

# Sentry Sprinklers®

## Model SY8052

Standard Coverage, Quick Response Concealed Pendent Sprinkler, K-factor 5.6 (80 metric)

### Description:

Sentry Sprinklers Model SY8052 is an Automatic Quick Response Concealed Pendent Sprinkler head that utilizes a frangible thermo-sensitive glass bulb to operate the sprinkler. The sprinkler is available in various finishes and temperatures. Sprinkler Model SY8052 is listed and approved for standard coverage for Light and Ordinary hazards. Model SY8052 is a 5.6 K-Factor (80 metric) intended for use in fire sprinkler systems designed in accordance with the standard installation rules recognized by the applicable listings or approved agency. The Concealed Sprinkler Assembly includes a Cover Plate Assembly that covers the operating components above the ceiling. The Cover Plate Assembly is mounted to the Sprinkler Cup Assembly. Upon the release of the Cover Plate Assembly, the Concealed Pendent Sprinkler produces a hemispherical water distribution pattern below the deflector.



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### Technical Data:

Minimum Operating Pressure:	7 psi (0.5 bar)
Maximum working Pressure:	175 PSI (12 bar)
Factory Test:	100% @ 500 psi (34.5 bar) Hydrostatically
Nominal K-Factor:	5.6 (80 metric)
Thread Size:	1/2" NPT
Bulb size:	3mm

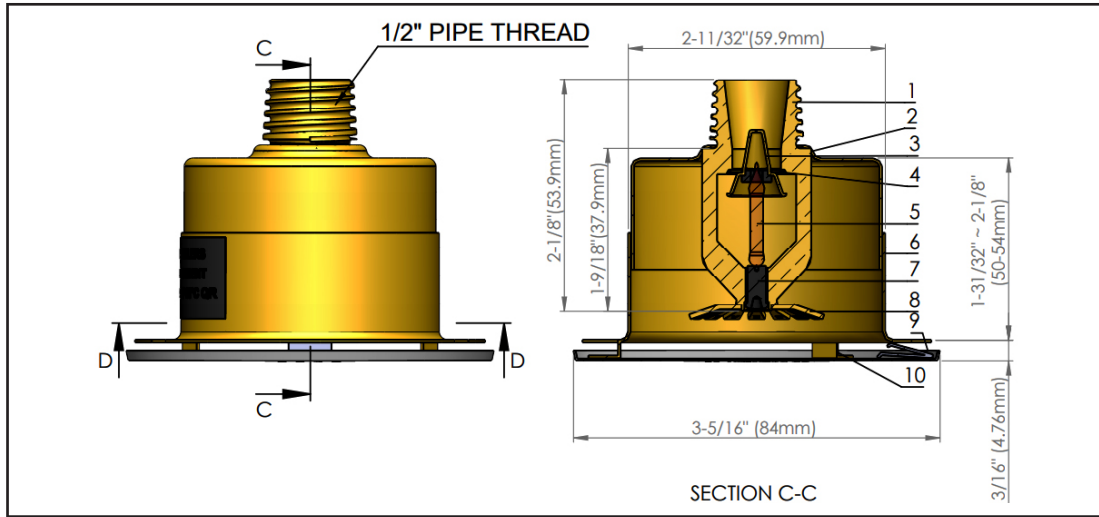
### Operation:

Upon fire initiation within a protected hazard, the temperature inside the hazard rises fusing the solder between the cover plate and its assembly. A spring on the Sprinkler Cup Assembly ensures the ejection of the cover plate from its assembly. The rising heat causes the liquid inside the Thermo-Sensitive bulb to expand. The liquid expansion causes the glass bulb to break, releasing the bulb seat assembly. The water discharges through the sprinkler orifice striking the deflector producing a uniform distribution pattern within the hazard area.

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Approval	Material Standard			
UL	1- Frame:	Brass	7- Set Screw:	Brass
	2- Mounting Cup		8- Deflector:	Bronze
	3- Button Seal:	Teflon Tape	9- Cover Plate	
	4- Spring Seal:	Stainless Steel	10- Ejection Spring	
	5- Bulb:	Glass Bulb with Glycerine Solution, 3mm Nominal	11- Label	
	6- Enclosure			

### Coverage:

For coverage area and placement of the sprinkler refer to NFPA 13 standard.

