

Multi Cupla Series

Multi Cupla MAS Type / MAT Type

7.0MPa {71kgf/cm²} general purpose type

Working pressure



7.0 MPa
(71 kgf/cm²)

Valve structure



Two-way shut-off

Applicable fluids



Air

Water

Hydraulic oil



MAS (Snap ring mount) type
(Plug)



MAT (Thread screw mount) type
(Socket)



MAT (Thread screw mount) type
(Plug)



MAS (Snap ring mount) type
(Socket)

* The types are classified by the method of mounting on the base plate.

Connects multiple lines simultaneously with a single operation for different fluids and sizes.

- Ideal for automated hydraulic or pneumatic cylinder operated systems that need to connect and disconnect several lines simultaneously.
- Automatic shut-off valves in both sockets and plugs ensure no outflow of fluid on disconnection.
- Body materials other than stainless steel are available, which can be ordered with or without valves (made-to-order products).
- Snap-ring and screw thread-in types to mount on the base plate are standardized.
- MAS type can accept axial eccentricity of socket and plug, or allow a plate hole position tolerance of $\pm 0.3\text{mm}$ because of the O-ring around the body.

Specifications

Body material	Stainless steel (with Autocatalytic Nickel-Phosphorus coating)			
Size	1/4" • 3/8" • 1/2" • 3/4" • 1"			
Working pressure MPa (kgf/cm ²)	7.0 (71)			
Pressure resistance MPa (kgf/cm ²)	10.0 (102)			
Seal material	Seal material	Mark	Working temperature range	Remarks
Working temperature range	Fluoro rubber	FKM (X-100)	-20°C~+180°C	Standard material

Interchangeability

MAS & MAT or MAS & MAS types of the same size are to be connected. Connection between the same MAT types virtually not possible due to no allowance for the eccentricity.

Min. Cross-Sectional Area

(mm²)

Model	1/4"	3/8"	1/2"	3/4"	1"
Min. Cross-Sectional Area	23	49	75	145	220

Suitability for Vacuum

$1.3 \times 10^{-1}\text{Pa}$ ($1 \times 10^{-3}\text{mmHg}$)

Socket only	Plug only	When connected
—	—	Operational

Admixture of air on connection

(mℓ)

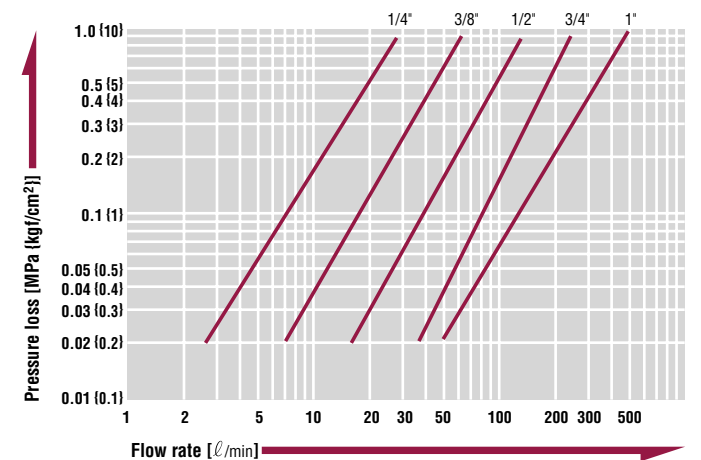
Size	1/4"	3/8"	1/2"	3/4"	1"
Volume of spillage	1.1	2.4	3.2	10.5	17.0

Appropriate load to maintain the connection when the line is pressurized (Internal pressure 10.0MPa (102kgf/cm²))

Size	1/4"	3/8"	1/2"	3/4"	1"
Maximum acceptable Load kN (kgf)	1.9 {193}	3.1 {319}	5.5 {561}	8.6 {875}	12.3 {1258}
Min. required load N at pressure P (MPa) (kgf at pressure p (kgf/cm ²))	Px185+45 {pX1.85+4.5}	Px310+70 {pX3.1+7}	Px545+75 {pX5.45+7.5}	Px850+95 {pX8.5+9.5}	Px1225+120 {pX12.25+12}

Flow Rate – Pressure Loss Characteristics

[Test conditions] • Fluid : Hydraulic oil • Temperature : 30°C \pm 5°C
• Fluid viscosity : $32 \times 10^{-6}\text{m}^2/\text{s}$ • Density : $0.87 \times 10^3\text{kg}/\text{m}^3$



Application example

