

Reliable®

F1 and F1FR Series Conventional Sprinklers

K-factor 5.6 (80) and 8.0 (115)

Features

- Standard Response or Quick Response
- Conventional deflector
- Low profile, compact design
- Available in a wide variety of finishes

Product Description

Conventional (or "old-style" sprinklers) direct approximately 40% of their water discharge up against the ceiling and the remainder downward to the floor, and may be used in either the upright or pendent position.

Reliable Model F1 Conventional Sprinklers are standard response fire sprinklers utilizing a 5.0 mm glass bulb thermal element.

Reliable Model F1FR Conventional Sprinklers are quick response fire sprinklers utilizing a sensitive 3.0 mm thermal glass bulb element.

These sprinklers are available in 5.6 (80 metric) and 8.0 (115 metric) K factor.

When used in the pendent position, sprinklers may be installed exposed or surface mounted using escutcheons such as the Reliable Models B, C, or HB (reference Technical Bulletin 204).

Table A provides a summary of the approvals and availability of specific Model F1 and F1FR Series Conventional sprinkler configurations. Additional technical information for each sprinkler model is provided on the following pages.



Model F1-56 Conventional



Model F1FR56 Conventional



Model F1-80 Conventional



Model F1FR80 Conventional

Note: Not all versions of the product are shown.

F1 and F1FR Series Conventional Sprinklers

Table A

Sprinkler Model	K-Factor gpm/ psi ^{1/2} (lpm/bar ^{1/2})	Orientation	Response	Listings & Approvals	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
F1-56	5.6 (80)	Conventional	SR	LPCB, VdS, CE, UKCA	175 psi (12 bar)	RA1375
F1FR56	5.6 (80)	Conventional	QR	LPCB, VdS, CE, WM, UKCA	175 psi (12 bar)	RA1475
F1-80	8.0 (115)	Conventional	SR	LPCB, VdS, UKCA	175 psi (12 bar)	R1772
F1FR80	8.0 (115)	Conventional	QR	LPCB, UKCA	175 psi (12 bar)	R3672

Technical Specifications

Style: Upright or Pendent
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Thermal Sensor: 5 mm Glass Bulb
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Finishes

(See Table B)

Sensitivity

Standard Response

Temperature Ratings

135°F (57°C)
 155°F (68°C)
 175°F (79°C)
 200°F (93°C)
 286°F (141°C)
 360°F (182°C)

Sprinkler Wrench

Model W2

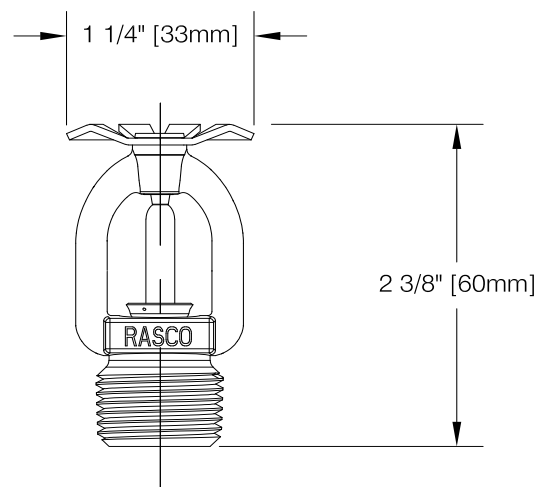
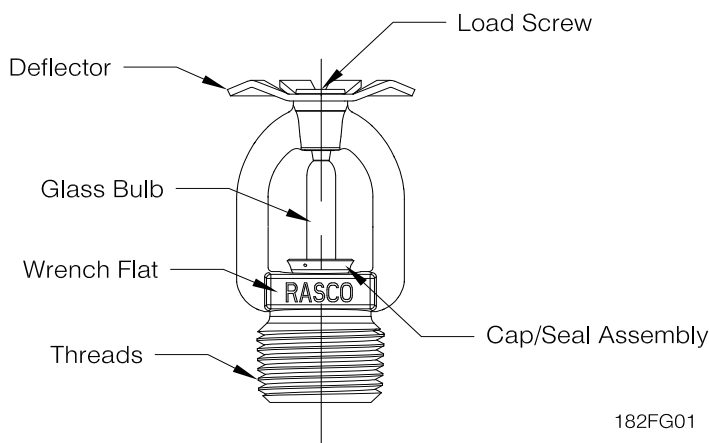
Listings and Approvals

LPCB
 VdS
 CE
 UKCA: 0832-UKCA-CPR-S5045



Model F1-56 Conventional Sprinkler Components and Dimensions

Figure 1



Technical Specifications

Style: Upright or Pendent
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Thermal Sensor: 3 mm Glass Bulb
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Finishes
 (See Table B)

Sensitivity
 Quick Response

Temperature Ratings

135°F (57°C)
 155°F (68°C)
 175°F (79°C)
 200°F (93°C)
 286°F (141°C)

