

# Reliable®

## Model G 2½" (65mm), 3" (80mm), 4" (100mm) & 6" (150mm) Right-Check™ Riser Valves

### Features

1. Grooved end connections.
2. Compact, lightweight design.
3. Non-slamming, spring loaded clapper to minimize water hammer.
4. Approved for horizontal and vertical installation.
5. Stream-lined body design provides very low friction loss.
6. Elastomer faced clapper provides leak-free, non-sticking sealing.

Reliable Model G Riser Right-Check™ Valves are intended for installation in wet pipe fire protection system risers and preaction systems using supervisory air as low as 1 psi (0,07 bar). The Riser Valve and Trim Kit (Figure 1) with a water flow detector can provide an electric alarm, and is a cost effective alternative to an alarm valve in installations not requiring a mechanical alarm.

Riser Valves are factory tapped for 1¼" (or 2") NPT and ½" NPT system connections and for ¼" NPT supply connection (Ref. Figure 3).

Grooved end connections provide fast and easy installation using listed or approved mechanical grooved couplings. Rigid style grooved couplings can be used for positive clamping to resist flexural and torsional loads.

Riser Right-Check™ Valves and associated riser equipment should periodically be given a thorough inspection and test. NFPA 25 provides minimum maintenance requirements. Check valves should be inspected and operated at least annually. Parts should be replaced as required.

When Model G Riser Valves are installed vertically, the direction of the flow arrow must point upward. For horizontal installations, the hinge pin must be located at the top. In preaction systems, the valves must be installed vertically.

### Valve Description

1. Rated working pressure - 250 psi (17,2 bar).
2. Factory hydrostatic test pressure - 500 psi (34,5 bar).
3. Friction loss, expressed in equivalent length of Sch. 40 pipe with  $C = 120$  (based on Hazen-Williams formula) and a flowing velocity of 15 ft/s (4.6 m/s), is:  
2½" (65mm) - 7 ft. (2.1m)    4" (100mm) - 10 ft. (3.0m)  
3" (80mm) - 7 ft. (2.1m)    6" (150mm) - 16 ft. (4.9m)  
See Bulletin 807 for Pressure Drop (psi) vs. Flow Rate (gpm) data chart.
4. Standard grooved end dimensions per ANSI/AWWA C606.

