



HVAC for Growing

**Your Guide to HVAC in Indoor
Cannabis Cultivation**



Climate Control Solutions



In an indoor cannabis growing operation, environmental control is *essential*.

Controlling the environment leads to greater yields, optimal vapor pressure deficit, and prevents issues like mite infestation and mold growth. To meet plants' needs, environmental controls must be dialed in at each stage of the plant growth cycle. Humidity and temperature control are vital for the microbial test that most states require.



“In a commercial growing operation, everything should be built around the environmental control. Controlling your environment with HVAC technology encourages plant growth.

For every 10 gallons of water that a plant drinks, nine get put back in the air through transpiration. You need to be able to meet specific set points for temperature and humidity to make sure a plant is photosynthesizing, eating nutrients and transpiring—and that process continues whether the lights are on or off.

With that in mind, environment is number one—and lights are secondary. Environment is what sets the stage for your success. Without it, you will struggle.”

Bard Customer
CHAIRMAN AND FOUNDER
Cannabis Company



HVAC and ROI

Profitability is a delicate balance in any commercial cannabis operation. As a commercial grower, understanding and optimizing your HVAC setup is an essential part of the recipe for success. Put simply: choosing the right HVAC setup has a direct impact on an operation's profitability and return on investment.

By minimizing upfront costs, maximizing day-to-day energy efficiency, and simplifying serviceability, a Bard wall-mount HVAC system makes economic sense at every step. It's also a scalable solution, so you only install the equipment you need. And compared to other facility improvements, an HVAC system delivers the greatest benefits and offers the quickest return on investment.




Customization and Control

In an industry that demands consistency, temperature and humidity control makes all the difference. Other HVAC systems don't offer the kind of customization, reliability and environmental control that a commercial, purpose-built Bard solution can provide. Furthermore, most buildings with traditional HVAC systems weren't initially designed for indoor agriculture—and may require substantial retrofitting to create the ideal growing environment.

Bard Wall-Mounts provide an integrated system, controlling temperature, humidity and air flow—all with a single piece of equipment. An integrated approach makes it easy to adjust to environmental fluctuations due to plant transpiration or changes in outdoor temperature. It also lets you optimize each environment to suit specific strains, automate your temperature and humidity settings in sync with lighting adjustments, or precisely control temperature and humidity across multiple areas. Whether you need one wall-mount unit or a dozen, an integrated system gives you the right combination of customization and control.





When you're choosing an HVAC system for indoor growing operations, there are many factors to consider.

“Investing in your HVAC system and finding the optimal solution for your operation is the quickest return on investment. There is no ROI without climate control.”

Bard Customer
PRESIDENT
Cannabis Industry

CONTROLLING HUMIDITY

The right HVAC system allows you to precisely control humidity. Fine-tuning the humidity is essential to helping plants thrive and preventing microbial overgrowth.

PREVENTING MOLD AND MILDEW

Controlling mold and mildew is a delicate balance of cooling and dehumidification. Your HVAC system should be able to mitigate high and low temperatures, limit fluctuations, and generate desired air flow. Materials matter, too. Large amounts of metallic surface area in your growing rooms can cause excessive sweat, which can add to humidity issues and mold growth.

AVOIDING HEAT STRESS

Even just a few hours of high temperatures can cause heat stress for plants—which can slow down photosynthesis and lead to nutrient deficiencies. But preventing heat stress is not as simple as setting the temperature. Heat stress can occur at temperatures as low as 92°F when elevated humidity levels interfere with plant transpiration.





VAPOR PRESSURE DEFICIT AND AIRFLOW

Maintaining an optimal vapor pressure deficit ensures that plants have the humidity they need to thrive, without the mold, mildew and condensation that can cause disease. And our airflow options mimic Mother Nature by keeping plants dry, healthy and dancing on a breeze.

ABILITY TO ISOLATE

You may want to consider isolating each room to create growing zones. Controlling environmental variables by zone lets you optimize growth in each phase of a plant's lifecycle. Having individual Bard wall-mount units—rather than a centralized system—minimizes down time to an individual room if issues with the HVAC system arise, and provides superior environmental control room-by-room for the specific life cycle stage of the plant.

EASE OF SERVICE

A Bard exterior wall-mount HVAC unit doesn't take up valuable space inside. Most qualified HVAC technician/contractors can easily service the unit from outside, allowing privacy and eliminating the risk of contamination during servicing.

EXPANSION AND MODIFICATION

If your operation were to expand or layouts were to shift, would your HVAC system need to be reengineered? A scalable HVAC solution gives you the flexibility to meet the shifting demands of a commercial market—and allows your operation to adjust to changing federal and/or state regulations.

REDUNDANCY

For critical operations, installing backup HVAC equipment provides security. Heat stress can happen in just a few hours, with devastating consequences to plants. A secondary HVAC unit protects your investment from unforeseen issues. Alternating the usage of redundant units will also help extend equipment life and reduce mechanical issues.



Trust the Experts

When you need a turnkey, scalable solution, turn to Bard. Our wall-mount HVAC solutions are easy to install, easy to service and cost-effective. With numerous ventilation options and reliable construction, Bard systems are well-suited for cannabis operations. And their functionality and flexibility make them an ideal solution for growers looking for consistent climate control and optimized yields. Whether you're building from scratch or setting up an existing space for cannabis cultivation, wall-mount units are an easy, energy-efficient way to turn any building, shelter or container into an ideal growing environment.

Most importantly, Bard is a trusted name in indoor agriculture. No two growing operations are alike—and turning to an expert ensures that you get an HVAC system that precisely meets your needs. Controlling your environment controls your risk—and controlling your risk ensures a better outcome. When your entire operation is on the line, why make do with anything less?



Bard Manufacturing Company, Inc.
1914 Randolph Dr., Bryan, OH 43506
419-636-1194

www.bardhvac.com
sales@bardhvac.com

