Coolant Valve for High-Pressure

Suitable for high-speed grinding and drilling with a long drill

This coolant valve is suitable for lubrication, blowing cutting chips, and cooling by high-pressure (3 MPa/7 MPa) coolant.

- **Life service:** 3 million cycles
  (Under SMC lifespan test conditions)

- **Power consumption:** 0.35 W
  (24 VDC)

- **Water hammer:** Reduced by 20%
  (2 port)
  (Compared with the existing model VNH series)

- **Standardized the 3-port reverse pressure spec.**
  (Refer to the application example 1 and 2.)

- **Flow-rate characteristics (2 port)**

<table>
<thead>
<tr>
<th>Pressure spec.</th>
<th>$A v \times 10^{-6}$ [m$^2$]</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 MPa</td>
<td>42 (1.8) to 155 (6.5)</td>
</tr>
</tbody>
</table>

  ( ): Cv factor

**Application example**

- **[Example 1]**
  3-port reverse pressure spec. normally closed
  SGH

  - Drippage can be prevented.

- **[Example 2]**
  3-port reverse pressure spec. selector valve
  SGH

  - Different pressures can be supplied.

- **[Example 3]**
  Nozzle turned ON/OFF by 2-port valve
  SGH

- **[Example 4]**
  Reduction of pump load by 3-port valve

- **[Example 5]**
  Switching the nozzles by 3-port valve

Use to supply the coolant with 2 locations by switching the valve. Can be used as a 2-port valve by plugging in the port 3(B).
## [Variations]

<table>
<thead>
<tr>
<th>Port size</th>
<th>Model</th>
<th>Orifice size [mm]</th>
<th>Flow-rate characteristics</th>
<th>Rated voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1→20</td>
<td>1→30</td>
<td>1→20</td>
</tr>
<tr>
<td>2 port</td>
<td>SGH(A)12-70-10</td>
<td>ø7.5 D</td>
<td>42(1.8) D</td>
<td>200 VAC 50/60Hz</td>
</tr>
<tr>
<td></td>
<td>SGH(A)22-70-15</td>
<td>ø9.4 D</td>
<td>65(2.7) D</td>
<td>110 VAC[115 VAC] 50/60Hz</td>
</tr>
<tr>
<td></td>
<td>SGH(A)32-70-20</td>
<td>ø12.4 D</td>
<td>112(4.7) D</td>
<td>220 VAC[230 VAC] 50/60Hz</td>
</tr>
<tr>
<td></td>
<td>SGH(A)42-70-25</td>
<td>ø15.4 D</td>
<td>155(6.5) D</td>
<td>24 VDC</td>
</tr>
<tr>
<td>3 port</td>
<td>SGH(A)13-30-10</td>
<td>ø11 D</td>
<td>50(2.1) D</td>
<td>12 VDC</td>
</tr>
<tr>
<td></td>
<td>SGH(A)23-30-15</td>
<td>ø10.5 D</td>
<td>55(2.3) D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SGH(A)33-30-20</td>
<td>ø12 D</td>
<td>65(2.7) D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SGH(A)43-30-25</td>
<td>ø15.2 D</td>
<td>100(4.3) D</td>
<td></td>
</tr>
<tr>
<td>7 port</td>
<td>SGH(A)13-70-10</td>
<td>ø7.5 D</td>
<td>26(1.1) D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SGH(A)23-70-15</td>
<td>ø10.1 D</td>
<td>45(1.9) D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SGH(A)33-70-20</td>
<td>ø12.8 D</td>
<td>75(3.3) D</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SGH(A)43-70-25</td>
<td>ø15.3 D</td>
<td>102(4.3) D</td>
<td></td>
</tr>
</tbody>
</table>

## [Electrical entry]

- **T: Conduit terminal**
- **D: DIN terminal** (Pitch between terminals: 11 mm)
- **DO: DIN terminal without connector**
- **W: M12 connector (4-pin spec.)**
- **V: M12 connector (5-pin spec.)**

## [Bracket]

- **B1: With bracket on the left side**
- **B2: With bracket on the right side**

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