



TECHNICAL DATA SHEET

Guards and Water Shields for XT1 Sprinklers

1. PRODUCT IDENTIFICATION

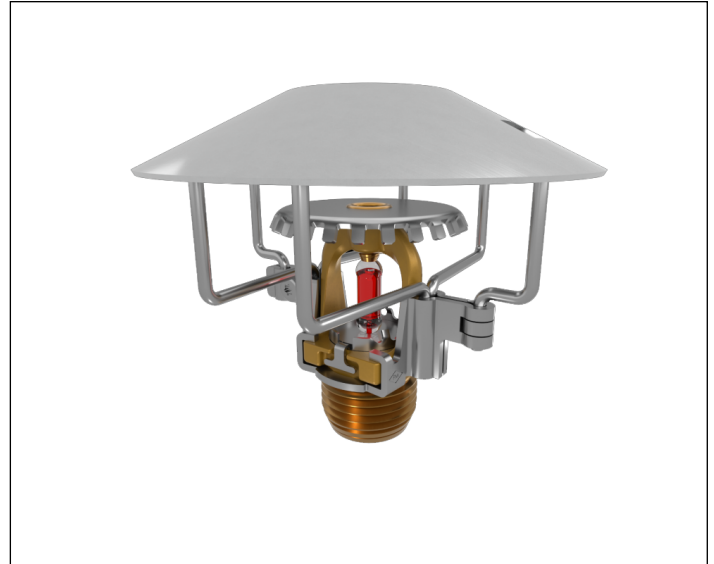
This document covers the following products, hereafter referred to as “sprinkler guard” and “water shield”:

Model XG Sprinkler Guard, XWU Water Shield, and F-1 Water Shield.

2. INTENDED USE

The sprinkler guard and water shields are intended to be used in conjunction with automatic fire sprinklers as allowed by applicable approval authorities. The sprinkler guard and water shields must be used in accordance with:

1. the sprinkler's Listings, Approvals, and associated design requirements.
2. the recognized design and installations standards issued, for example NFPA, FM, EN, VdS, or LPCB.
3. the latest revisions of all applicable manufacturer's documentation.



Governmental codes, ordinances, and standards may apply and may differ from one another.

Cancer and Reproductive Harm www.P65Warnings.ca.gov

2.1 Sprinkler Compatibility

NOTICE

Refer to section 5 for specific Listing and Approval information.

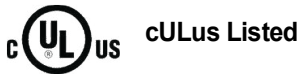
The tables below show the sprinkler, guard, and water shield compatibility.

Upright Sprinklers		
SIN	Compatible Model	
	Guard	Water Shield*
VK1001	XG	XWU
VK3001	XG	XWU
VK2001	XG	XWU
VK2002	XG	XWU
VK3501	XG	XWU
VK3502	XG	XWU
*The Model XWU water shield must be used with the Model XG guard.		

Pendent Sprinklers		
SIN	Compatible Model	
	Guard	Water Shield
VK850	XG	F-1
VK851	XG	F-1
VK852	XG	F-1
VK853	XG	F-1
VK1021	XG	F-1
VK2021	XG	F-1
VK2022	XG	F-1
VK3021	XG	F-1
VK3522	XG	F-1
VK3521	XG	F-1
The sprinkler may be used with the guard and water shield combined, or alone with either device.		

3. LISTING AND APPROVALS

Refer to section 5 for details and requirements that must be followed.



4. TECHNICAL SPECIFICATIONS

4.1 Definitions

Viking Sprinkler Guard: A sprinkler guard is a hard-wire cage designed to encase the sprinklers and protect them from mechanical damage. Sprinkler guards are recommended for areas where sprinklers are installed at a low elevation and/or near a high degree of human or mechanical activity.

Viking Water Shield: A water shield protects the sprinkler’s heat-sensing element from water discharging at a higher elevation.

