Reliable®

Model G5-56 Series Concealed Dry Pendent Sprinkler

Features

- Flat cover plate in a variety of finishes
- Stainless steel clad cover plate option
- Optional cover plate gasket to limit air and dust movement through ceiling.

Product Description

The Model G5-56 is a standard coverage concealed dry pendent sprinkler with a nominal K-factor of 5.6 (80 metric). The sprinkler is UL listed as a quick response sprinkler, and FM Approved as a standard response non-storage sprinkler.

Model G5-56 dry sprinklers are intended for installation on wet pipe, dry pipe, or preaction systems in accordance with NFPA 13, FM Property Loss Prevention Data Sheets, or other applicable installation standards.

The Model G5-56 utilizes a fast-response 165°F (74°C) ordinary or 212°F (100°C) intermediate temperature rated thermal operating element. Cover plates for ordinary temperature sprinklers are rated at 135°F (57°C). Cover plates for intermediate temperature sprinklers are rated at 165°F (74°C).

Cover plates for the Model G5-56 dry sprinklers are available in a variety of finishes as shown on the following pages. The Reliable Model G5 cover plate shown is the only cover plate listed for use with the sprinkler. The use of any other cover plate will void all guarantees, warranty, listing, and approvals.

Standard inlet fitting threads are 1" NPT or ISO7-R1 threads.

Table A provides a basic summary of the Model G5-56 concealed dry sprinkler. Additional technical information is provided on the following individual sprinkler pages.

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.

Model G5-56 Concealed Dry Pendent Sprinkler
(Shown without cover plate)

Sprinkler Summary **Table A**

Model	K-Factor gpm/psi$^{1/2}$ (lpm/bar$^{1/2}$)	Approvals	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
G5-56 Dry Pendent	5.6 (80)	cULus (Quick response) FM (Standard response) CE	175 (12.0)	RA5114

Model G5-56 Dry Pendent: Standard Escutcheon - SIN RA5114

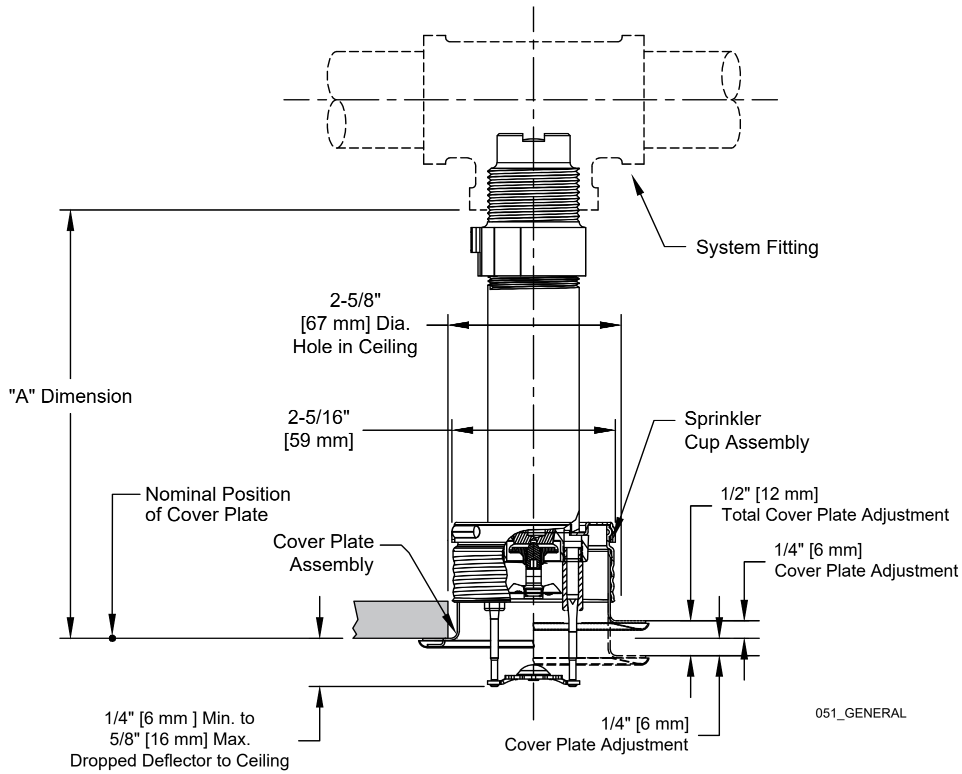
Table B

"A" Dimension in (mm)	Temperature Classification	Temperature Rating	Fusible Link Color	Approvals	Sprinkler Guard
4-1/4" to 48" (108mm to 1219mm) in 1/4" (6mm) increments	Ordinary	165°F (74°C)	Black	cULus (Quick response) FM (Standard response) CE	N/A
	Intermediate	212°F (100°C)	White		

Note: Standard inlet fitting threads are 1" NPT or ISO7-R1.

