Experts in fire protection

Minifog marine XP
water mist extinguishing system
High-pressure technology for maritime risks

WATER MIST

MINIFOG MARINE XP

Protection areas – all around protected

The special conditions at sea mean that safety is an incredibly important issue for ships. The aim is to prevent any danger to make sure everything runs smoothly on board. The key safety issue is of course the people on board. Ships are subject to a whole range of fire risks, which means fire protection on board has to be most effective and simple as possible. After all, in the event of a fire, it is not as easy to escape when at sea, and prompt fire-fighting assistance from outside cannot be counted on.

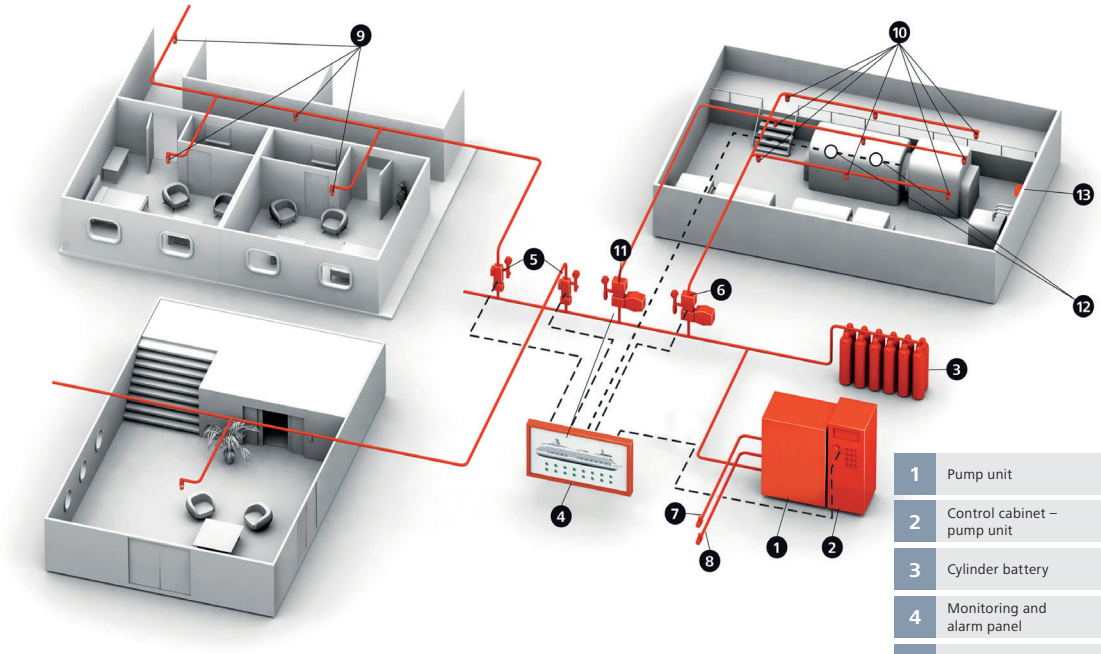
Minimax has developed the Minifog marine XP water mist extinguishing system especially for maritime risks. It takes high-pressure technology to new dimensions. Many years of experience in water mist extinguishing technology and the marine sector have gone into the research, and the Minifog marine XP is the result. It complies with all up-to-date relevant directives and, above all, it is extremely easy to use.

Minifog marine XP offers the optimum all around protection for any kind of vessels like cruise ships, ferries, large yachts, offshore platforms, supply vessels and navy vessels.
In short, it's an entirely new level of operational safety. The Minifog marine XP features a sophisticated design which has been thought through right down to the last detail – from installation to protection against clogging or breakdown.

The efficient Minifog marine XP water mist extinguishing system can be used in all kind of areas of the ship:

Accommodation, public space and store areas
A single Minifog marine XP sprinkler will provide coverage of up to 32 m² in these areas. That means the sprinklers can be installed at six-meter intervals on corridors – in total, the Minifog marine XP system requires far fewer sprinklers than standard systems, which also simplifies ceiling design.

