# GA SERIES / MODEL GA-81(1/2”)

## Storage / In-Rack Sprinkler
## Quick Response Sprinkler
## Upright & Pendent

LISTED
EX15331



Upright



Pendent

## PRODUCT DESCRIPTION

Intermediate Upright and Pendent sprinkler Model GA-81 described in this data sheet are sprinklers storage for use in Light or Ordinary Hazard.

Intermediate sprinklers are upright and pendent. Each sprinkler comes with an intermediate plate of water protection 3 15/64” (82 mm) in diameter. They can also come with a protective guard anti mechanical shocks.

Thermosensitive glass bulb 3 mm is used. They have a capacity to react 6 times faster than standard response sprinklers. The bulb contains a special liquid hermetically sealed in a glass capsule.

## TECHNICAL DATA

| | |
|---|---|
| **Nominal “K” Factor** | 8,0 (115 metric) |
| **Thread Size** | 1/2" NPT |
| **Temperatures** | 135ºF (57ºC)<br>155ºF (68ºC)<br>175ºF (79ºC)<br>200ºF (93ºC)<br>286ºF (141ºC) |
| **Working Pressure** | 175 psi (12 bar) |
| **Materials** | Frame: Brass Alloy<br>Deflector: Cooper Alloy<br>Screw: Brass Alloy<br>Bulb Seat: Copper Alloy<br>Sealing Spring: Nickel Alloy<br>Bulb: Glass, 3mm size |
| **Reference** | Pendent: **GA8101**<br>Upright: **GA8117** |
| **Finish** | Bronze |

## OPERATION

At normal temperatures, the glass bulb contains the fluid in both the liquid phase and the vapor phase. The vapor phase can be seen as a small bubble. As heat is applied, the liquid expands forcing the bubble smaller and smaller as the liquid pressure increases. Continued heating forces the liquid to push out against the bulb, causing to shatter, opening the waterway and allowing the deflector to distribute the discharging water.



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## INSTALLATION

Model GA-81 sprinklers are quick response sprinklers intended for installation as specified in NFPA13. They must also be installed with the Model **AB** Sprinkler Wrench specifically designed by AG Fire Sprinkler for use with these sprinklers.

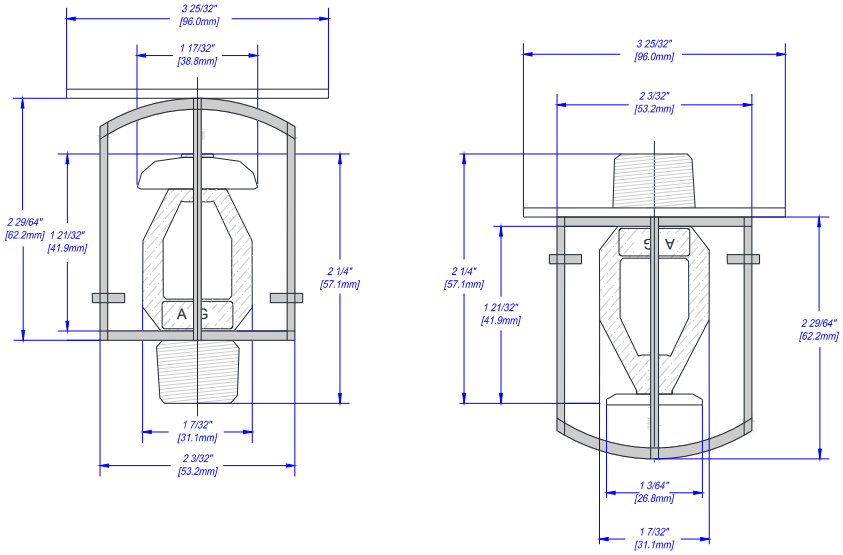
A leak tight 1/2" NPT (R1/2) sprinkler joint can be obtained with a torque of 8-18ft-lbs (10.8-24.4N-m). Do not tighten sprinklers over maximum recommended torque. It may cause leakage or impairment of these sprinklers.

The sprinklers come with an orange protection, to avoid breakage during assembly. Remove this protection once installed and made sure that everything is correct. The AG Sprinkler Wrenches are designed to install sprinklers with the protection still.

## TEMPERATURE RATINGS

| Classification | Sprinkler Temperature | | Max. Ambient Temperature | | Bulb Color |
|---|---|---|---|---|---|
| | ºF | ºC | ºF | ºC | ºF |
| Ordinary | 135 | 57 | 100 | 38 | Orange |
| Ordinary | 155 | 68 | 100 | 38 | Red |
| Intermediate | 175 | 79 | 150 | 66 | Yellow |
| Intermediate | 200 | 93 | 150 | 66 | Green |
| High | 286 | 141 | 225 | 107 | Blue |

## DIMENSIONS




The Guard and the Intermediate plate are sold separately.


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## ORDERING INFORMATION

| P/N | GAXXXX Y Z |
|---|---|

| DESCRIPTION | CODE |
|---|---|
| Pendant | GA1160 |
| Upright | GA1167 |

| | | | |
|---|---|---|---|
| Y | 1 | 57ºC | 135ºF |
| | 2 | 68ºC | 155ºF |
| | 4 | 79ºC | 175ºF |
| | 5 | 93ºC | 200ºF |
| | 7 | 141ºC | 286ºF |

| | | |
|---|---|---|
| Z | 1 | BRASS |

Specify:

| | |
|---|---|
| Quantity | |
| Model Number | |
| Type | |
| Orifice | |
| Thread Size | |
| Temperature | |
| Finishes | |
| Quantity - Wrenches | |



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  - Standard Coverage
  - Extended Coverage
  - Storage
  - Dry
  - Accessories
- System Valves
  - Wet
  - Dry
  - Preaction Equipment
  - Accessories
- Spray System Open Nozzles
  - High Velocity Nozzles
  - Medium Velocity Nozzles
  - Window Nozzles
  - Hydroshield Nozzles
  - Mushroom Type Nozzles
- Foam equipment
  - Tanks
  - Proportioners
  - Foam Discharge Equipment
  - Foam Concentrates
- Deluge equipment for Water Spray and Foam
  - Clapper Deluge Valves
  - Diaphragm Deluge Valves
- Monitors
  - Manual Monitors
  - Remote Monitors
  - Monitor Nozzles
  - Towers and Trolleys
- Valves
  - Butterfly Valves
  - Gate Valves
  - Check Valves
  - Pressure Control Valves
  - Test and Drain
  - Hose, Hydrant and Fire Connection Valves
  - Fire Department Connections

The equipment presented in this bulletin is to be installed in accordance with the latest published Standard 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.
This documentation is not contractual. AG Fire Sprinkler reserves the right to any kind of change without notice.



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