

Victaulic Vortex™ Fire Suppression System

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



SERIES 951 COMBINATION BOX

PATENT-PENDING

PRODUCT DESCRIPTION

The Victaulic Vortex Series 951 Combination Box is a completely pre-assembled Special Hazards box that provides all the necessary controls, monitors, and valves to operate a single zone in a Victaulic Vortex fire suppression system to control the needed dual fluids.

The panel components and assembly are assembled and tested for proper functioning. Included in the Series 951 Combination Box is the nitrogen manifold assembly consisting of the nitrogen high and low pressure tank sensors, and automatic regulated valve (ARV), supervised water manifold assembly, nitrogen pressure transducer, and quick connect wiring terminal strip. In case of system trouble or improper nitrogen pressure, the Series 951 Combination Boxes have both high pressure and low pressure relief valves integrated into the assembly. Nitrogen pressure is also monitored for trouble and supervisory conditions in case of system leakage. Note these may be field adjusted if lower nitrogen pressure storage is used and will be preset for standard 2400psi pressure storage. An integrated bleed valve to de-pressurize the box after the nitrogen supply is isolated is also standard along with a pressure gauge.

The panel also includes the equipment for isolation and control of water to the Series 953 emitters. This water supply feed incorporates an automated ball valve or solenoid that is triggered electronically when the regulating valve receives a pressure feedback signal. The water system also includes a drain solenoid to automate piping drainage after a system discharge. In accordance with good piping practices, a corrosion resistant strainer is installed in the system piping as well. A supervised isolation valve is also provided via the Victaulic FireLock Series 728 Control Valve.

Panel interfacing may be easily accomplished in the upper left hand corner using standard DIN rail terminal blocks. Needed connections would be 24V DC power feed, five dry contact points to monitor supervisory and alarm status, and a 24V DC release circuit. Optional Notifier Addressable- ready cards may be factory installed for using an SLC (Signaling Line Circuit) for monitoring and releasing the Victaulic Vortex System. This option may simplify field wiring by connecting additional SLC operated components, including, but not limited to, heat and smoke detectors, relay modules, control modules, and notification appliances.

Cabinet piping knockouts for nitrogen and water input are included for installation flexibility from the side or the bottom (standard) of the cabinet and pipe exiting the top. Electrical knockouts are included at the top. Note that the cabinet door hinges are on the left side as standard and the door is removable to provide greater access and ease during installation and servicing. Cabinet may be turned in any direction for installation purposes. All piping inlets and outlets are provided with rubber grommets for dust and splash resistance.

Panel options include:

- 1" Combination Boxes (Addressable ready and Dry contact)
- 1.5" Combination Boxes (Addressable ready and Dry contact)

Electrical Supply Options

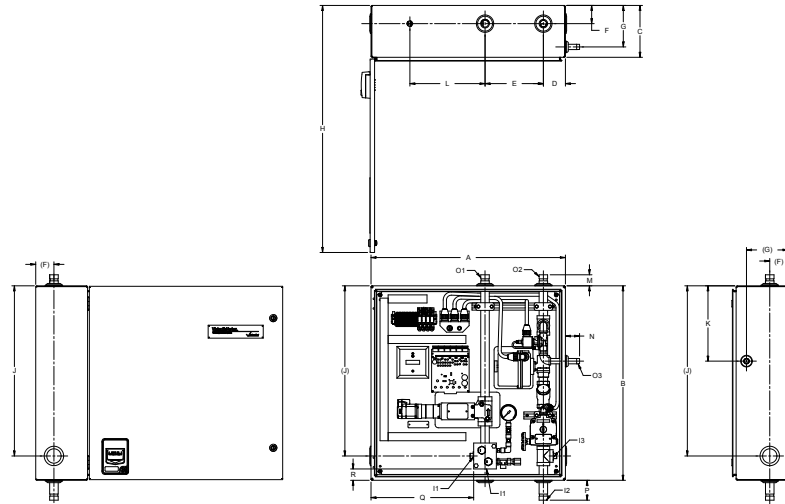
Battery Back-Up Box (with two 26 Amp-Hour Batteries)

JOB/OWNER	CONTRACTOR	ENGINEER
System No. _____	Submitted By _____	Spec Sect _____ Para _____
Location _____	Date _____	Approved _____
		Date _____

