

# Reliable®

## Model P22 ESFR Pendent Sprinklers

175 psi (12 bar) rated

### Features

- FM Approved as a quick-response storage and non-storage sprinkler
- Robust fusible link operating element
- Compact design

### Product Description

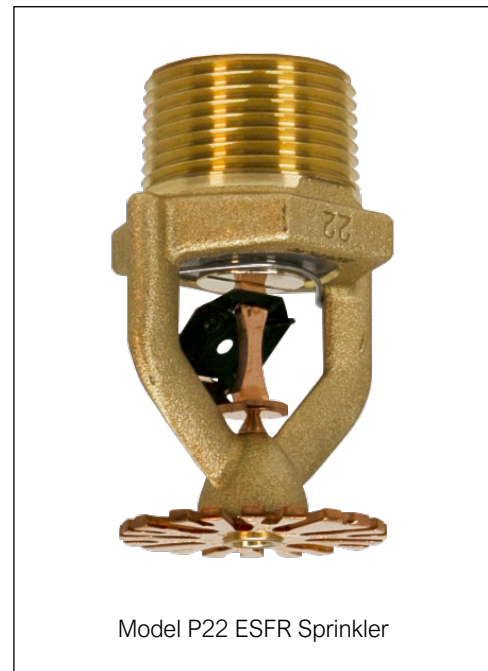
The Reliable Model P22 is an Early Suppression Fast Response (ESFR) fire sprinkler with a nominal K-factor of 22.4 (320 metric). The sprinkler uses a levered fusible alloy solder link in either a 165°F (74°C) or a 212°F (100°C) temperature rating. These sprinklers are designed to respond quickly to growing fires and will deliver a heavy water discharge to suppress a fire. Suppression is considered a higher level of control characterized by a sharp reduction in heat release rate along with preventing regrowth of the fire.

For systems designed in accordance with NFPA 13 standards, the Model P22 is considered an ESFR fire sprinkler. FM Approvals classifies the Model P22 as a quick-response storage and non-storage sprinkler when used in accordance with FM Global Property Loss Prevention Data Sheets.

The Model P22 fire sprinkler may also be used as an in-rack sprinkler where permitted by NFPA or FM. A sprinkler guard and water shield is available when the Model P22 is used in this application.

Model P22 ESFR sprinklers are designed to be shorter and more compact than other ESFR sprinklers, allowing greater flexibility with regard to distance from ceilings and obstructions. Model P22 ESFR sprinklers are less susceptible to damage due to smaller deflector and frame design and have passed rough use and abuse listing tests without plastic protectors.

**Important!** Reliable fire sprinklers must be handled, stored, and installed in accordance with the guidelines in Caution Sheet 310 and this bulletin. Failure to follow these instructions may result in unintended operation or nonoperation of the fire protection system.



Model P22 ESFR Sprinkler

To further the development of environmentally compatible and more sustainable construction methods, Reliable has developed and ASTM International has published an [Environmental Product Declarations \(EPD\) for the Model P22 sprinkler](#).

Model P22 ESFR Pendent Sprinkler

Table A

Model	Nominal K-factor gpm/psi <sup>1/2</sup> (L/min/bar <sup>1/2</sup> )	Approvals	Sprinkler Identification Number (SIN)
P22	22.4 (320)	FM, CE	R601

**Technical Specifications**

- Style:** Pendent
- Connection:**
  - 1" NPT
  - ISO7-1R1 (BSPT) threads
- Nominal K-Factor:** 22.4 (320 metric)
- Max. Working Pressure:** 175 psi (12 bar)

**Material Specifications**

- Thermal Sensor:** Nickel Alloy Solder Link
- Sprinkler Frame:** Brass Alloy
- Cap:** Bronze Alloy
- Sealing Assembly:** Nickel Alloy with PTFE
- Load Screw:** Bronze Alloy
- Deflector:** Bronze Alloy
- Kick Spring:** Nickel Alloy

**Sprinkler Finishes**

- Bronze

**Sensitivity**

- Fast-Response
- Quick-Response (FM)

**Temperature Ratings**

- Ordinary: 165°F (74°C)
- Intermediate: 212°F (100°C)

**Sprinkler Wrench**

- Model W5
- Model W16 (with guard)

