Reliable®

Model J112 and JL112 Sprinklers

Extended Coverage Sprinklers for
Light Hazard and Ordinary Hazard

cULus Listed
K11.2 (160 metric)

Product Description

Model J112 and JL112 series sprinklers are cULus Listed extended coverage spray sprinklers intended for installation in accordance with NFPA 13. The sprinklers also have cULus Listed Specific Application Criteria for installation under concrete tee construction in accordance with the requirements documented in this bulletin. Coverage areas up to 400 ft^2 (37 m^2) per sprinkler with a maximum spacing of up to 20 ft by 20 ft (6.1 m by 6.1 m) are permitted for both Light Hazard and Ordinary Hazard occupancies. Listed flows and pressures for each hazard classification and sprinkler spacing are provided in this bulletin. Model J112 and JL112 series sprinkler are cULus Listed as quick-response sprinklers for Light Hazard occupancies. When used in the Ordinary Hazard occupancies, Model J112 and JL112 series sprinklers are cULus Listed as quick-response for spacings up to 14 ft by 14 ft (4.3 m by 4.3 m) and standard-response for other listed spacings up to 20 ft by 20 ft (6.1 m by 6.1 m).

Model J112 Pendent and J112 Upright sprinklers use a glass bulb operating element and are cULus Listed as Corrosion Resistant Sprinklers when ordered with Polyester or Electroless Nickel PTFE (ENT) finish. Model JL112 Pendent and JL112 Upright sprinklers use a fusible link operating element. Model J112 Pendent and Model JL112 Pendent sprinklers are cULus Listed for use with the Model F2 and Model FP recessed escutcheons, which provide up to ½ inch (13 mm) of adjustment. In addition, for Ordinary Hazard occupancies, the Model J112 Pendent and Model JL112 Pendent sprinklers are cULus Listed for use with the Model F1 recessed escutcheon that provides up to ¾ inch (19 mm) of adjustment.

Application

Model J112 and JL112 series sprinklers are intended for installation in Light Hazard and Ordinary Hazard occupancies in accordance with NFPA 13. The sprinklers must be installed in accordance with the requirements of NFPA 13 for extended coverage spray sprinklers and the requirements identified in this bulletin. In addition to the installation requirements of NFPA 13, cULus Listed Specific Application Criteria for installation under concrete tee construction is provided in this bulletin.

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 JL112 Upright


Model J112 Upright


Model JL112 Pendent


Model J112 Pendent


F1/F2 Recessed Escutcheon


FP Recessed Escutcheon

Model J112 and JL112 Series Sprinkler Summary — **Table A**

Model	Orientation	Operating Element	Sprinkler Identification Number (SIN)
J112	Pendent	Glass Bulb	RA7216
JL112	Pendent	Fusible Link	R7216
J112	Upright	Glass Bulb	RA7326
JL112	Upright	Fusible Link	R7326

Model J112 Pendent Sprinkler — SIN RA7216

Technical Specifications
Style: Extended Coverage Pendent
Threads: 3/4" NPT or ISO 7-1R3/4
Nominal K-Factor: 11.2 (160 metric)
Max. Working Pressure: 175 psi (12 bar)
Min. Spacing: 8 ft. (2.4 m)

Material Specifications
Thermal Sensor: Glass Bulb
Cup: Bronze Alloy
Frame: Brass Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Kick Spring: Steel Alloy
Deflector: Brass Alloy

Sprinkler Wrench
Model J1
Model RJ (recessed)

Finishes
(See Table G)

Sensitivity
(See Table B)

