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DESALT LT VR

Vacuum heat pump Crystallizers



HIGHLIGHTS

Heat pump vacuum crystallizer fit to concentrate encrusting solutions.

Vertical boiling vessel with jacket exchanger and scraping device.

Full automatic operation system by PLC; display of main parameters by LCD TOUCH screen.

Standard manufacturing AISI316 – special alloys on demand.

Standard range from 250 to 4000 l/day of evaporated water.

Particularly suitable for obtaining concentrations of water-based high density solutions.

CRYSTALLIZERS WITH SCRAPER

○ STRUCTURE

- En-bloc skid made of austenitic steel.
- Boiling vessel, fitted with scraper positioned inside, having screw blades for the non-stop cleaning of exchange surface and product homogenizing during concentration phase.
- High performance heat exchanger, positioned outside the boiling chamber, cast-in lined.
- Upper condensation steam section, fitted with heat exchanger and cooling circuit.
- digital and analogue control instrument for the automatic monitoring of the system.
- The Vr series crystallizers are featured for the treatment of highly encrusting liquids thus reaching an high concentration level.

○ VACUUM CIRCUIT AND CONDENSED MATERIAL LINE

- Automatic circuit for condensate discharge and vacuum generation, composed of centrifugal motor pump, Venturi ejector, condensate storage and cooling tank, complete with heat exchanger, check valves, digital and analogue control, monitoring instrument.

○ COOLING UNIT

- The cooling unit features a heat pump made by a main refrigerant unit, complete with process compressor, eco-friendly driven, sub-cooling battery, heater fans, filters, pressure switches, pressure senders, gas flow indicators.

MAIN CHARACTERISTICS

- Electrically operated heat pump crystallizer.
- Fully automatic operation (working cycle 24 hours/day without man presence).
- Very compact structure.
- Absence of emissions and odors.
- No additional installation required.
- Total control by PLC.
- Lined heat-exchanger.
- Inside independent scraper device.
- Wastewater inlet, distillate and condensate outlet automatically operated.
- Pull-out boiling and condensation chambers.
- Main frame and condensation chamber made in stainless steel Aisi 316.
- Special material manufacturing on request.
- Voltage: 3 x 400 / 50 Hz + neutral.

MAIN APPLICATIONS

DESALT LT VR are particularly suitable for:

- Glue and encrusting liquid treatment.
- Treatment of wastewater from developing and fixing processes.
- Wastewater treatment from frames and cylinder press washes.
- links treatment and recovery.

- Additional cooling unit (from model Desalt LT VR) complete with auxiliary compressor, control equipment, filters.

CONCENTRATE DISCHARGE CIRCUIT

- Automatic circuit for the concentrate discharge, programmable by temporized system.
- The discharge of the concentrate can be made by means of a centrifugal or one-screw pump or by gravity.

FOAM CONTROL BATCHING SYSTEM

- Automatic system complete with foam formation sensor and variable setting control. The circuit allows the automatic injection of antifoam products inside the crystallizer: the quantity of injected antifoam is adjustable by the control panel according to the actual needs.

CONTROL UNIT

- Siemens PLC control unit and control panel.
- Electrical panel in painted sheet, protection IP 54.
- Automatic overload cutout for all motors.
- 24 volts auxiliary circuit.
- Wiring made in flame proof cables
- Level control regulators for tanks and outside reservoirs level.

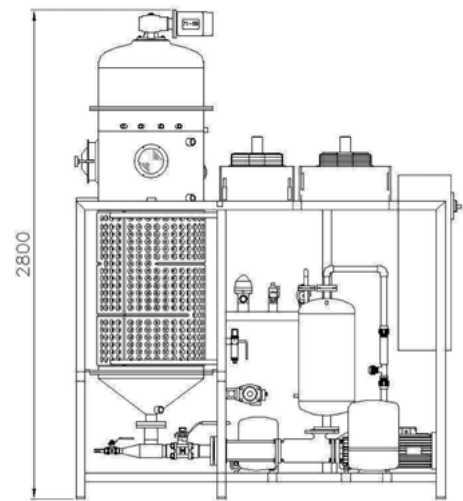
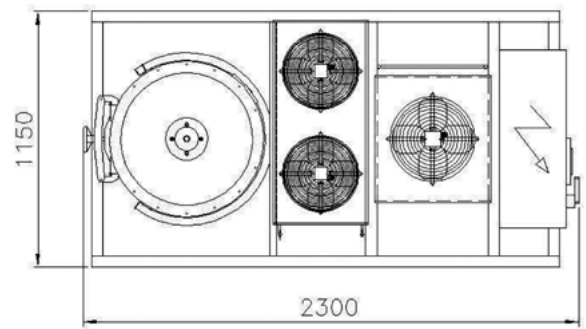
OPTIONALS

Cleaning Unit

- The automatic system is complete with pneumatic valve and rotating nozzle. The circuit allows the release of cleaning agents inside the crystallizer: the wash cycle time can be adjusted from the control panel according to the actual needs.

“Teleservice” Control System for remote assistance.

OVERALL DIMENSIONS DESALT LT VR



TECHNICAL DATA

	Units	500	750	1000	1500	2000	2500	3000	4000
Feed Inlet	I/d	500	750	1000	1500	2000	2500	3000	4000
Nominal Capacity	I/h	21	31	42	63	83	104	125	165
Energy Consumption	W/I	250	250	250	250	250	250	250	250
Dimensions (LxPxH)	cm	230x105x280	230x120x280	270x135x305	310x150x280	300x160x370	305x155x370	360x170x370	370x180x370

PROCESS DIAGRAM

