Perimeter SOLUTIONS

Solutions That Save.

FOAM CHAMBERS

SOLBERG

FEATURES

- **UL Listed and FM Approved with multiple SOLBERG® fluorine-free foam concentrates**
- **Available in four size ranges**
- **Equipped with an inspection opening on the cover plate**
- **Minimum operating pressure 40 psi (3 bar), maximum operating pressure 100 psi (7 bar)**
- **One-piece welded chambers are available for installations not requiring vapor seal**

DESCRIPTION

SOLBERG® Foam Chambers are NFPA-11 Type II air aspirating foam discharge devices that provide protection for open top floating and cone roof flammable liquid storage tanks. Foam chambers are a combination of a foam mixing chamber and a foam maker with an air inlet. A removable orifice plate is located between the flange inlet and solution pipe flange, and is sized to deliver the required foam solution at a specified pressure. A frangible glass vapor seal located in the foam chamber body prevents product vapors from entering the foam chamber body. The vapor seal will break once the foam solution enters, filling the foam chamber body with expanded foam. The foam flows to a deflector plate, which directs the foam to the inside of the storage tank wall and fuel surface, only allowing minimum foam submergence and fuel agitation.

APPLICATION

SOLBERG Foam Chambers are airaspirating Type II discharge devices that protect various types of flammable liquid storage tanks including cone roof tanks (with or without internal floaters) and open top floating roof tanks. The foam chambers are typically used with bladder tank systems or balanced pressure pump systems.



SPECIFICATIONS

The foam chamber assembly consists of the body, integral foam maker, orifice, deflector, vapor seal, gaskets and mounting hardware. The foam chamber body is constructed of steel. The inlet fitting is a raised face 150 lb flange, and the outlet fitting is a flat faced flange that can be bolted or welded to the storage tank. Foam chamber body has a cover plate with inspection opening for ease of inspection or access to the vapor seal. Vapor seal is constructed from glass and designed to meet the UL required burst pressure range of 10 - 25 psi (1 - 2 bar). The deflector plate can be either solid or split-type and constructed from steel that can be bolted or welded to side of storage tank.

Note: The defector plate is not supplied with foam chamber and needs to be ordered/specified separately.

CERTIFICATIONS

- Underwriters Laboratories, Inc. (UL) Listed - Standard 162
- FM Approved per Approval Standard 5130

FOAM CHAMBERS

FLOW RATES
FM APPROVED

	CONCENTRATE	ORIFICE RANGE	FLOW RATE	PRESSURE RANGE
SFS 825 C = .615	RE-HEALING RF3, 3%	0.625 - 0.938"	60 - 181 gpm (227 - 318 lpm)	50 - 100 PSI (3.0 - 6.9 bar)
	RE-HEALING SP-100, 3x3% (Pending)	0.432 - 0.938"	24 - 165 gpm (91 - 625 lpm)	40 - 100 PSI (2.8 - 6.9 bar)
	EVOLUTION 3% SFFF	0.432 - 0.619"	25 - 31 gpm (95 - 613 lpm)	40 - 60 PSI (2.8 - 4.1 bar)

	CONCENTRATE	ORIFICE RANGE	FLOW RATE	PRESSURE RANGE
SFS 1030 C = .625	RE-HEALING RF3, 3%	0.875 - 1.25"	95 - 315 gpm (360 - 1192 lpm)	40 - 100 PSI (2.8 - 6.9 bar)
	RE-HEALING SP-100, 3x3% (Pending)	0.688 - 1.25"	57 - 285 gpm (216 - 1079 lpm)	40 - 100 PSI (2.8 - 6.9 bar)
	EVOLUTION 3% SFFF	0.688"	58 - 292 gpm (220 - 1105 lpm)	40 - 100 PSI (2.8 - 6.9 bar)