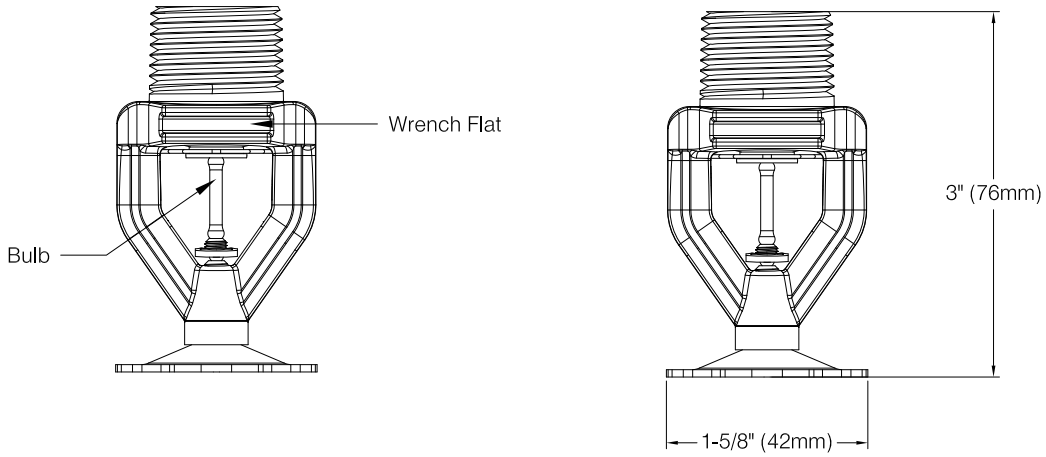
Temperature Ratings
155°F (68°C)
200°F (93°C)
286°F (141°C)

Recessed Escutcheons
F1-3/4" (19mm) adjustment (Ordinary Hazard only)
F2-1/2" (13mm) adjustment
FP-1/2" (13mm) adjustment

Listings and Approvals
cULus Listed
cULus Listed as Corrosion Resistant with Polyester and ENT finish only



Model J112 Pendent Sprinkler Components — **Figure 1**



Listed Design Criteria and Sensitivity — **Table B**

Max. Spacing ft. x ft. (m x m)	Light Hazard		Ordinary Hazard Group 1		Ordinary Hazard Group 2	
	Flow gpm (l/m)	Pressure psi (bar)	Flow gpm (l/m)	Pressure psi (bar)	Flow gpm (l/m)	Pressure psi (bar)
12 x 12 (3.7 x 3.7)	30 (114) QR	7.2 (0.50) QR	30 (114) QR	7.2 (0.50) QR	39 (148) QR	12.1 (0.8) QR
14 x 14 (4.3 x 4.3)	30 (114) QR	7.2 (0.50) QR	30 (114) QR	7.2 (0.50) QR	39 (148) QR	12.1 (0.8) QR
16 x 16 (4.9 x 4.9)	30 (114) QR	7.2 (0.50) QR	39 (148) SR	12.1 (0.8) SR	51 (193) SR	20.7 (1.4) SR
18 x 18 (5.5 x 5.5)	33 (125) QR	8.7 (0.60) QR	49 (186) SR	19.1 (1.3) SR	65 (246) SR	33.7 (2.3) SR
20 x 20 (6.1 x 6.1)	40 (152) QR	12.8 (0.88) QR	60 (227) SR	28.7 (2.0) SR	80 (303) SR	51.0 (3.5) SR

QR = Quick-response
SR = Standard-response

Model JL112 Pendent Sprinkler — SIN R7216

Technical Specifications
Style: Extended Coverage Pendent
Threads: 3/4" NPT or ISO 7-1R3/4
Nominal K-Factor: 11.2 (160 metric)
Max. Working Pressure: 175 psi (12 bar)
Min. Spacing: 8 ft. (2.4 m)

Material Specifications
Thermal Sensor: Nickel Alloy Solder Link
Frame: Brass Alloy
Levers: Brass Alloy
Cap: Bronze Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Deflector: Brass Alloy
Strut: Copper Alloy

Sprinkler Wrench
Model J1
Model RJ (recessed)

Finishes
(See Table G)

Sensitivity
(See Table C)

