

Reliable

Model G5 Series Sprinklers

Available with Solid, Perforated, or Gasket Cover Plate

Standard Coverage, Concealed Pendent

K2.8, 4.2, 5.6, & 8.0 (40, 60, 80, & 115 metric)

Features

- Flat concealed cover plate available solid or perforated in a variety of finishes.
- Available with Stainless Steel Clad cover plate (see Table I).
- 3/4-inch (19 mm) cover plate adjustment.
- Cover plate available with optional gasket.

Product Description

Model G5 series sprinklers are standard coverage, flat plate concealed sprinklers designed for installation in accordance with NFPA 13 and FM Global Property Loss Prevention Data Sheets. The sprinklers are offered with a standard Model G5 cover plate (solid or perforated), a Model G5 cover plate with a Quick-response (QR) gasket, or a Model G5 cover plate with a Standard-response (SR) gasket. Model G5 sprinklers must only be used with the Model G5 cover plate listed or approved with the sprinkler. All Model G5 series sprinklers use a fusible-link operating element. Table A provides a summary of available Model G5 series sprinklers, along with Listing and Approval information for each sprinkler and cover plate combination.



Model G5 Series Sprinkler Cover Plates

Model G5 Series Sprinkler Summary

Table A

Sprinkler Model	K-Factor gpm/psi ^{1/2} (L/min/bar ^{1/2})	Cover Plate Model	Listings and Approvals	Sensitivity	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
G5-28	2.8 (40)	G5	cULus	QR	175 (12)	RA3411
			FM	SR		
		G5 QR Gasket	cULus	QR		
		G5 SR Gasket	cULus, FM	SR		
G5-42	4.2 (60)	G5	cULus	QR	175 (12)	RA3413
		G5 QR Gasket		SR		
		G5 SR Gasket		SR		
G5-56	5.6 (80)	G5	cULus	QR	250 (17)	RA3415
			FM, LPCB, VdS, CE	SR	175 (12)	
		G5 QR Gasket	cULus	QR	250 (17)	
		G5 SR Gasket	cULus	SR	250 (17)	
			FM	SR	175 (12)	
G5-56 300	5.6 (80)	G5	cULus	QR	300 (21)	RA4014
		G5 QR Gasket		SR		
		G5 SR Gasket		SR		
G5-80	8.0 (115)	G5	cULus	QR	175 (12)	RA3412
		G5 QR Gasket		SR		
		G5 SR Gasket		SR		
G5-80F	8.0 (115)	G5	FM	SR	175 (12)	RA3417
		G5 SR Gasket				

Technical Specifications

Style: Flat Concealed Pendent
Threads: 1/2" NPT or ISO 7-1 R1/2
Nominal K-Factor: 2.8 (40 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Fusible Link: Beryllium Nickel
Sprinkler Body: Brass Alloy
Levers: Bronze Alloy
Yoke: Brass Alloy
Sealing washer: Nickel with PTFE
Load Screw: Bronze Alloy
Towers: Copper Alloy
Pins: Stainless Steel
Deflector: Bronze Alloy
Cup: Steel

Sprinkler Temperature Ratings

165°F (74°C)
 212°F (100°C)

Sensitivity

(See Table B)

Cover Plates

Model G5 (Solid or Perforated)
 Model G5 QR Gasket (cULus only)
 Model G5 SR Gasket

Cover Plate Finishes

(See Table I)

