For High Pressure

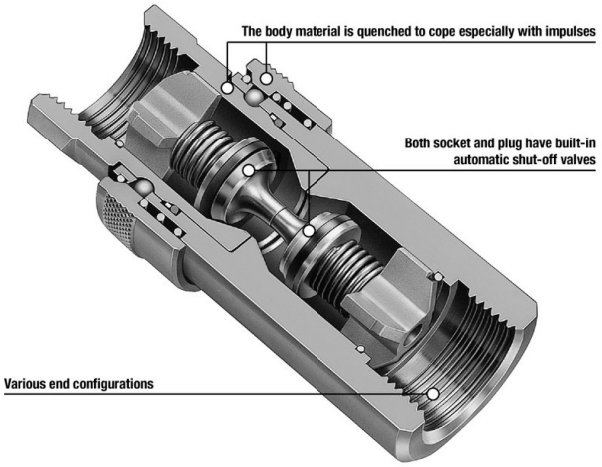
210 CUPLA

For hydraulic pressure up to 20.6 MPa {210 kgf/cm²}

Working pressure	Valve structure	Applicable fluid
20.6 MPa {210 kgf/cm²}	Two-way shut-off	Hydraulic oil

Standard hydraulic CUPLA for general purposes with a working pressure up to 20.6 MPa.
Low pressure loss, suitable for hydraulic equipment.

- General purpose hydraulic CUPLA with a working pressure of 20.6 MPa {210 kgf/cm²}.
- Structure is designed to reduce pressure loss to the lowest, and is best for hydraulic applications that need big flow rates.
- Both socket and plug have built-in automatic shut-off valves that prevent fluid outflow when disconnected.



Specifications

Body material	Special steel (Nickel plated)			
Size (Thread)	1/4", 3/8", 1/2", 3/4", 1"			
Pressure unit	MPa	kgf/cm²	bar	PSI
Working pressure	20.6	210	206	2990
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	Available on request

Maximum Tightening Torque — Nm {kgf·cm}

Size (Thread)	1/4"	3/8"	1/2"	3/4"	1"
Torque	28 {286}	45 {459}	90 {918}	100 {1020}	180 {1836}

Flow Direction

Fluid flow can be bi-directional when socket and plug are connected.

Interchangeability

Socket and plug of different sizes cannot be connected.

Minimum Cross-Sectional Area — (mm²)

Model	210-2SP	210-3SP	210-4SP	210-6SP	210-8SP
Minimum cross-sectional area	24.5	42.8	77.4	146.5	235.6

Suitability for Vacuum — 1.3 Pa {1 x 10⁻² mmHg}

Socket only	Plug only	When connected
–	–	Operational

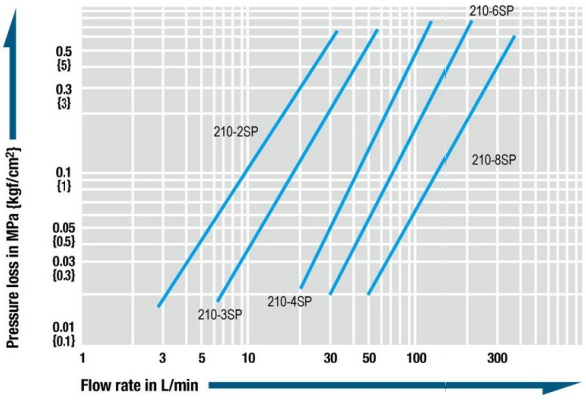
Admixture of Air on Connection — (mL)

May vary depending upon the usage conditions.

Model	210-2SP	210-3SP	210-4SP	210-6SP	210-8SP
Volume of air	0.85	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



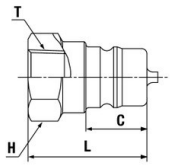
⚠ Precautions for use

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

Models and Dimensions

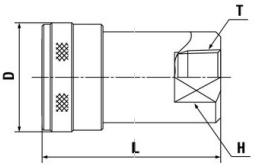
WAF : WAF stands for width across flats.

Plug Female thread



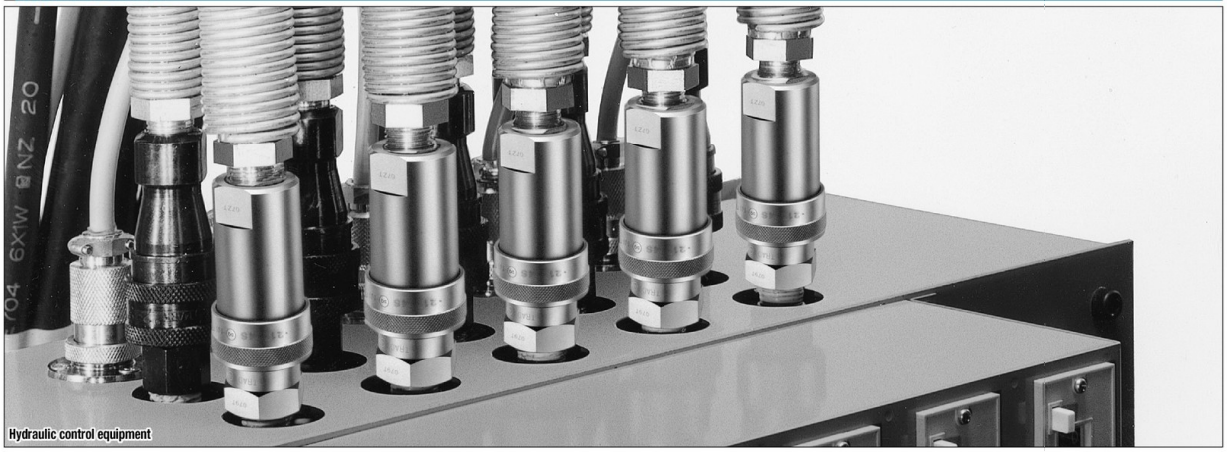
Model	Application (Thread)	Mass (g)	Dimensions (mm)			
			L	C	H(WAF)	T
210-2P	R 1/4	39	33	18	Hex.19	Rc 1/4
210-3P	R 3/8	57	36	18.5	Hex.23	Rc 3/8
210-4P	R 1/2	90	42.5	24	Hex.27	Rc 1/2
210-6P	R 3/4	195	51	28	Hex.35	Rc 3/4
210-8P	R 1	293	61	35	Hex.41	Rc 1

Socket Female thread



Model	Application (Thread)	Mass (g)	Dimensions (mm)			
			L	øD	H(WAF)	T
210-2S	R 1/4	158	50.5	(30)	22	Rc 1/4
210-3S	R 3/8	193	54	(33)	23	Rc 3/8
210-4S	R 1/2	330	65	(39)	29	Rc 1/2
210-6S	R 3/4	566	78.5	(48)	35	Rc 3/4
210-8S	R 1	861	95	(55)	41	Rc 1

Application Example



Hydraulic control equipment

Construction machinery

Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.