

# V27, K4.9

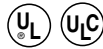
## Models V2730 and V2732 Residential Pendent, Recessed Pendent and Specific Application (Flat, Sloped & Beamed Ceilings) Quick Response

### PRODUCT DESCRIPTION



V2730  
or  
V2732

Pendent



Recessed  
Pendent

These Model V27 residential sprinklers are designed to meet the requirements of NFPA 13, 13D and 13R for residential use in a variety of room sizes, depending upon available operating pressure and room configuration. Models V2730 and V2732 are UL Listed for use under smooth flat horizontal ceilings, sloped ceilings up to and including 8/12 (33.7°) pitch, and beamed ceilings. The design incorporates state-of-the-art, heat responsive, frangible glass bulb design (quick response) for prompt, precise operation. The die cast frame is more streamlined and attractive

than traditional sand cast frames. It is cast with a hex-shaped wrench boss to allow easy tightening from many angles, reducing assembly effort. This sprinkler is available in various finishes to meet many design requirements.

#### Sprinkler Operation

The operating mechanism is a frangible glass bulb which contains a heat responsive liquid. During a fire, the ambient temperature rises causing the liquid in the bulb to expand. When the ambient temperature reaches the rated temperature of the sprinkler, the bulb shatters. As a result, the waterway is

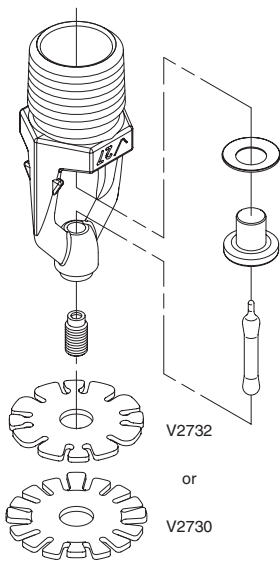
cleared of all sealing parts and water is discharged towards the deflector. The deflector is designed to distribute the water in a pattern that is most effective in controlling the fire.

#### Coverage

Residential spray coverage up to 20 feet X 20 feet (6,1 m X 6,1 m) room sizes per NFPA.

**These sprinklers meet the requirements of UL 1626 that become effective September 25, 2004.**

### TECHNICAL SPECIFICATIONS



Exaggerated for Clarity

**Models:** V2730, V2732

**Style:** Pendent and Recessed Pendent

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

**K-Factor:**

- V2730 – 4.9 Imp. (7,1 S.I. ^) for room sizes up to 16' (4,9 m).
- V2732 – 4.9 Imp. (7,1 S.I. ^) for room sizes 18' to 20' (5,5 and 6,1 m).

**Nominal Thread Size:** 1/2" NPT (15 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

**Pendent Deflector:** Bronze per UNS C51000

**Bulb:** Glass with glycerin solution.

**Bulb Nominal Diameter:** Quick Response: 3,0 mm

**Load Screw:** Bronze per UNS C65100

**Pip Cap:** Bronze per UNS C65100

**Seal:** Teflon\* tape

**Frame:** Die cast brass 65-30

#### ACCESSORIES

##### Installation Wrench:

- Open End: V27
- Recessed: V38-3

##### Sprinkler Finishes:

- Plain brass
- Chrome plated
- White painted\*\*
- Custom painted\*\*

For escutcheons, 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.

\*\*UL Listed for corrosion resistance in all configurations.

NOTE: Weather resistant recessed escutcheon available upon request.

