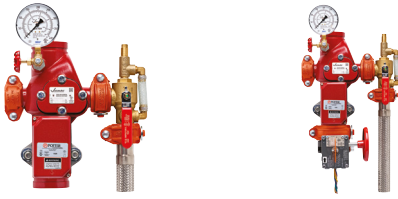


# Victaulic® Series UMC Universal Manifold Check Assembly



## 1.0 PRODUCT DESCRIPTION

### Available Sizes

- 1 ¼ – 8"/DN32 – DN200

### Maximum Working Pressure

- Up to 300 psi/2068 kPa/20.6 bar

### Application

- Floor control assemblies may be utilized to meet the zone separation requirements of multistory applications exceeding two stories in height or whenever separate control or zoning is specified.
- Shotgun riser assemblies may be utilized in vertical orientations on individual system risers.

### Configurations

- Optional control valve: Series 705 Butterfly Valve or Series 728 Ball Valve
- 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 UMC use saddle type 2" VSR flow switch
- 2 ½ – 3"/73mm – DN80 and 8"/DN200 UMC use saddle type VSR flow switch for corresponding valve size
- 4 – 6"/DN100-DN150 UMC use VSR-M flow switch with 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) standard groove

## 2.0 CERTIFICATION/LISTINGS



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

### 3.0 SPECIFICATIONS – MATERIAL

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

**Clapper:** Stainless Steel

**Clapper Seal:** EPDM

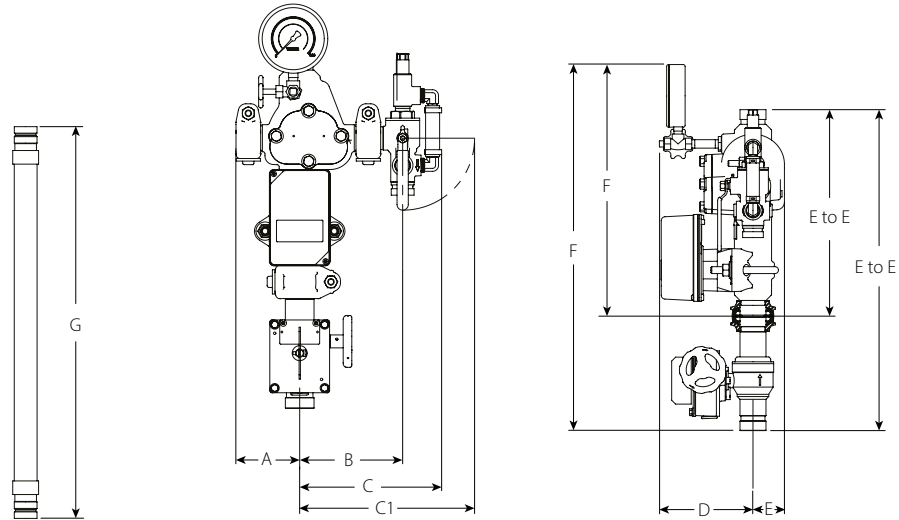
**Shafts:** Stainless Steel

**Seat:** Brass

**Spring:** Stainless Steel

**Hose:** Stainless Steel

### 4.0 DIMENSIONS

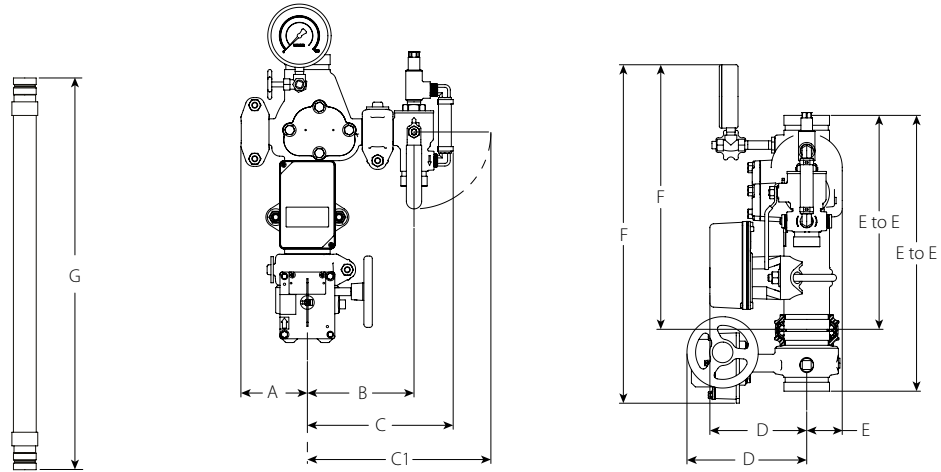


| Size              |                               | Dimensions                |                              |            |             |             |              |                      |                         |            |                      |                         | Series UTD Valve Size (Nominal) | Series UTD Test Orifice K-Factor S.I. | 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 | 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 | Approx. (Each) without control valve |
