Technical Information

Performance Data
Series PVV 125, 142 Pressure Compensated, Variable Volume, Piston Pumps

Features
- High Overall Efficiency
- Low Noise Levels
- Good Suction Characteristics
- Mineral Oils and, With Restrictions, Water Glycol Fluids. Consult Factory for Special Fluids
- Sleeve Bearing Construction
- Shock Suppressor
- Built In Automatic Airbleed
- Thru-Shaft Design

Controls
- Standard Remote Control Compensator
- Maximum Flow Limiter
- Remote Compensator
- Load Sensing
- Electrohydraulic Flow and/or Pressure
- Torque Control

Specifications
Flow Ratings*: PVV 125 — 59 GPM (223.6 LPM)
PVV 142 — 66 GPM (250.1 LPM)
*At 100 PSI (7 Bar) and 1800 RPM

Pressure Ratings: PVV 125 — 2500 PSI (172 Bar)
Continuous
PVV 142 — 2000 PSI (138 Bar)
Continuous

Speed Ratings: PVV 125 — 1200 to 1800 RPM
PVV 142 — 800 to 1800 RPM

Mounting: SAE — 2 Bolt Flange Mount
(Optional Foot Mount Available)

Housing Material: Cast-Iron

Schematic Symbol
(Basic Pump)

Installation Data
Inlet Conditions: 7 In. Hg. Max. Vacuum Condition
(At 1200 RPM)
5 In. Hg. Max. Vacuum Condition
(At 1800 RPM)

Operating Temperature Range: −40°F (−40°C) to
160°F (71°C)

Filtration: Maintain SAE Class 4

See Installation Section of this catalog for specific recommendations pertaining to system cleanliness, fluids, start-up, inlet conditions, shaft alignment, drain line restrictions and other important factors relative to the proper installation and use of these pumps.

Quick Reference Data Chart

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Theoretical Displacement CU. IN/REV. (CM³/REV.)</th>
<th>Delivery GPM (LPM) @ 100 PSI/7 Bar &amp; 1800 RPM</th>
<th>Operating Speed RPM (Maximum)</th>
<th>Pressure PSI (Bar) (Maximum)</th>
<th>Input Horsepower @ Max. PSI &amp; 1800 RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVV 125</td>
<td>7.63 (125)</td>
<td>59 (223.8)</td>
<td>1800</td>
<td>2500 (172)</td>
<td>95</td>
</tr>
<tr>
<td>PVV 142</td>
<td>8.67 (142)</td>
<td>66 (250.1)</td>
<td>1800</td>
<td>2000 (138)</td>
<td>87</td>
</tr>
</tbody>
</table>

For additional information – call your local Parker Fluidpower Motion & Control Distributor.
Performance Data

Based On Oil Temperature of 110°F. (43°C.) (130 SSU) Atmospheric Inlet

**1200 RPM PVV 125**

**1800 RPM PVV 142**

**1800 RPM PVV 125**

NOTE: The efficiencies and data in the graph are nominal values and good only for pumps running 1800 RPM and stroked to maximum. To calculate approximate horsepower for the other conditions, use the following formula:

\[
\text{HP} = \left[ \frac{Q \times \text{PSI}}{1714} \right] + (\text{CHp}) \times \frac{N}{1800}
\]

Actual GPM is directly proportional to drive speed and maximum volume setting. Flow loss, however, is a function of pressure only.

WHERE:

- \( Q \) = Actual Output Flow In GPM
- \( \text{PSI} \) = Pressure At Pump Outlet
- \( \text{CHp} \) = Input Horsepower @ Full Compensation @ 1800 RPM (from graph read at operating pressure)
- \( N \) = Drive Speed In RPM

Hydraulic Pump/Motor Division
Otsego, MI 49078
Performance Data — Horsepower Control Option (Code “H”)

Typical Input Horsepower Required & Flow Characteristics vs. Pressure
(At Various HP Limiter Settings)

PVV 125

PVV 142
Technical Information

Variable Volume Vane Pumps
Series PVV 125/142

Dimensions — Standard Remote Compensated Pump
(Rear Ported)

Millimeter equivalents for inch dimensions are shown in (*).
Variable Volume Vane Pumps
Series PVV 125/142

Dimensions — Thru-Shaft Pump
Millimeter Equivalents For Inch Dimensions Are Shown in (* *)

OUTLET

MOUNTING SURFACE X

INLET

MOUNTING SURFACE X

PVV 142 Side Ported & Rear Mount Variations Shown
1. See standard pump for dimensions not shown.
2. These variations correspond to SAE standards for 2 bolt, short straight shaft, flange mount pumps.
3. Compensator not shown for clarity of pump.

<table>
<thead>
<tr>
<th>Variation</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>6AH</td>
<td>12.04 (305.82)</td>
<td>4.188 (106.38)</td>
<td>3.251/3.252 (82.58/82.60)</td>
<td>3/8-16 UNC-2B Thd. Thru</td>
<td>2.67 (87.82)</td>
</tr>
<tr>
<td>6B</td>
<td>12.54 (318.52)</td>
<td>5.750 (146.06)</td>
<td>4.001/4.002 (101.63/101.65)</td>
<td>1/2-13 UNC-2B Thd. Thru</td>
<td>3.02 (76.71)</td>
</tr>
<tr>
<td>6C</td>
<td>13.54 (343.92)</td>
<td>7.125 (180.96)</td>
<td>5.001/5.002 (127.03/127.05)</td>
<td>5/8-11 UNC-2B Thd. Thru</td>
<td>4.24 (107.70)</td>
</tr>
<tr>
<td>6D</td>
<td>13.54 (343.92)</td>
<td>9.000 (228.60)</td>
<td>6.001/6.002 (152.43/152.45)</td>
<td>3/4-10 UNC-2B Thd. Thru</td>
<td>4.06 (103.12)</td>
</tr>
<tr>
<td>6BH</td>
<td>12.54 (318.52)</td>
<td>5.750 (146.06)</td>
<td>4.001/4.002 (101.63/101.65)</td>
<td>1/2-13 UNC-2B Thd. Thru</td>
<td>3.41 (86.61)</td>
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Variable Volume Piston Pumps
Series PVV 125/142

Technical Information

Dimensions — Electrohydraulic Pump
Millimeter equivalents for inch dimensions are shown in (*)

NOTES:
1. Consult factory for information relative to pump option selection and additional components required for desired pump function.
2. For electrohydraulic flow and pressure control of one or two pumps make electrical connections per Fig. IV. When one pump is used, omit connections to pump #2 feedback.
3. For electrohydraulic flow only, eliminate pressure command signal and place jumper between "Press CMD" and "+10V" terminals (compensating pressure will be controlled by manual adjustment on the remote compensator).
4. For electrohydraulic pressure only, eliminate volume command signal, and place jumper between "VOL CMD" and "+10V" terminals or use 801179 pressure driver card.
5. Figures I thru III show nominal input vs. output relationships. The actual values will vary with component tolerances. Full volume range will be realized with 0 to 7 volts. Full pressure range will be realized with 0 to 8 volts, or 0-600MA.

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Hydraulic Pump/Motor Division
Otsego, MI 49078
Variable Volume Vane Pumps
Series PVV 125/142

Technical Information

Dimensions — Accessories
Millimeter Equivalents For Inch Dimensions Are Shown In (**)

Foot Mounting Bracket
Part No. 800407

Two Pump Mount Bolts
Part No. 800447

Flange Kits
All Flange Kits Include Flange, O-Rings and Cap Screws. See Order Sheet For Part Numbers.

For Inlet Port
2-1/2" SAE

For Outlet Port
2" SAE

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