

# Foam Proportioning

## Vertical Bladder Tanks



**SAFETY INDUSTRIES**  
Pty Limited

### Description

Orion bladder tanks are supplied with capacities ranging from 100 litres to 7,000 litres. We will also manufacture tanks to other sizes on request.

Orion Bladder Tanks are designed 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. Tanks may also, optionally, be internally epoxy lined. 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 outlet and a sight glass.

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 required.

### 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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## ORION FIRE ENGINEERING PTY LIMITED

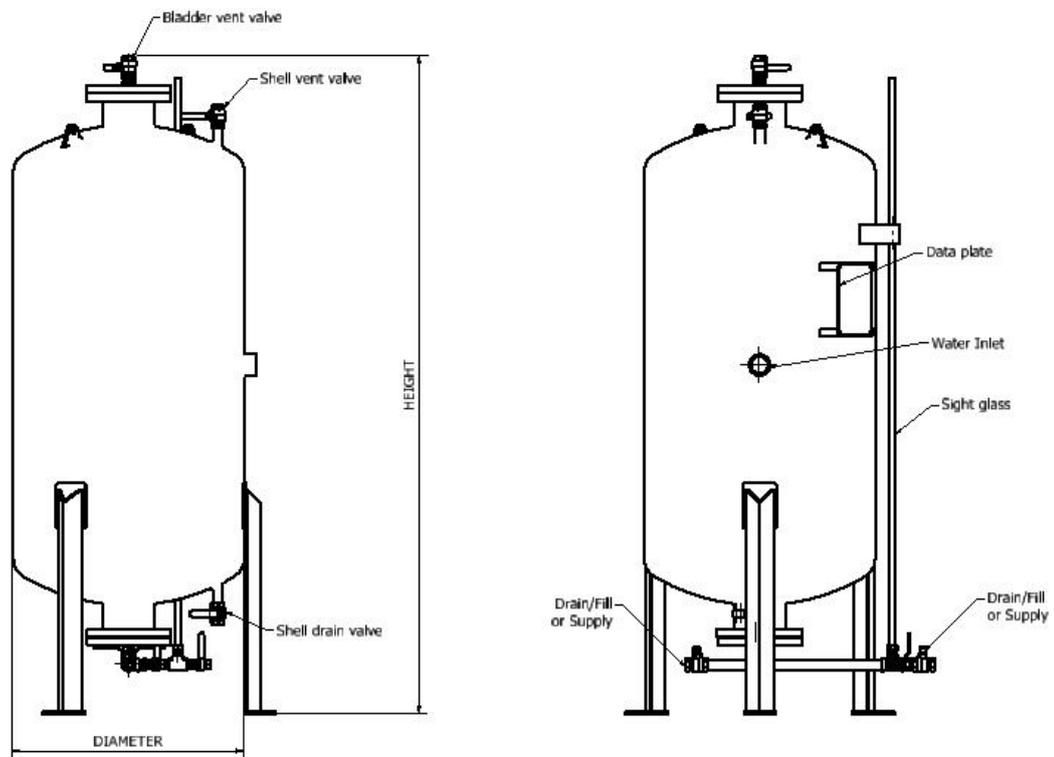
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## Specifications



Tank Size	Model #	Diameter mm	Water Inlet mm	Foam Outlet mm	Approx Weight Kg
400 Litre	BTV-40-12	610	50	40	215
600 Litre	BTV-60-12	762	50	40	330
800 Litre	BTV-80-12	762	50	40	455
1000 Litre	BTV-100-12	914	50	50	575
1200 Litre	BTV-120-12	914	50	50	680
1500 Litre	BTV-150-12	1067	50	50	830
2000 Litre	BTV-200-12	1067	50	50	1065
2500 Litre	BTV-250-12	1219	65	50	1116
3000 Litre	BTV-300-12	1219	65	65	1445
3500 Litre	BTV-350-12	1219	65	65	1600
4000 Litre	BTV-400-12	1524	65	65	1685
4500 Litre	BTV-450-12	1524	65	65	1785
5000 Litre	BTV-500-12	1524	65	65	2055
5500 Litre	BTV-550-12	1524	65	65	2245
6000 Litre	BTV-600-12	1829	65	65	2430
7000 Litre	BTV-700-12	1829	65	65	2485

Dimensions & connections sizes may vary.  
Custom sizes can be made on request.

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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 height above the tank to allow room for changing the bladder.

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 BTV-60-12-XRIL

Where:-

BTV is for Vertical 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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