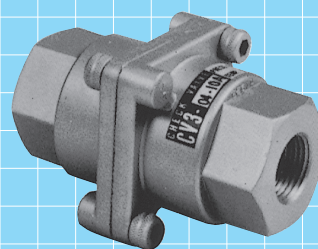
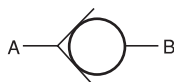


# CHECK VALVES

CV3·CV1 Standard type  $R_c \frac{1}{4} \sim 2$

The check valve permits only one-way air flow and prevents reverse flow. Konan's check valves are designed for low cracking pressure and very low resistance to air.

JIS Symbol



## Model Code

When ordering, specify the model as follows:

### Standard type

$R_c \frac{1}{4} \sim \frac{1}{2}$

CV3 **1** - 04 - **2** - **4**  
 • Corrosion-resistant • Port size • Operating temperature range

$R_c \frac{3}{4}$

CV3 **1** - 06 - 20A - **4**  
 • Corrosion-resistant • Operating temperature range

$R_c 1$

CV3 **1** - 08 - 25A - **4**  
 • Corrosion-resistant • Operating temperature range

$R_c 1 \frac{1}{4} \sim 2$

CV1 - **3**  
 • Port size

#### 1 Corrosion-resistant

- Portions that are exposed to outside weather conditions are corrosion-resistant coating and the exposed bolts, nuts and brackets are stainless steel.

Standard	No entry
Corrosion-resistant type	S

#### 2 Port size

$R_c \frac{1}{4}$	8A
$R_c \frac{3}{8}$	10A
$R_c \frac{1}{2}$	15A

#### 3 Port size

$R_c 1 \frac{1}{4}$	32A
$R_c 1 \frac{1}{2}$	40A
$R_c 2$	50A

#### 4 Operating temperature range

General purpose	-20 ~ 60°C	No entry
Heat-resistant	5 ~ 100°C	HT
Freeze-resistant	-40 ~ 45°C	LT

- For corrosion, freeze resistant type, allow some margin for delivery.
- In operating temperatures of 5°C or less, provide adequate measures against freezing.

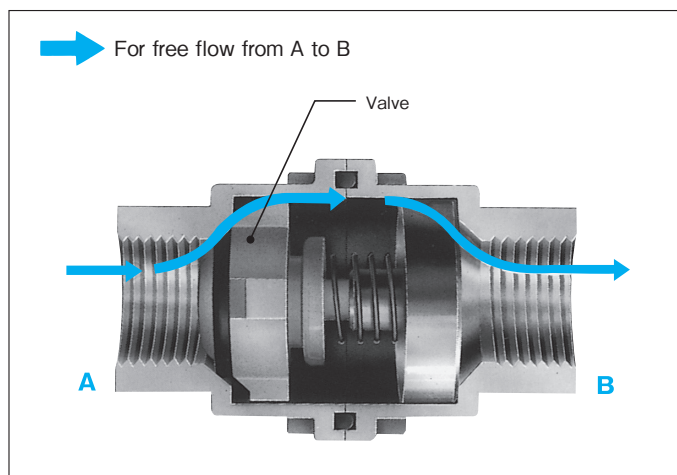
## Specifications

Model code	CV3-04			CV3-06	CV3-08	CV1		
Port size	8A	10A	15A	20A	25A	32A	40A	50A
	Rc1/4	Rc3/8	Rc1/2	Rc3/4	Rc1	Rc1 1/4	Rc1 1/2	Rc2
Effective sectional area	40mm <sup>2</sup>	63mm <sup>2</sup>	94mm <sup>2</sup>	155mm <sup>2</sup>	210mm <sup>2</sup>	528mm <sup>2</sup>		1,007mm <sup>2</sup>
Operating pressure	0.05 ~ 0.7MPa					0.1 ~ 0.7MPa		
Cracking pressure	0.01MPa or less							
Proof pressure	1.05MPa							
Operating temperature	See Model Code section.					5 ~ 60℃		
Mass	0.13kg			0.27kg	0.45kg	1.0kg		2.2kg

- For specifications other than those listed above, please contact us.
- In the event of use in high dry air over dew point - 40°C, please contact us

## Operation

### Standard type CV3 — 04 — 15A



#### ● For flow from ports A to B (free flow)

When air entering at port A exceeds the cracking pressure of the valve, the air forces the valve open and flows to port B.

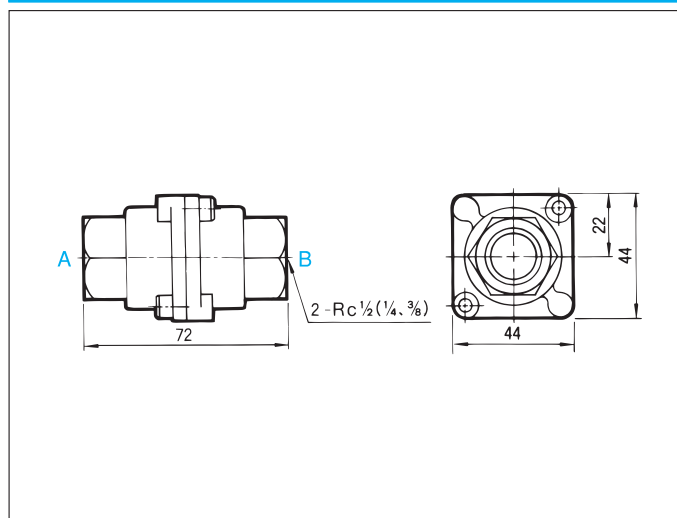
#### ● For flow from ports B to A (controlled flow)

The air pressure, together with the spring force, moves the valve in the closing direction, and the air entering port B is blocked.

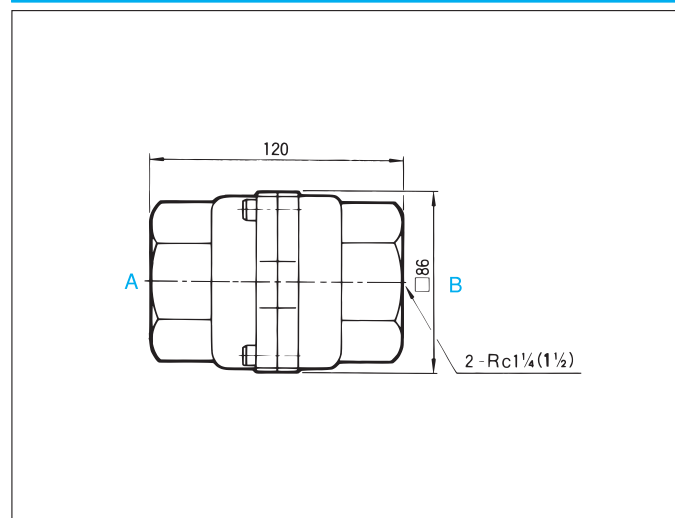
## Outside Dimensions

### Standard type

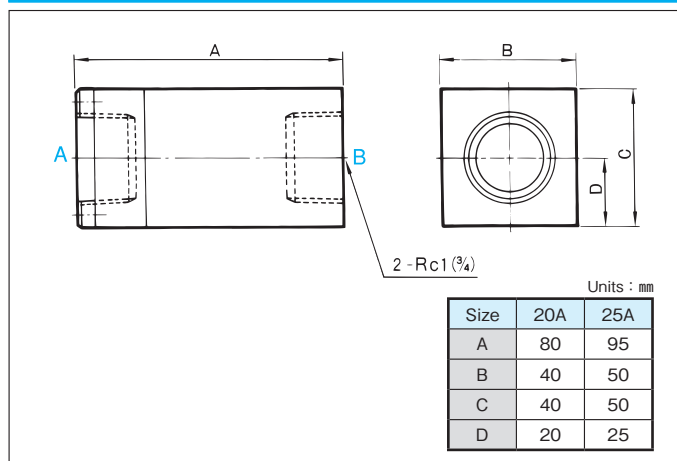
#### CV3-04-8A · 10A · 15A



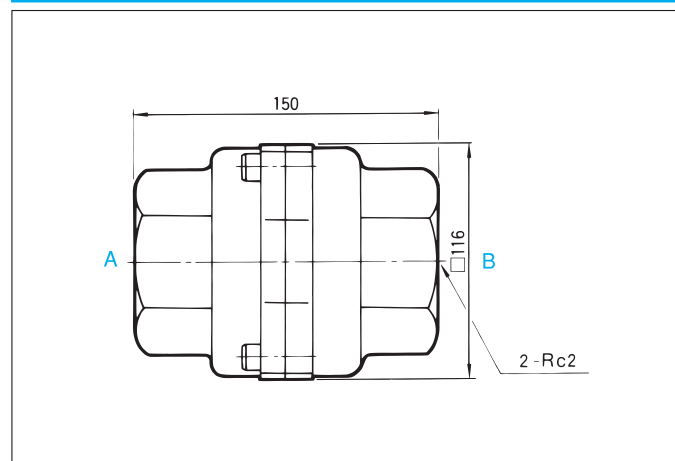
#### CV1-32A · 40A



#### CV3-06-20A CV3-08-25A



#### CV1-50A



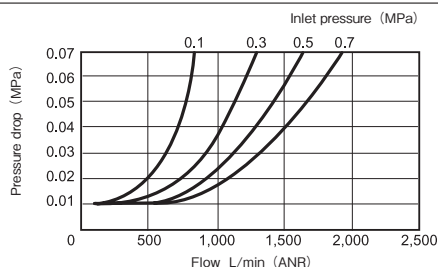


## Performance Tables

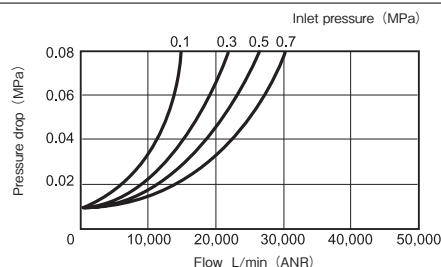
### Flow characteristics graphs (from ports A to B)

