



F1FR56 Series Quick Response Sprinklers

K-factor 5.6 (80)

Features

- Standard coverage quick-response sprinklers
- Upright, pendent, horizontal sidewall, and vertical sidewall defectors
- Low profile, compact design
- Available in a wide variety of finishes

Product Description

Reliable Model F1FR56 series sprinklers are 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, the Model F1FR56 series sprinklers are specifically listed with and may only be installed with listed Reliable 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 5 and 6 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 F1FR series sprinkler configurations. Additional technical information for each sprinkler model is provided on the following pages.



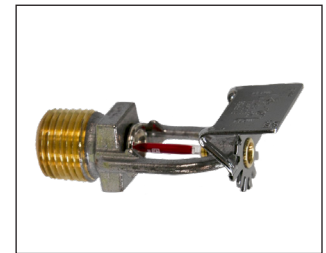
Model F1FR56 Pendent



Model F1FR56 Upright



Model F1FR56 Vertical Sidewall

Model F1FR56
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.

F1FR Series Sprinklers 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	5.6 (80)	Upright Intermediate Upright	cULus, FM, LPCB, VdS, EC, WM, UKCA	175 (12) 250 (17) (cULus only)	RA1425
		Pendent	cULus, FM, LPCB, VdS, EC, WM, UKCA	175 (12) 250 (17) (cULus only)	RA1414
		Concealed Pendent	cULus, VdS, EC, WM, UKCA	175 (12) 250 (17) (cULus only)	RA1414
		Horizontal Sidewall	cULus, FM	175 (12) 250 (17) (cULus only)	RA1435
		Vertical Sidewall	cULus, FM, LPCB, UKCA	175 (12)	RA1485

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:

175 psi (12 bar)
250 psi (17 bar) (cULus only)

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 (cULus, LPCB, VdS, CE, WM)
Model F2 (cULus, FM, LPCB, VdS, CE, WM)
Model FP (cULus, VdS, CE, WM)

Cover Plate

Model CCP (cULus, VdS⁽²⁾, CE⁽²⁾)

Guards & Shields (New Frames)⁽³⁾

F-1 Guard (FM)
F-5 Guard/Shield Kit (FM)
F-7 Guard (cULus)
F-8 Guard/Shield Kit (cULus)
S-1 Shield (cULus, FM)

Guards & Shields (Legacy Frames)⁽³⁾

C-1 Guard (FM)
C-5 Guard/Shield Kit (FM)
D-1 Guard (cULus, FM)
D-4 Guard/Shield Kit (FM)
D-5 Guard/Shield Kit (cULus, FM)
S-1 Shield (cULus, FM)

Sprinkler Wrenches

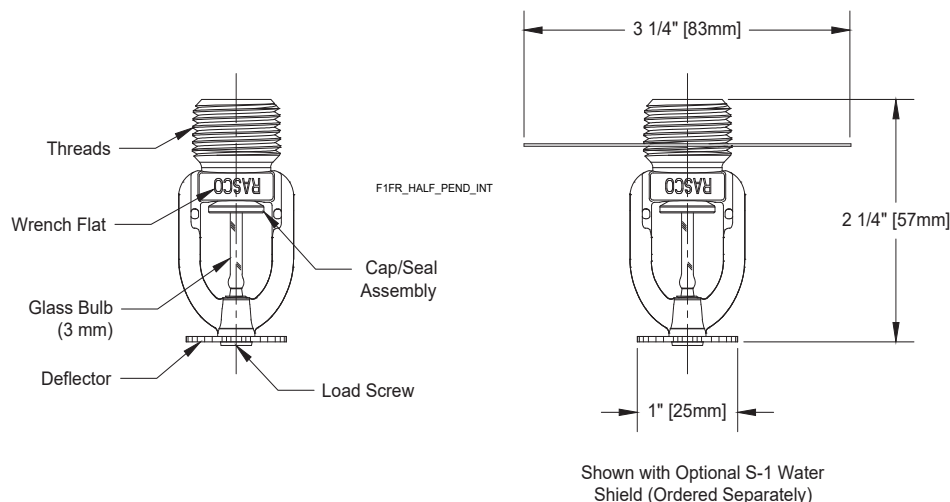
Model W2 (pendent)
Model W4 (recessed or concealed)
Model J (New frame with guard installed)
Model JD (Legacy frame with guard installed)