The Minifog marine XP system is divided into sections by valves. In standby mode, the pipes are filled with pressurised extinguishing water. In the event of fire, the sprinklers only open if they are in the immediate vicinity of the fire source. A control unit registers the resulting pressure drop in the piping and activates the sprinkler pumps. The fire is immediately fought with high-pressure water mist from the opened sprinklers.



1	Pump unit
2	Control cabinet – pump unit
3	Cylinder battery
4	Monitoring and alarm panel
5	Section valve – sprinkler
6	Section valve – engine rooms
7	Shut-off valve – hydrohore system
8	Shut-off valve – fire main
9	Minifog marine XP – sprinklers
10	Minifog marine XP – nozzles
11	Section valve – local application system
12	Detectors – local application system
13	Alarm – local application system

Safety operation

Engine rooms
Minimax has expanded the high pressure water mist system Minifog marine XP for use in engine rooms of up to 8,235 m^3 volume. With this Minimax meets the strict requirements for fire protection onboard of ships.

Extinguishing areas are formed in the engine rooms, each of which encompasses a section valve as well as piping with open water mist nozzles. In standby mode, the extinguishing water under pressure reaches the section valves. In the event of fire, an alarm signal is displayed in the engine control room via a fire detection system, and the section valve has to be opened manually for the affected area – or electrically by the release panel or push button by operating personnel in the engine control room. The pressure in front of the selector valves then drops, the sprinkler pumps are activated and the affected area is completely soaked with high-pressure water mist.

Local application system
The local application XP system protects hazard areas inside the engine room. The activation starts when two detectors detect a fire independently from each other. Then the corresponding section valve opens automatically. The pressure in front of the section valve drops, the sprinkler pumps are activated and the effected object is completely soaked with high-pressure water mist. Manual activation may also be made from the remote release panel or local push buttons possible.

Water supply
The extinguishing water for the Minifog marine XP system is held in a tank which is automatically fed from the ship's own freshwater systems. The system can also be supplied with filtered seawater from the ship's separate hydrant system (fire main), as well as via a shore connection pursuant to international standards and SOLAS regulations. In standby mode, the pipes are filled with water via a jockey pump kept under pressure. In the event of fire, the operating pressure is generate through high-pressure sprinkler pumps, which are integrated in a compact, pre-assembled pump unit.

Foaming agent mix
Minifog marine XP system can be used in all areas without extinguishing agent additives. A foaming agent can be added for fighting fire in the engine room bilge in order to minimize extinguishing water usage even further here. In this case, a proportional device or foam pump unit with a supply of foaming agent is connected directly near the engine rooms to the piping network for the bilge.

Alarms and monitoring
Upon extinguishing system activation, the sprinkler pump control unit automatically sends the "water supply in progress" signal to the bridge or safety station. To localize the fire event, an alarm signal is also displayed, which is transmitted by the affected area's current indicator.
The Minifog marine XP system is equipped with electric monitoring supplied with power via the emergency power supply system, which monitors all security-related lines to control units and signal transmitters for short circuits or interruption.

Minifog marine XP advantages

- Uses 90% less extinguishing water than classic sprinkler systems.
- Engine rooms of up to 8,235 m^3 volume.
- Conduit diameters from 10 to 42 mm save valuable space.
- No separate fire protection system needed to protect the engine rooms.
- Just one sprinkler in a cabin can cover up to 32 m^2.
- Sprinklers can be spaced up to 6 m apart in the corridors.
- Protects the entire engine rooms, including objects and the bilge, with just one nozzle type.
- Approved for many major marine classifications (e.g. DNVGL, ABS, LR, MED)
- Sprinkler and nozzle outlet ports 1 mm in diameter or more. No risk at clogging.
- Engine rooms (incl. bilge) can be protected without foaming agent.

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