

Reliable®

Model F1 Model F1 Recessed Standard Response Sprinklers

The Designer® Model F1 Sprinkler

Standard Upright
Standard Pendent
Extended Coverage Pendent
Conventional

The Designer®II Model F1 Recessed Sprinkler

Recessed Pendent
Recessed Extended Coverage Pendent

For Model F1 ½" K 5.6 (80) Sprinkler Types refer to Bulletin 013, 024 or 027 for technical specifications and approvals.

Approval Organizations

1. Underwriters Laboratories Inc. (UL)
2. Underwriters' Laboratories of Canada (ULC)
3. Factory Mutual Approvals (FM)
4. Loss Prevention Council (LPCB, UK)
5. NYC BS&A No. 587-75-SA
6. Pleniére Assemblée
7. Verband der Schadenversicherer GmbH
8. NYC MEA 258-93-E

UL Listing Category

Sprinklers, Automatic & Open (VNIV)

Product Description

The F1 Glass Bulb Sprinkler combines the durability of a standard sprinkler with the attractive low profile of a decorative sprinkler. Whether installed on exposed piping or in an office ceiling, it is functional and attractive.

Beautifully versatile is the description for the Reliable Model F1 Recessed Designer glass bulb sprinkler. Recessing The Designer® enhances its already low profile decorative appearance, and facilitates a rapid and perfect installation.

Model F1 Recessed Designer's escutcheon is highly adjustable. The two piece construction makes field installation a very easy and rapid task. This also allows ceiling panels to later be removed without shutting down the fire protection system, thus facilitating maintenance of above ceiling services.

The Designer® Automatic Sprinkler utilizes a frangible glass bulb. The glass bulb consists of an accurately controlled amount of special fluid hermetically sealed inside of a precisely manufactured glass capsule. This glass bulb is specially constructed to provide fast thermal response.



Upright



Pendent



Conventional



Recessed Pendent



Extended Coverage
Pendent



Recessed Extended
Coverage Pendent

At normal temperatures, the glass bulb contains the fluid in both the liquid phase and in the vapor phase. 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 F1 Sprinkler temperature rating is identified by the color of the glass bulb capsule as well as frame color where applicable.

Model F1 Upright, Pendent & Conventional Sprinklers

Installation Wrench: Model D Sprinkler Wrench



Upright



Pendent



Conventional

Installation Data:

Nominal Orifice	Thread Size	Nominal K Factor		Sprinkler Height	Approval Organization	Sprinkler Identification Numbers (SIN)	
		US	Metric			Upright	Pendent
Standard-Upright (SSU) and pendent Deflectors Marked to Indicate Position							
17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.3" (58mm)	1,2,3,4 ⁽¹⁾ ,7,8	R1722 ⁽⁴⁾⁽⁵⁾	R1712
17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.3" (58mm)	7 ⁽³⁾		
7/16" (11mm)	1/2" NPT (R1/2)	4.2	60	2.2" (56mm)	1,2,8	R1723 ⁽⁴⁾	R1713
3/8" (10mm)	1/2" NPT (R1/2)	2.8	40	2.54" (65mm)	1,2,3,8	R1721 ⁽⁴⁾⁽²⁾	R1711
10mm XLH	R3/8	4.2	60	56.1mm	4 ⁽¹⁾ ,6,7	R1724	R1714
Conventional-Install in Upright or Pendent Position							
10mm XLH	R3/8	4.2	60	56.1mm	-----	R1774	
20mm	3/4" NPT (R3/4)	8.0	115	58.1mm	4,7	R1772	

⁽¹⁾ LPCB Approval up to 286°F (141°C)

⁽²⁾ FM Approval for SSU up to and including 200°F (93°C).

⁽³⁾ (F1S5) VdS Approval for Intermediate Response 155°F (68°C) only.

⁽⁴⁾ Polycoated upright UL and ULC listed corrosion resistant.

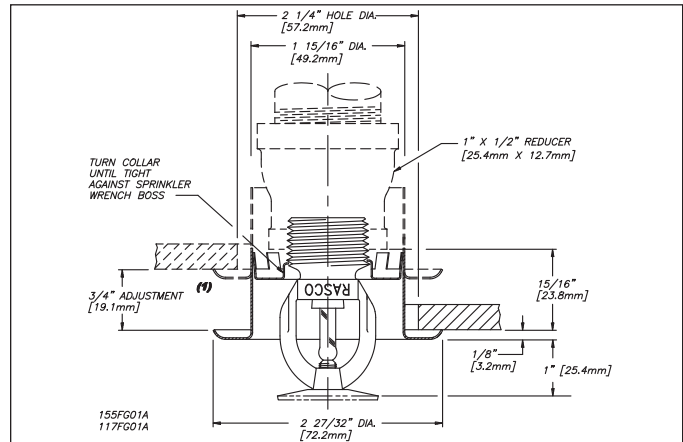
⁽⁵⁾ FM Approved for polycoated sprinklers.

Model F1 Recessed Pendent Sprinkler

Installation Wrench: Model GFR2 Sprinkler Wrench



Recessed Pendent



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

Installation Data:

Nominal Orifice	Thread Size	Nominal K Factor		Sprinkler Height	Approval Organization	Sprinkler Identification Numbers (SIN)
		US	Metric			
17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.3" (58mm)	1,2,3,4,8	R1712 ⁽¹⁾
17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.3" (58mm)	7 ⁽²⁾	
7/16" (11mm)	1/2" NPT (R1/2)	4.2	60	2.2" (56mm)	1,2,8	R1713
3/8" (10mm)	1/2" NPT (R1/2)	2.8	40	2.2" (56mm)	1,2,8	R1711
10mm	R3/8	4.2	60	56.1mm	4,7	R1714 ⁽¹⁾

⁽¹⁾ LPCB Approval is for 57°C through 93°C ratings.

