



AirGreen Revolutionizing Indoor Farming with Energy and Cost Efficiency

As the need for environmentally friendly food and crop production rises, indoor agriculture stands out as a new and exciting way forward. The numerous advantages of indoor agriculture, including minimized water usage and consistent yields, year-round production, and less reliance on weather, make it a favorable choice over traditional methods. However, cultivating crops indoors is highly energy-intensive as it requires a controlled environment with optimal temperature and humidity. Growers incur considerable energy costs to create the most favorable growing conditions, predominantly driven by temperature and humidity requirements.

The good news is that growers can now leverage sustainable technologies, offering an efficient way to control indoor growing conditions and cut costs.

AirGreen stands behind this feat.

Changing how indoor growers think about energy sustainability and efficiency, AirGreen leverages its patented, award-winning liquid desiccant air conditioning and dehumidification system to reduce energy consumption in controlled environments. Adept at conditioning air in applications where humidity control and energy savings are vital, the company extends its value proposition to various industries such as hospital environments, pharmaceutical facilities, and cold room environments, among others.

“What distinguishes us is the ability to strip moisture aggressively and cost-effectively, helping clients ensure optimal indoor conditions at lower operating costs,” says John Hammond, CEO.

Since plants transpire moisture, maintaining the right humidity level is critical. Clients need equipment solutions that can maintain desirable environmental conditions and help make their indoor farming endeavors efficient and successful. Buildings account for 40 percent of the U.S.’ energy consumption, a significant fifth of which goes into air conditioning. Air conditioning takes up 10 percent of the total global energy use. These staggering numbers are set to grow rapidly, meaning equipment solutions that can help offset the impact of this growth will be important. With the looming threat of climate change and rising CO2 emissions, a shift in mindset is overdue.

AirGreen’s system offers a new way to control the environment by directly dehumidifying, in stark contrast to the conventional,



John Hammond,
CEO

energy-intensive methods of cooling air below the dew point and reheating it. The solution entails a combination of dehumidification modules and an affordable air handler for controlling temperature. This process allows for precise and independent control of humidity and temperature under the changing target indoor environmental conditions that often exist at different plant growth stages.

AirGreen enables clients to ensure a longer-term successful strategy by investing wisely up front in energy efficiencies that will provide a return each year and create a sustainable competitive cost advantage.

In one instance, AirGreen effectively managed the loads associated with a small grow operation with a flower room of about

2000 sq. ft, holding approximately 450 mature plants, in an indoor hemp project. It accomplished this task with approximately 10 to 12 tons of cooling, more efficiently than the alternative solution, which was estimated to require nearly 50 tons of cooling and dehumidification at maximum capacity.

On another occasion, AirGreen installed its equipment at a large cannabis facility. Thermodynamic analysis estimates the highest energy costs to be about \$65 per day for the AirGreen solution, compared to more than \$160 per day for the alternative solid desiccant equipment, which requires significant regeneration energy.

With customer-centricity at its core, AirGreen delivers solutions to meet specific client needs. The company designs, installs, and fine-tunes its designs to ensure ideal temperature and humidity conditions throughout the growth cycle, driving energy efficiency. Post-installation, AirGreen monitors and adjusts the offering as needed, maximizing system performance and energy efficiency.

The team ensures the delivery of the right solution by quantifying its performance across the set of room condition requirements specified for each project. All operating data is stored in the cloud, making it easier for clients to monitor performance and efficiency.

Not limited to offering an economical solution, AirGreen is committed to driving sustainability. Clients can unlock the best value when they review the available state, federal, and utility incentive programs that promote energy-efficient equipment use. AirGreen champions this, enabling clients to think differently about air conditioning. With sustainable, energy-efficient solutions, it is setting the stage for a brighter, greener future for indoor agriculture and beyond. **AG**

AirGreen



The annual listing of 10 companies that are at the forefront of providing Indoor Farming solutions and impacting the Agriculture sector