Model G5-56 Dry Pendent Sprinkler: Standard Escutcheon

Figure 1



Notes:
1. Model G5-56 dry sprinklers may not be used where the pressure in the space behind the sprinkler is positive with respect to the protected area. Ensure that the openings around the sprinkler cup are unobstructed following installation.
2. Model G5-56 dry sprinklers should not be used in freezers where NFPA 13 requires the annular space around the freezer panel penetration to be sealed.

Finishes	
Sprinkler	**Cover Plate(1)**
Bronze	White Painted
	Euro White Painted
	Off White Painted
	Black Painted
	Custom Color Painted
	Chrome
	Satin Chrome
	Bright Brass
	Finished Bronze
	Printed Wood Grain
	Custom Printed
	Stainless Steel Clad(2)

Notes:
1. Additional information found on Technical Bulletin 203.
2. Stainless steel clad cover plates are Type 316 Stainless Steel on the finished side and C102 Copper Alloy on the back side. Cover plates are not listed or approved as corrosion resistant.

Installation (General)

Dry sprinklers connected to wet pipe systems must be installed as indicated in Figure 2 and as required by NFPA 13 with the Exposed Minimum Barrel Length located in a heated area.

Reliable Model G5-56 dry sidewall 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 3).

DO NOT install Reliable Model G5-56 dry sidewall sprinklers into elbows or couplings, welded outlets, mechanical tees, or gasket sealed CPVC fittings.

DO NOT install Reliable Mode G5-56 dry sprinklers where the pressure in the space above the ceiling is higher than that in the protected space.

Installation of the Model G5-56 Dry sprinkler is not recommended in copper pipe systems, as this may reduce the life expectancy of the sprinkler.

See Figure 4 for acceptable and unacceptable installation practices.

Install the Model G5-56 Concealed Dry Sprinkler following these steps:

1. Cut a 2-5/8 inch (67mm) diameter hole in the ceiling directly in-line with the outlet of the tee.
2. Apply pipe joint compound or Polytetrafluoroethylene (PTFE) tape to the threads of the sprinkler's inlet fitting.
3. A protective cap is provided to protect the drop-down sprinkler deflector from damage which could occur during construction before the cover plate is installed. The cap is factory installed inside the sprinkler cup. Remove the cap to install sprinkler (step 4) then reinstall cap until the cover plate is installed.
4. Install the sprinkler in the tee using the Model FC wrench. The Model FC wrench has a socket drive which is inserted into the sprinkler's cup and around the body of the sprinkler. When inserting or removing the wrench from the sprinkler/cup assembly, 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. Do NOT wrench any part of the sprinkler/cup assembly.
5. (Alternate) Where access to the outer tube of the sprinkler is available, the Model G5-56 Dry sprinkler may be installed using a pipe wrench. The pipe wrench shall only be permitted to interface with the steel outer tube portion of the sprinkler Do NOT wrench any other part of the sprinkler/cup assembly.

Note: Consideration should be given to the need for future removal of the sprinklers. A pipe wrench can impart a large amount of torque when installing the sprinkler. 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).

6. Reinstall the protective cap following installation of the sprinkler, until the cover plate is installed.
7. To install the cover plate, remove the protective cap and thread the cover plate into the cup turning the cover plate in the clockwise direction until it is tight against the ceiling.

Note: For cover plates using a sealing gasket, the gasket should be attached to the flange of the cover plate skirt only. Do not glue the gasket in place or allow the gasket to overlap both the cover plate and the flange of the skirt.

