

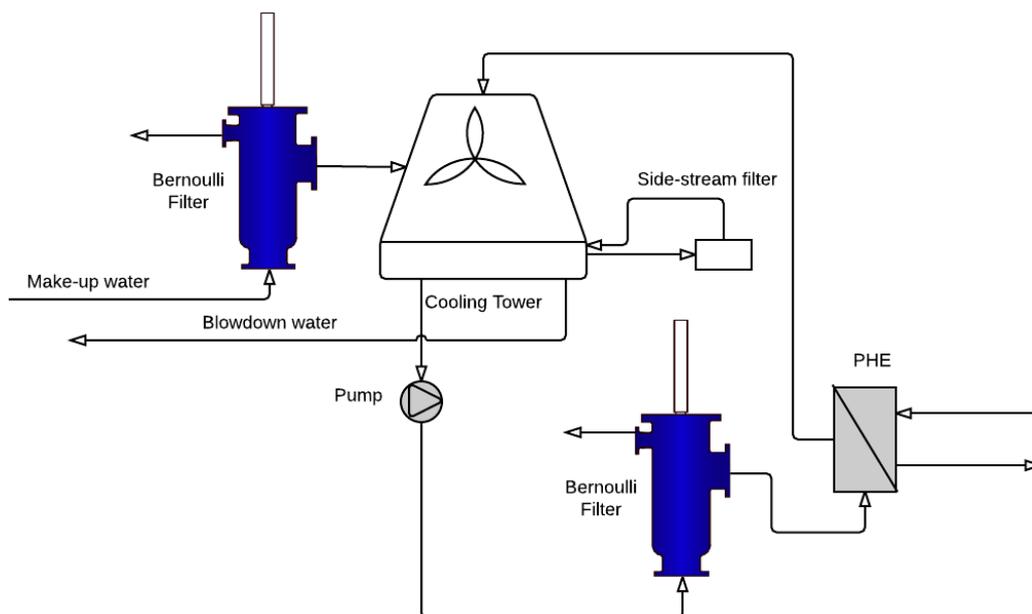
# APPLICATION SHEET

## Cooling tower

Cooling towers are an integral part of many cooling systems that provide comfort or process cooling. Heated water is received in the cooling tower, where a part of the water is evaporated to cool the remaining water, which is then collected in the tower's cold water basin and returned to the heat source.

Solid contaminants enter the cooling tower through ambient air dirt, circulation water build-up and in some cases by make-up water. The combination of process and environmental factors can contribute to four primary treatment concerns encountered in most cooling tower i.e. corrosion, scaling, fouling and microbiological activity. By utilizing a proper filtration system the suspended solids in the system cooling water can be reduced, which leads to less fouling and reduced biological growth. Decreasing biological growth in turn helps reduce microbiologically influenced corrosion. In addition, scaling can be reduced by limiting fouling and corrosion by-products. A proper filtration system helps to increase cooling tower efficiencies, increase cooling tower life, reduce chemical treatment costs, reduce maintenance and reduce shut-down time for manually cleaning of cooling towers.

Full flow and side stream filtration are the most common methods to filter the water in a cooling tower. In side stream filtration only a percentage (up to 20%) of the overall system flow is filtered and returned to the cooling tower basin. The side stream filtration in general requires a filtration degree from 1 to 50 micron. The Bernoulli filter is an excellent mechanical filter to be used to remove suspended solids in full flow filtration, make-up water filtration or to protect consumers like plate heat exchangers (PHE) in a cooling tower system where a coarser filtration can be applied.



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