

# Reliable®

## Sprinkler Guards, Guards with Shields, and Water Shields

### Product Description

Sprinkler guards and water shields in this bulletin are independent components which are Listed or Approved with specific fire sprinklers. Sprinkler guards are designed to protect the sprinkler from damage due to incidental contact. Water shields are intended for use in racks or under grated walkways and prevent water from above from cooling and thereby delaying activation of the shielded sprinkler.

Refer to the guard selection table in this bulletin and sprinkler technical bulletins for listing and approval information regarding sprinkler and guard combinations.

### Model C Guards and Guard/Shield Assemblies

#### Model C-1 Guard

This guard is used with pendent, upright, horizontal sidewall, and vertical sidewall sprinklers and does not incorporate a water shield.

#### Model C-2 Guard

This guard is used with non-recessed dry pendent sprinklers.

#### Model C-3 Guards

This guard has a built-in water shield. When assembled to an upright sprinkler, the combination forms an upright intermediate sprinkler with guard.

#### Model C-5 Guard/Shield Assembly

This assembly is a Model C-1 guard supplied with either an S-1 water shield threaded onto 1/2" sprinkler threads, or an S-2 water shield threaded onto 3/4" threads. The combination forms a pendent intermediate level sprinkler with guard.

### Model D Guards and Guard/Shield Assemblies

#### Model D-1 Guard

These guards are used with pendent, upright, and horizontal sidewall sprinklers and do not incorporate a water shield.

#### Model D-3, D-6, and D-7 Guards

These guards have a built-in water shield. When assembled to an upright sprinkler, the combination forms an upright intermediate sprinkler with guard.

#### Model D-4 and D-5 Guard/Shield Assembly

These assemblies are model D-1 guards supplied with either an S-1 water shield threaded onto 1/2" sprinkler threads, or an S-2 water shield threaded onto 3/4" threads. The combination forms a pendent intermediate level sprinkler with guard.



Example: Model D1 Sprinkler Guard

#### Model D-8 Guard

This guard is used with pendent and upright sprinklers and does not incorporate a water shield.

#### Model D-9 Guard/Shield Assembly

This assembly is a Model D-8 guard supplied with an S-2 water shield that is threaded onto 3/4" sprinkler threads. The combination forms a pendent intermediate level sprinkler with guard.

### Model S Water Shields

Model S Shields are threaded water shields designed to create a pendent intermediate level sprinkler when installed on an approved sprinkler. The water shields are UL listed and/or FM Approved with the sprinklers listed in Table A, Listed and Approved Sprinkler, Guard, and Water Shield Combinations.

#### Model S-1

Model S-1 (3-1/4" [83mm] diameter) water shields are threaded onto 1/2" sprinkler inlet threads prior to installation

#### Model S-2 and S-3

Model S-2 (3-1/4" [83mm] diameter) and S-3 (3-3/4" [95mm] diameter) water shields are threaded onto 3/4" sprinkler inlet threads prior to installation.

**Note:** Model S-3 water shields are intended and listed for use on Model JL14 and JL17 ESFR storage sprinklers.

#### Model S-5

Model S-5 (4-1/2" [114mm] diameter) water shields are threaded onto 1" sprinkler inlet threads prior to installation.

**Model 22 and 25 Sprinkler Guards**

Model 22 and 25 sprinkler guards are FM Approved for in-rack installation only. Each guard is supplied with a 1" locknut that must be threaded onto the sprinkler prior to sprinkler installation. Where permitted by Table A, the guards may also be used in combination with the S-5 water shield which replaces the locknut. The guard is assembled to the sprinkler following installation of the sprinkler.

**Model F Guards and Guards with Shields**

Model F guards and guards with shields are specifically designed for use with KFR sprinklers and various F1 and F1FR sprinklers being transitioned to KFR frames. These sprinklers are designated as "NEW" in Table A, "Listed and Approved Sprinkler, Guard, and Water Shield Combinations."

**Model F-1, F-2, F-4, and F-7**

These guards are used with pendent, upright, horizontal sidewall, and vertical sidewall sprinklers and do not incorporate a water shield.

**Model F-3 Guard**

This guard has a built-in water shield. When assembled to an upright sprinkler, the combination forms an upright intermediate sprinkler with guard.

**Model F-5 Guard/Shield Assembly**

This assembly is a Model F-1 guard supplied with an S-1 water shield that is threaded onto 1/2" sprinkler threads. The combination forms a pendent intermediate level sprinkler with guard.

**Model F-6 Guard/Shield Assembly**

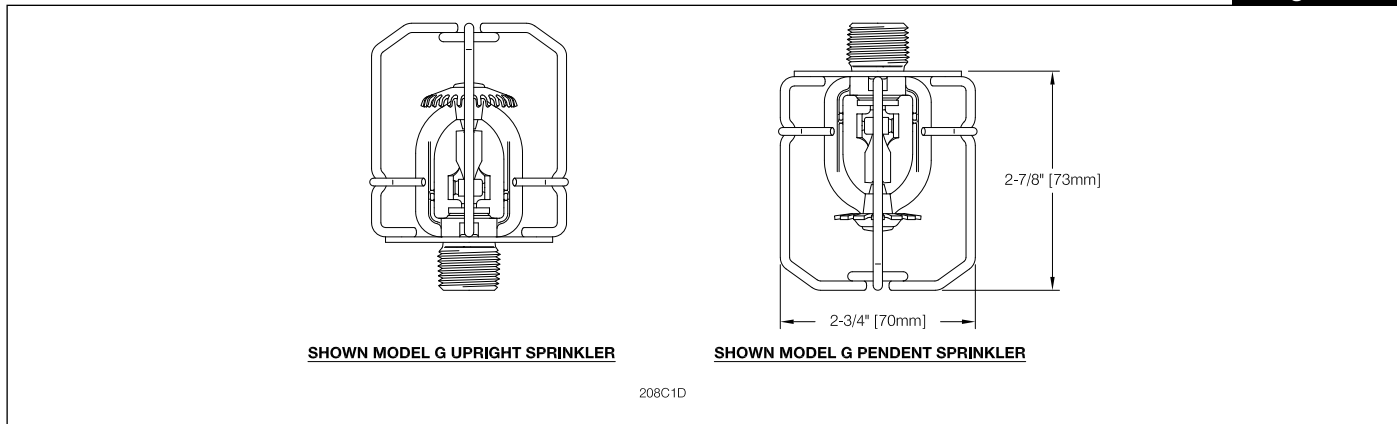
This assembly is a Model F-2 guard supplied with an S-2 water shield that is threaded onto 3/4" sprinkler threads. The combination forms a pendent intermediate level sprinkler with guard.

**Model F-8 Guard/Shield Assembly**

This assembly is a model F-7 guard supplied with either an S-1 water shield which is threaded onto 1/2" sprinkler threads, or an S-2 water shield threaded onto 3/4" threads. The combination forms a pendent intermediate level sprinkler with guard.

