



High Pressure Gear Pump (HGP) Chemical Industrial Pump (CIP)

"All PSI products and components are proudly designed and manufactured in the USA."



Features Include

- Compact / low profile design
- Leak-free operation
- All parts manufactured to ISO-9002 standards
- Special processing of material up to 850° F
- Heavy duty construction
- Through hardened tool steel gears

The Chemical Industrial Pump is a universal, precision gear pump designed for a wide variety of processes including chemical, industrial, injection and prepolymer applications. Precision ground gears provide precise metering and constant pressure (1,000 ΔP). PSI can provide complete system assemblies including the gear pump, motor, reducer, coupling, universal drive shaft, base plate/cart, and drive controls.

The PSI High Pressure Gear Pump (HGP) is ideal for the most demanding extrusion processes. The HGP is capable of processing highly viscous, filled materials and can operate at pressures up to 10,000 psi (7,500 ΔP). The pump system is mounted between the extruder and the die head to eliminate any process variations initiating in the extruder. The HGP will accurately meter polymer and pressure to the die, providing consistent output, precise gauge control and ultimately a superior end product. PSI manufactures complete pump systems, controls and all interfacing equipment, which can be mounted on a custom designed support stand, or supplied as individual components.

Benefits

- More accurate gauge control
- Lower processing temperatures
- Lower energy consumption and shear stress
- Faster start-ups
- Reduced scrap
- Increased life on extruder screw & barrel

Applications

- Blown film and cast film
- Sheet
- Coating
- Pipe and profile
- Pelletizing (strand and underwater)
- Compounding
- Wire and cable
- Tubing & profile
- Lab lines
- High pressures

Exclusive applications for CIP

- Solvents
- Oligomers
- Prepolymers
- Epoxy resins
- Hot-melt adhesive
- Acids
- Hardeners
- Silicones
- Oils
- Plasticizers
- Metering
- Lubrication

Technical Data For High Pressure Gear Pump

| Model HGP | Pump Output (lbs/hr) (kg/hr) | Capacity at SG = 1 (pph/rpm) (kg/rpm) | CC/REV | Ext Size (in) (mm) | Weight (lbs) (kg) |
|------------------------------|-----------------------------------|--|--------|-------------------------|------------------------|
| Min 5 RPM Max 100 RPM | | | | | |
| 28/12 | 2.66-53.2 1.21-24.1 | .532 .241 | 4.03 | 1 25 | 18 8.2 |
| 28/20 | 4.82-96.4 2.19-43.7 | .964 .437 | 7.30 | 1 25 | 20 9.1 |
| 38/23 | 13.3-266 6.03-121 | 2.66 1.21 | 20.6 | 2.5 65 | 30 14 |
| 45/27 | 23.1-462 10.5-210 | 4.62 2.10 | 34.8 | 3.5 90 | 40 18 |
| 60/36 | 45.6-912 20.7-414 | 9.12 4.14 | 69.0 | 4.5 114 | 100 45 |
| 70/45 | 74.5-1,490 33.8-676 | 14.9 6.76 | 113 | 4.5 114 | 150 68 |
| 76/50 | 122.5-2,450 55.6-1,111 | 24.5 11.1 | 185 | 6 150 | 185 84 |
| 90/55 | 151-3,020 68.5-1,370 | 30.2 13.7 | 227 | 6-8 150-200 | 225 102 |
| Min 5 RPM Max 50 RPM | | | | | |
| 110/70 | 300.5-3,005 136-1,363 | 60.1 27.3 | 455 | 8 200 | 390 177 |
| 110/90 | 392.5-3,925 178-1,780 | 78.5 35.6 | 596 | 8 200 | 400 181 |
| 150/75 | 730-7,300 331-3,311 | 146 66.2 | 1,108 | | 1,053 478 |
| 150/100 | 975-9,750 442-4,423 | 195 88.5 | 1,477 | | 1,114 505 |

For larger sizes and special applications contact our PSI sales office

Technical Data For Chemical Industrial Pump

| Model CIP | Pump Output (lbs/hr) (kg/hr) | Capacity at SG = 1 (pph/rpm) (kg/rpm) | CC/REV | Ext Size (in) (mm) | Weight (lbs) (kg) |
|--------------------------------|-----------------------------------|--|--------|-------------------------|------------------------|
| Min 100 RPM Max 300 RPM | | | | | |
| 12/1.5 | .75-4 .340-1.81 | .013 .006 | .11 | .75 20 | 5 2.27 |
| 12/3 | 1.75-7.75 .794-3.52 | .026 .012 | .21 | .75 20 | 6 2.72 |
| 12/6 | 3.75-15.25 1.70-6.92 | .054 .024 | .43 | .75 20 | 7 3.18 |
| 12/12 | 7.5-30.5 3.40-13.8 | .109 .049 | .85 | .75 20 | 7 3.18 |
| 28/6 | 15-75 6.80-34.0 | .272 .123 | 2.06 | 1 25 | 16 7.26 |
| 28/12 | 35-150 15.9-68.0 | .532 .241 | 4.03 | 1 25 | 18 8.16 |
| 28/20 | 65-275 29.5-125 | .964 .437 | 7.30 | 1 25 | 20 9.07 |
| 28/28 | 95-400 43.1-181 | 1.36 .617 | 10.3 | 2 50 | 22 9.98 |
| 38/38 | 280-1,125 127-510 | 4.42 2.0 | 33.8 | 2.5 65 | 40 18 |
| 45/45 | 550-2,250 249-1,021 | 7.7 3.5 | 58.2 | 3.5 90 | 62 28 |
| 60/60 | 1,050-4,200 476-1,905 | 15.2 6.9 | 115 | 4.5 114 | 125 57 |
| 70/70 | 1,600-6,400 726-2,903 | 23.2 10.5 | 176 | 4.5 114 | 180 82 |
| 76/76 | 2,500-10,350 1,134-4,695 | 37.3 16.9 | 283 | 6 150 | 195 88 |
| 90/90 | 3,600-14,500 1,633-6,577 | 51.8 23.5 | 392 | 6-8 150-200 | 245 111 |
| 110/110 | 6,700-26,800 3,039-12,156 | 96.1 43.6 | 727 | 8 200 | 410 186 |
| 150/75 | 10,100-40,500 4,581-18,371 | 146 66.2 | 1,108 | | 1,053 478 |
| 150/100 | 13,500-54,500 6,123-24,721 | 195 88.5 | 1,477 | | 1,114 505 |
| 150/125 | 17,000-68,000 7,711-30,845 | 244 111 | 1,846 | | 1,184 537 |
| 150/150 | 20,000-81,000 9,072-36,741 | 293 133 | 2,215 | | 1,250 567 |