

Check valve (for liquids) CCH Series



CHECK VALVE FOR LIQUIDS CCH SERIES

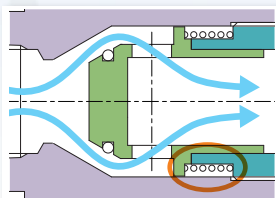
For coolants and cleaning fluids.

Now more durable with an even wider usage.



**Flow path structure
resistant to foreign matter**

By utilizing a spring in the main valve and by protecting the sliding section, foreign matter is prevented from entering and a stable operation is realized.



**Max. working pressure 7.0 MPa
Withstanding pressure 14.0 MPa**

In modern fluid analysis, large flow rates have been realized. Also, the O-ring deformation has been controlled, allowing for a sealing structure resistant to high pressures.

Anti-corrosion material

By using stainless steel for all the metal sections, the coolant's demonstrated reliability is unhindered, and allows for usage in various processes such as laser machining, cleaning equipment, etc.

Long service life

By the O-ring sealing + metallic touch structure, a stable internal sealing with a long life is realized.



Check valve (for liquids)

CCH Series

● Operation pressure range: 0.005 to 7.0 MPa



JIS symbol



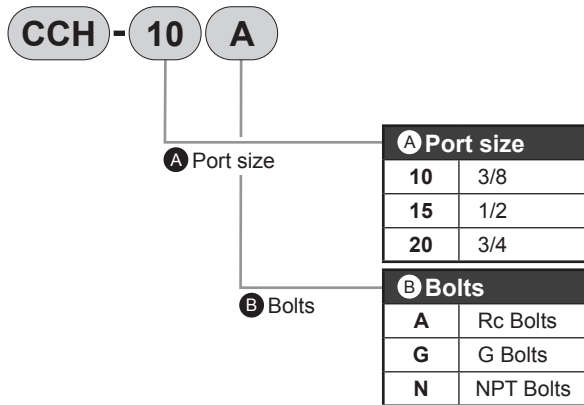
Specifications

Descriptions	CCH-10	CCH-15	CCH-20
Working fluid	Coolants / water / non-corrosive 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	0.27	0.44	0.88
Mounting orientation	Free		

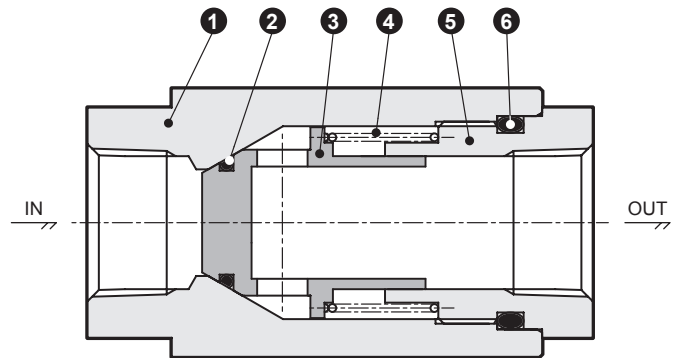
*1: Liquids that will have no effect to stainless steel, chrome plating, fluoro rubber

*2: May become higher due to the kind of / viscosity of the liquid. Also, if left for long periods, the initial cracking pressure may become higher than the regular cracking pressure when starting operation.

How to order

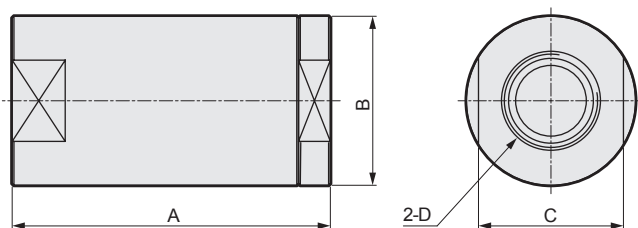


Internal structure and parts list



No.	Parts name	Material	
1	Body	SUS303	Stainless steel
2	O-ring	FKM	Fluoro rubber
3	Main valve	SUS303 (plated)	Stainless steel (plated)
4	Spring	SUS304	Stainless steel
5	Cap	SUS303	Stainless steel
6	O-ring	FKM	Fluoro rubber

