

For Air

Micro Cupla

For piping in pneumatic control devices

Working pressure



1.0 MPa
(10 kgf/cm²)

Valve structure



One-way shut-off

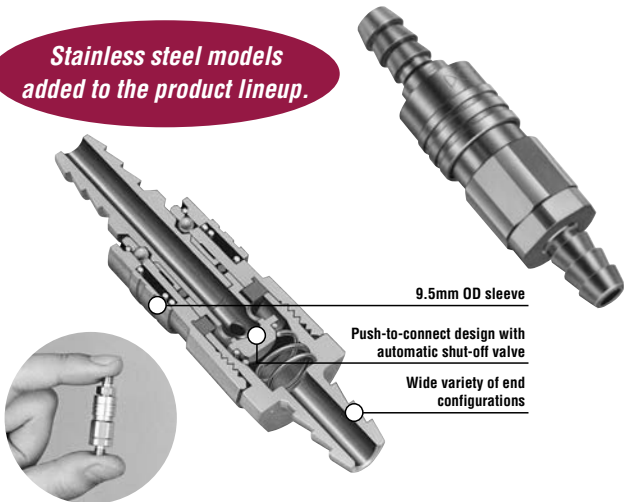
Applicable fluids



Air

Water (Tube Fitter type is unsuitable for water.)

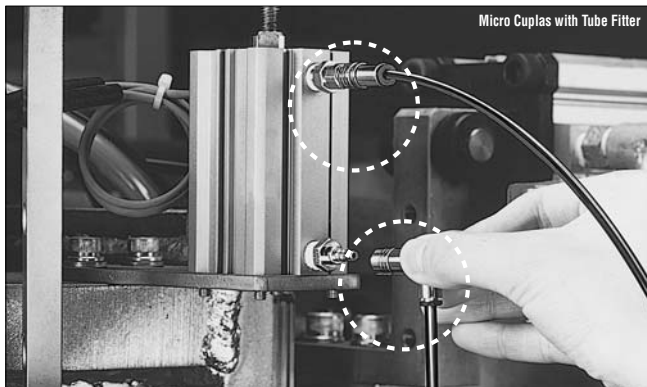
Stainless steel models
added to the product lineup.



9.5mm OD sleeve

Push-to-connect design with
automatic shut-off valve

Wide variety of end
configurations



Micro Cuplas with Tube Fitter

Compact, lightweight Cuplas with only 9.5mm outer diameter.
Push-to-connect operation. Tube Fitter type for even easier tube insertion.

- Even though the valve is built in the socket, the sleeve outer diameter is confined to 9.5mm.
- Push-to-connect design.
- Just push in and the tube mount is completed.
- By pushing the flange, the tube can be released from the Tube Fitter.
- Compact design for piping in narrow spaces.
- Chrome-plated brass and stainless steel bodies are available for excellent corrosion resistance.
- Regardless of the end configurations, all Micro Cupla sockets and plugs can be connected to each other.
- Available in various end configurations to satisfy a wide range of pneumatic applications.

Note: Fluid will flow out from the plug when disconnected because of no valve inside the plug.
If the fluid is water and you require a valve in the plug, ask for semi-standard Little Cupla or Compact Cupla series.

Specifications

| | | | | |
|---|---|-------------|---------------------------|-----------------------|
| Body material | Cupla : Brass (Chrome-plated) • Stainless steel (SUS 304) Tube Fitter Type : Brass (Chrome-plated) | | | |
| Size | 1/8" (minimum internal diameter 2.5mm) | | | |
| Tube size (for Tube Fitter end configurations) | Polyurethane : $\phi 4 \pm 0.1$ • $\phi 6 \pm 0.1$ Nylon : $\phi 4^{+0.05}_{-0.08}$ • $\phi 6^{+0.05}_{-0.08}$ Teflon : $\phi 4 \pm 0.05$ • $\phi 6 \pm 0.07$ | | | |
| Working pressure MPa (kgf/cm ²) | 1.0 (10) | | | |
| Pressure resistance MPa (kgf/cm ²) | 1.5 (15) | | | |
| Seal material Working temperature range | Seal material | Mark | Working temperature range | Remarks |
| | Nitrile rubber | NBR (SG) | -20°C~+80°C | Standard material |
| | Fluoro rubber | FKM (X-100) | -20°C~+180°C | Made-to-order item(s) |

