



Lithium battery manufacturing

Dry desiccant solutions



For over 75 years, Alfa Laval Kathabar has engineered and manufactured liquid and dry desiccant systems for dehumidification and energy recovery applications. Our technologies improve the reliability, economy and efficiency of any manufacturing or processing operation that is humidity, temperature or microorganism-sensitive. We meet the ever-changing needs of our customers with quality products – providing reliable, precise and economical temperature and humidity control.

Alfa Laval Kathabar dry desiccant systems provide a perfect solution for a wide range of applications for industrial, commercial, institutional and green/LEED facilities.

Applications:

- Lithium
- Sealed lead acid
- Sodium-based applications

Advantages:

- Production advantage
 - Large scale production with proper control of clean room manufacturing conditions
 - Maintain critical low dew points
 - Precise humidity control and air quality
- Improved product quality
 - Extend battery shelf life
 - Increase performance of batteries

How it works

The Alfa Laval Kathabar dry desiccant dehumidification system operates on the principle of adsorption of water vapor from air. The desiccant used is silica gel, arranged in a wheel-shaped rotor matrix with thousands of small parallel air passages.

The desiccant wheel is housed in a cabinet that is separated into process and reactivation sections. In the process section, moist air passes through the wheel, where the silica gel adsorbs the moisture. This dehumidifying process increases air temperature, and the leaving air is drier and warmer.

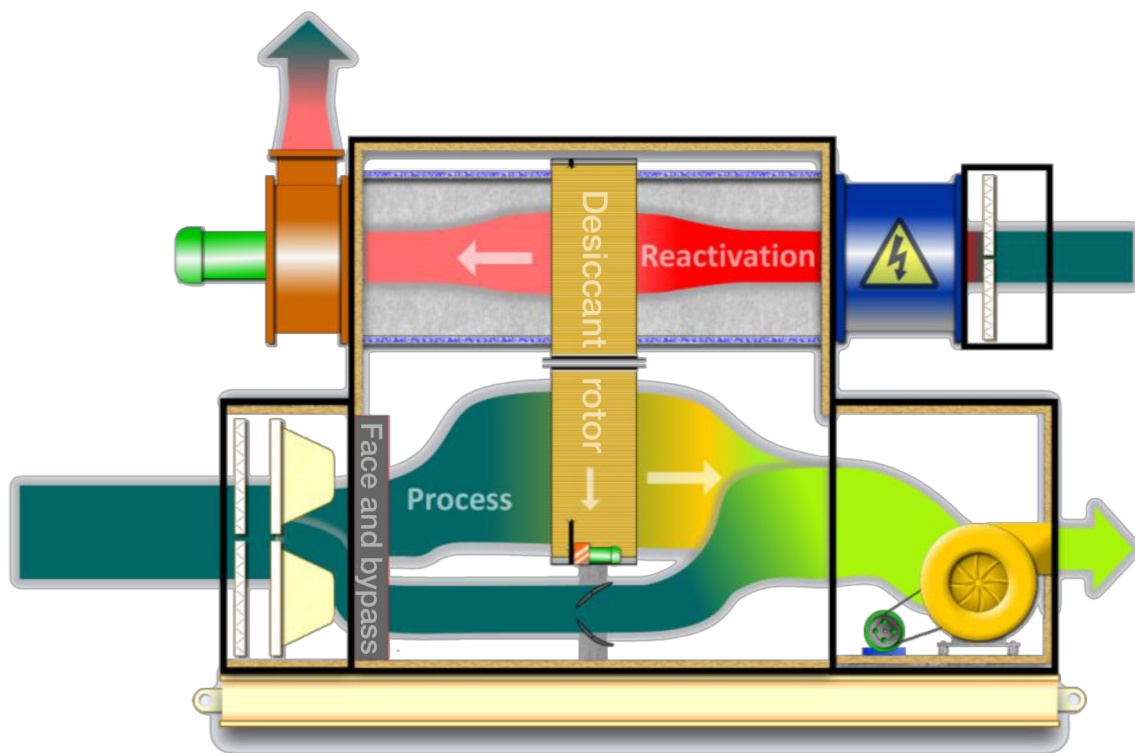
To drive the moisture out of the desiccant, the wheel slowly rotates into the reactivation section, where the second (heated) air stream passes through the desiccant. The moisture from the desiccant is

evaporated, and the moisture-laden reactivation air is exhausted outside. The wheel cycles back into the process section where the reactivated desiccant provides continuous drying of the process air.

In many applications, air handling modules are attached to the dehumidifier to create a packaged system.

The reactivation air stream may be heated by electricity, steam, hot water or natural gas, depending on the application and available utilities.

PLC options include, but are not limited to, Koyo Allen Bradley: MicroLogix, SLC, CompactLogix and ControlLogix. HMI choices include Maple, A-B PanelView, CTC Powerstation and Automation Direct E-ZTouch.



*Dry desiccant
dehumidification
system*

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Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval

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