Reliable®

F1XLH and F1FRXLH Series Standard Spray Sprinklers

K-factor 4.2 (60 metric)

Features

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

Important! Reliable fire sprinklers must be handled, stored, and installed in accordance with the guidelines in Caution Sheet 310 and this bulletin. Failure to follow these instructions may result in unintended operation or nonoperation of the fire protection system.

Product Description

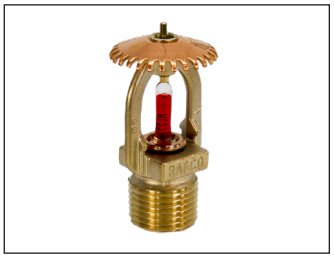
Reliable Model F1XLH Standard Spray Sprinklers are standard response fire sprinklers utilizing a 5.0 mm glass bulb thermal element.

Reliable Model F1FRXLH Standard Spray Sprinklers are quick response fire sprinklers utilizing a sensitive 3.0 mm thermal glass bulb element.

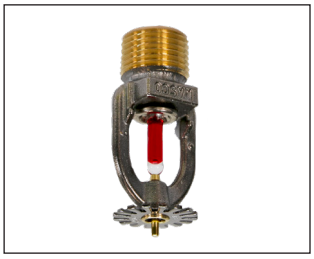
These sprinklers are characterized by a 4.2 (60 metric) K-factor with a pintle on the deflector.

Table A provides a summary of the approvals and availability of specific Model F1XLH and F1FRXLH Series Standard Spray Sprinkler configurations. Additional technical information for each sprinkler model is provided on the following pages.

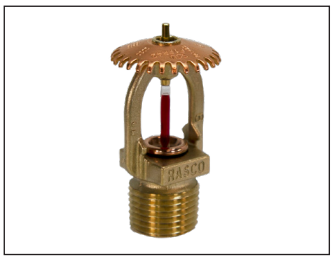
Pendent sprinklers may be installed exposed or surface mounted using escutcheons such as the Reliable Models B, C, or HB (reference Technical Bulletin 204). When installed recessed, the Models F1XLH and F1FRXLH series sprinklers are specifically listed and may only be installed with listed recessed escutcheons. Refer to the technical information on the following pages for specific listings for recessed sprinklers, and refer to Figure 5 for dimensional information.



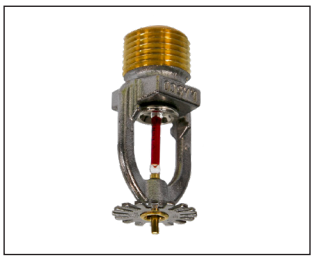
Model F1XLH Upright



Model F1XLH Pendent



Model F1FRXLH Upright



Model F1FRXLH Pendent

F1XLH and F1FRXLH 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)
F1XLH	4.2 (60)	Upright	SR	cULus	175 psi (12 bar)	RA1323
		Pendent				RA1313
F1FRXLH	4.2 (60)	Upright	QR	cULus	175 psi (12 bar)	RA1423
		Pendent				RA1413

Model F1XLH Upright Sprinkler — SIN RA1323

Technical Specifications
Style: Upright
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 4.2 (60 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)

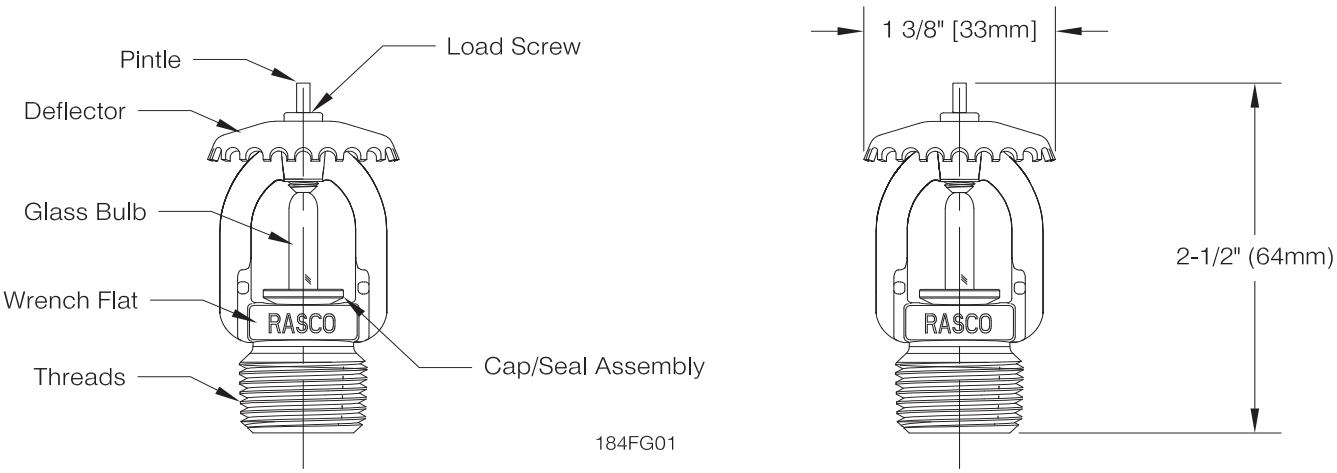
Guards and Shields
F1 Guard
F3 Guard with Shield

