



# CHILLED WATER BUFFER TANKS

ASME Commercial Buffer Tanks

## Frequently Asked Questions

**Q: What do buffer tanks do in a chilled water system?**

A: Buffer tanks provide extra water volume in a closed chilled water system.

**Q: Are buffer tanks used in every chilled water system?**

A: No. Some systems have an adequate volume of water in them so the extra storage provided by the buffer tank is not required.

**Q: How do they work?**

A: The added capacity, provided by the tank, reduces cycling of the compressor unit. This improves temperature control and provides more consistent system operation.

**Q: How is the water circulated inside the tank?**

A: The unit is designed with an internal baffle. As the system water enters the tank it is forced up and over the baffle before dropping back down to exit the tank. This ensures proper water circulation and full use of the tank volume.

**Q: Where in the chilled water loop is the tank installed?**

A: The tank should be installed at the suction side of the pump. This is considered the point of no pressure change.

**Q: Why are the flanges located at the bottom of the tank and not the top?**

A: The connections and the baffle are located at the bottom of the tank to maintain a lower center of gravity. If they were located at the top, the unit would be top heavy and more likely to tip over.

**Q: Will the unit work up-side down suspended from piping?**

A: Yes. Measures must be taken to ensure the wet weight of the vessel has been supported properly.

**Q: How do I calculate the wet weight of the tank?**

A: A gallon of water weighs 8.3 lbs. Take the volume of the tank and multiple it by 8.3 then add the ship weight of the tank. This will give you the wet weight.

**Q: What are the connections at the top & bottom of the tank used for?**

A: The top connection can be used for installing an air vent and the bottom can be used as a blow down connection. These connections can also remain plugged.

**Q: Are the units only available with flanged connections?**

A: No. Grooved connections are available up to 12" and threaded connections are available up to 4".



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