



# HYDROFIRE ΕΠΕ

Buildings - Industry - Marine – Waterworks  
END OF AG. PANTELEIMONOS Str. (ELEONAS)  
GR-12241 EGALEO,

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[www.hydrofire.gr](http://www.hydrofire.gr), email: [info@hydrofire.gr](mailto:info@hydrofire.gr)



## FireLock™ Alarm Check Valve Series 751



Series 751



Series 751 European Trim

### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 1 ½ – 8" / 40 – 200 mm

#### Pressure Class

- 1 ½ – 6" / 40 – 152.4 mm 300 psi / 2068 kPa / 20 Bar
- 8" / 200 mm 232 psi / 1600 kPa / 16 bar. See section 5.0

#### Valve Configurations

- Bare
- Pre-trimmed
- Vic-Quick Riser: Pre-trimmed and includes:
  - Shut Off Valve (1 ½" / 40 mm: Series 728 Ball Valve, 2" – 8" / 50 – 200 mm: Series 705 FireLock Butterfly Valve)
  - Drain Connection kit
- Fire-Pac Series 745 (refer to Victaulic [publication 30.23](#))

#### Pipe Preparation

- Victaulic Original Groove System

#### Application/Media

- For use on fire protection systems only.

### 2.0 CERTIFICATION/LISTINGS



ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

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## 3.0 SPECIFICATIONS – MATERIAL

**Bill of Materials: Standard Trim, cULus, FM, CCC version**

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

**Clapper:** Aluminum bronze UNS-C95500

**Shaft:** Stainless steel 17-4PH

**Clapper Seal:** EPDM

**Seat O-Rings:** Nitrile

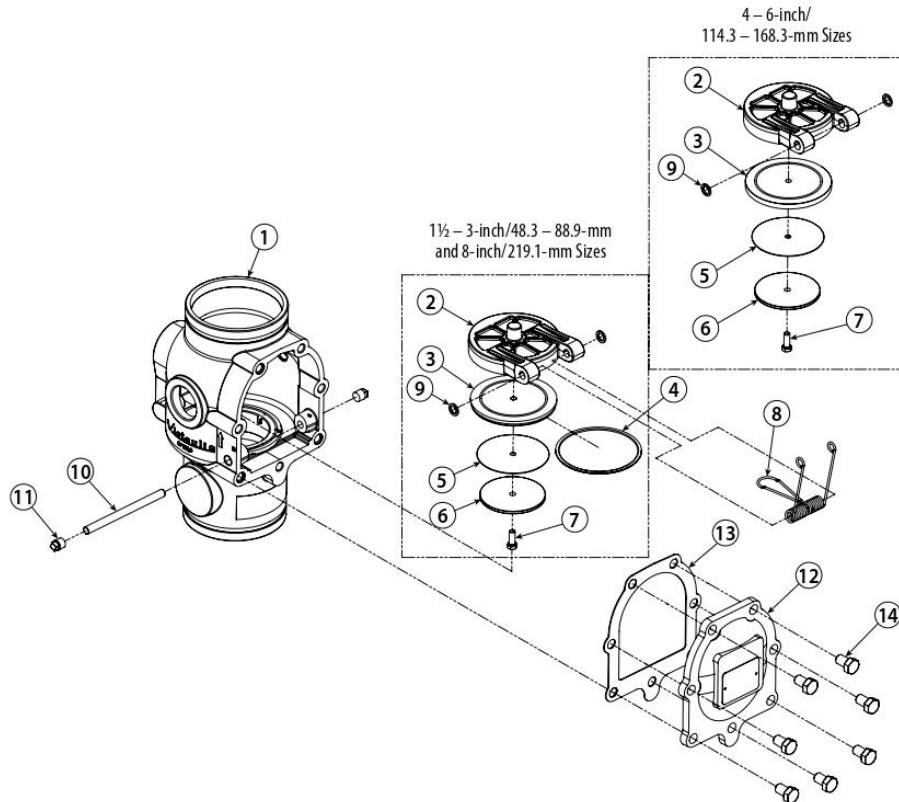
**Clapper Spring:** Stainless steel (302 Series)