|                   |                               | inches mm                 |                              |            |             |             |              |                      |                         |            |                      |                         | inches DN                       |                                       | inches mm                 | lb kg                             | lb kg                                |
| 1 ¼<br>DN32       | 1.660<br>42.4                 | 20.50<br>521              | 13.13<br>333                 | 3.63<br>92 | 5.88<br>149 | 8.25<br>210 | 10.00<br>254 | 6.00<br>152          | 6.00<br>152             | 2.00<br>51 | 23.38<br>594         | 16.00<br>406            | 1.00<br>25                      | 2.8<br>4.0                            | 24.00<br>610              | 32.0<br>14.5                      | 24.0<br>10.9                         |
| 1 ½<br>DN40       | 1.900<br>48.3                 | 20.50<br>521              | 13.13<br>333                 | 3.63<br>92 | 5.88<br>149 | 8.25<br>210 | 10.00<br>254 | 6.00<br>152          | 6.00<br>152             | 2.00<br>51 | 23.50<br>597         | 16.13<br>410            | 1.00<br>25                      | 2.8<br>4.0                            | 24.00<br>610              | 34.0<br>15.4                      | 25.0<br>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

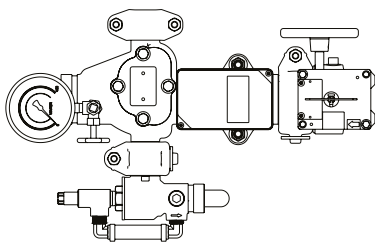
4.0 DIMENSIONS (CONTINUED)



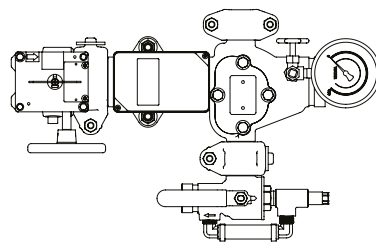
| Size              |                               | Dimensions                |                              |      |       |       |       |                      |                         |      |                      |                         | Series UTD Valve Size (Nominal) | Series UTD Test Orifice K-Factor S.I. | 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 | A    | B     | C     | C-1   | D with control valve | D without control valve | E    | F with control valve | F without control valve |                                 |                                       |                           | inches DN | inches mm |
| 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"/25 mm, flexible drain hose connection utilizes FireLock IGS™ groove profile

