

# Reliable®

## Model GFR VELO ECOH

Extended Coverage Ordinary Hazard Sprinkler

### Product Description

Model GFR VELO ECOH sprinklers are extended coverage, standard-response sprinklers with a fusible link operating element. The sprinklers are cULus Listed and have a nominal K-factor of 14.0 (200 metric). Model GFR VELO ECOH sprinklers are available in Ordinary (165°F [74°C]) and Intermediate (212°F [100°F]) temperature classification and a wide variety of finishes.

Pendent sprinklers may be installed exposed or surface mounted using escutcheons such as the Reliable Models B, C, or HB (reference Technical Bulletin 204). When installed recessed, the Model GFR VELO ECOH pendent sprinkler may only be installed with listed Reliable recessed escutcheons. Refer to the technical information on page 3 for specific listings for recessed installation and refer to Figure 3 for dimensional information.

Table A below provides a summary of the approvals and availability of specific Model GFR VELO ECOH sprinkler configurations. Additional technical information for each sprinkler model is provided on the following pages.

### Application

Model GFR VELO ECOH sprinklers are listed and approved for installation in accordance with the requirements of NFPA 13 for ordinary hazard occupancies having unobstructed construction and ceiling slopes not exceeding 2 inches (50mm) of rise in 12 inches (305 mm) of run. For open web truss construction, thickness of web members shall not exceed 1 in. (25mm). Follow all other requirements of NFPA 13 for extended coverage sprinklers when designing and installing Model GFR VELO ECOH sprinklers.



Upright



Pendent

**Note:** Not all versions of the product are shown.

Model GFR VELO ECOH Series Sprinklers Summary

Table A

Sprinkler Model	K-Factor gpm/psi <sup>1/2</sup> (lpm/bar <sup>1/2</sup> )	Orientation	Listings & Approvals	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
Model GFR VELO ECOH	14.0 (200)	Upright	cULus	175 (12.0)	R6553
		Pendent			R6043

**Model GFR VELO ECOH Upright Sprinkler**

**SIN R6553**

**Technical Specifications**

**Style:** Upright  
**Threads:** 3/4" NPT  
**Nominal K-Factor:** 14.0 (200 metric)  
**Max. Working Pressure:**  
 175 psi (12 bar)

**Material Specifications**

**Thermal Sensor:** Nickel alloy fusible link  
**Sprinkler Frame:** Brass Alloy  
**Cap:** Bronze Alloy  
**Sealing Washer:** Nickel alloy with PTFE  
**Load Screw:** Copper Alloy  
**Deflector:** Brass Alloy

**Sprinkler Finishes**

(See Table D)

**Sensitivity**

Standard response

**Temperature Ratings**

165°F (74°C)  
 212°F (100°C)

**Sprinkler Wrench**

Model H

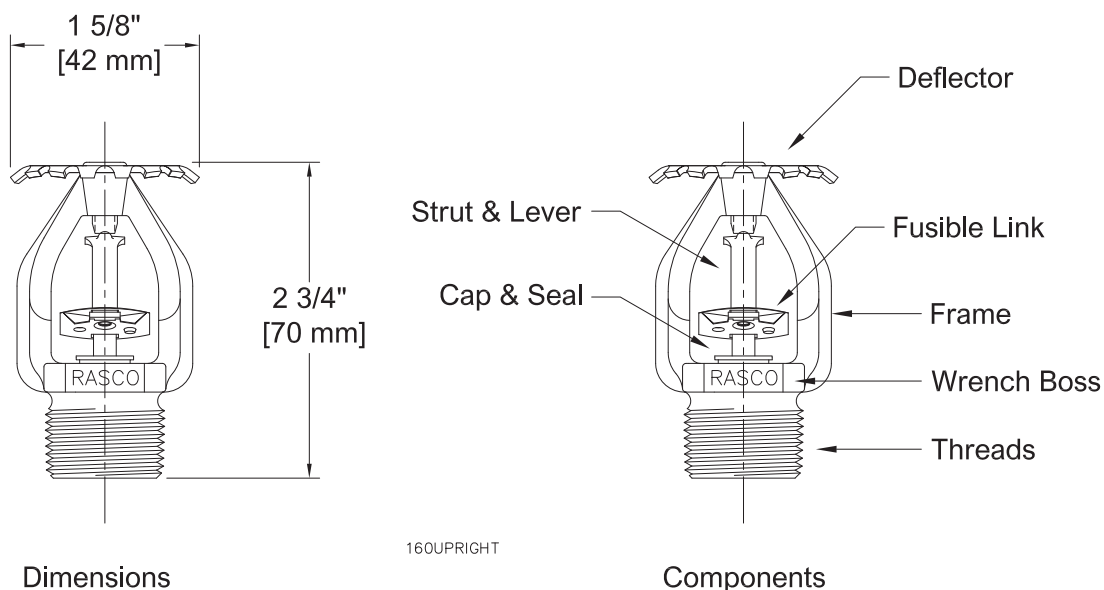
**Listings and Approvals**

cULus Listed



**Model GFR ECOH Upright Sprinkler Components and Dimensions**

**Figure 1**



160UPRIGHT

**Model GFR VELO ECOH Upright Sprinkler Minimum Design Criteria**

**Table B**

Coverage Area ft <sup>2</sup> (m <sup>2</sup> )	Sprinkler Spacing ft x ft (m x m)	Ordinary Hazard Group 1		Ordinary Hazard Group 2	
		Flow gpm (l/min)	Pressure psi (bar)	Flow gpm (l/min)	Pressure psi (bar)
400 (37.2)	20 x 20 (6.1 x 6.1)	60.0 (227)	18.4 (1.3)	80.0 (302)	32.7 (2.3)

