



Model GFR Model GFR Recessed Quick Response Sprinklers

Model GFR Sprinkler Types

- Standard Upright
- Standard Pendent
- Horizontal Sidewall
 - HSW1 Deflector
- Intermediate Level Upright
- Intermediate Level Pendent
- Conventional

Model GFR Recessed Sprinkler Types

- Recessed Pendent
- Recessed Horizontal Sidewall
 - HSW1 Deflector

Approvals

1. Underwriters Laboratories, Inc. (UL)
2. Underwriters' Laboratories of Canada (ULC)
3. NYC BS&A No. 587-75-SA
4. Factory Mutual Approvals (FM)
5.
6. MIL-S-901C and MIL-STD-167-1
7. NYC MEA 258-93-E

UL Listing Category

Sprinklers, Automatic & Open
Quick Response Sprinkler

UL Guide Number

VNIV

Product Description

Reliable Models GFR and GFR Recessed Sprinklers are Quick Response fusible solder type automatic sprinklers.

These sprinklers have demonstrated response times in laboratory tests which are five times faster than standard response sprinklers.

This quick response enables the Models GFR and GFR Recessed Sprinklers to apply water to a fire much faster than standard response sprinklers of the same temperature rating.

Application

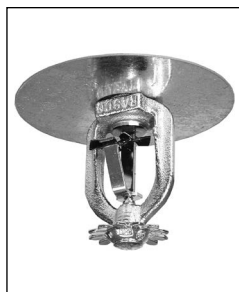
Quick response sprinklers are used in fixed fire protection systems: Wet, Dry, Deluge or Preaction. Care must be exercised that the orifice size, temperature rating, deflector style and sprinkler spacing are in accordance with the latest published standards of the National Fire Protection Association or the approving Authority Having Jurisdiction. Quick response sprinklers are intended for standard area coverage and standard water densities as specified in NFPA 13. Quick response sprinklers and standard response sprinklers should not be intermixed.



