

For Low Pressure

Mold Cupla

High Flow Type

High flow type mold coolant port coupling

Working pressure



1.0 MPa
(10 kgf/cm²)

Valve structure



One-way shut-off

Applicable fluids



Straight through

Applicable fluids



Water



Heated oil

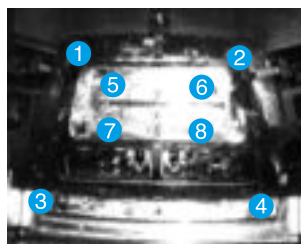
Flow rate has doubled to increase productivity.

- 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 K01, K02 and K03 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 cuplas 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.



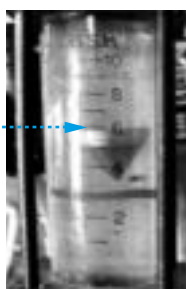
Flow comparison

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 Cuplas 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		
Working pressure		MPa	1.0	
		kgf/cm²	10	
		bar	10	
		PSI	145	
Seal material Working temperature rang		Seal material	Mark	Working temperature range
		Nitrile rubber	NBR (SG)	-20°C to +80°C
		Fluoro rubber	FKM (X-100)	-20°C to +180°C
				Remarks
				Standard material
				Available on request

Max. Tightening Torque

Nm (kgf·cm)

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

Flow Direction

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



Interchangeability

In K3 series sockets and plugs can be connected regardless of end configurations and sizes. In K4 series sockets and plugs can be connected regardless of end configurations and sizes. K3 series and K4 series cannot be connected to each other, or indeed to other mold Cuplas.

Min. 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 : Room temperature

