Reliable®

Model RFS42
Residential Flat Concealed
Horizontal Sidewall Sprinkler

Features

- Nominal 4.2 (60 metric) K-Factor
- 175 psi (12,0 bar) pressure rating
- Convenient push-on/pull-off flat cover plate with
- 1/8" (3 mm) adjustment
- Cover plate is available in a wide variety of colors and finishes
- Shipped complete with factory installed protective cap

Product Description

The Reliable Model RFS42 Concealed Residential Horizontal Sidewall Sprinkler is a cULus listed 165°F (74°C) ordinary temperature rated flat-plate concealed sprinkler specially designed to fit within a 3½" or larger stud space.

The sprinkler uses a push-on/pull-off flat cover plate assembly. The cover plate is attached to the skirt using 135°F (57°C) ordinary temperature classification solder. When the ambient temperature rises, the solder melts, allowing the the cover plate to release. The thermal element of the Model RFS42 is then exposed to the rising ambient temperature.

The Model RFS42 sprinkler is listed for a maximum service pressure of 175 psi (12,0 bar).The sprinkler assembly is shipped with a protective cap, and is installed using the Model G6 Sprinkler Wrench.

Listings & Approvals

1. Listed by Underwriters Laboratories Inc. (VKKW.EX3646) and UL Certified for Canada (VKKW7.EX3646)
2. LPCB; EN 12259-14:2020+A1:2022

Application

Reliable Model RFS42 sprinklers are specifically engineered to meet the latest residential sprinkler listing of UL Standard 199 (formerly UL 1626), and are intended for installation on wet pipe systems in NFPA 13, 13D, and 13R residential occupancies.

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.



Installation

The Model RFS42 sprinkler must be installed with the Reliable Model G6 Wrench. Do not remove the factory installed plastic protective cap as it is sized to fit inside the G6 wrench. Note that the Model RFS42 sprinkler and Model G6 wrench can only mate when the deflector orientation tab is aligned with wrench key-way (Figure 1). The Model G6 wrench is provided with a bubble level pad and TOP marking to allow proper orientation of the horizontal sidewall deflector. A 2-5/8" (67 mm) diameter hole is recommended in the wall to accommodate installation of the sprinkler.

Reliable Model RFS42 sprinklers may be use with any type of pipe and fitting permitted by NFPA 13, 13R and 13D that is approved by the authority having jurisdiction. A leak proof joint can be obtained with a torque of 8 to 18 ft-lbs (11 to 24 N•m) after applying an appropriate sealant to the male threads.

Leave the protective cap on the sprinkler while the wall is plastered, wallpapered, or painted. The protective cap must be removed and a listed Model RFS42 cover plate installed prior to the sprinkler system being placed in service. The Model RFS42 cover plate is specifically listed for use with the Model RFS42 sprinkler. The use of any other concealed cover plate with the Model RFS42 Residential Horizontal Sidewall Sprinkler or the use of this cover plate on any other sprinkler for which it is not specifically listed will void all guarantees, warranties, listings and approvals. The minimum listed spacing between Model RFS42 sprinklers located along the same wall is 8 ft. (2.4m.)

Model RFS42 Residential Sprinkler Specifications — **Table A**

Sprinkler Model	Orientation	Listings & Approvals	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
RFS42	Horizontal Sidewall, Concealed	cULus, LPCB	cULus	RA4835

Model RFS42 Residential Sprinkler

SIN RA4835

Technical Specifications
- **Style:** Flat Concealed Pendent
- **Threads:** 1/2" NPT or ISO 7-1R1/2
- **Nominal K-Factor:** 4.2 (60 metric)
- **Max. Working Pressure:** 175 psi (12 bar)
- **Min. Spacing:** 8 ft. (2.4 m)

Material Specifications
- **Thermal Sensor:** Nickel Alloy Solder Link
- **Sprinkler Body:** Bronze
- **Levers:** Bronze
- **Yoke:** Bronze
- **Sealing Assembly:** Nickel Alloy with PTFE
- **Load Screw:** Stainless Steel
- **Deflector:** Bronze
- **Cap:** Bronze

Cover Plate Finishes
(See Table C)

