

Reliable®

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

For Model F1FR-300 ½" K 5.6 (80) Sprinkler Types refer to Bulletin 026 for technical specifications and approvals.

Listings & Approvals

1. Listed by Underwriters Laboratories, Inc. (UL)
2. UL Certified for Canada (ULC).
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.



Upright



Pendent



Recessed Pendent

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

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 Sprinklers

Installation Wrench: Model D Sprinkler Wrench

Installation Data:

Sprinkler Type	Nominal Orifice Size	Thread Size	Nominal K Factor		Sprinkler Height	Approval Organizations	Sprinkler Identification Numbers (SIN)
			US	Metric			
Upright	17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.4" (61mm)	1, 2, 3	R5622
Pendent	17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.4" (61mm)	1, 2, 3	R5612



Upright



Pendent

Model F1-300 Quick Response Recessed Pendent Sprinkler

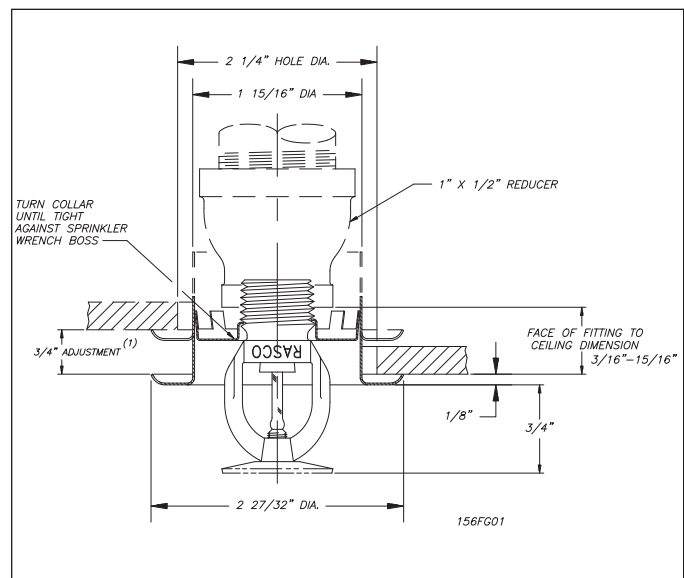
Installation Wrench: Model GFR2 Sprinkler Wrench

Installation Data:

Sprinkler Type	Nominal Orifice Size	Thread Size	Nominal K Factor		Sprinkler Height	Approval Organizations	Sprinkler Identification Numbers (SIN)
			US	Metric			
Recessed Pendent	17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.4" (61mm)	1, 2, 3	R5612

Escutcheon Data

Escutcheon Model	Approvals	Adjustment	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 Temperature		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.

Finishes⁽¹⁾

Standard Finishes:	
Sprinkler	Escutcheon
Bronze Chrome Plated White Polyester Coated	Brass Chrome Plated 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 finishes and colors are available on special order. Consult the 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
- Retarding 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
- 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 connection

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 90 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

Reliable[®]

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