

APPLICATIONS

CABLE TUNNELS



MicroDrop®

"Safeguards cable tunnels from fire by rapidly reducing radiated heat and smoke formation"

The Challenge

Although fires in cable tunnels are not frequent, the impact they can have on the provision of "Business Critical" services can be catastrophic. High intensity fires within congested cable tunnels pose a significant danger.

Smoke and toxic fumes are difficult to vent and hinder tenable access to firefighters to extinguish the fire. Any delay in extinguishing this type of fire also threatens the stability of the tunnel superstructure.

When all these factors are added together, they can substantially raise the financial burden placed upon the service provider.

The Tyco Fire & Integrated Solutions MicroDrop® High Pressure Water Mist system is an ideal fire protection solution to meet the specialist needs of cable tunnel protection in full.

Having been heavily involved in the protection of cable tunnels throughout the world for over sixty years, there is no imaginable fire and safety risk within cable tunnels that we have not encountered and neutralised.

MicroDrop® High Pressure Water Mist systems play a vital role in the protection of cable tunnels and their fast re-instatement following a fire. However, don't take our word for it. Our MicroDrop® cable tunnel protection "Fast Facts" illustrated overleaf speak for themselves.



The intelligent use of water...

tyco

*Fire & Integrated
Solutions*

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MicroDrop® Cable Tunnel “Fast Facts”

- MicroDrop® rapidly reduces radiated heat and smoke formation to minimise damage to the tunnel infrastructure and maximise tenable conditions for the fire brigade to ensure all traces of fire within the cable tunnel are eliminated.
- MicroDrop’s minimal use of water results in less clean up time and faster re-instatement of tunnel operations.
- 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 and a large tank is not required maximising the efficient use of floor space.
- 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.

MicroDrop® Systems

In some cases, MicroDrop® open nozzles may be required to be integrated into an infra-red flame detection system, an addressable/ analogue fire detection system or a VESDA early warning system depending on the type of risk to be protected.

These highly sophisticated systems will not discharge high pressure water mist through the open nozzles unless two or more detector devices detect a fire in its very early incipient stages and send a fire alarm signal to the main control panel.

This provides tunnel and transportation staff with sufficient time to investigate the cause of the initiated fire alarm and probably prevent a small fire from becoming a large one in the first place.

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 controllable size.



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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