



Model F1 Model F1 Recessed Standard Response Sprinklers

The Designer[®] Model F1 Sprinkler

Standard Upright
Standard Pendent
Extended Coverage Pendent
Conventional
Vertical Sidewall
Horizontal Sidewall
– HSW 1 Deflector
Horizontal Sidewall Extended Coverage
– EC6 Deflector

The Designer[®] II. Model F1 Recessed Sprinkler

Recessed Pendent
Recessed Extended Coverage Pendent
Recessed Extended Coverage Horizontal Sidewall

Product Description

The Reliable 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. The Horizontal and Vertical Sidewall Sprinklers provide an equally attractive appearance when ceiling piping cannot be used.

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.

The 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.

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.



Upright



Pendent



Vertical Sidewall



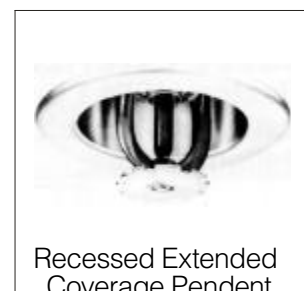
Conventional



Horizontal Sidewall



Recessed Pendent

Extended Coverage
Horizontal SidewallRecessed Extended
Coverage Horizontal
SidewallExtended Coverage
PendentRecessed Extended
Coverage Pendent

Model F1 Upright, Pendent & Conventional Sprinklers

Installation Wrench: Model D Sprinkler Wrench

Installation Data:

Sprinkler Type	"K" Factor		Sprinkler Height	Approval Organizations
	US	Metric		
Standard-Upright (SSU) and Pendent (SSP) Deflectors Marked to Indicate Position				
1/2" Standard Orifice with 1/2" NPT (R 1/2) Thread	5.62	81.0	2.2"	1,2,3,4,5,6,7
1 7/32" Large Orifice with 3/4" NPT (R 3/4) Thread	8.0	115.3	2.3"	1,2,3,8
7/16" Small Orifice with 1/2" NPT (R 1/2) Thread ⁽¹⁾	4.24	61.0	2.54"	1,2,8
3/8" Small Orifice with 1/2" NPT (R 1/2) Thread ^{(1) (2)}	2.82	40.6	2.54"	1,2,3,8
10mm Orifice XLH with R 3/8 Thread	4.10	59.1	56.1mm	4,6,7
Conventional-Install in Upright or Pendent Position				
10mm Orifice XLH with R 3/8 Thread	4.10	59.1	56.1mm	—
15mm Standard Orifice with 1/2" NPT (R 1/2) Thread	5.62	81.0	56.1mm	4,6,7
20mm Large Orifice with 3/4" NPT (R 3/4) Thread	8.0	115.3	58.4mm	4

⁽¹⁾ Identified by a pintle extending beyond the deflector.

⁽²⁾ FM Approval for SSU only, up to 200°F.

⁽³⁾ LPC Approval up 286°F (141°C)



Upright



Pendent



Upright ⁽¹⁾



Conventional

Model F1 Recessed Pendent Sprinkler

Installation Wrench: Model RC1 Sprinkler Wrench

Installation Data:

Nominal Orifice	Thread Size	"K" Factor		Sprinkler Height	Approval Organizations
		US	Metric		
1/2" (15mm)	1/2" NPT (R 1/2)	5.62	81.0	2.2" (56.1mm)	1,2,3 ⁽³⁾ ,4,5,7
1 7/32" (20mm)	3/4" NPT (R 3/4)	8.0	115.3	2.3" (58.4mm)	1,2,3 ⁽³⁾ ,4,8
7/16" ⁽¹⁾	1/2" NPT	4.24	61.0	2.54"	1,2,8
3/8" ⁽¹⁾	1/2" NPT	2.82	40.6	2.54"	1,2,8
10mm	R 3/8	4.10	59.1	56.1mm	4 ⁽⁴⁾ ,7

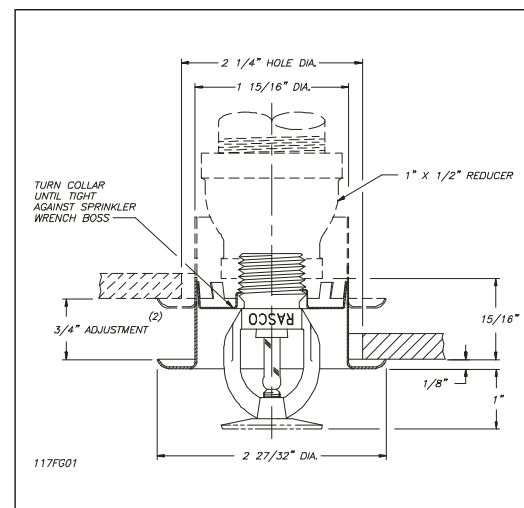
⁽¹⁾ Identified by a pintle extending beyond the deflector.

