**SERIES 751** 

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM (SEE PAGE 10)







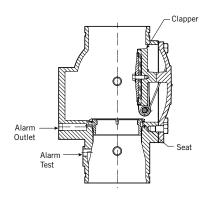
**SERIES 751** 

SERIES 751 EUROPEAN TRIM

The Victaulic® Series 751 alarm check valve works as a check valve by preventing the reverse flow of water from the system piping to the water supply. The valve is trimmed with a water bypass line, which has an in-line swing check valve. The bypass line allows pressure surges to enter the system and to be trapped above the alarm check valve's clapper without the clapper lifting and causing false alarms.

NOTE: The Series 751 FireLock Alarm Check Valve is also available as part of the FireLock European Alarm Check Valve Station (Vds, CE, LCPB). See page 10 for details.

#### **FEATURES**



Exaggerated for clarity

When a significant flow of water occurs, such as from an open sprinkler, the alarm valve's clapper lifts and allows water to enter the system. Simultaneously, water enters an intermediate chamber, which allows the water to activate an alarm either through a water motor alarm or through a water pressure alarm. These alarms continue to sound until the flow of water is stopped.

The Victaulic Series 751 alarm check valve is made from high strength, low weight ductile iron, and offers easy access to all internal parts. All internal parts are replaceable without having to remove the valve from the installed position. The rubber clapper seal is easily replaced without removing the clapper from the valve. The valve is painted inside and out to increase corrosion resistance.

The UL, ULC, FM, VNIIPO approved version of the valve station valve can be installed in either the vertical or horizontal orientations, and it can be used in both constant and variable pressure systems when the optional retard chamber is included in the trim piping. The VdS, CE, LPCB trim version can only be installed vertically. All versions of the Series 751 are available grooved x grooved only.

The Series 751 is available  $1\frac{1}{2} - 8\frac{n}{40} - 200\,\text{mm}$ . Standard grooved dimensions conform to ANSI/AWWA C606.

### Available Sizes and Approved Pressures - UL, ULC, FM, VNIIPO approved version:

The  $1\frac{1}{2}$  –  $6^{\circ}/40$  – 165.1 mm valve is rated to  $300\,\mathrm{psi}/2065\,\mathrm{kPa}$  and is tested hydrostatically to  $600\,\mathrm{psi}/4135\,\mathrm{kPa}$ . The  $8^{\circ}/200\,\mathrm{mm}$  valve is rated to  $225\,\mathrm{psi}/1550\,\mathrm{kPa}$  and is tested hydrostatically to  $450\,\mathrm{psi}/3100\,\mathrm{kPa}$ .

### OPTIONS

### Available Sizes and Approved Pressures: VdS, CE, LPCB version:

This configuration available in 3", 4", 6", 165mm (not VdS approved) and 8" sizes. These sizes are rated to 232 psi/16 bar.

Optional equipment includes pressure switch, which allows the activation of an electric alarm panel or remote alarm. The valve can be used in both constant pressure and variable pressure installations with the optional retard chamber. The body is tapped for main drain and all available trim configurations. The trim includes an alarm test valve, which allows testing of the alarm system without reducing the system pressure. The Series 751 Alarm Check Valve can be purchased with separate trim kits, or it can be purchased pre-trimmed.

JOB OWNER	CONTRACTOR	ENGINEER
System No	Submitted By	Spec Sect Para
Location	Date	Approved
		Date





SERIES 751

# \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM (SEE PAGE 10)





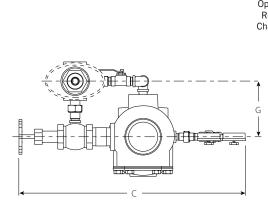


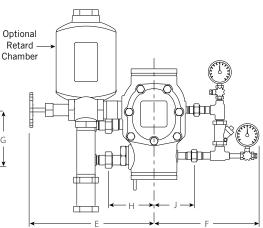
SERIES 751

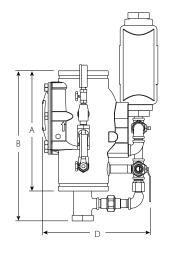
SERIES 751 EUROPEAN TRIM

### **DIMENSIONS**

(UL, ULC, FM VNIIPO version)







TYPICAL 4"/100 MM - OTHER SIZES MAY VARY.

