

SHURJOINT

Riser Check Valves

Model RCV

Installation Instructions

Product Description

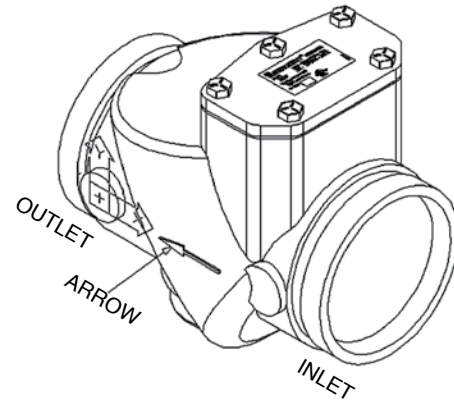
The Model RCV Riser Check Valve has been designed for use in the risers of wet type fire protection systems. The single clapper design features non-slaming operation. The streamlined body and wide open clapper design provide for low friction loss. This valve can be installed in the vertical or horizontal position and the EPDM rubber faced clapper provides a non-stick leak-tight seal with as little as 1.5 meters (5 feet) of head. The removable bonnet and clapper assembly provide easy access for maintenance, the drain is factory tapped at 1-1/4" or 2" NPT and two bosses on each side are provided for pressure gauges if required. The Model RCV check valve is rated at 20 bar (300 psi) working pressure. Check valves are supplied with our standard painted finishes, i.e. orange or RAL3000 red. Optional finishes such as hot dipped zinc galvanized and custom epoxy coatings are available.

Pipe Preparation

While pipe sizes are normally identified by the nominal size, always check the actual O.D. of the pipe and the fittings to be connected, as in some markets it is customary to refer to a different pipe O.D. with the same nominal size.

Sealing surface (pipe end to the groove) should be free of indentations, projections, loose coatings, rust, etc. for optimum sealing. Pipe ends should be cut square.

Prepare a roll or cut groove on the pipe end with a **SHURJOINT** or other roll or cut grooving machine or tool in accordance with the manufacturer's operation manual and to the proper groove specification. Refer to ANSI/AWWA C606 for the groove specifications.



Installation Instructions

1. **Locate the Arrow Mark** on the valve body. The arrow must point to the direction of flow.
2. **Position the check valve** in place in accordance with the flow direction. In vertical installation, the arrow will point upward.
3. **Connect the check valve** with two rigid couplings like the **SHURJOINT** model 7771 or similar products of other manufacturer's make. Please refer to the specific installation instructions for the couplings being used.

Cautions

- ❖ Do not use the Grade E EPDM gasket for petroleum or other oil services.
- ❖ Always thoroughly lubricate the gasket and pipe end to ensure optimum gasket sealing.
- ❖ Excessive torque may lead to joint failure.
- ❖ Uneven tightening may cause the gasket to be pinched, resulting in an immediate or delayed leak.

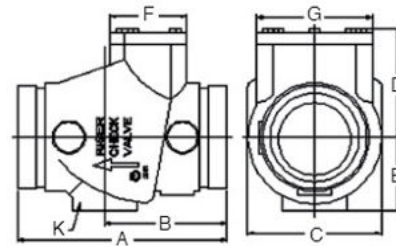
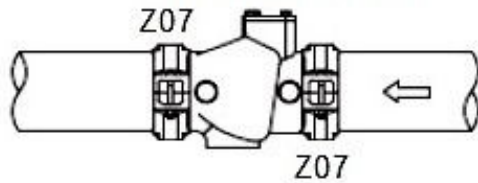


