

# EVALED PC F

## Heat pump forced circulation vacuum evaporators

EVALED PC F is a line of heat pump vacuum evaporators designed to treat liquids with a high content of dissolved solids while minimizing the fouling and scaling phenomena at low temperature evaporation. The line is dedicated to water separation and possible reuse from different industrial waste water solutions.

The line is available in different materials to treat different effluents and even the **most aggressive salted wastewater** (acid pH, chlorides, heavy metals), produced by:

- Mechanical & Surface Treatments (Automotive, Aviation)
- Microelectronics and Photovoltaics
- Chemicals
- Healthcare (Pharma and Cosmetics)
- Food & Beverage

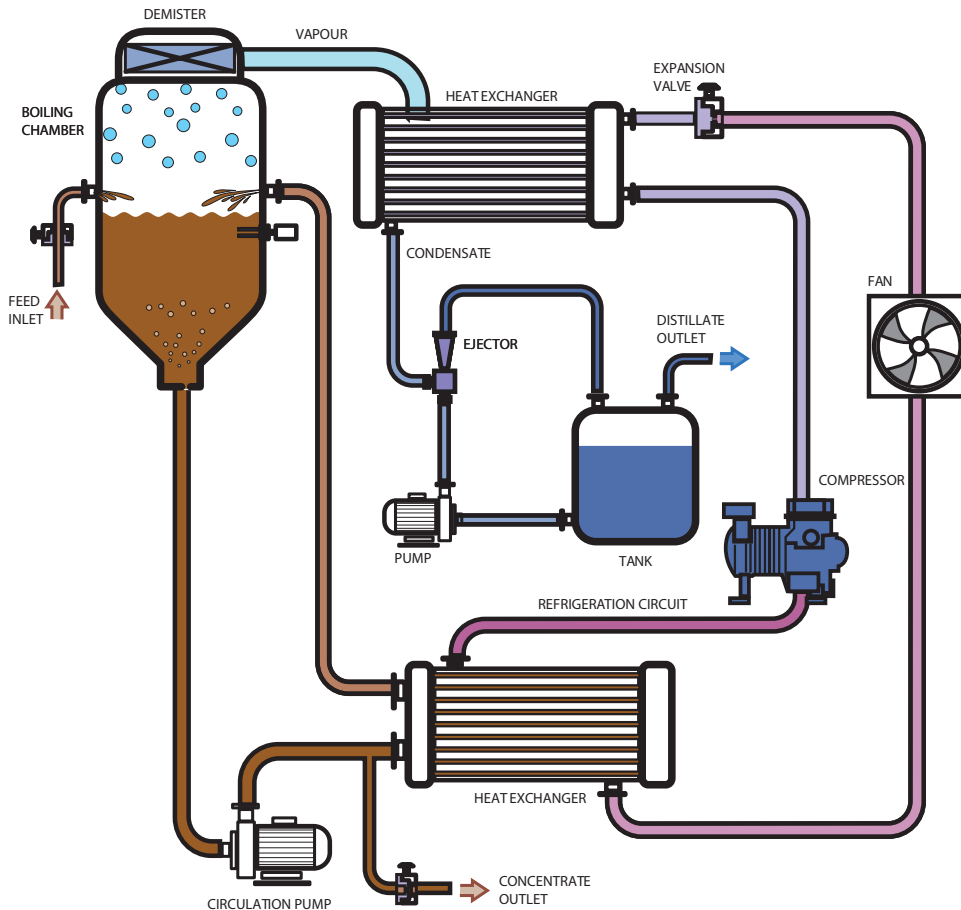
### BENEFITS

- Maximum water recovery, minimum quantity of waste to be disposed of
- High quality of recovered water suitable for reuse
- Low energy consumption
- Suitable for fouling and scaling liquids
- Modular and flexible, short delivery time
- Skid mounted (small footprint) and ready to use (plug & play)
- Fully automatic, minimal manpower
- Complete necessary instrumentation and remote control
- User-friendly (intuitive HMI)
- Heat pump device available for the production of hot/cold water

**Low running costs allow a return on investment often measured in months.**



## Process Diagram. How does PC F work?



High efficiency forced circulation shell & tube heat exchanger with horizontal tubes and the exchanged energy by the heat pump circuit: it allows that the wastewater concentration is achieved up to the salts solubility limits managing also scaling and fouling phenomena.

Evaporation at a low boiling point is made possible by the vacuum condition generated by the pump and the ejector. Wastewater is constantly treated producing two streams: a distillate and a concentrate. The first is simply discharged through a pump or by overflow. The concentrate is separated and discharged in semi-batch mode through a valve according to a pre-set timer when the desired concentration level is achieved.

**Evaporation temperature: 40°C**  
**Achievable concentration in TS: 25 - 35%**

## AVAILABLE MODELS

• PC F 0.7	0.5-1 ton/day	200-250 ton/year
• PC F 1.4	1-2 ton/day	250-500 ton/year
• PC F 2.4	2-3 ton/day	500-900 ton/year
• PC F 4	3-5 ton/day	900-1500 ton/year
• PC F 6	5-7 ton/day	1500-2000 ton/year
• PC F 8	7-10 ton/day	2000-3500 ton/year
• PC F 12	10-15 ton/day	3500-4500 ton/year
• PC F 24	20-30 ton/day	7000-8000 ton/year

**SERVICE OPTIONAL**

## EVA-life

**Your technology. Always powerful.**

The program which makes your unit perfectly performing for its entire life.



### EVA-Clean Automatic Washing System

The integrated chemical cleaning system allows a considerable reduction of maintenance and a complete reliability of the unit.



### EVA-Link Remote Control

The remote control access allows immediate support and troubleshooting, periodical unit check-up, report and parameters optimization, periodical back-up of the unit data and software modification.



### EVA-Lab Analysis

Inlet effluents analysis allows the client to be aware of effluent changes, if any, and to optimize the results by resetting the unit.

**Hydrex**

In case of foaming effluent, Ehaled evaporators are designed to be operated with Hydrex antifoams.