

tyco
Fire Protection Products

Safer.Smarter.Tyco.™



Watermist fire protection
Technology you can trust

▲ AquaMist



Trust in Tyco

Tyco Fire Protection Products helps to keep people, property and the environment safe with its high performance fire suppression products.

When designing a fire protection system, the challenge is to select the right suppression system to match the risk. Tyco has the widest range of fire protection products on the market, including sprinklers, clean agent systems, watermist and others.

We can help you make the right product choice to offer the best protection for the hazard at hand.

Our AquaMist product range includes proven watermist solutions supported by over 100 years of expertise in fire protection.

We offer three AquaMist options to suit different applications and better accommodate end users needs from industrial oil fryers, machinery spaces and cable tunnels to hospitals, commercial buildings and data centers. Our watermist systems safeguard lives and property, while saving water in usage.

▲ AquaMist

▲ AquaMist
ULF

▲ AquaMist
Sonic

▲ AquaMist
Fog

Tyco's AquaMist Systems

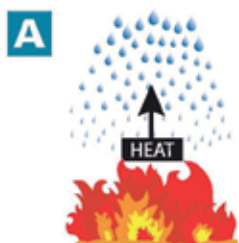
The Tyco AquaMist systems are a versatile and highly efficient fire-fighting medium featuring unique nozzles which have been developed and approved for fire protection.

As part of a fire-protection toolbox, the AquaMist systems offer a simple and easy to use water-based fire suppression solution which is dependable, safe and carries comprehensive approvals.

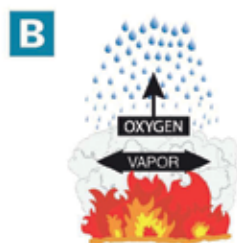
Through our expertise and knowledge, we can advise you on which system is best suited to the environment to be protected and the best specification to match the risk. We believe in customizing a solution to the application, not in a one-size-fits-all solution.

Selecting the right watermist system is not only about extinguishing the fire, it is about caring for the contents of the building and minimizing water damage. It is also about optimizing budgets and protecting the reputation of the specifier.

How the AquaMist systems work



- Evaporation (heat extraction) is a function of surface area of droplets
- Reducing droplet size increases surface area
- Increase in surface area allows for larger cooling effect for a given flow



- Water converts to vapor expanding by a factor of 1650 times
- Oxygen is displaced and diluted, thereby blocking it from the fuel source
- Higher heat level causes a faster vaporization



- Fire extinguishment is improved with direct contact of water droplets
- This type of extinguishment is normally associated with standard sprinklers
- Important part of operation if ventilation is a factor and Class A combustibles are present





- Small water droplets tend to remain suspended
- The expanding mist will expand and cool the gases and other fuels in the area
- Blocks the transfer of radiant heat to the adjacent combustibles and pre-wets them

Watermist Applications



	AquaMist ULF				
Application	FM	FM	UL	Performance based	FM
Max Room Height	5 M	8 M	8 M		N/A
Max Volume	Unlimited	1280 m ³	1600 m ³		N/A
Hotels	✓			✓	
Data Centers	✓			✓	
Heritage Buildings	✓			✓	
High Rise Buildings					
Hospitals	✓			✓	
Machinery spaces, total flooding		✓	✓		
Turbine Enclosures		✓	✓		
Special hazard Machinery spaces		✓	✓		
Stations	✓	✓	✓	✓	
Cable tunnel protection				✓	
Library / Archives				✓	
Rolling Stock					
Industrial Fryer Protection					✓

As part of your water protection armoury, the AquaMist range enables you to make the best choice and provide the most suitable protection. Because you have a choice, you can specify a solution where it is most applicable - with no compromise on performance or protection.

						
TS14972	FM	VdS Mechanical Escalators	IMO	Performance Based	FM	FM
4 M	5 M	N/A	5 M		5 M	8 M
Unlimited	260 m ³	N/A	2000 m ³		260 m ³	1040 m ³
✓				✓		
✓				✓		
✓				✓		
	✓		✓		✓	✓
	✓		✓		✓	✓
	✓		✓		✓	✓
✓	✓	✓	✓			
				✓		
				✓		
				✓		

Ultra Low Flow



**MACHINERY
PROTECTION**



**CABLE
TUNNEL**

The Ultra Low Flow system is a complete engineered solution which includes pumps, valves, discharge nozzles, pipes and fittings, all designed to function as one dedicated fire suppression solution.

