Advantages of high pressure water mist system

High-Efficiency Fire Extinguishing

The cooling effect is **100 times greater** than that of conventional sprinkler systems. The **high-pressure water mist** also has strong penetration capabilities, effectively addressing issues of total flooding and shielding, and **preventing fire re-ignition**.

Safe and Environmentally Friendly

Using **water as the extinguishing agent**, this system extinguishes fires through physical means without causing any harm or contamination to the environment, protected objects, or personnel within the protected area.

Minimal Water Damage

Water consumption is only **5–10%** of that of a traditional sprinkler system, minimizing drainage, **preventing equipment damage**, and avoiding **secondary pollution or corrosion** to the environment.

Excellent Electrical Insulation

The water mist that falls onto equipment is sparse and discontinuous. Tests have proven that **fine water mist does not affect the normal operation of electrical equipment.**

Smoke and Gas Purification

The system can **purify smoke and exhaust gases**, which greatly aids **safe personnel evacuation** and enhances the effectiveness of **firefighting and rescue operations.**

Radiant Heat Shielding

It provides excellent **protection against radiant heat**, preventing fire spread and enabling **rapid fire control.**

High Reliability

After installation, the system can undergo **simulation testing**, significantly improving the reliability of system operation.

Long Service Life

All components—including the **pump set, valve set, nozzles, and piping**—are made from corrosion-resistant materials, ensuring a **service life of up to 30 years.**

Flexible Configuration

The system can be applied **locally** to protect specific equipment or areas, or as a **total flooding system** to protect entire spaces.

Easy Installation

Compared with traditional fire suppression systems, it features **smaller pipe diameters (15–80 mm)**, which reduces installation costs accordingly.

Convenient Maintenance

Since **water is the only extinguishing agent** and the system remains at **atmospheric pressure** when idle, both daily maintenance workload and costs are **greatly reduced**.

Wide Application Range

The **high-pressure single-fluid water mist fire suppression system** is suitable for **Class A, B, C, and K electrical fires.** Due to its advanced extinguishing mechanism, its use is **not limited by location**—it can be applied on **land, sea, and in aerospace environments**, particularly effective for **local protection in high-risk areas** and **enclosed spaces.**

MINGXING WATER SUPPLY

Leader in the Integrated Water Supply
Industry of Smart Tank and Pump Systems

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MINGXING WATER SUPPLY

MingXing
Water Mist System

JIANGSU MINGXING WATER SUPPLY EQUIPMENT CO.,LTD

THE COMPOSITION OF HIGH-PRESSURE WATER MIST

01 Water Mist Equipment Components:

High-Pressure Water Mist Pump Unit

Single Pump Flow Rate:115L/min

Material: Stainless Steel

Lubrication Method: Water Self-Lubrication

Control Valve Unit

Valve Type: Electric Valve

Advantages: Reliable operation, strong resistance to water contamination

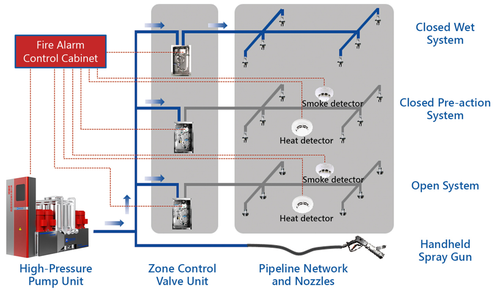
Water Mist Nozzles

Nozzle Material: Stainless Steel

Droplet Diameter: $Dv_{0.99}$ <400μm

$Dv_{0.99}$ <200μm

02 Water Mist System:



03 Main Components of the Water Mist:

High-Pressure Water Mist Pump Unit

High-Pressure Nine-Plunger Pump

Pressure Stabilizing Pump

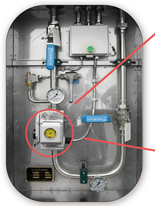
Filter

- ◆ The main pump operates at a rated pressure of 14 MPa, meeting the requirements for long-distance water delivery.
- ◆ Single pump flow rate: 115 L/min.
- ◆ Water-lubricated and maintenance-free design.
- ◆ Normally maintains a low-pressure state of 1.0–1.2 MPa during standby.
- ◆ Water is filtered through a precision filter, requiring the booster pump to work in coordination for water replenishment and pressurization.

04 Water Mist Valve Cabinet:

Closed-Type Zone Valve Box

Open-Type Zone Valve Box



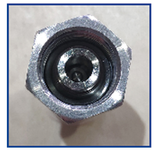
Key Component — Electric Valve: Features reliable operation, strong resistance to water contamination, and excellent sealing performance.

05 Water Mist Valve Assembly:

High-Pressure Nozzle

- ▲ The nozzle is equipped with an internal filtration device. The maximum aperture of the filter screen is 35% of the minimum water channel aperture of the nozzle.
- ▲ The nozzle's minimum working pressure is 10 MPa, with droplet sizes of $Dv_{0.99}$ ≤ 400 μm and $Dv_{0.5}$ ≤ 200 μm.

Drip-Proof Device



- ▲ The drip-proof device has obtained a Utility Model Patent Certificate.
- ▲ Operating at a pressure of 0.5 MPa, it effectively prevents water dripping after spray termination.

MEDIUM PRESSURE WATER MIST PUMP UNIT SPECIFICATIONS

Medium pressure water mist pump unit specifications:

Single Pump Flow Rate (Q): Q=400L/min

Head (H):2.0MPa

Power (N):30KW

Material: Stainless Steel

SPECIFICATIONS OF THE MOBILE TROLLEY-TYPE WATER MIST FIRE EXTINGUISHING DEVICE

MOBILE TROLLEY-TYPE WATER MIST FIRE EXTINGUISHING DEVICE

Specifications of the Mobile Trolley-Type Water Mist Fire Extinguishing Device:

- ▲ Rated Pump Output Pressure: >12 – 15 MPa
- ▲ Rated Working Pressure of Spray Gun: 10 MPa
- ▲ Spray Gun Flow Rate: 15 L/min or 32 L/min
- ▲ Spray Droplet Size: Dv0.99≤400μm;
- ▲ Range: >12 m (jet mode), >8 m (mist mode)
- ▲ Spray Gun Hose Length: 30 m / 50 m
- ▲ Water Tank Capacity: Provides sufficient water for over 3 minutes of operation, with a minimum capacity of 125 L
- ▲ Fire Extinguishing Capability: >10A / 70B
- ▲ Drive Mode Options: Diesel engine, gasoline engine, or electric motor (powered by lithium battery or AC power)

THE APPLICATION INDUSTRY AND REGION OF WATER MIST

- Rail Transit
- Cultural/ Archival/Records
- Power Sector
- Utility Tunnels/ Cable Trenches
- Tunnels & Bridges
- Automotive
- Hospitals
- Airports
- Data Centers
- Industrial