

# FireLock® V29, K4.1

## Model V2902

### Residential Adjustable Flush Pendent Quick Response



Flush Pendent  
(V29)



Extended Pendent  
(V29)

### Approvals/Listings:



See Victaulic Publication [10.01](#) for more details.

### Product Description:

The Model V29 Flush Residential Pendent Sprinkler is a low profile, aesthetically pleasing, flush mounted sprinkler that utilizes a 2.5 mm frangible glass bulb as the thermosensitive element. The combination of the 2.5 mm frangible glass bulb and specially designed deflector make the V29 Flush Residential Sprinkler a necessity in life safety and fire control. The sprinklers have met the strict requirements of Underwriters Laboratories Inc. as described in the Standard for Residential Sprinklers for Fire Protection Service, UL 1626, and should be installed in accordance with the appropriate National Fire Protection Association Standard NFPA 13, 13D or 13R. Model V2902 is UL Listed for use under smooth flat horizontal ceilings.

### Coverage:

The Model V2902 spray covers a room size up to 400sq.ft/ 37.0sq.m according to NFPA specifications.

### Technical Specifications:

**Models:** V2902

**Style:** Residential Flush Pendent

**Nominal Orifice Size:** 7/16"/12 mm

**K-Factor:** 4.1 Imp./6.1 S.I.<sup>1</sup>

**Nominal Thread Size:** 1/2" NPT/21.3 mm

**Factory Hydrostatic Test:** 100% @ 500 psi/3450 kPa

**Min. Operating Pressure:** 7psi/48 kPa

**Temperature Rating:** See chart on page 3

**Max. Working Pressure:** 175 psi/1200 kPa

<sup>1</sup> For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

### Job/Owner

|            |  |
|------------|--|
| System No. |  |
| Location   |  |

### Contractor

|              |  |
|--------------|--|
| Submitted By |  |
| Date         |  |

### Engineer

|              |  |
|--------------|--|
| Spec Section |  |
| Paragraph    |  |
| Approved     |  |
| Date         |  |

**Material Specifications:**

**Frame:** Bronze per C87400

**Deflector:** Bronze per UNS C22000

**Splitter:** Brass per UNS C36000

**Belleville Spring:** Beryllium nickel

**Seal:** Teflon<sup>2</sup>

**Drop pin:** Bronze per UNS C51000

**Lever Arm:** Bronze per UNS C51000

**Load Bar:** Bronze per UNS C22000

**Ceiling Cover:** Brass per UNS C26000

**Load Screw:** Stainless Steel per UNS S30400

**Bulb:** Glass with alcohol based solution, 2.5 mm

**Escutcheon:** Steel

**Dust Cover:** Nylon

**Pin Cover:** Nylon

**Accessories:**

**Installation Wrench:**

V29 Flush Wrench fits all V29 Series frames.

**Sprinkler Finishes:**

Chrome plated

White painted<sup>2</sup>

Black Painted<sup>2</sup>

Custom Painted<sup>2</sup>

VC-250<sup>3</sup>

For cabinets and other accessories refer to separate sheet.

<sup>2</sup> UL Listed for corrosion resistance.

<sup>3</sup> UL Listed and FM Approved for corrosion resistance.

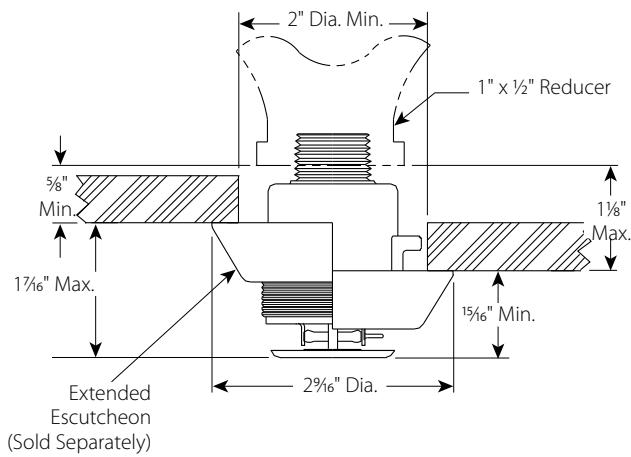
**Approval/Listings:**

| Model | Orifice Size<br>Inches<br>mm | Nominal K-Factor<br>Imperial<br>S.I. <sup>1</sup> | Response<br>Standard<br>or Quick | Deflector<br>Type | Approved Temperature<br>Ratings °F/°C <sup>4</sup> |            |
|-------|------------------------------|---|----------------------------------|-------------------|--|------------|
|       |                              |   |                                  |                   | UL   | C-UL       |
| V2902 | 7/16<br>12                   | 4.1<br>6.1  | Quick                            | Flush<br>Pendant  | 155°F/68°C   | 155°F/68°C |