Sprinkler Wrench

Model FC

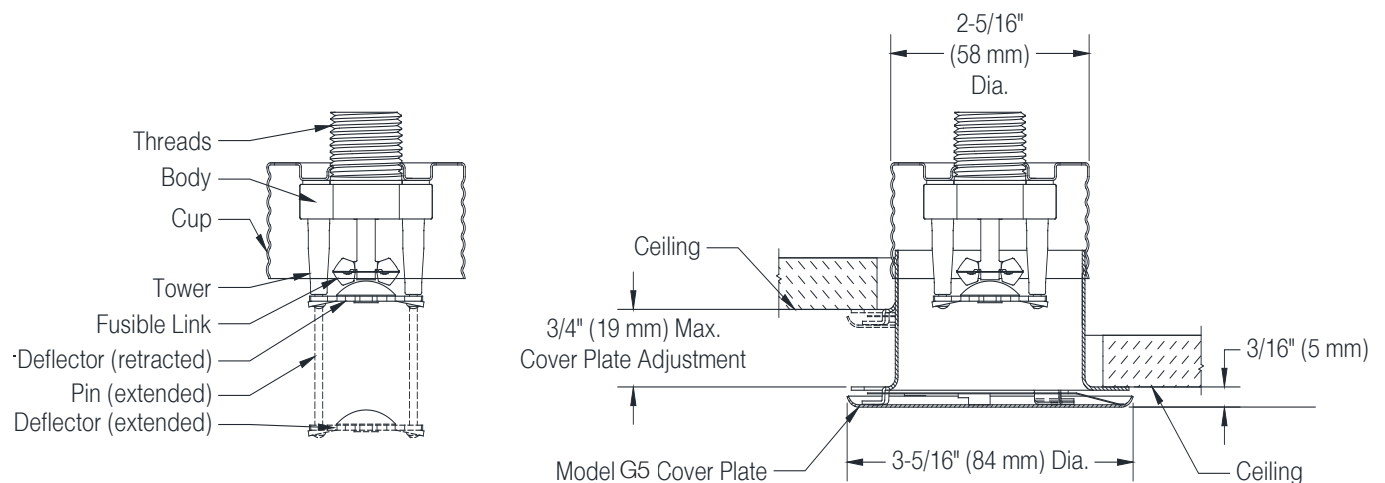
Listings and Approvals

cULus Listed (Light Hazard only)
 FM Approved



Model G5-28 Sprinkler Components and Dimensions

Figure 1



Model G5-28 Sprinkler Sensitivity

Table B

Cover Plate Model	Listing or Approval Agency	
	cULus	FM
G5	QR	SR
G5 QR Gasket	QR	--
G5 SR Gasket	SR	SR

QR: Quick-response

SR: Standard-response

Model G5-42 Standard Coverage, Concealed Pendent Sprinkler

SIN RA3413

Technical Specifications

Style: Flat Concealed Pendent

Threads: 1/2" NPT or ISO 7-1 R 1/2

Nominal K-Factor: 4.2 (60 metric)

Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Fusible Link: Beryllium Nickel

Sprinkler Body: Brass Alloy

Levers: Bronze Alloy

Yoke: Brass Alloy

Sealing washer: Nickel with PTFE

Load Screw: Bronze Alloy

Towers: Copper Alloy

Pins: Stainless Steel

Deflector: Bronze Alloy

Cup: Steel

Sprinkler Temperature Ratings

165°F (74°C)

212°F (100°C)

Sensitivity

(See Table C)

Cover Plates

Model G5 (Solid or Perforated)

Model G5 QR Gasket

Model G5 SR Gasket

Cover Plate Finishes

(See Table I)

