

For Low Pressure

# Micro Cupla

For piping in pneumatic control devices

Working pressure



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

Valve structure



One-way shut-off

Applicable fluids



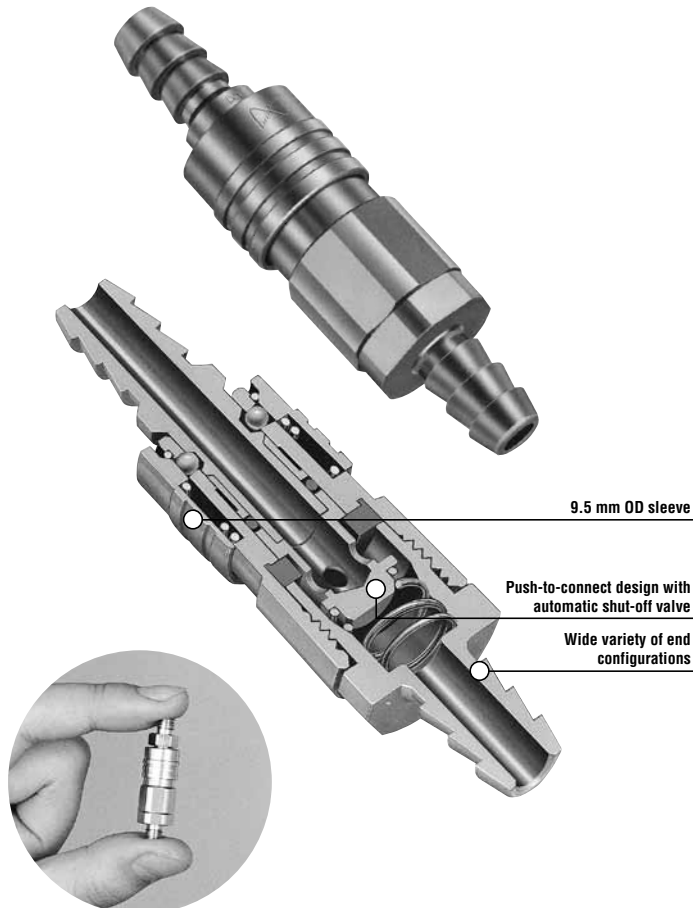
Air

Water (Tube Fitter type is unsuitable for water.)

**Compact, lightweight Cuplas with only 9.5 mm 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 9.5 mm.
- Push-to-connect design.
- Compact design for piping in narrow spaces.
- Plated brass and stainless steel bodies are available for excellent corrosion resistance.
- Available in various end configurations to satisfy a wide range of pneumatic applications.

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



## Specifications

<b>Body material</b>		Cupla : Brass (Plated), Stainless steel (SUS 304) Tube Fitter Type : Brass (Chrome-plated)		
<b>Size</b>	<b>Thread</b>	1/8", M5 x 0.8		
	<b>Tube barb (Tube fitter)</b>	Tube ID $\phi 3, \phi 4$ Polyurethane tube: Outside Dia. $\phi 4 \pm 0.1, \phi 6 \pm 0.1$ Polyamide tube: Outside Dia. $\phi 4^{+0.05}_{-0.08}, \phi 6^{+0.05}_{-0.08}$ Fluorine contained resin tube: Outside Dia. $\phi 4 \pm 0.05, \phi 6 \pm 0.07$		
<b>Working pressure</b>	MPa	1.0		
	kgf/cm <sup>2</sup>	10		
	bar	10		
	PSI	145		
<b>Seal material</b>	<b>Seal material</b>	<b>Mark</b>	<b>Working temperature range</b>	
<b>Working temperature range</b>	Nitrile rubber	NBR (SG)	-20°C to +80°C	Standard material
	Fluoro rubber	FKM (X-100)	-20°C to +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 its working temperature range.  
 Micro Cupla with Tube Fitter has NBR packing material only.

## Max. Tightening Torque

Nm (kgf·cm)

<b>Size (Thread)</b>	<b>M5 x 0.8</b>	<b>1/8"</b>
<b>Torque</b>	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

(mm<sup>2</sup>)

Model	MC-03SP	MC-04SP	MC-05SP	MC-10SP	Tube Fitter Type for 4 mm OD tube	Tube Fitter Type for 6 mm OD tube
Min. cross-sectional area	1.1	4.9	4.9	4.9	4.9	4.9

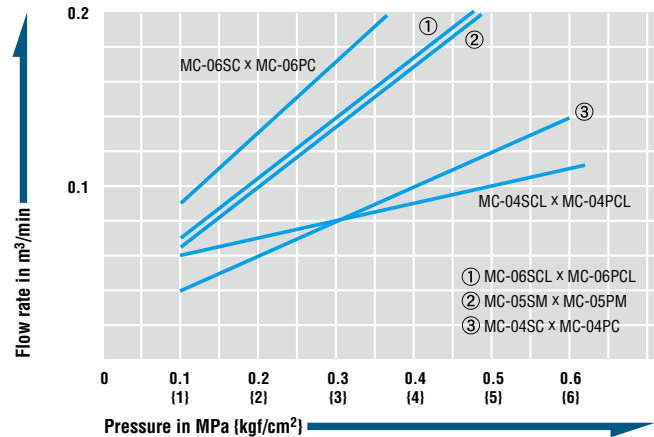
## Suitability for Vacuum

53.0 kPa (400 mmHg)

