

# V27, K4.2

## Model V2738

### Residential Horizontal Sidewall Recessed Horizontal Sidewall and Specific Application (Flat & Sloped Ceilings) Quick Response

## PRODUCT DESCRIPTION



These Model V2738 residential sprinklers are designed to meet the requirements of the 2002 or later NFPA 13, 13D and 13R for residential use. The Model V2738 is UL Listed for use under smooth flat horizontal ceilings and sloped ceilings up to and including 8/12 pitch. 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

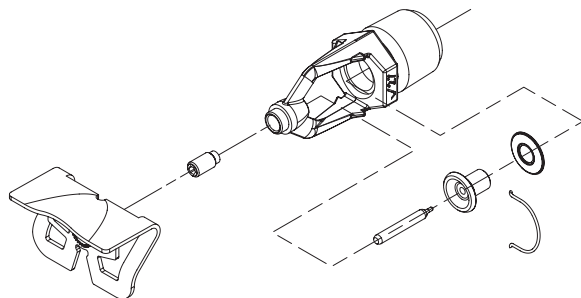
The operating mechanism is a frangible glass bulb which contains a heat responsive liquid. During a fire, the ambient temperature rises causing the liquid in the bulb to expand. When the ambient temper-

ature 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 16 feet X 20 feet (4,9 m X 6,1 m) room sizes per NFPA.

## TECHNICAL SPECIFICATIONS



**Model:** V2738  
**Style:** Residential Horizontal Sidewall and Recessed Horizontal Sidewall  
**Nominal Orifice Size:** 7/16" (12 mm)  
**K-Factor:** 4.2 Imp. (6,1 S.I. ^)

**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

**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  
**Spring:** Beryllium nickel  
**Seal:** Teflon\* tape  
**Frame:** Die cast brass 65-30  
**Lodgement Spring:** Stainless steel per UNS S30200

#### ACCESSORIES

**Installation Wrench:**  
 Open End: V27  
 Recessed: Contact Victaulic.  
**Sprinkler Finishes:**  
 Plain brass  
 Chrome plated  
 White painted\*\*  
 Custom painted\*\*  
For escutcheons, cabinets and other accessories refer to separate sheet.

NOTE: Weather resistant recessed escutcheons available upon request.  
^ 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.

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# APPROVALS/LISTINGS

SMOOTH FLAT HORIZONTAL AND SLOPED CEILINGS (SEE DIMENSIONS AND ROOM SIZE FOR DETAILS)

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
V2738	7/16 11	4.2 6,1	Quick	Horizontal Sidewall	155, 175 68, 79	155, 175 68, 79	155, 175 68, 79	155, 175 68, 79
V2738	7/16 11	4.2 6,1	Quick	Recessed Horizontal Sidewall Up to ¾" 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.

# RATINGS

Glass bulb fluid is rated for temperatures up to those shown in adjacent table and down to -67°F (-55°C).

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
Intermediate	E	175 79	150 66	Yellow

# ORDERING INFORMATION

Please specify the following when ordering:

- |   |                                      |  |
|---|--------------------------------------|--|
| <input type="checkbox"/> Sprinkler Model Number | <input type="checkbox"/> K-Factor    | <input type="checkbox"/> Sprinkler Finish    |
| <input type="checkbox"/> Style                  | <input type="checkbox"/> Thread Size | <input type="checkbox"/> Escutcheon Finish   |
| <input type="checkbox"/> Temperature Rating     | <input type="checkbox"/> Quantity    | <input type="checkbox"/> 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