4.2 Dimensions

Model XG Sprinkler Guard

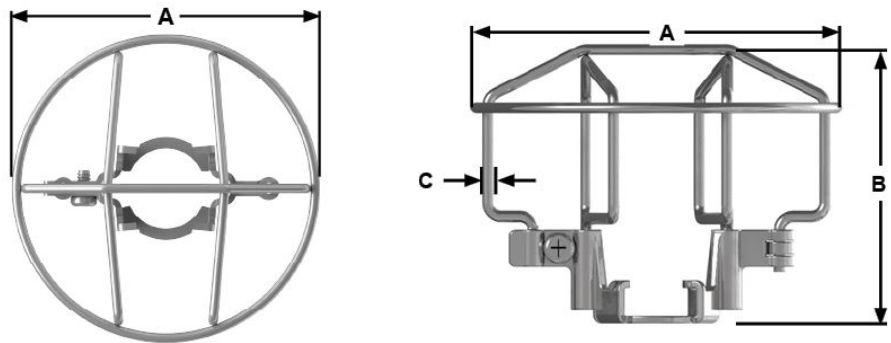


Figure – 1: Sprinkler Guard Dimensions

Description	Dimensions		
	A	B	C
XG Sprinkler Guard	2-15/16" (75 mm)	2-3/16" (56 mm)	3/32" (2.3 mm)



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Water Shields

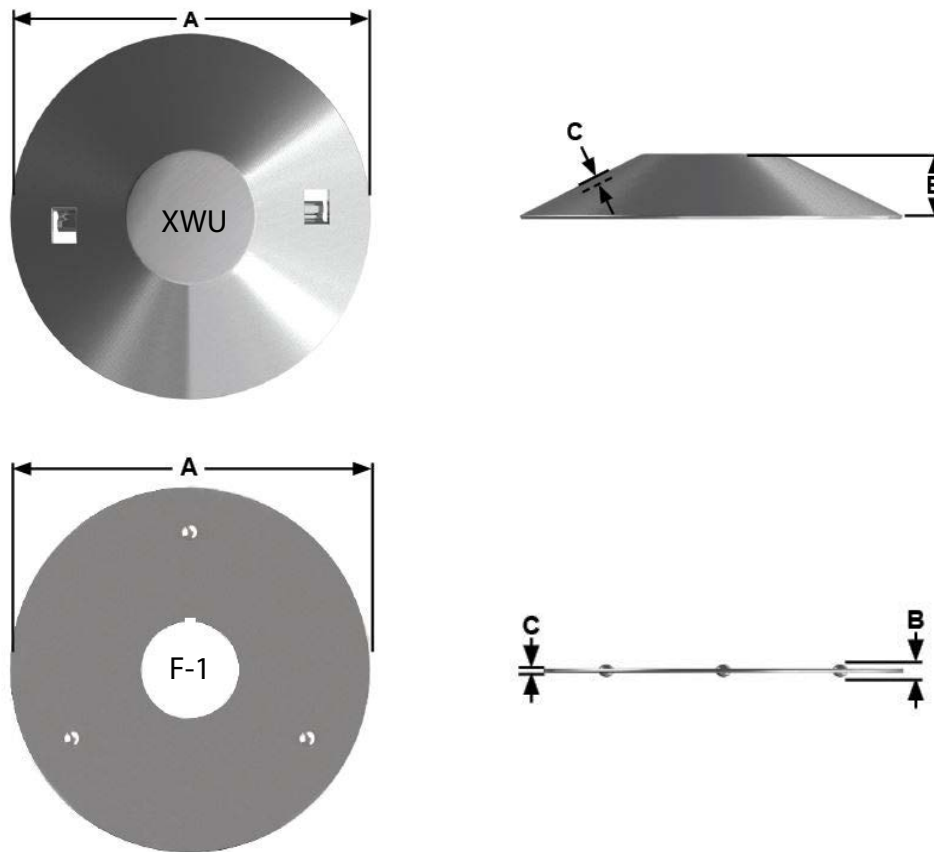


Figure – 2: Water Shield Dimensions

Description	Dimensions		
	A	B	C
XWU Upright Water Shield	3 3/8" (86 mm)	9/16" (14 mm)	1/32" (1 mm)
F-1 Pendent Water Shield (1/2")	3" (75 mm)	0.08" (2 mm)	0.036" (0.9 mm)
F-1 Pendent Water Shield (3/4")	3" (75 mm)	0.08" (2 mm)	0.036" (0.9 mm)