VICTAULIC® IS AN ISO 9001 CERTIFIED COMPANY

**Victaulic Company of America**  
Phone: 1-800-PICK-VIC (1-800-742-5842)  
Fax: 610-250-8817  
e-mail: pickvic@victaulic.com

**Victaulic Company of Canada**  
Phone: 905-884-7444  
Fax: 905-884-9774  
e-mail: viccanada@victaulic.com

**Victaulic Europe**  
Phone: 32-9-381-1500  
Fax: 32-9-380-4438  
e-mail: viceuro@victaulic.be

**Victaulic America Latina**  
Phone: 610-559-3300  
Fax: 610-559-3608  
e-mail: vical@victaulic.com

**Victaulic Asia Pacific**  
Phone: 65-6235-3035  
Fax: 65-6235-0535  
e-mail: vicap@victaulic.com

## APPROVALS/LISTINGS

Model	Nominal Orifice Size Inches/mm	Nominal K-Factor Imperial S.I. <sup>^</sup>	Response	Deflector Type	Approved Temperature Ratings °F/°C ‡			
					UL	ULC	NYC/MEA†	CSFM §
V2730	7/16 12	4.9 7.1	Quick	Pendent	155, 175 68,79	155, 175 68,79	155, 175 68,79	155, 175 68,79
V2730	7/16 12	4.9 7.1	Quick	Recessed Pendent Up to 1/2" Adjustment	155, 175 68,79	155, 175 68,79	155, 175 68,79	155, 175 68,79
V2732	7/16 12	4.9 7.1	Quick	Pendent	155, 175 68,79	155, 175 68,79	155, 175 68,79	155, 175 68,79
V2732	7/16 12	4.9 7.1	Quick	Recessed Pendent Up to 1/2" Adjustment	155, 175 68,79	155, 175 68,79	155, 175 68,79	155, 175 68,79

‡ Listings and approval as of printing.

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

† MEA #62-99-E.

§ CSFM #7690-0531:112

## 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 Ceiling Temp.	
Ordinary	C	155 68	100 38	Red
Intermediate	E	175 79	150 68	Yellow

## ORDERING INFORMATION

Please specify the following when ordering:

Sprinkler Model Number

Style

Temperature Rating

K-Factor

Thread Size

Quantity

Sprinkler Finish

Escutcheon Finish

Wrench Model Number

### ! 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.

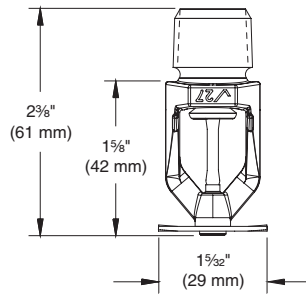
## WARRANTY

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

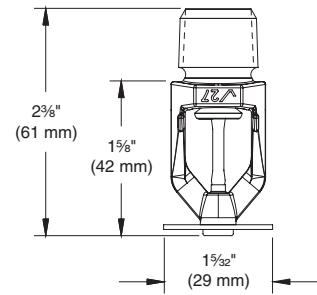
## AVAILABLE WRENCHES

	Open End	Recessed
V2730, V2732 – Pendent	V27	V38-3
V2730, V2732 – Recessed Pendent	–	V38-3

