Thru-Drive Vane Type Pump

(F3)-45VQT*(M)-**A(M)2-**-*20/21-*
NOTE
FOR BP MODELS AN ADAPTER KIT
AND SPACER KIT IS REQUIRED.

- 298147 Bolt (4 Req’d)
  Torque 55.2 – 67.8 N.m.
  (40 – 50 lb. ft.)

- 351776 “O” Ring

- 154086 “O” Ring

- “A” Adapter Plate (See Table)

- 87947 Bolt (4 Req’d)
  Torque 344 – 371 N.m.
  (255 – 275 lb. ft.)

- ▲433767 Seal packs (4 req’d)
- 380109 Screw (2 req’d)

- “B” Adapter Plate (See Table)

- 154088 “O” Ring

- △588725 Spacer (See table)
  (BP models only)

- ▲375422 “O” Ring (BP models only)

- △477700 Washer (BP models only)

- △205438 Screw (2 Req’d)
  (BP models only)

- “C” Adapter Plate (See Table)

- ▲435714 “O” Ring

- △582519 Washer (4 Req’d)

- 298148 Bolt (4 Req’d)
  Torque 55.2 – 67.8 N.m.
  (40 – 50 lb. ft.)
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SHAFT</th>
<th>KEY</th>
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<tr>
<td>45VQTAS-203</td>
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<th>BODY S/A</th>
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<tr>
<td>45VQT*S**A</td>
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<td>02-136923</td>
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<tr>
<td>45VQT*S**AM</td>
<td>478507</td>
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</tbody>
</table>

\[\square\] Assemble seal with spring loaded sealing member towards bearing. Seals to be completely wetted with oil prior to assembly.

- **154107 “O” Ring**
- **429282 Secondary shaft seal**
  
- **394974 Shaft Seal**
- **Key (See table)**

194878 Washer

Shaft (See Table)

- **425510 Pressure plate**
- **416444 Flex-plate (Install bronze face towards rotor)**

**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.
**Model Code**

**F3** – 45 VQT B S – 21 A M S 2 – 203 C A 21 R

| 1 | Viton seals  
Omit — Standard seals |
|---|---|
| 2 | Intravane pump series-Thru drive  
45VQT — Standard bearing |
| 3 | Thru-drive connection mounting adapter |
| Code | SAE Designation |  
J744C | J744Oct83 |
| A | A | 82-2 |
| B | B | 101-2 |
| BP | Special mounting with spacer for Vickers PVE19/21 |
| C | C | 127-2 |
| 4 | Front mounting flange |
| Model Series | SAE Designation |  
J744C | J744Oct83 |
| 45VQT | C | 127-2 |
| 5 | Geometric displacement |
| Code | SAE rating (USgpm) at 1200 rpm, 6.9 bar (100 psi)  
| Frame Size | Code | cm³/r | in³/r |
| 45VQT | 42 | 138 | 8.41 |
| 50 | 162 | 9.85 |
| 60 | 193 | 11.75 |
| 6 | Port connections  
A — SAE 4-bolt flange |
| 7 | Metric threads on port connection  
(Omit for inch threads.) |
| 8 | Double shaft seal  
S — Double shaft seal  
Blank — Single shaft seal |
| 9 | Thru—drive coupling  
2 — SAE splined coupling included with pump |
| 10 | Shaft  
203 — Straight key  
297 — Splined |
| 11 | Outlet positions  
(Viewed from adapter end of pump)  
A — Opposite inlet port  
B — 90° CCW from inlet  
C — In line with inlet  
D — 90° CW from inlet |
| 12 | Adapter mounting orientation  
(Viewed from adapter end of pump)  
| Code | A adapter | B or C adapter |
| A | Rotated 45° | In line with pump mtg. flg.  
| B | Rotated 45° | Rotated 90° |
| 13 | Design  
—20 design single shaft seal  
—21 design double shaft seal |
| 14 | Rotation  
(Viewed from shaft end of pump)  
L — Left hand (counterclockwise)  
R — Right hand (clockwise) |

**NOTE**

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

**NOTE**

When ordering spare cartridge parts, it is recommended they be obtained in cartridge kits. Kits are assembled and tested by Vickers for either right or left hand rotation. If left hand rotation is required, it should be specified on parts order by adding suffix “L” to cartridge kit number.

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**Sharp Edges of Vane Must Lead in Direction of Rotation**

- L.H. Rotation
- R.H. Rotation