

Anhydro MicraVap 100

Small Scale

The small scale plant, Anhydro MicraVap 100, is designed for continuous evaporation of liquid products and is very suitable for R&D, small-scale production and simulation trials for optimization of large scale production. The unit is easy to clean and it consists of a vertical tubular calandria, separator and a tubular condenser. All components are pre-mounted on a stainless steel skid.

The calandria has a top-mounted liquid distributor, which can be easily accessed for inspection.

The feed product is transported by means of vacuum from the feed tank into the vapor separator unit. A control valve situated on the side of the feed tank controls the flow into the evaporator bottom. From the vapor separator the product is pumped to the top through a pipe in the middle of the unit, while being thermally heated with vapor.

When the heated feed reaches the top it is distributed evenly and sent down the heated tubes, where the evaporation takes place. Vapor is separated from the concentrate in a separator integrated in the base of the evaporator unit. The vapor is condensed by means of cooling water in an indirect plate condenser.

The concentrate is extracted from the bottom of the calandria. From the bottom of the steam jacket of the calandria and the condenser, the condensate is removed by a pump. Vacuum is supplied by a water ring vacuum pump connected to the condenser.



Equipment Specification

- Feed system
- Calandria
- Vapor separator and duct
- Heating
- Condenser system
- Pipe system
- Support structure
- Control system
- Instrument panel
- Power supply

ANHYDRO MICRAVAP 100	
FEED RATE	125 KG/H
SOLIDS IN FEED	9%
WATER EVAPORATION	100 KG/H
CONCENTRATE RATE	25 KG/H
SOLIDS IN CONCENTRATE	45%
JACKET TEMPERATURE	68°C
BOILING TEMPERATURE	60°C
STEAM*	120 KG/H
INSTALLED POWER, PUMPS	3 kW

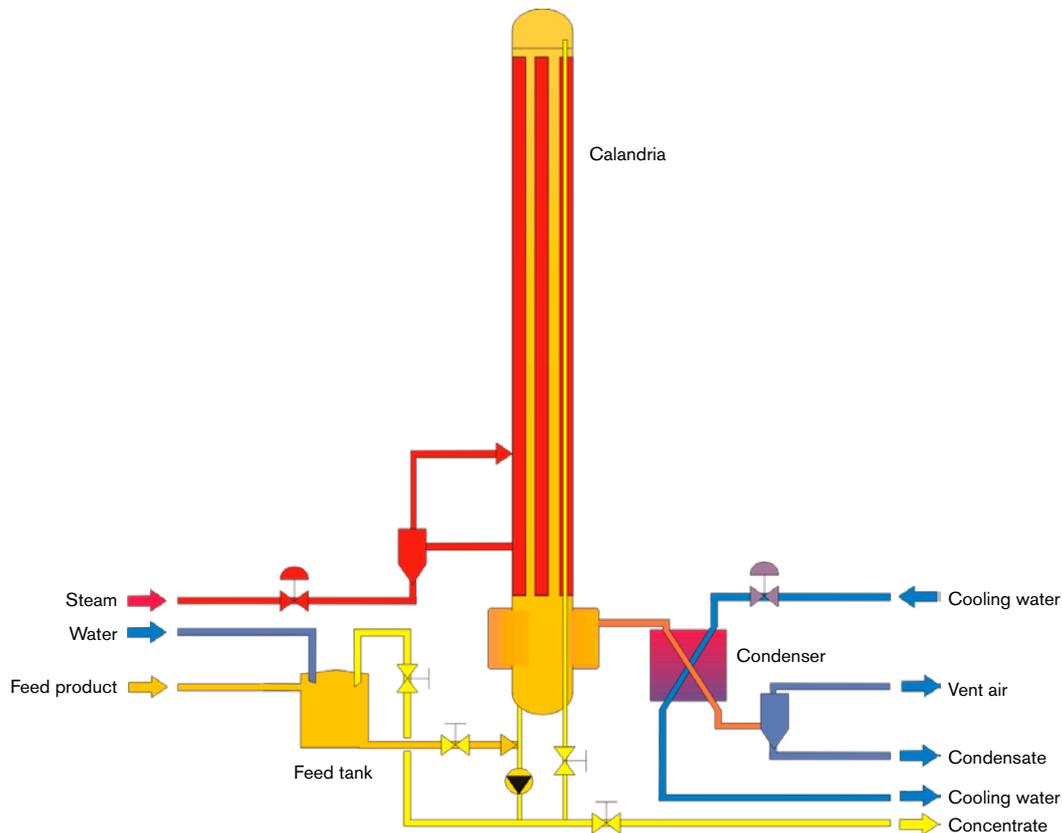
ANHYDRO MICRAVAP 100	
COOLING WATER*	3 M ³ /H
FEED PRODUCT TEMPERATURE	50°C
STEAM PRESSURE AT PLANT (GAUGE)	3 BAR
COOLING WATER (IN/OUT)	9/45°C
POWER SUPPLY	3x380/50 V/Hz
PRODUCT CONTACTING PARTS	AISI 316
NON-PRODUCT CONTACTING SURFACES	AISI 304
FLOOR SPACE	1.2x1.6 M
HEIGHT	3.6 M

* Approximately. Within a tolerance of +/- 5%.

The mentioned capacities are based on evaporation of low viscosity products such as salty water, sugars, and amino acids. Capacities will be reduced with products of high viscosity depending on fat contents and heat sensitive products such as milk and natural proteins.

The MicraVap 100 complies with regulations and standards according to CE, ATEX and cGMP.

Process flow



Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE: FLOW) is a multi-industry manufacturing leader. For more information, please visit www.spxflow.com

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