



Model F1FR – 300 300 psi (20,7 bar) Rated Quick Response Sprinklers

Model F1FR-300 300 PSI (20,7 bar) Rated Sprinkler Types

- Upright
- Pendent
- Recessed Pendent

Listings & Approvals

1. Listed by Underwriters Laboratories, Inc. (UL)
2. UL Certified for Canada.
3. NYC MEA 258-93-E

UL Listing Category

Sprinklers, Automatic & Open
Quick Response Sprinklers

UL Guide Number

VNIV

Product Description

Reliable Models F1FR – 300 QR Upright, Pendent and Recessed Pendent Sprinklers are high pressure rated automatic sprinklers which can handle a maximum service pressure of 300 psi (20,7 bar).

These automatic sprinklers are quick response sprinklers which utilize a 3.0mm frangible glass bulb. They have demonstrated response times in laboratory tests which are five times faster than standard response sprinklers. This quick response enables Model F1FR-300 sprinklers to apply water to a fire much faster than standard response sprinklers of the same temperature rating.

The glass bulb contains an accurately controlled amount of special fluid hermetically sealed inside. The other sprinkler parts are made of brass, copper or beryllium nickel.

At normal temperatures, the glass bulb contains fluid in both the liquid and vapor phases. The vapor phase can be seen as a small bubble. As heat is applied, the liquid expands, forcing the bubble smaller and smaller as the liquid pressure increases. Continued heating forces the liquid to push out against the bulb, causing the glass to shatter, opening the waterway and allowing the deflector to distribute the discharging water.

The temperature rating of the sprinkler is identified by the color of the glass bulb.



Upright



Pendent



Recessed Pendent

Application

The most common applications for Model F1FR-300 Quick Response Sprinklers will be in fire protection systems for high rise buildings where a quick response rating is required and the pressure entering the sprinkler system is in excess of 175 psi (12 bar). The use of these sprinklers will provide opportunity to reduce or eliminate the need for pressure reducing valves.

Model F1FR-300 Quick Response Upright and Pendent Sprinkler

Installation Wrench: Model D Sprinkler Wrench

Installation Data:

| Sprinkler Type | Nominal Orifice Size | Thread Size | Nominal K Factor | | Sprinkler Height | Approval Organizations | Sprinkler Identification Number (SIN) |
|----------------|----------------------|-----------------|------------------|--------|------------------|------------------------|---------------------------------------|
| | | | US | Metric | | | |
| Upright | 1/2" (15mm) | 1/2" NPT (R1/2) | 5.6 | 80 | 2.2" (56mm) | 1, 2, 3 | R5625 |
| | 17/32" (20mm) | 3/4" NPT (R3/4) | 8.0 | 115 | 2.4" (61mm) | 1, 2, 3 | R5622 |
| Pendent | 1/2" (15mm) | 1/2" NPT (R1/2) | 5.6 | 80 | 2.2" (56mm) | 1, 2, 3 | R5615 |
| | 17/32" (20mm) | 3/4" NPT (R3/4) | 8.0 | 115 | 2.4" (61mm) | 1, 2, 3 | R5612 |



Upright



Pendent

Model F1FR-300 Quick Response Recessed Pendent Sprinkler

Installation Wrench: Model GFR1 Sprinkler Wrench

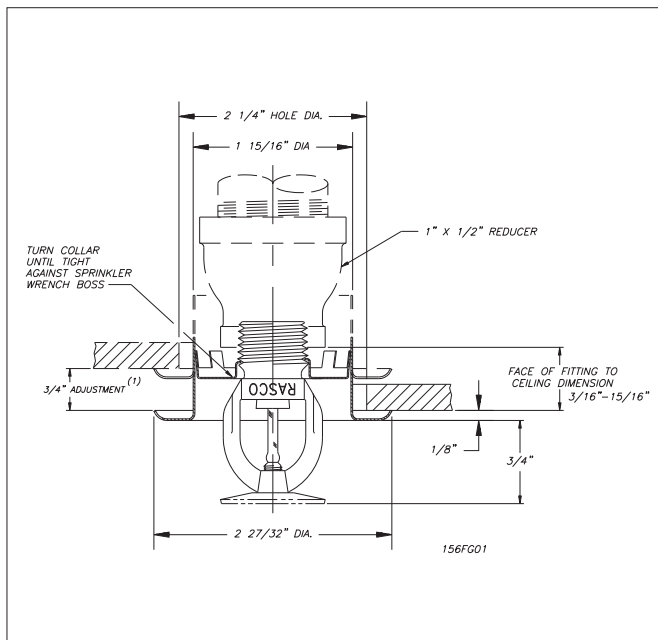
Installation Data:

| Sprinkler Type | Nominal Orifice Size | Thread Size | Nominal K Factor | | Sprinkler Height | Approval Organizations | Sprinkler Identification Number (SIN) |
|------------------|----------------------|-----------------|------------------|--------|------------------|------------------------|---------------------------------------|
| | | | US | Metric | | | |
| Recessed Pendent | 1/2" (15mm) | 1/2" NPT (R1/2) | 5.6 | 80 | 2.2" (56mm) | 1, 2, 3 | R5615 |
| | 17/32" (20mm) | 3/4" NPT (R3/4) | 8.0 | 115 | 2.4" (61mm) | 1, 2, 3 | R5612 |

