



## Model G5 Series Sprinklers

### Standard Spray, Flat Concealed Pendent

Available with Gasketed Cover Plate

### Features

- Standard Coverage, Concealed Pendent (K2.8, 4.2, 5.6, & 8.0 [40, 60, 80, & 115 metric])
- Flat concealed cover plate available 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. All Model G5 series sprinklers use a fusible-link operating element.

The sprinklers are offered with a standard Model G5 cover plate, 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 with a gasketed cover plate are intended for use in dust free environments such as clean rooms.

Model G5 sprinklers must only be used with the Model G5 cover plate listed or approved with the sprinkler. Table A provides a summary of available Model G5 series sprinklers, along with Listing and Approval information for each sprinkler and cover plate combination.

**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 G5 Cover Plate



Model G5 Cover Plate with QR Gasket



Model G5 Cover Plate with SR Gasket

**Note:** Gasket material is silicone rubber, available in white only.

Model G5 Series Sprinkler Summary

Table A

Sprinkler Model	K-Factor gpm/psi <sup>1/2</sup> (L/min/bar <sup>1/2</sup> )	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, UKCA	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				

# 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

## Temperature Ratings

Ordinary  
165°F (74°C) (Sprinkler)  
[135°F (57°C) (Cover Plate)]  
Intermediate  
212°F (100°C) (Sprinkler)  
[165°F (74°C) (Cover Plate)]

## Sensitivity

(See Table D)

## Cover Plates

Model G5  
Model G5 QR Gasket (cULus only)  
Model G5 SR Gasket (cULus and FM only)

## Cover Plate Finishes

(See Table I)

## Sprinkler Wrench

Model W3  
Model FC

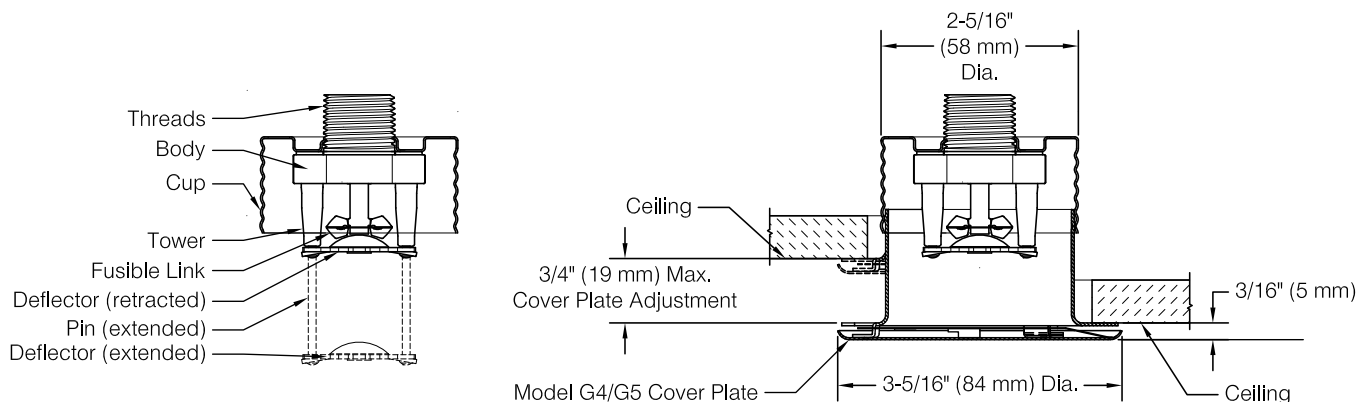
## Listings and Approvals

cULus Listed (Light & Ordinary Hazard only)  
FM Approved  
LPCB Approved  
VdS Approved [165°F (74°C) only]  
CE Listed (2831-CPR-S2062)  
UKCA: 0832-UKCA-CPR-S5045



## 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, UKCA
G5	QR	SR	SR
G5 QR Gasket	QR	--	--
G5 SR Gasket	SR	SR	--

QR: Quick-response

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 <sup>(1)</sup> Inch (mm)	Min. to Max. Dropped Deflector Distance below Ceiling Inch (mm)	Cover Plate Temperature Rating °F (°C)
G5	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 <sup>(3)</sup> (57°C)
G5 QR Gasket <sup>(2)</sup>	3-11/16 (94)					or
G5 SR Gasket <sup>(2)</sup>	4 (101 mm)					165°F <sup>(4)</sup> (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 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.
3. For use with 165°F (74°C) temperature rated sprinklers where the Maximum Ceiling Temperature does not exceed 100°F (38°C).
4. 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<sup>(1)(2)</sup>**
**Table I**