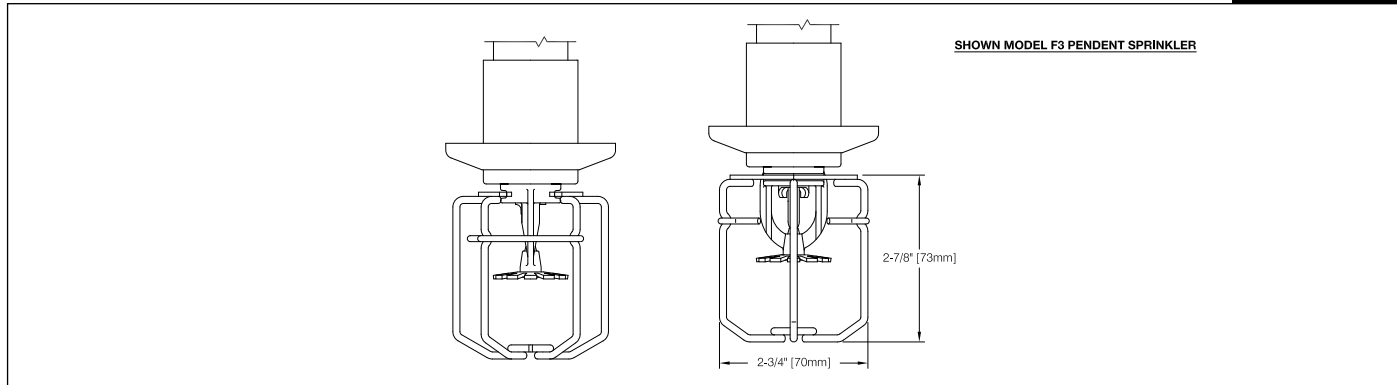
**Model C-1 Guards**

**Figure 1**



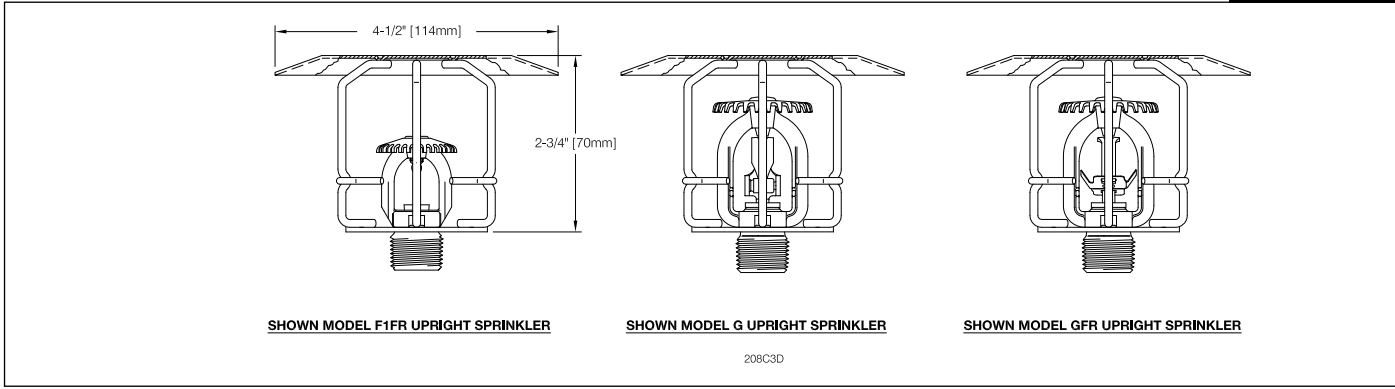
**Model C-2 Guards**

**Figure 2**



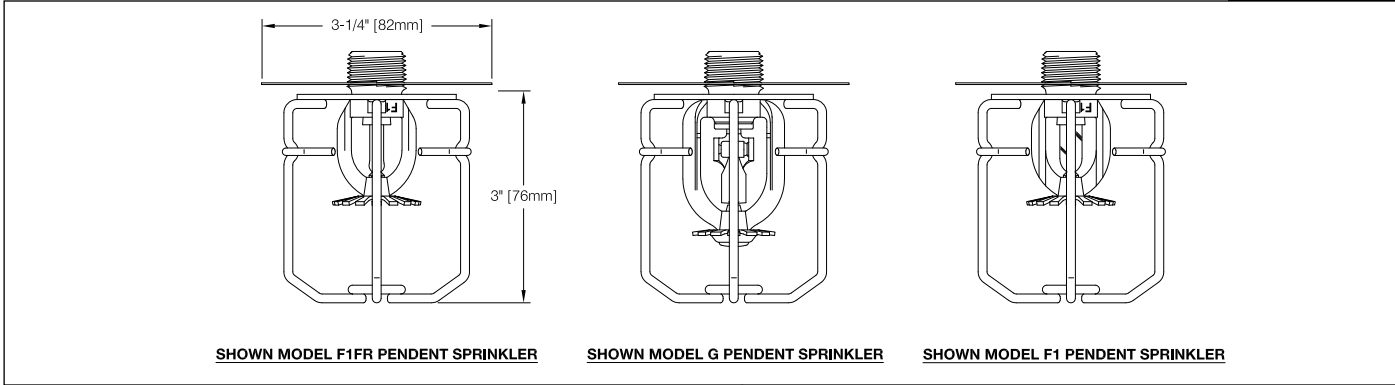
**Model C-3 Guards and Water Shield**

**Figure 3**



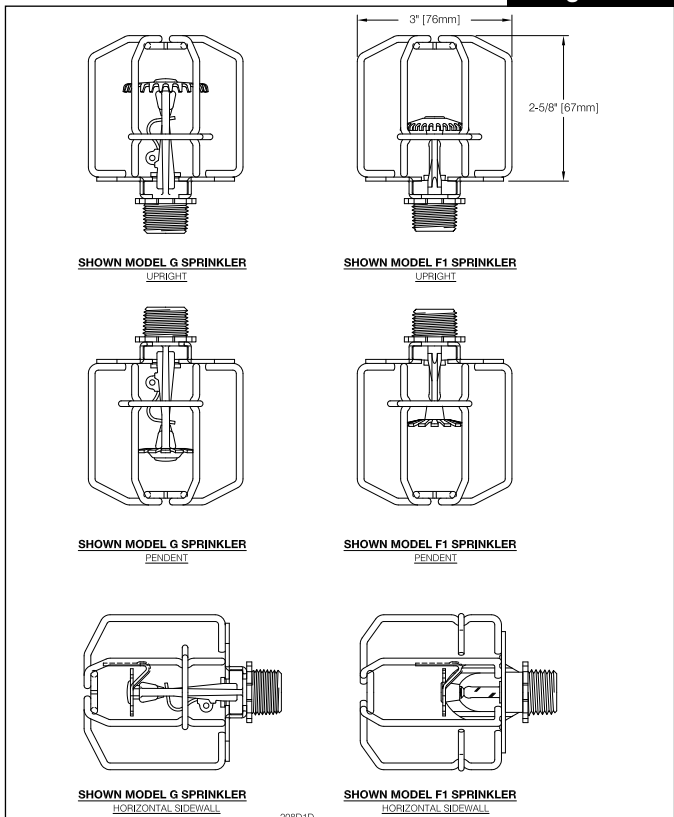
**Model C-5 Guards and Water Shield**

**Figure 4**



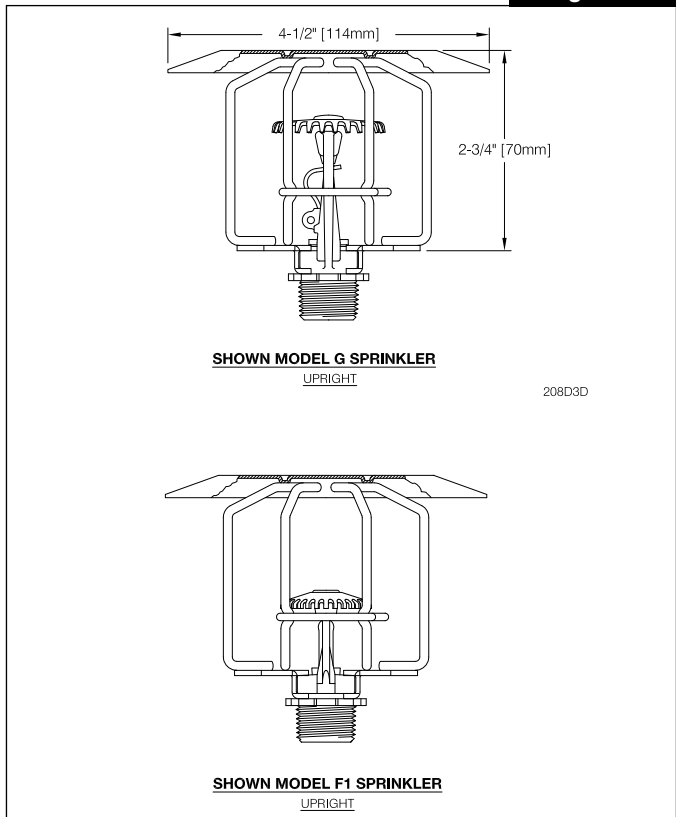
**Model D-1 Guard**

**Figure 5**



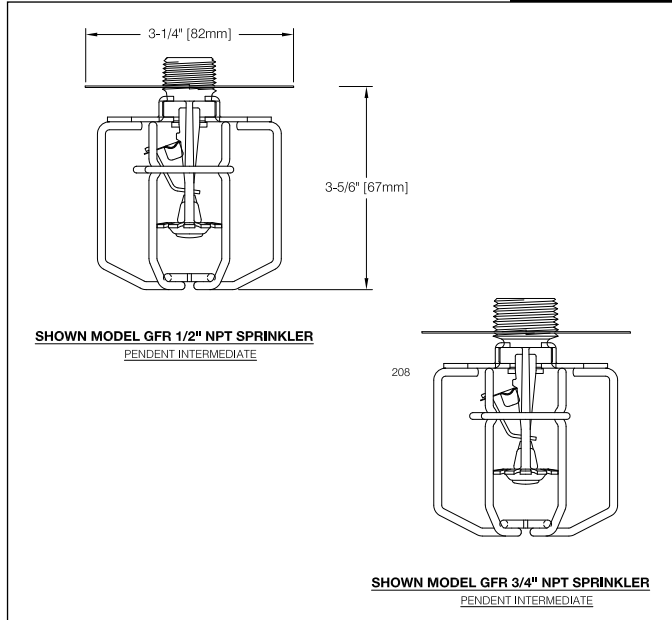
**Model D-3 Guards and Water Shield**

**Figure 6**



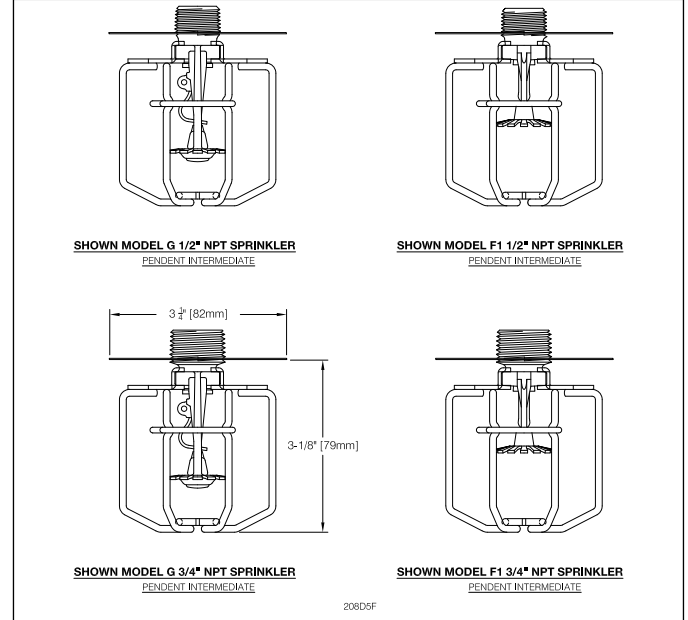
**Model D-4 Guards and Water Shield**

**Figure 7**



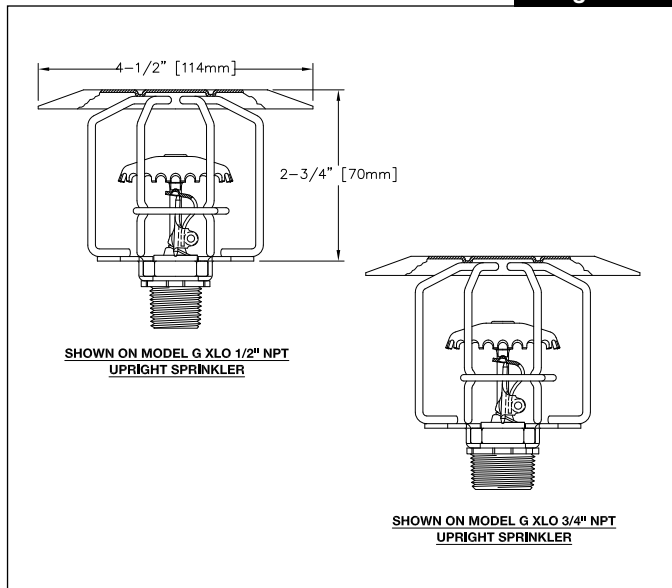
**Model D-5 Guards and Water Shield**

**Figure 8**



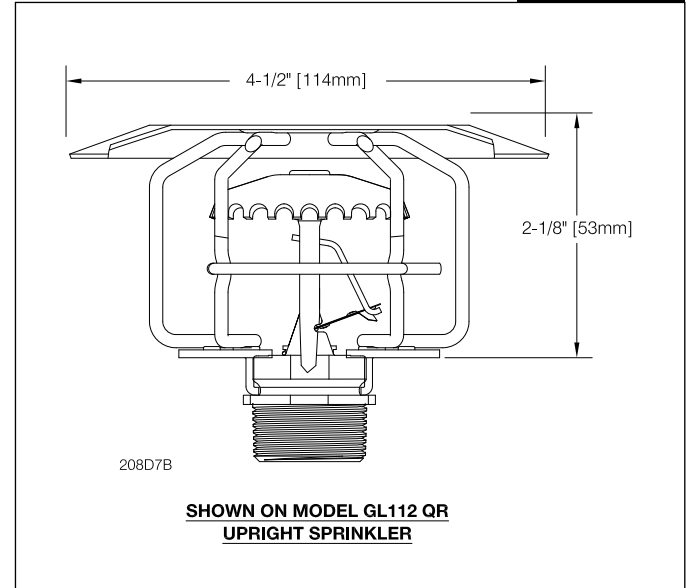
**Model D-6 Guards and Water Shield**

**Figure 9**



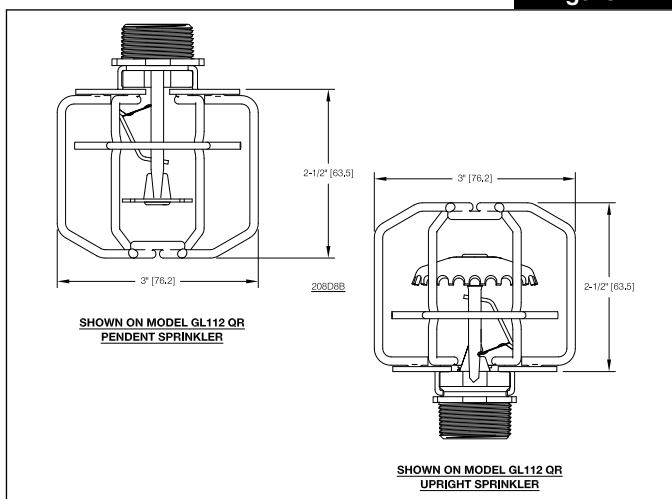
**Model D-7 Guards and Water Shield**

**Figure 10**



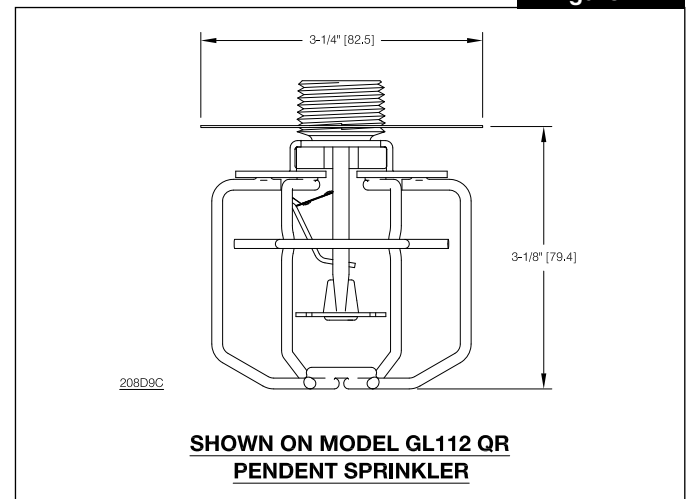
**Model D-8 Guard**

**Figure 11**



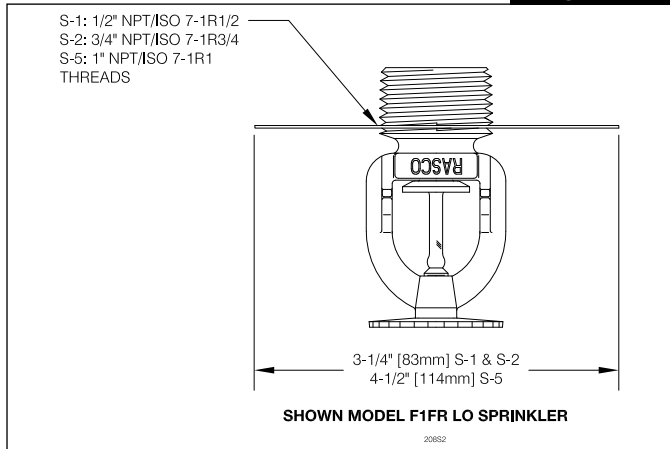
**Model D-9 Guard and Water Shield**

**Figure 12**



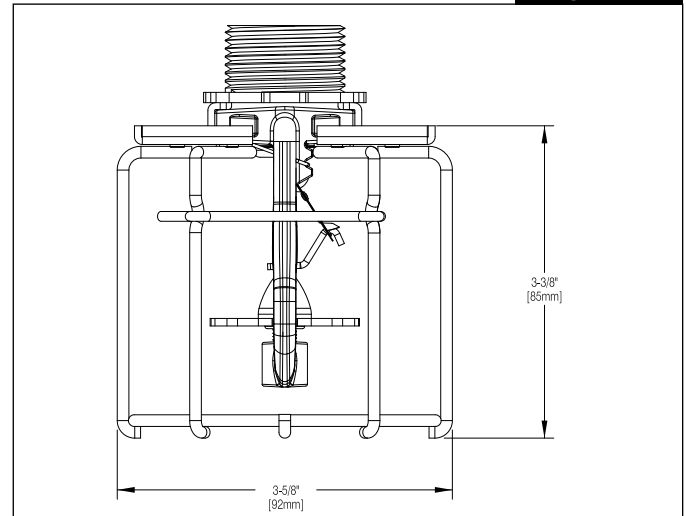
**Model S Water Shield**

**Figure 13**



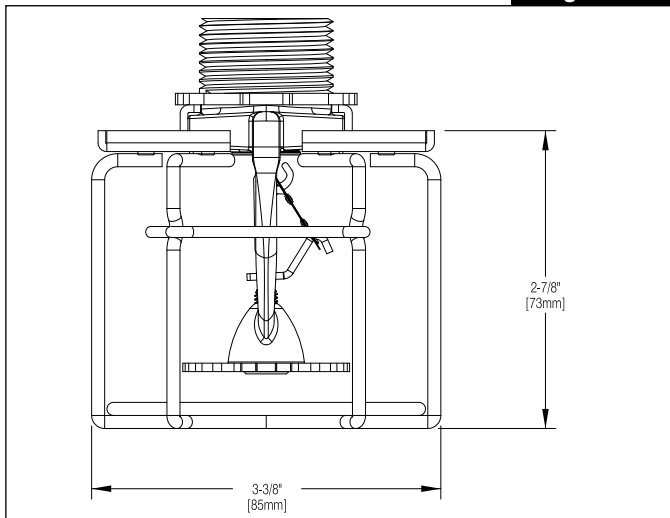
