

# Reliable®

## Model DH80 Model DH80 Recessed Model DH80 Concealed Quick Response, Extended Coverage Sprinkler

For coverages up to 28 feet wide and 14 feet long<sup>(1)</sup>. 250 psi (17,2 bar) rated.

### Features:

- Coverage for long and narrow spaces such as hallways, corridors, decks and rooms up to 28 feet wide and 14 feet long.<sup>(1)</sup>
- Deflector to ceiling dimensions are:  
4" (102mm) min. to 12" (305mm) max.
- Minimum spacing between sprinklers 12 feet (3,6m).
- UL Listed for light hazard applications.
- 8.0 K Factor.
- Sprinkler is approved for 250 psi (17,2 bar) applications.
- Quick response performance.
- ½" (13mm) adjustment of escutcheon and cover.
- Tamper resistant cover plate can prevent the sprinkler from being used for unintended purposes. No exposed thermal element with the concealed version.
- Push-on/thread-off sturdy convenient escutcheon for recessed and cover for concealed.
- Factory assembled sprinkler & cup, shipped complete with protective cap for concealed and FP recessed versions.
- Sprinkler & cup assembly and escutcheon or cover are separately packaged.
- Cover finishes available in standard white paint, special bronze, black paint or flat white paint.
- Polyester Coated or Electroless Nickel PTFE Plated cULus Listed Corrosion Resistant Sprinklers  
\*Concealed Sprinkler is not corrosion resistant

<sup>(1)</sup> See Figure 4.

### Approval Organizations

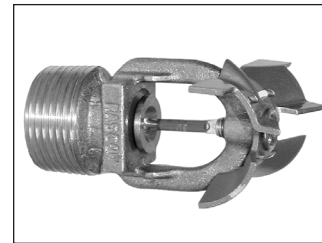
- Listed by Underwriters Laboratories Inc. and UL certified for Canada (cULus)
- NYC MEA 258-93-E

**Patents: US patent number 6,374,919**

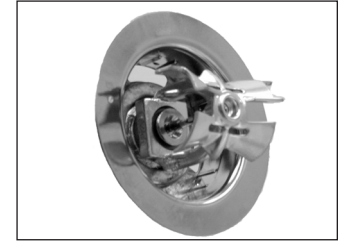
**SWC Cover Plate**

**US Patent Number 6, 920, 937, B2**

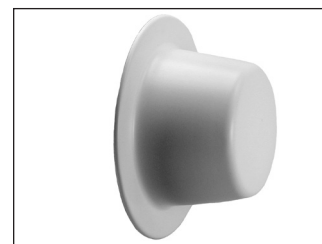
**DH80 Sprinkler**



**DH80**



**DH80 Recessed**



**DH80 Concealed  
with SWC cover plate**



**DH80 F2 Recessed**

### Products Description

The Model DH80 family of sprinklers are quick response extended coverage sidewall sprinklers for use in light hazard applications. The Model DH80 with SWC cover plate is a concealed sprinkler that uses Reliable's push on/thread off sidewall cover. This sprinkler has the cup factory mounted and is shipped with a protective cap that protects the 3mm frangible glass bulb during shipping and post installation finishing operations. The DH80 can be combined in the field with the FP or F2 Escutcheon to make a recessed sprinkler. The SWC cover plate, FP and F2 recessed escutcheons have ½" adjustment. The SWC cover plate is attached with 135-degree solder. In the event of a fire the rising ambient temperature melts the solder and the cover plate is ejected away by springs exposing the 3mm frangible glass bulb. The use of a 3mm bulb allows quick response which enables the sprinkler to apply water to a fire sooner than standard response sprinkles of the same temperature rating.

### Application

The Model DH80 is a horizontal sidewall sprinkler intended for installation in light hazard occupancies in accordance with NFPA 13. These sprinklers are designed to provide fire protection in long and narrow spaces such as hallways, corridors, decks and rooms up to 28 feet (8,5m) wide and 14 feet (4,3m) long. They are rated for 250 psi (17,2 bar) and can be mounted between 4 and 12 inches (102 and 305mm) down from the ceiling.

