

Model ROC

Residential Optima™ Concealed 4.2 K-factor - Fast Response Residential

Concealed Pendent Fusible Link Automatic Sprinkler

Tyco Fire Products --- www.centraisprinkler.com
451 North Cannon Avenue, Lansdale, Pennsylvania 19446 --- USA
Customer Service/Sales: Tel: (215) 362-0700 / Fax: (215) 362-5385
Technical Services: Tel: (800) 381-9312 / Fax: (800) 791-5500



General Description

The Central ROC - Residential Optima Concealed, 4.2 K-factor, Residential Pendent Sprinklers are decorative sprinklers featuring a flat cover plate designed for use in residential occupancies such as homes, apartments, dormitories, and hotels.

They are to be used in wet pipe residential sprinkler systems for one- and two-family dwellings and mobile homes per NFPA 13D; wet pipe residential sprinkler systems for residential occupancies up to and including four stories in height per NFPA 13R; or wet pipe sprinkler systems for the residential portions of any occupancy per NFPA 13.

The Cover Plate Assembly conceals the sprinkler operating components above the ceiling. The separable two-piece design of the Cover Plate and Support Cup Assemblies allows installation of the sprinklers and pressure testing of the fire protection system prior to installation of a suspended ceiling or application of the finish coating to a fixed ceiling. They also permit removal of suspended ceiling panels for access to building service equipment without having to first shut down the fire protection system and remove sprinklers. Also, the separable two-piece design of the the Sprinkler provides for 1/2 inch (12,7 mm) of vertical adjustment, to reduce the accuracy to which the length of fixed pipe drops to the sprinklers must be cut.

The ROC Residential Pendent Sprinklers are shipped with a Disposable Protective Caps. The Protective Cap is temporarily removed to install the ROC, and then replaced to protect the ROC while the ceiling is being installed and finished. The tip of the Cap can also be

used to mark the center of the ceiling hole into plaster board, ceiling tiles, etc. by pushing the ceiling product against the Cap. When the ceiling installation is complete, the Cap is removed and the Cover Plate Assembly installed.

Operation: When exposed to heat from a fire, the Cover Plate, which is normally soldered to the Support Cup at three points, falls away to expose the Sprinkler Assembly. At this point the Deflector supported by the Arms drops down to its operational position. The fusible link of the Sprinkler Assembly is comprised of two link halves which are joined together by a thin layer of solder. When the rated temperature is reached, the solder melts and the two link halves separate, which then allows the sprinkler to activate and flow water.

WARNING

The ROC Residential Pendent Sprinklers described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the National Fire Protection Association, in addition to the standards of any other authorities having jurisdiction. Failure to do so may impair the integrity of these devices.

Because of the above cited stipulations and the varied nature of residential type architecture, there will be some compartment designs which cannot be fully sprinklered in accordance with the recommendations of NFPA 13, NFPA 13D, or NFPA 13R. In the event of this condition, consult the authorities having jurisdiction for guidance and approval.

The owner is responsible for maintaining their fire protection system and devices in proper operating condition. The installing contractor or sprinkler manufacturer should be contacted relative to any questions.



Residential Concealed Pendent Sprinklers

SPRINKLERS FOR REPLACEMENT USE ONLY IN EXISTING SPRINKLER SYSTEMS



Technical Data

Sprinkler Identification Number
SIN C2596

Approvals

UL & C-UL Listed. NYC Approved
(Refer to the Design Criteria Section)

Maximum Working Pressure

175 psi (12,1 bar)

Pipe Thread Connection

1/2 inch NPT

Discharge Coefficient

$K = 4.2 \text{ GPM/psi}^{1/2} (60,5 \text{ LPM/bar}^{1/2})$

Temperature Ratings

160°F/71°C Sprinkler/135°F/57°C Plate

Finishes

Sprinkler: Natural Brass

Cover Plate: Chrome or Brass Plated; *Flat White, Bright White, or Custom Painted

* Standard Finish supplied when White is specified

Physical Characteristics

The Model ROC Residential Optima Concealed Pendent Sprinklers utilize a dezincification resistant (DZR) bronze frame and a monel thermal sensitive link. The sprinkler frame orifice is sealed with a gasketed spring plate (Belleville Seal) consisting of a beryllium nickel disc spring that is sealed on both its inside and outside edges with a Teflon™ gasket. The arms and deflector are bronze, and the support cup is steel. The cover plate and retainer assembly are brass.



Design Criteria

The Model ROC Residential Optima Concealed Pendent Sprinklers are UL, C-UL Listed and NYC Approved (MEA 7-95-E) for use in accordance with current NFPA standards on wet pipe sprinkler systems. These sprinklers with a maximum ceiling to top of sprinkler deflector distance of 4 inches, have been investigated for use under smooth flat horizontal ceilings with slopes up to 2 inches per foot using the hydraulic design requirements found in Table 1. When unique conditions exist such as sloping ceilings, and when acceptable to the local authority, guidance on the placement of residential sprinklers on sloped ceilings has been provided in Figures 5 -14. This information will provide the minimum spacing requirements necessary for preventing the wetting (i.e., cold soldering) of the heat responsive element (link) of a non-operated Central Model ROC, which is adjacent to one, which has operated. In these situations the minimum required sprinkler flow rates given in Table 1 should be used. Your local authority should be consulted to determine the number of sprinklers required in the hydraulic design area.