**Model 22 Guard**

**Figure 14**



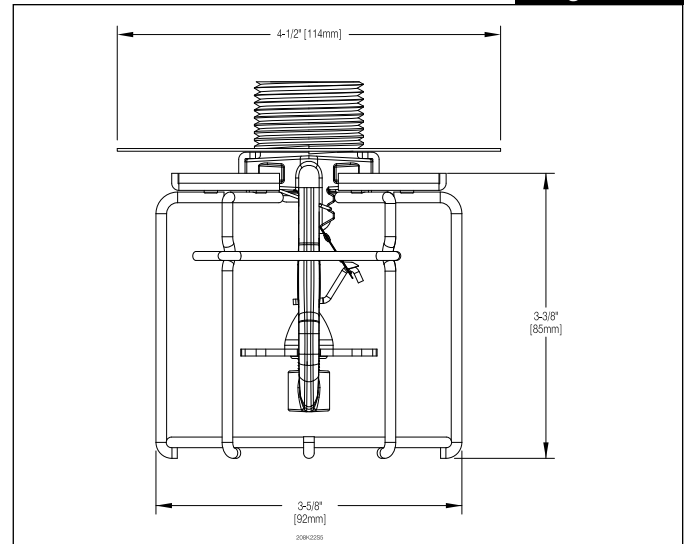
**Model 25 Guard**

**Figure 15**



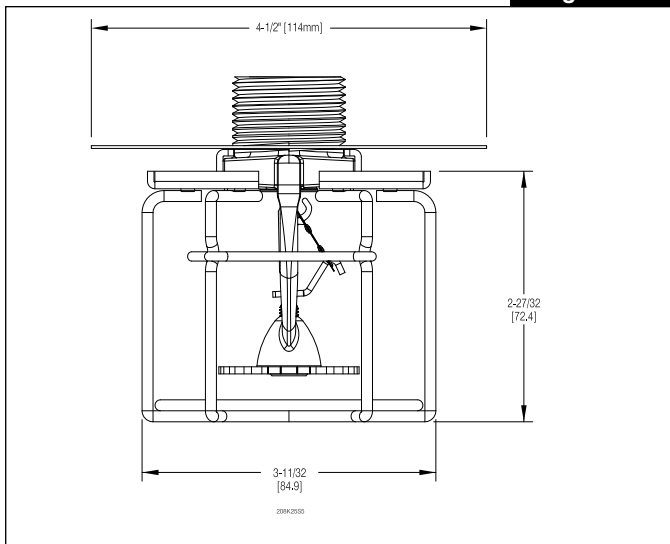
**Model 22 Guard w/ S-5 Shield**

**Figure 16**



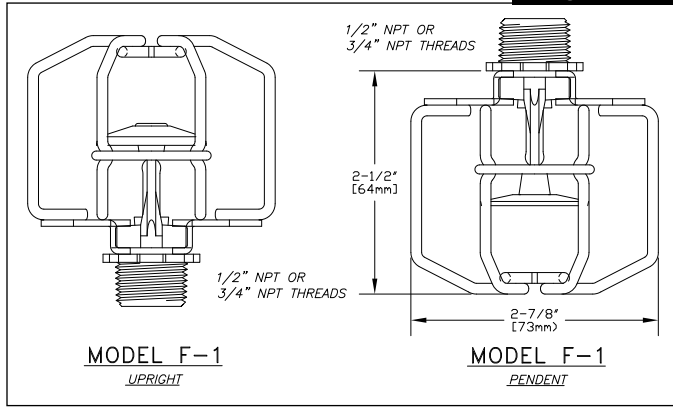
**Model 25 Guard w/ S-5 Shield**

**Figure 17**



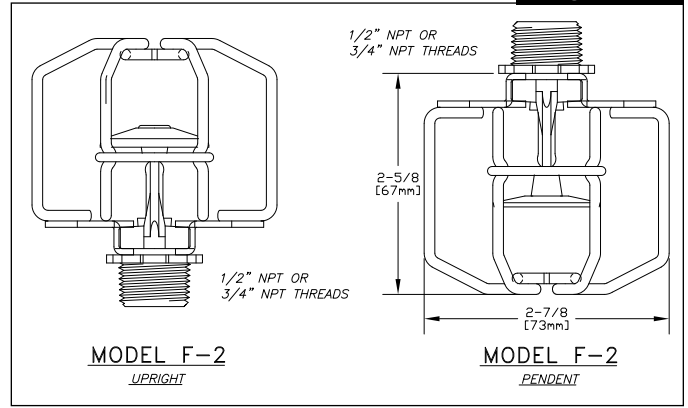
Model F-1 Guard

Figure 18



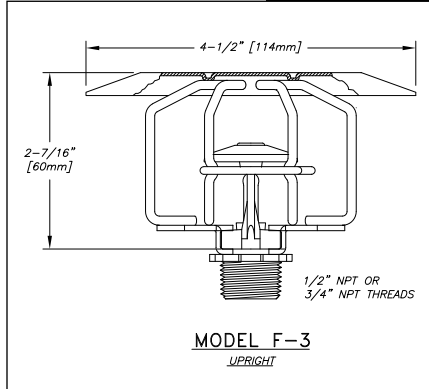
Model F-2 Guard

Figure 19



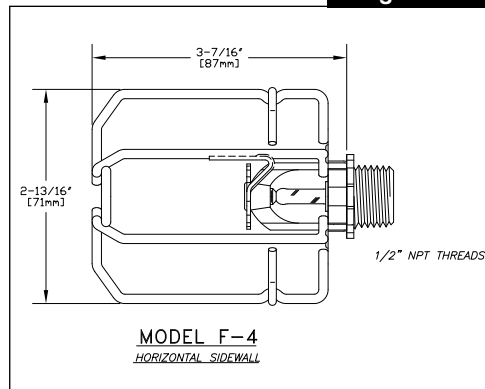
Model F-3 Guard and Water Shield

Figure 20



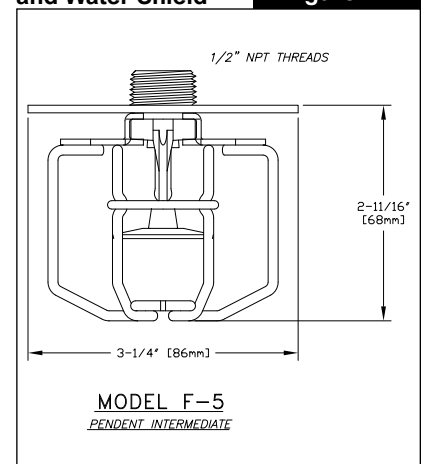
Model F-4 Guard

Figure 21



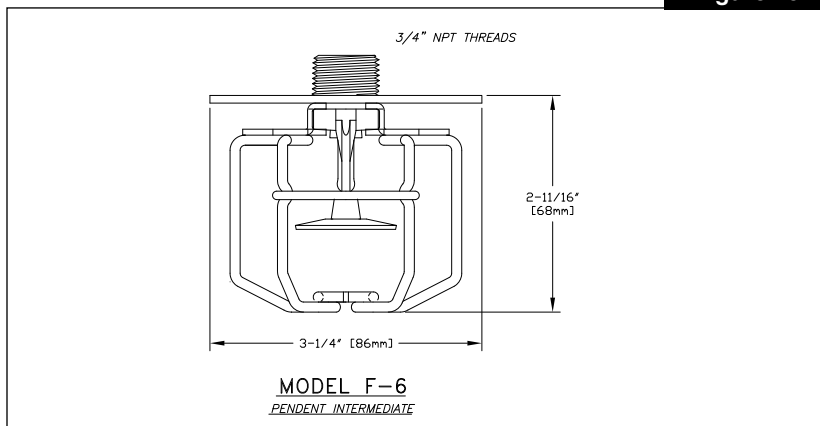
Model F-5 Guard and Water Shield

Figure 22



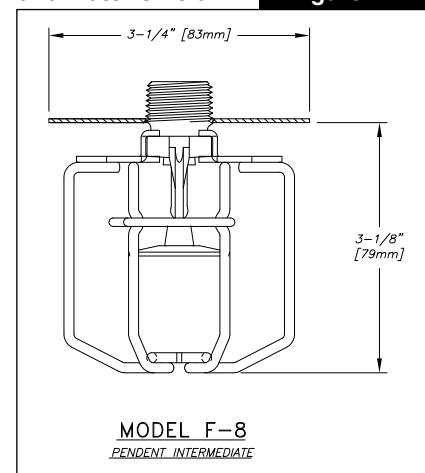
Model F-6 Guard and Water Shield

Figure 23



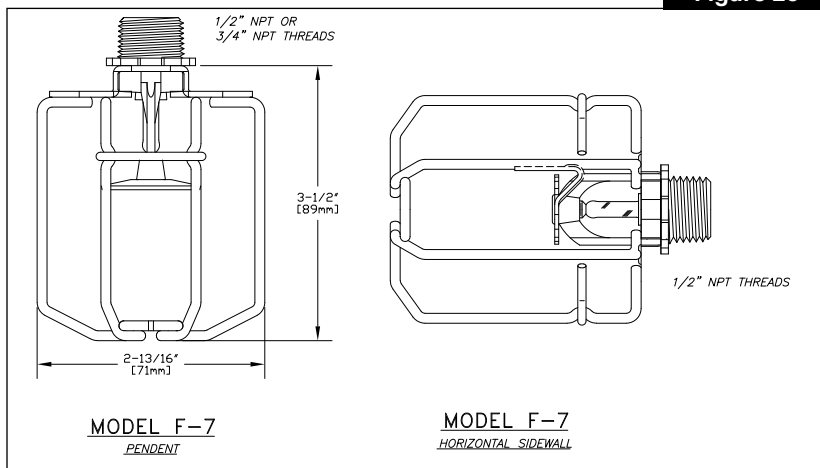
Model F-8 Guard and Water Shield

Figure 24



Model F-7 Guard

Figure 25



Listed and Approved Sprinkler, Guard, and Water Shield Combinations

Table A

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 ISO-7R	Approvals <sup>(4)</sup>	Guard, Guard and Shield, or Water Shield Model
F1LO	Pendent	R1712	8.0 (115)	SR	3/4	cULus	D-1 Guard D-5 Guard and Shield S-2 Shield
