




For High Pressure

Flat Face Cupla FF

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

Working pressure	Valve structure	Applicable fluids
 35.0MPa (357kgf/cm ²)	 Two-way shut-off (Non-Spill)	 Hydraulic oil

1.5 ~ 2 Times Higher Flow.
High flow type with "airless valve shut-off" design.

- Compared with Nitto's conventional 35MPa 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.
- Push-to-connect operation and 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.



NEW



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 of dirt and dusts.

Hexagon nut for easy mount



Specifications

Body material	Special steel (Autocatalytic nickel-phosphorus coating)			
Size	3/8" • 1/2" • 3/4" • 1"			
Working pressure	MPa (kgf/cm ²) 35.0 (357)			
Pressure resistance	MPa (kgf/cm ²) 52.5 (536)			
Seal material	Seal material	Mark	Working temperature range	Remarks
Working temperature range	Nitrile rubber	NBR	-20°C~+80°C	Standard material

Max. Tightening Torque

N·m (kgf·cm)

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

Flow Direction

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



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

(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

*Admixture volume of air on each connection depends on usage conditions.

Volume of Spillage per Disconnection

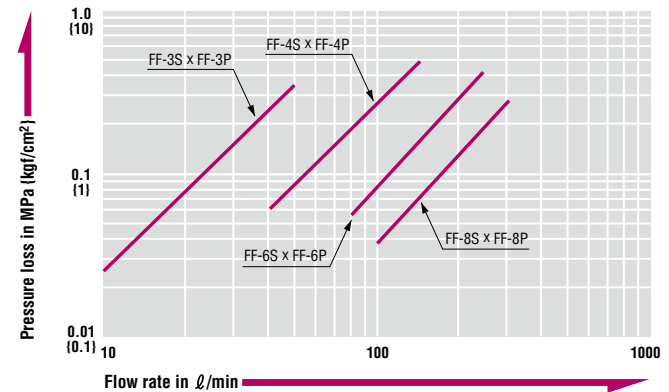
(mℓ)

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

*Spillage volume of liquid on each connection depends on usage conditions.

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

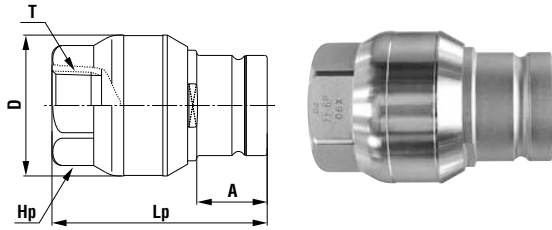


⚠ Precautions for use

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

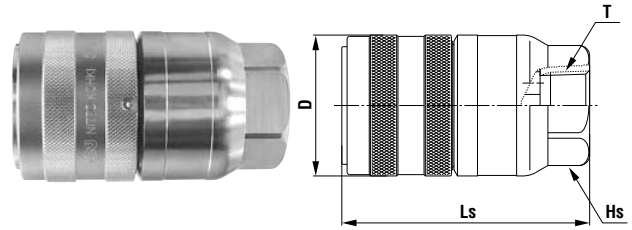
Models and Dimensions

Plug Female thread



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

