

For High Pressure

700R Cupla

For hydraulic pressure up to 68.6 MPa {700 kgf/cm²}

Working pressure

68.6

68.6 MPa
(700 kgf/cm²)

Valve structure



Two-way shut-off

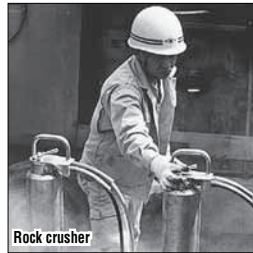
Applicable fluids



Hydraulic oil

High pressure Cupla for working pressures up to 68.6 MPa. Unique sleeve ring-lock system copes with vibration and impact when connected.

- Metal-touch valves use no rubber seal, and thus ensure excellent durability.
- Special sleeve ring-lock system maintains tight connection even under vibration or impact when connected.
- Both socket and plug have metal touch automatic shut-off valves that prevent fluid spill out on disconnection.



Admixture of Air on Connection Admixture of air may vary depending upon the usage conditions. (mL)

| Model | 700R-3SP | 700R-4SP |
|-------------------------|----------|----------|
| Volume of air admixture | 1.0 | 2.2 |

Models and Dimensions

| Model | Application | Mass (g) | Dimensions (mm) | | | | |
|---------|-------------|----------|-----------------|----|------|--------|--------|
| | | | L | C | øD | H(WAF) | T |
| 700R-3P | R 3/8 | 210 | 54 | 18 | 39.5 | 24 | Rc 3/8 |
| 700R-4P | R 1/2 | 418 | 70 | 22 | 50 | 27 | Rc 1/2 |

Specifications

| | | | | |
|---------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------|
| Body material | Special steel (Nickel-plated) | | | |
| Size (Thread) | 3/8", 1/2" | | | |
| Working pressure | MPa | 68.6 | | |
| | kgf/cm ² | 700 | | |
| | bar | 686 | | |
| | PSI | 9950 | | |
| Seal material | Seal material | Mark | Working temperature range | Remarks |
| | Nitrile rubber | NBR (SG) | -20°C to +80°C | Standard material |
| Working temperature range | Fluoro rubber | FKM (X-100) | -20°C to +180°C | Made-to-order item |
| | Stand-alone leakage rate on either socket or plug | For 700R-3SP, 0.05 mL/min at 0.2 MPa (2 kgf/cm ²) For 700R-4SP, 0.05 mL/min at 0.3 MPa (3 kgf/cm ²) | | |

Max. Tightening Torque

Nm (kgf·cm)

| | | |
|---------------|----------|----------|
| Size (Thread) | 3/8" | 1/2" |
| Torque | 40 {408} | 85 {867} |

Flow Direction

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



Interchangeability

Different sizes are not interchangeable.

Min. Cross-Sectional Area

(mm²)

| Model | 700R-3SP | 700R-4SP |
|---------------------------|----------|----------|
| Min. cross-sectional area | 34 | 55 |

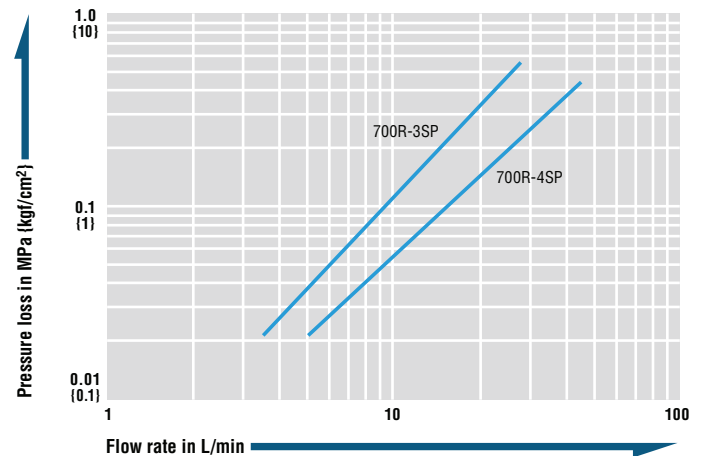
Suitability for Vacuum

1.3 Pa {1 x 10⁻² mmHg}

| Socket only | Plug only | When connected |
|-------------|-----------|----------------|
| — | — | Operational |

Flow Rate – Pressure Loss Characteristics

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



WAF : WAF stands for width across flats.

Socket Female thread

| Model | Application | Mass (g) | Dimensions (mm) | | | |
|---------|-------------|----------|-----------------|------|--------|--------|
| | | | L | øD | H(WAF) | T |
| 700R-3S | R 3/8 | 270 | (73) | 39.5 | 22 | Rc 3/8 |
| 700R-4S | R 1/2 | 562 | (91) | 50 | 27 | Rc 1/2 |

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