

EVALED PCR

Heat pump scraped vacuum evaporators

EVALED PCR is a range of heat pump vacuum evaporators designed to treat liquids with a high content of dissolved solids at low temperature and able to manage a high level of fouling and scaling phenomena (viscous liquids, sediment presence). The line is designed to achieve water separation and possible reuse while obtaining the maximum disposal cost reduction thanks to the high concentration ratio. The line is also suitable to treat pre-concentrated liquids.

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

- Mechanical & Surface Treatments (Automotive, Aviation)
- Waste (Collectors, Incinerators, Landfills)
- Microelectronics and Photovoltaics
- Chemicals
- Healthcare (Pharma and Cosmetics)

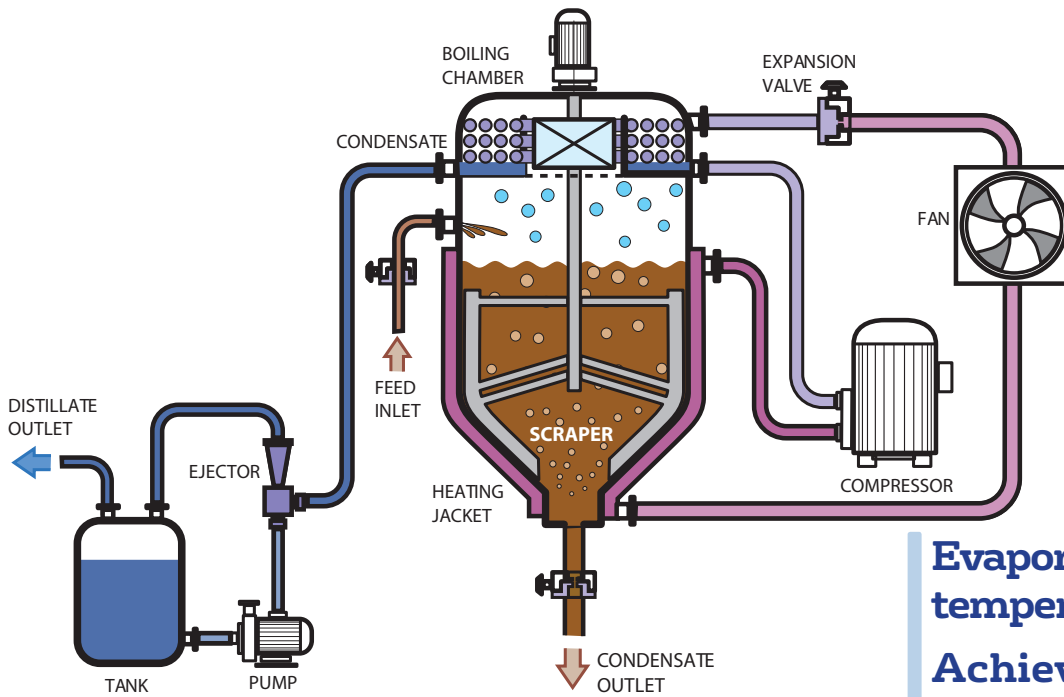
BENEFITS

- Maximum water recovery, minimum quantity of waste to be disposed of
- High quality of recovered water suitable for reuse
- Very low energy consumption
- Suitable for very scaling and fouling liquids
- Modular and flexible
- Short delivery time
- User-friendly (intuitive HMI)
- Skid mounted (small footprint) and ready to use (plug & play unit)
- Fully automatic, continuous operation, minimal manpower
- Complete necessary instrumentation and remote control
- Reduced maintenance
- 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 R work?



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

The heat transfer is possible thanks to the heat pump system via a conical jacket at the base of the boiling chamber. The inner heating surface is continuously cleaned by scrapers, which also act to stir the concentrate: this allows a waste concentration achieving the highest viscosity, levels also in presence of sediment. Evaporation at a low boiling point is made

possible by the vacuum condition generated by the pump and the ejector. The unit operates in semi batch operation: wastewater is constantly treated, the distillate is continually separated and then discharged through a pump, while the concentrate is discharged at the end of the cycle through a pump as well.

AVAILABLE MODELS

• PC R 0.1	0.1-0.2 ton/day	20-50 ton/year
• PC R 0.5	0.3-0.6 ton/day	60-150 ton/year
• PC R 1	0.6-1.2 ton/day	200-350 ton/year
• PC R 2	1.2-2.2 ton/day	400-600 ton/year

EVA-life

Your technology. Always powerful.

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



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.