The Victaulic Vortex system has been witnessed to extinguish small fires in large rooms in naturally ventilated environments. Unlike other combined agent systems, the Victaulic Vortex hybrid system utilizes water as the primary extinguishing agent, reducing the oxygen level in the room. Its complementary inert gas, nitrogen, the Victaulic Vortex system: By only using the natural materials of water and nitrogen, the Victaulic Vortex system:

- Eliminates the need for assurance of tight room integrity
- Quick system recharge; minimal facility downtime
- Green design that is safe for the environment and personnel
- Nearly zero wetting of protected areas; no need for costly clean up or equipment replacement
- Resumes normal operations.

The only hybrid nitrogen-water fire suppression system with:

- Nearly zero wetting of protected areas. No need for costly clean up or equipment replacement.
- Deep design that is safe for the environment and personnel.
- The fast return to normal operations. The Vortex system delivers.

My clients were very impressed with the Vortex system when they saw the level of fire protection it provides without huge amounts of water or toxic chemicals. It’s all about protecting the people and assets, minimal impact on the hazard environment and the fast return to normal operations.

Introducing the world’s first
High velocity and low pressure creates a uniform blend of water and nitrogen; water is introduced to a jet stream of nitrogen at supersonic speed, then delivered with the nitrogen into the protected space at 40 mph/65 kph.

Reduces fire loss and damage to property and personnel — personnel are safe even during activation; reduction of oxygen in the space is at levels within safe breathing tolerances.

Unlike other systems, maintaining room integrity is not essential; fires are extinguished in open, naturally ventilated areas.

System activation is immediate when sensors detect smoke or heat — there is no delay in activation to evacuate personnel to avoid a toxic environment.

The unique swirling pattern quickly fills the hazard space and attacks the fire, overcoming aerodynamic forces that typically decelerate and diffuse water droplets making their ineffectiveness.

The system delivers as little as one gallon of water per emitter per minute; each emitter can protect up to 2,500 ft³ / 71 m³.

System is scalable from one zone of 124,000 ft³ / 3511 m³ to broad networks of zones as large and as many as required.

Zones can be centrally controlled yet independently activated for fire suppression only where required.

The Victaulic Vortex emitter shape is based on supersonic aircraft wing design. The supersonic nitrogen flow drops rapidly to subsonic velocity, producing shock waves that atomize the water injected through the emitter.

The blended mixture of water droplets and nitrogen gas is propelled with enough energy to overcome the drag effect that has limited the effectiveness of traditional water mist systems.

The water and nitrogen mixture is projected at high velocity and great distance in a vortex pattern, absorbing the heat and starving the fire of oxygen.

The Victaulic Vortex fire suppression system is built on more than 85 years of Victaulic innovation and product development experience and provides the best capabilities of both water mist and inert gas systems.

Ease of design, minimal wetting and advanced fire suppression capabilities all give the Victaulic Vortex system the advantage over existing systems.

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