

Reliable®

F1FR56-300 Series Quick Response Sprinklers

K-factor 5.6 (80)

Features

- Standard coverage quick-response sprinklers
- 300 psi (20.7 bar) rated
- Upright, pendent, and horizontal sidewall deflectors
- Low profile, compact design
- Available in a wide variety of finishes

Product Description

Reliable Model F1FR56-300 series sprinklers are 300 psi (20.7 bar) rated, quick-response standard spray automatic fire sprinklers utilizing a sensitive 3.0 mm glass bulb thermal element.

Pendent and horizontal sidewall 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 or concealed, Model F1FR56-300 series sprinklers are specifically listed with and may only be installed with listed Reliable recessed escutcheons and cover plates. Refer to the technical information on the following pages for specific listings for recessed and concealed installations and refer to Figures 6 and 7 for dimensional information.

When fitted with an approved water shield, these sprinklers may be considered intermediate sprinklers for use in racks, below grated walkways, and other areas where intermediate level sprinklers are required.

Table A provides a summary of the approvals and availability of specific Model F1 series sprinkler configurations. Additional technical information for each sprinkler model is provided on the following pages.

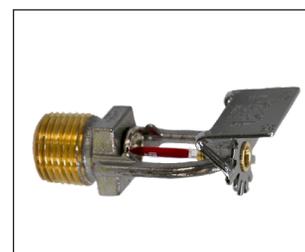
Important! Reliable fire sprinklers must be handled, stored, and installed in accordance with the guidelines in Caution Sheet 310 and this bulletin. Failure to follow these instructions may result in unintended operation or nonoperation of the fire protection system.



Model F1FR56-300 Pendent



Model F1FR56-300 Upright

Model F1FR56-300
Horizontal Sidewall

Note: Not all versions of the product are shown.

Note: This bulletin may contain information on New and Legacy sprinklers that reflects a dimensional change only. Sprinkler Identification Number (SIN), application, performance, and listings/approval are not otherwise affected. Sprinklers with New frames will include the suffix "N" in the order.

F1FR56-300 Series Sprinkler Summary

Table A

Sprinkler Model	K-Factor gpm/psi ^{1/2} (lpm/bar ^{1/2})	Orientation	Listings & Approvals	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
F1FR56-300	5.6 (80)	Upright	cULus	300 (20.7)	RA2625
		Pendent			RA2614
		Concealed Pendent			RA2614
		Horizontal Sidewall			RA2634
		Concealed Sidewall			RA2634

Technical Specifications

Style: Upright
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 300 psi (20.7 bar)

Material Specifications

Thermal Sensor: 3 mm Glass Bulb
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Finishes

(See Table B)

Sensitivity

Quick response

Temperature Ratings

135°F (57°C)
 155°F (68°C)
 175°F (79°C)
 200°F (93°C)
 286°F (141°C)

Guards & Shields (New Frames)

F-1 Guard
 F-3 Guard with Shield

Guards and Shields (Legacy Frames)

C-3 Guard with Shield
 D-1 Guard
 D-3 Guard with Shield

Sprinkler Wrench

Model W2
 Model W14 (new frame with guard installed)
 Model W13 (legacy frame with guard installed)

