MODEL SCV-4/SCV-4EN
CHECK VALVE
PRODUCT MANUAL

Thank you very much for choosing the Yoshitake's product. To ensure the correct and safe use of the product, please read this manual before use. This manual shall be kept with care for future references.
The symbols used in this manual have the following meanings.

Warning	This symbol indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.
Caution	This symbol indicates a hazardous situation that, if not avoided, may result in minor or moderate injury or may result in only property damage.

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YOSHITAKE

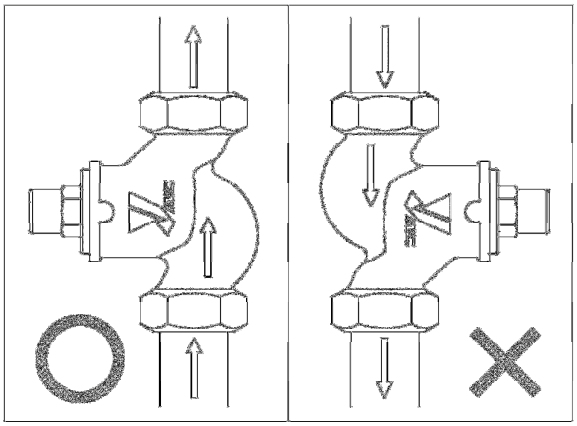
1. Specifications

Model	SCV-4	SCV-4EN
Nominal size	15-50A	15-250A
Application	Steam, Air, Cold and hot water, Oil, non-hazardous fluid	
Maximum pressure	1.6 MPa (※1)	
Maximum temperature	200°C (※1)	300°C (※1)
Installation posture	Horizontal and Vertical (※2)	
Connection	JIS Rc/NPT	BS PN16
Minimum valve opening pressure	0.05 MPa	
Body	EN-GJL-250 JL1040 (Equal with JIS FC250)	
Disc	X20Cr13 1.4021 (Equal with JIS SUS420J1)	

※1 Maximum pressure and temperature are shown in the following table.

	Temperature [°C]					
	-10～120	150	180	200	250	300
SCV-4	1.6 MPa	1.4 MPa	1.3 MPa	1.2 MPa		
SCV-4EN	1.6 MPa	1.4 MPa	1.3 MPa	1.2 MPa	1.1 MPa	0.9 Mpa

※2 When installing the product on vertical posture, please make the fluid flow from the ground up (see the following figure).

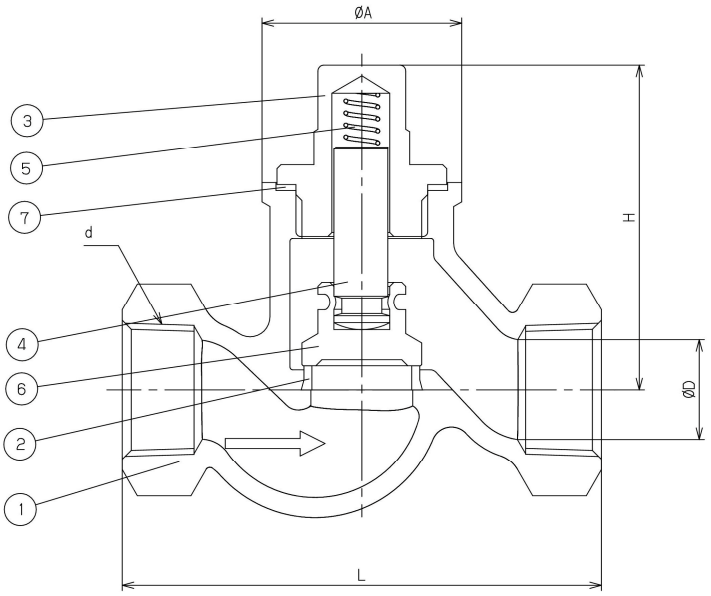


* The product cannot be disassembled.
* Since a small amount of fluid leaks out of the product, it cannot be used for applications requiring complete closing.
* Consider usage condition (usage frequency and durability) when you select the product.

Caution	Please confirm that the indications on the product correspond with the specifications of the ordered product model before use. * Do not use the product and contact us for further information.

