

Description

The Fierre vertical foam bladder tank model FI-OPI-UL is a steel pressure vessel that contains foam concentrate inside an elastomeric bladder. The bladder allows the water pressure to be transferred to the foam concentrate without the two fluids mixing together. The foam proportioner supplied with the tank doses the concentrate into the fire water line to generate the required foam solution. The solution then flows to the discharge devices that protect the hazard area.

The foam bladder tank requires only a pressurized water supply for operation and does not need any external energy sources.

The proportioner and piping are factory-installed with flow orientation upon request. The pre-piped system includes all the necessary valves for operation. Upon request, a hydraulic or electric control valve can be installed on the water inlet line or foam outlet line.

Application

Fierre foam bladder tanks are used in a wide range of applications, including:

- Refineries and petrochemical plants
- Chemical and pharmaceutical facilities
- Industrial plants
- Aircraft hangars
- Water / foam sprinkler systems
- Heliports

Use and Maintenance

For detailed installation, operation, and maintenance procedures, please refer to the Fierre foam bladder tank operation and maintenance manual.



Approvals



ASME VIII Div.1

UL listed Fierre bladder tanks are designed and manufactured according to ASME VIII Div.1 (no stamp).

The Fierre bladder tanks are UL Listed, listed system components can be found at <https://iq.ulprospector.com>.

UL Listed GHXV.EX28056 - Proportioners, Foam Concentrate.

Construction features

- Horizontal tanks on saddles equipped with holes for floor anchoring
- Standard design pressure of 12 bar; higher pressures available upon request
- 100% pressure tested according to the applicable design code
- Shell and heads made of ASTM A516 Gr. 70
- Corrosion-resistant brass drain and vent ball valves
- Welded lifting lugs to facilitate safe handling operations
- Grounding clamp for electrical safety
- Safety valve on the water side of the bladder tank to prevent slow overpressure and compensate for thermal variations
- Oversizing to allow thermal expansion of the foam concentrate (volumetric expansion tolerance)
- Internal PVC piping for foam concentrate distribution
- Internal channel to equalize pressure, protect the bladder, and facilitate draining during maintenance and service
- Pressure gauge level indicator; column level indicator available upon request

Standard design specifications

Design pressure	12 bar
Max. operating pressure	12 bar
Hydraulic test pressure	18 bar
Design temperature	-10° / +50° C
Painting cycle	Surface preparation: sandblasting Sa 2½ Primer coat: two-component epoxy primer, 60 µm Top coat: two-component aliphatic acrylic polyurethane finish, 60 µm Total dry film thickness: 120 µm Standard colour: RAL 3000 (Red)

Standard materials

Components	Materials
Tank shell and heads	ASTM A516 Gr. 70
Bladder	Hypalon / Neoprene
Vent and drain valves	Stainless steel or brass
Pressure gauges	Stainless steel 304
Ball shut-off valves	Body A150, stainless steel ball
Foam non-return valve	Stainless steel
Water and foam nozzles	Stainless steel