**Washers:** PTFE

**Cover Plate Bolts:** Carbon steel, zinc plated

**Cover Plate Gasket:** Nitrile

**Seal Plate:** Aluminum Bronze (UNS-C95400)



Item	Description	Item	Description
1	Valve Body	8	Clapper Spring
2	Clapper	9	Washer
3	Clapper Seal	10	Shaft
4	Seal Ring	11	Clapper Shaft Retaining Plug
5	Seal Washer	12	Cover Plate
6	Seal Plate	13	Cover Plate Gasket
7	Screw, Self Sealing	14	Cover Plate Bolts



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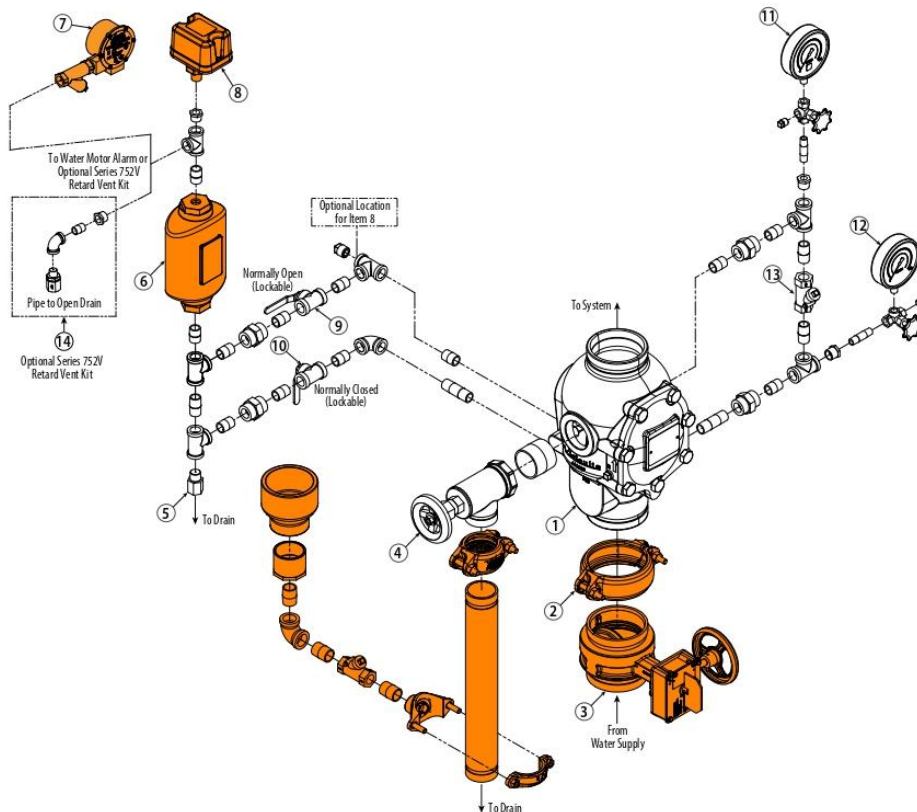
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## 3.1 SPECIFICATIONS – MATERIAL

Standard Trim: cULus, FM, CCC version  
 Series 751 FireLock Alarm Check Valve



Item	Description	Item	Description
1	Series 751 FireLock Alarm Check Valve	8	Alarm Pressure Switch (Optional/Sold Separately)
2	FireLock Rigid Coupling (Optional/Sold Separately)	9	Alarm Line Ball Valve (Normally Open)
3	Water Supply Main Control Valve (Optional/Sold Separately)	10	Alarm Test Line Ball Valve (Normally Closed)
4	System Main Drain Valve	11	System Pressure Gauge/Gauge Valve Assembly (0-300 psi/0-2068 kPa)
5	Alarm Line Drain Restrictor (1/16-inch)	12	Water Supply Pressure Gauge/Gauge Valve Assembly (0-300 psi/0-2068 kPa)
6	Series 752 Retard Chamber Assembly (Optional/Sold Separately)	13	Swing Check Valve
7	Series 760 Water Motor Alarm Assembly (Optional/Sold Separately)	14	Series 752V Retard Vent Kit <sup>1</sup> (Optional/Sold Separately)

<sup>1</sup> The Series 752V Retard Vent Kit is required any time an air break is needed above the Series 752 VdS Retarding Chamber Assembly. 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.



