

Victaulic® Series UM Universal Manifold Assembly



1.0 PRODUCT DESCRIPTION

Available Sizes

- 1 ¼ – 8"/DN32 – DN200

Maximum Working Pressure

- Up to 300 psi/2068 kPa/21 Bar

Application

- Fire protection system control module includes test and drain valve, waterflow detector, pressure gauge, flexible drain connection and adjustable pressure relief valve (175 – 310 psi/1206 – 2137 kPa/12.1 – 21.4 Bar adjustable set pressure).

Configurations

- Optional control valve: Series 728 FireLock™ Ball Valve for 1 ¼ – 1 ½"/DN32 – DN40 Series UM Sizes
- Optional control valve: Series 705 FireLock™ Butterfly Valve for 2 – 8"/DN50 – DN200 Series UM Sizes
- Optional auto test flow switch

Included Components

- 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 UM sizes use a 2" vane type flow switch with retard
 - 2 ½ – 8"/DN80 – DN200 Series UM sizes use a corresponding size vane type flow switch with retard
- 1 ¼ – 8"/DN32 – DN200 system-side pressure gauge 400 psi/2750 kPa/27.5 Bar

Available End Connections

- Victaulic Original Groove System (OGS)

2.0 CERTIFICATION/LISTINGS



3.0 SPECIFICATIONS – MATERIAL

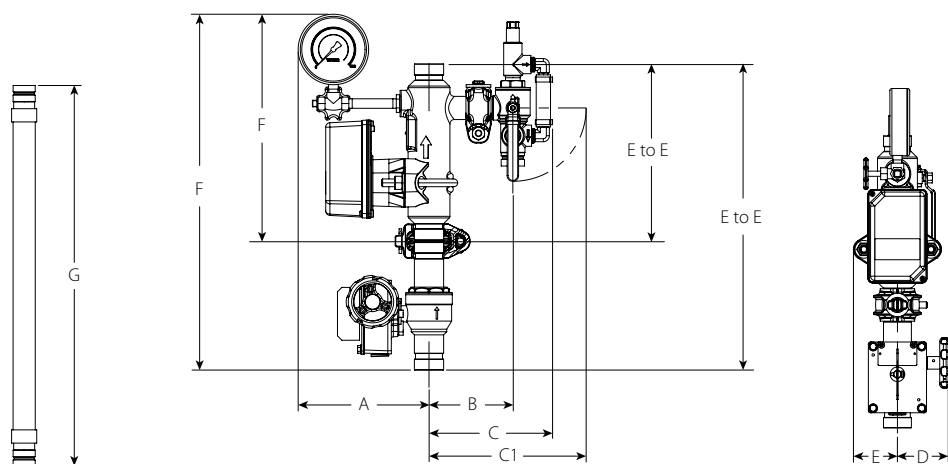
Valve Body: Cast ductile iron conforming to ASTM A536, Grade 65-45-12.

Waterflow Detector: Vane type waterflow detector with sealed retard, and mechanical delay adjustment. Cover includes tamper resistant security screws and tool.

