



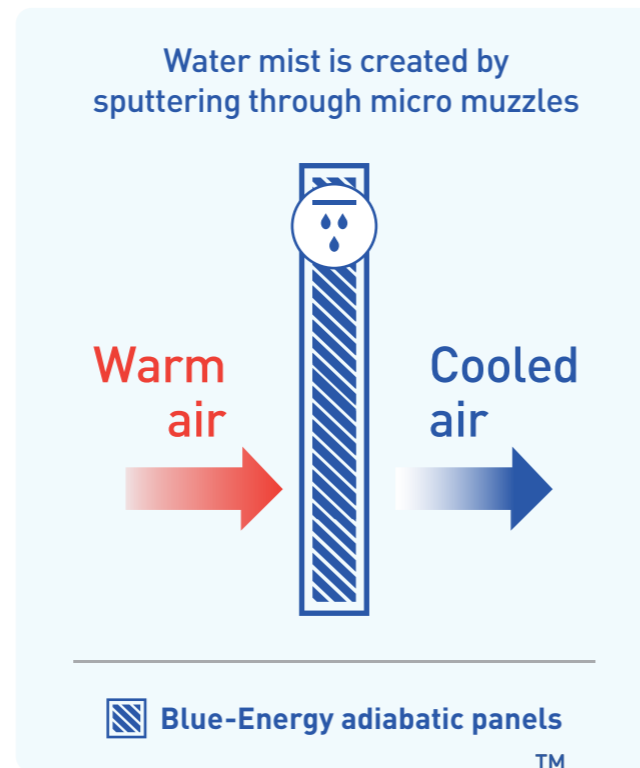
blue
energy
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The SMART COOLING™ adiabatic precooling panels will reduce up to 30% of your cooling systems energy consumption!

1. System operation

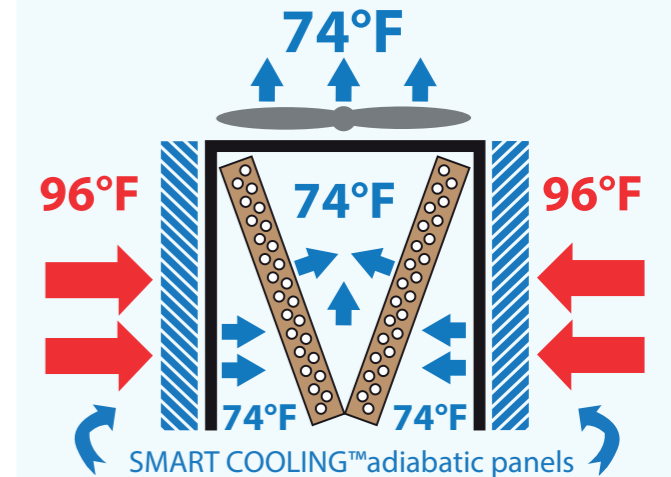
The SMART COOLING™ panel system increases the efficiency of the air-cooling systems. In the last years, the outdoor temperature during summertime has considerably increased. The cooling systems' capacity, very often, has not been planned for such a change. As a result, many cooling systems are used at their maximum output capacity, which results in a lack of cooling capacity, sharp increase in energy consumption, and high cost to maintain the system.



Watch the video here!

