

# V34, K14.0

Extended Coverage/Light Hazard (ECLH) Pendent and Recessed Pendent

**V3413 STANDARD RESPONSE, V3414 QUICK RESPONSE**

These Model V34 ECLH sprinklers are designed with a K14.0 orifice size to provide added coverage at normal light hazard operating pressures. 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) and finishes to meet many design requirements.



\* See page 2 for FM Approved product configurations

SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS



**PENDENT**  
(V3413 AND V3414)



**RECESSED PENDENT**  
(V3413 AND V3414)

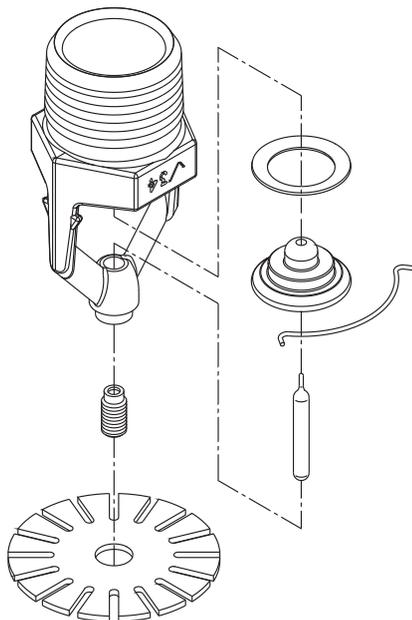
**SPRINKLER OPERATION:**

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:**

Extended spray coverage is up to 400 square feet/37.2 sq. m per NFPA 13.

**TECHNICAL SPECIFICATIONS:**



(Exaggerated for clarity)

- Models:** V3413, V3414
- Style:** ECLH – Pendent and Recessed Pendent
- Nominal Orifice Size:** 3/4" NPT/20mm
- K-Factor:** 14.0 Imp. (20.2 S.I.^)
- Nominal Thread Size:** 3/4" NPT/20mm
- Max. Working Pressure:** 175 psi/1200 kPa
- Factory Hydrostatic Test:** 1100% @ 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:**
    - Standard: 5.0 mm
    - Quick Response: 3.0mm
  - 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: V34
- Recessed: V34

**Sprinkler Finishes:**

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

For escutcheons, boxes 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 in all configurations.

**JOB/OWNER**

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

**CONTRACTOR**

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

**ENGINEER**

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

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**V3413 STANDARD RESPONSE, V3414 QUICK RESPONSE**

## APPROVALS/LISTINGS

Model	Orifice Size Inches/mm	Nominal K-Factor Imperial S.I. <sup>^</sup>	Response	Deflector Type	Approved Temperature Ratings F°/C° by Agency <sup>‡</sup>					
					Room Size Feet/meters					
					UL 18 x 18' 5.5 x 5.5m	ULC 18 x 18' 5.5 x 5.5m	FM 18 x 18' 5.5 x 5.5m	UL 20 x 20' 6.1 x 6.1m	ULC 20 x 20' 6.1 x 6.1m	FM 20 x 20' 6.1 x 6.1m
V3413	¾	14.0	Standard	Pendent	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C
	20	20.2			135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C
V3413	¾	14.0	Standard	Recessed Pendent Up to ½" Adjustment	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C
	20	20.2			135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A
V3413	¾	14.0	Standard	Recessed Pendent Up to ¾" Adjustment	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A
	20	20.2			135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A
V3414	¾	14.0	Quick	Pendent	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A
	20	20.2			135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A
V3414	¾	14.0	Quick	Recessed Pendent Up to ½" Adjustment	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A
	20	20.2			135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A
V3414	¾	14.0	Quick	Recessed Pendent Up to ¾" Adjustment	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A
	20	20.2			135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	N/A

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

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

## 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	100	Orange
		57	38	
Ordinary	C	155	100	Red
		68	38	
Intermediate	E	175	150	Yellow
		79	65	
Intermediate	F	200	150	Green
		93	65	

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**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**

