

Victaulic® FireLock™ Series FL-QR/ST/ESFR

Storage, Fast Response

ESFR Pendent Sprinklers K25.2 (36.8)



1.0 PRODUCT DESCRIPTION

FAST RESPONSE STORAGE SPRINKLERS	
SIN	V4804
SPRINKLER TYPE	NFPA-ESFR / FM-Quick Response Storage
SPRINKLER RESPONSE	ESFR
ORIENTATION	Pendent
K-FACTOR ¹	25.2 Imp./36.8 S.I.
CONNECTION	1"NPT/25 mm BSPT/ IGS™ Grooved
MAX. WORKING PRESSURE	175 psi (1200 kPa)

AVAILABLE WRENCHES	
SPRINKLER	V46 Open End
PENDENT	■

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

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

Temperature Rating: See tables in [Section 2.0](#)

¹ 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 CERTIFICATIONS/LISTINGS



ESFR PENDENT APPROVALS/LISTINGS			
	NFPA (cULus/FM)	FM/CNBOP	CCC
SIN	V4804		
Nominal K Factor Imperial	25.2	25.2	25.2
Nominal K Factor S.I. ²	36.3	36.3	36.3
Sprinkler Type	ESFR	Fast Response Storage	ESFR
System Type	Wet	Wet	Wet
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
Maximum Area of Coverage	100 ft ² /9.1 m ²	100 ft ² /9.1 m ²	GB50084
Minimum Area of Coverage	64 ft ² /6 m ²	64 ft ² /6 m ²	GB50084
Maximum Slope Ceiling	NFPA 13	Datasheet 2-0 and 8-9	GB50084
Maximum Spacing	12 ft/3.6 m for up to 30 ft/9.1 m ceiling 10 ft/3 m for over 30 ft/9.1 m ceiling	12 ft/3.6 m for up to 30 ft/9.1 m ceiling 10 ft/3 m for over 30 ft/9.1 m ceiling	GB50084
Minimum Spacing	8 ft/2.4 m	8 ft/2.4 m	GB50084
Deflector to Ceiling Distance ³	NFPA 13	Datasheet 2-0 and 8-9	GB50084
Minimum Deflector to Top of Storage	3 ft/0.9 m	3 ft/0.9 m	GB50084
Minimum Deflector Distance from Walls	4"/100 mm	4"/100 mm	GB50084
Sprinkler System Design	12 A.S @ Approved Pressures per NFPA 13 when more are required	12 A.S @ Approved Pressures per Datasheet 2-0 and 8-9 when more are required	GB50084
Storage Type	Applicable Standards		
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 2-0	GB50084
Solid Pile or Palletized Storage of Class I-IV and Group A or B Plastics	NFPA 13	Datasheet 2-0	GB50084
Idle Pallet Storage	NFPA 13	Datasheet 8-24	GB50084
Rubber Tire Storage	NFPA 13	Datasheet 8-3	GB50084
Rolled Paper Storage (Refer to the standard.)	NFPA 13	Datasheet 8-21	GB50084
Flammable Liquid Storage (Refer to the standard.)	NFPA 30	Datasheet 7-29	GB50084
Aerosol Storage (Refer to the standard.)	NFPA 30B	Datasheet 7-31	GB50084
Automotive Components in Portable Racks (Control mode only, refer to the standard.)	Refer to NFPA 13	N/A	GB50084

² For K-Factor when pressure is measured in bar, multiply S.I. units by 10.

³ Distance is taken from the center of the thermal element for FM.

NOTE

- Reference the specific agency website listings for the most up-to-date certification information.

