

▲ AquaMist®

Machinery spaces and equipment protection
**Effective water mist protection
for high-risk machinery hazards**

Powerful protection for critical machinery spaces and equipment

Machinery spaces are areas where complex machinery moves at high speeds, often in proximity. The machinery generates heat and requires significant quantities of oil or other flammable liquids to optimise performance. The oils, lubricants and hydraulic oils used in machinery equipment can leak and ignite.



What makes AquaMist so effective?

AquaMist is a water mist system that discharges fine mist droplets. These are suspended in a fire's flames and extinguish the fire, minimising damage and equipment downtime. Meanwhile, slightly larger droplets penetrate the flames and reach the fire's hot surface, absorbing the heat and cooling the area and machinery equipment surfaces. The rapid cooling also helps to prevent reignition. All of this is achieved using minimal water, reducing clean-up time and damage to surrounding equipment.

How does AquaMist compare to alternative solutions?

Gaseous suppression vs. water mist

1. Gaseous systems and water mist systems can effectively extinguish a fire, but only water mist systems provide the rapid cooling needed to prevent reignition
2. Certain gaseous suppressants, such as CO₂, can be undesirable to end users due to health and safety concerns. A water mist system does not harm people as a result of its suppression agent
3. Water mist provides both extinguishment and rapid cooling without the EHS concerns associated with CO₂ systems
4. A water mist system can be re-filled and returned to service much faster than gaseous systems, reducing downtime

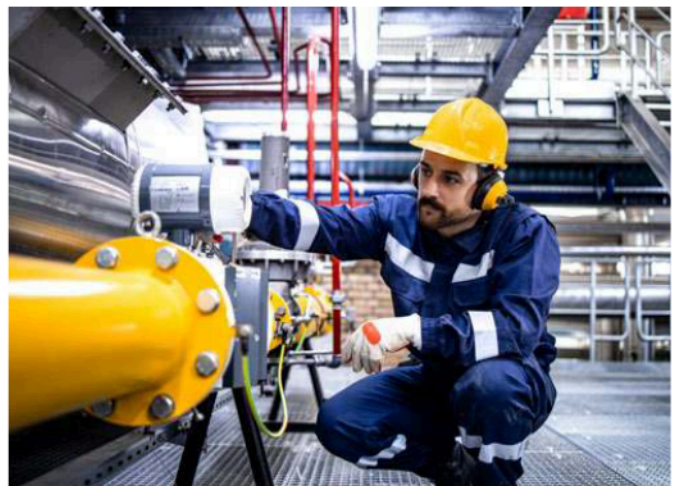
Deluge (water-based) sprinkler system vs. water mist

1. A deluge system can suppress a fire, but the much larger water droplets do not evaporate at the flammable liquid surface. Instead, they can cause interaction with the flammable liquids, making spillage and reignition a risk
2. Water mist droplets suppress the fire, while also absorbing heat from the flammable liquid, cooling the surface and evaporating
3. Deluge systems use significantly more water than a water mist system, resulting in more water usage and more clean-up, which increases downtime
4. Water mist systems use less energy and need less space for the water tank as they use less water and have smaller pumps. This, in turn, also reduces operational costs



AquaMist solutions can help protect:

- Gas turbines
- Diesel generators
- Steam turbines
- Transformers
- Oil pumps
- Compressors/Compressor stations
- Engine test cells
- Combustion machinery
- Emergency power supply rooms



The right **AquaMist** solution for your needs

We offer AquaMist ULF and AquaMist FOG for machinery protection, with either low- or high-pressure technology. Our specialists can work with you to determine the best system option based on your specific needs.