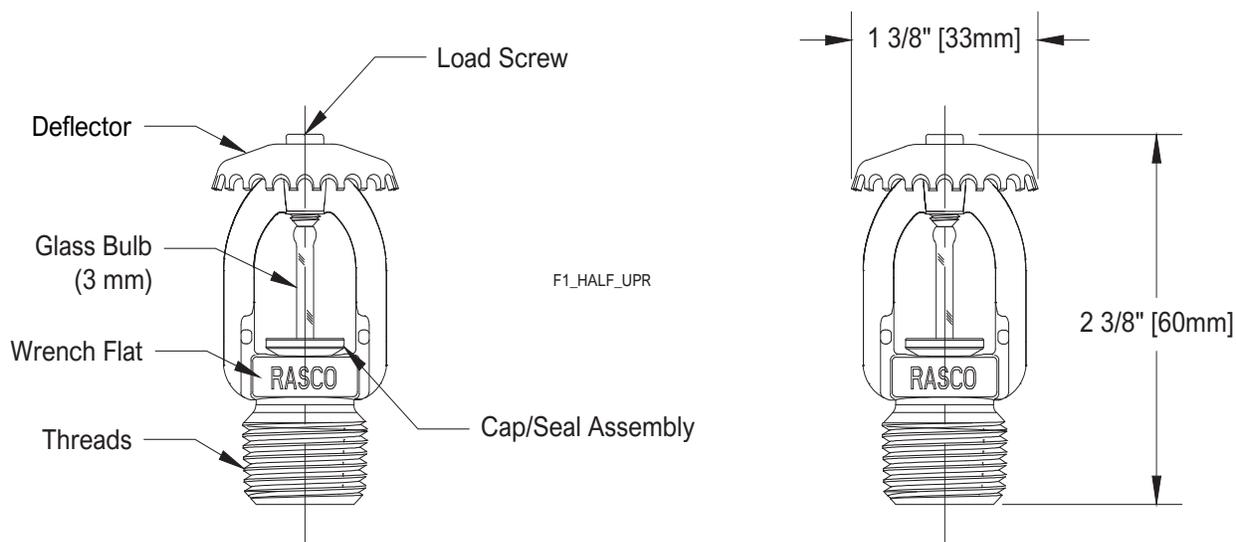
Listings and Approvals

cULus



Model F1FR56-300 Upright Sprinkler Components and Dimensions

Figure 1



Technical Specifications

Style:

Pendent
Recessed Pendent
Concealed Pendent

Threads: 1/2" NPT or ISO 7-R1/2

Nominal K-Factor: 5.6 (80 metric)

Max. Working Pressure: 300 psi (20.7 bar)

Material Specifications

Thermal Sensor: 3 mm Glass Bulb

Sprinkler Frame: Brass Alloy

Cap: Bronze Alloy

Sealing Washer: Nickel with PTFE

Load Screw: Copper Alloy

Deflector: Brass Alloy

Sprinkler Finishes

(See Table B)

Sensitivity

Quick response

Temperature Ratings⁽¹⁾

135°F (57°C)

155°F (68°C)

175°F (79°C)

200°F (93°C)

286°F (141°C)

Recessed Escutcheons

Model F1

Model F2

Model FP

Cover Plate

Model CCP

Guards & Shields (New Frames)⁽²⁾

F-1 Guard

F-8 Guard with Shield

S-1 Shield

Guards and Shields (Legacy Frames)⁽²⁾

D-1 Guard

D-5 Guard with Shield

S-1 Shield

Sprinkler Wrenches

Model W2 (non-recessed)

Model W4 (recessed or concealed)

Model W14 (new frame with guard installed)

Model W13 (legacy frame with guard installed)

