

AQUASYS high-pressure watermist systems: an expert report about innovative fire protection in data centres

State-of-the-art firefighting using high-pressure watermist (HPWM) technology is becoming more and more common for the protection of buildings, industry, rail and road tunnels as well as metros and trains. This feature explores the advantages of HPWM in data centres.

AQUASYS was founded in 1993 as part of a technology group and is a pioneer in the development and manufacture of HPWM systems. Since then, AQUASYS products have been helping to maintain the availability of our high-quality infrastructure worldwide. As a reliable Austrian manufacturer, systems integrator and partner, AQUASYS plays its part in providing safe and efficient fire protection in line with the company's mission: 'firefighting is responsibility'.

To this end, AQUASYS combines product development, active research, 1:1 real fire tests, simulations, project management, design, system installation, commissioning, customer training, service and maintenance under one roof. With products from AQUASYS, you know you are getting high-quality and efficient fire-safety solutions with the 'Made in Austria' distinction.

High-pressure watermist in critical areas

The uninterrupted, continuous operation of the server systems is a basic requirement for the reliable backup of stored data. Extinguishing systems that are currently in use, such as gas, generally require the ventilation for the entire server room to be switched off. This means that servers also need to be switched off.

AQUASYS solutions for targeted and efficient firefighting with HPWM have low water consumption, which makes them ideal for areas with very

valuable equipment or sensitive ambient conditions, such as server rooms, laboratories, electronic control panels and archives. As only high-grade stainless-steel components are used in AQUASYS systems, ultra-pure water can be utilised, thereby ensuring not only effective firefighting but also an extremely low risk of contamination for people and systems, while reducing expenditure on fire-water retention facilities. At the same time, using non-hazardous and environmentally friendly watermist makes it possible for people to leave rooms safely, and for the emergency services to gain access, even in the event of a fire. In various full-scale fire tests, AQUASYS was able to demonstrate its targeted and effective firefighting capabilities, even with the continued operation of the ventilation system.


Already realized projects such as a data centre of a major French bank prove the effectiveness and safety of HPWM in datacenters.

According to the client's specifications, the watermist would have to protect a server in case of fire without impairing the functionality of neighbouring servers. Immediate triggering without warning time is possible due to non-hazardous extinguishing media. Also, a full shutdown is not necessary in case of fire. The unaffected computers remain in operation.

'In all these situations, the goal of fire suppression systems is to contain fires at the moment they break out, while simultaneously maintaining a safe environment in the immediate vicinity. HPWM has proven to be a reliable technology in recent years and is a major contributor to increasing safety and helping our customers achieve their financial goals,' summarises Managing Director, Josef Hainzl.

▼ Data Centre.



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