

For Low Pressure

# Compact Cupla

Small multipurpose type for low pressure lines

Working pressure



1.0 MPa  
(10 kgf/cm<sup>2</sup>)

Valve structure



Two-way shut-off

Applicable fluids



Air

Water

**Compact 17.5mm outer diameter, yet socket and plug have built-in automatic shut-off valves.**

- Both socket and plug have built-in automatic shut-off valves.
- Compact size with max. outer dia. 17.5mm.
- Compact yet operator friendly sleeve design.
- For small bore piping from temperature control piping to scientific equipment.
- Body materials in stainless steel or brass, excellent in corrosion resistance.
- Four types of end configuration enable suitability with a wide range of piping applications.

**NEW**



## Specifications

|                           |   |          |                           |                      |
|---------------------------|---|----------|---------------------------|----------------------|
| Body material             | Brass, Stainless steel (SUS 304)                |          |                           |                      |
| Size                      | For 1/8", ø4mm x ø6mm, ø6mm x ø8mm tube         |          |                           |                      |
| Tube material             | Polyamide, Polyolefin, Fluorine contained resin |          |                           |                      |
| Working pressure          | MPa (kgf/cm <sup>2</sup> )                      | 1.0 (10) |                           |                      |
| Pressure resistance       | MPa (kgf/cm <sup>2</sup> )                      | 1.5 (15) |                           |                      |
| Seal material             | Seal material                                   | Mark     | Working temperature range | Remarks              |
|                           | Fluoro rubber                                   | FKM      | -20°C~+180°C              | Standard material    |
| Working temperature range | Ethylene-propylene rubber                       | EPDM     | -40°C~+150°C              | Available on request |

Note: Working pressure and working temperature of nut type depend on the tube material and its dimensional tolerance.

## Max. Tightening Torque

N·m (kgf·cm)

| Model  | PM, PF, SM, SF  | PN, SN |
|--------|-----------------|--------|
| Torque | Brass           | 5 (51) |
|        | Stainless steel | 9 (92) |

## Flow Direction

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



## Interchangeability

Socket and plug of Compact Cupla can be connected regardless of end configurations.

## Min. Cross-Sectional Area

(mm<sup>2</sup>)

| Model                     | CO-1SM x CO-1PM | CO-1SF x CO-1PF | CO-40SN x CO-40PN | CO-60SN x CO-60PN |
|---------------------------|-----------------|-----------------|-------------------|-------------------|
| Min. cross-sectional area | 8.8             | 8.8             | 4.9               | 8.8               |

## Suitability for Vacuum

1.3 x 10<sup>-1</sup>Pa (1 x 10<sup>-3</sup>mmHg)

| Socket only | Plug only | When connected |
|-------------|-----------|----------------|
| —           | —         | Operational    |

## Admixture of Air on Connection

(m<sup>3</sup>)

|                         |      |
|-------------------------|------|
| Volume of air admixture | 0.34 |
|-------------------------|------|

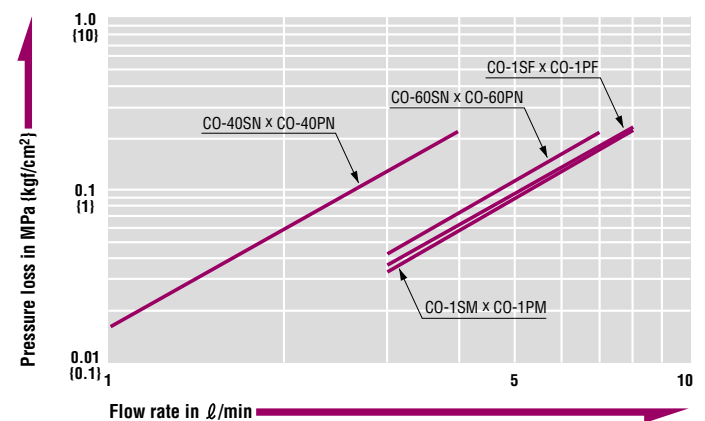
## Volume of Spillage per Disconnection

(m<sup>3</sup>)

|                    |      |
|--------------------|------|
| Volume of spillage | 0.23 |
|--------------------|------|

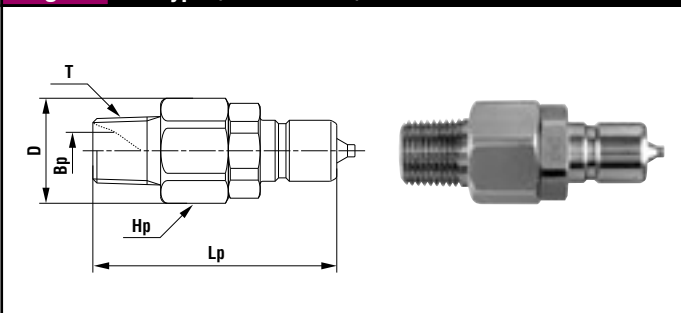
## Flow Rate – Pressure Loss Characteristics