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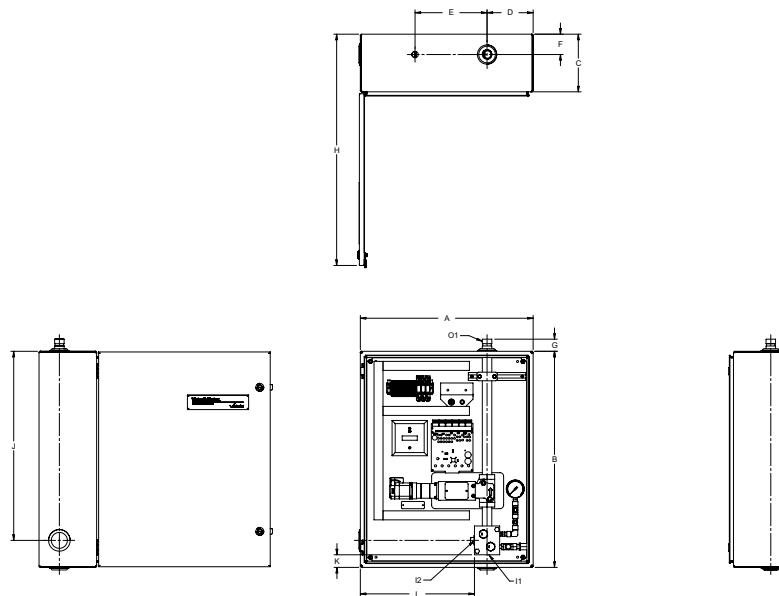
**SERIES 951 COMBINATION BOX FOR USE WITH VICTAULIC VORTEX
1000 AND VICTAULIC VORTEX 1500 FIRE SUPPRESSION SYSTEMS**

DIMENSIONS:
Combination Box



BOX DRAWING NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	I1	I2	I3	O1	O2	O3	ESTIMATED WEIGHT (LBS)	
PA-010-951-001	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	3.40 [86.4]	9.00 [228.6]	2.81 [71.4]	6.40 [162.6]	38.11 [968.0]	26.25 [666.8]	11.62 [295.1]	11.60 [294.6]	1.70 [43.2]	2.19 [55.5]	3.07 [77.9]	15.85 [402.6]	1.75 [44.4]	1"	1"	1"	1"	1"	1"	1"	170
PA-010-951-034	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	3.40 [86.4]	9.00 [228.6]	2.81 [71.4]	6.40 [162.6]	38.11 [968.0]	26.25 [666.8]	11.62 [295.1]	11.60 [294.6]	1.70 [43.2]	2.19 [55.5]	3.07 [77.9]	15.85 [402.6]	1.75 [44.4]	1"	1"	1"	1"	1"	1"	1"	165
PA-010-951-035	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	3.40 [86.4]	9.00 [228.6]	2.81 [71.4]	6.40 [162.6]	38.11 [968.0]	26.25 [666.8]	11.62 [295.1]	11.60 [294.6]	1.70 [43.2]	2.19 [55.5]	3.07 [77.9]	15.85 [402.6]	1.75 [44.4]	1"	1"	1"	1"	1"	1"	1"	168
PA-010-951-046	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	3.40 [86.4]	9.00 [228.6]	2.81 [71.4]	6.40 [162.6]	38.11 [968.0]	26.25 [666.8]	11.62 [295.1]	11.60 [294.6]	1.70 [43.2]	2.19 [55.5]	3.07 [77.9]	15.85 [402.6]	1.75 [44.4]	1"	1"	1"	1"	1"	1"	1"	170
PA-014-951-001	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	3.40 [86.4]	9.00 [228.6]	2.81 [71.4]	6.40 [162.6]	38.11 [968.0]	26.25 [666.8]	11.62 [295.1]	11.60 [294.6]	1.80 [45.7]	2.19 [55.5]	3.07 [77.9]	15.85 [402.6]	1.75 [44.4]	1-1/2"	1"	1"	1-1/2"	1"	1"	1"	180
PA-014-951-034	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	3.40 [86.4]	9.00 [228.6]	2.81 [71.4]	6.40 [162.6]	38.11 [968.0]	26.25 [666.8]	11.62 [295.1]	11.60 [294.6]	1.80 [45.7]	2.19 [55.5]	3.07 [77.9]	15.85 [402.6]	1.75 [44.4]	1-1/2"	1"	1"	1-1/2"	1"	1"	1"	175
PA-014-951-035	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	3.40 [86.4]	9.00 [228.6]	2.81 [71.4]	6.40 [162.6]	38.11 [968.0]	26.25 [666.8]	11.62 [295.1]	11.60 [294.6]	1.80 [45.7]	2.19 [55.5]	3.07 [77.9]	15.85 [402.6]	1.75 [44.4]	1-1/2"	1"	1"	1-1/2"	1"	1"	1"	178
PA-014-951-046	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	3.40 [86.4]	9.00 [228.6]	2.81 [71.4]	6.40 [162.6]	38.11 [968.0]	26.25 [666.8]	11.62 [295.1]	11.60 [294.6]	1.80 [45.7]	2.19 [55.5]	3.07 [77.9]	15.85 [402.6]	1.75 [44.4]	1-1/2"	1"	1"	1-1/2"	1"	1"	1"	180

