



PRO K8.0 AUTOMATIC AND OPEN SPRINKLER

PS215/PS225 (PUSG-1)

PS216/PS226 (PPS-1+PPG-1)

PRO K8.0 Upright and Pendent, Intermediate Level Sprinklers.
Standard and Quick Response.



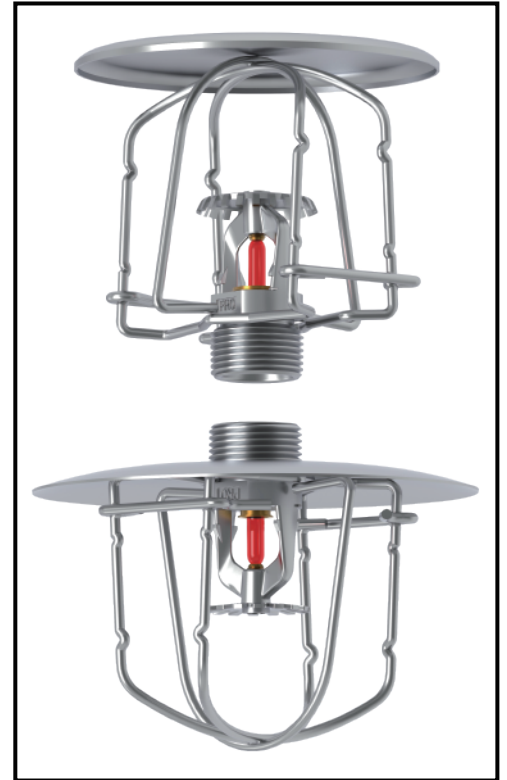
PRODUCT DESCRIPTION

PRO K8.0 Intermediate Level Sprinkler Series, including Models PS215, PS216, PS225, and PS226, is UL Listed in accordance with UL 199 for rack storage fire protection applications. The series is available in both Standard Response and Quick Response configurations and may be utilized in either automatic or open sprinkler applications, depending on system design requirements.

The sprinklers are specifically engineered for in-rack installations. Each sprinkler incorporates a shield assembly positioned above the thermal element to minimize the impact of discharge from sprinklers installed at higher elevations. This design helps maintain intended water distribution characteristics and improves fire control performance in high-piled and high-density storage occupancies.

Upright models PS215 and PS225 are intended for use with the Protector Model PUSG-1 Shield and Guard Set. Pendent models PS216 and PS226 are intended for use with the Protector Model PPS-1 Shield and PPG-1 Guard assembly. The shield is designed to reduce premature cooling and discharge interference from adjacent or overhead sprinklers, while the guard provides protection against mechanical damage associated with rack operations, material handling equipment, or external impact.

All PRO sprinklers are manufactured in Taiwan using high-quality glass bulbs sourced from Germany. The sprinkler body and frame are precision cast and available in multiple temperature ratings and finish options, providing reliability, durability, and installation flexibility for modern storage fire protection applications.



MATERIAL SPECIFICATIONS

Frame	Brass
Deflector	Brass
Cap	Copper
Load Screw	Brass
Bulb	Glass
Spring Seal	Beryllium Nickel w/TEFLON
Finishes	Natural Brass / Chrome Plated
Guard and Shield	Nickel-Chrome Plated Carbon Steel



TECHNICAL DATA

Orientations	Upright PS215 (S.R.), PS225 (Q.R.) Pendent PS216 (S.R.), PS226 (Q.R.)
K-Factor	8.0 Imp (114 S.I)
RTI	Standard 90 (m·s) ^{1/2} , Quick 33 (m·s) ^{1/2}
Nominal Working Thread	PT/NPT 3/4
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



LISTINGS AND APPROVALS



SHIELD AND GUARD DESIGN

The design should be in accordance with the requirements of the NFPA. The Shield and Guard should only be used with specific listed sprinklers mentioned above.

INSTALLATION REQUIREMENT

All PRO sprinklers shall be installed in accordance with NFPA 13 and all applicable local codes, standards, and authority having jurisdiction (AHJ) requirements. Any modification to the sprinkler or installation not in accordance with these instructions may impair performance and void all warranties provided by Protector Safety Ind. Co. System piping shall be properly sized to provide the minimum required flow and pressure to each sprinkler. Prior to installation, verify that the correct sprinkler model, response type, orifice size, and temperature rating have been selected for the intended application. Sprinklers shall be installed only after system piping has been completed to avoid mechanical damage during construction. Any damaged sprinkler shall be replaced immediately.

