Hydraulic Power Units
D, H and V-Pak Series

HY13-2600-500-002/US
### Quick Reference Data Chart

<table>
<thead>
<tr>
<th>Pump Model No.</th>
<th>Tank Size Liters (Gallon)</th>
<th>Pump Flow LPM (GPM) @ 1725 RPM</th>
<th>Electrical Motors KW (HP)</th>
<th>Maximum* Bar (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-Paks</td>
<td>18.9 (5)</td>
<td>2.2 - 10.2 (0.9 - 2.7)</td>
<td>0.37 (0.5) - 2.24 (3)</td>
<td>207 (3000)</td>
</tr>
<tr>
<td>H-Paks</td>
<td>37.9 (10), 75.7 (20), 113.6 (30), 151.4 (40)</td>
<td>2.2 - 26.1 (0.9- 6.3)</td>
<td>0.37 (0.5) - 14.9 (20)</td>
<td>207 (3000)</td>
</tr>
<tr>
<td>V-Paks</td>
<td>37.9 (10), 75.7 (20), 113.6 (30), 151.4 (40)</td>
<td>7.6 - 59.1 (2.0 - 15.6)</td>
<td>1.5 (2) - 14.9 (20)</td>
<td>207 (3000)</td>
</tr>
</tbody>
</table>

* See pump/motor combination, maximum pressure charts.
Warranty
The hydraulic components on these Parker Power Units are warranted for one year. This warranty may be extended to two years by using and properly maintaining Parker filters.

Installation Data:
See Installation/Maintenance Manual for specific recommendations pertaining to start-up, system cleanliness, fluids, temperature and other important factors relative to proper installation and use of these power units.

Standard Features
- Vertical Design
- Submerged Pump
- Spare Return Ports
- Precision Pump Mounting Adapters
- Suction Strainer
- Glycerine Filled Pressure Gage with Shut Off
- Oil Level Gage with Thermometer
- Relief Valve
- Breather and Fill Cap
- SAE Drain Plug
- Parker Connector Technology

Benefits
- Saves Floor Space
- Quieter Operation, Elimination of Potential Leak Point
- Longer Pump Life
- Protects Pump from Contamination
- Improved Diagnostics
- Helps to Maintain Trouble-Free Performance
- Protects Against System Shock
- Easy To Fill Reservoir
- Prevents Leaks

Schematic Symbol
(Hydraulic Schematic - Basic Unit)
D-Paks

Reservoir

Pressure Control

Pump Flow

Manifold

Ordering Code | Reservoir Size (Liters) |
---|---|
D5 | 18.9 (5) |

Ordering Porting Block/Subplate or Manifold Type

Porting Block/Subplate or Manifold Type | Supply/Return Port or Actuator Port Size | Other |
---|---|---|
O | Pressure and Return Port Block with Safety Relief Valve | "P" & "T" Ports SAE-10 Str. Thr'd | Convertible to S3 Option |
S3 | D03 Single Station Subplate with Safety Relief Valve | "A" & "B" Ports SAE-8 Str. Thr'd | Spare "P" & "T" SAE-10 Ports |
M33 | D03 Multistation Parallel Circuit Manifold with Safety Relief Valve | "A" & "B" Ports SAE-8 Str. Thr'd | Spare "G" Port SAE-6 |

Ordering Information

Series D-Paks

Vertical Power Units

Ordering Code | Motor Description |
---|---|
U1 | .37 (.5) - 1725 - 145TCZ - 1 |
T1 | .75 (1) - 1725 - 145TCZ - 1 |
T3 | .75 (1) - 1725 - 145TCZ - 3 |
G | 1.5 (2) - 1725 - 145TCZ - 3 |
K | 2.2 (3) - 1725 - 145TCZ - 3 |

Single phase electric motors are rated as follows:
115/230V, 1PH, TEFC - 60 Hertz 1800 RPM

Three phase electric motors are rated as follows:
200-230/460V, 3PH, TEFC - 60 Hertz 1800 RPM
190-220/380-440V, 3PH, TEFC - 50 Hertz 1500 RPM

Consult factory for other motor speeds (RPM) and voltages.

** Use "W" prefix when no motor is required on unit.
When ordering, "W" must be followed by motor model code equivalent. Motor coupling will have interface for a 56C frame motor.

Ordering Pressure Control Code | Description |
---|---|
Omit | System Pressure Relief Valve Only |
B | System Pressure Relief Valve with Unloading Valve (2-Way 120VAC) N.O. (Energize coil to close) |
J | System Pressure Relief Valve with Unloading Valve (2-Way 24VDC) N.O. (Energize coil to close) |

Ordering Code | Pump Used | Comments |
---|---|---|
0.9 | 331-9110-264 | Available With 0.37 KW (0.5 HP) Motors Only |
1.3 | 331-9110-265 |
1.8 | 331-9110-266 |
2.7 | 331-9110-263 |

NOTE:
Manifolds are mounted vertically.
Bottom station is number 1.
## D-Paks

**Directional Control Valve**

**Manapak Control Valves**

**Options and Accessories**

### Ordering Information

**Series D-Paks**

#### Manapak valves mounted in order of callout. First valve will be nearest DCV; last valve will be on manifold.

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Function</th>
<th>Valve Model Number</th>
<th>NFPA Mounting Pad</th>
<th>Nominal Flow LPM(GPM)</th>
<th>Circuit Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flow Control (Meter-Out)</td>
<td>FM2DDKN</td>
<td>D03</td>
<td>26.5 (7)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Pilot Operator Check</td>
<td>CPOM2DDN</td>
<td>D03</td>
<td>26.5 (7)</td>
<td></td>
</tr>
</tbody>
</table>

### Ordering Valve NFPA Nominal Circuit Code Model Mounting Flow Symbol Number Pad LPM(GPM) Description

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Function</th>
<th>Model Number</th>
<th>Technical Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1*</td>
<td>Exchanger</td>
<td>RM-08-2-2</td>
<td>Air/Oil: 52KW (.7HP) Rej. @ 11.4 LPM (3 GPM)</td>
</tr>
<tr>
<td>H</td>
<td>Pressure Filter</td>
<td>15P110QXRS</td>
<td>Microglass II Element Vis. Ind. - 3.4 Bar (50 PSI) Bypass (.14 Bar (2 PSI) Diff. @ 11.4 LPM (3 GPM))</td>
</tr>
<tr>
<td>K</td>
<td>Check Valve</td>
<td>DT370MOMF05</td>
<td>34 Bar (5 PSI) Cracking Pressure (.48 Bar (7 PSI) Diff. @ 11.4 LPM (3 GPM))</td>
</tr>
<tr>
<td>L</td>
<td>Bypass Check (On Heat Exch)</td>
<td>C1020S65</td>
<td>4.5 Bar (65 PSI) Cracking Pressure</td>
</tr>
<tr>
<td>O</td>
<td>Return Filter</td>
<td>12AT10C</td>
<td>Cellulose Element (Ind. Gage - 1.03 Bar (15 PSI) Bypass Max. Oil Flow)</td>
</tr>
<tr>
<td>R1</td>
<td>Combination Float/Temp. Switch</td>
<td>876782-01</td>
<td>Fixed Temp at 65°C (149°F) Close @ Low Level and/or 65°C (149°F) (N.O.)</td>
</tr>
<tr>
<td>R2</td>
<td>Combination Float/Temp. Switch</td>
<td>876782-02</td>
<td>Fixed Temp at 65.6°C (150°F) Open @ Low Level and/or 65.6°C (150°F) (N.C.)</td>
</tr>
</tbody>
</table>

