

For Low Pressure

Small Cupla

Lightweight and compact for use on air lines and scientific equipment

Working pressure



Valve structure



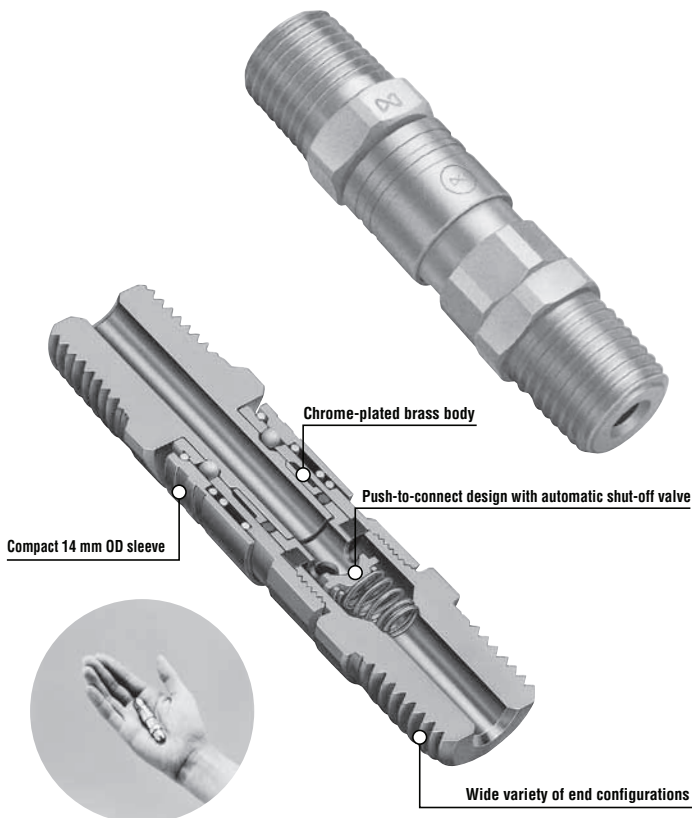
Applicable fluids



Lightweight and compact push-to-connect operation. Responding to requirements of modular combinations.

- Compact socket with built-in valve and 14 mm OD sleeve.
Suits applications calling for compact and modular components.
- Just push in the plug to the socket for connection by easy one hand operation.
- Chrome-plated brass for corrosion resistance adopted for the body.
Stable performance for long life.
- A wide line-up of end configurations (female and male threads, hose barbs, manifolds) enables suitability with a wide range of piping applications such as pneumatic, scientific and medical equipment.
- Also available with quick connect/disconnect Tube Fitter type.

Note: Fluid will flow out from the plug side when disconnected.
Take necessary precaution if the fluid is water.



Specifications

| | | | | |
|---------------------------|-------------------------|--|---------------------------|-------------------|
| Body material | | Cupla : Brass (Chrome-plated) Tube Fitter Type: Brass (Nickel-plated) | | |
| Size | Thread | 1/8", 1/4" | | |
| | Hose barb | Polyamide hose: $\phi 4 \times \phi 6$, $\phi 4.5 \times \phi 6$ Urethane hose: $\phi 4 \times \phi 6$ | | |
| | Tube barb (Tube fitter) | Polyurethane tube: Outside Dia. $\phi 6 \pm 0.1$, $\phi 8 \pm 0.15$ Polyamide tube: Outside Dia. $\phi 6^{+0.05}_{-0.08}$, $\phi 8^{+0.05}_{-0.1}$ Fluorine contained resin tube: Outside Dia. $\phi 6 \pm 0.07$, $\phi 8 \pm 0.07$ | | |
| Working pressure | MPa | 1.0 | | |
| | kgf/cm ² | 10 | | |
| | bar | 10 | | |
| | PSI | 145 | | |
| Seal material | Seal material | Mark | Working temperature range | Remarks |
| Working temperature range | Nitrile rubber | NBR (SG) | -20°C to +80°C | Standard material |

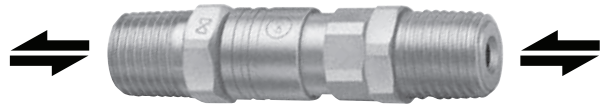
* Above specifications apply only to Cuplas. Working pressure, pressure resistance and working temperature range may vary depending on tube materials you use with and its working temperature range.

