

Aquazone Buffer Tanks

For Chilled and Heating Water Circuits





BUFFER TANKS

For Chilled and Heating Water Circuits

APPLICATIONS

- Chilled water
- Refrigeration process systems
- Heating water circuits
- Data Centres
- Hospitals
- Commercial
- Government projects



SYSTEM BUFFER CAPACITY

Sauverain buffer tanks are often incorporated into a chilled water system that has insufficient water volume throughout the piping network in relation to the chiller capacity. Adding a buffer tank creates extra volume and additional buffer capacity, addressing problems such as excessive compressor cycling, poor temperature control and erratic system operation.

THERMAL ENERGY STORAGE

With the addition of sparge pipes and baffles, Sauverain tanks can be used as thermal energy storage tanks. Operating the chiller at off-peak times gives the Facility Manager a strategy for reducing energy costs.

OFF-PEAK STORAGE

In some cases, when a large building is undergoing refurbishments or extensions, installing large buffer tanks and utilising the existing chiller can defer the capital expenditure of a larger chiller. The tanks are insulated to keep stored water chilled. This allows them to charge during off-peak periods, reducing the chiller's workload during peak periods the next day.

CHILLED AND HEATING WATER

Sauverain tanks can also be used in heating water systems. Internal sparge pipes can be provided to distribute incoming liquid evenly throughout the tank. The resulting temperature stratification, coupled with correctly sized insulation, provides an effective thermal energy storage tank for chilled and heating water applications. Contact our Sales Department for further information.