Sprinkler Wrench

Model FC

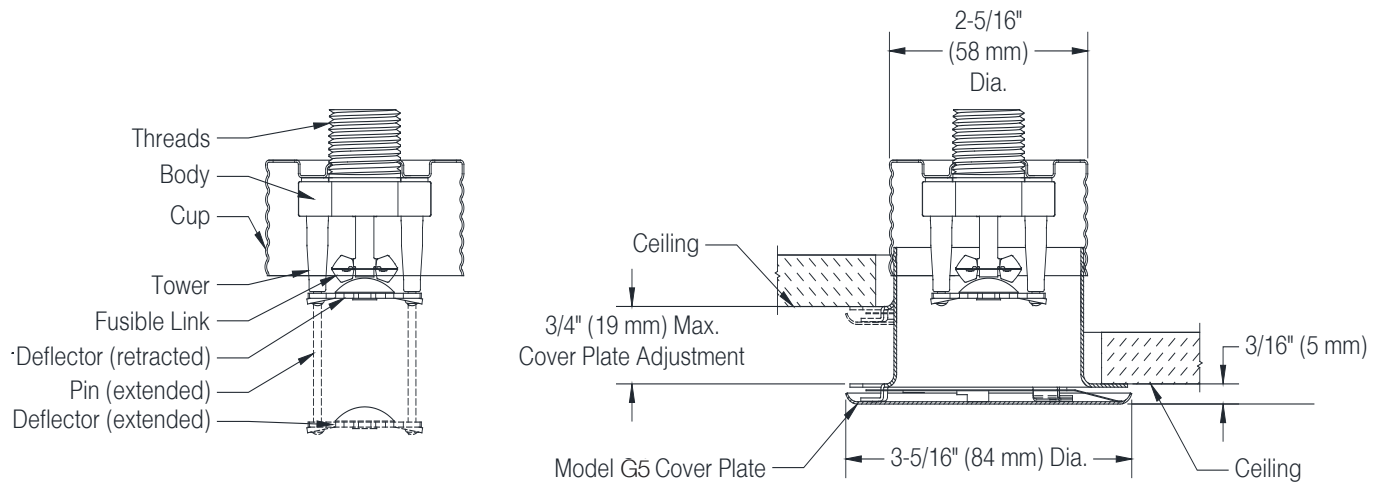
Listings and Approvals

cULus Listed (Light Hazard only)



Model G5-42 Sprinkler Components and Dimensions

Figure 2



Model G5-42 Sensitivity

Table C

Cover Plate Model	Listing or Approval Agency	
	cULus	
G5	QR	
G5 QR Gasket	QR	
G5 SR Gasket	SR	

QR: Quick-response

SR: Standard-response

Model G5-56 Standard Coverage, Concealed Pendent Sprinkler

SIN RA3415

Technical Specifications

Style: Flat Concealed Pendent

Threads: 1/2" NPT or ISO 7-1 R1/2

Nominal K-Factor: 5.6 (80 metric)

Max. Working Pressure:

175 psi (12 bar)

250 psi (17 bar) (cULus only)

Material Specifications

Fusible Link: Beryllium Nickel

Sprinkler Body: Brass Alloy

Levers: Bronze Alloy

Yoke: Brass Alloy

Sealing washer: Nickel with PTFE

Load Screw: Bronze Alloy

Towers: Copper Alloy

Pins: Stainless Steel

Deflector: Bronze Alloy

Cup: Steel

Sprinkler Temperature Ratings

165°F (74°C)

212°F (100°C) (cULus, FM, LPCB, CE only)

Sensitivity

(See Table D)

Cover Plates

Model G5 (Solid or Perforated)

Model G5 QR Gasket (cULus only)

Model G5 SR Gasket (cULus and FM only)

Cover Plate Finishes

(See Table I)

Sprinkler Wrench

Model FC

Listings and Approvals

cULus Listed (Light & Ordinary Hazard only)

FM Approved

LPCB Approved

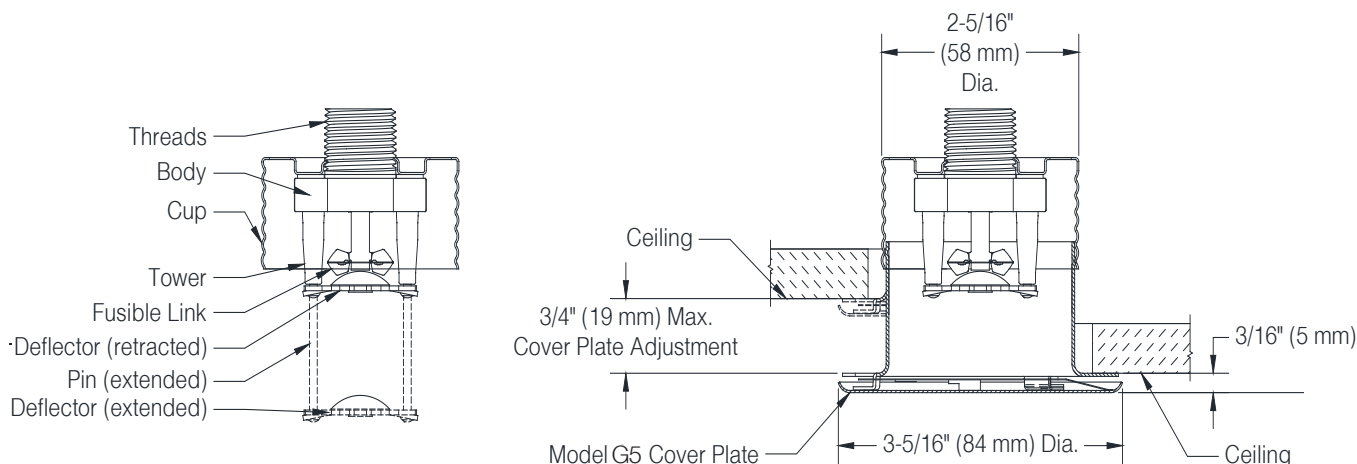
VdS Approved [165°F (74°C) only]

