

# SPRINKLER - UPRIGHT, PENDENT AND RECESSED PENDENT (K FACTOR - 8)



## TECHNICAL DATA

Style	Upright, Pendent and Recessed Pendent
Temperature Response	Standard Response - 5mm glass bulb Quick Response - 3mm glass bulb
Coverage	Standard Coverage
K-Factor	8.0 US (115 metric)
Nominal Thread Size	3/4" NPT
Max. Working Pressure	175 PSI (12 Bar)
Factory Hydrostatic Test Pressure	500 PSI (35 Bar)
Min. Operating Pressure	7 PSI (0.5 Bar)
Temp. Rating	57°C (135° F), 68°C (155° F), 79°C (175° F), 93°C (200° F)
Approvals	UL Listed
Finish	Brass, Chrome Plated, White Painted White shade is RAL9010. For other shades, contact HD Sales.
Ordering Information	Style, Temperature Rating & Response, Finish
SIN Number	HD171 - SR, Pendent & Recessed Pendent HD172 - SR, Upright HD271 - QR, Pendent & Recessed Pendent HD272 - QR, Upright

## DESCRIPTION

### Pendent & Upright Sprinklers

HD Pendent and Upright Sprinklers are designed for use in light and ordinary hazards. The temperature response is standard response (5mm glass bulb) and quick response (3mm glass bulb). The sprinklers come with compact design, glass bulb type, available in several different finishes and temperature ratings. The pendent sprinklers must be installed in pendent position, and upright sprinklers are to be installed in the upright position.

Pendent Recessed Sprinklers are installed with adjustable or non-adjustable Escutcheon plates (also termed as Rosette plates). These are intended to be installed with finished ceilings. Escutcheon plate adjustment provides convenience in Pendent Sprinkler installation in case of areas with finished ceilings or walls.



### 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 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 bulb sprinkler if the bulb is cracked or if there is a loss of liquid from the bulb. Sprinkler must be installed after the piping is in place to prevent mechanical damage.

Use Teflon Tape or soft thread sealant on male thread of the Sprinkler for the leak tight Sprinkler joint. A leak-tight 3/4" NPT or BSPT sprinkler joint should be obtained by applying a maximum torque of 27 N-m. Excessive tightening torque may distort the Sprinkler inlet and cause leakage. Sprinkler must never be painted, plated or coated after they leave factory.

The HD Sprinkler described herein must be installed and maintained in accordance with the latest edition of HD technical data, the latest standard of 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 device 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 details of warranty, refer HD's current price list, conditions of sale or contact HD directly. 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.

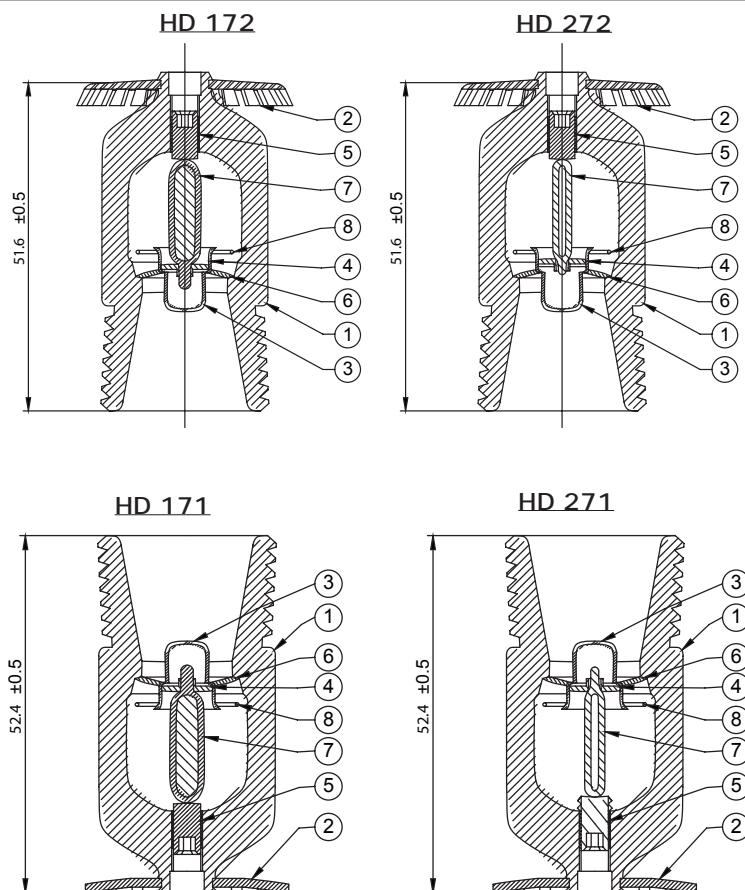
Material Specification	
Deflector	Brass
Bulb	Glass
Load Screw	Brass
Cap	Copper
Frame	Brass
Seal	Belleville Washer coated on both sides with Teflon Tape
Bulb Nominal Diameter	Standard Response 5.0mm Quick Response 3.0mm

