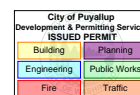




## Model F3QR56 Dry K5.6 (80 metric) Quick-Response, Standard Spray Sprinklers



### Features

- Available in the following configurations:
  - Pendent with standard escutcheon
  - Pendent with Model HB extended escutcheon
  - Pendent with Model FP recessed escutcheon
  - Pendent with Model F1 recessed escutcheon
  - Concealed Pendent with Model CCP cover plate
  - Horizontal Sidewall with Standard escutcheon
  - Horizontal Sidewall with Model HB extended escutcheon
  - Horizontal Sidewall with Model FP recessed escutcheon (FM Standard Response)
  - Horizontal Sidewall with Model F1 recessed escutcheon (FM Standard Response)
  - Upright
- Available with 1" NPT, ISO7-1R1, 3/4" NPT, or ISO7-1R3/4 inlet fitting.
- 3/4" NPT inlet fittings permit replacement of older 3/4" inlet dry sprinklers without changing to a larger sprinkler fitting.
- Sprinklers, escutcheons, and cover plates are available in a wide variety of standard and special application finishes.
- White polyester, black polyester, and Electroless Nickel PTFE (ENT) finish sprinklers are cULus Listed as Corrosion Resistant.
- Available with cULus Listed 250 psi (17.2 bar) pressure rating for Dry Pendent and select HSW configurations. FM Approved for 175 psi (12 bar).

### Product Description

Model F3QR56 Dry sprinklers are quick-response, standard coverage sprinklers with a nominal K-Factor of 5.6 (80 metric). Available in Dry Pendent, Dry Horizontal Sidewall, and Dry Upright configurations, Model F3QR56 Dry sprinklers all use a 3 mm glass bulb operating element. See the Temperature Ratings table in this Bulletin for available temperature ratings. Model F3QR56 Dry sprinklers are intended for installation on wet-pipe, dry-pipe, or preaction sprinkler systems in accordance with NFPA 13, FM Property Loss Prevention Data Sheets, and other applicable installation standards.

Model F3QR56 Dry Pendent and Sidewall sprinklers are available with a variety of escutcheon options as illustrated in Figs. 1 through 3 and Figs. 5 through 9. In addition, Model F3QR56 Dry Pendent sprinklers are also available with the Model CCP conical concealed cover plate as illustrated in Fig. 4. Available sprinkler, escutcheon, and cover plate finishes are identified in the Finishes table in this Bulletin. The Model F1 escutcheon, Model FP escutcheon, and Model CCP cover plate are the only recessed escutcheons and cover plate listed for use with Model F3QR56 Dry sprinklers; the use of any other recessed escutcheon or cover plate with Model F3QR56 Dry sprinklers will void all guarantees, warranties, listings and approvals.



Pendent  
(See Fig. 1)



Pendent / HB  
(See Fig. 2)



Recessed FP Pendent  
(See Fig. 3)



Concealed  
(See Fig. 4)



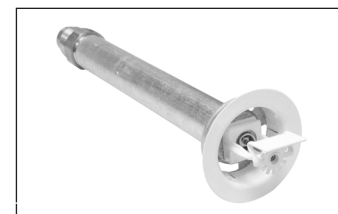
Recessed F1 Pendent  
(See Fig. 5)



Horizontal Sidewall  
(See Fig. 6)



Horizontal Sidewall / HB  
(See Fig. 7)



Recessed FP  
Horizontal Sidewall  
(See Fig. 8)



Recessed F1  
Horizontal Sidewall  
(See Fig. 9)



Upright  
(See Fig. 10)

Inlet fittings are available with 1" NPT, ISO 7-1R1, 3/4" NPT, or ISO7-1R3/4 threads. Sprinklers with 3/4" NPT and ISO7-1R3/4 inlet fittings are intended primarily for replacement of existing 3/4" or ISO7-1R3/4 inlet dry sprinklers, but may also be used in new installations.

See the Available Configurations, Listings, and Approvals table in this Bulletin for further information on Model F3QR56 Dry sprinklers.

### Available Configurations, Listings, and Approvals

Sprinkler Model	Escutcheon or Cover Plate	Available Length (See Figs. 1-9)	Listings and Approvals <sup>(1)</sup>	Inlet Threads	Sprinkler Identification Number (SIN)
F3QR56 Dry Pendent	Standard Escutcheon	2" to 36" (50 to 900 mm)	cULus, NYC	3/4" NPT or ISO7-1R3/4	R5714
	HB Extended Escutcheon	3-1/2" to 36" (90 to 900 mm)			
	F1 Recessed Escutcheon				
	FP Recessed Escutcheon				
	CCP Cover Plate				
	Standard Escutcheon	2" to 48" (50 to 1200 mm)	cULus, FM, NYC	1" NPT or ISO7-1R1	
	HB Extended Escutcheon	3-1/2" to 48" (90 to 1200 mm)			
	F1 Recessed Escutcheon				
	FP Recessed Escutcheon				
	CCP Cover Plate				
F3QR56 Dry Horizontal Sidewall	Standard Escutcheon	2" to 48" (50 to 1200 mm)	cULus <sup>(2)</sup> , NYC <sup>(2)</sup>	3/4" NPT or ISO7-1R3/4	R5734
	HB Extended Escutcheon	3-1/2" to 48" (90 to 1200 mm)			
	F1 Recessed Escutcheon				
	FP Recessed Escutcheon				
	Standard Escutcheon	2" to 48" (50 to 1200 mm)	cULus <sup>(2)</sup> , FM <sup>(3)</sup> , NYC <sup>(2)</sup>	1" NPT or ISO7-1R1	
	HB Extended Escutcheon	3-1/2" to 48" (90 to 1200 mm)			
	F1 Recessed Escutcheon	3-1/2" to 48" (90 to 1200 mm)	cULus <sup>(2)</sup> , FM <sup>(3)(4)</sup> , NYC <sup>(2)</sup>		
	FP Recessed Escutcheon				
F3QR56 Dry Upright	N/A	5" to 48" (127 to 1200 mm)	cULus <sup>(2)</sup>	1" NPT or ISO7-1R1	R5724

<sup>(1)</sup> For available temperature ratings and finishes see the Temperature Ratings and Finishes tables, respectively, in this Bulletin.

<sup>(2)</sup> cULus Listing and NYC for Light Hazard and Ordinary Hazard only.

<sup>(3)</sup> FM Approved for Light Hazard only.

<sup>(4)</sup> Model F3QR56 Dry Horizontal Sidewall with Model F1 or Model FP recessed escutcheon are FM Approved as Standard Response.

## Listing and Approval Agencies

See the Available Configurations, Listings, and Approvals table in this Bulletin for listings and approvals applicable to each available configuration.

1. Listed by Underwriters Laboratories, Inc. and UL Certified for Canada (cULus)
2. Certified by FM Approvals (FM)
3. Permitted in New York City based on UL Listing per Local Law 33/2007 (NYC)

## Technical Data

Nominal K-Factor: 5.6 gpm/psi<sup>1/2</sup> (80 L/min/bar<sup>1/2</sup>)

Sprinkler	Listing or Approval	Deflector to Ceiling Distance	Maximum Working Pressure
F3QR56 Dry Pendent	cULus, NYC	See note below	250 psi (17.2 bar)
	FM	See note below	175 psi (12 bar)
F3QR56 Dry Horizontal Sidewall	cULus, NYC	4" to 6 "	250 psi (17.2 bar)
		4" to 12"	175 psi (12 bar)
	FM	See note below	175 psi (12 bar)
F3QR56 Dry Upright	cULus	See note below	175 psi (12 bar)

**Note:** Deflector distance to be in accordance with applicable NFPA, FM, or other agency requirements. Information is provided only when additional clarification is necessary.

Temperature Classification	Glass Bulb Color	Sprinkler Temperature Rating	Cover Plate Temperature Rating	Maximum Ceiling Temperature	Listings and Approvals <sup>(1)</sup>
Ordinary	Orange	135°F (57°C)	135°F (57°C)	100°F (38°C)	cULus, FM, NYC
	Red	155°F (68°C)			
Intermediate	Yellow	175°F (79°C)	165°F (74°C)	150°F (66°C)	cULus, NYC
Intermediate	Green	200°F (93°C)	165°F (74°C)	150°F (66°C)	cULus, FM, NYC
High	Blue	286°F (141°C)	None	225°F (107°C)	cULus, FM <sup>(2)</sup> , NYC
			165°F (74°C)	150°F (66°C)	cULus, NYC

<sup>(1)</sup> For listed and approved sprinkler, escutcheon, and inlet configurations see the Available Configurations, Listings, and Approvals table in this Bulletin.

<sup>(2)</sup> High temperature classification is FM Approved with Standard and Model HB escutcheons only.

## Finish Notes

1. Finishes vary with type of trim selected. See table provided with each sprinkler detail for finish combinations.
2. Paint or any other coating applied over the factory finish will void all approvals and warranties.
3. Other finishes and colors may be available on special order. Consult your Reliable sales representative for details.
4. For Standard, Model HB, and Model F1 trims, both components of escutcheon are finished.
5. For Model FP and CCP trims, only the trim ring and cover plate are finished. The threaded sprinkler cup is unfinished.