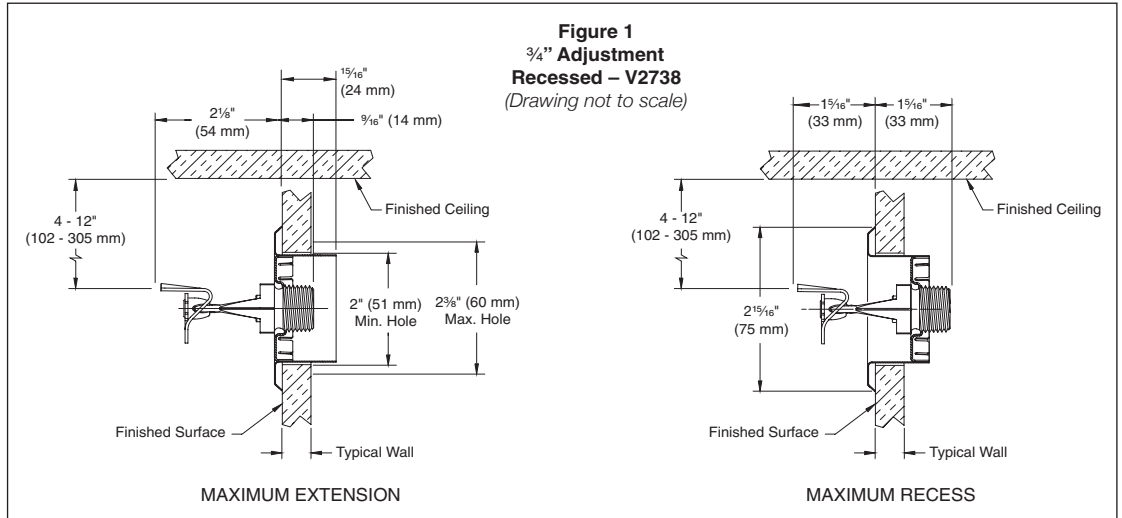
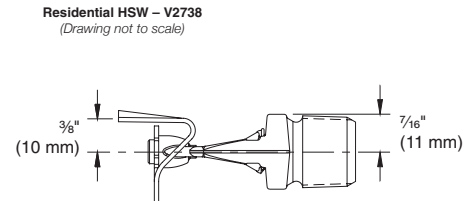
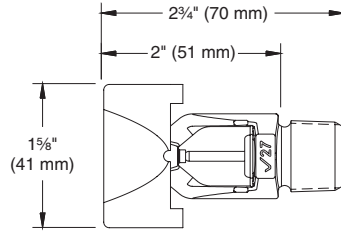
Refer to the Warranty section of the current Price List or contact Victaulic for details.

# AVAILABLE WRENCHES

	Open End	Recessed
V2738 – No escutcheon	V27	*
V2738 – With escutcheon	–	*

\*Contact Victaulic.

# DIMENSIONS AND ROOM SIZE

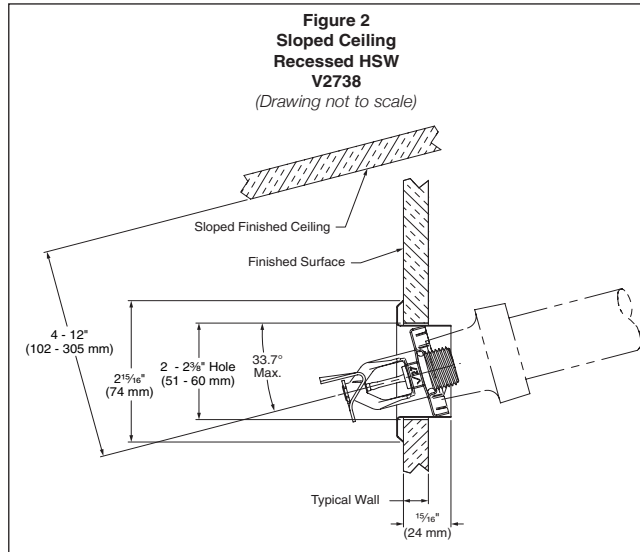


Installed under smooth flat horizontal ceilings up to 2/12 (9.5°) pitch

Model	Room Size Feet/meters	Min. Installation Spacing Feet/meters	Nominal K-Factor Imp./S.I. <sup>^</sup>	Min. Flow per Sprinkler 4 - 6" (100 - 150 mm) Down from Ceiling for 13R or 13D Systems 155° & 175°F (68° & 79°C) GPM/LPM @ psi/kPa	Min. Flow per Sprinkler 6 - 12" (150 - 300 mm) Down from Ceiling for 13R or 13D Systems* 155° & 175°F (68° & 79°C) GPM/LPM @ psi/kPa
V2738	12 X 12 3,7 X 3,7	8,0 2,4	4,2 6,1	14 GPM @ 11,1 psi 53,0 LPM @ 77 kPa	15 GPM @ 12,8 psi 64,3 LPM @ 113 kPa
V2738	14 X 14 4,3 X 4,3	8,0 2,4	4,2 6,1	14 GPM @ 11,1 psi 53,0 LPM @ 77 kPa	17 GPM @ 16,4 psi 64,3 LPM @ 113 kPa
V2738	16 X 16 4,9 X 4,9	8,0 2,4	4,2 6,1	17 GPM @ 16,4 psi 64,3 LPM @ 113 kPa	19 GPM @ 20,5 psi 71,9 LPM @ 141 kPa
V2738	16 X 18 4,9 X 5,5	8,0 2,4	4,2 6,1	19 GPM @ 20,5 psi 71,9 LPM @ 141 kPa	24 GPM @ 32,6 psi 90,8 LPM @ 225 kPa
V2738	16 X 20 4,9 X 6,1	8,0 2,4	4,2 6,1	23 GPM @ 30,0 psi 87,1 LPM @ 207 kPa	28 GPM @ 44,4 psi 106,0 LPM @ 306 kPa

