

For High Pressure

# 450B Cupla

For hydraulic pressure up to 44.1 MPa (450 kgf/cm<sup>2</sup>)

Working pressure



44.1 MPa  
(450 kgf/cm<sup>2</sup>)

Valve structure



Two-way shut-off

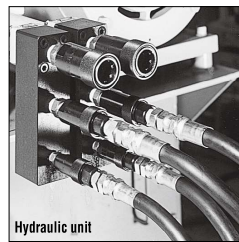
Applicable fluid



Hydraulic oil

**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/cm<sup>2</sup>).
- Sleeve stopper mechanism can be engaged by rotating sleeve after connection.
- Both socket and plug have metal-touch automatic shut-off valves that prevent fluid spill out on disconnection.



Hydraulic unit

## Specifications

Body material	Special steel (Nickel plated)			
Size (Thread)	3/8"			
Pressure unit	MPa	kgf/cm <sup>2</sup>	bar	PSI
Working pressure	44.1	450	441	6400
Seal material	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	Made-to-order item
Stand-alone leakage rate on either socket or plug	0.1 mL/min at 0.3 MPa (3 kgf/cm <sup>2</sup> )			

## Max. Tightening Torque

Nm (kgf·cm)

Torque	40 (408)
--------	----------

## Flow Direction

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



## Interchangeability

Different sizes are not interchangeable.

## Min. Cross-Sectional Area

(mm<sup>2</sup>)

Min. cross-sectional area	37
---------------------------	----

## Suitability for Vacuum

1.3 Pa (1 x 10<sup>-2</sup> mmHg)

Socket only	Plug only	When connected
-	-	Operational

## Admixture of Air on Connection

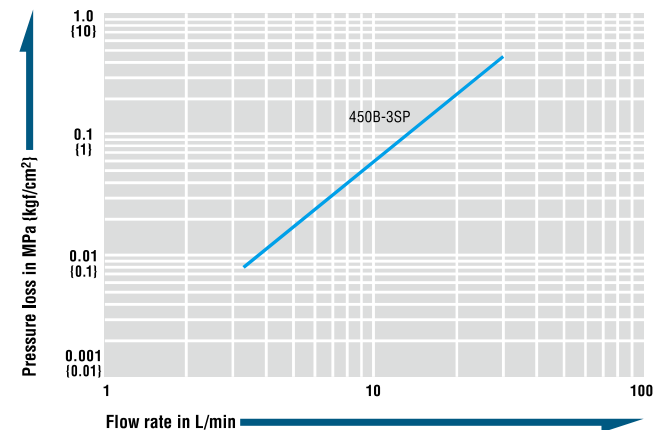
May vary depending upon the usage conditions.

(mL)

Volume of air admixture	1.43
-------------------------	------

## Flow Rate – Pressure Loss Characteristics

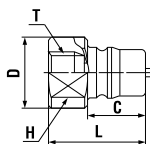
[Test conditions] • Fluid : Hydraulic oil • Temperature : 25°C ± 5°C  
• Fluid viscosity : 32 x 10<sup>-6</sup> m<sup>2</sup>/s • Density : 0.87 x 10<sup>3</sup> kg/m<sup>3</sup>



## Models and Dimensions

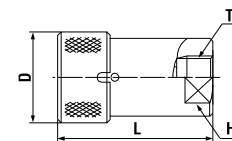
WAF : WAF stands for width across flats.

### Plug Female thread



Model	Application	Mass (g)	Dimensions (mm)				
			L	C	øD	H(WAF)	T
450B-3P	R 3/8	95	37.5	22.5	28	24 x ø28	Rc 3/8

### Socket Female thread



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

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