



**condorchem
envitech**

ENVIDEST LT VS

Vacuum heat pump evaporators



HIGHLIGHTS

ENVIDEST LT VS vacuum evaporators are designed for the treatment of water-based solutions. Heat pump vacuum evaporator fit to concentrate water based solutions.

High-efficiency immersed heat exchanger. Built-in upper condenser. Full automatic operation system by PLC; display of main parameters by LCD TOUCH screen. Standard manufacturing AISI316 – special alloys on demand. Standard range from 3000 to 20000 l/day of evaporated water.

STRUCTURE

- En-bloc skid made of austenitic steel.
- Boiling vessel, fitted with low-side flanged section for the housing of toroidal heat exchanger, complete with manhole and inspection sight glass.
- digital and analogue control instrument for the automatic monitoring of the system.
- The upper steam condensation section is complete with heat exchanger and cooling circuit.

VACUUM CIRCUIT AND CONDENSED MATERIAL LINE

- Automatic circuit for condensate discharge and vacuum generation, composed of centrifugal 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, de-super-heater.
- Additional cooling unit (from model ENVIDEST LT VS) complete with auxiliary compressor, control equipment, filters.
- Speed control system for undercooling fans (standard supply from model ENVIDEST LT VS).

MAIN CHARACTERISTICS

- Electrically operated heat pump evaporator.
- 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.
- Immersion heat-exchanger.
- Easily accessible upper condensation unit.
- Wastewater inlet, distillate and condensate outlet automatically.
- 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

ENVIDEST LT VS series is particularly suitable for:

- oily emulsions, wastewater from vibratory finishing, exhausted baths.
- wastewater from pressure die-casting (release agents, glycols, lubricant oils).
- wastewater from galvanization (chromium, nickel, copper), exhausted baths, eluates.
- recycling of exhausted baths.
- treatment of all water-based solutions.

○ CONCENTRATE DISCHARGE CIRCUIT

- Automatic circuit for recirculation and discharge of the concentrate, complete with extraction pump, pneumatic and manual shut-off valves for taking product samples during processing.
- The automatic discharge function is programmable through an adjustable density control device or by a timer for a complete customization of the process.

○ CLEANING SYSTEM

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

○ 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 evaporator: the quantity of injected antifoam is adjustable by the control panel according to the actual needs.

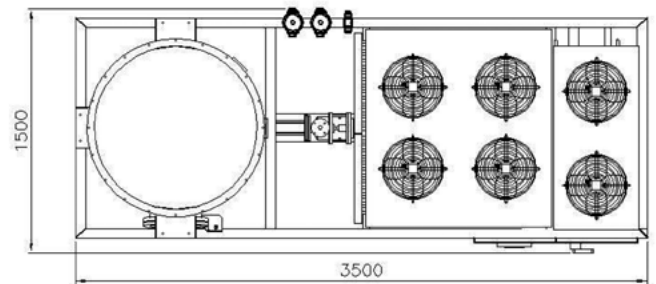
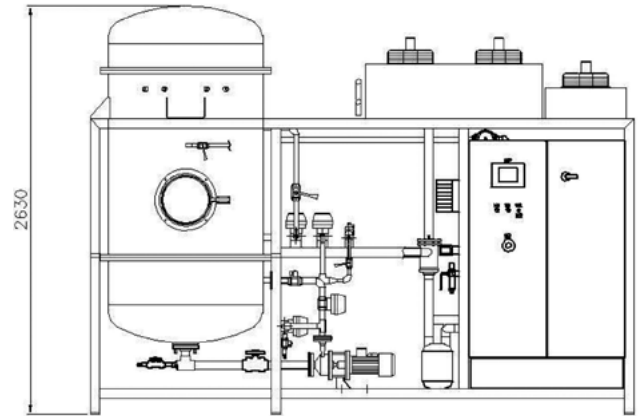
○ CONTROL UNIT

- 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

“Teleservice” Control System for remote assistance”

OVERALL DIMENSIONS ENVIDEST LT VS



TECHNICAL DATA

	Units	3000	4000	5500	7000	9000	12000	15000
Feed Inlet	l/d	3.000	4.000	5.500	7.000	9.000	12.000	15.000
Nominal Capacity	l/h	125	165	230	290	375	500	625
Energy Consumption	W/l	150	150	150	150	150	150	150
Dimensions (LxPxH)	cm	340x150x255	360x150x265	370x165x280	410x150x315	425x200x425	465x200x430	450x200x440

PROCESS DIAGRAM

