

Coolant check valve CCH Series



COOLANT CHECK VALVE CCH SERIES

A solution to running your
machining equipment trouble free!!

Check valve for
coolants resistant
to foreign matters!!



Flow path structure resistant to foreign matter

The spring and the sliding part are protected by the main valve to prevent foreign matters from adhering, providing stable operation.

Material best suited to coolant control

A wear resistant material is employed based on our experience in the coolant valves.

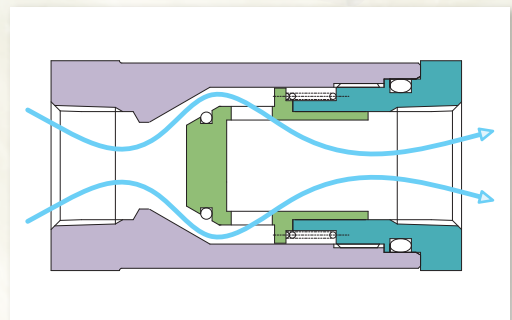
Max. working pressure 7.0 MPa

Withstanding pressure 14.0 MPa

The latest flow path analysis has realized large flows and high pressure resistance. The structure curbs the deformation of the O-ring and withstands high pressures.

Long service life

The O-ring seal and the metal touch structure realizes long-lasting internal sealing.





Coolant check valve

CCH Series

● Max. working pressure 7.0 MPa



JIS symbol



Specifications

Descriptions	CCH-10A	CCH-15A	CCH-20A
Working fluid	Coolant liquid or other non-corrosion liquids (*1)		
Fluid viscosity (mm ² /s)	500 or less		
Max. working pressure MPa	7.0		
Proof pressure (for water pressure) MPa	14.0		
Fluid temperature °C	-10 to 60 (no freezing)		
Ambient temperature °C	-10 to 60		
Cracking pressure kPa	5 (reference value) (*2)		
Valve base leak cm ³ /min	1.0 or less (water)		
Port size	Rc3/8	Rc1/2	Rc3/4
Cv	3.6	6.9	11.0
Weight kg	0.24	0.39	0.80
Mounting orientation	Free		

*1 Fluid that does not affect carbon steel (nickel plating), stainless steel, brass (chrome plated) or fluoro rubber.

*2 It may be higher depending on the type and viscosity of the fluid.

If the product is not used for a long period of time, the initial cracking pressure may be higher than the regular cracking pressure.

How to order

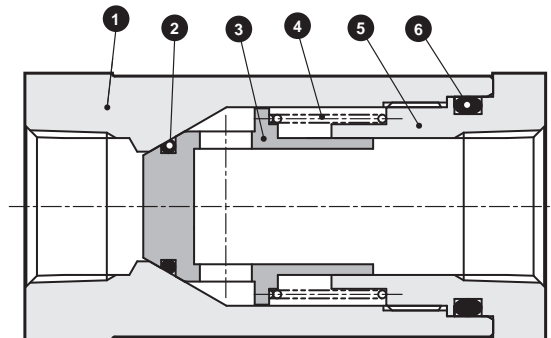
CCH - 10A

① Port size

① Port size

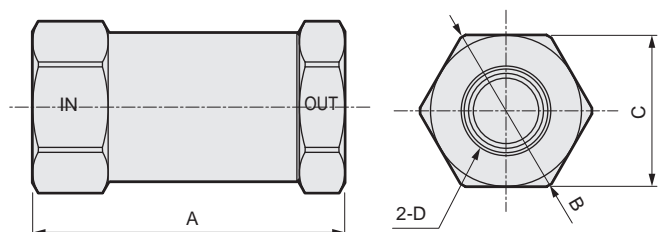
10A	Rc3/8
15A	Rc1/2
20A	Rc3/4

Internal structure and parts list



No.	Parts name	Material
1	Body	10A: S45C (plated) Carbon steel (plated)
		15A, 20A: SUS303 Stainless steel
2	O-ring	FKM Fluoro rubber
3	Main valve	C3604 (plated) Brass (plated)
4	Spring	SUS304 Stainless steel
5	Cap	S45C (plated) Carbon steel (plated)
6	O-ring	FKM Fluoro rubber

Dimensions



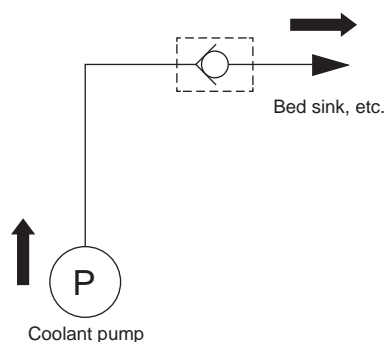
Model no.	A	B	C (Between hex sides)	D
CCH-10A	62	ø34	30	Rc3/8
CCH-15A	75	ø40	36	Rc1/2
CCH-20A	90	ø50	46	Rc3/4

Example uses in circuits

● Low-pressure circuit

(Applications)

