

CV · CVS Coolant Valve Air operated type 2 · 3 port valve



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CKD corporation

Series

- Option -

Seal material FKM

NO type

Mounting plate option

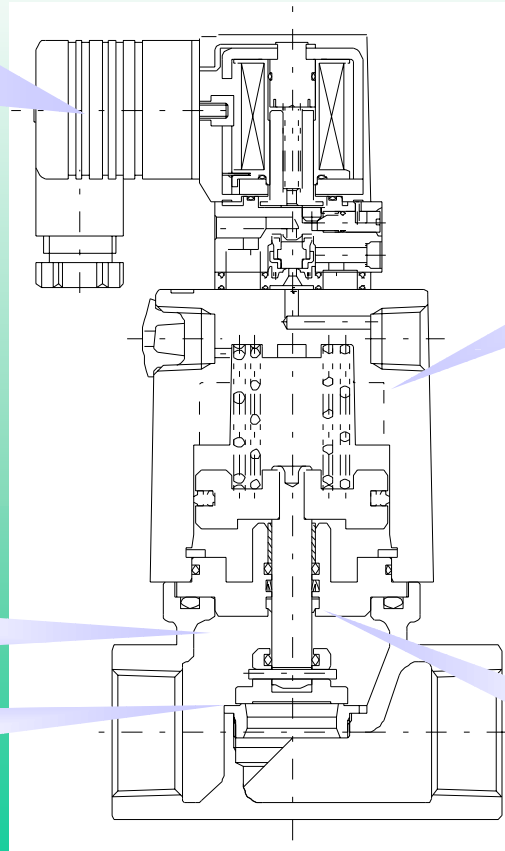
Switch option

	May. Working pressure [MP a]	Number of Port	Port size											
			Rc3/8	Rc1/2	Rc3/4	Rc1	Rc1 ¹ / ₄	Flange 32	Rc1 ¹ / ₂	Flange 40	Rc2	Flange 50	Flange 65	Flange 80
Low pressure drop type	0.3	3												
	0.5	2												
Low pressure	0.5	2												
	1.0													
Medium pressure	1.6	2												
	3.0													
	3.5	3												
High pressure	7.0	2												
		3												

Feature(2 port)

2 port valve

CV2/CVS2



Various terminal boxes

DIN terminal box and T shape terminal box other than lead wire type are available. Incorporated lamp and surge killer are also available.

Operation classification

NC and NO are available for safety diagram design.

Can be used in explosion atmosphere

Air operated type can be used safely in explosion atmosphere.

Water hammer prevention structure.

Metal seal structure

Durable against foreign matter like machining chips.

CE

Products conforming to EC standards are available.

Powerful structure

Air operated valve with cylinder actuate type. Easy to control high pressure coolant oil.

Long life design

Maintenance cost can be reduced.

Solid state switch can be mounted to supply operational signal.

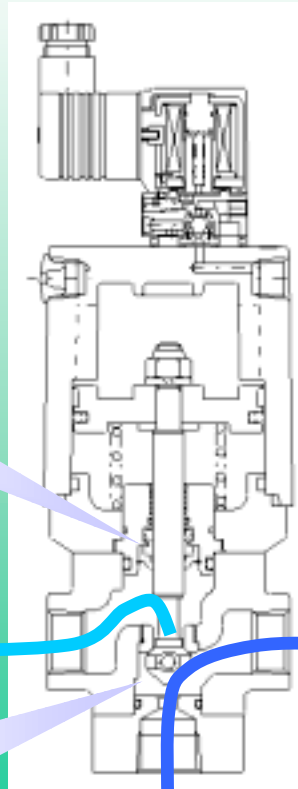
Scraper

Guard rod packing from foreign matter like machining chips.

Feature(3 port)

3 port valve

CV31/CVS31



Scraper · Rod packing

Special shape is adapted for high pressure type. Reliable high sealing performance.

Reduction of load to pump

In case of controlling high pressure coolant in high frequency with on/off pump control or 2 port valve control, load to pump increases. Using 3 port valve keeps load stable and it enables life of pump to be longer.

