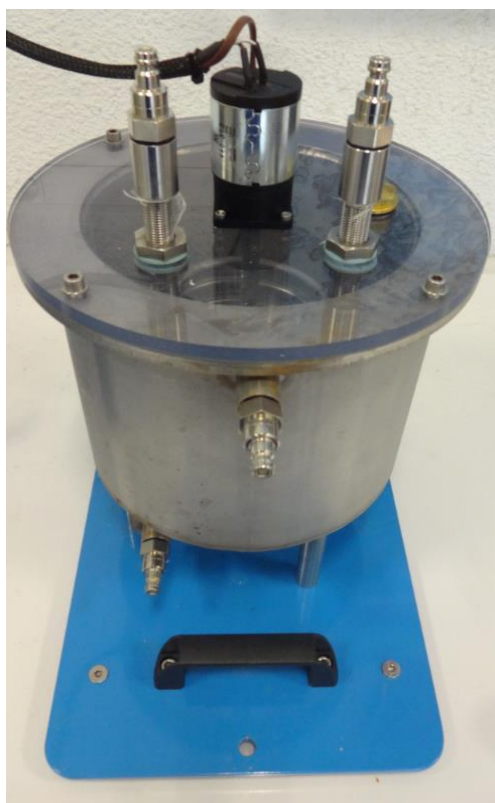


JACKETED VESSEL WITH STIRRER AND COIL



Experimental capabilities

In conjunction with BET 011 supply unit:

- **function and behaviour during operation of a jacketed heat exchanger**
- **plotting time curves**
- **heating mode with jacket**
- **heating mode with coiled tube**
- **influence of a stirring machine**
- **comparison with other heat exchanger types**

Operating principle

The BET 015 is part of a series of units enabling experiments to be performed on different heat exchanger types. In conjunction with the BET 011 supply unit, which has a hot and cold-water circuit and all of the necessary connections, the experimental unit is ideally suited for investigating the functioning and behaviour of a jacketed heat exchanger in operation.

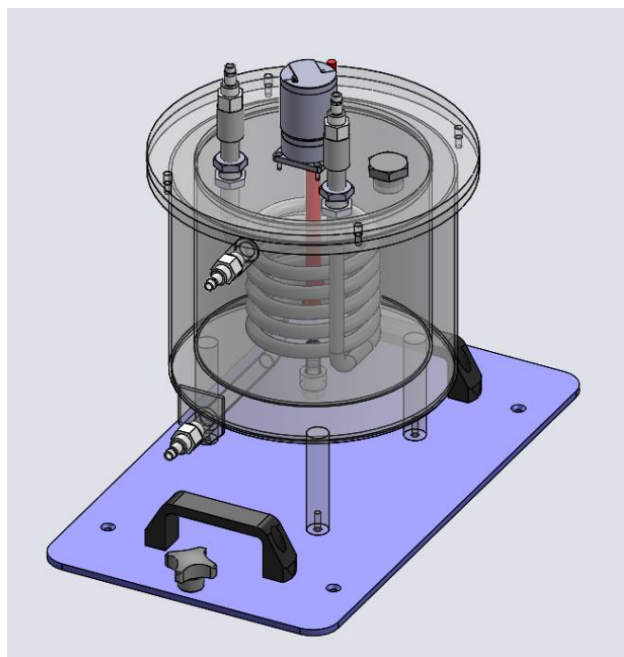
The BET 015 is connected to the BET 011 using quick-release couplings. The jacketed heat exchanger consists of a tank surrounded by a jacket. The tank is fitted with a coiled tube. In heating mode with jacket the hot water flows through the jacket and transfers a part of the thermal energy to the cold water in the tank. In heating mode with coiled tube the hot water flows through the coil and heats the cold water in the tank. A stirring machine can be used in all modes. Valves on the supply unit are used to adjust the flow rate of hot water. The temperature sensors for measuring the inlet and outlet temperature are located at the supply connections on the BET 011. An additional temperature sensor measures the temperature in the tank.

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

The equipment is set up on a steel coated frame. The frame is also equipped with adjustable feet with rubber to avoid vibrations. This gives it great strength and a flexibility of integration into your laboratory.

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

Illustrations



Technical details

1. **Jacketed heat exchanger**
 - Nominal value: 3 L
2. **Stirrer**
 - Rotation speed: 0 to 260 min⁻¹
3. **Envelope exchanger**
 - Stainless steel
 - Heat transfer area: 800 cm²
4. **Coil exchanger**
 - Stainless steel
 - Heat transfer area: 500 cm²

Cold water supply by BET 011

Hot water supply by BET 011

Temperature measurement with the BET 011

- 4 probes: inputs and outputs
- 1 additional probe: diving into the tank
- Type T thermocouple
- Entrance and exit of each circuit of the exchanger

Services required

- Cold water supply: BET 011
- Hot water supply: BET 011
- Dimensions: (LxWxH mm): 500 x 250 x 400
- weight (Kg): 10

Documentation

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

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