

## Gear Pumps / Motors

Series PGP / PGM  
Fixed Displacement Pumps,  
Cast-Iron and Aluminium Designs

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
**hydraulics**  
pneumatics  
process control  
sealing & shielding



ENGINEERING YOUR SUCCESS.

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 **WARNING**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

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The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

**Offer of Sale**

Please contact your Parker representation for a detailed "Offer of Sale".

PGP 500 pumps offer superior performance, high efficiency and low noise operation at high operating pressures. They are produced in four frame sizes (PGP 502, PGP 505, PGP 511, PGP 517) with displacements ranging from 0.8 to 70 cm<sup>3</sup>/rev. A wide variety of standard options is available to meet specific application requirements.



**Characteristics**

- **Up to 280 bar continuous operation**  
High strength materials and large journal diameters provide low bearing loads for high pressure operation.
- **Low noise**  
PGP 502 - 9 tooth gear profile, PGP 505 and 517 - 13 tooth gear profile, PGP 511 - 12 tooth gear profile and optimized flow metering provide reduced pressure pulsation and exceptionally quiet operation (PGP511 also available as noise reduced “stealth” version).

- **High efficiency**  
Pressure balanced bearing blocks assure maximum efficiency under all operating conditions.
- **Application flexibility**  
International mounts and connections, integrated valve capabilities and common inlet multiple pump configurations provide unmatched design and application versatility.
- **Large range of integrated valves**

**Technical data**

|                      |  |
|----------------------|--|
| Pump type            | Heavy-duty, aluminium, external gear.  |
| Mounting             | SAE, rectangular, thru-bolt standard specials on request.  |
| Ports                | SAE and metric split flanges and others  |
| Shaft style          | SAE splined, keyed, tapered, cylindrical tang drive, specials on request.  |
| Speed                | 500 - 5000 rpm, see Technical Data   |
| Theor. displacement  | See Technical Data   |
| Drive                | Drive direct with flexible coupling is recommended.  |
| Axial / Radial load  | Units subject to axial or radial loads must be specified with an outboard bearing.   |
| Inlet pressure       | Operating range 0.8 to 2 bar abs. Min. inlet pressure 0.5 bar abs. Short time without load. Consultation is recommended.   |
| Outlet pressure      | See Technical Data   |
| Pressure rising rate | Max. 3000 bar/s  |
| Flow velocity        | See Nomograph for Pipe Velocity  |
| Hydraulic fluids     | Hydraulic oil HLP, DIN 51524-2   |
| Fluid temperature    | Range of operating temperature -15 to +80 °C.<br>Max. permissible operating pressure dependent on fluid temperature.<br>Temperature for cold start -20 to -15 °C at speed ≤ 1500 rpm.<br>Max. permissible operating pressure dependent on fluid temperature. |

|  |   |
|--|---|
| Fluid viscosity                                    | Range of operating viscosity<br>8 to 1000 mm <sup>2</sup> /s (511 & 517)<br>20 to 1000 mm <sup>2</sup> /s (502 & 505)<br>Max. permissible operating pressure dependent on viscosity.<br>Viscosity range for cold start<br>1000 to 2000 mm <sup>2</sup> /s at operating pressure p≤10 bar and speed n≤1500 rpm.  |
| Range of ambient temperature                       | -40 °C to +70 °C  |
| Filtration   | According to ISO 4406 Cl. 18/16/13  |
| Direction of rotation (looking at the drive shaft) | Clockwise, counter-clockwise or double. Attention! Drive pump only in indicated direction of rotation.  |
| Multiple pump assemblies                           | <ul style="list-style-type: none"> <li>• Available in two or three section configuration.</li> <li>• Max. shaft load must be conform to the limitations shown in the shaft loading rating table in this catalogue.</li> <li>• Max. load is determined by adding the torque values for each pumping section that will be simultaneously loaded.</li> </ul> |
| Separate or common inlet capability                | Separate inlet configuration:<br><ul style="list-style-type: none"> <li>• Each gear housing has individual inlet and outlet ports.</li> </ul> Common inlet configuration:<br><ul style="list-style-type: none"> <li>• Two gear sets share a common inlet.</li> </ul>  |

PI PGP-PGM UK.PMD RH





**Gear design**

**Type**

**Unit**

**Dis-  
placement**

**Rotation**

**Shaft**

**Flange**

**Shaft seal**

**Inlet side ports option**

**Outlet**

**No rear ports**  
(rear ports on request)

| Code | Type |
|------|------|
| P    | Pump |

| Code | Unit          |
|------|---------------|
|      | Pump          |
| A    | Single unit   |
| B    | Multiple unit |

| Displacement |     |
|--------------|-----|
| Code         | ccm |
| 0008         | 0.8 |
| 0012         | 1.2 |
| 0016         | 1.6 |
| 0021         | 2.1 |
| 0025         | 2.5 |
| 0033         | 3.3 |
| 0036         | 3.6 |
| 0043         | 4.3 |
| 0048         | 4.8 |
| 0058         | 5.8 |
| 0062         | 6.2 |
| 0079         | 7.9 |

| Code | Rotation          |
|------|-------------------|
| C    | Clockwise         |
| A    | Counter-clockwise |

| Code             | Shaft                                     |
|------------------|---|
| H1 <sup>2)</sup> | Ø10, 3.0 key, no thread, 36L, parallel    |
| P2 <sup>3)</sup> | Ø9.35, 8.8L, 2.4 key, M6, taper 1:8       |
| V1 <sup>4)</sup> | 5x6.5 long shaft w/o coupling tang drive  |
| V2 <sup>5)</sup> | 5x4.5 short shaft w/o coupling tang drive |

| Code | Port options   |
|------|--|
| E3E2 | 1/2" - 14 BSP thread/<br>3/8" - 19 BSP thread                            |
| J4J3 | Ø12 mm - Ø30 mm - M6 square flange/<br>Ø8 mm - Ø30 mm - M6 square flange |

Example: E3 = inlet port  
 E2 = outlet port

| Code | Shaft seal |
|------|------------|
| X    | No seal    |
| N    | NBR        |

| Code | Flange  |
|------|---|
| D1   | 52.2x72.0 - Ø25.4 rectangular                             |
| H1   | 82.5 - Ø50.8 SAE "A-A" 2 bolt flange                      |
| P3   | 40.0x40.0 - Ø32.0 w/ seal, thrubolt flange                |
| P4   | 40.0x40.0 - Ø32.0 w/ seal f. short shaft, thrubolt flange |

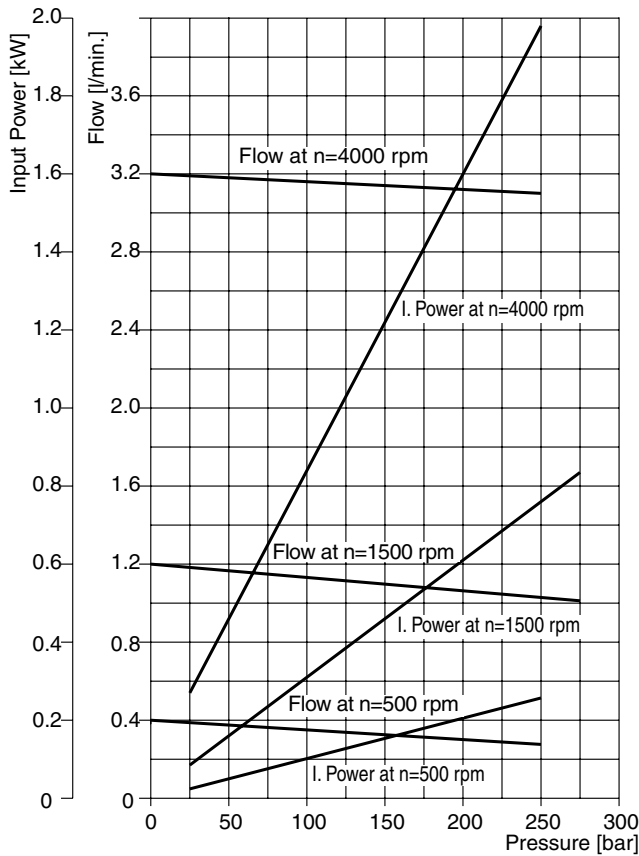
<sup>2)</sup> Only used with flange H1, D1.

<sup>3)</sup> Only used with flange D1.

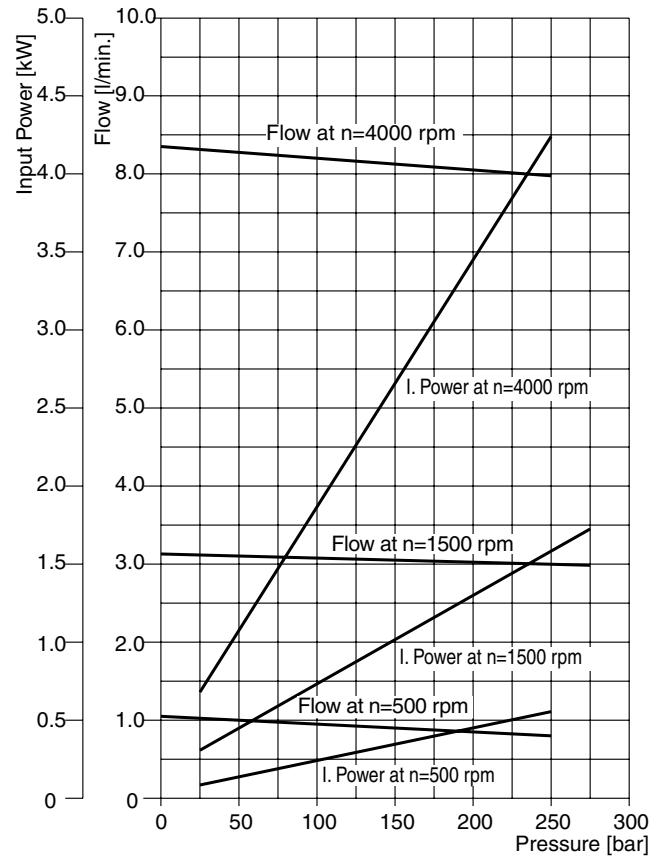
<sup>4)</sup> Only used with flange H1.

<sup>5)</sup> Only used with flange P3, P4.

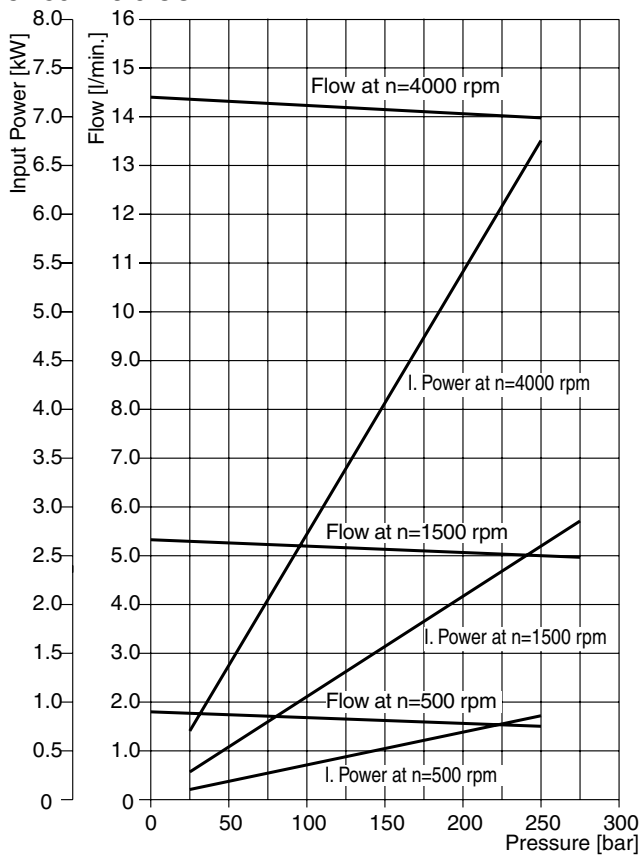
**PGP502 - 0.8 CC**



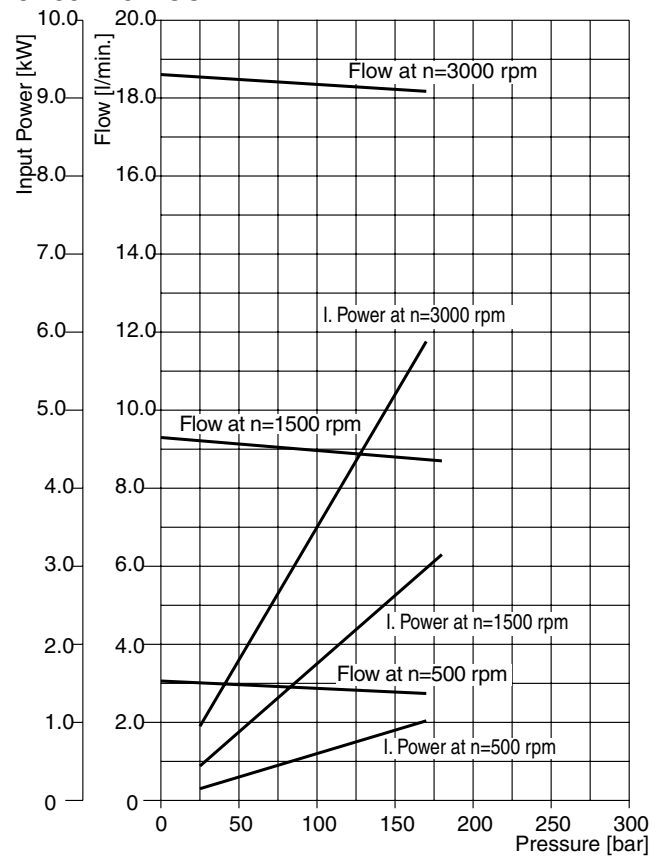
**PGP502 - 2.1 CC**



**PGP502 - 3.6 CC**



**PGP502 - 6.2 CC**



PI PGP-PGM UK.PMD RH

Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm<sup>2</sup>/s ;

Inlet pressure: 0.9 + 0.1 bar absolute

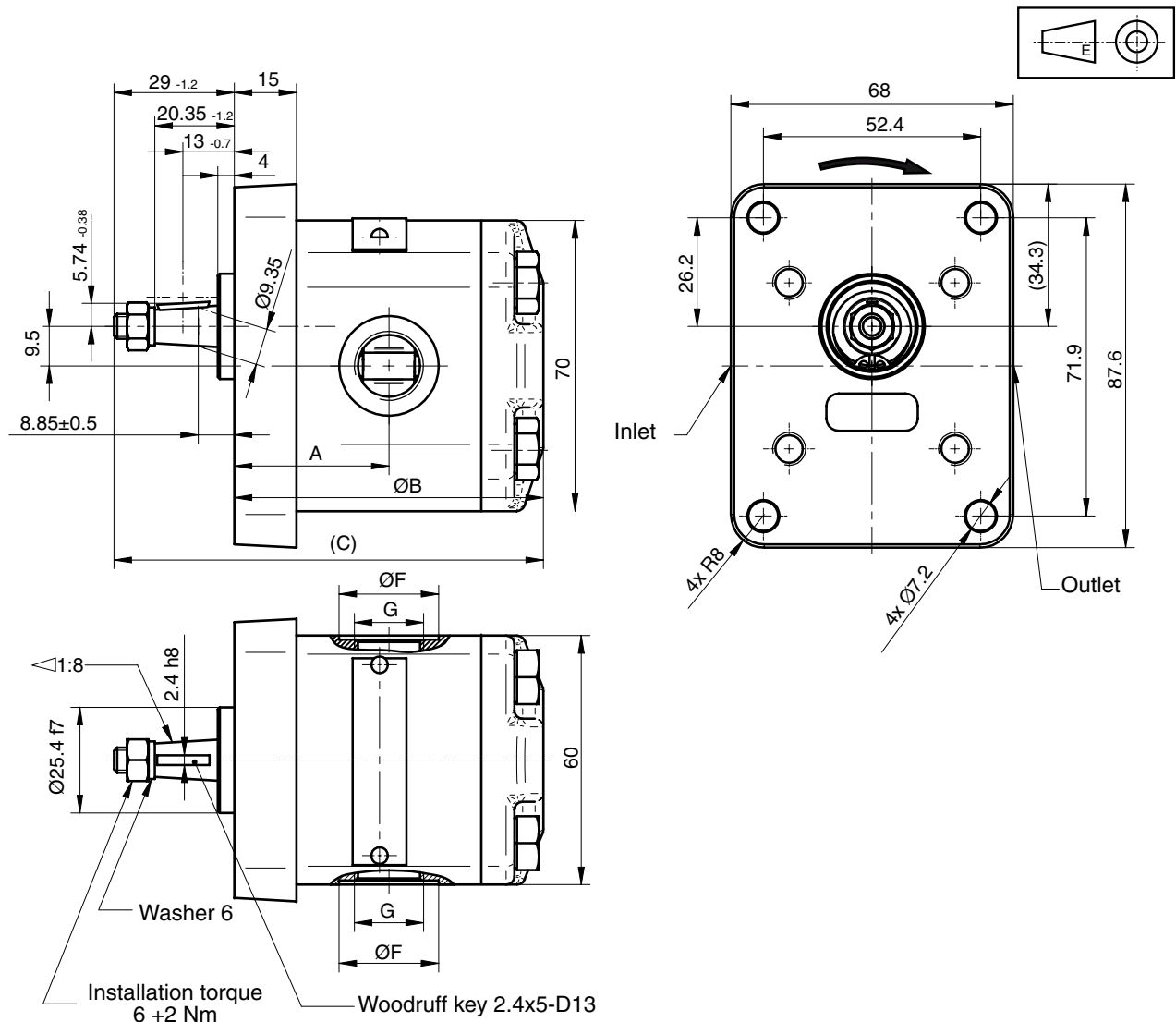


**PGP502 A XXXX Y P2 D1 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement<br>XXXX | cm <sup>3</sup> /rev | Dimension |         |         | Inlet port |         |         | Outlet port |         |         | Speed of rotation |             | Working pressure<br>max.<br>bar | Order number<br>direction of rotation |                       |
|----------------------|----------------------|-----------|---------|---------|------------|---------|---------|-------------|---------|---------|-------------------|-------------|---------------------------------|---------------------------------------|-----------------------|
|                      |                      | A<br>mm   | B<br>mm | C<br>mm | SS         | G<br>mm | F<br>mm | PP          | G<br>mm | F<br>mm | min.<br>rpm       | max.<br>rpm |                                 | clockwise                             | counter-<br>clockwise |
| 0008                 | 0.8                  | 32.6      | 65.3    | 94.0    | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 5000        | 280                             | 330 9111 346                          | 330 9112 233          |
| 0012                 | 1.2                  | 33.4      | 66.8    | 96.0    | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 5000        | 280                             | 330 9111 347                          | 330 9112 234          |
| 0016                 | 1.6                  | 34.1      | 68.3    | 97.5    | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 5000        | 280                             | 330 9111 348                          | 330 9112 235          |
| 0021                 | 2.1                  | 34.9      | 69.9    | 99.0    | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 4500        | 280                             | 330 9111 349                          |                       |
| 0025                 | 2.5                  | 35.7      | 71.5    | 100.5   | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 4500        | 280                             | 330 9111 350                          | 330 9112 236          |
| 0033                 | 3.3                  | 37.2      | 74.5    | 103.5   | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 4000        | 280                             | 330 9111 351                          | 330 9112 237          |
| 0036                 | 3.6                  | 37.8      | 75.6    | 104.5   | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 4000        | 260                             | 330 9111 352                          | 330 9112 238          |
| 0043                 | 4.3                  | 39.2      | 78.5    | 107.5   | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 4000        | 250                             | 330 9111 353                          |                       |
| 0048                 | 4.8                  | 40.0      | 80.0    | 109.0   | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 3800        | 230                             | 330 9111 354                          | 330 9112 239          |
| 0058                 | 5.8                  | 41.9      | 83.8    | 113.0   | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 3800        | 200                             | 330 9111 355                          | 330 9112 240          |
| 0062                 | 6.2                  | 42.6      | 85.3    | 114.5   | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 3500        | 180                             | 330 9111 356                          | 330 9112 241          |
| 0079                 | 7.9                  | 45.8      | 91.6    | 121.0   | E3         | G 1/2"  | 33      | E2          | G 3/8"  | 24      | 500               | 3000        | 160                             | 330 9111 357                          |                       |

**Dimensions (clockwise rotation shown)**





**PG**  
 Gear design

**Type**

**505**

**Unit**

**Displacement**

**Rotation**

**Shaft**

**Flange**

**Shaft seal**

**Inlet side ports**

**Outlet side ports option**

**B 1 B 1**

**No rear ports**  
 (rear ports on request)

| Code | Type |
|------|------|
| P    | Pump |

| Code | Unit Pump               |
|------|-------------------------|
| A    | Single unit             |
| M    | Single distributor unit |
| B    | Multiple unit           |

| Displacement |      |
|--------------|------|
| Code         | ccm  |
| 0030         | 3.0  |
| 0040         | 4.0  |
| 0060         | 6.0  |
| 0080         | 8.0  |
| 0100         | 10.0 |
| 0120         | 12.0 |

| Code | Rotation          |
|------|-------------------|
| C    | Clockwise         |
| A    | Counter-clockwise |

| Code             | Shaft  |
|------------------|--|
| A1 <sup>2)</sup> | 9T, 16/32DP, 32L, SAE "A" spline                   |
| J1 <sup>2)</sup> | Ø12.7, 3.2 key, no thread, 38L, parallel           |
| K1 <sup>3)</sup> | Ø15.88, 4.0 key, no thread, 32L, SAE "A", parallel |
| Q2 <sup>4)</sup> | Ø14.25, 5.5L, 3.0key, M10x1, taper 1:8             |

| Code | Port options  |
|------|---|
| E5E3 | 3/4" - 14 BSP thread/<br>1/2" - 14 BSP thread                             |
| J7J5 | Ø20 mm - Ø40 mm - M6 square flange/<br>Ø15 mm - Ø35 mm - M6 square flange |

Example: J7 = inlet port  
 J5 = outlet port

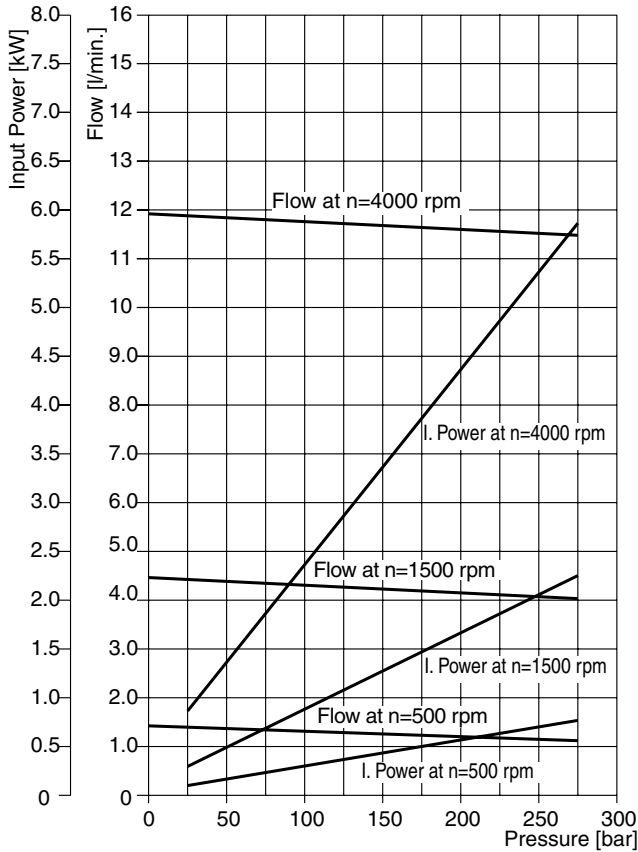
| Code | Shaft seal |
|------|------------|
| X    | No seal    |
| N    | NBR        |

| Code             | Flange                               |
|------------------|--------------------------------------|
| D2 <sup>5)</sup> | 56.0x73.0 - Ø30.0 rectangular        |
| H1               | 82.5 - Ø50.8 SAE "A-A" 2 bolt flange |
| H2 <sup>6)</sup> | 106.4 - Ø82.55 SAE "A" 2 bolt flange |

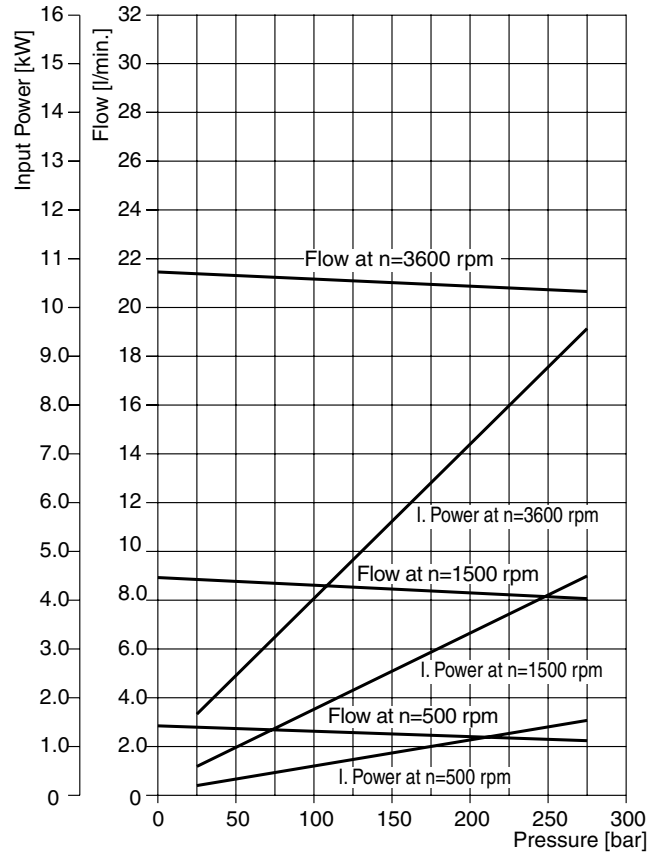
<sup>5)</sup> Only used with ports J\*J\*.  
<sup>6)</sup> Only used with ports E\*E\*.

