Reliable®

Model LT56 Series Special Sprinklers

Designed specifically for corridors and hallway

K5.6 (80 Metric)
UL Listed

Features

- 28 ft x 10 ft (8.5 m x 3 m) max. coverage area
- UL Listed for Light Hazard occupancies
- Increased spacing and reduced water demand in corridors compared with traditional extended coverage sprinklers

Product Description

Model LT56 series sprinklers are UL Listed Specific Application sprinklers designed for installation in accordance with NFPA 13. The sprinklers produce a spray pattern that is specifically designed to cover long narrow spaces, such as corridors and hallways, with fewer sprinklers and less water demand compared with traditional extended coverage sprinklers.

Model LT56 series sprinklers are quick-response sprinklers for use in Light Hazard occupancies only. Model LT56 and Model LT56-300 sprinklers have a glass bulb operating element. Model LT56L, LT56L-300, and LT56C sprinklers have a fusible link operating element. Model LT56, LT56-300, LT56L, and LT56L-300 sprinklers are available with Model FV recessed escutcheons, Model FP recessed escutcheons, or Model CCP concealed cover plates. Model LT56C sprinklers require a Model G5 flat concealed cover plate.

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.

Models LT56 & LT56-300

Models LT56L & LT56L-300

Model FV Escutcheon

Model FP Escutcheon

Model LT56C Sprinkler

Model G5 Flat Cover Plate

Model CCP Cover Plate

Table A

Sprinkler Model	Operating Element	Max. Working Pressure psi (bar)	Styles	Coverage Areas	Sprinkler Identification Number (SIN)
LT56	Glass Bulb	250 (17.2)	Pendent, Recessed Pendent or Conical Concealed Pendent	Table B	RA5814
LT56L	Fusible Link	250 (17.2)		Table C	R5814
LT56-300	Glass Bulb	300 (21)		Table D	RA5914
LT56L-300	Fusible Link	300 (21)		Table E	R5914
LT56C	Fusible Link	175 (12)	Flat Concealed	Table F	RA5994

Model LT56 Specific Application Sprinkler — SIN RA5814

Technical Specifications
Style: Pendent, Recessed Pendent, or Conical Concealed
Threads: 1/2" NPT or ISO 7-1 R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 250 psi (17.2 bar)
Min. Spacing: 14 ft. (4.3 m)

Material Specifications
Thermal Sensor: 3 mm glass-bulb
Sprinkler Frame: Brass Alloy
Button: Copper Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Deflector: Bronze Alloy

Sprinkler Finishes
(See Table H)

Sensitivity
Quick-response

Temperature Ratings
155°F (68°C)
200°F (93°C)

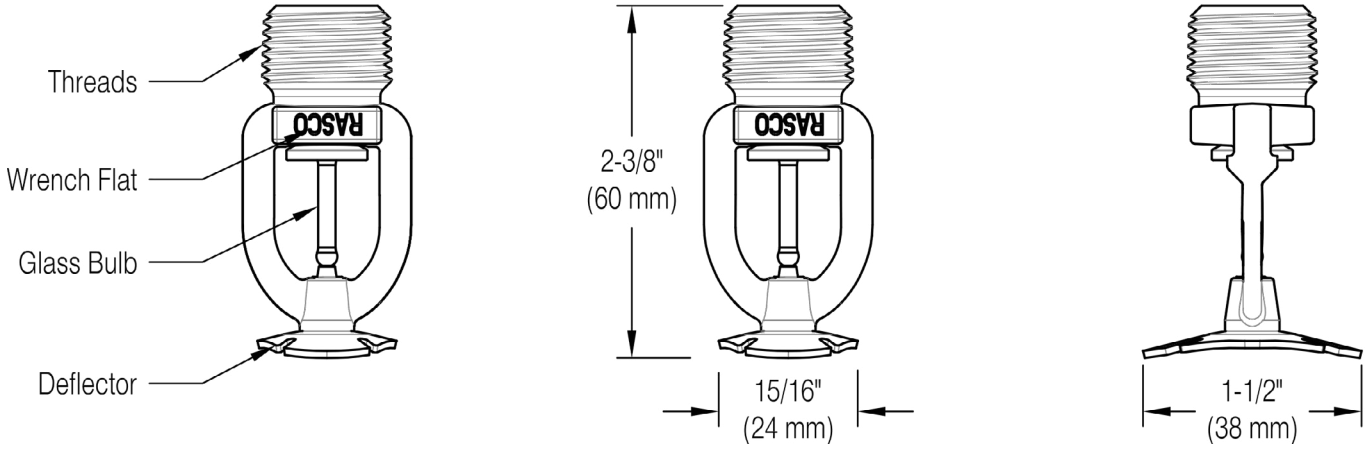
Recessed Escutcheons/Cover Plates
Model FV recessed escutcheon
Model FP recessed escutcheon
Model CCP cover plate*

Sprinkler Wrenches
Model W2 (pendent)
Model W1 (recessed and concealed)

Listings and Approvals
UL Listed

***Note:** 135°F (57°C) cover plate for 155°F (68°C) rated sprinklers; 165°F (74°C) cover plate for 200°F (93°C) rated sprinklers.

