Cultiva Systems, LLC

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Cultiva Systems

We Help You Grow

**The environmental control
specialist for indoor agriculture.**
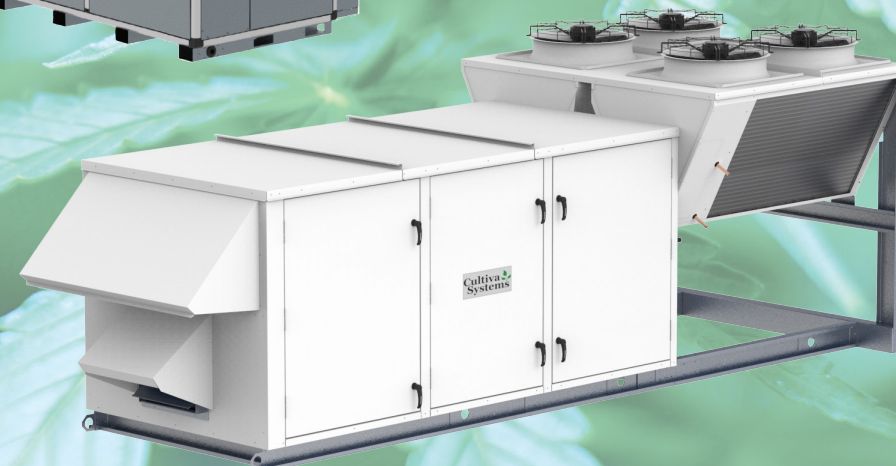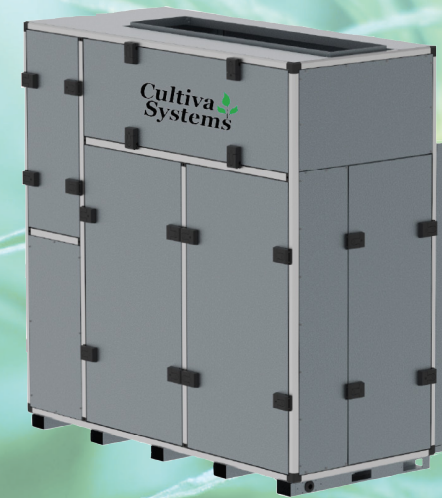
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Dedicated Indoor
Agricultural System
DIAS

How We Help You Grow

Cultiva Systems provides HVAC equipment nationally and internationally for indoor agriculture. Our equipment is designed specifically to handle the varying loads that occur within the grow environment throughout the entire plant life cycle. The Cultiva Systems controls are engineered to maximize the equipment performance and capabilities with the flexibility to be customized to meet the customer's needs. Cultiva Systems works directly with engineers and contractors to understand the load requirements in a given space to ensure the equipment Cultiva Systems provides will achieve the desired conditions.

Energy efficiency is an ongoing concern and the related HVAC equipment cost can be the highest contributing factor to electrical consumption. Cultiva Systems equipment design reduces your energy consumption by providing efficient fan and compressor components and operation. The Cultiva Systems controls integrates with the equipment design and components to maximize energy efficiency while achieving the desired conditions; therefore, lowering the operating cost to the grower.

Cultiva Systems is available on your time. Our knowledge and support begin in the design phase of a project and continues through equipment startup, commissioning, owner training and beyond.

Packaged Units

Cultiva Systems packaged units are available in air cooled and water cooled from 10 to 60 tons. Installations include roof top and ground mount. Multiple air paths with bottom discharge/return, horizontal discharge/return as well as custom top discharge and horizontal return.

