

UTEC® *Automatic Sprinkler*

Ut0007, Ut0008 — Conventional Sprinklers

Standard & Quick Response, Standard Coverage,

K-FACTOR: 5.6

DESCRIPTION

The UTEC® Series Ut0007, with the K-factor 5.6, is Standard Response sprinklers which utilize a 5mm frangible glass bulb, while the Ut0008 is Quick Response sprinkler with a 3mm glass bulb serving as the thermosensitive operating element. These sprinklers are intended to be installed in the upright or pendent orientations. In either position, they produce a spherical water discharge pattern with approximately 50% of the discharge directed upwards and approximately 50% of the discharge directed downwards. They are listed and approved as standard coverage sprinklers and are to be installed in accordance with the guidelines of the appropriate Installation Standard being mandated by the AHJ (i.e. NFPA 13; FM 2000). These sprinklers are available in various response sensitivity, temperatures and finishes as shown.

OPERATION

When a fire occurs and heat is absorbed, the thermal-sensitive liquid within the bulb expands and the internal pressure increases. When the internal pressure exceeds the strength of the glass, the glass would shatter. This results in the water discharge, which is distributed in an approved pattern depending upon the deflector style used.

NOTE

The UTEC® Series Sprinkler must be installed and maintained in compliance with standards of NFPA.



TECHNICAL SPECIFICATION

**Sprinkler Identification
Number (SIN)**

Ut0007 & Ut0008

Response

Standard & Quick

**Temperature Rating
/ Color / Classification**

135°F (57°C) / Orange / Ordinary
155°F (68°C) / Red / Ordinary
175°F (79°C) / Yellow / Intermediate
200°F (93°C) / Green / Intermediate
286°F (141°C) / Blue / High

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)

