

Reliable®

**Model F1FR LO Large Orifice
Model F1FR LO Large Orifice Recessed
Quick Response Sprinklers
With 1/2" connection Thread**

Model F1FR LO Large Orifice Sprinkler Types

Standard Upright
Standard Pendent

Model F1FR LO Large Orifice Recessed Sprinkler Types

Recessed Pendent

Approvals

VdS Schadenverhütung GmbH: Certificate
EC Certificate: 0786-CPD-40282, 0786-CPD-40283

Product Description

Reliable Models F1FR LO and F1FR LO Recessed Sprinklers are quick response sprinklers which combine the durability of a standard sprinkler with the attractive low profile of a decorative sprinkler.

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

The glass bulb consists of an accurately controlled amount of special fluid hermetically sealed inside a precisely manufactured glass capsule. This glass bulb is specially constructed to provide fast thermal response. The balance of parts are made of brass, copper and beryllium nickel.

At normal temperatures, the glass bulb contains the 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

Quick response sprinklers are used in fixed fire protection systems: Wet, Dry, Deluge or Preaction. Care must be exercised that the orifice size, temperature rating, deflector style and sprinkler type are in accordance with the latest published standards of the National Fire Protection Association or the approving Authority Having Jurisdiction. Quick response sprinklers are intended for installation as specified in NFPA 13, FM Global Loss Prevention Data Sheet 2-8N or other applicable standards. Quick response sprinklers and standard response sprinklers should not be intermixed.

Model F1FR LO Quick Response Upright & Pendent Sprinklers

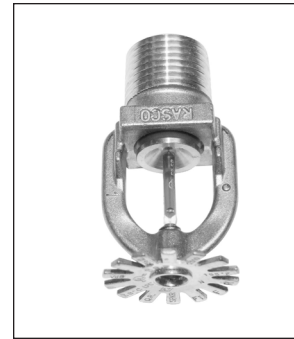
Installation Wrench: Model D Sprinkler Wrench or Model W2 Sprinkler Wrench

Installation Data:

Sprinkler Type	K Factor		Sprinkler Height
	US	Metric	
Standard-Upright (SSU) and pendent (SSP) Deflectors Marked to Indicate Position			
17/32" (20mm) Large Orifice with R1/2" Thread	8.0	115	2.3" (58mm)



Upright



Pendent

Model F1FR LO Quick Response Recessed Pendent Sprinkler^{(1) (2)}

Installation Wrench: Model GFR2 Sprinkler Wrench

Installation Data:

Nominal Orifice	Thread Size "T"	Nominal K Factor		Sprinkler Height
		US	Metric	
17/32" (20mm)	R1/2"	8.0	115	2.3" (58mm)

⁽¹⁾ Refer to escutcheon data table for dimensions

⁽²⁾ Currently not VdS Approved.

