

For Low Pressure

MOLD CUPLA

High Flow Type

High flow type mold coolant port coupling

Working pressure



Valve structure



Applicable fluids



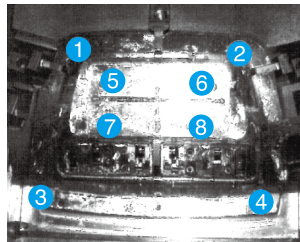
Flow rate has doubled to increase productivity.

- High flow type K3 and K4 series are added to MOLD CUPLA series for mold coolant and heated oil port coupling.
- Almost double flow rate compared with our standard K-01, K-02 and K-03 series, increasing productivity.
- Space saving design for molds with closely spaced coolant ports.
- Long sleeve socket facilitates connection / disconnection with plug embedded in mold.
- Enables quick mold coolant hose connection / disconnection.



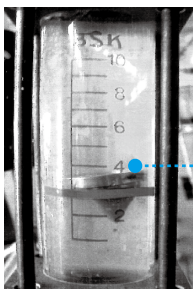
Results of reduced cooling time in the field

A customer replaced conventional K-0 series MOLD CUPLA with the K3 series and shortened the cooling time from 30 seconds to 21 seconds meaning an 18% reduction per shot and increased productivity by 20%. Temperature checks at 8 positions on the mold showed that surface temperatures on average had fallen by 3°C, providing evidence of the high cooling efficiency.



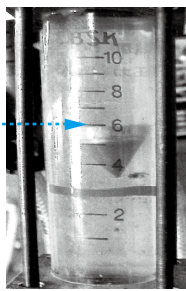
Flow comparison

Coolant water flow rate was checked with a flow meter, which confirmed increase by 1.7 to 1.8 times, when MOLD CUPLA K3 series are used.



Conventional K-0 series MOLD CUPLA were used.

Increased by 1.7 to 1.8 times UP



K3 series are used.

Specifications

| | | | | | |
|---------------------------|----------------|---------------------|---------------------------|----------------------|--|
| Body material | | Brass | | | |
| Size | Thread | 1/4", 3/8", 1/2" | | | |
| | Hose barb | 3/8", 1/2" hose | | | |
| Pressure unit | MPa | kgf/cm ² | bar | PSI | |
| Working pressure | 1.0 | 10 | 10 | 145 | |
| 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 | Available on request | |

Maximum Tightening Torque

Nm {kgf·cm}

| | | | |
|---------------|--------|----------|----------|
| Size (Thread) | 1/4" | 3/8" | 1/2" |
| Torque | 9 {92} | 11 {112} | 20 {204} |

Flow Direction

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



Interchangeability

K3 series sockets and plugs can be connected regardless of end configuration and sizes. K4 series sockets and plugs can be connected regardless of end configuration and sizes. K3 series and K4 series are not interchangeable with each other. Also not interchangeable with other K-0 series.

Minimum Cross-Sectional Area

(mm²)

| Plug | Socket | K3-03SH | K3-04SH | K3-03SM | K3-03SF | K4-04SH |
|---------|--------|---------|---------|---------|---------|---------|
| K3-03PH | | 38 | 38 | 38 | 38 | - |
| K3-02PM | | 38 | 62.5 | 62.5 | 62.5 | - |
| K3-03PM | | 38 | 62.5 | 62.5 | 62.5 | - |
| K3-03PF | | 38 | 62.5 | 62.5 | 62.5 | - |
| K4-04PM | | - | - | - | - | 78.5 |

Suitability for Vacuum

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

Plug Embedment Dimensions

(mm)

| Model | D* | C* | L | Remarks |
|---------|------------|--------|----|---|
| K3-02PM | 24 or more | 0 to 3 | 31 | * Socket interference prevents connection/disconnection when C exceeds 3 mm. |
| K3-03PM | 24 or more | 0 to 3 | 31 | * Size D should be bigger than the outer diameter of the socket wrench to be used. (See JISB4636-1, JISB4636-2) |
| K4-04PM | 32 or more | 0 to 3 | 39 | |

Flow Rate – Pressure Loss Characteristics (Comparison with MOLD CUPLA)

[Test conditions] • Fluid : Water • Temperature : 25°C±5°C