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

# DIMENSIONS AND ROOM SIZE



Installed under sloped ceilings between 2/12 (9.5°) pitch and 8/12 (33.7°) pitch - spraying down the slope #

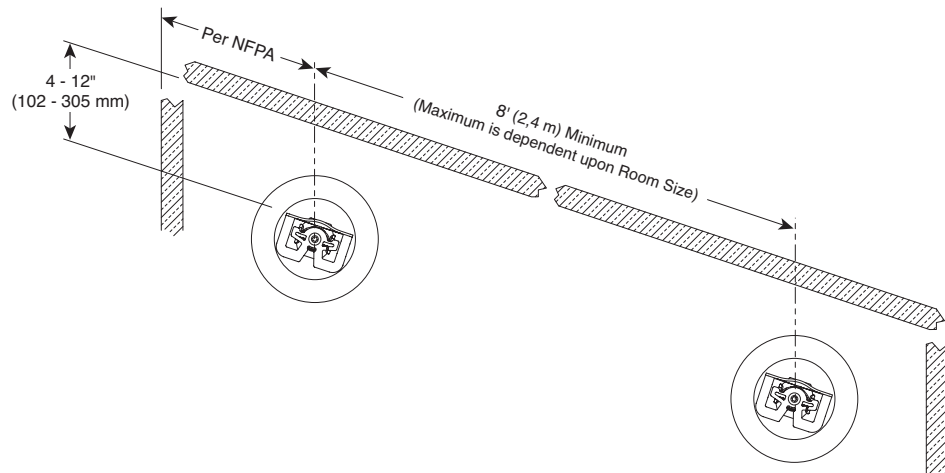
Model	Room Size Feet/meters	Min. Installation Spacing Feet/meters	Nominal K-Factor Imp./S.I. <sup>^</sup>	Min. Flow per Sprinkler 4 - 6" (100 - 150 mm) Down from Ceiling for 13R or 13D Systems 155° & 175°F (68° & 79°C) GPM/LPM @ psi/kPa	Min. Flow per Sprinkler 6 - 12" (150 - 300 mm) Down from Ceiling for 13R or 13D Systems* 155° & 175°F (68° & 79°C) GPM/LPM @ psi/kPa
V2738	12 X 12 3,7 X 3,7	8,0 2,4	4,2 6,1	14 GPM @ 11,1 psi 53,0 LPM @ 77 kPa	15 GPM @ 12,8 psi 64,3 LPM @ 113 kPa
V2738	14 X 14 4,3 X 4,3	8,0 2,4	4,2 6,1	14 GPM @ 11,1 psi 53,0 LPM @ 77 kPa	17 GPM @ 16,4 psi 64,3 LPM @ 113 kPa
V2738	16 X 16 4,9 X 4,9	8,0 2,4	4,2 6,1	17 GPM @ 16,4 psi 64,3 LPM @ 113 kPa	19 GPM @ 20,5 psi 71,9 LPM @ 141 kPa
V2738	16 X 18 4,9 X 5,5	8,0 2,4	4,2 6,1	19 GPM @ 20,5 psi 71,9 LPM @ 141 kPa	24 GPM @ 32,6 psi 90,8 LPM @ 225 kPa
V2738	16 X 20 4,9 X 6,1	8,0 2,4	4,2 6,1	23 GPM @ 30,0 psi 87,1 LPM @ 207 kPa	28 GPM @ 44,4 psi 106,0 LPM @ 306 kPa

<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. See NFPA 13, 13D, 13R for minimum spacing.

