

Water mist systems: Why third-party testing is essential

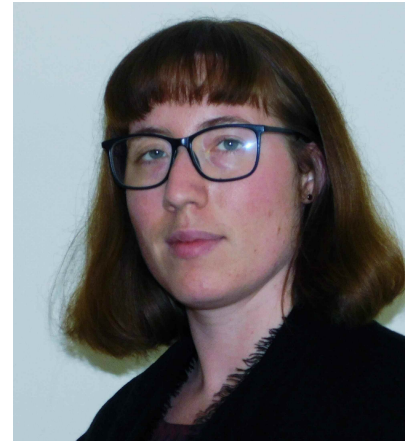
By Jade Musto

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Schools are considered high risk premises when it comes to fire safety. The size of the building, the number of people occupying it at any one time, the vulnerability of young school children and the potential presence of hazardous materials are all factors for consideration. There is also an increased risk of arson due to buildings often being left unoccupied during the school holidays. Research from Zurich Municipal, the leading insurer of schools, identified that schools are nearly twice as likely to suffer a fire than other types of commercial building.

Water mist systems can be highly effective at managing and preventing the spread of fire when used correctly. As water mist systems expel less water than traditional sprinkler systems, they are most typically seen in residential or domestic premises, however they are becoming increasingly common in commercial buildings such as schools.

There is therefore an increasing need for building owners and those responsible for fire safety in schools to be aware of the importance of third-party testing to ensure that systems will perform as intended in the event of a fire.



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Key considerations for water mist systems

Water mist systems have several features which make them preferable compared to sprinkler systems, such as requiring less water and smaller diameter pipework.

Importantly, water mist systems are considered “project specific”, meaning each building requires its own bespoke design. It therefore is not possible to design a water mist system simply by referencing one of the standards available. This differs from sprinkler systems where reference to BS EN 12845 enables a full design to be produced for most buildings and a fully compliant system to be installed.

This is exacerbated by the fact that the critical components for water mist systems are unique to each manufacturer. One of the critical components in water mist systems is the nozzles and even a cursory assessment will show that these are typically unique to each system supplier.

It is therefore vital that building owners and those responsible for fire safety in schools enlist a third party that has the knowledge and experience to carry out a thorough inspection pre-installation, as well as make any recommendations and conduct regular maintenance.

Testing and maintenance

It is important that water mist nozzles are tested regularly by a third party to ensure that the systems will operate effectively should a fire occur. The FPA advises that nozzles should be removed and sent for testing after 10 years of service and tested every five years after that. This supports the recommendation of NFPA 25 *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

Water mist systems have the potential to manage and prevent the spread of fire, preserve life and building safety, and limit the knock-on effects for communities when a school is lost to fire – but water mist technology remains comparatively new. It is therefore crucial that those responsible for fire safety in schools seek support from a certified third party to ensure the systems can protect the occupants and building in the event of a fire.

- For more information on the FPA’s advice and support for water mist systems, please visit: www.thefpa.co.uk/sprinkler-services/watermist-services