

# Series 751 FireLock™ European Alarm Check Valve Stations



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INSTALLED VALVE FOR FUTURE REFERENCE



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SERIES 751 FIRELOCK™ EUROPEAN ALARM CHECK VALVE STATION  
VDS, CE, UKCA, FM, EAC VERSION SHOWN  
(LPCB, FG, AND SBSC TRIM ALSO INCLUDED IN THIS MANUAL)

## ⚠ WARNING



- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.
- Failure to follow these instructions could result in death or serious personal injury and property damage.


- Series 751 FireLock™ European Alarm Check Valve Stations shall be used only in fire protection systems that are designed and installed in accordance with current, applicable local and national fire protection standards and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.
  - These installation instructions are intended for an experienced, trained installer. The installer shall understand the use of this product and why it was specified for the particular application.
  - The installer shall understand common industry safety standards and potential consequences of improper product installation.
- Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

# SERIES 751 FIRELOCK™ EUROPEAN ALARM CHECK VALVE STATIONS

THIS QUICK REFERENCE SECTION IS FOR PLACING THE SYSTEM IN SERVICE AND FOR PERFORMING REQUIRED WATER FLOW ALARM TESTS.

AN EXPERIENCED, TRAINED INSTALLER SHALL READ AND UNDERSTAND THE FULL CONTENTS OF THIS MANUAL AND ALL WARNING MESSAGES BEFORE ATTEMPTING TO PLACE THE SYSTEM INTO SERVICE.


## INITIAL SYSTEM SETUP

 **WARNING**

- Series 751 FireLock™ European Alarm Check Valve Stations and supply piping shall be protected from freezing temperatures and mechanical damage.
- For proper operation of alarms in a wet system, it is important to remove all air from the system. Auxiliary drains may be required to release all trapped air from the system.
- Alarms and electrical panels that are controlled by an alarm flow switch on the riser shall not be interrupted. If alarm activation is possible, notify local fire companies that the system is being serviced.

Failure to follow these instructions could cause improper valve operation, resulting in death or serious personal injury and property damage

- Step 1:**  
Open the system main drain valve (Item 9, page 7). Confirm that the system is drained.
- Step 2:**  
Close the system main drain valve (Item 9, page 7).
- Step 3:**  
Confirm that system drains are shut and the system is free of leaks.
- Step 3a:**  
Confirm that the system has been depressurized. The gauges should indicate zero pressure.
- Step 4:**  
Open the remote system test valve (inspector’s test connection) and any auxiliary drains to remove all air from the system.
- Step 5:**  
Close the alarm line ball valve (Item 13, page 7) to prevent alarms from operating while the system is filling. **FOR FG AND SBSC TRIM:** Close the alarm line monitoring ball valve(s) (Item 14a, page 7).
- Step 6:**  
Open the water supply main control valve (Item 3, page 7) slowly. Allow the system to fill with water completely. Allow water to flow from the remote system test valve (inspector’s test connection) and any auxiliary drains until all trapped air is removed from the system.
- Step 7:**  
Close the remote system test valve (inspector’s test connection) and any auxiliary drains. **NOTE:** The system pressure gauge (Item 7, page 7) reading should be equal to or greater than the water supply pressure gauge (Item 5, page 7) reading.
- Step 8:**  
Open the water supply main control valve (Item 3, page 7) fully.

 **WARNING**

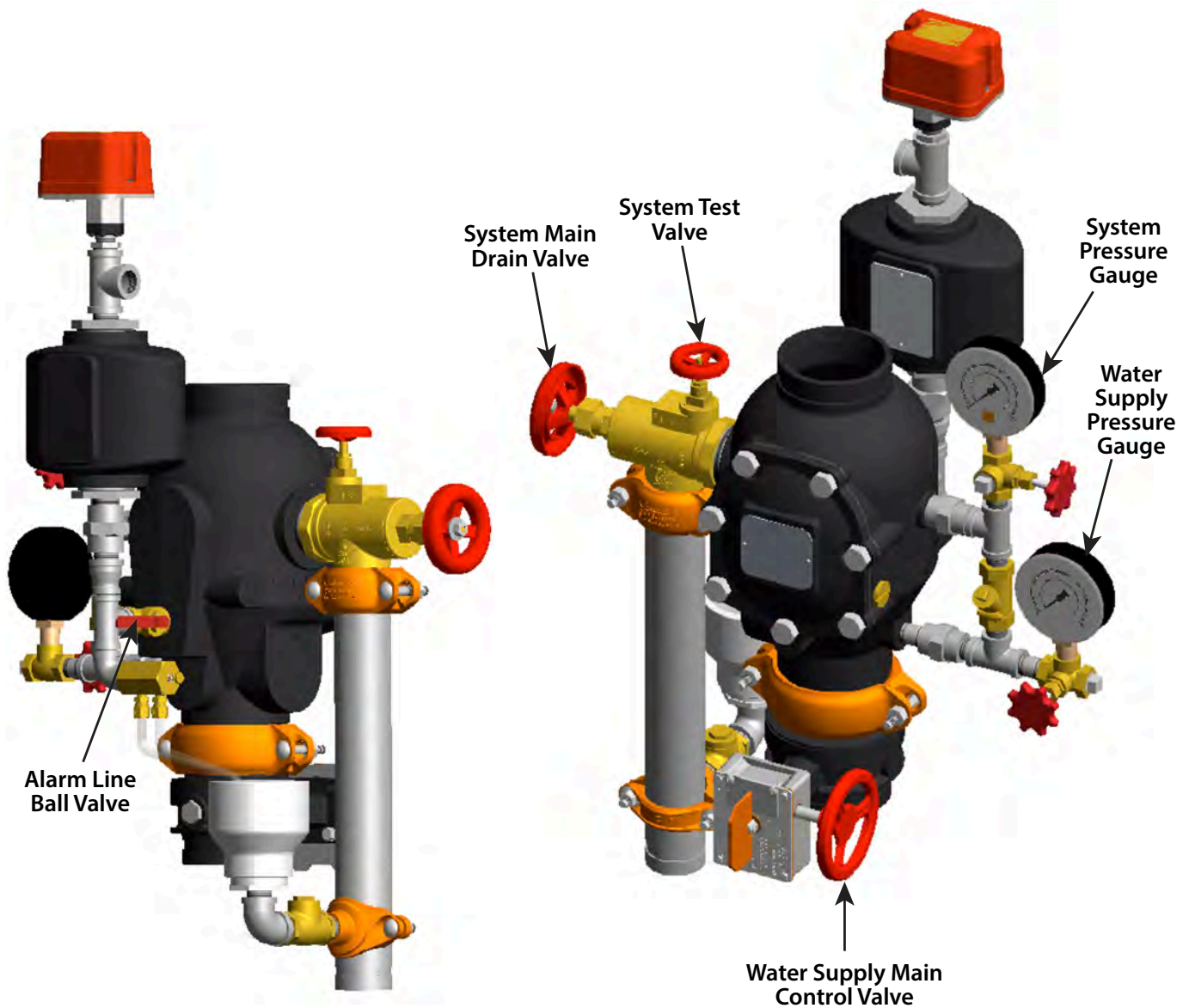
- The alarm line ball valve or alarm line monitoring ball valve(s) shall remain in the open position to allow alarms to activate.

Failure to follow this instruction will prevent alarms from activating, resulting in death or serious personal injury and property damage.

- Step 9:**  
Open the alarm line ball valve (Item 13, page 7). Lock the ball valve, if required. **FOR FG AND SBSC TRIM:** Open the alarm line monitoring ball valve(s) (Item 14a, page 7).
- Step 10:**  
Confirm that all valves are in their normal operating positions (refer to the table below).

Valve	Normal Operating Position
Alarm Line Ball Valve (Lockable)	Open
Water Supply Main Control Valve	Open
System Main Drain Valve	Closed
System Test Valve	Closed
Alarm Line Monitoring Ball Valve(s) - FG and SBSC Trim Only	Open

- Step 11:**  
Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the system is in service.



VDS, CE, UKCA, FM, EAC VERSION SHOWN

## REQUIRED WATER FLOW ALARM TEST

Refer to current, applicable local and national fire protection standards to perform water flow alarm tests. The authority having jurisdiction in the area may require these tests on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area.

1. Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the water flow alarm test will be performed.
2. Verify that the alarm line ball valve (Item 13, page 7) is open. **FOR FG AND SBSC TRIM:** Verify that the alarm line monitoring ball valve(s) is/are open (Item 14a, page 7).
3. Open the system test valve (Item 8, page 7) fully. Confirm that mechanical and electrical alarms are activated and that remote monitoring stations, if provided, receive an alarm signal. **NOTE:** There may be a time delay if a Series 752 VdS Retarding Chamber Assembly is installed.
4. Close the system test valve (Item 8, page 7) after proper operation of all alarms is verified.
5. Verify that all alarms stopped sounding, that the alarm line drained properly, and that remote station alarm reset properly.
6. Push in the plunger of the restricted orifice/alarm line drain (Item 10, page 7). Verify that water is not flowing from the restricted orifice/alarm line drain. If water is flowing, refer to Section VIII, Troubleshooting.
7. Confirm that all valves are in their normal operating positions (refer to the table to the left).
8. Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the valve is back in service. Provide test results to the authority having jurisdiction, if required.

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HAZARD IDENTIFICATION



Definitions for identifying the various hazard levels are provided below. When you see this symbol, be alert to the possibility of personal injury. Carefully read and fully understand the message that follows.

**WARNING**

- The use of the word “WARNING” identifies the presence of hazards or unsafe practices that could result in death or serious personal injury and property damage if instructions are not followed.


**CAUTION**



- The use of the word “CAUTION” identifies possible hazards or unsafe practices that could result in personal injury and product or property damage if instructions are not followed.

**NOTICE**

- The use of the word “NOTICE” identifies special instructions that are important but not related to hazards.

INSTALLER SAFETY INFORMATION

**WARNING**



- An experienced, trained installer shall install this product in accordance with all instructions. These instructions contain important information.
- Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.

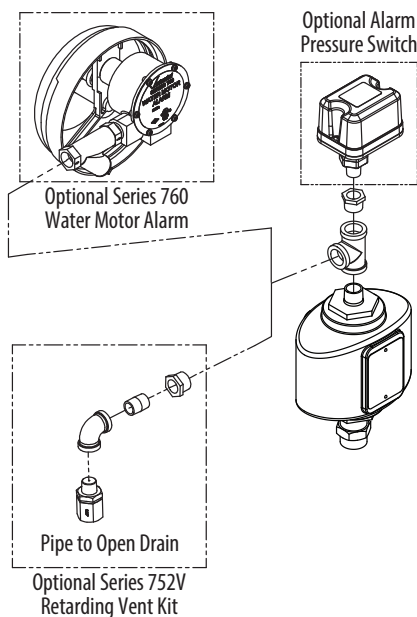
Failure to follow these instructions can cause product failure, resulting in death or serious personal injury and property damage.

1. **Read and understand all instructions and refer to the trim diagrams before installing, maintaining, or testing a Victaulic Series 751 FireLock™ European Alarm Check Valve Station.** For proper operation and approval, the alarm valve and accessories shall be installed in accordance with the specific trim diagrams included with the shipment.
2. **Use only recommended accessories.** Accessories and equipment that are not approved for use with this alarm valve may cause improper system operation and property damage.
3. **Wear safety glasses, hardhat, foot protection, and hearing protection.** Wear hearing protection if you are exposed to long periods of noisy jobsite operations.
4. **Prevent back injury.** Valve assemblies require more than one person (or mechanical lifting equipment) to position and install the assembly. Always practice proper lifting techniques.
5. **Keep work areas clean.** Keep the work area clean and well lit, and allow enough space to accommodate proper installation of the valve, trim, and accessories.
6. **Avoid pinch points.** Due to the weight of the valve body, use caution around pinch points and spring-loaded components (i.e. clapper assembly) in order to prevent bodily injury.

