



## PRO K5.6 AUTOMATIC AND OPEN SPRINKLER

PS009 / PS010

**PRO K5.6 Conventional Sprinklers.**  
**Standard and Quick Response.**



### PRODUCT DESCRIPTION

The PRO Sprinkler Series, including models PS009 and PS010, is designed in accordance with UL 199 standard. Both models are conventional sprinklers that can be installed in either upright or pendent orientations, offering flexibility for various system layouts. PS009 is a Standard Response model, while PS010 is the Quick Response counterpart.

All PRO sprinklers are manufactured in Taiwan using high-quality glass bulbs sourced from Germany. Featuring a cast body and frame, the series is available in multiple temperature ratings and three finish options—combining reliable performance with design versatility for modern fire protection systems.



### TECHNICAL DATA

<b>Orientations</b>	Upright/Pendent PS009 (S.R.), PS010 (Q.R.)
<b>K-Factor</b>	5.6 Imp (80 S.I)
<b>RTI</b>	Standard 90 (m·s) <sup>1/2</sup> , Quick 33 (m·s) <sup>1/2</sup>
<b>Nominal Working Thread</b>	PT/NPT 1/2
<b>Maximum Tightening Torque</b>	21 ft-lbs (28.6 Nm)
<b>Maximum Working Pressure</b>	175 PSI (1200kPa)
<b>Minimal Operating Pressure</b>	7 PSI (48kPa)
<b>Factory Hydrostatic Test</b>	100% tested at 500 PSI (3450kPa)
<b>Temperature Rating</b>	See Chart



### MATERIAL SPECIFICATIONS

<b>Frame</b>	Brass
<b>Deflector</b>	Brass
<b>Cap</b>	Copper
<b>Load Screw</b>	Brass
<b>Bulb</b>	Glass
<b>Spring Seal</b>	SUS
<b>Finishes</b>	Natural Brass / Chrome Plated / Polyester



### LISTINGS AND APPROVALS





## INSTALLATION REQUIREMENT

All PRO Sprinklers must be installed in accordance with NFPA 13 standards. Any deviation from these requirements, including unauthorized modifications to the sprinkler, will void all warranties provided by Protector Safety Ind. Co. Additionally, installation must comply with all applicable local codes, regulations, and standards.

System piping must be properly sized to ensure the minimum required flow rate is delivered to each sprinkler. Prior to installation, confirm that the correct model, style, orifice size, and temperature rating are selected. Sprinklers should only be installed after the piping is in place to avoid mechanical damage. Any sprinkler found to be damaged must be replaced immediately. Wet pipe systems must be protected against freezing. Upon completing installation, the system must be tested in accordance with recognized standards. If leakage occurs at the threaded connection, remove the sprinkler, reapply appropriate pipe joint compound or thread seal tape, and reinstall properly.



## INSTALLATION INSTRUCTIONS

**Step 1:** Install the sprinkler in the correct orientation:

- For upright installation, the sprinkler must be installed in the upright position, with the deflector positioned within 30 cm (12 inches) of the ceiling.
- For pendent installation, the sprinkler must be installed in the pendent position, hanging vertically downward.

**Step 2:** Apply only a non-hardening pipe joint compound or thread seal tape to the male threads of the sprinkler. Do not apply sealant to the female threads.

**Step 3:** Hand-tighten the sprinkler into the fitting to ensure proper thread engagement.

**Step 4:**

- Use the designated PRO Sprinkler Wrench to tighten the unit.
- A leak-tight joint requires only 7 to 14 ft-lbs (9.5 to 19.0 Nm) of torque.
- A tangential force of 14 to 28 ft-lbs (62.3 to 124.5 N) applied through a 6" (150 mm) handle will generally deliver sufficient torque.
- Do not exceed 21 ft-lbs (28.6 Nm) of torque, as excessive force may deform the spring seal, resulting in permanent damage or leakage.
- For exposed piping systems, ensure the sprinkler frame arms are aligned parallel to the branch line pipe for proper orientation.



## WARNING

All PRO Sprinklers must be installed and maintained in strict accordance with the instructions provided in this datasheet.

Before installing, removing, or adjusting any PRO sprinkler, ensure that the piping system is fully depressurized and drained. Failure to follow this precaution may impair sprinkler performance and compromise system integrity. It is the owner's responsibility to ensure that the fire protection system and all associated devices are properly maintained and remain in reliable operating condition at all times.