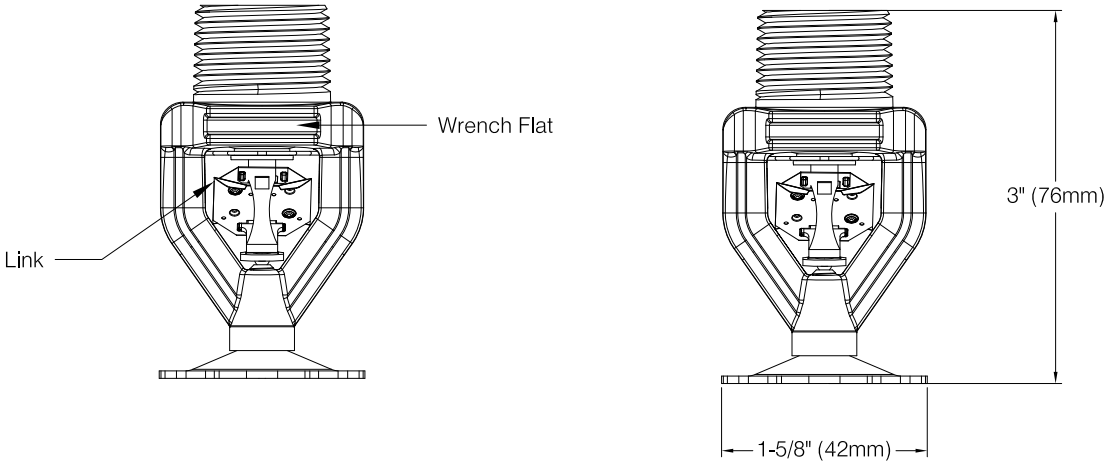
Temperature Rating*
165°F (74°C)
212°F (100°C)

Recessed Escutcheons
F1-3/4" (19mm) adjustment (Ordinary Hazard only)
F2-1/2" (13mm) adjustment
FP-1/2" (13mm) adjustment

Listings and Approvals
cULus Listed



Model J112 Pendent Sprinkler Components — **Figure 2**



Listed Design Criteria and Sensitivity — **Table C**

Max. Spacing ft. x ft. (m x m)	Light Hazard		Ordinary Hazard Group 1		Ordinary Hazard Group 2	
	Flow gpm (l/m)	Pressure psi (bar)	Flow gpm (l/m)	Pressure psi (bar)	Flow gpm (l/m)	Pressure psi (bar)
12 x 12 (3.7 x 3.7)	30 (114) QR	7.2 (0.50) QR	30 (114) QR	7.2 (0.50) QR	39 (148) QR	12.1 (0.8) QR
14 x 14 (4.3 x 4.3)	30 (114) QR	7.2 (0.50) QR	30 (114) QR	7.2 (0.50) QR	39 (148) QR	12.1 (0.8) QR
16 x 16 (4.9 x 4.9)	30 (114) QR	7.2 (0.50) QR	39 (148) SR	12.1 (0.8) SR	51 (193) SR	20.7 (1.4) SR
18 x 18 (5.5 x 5.5)	33 (125) QR	8.7 (0.60) QR	49 (186) SR	19.1 (1.3) SR	65 (246) SR	33.7 (2.3) SR
20 x 20 (6.1 x 6.1)	40 (152) QR	12.8 (0.88) QR	60 (227) SR	28.7 (2.0) SR	80 (303) SR	51.0 (3.5) SR

QR = Quick-response
SR = Standard-response

Model J112 Upright Sprinkler — SIN RA7326

Technical Specifications
Style: Extended Coverage Upright
Threads: 3/4" NPT or ISO 7-1 R3/4
Nominal K-Factor: 11.2 (160 metric)
Max. Working Pressure: 175 psi (12 bar)
Min. Spacing: 8 ft. (2.4 m)

Material Specifications
Thermal Sensor: Glass Bulb
Cup: Bronze Alloy
Frame: Brass Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Kick Spring: Steel Alloy
Deflector: Brass Alloy

Finishes
(See Table G)

Sensitivity
(See Table D)

