

FOOD DEHYDRATORS & EVAPORATORS



In Association with SVCH-Technologii, Moscow (Russia)

ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018

ABOUT US

KERONE is now renowned for serving the specialized needs of customers with the best quality and economical process of Heating /cooling and drying products, manufactured in a high-quality environment by a trained and qualified workforce (special purpose machinery)

-  48+ Years Manufacturing Excellence
-  Great Sale Support
-  Highly Customized Product
-  Adherence to Standards
-  Sound Infrastructure
-  Team of experts Delivering Quality
-  Timely Delivery
-  Cost Effective Solutions



KERONE is a pioneer in application and implementation engineering with its vast experience and team of professionals.



KERONE is devoteded to serve the industry to optimize its operations both economically and environmentally with its specialized heating and drying solutions.



KERONE is having immense expertise in manufacturing and implementing various types of engineering solutions.



KERONE is possessing employee strength of more than 280+ experts continuously putting efforts for happy industrial engineering solutions.

WHY CHOOSE US

With decades of expertise, cutting-edge technology, and a customer-centric approach, Kerone Engineering offers tailor-made heating solutions that prioritize quality, flexibility, and cost-effectiveness. Benefit from our commitment to excellence, post-sales support, and innovative solutions for your unique heating needs. Choose Kerone Engineering for reliability, performance, and unmatched value.

MISSION

- ✓ To enhance the value of customer operation through our customer need centric engineering solution
- ✓ We are committed to provide our customers, unique and best in class products in Industrial heating drying and cooling segment with strategic tie-up for the technical know-how with renowned leader in the industry specific segment

VISION

- ✓ Turn into a world leader in providing specialized, top-notch quality and ecological industrial heating, cooling, and drying solutions across the globe.
- ✓ To attain global recognition as the best of quality and environment-friendly engineering solution company.

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Enhance the value of customer operation through our customer need centric engineering solution.

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Summary

Food dehydrators and evaporators are essential tools in the food processing industry, used to preserve and extend the shelf life of various food items. Food dehydrators work by circulating hot air around the food to remove moisture, thereby inhibiting the growth of bacteria, yeast, and mold. This method is commonly used for fruits, vegetables, herbs, and meats, transforming them into lightweight, shelf-stable products that retain most of their nutritional value and flavor.

Evaporators, on the other hand, are used to concentrate liquids by removing water through evaporation. This process is widely employed in the production of products such as fruit juices, dairy products, and syrups. By reducing the water content, evaporators help to increase the product's viscosity, enhance its flavor, and improve its storage stability. Both food dehydrators and evaporators play a critical role in ensuring food quality, safety, and longevity, making them indispensable in both home and industrial food processing settings.



Food Dehydrator

A food dehydrator refers to a device that removes moisture from food to aid in its preservation. A food dehydrator uses a heat source and air flow to reduce the water content of foods. The water content of food is usually very high. Removing moisture from food restrains various bacteria from growing and spoiling food. Further, removing moisture from food dramatically reduces the weight of the food. Thus, food dehydrators are used to preserve and extend the shelf life of various foods



Types of Food Dehydrators

- | Stackable Food Dehydrators.
- | Box or Shelf Food Dehydrators.

Stackable Food Dehydrators

The first category is of stackable food dehydrator which is also known as vertical flow food dehydrator. In these dehydrators, the source of heat is located either at the top of the unit or the base of the appliance.

Examples: Nesco FD-37A American Harvest Food Dehydrator, Waring Pro DHR30 Professional Dehydrator etc.



Box or Shelf Food Dehydrator

The Box and Shelf Food Dehydrators which is also referred as Horizontal flow food dehydrator. To some extent they function like a conventional handy oven in which the heating source located in the back of the unit.

Box and Shelf Food Dehydrators are more costly than the Stackable Food Dehydrators.

Examples: Excalibur 2400 4-Tray Economy Dehydrator, Excalibur Dehydrator 3900B 9 Tray Deluxe etc.



Evaporator

- | The equipment used to remove water from the food product is called evaporator
- | Evaporators are used to separate materials based on differences in their boiling temperatures.
- | Its purpose is to concentrate non volatile solutes such as organic compounds, inorganic salts, acids or bases. Typical solutes include phosphoric acid, caustic soda, sodium chloride, sodium sulfate, gelatin, syrups and urea.