CE Listed



Model G5-56 Sprinkler Components and Dimensions

Figure 3



Model G5-56 Sensitivity

Table D

Cover Plate Model	Listing or Approval Agency		
	cULus	FM	LPCB, VdS, CE
G5	QR	SR	SR
G5 QR Gasket	QR	--	--
G5 SR Gasket	SR	SR	--

QR: Quick-response

SR: Standard-response

Model G5-56 300 Standard Coverage, Concealed Pendent Sprinkler

SIN RA4014

Technical Specifications

Style: Flat Concealed Pendent
Threads: 1/2" NPT or ISO 7-1 R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure: 300 psi (21 bar)

Material Specifications

Fusible Link: Beryllium Nickel
Sprinkler Body: Brass Alloy
Levers: Bronze Alloy
Yoke: Brass Alloy
Sealing washer: Nickel with PTFE
Load Screw: Bronze Alloy
Towers: Copper Alloy
Pins: Stainless Steel
Deflector: Bronze Alloy
Cup: Steel

Sprinkler Temperature Ratings

165°F (74°C)
212°F (100°C)

Sensitivity

(See Table E)

Cover Plates

Model G5 (Solid or Perforated)
Model G5 QR Gasket
Model G5 SR Gasket

Cover Plate Finishes

(See Table I)

Sprinkler Wrench

Model FC

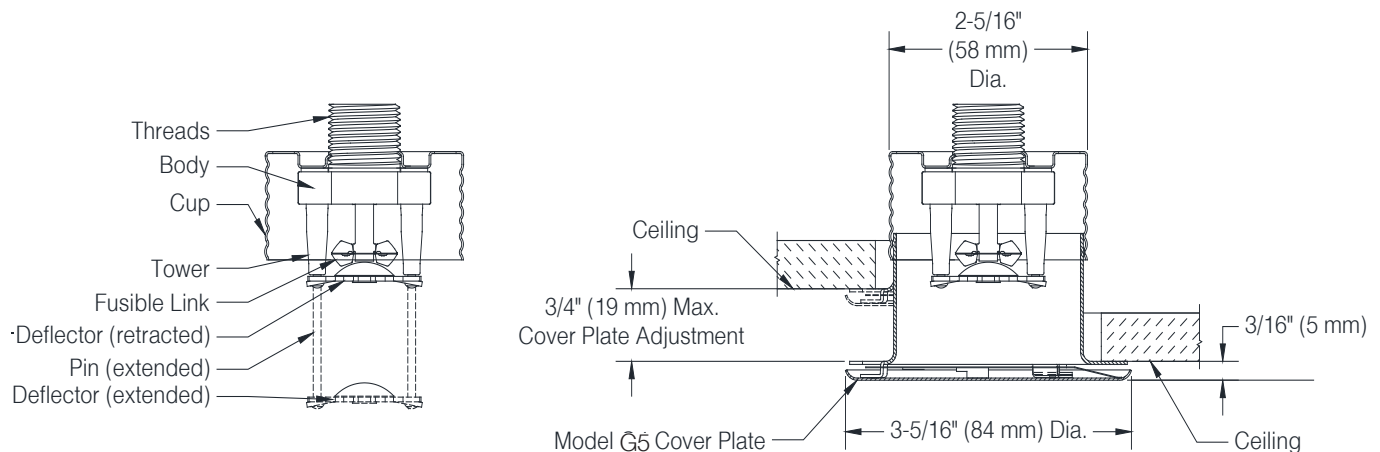
Listings and Approvals

cULus Listed (Light & Ordinary Hazard only)



Model G5-56 300 Sprinkler Components and Dimensions

Figure 4



Model G5-56 300 Sensitivity

Table E

Cover Plate Model	Listing or Approval Agency	
	cULus	
G5	QR	
G5 QR Gasket	QR	
G5 SR Gasket	SR	

