

# V34, K11.2

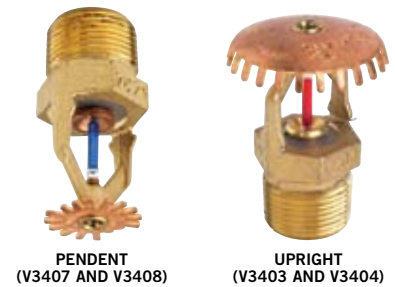


Standard Spray Pendent and Upright, Standard and Quick Response, Storage Protection (density/area) Sprinklers Standard Response

## V3403, V3404, V3407, V3408 STANDARD RESPONSE

The Models V3403, V3404, V3407 and V3408 Standard Spray Sprinklers are designed to protect any hazard defined within NFPA 13 where Standard Spray Sprinklers are allowed as fire protection. The Models V3403 and V3407 standard response sprinklers are also special sprinklers designed, tested and Listed for "Storage Protection" utilizing the density/area criteria per NFPA 13, 2002 edition (for example: Figure 12.3.3.1.5(b) Note 2, Figure 12.3.3.1.5(d) Note 5, Paragraphs 12.3.3.5.1.2, 12.3.2.5.1.2, etc.) In addition the FM Global Approval Guide and Loss Prevention Data Sheets must also be followed when installing these Model V34 sprinklers. FM Global refers to all these models as "Control Mode" sprinklers for use in storage applications utilizing the density/area design method. The discharge rates for Model V34 (ELO) sprinklers are twice that of standard 1/2" (15mm) sprinklers and up to 60 percent higher than 1 1/2" (20mm) orifice sprinklers. The design incorporates state-of-the-art, heat responsive, frangible glass bulb design (standard or 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 temperature ratings (see chart on page 2) to meet many design requirements.



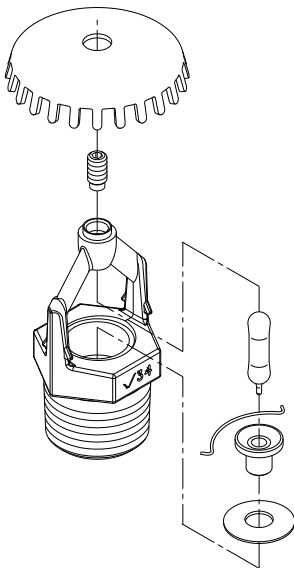
### SPRINKLER OPERATION:

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:

For coverage area and sprinkler placement, refer to NFPA 13 standards, the FM Global Approval Guide and Loss Prevention Data Sheets where applicable.

### TECHNICAL SPECIFICATIONS:



(EXAGGERATED FOR CLARITY)

- Models:** V3403, V3404, V3407, V3408
- Style:** Pendent or Upright
- Nominal Orifice Size:** 5/8"/16mm
- K-Factor:** 11.2 Imp./16.1 S.I.<sup>^</sup>
- Nominal Thread Size:** 3/4" NPT/20mm
- Max. Working Pressure:** 175 psi/1200 kPa
- Factory Hydrostatic Test:** 100% @ 500 psi/3450 kPa
- Min. Operating Pressure:** 7 psi/48 kPa UL, NFPA applications; 10 psi/69 kPa FM Global applications.
- Temperature Rating:** See chart on page 2.

### MATERIAL SPECIFICATIONS

- Upright Deflector:** Brass per UNS C22000
- Pendent Deflector:** Brass per UNS C51000
- Bulb:** Glass with glycerin solution.
- Bulb Nominal Diameter:**
  - Standard: 5.0mm
  - Quick Response: 3.0mm
- Load Screw:** Brass per UNS C65100
- Pip Cap:** Brass per UNS C65100
- Seal:** Teflon\* tape
- Spring:** Beryllium nickel
- Frame:** Die cast brass
- Lodgement Spring:** Stainless steel per UNS S30200

### ACCESSORIES

#### Installation Wrench:

- Open End: V34
- Recessed: V34

#### Sprinkler Finishes:

- Plain brass
- Chrome plated
- White painted\*\*†
- Proprietary Nickel-Teflon\*\* coating

For cabinets and other accessories refer to separate sheet.

<sup>^</sup> 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, ULC Listed for corrosion resistance in all configurations.  
 † Not FM approved.