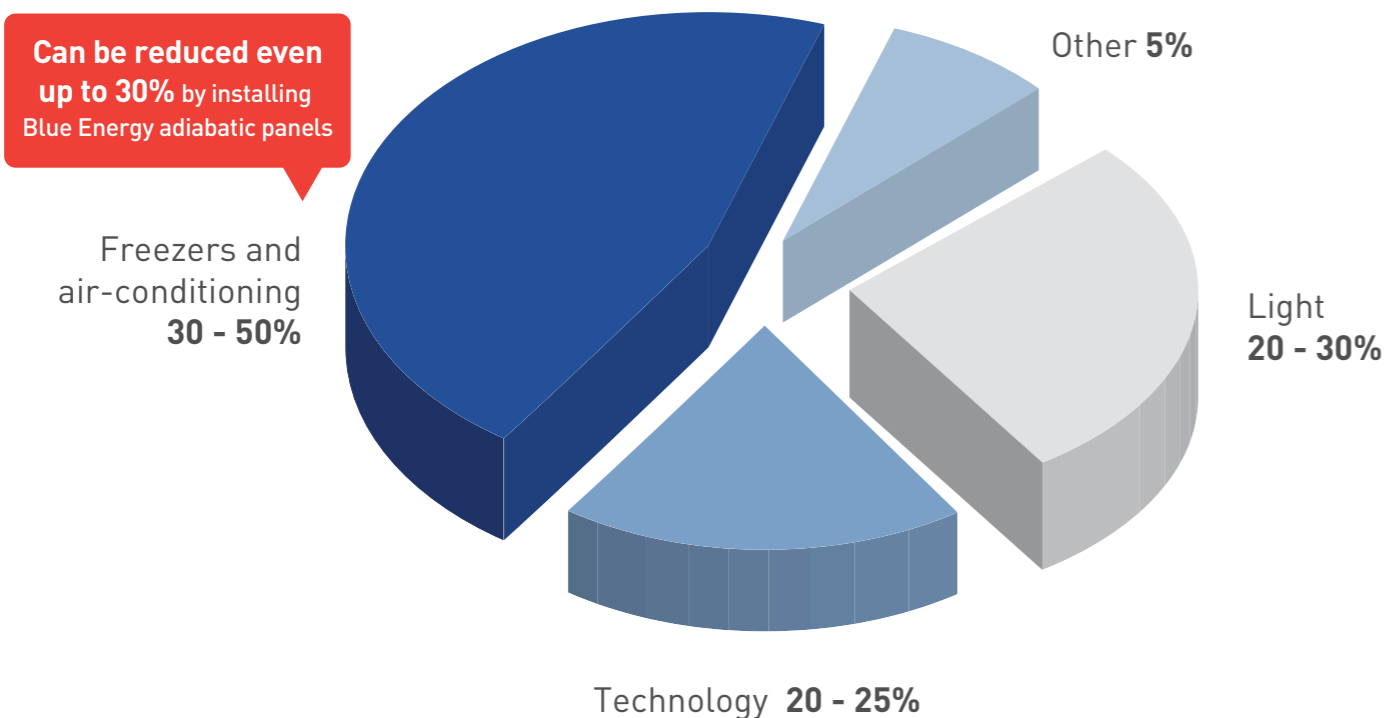
The SMART COOLING™ adiabatic precooling panels eliminate this problem. The cooling systems can work efficiently even when the temperature outdoors reaches over 120° F. The SMART COOLING™ adiabatic precooling panels can cool the air before it reaches the condenser to as low as to 70° F, which results in energy savings of up to 30% and increased efficiency of up to 25%.

In summertime, cooling systems can consume up to 50% of energy in buildings. This cost can be reduced significantly with the SMART COOLING™ adiabatic precooling panel system.



The return on investment with our system is 12-24 months, and combined with a 36-month of warranty, the SMART COOLING™ adiabatic precooling panel system is the best offered product in industry.