The Model ROC Residential Optima Concealed Pendent Sprinklers are only listed with the Series GB4/ROC Concealed Cover Plate Assembly.

The minimum required flow rates for systems designed to NFPA 13D or NFPA 13R occupancies are given in Table 1 as a function of temperature rating, ceiling to top of deflector distance, and the maximum allowable coverage areas. The single sprinkler flow rate is the minimum required discharge

from the most hydraulically demanding single sprinkler and, the multiple sprinkler flow rate is the minimum required discharge from each of the total number of "design sprinklers" as specified in NFPA 13D or NFPA 13R.

TIA 99-1 (Tentative Interim Ammendment) with an effective date of May 22, 2000 states that the minimum required discharge from each of the "design sprinklers" for systems designed to NFPA 13 must be calculated based on delivering a minimum design density of 0.1 gpm/sq. ft. for each of the listed coverage areas shown in Table 1. If the flow rates listed in Table 1 exceed a minimum design density of 0.1 gpm/sq. ft., then the flow rates in the Table shall be used. Consult the authority having jurisdiction regarding the application of this TIA to the currently adopted NFPA 13.

Model ROC Residential Pendent and Recessed Pendent Sprinklers must be installed using the obstruction criteria for extended coverage sprinklers found in the current edition of NFPA 13.

NOTES

Residential Fire Sprinkler Systems should only be designed and installed by those competent and completely familiar with automatic sprinkler system design, installation procedures, and techniques.

The sprinkler must be secured in position by firmly fastening the sprinkler system piping to the structure. If the sprinkler is not properly secured in position, reaction forces resulting from sprinkler operation could alter its orientation and its water distribution pattern. The sprinkler escutcheon cannot be used to hold the sprinkler in position.

Several criteria may apply to the installation and usage of each sprinkler. Consequently, it is recommended that the sprinkler system designer review and develop a working understanding of the complete list of criteria prior to initiating the design of the sprinkler system.

Questions concerning sprinkler installation and usage criteria, which are not covered by the following instructions, should be submitted to Central Sprinkler. Include sketches and technical details as appropriate.

In some instances, the requirements of this document may concern specifications which are more stringent and which take precedence over those specified in NFPA 13, NFPA 13D, NFPA 13R, or by the authority having jurisdiction.

Figure 1 - ROC Sprinkler Wrench (1265)



Figure 2
Residential Optima Concealed Pendent (Non-Activated)

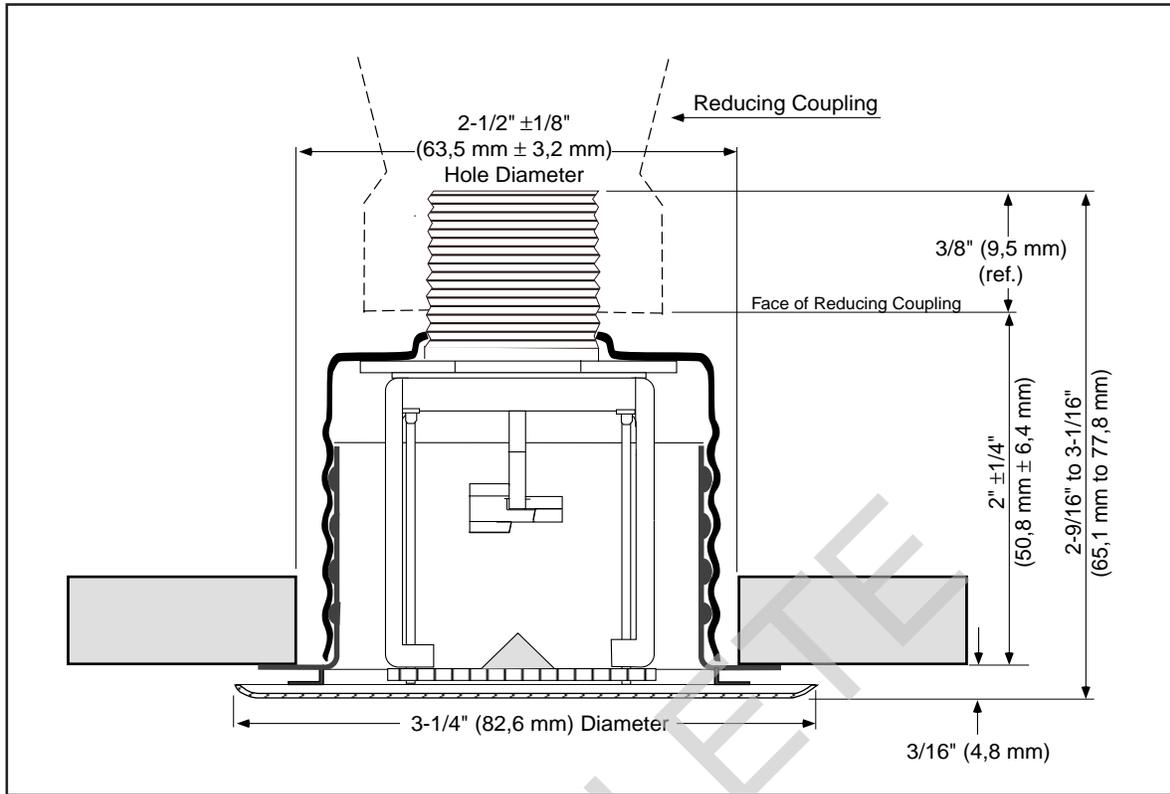


Figure 3
Residential Optima Concealed Pendent (Activated)