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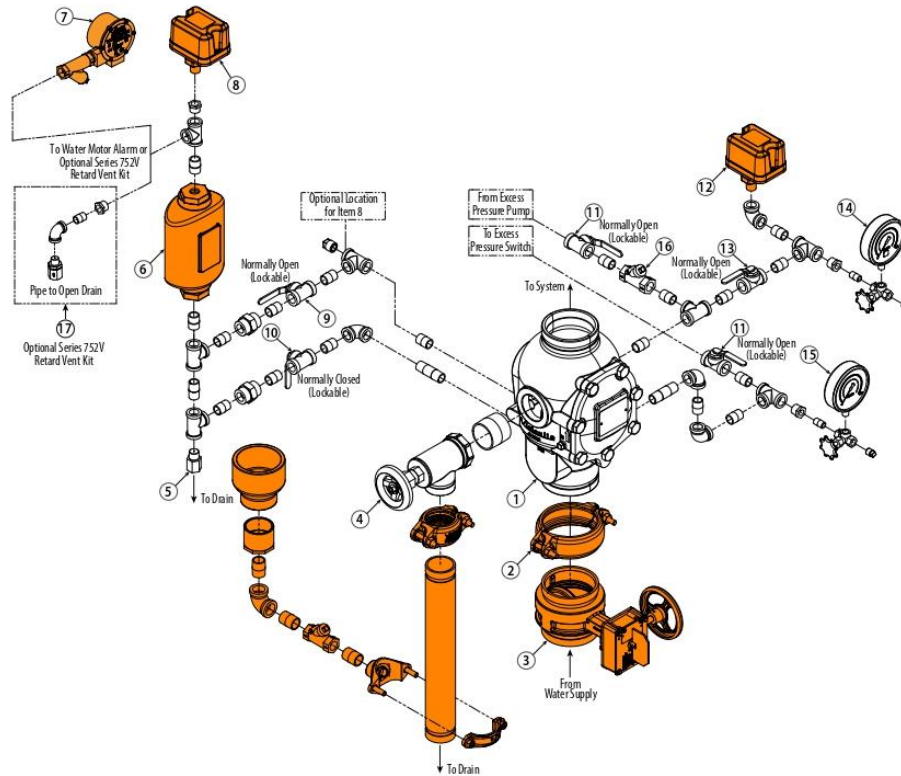


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## 3.2 SPECIFICATIONS – MATERIAL

Standard Trim: cULus, FM, CCC version

Series 751 FireLock Alarm Check Valve Trim for Use with Excess Pressure Pump



Item	Description	Item	Description
1	Series 751 FireLock Alarm Check Valve	10	Alarm Test Line Ball Valve (Normally Closed)
2	FireLock Rigid Coupling (Optional/Sold Separately – Comes Standard when VQR Assembly is Ordered)	11	Excess Pressure Pump Isolation Ball Valve (Normally Open)
3	Water Supply Main Control Valve (Optional/Sold Separately – Comes Standard when VQR Assembly is Ordered)	12	Excess Pressure Pump Pressure Switch (Sold Separately/Not Provided by Victaulic)
4	System Main Drain Valve	13	Excess Pressure Pump Pressure Switch Isolation Ball Valve (Normally Open)
5	Alarm Line Drain Restrictor (1/16-inch)	14	System Pressure Gauge (0-300 psi/0-2068 kPa)
6	Series 752 Retard Chamber Assembly (Optional/Sold Separately)	15	Water Supply Pressure Gauge (0-300 psi/0-2068 kPa)
7	Series 760 Water Motor Alarm Assembly (Optional/Sold Separately)	16	Swing Check Valve
8	Alarm Pressure Switch (Optional/Sold Separately)	17	Series 752V Retard Vent Kit <sup>1</sup> (Optional/Sold Separately)
9	Alarm Line Ball Valve (Normally Open)		

<sup>1</sup> The Series 752V Retard Vent Kit is required any time an air break is needed above the Series 752 VdS Retarding Chamber Assembly. 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.