Model LT56 Sprinkler Components and Dimensions — **Figure 1**



Model LT56 Sprinkler Hydraulic Design Criteria — **Table B**

Minimum Flow and Residual Pressure		
Max. Coverage Area ft. x ft. (m x m)	**Flow gpm (l/min)**	**Pressure psi (bar)**
28 x 8 (8.5 x 2.4)	23 (87)	16.9 (1.17)
28 x 10 (8.5 x 3.0)	28 (106)	25.0 (1.72)

Note: For coverage area dimensions less than or between those listed above, use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

Model LT56L Specific Application Sprinkler — SIN R5814

Technical Specifications
Style: Pendent, Recessed Pendent, or Conical Concealed
Threads: 1/2" NPT or ISO 7-1 R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 250 psi (17.2 bar)
Min. Spacing: 14 ft. (4.3 m)

Material Specifications
Thermal Sensor: Nickel Alloy Solder Link
Sprinkler Frame: Brass Alloy
Button: Copper Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Deflector: Bronze Alloy

Sprinkler Finishes
(See Table H)

Sensitivity
Quick-response

Temperature Ratings
165°F (74°C)
212°F (100°C)

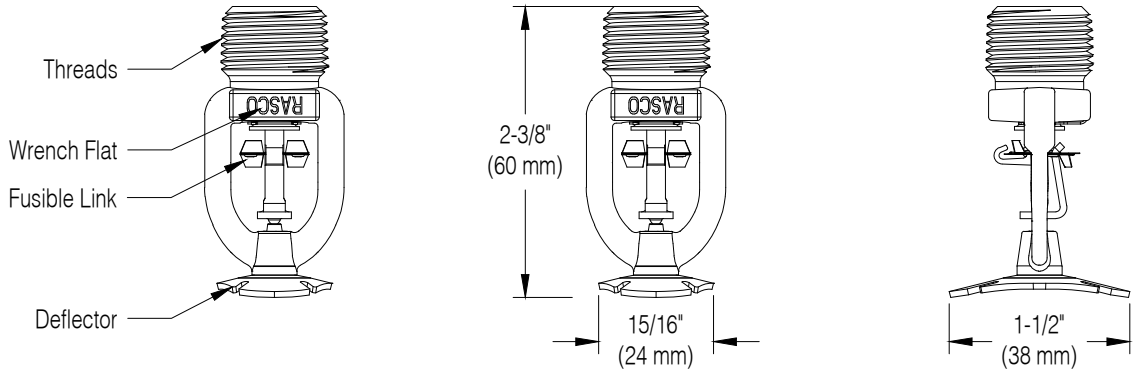
Recessed Escutcheons/Cover Plates
Model FV recessed escutcheon
Model FP recessed escutcheon
Model CCP cover plate*

Sprinkler Wrenches
Model W2 (pendent)
Model W1 (recessed and concealed)

Listings and Approvals
UL Listed

***Note:** 135°F (57°C) cover plate for 155°F (68°C) rated sprinklers; 165°F (74°C) cover plate for 200°F (93°C) rated sprinklers.

Model LT56L Sprinkler Components and Dimensions — **Figure 2**



Model LT56L Sprinkler Hydraulic Design Criteria — **Table C**

Minimum Flow and Residual Pressure		
Max. Coverage Area ft. x ft. (m x m)	**Flow gpm (l/min)**	**Pressure psi (bar)**
28 x 8 (8.5 x 2.4)	23 (87)	16.9 (1.17)
28 x 10 (8.5 x 3.0)	28 (106)	25.0 (1.72)

Note: For coverage area dimensions less than or between those listed above, use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

Model LT56-300 Specific Application Sprinkler — SIN RA5914

Technical Specifications
Style: Pendent, Recessed Pendent, or Conical Concealed
Threads: 1/2" NPT or ISO 7-1 R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 300 psi (21 bar)
Min. Spacing: 14 ft. (4.3 m)

Material Specifications
Thermal Sensor: 3 mm glass-bulb
Sprinkler Frame: Brass Alloy
Button: Copper Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Deflector: Bronze Alloy

