

### HIGH EXPANSION FOAM GENERATORS

### **DESCRIPTION**

The standard Buckeye High ExpansionFoam Generators are powered by a water turbine. They are designed to expand the foam solution into millions of tiny stable bubbles. Expansion ratios up to 800 gallons of finished foam for every one gallon of foam solution can be achieved depending on the generator selected, the solution flow rate and the water pressure. However, the optimum expansion ratio is in the range of 500:1 up to 700:1. The standard Buckeye High Expansion Foam Generators require no other source of power such as electricity or gasoline engines. They are powered by the foam solution driving a hydraulic (water) motor or turbine. However, in special cases, where electric motors may be required to drive the fan, Buckeye designed the unit to where the substitution of the water motor with an electric motor is guite straightforward. The expansion of foam solution is achieved by spraying the solution onto a stainless steel screen, then an air stream created by the fan attached to the motor blows air through the screen to produce a mass of foam bubbles. The continuous flow of the foam solution plus the movement of air through the screen will produce large volumes of finished foam. The Buckeye High Expansion Foam Generator is manufactured with a painted carbon steel housing, a stainless steel foam expansion screen and brass foam solution piping.

A pressure gauge is provided at the foam solution inlet. The design of the Buckeye High Expansion Foam Generator is such that a single nozzle with a large diameter orifice sprays foam solution across the aeration screen. The incorporation of this nozzle prevents clogging, thereby ensuring an uninterrupted foam discharge, almost irrespective of the water quality.

### **FEATURES**

- No outside source of power required only the pressurized foam solution.
- Highly reliable design, does not require a strainer at the foam solution inlet.
- Single large-orifice spray nozzle to prevent clogging of foam solution discharge.
- Can develop from 1,500 CFM to 30,000 CFM depending on unit selected.
- Units will operate with foam solution pressures as low as 30 psi.
- Stainless steel screen.

- Easy installation with units capable of being mounted in the horizontal or vertical position.
- Generator housing constructed in carbon steel and painted in red enamel paint, although other colors are available upon request.

### **PROPORTIONING**

Buckeye High Expansion Foam Generators can be used with the following types of proportioning equipment.

- Eductors, Fixed or Portable.
- Bladder tank (Balanced Pressure Proportioning System.)
- In-Line Balanced Pressure (I.L.B.P.) or Balanced Pressure
- Proportioning Skid with foam pump(s.)

### **TYPICAL HAZARDS**

Typical hazards where Buckeye High Expansion Foam Generators may be used to supply fire protection are:

- · LNG tank farms/loading facilities.
- Roll paper warehouse.
- Hazardous waste storage facilities.
- Shipboard engine rooms, bilges and holds.
- · Aircraft Hangars.
- Chemical storage facilities.
- Flammable liquid packaging/drumming areas.
- · Cable tunnels.
- Wildland fire breaks

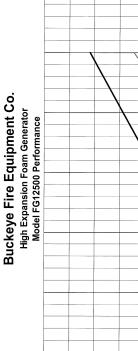
### **ORDERING INFORMATION**

When ordering a Buckeye High Expansion Foam Generator, please provide the following information:

- Volume of risk to be protected.
- Available residual water flow and pressure.
- Method of proportioning required.

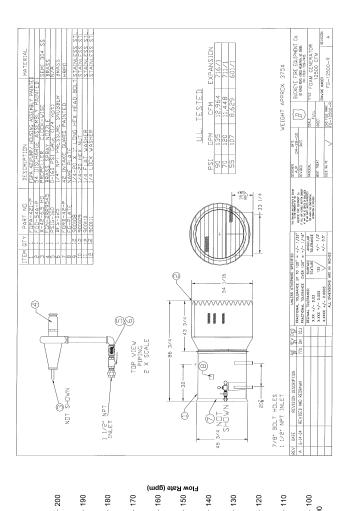






15000 -

Foam Generator Output (cfm)

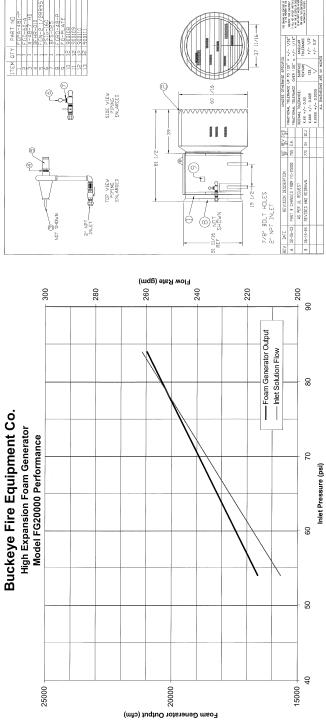


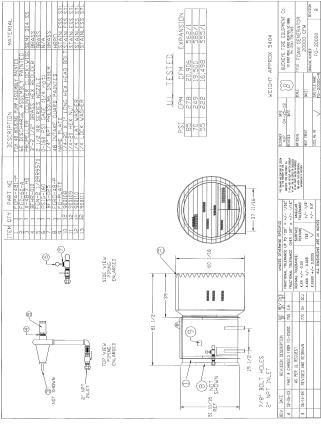


Inlet Pressure (psi) 

— Foam Generator Output ---- Inlet Solution Flow

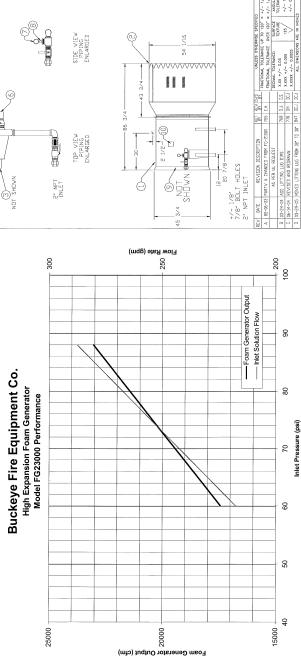


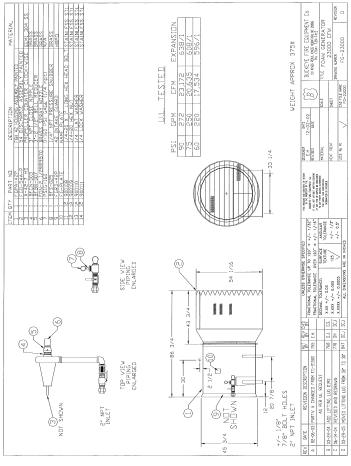






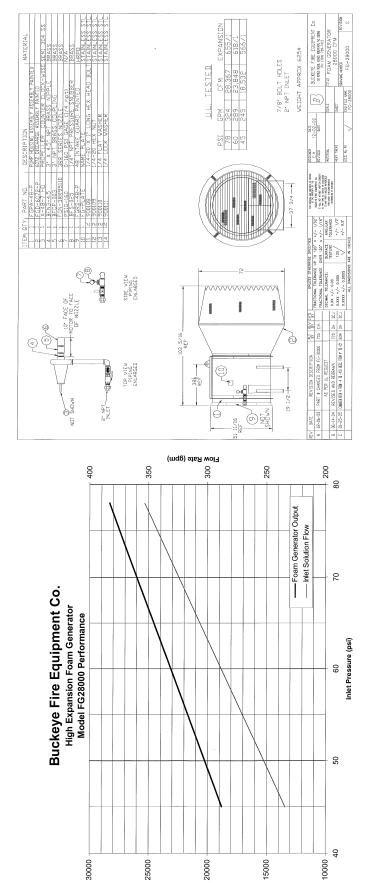












Foam Generator Output (cfm)

