



Model AG22 (SIN AG1011) Early Suppression Fast Response (ESFR) Sprinkler

Performance Characteristics: Single Sprinkler Minimum Pressure and Flow Requirements

Features

1. Utilizes a levered fusible alloy solder link.
2. Eliminates in-rack sprinklers for 45' high buildings.
3. Lower flows offer opportunities to reduce:
 - Interior Piping
 - Fire Pump Sizes
 - Underground Pipe
 - Tank Sizes
4. Maximum deflector distance from ceiling (roof) is 18" (457mm).
5. Available in 165°F (74°C) and 212 °F (100°C) - cULus Listed and FM Approved.
6. Available in 165°F (74°C) and 212°F (100°C) - VdS and LPCB Approved.

Bldg. Height	UL		FM, VdS & LPCB	
	Pressure	Flow	Pressure	Flow
* 45 ft. (13.7m)	40 psi (2,8 bar)	142 gpm (537 L/min)	50 psi (3,4 bar)	158 gpm (597 L/min)
40 ft. (12.2 m)	40 psi (2,8 bar)	142 gpm (537 L/min)	45 psi (3,1 bar)	150 gpm (567 L/min)
35 ft. (10.7m)	35 psi (2,4 bar)	133 gpm (503 L/min)	35 psi (2,4 bar)	133 gpm (503 L/min)
30 ft. (9.1 m)	25 psi (1,7 bar)	112 gpm (423 L/min)	25 psi (1,7 bar)	112 gpm (423 L/min)

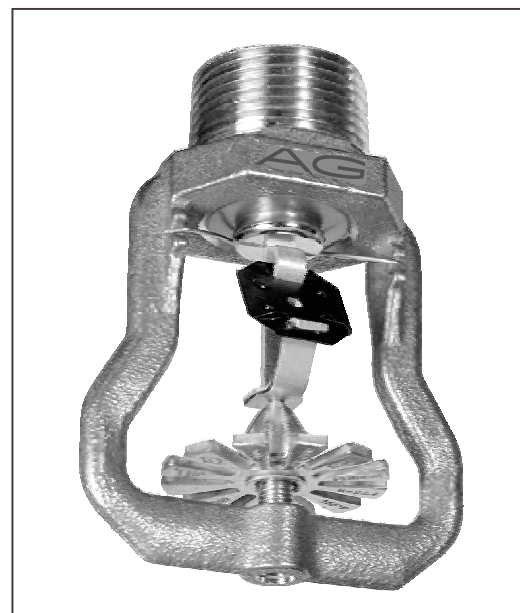
* with up to 40 ft. (12.2 m) storage (In-rack sprinklers are not required)

Product Description

The AG22 Early Suppression Fast Response (ESFR) Sprinkler is intended for use against severe fire challenges. This sprinkler is designed to respond quickly to growing fires with a high volume of water discharge to "suppress" rather than "control" fires at lower pressures and without in-rack sprinklers for 35' (10.7m) to 40' (12.2m) storage as is required with a K14 or K17 ESFR.

The AG22 Sprinkler utilizes a levered fusible alloy solder link in either 165 °F (74 °C) or 212 °F (100 °C) temperature ratings. The sprinkler has a Nominal K Factor of 22.4 (320 metric) and will deliver approximately 112 gpm (424 L/min) of water at 25 psi (1,7 bar).

The deflector and frame provide a broad, very symmetrical, hemispherical pattern capable of suppressing fires between sprinklers in high storage height areas and at the same time maintaining good central core distribution to penetrate and suppress fires occurring directly beneath the sprinkler.



Model AG22 Sprinkler

Application and Installation

The AG22 ESFR sprinkler is intended for installation in accordance with NFPA 13 and Factory Mutual (FM) Loss Prevention Data Sheet 2-2, as well as the Authority Having Jurisdiction.

This sprinkler is intended for protection of Class I to IV Commodities and Group A or B plastics, which includes cartoned unexpanded plastics. The storage can be palletized and solid piled, open frame single row or multiple row and portable rack storage.

