

UTEC[®] *Automatic Sprinkler*

Ut0009, Ut0010 — CONCEALED PENDENT, STANDARD COVERAGE, STANDARD & QUICK RESPONSE, SPRINKLER K-FACTOR: 5.6

DESCRIPTION

The UTEC[®] Series Ut0009, Ut0010, with the K-factor 5.6, is Flat-plate Concealed Pendent Sprinkler, having standard coverage. The Series Ut0009 described in this data sheet is standard response sprinklers with 5mm glass bulb, while the series Ut0010 is Quick Response sprinklers with a 3mm glass bulb.

OPERATION

The soldered cover plate drops off the retainer assembly when exposed to heat, e.g. a fire, that has reached the plate's Listed temperature rating. As heat encompasses the glass bulb's operating element of the sprinkler, the fluid in the bulb expands, compressing the air bubble within the bulb. When the air bubble can no longer be compressed, the fluid expansion causes the breakage of the glass bulb, resulting in the release of the water seat assembly, and the discharge of the water from the sprinkler.

NOTE

The UTEC[®] Series Flat Plate Concealed Pendent Sprinkler must be installed and maintained in compliance with standards of NFPA.



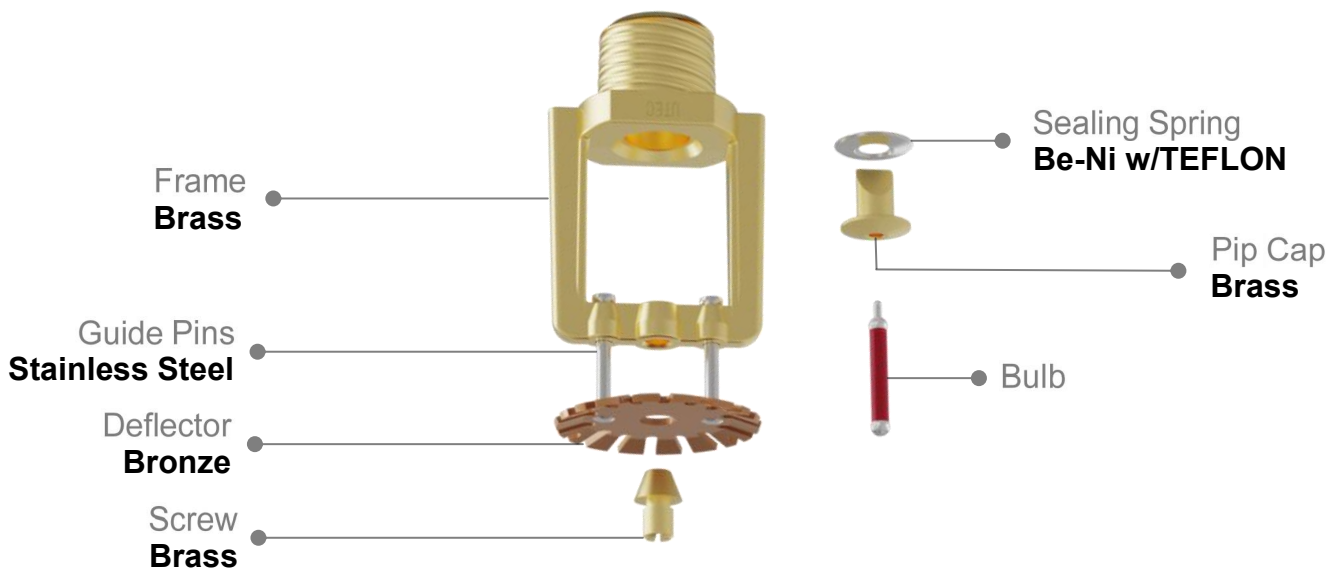
TECHNICAL SPECIFICATION

Sprinkler Identification Number (SIN)	Ut0009 & Ut0010
Response	Standard & Quick
Temperature Rating	135°F (57°C) Cover Plate <ul style="list-style-type: none">• 135°F (57°C) Sprinkler• 155°F (68°C) Sprinkler 165°F (74°C) Cover Plate <ul style="list-style-type: none">• 175°F (79°C) Sprinkler• 200°F (93°C) Sprinkler
Discharge Coefficient GPM / psi ^{1/2} (LPM/bar ^{1/2})	K=5.6 (80)
Nominal Thread Size	1/2" NPT / 1/2" BSPT
Max. Working Pressure	175 PSI (12BAR)
Factory Testing Pressure	500 PSI (35BAR)
Min. Operating Pressure	7 PSI (0.5 BAR)
Cover Plate Finishes	White Coating, Chrome, Bright Brass, Brass & Customized

