

## 1- Description

The TOP TECH Model FC 2.5 Foam Chamber consists of a foam expansion chamber and an integral foam maker. The foam chamber is installed on a flammable liquid storage tank just below the roof joint. The foam solution is piped to the chamber from outside the hazard area. Upon entering the chamber, the foam solution is expanded and then discharged against a deflector inside the storage tank. The deflector directs the foam against the inside wall of the storage tank. This reduces the submergence of the foam and agitation of the fuel surface. (NFPA Type II Application)

### Features

- Top of chamber has handle, which simplifies inspection access to the vapor seal
- Frangible glass vapor seal is provided. The glass is scored on one side and designed to break at a minimum 10 psi but not greater than 20 psi. **(optional)**
- Chamber manufactured in ASTM A36 carbon steel
- All foam chamber inlets and outlets are flat faced and drilled to ANSI 150 lb. standard. Flange gaskets are provided.
- Choice of two styles of deflector is available (split or solid)
- Finished with durable red epoxy paint

## 2. TECHNICAL DATA

### specifications:

See Table 1

### material standards:

Chamber - ASTM A36 Carbon Steel

### ordering Information:

Table 1: Foam Chamber Specifications

size	Flow:	Part No.	Weight
"2	77-250	<b>F15065</b>	60 lbs.
2-1/2"	GPM		

When placing a Foam Chamber Order, you must provide the Starting Pressure and desired Flow Rate. A properly sized orifice will be made to order and installed in the Foam Chamber.



## 3. INSTALLATION

Foam chambers are compatible with all types of foam concentrate; protein, fluoroprotein, AFFF, and AR-AFFF. They are generally installed on the side wall of vertical storage tanks above the maximum product level. Piping coupled to the unit can be linked to a fixed foam proportioning system, or terminated a safe distance from the tank, where foam solution can be delivered via mobile fire apparatus or portable foam proportioning equipment.

### Determining orifice size

After determining the required foam flow rate and available pressure, the orifice must be sized using the following formula:

$$d = \left( \frac{Q}{29.836 k P^{1/2}} \right)^{1/2}$$

Where:

d = orifice Ø (in.)

Q = Solution Flow Rate (GPM)

P = Pressure at orifice inlet (PSI)

k = Orifice Coefficient = 0.61

size	Flow:	Part No.	Description	Weight
"2"	GPM 77-250	F15066	Solid Deflector	5 lbs.
		F15067	Split Deflector	5 lbs.
2-1/2"		F15068	Mounting Pad	15 lbs.
		F15069	Spare Vapor Seal Assembly	1 lbs.

### 3- OPERATION

The Model FC Foam Chambers produce foam by introducing air into the foam solution stream. Foam solution can be delivered to the foam chamber in a variety of ways as previously noted. Air is drawn into the foam maker through a series of annular holes located around the integral foam maker. To prevent obstruction, The open area of the screen is designed to be not less than the total area of the foam maker air inlet holes.

### 4- INSPECTIONS, TESTS AND MAINTENANCE

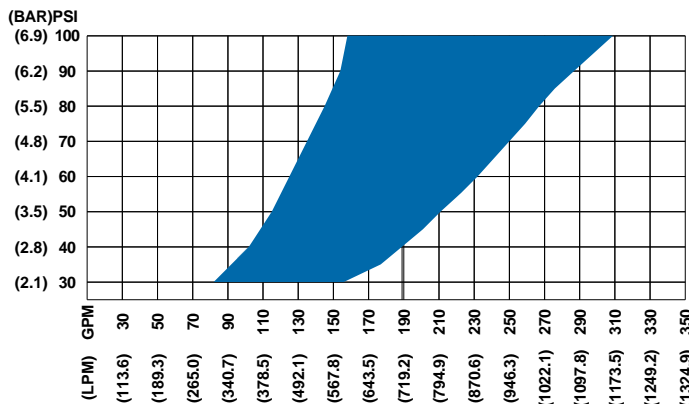
**NOTICE:** The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to recognized standards such as those produced by NFPA, LPC, and VdS which describe care and maintenance of sprinkler systems. In addition, the "Authority Having Jurisdiction" may have additional maintenance, testing and inspection requirements which must be followed.

**WARNING:** Any system maintenance or testing which involves placing a control valve or detection system out of service may eliminate the Fire Protection of that system. Prior to proceeding, notify all Authorities Having Jurisdiction. Consideration should be given to employment of a Fire Patrol in the affected area.