• Above specifications apply only to Cuplas. Working pressure, pressure resistance and working temperature range may vary depending on tube materials you use with and temperature conditions you use under.
Micro Cupla with Tube Fitter has NBR packing material only.

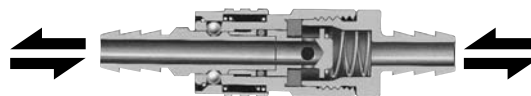
Max. Tightening Torque

N·m (kgf·cm)

| | | |
|--------|----------|--------|
| Size | M5 x 0.8 | 1/8" |
| Torque | 1.3 (13) | 7 (71) |

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 | MC-04SP | MC-05SP | MC-10SP | Tube Fitter Type for 4mm OD tube | Tube Fitter Type for 6mm OD tube |
|---------------------------|---------|---------|---------|--|--|
| Min. Cross-Sectional Area | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 |

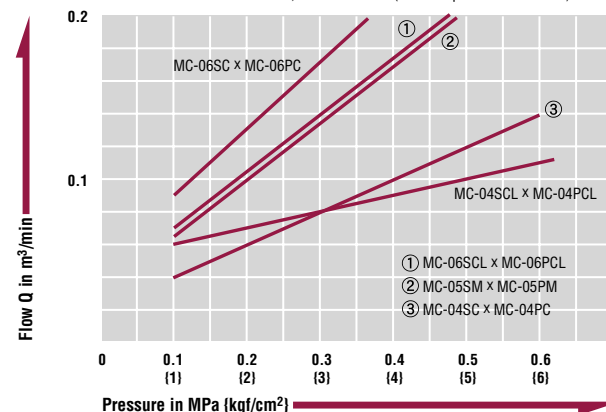
Suitability for Vacuum

53.0kPa (400mmHg)

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

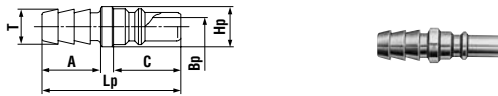
Pressure - Flow Characteristics

[Test conditions] • Fluid : Air • Temperature : Room temperature
• Tube size : $\phi 4\text{mm} \times \phi 2\text{mm}$, $\phi 6\text{mm} \times \phi 4\text{mm}$ (Micro Cupla with Tube Fitter)



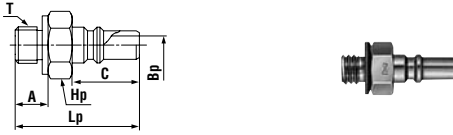
Models and Dimensions

Plug PH type (Hose barb)



| Model | Application (Tube) | Body material*Mass (g) | | Dimensions (mm) | | | | | | |
|---------|--------------------|------------------------|-----------------|-----------------|-----|---|-----|-----|-----|--|
| | | Brass | Stainless steel | Lp | C | A | øHp | øT | øBp | |
| MC-03PH | 3mm ID | 1.2 | — | 19 | 9.2 | 8 | 5.5 | 3.5 | 1.2 | |
| MC-04PH | 4mm ID | 1.4 | 1.3 | 19 | 9.2 | 8 | 5.5 | 4.8 | 2.5 | |

Plug PM type (Male thread)



