

Reliable®

Model KFR80 Series Sprinklers

Quick-response, Standard Spray Fusible Link Sprinklers

K8.0 (115 metric)
cULus, FM, VdS, CE, UKCA

Product Description

Model KFR80 series sprinklers are standard spray, quick-response sprinklers with a fusible link operating element. The sprinklers are cULus Listed and FM Approved. See Table C for available finishes. All KFR80 sprinklers have a nominal K-factor of 8.0 (115 metric).

Model KFR80 series sprinklers are available in Ordinary (165°F [74°C]) or Intermediate (212°F [100°C]) temperature classification. Model KFR80 Pendent sprinklers are available with Model F1, Model F2, or Model FP recessed escutcheons.

Application

Model KFR80 series sprinklers are listed and approved for installation in accordance with NFPA 13 and FM Loss Prevention Data Sheets. Follow requirements of NFPA 13 for Quick-response Standard Spray Sprinklers when installing Model KFR80 series sprinklers. FM Approvals classifies Model KFR80 sprinklers as K8.0 QR Non-storage and K8.0 QR In-rack Storage sprinklers.

Installation

Model KFR80 series sprinklers must be installed in accordance with the requirements of NFPA 13 or FM Property Loss Prevention Data Sheets. The Model F1, F2, and FP escutcheons are the only recessed escutcheons listed and approved for use with Model KFR80 Pendent sprinklers. The use of any other recessed escutcheon will void all approvals and warranties. Do not install Model FP escutcheons in ceilings that are positively pressurized with respect to the occupied space below.

Use only the Model W2 sprinkler wrench for installing Model KFR80 series pendent and upright sprinklers, and use only the Model W1 wrench for installing Model KFR80 series recessed pendent sprinklers. Model KFR series sprinklers with F series guards or guards/water shields may be installed as an assembly using the Model W14 wrench. The use of wrenches other than those specified may damage these sprinklers.



Model KFR80 Pendent



Model KFR80 Upright

Recommended installation torque is 14-20 ft-lbs (19 – 27 N-m). Do not tighten sprinklers over the maximum recommended torque. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinklers.

Listings & Approvals

Listed by Underwriters Laboratories, Inc. and UL Certified for Canada (cULus)

- Sprinklers, Automatic and Open (VNIV)

FM Approved (FM)

- K8.0 QR Non-storage
- K8.0 QR In-rack Storage

UKCA

- 0832-UKCA-CPR-S5045

VdS

- G 422045

CE

- 0786-CPR-40339

Model KFR Series Sprinkler Summary

Table A

Sprinkler Model	Orientation	Listing or Approval	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
KFR80 Pendent	Pendent	cULus	250 (17.2)	RA5412
		FM, VdS, CE, UKCA	175 (12)	
KFR80 Upright KFR80 Upright Intermediate	Upright	cULus	250 (17.2)	RA5422
		FM, VdS, CE, UKCA	175 (12)	

Technical Specifications

Style: Pendent or Recessed Pendent
Threads: 3/4" NPT or ISO 7-1 R3/4
Nominal K-Factor: 8.0 (115 metric)
Max. Working Pressure:
 cULus: 250 psi (17.2 bar)
 FM: 175 psi (12 bar)

Material Specifications

Thermal Sensor: Beryllium Nickel
Strut and Lever: Stainless Steel
Roto-clip: Stainless Steel
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Wrenches

Model W2 (pendent)
 Model W1 (recessed)
 Model W14 (with guard installed)

Listings and Approvals

cULus Listed
 FM Approved
 VdS (G 422045)
 CE (0786-CPR-40339)
 UKCA

Sprinkler Finishes
 (See Table C)

