



TECHNICAL DATA

Sprinkler PI-8 Series

Installation Guide

1 of 4

Automatic Sprinkler PI-8 Series (CONCEALED TYPE SPRINKLER)



PI 820 / PI821

- Glass bulb
- Standard Spray Pattern
- K-factor 5.6
- Quick & Standard Response



General Description

Paradise Industry Standard and Quick Response Concealed Pendant Sprinkler PI820 and PI821 are thermosensitive glass-bulb spray sprinklers with the cover plate. The sprinkler is pre-assembled with a threaded adapter for installation with a low-profile cover assembly that provides up to 10mm of vertical adjustment..

The two-piece design allows installation and testing of the sprinkler prior to installation of the cover plate. The "thread-on", "thread-off" design of the concealed cover plate assembly allows easy installation of the cover plate after the system has been tested and the ceiling finish has been applied. The cover assembly can be removed and reinstalled, allowing temporary removal of ceiling panels without taking the sprinkler system out of service or removing the sprinkler.

Sprinkler Identification Numbers

PI820 :

Standard response,Pendent,5.6K, 1/2"(N)PT

PI821 :

Quick response, Pendent, 5.6K, 1/2"(N)PT

Technical Data

Minimum Operating Pressure :

7 psi (0.5 bar)

Maximum Working Pressure :

175 psi (12 bar)

Discharge Coefficient :

$K = 5.6 \text{ GPM}/\text{psi}^{1/2} (80.7 \text{ LPM}/\text{bar}^{1/2})$

Temperature Rating:

Sprinkler : 155 / 200 °F (68 / 93 °C)

Cover Assembly : 135 / 165 °F(57 / 74°C)

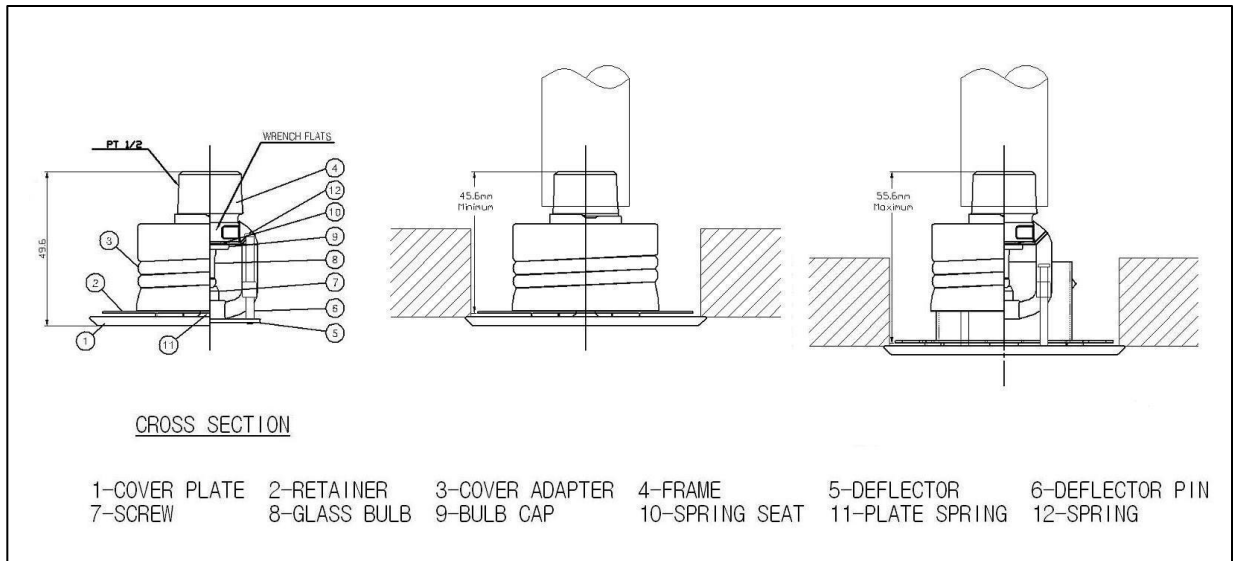
Leakage Test at Factory (Air):

30 Kg_f/cm² (0.3Mpa, 29.4bar, 426.7 psi)

Material

- Frame Forging ..Brass AS1568 Alloy486
- Deflector Copper C2680S
- Spring Seat Ni-Be alloy, coated on both sides with Teflon Tape.
- Bulb Glass
- Bulb Cap Phosphor Bronze C5191
- Screw Brass C3604

Design Criteria



SIN No	Spray Pattern	Response	Thread Size		Nominal K Factor	Vertical adjustment	Approval
			(N)PT	BSP			
PI 820	Pendent	SR	½"	15mm	K 5.6 (US)	10mm	cUL _{US}
PI 821	Pendent	QR	½"	15mm	K 5.6 (US)	10mm	cUL _{US}