### Guarantee:

Sentry Sprinklers shall replace any of its products if found to be defective in materials or workmanship for a period of one year from order date. The guarantee does not cover wear and tear or improper installation.



### Installation:

All sprinkler heads must be inspected prior to installation. If a sprinkler is damaged, the bulb is cracked, the bulb has loss of liquid and or lost its protective cap, do not install the sprinkler and contact Sentry Sprinklers for replacement. With the sprinkler held in the horizontal orientation, a small air bubble should be present inside the glass bulb.

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Use Sentry Sprinklers recommended wrench to install the sprinkler. Slide the sprinkler wrench around the sprinkler frame arms and press the wrench down to engage sprinkler wrench flats. Rotate the wrench clockwise to tighten the sprinkler head. The frame arms must be parallel to the pipe. Never tighten the sprinkler from sprinkler arms. Any torque applied to the frame arms will dislodge the bulb seating assembly causing the sprinkler to leak.

The concealed sprinkler must not be used in any application where the air pressure above the ceiling is greater than that below it. Downdraft through the Mounting Cup could delay sprinkler operation in a fire condition.

Only use Sentry Sprinklers recommended wrench to install the sprinkler.

Exercise caution when installing the sprinkler. If the sprinkler is damaged during installation, do not attempt to fix it, replace it immediately.

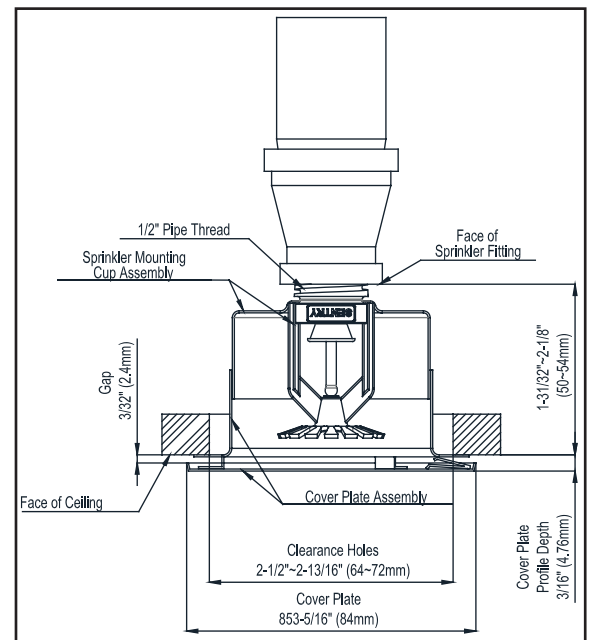
After the ceiling has been completed with a 2 1/2" (64mm) to 2 13/16" (72mm) diameter clearance hole, remove and discard the protective cap and verify that the sprinkler is intact.

**Do not attempt to make up for insufficient adjustment in the sprinkler assembly by under or overtightening the sprinkler Mounting Cup Assembly. Instead, readjust the position of the sprinkler fitting.**

**Do not remove Sprinkler Protective Cap until you are ready to install the Cover Plate Assembly.**

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

For additional details, refer to NFPA and UL for installation guidelines.



## Care and Maintenance:

The owner is responsible for maintaining their fire protection system and devices in proper operating condition. Refer to NFPA 25 for inspection, testing and maintenance requirements. It is recommended that an automatic sprinkler system be inspected quarterly by qualified inspection personnel.

Sprinklers must never be shipped and or stored where ambient temperature exceeds 100° F / 38° C. Inspect Sprinkler before and after installation. Exercise caution during installation to avoid damage to the sprinkler. Damaged sprinkler due to dropping, striking, and or wrench slippage must be replaced.