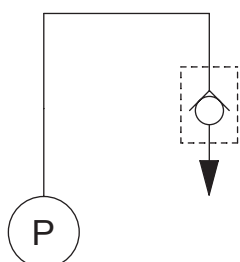
Dimensions



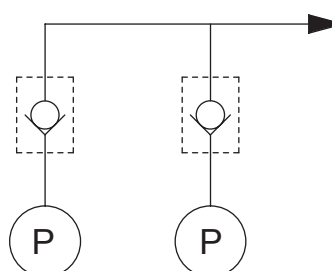
Model no.	A	B	C	D
CCH-10A, G, N	62	φ32	27	Rc3/8, G3/8, 3/8NPT
CCH-15A, G, N	75	φ38	34	Rc1/2, G1/2, 1/2NPT
CCH-20A, G, N	90	φ48	41	Rc3/4, G3/4, 3/4NPT

Example uses in circuits

- **Machining coolant control**
Improves spray responsiveness and prevents dripping of fluid.



- **Prevents back flow during control of 2 kinds of fluids**
Prevents the back flow in circuits where fluids of different pressures and types merge.

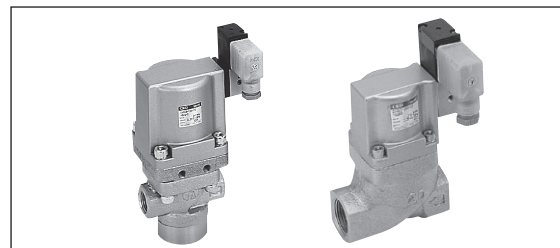


Related products

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.

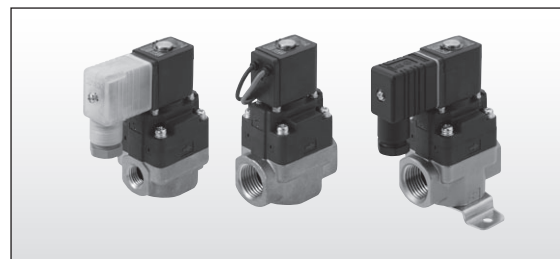
Catalog No.CB-03-1S



Compact pilot solenoid valve for water FWD Series

- **Low power consumption**
1/3 of conventional.
- **Compact / light weight**
Realized light weight through optimization of materials used.
- **High flow rate**
30% more of conventional.

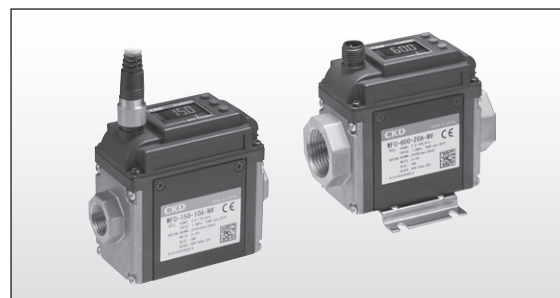
Catalog No.CC-1057



Capacitance electromagnetic flow sensor WFC Series

- **Capacitance**
As the structure of the detection unit is such that the electrode and the fluid do not contact each other, debris and foreign matter cannot enter and so detection errors will not occur.
- **No need for straight pipe sections**
By making the flow duct rectangular in shape, the flow within the ducts become stable, making the straight pipes unnecessary. The space required for the piping can now be reduced.
- **High pressure capacity**
Operation pressure range is from 0 to 2.0 MPa (0 to 50°C), answering your needs for high pressure compatibility.

Catalog No.CC-1230



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: stainless steel, brass, 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.
- If used in small flow situations, the pressure differential will become insufficient and may cause chattering. In such cases, please increase the flow to counter it.
- 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/or their replicas, the technology and/or software found in this catalog are to be exported, law requires that the exporter makes sure that they will never be used for the development and/or manufacture of weapons for mass destruction.

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● Specifications are subject to change without notice.

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