## SPRINKLER RATINGS

SPRINKLER TEMP. CLASSIFICATION	NORMAL SPRINKLER TEMP. RATING	NFPA MAX. CEILING TEMP. ALLOWED	GLASS BULB COLOUR
Ordinary	57° C (135° F)	38° C (100° F)	Orange
Ordinary	68° C (155° F)	38° C (100° F)	Red
Intermediate	79° C (175° F)	66° C (150° F)	Yellow
Intermediate	93° C (200° F)	66° C (150° F)	Green

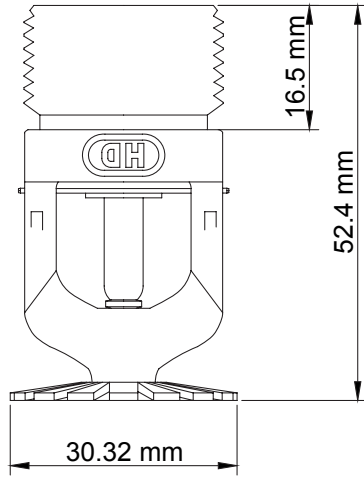
As per Table 6.2.5.1 NFPA 13

## DIMENSIONS (FRAME & DEFLECTOR FINISH)

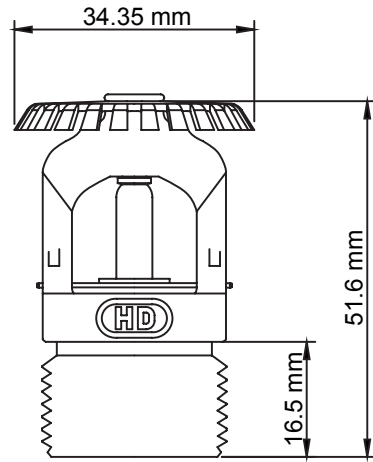