AquaMist ULF solution consists of:

- // A pump skid unit
 - // Electrical control equipment
 - // Discharge nozzles which are located around the protected area:
AM4, AM24, AM27, AM29, AM30
 - // G-PRESS piping system
 - // Optional FASTFLEX flexible hoses
 - // Design & technical services
 - // The ULF system is suitable for a variety of applications, for example machinery protection, heritage buildings and industrial fryers (also know as oil cookers)
-



HOSPITALS



HOTELS

How it works

The system operates at working pressures of 7 to 16 bar, producing droplets of water through an engineered discharge nozzle, with different nozzle types for different protected hazards.

The fine mist generated following operation is designed to limit fire growth at an early stage, before the fire can fully develop. The benefits gained include up to a fivefold reduction in the water required, without any detrimental effect on fire fighting capability.

Quality and Safety Assured

AquaMist ULF systems are supplied through authorized partners. Each partner is trained in the use of the SprinkCAD system software and in the design, installation and commissioning of systems.

The AquaMist ULF training module enables system designs from risk assessment all the way through to material take offs. Authorized partners are fully supported by the Tyco technical services team and all Tyco Fire Protection Products are manufactured components and are of the highest quality.

Benefits

Benefits can be found through lower water demands, translating into lower pressure losses, smaller diameter pipes and lower installation costs when compared to traditional sprinkler systems. As the system uses only water, it produces no adverse environmental impact.



AM27



AM29

Fog



**MACHINERY
PROTECTION**



ARCHIVE

Tyco's FOG system reduces the consumption of water and pipe diameters whilst providing a fast and efficient method of fire protection for class A and B fires.

AquaMist FOG solution consists of:

- // A pump skid unit and/or bank of cylinders
- // Electrical control equipment
- // Discharge nozzles which are located around the protected area
- // Design & technical services

It gives outstanding fire suppression protection for turbine and transformer rooms, engine test cells, diesel engines and alternators, paint spray booths and mechanical escalators.

It also provides fire control for computer rooms, occupied rooms and class A fires, archives, cable trays and telecommunication centers.



ESCALATORS



ROLLING
STOCK

How it works

The system operates at working pressures of 70 to 200 bar to produce droplets of small diameters at high speed. For each different protected hazard, optimized nozzles have been developed and tested.

AquaMist FOG is based on principles of well established hydraulic technology. Spray heads are designed to discharge water in the form of watermist, with tiny drops creating a large effective cooling surface area of the fire and surrounding volume. The high speed of the droplets means that the mist can penetrate the hot fumes and reach the combustion area quickly.

AquaMist FOG systems can be supplied with a stand-alone bank of cylinders, electric pumps and diesel pumps depending on the fire hazard and installation needs.

Approved and Tested Solutions

Our AquaMist FOG products are approved and certified so you know you are sourcing products which are approved and tested to the highest standards. Approvals are in place to prevent unsafe or risky products from entering the marketplace. Our solutions have been rigorously tested by a third-party, with on-going product auditing, to ensure standards are maintained.

Benefits

AquaMist FOG systems are one of the best options when piping dimensions or pressure losses are critical, for example in applications such as older heritage buildings or libraries and archives, where excessive water damage and fragile infrastructure needs specialist care and attention.



AquaMist FOG Nozzle



AquaMist FOG Open Nozzle

Sonic



MACHINERY
PROTECTION

Tyco's AquaMist Sonic system is a revolution in Class B fire protection and features 100% machined stainless steel construction for superior strength, no internal moving parts for extreme dependability and multiple mounting options for ease of installation.

AquaMist Sonic system consists of:

- // Bank of cylinders
- // Electrical control equipment
- // Discharge nozzles which are located around the protected area
- // Design & technical services

In terms of placement, the AquaMist Sonic system offers maximum flexibility. Atomizers can be mounted to the ceiling at heights from 3.0 to 8.0 meters (9.8 to 26.3 ft) and also to walls at heights from 2.0 to 5.0 meters (6.7 to 16.4 ft). Electrical or mechanical selector valve options allow protection of multiple hazards using a single system.