*Heat rejection based on flow given with a 40°F differential between transfer medium.*

† Units less valves will be supplied with station cover plates installed.
## Ordering Information

### H-Paks

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Order Porting Block/Subplate or Manifold Type</th>
<th>Supply/Return Port Actuator Port Size</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pressure and Return Port Block with Safety Relief Valve</td>
<td>&quot;P&quot; &amp; &quot;T&quot; Ports SAE-12 Str. Thr'd</td>
<td>Convertible to S3, S5, S6 Option</td>
</tr>
<tr>
<td></td>
<td>D03 Single Station Subplate with Safety Relief Valve</td>
<td>&quot;A&quot; &amp; &quot;B&quot; Ports SAE-8 Str. Thr'd</td>
<td>Spare &quot;P&quot; &amp; &quot;T&quot; SAE-10 Ports</td>
</tr>
<tr>
<td></td>
<td>D05 Single Station Subplate with Safety Relief Valve</td>
<td>&quot;A&quot; &amp; &quot;B&quot; Ports SAE-10 Str. Thr'd</td>
<td>Spare &quot;P&quot; &amp; &quot;T&quot; SAE-12 Ports</td>
</tr>
<tr>
<td></td>
<td>D03 Multistation Parallel Circuit Manifold with Safety Relief Valve</td>
<td>&quot;A&quot; &amp; &quot;B&quot; Ports SAE-8 Str. Thr'd</td>
<td>Spare &quot;G&quot; Port SAE-6</td>
</tr>
<tr>
<td></td>
<td>D05 Multistation Parallel Circuit Manifold with Safety Relief Valve</td>
<td>&quot;A&quot; &amp; &quot;B&quot; Ports SAE-8 Str. Thr'd</td>
<td>Spare &quot;G&quot; Port SAE-6</td>
</tr>
</tbody>
</table>

**Note:**
- Manifolds are mounted vertically.
- Bottom station is number 1.

**Observations:**
- Available up to 7.5 KW (10 HP) motor only.
- Single phase electric motors are rated as follows: 115/230V, 1PH, TEFC-60 Hertz 1800 RPM.
- Three phase electric motors are rated as follows: 208-230/460V, 3PH, TEFC-60 Hertz 1800 RPM.
- Consult factory for other motor speeds (RPM) and voltages.
- "Use "W" prefix when no motor is required on unit. When ordering, "W" must be followed by motor model code equivalent to frame size of motor to be used.
- Available with H2, H3, H4 Tanks Only.
- Shaded option U1 leadtime is 2 weeks.
H-Paks

Ordering Information

Vertical Power Units
Series H-Paks

H-Paks

Directional Control Valve

*Manapak Control Valves

Options and Accessories

Consult Factory For Special Modifications

Design Series

Omit If Not Required

P

Ordering Code | Function | Valve Model Number | NFPA Mounting Pad | Nominal Flow LPM(GPM) | Description | Circuit Symbol
---|---|---|---|---|---|---
1 | Flow Control | FM2DDKN | D03 | 26.5 (7) | | |
2 | Flow Control | FM3DDKN | D05 | 45.4 (12) | | |
3 | Pilot Operator Check | CPOM2DDON | D03 | 26.5 (7) | | |
4 | Pilot Operator Check | CPOM3DDON | D05 | 45.4 (12) | | |

*Manapak valves mounted in order of callout. First valve will be nearest DCV; last valve will be on manifold.

Ordering Code | Valve Model Number | NFPA Mounting Pad | Nominal Flow LPM(GPM) | Description | Circuit Symbol
---|---|---|---|---|---
B | D1VW001CN*** | D03 | 26.5 (7) | Double (Spr. Ctr) | |
C | D1VW004CN*** | D03 | 26.5 (7) | Double (Spr. Ctr) | |
F | D3W1CN** | D05 | 75.7 (20) | Double (Spr. Ctr) | |
G | D3W4CN** | D05 | 56.8 (15) | Double (Spr. Ctr) | |
T | D1VW008CN*** | D03 | 26.5 (7) | Double (Spr. Ctr) | |
W | D3W8CN** | D05 | 56.8 (15) | Double (Spr. Ctr) | |

† Units less valves will be supplied with station cover plates installed.

Note: Refer to options and accessories for voltage and connection choices.

† Units less valves will be supplied with station cover plates installed.

Note: Refer to options and accessories for voltage and connection choices.

*Heat rejection based on flow given with a 4.4°C (40°F) differential between transfer medium.
## V-Paks – 2 thru 7 GPM

### Ordering Information

- **Reservoir**
  - Omit If Not Required

- **Remote Compensator Options**
  - Omit If Not Required

- **Pump Control**
  - 7 OR Reduced Flow

- **Pump Flow**

- **Electric Motor**
  - Omit If Not Required

### Ordering Reservoir Size

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Reservoir Size Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1*</td>
<td>37.9 (10)</td>
</tr>
<tr>
<td>V2</td>
<td>75.7 (20)</td>
</tr>
<tr>
<td>V3</td>
<td>113.6 (30)</td>
</tr>
<tr>
<td>V4</td>
<td>151.4 (40)</td>
</tr>
</tbody>
</table>

*Available up to 7.5 KW (10HP) motor.

### Ordering Compensator Options

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Compensator Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omit</td>
<td>Single Pressure Remote Compensator</td>
</tr>
<tr>
<td>B</td>
<td>Single Pressure Remote Compensator With Low Pressure Standby</td>
</tr>
<tr>
<td>BJ</td>
<td>Single Pressure Remote Compensator With Low Pressure Standby, 24VDC</td>
</tr>
<tr>
<td>C</td>
<td>Bi-Pressure Remote Compensator</td>
</tr>
<tr>
<td>CJ</td>
<td>Bi-Pressure Remote Compensator, 24 VDC</td>
</tr>
<tr>
<td>D</td>
<td>Bi-Pressure Remote Compensator With Low Pressure Standby</td>
</tr>
<tr>
<td>DJ</td>
<td>Bi-Pressure Remote Compensator With Low Pressure Standby, 24VDC</td>
</tr>
<tr>
<td>F</td>
<td>Provision For Customer Supplied Remote Control Relief Valve</td>
</tr>
</tbody>
</table>

### Ordering Motor Description

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Motor Description (KW (HP)-RPM-Frame)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>1.5 (2) - 1725 - 56C - 3</td>
</tr>
<tr>
<td>K</td>
<td>2.2 (3) - 1725 - 56C - 3</td>
</tr>
<tr>
<td>L</td>
<td>3.7 (5) - 1725 - 184TC - 3</td>
</tr>
<tr>
<td>M</td>
<td>5.6 (7.5) - 1725 - 213TC - 3</td>
</tr>
<tr>
<td>N</td>
<td>7.5 (10) - 1725 - 215TC - 3</td>
</tr>
<tr>
<td>P †</td>
<td>11.2 (15) - 1725 - 254TC - 3</td>
</tr>
<tr>
<td>S †</td>
<td>14.9 (20) - 1725 - 256TC - 3</td>
</tr>
</tbody>
</table>

Electric motors are 208-230/460V, 60Hz, 3PH 1800 RPM. TEFC consult factory for other motor speeds (RPM) and voltages.

