

FireLock® European Alarm Check Valve Stations

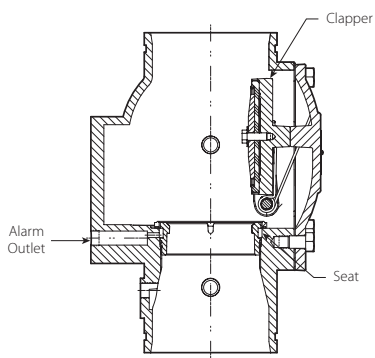


SERIES 751 GROOVED X GROOVED

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.



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 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.

JOB OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

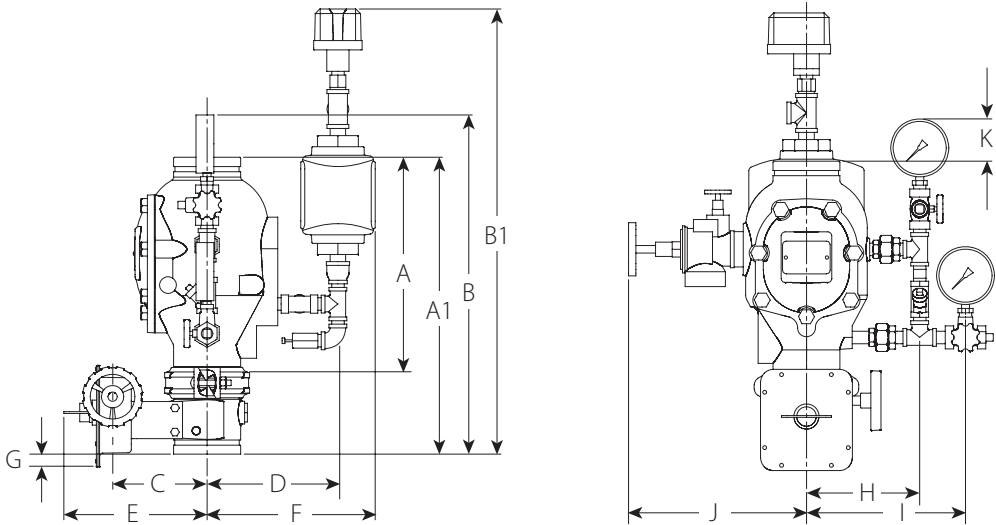
Date _____

FireLock® European Alarm
Check Valve Stations

SERIES 751
GROOVED X GROOVED



DIMENSIONS



Size	Dimensions – centimeters													Approx. Weight Ea.
	A*	A1	B	B1	C	D	E	F	G	H	I	J	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

* 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.

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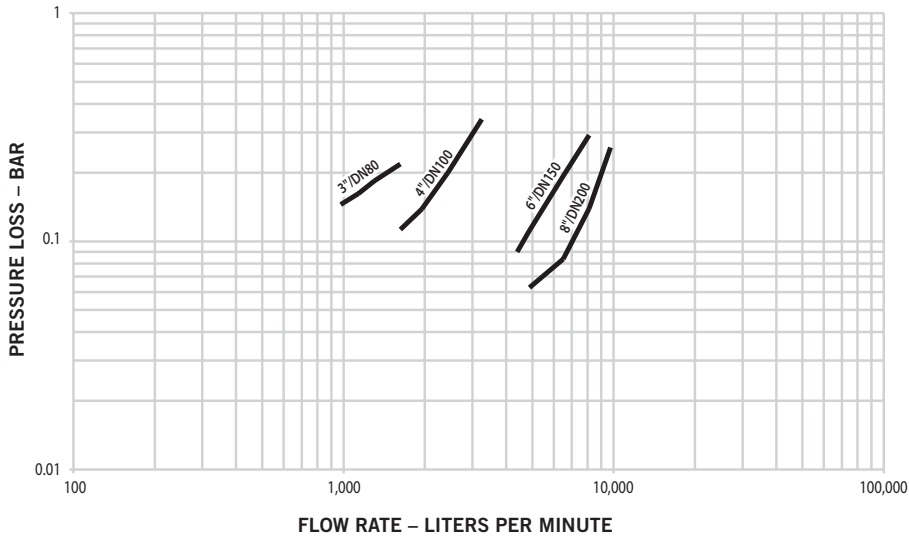
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PERFORMANCE

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 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.

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MATERIAL SPECIFICATIONS

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

Trim packages available:

Vertical trim for the Series 751 Alarm Check Valve installed vertically.

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.

