



# Humidity Control Systems

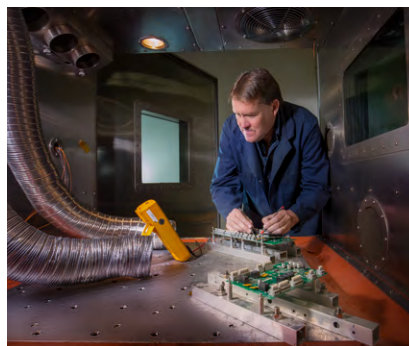
DEHUMIDIFICATION | HUMIDIFICATION | VENTILATION | WI-FI CONTROL



*Maximize plant growth and profit potential with  
precise humidity control*

# Humidity control for the professional cultivator

Anden has been an innovator in the development of precise humidity control systems for commercial and residential applications since 1954. Trust us to deliver the reliable products and expert technical support that are critical to successful harvests.



## Built on a foundation of comprehensive testing programs performed by Anden engineers.

- Research and development
- Lab testing capabilities
  - HALT, HASS, Environment testing
  - IEC 61000-4-2, IEC 61000-4-4
  - ASHRAE 52.2 Air filter test duct
- Technology partnerships, certifications, testing coordination with UW-Madison







# Creating and maintaining the right environment

Proper control of humidity and temperature throughout the growing and curing stages is essential to high-quality, high-yield harvests. Anden dehumidifiers ensure proper humidity levels are constantly maintained. This precise control, especially at the canopy level, prevents dangerous spikes in

humidity and reduces the amount of chemicals needed to control mold and mildew growth. The design of Anden thermostats and sensors draw upon years of engineering premium products for the HVAC industry. Critical control is achievable for your facilities.

## A COMPLETE PRODUCT ASSORTMENT FOR ALL GROW APPLICATIONS

	TYPE	MODELS	FEATURES
	<b>Industrial Dehumidifiers</b>	A70, A95, A130	<ul style="list-style-type: none"> <li>• High-capacity, low energy</li> <li>• Digital user interface</li> <li>• Crop-level external control option</li> <li>• 5-year warranty</li> </ul>
	<b>Industrial Grow-Optimized Dehumidifiers</b>	A200V1, A300V1, A300V3	<ul style="list-style-type: none"> <li>• High-capacity, low energy</li> <li>• Designed for "lights off" humidity spike</li> <li>• Robust design, industry leading components</li> <li>• Crop-level external control option</li> <li>• 5-year warranty</li> </ul>
	<b>Steam Humidifier</b>	AS35FP	<ul style="list-style-type: none"> <li>• Maintain precise, constant RH</li> <li>• High-capacity</li> <li>• Easy installation</li> <li>• Safe operation</li> <li>• Easy to maintain</li> </ul>
	<b>Controls</b>	8840, 8830, 8820, 8082, A76, 5558	<p>Wi-Fi thermostats with humidity control provide mobile monitoring of the conditions in your facility at all times. Monitor and adjust temperature and humidity set points from anywhere using a connected smart device.</p>

Consult an HVAC Application Engineer on Specialty Units

# Industrial dehumidifiers

Anden A-Series Dehumidifiers' capacities range from 70–130 pints per day of moisture removal. From the serious hobbyist to medium-sized commercial facilities, Anden industrial dehumidifiers are designed to operate effectively in the extreme conditions of any indoor cultivation environment.

## Digital Control

Included with every unit



Accurate, digital sensor with convenient top or side mounting options.

## External Digital Control

Optional



Position at crop height for critical monitoring and accuracy of RH control where it's needed most.



## MODEL A70

Water removal @ 80°F/60% RH	70 pints/day
Efficiency @ 80°F/60% RH	4.4 pints/kWh
Airflow	200 CFM
Power (Watts @ 80°F/60% RH)	630
Supply voltage	120VAC, 1 Phase, 60Hz
Dimensions: (cabinet only)	12½" W x 12½" H x 25" L
Weight	56 lbs.
Air filter	Washable MERV 8
Power cord	8' 120VAC grounded plug
Warranty	<b>5-YEAR WARRANTY</b>
Hanging kit	Model 5660 18" W x 6 <sup>15</sup> / <sub>16</sub> " x 29 <sup>7</sup> / <sub>8</sub> " Weight: 13 lbs.   Working Load: 400 lbs.



