Vane Type Single Pump

35VQ**A-86* - 20(L)
36VQ**A-86 - 20(L)
### CAPACITY (USGPM)

- **3"VQ21A**
- **3"VQ25A**
- **3"VQ30A**
- **3"VQ35A**
- **3"VQ38A**

### SCREW (2 REQ'D)

- **410609**
- **418108**

### PIN (2 REQ'D)

- **430806** (Includes 327009 Bushing)
- **433766 S/A**

### INLET SUPPORT PLATE

- **923953**
- **262154**

### SEAL PACK (4 REQ'D)

- **394962**
- **319396**
- **319397**
- **319398**
- **319399**

### FLEX-SIDE PLATE KIT

- **413420**
- **413421**
- **413422**
- **413418**
- **413419**

### Rotor Vane Kit

- **922700** (Includes 10 Vanes & 10 Inserts)

### Outlet Support Plate

- **412003**

### THESE PARTS ARE INCLUDED IN CARTRIDGE KIT

- **3*VQ21A**
- **3*VQ25A**
- **3*VQ30A**
- **3*VQ35A**
- **3*VQ38A**

### CART. KIT

- **413420**
- **413421**
- **413422**
- **413418**
- **413419**

### F3 CART. KIT

- **421582**
- **421583**
- **421584**
- **421585**
- **421586**

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**NOTE**

BRONZE FACES MUST BE INSTALLED TOWARDS THE ROTOR.

**NOTE**

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

**NOTE**

TO REVERSE CARTRIDGE KIT ROTATION, REMOVE THE TWO (2) 410609 SCREWS, AND REVERSE THE LOCATION OF THE INLET SUPPORT PLATE 430806 AND OUTLET SUPPORT PLATE 412003. REINSTALL THE TWO (2) SCREWS HAND TIGHT. USE PUMP COVER TO ALIGN ALL SECTIONS OF THE CARTRIDGE. REMOVE COVER CAREFULLY AND TIGHTEN SCREWS TO 100 LB. IN. TORQUE.

**NOTE**

WIPE O.D. OF SEAL WITH OIL BEFORE PRESSING INTO BODY. APPLY GREASE TO SEAL I.D. BEFORE INSTALLATION OF SHAFT.
○ ASSEMBLE SEAL WITH SPRING LOADED SEALING MEMBER TOWARD BEARING.

● ASSEMBLE SEAL FLUSH WITH PILOT FACE WITH SPRING LOADED SEALING MEMBER FACING INWARD AS SHOWN.

<table>
<thead>
<tr>
<th>MODEL</th>
<th>TYPE DRIVE</th>
<th>BEARING</th>
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<tbody>
<tr>
<td>35V</td>
<td>DIRECT-</td>
<td>38441</td>
</tr>
<tr>
<td>36V</td>
<td>INDIRECT-</td>
<td>239092</td>
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</table>

SHARP EDGE OF VANE MUST LEAD DIRECTION OF ROTATION.

FB-C-10 MOUNTING KIT (INCLUDES SCREWS)

429281 SHAFT SEAL (USE ON "S" FLANGE MOUNTED MODELS ONLY)

394973 SHAFT SEAL 193220 RETAINER
KEY (SEE TABLE)

119982 RETAINING RING
193144 SPIROLOX RING

▲ 588508 BACK-UP RING
▲ 154084 "O" RING
▲ 416974 RING SEALING (ASSEMBLY NOTE: INSTALL IN BODY BEFORE INSTALLATION OF CARTRIDGE KIT.)

205533 SCREW (2 REQ'D)

** NOTE WHEN ORDERED INDIVIDUALLY, FLEX SIDE PLATE KIT INCLUDES (4) F3 SEAL PACK SUB ASSY'S.

### SHAFTS

<table>
<thead>
<tr>
<th>SHAFT NO.</th>
<th>PART NO.</th>
<th>SHAFT NO.</th>
<th>PART NO.</th>
<th>KEY</th>
<th>TYPE</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>233624</td>
<td>88678</td>
<td>STRAIGHT - STANDARD</td>
<td></td>
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<tr>
<td>4</td>
<td>247803</td>
<td>36V</td>
<td>SPLINE - 14 TOOTH</td>
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<td></td>
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<tr>
<td>11</td>
<td>242287</td>
<td>35V</td>
<td>SPLINE - 14 TOOTH</td>
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<tr>
<td>86</td>
<td>392669</td>
<td>393536</td>
<td>STRAIGHT - HEAVY DUTY</td>
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</tbody>
</table>

* COVER END L.H. ROTATION
* COVER END R.H. ROTATION

** COVER END L.H. ROTATION
** COVER END R.H. ROTATION
Model Code

(F3) - 35 VQ ** A * - * * * 20 (*)

1. Viton Seals
   (Omit if not required.)
2. Series
3. Vane Type
4. SAE Rated Capacity
   (Rating @ 1200 RPM - 100 psi)
   21 - 21 USgpm
   25 - 25 USgpm
   30 - 30 USgpm
   35 - 35 USgpm
   38 - 38 USgpm
5. Port Connections
   A - SAE 4-Bolt Flange
6. Mounting & Shaft Seals
   Assembly
   F - Foot (Single Shaft Seal Assy.)
   S - Flange (Double Shaft Seal Assy.)
   Omitted - Flange (Single Shaft Seal Assy.)
7. Shafts
   1 - Square Key
   4 - Splined
   11 - Splined
   86 - Square Key
8. Port Positions
   See Chart Below
9. Design
10. Rotation
    (Viewed from Shaft End)
    L - Left Hand (CCW Rotation)
    Omitted - Right Hand Rotation

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.