Reliable®

Model G Series
Standard-Response Sprinklers

Features

- Standard coverage, standard-response sprinklers
- Upright, pendent, horizontal sidewall, and vertical sidewall deflectors
- Robust solder capsule thermal element
- Available in a wide variety of finishes

Product Description

Reliable Model G Series sprinklers are standard-response standard spray automatic sprinklers using a solder capsule thermal element. 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.

Pendent and horizontal sidewall sprinklers may be installed exposed or surface mounted using escutcheons such as the Reliable Models B, C, or HB (reference Technical Bulletin 204).

When installed recessed, the Model G Series sprinklers are specifically listed with and may only be installed with listed Reliable escutcheons. Refer to the technical information on the following pages for specific listings for recessed installations and Figures 6 and 7 for dimensional information.

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.



Upright



Pendent

Note: Not all versions of the product are shown.

When fitted with an approved water shield, these sprinklers may considered intermediate sprinklers for use in racks, below grated walkways, and other areas where intermediate level sprinklers are required.

Sprinkler Summary — **Table A**

Model	K-Factor gpm/psi$^{1/2}$ (lpm/bar$^{1/2}$)	Listings & Approvals	Threads	Sprinkler Identification Number (SIN)
G Upright	2.8 (40)	UL, FM	1/2" NPT, ISO 7-R1/2	R1021
	4.2 (60)	UL	1/2" NPT, ISO 7-R1/2	R1023
	5.6 (80)	UL, FM, CE	1/2" NPT, ISO 7-R1/2	R1025
	8.0 (115)	UL, FM	1/2" NPT, ISO 7-R1/2	R1026
	8.0 (115)	UL, FM, CE	3/4" NPT, ISO 7-R3/4	R1027
G Upright Intermediate	5.6 (80)	UL, FM	1/2" NPT, ISO 7-R1/2	R1425
	8.0 (115)	UL, FM	3/4" NPT, ISO 7-R3/4	R1427
G Pendent	2.8 (40)	UL, FM	1/2" NPT, ISO 7-R1/2	R1011
	4.2 (60)	UL	1/2" NPT, ISO 7-R1/2	R1013
	5.6 (80)	UL, FM	1/2" NPT, ISO 7-R1/2	R1015
	8.0 (115)	UL, FM, CE	3/4" NPT, ISO 7-R3/4	R1017
G Horizontal Sidewall	2.8 (40)	UL	1/2" NPT, ISO 7-R1/2	R1231
	4.2 (60)	UL	1/2" NPT, ISO 7-R1/2	R1233
	5.6 (80)	UL, FM	1/2" NPT, ISO 7-R1/2	R1235
	8.0 (115)	UL	1/2" NPT, ISO 7-R1/2	R1236
	8.0 (115)	UL	3/4" NPT, ISO 7-R3/4	R1237
G Vertical Sidwall	5.6 (80)	FM, CE	1/2" NPT, ISO 7-R1/2	R1285

Model G Upright Sprinkler

Technical Specifications
- **Style:** Upright
- **Threads:** (see Table B)
- **Nominal K-Factor:** (See Table B)
- **Max. Working Pressure:** 175 psi (12 bar)

Material Specifications
- **Thermal Sensor:** Solder capsule
- **Sprinkler Frame:** Brass Alloy
- **Cap:** Bronze Alloy with PTFE
- **Load Screw:** Brass Alloy
- **Deflector:** Brass Alloy

Sprinkler Finishes
(See Table F)

Sensitivity
Standard response

Temperature Ratings
135°F (57°C)
165°F (74°C)
212°F (100°C)
286°F (141°C)

Guards & Shields
D-1 Guard (UL)
C-1 Guard (FM)
C-3 Guard with Shield (UL, FM on R1025, R1026, and R1027 only)

Sprinkler Wrench
Model W2

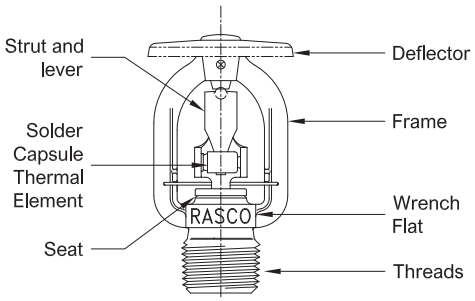
Listings and Approvals
(See Table B)