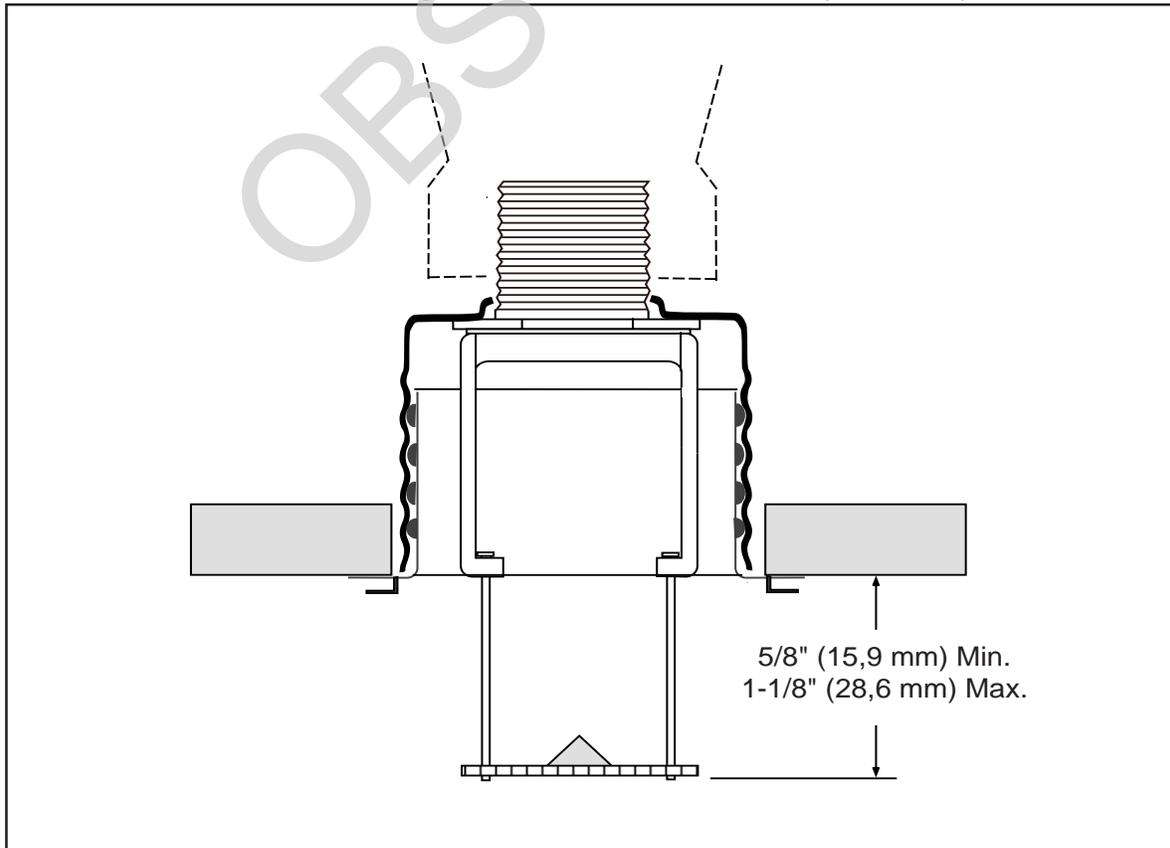


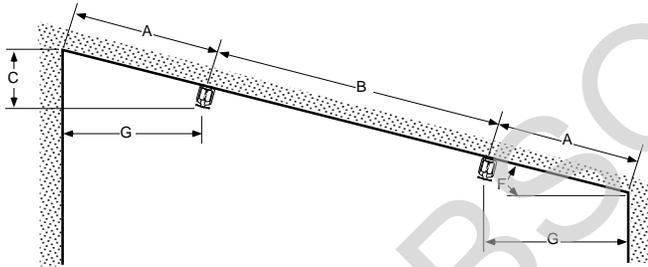
Table 1 - ROC Residential Optima Concealed Pendent Hydraulic Design Requirements for NFPA 13D & NFPA 13R Occupancies

