

For Gases and Liquids

SP Cupla

For medium pressure general applications

Working pressure



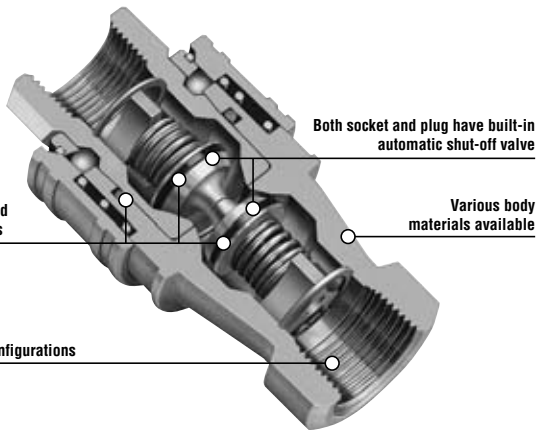
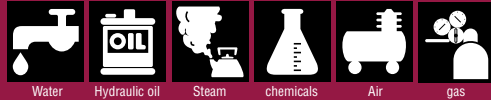
1.5~7.5MPa
(15~76kgf/cm²)

Valve structure



Two-way shut-off

Applicable fluids



Both socket and plug have built-in automatic shut-off valve

Wide range of seal materials for diversified applications with fluids

Various body materials available

Wide variety of end configurations

Socket and plug both have automatic shut-off valve for medium pressure applications! Available with various body and seal materials, or sizes.

- Both socket and plug have automatic shut-off valve inside so that the fluid in the line will not flow out on disconnection.
- Various semi-standard seal materials are available to suit a variety of fluids.
- Various semi-standard body materials and sizes are available to suit a wide range of medium pressure applications.

Note: see the pages of Seal Material Selection Table at the end of this catalog for the suitability of seal materials to fluids.

Specifications

Body material	Brass				Stainless steel•Steel (Nickel-plated)			
Size	1/8" • 1/4" / 3/8"	1/2" • 3/4" / 1"	1 1/4" / 1 1/2"	2"	1/8" • 1/4" / 3/8"	1/2" • 3/4" / 1"	1 1/4" / 1 1/2"	2"
Working pressure MPa (kgf/cm ²)	5.0 (51)	3.0 (31)	2.0 (20)	1.5 (15)	7.5 (76)	4.5 (46)	3.0 (31)	2.0 (20)
Pressure resistance MPa (kgf/cm ²)	7.5 (76)	4.5 (46)	3.0 (31)	2.3 (24)	10.0 (102)	6.5 (66)	4.5 (46)	3.0 (31)
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					
	Perfluoroelastomer	P	0°C~+50°C	Available on request				
Ethylene-propylene rubber	EPDM (EPT)	-40°C~+150°C						

* Standard stainless steel SUS304 and SUS316 are available as semi-standard body materials.

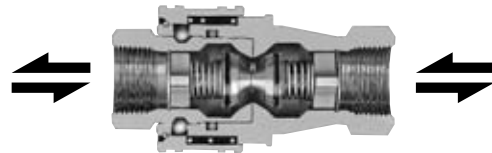
Max. Tightening Torque

N•m (kgf•cm)

Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	
Torque	Steel	9 (92)	14 (143)	22 (224)	60 (612)	90 (918)	120 (1224)	260 (2652)	500 (5100)	
		Brass	5 (51)	9 (92)	12 (122)	30 (306)	50 (510)	65 (663)	150 (1530)	260 (2652)
			Stainless steel	9 (92)	14 (143)	22 (224)	60 (612)	90 (918)	120 (1224)	260 (2652)

Flow Direction

Fluid may flow in either direction from plug or from socket side when coupled.



Interchangeability

Different sizes are not interchangeable.

* Interchangeable with SP-V Cuplas but take heed of flow rates.

Min. Cross-Sectional Area

(mm²)

Model	1SP	2SP	3SP	4SP	6SP	8SP	10SP	12SP	16SP
Min. Cross-Sectional Area	13	17	48	73	94	212	395	553	803

Suitability for Vacuum

1.3 x 10⁻¹Pa (1 x 10⁻³mmHg)

Socket only	Plug only	When connected
—	—	Operational

Admixture of air on connection

(m^l)

Model	1SP	2SP	3SP	4SP	6SP	8SP	10SP	12SP	16SP
Volume of spillage	0.52	1.02	2.4	3.2	10.5	17	29	45	84

Flow Rate – Pressure Loss Characteristics

[Test conditions] • Fluid : Hydraulic oil • Temperature : 30°C ± 5°C
• Fluid viscosity : 32 x 10⁻⁶m²/s • Density : 0.87 x 10³kg/m³

