APEX™ Technology by Technical Systems

Adiabatic Pre-cooling Evaporative X-change (APEX™) combines the time proven practice of evaporative cooling with the simplicity of air-cooled equipment. The results are high efficiency, built-to-order solutions with reduced operational costs and maintenance.

TECHNICAL SYSTEMS

DIVISION RAE CORPORATION

- Improve your system efficiency by 30-40%
- Exceed minimum energy standards and qualify for rebate plans
- Reduce the size of your cooling equipment
- Lower maintenance and utility costs
- Water usage as much as 90% less than traditional towers
- Able to run dry up to 85% of the year in most climates

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Efficient Solutions for Air-Cooled Systems

Air-Cooled Chillers • Fluid Coolers • Condensers • Condensing Units

Are you looking for ways to reduce your energy costs?
Do you want to exceed your energy code minimum standards?

Traditional air-cooled HVAC systems are simple but inefficient when the air is hot. Evaporative tower systems are efficient but water usage and treatment costs are high. APEX™ Technology offers the best of both with one simple goal: reduce energy costs while minimizing maintenance.

TECHNICAL
SYSTEMS
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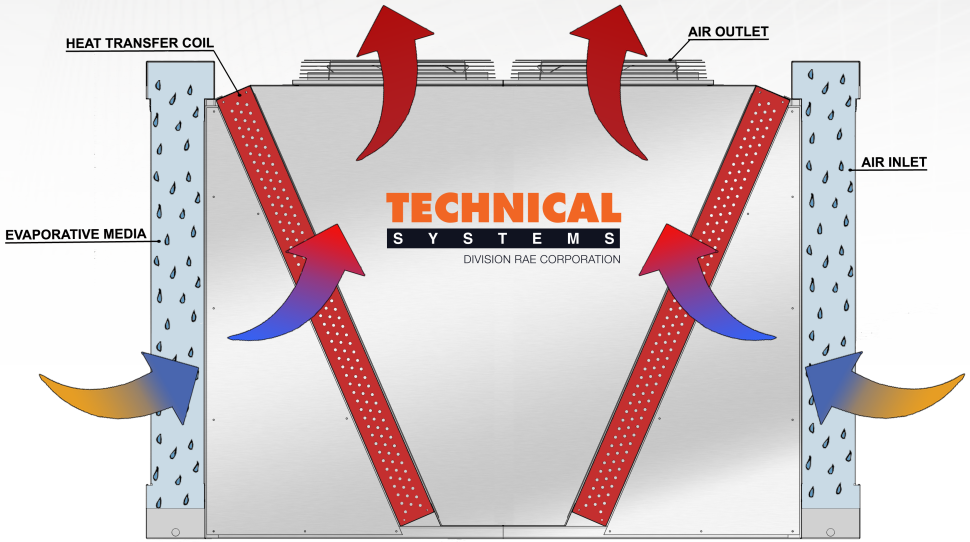

APEX™ TECHNOLOGY OPERATION

During hot temperatures, ambient air is drawn through the pre-cooling system and water is evaporated which humidifies the airstream and cools it very close to the wet bulb. The effective ambient is reduced by as much as 15-25 ºF. When the ambient dry bulb falls below the design wet bulb, pre-cooling is not needed and the water supply can be shut off.

SAVE ENERGY WHEN IT COSTS YOU THE MOST

Utility costs for traditional systems are highest in summer when the equipment is less efficient and peak demand pricing increases the cost of power. With APEX™ Technology, energy use is reduced the most during hot temperatures, which saves you money and provides a return on your investment.

USE ONLY THE WATER YOU NEED

Unlike evaporative tower systems that constantly use water, APEX™ Technology remains an air-cooled system at heart. Since water is only used during the hottest conditions the system runs dry for most of the year which saves up to 90% on annual water usage without sacrificing performance.

REDUCE YOUR ELECTRICAL SUPPLY REQUIREMENTS

A more efficient system uses fewer amps, which means the size and cost of electrical switchgear, wire, and conduit can all be reduced. New installations can be completed more quickly and with less cost, and existing facilities can be renovated with more cooling capacity without adding more power.

Optional Features

- Microprocessor to control the unit's functions, minimize water usage, and optimize wet or dry operation based on ambient conditions.
- Three acoustical packages to match any sound requirement and avoid costly attenuation walls.
- Water makeup and drain controls to maintain sump water quality and reduce potential for scale.
- Connection to BAS systems via BacNet or Modbus protocols.
- Variable speed drives with high efficiency motors for reduced energy.

Example Applications

- Mission Critical Systems
- Water Cooled CRAC and CRAH Units
- Split Condenser Systems
- Water Source Heat Pumps
- Process Fluid Cooling
- Floor-by-Floor Units
- Waterside Economizer Systems

PO Box 1206 • Pryor, OK 74362 • (918) 825-7222 • FAX (800) 264-5329 • www.Technical-Systems.com