

For High Pressure

Flat Face Cupla FF

For hydraulic pressure up to 35.0 MPa (357 kgf/cm²) with flat contact face

Working pressure



Valve structure



Applicable fluid



Compared with Nitto Kohki's conventional 35 MPa Cuplas, the flow volume is increased 1.5 to 2 times.

*Increase ratio of each flow volume depends on the Cupla size.

- "Airless valve shut-off" design minimizes spillage volume on disconnection and admixture volume of air on connection.
 - Best suited for hydraulic lines with drastic high pressure pulsation such as in die-casting machines.
 - Sleeve stopper design preventing accidental disconnection under vibration or impacts enhances workability and safety.
 - Sizes are Rc 3/8, Rc 1/2, Rc 3/4, and Rc 1.
- *Only the same size of socket and plug can be connected.



Offset concave flat face enables quick and smooth connection

Unique flat face design

Concaved offset for the flat face on socket guides plug for quick and smooth centering and connection, but still easy to wipe off dirt and dusts.



Hexagon nut for easy mount

Specifications

Body material	Special steel (Nickel plated)			
Size (Thread)	3/8", 1/2", 3/4", 1"			
Pressure unit	MPa	kgf/cm ²	bar	PSI
Working pressure	35.0	357	350	5080
Seal material	Seal material	Mark	Working temperature range	Remarks
Working temperature range	Nitrile rubber	NBR	-20°C to +80°C	Standard material

Max. Tightening Torque

N m (kgf·cm)

Size (Thread)	3/8"	1/2"	3/4"	1"
Torque	40 (408)	80 (816)	150 (1530)	250 (2550)

Flow Direction

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



Interchangeability

Different size socket and plug cannot be connected each other.

Min. Cross-Sectional Area

(mm²)

Model	FF-3S x FF-3P	FF-4S x FF-4P	FF-6S x FF-6P	FF-8S x FF-8P
Min. cross-sectional area	51	106	215	332

Suitability for Vacuum

Not suitable for vacuum application in either connected or disconnected condition.

Admixture of Air on Connection

May vary depending upon the usage conditions.

(mL)

Model	FF-3S x FF-3P	FF-4S x FF-4P	FF-6S x FF-6P	FF-8S x FF-8P
Volume of air admixture	0.018	0.029	0.033	0.080

Volume of Spillage per Disconnection

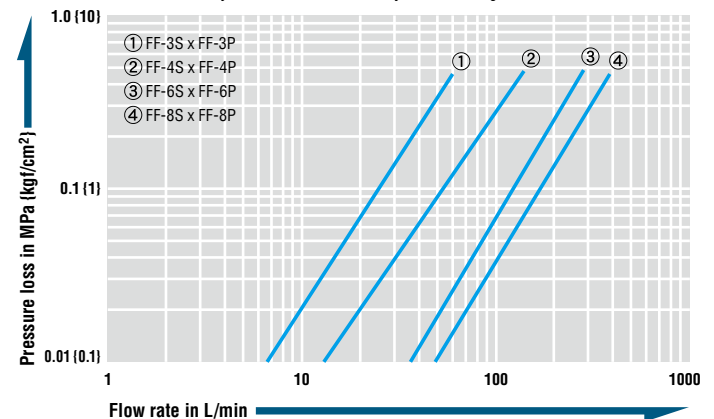
May vary depending upon the usage conditions.

(mL)

Model	FF-3S x FF-3P	FF-4S x FF-4P	FF-6S x FF-6P	FF-8S x FF-8P
Volume of spillage	0.009	0.023	0.031	0.110

Flow Rate – Pressure Loss Characteristics

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

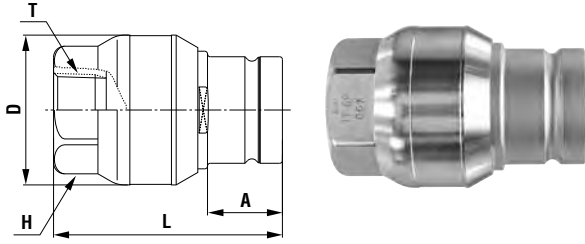


⚠ Precautions for use

Do not connect / disconnect Cuplas when pressure is applied or remaining.

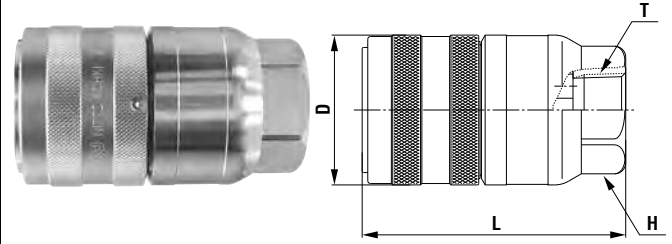
Models and Dimensions

Plug Female thread



Model	Application	Mass (g)	Dimensions (mm)				
			L	øD	A	H (WAF)	T
FF-3P	R 3/8	252	(66)	34	20.5	Hex.29	Rc 3/8
FF-4P	R 1/2	409	(74)	42	22.8	Hex.32	Rc 1/2
FF-6P	R 3/4	709	(82.5)	54	27	Hex.41	Rc 3/4
FF-8P	R 1	1314	(96.5)	66	29.5	Hex.54	Rc 1

Socket Female thread



Model	Application	Mass (g)	Dimensions (mm)				
			L	øD	H (WAF)	T	
FF-3S	R 3/8	345	(71)	(35.5)	Hex.29	Rc 3/8	
FF-4S	R 1/2	608	(84)	(44)	Hex.32	Rc 1/2	
FF-6S	R 3/4	1053	(95)	(54)	Hex.41	Rc 3/4	
FF-8S	R 1	1865	(109.5)	(66)	Hex.54	Rc 1	

Applications

- Hydraulic piping for die-casting machines
- Casting machines
- Electric furnaces
- Molding presses
- Forging press
- Powdery alloy presses
- Extrusion molding machines
- Machine tools
- Iron manufacturing blast furnaces
- Continuous casting machines
- Rolling mills
- Pipe forging machines
- Furnace opening / closing machines
- Glass molding machines, etc.