⁽²⁾ When installed directly into a tee the escutcheon adjustment will be reduced.

⁽³⁾ FM Approval

- Ordinary Hazard – Groups 1 & 2, Wet Systems only.
- Light Hazard – No Limitations.

⁽⁴⁾ LPC Approval is XLH, OH I and OH II Occupancies only, 57°C through 93°C ratings.



Model F1 Vertical Sidewall Sprinkler

Installation Wrench: Model D Sprinkler Wrench

Installation Position: Upright or Pendent

Approval Type: Light Hazard Occupancy

Installation Data:

Nominal Orifice	Thread Size	"K" Factor		Sprinkler Height	Approval Organizations
		US	Metric		
1/2" (15mm)	1/2" NPT (R 1/2)	5.62	81.0	2.2" (56.1mm)	1,2,3,4 ⁽¹⁾ ,5,6

⁽¹⁾ LPC Approval is pendent only, 57°C through 93°C ratings.



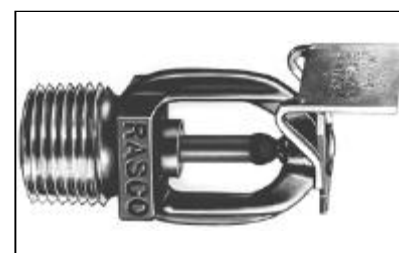
Model F1 Horizontal Sidewall Sprinkler

Deflector: HSW 1

Installation Wrench: Model D Sprinkler Wrench

Nominal Orifice	Thread Size	"K" Factor		Sprinkler Length	Approval Organizations	
		US	Metric		Light Hazard	Ordinary Hazard
1/2"	1/2" NPT	5.62	81.0	2.63"	1,2,3,5	1,2,5

Note: UL and ULC Listing permits use with F1 escutcheons, light hazard only.



Model F1 Extended Coverage Pendent Sprinkler

Deflector: EC Pendent

Installation Wrench: Model D Sprinkler Wrench

Approval Type: Extended Coverage — Light Hazard Occupancy

Installation Data: Use The Data Given Below For The F1 Recessed Extended Coverage Pendent Sprinkler.



Model F1 Recessed Extended Coverage Pendent Sprinkler

Deflector: EC Pendent

Installation Wrench: Model RC1 Sprinkler Wrench

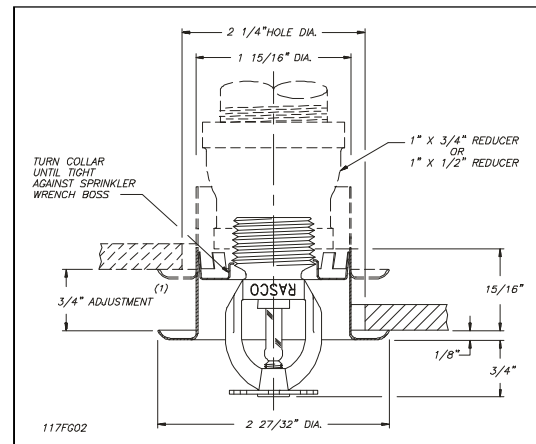
Approval Type: Extended Coverage — Light Hazard Occupancy

Installation Data:

Nominal Orifice	Thread Size	"K" Factor	Sprinkler Height	Approval Organizations	Temperature Rating °F
		US			
17/32"	3/4" NPT	8.0	2.2"	1,2,8	135,155
1/2"	1/2" NPT	5.62	2.2"	1,2,8	135,155

COVERAGE AREA			
Flow Rate (GPM)	Pressure (psi)		Max. Area Width x Length (ft.) x (ft.)
	K=8.0	K=5.6	
26	10.6	21.6	16 x 16
33	17.0	34.7	18 x 18
40	25.0	51.0	20 x 20

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



Model F1 Extended Coverage Horizontal Sidewall Sprinkler

Deflector: EC 6

Glass Bulb: 3mm 155°F Standard, Unless 5mm 135°F is Specified

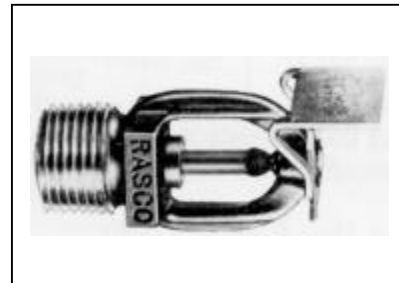
Installation Wrench: Model D Sprinkler Wrench