#### Standard type

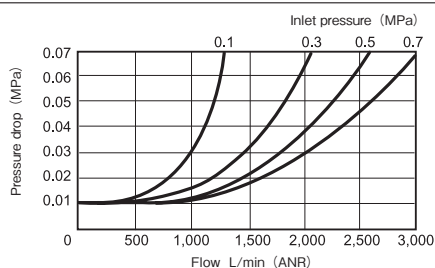
##### CV3-04-8A



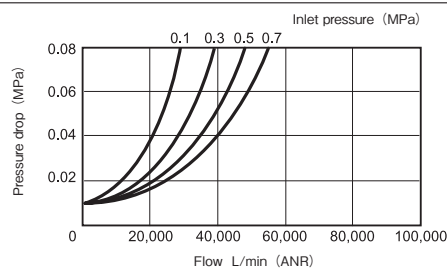
##### CV1-32A • 40A



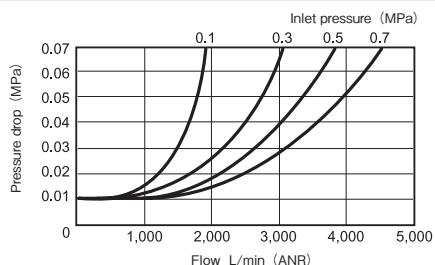
##### CV3-04-10A



##### CV1-50A



##### CV3-04-15A

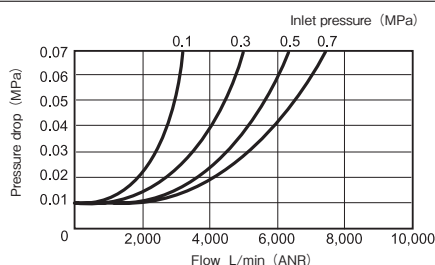


## Operating Instructions

### 1 Varying pressures

- Note that for a low operating pressure, the flow is very small, and that for fluids that are subject to great pressure fluctuations, the valve may vibrate noticeably.

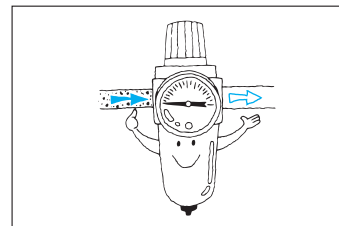
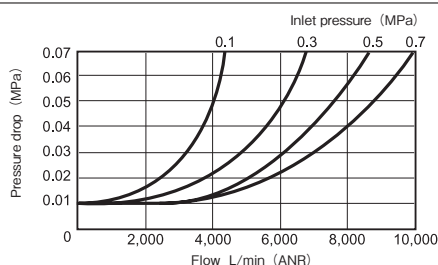
##### CV3-06-20A



### 2 Fluid

- Dirt, wastes, etc. in the fluid may cause malfunctioning. Use only with clean fluids.

##### CV3-08-25A

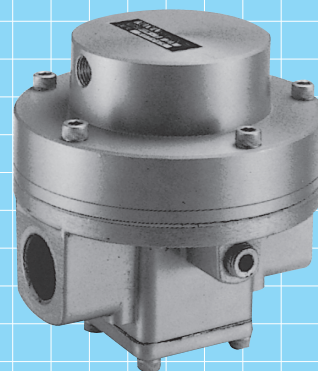
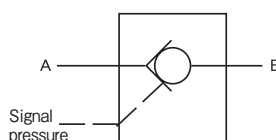


# Pilot-Operated CHECK VALVES

**CVP2** Standard type  $Rc \frac{3}{8} \sim 1$

This is a check valve with a check release (reverse flow) mechanism that is operated by a signal pressure.

JIS Symbol



## Model Code

When ordering, specify the model as follows:

### Standard type

Rc 3/8 ~ 1/2

**CVP2 - 04 -** 1

• Port size

Rc 3/4 ~ 1

**CVP2 - 08 -** 2

• Port size

**1** Port size

Rc3/8	10A
Rc1/2	15A

**2** Port size

Rc3/4	20A
Rc1	25A

## Specifications

Model code	CVP2-04		CVP2-08	
Port size	10A	15A	20A	25A
	Rc3/8	Rc1/2	Rc3/4	Rc1
Effective sectional area	30mm <sup>2</sup>	49mm <sup>2</sup>	83mm <sup>2</sup>	137mm <sup>2</sup>
Operating pressure	0.1 ~ 0.7MPa			
Signal pressure	0.12 ~ 0.7MPa Signal pressure ≥ Pressure of the fluid × 1/2			
Cracking pressure	0.01MPa or less			
Proof pressure	1.05MPa			
Operating temperature	-20 ~ 60°C (For use below 5°C, provide adequate measures against freezing.)			
Mass	1.4kg		2.9kg	

• For specifications other than those listed above, please contact us.

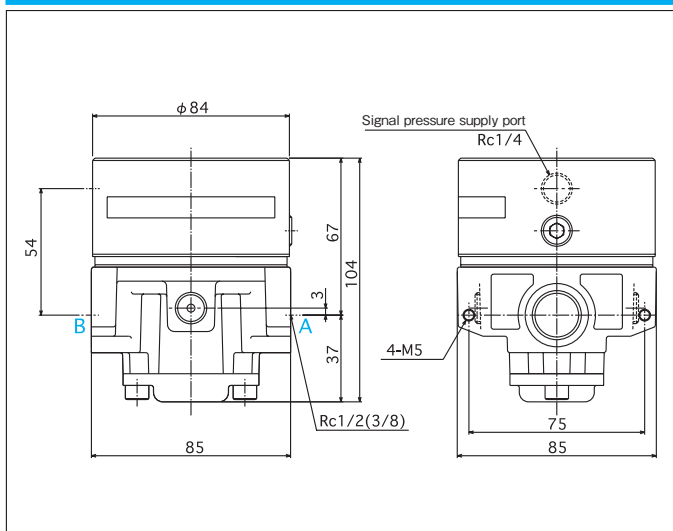
• In the event of use in high dry air over dew point - 40°C, please contact us.



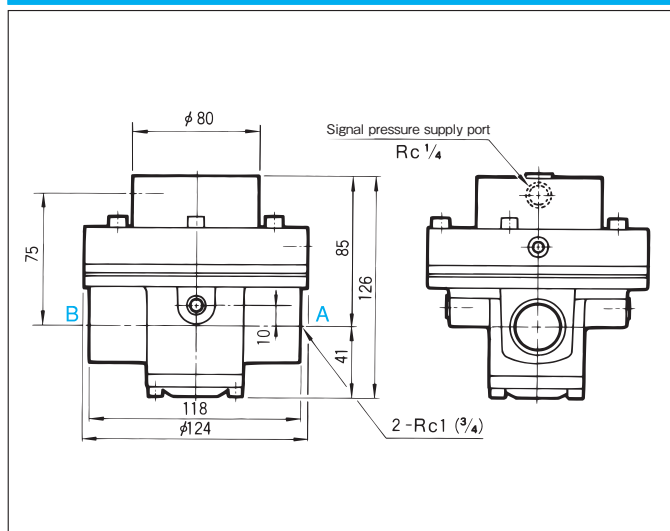
## Outside Dimensions

### Standard type

#### CVP2-04-10A • 15A



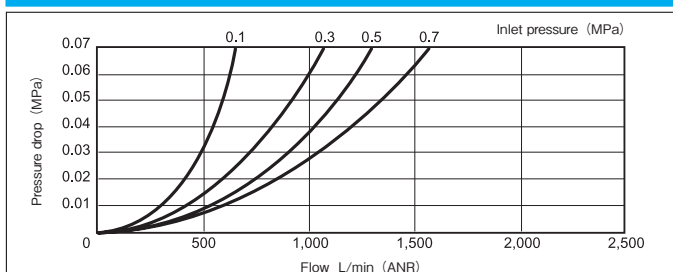
#### CVP2-08-20A • 25A



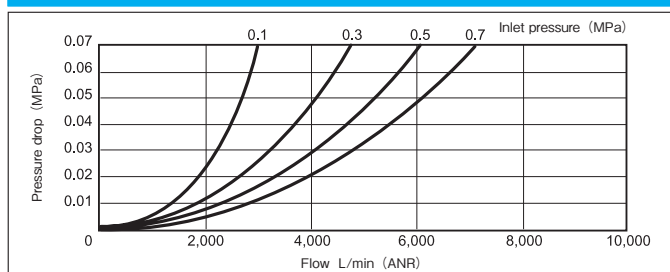
## Performance Tables

### Flow characteristics graphs (from ports A to B)

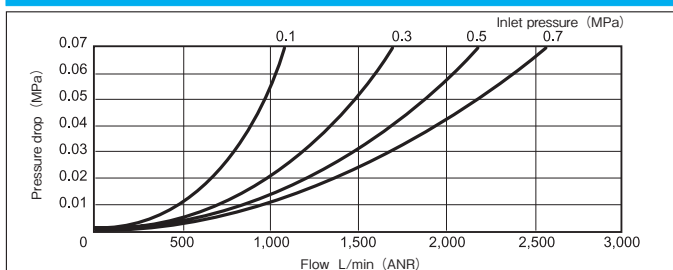
#### CVP2-04-10A



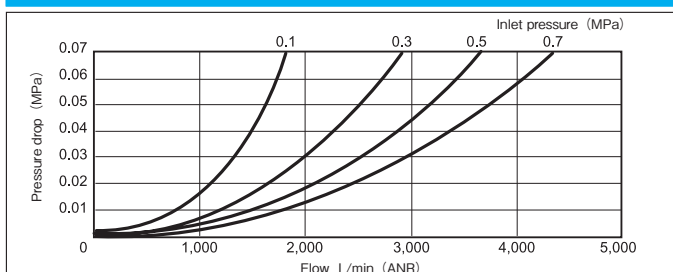
#### CVP2-08-25A



#### CVP2-04-15A



#### CVP2-08-20A



## Operating Instructions

### 1 Varying pressures

- Note that for a low operating pressure, the flow is very small, and that for fluids that are subject to great pressure fluctuations, the valve may vibrate noticeably.