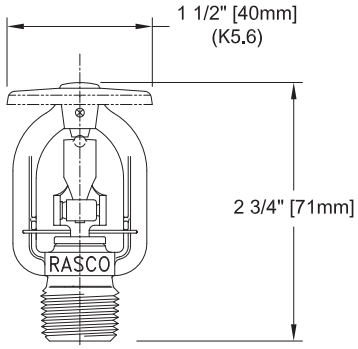


Model G Upright Sprinkler Components and Dimensions

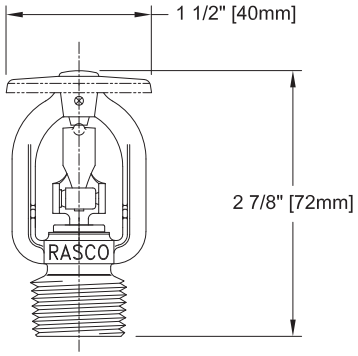
Figure 1

Note: Deflector on K2.8 and K4.2 Model G Upright is 1-1/4" (32 mm) diameter.





Shown with 1/2" Threads



Shown with 3/4" Threads

Model G Upright Sprinklers

Table B

SIN	K-factor (US)	K-factor (Metric)	Threads	Approvals
R1021	2.8	40	1/2” NPT, ISO 7-R1/2	UL, FM
R1023	4.2	60	1/2” NPT, ISO 7-R1/2	UL
R1025	5.6	80	1/2” NPT, ISO 7-R1/2	UL, FM CE: 1438-CPR-0053
R1026	8.0	115	1/2” NPT, ISO 7-R1/2	UL, FM
R1027	8.0	115	3/4” NPT, ISO 7-R3/4	UL, FM CE: 1438-CPR-0053

Model G Intermediate Upright Sprinkler

Technical Specifications
- **Style:** Intermediate Upright
- **Threads:** (See Table C)
- **Nominal K-Factor:** (See Table C)
- **Max. Working Pressure:** 175 psi (12 bar)

Material Specifications
- **Thermal Sensor:** Solder Capsule
- **Sprinkler Frame:** Brass Alloy
- **Cap:** Bronze Alloy with PTFE
- **Load Screw:** Brass Alloy
- **Deflector:** Brass Alloy

Sprinkler Finishes
Bronze (Only)

Sensitivity
Standard response

Temperature Ratings
135°F (57°C)
165°F (74°C)
212°F (100°C)
286°F (141°C)

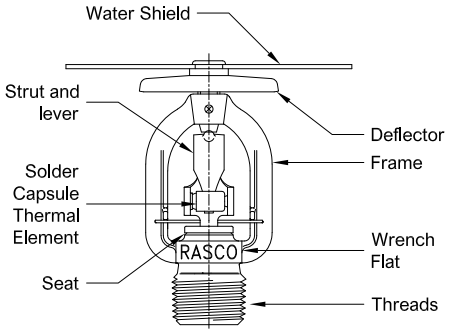
Guards & Shields
Factory Water Shield (cULus, FM)

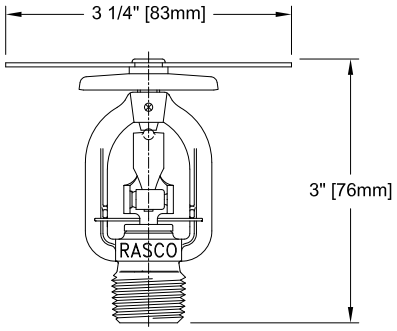
Sprinkler Wrenches
Model W2

Listings and Approvals
(See Table C)

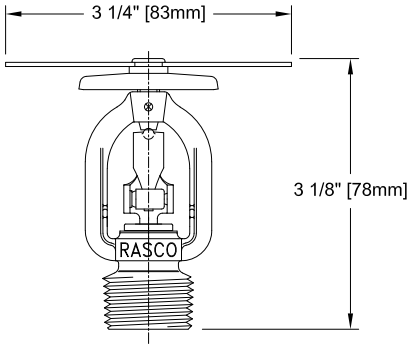


Model G Intermediate Upright Sprinkler Components and Dimensions — **Figure 2**





Shown with 1/2" Threads



Shown with 3/4" Threads

Model G Intermediate Upright Sprinklers — **Table C**

SIN	K-factor (US)	K-factor (Metric)	Threads	Approvals
R1425	5.60	80	1/2” NPT, ISO 7-R1/2	UL, FM
R1427	8.00	115	3/4” NPT, ISO 7-R3/4	UL, FM

