NEW ZEROSPILL CUPLA

Minimizing spillage during disconnection keeps workshops clean.

- Stainless Steel
- Brass

- \textbf{Valve structure:} Two-way shut-off
- \textbf{Applicable fluids:} Water, Hydraulic oil, Chemicals, Air, Gas
- \textbf{Working pressure:} 3.5 MPa (35 kgf/cm²)

For ZEROSPILL CUPLA: Accessories for ZEROSPILL CUPLA

- For sockets and plugs:
  - O-ring Maintenance
  - Grease for O-ring
- For plugs:
  - Grease for O-ring
- For ZEL-8S:
  - Capacitive
  - Capped
- For ZEL-6S:
  - Capacitive
  - Capped
- For ZEL-3S:
  - Capacitive
  - Capped
- For ZEL-2S:
  - Capacitive
  - Capped
- For ZEL-8P:
  - Capacitive
  - Capped
- For ZEL-6P:
  - Capacitive
  - Capped
- For ZEL-4P:
  - Capacitive
  - Capped
- For ZEL-3P:
  - Capacitive
  - Capped
- For ZEL-2P:
  - Capacitive
  - Capped

For environmental conservation, this print is made of the pulp blended with waste paper and printed with soy-based inks.

E-mail: overseas@nitto-kohki.co.jp
URL: www.nitto-kohki.co.jp/e

NITTO KOHKI CO.,LTD.

Headquarters
Ohta-ku, Tokyo 146-8555 Japan
9-4, Nakaikegami 2-chome,
Phone: 81-3-3755-1111  Fax: 81-3-3753-8791
Main Features of ZEROSPILL CUPLA

Unique seal design reduces both liquid spillage and air ingress

To compare with Nitto SP Cupla Type A.

<table>
<thead>
<tr>
<th>Volume of spillage:</th>
<th>Volume of air ingress:</th>
</tr>
</thead>
<tbody>
<tr>
<td>about 96% less vs SP Cupla Type A</td>
<td>about 94% less vs SP Cupla Type A</td>
</tr>
</tbody>
</table>

Reliable zero friction valve

New valve design offers smooth zero-friction movement resulting in reduced chance of malfunction caused by deterioration of valve parts.

Push-to-connect design       One-hand easy operation

Just push the plug into the socket for simple and secure connection. This reduces connection time and improves efficiency.

Wide variety of material options available

<table>
<thead>
<tr>
<th>Body material</th>
<th>Brass, Stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seal material</td>
<td>Nitrile rubber, Fluoro rubber, Ethylene-propylene rubber</td>
</tr>
<tr>
<td>Size</td>
<td>1/4&quot;, 3/8&quot;, 1/2&quot;, 3/4&quot;, 1&quot;</td>
</tr>
</tbody>
</table>
**Specifications**

- **Body material**: Brass, Stainless steel (SUS 304)
- **Applicable fluids**: Water, Hydraulic oil, Air, Gas
- **Size**: 1/4", 3/8", 1/2", 3/4", 1"
- **Working pressure**: 3.5 (MPa)
- **Seal material**: NBR (SG), Fluoro rubber, EPDM (EPT)
- **Working temperature range**: -20°C to +80°C, -20°C to +180°C, -40°C to +150°C
- **Mark**: Brass, Stainless steel
- **Fluid**: NBR (SG), FKM (X-100), EPDM (EPT)
- **Working temperature range**: -20°C to +80°C, -20°C to +180°C, -40°C to +150°C

**Max. Tightening Torque**

<table>
<thead>
<tr>
<th>Size</th>
<th>1/4&quot;</th>
<th>3/8&quot;</th>
<th>1/2&quot;</th>
<th>3/4&quot;</th>
<th>1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brass</td>
<td>9192</td>
<td>1222</td>
<td>3046</td>
<td>5010</td>
<td>6631</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>141143</td>
<td>222241</td>
<td>60612</td>
<td>909193</td>
<td>1231224</td>
</tr>
</tbody>
</table>

**Flow Direction**

Fluid may flow in either direction from plug or from socket side when coupled.

**Interchangeability**

Different size socket and plug cannot be connected to each other.

**Models and Dimensions**

**Plug**

- **Female thread**
- **Dimensions (mm)**: L, C, øD, H (max)

**Socket**

- **Female thread**
- **Dimensions (mm)**: L, H

**Min. Cross-Sectional Area**

<table>
<thead>
<tr>
<th>Size</th>
<th>1/4&quot;</th>
<th>3/8&quot;</th>
<th>1/2&quot;</th>
<th>3/4&quot;</th>
<th>1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (mm²)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>60.5</td>
<td>86.5</td>
<td>160.6</td>
<td>188.7</td>
<td></td>
</tr>
</tbody>
</table>

**Suitability for Vacuum**

- **3.5 x 10⁻¹ Pa (1 x 10⁻³ mmHg)**
- **Socket only**: —
- **Plug only**: —
- **When connected**: Operational

