Low Noise Industrial Piston Pump

PVQ 20–B2/MB  *** – ** – 10 C** *** – 11/12/20
CAUTION
* Position gasket with small end of teardrop hole pointing in direction of compensator adjusting plug.

- **COMPENSATOR**
  - 244956 Gasket
  - 154005 O-Ring
  - 354858 Body
  - 113000 Plug
  - 10358 Screw (4 Req'd)
  - Torque 7–8 Nm.
  - (60–70 lb. in.)
  - 356986 Spool
  - 234204 Seat
  - Spring (see table)
  - 173792 O-Ring
  - 360430 Adjustment plug

- ◆ 93509 Retaining ring
  - 12016 Bearing
  - 317162 Gasket
  - 386530 Piston
  - 113000 Plug
  - 1276 Screw (4 Req'd)
  - Torque 34–47 Nm.
  - (25–35 lb. ft.)
  - 387828 Piston rod
  - 185638 Snap ring
  - 173792 O-Ring
  - 186580 Plug
  - 154129 O-Ring
  - Valve block S/A
  - (see table)
  - 404751 Rotation plate

- ◆ 423324 Spherical washer
  - 275961 Shoe plate
  - Piston S/A kit (see table)
  - Includes 9 piston S/A
  - 239077 Swash plate
  - 227407 Screw (2 Req'd)

- ◆ 245223 Washer
  - 247294 Spring
  - 275474 Thrust washer
  - Cylinder block
  - (see table)
  - 248812 Pin
  - (3 Req'd)

NOTE
Compensator shown for left hand shaft rotation. Rotate 180° for right hand shaft rotation.

<table>
<thead>
<tr>
<th>Model</th>
<th>Valve block S/A</th>
<th>Right hand</th>
<th>Left hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVQ20</td>
<td>Rear ports</td>
<td>02-142934</td>
<td>02-142935</td>
</tr>
<tr>
<td></td>
<td>Side ports</td>
<td>02-142936</td>
<td>02-142937</td>
</tr>
<tr>
<td>PVQ32</td>
<td>Rear ports</td>
<td>02-142938</td>
<td>02-142939</td>
</tr>
<tr>
<td></td>
<td>Side ports</td>
<td>02-142940</td>
<td>02-142941</td>
</tr>
<tr>
<td>PVQ20</td>
<td>Thru–drive</td>
<td>02-143198</td>
<td>02-143199</td>
</tr>
<tr>
<td>PVQ32</td>
<td>Thru–drive</td>
<td>02-143200</td>
<td>02-143201</td>
</tr>
</tbody>
</table>

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CAUTION
Model PVQ32C compensator pressure adjustment shall not exceed 2000 psi.

<table>
<thead>
<tr>
<th>Model</th>
<th>Comp. kit</th>
<th>Comp. Spring</th>
<th>Load Sense Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVQ**C</td>
<td>942158</td>
<td>239371</td>
<td></td>
</tr>
<tr>
<td>PVQ**CM</td>
<td>942159</td>
<td>265693</td>
<td></td>
</tr>
<tr>
<td>PVQ**CG</td>
<td>942480</td>
<td>239371</td>
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</tr>
<tr>
<td>PVQ**CMG</td>
<td>941353</td>
<td>265693</td>
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<tr>
<td>PVQ<strong>C</strong>V(C)11B</td>
<td>02-142729</td>
<td>239371</td>
<td>581073</td>
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<tr>
<td>PVQ<strong>C</strong>V(C)11P</td>
<td>02-142728</td>
<td>239371</td>
<td>581073</td>
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<tr>
<td>PVQ<strong>C</strong>V(C)24B</td>
<td>02-142730</td>
<td>239371</td>
<td>581072</td>
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<tr>
<td>PVQ<strong>C</strong>V(C)24P</td>
<td>02-142727</td>
<td>239371</td>
<td>581072</td>
</tr>
<tr>
<td>PVQ**CD****</td>
<td>(Refer to service parts information 1-3255-S)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE
See model code for pressure range settings of individual compensator kits.

Non Thru-Drive Shaft

<table>
<thead>
<tr>
<th>Shaft</th>
<th>Type</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>270369</td>
<td>1</td>
<td>58303</td>
</tr>
<tr>
<td>292077</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>883219</td>
<td>N</td>
<td>472270</td>
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<tr>
<td>875620</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

5 343573 Shaft seal (assemble with spring toward inside of unit)
227401 Screw (2 Req’d)
Name plate
357652 Housing
164432 Instruction plate
227401 Screw (2 Req’d)
317239 Spring
278634 Spring
240535 Seat
1306 Screw (2 Req’d)
Torque 102–108 Nm. (75–80 lb. ft.)
342743 Yoke

5 58303 Key
Shaft (see table)

Thru-Drives

<table>
<thead>
<tr>
<th>Model</th>
<th>Shaft</th>
<th>Coupling</th>
<th>Snap Ring</th>
<th>O-Ring</th>
<th>Input Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVQ**A9</td>
<td>883302</td>
<td>426770</td>
<td>223172</td>
<td>351776</td>
<td>1 Str. Keyed SAE B</td>
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<tr>
<td>PVQ**A11</td>
<td>860501</td>
<td>577937</td>
<td>92757</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Couplings, coupling retaining rings, O-rings, capscrews and washers must be ordered separately to mount rear pump.

