

The Water Mist Technology!



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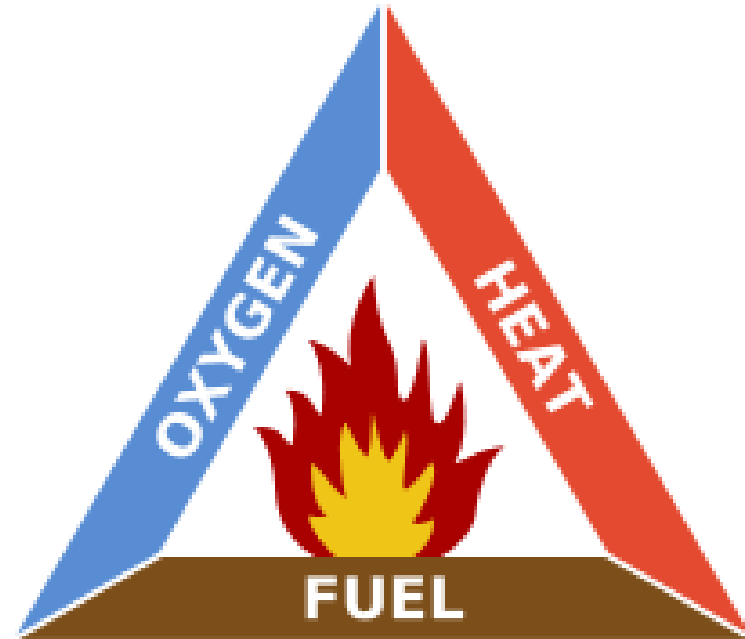
Content ...

- How does water mist work?
- Benefits of Water Mist
- Applications
- Norway

The Fire Triangle

A fire triangle consists of three elements:

- Combustible material / fuel
- Heat
- Oxygen



© Wikipedia.com

How does Water Mist work?

Water mist reduces two of these elements:

- Heat
- Oxygen

Water mist is a performance-based technology!!!

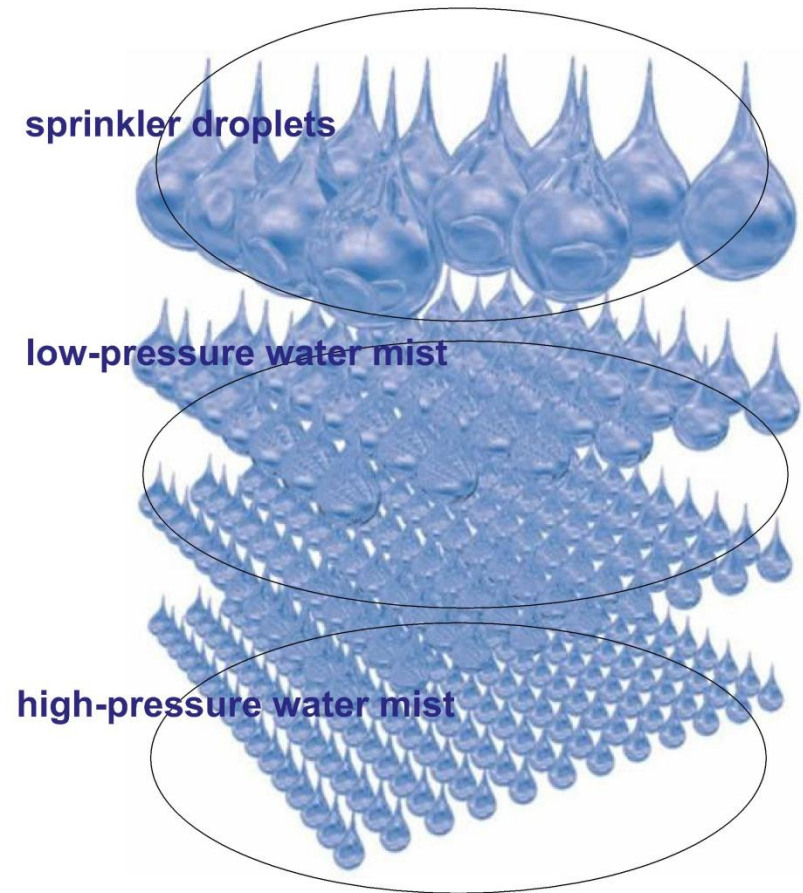
- Low pressure water mist: less than 12.5 bar (181 psi)
- Intermediate pressure water mist: between 12.5 and 35 bar (507 psi)
- High pressure water mist: up to 200 bar (2900 psi)

How does Water Mist work?

Definition:

Droplets size less than 1 mm – 1,000 microns

- NFPA say: 99% of the droplets less than 1 mm
- CEN say: 90% of the droplets less than 1 mm



© Fogtec

Benefits of Water Mist

	Colours						
Types		Fires involving wood, paper, textiles etc.	Fires involving flammable liquids, petrols & spirits etc.	Fires involving flammable gases, butane, propane etc.	Fires involving burning metals, e.g. magnesium	Fires involving electrical equipment	fires involving cooking oils and fats
Water Mist							
Water							
Foam							
Dry Powder							
M28 / L2							
Co2							
Wet Chemical							

Benefits of Water Mist

Eco-friendly and sustainable!