Sprinkler Finishes
(See Table H)

Sensitivity
Quick-response

Temperature Ratings
155°F (68°C)
200°F (93°C)

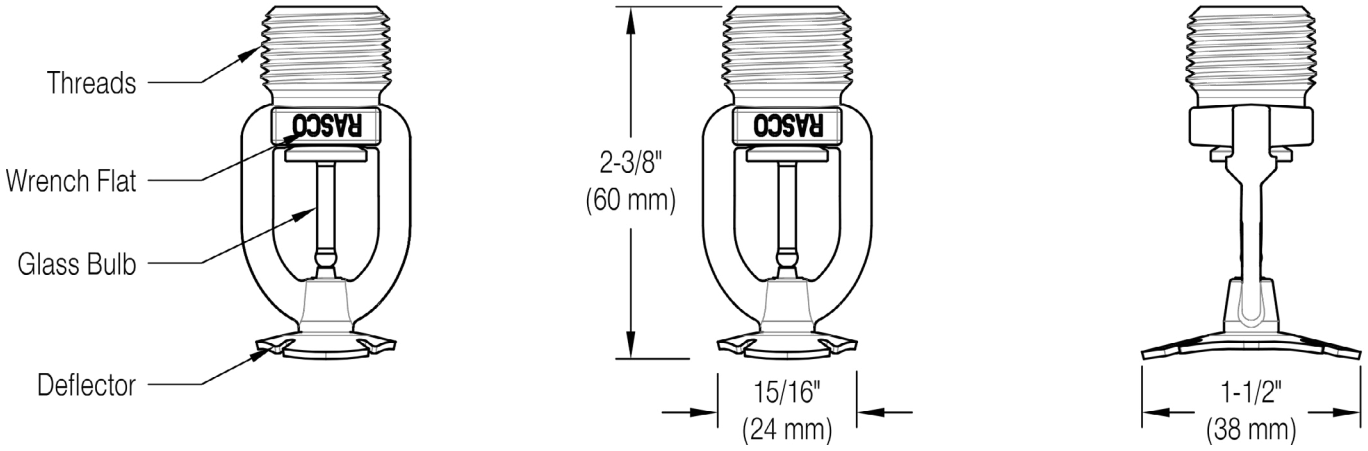
Recessed Escutcheons/Cover Plates
Model FV recessed escutcheon
Model FP recessed escutcheon
Model CCP cover plate*

Sprinkler Wrenches
Model W2 (pendent)
Model W1 (recessed and concealed)

Listings and Approvals
UL Listed

***Note:** 135°F (57°C) cover plate for 155°F (68°C) rated sprinklers; 165°F (74°C) cover plate for 200°F (93°C) rated sprinklers.

Model LT56-300 Sprinkler Components and Dimensions — **Figure 3**



Model LT56-300 Sprinkler Hydraulic Design Criteria — **Table D**

Minimum Flow and Residual Pressure		
Max. Coverage Area ft. x ft. (m x m)	**Flow gpm (l/min)**	**Pressure psi (bar)**
28 x 8 (8.5 x 2.4)	23 (87)	16.9 (1.17)
28 x 10 (8.5 x 3.0)	28 (106)	25.0 (1.72)

Note: For coverage area dimensions less than or between those listed above, use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

Model LT56L-300 Specific Application Sprinkler — SIN R5914

Technical Specifications
Style: Pendent, Recessed Pendent, or Conical Concealed
Threads: 1/2" NPT or ISO 7-1 R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 300 psi (21 bar)
Min. Spacing: 14 ft. (4.3 m)

Material Specifications
Thermal Sensor: Nickel Alloy Solder Link
Sprinkler Frame: Brass Alloy
Button: Copper Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Deflector: Bronze Alloy

Sprinkler Finishes
(See Table H)

Sensitivity
Quick-response

Temperature Ratings
165°F (74°C)
212°F (100°C)