### JOB/OWNER

System No. \_\_\_\_\_  
 Location \_\_\_\_\_

### CONTRACTOR

Submitted By \_\_\_\_\_  
 Date \_\_\_\_\_

### ENGINEER

Spec Sect \_\_\_\_\_ Para \_\_\_\_\_  
 Approved \_\_\_\_\_  
 Date \_\_\_\_\_

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APPROVALS/LISTINGS	Model			
	V3407	V3403	V3408	V3404
Orifice Size (inches)	5/8"	5/8"	5/8"	5/8"
Orifice Size (mm)	16	16	16	16
Nominal K Factor Imperial	11.2	11.2	11.2	11.2
Nominal K Factor S.I. <sup>^</sup>	16.1	16.1	16.1	16.1
Response	Standard	Standard	Quick	Quick
Deflector Type	Pendent	Upright	Pendent	Upright
Adjustment				
Approved Temperature Ratings F°/C° by Agency‡	Model			
UL	135°F/57°C	135°F/57°C	135°F/57°C	135°F/57°C
	155°F/68°C	155°F/68°C	155°F/68°C	155°F/68°C
	175°F/79°C	175°F/79°C	175°F/79°C	175°F/79°C
	200°F/93°C	200°F/93°C	200°F/93°C	200°F/93°C
	286°F/141°C	286°F/141°C	286°F/141°C	286°F/141°C
ULC	135°F/57°C	135°F/57°C	135°F/57°C	135°F/57°C
	155°F/68°C	155°F/68°C	155°F/68°C	155°F/68°C
	175°F/79°C	175°F/79°C	175°F/79°C	175°F/79°C
	200°F/93°C	200°F/93°C	200°F/93°C	200°F/93°C
	286°F/141°C	286°F/141°C	286°F/141°C	286°F/141°C
FM#	135°F/57°C	135°F/57°C	135°F/57°C	135°F/57°C
	155°F/68°C	155°F/68°C	155°F/68°C	155°F/68°C
	175°F/79°C	175°F/79°C	175°F/79°C	175°F/79°C
	200°F/93°C	200°F/93°C	200°F/93°C	200°F/93°C
	286°F/141°C	286°F/141°C	286°F/141°C	286°F/141°C
NYC/MEA # 62-99-E	1135°F/57°C	135°F/57°C	135°F/57°C	135°F/57°C
	155°F/68°C	155°F/68°C	155°F/68°C	155°F/68°C
	175°F/79°C	175°F/79°C	175°F/79°C	175°F/79°C
	200°F/93°C	200°F/93°C	200°F/93°C	200°F/93°C
	286°F/141°C	286°F/141°C	286°F/141°C	286°F/141°C
CSFM # 7690-0531:112	135°F/57°C	135°F/57°C	135°F/57°C	135°F/57°C
	155°F/68°C	155°F/68°C	155°F/68°C	155°F/68°C
	175°F/79°C	175°F/79°C	175°F/79°C	175°F/79°C
	200°F/93°C	200°F/93°C	200°F/93°C	200°F/93°C
	286°F/141°C	286°F/141°C	286°F/141°C	286°F/141°C
VNIPO	135°F/57°C	135°F/57°C	135°F/57°C	135°F/57°C
	155°F/68°C	155°F/68°C	155°F/68°C	155°F/68°C
	175°F/79°C	175°F/79°C	175°F/79°C	175°F/79°C
	200°F/93°C	200°F/93°C	200°F/93°C	200°F/93°C
	286°F/141°C	286°F/141°C	286°F/141°C	286°F/141°C

‡ Listings and Approvals as of printing. All are approved open, except for areas designated "No".

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

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#### RATINGS

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

Sprinkler Temperature Classification	Victaulic Part Identification	Temperature – °F/°C		Glass Bulb Color
		Nominal Temperature Rating	Maximum Ambient Temperature Allowed	
Ordinary	A	135 57	100 38	Orange
Ordinary	C	155 68	100 38	Red
Intermediate	E	175 79	150 65	Yellow
Intermediate	F	200 93	150 65	Green
High	J	286 141	225 ~ 107	Blue
– ‡	M	Open	– –	No Bulb

‡ Standard response only.

All are approved open, except for areas designated “No”.

~ 150/65 if wax coated.

#### ORDERING INFORMATION

Please specify the following when ordering:





Sprinkler Model Number	
Style	
Temperature Rating	
K-Factor	
Thread Size	
Sprinkler Finish	
Quantity	
Wrench Model Number	

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 <b>WARNING</b>	
    	<ul style="list-style-type: none"> <li>• Always read and understand installation, care, and maintenance instructions, supplied with each box of sprinklers, before proceeding with installation of any sprinklers.</li> <li>• Always wear safety glasses and foot protection.</li> <li>• Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.</li> <li>• Installation rules, especially those governing obstruction, must be strictly followed.</li> <li>• Painting, plating, or any re-coating of sprinklers (other than that supplied by Victaulic) is not allowed.</li> </ul> <p>Failure to follow these instructions could result in serious personal injury and/or property damage.</p> <p>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.</p> <p>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.</p>