Examples

- | Concentration of milk to produce condensed milk
- | Concentration of juices
- | Concentration of NaOH, NaCl from aqueous solutions to produce salt.
- | Ether recovery from fat extraction



Evaporator Types

- | Bare Tube Evaporators
- | Plate Type Evaporators
- | Finned Evaporators
- | Shell & Tube Type Evaporator
- | Multiple Effect Evaporators



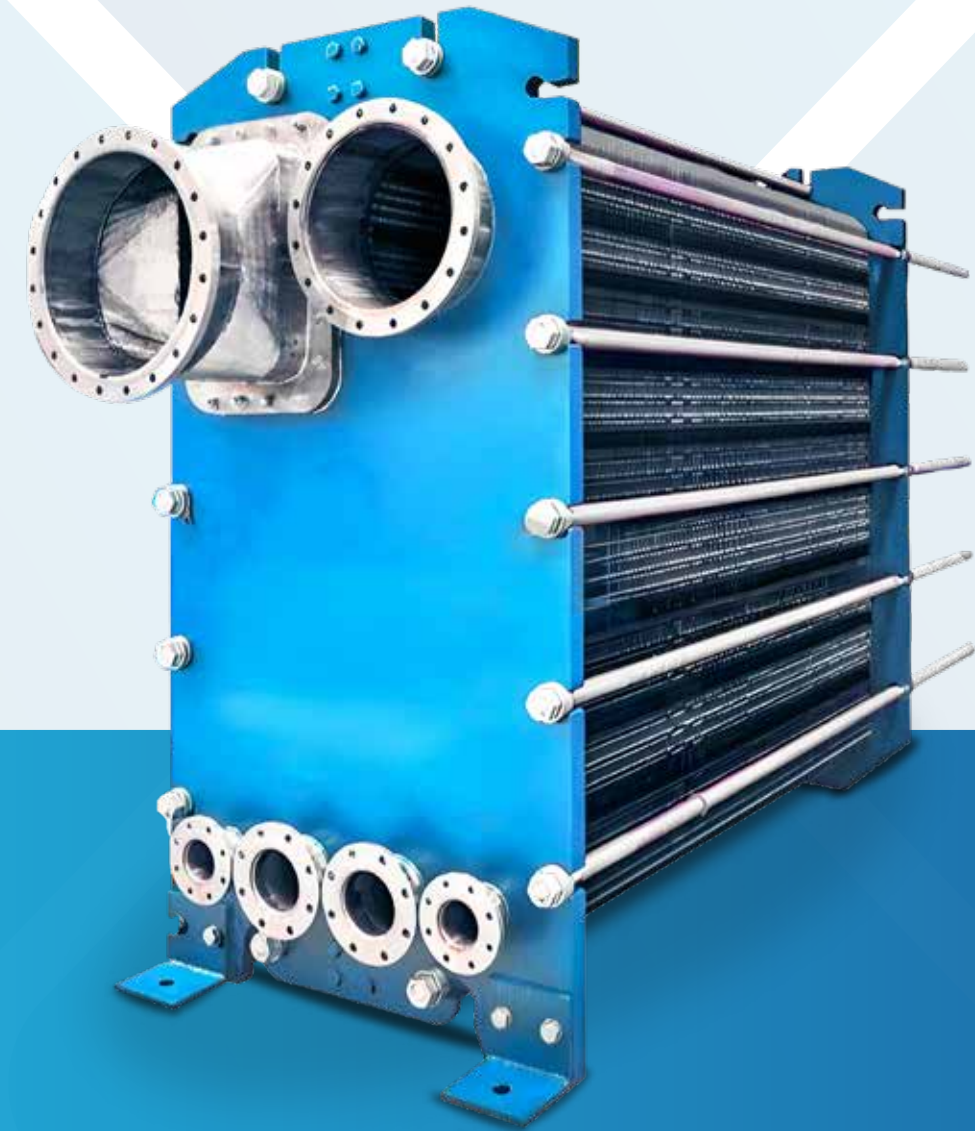
Bare Tube Evaporators

The bare tube evaporators are made up of copper tubing or steel pipes. The bare tube evaporator comprises of several turns of the tubing, though most commonly flat zigzag is the most common shapes. In the blast cooling and the freezing operations the atmospheric air flows over the bare tube evaporator and the chilled air leaving it used for the cooling purposes.