	CONCENTRATE	ORIFICE RANGE	FLOW RATE	PRESSURE RANGE
SFS 1240 C = .635	RE-HEALING RF3, 3%	1.125 - 1.875"	164 - 680 gpm (621 - 2574 lpm)	40 - 100 PSI (2.8 - 6.9 bar)
	RE-HEALING SP-100, 3x3% (Pending)	0.877 - 1.875"	94 - 582 gpm (356 - 2203 lpm)	40 - 100 PSI (2.8 - 6.9 bar)

	CONCENTRATE	ORIFICE RANGE	FLOW RATE	PRESSURE RANGE
SFS 1660* C = .650	Contact Perimeter Solutions	1.75" - 2.625"	375 - 1335 gpm (1419 - 5053 lpm)	40 - 100 PSI (2.8 - 6.9 bar)

*non-UL Listed, non-FM Approved

FLOW RATES
UL LISTED

	CONCENTRATE	FLOW RANGE MIN. ORIFICE 0.432 - MAX. ORIFICE 0.938
SFS 825 (C = .615)	RE-HEALING RF3, 3%	60 - 181 gpm (227 - 685 lpm)
	RE-HEALING SP-100, 3x3%	28.3 - 162 gpm (107 - 613 lpm)
	ARCTIC 1% AFFF	48 - 179 gpm (182 - 678 lpm)
	ARCTIC 3% AFFF	49 - 180 gpm (185 - 681 lpm)
	ARCTIC 1x3% ATC	51 - 84 gpm (193 - 318 lpm)
	ARCTIC 3x3% ATC	46 - 180 gpm (174 - 681 lpm)
	VERSAGARD AS-100	28 - 165 gpm (106 - 625 lpm)
	EVOLUTION 3% SFFF	72 - 95 gpm (273 - 356 lpm)

	CONCENTRATE	FLOW RANGE MIN. ORIFICE 0.688 - MAX. ORIFICE 1.25
SFS 1030 (C = .625)	RE-HEALING RF3, 3%	95 - 315 gpm (360 - 1192 lpm)
	RE-HEALING SP-100, 3x3%	71 - 306 gpm (269 - 1158 lpm)
	ARCTIC 1% AFFF	94 - 312 gpm (356 - 1181 lpm)
	ARCTIC 3% AFFF	96 - 316 gpm (363 - 1196 lpm)
	ARCTIC 1x3% ATC	N/A
	ARCTIC 3x3% ATC	94 - 312 gpm (356 - 1181 lpm)
	VERSAGARD AS-100	54 - 287 gpm (204 - 1086 lpm)

	CONCENTRATE	FLOW RANGE MIN. ORIFICE 0.877 - MAX. ORIFICE 1.875
SFS 1240 (C = .635)	RE-HEALING RF3, 3%	164 - 680 gpm (621 - 2575 lpm)
	RE-HEALING SP-100, 3x3%	88 - 488 gpm (333 - 1847 lpm)
	ARCTIC 1% AFFF	149 - 695 gpm (564 - 2631 lpm)
	ARCTIC 3% AFFF	147 - 720 gpm (556 - 2725 lpm)
	ARCTIC 1x3% ATC	N/A
	ARCTIC 3x3% ATC	150 - 695 gpm (568 - 2631 lpm)
	VERSAGARD AS-100	87 - 528 gpm (329 - 1998 lpm)

Note: Refer to UL 162 Listings for further details

FOAM CHAMBERS

ORIFICE PLATE SIZING

English

$$D = \sqrt{\frac{Q}{29.8 \times C \times \sqrt{P}}}$$

Metric

$$D = \sqrt{\frac{Q}{0.6659 \times C \times \sqrt{P}}}$$

Key

Q = Flow in GPM

D = Diameter of Orifice in Inches

C = Coefficient of Discharge for the Orifice (See C factor above)