Coverage Area	Minimum Design Flow	
	Single Sprinkler	Multiple Sprinklers
12' x 12' (3,7 x 3,7m)	18 GPM (18.4 psi) 68,1 lpm (1,27 bar)	13 GPM (9.6 psi) 49,2 lpm (0,66 bar)
14' x 14' (4,3 x 4,3m)	18 GPM (18.4 psi) 68,1 lpm (1,27 bar)	13 GPM (9.6 psi) 49,2 lpm (0,66 bar)
16' x 16' (4,9 x 4,9m)	18 GPM (18.4 psi) 68,1 lpm (1,27 bar)	13 GPM (9.6 psi) 49,2 lpm (0,66 bar)
18' x 18' (5,5 x 5,5m)	24 GPM (32.7 psi) 90,8 lpm (2,25 bar)	17 GPM (16.4 psi) 64,4 lpm (1,13 bar)
20' x 20' (6,1 x 6,1m)	24 GPM (32.7 psi) 90,8 lpm (2,25 bar)	17 GPM (16.4 psi) 64,4 lpm (1,13 bar)

Minimum spacing between sprinklers is 8' (2,4 m).

Figure 5 - Sprinkler Location for Sloped Ceiling

Note the minimum distance between sprinklers changes by the angle of the slope. Verify the Listed flows and pressures for "maximum" and "1/2 maximum" distances. Dimensions "A" and "B" are measured along the slope. For angles greater than 60°, verify with Central's Technical Services Department.



- A** — NFPA minimum of 4" (verify "G" dimension minimum of 4"), maximum 1/2 of the Listed spacing that the sprinkler was calculated for. (i.e., 18' x 18' spacing is maximum of 9'-0" from a wall).
- B** — For angles 0° to 39° minimum B = 8'-0".
For angles 40° to 45° minimum B = 9'-0".
For angles 46° to 60° minimum B = 9'-6".
Maximum Listed spacing that the sprinkler was calculated for.
- C** — Maximum of 3'-0" vertically from the peak.
- F** — Acceptable for angles 0° to 60°.
- G** — Minimum of 4", for maximum, refer to "A" and measure along slope.

Figure 6 - Symmetric Sprinkler Location on Opposing Slopes*

The minimum distance between sprinklers on opposing slopes is measured horizontally, some difficult conditions can be solved by staggering the sprinklers, thus increasing the horizontal distance. Remember to measure along the slope for "A" and "B". For angles greater than 60°, verify with Central's Technical Services Department.

- A** — NFPA minimum of 4", maximum 1/2 of the Listed spacing that the sprinkler was calculated for.
- B** — See "E" for minimum spacing. Maximum Listed spacing that the sprinkler was calculated for.
- C** — Maximum 3'-0" vertically from the peak.
- E** — NFPA minimum of 8'-0" (when minimum of 8'-0" cannot be obtained due to "B", a baffle must be installed between these sprinklers to obstruct the discharge and prevent cold-solder). See "B" for maximum.
- F** — Acceptable for angles 0° to 60°.

* For unequal spacing down from peak, see Figure 8.

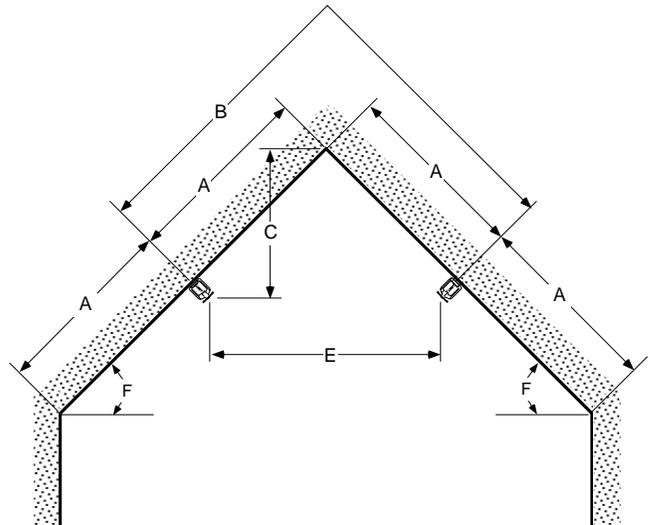
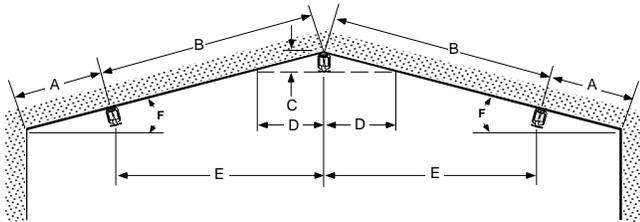


Figure 7 - Spacing for Sprinkler at the Peak of a Sloped Ceiling

First verify that the sprinkler at the peak is considered to be "Acceptable" or "Obstructed" by the sloped ceiling in accordance with Figure 12 Graph. Measure horizontally from the deflector to the sloped ceiling, this is equal to the "D" dimension in the Figure 12 Graph. If the "D" dimension is "Acceptable", then Figure 7 applies. If "D" is "Obstructed", then the protection area of the sprinkler at the peak will be the horizontal distance to the obstructing ceiling. The minimum distance between sprinklers is measured horizontally. Staggering sprinklers will help maintain minimum horizontal distances in difficult situations. Dimensions "A" and "B" are measured along the slope. For angles greater than 60°, verify with Central's Technical Services Department.