**IMPORTANT INSTALLATION INFORMATION****NOTICE**

- Drawings and/or pictures in this manual may be exaggerated for clarity.
- This product and this installation, maintenance, and testing manual contain trademarks, copyrights, and/or patented features that are the exclusive property of Victaulic.

1. **Verify that adequate space is available for valve, trim, and accessories.** Refer to pages 3 – 6 for dimensional information.
2. **Flush water supply piping.** Before installing the alarm valve, flush the water supply piping thoroughly to remove all foreign material.
3. **Protect system from freezing temperatures.** The alarm valve and supply piping SHALL NOT be located in an area where the valve can be exposed to freezing temperatures or mechanical damage.
4. **Confirm material compatibility.** It is the system designer's responsibility to confirm material compatibility of the alarm valve, trim, and associated accessories when a corrosive environment or contaminated water is present.
5. **Supply water to the system.** Supply an uninterrupted source of water from upstream of the main control valve.
6. **Install Series 752 VdS Retarding Chamber in variable pressure systems.** The Series 752 VdS Retarding Chamber shall be installed in variable pressure systems. Refer to the specific trim diagrams included with the shipment.



7. **Install Series 752V Retarding Vent Kit when an air break is required above the Series 752 VdS Retarding Chamber.** In addition, the Series 752V Retarding Vent Kit is required when multiple alarm valves are tied to one Series 760 European Water Motor Alarm and a check valve isolates each line. Refer to the specific trim diagrams included with the shipment.
8. **Install an uninterrupted alarm pressure switch when a Series 760 European Water Motor Alarm is used.** When the alarm valve is used with a Series 760 European Water Motor Alarm, install an uninterrupted alarm pressure switch in the location shown above.

**HYDROSTATIC TESTING****WARNING**

- If air testing is required, **DO NOT** exceed 50 psi/345 kPa/3.4 Bar air pressure.
- Failure to follow this instruction could result in death or serious personal injury and property damage.

The Series 751 FireLock™ European Alarm Check Valve Station is manufactured and listed for a maximum working pressure of 232 psi/1600kPa/16 Bar. The station can be hydrostatically tested against the clapper at 200 psi/1400 kPa/14 Bar and/or 50 psi/350 kPa/3.5 Bar above the normal water supply pressure (2-hour limited time period) for acceptance by the authority having jurisdiction.

**RECEIVING THE SHIPMENT**

1. Verify that all components are included in the shipment and that all necessary tools are available for installation. Verify that the provided trim drawing matches the system's requirements.

**CAUTION**

- Verify that all protective shipping items are removed from the interior and exterior of the valve body before installation.
- Verify that no foreign material gets into the valve body, pipe nipples, or valve openings.
- If using any material other than PTFE thread sealant tape, use extra caution so that material does not enter the trim.

Failure to follow these instructions could cause improper valve operation, resulting in personal injury and property damage.

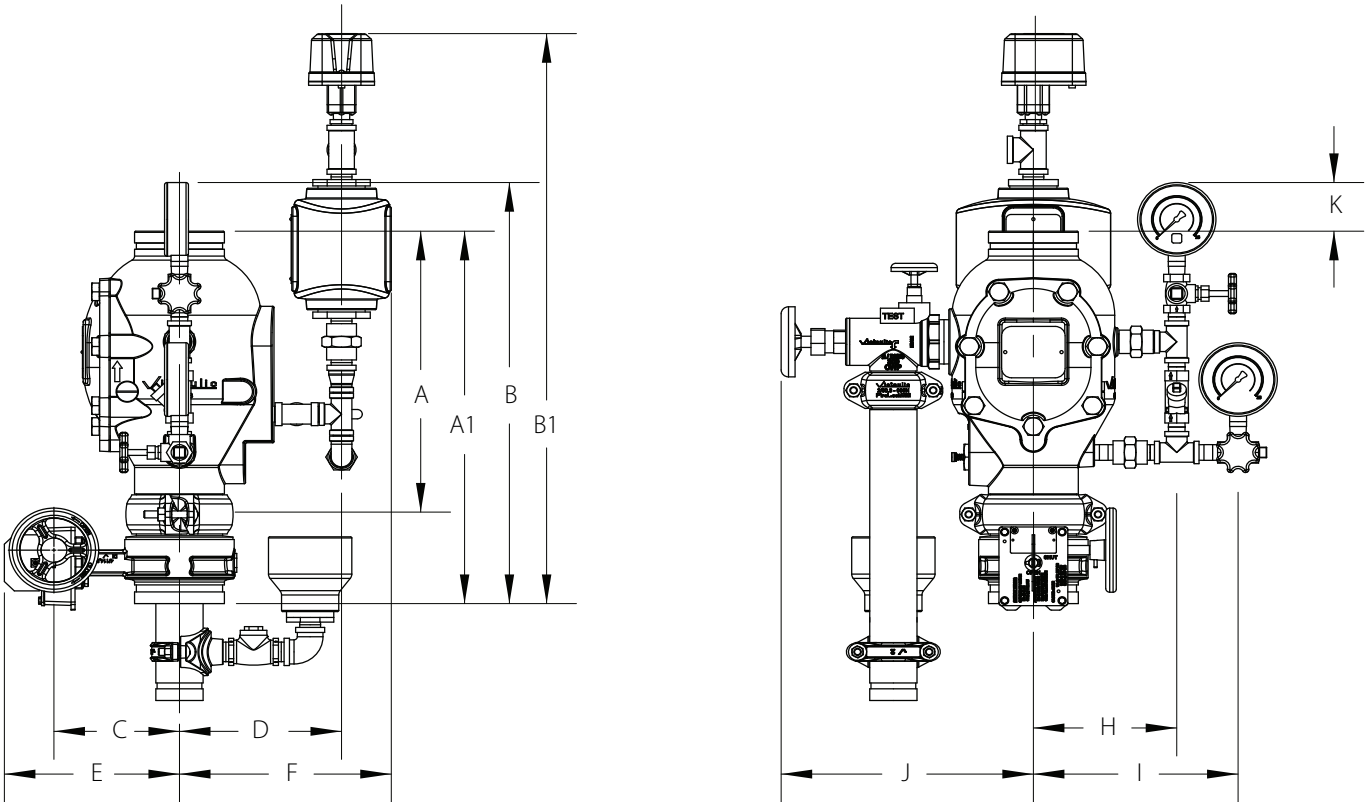
2. Remove all plastic caps and foam spacers from the valve.
3. Install the valve assembly into the riser with two Victaulic rigid couplings, supplied with the coupling, for complete installation requirements. **SERIES 751 FIRELOCK™ EUROPEAN ALARM CHECK VALVE STATIONS SHALL BE INSTALLED ONLY IN THE VERTICAL POSITION WITH THE ARROW ON THE BODY POINTING UPWARD.** In addition, the arrow on the swing check valve in the bypass line shall point upward.
4. For components shipped separate from the valve, apply a small amount of pipe joint compound or PTFE thread sealant tape to the external threads of all threaded connections. **DO NOT** get any tape, compound, or other foreign material into the openings of the threaded connections.

**TRIM ASSEMBLY DRAWING NUMBERS**

Nominal inches DN	Actual Outside Diameter inches mm	Vertical Trim Drawing Number
3 DN80	3.500 88.9	Z-030-751-000
4 DN100	4.500 114.3	Z-040-751-000
	6.500 165.1	Z-060-751-000
6 DN150	6.625 168.3	Z-060-751-000
8 DN200	8.000 203.2	Z-080-751-000

EUROPEAN TRIM DIMENSIONS: VDS, CE, UKCA, FM, EAC VERSION

A 4-INCH/DN100 FIRELOCK™ EUROPEAN ALARM CHECK VALVE STATION WITH OPTIONAL EQUIPMENT IS SHOWN BELOW



Size		Dimensions - inches/mm												Weight
Nominal inches DN	Actual Outside Diameter inches mm	A*	A1	B	B1	C	D	E	F	H	I	J	K	Approx. Each kg lbs
3 DN80	3.500 88.9	12.61 321	16.51 420	17.22 438	28.88 734	5.50 140	7.71 196	7.47 190	10.21 260	6.72 171	9.76 248	11.41 290	0.67 18	79.0 36.0
4 DN100	4.500 114.3	15.03 382	19.94 507	22.53 573	30.50 775	6.31 161	8.15 208	8.80 224	10.65 271	7.21 184	10.29 262	14.08 358	2.60 67	105.0 47.5
6 DN150	6.625 168.3	16.00 407	22.12 562	24.74 629	32.25 820	8.22 209	9.39 239	10.85 276	11.89 303	7.59 193	10.67 272	14.46 368	2.54 65	140.0 63.5
8 DN200	8.625 219.1	17.50 445	23.02 585	24.09 612	31.08 790	9.47 241	10.40 265	12.07 307	12.90 328	9.33 237	12.41 316	15.83 403	0.83 22	210.0 95.5

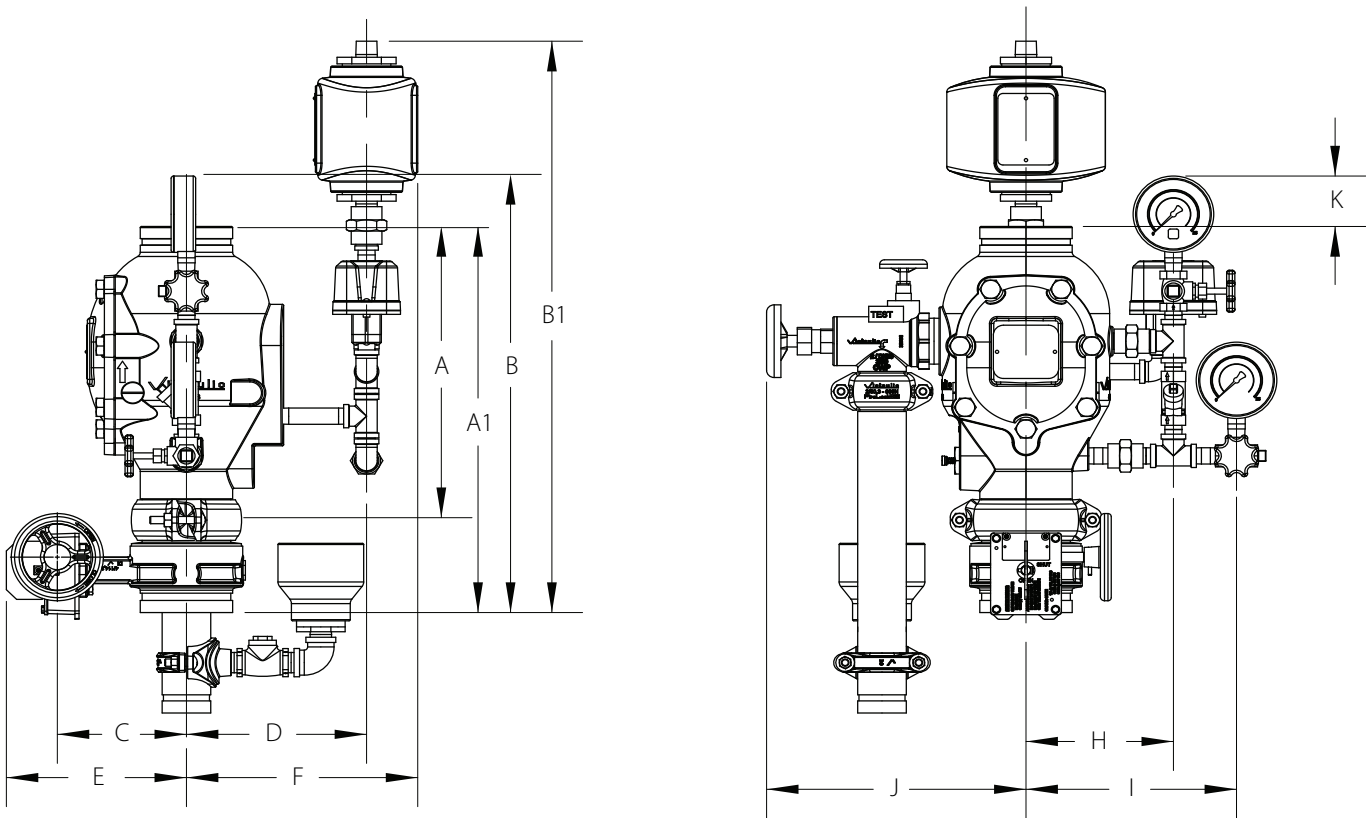
\* The "A" dimension is the measurement from the top of the valve body to the bottom of the valve body (takeout dimension).