QR: Quick-response

SR: Standard-response

Model G5-80 Standard Coverage, Concealed Pendent Sprinkler

SIN RA3412

Technical Specifications

Style: Flat Concealed Pendent
Threads: 3/4" NPT or ISO 7-1 R3/4
Nominal K-Factor: 8.0 (115 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Fusible Link: Beryllium Nickel
Sprinkler Body: Brass Alloy
Levers: Bronze Alloy
Yoke: Brass Alloy
Sealing washer: Nickel with PTFE
Load Screw: Bronze Alloy
Towers: Copper Alloy
Pins: Stainless Steel
Deflector: Bronze Alloy
Cup: Steel

Sprinkler Temperature Ratings

165°F (74°C)
212°F (100°C)

Sensitivity

(See Table F)

Cover Plates

Model G5 (Solid or Perforated)
Model G5 QR Gasket
Model G5 SR Gasket

Cover Plate Finishes

(See Table I)

Sprinkler Wrench

Model FC

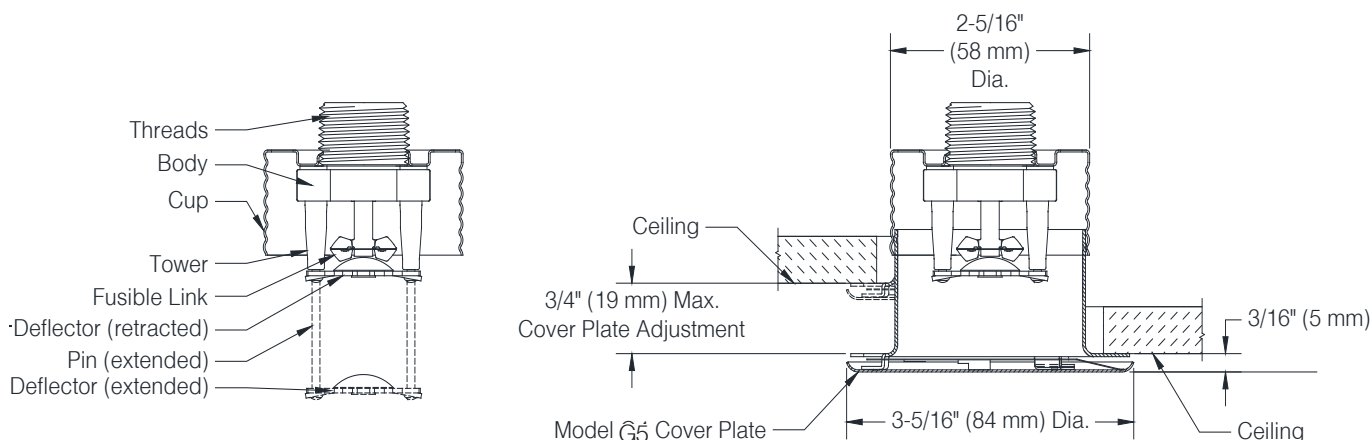
Listings and Approvals

cULus Listed (Light & Ordinary Hazard only)



Model G5-80 Sprinkler Components and Dimensions

Figure 5



Model G5-80 Sensitivity

Table F

Cover Plate Model	Listing or Approval Agency
	cULus
G5	QR
G5 QR Gasket	QR
G5 SR Gasket	SR

QR: Quick-response

SR: Standard-response

Technical Specifications

Style: Flat Concealed Pendent
Threads: 3/4" NPT or ISO 7-1 R3/4
Nominal K-Factor: 8.0 (115 metric)
Max. Working Pressure: 175 psi (12 bar)

Material Specifications

Fusible Link: Beryllium Nickel
Sprinkler Body: Brass Alloy
Levers: Bronze Alloy
Yoke: Brass Alloy
Sealing washer: Nickel with PTFE
Load Screw: Bronze Alloy
Towers: Copper Alloy
Pins: Stainless Steel
Deflector: Stainless Steel
Cup: Steel

Sprinkler Temperature Ratings

165°F (74°C)
 212°F (100°C)

Sensitivity

Standard Response

Cover Plates

Model G5 (Solid or Perforated)
 Model G5 SR Gasket

Cover Plate Finishes

(See Table I)

