

TECHNICAL MATERIAL SUBMITTAL

- 1. SIDEWALL SPRINKLER**
MODEL : UT0001
- 2. UPRIGHT SPRINKLER**
MODEL : UT0003
- 3. PENDENT SPRINKLER**
MODEL: UT0005

BRAND : UTEC

UL LISTED





TECHNICAL SPECIFICATIONS

| | |
|--|---|
| Style | Pendent, Upright, Sidewall, Conventional, and Recessed Pendent, Recessed Sidewall, Recessed Conventional |
| K Factor $\text{gpm}/(\text{psi})^{1/2}$ ($\text{L}^3/\text{min}(\text{bar})^{1/2}$) | 5.6 (80) |
| Nominal Thread Size | 1/2" NPT and 1/2" BSPT |
| Max. Working Pressure | 175 PSI (12bar) |
| Factory Testing Pressure | 500 PSI (35bar) |
| Min. Operating Pressure | 7 PSI (0.5 bar) |
| Finish | Brass or Chrome Plated or White Plated Available |

MAIN CATEGORIES

| SIN | Response Type | Sprinkler Style | Temp. Rating °F (°C) |
|--------|---------------|-----------------|--|
| Ut0001 | SR | Sidewall | 135(57) 155(68) 175(79) 200 (93) 286 (141) |
| Ut0002 | QR | Sidewall | 135(57) 155(68) 175(79) 200 (93) 286 (141) |
| Ut0003 | SR | Upright | 135(57) 155(68) 175(79) 200 (93) 286 (141) |
| Ut0004 | QR | Upright | 135(57) 155(68) 175(79) 200 (93) 286 (141) |
| Ut0005 | SR | Pendent | 135(57) 155(68) 175(79) 200 (93) 286 (141) |
| Ut0006 | QR | Pendent | 135(57) 155(68) 175(79) 200 (93) 286 (141) |
| Ut0007 | SR | Conventional | 135(57) 155(68) 175(79) 200 (93) 286 (141) |

DESCRIPTION & OPERATION

- 1/2" Sidewall, Upright, Pendent sprinkler, Standard/Quick Response,



is designed for use in automatic sprinkler systems per the installation standard (NFPA13). The temperature response is standard response (5mm glass bulb) and fast response (3mm glass bulb).

- When heat is absorbed, the the thermal-sensitive liquid within the bulb expands, increasing the internal pressure. When the internal pressure, it will cause the glass to shatter. This will result in the water discharge, which is distributed in an approved pattern, depending on the deflector style used.

TECHNICAL SPECIFICATION

| | |
|--|--|
| Style | Pendent, Upright, Sidewall |
| K Factor gpm/(psi) ^{1/2} (L ³ /min(bar) ^{1/2}) | 5.6 (80) |
| Nominal Thread Size | 1/2" NPT OR 1/2" BSPT |
| Max. Working Pressure | 175 PSI (12bar) |
| Factory Testing Pressure | 500 PSI (35bar) |
| Min. Operating Pressure | 7 PSI (0.5 bar) |
| Finish | Brass or Chrome Plated or White Plated Available |

TEMPERATURE RATING

| SIN | Temperature | Classification | Bulb Color |
|---------------|---------------|----------------|------------|
| Ut0001-Ut0006 | 135°F / 57°C | ORDINARY | ORANGE |
| Ut0001-Ut0006 | 155°F / 68°C | ORDINARY | RED |
| Ut0001-Ut0006 | 175°F / 79°C | INTERMEDIATE | YELLOW |
| Ut0001-Ut0006 | 200°F / 93°C | INTERMEDIATE | GREEN |
| Ut0001-Ut0006 | 286°F / 141°C | HIGH | BLUE |

SPRINKLER MATERIALS

| | |
|-----------------------|--|
| BULB | Glass with Glycerin Solution JOB G5 or Day-impex-937 for Ut0001, Ut0003, Ut0005, Ut0007 JOB F3 or Day-impex-941 for Ut0002, Ut0004, Ut0006 |
| LOADING SCREW | Brass UNS-28000 |
| SEAL | Brass UNS-28000 |
| FRAME | Brass UNS-28000 |
| SEAL WASHER | Washer, Coated on Both Sides, and Applied with Teflon Tape |
| NOMINAL BULB DIAMETER | Standard Response 5.0mm, Quick Response 3.0mm |

