



AQUAFOG[®]
WATER MIST



The **AQUAFOG®** water mist system optimises the quantity of water used through the distribution of very small droplets to achieve maximum cooling effect.

The **AQUAFOG®** systems operate at working pressures of 80 to 200 bars to produce droplets of very small diameter at very high speed.

The **AQUAFOG®** fire extinguishing systems use water at high pressure as an agent and are based on principles of well established hydraulic technology. Spray heads are designed to discharge water in the form of water mist. The tiny drops create 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.

Water mist is based on the principle of combined contribution of 3 main effects:

- **Cooling:**
Water spray in droplets of micron size produces a large surface area for heat absorption. Once in contact with hot bodies and gases, these droplets turn to vapour absorbing a large quantity of heat, equivalent to 540 calories per gram.
- **Smothering:**
The water in its vapour state occupies 1,600 times more volume than as a liquid and displaces an equivalent volume of oxygen, thus creating a smothering effect. If both the water vapour generated and the temperature in the hazard is high enough, the concentration of oxygen can fall drastically in the whole room.
- **Attenuation:**
The mist cloud generated in the enclosure absorbs a large part of the radiated heat thus protecting the adjoining risks.

System functionality:

- **Fire control (Total Flooding):**
Limiting the growth and the spread of fire, cooling the adjoining fuel and containing upper gas temperatures.
- **Fire extinction (Local Application):**
Complete fire suppression of the risk.

Whether it is fire control or fire extinction does not depend on the water mist system but on the configuration of the hazard.

Main advantages of the system:

- . Drastic reduction of temperature.
- . Efficient on deep seated fires.
- . Efficient for flammable liquid fires, preventing re-ignition.
- . Minimal water damage (the quantity of water used is very small).
- . Easy to refill.
- . Suitable for local application and total flood hazards.
- . Environmentally friendly. No damage to the environment.
- . Economical. Minimum cost in system refilling.
- . Does not create by-products of combustion.

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