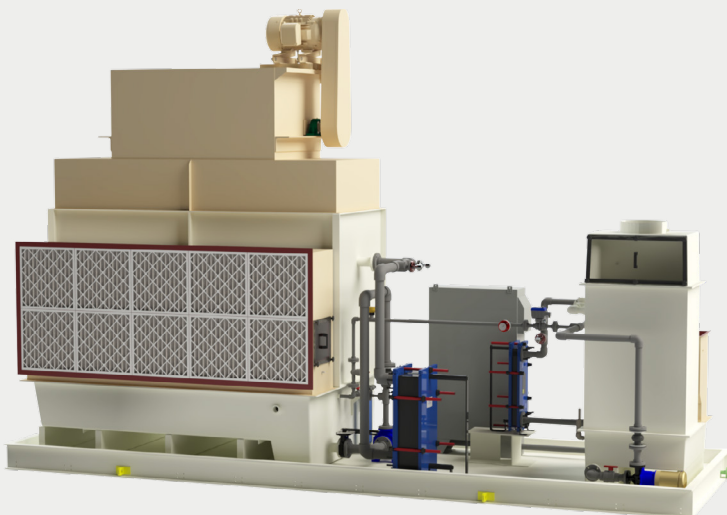




Engineered for Precise Humidity Control

For nearly a century, Alfa Laval Kathabar has engineered and manufactured liquid desiccant dehumidification systems. Our technologies improve the reliability, economy and efficiency of any manufacturing or processing operation sensitive to humidity, temperature or microorganisms. We meet the everchanging needs of our customers with quality products – providing reliable, precise and economical temperature and humidity control.

Alfa Laval Kathabar liquid desiccant systems are an ideal solution for a wide range of applications for industrial, commercial, institutional and green/LEED facilities.'



Advantages:

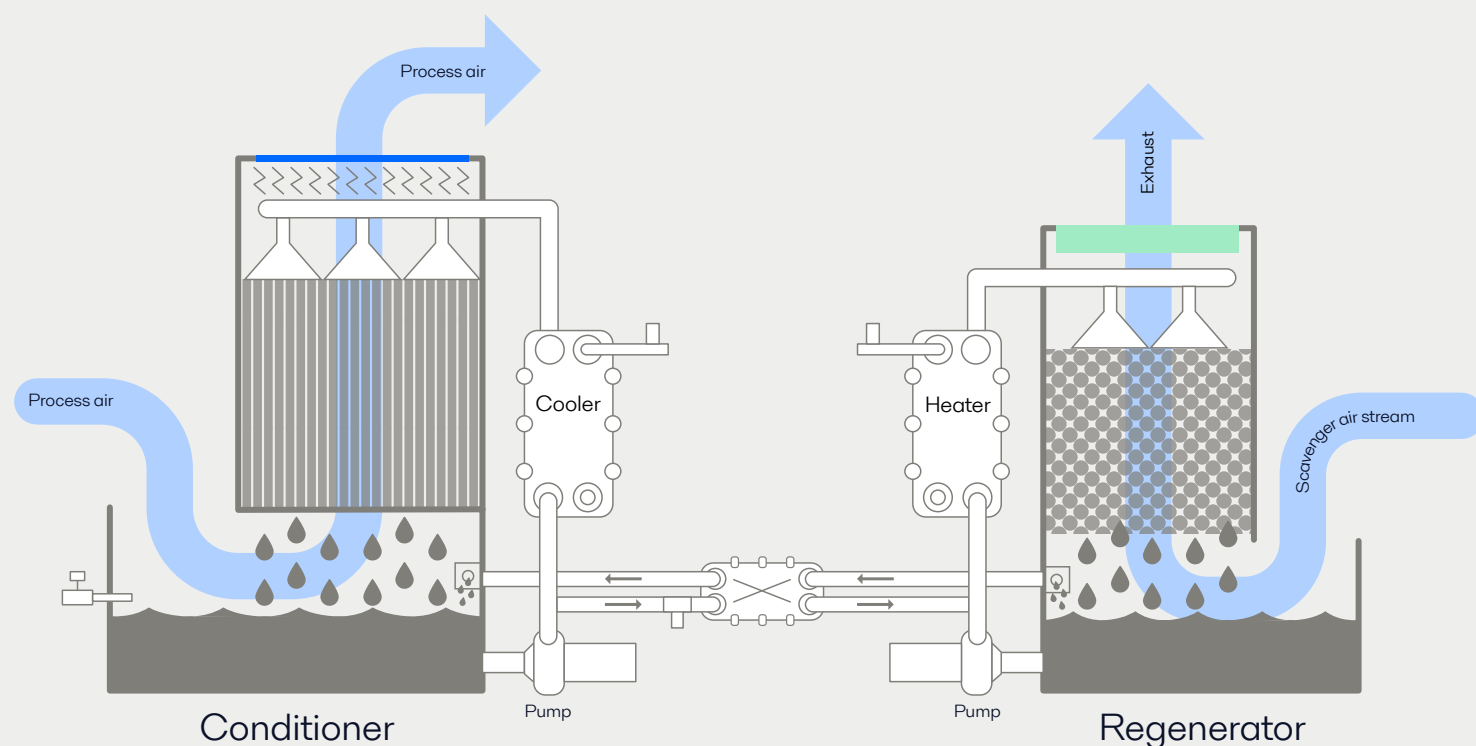
- Simultaneous dehumidification and direct air cooling – simple design provides high energy efficiency.
- Improved indoor air quality – The desiccant solution effectively captures and removes airborne contaminants, including dust, mold, bacteria, and volatile organic compounds (VOCs).
- Environmentally friendly – Lithium Chloride and Calcium Chloride liquid desiccants are non-toxic and eco-friendly, reducing reliance on harmful refrigerants.
- Energy savings – 100% modulation capacity; less energy is required to operate than dry desiccant or mechanical refrigeration systems, resulting in lower operating costs and reduced greenhouse gas emissions
- Precise humidity control ($\pm 1\%RH$) – fully customizable supply air humidity based on liquid desiccant concentration and temperature.
- FRP (fiberglass) non-metallic industrial construction – provides long equipment life, reliability and reduced maintenance.
- Design flexibility – Utilizes hot water or low pressure steam for regeneration (including waste heat); supports multiple conditioners with a single centralized regenerator; vertical and horizontal airflow orientations; integrates with existing HVAC systems. allowing versatility for retrofits or upgrades to existing facilities.

How it works:

The Kathabar system operates on the principle of chemical absorption of water vapor from air. Our systems utilize a liquid absorbent known as Kathene.®, which is non-toxic, non-vaporizing and resistant to degradation by common airborne contaminants.

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.



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



Alfa Laval Kathabar +1 716-875-2000
sales.kathabar@alfalaval.com
www.alfalaval.us/kathabar