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## 3.2 SPECIFICATIONS – MATERIAL (CONTINUED)

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- Standard Trim Package

Optional Accessories (specify choice):

- Series 752 Retard Chamber – Required when the Series 751 FireLock Alarm Check Valve is installed in a variable pressure installation in order to reduce the possibility of false alarms. (Refer to [30.01](#)).
- 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 FireLock 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. (Refer to [30.32](#)).
- Alarm pressure switch – The Series 751 FireLock 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.



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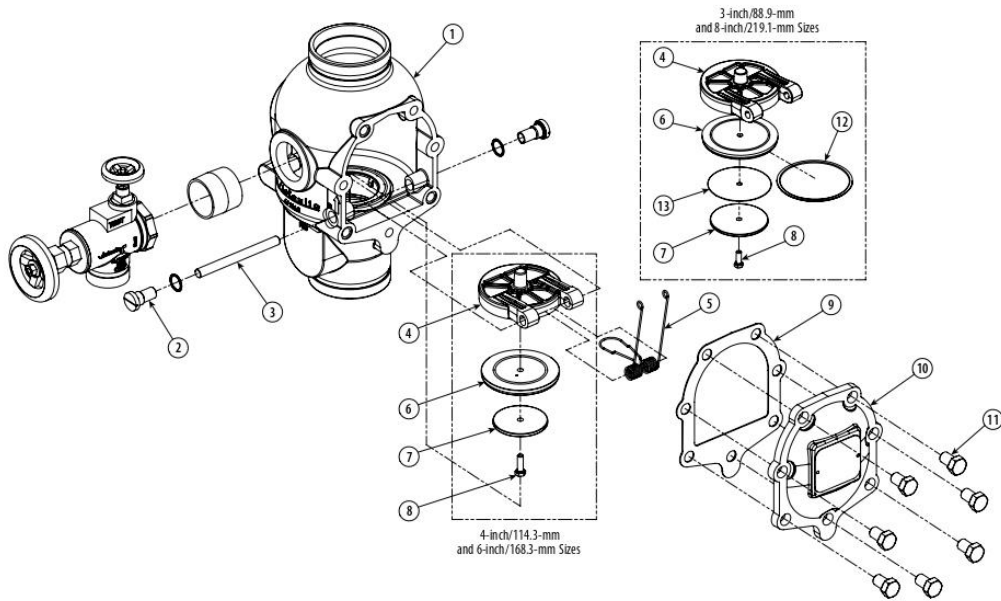


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## 3.3 SPECIFICATIONS – MATERIAL

Bill of Materials: European Trim, VdS, CE, LPCB, CNBOP, FM, EAC version

Series 751 FireLock Alarm Check Valve



Item	Description	Item	Description
1	Valve Body	8	Screw, Self Sealing
2	Clapper Shaft Retaining Bushing	9	Cover Plate Gasket
3	Shaft	10	Cover Plate
4	Clapper	11	Cover Plate Bolt
5	Clapper Spring	12	Seal Ring
6	Clapper Seal	13	Seal Washer
7	Seal Plate		



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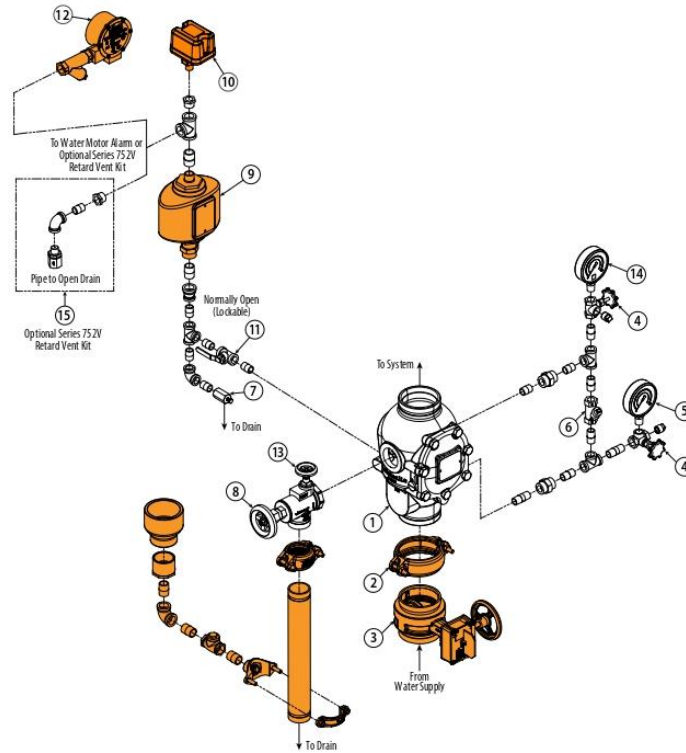


