

# Reliable®

## Sprinkler Guards and Water Shields

- Model C
- Model D
- Model E

### Model C Sprinkler Guards and Water Shields

Model C Series sprinkler guards are designed to be assembled onto installed sprinklers. They are constructed of heavy gauge wire welded to steel mounting plates and finished with zinc plating. Other finishes are available. Guards protect automatic sprinklers in locations where they are subject to physical damage. Refer to guard selection table for listing and approval information regarding specific sprinkler and guard combinations.

All Model C guards are certified by FM Approvals. Models C-2 and C-3 also have cULus Listings.

- **Model C-1**  
Model C-1 guards are used with pendent, upright, horizontal sidewall and vertical sidewall sprinklers.
- **Model C-2**  
Model C-2 guards are used with pendent dry sprinklers.
- **Model C-3**  
Model C-3 guards have a water shield attached. When assembled to an upright sprinkler, the combination is for upright intermediate sprinkler applications.
- **Model C-5**  
Model C-5 guards are supplied with a water shield and O-Ring which are assembled to the sprinkler before the sprinkler is installed. The guard is then installed to the sprinkler after it is installed in the fitting.

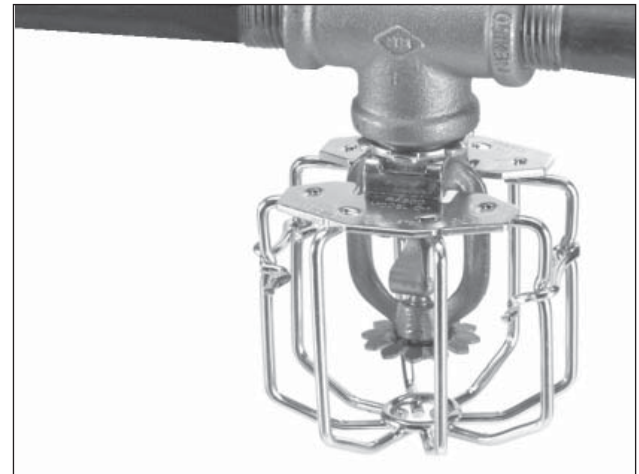
### Model D Sprinkler Guards and Water Shields

The Model D Series sprinkler guards are supplied as kits to be assembled to the sprinkler at the job site before sprinkler installation. The kit consists of the guard, 1/2" and 3/4" locknuts and a water shield when being used as an intermediate level sprinkler. The pendent intermediate has an O-Ring supplied. The Model D-9 does not require an O-Ring.

Each guard is fabricated of heavy gauge wire welded to steel mounting plates and complies with the latest UL or FM standards. Guards protect automatic sprinklers in locations where physical damage can occur.

Model D Series guards are also available factory assembled on the sprinkler ready for immediate installation of the sprinkler and guard assembly.

- **Model D-1**  
Model D-1 guards can be assembled to pendent, upright and horizontal sidewall sprinklers.
- **Model D-3, D-6 and D-7**  
Model D-3, D-6 and D-7 guards have a water shield attached and are assembled to upright sprinklers. The sprinkler guard assembly is for upright intermediate level sprinkler applications.



Model D1 Sprinkler Guard

- **Model D-4 and D-5**  
Model D-4 and D-5 guards are D-1 guards supplied with an original water shield which is threaded on (1/2") or passed over (3/4") the sprinkler inlet thread. The combination forms a pendent intermediate level sprinkler.
- **Model D-8**  
Model D-8 guard can be assembled to pendent sprinklers.
- **Model D-9**  
The Model D-9 guard is a model D-8 guard supplied with a water shield that is passed over the 3/4" sprinkler inlet thread. The combination forms a pendent intermediate level sprinkler.  
Guards and water shields are finished with zinc plating. Other finishes are available upon request.

### Model E Water Shields

The Model E sprinkler water shields are threaded water shields designed to create a pendent intermediate level sprinkler when installed on an approved sprinkler. The water shields are FM Approved when used with sprinklers listed in Table 1. Listed and Approved Sprinkler, Guard, and Water Shield Combinations.