Optional Cover Plate with Gasket

Model G5 QR Gasket Cover Plate (cULus Listed)

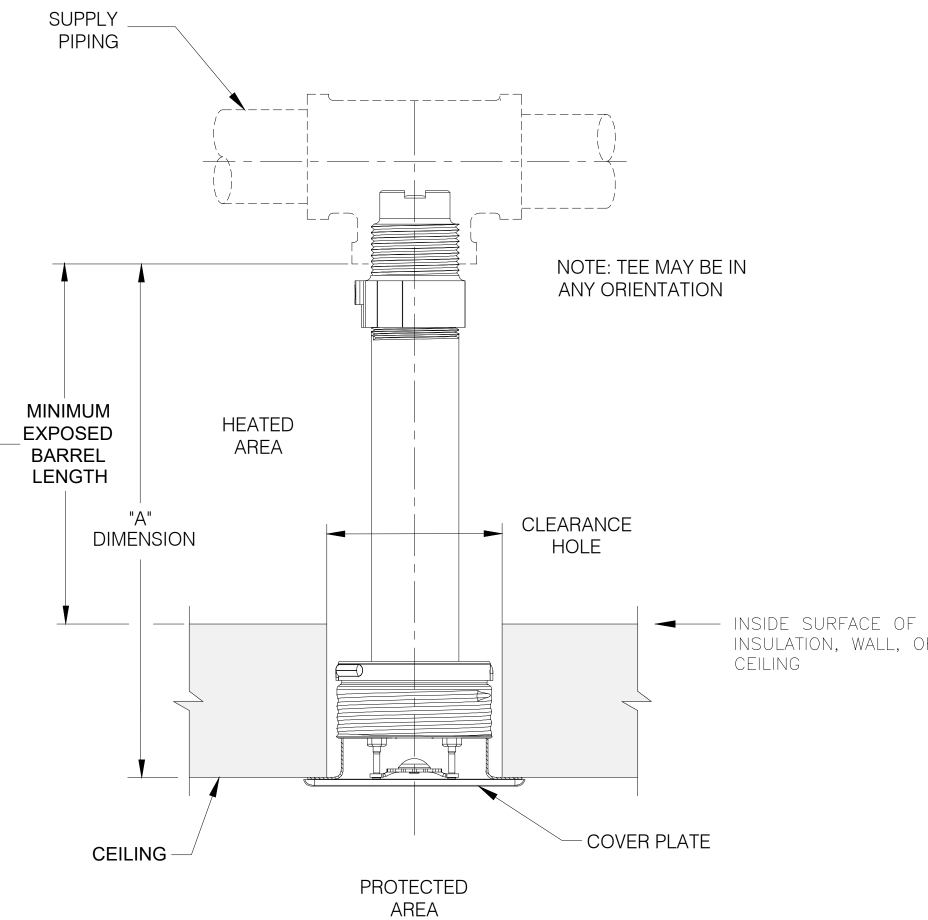
Model G5 SR Gasket Cover Plate (FM Approved)

Notes:
1. Model G5 QR and Model G5 SR cover plates with sealing gaskets are sold as assembled units and are NOT interchangeable.
2. Sealing gaskets are ONLY available with white and stainless steel clad Model G5 cover plates.
3. cULus listing of the sprinkler as quick-response is not affected when using the Model G5 QR cover plate with sealing gasket.

Figure 2

MINIMUM EXPOSED BARREL LENGTH WHEN CONNECTED TO WET PIPE SPRINKLER SYSTEM

AMBIENT TEMPERATURE OF PROTECTED AREA* AT THE DISCHARGE END OF THE SPRINKLER	EXPOSED BARREL AMBIENT TEMPERATURE		
	40°F/4°C	50°F/10°C	60°F/16°C
	EXPOSED MINIMUM BARREL LENGTH** (FACE OF TEE 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)