<sup>2)</sup> Only used with flange H1, H2.  
<sup>3)</sup> Only used with flange H2.  
<sup>4)</sup> Only used with flange D2.

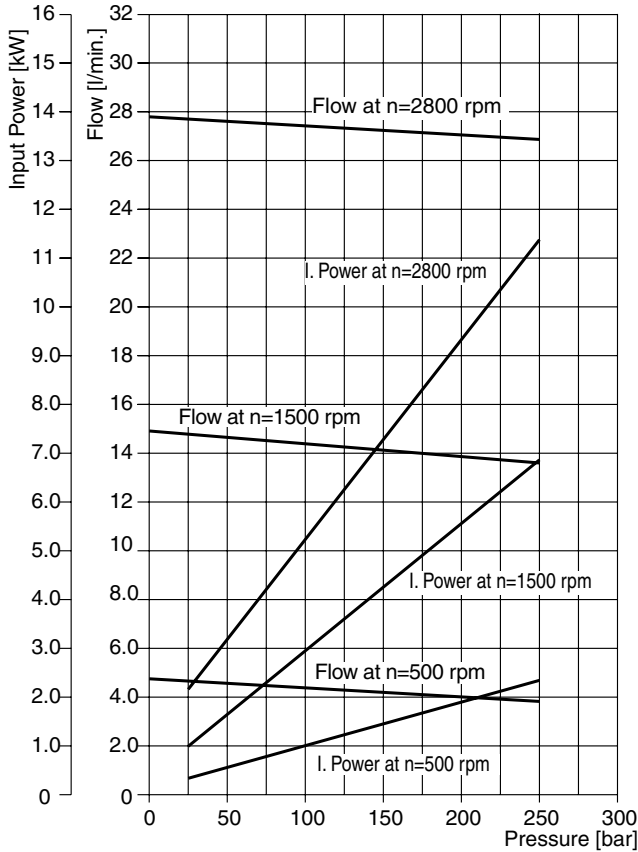
**PGP505 - 3.0 CC**



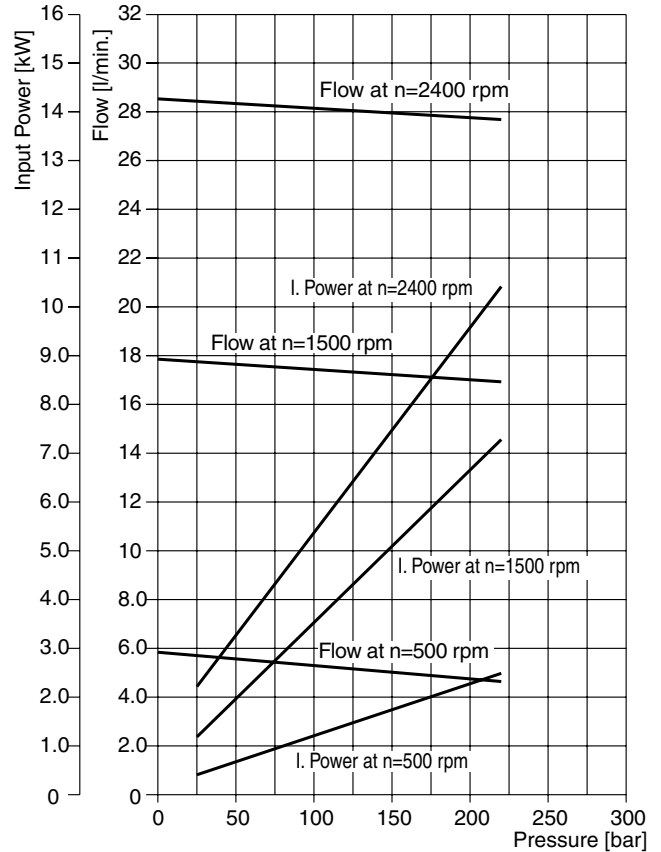
**PGP505 - 6.0 CC**



**PGP505 - 10.0 CC**



**PGP505 - 12.0 CC**



PI PGP-PGM UK.PMD RH

Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm<sup>2</sup>/s ;

Inlet pressure: 0.9 + 0.1 bar absolute



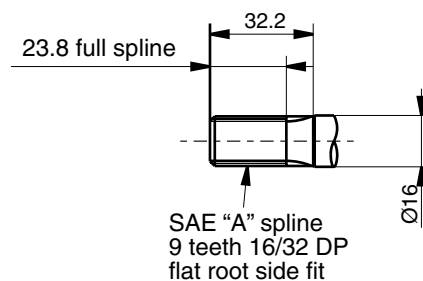
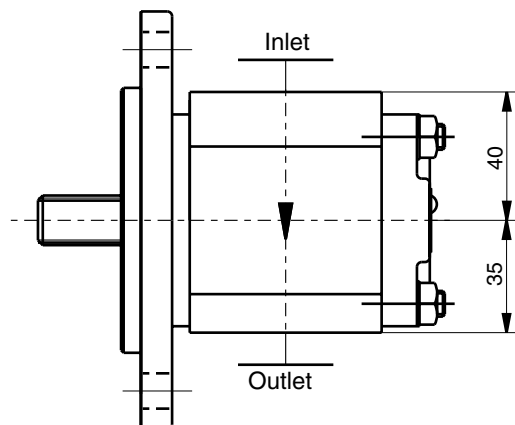
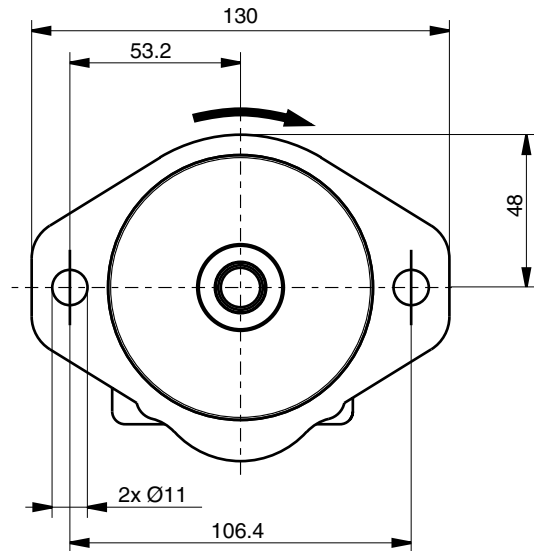
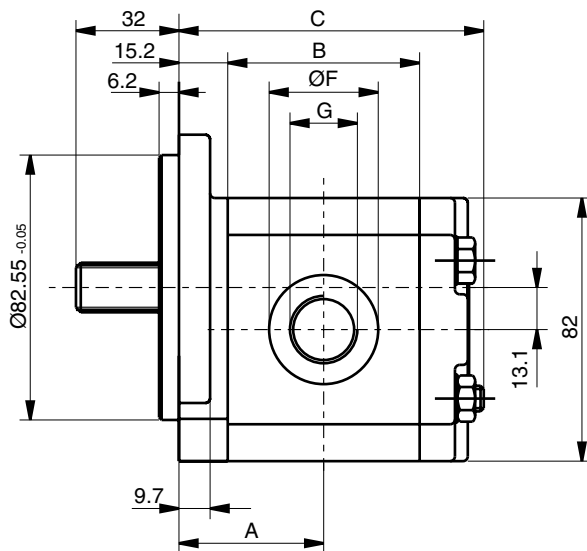
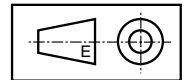


**PGP505 A XXXX Y A1 H2 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement<br>XXXX | cm <sup>3</sup> /rev | Dimension |      |       | Inlet port |                |      | Outlet port |                |      | Speed of rotation |          | Working pressure<br>max. bar | Order number<br>direction of rotation |                   |
|----------------------|----------------------|-----------|------|-------|------------|----------------|------|-------------|----------------|------|-------------------|----------|------------------------------|---------------------------------------|-------------------|
|                      |                      | A         | B    | C     | SS         | G              | F    | PP          | G              | F    | min. rpm          | max. rpm |                              | clockwise                             | counter-clockwise |
| 0030                 | 3.0                  | 35.9      | 41.1 | 79.8  | E5         | 3/4"-14<br>BSP | 42.0 | E3          | 1/2"-14<br>BSP | 34.0 | 500               | 4000     | 275                          | 331 9111 385                          |                   |
| 0040                 | 4.0                  | 37.2      | 43.8 | 79.8  | E5         | 3/4"-14<br>BSP | 42.0 | E3          | 1/2"-14<br>BSP | 34.0 | 500               | 4000     | 275                          | 331 9111 386                          |                   |
| 0060                 | 6.0                  | 39.8      | 49.1 | 84.8  | E5         | 3/4"-14<br>BSP | 42.0 | E3          | 1/2"-14<br>BSP | 34.0 | 500               | 3600     | 275                          | 331 9111 387                          |                   |
| 0080                 | 8.0                  | 42.5      | 54.5 | 89.8  | E5         | 3/4"-14<br>BSP | 42.0 | E3          | 1/2"-14<br>BSP | 34.0 | 500               | 3000     | 275                          | 331 9111 383                          | 331 9112 136      |
| 0100                 | 10.0                 | 45.2      | 59.8 | 100.8 | E5         | 3/4"-14<br>BSP | 42.0 | E3          | 1/2"-14<br>BSP | 34.0 | 500               | 2800     | 250                          | 331 9111 388                          |                   |
| 0120                 | 12.0                 | 47.9      | 65.2 | 104.8 | E5         | 3/4"-14<br>BSP | 42.0 | E3          | 1/2"-14<br>BSP | 34.0 | 500               | 2400     | 220                          | 331 9111 389                          |                   |

**Dimensions (clockwise rotation shown)**

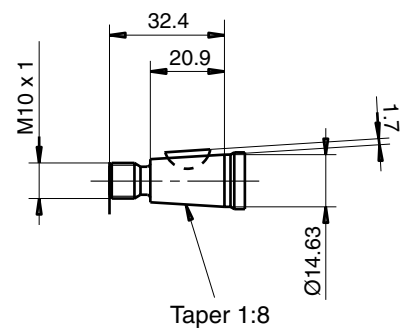
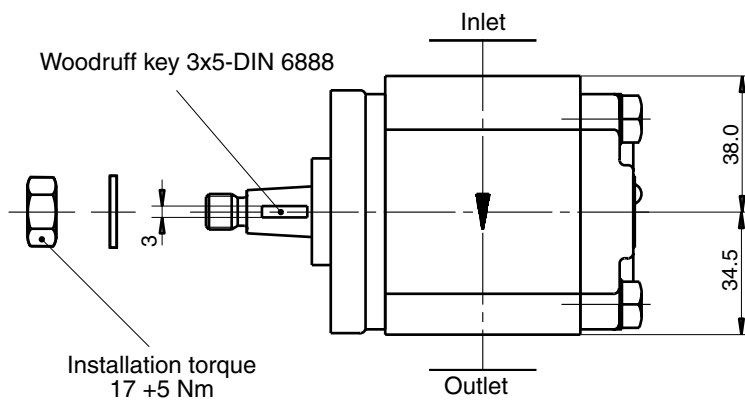
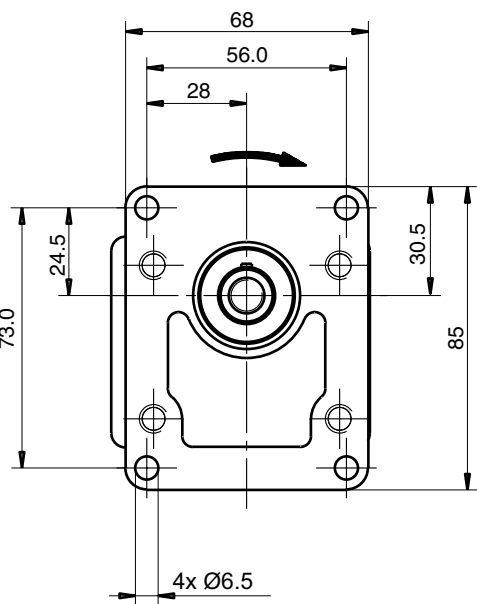
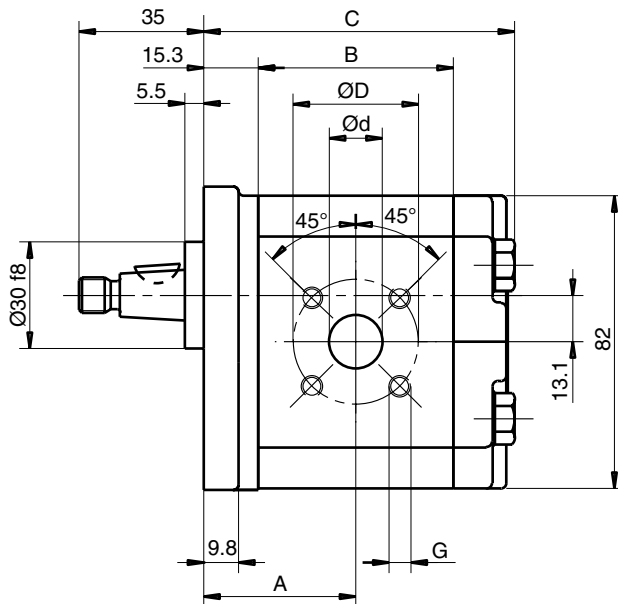
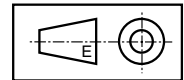


**PGP505 A XXXX Y Q2 D2 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement |                      | Dimension |      |      | Inlet port |      |      | Outlet port |    |      | Speed of rotation |    | Working pressure | Order number direction of rotation |          |              |                   |
|--------------|----------------------|-----------|------|------|------------|------|------|-------------|----|------|-------------------|----|------------------|------------------------------------|----------|--------------|-------------------|
| XXXX         | cm <sup>3</sup> /rev | A         | B    | C    | SS         | d    | D    | G           | PP | d    | D                 | G  | min. rpm         | max. rpm                           | max. bar | clockwise    | counter-clockwise |
| 0030         | 3.0                  | 35.9      | 41.1 | 74.3 | J7         | 20.0 | 40.0 | M6          | J5 | 15.0 | 35.0              | M6 | 500              | 4000                               | 275      | 331 9111 334 |                   |
| 0040         | 4.0                  | 37.2      | 43.8 | 76.4 | J7         | 20.0 | 40.0 | M6          | J5 | 15.0 | 35.0              | M6 | 500              | 4000                               | 275      | 331 9111 039 | 331 9112 061      |
| 0060         | 6.0                  | 39.8      | 49.1 | 81.7 | J7         | 20.0 | 40.0 | M6          | J5 | 15.0 | 35.0              | M6 | 500              | 3600                               | 275      | 331 9111 040 | 331 9112 077      |
| 0080         | 8.0                  | 42.5      | 54.5 | 87.1 | J7         | 20.0 | 40.0 | M6          | J5 | 15.0 | 35.0              | M6 | 500              | 3000                               | 275      | 331 9111 041 | 331 9112 078      |
| 0100         | 10.0                 | 45.2      | 59.8 | 92.4 | J7         | 20.0 | 40.0 | M6          | J5 | 15.0 | 35.0              | M6 | 500              | 2800                               | 250      | 331 9111 087 | 331 9112 033      |
| 0120         | 12.0                 | 47.9      | 65.2 | 97.8 | J7         | 20.0 | 40.0 | M6          | J5 | 15.0 | 35.0              | M6 | 500              | 2400                               | 220      | 331 9111 246 | 331 9112 135      |

**Dimensions (clockwise rotation shown)**



|           |  |            |  |  |  |  |  |  |  |  |          |          |          |          |               |
|-----------|--|------------|--|--|--|--|--|--|--|--|----------|----------|----------|----------|---------------|
| <b>PG</b> |  | <b>511</b> |  |  |  |  |  |  |  |  | <b>B</b> | <b>1</b> | <b>B</b> | <b>1</b> | <sup>1)</sup> |
|-----------|--|------------|--|--|--|--|--|--|--|--|----------|----------|----------|----------|---------------|

**Gear design**    **Type**    **Unit**    **Displacement**    **Rotation**    **Shaft**    **Flange**    **Shaft seal**    **Inlet side ports option**    **Outlet**    **No rear ports** (rear ports on request)

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

| Code | Unit                    |   |
|------|-------------------------|---|
|      | Pump                    | Motor   |
| A    | Single unit             | Standard motor with drain port                    |
| M    | Single distributor unit | —   |
| B    | Multiple unit           | Standard motor w. two checks                      |
| C    | —                       | Standard motor w. one anti-cavitation check (ACC) |

| Displacement |      |
|--------------|------|
| Code         | ccm  |
| 0040         | 4.0  |
| 0060         | 6.0  |
| 0080         | 8.0  |
| 0100         | 10.0 |
| 0110         | 11.0 |
| 0140         | 14.0 |
| 0160         | 16.0 |
| 0190         | 19.0 |
| 0230         | 23.0 |
| 0270         | 27.0 |
| 0310         | 31.0 |
| 0330         | 33.0 |

| Code | Rotation          |
|------|-------------------|
| C    | Clockwise         |
| A    | Counter-clockwise |
| B    | Bi-directional    |

| Code             | Shaft   |
|------------------|---|
| A1 <sup>2)</sup> | 9T, 16/32DP, 32L, SAE "A" spline                    |
| C1 <sup>3)</sup> | 11T, 16/32DP, 38.2L, SAE 19-4 spline                |
| F1 <sup>4)</sup> | 9T, B17x14, 23L, DIN 5482 spline                    |
| K1 <sup>2)</sup> | Ø15.88, 4.0 key, no thread, 32L, SAE "A", parallel  |
| L6 <sup>2)</sup> | Ø19.05, 4.8 key, no thread, 32L, SAE 19-1, parallel |
| S1 <sup>4)</sup> | Ø17.0, 7.7L, 3.0 key, M12x1.5, taper 1:5            |
| S2 <sup>5)</sup> | Ø16.65, 12.0L, 3.2 key, M12x1.5, taper 1:8          |
| S4 <sup>5)</sup> | Ø16.65, 12.0L, 4.0 key, M12x1.5, taper 1:8          |

| Code | Shaft seal |
|------|------------|
| X    | No seal    |
| N    | NBR        |
| V    | FPM        |

| Code | Port options (Pumps)   |
|------|--|
| E5E3 | 3/4" - 14 BSP thread/<br>1/2" - 14 BSP thread<br>rec. from 4 ccm to 16 ccm                       |
| E6E5 | 1"-11 BSP thread/<br>3/4"-14 BSP thread<br>rec. from 14 ccm to 23 ccm                            |
| E7E5 | 1 1/4"-11 BSP thread/<br>3/4"-14 BSP thread<br>rec. from 27 ccm to 33 ccm                        |
| J7J5 | Ø20 mm-Ø40 mm-M6 square flange<br>Ø15 mm-Ø35 mm-M6 square flange<br>rec. from 4 ccm to 16 ccm    |
| J9J8 | Ø26 mm-Ø55 mm-M8 square flange<br>Ø18 mm-Ø55 mm-M8 square flange<br>rec. from 14 ccm to 33 ccm   |
| L1L1 | Ø13 mm-Ø30 mm-M6 diamond flange<br>Ø13 mm-Ø30 mm-M6 diamond flange<br>rec. from 4 ccm to 8 ccm   |
| L2L1 | Ø19 mm-Ø40 mm-M8 diamond flange<br>Ø13 mm-Ø30 mm-M6 diamond flange<br>rec. from 10 ccm to 16 ccm |
| L2L2 | Ø19 mm-Ø40 mm-M8 diamond flange<br>Ø19 mm-Ø40 mm-M8 diamond flange<br>rec. from 19 ccm to 33 ccm |

| Code | Port options (Motors)  |
|------|--|
| E3E3 | 1/2" - 14 BSP thread/<br>1/2" - 14 BSP thread<br>rec. from 4 ccm to 16 ccm                     |
| E5E5 | 3/4" - 14 BSP thread/<br>3/4" - 14 BSP thread<br>rec. from 14 ccm to 33 ccm                    |
| J5J5 | Ø15 mm-Ø35 mm-M6 square flange<br>Ø15 mm-Ø35 mm-M6 square flange<br>rec. from 4ccm to 16ccm    |
| J7J7 | Ø20 mm-Ø40 mm-M6 square flange<br>Ø20 mm-Ø40 mm-M6 square flange<br>rec. from 19 ccm to 33 ccm |

