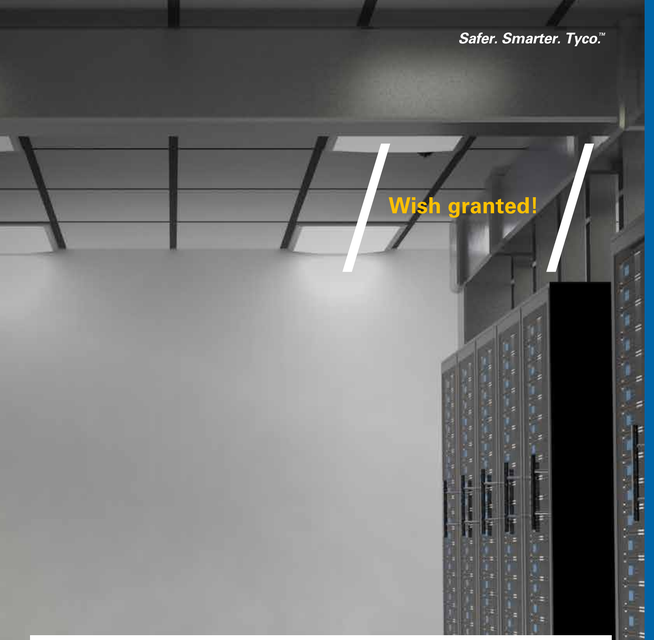
Safer. Smarter. Tyco.™



New FM Approved Water Mist System, designed for modern Data Centers

Until now water-based fire protection systems have not taken into account the modern operating conditions of Data Centers. Now, with the New AquaMist ULF solution, these special factors are covered.

// **FM Approved** fire protection solution
// **Continuous protection** for ventilated environments
// Protection against **fire-propagating** cable fires
// Suitable for **below-floor installation and Concealed Spaces**
// **Environmentally sustainable solution:** uses up to 80% less water than a pre-action sprinkler system designed to protect the same space.
// A proven **pre-action system** to minimize risks of damage due to accidental discharge
// Area of operation based on fixed number of nozzles allowing for **pre-calculation**
// This solution **can be combined with FM approved AquaMist solutions** for other areas within the building including: generator rooms, transformer rooms, offices, meet-me rooms and circulation spaces

For more information visit **www.tyco-fire.com/aquamist**

AquaMist

tyco Fire Protection Products

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Global strength. Local expertise. At your service.

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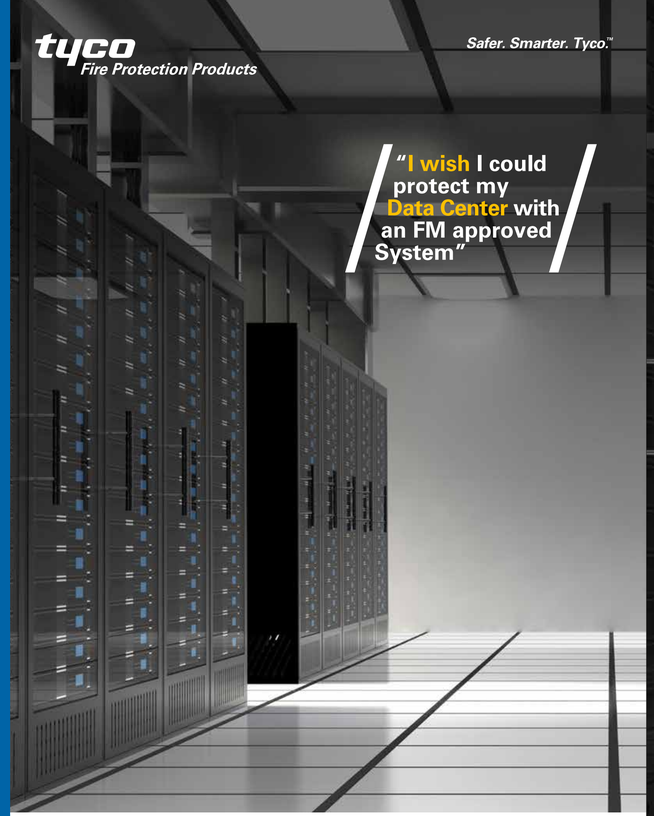
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"I wish I could protect my Data Center with a system specifically designed to mitigate ventilation, and take fire-propagating cables into consideration"