### 2 Fluid

- Dirt, wastes, etc. in the fluid may cause malfunctioning. Use only with clean fluids.

# SHUTTLE VALVES

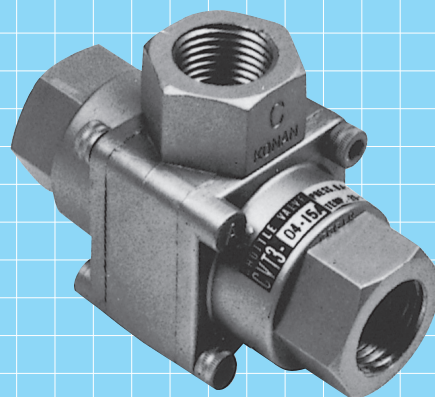
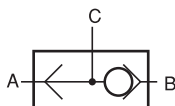
## CVT3

Standard type

Rc  $\frac{1}{4}$  ~  $1\frac{1}{2}$

A shuttle valve has two supply ports and one discharge port. When air pressure is admitted through one supply port, the other supply port is closed and the air pressure is transferred to the discharge port.

### JIS Symbol



## Model Code

When ordering, specify the model as follows:

### Standard type

Rc  $\frac{1}{4}$  ~  $\frac{1}{2}$

CVT3 **1** -04- **2** - **4**  
 • Corrosion-resistant • Port size • Operating temperature range

Rc  $\frac{3}{4}$

CVT3 **1** -06- 20A - **4**  
 • Corrosion-resistant • Operating temperature range

Rc 1

CVT3 **1** -08- 25A - **4**  
 • Corrosion-resistant • Operating temperature range

Rc  $1\frac{1}{4}$  ~  $1\frac{1}{2}$

CVT3 **1** -14- **3**  
 • Corrosion-resistant • Port size

#### ① Corrosion-resistant

- Portions that are exposed to outside weather conditions are corrosion-resistant coating and the exposed bolts, nuts and brackets are stainless steel.

Standard	No entry
Corrosion-resistant type	S

#### ② Port size

Rc $\frac{1}{4}$	8A
Rc $\frac{3}{8}$	10A
Rc $\frac{1}{2}$	15A

#### ③ Port size

Rc $1\frac{1}{4}$	32A
Rc $1\frac{1}{2}$	40A

#### ④ Operating temperature range

General purpose	-20 ~ 60°C	No entry
Heat-resistant	5 ~ 100°C	HT
Freeze-resistant	-40 ~ 45°C	LT

- For corrosion, freeze resistant type, allow some margin for delivery.
- In operating temperatures of 5°C or less, provide adequate measures against freezing.

## Specifications

Model code	CVT3-04			CVT3-06	CVT3-08	CVT3-14	
Port size	8A	10A	15A	20A	25A	32A	40A
	Rc $\frac{1}{4}$	Rc $\frac{3}{8}$	Rc $\frac{1}{2}$	Rc $\frac{3}{4}$	Rc 1	Rc $1\frac{1}{4}$	Rc $1\frac{1}{2}$
Effective sectional area	44mm <sup>2</sup>	65mm <sup>2</sup>	95mm <sup>2</sup>	116mm <sup>2</sup>	185mm <sup>2</sup>	350mm <sup>2</sup>	400mm <sup>2</sup>
Operating pressure	0.04 ~ 0.7MPa						
Proof pressure	1.05MPa						
Operating pressure differential	0.01MPa or more					0.02MPa or less	
Operating temperature	See Model Code section.					-20 ~ 60°C	
Mass	0.22kg			0.31kg	0.52kg	1.5kg	

- For specifications other than those listed above, please contact us.
- In the event of use in high dry air over dew point - 40°C, please contact us.

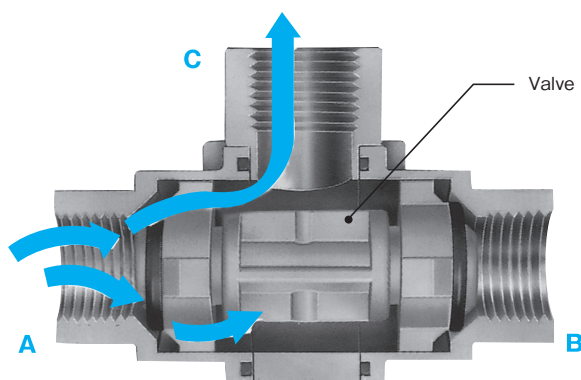


# Shuttle Valves

## Operation

### Standard type CVT3 — 04 — 15A

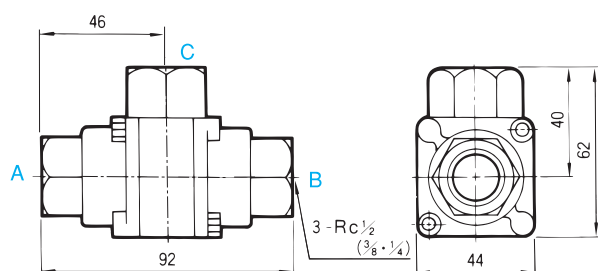
➔ For a A to C flow



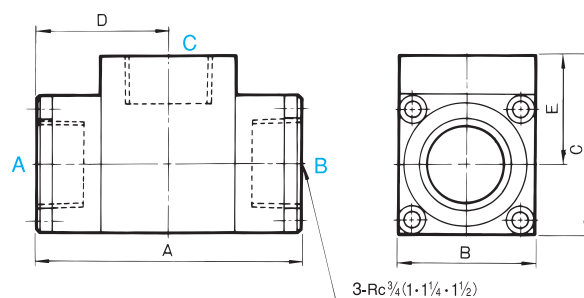
- 1 When air enters port A, it moves the valve and closes port B and then flows to port C.
- 2 When air enters port B, the air pressure from port B moves the valve and closes port A and then flows to port C.  
Be sure to place ports A and B in a discharge condition when air pressure is furnished via ports B and A, respectively.

## Outside Dimensions

### CVT3-04-8A • 10A • 15A



### CVT3-06-20A CVT3-08-25A CVT3-14-32A • 40A



Units : mm

Size	20A	25A	32A	40A
A	80	100	140	140
B	40	50	70	70
C	55	65	85	85
D	40	50	70	70
E	35	40	50	50

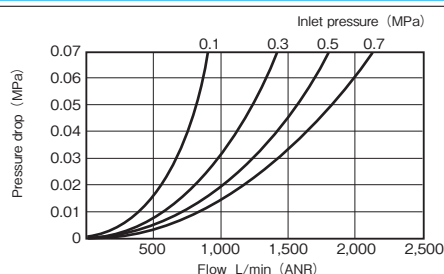
## Performance Tables

● Performance more than Rc1\_1/4, contact us.

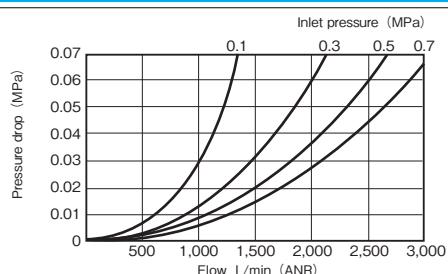
### Flow characteristics graphs

#### Standard type

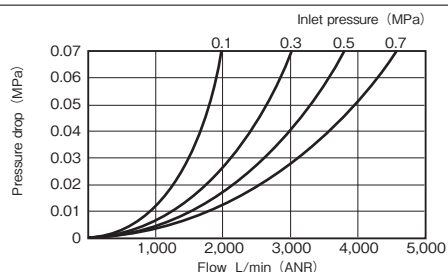
##### CVT3-04-8A



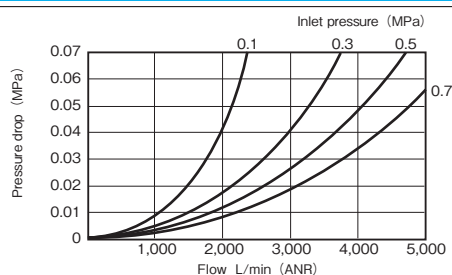
##### CVT3-04-10A



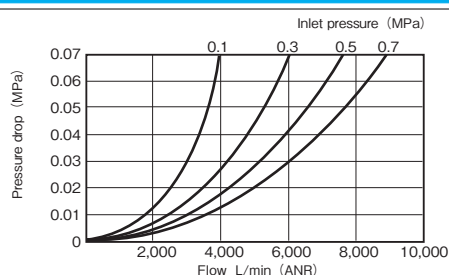
##### CVT3-04-15A



##### CVT3-06-20A

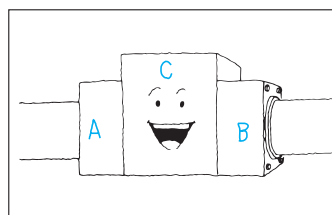


##### CVT3-08-25A



## Operating Instructions

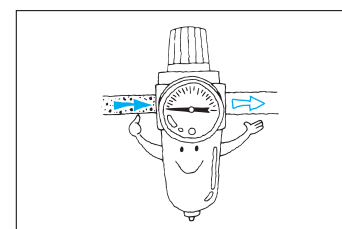
### 1 Varying pressures



- Take care that ports A and B are level.

