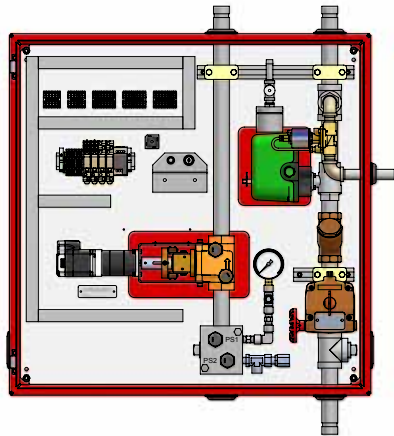


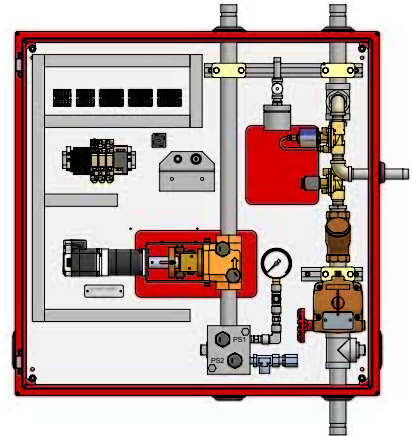
Victaulic Vortex™ Fire Suppression System



SERIES 951 COMBINATION BOXES FOR USE WITH VICTAULIC VORTEX
1000 AND VICTAULIC VORTEX 1500 FIRE SUPPRESSION SYSTEMS



SERIES 951 COMBINATION BOX
WITH BALL VALVE



SERIES 951 COMBINATION BOX
WITH SOLENOID

Patent 7,686,093 - Dual Extinguishment fire suppression system using high velocity low pressure emitters. Foreign patents also applied for and granted.

PRODUCT DESCRIPTION

The Victaulic Vortex Combination Box is a primary component in the Vortex System. The Combination Box is comprised of the essential components that create the Victaulic Vortex mist and control the discharge into the hazard. Each component inside the enclosure is factory installed and tested for operation. One Combination Panel is designed to provide fire suppression for a single hazard.

The Combination Box contains an automated regulating valve (ARV) that is coupled with a pressure transducer to maintain a fixed system pressure as the supply pressure decays. When active, the ARV controls the on/off state of the water release valve and the valve position.

Dependant on system size, an automated ball valve or solenoid will be used to control water flow water to the emitter. Before the water release valve, a mesh strainer is installed to prevent debris from entering the Victaulic Vortex System. Each Combination Box includes a water isolation valve so that the strainer or water release valve can be maintained.

The electrical interface for the system is comprised of clearly labeled, color-coded, push-to-connect terminal blocks. Two white three-connection terminal blocks are provided for the auxiliary power supply and transducer connections. One black four-connection terminal block is provided for the supervisory signals and two additional black terminal blocks are used for coupling the release signal from the FACP to the solenoid on the primary cylinder head.

All necessary plumbing connections are provided on the side or bottom of the enclosure. The drain and Nitrogen supply connection will be threaded and require proper pipe schedules to be used. The inlet and outlet piping and water supply will be grooved to accept Victaulic couplings and is sized to either 1 1/8" or 1 1/2" depending upon system design.

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

Date _____

www.victaulic.com

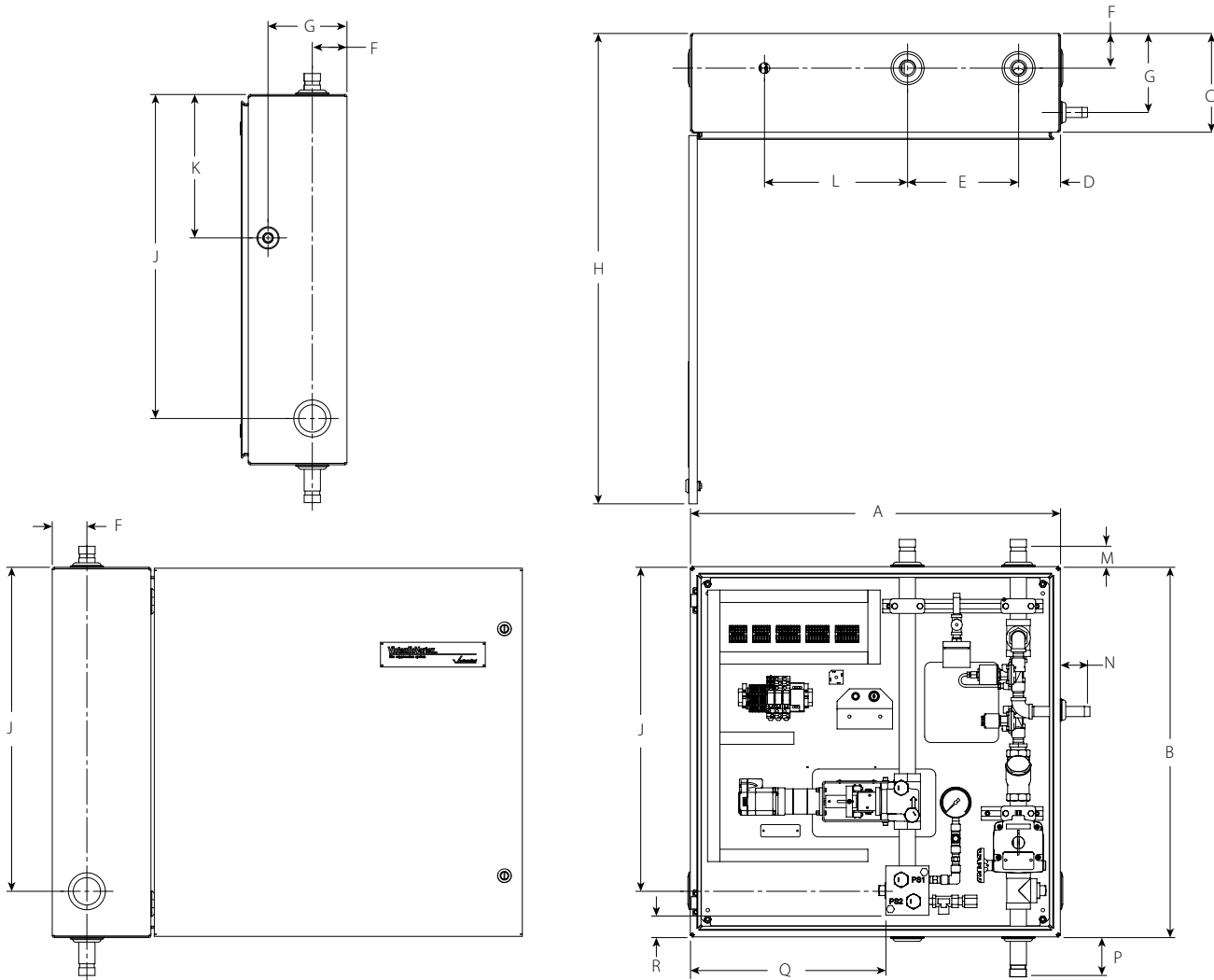
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DIMENSIONS:
Combination Box