AquaMist ULF

- Low-pressure system (7-16 bar/101.5-232 psi)
- Pump-based solution at volumes up to 1,600m³/56,000ft³
- FM-approved, UL-listed and performance-based design
- Total flood or local application



AquaMist FOG

- High-pressure system (50-200 bar/1,015-2,900 psi)
- Cylinder-based solution at volumes up to 260m³/9,181ft³
- FM-approved and performance-based design
- Total flood or local application

Features and benefits

1

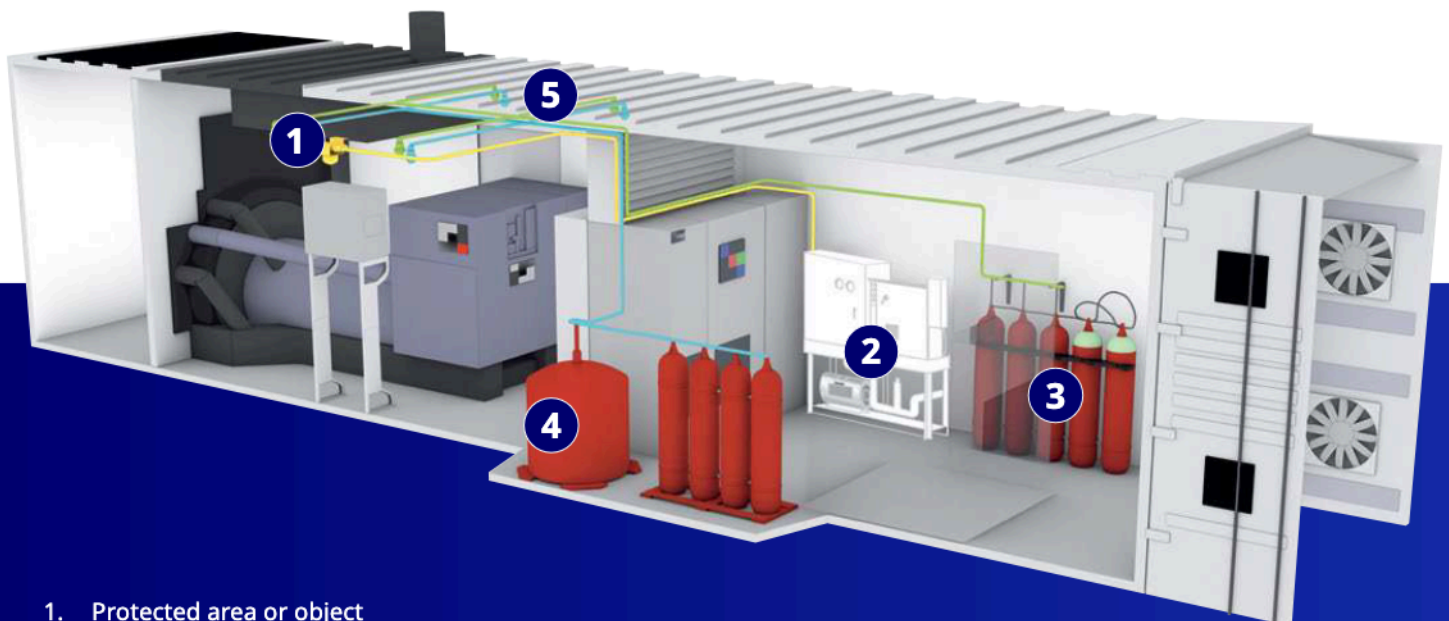
Effective water usage

AquaMist solutions use significantly less water than a traditional sprinkler/deluge system, including less water per nozzle and fewer activated nozzles in full-scale fire tests.

2

Global approvals backed by full-scale fire tests

AquaMist solutions for machinery spaces and equipment are full-scale fire tested and include FM-approved, UL-listed and EN 14972-compliant options. The local application solutions passed over 30 fire tests with both APSAD D2 and IMO fire tests witnessed by DNV/CNPP.



1. Protected area or object
2. Centralised ULF pump unit and water reservoir
3. Standalone FOG cylinder bank
4. Standalone ULF Red-E Mist skid
5. Stainless steel piping system

Image for illustrative purposes only

3

Flexible design: centralised or standalone solution

The AquaMist system is our most flexible, available as a contained, standalone solution or a centralised pump-driven solution.

4

Saves space: small and economical

The AquaMist water mist system is a compact solution. The AquaMist ULF low-pressure pump skid system uses smaller equipment than high-pressure water mist or deluge system alternatives. The contained, standalone AquaMist ULF and FOG solutions are also compact and can be placed near the hazard to reduce lengthy pipework demands. AquaMist systems have smaller pipework than fire sprinkler or gaseous systems, saving space for other building needs. This can help reduce overall system installation costs.