# See Figure 2 above.

# DIMENSIONS AND ROOM SIZE



**Figure 3**  
**Sprinklers installed to spray across the ceiling**  
*(Exaggerated for clarity)*

**Installed under smooth flat horizontal ceilings up to 4/12 (18.4°) pitch – spraying across the ceiling ††**

Model	Room Size Feet/meters	Min. Installation Spacing Feet/meters	Nominal K-Factor Imp./S.I. <sup>^</sup>	Min. Flow per Sprinkler 4 - 6" (100 - 150 mm) Down from Ceiling for 13R or 13D Systems 155° & 175°F (68° & 79°C) GPM/LPM @ psi/kPa	Min. Flow per Sprinkler 6 - 12" (150 - 300 mm) Down from Ceiling for 13R or 13D Systems* 155° & 175°F (68° & 79°C) GPM/LPM @ psi/kPa
V2738	12 X 12 3,7 X 3,7	8,0 2,4	4,2 6,1	17 GPM @ 16.4 psi † 64,3 LPM @ 113 kPa	20 GPM @ 22.7 psi 75,7 LPM @ 156 kPa
V2738	14 X 14 4,3 X 4,3	8,0 2,4	4,2 6,1	17 GPM @ 16.4 psi † 64,3 LPM @ 113 kPa	20 GPM @ 22.7 psi 75,7 LPM @ 156 kPa
V2738	16 X 16 4,9 X 4,9	8,0 2,4	4,2 6,1	17 GPM @ 16.4 psi † 64,3 LPM @ 113 kPa	20 GPM @ 22.7 psi 75,7 LPM @ 156 kPa

<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. See NFPA 13, 13D, 13R for minimum spacing.

† For 175°F (79° C) rating: 18 GPM @ 18.4 psi (68,1 LPM @ 127 kPa).

†† See Figure 3 above.

**Installed under sloped ceilings between 4/12 (18.4°) pitch and 8/12 (33.7°) pitch – spraying across the ceiling †††  
 (Three sprinkler design) †††**

Model	Room Size Feet/meters	Min. Installation Spacing Feet/meters	Nominal K-Factor Imp./S.I. <sup>^</sup>	Min. Flow per Sprinkler 4 - 6" (100 - 150 mm) Down from Ceiling for 13R or 13D Systems 155° & 175°F (68° & 79°C) GPM/LPM @ psi/kPa	Min. Flow per Sprinkler 6 - 12" (150 - 300 mm) Down from Ceiling for 13R or 13D Systems* 155° & 175°F (68° & 79°C) GPM/LPM @ psi/kPa
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V2738	14 X 14 4,3 X 4,3	8,0 2,4	4,2 6,1	17 GPM @ 16.4 psi † 64,3 LPM @ 113 kPa	20 GPM @ 22.7 psi 75,7 LPM @ 156 kPa
V2738	16 X 16 4,9 X 4,9	8,0 2,4	4,2 6,1	17 GPM @ 16.4 psi † 64,3 LPM @ 113 kPa	20 GPM @ 22.7 psi 75,7 LPM @ 156 kPa

<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. See NFPA 13, 13D, 13R for minimum spacing.

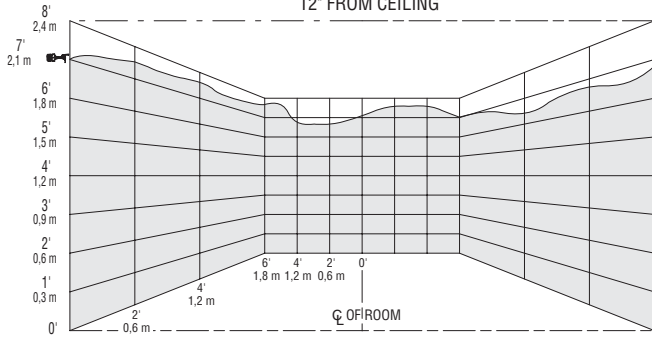
† For 175°F (79° C) rating: 20 GPM @ 22.7psi (75,7 LPM @ 156 kPa).

†† See Figure 3 above.

††† Three Sprinkler Design - When there are more than two sprinklers in a compartment installed along sloped ceilings between 4/12 and 8/12 pitch, three sprinklers must be included in the hydraulic calculation.