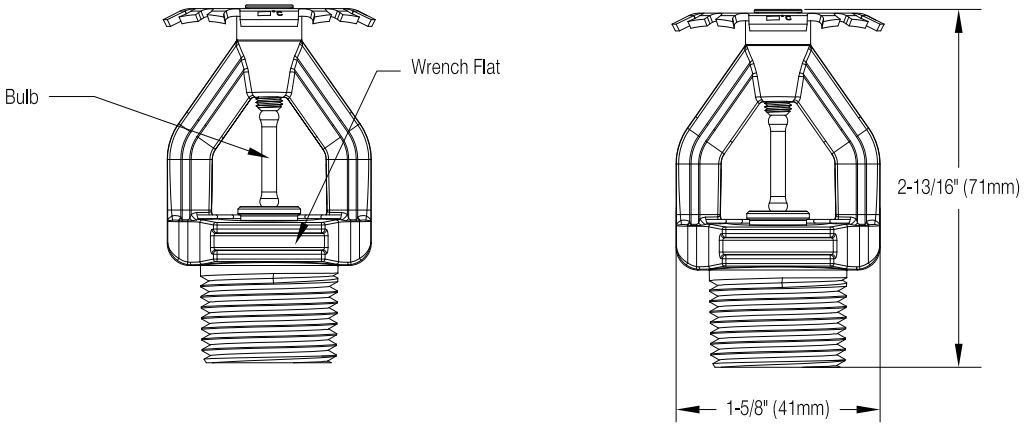
Temperature Rating
155°F (68°C)
200°F (93°C)
286°F (141°C)

Sprinkler Wrench
Model J1

Listings and Approvals
cULus Listed
cULus Listed as Corrosion Resistant with Polyester and ENT finish only



Model J112 Upright Sprinkler Components — **Figure 3**



Listed Design Criteria and Sensitivity — **Table D**

Max. Spacing ft. x ft. (m x m)	Light Hazard		Ordinary Hazard Group 1		Ordinary Hazard Group 2	
	Flow gpm (l/m)	Pressure psi (bar)	Flow gpm (l/m)	Pressure psi (bar)	Flow gpm (l/m)	Pressure psi (bar)
12 x 12 (3.7 x 3.7)	30 (114) QR	7.2 (0.50) QR	30 (114) QR	7.2 (0.50) QR	39 (148) QR	12.1 (0.8) QR
14 x 14 (4.3 x 4.3)	30 (114) QR	7.2 (0.50) QR	30 (114) QR	7.2 (0.50) QR	39 (148) QR	12.1 (0.8) QR
16 x 16 (4.9 x 4.9)	30 (114) QR	7.2 (0.50) QR	39 (148) SR	12.1 (0.8) SR	51 (193) SR	20.7 (1.4) SR
18 x 18 (5.5 x 5.5)	33 (125) QR	8.7 (0.60) QR	49 (186) SR	19.1 (1.3) SR	65 (246) SR	33.7 (2.3) SR
20 x 20 (6.1 x 6.1)	40 (152) QR	12.8 (0.88) QR	60 (227) SR	28.7 (2.0) SR	80 (303) SR	51.0 (3.5) SR

QR = Quick-response
SR = Standard-response

Model JL112 Upright Sprinkler — SIN R7326

Technical Specifications
Style: Extended Coverage Upright
Threads: 3/4" NPT or ISO 7-1 R3/4
Nominal K-Factor: 11.2 (160 metric)
Max. Working Pressure: 175 psi (12 bar)
Min. Spacing: 8 ft. (2.4 m)

Material Specifications
Thermal Sensor: Nickel Alloy Solder Link
Frame: Brass Alloy
Levers: Brass Alloy
Strut: Brass Alloy
Cap: Bronze Alloy
Sealing Assembly: Nickel Alloy with PTFE
Load Screw: Bronze Alloy
Deflector: Brass Alloy

Finishes
(See Table G)

Sensitivity
(See Table E)