**Notes:**

- For coverage areas less than 400 ft<sup>2</sup> (20 ft x 20 ft [6.1m x 6.1m]), the flow and pressure indicated for 400 ft<sup>2</sup> (20 ft x 20 ft [6.1m x 6.1m]) must be used.
- Minimum sprinkler spacing is 9 ft (2.7 m).

**Technical Specifications**

**Style:**  
 Pendent  
 Recessed Pendent  
**Threads:** 3/4" NPT  
**Nominal K-Factor:** 14.0 (200 metric)  
**Max. Working Pressure:**  
 175 psi (12 bar)

**Material Specifications**

**Thermal Sensor:** Nickel alloy fusible link  
**Sprinkler Frame:** Brass Alloy  
**Cap:** Bronze Alloy  
**Sealing Washer:** Nickel alloy with PTFE  
**Load Screw:** Copper Alloy  
**Deflector:** Brass Alloy

**Sprinkler Finishes**

(See Table D)

**Sensitivity**

Standard response

**Temperature Ratings**

165°F (74°C)  
 212°F (100°C)

**Recessed Escutcheons**

Model F1

**Sprinkler Wrenches**

Model H (Pendent)  
 Model XLO2 (Recessed Pendent)

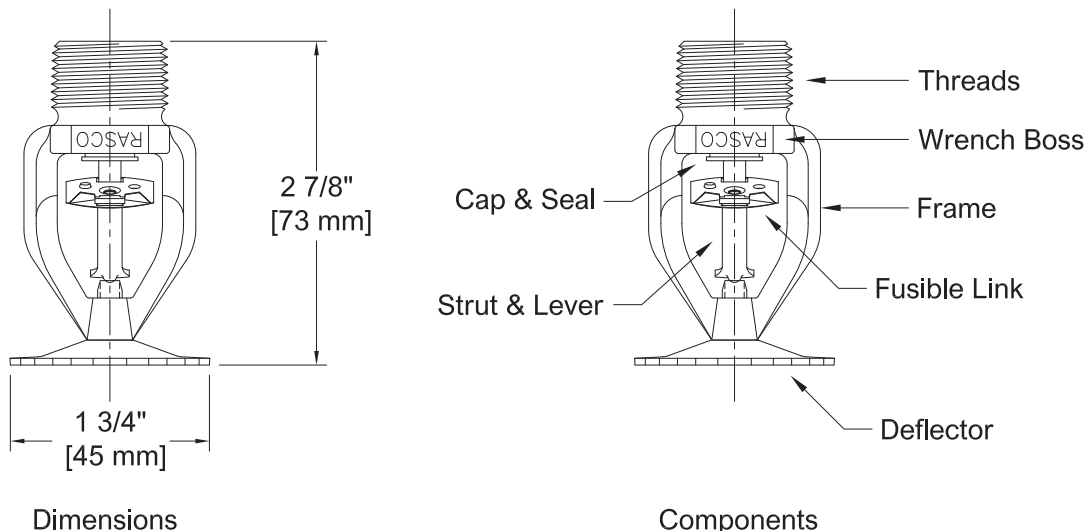
**Listings and Approvals**

cULus Listed



**Model GFR VELO ECOH Pendent Sprinkler Components and Dimensions**

**Figure 2**



**Note:** Please refer to Figure 3 for recessed installation.

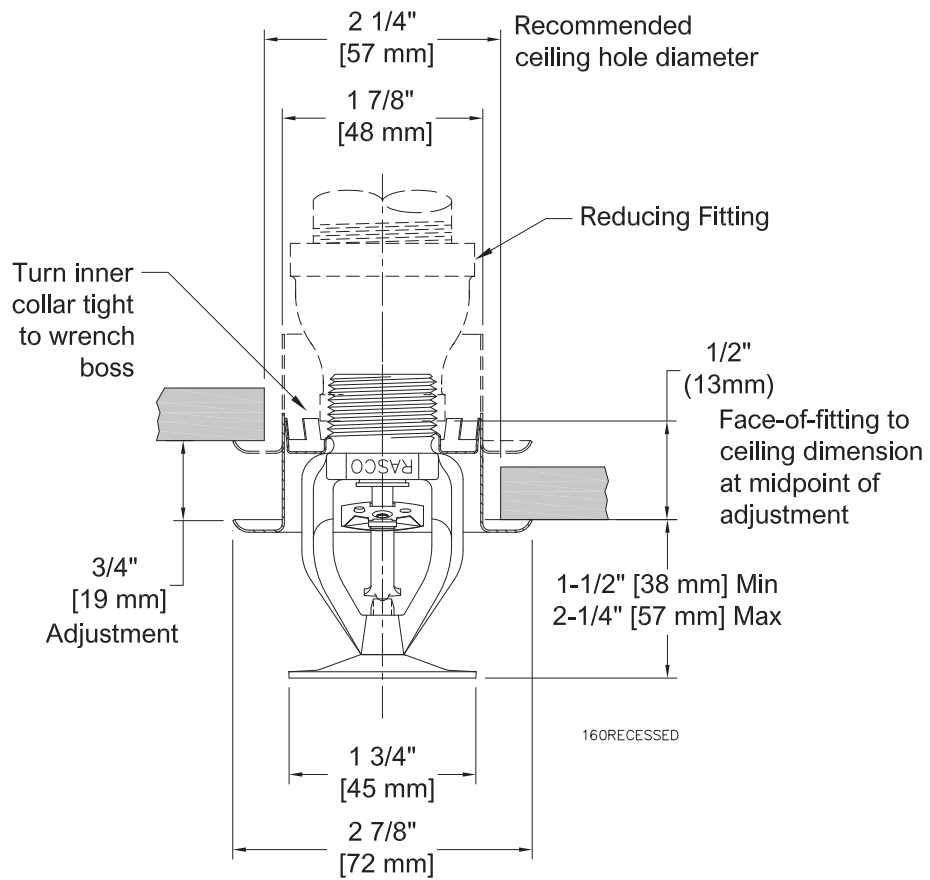
**Model GFR VELO ECOH Pendent Sprinkler Minimum Design Criteria**

**Table C**

Coverage Area ft <sup>2</sup> (m <sup>2</sup> )	Sprinkler Spacing ft x ft (m x m)	Ordinary Hazard Group 1		Ordinary Hazard Group 2	
		Flow gpm (l/min)	Pressure psi (bar)	Flow gpm (l/min)	Pressure psi (bar)
324 (30.1)	18 x 18 (5.5 x 5.5)	48.6 (184)	12.1 (0.8)	64.8 (245)	21.4 (1.5)
400 (37.2)	20 x 20 (6.1 x 6.1)	60.0 (227)	18.4 (1.3)	80.0 (302)	32.7 (2.3)

**Notes:**

- For coverage areas less than 324 ft<sup>2</sup> (18 ft x 18 ft [5.5m x 5.5m]), the flow and pressure indicated for 324 ft<sup>2</sup> (18 ft x 18 ft [5.5m x 5.5m]) must be used.
- Minimum sprinkler spacing is 13 ft (4.0m).



F1 Escutcheon

## Wrenches



Model H (upright, pendent)



Model XLO2

### Finishes<sup>(1)(2)</sup>

### Table D

Sprinkler <sup>(3)</sup>	F1 Escutcheons
Bronze	Brass
Chrome Plated	Chrome Plated
White Polyester <sup>(4)(5)</sup>	White Polyester

#### Notes:

- Other finishes and colors are available on special order. Consult your Reliable sales representative for details.