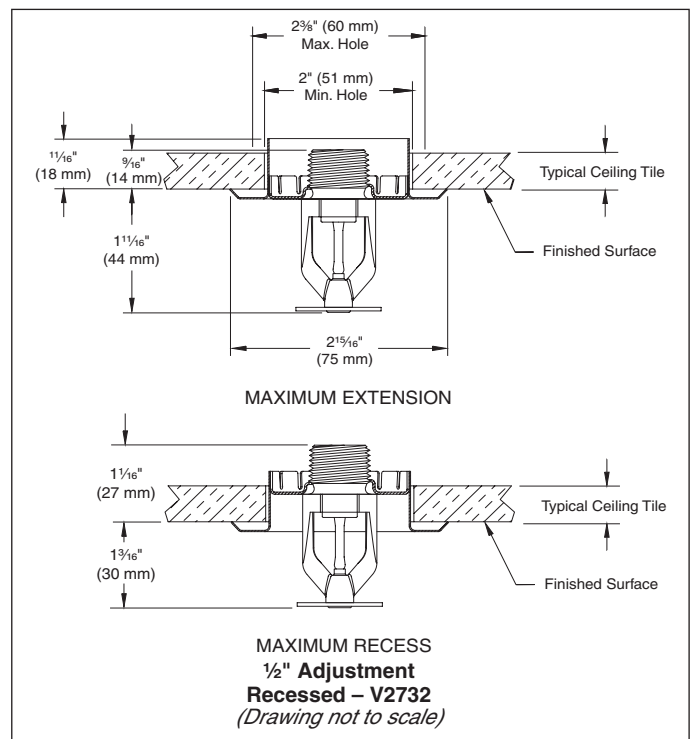
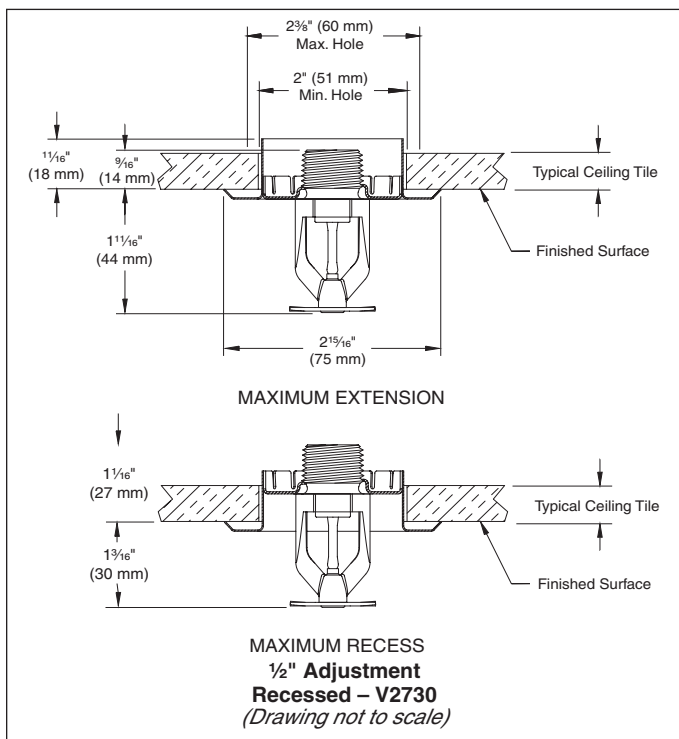
# DIMENSIONS



**Standard Pendant – V2730**



**Standard Pendant – V2732**



# ROOM SIZE

## Installed Under Smooth Flat Horizontal and Beamed Ceilings up to 2/12 (9.5°) Pitch

Model	Room Size Feet/meters	Min. Installation Spacing Feet/meters	Nominal K-Factor Imperial S.I. <sup>^</sup>	Minimum Flow per Sprinkler for Smooth Flat Horizontal and Beamed Ceilings Max. 2/12 (9.5°) Pitch for NFPA 13R or 13D* GPM/LPM @ PSI/kPa	
				155°F/68°C	175°F/79°C
V2730	12 X 12 3,7 X 3,7	8,0 2,4	4,9 7,1	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa
V2730	14 X 14 4,3 X 4,3	8,0 2,4	4,9 7,1	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa	15 GPM @ 9.4 PSI 56,8 LPM @ 64,6 kPa
V2730	16 X 16 4,9 X 4,9	8,0 2,4	4,9 7,1	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa	15 GPM @ 9.4 PSI 56,8 LPM @ 64,6 kPa
V2732	12 X 12 3,7 X 3,7	8,0 2,4	4,9 7,1	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa
V2732	14 X 14 4,3 X 4,3	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa
V2732	16 X 16 4,9 X 4,9	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa
V2732	18 X 18 5,5 X 5,5	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa
V2732	20 X 20 6,1 X 6,1	8,0 2,4	4,9 7,1	20 GPM @ 16.7 PSI 75,7 LPM @ 114,9 kPa	20 GPM @ 16.7 PSI 75,7 LPM @ 114,9 kPa

