

Vertical & Horizontal Bladder Tanks Models MTB-A

General Description

The SKUM MTB-A bladder tank is a steel pressure vessel which stores a foam concentrate contained within an elastomeric bladder. The concentrate is discharged from the tank by incoming water applying pressure to the bladder. This applied energy is transferred to the concentrate, supplying pressurized concentrate to the proportioner (Proportioners are separate items described on a separate data sheet). SKUM bladder tanks are available in both vertical and horizontal tank models and a variety of nominal capacities as listed in the tank information tables. Both tank models feature perforated center tubes which allow improved agent discharge.

Features incorporated into the SKUM bladder tanks include the following:

- Water pressurized bladder construction, alleviating the requirement for foam pumps or other energy sources
- Valves that are pinned in the normal operative positions and are supplied with nameplates identifying their functions and operating instructions
- Bladder tanks supplied with corrosion-resistant piping
- Exterior tank surfaces finished in red standard system paint or coated with an epoxy "CR" red finish for use in marine or corrosive environments
- Tanks with a high build epoxy coated interior for use with both fresh and salt water

Product Features

- Vertical (MTB-V-A) & Horizontal (MTB-H-A) models
- Capacities up to 12,000 Litres
- Standard Red or Epoxy Red paint coating models
- Epoxy models to work either with fresh or sea water
- All models UL Listed
- All models as per ASME code design
- Models conform to PED directive 97/23/EC

Listings and Approvals

The SKUM MTB-A vertical and horizontal tank assemblies are both Underwriters Laboratories listed with various proportioners and foam concentrates and bear the (UL) label along with an American Society of Mechanical Engineers (ASME) code stamp. Bladder tanks 757 Litre (200 gal) and larger are CE marked in conformance with the 97/23/EC Pressure Equipment Directive. Tanks less than 757 Litre (200 gal) are acceptable based on sound engineering practices of ASME code.



MTB-V-A



MTB-H-A

Applications

The SKUM MTB-A bladder tank is one component in a balanced pressure proportioning system. Its operation requires no external power other than a pressurized water system. It can be used in a proportioning system incorporating single or multiple proportioners and any suitable discharge device.

SKUM bladder tanks have numerous applications including truck loading racks, aircraft hangers, dip tanks, pump rooms, helipads, sprinkler systems, etc.

Specifications

The SKUM MTB-A vertical and horizontal bladder tanks are designed and constructed in accordance with the latest revisions to ASME code, Section VIII, Division I, for unfired pressure vessels with a maximum working pressure of 12.1 bar and tested to at least 17.6 bar. The tank shell overall dimensions are indicated in the appropriate diagram and corresponding information table. The tank is constructed of steel complying to ASME specifications possessing a tensile strength of not less than 482.6 MPa.

The circumferential, as well as the longitudinal body seam, are machine welded and radiographed when applicable by ASME codes.

The tank heads are made from 2 to 1 elliptical to ensure strength while reducing overall tank weight. All 25 mm diameter and larger tank openings on the outside of the bladder are divided to prevent bladder blow-out. The tank includes a water channel between the water inlet opening and water drain opening to establish a water path between the tank shell interior and the bladder to ensure proper water drainage.

The tank interior have all welds and edges ground smooth. It is cleaned, grit blasted to a near white surface, and immediately coated with a high build epoxy coating. The tank data plate is of a material compatible with the tank shell and is seal welded with appropriate procedure and material to the tank (This ensures that the data plate will reflect the overall condition of the tank and that no corrosion occurs undetected behind the data plate). The data plate contains as a minimum ASME code stamp: year of manufacture, working pressure, board number, material thickness, temperature, and type of head.

The vertical tank assembly is supported by a continuous skirt of a diameter equal to the tank with four feet drilled for anchoring. The horizontal tank assembly is supported by two saddles permanently welded to the tank and drilled for anchoring. These supports provide maximum stability and a maximum amount of bearing area which protects against horizontal and vertical forces such as vibration and shifting.

Lifting lugs are included with a clear hole of not less than 51 mm in diameter.

The tank contains a flexible bladder of material tested by Underwriters Laboratories for compatibility with the agent to be used. The bladder material is constructed to conform with the inside tank dimensions.

Both the vertical and horizontal tank assemblies contain perforated center tubes of P.V.C. or other material compatible with the agent, with holes of no more than 19 mm diameter.

The vertical tank assembly contains a single perforated center tube. The horizontal tank assembly contains both vertical and horizontal perforated center tubes connected with a cross fitting of compatible material.