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

Figure 3

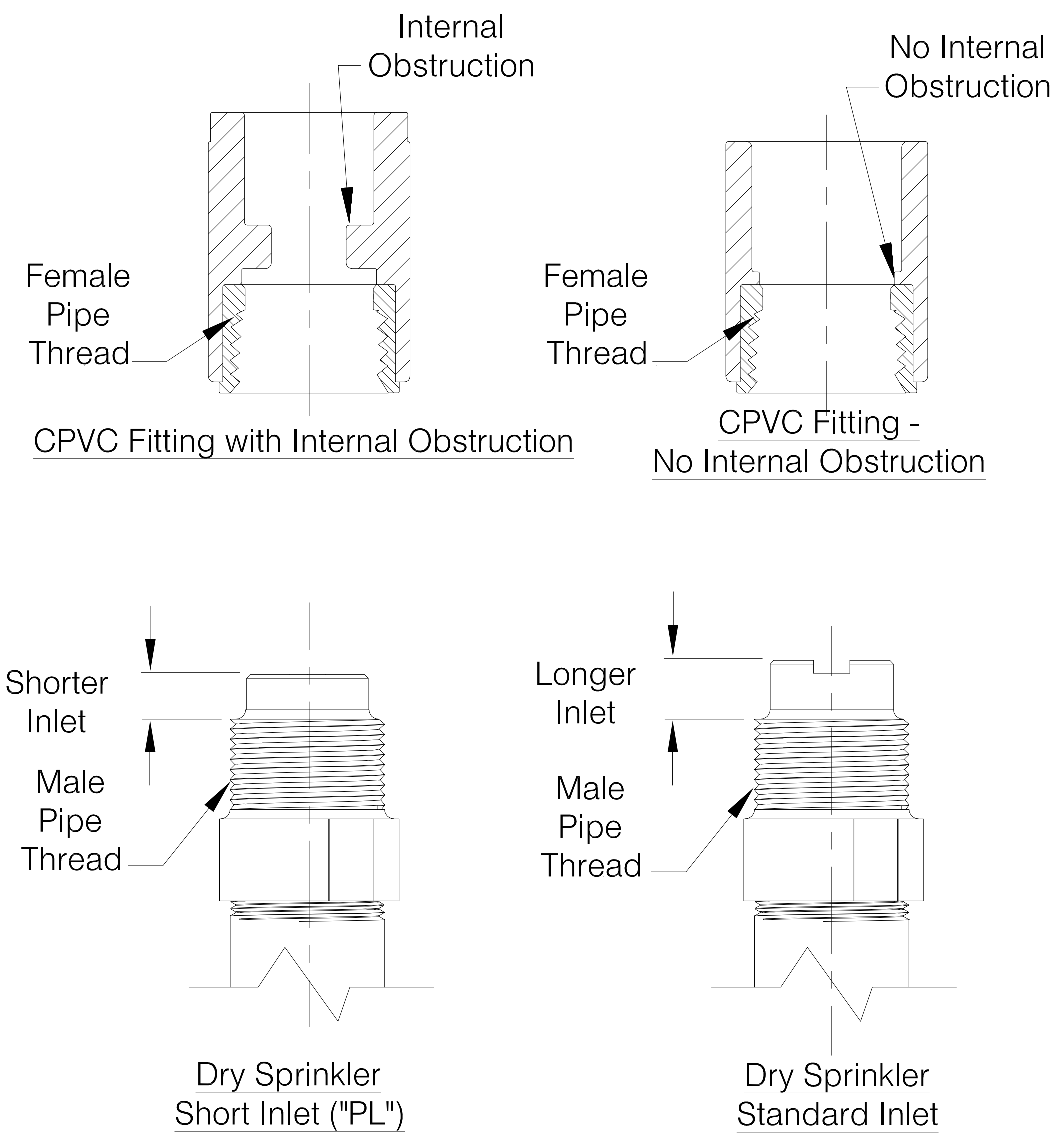
CAUTION

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.

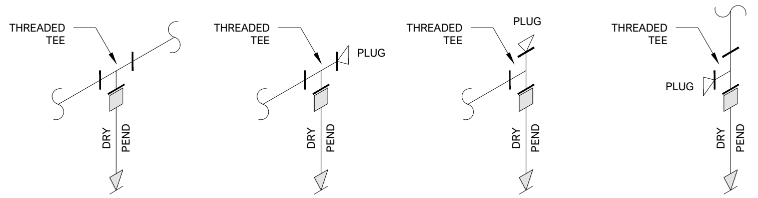


BE SURE TO ORDER THE CORRECT SPRINKLERS FOR YOUR APPLICATION

COMDRYDET2

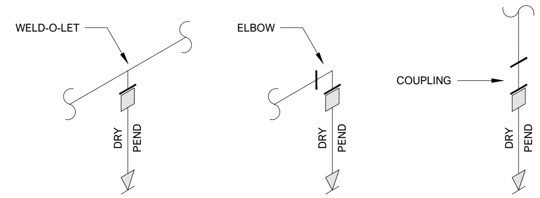
Acceptable and Unacceptable Installation Practices for Steel Pipe Fittings

