Performance Information
Series PAVC65 Pressure Compensated, Variable Volume, Piston Pump

Features
- High Strength Cast-Iron Housing
- Built-In Supercharger
- High Speed Capability - 3000 RPM
- Two Piece Housing for Ease of Service
- Cartridge Type Controls - Field Changeable
- Replaceable Bronze Clad Port Plate
- Airbleed Standard for Quick Priming
- Hydrodynamic Cylinder Barrel Bearing
- Full Pressure Rating on Water Glycol Fluids
- Filtered and/or Cooled Drain Line Capable - 7 bar (100 PSI) Maximum

Controls
- Pressure Compensation
- Remote Pressure Compensation
- Load Sensing
- Power (Torque) Limiting
- Power Limiting and Load Sensing
- Adjustable Maximum Volume Stop
- Electrohydraulic Pressure
- Electrohydraulic Flow and Pressure (Servo Control)
- Low Pressure Standby

Schematic Symbol
(Basic Pump)

Weight and Package Size

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight Kg (Lb)</th>
<th>Length From Mounting Face in CM (Inches)</th>
<th>Height in CM (Inches)</th>
<th>Width in CM (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAVC65</td>
<td>28 (62)</td>
<td>22.40 (8.82)</td>
<td>18.84 (7.42)</td>
<td>20.32 (8.00)</td>
</tr>
</tbody>
</table>

Quick Reference Data Chart

<table>
<thead>
<tr>
<th>Pump Model</th>
<th>Displacement CM³/REV (IN³/REV)</th>
<th>Pump Delivery @ 21 bar (300 PSI) in LPM (GPM)</th>
<th>'Approximate Noise Levels dB(A) @ Full Flow 1800 RPM (1200 RPM)</th>
<th>Input Power At 1800 RPM, Max. Displacement &amp; 207 bar (3000 PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAVC65</td>
<td>65 (4.0)</td>
<td>78.7 (20.8)</td>
<td>77 (75)</td>
<td>43.1 kw (57.8 hp)</td>
</tr>
</tbody>
</table>

* Since many variables such as mounting, tank style, plant layout, etc., effect noise levels, it cannot be assumed that the above readings will be equal to those in the field. The above values are for guidance in selecting the proper pump. Noise levels are A-weighted, mean sound pressure levels at 1 meter from the pump, measured and recorded in accordance with applicable ISO and NFPA standards.
Variable Displacement Piston Pumps
Series PAVC65

Ordering Information

Multiple Pumps

PAVC

Pump Axial
Displacement
Bearing Option
Shaft
Outlet
Inlet
Rotation
Differential Control Option
Volume Stop
Control Options
Seals
Paint

Code
Multiple Pumps
Omit
Single Pump
Factory Mounted to Rear of Another Pump

Code
Bearing Option
Omit
Single Piece Shaft
9*
Dual Bearing

* For applications where side loading may be experienced. Max. side load = 192.8 kg (425 lbs).

Typical Applications:
Belt/chain drive
Universal joint drive
Massive couplings
Foot mount installations

Code
Shaft Option
Omit
1-1/4” Keyed (SAE C)
B
14T Spline (SAE C)

Code
Port
Omit
Str. Thd.
Top
SAE/Inch

Code
Outlet Location Type
Omit
Str. Thd.
Rear
SAE/Inch Threads
2
Flange
Top
SAE/Inch Threads
8
Flange
Top
ISO 6149/Metric

Code
Volume Stop Options
Omit
Volume Stop Plugged
2
Maximum Volume Stop
5
Max. Vol. Stop With O-Ring

Code
Differential Options
4
Adjustable Differential

Code
Rotation*
R
Right (CW)
L
Left (CCW)

* Viewed from shaft end.

Code
Differential Options

Code
Control Options
Omit
Standard Pressure Compensated Setting Pressure 28-207 bar (400-3000 PSI)
A
Pressure & Flow (Load Sensing)
*C
Pressure, Flow & Power
*H
Pressure Compensated & Power
**M
Remote Pressure
**ME
Remote Pressure
*S
Servo Pressure & Volume (Requires PPC, Amplifier & Seq. Valve)
*SE
Servo Pressure & Volume (Requires PPC, Amplifier & Seq. Valve)
1AM
Remote Pressure & Flow
**CM
Remote Pressure, Flow & Power
**HM
Remote Pressure & Power

* Power controlled pumps (H, C, HM or CM) must have maximum input power limit specification at a particular drive speed (RPM) and compensator pressure setting (PSI) included with order. Power controlled pumps that do not have input power limit specifications, will be set at a default setting. (15 HP @ 1800 RPM and 1000 PSI) “H” & “C” (40 HP @ 1800 RPM and 3000 PSI) “HM” & “CM” ** “M” (May be remotely controlled)
**ME” (Requires external pilot)
† Pumps with M, ME, S, SE, AM, CM or HM controls will be set to compensate at 207 bar (3000 PSI) unless Chart #1 otherwise specifies.

Ordering Notes
Unless otherwise specified, pump is shipped at maximum GPM (1800 RPM) and set to 69 bar (1000 PSI) [See † Exceptions]. When factory settings are required, the items shown in Chart #1 must be included with order.