**Model F3QR56 Dry Pendent Sprinkler with Standard Escutcheon (SIN R5714)**

<b>"A" Dim.</b>	2" to 48" (51mm to 1219mm) in 1/4" (6mm) increments for 1" connections or
	2" to 36" (51mm to 914mm) in 1/4" (6mm) increments for 3/4" connections

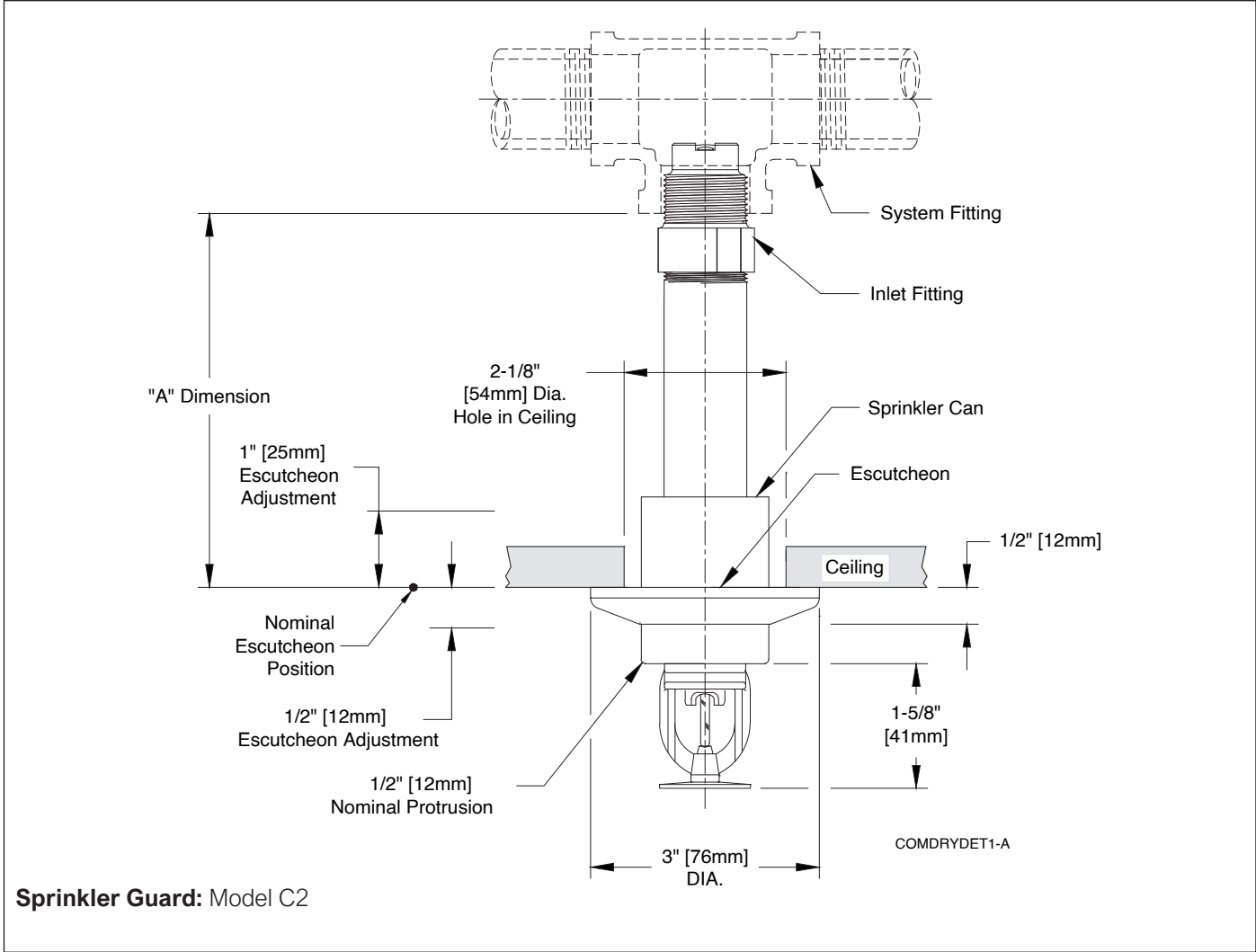


Fig. 1

**Note:** The sprinkler can protrudes 1/2" (12mm) when escutcheon is in nominal position. Escutcheon adjustment provides -1/2" (12mm) to +1" (25mm) "A" dimension adjustment range.

<b>Finish Combinations: Standard Escutcheon</b>	
<b>Sprinkler</b>	<b>Escutcheon<sup>(2)(3)</sup></b>
Bronze	Polished Stainless
Bronze	Laquered Brass
Chrome	Polished Stainless
White Polyester <sup>(1)</sup>	White Polyester
Black Polyester <sup>(1)</sup>	Black Polyester
Custom Color Polyester <sup>(1)</sup>	Custom Color Polyester
Electroless Nickel PTFE <sup>(4)</sup>	Polished Stainless

**Notes:**

1. UL Listed as Corrosion Resistant.
2. Escutcheons do not carry corrosion resistant listings.
3. Base material is 316 stainless steel unless noted.
4. FM Approved as Corrosion Resistant.

**Model F3QR56 Dry Pendent Sprinkler with Model HB Extended Escutcheon (SIN R5714)**

<b>"A" Dim.</b>	3½" to 48" (89mm to 1219mm) in 1/4" (6mm) increments for 1" connections or 3½" to 36" (89mm to 914mm) in 1/4" (6mm) increments for 3/4" connections
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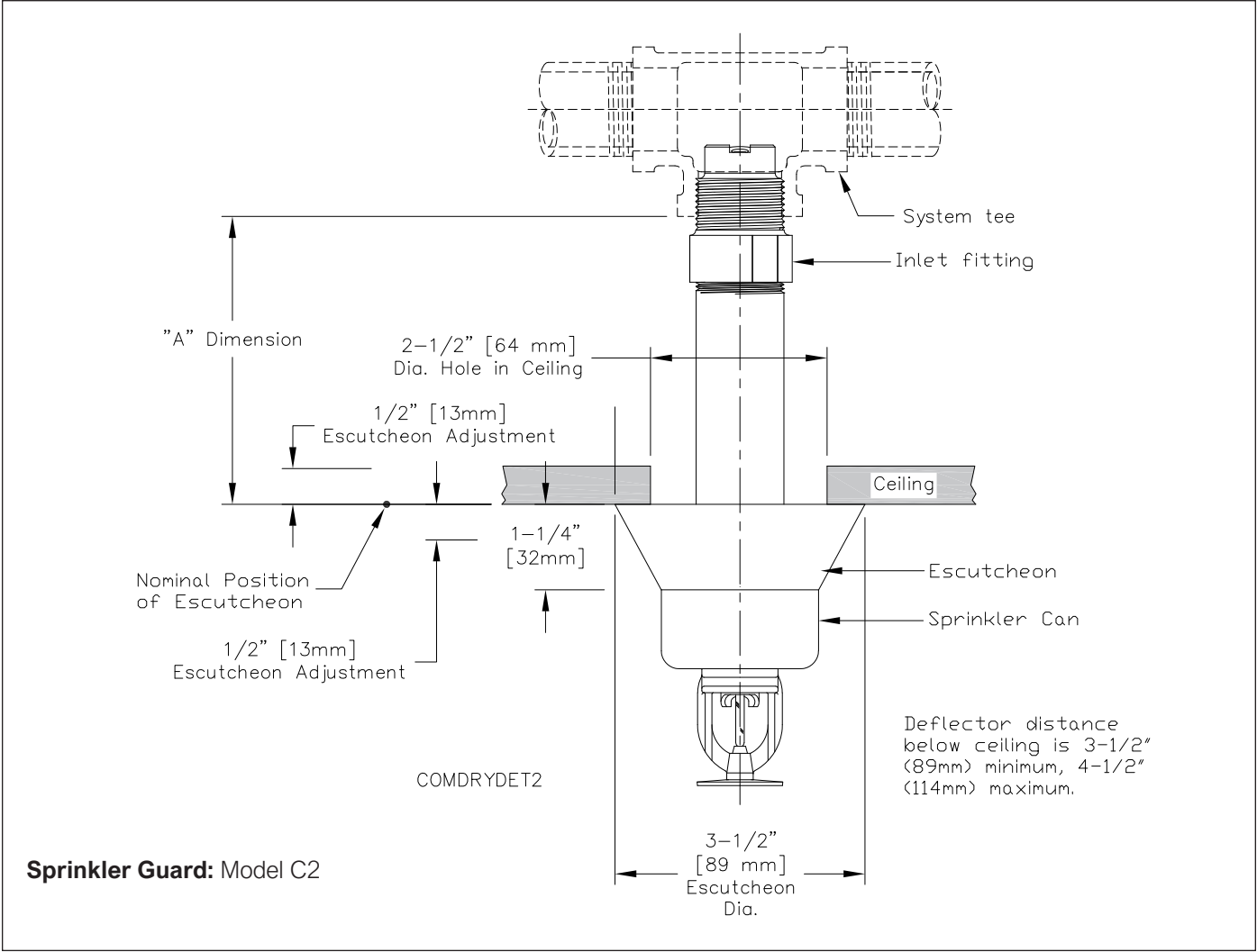


Fig. 2

**Note:** The sprinkler can protrudes 1¼" when escutcheon is in nominal position. Escutcheon adjustment provides -½" (-12.7mm) to +½" (+12.7mm) "A" dimension adjustment range.

Finish Combinations: HB Escutcheon	
Sprinkler	Escutcheon <sup>(2)(3)</sup>
Bronze	Chrome
Chrome	Chrome
White Polyester <sup>(1)</sup>	White Polyester
Black Polyester <sup>(1)</sup>	Black Polyester
Custom Color Polyester <sup>(1)</sup>	Custom Color Polyester
Electroless Nickel PTFE <sup>(1)(4)</sup>	Stainless Steel

- Notes:**
1. UL Listed as Corrosion Resistant.
  2. Escutcheons do not carry corrosion resistant listings.
  3. Base material is cold rolled steel unless noted.
  4. FM Approved as Corrosion Resistant.

**Model F3QR56 Dry Pendent Sprinkler with Model FP Recessed Escutcheon (SIN R5714)**

<b>"A" Dim.</b>	3 1/2" to 48" (89mm to 1219mm) in 1/4" (6mm) increments for 1" connections or
	3 1/2" to 36" (89mm to 914mm) in 1/4" (6mm) increments for 3/4" connections