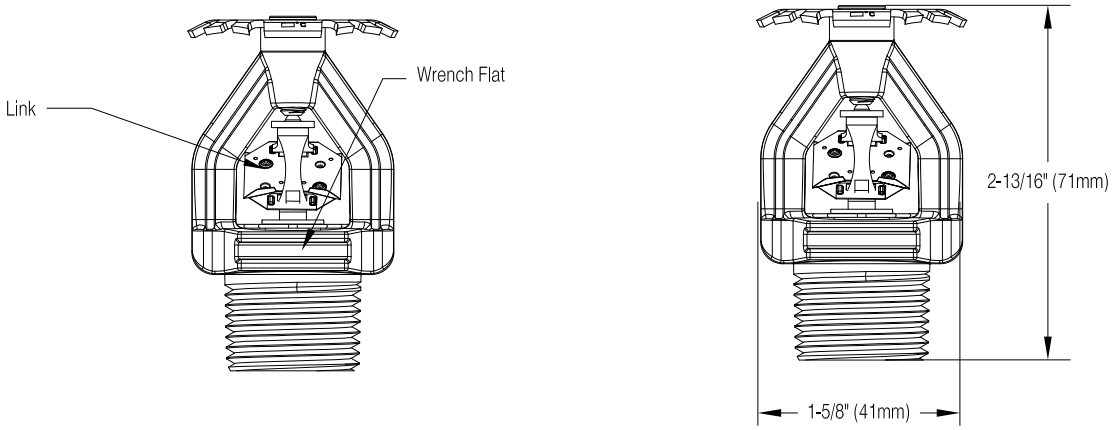
Temperature Rating*
165°F (74°C)
212°F (100°C)

Sprinkler Wrench
Model J1

Listings and Approvals
cULus Listed



Model JL112 Upright Sprinkler Components — **Figure 4**



Listed Design Criteria and Sensitivity — **Table E**

Max. Spacing ft. x ft. (m x m)	Light Hazard		Ordinary Hazard Group 1		Ordinary Hazard Group 2	
	Flow gpm (l/m)	Pressure psi (bar)	Flow gpm (l/m)	Pressure psi (bar)	Flow gpm (l/m)	Pressure psi (bar)
12 x 12 (3.7 x 3.7)	30 (114) QR	7.2 (0.50) QR	30 (114) QR	7.2 (0.50) QR	39 (148) QR	12.1 (0.8) QR
14 x 14 (4.3 x 4.3)	30 (114) QR	7.2 (0.50) QR	30 (114) QR	7.2 (0.50) QR	39 (148) QR	12.1 (0.8) QR
16 x 16 (4.9 x 4.9)	30 (114) QR	7.2 (0.50) QR	39 (148) SR	12.1 (0.8) SR	51 (193) SR	20.7 (1.4) SR
18 x 18 (5.5 x 5.5)	33 (125) QR	8.7 (0.60) QR	49 (186) SR	19.1 (1.3) SR	65 (246) SR	33.7 (2.3) SR
20 x 20 (6.1 x 6.1)	40 (152) QR	12.8 (0.88) QR	60 (227) SR	28.7 (2.0) SR	80 (303) SR	51.0 (3.5) SR

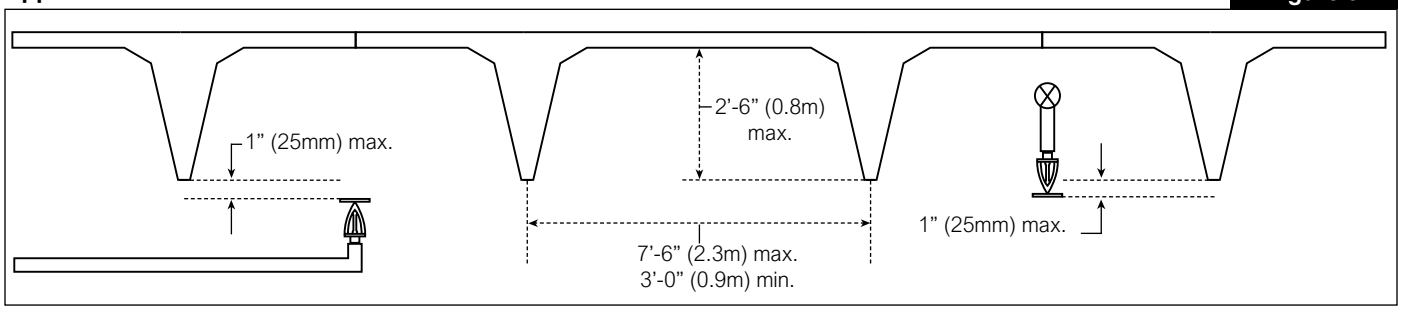
QR = Quick-response
SR = Standard-response