Si	ze	Dimensions – Inches/mm							Aprx. Wgt. Each			
Nominal Size In./mm	Actual Outside Diameter In./mm`	E to E	Height B	Width C	Depth D						Without Trim Lbs./kg	With Trim Lbs./kg
1 ½	1.900	9.00	18.50	21.00	12.50	10.00	11.00	9.00	5.00	5.00	14.2	31.0
40	48.3	228.60	470	533	318	254	279	229	127	127	6.4	14.1
2	2.375	9.00	18.50	21.00	12.50	10.00	11.00	9.00	5.00	5.00	14.6	31.0
50	60.3	228.60	470	533	318	254	279	229	127	127	6.6	14.1
2½	2.875	12.61	22.50	23.50	13.50	11.25	12.00	9.00	5.00	5.00	34.4	52.0
65	73.0	320.29	572	597	343	286	305	229	127	127	15.6	23.6
76.1 mm	3.000	12.61	22.50	23.50	13.50	11.25	12.00	9.00	5.00	5.00	34.4	52.0
	76.1	320.29	572	597	343	286	305	229	127	127	15.6	23.6
3	3.500	12.61	22.50	23.50	13.50	11.25	12.00	9.00	5.00	5.00	35.3	52.0
80	88.9	320.29	572	597	343	286	305	229	127	127	16.0	23.6
4	4.500	15.03	23.50	29.00	14.00	13.50	15.00	10.00	5.80	5.80	49.0	80.0
100	114.3	381.76	597	737	356	343	381	254	147	147	22.2	36.3
6	6.625	16.00	24.00	30.11	17.28	14.25	16.00	10.00	5.88	6.02	69.0	91.0
150	168.3	406.40	610	765	439	362	406	25	149	153	31.3	41.3
165.1 mm	6.500	16.00	24.00	30.11	17.28	14.25	16.00	10.00	5.88	6.02	69.0	95.0
	165.1	406.40	610	765	439	362	406	254	149	153	31.3	43.1
8	8.625	17.50	26.00	30.00	18.00	15.25	16.00	10.00	16.00	10.00	142	182
200	219.1	444.50	660	762	457	387	406	254	406	254	64.4	82.6
4	4.500	15.64	23.50	29.00	14.00	11.50	15.00	10.00	5.80	5.80	59.0	90.0
100	114.3	397.26	597	737	355	292	381	254	147	147	26.8	40.8
6	6.625	16.94	24.00	30.11	17.28	14.00	16.00	10.00	5.88	6.02	79.0	106.0
150	168.3	430.28	610	765	439	356	406	254	149	153	35.8	48.1
165.1 mm	6.500	16.94	24.00	30.11	17.28	14.00	16.00	10.00	5.88	6.02	79.0	110.0
	165.1	430.28	610	765	439	356	406	254	149	153	35.8	49.9
8	8.625	19.27	26.00	20.00	18.00	16.00	14.00	10.00	16.00	10.00	155	195
200	219.1	489.46	660	508	457	406	356	254	406	254	70	88.5

SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM (SEE PAGE 10)







**SERIES 751** 

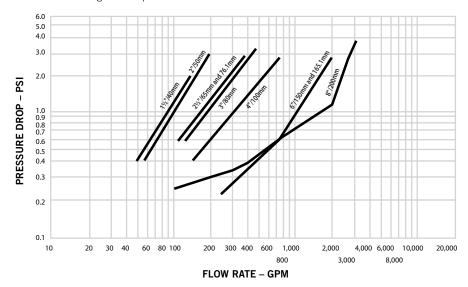
SERIES 751 EUROPEAN TRIM

### **PERFORMANCE**

(UL, ULC, FM VNIIPO version)

#### **Hydraulic Friction Loss**

The chart below expresses the flow of water at 65°F/18°C through a full open valve.



### Frictional Resistance

The chart below expresses the frictional resistance of Victaulic Series 751 Alarm Check Valve in equivalent feet of straight pipe.

Si	ze	Equivalent Length of Pipe
Nominal Size Inches mm	Actual Outside Dia. Inches mm	Feet meters
1 ½	1.900	3
40	48.3	0.910
2	2.875	9
50	60.3	2.740
2½	2.875	8.00
65	73.0	2.438
76.1 mm	3.000 76.1	8.00 2.438
3	3.500	17.00
80	88.9	5.182
4	4.500	21.00
100	114.3	6.401
6	6.625	22.00
150	168.3	6.706
165.1 mm	6.500 165.1	22.00 6.706
8	8.625	50.00
200	219.1	15.240

SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM (SEE PAGE 10)







SERIES 751

SERIES 751 FUROPEAN TRIM

#### OPERATION

(UL, ULC, FM VNIIPO version)

The Series 751 Alarm Check Valve's construction includes a clapper, which has a replaceable rubber face. The clapper closure is assisted by a spring, which ensures proper contact of the clapper to the brass seat ring.