Max. Tightening Torque Nm (kgf·cm)

| | | | |
|---------------|--------|--------|--------------|
| Size (Thread) | 1/8" | 1/4" | PN • SN Type |
| Torque | 7 (71) | 9 (92) | 5 (51) |

Flow Direction

Air flows in either direction from plug or socket side when coupled.



Interchangeability

Sockets and plugs can be connected regardless of end configurations.

Min. Cross-Sectional Area (mm²)

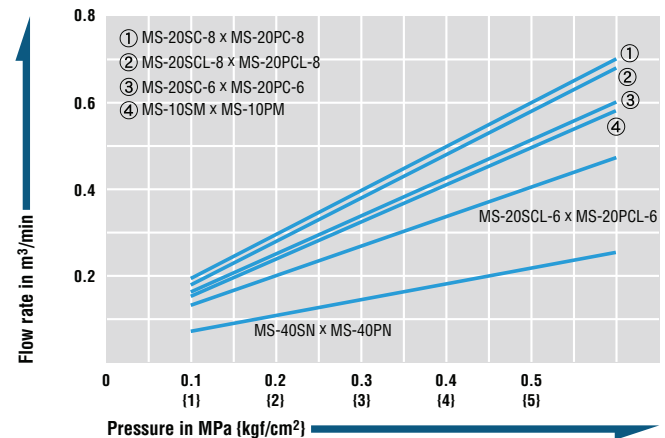
| Model | MS-10SM X MS-10PM | MS-20SM X MS-20PM | MS-40SN X MS-40PN | MS-45SN X MS-45PN | Tube Fitter Type for 6 mm OD tube | Tube Fitter Type for 8 mm OD tube |
|---------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---|---|
| Min. cross-sectional area | 12.5 | 12.5 | 4.9 | 7 | 12.5 | 12.5 |

Suitability for Vacuum 53.0 kPa (400 mmHg)

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

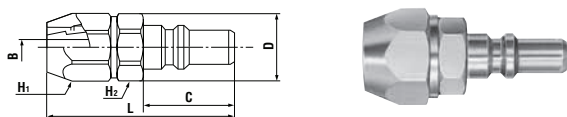
Pressure - Flow Characteristics

[Test conditions] • Fluid : Air • Temperature : Room temperature
• Tube size : $\phi 6 \text{ mm} \times \phi 4 \text{ mm}$, $\phi 8 \text{ mm} \times \phi 6 \text{ mm}$ (Small Cupla with Tube Fitter)



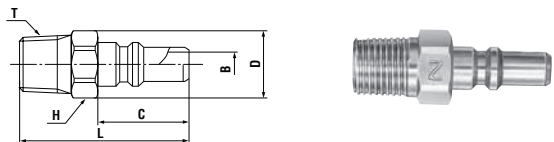
Models and Dimensions

Plug PN type (For connection to hose)



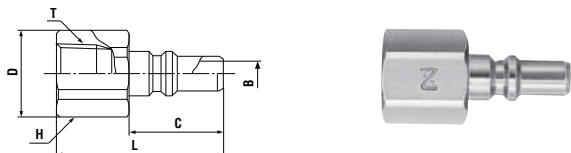
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | | |
|---------|---|----------|-----------------|------|----|---------|---------|-----|
| | | | L | C | øD | H1(WAF) | H2(WAF) | øB |
| MS-40PN | ø4 mm x ø6 mm Polyamide | 10.5 | (31) | 15.2 | 11 | Hex.10 | Hex.10 | 2.5 |
| MS-45PN | ø4.5 mm x ø6 mm Polyamide ø4 mm x ø6 mm Polyurethane | 11 | (31) | 15.2 | 11 | Hex.10 | Hex.10 | 3 |

Plug PM type (Male thread)



