



Model F1FR QREC CCP Concealed Quick Response Extended Coverage Sprinkler

Bulletin 151Rev. E

Concealed Quick Response Sprinkler Coverage to 20' x 20' (6.0 m x 6.0 m)

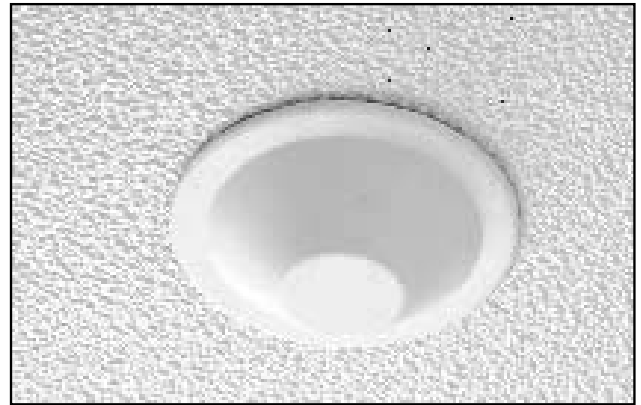
Features

1. Quick response performance.
2. Push on, thread off, sturdy convenient cover plate.
3. Factory assembled sprinkler and cup, shipped complete with protective cap.
4. Sprinkler assembly and cover plate separately packaged.
5. Two Versions:
 $\frac{1}{2}$ " (13mm) Adjustment
 $\frac{5}{16}$ " (8mm) Adjustment
6. Rugged damage resistant assembly. No exposed thermal element.
7. Utilizes the Model F1FR QREC Pendent Sprinkler.
8. Aesthetic ceiling profile.
9. Standard finishes in white painted or chrome plated. Other color-painted and specialty finishes available.

Product Description

Model F1FR QREC Quick Response Extended Coverage Concealed Sprinkler is an attractive, low profile concealed sprinkler assembly. This sprinkler assembly utilizes a Model F1FR QREC pendent sprinkler in a Model CCP cup and push-on thread-off cover plate assembly. The cup is securely factory threaded on the sprinkler's inlet end. The assembly is shipped with a protective cap. The sprinkler and cup are easily installed into the sprinkler fitting using the Model RC1 Sprinkler Wrench. The cover plate assembly is attached to the sprinkler cup using a flexible tooth threaded engagement. 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 melts, allowing the release of this part and thus exposing the Model F1FR QREC sprinkler inside to the rising ambient temperature. The Temperature rating of the sprinkler identified by the color of the glass bulb.



Model F1FR QREC automatic sprinkler utilizes a 3.0 mm frangible glass bulb. This sprinkler has demonstrated response times in laboratory tests which are five times faster than standard response sprinklers. This quick response enables the Model F1FR QREC sprinkler to apply water to a fire faster than standard sprinklers of the same temperature rating.

Approval Type:

Quick Response Extended Coverage — Light Hazard

Technical Data:

| Nominal Orifice | Thread Size | K Factor | | Approval Organizations | Sprinkler Ident. Number (SIN) |
|-------------------------|------------------------------------|----------|--------|------------------------|-------------------------------|
| | | US | Metric | | |
| $\frac{1}{32}$ " (20mm) | $\frac{3}{4}$ " (R $\frac{3}{4}$) | 8.0 | 115.3 | 1,2,3 | R4842 |
| $\frac{1}{2}$ " (15mm) | $\frac{1}{2}$ " (R $\frac{1}{2}$) | 5.62 | 81.0 | 1,2,3 | R4845 |

| Thread Size | Model | Temp. Rating | | Max. Ceiling Temp. | Bulb Color |
|--|-----------|---------------|---------------|--------------------|------------|
| | | Sprinkler | Cover | | |
| $\frac{3}{4}$ " NPT (R $\frac{3}{4}$) | F1FR QREC | 135°F 57°C | 135°F 57°C | 100°F 38°C | Orange |
| $\frac{3}{4}$ " NPT (R $\frac{3}{4}$) | F1FR QREC | 155°F 68°C | 135°F 57°C | 100°F 38°C | Red |
| $\frac{1}{2}$ " NPT (R $\frac{1}{2}$) | F1FR QREC | 135°F 57°C | 135°F 57°C | 100°F 38°C | Orange |
| $\frac{1}{2}$ " NPT (R $\frac{1}{2}$) | F1FR QREC | 155°F 68°C | 135°F 57°C | 100°F 38°C | Red |

| Coverage Area | | | |
|---------------|----------------------|----------------------|--|
| Flow Rate | Pressure psi (bar) | | Max. Enclosure Area Width x Length ft. x ft. (m x m) |
| | K=8.0 (Metric 115.3) | K=5.62 (Metric 81.0) | |
| 21.2 (80.3) | 7.0 (0,5) | 14.2 (0,98) | 14 x 14 (4.3 x 4.3) |
| 26 (98.4) | 10.6 (0,7) | 21.6 (1,5) | 16 x 16 (4.9 x 4.9) |
| 33 (125.0) | 17.0 (1,2) | 34.7 (2,4) | 18 x 18 5.5 x 5.5) |
| 40 (151.4) | 25.0 (1,7) | 51.0 (3,5) | 20 x 20 ⁽¹⁾ (6.0 x 6.0) ⁽¹⁾ |