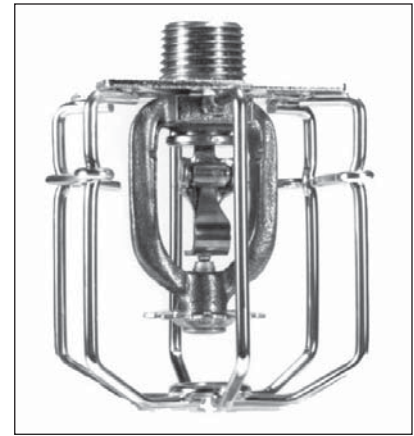
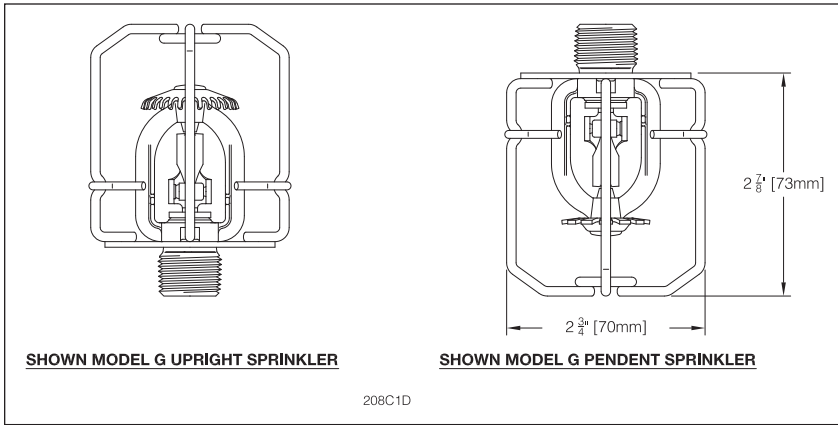
- **Model E-1**  
Model E-1 water shields are threaded onto 1/2" sprinkler inlet threads prior to installation.
- **Model E-2**  
Model E-2 water shields are threaded onto 3/4" sprinkler inlet threads prior to installation.

### Patents:

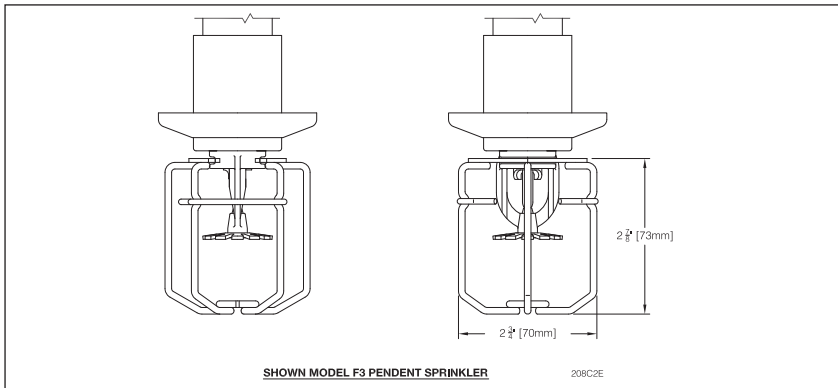
**US Patent No. 5,893,418**

**Applies to Model D Series Guards**

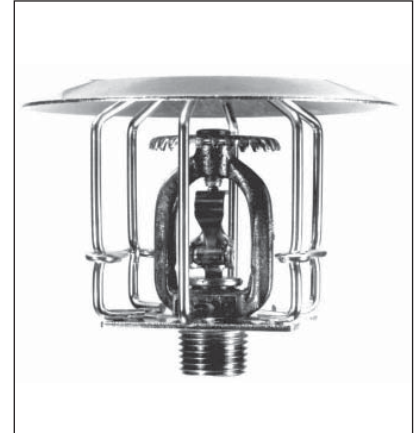
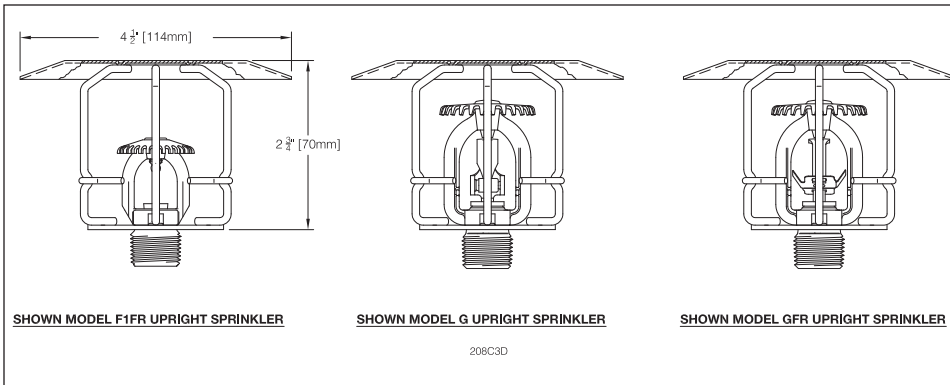
### Model C-1 Guards