How it works

This system utilizes non-toxic and readily available extinguishing media (water and nitrogen). AquaMist Sonic's twin-fluid technology is safe for people and is environmentally-friendly and it is also inexpensive to recharge. The system provides a higher volume of smaller water droplets, spraying them further and is the high-performance fire suppression system specifically engineered to cover a wide range of industrial, commercial and institutional special hazard applications.

It is constructed of industry-recognised, proven, components including an ASME/TPED approved stainless steel water storage tank. Capable of automatic detection and actuation and/or remote manual actuation, the system is installed and serviced by authorized distributors.

Innovative solutions

Just two supersonic atomizers create 1.5 trillion superfine water droplets per second, producing a combined surface area of 121 m² (1302 ft²) per second. This is equivalent to the surface of an Olympic-size soccer field in one minute. Plus, the atomizers propel the droplets at high velocity throughout the combustion zone.

The atomizer is the key to the effectiveness of the AquaMist Sonic system. Supersonic technology generates a high-velocity, low-pressure zone that draws a thin sheet of water into a primary atomization region. A conical supersonic wave then creates a zone of extreme acceleration and high shear-rate, breaking the sheet into atomized droplets.

Benefits

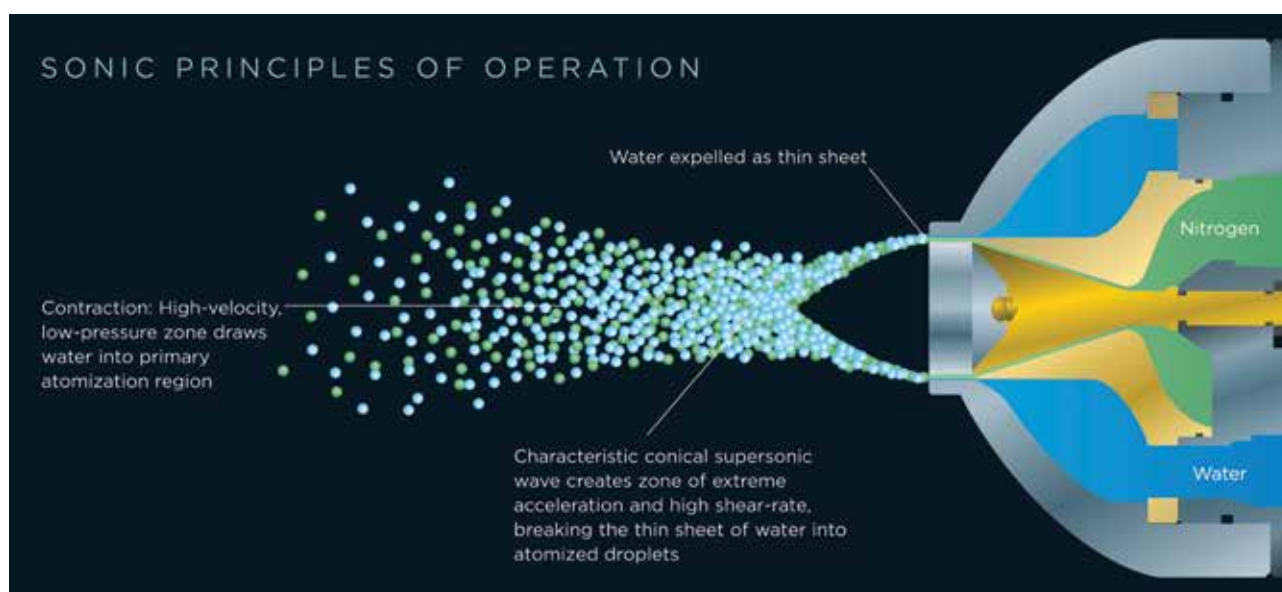
The system is faster with high-volume, high-velocity discharge which quickly fills spaces. It is also smarter and uses one-third the water of comparable high-pressure systems. This system is listed and approved for the protection of flammable liquid hazards (FM) and extinguished all fire scenarios in the FM Protocol 5580. It is FM approved for spaces ranging from 4,591 to 36,727 cubic feet (volumes up to 1040 cubic meters).



AquaMist Sonic
Bank of Cylinders



AquaMist Sonic Nozzle





Global Strength. Local expertise. At your service.

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