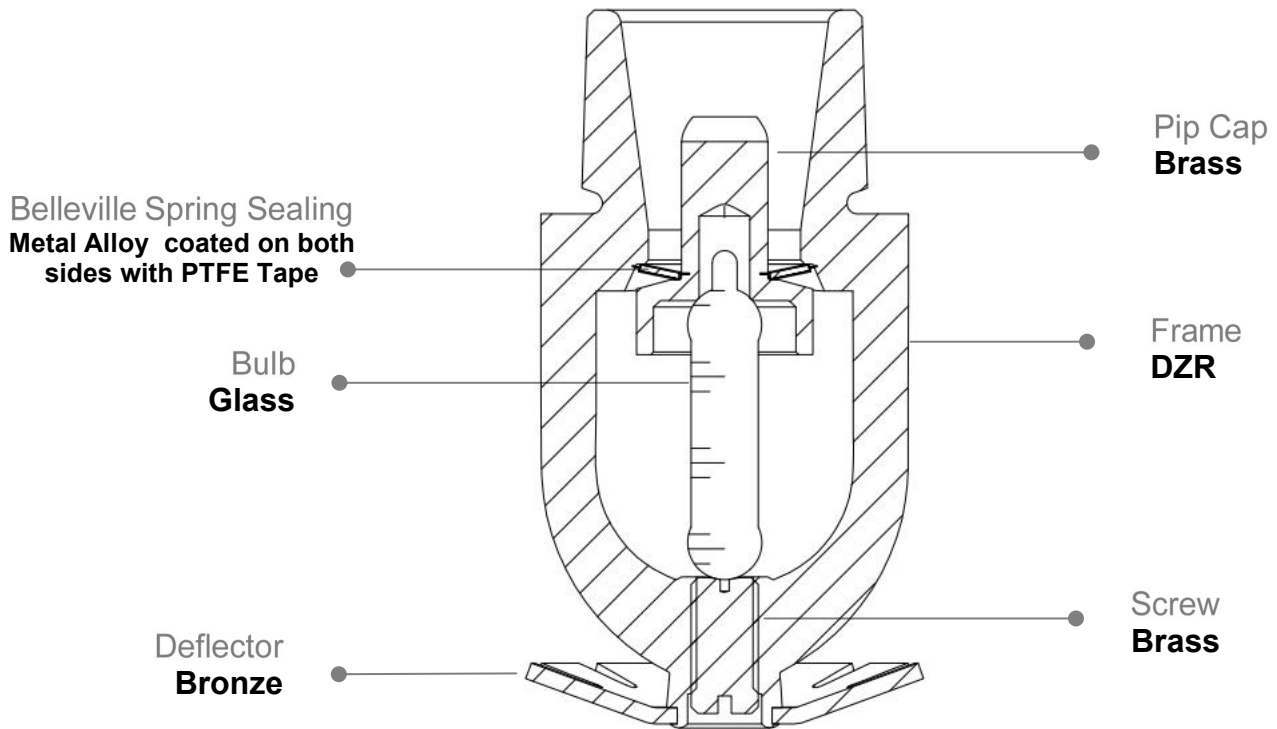
**Min. Operating
Pressure**

7 PSI (0.5 BAR)

Finishes

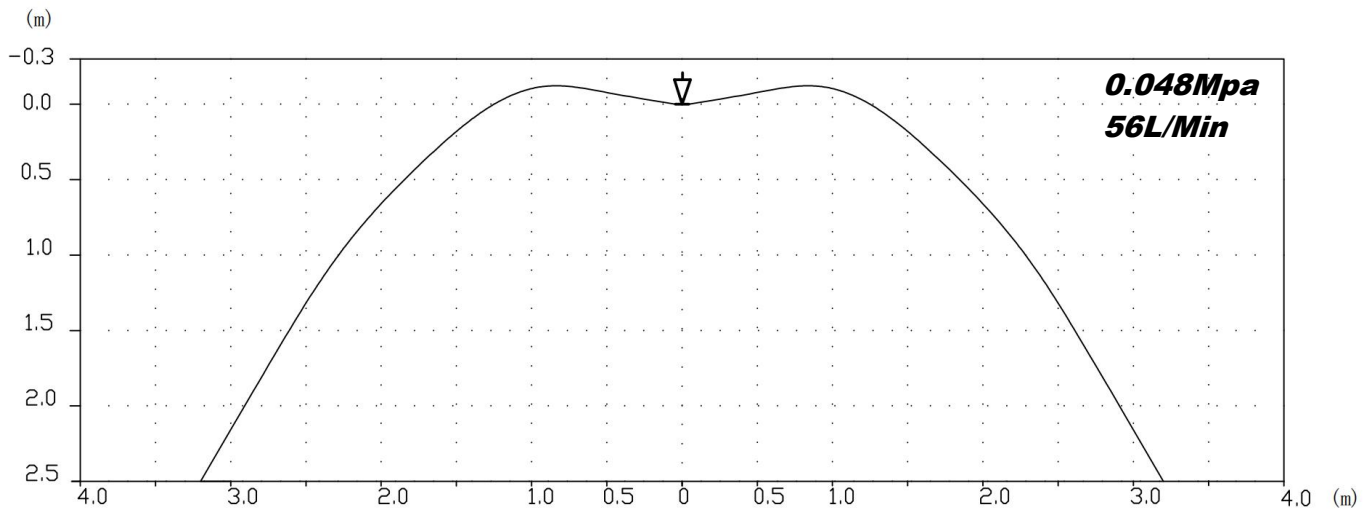