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## 3.4 SPECIFICATIONS – MATERIAL

European Trim: VdS, CE, LPCB, FM, EAC version

Series 751 *FireLock* Alarm Check Valve with Vertical Trim



Item	Description	Item	Description
1	Series 751 <i>FireLock</i> European Alarm Check Valve	9	Series 752 VdS Retarding Chamber Assembly (Optional/Sold Separately) Alarm Pressure Switch
2	<i>FireLock</i> Rigid Coupling	10	Alarm pressure switch (Optional/Sold Separately)
3	Water Supply Main Control Valve	11	Alarm Line Ball Valve (Lockable – Normally Open) Series 760 European Water Motor Alarm Assembly (Optional/Sold Separately)
4	Gauge Valve	12	Series 760 Water Motor Alarm (Optional/Sold Separately)
5	Water Supply Pressure Gauge (0-25 Bar)	13	System Test Valve
6	Swing Check Valve	14	System Pressure Gauge (0-25 Bar)
7	Restricted Orifice/Alarm Line Drain	15	Series 752V Retard Vent Kit <sup>1</sup> (Optional/Sold Separately)
8	System Main Drain Valve		

<sup>1</sup> The Series 752V Retard Vent Kit is required any time an air break is needed above the Series 752 VdS Retarding Chamber Assembly. 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.



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## 3.4 SPECIFICATIONS – MATERIAL (CONTINUED)

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- Standard Trim Package

Optional Accessories (specify choice):

- Series 752 Retard Chamber – Required when the Series 751 FireLock Alarm Check Valve is installed in a variable pressure installation in order to reduce the possibility of false alarms. (Refer to [30.01](#)).
- 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 FireLock 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. (Refer to [30.32](#)).
- Waterflow Detectors – Waterflow detectors are available for installation on the riser.





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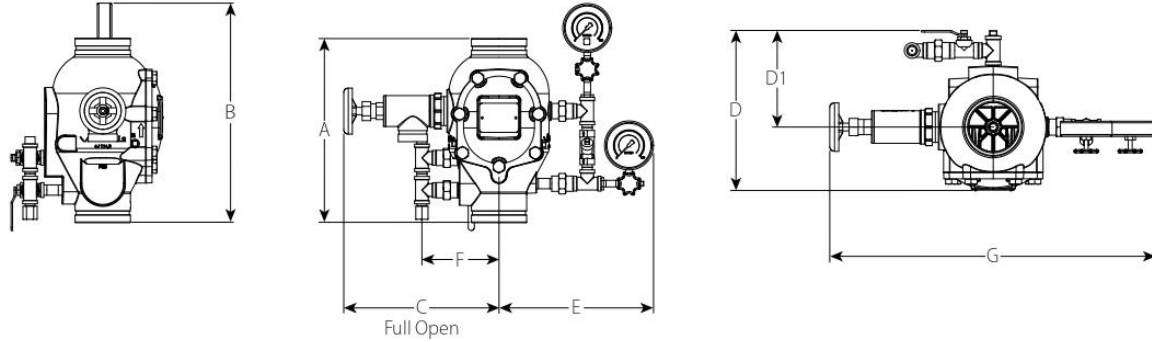


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## 4.0 DIMENSIONS

Standard Trim Dimensions: cULus, FM, CCC Version

Standard trim and trim for use with excess pressure pump (without drain connection kit and water supply main control valve options).