Listings and Approvals⁽⁴⁾

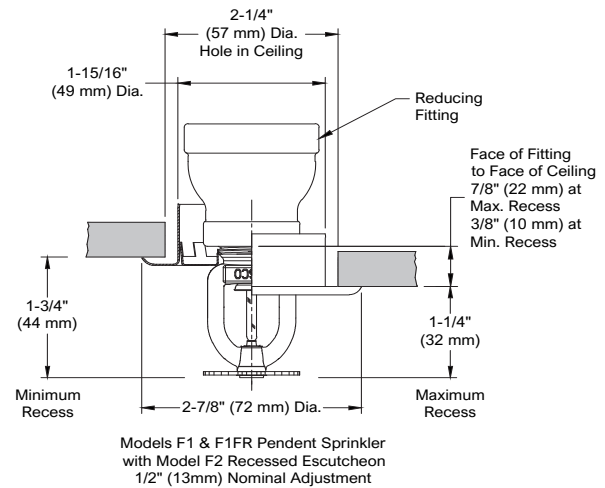
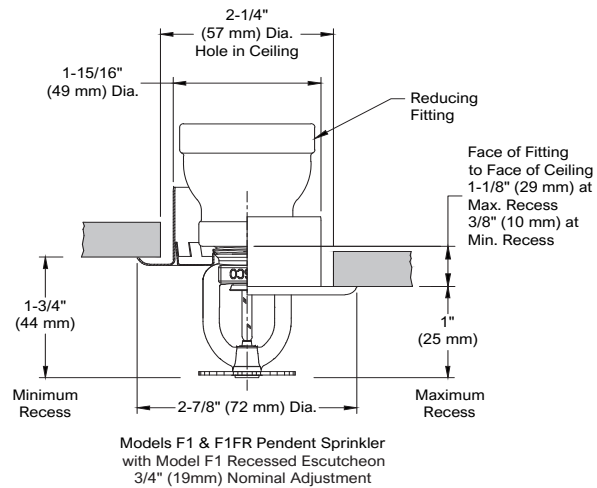
cULus Listed
FM Approved
LPCB
VdS
EC
WM
UKCA: 0832-UKCA-CPR-S5045,
0831-UKCA-CPR-5072 (CCP)

**Notes:**

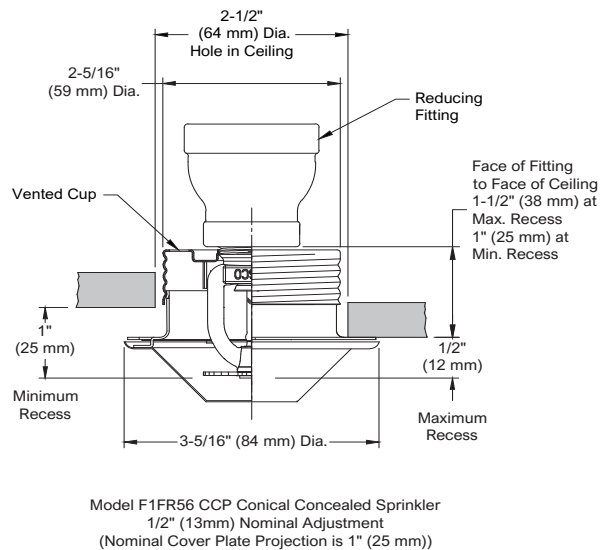
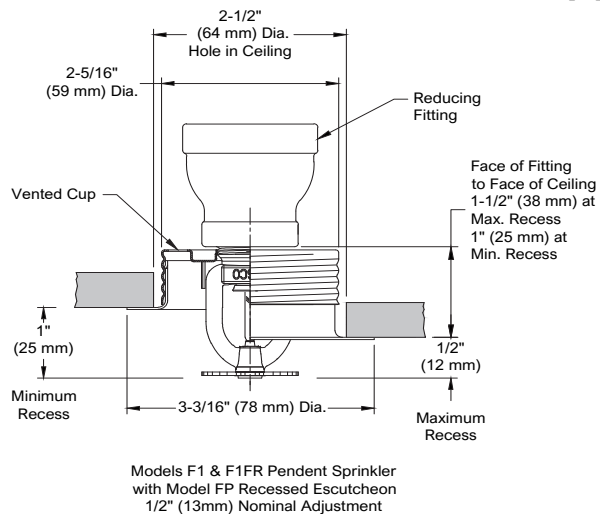
1. 286°F (141°C) temperature rated sprinkler not listed for recessed or concealed use.
2. VdS and CE approval for CCP concealed use is for 155°C (68°C) sprinkler ONLY.
3. Not suitable for recessed or concealed installations.
4. When used surface mounted or exposed. See Recessed Escutcheon and Cover Plate section for specific approvals when installed recessed or concealed.