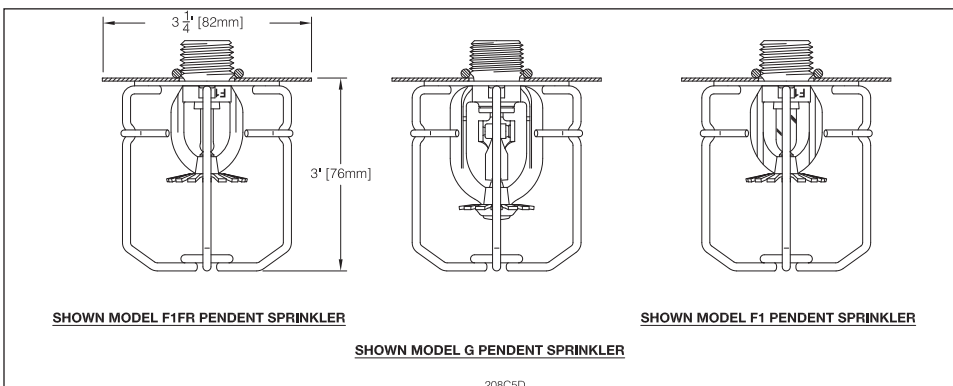
### Model C-2 Guards



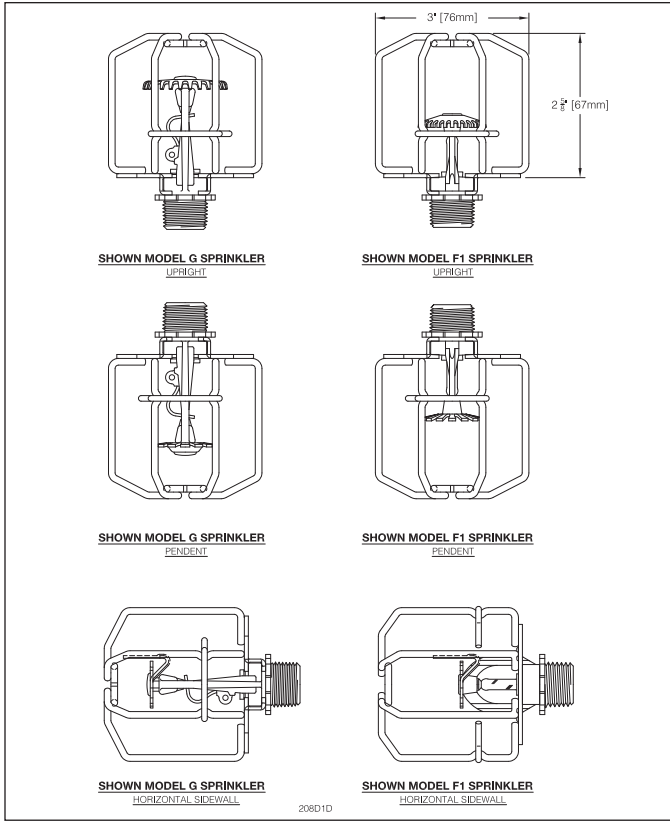
### Model C-3 Guards and Water Shield



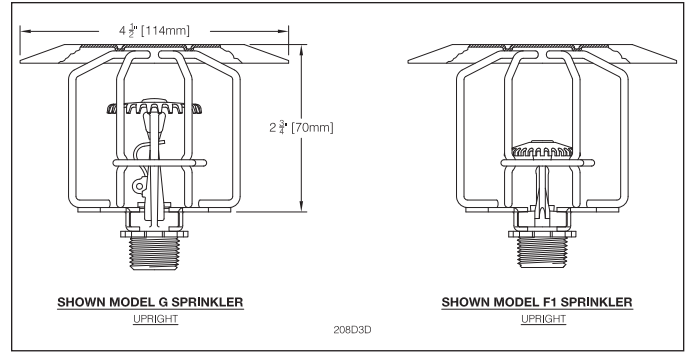
### Model C-5 Guards and Water Shield



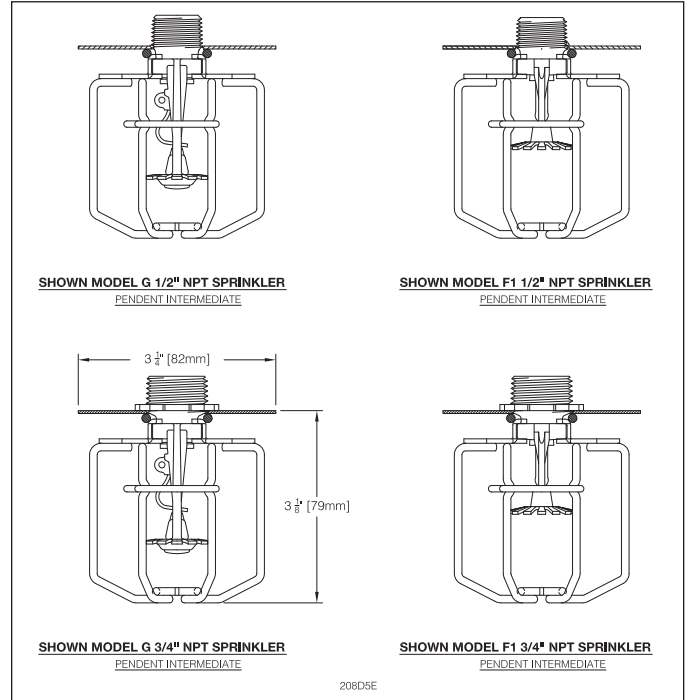
Model D-1 Guard



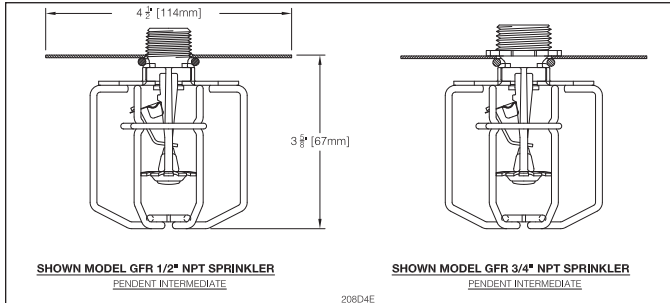
Model D-3 Guards and Water Shield



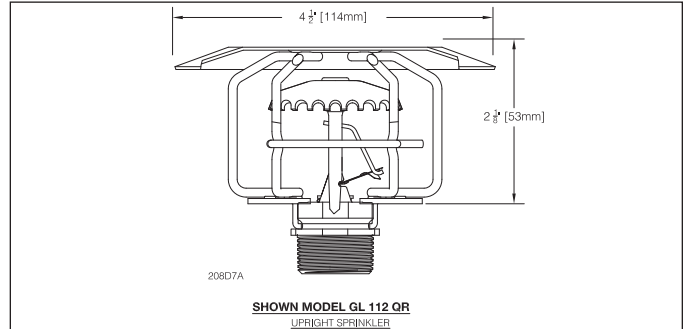
Model D-5 Guards and Water Shield



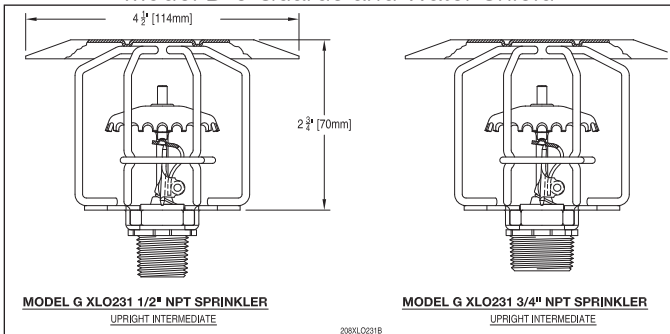
Model D-4 Guards and Water Shield



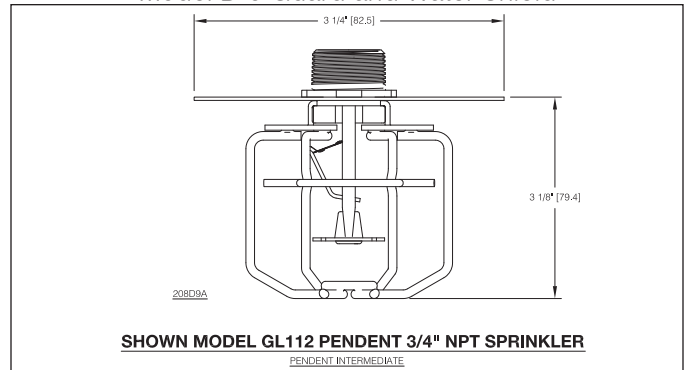
Model D-7 Guards and Water Shield



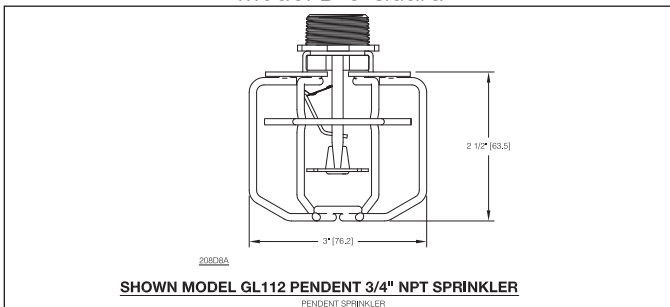
Model D-6 Guards and Water Shield



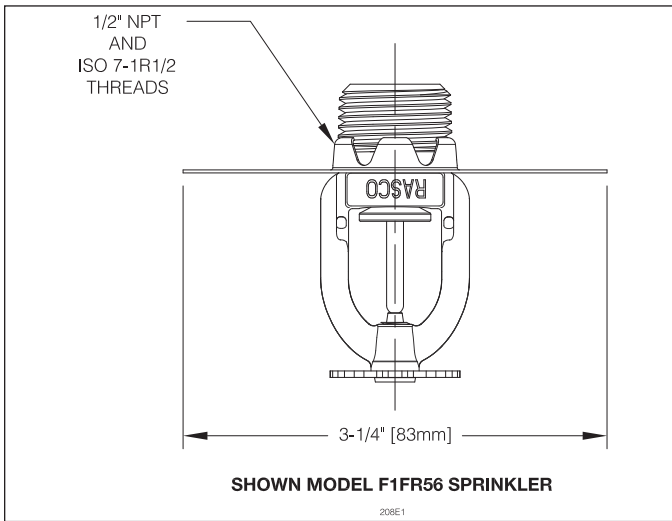
Model D-9 Guard and Water Shield



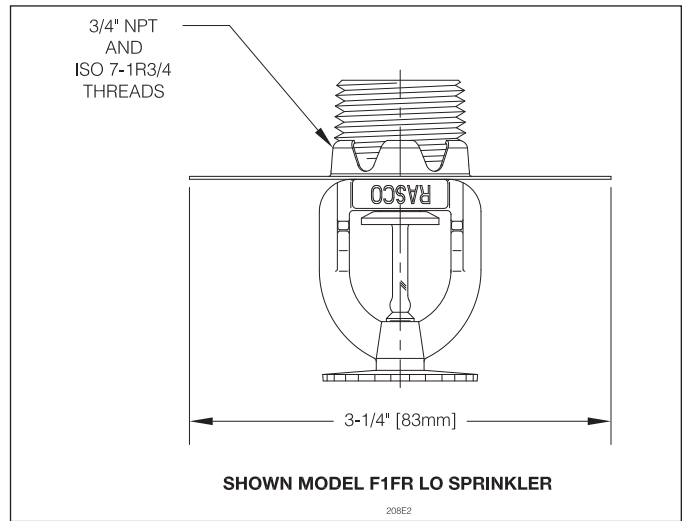
Model D-8 Guard



Model E-1 Water Shield



Model E-2 Water Shield



**Table 1.** Listed and Approved Sprinkler, Guard, and Water Shield Combinations

Sprinkler Model <sup>(1)</sup>	Type <sup>(2)</sup>	Sprinkler Identification Number (SIN)	Nominal K-Factor gpm/psi <sup>1/2</sup> (L/min/bar <sup>1/2</sup> )	Sensitivity <sup>(3)</sup>	Threads NPT or ISO7-1	Sprinkler and Guard or Water Shield Approvals <sup>(4)</sup>	Guard or Water Shield Model