Sprinkler Wrench
Model W2
Model W14 (with guard installed)

Listings and Approvals
cULus



Model F1XLH Upright Sprinkler Components and Dimensions — **Figure 1**



Model F1XLH Pendent Sprinkler — SIN RA1313

Technical Specifications
Style: Pendent
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 4.2 (60 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)*

Guards and Shields
F7 Guard
F8 Guard with Shield

Recessed Escutcheons
F1 (cULus)
F2 (cULus)
FP (cULus)

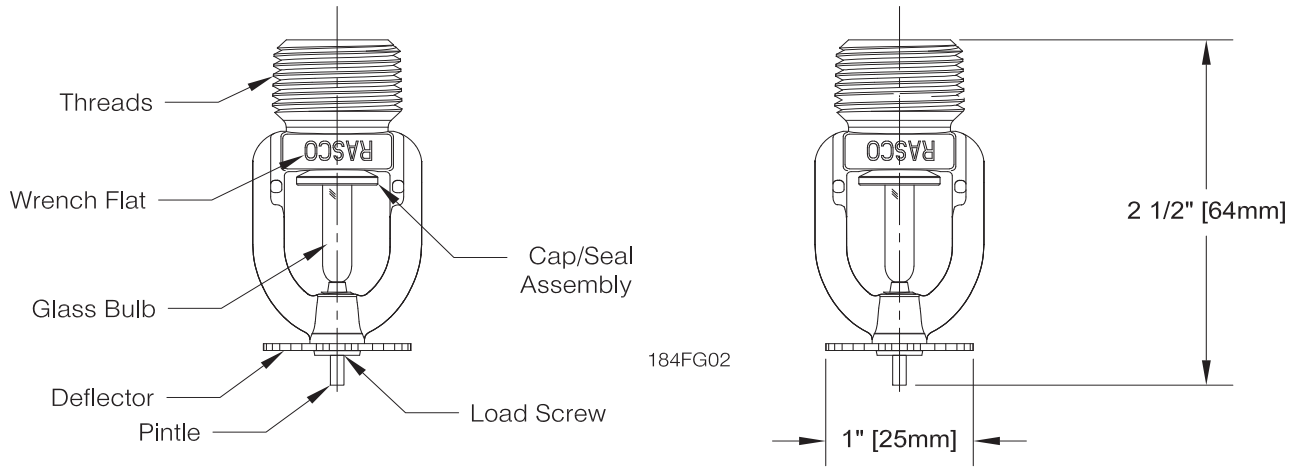
Sprinkler Wrenches
Model W2
Model W1 (Recessed)
Model W14 (with guard installed)

Listings and Approvals
cULus



***Note:** 286°F (141°C) and 360°F (182°C) temperature rated sprinklers not listed for recessed use.

Model F1XLH Pendent Sprinkler Components and Dimensions — **Figure 2**



Note: Please refer to Figure 5 for recessed installation.

Model F1FRXLH Upright Sprinkler — SIN RA1423

Technical Specifications
Style: Upright
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 4.2 (60 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)

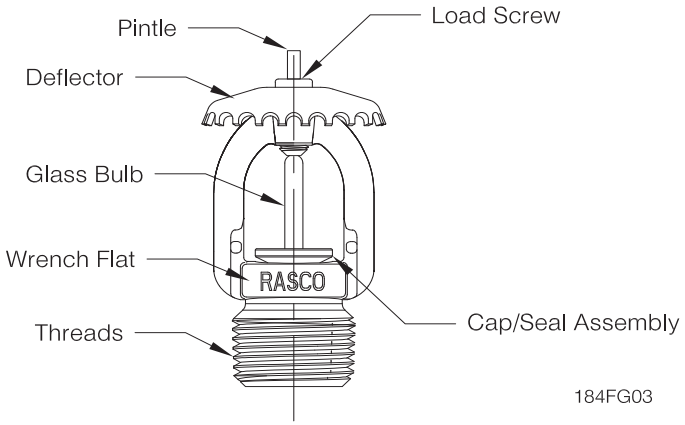
Guards and Shields
F1 Guard
F3 Guard with Shield

