



Model J168 Upright

Storage and Non-Storage Sprinkler
K16.8 (242 metric)

Product Description

The Reliable Model J168 Upright is a standard-response standard coverage 16.8 (242) K-factor sprinkler utilizing a solder capsule thermal element in 165°F (74°C), 212°F (100°C), and 286°F (141°C) temperature ratings.

The solder is captured in the cylinder of the capsule by a stainless steel ball. When the solder melts, the ball moves into the cylinder allowing the thermal element to fall away from the sprinkler. When this occurs, the compressed strut and lever spring free from the sprinkler. System pressure then clears the waterway of all operating parts allowing the deflector to evenly distribute water.

The Model J168 is provided with 3/4-inch NPT or ISO 7-1 R3/4 threads, and is installed using the Model J1 sprinkler wrench.

Application

This sprinkler is intended for use in hydraulically calculated control mode density area (CMDA) storage and non-storage occupancies in accordance with the area/density curves of NFPA 13 or other applicable standards.

The Model J168 is cULus Listed as a standard-response storage sprinkler, and FM Approved as both a standard-response storage and non-storage sprinkler.

Additional criteria for use as a storage sprinkler can be found in Table B.

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 J168 Upright

Model J168 Specifications

Table A

Style	Sprinkler Identification Number (SIN)	Listings and Approvals	Sensitivity	K-Factor
Upright	RA1124	cULus, FM	Standard Response	16.8 (242 metric)

Model J168 Upright Sprinkler

SIN RA1124

Technical Specifications

Style: Upright
Threads: 3/4" NPT or ISO 7-1R3/4
Nominal K-Factor: 16.8 (242 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Thermal Sensor: Solder Capsule
Sprinkler Frame: Brass Alloy
Button/Cup: Brass Alloy
Sealing Assembly: Brass Alloy with PTFE
Load Screw: Bronze
Deflector: Bronze Alloy
Levers: Bronze Alloy

Finishes

See Table C

Sensitivity

Standard Response

Temperature Ratings

See Table D

Sprinkler Wrench

Model J1

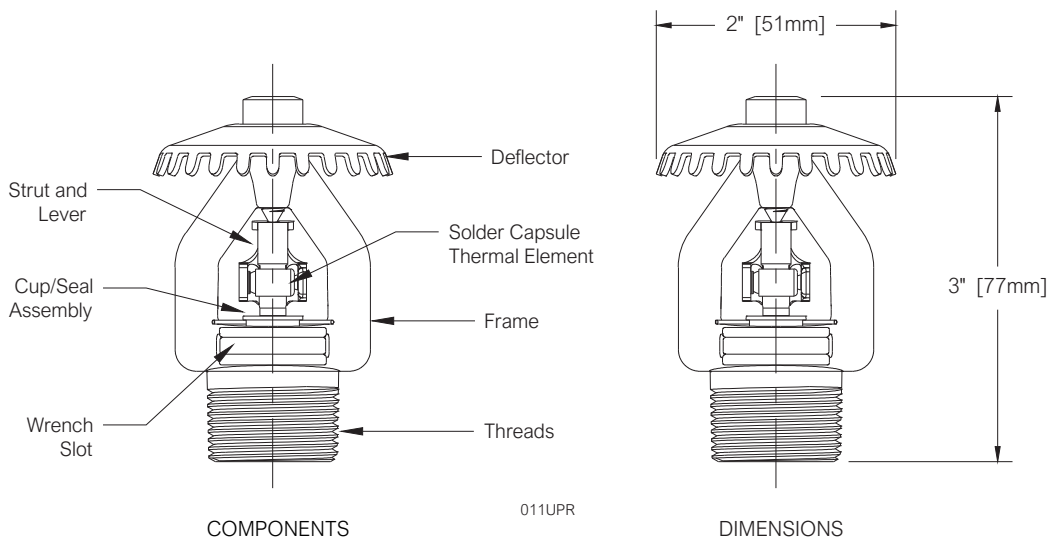
Listings and Approvals

cULus (Storage)
 FM Approved (Storage, Non-storage)



Model J168 Upright Components and Dimensions

Figure 1



Model J168 Upright Commodity Selection and Design Criteria Overview

Table B

Storage Type	NFPA	FM GLOBAL
Sprinkler Type	CMDA	Storage
Response Type	SR	SR
System Type	As Permitted by NFPA	As Permitted by NFPA
Temperature Rating °F (°C)	165, 212, 286 (74, 100, 141)	165, 212, 286 (74, 100, 141)
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 2-0 & 8-9
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 Commodity and Group A Plastic	See NFPA 13	See FM 2-0 & 8-9
Solid Pile or Palletized Storage of Class I - IV Commodity and Group A Plastic	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 8-3
Rolled Paper Storage	See NFPA 13	N/A
Flammable Liquid Storage	See NFPA 30	See FM 7-29 and 8-9
Aerosol Storage	See NFPA 13	See FM 7-31
Auto Components in Portable Racks	See NFPA 13	See FM 2-0 and 8-9

Finishes

Table C

Standard Finishes
Bronze
Chrome ⁽¹⁾
Lead ⁽²⁾⁽³⁾
Wax ⁽¹⁾⁽³⁾⁽⁴⁾
Wax over Lead ⁽¹⁾⁽³⁾⁽⁴⁾

Notes:

1. Not FM Approved
2. cULus listed and FM approved as corrosion resistant.
3. cULus listed as corrosion resistant.
4. Clear wax used on ordinary temperature rated sprinklers. Brown wax used on intermediate temperature rated sprinklers. Brown wax may be used on high temperature rated sprinklers where the ambient temperature does not exceed 150°F (66°C).

Temperature Ratings

Table D

Classification	Sprinkler Rating		Maximum Ambient Temperature		Frame Color
	°F	°C	°F	°C	
Ordinary	165	74	100	38	Uncolored White Blue
Intermediate	212	100	150	66	
High	286	141	225	107	

Installation

Model J168 upright sprinklers must be installed according to appropriate NFPA Standards, FM Global Loss Prevention Data Sheets, and/or the requirements of the authority having jurisdiction.

Use only the Model J1 sprinkler wrench for sprinkler installation. Any other type of wrench may damage the sprinkler. Damaged sprinklers must be replaced immediately.

A leak tight joint should be obtained with a torque of 14 to 20 lb-ft (19 to 27 N.m) for 3/4 inch NPT and ISO 7-R3/4 thread sprinklers after applying appropriate thread sealant. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinklers.

Model J1 Wrench

Figure 2



Maintenance

Reliable Model J168 upright 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). 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.

Guarantee

For the Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Ordering Information

Specify the following when ordering.

Model J168 Sprinkler

- Upright

Threads

- 3/4" NPT
- ISO 7-R3/4

Temperature Rating

- 165°F (74°C)
- 212°F (100°C)
- 286°F (141°C)

Finish

See Table C

Wrench

- Model J1