When installed, the alarm check valve traps pressure above the clapper and prevents the reverse flow of water. Minor pressure surges pass through the bypass loop without lifting the clapper from its seat. The swing check valve in the bypass line traps the pressure above the clapper; this can be observed in the pressure gauges. The system-side water pressure will always be equal to or greater than the supply-side water pressure in the absence of an open sprinkler.

When a sustained flow of water occurs, such as an activated sprinkler or an open inspector's test connection, the clapper lifts from its closed position; this allows water to enter the intermediate chamber through the holes in the seat ring. The water flows from the intermediate chamber to the alarm line and activates the system's alarms. These alarms continue to sound until the flow of water stops.

#### Operation with an Installed Retard Chamber

When the Series 751 Alarm Check Valve is installed with the optional retard chamber, a surge of water, greater than what the bypass line can handle, will lift the clapper. When the clapper lifts, water will enter the intermediate chamber through the holes in the seat ring, and it will fill the retard chamber. The water then drains from the retard chamber through a restricted orifice.

A sustained flow of water, as in an open sprinkler, will lift the clapper. Water will flow into the intermediate chamber, and it will fill the retard chamber completely; these events activate the water motor alarm and/or the pressure switch for the electric alarm.

SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM (SEE PAGE 10)



**EUROPEAN TRIM** 



#### **MATERIAL SPECIFICATIONS**

(UL, ULC, FM VNIIPO version)

Body: Ductile iron, ASTM A-536 Grade 65-45-12

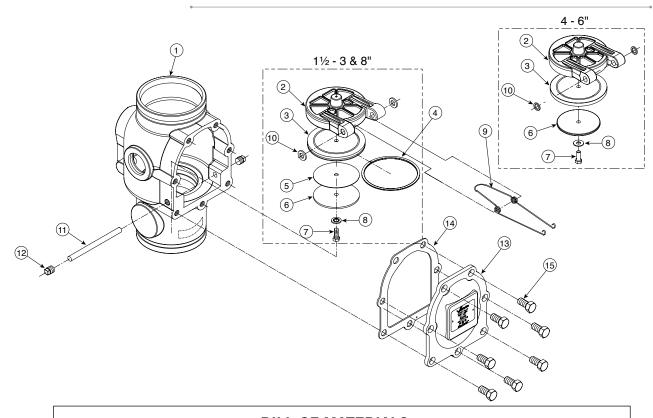
Clapper: Aluminum bronze UNS-C95500

Shaft: Stainless 17-4

Clapper Seal: EPDM, ASTM D2000

Seat O-Rings: Nitrile

Springs: Stainless steel (300 Series)



### **BILL OF MATERIALS**

- 1 Valve Body
- 2 Clapper
- 3 Clapper Seal
- 4 Seal Ring
- 5 Seal Washer
- 6 Seal-Retaining Ring
- 7 Seal-Assembly Bolt
- 8 Bolt Seal

- 9 Clapper Spring
- 10 Spacers (Qty. 2)
- 11 Clapper Shaft
- 12 Clapper Shaft Retaining Plug (Qty. 2)
- 13 Cover Plate
- 14 Cover Plate Gasket
- 15 Cover Plate Bolts (Qty. 7)

SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM (SEE PAGE 10)







SERIES 751

SERIES 751 EUROPEAN TRIM

#### TRIM PACKAGES

(UL, ULC, FM VNIIPO version)

### Trim packages available:

- 1 Vertical trim for the Series 751 Alarm Check Valve.
- 2 Horizontal trim configuration for the Series 751 Alarm Check Valve.

### Trim packages include:

- 1 All required pipe and fittings.
- 2 All standard trim accessories.
- 3 All required gauges.