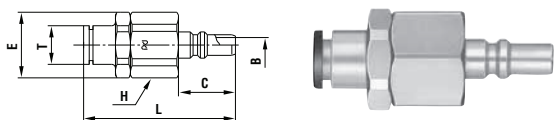
| Model | Application | Mass (g) | Dimensions (mm) | | | | | |
|---------|-------------|----------|-----------------|------|------|--------|-------|----|
| | | | L | øD | C | H(WAF) | T | øB |
| MS-10PM | Rc 1/8 | 9 | 28.5 | 12 | 15.2 | Hex.11 | R 1/8 | 4 |
| MS-20PM | Rc 1/4 | 19.5 | 32.5 | 15.2 | 15.2 | Hex.14 | R 1/4 | 4 |

Plug PF type (Female thread)



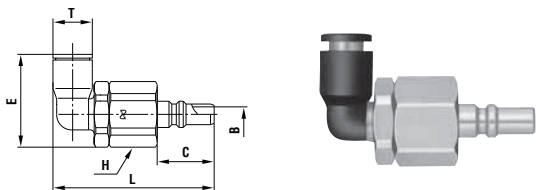
| Model | Application | Mass (g) | Dimensions (mm) | | | | | |
|---------|-------------|----------|-----------------|----|------|--------|--------|----|
| | | | L | øD | C | H(WAF) | T | øB |
| MS-10PF | R 1/8 | 11 | 27 | 14 | 15.2 | Hex.13 | Rc 1/8 | 4 |

Plug PC type (Tube Fitter)



| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | | | |
|-----------|--------------------|----------|-----------------|------|------|--------|------|----|
| | | | L | C | øE | H(WAF) | øT | øB |
| MS-20PC-6 | 6 mm OD | 26.5 | (40.5) | 15.2 | 17.5 | Hex.16 | 10.3 | 4 |
| MS-20PC-8 | 8 mm OD | 31 | (47.5) | 15.2 | 17.5 | Hex.16 | 13.5 | 4 |

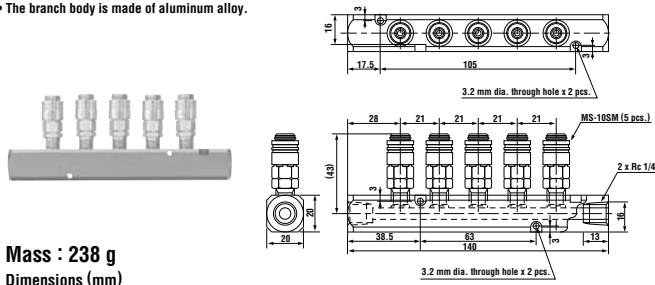
Plug PCL type (L-shaped Tube Fitter)



| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | | | |
|------------|--------------------|----------|-----------------|------|--------|--------|------|----|
| | | | L | C | E | H(WAF) | øT | øB |
| MS-20PCL-6 | 6 mm OD | 27.5 | (43) | 15.2 | (24.8) | Hex.16 | 10.5 | 4 |
| MS-20PCL-8 | 8 mm OD | 32 | (46.5) | 15.2 | (31.8) | Hex.16 | 13.5 | 4 |

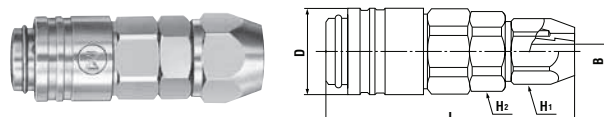
Socket MS-5 type (Small Line Cupla with 5 branch ports)

• The branch body is made of aluminum alloy.



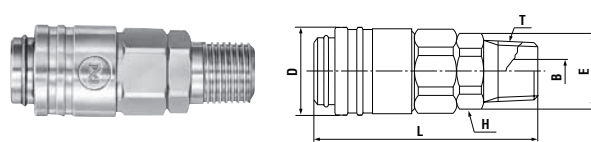
Mass : 238 g
Dimensions (mm)

Socket SN type (For connection to hose)