⁽¹⁾ 135°F (57°C) Only

Note: 1 bar = 100 kPa

Application and Installation

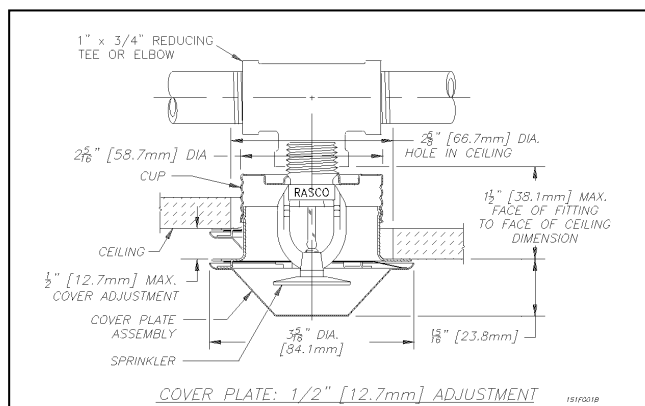
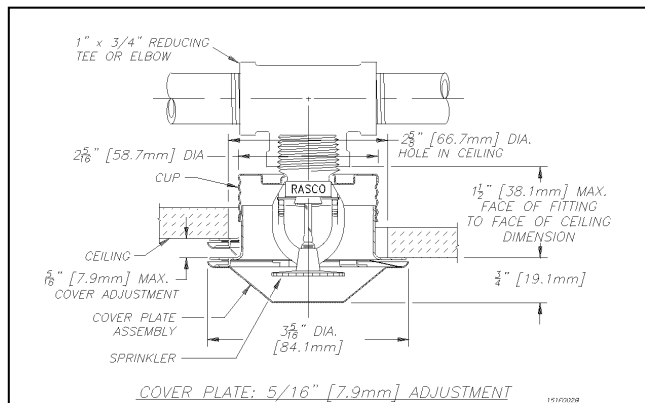
Model F1FR QREC Concealed Sprinklers use 135°F (57°C) or 155°F (68°C) Model F1FR QREC Pendent Sprinklers with a threaded Model CCP cup which is factory attached to the sprinkler. The assembly is completed by the installation of the attractive, low profile, 135°F (57°C) rated cover plate assembly. The cover plate and sprinkler cup are joined using a flexible tooth threaded engagement. A choice of two cover plate assemblies provides either 1/2" (13mm) or 5/16" (8mm) of cover adjustment.

Do not install these sprinklers in ceilings which have positive pressure in the space above.

The sprinkler cup is factory attached to the Model F1FR QREC Sprinkler. A Teflon*-based thread sealant should be applied to the sprinkler threads only.

After a 2 5/8" (67mm) inch diameter hole is cut in the ceiling, the sprinkler is easily installed with the Model RC1 Wrench. When installing a sprinkler, the protective cap is removed and the wrench is positioned into the sprinkler/cup assembly until the two wrench faces engage the wrenching flats on the Model F1FR QREC Sprinkler. The sprinkler is then tightened into the pipe fitting. 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.** The cover plate assembly is then

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pressed into the cup. Final adjustment is made by turning the cover plate until the skirt flange makes full contact with the ceiling surface. Cover plate removal requires turning in the counter clockwise direction.

After installation, inspect all sprinklers to ensure that there is a gap between the cover plate and ceiling and that the four cup slots are open and free from any air flow impediment to the space above.

Concealed cover plate/cup assemblies are listed only for use with specific sprinklers. The use of any other concealed cover plate/cup assembly with the Model F1FR QREC Pendent Sprinkler or the use of the Model CCP concealed cover plate assembly on any sprinkler with which it is not specifically listed may prevent good fire protection and will void all guarantees, warranties, listings and approvals.

Maintenance

Model F1FR QREC Concealed Sprinklers should be inspected quarterly and the sprinkler system maintained in accordance with NFPA 25. Do not clean sprinklers with soap and water, ammonia or any other cleaning fluids. Remove dust by using a soft brush or gentle vacuuming. Remove any sprinkler cover plate assembly which has been painted (other than factory applied) or damaged in any way. A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers. Prior to installation, sprinklers should be maintained in the original cartons and packaging until used to minimize the potential for damage to sprinklers that would cause improper operation or non-operation.

Approval Organizations

1. Underwriters Laboratories, Inc.
2. Underwriters' Laboratories of Canada.
3. NYC MEA 258-93-E

UL Listing Category

Sprinklers, Automatic and Open. Quick Response Extended Coverage Sprinklers.

Ordering Information

Specify:

1. Sprinkler Model:
F1FR QREC Pendent
1 7/32" (20mm) Orifice,
3/4" NPT (R3/4) or 1/2" Orifice,
1/2" NPT (R1/2).
2. Sprinkler Temp. Rating⁽¹⁾:
135°F (57°C) or
155°F (68°C).
3. Cover plate Model: CCP
4. Cover plate thread size:
3/4" NPT (R3/4) or 1/2" NPT (R1/2).
5. Cover plate temp. rating:
135°F (57°C).
6. Cover plate adjustment:
Either 1/2" (13mm) or 5/16" (8mm)
(approximate adjustment).
7. Cover plate finish.
⁽¹⁾135°F (57C) required for
20' x 20' (6.0m x 6.0m).

Installation Wrench

Model RC1 Sprinkler Wrench

Installation Aid

A protective cap is included for use during installation.

Cover Plate Finishes⁽¹⁾

| Standard Finishes |
|------------------------------|
| Chrome |
| White |
| Special Application Finishes |
| Bright Brass |
| Black Plating |
| Black Paint |
| Off White |
| Satin Chrome |

⁽¹⁾ Other finishes and colors are available on special order. Consult factory for details.

Note: Paint or any other coatings applied over the factory finish will void all approvals and warranties.

Important: The F1FR QREC Sprinkler with the Model CCP cover plate is not an FM Approved combination.

The equipment presented in this bulletin is to be installed in accordance with the latest published Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.