

# Model A-Series PROTECTOR



## Description

The Model A-Series PS003/PS006 (Glass Bulb Type) Standard Orifice standard and quick response. The A-Series Concealed Sprinkler Identification Number (SIN) PS003(standard) PS006(quick). The design incorporates state-of-the-art, heat responsive, frangible glass bulb design (standard or quick response) for prompt, precise operation. The forged frame is more streamlined and attractive than traditional sand cast frames. It is cast with a hex-shaped wrench to allow easy tightening from different angles. This sprinkler is available in various temperature ratings (see Chart on Page.4) and finishes to meet many design requirements. The recessed Pendant should be utilized with a Model A recessed escutcheon which provides up 1/4" of adjustments. All Protector Sprinklers are manufactured using the time proven Belleville seal used exclusively by all major manufactures to ensure long life and safe operation.



**Conceal Pendant**  
PS003, PS006



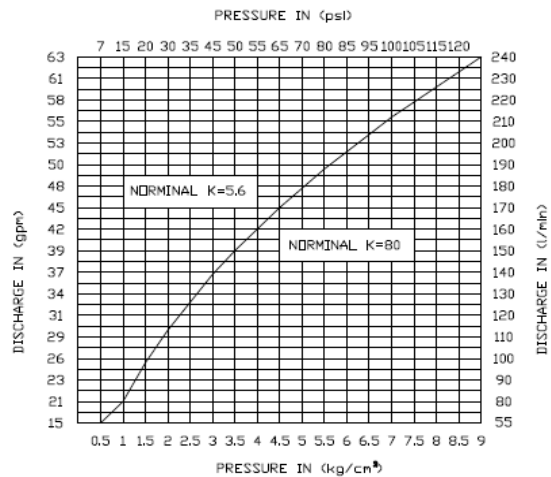
**Cover Plate**  
White Finish

## Maximum Coverage

Standard spray coverage is up to: Light Hazard = 225 square feet(20.9 sq.m); Ordinary Hazard = 130 square feet(12.1 sq.m) per NFPA 13. See Chart on Page.4 for distribution patterns.

## Operation

The operating mechanism is a frangible glass bulb which contains a heat responsive liquid. During a fire, the ambient temperature rises causing the liquid in the bulb to expand. When the ambient temperature reaches the rated temperature of the sprinkler, the bulb shatters. As a result, the waterway is cleared of all sealing parts and water is discharged towards the deflector. The deflector is designed to distribute the water in a pattern that is most effective in controlling the fire.



## Warnings

The Protector Model A-Series must be installed and maintained in compliance with this document.

Depressurize and drain the piping system before attempting to install, remove, or adjust any Protector Sprinklers.

Failure to do so may impair the performance of these sprinklers.

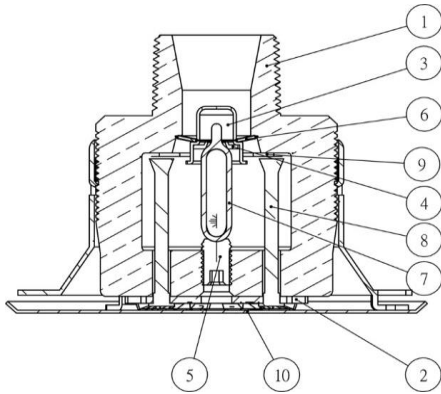
The owner is responsible for maintaining the fire protection system and devices in operation.