### 2 Fluid

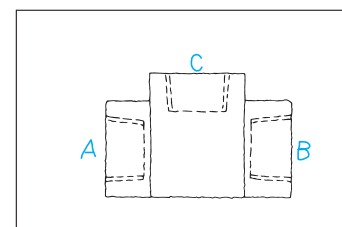
- Use only with clean fluids, as dirt, wastes, etc. in the fluid may cause malfunctioning.



### 3 Piping

- Take care not to confuse the ports :

- A..... Supply port
- B..... Supply port
- C..... Discharge port





# QUICK-RELEASE VALVES

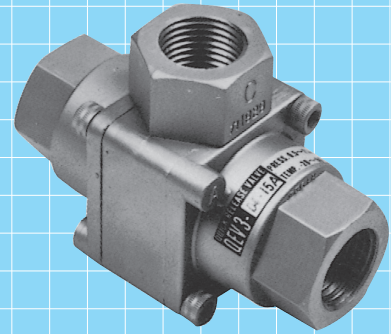
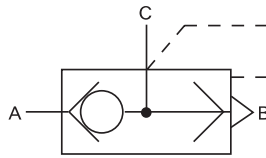
QEV3・QEV3S

Standard type

RC 1/4 ~ 1

The quick-release valve is installed between directional control valves and actuators such as cylinders, and is operated by the discharge action of the directional control valve. It is used to further increase the discharge volume of the actuator for greater operating speed (up to 1.4 times) .

JIS Symbol



## Model Code

When ordering, specify the model as follows:

### Standard type

QEV3 **1** -04- **2**

• Corrosion-resistant

• Port size

QEV3 **1** -06-20A- **3**

• Corrosion-resistant

• Operating temperature range

QEV3 **1** -08-25A- **3**

• Corrosion-resistant

• Operating temperature range

#### 1 Corrosion-resistant

- Portions that are exposed to outside weather conditions are corrosion-resistant coating and the exposed bolts, nuts and brackets are stainless steel.

Standard	No entry
Corrosion-resistant type	S

#### 2 Port size

Rc 1/4	8A
Rc 3/8	10A
Rc 1/2	15A

#### 3 Operating temperature range

General purpose	-20 ~ 60°C	No entry
Heat-resistant	5 ~ 100°C	HT
Freeze-resistant	-40 ~ 45°C	LT

- For corrosion, freeze resistant type, allow some margin for delivery.
- In operating temperatures of 5°C or less, provide adequate measures against freezing.

## Specifications

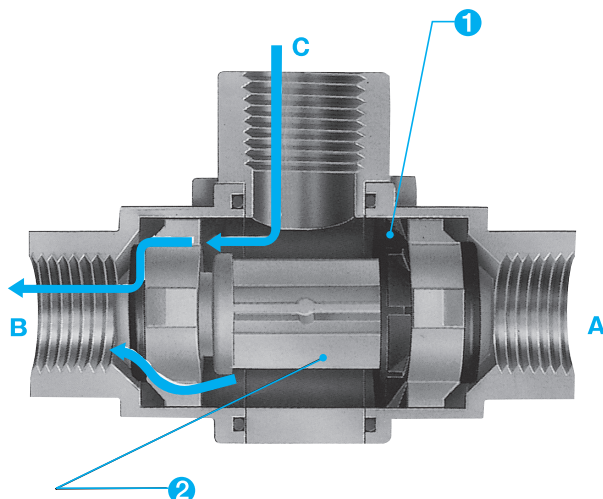
Model code		QEV3-04			QEV3-06	QEV3-08
Port size		8A	10A	15A	20A	25A
		Rc1/4	Rc3/8	Rc1/2	Rc3/4	Rc1
Effective sectional area	A → C	36mm <sup>2</sup>	59mm <sup>2</sup>	72mm <sup>2</sup>	133mm <sup>2</sup>	193mm <sup>2</sup>
	C → B	57mm <sup>2</sup>	81mm <sup>2</sup>	95mm <sup>2</sup>	150mm <sup>2</sup>	224mm <sup>2</sup>
Operating pressure		0.05 ~ 0.7MPa				
Proof pressure		1.05MPa				
Operating temperature		-20 ~ 60°C			See Model Code section.	
Mass		0.22kg			0.4kg	0.7kg

- For specifications other than those listed above, please contact us.
- In the event of use in high dry air over dew point - 40°C, please contact us.

## Operation

### Standard type QEV3 — 04 — 15A

➔ For a C-to-B flow



#### 1 Back packing

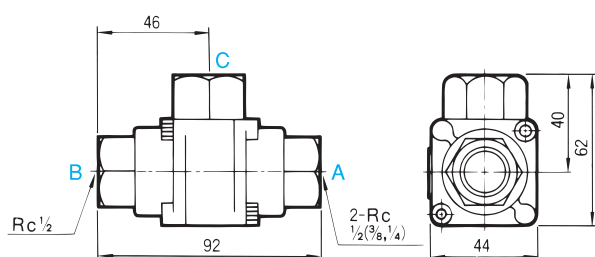
Air entering port A forces the back packing open and flows to port C. When the air from port A is discharged, air from port C closes the back packing and flows to port B.

#### 2 Valve

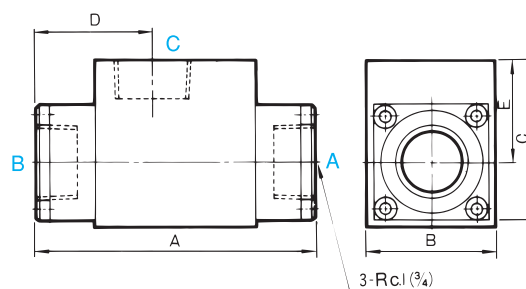
With an air pressure from port A, the valve is moved, closing port B, and the air flows to port C. When an pressure from port A is discharged through a directional control valve, the air pressure from port C pushes the back packing and moves the valve to port A. As a result, the air pressure from port C is quickly discharged through port B.

