

# Reliable®

## F1FR80-300 Series Quick Response Sprinklers

K-factor 8.0 (115)

### Features

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

### Product Description

Reliable Model F1FR80-300 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.

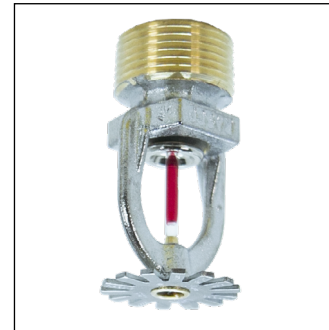
Pendent sprinklers may be installed exposed or surface mounted using escutcheons such as the Reliable Models B, C, or HB (reference Technical Bulletin 204). When installed recessed, Model F1FR80-300 series sprinklers are specifically listed with and may only be installed with listed Reliable recessed escutcheons. Refer to the technical information on the following pages for specific listings for recessed installations and refer to Figure 3 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.



Model F1FR80-300 Upright



Model F1FR80-300 Pendent

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

### F1FR80-300 Series Sprinkler 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)
F1FR80-300	8.0 (115)	Upright	cULus	300 (20.7)	RA7822
		Pendent			RA7812

**Model F1FR80-300 Upright Sprinkler**

**SIN RA7822**

**Technical Specifications**

**Style:** Upright  
**Threads:** 3/4" NPT or ISO 7-R3/4  
**Nominal K-Factor:** 8.0 (115)  
**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**

F-1 Guard  
 F-3 Guard with Shield

**Sprinkler Wrenches**

Model W2  
 Model W14 (with guard installed)

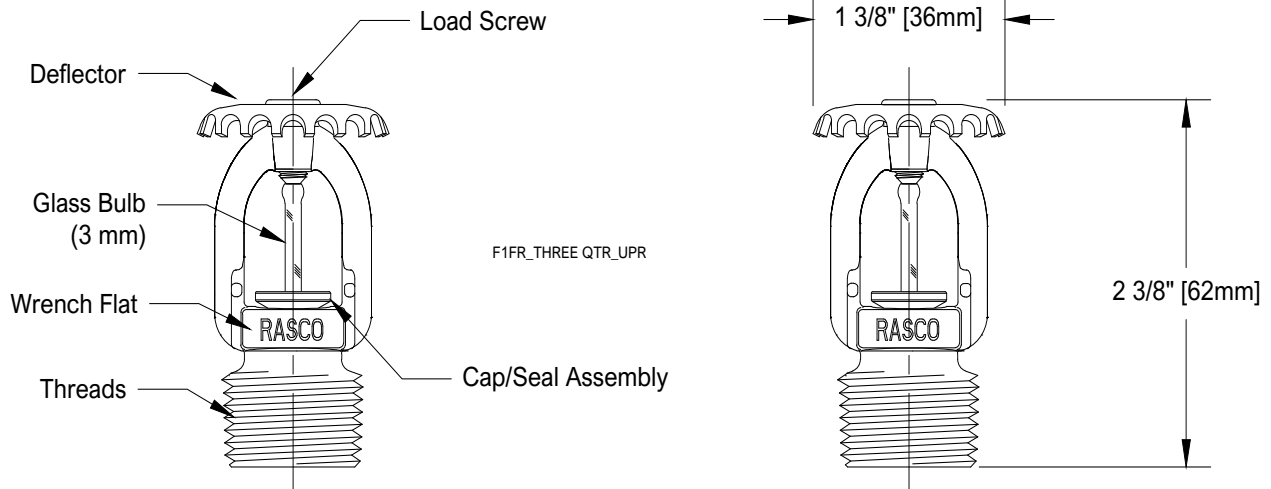
**Listings and Approvals**

cULus



**Model F1FR80-300 Upright Sprinkler Components and Dimensions**

**Figure 1**



**Technical Specifications**

**Style:**  
 Pendent  
 Recessed Pendent  
**Threads:** 3/4" NPT or ISO 7-R3/4  
**Nominal K-Factor:** 8.0 (115)  
**Max. Working Pressure:** 300 psi (20.7 bar)

**Temperature Ratings<sup>(1)</sup>**

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

**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

**Recessed Escutcheons**

Model F1  
 Model F2

**Guards & Shields<sup>(2)</sup>**

F-7 Guard  
 F-8 Guard/Shield Kit  
 S-2 Shield

**Sprinkler Finishes**

(See Table B)

**Sensitivity**

Quick response

**Sprinkler Wrenches**

Model W2 (non-recessed)  
 Model W4 (recessed)  
 Model W14 (with guard installed)