Sensitivity
 Quick-response

Temperature Ratings
 165°F (74°C), Gray Link
 212°F (100°C), White Link

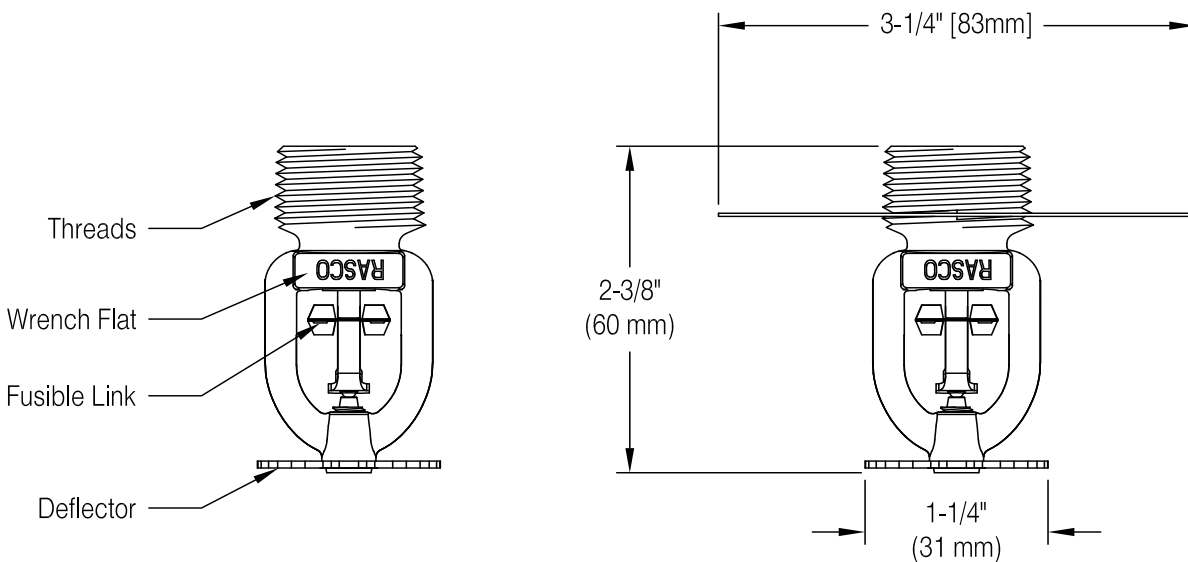
Recessed Escutcheons
 Model F1
 Model F2
 Model FP

Guards/Water Shields
 F-7 Guard (cULus)
 F-2 Guard (FM)
 F-8 Guard/Water Shield (cULus)
 F-6 Guard/Water Shield (FM)
 S-2 Water Shield (cULus, FM)



Model KFR80 Pendent Sprinkler Components and Dimensions

Figure 1



Shown with Optional S-2 Water Shield (Ordered Separately)

Technical Specifications

Style: Upright
Threads: 3/4" NPT or ISO 7-1 R3/4
Nominal K-Factor: 8.0 (115 metric)
Max. Working Pressure:
 cULus: 250 psi (17.2 bar)
 FM: 175 psi (12 bar)

Material Specifications

Thermal Sensor: Beryllium Nickel
Strut and Lever: Stainless Steel
Roto-clip: Stainless Steel
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Wrench

Model W2
 Model W14 (with guard installed)

Listings and Approvals

cULus Listed
 FM Approved
 VdS (G 422044)
 CE (0786-CPR-40340)
 UKCA

Sprinkler Finishes
 (See Table C)