## Outside Dimensions

QEV3-04-8A • 10A • 15A



QEV3-06-20A  
QEV3-08-25A



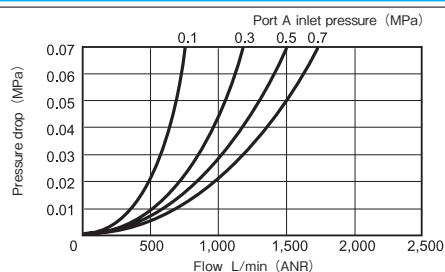
Units : mm

Size	20A	25A
A	100	120
B	46	56
C	60	70
D	40	50
E	37	42

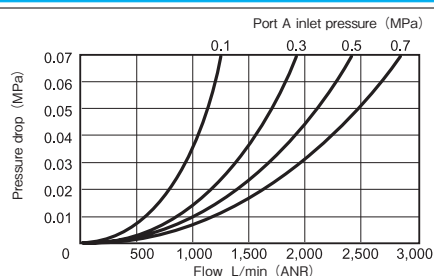
## Performance Tables

### Flow characteristics graphs (from ports A to C)

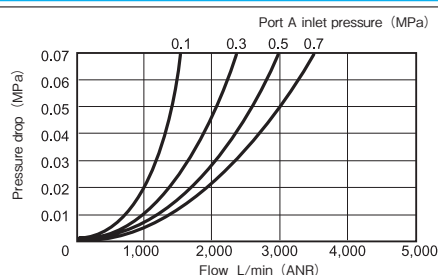
#### QEV3-04-8A



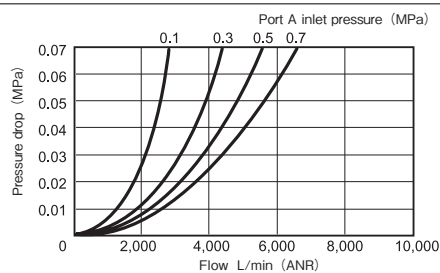
#### QEV3-04-10A



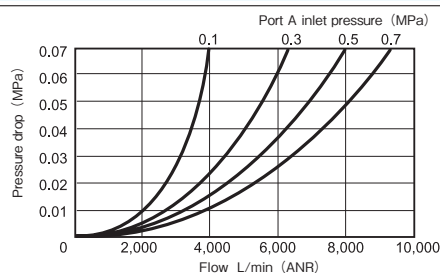
#### QEV3-04-15A



#### QEV3-06-20A

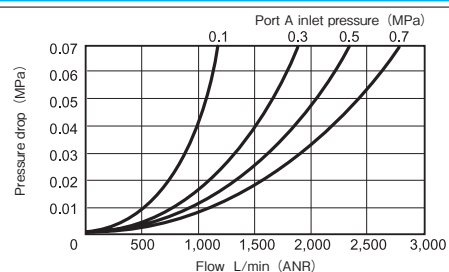


#### QEV3-08-25A

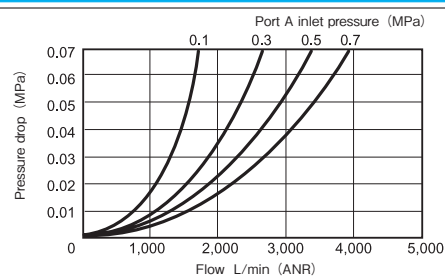


### Flow characteristics graphs (from ports C to B)

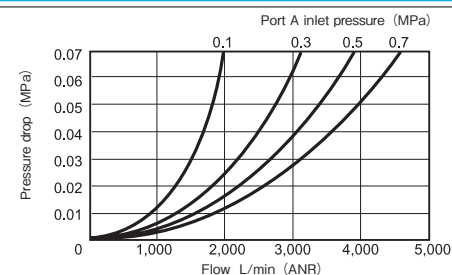
#### QEV3-04-8A



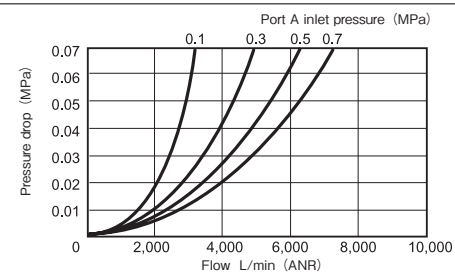
#### QEV3-04-10A



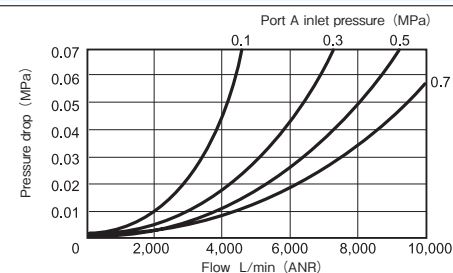
#### QEV3-04-15A



#### QEV3-06-20A



#### QEV3-08-25A



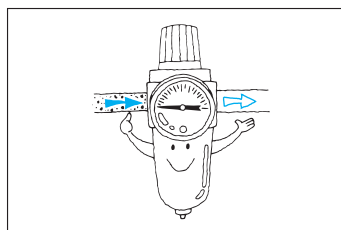
## Operating Instructions

### 1 Installation

- Install as near to the actuator as possible.
- Use piping of as large a diameter as possible for the discharge pipe of the actuator.

### 2 Fluid

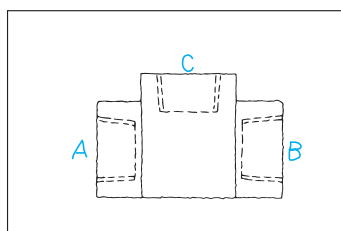
- Use only with clean fluids as dirt, wastes, etc. in the fluid may cause malfunctioning.



### 3 Piping

- Take care not to confuse the piping ports :

A..... For supply  
 B..... For discharge  
 C..... For actuator



# SAFETY BLOCK VALVES

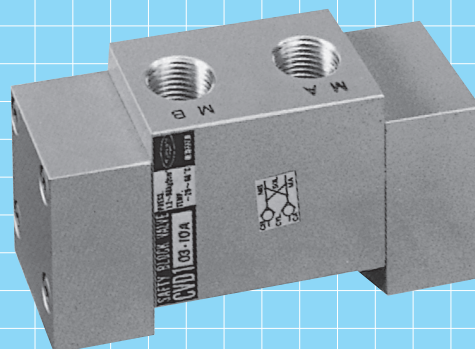
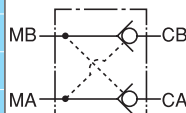
**CVD1**

Standard type

Rc 1/4 ~ 1

This is a safety line component that installed between three-position directional control valves and cylinders. It is used to ensure that the cylinder is held in the mid-position when stopped at the middle of its stroke. It protects equipments against accidents that may result from the cylinder unexpectedly moving from its middle stopping position.

JIS Symbol



## Model Code

When ordering,specify the model as follows:

### Standard type

Rc 1/4 ~ 3/8

**CVD1-03** – **1**

● Port size

Rc 3/8 ~ 1/2

**CVD1-04** – **2**

● Port size

Rc 3/4 ~ 1

**CVD1-08** – **3**

● Port size

**1** Port size

Rc 1/4	8A
Rc 3/8	10A

**2** Port size

Rc 3/8	10A
Rc 1/2	15A

**3** Port size

Rc 3/4	20A
Rc1	25A

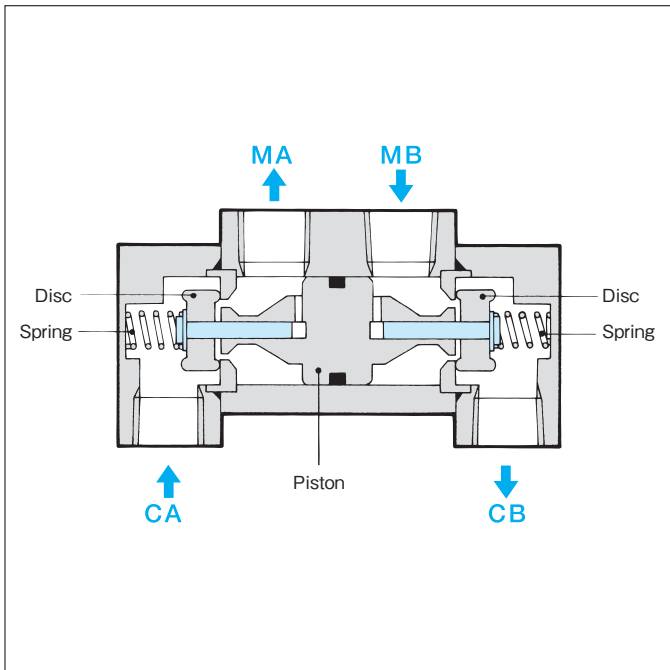
## Specifications

Model code	CVD1-03		CVD1-04		CVD1-08	
Port size	8A	10A	10A	15A	20A	25A
	Rc1/4	Rc3/8	Rc3/8	Rc1/2	Rc3/4	Rc1
Effective sectional area	30mm <sup>2</sup>	40mm <sup>2</sup>	70mm <sup>2</sup>	80mm <sup>2</sup>	200mm <sup>2</sup>	220mm <sup>2</sup>
Operating pressure	0.12 ~ 1.0MPa					
Cracking pressure	0.05MPa					
Proof pressure	1.5MPa					
Frequency of operations	2 cycle/s Max.					
Operating temperature	-20 ~ 60°C (For use below 5°C ,provide adequate measures against freezing.)					
Mass	0.4kg		0.9kg		2.0kg	

● For specifications other than those listed above,please contact us.

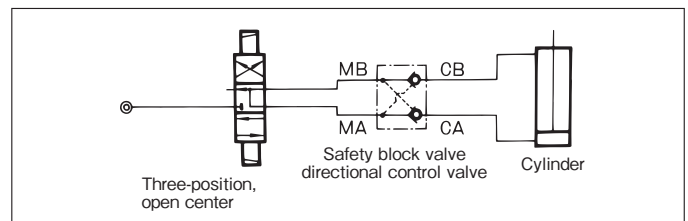
● In the event of use in high bry air over dew point — 40°C ,please contact us.

## Operation



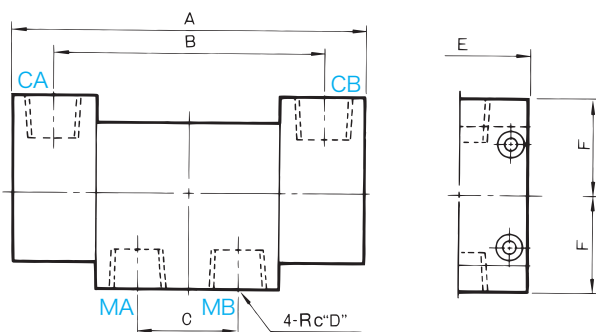
When a three-position, open-center type directional control valve, installed upstream of the safety block valve, is shifted to furnish an air pressure through port MA or MB, the disc and piston of the valve are moved by the air pressure to the left or to the right against the spring force. Ports MA and CA, or ports MB and CB are connected, and the cylinder is raised or lowered. When the directional control valve is shifted to its neutral position, the air pressure on the port MA or MB side is discharged, the disc is forced back by the spring to close the opening. With the poppet type, the discs prevent air leakage completely, and the cylinder is held at a given middle position for long periods.

## Circuit Example



## Outside Dimensions

CVD1-03-8A • 10A  
CVD1-04-10A • 15A  
CVD1-08-20A • 25A



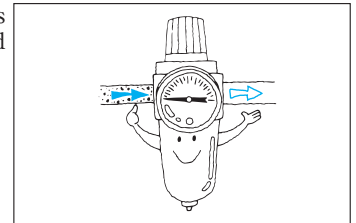
Units : mm

Model code	D	A	B	C	E	F
CVD1-03	1/4	110	82	32	36	25
	3/8					
CVD1-04	3/8	132	96	36	50	35
	1/2					
CVD1-08	3/4	202	152	60	60	45
	1					

## Operating Instructions

### 1 Fluid

- Use with clean fluids only as dirt, wastes, etc. in the fluid may cause malfunctioning.