2.0 CERTIFICATIONS/LISTINGS (CONTINUED)



UL SPECIFIC APPLICATION APPROVAL		
SIN	V4804	
Description	Specific Application UL	Specific Application UL
Sprinkler Type	ESFR	ESFR
Temperature Rating °F (°C)	165°F/74°C	212°F/100°C
Response Type	ESFR	ESFR
Sprinkler Position	Pendent	Pendent
System Type	Wet	Wet
Maximum Area of Coverage	100 ft²/9.1 m²	100 ft²/9.1 m²
Minimum Area of Coverage	64 ft²/6 m²	64 ft²/6 m²
Maximum Slope Ceiling	2 inch rise for 12 inch run	2 inch rise for 12 inch run
Maximum Spacing	10 ft/3.1 m	10 ft/3.1 m
Minimum Spacing	8 ft/2.4 m	8 ft/2.4 m
Deflector Distance from Walls	4"/100 mm	4"/100 mm
Deflector to Top of Storage	3 ft/0.9 m	3 ft/0.9 m
Deflector to Ceiling Distance	6"-14"/150 mm-355 mm	6"-14"/150 mm-355 mm
Maximum Ceiling Height	48 ft/14.6 m	48 ft/14.6 m
Maximum Storage Height	43 ft/13.1 m	43 ft/13.1 m
Storage Arrangement	Palletized, solid piled, open frame; single row, double row, or multiple row and portable rack arrangement	Palletized, solid piled, open frame; single row, or double row rack arrangement
Commodity	Class I-IV, Cartoned unexpanded plastic	Class I-IV, Cartoned unexpanded plastic
Sprinkler System Design	NFPA 13 for ESFR Sprinklers based upon 45 psi (3.1 bar) design pressure 169 gpm (640 lpm) with 12 sprinkler remote area	NFPA 13 for ESFR Sprinklers based upon 45 psi (3.1 bar) design pressure 169 gpm (640 lpm) with 12 sprinkler remote area
Obstruction Criteria	Reference NFPA 13	Reference NFPA 13
Minimum Aisle Width	4 ft/1.2 m	5 ft/1.5 m
Hose Stream allowance and Water Supply Duration	250 gpm/950 lpm for 60 minutes or as determined by the approval	250 gpm/950 lpm for 60 minutes or as determined by the approval

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NOTE

- Reference the specific agency website listings for the most up-to-date certification information.

3.0 SPECIFICATIONS – MATERIAL

V4804

Deflector: Bronze

Load Screw: Stainless Steel

Pip Cap: Brass

Spring Seal: PTFE Coated Beryllium Nickel Alloy

Bulb: N/A

Frame: Brass

Link: Nickel

Lever: Monel or Stainless Steel

Strut: Monel or Stainless Steel

Coupling: Refer to Victaulic [Publication 10.65](#)

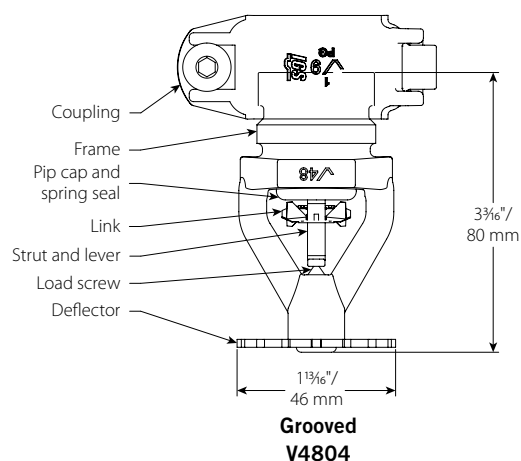
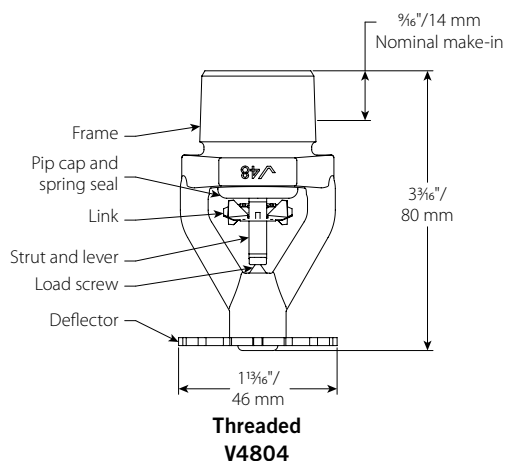
Installation Wrench: Ductile Iron

Sprinkler Frame Finishes: Plain Brass

NOTE

- For cabinets and other accessories refer to separate sheet.

4.0 DIMENSIONS



5.0 PERFORMANCE

Sprinkler systems are to be designed to and installed per NFPA, FM Datasheets, and any local standards.

6.0 NOTIFICATIONS

WARNING



- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

- 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) 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.
- The installer shall understand the use of this product and why it was specified for the particular application.
- The installer shall understand common industry safety standards and potential consequences of improper product installation.
- 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.
- 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.

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.

7.0 REFERENCE MATERIALS

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

[10.65: FireLock IGS Installation-Ready Style V9 Sprinkler Coupling](#)

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

[I-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 determining the suitability of Victaulic products for their end-use application, in accordance with industry standards, project specifications, and Victaulic's published performance, maintenance, and safety data, as well as all warnings and installation 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, warranty, installation instructions, or this disclaimer.

Installation

Always refer to and follow the [Victaulic Installation Handbook](#) or installation instructions for 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 [victaulic.com](#).

Warranty

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

Intellectual Property Rights

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Note

All products bearing a Victaulic trademark are manufactured by Victaulic or to Victaulic specifications. All products are to be installed only in accordance with the applicable Victaulic installation instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.