Upright



Pendent



Intermediate Level
Pendent



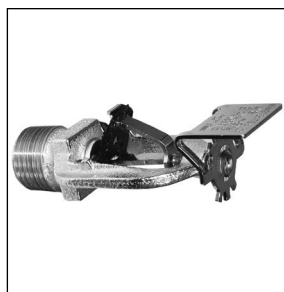
Intermediate Level
Upright



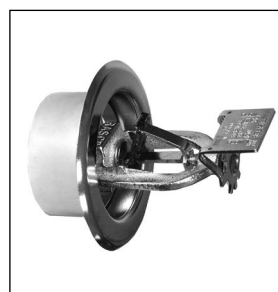
Small Orifice
Upright



Conventional



Horizontal Sidewall
HSW-1 Deflector



Recessed
Horizontal Sidewall
HSW-1 Deflector



Recessed
Pendent



Recessed FP
Pendent

Model GFR Quick Response Upright, Pendent & Conventional Sprinklers



Upright



Pendent



Conventional



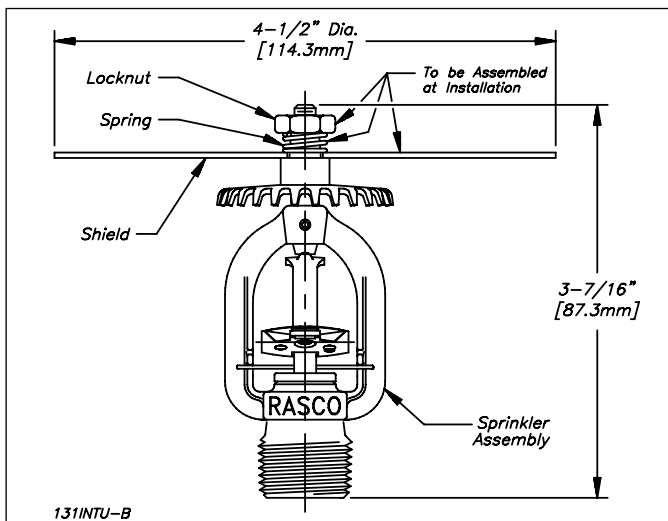
Small Orifice Upright

Installation Wrench: Model W2 Sprinkler Wrench

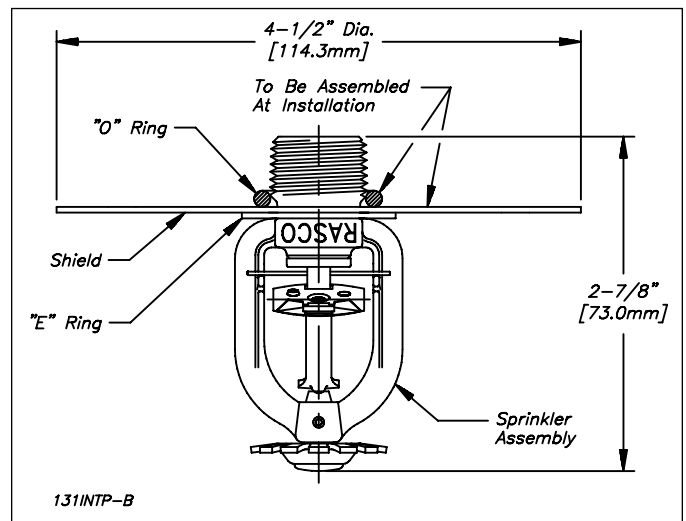
Installation Data:

Sprinkler Type	Nominal K Factor		Sprinkler Height	Approvals	Sprinkler Identification Numbers (SIN)	
	US	Metric			SSU	SSP
Standard-Upright (SSU) and Pendent (SSP) Deflectors Marked to Indicate Position						
1/2" (15mm) Standard Orifice with 1/2" NPT (R1/2) Thread	5.6	80	2 7/8" (73mm)	1,2,3,6,7	R3125	R3115
7/16" (11mm) Small Orifice with 1/2" NPT (R1/2) Thread (11mm)	4.2	60	2 7/8" (73mm)	1,2,3,6,7	R3123	R3113
3/8" (10mm) Small Orifice with 1/2" NPT (R1/2) Thread (10mm)	2.8	40	2 7/8" (73mm)	1,2,3,7	R3121	R3111
10mm Orifice XLH with R3/8" Thread	4.2	60	73mm	-----	R3124	R3114
1 7/32" (20mm) Large Orifice with 3/4" NPT (R3/4) Thread	8.0	115	2 15/16" (75mm)	1,2,3,4,7	R3127	R3117
Conventional-Install in Upright or Pendent Position						
10mm Orifice XLH with R3/8" Thread	4.2	60	73mm	-----		R3174
15mm Standard Orifice with 1/2" NPT (R1/2) Thread	5.6	80	73mm	-----		R3175

Model GFR Quick Response Upright & Pendent Intermediate Level Sprinklers



Upright



Pendent

Installation Wrench: Model W2 Sprinkler Wrench

Installation Wrench: Model GFR2 Sprinkler Wrench

Installation Data:

Sprinkler Type	Nominal K Factor		Sprinkler Height	Approvals	Sprinkler Identification Number (SIN)	
	US	Metric			SSU	SSP
Standard Upright (SSU) and Pendent (SSP) Deflectors Marked to Indicate Position						
1/2" (15mm) Standard Orifice with 1/2" NPT (R1/2) Thread	5.6	80	2 7/8" (73mm)	1,2,3,7	R3195	R3115
1 7/32" (20mm) Large Orifice with 3/4" NPT (R3/4) Thread	8.0	115	2 15/16" (75mm)	1,2,3,7	R3197	R3117

NOTE: The protective shield must be assembled in the field per the assembly drawings.

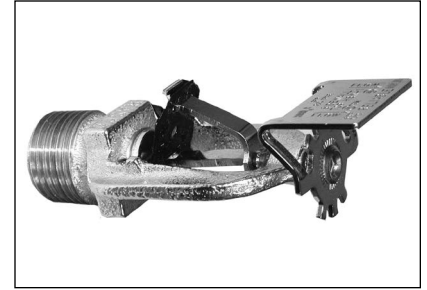
Model GFR Quick Response Horizontal Sidewall Sprinkler

Deflector: HSW1

Installation Wrench: Model W2 Sprinkler Wrench

Installation Data:

Nominal Orifice	Thread Size	Nominal K Factor		Sprinkler Height	Approval Organization and Type of Approval		Sprinkler Identification Number (SIN)
		US	Metric		Light Hazard	Ordinary Hazard	
1/2" (15mm)	1/2" NPT (R1/2)	5.6	80	3 ⁵ / ₁₆ " (84mm)	1,2,3,7	1,2,3,7	R3135
7/16" (11mm)	1/2" NPT (R1/2)	4.2	60	3 ⁵ / ₁₆ " (84mm)	1,2,3,7	—	R3133
3/8" (10mm)	1/2" NPT (R1/2)	2.8	41	3 ⁵ / ₁₆ " (84mm)	1,2,3,7	—	R3131
17/32" (20mm)	3/4" NPT (R3/4)	8.0	119	3 ⁵ / ₁₆ " (84mm)	1,2,3,7	—	R3137



