Standard hydraulic Cuplas for general purposes with a working pressure up to 20.6MPa. Low pressure loss, suitable for hydraulic equipment.

- General purpose hydraulic Cuplas with a working pressure of 20.6MPa (210kgf/cm²).
- Structure is designed to reduce pressure loss to the lowest, and is best for hydraulic applications that need big flow rates.
- Both socket and plug have built-in automatic shut-off valves that prevent fluid outflow when disconnected. Easy to handle.

### Specifications

<table>
<thead>
<tr>
<th>Body material</th>
<th>Special steel (Nickel-plated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1/8” • 3/8” • 1/2” • 3/4” • 1”</td>
</tr>
<tr>
<td>Working pressure MPa</td>
<td>20.6 (210)</td>
</tr>
<tr>
<td>Pressure resistance MPa</td>
<td>31.0 (316)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seal material</th>
<th>Mark</th>
<th>Working temperature range</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile rubber</td>
<td>NBR</td>
<td>-20°C~+80°C</td>
<td>Standard material</td>
</tr>
<tr>
<td>Fluoro rubber</td>
<td>FKM</td>
<td>-20°C~+180°C</td>
<td>Available on request</td>
</tr>
</tbody>
</table>

### Max. Tightening Torque N-m (kgf-cm)

<table>
<thead>
<tr>
<th>Size</th>
<th>1/4”</th>
<th>3/8”</th>
<th>1/2”</th>
<th>3/4”</th>
<th>1”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque</td>
<td>28</td>
<td>45</td>
<td>90</td>
<td>100</td>
<td>180</td>
</tr>
</tbody>
</table>

### Flow Direction

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

### Interchangeability

Different sizes are not interchangeable.

### Min. Cross-Sectional Area (mm²)

<table>
<thead>
<tr>
<th>Model</th>
<th>210-2SP</th>
<th>210-3SP</th>
<th>210-4SP</th>
<th>210-5SP</th>
<th>210-6SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. cross-sectional area</td>
<td>24.5</td>
<td>42.8</td>
<td>77.4</td>
<td>91.0</td>
<td>146.5</td>
</tr>
</tbody>
</table>

### Suitability for Vacuum 1.3Pa (1 x 10⁻²mmHg)

- Socket only
- Plug only
- When connected

### Admixture of Air on Connection (m³)

<table>
<thead>
<tr>
<th>Model</th>
<th>210-2SP</th>
<th>210-3SP</th>
<th>210-4SP</th>
<th>210-5SP</th>
<th>210-6SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of air</td>
<td>0.85</td>
<td>1.02</td>
<td>2.63</td>
<td>8.83</td>
<td>16.04</td>
</tr>
</tbody>
</table>

### Flow Rate – Pressure Loss Characteristics

- Fluid: Hydraulic oil
- Temperature: 30°C ± 5°C
- Fluid viscosity: 32 x 10⁻⁶m²/s
- Density: 0.87 x 10³kg/m³
Models and Dimensions

WAF: WAF stands for width across flat.

## Plug - Female thread

- **Model:** 210-2P  
  - **Application:** R 1/4  
  - **Dimensions (mm):**  
    - Lp: 39  
    - C: 33  
    - Hp/WAF: 18  
    - T: Hex.19  
  - **Mass (g):** 80

- **Model:** 210-3P  
  - **Application:** R 3/8  
  - **Dimensions (mm):**  
    - Lp: 57  
    - C: 36  
    - Hp/WAF: 18.5  
    - T: Hex.23  
  - **Mass (g):** 193

- **Model:** 210-4P  
  - **Application:** R 1/2  
  - **Dimensions (mm):**  
    - Lp: 90  
    - C: 42.5  
    - Hp/WAF: 24  
    - T: Hex.27  
  - **Mass (g):** 281

- **Model:** 210-6P  
  - **Application:** R 3/4  
  - **Dimensions (mm):**  
    - Lp: 195  
    - C: 51  
    - Hp/WAF: 28  
    - T: Hex.35  
  - **Mass (g):** 566

- **Model:** 210-8P  
  - **Application:** R 1  
  - **Dimensions (mm):**  
    - Lp: 293  
    - C: 61  
    - Hp/WAF: 35  
    - T: Hex.41  
  - **Mass (g):** 861

## Socket - Female thread

- **Model:** 210-2S  
  - **Application:** R 1/4  
  - **Dimensions (mm):**  
    - Ls: 50.5  
    - ØD: 30  
    - Hs/WAF: 22  
    - T: Rc 1/4  
  - **Mass (g):** 158

- **Model:** 210-3S  
  - **Application:** R 3/8  
  - **Dimensions (mm):**  
    - Ls: 54  
    - ØD: 33  
    - Hs/WAF: 23  
    - T: Rc 3/8  
  - **Mass (g):** 193

- **Model:** 210-4S  
  - **Application:** R 1/2  
  - **Dimensions (mm):**  
    - Ls: 65  
    - ØD: 39  
    - Hs/WAF: 29  
    - T: Rc 1/2  
  - **Mass (g):** 330

- **Model:** 210-6S  
  - **Application:** R 3/4  
  - **Dimensions (mm):**  
    - Ls: 78.5  
    - ØD: 48  
    - Hs/WAF: 35  
    - T: Rc 3/4  
  - **Mass (g):** 566

- **Model:** 210-8S  
  - **Application:** R 1  
  - **Dimensions (mm):**  
    - Ls: 95  
    - ØD: 55  
    - Hs/WAF: 41  
    - T: Rc 1  
  - **Mass (g):** 861

### Application Example

- Hydraulic control equipment
- Construction machinery

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