NOTE
For satisfactory service life of these components in industrial applications, use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or cleaner. OPF, OFR, and OFRS series filters are recommended.

NOTE
Rotation plate shown for right hand shaft rotation. Assemble on opposite side of valve plate for left hand rotation.

△ Standard seal kit 919682
F3 equivalent seal kit 919686
- Compensator kit (see table)
- Valve block S/A (see table)
- Rotating group kit (see table)
- Piston S/A kit (see table)
- Piston/Rod S/A kit 942327
Model Code

1 PVQ Series
   P – Inline piston pump
   V – Variable volume
   Q – Quiet series

2 Displacement
   (CC/Rev & Pressure ratings)
   20 – 20 CC/Rev (1.28 CIR)
   210 bar (3000 psi)
   32 – 32 CC/Rev (2.01 CIR)
   140 bar (2000 psi)

3 Mounting flange
   B2 – SAE "B" 2-bolt
   MB – ISO 3019/2 "B" 2-bolt (available with "N" drive shaft only)

4 Rotation
   (viewed from shaft end)
   R – Right hand (CW) (standard)
   L – Left hand (CCW) (optional)

5 Thru drive
   (without coupling) Available with side ports only.
   Blank – No thru drive
   A9 – SAE “A” 2-bolt with 9T shaft
   A11 – SAE “A” 2-bolt with 11T shaft

6 Ports
   (type and location)
   SE – SAE O-Ring rear port, 1.625 inch (Inlet & Outlet) (standard)
   SS – SAE O-Ring side port, 1.625 inch (Inlet & Outlet) (optional)

7 Shafts
   (input)
   1 – Straight keyed SAE “B” modified 2.31 inch long
   3 – Splined SAE “B” modified 13T, 16/32 DP major dia. fit
   N – ISO 3019/2 short straight keyed (available with "MB" mounting only) Not available on thru-drives
   28 – 26 Tooth splined shaft (Vickers)
   Used to mount PVQ20/32 on PVQ40/45 “B26” thru drive

8 Seals
   S – Buna N (standard)
   F – Fluorocarbon (optional)

9 Pump design number
   10 – First design

10 Control type
   C** – Pressure compensator, PVQ20: Std. model is C21, indicating factory setting of 210 bar (3000 psi). Range is 02–21 in tens of bar (350–3000 psi)
   PVQ32: Std. model is C14, indicating factory setting of 140 bar (2000 psi). Range is 02–14 in tens of bar (350–2000 psi)
   CM** – Low pressure compensator, Std. model is CM7, indicating factory setting of 70 bar (1000 psi). Range is 02–10 in tens of bar (350–1500 psi)
   C+V+B – Pressure compensator C**, as above, with load sensing. Std. load sensing setting is 11 bar (160 psi). Range 10–17 bar (150–250 psi), with bleed down orifice. Example: C21V11B indicates compensator with 210 bar pressure setting and 11 bar load sense differential.
   C+V**P – Pressure compensator with load sensing as C+V+B above, but with bleed down orifice plugged.
   C+V+B** – Pressure compensator with load sensing. Compensator same as C** above. Std. load sensing setting is 24 bar (350 psi). Range 17–31 bar (250–450 psi), with bleed down orifice.
   C+V**P – Pressure compensator with load sensing. Same as C+V+B above, but with bleed down orifice plugged.
   CG – Pressure compensator modified for hydraulic remote control.
   CD** – Electric dual range compensator. PVQ20: Std. model is CD2110, indicating dual pressure settings of 210 and 100 bar, adjustment ranges are 20–210 bar (high) and 20–100 bar (low). PVQ32: Std. model is CD1407, indicating settings of 140 and 70 bar, adjustment ranges are 20–140 bar (high) and 20–100 bar (low).

11 Control option
   Blank – Without adjustable Max. displacement stop (standard)
   D – Max. adjustable displacement stop (optional)

12 Control design
   11 – For C** & CM**
   11 – For C*D & CM**
   12 – For C+V(C)**B & C+V(C)**P
   20 – CD*** & CG