Brass, White Coating and Chrome

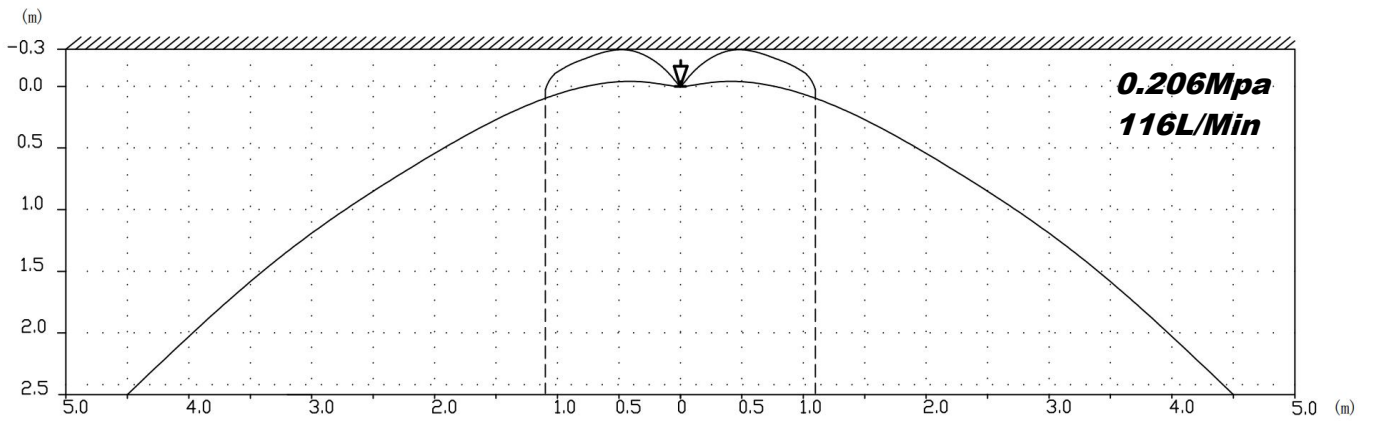
SPRINKLER MATERIALS