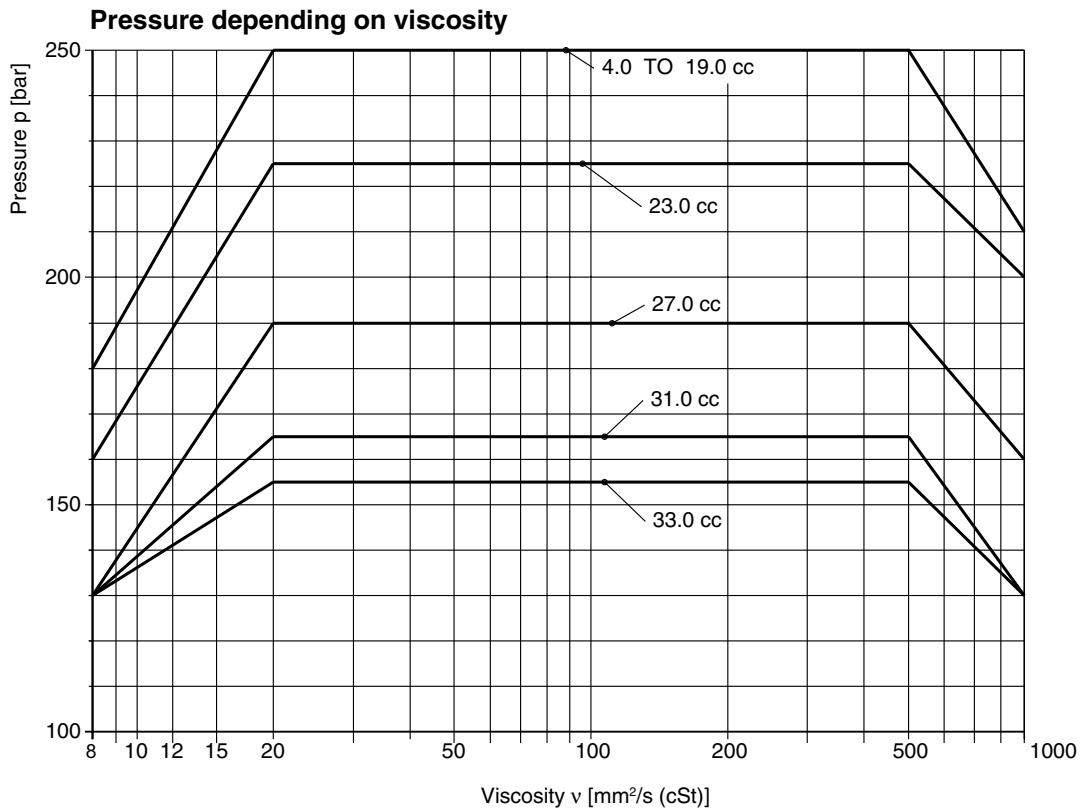
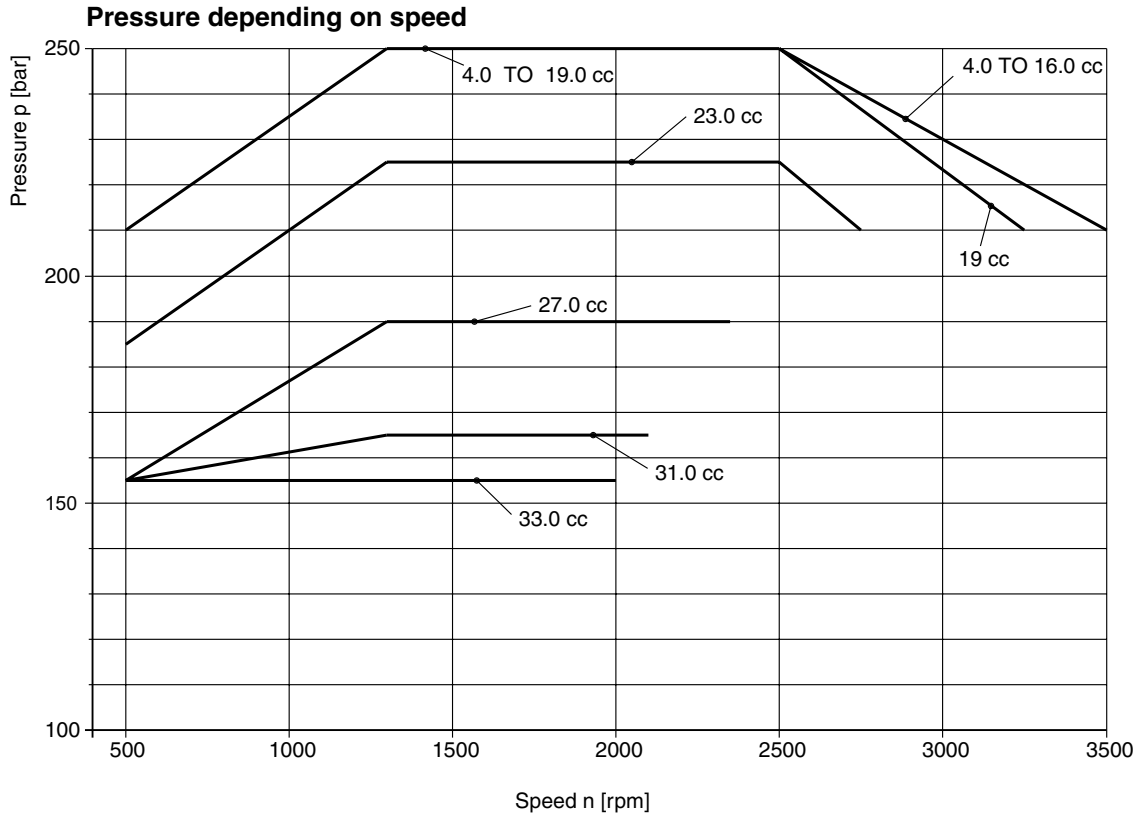
**Example:**    J7 = inlet port  
                  J5 = outlet port

| Code | Flange   |
|------|--|
| D3   | 71.4x96.0 - Ø36.47 rectangular                   |
| D4   | 72.0x100.0 - Ø80 rectangular                     |
| H2   | 106.4 - Ø82.55 SAE "A"<br>2 bolt flange          |
| H3   | 146.1 - Ø101.06 SAE "B"<br>2 bolt flange         |
| Q2   | 60.0x60.0 - Ø50.0 w. seal O',<br>thrubolt flange |
| Q4   | 60.0x60.0 - Ø50.0 w. seal O',<br>thrubolt flange |

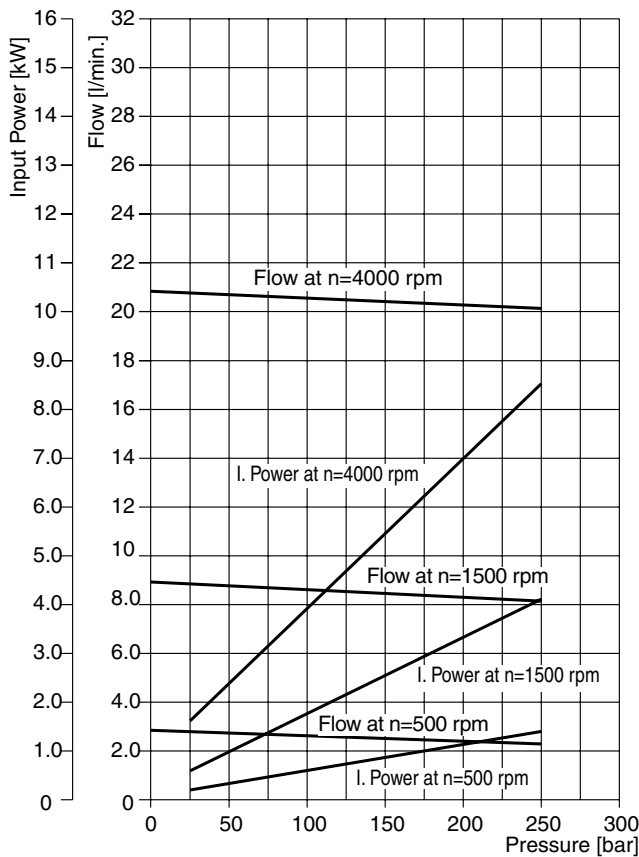
<sup>2)</sup> Only used with flange H2.  
<sup>3)</sup> Only used with flange H2, H3.  
<sup>4)</sup> Only used with flange D4, Q2, Q4.  
<sup>5)</sup> Only used with flange D3.

<sup>1)</sup> Code of drain line for PGM511 only.  
**2 Options:**  
G4 = 1/4-19 BSP rear drain.  
B1 = no drain, unit code must be "B" or "C".

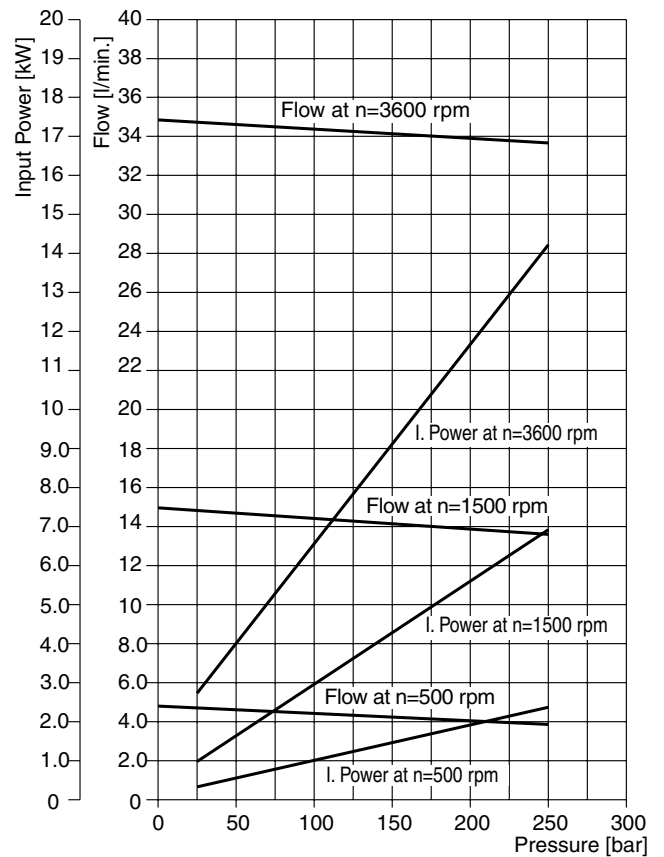




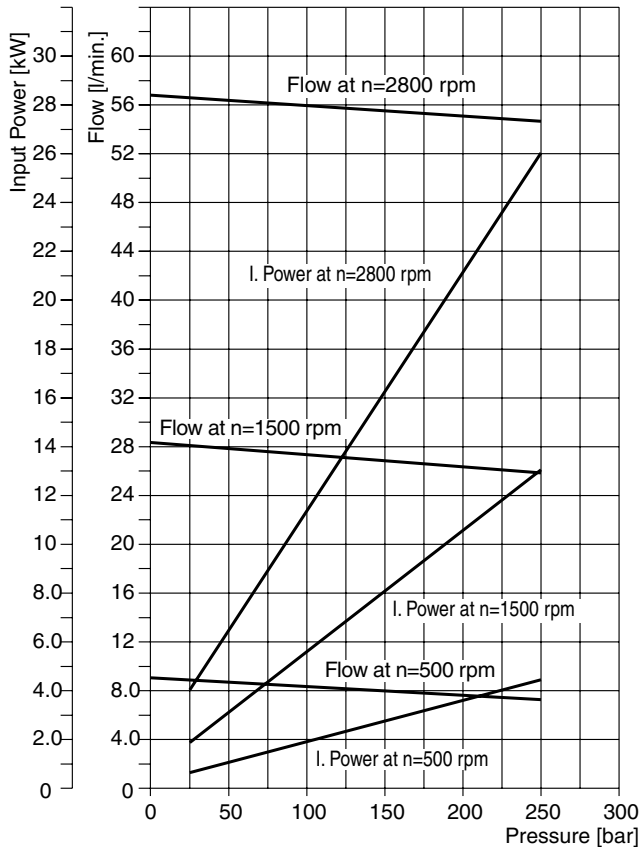
**PGP511 - 6.0 CC**



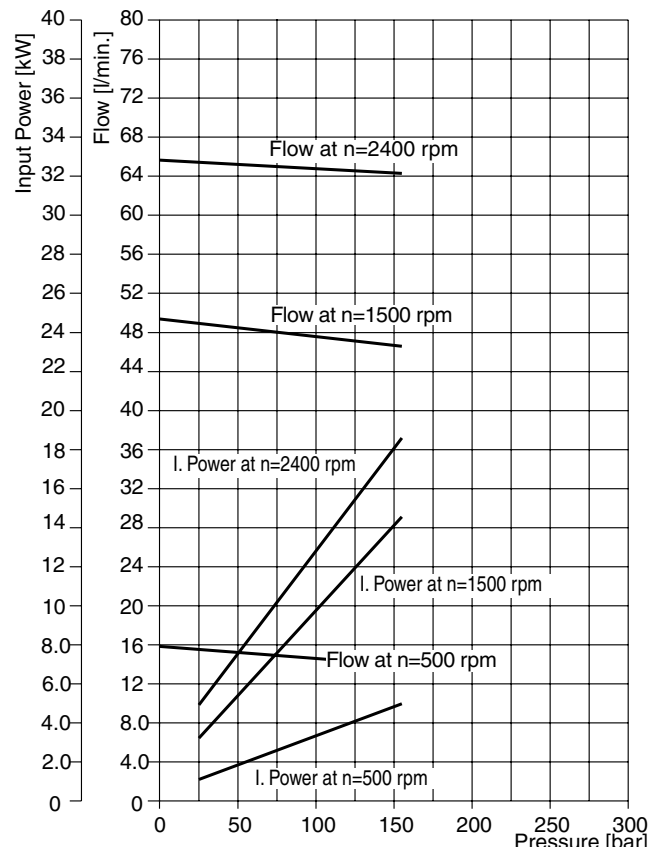
**PGP511 - 10.0 CC**



**PGP511 - 19.0 CC**



**PGP511 - 33.0 CC**



PI PGP-PGM UK.PMD RH

Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm<sup>2</sup>/s ;

Inlet pressure: 0.9 + 0.1 bar absolute

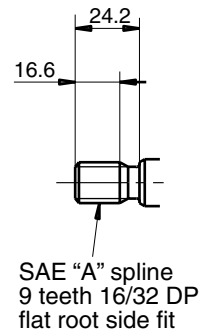
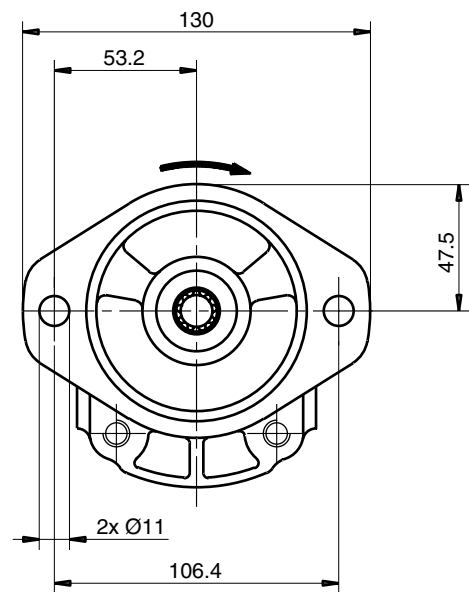
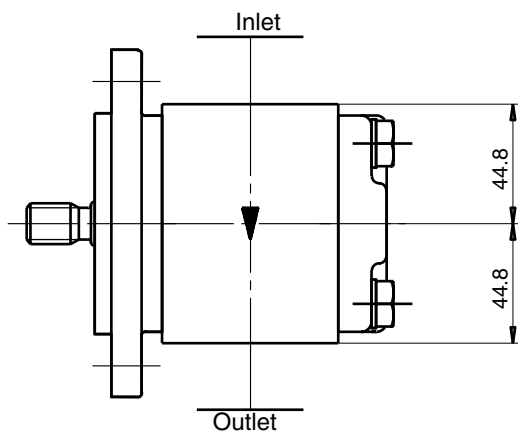
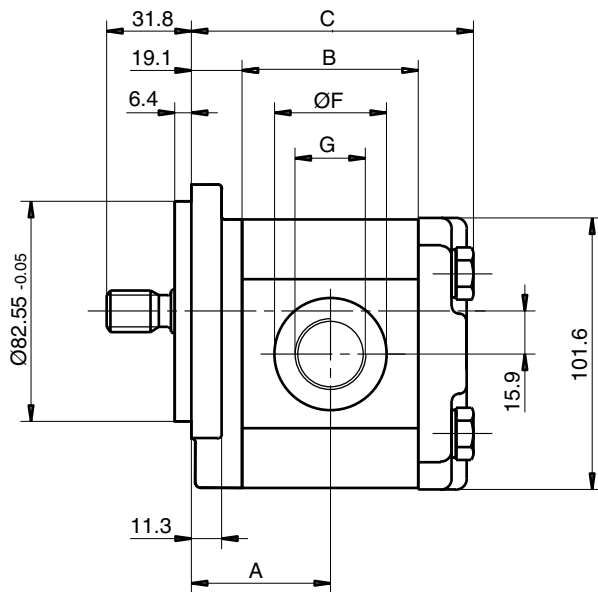
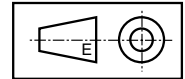


**PGP511 A XXXX Y A1 H2 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement |                      | Dimension |      |       | Inlet port |             |      | Outlet port |             |      | Speed of rotation |          | Working pressure<br>max. bar | Order number<br>direction of rotation |                   |
|--------------|----------------------|-----------|------|-------|------------|-------------|------|-------------|-------------|------|-------------------|----------|------------------------------|---------------------------------------|-------------------|
| XXXX         | cm <sup>3</sup> /rev | A         | B    | C     | SS         | G           | F    | PP          | G           | F    | min. rpm          | max. rpm |                              | clockwise                             | counter-clockwise |
| 0040         | 4.0                  | 42.6      | 47.0 | 86.7  | E5         | 3/4"-14 BSP | 42.0 | E3          | 1/2"-14 BSP | 34.0 | 500               | 3500     | 250                          |                                       |                   |
| 0060         | 6.0                  | 44.1      | 50.1 | 89.8  | E5         | 3/4"-14 BSP | 42.0 | E3          | 1/2"-14 BSP | 34.0 | 500               | 3500     | 250                          | 334 9111 044                          | 334 9112 621      |
| 0080         | 8.0                  | 45.7      | 53.3 | 93.0  | E5         | 3/4"-14 BSP | 42.0 | E3          | 1/2"-14 BSP | 34.0 | 500               | 3500     | 250                          | 334 9111 562                          | 334 9112 622      |
| 0100         | 10.0                 | 47.3      | 56.5 | 96.1  | E5         | 3/4"-14 BSP | 42.0 | E3          | 1/2"-14 BSP | 34.0 | 500               | 3500     | 250                          | 334 9111 130                          | 334 9112 628      |
| 0110         | 11.0                 | 48.1      | 58.0 | 97.7  | E5         | 3/4"-14 BSP | 42.0 | E3          | 1/2"-14 BSP | 34.0 | 500               | 3500     | 250                          | 334 9111 039                          | 334 9112 023      |
| 0140         | 14.0                 | 50.4      | 62.8 | 102.4 | E5         | 3/4"-14 BSP | 42.0 | E3          | 1/2"-14 BSP | 34.0 | 500               | 2700     | 250                          | 334 9111 563                          | 334 9112 623      |
| 0160         | 16.0                 | 52.0      | 65.9 | 105.6 | E6         | 1"-11 BSP   | 50.0 | E5          | 3/4"-14 BSP | 42.0 | 500               | 3500     | 250                          | 334 9111 092                          | 334 9112 060      |
| 0190         | 19.0                 | 54.4      | 70.6 | 110.3 | E6         | 1"-11 BSP   | 50.0 | E5          | 3/4"-14 BSP | 42.0 | 500               | 3200     | 250                          | 334 9111 193                          | 334 9112 624      |
| 0230         | 23.0                 | 57.5      | 76.9 | 116.6 | E6         | 1"-11 BSP   | 50.0 | E5          | 3/4"-14 BSP | 42.0 | 500               | 2700     | 210                          | 334 9111 564                          |                   |
| 0270         | 27.0                 | 60.7      | 83.2 | 122.9 | E6         | 1"-11 BSP   | 50.0 | E5          | 3/4"-14 BSP | 42.0 | 500               | 2300     | 180                          | 334 9111 942                          | 334 9112 494      |
| 0310         | 31.0                 | 63.8      | 89.5 | 129.2 | E6         | 1"-11 BSP   | 50.0 | E5          | 3/4"-14 BSP | 42.0 | 500               | 2000     | 160                          | 334 9111 207                          | 334 9112 229      |
| 0330         | 33.0                 | 65.4      | 92.6 | 132.3 | E6         | 1"-11 BSP   | 50.0 | E5          | 3/4"-14 BSP | 42.0 | 500               | 1800     | 150                          |                                       | 334 9112 773      |

