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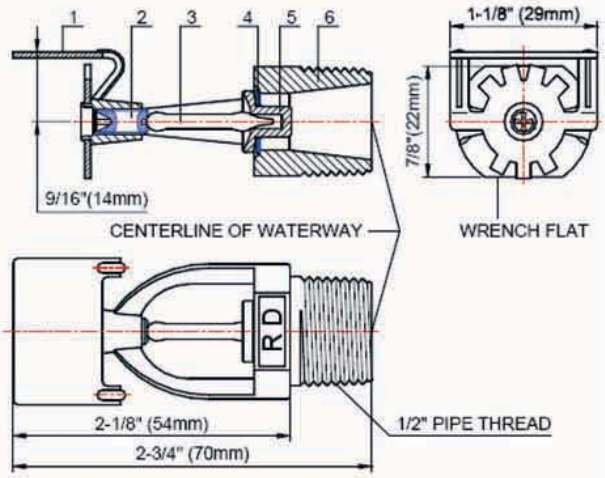
HORIZONTAL SIDEWALL SPRINKLERS
Model: RD001 / RD002
STANDARD / QUICK RESPONSE, 5 / 3mm BULB TYPE
K5.6 (80), 1/2" CONNECTING THREAD

GENERAL DESCRIPTION

Horizontal sidewall sprinklers are generally used in lieu of pendent and upright sprinklers because of building construction or installation economy considerations. They are designed for installation along a wall or the side of a beam and just beneath a smooth ceiling. Installed with their centerline of waterway horizontal, these sprinklers produce a quarter-spherical water discharge pattern that is predominately directed downward and outward from the deflector; however, a portion of the spray is also directed towards the back wall.

Model RD001 /RD002, Standard / Quick Response Horizontal Sidewall Sprinklers (Ref. Figure A), are automatic sprinklers of the frangible bulb type, and standard spray, 1/2" orifice, 5 / 3 mm bulb. They are "standard / quick response - standard orifice sidewall sprinklers" intended for use in fire sprinkler systems designed in accordance with the standard installation rules recognized by the applicable Listing or Approval agency (e.g., UL Listing is based on NFPA 13 requirements).



1.DEFLECTOR 2.SET SCREW 3.GLASS BULB 4.SPRING SEAL
5.BUTTON 6.FRAME

FIGURE A : MODEL RD001/RD002 HORIZONTAL SIDEWALL SPRINKLERS

SPRINKLER OPERATION

During a fire conditions, the thermal-sensitive liquid in the glass bulb expands, causing the bulb to shatter, releasing the button and spring seal assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

COVERAGE

For coverage area and sprinkler placement, refer to NFPA13 standards.

TECHNICAL SPECIFICATIONS

Model & Sprinkler I.D. No.[1]	RD001		RD002	
Style	Horizontal Sidewall			
Response & Bulb Nominal Dia.	Standard Response, Ø5mm		Quick Response, Ø3mm	
Temp. Classification	Ordinary	Ordinary	Intermediate	Intermediate
Nominal Temp. Rating	135 °F / 57 °C	155 °F / 68 °C	175 °F / 79 °C	200 °F / 93 °C
Max. Ambient Temp. Allowed [2]	115 °F / 46 °C	135 °F / 57 °C	155 °F / 68 °C	180 °F / 82 °C
Max. Recommended Ambient Temp. [3]	100 °F / 38 °C	100 °F / 38 °C	150 °F / 65 °C	150 °F / 65 °C
Glass Bulb Color [4]	Orange	Red	Yellow	Green
Thread Size [Optional]	☐NPT1/2 or ☐R1/2 [5]			

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Nominal Orifice Size	1/2 Inch
Nominal K-Factor [1]	5.6 (U.S.) / 80 (metric)
Max. Working Pressure	175 psig / 1.2 MPa (12 bar)
Factory Hydrostatic Test	100% @ 500psig (3.4 MPa)
Min. Operating Pressure	7 psig / 0.048 MPa (0.48 bar)
Sprinkler Finish [Optional]	☐Natural Brass or ☐Chrome Plated
Listings and Approvals [6]	UL(United States) [7]

Footnotes:

[1] Sprinkler I.D. Nos. and nominal U.S. K-factors provided in accordance with the 2002 edition of NFPA 13.

[2] Based on National Fire Prevention and Control Administration Contract No. 7-34860.

[3] Based on NFPA 13. Other limits may apply depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.

[4] The temperature rating is stamped on the deflector or adjacent to orifice seat on frame.

[5] The pipe thread connections accord with ISO7/1.

[6] This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals.

[7] UL Listed for both Light-Hazard and Ordinary-Hazard occupancies. Locate with deflectors 4" to 12" (100mm to 300mm) below ceiling.

Note: Locate with deflectors 4" to 12" (100mm to 300mm) from walls. Align horizontal sidewall sprinklers with top of deflectors parallel to the ceiling or roof.

SPRINKLER MATERIALS

Frame	Bronze Forging UNS-C87400
Deflector	Brass UNS-28000
Glass Bulb	Glass with Glycerin Solution, JOB® G5 for RD001 JOB® F3 for RD002
Set Screw	Brass UNS-28000
Button	Brass UNS-28000
Spring	Stainless Steel
Seal	Teflon® Tape

ACCESSORIES

Installation Wrench	
Style	T-1

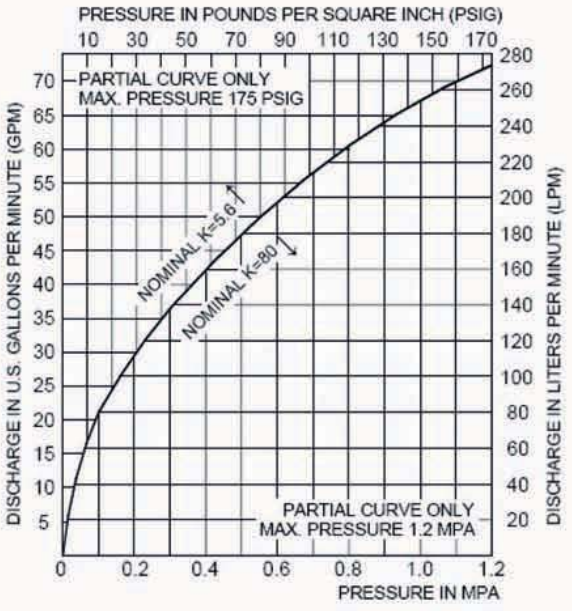

FIGURE B : NOMINAL DISCHARGE CURVE

DISCHARGE COEFFICIENT

Model RD001 / RD002 Horizontal Sidewall Sprinklers are rated for use at a maximum service pressure of 175 psig (12 bar).

The nominal discharge curve plotted in Figure B represents the flow "Q" in GPM (LPM) as determined by the following formula:

$$Q = K\ (P)^{0.5}$$

Where:

Q — Flow, LPM (GPM)

K — Discharge Coefficient, *K*=5.6 (80)

P — Discharge Pressure, psig (bar)

Listing standards permit the actual value of "K" to vary from 5.3 to 5.8 (76,4 to 83,6); however, for hydraulic calculations, a K-factor of 5.6 (80,7) is to be applied.

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