4.3 Materials of Construction

Component		Material
XG Sprinkler Guard	Wire	UNS-G10100 bright basic steel wire or JIS G3141 SPCF
	Screw	6-32 x 3/8 (R.H. Phillips-slotted combination drive); steel; zinc-plated
XWU Water Shield		UNS-G10080 cold rolled steel or JIS G3141 SPCF
F-1 Water Shield		UNS-G10080 cold rolled steel
Wrench		65-45-12 ductile iron or QT 450-12



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5. LISTING AND APPROVAL DESIGN REQUIREMENTS

5.1 Listing and Approval Specifications - Upright XT1 Sprinklers

The Upright Sprinklers shown in the Approval Chart below may be ordered with sprinkler guards factory-installed. See Ordering Table in this document and refer to the appropriate sprinkler technical data page for available temperatures and finishes.

NOTE: Viking XT1 style sprinkler with Model XWU or F-1 Water Shields and/or XG Guards are converted to intermediate level/rack storage sprinklers. They may be used in any application where water shielding is required.

Upright XT1 Sprinklers										
Sprinkler Base Part Number ¹	SIN	Sprinkler Type	Thread Size		Orifice Size	Nominal K-Factor		Maximum Pressure	Listings and Approvals	
			NPT	BSPT		U.S.	Metric		cULus ²	FM ³
Standard Response, Glass Bulb Type										
23867	VK1001	Upright	1/2"	—	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23879	VK1001	Upright	—	15 mm	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23875	VK2001	Upright	3/4"	—	Large	8.0	115.2	175 PSI	✓	✓
23887	VK2001	Upright	—	20 mm	Large	8.0	115.2	175 PSI	✓	✓
23871 ⁴	VK2002	Upright	1/2"	—	Large	8.0	115.2	175 PSI	✓	✓
23883	VK2002	Upright	—	15 mm	Large	8.0	115.2	175 PSI	✓	✓
Quick Response, Glass Bulb Type										
23869	VK3001	Upright	1/2"	—	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23881	VK3001	Upright	—	15 mm	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23877	VK3501	Upright	3/4"	—	Large	8.0	115.2	175 PSI	✓	✓
23889	VK3501	Upright	—	20 mm	Large	8.0	115.2	175 PSI	✓	✓
23873 ⁴	VK3502	Upright	1/2"	—	Large	8.0	115.2	175 PSI	✓	✓
23885	VK3502	Upright	—	15 mm	Large	8.0	115.2	175 PSI	✓	✓
Approved Temperature Ratings and Finishes										
Refer to the sprinkler technical data sheet.										
Footnotes										
1. For complete part number, refer to Viking's current price list.										
2. Listed by Underwriter's Laboratories, Inc. for use in the U.S. and Canada.										
3. FM Approved for protection of occupancies described in the FM Global Loss Prevention Data Sheets (including 2-0 and 8-9) and Technical Advisory Bulletins.										
4. The 1/2" NPT Large Orifice Sprinkler is listed and approved for retrofit only when installed in accordance with NFPA 13.										



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5.2 Listing and Approval Specifications - Pendent XT1 Sprinklers

The Pendent Sprinklers shown in the Approval Chart below may be ordered with sprinkler guards factory-installed. See Ordering Table in this document and refer to the appropriate sprinkler technical data page for available temperatures and finishes. Pendent Sprinklers (with or without the sprinkler guards) and water shields must be ordered separately. Water Shield assembly is required. See table 1 in this document and refer to the appropriate sprinkler technical data page for available temperatures and finishes.