DATA CENTER MANAGER
IN A MULTINATIONAL I.T. COMPANY



"I wish I could protect my Data Center with a pre-action system that delivers minimal amounts of water"

DATA CENTER ENGINEER



"I wish my policyholders could have a reliable Low Pressure FM Approved Water Mist Solution for their Data Center"

INSURANCE COMPANY MANAGER



tyco
Fire Protection Products

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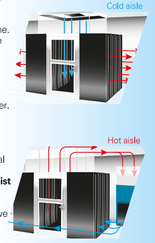
Advantages of the New AquaMist ULF Solution for Data Centers

Ventilation is no longer a problem

Data Centers are ventilated to maintain an optimum operating temperature. This creates one of the greatest challenges for fire systems to overcome. Smoke and heat are transported by the ventilation system, delaying operation and efficient system performance.

Shutting down ventilation is not viable due to the impact this will have on the operational efficiency of the Data Center.

The new Tyco AquaMist ULF Data Center solution has been tested and approved to operate in ventilated conditions, thus allowing operators total freedom in designing ventilation arrangements. **Only the Tyco AquaMist ULF guarantees rapid detection and discharge in a range of ventilated conditions**, no longer do operators have to choose between fire suppression and cooling



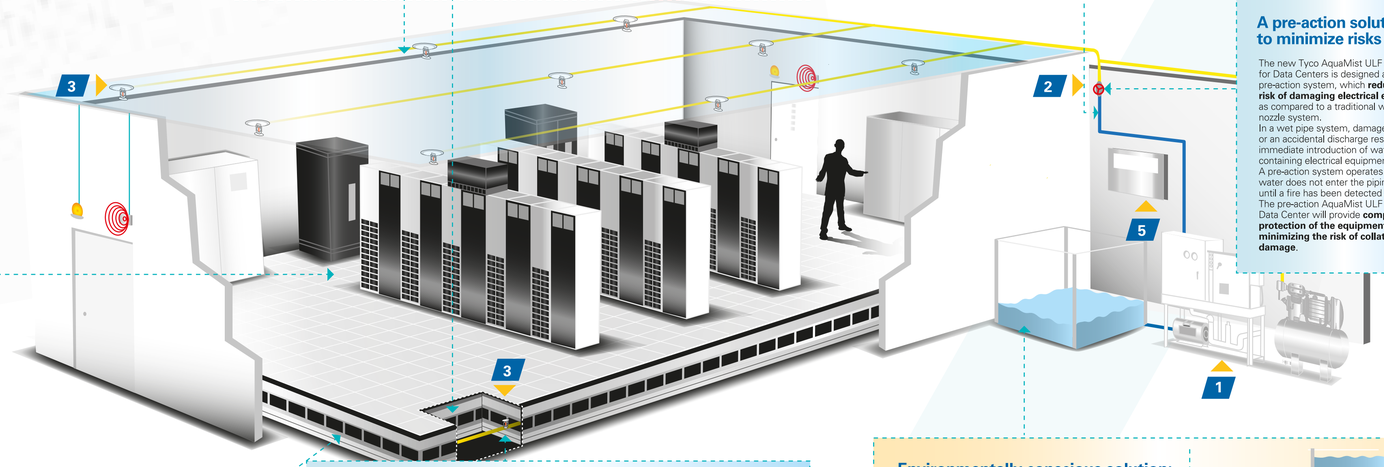
Protecting your Data Center when it contains fire-propagating cables

A Data Center typically contains a high density of cables in trays located above servers and below the raised floor. Previously, fire protection systems only provided protection for non fire-propagating cables. The new Tyco AquaMist ULF solution is **approved by FM** to further protect against the additional hazard inherent in fire-propagating cables, this allows greater flexibility in cable selection.

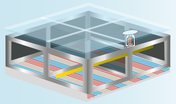
A new FM Approved solution

FM APPROVED

The new Tyco AquaMist ULF solution for Data Centers has been full scale fire **tested by FM in multiple scenarios**, including areas above, below raised floor, hot aisle and concealed spaces. Tyco offers AM29 and AM30 nozzles with two activation temperatures 135°F (57°C) and 155°F (68°C) providing more flexibility in design.
The architecture of every Data Center is unique. If you believe your installation is of a complexity that may require a bespoke solution, please contact us and we will be happy to provide an expert appraisal (or survey).