Standard Finishes	Special Application Finishes
White Paint Chrome	Off-White Paint Black Paint Custom Color Paint (Specify) <sup>(3)</sup> Raw Brass (Lacquered) Bright Brass Finished Bronze Satin Chrome Stainless Steel Clad <sup>(4)</sup> Custom Printed

**Notes:**

1. Paint or any other coating applied over the factory finish will void all approvals and warranties.
2. Cover plates do not carry corrosion resistant listings or approvals.
3. Custom color paint is semi-gloss unless specified otherwise.
4. Stainless steel clad cover plates are Type 316 Stainless Steel on the finished side and C102 Copper Alloy on the back side.

## 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)
- UKCA EN12259-1 : 1999 +A3:2006

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 applicable authorities having jurisdiction. Model G5 series sprinklers must not be installed in ceilings with positive pressure in the space above. Ensure that the 4 slots in the cup are open and unobstructed following installation.

Model G5 series sprinklers are shipped with a wrench-able protective cap that should remain on the sprinkler until the sprinkler system is placed in service following construction.

Model G5 series sprinklers can be installed without removing the wrench-able protective cap using the Model W3 wrench. Alternatively, Model G5 series sprinklers can be installed using the Model FC wrench by temporarily removing the protective cap during installation of the sprinkler. The use of any other wrench to installed Model G5 series sprinklers is not permitted and may damage the sprinkler.

## Wrench



**Model FC**

For use with Model G5 Series sprinklers without wrench-able cap installed



**Model W3**

For use with Model G5 Series sprinklers with wrench-able cap installed



Fully insert the Model W3 wrench over the cap until it reaches the bottom of the cup, or 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 W3 and FC wrenches are designed to be turned with a standard  $\frac{1}{2}$ " 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.

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 re-placement of damaged or operated sprinklers. Failure to properly maintain sprinklers may result in inadvertent operation or non-operation during a fire event.

## Installation Torque

**Table J**

Sprinkler Threads	Recommended Installation Torque (min. – max.)	
	ft.lb	N-m
$\frac{1}{2}$ " NPT or ISO7-1R $\frac{1}{2}$	8-18	11-24
$\frac{3}{4}$ " NPT or ISO7-1R $\frac{3}{4}$	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.

Install the cover plate by hand, pushing and then 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.

## Guarantee

For the Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit [www.reliablesprinkler.com](http://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, G5 QR Gasket, G5 SR Gasket]
- Finish (See Table I)

### Sprinkler Wrench

- Model W3
- Model FC

## Installation Of Flexhead Commercial Sprinkler System

### 1. Mounting Bracket Assembly M#: MP-24-BKT-2

Remove one (1) 3/8" bolt and one (1) 1/4" bolt from hardware bag in box. Remove (1) universal hub and one (1) mounting bracket from box. Thread the 3/8" bolt through side of universal hub. Select one (1) of the four (4) sprinkler port locations on mounting bracket.

- Insert tab of universal hub into slot on mounting bracket as shown. **(Photo 1a)**
- Flip bracket over and insert and tighten 1/4" attachment bolt thru pre-punched hole in bracket until tight as shown. **(Photo 1b)**

### 2. Attach Mounting Bracket to T-bar Suspended Ceiling Grid.

**\*Note:** These products are designed for use with Intermediate or Heavy Duty ceiling grids manufactured to ASTM C 635 (*Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings*) and ASTM C 636 (*Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels*) Designation.

- From above the ceiling, position FlexHead Mounting Bracket ends on to T-bar grid so that the center hole in support bracket aligns directly above the sprinkler hole prepared in ceiling tile. Be sure the center section of the bracket end is on the outside of grid and base section is on the inside. Position the ends of the support bracket on the T-bar grid and push each of the two (2) ends of the bracket down to snap in place as shown. **(Photo 2)**

### 3. Anchor Bracket to T-bar Grid

- Anchor bracket to t-bar grid with self tapping screw through bottom hole in bracket end into grid. Be sure to install self tapping screw in lower hole of bracket end with attachment clip as shown. Repeat process on opposite end of bracket. Both ends of bracket should be anchored as shown. **(Photo 3)**

### 4. Connect FlexHead to Sprinkler Branch-line

Apply teflon tape and pipe sealant to one inch (1") threaded end of FlexHead Sprinkler Drop per NFPA guidelines. Attach one inch (1") threaded end of FlexHead Sprinkler Drop to branch-line per NFPA, State and local code guidelines.

The flexible hose with fitting is only intended to be installed with bends.

