



tyco

*Fire & Integrated
Solutions*

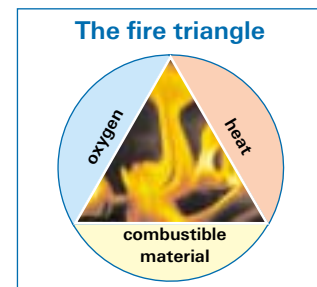
fighting fire with water mist
the *intelligent* use of water

a vital part of your world



increasingly, mist is a must

For a fire to survive, it relies on three elements of the fire triangle, these being oxygen, heat and combustible material. The removal of any one of these elements can suppress or extinguish a fire.



Tyco High Pressure Water Mist is unique. It removes two elements of the triangle, heat and oxygen. It achieves this by dispersing water at a typical 100 bar pressure through specifically designed nozzles. Generally as system pressure increases, the nozzle design allows the water droplet size to decrease, which in turn allows the surface area that the mist covers to significantly increase.




The larger the surface area, the more effective the system becomes in rapidly reducing temperature and oxygen at the flame front. In the event of a fire, a minimum of just 1 litre of water per minute flows through each nozzle, dependent on application. In addition, the system will bind smoke particles to reduce smoke damage. This makes the Tyco HPWM system an extremely effective fire protection medium that significantly reduces asset damage and operational downtime in "Business Critical" market sectors.

one brand, one team, more expertise

For over a decade, Tyco Fire & Integrated Solutions have been leaders in watermist technology. During that time we have developed recognised expertise within the Automotive, Food and Internet Service Providers industries.

Looking forward, our new Tyco HPWM brand that is a result of a strategic partnership with Danfoss Semco A/S of Denmark, will provide Tyco Fire & Integrated Solutions with a Pan-European approach to

High Pressure Water Mist that will enable us to further improve existing system applications and develop exciting new ones.

Droplet size comparison	
	Sprinkler
	Low pressure water mist
	High pressure water mist



applications across many markets

Add the concept of watermist to Tyco's reputation for delivering world-class services in fire protection, and you have a key reason why customers across the board are opting for a solution that is 100% environmentally sound and harmless to users.

For many users, the small amount of water used in high pressure watermist systems and reduced consequential damage helps to attract lower insurance premiums. Installing Tyco HPWM can be a good investment in several ways.

from food processing...

Food processing is a case in point. Mist has been shown to be very effective in protecting deep fat fryers and galley hoods and ducts. Fire is extinguished without the risk of personal injury, which can occur when water splashes into hot oil. Tyco HPWM is efficient, clean and non-contaminating. Furthermore, post discharge clean-up downtime and consequential damage are minimal.

...to automotives...

The automotive industries, where fire risks can be high, are finding watermist a perfect solution in fire protection for engine test cells, rolling roads, hydraulic pits, industrial ovens and paint spray booths. Watermist uses less than 10% of the water used in a deluge system, with most of it evaporating. Also because mist cools cables and metal, less damage occurs and production can re-start sooner.

...to all these applications

- In **Power and Utilities** Tyco HPWM can be used for turbine enclosures, unenclosed indoor turbines, enclosed and unenclosed diesel engines, wind generators and turbines, ductwork, cable tunnels, indoor transformers and compressors and other machinery.
- **Marine** applications span accommodation units, machinery spaces, galleys and general areas.
- **Railway and Subway** applications include underground areas and tunnels.
- In **Data Processing** computer centres, control rooms and server areas with ceiling heights of up to 5 metres are suited to high pressure watermist.
- **Archiving** applications cover premises such as museums and paper archive stores.
- **Property** applications include bedrooms and atria in hotels, classrooms and halls in schools and colleges, shop premises and storerooms in retail centres, prison cells, offices and public areas of many kinds.

Potentially the list doesn't end there. Other specific applications include **car stackers, production facilities and warehouses, woodmills and church towers.**


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Nozzles (sealed bulb)



Pump Unit



the right product, the right approach

Tyco HPWM systems depend on water supplied from either a dedicated pump system or cylinder system. Our pump systems typically operate at 100 – 120 bar to provide a continuous water flow to the nozzles. These systems are most suitable for protecting larger fire risks, particularly in large spaces or where ordinary combustible fire risks are present.

They can be used for both dry pipe (open nozzle systems) where the system is activated manually or from an automatic detection system allowing water mist to be discharged simultaneously from all nozzles in a zoned area. Alternatively, wet pipe systems can be used that incorporate sealed glass bulb activated detector nozzles. In this instance only the nozzles affected directly by the fire will open to allow the discharge of water mist.

Tyco HPWM cylinder systems by virtue of the stored water content have a limited time of discharge but are more cost effective for smaller applications than pump systems.

The cylinder units utilise propellant cylinders stored with 200 bar Nitrogen to discharge a number of non-pressurised water cylinders. These cylinder systems are ideal for the protection of smaller risks and if required, they can be skid mounted allowing easy transportation and installation to the protected area.

the right people, the right approvals

Any and every Tyco Fire & Integrated Solutions system is designed and installed by qualified specialists with years of experience. We are total solution providers in fire protection and safety.

The expertise of our engineers extends to all types of mechanical and electrical fire protection equipment from the simplest to the most sophisticated fire protection technology.

Throughout Europe, the Middle East and Africa our technical experts are currently conducting specific high pressure water mist tests for specific applications to meet

the sophisticated fire protection needs of our clients. At Tyco Fire & Integrated Solutions we not only say we can solve a problem; we physically prove to our clients that we can do what we say.

This approach has culminated in Tyco Fire & Integrated Solutions having more approvals for its products and services than any other organisation. Also, it is no coincidence that key members of our technical development teams have been invited to become members of the various CEN fire protection standards committees to help to develop future “standards of excellence” within the fire industry.

Tyco HPWM system approvals

- Lloyds Register of Shipping (LRS)
- Det Norske Veritas (DNV)
- Vertrauen Durch Sicherheit (VDS)
- Factory Mutual (FM)



always at your service

Our customer service strategy is to provide you with the best products, services and after-sales support. At Tyco Fire & Integrated Solutions service and maintenance means more than merely overhauling equipment. It's about response times, problem solving and genuine commitment to the client. By combining national resources with the knowledgeable contribution of local personalised support from our regional bases, we deliver results customers can depend on 24 hours a day, 365 days a year.

measuring performance

We measure customer delivery through Key Performance Indicators (KPI's) that monitor service and maintenance performance against customers' Service Level Agreements (SLA's). In this way customers receive the levels of service that suit their needs – precisely.

a full spectrum

In essence, our approach goes beyond the usual supplier and customer relationship. Our aim is to work with you as an expert partner who understands your goals and helps you to meet and exceed them.

our services cover...

- Consulting
- Planning
- Project management
- Design
- Installation
- Commissioning and functional testing
- Test and system verification
- Training and documentation
- Service, maintenance and after-sales support





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