Multi Cupla Series

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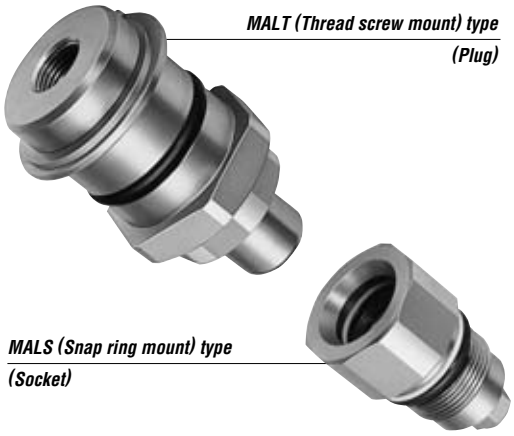
MALS Type / MALT Type

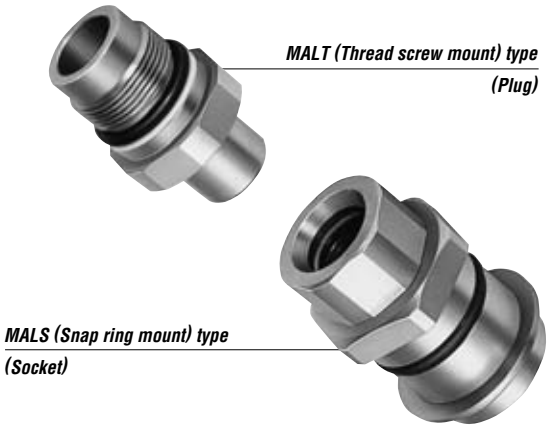
14MPa {142kgf/cm²} airless type

Working pressure: 14.0 — 14.0 MPa {142 kgf/cm²}

Valve structure: Two-way shut-off

Applicable fluids: Air, Hydraulic oil





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

Specifications

Body material	Steel (with Autocatalytic Nickel-Phosphorus coating)			
Size	1/4" • 3/8" • 1/2" • 3/4"			
Working pressure MPa {kgf/cm²}	14.0 {142}			
Pressure resistance MPa {kgf/cm²}	20.6 {210}			
Seal material / Working temperature range	Seal material	Mark	Working temperature range	Remarks
	Fluoro rubber	FKM (X-100)	-20°C~+180°C	Standard material

Interchangeability

MALS & MALT or MALS & MALS types of the same size are to be connected.
Connection between the same MALT 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"
Min. Cross-Sectional Area	19	39	77	108

Suitability for Vacuum 1.3 x 10⁻¹Pa {1 x 10⁻³mmHg}

Socket only	Plug only	When connected
—	—	Operational

Admixture of air on connection (mℓ)

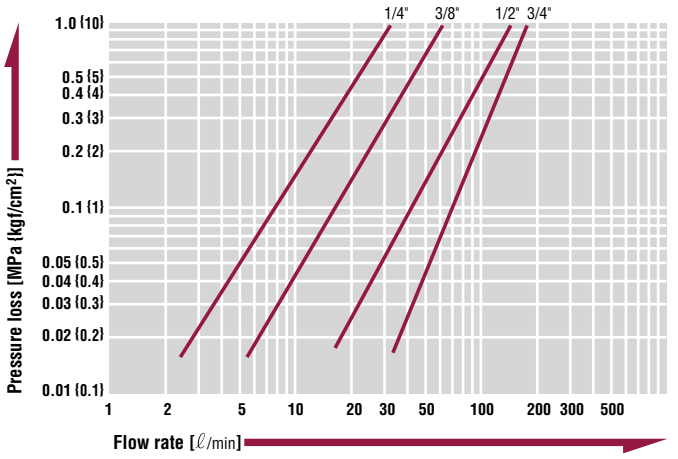
Size	1/4"	3/8"	1/2"	3/4"
Volume of spillage	0.1	0.2	0.4	0.5

Appropriate load to maintain the connection when the line is pressurized (Internal pressure 20.6MPa {210kgf/cm²})

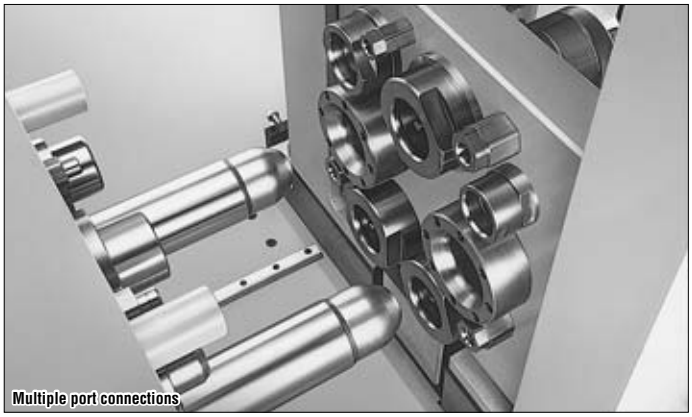
Size	1/4"	3/8"	1/2"	3/4"
Maximum acceptable Load kN {kgf}	7.1 {727}	11.0 {1117}	16.5 {1681}	22.7 {2311}
Min. required load N at pressure P (MPa) {kgf at pressure p (kgf/cm²)}	Px340+120 {px3.4+12}	Px530+140 {px5.3+14}	Px795+160 {px7.95+16}	Px1090+215 {px10.9+21.5}

Flow Rate – Pressure Loss Characteristics

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



Application example


Multiple port connections

Connects multiple lines simultaneously with a single operation for different fluids and sizes. A special design minimizes air admixture in fluid lines upon connection.

- Special valve structure allows minimal air admixture in fluid lines during Cupla connection.
- Liquid seep out on Cuplas disconnection is very little, which makes it best for frequent connection/disconnection applications.
- Snap-ring and screw thread-in types to mount on the base plate are standardized.
- MALS type can accept axial eccentricity of socket and plug, or allow a plate hole position tolerance of ±0.3mm because of the O-ring around the body.