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



4.0 DIMENSIONS

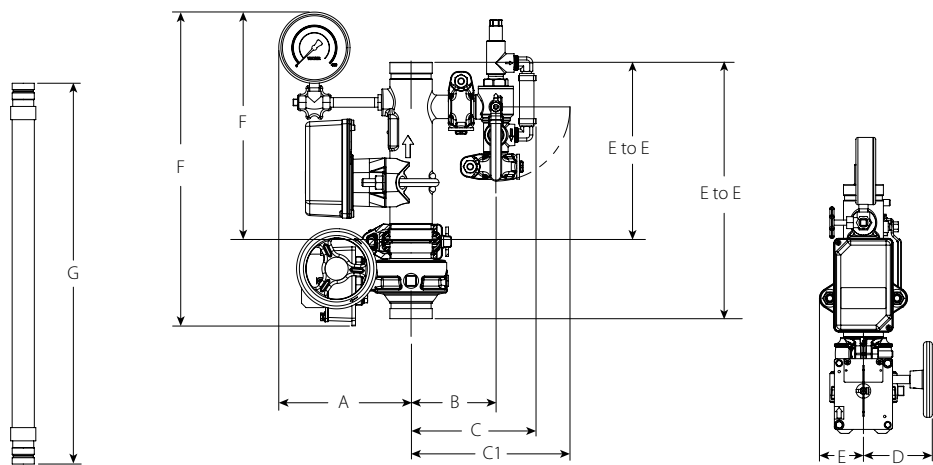


Size		Dimensions														Weight Approx. (Each)	
Nominal	Actual Outside Diameter	E to E with control valve	E to E without control valve	A	B	C	C1	D	E	F with control valve	F without control valve	G	Series UTD Drain Size (Nominal)	Series UTD Test Orifice	with control valve	without control valve	
inches DN	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches DN	K-Factor S.I.	lb kg	lb kg	
1 ¼ DN32	1.660 42.4	17.38 441	10.00 254	7.38 187	4.75 121	7.00 178	8.88 225	3.00 76	2.63 67	20.25 514	12.88 327	24.00 610	1.00 25	2.8 4.0	22 9.98	13 5.90	
1 ½ DN40	1.900 48.3	17.38 441	10.00 254	7.38 187	4.75 121	7.00 178	8.88 225	3.00 76	2.63 67	20.25 514	12.88 327	24.00 610	1.00 25	2.8 4.0	22 9.98	13 5.90	

NOTE

- When Series UTD Valve Size (Nominal) is 1"/25 mm, flexible drain hose connection utilizes FireLock IGS™ groove profile.

4.0 DIMENSIONS (CONTINUED)

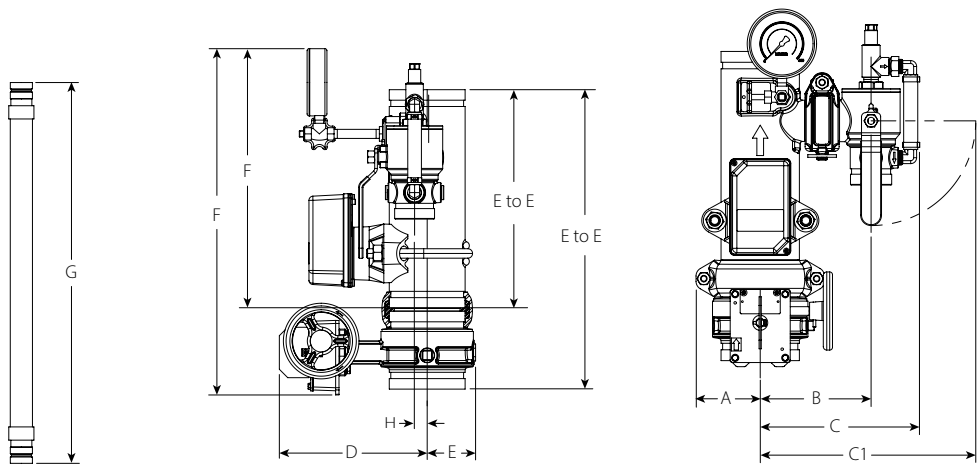


Size		Dimensions													Weight Approx. (Each)	
Nominal	Actual Outside Diameter	E to E with control valve	E to E without control valve	A	B	C	C1	D	E	F with control valve	F without control valve	G	Series UTD Drain Size (Nominal)	Series UTD Test Orifice	with control valve	without control valve
inches DN	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches DN	K-Factor S.I.	lb kg	lb kg
2	2.375	14.38	10.00	7.38	4.75	7.00	8.88	4.13	2.63	17.63	12.88	24.00	1.00	2.8	24	13
DN50	60.3	365	254	187	121	178	225	105	67	448	327	610	25	4.0	10.89	5.90
2½	2.875	13.88	10.00	7.63	5.88	8.38	10.75	4.13	2.63	17.50	12.88	24.00	1.25	4.2	29	17
	73.0	352	254	194	149	213	273	105	67	445	327	610	32	6.1	13.15	7.71
DN65	3.000	13.88	10.00	7.63	5.88	8.38	10.75	4.13	2.63	17.50	12.88	24.00	1.25	4.2	29	17
	76.1	352	254	194	149	213	273	105	67	445	327	610	32	6.1	13.15	7.71
3	3.500	14.88	11.00	8.00	6.13	8.63	11.00	4.13	2.88	18.50	13.88	24.00	1.25	4.2	33	20
DN80	88.9	378	279	203	156	219	279	105	73	470	352	610	32	6.1	14.97	9.07

