



CALORIS CONCENTRIX[®] MVR Compact Evaporator

Gain maximum force from minimum energy.

The **CALORIS CONCENTRIX**[®] MVR evaporator is a high-efficiency falling film evaporator system that uses proprietary turbofan technology for Mechanical Vapor Recompression (MVR) heating, driving the evaporation process with electrical power. It delivers the highest available energy and operational efficiencies in a compact evaporator design, evaporating up to 100,000 lbs of water per hour at 160 lbs of water evaporated per kilowatt of power consumed, or 0.05 kW per gallon of water evaporated.

Proprietary design features yield unequalled results.

Built in a concentric configuration, the Concentrix MVR uses proprietary Caloris technology with a standard turbofan wheel to efficiently discharge compressed heating vapors 360 degrees outward from the fan into the surrounding heat exchanger

tube bundles. By arranging the heat exchanger bundles around a novel Caloris centrifugal vapor separator vessel and mounting the turbofan in the center cross on top of the vapor separator, Caloris eliminates the need for vapor ducting to interconnect the evaporator components.

The Concentrix MVR does even more than you would expect.

- Available in chemical grade and 3-A or general food grade sanitary executions.
- Recirculated product flow ensures good tube wetting over a wide range of operating capacity, enabling long run times, good turndown, and excellent CIP performance.
- Option for addition of boosted heating via Thermal Vapor Recompression (TVR) on the final product section for achieving higher final product concentration.
- Regenerative heating of system feed optimizes overall energy efficiency.

- Options for efficient integration of feed degassing, HTST pasteurization, product heat treatment, and product cooling, integrated in the overall energy balance and part of the compact assembly of the evaporator system.



The Concentrix MVR system's **compact design** takes half the space of conventional evaporator designs to process the same volume, saving you building and installation costs.

With an electrically driven MVR turbofan motor as the primary heating source, the Concentrix MVR operates with an overall heat balance that in most cases is just slightly positive. Only a nominal supply of cooling water is required to remove waste heat. Where cooling water is not readily available or undesirable in cold climate locations, an air cooler or air condenser can be integrated.

Save time. Save money. Do more.

- Compact design takes half the space of conventional evaporator designs to process the same volume, saving you building and installation costs.
- Pre-engineered for fast delivery.
- Short installation and start-up time with the smaller system delivering pre-assembled or partially pre-assembled for the larger systems.

- Significant reduction of shipping costs.
- Outdoor installations benefit from similar cost savings, including reduced costs for foundations, installation, and eliminating requirements for support and access structures.



The Concentrix MVR can be **installed and brought online within a matter of days**, instead of the weeks or months typical for site-assembled evaporators.

The CALORIS CONCENTRIX® MVR line covers a wide range of evaporation

Concentrix Model	Nominal Water Evaporation* (lbs/hr)	Turbofan Compressor (HP)	Nominal Efficiency* (lbs H2O/kW)
50	5,000	50	160
100	10,000	100	160
150	15,000	150	160
200	20,000	200	160
300	30,000	300	160
400	40,000	400	160
500	50,000	500	160
600	60,000	600	160
700	70,000	700	160
800	80,000	800	160
900	90,000	900	160
1000	100,000	1,000	160

* Water from water evaporation

Concentrix MVR 50 to Concentrix MVR 200 models come completely pre-assembled and pre-tested at the factory. Larger models are delivered partially pre-assembled.

The CALORIS CONCENTRIX® can be configured to accommodate many of the complex processing needs for numerous product streams and wastewater applications. Contact our sales and technical specialists at 410.822.6900 or email sales@caloris.com to discuss your specific needs and to place an order. You can also schedule a benchtop test or an on-site test with a pilot evaporator.

The Advantages of Falling Film Evaporation

Falling film evaporation technology means that only a small quantity of product is held inside the evaporator at any given moment, minimizing the time required for system start-up, rinse-out and shutdown.

Caloris Compact Evaporators

The Concentrix MVR is one of Caloris' full line of compact evaporator systems that can be installed and brought online within a matter of days, instead of the weeks or months typical for site-assembled evaporators.

Caloris units deliver the most evaporation power within the least square footage and vertical space. Process building costs shrink commensurately.

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