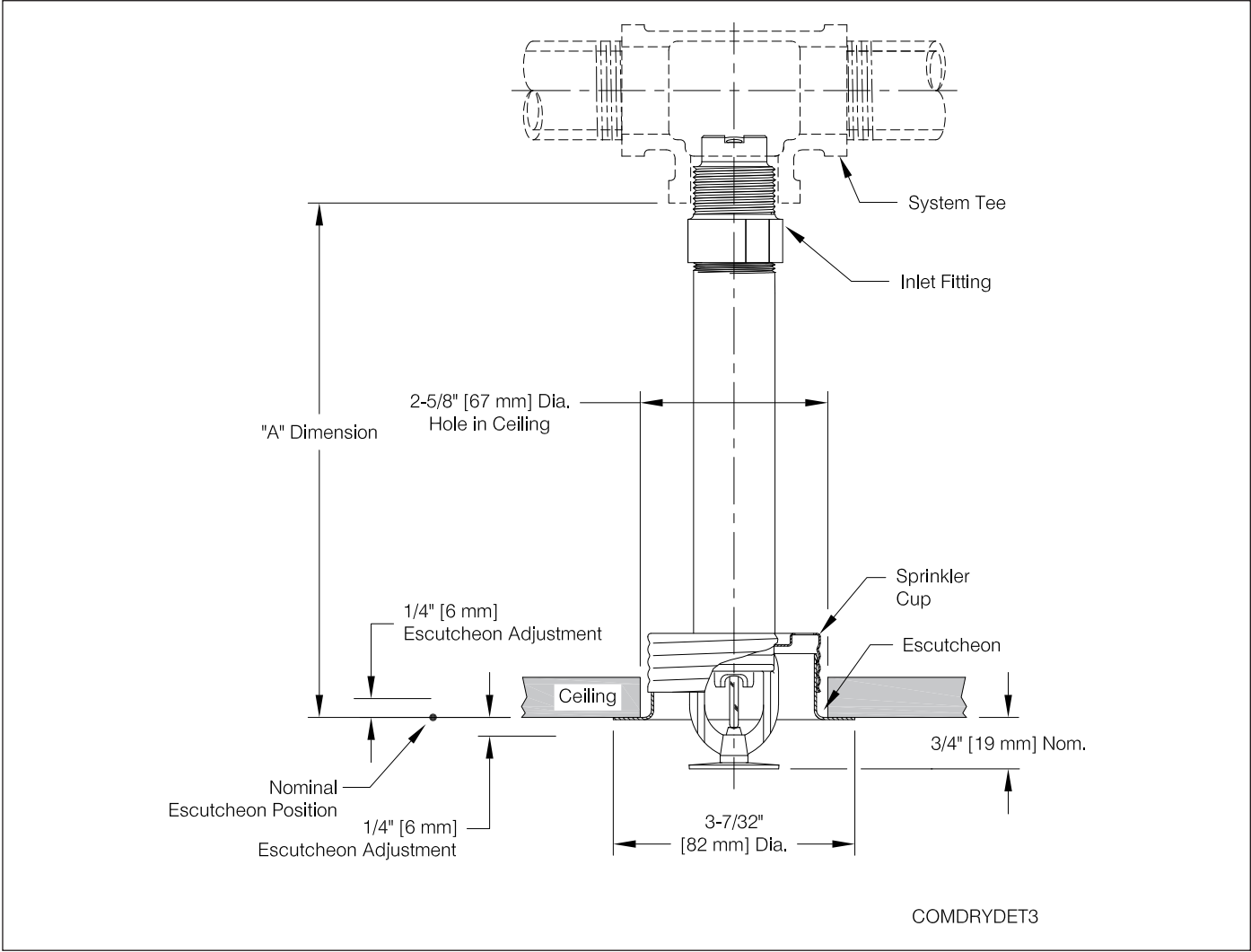


Fig. 3

**Note:** Do not install the Model F3QR56 Dry Pendent sprinkler with the Model FP escutcheon in ceilings which have positive pressure in the space above.

Finish Combinations: FP Recessed Escutcheon	
Sprinkler <sup>(1)</sup>	Escutcheon <sup>(3)(4)</sup>
Bronze	Chrome
Bronze	Brass
Chrome	Chrome
White Polyester <sup>(2)</sup>	White Polyester
Black Polyester <sup>(2)</sup>	Black Polyester
Custom Color Polyester <sup>(2)</sup>	Custom Color Polyester
Electroless Nickel PTFE <sup>(2)(5)</sup>	Stainless Steel

- Notes:**
1. Cup for FP Recessed is unfinished galvanized steel except electroless nickel PTFE sprinkler uses a stainless steel cup.
  2. UL Listed as Corrosion Resistant.
  3. Escutcheons do not carry corrosion resistant listings.
  4. Base material is cold rolled steel unless noted.
  5. FM Approved as Corrosion Resistant.

**Model F3QR56 Dry Pendent Sprinkler with Model CCP Cover Plate (SIN R5714)**

<b>"A" Dim.</b>	3 1/2" to 48" (89mm to 1219mm) in 1/4" (6mm) increments for 1" connections or
	3 1/2" to 36" (89mm to 914mm) in 1/4" (6mm) increments for 3/4" connections

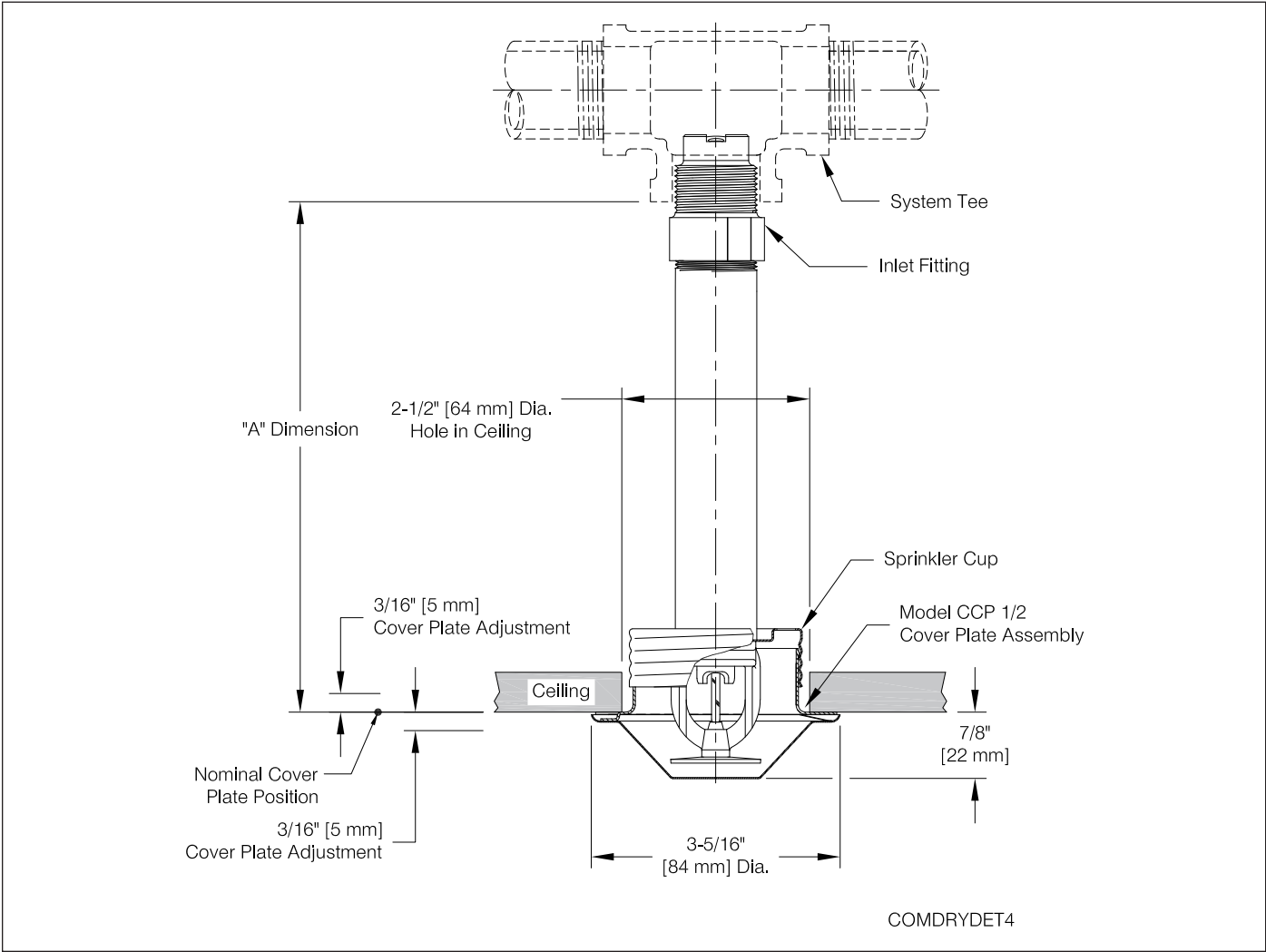


Fig. 4

**Note:** Do not install the Model F3QR56 Dry Pendent sprinkler with the Model CCP cover plate in ceilings which have positive pressure in the space above.

Finish Combinations: CCP Conical Cover Plate	
Sprinkler	Cover Plate <sup>(2)</sup>
Bronze	White Polyester
	Chrome Bright
	Chrome Dull
	Bright Brass
	Unfinished Bronze
	Custom Color

**Notes:**

1. Cup for CCP Concealed in unfinished galvanized steel.
2. Cover plates do not carry corrosion resistant listings.

**Model F3QR56 Dry Pendent Sprinkler with Model F1 Recessed Escutcheon (SIN R5714)**

<b>"A" Dim.</b>	3½" to 48" (89mm to 1219mm) in ¼" (6mm) increments for 1" connections or 3½" to 36" (89mm to 914mm) in ¼" (6mm) increments for ¾" connections.
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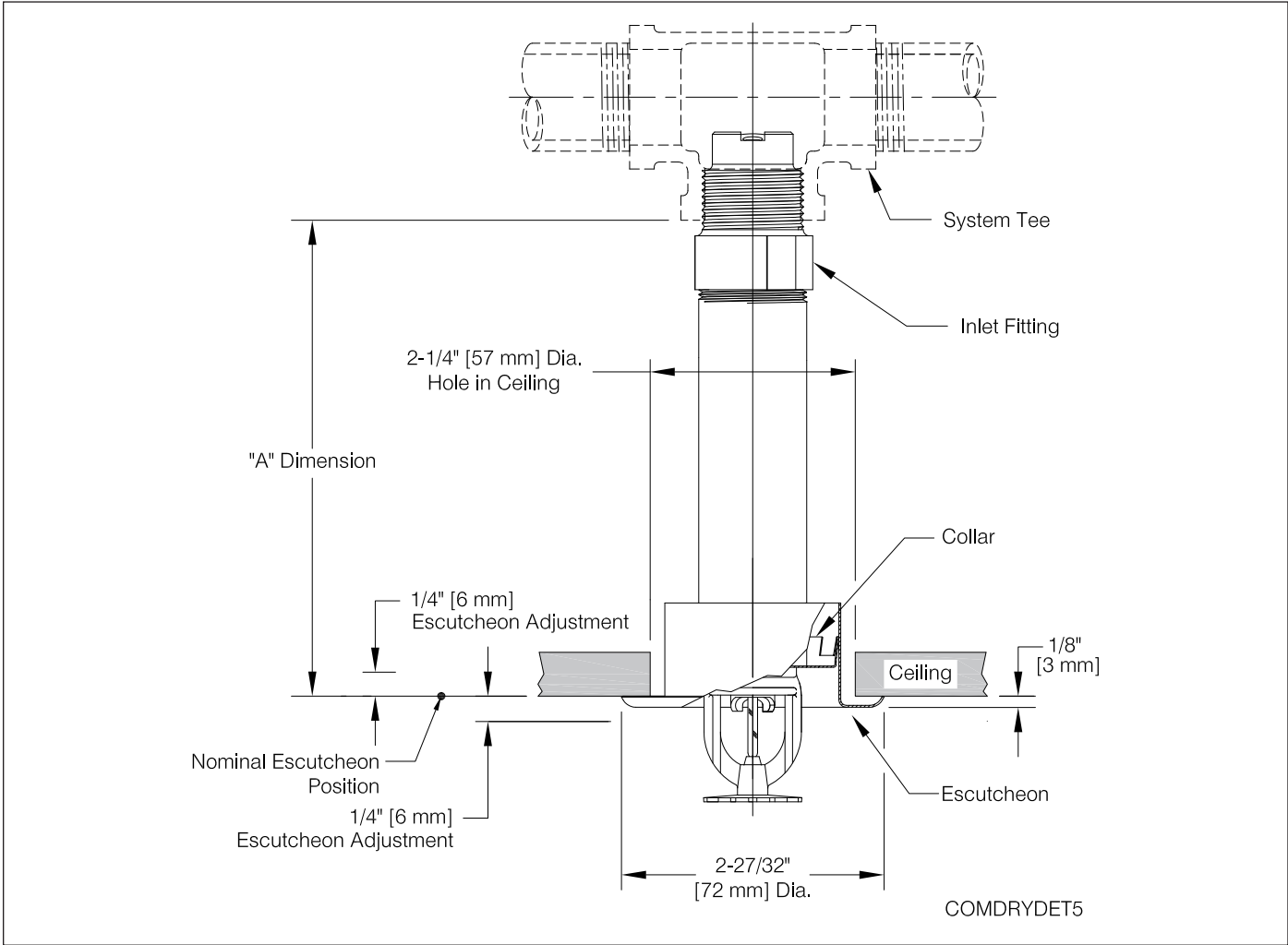