Sensitivity
 Quick-response

Temperature Ratings
 165°F (74°C), Gray Link
 212°F (100°C), White Link

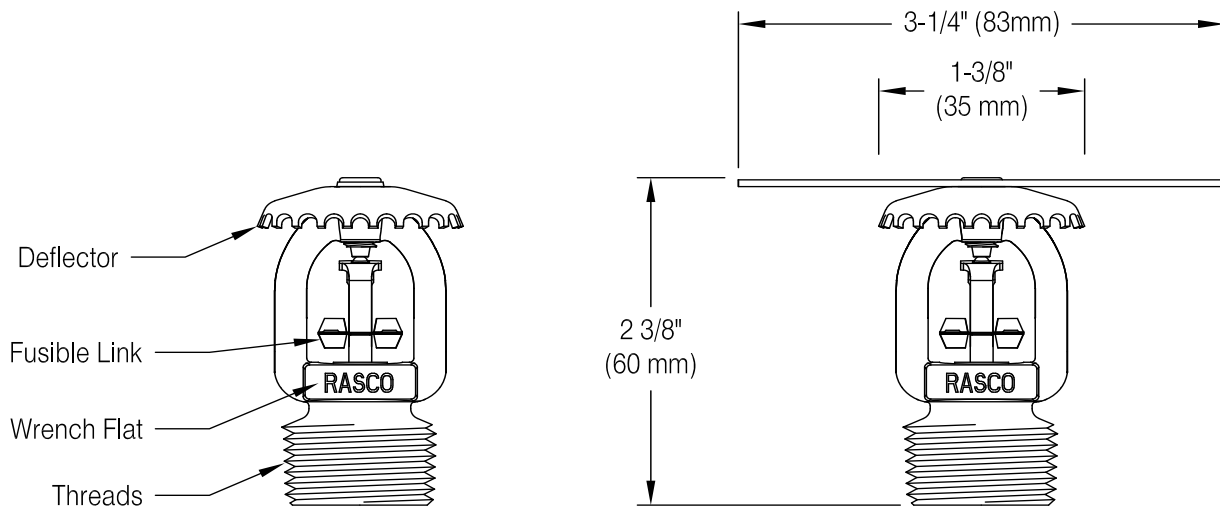
Guards/Water Shields

F-1 Guard (cULus)
 F-2 Guard (FM)
 F-3 Guard/Water Shield (cULus, FM)
 Factory Installed Shield (cULus, FM)



Model KFR80 Upright Sprinkler Components and Dimensions

Figure 2



Shown with Optional
 Factory Installed Water Shield
 (KFR80 Intermediate Upright)

