

EVAPORATION PROCESS TRAINER



Experimental capabilities

- Visualization of the liquid-vapor phase change in a tube during a heating process
- Evidence of natural circulation by convection
- Evidence of heat transfer
- Demonstration of the different states of the fluid from subcooled liquid to superheated steam
- Visualization of the disruptive effect of air in a condenser

Operating principle

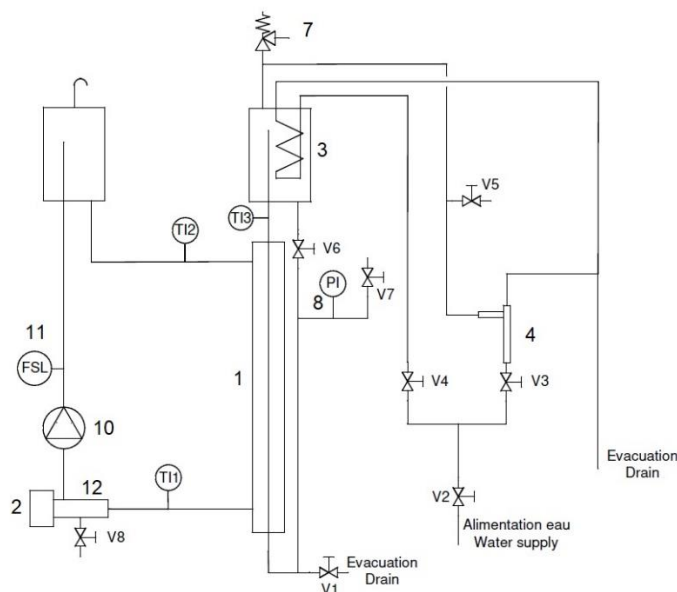
The PBE 010 trainer allows the study and visualization of the evaporation process in different forms of flow. For this purpose, an evaporating liquid, water, is heated inside a tubular glass evaporator. The pressure can be varied through the cooling circuit. A water jet pump evacuates the evaporation circuit.

The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises.

The manufacture of this equipment complies with the European standard for machinery manufacturing.

Illustrations



Technical details

1. Concentric tube exchanger in borosilicate glass
2. Heating resistor 2000W
3. Fluid tank with water condenser
4. Water jet pump
5. Control valve for the condenser (V4)
6. Vacuum control valve (V5)
7. Safety valve
8. Pressure gauge -1/1,5 bars
9. Water flow valve (studied fluid) (V6)
10. Hot water pump
11. Flow switch (protecting the resistance)
12. Hot water tank

Services required

- Electrical supply : 230 Vac – 50 Hz – 20 A
- Water supply : 15 L/min – 2 bars
- Water drain : on the floor
- Dimensions: (LxWxH mm): 1100 x 795 x 1885
- weight (Kg): 90

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

Documentation

- User's manual
- Technical documentation of the components
- Lab exercises
- Wiring diagram
- Fluidic diagram
- Certificate of conformity CE