NOTE: Overall height "B" is the greatest height if the optional Series 752 VdS Retarding Chamber Assembly is not installed.



EUROPEAN TRIM DIMENSIONS: LPCB VERSION

A 4-INCH/DN100 FIRELOCK™ EUROPEAN ALARM CHECK VALVE STATION WITH OPTIONAL EQUIPMENT IS SHOWN BELOW



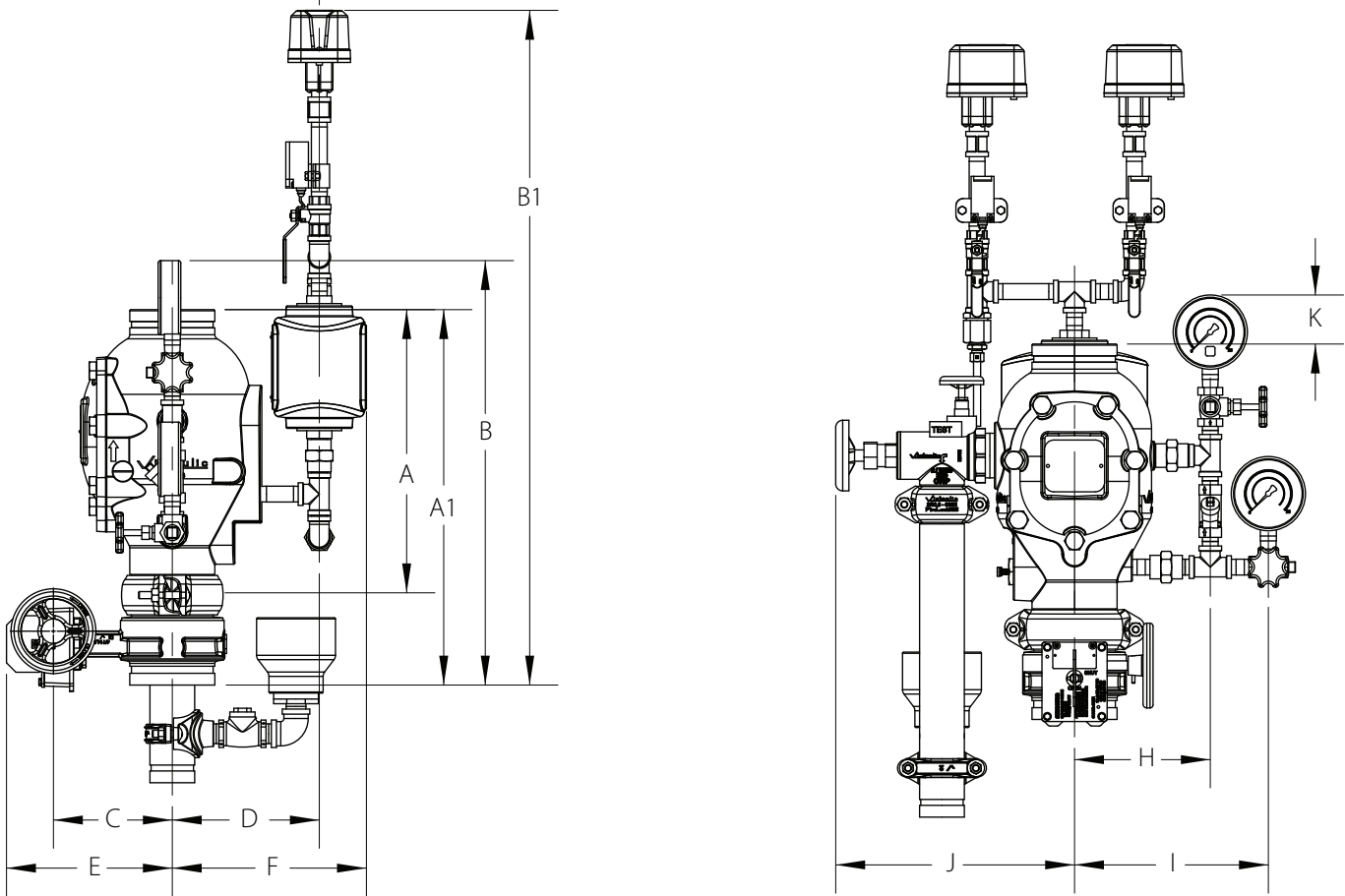
Size		Dimensions - inches/mm												Weight
Nominal inches DN	Actual Outside Diameter inches mm	A*	A1	B	B1	C	D	E	F	H	I	J	K	Approx. Each kg lbs
3 DN80	3.500 88.9	12.61 321	16.51 420	17.22 438	27.87 708	5.50 140	8.36 213	7.47 190	10.86 276	6.72 171	9.76 248	11.41 290	0.67 18	93.0 42.0
4 DN100	4.500 114.3	15.03 382	19.94 507	22.53 573	29.49 749	6.31 161	8.80 224	8.80 224	11.67 297	7.21 184	10.29 262	14.08 358	2.60 67	125.0 56.5
	6.500 165.1	16.00 407	22.12 562	24.74 629	31.24 794	8.22 209	10.04 256	10.85 276	12.54 319	7.59 193	10.67 272	14.46 368	2.54 65	165.0 75.0
8 DN200	8.625 219.1	17.50 445	23.02 585	24.09 612	30.79 783	9.47 241	11.04 281	12.07 307	13.56 345	9.33 237	12.41 316	15.83 403	0.83 22	225.0 102.0

\* The "A" dimension is the measurement from the top of the valve body to the bottom of the valve body (takeout dimension).

NOTE: Overall height "B" is the greatest height if the optional Series 752 VdS Retarding Chamber Assembly is not installed.

EUROPEAN TRIM DIMENSIONS: FG VERSION

A 4-INCH/DN100 FIRELOCK™ EUROPEAN ALARM CHECK VALVE STATION WITH OPTIONAL EQUIPMENT IS SHOWN BELOW



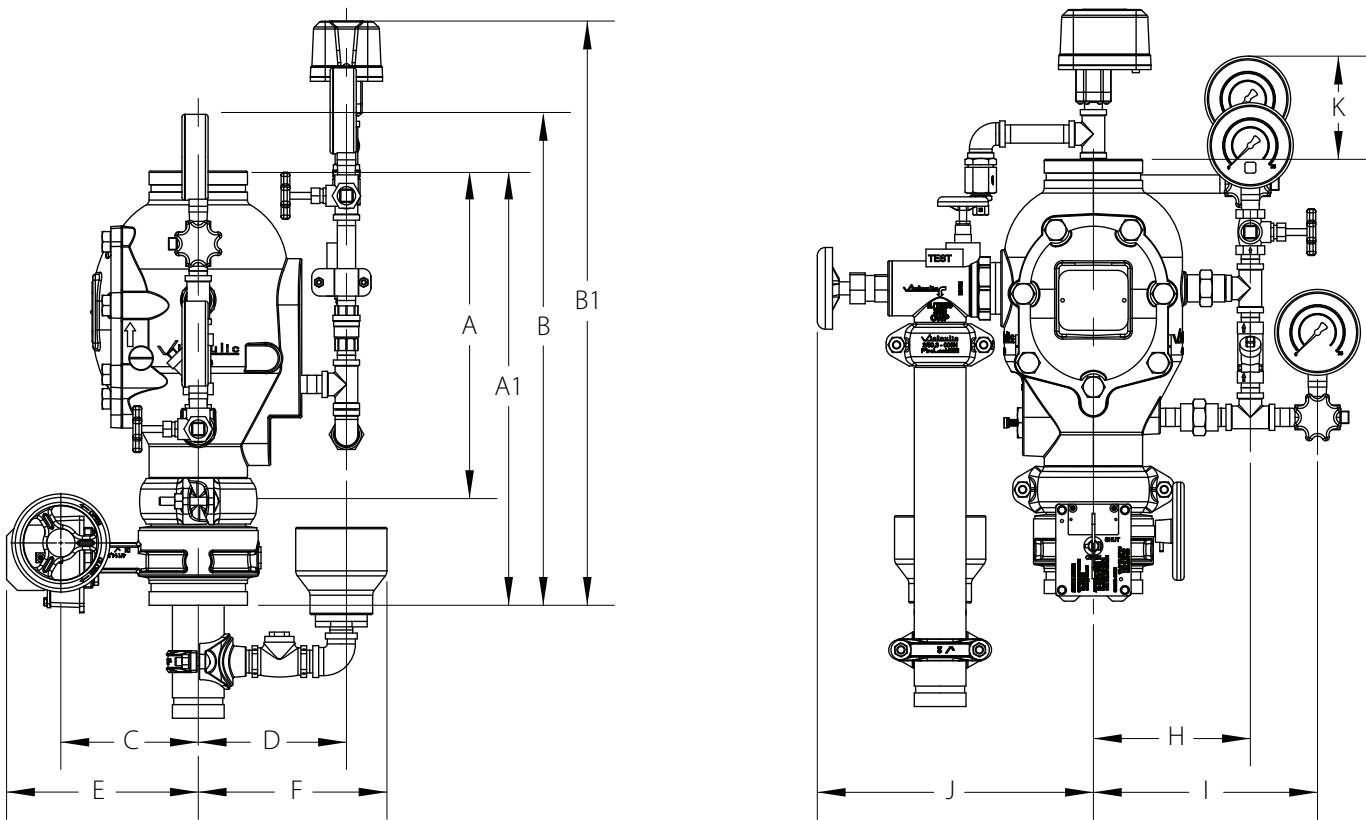
Size		Dimensions - inches/mm												Weight
Nominal inches DN	Actual Outside Diameter inches mm	A*	A1	B	B1	C	D	E	F	H	I	J	K	Approx. Each kg lbs
3 DN80	3.500 88.9	12.61 321	16.51 420	17.22 438	34.20 869	5.50 140	7.36 188	7.47 190	9.86 251	6.72 171	9.76 248	11.41 290	0.67 18	96.0 43.5
4 DN100	4.500 114.3	15.03 382	19.94 507	22.53 573	35.81 910	6.31 161	7.80 199	8.80 224	10.31 262	7.21 184	10.29 262	14.08 358	2.60 67	130.0 59.0
6 DN150	6.625 168.3	16.00 407	22.12 562	24.74 629	35.57 955	8.22 209	10.04 256	10.85 276	11.54 294	7.59 193	10.67 272	14.46 368	2.54 65	165.0 75.0
8 DN200	8.625 219.1	17.50 445	23.02 585	24.09 612	37.12 943	9.47 241	10.05 256	12.07 307	12.55 319	9.33 237	12.41 316	15.83 403	0.83 22	230.0 104.5

\* The "A" dimension is the measurement from the top of the valve body to the bottom of the valve body (takeout dimension).  
For FG trim, an additional coupling and water supply main control valve are available as an option for installation above the Series 751 FireLock European Alarm Check Valve (system side). The addition of this option will not affect the B1 dimension shown.