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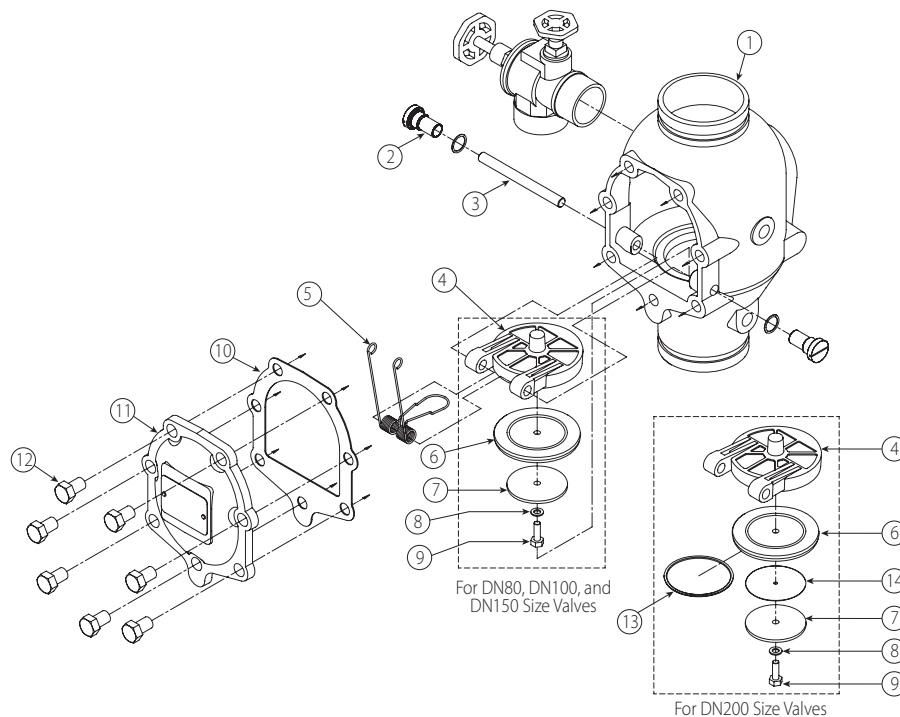
SERIES 751
GROOVED X GROOVED



BILL OF MATERIALS

Bill of Materials

- | | | | |
|---|--|----|---------------------------|
| 1 | Valve Body | 8 | Bolt Seal |
| 2 | Clapper Shaft Retaining Bushing (Qty. 2) | 9 | Seal-Assembly Bolt |
| 3 | Clapper Shaft | 10 | Cover Plate Gasket |
| 4 | Clapper | 11 | Cover Plate |
| 5 | Clapper Spring | 12 | Cover Plate Bolt (Qty. 7) |
| 6 | Clapper Seal | 13 | Seal Ring |
| 7 | Seal Retaining Ring | 14 | Seal Washer |



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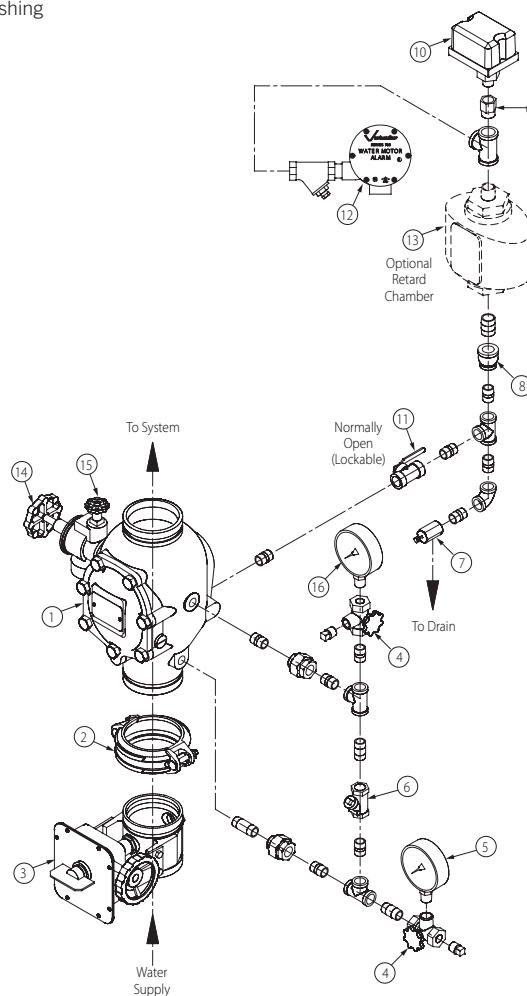


TRIM

Series 751 Alarm Check Valve
with Vertical Trim
Grooved X Grooved

Bill of Materials

- | | |
|--|---|
| 1 Series 751 FireLock European Alarm Check Valve | 10 EPS-10 Alarm Pressure Switch |
| 2 FireLock Rigid Coupling | 11 Alarm Line Ball Valve (Lockable - Normally Open) |
| 3 FireLock Butterfly Valve with Tap | 12 Series 760 Water Motor Alarm with 19-mm 100-Mesh Strainer (Optional) |
| 4 Gauge Valve | 13 Series 752 Retard Chamber (Optional) |
| 5 Water Supply Pressure Gauge (0-25 Bar) | 14 System Main Drain Valve |
| 6 Swing Check Valve | 15 System Test Valve |
| 7 Restricted Orifice/Alarm Line Drain | 16 System Pressure Gauge (0-25 Bar) |
| 8 Reducer | |
| 9 Reducing Bushing | |



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OPERATION

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.

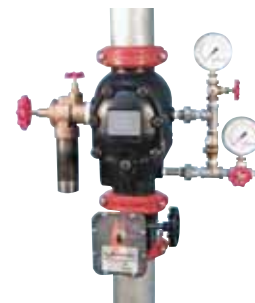
Operation with an Installed Retard Chamber

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.

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WARNING



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 Europe, Prijkelstraat 36, 9810 Nazareth, Belgium, Telephone: 32-9-381-1500.

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.

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