Model G Pendent Sprinkler

Technical Specifications
- **Style:**
  - Pendent
  - Recessed Pendent
- **Threads:** (See Table D)
- **Nominal K-Factor:** (See Table D)
- **Max. Working Pressure:**
  - 175 psi (12 bar)

Material Specifications
- **Thermal Sensor:** Solder Capsule
- **Sprinkler Frame:** Brass Alloy
- **Cap:** Bronze Alloy with PTFE
- **Load Screw:** Brass Alloy
- **Deflector:** Brass Alloy

Sprinkler Finishes
(See Table F)

Sensitivity
Standard response

Temperature Ratings
- 135°F (57°C)
- 165°F (74°C)
- 212°F (100°C)
- 286°F (141°C)[1]

Recessed Escutcheons
- G (cULus, all SIN)
- G (FM, SIN R1015 only)[2]
- F1 (cULus, all SIN)
- F1 (LPCB, SIN R1015 only)

Guards & Shields[3]
- D-1 Guard (UL)
- D-5 Guard and Shield (UL, R1015 and R1017)
- C-1 Guard (FM)
- C-5 Guard with Shield (FM on R1015 and R1017 only)
- S-1 (1/2") Shield (cULus, FM, R1015 only)
- S-2 (3/4") Shield (cULus, FM, R1017 only)

Sprinkler Wrenches
- Model W2 (non-recessed pendent)
- Model RC1 (recessed pendent)

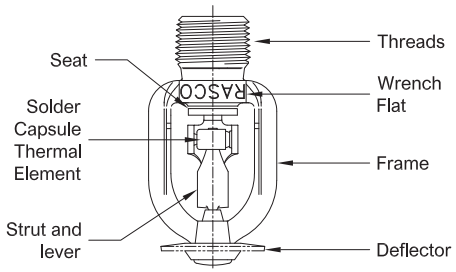
Listings and Approvals
(See Table D)

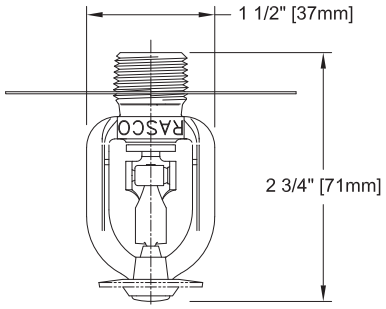


Notes:
1. 286°F (141°C) temperature rated sprinklers not approved for recessed installations.
2. FM Approval of Model G Recessed sprinkler for ordinary and extra hazard occupancies is limited to wet pipe systems only.
3. Not suitable for recessed installations.

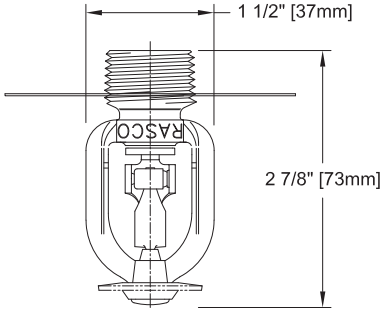
Model G Pendent Sprinkler Components and Dimensions

Figure 3





Shown with 1/2" threads and optional 3-1/4" (83mm) diameter S1 Water Shield (order separately)



Shown with 3/4" threads and optional 3-1/4" (83mm) diameter S2 Water Shield (order separately)

Model G Pendent Sprinklers

Table D

SIN	K-factor (US)	K-factor (Metric)	Threads	Approvals
R1011	2.8	40	1/2" NPT, ISO 7-R1/2	UL, FM
R1013	4.2	60	1/2" NPT, ISO 7-R1/2	UL
R1015	5.6	80	1/2" NPT, ISO 7-R1/2	UL, FM
R1017	8.0	115	3/4" NPT, ISO 7-R3/4	UL, FM CE: 1438-CPR-0053

