



Cold storage

Liquid 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 liquid desiccant systems provide a perfect solution for a wide range of applications for industrial, commercial, institutional and green/LEED facilities.

Applications:

- Warehouses
- Freezers
- Loading docks

Advantages:

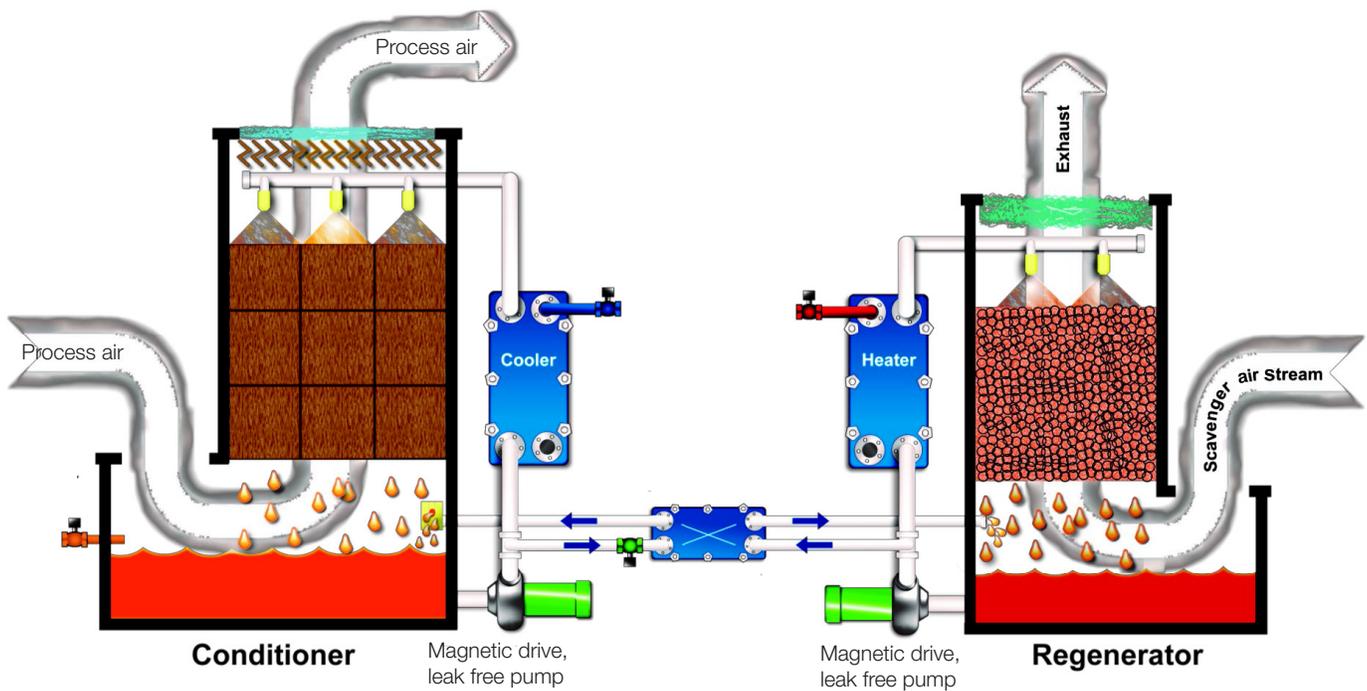
- Eliminate defrost cycles
 - Simplify refrigeration system by removing defrost equipment
 - Save energy by removing heat and moisture from the refrigerated space
- Improved product quality
 - Extend storage life and reduce scrap with consistent temperature and frost removal from warehouse
 - Eliminate mold and fungus with sanitary air stream
- Operational advantages
 - Safer environment with ice free and fog free work areas
 - Humidity control eliminates ice buildup on floors, walls and product
 - Eliminate unscheduled maintenance with frost free cooling
 - Operate at temperatures as low as -60°F without drip pans or defrosters equipment
 - Reduce refrigeration tonnage requirements through frost-free continuous cooling

How it works

The Alfa Laval Kathabar liquid desiccant dehumidification system operates on the principle of chemical absorption of water vapor from air. Our systems utilize a liquid absorbent known as Kathene.® Kathene solution is non-toxic, will not vaporize and is not degraded by common airborne contaminants.

The temperature and concentration of the solution determines the ability of Kathene to remove or add water vapor from the air. The concentration of Kathene can be adjusted so the conditioner delivers air at any desired relative humidity between 18% and 90%. For a given Kathene concentration, lower solution temperatures enable the conditioner to deliver cooler, dryer air.

The illustration below shows the basic elements of the liquid desiccant system. Conditioned air is cooled and dehumidified by contacting Kathene in the conditioner. By continuously circulating the desiccant through a heat exchanger, energy is extracted from the air and transferred to a coolant. The amount of heat extracted by the Alfa Laval Kathabar dehumidifier is modulated to exactly match the load $\pm 1\%$ by controlling coolant flow through the heat exchanger.



Liquid desiccant packaged conditioner

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

How to contact Alfa Laval

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