**Dimensions (clockwise rotation shown)**

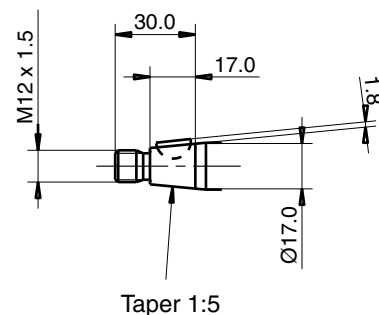
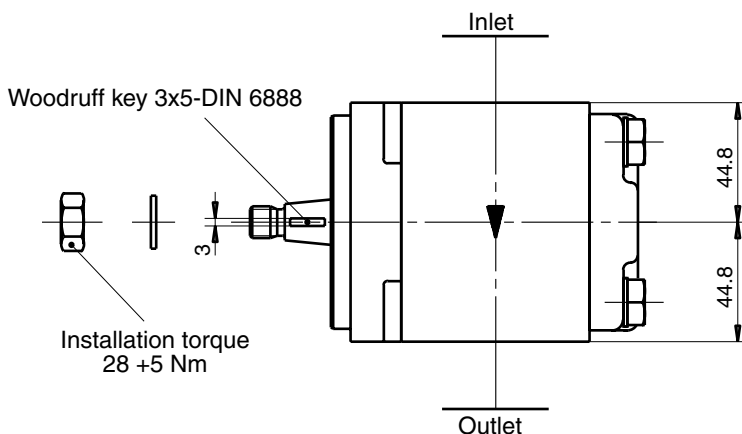
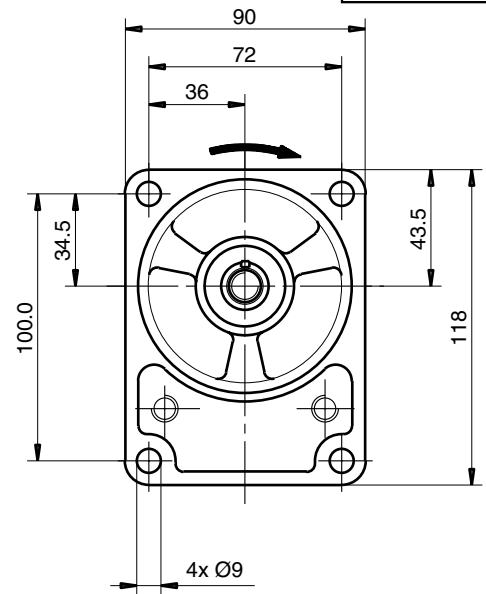
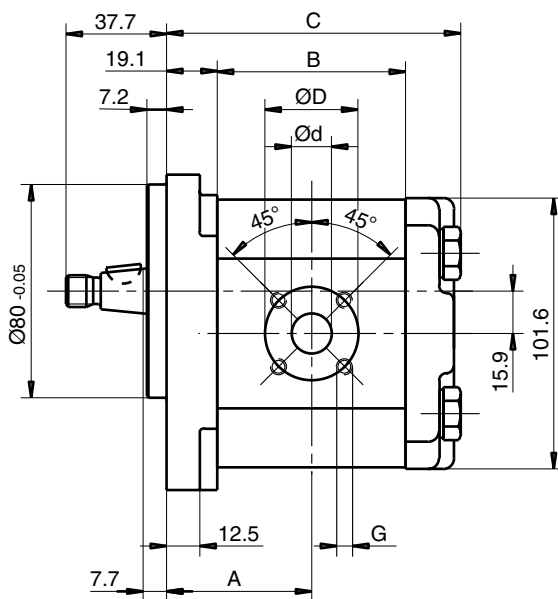
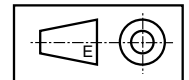


**PGP511 A XXXX Y S1 D4 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement<br>XXXX | cm <sup>3</sup> /rev | Dimension |      |       | Inlet port |    |    |    | Outlet port |    |    |    | Speed of rotation |          | Working pressure<br>max. bar | Order number<br>direction of rotation |                   |
|----------------------|----------------------|-----------|------|-------|------------|----|----|----|-------------|----|----|----|-------------------|----------|------------------------------|---------------------------------------|-------------------|
|                      |                      | A         | B    | C     | SS         | d  | D  | G  | PP          | d  | D  | G  | min. rpm          | max. rpm |                              | clockwise                             | counter-clockwise |
| 0040                 | 4.0                  | 42.6      | 47.0 | 86.7  | J7         | 20 | 40 | M6 | J5          | 15 | 35 | M6 | 500               | 3500     | 250                          | 334 9111 149                          | 334 9112 289      |
| 0060                 | 6.0                  | 44.1      | 50.1 | 89.8  | J7         | 20 | 40 | M6 | J5          | 15 | 35 | M6 | 500               | 3500     | 250                          | 334 9111 465                          | 334 9112 298      |
| 0080                 | 8.0                  | 45.7      | 53.3 | 93.0  | J7         | 20 | 40 | M6 | J5          | 15 | 35 | M6 | 500               | 3500     | 250                          | 334 9111 151                          | 334 9112 291      |
| 0100                 | 10.0                 | 47.4      | 56.5 | 96.1  | J7         | 20 | 40 | M6 | J5          | 15 | 35 | M6 | 500               | 3500     | 250                          | 334 9111 466                          | 334 9112 292      |
| 0110                 | 11.0                 | 48.1      | 58.0 | 97.7  | J7         | 20 | 40 | M6 | J5          | 15 | 35 | M6 | 500               | 3500     | 250                          | 334 9111 152                          | 334 9112 238      |
| 0140                 | 14.0                 | 50.4      | 62.8 | 102.4 | J7         | 20 | 40 | M6 | J5          | 15 | 35 | M6 | 500               | 3400     | 250                          | 334 9111 153                          | 334 9112 239      |
| 0160                 | 16.0                 | 52.0      | 65.9 | 105.6 | J7         | 20 | 40 | M6 | J5          | 15 | 35 | M6 | 500               | 3000     | 250                          | 334 9111 154                          | 334 9112 120      |
| 0190                 | 19.0                 | 54.4      | 70.6 | 110.3 | J9         | 26 | 55 | M8 | J8          | 18 | 55 | M8 | 500               | 3250     | 250                          | 334 9111 970                          |                   |
| 0230                 | 23.0                 | 57.5      | 76.9 | 116.6 | J9         | 26 | 55 | M8 | J8          | 18 | 55 | M8 | 500               | 2750     | 225                          | 334 9111 971                          |                   |
| 0270                 | 27.0                 | 60.7      | 83.2 | 122.9 | J9         | 26 | 55 | M8 | J8          | 18 | 55 | M8 | 500               | 2350     | 190                          | 334 9111 972                          | 334 9112 807      |
| 0310                 | 31.0                 | 63.8      | 89.5 | 129.2 | J9         | 26 | 55 | M8 | J8          | 18 | 55 | M8 | 500               | 2100     | 165                          | 334 9111 526                          |                   |
| 0330                 | 33.0                 | 65.4      | 92.6 | 132.3 | J9         | 26 | 55 | M8 | J8          | 18 | 55 | M8 | 500               | 2000     | 155                          | 334 9111 973                          |                   |

**Dimensions (clockwise rotation shown)**

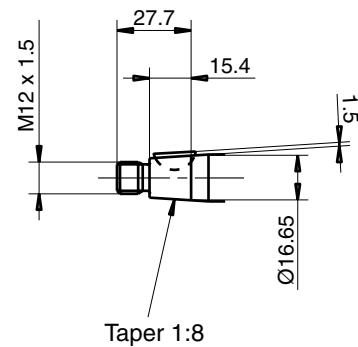
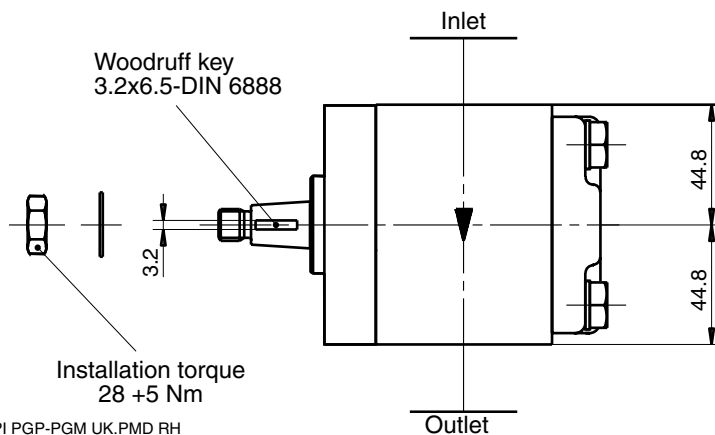
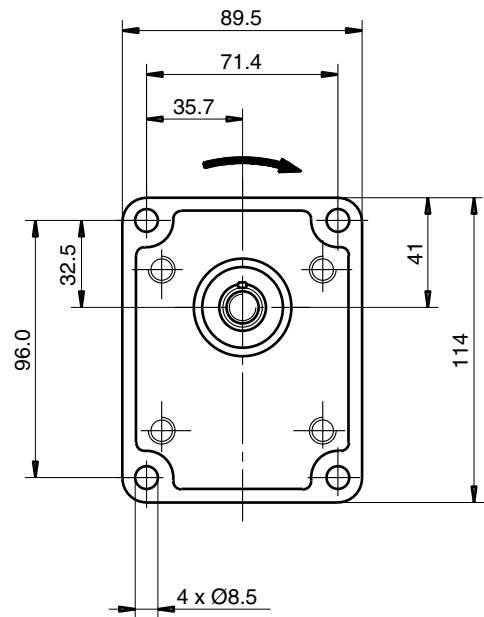
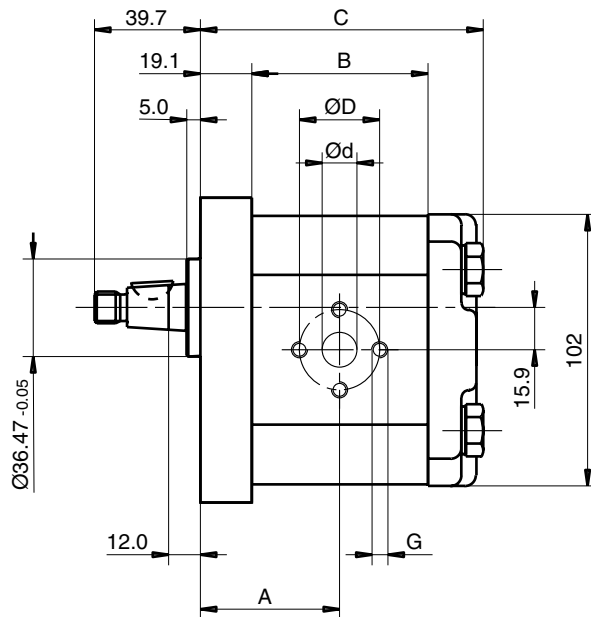
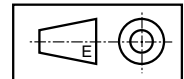


**PGP511 A XXXX Y S2 D3 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter clockwise rotation)

| Displacement |                      | Dimension |      |       | Inlet port |    |    | Outlet port |    |    | Speed of rotation |    | Working pressure | Order number direction of rotation |          |              |                   |
|--------------|----------------------|-----------|------|-------|------------|----|----|-------------|----|----|-------------------|----|------------------|------------------------------------|----------|--------------|-------------------|
| XXXX         | cm <sup>3</sup> /rev | A         | B    | C     | SS         | d  | D  | G           | PP | d  | D                 | G  | min. rpm         | max. rpm                           | max. bar | clockwise    | counter-clockwise |
| 0040         | 4.0                  | 42.6      | 47.0 | 86.7  | L1         | 13 | 30 | M6          | L1 | 13 | 30                | M6 | 500              | 3500                               | 250      | 334 9111 403 | 334 9112 398      |
| 0060         | 6.0                  | 44.1      | 50.1 | 89.8  | L1         | 13 | 30 | M6          | L1 | 13 | 30                | M6 | 500              | 3500                               | 250      | 334 9111 404 | 334 9112 395      |
| 0080         | 8.0                  | 45.7      | 53.3 | 93.0  | L1         | 13 | 30 | M6          | L1 | 13 | 30                | M6 | 500              | 2500                               | 250      | 334 9111 091 | 334 9112 397      |
| 0100         | 10.0                 | 47.3      | 56.5 | 96.1  | L2         | 19 | 40 | M8          | L1 | 13 | 30                | M6 | 500              | 3500                               | 250      | 334 9111 975 | 334 9112 618      |
| 0110         | 11.0                 | 48.1      | 58.0 | 97.7  | L2         | 19 | 40 | M8          | L1 | 13 | 30                | M6 | 500              | 3500                               | 250      | 334 9111 976 | 334 9112 399      |
| 0140         | 14.0                 | 50.4      | 62.8 | 102.4 | L2         | 19 | 40 | M8          | L1 | 13 | 30                | M6 | 500              | 3100                               | 250      | 334 9111 292 | 334 9112 400      |
| 0160         | 16.0                 | 52.0      | 65.9 | 105.6 | L2         | 19 | 40 | M8          | L1 | 13 | 30                | M6 | 500              | 2700                               | 250      | 334 9111 293 | 334 9112 601      |
| 0190         | 19.0                 | 54.4      | 70.6 | 110.3 | L2         | 19 | 40 | M8          | L2 | 19 | 40                | M8 | 500              | 2300                               | 250      | 334 9111 977 |                   |
| 0230         | 23.0                 | 57.5      | 76.9 | 116.6 | L2         | 19 | 40 | M8          | L2 | 19 | 40                | M8 | 500              | 1900                               | 225      | 334 9111 295 |                   |
| 0270         | 27.0                 | 60.7      | 83.2 | 122.9 | L2         | 19 | 40 | M8          | L2 | 19 | 40                | M8 | 500              | 1600                               | 190      | 334 9111 296 |                   |
| 0310         | 31.0                 | 63.8      | 89.5 | 129.2 | L2         | 19 | 40 | M8          | L2 | 19 | 40                | M8 | 500              | 1500                               | 165      | 334 9111 978 |                   |
| 0330         | 33.0                 | 65.4      | 92.6 | 132.3 | L2         | 19 | 40 | M8          | L2 | 19 | 40                | M8 | 500              | 1500                               | 155      | 334 9111 297 |                   |

**Dimensions (clockwise rotation shown)**



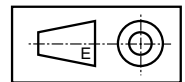
PI PGP-PGM UK.PMD RH



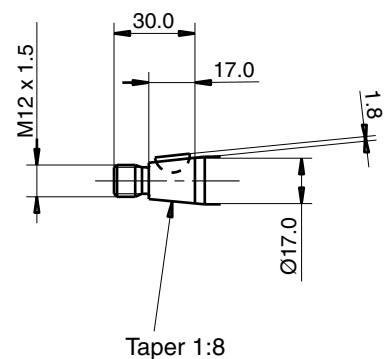
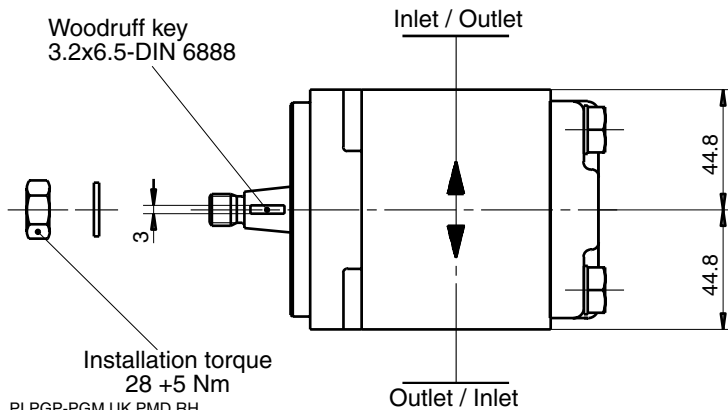
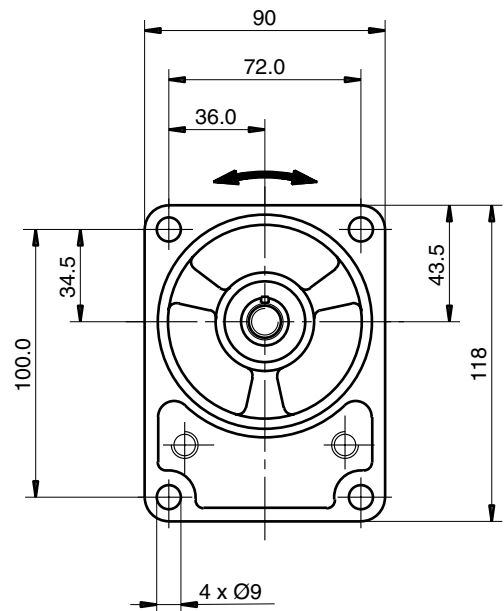
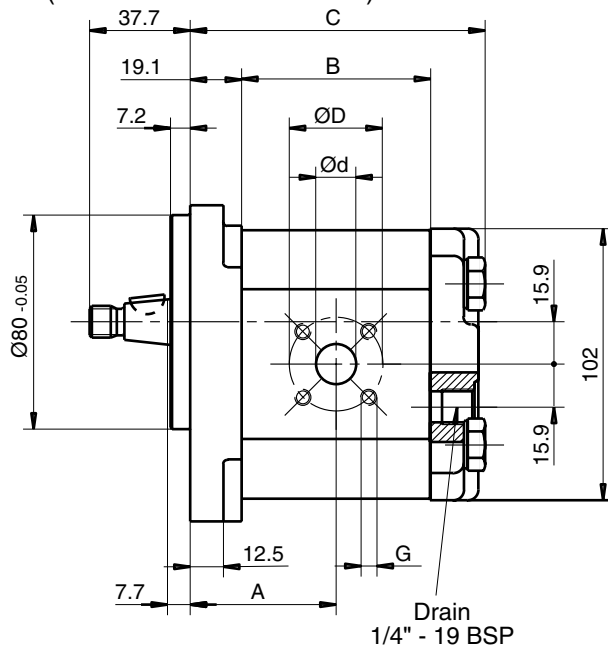
**PGM511 A XXXX B S1 D4 N PP SS B1 B1 G4**

“B” = B (bi-directional)

| Displacement<br>XXXX | cm³/rev | Dimension |      |       | Inlet port |    |    | Outlet port |    |    | Speed of rotation |    | Working pressure<br>max. bar | Order number<br>direction of rotation<br>bi-directional |          |              |
|----------------------|---------|-----------|------|-------|------------|----|----|-------------|----|----|-------------------|----|------------------------------|---|----------|--------------|
|                      |         | A         | B    | C     | PP         | d  | D  | G           | SS | d  | D                 | G  |                              |   | min. rpm | max. rpm     |
| 0060                 | 6.0     | 44.1      | 50.1 | 89.8  | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 3500  | 250      | 334 9219 253 |
| 0080                 | 8.0     | 45.7      | 53.3 | 93.0  | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 3500  | 250      |              |
| 0100                 | 10.0    | 47.3      | 56.5 | 96.1  | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 3500  | 250      |              |
| 0110                 | 11.0    | 48.1      | 58.0 | 97.7  | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 3500  | 250      |              |
| 0140                 | 14.0    | 50.4      | 62.8 | 102.4 | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 3400  | 250      |              |
| 0160                 | 16.0    | 52.0      | 65.9 | 105.6 | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 3000  | 250      |              |
| 0190                 | 19.0    | 54.4      | 70.6 | 110.3 | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 3250  | 250      | 334 9219 356 |
| 0230                 | 23.0    | 57.5      | 76.9 | 116.6 | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 2750  | 225      |              |
| 0270                 | 27.0    | 60.7      | 83.2 | 122.9 | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 2350  | 190      | 334 9219 200 |
| 0310                 | 31.0    | 63.8      | 89.5 | 129.2 | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 2100  | 165      |              |
| 0330                 | 33.0    | 65.4      | 92.6 | 132.3 | J5         | 20 | 40 | M6          | J5 | 15 | 35                | M6 | 500                          | 2000  | 155      |              |



**Dimensions (bi-directional motor shown)**



PI PGP-PGM UK.PMD RH



**PG** **517** **B 1 B 1**

**Gear design**

**Type**

**Unit**

**Dis-  
placement**

**Rotation**

**Shaft**

**Flange**

**Shaft seal**

**Inlet side ports option**

**Outlet side ports option**

**No rear ports**  
(rear ports on request)

| Code | Type |
|------|------|
| P    | Pump |

| Code | Unit                    |
|------|-------------------------|
|      | Pump                    |
| A    | Single unit             |
| M    | Single distributor unit |
| B    | Multiple unit           |

| Displacement |      |
|--------------|------|
| Code         | ccm  |
| 0140         | 14.0 |
| 0160         | 16.0 |
| 0190         | 19.0 |
| 0230         | 23.0 |
| 0250         | 25.0 |
| 0280         | 28.0 |
| 0330         | 33.0 |
| 0380         | 38.0 |
| 0440         | 44.0 |
| 0520         | 52.0 |
| 0700         | 70.0 |

| Code | Rotation          |
|------|-------------------|
| C    | Clockwise         |
| A    | Counter-clockwise |

| Code             | Shaft  |
|------------------|--|
| D1 <sup>2)</sup> | 13T, 16/32DP, 41.2L, SAE "B" spline                |
| M1 <sup>2)</sup> | Ø22.2, 6.3key, no thread, 41.2L, SAE "B", parallel |
| M2 <sup>2)</sup> | Ø25.4, 6.3key, no thread, 46L, SAE "B-B", parallel |
| T1 <sup>3)</sup> | Ø21.59, 11.2L, 4.0key, M14x1.5, taper 1:8          |

| Code | Port options  |
|------|---|
| E6E5 | 1"-11 BSP thread/<br>3/4"-14 BSP thread<br>rec. from 14 ccm to 19 ccm                             |
| E7E6 | 1 1/4"-11 BSP thread/<br>1"-11 BSP thread<br>rec. from 23 ccm to 38 ccm                           |
| E8E6 | 1 1/2"-11 BSP thread/<br>1"-11 BSP thread<br>rec. from 44 ccm to 70 ccm                           |
| J9J8 | Ø26 mm-Ø55 mm-M8 square flange<br>Ø18 mm-Ø55 mm-M8 square flange<br>rec. from 14 ccm to 52 ccm    |
| L3L2 | Ø27 mm-Ø51 mm-M10 diamond flange<br>Ø19 mm-Ø40 mm-M8 diamond flange<br>rec. from 14 ccm to 52 ccm |
| P3P2 | 1"-M10 SAE metric flange<br>3/4"-M10 SAE metric flange<br>rec. from 16 ccm to 23 ccm              |
| P4P3 | 1 1/4"-M10 SAE metric flange<br>1"-M10 SAE metric flange<br>rec. from 25 ccm to 44 ccm            |
| P5P3 | 1 1/2"-M12 SAE metric flange<br>1"-M10 SAE metric flange<br>rec. from 44 ccm to 70 ccm            |

Example: P4 = inlet port  
P3 = outlet port

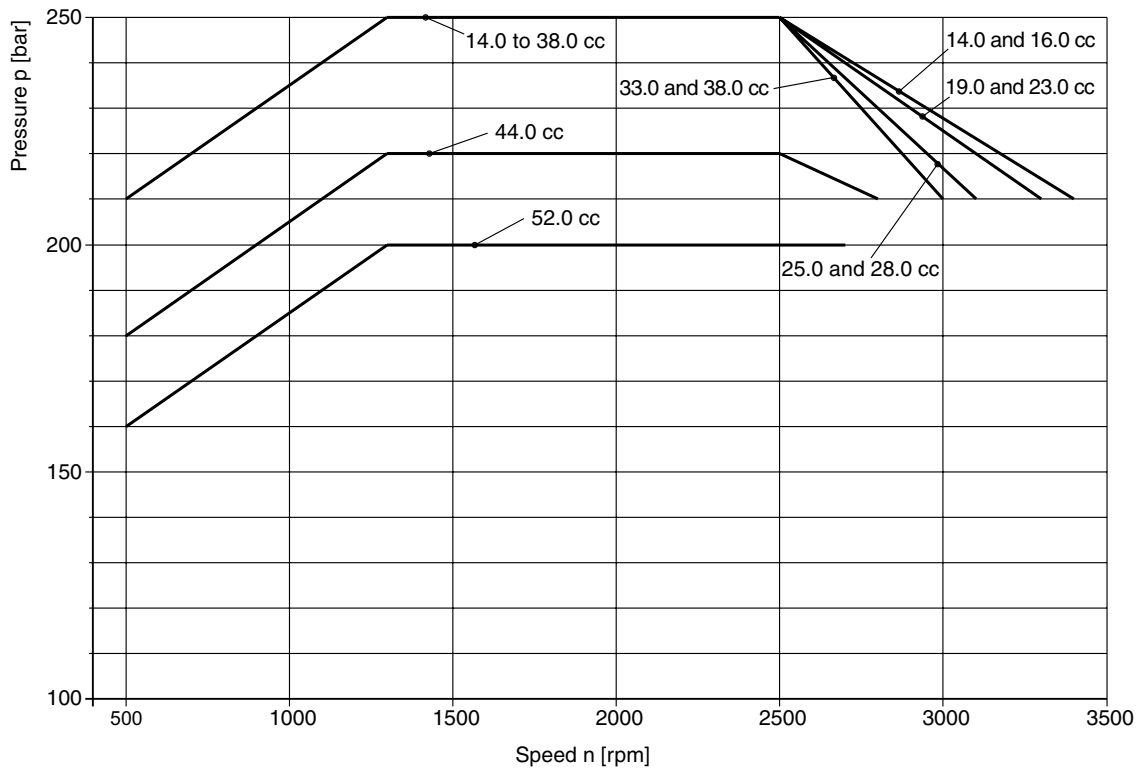
| Code | Shaft seal |
|------|------------|
| X    | No seal    |
| N    | NBR        |
| V    | FPM        |

| Code | Flange                                |
|------|---------------------------------------|
| D7   | 98.4x128.2 - Ø50.77 rectangular       |
| H3   | 146.1 - Ø101.06 SAE "B" 2 bolt flange |