Wet pipe systems shall be protected against freezing conditions. Upon completion of installation, the system shall be inspected and tested in accordance with recognized installation standards. If leakage occurs at the threaded connection, remove the sprinkler, reapply an appropriate non-hardening pipe joint compound or thread seal tape, and reinstall the sprinkler.

INSTALLATION INSTRUCTIONS

FOR UPRIGHT SPRINKLERS (PS215 AND PS225) WITH PUSG-1 SHIELD AND GUARD SET:

- Step 1:** Install the sprinkler in the upright position.
- Step 2:** Apply a non-hardening pipe joint compound or thread seal tape to the male threads only.
- Step 3:** Hand-tighten the sprinkler into the fitting.
- Step 4:** Tighten the sprinkler using the appropriate PRO sprinkler wrench. A leak-tight joint requires 7 to 14 ft-lbs (9.5 to 19.0 N·m) of torque. Torque exceeding 21 ft-lbs (28.6 N·m) may distort the spring seal and result in leakage or sprinkler damage. For exposed piping systems, orient the sprinkler so the frame arms are parallel to the branch line piping.
- Step 5:** Install the PUSG-1 Shield and Guard Set from the side of the sprinkler. After positioning the assembly, lift the Guard Clips upward and engage them into the first locking position on both sides. (refer to Picture below)
- Step 6:** Remove the orange protective clips only after the Shield and Guard Set has been fully installed.

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

PRO sprinklers shall be installed only with the designated PRO standard wrench and key. These specialized tools are designed to provide proper leverage during installation, helping to minimize the risk of slippage, over-tightening, or mechanical damage while ensuring installation accuracy and sprinkler integrity.

Use of non-designated wrenches or installation tools is strictly prohibited, as improper installation may result in damage to sprinkler components and adversely affect sprinkler performance, safety, and warranty coverage.

FOR PENDENT SPRINKLERS (PS216 AND PS226) WITH PPS-1 SHIELD AND PPG-1 GUARD:

- Step 1:** Install the sprinkler in the pendent position.
- Step 2:** Apply a non-hardening pipe joint compound or thread seal tape to the male threads only.
- Step 3:** Hand-tighten the sprinkler into the fitting.
- Step 4:** Tighten the sprinkler using the appropriate PRO sprinkler wrench. A leak-tight joint requires 7 to 14 ft-lbs (9.5 to 19.0 N·m) of torque. Torque exceeding 21 ft-lbs (28.6 N·m) may distort the spring seal and result in leakage or sprinkler damage. For exposed piping systems, orient the sprinkler so the frame arms are parallel to the branch line piping.
- Step 5:** Position the PPS-1 Shield over the threaded end of the sprinkler prior to installation, with the concave surface facing the sprinkler frame. Install the sprinkler and Shield assembly in accordance with Steps 2 through 4 above. After installation, attach the PPG-1 Guard from the side of the sprinkler and rotate the Guard 90 degrees until properly aligned with the sprinkler frame. Lift the Guard Clips upward and engage them into the first locking position on both sides. (refer to Picture below)
- Step 6:** Remove the orange protective clips only after the Shield and Guard assembly has been fully installed.

Note: Ensure the Guard Clips are aligned with the sprinkler centerline.



