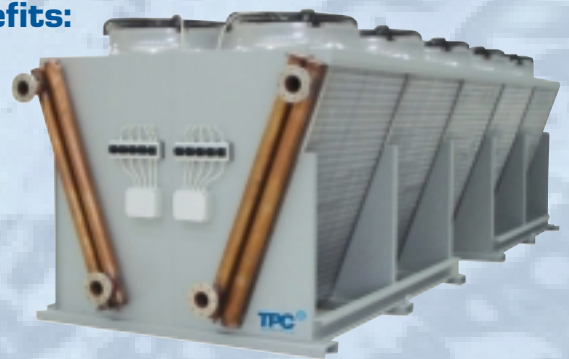


Cooling Tower Alternatives

TPC Air Blast Adiabatic and Wetted Surface Coolers are the cost effective alternative to evaporative cooling towers being capable of supplying similar water temperatures to evaporative coolers while reducing Health and Safety concerns and maintenance costs to a minimum.

TPC Air Blast & Adiabatic Benefits:

- No Chemical Water Treatment
- No Clean and Chlorination
- No Contamination of the Water Circuit
- No Unsightly Plumes of Water Vapour
- Reduced Maintenance Costs
- Minimal Plan Area
- Low Operating Costs
- Low Operating Noise Levels
- Low Water Consumption
- Fully Packaged Units



Standard Units are available in V-Type or Flat Bed arrangements and with vertical or horizontal airflow.

ADIABATIC PRINCIPLES OF OPERATION

Advantages:

- The Dry Cooler / Condenser can be designed for a much lower entering air temperature (see example) to obtain a smaller dimension unit with a smaller heat exchanger surface.
- It is possible to use the unit to cool water at temperatures lower than the ambient air temperatures.
- The combination of an adiabatic system with an inverter temperature controller, lowers the energy consumption of the fans and considerably reduces the sound pressure level.

Theory:

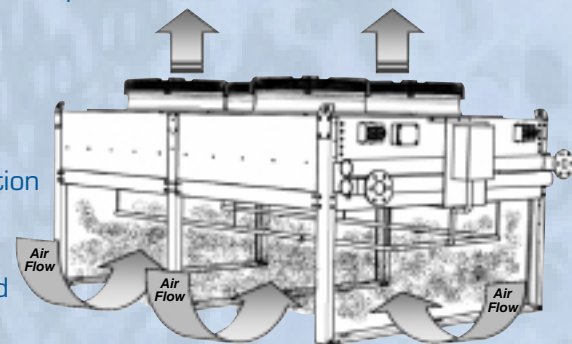
The adiabatic saturation temperature is a specific temperature value at which water by adiabatic evaporating brings the air itself to a saturation point, this then cools the water turning the temperature towards the wet bulb temperature.

Example:

T amb (Ambient Air) : 32° c / 50 % RH
T calc (Design Air Temp) : 26.3° c / 80 % RH

Working:

The physical phenomenon of adiabatic saturation is obtained by using an adiabatic vaporizing system. The suction air on the water cooler collides with a very fine water particle mist obtained with custom built spray nozzles fitted in order to create a complete and uniform saturation of the entering air.



TPC Products: Chillers - Air Blast Coolers - Adiabatic Coolers - Cooling Towers - Oil Coolers - Pump Sets - Heat Exchangers - Hire

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TPC Ltd. reserves the right to alter specification without prior notice
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