

FOAM CHAMBERS MODEL FC

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

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1. DESCRIPTION

The Chemguard Model FC 2.5, 3.0, 4.0 & 6.0 Foam Chambers consist 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

• (4) models available to cover all flow requirements

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- 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.
- · Chamber manufactured in ASTM A36 carbon steel with a 304 stainless steel screen covering the foam maker air inlets
- 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
- A stainless steel inlet orifice is supplied. Chemguard sizes the orifice based on the foam solution flow requirements and the foam solution inlet pressure available at the base of the foam chamber.

2. LISTINGS AND APPROVALS

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3. TECHNICAL DATA

Specifications: See Table 1

Material Standards: Chamber - ASTM A36 Carbon Steel Screen - 304 stainless steel Inlet Orifice - Stainless Steel

Ordering Information:

Т	able 1: Foam	Chamber Spec		
Size	Flow:	Part No.	Weight	
2-1/2"	26-187 GPM	F15065	60 lbs.	When placing a Foam Chamber Order, you must provide the Startin Pressure and desired Flow Rate. A properly sized orifice will be made
3"	82-309 GPM	F15070	100 lbs.	
4"	130-737 GPM	F15075	145 lbs.	Chamber.
6"	329-1120 GPM	F15080	270 lbs.	

Viking Technical Data may be found on The Viking Corporation's Web site at http://www.vikinggroupinc.com. The Web site may include a more recent edition of this Technical Data Page.

4. 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:

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

Where: d = orifice Ø (in.) Q = Solution Flow Rate (GPM) P = Pressure at orifice inlet (PSI) k = Orifice Coefficient = 0.61

Revised page replaces page 191a-d dated October 21, 2013. (Revised Table 2 Flow Ranges)

Form No. F_012201



TECHNICAL DATA

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Table 2: Accessories							
Size	Flow:	Part No.	Description	Weight			
2-1/2"	26-187 GPM	F15066	Solid Deflector	5 lbs.			
		F15067	Split Deflector	5 lbs.			
		F15068	Mounting Pad	15 lbs.			
		F15069	Spare Vapor Seal Assembly	1 lbs.			
3"	82-309 GPM	F15071	Solid Deflector	10 lbs.			
		F15072	Split Deflector	10 lbs.			
		F15073	Mounting Pad	20 lbs.			
		F15074	Spare Vapor Seal Assembly	1 lbs.			
4"	130-737 GPM	F15076	Solid Deflector	20 lbs.			
		F15077	Split Deflector	20 lbs.			
		F15078	Mounting Pad	35 lbs.			
		F15079	Spare Vapor Seal Assembly	1 lbs.			
6"	329-1120 GPM	F15081	Solid Deflector	30 lbs.			
		F15082	Split Deflector	30 lbs.			
		F15083	Mounting Pad	50 lbs.			
		F15084	Spare Vapor Seal Assembly	2 lbs.			

5. 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 air inlet holes are protected by a stainless steel screen selected with a perforation size designed to exclude most known nesting birds and insects. The open area of the screen is designed to be not less than the total area of the foam maker air inlet holes.

6. 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.

7. AVAILABILITY

Viking Foam Products are available through a network of domestic and international distributors. See the Viking web site for closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

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