



**condorchem  
envitech**

## ENVIDEST LT DPE

Vacuum heat pump evaporators



### HIGHLIGHTS

Heat pump vacuum evaporator fit to concentrate water based solutions. High-efficiency immersed heat exchanger. External upright condensation section for the maximum exploitation of the boiling area.

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 2500 l/day of evaporated water.

### EVAPORATORS WITH IMMERSION HEAT-EXCHANGER AND SIDE CONDENSATION:

#### ○ 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 steam condensation section is complete with heat exchanger and cooling circuit.
- The condensation side splitting allows the maximum exploitation of the evaporation area, reducing the entrainment effects, for a better quality of the condensate.

#### ○ 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.

### MAIN CHARACTERISTICS

- Concentrate extraction system and hydrometer for concentration determination.
- 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.
- Side 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.
- Voltage: 3 x 400 / 50 Hz + neutral.

### MAIN APPLICATIONS

**ENVIDEST LT DPE 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 high foamy liquids.
- treatment of all water-based solutions.

- Additional cooling unit (from model ECO 1500 DPE-HP) complete with auxiliary compressor, control equipment, filters.

## ○ 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.

## ○ 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

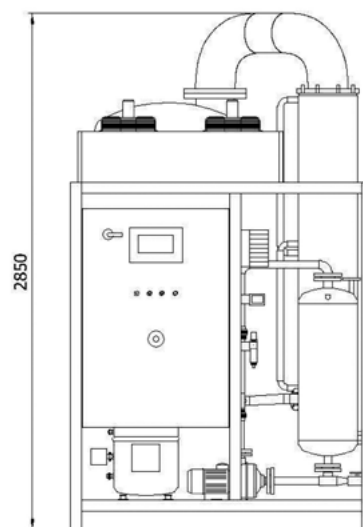
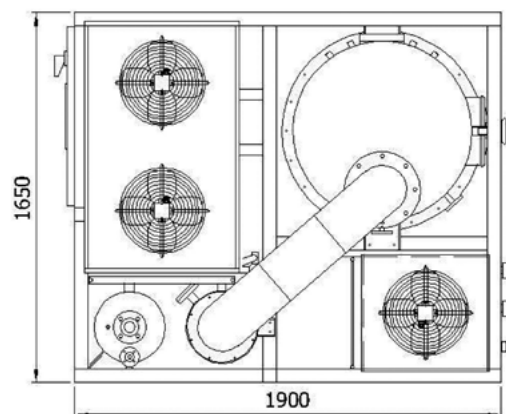
- Siemens PLC control unit and control panel
- Electrical panel in painted sheet, protection IP 54
- Automatic overload cutout for all motors
- 24 volts auxiliary circuit
- Wiring made in flame proof cables
- Level control regulators for tanks and outside reservoirs level.

## ○ OPTIONALS

### 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.
- "Teleservice" Control System for remote assistance"**

## OVERALL DIMENSIONS ENVIDEST LT DPE



## TECHNICAL DATA

	Units	250	500	750	1000	1500	2000	2500
Feed Inlet	l/d	250	500	750	1.000	1.500	2.000	2.500
Nominal Capacity	l/h	10	20	30	40	60	80	105
Energy Consumption	W/l	150	150	150	150	150	150	150
Dimensions (LxPxH)	cm	110x70x250	175x135x245	155x105x275	190x110x245	250x170x285	200x170x305	220x175x310

## PROCESS DIAGRAM