#### Optional accessories:

- Series 752 Retard Chamber Required when the Series 751 Alarm Check Valve is installed in a variable pressure installation in order to reduce the possibility of false alarms.
- Series 752V Retard Vent Kit Required when an electric pressure switch is installed on the retard chamber without a water motor alarm.
- Series 760 Water Motor Alarm The Series 751 Alarm Check Valve is designed to activate a
  mechanical alarm when a sustained flow of water (such as an open sprinkler) causes the alarm
  check's clapper to lift from its seat.
- Alarm pressure switch The Series 751 alarm check valve is designed to allow the installation
  of pressure switches to activate electric alarms and control panels when a sustained flow of
  water (such as an open sprinkler) causes the alarm check's clapper to lift from its seat.
- Waterflow Detectors Waterflow detectors are available for installation on the riser.
- Trim kit available for configuration with excess pressure pump (see page 9).

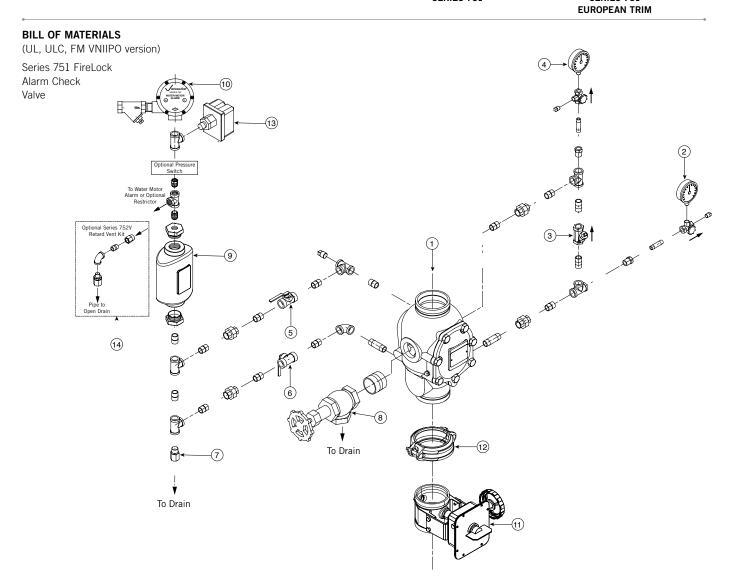
**SERIES 751** 

## \*FireLock® European Alarm **Check Valve Stations**

**SERIES 751 EUROPEAN TRIM (SEE PAGE 10)** 







### **BILL OF MATERIALS**

- 1 Series 751 FireLock Alarm Check Valve
- 2 Water Supply Pressure Gauge (0-300 psi/)-2068 kPa)
- Swing Check Valve
- 4 System Pressure Gauge (0-300 psi/0-2068 kPa)
- 5 Alarm Line Ball Valve (NO)
- 6 Alarm Test Line Ball Valve (NC)
- 7 Alarm Line Drain Restrictor (1/16")

- 8 System's Main Drain Valve
- 9 Series 752 Retard Chamber (Optional)
- 10 Series 760 Water Motor Alarm (Optional)
- 11 Series 705W Butterfly Valve (Optional)
- 12 Style 005 FireLock Rigid Coupling (Optional)
- 13 EPS10-1 or EPS10-2 Alarm Pressure Switch
- 14 Series 752V Retard Vent Kit (Optional)\*

NO = Normlly Open; NC = Normally Closed
\* The Series 752V Retard Vent Kit is required any time an air break is needed above the retard cchamber. In addition, the Series 752V Retard Vent Kit is required if multiple valves are tied into one water motor alarm and a check valve isolates each line

SERIES 751

## \*FireLock® European Alarm **Check Valve Stations**

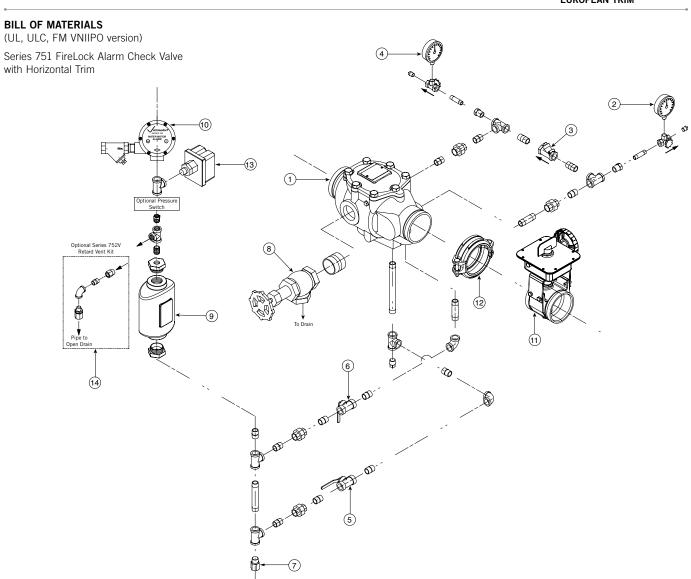
SERIES 751 **EUROPEAN TRIM (SEE PAGE 10)** 