Electric energy consumption distribution in buildings

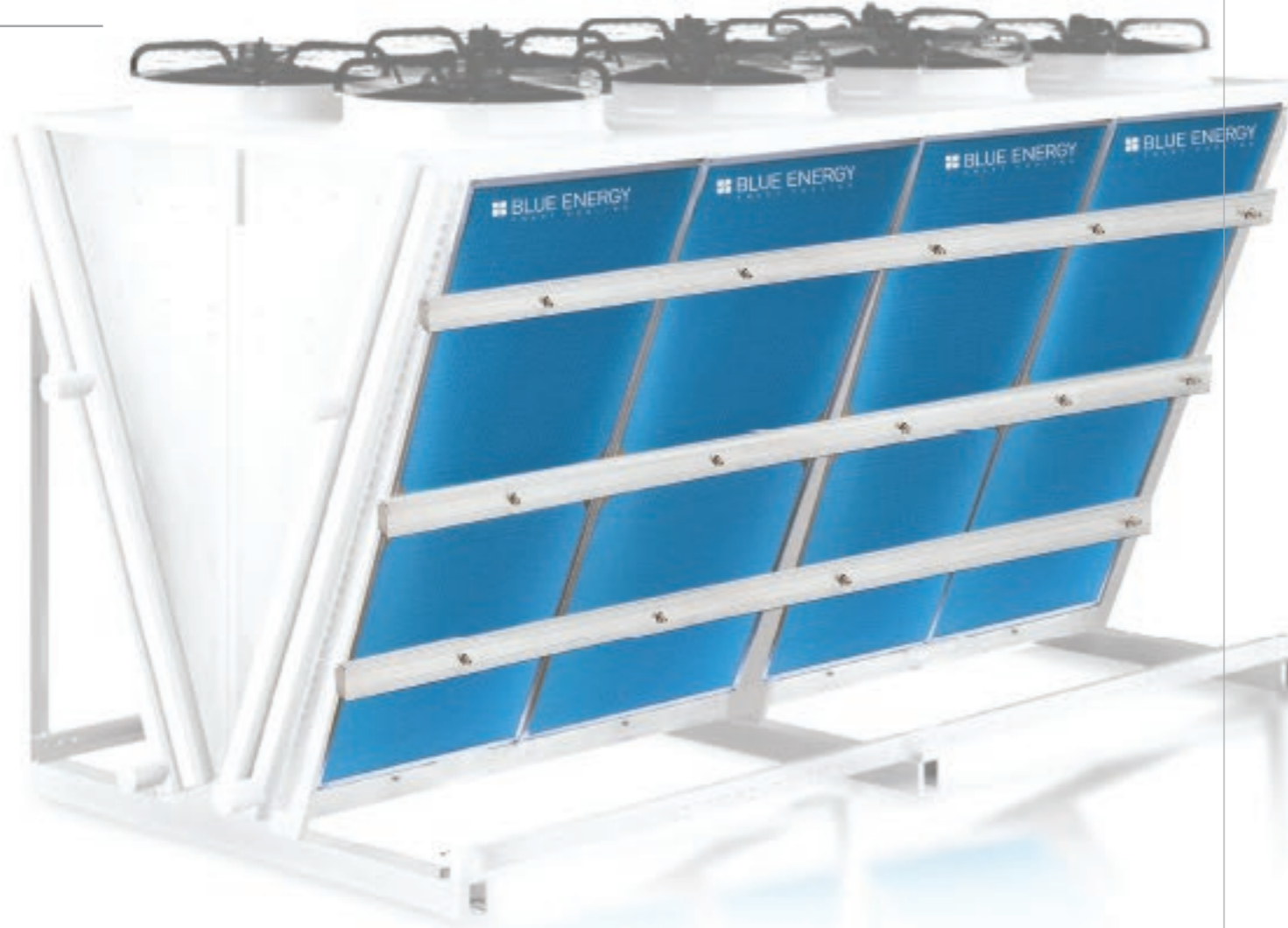


2. System benefits

SMART COOLING™ adiabatic panel system opportunities:

1. Saves up to 30% in energy usage
2. Increase up to 25% in cooling capacity
3. Return on investment of 12-24 months
4. Increases the lifespan of cooling equipment
5. Significantly increases efficiency of cooling equipment
6. Protects cooling equipment from overheating

