

## Check valve (for liquids) CCH Series



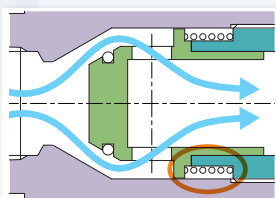
For coolants and cleaning fluids.

# 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.



Refer to "Safety Precautions" on the reverse side before use.

**CKD Corporation**

CC-1317A



Check valve (for liquids)

# CCH Series

● Operation pressure range: 0.05 to 7.0 MPa

RoHS

JIS symbol



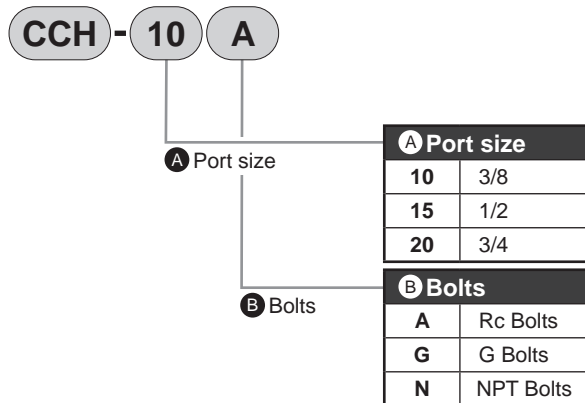
Specifications

Descriptions	CCH-10	CCH-15	CCH-20
Working fluid	Coolants / water / non-corrosive liquids (*1)		
Fluid viscosity (mm <sup>2</sup> /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	6 (reference value) (*2)		
Valve base leak cm <sup>3</sup> /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		

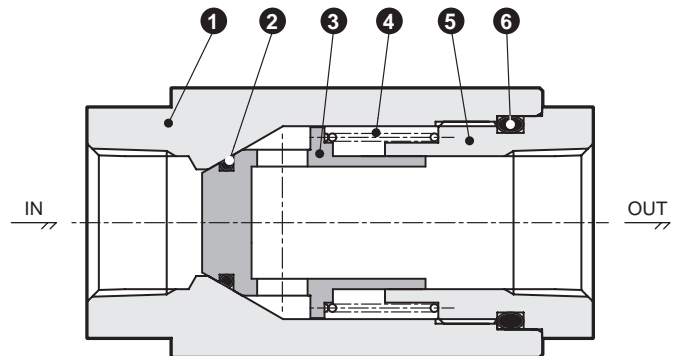
\*1: Liquids that will have no effect to stainless steel, chrome plating, fluoro rubber

\*2: Cracking pressure represents the pressure permitting a 5mL/min (air) flow rate. It may become higher depending on the fluid type and viscosity. When the valve is used for the first time after being unused for long periods, the initial cracking pressure may be higher than normal.

How to order

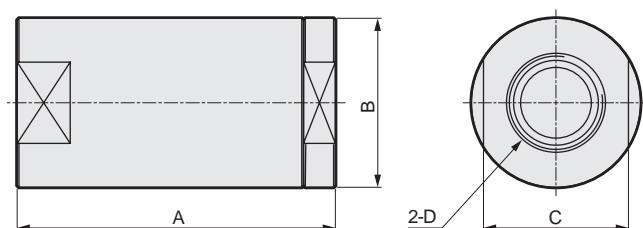


Internal structure and parts list



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

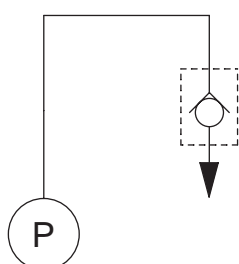
## Dimensions



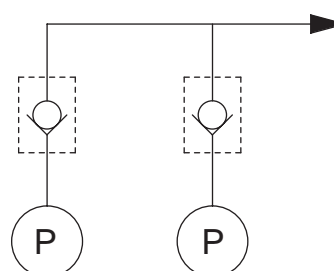
Model no.	A	B	C	D
CCH-10A, G, N	62	ø32	27	Rc3/8, G3/8, 3/8NPT
CCH-15A, G, N	75	ø38	34	Rc1/2, G1/2, 1/2NPT
CCH-20A, G, N	90	ø48	41	Rc3/4, G3/4, 3/4NPT