**WARNING**

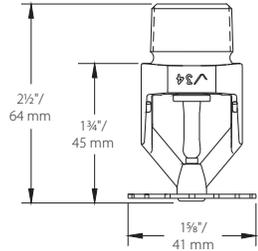
    	<ul style="list-style-type: none"> <li>Always read and understand installation, care, and maintenance instructions, supplied with each box of sprinklers, before proceeding with installation of any sprinklers.</li> <li>Always wear safety glasses and foot protection.</li> <li>Depressurize and drain the 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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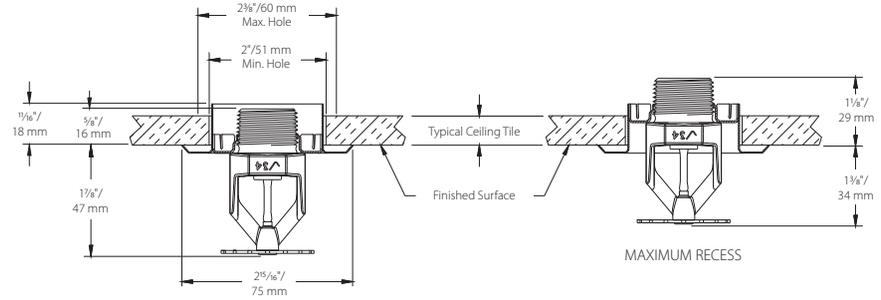
V3413 STANDARD RESPONSE, V3414 QUICK RESPONSE

## DIMENSIONS



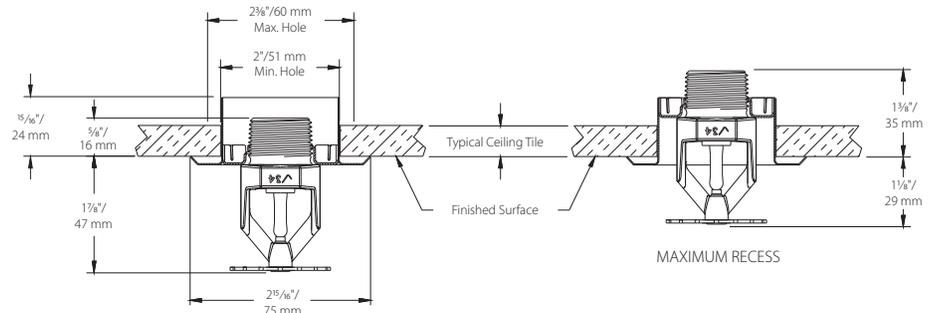
Standard Pendant V3413, V3414

### 1/2" Adjustment Recessed – V3413, V3414 (drawing not to scale)



MAXIMUM EXTENSION

### 3/4" Adjustment Recessed – V3413, V3414 (drawing not to scale)



MAXIMUM EXTENSION

## AVAILABLE WRENCHES

Sprinkler Type	V34 – Recessed	V34 – Open End
Pendant	yes	yes
Recessed Pendant	yes	—

## ROOM SIZE

Room Size Feet/m	SPRINKLER PERFORMANCE FLOW AND PRESSURE (MINIMUM) – V3413 , V3414			
	Flow Rate – GPM/LPM		End Sprinkler Pressure – PSI/kPa	
	FM*	UL	FM*	UL
18 x 18 5.5 x 5.5	37 140	37 140	7 50	7 50
20 x 20 6.1 x 6.1	40 150	40 150	8 60	8 60

\*See page 2 for V3413 FM Approvals. V3414 is not FM Approved.

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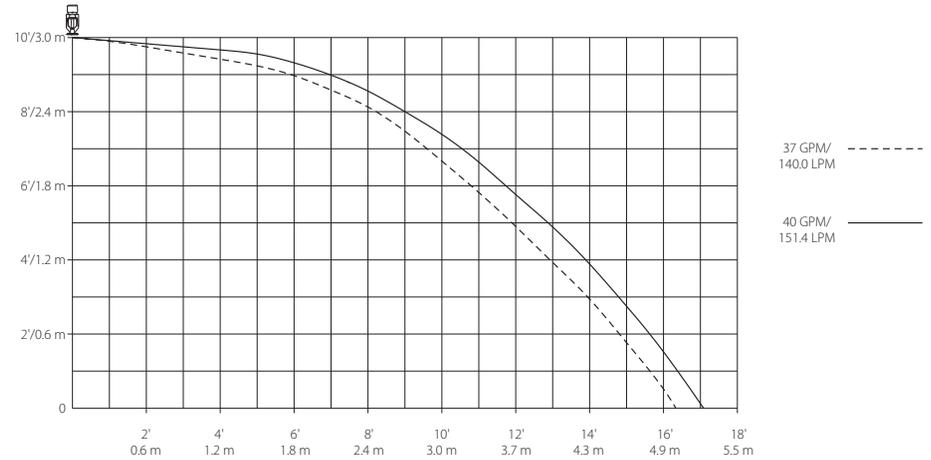
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## DISTRIBUTION PATTERNS

### Models V3413, V3414

#### K14.0 ECLH Pendent and Recessed Pendent Distribution Patterns – Trajectory



Response	Minimum Installation Spacing Feet/meters
V3413 – Standard	13.0 4.0
V3414 – Quick	12.0 3.7

#### 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 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 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.

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

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