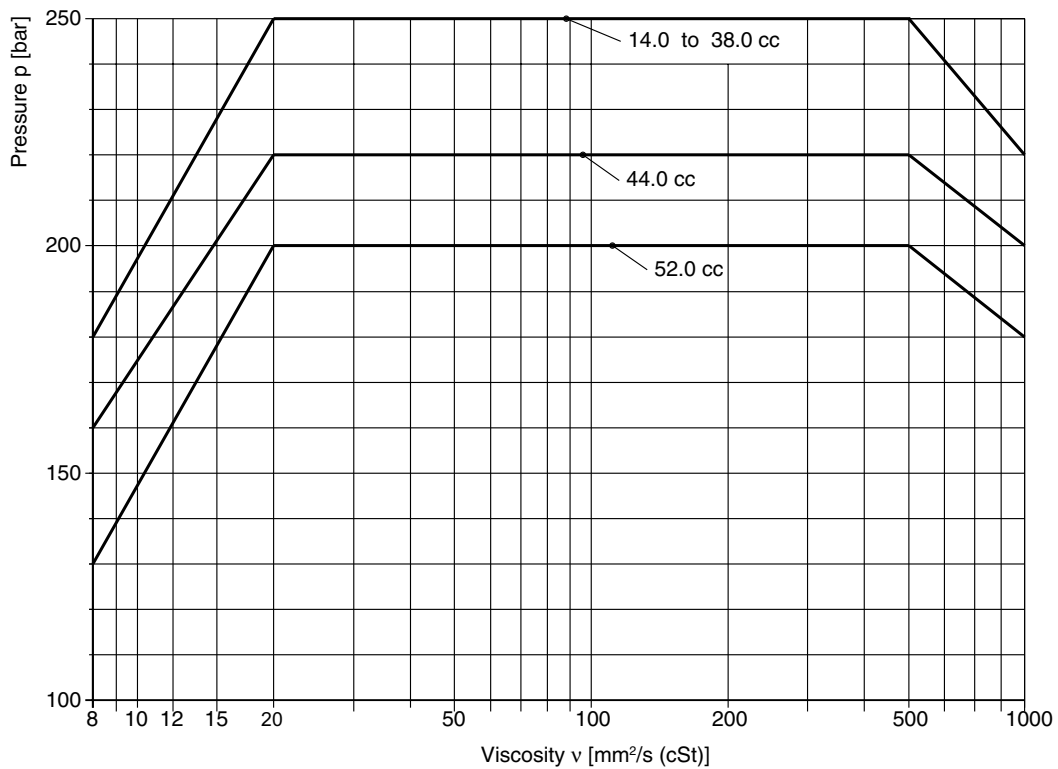
<sup>2)</sup> Only used with flange H3.

<sup>3)</sup> Only used with flange D7.

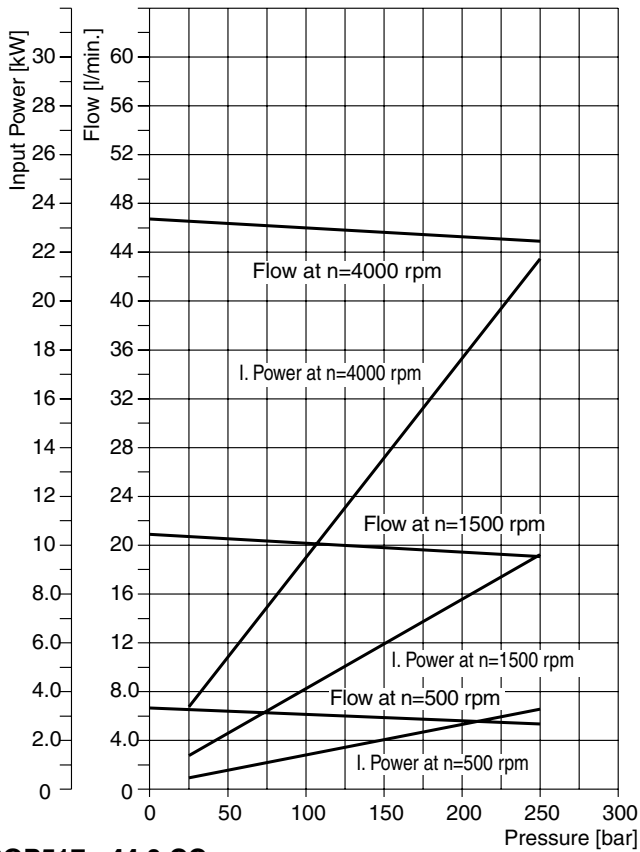
**Pressure depending on speed**



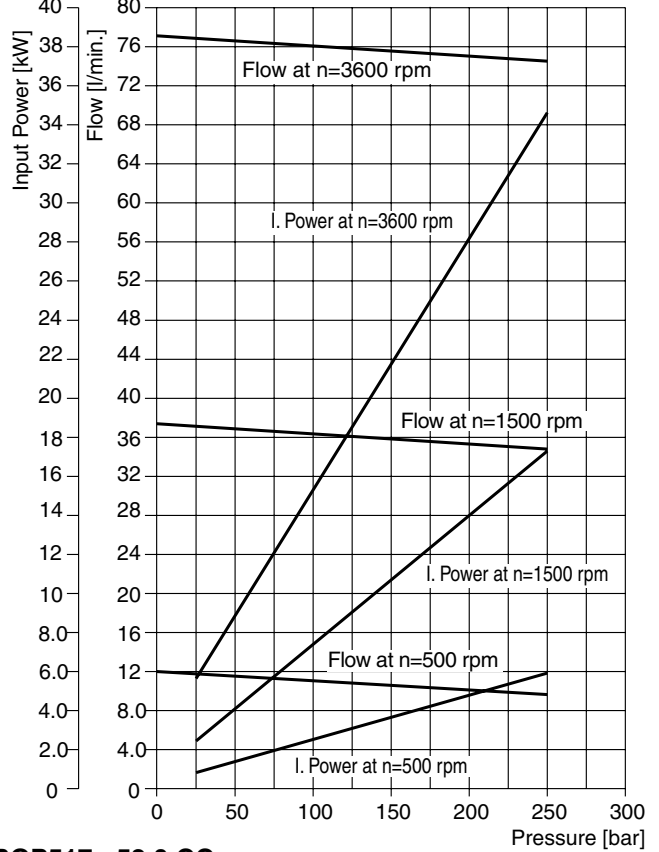
**Pressure depending on viscosity**



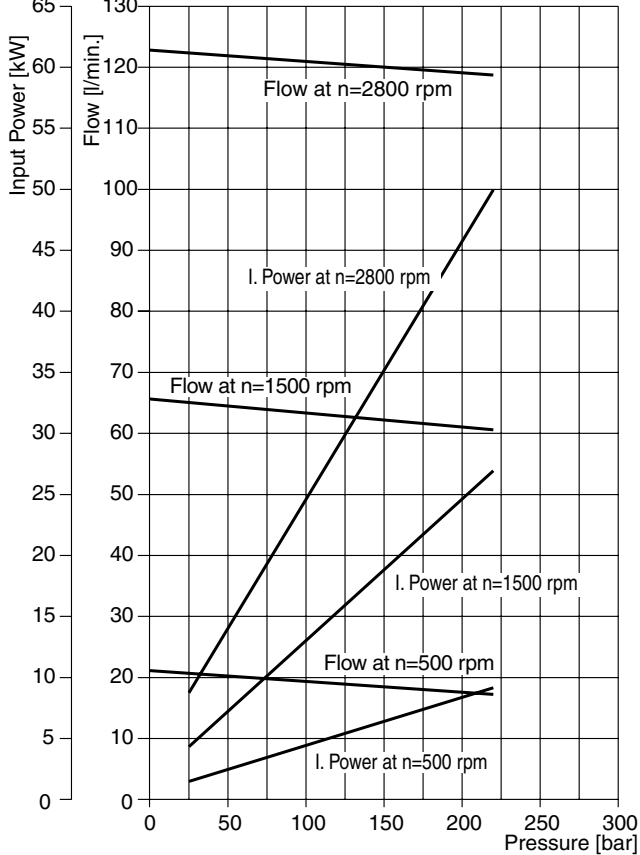
**PGP517 - 14.0 CC**



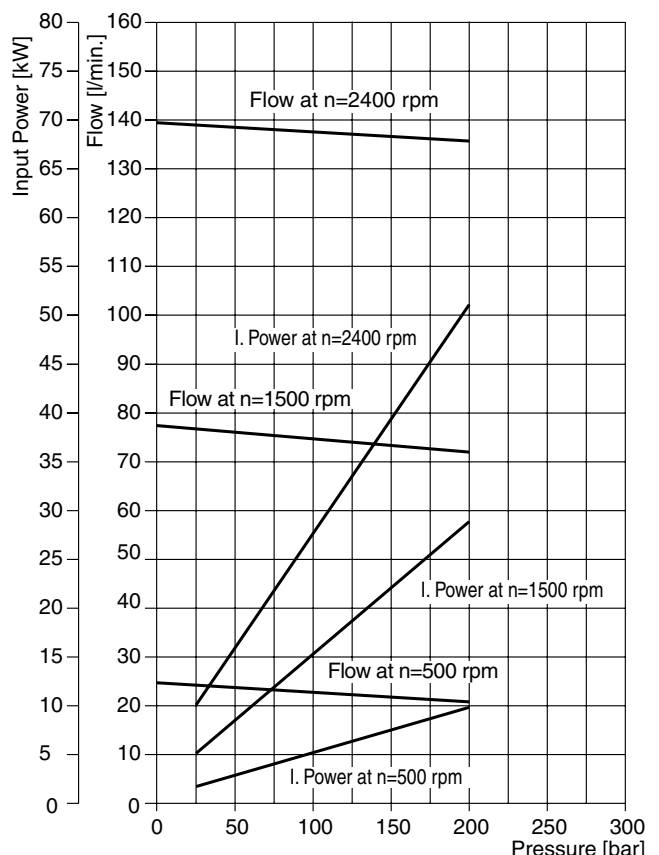
**PGP517 - 25.0 CC**



**PGP517 - 44.0 CC**



**PGP517 - 52.0 CC**



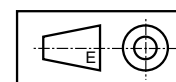
PI PGP-PGM UK.PMD RH Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm<sup>2</sup>/s ;

Inlet pressure: 0.9 + 0.1 bar absolute

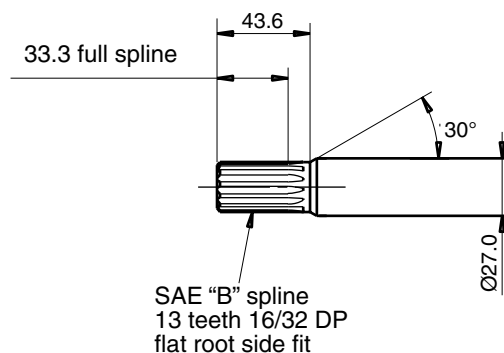
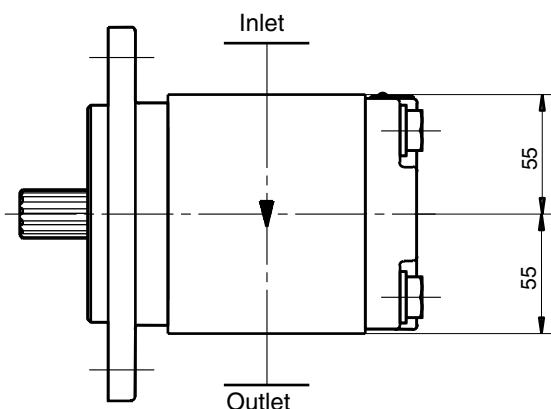
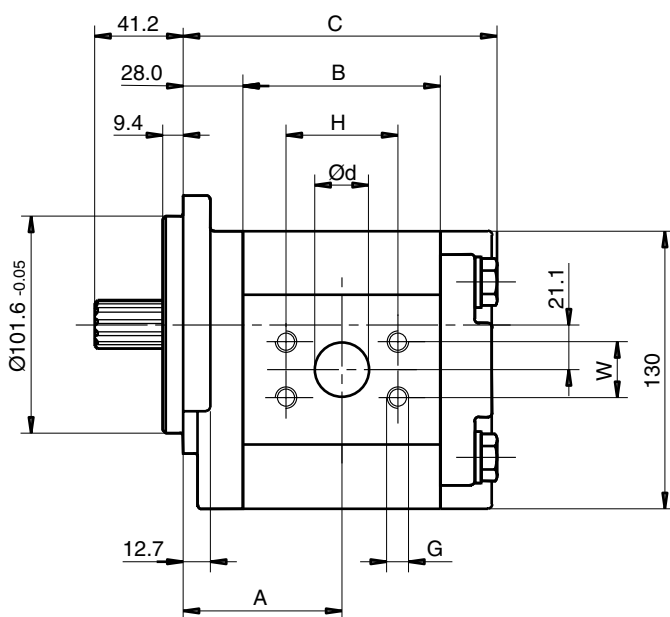
**PGP517 A XXXX Y D1 H3 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement<br>XXXX cm <sup>3</sup> /<br>rev | Dimension |       |       | Inlet port |        |     |       |       | Outlet port |      |     |       |       | Speed of rotation |          | Working pressure<br>max. bar | Order number<br>direction of rotation |                   |
|---|-----------|-------|-------|------------|--------|-----|-------|-------|-------------|------|-----|-------|-------|-------------------|----------|------------------------------|---------------------------------------|-------------------|
|   | A         | B     | C     | SS         | d      | G   | H     | W     | PP          | d    | G   | H     | W     | min. rpm          | max. rpm |                              | clockwise                             | counter-clockwise |
| 0140  | 62.1      | 68.3  | 122.8 | P2         | 3/4"   | M10 | 47.63 | 22.23 | P2          | 3/4" | M10 | 47.63 | 22.23 | 500               | 3000     | 250                          |                                       |                   |
| 0160  | 63.2      | 70.3  | 124.8 | P3         | 1"     | M10 | 52.37 | 26.19 | P2          | 3/4" | M10 | 47.63 | 22.23 | 500               | 3400     | 250                          |                                       |                   |
| 0190  | 64.7      | 73.3  | 127.8 | P3         | 1"     | M10 | 52.37 | 26.19 | P2          | 3/4" | M10 | 47.63 | 22.23 | 500               | 3300     | 250                          |                                       | 333 9112 180      |
| 0230  | 66.7      | 77.4  | 131.9 | P3         | 1"     | M10 | 52.37 | 26.19 | P2          | 3/4" | M10 | 47.63 | 22.23 | 500               | 3300     | 250                          | 333 9111 193                          | 333 9112 177      |
| 0250  | 67.7      | 79.4  | 133.9 | P4         | 1 1/4" | M10 | 58.72 | 30.17 | P3          | 1"   | M10 | 52.37 | 26.19 | 500               | 3100     | 250                          |                                       | 333 9112 388      |
| 0280  | 69.2      | 82.4  | 136.9 | P4         | 1 1/4" | M10 | 58.72 | 30.17 | P3          | 1"   | M10 | 52.37 | 26.19 | 500               | 3100     | 250                          | 333 9111 669                          | 333 9112 274      |
| 0330  | 71.7      | 87.5  | 142.0 | P4         | 1 1/4" | M10 | 58.72 | 30.17 | P3          | 1"   | M10 | 52.37 | 26.19 | 500               | 3000     | 250                          |                                       | 333 9112 374      |
| 0380  | 74.3      | 92.5  | 147.0 | P4         | 1 1/4" | M10 | 58.72 | 30.17 | P3          | 1"   | M10 | 52.37 | 26.19 | 500               | 3000     | 250                          | 333 9111 290                          | 333 9112 412      |
| 0440  | 77.3      | 98.6  | 153.1 | P4         | 1 1/4" | M10 | 58.72 | 30.17 | P3          | 1"   | M10 | 52.37 | 26.19 | 500               | 2800     | 225                          | 333 9111 150                          | 333 9112 346      |
| 0520  | 81.3      | 106.7 | 161.2 | P5         | 1 1/2" | M12 | 69.82 | 35.71 | P3          | 1"   | M10 | 52.37 | 26.19 | 500               | 2700     | 190                          | 333 9111 360                          | 333 9112 357      |
| 0700  | 90.4      | 124.9 | 179.4 | P5         | 1 1/2" | M12 | 69.82 | 35.71 | P3          | 1"   | M10 | 52.37 | 26.19 | 500               | 2300     | 165                          | 333 9111 563                          |                   |



**Dimensions (clockwise rotation shown)**



PI PGP-PGM UK.PMD RH

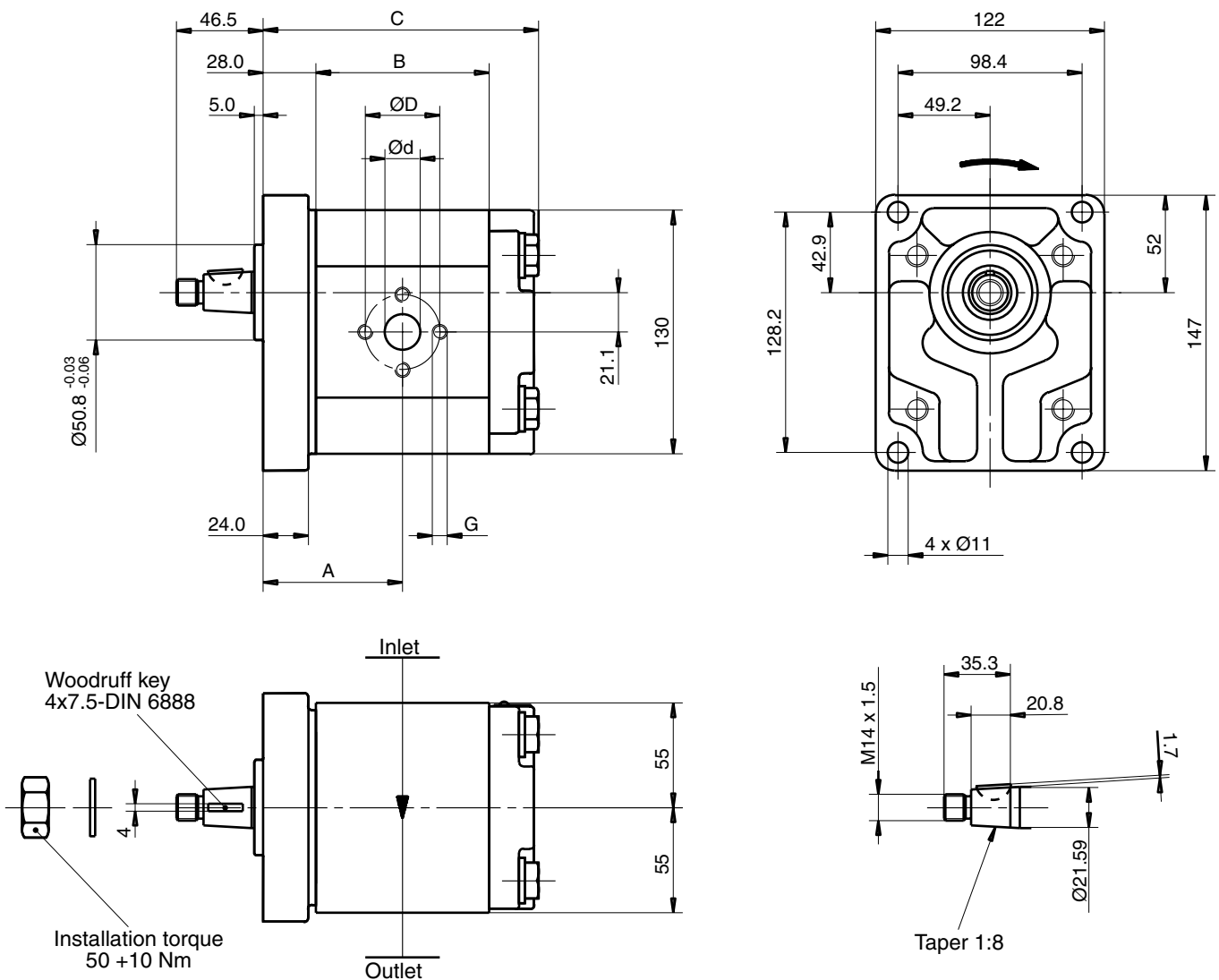
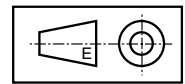


**PGP517 A XXXX Y T1 D7 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement<br>XXXX | cm <sup>3</sup> /rev | Dimension |       |       | Inlet port |    |    | Outlet port |    |    | Speed of rotation |    | Working pressure<br>max. bar | Order number<br>direction of rotation |          |              |                   |
|----------------------|----------------------|-----------|-------|-------|------------|----|----|-------------|----|----|-------------------|----|------------------------------|---------------------------------------|----------|--------------|-------------------|
|                      |                      | A         | B     | C     | SS         | d  | D  | G           | PP | d  | D                 | G  |                              | min. rpm                              | max. rpm | clockwise    | counter-clockwise |
| 0140                 | 14.0                 | 62.1      | 68.3  | 122.8 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 3400                                  | 250      | 333 9111 503 |                   |
| 0160                 | 16.0                 | 63.2      | 70.3  | 124.8 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 3400                                  | 250      | 333 9111 505 | 333 9112 430      |
| 0190                 | 19.0                 | 64.7      | 73.3  | 127.8 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 3300                                  | 250      | 333 9111 285 | 333 9112 212      |
| 0230                 | 23.0                 | 66.7      | 77.4  | 131.9 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 3300                                  | 250      | 333 9111 119 | 333 9112 213      |
| 0250                 | 25.0                 | 67.7      | 79.4  | 133.9 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 3100                                  | 250      | 333 9111 047 | 333 9112 068      |
| 0280                 | 28.0                 | 69.2      | 82.4  | 136.9 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 3100                                  | 250      | 333 9111 287 | 333 9112 214      |
| 0330                 | 33.0                 | 71.7      | 87.5  | 142.0 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 2600                                  | 250      | 333 9111 014 | 333 9112 035      |
| 0380                 | 38.0                 | 74.3      | 92.5  | 147.0 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 2300                                  | 250      | 333 9111 015 | 333 9112 036      |
| 0440                 | 44.0                 | 77.3      | 98.6  | 153.1 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 2000                                  | 220      | 333 9111 046 | 333 9112 040      |
| 0520                 | 52.0                 | 81.3      | 106.7 | 161.2 | L3         | 27 | 51 | M10         | L2 | 19 | 40                | M8 | 500                          | 1700                                  | 200      | 333 9111 242 | 333 9112 215      |