Fig. 5

Finish Combinations: F1 Recessed Escutcheon	
Sprinkler	Escutcheon <sup>(2)(3)</sup>
Bronze	Chrome
Bronze	Brass
Chrome	Chrome
White Polyester <sup>(1)</sup>	White Polyester
Black Polyester <sup>(1)</sup>	Black Polyester
Custom Color Polyester <sup>(1)</sup>	Custom Color Polyester
Electroless Nickel PTFE <sup>(1)(4)</sup>	Stainless Steel

**Notes:**

- 1. UL Listed as Corrosion Resistant.
- 2. Escutcheons do not carry corrosion resistant listings.
- 3. Base material is cold rolled steel unless noted.
- 4. FM Approved as Corrosion Resistant.



**Model F3QR56 Dry Horizontal Sidewall Sprinkler with Standard Escutcheon (SIN R5734)**

<b>"A" Dim.</b>	2" to 48" (51mm to 1219mm) in 1/4" (6mm) increments for 1" connections or 2"
	to 36" (51mm to 914mm) in 1/4" (6mm) increments for 3/4" connections

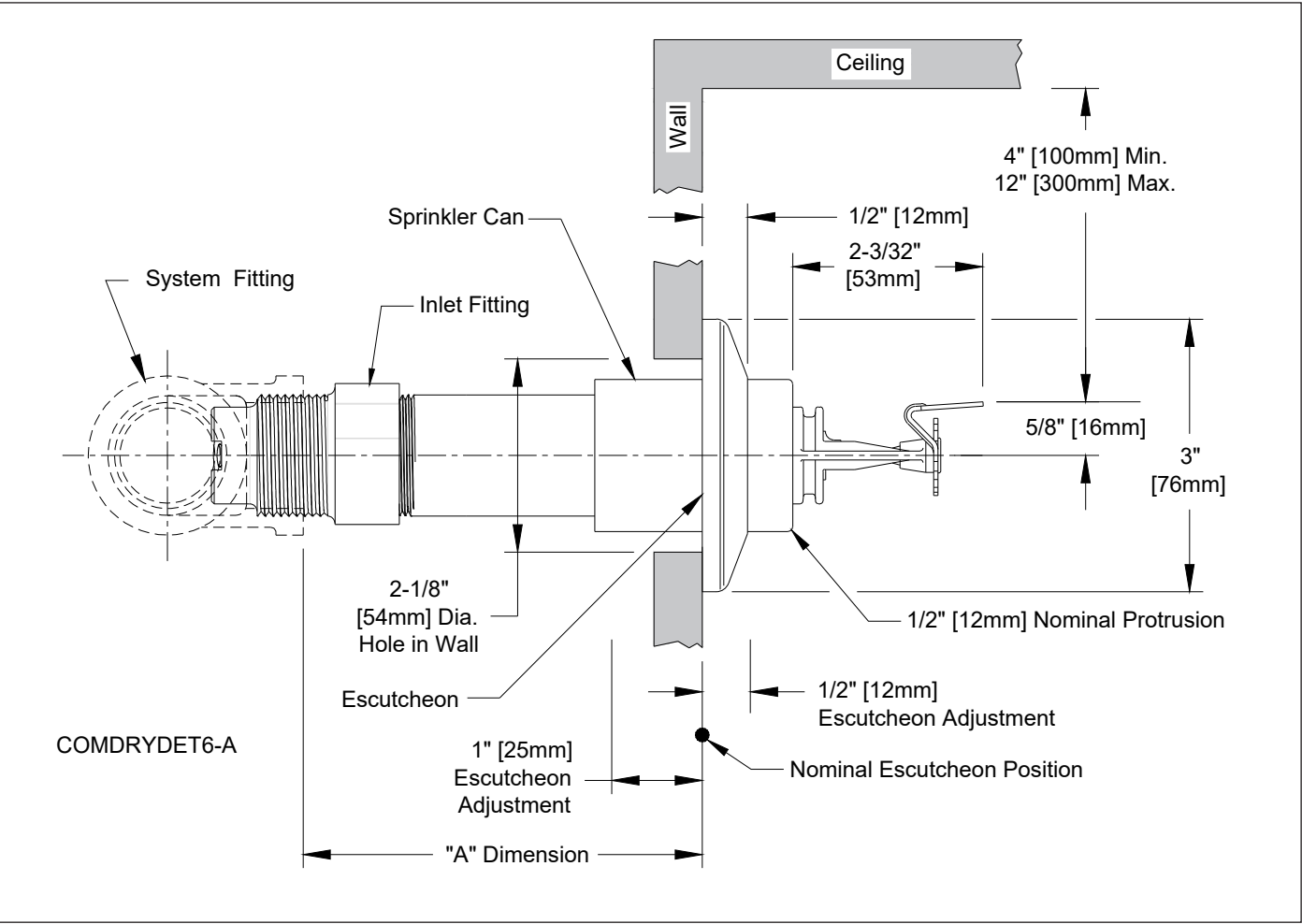


Fig. 6

**Note:** The sprinkler can protrudes 1/2" when escutcheon is in nominal position. Escutcheon adjustment provides -1/2" (-12mm) to +1" (25mm) "A" dimension adjustment range.

Finish Combinations: Standard Escutcheon	
Sprinkler	Escutcheon <sup>(2)(3)</sup>
Bronze	Polished Stainless
Bronze	Laquered Brass
Chrome	Polished Stainless
White Polyester <sup>(1)</sup>	White Polyester
Black Polyester <sup>(1)</sup>	Black Polyester
Custom Color Polyester <sup>(1)</sup>	Custom Color Polyester
Electroless Nickel PTFE <sup>(1)(4)</sup>	Polished Stainless

**Notes:**

1. UL Listed as Corrosion Resistant.
2. Escutcheons do not carry corrosion resistant listings.
3. Base material is 316 stainless steel unless noted.
4. FM Approved as Corrosion Resistant.

**Model F3QR56 Dry Horizontal Sidewall Sprinkler with Model HB Escutcheon (SIN R5734)**

<b>"A" Dim.</b>	3 1/2" to 48" (89mm to 1219mm) in 1/4" (6mm) increments for 1" connections or 3 1/2" to 36" (89mm to 914mm) in 1/4" (6mm) increments for 3/4" connections
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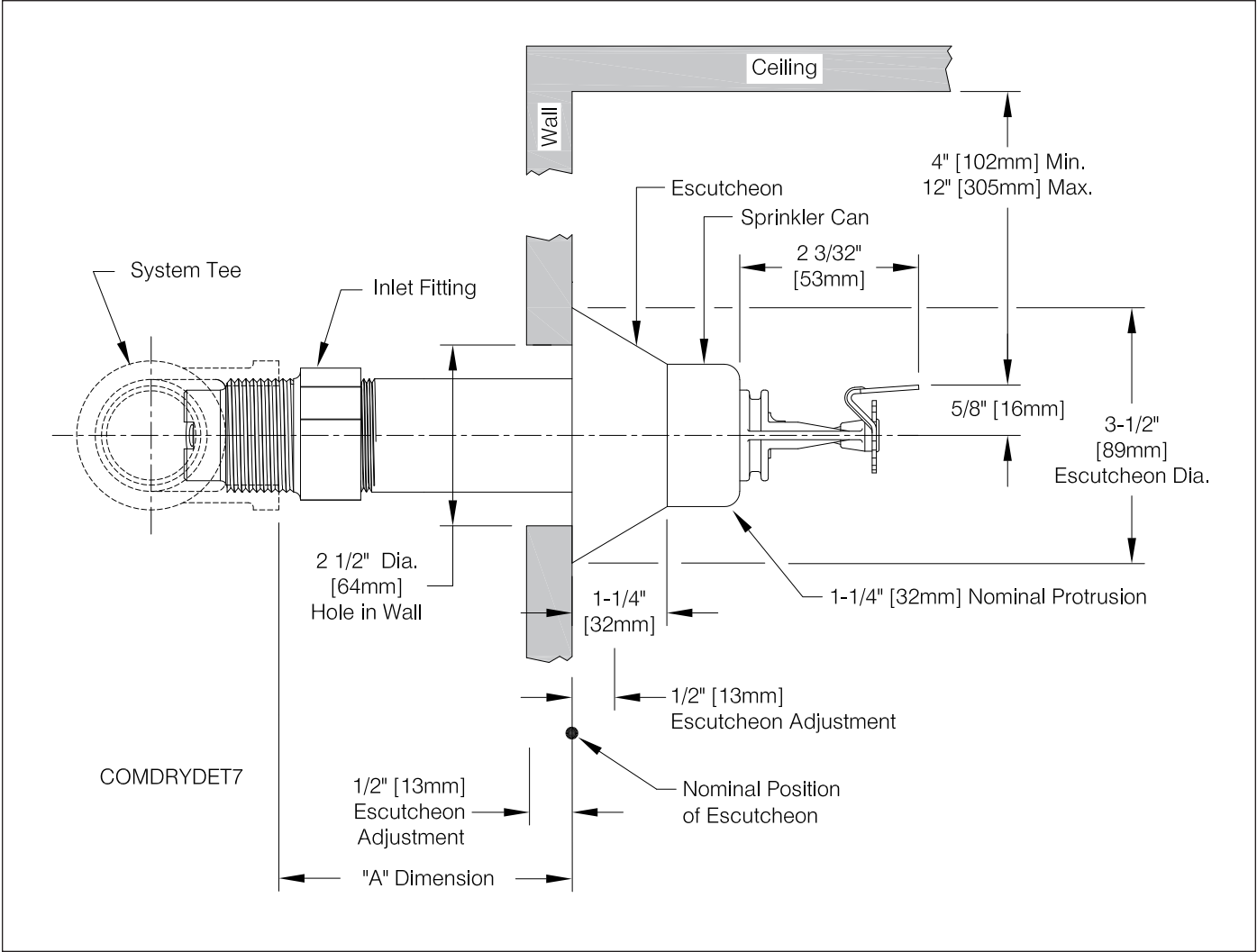


Fig. 7

**Note:** The sprinkler can protrudes 1 1/4" when escutcheon is in nominal position. Escutcheon adjustment provides -1/2" (-12.7mm) to +1/2" (+12.7mm) "A" dimension adjustment range.

