

# Victaulic® Series UMC

## Universal Manifold Check Assembly



### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 1 ¼ – 8"/DN32 – DN200

#### Maximum Working Pressure

- Up to 300 psi/2068 kPa/20.6 Bar

#### Application

- The Series UMC meets NFPA 13 requirements for “Floor Control Valve Assemblies” where multi-story buildings require zoning by floor, or whenever separate control and floor zoning is specified.
- The Series UMC may be used as a primary or sectional wet system control assembly.
- The Series UMC may be installed horizontally or vertically.

#### Configurations

- Optional control valve: Series 728 FireLock™ Ball Valve for 1 ¼ – 1 ½"/DN32 – DN40 Series UMC Sizes
- Optional control valve: Series 705 FireLock™ Butterfly Valve for 2 – 8"/DN50 – DN200 Series UMC Sizes
- Optional auto test flow switch
- Factory assembled right-handed/left-handed (field changeable if necessary)

#### Included Components

- Integrated check valve
- Series UTD (Universal Test Drain) with integrated Series ARV (Adjustable Relief Valve)
- Quick-drain hose
- Vane type flow switch
  - 1 ¼ – 2"/DN32 – DN50 Series UMC sizes use a 2" vane type flow switch with retard
  - 2 ½ – 3"/73mm – DN80 and 8"/DN200 Series UMC sizes use a corresponding size vane type flow switch with retard
  - 4 – 6"/DN100-DN150 Series UMC sizes use a corresponding size vane type flow switch with retard and flange adapter
- 1 ¼ – 8"/DN32 – DN200 system side pressure gauge 400 psi/2750 kPa/27.5 Bar
- 1 ¼ – 3"/DN32-DN80 supply side ½" plugged port located on control valve (if using as a system riser, pressure gauge ordered separately)
- 4 – 8"/DN100 – DN200 supply-side pressure gauge 400 psi/2750 kPa/27.5 Bar

#### Available End Connections

- Victaulic Original Groove System (OGS)

