

COTES ULTRADRY ADSORPTION DEHUMIDIFIER

MAXIMISING ENERGY EFFICIENCY IN BATTERY DRY ROOMS IN GIGAFACTORIES

Choose the most energy-efficient solution, using sustainable renewable energy sources to meet your battery dry room needs and achieve very low dew points cost-effectively.

85 %

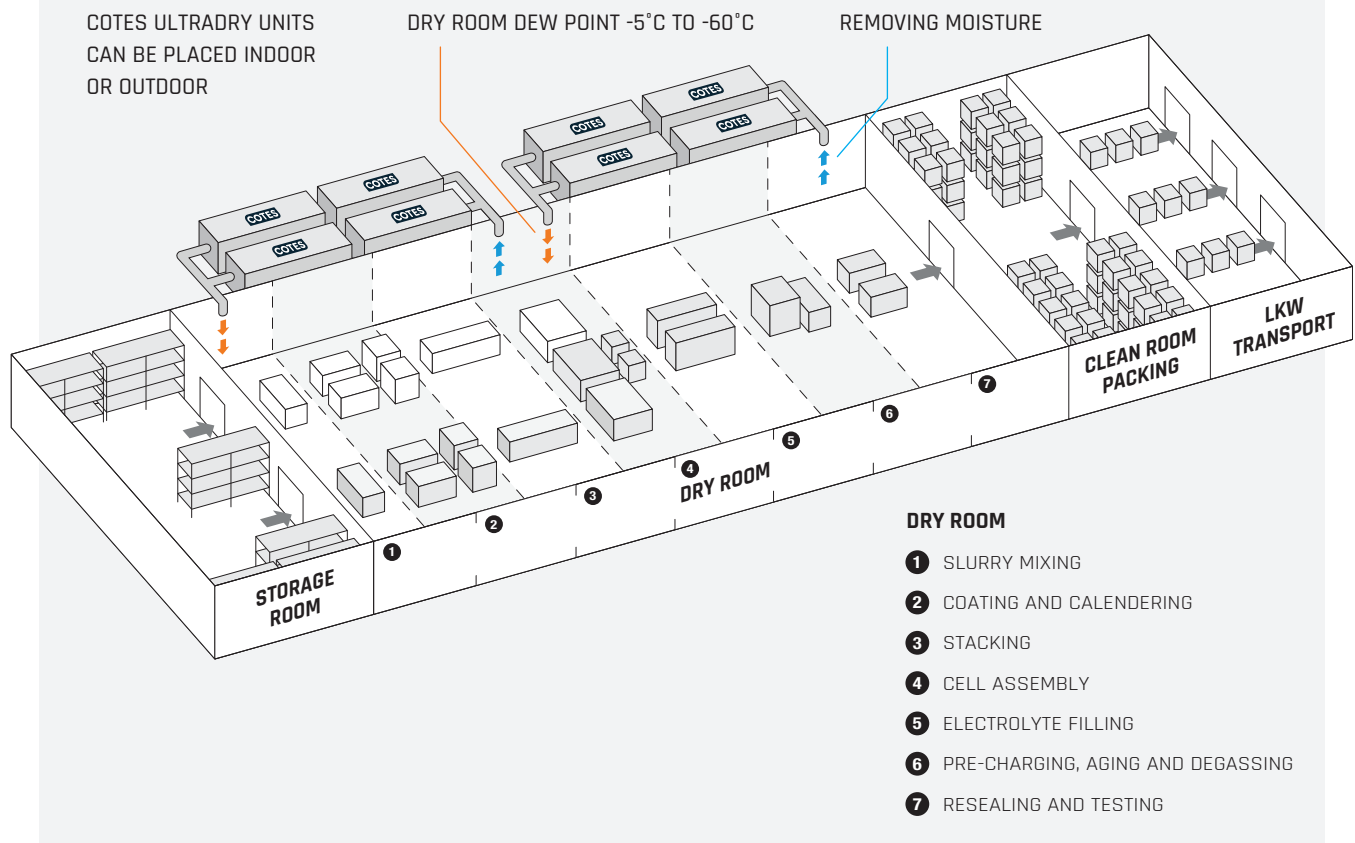
Energy-efficient solution
reducing electrical energy
consumption up to 85%

1,2-1,7 GWh

Electric saving potential for
each 1 GWh battery production
capacity.

