

MicroDrop®

“Safeguarding heritage buildings and contents from the threat of fire, smoke and fire water run-off damage”

The Challenge

Although there is no evidence that historic buildings are a greater fire risk than other types, the number of surviving authentic, high quality European historic buildings is being steadily eroded through the effects of fire.

There are a number of key factors that contribute to this disturbing statistic. First and foremost, the majority of these buildings are not protected against fire with active waterbased protection systems, and many are located in rural areas.

Even the most determined response time of the Fire Brigade would take an average of 20 minutes. Most uncontrolled fires within buildings can reach “Flashover” after about five minutes so it is inevitable that the building would be totally destroyed.

Despite this fact, the irreplaceable loss of a historic structures and authentic fabric due to the effects of a fire continues. That is because although sprinkler systems have a proven track record in extinguishing fires in their early stages, many curators and owners of historic buildings and museums are reluctant to install them within their buildings.

This reluctance stems from concern for structural damage and intrusion to the fabric of the building during installation of pipework.

Also, despite the undoubted value of traditional sprinkler systems, their effect, if activated, raises the fear of water damage caused to priceless artifacts, paintings and furniture or by the long term effect of water trapped in unventilated areas like floors and ceiling voids.

Working in close partnership with many of Europe’s leading Heritage Authorities and independent Insurance Risk Advisors, Tyco Fire & Integrated Solutions have developed a MicroDrop® High Pressure Water Mist System to overcome the waterbased fire protection concerns of the Heritage Industry.

However, don’t take our word for it. Our MicroDrop® Heritage & Culture “Fast Facts” illustrated overleaf, speak for themselves.

The intelligent use of water...

tyco

*Fire & Integrated
Solutions*

MicroDrop®

MicroDrop® Heritage “Fast Facts”

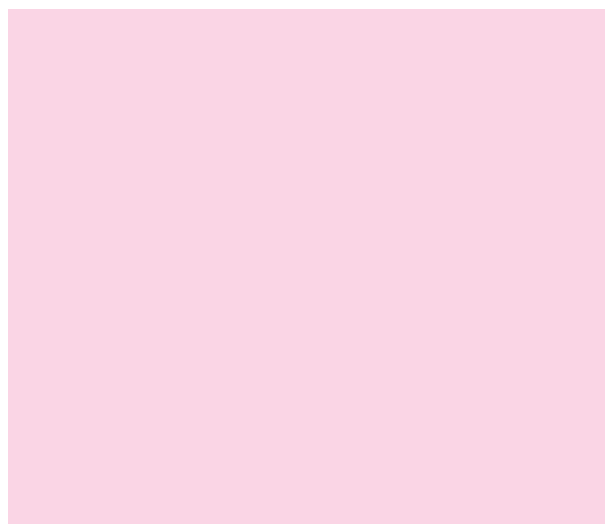
- Specially designed MicroDrop® glass bulb nozzles use less water and requires fewer nozzles than any other HPWM system. This ensures cost efficient system design and reduced installation time.
- MicroDrop’s minimal use of water and method of discharge does not create “water pooling” and therefore eliminates water from being trapped in unventilated areas such as floor and ceiling voids. This fact ensures a very fast “Post Fire” clean up time and re-instatement of the historical environment.
- Rapidly “Knocks Down” smoke formation to reduce smoke permeation into other areas. MicroDrop® also “scrubs” the smoke to remove some of the toxic substances from the combustion of smoke. This factor significantly reduces any potential smoke damage to valuable artifacts and fabrics within the affected fire zone.
- No “Post Fire” contamination or environmental issues. MicroDrop® does not use or require performance enhancing additives (foam etc. to fight fires).
- No moving parts in the MicroDrop® nozzles ensure cheaper life cycle maintenance costs and higher reliability.
- MicroDrop® Pump systems have a smaller footprint than other conventionally designed HPWM pumps. This eliminates the need for large tanks and pumps and maximises efficient floor space use.
- The design efficiency of the MicroDrop® Pump system is more economical to maintain than other conventionally designed HPWM pumps and therefore reduces life cycle maintenance costs.

The MicroDrop® nozzles are fitted into a distribution network of stainless steel pipework. In the event of a fire, only the nozzle closest to the seat of the fire operates to discharge high pressure water mist into the fire in a pre-determined spray pattern.

The water supply to the nozzles is fed from either a high pressure 100 - 120 bar pump and small water storage tank or a bank of cylinders.

MicroDrop® High pressure water mist has a dramatic effect on fire. As the size of the water droplets are so small, they are lighter and remain airborne longer than conventional water based systems.

The micro droplets also provide a much larger surface area that enables the discharged water to more effectively cool and knock down the fire to a control



MicroDrop® Heritage Applications at a glance

- Public access areas
- Visitor restaurants, cafeterias and retail shops
- Generators, boiler rooms and UPS (Un-interrupted Power Supply) areas
- Archive and Repository storage rooms
- EDP rooms
- Underground garage parking areas
- Workshops

For further information contact your local Tyco Fire & Integrated Solutions office on: tfis.microdrop.uk@tycoint.com or visit our website at www.tycofis.co.uk

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