




For Low Pressure

# Small Cupla

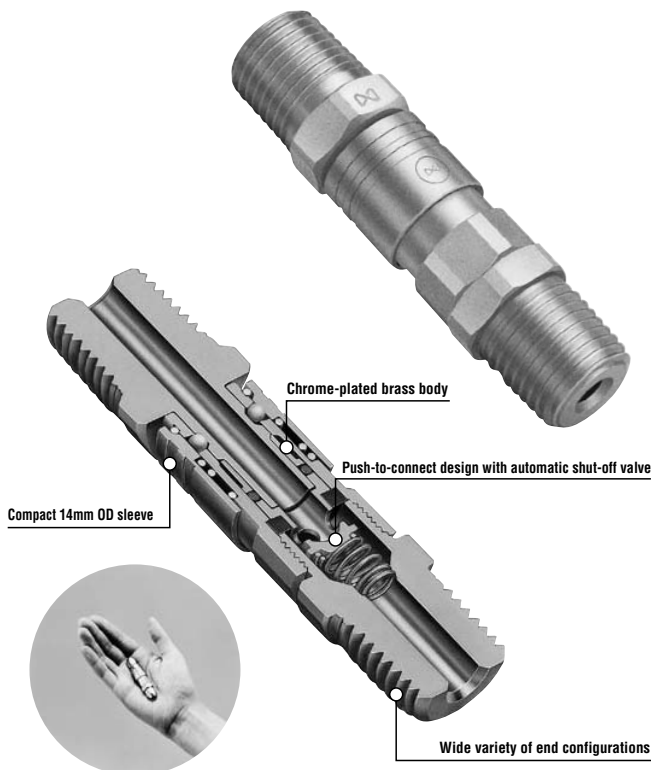
Lightweight and compact for use on air lines and scientific equipment

<b>Working pressure</b>  0.7 MPa (7 kgf/cm <sup>2</sup> )	<b>Valve structure</b>  One-way shut-off	<b>Applicable fluids</b>  Air Water (Tube Fitter type is unsuitable for water.)
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**Lightweight and compact push-to-connect operation.**  
**Responding to requirements of modular combinations.**

- Compact socket with built-in valve and 14mm 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 Tube Fitter quick connect/disconnect type.

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 (Chrome-plated) Tube Fitter Type: Brass (Nickel-plated)
<b>Size</b>	1/8" • 1/4"
<b>Tube size (for Tube Fitter end configurations)</b>	Polyurethane : $\phi 6 \pm 0.1$ • $\phi 8 \pm 0.15$ Nylon : $\phi 6^{+0.05}_{-0.08}$ • $\phi 8^{+0.05}_{-0.1}$ Teflon : $\phi 6 \pm 0.07$ • $\phi 8 \pm 0.07$
<b>Working pressure MPa (kgf/cm<sup>2</sup>)</b>	0.7 (7)
<b>Pressure resistance MPa (kgf/cm<sup>2</sup>)</b>	1.1 (11)
<b>Seal material</b>	<b>Seal material</b> <b>Mark</b> <b>Working temperature range</b> <b>Remarks</b>
<b>Working temperature range</b>	Nitrile rubber    NBR (SG)    -20°C~+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 temperature conditions you use under.

## Max. Tightening Torque

N·m (kgf·cm)

<b>Size</b>	1/8"	1/4"	<b>Nut type</b>
<b>Torque</b>	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

(mm<sup>2</sup>)

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

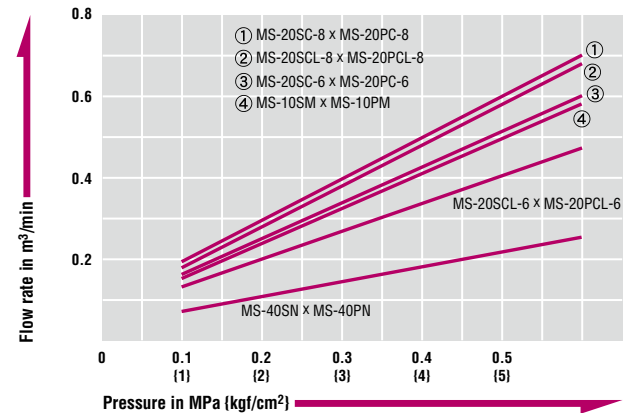
## Suitability for Vacuum

53.0kPa (400mmHg)

<b>Socket only</b>	<b>Plug only</b>	<b>When connected</b>
—	—	Operational

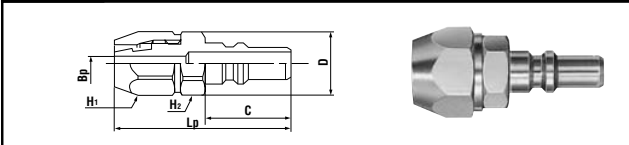
## Pressure - Flow Characteristics

[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)



