



Data Centre Fire Protection
Save Data
Reduce Damage



High-pressure
water mist fire protection



www.ultrafog.com

Delivering fire protection solutions for data centres

Security of data centres becomes a big challenge, not only because of the risk of hacking, but also in case of fire.

Data centres facilities are designed to use space with maximum performance and to provide constant level of availability. IT equipment including servers, storage hardware, cables and racks require special environments. Fire extinguishing systems are as important as uninterruptible power sources, air conditioning and ventilation systems.

Ultra Fog's technology uses pure water in minimal quantities to provide effective, rapid fire control and suppression. Compared to gaseous extinguishers, high pressure water mist is very economical solution which does not need annual cylinders replacement and takes up less space. Ultra Fog's high pressure water mist system meets all demands and achieves very reliable effectiveness in this sensitive environment.

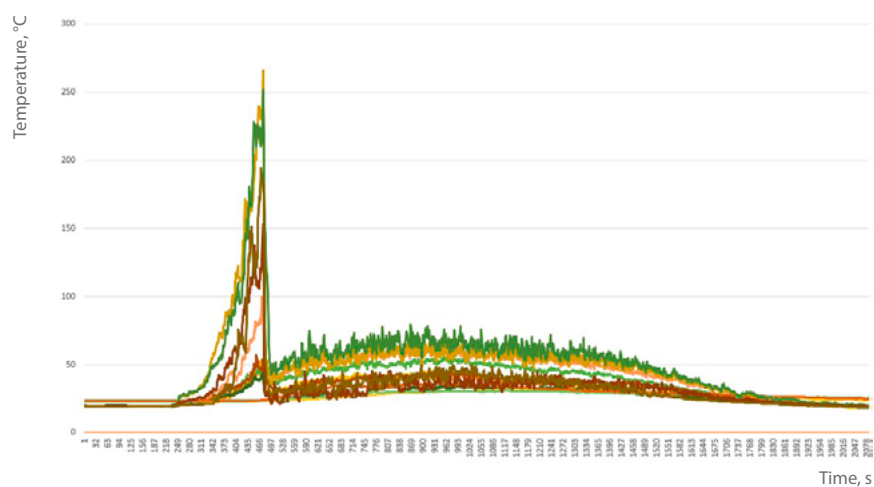


Chart from „double cable tier“ fire test showing temperature changes.

Technical details of Ultra Fog nozzles used for data centre protection according to FM5560 (Appendix M & N)

	DATA HALLS	BELOW THE RAISED FLOOR, SINGLE TIER	BELOW THE RAISED FLOOR, LOCAL APPLICATION	BELOW THE RAISED FLOOR, DOUBLE TIER
Bulb nozzle type	68°C	68°C	68°C	68°C
Maximum nozzle spacing:	4.1 m	4.1 m	4.1 m	4.1 m
Nozzle pressure	65 bar	65 bar	65 bar	70 bar
Design flow for pump unit	6 Nozzles	6 Nozzles	4 Nozzles	6 Nozzles
Design water density:	1.73 l/min/m ²	2.1 l/min/m ²	1.69 l/min/m ²	2.25 l/min/m ²

Effective high-pressure water mist solution

- Custom designed, highly engineered, quality manufactured fire suppression systems
- Minimum of water is used which means less harmful for electrical equipment
- Not required to turn off ventilation and conditioning systems to extinguish the fire
- Safe for human occupants and could be released without evacuation
- Ultra Fog's patented bulb nozzles, release automatic wet pipe system with direct impact on source of fire.
- Risk of flash over is substantially reduced or reduced to zero.
- Small stainless steel pipe dimensions result in less weight, ease of installation, and pipe networks that are easy to conceal.
- Reduced downtime and clean up costs following fire event.
- The only wet sprinkler able to be tested while in service using Ultra Fog's Patented Test tool.



Fire Testing, Type Approvals and compliance:

Ultra Fog's Water Mist System has been fire tested by the Swedish Test Laboratory (SP), SINTEF - Norway and Danish Fire Laboratory (DFL), the Southwest Research Institute (SwRI) and Baltic Fire Laboratory (BFL).

- FM5560 Data Processing Equipment Rooms/Halls above and below raised floor (Appendix M and N)
- FM5560 Non-Storage Occupancies, HC-1, Part 4 EN14972
- FM5560 Turbine and Machinery in Enclosures, Part 14 and 15 EN14972
- Part 3 EN14972 OH1
- Part 10 EN14972 Annex A OH4
- Part 2 EN14972 Annex A OH3
- Part 5 EN14972 Annex A OH2
- Part 7 & 17 EN14972 Annex A, Residential Water Mist Systems
 - BS 8458 – Domestic and Residential Water Mist Systems
 - BS 8489 – Commercial and Industrial Water Mist Systems
 - NFPA 750
- Archive / Library CEN TS 14972 annex B, ref fire report BFL2020/TP02/001 and BFL2020/TP02/009
- Part 12 EN14972, Fat Fryer & Galley Hood
- Component testing by the laboratory of UL and FM
- Tunnel: Uptun, Applus+ guideline full scale fire test.
- Vehicle / Diesel Train: Regulation No. 107, Revision 7, Annex 13; Train test specification ALn663

Since 1990, Ultra Fog has been committed to a continuous programme of product development and fire testing in response to the latest rules, regulations, and standards around the world. Ultra Fog products are 3rd party tested and approved, in accordance with internationally recognised test protocols.

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