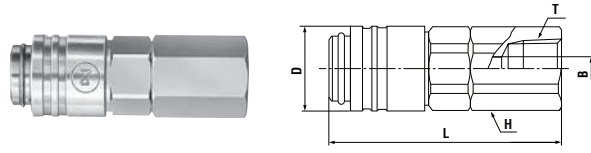
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | |
|---------|---|----------|-----------------|---------|---------|----|-----|
| | | | L | H1(WAF) | H2(WAF) | øD | øB |
| MS-40SN | ø4 mm x ø6 mm Polyamide | 26.5 | (40.8) | Hex.10 | Hex.12 | 14 | 2.5 |
| MS-45SN | ø4.5 mm x ø6 mm Polyamide ø4 mm x ø6 mm Polyurethane | 27.0 | (40.8) | Hex.10 | Hex.12 | 14 | 3 |

Socket SM type (Male thread)



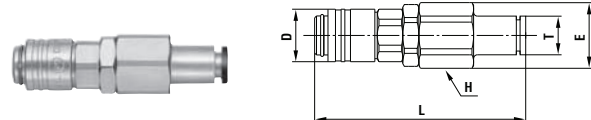
| Model | Application | Mass (g) | Dimensions (mm) | | | | | |
|---------|-------------|----------|-----------------|--------|-------|----|------|----|
| | | | L | H(WAF) | T | øD | øE | øB |
| MS-10SM | Rc 1/8 | 24 | (36.8) | Hex.12 | R 1/8 | 14 | 13.2 | 4 |
| MS-20SM | Rc 1/4 | 34 | (40.8) | Hex.14 | R 1/4 | 14 | 15.2 | 4 |

Socket SF type (Female thread)



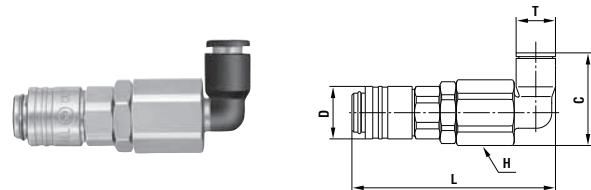
| Model | Application | Mass (g) | Dimensions (mm) | | | | |
|---------|-------------|----------|-----------------|--------|--------|----|----|
| | | | L | H(WAF) | T | øD | øB |
| MS-10SF | R 1/8 | 29.5 | (38.8) | Hex.13 | Rc 1/8 | 14 | 4 |

Socket SC type (Tube Fitter)



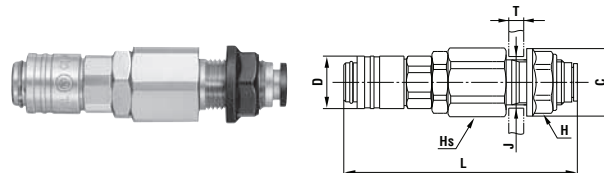
| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | | |
|-----------|--------------------|----------|-----------------|----|------|--------|------|
| | | | L | øD | øE | H(WAF) | øT |
| MS-20SC-6 | 6 mm OD | 46 | (56.3) | 14 | 17.5 | Hex.16 | 10.3 |
| MS-20SC-8 | 8 mm OD | 50.5 | (60.8) | 14 | 17.5 | Hex.16 | 13.5 |

Socket SCL type (L-shaped Tube Fitter)



| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | | |
|------------|--------------------|----------|-----------------|----|--------|--------|------|
| | | | L | øD | C | H(WAF) | øT |
| MS-20SCL-6 | 6 mm OD | 47.5 | (56.8) | 14 | (24.8) | Hex.16 | 10.5 |
| MS-20SCL-8 | 8 mm OD | 49.5 | (59.8) | 14 | (31.8) | Hex.16 | 13.5 |

Socket SCB type (Tube Fitter for panel mounting)



• T and øJ are dimensions of panel.

| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | | | | |
|------------|--------------------|----------|-----------------|----|----|---------|--------|-----------|-----------------------------------|
| | | | L | øD | øC | Hs(WAF) | H(WAF) | T | øJ |
| MS-20SCB-6 | 6 mm OD | 57.5 | (61.3) | 14 | 18 | Hex.17 | Hex.15 | 7 or less | 12.5 ^{+0.3} ₀ |
| MS-20SCB-8 | 8 mm OD | 58.5 | (62.8) | 14 | 21 | Hex.17 | Hex.18 | 8 or less | 15.5 ^{+0.3} ₀ |