



# 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. ....
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



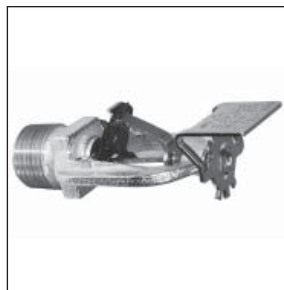
Intermediate Level  
Upright



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



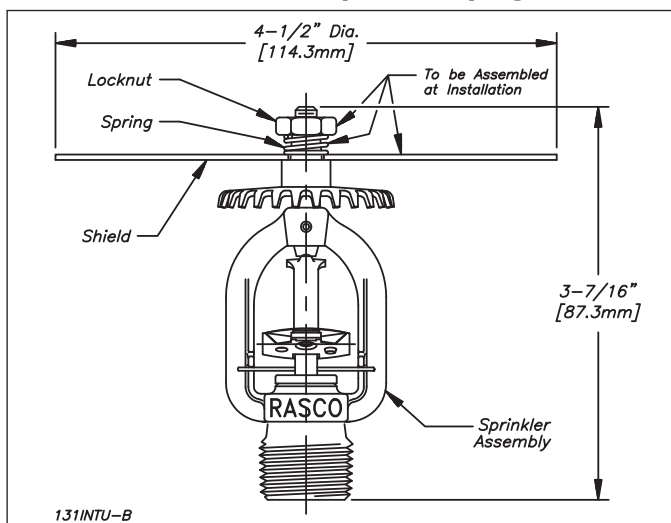
Small Orifice Upright

**Installation Wrench:** Model D Sprinkler Wrench

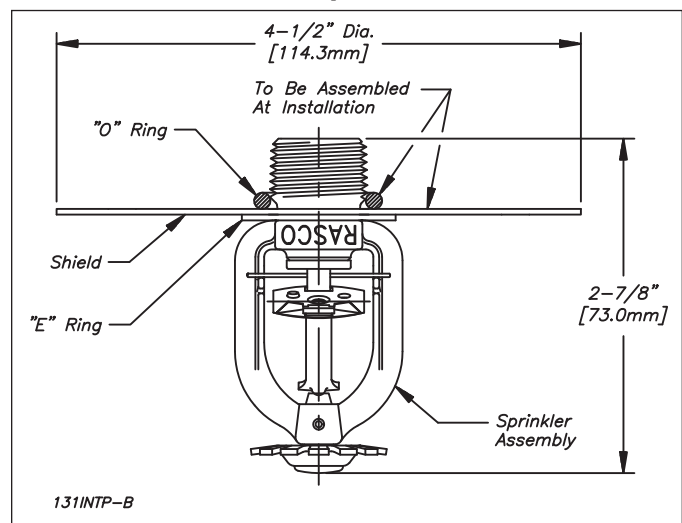
### Installation Data:

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)		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	1,2,3,7	R3124	R3114
1 7/32" (20mm) Large Orifice with 3/4" NPT (R3/4) Thread	8.0	115	2 15/16" (75mm)	1,2,3,7	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 D 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.

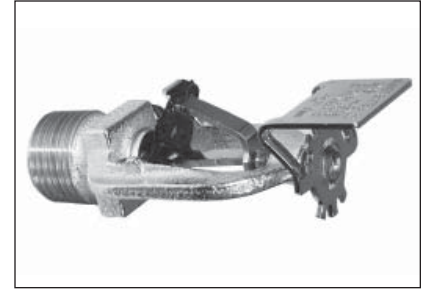
## Model GFR Quick Response Horizontal Sidewall Sprinkler

Deflector: HSW1

Installation Wrench: Model D 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	35/16" (84mm)	1,2,3,7	1,2,3,7	R3135
7/16" (11mm)	1/2" NPT (R1/2)	4.2	60	35/16" (84mm)	1,2,3,7	—	R3133
3/8" (10mm)	1/2" NPT (R1/2)	2.8	41	35/16" (84mm)	1,2,3,7	—	R3131
17/32" (20mm)	3/4" NPT (R3/4)	8.2	119	35/16" (84mm)	1,2,3,7	—	R3137



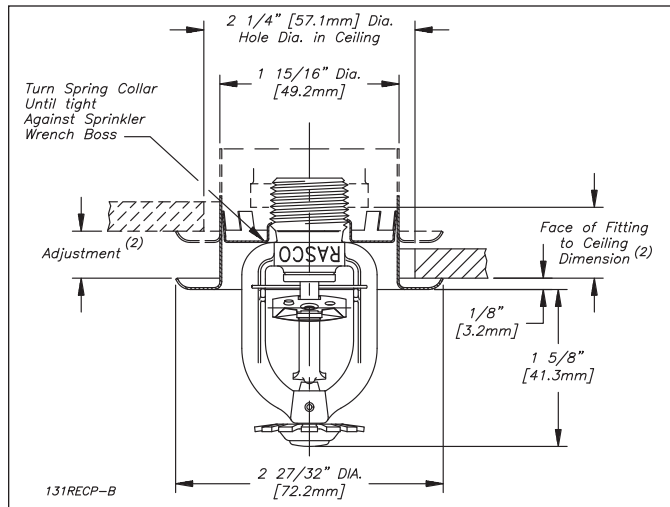
## Model GFR Quick Response Recessed Pendent Sprinklers

