Reliable®

F1FR80-300 Series Quick Response Extended Coverage QREC Sprinklers

K-factor 8.0 (115)

Features

- Extended coverage quick-response sprinklers
- 300psi (20.7 bar) rated
- Pendent and horizontal sidewall (EC-9) deflectors
- Low profile, compact design
- Available in a wide variety of finishes

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.

Product Description

Reliable Model F1FR80-300 QREC series sprinklers are quick-response extended coverage automatic fire sprinklers utilizing a sensitive 3.0 mm glass bulb thermal element for use in light hazard areas.

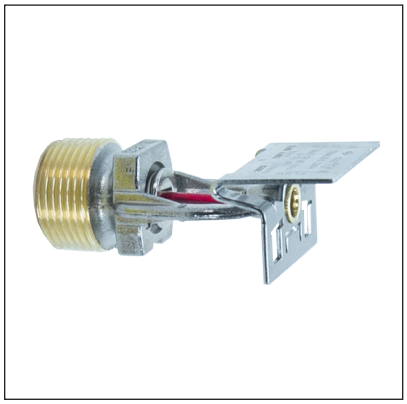
Pendent and horizontal sidewall sprinklers may be installed exposed or surface mounted using escutcheons such as the Reliable Models B, C, or HB (reference Technical Bulletin 204). When installed recessed, Model F1FR80-300 QREC series sprinklers are specifically listed with and may only be installed with listed Reliable recessed escutcheons. Refer to the technical information on the following pages for specific listings for recessed installations and refer to Figures 3 and 4 for dimensional information.

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.

Note: The EC-9 horizontal sidewall deflector is also available on the cULus Listed 300 psi (20.7 bar) Model SWC concealed sidewall sprinkler. Please reference Technical Bulletin 163.



Model F1FR80-300 QREC Pendent



Model F1FR80-300 QREC Sidewall

Note: Not all versions of product are shown.

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)
F1FR80-300 QREC	8.0 (115)	Pendent	cULus	300 (20.7)	R5942
		Horizontal Sidewall			R5962

Model F1FR80-300 QREC Pendent Sprinkler — SIN R5942

Technical Specifications
Style:
Pendent
Recessed Pendent
Concealed Pendent
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 E)

Sensitivity
Quick response

Temperature Ratings
135°F (57°C)
155°F (68°C)(1)

Recessed Escutcheons
Model F1
Model F2

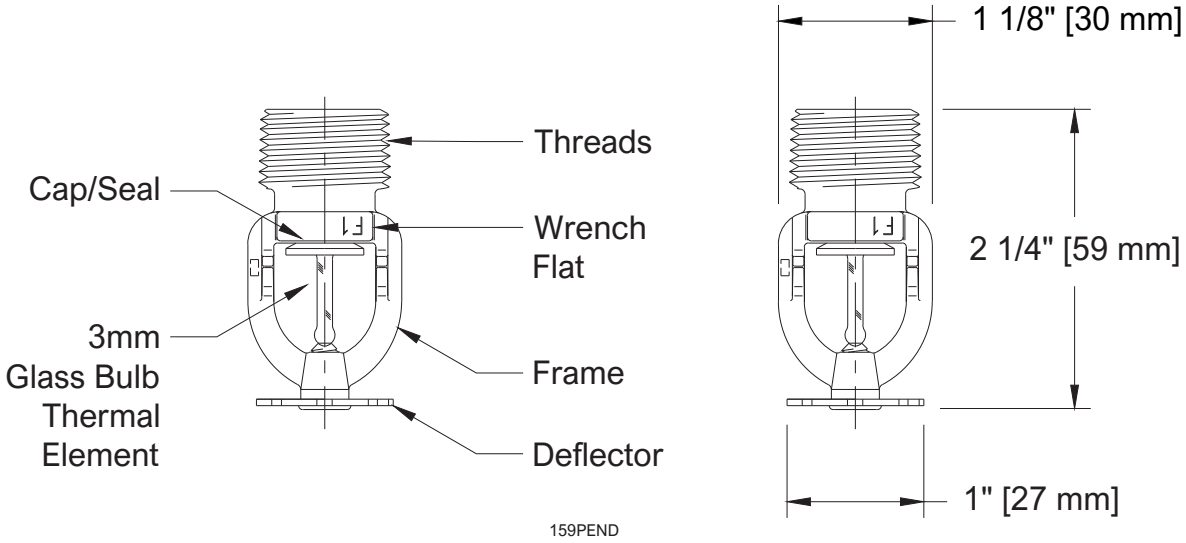
Sprinkler Wrenches
Model W2 (non-recessed)
Model W1 (recessed and concealed)

