

For Low Pressure

COMPACT CUPLA

Small multipurpose type for low pressure lines

Working pressure

1.0
1.0 MPa
(10 kgf/cm²)

Valve structure



Two-way shut-off

Applicable fluids



Air

Water

Compact 17.5 mm outer diameter, yet socket and plug have built-in automatic shut-off valves.

- Both socket and plug have built-in automatic shut-off valves.
- Compact size with maximum outer diameter 17.5 mm.
- For small bore piping from temperature control piping to scientific equipment.
- Body materials in stainless steel (SUS304) or brass, excellent in corrosion resistance.
- Four types of end configuration enable suitability with a wide range of piping applications.



Specifications

Body material		Brass, Stainless steel (SUS304)		
Size	Thread	1/8"		
	Tube barb	Polyamide tube : $\phi 4 \times \phi 6$, $\phi 6 \times \phi 8$ Polyolefin tube : $\phi 4 \times \phi 6$, $\phi 6 \times \phi 8$ Fluorine contained resin tube : $\phi 4 \times \phi 6$, $\phi 6 \times \phi 8$		
Pressure unit		MPa	kgf/cm ²	bar
Working pressure		1.0	10	10
Seal material		Seal material	Mark	Working temperature range
Working temperature range *1		Fluoro rubber	FKM	-20°C to +180°C
		Ethylene-propylene rubber	EPDM	-40°C to +150°C
				Remarks
				Standard material
				Available on request

- Maximum working pressure and working temperature range of nut type depend on the tube material and its dimensional tolerance.

- Tube size is indicated as inner diameter x outer diameter.

*1: The operable temperature range depends on the operating conditions.

Maximum Tightening Torque

N m {kgf·cm}

Size (Thread)		1/8"	Tube barb
Torque	Brass	5 {51}	5 {51}
	Stainless steel	9 {92}	7 {71}

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.

Minimum Cross-Sectional Area

(mm²)

Model	CO-1SM×CO-1PM	CO-1SF×CO-1PF	CO-40SN×CO-40PN	CO-60SN×CO-60PN
Minimum cross-sectional area	8.8	8.8	4.9	8.8

Suitability for Vacuum

1.3×10^{-1} Pa { 1×10^{-3} mmHg}

Socket only	Plug only	When connected
—	—	Operational

Admixture of Air on Connection

May vary depending upon the usage conditions.

(mL)

Volume of air admixture	0.34
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Volume of Spillage per Disconnection

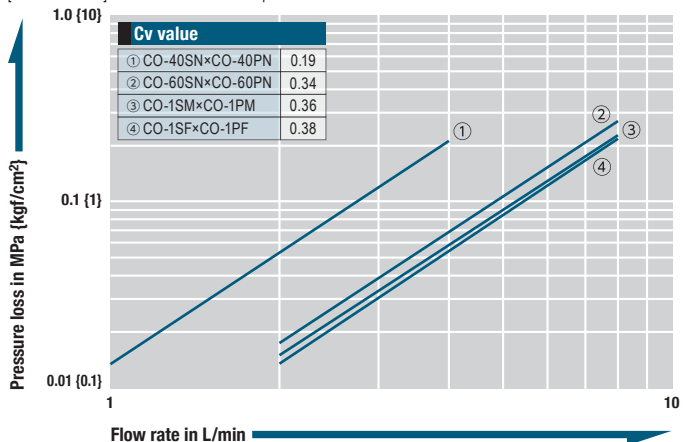
May vary depending upon the usage conditions.

(mL)

Volume of spillage	0.23
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Flow Rate – Pressure Loss Characteristics

[Test conditions] - Fluid : Water - Temperature : 23°C±5°C



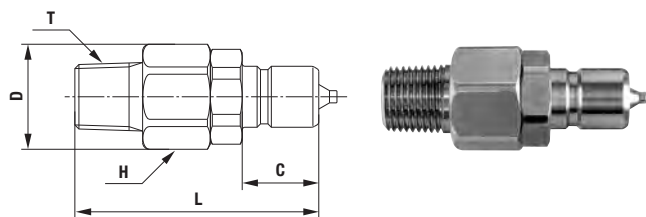
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Models and Dimensions

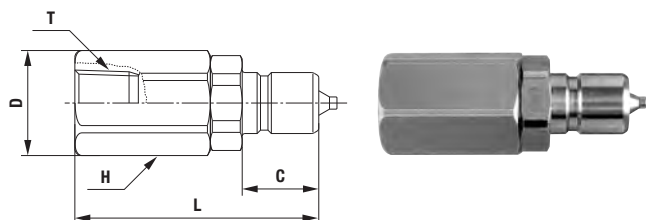
Plug PM type (Male thread)



Model	Application (Thread)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	L	C	øD	H (WAF)	T