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Benefits of Water Mist

- Less water
- Less material
- Less space
- Reduces heat AND oxygen
- Does not harm humans!!!
- Local inerting effect
- Can easily be retrofitted and extended
- Cooling-effect prevents re-ignition
- Proven to international protocols and standards

Standards & Guidelines

- CEN EN14972
- NFPA 750
- FM 5560
- UL 2167
- VdS 3188
- IMO A800 + MSC 265
- IMO MSC.1/Circ. 1165
- BS 8489 (industrial)
- BS 8458 (residential)
- The French Standard APSAD D2
- The Nordic Standard
- The Danish Guideline
- The Swedish Standard

References I

- Luxury apartments
- Student accommodation
- Social housing
- Protecting vulnerable residents
- Loft conversion
- Open plan kitchen / diners
- Mezzanine floors
- Holiday lets
- Means of escape
- Full house protection
- Tree house
- Car parks

References II

- 500 apartments / The Bread Factory (Oslo)
- Single occupancy flat (collaboration between a Housing Association / Kent Fire and Rescue Service)
- Surrey Towers (retrofit)
- Large domestic property (with atrium) in London (Kensington)

References III

- Care Homes in Berkshire, Brighton, Rugby, Canterbury, Lightwater, Moreton, Kentford, Sway, Felpham, Enfield, Cambridge, Maidstone and Salisbury
- Single dwelling houses in London
- Residential tower blocks in Slough and Colchester
- Manor House in Surrey

References IV

- Sackville Street (residential Flats / London)
- Sackville Gardens (large domestic / London)
- Wharton Street (domestic / London)
- Fulton Court (flats / London)
- Windsor Castle ...

Norway I

- In 2010 Norway imposed requirements for automatic suppression systems in residential buildings
- BS 8458 was used as the basis for the Nordic residential water mist standard which was published in 2014
- 10 per cent of the residential sprinkler market and growing

Norway II

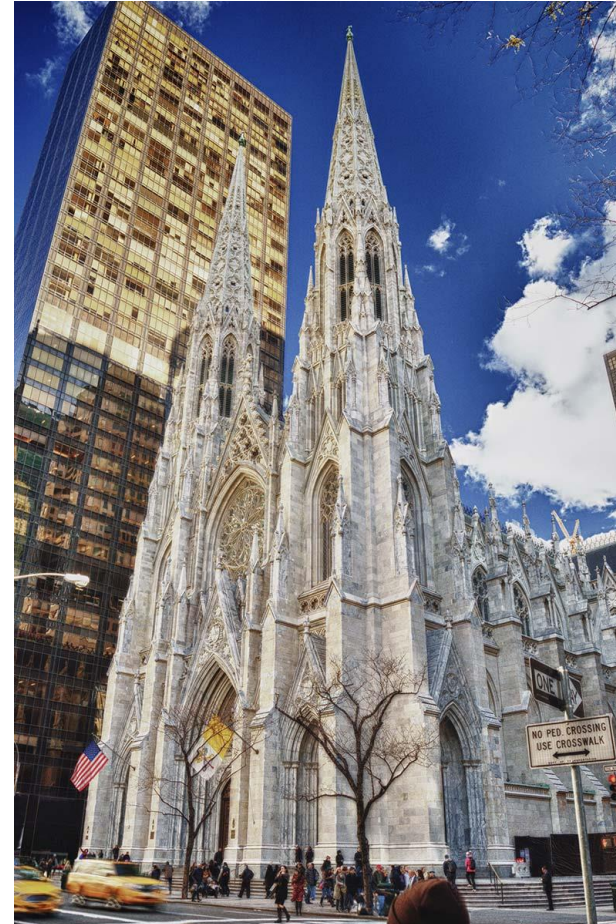
- In 2019, the water mist market grew by 8 % to 29,213 nozzles (73% of which were residential nozzles)
- In 2019, manufacturers sold 801,320 sprinklers (a reduction of 8 % from 2018)
- Insurance companies are open and positive
- Norway installs more sprinklers and nozzles per capita than any other country

Please look at

- - A summary of a research project report comparing residential sprinklers and water mist on www.ri.se
- www.redbooklive.com (and search for „watermist“)
- Norwegian Sprinkler Statistics

Applications: The Hall of Fame

- St. Patrick's Church, New York
- La Scala in Milan
- The Clock Tower in Mecca
- The Eurotunnel
- ISS International Space Station (portable water mist fire extinguishers)



© The Jewel Hotel

Land Segments & Key Verticals

Building Segment

- Hotels (hospitality industry)
- Data centres
- Healthcare (hospitals, care homes)
- Cultural heritage
- Educational (universities)
- Institutional (prisons)
- High-rise buildings
- Underground infrastructure
- Tunnels
- Museums
- Airports, etc.

Applications

- Hotel rooms and offices
- Storage areas
- Server halls
- Escalators
- Kitchens
- Restaurants
- Technical spaces
- Laboratories, etc.

Land Segments & Key Verticals

Industrial Segment

- Power generation
- Power distribution
- Automotive industry
- Food industry
- Manufacturing industry
- Petroleum
- Oil & Gas, etc.

Applications

- Gas turbines
- Flammable liquid storage
- Industrial fryers
- Paint booths
- Cable tunnels
- Diesel generators
- Conveyor belts
- Transformers
- Switchgear rooms, etc.

Marine Segment

Key Verticals

- Cruise vessels
- Ferries and RoPax
- Cargo vessels
- Superyachts
- RoRo & car carriers
- Navy
- Service vessels
- Off-shore
- River cruise liners
- Exploration cruise liners, etc.

Applications

- Accommodation
- Public spaces
- Balconies
- Engine rooms
- Bildges
- Storage areas
- Laundry
- Kitchen & fryers, etc.



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