EUROPEAN TRIM DIMENSIONS: SBSC VERSION

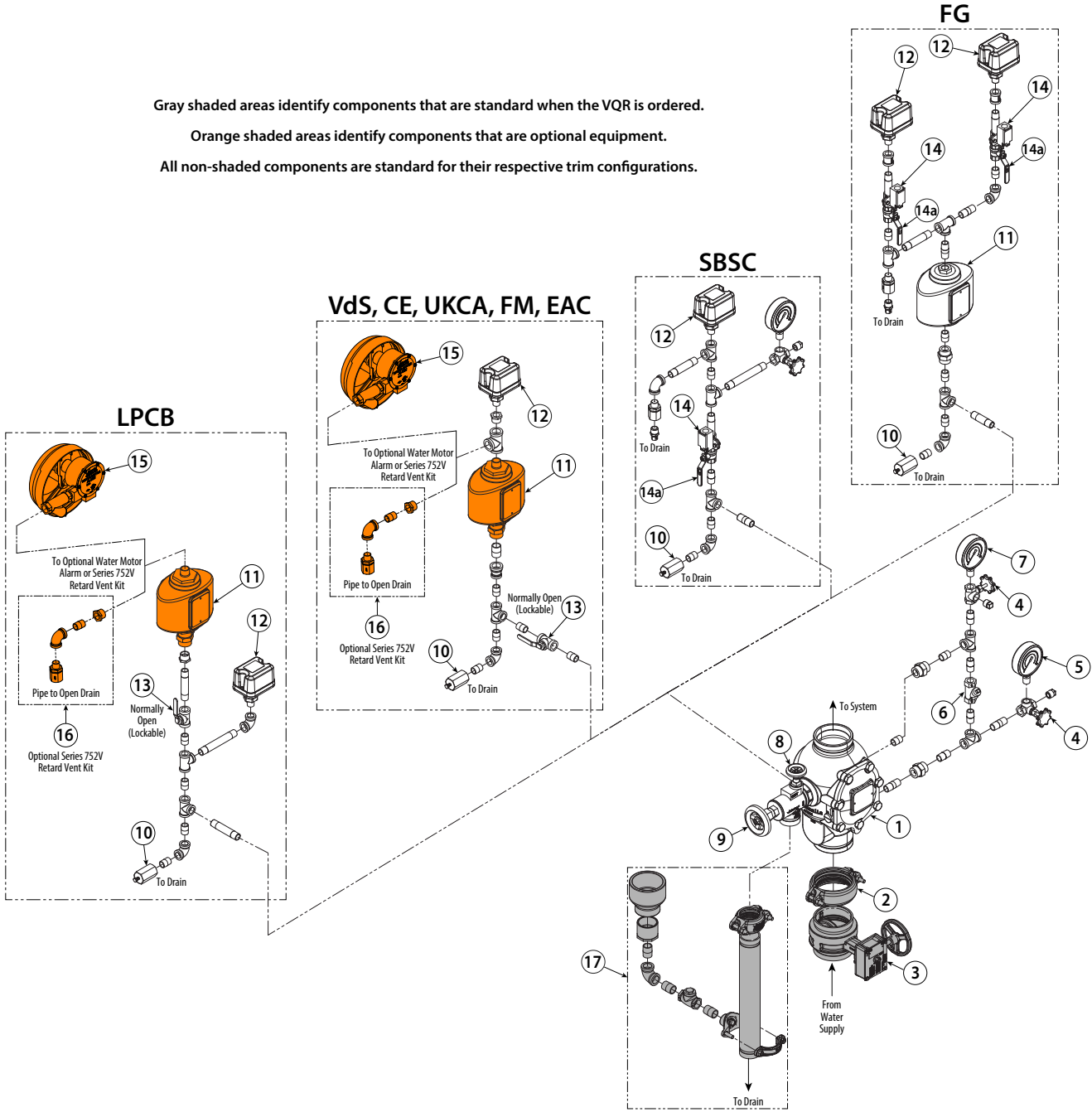
A 4-INCH/DN100 FIRELOCK™ EUROPEAN ALARM CHECK VALVE STATION WITH OPTIONAL EQUIPMENT IS SHOWN BELOW



Size		Dimensions - inches/mm												Weight
Nominal inches DN	Actual Outside Diameter inches mm	A*	A1	B	B1	C	D	E	F	H	I	J	K	Approx. Each kg lbs
3	3.500	12.61	16.51	17.22	25.19	5.50	6.36	7.47	6.21	6.72	9.76	11.41	6.50	85.0
DN80	88.9	321	420	438	640	140	162	190	158	171	248	290	165	38.5
4	4.500	15.03	19.94	22.53	26.81	6.31	6.80	8.80	8.66	7.21	10.29	14.08	4.72	115.0
DN100	114.3	382	507	573	681	161	173	224	220	184	262	358	120	52.0
6	6.625	16.00	22.12	24.74	28.56	8.22	8.04	10.85	8.66	7.59	10.67	14.46	4.22	155.0
DN150	168.3	407	562	629	726	209	205	276	220	193	272	368	108	70.5
8	8.625	17.50	23.02	24.09	28.12	9.47	9.05	12.07	8.66	9.33	12.41	15.83	2.71	220.0
DN200	219.1	445	585	612	715	241	230	307	220	237	316	403	69	100.0

\* The "A" dimension is the measurement from the top of the valve body to the bottom of the valve body (takeout dimension).  
For SBSC trim, an additional coupling and water supply main control valve are available as an option for installation above the Series 751 FireLock European Alarm Check Valve (system side). The addition of this option will not affect the B1 dimension shown.

Orange shaded areas identify components that are optional equipment.



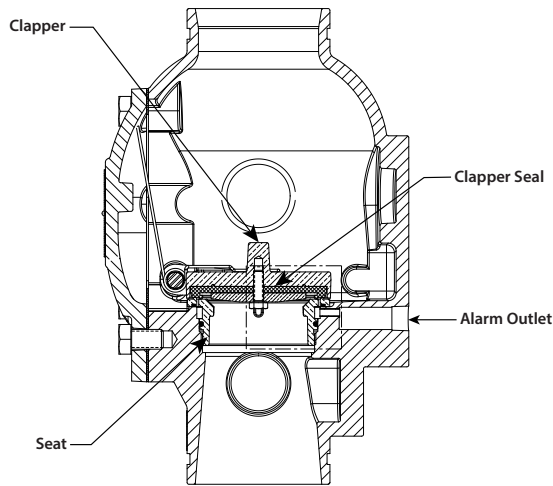
Item	Description
1	Series 751 FireLock™ European Alarm Check Valve
2	FireLock™ Rigid Coupling <sup>1</sup>
3	Water Supply Main Control Valve <sup>1</sup>
4	Gauge Valve
5	Water Supply Pressure Gauge
6	Swing Check Valve
7	System Pressure Gauge
8	System Test Valve
9	System Main Drain Valve

Item	Description
10	Restricted Orifice/Alarm Line Drain
11	Series 752 VdS Retarding Chamber
12	Alarm Pressure Switch
13	Alarm Line Ball Valve
14	Alarm Line Monitoring Limit Switch Assembly
14a	Alarm Line Monitoring Ball Valve
15	Series 760 Water Motor Alarm
16	Series 752V Retarding Vent Kit <sup>2</sup>
17	Drain Connection Kit

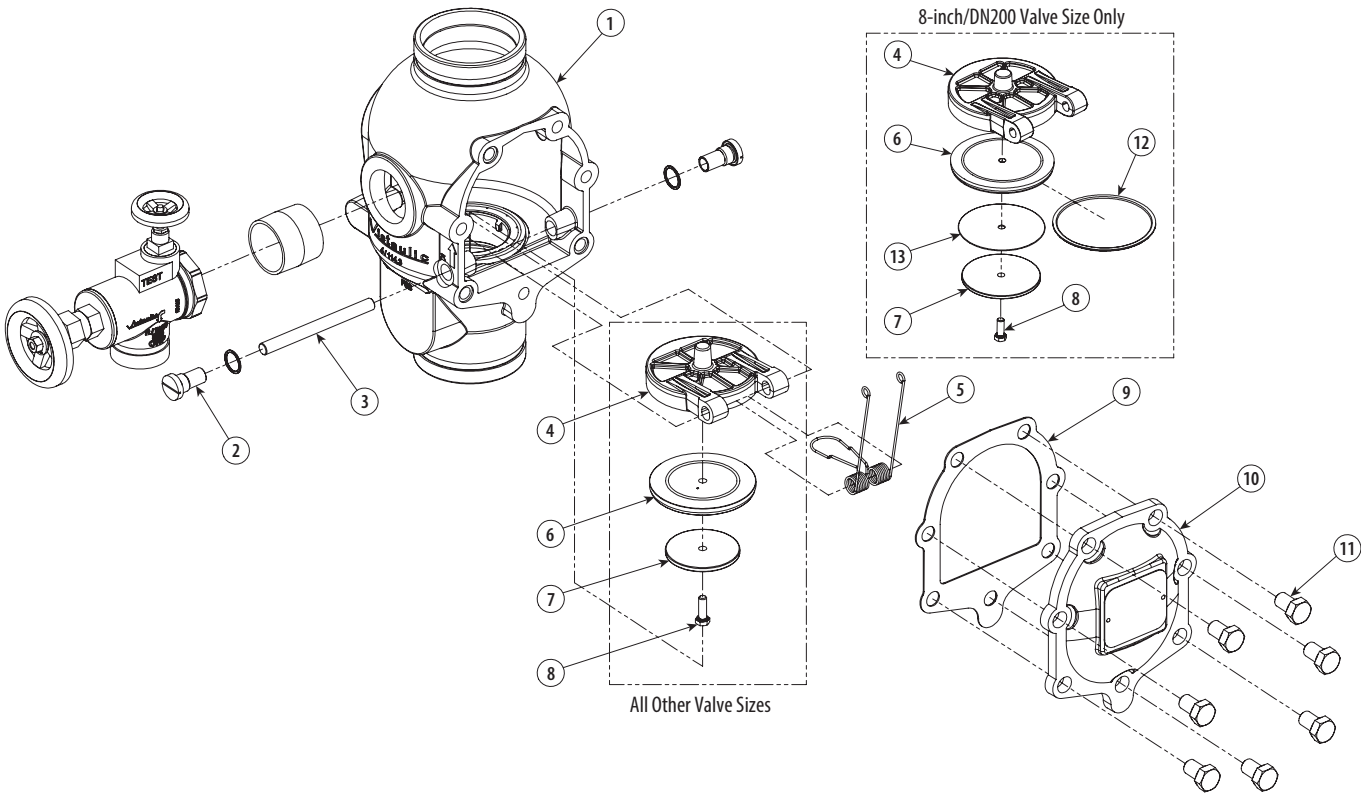
<sup>1</sup> Items 2 and 3 are provided standard when the SBSC and FG trim are ordered. For the SBSC and FG trim, an additional coupling and water supply main control valve are available as an option for installation above the Series 751 *FireLock* European Alarm Check Valve (system side).

<sup>2</sup> The Series 752V Retarding Vent Kit is required any time an air break is needed above the Series 752 VdS Retarding Chamber. In addition, the Series 752V Retarding Vent Kit is required if multiple valves are tied into one water motor alarm and a check valve isolates each line.

INTERNAL VALVE COMPONENTS – SECTION VIEW AND EXPLODED VIEW DRAWINGS



Exaggerated for Clarity  
Valve is shown in the "set" position



Item	Description
1	Valve Body
2	Clapper Shaft Retaining Bushings
3	Clapper Shaft
4	Clapper
5	Clapper Spring
6	Clapper Seal
7	Clapper Seal Retaining Ring

Item	Description
8	Self-Sealing Screw
9	Cover Plate Gasket
10	Cover Plate
11	Cover Plate Bolts
12	Clapper Seal Ring
13	Clapper Seal Washer

# SECTION I

- Initial System Setup

INITIAL SYSTEM SETUP

⚠️ WARNING

- Series 751 FireLock™ European Alarm Check Valve Stations and supply piping shall be protected from freezing temperatures and mechanical damage.
- For proper operation of alarms in a wet system, it is important to remove all air from the system. Auxiliary drains may be required to release all trapped air from the system.
- Alarms and electrical panels that are controlled by an alarm flow switch on the riser shall not be interrupted. If alarm activation is possible, notify local fire companies that the system is being serviced.