Listings and Approvals

cULus Listed

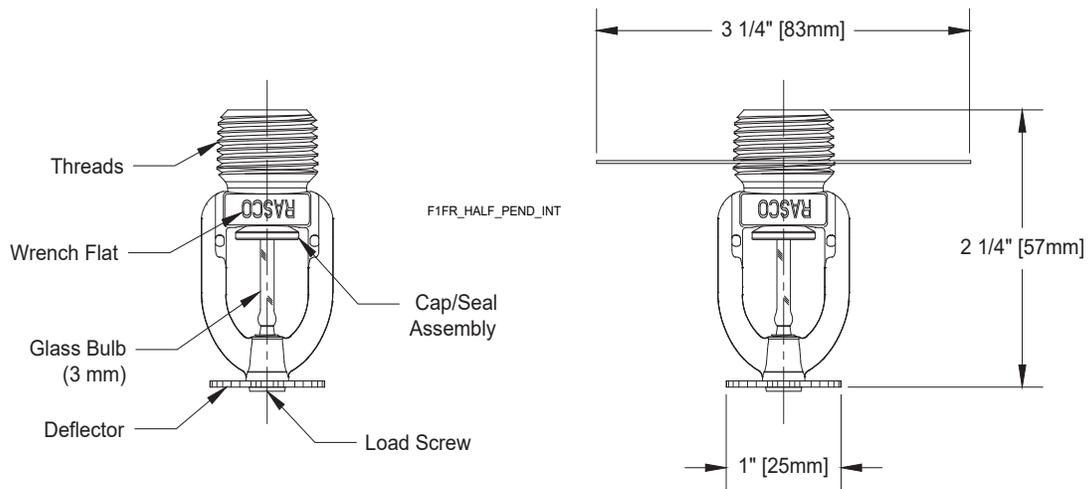


Notes:

1. 286°F (141°C) temperature rated sprinkler not listed for recessed or concealed use.
2. Not suitable for recessed or concealed pendent installation.

Model F1FR56-300 Pendent Sprinkler Components and Dimensions

Figure 2



Shown with Optional S-1 Water Shield (Ordered Separately)

Note: Please refer to Figure 4 for recessed and concealed installation.

Technical Specifications

Style:
 Horizontal Sidewall
 Recessed Horizontal Sidewall
 Concealed Horizontal Sidewall ⁽¹⁾
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 300 psi (20.7 bar)

Material Specifications
Thermal Sensor: 3 mm Glass Bulb
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Finishes
 (See Table B)

Sensitivity
 Quick response

Temperature Ratings

135°F (57°C)
 155°F (68°C)
 175°F (79°C)
 200°F (93°C)
 286°F (141°C)⁽²⁾

Recessed Escutcheons

Model F1
 Model F2
 Model FP

Cover Plates

Model SWC

Guards & Shields (New Frames)⁽³⁾

F-7 Guard

Guards & Shields (Legacy Frames)⁽³⁾

D-1 Guard

Sprinkler Wrenches

Model W2 (non-recessed)
 Model W4 (recessed or concealed)
 Model W14 (new frame with guard installed)
 Model W13 (legacy frame with guard installed)

Listings and Approvals

cULus Listed⁽⁴⁾

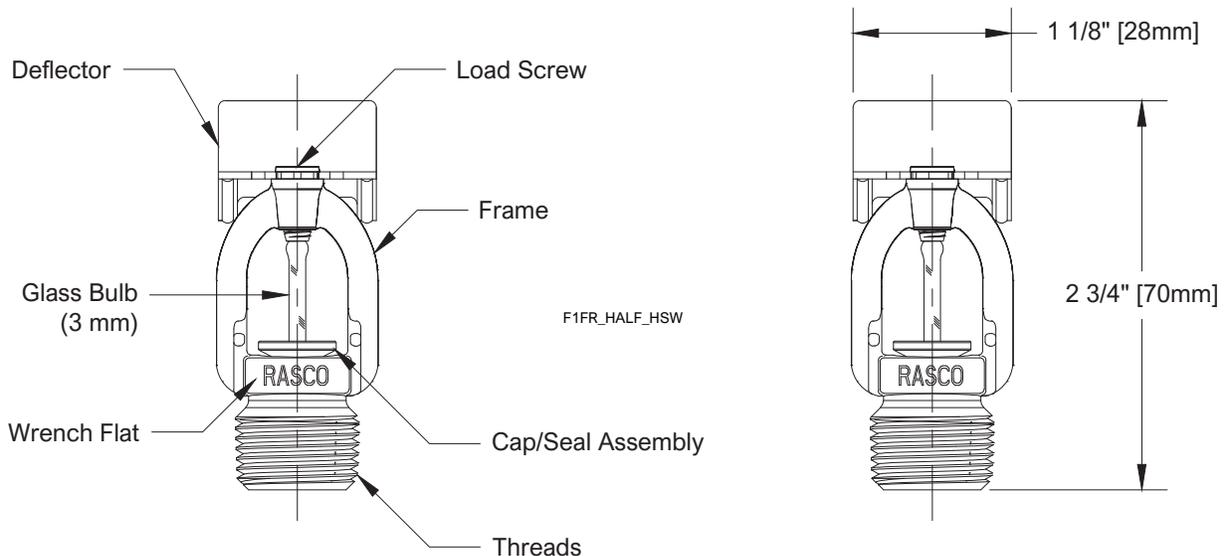


Notes:

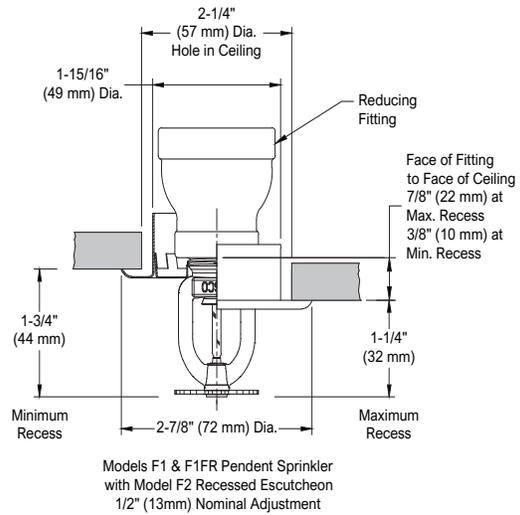
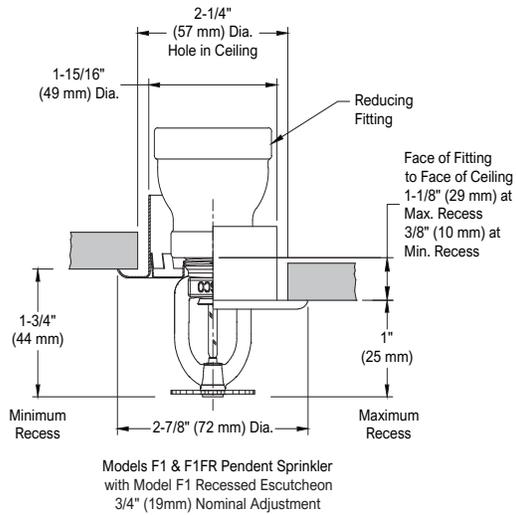
1. Concealed horizontal sidewall (SWC) available in 135°F (57°C) and 155°F (68°C) temperature ratings ONLY.
2. 286°F (141°C) temperature rated sprinkler not listed for recessed or concealed use.
3. Not suitable for recessed or concealed horizontal sidewall installations.
4. cULus Listed for light and ordinary hazards only.

Model F1FR56-300 Horizontal Sidewall Sprinkler Components and Dimensions

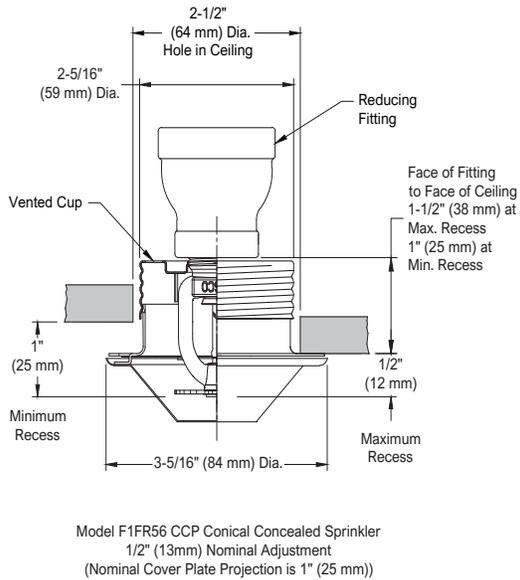
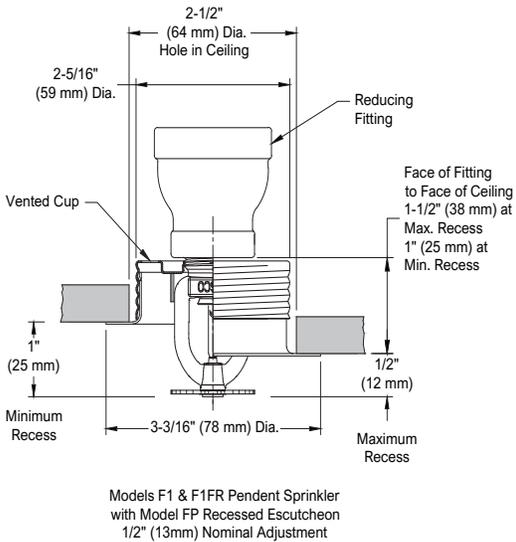
Figure 3



Note: Please refer to Figure 5 for recessed installation.



