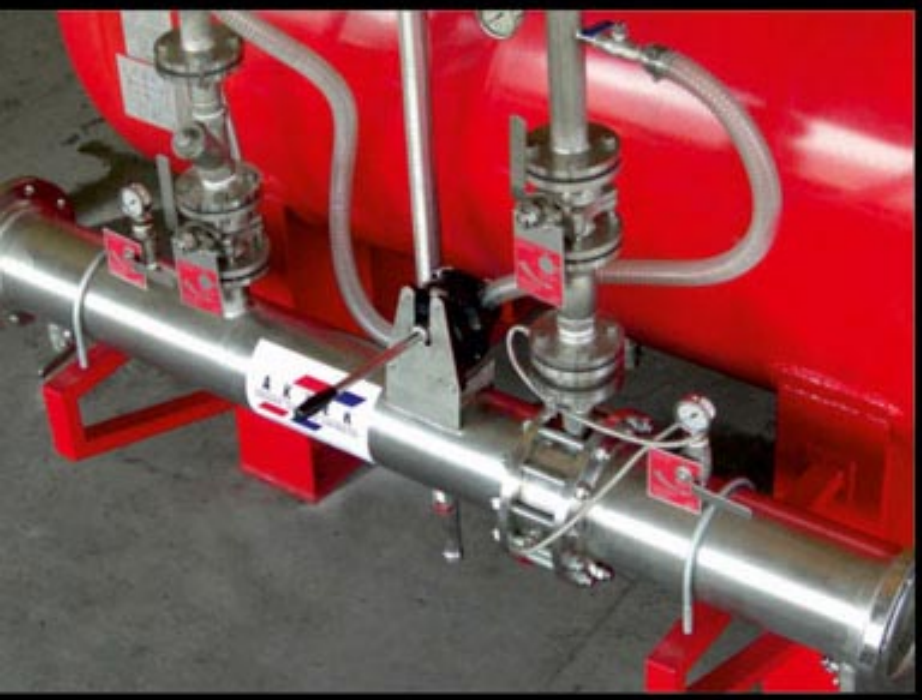
BLADDER TANK

Fire AKTEK

TECHNICAL DOCUMENT



Fire AKTEK

HIGH PERFORMANCE REINFORCED SUPER BLADDER

This Pressure Equipment has been designed and manufactured in accordance with the latest technical developments and complies with the applicable European Directive.

The design has been assessed by B.V. according to the Pressure Equipment Directive 97/23/EG and it has been established that the essential safety requirements have been met, hence, this equipment is CE-marked.

GENERAL SPECIFICATION
100 STANDARD MODELS

HIGH PERFORMANCE
REINFORCED SUPER BLADDER

AKTEK PRE-PIPED Bladder Tank Foam Unit

AKTEK Bladder Tanks are one component in a balance pressure foam proportioning system. It requires no external power other than water pressure to ensure correct operation. Both vertical and horizontal bladder tanks are designed and constructed in accordance with the latest revisions to ASME/DIN code. Proportioning is the introduction of foam concentrate into a flowing water stream to produce a foam solution. AKTEK offers a variety of proportioning equipment that will accurately accomplish this task with various types of systems such as Bladder tanks, balance pressure proportioning systems and inline balance proportioning systems.

Vertical and Horizontal Bladder Tanks

(AKTEK line of NFPA11 APPROVED BV TURKEY) vertical and horizontal bladder tank systems are available from 50 gallons to 3,500 gallons in the vertical and 100 gallons to 6,000 gallons in the horizontal style. These systems provide a dependable and cost-effective foam fire protection for a variety of flammable/combustible hazard areas and because water is the primary operating medium, they are easy to operate and maintain. Bladder tanks are frequently used in small aircraft hangers, warehouses, helicopter decks, and storage facilities. When the tank is in operation, water is applied to the outside surface of the bladder and subsequently displaces the foam concentrate, which is contained inside the bladder, which then makes its way to the proportioning device and then is injected into the water stream.
Bladder is manufactured in extremely durable material which has a ASTM bursting pressure in excess of 56 bar and constructed to conform to the inside dimensions of the tank.
Tanks are supplied with brass trimmed valves with Teflon seats.
All valves are labelled showing normal working conditions
All tanks are oversized to allow for any thermal expansion of the foam concentrate
All tanks are certified and supplied with a label identifying the type of foam concentrate the system is designed for and the percentage ratio and tank size .
All tanks include the following trim valve packages: tank shell drain/fill valve; tank shell vent valve, bladder vent valve and bladder drain/fill valve.
The vertical and horizontal bladder tanks are designed and constructed in accordance with the latest revisions to ASME code, Section VIII for unfired pressure vessels with a working pressure of 12,5 bar and tested to one and one half times this pressure.

