

COTES ADSORPTION DEHUMIDIFIERS

# THE RIGHT DRY-AIR SOLUTION FOR YOU, YOUR BUSINESS AND THE ENVIRONMENT





# 25%

OF BREAKDOWNS ARE  
CAUSED BY MOISTURE  
AND CORROSION

## HUMIDITY MANAGEMENT

# WHAT IS HUMIDITY AND WHAT CAN YOU DO ABOUT IT?

Humidity is the amount of moisture in the air – if you have too much for too long, it will cause issues, which is why you need more control.

### Absolute Humidity

Absolute humidity is the amount of moisture present in a particular volume of air and is typically measured in g/kg.

### Relative Humidity

Relative humidity is the relationship between the actual amount of moisture present and the maximum amount that the air could contain. Relative humidity is always measured in percentages.

### The Issue

Inappropriate levels of relative humidity can result in a wide range of problems in the industrial processes and commercial operations of your business.

### The Solution

Cotes dry-air solutions help you establish full control over humidity conditions in the essential structures, equipment and processes of your business.

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To all businesses who want to maximise their production output, Cotes provides both standardized and tailor-made adsorption dehumidifiers for better humidity control, more efficient processes and your peace-of-mind.

## COTES DRY-AIR SOLUTIONS

# HOW DO YOU BENEFIT?

Effective humidity management gives a degree of control over the operating conditions that are often crucial for the profitability of your business.

Dehumidification technology is the most cost-effective and environmentally responsible way to tackle many of the common issues caused by unwanted humidity in your business processes. It's a relatively straightforward and inexpensive way to implement pro-active measures to combat the negative effects of humidity.

Dry air helps you maintain the value of key structures and other high-value assets, reduce energy consumption, and boost the efficiency of a wide range of industrial processes.

Better control over the moisture in the air gives you:

- **Better control** of key parameters that affect your raw materials, production processes, manufacturing installations and fixed assets
- A way to actively **prevent detrimental conditions** and events that include condensation, rust and corrosion, mould and rot, electrical faults and spoilt materials
- **Longer service life** and better return on investment for structures, buildings and equipment
- **Reduced expenditure** on service, maintenance and refurbishment
- **Lower energy costs** and reduced environmental impact





DRY-AIR SOLUTIONS FOR

# YOUR BUSINESS AND INDUSTRY

If your business wants to maximise production output or simply needs a world-class dry-air solution, then Cotes provides standardised and tailor-made adsorption dehumidifiers for a range of industries and commercial drying applications – better humidity control, more efficient processes and your peace-of-mind.

## Food and beverage

If you are a food or beverage producer, quality and hygiene are top priorities, and you understand that unwanted humidity in your production is not a risk that you can take.

## Lithium-ion battery manufacturing

Manufacturing lithium-ion batteries requires maintaining optimum humidity levels in the cell production environment. This process consumes a significant amount of energy. However, by using Cotes adsorption dehumidifiers, high energy savings can be obtained, and total cost of ownership and carbon footprint reduced.

## Other business industries

- Aircraft maintenance & storage
- Boat storage solution
- Breweries
- Building & construction work
- Chemical production
- Confectionary manufacturing
- Dairy processing facility
- Electronics storage
- Food and beverage
- Lithium-ion battery manufacturing
- Meat processing facilities
- Pharma productions & packaging
- Offices & schools
- Flood repairs & damage control
- Glass production
- Hotels
- Ice rinks
- Indoor winter sports facilities
- Industrial freezer facilities
- Iron & steel storage
- Museums, archives & libraries
- Product drying & storage
- Shipping spaces & machinery rooms
- Sports facilities
- Vehicle manufacturing
- Wineries
- And much more



# FOUR DRY AIR SOLUTIONS SUITED FOR YOUR NEEDS

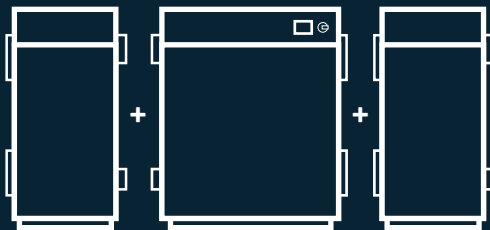
## MOBILE

A selection of compact, lightweight dehumidifiers built for mobility, with a handle for easy lifting and transportation.