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



## 2.0 CERTIFICATION/LISTINGS



## 3.0 SPECIFICATIONS – MATERIAL

**Body:** Ductile iron conforming to ASTM A536, grade 65-45-12

**Clapper:** Stainless Steel

**Clapper Seal:** EPDM

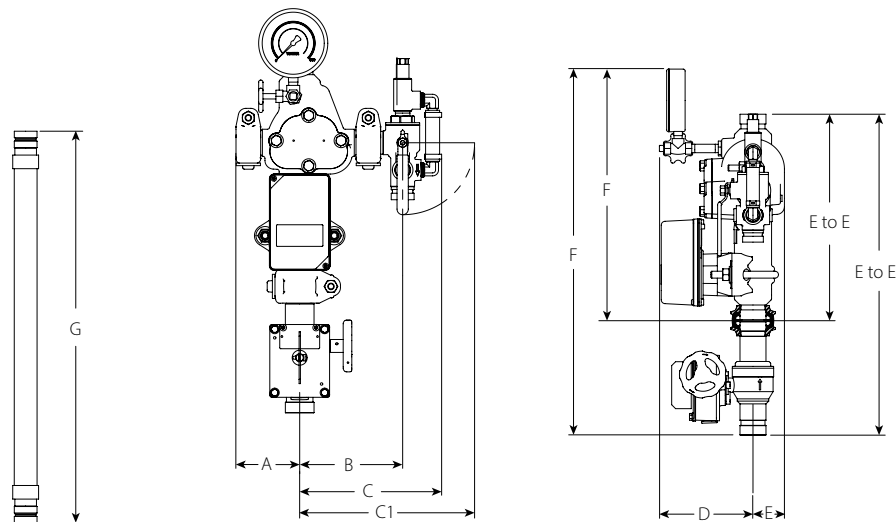
**Shafts:** Stainless Steel

**Seat:** Brass

**Spring:** Stainless Steel

**Hose:** Stainless Steel

## 4.0 DIMENSIONS

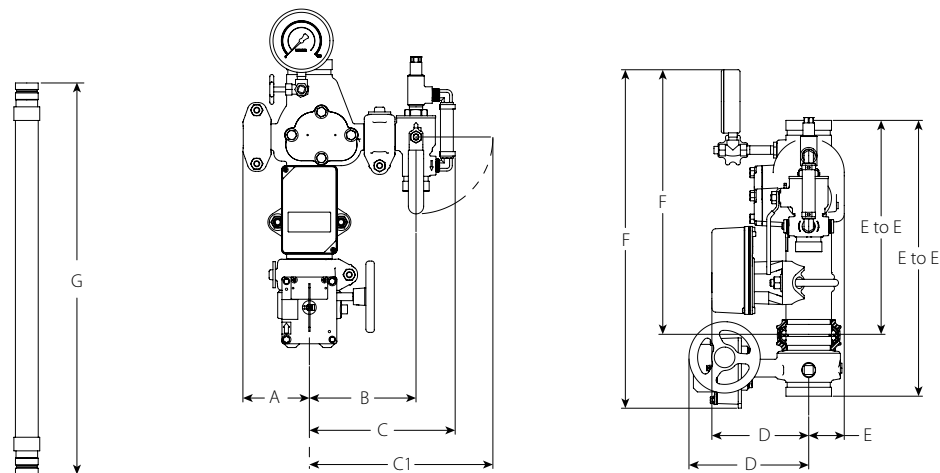


Size		Dimensions											Series UTD Drain Size (Nominal)	Series UTD Test Orifice K-Factor S.I.	G Quick Drain Hose Length inches mm	Weight	
Nominal inches DN	Actual Outside Dia. inches mm	E to E with control valve	E to E without control valve	A	B	C	C-1	D with control valve	D without control valve	E	F with control valve	F without control valve				Approx. (Each) with control valve lb kg	Approx. (Each) without control valve lb kg
1 ¼ DN32	1.660 42.4	20.50 521	13.13 333	3.63 92	5.88 149	8.25 210	10.00 254	6.00 152	6.00 152	2.00 51	23.38 594	16.00 406	1.00 25	2.8 4.0	24.00 610	32.0 14.5	24.0 10.9
1 ½ DN40	1.900 48.3	20.50 521	13.13 333	3.63 92	5.88 149	8.25 210	10.00 254	6.00 152	6.00 152	2.00 51	23.50 597	16.13 410	1.00 25	2.8 4.0	24.00 610	34.0 15.4	25.0 11.3

### NOTES

- When Series UTD Valve Size (Nominal) is 1"/25 mm, flexible drain hose connection utilizes FireLock IGS™ groove profile
- ½" system supply pressure gauge port located on the control valve for sizes 1 ¼ – 1 ½"/DN32 – DN40

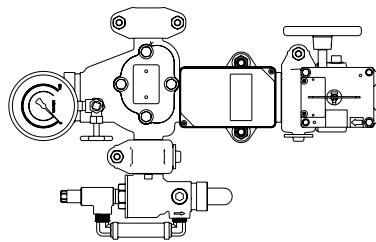
4.0 DIMENSIONS (CONTINUED)