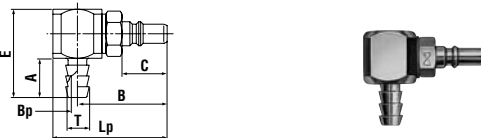
| Model | Application | Body material*Mass (g) | | Dimensions (mm) | | | | | | |
|---------|-------------|------------------------|-----------------|-----------------|-----|-----|---------|--------|-----|--|
| | | Brass | Stainless steel | Lp | C | A | Hp(WAF) | T | øBp | |
| MC-05PM | M5 x 0.8 | 1.9 | 2.2 | 17 | 9.2 | 4.5 | Hex.8 | M5x0.8 | 2.5 | |

Plug PM type (Male thread)



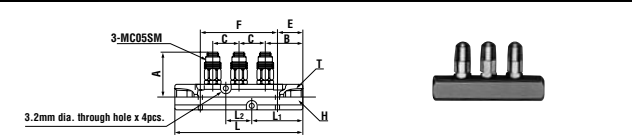
| Model | Application | Body material*Mass (g) | | Dimensions (mm) | | | | | | |
|---------|-------------|------------------------|-----------------|-----------------|-----|---|---------|------|-----|--|
| | | Brass | Stainless steel | Lp | C | A | Hp(WAF) | T | øBp | |
| MC-10PM | Rc1/8 | 9 | 8.1 | 26 | 9.2 | 9 | Hex.11 | R1/8 | 2.5 | |

Plug PHL type (Hose barb with elbow)



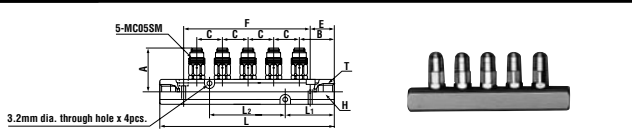
| Model | Application (Tube) | Body material*Mass (g) | | Dimensions (mm) | | | | | | |
|----------|--------------------|------------------------|-----------------|-----------------|-----|---|------|----|-----|-----|
| | | Brass | Stainless steel | Lp | C | A | B | E | øT | øBp |
| MC-04PHL | 4mm ID | 9.4 | 9 | 23.3 | 9.2 | 8 | 18.3 | 18 | 4.8 | 2.5 |

Socket Micro Line Cupla for three branch ports



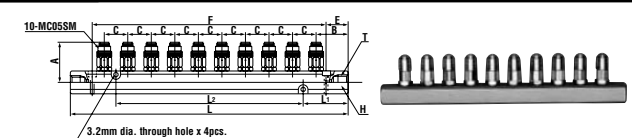
| Model | Application | Mass (g) | Dimensions (mm) | | | | | | | | | |
|-------|-------------|----------|-----------------|----|----|------|----|----|----|----|---------|--------|
| | | | L | L1 | L2 | A | B | C | E | F | T | H(WAF) |
| MC-03 | 3 ports | 65 | 78 | 31 | 16 | 28.8 | 23 | 16 | 15 | 48 | 2-Rc1/8 | Box 16 |

Socket Micro Line Cupla with 5 branch ports



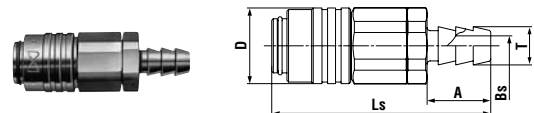
| Model | Application | Mass (g) | Dimensions (mm) | | | | | | | | | |
|-------|-------------|----------|-----------------|----|----|------|----|----|----|----|---------|--------|
| | | | L | L1 | L2 | A | B | C | E | F | T | H(WAF) |
| MC-05 | 5 ports | 101 | 110 | 31 | 48 | 28.8 | 23 | 16 | 15 | 80 | 2-Rc1/8 | Box 16 |

Socket Micro Line Cupla with 10 branch ports



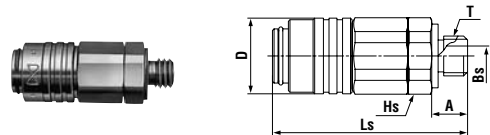
| Model | Application | Mass (g) | Dimensions (mm) | | | | | | | | | |
|-------|-------------|----------|-----------------|----|-----|------|----|----|----|-----|---------|--------|
| | | | L | L1 | L2 | A | B | C | E | F | T | H(WAF) |
| MC-10 | 10 ports | 187 | 190 | 31 | 128 | 28.8 | 23 | 16 | 15 | 160 | 2-Rc1/8 | Box 16 |

