

For High Pressure

# 280 Cupla

For hydraulic pressure up to 27.5 to 31.5 MPa (281 to 321 kgf/cm<sup>2</sup>)

Working pressure



27.5 to 31.5 MPa  
(281 to 321 kgf/cm<sup>2</sup>)

Valve structure



Two-way shut-off

Applicable fluids



Hydraulic oil

**Generic Cupla copes with high pressure lines in hydraulic equipment! Low pressure loss is ideal for hydraulic equipment.**

- Complys with international standard ISO 7241-1A.
- General purpose hydraulic Cuplas with the working pressure up to 27.5 to 31.5 MPa (281 to 321 kgf/cm<sup>2</sup>).
- Structure keeps pressure loss extremely low, particularly ideal for hydraulic applications requiring high flow rates.
- Both socket and plug have built-in automatic shut-off valves to prevent fluid spill out when disconnected. Easy to handle.
- Special steel body material is adopted for its excellent strength and additional quenching treatment is done to withstand hydro pressure impacts.



## Specifications

Body material		Special steel (Bright chromate conversion coating : silver)					
Size (Thread)		1/4", 3/8"	1/2", 3/4", 1"				
Working pressure	MPa	31.5	27.5				
	kgf/cm <sup>2</sup>	321	281				
	bar	315	275				
	PSI	4570	3990				
Seal material	Nitrile rubber	Mark	NBR (SG)	Working temperature range	-20°C to +80°C	Remarks	Standard material

## Max. Tightening Torque

Nm (kgf·cm)

Size (Thread)	1/4"	3/8"	1/2"	3/4"	1"
Torque	28 (286)	40 (408)	80 (816)	100 (1020)	180 (1836)

## Flow Direction

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



## Interchangeability

Different sizes cannot be connected.

## Min. Cross-Sectional Area

(mm<sup>2</sup>)

Model	280-2SP	280-3SP	280-4SP	280-6SP	280-8SP
Min. cross-sectional area	11.4	42.8	79.1	146.5	235.6

## Suitability for Vacuum

1.3 Pa (1 x 10<sup>-2</sup> mmHg)

Socket only	Plug only	When connected
—	—	Operational

## Admixture of Air on Connection

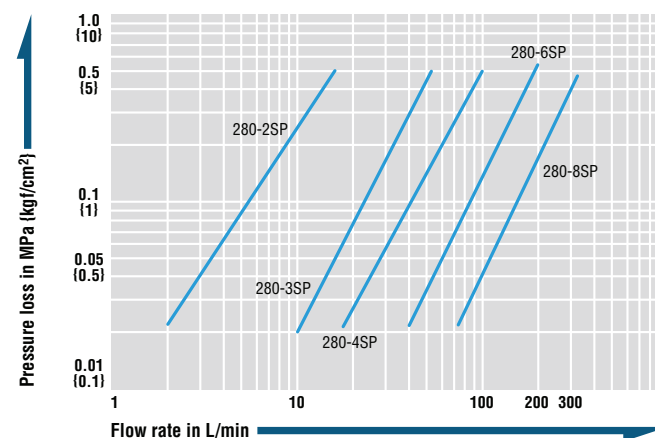
Admixture of air may vary depending upon the usage conditions.

(mL)

Model	280-2SP	280-3SP	280-4SP	280-6SP	280-8SP
Volume of air	0.37	1.02	2.63	8.83	16.04

## Flow Rate – Pressure Loss Characteristics

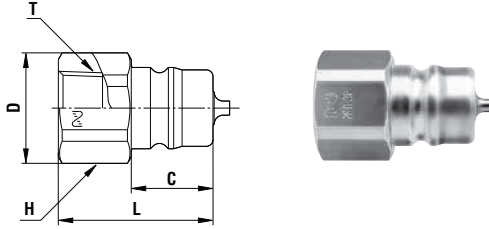
[Test conditions] • Fluid : Hydraulic oil • Temperature : 30°C ± 5°C  
• Fluid viscosity : 32 x 10<sup>-6</sup> m<sup>2</sup>/s • Density : 0.87 x 10<sup>3</sup> kg/m<sup>3</sup>



## ⚠ Precautions for use

There is no interchangeability between 280 Cupla and HSP Cupla or 210 Cupla. Do not connect each other even if some sizes are approximate.

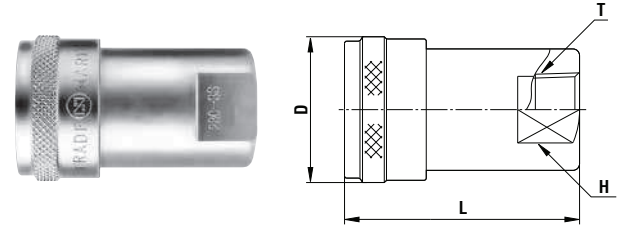
**Plug Female thread**



Model	Application	Mass (g)	Dimensions (mm)				
			L	øD	C	H(WAF)	T
280-2P	R 1/4	35	31.5	20.5	15	Hex.19	Rc 1/4
280-3P	R 3/8	59	35	25	18.5	Hex.23	Rc 3/8
280-4P	R 1/2	115	44	32	24.5	Hex.29	Rc 1/2
280-6P	R 3/4	178	52.5	35	28	Hex.32	Rc 3/4
280-8P	R 1	331	63.5	44	35	41	Rc 1

\* Internal structural design of 280-6S and 280-8S is partly different from the above drawing.

**Socket Female thread**



Model	Application	Mass (g)	Dimensions (mm)			
			L	øD	H(WAF)	T
280-2S	R 1/4	110	46	(27)	19	Rc 1/4
280-3S	R 3/8	185	53	(33)	23	Rc 3/8
280-4S	R 1/2	335	66.5	(39)	29	Rc 1/2
280-6S	R 3/4	571	81	(48)	35	Rc 3/4
280-8S	R 1	871	98	(55)	41	Rc 1

**Application Example**