## Installed Under Sloped Ceilings up to 4/12 (18.4°) Pitch

Model	Room Size Feet/meters	Min. Installation Spacing Feet/meters	Nominal K-Factor Imperial S.I. <sup>^</sup>	Minimum Flow per Sprinkler for Sloped Ceilings Max. 4/12 (18.4°) Pitch for NFPA 13R or 13D* GPM/LPM @ PSI/kPa	
				155°F/68°C	175°F/79°C
V2730	12 X 12 3,7 X 3,7	8,0 2,4	4,9 7,1	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa	15 GPM @ 9.4 PSI 56,8 LPM @ 65,0 kPa
V2730	14 X 14 4,3 X 4,3	8,0 2,4	4,9 7,1	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa	15 GPM @ 9.4 PSI 56,8 LPM @ 64,6 kPa
V2730	16 X 16 4,9 X 4,9	8,0 2,4	4,9 7,1	13 GPM @ 7.0 PSI 49,2 LPM @ 48,5 kPa	15 GPM @ 9.4 PSI 56,8 LPM @ 64,6 kPa
V2732	12 X 12 3,7 X 3,7	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	19 GPM @ 15.0 PSI 71,9 LPM @ 103,0 kPa
V2732	14 X 14 4,3 X 4,3	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	19 GPM @ 15.0 PSI 71,9 LPM @ 103,0 kPa
V2732	16 X 16 4,9 X 4,9	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	19 GPM @ 15.0 PSI 71,9 LPM @ 103,0 kPa
V2732	18 X 18 5,5 X 5,5	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	19 GPM @ 15.0 PSI 71,9 LPM @ 103,0 kPa
V2732	20 X 20 6,1 X 6,1	8,0 2,4	4,9 7,1	20 GPM @ 16.7 PSI 75,7 LPM @ 114,9 kPa	21 GPM @ 18.4 PSI 79,5 LPM @ 127,0 kPa

## Installed Under Sloped Ceilings up to 8/12 (33.7°) Pitch

Model	Room Size Feet/meters	Min. Installation Spacing Feet/meters	Nominal K-Factor Imperial S.I. <sup>^</sup>	Minimum Flow per Sprinkler for Sloped Ceilings Max. 8/12 (33.7°) Pitch for NFPA 13R or 13D* GPM/LPM @ PSI/kPa	
				155°F/68°C	175°F/79°C
V2730	12 X 12 3,7 X 3,7	8,0 2,4	4,9 7,1	15 GPM @ 9.4 PSI 56,8 LPM @ 65,0 kPa	20 GPM @ 16.7 PSI 75,7 LPM @ 114,9 kPa
V2730	14 X 14 4,3 X 4,3	8,0 2,4	4,9 7,1	15 GPM @ 9.4 PSI 56,8 LPM @ 65,0 kPa	20 GPM @ 16.7 PSI 75,7 LPM @ 114,9 kPa
V2730	16 X 16 4,9 X 4,9	8,0 2,4	4,9 7,1	15 GPM @ 9.4 PSI 56,8 LPM @ 65,0 kPa	20 GPM @ 16.7 PSI 75,7 LPM @ 114,9 kPa
V2732	12 X 12 3,7 X 3,7	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	23 GPM @ 22.0 PSI 87,1 LPM @ 152,0 kPa
V2732	14 X 14 4,3 X 4,3	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	23 GPM @ 22.0 PSI 87,1 LPM @ 152,0 kPa
V2732	16 X 16 4,9 X 4,9	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	23 GPM @ 22.0 PSI 87,1 LPM @ 152,0 kPa
V2732	18 X 18 5,5 X 5,5	8,0 2,4	4,9 7,1	17 GPM @ 12.0 PSI 64,3 LPM @ 83,0 kPa	23 GPM @ 22.0 PSI 87,1 LPM @ 152,0 kPa
V2732	20 X 20 6,1 X 6,1	8,0 2,4	4,9 7,1	26 GPM @ 28.2 PSI 98,4 LPM @ 194,0 kPa	- -

