

## V29, K4.1

Model V2902

Residential Adjustable Flush Pendent  
and Specific Application  
(Flat & Sloped Ceilings)  
Quick Response

### PRODUCT DESCRIPTION



Flush Pendent



Extended Pendent



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 and sloped ceilings up to and including 8/12 (33.7°) pitch.

The heart of the V29 Flush Sprinkler's actuating assembly is a hermetically sealed frangible glass bulb that contains a precisely measured amount of fluid. When heat is absorbed, the liquid within the bulb expands increasing the internal pressure. At the prescribed temperature, when the internal pressure exceeds the strength of the

glass bulb, the bulb ruptures. The levers that had been held in position by the bulb now collapse inward allowing the deflector and Teflon coated Belleville washer seal to move downward to the full-operated position. This results in water discharge that is distributed in an approved pattern.

#### Coverage

The Model V2902 spray covers a room size up to 20' X 20' according to NFPA specifications.

**These sprinklers meet the .05 minimum density requirement in UL 1626 that became effective July 12, 2002.**

### TECHNICAL SPECIFICATIONS

**Model:** V2902  
**Style:** Residential Flush Pendent  
**Nominal Orifice Size:** 7/16" (12 mm)  
**K-Factor:** 4.1 Imp. (6.1 S.I. ^)  
**Nominal Thread Size:** □ 1/2" NPT (21,3 mm)  
**Max. Working Pressure:** 175 psi (1200 kPa)  
**Factory Hydrostatic Test:** 100% @ 500 psi (3450 kPa)  
**Min. Operating Pressure:** 7 psi (48 kPa)  
**Temperature Rating:** See chart on page 2.

#### MATERIAL SPECIFICATIONS

**Frame:** Bronze per C87400  
**Deflector:** Bronze per UNS C22000  
**Splitter:** Brass per UNS C36000  
**Belleville Spring:** Beryllium nickel  
**Seal:** Teflon\*  
**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.

##### Finishes:

□ Chrome Plated

□ White Painted

□ Flat Black Polyester†

□ Custom Paint†

For cabinets and other accessories refer to separate sheet.

^ For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.

\* Teflon is a registered trademark of Dupont Co.

† Finish available on special order.

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## APPROVALS/LISTINGS

Model	Orifice Size Inches millimeters	Nominal K-Factor Imperial S.I. <sup>^</sup>	Response	Deflector Type	Approved Temperature Ratings °F/°C ‡	
					UL	C-UL
V2902	7/16 12	4.1 6.1	Quick	Flush Pendent	155 68	155 68

‡ Listings and approval as of printing.

<sup>^</sup> For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.

## RATINGS

All glass bulbs are rated for temperatures from -67°F (-55°C) up to those shown in adjacent table.

Sprinkler Temperature Classification	Victaulic Part Identification	Temperature – °F/°C		Glass Bulb Color
		Nominal Temperature Rating	Maximum Ambient Temp. Allowed	
Ordinary	C	155 68	100 38	Red

## ORDERING INFORMATION

Please specify the following when ordering:

- Sprinkler Model Number
- Style
- Temperature Rating
- K-Factor
- Quantity
- Sprinkler Finish
- Escutcheon Style (Flush or Extended)

### WARNING

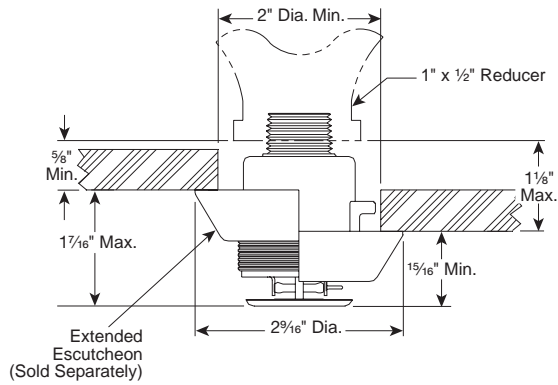


- Always read and understand installation, care, and maintenance instructions, supplied with each box of sprinklers, before proceeding with installation of any sprinklers.
  - Always wear safety glasses and foot protection.
  - Depressurize and drain the piping system before attempting to install, remove, 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.