NOTE

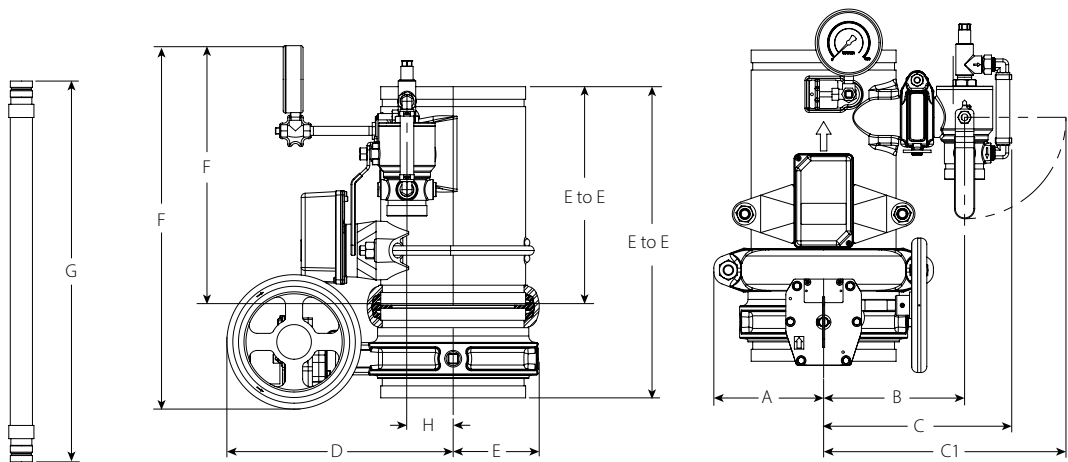
- When Series UTD Valve Size (Nominal) is 1/25 mm, flexible drain hose connection utilizes FireLock IGS™ groove profile.

4.0 DIMENSIONS (CONTINUED)



Size		Dimensions														Weight Approx. (Each)	
Nominal inches DN	Actual Outside Dia. inches mm	E to E with control valve inches mm	E to E without control valve inches mm	A inches mm	B inches mm	C inches mm	C1 inches mm	D inches mm	E inches mm	F with control valve inches mm	F without control valve inches mm	G inches mm	H inches mm	Series UTD Drain Size (Nominal) inches DN	Series UTD Test Orifice K-Factor S.I.	with control valve lb kg	without control valve lb kg
4 DN100	4.500	17.88	13.00	3.75	6.38	9.25	12.38	8.75	2.88	20.63	15.50	36.00	0.75	2.00	5.6	44	17
	114.3	454	330	95	162	235	314	222	73	524	394	914	19	51	8.1	19.96	7.71
6 DN150	6.500	19.00	13.00	5.13	7.38	10.25	13.38	11.38	4.25	21.50	15.50	36.00	1.50	2.00	5.6	66	34
	165.1	483	330	130	187	260	340	289	108	546	394	914	38	51	8.1	29.94	15.42
6 DN150	6.625	19.00	13.00	5.13	7.38	10.25	13.38	11.38	4.25	21.50	15.50	36.00	1.50	2.00	5.6	66	34
	168.3	483	330	130	187	260	340	289	108	546	394	914	38	51	8.1	29.94	15.42

4.0 DIMENSIONS (CONTINUED)



Size		Dimensions														Weight Approx. (Each)	
Nominal	Actual Outside Dia.	E to E with control valve	E to E without control valve	A	B	C	C1	D	E	F with control valve	F without control valve	G	H	Series UTD Drain Size (Nominal)	Series UTD Test Orifice	with control valve	without control valve
inches DN	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches DN	K-Factor S.I.	lb kg	lb kg
8 DN200	8.625 219.1	18.50 470	13.00 330	6.50 165	8.38 213	11.25 286	14.38 365	13.50 343	5.13 130	21.63 549	15.50 394	36.00 914	2.75 70	2.00 51	5.6 8.1	91 41.28	54 24.49