						FM	C-1 Guard C-5 Guard and Shield S-2 Shield
	Upright	R1722	8.0 (115)	SR	3/4	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield
F1LO-300	Pendent	RA5512	8.0 (115)	SR	3/4	cULus	D-1 Guard D-5 Guard and Shield S-2 Shield
	Upright	RA5522	8.0 (115)	SR	3/4	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and 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
F1-28 NEW <sup>(8)</sup>	Pendent	RA1311	2.8 (40)	SR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
	Upright	RA1321	2.8 (40)	SR	1/2	cULus	F-1 Guard F-3 Guard and Shield
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
F1-42 NEW <sup>(8)</sup>	Pendent	RA1313	4.2 (60)	SR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
	Upright	RA1323	4.2 (60)	SR	1/2	cULus	F-1 Guard F-3 Guard and Shield
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	D-1 Guard D-5 Guard and Shield S-1 Shield
						FM	C-1 Guard C-5 Guard and Shield D-1 Guard D-4 Guard and Shield D-5 Guard and Shield S-1 Shield
	Upright	RA1325	5.6 (80)	SR	1/2	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield
						FM	C-1 Guard C-3 Guard and Shield
VSW	RA1385	5.6 (80)	SR	1/2	FM	C-1 Guard	
F1-56 NEW <sup>(8)</sup>	HSW	RA1335	5.6 (80)	SR	1/2	cULus	F-7 Guard
						FM	F-4 Guard
	Pendent	RA1314	5.6 (80)	SR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
						FM	F-1 Guard F-5 Guard and Shield S-1 Shield
	Upright	RA1325	5.6 (80)	SR	1/2	cULus	F-1 Guard F-3 Guard and Shield
						FM	F-1 Guard F-3 Guard and Shield
VSW	RA1385	5.6 (80)	SR	1/2	cULus	NA	
					FM	F-2 Guard	

Note: see table notes on page 12.

<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 ISO-7R</b>	<b>Approvals<sup>(4)</sup></b>	<b>Guard, Guard and Shield, or Water Shield Model</b>
F1-56-300	Pendent	RA2514	5.6 (80)	SR	1/2	cULus	D-1 Guard D-5 Guard and Shield S-1 Shield
	Upright	RA2525	5.6 (80)	SR	1/2	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield
F1-56-300 NEW <sup>(8)</sup>	Pendent	RA2514	5.6 (80)	SR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
	Upright	RA2525	5.6 (80)	SR	1/2	cULus	F-1 Guard F-3 Guard and Shield
F1-56SS	Pendent	RA6414	5.6 (80)	SR	1/2	cULus	D-1 Guard D-5 Guard and Shield S-1 Shield
						FM	C-1 Guard C-5 Guard and Shield D-1 Guard D-4 Guard and Shield D-5 Guard and Shield S-1 Shield
	Upright	RA6424	5.6 (80)	SR	1/2	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield
						FM	C-1 Guard C-3 Guard and Shield
F1-80 NEW <sup>(8)</sup>	Pendent	RA6212	8.0 (115)	SR	3/4	cULus	F-7 Guard F-8 Guard and Shield S-2 Shield
						FM	F-2 Guard F-6 Guard and Shield S-2 Shield
	Upright	RA6222	8.0 (115)	SR	3/4	cULus	F-1 Guard F-3 Guard and Shield
						FM	F-2 Guard F-3 Guard and Shield
F1-80SS	Pendent	RA6412	8.0 (115)	SR	3/4	cULus	D-1 Guard D-5 Guard and Shield S-2 Shield
						FM	C-1 Guard C-5 Guard and Shield S-2 Shield
	Upright	RA6422	8.0 (115)	SR	3/4	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield
						FM	C-1 Guard C-3 Guard and Shield
F1FRLO	Pendent	R3612	8.0 (115)	QR	3/4	cULus	D-1 Guard D-5 Guard and Shield S-2 Shield
						FM	C-1 Guard C-5 Guard and Shield S-2 Shield
	Upright	R3622	8.0 (115)	QR	3/4	cULus	D-1 Guard D-3 Guard and Shield C-3 Guard and Shield
						FM	C-1 Guard C-3 Guard and 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
F1FR28 NEW <sup>(8)</sup>	Pendent	RA1411	2.8 (40)	QR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
	Upright	RA1421	2.8 (40)	QR	1/2	cULus	F-1 Guard F-3 Guard and Shield
F1FR-300	Pendent	R5612	8.0 (115)	QR	3/4	cULus	D-1 Guard D-5 Guard and Shield S-2 Shield
	Upright	R5622	8.0 (115)	QR	3/4	cULus	D-1 Guard