Listings and Approvals
cULus (light hazard)



Notes:
1. 155°F (68°C) sprinkler is not cULus listed for 20' x 20' (6m x 6m) coverage area.

Model F1FR80-300 QREC Pendent Sprinkler Components and Dimensions — **Figure 1**



Note: Please refer to Figure 3 for recessed installations.

F1FR80-300 QREC Pendent Required Minimum Flow and Pressure — **Table B**

Coverage Area ft x ft (m x m)	Flow gpm (L/min)	Pressure psi (bar)
16 x 16 (4.9 x 4.9)	26 (98.4)	10.6 (0.7)
18 x 18 (5.5 x 5.5)	33 (125.0)	17.0 (1.2)
20 x 20 (6.0 x 6.0) (1)	40 (151.4)	25.0 (1.7)

Note: cULus Listing for 20' x 20' (6.0 m x 6.0 m) coverage area is for 135°F (57°C) sprinkler only. 155°F (68°C) sprinkler is not cULus Listed for 20' x 20' (6.0 m x 6.0 m) coverage area.

Model F1FR80-300 QREC Horizontal Sidewall Sprinkler — SIN R5962

Technical Specifications
Style:
Horizontal Sidewall
Recessed Horizontal Sidewall
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 E)

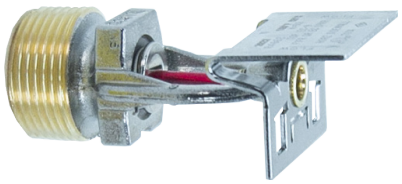
Sensitivity
Quick response

Temperature Ratings[1]
135°F (57°C)
155°F (68°C)
175°F (79°C)

Recessed Escutcheons
Model F2

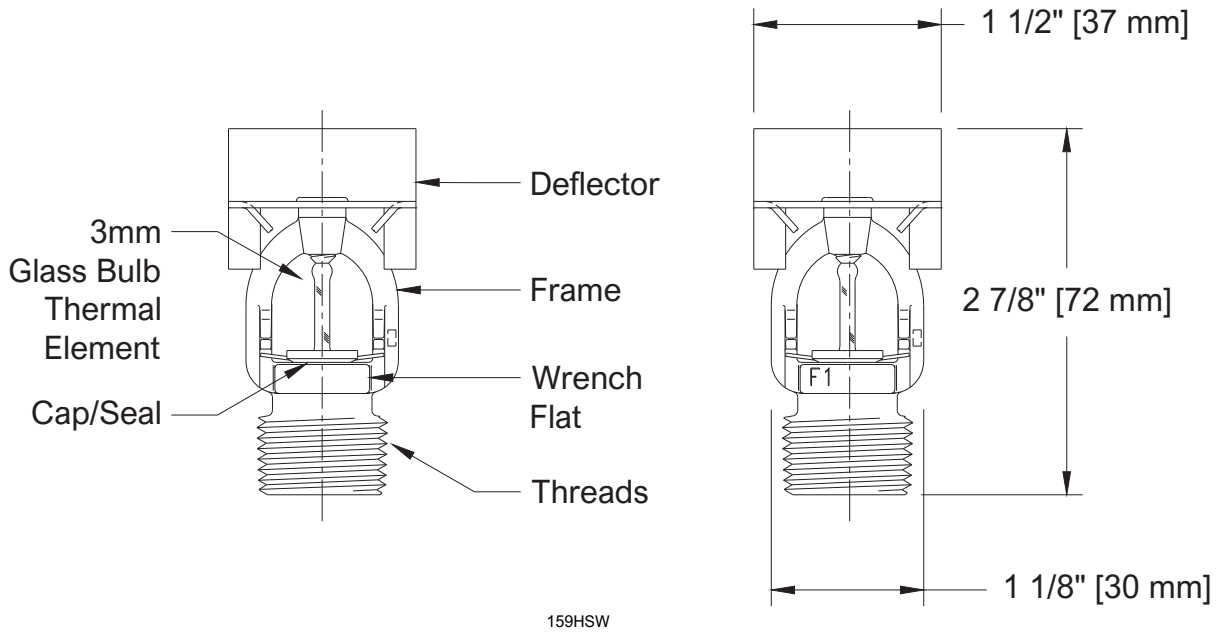
Sprinkler Wrenches
Model W2 (non-recessed)
Model W1 (recessed)