Socket only	Plug only	When connected
—	—	Operational

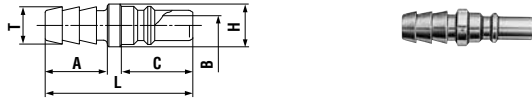
## Pressure - Flow Characteristics

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



Models and Dimensions

**Plug PH type (Tube barb)**



Model	Application (Tube)	Body material•Mass (g) Brass	Dimensions (mm)					
			L	C	A	∅H	∅T	∅B
MC-03PH	3 mm ID	1.2	19	9.2	8	5.5	3.5	1.2
MC-04PH	4 mm ID	1.4	19	9.2	8	5.5	4.8	2.5

**Plug PM type (Male thread)**



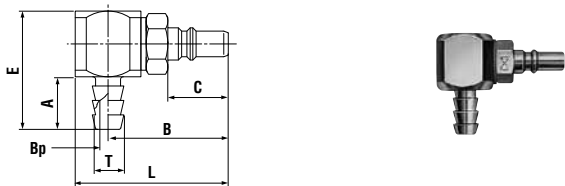
Model	Application	Body material•Mass (g) Brass	Dimensions (mm)					
			L	C	A	H(WAF)	T	∅B
MC-05PM	M5 x 0.8	1.9	17	9.2	4.5	Hex.7	M5x0.8	2.5

**Plug PM type (Male thread)**



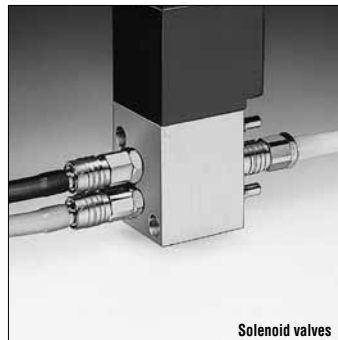
Model	Application	Body material•Mass (g) Brass	Dimensions (mm)					
			L	C	H(WAF)	T	∅B	
MC-10PM	Rc 1/8	9	26	9.2	Hex.11	R 1/8	2.5	

**Plug PHL type (Tube barb)**



Model	Application (Tube)	Body material•Mass (g) Brass	Dimensions (mm)						
			L	C	A	B	E	∅T	∅Bp
MC-04PHL	4 mm ID	9.4	(23.3)	9.2	8	(18.3)	18	4.8	2.5

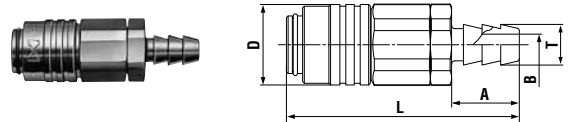
Application Example



Always fix tubes with hose clamps when using hose barb types.

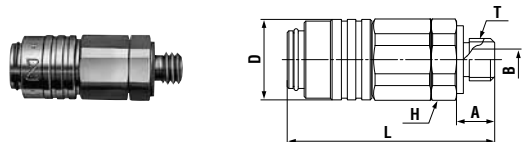
Always fix tubes with hose clamps when using hose barb types.

**Socket SH type (Tube barb)**



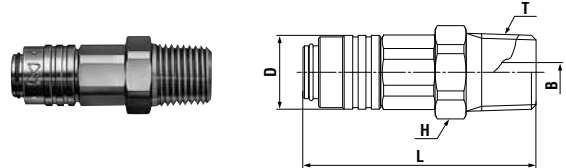
Model	Application (Tube)	Body material•Mass (g) Brass	Dimensions (mm)				
			L	∅D	A	∅T	∅B
MC-03SH	3 mm ID	7	(27.5)	9.5	8	3.5	1.2
MC-04SH	4 mm ID	7.3	(27.5)	9.5	8	4.8	2.5

**Socket SM type (Male thread)**



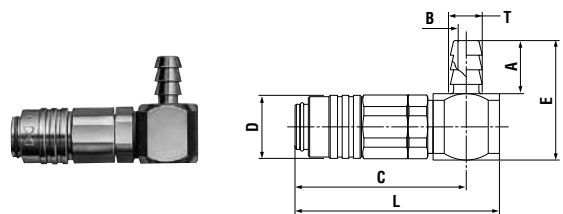
Model	Application	Body material•Mass (g) Brass	Dimensions (mm)					
			L	∅D	A	T	H(WAF)	∅B
MC-05SM	M5 x 0.8	7.4	(24.5)	9.5	4.5	M5x0.8	Hex.9	2.5

**Socket SM type (Male thread)**



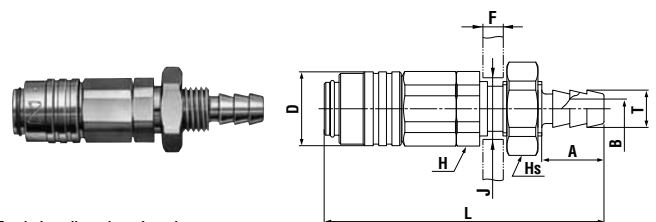
Model	Application	Body material•Mass (g) Brass	Dimensions (mm)				
			L	∅D	T	H(WAF)	∅B
MC-10SM	Rc 1/8	13.1	(30)	9.5	R 1/8	Hex.11	3

**Socket SHL type (Tube barb)**



Model	Application (Tube)	Body material•Mass (g) Brass	Dimensions (mm)						
			L	C	E	A	∅D	∅T	∅B
MC-04SHL	4 mm ID	14.8	(30.8)	(25.8)	18	8	9.5	4.8	2.5

**Socket SHB type (For panel mounting)**



\* F and ∅J are dimensions of panel.

Model	Application (Tube)	Body material•Mass (g) Brass	Dimensions (mm)								
			L	A	∅D	∅T	∅B	HS(WAF)	∅J	H(WAF)	F
MC-04SHB	4 mm ID	11.5	(36)	8	9.5	4.8	2.5	Hex.11	7.1 <sup>+0.3</sup>	Hex.9	1.2 to 3.5