- Paint or any other coating applied over the factory finish will void all approvals and warranties.
- Excluding fusible link.
- Available for pendent sprinkler only.
- Frame and deflector only; operating parts are chrome plated.

## Installation

Model G VELO ECOH sprinklers are intended for installation in accordance with NFPA 13 as well as the requirements of any Authorities Having Jurisdiction. Model GFR VELO ECOH Series sprinklers must be installed with the Reliable sprinkler installation wrench identified in the Design and Installation Information table in this Bulletin. Any other wrench may damage the sprinkler. A leak tight sprinkler joint can be obtained with a torque of 14 to 20 ft-lbs (19 to 27 N-m) after applying thread sealant to the sprinkler threads. Do not tighten sprinklers over the maximum recommended installation torque. Exceeding the maximum recommended installation torque may cause leakage or impairment of the sprinkler.

## Maintenance

Reliable Model GFR VELO ECOH series sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25, as well as the requirements of any Authorities Having Jurisdiction.

Prior to installation, sprinklers should remain in the original cartons and packaging until used. This will minimize the potential for damage to sprinklers that could cause improper operation or non-operation.

Do not clean sprinklers with soap and water, ammonia liquid or any other cleaning fluids. Remove dust by gentle vacuuming without touching the sprinkler.

Replace any sprinkler which has been painted (other than factory applied). A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers. Failure to properly maintain sprinklers may result in inadvertent operation or non-operation during a fire event.

## Guarantee

For the guarantee, terms, and conditions, visit [www.reliablesprinkler.com](http://www.reliablesprinkler.com).

## Ordering Information

### Specify the following when ordering:

#### Model

- GFR VELO ECOH

#### Deflector/Orientation

- Upright
- Pendent

#### Temperature Rating

- See sprinkler technical specifications

#### Sprinkler Finish

- See Table D

#### Recessed Escutcheon

- F1 (3/4")

#### Escutcheon Finish

- See Table D

#### Sprinkler Wrench

- Model H (upright and pendent)
- Model XLO2 (recessed pendent)