Failure to follow these instructions could cause improper valve operation, resulting in death or serious personal injury and property damage

- Step 1:  
Open the system main drain valve (Item 9). Confirm that the system is drained.
- Step 2:  
Close the system main drain valve (Item 9).
- Step 3:  
Confirm that system drains are shut and the system is free of leaks.
- Step 3a:  
Confirm that the system has been depressurized. The gauges should indicate zero pressure.
- Step 4:  
Open the remote system test valve (inspector's test connection) and any auxiliary drains to remove all air from the system.
- Step 5:  
Close the alarm line ball valve (Item 13) to prevent alarms from operating while the system is filling. **FOR FG AND SBSC TRIM:** Close the alarm line monitoring ball valve(s)– Item 14a on page 7.

- Step 6:  
Open the water supply main control valve (Item 3) slowly. Allow the system to fill with water completely. Allow water to flow from the remote system test valve (inspector's test connection) and any auxiliary drains until all trapped air is removed from the system.
- Step 7:  
Close the remote system test valve (inspector's test connection) and any auxiliary drains. **NOTE:** The system pressure gauge (Item 7) reading should be equal to or greater than the water supply pressure gauge (Item 5) reading.
- Step 8:  
Open the water supply main control valve (Item 3) fully.

⚠️ WARNING

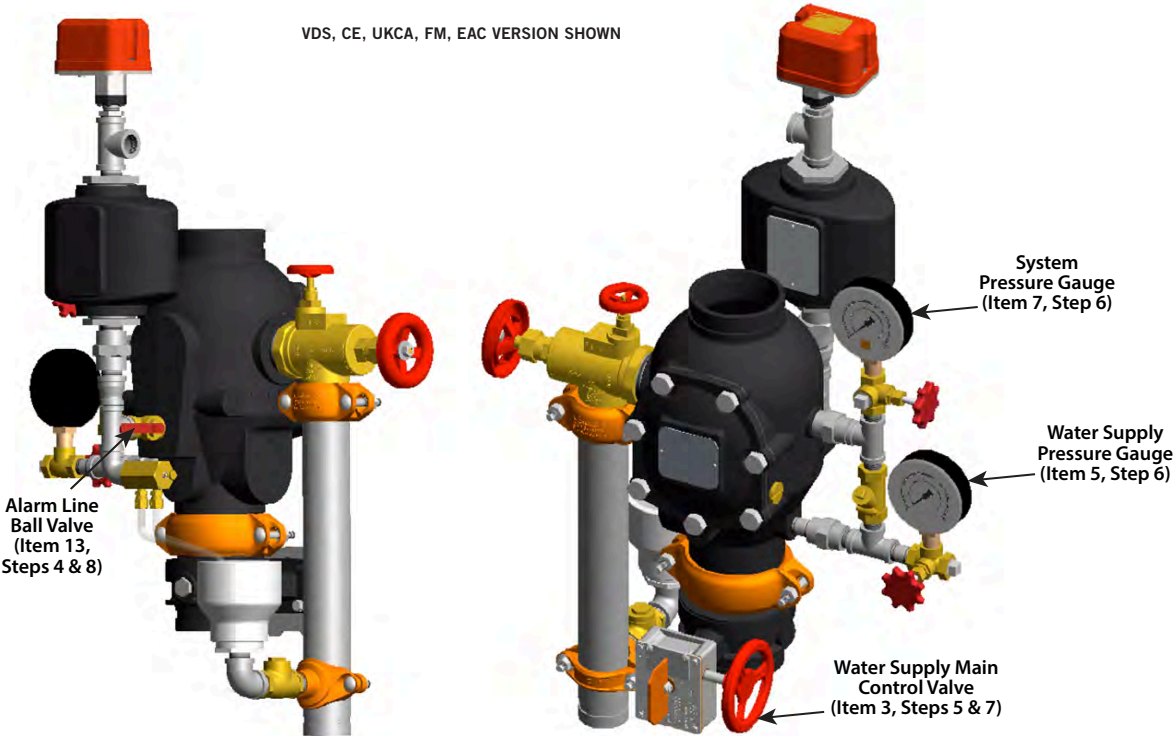
- The alarm line ball valve or alarm line monitoring ball valve(s) shall remain in the open position to allow alarms to activate.

Failure to follow this instruction will prevent alarms from activating, resulting in death or serious personal injury and property damage.

- Step 9:  
Open the alarm line ball valve (Item 13). Lock the ball valve, if required. **FOR FG AND SBSC TRIM:** Open the alarm line monitoring ball valve(s)– Item 14a on page 7.
- Step 10:  
Confirm that all valves are in their normal operating positions (refer to the table below).

Valve	Normal Operating Position
Alarm Line Ball Valve (Lockable)	Open
Water Supply Main Control Valve	Open
System Main Drain Valve	Closed
System Test Valve	Closed
Alarm Line Monitoring Ball Valve(s) - FG and SBSC Trim Only	Open

- Step 11:  
Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the system is in service.



# SECTION II

- **Resetting the System**



## RESETTING THE SYSTEM

### Step 1:

Close the water supply main control valve (Item 3).

### Step 2:

Open the system main drain valve (Item 9). Confirm that the system is drained.

### Step 3:

Close the system main drain valve (Item 9).

### Step 4:

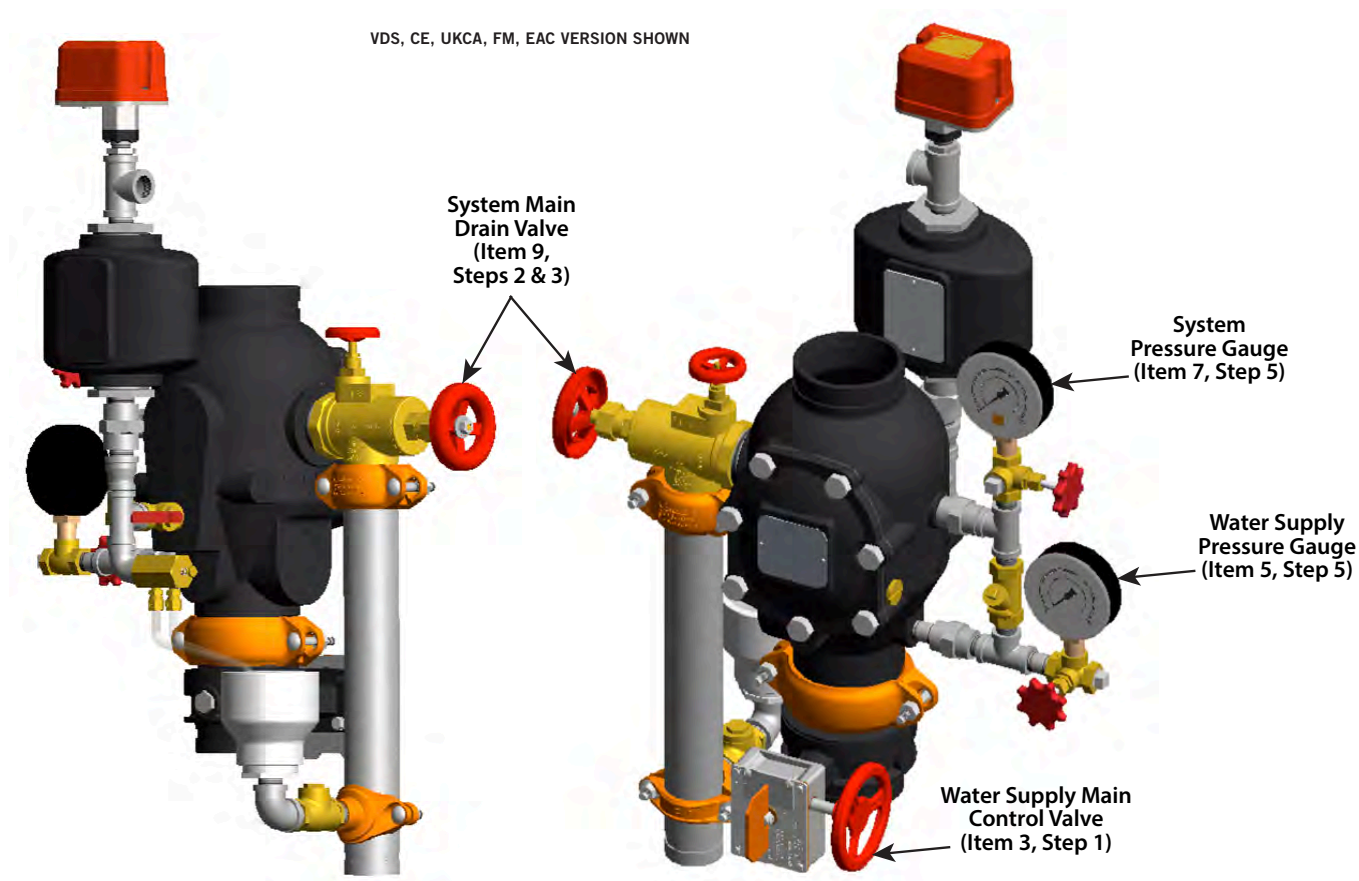
Confirm that all system drains are shut and that the system is free from leaks.

### Step 5:

Confirm that the system has been depressurized. The gauges (Items 5 and 7) should indicate zero pressure.

### Step 6:

Follow steps 5 – 11 of Section I, Initial System Setup.



# SECTION III

- **Inspection/Testing Requirements**

## **WARNING**

- The building owner or their representative is responsible for maintaining the fire protection system in proper operating condition.
- To ensure proper system operation, reference current, applicable local and national fire protection standards, along with applicable building and fire codes, for valve inspection requirements. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area, and always refer to the instructions in this manual for additional inspection and testing requirements.
- The frequency of inspections shall be increased in the presence of contaminated water supplies, corrosive/scaling water supplies, and corrosive atmospheres.

Failure to follow these instructions could cause system failure, resulting in death or serious personal injury and property damage.

## DAILY/WEEKLY INSPECTION

Refer to current, applicable local and national fire protection standards to perform daily/weekly inspections. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area.

1. During cold weather conditions, verify on a daily basis that the enclosure temperature is maintained above 40° F/4°C.
2. Inspect the valve and trim for mechanical damage and corrosion. Replace any damaged or corroded parts.

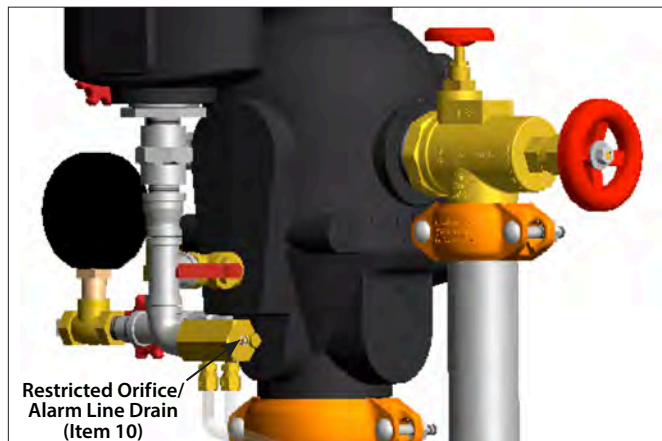
### NOTICE

- If the alarm valve is equipped with a low-pressure alarm, monthly inspections may be sufficient. Contact the local authority having jurisdiction for specific requirements.

## MONTHLY INSPECTION

Refer to current, applicable local and national fire protection standards to perform monthly inspections. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area.

1. Record the system pressure and water supply pressure. Confirm that the water supply pressure is within the range of normal pressures observed in the area. Significant loss of water supply pressure could indicate an adverse condition in the water supply. Any variations outside of the normal pressures shall be investigated.
2. Inspect the valve and trim for mechanical damage and corrosion. Replace any damaged or corroded parts.
3. Confirm that the valve and trim are located in an area that is not subject to freezing temperatures.



4. If the alarm valve is installed in a variable pressure system, confirm that continuous leakage is not occurring from the restricted orifice/ alarm line drain (Item 10). **NOTE:** It is normal for intermittent leakage to occur from the restricted orifice/alarm line drain due to pressure surges that lift the clapper and allow water into the intermediate chamber.