Model G Horizontal Sidewall Sprinkler

Technical Specifications
- **Style:** Horizontal Sidewall
- **Threads:** (See Table E)
- **Nominal K-Factor:** See Table E
- **Max. Working Pressure:** 175 psi (12 bar)

Material Specifications
- **Thermal Sensor:** Solder Capsule
- **Sprinkler Frame:** Brass Alloy
- **Cap:** Bronze Alloy with PTFE
- **Load Screw:** Brass Alloy
- **Deflector:** Brass Alloy

Sprinkler Finishes
(See Table F)

Sensitivity
Standard response

Temperature Ratings
135°F (57°C)
165°F (74°C)
212°F (100°C)
286°F (141°C)

Recessed Escutcheons[1][2]
F1 (UL)

Guards & Shields[3]
D-1 Guard (UL, all SIN)
C-1 Guard (FM, SIN R1235 only)

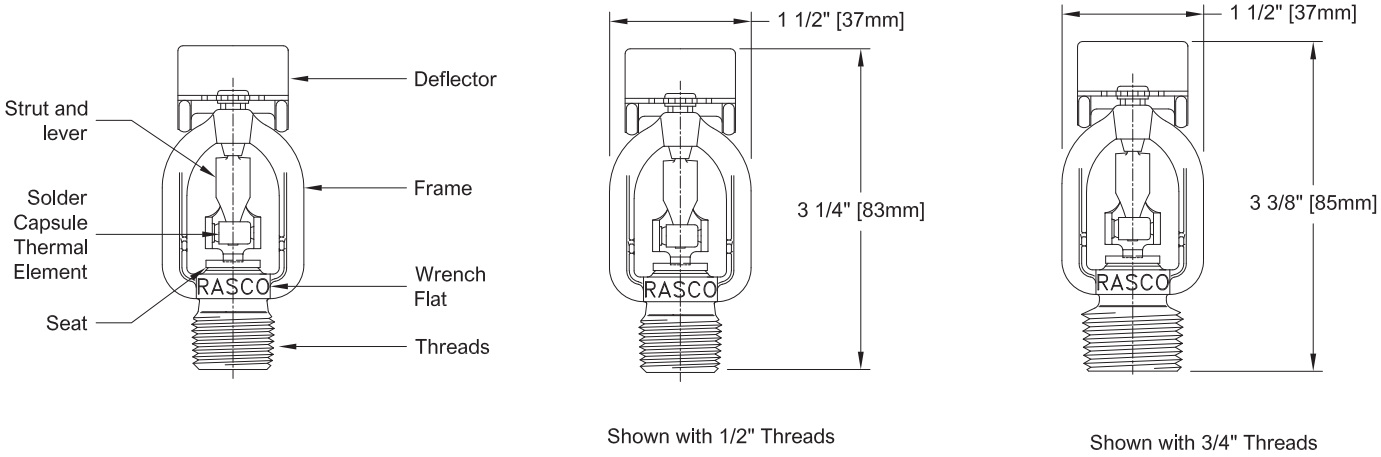
Sprinkler Wrenches
Model W2 (non-recessed sidewall)
Model RC-1 (recessed sidewall)

Listings and Approvals[4]
(See Table E)



Notes:
1. Listed for use with 135°F (57°C) temperature rated sprinkler only.
2. Listed for Light Hazard ONLY when installed recessed.
3. Not suitable for recessed horizontal sidewall installations.
4. Listed for light hazard only, except for SIN R1235 is cULus Listed for ordinary hazard when exposed or surface mounted.

Model G Horizontal Sidewall Sprinkler Components and Dimensions — **Figure 4**



Note: Please refer to Figure 7 for recessed installation.