## CAUTION

Do not over-tighten or under-tighten the sprinkler in an attempt to compensate for misaligned or improperly adjusted escutcheon plates, as this may damage the sprinkler or affect its performance. Protection clips are provided to safeguard the glass bulb and must always remain in place during transportation and installation to prevent accidental damage.



## MAINTENANCE

Sprinklers must never be altered after manufacture. Any modifications—including painting, coating, or surface treatments—can compromise sprinkler integrity and lead to malfunction or failure during operation. Sprinklers exposed to corrosive substances must be replaced if they cannot be thoroughly cleaned. Visual inspections are strongly recommended immediately after installation, and a close-up inspection should be performed at least once per year thereafter.

The inspection, testing, and maintenance of the fire protection system is the responsibility of the owner. It is strongly advised that the automatic sprinkler system be maintained in accordance with all applicable local and/or national codes and regulations.

## WRENCH & KEY DESCRIPTION

The Sprinkler Wrench and Key are specialized tools designed exclusively for the installation of PRO Sprinklers. The Wrench is intended for use with Upright and Pendent models, while the Key is specifically for Recessed Pendent models. These tools are engineered to provide the correct leverage during installation, ensuring a secure fit and minimizing the risk of slippage or damage. Use of non-designated wrenches or keys may result in damage to the sprinkler components.



WRENCH



KEY

## OPERATION

The operating mechanism of the sprinkler is a frangible glass bulb filled with a heat-sensitive liquid. In the event of a fire, the ambient temperature increases, causing the liquid inside the bulb to expand. When the temperature reaches the sprinkler's rated activation point, the bulb shatters, instantly clearing the waterway of internal components. Water is then discharged and directed toward the deflector, which is precisely engineered to distribute the water in a pattern optimized for effective fire control.

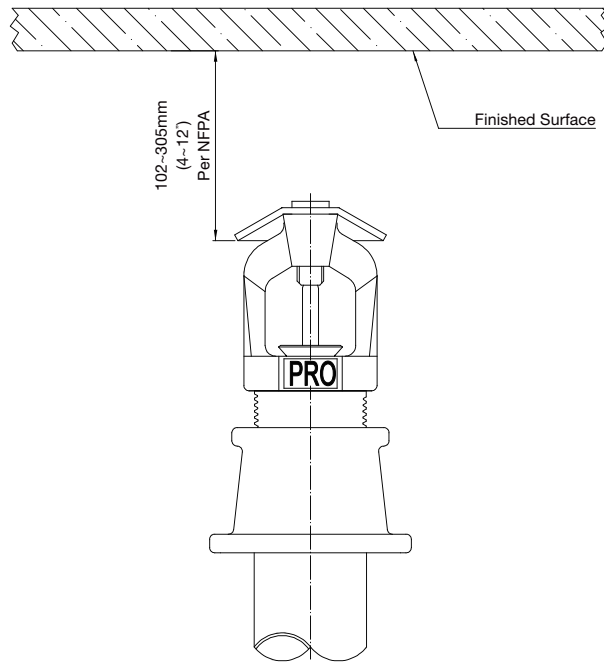
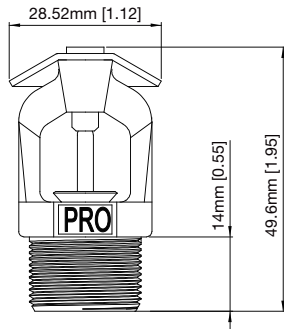
## TEMPERATURE RATING TABLE

Spinkler SIN	Temperature Rating	NFPA Allowed Maximum Ambient (Ceiling) Temperature	Glass Bulb Color
PS009	135°F/57°C	100°F/38°C	Orange
	155°F/68°C	100°F/38°C	Red
	175°F/79°C	150°F/65°C	Yellow
	200°F/93°C	150°F/65°C	Green
	286°F/141°C	225°F/107°C	Blue
	360°F/182°C	300°F/149°C	Mauve
PS010	135°F/57°C	100°F/38°C	Orange
	155°F/68°C	100°F/38°C	Red
	175°F/79°C	150°F/65°C	Yellow
	200°F/93°C	150°F/65°C	Green
	286°F/141°C	225°F/107°C	Blue



## DIMENSIONS

### Conventional Sprinkler



**Protector Safety Ind. Co.** Visit our website for the latest edition of this technical data page: [www.protector.com.tw](http://www.protector.com.tw)

Telephone: +886-3-3129-308 | Fax: +886-3-3217-956 | Email: [sales@protector.com.tw](mailto:sales@protector.com.tw)

**Protector Safety Ind. Co.**