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RCV Riser Check



Dimensions

Nominal Size	Pipe OD mm/inch	Dimensions (mm / inch)								Weight Kg/Lbs
		A	B	C	D	E	F	G	K*	
65 2 1/2	73.0 2.875	190 7.48	104 4.09	114 4.50	95 3.75	63 2.50	66 2.60	99 3.90	11/4" NPT	4.9 10.8
65 2 1/2	78.1 3.000	190 7.48	104 4.09	114 4.50	95 3.75	63 2.50	66 2.60	99 3.90	11/4" NPT	4.9 10.8
80 3	88.9 3.500	178 7.00	104 4.09	114 4.50	95 3.75	63 2.50	66 2.60	99 3.90	11/4" NPT	4.7 10.4
100 4	114.3 4.500	216 8.50	127 5.00	146 5.75	117 4.60	80 3.15	76 3.00	123 4.84	2" NPT	7.9 17.4
150 6	165.1 6.500	305 12.00	178 7.00	209 8.23	178 7.00	114 4.50	93 3.66	175 6.89	2" NPT	22.5 49.5
150 6	168.3 6.625	305 12.00	178 7.00	209 8.23	178 7.00	114 4.50	93 3.66	175 6.89	2" NPT	22.5 49.5
200 8	219.1 8.625	365 14.37	210 8.27	266 10.47	217 8.54	146 5.75	151 5.94	244 9.61	2" NPT	29.0 63.8

Grooved end dimensions & tolerances shall conform to AWWA/ANSI C806. * ISO/BS pipe threads are available upon request.

Model RCV Riser Check Valve

Valve Size	Actual O.D.	Equivalent Length of Sch. 40 pipe*	Cv Value
in mm	in mm	feet meter	
2 1/2 65	2.875 73.0	7.8 2.4	210
3 80	3.500 88.9	16.5 5.0	270
4 100	4.500 114.3	23.9 7.3	430
5 125	5.563 141.3	24.0 7.3	700
6 150	6.625 168.3	25.6 7.8	1250



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Material Specification

❖ Valve Body & Bonnet (①②):

Ductile iron to ASTM A536 Gr. 65-45-12, Min. tensile strength 448 MPa (65,000 psi)

❖ Surface Finish: Orange color painted or red RAL3000 color painted

Hot dip galvanized (Option)

Epoxy coated in red RAL3000 or other colors (Option)

❖ Clapper (③): Stainless steel Type 304 of ASTM A240 (2 1/2" - 4"), ductile iron ASTM A536 Gr. 65-45-12 (5" - 12")

❖ Clapper Facing (④):

Grade "E" EPDM (Color code: Green stripe) Recommended for cold and hot water within the specified temperature range, dilute acids, alkalis, salts, oil-free air and many chemical services not involving hydrocarbons, oils or gases. **Do not use for HYDROCARBONS and PETROLEUM services.** Temperature range: -34°C to +110°C (-30°F to +230°F). For water services of constant high temperature higher than +85°C(+185°F), please contact **Shurjoint** for recommendation.

Other options:

Grade "T" Nitrile,

Grade "O" Fluoro-Elastomer,

Grade "L" Silicone

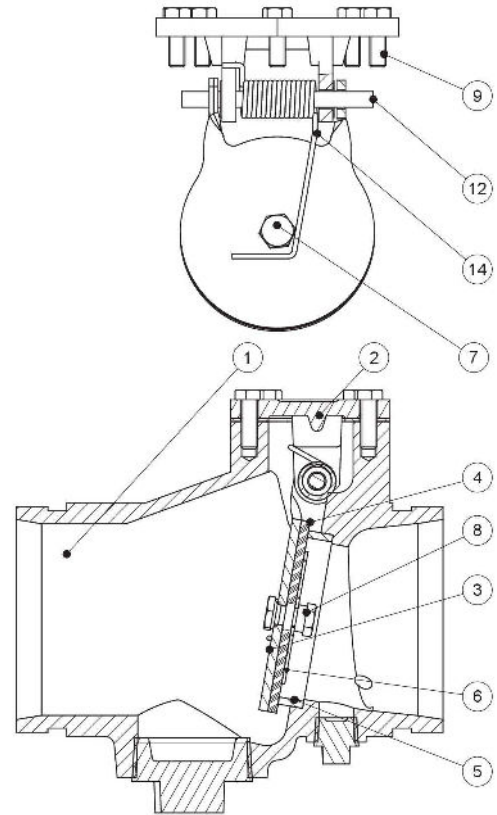
❖ **Seat Ring (⑤):** Bronze C83600 of ASTM B584

❖ **Facing Retainer (⑥), Cap Screw (⑦), Lock nuts (⑧):** Stainless steel Type 304

