



GA SERIES / MODEL GA2331

Extended Coverage / Light Hazard
Quick Response Sprinkler
Recessed Horizontal Sidewall,
Horizontal Sidewall



PRODUCT DESCRIPTION

The Model GA2331 sprinkler is an extended coverage, light hazard sprinkler that can be installed with or without escutcheon, depending on the environment in which it is to be installed and the importance of its finish.

The GA2331 sprinkler is quick response with a 3mm bulb.

The product is designed for use in commercial and industrial buildings.

The bulb contains a quantity of special liquid hermetically sealed inside a glass capsule, so that when the liquid expands, the bubble disappears and later, at the appropriate temperature, the bulb breaks, letting the water outlet free to discharge.

TECHNICAL DATA

Nominal "K" Factor	8.0 (115)
Thread Size	3/4" NPT
Temperatures	135°F (57°C) sprinkler 155°F (68°C) sprinkler 175°F (79°C) sprinkler
Maximum Working Pressure	175psi (12 bar)
Materials	Frame: DZR Brass Deflector: Bronze Screw: Brass Bulb Seat: Brass Seal Teflon: Nickel Alloy + Teflon Bulb: Glass, 3mm size Escutcheon Assembly: Chrome Steel
Reference	GA2331
Finish (Sprinkler)	Bronze, White, Chrome.
Finish (Escutcheon)	White, Chrome (1.)

- For special finishes, consult the details in advance with the Technical Office.

APPROVALS

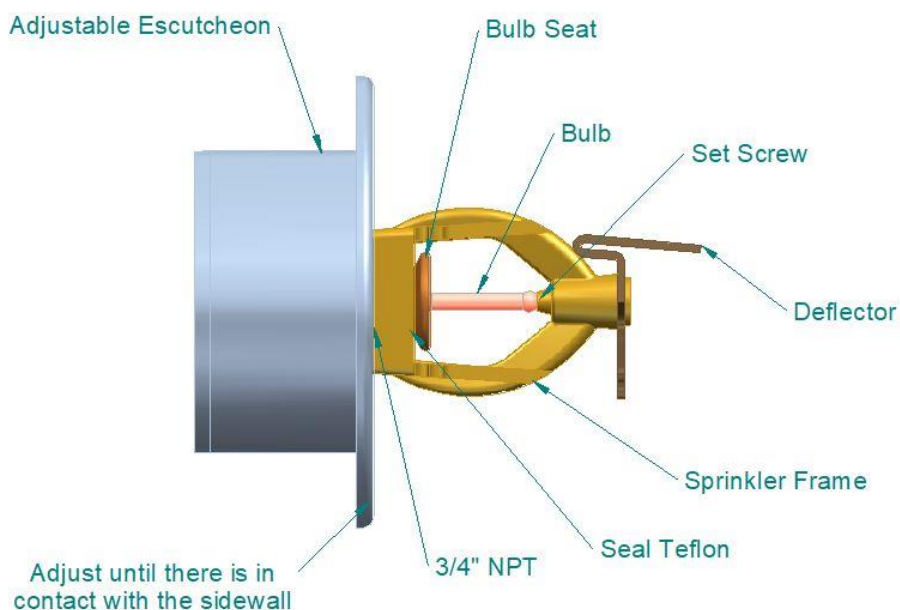
The following are the successful design criteria approved for the GA2331 sprinkler.

