

Technical Data

Foam generators

HG-25	Foam generation of 60m ³ /min with solution consumption of 90 litre/min
HG-15	Foam generation of 18m ³ /min with solution consumption of 30 litre/min
Material	Stainless steel bronze nozzle
Work pressure	6 bar
Expansion ratio	1: 666

Foam concentrate

Type	Synthetic Meteor P+
Viscosity	< 60 cST at -2°C
Lowest use Temp.	-2°C
Storage Temp.	-2°C to +45°C

Mixing equipment

Material	Stainless steel and bronze
Type	Wide range proportioner

Foam pump

Type	Centrifugal
Materials of construction	Stainless steel

Foam pump motor

Phase	3 phase
Enclosure type	Marine class F

Foam tank

Materials of construction	GRP
Opening	Internal inspection
Gauges	Level and pressure/vacuum

For more information on how Tyco Fire & Security can help you, please contact us.
www.tycomarine.com or email us: tyco.marine@tycoint.com



Hot Foam

The most cost-effective alternative to CO₂

Cost-effective alternative to CO₂ for total flooding applications in machinery spaces

The Hot Foam system is especially convenient for use on tankers where a deck foam system is also a requirement as it reduces overall cost of both systems while simplifying maintenance and operator training.

Unlike CO₂, Hot Foam is non-toxic and if required rotating machinery, can continue to be operated in the foam in an emergency. Installation is very simple with no moving parts in the foam generators located in the machinery space and no large ducting requirements in the space. The system has already been supplied on a number of vessels and has received Type approval from all the major class societies.

Benefits

- More cost effective than CO₂ Systems especially on tankers
- Provides more than "one shot"
- Does not endanger human life when released
- Lends itself to simple operational testing during vessel life
- Integrity of space boundary much less critical than for CO₂ systems
- Can be released quickly reducing damage
- Zoning provides option for selective release
- Inherently more reliable than CO₂
- Allows machinery to continue to be operate in it
- Especially effective against deep-seated fires
- Minimal security risk when compared to high pressure bottle bank

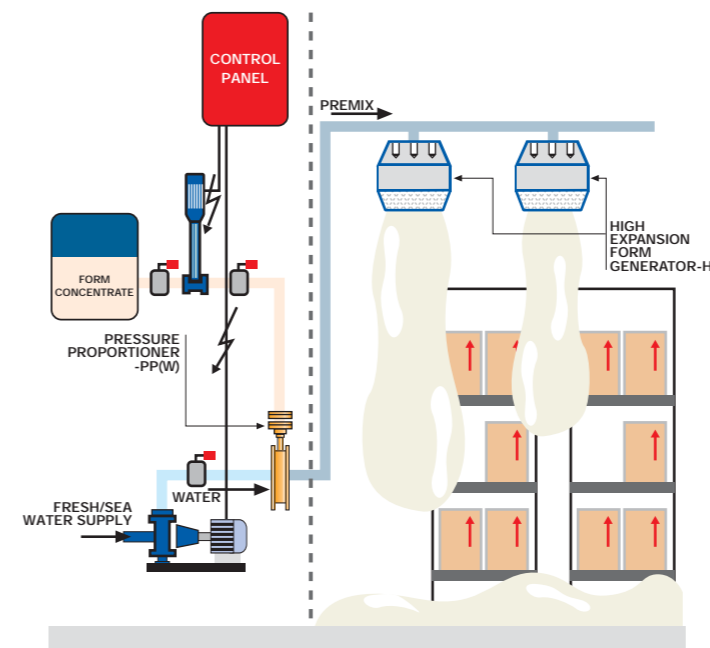


How it works

The Tyco Hot Foam system uses air from inside the machinery space to generate high expansion foam for smothering the fire and in addition offers the temperature reduction effects of water fog. The foam extinguishes the fire as it fills all void spaces, effectively starving the fire of oxygen while cooling down the surrounding areas. The Hot Form system is no different from an ordinary deck foam system with the foam monitors replaced by hot foam generators that induct hot air from inside the machinery space to create Hot Foam with an expansion ratio of 1 - 666.

There are no moving parts in the stainless steel Hot Foam generators making the system very easy to maintain and simple to test over the life of the vessel.

A fully operational system can be released both manually and automatically and is set out schematically alongside. The system can also be operated remotely if required from control stations around the vessel. In its simplest form the system can be operated by opening the valves, and starting the fire pump; followed by the foam pump after a short delay.



All major components including foam are manufactured by Tyco

Design and operational considerations for effective inside air high expansion foam systems

There are common issues encountered for all inside air hot foam systems which need to be addressed when designing a system. These include:

- Compliance with test protocol MSC/Circ.668
- Identifying the correct fill rate based on MSC/Circ.668 testing and set out in the Type Approval Certificate
- When lower level generators are submerged the premix to them needs to be stopped
- Accomplish foam generation at the required fill rates at floor plate and mid-level
- In case of a problem with one section, we need to sense this and isolate the section
- Incorporate testing the system to make certain that it is fully operational
- Deal with vibration in the machinery space
- Select the location of generators to get the best coverage
- For sequential automatic operation use only type approved PLCs and review reliability