

# F1 FR Quick Response K80 Commercial



**Temperature Range** 68°C to 93°C

**Installation Data**

Thread Size mm	K Factor	Sprinkler Temp.	Sprinkler Temp.	Sprinkler Temp.	Sprinkler Length
1/2" NPT	80	68°C	79°C	93°C	56 mm

**RRP**  
**White**  
**\$ 24.00**  
**Chrome**  
**\$ 23.00**  
**Brass**  
**\$ 21.00**  
**Plus GST**

**Listings & Approvals**

1. Listed by Underwriters Laboratories, Inc. (UL)
- 2. Listed by Underwriters' Laboratories of Canada (ULC)**
- 3. Certified by FM Approvals**
4. Loss Prevention Council (LPC, UK)
5. NYC BS&A No. 587-75-SA
6. Meets MIL-S-901C and MIL-STD 167-1
7. Verband der Schadenversicherer (VdS, Germany)
8. NYC MEA 258-93-E

**UL Listing Category**

Sprinklers, Automatic & Open  
Quick Response Sprinkler

**Product Description**

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

The Models F1 FR and F1 FR 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 F1 FR and F1 FR Recessed sprinklers to apply water to a fire much faster than standard sprinklers of the same temperature rating.

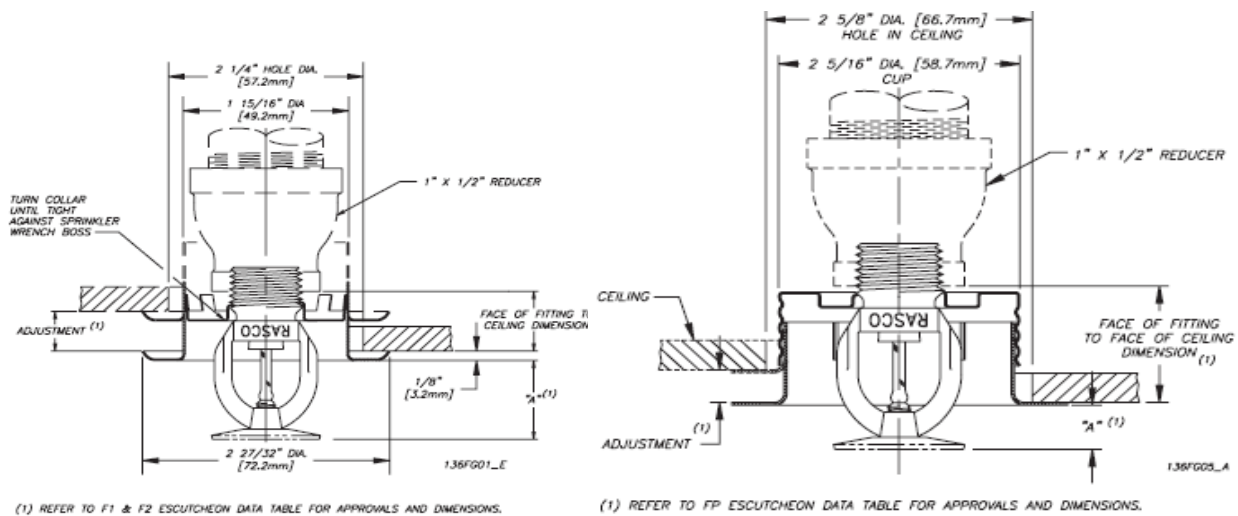
The glass bulb consists of an accurately controlled amount of special fluid hermetically sealed inside a precisely manufactured glass capsule. This glass bulb is specially constructed to provide fast thermal response. The balance of parts are made of brass, copper and beryllium nickel.

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 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.

## Application and Installation

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.



## Installation

Quick response sprinklers are intended for installation as specified in NFPA13, 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 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 sprinklers. The use of any other recessed escutcheon will void all approvals and negate all warranties.

When installing Model F1 FR Sprinklers, use the Model D Sprinkler Wrench. When installing Model F1 FR Recessed Pendent or Sidewall Sprinklers, use the Model GFR1 Sprinkler Wrench. Any other type of wrench may damage these sprinklers.

Glassbulb 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		Max. Ambient Temp.	Bulb Color
	°C	°F		
Ordinary	57	135	100°F (38°C)	Orange
Ordinary	68	155	100°F (38°C)	Red
Intermediate	79	175	150°F (66°C)	Yellow
Intermediate	93	200	150°F (66°C)	Green
High <sup>(1)</sup>	141	286	225°F (107°C)	Blue

<sup>(1)</sup> Not available for recessed sprinklers.

### Escutcheon Data

Escutcheon Model	Approvals	Adjustment	"A" Dimension	Face of Fitting to Ceiling or Wall Dimension
F1	1,2,4,8	Max Recess Min Recess	1 1/2" (38.1mm) 3/4" (19.1mm)	3/8" - 5/8" (5mm - 24mm)
F2	1,2,3,4,5,7,8	Max Recess Min Recess	1 1/2" (38.1mm) 5/16" (24mm)	3/8" - 1 1/8" (5mm - 17mm)
FP Push-on/ Thread-off	1,2	Max Recessed	7/16" (11mm)	1 1/2" (38.1mm)
	1,2	Min Recessed	15/16" (24mm)	1" (25.4mm)

### Maintenance

The Models F1FR and F1FR 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 anyway. 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.