F1 LO	Pendent	R1712	8.0 (115)	SR	3/4	cULus	D-1 Guard
						FM	C-1 Guard
	Pendent Intermediate	R1712	8.0 (115)	SR	3/4	cULus	D-5 Guard and Water Shield
						FM	C-5 Guard and Water Shield E-2 Water Shield
	Upright	R1722	8.0 (115)	SR	3/4	cULus	D-1 Guard
Upright Intermediate	R1722	8.0 (115)	SR	3/4	cULus	C-3 Guard and Water Shield D-3 Guard and Water Shield	
F1-28	Pendent	RA1311	2.8 (40)	SR	1/2	cULus	D-1 Guard
	Upright	RA1321	2.8 (40)	SR	1/2	cULus	D-1 Guard
F1-42	Pendent	RA1313	4.2 (60)	SR	1/2	cULus	D-1 Guard
	Upright	RA1323	4.2 (60)	SR	1/2	cULus	D-1 Guard
F1-56	HSW	RA1335	5.6 (80)	SR	1/2	cULus	D-1 Guard
						FM	C-1 Guard
	Pendent	RA1314	5.6 (80)	SR	1/2	cULus, FM	D-1 Guard
						FM	C-1 Guard
	Pendent Intermediate	RA1314	5.6 (80)	SR	1/2	cULus, FM	D-5 Guard and Water Shield
						FM	C-5 Guard and Water Shield
							D-4 Guard and Water Shield E-1 Water Shield
	Upright	RA1325	5.6 (80)	SR	1/2	cULus	D-1 Guard
						FM	C-1 Guard