2. Dimensions and Weights

SCV-4



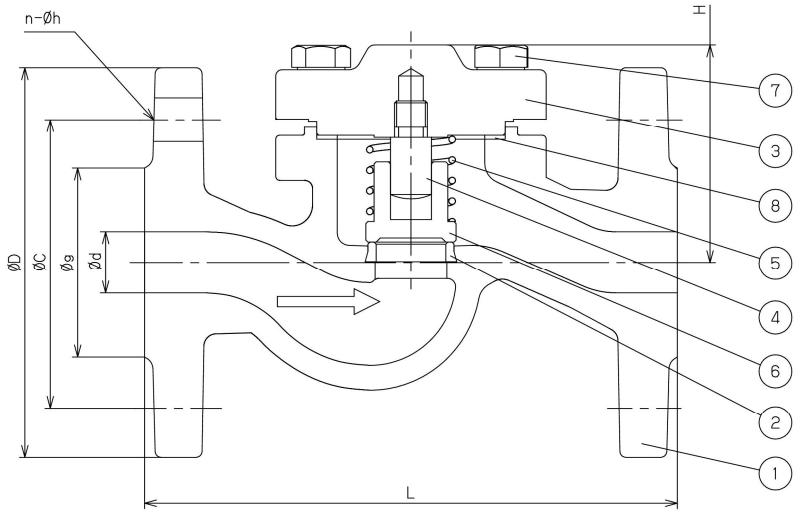
No.	Part name
1	Body
2	Valve seat
3	Bonnet
4	Stem
5	Spring
6	Valve
7	Gasket

(mm)

Nominal size	d		H	L	D	A	Weight (kg)
15A	Rc 1/2	NPT 1/2	56	90	15	41	0.7
20A	Rc 3/4	NPT 3/4	56	100	20	41	0.9
25A	Rc 1	NPT 1	82	120	25	50	1.2
32A	Rc 1 1/4	NPT 1 1/4	99	140	32	60	1.7
40A	Rc 1 1/2	NPT 1 1/2	112	170	40	68	2.2
50A	Rc 2	NPT 2	121	200	50	84	3.6

Fig.1 Structure, dimensions and weights of SCV-4

SCV-4EN



No.	Part name
1	Body
2	Valve seat
3	Bonnet
4	Stem
5	Spring
6	Valve
7	Hexagon bolt
8	Gasket

(mm)

Nominal size	d	H	L	Flange BSEN PN16				Weight (kg)
				D	C	G	n-h	
15A	15	56	130	95	65	46	4-14	2.1
20A	20	56	150	105	75	56	4-14	2.7
25A	25	67	160	115	85	65	4-14	3.8
32A	32	76	180	140	100	76	4-19	5.5
40A	40	89	200	150	110	84	4-19	7.4
50A	50	96	230	165	125	99	4-19	9.5
65A	65	104	290	185	145	118	4-19	15.0
80A	80	124	310	200	160	132	8-19	20.0
100A	100	161	350	220	180	156	8-19	29.0
125A	125	174	400	250	210	184	8-19	41.0
150A	150	197	480	285	240	211	8-23	66.0
200A	200	248	600	340	295	266	12-23	111
250A	250	295	730	405	355	319	12-28	196

Fig.2 Structure, dimensions and weights of SCV-4EN

3. Pressure loss

The values listed on the chart below are reference values. It varies depend on the piping conditions and usage environment. Use a safety factor more than 20% for product selection.

Fluid: water

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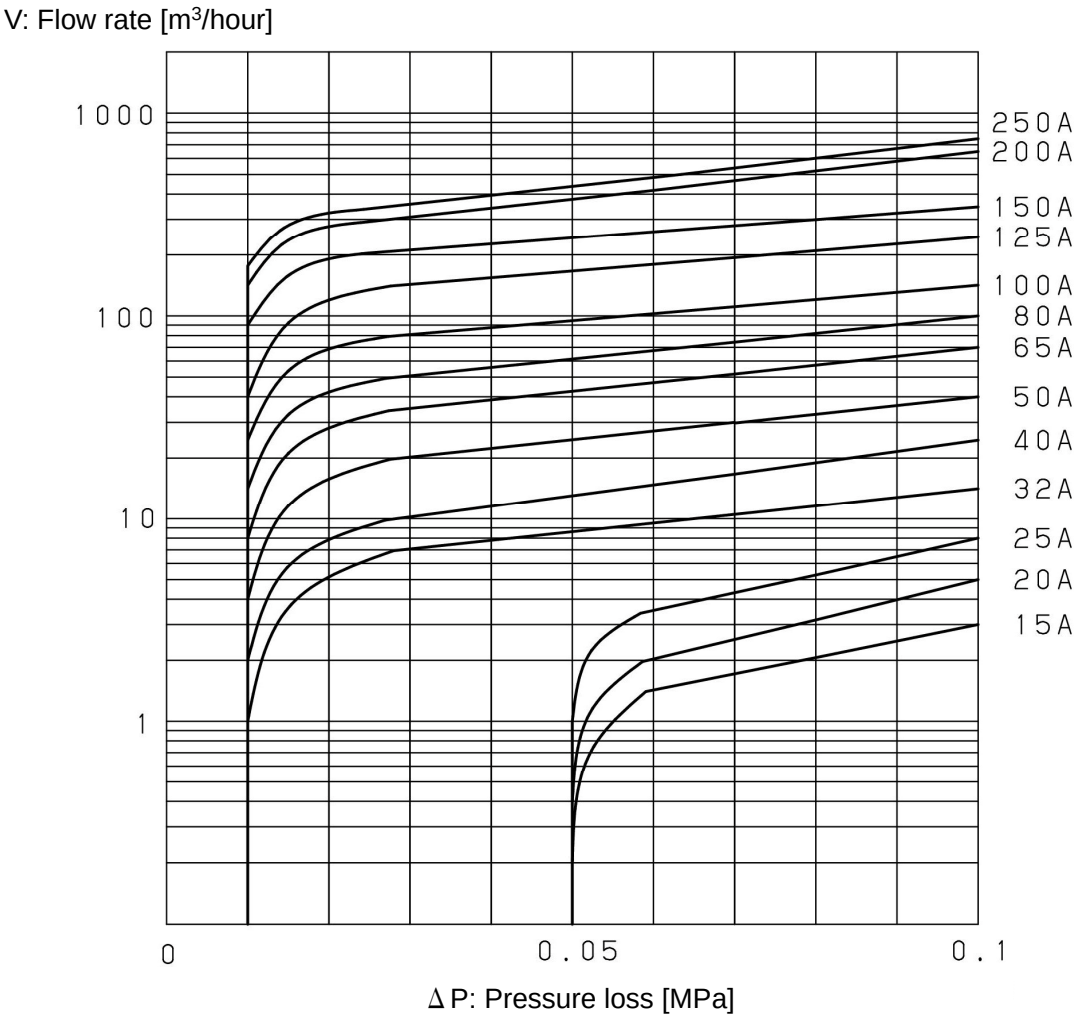

