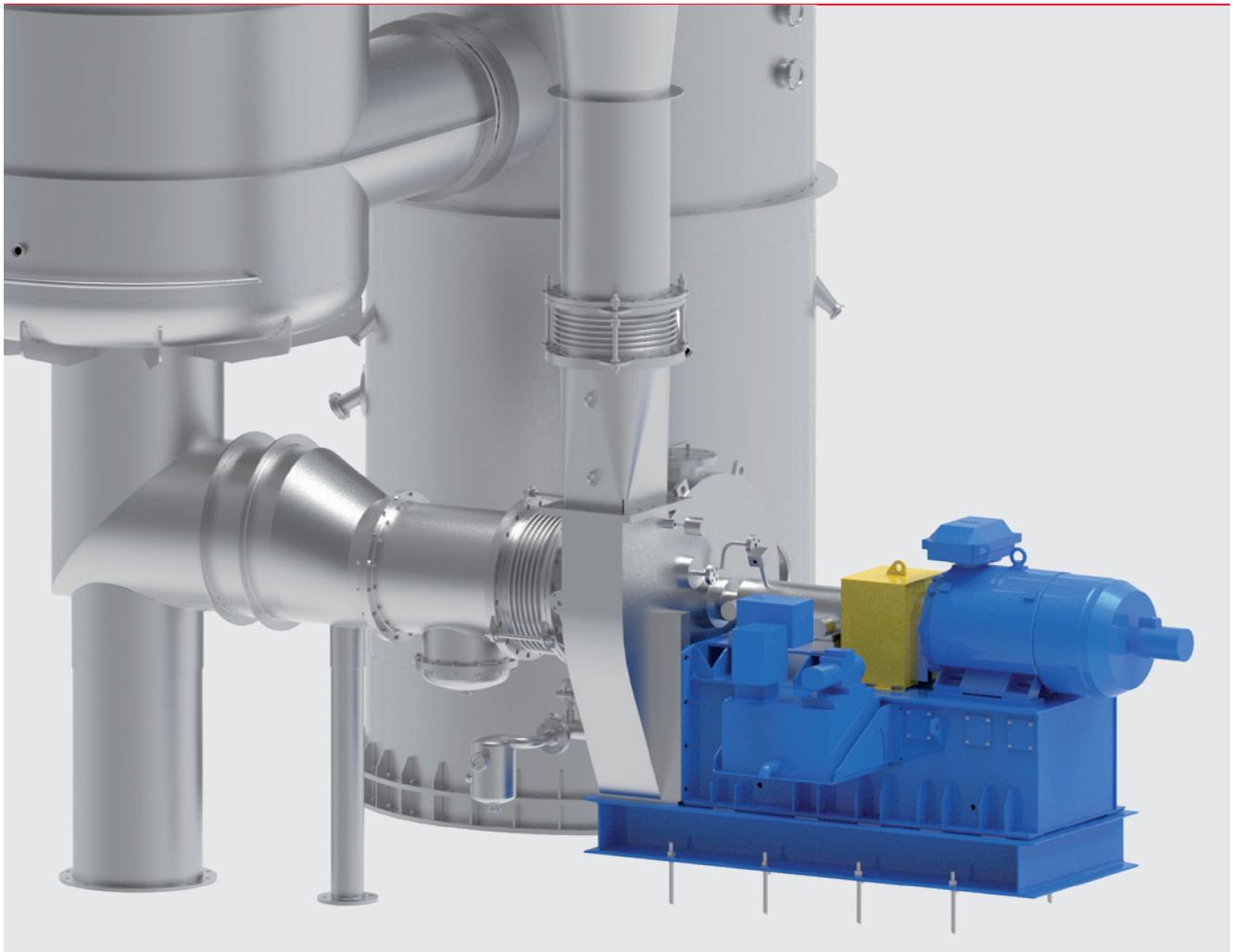
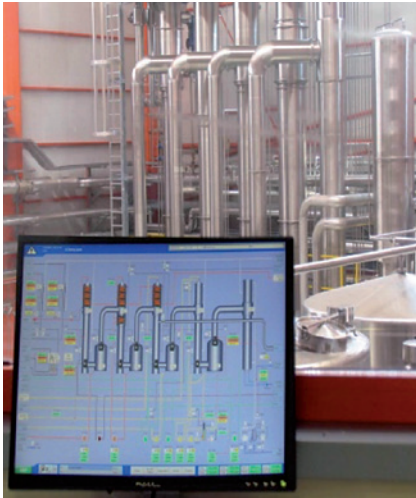


Conversion of evaporators to MVR



Conversion of multi-effect evaporators into mechanical vapour recompression 'MVR' evaporators

- Significant OPEX reduction
- 80% reduction in fossil fuel consumption and CO₂ emissions
- No modifications to the software, or only minor changes
- Reliable partner with many years of experience in evaporator conversions



Application

Classical multi-stage evaporators and multi-stage evaporators with thermal vapour recompression (TVR) have been the standard in the dairy industry for many decades. TVR evaporators can typically reduce one or two evaporation stages compared to classical evaporators. While specific steam consumption is reduced by 50%, fossil fuels are still used.

Falling film evaporators with mechanical vapour recompression (MVR)

Evaporators with mechanical vapour recompression (MVR) operate using a high-pressure blower. The recompressed steam is used to heat the product. An MVR evaporator can function at relatively low evaporation temperatures, ensuring that the product maintains the same evaporation temperature throughout all stages. Thanks to the low thermal stress, concentrated products of superior quality can be produced. Additionally, evaporation costs are significantly lower compared to other designs, and steam and cooling towers are no longer necessary for production.

Conversion of classical and TVR evaporators into MVR evaporators

Bucher Unipektin is your partner for modifying most existing evaporators to an MVR type. The existing multi-stage plants are adapted so that all the multi-stage evaporation columns remain in place but are configured for parallel heating. When evaluating the evaporator and calculating the return on investment, it's essential to consider the costs of steam, electricity, and cooling water.

Milk- und whey products

Thanks to our extensive experience in modifying evaporators, Bucher Unipektin is your ideal partner for MVR solutions for the concentration of:

- Whole and skimmed milk
- Whey
- Condensed milk
- Lactose

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Products and Services

Process technology for the processing of fruit and vegetables into juices, concentrates and purees production, for brewing solutions, for filtration, for milk powder production, for vacuum drying of liquid and solid products, freeze drying of coffee, tea, fruit, vegetables, etc. Technology for the dewatering of municipal and industrial biosolids and the filtration of drinking water.

Products

Fruit reception lines, mills and crushers, mash heaters, hydraulic presses, extractors, membrane filtration equipment, cold block equipment, adsorbers, ion exchangers, evaporators, dealcoholisation and aroma systems, pasteurisers, CIP systems, vacuum and freeze drying cabinets and belt dryers, zeolite adsorbers, complete processing lines, tank farms, storage and processing tanks, mixing and dosing stations

Services

Bucher customer portal and digital services, process development and project engineering, assembly and commissioning, technical support, original spare parts, inspection and maintenance, test centers, Bucher Academy