ACCEPTABLE INSTALLATIONS FOR DRY PENDENT SPRINKLERS



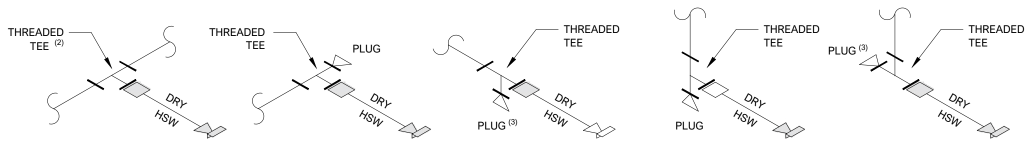
NOTES:
1. EXPOSED LENGTH OF DRY BARREL INSIDE OF CONDITIONED SPACE TO BE IN ACCORDANCE WITH THIS BULLETIN AND NFPA 13.

UNACCEPTABLE INSTALLATIONS FOR DRY PENDENT SPRINKLERS



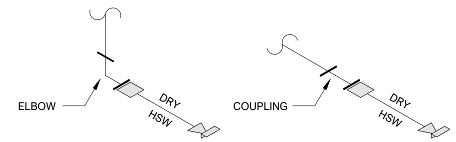
NOTES:
1. IN ADDITION TO THE UNACCEPTABLE INSTALLATIONS ABOVE, DRY PENDENT SPRINKLERS SHALL NOT BE INSTALLED INTO MECHANICAL TEES (SADDLE OR U-BOLT STYLE), OR INTERNALLY GASKETED CPVC FITTINGS.

ACCEPTABLE INSTALLATIONS FOR DRY SIDEWALL SPRINKLERS



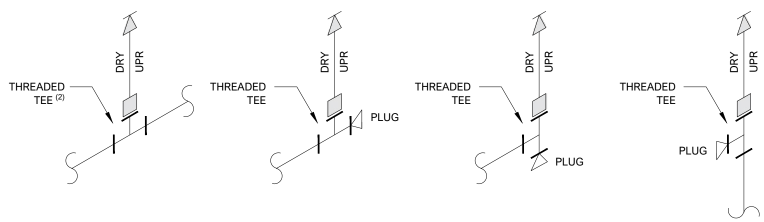
NOTES:
1. EXPOSED LENGTH OF DRY BARREL INSIDE OF CONDITIONED SPACE TO BE IN ACCORDANCE WITH THIS BULLETIN AND NFPA 13.
2. WELD-O-LETS IN COMPLIANCE WITH NFPA 13 REQUIREMENTS ALSO ACCEPTABLE FOR DRY SIDEWALL SPRINKLERS.
3. PREFERRED ORIENTATION OF PLUG IS DOWN.

UNACCEPTABLE INSTALLATIONS FOR DRY SIDEWALL SPRINKLERS



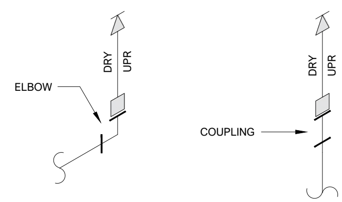
NOTES:
1. IN ADDITION TO THE UNACCEPTABLE INSTALLATIONS ABOVE, DRY SIDEWALL SPRINKLERS SHALL NOT BE INSTALLED INTO MECHANICAL TEES (SADDLE OR U-BOLT STYLE), OR INTERNALLY GASKETED CPVC FITTINGS.

ACCEPTABLE INSTALLATIONS FOR DRY UPRIGHT SPRINKLERS



NOTES:
1. EXPOSED LENGTH OF DRY BARREL INSIDE OF CONDITIONED SPACE TO BE IN ACCORDANCE WITH THIS BULLETIN AND NFPA 13.
2. WELD-O-LETS IN COMPLIANCE WITH NFPA 13 REQUIREMENTS ALSO ACCEPTABLE FOR DRY UPRIGHT SPRINKLERS.