** Use "W" prefix when no motor is required on unit. When ordering, "W" must be followed by motor model code equivalent to frame size of motor to be used.

### Ordering Pump Control Option

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Pump Control Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omit</td>
<td>Std. Remote Compensator</td>
</tr>
<tr>
<td>A*</td>
<td>Load Sense (Flow Control)</td>
</tr>
<tr>
<td>H**</td>
<td>Horsepower Limiting</td>
</tr>
</tbody>
</table>

*Unless otherwise specified, a SAE-6 sense port line will be supplied in topplate. When shuttle check option (9 or 0) is specified on D03 or D05 manifold, sense line will be plumbed to shuttle check. ** Unless otherwise specified, horsepower setting will be at max. flow & pressure obtainable with motor selected. Reference Pump HP curves on page B18.

### Ordering Pump Flow Rate

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Pump Flow Rate @ 1800 LPM (RPM)</th>
<th>Pump Used and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>29.5 (7.8)</td>
<td>PVP16 - Std. Remote Compensator Destroked Max. Volume 7.57 LPM (2 GPM) Min.</td>
</tr>
<tr>
<td>*</td>
<td>Specify in GPM</td>
<td></td>
</tr>
</tbody>
</table>

*Unless otherwise specified, units are shipped at max. flow rate (29.5 LPM (7.8 GPM)) at 1800 RPM. When reduced flow setting is required, specify pump setting in .5 GPM increments. Example: 5, 5.5, 6, 6.5 with a 2 GPM minimum flow. If horsepower limiting pump (H) control is required to be destroked, utilize the special ordering code X.

Example: V*5**-- = Std. Pump Destroked to 5 GPM
V*A4.5**-- = Load Sense Pump Destroked to 4.5 GPM

### Ordering Supply/Return Port Actuator Port Size

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Supply/Return Port Actuator Port Size</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>&quot;P&quot; &amp; &quot;T&quot; Port SAE-12 Str. Thr'd</td>
<td>Convertible to S3, S5, S6 Option</td>
</tr>
<tr>
<td>S3</td>
<td>D03 Single Station Subplate with Safety Relief Valve &quot;A&quot; &amp; &quot;B&quot; Ports SAE-8 Str. Thr'd</td>
<td>Spare &quot;P&quot; &amp; &quot;T&quot; SAE-10 Ports</td>
</tr>
<tr>
<td>S5</td>
<td>D05 Single Station Subplate with Safety Relief Valve &quot;A&quot; &amp; &quot;B&quot; Ports SAE-10 Str. Thr'd</td>
<td>Spare &quot;P&quot; &amp; &quot;T&quot; SAE-12 Ports</td>
</tr>
<tr>
<td>M33 M35</td>
<td>D03 Multistation Parallel Circuit Manifold with Safety Relief Valve &quot;A&quot; &amp; &quot;B&quot; Ports SAE-8 Str. Thr'd</td>
<td>Spare &quot;G&quot; Port SAE-6</td>
</tr>
<tr>
<td>M53 M55</td>
<td>D05 Multistation Parallel Circuit Manifold with Safety Relief Valve &quot;A&quot; &amp; &quot;B&quot; Ports SAE-8 Str. Thr'd</td>
<td>Spare &quot;G&quot; Port SAE-6</td>
</tr>
</tbody>
</table>

* When ordering Multi-Station Manifolds, the number of stations must be specified. If more than 5 stations required, consult factory. If valves are to be mounted, specify the valves and sequence. If the model code exceeds 25 digits, utilize the special ordering code X.

Example: V2 7 N M33X

** NOTE:**
X= 3 Station Manifold
Station #1: A
Station #2: B
Station #3: C24

Manifolds are mounted vertically. Bottom station is number 1.
# V-Paks – 2 thru 7 GPM

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Function</th>
<th>Valve Model Number</th>
<th>NFPA Mounting Pad</th>
<th>Nominal Flow LPM/(GPM)</th>
<th>Circuit Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flow Control Meter Out</td>
<td>FM2DDKN</td>
<td>D03</td>
<td>26.5 (7)</td>
<td>➤➤ ➤</td>
</tr>
<tr>
<td>2</td>
<td>Flow Control Meter Out</td>
<td>FM3DDKN</td>
<td>D05</td>
<td>45.4 (12)</td>
<td>➤➤ ➤</td>
</tr>
<tr>
<td>3</td>
<td>Pilot Operator Check</td>
<td>CPOM2DDN</td>
<td>D03</td>
<td>26.5 (7)</td>
<td>➤➤ ➤</td>
</tr>
<tr>
<td>4</td>
<td>Pilot Operator Check</td>
<td>CPOM3DDN</td>
<td>D05</td>
<td>45.4 (12)</td>
<td>➤➤ ➤</td>
</tr>
</tbody>
</table>

* Manapak valves mounted in order of callout. First valve will be nearest DCV; last valve will be on manifold.

---

## Design Series

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Function</th>
<th>Model Number</th>
<th>Technical Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Pump Case Heat Exchanger</td>
<td>RM-08-4-2</td>
<td>Air/Oil: 5.2 KW (7HP) (1.5-11.2KW (2-15HP) Motors)</td>
</tr>
<tr>
<td>B1*</td>
<td>Return Heat Exchanger</td>
<td>RM-08-1-2</td>
<td>Air/Oil: 5.2 KW (7HP) (1.5-3.7KW (2-5HP) Motors Only)</td>
</tr>
<tr>
<td>B2*</td>
<td>Return Heat Exchanger</td>
<td>RM-190-1-2</td>
<td>Air/Oil: 1.1KW (1.5HP) (5.6-11.2KW (7.5-15HP) Motors Only)</td>
</tr>
<tr>
<td>H</td>
<td>Pressure Filter</td>
<td>1SP110BXSRS</td>
<td>Microglass II Element Visual Ind. - 3.4 Bar (50 PSI) Bypass (.28 Bar (4 PSI) Diff. at 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>K</td>
<td>Check Valve Pump Outlet</td>
<td>DT750MOMF05</td>
<td>.34 Bar (5 PSI) Cracking Pressure (.55 Bar (8 PSI) Diff. @ 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>L</td>
<td>Bypass Check (On Heat Exch.)</td>
<td>C1220S65</td>
<td>4.48 Bar (65 PSI) Cracking Pressure</td>
</tr>
<tr>
<td>N</td>
<td>Return Filter</td>
<td>40CN110B</td>
<td>Microglass II Element Visual 1.7 Bar (25 PSI) Indicator (.21 Bar (3 PSI) Diff. @ 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>O</td>
<td>Return Filter</td>
<td>12AT10C</td>
<td>Cellulose Element Ind. Gage - 1.03 Bar (15 PSI) Bypass</td>
</tr>
<tr>
<td>R1</td>
<td>Combination Float/Temp. SW N.O. Float Up</td>
<td>876782-01</td>
<td>Fixed Temp at 65°C (149°F) Close @ Low Level And/Or 65°C (149°F) (N.O.)</td>
</tr>
<tr>
<td>R2</td>
<td>Combination Float/Temp. SW N.O. Float Up</td>
<td>876782-02</td>
<td>Fixed Temp at 65°C (150°F) Open @ Low Level And/Or 65°C (150°F) (N.C.)</td>
</tr>
</tbody>
</table>

Heat rejection based on flow given with a 4.4°C (40°F) differential between transfer medium.

