Foam Proportioning Unit
Bladder Type (Horizontal & Vertical)

Technical Specification

Model	:	Vertical Bladder Tank, Horizontal Bladder Tank
Brand	:	SIBCA
Approval	:	UL Listed (EX29159)
Design Standard	:	ASME SEC.VIII DIV.1
Nominal Capacity	:	95 - 15,000 Liters (25 - 4,000 Gallons), 180 - 15,000 Liters (50 - 4,000Gallons)
Mounting	:	Vertical on Leg Supports (4 Nos.), Horizontal on Saddle Support (2 Nos.)
Service	:	Fire Water / Foam Concentrate
Rated Pressure	:	12.06 Bar
Service Temperature	:	49°C (Maximum)
Design Temperature	:	20°C to 80°C
Type Of Dish End	:	2:1 Ellipsoidal
Hydrostatic Test Pressure	:	18 Bar
Foam Proportioner Size	:	50 NB, 80 NB, 100 NB (Stainless Steel, Wafer & Flange)
Foam Concentrate	:	Aqueous Film Foaming Foam (AFFF) & Alcohol Resistant Aqueous Film Foaming Foam (AR-AFFF)
Foam Proportioning Ratio	:	3% (+0.9/-0)
Internal Coating	:	Coal Tar Epoxy
External Coating	:	Painted Fire-Red to Shade RAL 3000

Horizontal Bladder Tank

Vertical Bladder Tank

Description

* Foam Proportioning Unit - Bladder Type is a selfcontained foam proportioning unit used for injecting the foam concentrate into firewater stream over a wide range of flow and pressure.

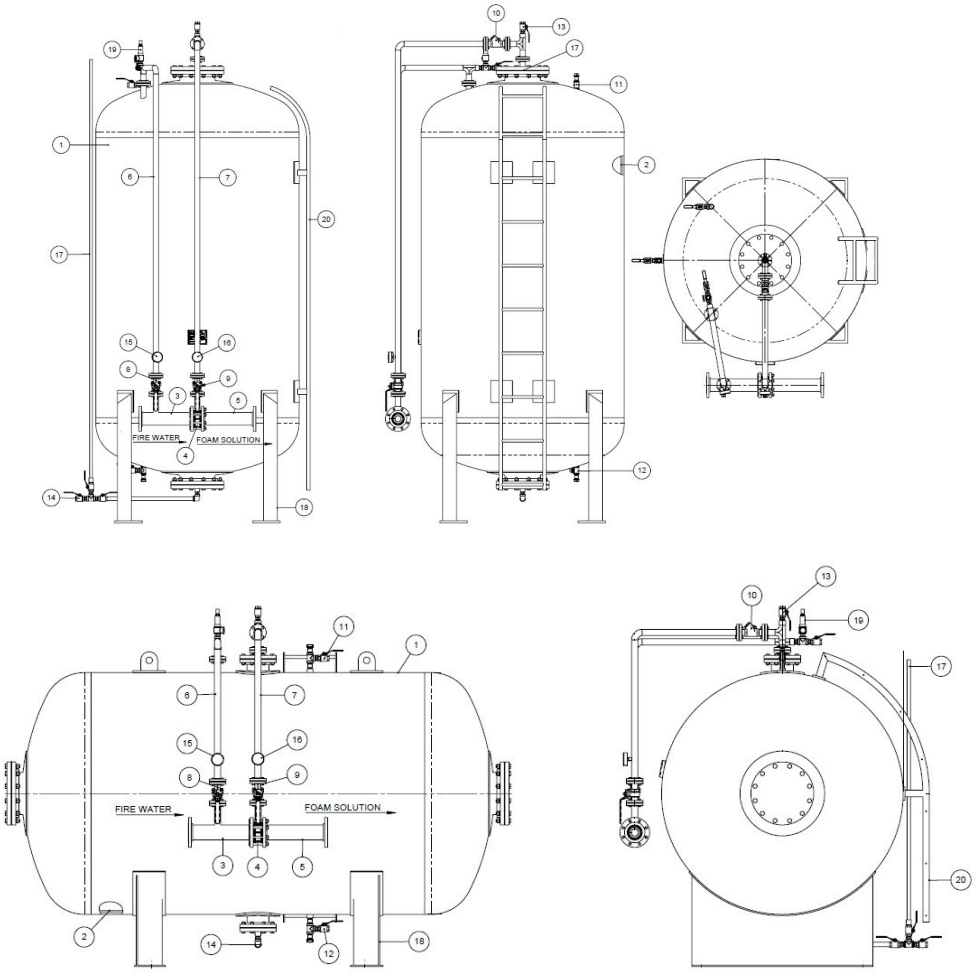
* Units are available from 95 Liters to 15,000 Liters in Vertical as well as Horizontal Mounting. General arrangement of vertical mounting shall be as per fig and horizontal mounting shall be as per fig. The dimensions of foam vessel may be subject to change as per changes in design. Unit consists of a foam vessel, foam bladder, foam proportioner, interconnecting piping, valves and concentrate level gauge.

* Foam vessel is designed and fabricated to ASME Sec. VIII Div. I. Foam bladder is made of Nylon reinforced nitrite rubber, which is fixed inside the foam vessel. Foam concentrate is stored inside the foam bladder. Foam proportioner is supplied separately. The general arrangement of foam proportioned shall be as per fig. It is connected to the tank by means of interconnecting piping. Inlet of foam proportioned is connected to the firewater supply and outlet of foam proportioner to the foam solution delivery piping. Units can also be installed in double vessel configuration to facilitate standby arrangement for immediate switchover.