Sensitivity
Fast-Response/Residential

Temperature Rating
Ordinary:
165°F (74°C) sprinkler
135°F (57°C) cover plate

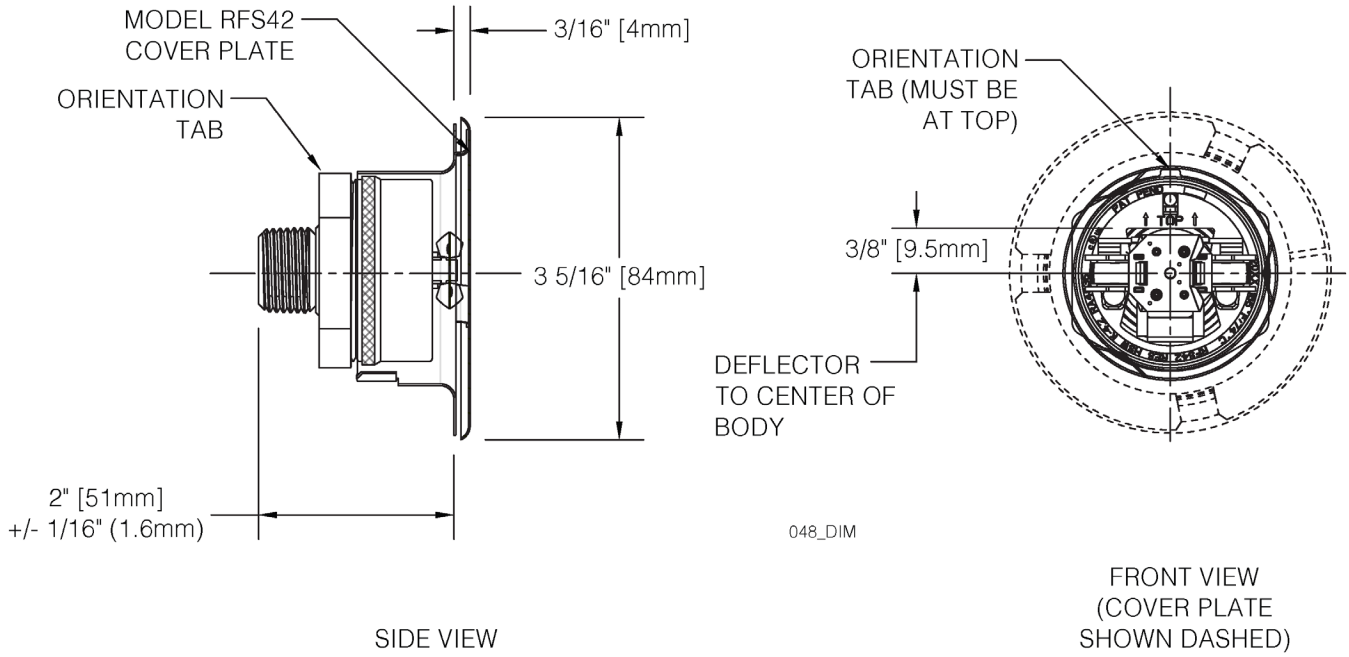
Cover Plate
Model RFS

Sprinkler Wrench
Model G6

Listings and Approvals
cULus Listed
LPCB



Model RFS42 Residential Sprinkler Components and Dimensions — **Figure 1**



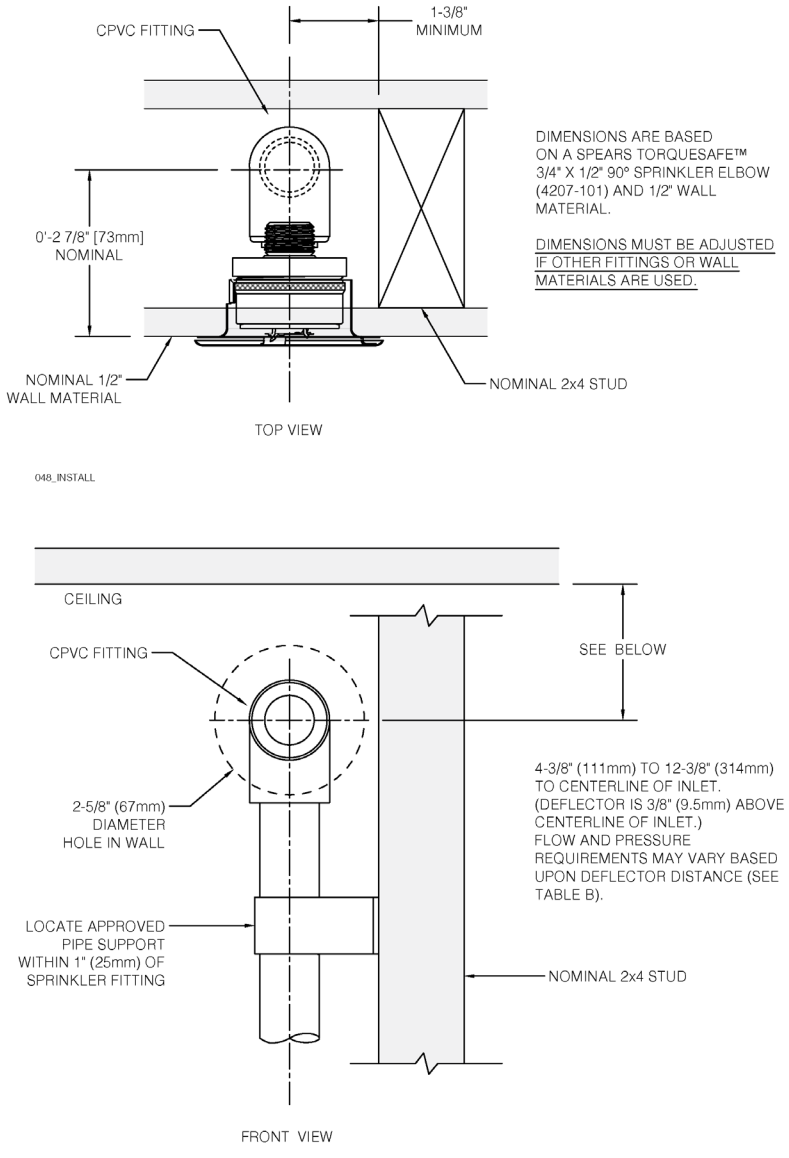
NOTE: DO NOT INSTALL THE MODEL RFS42 SPRINKLER IN LOCATIONS WHERE THE PRESSURE IN THE CAVITY BEHIND THE SPRINKLER IS HIGHER THAN THE PRESSURE IN THE PROTECTED AREA.

Listed Design Criteria

Table B

Max. Coverage Area Width x Length		Deflector to Ceiling Dimension		Flow Rate		Pressure		Temperature Rating	
ft. x ft.	m x m	inches	mm	gpm	L/min	psi	bar	Sprinkler	Cover
12 x 12	3.6 x 3.6	4 - 6	102 - 152	12	45.4	8.2	0.57	165°F (74°C)	135°F (57°C)
12 x 12	3.6 x 3.6	6 - 12	152 - 305	13	49.2	9.6	0.67		
14 x 14	4.3 x 4.3	4 - 6	102 - 152	12	45.4	8.2	0.57		
14 x 14	4.3 x 4.3	6 - 12	152 -305	14	53.0	11.1	0.78		
16 x 16	4.9 x 4.9	4 - 12	102 - 305	16	60.6	14.5	1.01		
16 x 18	4.9 x 5.5	4 - 12	102 - 305	18	68.1	18.4	1.26		
16 x 20	4.9 x 6.1	4 - 6	102 - 152	22	83.3	27.4	1.92		
16 x 20	4.9 x 6.1	6 - 12	152 - 305	23	87.0	30.0	2.10		

Figure 2



Maintenance

Model RFS42 Concealed Sprinklers should be inspected and 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. Replace any sprinkler or cover plate assembly, 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 their original cartons and packaging until used to minimize the potential for damage to sprinklers that would cause improper operation or non-operation. Once operated automatic sprinklers and cover plates cannot be reassembled and reused. New sprinklers of the same size, type and temperature rating must be installed. A cabinet of replacement sprinklers should be provided for this purpose.

Guarantee

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

Ordering Information

Specify the following when ordering.

- Model RFS42 Residential Sidewall
- Model RFS Cover Plate (see table C for finishes)
- Model G6 Sprinkler Wrench

Cover Plate Finishes[1][2] **Table C**

Standard Finishes	Special Application Finishes
White Paint Chrome	Euro White Painted Off White Painted Black Painted Custom Color Painted[3] Satin Chrome Bright Brass Finished Bronze Printed Wood Grain Custom Printed

Notes:

1. Please reference bulletin 203 for additional information.
2. Paint or any other coating applied over the factory finish will void all approvals and warranties.
3. Custom color paint is semi-gloss unless otherwise specified.

Model G6 Wrench **Figure 3**



P/N 9999970457