



## Model RFC56 Concealed Residential Sprinkler (SIN RA0914)

**A Concealed Residential Sprinkler approved for a minimum density of 0.05 gpm/ft<sup>2</sup>. The larger K Factor provides lower pressure demands for 0.10 densities in NFPA-13 residential applications.**

### Features

1. ½" (13mm) Total adjustment.
2. Smooth aesthetic ceiling profile.
3. Available in brass, chrome and black plated or painted finishes.

### Listings & Approval

1. Listed by Underwriters Laboratories, and certified by UL for Canada (cULus)
2. NYC MEA 258-93-E

### UL Listing Categories

Residential Automatic Sprinklers

### UL Guide Number

VKKW



### Product Description

Model RFC56 Concealed Residential Sprinklers are fast response residential fusible solder link automatic sprinklers. Residential sprinklers differ from standard sprinklers primarily in their response time and water distribution patterns.

Model RFC56 sprinklers discharge water in a hemispherical pattern below the sprinkler deflector. Residential distribution patterns are higher and generally contain a finer droplet size than standard sprinkler patterns.

The combination of speed of operation and high discharge pattern required for residential sprinklers has demonstrated, in fire testing, an ability for controlling residential fires, and thereby providing significant evacuation time for occupants.

The RFC56 Sprinkler provides the best form of fire protection by combining an attractive appearance and ½" (13mm) of cover adjustment for ease of installation. The small diameter cover plate is easily and positively attached and blends into the ceiling, concealing the most dependable fire protection available, an automatic sprinkler system.

The RFC56 is a UL Listed Residential Sprinkler to be installed in the residential portions of any occupancy in accordance with NFPA 13, 13R, & 13D.

The RFC56 can reduce the need for precise cutting of drop nipples. The threaded cover plate assembly can be adjusted without tools to fit accurately against the ceiling. The fire protection system need not be shut down to adjust or remove the cover plate assembly.

### Application and Installation

The RFC56, for residential installations, uses a 165°F (74°C) fusible solder link with a drop-down deflector. This assembly is recessed into the ceiling and concealed by a flat cover plate. The cover plate is attached to the skirt, using 135°F (57°C) ordinary temperature classification solder. When the ceiling temperature rises, the solder holding the cover plate releases the cover allowing the deflector to drop into position and exposing the sprinkler inside to ceiling temperature. The

subsequent operation of the solder link opens the waterway to distribute the discharging water in a hemispherical pattern below the sprinkler deflector. Any adjustment of thread engagement between the cover plate and cup will assure that the drop-down deflector is properly located below the ceiling. The residential distribution pattern contains a finer droplet size than a standard sprinkler, and the pattern produces significantly higher wall wetting.

After a 2 5/8 inch diameter hole is cut in the ceiling, the sprinkler is easily installed with the Model G4 Wrench. The wrench has drive tangs which insert into the cup slots. When installing a sprinkler the wrench is first positioned into the sprinkler/cup assembly until the wrench tangs engage the drive slots in the top of the cup (there are two sets of drive slots in the cup). The sprinkler is then tightened into the pipe

fitting. When inserting or removing the wrench from the sprinkler/cup assembly, care should be taken to prevent damage to the sprinkler. DO NOT WRENCH ON ANY OTHER PART OF THE SPRINKLER/CUP ASSEMBLY. MODEL RFC56 CONCEALED SPRINKLERS MUST BE INSTALLED ONLY WITH 135°F RATED COVERS.

In ceilings that have a plenum space above the sprinkler, the plenum space may have neutral or negative pressurization but must not be positively pressurized. In addition, inspect all sprinklers after installation to ensure that both the gap between the cover plate, ceiling and the 4 slots in the cup are open and free from any air flow impediment.

## Temperature Rating

Sprinkler	Cover Plate	Max. Ambient Temp.
165°F/74°C	135°F/57°C	100°F/38°C

## Installation Data

Thread Size inch (mm)	K Factor	Sprinkler Spacing ft. (m)	Maximum Distance to Wall ft. (m)	Minimum Distance between sprinkler ft. (m)	Minimum Required Sprinkler Discharge	
					Flow gpm (Lpm)	Press. psi (bar)
1/2" (15mm)	5.6	12 x 12 (3.6x3.6)	6 (1.83)	8 (2.43)	26 (98)	21.6 (1.49)
1/2" (15mm)	5.6	14 x 14 (4.3x4.3)	7 (2.13)	8 (2.43)	26 (98)	21.6 (1.49)
1/2" (15mm)	5.6	16 x 16 (4.9x4.9)	8 (2.43)	8 (2.43)	26 (98)	21.6 (1.49)

**Note:** 1 bar = 100 Kpa

## Maintenance

Model RFC56 Concealed 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 fluids. Remove dust by using a soft brush or gentle vacuuming. Remove any sprinkler 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 the original cartons and packaging until used to minimize the potential for damage to sprinklers that would cause improper operation or non-operation.