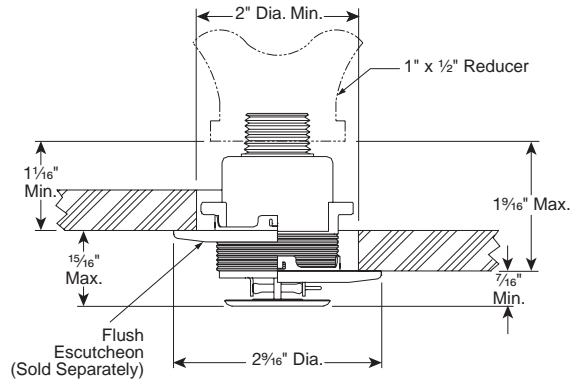
The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to the current National Fire Protection Association pamphlet that describes care and maintenance of sprinkler systems. In addition, 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, 610-559-3300.

## DIMENSIONS



**Extended Pendant**



**Flush Pendant**

## AVAILABLE WRENCH

V29 Flush Wrench fits all V29 Series frames.

## ROOM SIZE

Model	Room Size Feet/meters	Minimum Installation Spacing Feet/meters	K-Factor Imp./S.I. <sup>^</sup>	Minimum Flow per Sprinkler† for Horizontal Ceilings Maximum 2/12 Pitch For NFPA 13R or 13D* GPM/LPM @ psi/kPa	Minimum Flow per Sprinkler† for Sloped Ceilings Maximum 8/12 Pitch For NFPA 13R or 13D* GPM/LPM @ psi/kPa
V2902	12 × 12 3,7 × 3,7	9 2,7	4,1 6,1	11 GPM @ 7.2 psi 42 LPM @ 50 kPa	22 GPM @ 28.8 psi 83 LPM @ 199 kPa
V2902	14 × 14 4,3 × 4,3	9 2,7	4,1 6,1	11 GPM @ 7.2 psi 42 LPM @ 50 kPa	22 GPM @ 28.8 psi 83 LPM @ 199 kPa
V2902	16 × 16 4,9 × 4,9	9 2,7	4,1 6,1	13 GPM @ 10.1 psi 49 LPM @ 69 kPa	22 GPM @ 28.8 psi 83 LPM @ 199 kPa
V2902	18 × 18 5,5 × 5,5	9 2,7	4,1 6,1	17 GPM @ 17.2 psi 64 LPM @ 119 kPa	22 GPM @ 28.8 psi 83 LPM @ 199 kPa
V2902	20 × 20 6,1 × 6,1	9 2,7	4,1 6,1	20 GPM @ 23.8psi 76 LPM @ 164 kPa	22 GPM @ 28.8 psi 83 LPM @ 199 kPa

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

<sup>†</sup> Single or multiple sprinkler flow calculation.

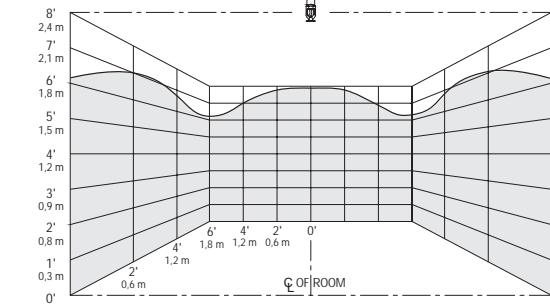
\* For systems designed to NFPA 13, the number of design sprinklers is to be the four most demanding sprinklers. The minimum required discharge from each of the four sprinklers is to be the greater of the flow rates provided in the table for NFPA 13D and 13R systems and the maximum allowable coverage area or a minimum discharge of 0.1 gpm/ft.<sup>2</sup> over the design area of the four most demanding sprinklers for the actual coverage areas being protected by four sprinklers.

## WARRANTY

This product is warranted only by Globe Fire Sprinkler Corporation. For further details, contact Victaulic.

