S.A.I.T.A.
water treatment solutions

EVAPORATORS under-vacuum heat pump

CVD SERIES

UNDER-VACUUM HEAT PUMP EVAPORATOR

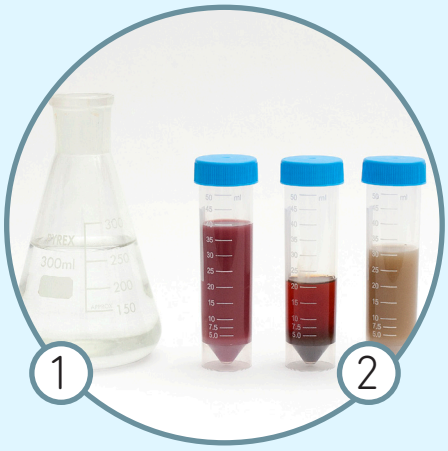
The evaporators CVD series **are designed for the treatment of solutions with the following characteristics: high density, oils, emulsions and lubricants, presence of precious metals or salts, colloids, dyes or raw materials from the process.** The treatment process with the under-vacuum evaporator CVD series allows to obtain **high percentages of concentration** up to a maximum of 98% of distillate recovery and 2% of waste produced.

ADVANTAGES:

- reduction of waste disposals
- higher distillate quality, reusable in production
- high density of the concentrate phase,
- raw materials recovery
- automatic functioning 24h/24h
- stable performance of the heat exchanging systems
- minimum supervision required.

INDUSTRIAL APPLICATIONS:

- **degreasing solutions for metal parts;**
- **emulsion and water containing oils;**
- **ultrasonic cleaning;**
- **metal surface preparation: passivation, painting, etc...;**
- **vibratory finishing waste;**
- **precious metal finishing;**
- **die-casting lubricants;**
- **herbal extracts;**
- **emulsions from wet wire drawing;**
- **recovery of crystallized salts from acid solutions.**



- **1 - Pure distillate**
- **2 - Concentrate waste**

SAITA CVD EVAPORATORS

The CVD series produced by SAITA comprise standard models from a capacity of 5 litres/hour of distillate until 150 litres/hour. Through the study of the treatment process and the design of the plant we are able to accessorize each model according to the customer's needs.

S.A.I.T.A. PROPOSES STANDARD AND ACCESSORIZE MODELS ACCORDING TO THE CUSTOMER'S NEEDS.

CHARACTERISITCS

All S.A.I.T.A.'s models are equipped with: **stainless steel skid,** automation PLC, digital and analogic instruments and alarms that allow the automatic functioning 24h.

The evaporators CVD series are designed with an **internal scarper blade complete with motor-reducer and shaft.** With this solution the heating surface of the boiling reactor is kept always clean maintaining a stable performance of the evaporator.

The scraper blade allows to reach **high concentration ratio of the inlet solution obtaining** in some case a dry waste for disposal.

The under-vacuum **distillation at low temperature between 28°C and 35°C** allows to produce high quality of distillate that can be reused in production line.

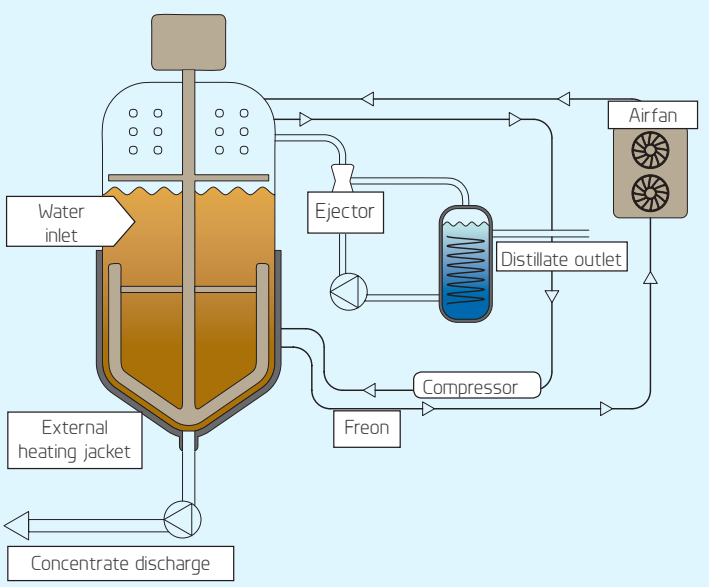
SUPPLY

The functioning of the under-vacuum heat pump evaporator requires only power and compressed air supply. **The electrical consumption has an average of 0,15 kWh/lt per litre of distillate produced.**

THE EVAPORATORS CVD SERIES ARE COMPLETE WITH:

- touch screen panel;
- S.A.I.T.A.'s automation software;
- hermetic or semi-hermetic compressor;
- digital and analogic measurement instruments;
- level regulators and alarms;
- internal scraper blade;
- automatic charging of inlet solution;
- automatic anti-foam charging
- pneumatic pump for concentrate discharge.

Internal scraper



Production site in Padova

Distillation test in laboratory

MODELS	CVD30	CVD50	CVD80	CVD100
Flow-rate of distillate lt/h	30	50	80	100
Power installed kW	8	16	18	21
Boiling temperature	32-35	32-35	32-35	32-35
Concentration ratio	1/10 : 1/40	1/10 : 1/40	1/10 : 1/40	1/10 : 1/40
Vacuum degree	715 mmHg	715 mmHg	715 mmHg	715 mmHg
Refrigerant	R134a	R134a	R134a	R134a
Voltage	400 Volt / 50 Hz	400 Volt / 50 Hz	400 Volt / 50 Hz	400 Volt / 50 Hz
Length mm	2200	2200	2200	2200
Width mm	1200	1200	1200	1500
Height mm	3200	3200	3200	3200

ADDITIONAL EQUIPMENTS AND SERVICES:

- plastic storage tanks;
- distillate final filtration (COD, color and odor removal);
- concentrate discharge on filtration bags;
- construction with special anti-corrosion materials: SANICRO 28, Super Duplex SAF 2507;
- annual maintenance contract;
- remote telecontrol.

COMPANY PROFILE

S.A.I.T.A. srl was established in 1980, design, produce and provide after sale services to industrial water treatment plants. SAITA has concentrated its efforts to develope the design and manufacturing of recycle water treatment plants in order to encourage the integration of the production cycle with the waste treatment system.

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