Specifications

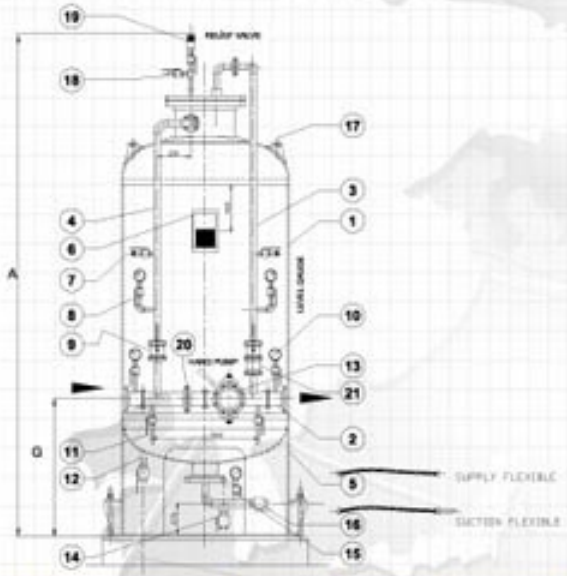
The tank shell is constructed of steel, complying with ASME specifications, possessing a tensile strength of not less than 20,000 psi. The circumferential, as well as the longitudinal body seam, are machine welded. The tank interior is sand blasted white and all welds and edges are ground smooth. The tank shell water inlet is screened to prevent bladder blow out or the entrapment of debris between the tank shell and the bladder.
All other openings greater than 1" are also screened to prevent bladder blow out. The vertical tank assembly is supported by a continuous skirt with access holes for the bladder drain/fill valve and the tank shell drain/fill valve. Four feet are provided for anchoring the tank. The horizontal assembly is supported on two saddles welded to the tank and fitted with anchoring holes.
Bladder is manufactured of nylon reinforced Buna-N. The bladder material shall have a ASTM burst pressure in excess of 56 bar and is constructed to conform to the inside dimensions of the tank.
The diameter of the vertical tank skirt is equal to the shell diameter to give greater stability.
Tanks are supplied with brass trim valves with Teflon seats and permanently mounted to the tank.
All valves are labelled showing normal working position.
Lifting lugs are permanently welded to the tank with eyes of approximately 1½" diameter.
Both the vertical and horizontal tanks contain a perforated PVC center tube that permits greater agent discharge.
All tanks are approximately 10% oversized to allow for any thermal expansion of the foam concentrate.
All tanks are supplied with a label which identifies the type of foam concentrate the system is designed for, the percentage ratio and the tank size. Tanks are painted red enamel.

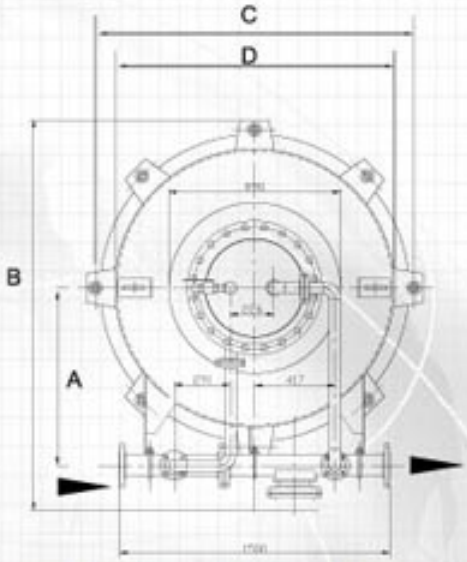
Options

Coal tar epoxy for coating the interior shell of the tank (for use in salt water environment).

Sight glass

Proportioner pre-piped onto tank assembly.
Primed red epoxy finish.
Custom fabrication of specialty materials, dimensions and capacities.
Actuated valves for water/concentrate.
Stainless steel trim.
Insulation and heat tracing packages.
Foam concentrate outlets and water inlets are 2" NPT on tanks up to 450 gallons. For tank capacities over 450 gallons, foam concentrate outlets and water inlets are 3" NPT.