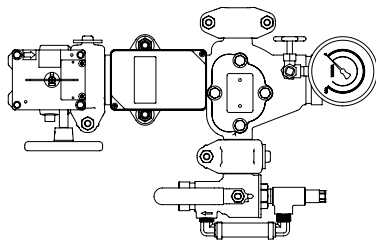
Size		Dimensions											Series UTD Drain Size (Nominal)	Series UTD Test Orifice	G Quick Drain Hose Length	Weight	
Nominal  inches DN	Actual Outside Dia.  inches mm	E to E with control valve	E to E without control valve					D with control valve	D without control valve		F with control valve	F without control valve				Approx. (Each) with control valve	Approx. (Each) without control valve
		inches mm														inches DN	K-Factor S.I.
2	2.375	17.50	13.13	3.63	5.88	8.25	10.00	6.38	6.00	2.00	21.13	16.38	1.00	2.8	24.00	36.0	25.0
DN50	60.3	445	333	92	149	210	254	162	152	51	537	416	25	4.0	610	16.3	11.3
2½	2.875	17.38	13.50	4.25	6.75	9.25	11.50	7.50	6.13	2.25	21.25	16.63	1.25	4.2	24.00	39.0	28.0
	73.0	441	343	108	171	235	292	191	156	57	540	422	32	6.1	610	17.7	12.7
DN65	3.000	17.38	13.50	4.25	6.75	9.25	11.50	7.50	6.13	2.25	21.25	16.63	1.25	4.2	24.00	39.0	28.0
	76.1	441	343	108	171	235	292	191	156	57	540	422	32	6.1	610	17.7	12.7
3	3.500	17.63	13.75	4.38	7.13	9.63	11.88	7.75	6.38	2.38	21.13	16.50	1.25	4.2	24.00	44.0	31.0
DN80	88.9	448	349	111	181	244	302	197	162	60	537	419	32	6.1	610	20.0	14.1
4	4.500	19.50	14.63	5.75	8.75	11.63	14.88	8.75	7.00	3.00	22.75	17.63	2.00	5.6	36.00	65.0	52.0
DN100	114.3	495	371	146	222	295	378	222	178	76	578	448	51	8.1	914	29.5	23.6
	6.500	23.50	17.38	6.88	10.00	12.88	16.13	11.38	8.00	3.88	25.88	19.75	2.00	5.6	36.00	100.0	73.0
	165.1	597	441	175	254	327	410	289	203	98	657	502	51	8.1	914	45.4	33.1
6	6.625	23.50	17.38	6.88	10.00	12.88	16.13	11.38	8.00	3.88	25.88	19.75	2.00	5.6	36.00	100.0	73.0
DN150	168.3	597	441	175	254	327	410	289	203	98	657	502	51	8.1	914	45.4	33.1

NOTES

- ½" system supply pressure gauge port located on the control valve for sizes 2 – 3"/DN50 – DN80 (gauge sold separately)
- Included system supply pressure gauge located on the control valve for sizes 4 – 6"/DN100 – DN150
- When Series UTD Valve Size (Nominal) is 1 1/2" / 25 mm, flexible drain hose connection utilizes FireLock IGS™ groove profile