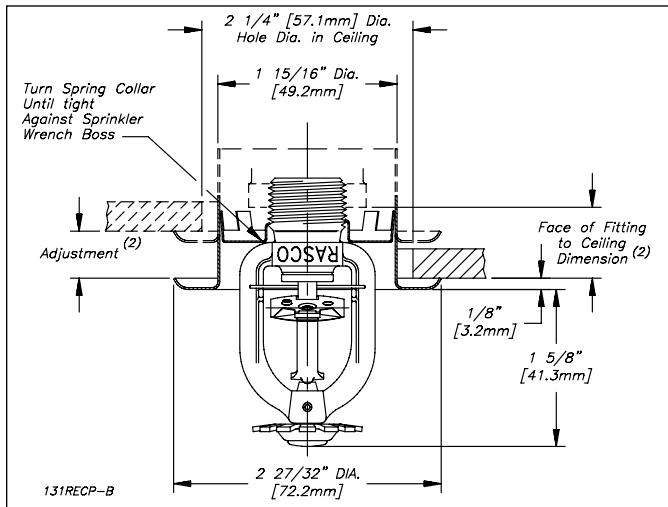
Model GFR Quick Response Recessed Pendent Sprinklers

Installation Wrench: New Model GFR2 (F1 Recessed); Old Model GFR2 (FP Recessed)

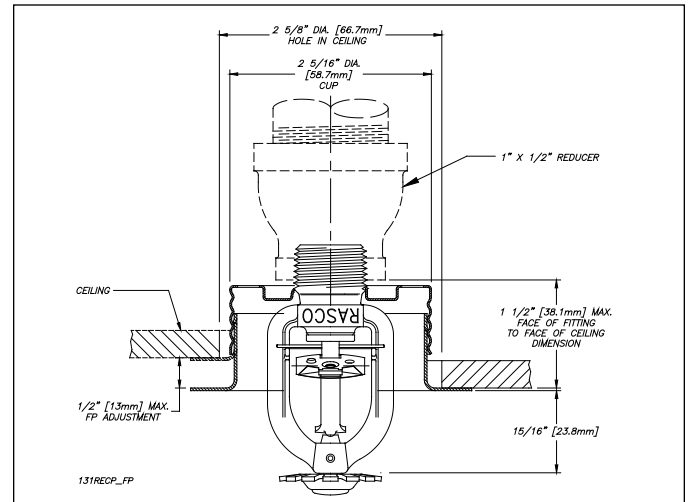
Installation Data:

Sprinkler Type	Nominal K Factor		Sprinkler Height	Approvals ⁽²⁾	Sprinkler Identification Number (SIN)
	US	Metric			
1/2" (15mm) Standard Orifice with 1/2" NPT (R1/2) Thread	5.6	80	2 ⁷ / ₈ " (73mm)	1,2,3,7	R3115
7/16" (11mm) Small Orifice with 1/2" NPT (R1/2) Thread	4.2	60	2 ⁷ / ₈ " (73mm)	1,2,3,7	R3113
3/8" (10mm) Small Orifice with 1/2" NPT (R1/2) Thread	2.8	40	2 ⁷ / ₈ " (73mm)	1,2,3,7	R3111
10mm Orifice XLH with R ⁵ / ₈ " Thread	4.2	60	(73mm)	—	R3114
17/32" (20mm) Large Orifice with 3/4" NPT (R3/4) Thread	8.0	115	2 ¹⁵ / ₁₆ " (75mm)	1,2,3,7	R3117

⁽¹⁾ Refer to escutcheon data table for specific escutcheon approvals and dimensions.