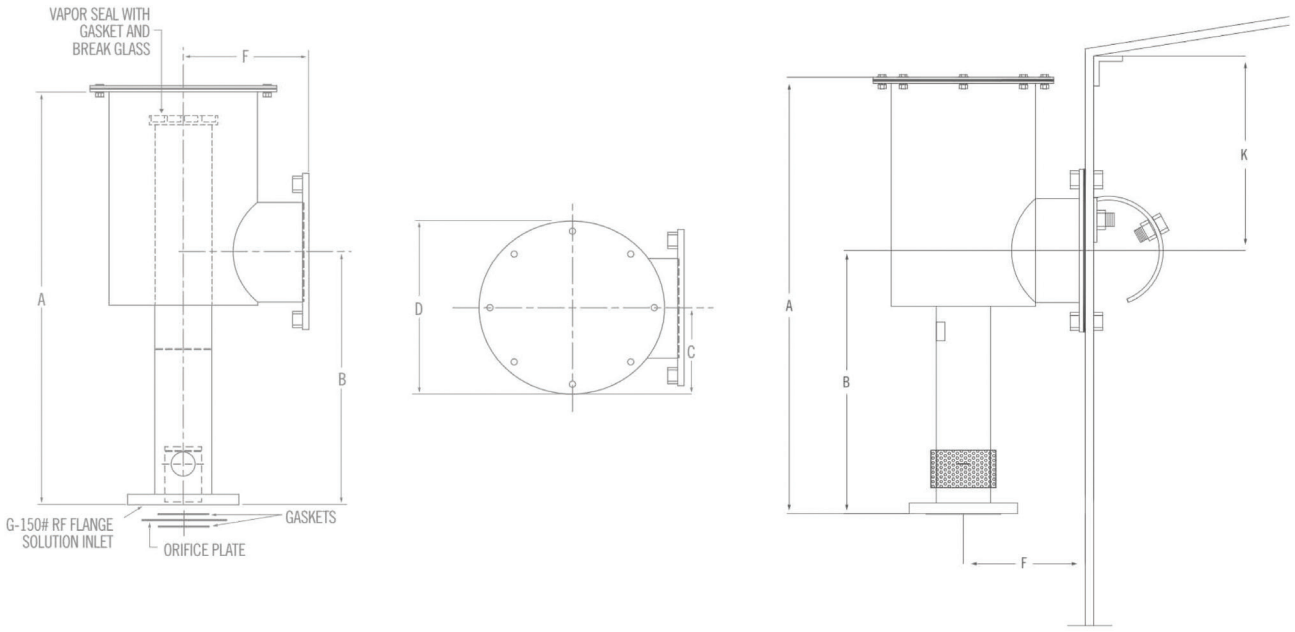
P = Pressure in psi

DIMENSIONAL INFORMATION

APPROXIMATE DIMENSIONS Inches (Millimeters)

MODEL	A	B	C	D	E	F	G	H	J	K
SFS 825	26.25 (667)	17.00 (432)	5.75 (146)	11.50 (292)	4.50 (114)	7.00 (178)	2.50 (64)	7.50 (191)	.63 (16)	8.00 (203)
SFS 1030	32.13 (816)	19.00 (483)	6.50 (165)	13.00 (330)	6.63 (168)	9.00 (229)	300 (76)	9.50 (241)	.75 (19)	9.50 (241)
SFS 1240	35.75 (908)	22.00 (559)	7.75 (197)	15.50 (394)	8.75 (222)	10.00 (254)	4.00 (102)	11.75 (298)	.88 (22)	11.00 (279)
SFS 1660	4138 (1051)	23.63 (600)	9.50 (241)	19.00 (483)	10.81 (275)	12.00 (305)	6.00 (152)	14.25 (362)	1.OO (25)	12.00 (305)