EXTENDED COVERAGE HORIZONTAL SIDEWALL SPRINKLER AND RECESSED HORIZONTAL SIDEWALL SPRINKLER								
Approvals	Reference	Type of response	Maximum Coverage Area, ft (m)	Minimum Flow Rate, gpm (lpm)	Distance below Ceiling, inch (m)	Sprinkler Temperature, °F (°C)		
						135 (57)	155 (68)	175 (79)
FM APPROVALS	GA 2331	Quick Response	16x16 (4,9x4,9)	32 (120)	4"-12" (0,1-0,3)	X	X	X
			16x18 (4,9x5,5)	36 (135)	4"-12" (0,1-0,3)	X	X	X
			16x20 (4,9x6,1)	40 (150)	4"-12" (0,1-0,3)	X	X	X
			16x22 (4,9x6,7)	44 (165)	4"-12" (0,1-0,3)	X	X	X
			16x24 (4,9x7,3)	48 (180)	4"-12" (0,1-0,3)	X	X	X
	GA2331 RECESSED	Quick Response	16x16 (4,9x4,9)	32 (120)	4"-12" (0,1-0,3)	X	X	
			16x18 (4,9x5,5)	36 (135)	4"-12" (0,1-0,3)	X	X	
			16x20 (4,9x6,1)	40 (150)	4"-12" (0,1-0,3)	X	X	
			16x22 (4,9x6,7)	44 (165)	4"-12" (0,1-0,3)	X	X	
			16x24 (4,9x7,3)	48 (180)	4"-12" (0,1-0,3)	X	X	

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						135 (57)	155 (68)	175 (79)
UL	GA 2331	Quick Response	16x16 (4,9x4,9)	29 (110)	4"-12" (0,1-0,3)	X	X	X
			16x18 (4,9x5,5)	29 (110)	4"-12" (0,1-0,3)	X	X	X
			16x20 (4,9x6,1)	32 (120)	4"-6" (0,1-0,15)	X	X	X
				37 (140)	6"-12" (0,15-0,3)	X	X	X
			16x22 (4,9x6,7)	36 (135)	4"-6" (0,1-0,15)	X	X	X
				43 (163)	6"-12" (0,15-0,3)	X	X	X
			16x24 (4,9x7,3)	40 (150)	4"-6" (0,1-0,15)	X	X	X
				48 (180)	6"-12" (0,15-0,3)	X	X	X
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OPERATION

Under normal conditions, the glass bulb contains both liquid and a gas bubble. As the temperature increases, the bubble decreases in size due to the internal pressure exerted by the liquid as it heats up. When the nominal temperature of the bulb is reached, the liquid inside the bulb exerts the necessary pressure to break the bulb and release the water flow. Finally, it is the deflector that distributes the water flow in a suitable way over the operating surface.



INSTALLATION

Model GA2331 sprinklers are designed to be installed as specified in this section. They must be installed using the Model CO2 sprinkler wrench for those with escutcheon and the AB wrench for those without escutcheon.

Do not install any sprinkler if the bulb is broken, leaking or in poor condition. With the sprinkler held horizontally, the air bubble must be clearly visible.

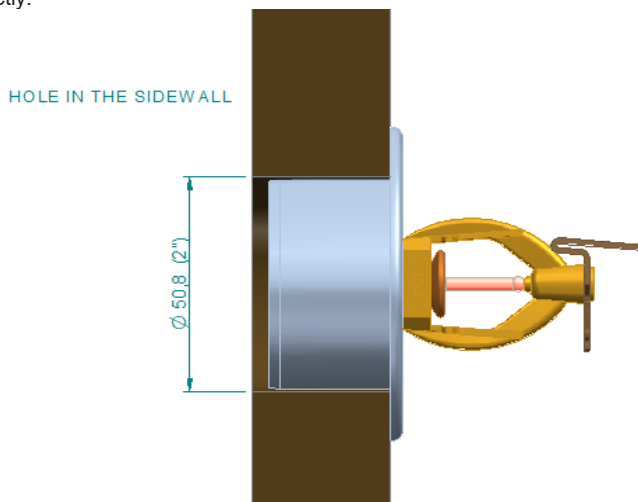
If the sprinkler has any visual damage do not install it, replace it with another unit.

The following steps will explain how to install GA2331 sprinklers with escutcheon in steps 1, 2, 3, 4 and without escutcheon in steps 1 and 4.