SL. NO	PART NAME
1	FRAME
2	DEFLECTOR
3	CAP
4	CAP SEAT
5	LOAD SCREW
6	SEAL
7	BULB
8	SPRING

**PENDENT & UPRIGHT SPRINKLER**



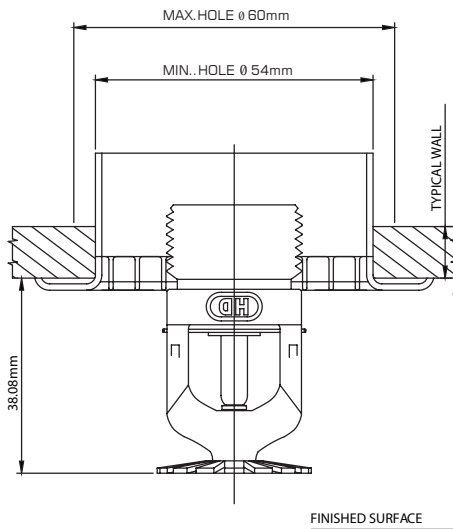
**PENDENT**



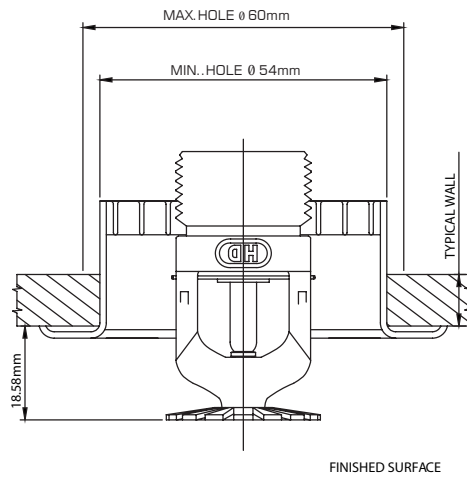
**UPRIGHT**

Tolerance for all dimensions  $\pm 0.5$  mm

**RECESSED PENDENT**



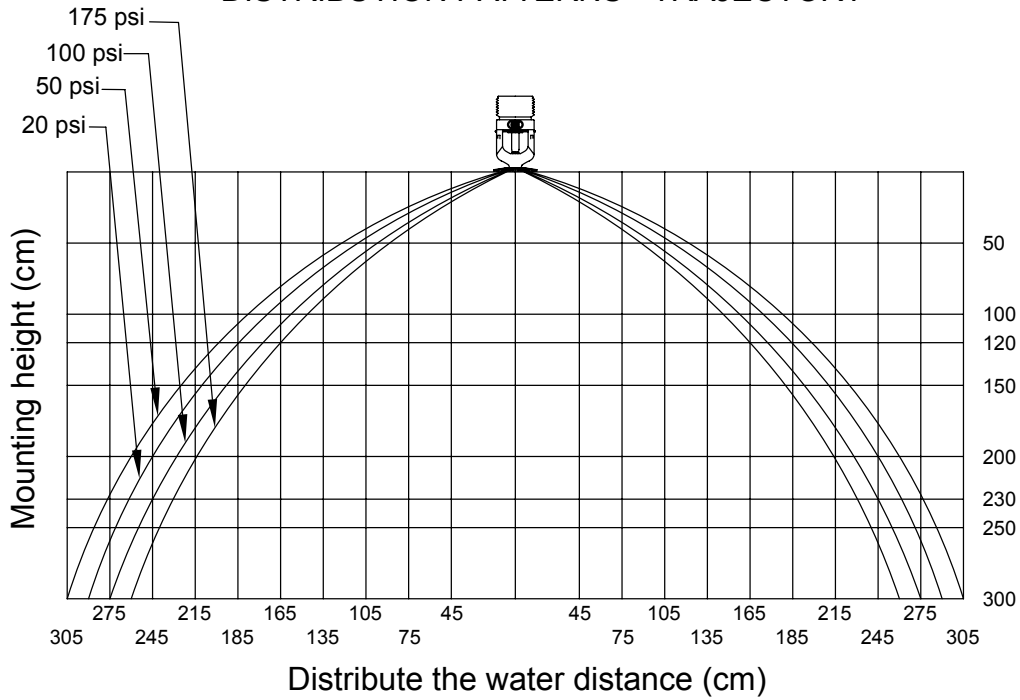
**MAXIMUM EXTENSION**



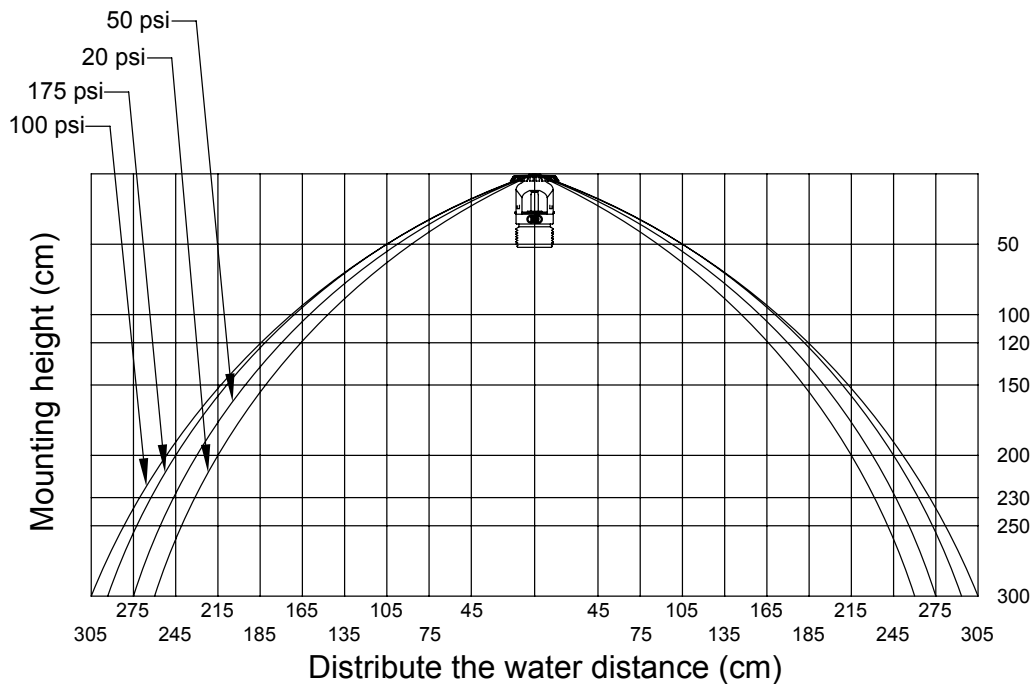