	Upright Intermediate	RA1325	5.6 (80)	SR	1/2	cULus	D-3 Guard and Water Shield
cULus, FM						C-3 Guard and Water Shield	
VSW	RA1385	5.6 (80)	SR	1/2	FM	C-1 Guard	
F1-56 Intermediate	Upright Intermediate	RA3125	5.6 (80)	SR	1/2	cULus	D-3 Guard and Water Shield
						cULus, FM	C-3 Guard and Water Shield
F1FR LO	Pendent	R3612	8.0 (115)	QR	3/4	cULus	D-1 Guard
						FM	C-1 Guard
	Pendent Intermediate	R3612	8.0 (115)	QR	3/4	cULus	D-5 Guard and Water Shield
						FM	C-5 Guard and Water Shield E-2 Water Shield
	Upright	R3622	8.0 (115)	QR	3/4	cULus	D-1 Guard
FM						C-1 Guard	
Upright Intermediate	R3622	8.0 (115)	QR	3/4	cULus	D-3 Guard and Water Shield	
					cULus, FM	C-3 Guard and Water Shield	
F1FR28	Pendent	RA1411	2.8 (40)	QR	1/2	cULus	D-1 Guard
	Upright	RA1421	2.8 (40)	QR	1/2	cULus	D-1 Guard
F1FR-300	Pendent	R5612	8.0 (115)	QR	3/4	cULus	D-1 Guard
	Pendent Intermediate	R5612	8.0 (115)	QR	3/4	cULus	D-5 Guard and Water Shield
	Upright	R5622	8.0 (115)	QR	3/4	cULus	D-1 Guard
F1FR42	Pendent	RA1413	4.2 (60)	QR	1/2	cULus	D-1 Guard
	Upright	RA1423	4.2 (60)	QR	1/2	cULus	D-1 Guard