1. First of all, the sprinkler is removed from its packaging and a visual inspection is carried out to check that it has not suffered any deformation or that none of its parts are in a bad state.
2. Thread the sprinkler with the escutcheon by hand all the way.

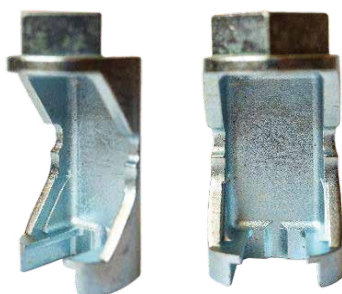
Note: Be careful when screwing the sprinkler and do not touch the deflector, always catch when you want to do something to the body.

3. Drill a 2" hole in the sidewall to be able to install our sprinkler with escutcheon correctly.

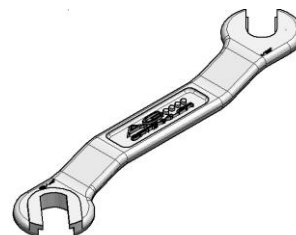


Note: Do not make the hole larger than specified above to ensure that the hole is not visible once the escutcheon is fitted.

4. Thread the sprinkler with or without escutcheon where it is to be finally positioned by applying a force of 8 to 18 ft-lb (10.8 - 24.4 Nm) to obtain a tight 3/4" (R3/4) NPT joint. Do not tighten the sprinklers above the maximum recommended torque, as this may cause leakage or damage to the sprinklers. The AB or CO2 sprinkler wrench, specially designed for this product, is to be used.



1 Key for sprinkler with escutcheon.

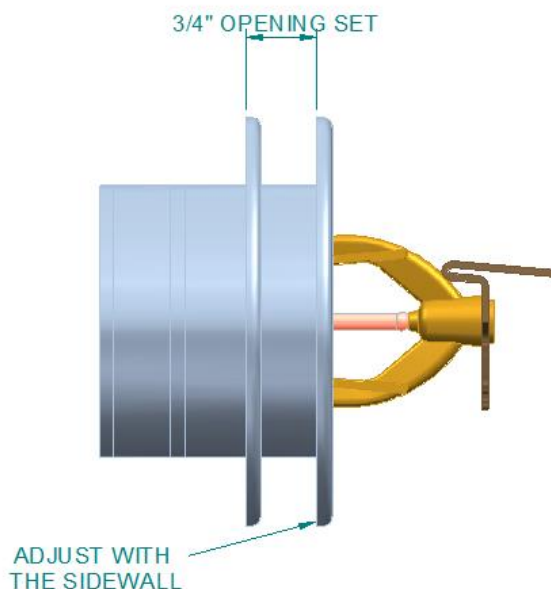


2 Key for sprinkler without escutcheon.

Note: It is important to hold the sprinkler by the body when handling to avoid damage to the sprinkler (do not use force on the deflector).

5. Once the sprinkler is installed, if the escutcheon is separated from the sidewall, once the sprinkler is well tightened with its corresponding torque, push the external part of the escutcheon towards the sidewall until it is completely adjusted to the sidewall.

Note: Fit using the $\frac{3}{4}$ " set in the escutcheon as shown in the dimensions section.



6. Remove the upper protector using a M-3 Allen wrench to unscrew the screw holding the protector.



Note: Remove all protectors after installing the sprinkler in its respective position.

MAINTENANCE

GA2331 Series sprinklers must be inspected and maintained in accordance with applicable standards according to their approvals (refer to the appropriate data sheet).

Do not clean the sprinklers with soap and water, ammonia, or other cleaning liquids that may be corrosive.

Remove dust with a vacuum cleaner.

If the room where the sprinklers will be installed needs to be painted, paint it before installing them. If not possible, remove covers before painting. If any sprinkler or cover shows any paint on it, replace it immediately.

Sprinklers that are leaking or show visible signs of corrosion should be replaced.

