



Data Center Fire Protection





VID FIREKILL is a world leading innovative developer and manufacturer of low pressure water mist systems.

Reliable fire protection for your data center

The importance of data centers in the modern business environment

In the modern business environment, data security is of great importance for the development of any company and any organization. The economies in the 21st century will increasingly depend on how critical data is managed and stored.

As the heart of the information infrastructure, data centers are critical to your mission. That is why it is important to provide data centers with the highest level of safety by choosing the right fire protection system. The main task is to control the fire without disrupting the work process.

In addition, modern data centers need to be exceptionally agile, with the ability to scale up, down, and out to meet any workload they serve. Then you need a fire system to protect your data center that is equally agile and offers you the same flexibility in scaling. While each fire protection system has its own pros & cons, it is important to choose the most suitable fire protection solution for each specific application.

For today's data centers, a low pressure water mist system is the most superior firefighting technology, protecting both the building and its valuable contents.

Data centers fire protection is a big challenge

Data centers are at high risk of fire. They house IT equipment used to collect, process and store data. Thousands of servers and cables are stored inside these facilities and due to the massive power density in the electrical equipment in server rooms, there is a great risk of equipment overheating and catching fire. Data centers need fast-acting fire suppression to protect equipment, ensure personnel safety and safeguard business continuity.

Complete data center protection

We at VID FIREKILL provide effective and reliable fire protection for data centers and data processing equipment. Our low pressure water mist system can protect all areas of modern data centers, including server halls, sub floors, technical rooms, offices, and more. With us, the data center fire protection is an easy task. With the right expertise and solutions, your data center can be equipped with the most appropriate fire protection to match and mitigate fire risks while ensuring your business continuity goals.

FIREKILL™ - one system for complete Data Center protection

The FIREKILL system is FM approved to protect all areas of data centers:

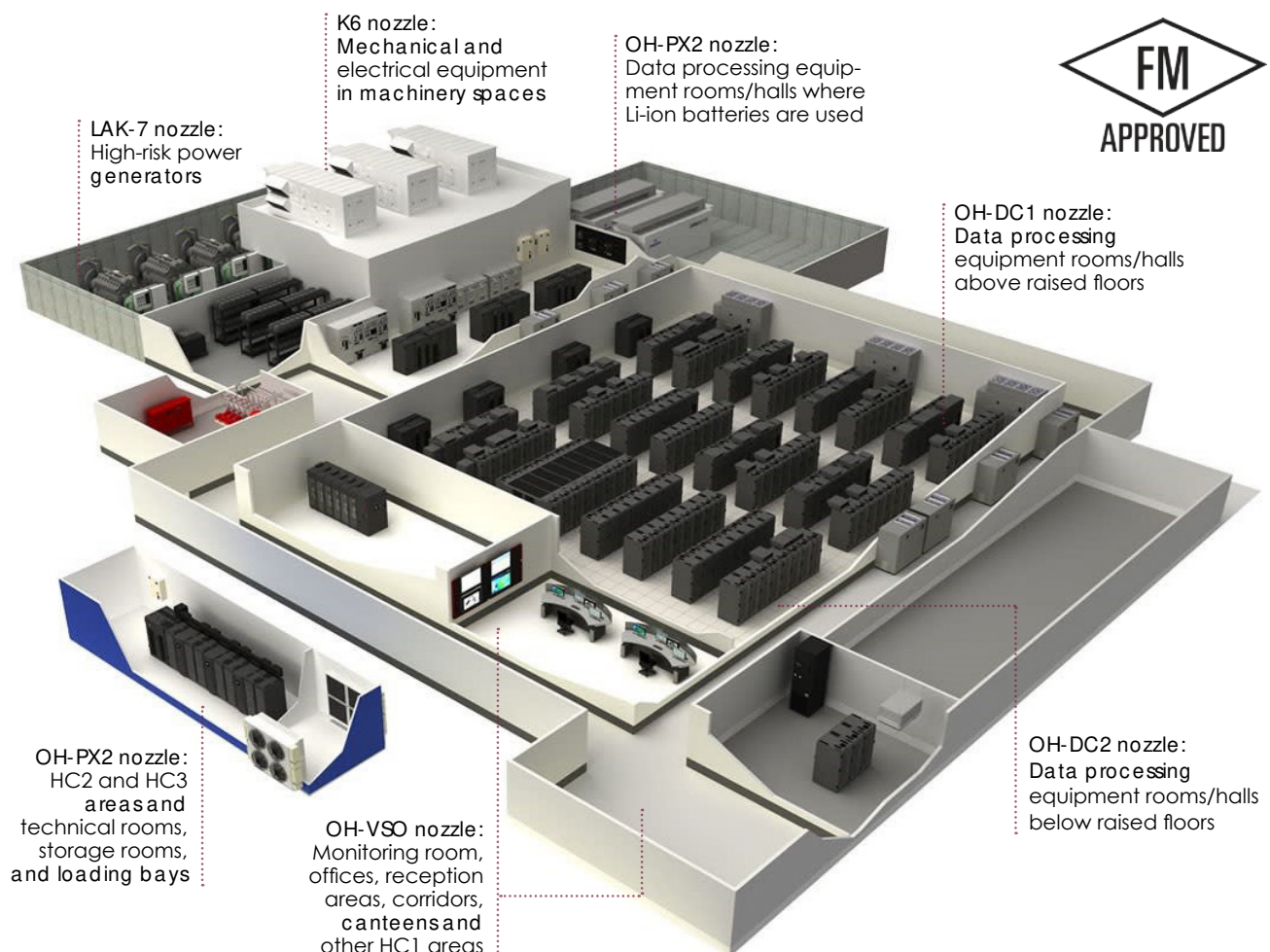
- Data processing equipment rooms
- Halls above and below raised floor
- Offices
- Circulation spaces
- Electrical rooms
- Technical rooms
- Storage rooms
- Loading bays
- Transformers
- Generators
- Data halls using Li-ion batteries in distributed power systems