**Table 1.** Continuation

<b>Sprinkler Model<sup>(1)</sup></b>	<b>Type<sup>(2)</sup></b>	<b>Sprinkler Identification Number (SIN)</b>	<b>Nominal K-Factor gpm/psi<sup>1/2</sup> (L/min/bar<sup>1/2</sup>)</b>	<b>Sensitivity<sup>(3)</sup></b>	<b>Threads NPT or ISO7-1</b>	<b>Sprinkler and Guard or Water Shield Approvals<sup>(4)</sup></b>	<b>Guard or Water Shield Model</b>	
F1FR56	HSW	RA1435	5.6 (80)	QR	1/2	cULus	D-1 Guard	
						FM	C-1 Guard	
	Pendent	RA1414	5.6 (80)	QR	1/2	cULus, FM	D-1 Guard	
						FM	C-1 Guard	
	Pendent Intermediate	RA1414	5.6 (80)	QR	1/2	FM	E-1 Water Shield	
						cULus, FM	D-5 Guard and Water Shield	
						FM	C-5 Guard and Water Shield D-4 Guard and Water Shield	
	Upright	RA1425	5.6 (80)	QR	1/2	cULus	D-1 Guard	
						FM	C-1 Guard	
	Upright Intermediate	RA1425	5.6 (80)	QR	1/2	cULus	D-3 Guard and Water Shield	
cULus, FM						C-3 Guard and Water Shield		
VSW	RA1485	5.6 (80)	QR	1/2	FM	C-1 Guard		
F1FR56 Intermediate	Upright Intermediate	RA3195	5.6 (80)	QR	1/2	cULus	D-3 Guard and Water Shield	
						cULus, FM	C-3 Guard and Water Shield	
F3-56 Dry	Pendent	R5314	5.6 (80)	SR	1	cULus, FM	C-2 Guard	
F3QR56 Dry	Pendent	R5714	5.6 (80)	QR	1	cULus, FM	C-2 Guard	
G	HSW	R1231	2.8 (40)	SR	1/2	cULus	D-1 Guard	
		R1233	4.2 (60)	SR	1/2	cULus	D-1 Guard	
		R1235	5.6 (80)	SR	1/2	cULus	D-1 Guard	
		R1235	5.6 (80)	SR	1/2	FM	C-1 Guard	
		R1236	8.0 (115)	SR	1/2	cULus	D-1 Guard	
		R1237	8.0 (115)	SR	3/4	cULus	D-1 Guard	
	Pendent	R1011	2.8 (40)	SR	1/2	cULus	D-1 Guard	
			2.8 (40)	SR	1/2	FM	C-1 Guard	
		R1015	5.6 (80)	SR	1/2	cULus	D-1 Guard	
			5.6 (80)	SR	1/2	FM	C-1 Guard	
		R1013	4.2 (60)	SR	1/2	cULus	D-1 Guard	
		R1016	8.0 (115)	SR	1/2	cULus	D-1 Guard	
		R1017	8.0 (115)	SR	3/4	cULus	D-1 Guard	
		R1016	8.0 (115)	SR	1/2	FM	C-1 Guard	
		R1017	8.0 (115)	SR	3/4	FM	C-1 Guard	
	Pendent Intermediate	R1015	5.6 (80)	SR	1/2	cULus	D-5 Guard and Water Shield	
			5.6 (80)	SR	1/2	FM	C-5 Guard and Water Shield	
		R1016	8.0 (115)	SR	1/2	cULus	D-5 Guard and Water Shield	
			8.0 (115)	SR	3/4	cULus	D-5 Guard and Water Shield	
	Upright	R1021	2.8 (40)	SR	1/2	cULus	D-1 Guard	
			2.8 (40)	SR	1/2	FM	C-1 Guard	
		R1023	4.2 (60)	SR	1/2	cULus	D-1 Guard	
		R1025	5.6 (80)	SR	1/2	cULus	D-1 Guard	
			5.6 (80)	SR	1/2	FM	C-1 Guard	
		R1026	8.0 (115)	SR	1/2	cULus	D-1 Guard	
		R1027	8.0 (115)	SR	3/4	cULus	D-1 Guard	
		R1026	8.0 (115)	SR	1/2	FM	C-1 Guard	
		R1027	8.0 (115)	SR	3/4	FM	C-1 Guard	
		Upright Intermediate	R1025	5.6 (80)	SR	1/2	cULus	D-3 Guard and Water Shield
				5.6 (80)	SR	1/2	cULus, FM	C-3 Guard and Water Shield
			R1026	8.0 (115)	SR	1/2	cULus	C-3 Guard and Water Shield
	8.0 (115)			SR	1/2	cULus	D-3 Guard and Water Shield	
	R1027		8.0 (115)	SR	3/4	cULus	D-3 Guard and Water Shield	
8.0 (115)		SR	3/4	cULus, FM	C-3 Guard and Water Shield			
VSW	R1285	5.6 (80)	SR	1/2	FM	C-1 Guard		