## Technical Specification

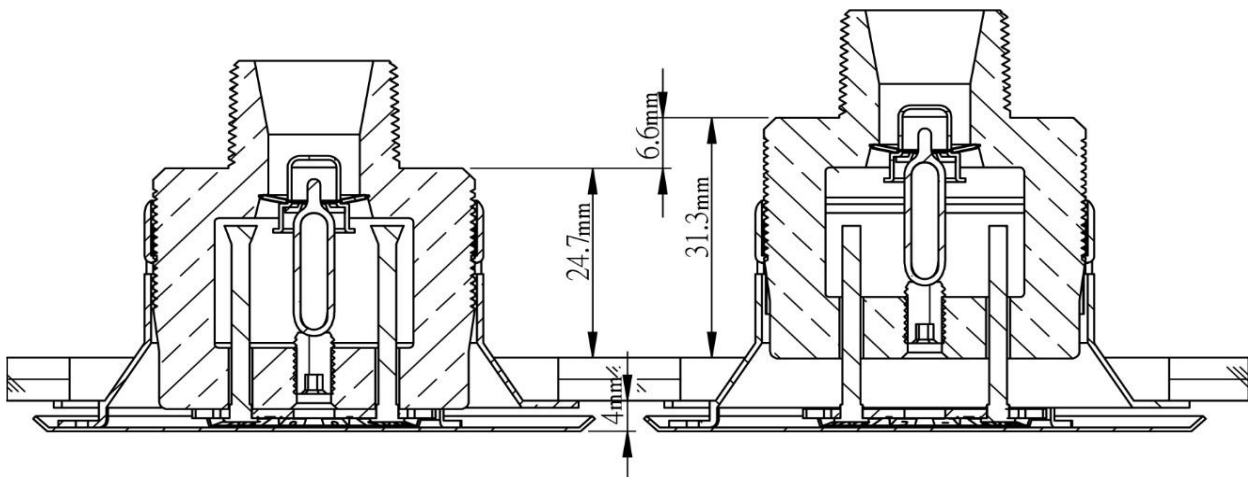
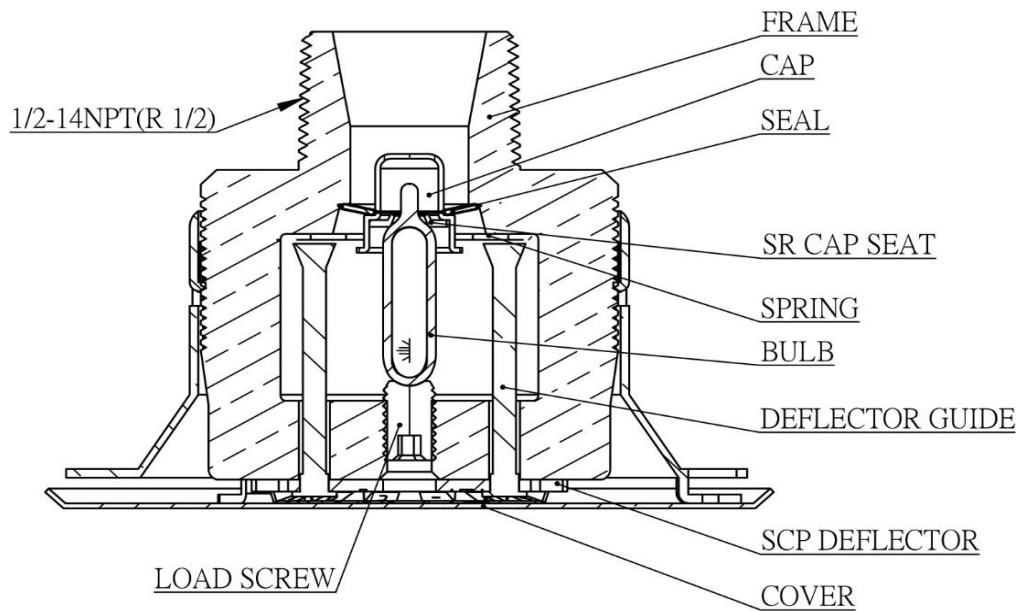
Model SIN:	PS003 Standard Response
	PS006 Quick Response (UL Only)
Style:	PS003 Concealed Sprinkler
	PS006 Concealed Sprinkler
K-Factor:	5.6Imp(80S.I)
RTI:	Standard 90 (m·s) <sup>1/2</sup> , Quick 33 (m·s) <sup>1/2</sup>
Approvals:	See Chart on Page.4
Nominal Working Thread:	1/2"NPT(15mm)
Max. Working Pressure:	175PSI(1200kPa)
Factory Hydrostatic Test:	100%@500PSI(3450kPa)
Min. Operating Pressure:	7PSI(48kPa)
Temperature Rating:	See Chart on Page.4