Model G Horizontal Sidewall Sprinklers — **Table E**

SIN	K-factor (US)	K-factor (Metric)	Threads	Approvals
R1231	2.8	40	1/2” NPT, ISO 7-R1/2	UL
R1233	4.2	60	1/2” NPT, ISO 7-R1/2	UL
R1235	5.6	80	1/2” NPT, ISO 7-R1/2	UL, FM
R1236	8.0	115	1/2” NPT, ISO 7-R1/2	UL
R1237	8.0	115	3/4” NPT, ISO 7-R3/4	UL

Model G Vertical Sidewall Sprinkler — SIN R1285

Technical Specifications
Style:
Upright Vertical Sidewall
Pendent Vertical Sidewall
Threads: 1/2" NPT or ISO 7-R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications
Thermal Sensor: Solder Capsule
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy with PTFE
Load Screw: Brass Alloy
Deflector: Brass Alloy

Sprinkler Finishes
(See Table F)

Sensitivity
Standard response

Temperature Ratings
135°F (57°C)
165°F (74°C)
212°F (100°C)
286°F (141°C)

Guards & Shields
C-1 Guard (FM)

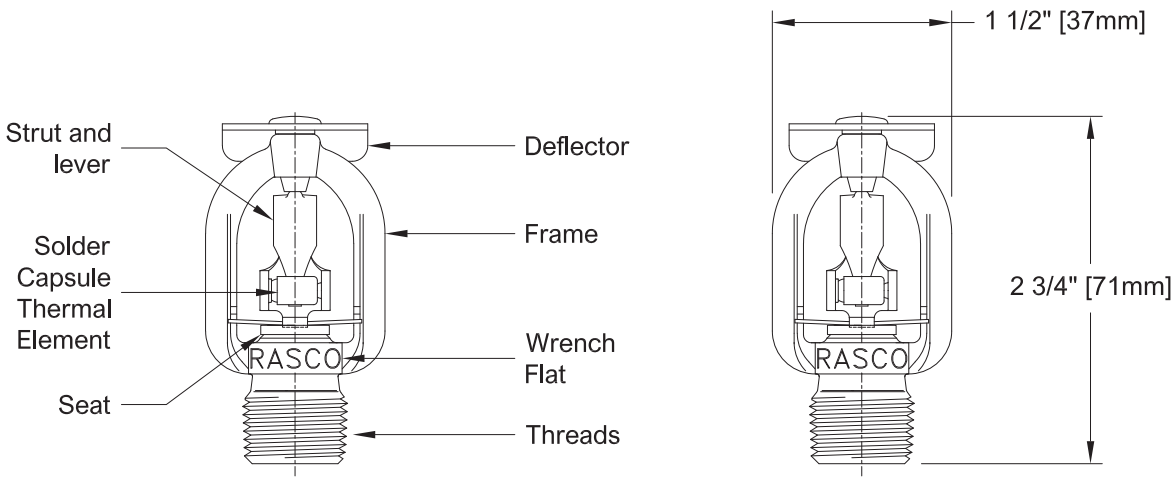
Sprinkler Wrenches
Model W2

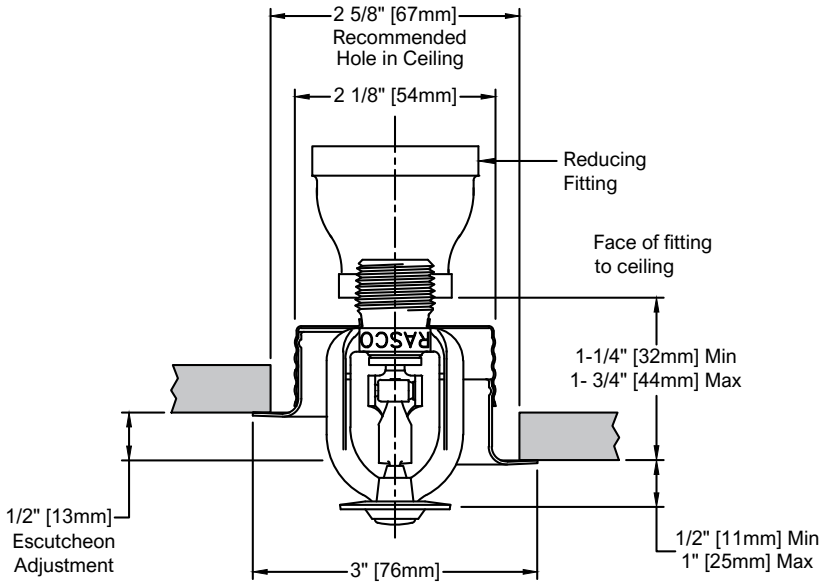
Listings and Approvals[1]
FM Approved
CE (1438-CP-0055)



Notes:
1. Listed and approved for Light Hazard ONLY.

