

Foam Proportioning

Horizontal Bladder Tanks



Orion horizontal bladder tanks are supplied with capacities ranging from 400 litres to more than 12,000 litres. We will also manufacture tanks to other sizes on request.

Orion Bladder Tanks are manufactured to AS1210 but other suitable standards will be accommodated if required. Each tank is finished with a two pack epoxy paint system externally before delivery. The standard colour is AS 2700 R13, Signal Red. The maximum working pressure for the standard tanks is 1,200 kPa and the test pressure is 1,770 kPa.

Tanks are fitted with two ball valves on the foam connections and a sight glass is standard.

Bladder tanks are made in both vertical and horizontal configurations depending on the requirements of the installation. For very large capacity tanks (over 7,000 litres) the horizontal type is recommended.

We also build customised tank modules for major projects. Tanks can be made to various national standards, to user required operating pressures and from different materials.



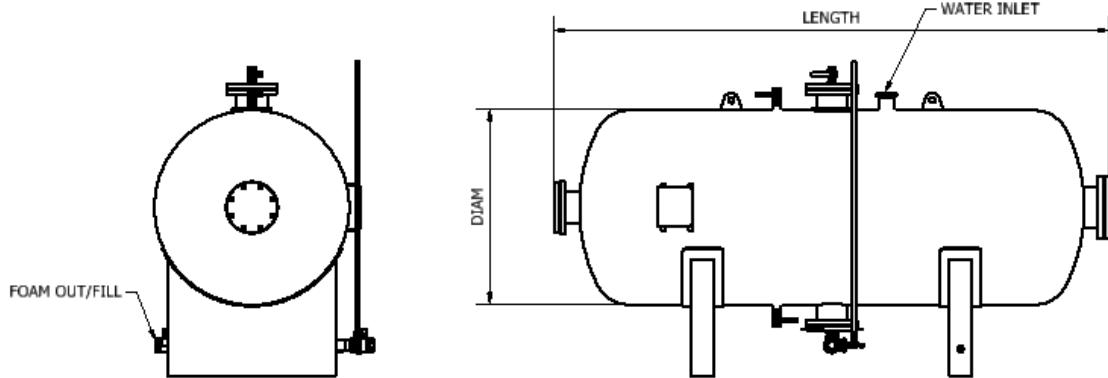
ORION FIRE ENGINEERING PTY LIMITED

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Tank Size	Model #	Diameter mm	Length mm	Water Inlet mm	Foam Outlet mm	Weight Kg (Approx)
400 Litre	BTH-40-12	610	2,000	50	40	235
600 Litre	BTH-60-12	762	1,910	50	40	350
800 Litre	BTH-80-12	762	2,400	50	40	475
1000 Litre	BTH-100-12	914	2,250	50	50	595
1200 Litre	BTH-120-12	914	2,560	50	50	700
1500 Litre	BTH-150-12	1067	2,540	50	50	850
2000 Litre	BTH-200-12	1067	3,050	50	50	1085
2500 Litre	BTH-250-12	1219	2,940	65	50	1136
3000 Litre	BTH-300-12	1219	3,410	65	65	1465
3500 Litre	BTH-350-12	1219	3,870	65	65	1620
4000 Litre	BTH-400-12	1524	3,040	65	65	1705
4500 Litre	BTH-450-12	1524	3,330	65	65	1805
5000 Litre	BTH-500-12	1524	3,560	65	65	2075
5500 Litre	BTH-550-12	1524	3,930	65	65	2265
6000 Litre	BTH-600-12	1829	3,180	65	65	2450
7000 Litre	BTH-700-12	1829	3,595	65	65	2505
8000 Litre	BTH-800-12	1829	4,005	65	65	2730
9000 Litre	BTH-900-12	1829	4,420	65	80	3020
10000 Litre	BTH-1000-12	1829	4,830	65	80	3150

Dimensions & connections sizes may vary.

Options.

Special paint finish.

Alternative paint colours.

Internal coating of the tank.

Relief valve (required if the tank may be exposed to fire).

Access ladder.

Factory assembly with proportioner.

Custom design pressure.

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Bladder Tank Design Requirements

Standard bladder tanks are supplied simply with the main closure valves. When installing the proportioner away from the tank it is essential to keep the length of pipe very short. Tanks can also be supplied with proportioners pre-assembled.

Proportioners always require five (5) diameters of straight pipe before and after without any valves, size changes or major branches that would disturb the flow. Inaccurate proportioning and higher friction losses will result if this rule is not followed.

The proportioner must be mounted above the top of the tank unless a water operated concentrate valve is fitted.

The service (design) pressure for a bladder tank must be no less than the maximum fire main water pressure. Standard tanks are rated for 1,200 kPa. If the fire main pressure can exceed 1,200 kPa then a custom design pressure must be specified for the tank. We build high pressure tanks regularly. It is the owner or fire system designer's responsibility to ensure that the fire main pressure does not exceed the design pressure for the tank.

A pressure relief valve may need to be fitted to the bladder tank if the tank is located in a position where it could be exposed to a fire. This relief valve is solely for relieving excess pressure that may occur if the tank is overheated by a fire. It will not have the capacity to protect against excess fire main pressure. It is the owner or system designer's responsibility to establish whether a relief valve is required.

Access to the tank requires a minimum 1 meter clearance from walls. Clear area is also required to service the tank: at least equal to the tank length on the side with the larger end flange and one tank diameter above.

Friction losses in the water inlet piping must be less than 15 kPa. Friction losses in the foam concentrate piping must also be less than 15 kPa.

Part Numbering

Standard part numbering is given in the table above. If additional options are required the part number can be extended. Example BTH-60-12-XRIL

Where:-

BTH is for Horizontal bladder tank.

60 is the capacity in litres divided by 10.

12 is the design pressure in Bar.

X if a special paint finish is required.

R if a relief valve is required.

I if internal coating of the tank is required.

L if a ladder is required.

P if a pipe support is required.

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