---

† Units less valves will be supplied with station cover plates installed.

Note: Refer to options and accessories for voltage and connection choices.
V-Paks – 8 thru 15 GPM

Ordering Information

Ordering Code Reservoir Size Liters (Gallons)
V2 75.7 (20)
V3 113.6 (30)
V4 151.4 (40)

Ordering Code Pump Control Option
Omit Std. Remote Compensator
A* Load Sense (Flow Control)
H** Horsepower Limiting

Ordering Code Motor Description (KW (HP)-RPM-Frame)
L 3.7 (5) - 1725 - 184TC - 3
M 5.6 (7.5) - 1725 - 213TC - 3
N 7.5 (10) - 1725 - 215TC - 3
P 11.2 (15) - 1725 - 254TC - 3
S 14.9 (20) - 1725 - 256TC - 3

Electric motors are 208-230/460V, 60Hz, 3PH 1800 RPM. TEFC consult factory for other motor speeds (RPM) and voltages.

** Use “W” prefix when no motor is required on unit. When ordering, “W” must be followed by motor model code equivalent to frame size of motor to be used.

NOTE: For shaded options A & H, lead time is four weeks.

Ordering Information

Ordering Code Pump Flow Rate @ 1800 RPM LPM (GPM)
15 59 (15.6)

Ordering Code Pump Used and Description
15 PVP33 - Std. Remote Compensator

* Unless otherwise specified, units are shipped at max. flow rate (59 LPM (15.6 GPM)) at 1800 RPM. When reduced flow setting is required, specify pump setting in .5 GPM increments. Example: 11, 11.5, 12, 12.5 with a 8 GPM minimum flow.

If horsepower limiting pump (H) control is required to be destroked, utilize the special ordering code X.

Example: V*12**-- = Std. Pump Destroked to 12 GPM
V*A11.5**-- = Load Sense Pump Destroked to 11.5 GPM

Ordering Code Porting Block/Subplate or Manifold Type
O Pressure and Return Port Block with Safety Relief Valve
S3 D03 Single Station Subplate with Safety Relief Valve
S5 D05 Single Station Subplate with Safety Relief Valve
M33 D03 Multistation Parallel Circuit Manifold with Safety Relief Valve
M53 D05 Multistation Parallel Circuit Manifold with Safety Relief Valve

Supply/Return Port or Actuator Port Size
“P” & “T” Ports SAE-12 Str. Thr’d
“A” & “B” Ports SAE-8 Str. Thr’d
“A” & “B” Ports SAE-10 Str. Thr’d
“A” & “B” Ports SAE-8 Str. Thr’d
“A” & “B” Ports SAE-8 Str. Thr’d

Other
Convertible to S3, S5, S6 Option
Spare “P” & “T” SAE-10 Ports
Spare “P” & “T” SAE-12 Ports
Spare “G” Port SAE-6
Spare “G” Port SAE-6

NOTE:

Manifolds are mounted vertically. Bottom station is number 1.
### Vertical Power Units

#### Series V-Paks

**V-Paks – 8 thru 15 GPM**

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Valve Model Number</th>
<th>NFPA Mounting Pad</th>
<th>Nominal Flow LPM(GPM)</th>
<th>Description</th>
<th>Circuit Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>D1VW001CN***</td>
<td>D03</td>
<td>26.5 (7)</td>
<td>Double (Spr. Ctr)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>D1VW004CN***</td>
<td>D03</td>
<td>26.5 (7)</td>
<td>Double (Spr. Ctr)</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>D3W1CN**</td>
<td>D05</td>
<td>75.7 (20)</td>
<td>Double (Spr. Ctr)</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>D3W4CN**</td>
<td>D05</td>
<td>56.8 (15)</td>
<td>Double (Spr. Ctr)</td>
<td></td>
</tr>
</tbody>
</table>

*Manapak valves mounted in order of callout. First valve will be nearest DCV; last valve will be on manifold.*

---

**Options and Accessories**

- **Consult Factory For Special Modifications**
- **Design Series**

---

**Ordering Function Model Technical Data**

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Function</th>
<th>Model Number</th>
<th>Technical Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>Pump Case Heat Exchanger</td>
<td>RM-08-4-2</td>
<td>Air/Oil: 52 KW (.7HP) Rejection @ 1.9 LPM (5 GPM) (1.5-11.2KW (2-15HP) Motors)</td>
</tr>
<tr>
<td>B1*</td>
<td>Return Heat Exchanger</td>
<td>RM-08-1-2</td>
<td>Air/Oil: 52 KW (.7HP) Rejection @ 26.5 LPM (7 GPM) (1.5-3.7KW (2-5HP) Motors Only)</td>
</tr>
<tr>
<td>B2*</td>
<td>Return Heat Exchanger</td>
<td>RM-190-1-2</td>
<td>Air/Oil: 1.1KW (1.5HP) Rejection @ 26.5 LPM (7 GPM) (5.6-11.2KW (7.5-15HP) Motors Only)</td>
</tr>
<tr>
<td>H</td>
<td>Pressure Filter</td>
<td>15P110BXRS</td>
<td>Microglass II Element Ind. - .34 Bar (50 PSI) Bypass (.28 Bar (4 PSI) Diff. @ 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>K</td>
<td>Check Valve Pump Outlet</td>
<td>DT750MOMF05</td>
<td>.34 Bar (5 PSI) Cracking Pressure (.55 Bar (8 PSI) Diff. @ 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>L</td>
<td>Bypass Check (On Heat Exch.)</td>
<td>C122066S</td>
<td>4.48 Bar (65 PSI) Cracking Pressure</td>
</tr>
<tr>
<td>N</td>
<td>Return Filter</td>
<td>40CN110B</td>
<td>Microglass II Element Visual 1.72 Bar (25 PSI) Indicator (.21 Bar (3 PSI) Diff. @ 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>O</td>
<td>Return Filter</td>
<td>12AT10C</td>
<td>Cellulose Element Ind. Gage - 1.03 Bar (15 PSI) Bypass</td>
</tr>
<tr>
<td>R1</td>
<td>Combination Float/Temp. SW N.O. Float Up</td>
<td>876782-01</td>
<td>Fixed Temp at 65°C (149°F) Close @ Low Level And/Or 65°C (149°F) (N.O.)</td>
</tr>
<tr>
<td>R2</td>
<td>Combination Float/Temp. SW N.O. Float Up</td>
<td>876782-02</td>
<td>Fixed Temp at 65.6°C (150°F) Open @ Low Level And/Or 65.6°C (150°F) (N.C.)</td>
</tr>
</tbody>
</table>

*Heat rejection based on flow given with a 4.4°C (40°F) differential between transfer medium.*