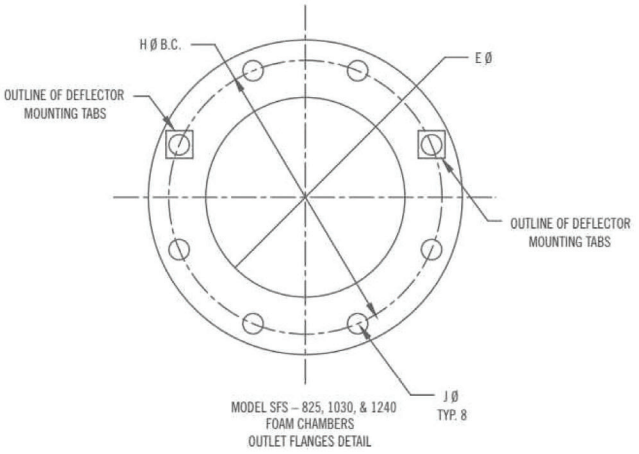
FOAM CHAMBER



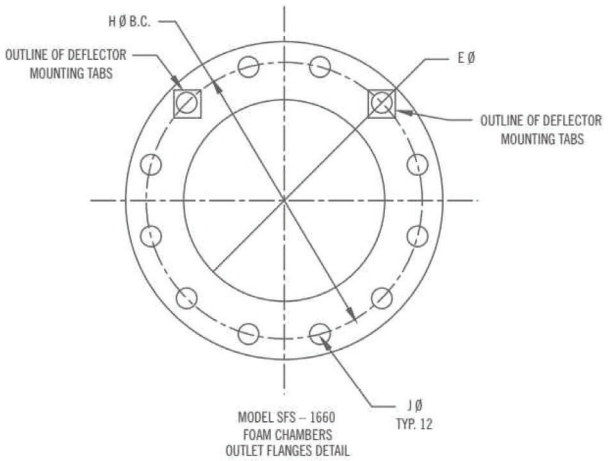
FOAM CHAMBERS

INSTALLATION INFORMATION

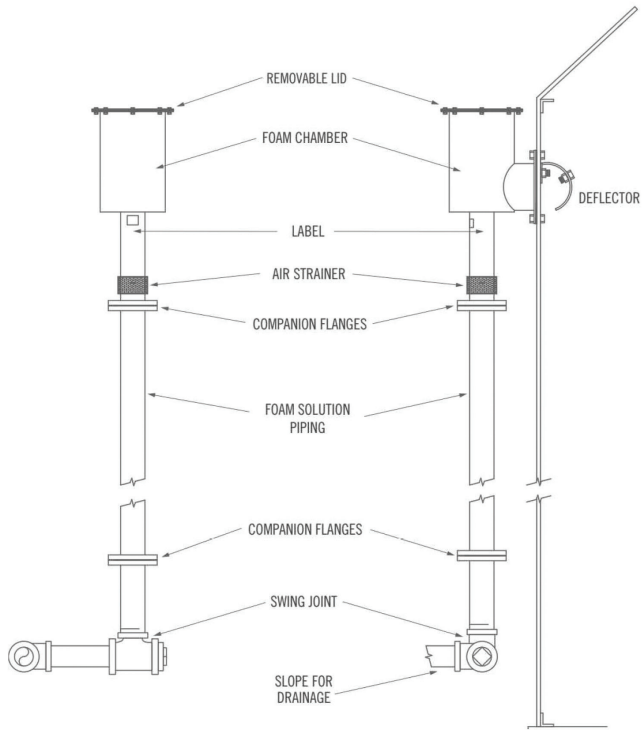
FOAM CHAMBER MOUNTING



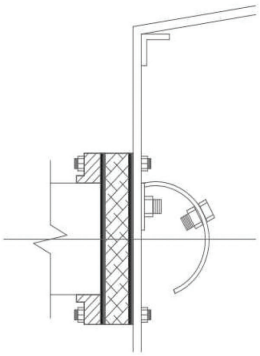
BOLTED WITH PAD, SPLIT DEFLECTOR



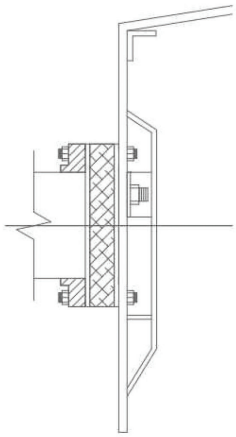
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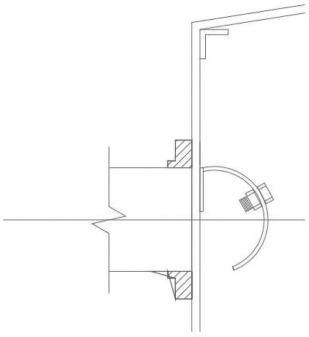
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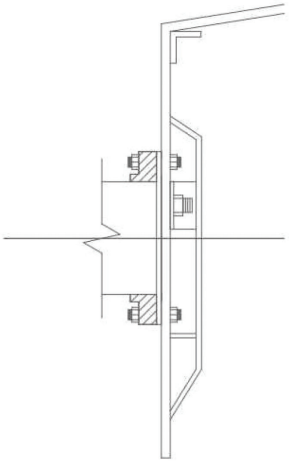
BOLTED WITH PAD, SHALLOW DEFLECTOR



WELDED WITH SPLIT DEFLECTOR



WELDED WITH SHALLOW DEFLECTOR



Note: This installation information provides only general guidelines. Each installation may require modifications to meet specific requirements or application(s). Perimeter Solutions reserves the right to change any portion of this information without notice.

FOAM CHAMBERS

ORDERING INFORMATION

FOAM CHAMBERS		APPROXIMATE SHIPPING WEIGHT	
PART NO.	DESCRIPTION	lb	kg
32100	Foam Chamber, Model SFS-825, Red Enamel Finish	46	21
32101	Split Deflector Plate, Model SFS-825, Red Enamel Finish	5	2
32102	Solid Deflector Plate, Model SFS-825, Red Enamel Finish	5	2
32103	Foam Chamber, Model SFS-1030, Red Enamel Finish	84	38
32104	Split Deflector Plate, Model SFS-1030, Red Enamel Finish	6	3
