

# BJORN EVAPORATOR

## Vacuum Evaporator type ELT Flash

**Recovery of wastewater, water / oil emulsions and solvents,  
glycol and other chemicals**

**Very high concentration rates – less than 5% water in the concentrate**



- **Concentration of aggressive wastewater**
- **High concentration rates on water / oil emulsions – less than 5% water in the recovered oil.**
- **Environment safe vacuum operation**
- **Energy saving heat recovery**
- **Compact design**
- **Low temperature, no product decomposition**

Many industries can benefit financially from recovering their wastewater and organic solvents.

### **Recycling industry**

Concentration and recovery of water / oil emulsions, glycols, spent chemicals and organic solvents.

### **Manufacturing industry**

Separation and recovery of oil-bearing wastewater and degreasing baths

### **Printing industry**

High concentration of spent cleaning liquids.

### **Shipping industry**

Concentration and recovery of oil bearing wastewater incl. slop oil.

### **Galvanic industry and pickling industries**

Concentration of spent electrolytic degreasing, rinse and acid baths

### **Hot dip galvanizing**

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

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## BJORN Vacuum Evaporator ELT Flash

### Recycling and Concentration

The BJORN ELT FLASH is designed for concentrating oil bearing wastewater, organic and aqueous solvent solutions. Vapours are condensed so that pure oil, water or solvent is produced ready for recycling.

### Self-cleaning No fouling and scaling

Forced circulation, low temperatures and full emptying between each cycle ensure a clean evaporator.

### Low temperature vacuum operation

In the BJORN ELT Flash, evaporation / distillation takes place at low temperature (37°) and at a correspondingly low pressure. Low temperature means minor risk of thermal decomposition of product.

### Fully automatic

BJORN ELT Flash is equipped with a PLC control unit for 100% non-supervised operation. The control unit can be extended with a data collection system. Connected to a computer essential operation data can be recorded.

### Foam control

BJORN ELT Flash is equipped with automatic foam control. A conductive electrode will detect any foam formation in the evaporator and control injection of anti-foam. Simultaneously vacuum will be reduced so that foam is immediately suppressed.

### Environment safe, no emission

The BJORN ELT Flash operating under vacuum and at a low temperature gives off no vapours and odours. There are no risks to operators and to the environment.

### Heat recovery

The BJORN ELT Flash features a heat pump delivering heat for the evaporation and cold for the condensation. The heat pump operates in a closed secondary cycle with an environment friendly refrigerant. For the final concentration of heavy liquids particularly difficult to evaporate, extra electrical heating can be supplied.

### All stainless steel

All parts in contact with feed and distillate are as a standard made of stainless steel type AISI 316. Because of the low temperature even aggressive chemical solutions can be processed.

## Options

### In-Line pH-control unit

When evaporating acid or basic chemical effluent, the pH of the evaporator charge at the inlet 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 control 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.

### Cooling

The standard model BJORN ELT Flash is water cooled. A separate cooling unit is offered, eliminating cooling water.



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