DISCHARGE COEFFICIENT “ K ”

- Sprinklers are rated for use at a maximum service pressure of 175 psig (12 bar).

$$K=Q/P^{1/2}$$

In which:

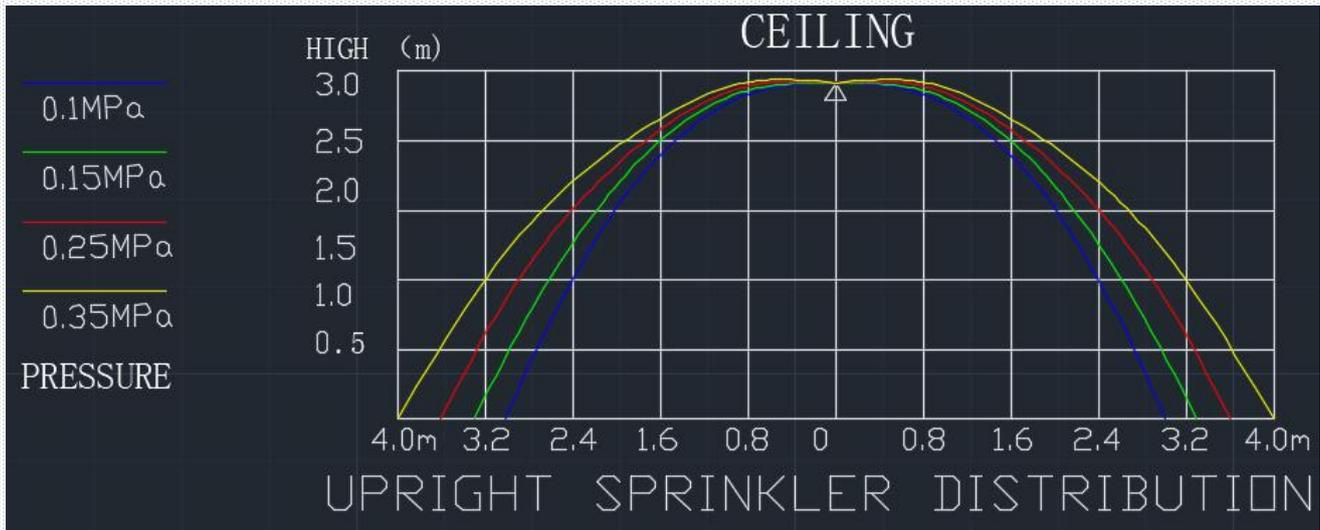
Q — The flow in gallons per minute

K — Discharge Coefficient, K = 5.6 (80)

