A−8

PUMPS AND MOTORS

FIXED-DISPLACEMENT DOUBLE VANE PUMP (HVP-FCC1, FCE1, FEE1)

Features

Two single pumps (HVP-FC1, HVP-FE1 series) are assembled into one unit and driven by one motor. In this combination, install normally the pump of larger capacity closer to the shaft. Fluid discharge from these two pumps is supplied to individual circuits to activate actuators respectively or converged to activate the same actuator.

Cautions on use

Please read the Operating Manual carefully to ensure correct usage:

- Standard direction of rotation is to right (CW) viewed from the shaft end.
- For the specifications of each pump, refer to the single pump, A-5 and A-6 pages.
- Symbol “*” in the model designation indicates the nominal displacement and, in the combination, the pump with larger capacity is installed at the shaft side.
- When using the HVP-FCC1 Series double vane pump, use the pumps within 1,200 min⁻¹/11 kW or 1,800 min⁻¹/15 kW.
- When using the HVP-FCE1 Series double vane pump, use the pumps within 1,000 min⁻¹/18 kW or 1,200 min⁻¹/22 kW.
- When using the HVP-FEE1 Series double vane pump, use the pumps within 1,200 min⁻¹/18 kW and 1,200 min⁻¹/22 kW.
- In the nominal displacement, the upper row indicates the head side pump and the lower row indicates the shaft side pump, for both the minimum and maximum.

The pump can be used for R & O type and abrasion-resistant type hydraulic fluid applications.

- When using water-glycol hydraulic fluid, specify “G” at the end of model designation. The maximum rotating speed, however, becomes 1,200 min⁻¹. For brand names of water-glycol hydraulic fluid, please consult us.
- Since the pipe connecting port is of flange mounting type, the pump can be installed or removed without disassembling the pipe.
- The direction of rotation can be changed on the same pump. For the changing method, please consult us.
- The pump for counterclockwise rotation has the inlet and outlet ports opposite to those on the pump for clockwise rotation.

Please read the “Cautions on Using Pumps and Motors”, A-2 and A-3 pages.

Description of the model designation

HVP-FCC1-L11-32R-B (-G)

Vane pump

Fixed displacement type

Head side pump

HVP-FC1, FE1 Series

Shaft side pump

HVP-FC1, FE1 Series

Kind of hydraulic fluid

No code: Petroleum base hydraulic fluid

G: Water-glycol hydraulic fluid

Model No.

Direction of rotation R: CW L: CCW (Viewed from shaft end)

Nominal displacement of head side pump

Nominal displacement of shaft side pump

Mounting method L: Foot type F: Flange type

Rated pressure

Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Foot type</th>
<th>Flange type</th>
<th>Nominal displacement</th>
<th>Pressure (MPa)</th>
<th>Rotating speed (min⁻¹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVP-FCC1-L*-*R-B</td>
<td>HVP-FCC1-F*-*R-B</td>
<td>Min. Max.</td>
<td>2 20</td>
<td>Rated Max.</td>
<td>1,800 1,800</td>
</tr>
<tr>
<td>HVP-FCE1-L*-*R-A</td>
<td>HVP-FCE1-F*-*R-A</td>
<td>Min. Max.</td>
<td>2 20</td>
<td>Rated Max.</td>
<td>1,200 1,200 1,500 1,200</td>
</tr>
<tr>
<td>HVP-FEE1-L*-*R-A</td>
<td>HVP-FEE1-F*-*R-A</td>
<td>Min. Max.</td>
<td>2 20</td>
<td>Rated Max.</td>
<td>1,200 1,200</td>
</tr>
</tbody>
</table>

Outside dimensions

HVP-FCC1-L*-*R-B

HVP-FCC1-F*-*R-B
### Fixed displacement type

#### HVP-FCE1-L∗-R-A

- Outside dimensions
  - Mass: 38.5 kg
  - Rated pressure: 19.05 ±0.021 MPa
  - Rated speed: 50 ±0.2 min⁻¹

#### HVP-FCE1-F∗-R-A

- Outside dimensions
  - Mass: 38.0 kg
  - Rated pressure: 19.05 ±0.021 MPa
  - Rated speed: 50 ±0.2 min⁻¹

#### HVP-FEE1-L∗-R-A

- Outside dimensions
  - Mass: 58.0 kg
  - Rated pressure: 18.3 ±0.2 MPa
  - Rated speed: 101.6 ±0.1 min⁻¹

#### HVP-FEE1-F∗-R-A

- Outside dimensions
  - Mass: 57.9 kg
  - Rated pressure: 19.05 ±0.021 MPa
  - Rated speed: 50 ±0.2 min⁻¹

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When using the HVP-FCE1 Series double vane pump, use the pumps within 1,200 min⁻¹/18 kW or 1,200 min⁻¹/22 kW.

When using the HVP-FEE1 Series double vane pump, use the pumps within 1,800 min⁻¹/11 kW or 1,800 min⁻¹/15 kW.

Features:
- Foot type
- Flange type
- Series
- Foot side pump
- Shaft side pump