32105	Solid Deflector Plate, Model SFS-1030, Red Enamel Finish	6	3
32106	Foam Chamber, Model SFS-1240, Red Enamel Finish	92	42
32107	Split Deflector Plate, Model SFS-1240, Red Enamel Finish	9	5
32108	Solid Deflector Plate, Model SFS-1240, Red Enamel Finish	9	5
32109	Foam Chamber, Model SFS-1660, Red Enamel Finish	163	74
32110	Split Deflector Plate, Model SFS-1660, Red Enamel Finish	12	5
32111	Solid Deflector Plate, Model SFS-1660, Red Enamel Finish	12	5

FOAM CHAMBER - REPLACEMENT PARTS		APPROXIMATE SHIPPING WEIGHT	
PART NO.	DESCRIPTION	lb	kg
32120	Vapor Seal Assembly, Model SFS-825	0.50	0.2
32121	Vapor Seal Assembly, Model SFS-1030	0.50	0.2
32122	Vapor Seal Assembly, Model SFS-1240	0.50	0.2
32123	Vapor Seal Assembly, Model SFS-1660	0.50	0.2
32124	Cover Gasket, Model SFS-825	0.25	0.1
32125	Cover Gasket, Model SFS-1030	0.25	0.1
32126	Cover Gasket, Model SFS-1240	0.25	0.1
32127	Cover Gasket, Model SFS-1660	0.25	0.1
32128	Orifice Plate, Model SFS-825	1.00	0.4
32129	Orifice Plate, Model SFS-1030	1.00	0.4
32130	Orifice Plate, Model SFS-1240	1.00	0.4
31131	Orifice Plate, Model SFS-1660	1.00	0.4

Perimeter SOLUTIONS

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FOR MORE INFORMATION

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