



HIGH EXPANSION FOAM

FIRE EXTINGUISHING SYSTEM ↓

If a fire breaks out in an enclosed area on a vessel, we depend on an extinguishing system that deploys quickly, is effective and safe for personnel. The Survitec High Expansion Foam fire extinguishing system (Survitec HiFoam system) using inside air is an extremely effective protection for machinery space of Category A applications. Further, the system is cost effective and safe for the crew.

FEATURES

- FAST AND EFFECTIVE SOLUTION WITH FILLING UP TO 1.8 M/MIN
- THE SYSTEM CAN BE INSTALLED AS A TOTAL FLOODING SOLUTION FOR THE ENTIRE MACHINERY SPACE OR FOR INDIVIDUAL COMPARTMENTS
- QUICK ACTIVATION OF THE SYSTEM MINIMISES FIRE AND HEAT DAMAGE TO EQUIPMENT AND STRUCTURES
- THE FOAM IS NOT HARMFUL TO THE CREW
- IT HAS A COOLING EFFECT WHICH HELPS PREVENT RE-IGNITION OF THE FIRE
- NO HAZARDOUS DECOMPOSITION PRODUCTS IS FORMED THAT COULD CAUSE DAMAGE
- EXPANSION RATIO UP TO 1:666 AT NOMINAL PRESSURE OF 6 BAR USING INSIDE AIR



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Solution benefits

The Survitec HiFoam system is a first-class fire extinguishing system with easy installation and operation. The space saving installation provides a zoning option for selective and sequential release. The high expansion ratio and the stable condition of the foam results in a very rapid filling rate with low consumption of water and foam concentration. This optimises protection of equipment and reduces water capacity needs. Replacement of the foam concentrate is available worldwide.

Cost effective

The Survitec HiFoam system is designed to keep both installation and operational costs low. The use of inside air eliminates the need for an external air ducting and fans. Furthermore, the system requires minimal maintenance.

Applications

The Survitec HiFoam system is designed as a total flooding system for machinery spaces of Category A. This includes enclosed spaces such as cargo pump rooms, vehicle and ro-ro spaces, special category spaces and cargo spaces.

System description

The Survitec HiFoam system uses a synthetic foam concentrate together with fresh/sea water and inside air to produce extinguishing foam. The system consists of foam generators, foam concentrate, foam storage tank at atmospheric pressure and other system components like water and foam pump(s), foam proportioner, distribution pipes made of galvanized steel or equivalent corrosion resistant material, strainer, valves, test-and-blow-through lines, power and control system. When the system is activated, the foam concentrate is mixed with water and discharged into protected space through the foam generators. The nominal working pressure is 6 bar at the foam generators. For optimal effectiveness it is critical that the foam concentrate is mixed with water in the correct proportions throughout the fire fighting operation. This is secured by the proportioner that gives the right mix in the full operating range. Foam generators expand the foam mixture with use of air drawn from the protected space. The foam is discharged from foam generators over the fire risk hazards first and fill up protected space completely. The system can be manually released from the foam room by directly operating the valves and pumps. It can also be remotely operated by a centrally located control cabinet for operational flexibility.

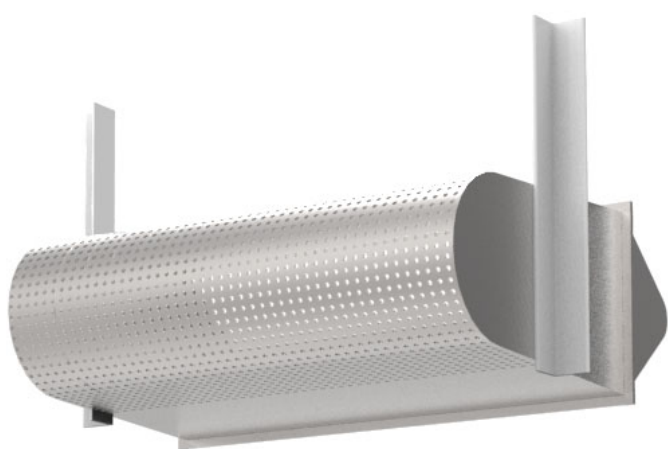


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Generators

TECHNICAL DATA	
Foam capacity	
UFG-90 [m ³ /min]	60
UFG-60 [m ³ /min]	40
UFG-30 [m ³ /min]	20
Material	stainless steel
Nom.working pressure	6 bar (Q generator)
Expansion ratio	1:666
Connection flange	DN 20
Filling rate	1.8 m/min



Extinguishing fire using foam

The high expansion foam suppresses fire first by separating the fuel from the air, suffocating the flames and immediately preventing further combustion. The foam then cools the area on fire and reduces evaporation of flammable vapours into the air. This is the most effective way of starving the fire of oxygen and cooling the objects on fire. The high expansion foam has high resistance to heat and smoke generated during the fire.

