

FLASH DISTILLATION

REFERENCE : MP1025



Non contractual photo

**SERVICE : 230 V / 50 HZ / SINGLE PHASE: 3
KW. COLD WATER 10 ° C / 3 BAR: 1 M3 / H.
SEWER
DIMENSIONS : 1,65 M X 0,68 M X 2,2 M**

WEIGHT : 150KG

Principle of operation

Flash distillation (or simple distillation) allows the separation, from a feed solution, of the compounds present in this solution by evaporation. The most volatile liquid is partially evaporated and, after condensation and cooling, recovered separately from the solution; this solution, partially depleted in volatile product, is itself recovered in a specific circuit after cooling. The solution is fed continuously into the evaporation chamber. The solutions used are binary mixtures that may be ideal or not.

Educational Objectives :

- Continuous concentration of a solution by evaporation.
- Influence of the operating conditions on the concentration of a solution.
- Thermal balance.
- Material balance.

Technical specifications :

Equipment :

- Storage can of the polyethylene feed solution.
- Feeder dosing pump.
- Continuous boiler in borosilicate glass, electric heating, equipped with minimum safety level and maximum temperature safety.
- Inclined condenser in 316L stainless steel, borosilicate glass ferrule.
- 316L stainless steel distillate coolant.
- Recipe for borosilicate glass distillate.
- Concentrate cooler made of 316L stainless steel.
- Recipe for borosilicate glass concentrate.
- 316L stainless steel connection pipes.
- Support frame in 304L stainless steel tubes and aluminum nuts.

Instrumentation :

- Condenser cooling water supply equipped with a float flowmeter with its control valve and a water circulation controller to stop heating due to lack of cooling.
- Control and control cabinet, IP55, equipped with emergency stop, operating buttons and the following interfaces:
- Regulator of the temperature of the boiler.
- Two digital temperature indicators of 7 probes type Pt100 ?.

OPTIONS :

Option: Touch screen to view temperatures. With data storage and data recovery on USB stick in .txt files.