Finish Combinations: HB Escutcheon	
Sprinkler	Escutcheon <sup>(2)(3)</sup>
Bronze	Chrome
Chrome	Chrome
White Polyester <sup>(1)</sup>	White Polyester
Black Polyester <sup>(1)</sup>	Black Polyester
Custom Color Polyester <sup>(1)</sup>	Custom Color Polyester
Electroless Nickel PTFE <sup>(1)(4)</sup>	Stainless Steel

- Notes:**
1. UL Listed as Corrosion Resistant.
  2. Escutcheons do not carry corrosion resistant listings.
  3. Base material is cold rolled steel unless noted.
  4. FM Approved as Corrosion Resistant.

## Model F3QR56 Dry Horizontal Sidewall Sprinkler with Model FP Recessed Escutcheon (SIN R5734)

<b>"A" Dim.</b>	3 1/2" to 48" (89mm to 1219mm) in 1/4" (6mm) increments for 1" connections or
	3 1/2" to 36" (89mm to 914mm) in 1/4" (6mm) increments for 3/4" connections

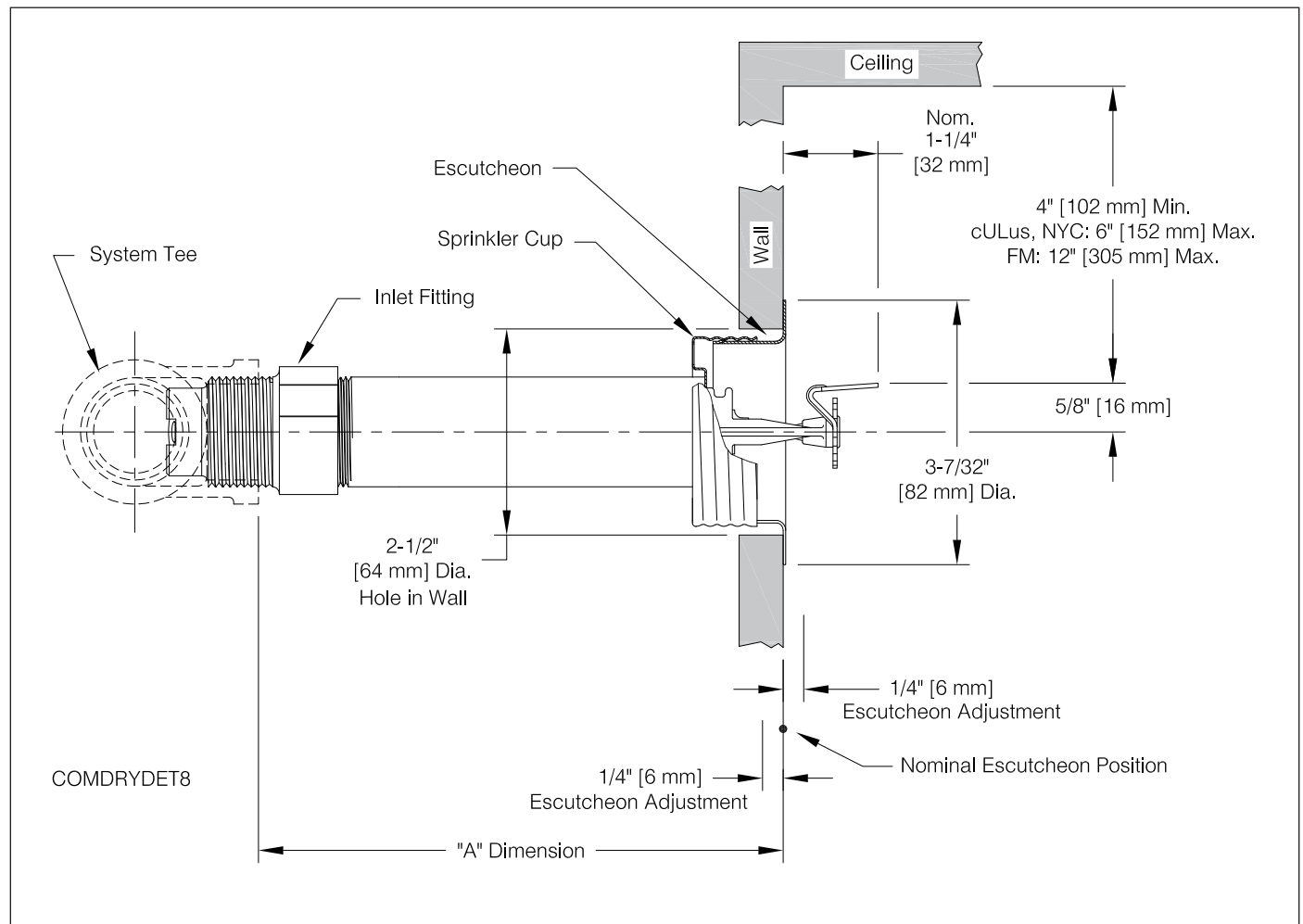


Fig. 8

**Note:** Do not install the Model F3QR56 Dry Horizontal Sidewall sprinkler with the Model FP escutcheon in walls which are positively pressurized with respect to the protected space.

Finish Combinations: FP Recessed Escutcheon	
Sprinkler <sup>(1)</sup>	Escutcheon <sup>(3)(4)</sup>
Bronze	Chrome
Bronze	Brass
Chrome	Chrome
White Polyester <sup>(2)</sup>	White Polyester
Black Polyester <sup>(2)</sup>	Black Polyester
Custom Color Polyester <sup>(2)</sup>	Custom Color Polyester
Electroless Nickel PTFE <sup>(2)(5)</sup>	Stainless Steel

### Notes:

1. Cup for FP Recessed is unfinished galvanized steel except electroless nickel PTFE sprinkler uses a stainless steel cup.
2. UL Listed as Corrosion Resistant.
3. Escutcheons do not carry corrosion resistant listings.
4. Base material is cold rolled steel unless noted.
5. FM Approved as Corrosion Resistant.

## Model F3QR56 Dry Horizontal Sidewall Sprinkler with Model F1 Recessed Escutcheon (SIN R5734)

"A" Dim.	3 1/2" to 48" (89mm to 1219mm) in 1/4" (6mm) increments for 1" connections or 3 1/2"
	to 36" (89mm to 914mm) in 1/4" (6mm) increments for 3/4" connections

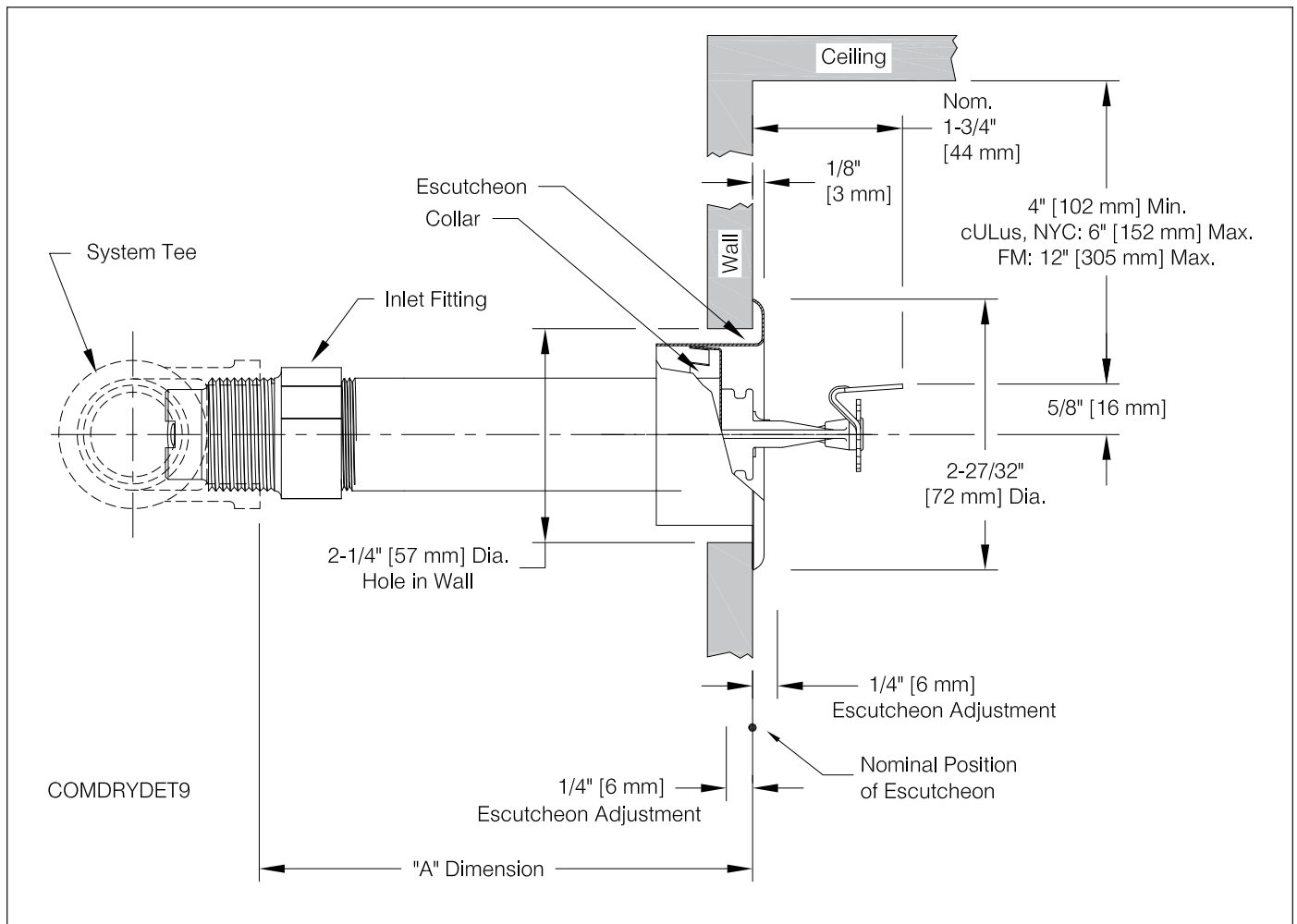


Fig. 9

Finish Combinations: F1 Recessed Escutcheon	
Sprinkler	Escutcheon <sup>(2)(3)</sup>
Bronze	Chrome
Bronze	Brass
Chrome	Chrome
White Polyester <sup>(1)</sup>	White Polyester
Black Polyester <sup>(1)</sup>	Black Polyester
Custom Color Polyester <sup>(1)</sup>	Custom Color Polyester
Electroless Nickel PTFE <sup>(1)(4)</sup>	Stainless Steel

### Notes:

1. UL Listed as Corrosion Resistant.
2. Escutcheons do not carry corrosion resistant listings.
3. Base material is cold rolled steel unless noted.
4. FM Approved as Corrosion Resistant.