Introducing our Dedicated Indoor Agricultural System or **DIAS**, a complete system unlike conventional systems that utilize standard air conditioning units to control temperature and dehumidifiers to control humidity. Our **DIAS** units are built with the capacity required for late flower loads with enough turn down to handle a grow in the earliest stages of veg. Powerful moisture removal capability for dry rooms with plenty of heat recovery (hot gas reheat) to keep the room where you need it.
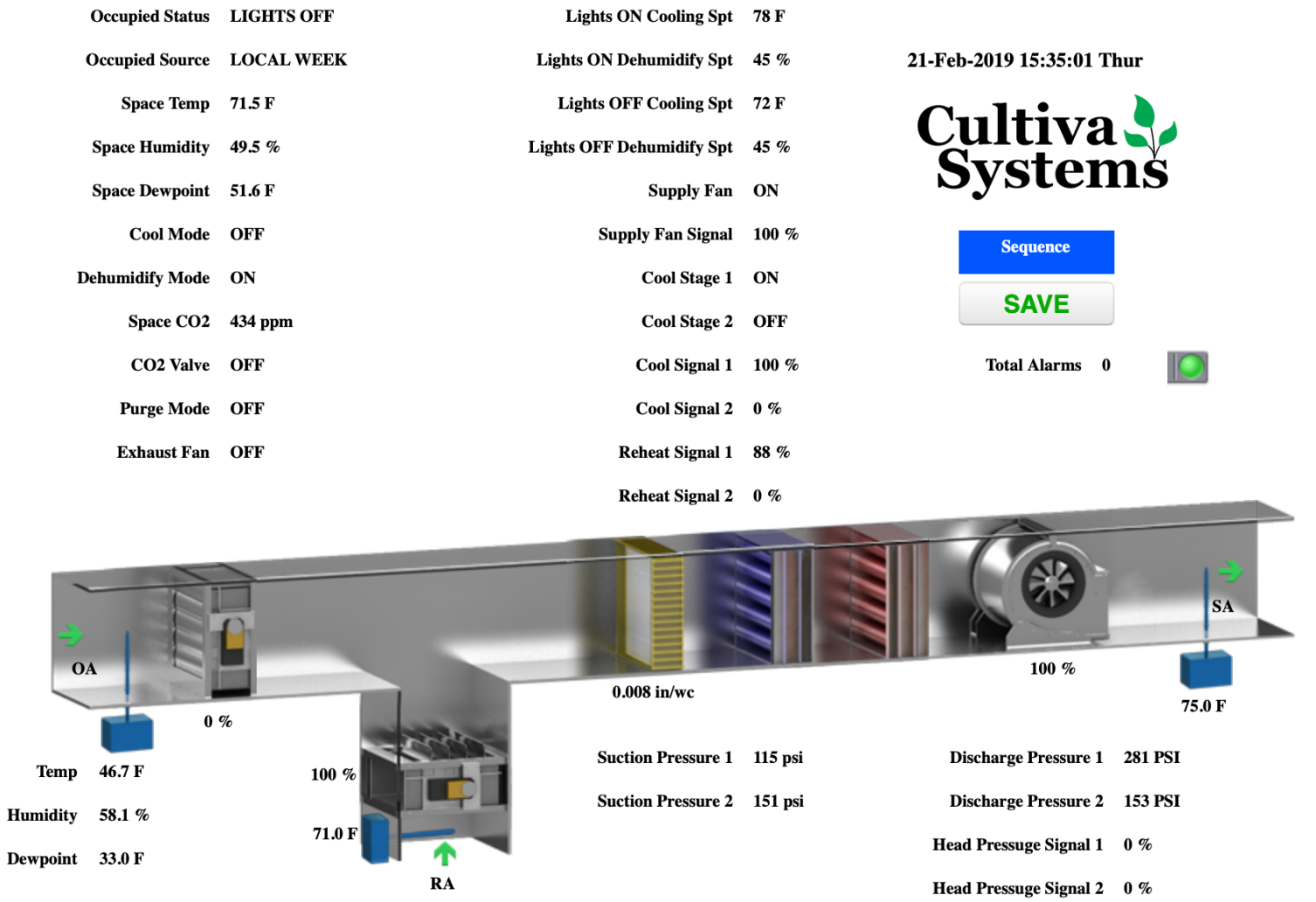
All of our packaged units and vertical / horizontal self-contained air and water cooled units feature redundancy in each refrigerant circuit. Dual refrigerant circuits utilize variable capacity compressors and modulating, full condensing, full heat of rejection hot gas reheat coils. Supply fan assemblies are direct drive plenum fans with integrated high efficiency EC motors.

Available PCO air cleaner slot is included in each unit located between the evaporator and reheat coils. More effective than traditional UV lights and eliminates the need for HEPA and carbon filtration. Provided by Pura Vida Air Systems. We partner with them to provide the best air cleaner in the industry. Learn more about their products at www.puravidaairsystems.com.

Vertical / Horizontal Self-Contained Units

Cultiva Systems vertical and horizontal self-contained units are available in air cooled and water cooled from 10 to 45 tons. Multiple air paths with removable panels that are field configurable as top discharge, rear and front discharge with return air from the rear of the unit.

Occupied Status	LIGHTS OFF	Lights ON Cooling Spt	78 F	
Occupied Source	LOCAL WEEK	Lights ON Dehumidify Spt	45 %	21-Feb-2019 15:35:01 Thur
Space Temp	71.5 F	Lights OFF Cooling Spt	72 F	
Space Humidity	49.5 %	Lights OFF Dehumidify Spt	45 %	
Space Dewpoint	51.6 F	Supply Fan	ON	
Cool Mode	OFF	Supply Fan Signal	100 %	Sequence
Dehumidify Mode	ON	Cool Stage 1	ON	SAVE
Space CO2	434 ppm	Cool Stage 2	OFF	
CO2 Valve	OFF	Cool Signal 1	100 %	Total Alarms 0
Purge Mode	OFF	Cool Signal 2	0 %	
Exhaust Fan	OFF	Reheat Signal 1	88 %	
		Reheat Signal 2	0 %	

OA   0 %   0.008 in/wc   100 %   SA   75.0 F

Temp 46.7 F
Humidity 58.1 %
Dewpoint 33.0 F

100 %   71.0 F   RA

Suction Pressure 1	115 psi	Discharge Pressure 1	281 PSI
Suction Pressure 2	151 psi	Discharge Pressure 2	153 PSI
		Head Pressuge Signal 1	0 %
		Head Pressuge Signal 2	0 %

Controlling Your Environment

The FS32 controller's built-in Web Server, powered by PHP and HTML5 graphics, is multi-platform and multi-device compatible. User connectivity can be hard wired by Ethernet or is WiFi accessible with our supplied router. A rich, informative user interface is provided for operational status, I/O monitoring setpoint adjustment, configuration, internal scheduling, historical data collection and alarm reporting. Application backup and restore features are a part of the user interface utilities as well as customizable user access accounts. Integration with building automation systems made easy with native BACnet IP / MSTP and Modbus TCP / RTU.

Our standard sequence of operations includes space temp/humidity control, CO_2 injection, purge, high CO_2 alarm strobes and lighting.

SpaceTemp
SpaceHumidity