



HIGH EXPANSION FOAM GENERATOR



FIRECHEM Hi Ex-Foam Generators (FCHX-250) are designed to expand foam solution in to millions of tiny stable bubbles in which the foam solution is expanded in volume to a range of 200:1 to 450:1 approximately depending on the generator selected, solution flow rate, foam concentrate and the operating pressure.

PRODUCT DESCRIPTION

FIRECHEM Hi Ex Foam Generators are used for total foam flooding in enclosed areas and also act as a powerful smoke extractor. They require no other source of power such electricity or gasoline engines. They are powered by the foam solution driving a hydraulics (water) motor. The expansion of the foam solution is achieved by spraying the solution onto a stainless steel screen, and then an air stream created by the fan attached to the motor forces air through the screen to produce a mass of foam bubbles. The continuous flow of the foam solution and the movement of air through the screen will generate large volumes of foam.

AREAS OF APPLICATION

Typical hazards where FIRECHEM High Expansion Foam Generators may be used to provide fire protection are:

- ✓ LNG Tank Farms / Loading Facilities
- ✓ Flammable Liquid Storage Areas
- ✓ Hazardous Waste Storage Facilities
- ✓ Shipboard Engine Rooms, Bilges and Holds
- ✓ Roll Paper Warehouse
- ✓ Chemical Storage Facilities
- ✓ Flammable Liquid Packaging Areas
- ✓ Cable Tunnels
- ✓ Aircraft Hangars

In addition to the above hazard types involving Class A and B fires, high-expansion foam is effective in controlling liquefied natural gas (LNG) fires by blocking heat feedback from the flames to the LNG thereby reducing the vaporization rate.

High-expansion foam is also effective in reducing vapor concentrations downwind from un-ignited LNG and other hazardous low-boiling-point gaseous products such as ammonia spills.

APPROVALS

FIRECHEM High-expansion foam generators are designed in accordance with NFPA 11 Standard for "Low, Medium and High-Expansion Foam System."

HOW THE PRODUCT WORKS

The extinguishing mechanisms of FIRECHEM Hi Ex Foam Generator (FCHX-250) involve a combination of the following:

- Free air movement necessary for continued combustion is reduced.
- Water content of the foam being converted to steam dilutes the oxygen concentration to a level below that necessary to support combustion.
- Cooling to a temperature below the combustion point or auto-ignition temperature of Class A or Class B fuels occurs as water is converted to steam.
- Reduced surface tension of the foam solution draining from the expanded foam penetrates into Class A materials extinguishing deep seated fires.
- Insulating and heat reflective properties of the foam blanket provide a heat shield preventing fire spread.

SPECIFICATIONS OF FCHX-250

TECHNICAL / PERFORMANCE DATA (±5%)

MINIMUM INLET WATER PRESSURE (BAR)		5.0
NOMINAL WATER INFLOW (LPM)		170
FOAM EXPANSION RATIO (FIRECHEM HI EX FOAM)		1:250 - 1:400
FOAM OUTPUT (CALCULATED)	IPM (approx)	75000 (max)
	M3 / MIN (approx)	75
PROPORTIONING (INDUCTION) TO SUIT CUSTOMER REQUIREMENT		FIXED - 2% / 3% or VARIABLE - 2% to 6 %

DIMENSION (APPROX.)

	WITH BUILT-IN FOAM INDUCTOR	WITHOUT BUILT-IN FOAM INDUCTOR
LENGTH (MM)	310	310
WIDTH (MM)	630	490
HEIGHT (MM)	630	630

SMOKE EXTRACTION (±5%)

Z INLET WATER PRESSURE (BAR)	7.0
SMOKE EXTRACTION CAPACITY (M ³ / MIN)	100 Appx*

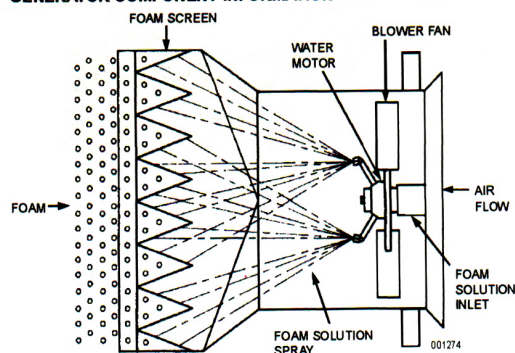
* Design capacity as per in house test report.

MATERIALS OF CONSTRUCTION

BODY / SHELL	S.S. (304 GRADE)
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NOZZEL	G.M. / AL. ALLOY / BRASS
FOAM SCREEN	K.F. / S.S
COUPLING	GM / AL. ALLOY / S.S
PIPING & INDUCTOR	CORROSION RESISTENT
FAN	AL. ALLOY
TURBINE	G.M.
FOAM DUCT (10M LONG)	POLYTHENE (DSPOSABLE TYPE)

Optional : (With Extra Cost)
Smoke Trunk : 10M Long
Special Construction

GENERATOR COMPONENT INFORMATION



FIRE SAFETY DEVICES PRIVATE LIMITED

B-4, Rama Palace Commercial Complex, IInd Floor,
Sector 20-B, Faridabad - 121007 INDIA
Ph.: +91-129-2288196/7/8, Fax: +91-129-2288700
E-mail: info@fcfsd.com | Website: www.fcfsd.com
Helpline No. +91-9312837657