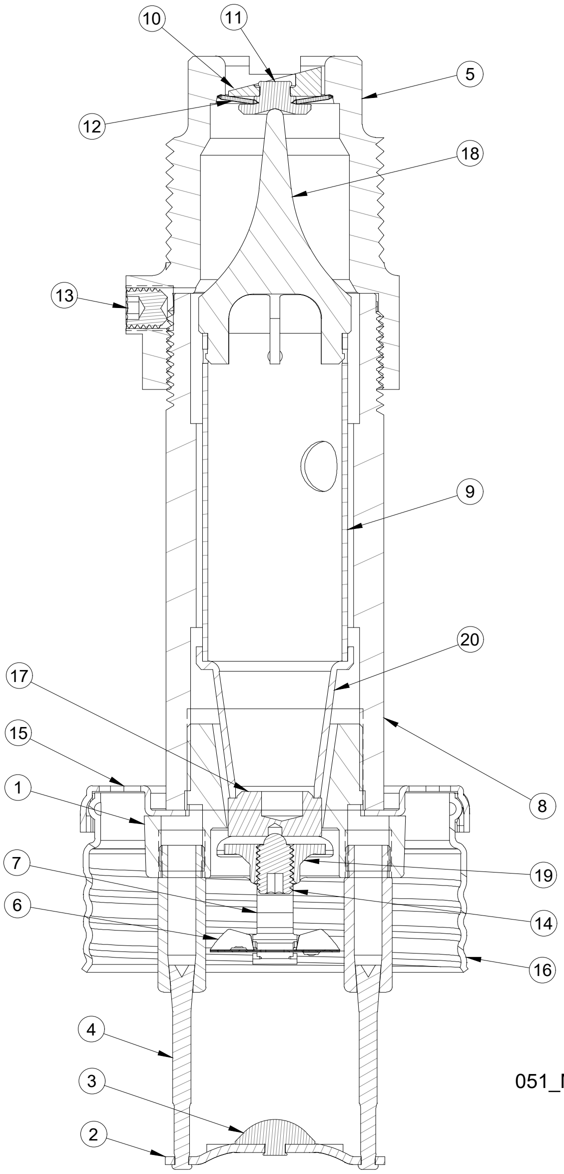
UNACCEPTABLE INSTALLATIONS FOR DRY UPRIGHT SPRINKLERS



NOTES:
1. IN ADDITION TO THE UNACCEPTABLE INSTALLATIONS ABOVE, DRY UPRIGHT SPRINKLERS SHALL NOT BE INSTALLED INTO MECHANICAL TEES (SADDLE OR U-BOLT STYLE), OR INTERNALLY GASKETED CPVC FITTINGS.

Figure 5

MATERIAL SPECIFICATIONS



ITEM #	DESCRIPTION	MATERIAL
1	BODY, MACH.	DZR BRASS
2	DEFLECTOR	COPPER ALLOY
3	DEFL. SPLITTER	BRASS ALLOY
4	DEFL. PIN	STAINLESS STEEL
5	MEGA-INLET	DZR BRASS
6	LINK ASSY.	NICKEL/BERYLLIUM NICKEL
7	LEVER	COPPER ALLOY
8	OUTER TUBE	GALVANIZED STEEL
9	INNER TUBE	BRASS ALLOY
10	FLIP DISK	BRASS ALLOY
11	CAP	BRASS ALLOY
12	WASHER	PTFE COATED BERYLLIUM NICKEL
13	SET SCREW	STAINLESS OR ALLOY STEEL
14	LOAD SCREW	STAINLESS STEEL
15	BOTTOM CUP	GALVANIZED STEEL
16	TOP CUP	GALVANIZED STEEL
17	ADJ. SEAT ADAPTER	BRASS ALLOY
18	YOKE	BRASS ALLOY
19	CLOSURE YOKE	BRASS ALLOY
20	ORIFICE ADAPTER	BRASS ALLOY

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Model FC Wrench

Maintenance

Reliable Model G5-56 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). 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

US Patent Nos. 5,775,431 & 5,967,240

Ordering Information

Specify:

Model G5-56 Concealed Dry Pendent Sprinkler

Temperature Rating
- Ordinary 165°F (74°C) with 135°F (57°C) cover plate
- Intermediate 212°F (100°C) with 165°F (74°C) cover plate

Cover Plate Finish
- See page 2, also reference techical bulletin 203.

Length[(1)]
- "A" dimension is measured from face of fitting to face of finished ceiling or wall in 1/4" (6mm) increments.

Installation Wrench
- Model FC

Notes:
1. Lengths are based upon a normally gauged pipe thread "make-up" of .60 inch (15mm) per ANSI B2.1 (approximately 7-1/2 threads).