- A — NFPA minimum 4", maximum 1/2 of the Listed spacing that the sprinkler was calculated for.
- B — See "E" for minimum spacing. Maximum Listed spacing that the sprinkler was calculated for.
- C — Maximum of 3'-0" vertically from the peak.
- D — Horizontal distance from the deflector to the intersecting sloped ceiling.
- E — NFPA minimum of 8'-0" (when minimum of 8'-0" cannot be obtained due to "B", a baffle must be installed between these sprinklers to obstruct the discharge and prevent cold-solder). See "B" for maximum.
- F — Acceptable for angles 0° to 60°.

Figure 8 - Sprinkler Location on Opposing Slopes

First verify that the sprinkler nearest the peak is "Acceptable" or "Obstructed" per Figure 14. If "Acceptable", Figure 8 applies. If "Obstructed", the horizontal distance to the opposing slope is to be considered as the protected area. The minimum distance between sprinklers is measured horizontally, shown as dimension "E". Staggering the sprinklers will help maintain minimum horizontal distances in difficult situations. Dimensions "A" and "B" are measured along the slope. For angles greater than 60°, verify with Central's Technical Services Department.

- A — NFPA minimum of 4", maximum 1/2 of the Listed spacing that the sprinkler was calculated for.
- B — See "E" for minimum spacing. Maximum Listed spacing that the sprinkler was calculated for.
- C — Maximum of 3'-0" vertically from the peak.
- D — Minimum 4". Also, see note above.
- E — NFPA minimum of 8'-0" (when minimum of 8'-0" cannot be obtained due to "B", a baffle must be installed between these sprinklers to obstruct the discharge and prevent cold-solder). See "B" for maximum.
- F — Acceptable for angles from 0° to 60°.

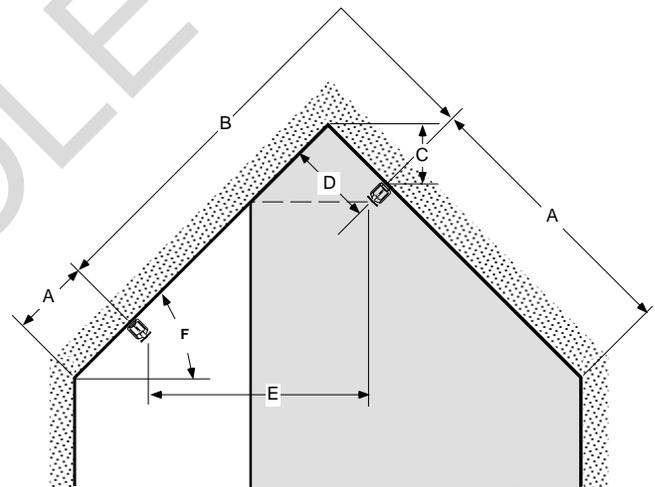
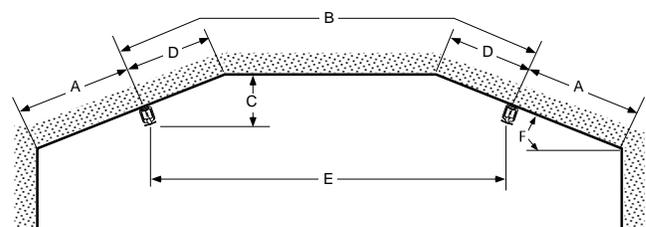


Figure 9 - Sprinkler Location on Coffered Ceiling

First verify that "D" is "Acceptable" or "Obstructed" per Figure 13. If "Acceptable", Figure 9 applies. If "Obstructed", additional sprinklers will be necessary to protect the flat ceiling area. The minimum distance between sprinklers is measured horizontally. Staggering sprinklers will help maintain minimum horizontal distances in difficult situations. Dimensions "A" and "B" are measured along the slope. For angles greater than 60°, verify with Central's Technical Services Department.

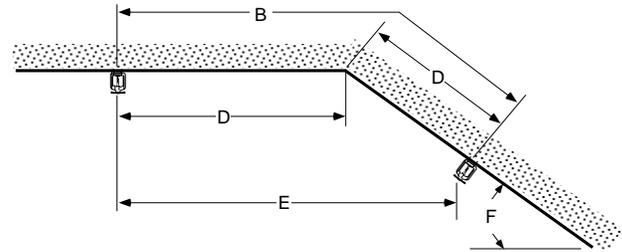
- A — NFPA minimum of 4", maximum 1/2 of the Listed spacing that the sprinkler was calculated for.
- B — See "E" for minimum spacing. Maximum Listed spacing that the sprinkler was calculated for.
- C — Maximum 3'-0" vertically from the peak.
- D — Refer to Figure 13.



- E — NFPA minimum of 8'-0" (when minimum of 8'-0" cannot be obtained due to "B", a baffle must be installed between these sprinklers to obstruct the discharge and prevent cold-solder). See "B" for maximum.
- F — Acceptable for angles 0° to 60°.