Do not use welded or braided hose section of FlexHead Sprinkler Drop for a wrenching surface.

**Attach FlexHead Sprinkler Drop using rigid pipe end of units as wrenching surface as shown. (Photo 4)**

### 5. Secure FlexHead Sprinkler Drop to Mounting Bracket and install Sprinkler Head.

- Bend the Flexhead to hold its desired position. **Do not overbend the flexible hose. FlexHead has a 3" (75mm) minimum bend radius.** Insert reducing coupling end of FlexHead Sprinkler Drop through center hole in previously installed support bracket and hole in ceiling tile. Make sure the hose is bent sufficiently so that the reducing coupling sits perfectly vertical in center hole of support bracket. Do not torque or twist FlexHead during installation process. **(Photo 5a)**

- Attach sprinkler head, properly prepared with teflon tape and sealant to FlexHead Sprinkler Drop according to NFPA and sprinkler head manufacturer's guidelines. **(Photo 5b)**

- Adjust FlexHead Sprinkler height to accommodate type of sprinkler head. When sprinkler head is in desired location, tighten the fastening bolt on center hub of support bracket by turning clockwise hand tight plus 1 turn (100 inch lbs) with wrench as shown. After tightening the bolt, tighten the nut hand tight plus 1 turn (100 inch lbs) with wrench. **(Photo 5c)**

### 6. Installation of the FlexHead Ceiling Sprinkler System is complete.

\*Test installation of sprinkler system for any leaks per NFPA Guidelines.

\*Install sprinkler escutcheon from below ceiling per manufacturers guidelines.

1a



1b



2



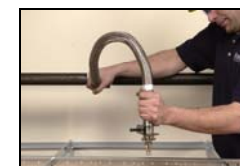
3



4



5a



5b



5c



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# FlexHead Friction Loss Data

F R I C T I O N  L O S S	Flexhead Model #	Outlet Size	Hose Assembly Length	Maximum Number of 90-Degree Bends (3 in. Bending Radius)	Maximum Equivalent Length of Schedule 40, Nominal 1 in Diameter Pipe (C=120), ft	Maximum Ambient Temperature Rating F (C)	Maximum Rated Pressure	Maximum K-factor & Orifice of Sprinkler K-factor/ orifice
		in (cm)	Ft (m)				H-Series psi (kPa) / psi (kPa)	
	2024, 2024H	1/2 (1.27)	2 (0.6)	3	11	300° (148°)	175 (1205) / 300 (2068)	5.62 / 1/2"
	2036, 2036H	1/2 (1.27)	3 (0.9)	3	16	300° (148°)	175 (1205) / 300 (2068)	5.62 / 1/2"
	2048, 2048H	1/2 (1.27)	4 (1.2)	4	24	300° (148°)	175 (1205) / 300 (2068)	5.62 / 1/2"
	2060, 2060H	1/2 (1.27)	5 (1.5)	4	29	300° (148°)	175 (1205) / 300 (2068)	5.62 / 1/2"
	2072, 2072H	1/2 (1.27)	6 (1.8)	4	35	300° (148°)	175 (1205) / 300 (2068)	5.62 / 1/2"
	2024, 2024H	3/4 (1.90)	2 (0.6)	3	12	300° (148°)	175 (1205) / 300 (2068)	8.2 / 17/32"
	2036, 2036H	3/4 (1.90)	3 (0.9)	3	18	300° (148°)	175 (1205) / 300 (2068)	8.2 / 17/32"
	2048, 2048H	3/4 (1.90)	4 (1.2)	4	23	300° (148°)	175 (1205) / 300 (2068)	8.2 / 17/32"
	2060, 2060H	3/4 (1.90)	5 (1.5)	4	29	300° (148°)	175 (1205) / 300 (2068)	8.2 / 17/32"
	2072, 2072H	3/4 (1.90)	6 (1.8)	4	32	300° (148°)	175 (1205) / 300 (2068)	8.2 / 17/32"

- FlexHead products are intended for use in hydraulically designed wet, pre-action, deluge or dry pipe sprinkler per NFPA 13, 13R, and 13D guidelines.
- The hydraulic loss of FlexHead needs to be included in the hydraulic design calculations the same as a valve or fitting.
- Each FlexHead Sprinkler Drop has a 3" minimum bend radius per UL guidelines. FlexHead products are listed to limited flexibility standards and are intended for direct connection to fire sprinklers.
- Bracket System MP-24-BKT-2 has a minimum of 6 inch and a maximum of 24 inch spacing requirement for anchoring to the building component.