SPRINKLER MATERIALS



Support Cup
With Thread
Plated Steel



Frame
Brass

Guide Pins
Stainless Steel

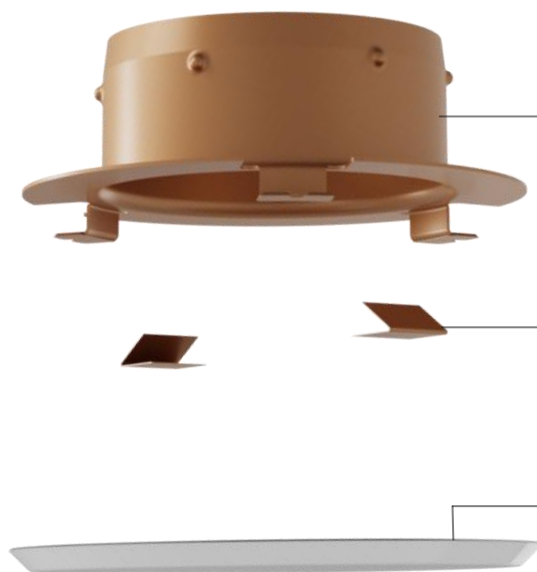
Deflector
Bronze

Screw
Brass

Sealing Spring
Be-Ni w/TEFLON

Pip Cap
Brass

Bulb



Retainer
Plated Brass

Ejection Spring
Bronze

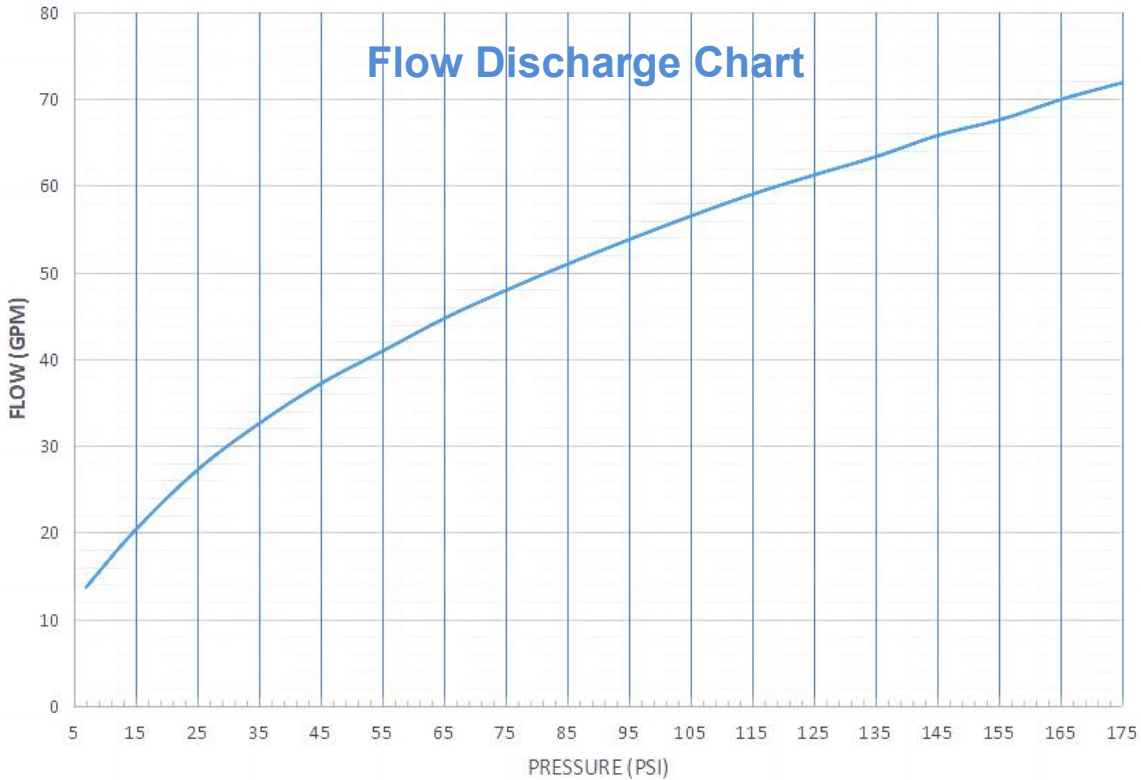
Cover Plate
Brass

DISCHARGE COEFFICIENT (K-Factor)

