



# TALL BUILDINGS:

## Safety and business benefits of high pressure watermist fire protection

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**UK Home Office statistics show that risk of casualties or fatalities are higher when fires occur in buildings of four stories or more. Smoke, heat and fire can travel rapidly across and between levels, with smoke being the leading single cause of death in residential fires.**

Following the Grenfell fire, in 2020 the Ministry of Housing introduced new safety measures including mandatory use of sprinkler systems for all new apartment blocks over 11 metres high. These measures, along with guidelines on duty of care, are a great step forward. However traditional sprinklers are some way behind high pressure watermist fire suppression when it comes to performance and life-saving capabilities.

### **The only fire suppression solution that combats smoke**

At Fireworks, we are working to raise awareness of the live-saving advantages of high pressure watermist for fire protection.

When fires occur, evacuating residents is difficult, dangerous and obscured by smoke. Watermist's major advantage is that it is the only solution that suppresses and stops the spread of smoke to provide a survivable environment. When activated, watermist molecules bond with smoke particles, which then fall harmlessly to the floor. This ability to combat smoke is crucial to saving lives. Sprinklers, on the other hand, work on the principle of deluge, which only moves the smoke around more. Watermist also delivers faster fire and heat suppression – as proven during independent testing by the Ministry of Justice, BRE and other international fire and safety organisations.

### **Space-saving and environmental benefits**

Traditional sprinklers need large amounts of water. When activated, whole floors can be completely flooded, posing

a threat to structural integrity. Even when not in use, very large water tanks are required, taking up valuable space. For tall buildings, sprinklers also require secondary pumps to deliver sufficient volumes of water up to the higher floors. High pressure watermist uses around 70% less water than sprinklers, to bring important logistical and ecological benefits. Less water means only one compact pump set is needed, with much smaller water tanks, pipes and fittings, reducing the environmental footprint.

Above all, the smaller, less-invasive equipment needed for high pressure watermist makes retrofitting older buildings more viable.

### **Safeguard all areas of multi-use buildings, with one unified system**

At Fireworks we have seen growing interest in watermist from constructors, as the same system can be used to protect all areas of multi-use buildings – not only living areas, but restaurants, underground car parks and office spaces with private data rooms. We can use CFD modelling software to map the potential paths of fire and smoke throughout a specific building. We then advise on and design a bespoke plan for the most efficient and effective fire protection system.

### **Learn more with an IFE-accredited CPD session on fire suppression in tall buildings**

To increase awareness of watermist's benefits, we have developed an IFE-accredited CPD webinar on fire suppression in tall buildings. This informative session includes some of the latest independent research, best practices from real-life deployments and a live Q&A discussion. To schedule a CPD, or for more information, contact [enquiries@fireworks-ltd.com](mailto:enquiries@fireworks-ltd.com).