

# Victaulic® FireLock™ Series FL-QR/ST/ESFR Storage, Fast Response ESFR Pendent Sprinklers K22.4 (32.0)



## 1.0 PRODUCT DESCRIPTION

ESFR PENDENT APPROVALS/LISTINGS		
SIN	V4902	V4996
SPRINKLER TYPE	NFPA-ESFR/FM-Quick Response Storage	NFPA-ESFR/ FM-Quick Response Storage
SPRINKLER RESPONSE	QR	QR
ORIENTATION	Pendent	Pendent
K-FACTOR <sup>1</sup>	22.4 Imp./32.0 S.I.	22.4 Imp./32.0 S.I.
CONNECTION	IGS™ Grooved	1" NPT/25 mm BSPT/IGS™ Grooved
MAX. WORKING PRESSURE	175 psi (1200 kPa)	175 psi (1200 kPa)

AVAILABLE WRENCHES			
SPRINKLER	V4902 (IGS only)	V4996/8 Open End	3/16 Hex-Bit (V9)
Pendent	-	■	■

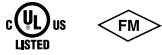
**Factory Hydrostatic Test:** 100% @ 500 psi/3447 kPa/34 bar

**Min. Operating Pressure:** UL/FM: 7 psi/48 kPa/.5 bar

<sup>1</sup> For K-Factor when pressure is measured in bar, multiply S.I. units by 10.0.

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

## 2.0 CERTIFICATION/LISTINGS



ESFR PENDENT APPROVALS/LISTINGS				
	cULus (NFPA)		FM	
SIN	V4902		V4996	
Nominal K Factor Imperial	22.4		22.4	
Nominal K Factor S.I. <sup>2</sup>	32.0		32.0	
Sprinkler Type	ESFR	Quick Response Storage	ESFR	Quick Response Storage
System Type	Wet		Wet	
	Approved Temperature Rating		Approved Temperature Rating	
Temperature Rating	165°F/74°C 212°F/100°C	165°F/74°C 212°F/100°C	165°F/74°C 212°F/100°C	165°F/74°C 212°F/100°C
Maximum Area of Coverage	100ft <sup>2</sup> /9.1m <sup>2</sup>		100ft <sup>2</sup> /9.1m <sup>2</sup>	
Minimum Area of Coverage	64ft <sup>2</sup> /6m <sup>2</sup>		64ft <sup>2</sup> /6m <sup>2</sup>	
Maximum Slope Ceiling	2 in 12/10.5°		2 in 12/10.5°	
Maximum Spacing	12ft/3.6m for up to 30ft/9.1m ceiling 10ft/3m for over 30ft/9.1m ceiling	12ft/3.6m for up to 30ft/9.1m ceiling 10ft/3m for over 30ft/9.1m ceiling	12ft/3.6m for up to 30ft/9.1m ceiling 10ft/3m for over 30ft/9.1m ceiling	12ft/3.6m for up to 30ft/9.1m ceiling 10ft/3m for over 30ft/9.1m ceiling
Minimum Spacing	8ft/2.4m		8ft/2.4m	
Deflector to Ceiling Distance <sup>3</sup>	6"-18"/150mm-457mm	4"-17"/100mm-432mm	6"-18"/150mm-457mm	4"-17"/100mm-432mm
Minimum Deflector to Top of Storage	3ft/0.9m		3ft/0.9m	
Minimum Deflector Distance from Walls	4"/100mm		4"/100mm	
Sprinkler System Design	12 A.S @ Approved Pressures	12 A.S @ Approved Pressures	12 A.S @ Approved Pressures	12 A.S @ Approved Pressures
<b>Storage Type</b>				
Open Frame (that is, no solid shelves) Single, Double, Multiple-Row, or Portable Rack Storage of Class I-IV and Group A or B Plastics	NFPA 13	Datasheet 8-9	NFPA 13	Datasheet 8-9
Solid Pile or Palletized Storage of Class I-IV and Group A or B Plastics	NFPA 13	Datasheet 8-9	NFPA 13	Datasheet 8-9
Idle Pallet Storage	NFPA 13	Datasheet 8-24	NFPA 13	Datasheet 8-24
Rubber Tire Storage	NFPA 13	Datasheet 8-3	NFPA 13	Datasheet 8-3
Rolled Paper Storage (Refer to the standard.)	NFPA 13	Datasheet 8-21	NFPA 13	Datasheet 8-21
Flammable Liquid Storage (Refer to the standard.)	NFPA 30	Datasheet 7-29	NFPA 30	Datasheet 7-29
Aerosol Storage (Refer to the standard.)	NFPA 30B	Datasheet 7-31	NFPA 30B	Datasheet 7-31
Automotive Components in Portable Racks (Control mode only, refer to the standard.)	Refer to NFPA 13	N/A	Refer to NFPA 14	N/A

<sup>2</sup> For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.

<sup>3</sup> Distance is taken from the center of the thermal element for FM.

**NOTES**

- Listings and approval as of printing.

### 3.0 SPECIFICATIONS – MATERIAL

**Deflector:** Brass

**Load Screw:** Stainless Steel

**Pip Cap:** Brass

**Spring Seal:** PTFE coated Beryllium nickel alloy

**Frame:** Cast Brass

**Link:** Nickel

**Lever:** Monel

**Strut:** Monel

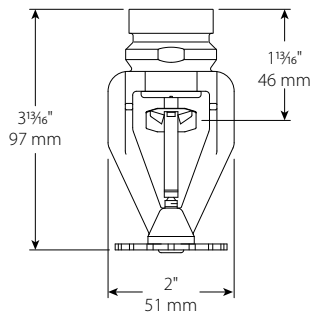
**Installation Wrench:** Ductile iron

**Sprinkler Frame Finishes:** Plain brass

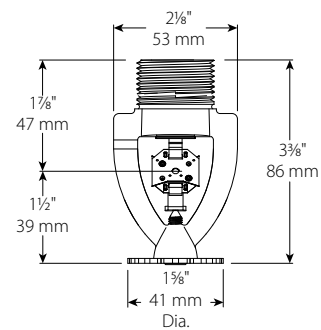
**NOTE**

- For cabinets and other accessories refer to separate sheet.

### 4.0 DIMENSIONS



**V4902**




**V4996**

### 5.0 PERFORMANCE

Sprinkler is to be installed and designed as per NFPA, FM Datasheets, or any local standards.

## 6.0 NOTIFICATIONS

<b>⚠ WARNING</b>	
	<ul style="list-style-type: none"> <li>• Read and understand all instructions before attempting to install any Victaulic products.</li> <li>• Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.</li> <li>• Wear safety glasses, hardhat, and foot protection.</li> </ul> <p>Failure to follow these instructions could result in death or serious personal injury and property damage.</p>
<ul style="list-style-type: none"> <li>• These products shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.</li> <li>• The installer shall understand the use of this product and why it was specified for the particular application.</li> <li>• The installer shall understand common industry safety standards and potential consequences of improper product installation.</li> <li>• It is the system designer's responsibility to verify suitability of materials for use with the intended fluid media within the piping system and external environment.</li> <li>• The material specifier shall evaluate the effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on materials to confirm system life will be acceptable for the intended service.</li> </ul> <p>Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.</p>	

## 7.0 REFERENCE MATERIALS

**Ratings:** All glass bulbs are rated for temperatures from -67°F/-55°C.

[1-40: Victaulic FireLock™ Automatic Sprinklers Installation and Maintenance Instructions](#)

[1-V9: Style V9 Victaulic FireLock™ IGS™ Installation-Ready™ Sprinkler Coupling Installation Instructions](#)

### User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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### Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

### Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

### Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

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