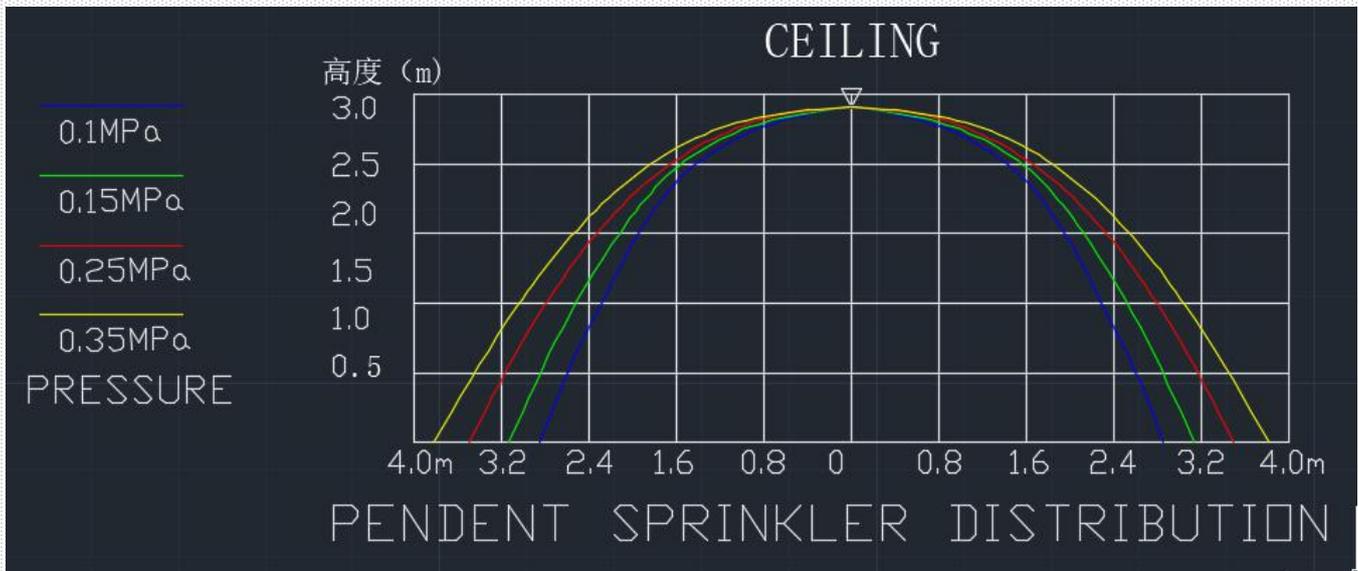
P — The pressure in pounds per square inch gauge (psig) .