Pendent Intermediate Level XT1 Sprinklers										
Sprinkler Base Part Number ¹	SIN	Sprinkler Type	Thread Size		Orifice Size	Nominal K-Factor		Maximum Pressure	Listings and Approvals	
			NPT	BSPT		U.S.	Metric		cULus ²	FM ³
Standard Response, Glass Bulb Type										
24583	VK850	Pendent	1/2"	—	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
24584	VK851	Pendent	1/2"	—	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23868	VK1021	Pendent	1/2"	—	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23880	VK1021	Pendent	—	15 mm	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23876	VK2021	Pendent	3/4"	—	Large	8.0	115.2	175 PSI	✓	✓
23888	VK2021	Pendent	—	20 mm	Large	8.0	115.2	175 PSI	✓	✓
23872 ⁴	VK2022	Pendent	1/2"	—	Large	8.0	115.2	175 PSI	✓	✓
23884	VK2022	Pendent	—	15 mm	Large	8.0	115.2	175 PSI	✓	✓
Quick Response, Glass Bulb Type										
24321	VK852	Pendent	1/2"	—	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
24580	VK853	Pendent	1/2"	—	Standard	8.0	115.2	175 PSI	✓	✓
23870	VK3021	Pendent	1/2"	—	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23882	VK3021	Pendent	—	15 mm	Standard	5.6	80.6	UL - 250 PSI FM - 175 PSI	✓	✓
23878	VK3521	Pendent	3/4"	—	Large	8.0	115.2	175 PSI	✓	✓



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Pendent Intermediate Level XT1 Sprinklers

Sprinkler Base Part Number ¹	SIN	Sprinkler Type	Thread Size		Orifice Size	Nominal K-Factor		Maximum Pressure	Listings and Approvals	
			NPT	BSPT		U.S.	Metric		cULus ²	FM ³
23890	VK3521	Pendent	—	20 mm	Large	8.0	115.2	175 PSI	✓	✓
23874 ⁴	VK3522	Pendent	1/2"	—	Large	8.0	115.2	175 PSI	✓	✓
23886	VK3522	Pendent	—	15 mm	Large	8.0	115.2	175 PSI	✓	✓

Approved Temperature Ratings and Finishes

Refer to the sprinkler technical data sheet.

Footnotes

1. For complete part number, refer to Viking's current price list.
2. Listed by Underwriter's Laboratories, Inc. for use in the U.S. and Canada.
3. FM Approved for protection of occupancies described in the FM Global Loss Prevention Data Sheets (including 2-0 and 8-9) and Technical Advisory Bulletins.
4. The 1/2" NPT Large Orifice Sprinkler is listed and approved for retrofit only when installed in accordance with NFPA 13.



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6. ORDERING PROCEDURES

6.1 Factory Assembled Guards and Shields

To order the guard, or guard and water shield combination factory assembled on the sprinkler:

1. Choose a sprinkler base part number with the required thread size and listing or approval (refer to section 5).
2. Add the suffix "G" to the part number from step 1 for the guard alone to be assembled with the sprinkler.
3. (Optional) Add the suffix "U" to the part number from step 2 for the water shield to be assembled with the sprinkler and guard.

NOTE: To order the guard and water shield alone, refer to "Individual Ordering Procedure".

EXAMPLE: 23867MB/WGU = VK1001 with 1/2" NPT threads, a white polyester finish, a 155 °F (68 °C) nominal temperature rating, that includes a factory installed Model XG Sprinkler Guard and Model XWU water shield.