❖ **Hinge Pin (⑫):** Stainless Steel Type 303 of ASTM A582

❖ **Spring (⑬):** Stainless Steel Type 302 of ASTM A313

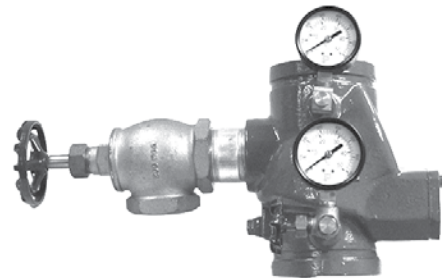
❖ **Set Screw (⑨):** Medium-carbon steel of ASTM A449



Riser Check Valves Model RCV with Trim Kit

Product Description

The Model RCV check valve is also available with a riser trim kit. The combination of the Model RCV check valve, riser trim kit, water-flow indicator and grooved butterfly valve (as shown below) provides an economical means for actuating electric alarms in installations not requiring a mechanical alarm.



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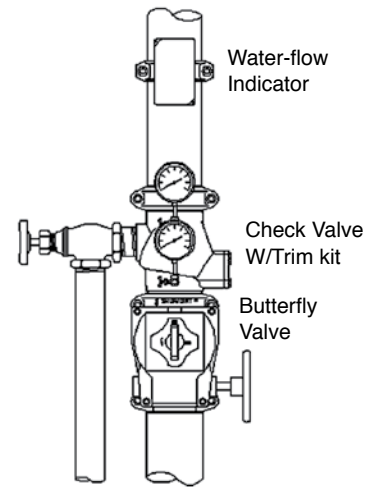
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Riser Trim Kit

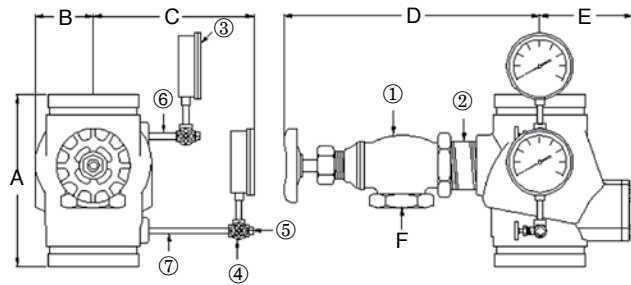
For sizes 65 - 80 (2-1/2" - 3")

- 1) 1 1/4" angle valve (1)
- 2) 1 1/4" close nipple (1)
- 3) 20 bar (300 psi) water pressure gauges (2)
- 4) 1/4" gauge test valves (2)
- 5) 1/4" plugs (2)
- 6) 1/4" x 1-1/2" nipple (1)
- 7) 1/4" x 4" nipple (1)



For sizes 100 - 200 (4" - 8")

- 1) 2" angle valve (1)
- 2) 2" close nipple (1)
- 3) 20 bar (300 psi) water pressure gauges (2)
- 4) 1/4" gauge test valves (2)
- 5) 1/4" plugs (2)
- 6) 1/4" x 1-1/2" nipple (1)
- 7) 1/4" x 4" nipple (1)



Dimensions

Nominal Size	Pipe OD mm/inch	Dimensions (mm / inch)						Weight* Kg/Lbs
		A	B	C	D	E	F Drain	
65 2 1/2	73.0 2.875	190 7.50	57 2.25	184 7.25	295 11.63	95 3.75	1 1/4" NPT	7.2 15.8
65 2 1/2	76.1 3.000	190 7.50	57 2.25	184 7.25	295 11.63	95 3.75	1 1/4" NPT	7.2 15.8
80 3	88.9 3.500	178 7.00	57 2.25	184 7.25	295 11.63	95 3.75	1 1/4" NPT	7.1 15.6
100 4	114.3 4.500	216 8.50	73 2.88	200 7.88	330 13.00	117 4.60	2" NPT	11.8 26.0
150 6	165.1 6.500	305 12.00	105 4.13	229 9.00	356 14.00	178 7.00	2" NPT	26.4 58.0
150 6	168.3 6.625	305 12.00	105 4.13	229 9.00	356 14.00	178 7.00	2" NPT	26.4 58.0
200 8	219.1 8.625	365 14.37	133 5.24	257 10.12	388 15.28	217 8.54	2" NPT	32.9 72.4

* Including trim kit



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