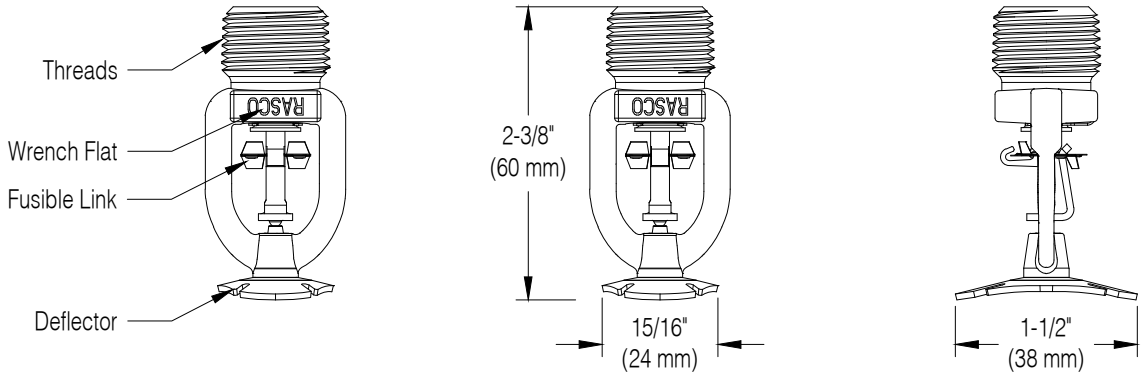
Recessed Escutcheons/Cover Plates
Model FV recessed escutcheon
Model FP recessed escutcheon
Model CCP cover plate*

Sprinkler Wrenches
Model W2 (pendent)
Model W1 (recessed and concealed)

Listings and Approvals
UL Listed

***Note:** 135°F (57°C) cover plate for 155°F (68°C) rated sprinklers; 165°F (74°C) cover plate for 200°F (93°C) rated sprinklers.

Model LT56L-300 Sprinkler Components and Dimensions — **Figure 4**



Model LT56L-300 Sprinkler Hydraulic Design Criteria — **Table E**

Minimum Flow and Residual Pressure		
Max. Coverage Area ft. x ft. (m x m)	**Flow gpm (l/min)**	**Pressure psi (bar)**
28 x 8 (8.5 x 2.4)	23 (87)	16.9 (1.17)
28 x 10 (8.5 x 3.0)	28 (106)	25.0 (1.72)

Note: For coverage area dimensions less than or between those listed above, use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

Model LT56C Specific Application Sprinkler — SIN RA5994

Technical Specifications
Style: Flat Cover Plate Concealed Pendent
Threads: 1/2" NPT or ISO 7-1 R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 175 psi (12 bar)
Min. Spacing: 14 ft. (4.3 m)

Material Specifications
Thermal Sensor: Nickel Alloy Solder Link
Sprinkler Body: Brass Alloy
Levers: Bronze Alloy
Yoke: Brass Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Towers: Copper Alloy
Pins: Stainless Steel
Deflector: Bronze Alloy
Cup: Steel

Sprinkler Finishes
(See Table H)

Sensitivity
Quick-response

Temperature Ratings
165°F (74°C)
212°F (100°C)

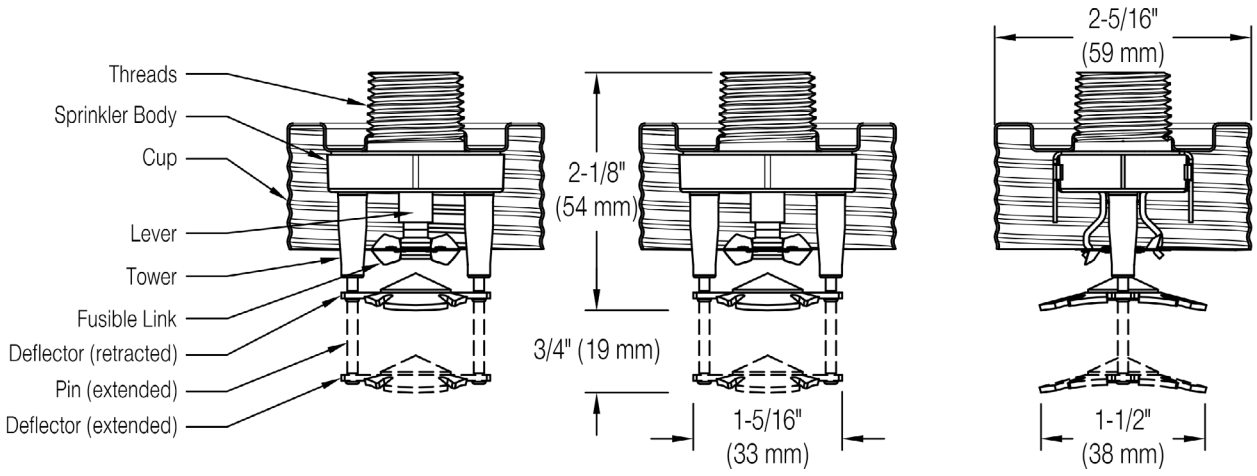
Cover Plate
Model G5*

Sprinkler Wrench
Model FC (without wrench-able cap)
Model W3 (with wrench-able cap)

Listings and Approvals
UL Listed

***Note:** 135°F (57°C) cover plate for 155°F (68°C) rated sprinklers; 165°F (74°C) cover plate for 200°F (93°C) rated sprinklers.