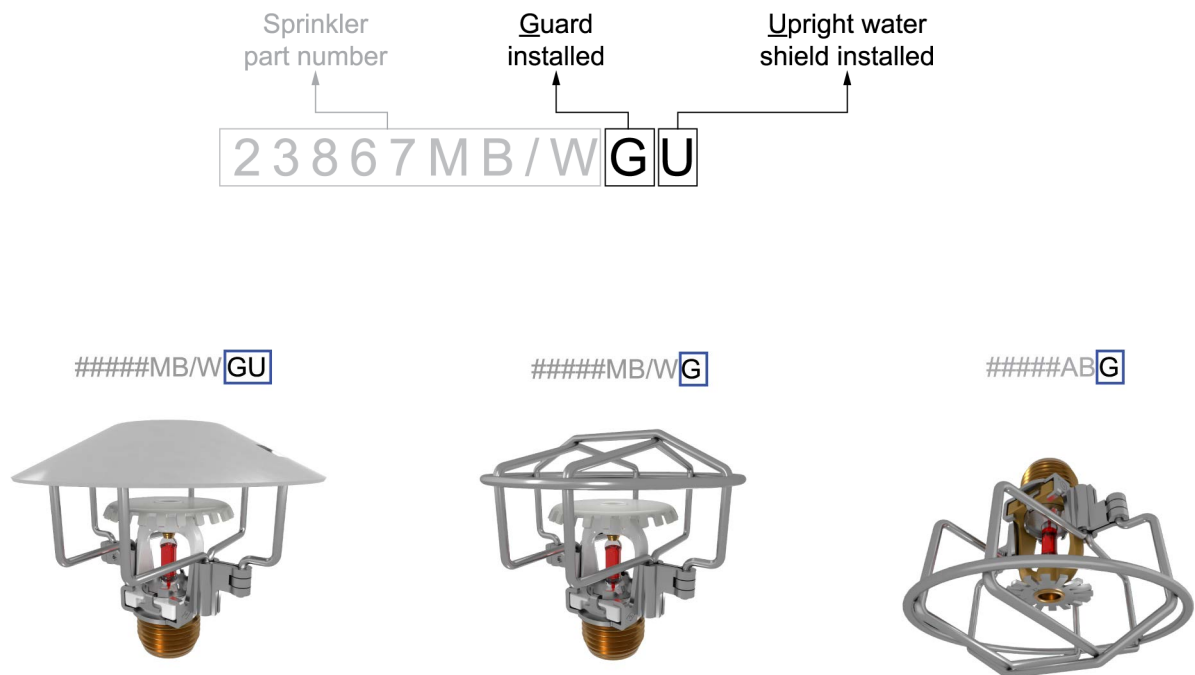


Figure – 3: Factory Assembled Options

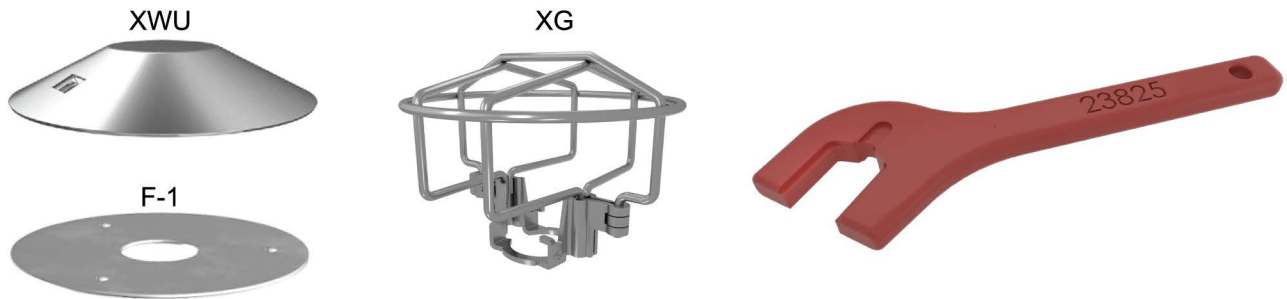


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6.2 Individual Ordering Procedure

1. Choose a sprinkler with the required thread size and listing or approval (refer to section 5 and the sprinkler's technical data sheet).
2. Choose a guard or water shield with the required size for the sprinkler.



Part Number	Description	Size	
		NPT	BSPT
23930	Model XG Sprinkler Guard (see note above for factory-installed option)	1/2" or 3/4"	15 mm or 20 mm
22937	Model XWU Upright Water Shield (must be used with Model XG Guard)	--	--
10323	Model F-1 Pendent Water Shield	1/2"	15 mm
10324	Model F-1 Pendent Water Shield	3/4"	20 mm
23825MR*	XT1 Sprinkler Guard Wrench	1/2" or 3/4"	15 mm or 20 mm

* Required for installation of XT1 Sprinklers with Model XG guards.

7. CONTACT

The sprinkler and accessories are available through Viking distributors only. Contact your local Viking sales office which can be found on our website:

Americas and Asia: www.vikinggroupinc.com/locations OR Europe, Middle East, Africa (EMEA): www.viking-emea.com/contact

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