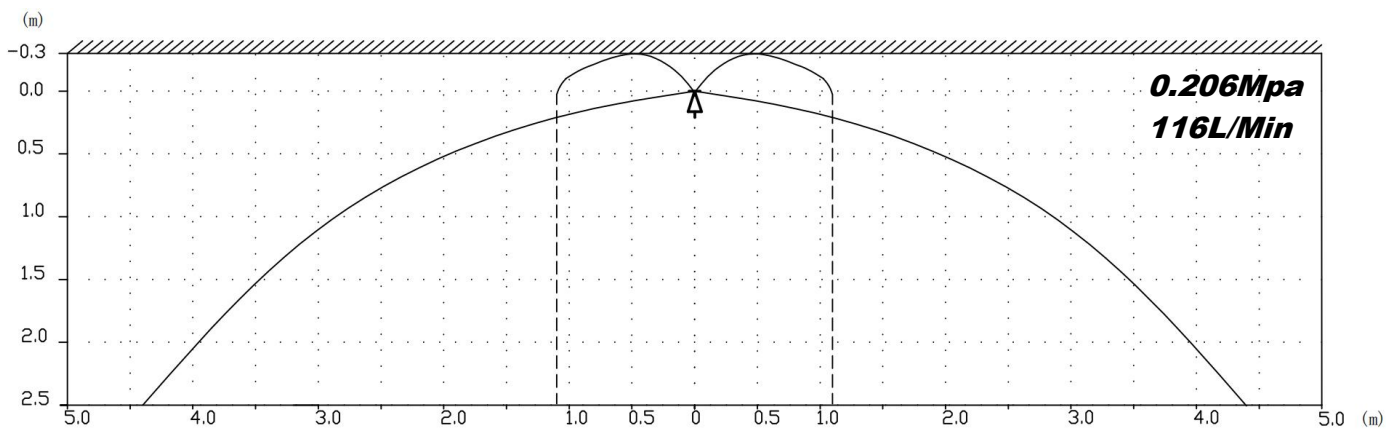
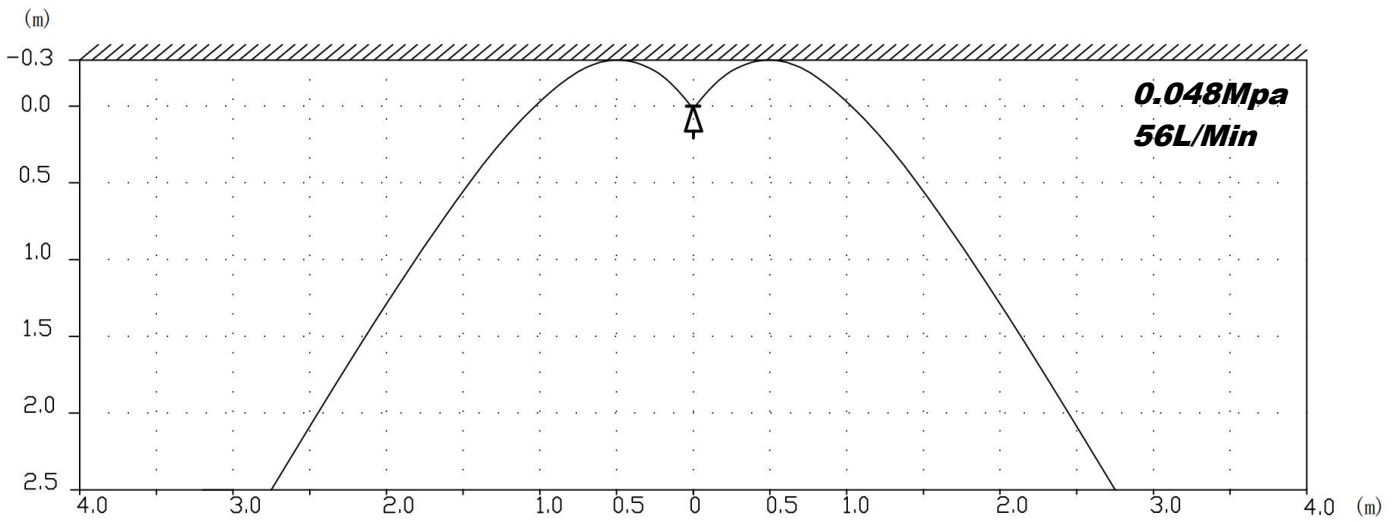
CONVENTIONAL SPRINKLER DISTRIBUTION

