

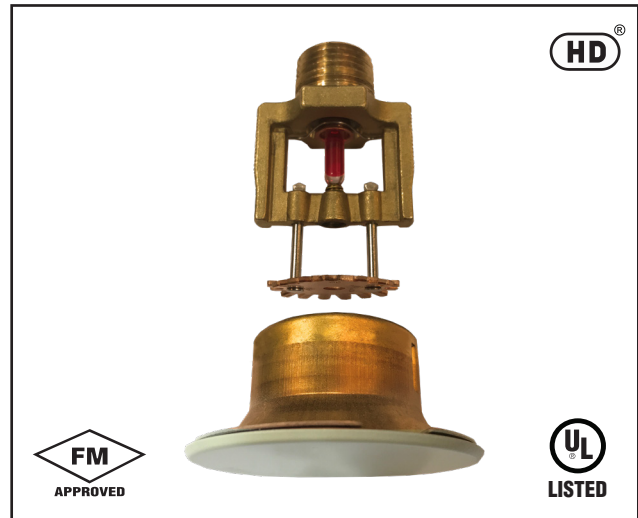
CONCEALED PENDENT SPRINKLER

STANDARD & QUICK RESPONSE



TECHNICAL DATA

| | |
|-----------------------------------|---|
| Style | Concealed Sprinkler |
| Temperature Response | Standard Response with 5mm glass bulb, Quick Response with 3mm glass bulb |
| Coverage | Standard Coverage |
| K-Factor | 5.6 US (80 metric) |
| Nominal Thread Size | 1/2" BSPT (NPT Optional) |
| Max. Working Pressure | 175 PSI (12 Bar) |
| Factory Hydrostatic Test Pressure | 500 PSI (35 Bar) |
| Min. Operating Pressure | 7 PSI (0.5 Bar) |
| Approvals | UL Listed & FM Approved |
| Finish | Sprinkler - Brass Cover Plate - White/ Chrome Plated |
| Ordering Information | Style, Temp. Rating & Response, Thread type, Finish, Cover specification. |
| SIN Number | HD 104 Standard Response HD 204 Quick Response |



| Response Type | Type | Temp Rating Bulb/Cover Plate | Listing | |
|---------------|-----------|------------------------------|----------------|---------------------|
| | | | Code No for UL | Code No for UL & FM |
| SR | CONCEALED | 57°C / 57°C | T10138 | - |
| | | 68°C / 57°C | T10102 | T10102F |
| | | 79°C / 68°C | T10105 | T10105F |
| | | 93°C / 68°C | T10140 | T10140F |
| QR | CONCEALED | 57°C (135°F) | - | - |
| | | 68°C / 57°C | T10100 | T10100F |
| | | 79°C / 68°C | - | T10101F* |
| | | 93°C / 68°C | - | T10104F* |

* Only FM

Table 1

Approvals

HD 104 Sprinklers are UL Listed and FM Approved as Standard Response with 5mm bulb.

HD 204 Sprinklers are UL Listed as Quick Response and FM Approved as Standard Response with 3mm bulb.

Factory Mutual (FM) does not approve concealed sprinklers under quick response category.

DESCRIPTION

Pendent Concealed Sprinklers

HD Pendent Concealed Sprinklers are thermo-sensitive glass bulb sprinklers having decorative flat cover plate designed to conceal the sprinkler for smooth ceiling. The cover plates are available in several decorative finishes to match architectural requirements. The unique design allows installation and testing of the sprinkler prior to installation of the cover plate with cup. Sprinkler housing is threaded to fix cover plate with cup assembly to provide 6.5 mm (1/4") vertical adjustment.

The cover plate and cup design allows installation of the sprinkler and pressure testing of the fire fighting system prior to installation of a suspended ceiling or final painting of the ceiling. The sprinkler cover assembly can be removed and reinstalled for removal of ceiling panels for access to building service equipments. HD Pendent Concealed Sprinklers are Standard Response (5mm glass bulb) or Quick response (3mm glass bulb) with standard coverage.

Sprinkler Operation

The Sprinkler operating device is state of the art heat responsive frangible glass bulb supplied by a world leader in this innovative technology. The glass bulb contains fluid which expands when exposed to heat.

When rated temperature of cover plate is reached, the solder melts and cover plate detaches & falls down. Further, when rated temperature is reached, the bulb shatters and water flows through the sprinkler and strikes deflector, forming a uniform water spray pattern to control or extinguish fire.

Care and Handling

Sprinklers must be handled with due care, they must be stored at ambient temperature for best results. Storage as well as any onward shipment is to be made in original packing only. Sprinklers must be visually inspected carefully before installation. Sprinklers visibly damaged, dropped or exposed to temperature in excess of the maximum ambient temperature permitted should never be installed. Never install any glass bulbs sprinkler if the bulb is cracked or if there is a loss of liquid from the Bulb.