Sprinkler Wrenches
 Model W2

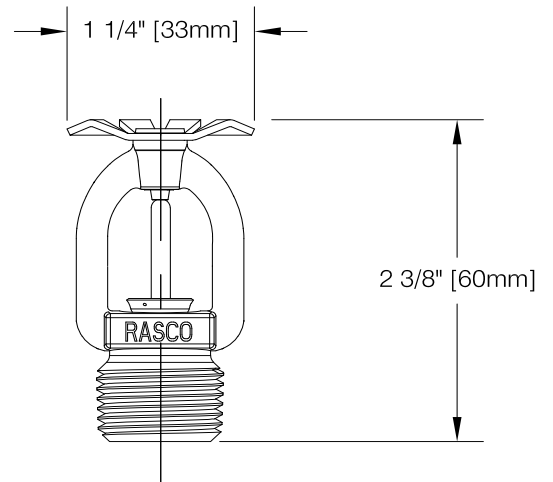
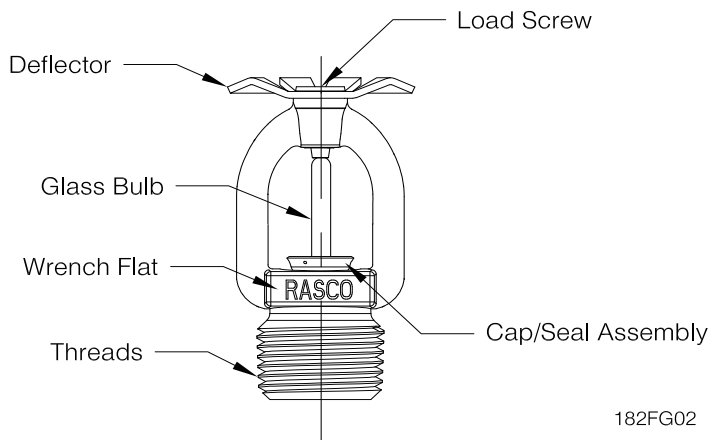
Listings and Approvals

LPCB
 VdS
 CE
 WM
 UKCA: 0832-UKCA-CPR-S5045



Model F1FR56 Conventional Sprinkler Components and Dimensions

Figure 2



Technical Specifications

Style: Upright or Pendent
Threads: 3/4" NPT or ISO 7-R3/4
Nominal K-Factor: 8.0 (115 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Thermal Sensor: 5 mm Glass Bulb
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Finishes

(See Table B)

Sensitivity

Standard Response

Temperature Ratings

135°F (57°C)
 155°F (68°C)
 175°F (79°C)
 200°F (93°C)
 286°F (141°C)
 360°F (182°C)

Sprinkler Wrenches

Model W2

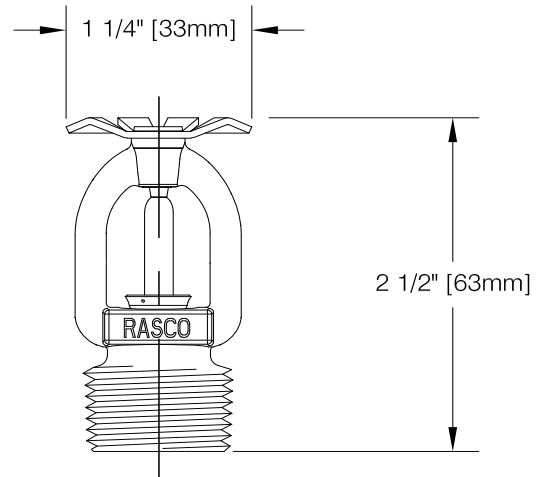
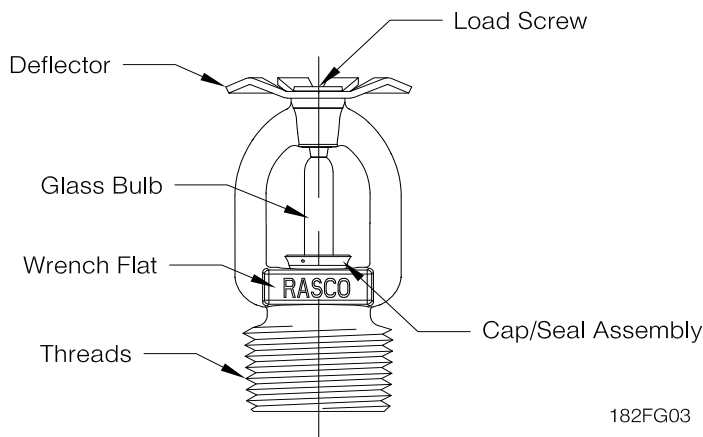
Listings and Approvals

LPCB
 VdS
 UKCA: 0832-UKCA-CPR-S5106



Model F1-80 Conventional Sprinkler Components and Dimensions

Figure 3



Technical Specifications

Style: Upright or Pendent
Threads: 3/4" NPT or ISO 7-R3/4
Nominal K-Factor: 8.0 (115 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Thermal Sensor: 3 mm Glass Bulb
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Finishes
 (See Table B)