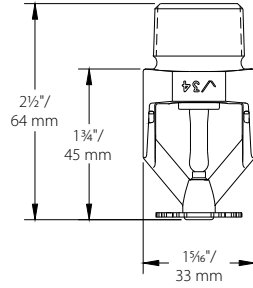
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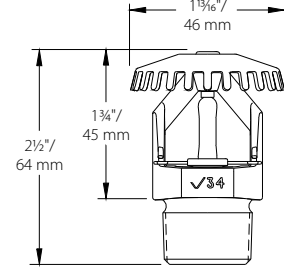
**V3403, V3404, V3407, V3408 STANDARD RESPONSE**

## DIMENSIONS

**Standard Pendent – V3407, V3408**



**Standard Upright – V3403, V3404**



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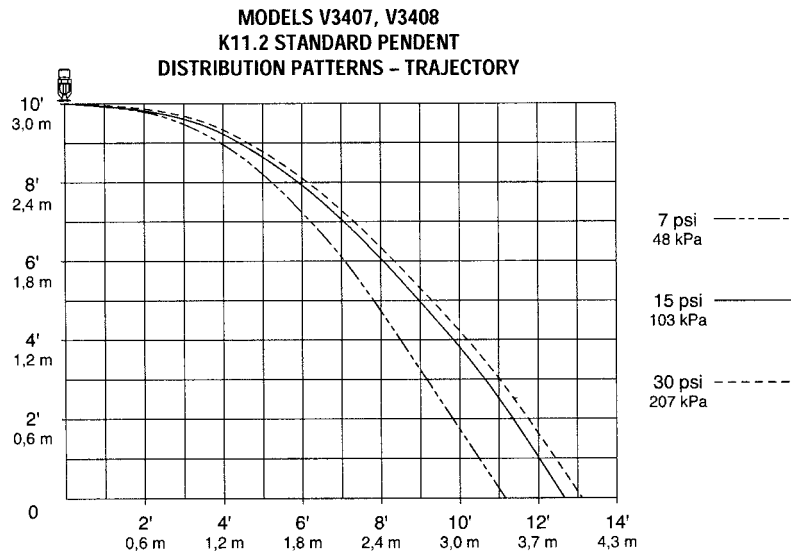
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### AVAILABLE WRENCHES

Sprinkler Type	V34 Recessed	V34 Open End
Pendent and Upright	yes	yes

### DISTRIBUTION PATTERNS

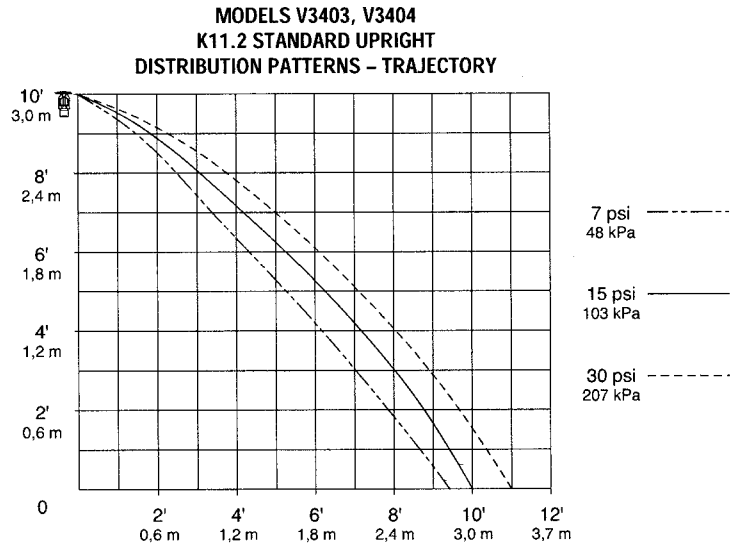


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## DISTRIBUTION PATTERNS



**NOTES:**

1. Data shown is approximate and can vary due to differences in installation.
2. These graphs illustrate approximate trajectories, floor-wetting, and wall-wetting patterns for these specific Victaulic FireLock Automatic Sprinklers. They are provided as information for guidance in avoiding obstructions to sprinklers and should not be used as minimum sprinkler spacing rules for installation. Refer to the appropriate NFPA National Fire Code, FM Global Approval Guide and Loss Prevention Data Sheets or the Authority Having Jurisdiction for specific information regarding obstructions, spacing limitations and area of coverage requirements. 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 waterway.

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**WARRANTY**

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

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**NOTE**

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.



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For complete contact information, visit [www.victaulic.com](http://www.victaulic.com)

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