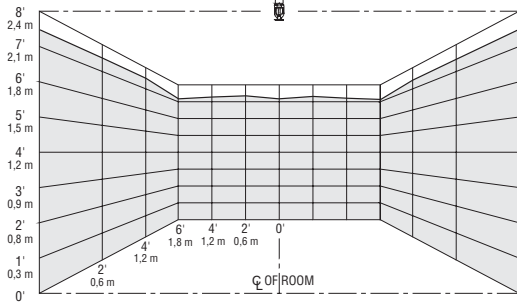
**NOTES:**

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

\* 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.

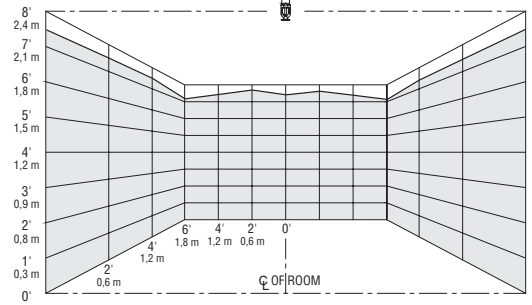
# NOMINAL WETTING PATTERNS

**MODEL V2730**  
**K4.9 RESIDENTIAL PENDENT AND RECESSED PENDENT**  
 13 GPM (49,2 LPM)



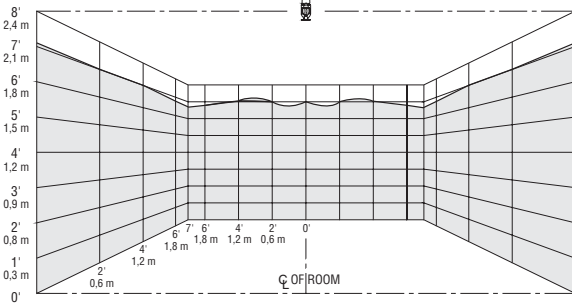
**NOMINAL WETTING PATTERN**  
 12' X 12' COVERAGE AREA

**MODEL V2732**  
**K4.9 RESIDENTIAL PENDENT AND RECESSED PENDENT**  
 13 GPM (49,2 LPM)



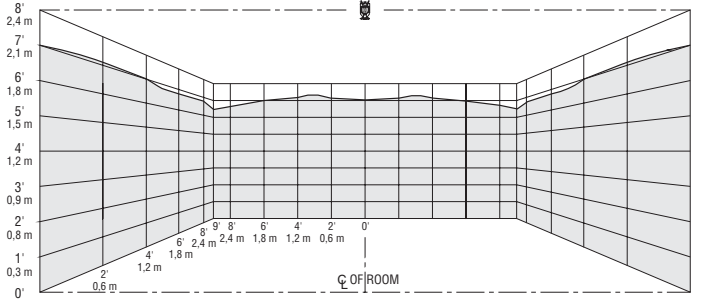
**NOMINAL WETTING PATTERN**  
 12' X 12' COVERAGE AREA

**MODEL V2730**  
**K4.9 RESIDENTIAL PENDENT AND RECESSED PENDENT**  
 13 GPM (49,2 LPM)



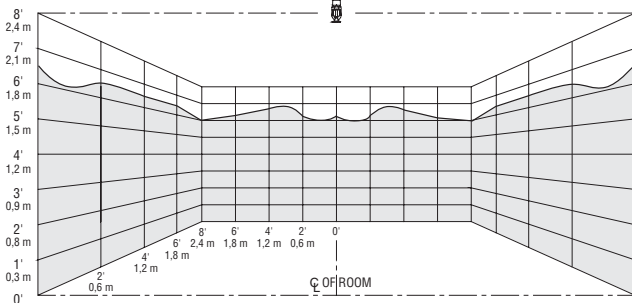
**NOMINAL WETTING PATTERN**  
 14' X 14' COVERAGE AREA