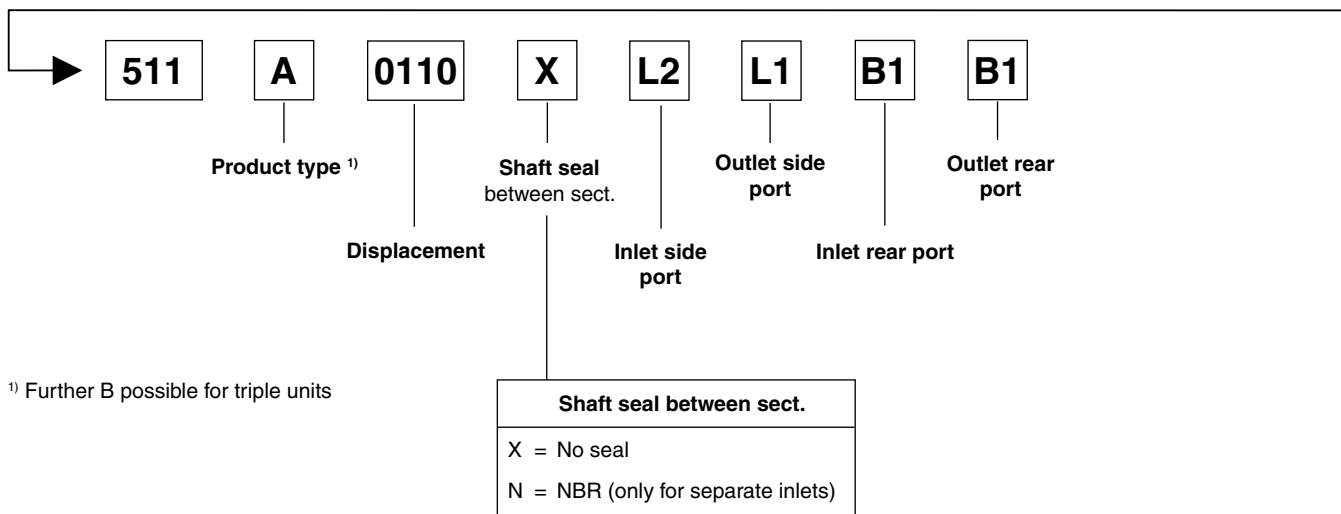
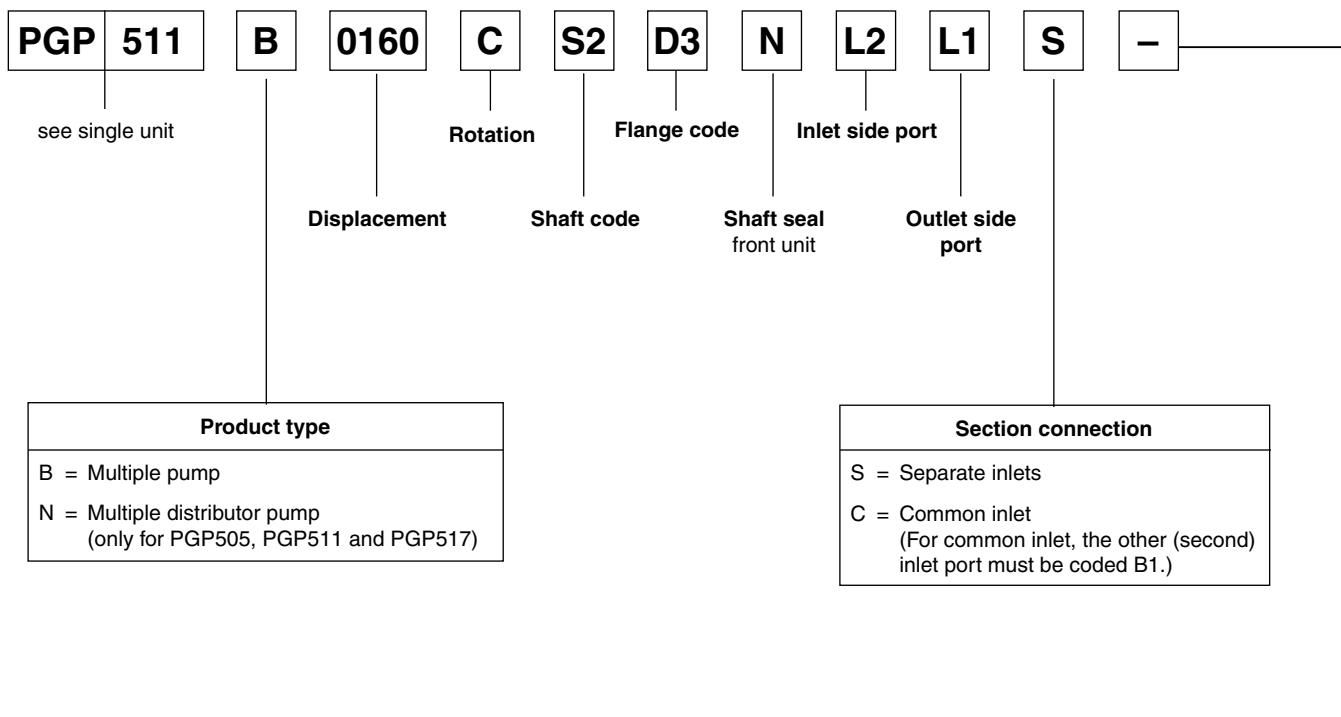
**Dimensions (clockwise rotation shown)**



PI PGP-PGM UK.PMD RH



**Code for multiple units**



This coding system can be used for all pumps series 500.

Over many years Parker Hydraulics has supplied gear pumps and motors for mobile and industrial markets worldwide, especially for materials handling, commercial grass cutting and construction equipment applications. Many Parker pumps and motors have been developed and tested for the specific needs of these industries.

Parker's defined strategy to provide engineered solutions, coupled with an award winning flexible manufacturing system, has resulted in a wide range of SAE/DIN/European and other special options being available as standard.



**Features**

- Patented interlocking body design
- 12 tooth gears, bronze balance plates
- Tandem, triple and cross-frame pumps available
- Common inlets available for tandem and triple pumps
- Continuous operating pressures up to 310 bar
- Production run-in available to suite OEM application conditions and to provide optimized volumetric efficiencies
- Pressure balanced design for high efficiency
- Reduced system noise levels compared to earlier models
- High power through-drive capability
- Wide range of integral valves for power steering, power brakes, fan drivers and implement hydraulics
- Load sense and solenoid operated unloading valves
- Low noise version as "stealth" pump

**Technical data**

|                      |   |
|----------------------|---|
| Pump type            | Heavy-duty, cast iron, external gear.   |
| Mounting             | SAE, rectangular, thru-bolt standard specials on request.   |
| Ports                | SAE and metric split flanges and others   |
| Shaft style          | SAE splined, keyed, tapered, cylindrical tang drive, specials on request.   |
| Speed                | 500 - 3500 rpm, see Technical Data  |
| Theor. displacement  | See Technical Data  |
| Drive                | Drive direct with flexible coupling is recommended.   |
| Axial / Radial load  | Units subject to axial or radial loads must be specified with an outboard bearing.  |
| Inlet pressure       | Operating range 0.8 to 2 bar abs. Min. inlet pressure 0.5 bar abs. Short time without load. Consultation is recommended.  |
| Outlet pressure      | See Technical Data  |
| Pressure rising rate | Max. 3000 bar/s   |
| Flow velocity        | See Nomograph for Pipe Velocity   |
| Hydraulic fluids     | Hydraulic oil HLP, DIN 51524-2  |
| Fluid temperature    | Range of operating temperature -15 to +80 °C.<br>Max. permissible operating pressure dependent on fluid temperature. Temperature for cold start -20 to -15 °C at speed ≤ 1500 rpm.<br>Max. permissible operating pressure dependent on fluid temperature. |

|  |   |
|--|---|
| Fluid viscosity                                    | Range of operating viscosity 8 to 1000 mm <sup>2</sup> /s.<br>Max. permissible operating pressure dependent on viscosity.<br>Viscosity range for cold start 1000 to 2000 mm <sup>2</sup> /s at operating pressure p ≤ 10 bar and speed n ≤ 1500 rpm.  |
| Range of ambient temperature                       | -40 °C to +70 °C  |
| Filtration   | According to ISO 4406 Cl. 18/16/13  |
| Direction of rotation (looking at the drive shaft) | Clockwise, counter-clockwise or double. Attention! Drive pump only in indicated direction of rotation.  |
| Multiple pump assemblies                           | <ul style="list-style-type: none"> <li>• Available in two or three section configuration.</li> <li>• Max. shaft load must be conform to the limitations shown in the shaft loading rating table in this catalogue.</li> <li>• Max. load is determined by adding the torque values for each pumping section that will be simultaneously loaded.</li> </ul> |
| Separate or common inlet capability                | Separate inlet configuration: <ul style="list-style-type: none"> <li>• Each gear housing has individual inlet and outlet ports.</li> </ul> Common inlet configuration: <ul style="list-style-type: none"> <li>• Two gear sets share a common inlet.</li> </ul>  |

PI PGP-PGM UK.PMD RH



|           |  |            |  |  |  |  |  |  |  |  |  |  |          |          |          |          |    |
|-----------|--|------------|--|--|--|--|--|--|--|--|--|--|----------|----------|----------|----------|----|
| <b>PG</b> |  | <b>620</b> |  |  |  |  |  |  |  |  |  |  | <b>B</b> | <b>1</b> | <b>B</b> | <b>1</b> | 1) |
|-----------|--|------------|--|--|--|--|--|--|--|--|--|--|----------|----------|----------|----------|----|

**Gear design**      **Type**      **Unit**      **Dis- placement**      **Rotation**      **Shaft**      **Flange**      **Shaft seal**      **Inlet side ports option**      **Outlet side ports option**      **No rear ports** (rear ports on request)

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

| Code | Unit          |   |
|------|---------------|---|
|      | Pump          | Motor   |
| A    | Single unit   | Standard motor with drain port                    |
| B    | Multiple unit | Standard motor w. two checks                      |
| C    | —             | Standard motor w. one anti-cavitation check (ACC) |

| Displacement |      |
|--------------|------|
| Code         | ccm  |
| 0160         | 16.0 |
| 0190         | 19.0 |
| 0210         | 21.0 |
| 0230         | 23.0 |
| 0260         | 26.0 |
| 0290         | 29.0 |
| 0330         | 33.0 |
| 0360         | 36.0 |
| 0370         | 37.0 |
| 0410         | 41.0 |
| 0440         | 44.0 |
| 0460         | 46.0 |
| 0500         | 50.0 |
| 0520         | 52.0 |

| Code | Rotation           |
|------|--------------------|
| C    | Clockwise          |
| A    | Counter- clockwise |
| B    | Bi-directional     |

| Code             | Shaft                                     |
|------------------|---|
| D1 <sup>2)</sup> | 13T, 16/32DP, 41.2L, SAE "B" spline       |
| E1               | 15T, 16/32DP, 46L, SAE "B-B" spline       |
| T1 <sup>3)</sup> | Ø21.59, 11.2L, 4.0key, M14x1.5, taper 1:8 |

| Code | Port options (pumps)   |
|------|--|
| E6E5 | 1"-11 BSP thread/<br>3/4"-14 BSP thread<br>rec. from 14 ccm to 26 ccm                |
| E7E5 | 1¼"-11 BSP thread/<br>3/4"-14 BSP thread<br>rec. from 29 ccm to 41 ccm               |
| E8E6 | 1½"-11 BSP thread/<br>1"-11 BSP thread/<br>rec. from 41 ccm to 52 ccm                |
| T3T2 | 1"-M10 SAE metric flange<br>3/4"-M10 SAE metric flange<br>rec. from 16 ccm to 23 ccm |
| T4T3 | 1¼"-M10 SAE metric flange<br>1"-M10 SAE metric flange<br>rec. from 26 ccm to 41 ccm  |
| T5T3 | 1½"-M12 SAE metric flange<br>1"-M10 SAE metric flange<br>rec. from 41 ccm to 52 ccm  |
| Code | Port options (motors)  |
| E5E5 | 3/4"-14 BSP thread<br>3/4"-14 BSP thread<br>rec. from 16 ccm to 26 ccm               |
| E6E6 | 1" - 11 BSP thread/<br>1" - 11 BSP thread<br>rec. from 29 ccm to 41 ccm              |
| E7E7 | 1¼"-11 BSP thread/<br>1¼"-11 BSP thread<br>rec. from 41 ccm to 52 ccm                |

Example: T4 = inlet port  
T3 = outlet port

| Code            | Shaft seal  |
|-----------------|-------------|
| X               | No seal     |
| N               | NBR (2 bar) |
| V <sup>4)</sup> | FPM (5 bar) |

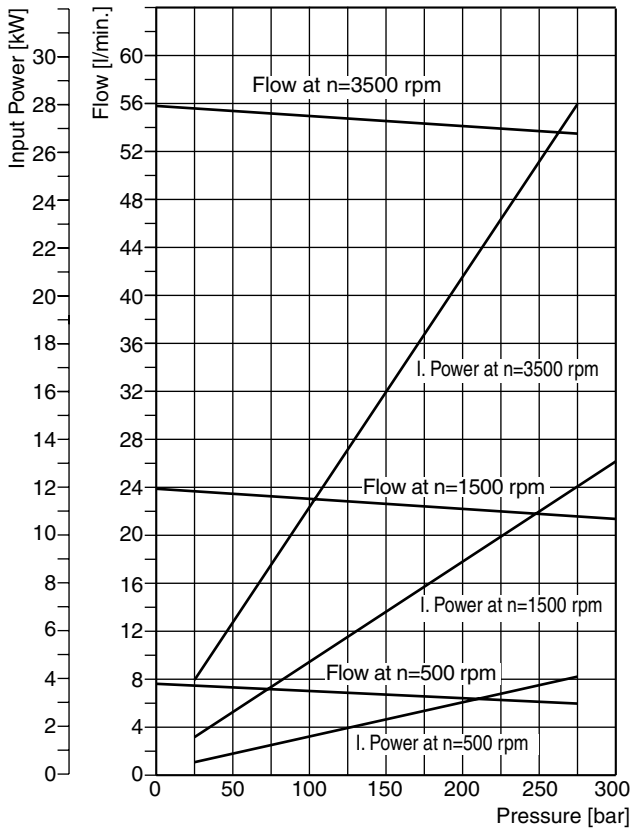
<sup>4)</sup> for motors recommended

| Code | Flange                                    |
|------|---|
| D7   | 98.4x128.2 - Ø50.77 rectangular           |
| H2   | 106.4 - Ø82.55 SAE "A" 2bolt flange       |
| H3   | 146.1 - Ø101.06 SAE "B" 2bolt flange      |
| A4   | 114.5 x 114.5 - Ø127 SAE "C" 4bolt square |

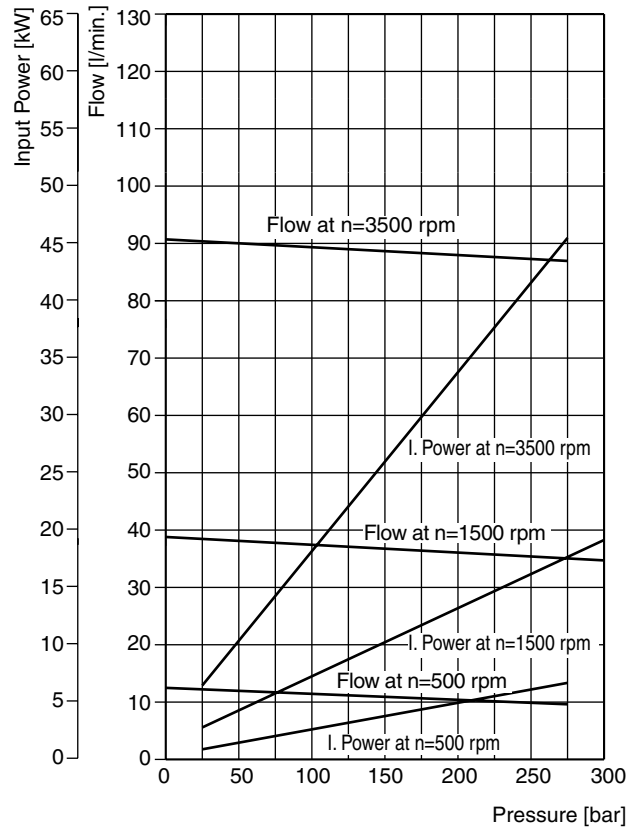
<sup>1)</sup> Code of drain line for PGM620 only.  
**2 Options:**  
G4 = 1/4-19 BSP rear drain.  
B1 = no drain, unit code must be "B" or "C".

<sup>2)</sup> Only used with flange H2, H3.  
<sup>3)</sup> Only used with flange D7.

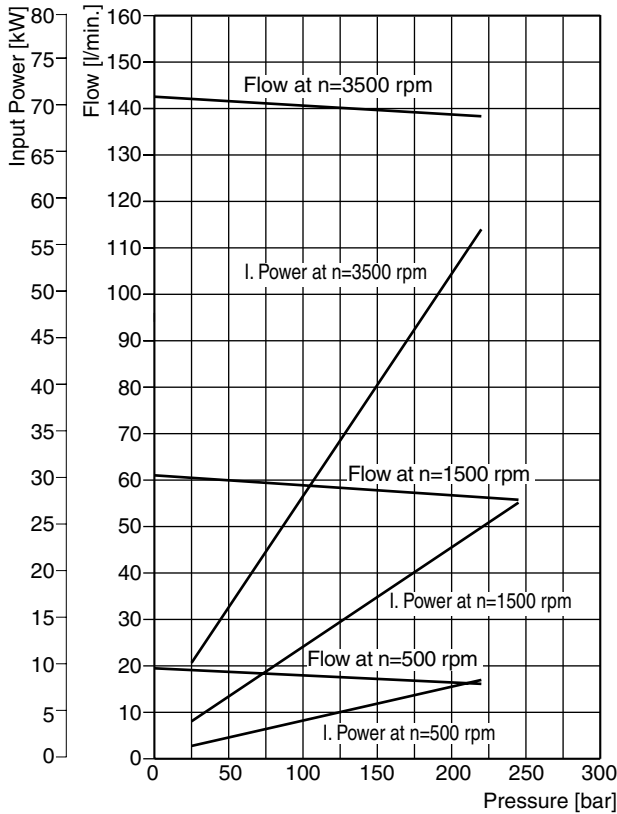
**PGP620 - 16.0 CC**



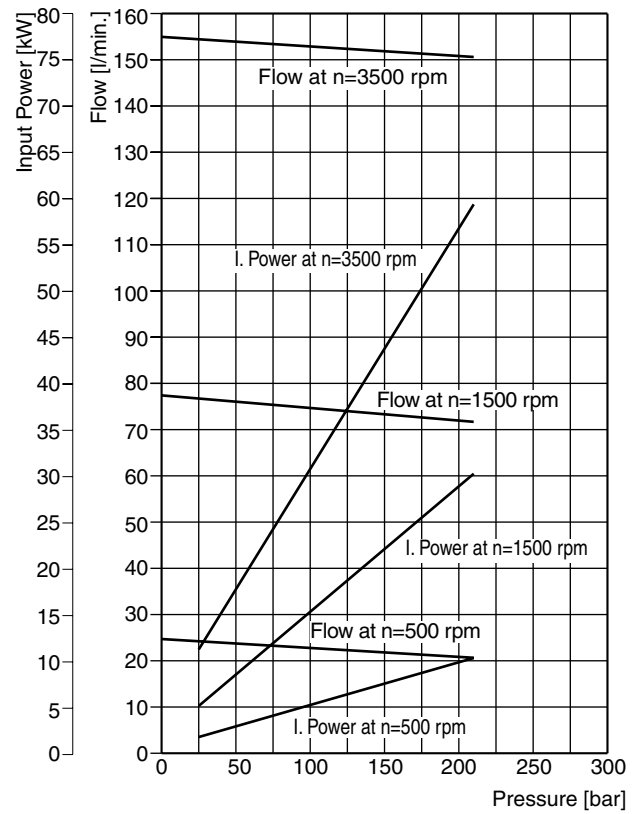
**PGP620 - 26.0 CC**



**PGP620 - 41.0 CC**



**PGP620 - 52.0 CC**



Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm<sup>2</sup>/s ; Inlet pressure: 0.9 + 0.1 bar absolute