P/S No	Capacity		Tank Diameter	Total Height	Collector Level	Anchor Circle Dia.	Dist. Tank CL-Header CL	Total Width	Weight	Header Diameter
AKTEK CODE	(Gallons)	(Liters)	ØD (mm)	H (mm)	G (mm)	ØC (mm)	A (mm)	B (mm)	(kg)	Ød (inch)
VBTPP200	53	200	600	2256	700	750	405	1030	150	2 1/2"-3"-4
VBTPP300	79	300	700	2390	700	850	473	1148	200	2 1/2"-3"-4
VBTPP400	106	400	800	2424	900	950	540	1265	160	2 1/2"-3"-4
VBTPP500	132	500	900	2458	900	1050	608	1383	200	2 1/2"-3"-4
VBTPP600	159	600	1000	2492	900	1150	675	1500	200	2 1/2"-3"-4
VBTPP700	185	700	1000	2592	900	1150	675	1500	219	3"-4"-6"
VBTPP800	212	800	1000	2692	900	1150	675	1500	250	3"-4"-6"
VBTPP900	238	900	1000	2892	900	1150	675	1500	281	3"-4"-6"
VBTPP1000	265	1.000	1000	2942	900	1150	675	1500	313	3"-4"-6"
VBTPP1250	331	1.250	1000	3292	900	1150	675	1500	305	3"-4"-6"
VBTPP1500	397	1.500	1000	3692	900	1150	675	1500	366	3"-4"-6"
VBTPP1750	463	1.750	1100	3576	900	1250	743	1618	455	3"-4"-6"
VBTPP2000	529	2.000	1100	3826	900	1250	743	1618	519	3"-4"-6"
VBTPP2500	661	2.500	1200	3960	900	1350	810	1735	758	3"-4"-6"-8"
VBTPP3000	794	3.000	1300	4044	900	1450	878	1853	909	3"-4"-6"-8"
VBTPP3500	926	3.500	1400	4078	900	1550	945	1970	1061	3"-4"-6"-8"
VBTPP4000	1058	4.000	1450	4345	900	1650	979	2054	1143	3"-4"-6"-8"
VBTPP4500	1190	4.500	1500	4412	900	1700	1013	2113	1286	3"-4"-6"-8"
VBTPP5000	1323	5.000	1600	4396	900	1800	1080	2230	1351	3"-4"-6"-8"
VBTPP5500	1455	5.500	1600	4646	900	1800	1080	2230	1486	3"-4"-6"-8"
VBTPP6000	1587	6.000	1750	4447	900	1950	1181	2406	1622	3"-4"-6"-8"
VBTPP6500	1719	6.500	1800	4514	900	2000	1215	2465	1711	3"-4"-6"-8"
VBTPP7000	1852	7.000	2000	4282	900	2200	1350	2700	1842	3"-4"-6"-8"
VBTPP7500	1984	7.500	2000	4432	900	2200	1350	2700	1974	3"-4"-6"-8"
VBTPP8000	2116	8.000	2000	4582	900	2200	1350	2700	2105	3"-4"-6"-8"
VBTPP8500	2248	8.500	2000	4732	900	2200	1350	2700	2237	3"-4"-6"-8"
VBTPP9000	2381	9.000	2000	4882	900	2200	1350	2700	2250	3"-4"-6"-8"
VBTPP9500	2513	9.500	2000	5032	900	2200	1350	2700	2375	3"-4"-6"-8"
VBTPP10000	2645	10.000	2000	5232	900	2200	1350	2700	2500	3"-4"-6"-8"
VBTPP10500	2777	10.500	2000	5382	900	2200	1350	2700	2625	3"-4"-6"-8"
VBTPP11000	2910	11.000	2000	5532	900	2200	1350	2700	2683	3"-4"-6"-8"
VBTPP11500	3042	11.500	2000	5732	900	2200	1350	2700	2738	3"-4"-6"-8"
VBTPP12000	3174	12.000	2000	5882	900	2200	1350	2700	2857	3"-4"-6"-8"

AKTEK
ENGINEER- FABRICATOR -CONTRACTOR

AKTEK TECHNOLOGY ENGINEERING CO.
Yeni Mh. Başöğretmen Cd. Dostluk Okulu Karşısı
Yazlık - Gölcük - Kocaeli / TURKEY
Tel: +90 262 335 15 98 Fax: +90 262 335 15 67
E-mail: info@aktekeng.com Web: www.aktekfire.com