**MAXIMUM RECESS**

**DISTRIBUTION PATTERNS**

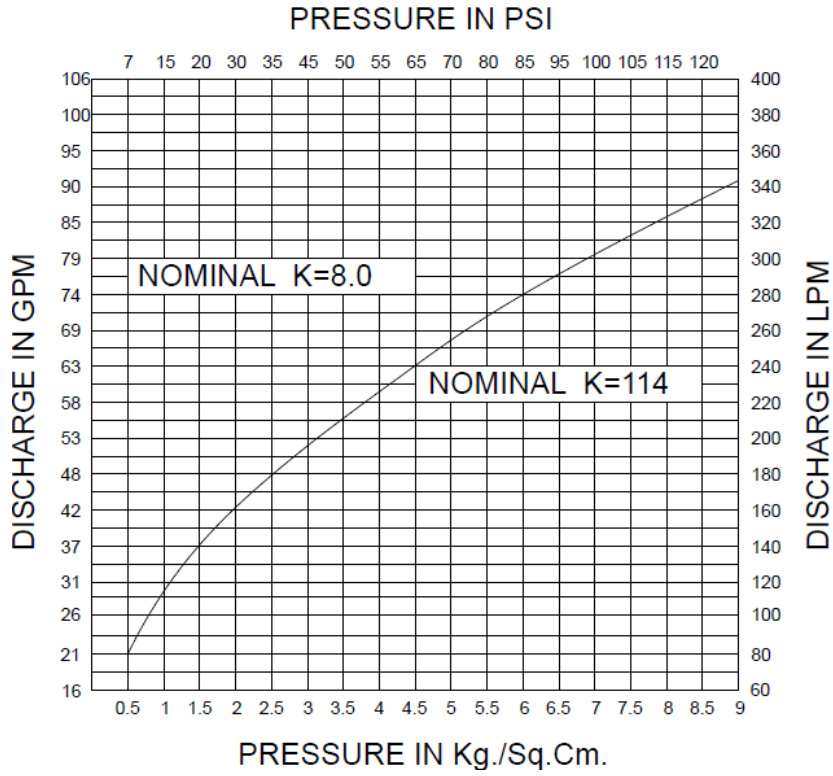
**K8.0 PENDENT SPRINKLER  
DISTRIBUTION PATTERNS - TRAJECTORY**



**K8.0 UPRIGHT SPRINKLER  
DISTRIBUTION PATTERNS - TRAJECTORY**

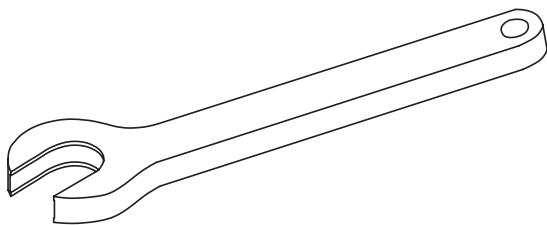


**DISCHARGE CURVE**

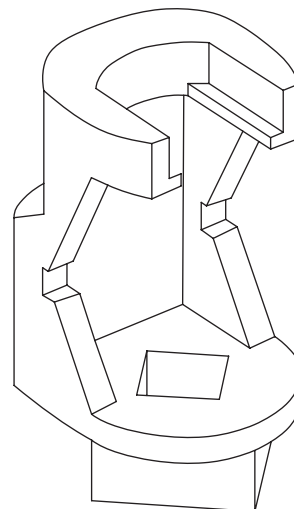


**TOOLS**

**SPRINKLER WRENCH**



**SPRINKLER KEY**



#### 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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