DISTRIBUTION FIGURE

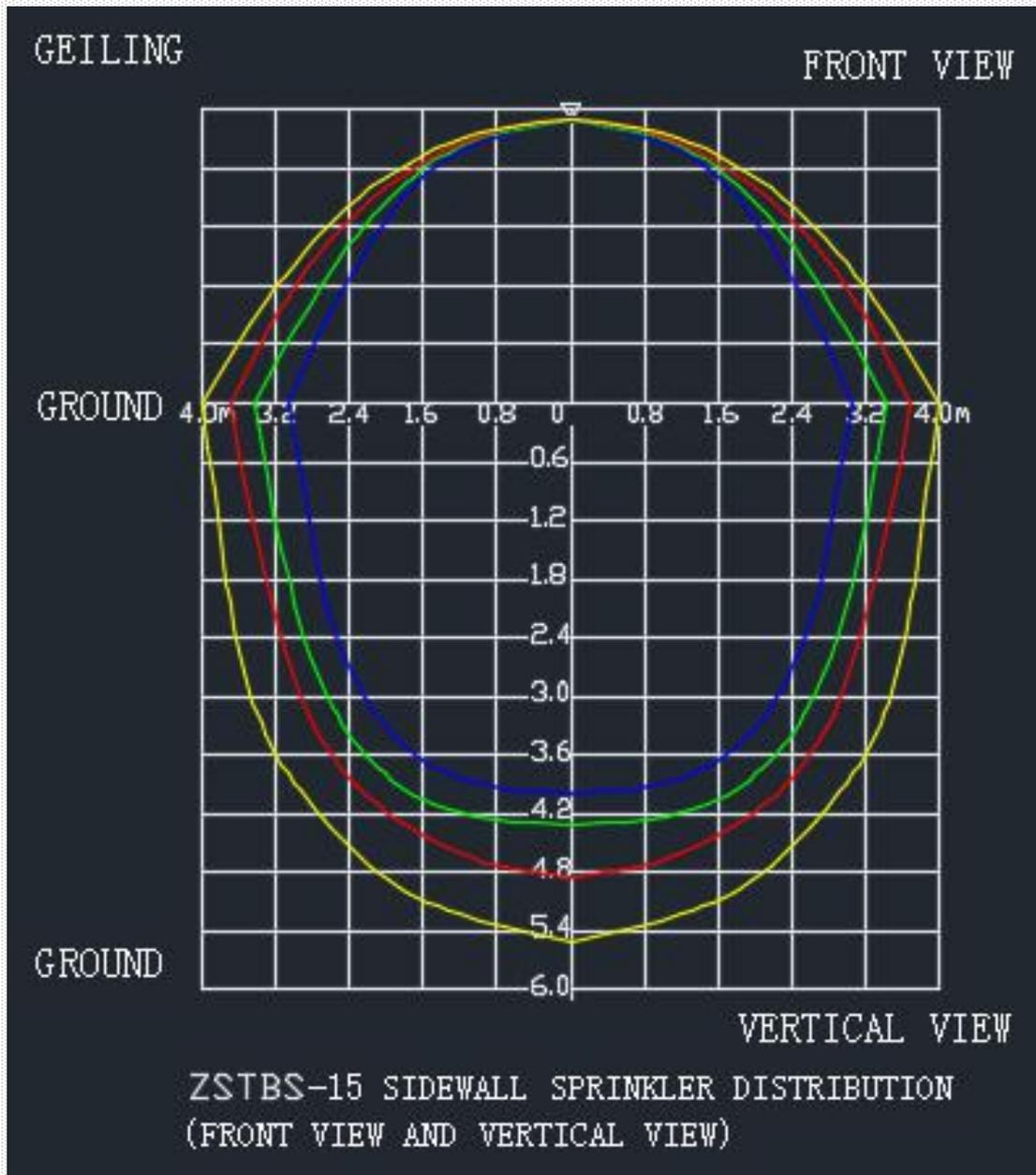
- Upright Sprinkler Distribution



- Pendent Sprinkler Distribution



- Sidewall Sprinkler Distribution



INSTALLATION

UTEC[®] Automatic Sprinklers

The sprinklers which are manufactured and tested in accordance with the compulsory requirements of UL 199, also should be installed in accordance with the current Standard NFPA 13.

The system piping must be properly sized to insure the minimum required flow rate at the sprinkler.

Check the type, style, orifice size, and temperature rating prior to installation. After the piping is in place, sprinklers start to be installed. Pay attention to avoid mechanical damage, and replace any damaged sprinkler. As for wet pipe system, it 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 sprinkler, apply new piping joint compound or Teflon tape, then re-install.

INSTALLATION METHODS

- a. Pendent sprinkler must be mounted in a pendent position, and upright sprinkler must be mounted in an upright position, the conventional sprinkler may be mounted in both upright and pendent position, the horizontal sidewall sprinkler is installed at horizontal position, to suit field condition.
- b. Tighten the sprinkler into the sprinkler fitting by hand. It is recommended that a torque of 7 ~14 ft-lbs be used to obtain a thread 1/2 inch NPT sprinkler joint. A radial force of 10 – 20 lbs.
- c. Only use the non-hardening piping joint compound or Teflon tape, and apply to male thread only.
- d. Tighten the sprinkler into fitting by hand, use a 22mm open spanner or 8" (200mm) adjustable wrench to tighten the unit into the fitting, do not use spanner on the frame arms, for it will cause the arms to break and glass bulb to burst.

REMOVE PROTECTIVE COVER

- Be sure to remove the plastic protective cover after completing the installation, don't clamp the cover on the frame, otherwise it will affect the heat response function.

- **Caution :**

A maximum of 21 ft-lbs torque is to be used to install the sprinkler. Higher levels of torque may distort the sprinkler orifice seat, which leads to leakage.

- **Escutcheon for clean attractive installation**

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

1. Spin the inner component of escutcheon into sprinkler threads.

2. Only use the non-hardening piping joint compound or Teflon tape, and apply to male thread only.

3. Tighten the sprinkler into fitting by hand, use a 22mm open spanner or 8" (200mm) adjustable wrench to tighten the unit into the fitting.

4. Keep the plastic protective cover clamping on sprinkler arms while the building's inside decoration work is ongoing.

5. Once decoration work completed, take off the plastic protective cover.

6. Insert the outer component of escutcheon into inner component, make the escutcheon be flush to the ceiling, then the sprinkler is ready for services.

Concealed Pendent Sprinklers are available with variety of temperature ratings to meet different design requirements.