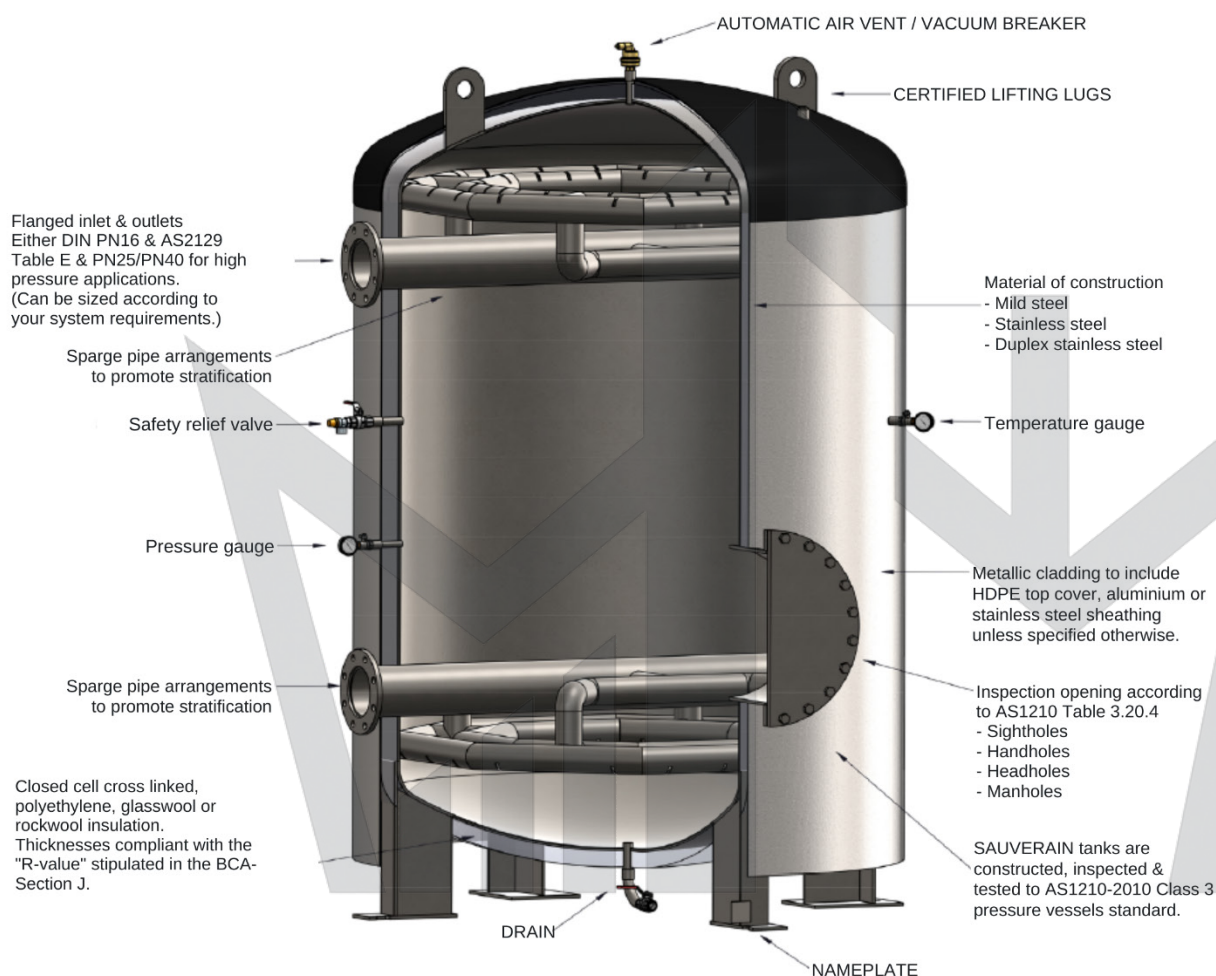


THERMAL ENERGY

Design Features

FEATURES TYPICALLY INCLUDE

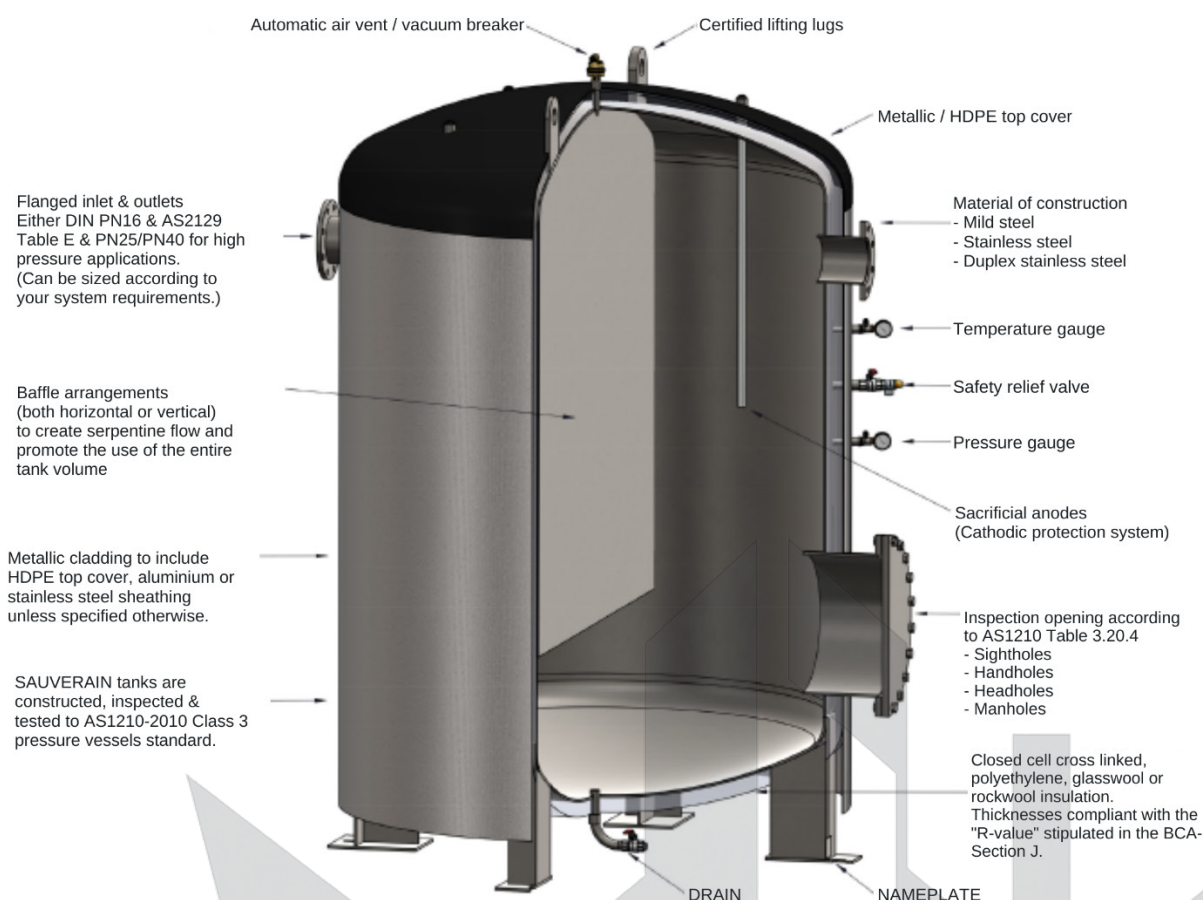
- Relief valve supplied loose to suit system pressure - please specify.
- Standard shell construction is carbon steel (stainless available on request)
- Temperature limits: 4°C - 99°C.
- Working pressures vary from 6 Bar to 10 Bar.
- Higher pressure ratings of 16 and 25 Bar available if required.