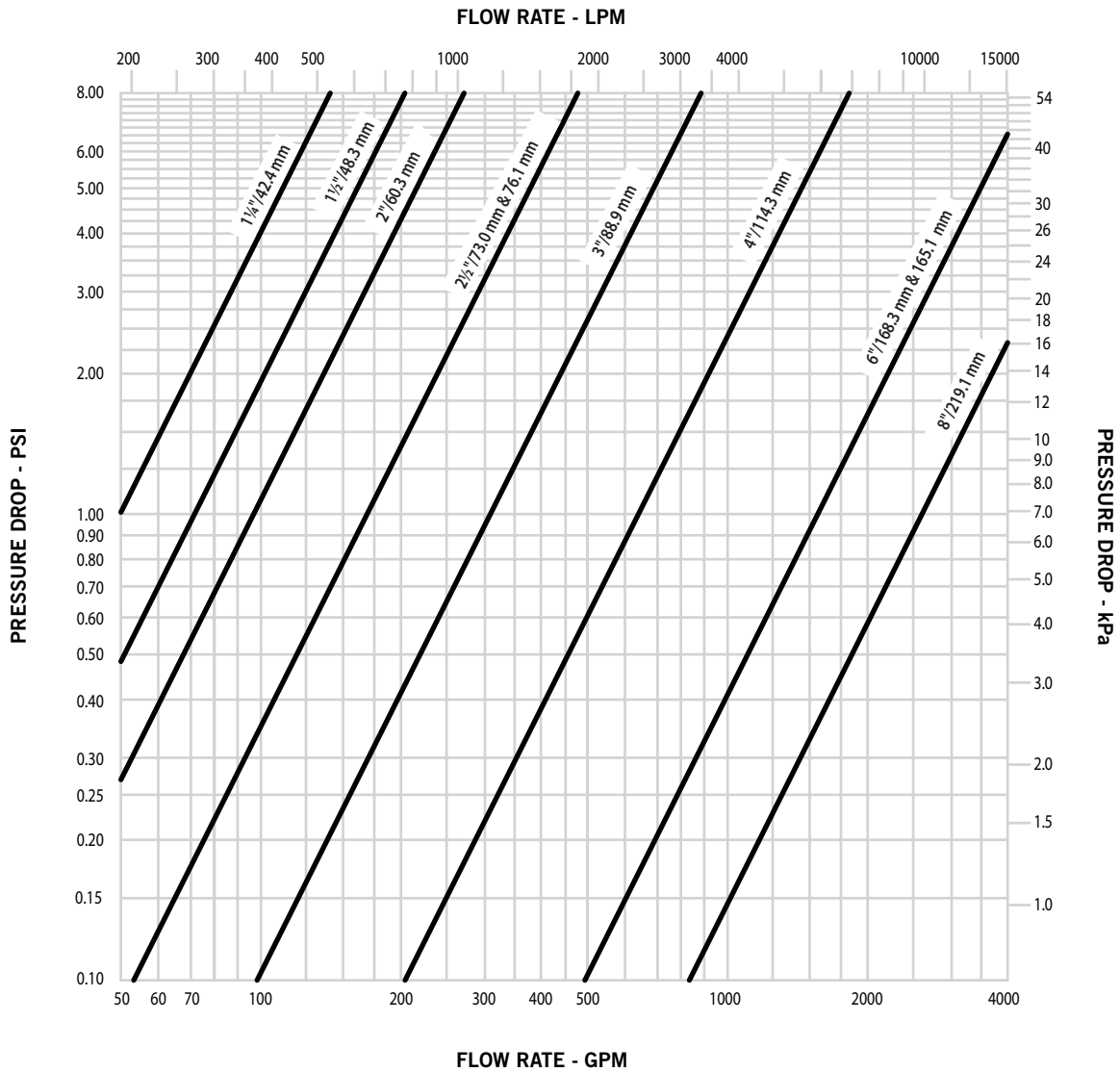
5.0 PERFORMANCE

Size		Equivalent Length of Sch. 40 Pipe ¹		Flow Characteristics		Performance
Nominal inches DN	Actual Outside Diameter inches mm	with control valve feet meters	without control valve feet meters	Cv/Kv Values with control valve Full Open	Cv/Kv Values without control valve Full Open	Maximum Working Pressure psi kPa
1 ¼ DN32	1.660 42.4	5.75 1.8	5.25 1.6	47.65 41	49.33 43	300 2068
1 ½ DN40	1.900 48.3	6 1.8	5.875 1.8	70.66 61	72.53 63	300 2068
2 DN50	2.375 60.3	12.25 3.7	6.625 2.0	95.39 83	130.61 113	300 2068
2 ½	2.875 73.0	9.875 3.0	5.25 1.6	149.98 130	218.87 189	300 2068
DN65	3.000 76.1	9.875 3.0	5.25 1.6	149.98 130	218.87 189	300 2068
3 DN80	3.500 88.9	9 2.7	4.125 1.3	298 258	433.2 375	300 2068
4 DN100	4.500 114.3	8.5 2.6	3 0.9	594.94 515	964.95 835	300 2068
	6.500 165.1	12 3.7	4.5 1.4	1472.2 1273	2256.53 1952	300 2068
6 DN150	6.625 168.3	12 3.7	4.5 1.4	1472.2 1273	2256.53 1952	300 2068
8 DN200	8.625 219.1	17.5 5.3	4.125 1.3	2500.92 2163	5035.24 4355	300 2068

¹ Equivalent length of Sch. 40 pipe calculated using the hazen-williams formula with a roughness constant of c=120.