5. Confirm that all valves are in their normal operating positions (refer to the table below).

Valve	Normal Operating Position
Alarm Line Ball Valve (Lockable)	Open
Water Supply Main Control Valve	Open
System Main Drain Valve	Closed
System Test Valve	Closed
Alarm Line Monitoring Ball Valve(s) - FG and SBSC Trim Only	Open

## ANNUAL INSPECTION

Refer to current, applicable local and national fire protection standards to perform annual inspections. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area.

1. Perform the required main drain test in accordance with Section IV of this manual.
2. Perform an internal inspection of the alarm check valve in accordance with Section VI of this manual.

# SECTION IV

- **Required Main Drain Test**

## **WARNING**

- The building owner or their representative is responsible for maintaining the fire protection system in proper operating condition.
- To ensure proper system operation, reference current, applicable local and national fire protection standards, along with applicable building and fire codes, for valve inspection requirements. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area, and always refer to the instructions in this manual for additional inspection and testing requirements.
- The frequency of inspections shall be increased in the presence of contaminated water supplies, corrosive/scaling water supplies, and corrosive atmospheres.
- Any activities that require taking the valve out of service may eliminate the fire protection provided. A fire patrol is strongly recommended for the affected areas.
- Before servicing or testing the system, notify the authority having jurisdiction.

Failure to follow these instructions could cause system failure, resulting in death or serious personal injury and property damage.

### REQUIRED MAIN DRAIN TEST

Refer to current, applicable local and national fire protection standards to perform main drain tests. The authority having jurisdiction in the area may require these tests on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area.

1. Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the main drain test will be performed.
2. Confirm that sufficient drainage is available.
3. Record the water supply pressure gauge (Item 5) and system pressure gauge (Item 7) readings.

### NOTICE

- Close the alarm line ball valve at this point to prevent alarms from activating during the main drain test.
- **FOR FG AND SBSC TRIM:** Close the alarm line monitoring ball valve(s) at this point to prevent alarms from activating during the main drain test.

4. To prevent alarms from activating during the main drain test, close the alarm line ball valve (Item 13). **FOR FG AND SBSC TRIM:** Close the alarm line monitoring ball valve(s) – Item 14a on page 7.
5. Open the system main drain valve (Item 9) fully. Record the water supply pressure gauge (Item 5) reading as the residual pressure.
6. Close the system main drain valve (Item 9) slowly. Record the water supply pressure gauge (Item 5) reading after closing the system main drain valve.
7. Compare the residual pressure reading to the residual pressure readings taken in previous main drain tests. If there is degradation in the residual water supply reading, restore the proper water supply pressure.

### WARNING

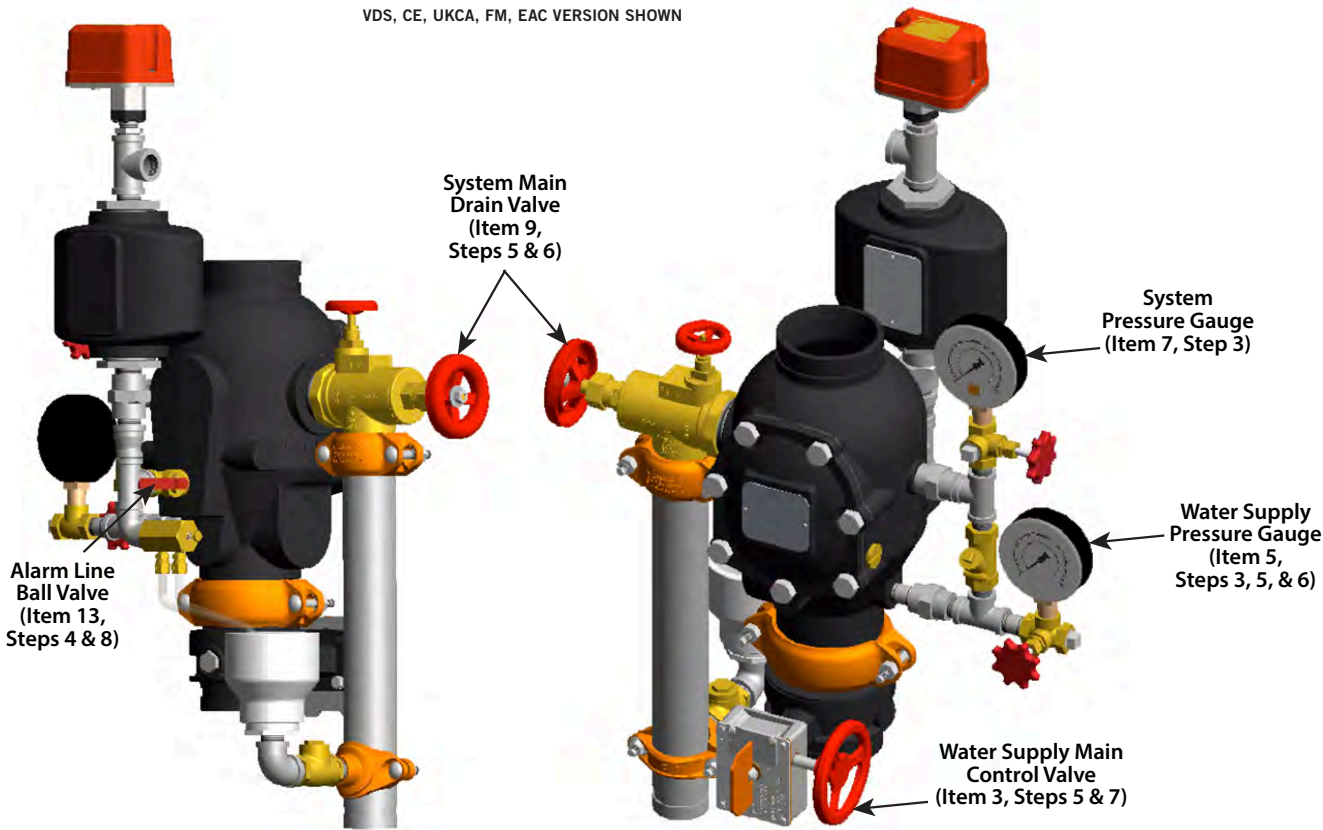
- The alarm line ball valve or alarm line monitoring ball valve(s) shall remain in the open position to allow alarms to activate.  
**Failure to follow this instruction will prevent alarms from activating, resulting in death or serious personal injury and property damage.**

8. Open the alarm line ball valve (Item 13). **FOR FG AND SBSC TRIM:** Open the alarm line monitoring ball valve(s) – Item 14a on page 7.
9. Confirm that all valves are in their normal operating positions (refer to the table below).

Valve	Normal Operating Position
Alarm Line Ball Valve (Lockable)	Open
Water Supply Main Control Valve	Open
System Main Drain Valve	Closed
System Test Valve	Closed
Alarm Line Monitoring Ball Valve(s) - FG and SBSC Trim Only	Open

10. Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the valve is back in service. Provide test results to the authority having jurisdiction, if required.

VDS, CE, UKCA, FM, EAC VERSION SHOWN



# SECTION V

- **Required Water Flow Alarm Test**

## **WARNING**

- The building owner or their representative is responsible for maintaining the fire protection system in proper operating condition.
- To ensure proper system operation, reference current, applicable local and national fire protection standards, along with applicable building and fire codes, for valve inspection requirements. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area, and always refer to the instructions in this manual for additional inspection and testing requirements.
- The frequency of inspections shall be increased in the presence of contaminated water supplies, corrosive/scaling water supplies, and corrosive atmospheres.
- Any activities that require taking the valve out of service may eliminate the fire protection provided. A fire patrol is strongly recommended for the affected areas.
- Before servicing or testing the system, notify the authority having jurisdiction.

Failure to follow these instructions could cause system failure, resulting in death or serious personal injury and property damage.



REQUIRED WATER FLOW ALARM TEST

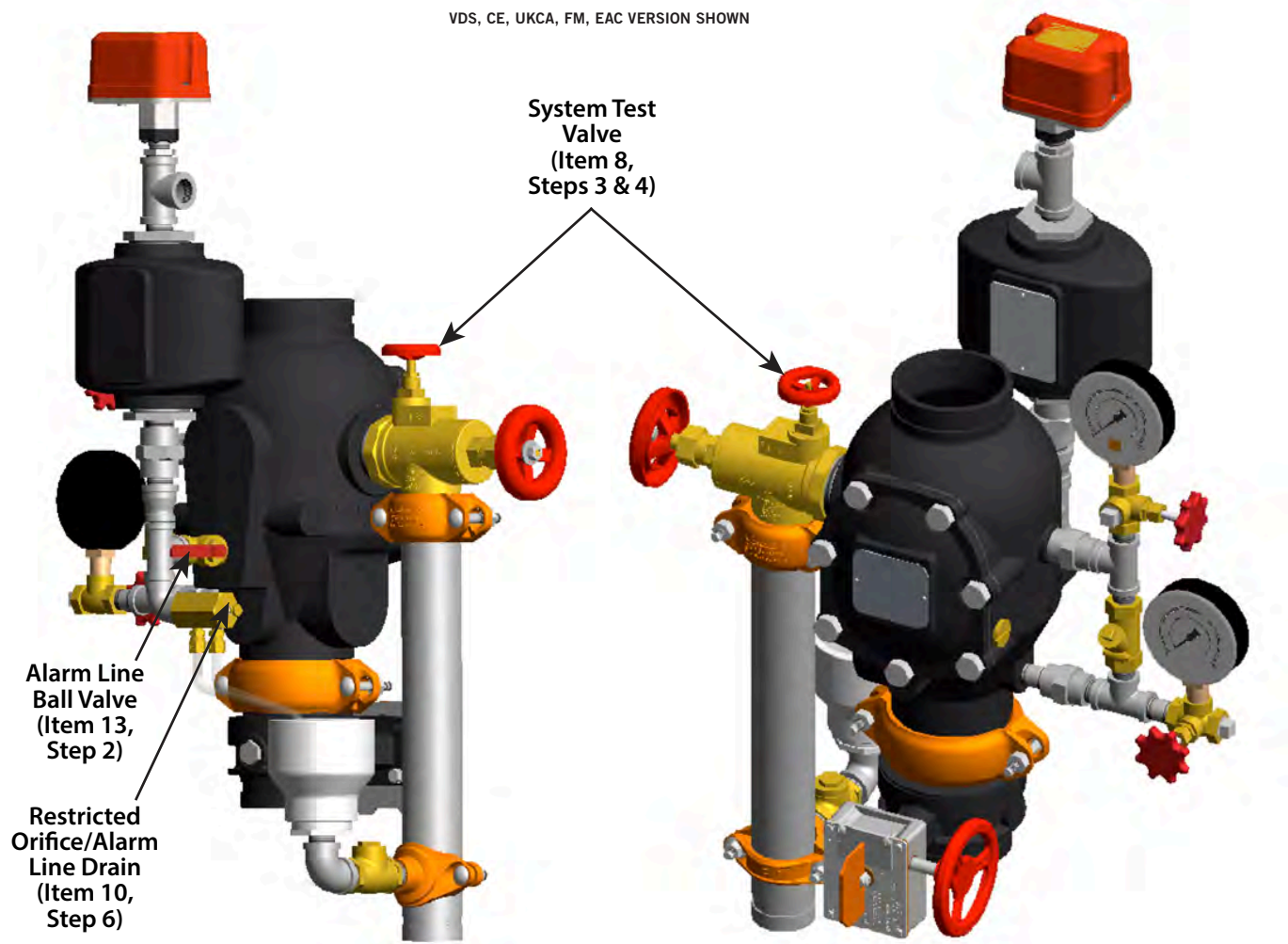
Refer to current, applicable local and national fire protection standards to perform water flow alarm tests. The authority having jurisdiction in the area may require these tests on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area.