## Model RFC56 Residential Concealed Sprinkler Specification

Sprinklers shall be cULus Listed low flow residential concealed sprinklers with drop-down deflector and adjustable flat cover plate engineered for a minimum design density of 0.10 gpm/ft<sup>2</sup>. Sprinkler frame and deflector shall be of bronze construction having a 1/2" NPT thread. Thermal element shall consist of an approved black-painted beryllium-nickel fusible solder link with lever and strut mechanism, maintaining a Teflon-coated brass cap water seal containing no plastic parts. Sprinkler K-factor shall be nominal 5.6 (80), having a 1/2" orifice. Temperature rating shall be Ordinary 165°F (74°C); cover plate temperature rating to be 135°F (57°C). Cover plate assembly shall consist of a

brass cover plate and copper alloy retainer flange having a push-on and thread-off design, allowing a 1/2" cover plate adjustment. Any secure engagement between the cover plate and the cup will assure that the drop-down deflector is properly located below the ceiling. A plastic protective cap shall be provided and factory installed inside the sprinkler cup to protect the drop-down sprinkler deflector from damage, which could occur during construction before the cover plate is installed. Standard cover finish: [Chrome] [White] [Specialty – specify]. Residential concealed sprinklers shall be Reliable Model RFC56, SIN RA0914 (Bulletin 009).

## Ordering Information Specify:

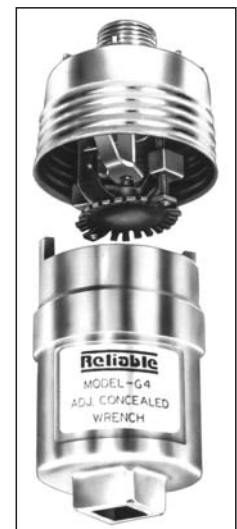
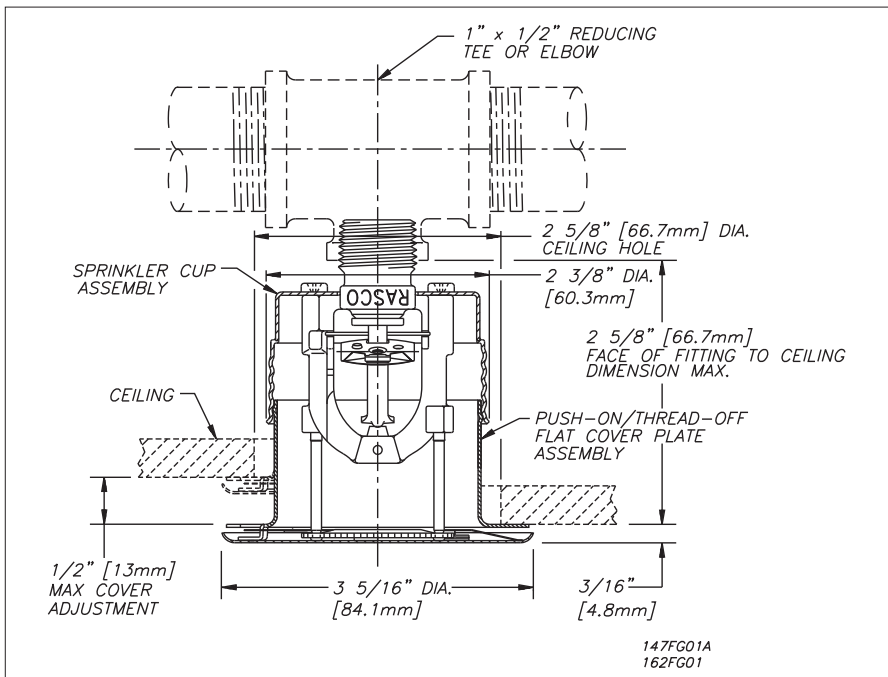
1. Sprinkler Model
2. Cover Plate Finish

## Cover Plate Finishes <sup>(1)</sup>

Standard Finishes
Chrome
White
Special Application Finishes
Bright Brass
Black Plating
Black Paint
Off White
Satin Chrome

<sup>(1)</sup> Other colors and finishes available. Consult factory for details.

**Note:** Paint or any other coatings applied over the factory finish will void all approvals and warranties.



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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.

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