5

Easy retrofit with shared or contained water supply

AquaMist systems can share a potable water supply with existing sprinkler systems, making it the ideal system for buildings that use both sprinkler and water mist low-pressure systems.

AquaMist systems also have the option to utilise a dedicated water resource (in cylinders/containers). Both options provide easy retrofit and do not require any speciality water treatment; potable water is sufficient.

6

Reduce or eliminate electrical needs

AquaMist ULF's reduced pressure demands significantly reduce the pump skid's electrical needs, lowering the power needed to support the system. The lower power demand significantly reduces the required size of the backup energy source (i.e., a generator) and lowers the operational cost (ops cost for mains connection).

Standalone AquaMist solutions do not need a power supply connection and operate as an independent standalone water supply skid. Standalone solutions are available for both AquaMist FOG and AquaMist ULF systems.

Why partner with us?

- Global company with nearly 150 years of expertise in fire protection
- Direct worldwide technical support dedicated to water mist
- Protection options for one to multiple machinery hazards
- FM-approved, UL-listed and EN 14972-compliant solutions based on full-scale fire testing
- Can supply potable water or storage tanks – no treated water or additives required
- Eco-friendly system solutions

AquaMist systems

Includes fully FM-approved, UL-listed and EN14972-compliant components

Low- and high-pressure discharge nozzles



Features

- AM 15 & AM 32 machinery local application low-pressure nozzles
- AM 4 machinery spaces low-pressure nozzle
- Pendant and door high-pressure nozzles

Pump skid unit simplifies system installation



Features

- Pre-assembled, pre-wired and pre-piped for easy installation and reduced time and labour
- Available in a variety of configurations with variable water flow rates and pressures
- AquaMist ULF MCC is FM approved
- AquaMist ULF EMCC is CE marked, EN14972, NFPA20, EN12845 and VdS CEA 4001

Various standalone solutions: no power supplies needed



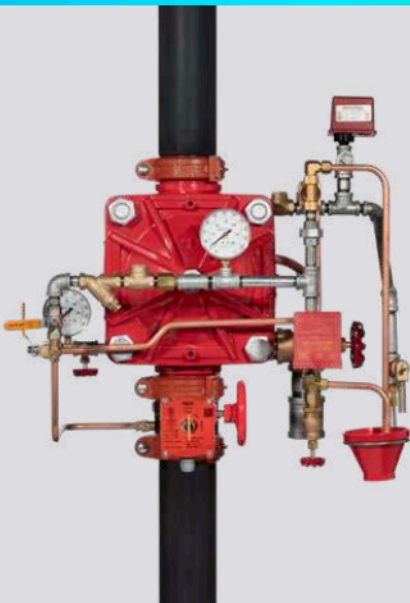
Features

- AquaMist FOG provides a smart, contained, high-pressure cylinder-based skidded solution, which can be configured according to the project's needs
- AquaMist ULF Red-E Mist skids provide a smart low-pressure, contained solution with a very small footprint
- No external power supplies required to operate the systems

Tyco valves

G-Press piping

Flex hoses



Features

- Dependable low-pressure alarm and deluge valves
- FM and VdS approved and EN 14972 compliant

Features

- Stainless steel press fitting system for rapid installation
- FM and VdS approved and EN 14972 compliant
- G-Press system has a 10-year limited warranty

Features

- Stainless steel press fitting system for rapid installation
- Dependable stainless steel braided hoses
- FM and VdS approved and EN 14972 compliant

About Johnson Controls:

At Johnson Controls (NYSE:JCI), we transform the environments where people live, work, learn and play. As the global leader in smart, healthy and sustainable buildings, our mission is to reimagine the performance of buildings to serve people, places and the planet.

Building on a proud history of 140 years of innovation, we deliver the blueprint of the future for industries such as healthcare, schools, data centers, airports, stadiums, manufacturing and beyond through OpenBlue, our comprehensive digital offering.

Today, Johnson Controls offers the world's largest portfolio of building technology and software as well as service solutions from some of the most trusted names in the industry.