Approval Organizations (See following table)

1. Listed by Underwriters Laboratories Inc. and UL certified for Canada (cULus). Listed for installation in accordance with NFPA standards for storage heights to 40ft. (12.2m) in buildings to 45ft. (13.7m) high.
2. Factory Mutual Research Corp. (FM)
The AG22 Sprinkler is for use in buildings with ceilings up to 45ft. (13.7m) high with storage heights to 40 ft. (12.2m) when installed in accordance with FM Loss Prevention Data Sheet 2-2 or other FM Installation Standards.
3. VdS Schadenverhütung (VdS)
4. Loss Prevention Certification Board (LPCB)

Model AG22 Temperature Ratings and Approvals

Classification	Sprinkler Temperature Rating		Link Color	Frame Color	Maximum Ambient Temperature		Approvals	Sprinkler Identification No. (SIN)
	°F	°C			°F	°C		
Ordinary	165	74	Black	Uncolored	100	38	cULus, FM, VdS, LPCB	AG1011
Intermediate	212	100	White	White	150	66	cULus, FM, VdS, LPCB	AG1011

Installation Data

Sprinkler Type	Nominal Orifice	Thread Size	Nominal K Factor		Maximum Working Pressure	Finish
			US	Metric		
Pendent Only	0.87 " (22.1mm)	1" NPT R1	22.4	320	175 psi (12,1 bar)	Bronze

Maintenance

The AG22 Sprinkler should be inspected quarterly and the sprinkler system 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 that 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 the original cartons and packaging until used. This will minimize the potential for damage to sprinklers that would cause improper operation or non-operation.

Engineering Specification Model AG22 ESFR

Sprinklers shall be Early Suppression Fast Response (ESFR) pendent suppression mode sprinklers [cULus Listed] [FM Approved] for commodity storage applications. Sprinkler frame and deflector to be of bronze construction with deflector located inside of the frame arms. Sprinkler shall have a maximum listed/approved ceiling-to-deflector distance of 18 ". Fusible alloy solder link assembly shall utilize the strut and lever principle of operation with approved fast response beryllium-nickel thermal element with protective [black painted (165 °F)] [white painted (212 °F)] coating. Water seal shall consist of a Teflon-coated Belleville spring washer and brass cap assembly containing no plastic parts. ESFR sprinklers shall have a nominal K-factor of 22.4 and 1" NPT or ISO 7-R1 threaded end connections. Sprinkler temperature rating shall be [Ordinary 165 °F (74 °C)] [Intermediate 212 °F (100 °C)]. ESFR pendent sprinklers shall be AG Model AG22, SIN AG1011 (Bulletin 014).

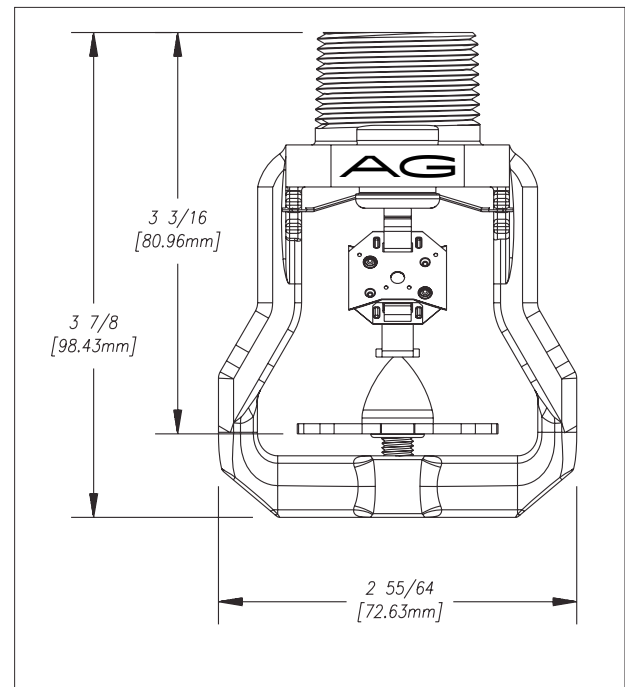


Use only the Model AG5 sprinkler wrench for removal and installation. Any other type of wrench may damage the sprinkler.

Ordering Information

Specify:

1. Temperature Rating
2. Thread type 1 " NPT or ISO 7-R1



The equipment presented in this bulletin is to be installed in accordance with the latest pertinent 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 AG have been protecting life and property for many years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the world.