PI PGP-PGM UK.PMD RH

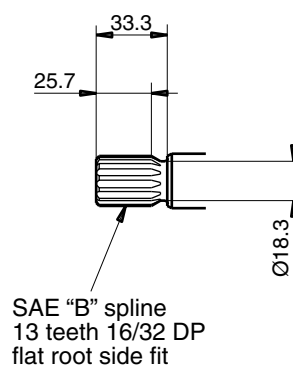
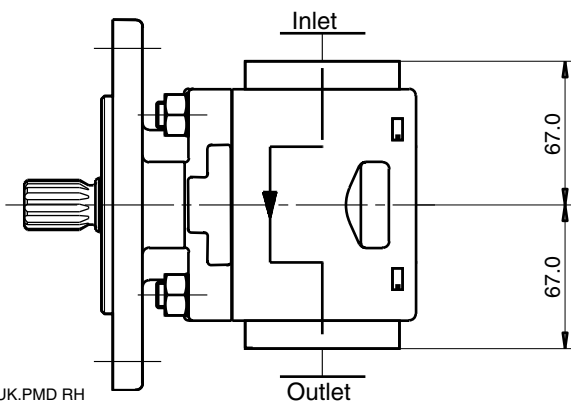
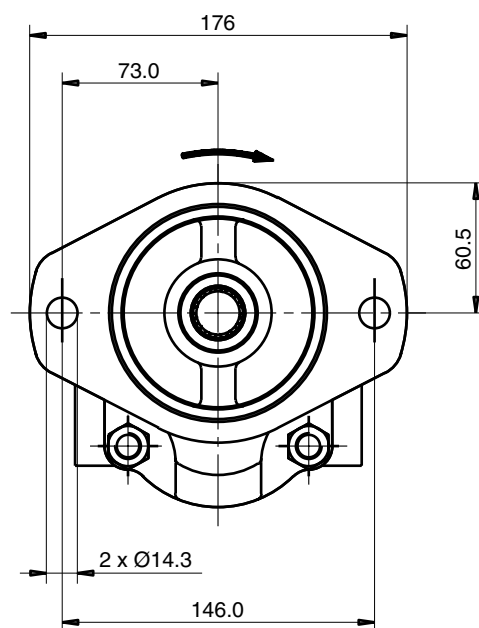
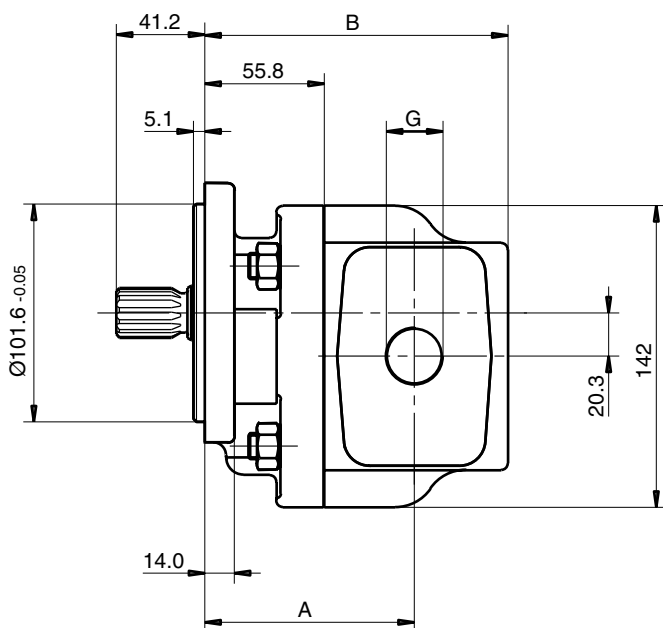
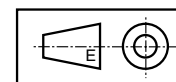


**PGP620 A XXXX Y D1 H3 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement<br>XXXX | cm <sup>3</sup> /rev | Dimension |       | Inlet port |           | Outlet port |         | Speed of rotation |          | Working pressure<br>max. bar | Order number direction of rotation |                   |
|----------------------|----------------------|-----------|-------|------------|-----------|-------------|---------|-------------------|----------|------------------------------|------------------------------------|-------------------|
|                      |                      | A         | B     | SS         | G         | PP          | G       | min. rpm          | max. rpm |                              | clockwise                          | counter-clockwise |
| 0160                 | 16.0                 | 79.2      | 122.7 | E6         | 1"-11     | E5          | 3/4"-14 | 500               | 3000     | 275                          | 702 9111 052                       | 702 9112 053      |
| 0190                 | 19.0                 | 82.5      | 126.0 | E6         | 1"-11     | E5          | 3/4"-14 | 500               | 3000     | 275                          | 702 9111 186                       |                   |
| 0210                 | 21.0                 | 84.7      | 128.2 | E6         | 1"-11     | E5          | 3/4"-14 | 500               | 3000     | 275                          | 702 9111 168                       |                   |
| 0230                 | 23.0                 | 86.9      | 130.4 | E6         | 1"-11     | E5          | 3/4"-14 | 500               | 2700     | 275                          | 702 9111 098                       | 702 9112 054      |
| 0260                 | 26.0                 | 90.2      | 133.7 | E6         | 1"-11     | E5          | 3/4"-14 | 500               | 2400     | 275                          | 702 9111 112                       | 702 9112 093      |
| 0290                 | 29.0                 | 93.5      | 137.0 | E7         | 1 1/4"-11 | E5          | 3/4"-14 | 500               | 3000     | 275                          |                                    |                   |
| 0330                 | 33.0                 | 97.9      | 141.4 | E7         | 1 1/4"-11 | E5          | 3/4"-14 | 500               | 3000     | 275                          |                                    |                   |
| 0360                 | 36.0                 | 101.2     | 144.7 | E7         | 1 1/4"-11 | E5          | 3/4"-14 | 500               | 2900     | 250                          |                                    |                   |
| 0370                 | 37.0                 | 102.3     | 145.8 | E7         | 1 1/4"-11 | E5          | 3/4"-14 | 500               | 2900     | 250                          | 702 9111 164                       | 702 9112 046      |
| 0410                 | 41.0                 | 106.7     | 150.2 | E7         | 1 1/4"-11 | E5          | 3/4"-14 | 500               | 2600     | 220                          |                                    | 702 9112 071      |
| 0440                 | 44.0                 | 110.0     | 153.5 | E8         | 1 1/2"-11 | E6          | 1"-11   | 500               | 3000     | 210                          |                                    | 702 9112 105      |
| 0460                 | 46.0                 | 112.2     | 155.7 | E8         | 1 1/2"-11 | E6          | 1"-11   | 500               | 3000     | 210                          |                                    |                   |
| 0500                 | 50.0                 | 116.6     | 160.1 | E8         | 1 1/2"-11 | E6          | 1"-11   | 500               | 3000     | 210                          |                                    |                   |
| 0520                 | 52.0                 | 118.8     | 162.3 | E8         | 1 1/2"-11 | E6          | 1"-11   | 500               | 3000     | 210                          |                                    | 702 9112 104      |

**Dimensions (clockwise rotation shown)**



PI PGP-PGM UK.PMD RH

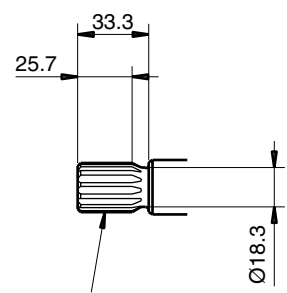
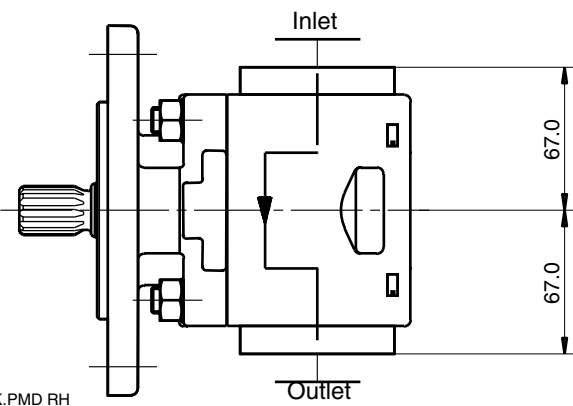
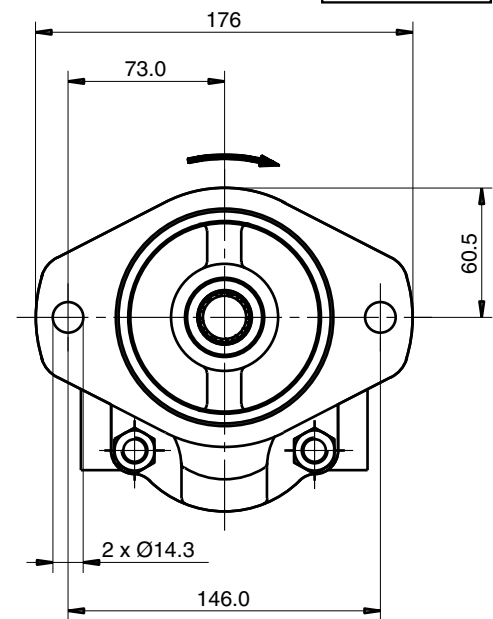
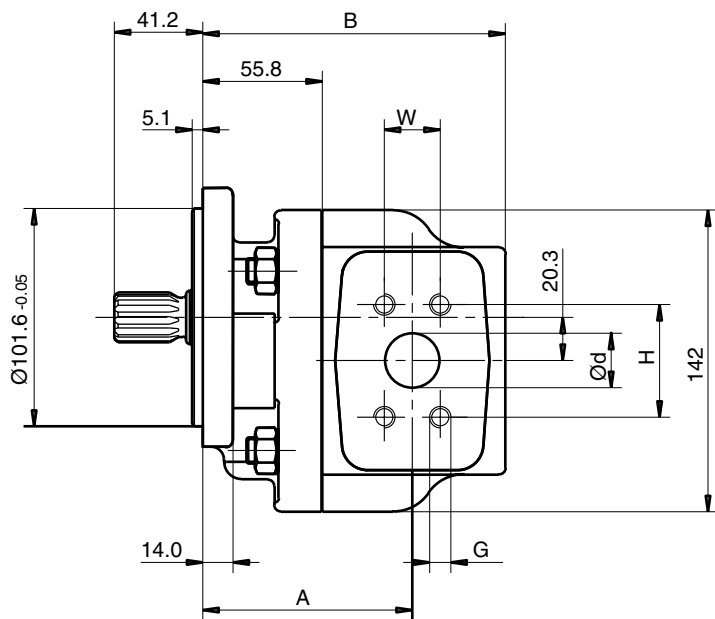
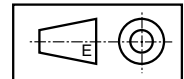


**PGP620 A XXXX Y T1 D7 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement<br>XXXX | cm <sup>3</sup> /<br>rev | Dimension |       | Inlet port |     |     |       |       | Outlet port |    |     |          |          | Speed of rotation |      | Working pressure<br>max. bar | Order number<br>direction of rotation |                 |
|----------------------|--------------------------|-----------|-------|------------|-----|-----|-------|-------|-------------|----|-----|----------|----------|-------------------|------|------------------------------|---------------------------------------|-----------------|
|                      |                          | A         | B     | SS         | d   | G   | H     | W     | SS          | d  | G   | H<br>rpm | W<br>rpm | min.              | max. |                              | clockwise                             | counter-clockw. |
| 0160                 | 16                       | 79.2      | 122.7 | T3         | 1"  | M10 | 52.37 | 26.19 | T2          | ¾" | M10 | 47.63    | 22.23    | 500               | 1500 | 275                          |                                       |                 |
| 0190                 | 19                       | 82.5      | 126.0 | T3         | 1"  | M10 | 52.37 | 26.19 | T2          | ¾" | M10 | 47.63    | 22.23    | 500               | 2300 | 275                          |                                       | 702 9112 062    |
| 0210                 | 21                       | 84.7      | 128.2 | T3         | 1"  | M10 | 52.37 | 26.19 | T2          | ¾" | M10 | 47.63    | 22.23    | 500               | 2000 | 275                          |                                       |                 |
| 0230                 | 23                       | 86.9      | 130.4 | T3         | 1"  | M10 | 52.37 | 26.19 | T2          | ¾" | M10 | 47.63    | 22.23    | 500               | 1900 | 275                          |                                       |                 |
| 0260                 | 26                       | 90.2      | 133.7 | T4         | 1¼" | M10 | 58.72 | 30.17 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 1600 | 275                          |                                       |                 |
| 0290                 | 29                       | 93.5      | 137.0 | T4         | 1¼" | M10 | 58.72 | 30.17 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 3000 | 275                          | 702 9111 151                          |                 |
| 0330                 | 33                       | 97.9      | 141.4 | T4         | 1¼" | M10 | 58.72 | 30.17 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 2600 | 275                          | 702 9111 087                          | 702 9112 070    |
| 0360                 | 36                       | 101.2     | 144.7 | T4         | 1¼" | M10 | 58.72 | 30.17 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 2400 | 250                          |                                       |                 |
| 0370                 | 37                       | 102.3     | 145.8 | T4         | 1¼" | M10 | 58.72 | 30.17 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 2300 | 250                          |                                       |                 |
| 0410                 | 41                       | 106.7     | 150.2 | T5         | 1½" | M12 | 69.82 | 35.71 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 2100 | 220                          | 702 9111 179                          | 702 9112 117    |
| 0440                 | 44                       | 110.0     | 153.5 | T5         | 1½" | M12 | 69.82 | 35.71 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 2000 | 210                          |                                       | 702 9112 037    |
| 0460                 | 46                       | 112.2     | 155.7 | T5         | 1½" | M12 | 69.82 | 35.71 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 1900 | 210                          | 702 9111 117                          |                 |
| 0500                 | 50                       | 116.6     | 160.1 | T5         | 1½" | M12 | 69.82 | 35.71 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 1700 | 210                          | 702 9111 150                          |                 |
| 0520                 | 52                       | 118.8     | 162.3 | T5         | 1½" | M12 | 69.82 | 35.71 | T3          | 1" | M10 | 52.37    | 26.19    | 500               | 1700 | 210                          |                                       | 702 9112 022    |

**Dimensions (clockwise rotation shown)**



SAE "B" spline  
 13 teeth 16/32 DP  
 flat root side fit

PI PGP-PGM UK.PMD RH





| Gear design | Type  |
|-------------|-------|
| Code        | Type  |
| P           | Pump  |
| M           | Motor |

| Code | Unit          |   |
|------|---------------|---|
|      | Pump          | Motor   |
| A    | Single unit   | Standard motor with drain port                    |
| B    | Multiple unit | Standard motor w. two checks                      |
| C    | —             | Standard motor w. one anti-cavitation check (ACC) |

| Displacement |      |
|--------------|------|
| Code         | ccm  |
| 0300         | 30.0 |
| 0350         | 35.0 |
| 0400         | 40.0 |
| 0450         | 45.0 |
| 0500         | 50.0 |
| 0550         | 55.0 |
| 0600         | 60.0 |
| 0650         | 65.0 |
| 0700         | 70.0 |
| 0750         | 75.0 |
| 0800         | 80.0 |

| Code | Rotation          |
|------|-------------------|
| C    | Clockwise         |
| A    | Counter-clockwise |
| B    | Bi-directional    |

| Code             | Shaft                                 |
|------------------|---------------------------------------|
| D1 <sup>2)</sup> | 13T, 16/32DP, 41.2L, SAE "B" spline   |
| E1 <sup>2)</sup> | 15T, 16/32DP, 46.0L, SAE "B-B" spline |
| E4 <sup>3)</sup> | 14T, 12/24DP, 55.6L, SAE "C" spline   |

<sup>2)</sup> Only used with flange A3, H3.  
<sup>3)</sup> Only used with flange A4, K3.

<sup>1)</sup> Code of drain line for PGM640 only.  
**2 Options:**  
G4 = 1/4"-19 BSP rear drain.  
B1 = no drain, unit code must be "B" or "C".

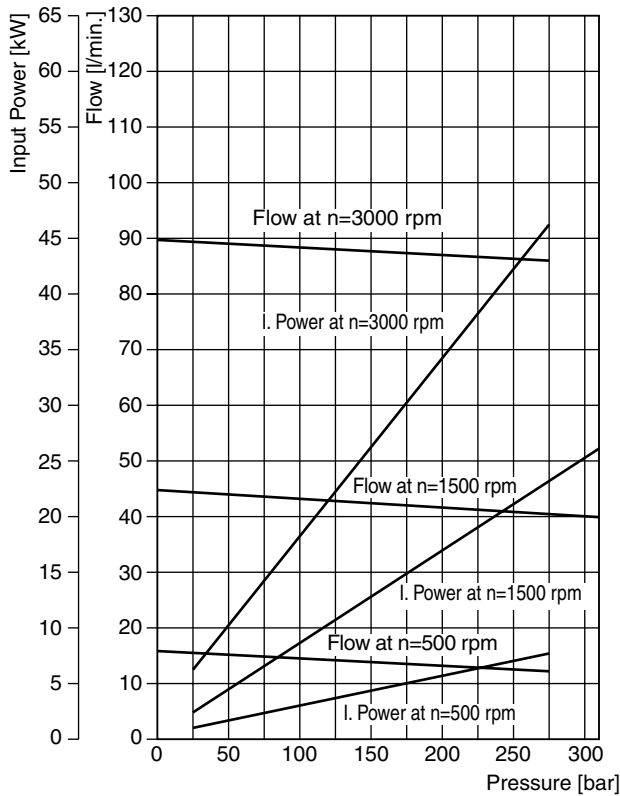
| Code | Port options (pumps)  |
|------|---|
| E8E7 | 1½" -11 BSP Thread / 1¼" -11 BSP Thread rec. from 30 ccm to 50 ccm                          |
| T4T3 | 1¼" - M10 SAE metr. split flange 1" - M10 SAE split flange rec. from 30 ccm to 40 ccm       |
| T5T3 | 1½" - M12 SAE metr. split flange 1" - M10 SAE split flange rec. from 45 ccm to 60 ccm       |
| T6T4 | 2" - M12 SAE metr. split flange 1¼" - M10 SAE metr. split flange rec. from 65 ccm to 80 ccm |
| Code | Port options (motors)   |
| E7E7 | 1¼"-11 BSP thread/ 1¼"-11 BSP thread  |

Example: T5 = inlet port  
T3 = outlet port

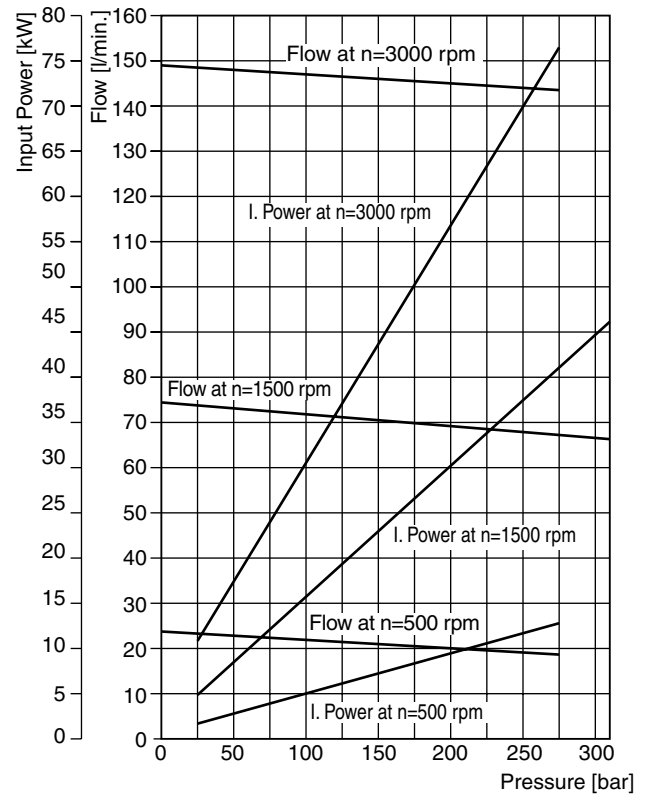
| Code | Shaft seal         |
|------|--------------------|
| X    | No seal            |
| N    | NBR                |
| V    | FPM                |
| T    | PTFE (motors only) |

| Code | Flange  |
|------|---|
| A3   | 89.8x89.8 - Ø101.06 4 bolt square flange        |
| A4   | 114.5x114.5 - Ø127 SAE "C" 4 bolt square flange |
| H3   | 146.1 - Ø101.06 SAE "B" 2 bolt flange           |
| K3   | 181.0 - Ø127 SAE "C" 2 bolt flange              |

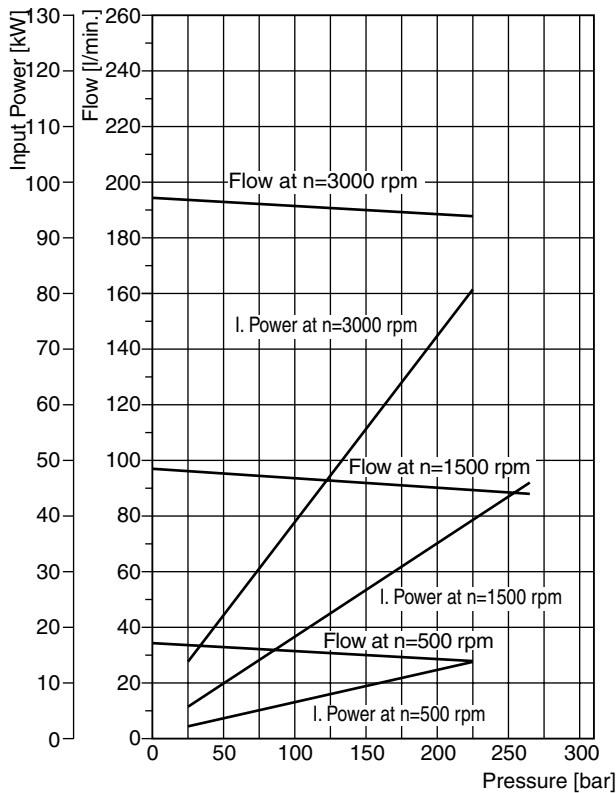
**PGP640 - 30.0 CC**



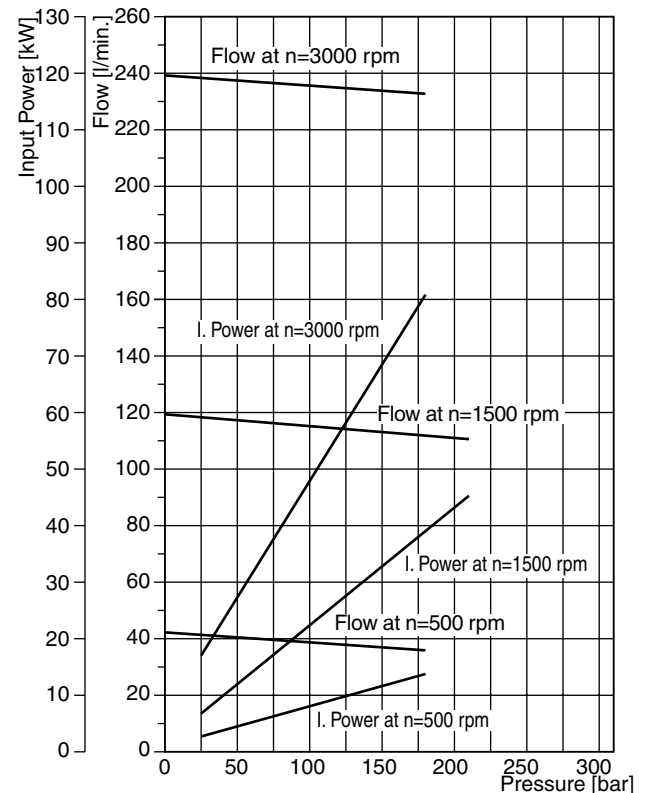
**PGP640 - 50.0 CC**



**PGP640 - 65.0 CC**



**PGP640 - 80.0 CC**



Fluid temperature: 45 °C ± 2K ; Viscosity: 36mm<sup>2</sup>/s ; Inlet pressure: 0.9 + 0.1 bar absolute