SPECIFICATIONS

| Model | NX007 | NX008 |
|------------------------------|--|---|
| Style | Concealed Pendent Sprinkler | Concealed Pendent Sprinkler |
| Bulb Nominal Dia. & Response | Ø5mm, Standard Response | Ø3mm, Quick Response |
| Thread Size | NPT1/2 or R1/2 | NPT1/2 or R1/2 |
| Nominal K-Factor | 5.6 (U.S.) / 80 (metric) | 5.6 (U.S.) / 80 (metric) |
| Max. Working Pressure | 175 psig/1.2 MPa (12 bar) | 175 psig/1.2 MPa (12 bar) |
| Sprinkler Finish | Chrome Plated | Chrome Plated |
| Cover Plate Finish | Whited Painted | White Painted |
| Nominal Temp. Rating | 135°F /57°C or 155°F /68°C or 175°F /79°C or 200°F /93°C | 135°F /57°C or 155°F /68°C or 175°F /79°C or 200°F /93°C |
| Max. Ambient Temp. | 135°F , 155°F : 100°F (38°C) 175°F , 200°F : 150°F (65°C) | 35°F , 155°F : 100°F (38°C) 175°F , 200°F : 150°F (65°C) |
| Approvals | UL | UL |

Accessories

Universal Sprinkler Wrench

UTECH universal sprinkler wrench is designed to speed and ease sprinkler heads installation and removal.



The unique flat head design enable the wrench to reach into all Semi-recessed, fire sprinkler heads and most concealed sprinklers.

Sprinkler Decorative Plate

1. one piece and double escutcheons plate
2. apply to 1/2", 3/4" sprinklers
3. white painting, chrome, stainless color



浙江优泰客消防设备有限公司

Zhejiang Youtaike Fire Equipment Co., Ltd

Add: CIFEIMIAO VILLAGE, SHANXIAHU TOWN, ZHUJI, ZHEJIANG 311804 CHINA



ZHEJIANG YOUTAIKE FIRE EQUIPMENT CO.,LTD

SPRINKLER MANUAL

浙江优泰客消防设备有限公司

Zhejiang Youtaike Fire Equipment Co., Ltd

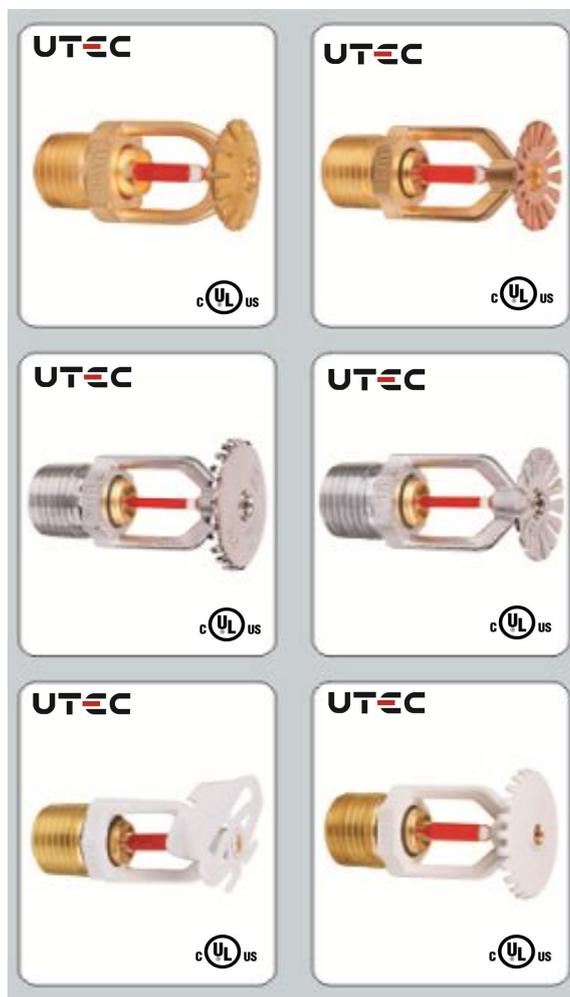
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DESCRIPTION

Pendent and upright and conventional and sidewall sprinklers are designed for use in automatic sprinkler systems designed in accordance with standard installation (NFPA13). The temperature response is standard response 5mm glass bulb and fast response 3mm glass bulb. The sprinklers come with compact design. available in different finishes and temperature ratings.