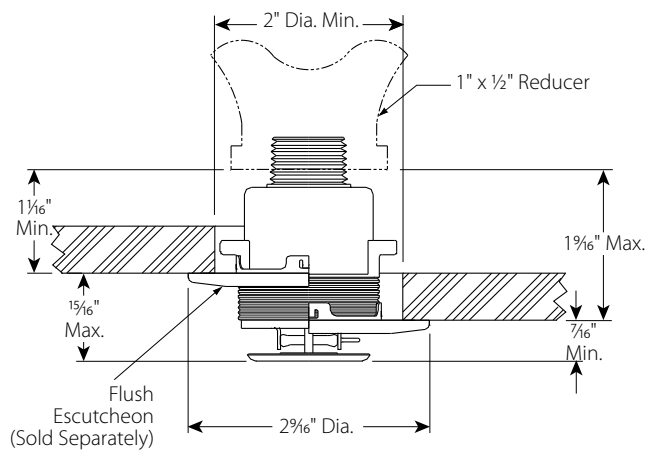
<sup>4</sup> Listings and approval as of printing.

<sup>1</sup> For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

**Dimensions:**



Extended Pendant



Flush Pendant

**Room Size:**

Victaulic V2902, 4.1 K-Factor Adjustable Flush Pendant Sprinkler. For Ceiling types refer to NFPA 13, 13R or 13D 2013 Editions

| Maximum Coverage Area <sup>5</sup><br>Ft. x Ft.<br>m x m | Maximum Temp Rating<br>155°F/68°C |                                  | Intermediate Temp Rating<br>175°F/79°C |                                  | Deflector to Ceiling | Installation Type                  | Minimum Spacing<br>Ft.<br>m |
|--|-----------------------------------|----------------------------------|--|----------------------------------|----------------------|------------------------------------|-----------------------------|
|  | Flow <sup>6</sup> GPM<br>L/min    | Pressure <sup>6</sup><br>PSI bar | Flow <sup>6</sup> GPM<br>L/min         | Pressure <sup>6</sup><br>PSI bar |                      |                                    |                             |
| 12 X 12<br>3.7 X 3.7                                     | 11<br>41.6                        | 7.2<br>0.5                       | 11<br>41.6                             | 7.2<br>0.5                       | N/A                  | Extended<br>or Flush<br>Escutcheon | 8.0<br>2.4                  |
| 14 X 14<br>4.3 X 4.3                                     | 11<br>41.6                        | 7.2<br>0.5                       | 11<br>41.6                             | 7.2<br>0.5                       |                      |                                    |                             |
| 16 X 16<br>4.9 X 4.9                                     | 13<br>49.2                        | 10.1<br>0.7                      | 13<br>49.2                             | 10.1<br>0.7                      |                      |                                    |                             |
| 18 X 18<br>5.5 X 5.5                                     | 17<br>64.4                        | 17.2<br>1.19                     | 17<br>64.4                             | 17.2<br>1.19                     |                      |                                    |                             |
| 20 X 20<br>6.1 X 6.1                                     | 20<br>75.7                        | 23.8<br>1.64                     | 20<br>75.7                             | 23.8<br>1.64                     |                      |                                    |                             |

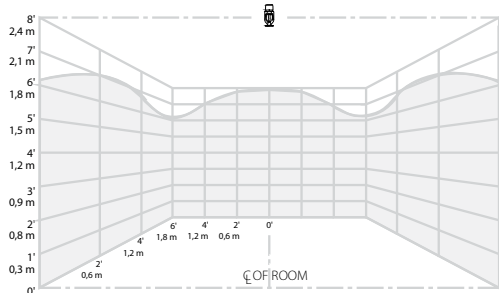
<sup>5</sup> For coverage area dimensions less than or between those indicated, use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

<sup>6</sup> For NFPA 13 residential applications, the greater of 0.1gpm/ft2 over the design area of the flow in accordance with the criteria in the table must be used.

**Nominal Wetting Patterns:**

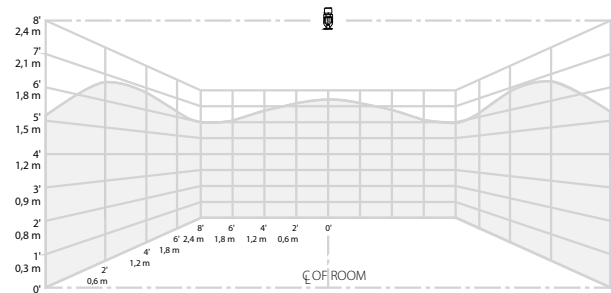
**Model V2902  
K4.1 Residential Adjustable Flush Pendant**

11GPM/41.6 LPM – 12' x 12'<sup>3</sup>/<sub>8</sub>' x 3.6 m coverage area



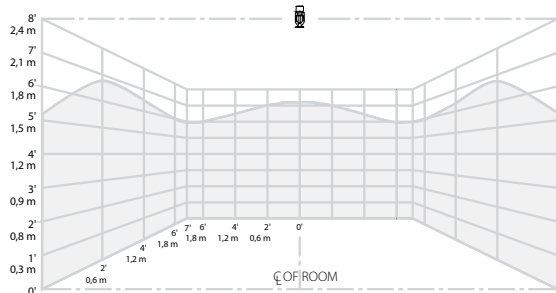
**Model V2902  
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13 GPM/49.2 LPM – 16' x 16'<sup>4</sup>/<sub>9</sub>' x 4.9 m coverage area



