

Marine application | SEM-SAFE® high-pressure water mist system

## Reliable fire fighting in accommodation areas

Danfoss Fire Safety A/S



As one of the world's few manufacturers, Danfoss can offer protection of your accommodation areas with a true high-pressure water mist system approved to IMO A 800 and IMO resolution MSC/circ. 265.

The SEM-SAFE® high-pressure water mist system has an advantage over traditional sprinkler systems in that it uses only approx. 20% of the amount of water to cover a given area.

In addition, reduced pipe dimensions mean a considerable reduction in weight and allows installation in smaller spaces. As a consequence of the small pipe dimensions, installation is very easy and Danfoss has developed a fitting system making installation even easier.

If you experience accidental releases in public areas or cabins, the very low water quantity means that water damage is limited.

The nozzles used in accommodation areas are usually the closed type with a glass bulb that breaks at a set temperature. On stand-by, the system maintains only a low pilot pressure.

In addition, it is possible to integrate total flooding and local application fire fighting system to the same pump unit.



### SEM-SAFE® high-pressure water mist system

High-pressure water mist is water that, at a high-pressure of 100 bar, creates a fine mist. The fine water mist evaporates very quickly and the resulting steam starves the fire of oxygen, suppressing it. At the same time, the water evaporation creates the most efficient form of cooling. In this way, the fire is extinguished both by oxygen suppression and cooling, providing the advantages of both water and gas-based fire fighting.

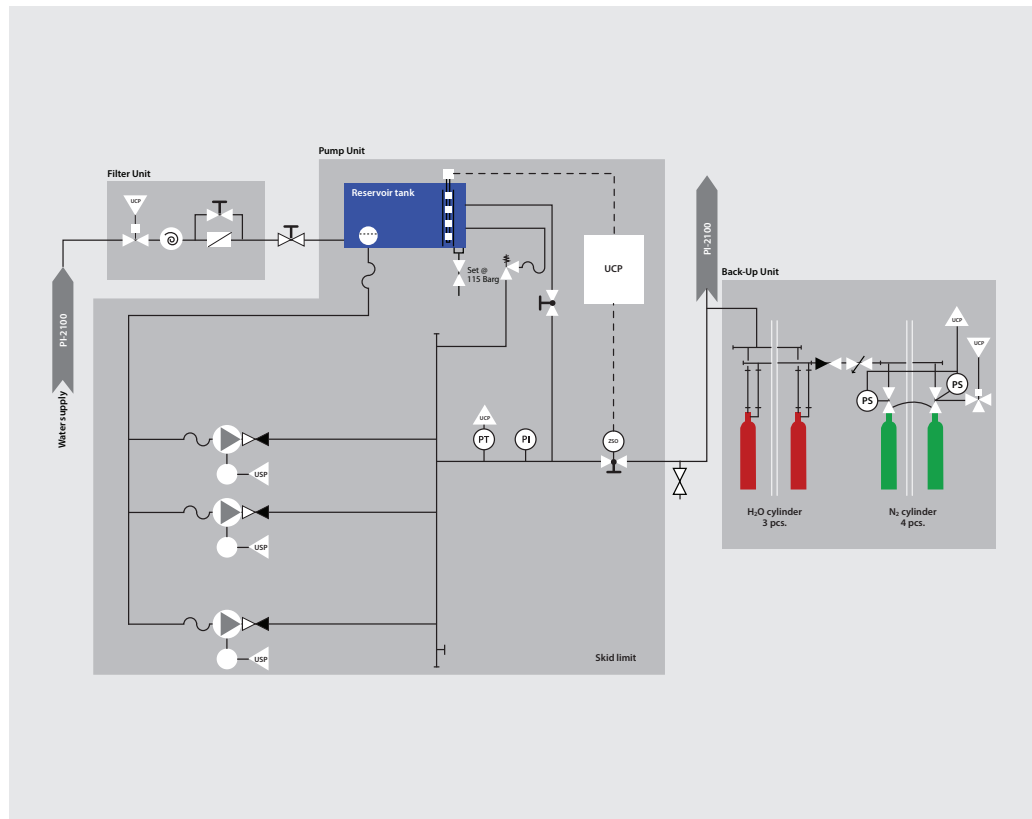
High-pressure systems only create high-pressure during extinguishing. High-pressure water mist will cool the areas around hot surfaces, and the water mist evaporates before it reaches the hot metal. In this way, shock cooling and changes in metal structures can be avoided.

Danfoss has been working with high-pressure water mist from the very beginning. This revolutionary system is finding its way into more and more application areas, offering an efficient system that is environmentally friendly as well as harmless to users.

### Approval levels and experience

So far, our high-pressure water mist system is probably the world's most efficient system for accommodation and service areas. SEM-SAFE® systems have undergone extensive testing at the Sintef laboratory and have been found to meet all the requirements of the IMO regulations.

Today, we have the approval of all major classification societies.



Press fittings and section valve for the accommodation area.