

For Air

# Micro Cupla

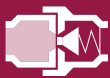
For piping in pneumatic control devices

Working pressure



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

Valve structure



One-way shut-off

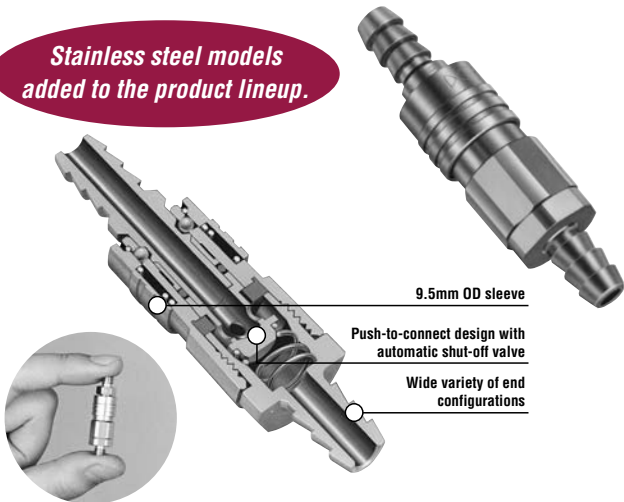
Applicable fluids



Air

Water (Tube Fitter type is unsuitable for water.)

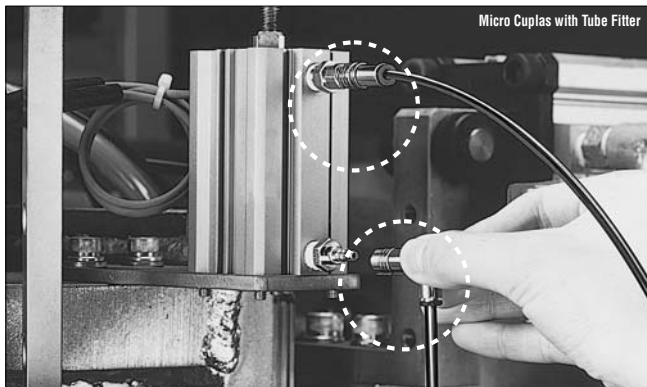
Stainless steel models  
added to the product lineup.



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

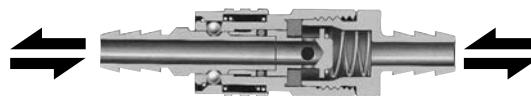
## Max. Tightening Torque

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

(mm<sup>2</sup>)

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

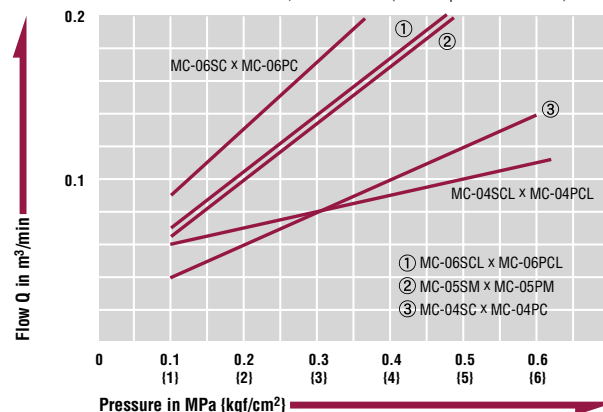
## Suitability for Vacuum

53.0kPa (400mmHg)

Socket only	Plug only	When connected
—	—	Operational

## Pressure - Flow Characteristics

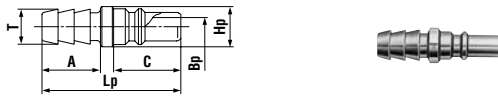
[Test conditions] • Fluid : Air • Temperature : Room temperature  
• Tube size :  $\phi 4\text{mm} \times \phi 2\text{mm}$ ,  $\phi 6\text{mm} \times \phi 4\text{mm}$  (Micro Cupla with Tube Fitter)



Models and Dimensions

WAF : WAF stands for width across flats.

**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)**



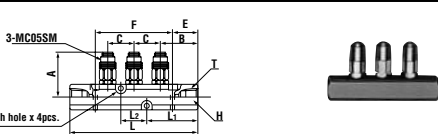
Model	Application	Body material*Mass (g)		Dimensions (mm)						
		Brass	Stainless steel	Lp	C	A	Hp(WAF)	T	øBp	
MC-10PM	Rc1/8	9	8.1	26	9.2	9	Hex.11	R1/8	2.5	

**Plug PHL type (Hose barb with elbow)**



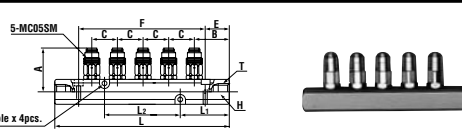
Model	Application (Tube)	Body material*Mass (g)		Dimensions (mm)						
		Brass	Stainless steel	Lp	C	A	B	E	øT	øBp
MC-04PHL	4mm ID	9.4	9	23.3	9.2	8	18.3	18	4.8	2.5

**Socket Micro Line Cupla for three branch ports**



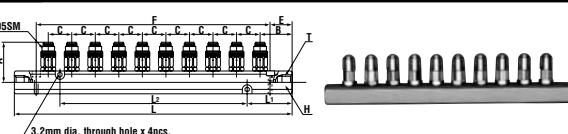
Model	Application	Mass (g)	Dimensions (mm)									
			L	L1	L2	A	B	C	E	F	T	H(WAF)
MC-03	3 ports	65	78	31	16	28.8	23	16	15	48	2-Rc1/8	Box 16

