



HVAC PRE-COOL SOLUTIONS

FOR COMMERCIAL HVAC SYSTEMS

Installs on most HVAC systems.

Nonintrusive installation and maintenance.

Custom installations professionally designed and maintained.

Proven to save energy and reduce the cost of maintenance.

Quick "Payback Period" - high ROI turnaround.



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INTRODUCTION



Greenway Design Group, LLC. designs, builds and markets ecologically sensible HVAC solutions under the brand name **Cool-n-Save®** to commercial and residential property owners. We bring innovation to the forefront to meet the growing need for energy conservation, environmentally friendly water treatment and corrosion control. We do our utmost to ensure that every component is field tested and proven. We strive to provide the highest quality customer service and technical support.

HVAC PRE-COOL SOLUTIONS – dramatic energy savings for commercial and residential applications



Top: A typical Greenway pre-cool commercial installation with the micro nozzle array.

Bottom: The brains of the system, the proprietary Cool-n-Save® "Smart Pump."

We design and build automatic *pre-cool solutions* for residential and commercial HVAC systems. Our proprietary products are found on thousands of homes and commercial buildings throughout the United States. There is a huge difference in terms of complexity and performance between our commercial and residential systems, but they both work the same way. When the compressor turns on treated water is converted into micro mist and injected into the air around the HVAC unit. The mist evaporates almost instantly and literally sucks heat out of the air. Third-party tests have shown that *Cool-n-Save® Pre-Cool solutions* reduce energy consumption of HVAC systems by as much as 30%.



www.greenwaydesigns.com

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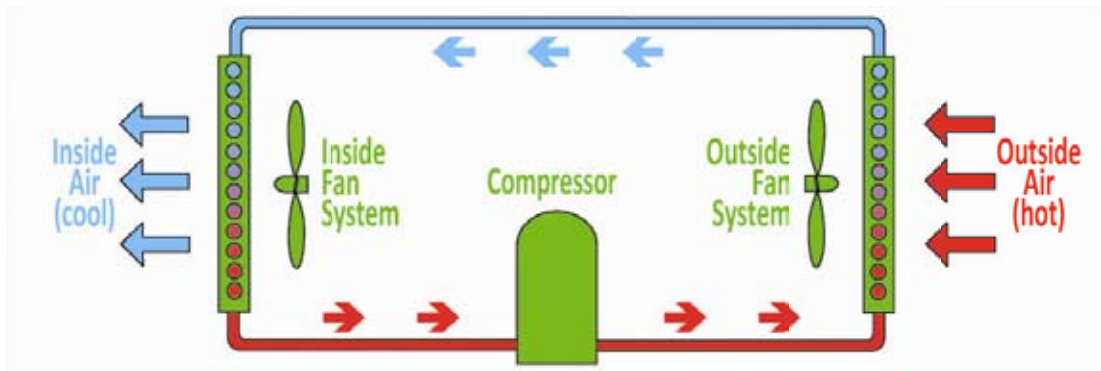
Top: Thousands of residential customers use our Cool-n-Save® pre-cool system. Our patented 'airlift' "flapper" rises as the condenser fan turns on to open the water valve to the micro nozzles.

Bottom: The Cool-n-Save® residential kit requires a simple five-step install; no tools and no electricity needed.



THE “HOT AIR” PROBLEM

Whether commercial or residential, all HVAC systems consist of copper tubing filled with refrigerant gas, electronic sensors, switches, fans and a compressor. Most of the copper tubing is coiled up at either end of the system. At one end, copper coils are placed outdoors to cool the refrigerant with outside air. Cooled refrigerant then circulates to another set of coils to chill air inside of the building. Fans blow air over the coils to facilitate efficient exchange of energy (see illustration).

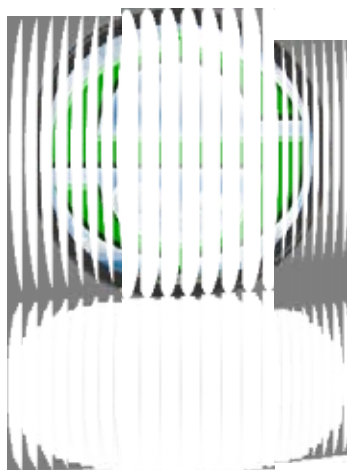


1. Refrigerant in copper tubes is compressed and pushed through the tubing (small arrows).
2. Compressed refrigerant gas runs through the outdoor coil; the gas loses heat and becomes a liquid.
3. Liquid refrigerant circulates to the indoor coil where another fan blows chilled air into the building.
4. The refrigerant re-absorbs heat, which causes it to turn back into a gas, and process starts all over again.

The “hot air” problem arises as outdoor ambient temperatures increase. The severity of the problem depends on altitude, humidity and placement of the outdoor coils. The higher the temperatures rise, the harder the condenser has to work to pump refrigerant through the coils. Ambient outdoor air temperatures do not have to be excessive for the “hot air” problem to cause the condenser to work overtime – just to maintain the same level of cooling power. The more heat, the harder the condenser has to work. Consequently, the system uses more and more energy.