**MODEL A95**

95 pints/day

4.7 pints/kWh

265 CFM

870

120VAC, 1 Phase, 60Hz

12½" W x 14½" H x 27½" L

70 lbs.

Washable MERV 8

8' 120VAC grounded plug



**Model 5660**

18" W x 6<sup>15</sup>/<sub>16</sub>" x 29<sup>7</sup>/<sub>8</sub>"

Weight: 13 lbs. | Working Load: 400 lbs.



**MODEL A130**

130 pints/day

6.1 pints/kWh

310 CFM

900

120VAC, 1 Phase, 60Hz

19½" W x 18¾" H x 30" L

113 lbs.

Washable MERV 8

8' 120VAC grounded plug



**Model A130**

27" W x 10½" x 35"

Weight: 18 lbs. | Working Load: 400 lbs.

# Industrial grow-optimized dehumidifiers



## MODEL A200V1

Anden AV-Series Dehumidifiers range from 210-310 pints per day of moisture removal. Components utilize materials designed for the most extreme conditions and demanding enterprises. Sensors and controls can be custom-configured for each facility. Anden AV-Series are recommended for the large, ultra-high volume industrial facilities.


► **FACT**

Humidity spikes when lights are turned off.

► **FACT**

Dehumidifiers must achieve full capacity quickly and hold capacity while temperatures drop until lights are turned on.

**Anden dehumidifiers utilize refrigeration technology designed for grow conditions.**

Water removal @ 80°F/60% RH	210 pints/day
Efficiency @ 80°F/60% RH	6.0 pints/kWh
Airflow	400 CFM
Power (Watts @ 80°F/60% RH)	1400
Supply voltage	208/240VAC, 1 Phase, 60Hz
Dimensions: (cabinet only)	28½" W x 18¾" H x 23" L
Weight	140 lbs.
Air filter	MERV 11 disposable
Power cord	10' 240VAC grounded plug
Warranty	
Hanging kit	Models A200 and A300 hanging brackets are built in



**MODEL A300V1**



**MODEL A300V3**

300 pints/day

4.6 pints/kWh

400 CFM

3100

208/240VAC, 1 Phase, 60Hz

28½" W x 18¾" H x 23" L

140 lbs.

MERV 11 disposable

Hardwired



Models A200 and A300 hanging brackets are built in

300 pints/day

Coming Soon

Coming Soon

Coming Soon

Coming Soon

28½" W x 18¾" H x 23" L

Coming Soon

MERV 11 disposable

Hardwired



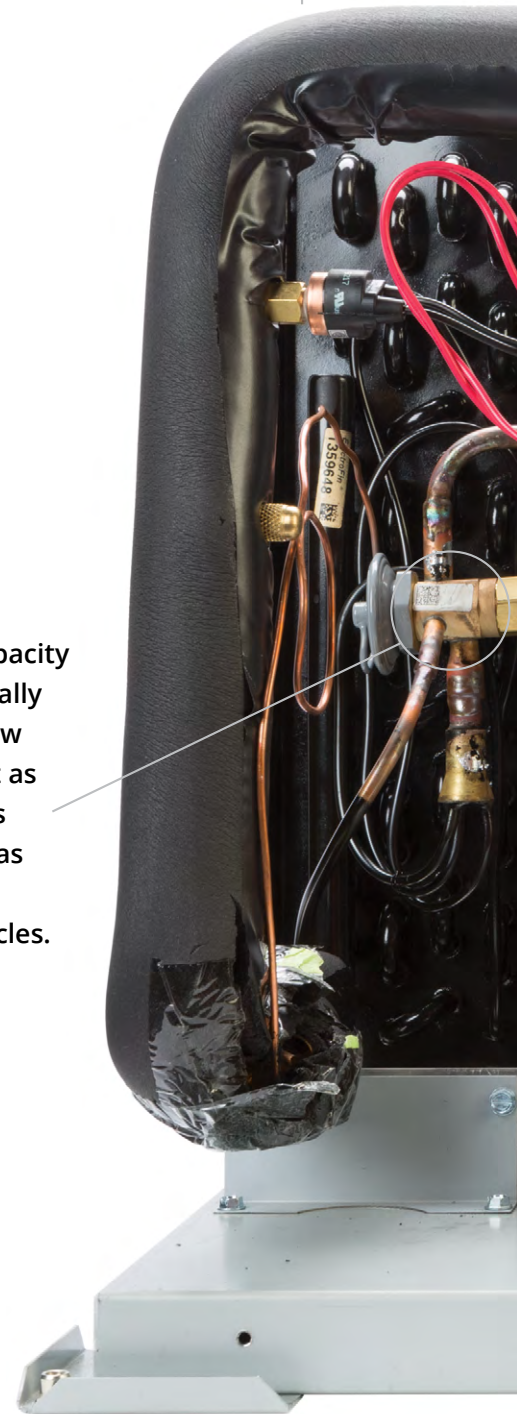
Models A200 and A300 hanging brackets are built in

