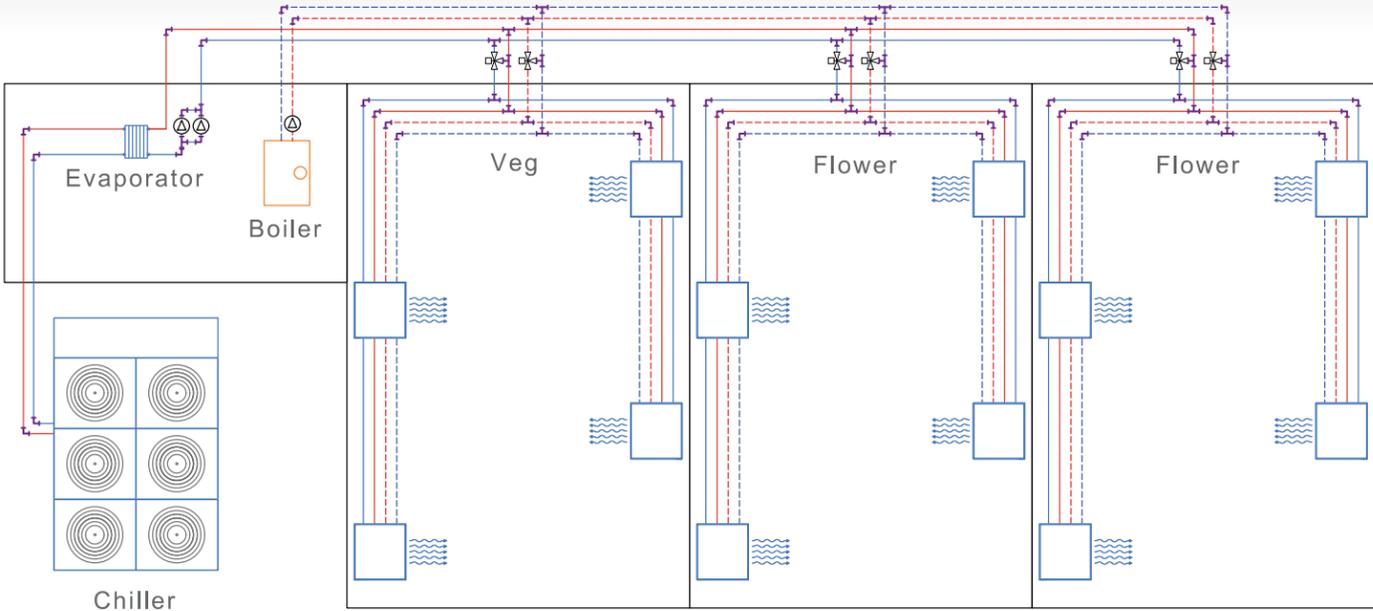


# Better Cooling than Traditional HVAC



## Compare the DeltaCool™ Advantages

DeltaCool™ Environmental Systems provide precision temperature and humidity control to maintain a consistent growing environment. Standard air conditioning systems cool air by pulling moisture out, producing inconsistent humidity levels. Compare systems below to see how DeltaCool™ best delivers optimal humidity levels necessary for healthy, high-yield cannabis crops.

Cooling Benefits	DeltaCool™ System	Traditional HVAC	Other Systems
<b>Efficiency</b>	Saves up to 35% energy usage.	Requires more energy overall.	Varies by system.
<b>Dehumidification</b>	Regulates water temp as it enters the fan coil to provide consistent, precise temperature and humidity control.	Continual dehumidification results in inconsistent humidity levels.	Do not modulate incoming water temperatures to fan coil.
<b>Chiller Units</b>	Heavy duty, industrial-grade system with standard steel piping. Generally requires one or two large tonnage units. Available in up to 250 ton units.	Use condensers instead of cold water chiller.	Residential and lightweight commercial-grade use Sch 40 PVC piping. Requires multiple smaller tonnage units with more piping.
<b>Fan Coils</b>	Industrial, galvanized steel construction with precise published specs. Available in a 2.5 ton unit.	No fan coils; expensive duct work.	Residential and lightweight commercial-grade with questionable outputs.
<b>Horticultural Environmental Control</b>	Integrated with DeltaCool™ system design.	Typically standard wall thermostats.	Standard HVAC control.

Contact us for more information on how your growing operation can benefit from DeltaCool™ Environmental Systems.

# DeltaCool™ Environmental System Control your Growing Environment

Get precise temperature and humidity control for healthy cannabis crops with Delta T's all in one system.

High-yield, high-quality cannabis plants thrive in a tightly controlled greenhouse or indoor growing environment. These systems require precise control, efficiency and reliability. The DeltaCool™ Environmental System provides the ideal growing environment to ensure a consistent and healthy crop.

### Temperature Control

The chilled water and hydronic heat package engineered for indoor and greenhouse growing is a hydronic process that circulates water through a loop piping system. Circulator pumps force the water through a heat exchanger, and a fan draws warm air out, cooling it as it passes over cold coils.

Fan coils are placed in accordance with the facility layout to accommodate warm and cold areas of the growing environment. For flexibility, this system may be broken up into individual temperature zones using either multiple circulator pumps, or a single pump and electrically operated zone valves.

### Precise Humidity Control

Many commercial greenhouses use evaporative cooling, but these systems use mists, sprays or wetted pads to lower air temperature, which can create too much humidity. By contrast, standard air conditioning systems dehumidify to the point of 10% to 20% relative humidity when cooling for long periods of time — too low for proper growth and production.

The DeltaCool™ system controls relative humidity better, providing both cooling and humidity control without dehumidifying to the extreme. It also cools the air to a temperature at or around dew point to avoid condensation of the air and excessive humidity. Chilled water cooling provides the ideal growing environment for consistent crop health, where optimum relative humidity levels should range from 30% to 50% for flowering and 50% to 60% for vegetative growing. By modulating the water temperature to the coil, exact cooling and humidity control can be achieved — a capability that is critical for growing healthy cannabis crops.



Creating custom horticultural heating & cooling solutions for over 30 years

## Complete Horticultural Control System

Like radiant heating, chilled water cooling is controlled and regulated by the environmental controls, allowing the grower to manage precisely the temperature of the plants, the humidity of the growing area and other climate factors. Direct digital controls have the added benefit of energy and cost savings.

The DeltaCool™ Environmental System controller works with or without your PC to control the chilled and hot water systems as well as additional climate control equipment in your growing operation. The system can also be connected to other horticulture controllers for growers who prefer this option.

## DeltaCool™ System Components

The Delta T Solutions chilled water cooling system provides all the elements needed to control the cannabis growing environment:

- Water- or air-cooled chillers
- High-efficiency boiler that works with chiller to temper water and adjust humidity levels
- Multiple unit types of fan coils that customize the system to meet each grower's needs and specifications
- Under bench or hanging fan coils — optimized for maximum sensible/minimum controlled latent cooling
- Overhead fan coils, providing control for floor-grown tall crops
- Under bench fan coils that offer soil-level temperature control for bench crops or plug-growing
- Horticultural environmental control system — precisely regulates temperature and humidity while managing any additional climate control equipment
- Multi-chiller loop piping components

## Custom Design Solutions

DeltaCool™ Environmental Systems offer precise control and are typically developed as a custom solution for each growing operation. Consider these factors when selecting a system:

- Installed cost & energy consumption
- Space requirements
- Freeze prevention
- Precision
- Growing area height, size and shape
- System cooling and heating capacity
- Centralized maintenance
- Stability of control