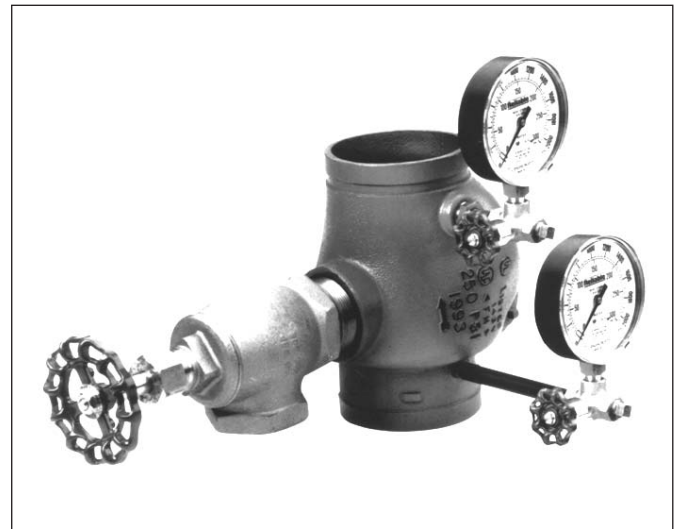


Figure 1

| 2-1/2" (65mm) Valve: |                    |                    |                     |                    |
|----------------------|--------------------|--------------------|---------------------|--------------------|
| A=7.12"<br>(181mm)   | B=4.81"<br>(122mm) | C=3.88"<br>(98mm)  | D=11.38"<br>(289mm) | E=3.01"<br>(76mm)  |
| 3" (80mm) Valve:     |                    |                    |                     |                    |
| A=7.62"<br>(194mm)   | B=5.06"<br>(129mm) | C=4.00"<br>(102mm) | D=11.62"<br>(295mm) | E=3.56"<br>(90mm)  |
| 4" (100mm) Valve:    |                    |                    |                     |                    |
| A=8.44"<br>(214mm)   | B=6.19"<br>(157mm) | C=4.00"<br>(152mm) | D=13.56"<br>(344mm) | E=4.12"<br>(105mm) |
| 6" (150mm) Valve:    |                    |                    |                     |                    |
| A=10.25"<br>(260mm)  | B=7.06"<br>(179mm) | C=5.12"<br>(130mm) | D=14.44"<br>(367mm) | E=5.40"<br>(137mm) |

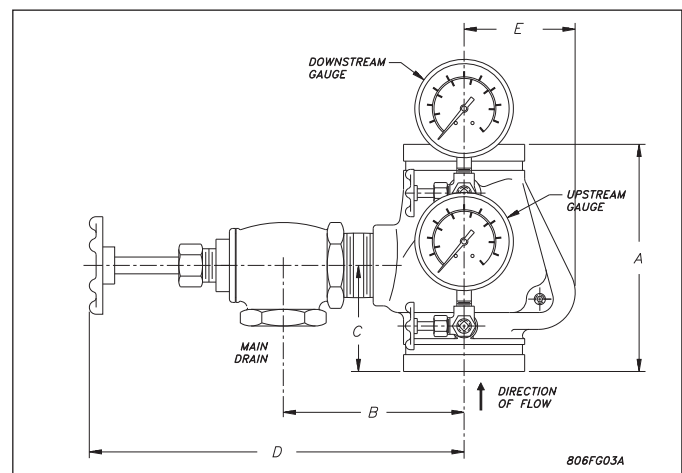


Figure 2

6. Shipping weight (including Trim Kit):  
2½" (65mm) - 14 lbs. (6.4 kg)  
3" (80mm) - 15 lbs. (6.8 kg)  
4" (100mm) - 24 lbs. (11.0 kg)  
6" (150mm) - 45 lbs. (20.4 kg)

Refer to figure 3.

| Item No. | Part Name                  | Material                           | Quantity | Part Number |            |            |            |
|----------|----------------------------|------------------------------------|----------|-------------|------------|------------|------------|
|          |                            |                                    |          | 2½" (65mm)  | 3" (80mm)  | 4" (100mm) | 6" (150mm) |
| 1*       | Valve Body                 | Gray Iron, ASTM-A48 Class 30A      | 1        | 91005002    | 91005003   | 91005004   | 91005006   |
| 2*       | Seat                       | Bronze C83600 or C93200, ASTM-B505 | 1        | 96020200    | 96020300   | 96020400   | 96020600   |
| 3        | Clapper                    | Stainless Steel 304, ASTM-A240     | 1        | 91816112    | 91816113   | 91816114   | 91816116   |
| 4        | Facing Seal **             | EPDM Rubber                        | 1        | 95520200    | 95520300   | 95520400   | 95520600   |
| 5        | Clamping Ring              | Stainless Steel 304, ASTM-A240     | 1        | 95290300    | 95290300   | 95290400   | 95290600   |
| 6        | Gasket **                  | EPDM Rubber                        | 1        | 93720302    | 93720302   | 93720604   | 93720604   |
| 7        | Spring                     | Stainless Steel 302, ASTM-A313     | 1        | 96400300    | 96400300   | 96400400   | 96400600   |
| 8        | Hinge Pin                  | Stainless Steel 303, ASTM-A582     | 1        | 95000280    | 95000300   | 95006824   | 95000600   |
| 9        | Bolt                       | Stainless Steel 304, ASTM-F593     | 1        | 91090300    | 91090300   | 91090400   | 91090600   |
| 10       | Locknut **                 | Stainless Steel 303, ASTM-F594     | 1        | 94911420    | 94911420   | 94913816   | 94913816   |
| 11       | Plug, ½"NPT                | Steel                              | 1        | —           | —          | —          | —          |
| **       | Replacement Seal Kit       |                                    | 1        | 6888040025  | 6888040030 | 6888040040 | 6888040060 |
|          | Body - Seat Sub - Assembly |                                    | 1        | 91005202    | 91005203   | 91005204   | 91005206   |

\* Not field replaceable.