# Industrial Grow-Optimized Dehumidifier

Anden dehumidifiers are designed with industry leading components from Modine®, ElectroFin®, Ziehl-Abegg®, Copeland® and Sporlan®.

Design Feature	Anden AV Series	Standard
Compressor Start Up	Crank case heater	None
Capacity Regulator	Thermal Expansion Valve (TXV)	No TXV; uses cap tube
Compressor Type	Scroll	Rotary
Corrosion Resistance Coil	Industry leader Modine® coil with ElectroFin® coating	Standard coating
Air Flow	ECM—variable speed blower	Direct drive single speed blower
Control	Digital RH Sensor ±1.5% accuracy external controls with Wi-Fi and temperature averaging	Nylon RH Sensor ±5% accuracy external controls
Warranty	5-Year “Bumper to Bumper”	1-Year parts and labor 5-Years refrigeration system

**TXV Valve**  
Maintains capacity by automatically regulating flow of refrigerant as temperatures change such as during lights on and off cycles.



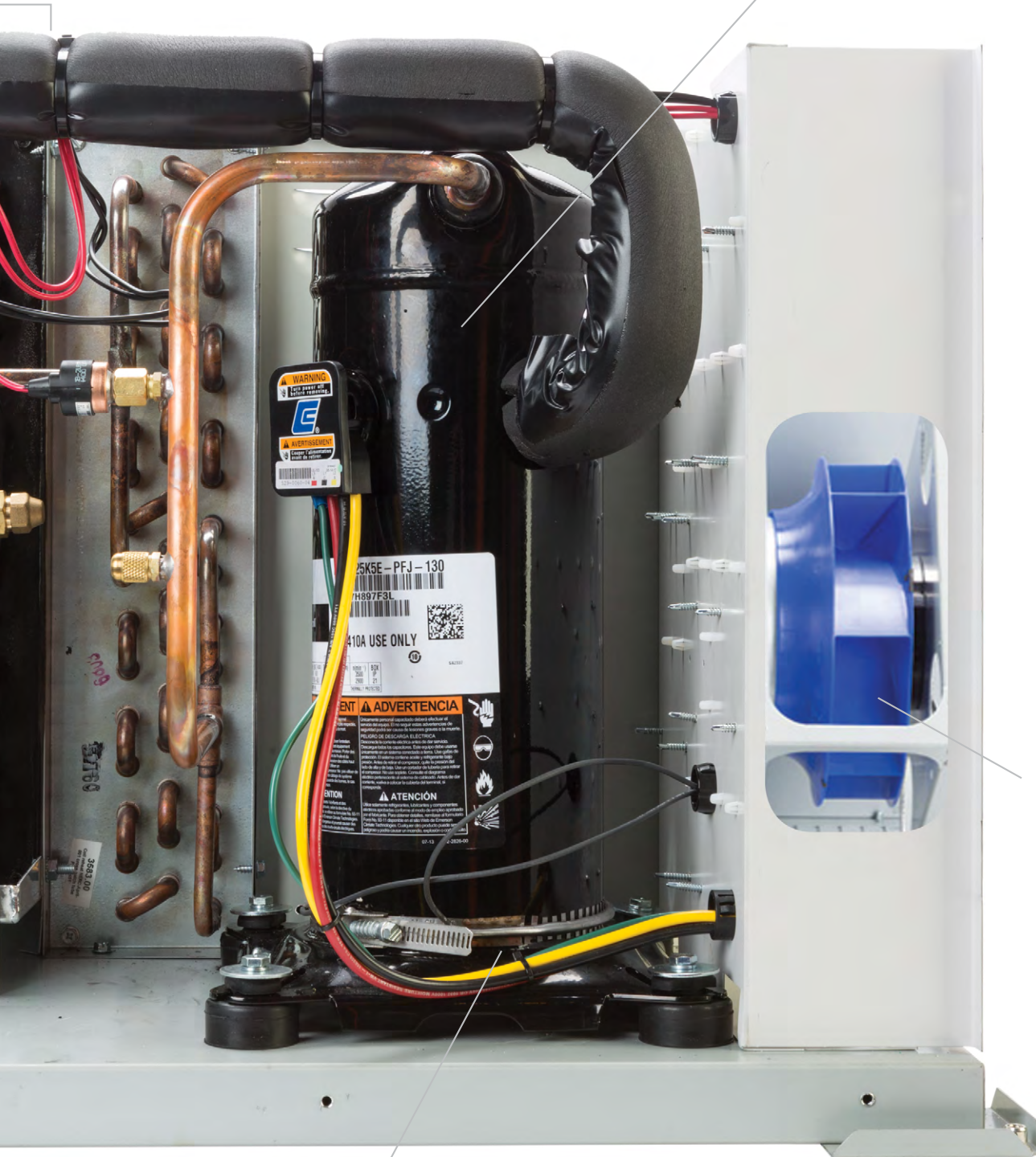


### Modine® Coil with ElectroFin® E-Coating

- Robust design optimizes humidity control
- Maximizes heat transfer for optimum performance
- Protects against corrosion

### Scroll Compressor

The industry standard for quiet, reliable performance.



### ECM blower

Reliable air flow across the coil ensures continued high ppd removal efficiency

### Crank Case Heater

Optimizes start-up similar to an engine block heater, so when lights turn off and humidity spikes, the dehumidifier immediately reaches full capacity.