**Model F3QR56 Dry Upright (SIN 5724)**  
Order Dimensions 5" to 48" (127 mm to 1219 mm)

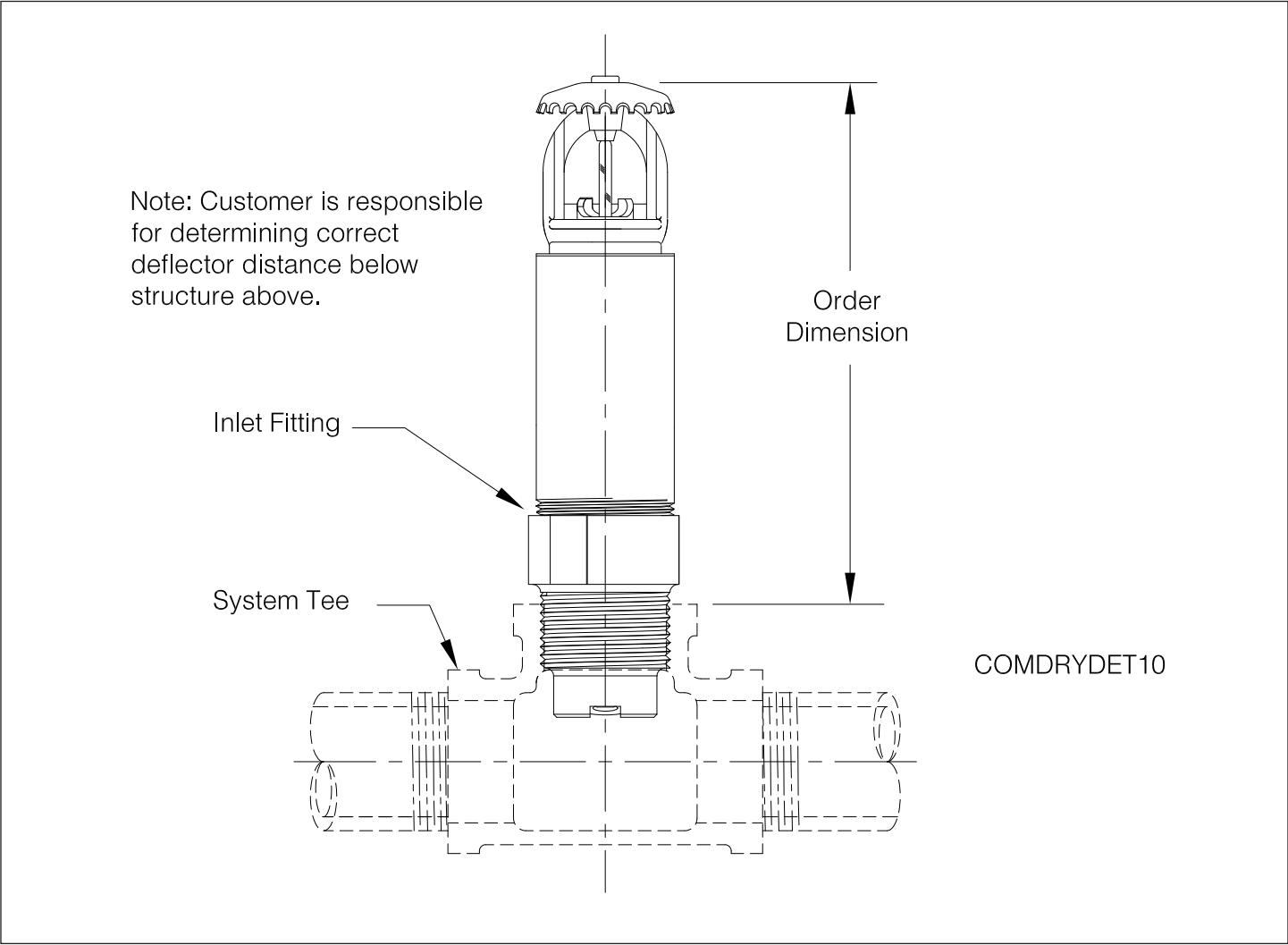


Fig. 10

Finish Combinations: Upright	
Sprinkler	Escutcheon
Bronze	NA
Electroless Nickel PTFE <sup>(1)</sup>	NA

- Notes:**
1. UL Listed as Corrosion Resistant.
  2. Escutcheons do not carry corrosion resistant listings.
  3. Base material is cold rolled steel unless noted.

## MINIMUM EXPOSED BARREL LENGTH WHEN CONNECTED TO WET PIPE SPRINKLER SYSTEM

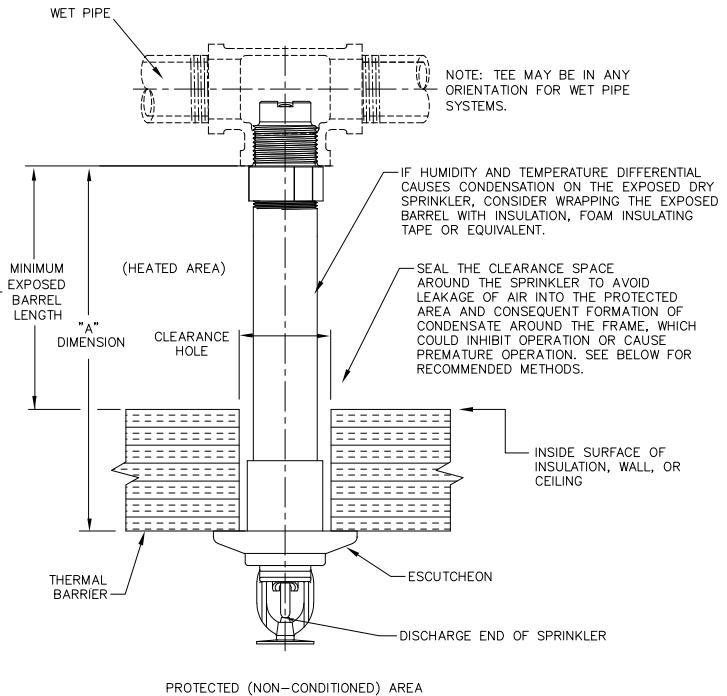
NOTE: STANDARD DRY PENDENT IS SHOWN, HOWEVER, MINIMUM EXPOSED BARREL LENGTH APPLIES TO ALL STYLES OF DRY SPRINKLERS CONNECTED TO A WET PIPE SYSTEM.

AMBIENT TEMPERATURE EXPOSED TO DISCHARGE END OF SPRINKLER*	EXPOSED BARREL AMBIENT TEMPERATURE		
	40°F/4°C	50°F/10°C	60°F/16°C
	EXPOSED MINIMUM BARREL LENGTH** (FACE OF FITTING TO TOP OF CEILING)***		
	IN. (MM)	IN. (MM)	IN. (MM)
40°F (4°C)	0	0	0
30°F (-1°C)	0	0	0
20°F (-7°C)	4 (100)	0	0
10°F (-12°C)	8 (200)	1 (25)	0
0°F (-18°C)	12 (300)	3 (75)	0
-10°F (-23°C)	14 (350)	4 (100)	1 (25)
-20°F (-29°C)	14 (350)	6 (150)	3 (75)
-30°F (-34°C)	16 (400)	8 (200)	4 (100)
-40°F (-40°C)	18 (450)	8 (200)	4 (100)
-50°F (-46°C)	20 (500)	10 (250)	6 (150)
-60°F (-51°C)	20 (500)	10 (250)	6 (150)

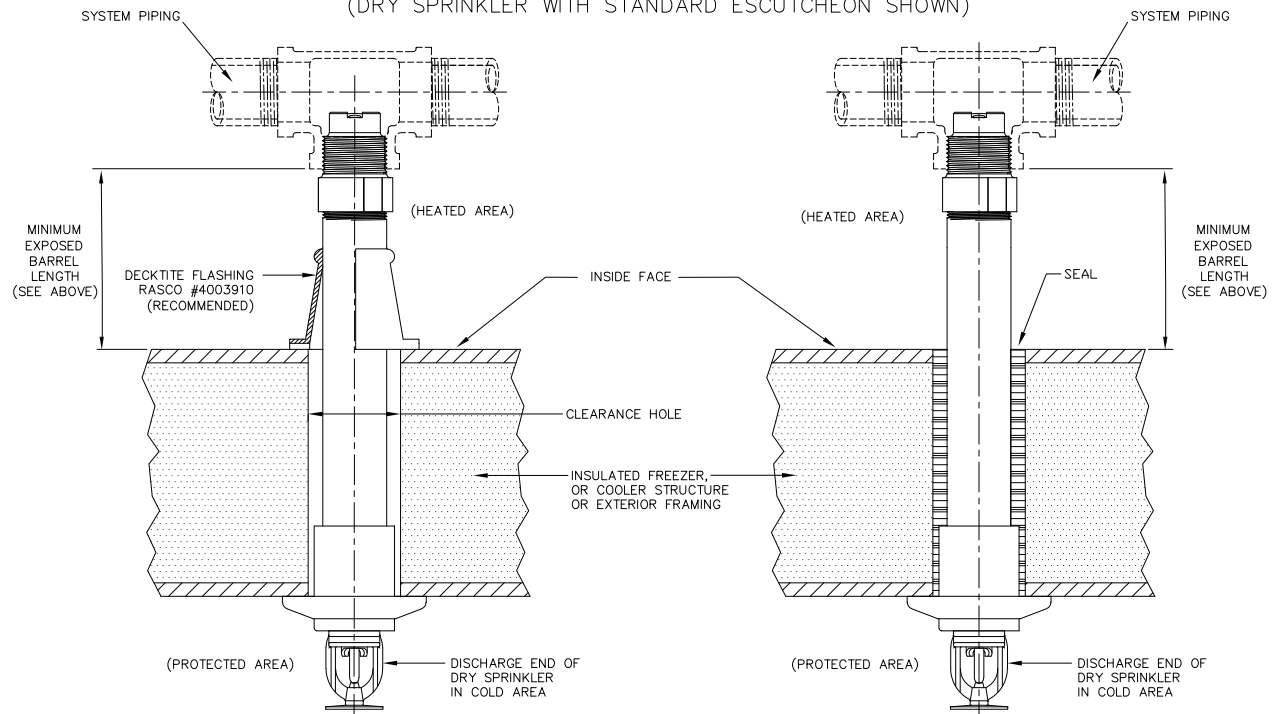
\* FOR AMBIENT TEMPERATURES EXPOSED TO THE DISCHARGE END OF THE SPRINKLER THAT OCCUR BETWEEN THE VALUES LISTED, USE THE NEXT COOLER TEMPERATURE.

