

Royal Flush™ Concealed Field Adjustable Dry Pendent Automatic Sprinkler Model "A-1"

Patent #4,007,878



Listed by: Underwriters Laboratories, Inc.
Underwriters' Laboratories of Canada

Approved by: B.S.&A. of New York City (Cal. No. 375-75-SA)

Description • Operation • Installation • Technical Data



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Central Sprinkler Corporation

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Description

The Model "A-1" Royal Flush Concealed type Field Adjustable Dry Pendent Automatic Sprinkler is designed for use in special applications such as freezing environments and conditions where sediment or foreign materials might accumulate in ordinary drop nipples. Unlike standard non-adjustable dry pendent sprinklers, the Model "A-1" incorporates a special elbow that permits 2½ inches of field adjustment. This exclusive and unique feature allows flexibility never before available. It insures a perfect ceiling fit for the sprinkler upon initial installation. Should the ceiling sag, etc. in the future, a simple readjustment at the ceiling is all that should be necessary to once again obtain a perfect ceiling fit.

Model "A-1" offers the ultimate in aesthetic appeal as only the unobtrusive ceiling plate appears at the ceiling. No links or sprinklers extend below the ceiling thus providing a smooth uninterrupted ceiling surface.

Operation

Central's Model "A-1" Royal Flush Concealed Dry Pendent Automatic Sprinkler absorbs heat through the ceiling plate which is secured to the support ring by a fusible alloy. At the rated temperature, the plate falls away, allowing the springloaded deflector to drop 1/2" below ceiling level. Heat then melts the fusible alloy sealed into bronze center strut (#15) by stainless steel ball (#12). The ball is forced upward into the center strut releasing the two ejectors (#16) and operating the basic sprinkler (#10). This causes the release of the cap (#9) and the bushing (#8) allowing the guide tube (#6) and the thrust bearing (#4) to drop down, allowing ball bearing (#3), seal (#2) and plunger (#1) to be released and ejected through the sprinkler with the water stream. Note that it is not necessary to reorder the special cast iron fitting (#21) for replacement after sprinkler operation. It is only necessary to order the basic adjustable dry pendent assembly in the same length as the original.

Installation

The special cast iron fitting (#21) is not attached to the Model "A-1" assembly in the factory as this fitting must be made into the sprinkler line fitting first. Then the assembly is attached to the special cast iron fitting by screwing in threaded connector (#18) tightly. (Apply pipe dope to the male threads first.) The upper support shell is permanently attached to the sprinkler frame. After aligning the ceiling plate and support ring assembly holding studs with the slots in the upper support shell, a simple upward push and twisting to the right until the ceiling stop tabs rest against the ceiling complete the installation. System installation should be completed sooner resulting in greater efficiency.

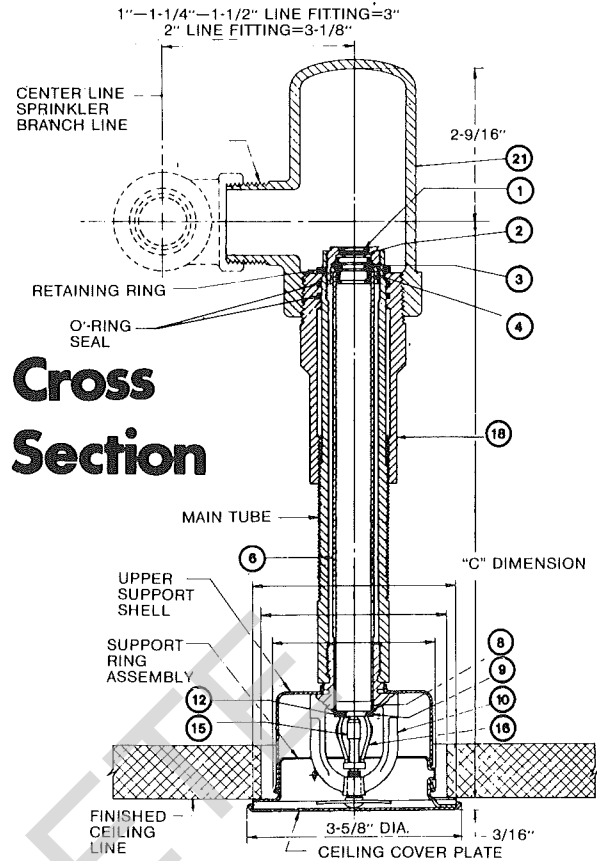
Technical Data

Nominal Orifice Size	"K" Factor	Available Temperature Ratings	Finishes Available
½"	See Ordering Range	135°F or 145° w/117° Plate 162° w/135° Plate **212° w/165° Plate	Chrome Brass White Enamel or other painted finishes

**212° Sprinkler not F.M. Approved

NOTE: F.M. Approved for Light Hazard use only.

Printed in U.S.A.



Ordering Information

- Specify:
- Quantity and Style. Sprinklers and Nozzles.
 - Finish.
 - Temperature Rating(s).
 - "C" Dimension in ¼" increments. (See Ordering Range Chart. Minimum "C" Dimension is 7-5/16").
 - Quantity - Concealed Wrenches - #C-109-32

- Notes:
- Approved length limitations are as follows:

Pendent
U.L. & F.M. 36"

- "C" Dimension is distance between center line of line pipe fitting and listed ceiling line.
- Do not overtighten special elbow (#21) into line fitting or breakage will result.

ORDERING RANGE CHART

Order "C" Dimension*	"K" Factor**	Order "C" Dimension*	"K" Factor**
7-5/16"	5.29	17-5/16"	
8-9/16"	5.26	18-9/16"	
9-13/16"	5.23	19-13/16"	
11-1/16"	5.20	21-1/16"	
12-5/16"	5.17	22-5/16"	
13-9/16"	5.14	23-9/16"	
14-13/16"	5.11	24-13/16"	
16-1/16"	5.08	26-1/16"	

* Order by "C" dimension shown. Field adjustment is ± 1/4" to same.

** "K" Factor reduces by .03 per each 1/4" additional length.