Model LT56C Sprinkler Components and Dimensions — **Figure 5**



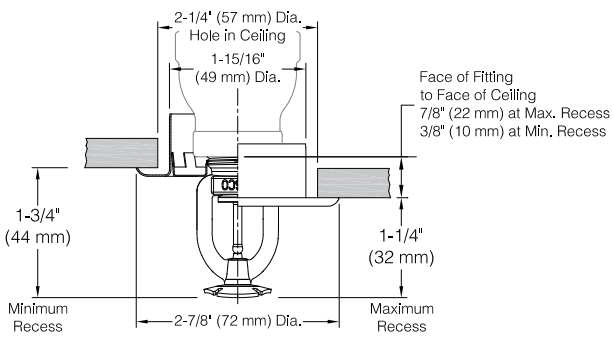
Model LT56C Sprinkler Hydraulic Design Criteria — **Table F**

Minimum Flow and Residual Pressure		
Max. Coverage Area ft. x ft. (m x m)	**Flow gpm (l/min)**	**Pressure psi (bar)**
28 x 8 (8.5 x 2.4)	24 (91)	18.4 (1.27)
28 x 10 (8.5 x 3.0)	28 (106)	25.0 (1.72)

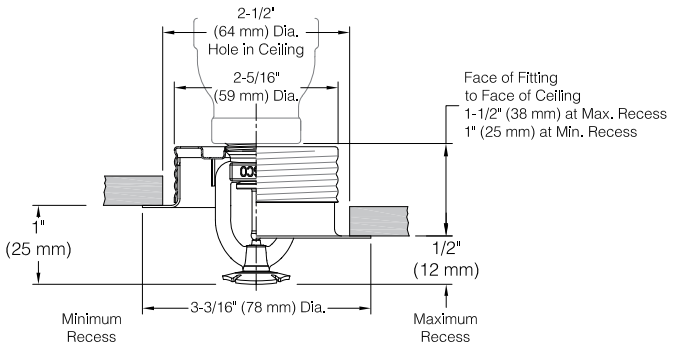
Note: For coverage area dimensions less than or between those listed above, use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

