

For Low Pressure

# Small Cupla

Lightweight and compact for use on air lines and scientific equipment

Working pressure



1.0 MPa  
(10 kgf/cm²)

Valve structure



One-way shut-off

Applicable fluids



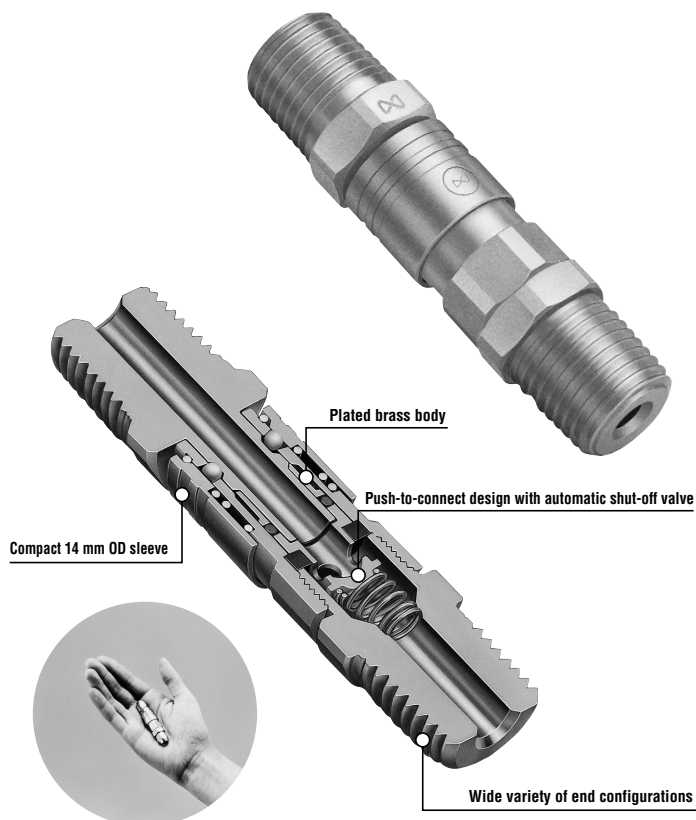
Air

Water (Tube Fitter type is unsuitable for water.)

## 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.
- 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 Part : 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. $\phi 6 \pm 0.05$ , $\phi 8 \pm 0.05$ Fluorine contained resin tube: Outside Dia. $\phi 6 \pm 0.07$ , $\phi 8 \pm 0.07$		
Pressure unit		MPa	kgf/cm²	bar
Working pressure		1.0	10	10
Seal material		Seal material	Mark	Working temperature range
Working temperature range		Nitrile rubber	NBR (SG)	-20°C to +80°C
				Remarks
				Standard material

• Above specifications apply only to Cuplas. Max working pressure and working temperature range may vary depending on tube materials you use with and the working temperature.

### Max. Tightening Torque

Nm (kgf·cm)

Size (Thread)	1/8"	1/4"	PN · SN Type
Torque	5 {51}	9 {92}	5 {51}

### Flow Direction

Fluid flow can be bi-directional when socket and plug are connected.



### Interchangeability

Sockets and plugs can be connected regardless of end configurations.

### Min. Cross-Sectional Area

(mm²)

Model	MS-10SM × MS-10PM	MS-20SM × MS-20PM	MS-40SN × MS-40PN	MS-45SN × 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

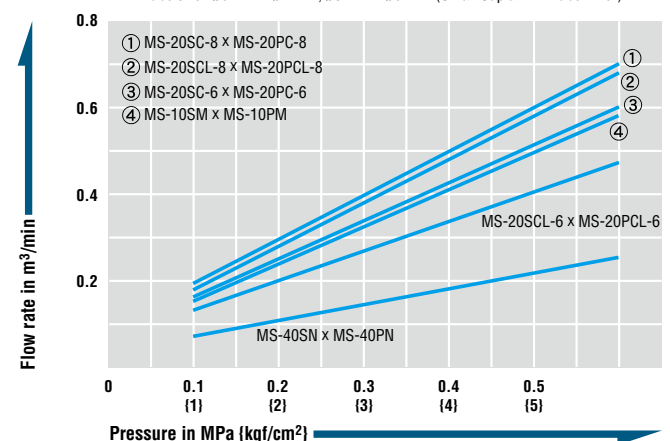
### Suitability for Vacuum

53.0 kPa (400 mmHg)

