



Baltimore Aircoil



Finned Ice Coils An Innovative New Breakthrough in

Thermal Energy Storage



he success of ice thermal storage in office building applications has received a great deal of publicity and exposure. Ice thermal storage has been successfully implemented in all types of buildings for many of the same reasons it works in office buildings: lower first cost, lower operating cost and the ability to eliminate CFCs.

The use of low temperature water from the ice storage allows savings in piping, pumps, and air handling equipment. An ice storage system with supply and return water temperatures of 36°F

(2°C) and 54°F (13°C) versus a traditional system using 44°F (7°C) to 54°F (13°C) requires almost half the water flow, pump BHP and smaller pipes. In addition, when low temperature air distribution (45°F (7°C) supply air versus traditional 55°F (13°C) air supply) is also used, additional savings are realized from smaller ductwork, smaller fans as well as less energy consumption and increased useable space. Operating costs decrease when the system is designed to take advantage of low night time electrical rates and has the flexibility to adjust to changes in peak electrical rates.



Finned Ice Coils (TSC-IMFS) *New Innovative Design*

Finned Ice Coils® Thermal Energy Storage system offer the designer additional flexibility to meet project temperatures, capacity and site requirements. BAC can provide coils identical to those used in the standard TSC Thermal Storage Coils but with an additional finned coil section on top of the coils in lieu of a separate heat exchanger. Coils can be supplied with factory manufactured steel tank. The coils can also be directly installed in field erected concrete tank.





Using *Finned Ice Coils*® Thermal Energy Storage system, 36 °F (2 °C) water can be supplied from a closed loop system. This innovative system design, combines the benefits of the low supply temperature of an external melt system with the closed loop benefits of an internal melt systems. It is an all-in-one system.

Custom-designed *Finned Ice Coils*® Thermal Energy Storage Coils to meet specific project requirements are also available on special order. Contact your local BAC representative for custom *Finned Ice Coils*® Thermal Energy Storage Coils design details.



BAC: The company to rely on for your thermal energy storage applications

Founded in 1938, Baltimore Aircoil Company specializes in the design and manufacture of evaporative cooling and heat transfer equipment. The superior quality and performance advantages of BAC products are the result of a continuing research and development program and years of engineering experience. The design and construction innovations developed by BAC engineers offer more installation flexibility and easier maintenance plus longer, more reliable and cost-effective operation.



Facilities and offices located worldwide can provide the

Engineering support for all of your project needs. BAC has pioneered the design and manufacture of openand closed-circuit cooling systems and thermal energy storage for many industrial processes – including air compressor cooling, induction furnace cooling, and multiple heat exchanger loops – as well as chiller and water source heat pumps loops.

BAC maintains the industry's most advanced cooling tower research and product development facility where a broad range of environmental and operating conditions are simulated to evaluate material and component performance. After new concepts are screened by computer modeling, thermal tests are conducted on prototype modules used in conceptual development as well as full scale operating cooling towers. In addition to controlled environmental testing, a broad range of material and component development programs are conducted. These programs include fan development, dynamic and static stress evaluations, accelerated aging and corrosion testing, hydraulic tests, and wind tunnel tests. BAC research and development programs have resulted in over a hundred patents and the most complete line of proven evaporative cooling products in the industry.







P.O. Box 7322, Baltimore, MD 21227 Phone: 410-799-6200 • Fax: 410-799-6416 Web site: http://www.baltimoreaircoil.com

