condorchem
envitech

ENVIDEST ® EVAPORATORS
DESALT ® CRYSTALLIZERS

For industrial wastewater treatment
CONDOCHEM ENVITECH

Condorchem Envitech is an environmental engineering company offering turn-key solutions in any industrial sector for:

- **WASTEWATER TREATMENT**
- **ZERO LIQUID DISCHARGE**
- **RESOURCES RECOVERY**

We always ensure that we provide the most efficient process, both in environmental and economical terms. We offer a 360° solution for:

- **DESIGN**
- **INSTALLATION**
- **START UP**
- **MAINTENANCE**

We have completed more than 500 projects in over 20 countries, for all kinds of industrial companies, from small plants to huge installations. These are some of our main references:

- Mercedes-Benz
- AkzoNobel
- DSM
- Philips
- Tetra Pak
- Acciona
- Alcoa
- Iberdrola
- Suzuki
- Roquette
- Viscofan
- Comex
- TRW Automotive
- Yatai Steel

ENVIDEST® & DESALT® SERIES

ENVIDEST and Desalt series are one of the most innovative and efficient technologies for industrial wastewater minimization and treatment.

Our evaporators and crystallizers are a clean, safe and very versatile technology with low power and management costs that allow the recovery of high-quality water and other raw materials from industrial effluents.

In most cases they also serve as a zero liquid discharge treatment system.

The scope of its application is virtually unlimited. The following are some of the usual.

**APPLICATIONS:**

- Oil emulsions, drilling oils, mould release agents.
- Compressor blow downs, flow washing water.
- Tank and reactor washing water: Chemical, Pharmaceutical, Cosmetics and Perfume Industries.
- Work-baths and washing waters in galvanic processes and surface treatments.
- Penetrating liquids.
- Graphic arts waste (cleaning water, inks, etc.).
- Wastewater treatment plants reject (reverse osmosis, demineralization, etc.).
- Leachates.
- Digestate in biogas plants.
ENVIDEST MVR FC
Forced circulation evaporator

ENVIDEST MVR FC evaporators are a new concept of mechanical vapour recompression forced circulation evaporators. A fast cool start system for preheating the water using electrical resistors, or using steam available.

Vacuum is maintained around 200 mbar and evaporator temperature rises up to 60 ºC.

ENVIDEST MVR FF
Falling film evaporator

The ENVIDEST MVR FF is falling film vacuum evaporator with forced circulation by means of mechanical vapour compression. The application of the falling film optimises heat exchange and achieves lower energy consumption.

Vacuum is maintained around 700 mbar and evaporator temperature rises up to 90 ºC.
ENVIDEST LT DPE
Heat pump evaporators

The ENVIDEST LT DPE is a heat pump-based vacuum evaporator that is electrically operated. Specially recommended for the treatment of small volumes of effluents.

Vacuum is maintained around 45 mbar and evaporator temperature rises up to 37 ºC.

- MODEL: ENVIDEST LT DPE
- VACUUM PLANT: Evaporator
- ENERGY SOURCE: Electricity
- TYPE: Heat pump
- MAIN CHARACTERISTIC: Low temperature
- DAILY PRODUCTION (l/d): 250 - 2500
- HOURLY PRODUCTION (l/h): 10 - 100
- ENERGY CONSUMPTION (kwh/m³): 150
- MATERIAL: A-316 L
- SPECIAL MATERIAL: SAF/SANICRO/Ti
- VESSEL: Vertical
- HEAT EXCHANGER: Toroidal, immersed
- VACUUM SYSTEM: Venturi or liquid ring pump
- COMPRESSOR: Freon R407c
- EXTERNAL CONDENSATION: Not required
- CONTROL: PLC & HMI
- CIP: Pre-installed

ENVIDEST LT VS
Heat pump evaporators

The ENVIDEST LT VS is a vacuum evaporator with a heat pump and it operates on electrical power. Designed for the treatment of industrial effluents.

Vacuum is maintained around 45 mbar and evaporator temperature rises up to 37 ºC.

- MODEL: ENVIDEST LT VS
- VACUUM PLANT: Evaporator
- ENERGY SOURCE: Electricity
- TYPE: Heat pump
- MAIN CHARACTERISTIC: Low temperature
- DAILY PRODUCTION (l/d): 3000 - 15000
- HOURLY PRODUCTION (l/h): 125 - 625
- ENERGY CONSUMPTION (kwh/m³): 150
- MATERIAL: A-316 L
- SPECIAL MATERIAL: SAF/SANICRO/Ti
- VESSEL: Vertical
- HEAT EXCHANGER: Toroidal, immersed
- VACUUM SYSTEM: Venturi or liquid ring pump
- COMPRESSOR: Freon R407c
- EXTERNAL CONDENSATION: Not required
- CONTROL: PLC & HMI
- CIP: Pre-installed
**DESALT LT VR**

Heat pump crystallizers

The DESALT LT VR low temperature crystallizer is electrically operated and equipped with an internal scraper. Specially recommended for treating scale-producing wastewater and high density aqueous solutions.

Vacuum is maintained around 45 mbar and evaporator temperature rises up to 37 °C.

**DESALT LT DRY**

Heat pump crystallizers

The DESALT LT DRY is a vacuum low temperature crystallizer driven by a heat pump and it operates on electrical power. It is designed to obtain solid concentrates, as well as to recover raw materials in the solution of the feed stream.

Vacuum is maintained around 45 mbar and evaporator temperature rises up to 37 °C.
ENVIDEST DPM
Multiple effect evaporator

The ENVIDEST DPM is a vacuum evaporator operating with immersed tube bundle heat exchangers and a superheated water (W) or steam (V) supply. Two condensation alternatives: by wet bulb Adiabatic cooling tower (C) or by plate heat exchanger with a cooling water circuit (W).

The advantage of this system consists on recovering the latent heat in all effects. Fully automatic operation of the equipment.

ENVIDEST MFE
Forced circulation multiple effect evaporator

The ENVIDEST MFE is a vacuum evaporator operating with an external heat exchanger and forced circulation. This equipment operates using superheated water (W) or steam (V) supply. Condensing system using plate heat exchanger with a cooling water circuit (W).

The advantage of this system consists on recovering the latent heat in all effects. Fully automatic operation of the equipment. Equipment designed to concentrate large amounts of liquid effluents and brines.