Options

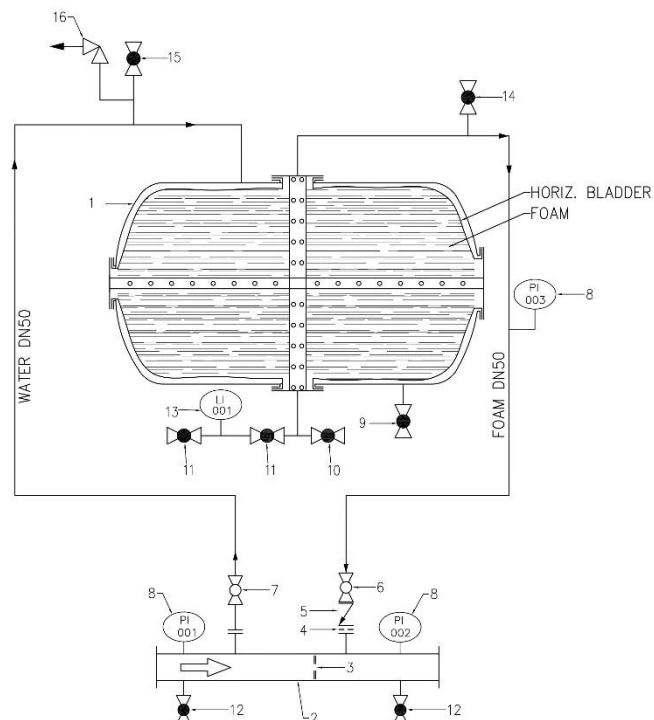
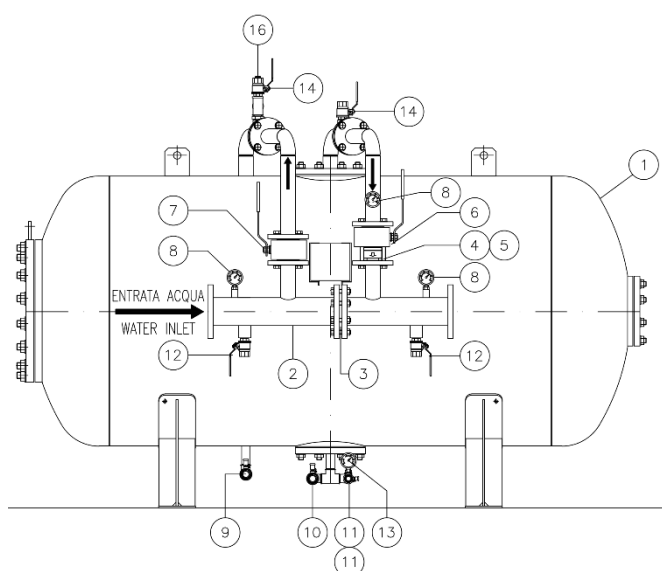
- Special painting cycles for saltwater or aggressive environments
- Column-type level indicator
- Stainless steel valves
- ATEX-certified instrumentation
- Manual or electric foam concentrate filling pump
- Hydraulically or electrically actuated control valve
- Corrosion-resistant stainless steel nameplate
- Increased wall thickness for corrosion allowance
- Internal protective coatings
- Design pressure higher than 12 bar
- Ladder | Work platform | Protective sunshield
- Skid-mounted base according to Customer specifications
- Non-destructive tests according to the applicable construction code (RT, LP, MT, etc.)
- Factory acceptance test, inspections by Notified Body or Third-Party Authority
- Special packaging for maritime transport and fumigated crates

FIERRE - Fire Fighting Equipment

UL listed horizontal foam bladder tank FI-OPI-UL



Layout e P&ID



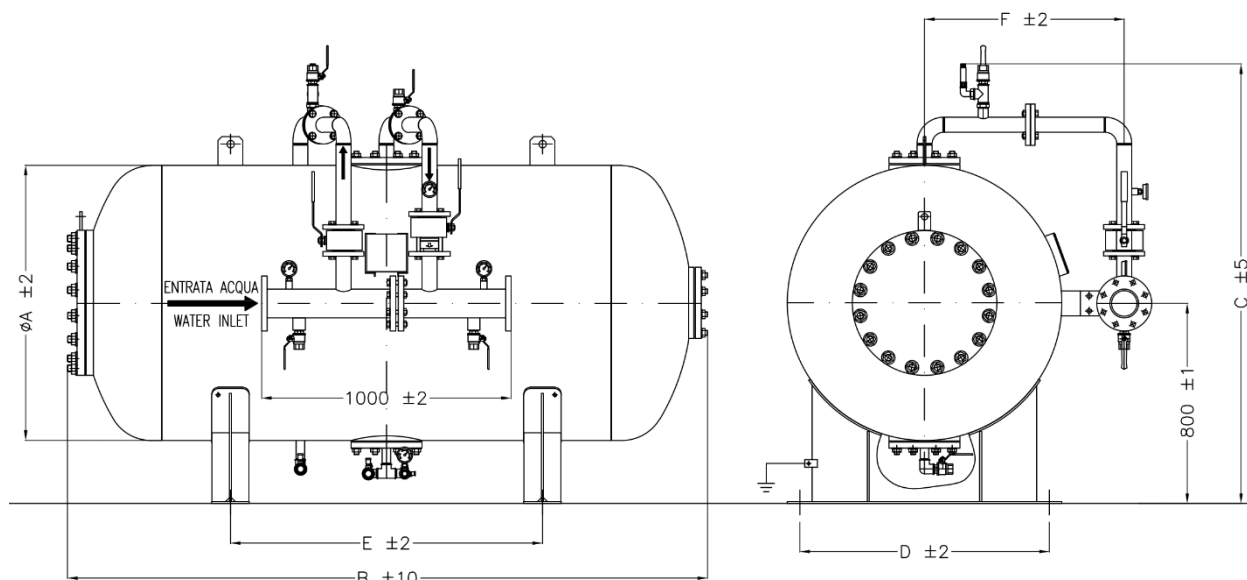
Item	Components	Item	Components
1	Tank	9	Water drain valve
2	Foam proportioner	10	Foam filling and drain valve
3	Water nozzle	11	Shut-off and pressure gauge drain valves
4	Foam nozzle	12	Proportioner drain valves
5	Foam non-return valve	13	Level indicator pressure gauge 0-400 millibar
6	Foam shut-off valve	14	Foam pipe vent valve
7	Water shut-off valve	15	Water pipe vent valve
8	Pressure gauges 0-25 bar	16	Safety valve