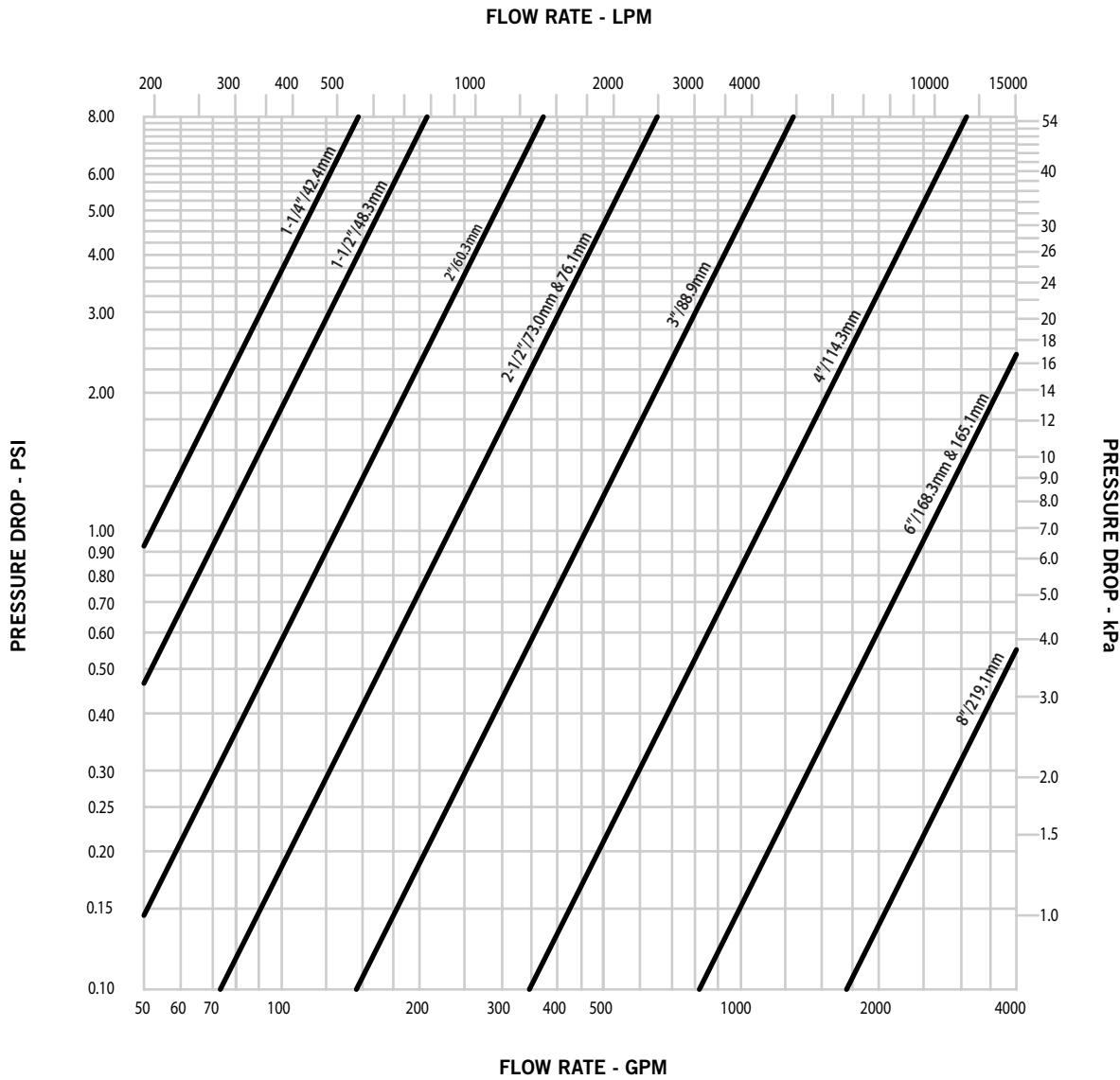
5.0 PERFORMANCE

Series UM Friction Loss with Control Valve (including water flow switch)



5.0 PERFORMANCE (CONTINUED)

Series UM Friction Loss without Control Valve (including water 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: Series 728 FireLock™ Ball Valve](#)

[10.54: FireLock™ Innovative Groove System IIGS™](#)

[10.64: FireLock™ Installation-Ready™ Rigid Couplings Style 009N and Style 109](#)

[10.80: Series 765 FireLock™ High Pressure Butterfly Valve](#)

[10.81: Series 705 FireLock™ Butterfly Valve](#)

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

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

[30.75: Series FTV Flow Test Valve](#)

[I-UM: Series UM Universal Manifold Assembly Installation Manual](#)

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.

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Note

All products bearing a Victaulic trademark are manufactured by Victaulic or to Victaulic specifications. All products are to be installed only in accordance with the applicable Victaulic installation instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.