SERIES 751

SERIES 751 **EUROPEAN TRIM** 



### **BILL OF MATERIALS**

- 1 Series 751 FireLock Alarm Valve
- 2 Water Supply Pressure Gauge (0-300 psi)
- 3 By-Pass Check Valve
- 4 System Pressure Gauge (0-300 psi)
- 5 Alarm Line Ball Valve (NO)
- 6 Alarm Test Line Ball Valve (NC)
- 7 Alarm Line Drain Resterictor (1/16")

- 8 Main System Drain Valve
- 9 Series 752 Retard Chamber (Optional)
- 10 Series 760 Water Motor Alarm (Optional)
- 11 Series 705W Control Valve (Optional)
- 12 Style 005 FireLock Coupling (Optional)
- 13 Alarm Switch EPS10-1 or EPS10-2 (Optional)
- 14 Series 752 Retard Vent Kit (Optional)

SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM (SEE PAGE 10)

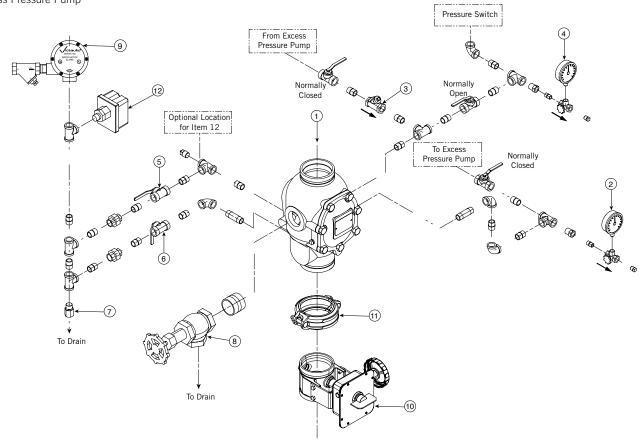




#### **BILL OF MATERIALS**

(UL, ULC, FM VNIIPO version)

Series 751 Trim for Use with Excess Pressure Pump



### **BILL OF MATERIALS**

- 1 Series 751 FireLock Alarm Check Valve
- 2 Water Supply Pressure Gauge (0-300 psi/0-2068 kPa)
- 3 Swing Check Valve
- 4 System Pressure Gauge (0-300 psi/0-2068 kPa)
- 5 Alarm Line Ball Valve (NO)
- 6 Alarm Test Line Ball Valve (NC)

- 7 Alarm Line Drain Resterictor (Z\zn-inch)
- 8 System's Main Drain Valve
- 9 Series 760 Water Motor Alarm (Optional)
- 10 Series 705W Butterfly Valve (Optional)
- 11 Style 005 FireLock Rigid Coupling (Optional)
- 12 PS10-1 or PS10-2 Alarm Pressure Switch (Optional)

NO = Normally Open; NC = Normally Closed

SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM





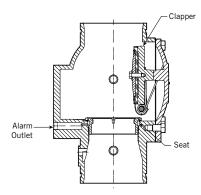


SERIES 751

SERIES 751 EUROPEAN TRIM

### FEATURES - EUROPEAN TRIM

(VdS, CE, LPCB, CNBOP version)



Exaggerated for clarity

When a significant flow of water occurs, such as from an open sprinkler, the alarm valve's clapper lifts and allows water to enter the system. Simultaneously, water enters an intermediate chamber, which allows the water to activate an alarm either through a water motor alarm or through a water pressure alarm. These alarms continue to sound until the flow of water is stopped.

The Victaulic Series 751 alarm check valve is made from high strength, low weight ductile iron, and offers easy access to all internal parts. All internal parts are replaceable without having to remove the valve from the installed position. The rubber clapper seal is easily replaced without removing the clapper from the valve. The valve is painted inside and out to increase corrosion resistance.

**The valve is to be installed in the vertical orientation only;** it can be used in both constant and variable pressure systems when the optional retard chamber is included in the trim piping.

The Series 751 is available grooved X grooved (all sizes). Standard grooved dimensions conform to ANSI/AWWA C606.