Model J112 and JL112 Specific Application Criteria for Use Under Concrete Tee Construction cULus Listed

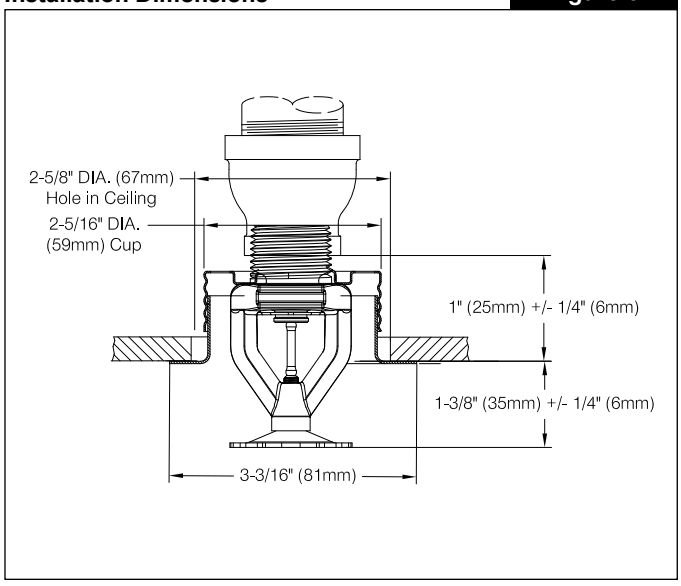
The Model J112 and JL112 pendent and upright sprinklers are cULus Listed for installation under concrete tee construction in accordance with the following specific application criteria:

- Max. Tee Depth: 2'- 6" (0.8m)
- Max. Tee Stem Spacing: 7'- 6" (2.3m)
- Min. Tee Stem Spacing: 3'- 0" (0.9m)
- Max. Tee Length: 32'- 0" (9.8m) or non-combustible baffles not less than the depth of the tees must be installed so that the longitudinal space between baffles does not exceed 32ft (9.8m) in length.
- Max. Deflector distance below Tee: 1" (25mm)
- Comply with obstructions to the Sprinkler Discharge Pattern Development requirements of the NFPA13 where deflector is located above bottom of tee.

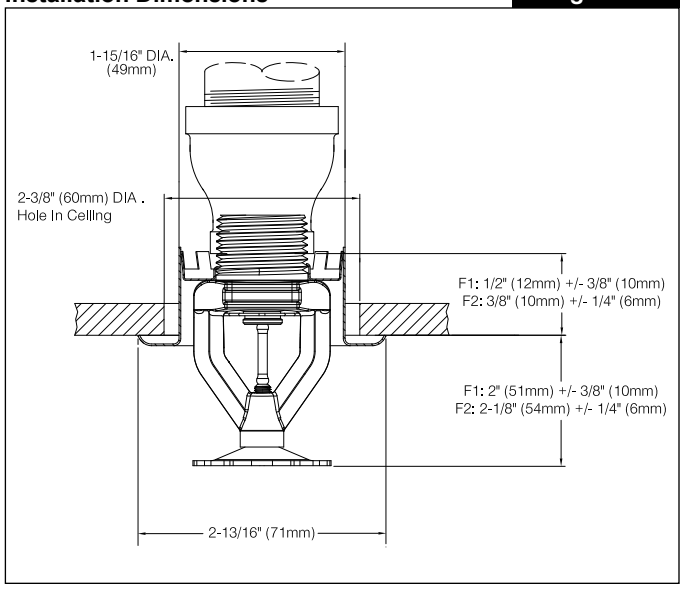
Application and Installation for Use Under Concrete Tee **Figure 5**