**MODEL V2732**  
**K4.9 RESIDENTIAL PENDENT AND RECESSED PENDENT**  
 17 GPM (64,3 LPM)



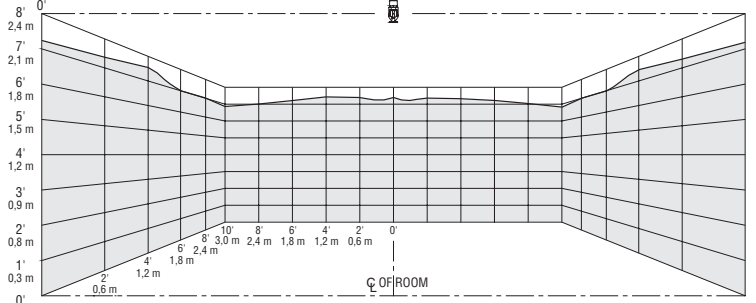
**NOMINAL WETTING PATTERN**  
 18' X 18' COVERAGE AREA

**MODEL V2730**  
**K4.9 RESIDENTIAL PENDENT AND RECESSED PENDENT**  
 13 GPM (49,2 LPM)



**NOMINAL WETTING PATTERN**  
 16' X 16' COVERAGE AREA

**MODEL V2732**  
**K4.9 RESIDENTIAL PENDENT AND RECESSED PENDENT**  
 20 GPM (75,7 LPM)



**NOMINAL WETTING PATTERN**  
 20' X 20' 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 symmetric to waterway.

# BEAMED CEILINGS

## Installation Guidelines

The Victaulic Model V2730 and V2732 Residential Pendent Sprinklers are UL Listed for use in beamed ceilings in residential occupancies. These sprinklers can be installed in or adjacent to non-combustible, combustible, solid or hollow-core beams with solid surfaces per the following guidelines. See the Room Size section on page 4 for specific flow/pressure requirements for hydraulic design.

**Primary Beams:** The main longitudinal beams attached directly to a smooth flat horizontal ceiling of any height.

**Secondary Beams:** The beams running perpendicular to the primary beams, attached directly to a smooth flat horizontal ceiling of any height.

**Beam Cross Section:** The maximum allowable beam depth is 14". The secondary beam depth cannot be greater than the primary beam depth. The width is unlimited. The cross section can vary between rectangular and circular.

### Beam Spacing:

- **Primary Beams:** The distance from the wall to the center of the nearest primary beam must be at least 3'4" and not more than 1/2 the Listed sprinkler spacing.
- **Secondary Beams:** The beam pockets created by the primary beams cannot exceed 20 ft. in length. If the primary beams exceed 20 ft., then a secondary beam must be placed such that the pocket created does not exceed 20 ft. When a secondary beam is placed for this reason, then the secondary beam must be of a depth equal to the primary beams. When the primary beams are less than 20 ft., secondary beams are not required, but may be placed at any distance from the wall and at any center to center distance between beams.