Listings and Approvals
cULus (light hazard)



Notes:
1. Temperature ratings may vary depending on coverage area selected. See Table C.

Model F1FR80-300 QREC Horizontal Sidewall (EC-9) Components and Dimensions — **Figure 2**

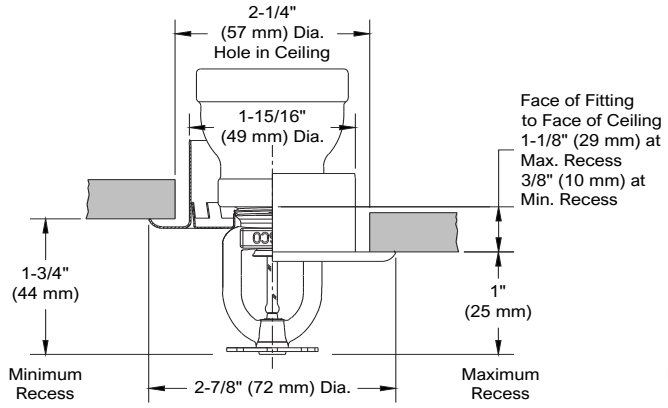


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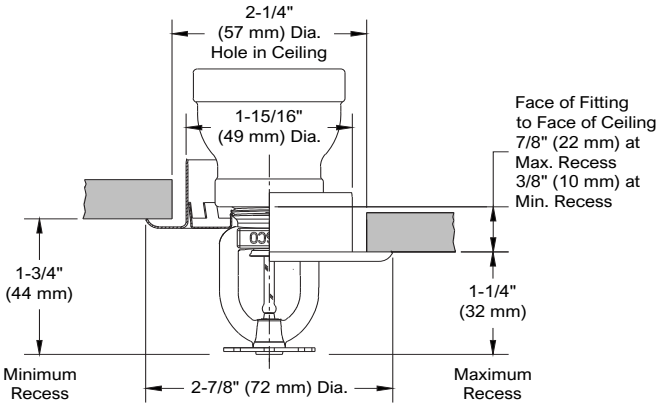
Note: Please refer to Figure 4 for recessed installations.

F1FR80-300 QREC Horizontal Sidewall Required Minimum Flow and Pressure: cULus **Table C**

