



# HIGH EXPANSION FOAM GENERATORS

## HIGH EXPANSION FOAM GENERATORS

### DESCRIPTION

The standard Buckeye High Expansion Foam Generators are **U. L. Listed** and 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 quite 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.
- U. L. Listed.
- 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

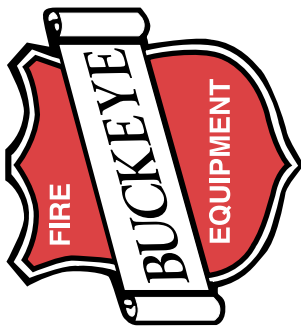
When ordering a Buckeye High Expansion Foam Generator, please provide the following information:

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



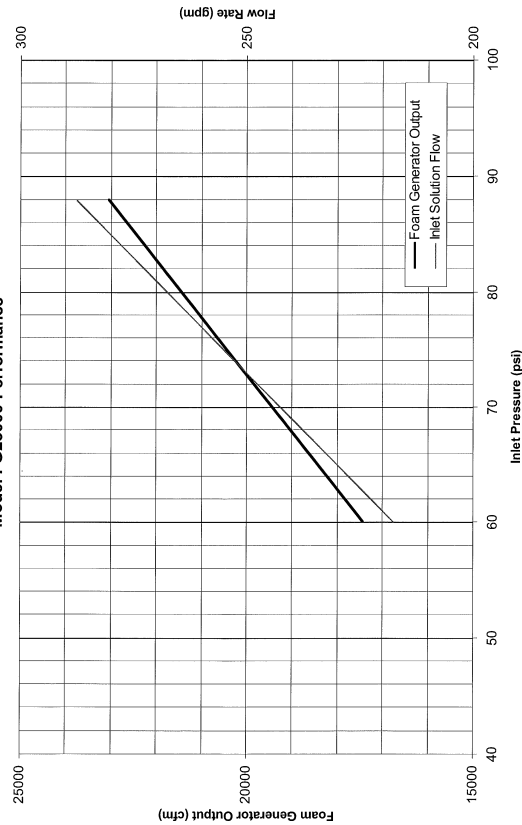






# HIGH EXPANSION FOAM GENERATORS

## Buckeye Fire Equipment Co. High Expansion Foam Generator Model FG23000 Performance



ITEM QTY	PART NO.	DESCRIPTION	MATERIAL
1	10000000	1/4" NPT INLET	STAINLESS STEEL
2	10000001	1/4" NPT INLET	STAINLESS STEEL
3	10000002	1/4" NPT INLET	STAINLESS STEEL
4	10000003	1/4" NPT INLET	STAINLESS STEEL
5	10000004	1/4" NPT INLET	STAINLESS STEEL
6	10000005	1/4" NPT INLET	STAINLESS STEEL
7	10000006	1/4" NPT INLET	STAINLESS STEEL
8	10000007	1/4" NPT INLET	STAINLESS STEEL
9	10000008	1/4" NPT INLET	STAINLESS STEEL
10	10000009	1/4" NPT INLET	STAINLESS STEEL
11	10000010	1/4" NPT INLET	STAINLESS STEEL
12	10000011	1/4" NPT INLET	STAINLESS STEEL
13	10000012	1/4" NPT INLET	STAINLESS STEEL
14	10000013	1/4" NPT INLET	STAINLESS STEEL

TOP VIEW PIPING ENLARGED  
SIDE VIEW PIPING ENLARGED  
FRONT VIEW PIPING ENLARGED

Dimensions: 86 3/4", 43 3/4", 54 1/16", 45 3/4", 12", 20 7/8", 33 1/4"

Callouts: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

NOT SHOWN: 1/4" NPT INLET, 2" NPT INLET, 7/8" BOLT HOLES, 1/2" BOLT HOLES

U.L. TESTED.