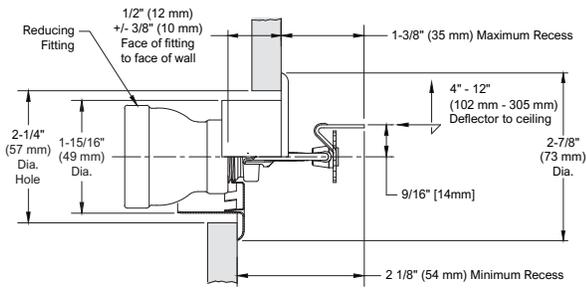
F1_REC_PEND_CCP



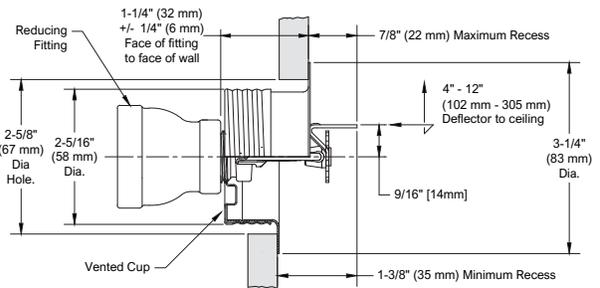
Note: Model FP recessed assemblies may not be used where the pressure in the space above the ceiling is positive with respect to the protected area. Ensure that the openings in the Model FP cup are unobstructed following installation.

Note: Model CCP concealed assemblies may not be used where the pressure in the space above the ceiling is positive with respect to the protected area. Ensure that the openings in the Model CCP cup are unobstructed following installation.





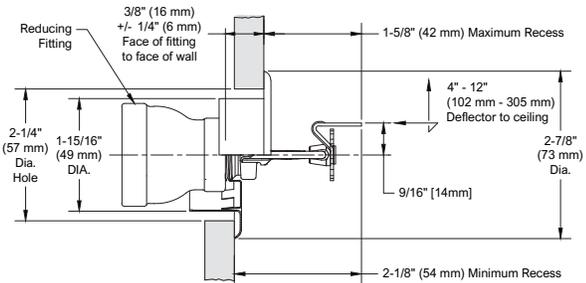
Model F1FR Horizontal Sidewall Sprinkler with Model F1 Recessed Escutcheon
3/4" (19mm) Nominal Adjustment



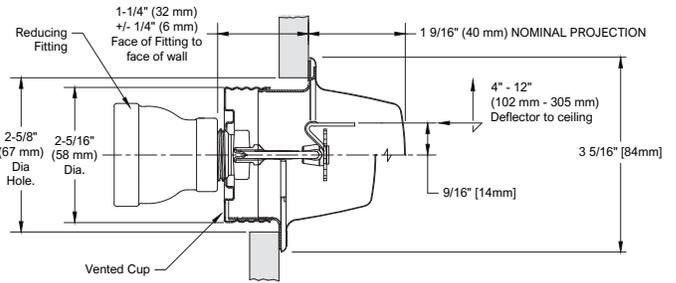
Model F1FR Horizontal Sidewall Sprinkler with Model FP Recessed Escutcheon
1/2" (13mm) Nominal Adjustment

Note: Model FP recessed assemblies may not be used where the pressure in the space behind the sprinkler is positive with respect to the space in the protected area. Ensure that the openings in the Model FP cup are unobstructed following installation.