[Test conditions] • Fluid : Water • Temperature : 20°C ± 5°C



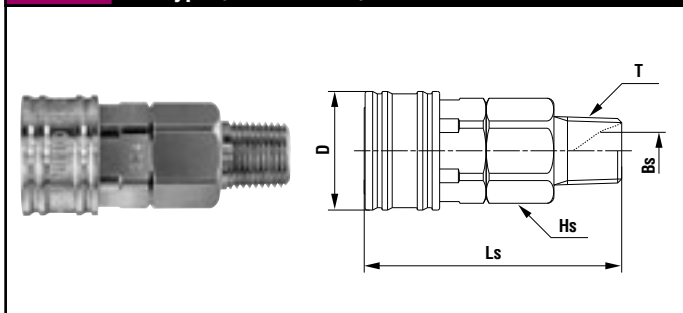
Models and Dimensions

**Plug PM type (Male thread)**



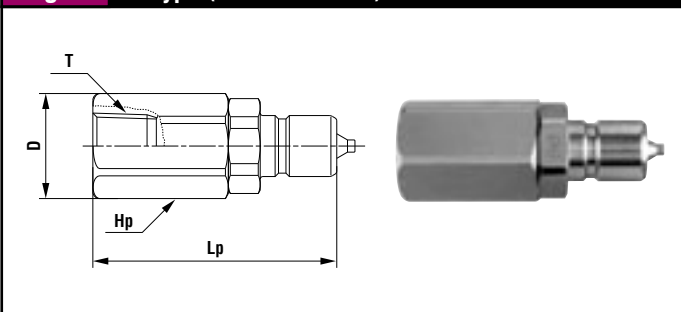
| Model  | Application | Body material, Mass (g) |                 | Dimensions (mm) |      |          |       |     |
|--------|-------------|-------------------------|-----------------|-----------------|------|----------|-------|-----|
|        |             | Brass                   | Stainless steel | Lp              | øD   | Hp (WAF) | T     | øBp |
| CO-1PM | Rc 1/8      | 20                      | 19              | (36)            | 15.5 | Hex.14   | R 1/8 | 5.5 |

**Socket SM type (Male thread)**



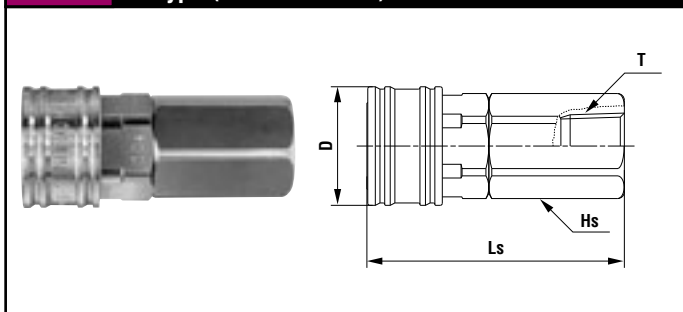
| Model  | Application | Body material, Mass (g) |                 | Dimensions (mm) |      |          |       |     |
|--------|-------------|-------------------------|-----------------|-----------------|------|----------|-------|-----|
|        |             | Brass                   | Stainless steel | Ls              | øD   | Hs (WAF) | T     | øBs |
| CO-1SM | Rc 1/8      | 34                      | 32              | (38)            | 17.5 | Hex.14   | R 1/8 | 5.5 |

**Plug PF type (Female thread)**



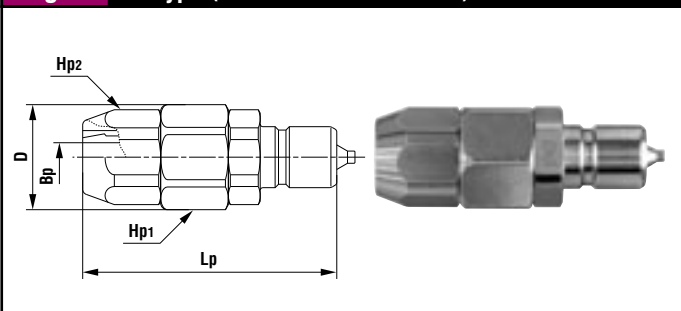
| Model  | Application | Body material, Mass (g) |                 | Dimensions (mm) |      |          |        |
|--------|-------------|-------------------------|-----------------|-----------------|------|----------|--------|
|        |             | Brass                   | Stainless steel | Lp              | øD   | Hp (WAF) | T      |
| CO-1PF | R 1/8       | 25                      | 23              | (36)            | 15.5 | Hex.14   | Rc 1/8 |

