Reliable®

Model F4FR-NF Non-Ferrous Quick Response Concealed Automatic Sprinkler

cULus Listed

Features

- Non-Ferrous design specifically tested in an MRI environment
- Cup and skirt fabricated from brass
- Simple sturdy cover attachment
- Smooth aesthetic ceiling profile
- Cover plate is available in a variety of finishes
- Ordinary temperature rating
- Threaded cover plate does not require clips or springs

Product Description

The Model F4FR-NF Non-Ferrous Concealer™ is a quick-response standard coverage sprinkler that uses a 155°F (68°C) 3mm diameter glass bulb in a concealed sprinkler frame with a drop-down deflector. This assembly is recessed into the ceiling and finished with a flat cover plate. The push-on/thread off cover plate provides ½" (13mm) of cover adjustment.

The cover plate is attached to the skirt using 135°F (57°C) ordinary temperature classification solder. When the ceiling temperature rises, the solder holding the cover plate fuses, releasing the plate and exposing the sprinkler.

As the temperature increases, the fluid within the glass bulb expands. Upon reaching activation temperature, the glass bulb shatters and opens the waterway causing the deflector to drop into position to properly distribute the water.

The Reliable Model F4FR-NF Non-Ferrous Concealer™ is designed specifically for MRI rooms. The sprinkler assembly was tested in a laboratory with a magnetic field of 6 Tesla. The test exposed the sprinklers to magnetic fields and field gradients that exceed a standard peripheral MRI room environment. There was no recorded influence of the magnetic field on the sprinklers.

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 F4FR-NF

Model F4FR 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)
F4FR	5.6 (80)	Concealed Pendent	cULus*	175 (12.1)	RA0212

***Note:** Listed for use in Light and Ordinary hazard occupancies only.

Model F4FR Concealed Sprinkler — SIN RA0212

Technical Specifications
Style: Concealed Pendent
Threads: 1/2” NPT or ISO 7-R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 175 psi (12.1 bar)
Min. Spacing: 6 ft (1.8 m)

Material Specifications
Operating Element: Glass Bulb
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Titanium, PTFE Coated
Load Screw: Brass
Deflector: Brass
Cup: Brass

Sprinkler Finishes
Brass (Unfinished)

Sensitivity
Quick-Response

Sprinkler Temperature Rating
155°F (68°C)

Cover Plate Temperature Rating
135°F (57°C)

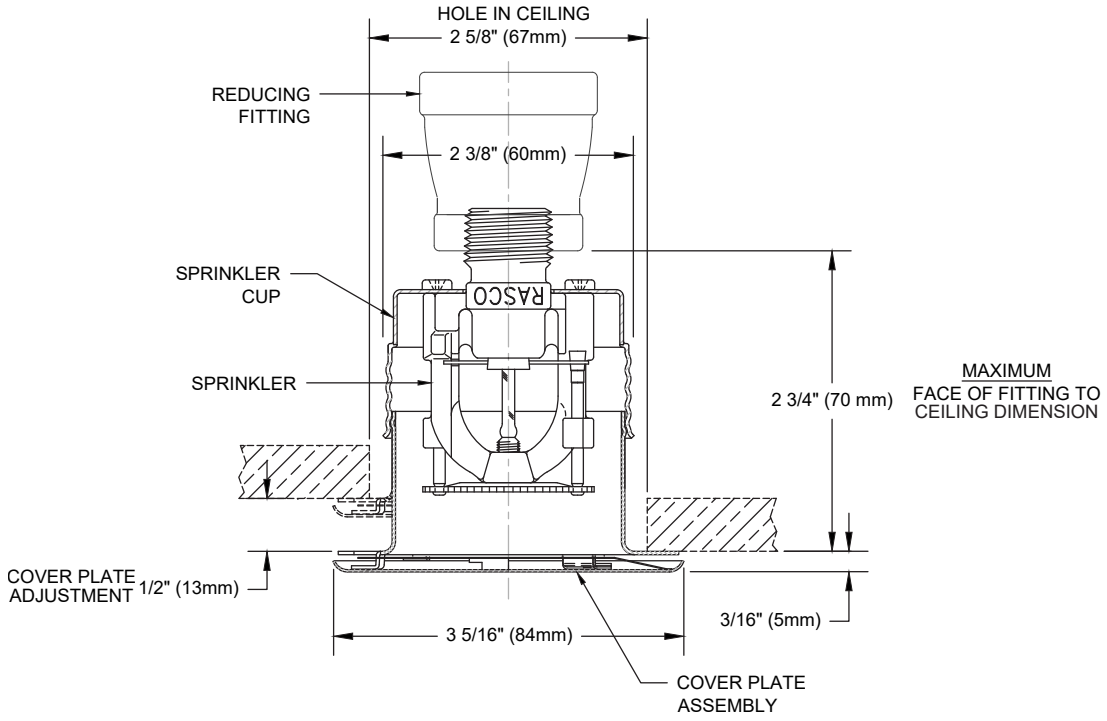
Cover Plate Finishes
(See Table B)

Sprinkler Wrenches
Model G4

Listings and Approvals
cULus Listed



Model F4FR Sprinkler Components and Dimensions — Figure 1



G4 Wrench



Installation

Model F4FR-NF sprinklers are intended to be installed in accordance with NFPA 13, FM Global Property Loss Prevention Data Sheets, and the requirements of applicable authorities having jurisdiction.

Do not install The Non-Ferrous Concealer™ in ceilings which have positive pressure in the space above. In addition, inspect all sprinklers after installation to ensure that both the gap between the cover plate and ceiling and the four (4) slots in the cup are open and free from any air flow impediment.

After a 2-5/8" diameter hole is cut in the ceiling, the sprinkler is installed with the Model G4 Wrench. When installing a sprinkler, the wrench is first positioned into the sprinkler/cup assembly until two wrench tangs fully engage drive slots in the top of the cup (there are two pairs of drive slots in the cup). The sprinkler is then tightened into the pipe fitting to a torque of 8 to18 ft-lbs (11 to 24 N.m). Do not exceed the maximum recommended torque. Excessive torque may cause leakage or impairment of the sprinkler.

When inserting or removing the wrench from the sprinkler/cup assembly care should be taken to prevent damage to the sprinkler. DO NOT WRENCH ON ANY OTHER PART OF THE SPRINKLER/CUP ASSEMBLY. Replace any sprinklers that have been damaged.

Install the cover plate by hand, pushing and then turning the cover in the clockwise direction until it is tight against the ceiling.

Cover Plate Finishes[1][2] **Table B**

Standard Finishes	Special Application Finishes
Chrome	Bright Brass
White	Finished Bronze
	Black Paint
	Off White
	Satin Chrome
	Raw Brass (Lacquered)
	Custom Color Paint (Specify)
	Custom Printed

Notes:
1. Other finishes and colors are available on special order. Consult factory for details. Cover plate custom paint is semi-gloss, unless specified otherwise.
2. Paint or any other coatings applied over the factory finish will void all approvals and warranties.

Maintenance

Reliable Model F4FR 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:

Sprinkler
- F4FR-NF [155°F (68°C) including 135°F (57°C) Cover Plate)

Cover Plate Finish
- See Table B

Sprinkler Wrench
- Model G4

***Replacement Cover Plates:**
- Chrome [PN 87132107]
- White [PN 87137207]