---

**Consult Factory For Special Modifications**

<table>
<thead>
<tr>
<th>Ordering Code</th>
<th>Function</th>
<th>Model Number</th>
<th>Technical Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>Pump Case Heat Exchanger</td>
<td>RM-08-4-2</td>
<td>Air/Oil: 52 KW (.7HP) Rejection @ 1.9 LPM (5 GPM) (1.5-11.2KW (2-15HP) Motors)</td>
</tr>
<tr>
<td>B1*</td>
<td>Return Heat Exchanger</td>
<td>RM-08-1-2</td>
<td>Air/Oil: 52 KW (.7HP) Rejection @ 26.5 LPM (7 GPM) (1.5-3.7KW (2-5HP) Motors Only)</td>
</tr>
<tr>
<td>B2*</td>
<td>Return Heat Exchanger</td>
<td>RM-190-1-2</td>
<td>Air/Oil: 1.1KW (1.5HP) Rejection @ 26.5 LPM (7 GPM) (5.6-11.2KW (7.5-15HP) Motors Only)</td>
</tr>
<tr>
<td>H</td>
<td>Pressure Filter</td>
<td>15P110BXRS</td>
<td>Microglass II Element Ind. - .34 Bar (50 PSI) Bypass (.28 Bar (4 PSI) Diff. @ 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>K</td>
<td>Check Valve Pump Outlet</td>
<td>DT750MOMF05</td>
<td>.34 Bar (5 PSI) Cracking Pressure (.55 Bar (8 PSI) Diff. @ 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>L</td>
<td>Bypass Check (On Heat Exch.)</td>
<td>C122066S</td>
<td>4.48 Bar (65 PSI) Cracking Pressure</td>
</tr>
<tr>
<td>N</td>
<td>Return Filter</td>
<td>40CN110B</td>
<td>Microglass II Element Visual 1.72 Bar (25 PSI) Indicator (.21 Bar (3 PSI) Diff. @ 26.5 LPM (7 GPM))</td>
</tr>
<tr>
<td>O</td>
<td>Return Filter</td>
<td>12AT10C</td>
<td>Cellulose Element Ind. Gage - 1.03 Bar (15 PSI) Bypass</td>
</tr>
<tr>
<td>R1</td>
<td>Combination Float/Temp. SW N.O. Float Up</td>
<td>876782-01</td>
<td>Fixed Temp at 65°C (149°F) Close @ Low Level And/Or 65°C (149°F) (N.O.)</td>
</tr>
<tr>
<td>R2</td>
<td>Combination Float/Temp. SW N.O. Float Up</td>
<td>876782-02</td>
<td>Fixed Temp at 65.6°C (150°F) Open @ Low Level And/Or 65.6°C (150°F) (N.C.)</td>
</tr>
</tbody>
</table>

*Heat rejection based on flow given with a 4.4°C (40°F) differential between transfer medium.*
Dimensions - Basic D-Pak (18.9 Liter (5 Gallon) Tank)
Inch equivalents for millimeter dimensions are shown in (**).

Filter Option Reference

<table>
<thead>
<tr>
<th>Motor Code</th>
<th>Motor Description</th>
<th>Dimension “A”</th>
</tr>
</thead>
<tbody>
<tr>
<td>U1</td>
<td>.37 (.5)-1725-145TCZ-1</td>
<td>269.75 (10.62)</td>
</tr>
<tr>
<td>C1</td>
<td>.56 (.75)-1725-145TCZ-1</td>
<td>295.15 (11.62)</td>
</tr>
<tr>
<td>T1</td>
<td>.75 (1)-1725-145TCZ-1</td>
<td>295.15 (11.62)</td>
</tr>
<tr>
<td>T3</td>
<td>.75 (1)-1725-145TCZ-3</td>
<td>258.57 (10.18)</td>
</tr>
<tr>
<td>F</td>
<td>1.1 (1.5)-1725-145TCZ-3</td>
<td>283.97 (11.18)</td>
</tr>
<tr>
<td>G</td>
<td>1.5 (2)-1725-145TCZ-3</td>
<td>306.32 (12.06)</td>
</tr>
<tr>
<td>K</td>
<td>2.2 (3)-1725-145TCZ-3</td>
<td>341.37 (13.44)</td>
</tr>
</tbody>
</table>
Dimensions - Basic H1 & V1
(10 Gallon Tank)

Inch equivalents for millimeter dimensions are shown in (\textit{**}).

<table>
<thead>
<tr>
<th>Motor Code</th>
<th>Motor Description</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&quot;A&quot;</td>
<td>&quot;B&quot;</td>
</tr>
<tr>
<td>U1</td>
<td>0.37 (.5)-1725-56C-1</td>
<td>266.70 (10.50)</td>
</tr>
<tr>
<td>C1</td>
<td>0.56 (.75)-1725-56C-1</td>
<td>279.40 (11.00)</td>
</tr>
<tr>
<td>T1</td>
<td>0.75 (1)-1725-56C-1</td>
<td>298.45 (11.75)</td>
</tr>
<tr>
<td>T3</td>
<td>0.75 (1)-1725-56C-3</td>
<td>266.70 (10.50)</td>
</tr>
<tr>
<td>F</td>
<td>1.1 (1.5)-1725-56C-3</td>
<td>273.05 (10.75)</td>
</tr>
<tr>
<td>G</td>
<td>1.5 (2)-1725-56C-3</td>
<td>298.45 (11.75)</td>
</tr>
<tr>
<td>K</td>
<td>2.2 (3)-1725-56C-3</td>
<td>320.55 (12.62)</td>
</tr>
<tr>
<td>L</td>
<td>3.7 (5)-1725-184TC-3</td>
<td>365.25 (14.38)</td>
</tr>
<tr>
<td>M</td>
<td>5.6 (7.5)-1725-213TC-3</td>
<td>406.40 (16.00)</td>
</tr>
<tr>
<td>N</td>
<td>7.5 (10)-1725-215TC-3</td>
<td>413.51 (16.28)</td>
</tr>
</tbody>
</table>
### Dimensions - Basic H2, 3, 4 & V2, 3, 4 (20, 30, 40 Gallon Tank)

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

![Diagram of Basic Unit](image)

**Motor Code** | **Motor Description** | **Dimension “A”** | **Dimension “B”**
--- | --- | --- | ---
U1 | .37 (.5) -1725-56C-1 | 266.70 (10.50) | 19.05 (.75)
C1 | .56 (.75) -1725-56C-1 | 279.40 (11.00) | 19.05 (.75)
T1 | .75 (1) -1725-56C-1 | 298.45 (11.75) | .75 (19.05)
T3 | .75 (1) -1725-56C-3 | 266.70 (10.50) | 19.05 (.75)
F | 1.1 (1.5) -1725-56C-3 | 273.05 (10.75) | 19.05 (.75)
G | 1.5 (2) -1725-56C-3 | 298.45 (11.75) | 19.05 (.75)
K | 2.2 (3) -1725-56C-3 | 320.55 (12.62) | 19.05 (.75)
L | 3.7 (5) -1725-184TC-3 | 365.25 (14.39) | 28.70 (1.13)
M | 5.6 (7.5) -1725-213TC-3 | 406.40 (16.00) | 35.05 (1.38)
N | 7.5 (10) -1725-215TC-3 | 413.51 (16.28) | 35.05 (1.38)
P | 11.2 (15) -1725-254TC-3 | 447.80 (17.63) | 85.09 (3.35)
S | 14.9 (20) -1725-256TC-3 | 492.25 (19.3) | 85.09 (3.35)

<table>
<thead>
<tr>
<th>Reservoir Code</th>
<th>Reservoir Size</th>
<th>Dimension “C”</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2 or V2</td>
<td>151.4 liters (20 gal)</td>
<td>491.74 (19.36)</td>
</tr>
<tr>
<td>H3 or V3</td>
<td>113.6 liters (30 gal)</td>
<td>599.95 (23.62)</td>
</tr>
<tr>
<td>H4 or V4</td>
<td>75.7 liters (40 gal)</td>
<td>733.04 (28.86)</td>
</tr>
</tbody>
</table>

**Filter Option Reference**

- **“O” & “SS” Option Manifold**
  - (P & T Block & D05 Single Station)
  - Shown with Option “N” Return Filter

- **“MS” Option Manifold**
  - (Multi-Station D05 manifold)
  - Shown with Option “N” Return Filter
Manifold Options
Inch equivalents for millimeter dimensions are shown in (**).