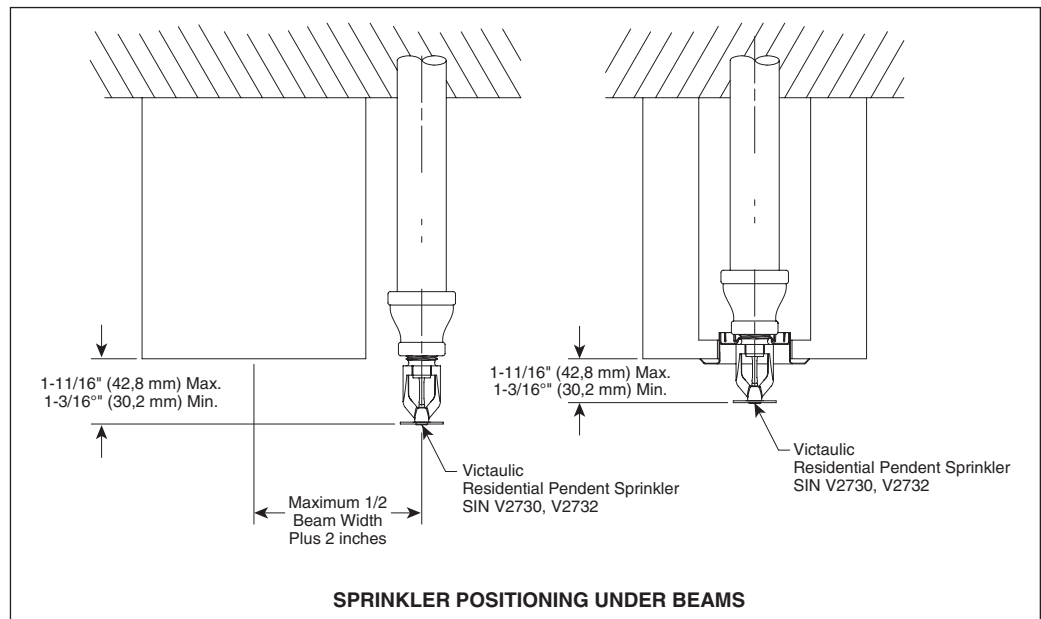
**Lintels:** Are required over doorways exiting the compartment. The minimum lintel height is 8 inches or at least the depth of the primary beams, whichever is greater.

**Soffit and Beam combinations:** Soffits may be installed around the room perimeter. The beams would then be placed within the soffit area. There is no limitation for the size of the soffit as long as the water distribution is not impaired per the obstruction rules in NFPA 13 for Residential sprinklers. Beam pockets would then be measured from the face of the soffit. The sprinkler coverage area shall be spaced off the walls.

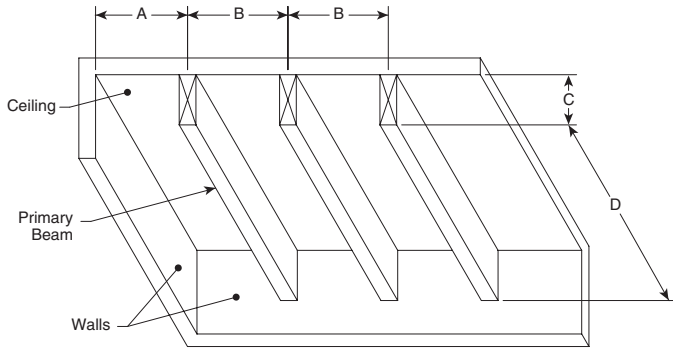
**Sprinkler Location:** The sprinklers must be located below the underside of the beams, not in the beam pockets. The deflector shall be within 1<sup>3</sup>/<sub>16</sub>" and 1<sup>11</sup>/<sub>16</sub>" off the bottom of the primary beam. The horizontal distance between the centerline of the sprinkler and the edge of the primary beam cannot be more than 2".

**! CAUTION**

A structural engineer must be consulted before drilling into beams to install drops. If drilling into the beam is not allowed, then the drop may be installed adjacent to the primary beam per the dimensions above.



# BEAMED CEILING ARRANGEMENTS



**PRIMARY BEAM SPANS UP TO 20'-0" (6,1 m)**

**Figure 3A**

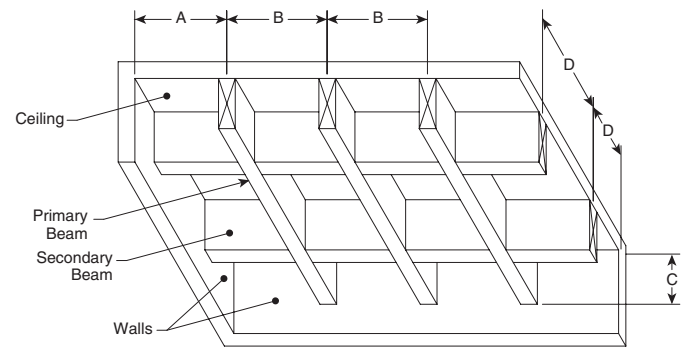
All dimensions are measured to wall faces and to centerlines of beams.

