

ELECTRICAL BOILER



Experimental capabilities

- Identification of the components of an electrical boiler
- Commissioning and adjustments
- Measurement of the electrical consumption, temperatures and water flow
- Energy balance and efficiency of the boiler
- This unit may be used with additional unit (fan heater, heaters...) and control unit (three way valve..)

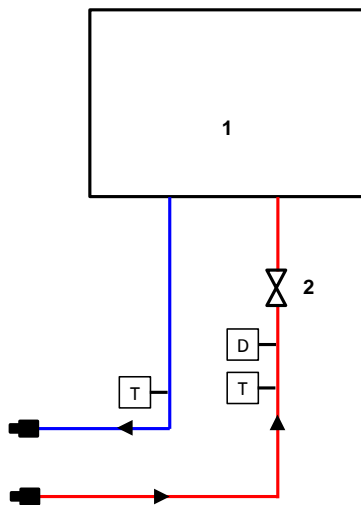
Operating principle

This unit has been designed to study an electrical boiler. It includes all the instruments needed to study the heating production and the electrical consumption. This unit is really useful and can produce hot water without fuel supply or smoke exhaust. 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.

This equipment can be used alone or with other compatible equipment from our range (see last section of this document).

Illustrations



Technical details

1. Boiler:
 - Quantity : 1
 - Puissance : 6Kw
 - expansion vessel
 - water pump with adjustable speed
 - safety valve
 - pressure gauge
 - temperature switch (safety)
2. Manual valve to adjust the water flow
 - balancing valve
3. Instrumentation
 - water flow meter 100-1000L/h (D)
 - temperature gauge with needle 0/120°C inlet (T)
 - temperature gauge with needle 0/120°C outlet (T)
4. Electrical box
 - GFCI circuit breaker 30mA
 - emergency stop button
 - power meter
5. Frame
 - this unit is setup on a frame made of screwed aluminium profiles with four casters wheels with brake.

Services required

- Electrical supply : 400 Vac – 50 Hz – 20 A
- Electrical network : 3 phase(s) + Neutral + Earth.
- Water supply : filling
- Dimensions: (LxWxH mm): 1000 x 800 x 1700
- weight (Kg): 70

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
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Wiring diagram
- Hydraulic diagram
- Certificate of conformity CE

Recommended equipment

- Unit heater dissipation bench
- Bench of radiators
- Heated floor
- Bench of hydraulic balancing (radiators)
- Bench of fan coil
- Ref : AER033
- Ref : TCF120
- Ref : TCF121
- Ref : TCF122
- Ref : TCF124