Figure 10 - Minimum Distance Between Sprinklers on Intersecting Ceilings

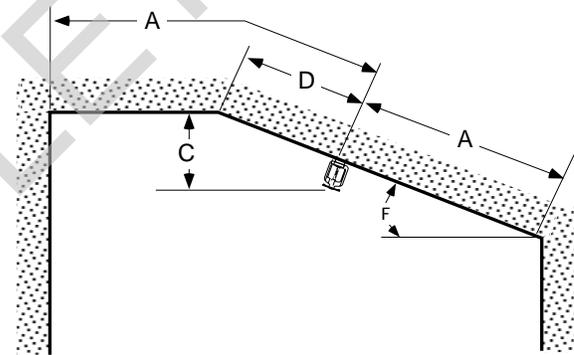
First verify that "D" is "Acceptable" or "Obstructed" per Figure 12 for the horizontal ceiling sprinkler and Figure 13 for the sloped ceiling sprinkler. If "Acceptable", Figure 10 applies. If "Obstructed", per Figure 12 or 13, then "D" is to be considered the area of coverage. The minimum distance between sprinklers is measured horizontally. Staggering sprinklers will help maintain maximum horizontal distances in difficult situations. Dimension "B" is measured along the slope. For angles greater than 60°, verify with Central's Technical Services Department.



- B** — See "E" for minimum spacing. Maximum Listed spacing that the sprinkler was calculated for.
- D** — Distance to intersecting ceiling.
- E** — NFPA minimum of 8'-0" (when minimum of 8' cannot be obtained due to "B", a baffle must be installed between these sprinklers to obstruct the discharge and prevent cold-solder) see "B" for maximum.
- F** — Acceptable for angles 0° to 60°.

Figure 11 - Sprinkler Location on Sloped Ceiling Intersecting a Flat Ceiling

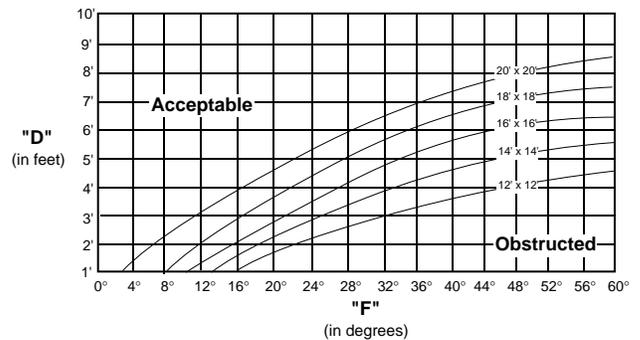
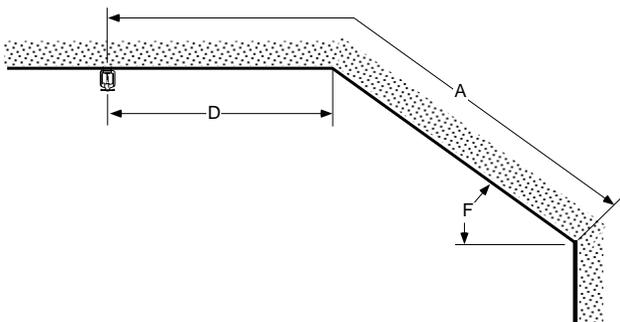
First verify that "D" is "Acceptable" or "Obstructed" per Figure 13. If "Acceptable", Figure 11 applies. If "Obstructed", additional sprinklers will be necessary to protect the flat ceiling area. Dimension "A" is measured along the slope. For angles greater than 60°, verify with Central's Technical Services Department.



- A** — NFPA minimum of 4", maximum 1/2 of the Listed spacing that the sprinkler was calculated for.
- C** — Maximum 3'-0" vertically from the peak.
- D** — Refer to Figure 13.
- F** — Acceptable for angles 0° to 60°.

Figure 12 - Obstruction to Discharge by Intersecting Sloped Ceiling

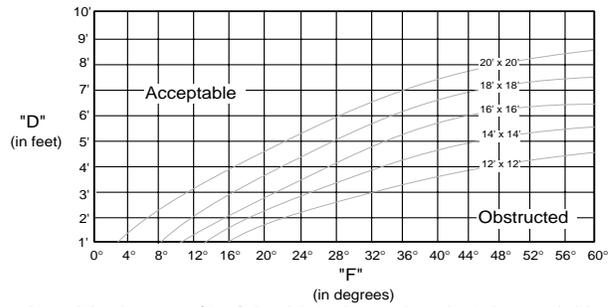
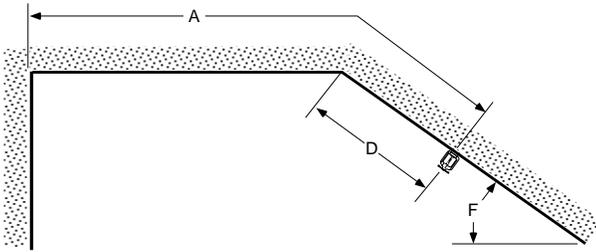
If "D" is "Obstructed" per Figure 12 Graph, then "D" is to be considered the area of coverage and additional sprinklers along the sloped ceiling will be necessary. Only if "D" is "Acceptable" can "A" be considered 1/2 of the maximum Listed spacing that the sprinkler was calculated for. Dimension "A" is measured along the slope.