BUFFER TANK

Design Features



OPTIONAL EXTRAS & INSTRUMENTATION PACKAGES

All Sauverain Buffer Tanks can be supplied with a range of accessories. As standard, a Relief Valve will be supplied loose and should always be installed to provide protection against over pressurisation. Other accessories which are always quoted as Optional Extras include Cathodic Protection and Instrumentation Packages. Refer to our separate Technical Bulletin for information on Cathodic Protection.

Two different Instrumentation Packages are available: Deluxe and Economy.



ECONOMY PACKAGE

Includes the pressure gauge and Air Release Valve only.



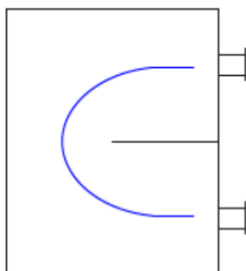
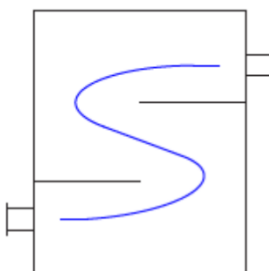
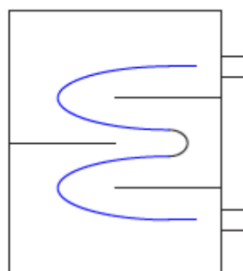
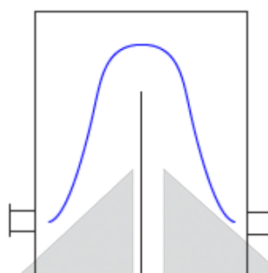
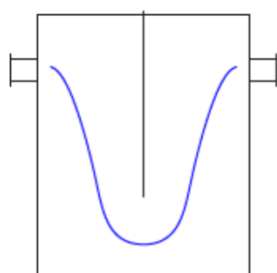
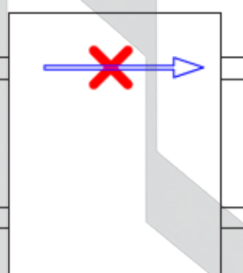
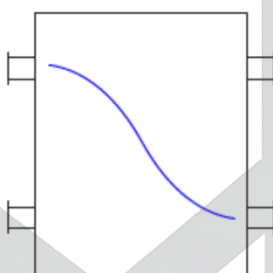
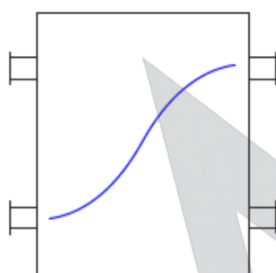
DELUXE PACKAGE

Includes Temperature Gauge, Thermowell, Auto Air Release Valve with large throat and $\frac{1}{2}$ connection and Pressure Gauge with 100mm face in accordance with AS1210.



BUFFER TANK

Internal Baffle Arrangements

1 BAFFLE**2 BAFFLES****3 BAFFLES****1 VERTICAL BAFFLE****NO BAFFLE**

NEVER ALLOW A
BUFFER TANK TO
SHORT CIRCUIT

INSTALLATION RECOMMENDATIONS

For tanks with no internal baffle/s, it is important to ensure diagonal pipe connections to avoid chiller short cycling. If the Tank is being used as a Buffer Tank to add additional volume to the circuit, we recommend installing on the return line. This will ensure the warmest water is delivered to the chiller (or in the case of a boiler/heat pump, the coldest water is delivered).