The valve is rated to 16 Bar and is tested hydrostatically to 32 Bar.

#### **Options**

The valve can be used in both constant pressure and variable pressure installations with the optional retard chamber. The body is tapped for main drain and all available trim configurations. The trim includes an integral alarm test drain valve, which allows testing of the alarm system without reducing the system pressure.

SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM





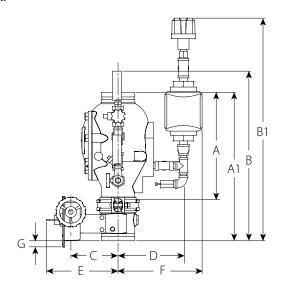


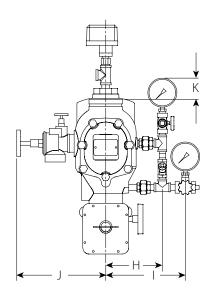
SERIES 751

SERIES 751 EUROPEAN TRIM

### **DIMENSIONS - EUROPEAN TRIM**

(VdS, CE, LPCB, CNBOP version)





Size						Dimen	sions – centi	meters						Approx. Weight Ea.
	A*	A1		В1	С								K	kg
DN80	32.03	42.24	_	71.86	14.48	21.21	22.11	27.56	4.67	18.64	26.93	27.97	_	24.0
DN100	38.18	50.66	57.88	75.97	16.13	22.33	24.45	26.68	2.14	19.33	27.14	30.37	7.22	54.0
DN150	40.64	56.32	64.44	79.38	18.60	25.77	26.93	31.79	_	20.30	28.11	31.08	8.12	69.0
DN200	44.45	65.38	_	85.80	16.66	28.34	26.81	34.39	_	23.85	30.87	34.56	_	83.0

<sup>\*</sup> 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 greatest height if optional retard chamber is not installed.

SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM







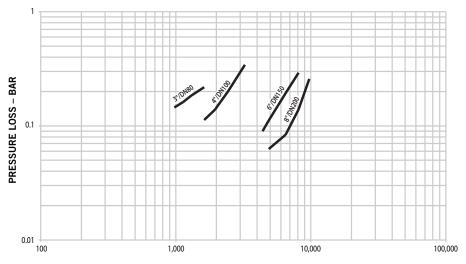
SERIES 751

SERIES 751 EUROPEAN TRIM

## **PERFORMANCE - EUROPEAN TRIM** (VdS, CE, LPCB, CNBOP version)

### RMANCE - EUROPEAN TRIM Hydraulic Friction Loss

The chart below expresses the flow of water at 65°F/18°C through a full open valve.



FLOW RATE - LITERS PER MINUTE

### Frictional Resistance

The chart below expresses the frictional resistance of Victaulic Series 751 Alarm Check Valve in equivalent meters of straight pipe.

Size	Equivalent Length of Pipe
Nominal Size mm	meters
80	5.18
100	6.40
150	6.70
200	15.24

Expressed in equivalent length of pipe C=120.

**SERIES 751** 

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM







SERIES 751

#### SERIES 751 EUROPEAN TRIM

#### MATERIAL SPECIFICATIONS

(VdS, CE, LPCB, CNBOP version)

**Valve Body:** Ductile iron conforming to ASTM A-536, grade 65-45-12. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

Valve Body Seat Ring (Not Shown): Bronze, UNS-C83600 (85-5-5-5)

Seat O-Rings (Not Shown): Nitrile

Clapper: Aluminum Bronze (UNS-C95500)

Clapper Seal: EPDM, ASTM D2000

Clapper Shaft: 17-4 PH Stainless Steel

Clapper Spring: 302 Stainless Steel

Clapper Seal-Retaining Ring: Aluminum Bronze (UNS-C95400)

Clapper Shaft Retaining Bushings: CA360 Brass

Cover Plate Gasket: Nitrile

### TRIM PACKAGES

(VdS, CE, LPCB version)

### Trim packages available:

Vertical trim for the Series 751 Alarm Check Valve.

