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## ENVIDEST MVR FC

Forced circulation evaporator



### HIGHLIGHTS

ENVIDEST MVR FC evaporators are a new concept of mechanical vapour recompression forced circulation evaporators, for production of 2502,000 L/h of distillate.

A fast cool start system for preheating the water using electrical resistors, or using steam of available.

Vacuum is maintained around 200 mbar an evaporator temperature rises up to 60 °C.

### ○ OPTIONS

- Cleaning in place system for the inside of the evaporator, thus guaranteeing its continuous availability.
- Machine with panelling to minimise the noise and optimise the performance of the machine at thermal level.
- It is possible to build the machine, the parts in contact with the liquid, with a special material that is resistant to corrosion (SAF 2507 or TITANIUM) (effluent with a high chloride or fluoride, etc., content).
- Remote control MODEM.
- other electrical outputs are available.

### MAIN CHARACTERISTICS

The ENVIDEST MVR FC® evaporators are supplied pre-assembled in a skid that encompasses the following elements:

- Vertical vessel, built in AISI 316 L. Large capacity for continuous operation of the machine.
- Vapour compression system using a Root pump.
- Vacuum formed by a liquid ring pump. A system for cooling the pump using a chiller installed outside the skid.
- A system for recirculating concentrated water using a centrifugal pump.
- A plate exchanger for exchanging heat between the fluid to be treated and the vapour produced, causing the condensation of the latter (distillate). Manufactured with AISI 316 L.
- Heat recovery from distillate through plate heat exchanger to preheat the feed fluid.
- Condensate collection tank built in AISI 316 L.
- Automatic control by weight, pressure and temperature:
  - Load cells, controlling internal level.
  - Scaled level sensor for continuous control of the process.
  - Pressure transmitter for controlling the vacuum and the operation of the vacuum pump.
- Pipes and valves manufactured in AISI 316 L.
- Cleaning in place system for the heat exchanger.
- Control cabinet integrated into skid with protection and operational control equipment. It has PLC, instrumentation and touch screen HMI.

## TECHNICAL DATA

	Units	250	500	750	1000	1500	2000
Feed Inlet	l/d	5.000	10.000	15.000	20.000	30.000	40.000
Nominal Capacity	l/h	250	500	750	1000	1500	2000
Energy Consumption	W/l	52	52	48	48	48	48
Dimensions (LxPxH)	cm	320x190x290	350x210x290	400x220x325	450x220x340	470x220x350	490x220x350

## PROCESS DIAGRAM