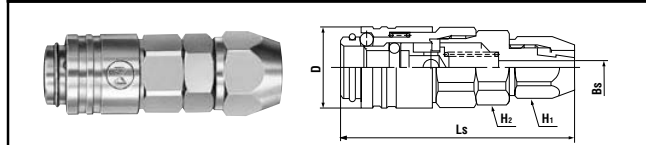
Models and Dimensions

**Plug PN type (For connection to Nylon or Polyurethane hose)**



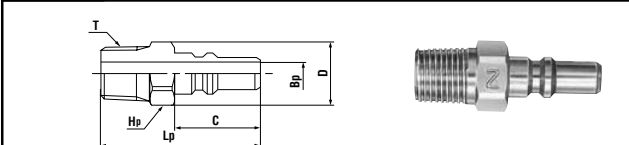
Model	Application (Hose)	Mass (g)	Dimensions (mm)					
			Lp	C	øD	H1(WAF)	H2(WAF)	øBp
MS-40PN	ø4mm x ø6mm Nylon hose	10.5	31	15.2	11	Hex.10	Hex.10	2.5
MS-45PN	ø4.5mm x ø6mm Nylon hose ø4mm x ø6mm Polyurethane hose	11	31	15.2	11	Hex.10	Hex.10	3

**Socket SN type (For connection to Nylon or Polyurethane hose)**



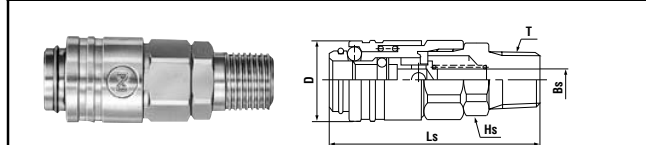
Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			Ls	H1(WAF)	H2(WAF)	øD	øBs
MS-40SN	ø4mm x ø6mm Nylon hose	26.5	(40.8)	Hex.10	Hex.12	14	2.5
MS-45SN	ø4.5mm x ø6mm Nylon hose ø4mm x ø6mm Polyurethane hose	27.0	(40.8)	Hex.10	Hex.12	14	3

**Plug PM type (Male thread)**



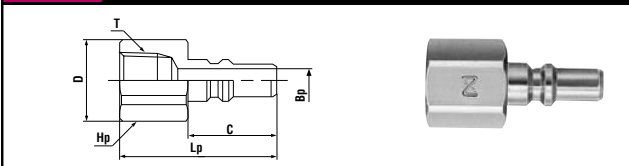
Model	Application	Mass (g)	Dimensions (mm)					
			Lp	øD	C	Hp(WAF)	T	øBp
MS-10PM	Rc 1/8	9	28.5	12	15.2	Hex.11	R 1/8	4
MS-20PM	Rc 1/4	19.5	32.5	15.2	15.2	Hex.14	R 1/4	4

**Socket SM type (Male thread)**



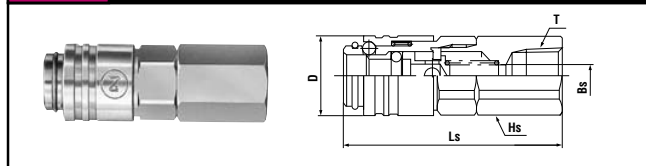
Model	Application	Mass (g)	Dimensions (mm)				
			Ls	Hs(WAF)	T	øD	øBs
MS-10SM	Rc 1/8	24	(36.8)	Hex.12	R 1/8	14	4
MS-20SM	Rc 1/4	34	(40.8)	Hex.14	R 1/4	14	4

**Plug PF type (Female thread)**



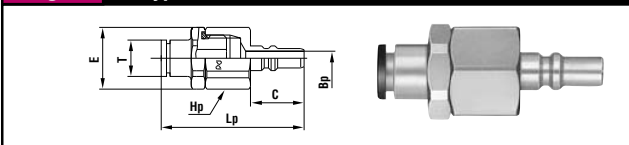
Model	Application	Mass (g)	Dimensions (mm)					
			Lp	øD	C	Hp(WAF)	T	øBp
MS-10PF	R 1/8	11	27	14	15.2	Hex.13	Rc 1/8	4