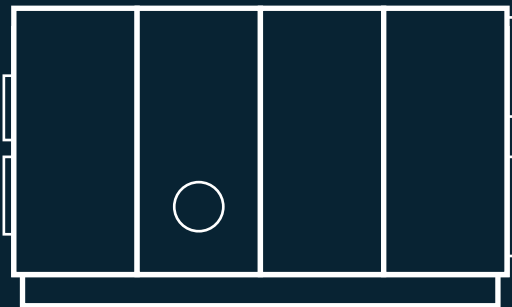
## MODULAR

A range of off-the-shelf dehumidifiers in different sizes and capacity, with add-on modules you can select to meet specific requirements.



## FLEXIBLE

An assortment of dehumidifiers built to handle large volumes of air to meet our client's specialised needs for highly specific production or manufacturing processes where precision, performance and stability are key.



## ULTRADRY

Cotes Ultradry adsorption dehumidifiers are energy-efficient and provide precise humidity control for ultradry air at extremely low dewpoints in battery dry rooms, creating cost savings in battery cell production. With our innovative Exergic Technology, you can integrate sustainable energy sources, such as waste heat or heat pumps.

MAIN MODULE



INTAKE MODULE



# MOBILE SOLUTIONS



### OUR MOBILE SOLUTIONS

Lift it, push it, turn it or swing it around, this selection of compact, lightweight dehumidifiers is built for mobility.

With a handle for easy lifting and transportation, these are popular for:

- Ad hoc/quick-fix dehumidification requirements
- Aircraft, vehicles and boats
- Building, construction and renovation
- Equipment rental services
- Recovery and repair after flooding and water damage
- Small-scale dry storage
- Waterworks and pumping stations

CR80B	
Moisture removal capacity:	0.44 kg/h
Connected load:	0.83 kW
CR240B	
Moisture removal capacity:	0.8 kg/h
Connected load:	1.05 kW
CR290B	
Moisture removal capacity:	1.1 kg/h
Connected load:	1.63 kW
CR400B	
Moisture removal capacity:	1.4 kg/h
Connected load:	1.97 kW
NEW: CR240	
Moisture removal capacity:	0.8 kg/h
Connected load:	1.05 kW

# MODULAR SOLUTIONS

A range of standardized off-the-shelf dehumidifiers in different sizes and capacity, with add-on modules you can select to meet specific requirements. These modular dry-air solutions cover a large range of industrial applications like:

- Archives
- Buildings and bridges
- Breweries
- Dairy processing
- Food industry
- Sport facilities
- Storage rooms
- Utility operations



## C30

The C30 is often used in food industry processing facilities, cold stores, waterworks, general humidity management in all kinds of indoor spaces. Easy to clean, it has a sleek and quality design with low energy consumption, low noise level running and low maintenance costs.

### Standard specifications overview

Moisture removal capacity:	0.9 - 1.9 kg/h
Connected load:	1.4 - 2.9 kW
Compatible modules:	Air condensation and Heat recovery

## C35

The C35 is an innovative range of elegant, versatile dehumidifiers, with moisture removal capacities of 3-6 kg per hour, ideal for food industry processing facilities, pharmaceutical production facilities, waterworks, cold stores/freezer facilities and general humidity management in all kinds of indoor spaces.

### Standard specifications overview

Moisture removal capacity:	3.3 - 5.6 kg/h
Connected load:	5.1 - 8.8 kW
Compatible modules:	Air condensation, heat recovery, pre/post cooling and post heating

## C65

Redesigned and improved in 2021, the new C65 incorporates the heat recovery module as default functionality, improving energy efficiencies and making it arguably the most energy efficient mid-sized dehumidifier on the market.

### Standard specifications overview

Moisture removal capacity:	7.8 - 19.1 kg/h
Connected load:	8 - 33.8 kW
Compatible modules:	Heat recovery included, pre/post cooling and post heating

## C105

The C105 has high moisture removal capabilities and the large volumes of air that can be dried make this dry-air solution well suited for many industrial applications where temperature, air flow or relative humidity are business critical parameters.

### Standard specifications overview

Moisture removal capacity:	25.1 - 50.5 kg/h
Connected load:	38 - 75 kW
Compatible modules:	Heat recovery, pre/post cooling and post heating

# FLEXIBLE SOLUTIONS

Cotes Flexible dehumidifiers are designed for large-scale humidity management in conjunction with process drying - where exceptionally dry air (deep drying, high ΔX) or exceptional volumes of process air are required - ensuring effectiveness, versatility and reliability.