If the Tank is being used as a Storage Tank or Thermal Energy Tank, it must be installed on the supply line so it is charged by the heat source (chiller/boiler).

This will ensure the tank is always 'charged' with water equal to the output temperature of the heat source.

INSTALL LOCATION	HEATING WATER	
	INLET	OUTLET
Return Loop	High	Low (to the boiler)
Supply Loop	Low	High (to the field)

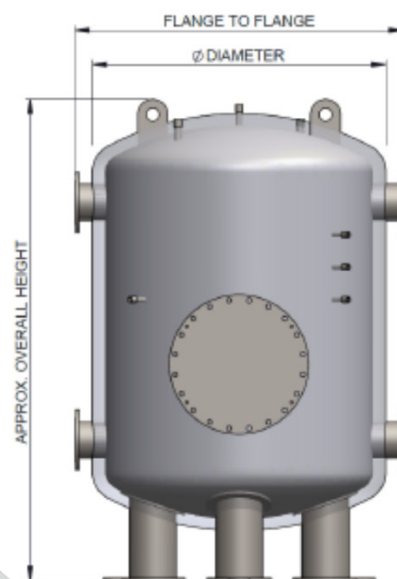
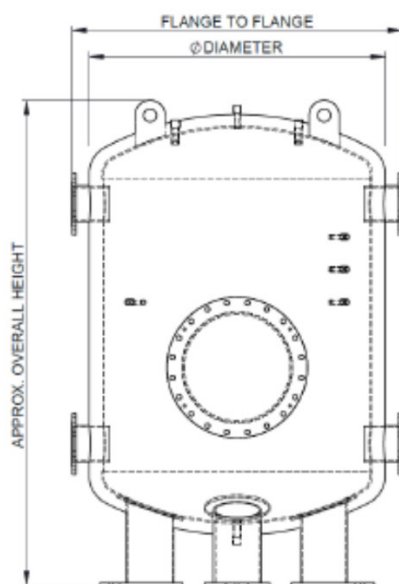
INSTALL LOCATION	CHILLED WATER	
	INLET	OUTLET
Return Loop	Low	High (to the field)
Supply Loop	High	Low (to the boiler)



BUFFER TANK

Standard Vertical - Dimensional Data

**NEVER ALLOW A
BUFFER TANK
TO SHORT CIRCUIT**



SIZE (L)	BASE MODEL NO.	INLET/ OUTLET	DIAMETER	FF	APPROX. OVERALL HEIGHT
300	AVBT300-C0	80NB	670	830	1790
500	AVBT500-C0	80NB	770	930	1910
750	AVBT750-C0	80NB	880	1040	2260
1000	AVBT1000-C0	100NB	1080	1240	2010
1500	AVBT1500-C0	100NB	1220	1380	2180
2000	AVBT2000-C0	150NB	1360	1520	2230
2500	AVBT2500-C0	150NB	1550	1710	2180
3000	AVBT3000-C0	150NB	1550	1710	2490
3500	AVBT 3500-C0	150NB	1550	1710	2790
4000	AVBT4000-C0	150NB	1800	1960	2490
5000	AVBT5000-C0	200NB	1800	1960	2870
5000	AVBT5000 (SQT)	200NB	1950	2110	2490
6000	AVBT6000-C0	200NB	1850	2010	3280
7500	AVBT7500-C0	200NB	1950	2330	3590
7500	AVBT7500 (SQT)	200NB	2170	2330	3000
10000	AVBT10000-C0	200NB	2170	2330	3810
15000	AVBT15000-C0	200NB	2170	2330	5370
20000	AVBT20000-C0	200NB	2170	2330	6910

*FF: Flange to flange dimension.

*Above dimensions include insulation and cladding.

*Please note: All sizes can vary and this table must not be used for construction purposes. Always confirm with Sales Office.

The above table contains dimension for our chilled water buffer tanks, C0 design.

Please contact our sales team for alternative variations.

The above is subject to change without prior notice.