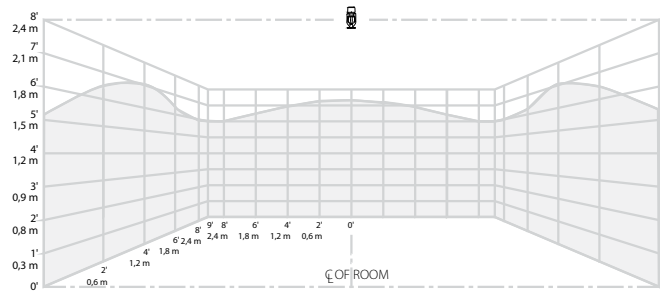
**Model V2902  
K4.1 Residential Adjustable Flush Pendant**

11 GPM/41.6 LPM – 14' x 14'<sup>4</sup>/<sub>8</sub>' x 4.3m coverage area



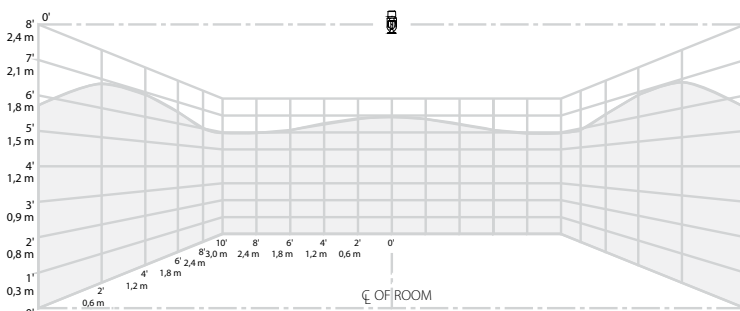
**Model V2902  
K4.1 Residential Adjustable Flush Pendant**

17 GPM/64.3 LPM – 18' x 18'<sup>5</sup>/<sub>8</sub>' x 5.5m coverage area



**Model V2902  
K4.1 Residential Adjustable Flush Pendant**

20 GPM/75.7 LPM – 20' x 20'<sup>6</sup>/<sub>8</sub>' x 6.1 m coverage area



**NOTES:**

- 1 Data shown is approximate and can vary due to differences in installation.
- 2 These graphs illustrate approximate wall-wetting patterns for these specific Victaulic FireLock Automatic Sprinklers. They are provided as information for guidance and should not be used as minimum sprinkler spacing rules for installation. Sprinkler location shall be in accordance with the obstruction rules for residential sprinklers in NFPA 13 (2002 or later revision). Failure to follow these guidelines could adversely affect the performance of the sprinkler and will void all Listings, Approvals and Warranties.
- 3 All patterns are symmetrical to waterway.

**Ratings:**

All glass bulbs are rated for temperatures from –67°F/ –55°C to those shown in table below.




| Sprinkler Temperature Classification | Victaulic Part Identification | Temperature – °F/°C        |                                     | Glass Bulb Color |
|--------------------------------------|-------------------------------|----------------------------|-------------------------------------|------------------|
|                                      |                               | Nominal Temperature Rating | Maximum Ambient Temperature Allowed |                  |
| Ordinary                             | A                             | 135°F/57°C                 | 100°F/38°C                          | Orange           |
| Ordinary                             | C                             | 155°F/68°C                 | 100°F/38°C                          | Red              |
| Intermediate                         | E                             | 175°F/79°C                 | 150°F/65°C                          | Yellow           |
| Intermediate                         | F                             | 200°F/93°C                 | 150°F/65°C                          | Green            |
| High                                 | J                             | 286°F/141°C                | 225°F/107°C                         | Blue             |
| Extra High <sup>8</sup>              | K                             | 360°F/182°C                | 300°F/149°C                         | Purple           |
| –                                    | M                             | Open                       | –                                   | No Bulb          |

<sup>8</sup> Standard response only.

**Available Wrenches:**

| Sprinkler Type   | Open End | Recessed |
|------------------|----------|----------|
| V29 Flush Wrench | ✓        | ✓        |

**⚠ WARNING**

- Always read and understand installation, care, and maintenance instructions, supplied with each box of sprinklers, before proceeding with installation of any sprinklers.
- Always wear safety glasses and foot protection.
- Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.
- Installation rules, especially those governing obstruction, must be strictly followed.
- Painting, plating, or any re-coating of sprinklers (other than that supplied by Victaulic) is not allowed.

Failure to follow these instructions could result in serious personal injury and/or property damage.

The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to the current National Fire Protection Association pamphlet that describes care and maintenance of sprinkler systems. In addition, the authority having jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed.

If you need additional copies of this publication, or if you have any questions about the safe installation of this product, contact Victaulic World Headquarters: P.O. Box 31, Easton, Pennsylvania 18044-0031 USA, Telephone: 001-610-559-3300.

**Installation**

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for 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.

**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.

**Trademarks**

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