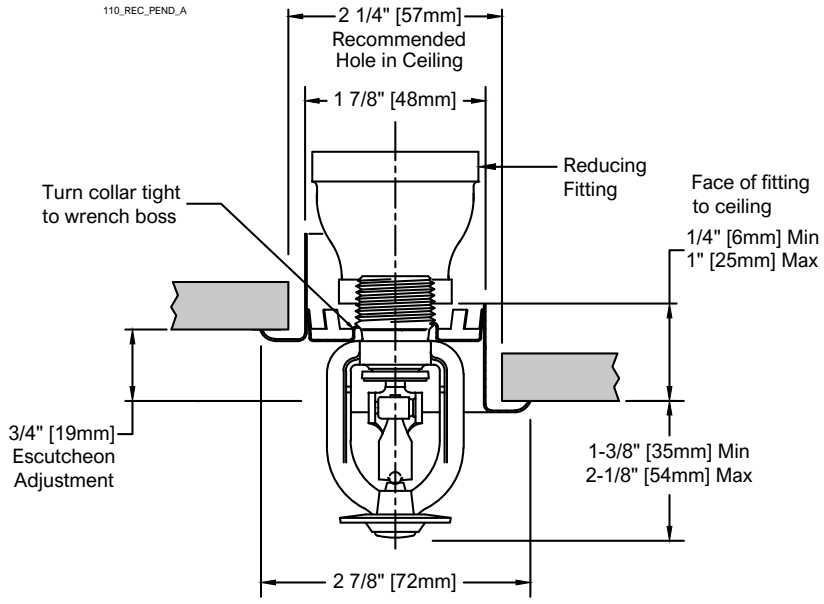
Model G Vertical Sprinkler Components and Dimensions — Figure 5