Plate Type Evaporators

In the plate type of evaporators the coil usually made up of copper or aluminium is embedded in the plate so as to form a flat looking surface. Externally the plate type of evaporator looks like a single plate, but inside it there are several turns of the metal tubing through which the refrigerant flows. The advantage of the plate type of evaporators is that they are more rigid. Further, the plate type of evaporators are easy to clean and can be manufactured cheaply.



Finned Evaporators

The finned evaporators are the bare tube type of evaporators covered with the fins. When the fluid to be chilled flows over the bare tube evaporator lots of cooling effect from the refrigerant goes wasted since there is less surface for the transfer of heat from the fluid to the refrigerant. The finned evaporators are more effective than the bare tube evaporators.



Shell & Tube Evaporators

The shell and tube types of evaporators are used in the large refrigeration and central air conditioning systems. The evaporators in these systems are commonly known as the chillers. The chillers comprise of large number of the tubes that are inserted inside the drum or the shell. In these chillers the level of the refrigerant is kept constant by the float valve that acts as the expansion valve also.



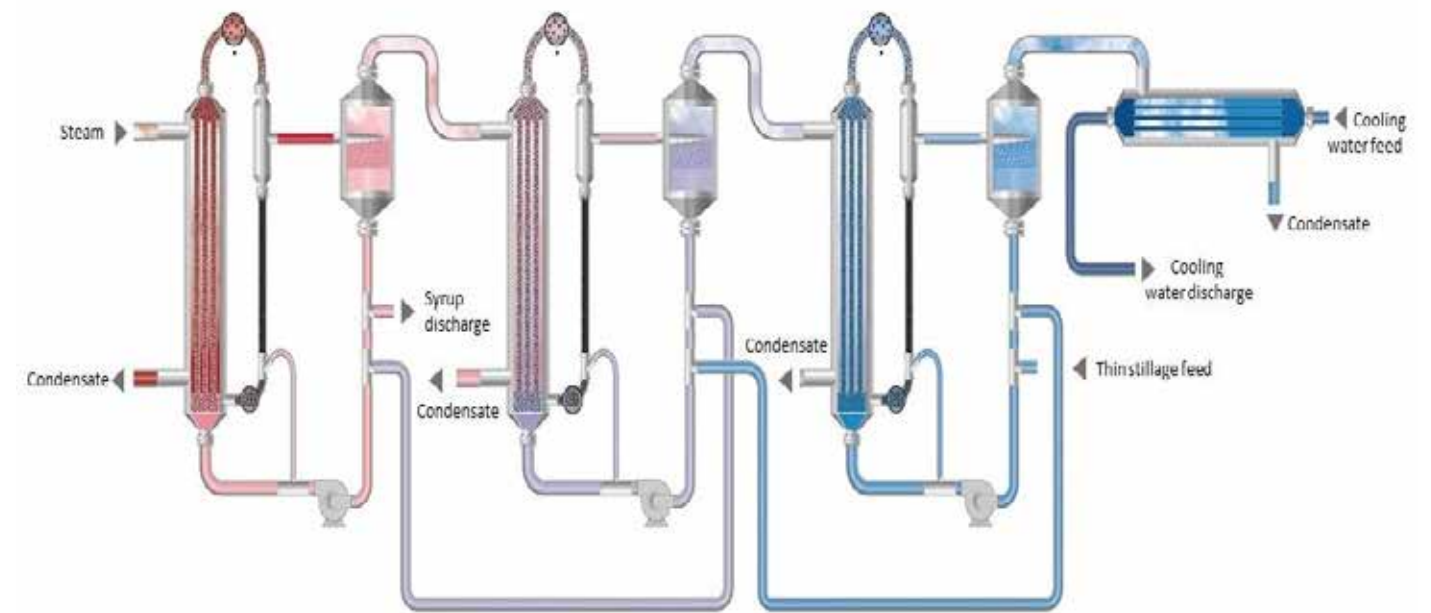
Multiple-effect Evaporator

- Water is boiled in a sequence of vessels, each held at a lower pressure than the last.
- Because the boiling point of water decreases as pressure decreases, the vapor boiled off in one vessel can be used to heat the next.
- Generally the first vessel (at the highest pressure) requires an external source of heat.



Multiple effect evaporator Advantages

- Suitable for large scale & for continuous operation.
- Highly economical when compared to single effect.
- Multiple effects, or stages, are now used to minimize the energy input required to evaporate or boil off undesirable water content.
- The total evaporation achieved in these systems is approximately the number of effects times the energy input to the first effect.



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