### NOTES

- The "A" dimension is the actual takeout dimension of the valve body.
- For systems with the optional Series 752 Retard Chamber Assembly, add 12 inches/305 mm to the "B" dimension to account for the additional height.

Size		Dimensions								Approx Weight Each	
Nominal inches	Actual Outside Diameter inches mm	A inches mm	B inches mm	C inches mm	D inches mm	D1 inches mm	E inches mm	F inches mm	G inches mm	Without Trim lbs. kg	With Trim lbs. kg
1 ½	1.900	9.00	11.75	10.00	11.25	7.00	11.00	5.00	21.00	14.2	31.0
DN40	48.3	229	298	254	286	178	279	127	533	6.4	14.0
2	2.875	9.00	11.75	10.00	11.25	7.00	11.00	5.00	21.00	14.6	31.0
DN50	60.3	229	298	254	286	178	279	127	533	6.6	14.1
2 ½	2.875	12.50	15.00	11.25	11.75	7.50	11.75	7.50	23.00	34.4	52.0
	73.0	318	381	286	298	191	298	191	548	15.6	23.6
DN65	3.000	12.50	15.00	11.25	11.75	7.50	11.75	7.50	23.00	34.4	52.0
	76.1	318	381	286	298	191	298	191	584	15.6	23.6
3	3.500	12.50	15.00	11.25	11.75	7.50	11.75	7.50	23.00	35.3	52.0
DN80	88.9	318	381	286	298	191	298	191	584	16.0	23.6
4	4.500	15.00	18.25	13.00	12.75	7.75	13.00	6.75	26.00	49.0	80.0
DN100	114.3	381	464	330	324	197	330	171	660	22.2	36.3
	6.625	16.00	19.00	13.50	14.75	9.00	13.75	6.75	27.25	69.0	91.0
165.1mm	168.3	406	483	343	375	229	349	171	692	31.3	41.3
6	6.500	16.00	19.00	13.50	14.75	9.00	13.75	6.75	27.25	69.0	95.0
DN150	165.1	406	483	343	375	229	349	171	692	31.3	43.1
8	8.625	17.50	18.75	14.75	17.25	10.00	14.75	6.75	29.50	142.0	182.0
DN200	219.1	445	476	375	438	254	375	171	749	64.4	82.6



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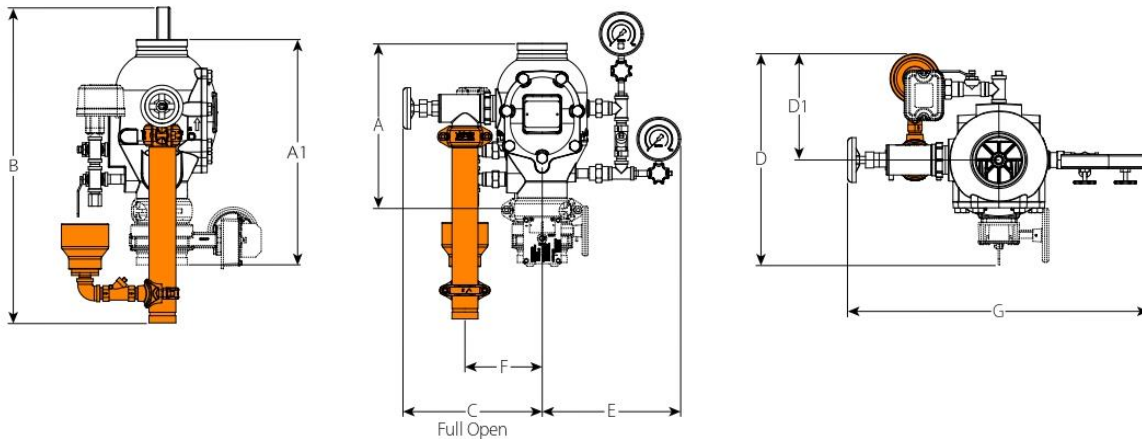
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## 4.0 DIMENSIONS

Standard Trim Dimensions: cULus, FM, CCC Version

Standard trim and trim for use with excess pressure pump (with drain connection kit and water supply main control valve options).