Foam concentrate

TECHNICAL DATA	
Type	synthetic
Viscosity [cSt] @ 0 °C	<70
Pour point	-10
Storage temperature	-10 °C to +45 °C
Approval	MED, CCS and NK certified

Mixing equipment

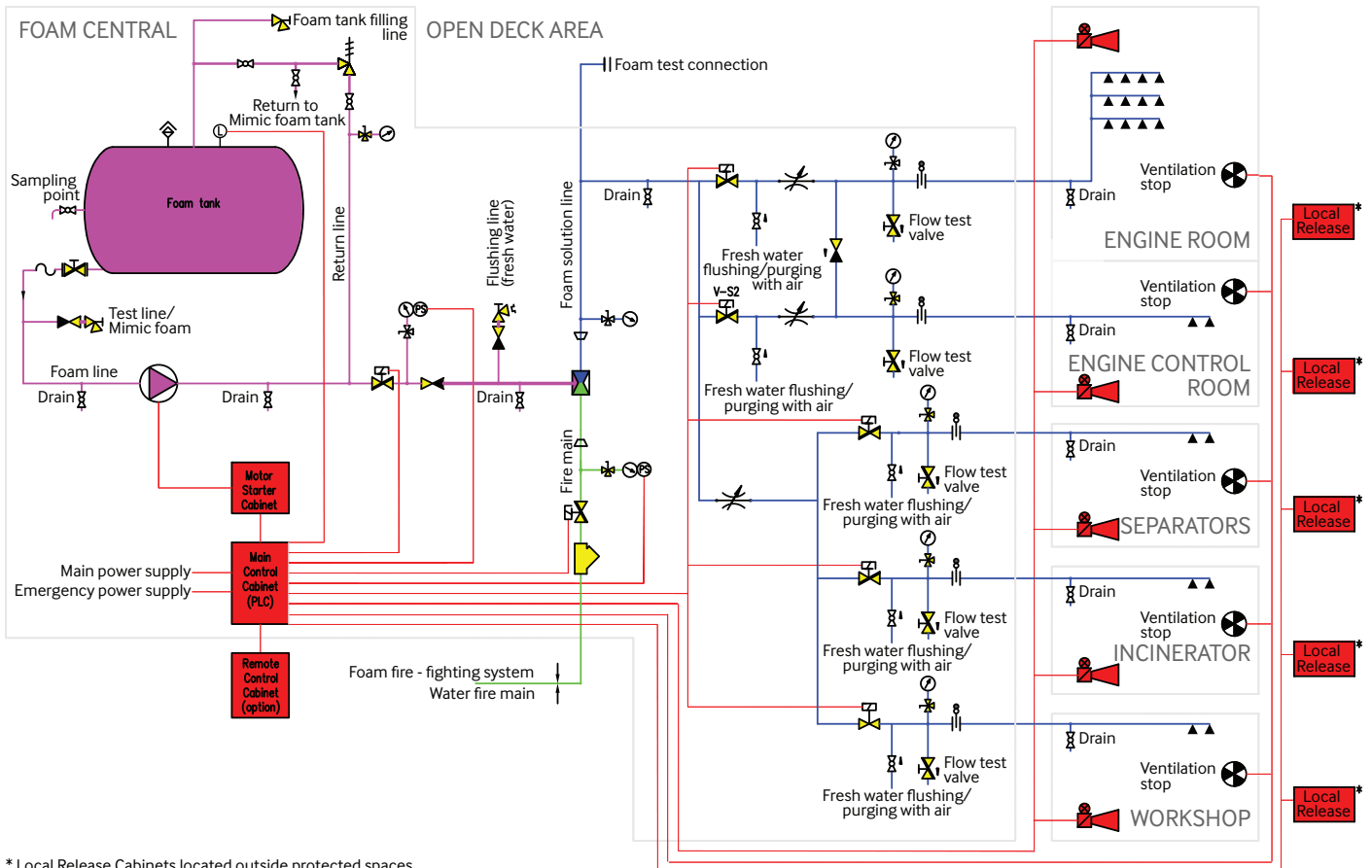
TECHNICAL DATA	
Type	balanced pressure proportioner
Capacity [l/min]	75 to 20,000
Material	stainless steel and bronze



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Standard configuration



* Local Release Cabinets located outside protected spaces

Approvals

The Survitec HiFoam system can be applied on merchant and offshore structures as it is designed in accordance to SOLAS and IMO MODU Code. The system is approved by all major classification societies.

- SOLAS, Chapter II-2, Part C, Reg. 10
- FSS Code, Chapter 6
- IMO MSC/Circ.1384 and 670
- Classification societies rules and regulations
- MED 2014/90/EU approved