Coverage Area ft x ft (m x m)	Deflector Distance Inches (mm)	Temperature Rating	Flow gpm (L/min)	Pressure psi (bar)
14 x 26 (4.3 x 7.9)	4 – 6 (100 – 150)	135°F (57°C)	39 (147.6)	23.8 (1.6)
14 x 26 (4.3 x 7.9)	6 – 12 (150 – 300)	135°F (57°C) 155°F (68°C)	46 (174.1)	33.1 (2.3)
16 x 16 (4.9 x 4.9)	4 – 12 (100 – 300)	All	29 (109.8)	13.1 (0.9)
16 x 16 (4.9 x 4.9)	6 – 12 (150 – 300)	All	26 (98.4)	10.6 (0.7)
16 x 18 (4.9 x 5.5)	4 – 12 (100 – 300)	All	29 (109.8)	13.1 (0.9)
16 x 20 (4.9 x 6.0)	4 – 12 (100 – 300)	All	32 (121.1)	16.0 (1.1)
16 x 22 (4.9 x 6.7)	4 – 12 (100 – 300)	All	36 (136.3)	20.2 (1.4)
16 x 24 (4.9 x 7.3)	4 – 12 (100 – 300)	All	39 (147.6)	23.8 (1.6)
18 x 18 (5.5 x 5.5)	4 – 12 (100 – 300)	135°F (57°C) 155°F (68°C)	33 (124.9)	17.0 (1.2)
18 x 22 (5.5 x 6.7)	4 – 12 (100 – 300)	135°F (57°C) 155°F (68°C)	40.0 (151.4)	25.0 (1.7)

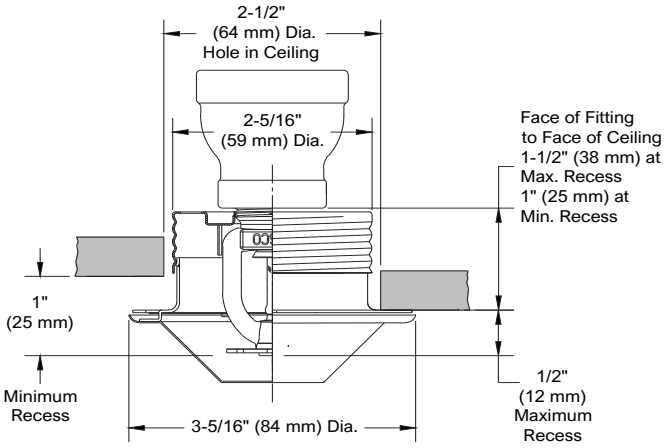


Model F1FR80-300 EC Pendent Sprinkler
with Model F1 Recessed Escutcheon
(3/4" [19mm] adjustment)



Model F1FR80-300 EC Pendent Sprinkler
with Model F2 Recessed Escutcheon
(1/2" [13mm] adjustment)

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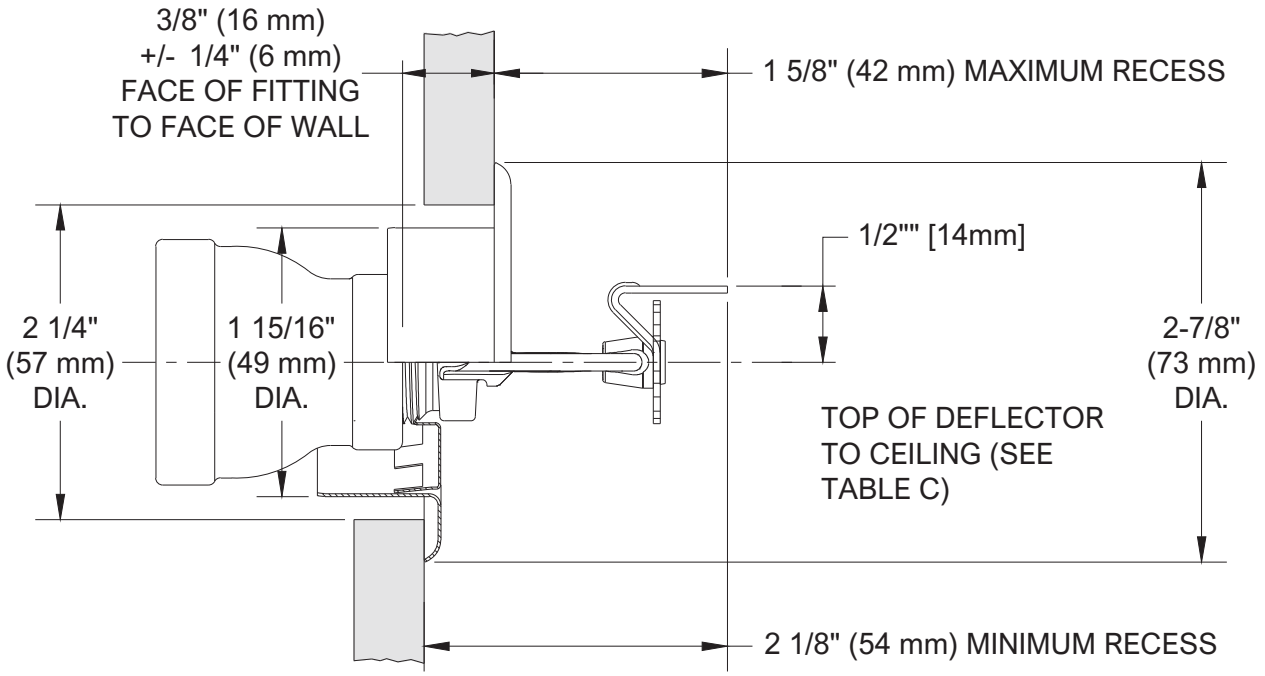
Model F1FR80-300 EC Pendent Sprinkler
with Conical Concealed Cover Plate
(1/2" [13mm] adjustment)