- A** — Maximum 1/2 of the Listed spacing that the sprinkler was calculated for.
- D** — Distance to intersecting sloped ceiling.
- F** — Acceptable for angles 0° to 60°.

Figure 13 - Obstruction to Discharge by Intersecting Flat Ceiling

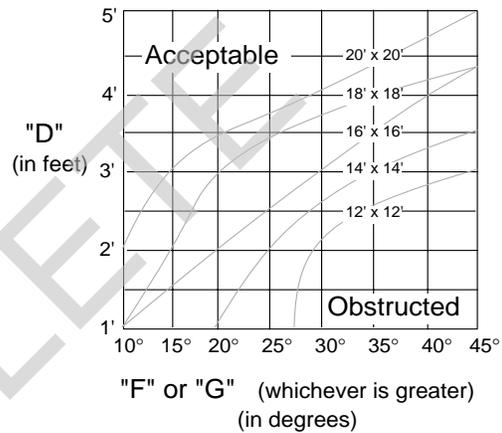
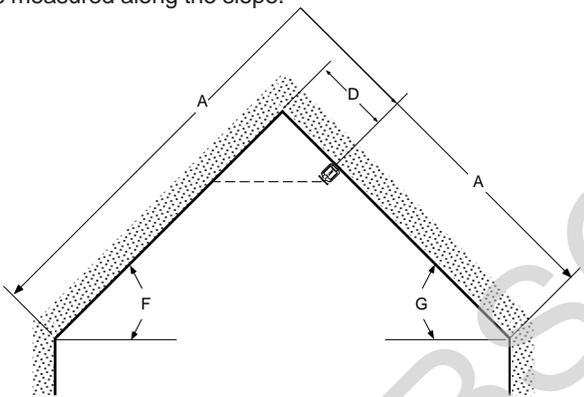
If "D" is "Obstructed" per Figure 13 Graph, then "D" is to be considered the area of coverage and additional sprinklers along the horizontal ceiling will be necessary. Only if "D" is "Acceptable" can "A" be considered 1/2 of the maximum Listed spacing that the sprinkler was calculated for. Dimension "A" is measured along the slope.



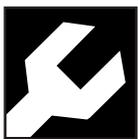
- A** — Maximum 1/2 of the Listed spacing that the sprinkler was calculated for.
- D** — Distance to intersecting horizontal ceiling.
- F** — Acceptable for angles 0° to 60°.

Figure 14 - Obstruction to Discharge by an Opposing Sloped Ceiling

If "D" is "Obstructed" per Figure 14 Graph, then the horizontal distance to the opposing slope is the extent of coverage and additional sprinklers will be necessary to protect the remainder of the opposing slope. Only if "D" is "Acceptable" can "A" equal 1/2 of the maximum Listed spacing that the sprinkler was calculated for. Dimension "A" is measured along the slope.



- A** — NFPA minimum of 4", maximum 1/2 of the Listed spacing that the sprinkler was calculated for.
- D** — Distance to opposing sloped ceiling.
- F & G** — Acceptable for angles 0° to 60°.



Installation

The Central ROC Residential Optima Concealed Pendent Sprinklers must be installed in accordance with the following instructions:

NOTES

Damage to the fusible Link Assembly during installation can be avoided by handling the sprinkler by the frame arms only (i.e., do not apply pressure to the fusible Link Assembly), and by using the appropriate sprinkler wrench. Damaged sprinklers must be replaced.

A leak tight 1/2 inch NPT sprinkler joint should be obtained with a torque of 7 to 14 ft.lbs. (9,5 to 19,0 Nm). A maximum of 21 ft.lbs. (28,5 Nm) of torque is to be used to install 1/2 inch NPT sprinklers. Higher levels of torque may distort the sprinkler inlet with consequent leakage or impairment of the sprinkler.

Step 1. The sprinkler must only be installed in the pendent position and with the centerline of the sprinkler perpendicular to the mounting surface.

Step 2. Remove the Protective Cap.

Step 3. With pipe thread sealant applied to the pipe threads, and using the ROC Wrench shown in Figure 1, install and tighten the Sprinkler/Support Cup Assembly into the fitting. ROC Wrench will except a 1/2 inch ratchet drive.

Step 4. Replace the Protective Cap by pushing it upwards until it bottoms out against the Support Cup. The Protective Cap helps prevent damage to the Deflector and Arms during ceiling installation and/or during application of the finish coating of the ceiling. It may also be used to locate the center of the clearance hole by gently pushing the ceiling material up against the center point of the Cap.

NOTE

As long as the Protective Cap remains in place, the system is considered to be "Out of Service"

Step 5. After the ceiling has been completed with the 2-1/2 inch (66,7 mm) diameter clearance hole and in preparation for installing the Cover Plate Assembly, remove and discard the Protective Cap, and verify that the Deflector moves up and down freely. If the Sprinkler has been damaged and the Deflector does not move up and down freely, replace the entire Sprinkler assembly. Do not attempt to modify or repair a damaged sprinkler.