Recessed Escutcheon and Concealed Cover Plate Diagrams

Figure 6

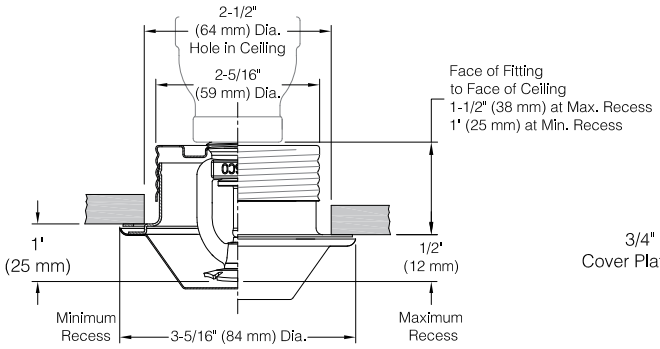


Model LT56, LT56-300, LT56L or LT56L-300 Sprinkler
with Model FV Escutcheon

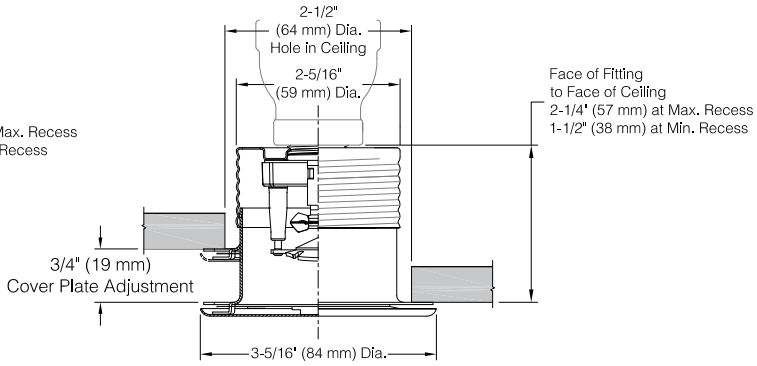


Model LT56, LT56-300, LT56L or LT56L-300 Sprinkler
with Model FP Escutcheon

LT56_REC_CONC

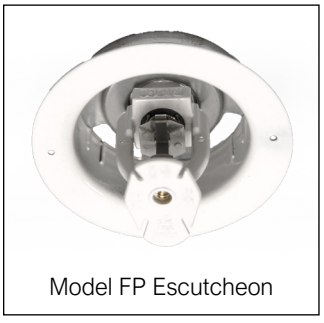


Model LT56, LT56-300, LT56L or LT56L-300 Sprinkler
with Model CCP Cover Plate

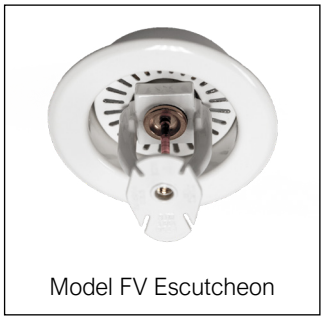


Model LT56C Sprinkler with Model G4/G5 Cover Plate
Minimum Deflector Distance Below Ceiling: 1/4' (6mm)
Maximum Deflector Distance Below Ceiling: 1" (25mm)

Note: Model LT56 sprinklers with Model FV recessed escutcheon, Model FP recessed escutcheon, and Model CCP concealed cover plate may not be used where the pressure in the space above the ceiling is positive with respect to the protected area. Ensure that the openings in the Model FV recessed escutcheon collar and Model FP and CCP cups are unobstructed following installation.



Model FP Escutcheon



Model FV Escutcheon

CCP Cover Plate

Model G5 Cover Plate

Application

Model LT56 series sprinklers are UL Listed Specific Application sprinklers for use in Light Hazard corridors and hallways in accordance with NFPA 13. The sprinklers are classified as Special Sprinklers based on the maximum and minimum allowable spacing, but shall otherwise be designed in accordance with the requirements of NFPA 13 for Extended Coverage Pendent Spray sprinklers. Model LT56 series sprinklers are quick-response sprinklers for use in Light Hazard occupancies only.

The sprinklers must be hydraulically designed using the minimum flow and pressure specified in the Hydraulic Design Criteria tables in this Bulletin. Figure 7 outlines the maximum coverage area of Model LT56 series sprinklers. Figure 8 identifies the sprinklers that can be located adjacent to Model LT56 series sprinklers; note that LT56 series sprinkler are not permitted to be installed with the short coverage length oriented towards the short coverage length of an adjacent LT56 series sprinkler. An example layout of Model LT56 series sprinklers is illustrated in Figure 9.

Listings and Approvals

Listed by Underwriters Laboratories, Inc.

UL Listing Category

Sprinklers, Automatic and Open

UL Guide Number

VNIV

Installation

Model LT56 series sprinklers must be installed in accordance with the requirements of the NFPA 13 for pendent sprinklers and may also be installed as a recessed sprinkler or concealed sprinkler as shown in Figure 6. The Model FV and FP recessed escutcheons, and Model CCP cover plate, are the only recessed escutcheons and concealed cover plate to be used with Model LT56, LT56L, LT56-300 and LT56L-300 sprinklers. The Model G5 cover plate is the only concealed cover plate permitted for use with the Model LT56C sprinkler. Use of any other recessed escutcheon or cover plate will void all approvals and warranties. Do not install Model FV and FP escutcheons or Model CCP and G5 cover plates in ceilings that are positively pressurized with respect to the protected area below.

When installing Model LT56, LT56L, LT56-300, and LT56L-300 sprinklers use only the Model W2 wrench for pendent installations and the Model W1 wrench for recessed pendent and concealed installation. The Model LT56C sprinkler must be installed with the W3 or FC wrench only. Use of wrenches other than those specified may damage these sprinklers.

Model LT56C series sprinklers can be installed without removing the wrench-able protective cap using the Model W3 wrench. Alternatively, Model LT56C series sprinklers can be installed using the Model FC wrench by temporarily removing the protective cap during installation of the sprinkler. The use of any other wrench to installed Model LT56C series sprinklers is not permitted and may damage the sprinkler. Fully insert the Model W3 wrench over the cap until it reaches the bottom of the cup, or the Model FC wrench over the sprinkler until the wrench engages the body. Do not wrench any other part of the sprinkler/cup assembly. The Model W3 and FC wrenches are designed to be turned with a standard 1/2" square drive. Tighten the sprinkler into the fitting after applying a PTFE based thread sealant to the sprinkler's threads. Recommended installation torque is 8 to 18 ft-lbs (11 to 24 N-m) for 1/2" thread sprinklers and 14 to 20 ft-lbs (19 to 27 N-m) for 3/4" thread sprinklers.

Model LT56 series sprinklers must be installed with the frame arms or towers perpendicular to the length of the corridor or hallway. The deflector is marked with "<-28 FT->" to indicate the direction of the 28 ft. (8.5 m) coverage length. Model LT56 series sprinklers need not be installed with the frame arms or towers parallel to the sprinkler pipe.

