Flow Divider - Combiner Valve

SFD2F-D4/I

1-5/16-12 UN  •  \(Q_{\text{max}}\) 150 l/min (40 GPM)  •  \(p_{\text{max}}\) 350 bar (5100 PSI)

Technical Features

› Divides pump flow to operate two actuators under different load conditions
› Re-combines the return flows to synchronize actuator movement
› Division and combination of flows largely independent of the load
› Used for synchronisation controls and differential lock
› High accuracy under load and pressure imbalance
› High flow capacity
› Flow variation \(\pm 10\%\) with the maximum variation of pressure and inlet flow
› In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227

Functional Description

The inlet flow passes through the two orifices in the valve housing, then through the spools and out of the radial holes in the sleeve. The matched orifices and compensating springs ensure that the flow is divided equally, excess flow in either direction causes the spool to move and close the radial holes in the sleeve until pressure balance is restored. In the reverse direction the spools shift closer together and regulate the inflow through the radial ports.

Symbol

Technical Data

<table>
<thead>
<tr>
<th>Valve size / Cartridge cavity</th>
<th>1-5/16-12 UN-2A / D4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. flow (Q) l/min (GPM)</td>
<td>150 (39.6)</td>
</tr>
<tr>
<td>Max. operating pressure (p) bar (PSI)</td>
<td>350 (5080)</td>
</tr>
<tr>
<td>Fluid temperature range (NBR) (\text{°C (°F)})</td>
<td>(-20 .... +90 (-4 ... +194))</td>
</tr>
<tr>
<td>Division ratio %</td>
<td>50 / 50 standard</td>
</tr>
<tr>
<td>Max. flow variation %</td>
<td>(\pm 10)</td>
</tr>
<tr>
<td>Mass kg (lbs)</td>
<td>0.36 (0.79)</td>
</tr>
</tbody>
</table>

Datasheet | Type
---|---
GI_0060 | General information
SB_0018 | Valve bodies
SMT_0019 | Cavity details
SP_8010 | Spare parts

Characteristics measured at \(v = 40 \text{ mm/s} (195 \text{ SUS})\)

Pressure drop related to inlet flow rate

Notice: When used in cylinders select the size to suite the return flow rate. Blocking one leg will result in a large reduction in flow from the other.
Valves with higher working pressures are available. Contact the main office for details.
**Dimensions** in millimeters (inches)

- 103 (4.06)
- 12 (0.47)

**Ordering Code**

- Flow divider - combiner valve
  - 1-5/16-12 UNF

**Flow rate (inlet flow)**

- 33 - 100 l/min (8.7 - 26.4 GPM) 100
- 50 - 150 l/min (13.2 - 39.6 GPM) 150

**Surface treatment**

- zinc-coated (ZnCr-3), ISO 9227 (240 h)

**Seals**

- NBR
- FPM (Viton)