# Steam humidifiers

## Humidity control when preparing the crop

Drying and curing plants may require the addition of humidity to the drying room at some times of day and the removal of moisture at others.

Anden systems can automatically switch between humidification and dehumidification to ensure proper levels. Operational deadband prevents equipment from engaging simultaneously when optimal RH is reached.

## Modulating control of humidity

Anden steam humidifiers with modulating control maintain extremely precise and constant RH levels required in the growing and curing environment.



MODEL AS35FP

10 $\frac{1}{8}$ " W x 20 $\frac{7}{8}$ " H x 7 $\frac{1}{8}$ " D

Steam Capacity Pints/Day	Voltage	Current Draw	
		Amps	kW
92	120V	11.5	1.4
128		16.0	1.9
164	208V	11.5	2.4
240		16.0	3.3
186.4	240V	11.5	2.8
276.8		16.0	3.8

MODEL AS35FP INCLUDES:



### Fan Pack

14" W x 6 $\frac{9}{10}$ " H x 3 $\frac{15}{16}$ " D

FINISHED GRILLE

16 $\frac{13}{16}$ " W x 9" H x 1 $\frac{15}{16}$ " D



### Digital Humidistat

2 $\frac{17}{20}$ " W x 4 $\frac{17}{20}$ " H x 1" D

**High capacity** - One unit provides between 92 and 277 pints per day (11.5 and 34.6 gallons per day).

**Independent operation** - Works with or without the use of an HVAC system's duct work.

**Water requirements** - Uses standard potable water or softened water. Reverse Osmosis "RO" or deionized water is not recommended.

**Easy to install** - The fan pack can be surface mounted or recessed into a wall and connects directly to the steam humidifier.