Model F1FR56 Pendent Sprinkler Components and Dimensions**Figure 2**

Note: Please refer to Figure 8 for recessed and concealed 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.



Wrenches



Model W2 (upright, pendent)



Model J (New frame with guard installed)
Model JD (Legacy frame with guard installed, similar but with zinc finish)



Model W4
(recessed, concealed pendent)

Finishes⁽¹⁾

Table B

Standard Finishes			Special Application Finishes		
Sprinkler	F1, F2 and FP ⁽²⁾ Escutcheons	CCP Cover Plate ⁽²⁾	Sprinkler	F1, F2 and FP ⁽²⁾ Escutcheons	CCP Cover Plate ⁽²⁾
Bronze	Brass	Chrome	Electroless Nickel PTFE ⁽³⁾⁽⁴⁾	Bright Brass	Bright Brass
Chrome	Chrome	White Paint	Bright Brass ⁽⁵⁾	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 and Model CCP sprinklers utilize a galvanized steel cup with a finished trim ring or cover plate.
3. cULus Listed as corrosion resistant.
4. FM Approved as corrosion resistant.
5. 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 F1FR 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 F1FR 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

Deflector/Orientation

- Upright
- Intermediate Upright
- Pendent
- CCP Concealed Pendent
- Horizontal Sidewall
- Vertical Sidewall

Temperature Rating

- See sprinkler technical specifications

Sprinkler Finish

- See Table B

Recessed Escutcheon⁽¹⁾⁽²⁾

- F1
- F2
- FP

Escutcheon Finish

- See Table B

CCP 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 Cover Plate Finish

- See Table B

Sprinkler Wrench

- Model W2
- Model W4 (recessed, concealed)
- Model J (New frame with guard installed)
- Model JD (Legacy frame with guard installed)

Notes:

1. 286°F (141°C) sprinklers are not listed to be used recessed or concealed.
2. For FM, recessed sprinklers must use the Model F2 escutcheon.



Sprinklers | Non-Storage Sprinklers | Recessed, Flush, and Concealed Sprinklers

RA1414

Details

Category	Recessed, Flush, and Concealed Sprinklers
Class of Work	2015 - AS, Ctrl Md, Rec FI & Concl'd
Approval Standard	FM 2000 - Automatic Sprinklers for Fire Protection
Certification Type	FM Approved
K	5.6
K (metric)	80
Coverage Type	Standard
Sprinkler Category	Non Storage
Use with Vacuum System	No
Grooved Connection	No
Type	Recessed Pendent
Response	QR - Quick Response
Element	3 mm
NPT (in.)	1/2
Finish	Black Plated, Chrome, Zinc Plated, Electroless Nickel PTFE (ENT), Polyester, Bright Brass, Brass
Temp. Rating (°F)	135, 155, 175, 200
Temp. Rating (°C)	57, 68, 79, 93

Company

Reliable Automatic Sprinkler Co Inc

1470 Smith Grove Rd, Liberty ,
South Carolina 29657-0313
United States of America

<http://reliablesprinkler.com>



Listing Country United States of America



Sprinklers | Non-Storage Sprinklers | **Recessed, Flush, and Concealed Sprinklers**