### 5-AVAILABILITY

TOP TECH Foam Products are available through a network of domestic.

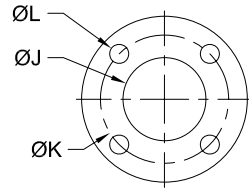
## FLOW RANGE CHART FOR FOAM CHAMBERS



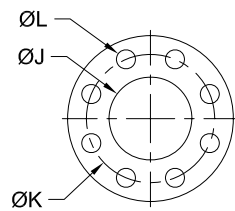
FLOW @ 30 PSI (2.1 BAR) = 82-156 GPM (310-591 LPM)  
FLOW @ 100 PSI (6.9 BAR) = 158-309 GPM (598-1170 LPM)

**MODEL FC2.50 FOAM CHAMBER**

	<b>FC2.5</b>
<b>A</b>	29"
<b>b</b>	17.5"
<b>C</b>	10.625"
<b>D</b>	7"
<b>E</b>	2.5"
<b>F</b>	3.25"
<b>G</b>	6.5"
<b>H</b>	8"
<b>I</b>	4"
<b>J</b>	2.875"
<b>K</b>	5.5"
<b>L</b>	0.75"
<b>m</b>	4.5"
<b>N</b>	7.5"
<b>o</b>	0.75"
<b>P</b>	8"
<b>Q</b>	12"

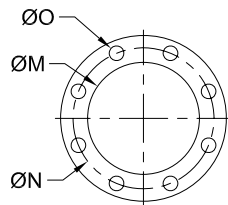


FC2.5, 3

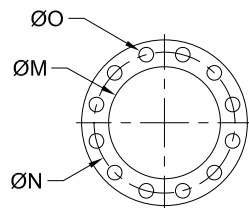


FC4, 6

INLET FLANGE  
(E DETAIL)

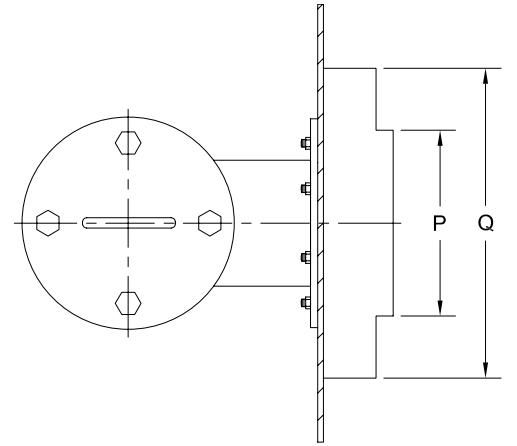


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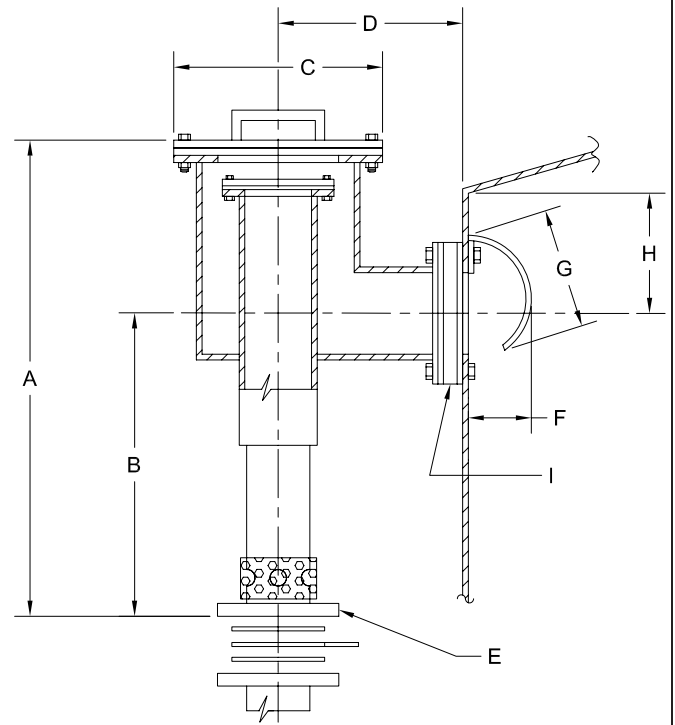


FC6

OUTLET FLANGE  
(I DETAIL)



TOP VIEW



SIDE VIEW

**Figure 1 - Dimensions**