#### Trim packages include:

- 1 All required pipe and fittings.
- 2 All standard trim accessories.
- 3 All required gauges.
- 4 Alarm Pressure Switch
- 5 Control Valve (Series 705W Butterfly Valve)

#### Optional accessories:

- Series 752 Retard Chamber Required when the Series 751 Alarm Check Valve is installed in a variable pressure installation in order to reduce the possibility of false alarms.
- Series 752V Retard Vent Kit Required when an electric pressure switch is installed on the retard chamber without a water motor alarm.
- Series 760 Water Motor Alarm The Series 751 Alarm Check Valve is designed to activate a
  mechanical alarm when a sustained flow of water (such as an open sprinkler) causes the alarm
  check's clapper to lift from its seat.
- Waterflow Detectors Waterflow detectors are available for installation on the riser.



SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM

## UL FM> UC FM> UC VdS \* LPCB \*



### SERIES 751

#### SERIES 751 EUROPEAN TRIM

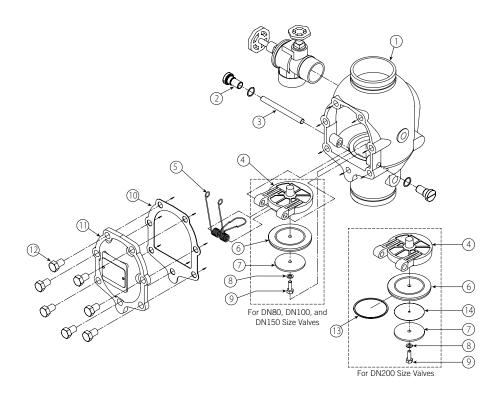
### **BILL OF MATERIALS**

(VdS, CE, LPCB, CNBOP version)

### **Bill of Materials**

- 1 Valve Body
- 2 Clapper Shaft Retaining Bushing (Qty. 2)
- 3 Clapper Shaft
- 4 Clapper
- 5 Clapper Spring
- 6 Clapper Seal
- 7 Seal Retaining Ring

- 8 Bolt Seal
- 9 Seal-Assembly Bolt
- 10 Cover Plate Gasket
- 11 Cover Plate
- 12 Cover Plate Bolt (Qty. 7)
- 13 Seal Ring
- 14 Seal Washer



SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM

with Vertical Trim

(VdS, CE, LPCB, CNBOP version)

Series 751 Alarm Check Valve

TRIM

## UL FM ULC FM (VdS)\* LPCB



- 1 Series 751 FireLock European Alarm Check Valve
- 2 FireLock Rigid Coupling (Optional)
- 3 Water Supply Main Control Valve (Optional)
- 4 Gauge Valve

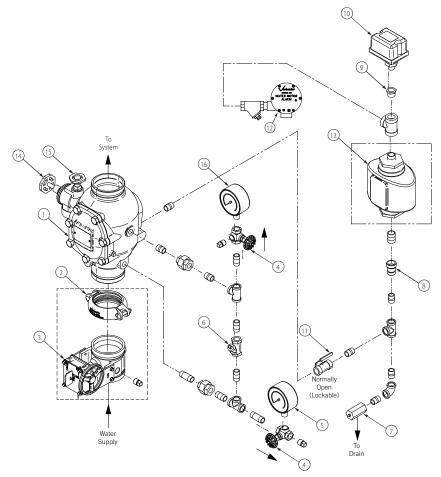
**Bill of Materials** 

- 5 Water Supply Pressure Gauge (0-25 Bar)
- 6 Swing Check Valve
- 7 Restricted Orifice/Alarm Line Drain
- 8 Reducer
- 9 Reducing Bushing

- 10 Alarm Pressure Switch
- 11 Alarm Line Ball Valve (Lockable - Normally Open)
- 12 Series 760 Water Motor Alarm with 19-mm, 100-Mesh Strainer (Optional)

**EUROPEAN TRIM** 

- 13 Series 752 Retard Chamber (Optional)
- 14 System Main Drain Valve
- 15 System Test Valve
- 16 System Pressure Gauge (0-25 Bar)



SERIES 751

## \*FireLock® European Alarm Check Valve Stations

SERIES 751 EUROPEAN TRIM









SERIES 751

SERIES 751 EUROPEAN TRIM

### **WARNING**



• This product must be installed by an experienced, trained installer, in accordance with the instructions provided with each valve. These instructions contain important information.

Failure to follow these instructions may result in serious personal injury, property damage, or valve leakage.

If you need additional copies of this product literature or the valve installation instructions, or if you have any questions about the safe installation and use of this device, contact Victaulic Company, P.O. Box 31, Easton, PA 18044-0031 USA, Telephone: 001-610-559-3300.

WARRANTY

Refer to the Warranty section of the current Price List or contact Victaulic for details.

NOTE

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.