Fig. 3 Pressure loss chart

4. Installation

4.1 Precaution for installation

⚠ Caution

1. When installing the product to the piping, make sure that the tip of the thread does not interfere with the bulkhead of the valve or apply excessive torque which will damage the valve.
2. Impact by rapid pressure change, such as water hammer, breaks the product or parts.
3. When the product is in a sealed piping state, the fluid temperature rising and expansion leads to malfunction of the product
4. Keeping fluid in the product for a long term fixes sliding parts and leads to malfunction of the product.
5. Fluid with viscosity fixes the parts and leads to malfunction of the product.
6. Secure enough space needed for maintenance, inspection and repair of the product.
7. Do not apply excessive load, torque or vibration to the product.
8. Before installing the product, be sure to remove foreign substances and scale from the piping, and prevent seal materials to be used for piping connection, such as seal tape or liquid seal agent, from flowing into the inside of piping. Commingling of foreign substances such as scale or seal material leads to malfunction of the product.
9. Do not make dissimilar metal piping which causes difference of electrical potential. If doing so, the product and parts are corroded.
10. Consider usage condition (usage frequency or durability) when selection.
11. When installation, check the direction of the product so that the fluid flowing and the arrow marked on the product are in the same direction.
    * Wrong direction prevents fluid from flowing.
12. The majority of product failures are happened due to scales such as sands and dust in the pipeline. Please pay attention to the dust inside the pipeline.

5. Operating procedure

5.1 Precaution for operation

⚠ Caution

1. Before flowing the fluid, make sure that there is no danger when the fluid flows to the end of piping. Also make sure that the connection is securely connected and there is no slack in the piping connection.
   * If tightening is not secured, the fluid may blow out. If the fluid in high temperature, it can result in burns.
2. Keep the product warm and drainage the water to prevent from freezing.
3. In case of high temperature fluid, please do not touch the product directly with hands.
   * There is a risk of burn.
4. Perform daily inspections and periodical inspections to maintain the product functions.
   * If there is any abnormalities, ask specialized dealer for the treatment.
5. After a long term of out of service, perform operation check before re-operate the product.
   * If there is any abnormalities, ask specialized dealer for the treatment.

6. Maintenance

6.1 Troubleshooting

Trouble	Cause	Remedy
Fluid does not flow.	1. Contact surface of valve [6] and valve seat [2] is stuck.	1. Replace the product if valve [6] does not move.
	2. Installation direction is wrong.	2. Confirm the arrow on the product and install it correctly.
Fluid flows back.	1. Contact surface of valve [6] and valve seat [2] is worn away.	1. Replace the product.
	2. Internal parts are damaged.	2. Replace the product.

6.2 Warning for maintenance

⚠ Warning

1. Completely discharge the pressure inside of the product, line and equipment before disassembling or maintenance. In the case of high-temperature fluid, cool down the product till it can be touched with bare hands.
   * Failure to follow this notice may result in injury or burns.
2. Ask professional or experienced company to do the inspection.