Sprinkles must be installed after the piping is in place, to prevent mechanical damage.

Do not attempt to make-up for insufficient adjustment in the cover plate by over tightening the sprinkler.

Installation

1. The unit must be installed in the Pendent position for the Concealed Sprinkler.
2. Use only a non-hardening pipe joint compound or tape seal. Apply only to the make threads.
3. Hand tighten the sprinkler into fitting.
4. For Concealed Sprinklers, use a HD sprinkler wrench. Tighten the unit into the fitting. A lead-tight joint requires only 7 to 14 ft.-lbs (9.5 to 19.0Nm) of torque. A tangential force of 14 to 28 ft.-lbs (62.3 to 124.5N) delivered through a 6"(150mm) handle will deliver adequate torque. If the torque level reaches over 21 ft.-lbs (28.6 Nm) it may distort the orifice seal, resulting in leakage. For exposed piping systems, the sprinkler should be oriented so the frame arms are parallel with the branch line pipe.
5. The HD sprinkler described herein must be installed and maintained in accordance with the latest edition of HD technical data, the latest standards of the National Fire Protection Association (NFPA) and Factory Mutual (FM) or to the standard of any other authorities having jurisdiction. The owner is solely responsible for maintaining their fire protection system and devices in proper operating condition.

Inspection Testing and Maintenance

Refer to NFPA 25 for inspection testing and maintenance requirement or to the authority having jurisdiction. For detail of warranty refer HD'S current price list, conditions of sale or contact HD sales directly.

Sprinklers must never be altered after manufacture. Any alteration such as painting and coating will directly harm the sprinkler and cause malfunctions. Sprinkler in contact with corrosive products should be replaced if they cannot be cleaned completely.

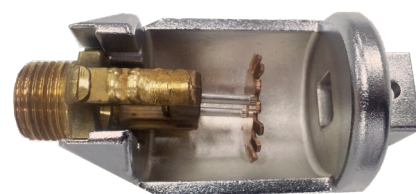
Visual inspections are recommended after installation. After installation, a close-up inspection annually will suffice.

Inspection and maintenance of fire protection system is the responsibility of the owner. It is recommended that automatic sprinkler system be inspected and tested according to local and/or national regulations.

Exposure to ultraviolet or direct sunlight for extended period may cause the liquid dye in glass bulb to fade or lose colour. Colourless or faded coloured bulbs are not a problem, as long as the fluid level has not been affected. The loss of colour in the liquid will not effect sprinkler performance, as long as the bulb is intact and not damaged. The loss of colour may be an issue in identifying sprinkler temperature rating, but the temperature rating is still stamped on the sprinkler deflector.

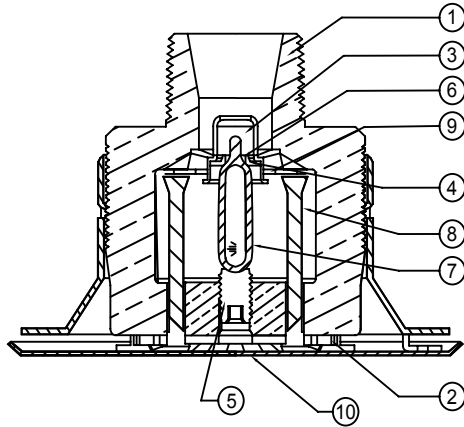
Caution

1. The Sprinkler must be installed and maintained in compliance with this document.
2. In false ceiling, a cut out must be to minimum 55mm & maximum 68mm, and must be concentric to sprinkler. A template gauge must be used to check the cut out to avoid damage or improper fitment of cover.
3. Sprinkler adjustment with reference to false ceiling is 6.6 mm. For more details, refer figure in Page-3.
4. Improper fitment may result into fall of cover plates.
5. Cover plates must be installed only after hydro-testing and false ceiling painting.
6. Always use HD Wrench for installation. Any other wrench may damage the sprinkler.