### Trim Kit Description

Main Drain:

- 1¼" (32mm) angle valve and close nipple, 2½" and 3" (65mm and 80mm) sizes.
- 2" (50mm) angle valve and close nipple, 4" and 6" (100mm and 150mm) sizes.

Upstream and Downstream Side (all sizes):

- 300 psi (20,7 bar) water pressure gauge (2 req'd.).
- ¼" (6mm) 3-way globe valve (2 req'd.).
- ¼" x 5" (6mm x 127mm) nipple (upstream only).
- ¼" x 1½" (6mm x 38mm) nipple (downstream only).
- ¼" (6mm) plug (2 req'd.).

### Approvals

1. Listed by Underwriters Laboratories, Inc.
2. Listed by Underwriters Laboratories of Canada.
3. Approved by Factory Mutual Research Corp.
4. NYC MEA 258-93E.

### Valve Disassembly (Refer to figure 3)

1. Close the main water supply valve and drain the system.
2. Remove the check valve from the piping system.
3. Inspect the Seat (2) for any cuts, scrapes and dents. Replace the valve if any damage is found.
4. To replace the Facing Seal (4), remove the Clapper (3), unscrew the Locknut (10) and remove the retention Bolt (9).

### Valve Reassembly (Refer to figure 3)

1. Thoroughly clean the Clapper (3). Insert the retention Bolt (9) with a new Gasket (6).
2. Place the new Facing Seal (4) and the Clamping Ring (5) against the Clapper (3). Tighten the new Locknut (10) to 21 in. lbs. (2.3 Nm) torque in 2½" (65mm) and 3" (80mm) sizes and to 52 in. Lbs. (5.7 Nm) in 4" (100mm) and 6" (150mm) sizes.

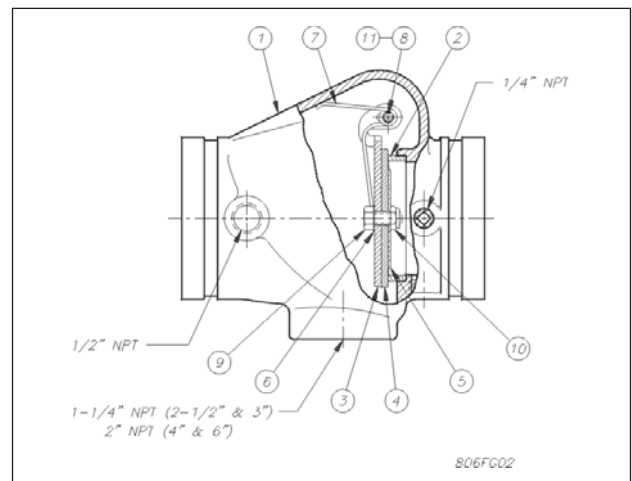


Figure 3

3. Insert the clapper assembly into the valve through the downstream opening. Reinsert the Hinge Pin (8) while holding the coils of the properly oriented Spring (7) in place. Install the Hinge Pin Plug (11).
4. Reinstall the check valve in the system.
5. Place the system back in service.

### Ordering Information

Specify:

1. Model G Riser Valve.
2. Size.
3. Riser Trim Kit (ordered separately), specify valve size.

Contact the installing contractor or Reliable if any difficulties are experienced. Should replacement parts be needed, use only genuine Reliable parts.

The equipment presented in this bulletin is to be installed in accordance with the latest pertinent Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.

Products manufactured and distributed by Reliable have been protecting life and property for over 80 years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.



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