**Socket SF type (Female thread)**



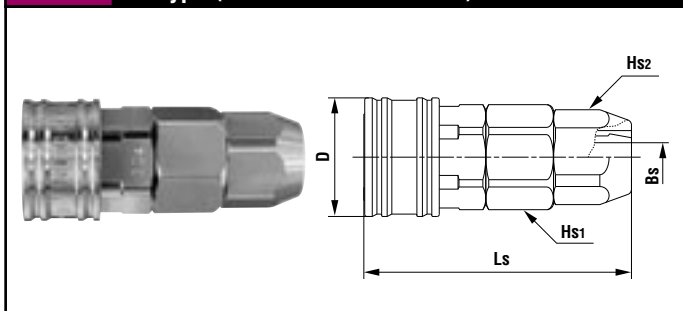
| Model  | Application | Body material, Mass (g) |                 | Dimensions (mm) |      |          |        |
|--------|-------------|-------------------------|-----------------|-----------------|------|----------|--------|
|        |             | Brass                   | Stainless steel | Ls              | øD   | Hs (WAF) | T      |
| CO-1SF | R 1/8       | 39                      | 36              | (38)            | 17.5 | Hex.14   | Rc 1/8 |

**Plug PN type (For connection to tube)**



| Model   | Application (Tube) | Body material, Mass (g) |                 | Dimensions (mm) |      |           |           |     |
|---------|--------------------|-------------------------|-----------------|-----------------|------|-----------|-----------|-----|
|         |                    | Brass                   | Stainless steel | Lp              | øD   | Hp1 (WAF) | Hp2 (WAF) | øBp |
| CO-40PN | ø4 x ø6            | 23                      | 22              | (38.5)          | 15.5 | Hex.14    | Hex.10    | 2.5 |
| CO-60PN | ø6 x ø8            | 25                      | 24              | (37.5)          | 15.5 | Hex.14    | Hex.13    | 4.2 |

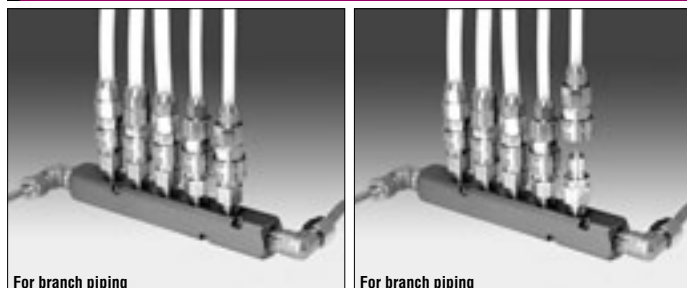
**Socket SN type (For connection to tube)**



| Model   | Application (Tube) | Body material, Mass (g) |                 | Dimensions (mm) |      |           |           |     |
|---------|--------------------|-------------------------|-----------------|-----------------|------|-----------|-----------|-----|
|         |                    | Brass                   | Stainless steel | Ls              | øD   | Hs1 (WAF) | Hs2 (WAF) | øBs |
| CO-40SN | ø4 x ø6            | 38                      | 35              | (40.5)          | 17.5 | Hex.14    | Hex.10    | 2.5 |
| CO-60SN | ø6 x ø8            | 40                      | 37              | (39.5)          | 17.5 | Hex.14    | Hex.13    | 4.2 |

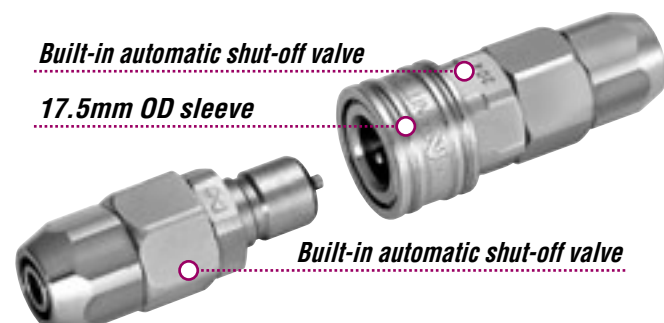
No difference in dimensions of brass and stainless steel Cupla  
Before use, please be sure to read "Instruction Sheet" that comes with the products.

Application Example



For branch piping

For branch piping



Built-in automatic shut-off valve

17.5mm OD sleeve

Built-in automatic shut-off valve