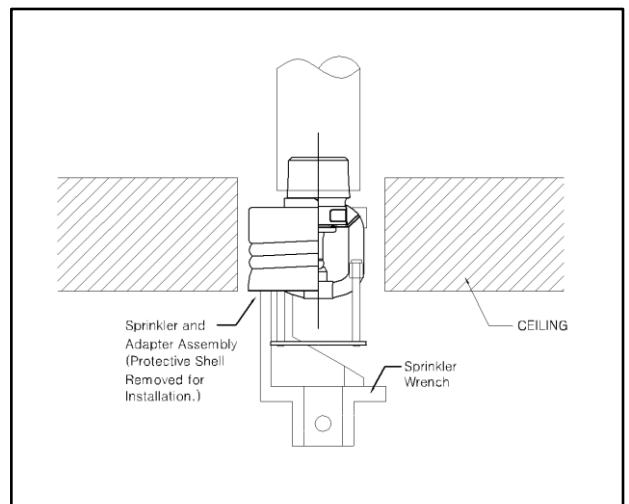
Installation

The Paradise Industry sprinklers are intended for fire protection systems designed in accordance with the standard installation rules of the applicable listings or approval agency. (eg., NFPA 13 or UL 199 Standard)

Note.

Do not install any bulb type sprinkler if the bulb is cracked or there is a loss of fluid from the bulb. And with the sprinkler held horizontally, a small air bubble should be present.

The sprinkler joint should be obtained with maximum torque of 28.5 Nm (21 ft-lbs)



Operation

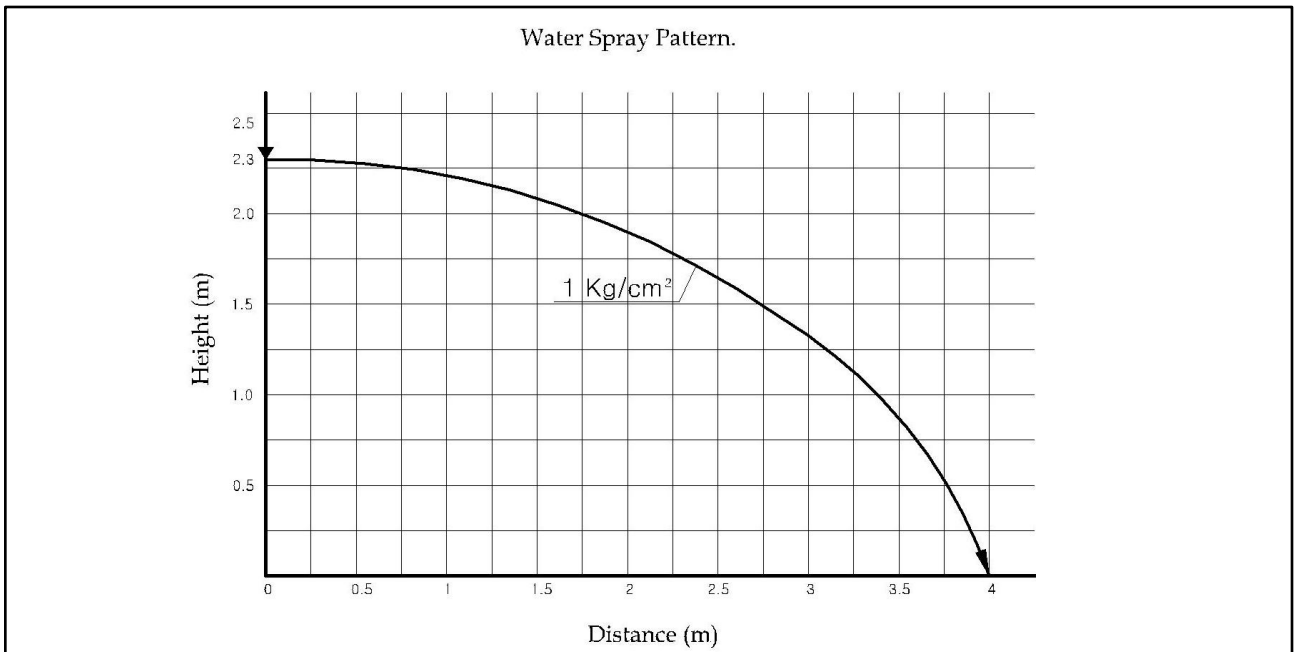
During fire conditions, when the temperature around the sprinkler approaches its operating temperature, the cover plate detaches. Continued heating of the exposed sprinkler causes the heat-sensitive liquid in the glass bulb to expand and the bulb to shatter, releasing the bulb cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

Inspections, Tests and Maintenance

Automatic Sprinklers must never be shipped or stored where their temperature will exceed 39°C and they must never be painted, plated, coated or otherwise altered after leaving factory. Modified sprinklers must be replaced. Sprinklers that have been exposed to corrosive products of combustion, but have not operated, should be replaced if they cannot be completely cleaned by wiping the sprinkler with a cloth or by brushing it with a soft bristle brush.

Care must be exercised to avoid damage to the sprinklers both before and after installation. Sprinklers damaged by dropping, striking, wrench twist/slippage, or the like, must be replaced. Also, replace any sprinkler that has a cracked bulb or that has lost liquid from its bulb.

Spray Pattern



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