



TECHNICAL INFORMATION

CLIMBING FILM EVAPORATOR

Our competence:

With its history going back to 1986, EPCON is an international supplier of separation and energy recovery technology based in Trondheim, Norway. These technologies provides added value for our customers.

EPCONs key competence is thermal separation processes like evaporation, distillation and drying.

EPCON always find the energy optimal solution for the customers. Often the best energy solution includes MVR.

MVR, or Mechanical Vapor Recompression, is in principle a highly efficient heat pump typically applied directly in process vapour of water or other solvents.

EPCON offers all customers a 24-hour after-sales service that includes troubleshooting, spare parts, preventive and corrective maintenance, as well as inspection of installations.



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Climbing film:

Climbing film evaporation is among the most cost-efficient and energy-saving evaporation method. It is especially well suited to give low energy consumption when mechanical vapour recompression (MVR) is applied.

In a climbing film evaporator the liquid to be evaporated is fed, either by self circulation or via a priming pump, into a plate or tube heat exchanger. As external energy is applied from the outside, the boiling process starts on the heated surface which both increases the dry solids concentration and maintains the liquid circulation. At the specified DS concentration, the concentrate is pumped out of the plant.

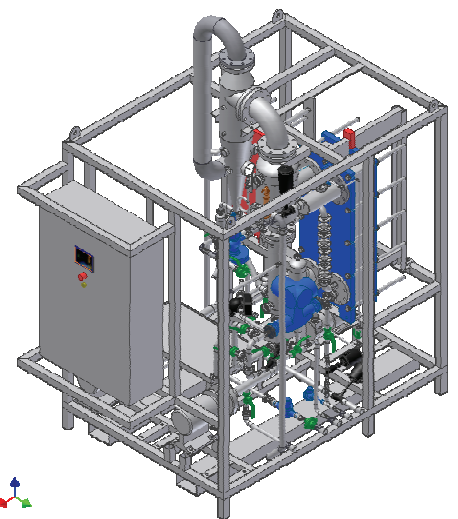
An EPCON climbing film evaporator may consist of one or more stages in a series. If a number of stages are used, the concentration of dry solids will be increased through the plant. This gives lower average concentration which reduces the need for heating surface, which in turn means lower energy consumption compared to a single-stage plant. A climbing film evaporator may operate at various pressures and boiling temperatures, the typical range being between 30°C and 100°C.



Applications:

Typical applications for EPCON climbing film evaporators, for products with low or medium viscosity and without fibrous material, among other:

- Concentration of juice, sweetener, and other food products.
- Concentration of marine protein extracts.
- Concentration of certain waste water streams.
- Concentration of chemical products.



EPCON skid mounted climbing film evaporators.