FIRE SUPPRESSION SYSTEM 70.10

Victaulic Vortex® 500 Fire Suppression System

The Victaulic Vortex® 500 fire suppression system is a hybrid system incorporating liquid (water) and inert gas (nitrogen) extinguishing agents discharged together from a single emitter.

Using proprietary supersonic technology, the system atomizes the water to $<10\mu$ m forming a dense homogeneous suspension of nitrogen and water. In this manner two extinguishment mechanisms are occurring simultaneously: cooling and oxygen reduction.

The Victaulic Vortex 500 Fire Suppression System is self contained, requiring no additional piping once placed in the risk area, and unlike other technologies that use toxic agents it can activate immediately without pre-discharge delay. With only .26 gallons of water discharged from each emitter per minute, minimal wetting is incurred.

The Victaulic Vortex 500 Fire Supression System allows for adjustments to aim the emitter only, it is not permittable to customize or alter after point of sale. Application in a room volume or elevation above sea level different than that specified during purchase is not condoned. Please contact Victaulic for more details on these guidelines.



PATENT 7,686,093 - DUAL EXTINGUISHMENT FIRE SUPPRESSION SYSTEM USING HIGH VELOCITY LOW PRESSURE EMITTERS. FOREIGN PATENTS ALSO APPLIED FOR AND GRANTED.

APPLICATION

The Victaulic Vortex 500 Fire Suppression System can effectively be applied in total flooding fire suppression applications in the following areas:

- · Information technology equipment areas
- Motor control centers (MCC)

Environmental Impact

Since the Victaulic Vortex 500 system only discharges pure nitrogen and water, there are no environmental or life-safety risks as a result of a system discharge. The Environmental Protection Agency Significant New Alternatives Policy (SNAP) approval recognizes the Victaulic Vortex homogenous suspension discharge as a suitable replacement for Halon 1301. The system can be discharged immediately upon hazard detection, without a delay for occupant evacuation.

OPERATION

The system is fully compatible with automatic hazard detection systems and is adaptable for remote manual activation if required.

A system installation and maintenance manual is available containing information on system components and procedures concerning design, operation, inspection, maintenance and recharge.

The Victaulic Vortex 500 system is particularly useful for suppressing fires in hazards where an electrically non-conductive medium is essential or desirable, where clean up of other agents present a problem, room integrity is not possible, or where the hazard is normally occupied and requires a non-toxic agent.

The basic system consists of stored nitrogen, a captive water supply, and integral overhead emitters in the hazard area. The quantity of stored nitrogen required is dictated by both the elevation and enclosure volume of the area being protected. The suspension of water and nitrogen is distributed and discharged into the hazard area through a twin piping network and emitter. The sidewall emitters are located at the top of the system, and require no additional piping before use in the hazard area.

| JOB/OWNER | CONTRACTOR | ENGINEER |
|-----------|--------------|----------------|
| System No | Submitted By | Spec Sect Para |
| Location | Date | Approved |
| | | Date |

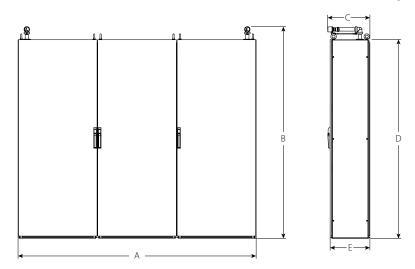
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DIMENSIONS WITH OPTIONAL CABINET



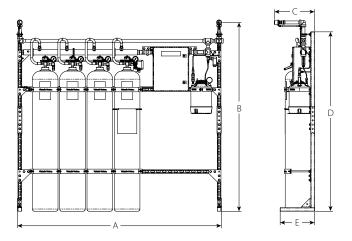
| | Dimensions with Optional Cabinet | | | | Weight* | | | |
|--------------|----------------------------------|--------|-------|-------|---------|----------------------------|----------------|----------------|
| No. of tanks | А | В | С | D | E | cabinet without N tanks | with 49L tanks | with 80L tanks |
| | in/mm | in/mm | in/mm | in/mm | in/mm | lbs./kg. | lbs./kg. | lbs./kg. |
| 1 | 63 | 86.89 | 17.6 | 79 | 15.75 | 475 | 660 | 795 |
| | 1600 | 2207.1 | 447 | 2000 | 400 | 215.5 | 299.4 | 360.6 |
| 2 | 63 | 86.89 | 17.6 | 79 | 15.75 | 475 | 845 | 1115 |
| | 1600 | 2207.1 | 447 | 2000 | 400 | 215.5 | 383.3 | 505.8 |
| 3 | 94.5 | 86.89 | 17.6 | 79 | 15.75 | 750 | 1305 | 1710 |
| | 2400 | 2207.1 | 447 | 2000 | 400 | 340.2 | 591.1 | 775.6 |
| 4 | 94.5 | 86.89 | 17.6 | 79 | 15.75 | 750 | 1490 | 2030 |
| | 2400 | 2207.1 | 447 | 2000 | 400 | 340.2 | 675.8 | 920.8 |

 $^{^{\}star}$ Average weight of Nitrogen cylinders - 49L (185 lbs.) 80L (320 lbs.)

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DIMENSIONS



| | | Dimensions | | | | | |
|--------------|-----------------|-----------------|-----------------|-------------|----------------|----------------|-------------------------|
| No. of Tanks | Size of N Tanks | Α | В | С | D | E | Weight with N tanks* |
| | | in/mm | in/mm | in/mm | in/mm | in/mm | lbs./kg. |
| 1 | 49L | 63.75 1619.3 | 86.89 2207.1 | 17.6 447 | 82.7 2100.6 | 15.15 384.8 | 410 185.9 |
| 2 | 49L | 63.75 1619.3 | 86.89 2207.1 | 17.6 447 | 82.7 2100.6 | 15.15 384.8 | 620 281.2 |
| 3 | 49L | 76.75 1949.5 | 86.89 2207.1 | 17.6 447 | 82.7 2100.6 | 15.15 384.8 | 830 376.5 |
| 4 | 49L | 89.75 2279.7 | 86.89 2207.1 | 17.6 447 | 82.7 2100.6 | 15.15 384.8 | 1040 471.7 |
| 1 | 80L | 63.75 1619.3 | 86.89 2207.1 | 17.6 447 | 82.7 2100.6 | 15.15 384.8 | 545 247.2 |
| 2 | 80L | 63.75 1619.3 | 86.89 2207.1 | 17.6 447 | 82.7 2100.6 | 15.15 384.8 | 890 403.7 |
| 3 | 80L | 76.75 1949.5 | 86.89 2207.1 | 17.6 447 | 82.7 2100.6 | 15.15 384.8 | 1235 560.2 |
| 4 | 80L | 89.75 2279.7 | 86.89 2207.1 | 17.6 447 | 82.7 2100.6 | 15.15 384.8 | 1580 716.7 |

 $^{^{\}ast}$ Average weight of Nitrogen cylinders - 49L (185 lbs.) 80L (320 lbs.)

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INSTALLATION

All system components and accessories must be installed by personnel trained by the manufacturer. All installations must be performed according to the guidelines stated in the manufacturer's design, installation, operation, inspection, recharge and maintenance manual. See publication: I-VORTEX.500

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.