RA1435

Details

Category	Recessed, Flush, and Concealed Sprinklers
Class of Work	2015 - AS, Ctrl Md, Rec FI & Concl'd
Approval Standard	FM 2000 - Automatic Sprinklers for Fire Protection
Certification Type	FM Approved
K	5.6
K (metric)	80
Coverage Type	Standard
Type	Recessed Horizontal Sidewall
Response	QR - Quick Response
Element	3 mm
Temp. Rating (°C)	57, 68, 79, 93
Sprinkler Category	Non Storage
Use with Vacuum System	No
Grooved Connection	No
NPT (in.)	1/2
Finish	Polyester Coated, Electroless Nickel PTFE (ENT), Zinc Plated, Bright Brass, Brass, Chrome

Company

Reliable Automatic Sprinkler Co Inc

1470 Smith Grove Rd, Liberty ,
South Carolina 29657-0313
United States of America

<http://reliablesprinkler.com>



Temp. Rating (°F)	135, 155, 175, 200
Listing Country	United States of America



Sprinklers | Non-Storage Sprinklers | **Non-Storage Sprinklers**

RA1425

Details

Category	Non-Storage Sprinklers
Class of Work	2016 - AS, Control Mode, Upright
Approval Standard	FM 2000 - Automatic Sprinklers for Fire Protection
Certification Type	FM Approved
K	5.6
K (metric)	80
Coverage Type	Standard
Type	Upright
Response	QR - Quick Response
Element	3 mm
Finish	Bright Brass, Zinc Plated, Polyester Coated, Brass, Chrome, Electroless Nickel PTFE (ENT)
Temp. Rating (°C)	57, 68, 79, 93, 141
Sprinkler Category	Non Storage
Use with Vacuum System	No
Grooved Connection	No
NPT (in.)	1/2

Company

Reliable Automatic Sprinkler Co Inc

1470 Smith Grove Rd, Liberty ,
South Carolina 29657-0313
United States of America

<http://reliablesprinkler.com>



Temp. Rating (°F)	135, 155, 175, 200, 286
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Listing Country	United States of America
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SIN RA1425
File Number: EX454

COMPANY

RELIABLE AUTOMATIC SPRINKLER CO INC
1470 Smith Grove Rd
Liberty, SC 29657 United States

SIN INFO

RA1425
Glass Bulb Type

ATTRIBUTES				
Response Type	Sprinkler Type	Nom K-Factor, gpm/vpsi (L/min/vbar)	System Working Pressure	Corrosion Resistant
QR	Standard-Spray Sprinklers, Upright And Pendent	5.6 (80)	250 psig (1.7 Mpa)	Non-Wax Coatings - See installation instructions

GENERAL	
Inlet Connection	
1/2 in. NPT	

STANDARD-SPRAY SPRINKLERS, UPRIGHT AND PENDENT		
Type	Sprinkler Temp Rating, °F (°C)	Cover Temp Rating, °F (°C)
Upright	135 (57), 155 (68), 175 (79), 200 (93), 286 (141), 360 (182)	Not Applicable



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SIN RA1414

File Number: EX454

COMPANY

RELIABLE AUTOMATIC SPRINKLER CO INC

1470 Smith Grove Rd
Liberty, SC 29657 United States

SIN INFO

RA1414
Glass Bulb Type

ATTRIBUTES

Response Type	Sprinkler Type	Nom K-Factor, gpm/vpsi (L/min/vbar)	System Working Pressure	Corrosion Resistant
QR	Standard-Spray Sprinklers, Upright And Pendent, Intermediate Level Sprinklers	5.6 (80)	250 psig (1.7 Mpa)	Non-Wax Coatings - See installation instructions

GENERAL

Inlet Connection

1/2 in. NPT

STANDARD-SPRAY SPRINKLERS, UPRIGHT AND PENDENT

Type	Sprinkler Temp Rating, °F (°C)	Cover Temp Rating, °F (°C)
Conc. Pendent	135 (57), 155 (68), 175 (79), 200 (93)	135 (57), 165 (73)
Rec. Pendent	135 (57), 155 (68), 175 (79), 200 (93)	Not Applicable
Pendent	135 (57), 155 (68), 175 (79), 200 (93), 286 (141)	Not Applicable

INTERMEDIATE LEVEL SPRINKLERS	
Type	Sprinkler Temp Rating, °F (°C)
Pendent	135 (57), 155 (68), 175 (79), 200 (93), 286 (141)

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