This range of well-engineered, energy-efficient, reliable dehumidifiers are robustly built and designed for ease of use, maintenance and operation in industries like:

- Clothing industry
- Ice rinks
- Industrial air supply
- Powder packaging lines
- Sport facilities



### Standard specifications overview

Moisture removal capacity:	62.6 - 220 kg/h
Connected load:	92 - 345 kW

# ULTRADRY SOLUTIONS

Battery dry rooms are essential in lithium-ion battery manufacturing for maintaining a constant and ultradry humidity level. However, maintaining this environment requires a significant amount of energy. Cotes Ultradry adsorption dehumidifiers are the world's most sustainable and energy-efficient solution for battery dry rooms.

Cotes Ultradry ensures high energy efficiency, reduces total cost of ownership, and maintains optimum humidity control with low dewpoint, enabling best battery performance and a safe working environment.

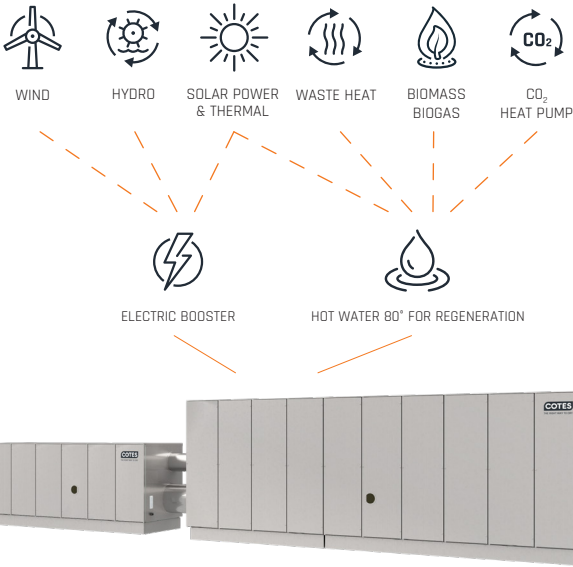
### Standard specifications overview

Main Module:	
Minimum airflow	3300 - 8000 m³/h
Maximum airflow:	15000 - 34000 m³/h
Connected load:	52 - 110 kW

### Intake Module:

Minimum airflow	1500 - 8000 m³/h
Maximum airflow:	5000 - 20000 m³/h
Connected load:	78 - 175 kW

With our innovative Exergic Technology, the Cotes Ultradry solution maximises energy savings by utilising three rotors and hot water at 80-90°C obtained from sustainable energy sources such as waste heat, biomass, solar thermal panels, CO2 heat pumps, and renewable energy from wind, hydro, or solar power.



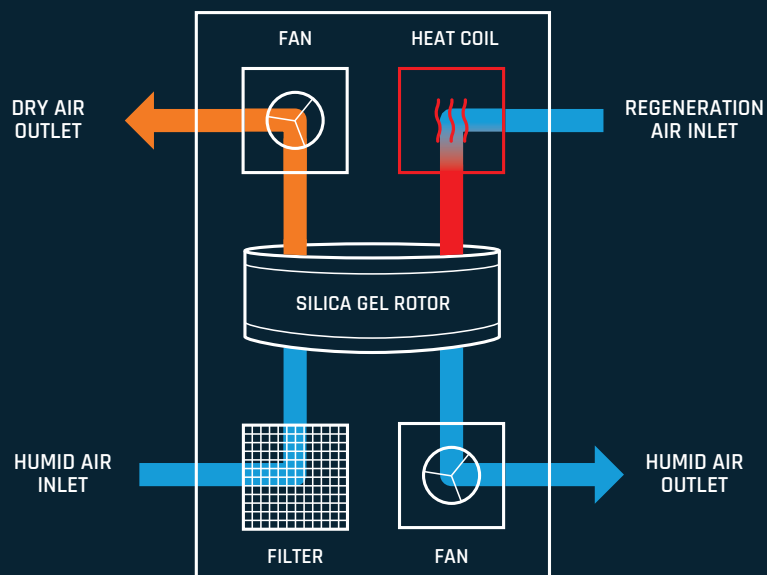
# HOW IT WORKS

## ADSORPTION DEHUMIDIFICATION

The effect of Cotes adsorption dehumidifiers basically stems from the action of two flows of air. The process is self-sustaining and requires little maintenance.

The silica rotor removes moisture from the intake airflow and the second airflow removes moisture from the silica rotor which is transported out of the building or structure.

Depending on your choice of the Cotes dry-air solution rotor configuration, the regeneration inlet and fan setup will look different.



## EXERGIC TECHNOLOGY

Cotes developed the Exergic Technology, an innovative solution that maximises energy savings by using three rotors and sustainable energy sources.

With Cotes Exergic Technology, you can utilise a combination of sustainable energy sources to achieve considerable energy cost savings and large carbon footprint reductions. All you need is hot water heated at 80-90°C, which can be obtained by a sustainable energy source.