Installation Wrench: Model GFR1 Sprinkler Wrench

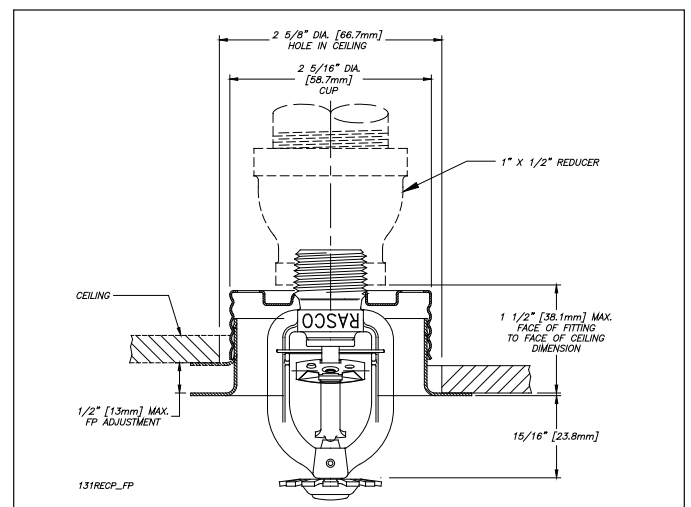
### Installation Data:

Sprinkler Type	Nominal K Factor		Sprinkler Height	Approvals <sup>(2)</sup>	Sprinkler Identification Number (SIN)
	US	Metric			
1/2" (15mm) Standard Orifice with 1/2" NPT (R1/2) Thread	5.6	80	27/8" (73mm)	1,2,3,7	R3115
7/16" (11mm) Small Orifice with 1/2" NPT (R1/2) Thread	4.2	60	27/8" (73mm)	1,2,3,7	R3113
3/8" (10mm) Small Orifice with 1/2" NPT (R1/2) Thread	2.8	40	27/8" (73mm)	1,2,3,7	R3111
10mm Orifice XLH with R3/8" Thread	4.2	60	(73mm)	—	R3174
17/32" (20mm) Large Orifice with 3/4" NPT (R3/4) Thread	8.0	115	25/16" (75mm)	1,2,3,7	R3117

<sup>(1)</sup> 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

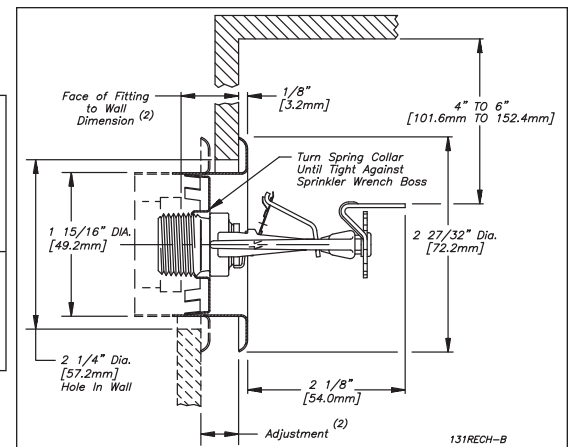
Deflector: HSW1

Installation Wrench: Model GFR1 Sprinkler Wrench

### Installation Data

Nominal Orifice	Thread Size NPT	Nominal K Factor		Sprinkler Height	Approval Organization <sup>(2)</sup> Type of Approval		Sprinkler Identification Number (SIN)
		US	Metric		Light Hazard	Ordinary Hazard	
1/2" (15mm)	1/2" (R1/2)	5.6	81.0	35/16" (84mm)	1,2,3,7	1,2,3,7	R3135
7/16" (11mm)	1/2" (R1/2)	4.2	61.0	35/16" (84mm)	1,2,3,7	—	R3133
3/8" (10mm)	1/2" (R1/2)	2.8	40.6	35/16" (84mm)	1,2,3,7	—	R3131
17/32" (20mm)	3/4" (R3/4)	8.0	118.2	35/16" (84mm)	1,2,3,7	—	R3137

<sup>(1)</sup> Refer to escutcheon data table for specific escutcheon approvals and dimensions.



## 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 D Sprinkler Wrench and when installing Model GFR Recessed Sprinklers, use the Model GFR1 Sprinkler Wrench. Any other type of wrench may cause sprinkler damage.

### Maintenance

The Models GFR and GFR Recessed Sprinklers should be inspected quarterly 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<sup>(1)(2)</sup>

Standard Finishes	
Sprinkler	Escutcheon
Bronze Chrome Plated	Brass Chrome Plated
Special Application Finishes	
Sprinkler	Escutcheon
Bright Brass Black Plated Satin Chrome	Bright Brass Chrome Plated Satin Chrome

<sup>(1)</sup> Other finishes and colors are available, consult factory for details

<sup>(2)</sup> All sprinklers have black painted solder links

### 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	3/4" (19mm)	3/16" - 15/16" (5mm-24mm)
F2	1,2,3	1/2" (13mm)	3/16" - 11/16" (5mm-18mm)
FP <sup>(1)</sup>	1,2	3/4" (19mm)	3/16" - 15/16" (5mm-24mm)

<sup>(1)</sup> 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, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.

Manufactured by



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