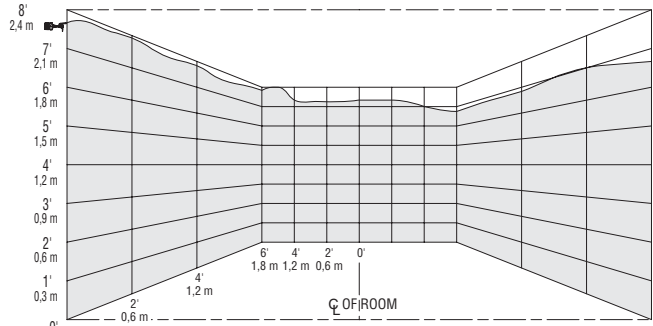
# NOMINAL WETTING PATTERNS

**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 15 GPM (56,8 LPM)  
 12" FROM CEILING



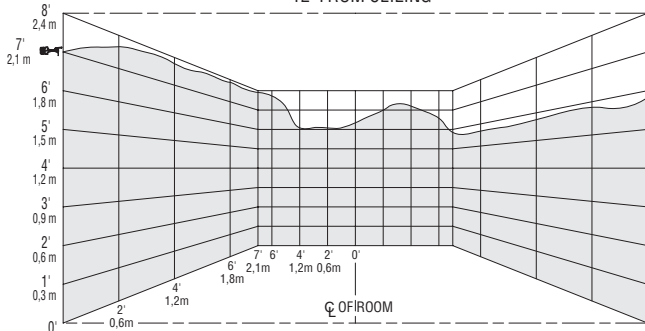
**NOMINAL WETTING PATTERN**  
 12' X 12' COVERAGE AREA

**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 14 GPM (53,0 LPM)  
 4" FROM CEILING



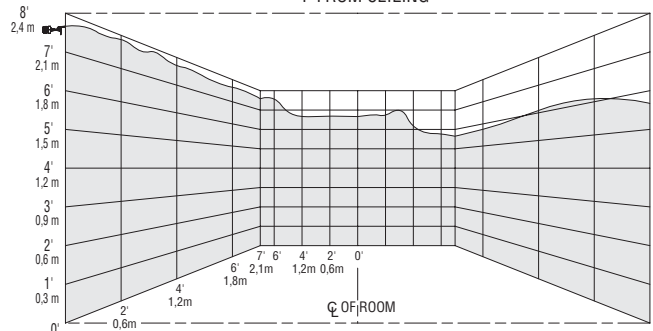
**NOMINAL WETTING PATTERN**  
 12' X 12' COVERAGE AREA

**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 17 GPM (64,3 LPM)  
 12" FROM CEILING



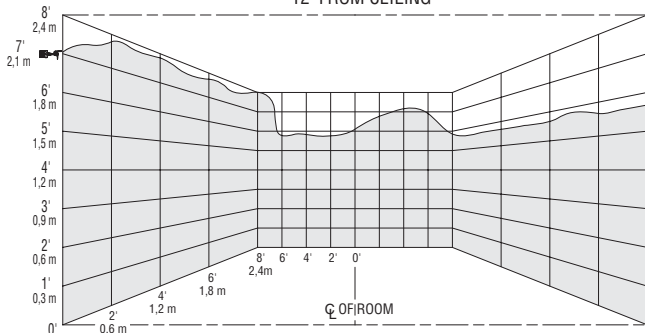
**NOMINAL WETTING PATTERN**  
 14' X 14' COVERAGE AREA

**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 14 GPM (53,0 LPM)  
 4" FROM CEILING



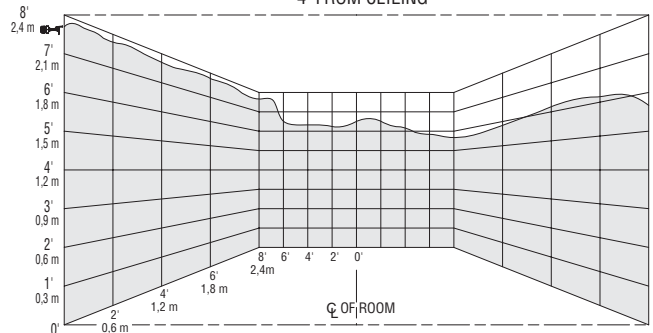
**NOMINAL WETTING PATTERN**  
 14' X 14' COVERAGE AREA