The following are assembled to each tank: a bladder drain/fill valve, bladder vent/fill valve, tank shell drain valve, and tank shell vent valve. These valves are 1 in., 1/4-turn ball valves with bronze bodies, hard chromium-plated bronze ball, bronze stem, stainless steel locking nut and handle, and high performance Teflon seats and stuffing box ring. Each valve has a nameplate secured to it depicting the valve name and operating position. Also, the valve are having a ring pin and chain attached for securing the valve in the operating position. The valve names coincide exactly with those in the tank instruction manual. All valves are piped out from under the tank for easy access. All pipes are Schedule 40 ASTM-B-43 and all fittings are ASTM B-62 or B-584 bronze. The bladder drain/fill piping includes a tee with 1/2 in. plug for future sight gauge connection (See sight gauge data sheet).

The tank exterior is prepared and finished in accordance with our specific Red paint Standard or "CR" (Corrosion Resistant) red as per SKUM specification.

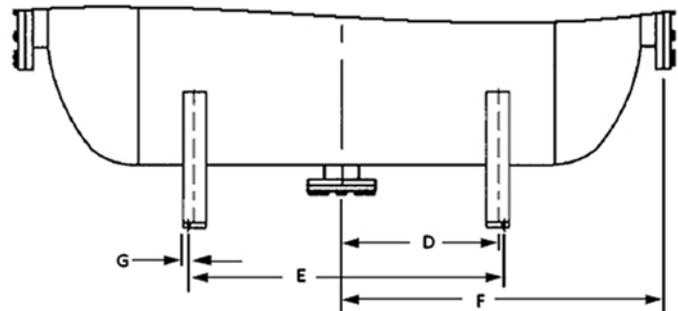
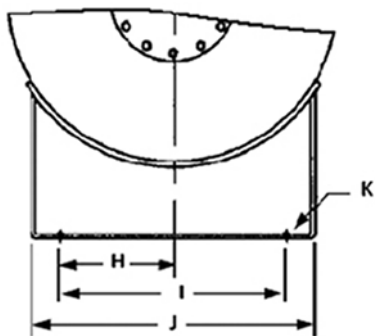
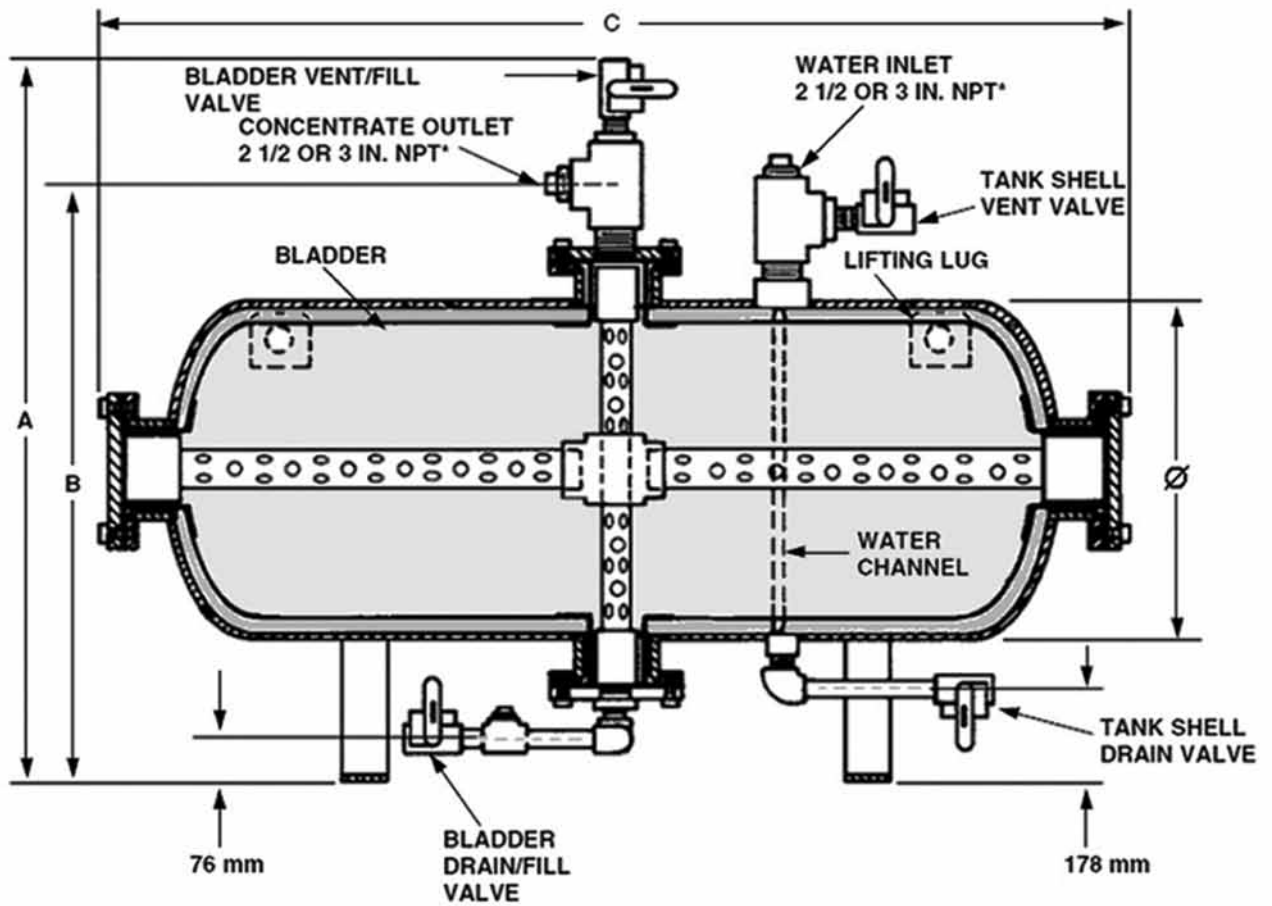
Printed filling and maintenance manuals are supplied with each tank. The manual is an important document to be read before installation that contains system schematic, installation instructions, initial fill procedures, major and minor refill procedures, inspection and maintenance procedures, sight gauge use instructions, service and repair procedures, and field inspection manual.

