

RELCO's Evaporator is specifically designed to evaporate a variety of milk products, including skim and whole milk, whey, and permeate. Pre-evaporators are designed for a feed concentration generally between 6% and 24% total solids, and will concentrate up to 35% to 45% total solids, depending on the application. From there a finisher is used to concentrate to higher solids, up to 62% total solids. Operating temperatures of each stage are controlled to maintain optimum product quality. RELCO can utilize MVR and/or TVR technology for each stage of evaporation.



FEATURES & BENEFITS

- Generous surface area is used in each calandria to promote longer run times with increased efficiency.
- Each calandria is divided into several passes to allow greater tube wetting rates, promoting longer run times with increased efficiency.
- Turbofans are selected for large pressure rise with oversized motor, allowing for longer run times while using only the energy required.
- Evaporator balance tank is integrated into the calandria base for reduced equipment footprint.
- 316L product contact surfaces are available, and sometimes required based on the application.
- Discharge solids are maintained automatically.

COMPONENTS

- Preheaters
Preheating is done with a combination of plate heat exchangers, tubular heaters, and/or direct steam injection (DSI).
- Calandrias
The heart of the evaporator where evaporation occurs. RELCO utilizes a falling film design. Calandrias are designed for each application to optimize surface area, tube wetting, and vapor velocities.
- Vapor Separators
External vapor separators are offered as a standard and are sized to maximize evaporator condensate quality.
- Turbofans
This is the way to use electricity to evaporate water. Turbofans are a form of mechanical vapor recompression (MVR). The latest turbofan designs are utilized, which offer the highest efficiency and the most reliability. Turbofans are generally used for pre-concentration and can be applied to the finisher also.
- Thermocompressors
This is the way to use steam to evaporate water. Thermocompressors are used in thermal vapor recompression (TVR) evaporators, and use plant steam to entrain and compress water vapor. This vapor mixture is used to concentrate incoming product.