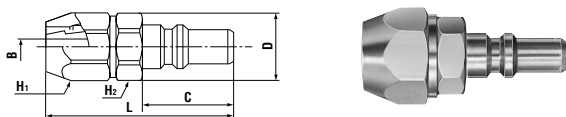
Socket only	Plug only	When connected
—	—	Operational

### Pressure - Flow Characteristics

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

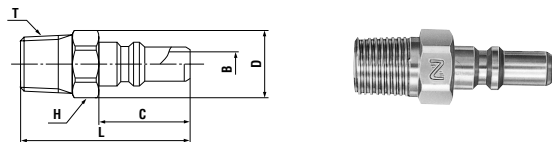


**Plug PN type (For connection to hose)**



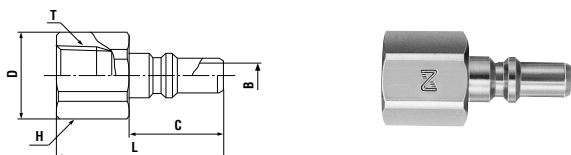
Model	Application (Hose)	Mass (g)	Dimensions (mm)					
			L	C	øD	H1(WAF)	H2(WAF)	øB
MS-40PN	ø4 mm x ø6 mm Polyamide	10.5	(31)	15.2	11	Hex.10	Hex.10	2.5
MS-45PN	ø4.5 mm x ø6 mm Polyamide ø4 mm x ø6 mm Polyurethane	11	(31)	15.2	11	Hex.10	Hex.10	3

**Plug PM type (Male thread)**



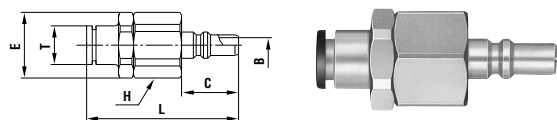
Model	Application	Mass (g)	Dimensions (mm)					
			L	øD	C	H(WAF)	T	øB
MS-10PM	Rc 1/8	9	28.5	12	15.2	Hex.11	R 1/8	4
MS-20PM	Rc 1/4	19.5	32.5	15.2	15.2	Hex.14	R 1/4	4

**Plug PF type (Female thread)**



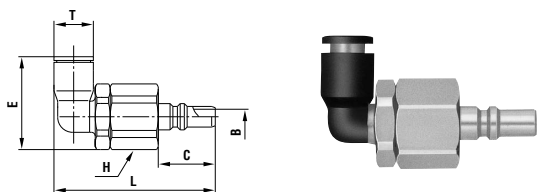
Model	Application	Mass (g)	Dimensions (mm)					
			L	øD	C	H(WAF)	T	øB
MS-10PF	R 1/8	11	27	14	15.2	Hex.13	Rc 1/8	4

**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

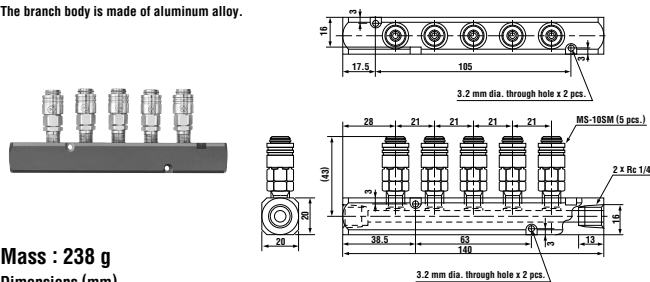
**Plug PCL type (L-shaped Tube Fitter)**



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

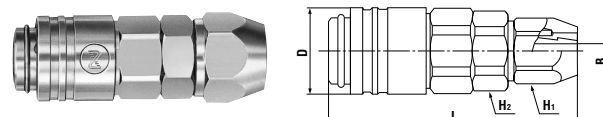
**Socket MS-5 type (Small Line Cupla with 5 branch ports)**

• The branch body is made of aluminum alloy.