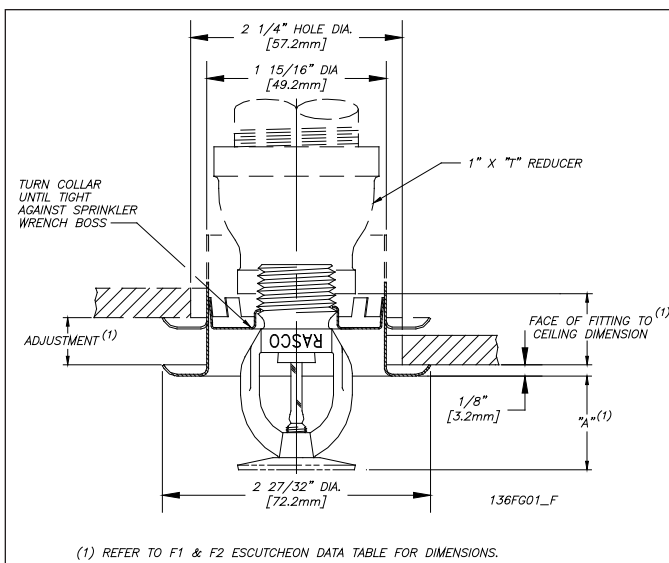


Fig. 1

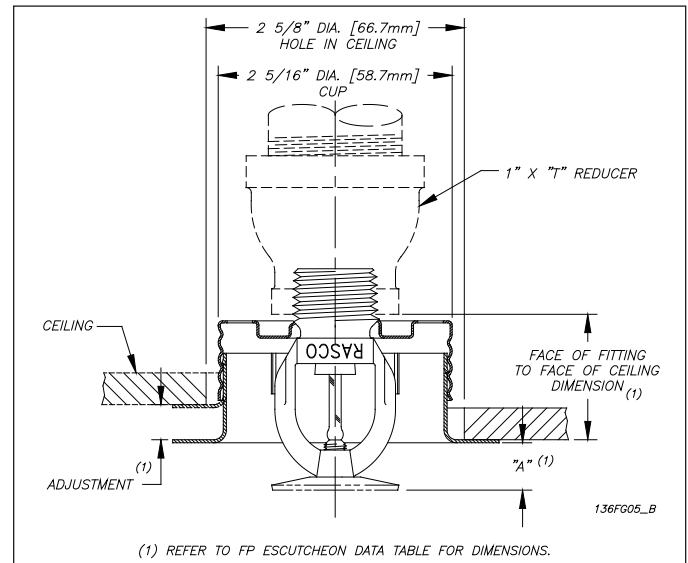


Fig. 2

Installation

Quick response sprinklers are intended for installation as specified in NFPA 13, FM Global Loss Prevention Data Sheet 2-8N or other applicable standards. Quick response sprinklers and standard response sprinklers should not be intermixed.

The Model F1FR LO Recessed Quick Response Sprinklers are to be installed as shown. The Model F1 or F2 Escutcheons illustrated are the only recessed escutcheons to be used with the Model F1FR LO Sprinklers. The use of any other recessed escutcheon will void all approvals and negate all warranties.

When installing Model F1FR LO Sprinklers, use the Model D Sprinkler Wrench or Model W2 Sprinkler Wrench. When installing Model F1FR LO Recessed Pendant or Sidewall Sprinklers, use the Model GFR1 Sprinkler Wrench. Any other type of wrench may damage these sprinklers.

Glass bulb sprinklers have orange bulb protectors to minimize bulb damage during shipping, handling and installation. REMOVE THIS PROTECTION AT THE TIME THE SPRINKLER SYSTEM IS PLACED IN SERVICE FOR FIRE PROTECTION. Removal of the protectors before this time may leave the bulb vulnerable to damage. RASCO wrenches are designed to install sprinklers when covers are in place. REMOVE PROTECTORS BY UNDOING THE CLASP BY HAND. DO NOT USE TOOLS TO REMOVE THE PROTECTORS.

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.

Escutcheon Data

Escutcheon Model	Adjustment	"A" Dimension	Face of Fitting to Ceiling or Wall Dimension
F1	Max Recess	1 1/2" (38.1mm)	3/16" - 15/16"
	Min Recess	3/4" (19.1mm)	(5mm - 24mm)
F2	Max Recess	1 1/2" (38.1mm)	3/16" - 11/16"
	Min Recess	1" (24.5mm)	(5mm - 17mm)
FP Push-on/ Thread-off	Max Recessed Min Recessed	5/16" (8mm) 15/16" (24mm)	1 1/2" - 1" (38.1mm - 25.4mm)

Maintenance

The Models F1FR LO and F1FR LO Recessed 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 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.

Sprinkler Types

Standard Upright
Standard Pendant
Recessed Pendant

Finishes⁽¹⁾⁽²⁾

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.

⁽²⁾ FP Push-on/Thread-off escutcheon.

Ordering Information

Specify:

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

Note: When Model F1FR LO 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.

Manufactured by

Reliable[®]

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Revision lines indicate updated or new data.

EG. Printed in U.S.A.12/17

P/N 9999970414