Suitable for below-floor and Concealed Spaces



AquaMist ULF has been extensively tested to provide below floors, in cable voids or wherever cable trays are located and we offer **design flexibility for different layouts**. For example, trays below or between floor grates can be protected using upright nozzle (AM30) or pendent nozzle (AM29). Innovative design approaches for local protection of cable trays is also available.

Continous protection

In general, Water Mist systems do not require treated water or additives, so the system **can be supplied by potable water or water storage tank**s.

A pre-action solution to minimize risks

The new Tyco AquaMist ULF solution for Data Centers is designed as a pre-action system, which **reduces the risk of damaging electrical equipment** as compared to a traditional wet pipe nozzle system.
In a wet pipe system, damage to nozzles or an accidental discharge results in immediate introduction of water to areas containing electrical equipment.
A pre-action system operates differently: water does not enter the piping network until a fire has been detected and verified. The pre-action AquaMist ULF solution for Data Center will provide **complete protection of the equipment while minimizing the risk of collateral water damage**.

Environmentally conscious solution: save space and up to 80% of water

Is floor and ceiling space limited in your Data Center? Would you like to decrease water demand and decrease pipe sizes in your design? The new Tyco AquaMist ULF solution for Data Centers is the answer. The Water Mist alternative to traditional pre-action systems **can reduce the demand by up to 80% making it possible to reduce supply piping and water storage tanks**.

FIRE PROTECTION WATER TANK FOR DATA CENTER

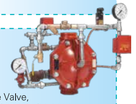


Components of the AquaMist ULF Solution for Data Centers



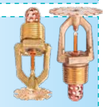
1 Pump Skid Unit, simplifies your system installation

// Pre-assembled, self-contained, control center for the AquaMist ULF system.
// Pre-wired and pre-piped for easy installation and reduced time and labour.
// Available in a variety of configurations with water flow rates from 50 gpm (189 lpm) to 150 gpm (568 lpm).
** Ref: MCC FM Approved*



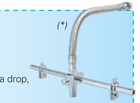
2 Pre-action System with DV-5 Deluge Valve Single Interlock

// Pre-action System with Electric Actuation utilizes automatic AquaMist nozzles and a supplemental detection system. Actuation of the detection system automatically operates (releases) the DV-5 Deluge Valve, allowing water to flow into the Water Mist pipe network to be discharged from any Water Mist nozzle that may be open.
// This is a suitable system to protect areas where there is a risk from water damage. Pre-action systems can avoid accidental water damage because the system is only filled with water in the event of fire detection and only discharges water when the nozzle is activated by heat.
// The one-piece, diaphragm-style design of the DV-5 is one of the most respected and hassle-free fire protection valves in the industry.



3 Discharge nozzles which are located within the protected area: AM29 and AM30

// The Tyco AquaMist ULF nozzles Type ULF AM29 and AM30 are closed (automatic) nozzles intended for use with engineered, Water Mist systems.
// AM29 and AM30 are Low Pressure nozzles that utilize a single fluid jet impacting on a diffuser to produce a spray having a range of water droplet sizes suitable for the control of cable fires.



4 Tyco Flexible Hose Connection and G-Press Piping

// The Fastflex Flexible Hose is a unique drop assembly comprised of a branch line adapter nipple, stainless steel flexible hose, reducer and a lightweight ceiling bracket.
// The Flexible Hose can be installed in false ceilings without cutting pipes associated with installing a drop, armover, and elbows
// Once the ceiling grid is in position, the hoses can be reshaped to suit the final nozzle location.
// A Flexible Hose is installed quickly without large and expensive tools.
// This allows complete flexibility, particularly important where cabinet locations regularly change.
// Stainless Steel G-Press system FM Approved.
** Ref: Tyco Flexible hose design complying with FM Design Criteria*

5 FM Approved detection equipment

FM APPROVED

// An FM approved AquaMist Data Center system should be combined with an FM approved Detection system. Tyco can offer a full range of FM approved detection hardware. Contact Tyco to identify the best option for your Data Center.

AquaMist