### Contact Product Support for more information.

We became the market leading manufacturer of hydraulic gear pumps for mobile equipment by anticipating customer needs and developing engineered solutions to meet them. While we offer a broad range of standard gear pumps and motors for most applications, we recognize that standard equipment may not always be the best solution. We are always ready and able to discuss special applications and provide practical, cost-effective, well-engineered solutions to your special hydraulic system needs. Here are a few examples of our engineering and manufacturing skills.

#### PGP/PGM315 Series - Special Assemblies

- PGP/PGM315 gears with various drive shafts
- PGP315 port end cover with built-in relief valve  
Tandem use only - no inlet port available
- PGP315 port end cover with side ports  
up to 1-1/2" S.F. inlet
- PGP315 port end cover with integral priority valve  
Built-in relief valve on primary circuit
- Clutch pump mount model available

#### PGP/PGM330 Series - Special Assemblies

- PGP330 dual outlet pump bearing carrier that will accept a 2-1/2" S.F. inlet port
- PGP/PGM330 gears with optional number of gear teeth (10 tooth gears are standard; 13 tooth gears are optional)
- PGP/PGM330 gears with various drive shafts and gear widths
- PGP330/PGP315 piggyback
- PGP330 port end cover with side ports  
up to 2" S.F. inlet
- Narrow PGP330 dual rotation port end cover that accepts side and/or rear ports
- Narrow PGP330 port end cover that accepts side and/or rear ports
- PGP330 port end cover accepts rear threaded ports
- PGP330 port end cover with integral priority valve  
No relief valve on primary circuit
- PGP330 pad mount shaft end cover with two drive shafts
- PGP330 SAE "B" 2 bolt short shaft end cover
- FD330 flow divider assemblies

#### PGP/PGM350 Series - Special Assemblies

- PGP/PGM350 gears with optional number of gear teeth (10 tooth gears are standard; 13 tooth gears are optional)
- PGP/PGM350 gears with various drive shafts and gear widths
- PGP350/PGP315 piggyback
- PGP350 add-a-pump port end cover with the ability to mount any pump that has an SAE "A" or "B" 2 bolt mounting flange and SAE "A" or "B" splined drive shaft
- PGP350 port end cover that is shorter and narrower than standard P350 PEC. Accepts 1-1/2" diameter beaded inlet tube
- PGP/PGM350 SAE "C" 4 bolt, ductile iron shaft end cover
- PGP/PGM350 SAE "B" 2 bolt short shaft end cover
- FD350 flow divider assemblies
- Double tapered bearing
- Pad mount

#### PGP/PGM365 Series - Special Assemblies

- P365 bearing carriers with special porting arrangements accept 3" S.F. inlet ports
- PGP/PGM365 gears with various drive shafts and gear widths
- PGP365/PGP330 piggyback
- PGP365 add-a-pump port end cover with the ability to mount any pump that has an SAE "A" or "B" 2 bolt mounting flange and SAE "A" or "B" splined drive shaft
- PGM365 SAE "C" 4 bolt, compacted graphite shaft end cover
- FD365 flow divider assemblies

