

For High Pressure

450B Cupla

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

Working pressure

44.1

44.1MPa
{450kgf/cm²}

Valve structure



Two-way shut-off

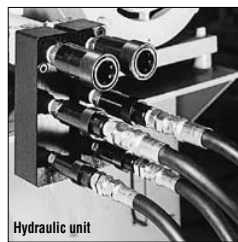
Applicable fluids



Hydraulic oil

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

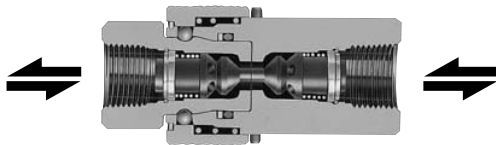
- Cupla for higher working pressure up to 44.1MPa {450kgf/cm²}.
- Mechanism to prevent accidental disconnection maintains tight connection even under vibration or impact when connected.
- Both socket and plug have metal-touch automatic shut-off valves that prevent fluid spill out on disconnection.



Hydraulic unit

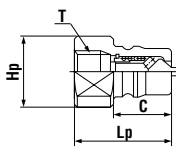
Flow Direction

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



Models and Dimensions

Plug Female thread



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

* Made-to-order item

Specifications

Body material	Special steel (Nickel-plated)		
Size	3/8" • 1/2"		
Working pressure MPa (kgf/cm ²)	44.1 {450}		
Pressure resistance MPa (kgf/cm ²)	68.6 {700}		
Seal material	Seal material	Mark	Working temperature range
	Nitrile rubber	NBR (SG)	-20°C~+80°C
Working temperature range	Fluoro rubber	FKM (X-100)	-20°C~+180°C
	Remarks		
Stand-alone leakage rate on either socket or plug	0.1mℓ/min at 0.3MPa {3kgf/cm ² }		
	* Owing to the metal contact seal structure design, there will be very minimal amount of leakage from both socket and plug respectively, when they are separated.		

Max. Tightening Torque

N·m (kgf·cm)

Size	3/8"	1/2"
Torque	40 {408}	85 {867}

Interchangeability

Different sizes are not connectable.

Min. Cross-Sectional Area

(mm²)

Model	450B-3SP	450B-4SP
Min. cross-sectional area	37	66

Suitability for Vacuum

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

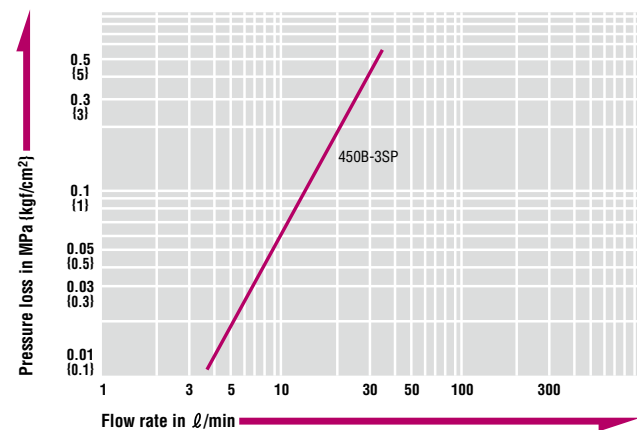
Admixture of Air on Connection

(mℓ)

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

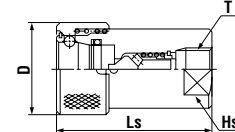
Flow Rate – Pressure Loss Characteristics

[Test conditions] •Fluid : Hydraulic oil •Temperature : 30°C ± 5°C
•Fluid viscosity : 32 × 10⁻⁶m²/s •Density : 0.87 × 10³kg/m³



WAF : WAF stands for width across flat.

Socket Female thread



Model	Application	Mass (g)	Dimensions (mm)			
			Ls	øD	Hs (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.