**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 19 GPM (71,9 LPM)  
 12" FROM CEILING



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

**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 17 GPM (64,3 LPM)  
 4" FROM CEILING



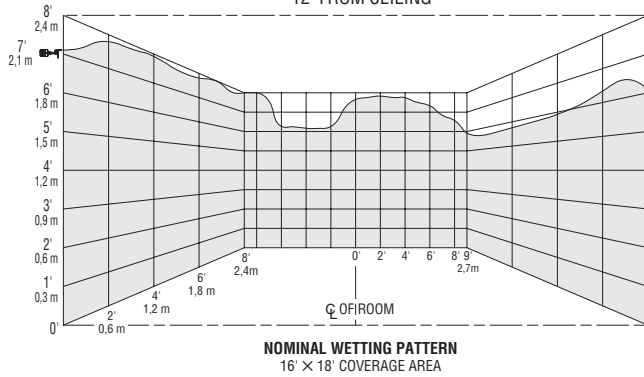
**NOMINAL WETTING PATTERN**  
 16' X 16' COVERAGE AREA

## NOTES:

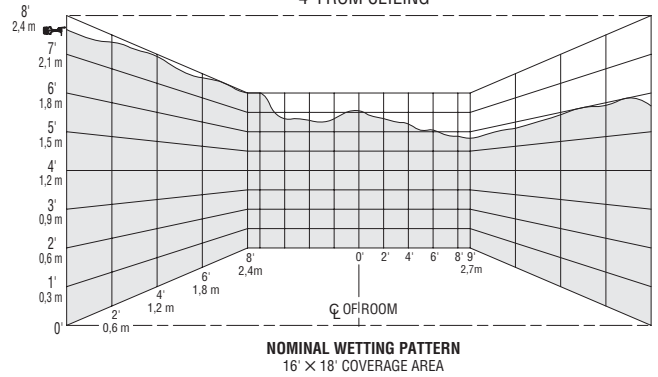
1. Data shown is approximate and can vary due to differences in installation.
2. These graphs illustrate approximate wall-wetting patterns for these specific Victaulic FireLock Automatic Sprinklers. They are provided as information for guidance and should not be used as minimum sprinkler spacing rules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

# NOMINAL WETTING PATTERNS

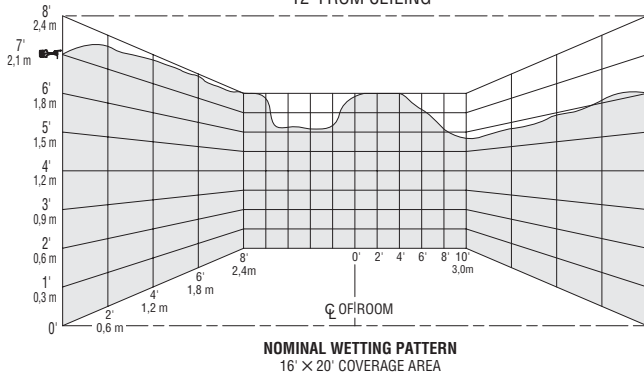
**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 24 GPM (90,8 LPM)  
 12" FROM CEILING



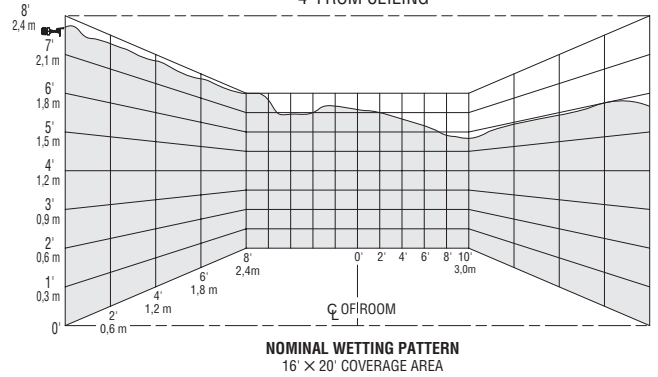
**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 19 GPM (71,9 LPM)  
 4" FROM CEILING



**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 28 GPM (106,0 LPM)  
 12" FROM CEILING



**MODEL V2738**  
**K4.2 RESIDENTIAL HORIZONTAL SIDEWALL**  
 23 GPM (87,0 LPM)  
 4" FROM CEILING



## 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 edition). Failure to follow these rules and guidelines could adversely affect the performance of the sprinkler and will void all Listings, Approvals and Warranties.
3. All patterns are symmetric to waterway.

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.