

# In the data-centre industry, sustainability is fundamental – from design to daily operations

**S**ustainability is a crucial element in the data-centre industry, starting from the initial design phase through daily operations. The focus on sustainability has become a prominent topic of conversation within the industry, especially as data centres consume a significant amount of energy. Building data centres in an environmentally friendly manner presents a challenge that must be addressed.

One key area where the importance of sustainability is evident is in fire protection. There is a growing demand for water- and energy-efficient solutions, as well as a greater emphasis on using high-quality materials. A member of the International Water Mist Association (IWMA), Danish company VID FIREKILL specializes in creating advanced fire protection products that are water-based. Their strong focus on sustainability and environmentally friendly solutions

has established them as a frontrunner in the industry.

As data centres consume a significant amount of energy, there is a growing demand to construct them sustainably. In the realm of fire protection, there is a noticeable trend towards increasing water and energy efficiency, as well as a greater emphasis on utilizing high-quality materials.

'VID FIREKILL has introduced a tailored solution to address these challenges, offering water and energy savings, a 70% reduction in CO<sub>2</sub> emissions, and a longer lifespan for fire-protection systems,' says Riccardo Cerati, business development manager data centres at VID FIREKILL.

## Batteries are changing the market

As the energy demand continues to rise, the use of batteries is also increasing steadily. Lithium-ion (Li-ion) batteries, for example, are not only space-saving

but can also be decentralized and installed directly in server racks as Battery Backup Units (BBUs). Riccardo Cerati explains: 'This, however, poses a significant challenge for the fire safety industry since Li-ion batteries have a strong resistance to traditional fire protection systems, and unfortunately, there is no publicity available on the effectiveness of any fire protection system (ref. FM 5-33 C.5).' Riccardo Cerati continues: 'What we know from the testing is that cooling is key to keep the thermal runaway stable and avoid any fire spread to other batteries or hazards. The FIREKILL low pressure water mist system is a highly effective solution for fire suppression, surpassing traditional sprinklers in efficiency. The system has been tested against HC-2 and HC-3 from FM DS 5-32 standards, making it a top choice for protecting battery rooms and other critical areas within a data centre.'

## Low-pressure water mist technology

The innovative FIREKILL low-pressure technology combines the robustness and reliability of traditional sprinkler systems with the water-saving benefits of high-pressure technology. The low-pressure water mist technology offers significant water savings (up to 10 times less than traditional sprinklers) and requires minimal energy consumption (70% less than high-pressure systems). In addition to being FM-approved, this system provides a comprehensive and cost-effective fire-protection solution that is both safe and reliable. Global customers can easily standardize this solution across all their sites, streamlining the design and management of their fire-safety strategies.

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▼ Riccardo joined VID FIREKILL as a Business Development Manager for Data Centres in the EMEA region in September 2023. Riccardo has a decade of experience in fire protection, water mist technology, and the data centre industry.

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