O MANIFOLD OPTION
FOR SUPPLY & RETURN CONNECTIONS
(18.9 LITER (5 GAL.) RESERVOIR UNITS)

S3 SUBPLATE OPTION
FOR USE WITH D1VW VALVE
(NFPA D03)

O MANIFOLD OPTION
FOR SUPPLY & RETURN CONNECTIONS
(37.9, 75.7, 113.6, 115.4 LIT
(10, 20, 30, 40 GAL) RESERVOIR UNITS)

S5 SUBPLATE OPTION
FOR USE WITH D3W VALVE
(NFPA D05)
Manifold Options
Inch equivalents for millimeter dimensions are shown in (**).

Option M33/M35

```
Option M33/M35
3 AND 5 STATION MANIFOLD OPTIONS
FOR USE WITH NFPA D03 VALVES
```

Option M53/M55

```
Option M53/M55
3 AND 5 STATION MANIFOLD OPTIONS
FOR USE WITH NFPA D05 VALVES
```
Pressure Control Option "B" - Unloading Valve

"H"PAK WITH "S3" MANIFOLD
3.4-19.3 LPM (0.9-5.1 GPM) FLOW RATES ONLY
(CONNECTED TO SYSTEM RETURN LINE)

"H"PAK WITH "M3*" MANIFOLD
3.4-19.3 LPM (0.9-5.1 GPM) FLOW RATES ONLY
(CONNECTED TO SYSTEM RETURN LINE)

"H"PAK WITH "OMIT", "S3", "S5", "S6", "M3*", "M5*", "M6*" MANIFOLDS
3.4-19.3 LPM (0.9-5.1 GPM) FLOW RATES ONLY
(PLUMBED DIRECTLY BACK TO TANK)

"H"PAK WITH "OMIT", "S3", "S5", "S6", "M3*", "M5*", "M6*" MANIFOLDS
23.84-46.56 LPM (6.3-12.3 GPM) FLOW RATES ONLY
(PLUMBED DIRECTLY BACK TO TANK)
Pressure Control Option "B" - Unloading Valve

"D"PAK WITH "S3" MANIFOLD (CONNECTED TO SYSTEM RETURN)

"D"PAK WITH "M3" MANIFOLD (CONNECTED TO SYSTEM RETURN)

"D"PAK WITH "OMIT" MANIFOLD (CONNECTED TO SYSTEM RETURN)
V-Pak – Compensator Options

“OMIT” OPTION
SINGLE PRESSURE
REMOTE COMPENSATOR

“B” OPTION
SINGLE PRESSURE
REMOTE COMPENSATOR
W/LOW PRESS. STANDBY

“C” OPTION
BI-PRESSURE
REMOTE COMPENSATOR

“D” OPTION
BI-PRESSURE
REMOTE COMPENSATOR
W/LOW PRESS. STANDBY

“F” OPTION
PROVISION FOR
CUSTOMER SUPPLIED
REMOTE COMPENSATOR

PUMP COMPENSATOR
LOW PRESS. CONTROL

HIGH PRESS. SOLENOID (N.O.)
ENERGIZE FOR HIGH PRESSURE

LOW PRESS. STANDBY (N.O.)
ENERGIZE TO BUILD PRESSURE

PUMP COMPENSATOR
CONTROL ADJUSTMENT

AUX. VENT PORT (SAE-6)

HIGH PRESS. SOLENOID (N.O.)
ENERGIZE FOR HIGH PRESSURE

LOW PRESS. STANDBY (N.O.)
ENERGIZE FOR LOW PRESSURE

Solenoid is low watt
with DIN. 43650 connector
and manual override

PUMP COMPENSATOR
PRESSURE (INLET) PORT

PUMP COMPENSATOR
TANK (RETURN) PORT

SAE-6 37 FLARE "P" & "T" PORTS
attach points for customer
supplied remote compensator

PUMP COMPENSATOR
CONTROL ADJUSTMENT

PUMP COMPENSATOR
PRESSURE (INLET) PORT

PUMP COMPENSATOR
TANK (RETURN) PORT

SAE-6 37 FLARE "P" & "T" PORTS
attach points for customer
supplied remote compensator

PUMP COMPENSATOR
PRESSURE (INLET) PORT

PUMP COMPENSATOR
TANK (RETURN) PORT

SAE-6 37 FLARE "P" & "T" PORTS
attach points for customer
supplied remote compensator

PUMP COMPENSATOR
PRESSURE (INLET) PORT

PUMP COMPENSATOR
TANK (RETURN) PORT

SAE-6 37 FLARE "P" & "T" PORTS
attach points for customer
supplied remote compensator

PUMP COMPENSATOR
PRESSURE (INLET) PORT

PUMP COMPENSATOR
TANK (RETURN) PORT

SAE-6 37 FLARE "P" & "T" PORTS
attach points for customer
supplied remote compensator

PUMP COMPENSATOR
PRESSURE (INLET) PORT

PUMP COMPENSATOR
TANK (RETURN) PORT

SAE-6 37 FLARE "P" & "T" PORTS
attach points for customer
supplied remote compensator

PUMP COMPENSATOR
PRESSURE (INLET) PORT

PUMP COMPENSATOR
TANK (RETURN) PORT

SAE-6 37 FLARE "P" & "T" PORTS
attach points for customer
supplied remote compensator
Accessory Options

D & H-PAKS
Option B  Return Line Air/Oil Heat Exchanger (B1 or B2)  Option N  Return Line Filter
Option H  Pressure Filter  Option O  Return Line Filter
Option K  Check Valve – Pump Outlet  Option R  Combination Temp/Level Switch (R1 or R2)
Option L  Check Valve – Return Line Bypass

V-PAKS
Option A  Pump Case Heat Exchanger  Option L  Check Valve – Return Line Bypass
Option B  Return Line Air/Oil Heat Exchanger (B1 or B2)  Option N  Return Line Filter
Option H  Pressure Filter  Option O  Return Line Filter
Option K  Check Valve – Pump Outlet  Option R  Combination Temp/Level Switch (R1 or R2)
Dimensions - D-Pak (5 Gallon Tank) Accessories

Inch equivalents for millimeter dimensions are shown in (**).
Dimensions - H1 & V1 (10 Gallon Tank) Accessories

Inch equivalents for millimeter dimensions are shown in (**).
Dimensions - H2, 3, 4 & V2, 3, 4 (20, 30, 40 Gallon Tank) Accessories

Inch equivalents for millimeter dimensions are shown in (**).
Performance Data – Maximum Working Pressures

D & H-Pak - Pump/Motor Combinations Maximum Operating Pressure Bar (PSI)