**A = Distance from wall to nearest primary beam:** Minimum: 3'-4" (1,0 m); Maximum: No more than 1/2 listed sprinkler spacing.

**B = Spacing between primary beams:** 20'-0" (6,1 m) maximum

**C = Beam depth:** 14" (356 mm) maximum.

**D = Beam span:** 20'-0" (6,1 m) maximum.



**PRIMARY BEAM SPANS GREATER THAN 20'-0" (6,1 m)**

**Figure 3B**

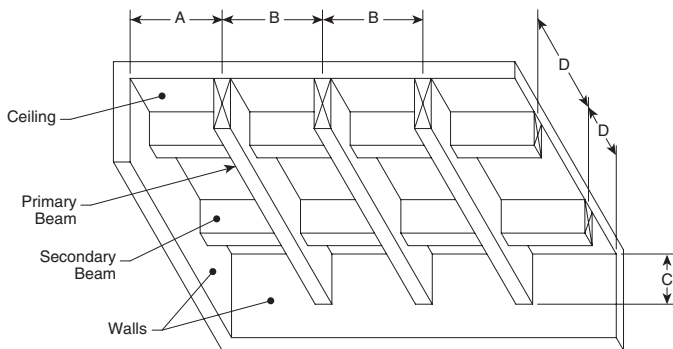
All dimensions are measured to wall faces and to centerlines of beams.

**A = Distance from wall to nearest primary beam:** Minimum: 3'-4" (1,0 m); Maximum: No more than 1/2 listed sprinkler spacing.

**B = Spacing between primary beams:** 20'-0" (6,1 m) maximum

**C = Beam depth:** 14" (356 mm) maximum.

**D = Secondary Beam Spacing:** 20'-0" (6,1 m) maximum spacing. Secondary beams are to be equal in depth to primary beams and are required so that the primary beam pockets do not exceed 20'-0" (6,1 m).



**COMBINATIONS OF PRIMARY AND SECONDARY BEAMS**

**Figure 3C**

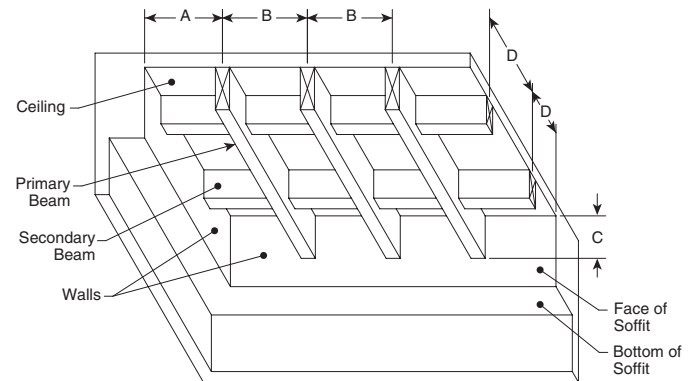
All dimensions are measured to wall faces and to centerlines of beams.

**A = Distance from wall to nearest primary beam:** Minimum: 3'-4" (1,0 m); Maximum: No more than 1/2 listed sprinkler spacing.

**B = Spacing between primary beams:** 20'-0" (6,1 m) maximum

**C = Beam depth:** 14" (356 mm) maximum. Note: Secondary beam depth cannot be greater than the primary beam.

**D = Secondary Beam Spacing:** Secondary beams may be spaced at any distance, unless primary beam spans exceed 20'-0" (6,1 m).



**BEAM AND SOFFIT ARRANGEMENTS**

**Figure 3D**

**D =** Use the dimensions shown in Figures 3A, 3B, and 3C, except that measurements are taken from the face of the soffit instead of from the wall surface.

**NOTE:** The sprinkler area of coverage is to be measured from the wall.

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.