A 4-inch/114.3 mm Series 751 *FireLock* Alarm Check Valve with optional drain connection kit and water supply main control valve is shown below.



### NOTES

- The "A" dimension is the actual takeout dimension of the valve body.
- The "A1" dimension is the actual takeout dimension of the valve body with optional water supply main control valve.
- For systems with the optional Series 752 Retard Chamber Assembly, add 12 inches/305 mm to the "B" dimension to account for the additional height. The "D" and "D1" dimensions are not fixed measurements. The drip cup of the drain connection kit option can be rotated to provide more clearance at the back of the trim.
- Components shown as dotted lines denote optional equipment.
- The recommended drain connection kit option (shaded in orange) is shown for reference and takeout dimensions.

Size		Dimensions									Approx Weight Each	
Nominal inches mm	Actual Outside Diameter inches mm	A inches mm	A1 inches mm	B inches mm	C inches mm	D inches mm	D1 inches mm	E inches mm	F inches mm	G inches mm	Without Trim lbs. kg	With Trim lbs. kg
1 ½	1.900	9.00	16.25	24.50	9.25	14.00	7.50	11.25	5.75	20.50	16.7	43.0
DN40	48.3	229	413	622	235	356	191	286	146	521	7.6	19.5
2	2.875	9.00	13.75	24.50	9.25	14.00	7.50	11.25	5.75	20.50	17.0	43.0
DN50	60.3	229	349	622	235	356	191	286	146	521	7.7	19.5
2 ½	2.875	12.50	16.50	26.25	11.25	16.50	9.00	11.75	6.50	23.00	41.0	65.0
	73.0	318	419	667	286	419	229	298	165	584	18.7	29.5
DN65	3.000	12.50	16.50	26.25	11.25	16.50	9.00	11.75	6.50	23.00	41.0	65.0
	76.1	318	419	667	286	419	229	298	165	584	18.7	29.5
3	3.500	12.50	16.50	26.25	11.25	16.50	9.00	11.75	6.50	23.00	41.0	65.0
DN80	88.9	318	419	667	286	419	229	298	165	584	18.7	29.5
4	4.500	15.00	19.75	25.50	13.00	18.00	9.25	13.00	7.50	26.00	59.0	95.0
DN100	114.3	381	502	648	330	457	235	330	191	660	26.7	43.0
	6.625	16.00	22.13	25.25	13.50	20.75	9.25	13.75	7.75	27.25	80.0	116.0
165.1mm	168.3	406	562	641	343	527	235	349	197	692	36.2	52.6
6	6.500	16.00	22.13	25.25	13.50	20.75	9.25	13.75	7.75	27.25	80.0	116.0
DN150	165.1	406	562	641	343	527	235	349	197	692	36.2	52.6
8	8.625	17.50	23.00	26.75	14.75	24.00	10.50	14.50	9.25	29.25	122.0	158.0
DN200	219.1	445	584	679	375	610	267	368	235	743	55.3	71.6



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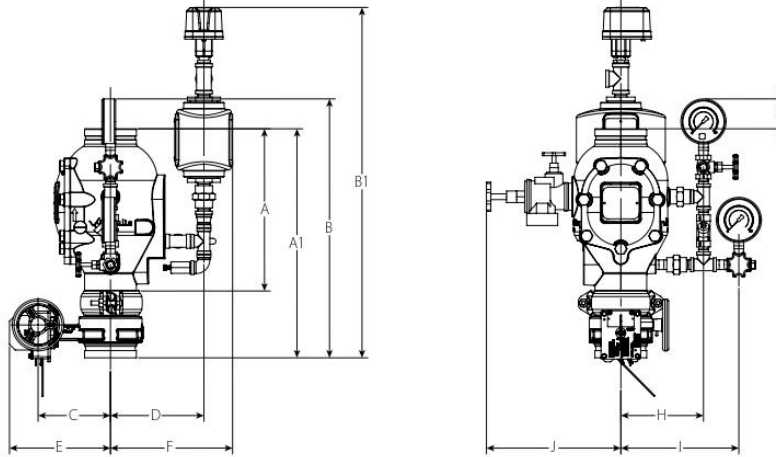
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## 4.0 DIMENSIONS (CONTINUED)