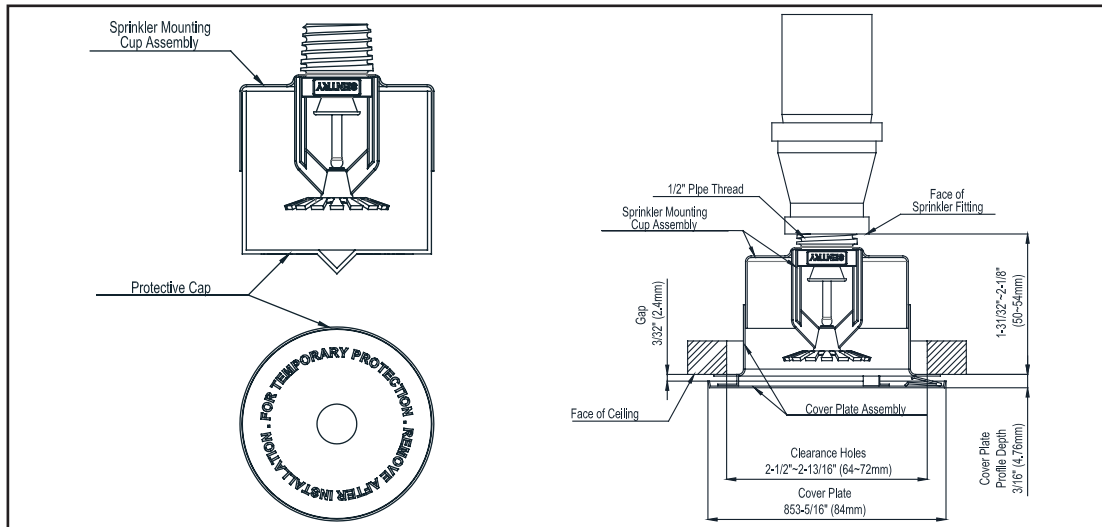


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If a sprinkler must be removed for any reason, do not reinstall it or a replacement without reinstalling the Cover Plate Assembly. If a Cover Plate Assembly becomes dislodged during service, replace it immediately.



Properly installed sprinklers must have a nominal 3/32" (2.4mm) air gap between the lip of Cover Plate and the ceiling. The air gap is necessary for the proper operation of the sprinkler. If the ceiling is to be painted after installation of the Cover Plate Assembly, care must be taken to ensure that new paint does NOT seal off the nominal 3/32" (2.4mm) air gap.

Sprinklers and or cover plates must not be painted, coated or otherwise altered after leaving the factory. Sprinklers that have been exposed to corrosive products of combustion, but have not operated, must be replaced.

<b>CONCEALED PENDENT SPRINKLERS</b>				
SIN + TEMPERATURE + FINISH CODE				
PART	SY8052135*	SY8052155*	SY8052175*	SY8052200*
K-FACTOR	5.6 (80 METRIC)	5.6 (80 metric)	5.6 (80 metric)	5.6 (80 metric)
ORIENTATION	CONCEALED	CONCEALED	CONCEALED	CONCEALED
RESPONSE	QUICK	QUICK	QUICK	QUICK
TEMPERATURE	135° F (57° C)	155° F (68° C)	175° F (79° C)	200° F (93° C)
BULB COLOR	ORANGE	RED	YELLOW	GREEN
TEMP. CLASSIFICATION	ORDINARY	ORDINARY	INTERMEDIATE	INTERMEDIATE
HAZARD TYPE	LIGHT/ORDINARY	LIGHT/ORDINARY	LIGHT/ORDINARY	LIGHT/ORDINARY
APPROVAL	UL	UL	UL	UL
THREADS	1/2" NPT	1/2" NPT	1/2" NPT	1/2" NPT
* FINISH CODE: 1 FOR BRASS				

<b>COVER PLATE PART NUMBER</b>				
SIZE	WHITE 135° F (57° C)	CHROME 135° F (57° C)	WHITE 155° F (68° C)	CHROME 155° F (68° C)
ADJUSTMENT	1/6" (4.2 mm)	1/6" (4.2 mm)	1/6" (4.2 mm)	1/6" (4.2 mm)
3- 5/16"	CP80135-W	CP80135-C	CP80155-W	CP80155-C

**\*Do not attempt to paint or repaint the cover plate. Only factory paint is allowed.**