### 2 Piping

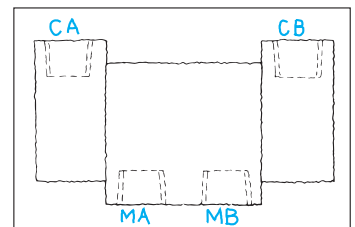
- Take care not to confuse the piping ports.

Port **CA** and **CA**

..... To cylinder

Port **MA** and **MB**

..... To directional control valve



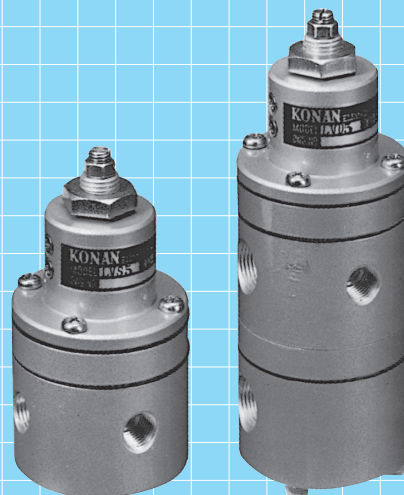
# LOCKUP VALVES

**LVS(D)5** Standard type RC 1/4 · 3/8

This valve responds to abnormal drops in the supply air pressure in the pneumatic line, ensuring that the set pressure for the driven unit is maintained until the supply pressure returns to normal. It also locks the actuator to prevent unexpected movements if the supply pressure varies.

## JIS Symbol

See Model Code section



## Model Code

When ordering, specify the model as follows:

## Standard type

Rc 1/4 · 3/8

**LV** 1 **5** 2 - **02** - 3 - 4

• Number of circuits • Corrosion-resistant • Port size • Operating temperature range

1 Number of circuits		
One-circuit		S
Two-circuit		D

2 Corrosion-resistant	
<ul style="list-style-type: none"> <li>Portions that are exposed to outside weather conditions are corrosion-resistant coating and the exposed bolts, nuts and brackets are stainless steel.</li> </ul>	
Standard	No entry
Corrosion-resistant type	S

3 Port size	
Rc 1/4	8A
Rc 3/8	10A

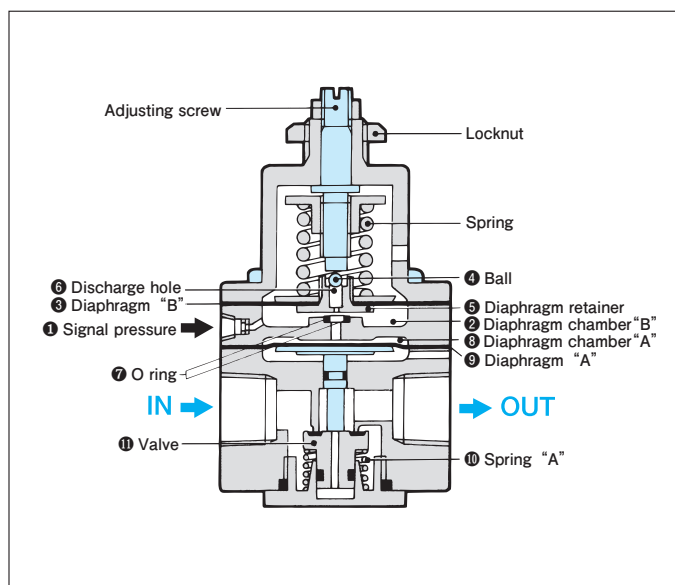
4 Operating temperature range	
General purpose : - 20 ~ 60°C	No entry
Heat-resistant : 5 ~ 100°C	HT

## Specifications

Model code		LVS5-02		LVD5-02	
Number of circuits		1		2	
Port size		8A	10A	8A	10A
		Rc1/4	Rc3/8	Rc1/4	Rc3/8
Effective sectional area		17mm <sup>2</sup>	22mm <sup>2</sup>	17mm <sup>2</sup>	22mm <sup>2</sup>
Operating pressure	Signal pressure	Max. 1.0MPa			
	Supply pressure	Max. 0.7MPa			
Pressure setting		0.14 ~ 0.7MPa			
Pressure differential		0.01MPa or less			
Proof pressure		1.5MPa			
Operating temperature		See model code section. (For use below 5°C, provide adequate measures against freezing.)			
Mass		0.6kg		1.0kg	

- For specifications other than those listed above, please contact us.
- In the event of use in high dry air over dew point - 40°C, please contact us.

## Operation



Signal pressure ① enters diaphragm chamber B ② and acts on diaphragm B ③. When the signal pressure exceeds the spring force, it pushes diaphragm B upwards and causes ball ④ to close the discharge hole ⑥ in the diaphragm retainer ⑤. At the same time, the signal pressure flows between diaphragm retainer ⑤ and O ring ⑦ to diaphragm chamber A ⑧.

It acts on diaphragm A (⑨) and forces valve ⑪ open against the force of spring A (⑩), thus completing the operating circuit.

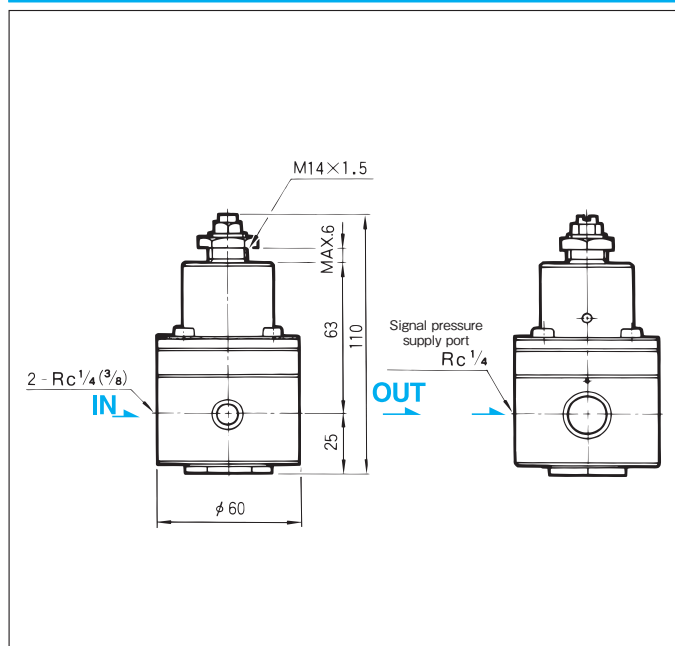
If the signal pressure drops below the spring force for any reason, diaphragm B ③ is forced down by the spring and at the same time that discharge hole ⑥ in diaphragm retainer ⑤ is opened, diaphragm chamber B is connected with diaphragm chamber A ⑧. Because of this, the signal pressure supplied to diaphragm chamber A ⑧ is discharged through discharge hole ⑥. After the signal pressure in diaphragm chamber A ⑧ has been discharged, the force of spring A ⑩ closes the valve, and the operating circuit is closed off. Thus, the Pressure in the circuit is maintained.

With the two-circuit type (LVD5-02), circuits 1 and 2 are installed in parallel to each other, and diaphragm chambers A ⑧ of each circuit are connected to each other.

## Outside Dimensions

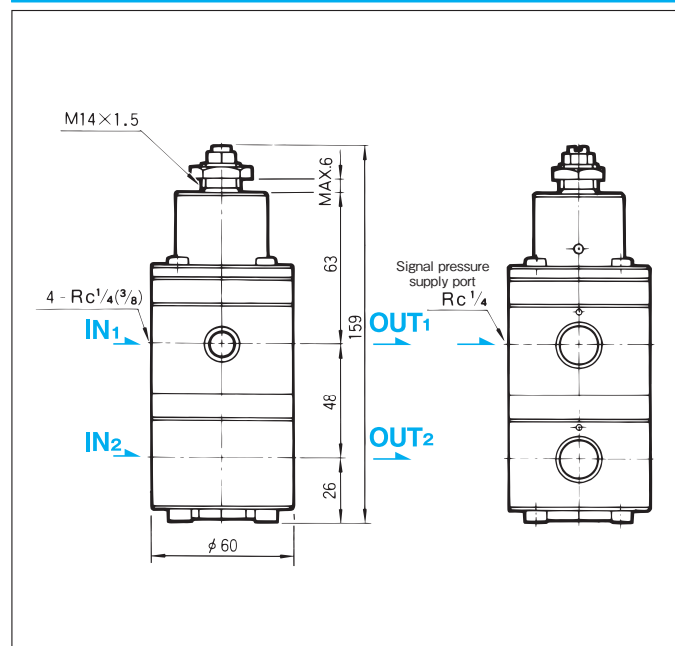
### Standard type (1 circuit)

LVS5-02-8A • 10A



### Standard type (2 circuit)

LVD5-02-8A • 10A



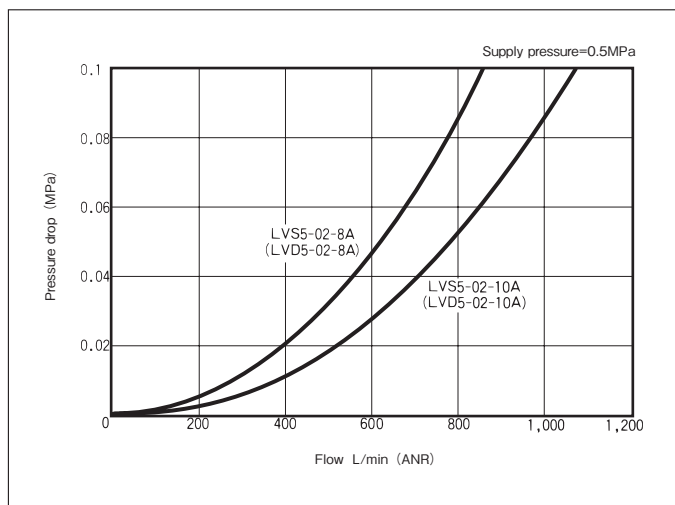




# Lockup Valves

## Performance Tables

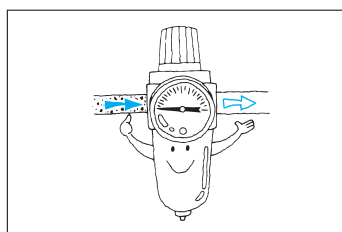
### Flow characteristics graphs (supply pressure=0.5MPa)



## Operating Instructions

### 1 Fluid

- Use only with clean fluids as dirt, waste, etc. in the fluid may cause malfunctioning.