Maximized Air Velocity

The FIREKILL low pressure water mist system is FM approved with 1.7 m/s of air velocity in the data hall. The system is also performance tested at 4.1 m/s with maximum 8 levels of cable trays. In contrast, sprinkler systems are limited at 1.5 m/s by FM DS 2-0.

Li-ion batteries in data centers

Following the new energy saving technologies in modern data centres, the FIREKILL system is now tested and approved for fire protection of Li-ion batteries according to the latest update of the FM standard.

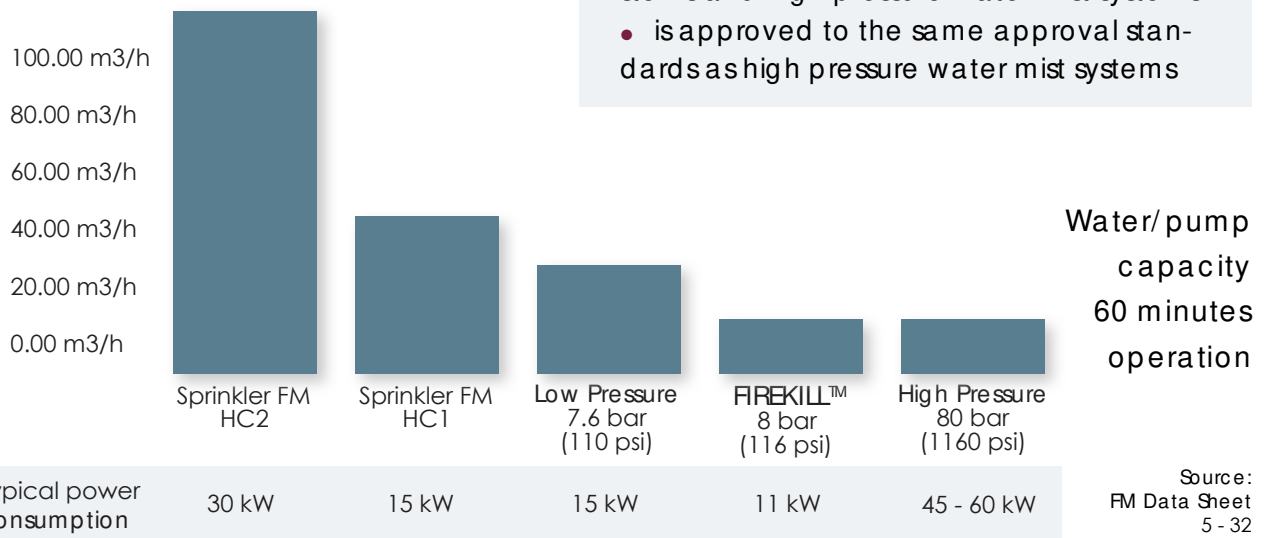


Maximized efficiency and performances with low pressure technology

The FIREKILL low pressure water mist system for data centers offers complete **fire protection with water pressure** down to 8 bar while using as little water as high pressure water mist systems typically operating at plus 60 bar. Low water pressure increases reliability and robustness as found in conventional sprinkler systems and also helps reduce installation, operational and maintenance cost.