Caution: The protective cap provided with the Model LT56C concealed sprinkler must be removed temporarily to verify alignment at the time of sprinkler rough-in. Replace protective cap following alignment and leave in place until cover plate is installed.

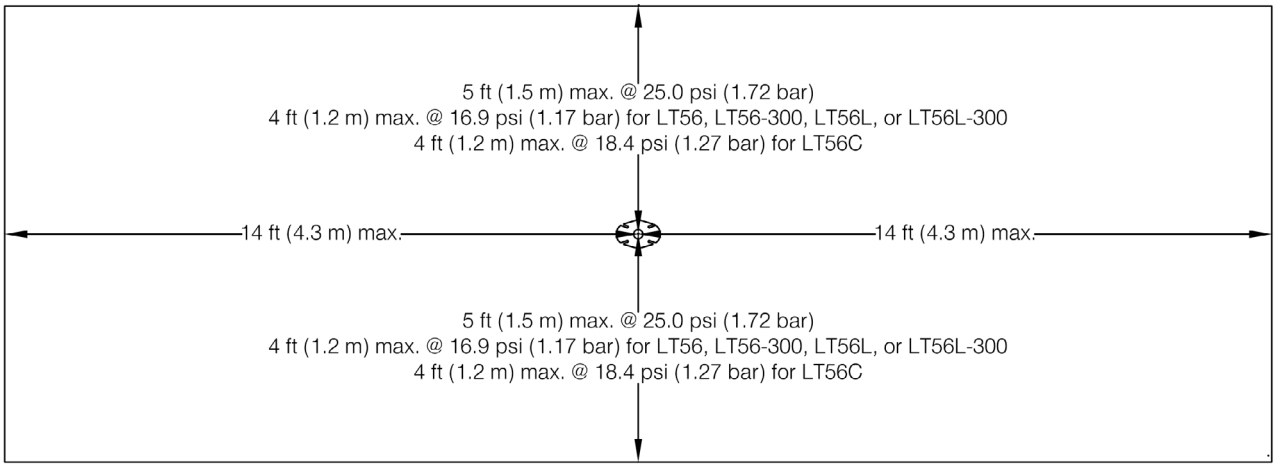
Recommended installation torque is 8-18 ft-lbs (11 – 24 N-m). Do not tighten sprinklers over the maximum recommended torque. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinklers.

Do not install any glass bulb sprinklers where the bulb is cracked or there is a loss of liquid from the bulb.

Glass bulb sprinklers have orange bulb protectors to minimize bulb damage during shipping, handling and installation. Remove the bulb protector at the time the sprinkler system is placed in service for fire protection. Removal of the bulb protectors before this time may leave the bulb vulnerable to damage. The required sprinkler wrenches are designed to install sprinklers with bulb protectors in place. Remove bulb protectors by undoing the clasp by hand. Do not use tools to remove the bulb protectors.