Pendent with Model F1
Recessed Escutcheon
(F2 similar)

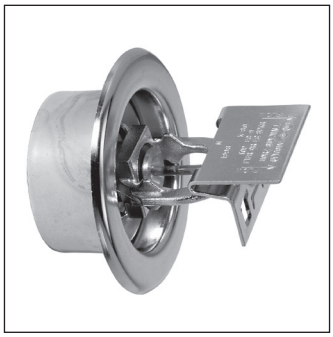


Pendent with Model CCP
Cover Plate (Conical)



F2 RECESSED ESCUTCHEON INSTALLATION

1/2" (13 mm) Adjustment



Horizontal Sidewall with
Model F2 Escutcheon

Wrenches



Model W2 (non-recessed)



Model W1 (recessed, concealed)

Finishes[1]

Table E

Standard Finishes			Special Application Finishes		
Sprinkler	**F1 and F2 Escutcheons**	**CCP Cover Plate[2]**	**Sprinkler**	**F1 and F2 Escutcheons**	**CCP Cover Plate[2]**
Bronze	Brass	Chrome Plated	Electroless Nickel PTFE[3][4]	Bright Brass	Bright Brass
Chrome Plated	Chrome Plated	White Paint	Bright Brass	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. The CCP assembly consists of a bronze sprinkler mounted in a galvanized steel cup with a finished cover plate.
3. cULus Listed as corrosion resistant.

Installation

Reliable Model F1FR80-300 QREC series sprinklers must be installed in accordance with NFPA 13 and the requirements of all authorities having jurisdiction using the Reliable sprinkler installation wrench specified in this bulletin. Any other wrench may damage the sprinkler. A leak free 3/4" (R3/4) sprinkler joint can be obtained with a torque of 14-20 lb-ft (19 - 27 N.m) after applying a thread sealant to the male threads of the sprinkler. 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 QREC 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
- F1FR80-300 QREC Sprinkler

Deflector/Orientation
- Pendent
- Horizontal Sidewall (EC-9)

Temperature Rating
- See sprinkler technical specifications

Sprinkler Finish
- See Table B

Recessed Escutcheon[1]
- F1
- F2

Escutcheon Finish
- See Table E

Pendent Cover Plate
- CCP (Conical, 135°F [57°C] only)

Cover Plate Finish
- See Table E

Sprinkler Wrench
- Model W2 (non-recessed)
- Model W1 (recessed or concealed)

Notes:
1. The Model F2 escutcheon must be used for recessed horizontal sidewall sprinkler applicaitons.

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