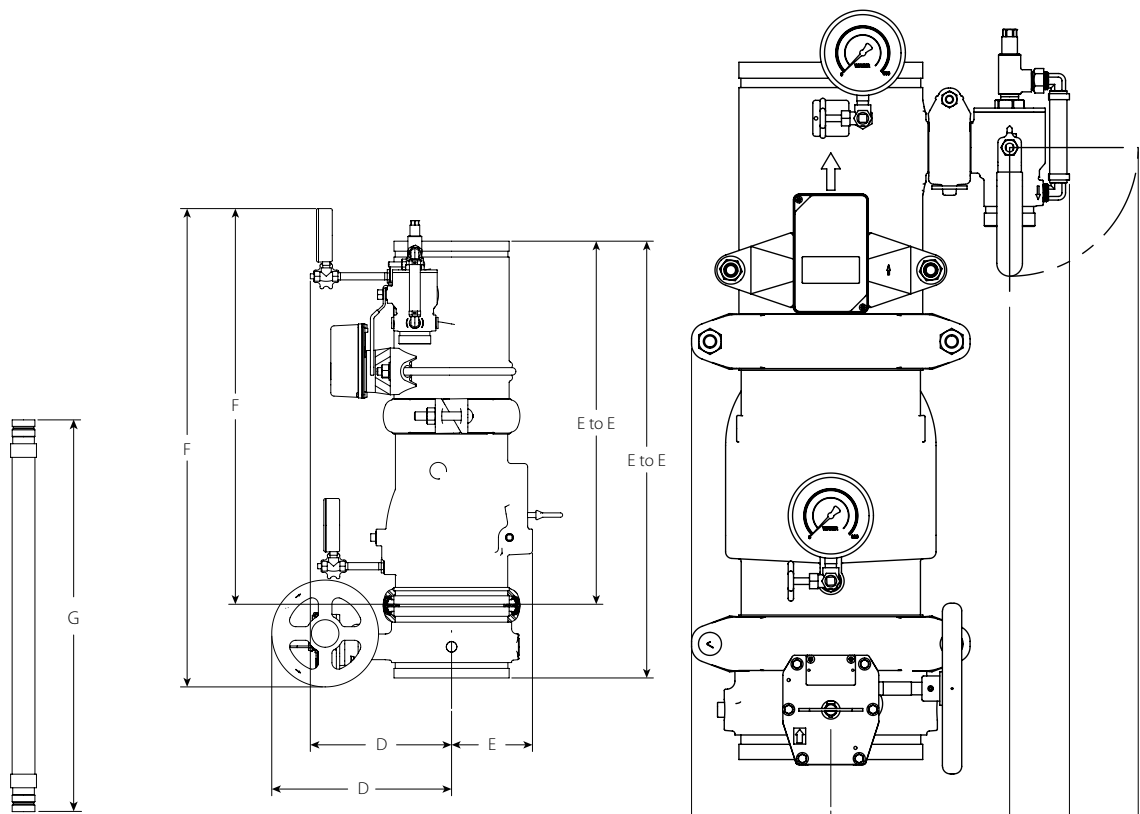


Horizontal Install Left Hand with Control Valve



Horizontal Install Right Hand with Control Valve

4.0 DIMENSIONS (CONTINUED)



Size		Dimensions											Series UTD Drain Size (Nominal)	Series UTD Test Orifice K-Factor S.I.	G Quick Drain Hose Length inches mm	Weight	
Nominal inches DN	Actual Outside Dia. inches mm	E to E with control valve	E to E without control valve	A	B	C	C-1	D with control valve	D without control valve	E	F with control valve	F without control valve				Approx. (Each) with control valve lb kg	Approx. (Each) without control valve lb kg
		inches mm														inches DN	
8 DN200	8.625 219.1	32.75 832	27.25 692	6.50 165	8.38 213	11.25 286	14.38 365	13.50 343	10.63 270	6.00 152	35.13 892	29.63 752	2.00 51	5.6 8.1	36.00 914	178.0 80.7	136.0 61.7