**Note:** see table notes on page 12.



**Table A cont.**

<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 ISO-7R</b>	<b>Approvals<sup>(4)</sup></b>	<b>Guard, Guard and Shield, or Water Shield Model</b>
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
F1FR42 NEW <sup>(8)</sup>	Pendent	RA1413	4.2 (60)	QR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
	Upright	RA1423	4.2 (60)	QR	1/2	cULus	F-1 Guard F-3 Guard and Shield
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	D-1 Guard D-5 Guard and Shield S-1 Shield
						FM	C-1 Guard C-5 Guard and Shield D-1 Guard D4 Guard and Shield D-5 Guard and Shield S-1 Shield
	Upright	RA1425	5.6 (80)	QR	1/2	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield
						FM	C-1 Guard C-3 Guard and Shield
	VSW	RA1485	5.6 (80)	QR	1/2	FM	C-1 Guard
F1FR56 NEW <sup>(8)</sup>	HSW	RA1435	5.6 (80)	QR	1/2	cULus	F-7 Guard
						FM	F-4 Guard
	Pendent	RA1414	5.6 (80)	QR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
						FM	F-1 Guard F-5 Guard and Shield S-1 Shield
	Upright	RA1425	5.6 (80)	QR	1/2	cULus	F-1 Guard F-3 Guard and Shield
						FM	F-1 Guard F-3 Guard and Shield
	VSW	RA1485	5.6 (80)	QR	1/2	cULus	NA
FM						F-2 Guard	
F1FR56-300	HSW	RA2634	5.6 (80)	QR	1/2	cULus	D-1 Guard
						FM	C-1 Guard
	Pendent	RA2614	5.6 (80)	QR	1/2	FM	C-1 Guard C-5 Guard and Shield D-1 Guard D4 Guard and Shield D-5 Guard and Shield S-1 Shield
	Upright	RA2625	5.6 (80)	QR	1/2	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield
						FM	C-1 Guard C-3 Guard and Shield
F1FR56-300 NEW <sup>(8)</sup>	HSW	RA2634	5.6 (80)	QR	1/2	cULus	F-7 Guard
F1FR56-300 NEW <sup>(8)</sup>	Pendent	RA2614	5.6 (80)	QR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
	Upright	RA2625	5.6 (80)	QR	1/2	cULus	F-1 Guard F-3 Guard and Shield

**Note:** see table notes on page 12.

**Table A cont.**

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 ISO-7R	Approvals <sup>(4)</sup>	Guard, Guard and Shield, or Water Shield Model
F1FR56SS	Pendent	RA6514	5.6 (80)	QR	1/2	cULus	D-1 Guard D-5 Guard and Shield
						FM	C-1 Guard C-5 Guard and Shield D-1 Guard D-4 Guard and Shield D-5 Guard and Shield
	Upright	RA6524	5.6 (80)	QR	1/2	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield
						FM	C-1 Guard C-3 Guard and Shield
F1FR80 NEW <sup>(8)</sup>	Pendent	RA6312	8.0 (115)	QR	3/4	cULus	F-7 Guard F-8 Guard and Shield S-2 Shield
						FM	F-2 Guard F-6 Guard and Shield S-2 Shield
	Upright	RA6322	8.0 (115)	QR	3/4	cULus	F-1 Guard F-3 Guard and Shield
						FM	F-2 Guard F-3 Guard and Shield
F1FR80-300 NEW <sup>(8)</sup>	Pendent	RA5612	8.0 (115)	QR	3/4	cULus	F-7 Guard F-8 Guard and Shield S-2 Shield
	Upright	RA5622	8.0 (115)	QR	3/4	cULus	F-1 Guard F-3 Guard and Shield
F1FR80SS	Pendent	RA6412	8.0 (115)	QR	3/4	cULus	D-1 Guard D-5 Guard and Shield S-2 Shield
						FM	C-1 Guard C-5 Guard and Shield S-2 Shield
	Upright	RA6522	8.0 (115)	QR	3/4	cULus	C-1 Guard C-3 Guard and Shield
						FM	C-1 Guard
F3-56 Dry	Pendent	R5314	5.6 (80)	SR	1	cULus, FM	C-2 Guard <sup>(5)</sup>
	HSW	R5334	5.6 (80)	SR	1	FM	C-2 Guard <sup>(5)</sup>
F3QR56 Dry	Pendent	R5714	5.6 (80)	QR	1	cULus, FM	C-2 Guard <sup>(5)</sup>
	HSW	R5734	5.6 (80)	QR	1	FM	C-2 Guard <sup>(5)</sup>
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 FM	D-1 Guard 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 FM	D-1 Guard C-1 Guard
		R1013	4.2 (60)	SR	1/2	cULus	D-1 Guard
		R1015	5.6 (80)	SR	1/2	cULus	D-1 Guard D-5 Guard and Shield S-1 Shield
						FM	C-1 Guard C-5 Guard and Shield S-1 Shield
		R1016	8.0 (115)	SR	1/2	cULus	D-1 Guard D-5 Guard and Shield
						FM	C-1 Guard
		R1017	8.0 (115)	SR	3/4	cULus	D-1 Guard D-5 Guard and Shield S-2 Shield
						FM	C-1 Guard C-5 Guard and Shield S-2 Shield

**Note:** see table notes on page 12.

<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 ISO-7R</b>	<b>Approvals<sup>(4)</sup></b>	<b>Guard, Guard and Shield, or Water Shield Model</b>	
G (cont.)	Upright	R1021	2.8 (40)	SR	1/2	cULus FM	D-1 Guard 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 C-3 Guard and Shield D-3 Guard and Shield	
						FM	C-1 Guard C-3 Guard and Shield	
		R1026	8.0 (115)	SR	1/2	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield	
						FM	C-1 Guard C3 Guard and Shield	
		R1027	8.0 (115)	SR	3/4	cULus	D-1 Guard C-3 Guard and Shield D-3 Guard and Shield	
						FM	C-1 Guard C-3 Guard and Shield	
		VSW	R1285	5.6 (80)	SR	1/2	FM	C-1 Guard
		GFR	HSW	R3131	2.8 (40)	QR	1/2	cULus
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 D-4 Guard and Shield S-1 Shield	
	R3117		8.0 (115)	QR	3/4	cULus	D-1 Guard D-4 Guard and Shield S-2 Shield	
FM						C-5 Guard and 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	C-3 Guard and Shield D-1 Guard D-3 Guard and Shield	
	R3127		8.0 (115)	QR	3/4	cULus	C-3 Guard and Shield D-1 Guard D-3 Guard and Shield	
FM						C-3 Guard and Shield		
GL112	Pendent	R3216	11.2 (160)	QR	3/4	FM	D-8 Guard D-9 Guard and Shield S-2 Shield	
	Upright	R3226	11.2 (160)	QR	3/4	FM	D-7 Guard and Shield D-8 Guard	
GXLO	Pendent	R2916	11.2 (160)	SR	3/4	FM	D-8 Guard D-9 Guard and Shield S-2 Shield	
	Upright	R2921	11.2 (160)	SR	3/4	cULus FM	D-6 Guard and Shield D-7 Guard and Shield D-8 Guard	
HL22 Threaded	Pendent	RA1011	22.4 (320)	ESFR	1	FM	22 Guard <sup>(6)</sup> S-5 Shield <sup>(6)(7)</sup>	
JL14	Pendent	RA1812	14.0 (200)	ESFR	3/4	FM	S-3 Shield	
JL17	Pendent	RA1914	16.8 (240)	ESFR	3/4	FM	S-3 Shield	

