Cannabis
And Humidity Control

Humiscope

Not everything is resilient to environmental fluctuations. Sometimes for your company to succeed, you need to master your indoor environment.

Master your indoors

Many growers maintain that soil and nutrients are the most important factors in growing cannabis, however it is environmental conditions that really matter.

Light, temperature, air circulation, light reflection and humidity are the main factors for creating the perfect growing environment.

Common Industry Problems

Humidity	Light burn
Temperature	Over/under watering
Lack of ventilation	Too many nutrients
Lack of light	Bud/root rot

" We are very happy with the outcome. Drying times were reduced by 50%. Essentially we created our own climate'

~ Peter Schulte, Managing Director, Schultes (Drying Room)

To enable year-round yield, the grow room must maintain a consistent climate. Temperature and humidity are both essential factors during growth cycles and drying.

Greenhouse Dehumidifiers have a large impact on, and play a pivotal role in, creating the optimal climate for indoor growing systems. A variety of factors are considered to ascertain if a desiccant or refrigerant dehumidifier is the ideal system.

Designing the Ideal Environment

A number of factors play a role when designing the ideal indoor environment:

- Room temperature
- Room size
- Number of plants
- Plant species
- Air circulation

> *"Humiscope offered strong customer service throughout the entire project and backed it up with thorough technical knowledge.*
>
> ~ Dallas Garratt, GM Operations - Cap-XX Australia (Low Dew Point Dry Room)

In an endeavour to create the optimal environment, indoor agriculture can encounter certain challenges in climate regulation including humidity levels.

Indoor Agriculture and Relative Humidity

When we talk about the ideal humidity for any plant, we mean 'relative humidity' (RH). In simple terms, RH relates to the amount of water air can hold.

Dry air causes plants to lose more water which drives down the overall moisture content in the plant. Once the environment becomes too dry, plants lose more water than they are able to regain via their roots.

If you water the plant more–the plant could develop root rot.

If the air is too moist it puts cannabis at risk of developing bud rot.

Whether growing in a greenhouse or closed facility, plants constantly transpire water, driving humidity up. If kept unchecked, relative humidity will quickly increase.

Once the air is saturated with water vapor, the dew point is reached and water begins to condense on cooler surfaces, including on the plants and inside the buds. This condensation causes fungal pathogens, leading to disease outbreaks and rotting of the end product.

> *"From the first phone call I made to you and to the follow-on communication, was perfect. Thank you.*
>
> ~ Neil Rattray, Supervisor, BSA (cold/dry room)

Cannabis and Relative Humidity

The relative humidity that is best for cannabis plants varies over the course of their lifecycle. RH levels should be changed during different cycles to optimise growth and health.

Seedlings
65-80% RH

Vegetative stage
55-70% RH

Flowering stage
40-50% RH

Late bud stage
30-40% RH

Above is a guide. RH also depends on the plant's heritage.

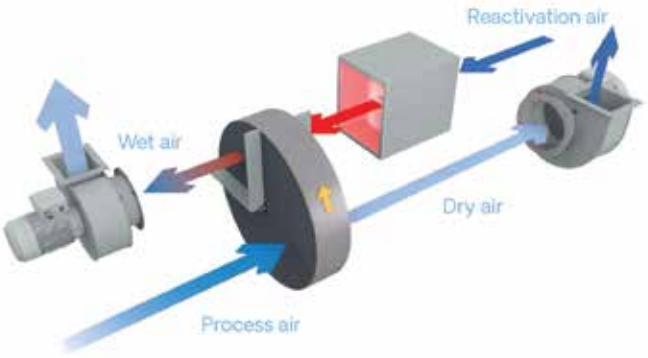
Throughout the cannabis lifecycle humidity control is required to maintain optimal growth and drying conditions. A humidity control system will improve grow quality, increase dry weight mass and encourage the manufacture of compounds and is the most efficient method in eliminating disease.

Ultimately, nearly every indoor grower, no matter how small or large the application, is going to need a dehumidifier or humidifier to achieve indoor air quality.

Dehumidifiers

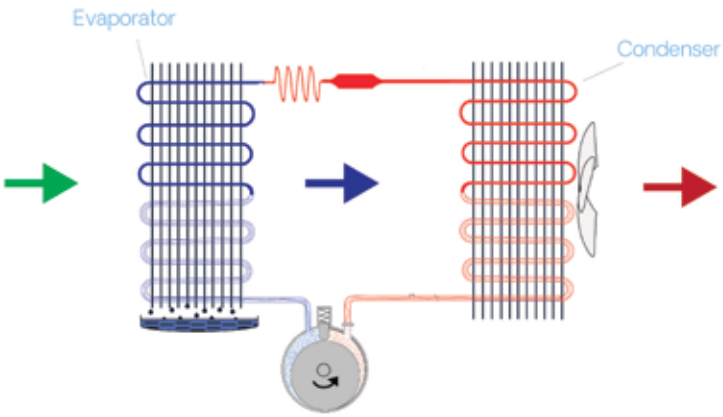
Dehumidifiers simultaneously improve grow quality, increase dry weight mass, and stimulates the manufacture of compounds. There are two types of common dehumidifiers that can be applied, depending on a few variables.

Desiccant Dehumidifier



Desiccant dehumidifiers work by passing air through a rotating desiccant wheel to exact moisture from the air. They achieve humidity levels below 35% and have proven themselves to reduce both operating costs and energy consumption.

Refrigerant Dehumidifier



Refrigerant dehumidifiers work best in spaces where the temperature is at 20°C and above and humidity levels of 50% and above. They work on the humidity of the room and run when the humidity is above its set point.

Humidifiers

There are many varieties of humidifiers in the market with only few are designed with commercial operations in mind. Humidifiers add moisture to the air. Young plants need upwards of 65-70% humidity for vigorous growth. This extra humidity is needed because root systems have not fully developed yet, so most of their water is absorbed through the leaves.

Who we are

We are a group of engineers, technicians and draftsmen dedicated to our clients and committed to providing energy efficient indoor environment systems; from simple applications to specially engineered solutions.

Our services

Design and Installation

We are experts in designing, building and installing state-of-the-art climate control systems from simple applications to specially engineered solutions.

Rentals

Whether the application is a temporary project or being able to test the technology before investing, renting is a risk-free option.

Service & Maintenance

With over 35 years' experience we are able to service any brand dehumidifier regardless of make or model. We can identify where improvements can be made.

We hold ourselves to the highest professional standard. Our clients tell us time and again how easy we are to work with & that we have exceptional communication.

> *" Katherine was terrific! Nothing was too much trouble and she couldn't have been more helpful.*
>
> ~ Peter Schulte, Managing Director, Schulte's (drying room)

Call us – obligation free – and we can talk through your specific concerns and suggest some solutions that would work best for you!

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