Operation

* During operation, water is charged between the foam vessel and the foam bladder, thereby causing the of pressurization foam concentrate stored inside the foam bladder to a pressure, as that of firewater supply.

* The foam concentrate is injected in the fire- water stream due to pressure drop at the foam proportioned. Foam proportioned provides accurate and automatic proportioning of foam concentrate within its flow range with very low proportioning losses.



Note: Subject to change without prior notice due to products optimization

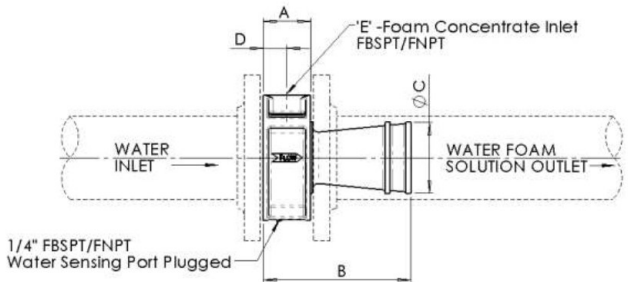
Material Specification

No.	Part Name	Material
1	Foam Vessel	Carbon Steel
2	FoamBladder	ReinforcedNitrileRubber
3	Water Spool	Carbon Steel
4	FoamProportioner 50/ 80 / 100 NB	Bronze / SS 316
5	Foam Solution Spool	StainlessSteel304/304L/316/316L
6	WaterPiping	CarbonSteel
7	FoamPiping	StainlessSteel304/304L/316/316L
8	WaterChargingValve	StainlessSteel304/304L/316/316L
9	FoamSupplyValve	StainlessSteel304/304L/316/316L
10	Non Return Valve	Carbon Alloy (Bronze)
11	Vessel Vent Valve	StainlessSteel304/304L/316/316L
12	Vessel Drain Valve	StainlessSteel304/304L/316/316L
13	BladderVent Valve	StainlessSteel304/304L/316/316L
14	BladderTrainValve	StainlessSteel304/304L/316/316L
15	PressureGuageWater	StainlessSteel(316LInternals)
16	Pressure GuageFoam	StainlessSteel(316LInternals)
17	SightGlass	Ploycarbonate
18	SaddleSupport	CarbonSteel
19	*Reliefvalve	CopperAlloy/StainlessSteel 304/304L/316/316L
20	*Ladder	CarbonSteel

Note:
** Wafer Type Standard Supply, Flanged - Optional
* Relief Valve & Ladder Optional

Foam Proportioner Details

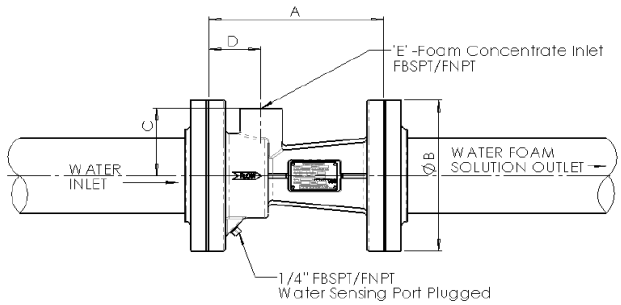
Wafer Type



Description	Material
Body	Stainless Steel / Bronze

Size	A	ØB	C	D	F
2”	50	200	51	25	1” BSPT (F) / NPT (F)
3”	64	154	74	31.5	1½” BSPT (F) / NPT (F)
4”	65	204	98.5	32.5	1½” BSPT (F) / NPT (F)

Flanged Type



Description	Material
Body	Stainless Steel / Bronze

Size	A	ØB	C	D	F
2”	200	152	63	38.5	1” BSPT (F) / NPT (F)
3”	168	190	76	51	1½” BSPT (F) / NPT (F)
4”	255	229	102	76	1½” BSPT (F) / NPT (F)

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Foam Proportioning Unit
Bladder Type (Horizontal & Vertical)

Application

SIBCA Foam Proportioning Unit - Bladder Type is a very versatile and reliable foam proportioning unit, which provides accurate and automatic foam proportioning with very low proportioning losses. Unit can be supplied with a single or multiple proportioners for covering a wide flow range.

Foam Proportioning Unit - Bladder Type is most ideal for foam systems employed for protection of hazardous areas, such as:

* Flammable liquid storage tanks in refineries and petrochemical units
* Chemical process plants
* Aircraft hangars
* Loading and Unloading gantries
* Oil Jetties
* OffShore Platforms
* Warehouses
* Foam application through spray nozzle and foam sprinkler

Features

* UL LISTED with AFFF3% & ARAFFF3% Foam Concentrates.
* Designed & constructed as per ASME Sec. VIII Div.1 (Optional — ASME U Stamped).
* Largest Range of Capacities (95 Liters to 15,000 Liters) in Vertical & Horizontal Mounting.
* Largest Range of Ratio Controllers 5ONB/80NB/100NB/150NB/200NB.
* Widest Flow Range (11418,000 LPM).
* Lowest Proportioning Losses.
* Nylon reinforced nitrite foam bladder is UL Listed with AFFF & ARAFFF Foam.
* Concentrate & compatible with all types of foam concentrates.
* High reliability and design simplicity minimizes chances of system failure.
* Manual / automatic operation.
* Horizontal / Vertical Mounting.
* Low installation cost.

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