The sprinklers body is made of brass forging copper alloy (DZR). The spring seat consists of a spring Belleville washer coated on both side with a Teflon tape.

Pendent and conventional and sidewall sprinklers are installed with adjustable or non-adjustable escutcheon plates. These are intended to be installed finished ceilings. Escutcheon plate adjustment provides convenience in pendent and conventional sprinkler installation in case of areas with finished ceiling or walls.



TECHNICAL SPECIFICATION

| | |
|--|---|
| Style | Pendent, Upright, Sidewall, Conventional and Recessed Pendent, Recessed Sidewall, Recessed Conventional |
| K Factor gpm/(psi) ^{1/2} (L ³ /min(bar) ^{1/2}) | 5.6 (80) |
| Nominal Thread Size | 1/2" NPT OR 1/2" BSPT |
| Max. Working Pressure | 175 PSI (12BAR) |
| Factory Test Pressure | 500 PSI (35BAR) |
| Min. Operating Pressure | 7 PSI (0.5 BAR) |

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| | |
|--------|--|
| Finish | Brass and Chrome Plated and White Plated Available |
|--------|--|

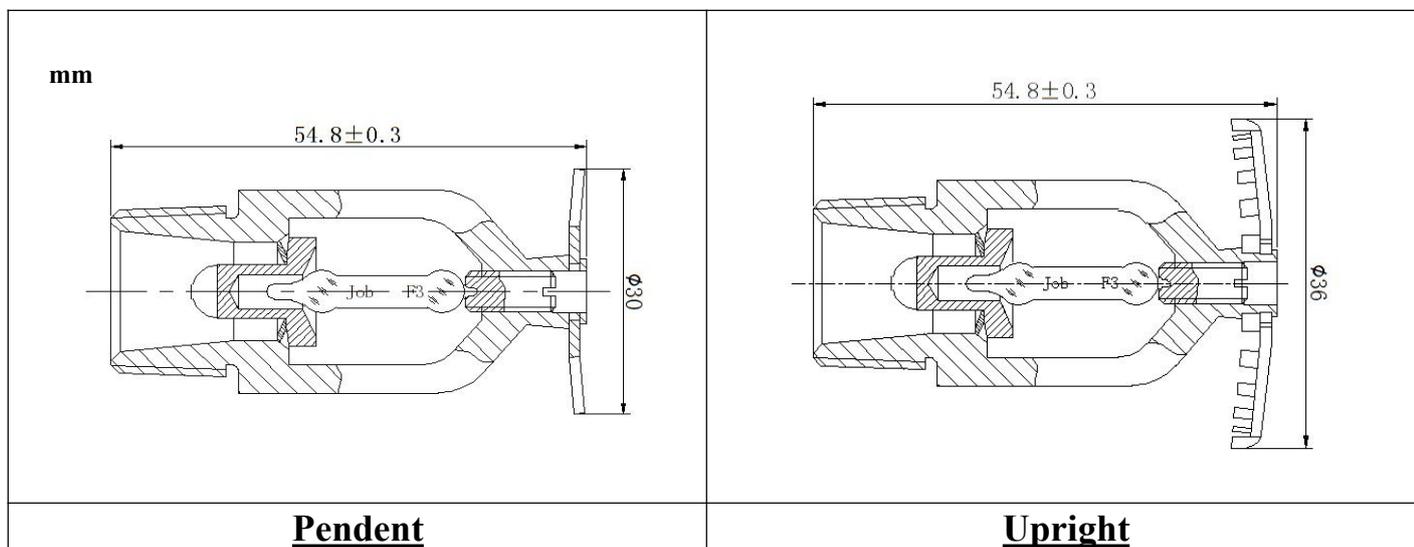
TECHNICAL SPECIFICATIONS

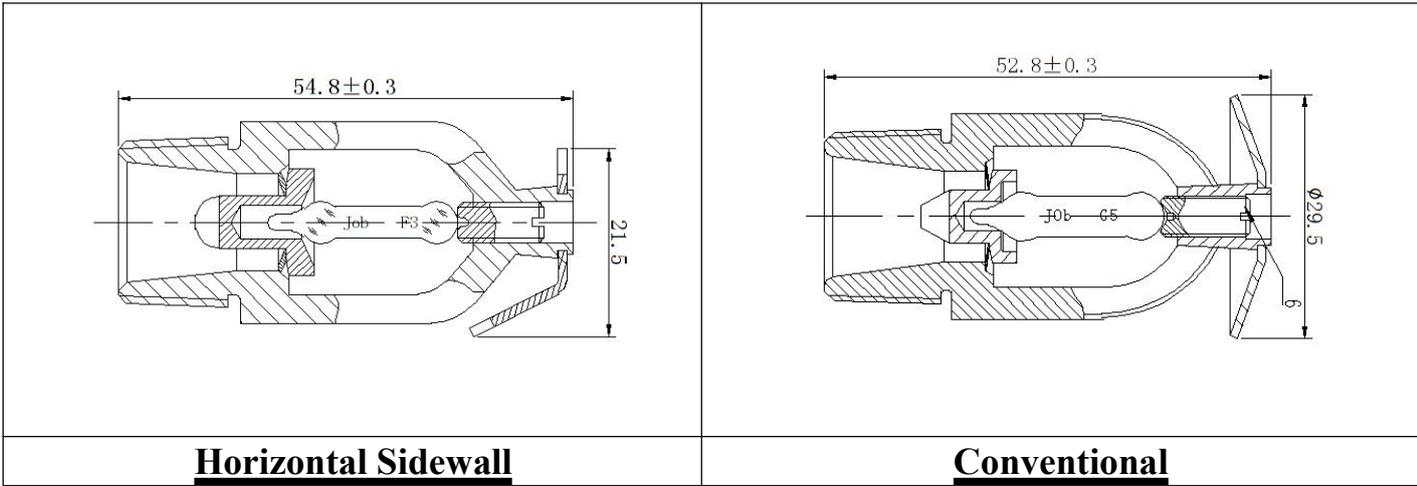
| SIN | Response type | Sprinkler Style | Temp. Rating F (C) |
|--------|---------------|-----------------|-------------------------|
| Ut0001 | SR | Sidewall | 135(57) 155(68) 175(79) |
| Ut0002 | QR | Sidewall | 155(68) |
| Ut0003 | SR | Upright | 135(57) 155(68) 175(79) |