704 €/MWh

Investment costs for 1 MWh
renewable energy production
(offshore wind turbine).



ULTRADRY-AIR SOLUTIONS

IMPORTANCE OF DRY ROOMS AND EARLY PLANNING

Battery dry rooms play a vital role in the battery industry, ensuring optimal performance by maintaining low humidity levels, preventing moisture-related issues, and promoting consistent manufacturing processes. Maintaining a constant and ultradry humidity level requires a lot of energy. Battery dry rooms represent 43% of the total energy used in battery production process.

With Cotes Ultradry adsorption dehumidifiers, you can cut that energy consumption dramatically and source the remaining energy from sustainable energy sources.

Early planning is essential due to tight schedules and budgets. At Cotes, we offer a one-stop shop solution, providing supervised installation, commissioning, transport, maintenance, and service, ensuring a hassle-free experience for our clients.

WE STAND FOR

- Expertise in Adsorption Technology
- Innovative Ultradry Air Solutions
- Efficient Project Management
- Comprehensive Service

TRUSTED BY:



Fraunhofer



BEYONDER™



SINTEF



SOLVAY

CATL



UNIVERSITY OF CAMBRIDGE

The partially dehumidified air from the intake module proceeds to the **main module**, housing a single silica gel rotor. This rotor further decreases humidity, achieving the targeted dryness level.

The **Intake module** plays a crucial role in drawing humid air from the environment. Its powerful fan propels air through silica gel rotors, effectively reducing humidity levels. These rotors absorb moisture, ensuring the incoming air reaches the desired dryness.

ADSORPTION DEHUMIDIFIER

COTES ULTRADRY

At Cotes A/S, we understand that each gigafactory and research plant are unique. Our Cotes Ultradry adsorption dehumidifiers are designed to meet your specific requirements and deliver outstanding results.

Cotes Ultradry dehumidifiers are the world's most energy-efficient solution for battery dry rooms. They ensure high energy efficiency, reduce the total cost of ownership, and maintain optimum humidity control with a very low dewpoint. This results in the best battery performance and a safe working environment.

Key benefits

- Project-specific energy and cost saving calculations
- Compact design
- User-friendly interface for easy operation
- Seamless integration with your existing management systems
- Adherence to industry standards for reliability and safety
- Comprehensive maintenance and service packages to ensure longevity and performance.

Standard specifications overview

General:

Supply dew point possible for battery dry rooms:

-40°C to -120°C

Persons in the dry rooms:

As many as you need

Return air to dry room:

+20° to 24°C

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:

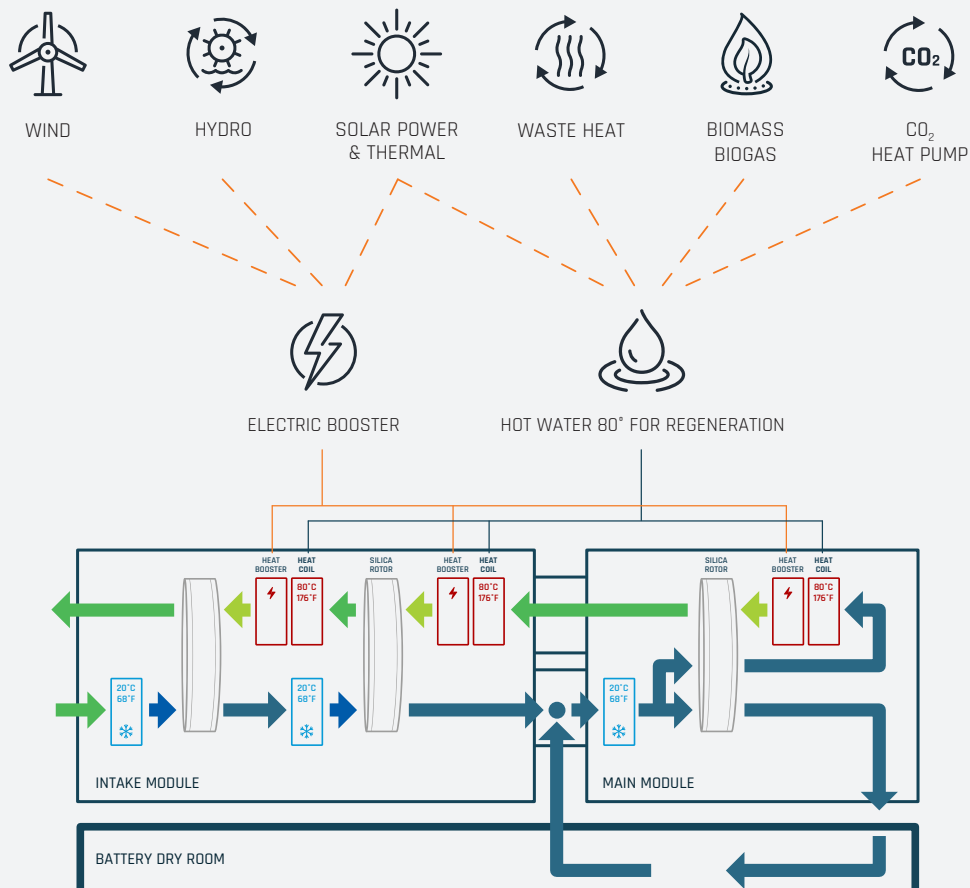
5000 - 20000 m³/h

Connected load:

78 - 175 kW



Scan and download
our datasheet



HOW IT WORKS

COTES EXERGIC TECHNOLOGY®

Cotes developed the Exergic Technology®, an innovative solution maximizing energy savings by using three rotors and sustainable energy sources. With the patented 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.

All you need is hot water at 80°C-90°C heated by a sustainable energy source::

- Waste heat (from elsewhere in the li-ion battery production)
- Biomass or Biogas (if available and sustainable)
- Solar thermal panels
- CO₂ Heat Pump used for both heating and cooling.
Pay once and use twice.
- Electricity from sustainable energy sources, i.e., wind power, hydropower, solar power and/or nuclear power
- Gas **

Because the energy to heat the water can come from a combination of sustainable energy sources and can be changed in the future if the price of energy changes, it makes the Cotes Exergic Technology more sustainable and more future proof.

**Cotes does not recommend or consider gas as a source of sustainable energy due to the environmental footprint. We recommend utilizing energy for the hot water from sustainable or "green" energy sources instead. However, if gas is a requirement, the water can come from a central gas boiler.



Scan and watch
how it works

SERVICE PROVIDER

ONE-STOP-SHOP

As your trusted service provider in humidity management solutions, we offer in addition to our top-of-the-line Ultradry Adsorption Dehumidifier Units, a range of additional options to meet all your needs:

- **Supervised Installation:**

Our experienced team ensures seamless installation of your dehumidifier unit, providing peace of mind and optimal performance from day one.

- **Commissioning:**

We handle the commissioning process with precision, ensuring that your Cotes Ultradry dehumidifier operates at peak efficiency right from the start.

- **Transport:**

Count on us for safe and efficient transport of your Cotes Ultradry dehumidifier unit to its designated location, wherever you are.



SERVICE PACKAGES

- **Maintenance and Service:**

Choose from our tailored service packages for ongoing maintenance and support, keeping your system running smoothly for years to come.

- **Training:**

Comprehensive trainings, ensuring your staff is well-equipped to operate and maintain the equipment.

At Cotes A/S, we are dedicated to providing a seamless experience, supporting you every step of the way with top-notch service and expertise.



CALCULATE ENERGY SAVINGS FOR YOUR BATTERY DRY ROOMS



[COTES.COM/CALCULATE](https://cotes.com/calculate)

CONTACT US TO KNOW MORE ABOUT OUR **ULTRADRY AIR SOLUTIONS** FOR YOUR BATTERY DRY ROOM



JORIS VIEUX

Global Manager Battery
Manufacturing

jvi@cotes.com

+33 6 51187705

LinkedIn: www.cotes.com/JVI

