

# V34, K14.0

Models V3413 and V3414  
Extended Coverage/Light Hazard (ECLH)  
Pendent and Recessed Pendent  
Standard and Quick Response

## PRODUCT DESCRIPTION



Pendent



See Victaulic publication 10.01 for details.



Recessed Pendent

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.

### Sprinkler Operation

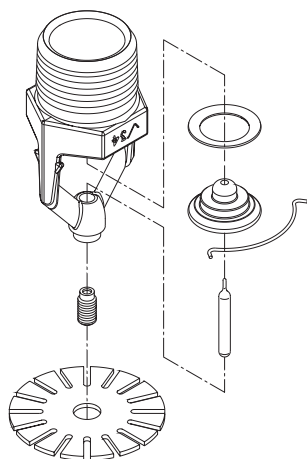
The operating mechanism is a frangible glass bulb which contains a heat responsive liquid. During a fire, the ambient temperature rises causing the liquid in the bulb to expand. When the ambient temperature reaches the rated

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" (20 mm)

**K-Factor:** 14.0 Imp. (20,2 S.I. ^)

**Nominal Thread Size:**  
3/4" NPT (20 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:

☐ Standard: 5,0 mm

☐ 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: 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.

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## APPROVALS/LISTINGS

Model	Orifice Size Inches/mm	Nominal K-Factor Imperial S.I. <sup>^</sup>	Response	Deflector Type	Approved Temperature Ratings ‡ (Refer to notes below.)	
					Room Size – Feet/meters	
					18 X 18 5,5 X 5,5	20 X 20 6,1 X 6,1
V3413	¾ 20	14.0 20,2	Standard	Pendent	1,3,4,5 – A 2 – B	1,3,4,5 – A 2 – B
V3413	¾ 20	14.0 20,2	Standard	Recessed Pendent Up to ½" Adjustment	1,3,4,5 – A 2 – D	1,3,4,5 – A 2 – D
V3413	¾ 20	14.0 20,2	Standard	Recessed Pendent Up to ¾" Adjustment	1,3,4,5 – A	1,3,4,5 – A
V3414	¾ 20	14.0 20,2	Quick	Pendent	1,3,4,5 – A 2 – D	1,3,4,5 – A 2 – D
V3414	¾ 20	14.0 20,2	Quick	Recessed Pendent Up to ½" Adjustment	1,3,4,5 – A 2 – E	1,3,4,5 – A 2 – E
V3414	¾ 20	14.0 20,2	Quick	Recessed Pendent Up to ¾" Adjustment	1,3,4,5 – A	1,3,4,5 – A

‡ Listings and approval as of printing. Not all temperature rating combinations are Approved or Listed. Check Victaulic for specific combinations.

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

NOTES	
Approval	Temperature Rating
1 – UL	A – 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C)
2 – FM	B – 135°F (57°C), 155°F (68°C), 175°F (79°C)
3 – ULC	C – 135°F (57°C), 175°F (79°C)
4 – NYC/MEA †	D – 135°F (57°C), 155°F (68°C)
5 – CSFM §	E – 135°F (57°C)

† MEA #62-99-E

§ CSFM #7690-0531:112

## RATINGS

All glass bulbs are rated for temperatures from -67°F (-55°C) 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	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

## 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

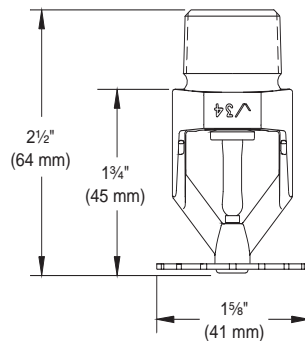


- Always read and understand installation, care, and maintenance instructions, supplied with each box of sprinklers, before proceeding with installation of any sprinklers.
  - Always wear safety glasses and foot protection.
  - Depressurize and drain the piping system before attempting to install, remove,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

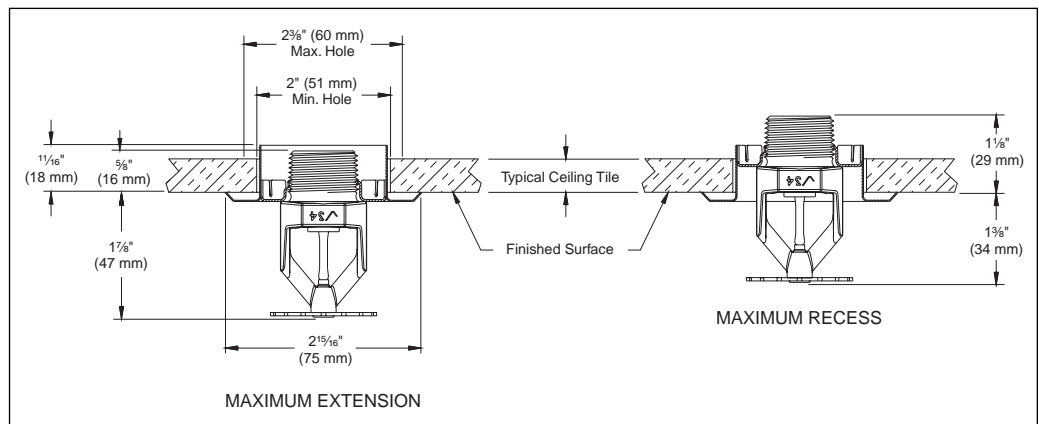
The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to the current National Fire Protection Association pamphlet that describes care and maintenance of sprinkler systems. In addition,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