2. Blue Energy products



1 Membrane

The SMART COOLING™ adiabatic pre-cooling panel system is added in front of the heat emission condenser (coil) of the cooling equipment. It provides shading, which prevents the impact of solar radiation and direct sunbeams on the heat emission radiator. The adiabatic panel works as a self-cleaning filter, which protects the heat emission radiator from fur, hair, and dust particles. By ensuring shading and cleanness of the condenser (coil), the general efficiency of the system may be improved by another 3-5%

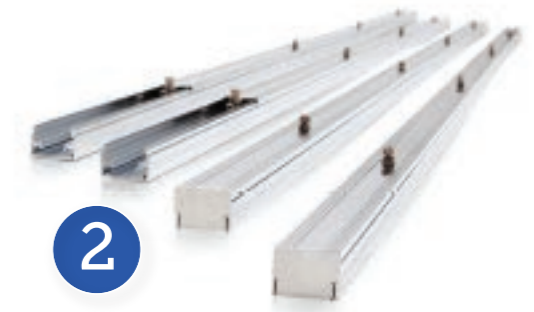
2 High pressure nozzles panel

In front of the SMART COOLING™ adiabatic precooling panel system, water mist is created by forcing water through a specially designed mist nozzle at a pressure that can create a fog of ultra-fine water droplets in size 5 -20 microns. These tiny water droplets quickly absorb the energy (heat) present in the environment and evaporate, becoming water vapor (gas), the heat emission condenser (coil) remains practically dry, and the temperature of the air entering the radiator is reduced to 70°F.

1



2



3



4



5



4 Pump station

A high-pressure pump station ensures constant water pressure for the efficient distribution of the water mist drops within a range of 5-20 microns.

3 Preparation of water

The water which is sprayed as mist to reduce the temperature of the air entering the air conditioning and cooling unit is processed with anti scaling preparation equipment with minimal maintenance cost. Due to this, the plaque and corrosion are not formed on surfaces of air conditioning and cooling unit when using the adiabatic pre-cooling panel SMART COOLING™ only negligible amounts of water hits the surface of the unit.

5 Control unit and energy monitoring

The control module ensures automatic switching on and off. A switch controls when the system turns on and off. The SMART COOLING™ adiabatic precooling panel system will work only when the set temperature is reached and the air-cooling chiller turns on. The control unit can be integrated into any building management system to monitor savings.

3. System parameters



NO CALCIUM CARBONATE RISK

Water before it gets used in SMART COOLING™ system is processed with patented EMI (electronic magnetic impact) antiscaling system changing the structure of calcium carbonate molecule so that it does not stick to surfaces and does not create limestone any more.



NO LEGIONELLA RISK

NO LEGIONELLA RISK. The system can be equipped with UV lamps, ensuring that all bacteria in water are killed, including legionella.



INCREASED DURABILITY

By using the SMART COOLING™ adiabatic precooling panel system, the cleanness of the heat emission radiators is maintained, thus ensuring low exit temperatures and reduced pressure in the whole system. In such a way, servicing frequency and the number of emergency calls are considerably reduced, which may have a direct influence on the maintenance budget, not to mention safety and durability.



ELECTRICITY CONSUMPTION MINUS 30%

The SMART COOLING™ adiabatic precooling panel system increases output of an air-cooled HVAC system and decreases electric consumption by up to 30%.

EASY TO SET-UP

The SMART COOLING™ adiabatic precooling panel system is delivered in kit form, which can be installed both on new or already functioning equipment. It is compatible with any air-cooling chiller unit. The system is installed outside without affecting the inside temperature or business' operating hours.

INCREASED SERVICE TIME

In addition, the SMART COOLING™ adiabatic precooling panel system decreases the pressure in the compressor. As a result of a decrease of pressure, it increases lifetime of the compressor. Also, due to the considerably reduced high discharge pressure and cooling cycle temperatures, the mechanical stress of the system is considerably reduced, which means less pent money and time on maintenance.



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Recognitions and awards:



SMART COOLING™ adiabatic panels can be installed on all cooling systems of all major manufacturers.

