

For Medium Pressure

TSP Cupla

For medium pressure general applications

Working pressure

1.5 to 7.5

1.5 to 7.5 MPa
(15 to 76 kgf/cm²)

Applicable fluids



Valve structure



Straight through

Applicable fluids for braided hose connection type depend upon the specifications of braided hoses to be used.

Note: Depending on the temperature of steam/hot water, the heat may damage seal materials. Please contact one of our distributors.

Valveless structure suits high viscosity fluids! Various body materials, sizes and end configurations. Braided hose connection types are newly added.

- Valveless construction drastically saves pressure loss and achieves high flow rate.
- Suitable for high viscosity fluids (such as grease).
- Available in various standard body materials, sizes and end configurations to cope with diversified applications and operating situations.
- No hose clamp required! Simple and secure connection to braided hose.

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



For connection to braided hoses



Specifications

Body material		Brass				Stainless steel, Steel (Nickel-plated)			
Size (Thread and hose)		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	5.0	3.0	2.0	1.5	7.5	4.5	3.0	2.0
	kgf/cm ²	51	31	20	15	76	46	31	20
	bar	50	30	20	15	75	45	30	20
	PSI	725	435	290	218	1090	653	435	290
Seal material Working temperature range		Seal material	Mark		Working temperature range		Remarks		
		Nitrile rubber	NBR (SG)		-20°C to +80°C		Standard material		
		Fluoro rubber	FKM (X-100)		-20°C to +180°C				
		Ethylene-propylene rubber	EPDM (EPT)		-40°C to +150°C				

- SUS316 is available as option.
- Working pressure and working temperature range of TSP Cupla for braided hoses depend upon the specifications of braided hoses to be used.
- Seal material for braided hoses is nitrile rubber.

Max. Tightening Torque

Nm {kgf·cm}

Size (Thread)		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}	280 {2856}	500 {5100}
	Brass	5 {51}	9 {92}	12 {122}	30 {306}	50 {510}	65 {663}	150 {1530}	160 {1632}	260 {2652}
	Stainless steel	9 {92}	14 {143}	22 {224}	60 {612}	90 {918}	120 {1224}	260 {2652}	280 {2856}	500 {5100}

- Tighten the nut for braided hoses until it is flush against the hose barb base.

Flow Direction

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



Interchangeability

If the first digit of model number of socket is the same as that of plug, they can be connected regardless of the end configurations.

Min. Cross-Sectional Area

(mm²)

Model	1TSP	2TSP	3TSP	4TSP	6TSP	8TSP	10TSP	12TSP	16TSP
End configurations									
H type (Hose barb)	7.0 (ø3)	19.6 (ø5)	38.4 (ø7)	78.5 (ø10)	176 (ø15)	283 (ø19)	530 (ø26)	804 (ø32)	1256 (ø40)
M type / F type (Male thread / Female thread)	15.9 (ø4.5)	33.1 (ø6.5)	78.5 (ø10)	132 (ø13)	226 (ø17)	452 (ø24)	804 (ø32)	1134 (ø38)	1885 (ø49)
Model	2TSN-60 2TPN-60	3TSN-90 3TPN-90	4TSN-120 4TPN-120	4TSN-150 4TPN-150	6TSN-190 6TPN-190	8TSN-250 8TPN-250			
End configurations									
N type (For braided hose connection)	23.7 (ø5.5)	56.7 (ø8.5)	95.0 (ø11)	132 (ø13)	226 (ø17)	415 (ø23)			

Suitability for Vacuum

1.3 x 10⁻¹ Pa {1 x 10⁻³ mmHg}

Socket only	Plug only	When connected
—	—	Operational

Flow Rate – Pressure Loss Characteristics

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

