

Xvaporator

Environmental Technology and Waste Recovery

Vacuum evaporators type X-VAC

Capacities from 8 l/h to 1000 l/h

Recover 85-95% of your waste water or solvent

The remaining waste concentrate constitutes only 5-15% of the feed

- Aggressive effluent concentration
- Solvent recycling
- Environment safe vacuum operation
- Energy saving heat recovery
- Compact design
- Low temperature, no product decomposition



Many industries can with economic success recover their waste water and organic solvent. The investment in an evaporator is not only a very profitable business, it is also a very environmentally conscious act that ensures a green profile.

Examples of industries that with benefit can use evaporators:

Photo Industry

Concentration of spent developer, fix and bleach. Recycling wash water and stabilizer.

Manufacturing Industry

Separation of oil-bearing waste water and degreasing baths.

Pharmaceutical

Recycling of organic solvents.
Concentration of CIP-cleaning fluids.

Galvanic industry

Concentration of spent electrolytic, degreasing and rinse baths.

Hot dip galvanizing

Recycling of water, hydrochloric acid and iron chloride from spent baths.

Surface treatment

Recycling of wash and rinse water.

Recycling industry

Concentration and recovery of spent chemicals incl. organic solvents.



Recycling and concentration

The X-Vac evaporator is designed for concentrating organic and aqueous solvent solutions including waste water. Vapours are condensed so that clean solvent or water is produced, ready for recycling.

Self-cleaning, no fouling, no scaling

Free circulation, low temperatures and full emptying between each cycle ensures a clean evaporator.

Low temperature vacuum operation

In the X-VAC, evaporation/distillation takes place at low temperature (20-40°C) and at a correspondingly low pressure. Low temperature means minor risk of thermal chemical decomposition of product.

Fully automatic

The X-VAC is equipped with a PLC control unit for 100% automatic (24 hours a day) non-supervised operation. The control unit are equipped with a data collection system. Connected to a computer (PC) essential operating data can be recorded.

Foam Control

The X-VAC can be equipped with automatic foam control. A photo cell will detect any foam formation in the evaporator and control injection of antifoam. Simultaneously vacuum will be reduced so that foam is immediately suppressed.

Environment safe, no emission

The X-VAC operating under vacuum and at low temperature gives off no vapours and no odours. There are no risks to operators and to the environment.

Heat recovery

The X-VAC features a heat pump circulating an environmentally compatible refrigerant in a closed secondary cycle. Heat for the vaporizer is supplied by condensing refrigerant vapour. Cold for the condenser is supplied by evaporating refrigerant. The heat pump requires only 1/4 of the energy normally required for evaporation.

Alternative the X-VAC can be heated with your **excess heat**; this will mean an almost cost-free operation.

pH-control unit

When evaporating acid or basic chemical effluent, the pH of the evaporator charge is continuously monitored. When necessary, acid or base is injected until evaporator pH has been adjusted to the desired value.

Distillate purity Control

Distillate purity is controlled by monitoring the electrical conductivity. Whenever the conductivity exceeds a set-point, distillate will be returned to the feed tank. When clean again distillate is conducted to the distillate tank.

Explosion proof execution

For the distillation of inflammable liquids, the X-VAC is supplied in explosion proof execution. In this version electric motors are (EX) approved. Signal circuits are intrinsically safe. Control valves are air actuated or self-operated. The control box is supplied for separate installation outside the (Ex) classified area.

Data collection

The control unit can be extended with a data collection system. Connected to a computer (PC) essential operation data can be recorded and monitored remotely through the telephone net.

Xvaporator

Environmental Technology and Waste Recovery

Xvaporator ApS
Haraldsvej 9 – 8960 Randers SØ - Denmark
Phone (+45) 2383 2002

slk@xvaporator.dk

www.xvaporator.dk