Socket SH type (Hose barb)



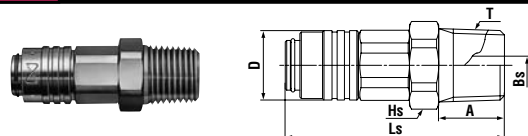
| Model | Application (Tube) | Body material*Mass (g) | | Dimensions (mm) | | | | | |
|---------|--------------------|------------------------|-----------------|-----------------|-----|---|-----|-----|--|
| | | Brass | Stainless steel | Ls | øD | A | øT | øBs | |
| MC-03SH | 3mm ID | 7 | — | 27.5 | 9.5 | 8 | 3.5 | 1.2 | |
| MC-04SH | 4mm ID | 7.3 | 6.7 | 27.5 | 9.5 | 8 | 4.8 | 2.5 | |

Socket SM type (Male thread)



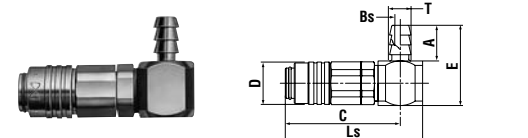
| Model | Application | Body material*Mass (g) | | Dimensions (mm) | | | | | |
|---------|-------------|------------------------|-----------------|-----------------|-----|-----|--------|---------|-----|
| | | Brass | Stainless steel | Ls | øD | A | T | Hs(WAF) | øBs |
| MC-05SM | M5 x 0.8 | 7.4 | 6.8 | 24.5 | 9.5 | 4.5 | M5x0.8 | Hex.9 | 2.5 |

Socket SM type (Male thread)



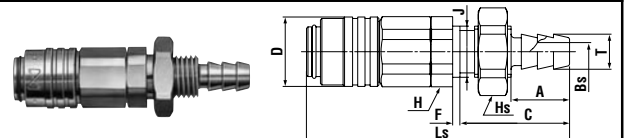
| Model | Application | Body material*Mass (g) | | Dimensions (mm) | | | | | |
|---------|-------------|------------------------|-----------------|-----------------|-----|---|------|---------|-----|
| | | Brass | Stainless steel | Ls | øD | A | T | Hs(WAF) | øBs |
| MC-10SM | Rc1/8 | 13.1 | 12.1 | 30 | 9.5 | 9 | R1/8 | Hex.11 | 2.5 |

Socket SHL type (Hose barb with elbow)



| Model | Application (Tube) | Body material*Mass (g) | | Dimensions (mm) | | | | | | |
|----------|--------------------|------------------------|-----------------|-----------------|------|----|---|-----|-----|-----|
| | | Brass | Stainless steel | Ls | C | E | A | øD | øT | øBs |
| MC-04SHL | 4mm ID | 14.8 | 13.6 | 30.8 | 25.8 | 18 | 8 | 9.5 | 4.8 | 2.5 |

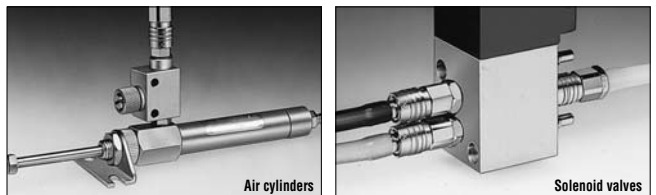
Socket SHB type (for panel mounting)



| Model | Application | Body material*Mass (g) | | Dimensions (mm) | | | | | | | | | |
|----------|--------------------|------------------------|-----------------|-----------------|----|---|-----|-----|-----|---------|---|----|--------|
| | | Brass | Stainless steel | Ls | C | A | øD | øT | øBs | Hs(WAF) | F | øJ | H(WAF) |
| MC-04SHB | for panel mounting | 11.5 | 10.6 | 36 | 15 | 8 | 9.5 | 4.8 | 2.5 | Hex.11 | 1 | 7 | Hex.9 |

*Available body material for Model MC03PH, MC-03SH and Micro Line Cuplas is brass only. Stainless steel body is unavailable for these models.