WRENCH



KEY



OPERATION

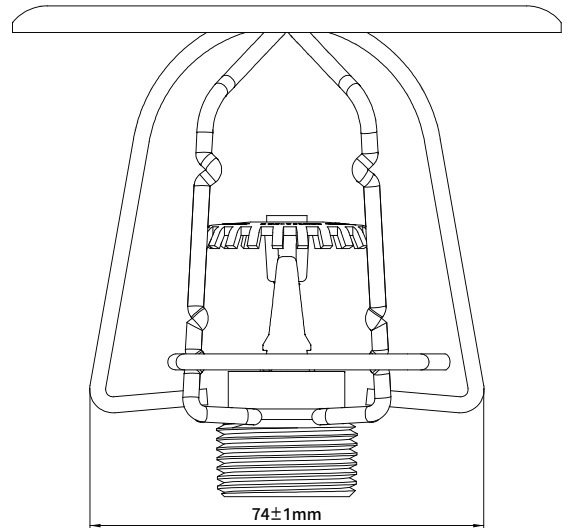
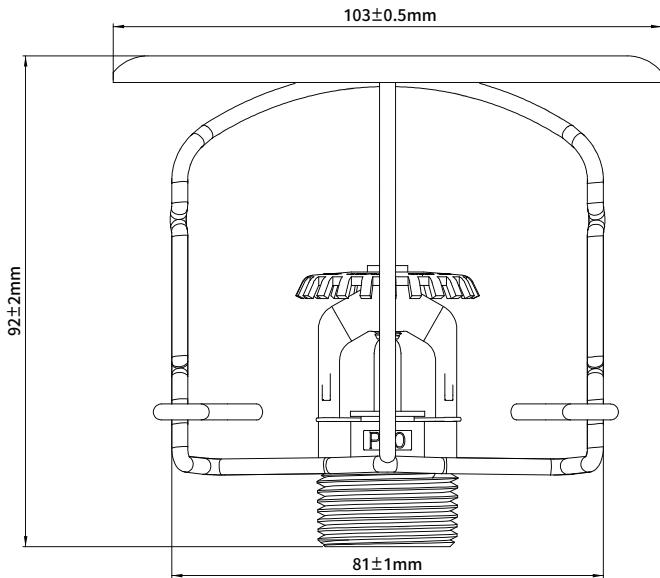
The operating mechanism of the sprinkler is a frangible glass bulb filled with a heat-sensitive liquid. In the event of a fire, the ambient temperature increases, causing the liquid inside the bulb to expand. When the temperature reaches the sprinkler's rated activation point, the bulb shatters, instantly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



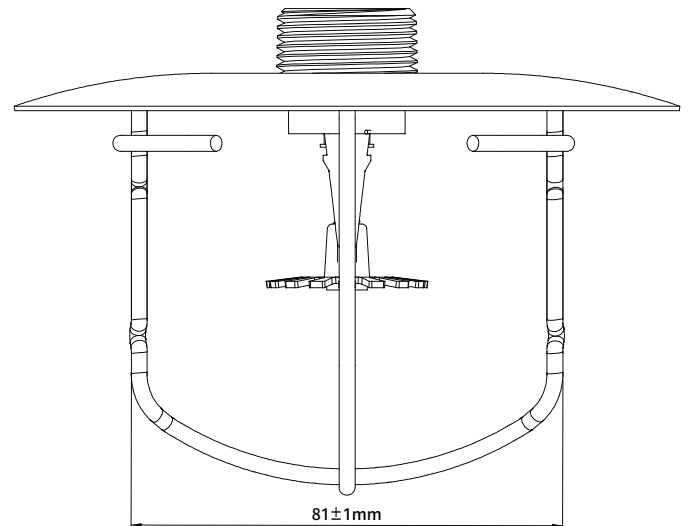
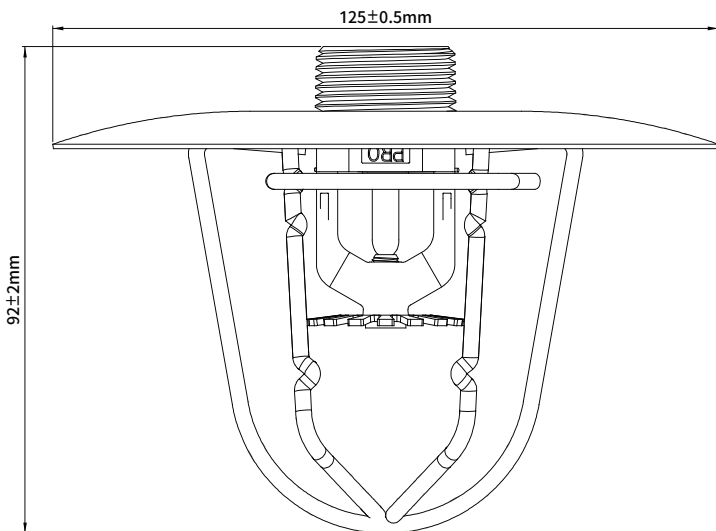


DIMENSIONS

Upright Sprinkler with Shield and Guard



Pendent Sprinkler with Shield and Guard





TEMPERATURE RATING TABLE

Spinkler SIN	Temperature Rating	NFPA Allowed Maximum Ambient (Ceiling) Temperature	Glass Bulb Color
PS215	135°F/57°C	100°F/38°C	Orange
PS216	155°F/68°C	100°F/38°C	Red
PS225	175°F/79°C	150°F/65°C	Yellow
PS226	200°F/93°C	150°F/65°C	Green

