

Automatic Sprinkler UV-8 Series (CONCEALED TYPE SPRINKLER)



UV820 / UV821

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



General Description

UNIVAL Standard Response Concealed Pendant and UNIVAL Quick Response Concealed Pendant Sprinkler UV820 and UV821 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

UV820 :

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

UV821 :

Quick response, Pendant, 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 :

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

Temperature Rating:

Sprinkler : 155 / 200 °F (68 / 93 °C)

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

Leakage Test at Factory (Air):

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

Material

Frame Forging ..Brass AS1568 Alloy486

Deflector Copper C2680S

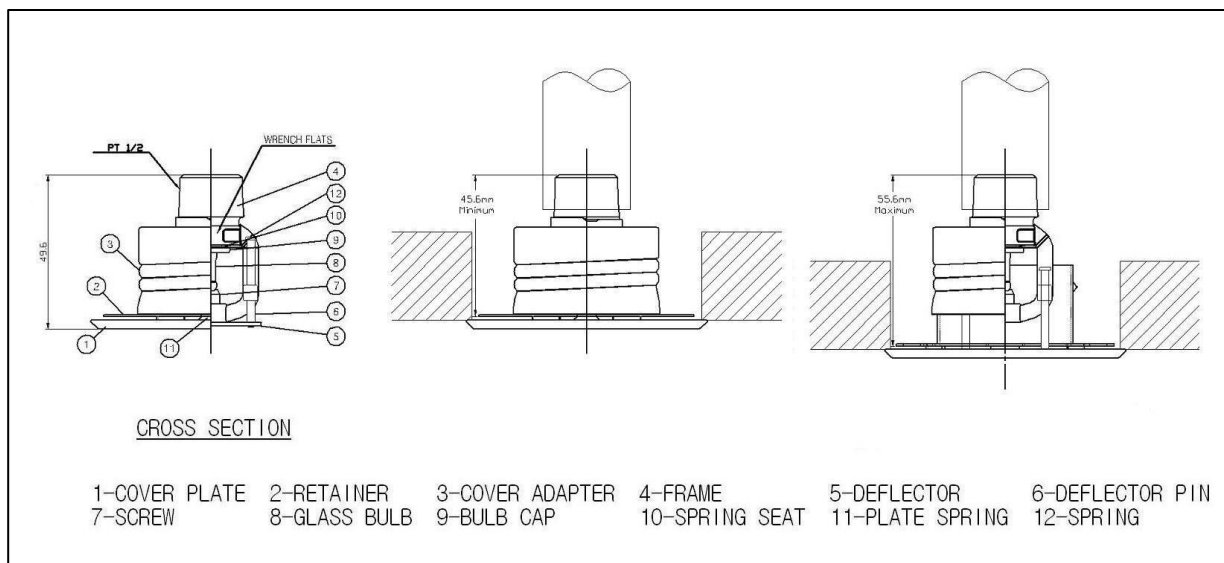
Spring Seat Ni-Be alloy,
coated on both sides with Teflon Tape.

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 | | | |
| UV 820 | Pendent | SR | ½" | 15mm | K 5.6 (US) | 10mm | UL _{US} |
| UV 821 | Pendent | QR | ½" | 15mm | K 5.6 (US) | 10mm | UL _{US} |

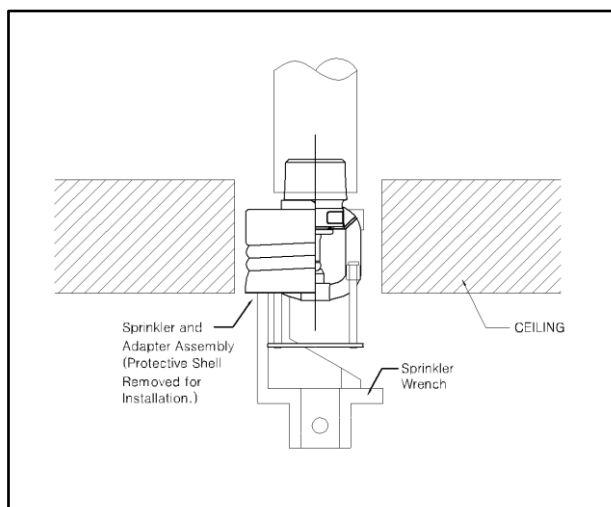
Installation

The UNIVAL 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.

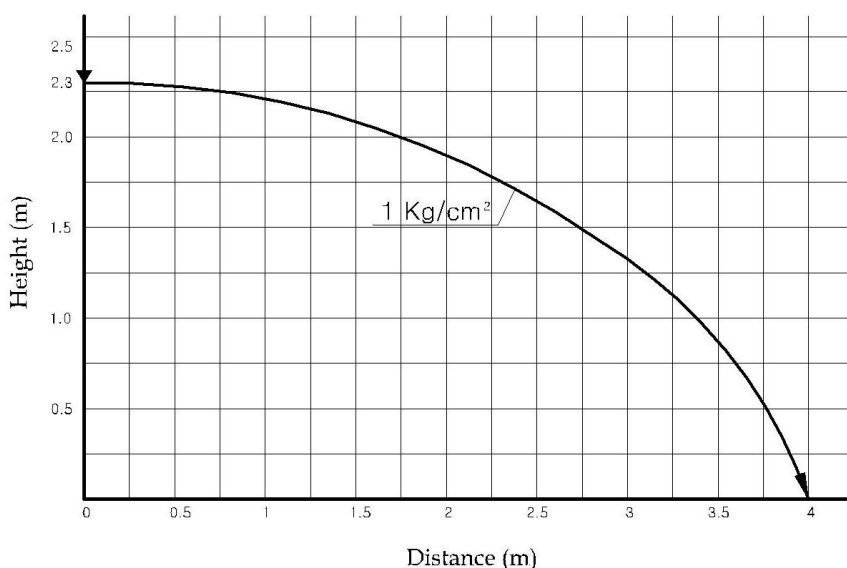
Inspections, Tests and Maintenance

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

Water Spray Pattern.



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