## 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.

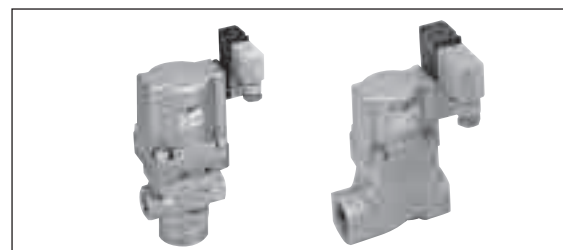


## Related products

### 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.

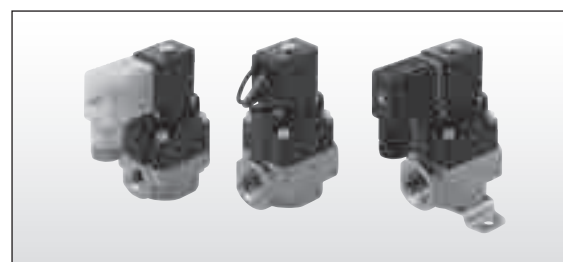
Catalog No.CB-03-1SA



### Compact pilot solenoid valve for water FWD Series

- **Low power consumption**  
1/3 of conventional.
- **Compact / light weight**  
Materials optimized to realize weight reduction. Approximately one-third for both weight and capacity
- **High flow rate**  
30% more of conventional.

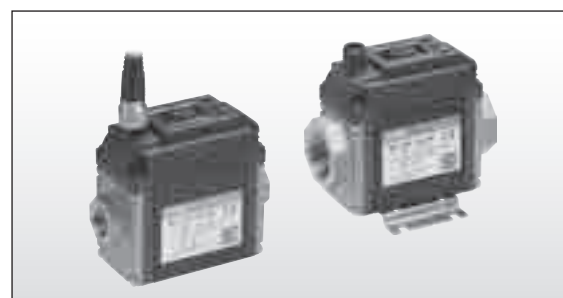
Catalog No.CB-03-1SA



### 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.CB-024SA



## 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 the product is used at a low flow rate, differential pressure will be insufficient and the valve will not fully open, causing chattering and valve return failure. 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 clearly 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 and at no cost, according to its own judgment. Note that the following failures are excluded from the warranty scope:

- (1) Failures due to use outside the conditions and environments set forth in the catalog, specifications, or instruction manuals
- (2) Failures resulting from factors exceeding durability (frequency, distance, time, etc.) or relating to consumable parts
- (3) Failures resulting from factors other than this product.
- (4) Failures caused by improper use of the product.
- (5) Failures resulting from modifications or repairs made without CKD consent.
- (6) Failures caused by matters that could not be predicted with the technologies in practice when the product was delivered.
- (7) Failures resulting from natural disasters or accidents for which CKD is not liable.

The warranty covers the actual delivered product, as a single unit, and does not cover any damages resulting from losses induced by malfunctions in the delivered product.

Note) Contact the nearest CKD Sales Office for details on durability and consumable parts.

### 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 from Japan, Japanese laws require the exporter makes sure that they will never be used for the development and/or manufacture of weapons for mass destruction.

# CKD Corporation

[Website]

<https://www.ckd.co.jp/en/>

Head Office / Plant  
Tokyo Office

Osaka Office

2-250, Oujii, Komaki, Aichi 485-8551  
4F, Bunkahousou Media Plus, 1-31-1, Hamamatsu-cho,  
Minato-ku, Tokyo 105-0013  
6F, PMO EX Shin-Osaka, 4-2-10 Miyahara,  
Yodogawa-ku, Osaka 532-0003

TEL(0568)77-1111 FAX(0568)77-1123  
TEL(03)5402-3620 FAX(03)5402-0120  
TEL(06)6152-9415 FAX(06)4866-5391