Chart #1

<table>
<thead>
<tr>
<th>Item</th>
<th>RPM</th>
<th>PSI</th>
<th>HP</th>
<th>GPM</th>
</tr>
</thead>
</table>

Parker Hannifin Corporation
Hydraulic Pump/Motor Division
Greeneville, Tennessee USA
Typical Performance Data - Fluid: Standard Hydraulic Oil 100 SSU @ 49°C (120°F)

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

\[ HP = \frac{Q \times (PSI)}{1714} + (CH_p) \]

WHERE:
- \( Q \) = Actual Output Flow in GPM
- \( PSI \) = Pressure At Pump Outlet
- \( CH_p \) = Input Power @ Full Compensation @ 1800 RPM (from graph read at operating pressure)

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

Minimum Power Settings Attainable With Control Options C, H, CM & HM

NOTE: Minimum attainable HP setting means that input power will not exceed the indicated setting at the indicated RPM and that the pump will achieve full compensator pressure selected. If setting input power limiter below full flow boundary, full flow may not be obtained at low operating pressure.

Determine maximum input power limitation at desired RPM. All points above desired compensator setting curve can be achieved.

Power (Torque) Limiting Curves

See page A102 for “How to Read Curves” information.
Dimensions – Rear Port

* Inch equivalents for millimeter dimensions are shown in (**).

NOTES:
1. Pump shown and dimensioned is a clockwise rotation pump. Outlet port, A and B ports, and controls will be on opposite side for a counterclockwise rotation pump.
2. Pump mounting and shaft comply with SAE "C" dimensions.

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**NOTES:**

1. Pump shown and dimensioned is a clockwise rotation pump. Outlet port, A and B ports, and controls will be on opposite side for a counterclockwise rotation pump.
2. Pump mounting and shaft comply with SAE "C" dimensions.

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Dimensions – Rear Port

* Inch equivalents for millimeter dimensions are shown in (**).
Dimensions – Top Port

* Inch equivalents for millimeter dimensions are shown in (**).

NOTES:
1. Pump shown and dimensioned is a clockwise rotation pump. Outlet port, A and B ports, and controls will be on opposite side for a counterclockwise pump.
2. Pump mounting and shaft comply with SAE "C" dimensions.

<table>
<thead>
<tr>
<th>Option</th>
<th>Outlet Port</th>
<th>Inlet Port</th>
<th>Control Drain</th>
<th>Signal Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>SAE-16</td>
<td>1-1/2 SAE 4-Bolt Flange (M33 x 2)</td>
<td>SAE-6 1-1/2 SAE 4-Bolt Flange Standard Pressure Series (Code 61)</td>
<td>SAE-4 1-1/2 SAE 4-Bolt Flange Standard Pressure Series (Code 61)</td>
</tr>
<tr>
<td>8</td>
<td>ISO 6149-16</td>
<td>1-1/2 SAE 4-Bolt Flange (M33 x 2)</td>
<td>ISO 6149-5 1-1/2 SAE 4-Bolt Flange Standard Pressure Series (Code 61)</td>
<td>ISO 6149-4 1-1/2 SAE 4-Bolt Flange Standard Pressure Series (Code 61)</td>
</tr>
</tbody>
</table>

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Front View

SHAFT OPTION “B”
14 TOOTH SAE “C” SPLINE 12/24 PITCH MAX. TORQUE = 641 N•m (5,680 IN-LBS)

OPTION “B” ISO 6149-4 ADAPTER FITTING ON OPTION “B”

AIRBLEED DRAIN PORT 7/16-20UNF-2B ST. THREAD O-RING SAE-4

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Rear View

SHAFT OPTION “ODM”
SAE “C” SHAFT 1-1/4” KEYED MAX. TORQUE = 641 N•m (5,680 IN-LBS)

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Top View

CLEARANCE FOR 625 DIA. MOUNTING BOLTS SAE “C” 2-BOLT PATTERN

CLEARANCE FOR 500 DIA. BOLTS MOUNTED DIAGONALLY ON SAE “C” 4-BOLT PATTERN

CONTROL DRAIN PORT SEE CHART FOR SIZE

ADJUSTABLE DIFFERENTIAL OPTION "4" SENSITIVITY: 13.8 BAR (200 PSI) PER TURN

OPTION “5” VOLUME STOP SENSITIVITY: 4.2 CC/REV/TURN

SIDE VIEW

OPTION “3” VOLUME STOP SENSITIVITY: 3.8 CC/REV/TURN

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NOTES:
1. Pump shown and dimensioned is a clockwise rotation pump. Outlet port, A and B ports, and controls will be on opposite side for a counterclockwise pump.
2. Pump mounting and shaft comply with SAE "C" dimensions.
Dimensions – Electrohydraulic Pump

* Inch equivalents for millimeter 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 Figure 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 maximum setting on pump or remote compensator if used).
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 7 volts, or 0-500MA.
6. Pump shown is a clockwise rotation. For a counterclockwise rotation LVDT feedback is on opposite side.
7. For further detail on installation of AP11/AP211, refer to the latest edition of Catalog 2600-400-x/US.

Typical Hookup for Infinitely Variable Electrohydraulic Pressure & Volume Control.

Fig. IV

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Nominal output flow vs. input command voltage when used in conjunction with AP*11 amplifier and 786645 proportional pressure controller.

Fig. I

Nominal output pressure vs. input command voltage when used in conjunction with AP*11 amplifier and 786645 proportional pressure controller.

Fig. II

Nominal input current vs. pressure when used in conjunction with a current source and 786645 proportional pressure controller.

Fig. III