

Air operated 3-port valve for low pressure (coolant control)
(coolant valve)

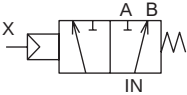
CV3E/CVS3E Series

● Port size: Rc3/4, Rc1

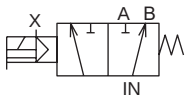


JIS symbol

● Air operated (CV3E)



● With solenoid valve (CVS3E)



Common specifications

Item	CV3E/CVS3E	
	20A	25A
Actuation	Directional (COM port pressurization only)	
Working fluid	Coolant	
Fluid viscosity mm ² /s	500 or less	
Working pressure MPa	0 to 0.3	
Proof pressure (water pressure) MPa	2.0	
Fluid temperature °C	-10 to 60	
Ambient temperature °C	-10 to 60	
Valve seat leakage cm ³ /min	20 or less	
Orifice size mm	22.8 or equiv.	29.3 or equiv.
Cv	12.5	20
Port size	Rc3/4	Rc1
Weight kg	2.2 (2.1) *1	3.9 (3.8) *1
Pilot fluid	Air	
Pilot pressure MPa	0.25 to 0.5	
Pilot port size	Rc1/4	
Mounting orientation	Unrestricted	

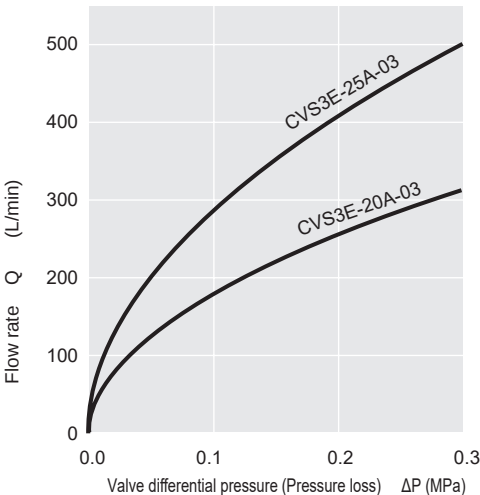
*1: Weights in () are for air operated (CV3E).

Electrical specification (with solenoid valve/common specifications)

Rated voltage		100 VAC (50/60 Hz) / 110 VAC (60 Hz), 200 VAC (50/60 Hz) / 220 VAC (60 Hz), 24 VDC
Apparent power VA	When holding	3.6 (50Hz), 2.8 (60Hz)
	When starting	11 (50Hz), 9 (60Hz)
Power consumption W	AC	1.9 (50Hz), 1.5 (60Hz)
	DC	2.0
Thermal class		Class 130 (B)
Degree of protection (IEC standards 529)	With DIN terminal box (Pg9)	IPX5
	With T type terminal box (G1/2)	IPX6

*2: The voltage fluctuation range must be within ±10% of the rated voltage.

Flow Rate Characteristics



Note: Calculated value at specific gravity 1.

How to order

● Air operated

CV3E - **20A** - **03** - **B**

● With solenoid valve

CVS3E - **25A** - **03** - **0** **2H** **S** - **2**

Model No.	
Air operated (3-port)	CV3E
With solenoid valve (3-port)	CVS3E

A Port size

Working pressure
0 to 0.3 MPa

B Packing seal/gasket material

C Coil

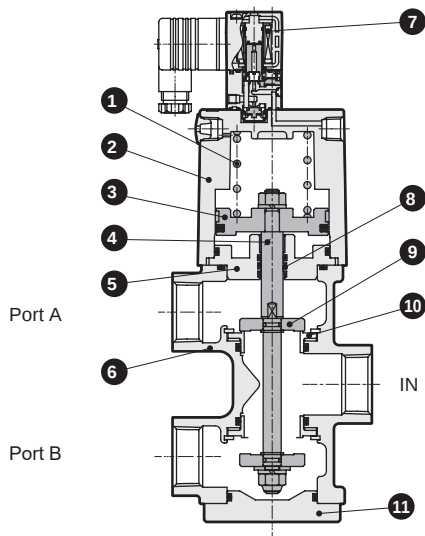
D Other options

E Rated voltage

		Model No.		
Code	Description	CV3E	CVS3E	
A Port size				
20A	Rc3/4	●	●	
25A	Rc1	●	●	
B Packing seal/gasket material				
0	Standard	Nitrile rubber	●	●
B	Option	Fluoro rubber	●	●
C Coil				
2G	With DIN terminal box (Pg9)			●
2H	DIN terminal box with lamp (Pg9)			●
3T	With T type terminal box (G1/2)			●
3R	T type terminal box with lamp (G1/2)			●
D Other options				
Blank	Standard	No option		●
S	Option	With surge suppressor		●
E Rated voltage				
1	100 VAC(50/60 Hz), 110 VAC(60 Hz)			●
2	200 VAC(50/60 Hz), 220 VAC(60 Hz)			●
3	24 VDC			●

The combinations indicated with ● in the above table are available.

Internal structure and parts list

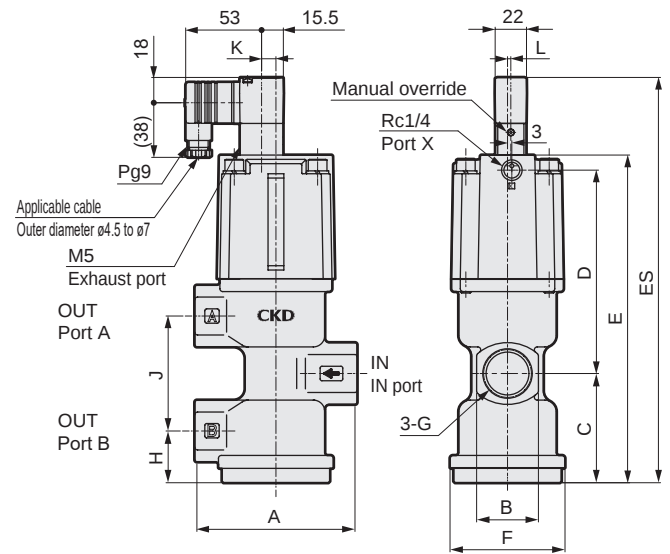


Part No.	Part name	Material	
1	Spring	SWP	Piano wire
2	Cylinder guard	ADC12	Aluminum die-casting
3	Piston	A2017	Aluminum
4	Piston rod	SUS304	Stainless steel
5	Adapter	SUS303	Stainless steel
6	Body	FCD450	Cast iron (plating)
7	Pilot solenoid valve	-	-
8	Rod packing	NBR (FKM)	Nitrile rubber (fluoro rubber)
9	Main valving element	SUS440	Stainless steel
10	Valve seat	SUS440	Stainless steel
11	Bottom cap	SUS303	Stainless steel

Dimensions



● With DIN terminal box (Pg9)



Part No.	A	B	C	D	E	ES	F	G	H	J	K	L
CV(S)3E-20A	90	35	64	112	186	240	65	Rc3/4	31.5	65	4	1.5
CV(S)3E-25A	110	43	76	141.5	233	282	80	Rc1	36	80	14	2.3

*1: Dimension E indicates the total height of the air operated type, and dimension ES indicates that of the solenoid valve mounted type.

● With T type terminal box (G1/2)