**Socket Micro Line Cupla with 5 branch ports**



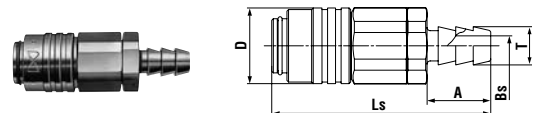
Model	Application	Mass (g)	Dimensions (mm)									
			L	L1	L2	A	B	C	E	F	T	H(WAF)
MC-05	5 ports	101	110	31	48	28.8	23	16	15	80	2-Rc1/8	Box 16

**Socket Micro Line Cupla with 10 branch ports**



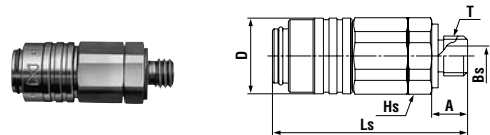
Model	Application	Mass (g)	Dimensions (mm)									
			L	L1	L2	A	B	C	E	F	T	H(WAF)
MC-10	10 ports	187	190	31	128	28.8	23	16	15	160	2-Rc1/8	Box 16

**Socket SH type (Hose barb)**



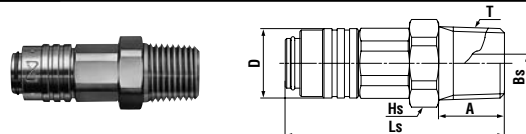
Model	Application (Tube)	Body material*Mass (g)		Dimensions (mm)					
		Brass	Stainless steel	Ls	øD	A	øT	øBs	
MC-03SH	3mm ID	7	-	27.5	9.5	8	3.5	1.2	
MC-04SH	4mm ID	7.3	6.7	27.5	9.5	8	4.8	2.5	

**Socket SM type (Male thread)**



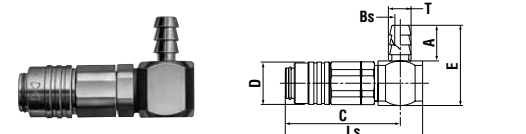
Model	Application	Body material*Mass (g)		Dimensions (mm)					
		Brass	Stainless steel	Ls	øD	A	T	Hs(WAF)	øBs
MC-05SM	M5 x 0.8	7.4	6.8	24.5	9.5	4.5	M5x0.8	Hex.9	2.5

**Socket SM type (Male thread)**



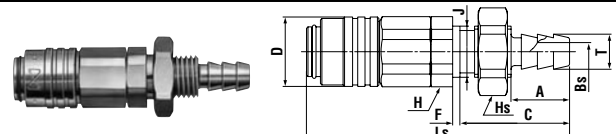
Model	Application	Body material*Mass (g)		Dimensions (mm)					
		Brass	Stainless steel	Ls	øD	A	T	Hs(WAF)	øBs
MC-10SM	Rc1/8	13.1	12.1	30	9.5	9	R1/8	Hex.11	2.5

**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

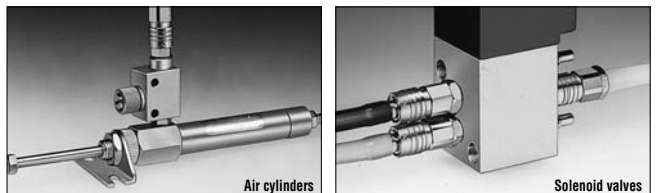
**Socket SHB type (for panel mounting)**



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



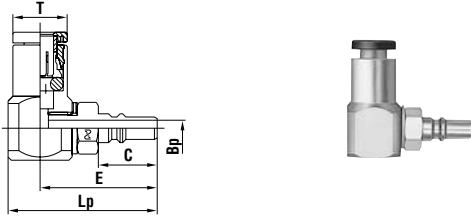
Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.

**Plug PC type (Straight type with Tube Fitter)**



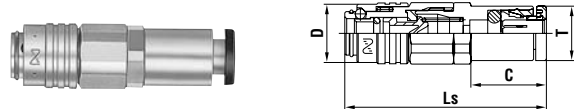
Model	Application (Tube)	Mass (g)	Dimensions (mm)			
			Lp	C	øT	øBp
MC-04PC	4mm OD	3	(21.7)	9.2	8.6	2.5
MC-06PC	6mm OD	5	(25)	9.2	10.5	2.5

**Plug PCL type (Straight type with Tube Fitter)**



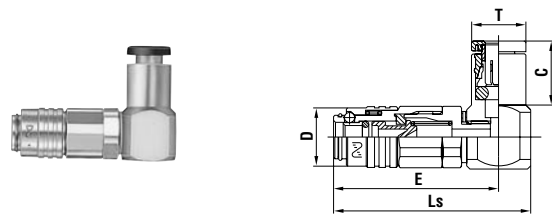
Model	Application (Tube)	Mass (g)	Dimensions (mm)				
			Lp	C	E	øT	øBp
MC-04PCL	4mm OD	10	(23.3)	9.2	(18.3)	8.6	2.5
MC-06PCL	6mm OD	13.5	(24.3)	9.2	(18.8)	10.6	2.5

**Socket SC type (Straight type with Tube Fitter)**



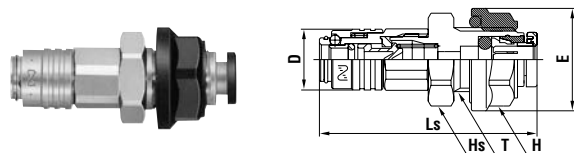
Model	Application (Tube)	Mass (g)	Dimensions (mm)			
			Ls	øD	C	øT
MC-04SC	4mm OD	9	(31.5)	9.5	(11.8)	8.6
MC-06SC	6mm OD	11.5	(33.5)	9.5	(12.5)	10.6

**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