European Trim Dimensions: VdS, CE, LPCB, FM, EAC version



Size		Dimensions												Weight
Nominal	Actual Outside Diameter	A <sup>2</sup>	A1	B	B1	C	D	E	F	H	I	J	K	Approx. Each
inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	lbs.
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
3	3.500	12.50	16.50	17.13	28.75	5.50	7.63	7.50	10.13	6.63	9.75	10.88	0.63	75.8
DN80	88.9	318	419	435	730	140	194	191	257	168	248	276	16	34.4
4	4.500	15.00	19.88	22.50	30.50	6.25	8.13	8.75	10.63	7.13	10.25	11.63	2.50	100.4
DN100	114.3	381	505	572	775	159	206	222	270	181	260	295	64	45.5
6	6.625	16.00	22.13	24.63	32.13	8.13	9.38	10.75	11.88	7.50	10.63	12.00	2.50	132.5
DN150	168.3	406	562	625	816	206	238	273	302	191	270	305	64	60.1
8	8.625	17.50	23.00	23.25	30.13	9.38	8.50	12.00	11.00	9.25	12.13	13.38	0.25	199.7
DN200	219.1	445	584	591	765	238	216	305	279	235	308	340	6	90.6

<sup>2</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.



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## 5.0 PERFORMANCE

Standard Trim: cULus, FM, CCC Version

### Frictional Resistance

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

Nominal Size	Actual Outside Diameter	Equivalent Length of Pipe	
		feet	meters
1½ DN40	1.900 48.3	3.00	0.910
2 DN50	2.875 60.3	9.00	2.740
2½	2.875	8.00	
	73.0	2.438	
DN65	3.000	8.00	
	76.1	2.438	
3 DN80	3.500 88.9	17.00	5.182
4 DN100	4.500	21.00	
	114.3	6.401	
6 DN150	6.625	22.00	
	168.3	6.706	
8 DN200	6.500	22.00	
	165.1	6.706	
	8.625	50.00	
	219.1	15.240	

European Trim: VdS, CE, LPCB, FM, EAC version

### Frictional Resistance

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

Nominal Size	Actual Outside Diameter	Equivalent Length of Pipe	
		meters	feet
DN80	88.9	5.182	
3	3.500	17.00	
DN100	114.3	6.401	
4	4.500	21.00	
DN150	168.3	6.706	
6	6.625	22.00	
DN200	219.1	15.240	
8	8.625	50.00	



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## 5.0 PERFORMANCE (CONTINUED)

### Maximum Working Pressure

#### Standard Trim:

Size		cULus	FM	CCC
Nominal inches DN	Actual Outside Diameter inches DN	psi kPa bar	psi kPa bar	psi kPa bar
1 ½ DN40	1.900 48.3	300 2068 21	300 2068 21	-
2 DN50	2.375 60.3	300 2068 21	300 2068 21	-
2 ½	2.875 73.0	300 2068 21	300 2068 21	-
DN65	3.000 76.1	300 2068 21	300 2068 21	-
3 DN80	3.500 88.9	300 2068 21	300 2068 21	232 1600 16
4 DN100	4.500 114.3	300 2068 21	300 2068 21	232 1600 16
6 DN150	6.625 168.3	300 2068 21	300 2068 21	232 1600 16
	6.500 165.1	300 2068 21	300 2068 21	232 1600 16
8 DN200	8.625 219.1	232 1600 16	232 1600 16	232 1600 16

#### European Trim:

Size		FM	EAC	VdS	LPCB	CE
Nominal inches DN	Actual Outside Diameter inches DN	psi kPa bar	psi kPa bar	psi kPa bar	psi kPa bar	psi kPa bar
3 DN80	3.500 88.9	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16
4 DN100	4.500 114.3	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16
6 DN150	6.625 168.3	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16
	6.500 165.1	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16
8 DN200	8.625 219.1	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16