**Air Ingress on Connection**

<table>
<thead>
<tr>
<th>Size</th>
<th>1/4&quot;</th>
<th>3/8&quot;</th>
<th>1/2&quot;</th>
<th>3/4&quot;</th>
<th>1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of air admixture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.16</td>
<td>0.21</td>
<td>3.37</td>
<td>1.12</td>
<td>1.52</td>
<td></td>
</tr>
</tbody>
</table>

**Volume of Spillage per Disconnection**

<table>
<thead>
<tr>
<th>Size</th>
<th>1/4&quot;</th>
<th>3/8&quot;</th>
<th>1/2&quot;</th>
<th>3/4&quot;</th>
<th>1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of spillage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.06</td>
<td>0.12</td>
<td>0.20</td>
<td>0.43</td>
<td>0.55</td>
<td></td>
</tr>
</tbody>
</table>

**Flow Rate – Pressure Loss Characteristics**

- **Fluid**: Water
- **Temperature**: 25°C - 27°C

**Volume of Spillage**

- **When connected**: —
- **Operational**: —

**Air Ingress on Connection**

- **Volume of air admixture**: —
- ** operate with low viscosity fluids may cause some spillage.

Nitto Kohki’s cutting-edge technology has created the eco-friendly ZEROSPILL CUPLA.


Jig for O-ring replacement

Model PMJ-1 (Small)  
(Part No. CB23687)  
Sales unit: 1pc.

Model PMJ-2 (Large)  
(Part No. CB23688)  
Sales unit: 1pc.

PMJ-1 (Small)

Model PMJ-2 (Large)

Sales unit: 1pc.

Grease for O-ring

Model GRE-82 (Silicon base oil) for EPDM O-ring  
(Part No. CB23791)  
Sales unit: 1pc.

Model GRE-M1 (Mineral base oil) for NBR / FKM O-ring  
(Part No. CB23701)  
Sales unit: 1pc.

Grease for O-ring

Dip Mold Cap

For sockets

For plugs

Capped

Optional Dust caps are available to prevent dust and debris from entering the fluid line, to retain seal integrity and to maximize the O-ring’s life.

• When ordering, please always indicate part number, part name, and quantity.

<table>
<thead>
<tr>
<th>O-ring</th>
<th>Part number</th>
<th>Sales unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBR</td>
<td>C040611</td>
<td>1pc.</td>
</tr>
<tr>
<td></td>
<td>C040740</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C040742</td>
<td></td>
</tr>
<tr>
<td>FKM</td>
<td>C040628</td>
<td>1pc.</td>
</tr>
<tr>
<td></td>
<td>C040744</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C040746</td>
<td></td>
</tr>
<tr>
<td>EPDM</td>
<td>C040645</td>
<td>1pc.</td>
</tr>
<tr>
<td></td>
<td>C040748</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C040750</td>
<td></td>
</tr>
<tr>
<td>For ZEL-2S</td>
<td>CA96463</td>
<td>1pc.</td>
</tr>
<tr>
<td></td>
<td>CA96464</td>
<td></td>
</tr>
<tr>
<td>For ZEL-3S</td>
<td>CA96467</td>
<td>1pc.</td>
</tr>
<tr>
<td>For ZEL-4S</td>
<td>CA96466</td>
<td>1pc.</td>
</tr>
<tr>
<td>For ZEL-6S</td>
<td>CA96457</td>
<td>1pc.</td>
</tr>
<tr>
<td>For ZEL-8S</td>
<td>CA96458</td>
<td>1pc.</td>
</tr>
<tr>
<td>For ZEL-2P</td>
<td>CA96454</td>
<td>1pc.</td>
</tr>
<tr>
<td>For ZEL-3P</td>
<td>CA96457</td>
<td>1pc.</td>
</tr>
<tr>
<td>For ZEL-4P</td>
<td>CA96456</td>
<td>1pc.</td>
</tr>
<tr>
<td>For ZEL-6P</td>
<td>CA96457</td>
<td>1pc.</td>
</tr>
<tr>
<td>For ZEL-8P</td>
<td>CA96457</td>
<td>1pc.</td>
</tr>
</tbody>
</table>

Accessories for ZEROSPILL CUPLA

The quality of seal materials plays an important role in maintaining the performance of the ZEROSPILL Cupla. Please periodically apply a small amount of Nitto Kohki’s genuine grease to the O-rings or balls to retain the Cupla’s full performance.

• When ordering, please always indicate part number, part name, and quantity.

Specifications and designs are subject to change at any time without notice.

Head Office
9-4, Nakaikagami 2-chome, Ohta-ku, Tokyo 146-8555 Japan  
Phone: +81-3-3755-1111 Fax: +81-3-3753-8791

E-mail: overseas@nitto-kohki.co.jp  
URL: www.nitto-kohki.co.jp/e

DISTRIBUTED BY

For environmental conservation, this print is made of the pulp blended with waste paper and printed with soy-based inks.