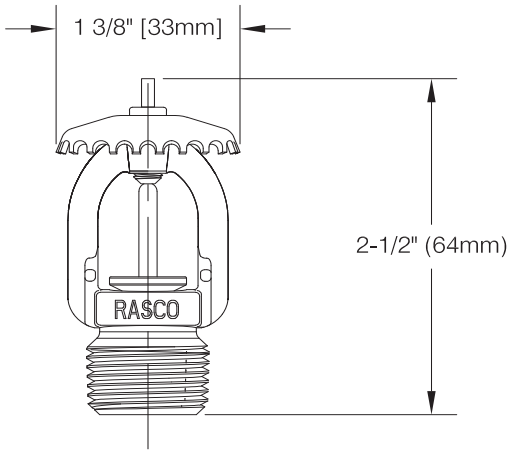
Sprinkler Wrenches
Model W2
Model W14 (with guard installed)

Listings and Approvals
cULus



Model F1FRXLH Upright Sprinkler Components and Dimensions — **Figure 3**





Model F1FRXLH Pendent Sprinkler — SIN RA1413

Technical Specifications
Style: Pendent
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 4.2 (60 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)*

Guards and Shields
F7 Guard
F8 Guard with Shield

Recessed Escutcheons
F1 (cULus)
F2 (cULus)
FP (cULus)

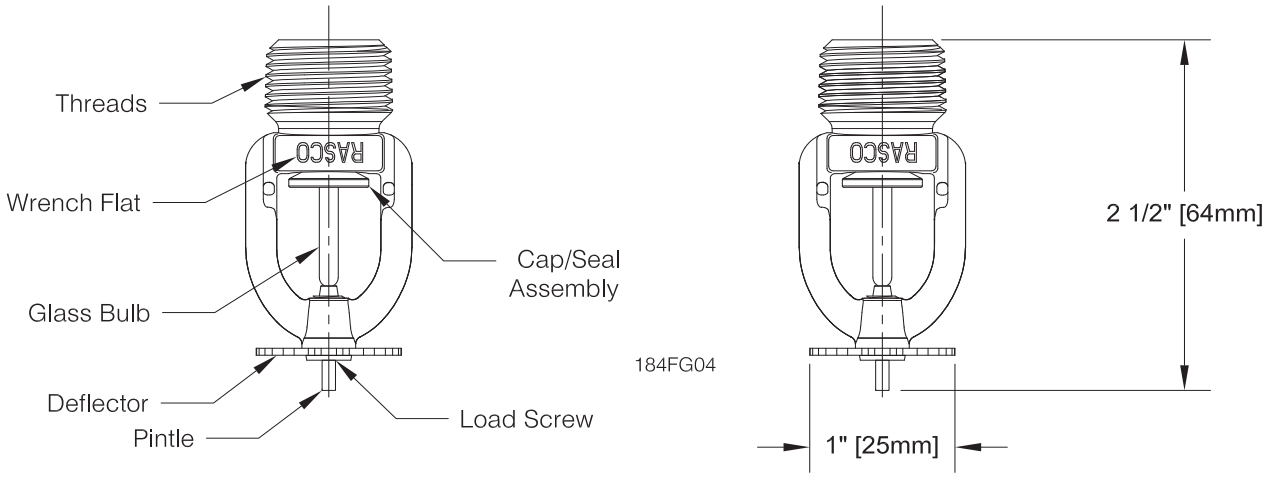
Sprinkler Wrenches
Model W2
Model W1 (Recessed)
Model W14 (with guard installed)

Listings and Approvals
cULus



***Note:** 286°F (141°C) temperature rated sprinkler not listed for recessed use.

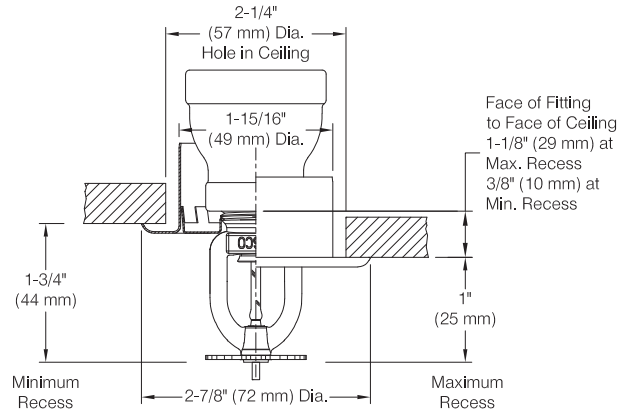
Model F1FRXLH Pendent Sprinkler Components and Dimensions — **Figure 4**