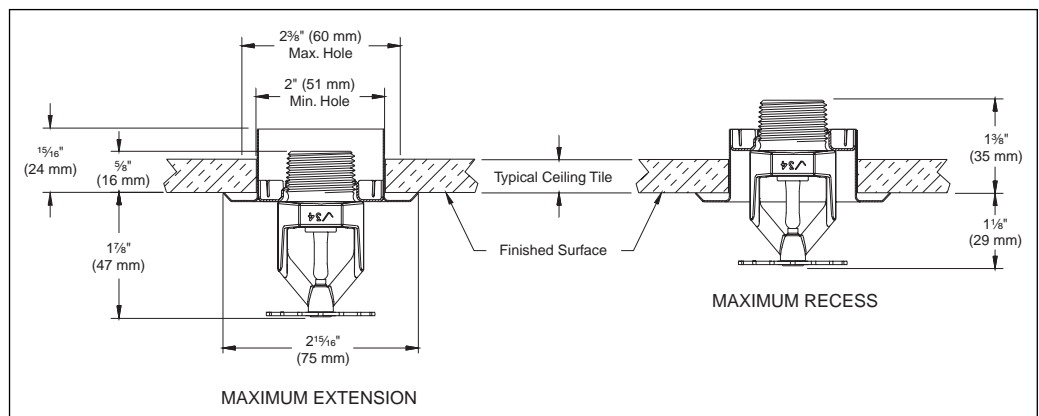
## DIMENSIONS



**Standard Pendant  
V3413, V3414**



**1/2" Adjustment  
Recessed – V3413, V3414  
(Drawing not to scale)**



**3/4" Adjustment  
Recessed – V3413, V3414  
(Drawing not to scale)**

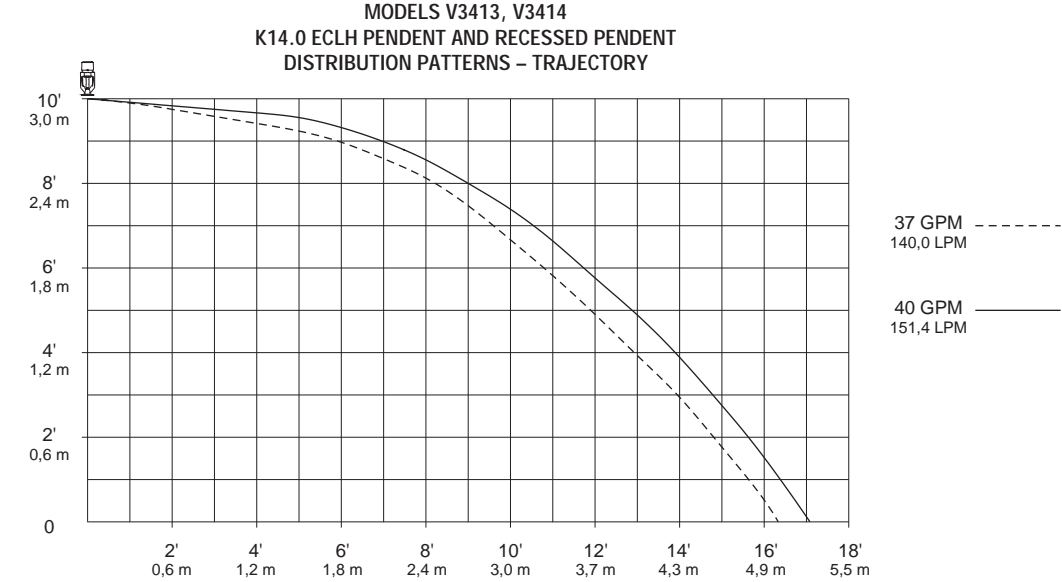
## AVAILABLE WRENCHES

	V34 Open End	V34 Recessed
Pendent	✓	✓
Recessed Pendent	–	✓

## ROOM SIZE

SPRINKLER PERFORMANCE FLOW AND PRESSURE (MINIMUM) V3413, V3414				
Room Size Feet/m	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

# DISTRIBUTION PATTERNS



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.

# WARRANTY

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

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.