The most suitable rubber for hot water adopted. Best suited for hot water applications such as plastic moldings.

- The safety lock function prevents accidental disconnection caused by vibration or impact.
- Nickel plated on the liquid contact parts to improve corrosion resistance.
- The socket has double O-ring for improved seal.

### Specifications

<table>
<thead>
<tr>
<th>Body material</th>
<th>Brass (Nickel plated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (Thread)</td>
<td>Plug: R 1/4, R 3/8, R 1/2 / Socket: Rc 1/4, Rc 3/8, Rc 1/2</td>
</tr>
<tr>
<td>Pressure unit</td>
<td>MPa</td>
</tr>
<tr>
<td>Working pressure</td>
<td>2.0</td>
</tr>
<tr>
<td>Seal material</td>
<td>Fluoro rubber FKM (X-100)</td>
</tr>
<tr>
<td>Working temperature range</td>
<td>20°C to +180°C</td>
</tr>
<tr>
<td>Working Pressure</td>
<td>2.0 MPa (20 kgf/cm²)</td>
</tr>
</tbody>
</table>

### Max. Tightening Torque

<table>
<thead>
<tr>
<th>Torque</th>
<th>1/4&quot;</th>
<th>3/8&quot;</th>
<th>1/2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nm(kgf·cm)</td>
<td>9 (92)</td>
<td>11.2 (122)</td>
<td>30 (306)</td>
</tr>
</tbody>
</table>

On installation or removal always use correct size spanner/wrench on the hexagon section of socket/plug body.

### Flow Direction

Fluid flow can be bi-directional when socket and plug are connected.

### Interchangeability

Different sizes of sockets and plugs cannot be connected to each other. SP Cupla Type A and HW Type Cuplas of the same size can be connected to each other regardless of end configurations.

However, SP Cupla Type A has different seal material characteristics, so the product specification and durability will differ. Conduct performance evaluation test under your actual operating environment and conditions within range of the working conditions of the product.

### Admixture of Air on Connection

May vary depending upon the usage conditions. (mL)

<table>
<thead>
<tr>
<th>Model</th>
<th>HW-2S-F × HW-2P-M</th>
<th>HW-3S-F × HW-3P-M</th>
<th>HW-4S-F × HW-4P-M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of air</td>
<td>1.2</td>
<td>2.7</td>
<td>3.9</td>
</tr>
</tbody>
</table>

### Volume of Spillage per Disconnection

May vary depending upon the usage conditions. (mL)

<table>
<thead>
<tr>
<th>Model</th>
<th>HW-2S-F × HW-2P-M</th>
<th>HW-3S-F × HW-3P-M</th>
<th>HW-4S-F × HW-4P-M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of spillage</td>
<td>0.8</td>
<td>2.1</td>
<td>3.2</td>
</tr>
</tbody>
</table>

### Flow Rate – Pressure Loss Characteristics

<table>
<thead>
<tr>
<th>Test conditions</th>
<th>Fluid: Water</th>
<th>Temperature: 25°C ± 5°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure loss in MPa (kgf/cm²)</td>
<td>0.001 (0.01)</td>
<td>0.01 (0.1)</td>
</tr>
<tr>
<td>Flow rate in L/min</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

### Safety lock function (Sleeve lock)

- **How to lock**: Slide the Lock Ring in the direction of the arrow A and rotate it simultaneously. When the Stopper is aligned with the shallower cutout on the Lock Ring, the Cupla will be locked.

- **How to unlock**: Slide the Lock Ring in the direction of the arrow A and rotate it simultaneously. When the Stopper is aligned with the deeper cutout on the Lock Ring, the Cupla will be unlocked.

![Safety lock function (Sleeve lock)](image-url)
**Models and Dimensions**

**Hot Water Cupla HW Type**

WAF: WAF stands for width across flats.

---

### Hot Water

- **Valve**
  - When 180˚C
    - Please replace the whole Cupla in approximately 1000 hours.
    - The valve cannot be replaced.
  - When 160˚C
    - Please replace the whole Cupla in approximately 3000 hours.
    - The valve cannot be replaced.

### O-ring

- When 180˚C
  - Please replace the O-rings of the Socket in approximately 700 hours.
  - Please replace the two O-rings at once.
- When 160˚C
  - Please replace the O-rings of the Socket in approximately 2000 hours.
  - Please replace the two O-rings at once.

---

**Approximate time for Valve / O-ring replacement**

<table>
<thead>
<tr>
<th>Valve</th>
<th>O-ring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>when 180˚C</strong></td>
<td><strong>when 180˚C</strong></td>
</tr>
<tr>
<td>Please replace the whole Cupla in approximately 1000 hours.</td>
<td>Please replace the O-rings of the Socket in approximately 700 hours.</td>
</tr>
<tr>
<td>The valve cannot be replaced.</td>
<td>Please replace the two O-rings at once.</td>
</tr>
<tr>
<td><strong>when 160˚C</strong></td>
<td><strong>when 160˚C</strong></td>
</tr>
<tr>
<td>Please replace the whole Cupla in approximately 3000 hours.</td>
<td>Please replace the O-rings of the Socket in approximately 2000 hours.</td>
</tr>
<tr>
<td>The valve cannot be replaced.</td>
<td>Please replace the two O-rings at once.</td>
</tr>
</tbody>
</table>

---

**Guide for Replacement (180˚C)**

- **700 hours**
  - Large compression set
  - The compression set of the O-ring when used with hot water.
  - Before test (unused)
  - After 1000 hours of use

- **2000 hours**
  - Before test (unused)
  - After 3000 hours of use

**Guide for Replacement (160˚C)**

- Large compression set
- Please apply grease at the replacement.

---

**Caution**

*Hot water continuous flow test by a mold temperature controller*

- **Valve**: For continuous use of 3000 hours at 160˚C / 1000 hours at 180˚C
- **O-ring**: For continuous use of 2000 hours at 160˚C / 700 hours at 180˚C

- Air will be admixed at the time of connection. Please purge the air by the equipment side when using with hot water.
- If additives are mixed in water or the piping is filled with steam, the lifetime of the seal will be decreased.
- When using in such an environment, conduct performance evaluation test by actual product.

---

**Test conditions**

- Testing device: Mold temperature controlling machine
- Fluid: Clean water
- Test temperature: 160˚C, 180˚C
- Test condition: Continuous test with the Cupla connected

- Please replace the whole Cupla in approximately 1000 hours.
- The valve cannot be replaced.
- Please replace the whole Cupla in approximately 3000 hours.
- The valve cannot be replaced.
- Please replace the two O-rings at once.
- Please replace the two O-rings at once.

---

**Accessory**

- O-ring (2 pieces/set)
- Please apply grease at the replacement.

---

**Note**

Although we have confirmed that there is no leakage, it is our experimental value and not a guaranteed value. Please consider above hours just as a guide. The durability of the seal differs depending on the customers usage conditions. (Number of connection / disconnection, fluid additives, etc.)

**Before use, please be sure to read “Safety Guide” described at the end of this book and “Instruction Sheet” that comes with the products.**