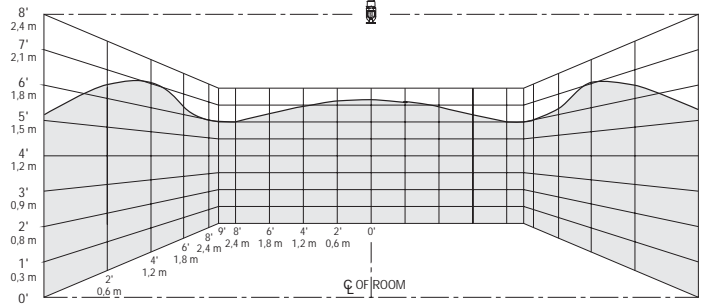
# DISTRIBUTION PATTERNS

MODEL V2902  
K4.1 RESIDENTIAL ADJUSTABLE FLUSH PENDENT  
11 GPM (41,6 LPM)



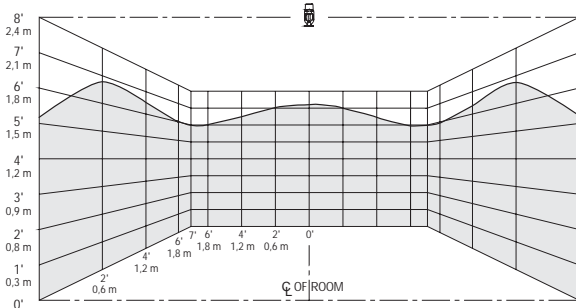
NOMINAL WETTING PATTERN  
12' X 12' COVERAGE AREA

MODEL V2902  
K4.1 RESIDENTIAL ADJUSTABLE FLUSH PENDENT  
17 GPM (64,3 LPM)



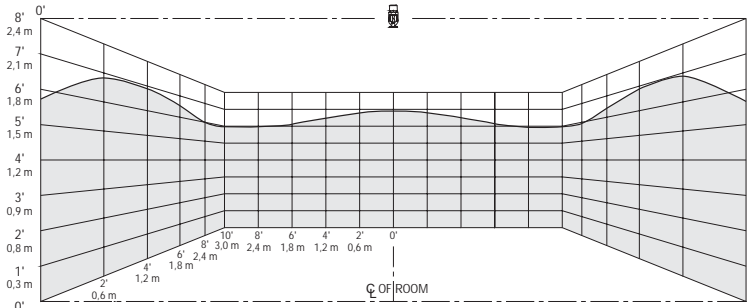
NOMINAL WETTING PATTERN  
18' X 18' COVERAGE AREA

MODEL V2902  
K4.1 RESIDENTIAL ADJUSTABLE FLUSH PENDENT  
11 GPM (41,6 LPM)



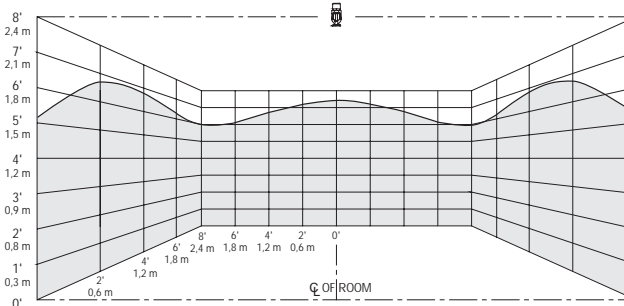
NOMINAL WETTING PATTERN  
14' X 14' COVERAGE AREA

MODEL V2902  
K4.1 RESIDENTIAL ADJUSTABLE FLUSH PENDENT  
20 GPM (75,7 LPM)



NOMINAL WETTING PATTERN  
20' X 20' COVERAGE AREA

MODEL V2902  
K4.1 RESIDENTIAL ADJUSTABLE FLUSH PENDENT  
13 GPM (49,2 LPM)



NOMINAL WETTING PATTERN  
16' X 16' 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 edition or later). 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 the centerline of the roadway.

This product shall be manufactured by Victaulic Company. 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.