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Dimensions



Model	Measures (mm)						Capacity (USG)	Capacity (Lt)	Empty weight (Kg)
	A	B	C	D	E	F			
FI-OPI-UL 25	500	1280	1382	550	300	450	25	95	382
FI-OPI-UL 50	700	1055	1485	700	600	450	50	190	395
FI-OPI-UL 75	700	1343	1370	660	400	550	75	284	426
FI-OPI-UL 100	800	1482	1470	800	600	550	100	379	554
FI-OPI-UL 150	800	1482	1470	800	650	600	150	568	554
FI-OPI-UL 200	800	1902	1470	800	900	600	200	757	602
FI-OPI-UL 250	1000	1600	1654	900	660	750	250	947	653
FI-OPI-UL 300	1000	1952	1654	900	800	750	300	1136	685
FI-OPI-UL 350	1000	2103	1654	900	900	750	350	1136	685
FI-OPI-UL 400	1000	2350	1654	900	1100	750	400	1325	705
FI-OPI-UL 450	1000	2600	1654	900	1200	750	450	1514	737

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	A	B	C	D	E	F			
FI-OPI-UL 500	1100	2433	1756	1000	1200	800	500	1893	877
FI-OPI-UL 600	1170	2576	1828	1000	1350	800	600	2271	949
FI-OPI-UL 700	1270	2573	1930	1150	1350	860	700	2650	980
FI-OPI-UL 800	1270	2873	1930	1150	1400	860	800	3028	1038
FI-OPI-UL 900	1360	2845	2024	1200	1400	900	900	3407	1135
FI-OPI-UL 1000	1450	2808	2114	1250	1450	950	1000	3785	1253
FI-OPI-UL 1100	1450	2978	2114	1250	1450	950	1100	4164	1296
FI-OPI-UL 1200	1450	3278	2114	1250	1450	950	1200	4542	1374
FI-OPI-UL 1300	1600	3008	2265	1400	1500	1050	1300	4921	1591
FI-OPI-UL 1400	1600	3188	2265	1400	1500	1050	1400	5299	1650
FI-OPI-UL 1500	1600	3378	2265	1400	1500	1050	1500	5678	1711
FI-OPI-UL 1600	1750	3107	2417	1500	1500	1150	1600	6056	1775
FI-OPI-UL 1700	1750	3267	2417	1500	1500	1150	1700	6435	1831
FI-OPI-UL 1800	1750	3407	2417	1500	1500	1150	1800	6813	1880
FI-OPI-UL 1900	1750	3577	2417	1500	1900	1150	1900	7192	1941
FI-OPI-UL 2000	1960	3132	2676	1700	1400	1250	2000	7570	2383
FI-OPI-UL 2200	1960	3382	2676	1700	1500	1250	2200	8327	2506
FI-OPI-UL 2400	2100	3286	2817	1850	1500	1300	2400	9084	2674
FI-OPI-UL 2600	2100	3476	2817	1850	1500	1300	2600	9841	2776
FI-OPI-UL 2800	2200	3438	2918	1950	1500	1350	2800	10598	2891

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	A	B	C	D	E	F			
FI-OPI-UL 3000	2200	3648	2918	1950	1500	1350	3000	11355	3008
FI-OPI-UL 3200	2200	3858	2918	1950	1900	1350	3200	12112	3124
FI-OPI-UL 3400	2200	4078	2918	1950	1900	1350	3400	12869	3247
FI-OPI-UL 3600	2200	4278	2918	1950	2100	1350	3600	13626	3357
FI-OPI-UL 3800	2200	4478	2918	1950	2500	1350	3800	14383	3467
FI-OPI-UL 4000	2200	4678	2918	1950	2700	1350	4000	15140	3579