

For Hydraulics

# 700R Cupla

For hydraulic pressure up to 68.6MPa {700kgf/cm<sup>2</sup>}

Working pressure

**68.6**  
68.6MPa  
{700kgf/cm<sup>2</sup>}

Valve structure

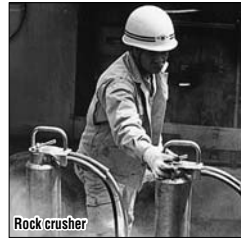


Two-way shut-off

Applicable fluids



Hydraulic oil



**High pressure Cupla for working pressures up to 68.6 MPa and pressure resistance of 98 MPa! Unique sleeve ring-lock system copes with vibration and impact when connected.**

- Cupla for extremely high working pressures up to 68.6MPa {700kgf/cm<sup>2</sup>} and pressure resistance of 98MPa {1,000kgf/cm<sup>2</sup>}.
- Metal-touch valves use no rubber seal, and thus ensure excellent durability.
- Special sleeve ring-lock system maintains tight connection even under vibration or impact when connected.
- Both socket and plug have metal touch automatic shut-off valves that prevent fluid spill out on disconnection.

## Specifications

Body material	Special steel (Nickel-plated)			
Size	3/8" • 1/2"			
Working pressure MPa (kgf/cm <sup>2</sup> )	68.6 {700}			
Pressure resistance MPa (kgf/cm <sup>2</sup> )	98.0 {1000}			
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	Available on request
Stand-alone leakage rate on either socket or plug	For 3/8", 0.05mℓ/min at 0.2MPa {2kgf/cm <sup>2</sup> }			
	For 1/2", 0.05ℓ/min at 0.3MPa {3kgf/cm <sup>2</sup> }			
	* Owing to the metal contact seal structure, there will be very minimal leakage from socket and plug respectively, when they are separated.			

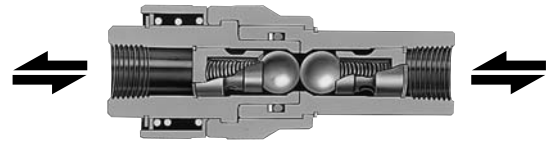
## Models and Dimensions

Model	Application	Mass (g)	Dimensions (mm)					
			Lp	C	øDp	Hp(WAF)	A	T
700R-3P	R 3/8	210	54	18	39.5	Two flats 24 x ø28	13	Rc 3/8
700R-4P	R 1/2	418	70	22	50	Two flats 27 x ø35	16	Rc 1/2

Max. Tightening Torque		N·m (kgf·cm)
Size	3/8"	1/2"
Torque	40 {408}	85 {867}

## Flow Direction

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



## Interchangeability

Different sizes are not connectable.

Min. Cross-Sectional Area		(mm <sup>2</sup> )
Model	700R-3SP	700R-4SP
Min. Cross-Sectional Area	34	55

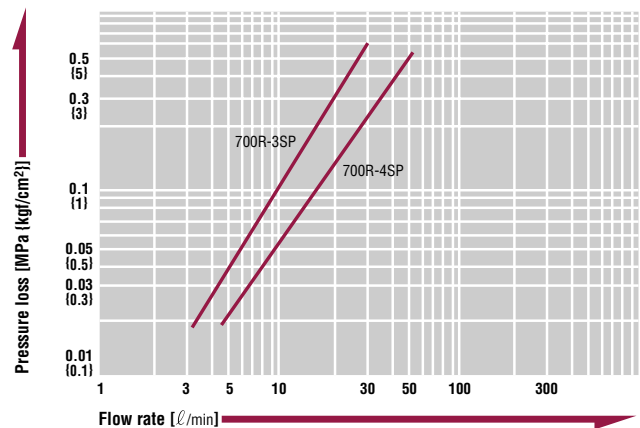
## Suitability for Vacuum

Can be used to for vacuum applications up to 1.3Pa {1x10<sup>-2</sup>mmHg} only when socket and plug are connected.

Admixture of Air on Connection		(mℓ)
Model	700R-3SP	700R-4SP
Volume of air	1.0	2.2

## 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>



WAF : WAF stands for width across flats.

Model	Application	Mass (g)	Dimensions (mm)				
			Ls	øDs	Hs(WAF)	A	T
700R-3S	R 3/8	270	73	39.5	Two flats 22 x ø25	13	Rc 3/8
700R-4S	R 1/2	562	91	50	Two flats 27 x ø32	16	Rc 1/2

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