Sprinkler Wrench

Model FC

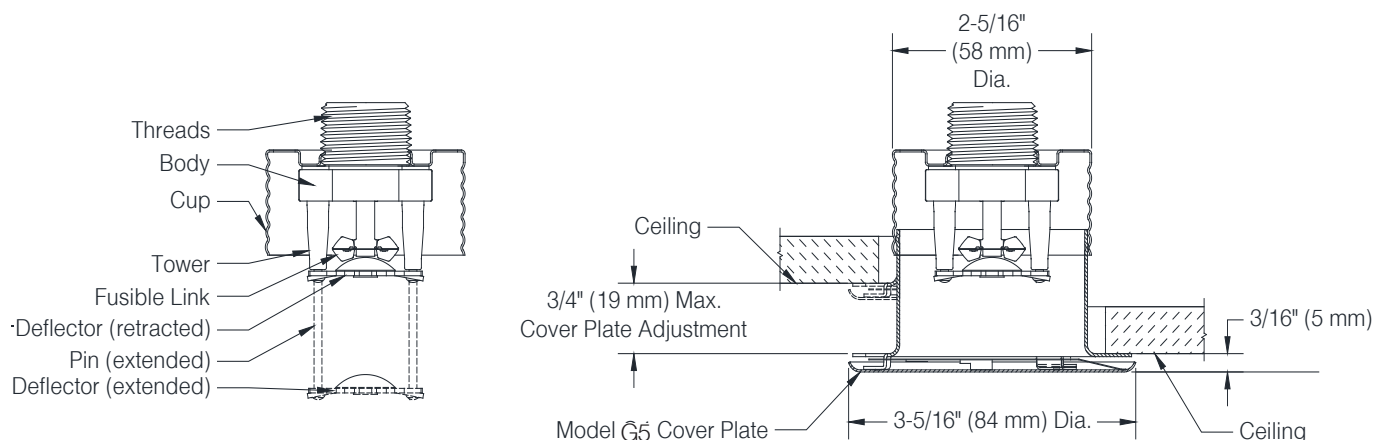
Listings and Approvals

FM Approved



Model G5-80F Sprinkler Components and Dimensions

Figure 6



Model G5-80F Sensitivity

Table G

Cover Plate Model	Listing or Approval Agency	
	FM	
G5	SR	
G5 SR Gasket	SR	

SR: Standard-response

Installation Dimensions and Cover Plate Information
Table H

Cover Plate Model	Cover Plate Diameter Inch (mm)	Recommended Hole Diameter in Ceiling Inch (mm)	Cover Plate Adjustment Inch (mm)	Min. to Max. Face of Fitting to Ceiling ⁽¹⁾ Inch (mm)	Min. to Max. Dropped Deflector Distance below Ceiling Inch (mm)	Cover Plate Temperature Rating °F (°C)
G5 ⁽²⁾	3-5/16 (84)	2-5/8 (67)	3/4 (19)	1-1/2 to 2-1/4 (38 to 57)	1/4 to 1 (6 to 25)	135°F ⁽⁴⁾ (57°C)
G5 QR Gasket ⁽³⁾	3-11/16 (94)					or
G5 SR Gasket ⁽³⁾	4 (101 mm)					165°F ⁽⁵⁾ (74°C)

Notes:

1. Face of fitting to ceiling dimensions are based on nominal thread make up. Verify dimensions based on fitting and thread sealing method prior to installation. A 1/2" x 1/2" brass nipple extension (Reliable P/N 6999991900) is available to assist with replacement of Reliable Model G4A sprinklers.
2. Model G5 cover plates are available either solid or perforated.
3. Model G5 QR Gasket and Model G5 SR Gasket cover plates are sold as assembled units including both the cover plate and gasket. Model G5 QR Gasket and Model G5 SR Gasket cover plates and gaskets are not interchangeable.
4. For use with 165°F (74°C) temperature rated sprinklers where the Maximum Ceiling Temperature does not exceed 100°F (38°C).
5. For use with 212°F (100°C) temperature rated sprinklers where the Maximum Ceiling Temperature does not exceed 150°F (66°C).

Cover Plate Finishes⁽¹⁾
Table I

Standard Finishes	Special Application Finishes
White Paint Chrome	Off-White Paint Black Paint Custom Color Paint – Specify ⁽²⁾ Raw Brass (Lacquered) Bright Brass Finished Bronze Black Plated Satin Chrome Stainless Steel Clad ⁽³⁾

Notes:

1. Paint or any other coating applied over the factory finish will void all approvals and warranties. Gaskets for Model G5 QR Gasket and Model G5 SR Gasket cover plates are only available in white.
2. Custom color paint is semi-gloss unless specified otherwise.
3. Stainless steel clad cover plates are Type 316 Stainless Steel on the finished side and C102 Copper Alloy on the back side. Cover plates are not listed or approved as corrosion resistant. Stainless steel clad cover plates are not available perforated.