Escutcheon Data

| Escutcheon Model | Approvals | Adjustment ⁽¹⁾ | Face of Fitting to Ceiling Dimension |
|------------------|-----------|---------------------------|--------------------------------------|
| F1 | 1, 2, 3 | 3/4" (19mm) | 3/16" - 15/16" (5mm - 24mm) |

⁽¹⁾When installed directly into a tee, the escutcheon adjustment will be reduced.



Installation

Quick response sprinklers are intended for installation as specified in NFPA 13. Quick response sprinklers and standard response sprinklers should not be intermixed.

The Model F1FR Recessed Quick Response Sprinklers are to be installed as shown. The Model F1 escutcheon illustrated is the only recessed escutcheon to be used with the Model F1FR-300 Sprinklers. The use of any other recessed escutcheon will void all approvals and negate all warranties.

When installing Model F1FR-300 Upright and Pendent Sprinklers, use the Model D Sprinkler Wrench. Use the Model GFR1 Wrench for installing F1FR-300 Recessed Pendent Sprinklers. Any other type of wrench may damage these sprinklers.

Glass bulb sprinklers have orange covers to protect the bulb during the installation process. REMOVE THIS PROTECTION ONLY AFTER THE SYSTEM HAS BEEN HYDROSTATICALLY TESTED AND, WHEN APPLICABLE, THE ESCUTCHEONS HAVE BEEN INSTALLED. RASCO wrenches are designed to install sprinklers when covers are in place.

Maintenance

Model F1FR-300 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 that 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.

Standard Temperature Ratings

| Classification | Sprinkler Temperature | | Maximum Ambient Temp. | | Bulb Color |
|---------------------|-----------------------|-----|-----------------------|-----|------------|
| | °F | °C | °F | °C | |
| Ordinary | 135 | 57 | 100 | 38 | Orange |
| Ordinary | 155 | 68 | 100 | 38 | Red |
| Intermediate | 175 | 79 | 150 | 66 | Yellow |
| Intermediate | 200 | 93 | 150 | 66 | Green |
| High ⁽¹⁾ | 286 | 141 | 225 | 107 | Blue |

⁽¹⁾ Not available for recessed sprinklers.

Sprinkler Types

- Standard Upright
- Standard Pendent
- Recessed Pendent

Finishes ⁽¹⁾

| Standard Finishes: | |
|--|--|
| Sprinkler | Escutcheon |
| Bronze Chrome White Polyester Coated | Brass Chrome White Painted |
| Special Application Finishes: | |
| Sprinkler | Escutcheon |
| Bright Brass Black Plated Black Paint Off White Satin Chrome | Bright Brass Black Plated Black Paint Off White Satin Chrome |

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

Ordering Information

Specify:

1. Sprinkler Model
2. Sprinkler Type
3. Orifice Size
4. Deflector Type
5. Temperature Rating
6. Sprinkler Finish
7. Escutcheon Finish (where applicable)

Note: When Model F1FR-300 Recessed sprinklers are ordered, the sprinklers and escutcheons are packaged separately.

Reliable...For Complete Protection

Reliable offers a wide selection of sprinkler components. Following are some of the many precision-made Reliable products that guard life and property from fire around the clock.

- Automatic sprinklers
- Flush automatic sprinklers
- Recessed automatic sprinklers
- Concealed automatic sprinklers
- Adjustable automatic sprinklers
- Dry automatic sprinklers
- Intermediate level sprinklers
- Open sprinklers
- Spray nozzles
- Alarm valves
- Retard chambers
- Dry pipe valves
- Accelerators for dry pipe valves
- Mechanical sprinkler alarms
- Electrical sprinkler alarm switches
- Water flow detectors
- Deluge valves
- Detector check valves
- Check valves
- Supertrol electrical system
- Sprinkler emergency cabinets
- Sprinkler wrenches
- Sprinkler escutcheons and guards
- Inspectors test connections
- Sight drains
- Ball drips and drum drips
- Control valve seals
- Air maintenance devices
- Air compressors
- Pressure gauges
- Identification signs
- Fire department connections

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.

Products manufactured and distributed by Reliable have been protecting life and property for over 80 years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.

Manufactured by

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