# Dimensions

PROTECTOR



1	FRAME	ASTM C48600
2	DEFLECTOR	ASTM C51000 (JIS C5191)
3	CAP	ASTM C11000
4	CAP SEAT	ASTM S30400
5	LOAD SCREW	ASTM C26000 (JIS C2600)
6	SEAL	BERY. NICKEL SPRING TEFLON TAPE
7	BULB	NORBULB N5
8	DEFLECTOR GUIDE	ASTM S30400
9	SPRING	ASTM S30400
10	COVER	ASTM C26800



## **Wrench Description**

The Sprinkler Wrench is a tool specifically designed for installing PROTECTOR Sprinklers. These special wrenches must be used to provide the proper leverage when tightening the sprinkler and to minimize slippage during installation. Any other wrench may damage the sprinkler. The following wrenches are available for installing PROTECTOR Sprinklers.



**PROTECTOR CONCEAL  
SPRINKLER WRENCH**

## **Installation**

All PROTECTOR Sprinklers must be installed according to NFPA 13 Standards. Deviations from these requirements and standards or any alteration to the sprinkler itself will void any warranty made by PROTECTOR Sprinkler Company. In addition, installation must also meet local government provisions, codes and standards as applicable.

The system piping must be properly sized to insure the minimum required flow rate at the sprinkler. Check for the proper model, style, orifice size and temperature rating prior to installation. Install sprinklers after the piping is in place to avoid mechanical damage, replace any damaged units. Wet pipe systems must be protected from freezing.

Upon completion of the installation, the system must be tested per recognized standards. In the event of a thread task, remove the unit, apply new pipe joint compound or tape, and reinstall.

## **Additional**

**Cover Plate** - To install the conceal cover plate, align it with the sprinkler and slowly turn clockwise for the cover plates and sprinkler to lock in. Make sure the cover plate is securely locked in, fail to do so may cause the sprinkler to malfunction.

## **Installation Sequence**

Step 1. The unit must be installed in the Pendent position for the Concealed Sprinkler.

Step 2. Use only a non-hardening pipe joint compound or tape seal. Apply only to the male threads.

Step 3. Hand tighten the sprinkler into fitting.

Step 4. For Concealed Sprinklers, use a standard wrench. Tighten the unit into the fitting. A lead-tight joint requires only 7 to 14ft.-lbs(9.5 to 19.0Nm) of torque. A tangential force of 14 to 28ft.-lbs(62.3 to 124.5N) delivered through a 6"(150mm) handle will deliver adequate torque. Once torque level reach over 21ft.-lbs(28.6Nm) it may distort the orifice seal, resulting in leakage. For exposed piping systems, the sprinkler should be oriented so the frame arms are parallel with the branch line pipe.

## **Caution**

Do not over-tighten or under-tighten the sprinkler to compensate for inaccurate escutcheon plate adjustment. Protection caps are used to protect its bulb and deflector. Please have cap on at all times during transportation and interior decorating.

## **Maintenance**

Sprinklers must never be altered after manufacture. Any alteration such as painting and coating will directly harm the sprinkler and cause malfunctions. Sprinkler in contact with corrosive products should be replaced if they cannot be cleaned completely.

Visual inspections are recommended after installation. After installation, a close-up inspection annually will suffice.

Inspection and maintenance of fire protection system is the responsibility of the owner. It is recommended that automatic sprinkler system be inspected and tested according to local and/or national regulations.

## Approvals and Listings

Nominal Size Inches/mm		K-Factor Imperial S.I.	Response	Sprinkler Type	Approvals		
Thread	Orifice				UL	C-UL	FM
1/2/15	1/2/13	5.6/80	Standard	Pendent	Yes	Yes	Yes
1/2/15	1/2/13	5.6/80	Quick	Pendent	Yes	Yes	Yes

## Temperature Ratings

Sprinkler Temperature Classification	Nominal Sprinkler Temperature Rating	N.F.P.A. Maximum Ambient (Ceiling) Temp.	Cover Temperature	Glass Bulb Color
Ordinary	155°F/68°C	100°F/38°C	135°F/57°C	Red
Intermediate	175°F/79°C	150°F/65°C	155°F/68°C	Yellow
	200°F/93°C	150°F/65°C	155°F/68°C	Green

## Distribution Patterns - Trajectory

K5.6 PENDENT SPRINKLER  
DISTRIBUTION PATTERNS - TRAJECTORY

