PRO K11.2 AUTOMATIC AND OPEN SPRINKLER

PS301 / PS302 / PS304 / PS305

PRO K11.2 Upright and Pendent Sprinklers. Standard and Quick Response.



PRODUCT DESCRIPTION

The PRO K11.2 Sprinkler Series, including models PS301, PS302, PS304, and PS305, is designed in accordance with UL 199 and is available in both Standard Response and Quick Response types. These sprinklers offer two installation orientations: Upright (PS301, PS305), and Pendent (PS302, PS304). 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 multiple finish options, combining reliable performance with flexible design to meet the demands of modern fire protection systems.

These sprinklers are intended for use in hydraulically calculated Control Mode Density Area (CMDA) applications, covering both storage and non-storage occupancies, in accordance with the area/density curves of NFPA 13 and other applicable standards. With a K-factor of 11.2, the sprinklers produce a broad, hemispherical water distribution pattern that delivers the required densities at relatively lower pressures compared to standard orifice sprinklers.

This performance characteristic makes them well-suited for modern fire protection designs that demand efficiency, reliability, and flexibility in pipe sizing and system layout.

TECHNICAL DATA

Orientations	Upright PS301 (S.R.), PS305 (Q.R.) Pendent PS302 (S.R.), PS304 (Q.R.)
K-Factor	11.2 Imp (160 S.I)
RTI	Standard 90 (m·s)½, Quick 33 (m·s)½
Nominal Working Thread	PT/NPT ¾
Maximum Tightening Torque	21 ft-lbs (28.6 Nm)
Maximum Working Pressure	175 PSI (1200kPa)
Minimal Operating Pressure	7 PSI (48kPa)
Factory Hydrostatic Test	100% tested at 500 PSI (3450kPa)
Temperature Rating	See Chart

MATERIAL SPECIFICATIONS

Frame	Brass
Deflector	Brass
Cap	Copper
Load Screw	Brass
Bulb	Glass
Spring Seal	Beryllium Nickel w/TEFLON
Finishes	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:
- Upright Sprinklers must be installed in the upright position.
- Pendent Sprinklers must be installed in the pendent position.

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. 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 indamage to the sprinkler components.



WRENCH



KEY

OPERATION

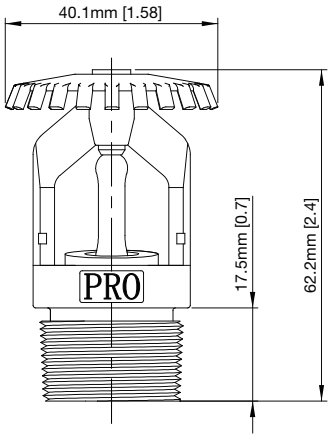
The operating mechanism of the sprinkler is a frangible glass bulb filled with a heat-sensitive liquid. In the event of a fire, the ambient temperature increases, causing the liquid inside the bulb to expand. When the temperature reaches the sprinkler's rated activation point, the bulb shatters, instantly 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

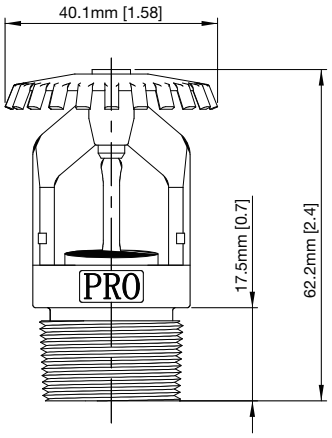
Spinkler SIN	Temperature Rating	NFPA Allowed Maximum Ambient (Ceiling) Temperature	Glass Bulb Color
PS301 PS302 PS304 PS305	155°F/68°C	100°F/38°C	Red
	175°F/79°C	150°F/65°C	Yellow
	200°F/93°C	150°F/65°C	Green

DIMENSIONS

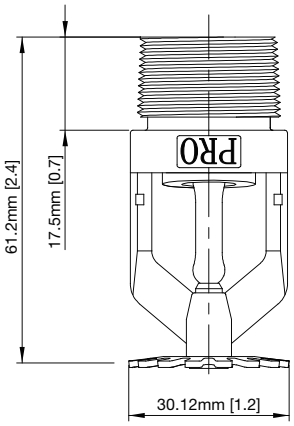
Upright Sprinkler - PS301



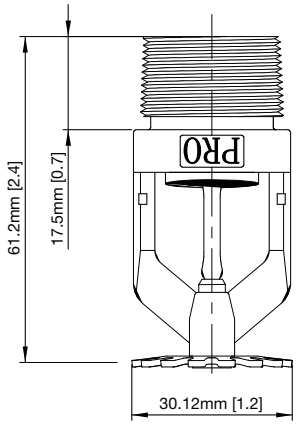
Upright Sprinkler - PS305



Pendent Sprinkler - PS302



Pendent Sprinkler - PS304



Distributed by :
PT. Sinabu Nusaindo
Komplek Kebon Jeruk Raya Permai Blok A 8
Jalan Kebon Jeruk Raya 7
Jakarta Barat 11530

Ph : (+6221) 5366 0988
Mail : marketing@sinabunusaindo.com

Protector Safety Ind. Co.