| Ut0004 | QR | Upright | 155(68) |
| Ut0005 | SR | Pendent | 135(57) 155(68) 175(79) |
| Ut0006 | QR | Pendent | 155(68) |
| Ut0007 | SR | Conventional | 155(68) |

Material Specification

| | |
|-----------------------|--|
| Deflector | Brass UNS-28000 |
| Bulb | Glass with Glycerin Solution JOB G5 or Day-impex-937 for Ut0001, Ut0003, Ut0005, Ut0007 JOB F3 or Day-impex-941 for Ut0002, Ut0004, Ut0006 |
| Load Screw | Brass UNS-28000 |
| Seal | Brass UNS-28000 |
| Frame | Brass UNS-28000 |
| Seal Washer | Belleville Washer coated on both sides with Teflon Tape |
| Bulb Nominal Diameter | Standard Response 5.0mm, Quick Response 3.0mm |

Each style sprinkler dimension





INSTALLATION

The sprinklers which are manufactured and tested in accordance with the rigid requirements of the Standard UL 199, also should be installed in accordance with the current Standard NFPA 13. The system piping must be properly sized to insure the minimum required flow rate at the sprinkler. Check for the proper model, style, orifice size and temperature rating prior to installation, install sprinkler after the piping is in place to avoid mechanical damage, replace any damage units, wet pipe systems must be protected from freezing.

Upon completion of the installation, the system must be tested per recognized standard. In case of a thread leak, remove the unit, apply new pipe joint compound or tape and re-install.

