

Horizontal Sidewall Sprinklers

GF80SH



GF80QH

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 GF80SH / GF80QH, 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).

TECHNICAL SPECIFICATION

Model & Sprinkler I.D. No.	GF80SH	GF80QH
Style	Horizontal Sidewall	
Response & Bulb Nominal Dia.	Standard Response, Ø5 mm	Quick Response, Ø3 mm
Thread Size [Optional]	NPT1/2 or R1/2	
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]	<input type="checkbox"/> Natural Brass or <input type="checkbox"/> Chrome Plated <input type="checkbox"/> White Color Coated	
Listings and Approvals	UL Listed	

DISCHARGE COEFFICIENT

Model GF80SH/GF80QH 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, GPM (LPM)

K — Discharge Coefficient, K=5.6 (80)

P — Discharge Pressure, psig (bar)

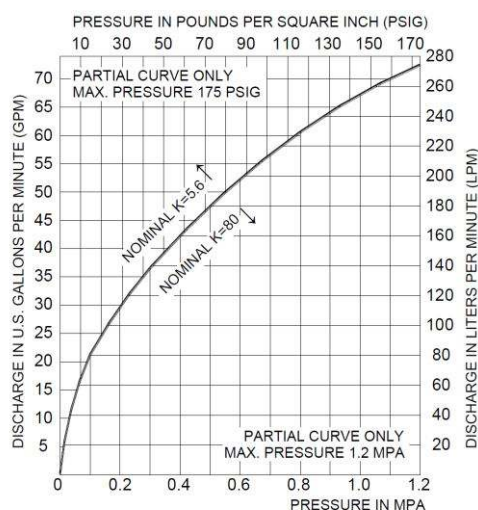


FIGURE B : NOMINAL DISCHARGE CURVE

SPRINKLER MATERIALS

Frame	Bronze Casting DZR
Deflector	Brass UNS-28000
Glass Bulb	Glass with Glycerin Solution, JOB® G5 for GF80SH JOB® F3 for GF80QH
Set Screw	Brass UNS-28000
Button	Brass UNS-28000
Spring	Stainless Steel
Seal	Teflon® Tape
Standard Escutcheon (Type E-1)	Cold Rolled Steel

Accessories

Order the following accessories, as applicable:

- Type E-1 1/2" Standard Escutcheon with chromate finishes: E1C
- Type E-1 1/2" Standard Escutcheon with white painted finish: E1W
- Type T-1 Wrench: SWR

Weight

The nominal weights are as follows.

- 1/2" Orifice Model GF80SH/ GF80QH Horizontal Sidewall - 2.8 ozs. (80 gr)
- E-1 Standard Escutcheon - 0.6 ozs. (18 gr)
- T-1 Sprinkler Wrench - 18 ozs. (510 gr)

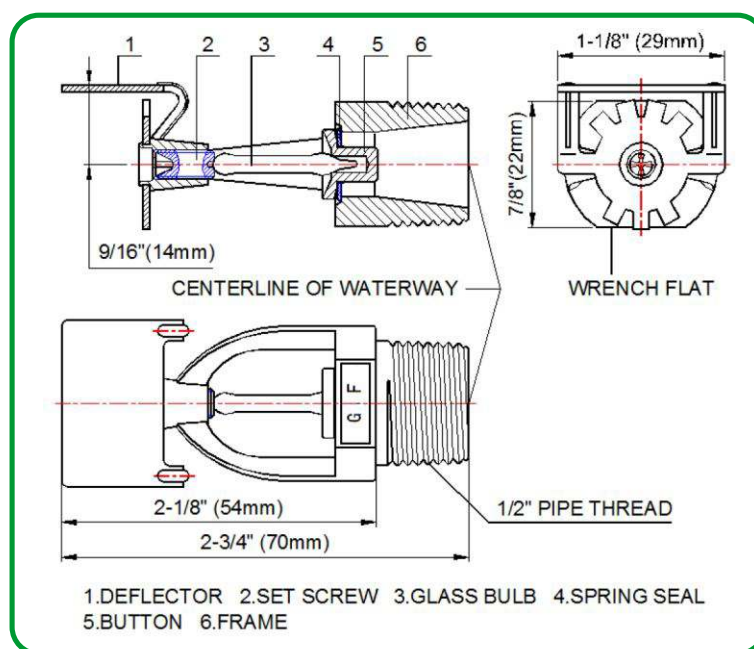


FIGURE A : MODEL GF80SH/GF80QH

AVAILABLE TEMPERATURE RATING

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 ⁵	115°F / 46°C	135°F / 57°C	155°F / 68°C	180°F / 82°C
Max. Recommended Ambient Temp. ⁶	100°F / 38°C	100°F / 38°C	150°F / 65°C	150°F / 65°C
Glass Bulb Color ⁷	Orange	Red	Yellow	Green

Footnotes:

¹ Sprinkler I.D. Nos. and nominal U.S. K-factors provided in accordance with NFPA 13.

² The pipe threads connections accord with ISO7/1.

³ This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals.

⁴ UL Listed for both Light-Hazard and Ordinary-Hazard occupancies.

⁵ Based on National Fire Prevention and Control Administration Contract No. 7-34860.

⁶ 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.

⁷ The temperature rating is stamped on the deflector or adjacent to orifice seat on frame.

Note: Locate with deflectors 4" to 6" (100mm to 150mm) from walls. Align horizontal sidewall sprinklers with top of deflectors parallel to the ceiling or roof.