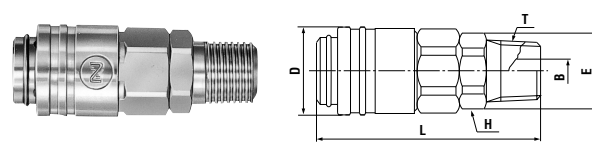
Mass : 238 g  
Dimensions (mm)

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



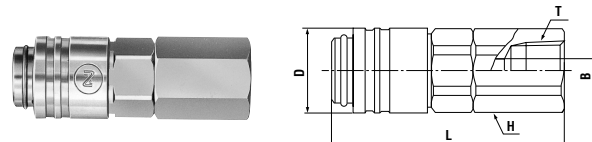
Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	H1(WAF)	H2(WAF)	øD	øB
MS-40SN	ø4 mm x ø6 mm Polyamide	26.5	(40.8)	Hex.10	Hex.12	14	2.5
MS-45SN	ø4.5 mm x ø6 mm Polyamide ø4 mm x ø6 mm Polyurethane	27.0	(40.8)	Hex.10	Hex.12	14	3

**Socket SM type (Male thread)**



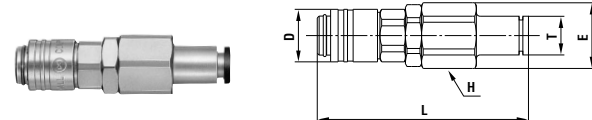
Model	Application	Mass (g)	Dimensions (mm)					
			L	H(WAF)	T	øD	øE	øB
MS-10SM	Rc 1/8	24	(36.8)	Hex.12	R 1/8	14	13.2	4
MS-20SM	Rc 1/4	34	(40.8)	Hex.14	R 1/4	14	15.2	4

**Socket SF type (Female thread)**



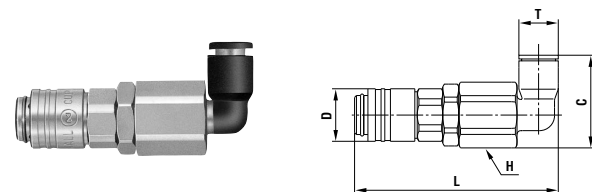
Model	Application	Mass (g)	Dimensions (mm)				
			L	H(WAF)	T	øD	øB
MS-10SF	R 1/8	29.5	(38.8)	Hex.13	Rc 1/8	14	4

**Socket SC type (Tube Fitter)**



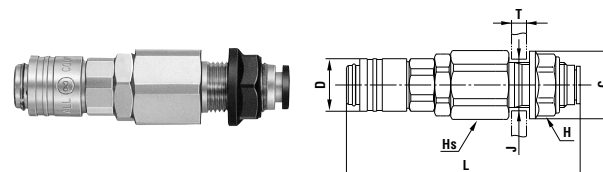
Model	Application (Tube)	Mass (g)	Dimensions (mm)				
			L	øD	øE	H(WAF)	øT
MS-20SC-6	6 mm OD	46	(56.3)	14	17.5	Hex.16	10.3
MS-20SC-8	8 mm OD	50.5	(60.8)	14	17.5	Hex.16	13.5

**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-20SCI-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)	øJ
MS-20SCB-6	6 mm OD	57.5	(61.3)	14	18	Hex.17	Hex.15 <sup>7 or less</sup>	12.5 <sup>0.3</sup> <sub>0</sub>
MS-20SCB-8	8 mm OD	58.5	(62.8)	14	21	Hex.17	Hex.18 <sup>8 or less</sup>	15.5 <sup>0.3</sup> <sub>0</sub>