Sensitivity
 Quick Response

Temperature Ratings

135°F (57°C)
 155°F (68°C)
 175°F (79°C)
 200°F (93°C)
 286°F (141°C)

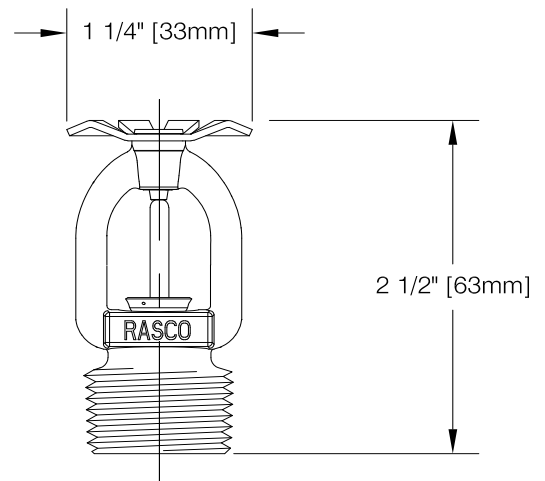
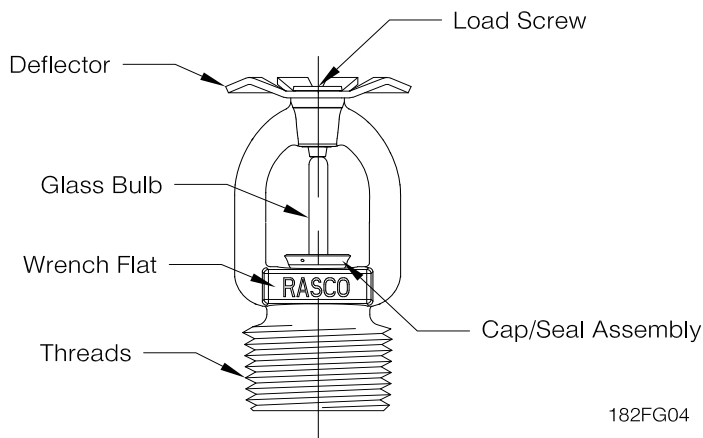
Sprinkler Wrenches
 Model W2

Listings and Approvals
 LPCB
 UKCA: 0832-UKCA-CPR-S5105



Model F1FR80 Conventional Sprinkler Components and Dimensions

Figure 4



Model W2 Wrench**Figure 5**

Installation

Model F1 and F1FR Series sprinklers must be installed with the Reliable Model W-2 sprinkler installation wrench as identified in the Design and Installation Information table in this Bulletin. Any other wrench may damage the sprinkler. The Model W-2 wrench has two sets of jaws. Use the smallest set of jaws that fit on the wrench flats of the sprinkler. A leak tight sprinkler joint can be obtained with a torque of 8 to 18 lb-ft (11 to 24 N-m). Do not tighten sprinklers over the maximum recommended installation torque. Exceeding the maximum recommended installation torque may cause leakage or impairment of the sprinkler.

Glass bulb sprinklers have orange bulb protectors or protective caps to minimize bulb damage during shipping, handling and installation. Reliable sprinkler installation wrenches are designed to install sprinklers with bulb protectors in place. Remove the bulb protector at the time when the sprinkler system is placed in service for fire protection. Removal of the bulb protector before this time may leave the bulb vulnerable to damage. Remove bulb protectors by undoing the clasp by hand. Do not use tools to remove bulb protectors.

Maintenance

Reliable Model F1 and F1FR series sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25, as well as the requirements of any Authorities Having Jurisdiction.

Prior to installation, sprinklers should remain in the original cartons and packaging until used. This will minimize the potential for damage to sprinklers that could cause improper operation or non-operation.

Do not clean sprinklers with soap and water, ammonia liquid or any other cleaning fluids. Remove dust by gentle vacuuming without touching the sprinkler.

Replace any sprinkler which has been painted (other than factory applied). A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers. Failure to properly maintain sprinklers may result in inadvertent operation or non-operation during a fire event.

Sprinkler Finishes⁽¹⁾⁽²⁾**Table B**

Standard Finishes	Special Application Finishes
Bronze	Electroless Nickel PTFE
Chrome Plated	Bright Brass ⁽³⁾
White Polyester	Chrome Dull

Notes:

1. Other finishes and colors are available on special order. Consult your Reliable sales representative for details.
2. Paint or any other coating applied over the factory finish will void all approvals and warranties.
3. For 200°F (93°C) maximum temperature rated sprinklers only.

Guarantee

For the Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Ordering Information

Specify the following when ordering:

- **Sprinkler**
F1-56 Conventional
F1FR56 Conventional
F1-80 Conventional
F1FR80 Conventional
- **Temperature Rating**
- **Sprinkler Finish**
See Table B
- **Sprinkler Wrench**
Model W-2