PSI	GPM	CFM	EXPANSION
90	272	23172	6.58/1
75	250	20635	6.08/1
60	220	17534	5.96/1

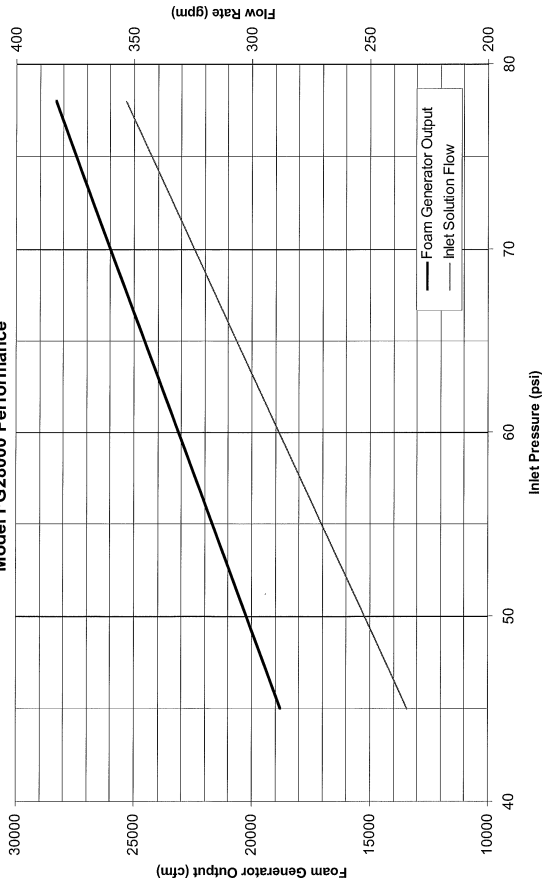
WEIGHT APPROX. 375#

REV#	DATE	REVISION DESCRIPTION	BY	CHK	DATE	SCALE	TITLE
A	02-05-03	PART V B CHANGED FROM FE-23000 AS PER U.L. REQUEST	TSS	E.H.	02-05-03	1/8"	BUCKEYE FIRE EQUIPMENT CO. HIGH EXPANSION FOAM GENERATOR
B	03-24-04	ADD LIFTING LUG DIMS	TSS	D.J.	03-24-04	1/8"	BUCKEYE FIRE EQUIPMENT CO. HIGH EXPANSION FOAM GENERATOR
C	08-10-08	REVISED AND REBORN	TSS	D.J.	08-10-08	1/8"	BUCKEYE FIRE EQUIPMENT CO. HIGH EXPANSION FOAM GENERATOR
D	03-25-09	REVISED LIFTING LUG DIMS	TSS	D.J.	03-25-09	1/8"	BUCKEYE FIRE EQUIPMENT CO. HIGH EXPANSION FOAM GENERATOR



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## Buckeye Fire Equipment Co. High Expansion Foam Generator Model FG28000 Performance



ITEM QTY	PART NO.	DESCRIPTION	MATERIAL
1	FG28-48-00	PUMP HOUSING ASSY (ZINC PLATED)	BRASS
1	FG28-48-01	PROPELLER	BRASS
1	FG28-48-02	PROPELLER GUNNER CLOCKWISE SEWAL 304 SS	304 SS
1	FG28-48-03	3" X 4" NPT BRASS NIPPLE	BRASS
1	FG28-48-04	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-05	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-06	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-07	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-08	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-09	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-10	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-11	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-12	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-13	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-14	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-15	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-16	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-17	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-18	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-19	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-20	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-21	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-22	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-23	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-24	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-25	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-26	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-27	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-28	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-29	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-30	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-31	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-32	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-33	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-34	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-35	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-36	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-37	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-38	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-39	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-40	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-41	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-42	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-43	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-44	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-45	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-46	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-47	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-48	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-49	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-50	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-51	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-52	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-53	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-54	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-55	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-56	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-57	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-58	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-59	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-60	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-61	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-62	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-63	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-64	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-65	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-66	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-67	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-68	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-69	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-70	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-71	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-72	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-73	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-74	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-75	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-76	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-77	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-78	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-79	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-80	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-81	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-82	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-83	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-84	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-85	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-86	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-87	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-88	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-89	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-90	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-91	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-92	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-93	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-94	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-95	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-96	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-97	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-98	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-99	3/4" NPT BRASS NIPPLE	BRASS
1	FG28-48-100	3/4" NPT BRASS NIPPLE	BRASS

PSI	GPM	CFM	EXPANSION
78	324	28,367	65.5/1
60	259	23,848	61.8/1
45	245	18,532	56.6/1

U.L. TESTED

7/8" BOLT HOLES  
2" NPT INLET  
WEIGHT APPROX 625H