INSTRUCTIONS
FOR CHILLED WATER BUFFER TANK MAINTENANCE
MODELS: CVU/CVL 120 - 1000

⚠ WARNING

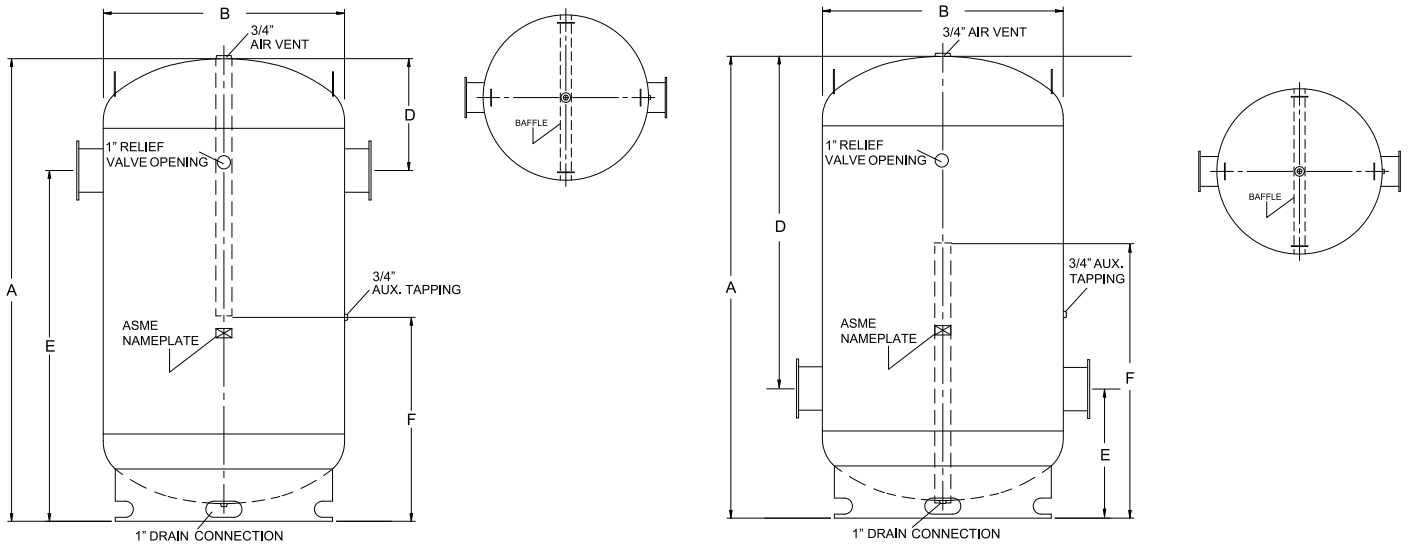
Use this vessel only in chilled water systems. DO NOT use in potable water systems. The installer must comply with all plumbing codes. DO NOT operate above the temperature or pressure specified on the rating plate. Failure to comply may result in personal injury, property damage, or death.

Application

Chiller manufacturers recommend a specific volume of water per ton of chiller capacity to maintain water temperature stability. These recommendations range from 3 to 5 gallons of system volume per ton of chiller capacity when used in a comfort cooling application to system volumes of 6 to 10 gallons per ton when used in a process cooling application where temperature stability is critical.

A new tank installation should have a regular inspection program set up initially. The first inspection should be within the first three months of operation. Once the tendency to accumulate sediment has been established, the inspection program can be modified to suit the water conditions. Typical inspection programs flush the tank at six-month intervals and clean the tank in yearly intervals.

Figure 1 *CVU & CVL Buffer tank dimensions, refer to table below*



Dimensions and Specifications

Chilled Water Buffer Tank w/ Upper Connections								
Model Number	**Gallon Capacity**	**A**	**B**	**D**	**E**	**F**	**Max. Conn. Diameter**	**Weight (lbs.)**
CVU120	120	56"	28"	20"	36"	19"	6"	298
CVU200	200	86"	28"	20"	66"	29"	6"	430
CVU300	300	76"	36"	23"	53"	25"	8"	533
CVU400	400	76"	42"	25"	52"	25"	8"	818
CVU500	500	87"	42"	25"	62"	29"	8"	930
CVU750	750	100"	48"	27"	73"	33"	8"	1430
CVU1000	1000	124"	48"	27"	97"	41"	8"	1733

Chilled Water Buffer Tank w/ Lower Connections								
Model Number	**Gallon Capacity**	**A**	**B**	**D**	**E**	**F**	**Max. Conn. Diameter**	**Weight (lbs.)**
CVL120	120	56"	28"	32"	24"	37"	6"	298
CVL200	200	86"	28"	62"	24"	57"	6"	430
CVL300	300	76"	36"	49"	27"	50"	8"	533
CVU400	400	76"	42"	48"	29"	50"	8"	818
CVL500	500	87"	42"	58"	29"	58"	8"	930
CVL750	750	100"	48"	69"	31"	66"	8"	1430
CVL1000	1000	124"	48"	93"	31"	82"	8"	1733

Flushing the Tank

Follow the procedure below to flush the tank:

1. Turn OFF all power to the chiller.
2. Turn OFF all power to the circulating pump.
3. Close the valve on the water outlet on the top of the buffer tank.
4. Ensure that the drain located on the bottom of the tank is routed to a floor drain with adequate capacity to allow the tank to be flushed.
5. Open the drain valve and allow the incoming cold water to flush the soft sediment out of the bottom of the storage tank.
6. Observe the color of the water initially discharged from the tank drain. Allow the drain to run until the water runs clear.
7. Close the drain valve on the tank.
8. Open the water outlet valve on the top of the tank.
9. Open an adjacent water tap to purge any air that may have entered the buffer tank during the draining process. Close the water tap if no air discharge is observed.
10. Turn ON power to the chiller and circulating pump.

Cleaning the Tank
(For tanks equipped with a manway only)

Follow the procedure below to clean the tank:

1. Turn OFF all power to the chiller.
2. Turn OFF all power to the circulating pump.
3. Close the valve on the water outlet on the top of the buffer tank and the cold water to the system.
4. Ensure that the drain located on the bottom of the tank is routed to a floor drain with adequate capacity to allow the tank to be drained.
5. Open the drain valve and open a vent to allow the air to enter the tank (manually opening the relief valve will usually accomplish this).
6. Allow the tank to drain completely.
7. Remove the cover over the manway or hand hole. Remove the bolt(s) securing the tank access opening. Use a flashlight to observe the sediment collected in the tank.
8. Use hand tools to remove all sediment from the interior of the tank. Use care not to damage the interior of the tank.
9. Use a water hose to flush the remaining sediment from the interior surface of the tank and ensure that all debris is removed. Scale or sediment allowed to reach the potable system can foul valves, pumps, strainers and other water fixtures. Ensure that the tank interior is clean before refilling the vessel.
10. Install a new gasket on the manway or hand hole to prevent any possible leaks. Tighten the gasket properly to prevent leaks.

CAUTION

Do NOT over-tighten the gasket. Over-tightening can result in cutting the gasket and allowing a water leak to occur.

11. Install the jacket cover over the tank access.
12. Close the drain and open the cold water supply. If the relief valve was used for a vent, ensure that it is now closed. Open the closest water valve to allow the air in the tank to vent as water enters the vessel. Close the valve opened for a vent when water flows from the valve.
13. Check the manway or hand hole and all related piping for any water leaks.
14. Turn ON power to the chiller and circulating pump.

Revision Notes: *Revision A (ECO C11725) initial release.*