- 1. Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the water flow alarm test will be performed.
- 2. Verify that the alarm line ball valve (Item 13) is open. **FOR FG AND SBSC TRIM:** Verify that the alarm line monitoring ball valve(s) is/ are open – Item 14a on page 7.
- 3. Open the system test valve (Item 8) fully. Confirm that mechanical and electrical alarms are activated and that remote monitoring stations, if provided, receive an alarm signal. **NOTE:** There may be a time delay if a Series 752 VdS Retarding Chamber Assembly is installed.
- 4. Close the system test valve (Item 8) after proper operation of all alarms is verified.
- 5. Verify that all alarms stopped sounding, that the alarm line drained properly, and that remote station alarm reset properly.
- 6. Push in the plunger of the restricted orifice/alarm line drain (Item 10). Verify that water is not flowing from the restricted orifice/alarm line drain. If water is flowing, refer Section VIII, Troubleshooting.

- 7. Confirm that all valves are in their normal operating positions (refer to the table below).




Valve	Normal Operating Position
Alarm Line Ball Valve (Lockable)	Open
Water Supply Main Control Valve	Open
System Main Drain Valve	Closed
System Test Valve	Closed
Alarm Line Monitoring Ball Valve(s) - FG and SBSC Trim Only	Open

- 10. Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the valve is back in service. Provide test results to the authority having jurisdiction, if required.



# SECTION VI

- **Required Internal Inspection**

 <b>WARNING</b>	
	
<ul style="list-style-type: none"><li>• Depressurize and drain the piping system before attempting to remove the cover plate from the valve.</li><li>• The building owner or their representative is responsible for maintaining the fire protection system in proper operating condition.</li><li>• To ensure proper system operation, reference current, applicable local and national fire protection standards, along with applicable building and fire codes, for valve inspection requirements. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area, and always refer to the instructions in this manual for additional inspection and testing requirements.</li><li>• The frequency of inspections shall be increased in the presence of contaminated water supplies, corrosive/scaling water supplies, and corrosive atmospheres.</li><li>• Any activities that require taking the valve out of service may eliminate the fire protection provided. A fire patrol is strongly recommended for the affected areas.</li><li>• Before servicing or testing the system, notify the authority having jurisdiction.</li></ul> <p>Failure to follow these instructions could cause system failure, resulting in death or serious personal injury and property damage.</p>	

## REQUIRED INTERNAL INSPECTION

Refer to current, applicable local and national fire protection standards to perform internal inspections. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area.

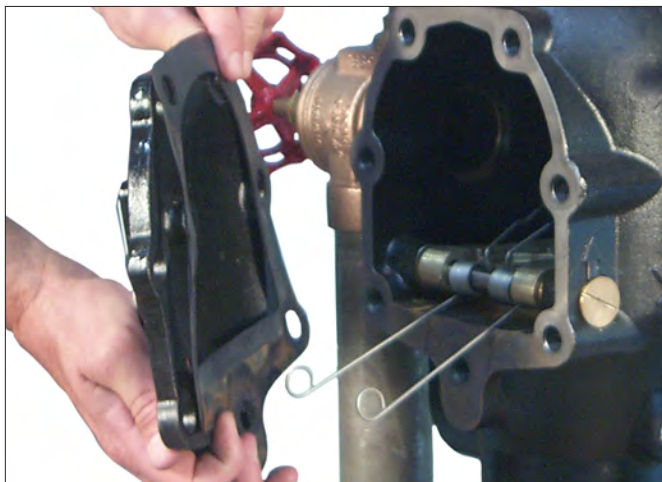
1. Notify the authority having jurisdiction, remote station alarm monitors, and those in the affected area that the system is being taken out of service.
2. Close the water supply main control valve to take the system out of service.
3. Open the system main drain valve to allow the system to drain completely. **NOTE:** If the system has operated, open the remote system test valve (inspector's test connection) and any auxiliary drain valves.

### ⚠ WARNING

- Verify that the valve is depressurized and drained completely before the cover plate bolts are removed.

Failure to follow this instruction could result in death or serious personal injury and property damage.

4. After all pressure is released from the system, loosen the cover plate bolts slowly. **NOTE:** DO NOT remove any cover plate bolts until all cover plate bolts are loosened.



5. Remove all cover plate bolts, along with the cover plate and cover plate gasket.

### ⚠ CAUTION

- DO NOT use solvents or abrasives on or near the valve body seat ring.


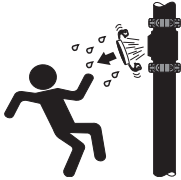

Failure to follow this instruction could prevent the clapper from sealing, resulting in valve leakage.



6. Rotate the clapper out of the valve body. Inspect the clapper seal and seal retaining ring. Wipe away any contaminants, dirt, and mineral deposits. Clean out any holes that are plugged in the valve body seat ring. **DO NOT USE SOLVENTS OR ABRASIVES.**
7. Inspect the clapper for freedom of movement and physical damage. Replace any damaged or worn parts by following the applicable instructions in Section VII.
8. Re-install the cover plate by following the "Installing the Cover Plate Gasket and Cover Plate" instructions in Section VII.
9. Place the system back in service by following Section II, Resetting the System.

# SECTION VII

- Removing and Replacing the Clapper Seal (All Sizes)
- Removing and Replacing the Clapper Assembly (All Sizes)
- Installing the Cover Plate Gasket and Cover Plate

 <b>WARNING</b>	
	
<ul style="list-style-type: none"><li>• Before servicing or testing the system, notify the authority having jurisdiction.</li><li>• Depressurize and drain the piping system before attempting to remove the cover plate from the valve.</li><li>• The building owner or their representative is responsible for maintaining the fire protection system in proper operating condition.</li><li>• To ensure proper system operation, reference current, applicable local and national fire protection standards, along with applicable building and fire codes, for valve inspection requirements. The authority having jurisdiction in the area may require these inspections on a more frequent basis. Verify these requirements by contacting the authority having jurisdiction in the affected area, and always refer to the instructions in this manual for additional inspection and testing requirements.</li><li>• The frequency of inspections shall be increased in the presence of contaminated water supplies, corrosive/scaling water supplies, and corrosive atmospheres.</li><li>• Any activities that require taking the valve out of service may eliminate the fire protection provided. A fire patrol is strongly recommended for the affected areas.</li></ul> <p>Failure to follow these instructions could cause system failure, resulting in death or serious personal injury and property damage.</p>	



## REMOVING AND REPLACING THE CLAPPER SEAL (ALL SIZES)

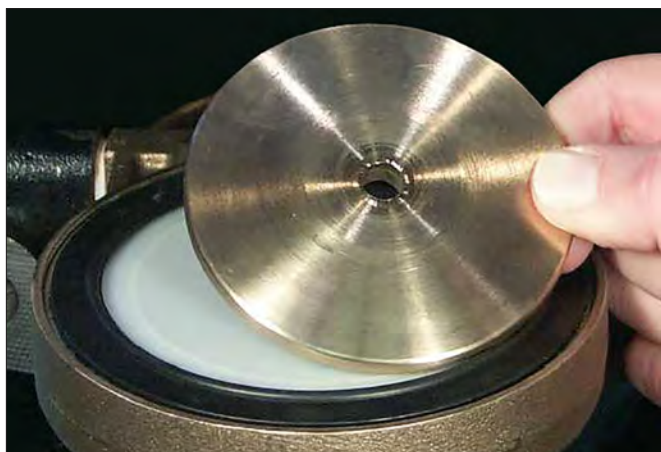
### NOTICE

- The clapper assembly for an 8-inch/DN200 valve is shown in the photos featured in this section.

1. Perform steps 1 – 6 of Section VI, Required Internal Inspection.



2. Remove the self-sealing screw from the clapper seal.



3. Remove the seal retaining ring. Save the seal retaining ring for re-installation.

### ⚠ CAUTION

- DO NOT pry the seal washer out of the clapper seal from the inner hole (for the 8-inch/DN200 valve size only).

Failure to follow this instruction could damage the seal washer, resulting in improper clapper sealing and valve leakage.



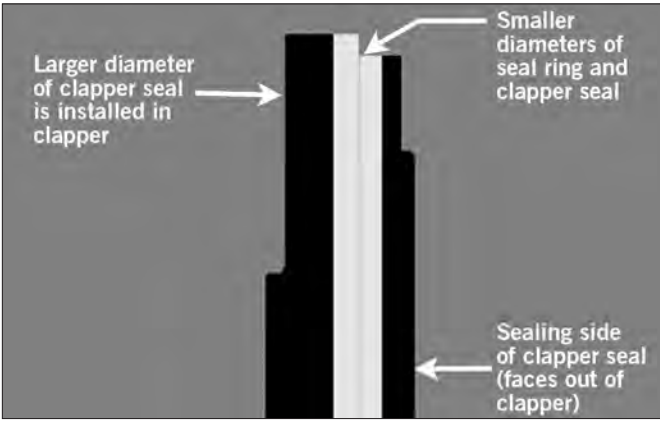
4. **For the 8-inch/DN200 Size Only:** Pry the edge of the old seal washer from inside the clapper seal, as shown above.



5. **For the 8-inch/DN200 Size Only:** Remove and discard the old seal washer.



6. Pry the old clapper seal out of the clapper. For the 8-inch/DN200 size, verify that the seal ring is removed with the clapper seal. Discard the old clapper seal and replace it with a new, Victaulic-supplied clapper seal assembly. Proceed to step 6a for the 8-inch/DN200 size or step 7 for all other sizes.



6a. For the 8-inch/DN200 Size Only: Verify that the seal ring is installed in the new clapper seal properly, as shown above. The smaller diameter of the seal ring must be installed toward the sealing surface of the clapper seal. Proceed to step 7.



7. For the 8-inch/DN200 Size Only: Verify that the seal washer is inserted completely underneath the sealing lip of the gasket.

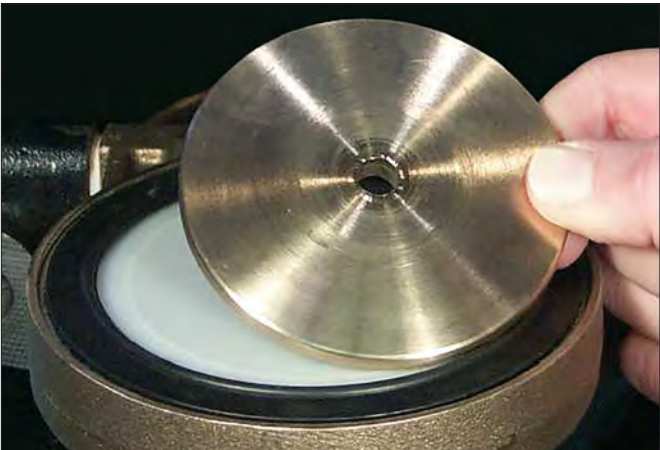
**CAUTION**

- DO NOT use solvents or abrasives on or near the valve body seat ring.
  - Use only Victaulic-supplied replacement parts.
- Failure to follow these instructions could cause improper valve operation, resulting in property damage.

8. Remove any debris from the clapper. Inspect the clapper for damage that may affect the sealing capabilities of the clapper seal. Clean out any holes that are plugged in the valve body seat ring. **DO NOT USE SOLVENTS OR ABRASIVES.** If the clapper requires replacement, contact Victaulic and follow the “Removing and Replacing the Clapper Assembly (All Sizes)” instructions on the following page.



9. Install the clapper seal into the clapper carefully. **FOR THE 8-INCH/DN200 SIZE:** Verify that the seal ring snaps into the clapper completely.



10. Place the seal retaining ring (flat side down) onto the clapper assembly, as shown above.



11. Install the self-sealing screw through the seal retaining ring and clapper. Tighten the self-sealing screw to the torque value listed in the table below to ensure a proper seal.