Next page, see “The Pre-Cool Shield”

SAVING ENERGY IS GOOD FOR BUSINESS

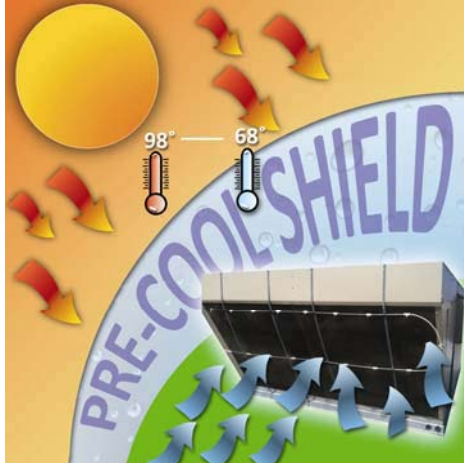


Making your building “eco-friendly” is a fashionable and attractive PR move. It may differentiate your property – help draw tenants and customers. But saving energy is more than a fashion statement – saving energy is good for business. Our **Cool-n-Save** HVAC pre-cool solutions are *profitable, sustainable, and trouble-free*. We can help you save up to 30% on the cost of electricity for your HVAC system. We can also help reign in the cost of maintenance. Aggressive field-testing has shown that the rewards are substantial. The sooner you take action, the sooner you can cash in on the great ROI. Learn more by visiting www.coolnsave.com

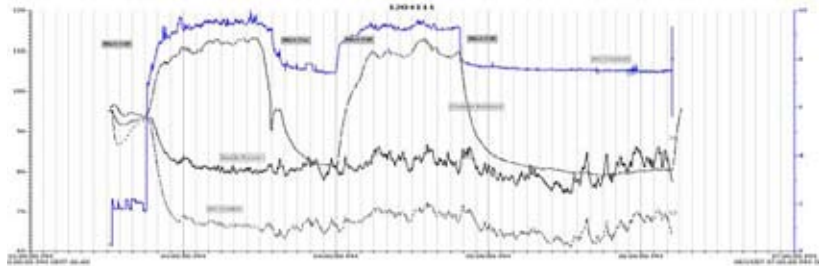


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THE “PRE-COOL” SHIELD



Greenway Design Group has found that the easiest way to solve the “hot air” problem is with a little evaporative magic. Our **Cool-n-Save** pre-cool system erects a “pre-cool shield” of treated water mist into the air around the HVAC unit. Flash evaporation causes the mist to evaporate almost instantly. The result is what engineers call an *adiabatic boundary* – a shield that literally insulates the HVAC from excess heat. Ambient air temperature around the unit drops by as much as 30°F. If the ambient air temperature is 98°F, our **Cool-n-Save** system will knock it down to 68°F before the air reaches the primary HVAC coils.



Cool-n-save® HVAC Pre-cool Solutions are proven to save-energy and can reduce cost of maintenance.



The 30-degree drop in ambient air temperature increases the EER (Energy Efficiency Rating) of the unit, which causes the condenser to run more efficiently and less frequently. Field tests show that when **Cool-n-Save** solutions are properly installed on commercial grade HVAC systems, the reduction of energy consumption can be as high as 30%. Moreover, the beauty of this concept is that the hotter the air, the better the pre-cool shield works.

We develop proprietary components to make the “pre-cool” concept work flawlessly and with minimal need for maintenance. The combination of these components comprises the *Cool-n-Save® HVAC Pre-Cool Solution* – proven by independent tests to deliver remarkable results for long-term energy savings. Our unique HVAC solution can also decrease maintenance and equipment replacement costs from reduced wear and tear on HVAC components. The combined savings in lower energy and maintenance are often so significant that most of our clients earn back the cost of installation and equipment within the first year of operation.

Above: Graphic illustration of the “pre-cool shield.”

Middle: All commercial systems are professionally designed, installed and maintained.

Bottom: A typical Cool-n-Save® installation with micro mist nozzles in place.

Right Center: Test results from a recent commercial installation that shows a significant reduction in ambient temperature and energy consumption after installation.



THE COOL-N-SAVE® HVAC PRE-COOL SYSTEM

Greenway Design Group builds and maintains high-performance automatic HVAC *pre-cool systems* that allow commercial air conditioning systems to work more efficiently. We have been working five years under our brand “Cool-n-Save” customizing systems for commercial properties in the United States and abroad. We build each installation to meet specific requirements and specifications of the location. While no two installations are alike, a typical installation has these three main components:



Cool-n-Save® Smart Pump™

A proprietary device that controls the flow of water from the building water supply. The pump senses condenser activation through a low volt relay switch connected to the HVAC thermostat and releases just enough treated water to each micro nozzle. The Smart Pump requires little maintenance.



Cool-n-Save® Smart Release™ Water Treatment

A patented non-phosphate, environmentally friendly water treatment system that prevents mineral scaling on HVAC condenser coils. Refilling water treatment canisters is a simple process. Just unscrew the blue canister, refill it with the patented non-toxic, easy to handle cubes, and screw the canister back on. System shut down is not required.



Cool-n-Save® Smart Array™

A network of tubing and micro mist nozzles laid out to a specific pattern and size (number and deployment of the micro nozzles) to ensure that just enough treated water is used to create the pre-cool shield. The mist nozzle size is specifically matched for environmental and equipment variables.

THE BENEFITS OF A COOL-N-SAVE® HVAC PRE-COOL SYSTEM

- All systems are professionally installed – low-impact and noninvasive installation. No permits are required*.
- Pre-cooling your HVAC system is a cost-effective way to **Do Your Part** and lower energy consumption, reduce demand for non-renewable fuel and decrease production of CO².
- Earn a substantial savings with a quick “payback period” – in months, not years‡.

* Depending upon state and municipal building codes.

‡ Actual results will vary depending on weather and climate.