CO-1PM	Rc 1/8	20	19	(36)	11.3	15.5	Hex.14	R 1/8
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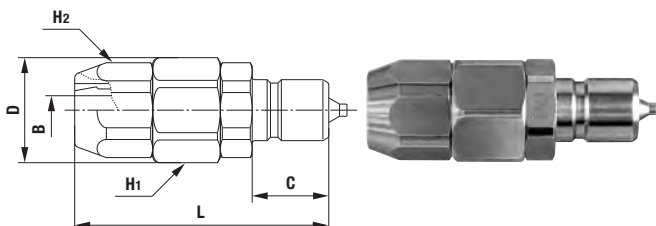
Plug PF type (Female thread)



Model	Application (Thread)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	L	C	øD	H (WAF)	T

CO-1PF	R 1/8	25	23	(36)	11.3	15.5	Hex.14	Rc 1/8
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Plug PN type (For connection to tube)



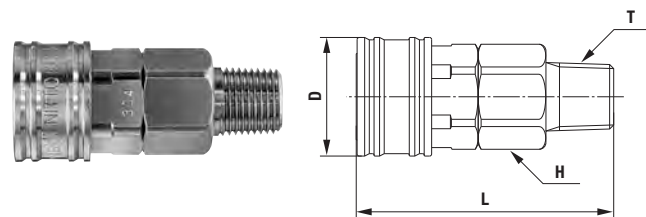
Model	Application (Tube)	Body material, Mass (g)		Dimensions (mm)					
		Brass	Stainless steel	L	C	øD	H1 (WAF)	H2 (WAF)	øB

CO-40PN	ø4×ø6	23	22	(38.5)	11.3	15.5	Hex.14	Hex.10	2.5
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CO-60PN	ø6×ø8	25	24	(37.5)	11.3	15.5	Hex.14	Hex.13	4.2
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No difference in dimensions of brass and stainless steel CUPLA

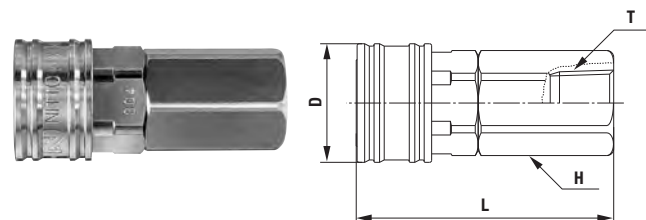
Socket SM type (Male thread)



Model	Application (Thread)	Body material, Mass (g)		Dimensions (mm)			
		Brass	Stainless steel	L	øD	H (WAF)	T

CO-1SM	Rc 1/8	34	32	(38)	17.5	Hex.14	R 1/8
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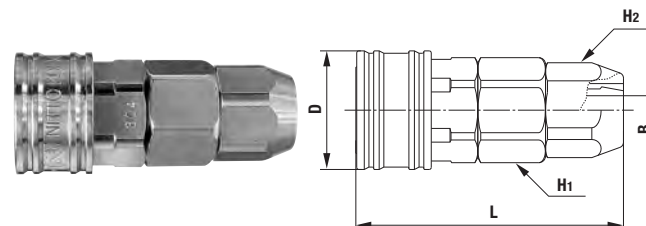
Socket SF type (Female thread)



Model	Application (Thread)	Body material, Mass (g)		Dimensions (mm)			
		Brass	Stainless steel	L	øD	H (WAF)	T

CO-1SF	R 1/8	39	36	(38)	17.5	Hex.14	Rc 1/8
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Socket SN type (For connection to tube)



Model	Application (Tube)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	L	øD	H1 (WAF)	H2 (WAF)	øB

CO-40SN	ø4×ø6	38	35	(40.5)	17.5	Hex.14	Hex.10	2.5
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CO-60SN	ø6×ø8	40	37	(39.5)	17.5	Hex.14	Hex.13	4.2
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Application Example



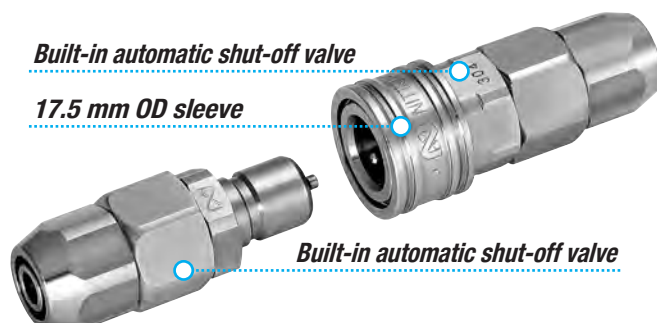
For branch piping



For branch piping

Built-in automatic shut-off valve

17.5 mm OD sleeve



Built-in automatic shut-off valve