

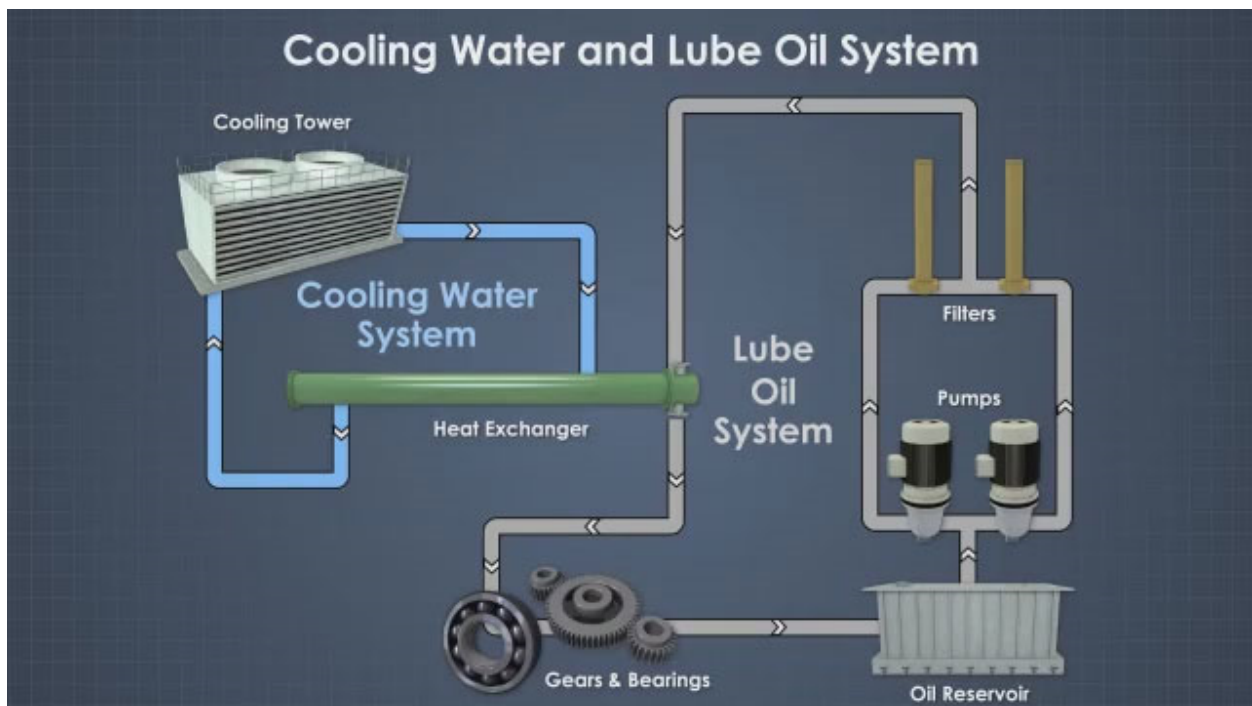
HVAC - CHILLED WATER SYSTEM

What Exactly Are Closed-Loop Chillers?

Closed-loop chillers are recirculating systems that interchange heat from various industrial and commercial operations by using coolant fluid in a closed-loop arrangement.

The coolant used in a closed-loop chiller can be any of the following:

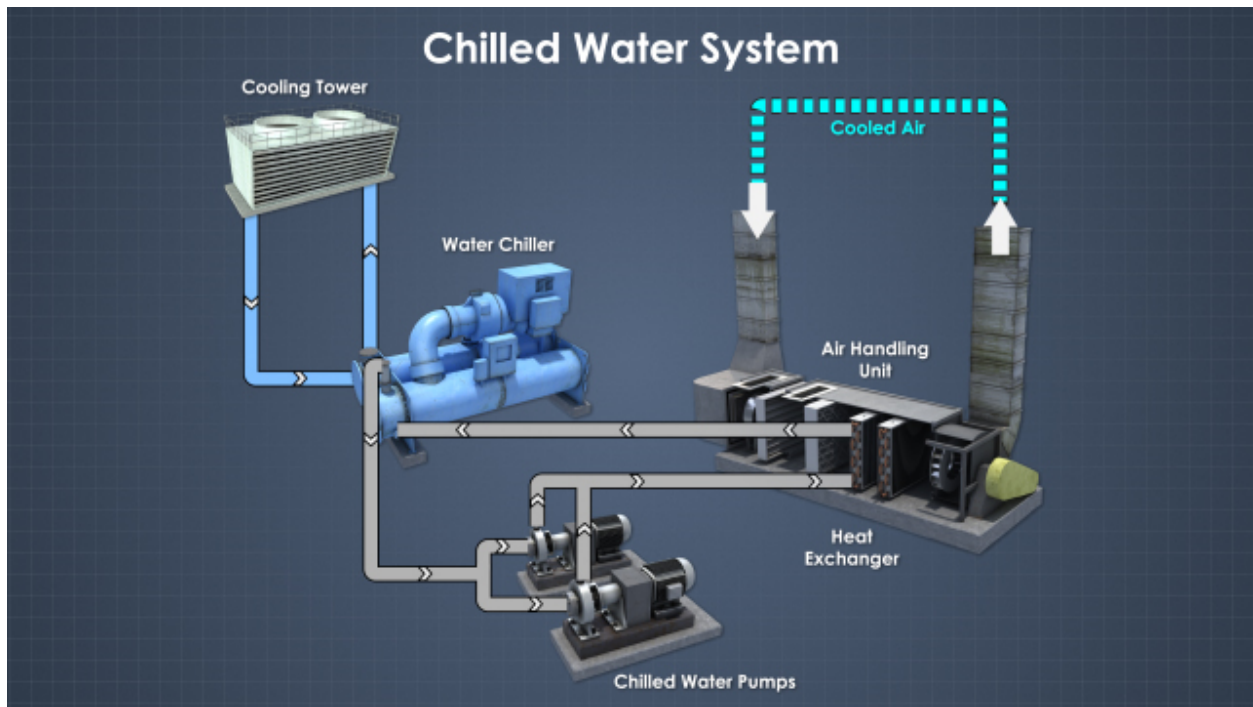
- Water and water-based coolants.
(de-ionized water, water/glycol blends, and water-based synthetic coolants)
- Coolants based on oil and oil-based coolants.



The coolant is refrigerated in a coolant tank before being routed through a heat load and absorbing heat from industrial operations or equipment. The heat received from the heat load is dissipated in an evaporator before returning to the coolant tank for re-cooling and recycling via the closed-loop system.

The temperature of the coolant is controlled by a thermostat that monitors temperature changes within the coolant tank. This thermal controller then adjusts the evaporator's refrigeration effect to ensure that the fluid in the coolant tank is at an ideal temperature for its next interaction with the heat load.

The Advantages of Closed-Loop Water Chiller Systems



Using a closed-loop water chiller system is not only a good economical move, but it is also good for the environment. A closed-loop water chiller and the cooling tower will recycle water through a closed-loop frequently, as opposed to a single pass cooling configuration that uses water only once before dumping.

lower sewer usage expenses due to a reduction in the volume of water required for the cooling limiting the flow of toxins into bodies of water that may be damaging to aquatic life providing considerable long-term returns on investment.

A closed-loop water chiller consumes extremely little water after it is set up due to its sealed design and cyclical mechanism of operation. Water is only lost in trace amounts during component maintenance, with annual fluid losses totaling only a few gallons.