## Installation

### DH80 Recessed, FP Escutcheon

To install the DH80 with the FP Escutcheon as a recessed sprinkler cut a 2<sup>5</sup>/<sub>8</sub>" diameter hole in the wall as shown in Figure 1. Remove temporarily the plastic protective cap, then use the W4 wrench to tighten the sprinkler until secured in the sprinkler fitting. This wrench can only be inserted one way. Care must be taken not to damage the deflector during tightening. Apply a PTFE based sealant to the sprinkler threads before installing in the fitting. When inserting or removing the wrench from the sprinkler cup, care must be taken to prevent damage to the sprinkler. Wrench only on the square boss. **DO NOT WRENCH ON ANY OTHER PART OF THE SPRINKLER.** It is recommended that the sprinkler be protected during plastering and painting operations by reinstalling the protective cap P/N 6802710003. Installation is completed by removing the protective cap and inserting the push-on escutcheon. Turn clockwise to adjust the escutcheon against the wall.

### DH80 Recessed, F2 Escutcheon

To install the DH80 with the F2 Escutcheon as a recessed sprinkler cut a 2<sup>1</sup>/<sub>4</sub>" diameter hole in the wall as shown in Figure 2. Thread the DH80 into the collar hand tight. Apply a PTFE based sealant to the sprinkler threads and install in the fitting. Wrench only on the square boss. The W4 wrench can only be inserted one way. When inserting or removing the wrench from the sprinkler cup care must be taken to prevent damage to the sprinkler. **DO NOT WRENCH ON ANY OTHER PART OF THE SPRINKLER.** It is recommended that the sprinkler be protected during plastering and painting operations by using the protective cap P/N 6999991009. These must be ordered separately. Installation is completed by removing the protective cap and inserting the F2 Escutcheon over the collar.

### DH80 with SWC Cover Plate Concealed

To install the sprinkler, cut a 2<sup>5</sup>/<sub>8</sub>" diameter hole into the wall as shown in Figure 1. A PTFE based thread sealant should be applied to the sprinkler threads only. Remove the protective cap (P/N 6802710003) and then position the W4 wrench into the sprinkler/cup assembly until the wrench engages the flats of the square boss and tighten the sprinkler into the pipe fitting. The W4 wrench can only be inserted one way. When inserting or removing the wrench from the sprinkler/cup assembly, care should be taken to prevent damage to the sprinkler. **DO NOT WRENCH ON ANY OTHER PART OF THE SPRINKLER.** The protective caps should be reinstalled for protection during plastering and painting. Remove caps only when covers are being installed. The cover assembly is then pushed onto the cup. Cover assemblies provide 1/2" (13mm) of adjustment. Final adjustment is made by turning the cover clockwise until the skirt flange makes full contact with the wall surface. Cover removal requires turning in the counter-clockwise direction.

Concealed cover/cup assemblies are listed only for use with specific sprinklers. The use of any other concealed cover/cup assembly with the Model DH80 Horizontal Sidewall Sprinkler or the use of the concealed cover assembly on any sprinkler with which it is not specifically listed will void all guarantees, warranties, listings and approvals.

**Note:** DH80 and DH80 Recessed Sprinklers have orange bulb protectors to minimize bulb damage during shipping, handling, and installation. REMOVE THIS PROTECTION AT THE TIME THE SPRINKLER SYSTEM IS PLACED IN SERVICE FOR FIRE PROTECTION. Removal of the protectors before this time may leave the bulb vulnerable to damage. RASCO wrenches are designed to install sprinklers when covers are in place. REMOVE PROTECTORS BY UNDOING THE CLASP BY HAND. DO NOT USE TOOLS TO REMOVE THE PROTECTORS.

## Technical Data:

K Factor		Thread Size	Temperature Rating		Maximum Ambient Temperature	Sprinkler Identification Number (SIN)
US	Metric		Sprinkler	SWC Cover		
8.0	115,3	3/4"	155°F (68°C) 135°F (57°C)	135°F (57°C)	100°F (38°C)	RA0362

Coverage Area		
Flow Rate gpm (L/min)	Pressure psi (bar)	Maximum Coverage Area Width x Length ft x ft (m x m)
40 (151,4)	25 (1,7)	28 x 14 (8,5 x 4,3)

