

AQUATECH[®]

WATER MIST



The power of a water drop.

 **tema sistemi**
FIRE TECHNOLOGY

30
YEARS



1998

Just a few years earlier, we had begun to take the **first steps in the fire fighting market**. Very soon we understood that our fight against the fire had to go far beyond the control and the suppression of the flames. Firstly, **we wanted to protect people, goods and nature**.

We realized that the most widespread **fire prevention measures of the time were about to destroy the environment**. The same environment we were trying to protect from the devastating effects of the fire.

It was then that we found out that the solution we were looking for was right there, in front of our eyes. **Nature was showing us the way with a very simple and extremely effective proposal: the atomized water**.

So, **20 years ago** we started a **research path** for the engineering of **our own Water mist technology**. We have been among the first ones in Europe to **believe in the potential of this innovative fire fighting solution, already tested by the nature**.

Today

Now we are a team of **fire technologies specialists** and we would like you to discover, through our experience, the **unmatchable advantages of the Water mist system**.

We introduce you a product, the result of years and years of investments, researches, analysis and tests, which obtained **national and international certifications**, with **thousands of customized solutions** all over the world.

Here it is, our leading product:

Aquatech[®], the Water mist.

Aquatech[®]: the power of a water drop.

AQUATECH[®], THE WATER MIST

Aquatech[®] is our innovative High pressure Water mist fire fighting solution, capable of cleverly exploiting the extreme extinguishing power of the most eco-friendly element available in nature: water.

Aquatech[®] Water mist uses the same methodology as the well-known **Sprinkler system**, enhancing its **performance**. Thanks to its **advanced process** of mist production, **Aquatech[®] reaches the peak of the extinguishing power.**

The **atomized water** generated by the system appears as a **fine mist** to the human eye since it is the result of the **separation** process of every **single water drop** into millions of **micro-droplets** (smaller than 50 micron).

Thanks to the **Aquatech[®] sophisticated engineering process**, the misted water is able to **extinguish any kind of fire** by intervening on **three processes** related to the fire suppression:

- 1 Oxygen displacement** in the combustion area
- 2 Sevenfold increase of the cooling effect of water**, compared to the sprinkler systems
- 3 Dramatic reduction of the radiant heat**

The **advanced technology** of **Aquatech[®] nozzles**, the **smallest on the international market**, allows the supply of very high speed atomized water directly on the source of the fire. **Aquatech[®] is harmless** to people and environment, **preventing damages to valuable furniture** and dramatically **reducing business down time** and **water consumption** (up to 90% less when compared to Sprinkler systems).



Aquatech® vs Sprinkler

Water mist Aquatech® installations are **lighter, faster, more compact** and **long lasting**. **Aquatech®** weighs 85% less than a Sprinkler system, since it requires **less nozzles, smaller piping** and is made of **high quality materials**.

The compact design of **Aquatech®** nozzles and the **minimum need** of **water reservoir** (**customizable** in terms of capacity and size) allow a **low architectural impact** and the **greatest design freedom** to architects and interior decorators.

AQUATECH® BENEFITS



Aquatech® is our best achievement:

a **100% eco- friendly** advanced technology, capable of **replacing** even the most **effective fire fighting systems**, for the control and suppression of any kind of fire.

Our clients all over the world say that **Aquatech® Water mist** offers an **excellent cost/benefit ratio**.

By choosing Aquatech® you can benefit of:

- \$ Minimum use of water**
- \$ No building and furniture damages**
- \$ System reduction of weight and size**
- \$ Low maintenance costs**
- \$ Minimal business downtime**

Aquatech® vs Gas

Just like a Gas, **Aquatech® operates by total flooding**, penetrating fire even in the tightest spaces, **removing** the **oxygen** from the combustion area. Moreover, the **Water mist** technology **reduces** the **radiant heat** from the heart of the fire and **inhibits smokes**.

Unlike the gas systems, **Aquatech®** can be discharged **in human presence**, has no enclosure integrity requirements and **does not need disposal operations**.

Aquatech® replaces Gas systems also in the cases when the traditional Water solutions are not appropriate.

TESTED AND APPROVED

Aquatech® Water mist has proven reliability and efficacy in every sector of application: Buildings, Cultural heritage, Industry, Oil & Gas, Marine, Transportation, Luxurious places.

We have been among the first ones in Europe to study and engineer our own Water mist technology, testing its materials and components.

We tested Aquatech® system in its various applications, verifying its performances **far beyond applicable standards and protocols**. Thanks to this intense and meticulous analysis, **we aroused the awareness of the operators** of the sector, **catching the interest of clients**.

On request of our clients we try Aquatech® on specific **real applications**, for cases where test protocols are still not available, **bringing the current legislation forward** and **achieving** increasingly **ambitious goals**.

Aquatech® technology is **extremely flexible**, adaptable to any client need. The **typologies of installation** we propose are: with **cylinder skid**, with **pumping unit**, **pre-action "appearing" system**.

Aquatech® can be installed both in **new constructions** or in **retrofit projects**.

Aquatech® is approved by the most renowned national and international certification bodies.

We comply with the following regulations and protocols:

- NFPA 750 Standard
- UNI CEN/TS 14972 technical specifications
- IMO Resolution A.800 (19)
- IMO Resolution MSC/Circ. 1165
- IMO Resolution MSC/Circ. 1387
- FM5560 Approval Standards

COMPONENTS AND APPLICATIONS

To ensure the satisfaction of the **highest performances**, we entrust every project step of **Aquatech®** to the **expertise** of **our engineers**, who work in constant and mutual support with the **Research and Development department**, aiming at the **optimization** of every single **component** of all **Aquatech®** systems.

Every detail is crucial for us. For this reason, we choose to personally **manufacture** even the **key components** of our systems, from the nozzles to the valves, ensuring to our clients that every step of the production is verified and checked by our specialized technicians.

Every **Aquatech®** solution is **evaluated** in **our laboratories** and in the **test field** with **real-scale simulations**.

Components:

- **AQUATECH® NOZZLES**
the smallest on the international market
Open nozzles
Closed nozzles equipped with heat-sensitive bulb
Concealed nozzles
- **"TWIN FLUID" VALVE**
- **STAINLESS STEEL PIPING AND FITTINGS**
- **SORTING VALVE AND ZONE VALVE** in corrosion resistant stainless steel
- **PRESSURIZATION SYSTEM**
Aquatech® GAP with pumping unit
Aquatech® GAB with cylinders unit

Applications

Building and Cultural heritage

- Hotels, shopping malls and hospitals
- Churches and cathedrals
- Theatres and museums
- Libraries and archives
- Warehouses and deposits
- Car parks
- Kitchens
- Data centers and technical rooms

Oil & Gas and Industry

- Turbines
- Generators and transformers
- Cable tunnels
- Electric cabinets
- Conveyor belts
- Transformers and electric substations
- PC and telecommunication rooms
- Engine rooms
- Oil tanks

Marine & Offshore

- Engine rooms
- Accommodation areas
- Ro-ro decks
- Galleys and deep fat fryers
- Balconies
- Hangars
- Bilges

Transportation and Infrastructures

- Galleries and tunnels
- Hangars
- Train and underground stations
- Airports
- Trains

Luxurious places

- Boutiques and show rooms
- Yachts and cruise ships
- Historical buildings
- Luxurious areas



TEMA SISTEMI S.P.A. | Via Romagnoli, 4 - 48026 RUSSI (RA) - ITALY |
+39 054 44 55 065 | info@temasistemi.com | www.temasistemi.com