PENDENT INSTALLATION POSITION





UPRIGHT INSTALLATION POSITION



DISCHARGE COEFFICIENT (K-Factor)

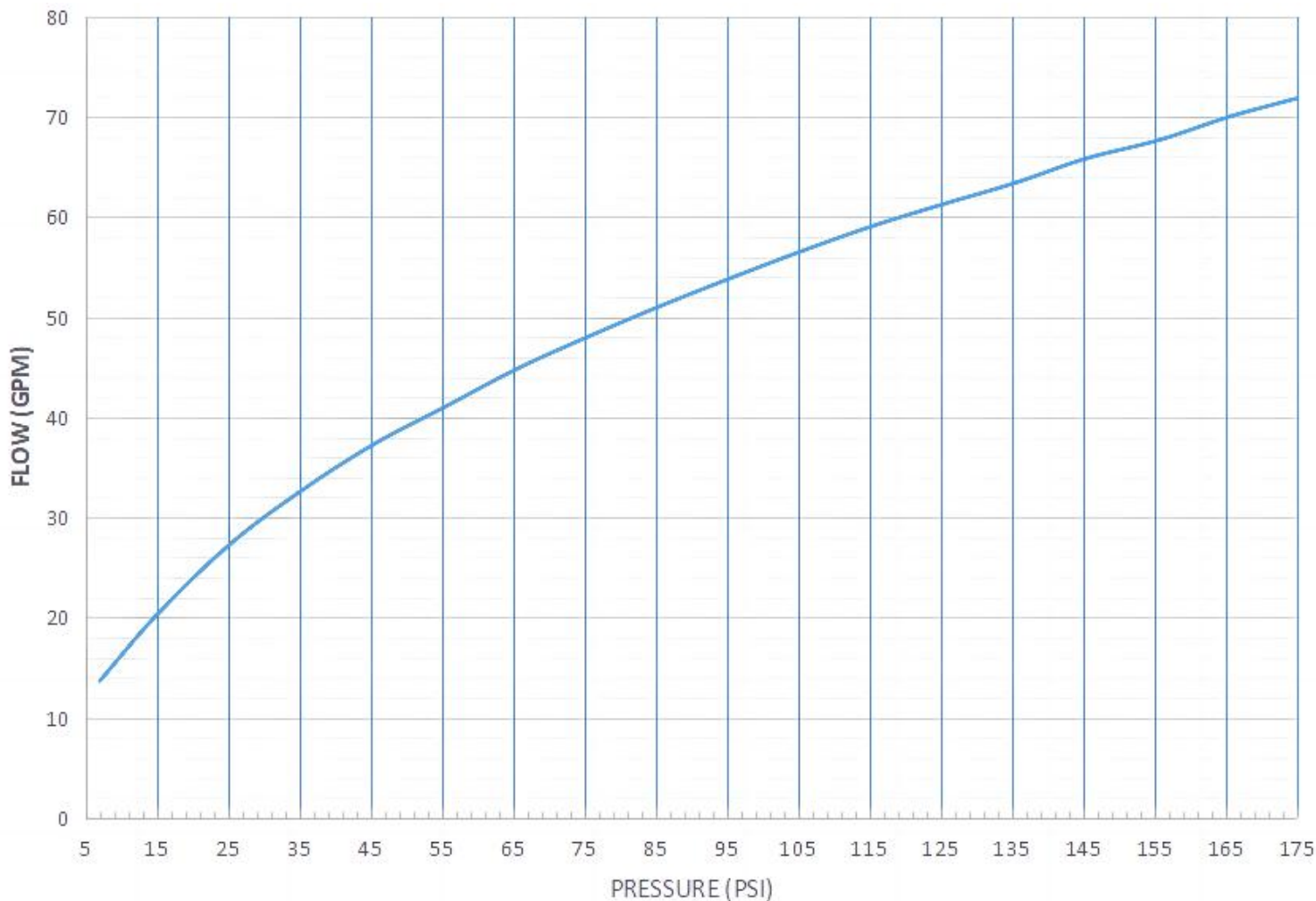
$$K = \frac{Q}{\sqrt{P}}$$

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}.

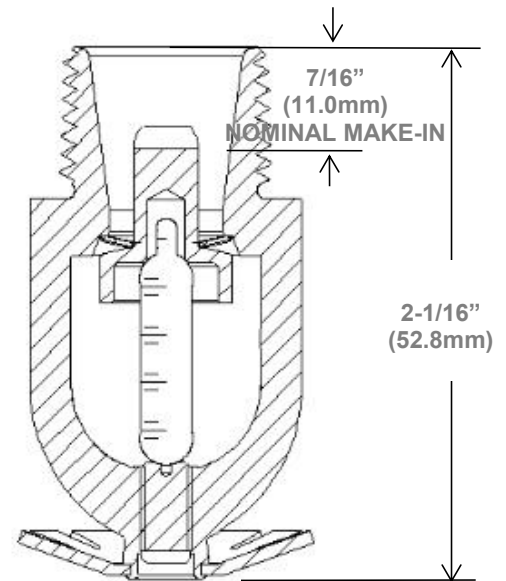
Flow Discharge Chart



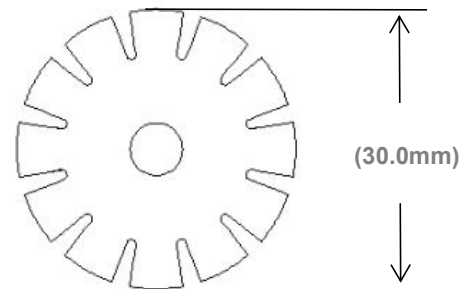
INSTALLATION METHODS

INSTRUCTION:

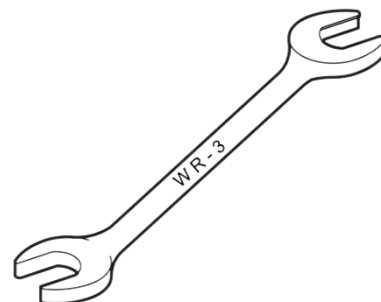
The Ut0007, Ut0008 sprinklers, which are manufactured and tested in accordance with the rigid requirements of the Standard UL 199, should also be installed in accordance with the latest edition of the Standard NFPA 13. The system piping must be properly sized to ensure the minimum required flow rate 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.