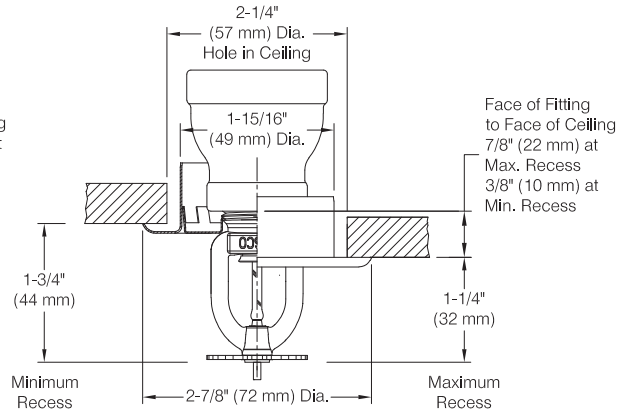
Note: Please refer to Figure 5 for recessed installation.

Recessed Installation

Figure 5

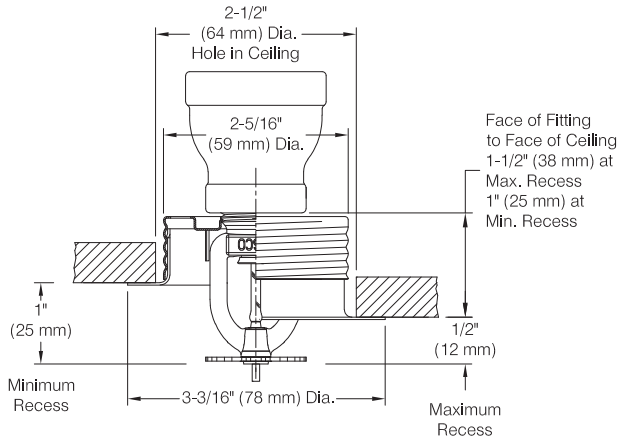


Model F1FRXLH Pendent Sprinkler
with Model F1 Recessed Escutcheon
(Model F1XLH Similar)



Model F1FRXLH Pendent Sprinkler
with Model F2 Recessed Escutcheon
(Model F1XLH Similar)

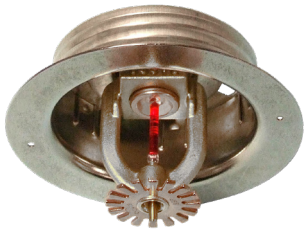
184FG05



Model F1FRXLH Pendent Sprinkler
with Model FP Recessed Escutcheon
(Model F1XLH Similar)



Model F1XLH
F1 Recessed
(Model F1FRXLH; F2 Similar)



Model F1FRXLH
FP Recessed
(Model F1XLH Similar)

Sprinkler, Escutcheon, and Cover Plate Finishes[1][2]

Table B

Standard Finishes		Special Application Finishes	
Sprinkler	**F1, F2 and FP[3] Escutcheons**	**Sprinkler**	**F1, F2 and FP[3] Escutcheons**
Bronze	Brass	Electroless Nickel PTFE[4]	Bright Brass
Chrome Plated	Chrome Plated	Bright Brass[5]	Black Paint
White Polyester[4]	White Polyester	Black Paint	Off White
		Off White	Chrome Dull
		Chrome Dull	
		Lead[4][6][7]	
		Wax Coated [4][6][7]	
		Wax Over Lead [4][6][7]	

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. The Model FP and recessed assembly consists of a sprinkler mounted in a galvanized steel cup with a finished trim ring.
4. cULus Listed as corrosion resistant.
5. For 200°F (93°C) maximum temperature rated sprinklers only.
6. Available on F1XLH standard response sprinklers only.
7. Lead, wax, and wax over lead are not available for 135°F (57°C) and 360°F (182°C) sprinklers.

Installation

Model F1XLH and F1FRXLH Series sprinklers must be installed with the Reliable sprinkler installation wrench identified in this Bulletin. Any other wrench may damage 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.

Wrenches **Figure 5**



Model W2 Wrench
(non-recessed)



Model W14 Wrench
(with guard installed)



Model W1 Wrench
(recessed)

Maintenance

Reliable Model F1XLH and F1FRXLH 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.

Guarantee

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

Ordering Information

Specify the following when ordering:

- **Sprinkler**
  [Model F1XLH] [Model F1FRXLH]
- **Deflector/Orientation**
  [Upright] [Pendent]
- **Temperature Rating**
  See individual sprinkler pages
- **Sprinkler Finish**
  See Table B
- **Sprinkler Wrench**
  Model W2 (non-recessed)
  Model W4 (recessed)
  Model W14 (with guard installed)
- **Guards and Shields**
  See individual sprinkler pages

P/N 9999970608