Application example

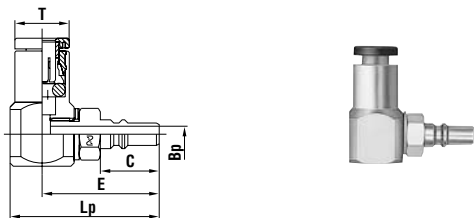


Plug PC type (Straight type with Tube Fitter)



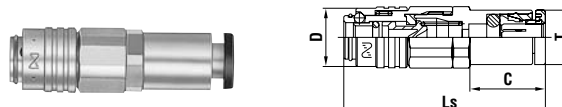
| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | |
|---------|--------------------|----------|-----------------|-----|------|-----|
| | | | Lp | C | øT | øBp |
| MC-04PC | 4mm OD | 3 | (21.7) | 9.2 | 8.6 | 2.5 |
| MC-06PC | 6mm OD | 5 | (25) | 9.2 | 10.5 | 2.5 |

Plug PCL type (Straight type with Tube Fitter)



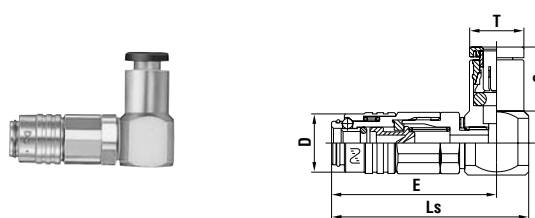
| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | | |
|----------|--------------------|----------|-----------------|-----|--------|------|-----|
| | | | Lp | C | E | øT | øBp |
| MC-04PCL | 4mm OD | 10 | (23.3) | 9.2 | (18.3) | 8.6 | 2.5 |
| MC-06PCL | 6mm OD | 13.5 | (24.3) | 9.2 | (18.8) | 10.6 | 2.5 |

Socket SC type (Straight type with Tube Fitter)



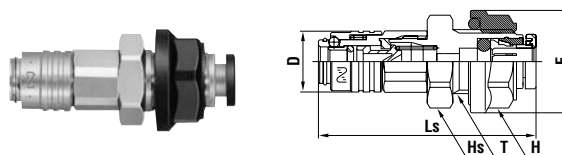
| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | |
|---------|--------------------|----------|-----------------|-----|--------|------|
| | | | Ls | øD | C | øT |
| MC-04SC | 4mm OD | 9 | (31.5) | 9.5 | (11.8) | 8.6 |
| MC-06SC | 6mm OD | 11.5 | (33.5) | 9.5 | (12.5) | 10.6 |

Socket SCL type (Straight type with Tube Fitter)



| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | | |
|----------|--------------------|----------|-----------------|--------|-----|------|------|
| | | | Ls | E | øD | C | øT |
| MC-04SCL | 4mm OD | 16 | (30.8) | (25.8) | 9.5 | (10) | 8.6 |
| MC-06SCL | 6mm OD | 19 | (31.8) | (26.3) | 9.5 | (12) | 10.6 |

Socket SCB type (Straight type with Tube Fitter)



| Model | Application (Tube) | Mass (g) | Dimensions (mm) | | | | | |
|----------|--------------------|----------|-----------------|-----|----|---------|--------|-------|
| | | | Ls | øD | øE | Hs(WAF) | H(WAF) | øT |
| MC-04SCB | 4mm OD | 15 | (34) | 9.5 | 16 | Hex.13 | Hex.13 | M10X1 |
| MC-06SCB | 6mm OD | 18.5 | (36) | 9.5 | 18 | Hex.15 | Hex.15 | M12X1 |