F1_REC_HSW_SWC



Model F1FR Horizontal Sidewall Sprinkler with Model F2 Recessed Escutcheon
1/2" (13mm) Nominal Adjustment



Model F1FR Horizontal Sidewall Sprinkler with Model SWC Concealed Cover Plate
1/2" (13mm) Nominal Adjustment

Note: Model SWC concealed assemblies may not be used where the pressure in the space behind the sprinkler is positive with respect to the space in the protected area. Ensure that the openings in the Model SWC cup are unobstructed following installation.



Wrenches



Model W2 (upright, pendent)



Model W13 (Legacy frame with guard installed)



Model W14 (New frame with guard installed)



Model W4
(recessed, concealed pendent)

Finishes⁽¹⁾

Table B

Standard Finishes			Special Application Finishes		
Sprinkler	F1, F2 and FP ⁽²⁾ Escutcheons	CCP & SWC Cover Plates ⁽²⁾	Sprinkler	F1, F2 and FP ⁽²⁾ Escutcheons	CCP & SWC Cover Plates ⁽²⁾
Bronze	Brass	Chrome	Electroless Nickel PTFE ⁽³⁾	Bright Brass	Bright Brass
Chrome	Chrome	White Paint	Bright Brass ⁽⁴⁾	Satin Chrome	Satin Chrome
White Polyester ⁽³⁾	White Polyester		Satin Chrome	Custom Color Polyester	Custom Color Paint
			Custom Color Polyester ⁽³⁾		

Notes:

1. Paint or any other coating applied over the factory finish will void all approvals and warranties.
2. Model FP escutcheons, Model CCP sprinklers, and Model SWC sprinklers utilize a galvanized steel cup with a finished trim ring or cover plate.
3. cULus Listed as corrosion resistant.
4. For 200°F (93°C) maximum temperature rated sprinklers only.

Installation

Model F1FR Series sprinklers must be installed in accordance with NFPA13 and the requirements of all applicable authorities having jurisdiction. Model F1FR56-300 Series sprinklers must be installed with the Reliable sprinkler installation wrench identified in this Bulletin. Any other wrench may damage the sprinkler. The Models W2 and W4 wrenches have two sets of jaws. Use the smallest set of jaws that fit on the wrench flats of the sprinkler. A leak tight sprinkler joint can be obtained with a torque of 8 to 18 lb-ft (11 to 24 N-m). Do not tighten sprinklers over the maximum recommended installation torque. Exceeding the maximum recommended installation torque may cause leakage or impairment of the sprinkler.

Glass bulb sprinklers have orange bulb protectors or protective caps to minimize bulb damage during shipping, handling and installation. Reliable sprinkler installation wrenches are designed to install sprinklers with bulb protectors in place. Remove the bulb protector at the time when the sprinkler system is placed in service for fire protection. Removal of the bulb protector before this time may leave the bulb vulnerable to damage. Remove bulb protectors by undoing the clasp by hand. Do not use tools to remove bulb protectors.

Maintenance

Reliable Model F1FR56-300 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.

Ordering Information

Specify the following when ordering:

Model

- F1FR56-300

Deflector/Orientation

- Upright
- Pendent
- CCP Concealed Pendent
- Horizontal Sidewall
- SWC Concealed Horizontal Sidewall

Temperature Rating

- See sprinkler technical specifications

Sprinkler Finish

- See Table B

Recessed Escutcheon*

- F1
- F2
- FP

Escutcheon Finish

- See Table B

CCP or SWC Cover Plate Temperature Rating

- 135°F (57°C) [For use with 135°F (57°C) and 155°F (68°C) sprinklers.]
- 165°F (74°C) [For use with 175°F (79°C) and 200°F (93°C) sprinklers.]

CCP or SWC Cover Plate Finish

- See Table B

Sprinkler Wrench

- Model W2 (upright, non-recessed pendent)
- Model W4 (recessed & concealed pendent)
- Model W14 (new frame with guard installed)
- Model W13 (legacy frame with guard installed)

***Note:** 286°F (141°C) sprinklers are not listed to be used recessed or concealed.