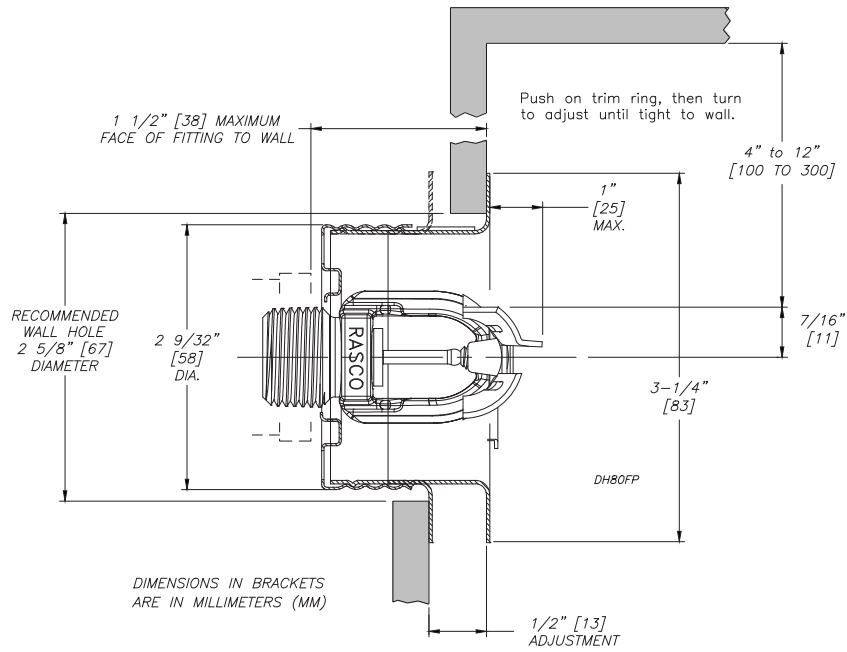
**Note:** Minimum spacing between DH80 sprinklers is 12' (3.7m).

## Approval Type:

- Quick Response, Extended Coverage.
- Approved for installation in accordance with NFPA 13 for light hazard occupancies.

## Maintenance

Model DH80 should be inspected and the sprinkler maintained in accordance with NFPA 25. Do not clean sprinklers with soap and water, ammonia or any other cleaning fluids. Remove dust by using a soft brush or gentle vacuuming. Remove any sprinkler/cover assembly, which has been painted (other than factory applied) or damaged in any way. A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers. Prior to installation, sprinklers should be maintained in their original cartons and packaging until used to minimize the potential for damage to sprinklers that would cause improper operation or non-operation.



Note: Model DH80 sprinklers with Model FP recessed escutcheon may not be used where the pressure in the space behind the sprinkler is positive with respect to the protected area. Ensure that the openings around the Model FP cup are unobstructed following installation.