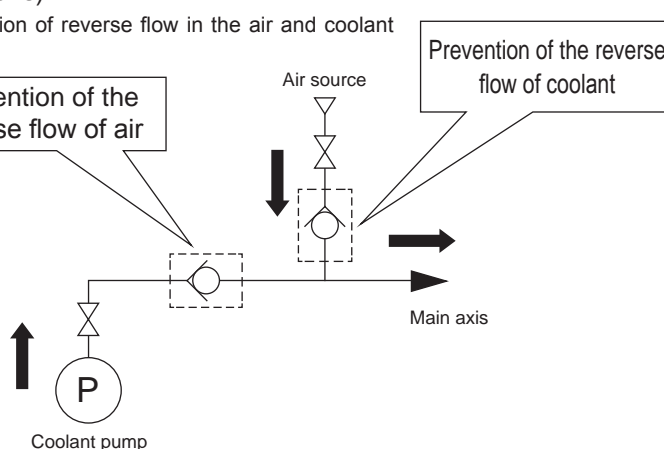
- Improvement in the responsiveness of coolant discharge
- Prevention of liquid leak



● Middle/high-pressure circuit

(Applications)

- Prevention of reverse flow in the air and coolant circuits



Related products

Coolant valve CVSE2 and CVSE3 Series

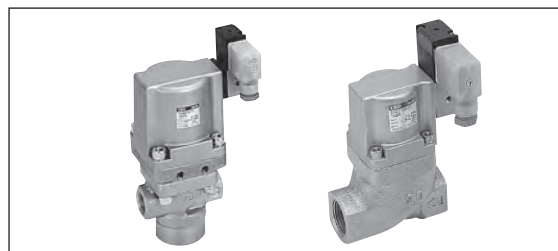
■ Low pressure loss and large flow

The flow-path structure with low pressure loss provides large flows and energy-saving piping.

■ Wide variations

Wide variations in flange sizes from 10 to 80 A
Wide range of supported pressures from low pressures to high pressures.
3-port valves are available as well as 2-port ones.

Catalog No.CB-03-1S

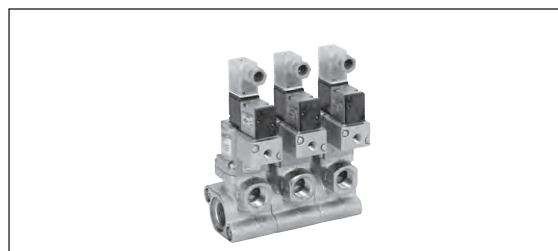


Module coolant valves GCVE2 and GCVSE2 Series

■ Module connection possible

Downsizing of machining tools and consolidation of coolant piping are now possible.

Catalog No.CB-03-1S



Pressure switch for coolant CPE and CPD Series

■ CPE Mechanical pressure switch for low pressures

The diaphragm structure prevents liquid (gas) contact.

Working pressure: 0.05 to 0.8 MPa

Protection structure: IP65 conformed (anti-dust, anti-jet type)

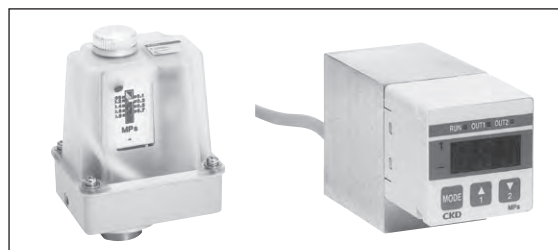
■ CPD Electronic pressure switch for high pressures

Working pressure: 0 to 7 MPa

Protection structure: IP65 conformed (anti-dust, anti-jet type)

The electronic type structure provides high-accuracy detection settings.

Catalog No.CB-03-1S



Warning

■ Design and selection

- Working fluid

(1) The adequacy for all coolants has not been evaluated. If coolant contains high levels of chlorine or sulfur, materials used at wetted sections could be adversely affected. Confirm the adequacy when making a selection. A non-corrosion liquid is a liquid that does not affect and is not affected by the material of the liquid-contacting part of the valve.

Material of liquid-contacting part: Carbon steel (nickel plating), stainless steel, brass (chrome plated), and fluoro rubber

(2) Please be noted that wear powder could be generated when internal parts are worn through check valve operation. This could flow to the secondary side of the check valve.

- Quality of fluid

Rust and dirt in fluid could cause operation faults or leaks and obstruct product performance.

- Temperature of fluid

Use the product within the temperature range of the fluid used.

Caution

■ During use

- Check the in and out directions before piping.
- Tighten the piping with the torques listed in the table below.

<Tightening torques for piping>

Nominal diameter of piping	Recommended tightening torques (Nm) for piping
Rc3/8	31 to 33
Rc1/2	41 to 43
Rc3/4	62 to 65

Precautions when ordering

1 Warranty period

“Warranty Period” is one (1) year from the first delivery to the customer.

2 Scope of warranty

In case any defect attributable to CKD is found during the Warranty Period, CKD shall, at its own discretion, repair the defect or replace the relevant product in whole or in part, according to its own judgement.

Note that the following faults are excluded from the warranty term:

- (1) Product abuse/misuse contrary to conditions/environment recommended in its catalogs/specifications
- (2) Failure caused by other than the delivered product
- (3) Use other than original design purposes
- (4) Third-party repair/modification
- (5) Faults caused by reason that is unforeseeable with technology put into practical use at the time of delivery
- (6) Failure attributable to force majeure

In no event shall CKD be liable for business interruptions, loss of profits, personal injury, costs of delay or for any other special, indirect, incidental or consequential losses, costs or damages.

3 Compatibility confirmation

In no event shall CKD be liable for merchantability or fitness for a particular purpose, notwithstanding any disclosure to CKD of the use to which the product is to be put.

If the goods and their replicas, or the technology and software in this catalog are to be exported, laws require the exporter. To make sure they will never be used for the development or the manufacture of weapons for mass destruction.

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