DIMENSIONS:
Fluid Control box

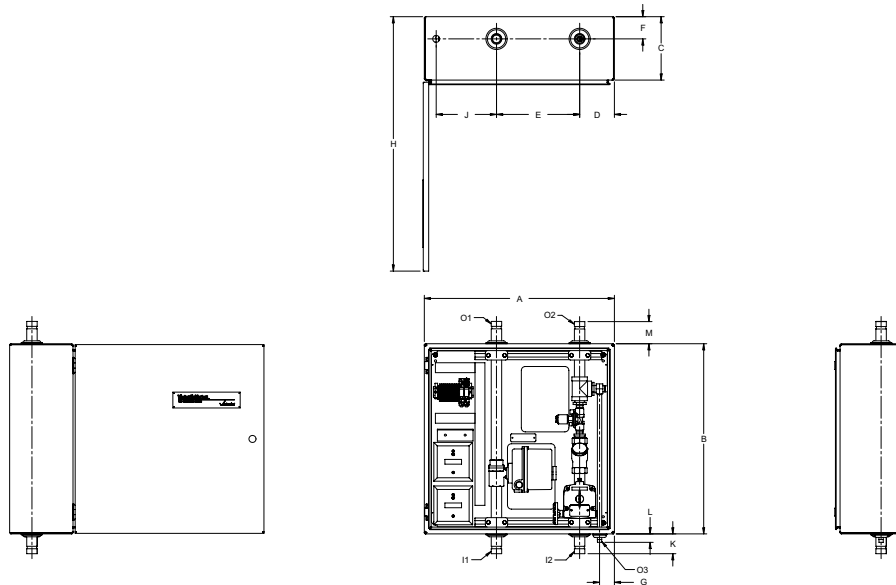


BOX DRAWING NUMBER	A	B	C	D	E	F	G	H	J	K	L	I1	I2	O1	ESTIMATED WEIGHT (LBS)
PA-010-951-002	24.00 [609.6]	30.00 [762.0]	8.00 [203.2]	6.40 [162.6]	10.00 [254.0]	2.82 [71.6]	1.68 [42.7]	32.11 [815.6]	26.25 [666.8]	1.75 [44.5]	15.85 [402.6]	1"	1"	1"	130
PA-010-951-038	24.00 [609.6]	30.00 [762.0]	8.00 [203.2]	6.40 [162.6]	10.00 [254.0]	2.82 [71.6]	1.68 [42.7]	32.11 [815.6]	26.25 [666.8]	1.75 [44.5]	15.85 [402.6]	1"	1"	1"	130
PA-014-951-002	24.00 [609.6]	30.00 [762.0]	8.00 [203.2]	6.40 [162.6]	10.00 [254.0]	2.82 [71.6]	2.20 [56.0]	32.11 [815.6]	26.25 [666.8]	1.75 [44.5]	15.85 [402.6]	1-1/2"	1-1/2"	1-1/2"	110
PA-014-951-038	24.00 [609.6]	30.00 [762.0]	8.00 [203.2]	6.40 [162.6]	10.00 [254.0]	2.82 [71.6]	2.20 [56.0]	32.11 [815.6]	26.25 [666.8]	1.75 [44.5]	15.85 [402.6]	1-1/2"	1-1/2"	1-1/2"	140

