Vane Type Double Pump

4525VQ Series –20 Design
### SAE rated capacity (4525VQ** shaft end pump cartridge)

<table>
<thead>
<tr>
<th>USgpm</th>
<th>● Ring</th>
<th>● STD. cartridge kit</th>
<th>● F3 cartridge kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>297510</td>
<td>416435</td>
<td>419511</td>
</tr>
<tr>
<td>47</td>
<td>297718</td>
<td>421234</td>
<td>421954</td>
</tr>
<tr>
<td>50</td>
<td>297502</td>
<td>416436</td>
<td>419510</td>
</tr>
<tr>
<td>57</td>
<td>306772</td>
<td>421233</td>
<td>421955</td>
</tr>
<tr>
<td>60</td>
<td>297503</td>
<td>416437</td>
<td>419509</td>
</tr>
</tbody>
</table>

### SAE rated capacity (4525VQ *** ***) cover end pump cartridge

<table>
<thead>
<tr>
<th>USgpm</th>
<th>● Ring</th>
<th>● STD. cartridge kit</th>
<th>● F3 cartridge Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>326984</td>
<td>421244</td>
<td>421576</td>
</tr>
<tr>
<td>14</td>
<td>326985</td>
<td>421235</td>
<td>421577</td>
</tr>
<tr>
<td>17</td>
<td>326986</td>
<td>421236</td>
<td>421578</td>
</tr>
<tr>
<td>19</td>
<td>326987</td>
<td>421237</td>
<td>421579</td>
</tr>
<tr>
<td>21</td>
<td>326988</td>
<td>421238</td>
<td>421580</td>
</tr>
</tbody>
</table>

**NOTE:**
- Install 419673 sealing ring into body, then install cartridge kit.

- 923956 Flex side plate kit
- 270597 Rotor
- 923956 Flex side plate kit
- 419079 Outlet support plate
- 154095 "O" Ring
- 419673 Seal ring
- 154078 "O" Ring
- 231532 Cover ("A" 4 bolt flange)
- 242250 Cover ("E" STR. thread flange)
- 11163 Bolt (4 Req’d) Oil & torque 88–101 N.m. (65–75 lb. ft.)
- 588507 Back up ring
- 237138 Bolt (4 Req’d) Oil & torque 345–373 N.m. (255–275 lb. ft.)
- 370071 Inlet housing
- 413834 Screw (2 Req’d) Torque 4–5 N.m. (40–50 lb. in.)
- 422207 Pin (2 Req’d)
- 419080 Inlet support plate
- 433764 Seal pack S/A
- 922710 Vane kit (Includes 10 vanes & inserts)
- 419509 F3 cartridge kit
- Included in 4525VQ shaft end cart. kit.
- Included in 4525VQ cover end cart. kit.
- Included in single shaft seal kit 920068
- Included in double shaft seal kit 920069
- Included in mounting kit FB–C–10

© Eaton Hydraulics, Incorporated 2000
All Rights Reserved
**NOTE:**
- Assemble seal with spring loaded sealing member towards bearing. Seals to be completely wetted with oil prior to assembly.
- Mounting bracket

---

**Typical cutaway view**
Outlet port positions
(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 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° CW 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

Outlet port positions continued
(Viewed from cover end of pump)

#1 outlet 90° CW 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

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

Shaft type
1– Straight with square key standard
11– Splined
19– Splined
86– Straight with square key heavy duty
114– Splined

SAE port connections
Code Inlet Outlet #1 Outlet #2
A – 4 bolt 4 bolt 4 bolt
flange flange flange
E – 4 bolt 4 bolt SAE ST.
flange flange THD.

US GPM capacity
(Shaft end pump)
SAE rating 1200 rpm−100 psi (7 bar)
42 – 42 USgpm 57 – 57 USgpm
47 – 47 USgpm 60 – 60 USgpm
50 – 50 USgpm

SAE port connections
Code Inlet Outlet #1 Outlet #2
A – 4 bolt 4 bolt 4 bolt
flange flange flange
E – 4 bolt 4 bolt SAE ST.
flange flange THD.

US GPM capacity
(Cover end pump)
SAE rating 1200 rpm−100 psi (7 bar)
12 – 12 USgpm 19 – 19 USgpm
14 – 14 USgpm 21 – 21 USgpm
17 – 17 USgpm

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

Cover end cartridge R. H. Rotation

Shaft end cartridge R. H. Rotation

Printed in U.S.A.