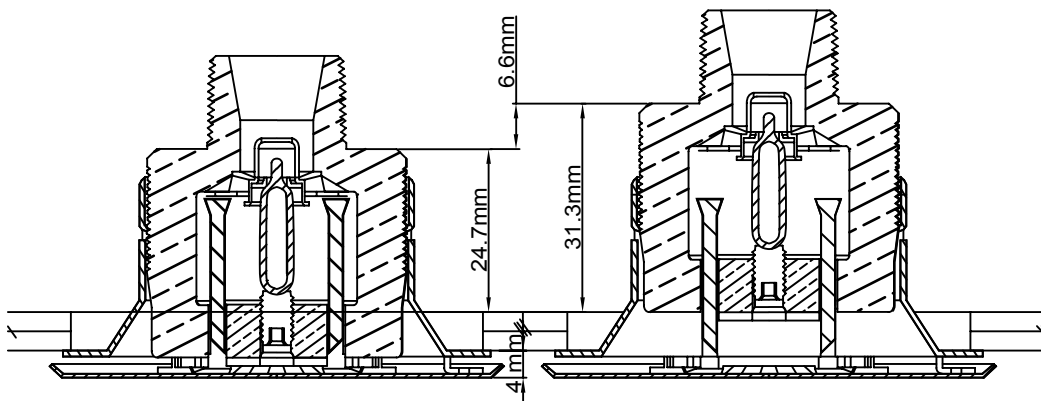
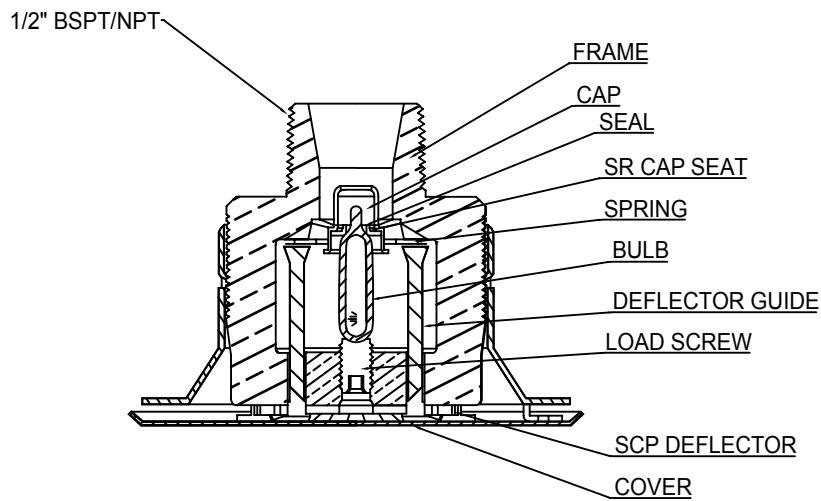


Wrench for Concealed Sprinkler

CONCEALED SPRINKLER ASSEMBLY



| | | |
|----|-----------------|---------------------------------|
| 1 | FRAME | ASTM C48600 |
| 2 | DEFLECTOR | ASTM C51000 (JIS C5191) |
| 3 | CAP | ASTM C11000 |
| 4 | CAP SEAT | ASTM S30400 |
| 5 | LOAD SCREW | ASTM C26000 (JIS C2600) |
| 6 | SEAL | BERY. NICKEL SPRING TEFLON TAPE |
| 7 | BULB | NORBULB N5 |
| 8 | DEFLECTOR GUIDE | ASTM S30400 |
| 9 | SPRING | ASTM S30400 |
| 10 | COVER | ASTM C26800 |



LIMITED WARRANTY

HD FIRE PROTECT PVT. LTD. hereby referred to as HD FIRE warrants to the original purchaser of the fire protection products manufactured by HD FIRE and to any other person to whom such equipment is transferred, that such products will be free from defect in material and workmanship under normal use and care, for two (2) years from the date of shipment by HD FIRE. Products or Components supplied or used by HD FIRE, but manufactured by others, are warranted only to the extent of the manufacturer's warranty. No warranty is given for product or components which have been subject to misuse, improper installation, corrosion, unauthorized repair, alteration or un-maintained. HD FIRE shall not be responsible for system design errors or improper installation or inaccurate or incomplete information supplied by buyer or buyer's representatives. HD FIRE will repair or replace defective material free of charge, which is returned to our factory, transportation charge prepaid, provided after our inspection the material is found to have been defective at the time of initial shipment from our works. HD FIRE shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of the product including damages for injury to person, damages to property and penalties resulting from any products and components manufactured by HD FIRE. HD FIRE shall not be liable for any damages or labour charges or expense in making repair or adjustment to the product. HD FIRE shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data & services. In no event shall HD Fire's product liability exceed an amount equal to the sale price. The foregoing warranty is exclusive and in lieu of all other warranties and representation whether expressed, implied, oral or written, including but not limited to, any implied warranties or merchantability or fitness for a particular purpose. All such other warranties and representations are hereby cancelled.

NOTICE :

The equipment presented in this bulletin is to be installed in accordance with the latest publication standards of NFPA or other similar organisations and also with the provision of government codes or ordinances wherever applicable.

The information provided by us is to the best of our knowledge and belief, and consist of general guidelines only. Site handling and installation control is not in our scope. Hence we give no guarantee for result and take no liability for damages, loss or penalties whatsoever, resulting from our suggestion, information, recommendation or damages due to our product.

Product development is a continuous programme of HD FIRE PROTECT PVT. LTD. and hence the right to modify any specification without prior notice is reserved with the company.



HD FIRE PROTECT PVT. LTD.
Protecting What Matters Most to You

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