INSTALLATION METHODS

- a. Pendent sprinkler must be mounted in a pendent position, and upright sprinkler must be mounted in upright position, the C U/P sprinkler may be mounted both in upright and pendent position, the horizontal sidewall sprinkler is install at horizontal position, to suit for field condition.
- b. Hand tighten the sprinkler into the sprinkler fitting. It is recommended that a torque of 7 ~14 ft-lbs be used to obtain a thread 1/2 inch NPT Sprinkler joint. A radial force of 10 – 20 lbs.
- c. For using only a non-hardening pipe joint compound or Teflon tape apply to the male thread only.
- d. Hand tighten the sprinkler into fitting, use a 22mm open spanner or 8” (200mm) adjustable wrench on flat to tighten the unit into the fitting, do not use spanner on the frame arms, for it will cause the arms break and glass bulb burst.

浙江优泰客消防设备有限公司

Zhejiang Youtaike Fire Equipment Co., Ltd

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REMOVE PROTECTIVE COVER

Be sure to remove the plastic protective cover after completed the installation, should not clamp on the frame arms, otherwise will to prevent the heat response function.

➤ **Caution :**

A maximum of 21 ft-lbs of torque is to be used to install the sprinkler. Higher levels of torque may distort the sprinkler orifice seat saddle with consequent leakage.

➤ **Escutcheon for clean attractive installation**

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

1. Spin the inner piece of escutcheon into sprinkler threads.
2. Use only a non-hardening pipe joint compound or Teflon tape apply to the male thread only.
3. Hand tighten the sprinkler into fitting, use a 22mm open spanner or 8” (200mm) adjustable wrench to tighten the unit into the fitting.
4. Keep the plastic protective cover clamped on sprinkler arms while inner decoration work.
5. Once decoration work completed, take off the plastic protective cover.
6. Insert the outer piece of escutcheon into inner piece, make the escutcheon flush to the ceiling, then the sprinkler is ready for services.

CERTIFICATE OF COMPLIANCE

Certificate Number 20191004-EX27060
Report Reference EX27060-20181220
Issue Date 2019-OCTOBER-04

Issued to: Zhejiang Youtaike Fire Equipment Co.,Ltd
Cifeimiao Village, Shanxiahu Town,
Zhuji, Zhejiang 311804 CHINA

**This certificate confirms that
representative samples of**

SPRINKLERS, AUTOMATIC AND OPEN
See Addendum Page

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: ANSI/UL 199 - Automatic Sprinklers for Fire Protection
Service

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20191004-EX27060
Report Reference EX27060-20181220
Issue Date 2019-OCTOBER-04

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

USL,CNL – Automatic sprinklers, incorporating 3 mm and 5 mm frangible glass bulbs in the following models, styles and temperature ratings:

| SIN | Response Type | Type | K-Factor | Temperature Rating, °F |
|--------|---------------|---------------------|----------|------------------------|
| Ut0001 | SR | Horizontal Sidewall | 5.6 | 135,155,175,200,286 |
| Ut0002 | QR | Horizontal Sidewall | 5.6 | 135,155,175,200,286 |
| Ut0003 | SR | Upright | 5.6 | 135,155,175,200,286 |
| Ut0004 | QR | Upright | 5.6 | 135,155,175,200,286 |
| Ut0005 | SR | Pendent | 5.6 | 135,155,175,200,286 |
| Ut0006 | QR | Pendent | 5.6 | 135,155,175,200,286 |
| Ut0007 | SR | Conventional | 5.6 | 135,155,175,200,286 |

Per client's request on Sprinkler SIN change, New SIN will be shown as below:

| Current SIN | Original SIN (Datasheet) |
|-------------|--------------------------|
| Ut0001 | JS001 |
| Ut0002 | JS002 |
| Ut0003 | JS003 |
| Ut0004 | JS004 |
| Ut0005 | JS005 |
| Ut0006 | JS006 |
| Ut0007 | JS007 |



Bruce Mahrenholz, Director North American Certification Program
UL LLC

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SINCE 2004

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PARAMOUNT FIRE & SAFETY CO.

Exclusive distributor for Kingdom of Saudi Arabia

PARAMOUNT FIRE & SAFETY CO

7400, ABDULLAH BIN RAWAHA STREET,

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