### 2 During operation

- Lockup valves are of the bleed type. Although a small amount of air will escape from the relief opening during operation, it will not cause any problems under normal use. To prevent air escaping, apply a signal pressure more than 0.15MPa higher than the set pressure on the valve.

### 3 Pressure setting procedure

- Step1.** Apply a signal pressure equal to the set pressure. (Valve opens.)
- Step2.** Turn the adjusting screw clockwise to close the valve. This completes pressure setting. (After pressure setting is completed, a small amount of air will escape from the relief opening. However, this will not cause any problems under normal use.)
- Step3.** Increase the signal pressure. (Applying a signal pressure more than 0.05MPa higher than the set pressure will make operation more stable. To prevent air escaping, apply a signal pressure more than 0.15MPa higher than the set pressure.)

# SLOW-START VALVES

(Quick cylinder extension preventive valves)

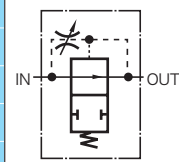
**SSV2**

Standard type

RC  $\frac{3}{8}$  ·  $\frac{1}{2}$

This valve prevents accidents that may arise from a cylinder suddenly rising in response to the operation of a solenoid valve, etc. It has a built-in bleed mechanism to supply air to the cylinder gradually at the initial stage of operation of the cylinder, and by automatically opening the main valve at high speed when the pressure in the cylinder rises enough.

JIS Symbol



## Model Code

When ordering, specify the model as follows:

### Standard type

Rc  $\frac{3}{8}$  ·  $\frac{1}{2}$

**SSV2-04-**

**1**

• Port size

**1** Port size

Rc3/8	10A
Rc1/2	15A

## Specifications

Model code	SSV2-04	
Port size	10A	15A
	Rc3/8	Rc1/2
Operating pressure	0.1 ~ 0.7MPa	
Proof pressure	1.05MPa	
Operating temperature	-20 ~ 60°C (For use below 5°C ,provide adequate measures against freezing.)	
Mass	1.4kg	

• For specifications other than those listed above, please contact us.

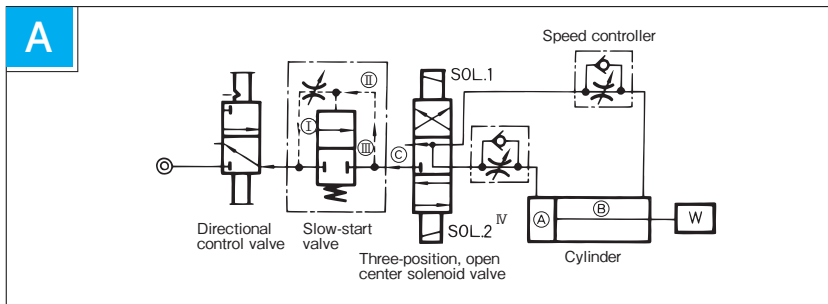
• In the event of use in high dry air over dew point - 40°C ,please contact us.



# Slow-Start Valves

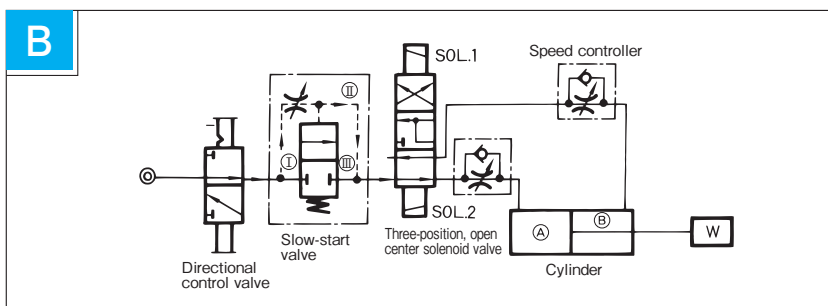
## Operation

### Standard type



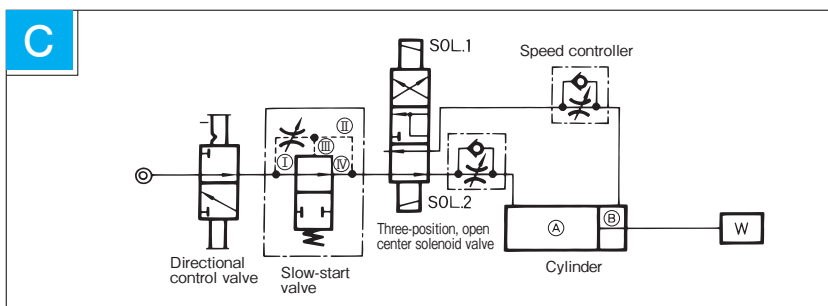
#### ● When the cylinder has an internal pressure of 0 MPa

See circuit **A**. When the three-position, open-center solenoid valve is placed in neutral and the directional control valve in OFF, the air pressures in chambers **A** and **B** of the cylinder are discharged through the solenoid valve, and the air pressure in area **C** flows **III** to **II** to **I** and is discharged. During discharge, the main valve of the slow-start valve is kept closed by spring force.



#### ● At startup of the cylinder

Turn on the directional control valve when the cylinder piston is to be moved to the right by energizing the number 2 solenoid of the solenoid valve. The air pressure flows through passages **I** and **II** and the passage drilled in the piston of the slow start valve, and passage **III**, in that order, and is gradually furnished to the cylinder chamber **A**. A needle valve is installed between chambers **I** and **II**. This is used to adjust the amount of air to cylinder chamber **A** for meter-in control of the cylinder. This feature prevents sudden operation of the cylinder. At startup of the cylinder, the pressure on the piston top is still small, and hence the main valve of the slow-start valve remains closed, as in circuit **A**.



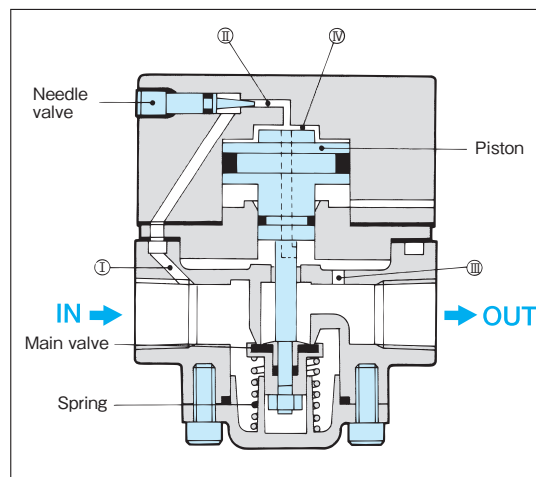
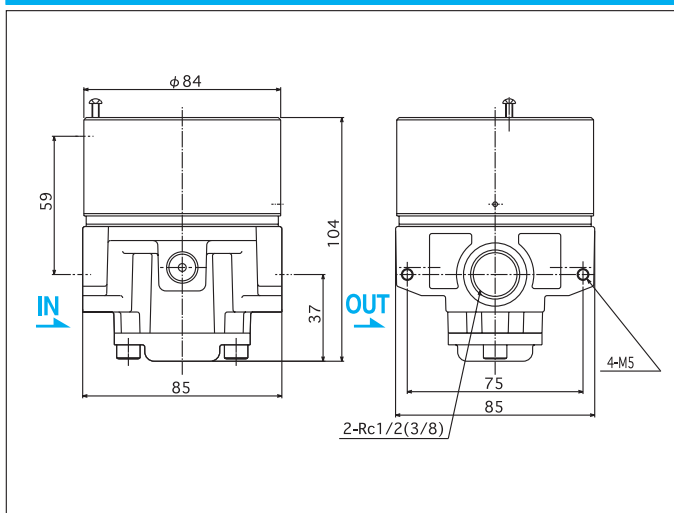
#### ● During normal operation of the cylinder

Air entering cylinder chamber **A** through passages **I**, **II** and **III** gradually increases. When the pressure reaches a given value, it starts to act on the piston top **IV**, pushing the piston down, and fully opens the main valve of the slow-start valve. When the main valve is opened, the normal airpressure circuit is completed. With a speed controller installed as the meter-out device the cylinder speed can now be controlled.