\*\* THE MINIMUM EXPOSED BARREL LENGTH IS NOT THE SAME AS THE "A" DIMENSION. THE MINIMUM EXPOSED BARREL LENGTH IS BASED ON A PROPERLY SEALED PENETRATION WITH A MAXIMUM WIND VELOCITY ON THE EXPOSED SPRINKLER OF 30 MPH (48 KM/H). LONGER EXPOSED BARREL LENGTHS WILL HELP AVOID FREEZING OF THE WET PIPING WHERE HIGHER WIND VELOCITY IS EXPECTED.

\*\*\* THE MINIMUM EXPOSED BARREL LENGTH IS MEASURED FROM THE FACE OF THE FITTING TO THE INSIDE FACE OF THE INSULATION, WALL, OR CEILING LEADING TO THE COLD SPACE, WHICHEVER IS CLOSEST TO THE FITTING.



## RECOMMENDED DRY SPRINKLER SEAL ARRANGEMENTS (DRY SPRINKLER WITH STANDARD ESCUTCHEON SHOWN)



COMDRYDET11

Fig. 11

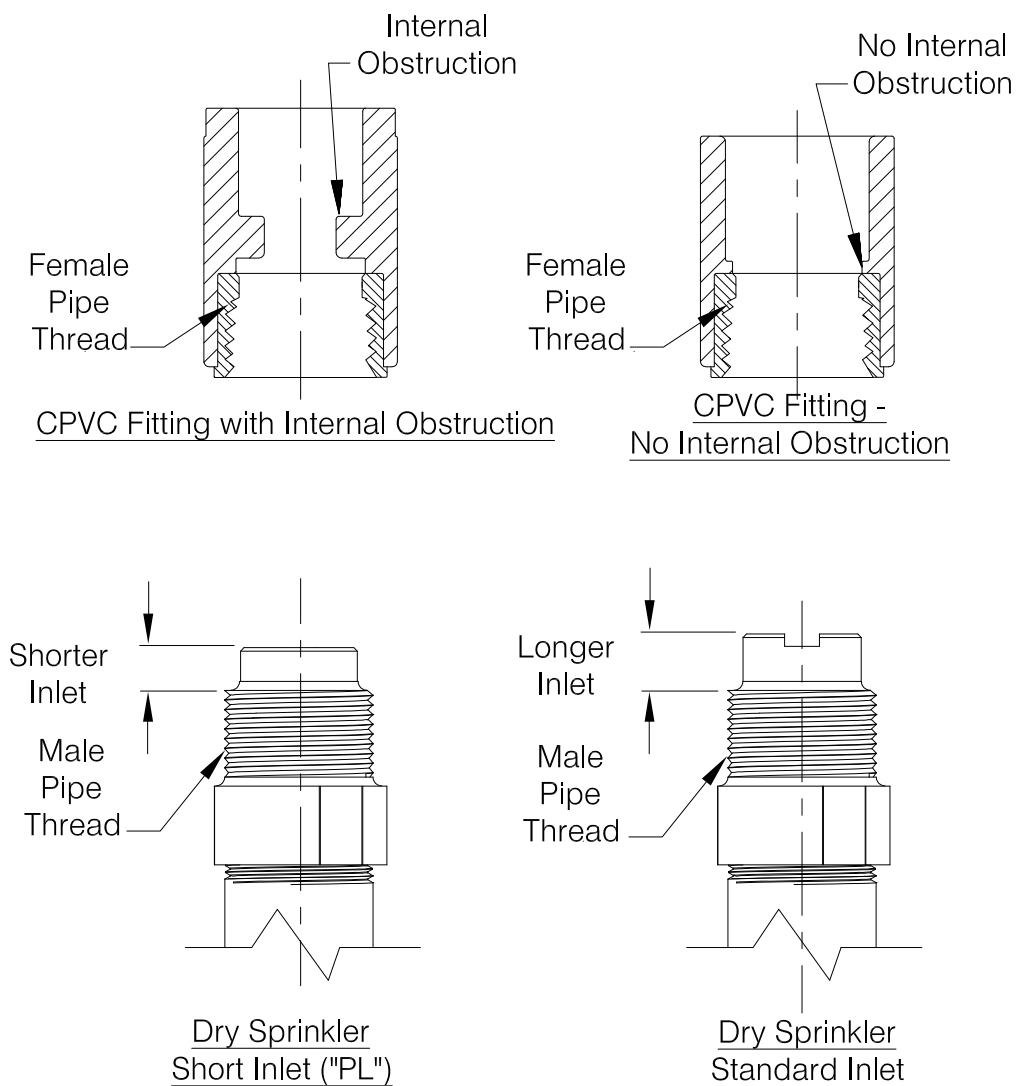
## **\*CAUTION\***

RELIABLE DRY SPRINKLERS MAY BE INSTALLED IN A LISTED CPVC SPRINKLER FITTING, ONLY UPON VERIFICATION THAT THE FITTING DOES NOT INTERFERE WITH THE SPRINKLER'S INLET.

Do not install dry sprinklers with standard inlets into CPVC fittings that have an internal obstruction; this will damage the sprinkler, the fitting, or both.

Short inlet ("PL") versions of Reliable dry sprinklers are available that may or may not be compatible with fittings having internal obstructions in existing installations. Sprinklers with the short inlet ("PL") should only be installed in CPVC fittings of wet-pipe systems.

In all cases, verify sprinkler and fitting dimensions prior to installation to avoid interference.



**BE SURE TO ORDER THE CORRECT SPRINKLERS FOR YOUR APPLICATION**

COMDRYDET2

Fig. 12

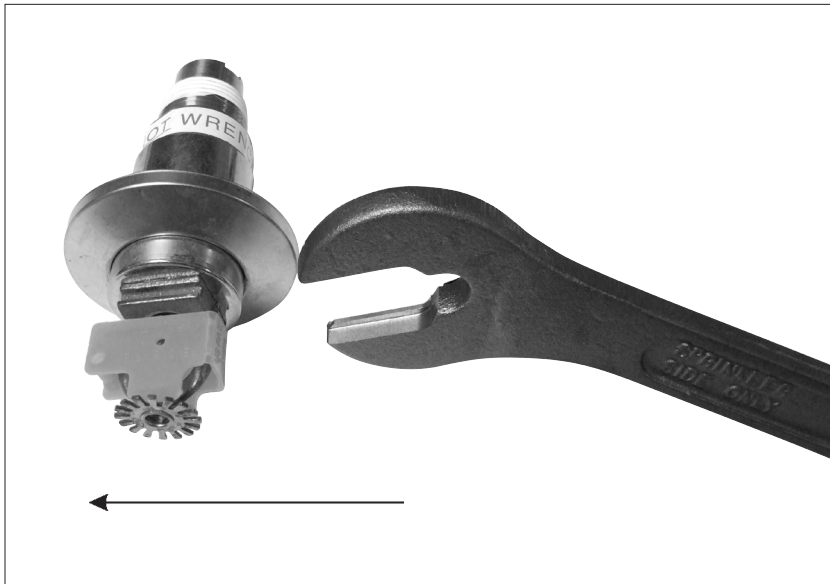


Fig. 13 - Model F3R Wrench

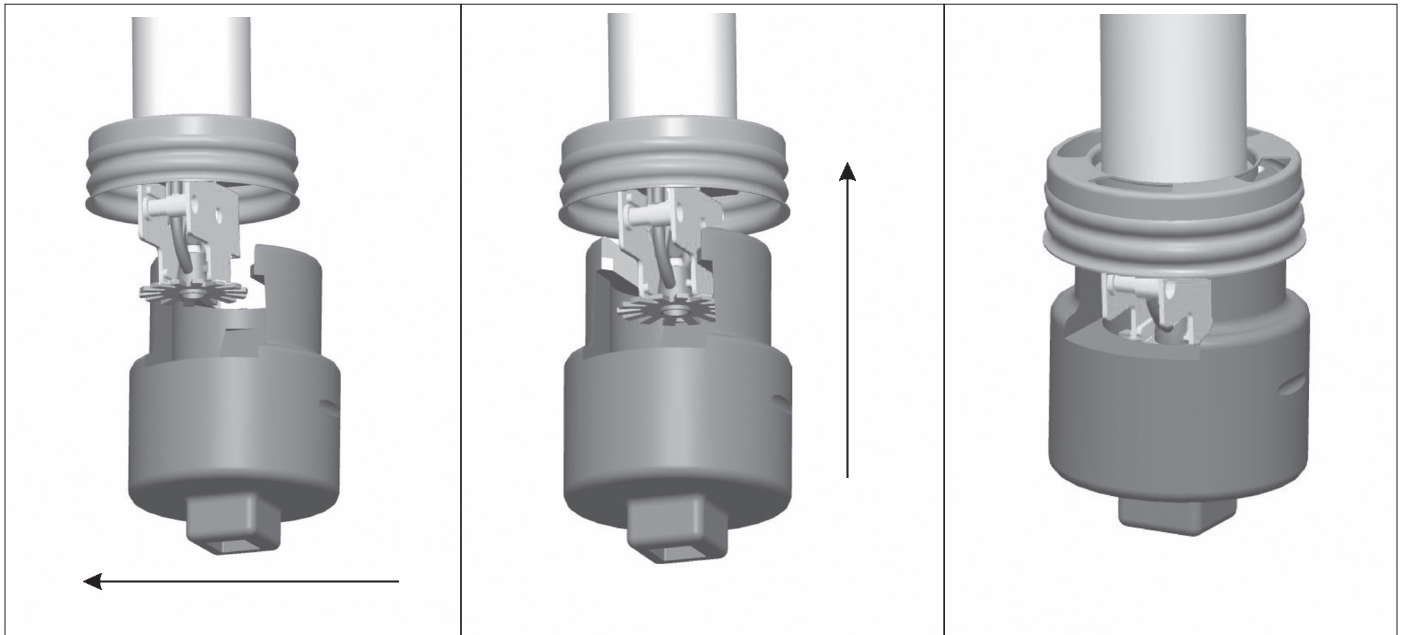
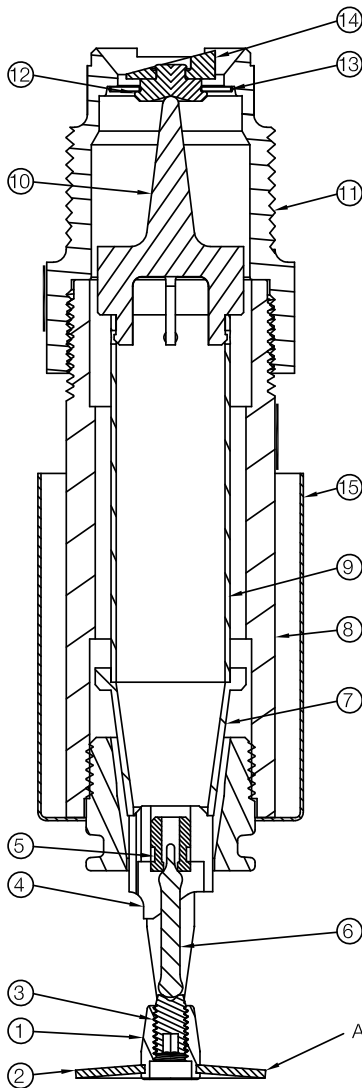