NOTE

- System supply pressure gauge port is on the supply side of check valve

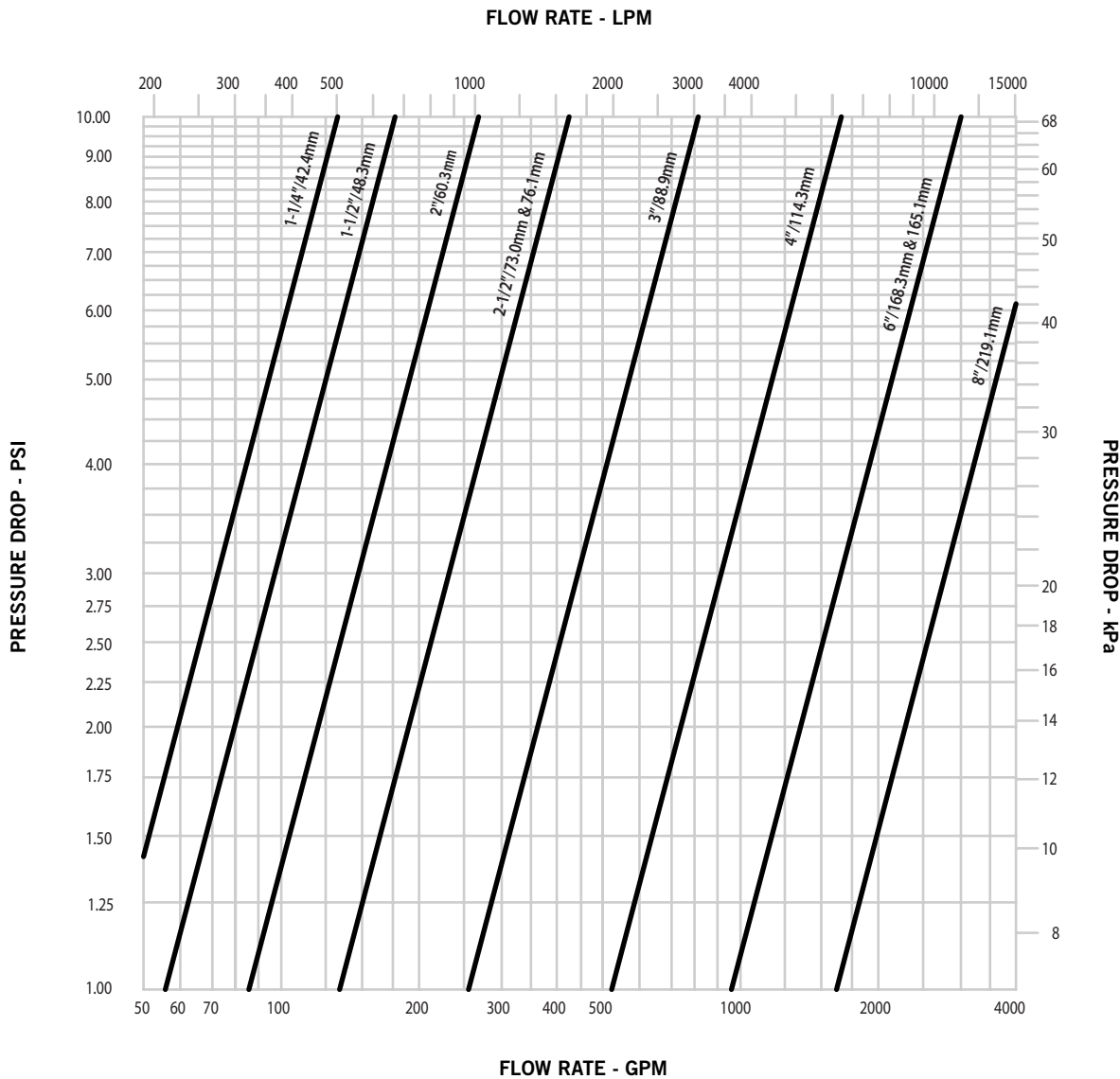
## 5.0 PERFORMANCE

Size		Equivalent Length of Sch. 40 Pipe <sup>1</sup>		Flow Characteristics		Maximum Working Pressure psi kPa
Nominal inches DN	Actual Outside Diameter inches mm	with control valve feet meters	without control valve feet meters	Cv/Kv Values with control valve	Cv/Kv Values without control valve	
				Full Open	Full Open	
1 ¼ DN32	1.660 42.4	8.3 2.5	8.0 2.4	38.52 33	35.59 31	300 2068
1 ½ DN40	1.900 48.3	10.1 3.1	10.0 3.0	56.75 49	57.43 50	300 2068
2 DN50	2.375 60.3	21.1 6.4	15.8 4.8	71.43 62	83.14 72	300 2068
2 ½	2.875 73.0	19.6 6.0	15.8 4.8	112.43 97	125.84 109	300 2068
DN65	3.000 76.1	19.6 6.0	15.8 4.8	112.43 97	125.84 109	300 2068
3 DN80	3.500 88.9	20.0 6.1	13.3 4.0	199.32 172	241.43 209	300 2068
4 DN100	4.500 114.3	17.6 5.4	12.9 3.9	425.88 368	499.23 432	300 2068
	6.500 165.1	40.6 12.4	32.0 9.8	834.97 722	932.83 807	300 2068
6 DN150	6.625 168.3	40.6 12.4	32.0 9.8	834.97 722	932.83 807	300 2068
8 DN200	8.625 219.1	60.8 18.5	45.8 13.9	1376.8 1191	1556.57 1346	300 2068

<sup>1</sup> Equivalent length of Sch 40 pipe calculated using the Hazen-Williams formula with a roughness coefficient of C=120