Step 6. Screw on the Cover Plate/ Retainer Assembly until its flange just comes in contact with the ceiling. Do not continue to screw on the Cover Plate/ Retainer Assembly such that it lifts a ceiling panel out of its normal position. If the Cover Plate/Retainer Assembly cannot be engaged with the Support Cup or the Cover Plate/Retainer Assembly cannot be engaged sufficiently to contact the ceiling, the Sprinkler Fitting must be repositioned. the Sprinkler Fitting must be repositioned.



Care & Maintenance

The Central ROC Residential Optima Concealed Pendent Sprinklers must be maintained and serviced in accordance with the following instructions:

NOTES

Wet pipe sprinkler systems must be maintained at a minimum temperature of 40°F/4°C to prevent freezing and bursting of the pipe and/or sprinklers.

Automatic sprinklers are not to be tested with a heat source. Operation of the heat responsive element (link) can result.

Absence of the Cover Plate assembly may delay sprinkler operation in a fire situation.

When properly installed, there is a nominal 3/32 inch (2,4 mm) air gap between the lip of the Cover Plate and the ceiling. This air gap is necessary for proper operation of the sprinkler. If the ceiling is to be repainted after the installation of the Sprinkler, care must be exercised to ensure that the new paint does NOT seal off any of the air gap

Factory painted Cover Plates MUST NOT be repainted. They should be replaced, if necessary, by factory painted units.

Do not pull the Cover Plate relative to the Enclosure. Separation may result.

Before closing a fire protection system main control valve for maintenance work on the fire protection system which it controls, permission to shut down the affected fire protection system must be obtained from the proper authorities. All personnel who may be affected by this action must be notified.

Do NOT enclose sprinklers within drapes, curtains, or valances.

Do NOT hang anything from the sprinklers.

Do NOT cleanse the sprinklers with soap and water, detergents, ammonia, cleaning fluids, or other chemicals. Remove dust, lint, cobwebs, cocoons, insects, and larvae by gently brushing with a feather duster or gently vacuuming with a soft bristle (i.e., dusting) brush attachment.

Exercise suitable safety precautions in the use and storage of highly flammable materials. The rapid rate of fire development and spread of which can be caused by such materials can reduce the ability of the sprinkler system to aid in the control of a fire in which they are involved.

It is recommended that automatic sprinkler systems be inspected and maintained in accordance with the advice and suggestions given in NFPA 25.

Sprinklers which are found to be leaking or exhibiting visible signs of corrosion must be replaced.

Automatic sprinklers must never be shipped or stored where its temperature will exceed 100°F/38°C and they must never be painted, plated, coated, or otherwise altered after leaving the factory. Modified or over-heated sprinklers must be replaced.

Care must be exercised to avoid damage - both before and after installation. Sprinklers damaged by dropping, striking, wrench twist/slippage, or the like, must be replaced.

The ROC Residential Optima Concealed Pendent Sprinklers must only be replaced with pendent sprinklers which are listed for residential fire protection service and which have the same nominal K-factor, the same coverage area, and the same or lower flow ratings (as indicated under "Design Criteria").

When remodeling, such as by adding false beams or light fixtures or changing the location of compartment walls, first verify that the new construction will not violate the installation requirements stated under WARNINGS. Alter the new construction and/or the sprinkler system to suit the requirements of this document.

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (e.g., NFPA 25), in addition to the standards of any other authorities having jurisdiction. The installing contractor or sprinkler manufacturer should be contacted relative to any questions.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified Inspection Service.

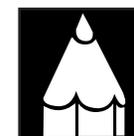


Limited Warranty

Products manufactured by Tyco Fire Products are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by Tyco Fire Products. No warranty is given for products or components manufactured by companies not affiliated by ownership with Tyco Fire Products or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association, and/or the standards of any other Authorities Having Jurisdiction. Materials found by Tyco Fire Products to be defective shall be either repaired or replaced, at Tyco Fire Products' sole option. Tyco Fire Products neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. Tyco Fire Products shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

IN NO EVENT SHALL TYCO FIRE PRODUCTS BE LIABLE, IN CONTRACT, TORT, STRICT LIABILITY OR UNDER ANY OTHER LEGAL THEORY, FOR INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LABOR CHARGES, REGARDLESS OF WHETHER TYCO FIRE PRODUCTS WAS INFORMED ABOUT THE POSSIBILITY OF SUCH DAMAGES, AND IN NO EVENT SHALL TYCO FIRE PRODUCTS' LIABILITY EXCEED AN AMOUNT EQUAL TO THE SALES PRICE.

THE FOREGOING WARRANTY IS MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



Ordering Information

Ordering Information: When placing an order, indicate the full product name. Please specify the quantity, model, style, orifice size, temperature rating, type of finish or coating, and sprinkler wrench. Refer to price list for complete listing of Part Numbers.

Teflon is a trademark of the DuPont Corp.