Application

Model G5 series sprinklers are standard coverage, flat plate concealed pendent sprinklers. The sprinklers are intended for use in accordance with NFPA 13 and FM Global Property Loss Prevention Data Sheets, as well as the requirements of the applicable approval agencies.

Model G5 series sprinklers are available as either Quick-response (QR) or Standard-response (SR) depending on the approval agency and cover plate selected.

Model G5 series sprinklers use Model G5 flat cover plates. Model G5 QR Gasket and G5 SR Gasket cover plates are available to limit air and dust movement through the ceiling.

Listing & Approval Agencies

Individual Model G5 series sprinkler may be listed or approved by the following agencies:

- Underwriters Laboratories, Inc. and UL Canada (cULus)

Listing Category: Sprinklers, Automatic and Open

Guide Number: VNIV

- FM Approvals (FM)
- Loss Prevention Certification Board (LPCB)
- VdS Schadenverhütung GmbH (VdS)
- EC-Certificate of Conformity 0832-CPD-2062 (CE)

See Table A and the individual sprinkler data sheets in this Bulletin for listings and approvals applicable to each sprinkler.

Installation

Model G5 series sprinklers are intended to be installed in accordance with NFPA 13, FM Global Property Loss Prevention Data Sheets, and the requirements of other applicable authorities having jurisdiction. Model G5 series sprinklers must not be installed in ceilings with positive pressure in the space above.

Model G5 series sprinklers are shipped with a protective cap that should remain on the sprinkler until installed. The protective cap should be replaced following installation of the sprinkler and permanently removed only when the cover plate is installed and the sprinkler system is placed in service following construction.

Model G5 series sprinkler are installed with the Model FC wrench. The use of any other wrench to installed Model G5 series sprinklers is not permitted and may damage the sprinkler. Temporarily remove the protective cap during installation of the sprinkler. Insert the Model FC wrench over the sprinkler until the wrench engages the body. Do not wrench any other part of the sprinkler/cup assembly. The Model FC wrench is designed to be turned with a standard 1/2" square drive. Tighten the sprinkler into the fitting after applying a PTFE based thread sealant to the sprinkler's threads. Recommended installation torque is specified in Table J.

Installation Torque	Table J	
	Recommended Installation Torque (min. – max.)	
	ft.lb	N.m
1/2" NPT or ISO7-1R1/2	8-18	11-24
3/4" NPT or ISO7-1R3/4	14-20	19-27

Do not exceed the maximum recommended torque. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinkler. Use care when inserting or removing the wrench from the sprinkler to avoid damage to the sprinkler.



Model FC Wrench

Install the cover plate by hand, turning the cover in the clockwise direction until it is tight against the ceiling. For Model G5 QR Gasket and Model G5 SR Gasket cover plates, the gasket should be attached to the flange of the cover plate skirt only. Do not glue the gasket in place or allow the gasket to overlap both the cover plate and the flange of the skirt.

Maintenance

Reliable Model G5 series sprinkler 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 or cover plate which has been painted (other than factory applied). Properly installed Model G5 cover plates will have an air gap that is required for proper operation, do not seal the gap or paint the cover plates. Model G5 series sprinklers have holes in the cup that must remain unobstructed.

Replace any sprinkler which has been damaged. 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.

Patents

Model G5 series sprinklers may be covered by one or more of the following patents:

U.S. Patent 6,554,077, U.S. Patent 7,275,603, U.S. Patent 8,776,903, U.S. Patent 9,248,327

Ordering Information

Specify the following when ordering.

Sprinkler

- Model [G5-28] [G5-42] [G5-56] [G5-56 300] [G5-80] [G5-80F]
- Temperature Rating [165°F (74°C)] [212°F (100°C)]
- Threads [NPT or ISO 7-1]

Cover Plate

- Model [G5 (Solid), G5 Perforated, G5 QR Gasket, G5 SR Gasket]
- Finish (See Table I)

Sprinkler Wrench

- Model FC