**Note:** see table notes on page 12.

<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 ISO-7R</b>	<b>Approvals<sup>(4)</sup></b>	<b>Guard, Guard and Shield, or Water Shield Model</b>
KFR56	Pendent	RA3614	5.6 (80)	QR	1/2	cULus	F-7 Guard F-8 Guard and Shield S-1 Shield
						FM	F-1 Guard F-5 Guard and Shield S-1 Shield
	Upright	RA3624	5.6 (80)	QR	1/2	cULus	F-1 Guard F-3 Guard and Shield
						FM	F-1 Guard F-3 Guard and Shield
	HSW	RA3634	5.6 (80)	QR	1/2	cULus	F-7 Guard
						FM	F-4 Guard
KFR56-300	Pendent	RA3914	5.6 (80)	QR	1/2	cULus	F-7 Guard F-8 Guard/Water Shield S-1 Water Shield
	Upright	RA3924					F-1 Guard F-3 Guard/Water Shield
	HSW	RA3934					F-7 Guard
KFR80	Pendent	RA5412	8.0 (115)	QR	3/4	cULus	F-7 Guard F-8 Guard and Shield S-2 Shield
						FM	F-2 Guard F-6 Guard and Shield S-2 Shield
	Upright	RA5422	8.0 (115)	QR	3/4	cULus	F-1 Guard F-3 Guard and Shield
						FM	F-2 Guard F-3 Guard and Shield
N25 Threaded	Pendent	RA0912	25.2 (360)	ESFR	1	FM	25 Guard <sup>(6)</sup> S-5 Shield <sup>(6)(7)</sup>
N252EC	Pendent	RA0842	25.2 (360)	QR	1	FM	25 Guard <sup>(6)</sup>

**Notes:**

- <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; ESFR: Early Suppression Fast Response.
- <sup>(4)</sup> In addition, SSL Approval for C-1, C-2, and C-3 guards and water shields.
- <sup>(5)</sup> Model C-2 guards are listed and work only with standard and HB type escutcheons. Model C-2 guards cannot be used with FP or F1 recessed escutcheons
- <sup>(6)</sup> FM Approved for intermediate-level use only, such as in-rack, under conveyors, mezzanines, or other similar obstructions. Only for use with threaded sprinklers.
- <sup>(7)</sup> When used in combination with the 22 or 25 Guard, the S-5 Shield replaces the 1" lock washer provided with the guard.
- <sup>(8)</sup> Sprinklers designated as "NEW" are updated versions of legacy sprinklers and MUST use F-series guards and guards with shields. These sprinklers will be designated with the suffix "N" on orders.

**Listings & Approvals**

Refer to Table A. 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. Scientific Services Laboratories (SSL, Australia)\*  
\* For Models C1, C2, C3 guards.

**Installation**

**Model C-1, C-2, and C-3 Guards**

Install the sprinkler in accordance with the applicable sprinkler installation instructions prior to installing the Model C guard. With both clips 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 C-5 Guard/Shield Assembly**

Prior to installing sprinkler into fitting, thread the Model S-1 (1/2") or S-2 (3/4") water shield onto the sprinkler. After installing sprinkler into fitting, install the Model C-1 Guard per the instructions above.

**Model D Guards**

Model D series guards and water shields are designed to be installed on the sprinkler prior to sprinkler installation. Assemble the guard on the sprinkler 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. After installing the guard, thread EITHER a 1/2" or 3/4" lock nut (for guard only) OR an S-1 (1/2") or S-2 (3/4") water shield (for guard/shield assembly) onto the sprinkler threads. The final assembly can then be installed into a fitting using only the wrench indicated in Table B "Wrench for Installation of Guard, Water Shield, and Sprinkler Assembly." The guard is more securely installed. Install the lock nut on to the NPT threads until the nut is securely against the guard.

**Model F Guards**

Model F series guards and guards with shields are designed to be installed on the sprinkler prior to installation. The assembly is then installed with the wrench indicated in Table B, Wrench for Installation of Guard, Water Shield, and Sprinkler Assembly.

**Models F-1, F-2, F-3, F-4 & F-7**

Assemble the guard on the sprinklers using the technique described for the Model D-1, then install a 1/2" or 3/4" locking nut on the NPT threads until the nut is tight against the guard.

**Models F-5, F-6, & F-8**

Assemble the guard on the sprinklers using the technique described for the Model D-1, then install a 1/2" or 3/4" threaded water shield on the NPT threads until the shield is tight against the guard.

**Model 22 & 25 Guards**

Install the provided locknut on the sprinkler threads prior to installation of the sprinkler. Install the sprinkler in accordance with the applicable sprinkler installation instructions. With both clips unhooked, slightly spread open the guard. Insert the guard over the installed sprinkler so that the base plate of the guard attaches to the wrench flats of the sprinkler. Connect both locking clips to the adjacent tines of the guard. Tighten the locknut against the base plate of the guard.

**Model S Water Shields**

Model S water shields are designed to be installed on the sprinkler prior to installation. Thread the Model S water shield onto the sprinkler by hand, making sure that the shield does not pass by the end of the threads near the wrench boss. Install the sprinkler/shield assembly with the wrench indicated in the appropriate Technical Bulletin for the sprinkler.

**Installation Notes**

1. For all products incorporating a lock-nut feature, the lock-nut is part of the listed assembly. Failure to install the lock-nut will void the listing of the product and may lower the impact tolerance of the device.
2. The products in this bulletin are NOT compatible with recessed or concealed sprinkler installations.

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

**Table B**

Guard/ Water Shield	Required Wrench for Installation of Guard, Water Shield, and Sprinkler Assembly
D-1	Model JD
D-3	
D-4	
D-5	
D-1	Model J
D-3	
D-4	
D-5	
D-6	Model JV
D-7	
D-8	
D-9	
F (All)	Model J

**Finishes**

**Guard Finishes**

**Table C**

Standard	Special Application
Zinc plated with clear chromate	Enamel red paint White paint Black paint Custom color paint Bright Chrome Dull Chrome

**Water Shield Finishes**

**Table D**

S Series Water Shields	
Standard	Special Application
Galvanized	Enamel red paint White paint Black paint Custom color paint

**Ordering Information**

**Specify:**

- Guard, Guard with Shield, or Shield Model
- Sprinkler Thread Size (required for Model D-4 and D-5 only)
- Finish (See tables C and D)
- Wrench (See table B)

**Note:** Factory installation of Models D and F guards is available at additional cost. Please contact your Reliable representative for details.