Ordering Information

The MTB-A SKUM bladder tank shipping assembly part numbers and approximate shipping weights are identified in the following tables. Part numbers vary according to tank requirements.

For tanks with special engineered options, such as special pressure ratings, seismic ratings, or trim and finish options, contact our Technical Services Department. Please email info@skum.com

Horizontal Tanks MTB-H-A Dimensions



For dimensions A to L please see table on next page

Horizontal Tanks MTB-H-A Dimensions

Model	Nominal Capacity		Inlet Outlet	Dimensions (mm)												Approx Ship Weight	Bladder Tank Ordering No.		
	L	Gal		NPT	Ø	A	B	C	D	E	F	G	H	I	J		K	L	Kg
MTB-H-A 380	380	100	2½"	610	1321	1118	1880	406	857	902	16		254	457	16	76	327	438429	438455
MTB-H-A 570	570	150	2½"	762	1473	0	1880	457	959	889	16	203	406	610	16	76	476	438430	438456
MTB-H-A 760	760	200	2½"	762	1473	0	2311	508	1061	1118	16	203	406	610	16	76	599	438431	438457
MTB-H-A 1135	1135	300	2½"	914	1626	1422	2438	508	1061	1168	16	279	559	762	16	76	726	438432	438458
MTB-H-A 1515	1515	400	2½"	1219	1930	1727	1956	400	857	927	22	432	864	1067	22	102	1043	438433	438459
MTB-H-A 1890	1890	500	2½"	1219	1930	1727	2286	495	1048	1092	22	432	864	1067	22	102	1157	438434	438460
MTB-H-A 2270	2270	600	2½"	1219	1930	1727	2616	572	1200	1257	22	432	864	1067	22	102	0	438435	438461
MTB-H-A 2650	2650	700	2½"	1219	1930	1727	2972	660	1378	1435	22	432	864	1067	22	102	1383	438436	438462
MTB-H-A 3030	3030	800	2½"	1219	1930	1727	3327	749	1556	1613	22	432	864	1067	22	102	1474	438437	438463
MTB-H-A 3400	3400	900	2½"	1219	1930	1727	3683	838	1734	1791	22	432	864	1067	22	102	1551	438438	438464
MTB-H-A 3785	3785	1000	2½"	1219	1930	1727	4037	927	1911	1969	22	432	864	1067	22	102	1633	438439	438465
MTB-H-A 4160	4160	1100	3"	1524	2235	2032	3124	711	1480	1524	22	584	1168	1372	25	102	1882	438440	438466
MTB-H-A 4540	4540	1200	3"	1524	2235	2032	3353	775	1607	1638	22	584	1168	1372	25	102	1982	438441	438467
MTB-H-A 4920	4920	1300	3"	1524	2235	2032	3581	826	1708	1753	22	584	1168	1372	25	102	2064	438442	438468
MTB-H-A 5300	5300	1400	3"	1524	2235	2032	3810	889	1835	1867	22	584	1168	1372	25	102	2159	438443	438469
MTB-H-A 5680	5680	1500	3"	1524	2235	2032	4039	940	1937	1981	22	584	1168	1372	25	102	2441	438444	438470
MTB-H-A 6050	6050	1600	3"	1524	2235	2032	4293	1003	2064	2235	22	584	1168	1372	25	102	2327	438445	438471
MTB-H-A 6430	6430	1700	3"	1524	2235	2032	4521	1067	2191	2223	22	584	1168	1372	25	102	2418	438446	438472
MTB-H-A 6800	6800	1800	3"	1524	2235	2032	4750	1118	2292	2337	22	584	1168	1372	25	102	2499	438447	438473
MTB-H-A 7190	7190	1900	3"	1524	2235	2032	4978	1181	2419	2451	22	584	1168	1372	25	102	2581	438448	438474
MTB-H-A 7570	7570	2000	3"	1829	2540	2362	3912	914	1886	1834	22	737	1473	1676	25	102	2735	438449	438475
MTB-H-A 8330	8330	2200	3"	1829	2540	2362	4216	991	2038	2075	22	737	1473	1676	25	102	2898	438450	438476
MTB-H-A 9080	9080	2400	3"	1829	2540	2362	4572	1080	2216	2240	22	737	1473	1676	25	102	3071	438451	438477
MTB-H-A 9840	9840	2600	3"	1829	2540	2362	4902	1156	2369	2405	22	737	1473	1676	25	102	3261	438452	438478
MTB-H-A 10600	10600	2800	3"	1829	2540	2362	5207	1232	2521	2558	22	737	1473	1676	25	102	3393	438453	438479
MTB-H-A 11350	11350	3000	3"	1829	2540	2362	5537	1321	2699	2723	22	737	1473	1676	25	102	3570	438454	438480