Conventional Sprinkler Dimension



Conventional Deflector Dimension



WR-3 Wrench

CAUTION

DO NOT INSTALL ANY SPRINKLER IF THE BULB IS CRACKED OR THERE IS A LOSS OF LIQUID FROM THE BULB!

METHOD:

- Step.1** The conventional type sprinkler can be installed at upward or downward direction to suit field condition.
- Step.2** Only use the non-hardening pipe joint compound or Teflon tape for the male thread.
- Step.3** Hand-tighten the sprinkler into the fitting.
- Step.4** Tighten the sprinkler into the fitting using WR-3 wrench on flat. It is recommended that a torque of 7 ~14 ft-lbs be used to obtain a 1/2 inch NPT thread Sprinkler joint. Do not use wrench on the frame arms. It will cause the breakage of the arms and the burst of the glass bulb.

In case of install a decoration of escutcheon for clean attractive purpose, the step as below:

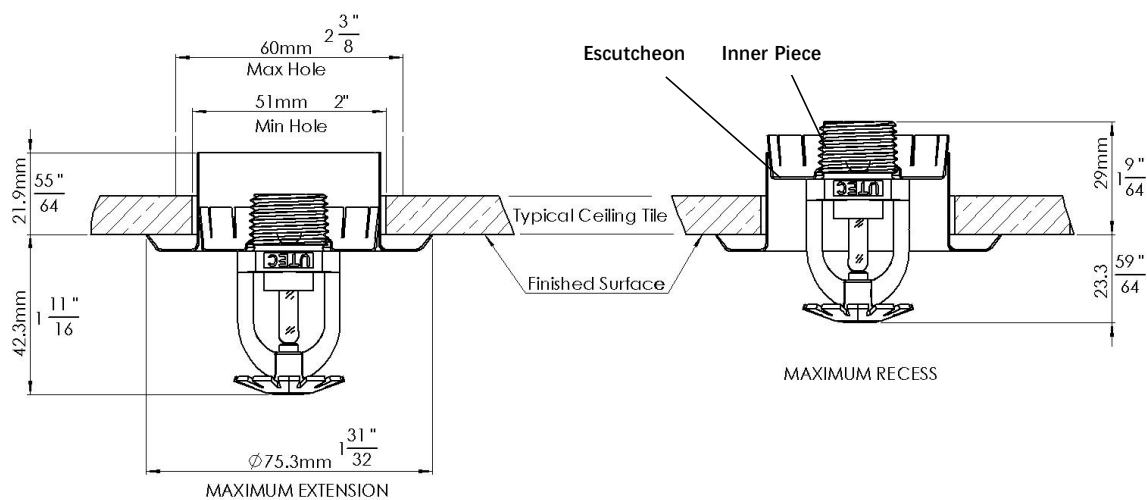
Step.1 Spin the inner piece of escutcheon into sprinkler threads.

Step.2 Only use the non-hardening pipe joint compound or Teflon tape for the male thread.

Step.3 Keep the plastic protective cover clamped on sprinkler arms while inner decoration work.

Step.4 Hand-tighten the sprinkler into the fitting.

Step.5 Tighten the sprinkler into fitting using the WR-3 wrench on flat. It is recommended that a torque of 7 ~14 ft-lbs be used to obtain a sprinkler joint with 1/2 inch NPT threads. Do not use wrench on the frame arms. It will cause the breakage of the arms and the burst of the glass bulb.



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!