**REQUIRED SELF-SEALING SCREW TORQUES FOR 3 – 6-INCH/ DN80 – DN150 AND 165.1-MM SIZES**

Nominal inches DN	Actual Outside Diameter inches mm	Required Torque inch-lbs N•m
3 - 6 DN80 - DN150	3.500 - 6.625 88.9 - 168.3	75 8
	6.500 165.1	75 8

**REQUIRED SELF-SEALING SCREW TORQUES FOR 3-INCH/DN80 AND 8-INCH/DN200 SIZES**

Nominal inches DN	Actual Outside Diameter inches mm	Required Torque inch-lbs N•m
8 DN200	8.625 219.1	160 18

12. Re-install the cover plate by following the “Installing the Cover Plate Gasket and Cover Plate” instructions on page 25.

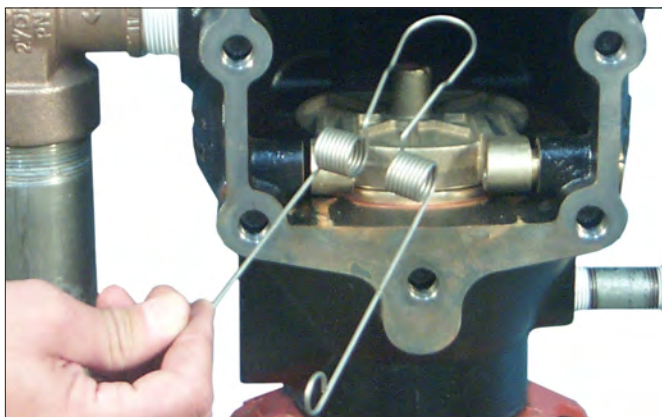
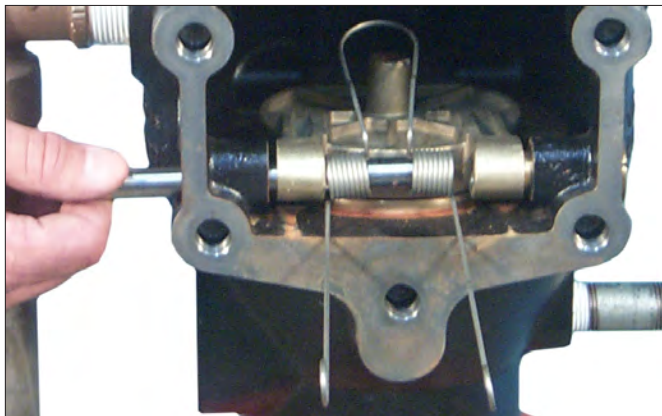


## REMOVING AND REPLACING THE CLAPPER ASSEMBLY (ALL SIZES)

1. Perform steps 1 – 5 of Section VI, Required Internal Inspection.



2. Remove one clapper shaft retaining bushing from the valve body.



3. Remove the clapper shaft. **NOTE:** As the shaft is being removed, the clapper spring will drop out of position. Save the clapper spring for re-installation.

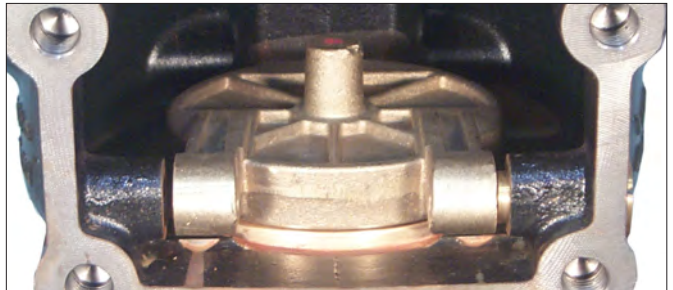


4. Remove the clapper assembly from the valve body seat ring. Clean out any holes that are plugged in the valve body seat ring. **DO NOT USE SOLVENTS OR ABRASIVES.**

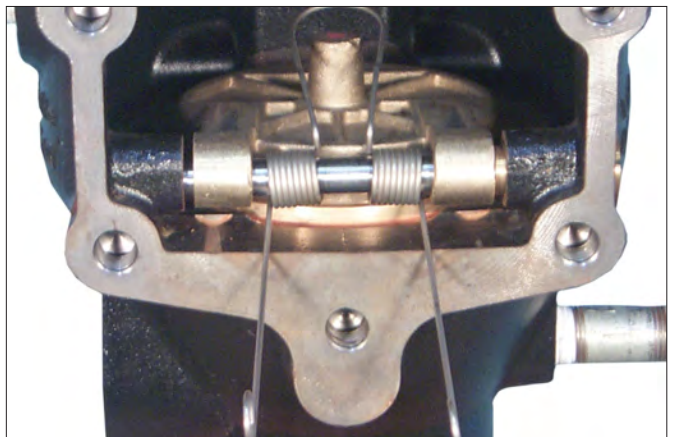
### **CAUTION**

- **DO NOT** use solvents or abrasives on or near the valve body seat ring.
- Use only Victaulic-supplied replacement parts.

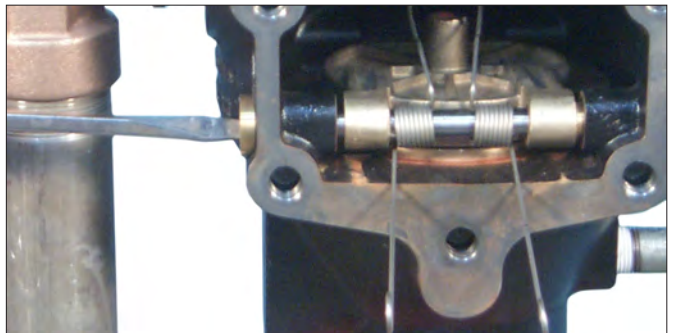
Failure to follow these instructions could cause improper valve operation, resulting in property damage.



5. Place the new clapper assembly onto the valve body seat ring. Verify that the holes in the clapper arms align with the holes in the valve body.



6. Start the clapper shaft into the valve body and install the clapper spring onto the clapper shaft. Verify that the loop of the clapper spring is facing the clapper, as shown above.
7. Finish inserting the clapper shaft through the clapper arm and valve body.



8. Apply thread sealant to the clapper shaft retaining bushing. Install the clapper shaft retaining bushing into the valve body until hand-tight.
- 8a. Tighten the clapper shaft retaining bushing until metal-to-metal contact occurs with the valve body.
- 8b. Check the clapper for freedom of movement.
9. Re-install the cover plate by following the "Installing the Cover Plate Gasket and Cover Plate" instructions on page 25.

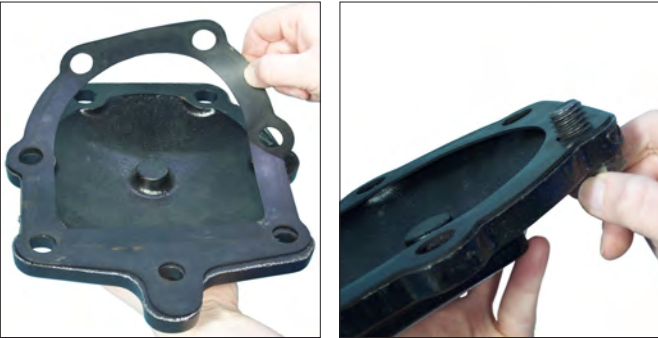
INSTALLING THE COVER PLATE GASKET AND COVER PLATE

⚠ CAUTION

- Use only Victaulic-supplied replacement parts.

Failure to follow this instruction could cause improper valve operation, resulting in property damage.

1. Verify that the cover plate gasket is in good condition. If the gasket is torn or worn, replace it with a new, Victaulic-supplied gasket.

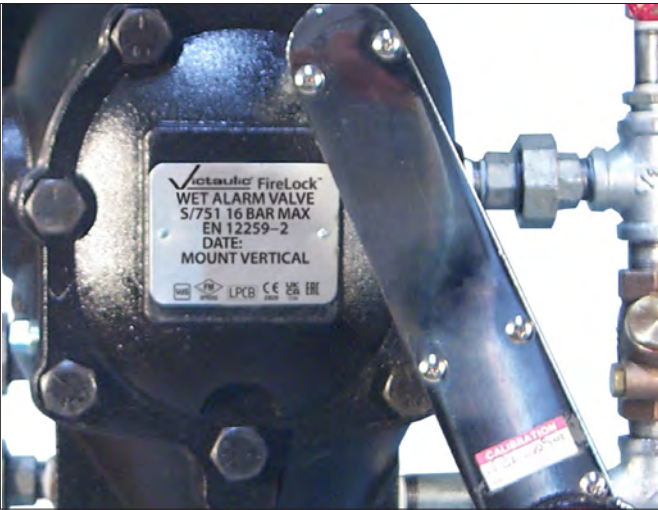


2. Align the holes of the cover plate gasket with the holes in the cover plate.
3. Insert one cover plate bolt through the cover plate and cover plate gasket to ease alignment.

⚠ CAUTION

- DO NOT over-tighten the cover plate bolts.

Failure to follow this instruction could cause damage to the cover plate gasket, resulting in valve leakage.



4. Align the cover plate/cover plate gasket to the valve. Verify that the clapper spring's arms are rotated to their installed position. Tighten all cover plate bolts into the cover plate/valve body.
5. Torque all cover plate bolts in an even, crossing pattern. Refer to the "Required Cover Plate Bolt Torques" table on this page. DO NOT over-tighten the cover plate bolts.

REQUIRED COVER PLATE BOLT TORQUES

Nominal inches DN	Actual Outside Diameter inches mm	Required Torque inch-lbs N•m
3 DN80	3.500 88.9	60 81
4 DN100	4.500 114.3	100 136
	6.500 165.1	115 156
6 DN150	6.625 168.3	115 156
8 DN200	8.000 203.2	100 136

6. Place the system back in service by following Section II, Resetting the System.

# SECTION VIII

## • Troubleshooting

### TROUBLESHOOTING – SYSTEM

Problem	Possible Cause	Solution
The system water pressure gauge is fluctuating with the supply pressure.	The check valve in the bypass line is installed backward.  Debris is present in the bypass check valve.	Check the orientation of the bypass check valve. The arrow shall point from the supply side to the system side.  Remove the threaded cap to the check valve, and remove any debris. Verify that the clapper is free to move.
Water is leaking from the intermediate chamber.	Water is getting past the seal.  There is flow coming from downstream of the valve. A differential has not been created across the valve.	Check the clapper seal and seat for physical damage. Verify that no debris is present on the clapper seal and seat.  Verify that there is no vacuum in the alarm line. If a vacuum is present in the alarm line, install the Series 752V Retarding Vent Kit or create some means of an air break in the alarm line.  Shut off any flow that is coming from downstream of the valve.  Verify that the bypass line is installed properly.
The water motor gong is not ringing or the ringing is weak.	No water is going into the intermediate chamber.  Water from the alarm line could be leaking out of the restricted orifice/ alarm line drain of another valve.  The wrong restrictor size is installed in the restricted orifice/alarm line drain.	Verify that the holes in the valve body seat ring are not plugged.  Verify that the orifice from the intermediate chamber to the alarm line is not plugged.  Verify that there are check valves isolating the alarm line of each valve in the system.  Verify that the proper restrictor size is installed in the restricted orifice/ alarm line drain. If the proper restrictor size is not installed, refer to the trim drawing to replace the restrictor with the correct size.

Series 751 FireLock™ European Alarm Check Valve Stations

Victaulic Company 4901 Kesslersville Road US 18040 Easton, Pennsylvania Phone: 001-610-559-3300 Fax: 001-610-250-8817		
WET Alarm Valve Stations		
Approval no.:	G4060008	VdS
Name of product:	Nassalarmventilstation/wet alarm valve station "S/751" DN 80	
Approval no.:	G4040013	VdS
Name of product:	Nassalarmventilstation/wet alarm valve station "S/751" DN 100	
Approval no.:	G4040014	VdS
Name of product:	Nassalarmventilstation/wet alarm valve station "S/751" DN 150	
Approval no.:	G4060007	VdS
Name of product:	Nassalarmventilstation/wet alarm valve station "S/751" DN 200	