Recessed Pendent /F1



Recessed Pendent /FP

Model GFR Quick Response Recessed Horizontal Sidewall Sprinklers

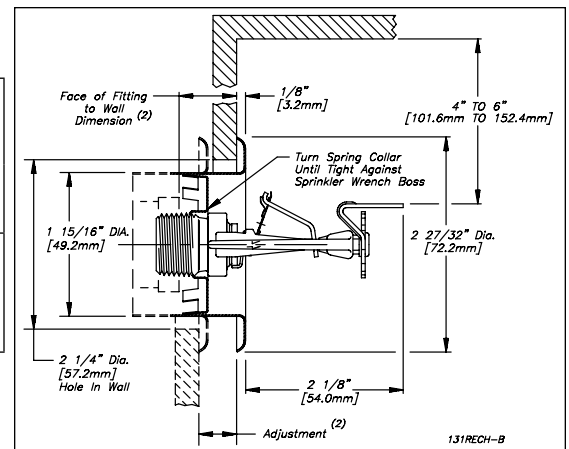
Deflector: HSW1

Installation Wrench: Model GFR2 Sprinkler Wrench

Installation Data

Nominal Orifice	Thread Size NPT	Nominal K Factor		Sprinkler Height	Approval Organization ⁽²⁾ Type of Approval		Sprinkler Identification Number (SIN)
		US	Metric		Light Hazard	Ordinary Hazard	
1/2" (15mm)	1/2" (R1/2)	5.6	81.0	3 ⁵ / ₁₆ " (84mm)	1,2,3,7	1,2,3,7	R3135
7/16" (11mm)	1/2" (R1/2)	4.2	61.0	3 ⁵ / ₁₆ " (84mm)	1,2,3,7	—	R3133
3/8" (10mm)	1/2" (R1/2)	2.8	40.6	3 ⁵ / ₁₆ " (84mm)	1,2,3,7	—	R3131
17/32" (20mm)	3/4" (R3/4)	8.0	118.2	3 ⁵ / ₁₆ " (84mm)	1,2,3,7	—	R3137

⁽¹⁾ Refer to escutcheon data table for specific escutcheon approvals and dimensions.



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Model GFR & GFR Recessed Quick Response Sprinklers

Installation

Quick response sprinklers are intended for standard area coverage and standard water densities as specified in NFPA-13. Quick response sprinklers and standard response sprinklers should not be intermixed.

The Model GFR Recessed Quick Response Sprinkler is to be installed as shown. The Model F1 or F2 Escutcheons illustrated are the only recessed escutcheons to be used with the Model GFR Pendent or Horizontal Sidewall Sprinklers. The use of any other recessed escutcheon will void all approvals as a quick response sprinkler and negate all warranties.

When installing Model GFR Sprinklers, use the Model W2 Sprinkler Wrench and when installing Model GFR Recessed Sprinklers and Pendent Intermediate Sprinklers use the Model GFR2 Sprinkler Wrench. Any other type of wrench may cause sprinkler damage.

Maintenance

The Models GFR and GFR Recessed Sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25. Do not clean the sprinklers with soap and water, ammonia or any other cleaning fluids. Remove any dust using a soft brush or gentle vacuuming. Remove 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. This minimizes the potential for damage resulting in improper operation or non-operation.

Ordering Information:

Specify

1. Sprinkler model
2. Sprinkler type
3. Orifice size
4. Temperature rating
5. Sprinkler finish
6. Escutcheon type
7. Escutcheon finish (where applicable)

Note: When Recessed Model GFR/F1 or F2 are ordered, sprinkler and escutcheon are packaged separately.

Sprinkler Types

Standard Upright

Standard Pendent

Sidewall

— Horizontal HSW1 Deflector

Conventional

Recessed

— Pendent

— Horizontal Sidewall HSW 1 Deflector

Intermediate Level

— Upright

— Pendent

Finishes⁽¹⁾⁽²⁾

Standard Finishes	
Sprinkler	Escutcheon
Bronze Chrome Plated Polyester Coated ⁽³⁾	Brass Chrome Plated Polyester Coated
Special Application Finishes	
Sprinkler	Escutcheon
Bright Brass Black Plated Satin Chrome	Bright Brass Black Plated Satin Chrome

⁽¹⁾ Other finishes and colors are available, consult factory for details

⁽²⁾ All sprinklers 165°F (74°C) have black painted solder links and all sprinklers 212°F (100°C) have white painted solder links.

⁽³⁾ FM Approved for R3127 only.

Temperature Ratings

Classification	Sprinkler Rating		Maximum Ambient Temperature	
	°F	°C	°F	°C
Ordinary	165	74	100	38
Intermediate	212	100	150	66

Escutcheon Data

Escutcheon Model	Approvals	Adjustment	Face of Fitting To Ceiling or Wall Dimension
F1	1,2,3	¾" (19mm)	¾" - 15/16" (5mm-24mm)
F2	1,2,3	½" (13mm)	¾" - 11/16" (5mm-18mm)
FP ⁽¹⁾	1,2	¾" (19mm)	¾" - 15/16" (5mm-24mm)

⁽¹⁾ Approved for Pendent only.

The equipment presented in this bulletin is to be installed in accordance with the latest published Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable. Products manufactured and distributed by Reliable have been protecting life and property for over 90 years.

Manufactured by

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