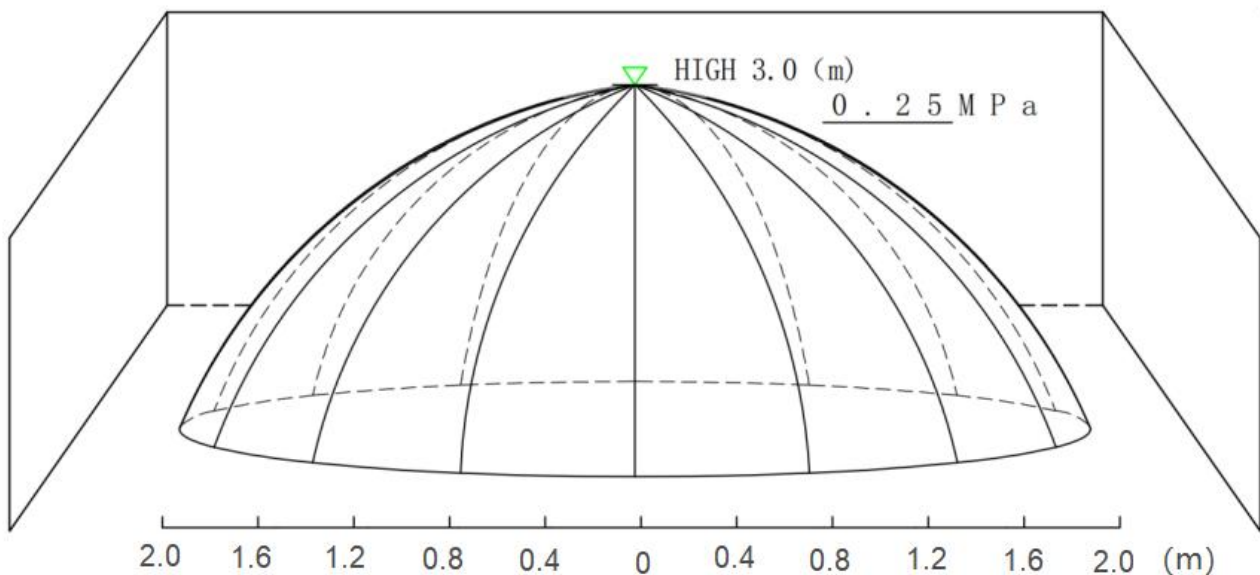
$$K_m = \frac{Q}{\sqrt{P}}$$

The coefficient of discharge, K, as expressed in the equation:

Where Q is the flow in gallons per minute (gal/min), and P is the pressure in pounds per square inch (psi). Expressed in SI units: Q is the flow in liters per minute (L/min) and P is the pressure in bar. The discharge coefficient, therefore, has units of gal/min/(psi)^{1/2} or L/min/(bar)^{1/2}.



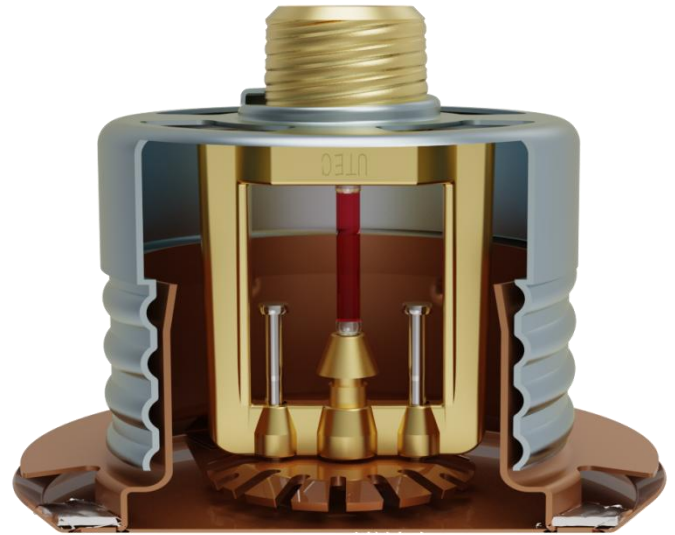
Concealed Pendent Sprinkler Distribution



INSTALLATION

Note:

The sprinklers, which are manufactured and tested in accordance with the rigid requirements of the Standard UL 199, should also be installed in accordance with the latest edition of the Standard NFPA 13. The system piping must be properly sized to ensure the minimum required flow rate at the sprinkler. Check for the proper model, style, orifice size and temperature rating prior to installation, and install the sprinklers after the piping is in place. Pay attention to avoiding mechanical damage, and replace any damaged units. The wet pipe sprinkler systems must be protected from freezing. Upon completion of the installation, the system must be tested per recognized standard. In case of thread leakage, remove the unit, and apply new pipe jointing compounds or use the tape, and then re-install.