<table>
<thead>
<tr>
<th>Pump Code Flow at 1725 RPM LPM (GPM)</th>
<th>Motor KW (HP)</th>
<th>Max Operating Pressure (Theoretical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4 (0.9)</td>
<td>.37 (.5)</td>
<td>223.3 (3240)</td>
</tr>
<tr>
<td>4.9 (1.3)</td>
<td>.60 (.75)</td>
<td>16.7 (2430)</td>
</tr>
<tr>
<td>6.8 (1.8)</td>
<td>.75 (1)</td>
<td>29.6 (430)</td>
</tr>
<tr>
<td>8.7 (2.3)</td>
<td>1.1 (1.5)</td>
<td>34.5 (500)</td>
</tr>
<tr>
<td></td>
<td>1.5 (2)</td>
<td>46.2 (670)</td>
</tr>
<tr>
<td></td>
<td>2.2 (3)</td>
<td>69.0 (1000)</td>
</tr>
<tr>
<td></td>
<td>3.7 (5)</td>
<td>92.4 (1400)</td>
</tr>
<tr>
<td></td>
<td>5.6 (7.5)</td>
<td>138.6 (2010)</td>
</tr>
<tr>
<td></td>
<td>7.5 (10)</td>
<td>231.0 (3350)</td>
</tr>
<tr>
<td></td>
<td>11.2 (15)</td>
<td>356.0 (5100)</td>
</tr>
<tr>
<td></td>
<td>14.9 (20)</td>
<td>568.0 (830)</td>
</tr>
</tbody>
</table>

V-Pak - Pump/Motor Combinations Maximum Operating Pressure Bar (PSI)

<table>
<thead>
<tr>
<th>Pump</th>
<th>LPM (GPM) @ 1725 RPM</th>
<th>Motor KW (HP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVP16</td>
<td>7.6 (2.0)</td>
<td>228.4 (3370)</td>
</tr>
<tr>
<td>PVP16</td>
<td>9.5 (2.5)</td>
<td>231.7 (3400)</td>
</tr>
<tr>
<td>PVP16</td>
<td>11.4 (3.0)</td>
<td>243.9 (3500)</td>
</tr>
<tr>
<td>PVP16</td>
<td>13.2 (3.5)</td>
<td>261.3 (3790)</td>
</tr>
<tr>
<td>PVP16</td>
<td>15.1 (4.0)</td>
<td>280.4 (4000)</td>
</tr>
<tr>
<td>PVP16</td>
<td>17.0 (4.5)</td>
<td>304.1 (4300)</td>
</tr>
<tr>
<td>PVP16</td>
<td>18.9 (5.0)</td>
<td>322.4 (4500)</td>
</tr>
<tr>
<td>PVP16</td>
<td>20.8 (5.5)</td>
<td>346.6 (4700)</td>
</tr>
<tr>
<td>PVP16</td>
<td>22.7 (6.0)</td>
<td>370.8 (5000)</td>
</tr>
<tr>
<td>PVP16</td>
<td>24.6 (6.5)</td>
<td>395.0 (5300)</td>
</tr>
<tr>
<td>PVP16</td>
<td>26.5 (7.0)</td>
<td>419.2 (5600)</td>
</tr>
<tr>
<td>PVP33</td>
<td>30.3 (8.0)</td>
<td>255.1 (3700)</td>
</tr>
<tr>
<td>PVP33</td>
<td>32.2 (8.5)</td>
<td>242.7 (3520)</td>
</tr>
<tr>
<td>PVP33</td>
<td>34.1 (9.0)</td>
<td>231.0 (3550)</td>
</tr>
<tr>
<td>PVP33</td>
<td>36.0 (9.5)</td>
<td>228.4 (3370)</td>
</tr>
<tr>
<td>PVP33</td>
<td>37.9 (10.0)</td>
<td>226.1 (3310)</td>
</tr>
<tr>
<td>PVP33</td>
<td>39.7 (10.5)</td>
<td>224.2 (3270)</td>
</tr>
<tr>
<td>PVP33</td>
<td>41.6 (11.0)</td>
<td>222.3 (3210)</td>
</tr>
<tr>
<td>PVP33</td>
<td>43.5 (11.5)</td>
<td>220.4 (3150)</td>
</tr>
<tr>
<td>PVP33</td>
<td>45.4 (12.0)</td>
<td>218.5 (3100)</td>
</tr>
<tr>
<td>PVP33</td>
<td>47.3 (12.5)</td>
<td>216.6 (3050)</td>
</tr>
<tr>
<td>PVP33</td>
<td>49.2 (13.0)</td>
<td>214.7 (3000)</td>
</tr>
<tr>
<td>PVP33</td>
<td>51.1 (13.5)</td>
<td>212.8 (2950)</td>
</tr>
<tr>
<td>PVP33</td>
<td>53.0 (14.0)</td>
<td>210.9 (2900)</td>
</tr>
<tr>
<td>PVP33</td>
<td>54.9 (14.5)</td>
<td>209.0 (2850)</td>
</tr>
<tr>
<td>PVP33</td>
<td>56.8 (15.0)</td>
<td>207.1 (2800)</td>
</tr>
</tbody>
</table>
NOTE: The efficiencies and data in the graph are good only for pumps running at 1800 RPM and stroked to maximum. To calculate approximate horsepower for the other conditions, use the following formula:

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

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

### Horsepower Limited Pumps

**PVP16 @ 1800 RPM**

- **Outlet Flow (GPM)**
- **Horsepower HP**
- **Input Torque (In.-Lb.)**

**PVP33 @ 1800 RPM**

- **Outlet Flow (GPM)**
- **Horsepower HP**
- **Input Torque (In.-Lb.)**

Pump Control Option “H” with PVP16
Horsepower Limiting
Factory Compensator Settings

Pump Control Option “H” with PVP33
Horsepower Limiting
Factory Compensator Settings
Performance Data – Heat Exchangers

Air/Oil Heat Exchangers
“A”, “B1” & “B2” used with 1800 RPM TEFC Motors

Heat removal is based on 4.4°C (40°F) differential between transfer medium.

Horsepower Removed
By Reservoir

<table>
<thead>
<tr>
<th>RESERVOIR SIZE LITERS (GALLONS)</th>
<th>KW (HP) REMOVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.9 (5)</td>
<td>.15 (.2)</td>
</tr>
<tr>
<td>37.9 (10)</td>
<td>.28 (.38)</td>
</tr>
<tr>
<td>75.7 (20)</td>
<td>.43 (.58)</td>
</tr>
<tr>
<td>113.6 (30)</td>
<td>.51 (.68)</td>
</tr>
<tr>
<td>151.4 (40)</td>
<td>.60 (.81)</td>
</tr>
</tbody>
</table>

Heat removal is based on static ambient air at 29.4°C (85°F) and max. oil temperature of 57.2°C (135°F).
Operating Notes

- Jog the electric motor once and verify that the electric motor is rotating in the same direction as the arrow on the electric motor housing. If direction is incorrect, reverse two of the three leads on a 3-phase electric motor.
- D & H-Pak power units are tested and relief valve is set at maximum pressure of the pump/motor combination.
- V-Pak power units are tested and pressure control valves are factory preset. If adjustments are needed, follow the procedure below: Begin adjusting relief valve and pump compensator control valve to increase pressure gradually. (NOTE: Always set relief valve 250 PSI higher than pump compensator pressure control valve or severe overheating will occur.)
- If pump fails to prime, vent pump discharge to atmosphere to establish fluid flow.
- Reservoir temperature should not exceed 150°F. System reliability and component service life will be reduced when system is operated at higher temperature.
- Clean fluid = improved system reliability and longer component service life, change filter elements whenever filter indicators indicate a dirty element condition.
- It is recommended that every 4,000 operating hours or once a year, whichever occurs first, the filler/breather cap and suction strainer should be replaced.