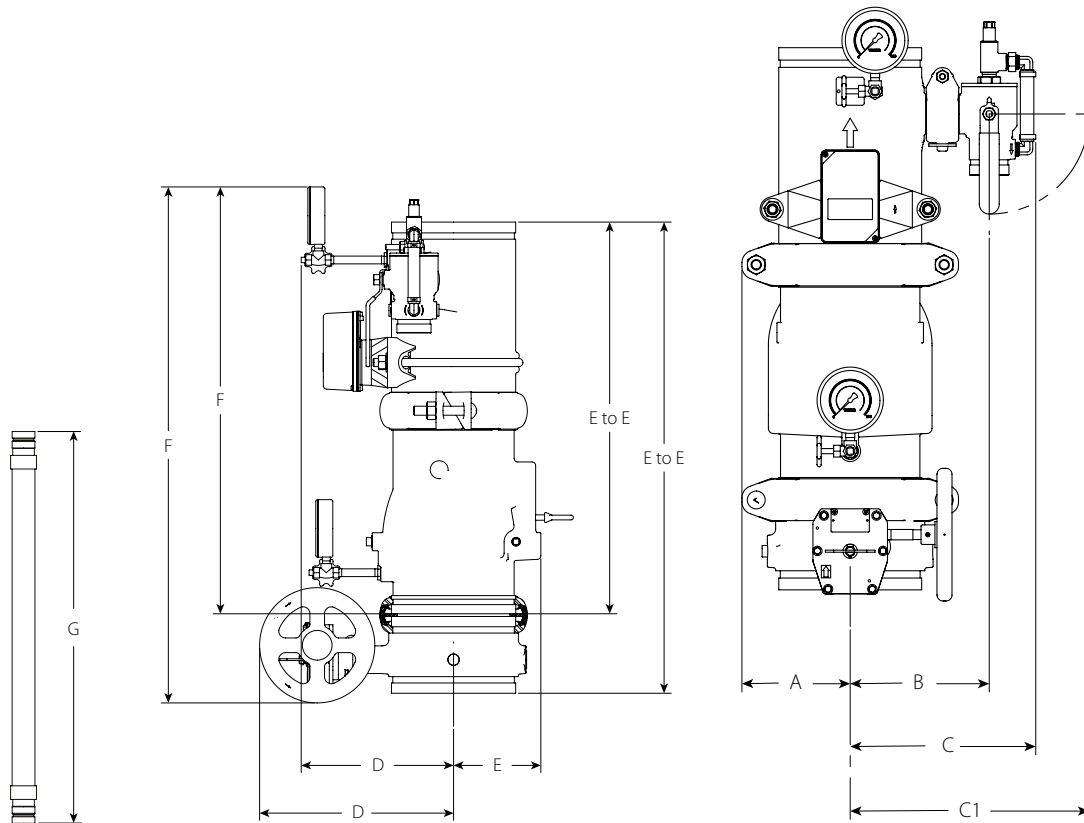


Horizontal Install Left Hand with Control Valve



Horizontal Install Right Hand with Control Valve

4.0 DIMENSIONS (CONTINUED)



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

NOTE

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

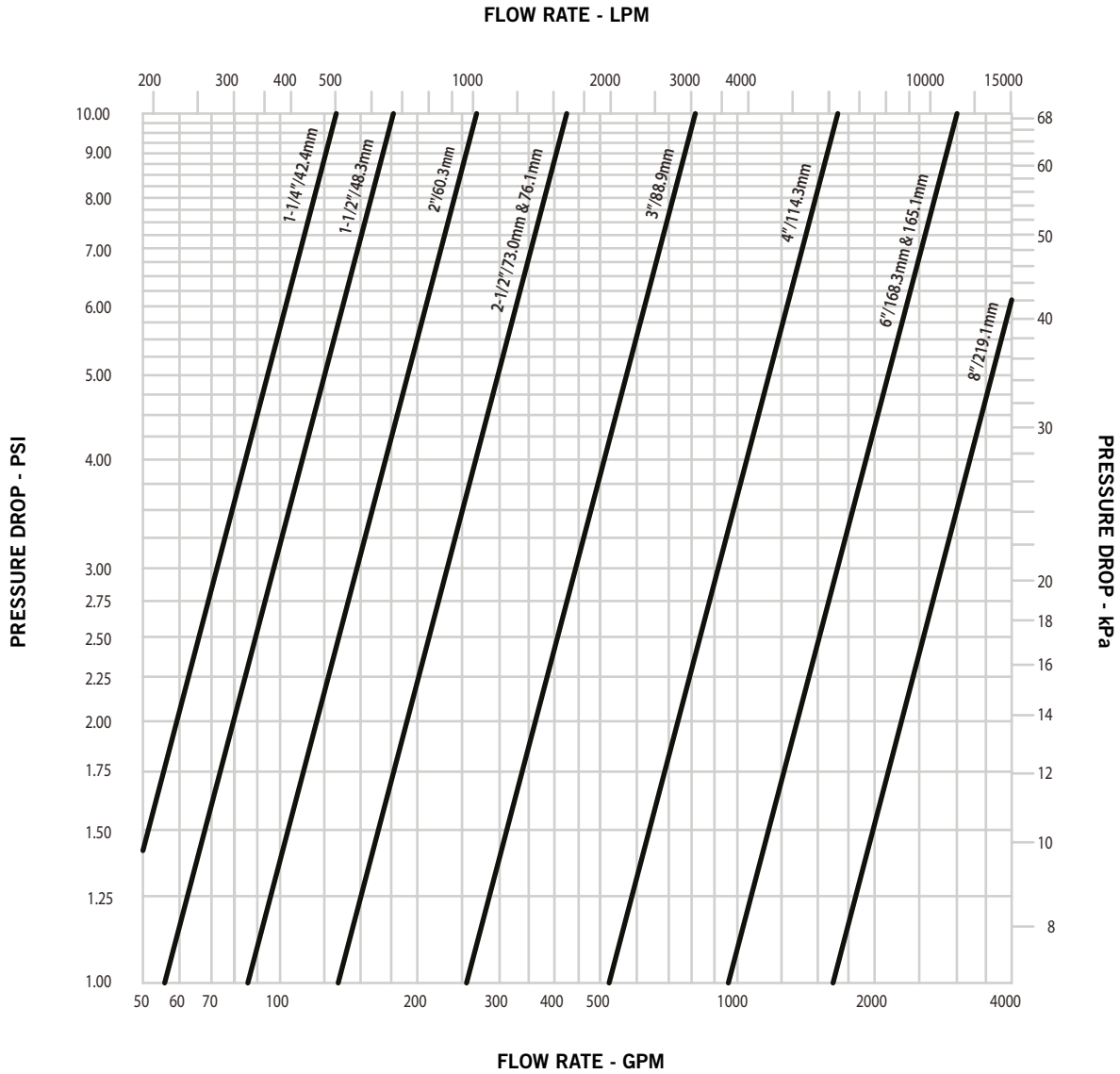
## 5.0 PERFORMANCE

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

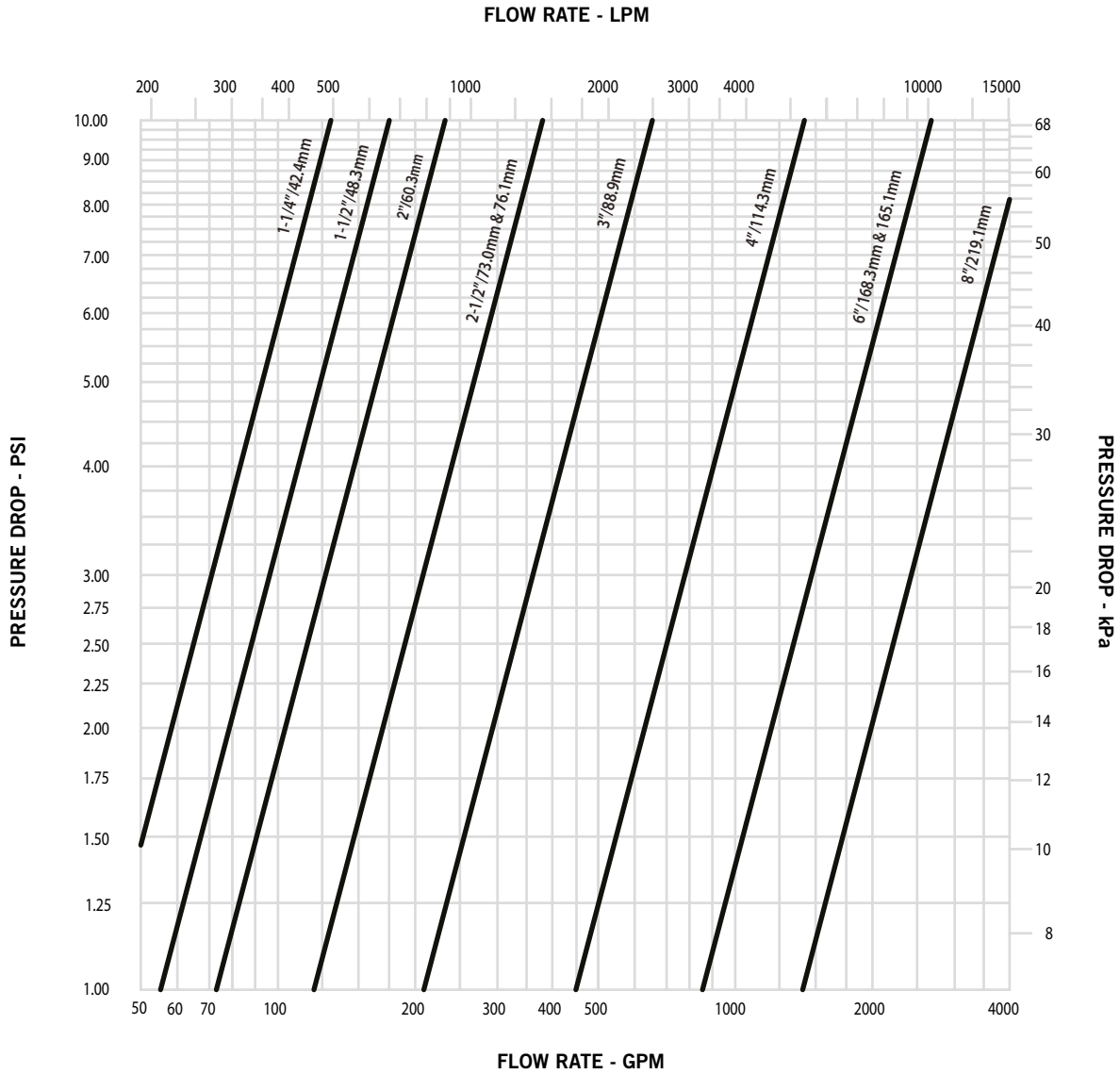


**NOTE**

- 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 13, 13D, 13R, etc.) 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 making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning 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, installation guide, or this disclaimer.

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### 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.

### Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of 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 [www.victaulic.com](http://www.victaulic.com).

### Warranty

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

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