⁽²⁾ (F1S5) VdS Approval for Intermediate Response 155F (68°C) only.

Model F1 Extended Coverage Pendent Sprinkler

Deflector: EC Pendent

Installation Wrench: Model D Sprinkler Wrench

Approval Type: Extended Coverage - Light Hazard Occupancy



Extended Coverage Pendent

Coverage Area					
Flow Rate		Pressure Nominal K=8.0 (115)		Max. Area Width x Length	
gpm	L/min	psi	bar	ft. x ft.	m x m
26	98.4	10.6	0,7	16 x 16	4.9 x 4.9
33	125.0	17.0	1,2	18 x 18	5.5 x 5.5
40	151.4	25,0	1,7	20 x 20	6.0 x 6.0

Installation Data:

Nominal Orifice	Thread Size	Nominal K Factor		Sprinkler Height	Approval Organization	Temperature Rating		Sprinkler Identification Numbers (SIN)
		US	Metric			°F	°C	
17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.2" (56mm)	1,2,8	135, 155	57, 68	R1742

Model F1 Recessed Extended Coverage Pendent Sprinkler

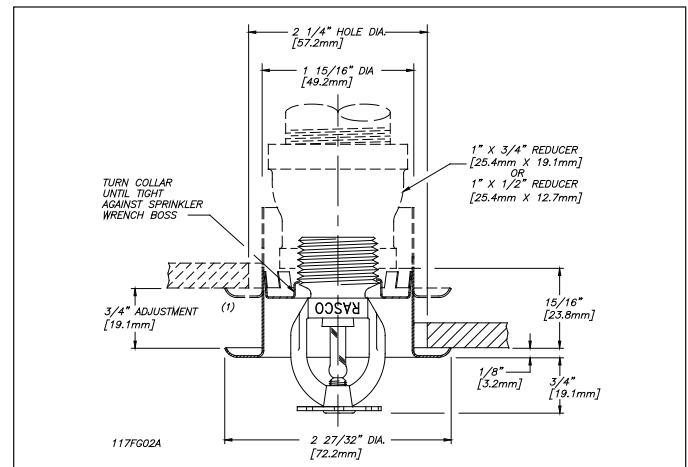
Deflector: EC Pendent

Installation Wrench: Model GFR2 Sprinkler Wrench

Approval Type: Extended Coverage - Light Hazard Occupancy



Recessed Pendent



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

Coverage Area					
Flow Rate		Pressure Nominal K=8.0 (115)		Max. Area Width x Length	
gpm	L/min	psi	bar	ft. x ft.	m x m
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Installation Data:

Nominal Orifice	Thread Size	Nominal K Factor		Sprinkler Height	Approval Organization	Temperature Rating		Sprinkler Identification Numbers (SIN)
		US	Metric			°F	°C	
17/32" (20mm)	3/4" NPT (R3/4)	8.0	115	2.2" (56mm)	1,2,8	135, 155	57, 68	R1742

Model F1 & F1 Recessed Sprinklers

Application

Model F1 and F1 Recessed 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.

Installation

Model F1 sprinklers are standard response sprinklers intended for installation as specified in NFPA 13. They must also be installed with the Model D Sprinkler Wrench specifically designed by Reliable for use with these sprinklers.

The Model F1 Recessed Sprinklers are to be installed with a maximum recess of $\frac{3}{4}$ inch (19mm). The Model F1 Escutcheon illustrated is the only recessed escutcheon to be used with the Model F1 Pendent and EC Sprinklers. The use of any other recessed escutcheon will void all approvals and negate all warranties. When installing Model F1 Recessed Pendent and EC Pendent Sprinklers, use the Model GFR2 Sprinkler Wrench. 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

The Models F1 and F1 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 fluid. 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.

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)

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
Extra High ⁽¹⁾	360	182	300	149	Mauve

⁽¹⁾ Not Available for F1 Recessed

Finishes⁽¹⁾

Standard Finishes	
Sprinkler	Escutcheon
Bronze	Brass
Chrome	Chrome
Polyester Coated ⁽⁶⁾⁽⁷⁾	White Painted
Special Application Finishes	
Sprinkler	Escutcheon
Bright Brass ⁽²⁾	Bright Brass
Black Plated	Black Plated
Black Paint ⁽³⁾⁽⁴⁾	Black Paint
Off White ⁽³⁾	Off White
Satin Chrome	Satin Chrome
Lead Plated ⁽³⁾⁽⁴⁾	
Wax Coated ⁽³⁾⁽⁴⁾⁽⁵⁾	
Wax Over Lead ⁽³⁾⁽⁴⁾	

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

⁽²⁾ 200°F (93°C) maximum.

⁽³⁾ UL and ULC listed, and NYC approved only.

⁽⁴⁾ 155°F to 200°F (68°C to 93°C) ratings only.

⁽⁵⁾ 286°F (141°C) sprinklers may be coated for ambient conditions not exceeding 150°F (66°C).

⁽⁶⁾ UL and ULC listed corrosion resistant SIN numbers: R1721, R1722 and R1723 in standard Black or White.

⁽⁷⁾ FM Approved for SIN R1722 in standard Black or White.

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



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Revision lines indicate updated or new data.

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