PI PGP-PGM UK.PMD RH

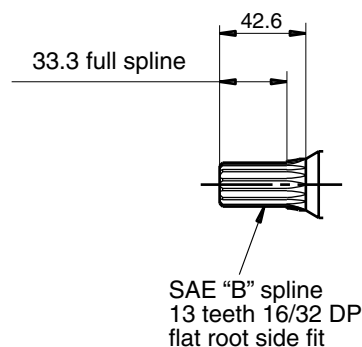
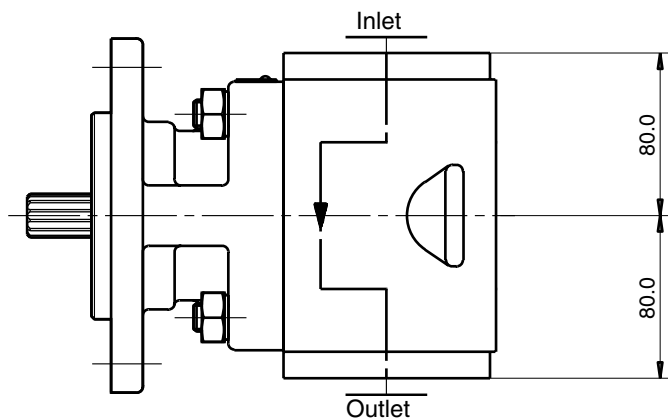
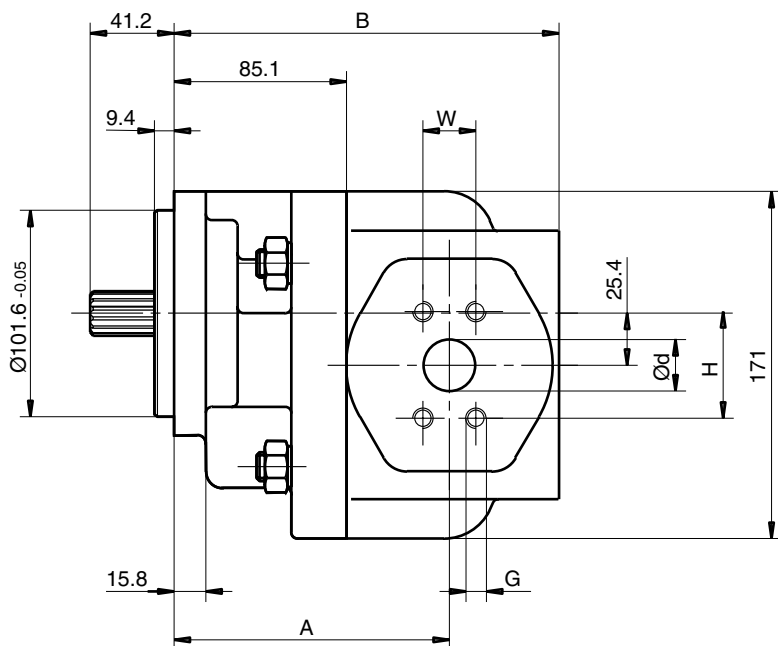
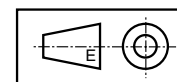


**PGP640 A XXXX Y D1 H3 N SS PP B1 B1**

“Y” = C (clockwise rotation)  
 = A (counter-clockwise rotation)

| Displacement<br>XXXX cm <sup>3</sup> /<br>rev | Dimension |       | Inlet port |    |        |     |       | Outlet port |    |        |     |       | Speed of rotation |          | Working pressure<br>max. bar | Order number<br>direction of rotation |                   |              |
|---|-----------|-------|------------|----|--------|-----|-------|-------------|----|--------|-----|-------|-------------------|----------|------------------------------|---------------------------------------|-------------------|--------------|
|   | A         | B     | SS         | d  | G      | H   | W     | PP          | d  | G      | H   | W     | min. rpm          | max. rpm |                              | clockwise                             | counter-clockwise |              |
| 0300  | 30        | 128.6 | 176.1      | T4 | 1-1/4" | M10 | 58.72 | 30.17       | T3 | 1"     | M10 | 52.37 | 26.19             | 500      | 3000                         | 310                                   |                   |              |
| 0350  | 35        | 128.6 | 176.1      | T4 | 1-1/4" | M10 | 58.72 | 30.17       | T3 | 1"     | M10 | 52.37 | 26.19             | 500      | 3000                         | 310                                   |                   |              |
| 0400  | 40        | 131.8 | 182.7      | T4 | 1-1/4" | M10 | 58.72 | 30.17       | T3 | 1"     | M10 | 52.37 | 26.19             | 500      | 3000                         | 310                                   | 704 9111 055      | 704 9112 020 |
| 0450  | 45        | 131.8 | 182.7      | T5 | 1-1/2" | M12 | 69.82 | 35.71       | T3 | 1"     | M10 | 52.37 | 26.19             | 500      | 3000                         | 310                                   |                   |              |
| 0500  | 50        | 135.6 | 189.3      | T5 | 1-1/2" | M12 | 69.82 | 35.71       | T3 | 1"     | M10 | 52.37 | 26.19             | 500      | 3000                         | 310                                   | 704 9111 016      |              |
| 0550  | 55        | 135.6 | 189.3      | T5 | 1-1/2" | M12 | 69.82 | 35.71       | T3 | 1"     | M10 | 52.37 | 26.19             | 500      | 3000                         | 310                                   | 704 9111 050      | 704 9112 019 |
| 0600  | 60        | 138.4 | 195.8      | T5 | 1-1/2" | M12 | 69.82 | 35.71       | T3 | 1"     | M10 | 52.37 | 26.19             | 500      | 3000                         | 290                                   | 704 9111 059      |              |
| 0650  | 65        | 138.4 | 195.8      | T6 | 2"     | M12 | 77.77 | 42.88       | T4 | 1-1/4" | M10 | 58.72 | 30.17             | 500      | 3000                         | 265                                   | 704 9111 040      | 704 9112 022 |
| 0700  | 70        | 142.2 | 203.2      | T6 | 2"     | M12 | 77.77 | 42.88       | T4 | 1-1/4" | M10 | 58.72 | 30.17             | 500      | 3000                         | 245                                   |                   |              |
| 0750  | 75        | 142.2 | 203.2      | T6 | 2"     | M12 | 77.77 | 42.88       | T4 | 1-1/4" | M10 | 58.72 | 30.17             | 500      | 3000                         | 225                                   |                   |              |
| 0800  | 80        | 142.2 | 203.2      | T6 | 2"     | M12 | 77.77 | 42.88       | T4 | 1-1/4" | M10 | 58.72 | 30.17             | 500      | 3000                         | 210                                   | 704 9111 045      |              |

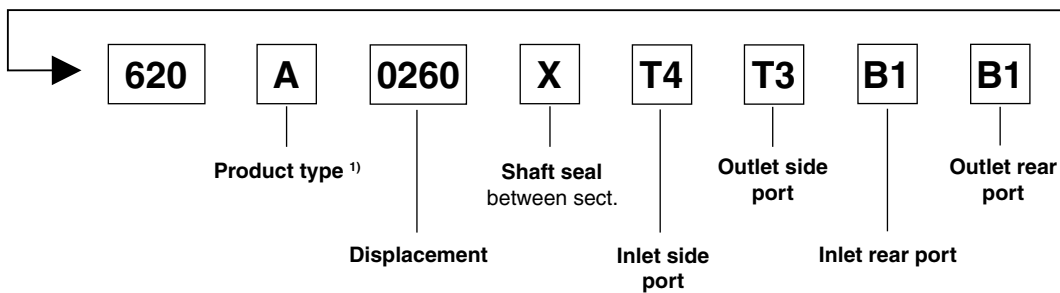
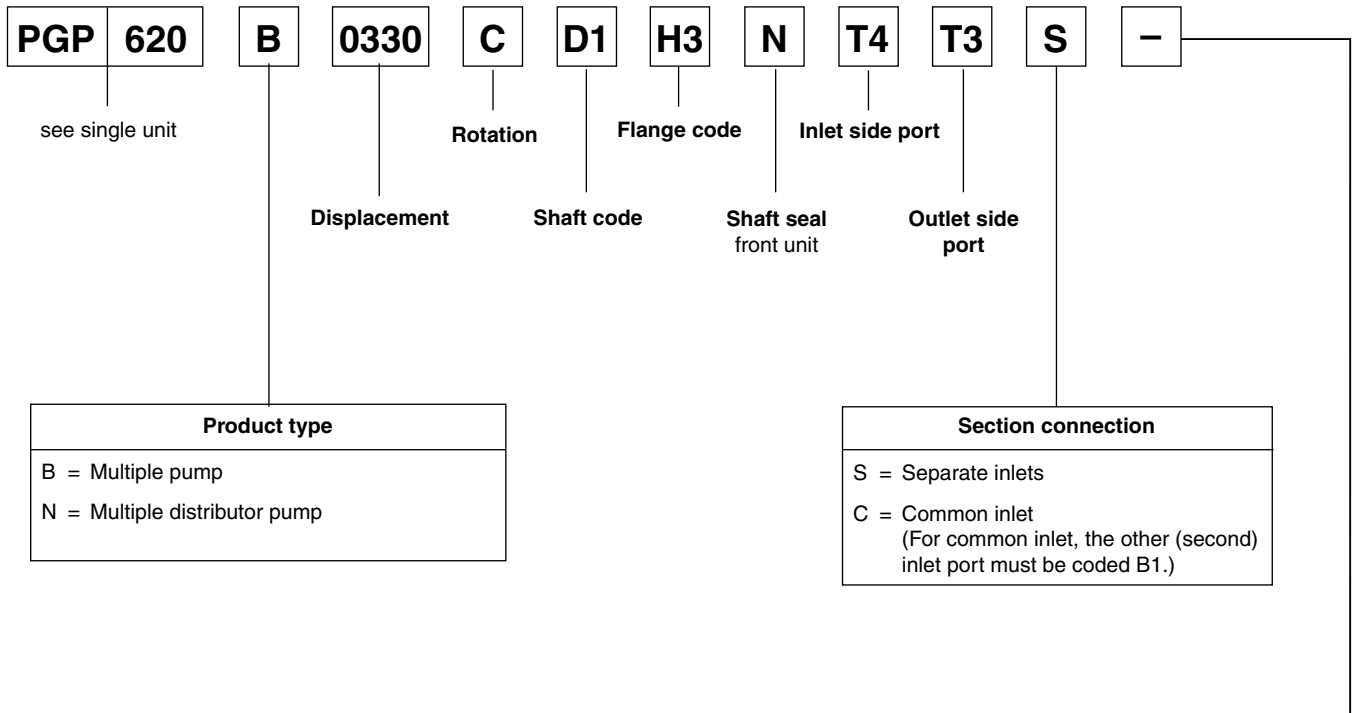
**Dimensions (clockwise rotation shown)**



PI PGP-PGM UK.PMD RH



**Code for multiple units**



<sup>1)</sup> Further B possible for triple units

This coding system can be used for all pumps series 600.



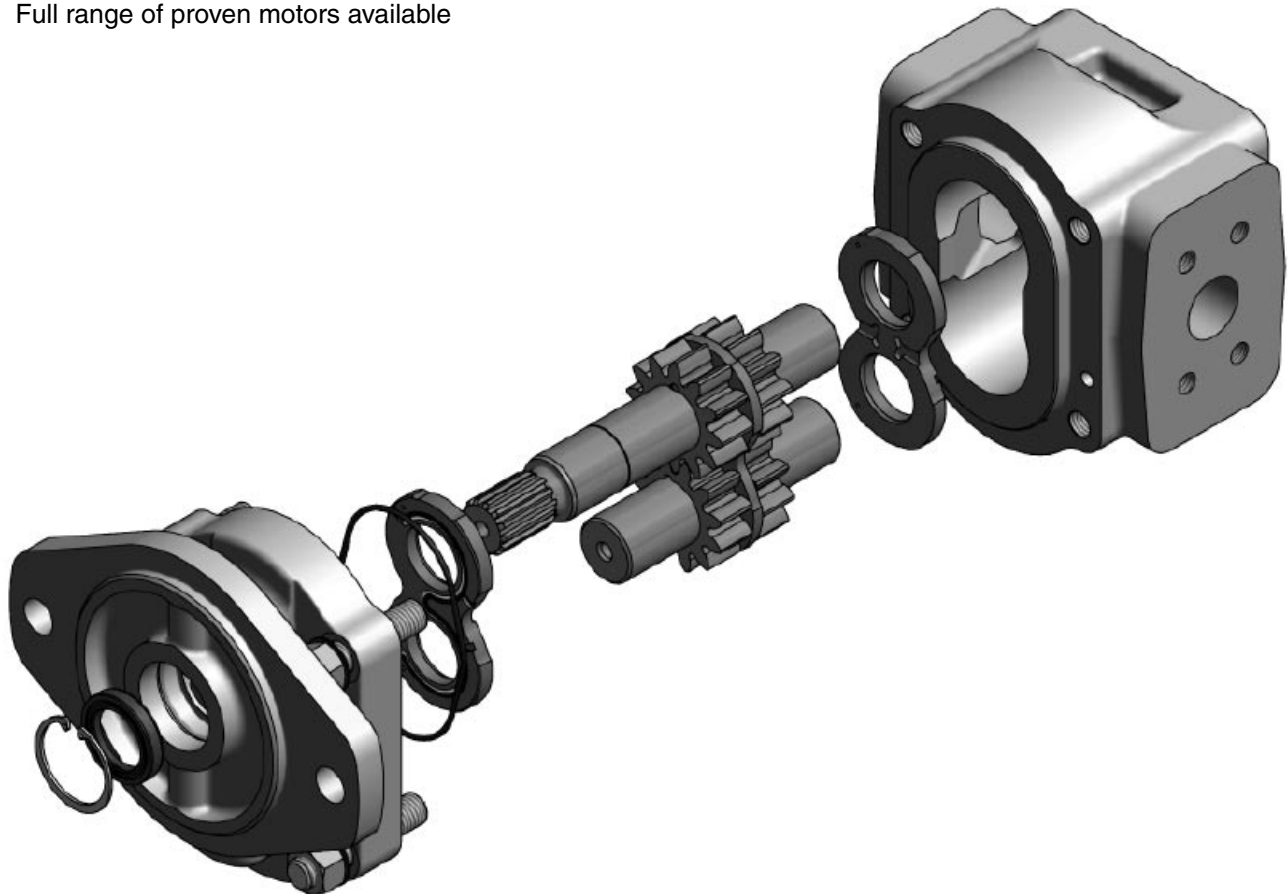
**Quality pays**

Aluminium or cast-iron bodied 'split-gear' gear pumps are designed for high pressure and speed ratings together with high efficiency and optimised noise levels.

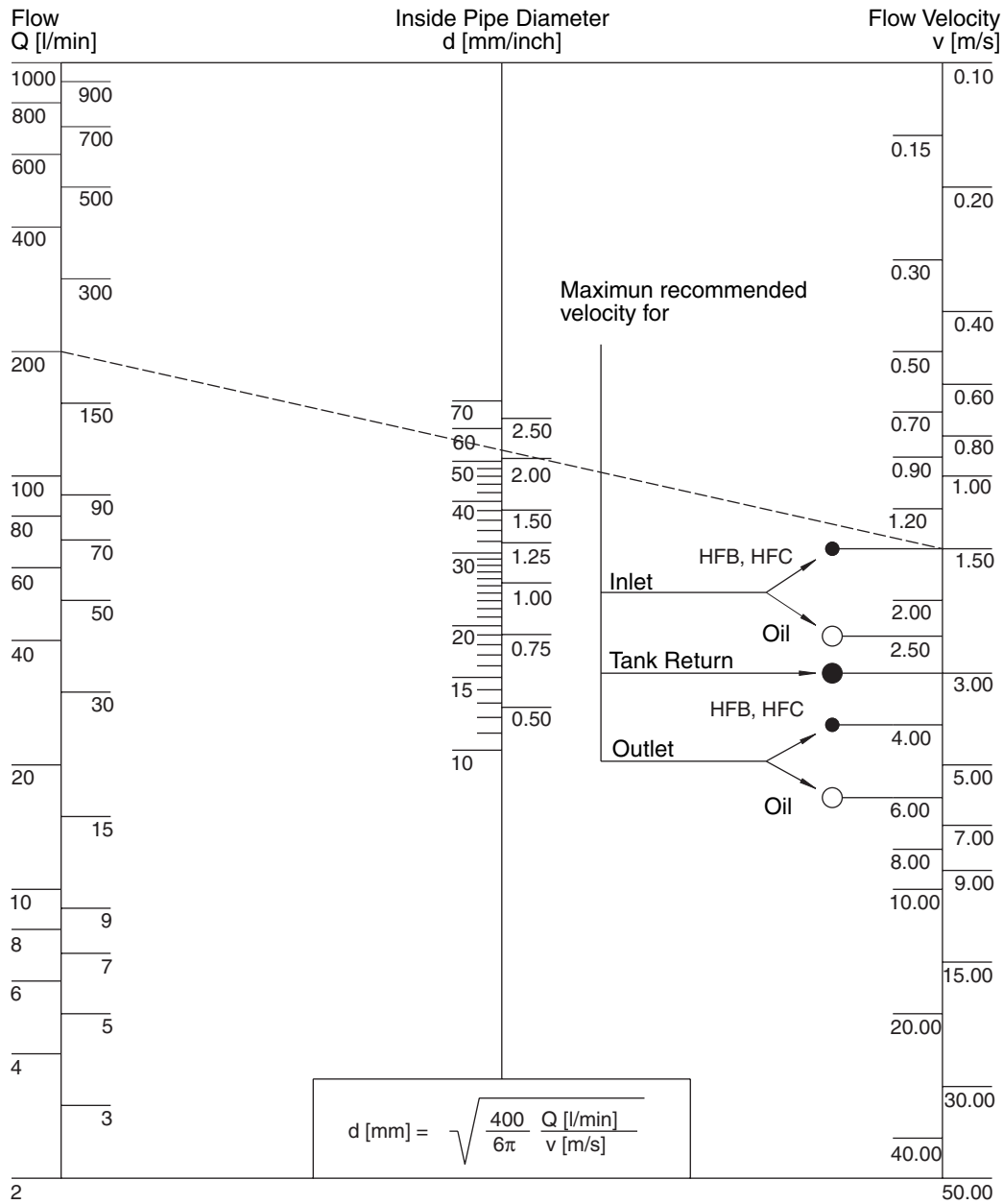
The flow pulsation is considerably decreased by phased dual element gear sets, resulting in models with clearly lower noise levels. Common inlet available for multiple section units.

**Series PGP511 / PGP620 (on request)**

- Up to 250 bar constant operation possible due to high-quality materials
- Low noise levels even in constant operation
- High efficiency thanks to precise manufacturing
- Complete product range for huge variety of applications
- Common inlet ports for double and triple pumps
- Wide choice of integrated valves, e.g. load-sensing and solenoid types
- Full range of proven motors available



**Nomograph for Pipe Velocity**



**Shaft loads PGP/PGM500**

| Code | Description                               | Type       | Torque rating [Nm] |            |            |            |
|------|---|------------|--------------------|------------|------------|------------|
|      |   |            | PGP/PGM503         | PGP/PGM505 | PGP/PGM511 | PGP/PGM517 |
| H1   | Ø10.0, 3.0 key, no thread, 36L            | parallel   | 30                 | —          | —          | —          |
| P2   | Ø9.95, 8.8L, 2.4 key, M6                  | taper 1:8  | 30                 | —          | —          | —          |
| V1   | 5 x 6.5 long shaft w/o coupling           | tang drive | 20                 | —          | —          | —          |
| V2   | 5 x 4.5 short shaft w/o coupling          | tang drive | 20                 | —          | —          | —          |
| A1   | 9T, 16/32DP, 32L, SAE "A"                 | splined    | —                  | 108        | —          | —          |
| J1   | Ø12.7, 3.2 key, no thread, 38L            | parallel   | —                  | 43         | —          | —          |
| K1   | Ø15.88, 4.0 key, no thread, 32L, SAE "A"  | parallel   | —                  | 85         | —          | —          |
| Q2   | Ø14.25, 5.5L, 3.0 key, M10x1              | taper 1:8  | —                  | 68         | —          | —          |
| A1   | 9T, 16/32DP, 32L, SAE "A"                 | splined    | —                  | —          | 86         | —          |
| C1   | 11T, 16/32DP, 38.2L, SAE 19-4             | splined    | —                  | —          | 184        | —          |
| F1   | 9T, B17x14.23L, DIN 5482                  | splined    | —                  | —          | 101        | —          |
| K1   | Ø15.88, 4.0 key, no thread, 32L, SAE "A"  | parallel   | —                  | —          | 75         | —          |
| L6   | Ø19.05, 4.8 key, no thread, 32L, SAE 19-1 | parallel   | —                  | —          | 145        | —          |
| S1   | Ø17.0, 7.7L, 3.0 key, M12x1.5             | taper 1:5  | —                  | —          | 193        | —          |
| S2   | Ø16.65, 12.0L, 3.2 key, M12x1.5           | taper 1:8  | —                  | —          | 198        | —          |
| S4   | Ø16.65, 12.0L, 4.0 key, M12x1.5           | taper 1:8  | —                  | —          | 198        | —          |
| D1   | 13T, 16/32DP, 41.2L, SAE "B"              | splined    | —                  | —          | —          | 345        |
| M1   | Ø22.2, 6.3 key, no thread, 41.2L, SAE "B" | parallel   | —                  | —          | —          | 251        |
| M2   | Ø25.4, 6.3 key, no thread, 46L, SAE "B-B" | parallel   | —                  | —          | —          | 395        |
| T1   | Ø21.59, 11.2L, 4.0 key, M14x1.5           | taper 1:8  | —                  | —          | —          | 250        |
|      | Connecting shaft for multiple units       |            | 20                 | 36         | 110        | 228        |

**Shaft loads PGP/PGM600**

| Code | Description                         | Type        | Torque rating 620 [Nm] | Torque rating 640 [Nm] |
|------|-------------------------------------|-------------|------------------------|------------------------|
| D1   | 13T, 16/32 DP, 41.2L, SAE "B"       | splined     | 272                    | 328                    |
| E1   | 15T, 16/32 DP, 46.0L, SAE "B-B"     | splined     | 460                    | 503                    |
| E4   | 14T, 12/24 DP, 5.6L, SAE "C"        | splined     | —                      | 960                    |
| T1   | Ø21.59, 11.2L, 4.0key, M14x1.5      | tapered 1:8 | 218                    | —                      |
|      | Connecting shaft for multiple units |             | 228                    | 407                    |

**Formula to calculate shaft load**

$$\text{Torque [Nm]} = \frac{\text{Displacement [cm}^3\text{/rev]} \cdot \text{Pressure [bar]}}{57.2}$$

**Hydraulic fluids**

| Type            | Fluid composition                                    | Max. working pressure [bar] | Max. speed [min <sup>-1</sup> ] | Temperature                     | Seal       |
|-----------------|--|-----------------------------|---------------------------------|---------------------------------|------------|
| Hydraulic fluid | Mineral oil based on hydraulic fluid acc. to ISO/DIN | See Technical Data          | See Technical Data              | -15 ... +80°C<br>-15 ... +120°C | NBR<br>FPM |
| HFB             | Water-in-oil emulsion 40/60                          | 140                         | 1500                            | +2 ... +65°C                    | NBR        |
| HFC             | Water-glycol 40/60                                   | 140                         | 1500                            | -15 ... +65°C                   | NBR        |
| HFD             | Phosphate ester                                      | 140                         | 1500                            | -10 ... +80°C                   | FPM        |

**Flanges for suction and discharge ports**

Please refer to Parker Bulletin 4040/UK.

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