

# ECO VS WW

## MAIN APPLICATIONS:

- Oily emulsions, wastewater from vibratory finishing, exhausted baths
- Wastewater from pressure die-casting (release agent, glycols, lubricant oils).
- Wastewater from galvanization (Chromium, Nickel, Copper), exhausted baths, eluates.
- Recycling of exhausted baths.
- Chemical/Pharmaceutical Industries (washing of reactors, process wastewater)
- Treatment of water-based solutions.

## MAIN CHARACTERISTICS:

- Power supply by hot water or steam.
- Immersed thoroidal heat exchanger.
- Heat exploiting at multiple effect.
- Charge of product, discharge of distillate and concentrate: completely automatic.
- Check by PLC Siemens S7-200 with TP 170 B keyboard.
- Pull-out heat exchangers.
- Main frame, pipes and valves Aisi 316 made.
- Special alloys on demand.
- Possible extension from one, up to three stages.

Concentrators VSWW series are energized by hot water or steam to carry into effect the evaporation process, offering the possibility to use heat sources already available.

These units can consist of one or more evaporation serial modules, according to the temperature of the heating fluid available and to the wastewater to be treated.

For the multi stage version, the heat created by the evaporation of the wastewater is completely recycled for the heating of the following module, having so a "cascading" effect. This process avoids any energy cost.

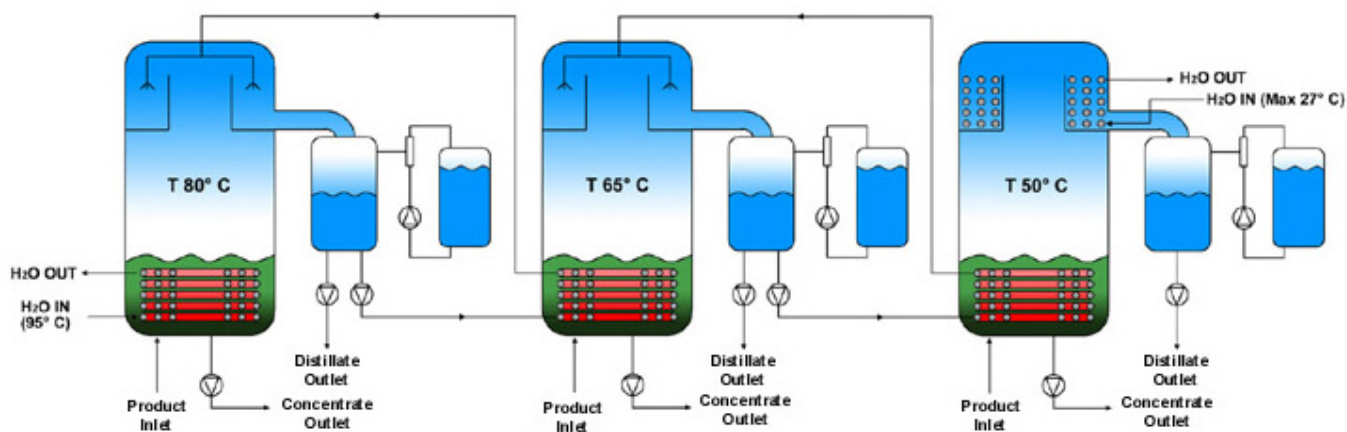
The condensation of the steam into distillate happens into the final stage by means of a special condenser with closed circuit and does not require water consumption (except for a small quantity for the recover).

These units can be extended up to 3 modules, with the simple add of new stages, avoiding the purchase of new plants or energy request.

Main characteristics and the lack of freezing circuits guarantee a safety working and lower management respect to all other evaporation plants in the world.



The system consists of one or more vacuum evaporation modules. An external fluid of hot water or steam energizes the first stage. The heat produced by the wastewater into the first stage, disguised as steam rises through the central chimney and heats "free" the following stage. The condensation of the steam created into the last module is by a special evaporation condenser with closed circuit or by a simple exchanger with plates if cool water is available.



| SIZE         | LITRES/HOUR | Kcal<br>REQUIREMENT * | DIMENSIONS* (b x l x h) |
|--------------|-------------|-----------------------|-------------------------|
| 10000 VsWW/1 | 420         | 270.000               | 1800 X 3200 X 5000      |
| 20000 VsWW/1 | 840         | 540.000               | 2000 X 3200 X 6000      |
| 20000 VsWW/2 | 840         | 270.000               | 3600 X 3200 X 5000      |
| 30000 VsWW/1 | 1250        | 810.000               | 2000 X 3200 X 7000      |
| 30000 VsWW/2 | 1250        | 410.000               | 3600 X 3200 X 6000      |
| 30000 VsWW/3 | 1250        | 270.000               | 5400 X 3200 X 5000      |
| 40000 VsWW/2 | 1660        | 540.000               | 4000 X 3200 X 6000      |
| 60000 VsWW/2 | 2500        | 810.000               | 4000 X 3200 X 7000      |
| 90000 VsWW/3 | 3750        | 810.000               | 6000 X 3200 X 7000      |



All units by ECOTECNO conforms to "Machinery Directives" 89/392/CEE

\* Ecotecno can change dimensions and characteristics without notice

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