**Guards & Shields\***

- Model D-14 Guard
- Model S-5 Shield

**Listings and Approvals**

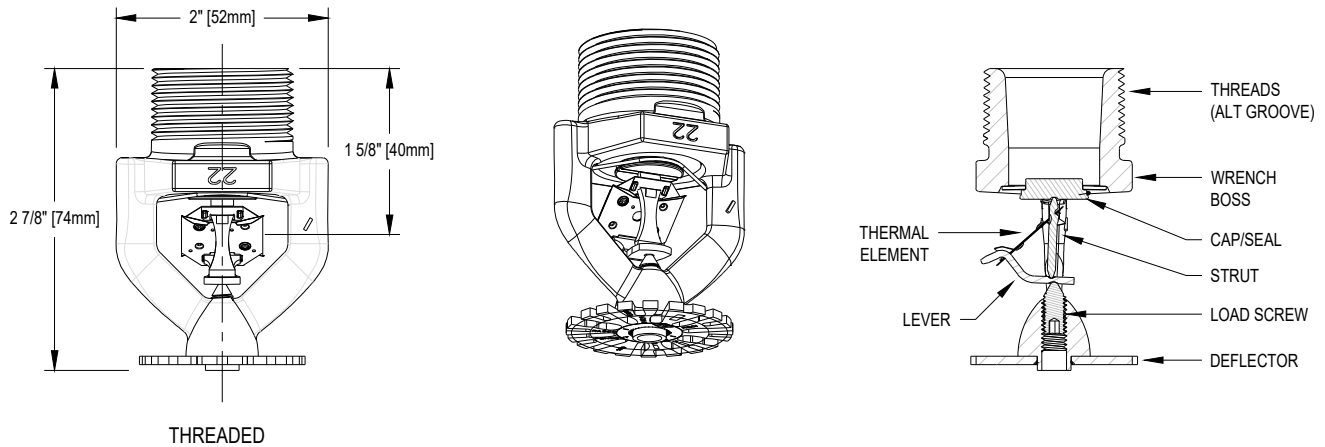
- FM Approved
- CE (2809-CPR-M0054)



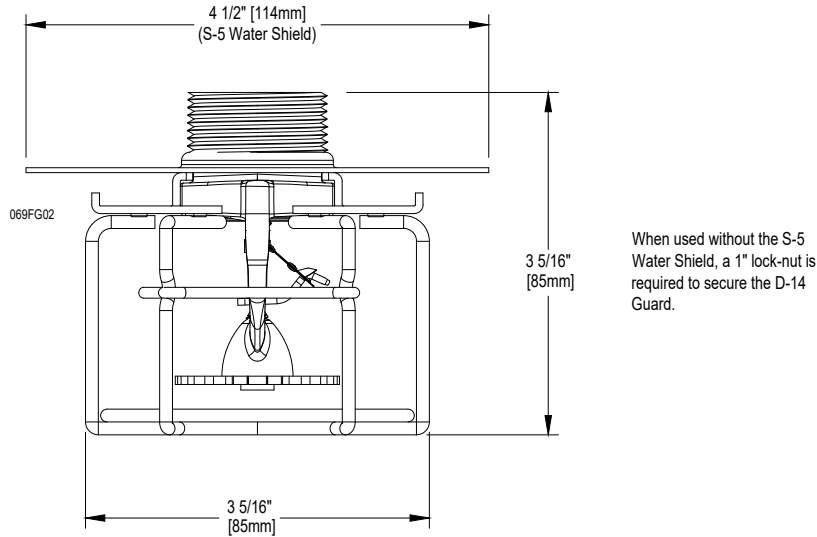
**\*Note:** Guard and guard/shield combination is available and is approved for in-rack or intermediate level use only. Not approved for general use elsewhere.

**Model P22 Sprinkler Dimensions and Components**

**Figure 1**



069FG01



**Note:** Guard and guard/shield combination is available and is approved for in-rack or intermediate level use only. Not approved for general use elsewhere.