**Table 1.** Continuation

<b>Sprinkler Model<sup>(1)</sup></b>	<b>Type<sup>(2)</sup></b>	<b>Sprinkler Identification Number (SIN)</b>	<b>Nominal K-Factor gpm/psi<sup>1/2</sup> (L/min/bar<sup>1/2</sup>)</b>	<b>Sensitivity<sup>(3)</sup></b>	<b>Threads NPT or ISO7-1</b>	<b>Sprinkler and Guard or Water Shield Approvals<sup>(4)</sup></b>	<b>Guard or Water Shield Model</b>
GFR	HSW	R3131	2.8 (40)	QR	1/2	cULus	D-1 Guard
		R3133	4.2 (60)	QR	1/2	cULus	D-1 Guard
		R3135	5.6 (80)	QR	1/2	cULus	D-1 Guard
		R3137	8.0 (115)	QR	3/4	cULus	D-1 Guard
	Pendent	R3111	2.8 (40)	QR	1/2	cULus	D-1 Guard
		R3113	4.2 (60)	QR	1/2	cULus	D-1 Guard
		R3115	5.6 (80)	QR	1/2	cULus	D-1 Guard
		R3117	8.0 (115)	QR	3/4	cULus	D-1 Guard
	Pendent Intermediate	R3115	5.6 (80)	QR	1/2	cULus	D-4 Guard and Water Shield
		R3117	8.0 (115)	QR	3/4	cULus	D-4 Guard and Water Shield
			8.0 (115)	QR	3/4	FM	C-5 Guard and Water Shield
	Upright	R3121	2.8 (40)	QR	1/2	cULus	D-1 Guard
		R3123	4.2 (60)	QR	1/2	cULus	D-1 Guard
		R3125	5.6 (80)	QR	1/2	cULus	D-1 Guard
		R3127	8.0 (115)	QR	3/4	cULus	D-1 Guard
	Upright Intermediate	R3125	5.6 (80)	QR	1/2	cULus	C-3 Guard and Water Shield
QR				1/2	cULus	D-3 Guard and Water Shield	
R3127		8.0 (115)	QR	3/4	cULus	D-3 Guard and Water Shield	
			QR	3/4	cULus, FM	C-3 Guard and Water Shield	
GL112	Pendent	R3216	11.2 (160)	QR	3/4	FM	D-8 Guard
	Pendent Intermediate	R3216	11.2 (160)	QR	3/4	FM	D-9 Guard and Water Shield
	Upright Intermediate	R3226	11.2 (160)	QR	3/4	FM	D-7 Guard and Water Shield
GXLO	Pendent	R2916	11.2 (160)	SR	3/4	FM	D-8 Guard
	Pendent Intermediate	R2916	11.2 (160)	SR	3/4	FM	D-9 Guard and Water Shield
	Upright Intermediate	R2921	11.2 (160)	SR	3/4	cULus	D-6 Guard and Water Shield

<sup>(1)</sup> Sprinkler guards and water shields are listed and approved only for use with specific sprinklers. The use of any other guards or water shields on these sprinklers may impede their operation or distribution and negate all approvals and warranties.