**Automatic drain and fill cycle** - Unit flushes and fills periodically to maintain the proper conductivity.

**Safe operation** - Drain water tempering uses cold inlet water to reduce the drain water temperature to protect PVC piping and condensation pumps.

**Easy to maintain** - No cleaning or scrubbing, simply remove the steam canister and replace.

# Precise control and remote monitoring

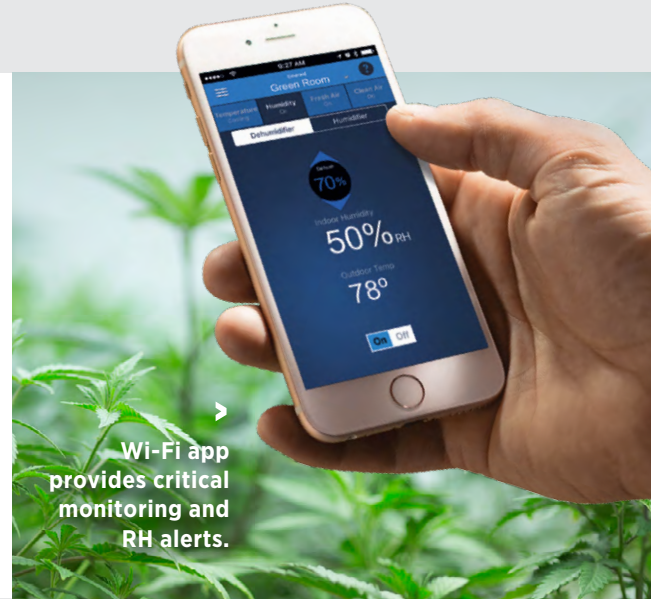
Anden systems provide precise and continuous control of indoor environmental conditions crucial to growth cycles. Smart Wi-Fi alerts provide effective and convenient monitoring of conditions anywhere, anytime.

## Wi-Fi control and monitoring

Wi-Fi thermostats with humidity control provide mobile monitoring of the conditions in your facility at all times. Monitor and adjust temperature and humidity set points from anywhere using a connected smart device.



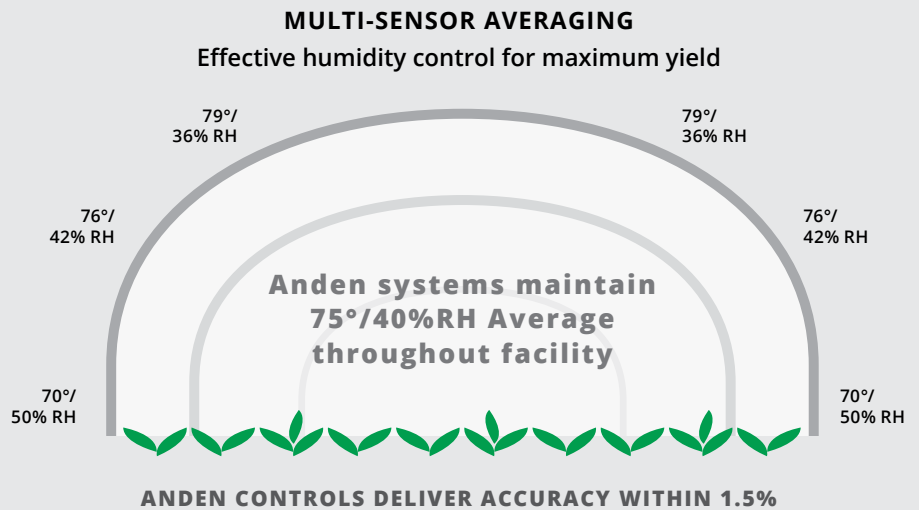
**Model 8840 Shown**



Wi-Fi app provides critical monitoring and RH alerts.

## Location of air sampling — remote sensing

Temperature and humidity can vary greatly between the upper and lower levels of a grow facility. With remote sensors for the temperature and humidity, Anden controls sample the air at plant level, and at multiple points, providing more accurate monitoring and control.



**Model 8082 Sensor**  
Monitor temperature and humidity in multiple locations. Readings averaged to balance temperature and humidity.



**Model A76**  
Dedicated monitoring and control of each dehumidifier at canopy height.



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