Fluid Recommendations

Premium quality hydraulic oil with a viscosity range between 150-250 SSU (30-50 cst.) at 100°F (38°C). Normal operating viscosity range between 80-1000 SSU (17-180 cst.). Maximum start-up viscosity is 4000 SSU (1000 cst.).

NOTE: Consult Parker when exceeding 160°F (71°C) operation. Oil should have maximum anti-wear properties, rust and oxidation treatment.

Filtration

For maximum pump and system component life, the system should be protected from contamination at a level not to exceed 125 particles greater than 10 microns per milliliter of fluid. (SAE Class 4 / ISO 16/13.) Due to the nature of variable displacement pumps, variations in pump inlet conditions, fluid acceleration losses, system aeration, and duty cycle must be carefully considered before specifying suction line filtration. Contact your Parker representative for assistance.

The totally enclosed pump mounting bracket offers precision shaft alignment and safety from the rotating shafts and coupling. The bracket is designed to mount on the motor face with the motor coupling half secure to the shaft. Then the pump, with its coupling half secure on the pump shaft, is mounted and the coupling halves are engaged. This will require proper spacing of the coupling prior to installation and a coupling with an outside diameter less than “P” dimension. If the coupling selected cannot be assembled this way, both coupling halves must be installed on the motor shaft. Next, mount the adapter on the motor. Then the pump can be mounted and the coupling secured to the pump by using the access slot to tighten the pump shaft coupling set screw.

**Dimensions**

Pump Mounting Adapter

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Pump Mounting</th>
<th>Motor Mounting</th>
<th>A</th>
<th>B</th>
<th>C1</th>
<th>C2</th>
<th>D</th>
<th>Face to Face</th>
<th>G</th>
<th>H</th>
<th>M</th>
<th>P</th>
<th>Vertical Mounting</th>
<th>Horizontal Mounting</th>
<th>Style</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>876631</td>
<td>SAE AA</td>
<td>56C</td>
<td>6.7</td>
<td>5.0</td>
<td>5.88</td>
<td>N/A</td>
<td>4.50</td>
<td>3.50</td>
<td>1.63</td>
<td>3/8-16</td>
<td>0.44</td>
<td>2.00</td>
<td>YES</td>
<td>YES</td>
<td>1</td>
<td>3 lb.</td>
</tr>
<tr>
<td>876632</td>
<td>SAE AA</td>
<td>182TC/256TC</td>
<td>9.0</td>
<td>5.3</td>
<td>7.25</td>
<td>N/A</td>
<td>8.50</td>
<td>5.00</td>
<td>1.63</td>
<td>3/8-16</td>
<td>0.56</td>
<td>2.00</td>
<td>YES</td>
<td>YES</td>
<td>1</td>
<td>4 lb.</td>
</tr>
<tr>
<td>876633</td>
<td>SAE A</td>
<td>56C</td>
<td>6.7</td>
<td>5.0</td>
<td>5.88</td>
<td>N/A</td>
<td>4.50</td>
<td>4.25</td>
<td>2.10</td>
<td>3/8-16</td>
<td>0.44</td>
<td>3.25</td>
<td>YES</td>
<td>YES</td>
<td>1</td>
<td>4 lb.</td>
</tr>
<tr>
<td>876634</td>
<td>SAE A</td>
<td>182TC/256TC</td>
<td>9.0</td>
<td>5.3</td>
<td>7.25</td>
<td>N/A</td>
<td>8.50</td>
<td>5.00</td>
<td>2.10</td>
<td>3/8-16</td>
<td>0.56</td>
<td>3.25</td>
<td>YES</td>
<td>YES</td>
<td>1</td>
<td>4 lb.</td>
</tr>
<tr>
<td>876635</td>
<td>SAE A</td>
<td>182TC/256TC</td>
<td>9.0</td>
<td>5.3</td>
<td>7.25</td>
<td>N/A</td>
<td>8.50</td>
<td>5.88</td>
<td>2.10</td>
<td>3/8-16</td>
<td>0.56</td>
<td>3.25</td>
<td>YES</td>
<td>YES</td>
<td>1</td>
<td>5 lb.</td>
</tr>
<tr>
<td>875343</td>
<td>SAE B</td>
<td>182TC/256TC</td>
<td>11.4</td>
<td>9.0</td>
<td>7.25</td>
<td>10.25</td>
<td>8.50</td>
<td>5.75</td>
<td>2.88</td>
<td>1/2-13</td>
<td>0.53</td>
<td>4.00</td>
<td>YES</td>
<td>NO</td>
<td>2</td>
<td>7 lb.</td>
</tr>
<tr>
<td>875344</td>
<td>SAE B</td>
<td>182TC/256TC</td>
<td>11.4</td>
<td>9.0</td>
<td>7.25</td>
<td>10.25</td>
<td>8.50</td>
<td>6.81</td>
<td>2.88</td>
<td>1/2-13</td>
<td>0.53</td>
<td>4.00</td>
<td>YES</td>
<td>NO</td>
<td>2</td>
<td>8 lb.</td>
</tr>
<tr>
<td>876683</td>
<td>SAE B</td>
<td>182TC/256TC</td>
<td>9.0</td>
<td>8.8</td>
<td>7.25</td>
<td>N/A</td>
<td>8.50</td>
<td>6.38</td>
<td>2.88</td>
<td>1/2-13</td>
<td>0.53</td>
<td>4.00</td>
<td>NO</td>
<td>YES</td>
<td>1</td>
<td>7 lb.</td>
</tr>
<tr>
<td>876684</td>
<td>SAE C</td>
<td>182TC/256TC</td>
<td>9.0</td>
<td>9.3</td>
<td>7.25</td>
<td>N/A</td>
<td>8.50</td>
<td>6.69</td>
<td>3.56</td>
<td>5/8-11</td>
<td>0.53</td>
<td>5.00</td>
<td>NO</td>
<td>YES</td>
<td>1</td>
<td>20 lb.</td>
</tr>
</tbody>
</table>

* All dimensions are in inches.

NOTE: It is the responsibility of the user to check the listed dimensions to ensure suitability of mounting adapter with pump/coupling/motor combination.
Application Formulas

- 1 GPM at 1500 PSI = 1 HP (General Rule)
- 1 Gallon = 231 Cubic Inches (3.7854 Liters)
- 1 Gallon Oil = 7.08 Lbs.
- 1 bar = 14.5 PSI
- 25.4mm = 1 Inch

\[
\begin{align*}
HP &= \frac{\text{GPM} \times \text{PSI}}{1714 \times \text{Pump Efficiency}} \\
\text{PSI} &= \frac{1714 \times \text{Pump Efficiency} \times \text{HP}}{\text{GPM}} \\
\text{GPM} &= \frac{1714 \times \text{Pump Efficiency} \times \text{HP}}{\text{PSI}} \\
\text{HP} &= \frac{\text{Torque (in.-lbs.)} \times \text{RPM}}{63025} \\
\text{Torque} &= \frac{\text{HP} \times 63025}{\text{RPM}} \\
\text{RPM} &= \frac{\text{HP} \times 63025}{\text{Torque}}
\end{align*}
\]

Motor Information

At 440V — 3-Phase Motor Draws 1.25 AMP/HP
At 220V — 3-Phase Motor Draws 2.5 AMP/HP
At 110V — Single Phase Motor Draws 10 AMP/HP