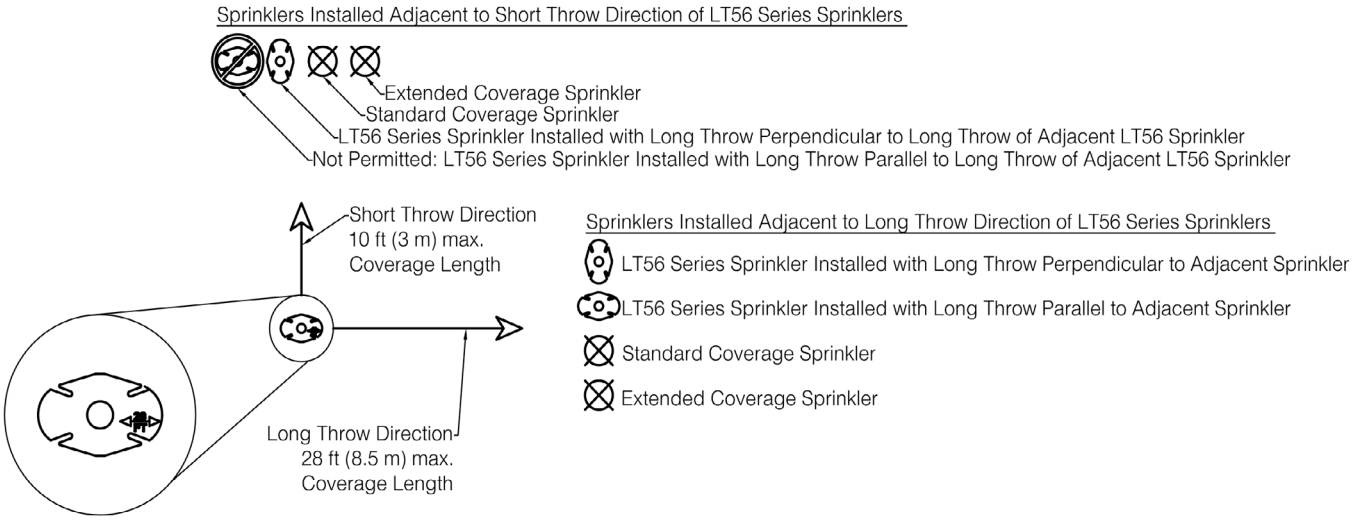
Coverage Area

Figure 7



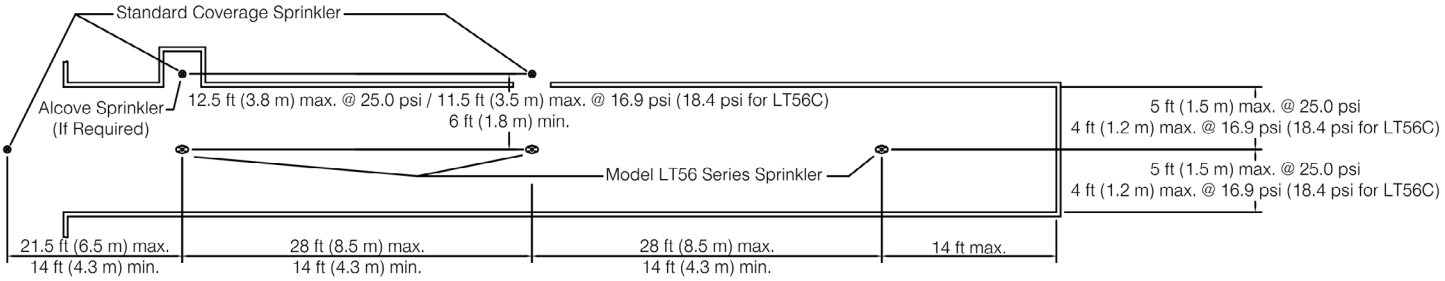
Adjacent Sprinklers

Figure 8



Example Sprinkler Layout

Figure 9



Wrench

Model FC
For use with Model LT56C Series sprinklers without wrench-able cap installed

Model W3
For use with Model LT56C Series sprinklers with wrench-able cap installed

Model W2
For use with pendent sprinklers

Model W1
For use with recessed pendent & conical concealed

Finishes[1]

Table H

Standard Finishes			Special Application Finishes		
Sprinkler[2]	**FV, FP**[4] **Escutcheons**	**CCP, G5 Cover Plate**	**Sprinkler**[2]	**FV, FP**[4] **Escutcheons**	**CCP, G5**[5] **Cover Plate**
Bronze	Brass		Bright Brass	Bright Brass	Bright Brass
Chrome Plated	Chrome Plated	Chrome Plated	Satin Chrome	Satin Chrome	Satin Chrome
White Polyester[3]	White Polyester	White Paint	Custom Color Polyester[3]	Custom Color Polyester	Custom Color Paint

Notes:
1. Paint or any other coating applied over the factory finish will void all approvals and warranties.
2. Model CCP and G5 concealed sprinklers available only in bronze.
3. UL Listed Corrosion Resistant (non-concealed sprinklers only).
4. Model FP, CCP, and G5 sprinklers consist of a galvanized cup with a finished trim ring or cover plate.
5. Please also refer to Technical Bulletin 203.

Maintenance

Reliable Model LT56 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). Properly installed Model CCP and Model G5 cover plates will have an air gap that is required for proper operation, do not seal the gap or paint the cover plates. Model FV and FP escutcheons as well as Model CCP and Model G5 cover plates have holes in the ring or cup that must remain unobstructed.

Replace any sprinkler which has been damaged, cracked the glass bulb, or has lost liquid from the glass bulb. 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.

Patents

Patent Pending

Ordering Information

Specify the following when ordering:

Sprinkler

- Model (LT56, LT56L, LT56-300, LT56L-300, LT56C)
- Temperature Rating
- Threads (1/2" NPT or ISO 7-1 R1/2)
- Finish (See Table H)

Escutcheon or Cover Plate

- Type (None, FV, FP, CCP, G5)
- Finish (See Table H)

Sprinkler Wrench

- Pendent: Model W2 Wrench
- Recessed Pendent & Conical Concealed: Model W1 Wrench
- Flat Concealed Pendent:
  - Model W3 Wrench (with wrench-able cap)
  - Model FC Wrench (without wrench-able cap)