STEP 2.

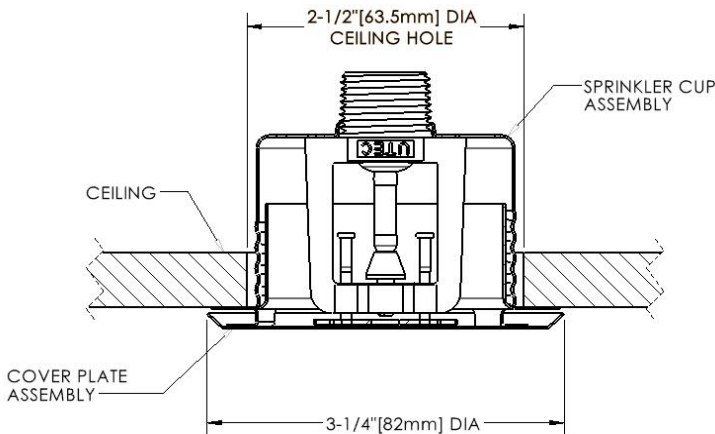
Twist-off the blue Protective Cap.

STEP 3.

Only using the non-hardening pipe joint compound or Teflon tape apply for the male thread.

STEP 4.

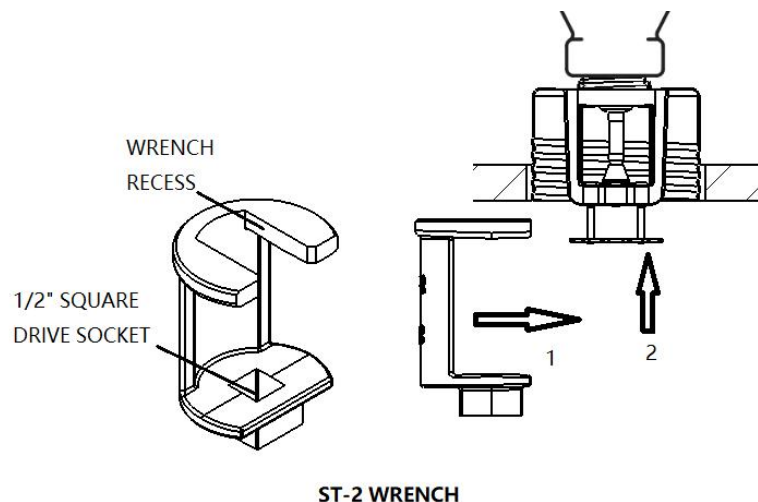
Tighten the sprinkler into fitting with model ST-2 Wrench, fully insert the wrench over the sprinkler until the wrench engages the body. Do not wrench any other part of the sprinkler/cup assembly. And the ST-2 wrench is designed to be turned with a standard 1/2" square drive. Tighten the sprinkler into the fitting with proper torque.



METHOD:

STEP 1.

This type of sprinklers must not be installed in the ceiling with positive pressure above them. Ensure that the 4 slots in the cup are open and unobstructed after the installation. There is an adjustable protective cap shipped with the sprinkler that should remain on the sprinkler until the sprinkler system is placed in service following the installation.



STEP 5.

To install the cover plate, align it with support ring assembly and press it over the support ring assembly, then push upward and twist to the right.

CAUTION

1. BE SURE TO REMOVE THE PLASTIC PROTECTION COVER AFTER INSTALLATION. DO NOT CLAMP IT ON THE FRAME ARMS, OTHERWISE WILL TO PREVENT THE HEAT RESPONSE FUNCTION WITH FAIL!
2. IT IS RECOMMENDED NOT TO EXCEED 14 FT-LB TORQUE FOR THE SPRINKLERS WITH 1/2 IN. NPT THREADS..
3. PROTECTIVE CAPS MUST BE REMOVED FROM SPRINKLERS BEFORE PLACING THE SYSTEM!