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SERIES 951 COMBINATION BOX FOR USE WITH VICTAULIC VORTEX
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DIMENSIONS:
Zone Control Box



PANEL DRAWING NUMBER	A	B	C	D	E	F	G	H	J	K	L	M	I1	I2	O1	O2	O3	ESTIMATED WEIGHT (LBS)
PA-010-951-003	24.00 [609.6]	24.00 [609.6]	8.00 [203.2]	4.38 [111.3]	10.50 [266.7]	2.80 [71.1]	1.88 [47.6]	32.11 [815.6]	7.62 [193.5]	2.50 [63.5]	1.07 [27.1]	2.79 [71.0]	1"	1"	1"	1"	1/4" NPT	130
PA-010-951-039	24.00 [609.6]	24.00 [609.6]	8.00 [203.2]	4.38 [111.3]	10.50 [266.7]	2.80 [71.1]	1.88 [47.6]	32.11 [815.6]	7.62 [193.5]	2.50 [63.5]	1.07 [27.1]	2.79 [71.0]	1"	1"	1"	1"	1/4" NPT	130
PA-010-951-047	24.00 [609.6]	24.00 [609.6]	8.00 [203.2]	4.38 [111.3]	10.50 [266.7]	2.80 [71.1]	1.88 [47.6]	32.11 [815.6]	7.62 [193.5]	2.50 [63.5]	1.18 [29.8]	3.01 [76.5]	1"	1"	1"	1"	1/4" NPT	110
PA-010-951-052	24.00 [609.6]	24.00 [609.6]	8.00 [203.2]	4.38 [111.3]	10.50 [266.7]	2.80 [71.1]	1.88 [47.6]	32.11 [815.6]	7.62 [193.5]	2.50 [63.5]	1.18 [29.8]	3.01 [76.5]	1"	1"	1"	1"	1/4" NPT	140
PA-014-951-003	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	6.00 [152.4]	13.00 [330.2]	3.55 [90.2]	3.49 [88.6]	38.11 [968.0]	9.50 [241.3]	2.50 [63.5]	1.53 [38.7]	2.66 [67.6]	1-1/2"	1"	1-1/2"	1"	1/4" NPT	140
PA-014-951-039	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	6.00 [152.4]	13.00 [330.2]	3.55 [90.2]	3.49 [88.6]	38.11 [968.0]	9.50 [241.3]	2.50 [63.5]	1.18 [29.8]	3.01 [76.5]	1-1/2"	1"	1-1/2"	1"	1/4" NPT	120
PA-014-951-047	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	6.00 [152.4]	13.00 [330.2]	3.55 [90.2]	3.49 [88.6]	38.11 [968.0]	9.50 [241.3]	2.50 [63.5]	1.18 [29.8]	3.01 [76.5]	1-1/2"	1"	1-1/2"	1"	1/4" NPT	120
PA-014-951-052	30.00 [762.0]	30.00 [762.0]	8.00 [203.2]	6.00 [152.4]	13.00 [330.2]	3.55 [90.2]	3.49 [88.6]	38.11 [968.0]	9.50 [241.3]	2.50 [63.5]	1.18 [29.8]	3.01 [76.5]	1-1/2"	1"	1-1/2"	1"	1/4" NPT	150

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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 Stainless Steel Screen

ELECTRICAL REQUIREMENTS

Voltage: 24V DC

Current Draw during Operation:	Standby:
Solenoid Version: 2.785 A	90.2 mA
Ball Valve Version: 3.421 A	90.2 mA

Transducer Feedback line may be up to 3000' away. Minimum AWG size is 22

Battery Backup supplies must be provided for the Victaulic Vortex System. These calculations shall be done by qualified personnel; this supply must meet agency approvals and may be incorporated with the necessary Fire Alarm Control Panel backups. Victaulic also offers a standalone Battery Backup Assembly with 2 26 Amp-Hour batteries that may be used for multiple panels.

Options:

1" or 1.5" Nitrogen Supply and Outlet
(1.5" Nitrogen does not have water solenoid option)

Notifier Addressable Ready Option

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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