FOAM MAKING BRANCH PIPE

Frozenfire Foam Making Branch Pipe

Product Overview

The Frozenfire Foam Making Branch Pipes are high-performance, low-expansion, self-inducing foam discharge devices designed for rapid suppression of Class B fires involving flammable and combustible liquids. Engineered for professional firefighting operations, these branch pipes produce high-quality aspirated foam that effectively blankets burning fuel surfaces, suppresses flammable vapours, cools the fuel, and prevents re-ignition.



Foam Making Branch FB-5X | Foam Making Branch FB-5 | Foam Making Branch FB-10X

The FB series is designed for use with AFFF, AR-AFFF, FFFP, Protein, Fluoroprotein, and Synthetic foam concentrates, making it suitable for a wide range of industrial fire protection applications. Lightweight yet rugged, the branch pipes are ideal for use by fire brigades, industrial emergency response teams, airport rescue services, petrochemical plants, oil terminals, and hazardous material storage facilities.

The FB-5X is designed for medium-capacity firefighting applications with a nominal flow of 225 LPM, while the FB-10X provides a higher discharge capacity of 450 LPM, enabling faster foam application over larger hazard areas. Both models are designed in accordance with IS 2097 performance requirements.

Working Principle

The Frozenfire Foam Making Branch Pipe operates on the Venturi principle. Pressurized water entering the branch creates a pressure differential that draws foam concentrate through the attached pickup tube or accepts premixed foam solution from an inline inductor or foam proportioning system. Air is simultaneously inducted through the air inlet, producing fully aspirated low-expansion foam.

The expanded foam exits through the specially designed discharge tube as a coherent stream that can be projected over significant distances. Once applied, the foam spreads across the fuel surface to create a stable blanket that isolates the fuel from oxygen, suppresses vapours, cools the fuel, and prevents flashback or re-ignition.

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Construction

The Frozenfire Foam Making Branch Pipe are manufactured using precision-engineered components to ensure durability, reliable foam generation, and long service life.

Typical construction includes:

- High-strength Aluminium alloy / Stainless Steel body
- Corrosion-resistant internal components
- Stainless steel foam induction tube
- Integrated air aspirating chamber
- Foam expansion tube
- Foam pickup connection
- 1.5 m foam pickup hose with dip tube (optional)
- Shut-off control valve (FB-5x)
- Instantaneous or threaded inlet coupling
- Ergonomic carrying handle
- Protective anodized or epoxy-coated finish

The streamlined internal design minimizes hydraulic losses while ensuring consistent foam quality and efficient induction.

Key Features

- Low-expansion aspirated foam generation
- Self-inducing operation using Venturi principle
- Suitable for premixed foam or direct foam concentrate induction
- Excellent foam expansion and discharge quality
- Long foam throw for safe firefighting operations
- Lightweight and easy to handle
- Rugged industrial construction
- Corrosion-resistant materials
- Simple operation and maintenance
- Wide operating pressure range
- Compatible with all major firefighting foam concentrates
- Quick connection pickup tube
- Reliable performance under demanding field conditions

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Performance Advantages

The Frozenfire Foam Making Branch Pipe delivers a dense, stable foam stream with excellent expansion characteristics, allowing rapid coverage of burning liquid surfaces. The coherent foam jet enables operators to attack fires from a safe distance while minimizing fuel disturbance.

Its lightweight construction reduces operator fatigue, while the efficient induction system ensures consistent foam quality even during prolonged firefighting operations.

Major benefits include:

- Rapid fire knockdown
- Excellent vapour suppression
- Reduced water consumption
- Efficient foam concentrate usage
- Increased firefighter safety
- Reliable operation in emergency situations
- Easy deployment for mobile firefighting

Applications

The Frozenfire FB Series Foam Branch Pipes are suitable for:

Oil & Gas Industry

- Petroleum storage tanks
- Fuel loading bays
- Refineries
- Tank farms
- Pipeline installations

Petrochemical Industry

- Chemical plants
- Solvent storage
- Hydrocarbon processing facilities

Aviation

- Aircraft rescue and firefighting (ARFF)
- Airport fuel farms
- Hangars

Marine & Port Facilities

- Ship terminals
- Marine fuel storage
- Offshore platforms
- Dockyards

Industrial Applications

- Power plants
- Warehouses
- Paint industries
- Pharmaceutical plants
- Hazardous material storage
- Fire brigade operations

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Compatible Foam Concentrates

The Frozenfire FB-5X and FB-10X are compatible with:

- AFFF (Aqueous Film Forming Foam)
- AR-AFFF (Alcohol Resistant AFFF)
- FFFP (Film Forming Fluoroprotein Foam)
- Protein Foam
- Fluoroprotein Foam
- Synthetic Foam Concentrates

Typical Technical Specifications

Parameter	FB-5X	FB-10X
Product Type	Low Expansion Foam Making Branch Pipe	Low Expansion Foam Making Branch Pipe
Nominal Flow	225 LPM	450 LPM
Operating Pressure	5.5–7 Bar	5.5–7 Bar
Foam Expansion Ratio	Up to 10:1	Up to 10:1
Maximum Jet Throw	Up to 20 m	Up to 24–25 m
Foam Induction	Self-Inducing / Premix Compatible	Self-Inducing / Premix Compatible
Foam Percentage	3% / 6%	3% / 6%
Inlet Connection	63 mm Instantaneous / Threaded	63 mm Instantaneous / Threaded
Body Material	Aluminium Alloy / SS304 / SS316 (Optional)	Aluminium Alloy / SS304 / SS316 (Optional)
Surface Finish	Epoxy Coated	Epoxy Coated
Weight	Approx. 3–4 kg	Approx. 4–6 kg
Standard	IS 2097	IS 2097

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Inspection and Testing

Each Frozenfire Foam Making Branch Pipe is subjected to stringent quality control procedures, including:

- Dimensional inspection
- Flow rate verification
- Foam induction test
- Foam expansion ratio test
- Throw distance test
- Leakage inspection
- Visual quality inspection
- Functional operational testing

This ensures every unit delivers dependable performance under emergency firefighting conditions**.**

Advantages of Frozenfire Foam Making Branch Pipe

- Produces high-quality low-expansion aspirated foam.
- Lightweight design for easy handling and rapid deployment.
- Available in two capacities to suit different firefighting requirements.
- Compatible with self-induction or premixed foam systems.
- Long-range foam projection for safer firefighting.
- Rugged construction for industrial and municipal use.
- Low maintenance with reliable long-term performance.
- Manufactured to meet IS 2097 performance requirements.
- Ideal for oil & gas, petrochemical, aviation, marine, and industrial **fire protection applications.**

Frozenfire Industries LLP

The Frozenfire Foam Making Branch Pipes are engineered to provide reliable, efficient, and high-performance foam generation for tackling flammable liquid fires. Combining lightweight construction, superior foam quality, and rugged durability, these branch pipes are an essential part of any professional firefighting and industrial fire protection system.

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