Model P22 Commodity Selection and Design Criteria Overview

Table B

Storage Type	NFPA	FM GLOBAL
Sprinkler Type	ESFR	Storage
Response Type	ESFR	Quick Response
System Type	Wet	Wet
Temperature Rating °F (°C)	165 (74), 212 (100)	165 (74), 212 (100)
Roof Construction	See NFPA 13	See FM Global 2-0
Ceiling Slope	See NFPA 13	See FM Global 2-0
Maximum Coverage Area	See NFPA 13	See FM Global 2-0
Minimum Coverage Area	See NFPA 13	See FM Global 2-0
Maximum Spacing	See NFPA 13	See FM Global 2-0
Minimum Spacing	See NFPA 13	See FM Global 2-0
Minimum Clearance to Commodity	See NFPA 13	See FM Global 2-0
Sprinkler Distance to Ceiling	See NFPA 13	See FM Global 2-0
Open Frame, Single, Double, Multiple Row, or Portable Rack Storage of Class I-IV, and Group A Plastics	See NFPA 13	See FM 2-0 & 8-9
Solid Pile or Palletized Storage of Class I - IV and Group A Plastics	See NFPA 13	See FM 2-0 & 8-9
Idle Pallet Storage	See NFPA 13	See FM 2-0, 8-9 & 8-24
Rubber Tire Storage	See NFPA 13	See FM 2-0 & 8-3
Rolled Paper Storage	See NFPA 13	See FM 8-21
Flammable Liquid Storage	See NFPA 30	See FM 7-29
Aerosol Storage	See NFPA 30B	See FM 7-31
Auto Components in Portable Racks	See NFPA 13	See FM 2-0 and 8-9

## Installation

Model P22 sprinklers are intended for installation in accordance with NFPA 13 and FM Loss Prevention Data Sheets 2-0 and 8-9, as well as the requirements of any Authorities Having Jurisdiction. See Table B for information on NFPA and FM Global design criteria for the Model P22 sprinkler.

**Caution:** When handling sprinklers, hold sprinklers only by the frame arms and do not apply any force on the link assembly.

For threaded sprinklers only, use the Model W5 or W16 sprinkler wrench (see Figure 3) for removal and installation. Any other type of wrench may damage the sprinkler. A grooved wrench boss is provided on the sprinkler to limit the potential for the wrench to slip during installation. After applying a thread sealant to the male sprinkler threads, Model P22 sprinklers should be tightened between 22-30 lb-ft (30-40 N·m) torque. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinkler. Damaged sprinklers must be replaced immediately.

Failure to follow these installation instructions may result in leaks, inadvertent operation, or non-operation of sprinklers.

## Maintenance

Reliable Model P22 sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25, as well as the requirements of any Authorities Having Jurisdiction.

Prior to installation, sprinklers should remain in the original cartons and packaging until used. This will minimize the potential for damage to sprinklers that could cause improper operation or non-operation.

Do not clean sprinklers with soap and water, ammonia liquid or any other cleaning fluids. Remove dust by gentle vacuuming without touching the sprinkler.

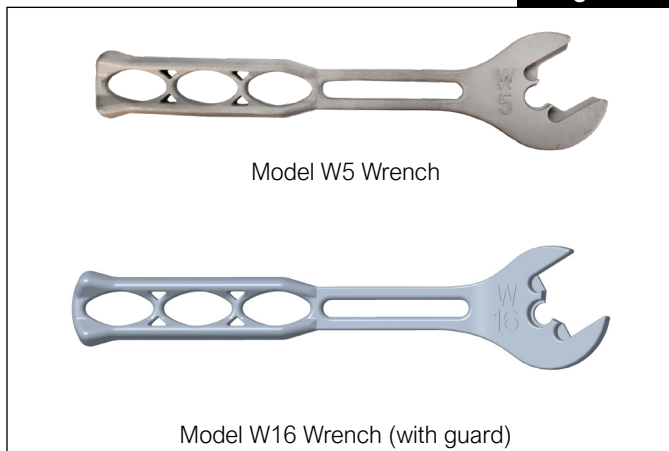
Replace any sprinkler which has been painted (other than factory applied).

Once operated, automatic sprinklers cannot be reassembled and/or reused. A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers.

Failure to properly maintain sprinklers may result in inadvertent operation or non-operation during a fire event.

## Wrenches

Figure 3



## Guarantee

For the Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit [www.reliablesprinkler.com](http://www.reliablesprinkler.com).

## Ordering Information

### Specify:

#### Sprinkler

- P22

#### Temperature Rating

- 165°F (74°C)
- 212°F (100°C)

#### End Connection

- 1" NPT
- ISO7-1R1 (BSPT)

#### Optional

- Model D-14 Guard
- Model S-5 Shield