Sprinklers damaged by dropping, knocking, bending, twisting, slipping or similar should be replaced.

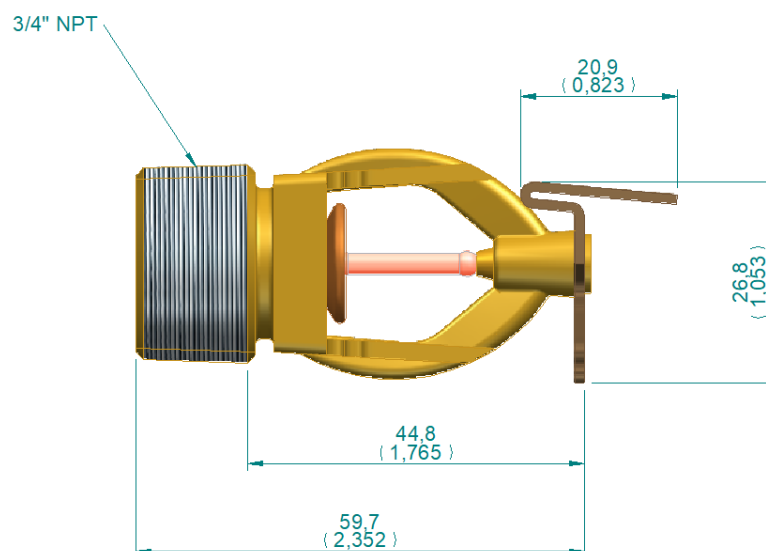
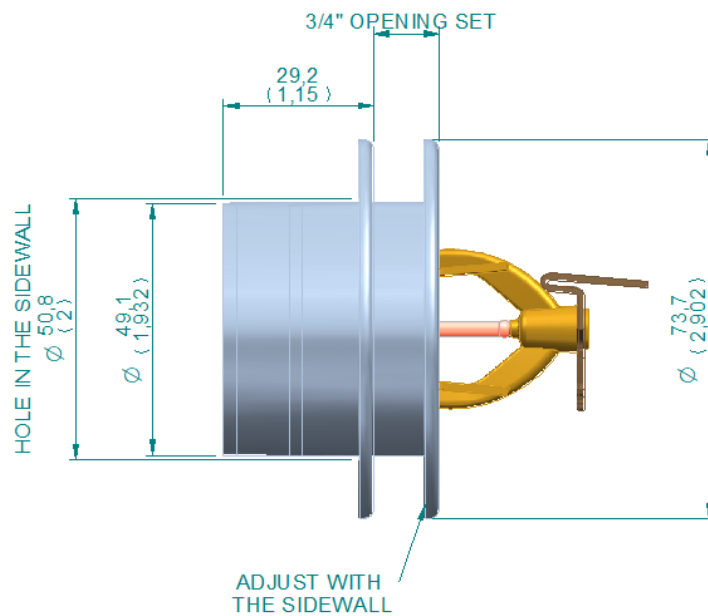
A stock of spare sprinklers should be maintained to allow rapid replacement of damaged or cracked sprinklers.

Prior to installation, sprinklers should be kept in the original packaging until use to minimize the damage to sprinklers.

TEMPERATURES RATINGS

Classification	Sprinkler Temperature		Maximum Ambient Temp.		Bulb Color
	°F	°C	°F	°C	
Ordinary	135	57	100	38	Orange
Ordinary	155	68	100	38	Red
Intermediate	175	79	150	66	Yellow

DIMENSIONS



ORDERING INFORMATION

P/N	GAXXXX Y Z
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DESCRIPTION	CODE
Horizontal	GA2331

Y	1	57°C	135°F
	2	68°C	155°F
	4	79°C	175°F

Z	1	BRONZE
	2	CHROME
	3	WHITE

Specify:

Quantity	
Model number	
Type	
Orifice	
Type Deflector	
Temperature	
Finishes	
Finish of the escutcheon	