For High Pressure

280 Cupla

For hydraulic pressure up to 27.5 to 31.5 MPa {281 to 321 kgf/cm²}

Working pressure: 27.5 to 31.5 MPa {281 to 321 kgf/cm²}

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/cm²}.
- 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/cm²	321	281	
	bar	315	275	
	PSI	4570	3990	
Seal material / Working temperature range	Seal material	Mark	Working temperature range	Remarks
	Nitrile rubber	NBR (SG)	−20°C to +80°C	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 — (mm²)

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 10⁻² mmHg}

Socket only	Plug only	When connected
—	—	Operational

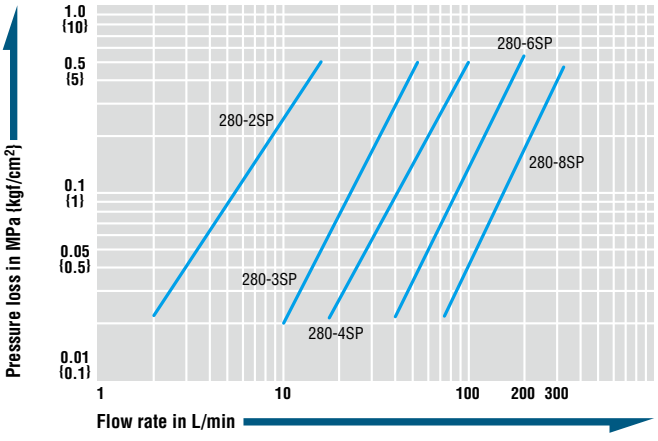
Admixture of Air on Connection — (mL)

Admixture of air may vary depending upon the usage conditions.

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^{-6} m^2/s •Density : 0.87 x 10^3 kg/m^3



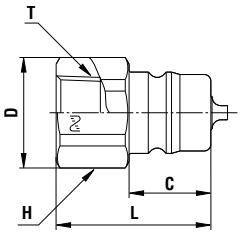
⚠Precautions for use

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

Models and Dimensions

WAF : WAF stands for width across flats.

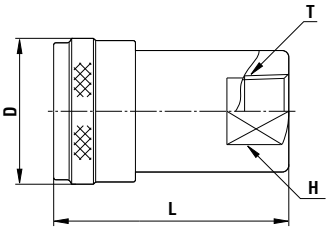
Plug Female thread



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

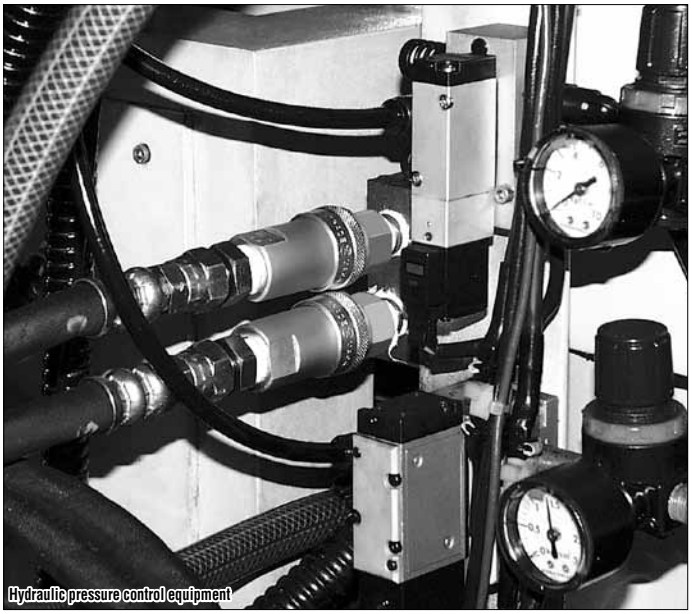
* Internal structural design of 280-6S and 280-8S is partly different from the above drawing.

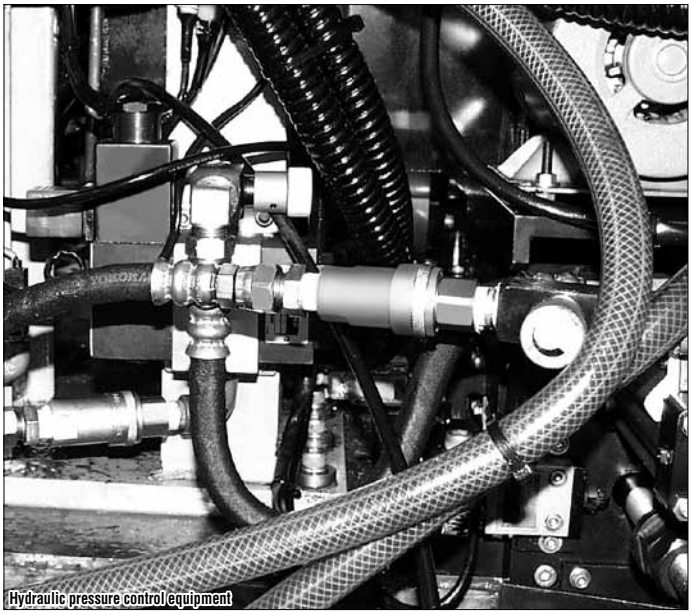
Socket Female thread



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


Hydraulic pressure control equipment


Hydraulic pressure control equipment