Our water mist system

- can be designed, installed and maintained with the same skillset as if it was a conventional sprinkler system
- can be combined with conventional sprinklers for a hybrid system
- uses the same pressure class components as sprinkler systems (EN: <16 bar, NFPA: <12 bar)
- is more robust and reliable than high pressure water mist systems
- requires less electricity than sprinkler systems and high pressure water mist systems
- is approved to the same approval standards as high pressure water mist systems





BENEFITS OF OUR SYSTEM



■ Successfully tested and FM approved

The FIREKILL low pressure water mist system is FM approved to protect all critical areas of modern data centers including data halls using Li-ion batteries.

■ Environmentally friendly

The FIREKILL low pressure water mist system requires very low water flow rates resulting in a water saving of 60-90% compared to conventional sprinkler systems. Similar water savings are found when using high pressure water mist systems, though with our system the water saving can be obtained with a much more energy efficient solution. With lower water consumption than conventional sprinkler systems and lower water pressure than high pressure water mist systems the FIREKILL system is the most environmentally friendly solution found on the market.

■ Cost effective and resource saving

With the use of low water pressure and low water consumption the FIREKILL system can be designed with small system components (e.g. reservoir, pump, pipes and fittings) resulting in cost savings. Further, as the system installation procedures are similar to the installation of conventional sprinkler systems, but with less nozzles and smaller pipes, installation work can be done fast and easy saving time and money.

■ Space saving and scalable

The water tanks used for low pressure water mist systems are much smaller than those used for conventional sprinkler systems leaving more space for server cabinets. In case of facility expansion, additional pipes, valves and nozzles can easily be installed to new areas, supported by the original water supply and pump set.

The FIREKILL system is the most environmentally friendly solution found on the market



Sustainable solution

Reduced CO2 emissions by up to 70%

Sustainable fire safety design
Reduced production footprint



Water saving

Uses 80% less water than traditional sprinkler systems



Energy efficient

Low energy consumption

FIREKILL™ - the right solution for protection of your data center

Full range of all critical components tested and approved to ensure reliable and efficient fire protection



FIREKILL Nozzles

- OH-DC1 is an automatic pendent nozzle designed for protection of data processing equipment rooms/halls above raised floor.
- OH-DC2 is an automatic upright nozzle designed for protection of data processing equipment rooms/halls below raised floor.
- OH-VSO is an automatic pendent nozzle for protection of offices, reception areas, corridors, canteens and other HC1 areas.
- OH-PX2 is an automatic nozzle designed for protection of HC2 and HC3 areas and data processing equipment rooms/halls where Li-ion batteries are used, and technical rooms, storage rooms and loading bays.
- K6 is a total flooding open nozzle designed for protection of mechanical and electrical equipment found in machinery spaces.
- LAK-7 is an open nozzle designed for local protection of high-risk machinery in large industrial spaces.

FIREKILL Valves

- C-EL Valve is an electrical control valve design to operate in open deluge systems as a zone valve or a full flooding valve.
- C-EL-PA Pre Action Valve is a series of robust and reliable deluge pilot-control valves typically installed below and above data halls. The inclusion of the Model C-EL-PA Pre-Action trim allows the system to monitor dry pipe pressure drops creating additional false alarm prevention.
- WAC Alarm Valve is a wafer style alarm check valve designed to detect the low water flows created when the watermist nozzle activates. The Model WAC utilizes a clapper function to detect the flow which ensures a safe and robust detection function.

FIREKILL Pumps

- Compact pump consisting of non self-priming frequency controlled vertical stainless steel centrifugal pumps including controller.

Nozzles



Valves



Pumps





RELIABILITY ACCORDING TO THE HIGHEST STANDARDS

APPROVALS

Our FIREKILL system complies with FM 5560 - the main global standard that currently defines the requirements for water mist systems for data center protection. FIREKILL has been tested and approved based on existing full-scale fire test protocols, published within the standard. The system also complies with NFPA750 and with the European standard EN 14972, and has several internal developments of new fire test protocols.

FIREKILL is fully tested and approved

Based on these standards, our system is fully tested and approved to protect all areas in modern data centers. Compared to traditional sprinklers, FIREKILL uses significantly less water while operating at low water pressure - a significant advantage over high pressure

water mist systems. Our system is completely safe for people, the environment and equipment.

FIREKILL has four levels of approvals

In addition to fire tests, all system components have passed tests proving their strength and reliability. In addition, the production system is ISO 9001 and ISO 14001 certified and approved by FM, DNV/GL. An important document that provides complete instructions for successful implementation of the system is the DIOM - Design, Installation, Operation and Maintenance manual. This document has been developed in accordance with the EN 14972 standard and has been approved by the independent body FM Approvals.





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