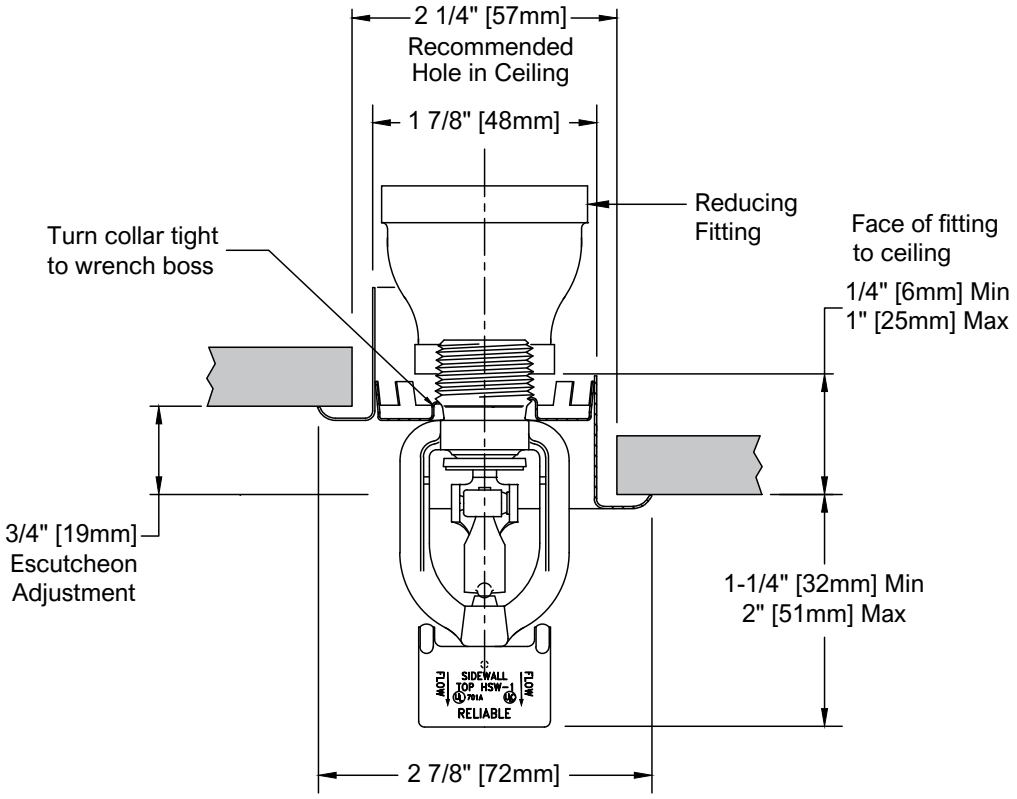


MODEL G RECESSED SPRINKLER

Note: Model G Recessed sprinklers utilizing vented cups may not be used where the pressure in the space above the ceiling is positive with respect to the protected area. Ensure that the openings around the sprinkler cup are unobstructed following installation.



MODEL G PENDENT SPRINKLER
WITH MODEL F1 RECESSED ESCUTCHEON



MODEL G HORIZONTAL SIDEWALL SPRINKLER
WITH MODEL F1 RECESSED ESCUTCHEON
(TOP VIEW)

110RECHSW



G Escutcheon



F1 Recessed

Wrenches



Model W2 (upright, pendent, sidewall)



Model RC1 (recessed)

Finishes[1][2]

Table F

Standard Finishes		Special Application Finishes	
Sprinkler	**G and F1 Recessed Escutcheons**	**Sprinkler**	**G and F1 Recessed Escutcheons**
Bronze	Brass	Bright Brass[5]	Bright Brass
Chrome	Chrome	Satin Chrome	Satin Chrome
White Polyester[3][4]	White Polyester	Custom Color Polyester[3][4]	Custom Color Polyester
		Lead Plated[6][7][9]	
		Wax Coated[6][7][8]	
		Wax Over Lead[6][7][8][9]	

Notes:

1. Other finishes and colors are available on special order. Consult your Reliable sales representative for details.
2. Paint or any other coating applied over the factory finish will void all approvals and warranties.
3. The Model G Recessed assembly consists of a sprinkler mounted in a galvanized steel cup with a finished trim ring.
4. Only frame and deflector are coated, operating parts are chrome plated.
5. For 212°F (100°C) maximum temperature rated sprinklers only.
6. Not suitable for use with recessed installations.
7. cULus Listed as corrosion resistant.
8. 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).
9. Not suitable for use on the 5.6K pendent (R1015).

Maintenance

Reliable Model G series 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.

Application

Model G Series standard spray upright and pendent sprinklers having K-factors of 5.6 (80) and higher are permitted to be used in all occupancy classifications and building construction types unless otherwise noted.

Model G Series standard spray upright and pendent sprinklers having K-factors less than 5.6 (80) are limited to light hazard occupancies.

Model G Series sidewall sprinklers shall only be installed in light hazard occupancies with smooth, horizontal or sloped, flat ceilings unless otherwise noted.

Installation

Model G Series sprinklers must be installed in accordance with NFPA 13 and the requirements of all applicable authorities having jurisdiction

Model G Series sprinklers must be installed with the Reliable sprinkler installation wrench identified in this Bulletin. Any other wrench may damage the sprinkler. A leak tight sprinkler joint can be obtained with a torque of 8 to 18 lb-ft (11 - 24 N·m) for 1/2" sprinklers and a torque of 14-20 lb-ft (19 - 27 N·m) for 3/4" sprinklers after applying appropriate thread sealant.

Do not tighten sprinklers over the maximum recommended installation torque. Exceeding the maximum recommended installation torque may cause leakage or impairment of the sprinkler.

Guarantee

For the guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Ordering Information

Specify the following when ordering:

Model
- G

Deflector/Orientation
- Upright
- Upright Intermediate
- Pendent
- G Recessed
- Horizontal Sidewall
- Vertical Sidewall

Temperature Rating
- See sprinkler technical specifications

Sprinkler Finish
- See Table F

Recessed Escutcheon*
- G
- F1

Escutcheon Finish
- See Table F

Sprinkler Wrench
- Model W2 (upright, non-recessed pendent, and sidewall)
- Model RC1 (recessed)

Guards and Shields
- See sprinkler technical specifications

***Note:** 286°F (141°C) sprinklers are not listed to be used recessed.

P/N 9999970005