5.0 PERFORMANCE (CONTINUED)

Series UMC without Control Valve

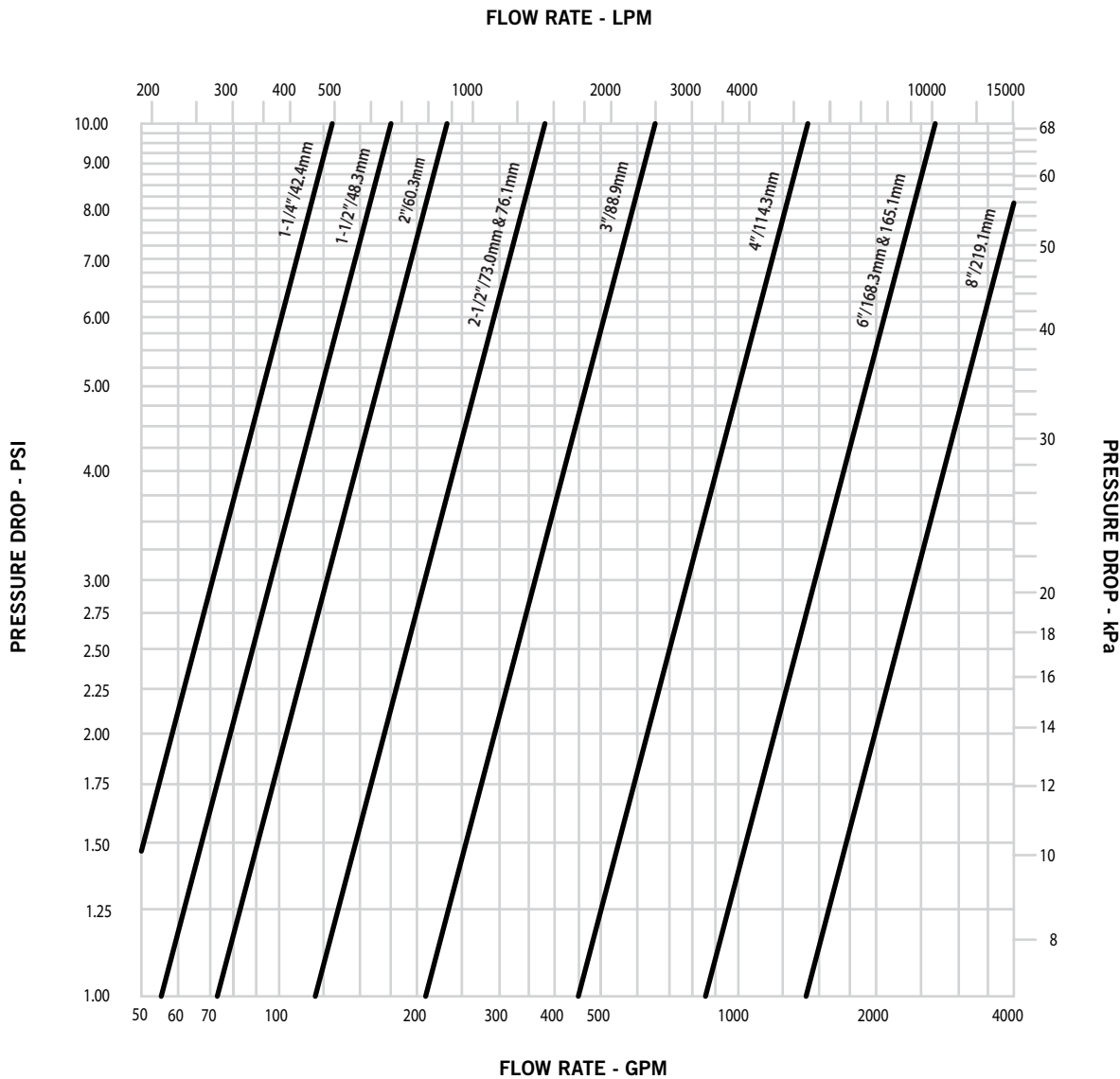


NOTE

- Includes friction loss across flow switch

5.0 PERFORMANCE (CONTINUED)

Series UMC with Control Valve



NOTE

- Includes friction loss across flow switch

## 6.0 NOTIFICATIONS

### ⚠ 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.
- Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained intermediately 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.

- These products shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA) standards, or equivalent 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.
- 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.

## 7.0 REFERENCE MATERIALS

[10.17: FireLock® Ball Valve](#)

[10.54: Victaulic FireLock™ Innovative Groove System I IGS™](#)

[10.64: Victaulic® FireLock™ Installation-Ready™ Rigid Couplings](#)

[10.81: FireLock® Butterfly Valve](#)

[30.71: Series UM Universal Manifold Assembly](#)

[30.73: Victaulic® Series UTD Universal Test and Drain](#)

[30.74: Victaulic® Series ARV Adjustable Relief Valve](#)

[I-100: Field Installation Handbook](#)

[I-UMC: Series UMC Universal Manifold Check Assembly](#)

### User Responsibility for Product Selection and Suitability

Each user bears final responsibility for determining the suitability of Victaulic products for their end-use application, in accordance with industry standards, project specifications, and Victaulic's published performance, maintenance, and safety data, as well as all warnings and installation instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, warranty, installation instructions, or this disclaimer.

### Installation

Always refer to and follow the [Victaulic Installation Handbook](#) or installation instructions for the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at victaulic.com.

### Warranty

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

### Intellectual Property Rights

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### Note

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