

For High Pressure

450B Cupla

For hydraulic pressure up to 44.1 MPa {450 kgf/cm²}

Working pressure



Valve structure

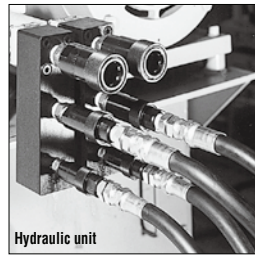


Applicable fluids



Metal-touch valve system with superior durability! Sleeve stopper mechanism gives secure connection.

- Cupla for higher working pressure up to 44.1 MPa (450 kgf/cm²).
- Mechanism to prevent accidental disconnection ensures 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.



Admixture of Air on Connection Admixture of air may vary depending upon the usage conditions. (mL)

Model	450B-3SP	450B-4SP
Volume of air admixture	1.43	3.44

Models and Dimensions

Model	Application	Mass (g)	Dimensions (mm)			
			L	C	H(WAF)	T
450B-3P	R 3/8	95	37.5	22.5	24 x ø28	Rc 3/8
450B-4P*	R 1/2	-	50	35	32 x ø35	Rc 1/2

* Made-to-order item

Specifications				
Body material	Special steel (Nickel-plated)			
Size (Thread)	3/8", 1/2"			
Working pressure	MPa	44.1		
	kgf/cm ²	450		
	bar	441		
	PSI	6400		
Seal material	Seal material	Mark	Working temperature range	Remarks
	Nitrile rubber	NBR (SG)	-20°C to +80°C	Standard material
Working temperature range	Fluoro rubber	FKM (X-100)	-20°C to +180°C	Made-to-order item
Stand-alone leakage rate on either socket or plug	0.1 mL/min at 0.3 MPa (3 kgf/cm ²)			

Max. Tightening Torque		Nm {kgf·cm}
Size (Thread)	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

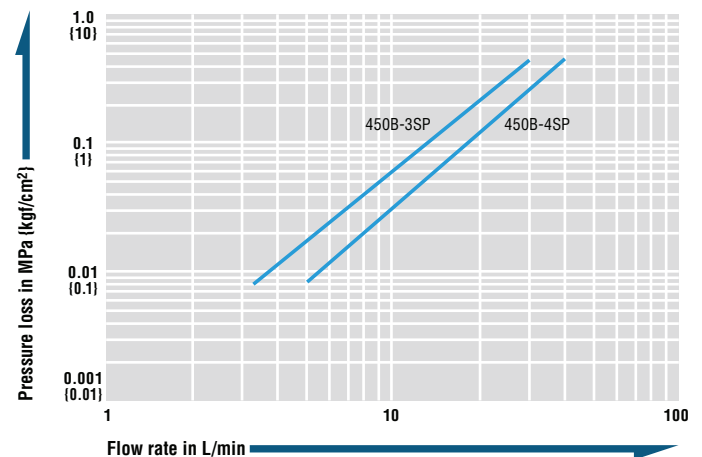
Different sizes are not interchangeable.

Min. Cross-Sectional Area	(mm ²)	
Model	450B-3SP	450B-4SP
Min. cross-sectional area	37	66

Suitability for Vacuum			1.3 Pa (1 x 10 ⁻² mmHg)
Socket only	Plug only	When connected	
-	-	Operational	

Flow Rate – Pressure Loss Characteristics

[Test conditions] •Fluid : Hydraulic oil •Temperature : 25°C ± 5°C
•Fluid viscosity : 32 x 10⁻⁶ m²/s •Density : 0.87 x 10³ kg/m³



WAF : WAF stands for width across flats.

Model	Application	Mass (g)	Dimensions (mm)			
			L	øD	H(WAF)	T
450B-3S	R 3/8	285	59.5	(36)	24	Rc 3/8
450B-4S*	R 1/2	-	85	(46)	36	Rc 1/2

* Made-to-order item

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