Vickers®

Service Data

Vane Pumps

Vane Type Double Pump

2520VQ Series - 20 Design
**ASSEMBLE SEAL FLUSH TO PILOT FACE WITH SPRING FACING INWARD AS SHOWN.**

**USE THE REPLACEMENT PARTS SHOWN ON THIS DRAWING TO SERVICE A 2520V-10/12 UNIT. CARTRIDGES MUST BE REPLACED AS A KIT. INDIVIDUAL PARTS OF A CARTRIDGE ARE NOT INTERCHANGEABLE.**

**ASSEMBLE SEAL WITH SPRING TOWARD BEARING.**

**WIPE O.D. OF SEAL WITH OIL BEFORE PRESSING INTO BODY. APPLY GREASE TO SEAL I.D. BEFORE INSTALLATION OF SHAFT.**

**INCLUDED IN FOOT BRACKET KIT FB-B-10**

**NOTE: FLEX SIDEPLATE KITS INCLUDE (4) F3 SEAL PACKS.**

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### Table: Seal Ring Information

<table>
<thead>
<tr>
<th>Model</th>
<th>Lock Ring</th>
<th>Retaining Ring</th>
<th>BRG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>252’VQ******-*** 20</td>
<td>191400</td>
<td>120128</td>
<td>1705</td>
</tr>
<tr>
<td>252’VQ******-*** 20</td>
<td></td>
<td></td>
<td>232750</td>
</tr>
</tbody>
</table>

**NOTE:** BRONZE FACES MUST BE INSTALLED TOWARD THE ROTOR.

**TORQUE TO 45 ± 5 LB. IN.**

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### Table: Model-Body-Type

<table>
<thead>
<tr>
<th>Model</th>
<th>Body</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2<em>2’VQ</em>A/E*-*** 20</td>
<td>942353</td>
<td>4-BOLT</td>
</tr>
<tr>
<td>2<em>2’VQ</em>C/F*-*** 20</td>
<td>942378</td>
<td>STR THD</td>
</tr>
</tbody>
</table>

**STD/F3 SEAL KITS**

<table>
<thead>
<tr>
<th>STD SINGLE SHAFT</th>
<th>STD DOUBLE SHAFT</th>
<th>F3 SINGLE SHAFT</th>
<th>F3 DOUBLE SHAFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>920040</td>
<td>920041</td>
<td>920042</td>
<td>920043</td>
</tr>
</tbody>
</table>

**NOTE:** INSTALL SEAL RING IN BODY OR COVER, THEN INSTALL CARTRIDGE KIT.
**Model Code**

- **Shaft type**
  - 1 – Straight with square key standard
  - 11 – Splayed
  - 123 – Splayed

- **SAE port connections**
  Models Without Flow Control
<table>
<thead>
<tr>
<th>Code</th>
<th>Inlet</th>
<th>Outlet #1</th>
<th>Outlet #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4 bolt</td>
<td>4 bolt</td>
<td>4 bolt</td>
</tr>
<tr>
<td>C</td>
<td>4 bolt</td>
<td>SAE St.</td>
<td>SAE St.</td>
</tr>
<tr>
<td>E</td>
<td>4 bolt</td>
<td>4 bolt</td>
<td>flange</td>
</tr>
<tr>
<td>F</td>
<td>4 bolt</td>
<td>4 bolt</td>
<td>SAE St.</td>
</tr>
</tbody>
</table>

  Models With Flow Control
<table>
<thead>
<tr>
<th>Code</th>
<th>Inlet</th>
<th>Outlet #1</th>
<th>Outlet #2</th>
<th>Tank</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>4 bolt</td>
<td>SAE St.</td>
<td>SAE St.</td>
<td>SAE St.</td>
</tr>
<tr>
<td>E</td>
<td>4 bolt</td>
<td>4 bolt</td>
<td>flange</td>
<td>Thd.</td>
</tr>
</tbody>
</table>

- **Outlet port positions**
  (Viewed from cover end of pump)
  With #1 outlet opposite inlet:
  - AA – #2 outlet – 135° CCW from inlet
  - AB – #2 outlet – 45° CCW from inlet
  - AC – #2 outlet – 45° CW from inlet
  - AD – #2 outlet – 135° CW from inlet

  With #1 outlet 90° CCW from inlet:
  - BA – #2 outlet – 135° CCW from inlet
  - BB – #2 outlet – 45° CCW from inlet
  - BC – #2 outlet – 45° CW from inlet
  - BD – #2 outlet – 135° CW from inlet

- **SAE gpm capacity**
  (Cover end pump)
  SAE rating 1200 rpm–100 psi (7 bar)
  - 5 – 5 USgpm
  - 8 – 8 USgpm
  - 9 – 9 USgpm

- **Mounting**
  - F – Foot (Single shaft seal)
  - S – Flange (Double shaft seal)
  - Omitted – Flange, single shaft seal assembly

- **Outlet port positions continued**
  (Viewed from cover end of pump)
  With #1 outlet inline with inlet:
  - CA – #2 outlet – 135° CCW from inlet
  - CB – #2 outlet – 45° CCW from inlet
  - CC – #2 outlet – 45° CW from inlet
  - CD – #2 outlet – 135° CW from inlet

  With #1 outlet 90° CCW from inlet:
  - DA – #2 outlet – 135° CCW from inlet
  - DB – #2 outlet – 45° CCW from inlet
  - DC – #2 outlet – 45° CW from inlet
  - DD – #2 outlet – 135° CW from inlet

- **Controlled flow rate**
  (Models with flow control)
  - 2 – 2 USgpm
  - 4 – 4 USgpm
  - 6 – 6 USgpm
  - 7 – 7 USgpm

- **Relief valve setting**
  (Models with flow control)
  - C – 750 PSI
  - D – 1000 PSI
  - E – 1250 PSI
  - F – 1500 PSI
  - G – 1750 PSI
  - H – 2000 PSI
  - I – 2250 PSI
  - J – 2500 PSI
  - * 20V pump only (not for 12 & 14 ring sizes).

- **Design**
  (Viewed from shaft end of pump)
  - L – Left hand (CCW rotation)
  - Omitted – Right hand rotation

- **Mounting**
  - 282 – SAE 2-bolt mounting
  - 283 – Foot mounting

**NOTE**

- Standard right hand shaft rotation cartridges shown. Reverse for left hand rotation; refer to note.

- To reverse cartridge kit rotation, remove the two screws and reverse the location of the inlet support plate and the outlet support plate. Reinstall the two screws hand tight. Use pump cover to align all sections of the cartridge. Carefully remove the cover and tighten the screws.

- For satisfactory service life of these components, use full flow filtration to provide fluid which meets ISO cleanliness code 16/13 or cleaner. Selections from pressure, return, and in-line filter series are recommended.