**Socket SF type (Female thread)**



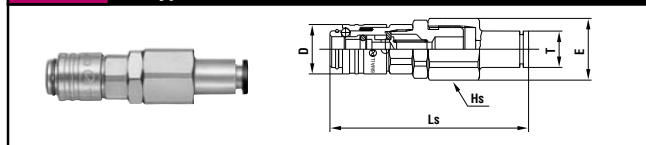
Model	Application	Mass (g)	Dimensions (mm)				
			Ls	Hs(WAF)	T	øD	øBs
MS-10SF	R 1/8	29.5	(38.8)	Hex.13	Rc 1/8	14	4

**Plug PC type (With Tube Fitter)**



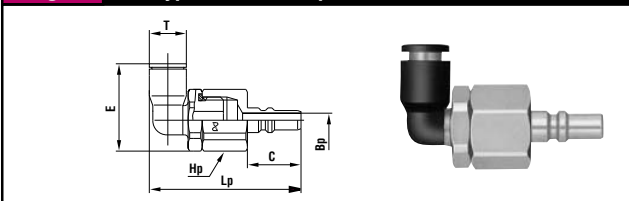
Model	Application (Tube)	Mass (g)	Dimensions (mm)					
			Lp	C	øE	Hp(WAF)	øT	øBp
MS-20PC-6	6mm OD	26.5	(40.5)	15.2	17.5	Hex.16	10.3	4
MS-20PC-8	8mm OD	31	(47.2)	15.2	17.5	Hex.16	13.5	4

**Socket SC type (With Tube Fitter)**



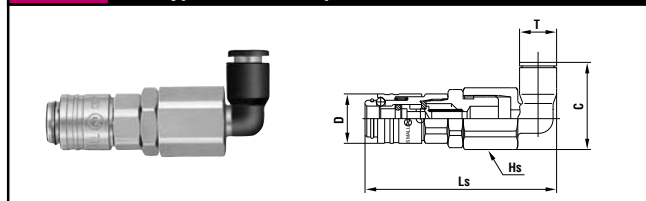
Model	Application (Tube)	Mass (g)	Dimensions (mm)				
			Ls	øD	øE	Hs(WAF)	øT
MS-20SC-6	6mm OD	46	(56.3)	14	17.5	Hex.16	10.3
MS-20SC-8	8mm OD	50.5	(60.8)	14	17.5	Hex.16	13.5

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



Model	Application (Tube)	Mass (g)	Dimensions (mm)					
			Lp	C	E	Hp(WAF)	øT	øBp
MS-20PCL-6	6mm OD	27.5	(43)	15.2	(24.8)	Hex.16	10.5	4
MS-20PCL-8	8mm OD	32	(46.3)	15.2	(31.8)	Hex.16	13.5	4

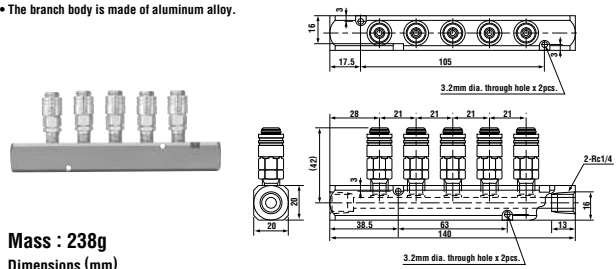
**Socket SCL type (With L-shaped Tube Fitter)**



Model	Application (Tube)	Mass (g)	Dimensions (mm)				
			Ls	øD	C	Hs(WAF)	øT
MS-20SCL-6	6mm OD	47.5	(55)	14	(24.7)	Hex.16	10.5
MS-20SCL-8	8mm OD	49.5	(58.5)	14	(31.4)	Hex.16	13.5

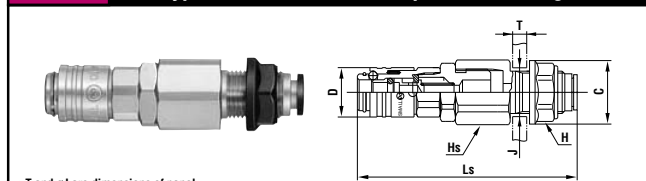
**Socket MS-5 type (Small Line Cupla with 5 branch ports)**

• The branch body is made of aluminum alloy.



Mass : 238g  
Dimensions (mm)

**Socket SCB type (With Tube Fitter for panel mounting)**



• T and øJ are dimensions of panel.

Model	Application (Tube)	Mass (g)	Dimensions (mm)						
			Ls	øD	øC	Hs(WAF)	H(WAF)	T	øJ
MS-20SCB-6	6mm OD	57.5	(62.3)	14	18	Hex.17	Hex.15	7 or less	12.5 <sup>+0.3</sup> <sub>0</sub>
MS-20SCB-8	8mm OD	58.5	(62.8)	14	21	Hex.17	Hex.18	8 or less	15.5 <sup>+0.3</sup> <sub>0</sub>