Approval Type: Extended Coverage — Light Hazard Occupancy

Installation Data:

Nominal Orifice	Thread Size	"K" Factor	Sprinkler Height	Approval Organizations	Temperature Rating °F
		US			
17/32"	3/4" NPT	8.0	2.75"	1,2,8	135 (5mm) or 155 (3mm)

COVERAGE AREA			
Flow Rate (GPM)	Pressure (psi)	Max. Area Width x Length (ft.) x (ft.)	Deflector to Ceiling Dimension Min. (in) – Max. (in)
36	20.3	16 x 22	4 — 10
39	23.8	16 x 24	4 — 10



Model F1 Recessed Extended Coverage Horizontal Sidewall Sprinkler

Deflector: EC 6

Glass Bulb: 3mm 155°F Only

Installation Wrench: Model GFR1 Sprinkler Wrench

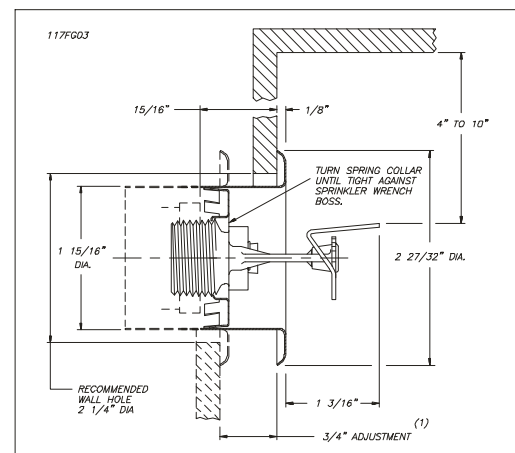
Approval Type: Extended Coverage — Light Hazard Occupancy

Installation Data:

Nominal Orifice	Thread Size	"K" Factor	Sprinkler Height	Approval Organizations	Temperature Rating °F
		US			
17/32"	3/4" NPT	8.0	2.75"	1,2,8	155

COVERAGE AREA			
Flow Rate (GPM)	Pressure (psi)	Max. Area Width x Length (ft.) x (ft.)	Deflector to Ceiling Dimension Min. (in) – Max. (in)
36	20.3	16 x 22	4 — 10
39	23.8	16 x 24	4 — 10

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



Model F1 & F1 Recessed Sprinklers

Application

Model F1 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.

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 dust by using a soft brush or gently 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.

Approval Organizations

1. Underwriters' Laboratories Inc.
2. Underwriters' Laboratories of Canada
3. Factory Mutual Research Corp.
4. Loss Prevention Council
5. NYC BS&A number 587-75-SA
6. Pleniére Assemblée
7. Verband der Schadenversicherer

ULI Listing Category

Sprinklers, Automatic & Open (VNIV)

Ordering Information

Specify

1. Sprinkler Model
2. Sprinkler Type
3. Orifice Size
4. Deflector Type
- Specify Bulb Size When ordering Model F1 EC HSW Sprinkler
5. Temperature Rating
6. Sprinkler Finish
7. Escutcheon Finish (where applicable)

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. The Model G/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 RC1 Sprinkler Wrench. When installing Model F1 Recessed EC HSW Sprinklers use the Model GFR1 Sprinkler Wrench. Any other type of wrench may damage these sprinklers.

Temperature Ratings

Classification	Sprinkler Temperature		Bulb Color
	°C	°F	
Ordinary	57	135	Orange
Ordinary	68	155	Red
Intermediate	79	175	Yellow
Intermediate	93	200	Green
High ⁽¹⁾	141	286	Blue
Extra High ⁽¹⁾	182	360	Mauve

⁽¹⁾ Not Available For F1 Recessed.

Standard Finishes⁽⁵⁾

Sprinkler	Escutcheon
Bronze	Bronze
Bright Brass Plated ⁽³⁾	Bright Brass Plated
Chrome Plated	Chrome Plated
White Polyester Coated ⁽²⁾	White Painted ⁽⁵⁾
Black Plated	Black Plated
Lead Plated ⁽⁴⁾	
Wax Coated ⁽⁴⁾	
Wax Over Lead ⁽⁴⁾	

⁽²⁾UL and ULC Listed and LPC Approved Only.

⁽³⁾200°F Maximum.

⁽⁴⁾155°F To 200°F Ratings Only.

⁽⁵⁾Other colors are available on special order.
Consult factory for details.

The equipment presented in this bulletin is to be installed in accordance with the latest pertinent 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 70 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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