<sup>(2)</sup> HSW: Horizontal Sidewall; VSW: Vertical Sidewall

<sup>(3)</sup> QR: Quick-response; SR: Standard-response

<sup>(4)</sup> In addition, NYC MEA Approvals for C-2, C-3, D-1, D-3, D-4, and D-5 guards and water shields. All UL Listed guards and water shields are approved for use in New York City in accordance with Local Law 33/2007. SSL Approval for C-1, C-2, and C-3 guards and water shields.



## Listings & Approvals

Refer to Table 1. Listed and Approved Sprinkler, Guard, and Water Shield Combinations for information on Listings and Approvals applicable to each guard and water shield.

1. Listed by Underwriters Laboratories, Inc. and UL certified for Canada (cULus)
  2. Certified by FM Approvals
  3. NYC MEA 258-93-E
  4. Scientific Services Laboratories (SSL, Australia)\*
- \* For Models C1, C2, C3 guards.

## Installation Instructions

### • Model C Guards

Install the sprinkler in accordance with the applicable sprinkler installation instructions prior to installing the Model C guard. With both cups unhooked, slightly spread open the guard. Insert steel plate into the installed sprinkler between the threads and the wrench flats. The steel plate tabs should face the sprinkler wrench flats and four contact points engage the sprinkler neck.

For Model C-2, the steel plate fits into the groove in each wrench flat and the guard is located by the notch in both steel plates.

Snap the upper locking clip into place, then close the near clip. The guard is now securely installed in place. If locking clip requires too much force to snap closed or open, slightly flex the wires on both sides of the clip and either close or open the clip.

### • Model D Guards

Model D series guards and water shields are designed to be installed on the sprinkler prior to sprinkler installation. The guard, water shield, and sprinkler assembly must be installed with the wrench indicated in Table 2. Wrench for Installation of Guard, Water Shield, and Sprinkler Assembly.

### • Model D-1

Assemble the guard on the sprinklers using the following technique.

With both cups unhooked, slightly spread open the guard. Insert steel plate into the installed sprinkler between the threads and the wrench flats. The steel plate tabs should face the sprinkler wrench flats and four contact points should engage the sprinkler neck.

Snap the upper locking clip (steel plates) into place. Close the lower clip at the top of the guard and slide it down to the notch. The guard is more securely installed.

Install the lock nut on to the NPT threads until the nut is securely against the guard.

### • Model D-3, D-4, D-5, D-6, D-7, D-8 & D-9

Before a sprinkler is installed into a fitting, assemble the guard on the sprinkler using the same technique described for

the Model C Guards. Then install a 1/2" or 3/4" locking nut on to the NPT threads until the nut is tight against the guard. Each guard is supplied with both size of locking nuts.

### • Model E Water Shields

Model E series water shields are designed to be installed on the sprinkler prior to sprinkler installation. The water shield and sprinkler assembly must be installed with the wrench indicated in Table 2. Wrench for Installation of Guard, Water Shield, and Sprinkler Assembly.

Thread the Model E water shield onto the sprinkler by hand until the water shield is securely against the sprinkler's wrench boss. The flat side of the water shield must face towards the sprinkler's wrench boss.

**Table 2.** Wrench for Installation of Guard, Water Shield, and Sprinkler Assembly

Guard or Water Shield	Sprinklers*	Required Wrench for Installation of Guard, Water Shield, and Sprinkler Assembly
D-1	Approved 5.6 (80 metric) and smaller Nominal K-factor sprinklers	Model JD
D-3		
D-4		
D-5		
D-1	Approved 8.0 (115 metric) Nominal K-factor sprinklers	Model J
D-3		
D-4		
D-5		
D-6	All Approved Sprinklers	Model JV
D-7		
D-8		
D-9	All Approved Sprinklers	Model GFR2
E-1		
E-2		

\* See Table 1. Listed and Approved Sprinkler, Guard, and Water Shield Combinations for information on sprinklers approved with each guard and water shield.

## Finish

Standard Finish—Zinc with chromate dip.  
Other finishes, quoted on request.

## Ordering Information

Specify:

- Guard or Water Shield Model
- Finish (Standard or other)
- Sprinkler Thread Size (Model D-4 & D-5 Only).
- Installation Type: Kit or Factory Installed (Model D and E series only).
- Wrench: Model J, JD, JV, or GFR2 wrench (See Table 2 - Model D and E series 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 almost 100 years.

Manufactured by



**Reliable Automatic Sprinkler Co., Inc.**

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