Taper Metal Seal Structure

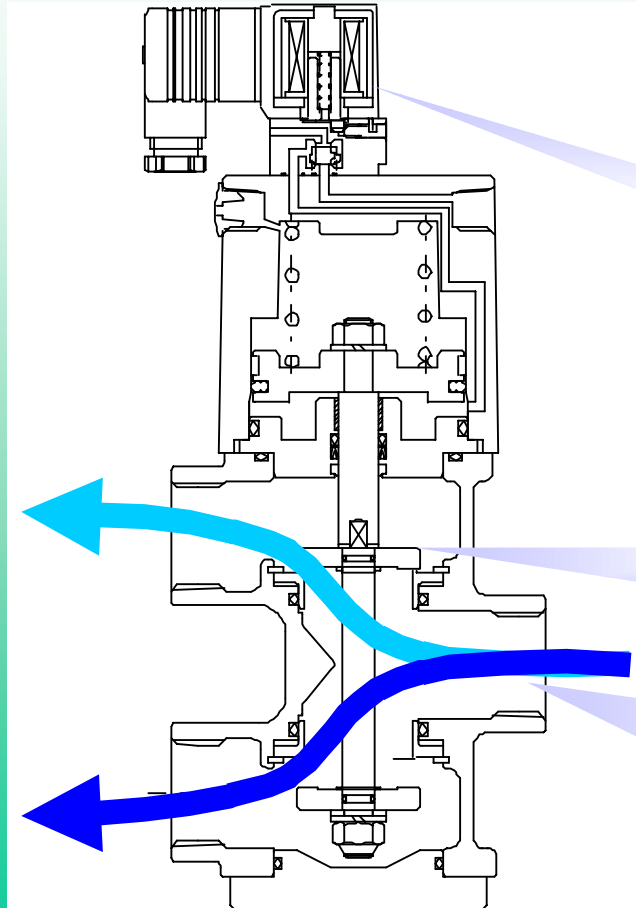
Better seal performance. Durable against foreign matter like machining chips.

M/C

Tank

Features(Low pressure drop)

Low pressure drop *CV2E/CVS2E(2 port)*
 CV3E/CVS3E(3 port)



Energy saving
 Power consumption 50% less compared to conventional type.

Special Metal Seal Structure
 Durable sealing structure against foreign matter like machining chips.

Ideal internal shape to search for pressure drop "0".
 Pressure drop 50% less.

Application(Low pressure drop)

Environment friendly low pressure drop type

Low pressure drop is realized due to ideal valve flow passage.

CVS3E series
CVSZE

Replace 2 pieces of 2 port valves with a 3 port valve. (Discharge cycle change)

Improvement of coolant system. (Pipe, Nozzle, valve)

Smaller coolant pump

Energy saving · Reduction of environmental load · Cost reduction
(Reduction of CO₂ emission)

Specifications

Item	Low pressure drop		2 port valve					3 port valve		
	2 port valve	3 port valve	Low pressure		Medium pressure		High pressure	Medium pressure	High pressure	
Working fluid	COOLANT									
Working pressure range	MPa	0 ~ 0.5	0 ~ 0.3	0 ~ 0.5	0 ~ 1.0	0 ~ 1.6	0 ~ 3.0	0 ~ 7.0	0 ~ 3.5	0 ~ 7.0
Pressure Limit	MPa	2.0			6.0		14	7	14	
Fluid temperature	-10 ~ 60									
Valve seat leakage	cm ³ /min	below 20								
Orifice	mm	19/24	22.8/29.3	10 ~ 79	7 ~ 57	10 ~ 19	8 ~ 17	6.5 ~ 13	4.5 ~ 26	4.5 ~ 9
Cv factor		11/17	12.5/20	1.8 ~ 100	1.3 ~ 73	2.8 ~ 8	1.8 ~ 7.5	1.6 ~ 6.7	1.0 ~ 25	1.0 ~ 3.8