## Outside Dimensions

### Standard type

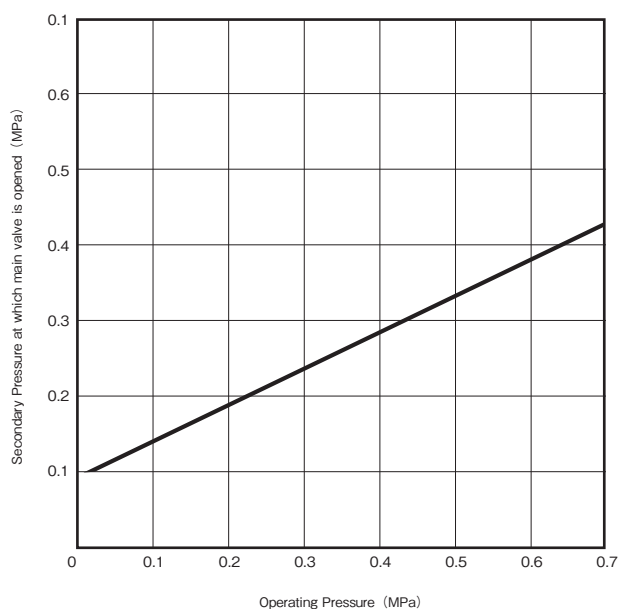
SSV2-04-10A • 15A



## Performance Tables

### Switching sensitivity graph

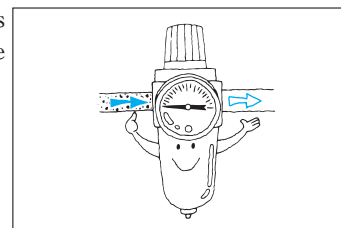
SSV2-04-10A • 15A



## Operating Instructions

### 1 Fluid

- Use only with clean fluids as dirt, waste, etc. may cause malfunctioning.



### 2 Starting speed of the cylinder

- Use the needle valve to adjust the starting speed of the cylinder.

# PRESSURE DETECTION VALVES

3 Ports

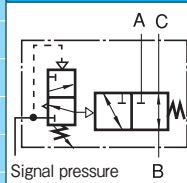
**PSV5**

Standard type

RC  $\frac{3}{8}$  ·  $\frac{1}{2}$

This valve detects signal pressure (air pressure) and controls other valves to which it is attached ; when mounted on a shutoff valve, for example, it operates the shutoff valve if it detects a signal pressure drop.

JIS Symbol



5 Ports

**PSV2**

Standard type

RC  $\frac{1}{4}$  ·  $\frac{3}{8}$

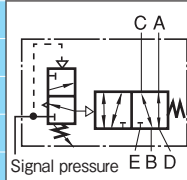
**PSV3L**

Low pressure purpose

RC  $\frac{1}{4}$  ·  $\frac{3}{8}$

5-port type pressure detection valve detects signal pressure (air pressure) and directly control other actuators.

JIS Symbol



## Model Code

When ordering,specify the model as follows:

3 Ports

Standard type

Rc  $\frac{3}{8}$  ·  $\frac{1}{2}$

**PSV5** 1 -04- 2 - 4

• Corrosion-resistant

• Port size

• Bracket

5 Ports

Standard type

Rc  $\frac{1}{4}$  ·  $\frac{3}{8}$

**PSV2** 1 -02- 3 - 4

• Corrosion-resistant

• Port size

• Bracket

Low pressure purpose

Rc  $\frac{1}{4}$  ·  $\frac{3}{8}$

**PSV3L** 1 -02- 3 - 4

• Corrosion-resistant

• Port size

• Bracket

### 1 Corrosion-resistant

- Portions that are exposed to outside weather conditions are corrosion-resistant coating and the exposed bolts,nuts and brackets are stainless steel.

Standard	No entry
Corrosion-resistant type	S

### 2 Port size

Rc $\frac{3}{8}$	10A
Rc $\frac{1}{2}$	15A

### 3 Port size

Rc $\frac{1}{4}$	8A
Rc $\frac{3}{8}$	10A

- Port size of "D" and "E" are Rc $\frac{1}{4}$

### 4 Bracket

Without	No entry
With (Append)	BR

- Bracket is not mounted but appended with valves.

## Specifications

Number of ports		3 Ports		5 Ports		5 Ports (Low pressure purpose)	
Model code		PSV5-04		PSV2-02		PSV3L-02	
Port size		10A	15A	8A	10A	8A	10A
		Rc3/8	Rc1/2	Rc1/4	Rc3/8	Rc1/4	Rc3/8
Effective sectional area		32mm <sup>2</sup>	48mm <sup>2</sup>	22mm <sup>2</sup>		22mm <sup>2</sup>	
Operating pressure	Signal pressure	Max. 1.0MPa				Max. 0.5MPa	
	Supply pressure	Max. 0.7MPa				Max. 0.7MPa	
Pressure setting		0.06 ~ 0.7MPa				0.03 ~ 0.2MPa	
Proof pressure		1.5MPa				1.05MPa	
Operating temperature		-5 ~ 60℃					
Mass		約 1.5kg					

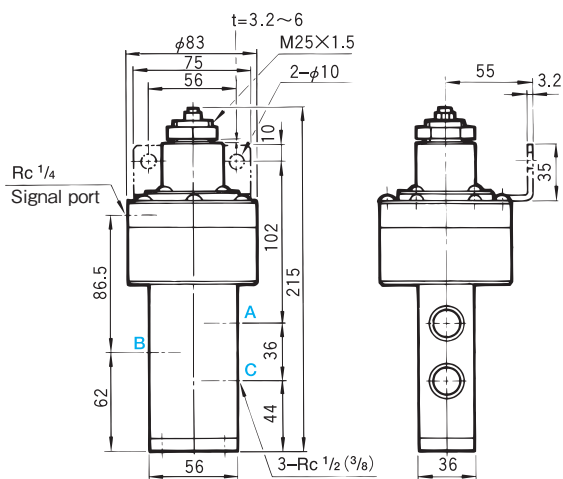
● For specifications other than those listed above, please contact us.

● In the event of use in high bry air over dew point - 40°C ,please contact us.

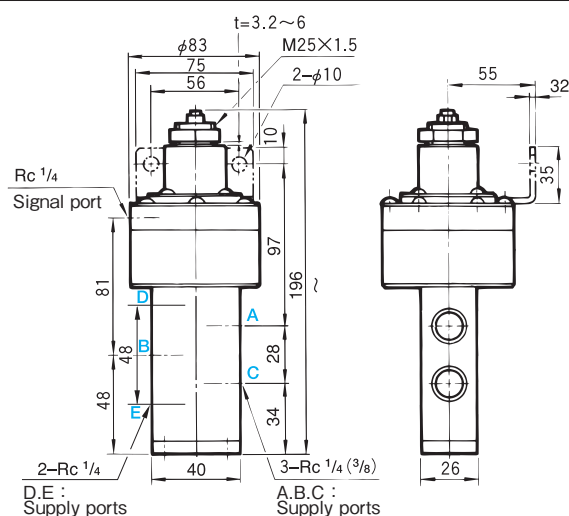
## Outside Dimensions

## Standard type

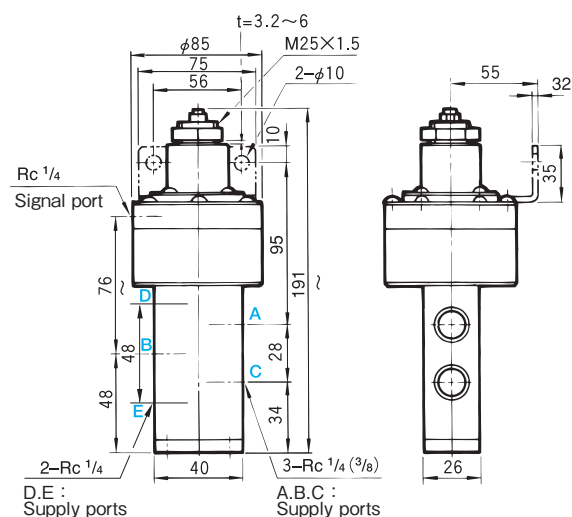
## PSV5-04-10A • 15A



## PSV2-02-8A • 10A



## PSV3L-02-8A • 10A



## Operation

# Differential

## PSV5-04-10A • 15A

Pressure setting (MPa)	Differential (MPa)
0.06	0.005 or less
0.5	0.03 or less
0.7	0.03 or less

## PSV2-02-8A • 10A

Pressure setting (MPa)	Differential (MPa)
0.06	0.003
0.5	0.018
0.7	0.02

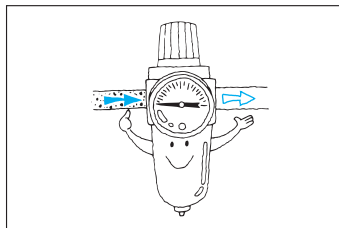
## PSV3L-02-8A • 10A

Pressure setting (MPa)	Differential (MPa)
0.03	0.002
0.06	0.004
0.2	0.005

## Operating Instructions

### 1 Fluid

- Use clean fluid, as dusts and drains included in the fluid may greatly affect the product performance, causing malfunction.



### 2 Caution

- Pressure detection valve is a bleed type valve. During operation air escapes from the bleeding hole, but this does not affect the valve performance.

### 3 Pressure setting

- Step1.** Supply a signal pressure equal to the set pressure (Valve opens) .
- Step2.** Turn the adjusting screw clockwise to close the valve and complete pressure setting. (After pressure setting is completed, a small amount of air will escape from the bleeding hole. However, this does not affect the valve performance.)
- Step3.** Increase the signal pressure. (Set the signal pressure at least 0.05 MPa higher than the set pressure for stable valve operation.)