**Listings and Approvals**

cULus Listed

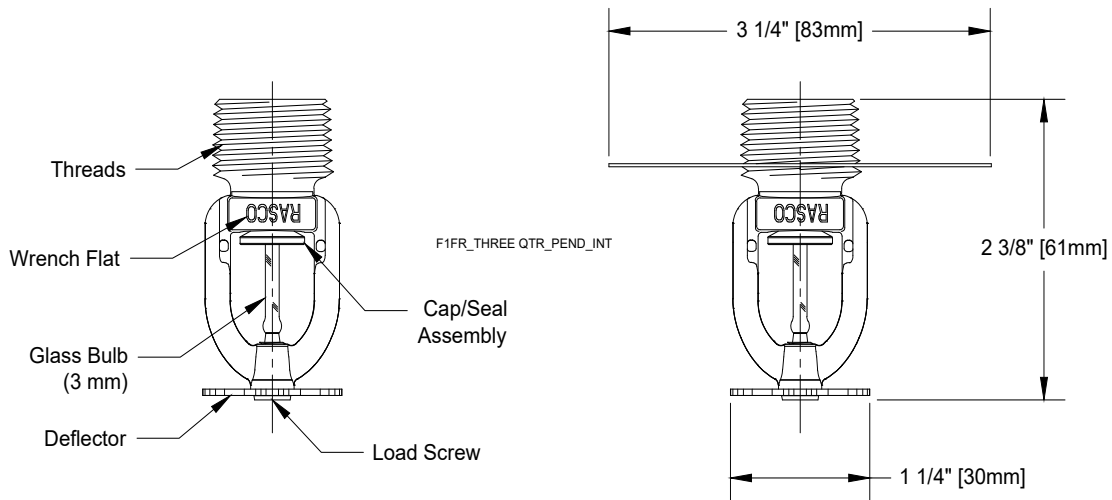


**Notes:**

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

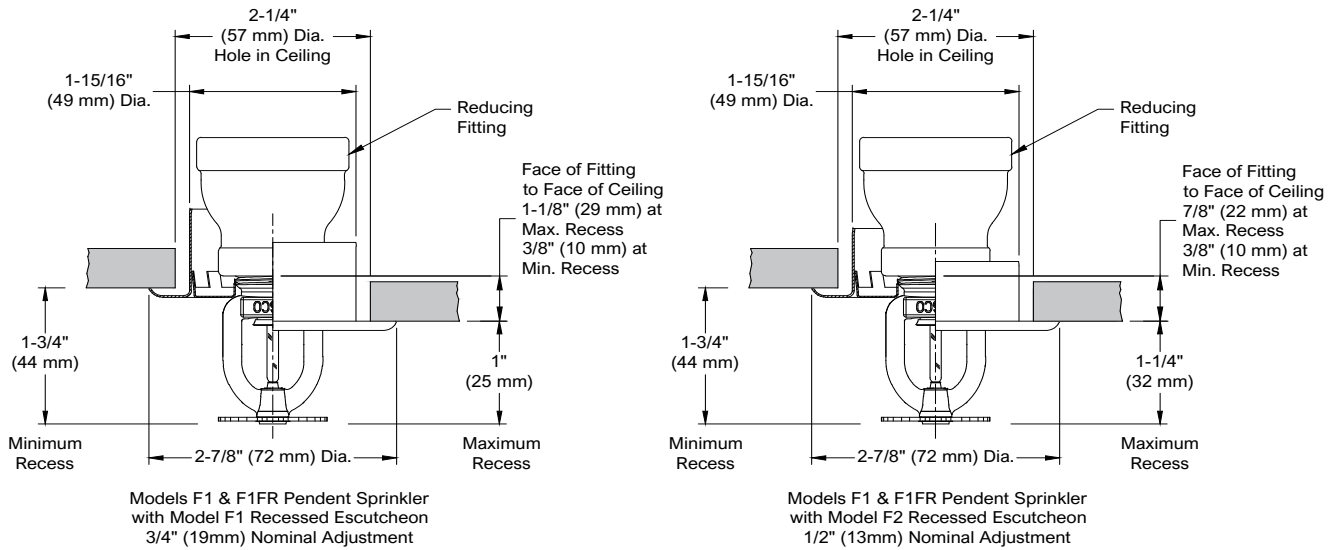
**Model F1FR80-300 Pendent Sprinkler Components and Dimensions**

**Figure 2**



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

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



F1\_REC\_PEND\_NO FP



## Wrenches



Model W2 (upright, surface mount, exposed)



Model W14 (with guard installed)



Model W4 (recessed)

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

Table B

Standard Finishes		Special Application Finishes	
Sprinkler	F1 Escutcheon	Sprinkler	F1 Escutcheons
Bronze	Brass	Electroless Nickel PTFE <sup>(2)</sup>	Bright Brass
Chrome Plated	Chrome Plated	Bright Brass <sup>(3)</sup>	Satin Chrome
White Polyester <sup>(2)</sup>	White Polyester	Satin Chrome	Custom Color Polyester
		Custom Color Polyester <sup>(2)</sup>	

### Notes:

1. Paint or any other coating applied over the factory finish will void all approvals and warranties.
2. cULus Listed as corrosion resistant.
3. 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 F1FR80-300 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 F1FR80-300 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](http://www.reliablesprinkler.com).

## Ordering Information

Specify the following when ordering:

### Model

- F1FR80-300

### Deflector/Orientation

- Upright
- Pendent

### Temperature Rating

- See sprinkler technical specifications

### Sprinkler Finish

- See Table B

### Recessed Escutcheon\*

- F1
- F2

### Escutcheon Finish

- See Table B

### Sprinkler Wrench

- Model W2 (upright, non-recessed pendent)
- Model W4 (recessed pendent)
- Model W14 (with guard installed)

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