Model FP Escutcheon Installation Dimensions **Figure 6**



Model F1/F2 Escutcheon Installation Dimensions **Figure 7**



Note: The Model FP, F1, or F2 may be used for ordinary hazard occupancies. For light hazard occupancies, the Model FP or F2 recessed escutcheon must be used. Model J112 and JL112 sprinklers with Model F1 recessed escutcheon are not listed for use in light hazard occupancies.

Sprinkler & Escutcheon Finishes [1] **Table G**

Standard Finishes		Special Application Finishes	
Sprinkler	**F1, F2, & FP[3] Escutcheons**	**Sprinkler**	**F1, F2, & FP[3] Escutcheons**
Bronze Chrome Plated White Polyester [2]	Brass Chrome Plated White Polyester	Bright Brass Satin Chrome Custom Color Polyester[2] Electroless Nickel PTFE [2] [4]	Bright Brass Satin Chrome Custom Color Polyester Type 316 Stainless Steel

Notes: [1] Paint or any other coating applied over the factory finish will void all approvals and warranties.
[2] cULus Listed Corrosion Resistant when ordered with Model J112 Pendent (RA7216) or Model J112 Upright (RA7326).
[3] The Model FP escutcheon assembly consists of an unfinished galvanized cup with a finished escutcheon ring.
[4] Available with Model J112 Pendent (RA7216) and Model J112 Upright (RA7326) only.

Installation

Glass bulb sprinklers have orange bulb protectors to minimize bulb damage during shipping, handling, and installation. Reliable sprinkler installation wrenches are designed to install sprinklers with bulb protectors in place. Remove the bulb protector at the time when the sprinkler system is placed in service for fire protection. Removal of the bulb protector before this time may leave the bulb vulnerable to damage. Remove bulb protectors by undoing the clasp by hand. Do not use tools to remove bulb protectors.

Models J112 and JL112 series sprinklers must be installed with the Reliable sprinkler installation wrench identified in this bulletin. Any other wrench may damage the sprinkler. Recommended installation torque is 14 to 20 lb.ft (19 to 27 N.m). Do not tighten sprinklers over the maximum recommended installation torque. Exceeding the maximum recommended installation torque may cause leakage or impairment of the sprinkler.

Recessed pendent sprinklers are to be installed as shown in Fig. 6 or Fig 7., as applicable to the specific model being installed. Models J112 and JL112 series recessed pendent sprinklers may only be installed with the Reliable Model F1, Model F2, or Model FP recessed escutcheon. The use of any other recessed escutcheon will void all approvals and negate all warranties. The Reliable Model FP escutcheon may not be used in ceilings having positive pressure with respect to the space below. Ensure that the openings in the Model FP escutcheon/can assembly are unobstructed following installation.

Maintenance

Models J112 and JL112 series sprinklers should be inspected 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 gentle vacuuming. Replace any sprinkler which 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 to minimize the potential for damage to sprinklers that would cause improper operation or non-operation.

J1 Wrench



RJ Wrench



Listings and Approvals

Listed by Underwriters Laboratories, Inc. and certified by Underwriters Laboratories of Canada (cULus)

UL Listing Category

Sprinklers, Automatic and Open Extended Coverage Sprinklers
UL Guide Number – VNIV.

Ordering Information

Specify:

1. Sprinkler Model: [J112 Pendent] [JL112 Pendent]
   [J112 Upright] [JL112 Upright]
2. Temperature Rating: J112: [155°F (68°C)] [200°F (93°C)]
   [286°F (141°C)]
   JL112: [165°F (74°C)] [212°F (100°C)]
3. Finish: (See Table G)
4. Escutcheon (Pendent Only; for 3/4" threads)
   Model F1 (Ordinary Hazard Only)
   Model F2
   Model FP

P/N 9999970310