



**SEMCO**  
maritime

*Danfoss*  
**SEMCO**  
**SEM-SAFE**

**SEMSAFE**

# High pressure water mist system

## The Sem-Safe water mist system is unique

Water is forced through micro nozzles at very high pressure to create a water mist with the most effective fire fighting drop size distribution. The extinguishing effects give optimum protection by cooling, due to heat absorption and removes the oxygen like a gas system

The amount of water required is very small compared with other systems using water; this makes it suitable for use with Electrical Rooms. This system is easily expanded and becomes less costly as the number of areas protected increases.

## Accommodation areas

On stand-by, the Sem-Safe system maintains a pipe pressure of approx. 12 bars. When the temperature exceeds a given level - for example, 57 °C - the heat-sensitive glass bulbs mounted in the nozzle heads melt. At this point, the high-pressure pump is automatically activated and water is forced through micro-nozzles at high pressure (60 bar) to create a fine mist.

Importantly, only those nozzles with melted bulbs are actually activated. This means that only heat-affected area will be sprayed.

## Engine rooms and local application

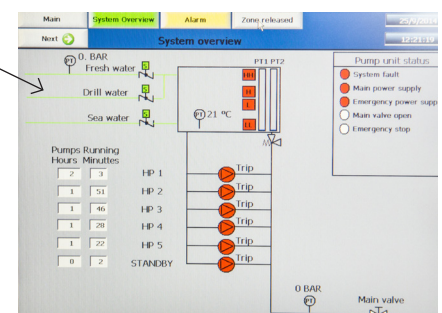
On stand-by, the Sem-Safe system has dry piping. The local protection system will activate automatically when sensors have detected heat, smoke or a flame, depending on type and application.

The nozzles are dimensioned in sections and all nozzles in the activated zone will be released. The total flooding system is dimensioned with one section per fire zone and is activated manually either from the valve operation panel (VOP), in the engine control room or from a panel in the control room.



## The Sem-Safe system has a number of advantages over traditional interior systems:

- Ready for re-use immediately after a fire - no expensive refilling costs after use.
- Considerably less costly than some systems using gas.
- As effective as Gas Systems with no negative impact on the environment.
- Very low water consumption unlike low or medium pressure systems.
- Fine water mist causes little or no damage to even electrical equipment.
- The mist cools area and so prevents re-ignition.
- Downtime is kept to a minimum following a fire.
- The pump unit takes up little space and needs no special room or safe storage.
- Easy and fast installation is possible, due to small pipe size and low system weight.





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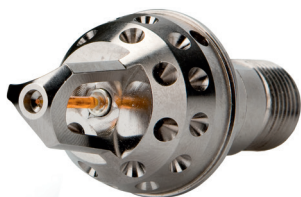


Present pump unit consists of 6 electrically driven Danfoss stainless steel high-pressure pumps (one is stand-by). The setup is modular designed depending on capacity. Waterflow capacities from 138 l/min to 1242 l/min (9 duty and 1 standby).



The machinery Area fire Protection System can be released by activating a »Water Mist Release« push button in the Valve Operation Panel (VOP) located in the Navigation Bridge or Central Control Room. It can also be activated on the electrical panel, mounted on the water mist unit.

Closed nozzle  
for accomodation



Open nozzle for total flooding  
and local application



Open nozzle  
for deep fat fryer



For further information, addresses, email addresses and phone numbers - please see our website:

**[www.semcomaritime.com](http://www.semcomaritime.com)**