Dimensions - Inches/mm																Approx. Weight Each
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	Lbs. kg #
30.00	30.00	8.00	3.40	9.00	2.81	6.40	38.11	26.25	11.62	11.60	1.75	2.19	3.07	15.85	1.75	165 - 180
762.0	762.0	203.2	86.4	228.6	71.4	162.6	968.0	666.8	295.1	294.6	44.5	55.5	77.9	402.6	44.4	75 - 82

weight varies dependent upon trim ordered
NOTE: The inlet and outlet piping and water supply will be grooved to accept Victaulic couplings and is sized to either 1 1/8" / 28.6 mm or 1 1/2" / 38.1 mm depending upon system design.

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MATERIAL SPECIFICATIONS

Cabinet Specifications: Carbon steel, 14 gauge

Finish: Cabinet, polyester powdered coated red

Back panel: Zinc plated for corrosion resistance

Automatic Regulating Valve:

Body: UNS C954000 aluminum bronze

Seal: Ultra high molecular weight polyethylene

Stem and Seal Retainer: UNS 416 stainless steel

Stem Adapter: UNS C36000 brass or UNS C95400 aluminum bronze

Manifold Blocks: Low carbon steel

Strainer: Brass with UNS 302000 100 mesh stainless steel screen

PERFORMANCE DATA

Pressure Inputs:

Nitrogen: 3000 psi/20684 kPa

Water: 300 psi/2068 kPa

Pressure Outputs: variable, maximum = 175 psi/ 1207 kPa

Temperature Ratings: 40°F/4°C to 130°F/55°C

Victaulic Vortex™ Fire Suppression System

SERIES 951 COMBINATION BOXES FOR USE WITH VICTAULIC VORTEX
1000 AND VICTAULIC VORTEX 1500 FIRE SUPPRESSION SYSTEMS

ELECTRICAL SPECIFICATIONS

Combination Box: 24VDC continuous power supply (23-27VDC), polarity sensitive

Alarm Current: 3 Amps

Standby Current: 125mA

Supervisory Connections: 500mA @30 VDC resistive load

Pressure Transducer:

Operation Voltage: 24VDC, polarity sensitive

Output: 4-20mA (0-50 psi/0-335 kPa, 0-100 psi/0-689 kPa, 0-300 psi/0-2068 kPa)

Connections: 18 AWG shielded twisted pair

CONNECTIONS

DC Power – TB1

- 23-27 VDC operation voltage
- Supervised by system fault contact

Transducer – TB2

- Polarity sensitive
- Uses supply power from TB1
- Shield connection terminated at panel only
- Operation and wiring supervised by system fault contact

Supervisory – TB3

- System fault connection (24V, transducer, PLC fault)
- Provides the means to signal a system fault to another device
- Water isolation valve, system fault and manifold charge
- 500mA @ 30VDC resistive dry contacts
- Non-latching

Release Input – TB4

- Termination point from release panel
- Two connections, Release + and Release -

Solenoid Output – TB5

- Out to primary head
- Optional second head connection
- 22-27 VDC operation voltage
- 13 Watts

Victaulic Vortex™ Fire Suppression System

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CONTROLS AND INDICATORS

Multifunction Key Switch

- Disables ARV from operating (Primary release circuit shall include a separate disable switch)
- Resets valve after discharge
- Key removal in normal, ready condition
- Closes system fault contact

Red Indicator Light

- Visual indicator shows if the system is in the not ready condition
- Active when system fault contact is closed
- Light is off in normal condition

Water Isolation Valve

- Visual indicator provides status
- Isolated water for strainer maintenance
- Terminated on TB3

Pressure Gauge

- Provides visual indication of manifold pressure
- 0 to 4000 psi/0 to 27579 kPa
- Reference only gauge

Automated Drain Valve

- 24 VDC operation

Options:

Automated Ball Valve

- Directional arrow provides visual indication of status
- Manual operation - push stem in and rotate with wrench

Solenoid

- 24 VDC operation
- 13 Watts

INSTALLATION

Reference should always be made to the applicable I-VORTEX Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data.

WARRANTY

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

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.

For complete contact information, visit www.victaulic.com

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