Recessed Escutcheon Dimensions

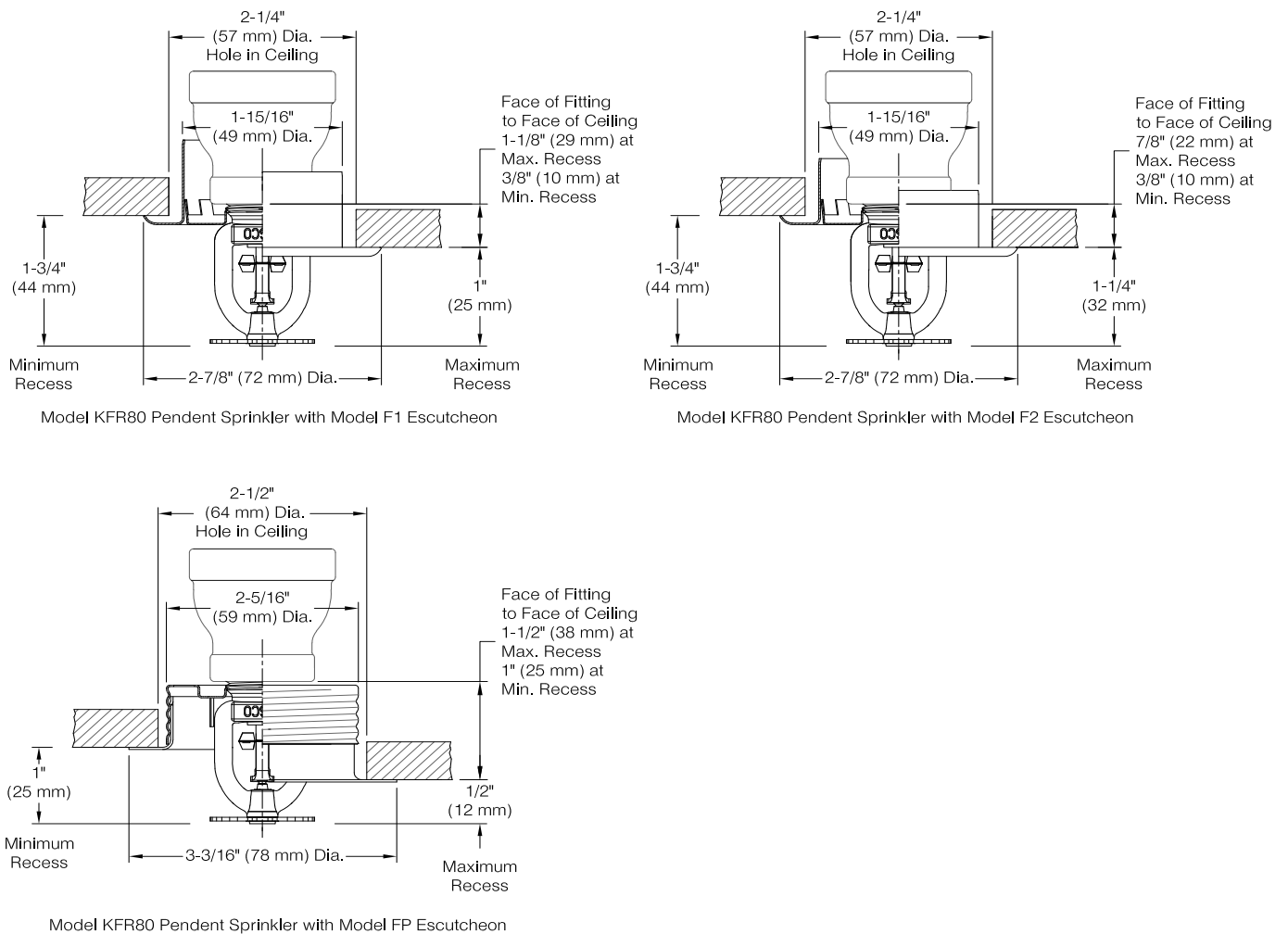
Table B

Type	Adjustment Inch (mm)	Maximum Face of Fitting to Ceiling* Inch (mm)	Minimum Face of Fitting to Ceiling* Inch (mm)	Maximum Deflector Distance Below Ceiling Inch (mm)	Minimum Deflector Distance Below Ceiling Inch (mm)
F1	3/4 (19)	1-1/8 (29)	3/8 (10)	1-3/4 (44)	1 (25)
F2	1/2 (12)	7/8 (22)	3/8 (10)	1 1-3/4 (44)	1-1/4 (32)
FP	1/2 (12)	1-1/2 (38)	1 (25)	1 (25)	1/2 (12)

*Note: Face of fitting to ceiling dimensions are based on nominal thread make up. Verify dimensions based on fitting and thread sealing method prior to installation..

Recessed Escutcheon Diagrams

Figure 3



Note: Model FP escutcheons shall not be used where pressure in the space above the ceiling is positive with respect to the pressure below the ceiling. Ensure the openings in the FP cup are unobstructed following installation.

Sprinklers & Escutcheons Finishes⁽¹⁾

Table C

Standard Finishes		Special Application Finishes	
Sprinkler	F1, F2 and FP ⁽²⁾ Escutcheons	Sprinkler	F1, F2 and FP ⁽²⁾ Escutcheons
Bronze	Brass	Bright Brass	Bright Brass
Chrome Plated	Chrome Plated	Dull Chrome	Dull Chrome
White Polyester	White Polyester	Black Polyester	Black Polyester
		Custom Color Polyester	Custom Color Polyester

Notes:

1. Paint or any other coating applied over the factory finish will void all approvals and warranties.
2. The Model FP escutcheon assembly consists of an unfinished galvanized cup with a finished escutcheon ring.

Wrench



Model W2 (upright, pendent)



Model W14 (with guard installed)



Model W1 (recessed pendent)

Maintenance

Reliable Model KFR80 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 Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Ordering Information

Specify the following when ordering.

Sprinkler

- Model (KFR80 Pendent, KFR80 Upright, or KFR80 Intermediate Upright)
- Temperature Rating [165°F (74°C) or 212°F (100°C)]
- Threads (3/4" NPT or ISO 7-1 R3/4)
- Finish (See Table C)

Escutcheon

- Type (None, F1, F2, or FP)
- Finish (See Table C)

Guards/Water Shields

- See sprinkler information pages in this bulletin

Sprinkler Wrench

- W2 (Pendent, Upright)
- W1 (Recessed)
- W14 (with guard installed)