Figure 1. Model DH80 FP Recessed

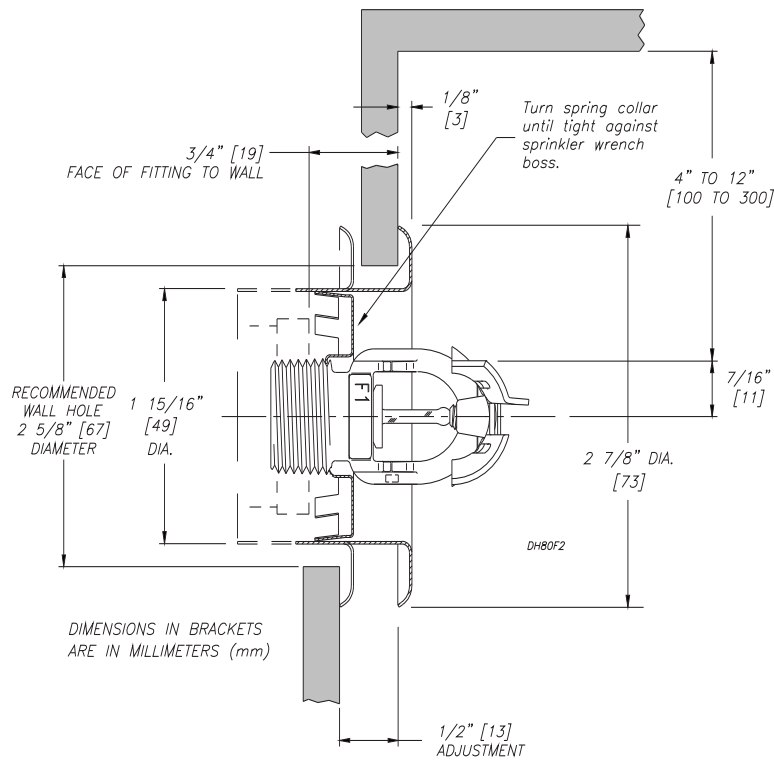


Figure 2. Model DH80 F2 Recessed

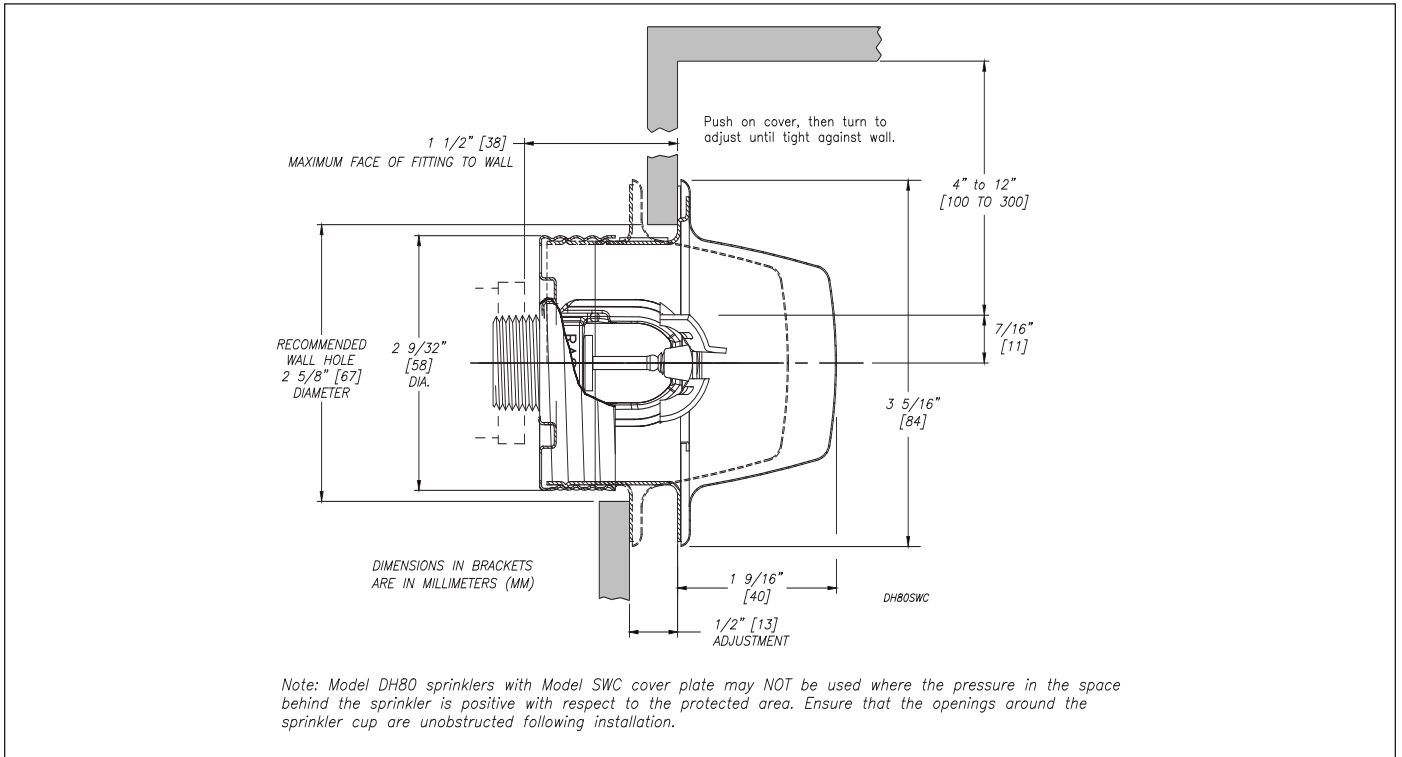


Figure 3. Model DH80 SWC Concealed

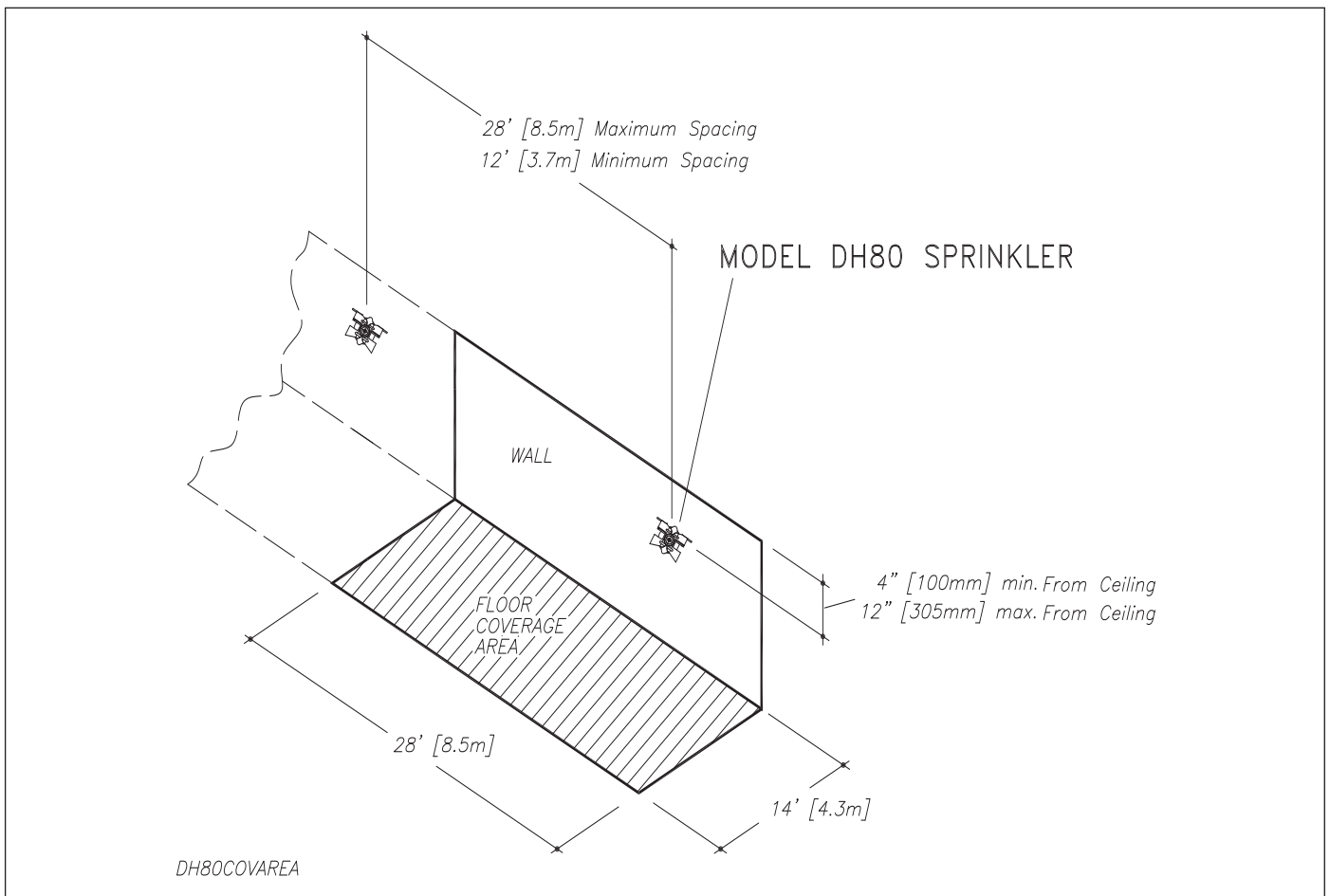


Figure 4. Model DH80 Coverage Area

## Finishes<sup>(1)</sup>

Standard Finishes <sup>(1)</sup>			
Sprinkler	FP Escutcheon	F2 Escutcheon	Cover Plate
White and Black Polyester <sup>(2)</sup> Chrome Bronze	White Chrome	White Chrome	White Chrome

Special Application Finishes	
Sprinkler	FP/F2 Escutcheons
Electroless Nickel PTFE <sup>(2)</sup>	Stainless Steel

<sup>(1)</sup> Other colors and finishes are available. Consult factory for details.

<sup>(2)</sup> cULus listed Corrosion Resistant.

**Note:** Paint or any other coatings applied over the factory finish will void all approvals and warranties.

### UL Listing Category

Sprinklers, Automatic and Open.  
Quick Response Sprinklers.

### Installation Wrench

Model W2 (non-recessed, non-concealed)  
Model W4 (recessed, concealed)

**Note:** A leak tight 3/4" NPT (R3/4) sprinkler joint can be obtained with a torque of 14-20 ft-lbs (19-27 N·m). Do not tighten sprinklers over maximum recommended torque as this may cause leakage or impairment of the sprinklers.

### Escutcheon Data:

FP cup/escutcheon assembly - 1/2" (13mm) adjustment  
F2 recessed escutcheon - 1/2" (13mm) adjustment

### Ordering Information

Specify:

- DH80  
- Sprinkler Finish
- DH80 Recessed  
-Sprinkler Finish
- FP or F2 Escutcheon  
-Escutcheon Finish
- SWC Concealed  
-Cover-Plate Finish

The equipment presented in this bulletin is to be installed in accordance with the latest published Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.

Products manufactured and distributed by Reliable have been protecting life and property for over 100 years.

Manufactured by



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