Vertical Tanks MTB-H V-A Dimensions

Model	Nominal Capacity		Inlet Outlet		Foam Outlet		Dimensions (mm)										Approx Weight	Bladder Tank Ordering No.	
	L	Gal	NPT	NPT	Ø	A	B	C	D	E	F	G	H	I	Kg	Epoxy	Std Red		
MTB-H-A 190	190	50	2 1/2"	2 1/2"	610	1626	1448	610	191	508	483	495	43	25	213	438395	438412		
MTB-H-A 380	380	100	2 1/2"	2 1/2"	610	2286	2083	1321	216	483	483	495	43	25	318	438396	438413		
MTB-H-A 570	570	150	2 1/2"	2 1/2"	762	2286	2083	1245	267	533	533	602	43	25	445	438397	438414		
MTB-H-A 760	760	200	2 1/2"	2 1/2"	762	2743	2540	1727	267	559	533	602	43	25	585	438398	438415		
MTB-H-A 1135	1135	300	2 1/2"	2 1/2"	914	2845	2642	1778	267	635	610	709	43	25	703	438399	438416		
MTB-H-A 1515	1515	400	2 1/2"	2 1/2"	1219	2350	2146	1397	267	813	762	942	56	25	1021	438400	438417		
MTB-H-A 1890	1890	500	2 1/2"	2 1/2"	1219	2680	2477	1854	267	813	762	942	56	25	1134	438401	438418		
MTB-H-A 2270	2270	600	2 1/2"	2 1/2"	1219	2997	2794	2210	267	813	762	942	56	25	1166	438402	438419		
MTB-H-A 2650	2650	700	2 1/2"	2 1/2"	1219	3353	3150	2235	267	813	762	942	56	25	1288	438403	438420		
MTB-H-A 3030	3030	800	2 1/2"	2 1/2"	1219	3721	3518	2413	267	813	762	942	56	25	1452	438404	438421		
MTB-H-A 3400	3400	900	2 1/2"	2 1/2"	1219	4077	3874	2692	267	813	762	942	56	25	1542	438405	438422		
MTB-H-A 3785	3785	1000	2 1/2"	2 1/2"	1219	4432	4229	2946	267	813	762	942	56	25	1633	438406	438423		
MTB-H-A 4160	4160	1100	3"	3"	1524	3658	3454	2286	470	940	914	1158	56	25	1701	438407	438424		
MTB-H-A 4540	4540	1200	3"	3"	1524	3886	3683	2438	470	940	914	1158	56	25	1792	438408	438425		
MTB-H-A 4920	4920	1300	3"	3"	1524	4115	3912	2642	470	940	914	1158	56	25	1878	438409	438426		
MTB-H-A 5300	5300	1400	3"	3"	1524	4343	4140	2794	470	940	914	1158	56	25	1973	438410	438427		
MTB-H-A 5680	5680	1500	3"	3"	1524	4572	4343	2972	470	940	914	1158	56	25	2055	438411	438428		

For dimensions A to I please see table above