Fig. 14 - Model XLO2 Wrench



# MATERIAL SPECIFICATIONS



ITEM #	DESCRIPTION	MATERIAL SPECIFICATION
1	FRAME	BRASS PER UNS C83600
2	DEFLECTOR	BRONZE PER UNS C51000
3	LOAD SCREW	BRASS PER UNS C22000
4	SEAT ADAPTOR	BRASS ALLOY PER UNS C36000
5	BULB INSERT	COPPER ALLOY PER UNS C31400
6	GLASS BULB	GLASS W/GLYCERIN SOLUTION
7	ORIFICE ADAPTOR	BRASS ALLOY PER UNS C36000
8	OUTER TUBE	GALVANIZED STEEL
9	INNER TUBE	BRASS ALLOY PER UNS C23000
10	YOKE	BRASS ALLOY PER UNS C38000
11	INLET	BRASS ALLOY PER UNS C35330
12	CAP	BRASS ALLOY PER UNS C54400
13	SPRING WASHER/SEAL	PTFE COATED BERYLLIUM NICKEL
14	FLIP DISK	BRASS ALLOY PER UNS C54400
15	CAN/ESCUTCHEON	PAINTED OR PLATED MILD STEEL, EXCEPT FOR TYPE 316 STAINLESS STEEL FOR SPRINKLERS WITH ENT FINISH

(PIPE WRENCH MAY ONLY BE USED ON OUTER STEEL PIPE OF SPRINKLER)

COMDRYDET13

APPEARANCE OF DEFLECTOR MAY VARY DEPENDING ON MODEL

Fig. 15

## Installation Instructions

When used on wet pipe systems, Reliable Model F3QR56 dry sprinklers may be installed in ductile or malleable cast iron threaded tees, or CPVC tees and adapters upon verification that the sprinkler inlet fitting does not interfere with the interior of the fitting (see Figure 12).

When used on dry pipe systems, Reliable Model F3QR56 dry pendent sprinklers MUST ONLY BE installed in the outlets of ductile or malleable cast iron threaded tees on horizontal pipe such that the inlet of the sprinkler protrudes above the bottom level of the pipe.

When used on dry pipe systems, Reliable Model F3QR56 dry sidewall and dry upright sprinklers may be installed in ductile or malleable cast iron threaded tees, or CPVC tees and adapters upon verification that the sprinkler inlet fitting does not interfere with the interior of the fitting (see Figure 12).

DO NOT install Reliable dry sprinklers into elbows or couplings, welded outlets, mechanical tees, or gasket sealed CPVC fittings.

Dry sprinklers connected to wet pipe systems must be installed as indicated in Figure 11 and as required by NFPA 13 with the Exposed Minimum Barrel Length located in a heated area.

An orange protective clip is factory installed on the sprinkler to protect the glass bulb thermal element from damage. The clip should remain in place during installation of the sprinkler and be removed when the sprinkler system is placed in service. Sprinklers with 3/4" NPT and ISO7-1R3/4 inlets are supplied with a protective cap on the inlet that must be removed before installation.

### Use the following steps for installation:

1. Cut a hole in the wall or ceiling directly in-line with the outlet of the fitting. See the Installation Data table for the recommended hole diameter based on the escutcheon or cover plate option selected.
2. Apply pipe joint compound or PTFE tape to the male threads of the sprinkler's inlet fitting.
3. Install the sprinkler in the fitting using the installation wrench specified in the Installation Data table. The Model F3R wrench is designed to be inserted into the grooves in the sprinkler's wrench boss as shown in Fig. 13. The Model XLO2 wrench is designed to fit into the cup and engage the wrench boss as shown in Fig. 14. Do NOT wrench any part of the sprinkler assembly other than the wrench boss. When inserting or removing the wrench from the sprinkler, care should be taken to prevent damage to the sprinkler. The sprinkler is then tightened into the pipe fitting to achieve a leak free connection. The recommended minimum to maximum installation torque is 22 - 30 lb-ft (30 – 40 N-m) for 1" NPT and ISO7-1R1 sprinklers, and 14 - 20 lb-ft (19 – 27 N-m) for 3/4" NPT and ISO7-1R3/4 sprinklers.

- 3a. Alternatively, where access to the outer tube of the sprinkler is available, the Model F3QR56 Dry sprinkler may be installed using a pipe wrench. The pipe wrench shall only be permitted to interface with the galvanized steel outer tube portion of the sprinkler (Item #8 in Fig. 15). Do NOT wrench any other portion of the sprinkler assembly. A pipe wrench can install the sprinkler into the fitting with a large amount of torque; consideration should be given to the need for future removal of the sprinkler because the installation torque will have to be matched or exceeded to remove the sprinkler. The recommended minimum to maximum installation torque is 22 - 30 lb-ft (30 – 40 N-m) for 1" NPT and ISO7-1R1 sprinklers, and 14 - 20 lb-ft (19 – 27 N-m) for 3/4" NPT and ISO7-1R3/4 sprinklers.
4. Standard and Model HB escutcheons can be installed by slipping the escutcheon over the can until the escutcheon is seated against the ceiling or wall. Model F1 escutcheons are installed by pressing the escutcheon onto the collar until the escutcheon is seated against the ceiling or wall. The Model FP escutcheon is installed by pressing or threading the escutcheon into the cup by hand; the escutcheon can be tightened against the ceiling or wall by turning the escutcheon in a clockwise direction and removed by turning the escutcheon in a counter-clockwise direction. To install the Model CCP cover plate, first remove the protective clip. Install the Model CCP cover plate on the sprinkler by pressing or threading the cover plate into the cup by hand; the cover plate can be tightened against the ceiling by turning the cover plate in a clockwise direction and removed by turning the cover plate in a counter-clockwise direction.
5. Remove the orange protective clip when placing the sprinkler system in service.

## Installation Data

Sprinkler Model	Escutcheon or Cover Plate	Suggested Hole Diameter in Wall or Ceiling	Installation Wrench	Required Centerline of Sprinkler Tube/Inlet to Finished Ceiling Vertical Dimension*
<b>F3QR56 Dry Pendent</b>	Standard Escutcheon	2-1/8" (54 mm)	F3R	Not Applicable
	HB Extended Escutcheon	2-1/2" (64 mm)	F3R	
	F1 Recessed Escutcheon	2-1/4" (57 mm)	XLO2	
	FP Recessed Escutcheon	2-1/2" (64 mm)	XLO2	
	CCP Cover Plate		XLO2	
<b>F3QR56 Dry Horizontal Sidewall</b>	Standard Escutcheon	2-1/8" (54 mm)	F3R	4-5/8" to 12-5/8" (118 mm to 321 mm)
	HB Extended Escutcheon	2-1/2" (64 mm)	F3R	cULus, NYC 4-5/8" to 6-5/8" (118 mm to 168 mm)
	F1 Recessed Escutcheon	2-1/4" (57 mm)	XLO2	
	FP Recessed Escutcheon	2-1/2" (64 mm)	XLO2	FM 4-5/8" to 12-5/8" (118 mm to 321 mm)
	F1 Recessed Escutcheon	2-1/4" (57 mm)	XLO2	
	FP Recessed Escutcheon	2-1/2" (64 mm)	XLO2	
<b>F3QR56 Dry Upright</b>	N/A	1-1/2" (38mm)	F3R	Not Applicable

**\*Note:** Based on 5/8" (16 mm) centerline of sprinkler tube/inlet to deflector vertical distance.

## Maintenance

The Model F3QR56 Dry Sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25. Do not remove the factory applied thermally sensitive wax fillet between the bulb supporting cup and the wrenching boss. Do not replace this wax with a substitute substance.

An Alternate substance may interfere with proper operation of the sprinkler. Do not clean sprinklers with soap and water, ammonia or any other cleaning fluids. Remove dust by using a soft brush or gently vacuuming. Replace any sprinkler 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.

## Ordering Information

Specify:

1. Sprinkler: [Model F3QR56 Dry Pendent SIN R5714]  
[Model F3QR56 Dry Horizontal Sidewall SIN R5734]  
[Model F2QR Dry Upright SIN R5724]
2. Escutcheon/Cover Plate: [None][Standard escutcheon]  
[Model HB extended escutcheon][Model F1 recessed escutcheon][Model FP recessed escutcheon][Model CCP cover plate – pendent only]
3. Inlet Threads: [1" NPT][ISO7-1R1][3/4" NPT][ISO7-1R3/4]

4. Inlet Fitting: [Long – Standard Inlet Fitting][Short "PL" – Wet Pipe Systems only]
5. Sprinkler Temperature Rating: See Temperature Ratings Table
6. Sprinkler Finish: See Finish Combinations Table
7. Escutcheon/Cover Plate Finish: See Finish Combinations Table
8. Length:

\*For dry pendants and dry sidewalls: "A" Dimension is from face of tee to face of finished ceiling or wall in 1/4" (6mm) increments. See Fig. 1 through Fig. 9.

\*For dry uprights: Order dimension is from face of tee to top of deflector in 1/4" (6mm) increments. See Fig. 10.

### Notes:

1. For Dry Upright, customer is responsible for determining the correct deflector distance from structure above.
2. Length is based on normally gauged pipe thread "make-up" of .600" (15mm) per ANSI B2.1 (approximately 7-1/2 threads).

## Installation Wrench

Model F3R Sprinkler Wrench (Standard and HB escutcheons)  
Model XLO2 Sprinkler Wrench (FP Recessed and CCP Concealed)

The equipment presented in this bulletin is to be installed in accordance with the latest published 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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