

WOOD PELLET BOILER STOVE



Experimental capabilities

- Identification of the components of a wood pellet boiler stove
- Commissioning and use
- Pellet loading operations
- Maintenance and cleaning of the stove
- Heating water production
- Measurement of the power produced (energy meters)

Operating principle

The bench allows the study of a wood pellet boiler stove. It consists of a pellet stove with hydraulic connection for central heating and all the ancillary components necessary for production (filling, circulation, expansion, valve, etc.). The bench is intended to be connected to a storage tank, a dissipation system or an internal network of the training center. The students will be able to identify the components of the system, prepare it (filling, loading wood, etc.) and then put it into service (ignition, etc.). During operation, they will be able to read the operating parameters (temperature, flow, power, etc.) and will also be able to check combustion (requires an optional combustion analyzer). After a period of operation, they will be able to shut down the system and do maintenance.

The rugged design of this equipment makes it perfectly suited for use in a school setting. Its anodized aluminum structure on wheels gives it a very high robustness as well as great flexibility of integration into your premises. The manufacture of this equipment complies with the European Machinery Directive. This equipment can be used alone or in combination with other compatible equipment in our range (see last part of this document).

Illustrations

The bench is installed on an aluminum profile structure equipped with four braked-directional castors. It includes an electrical box with standby power disconnect, 30mA RCD and emergency stop button.

The bench is composed of the following elements:

1. A hydraulic pellet stove
 - power 15KW
 - pellet storage: 25Kg
 - 5 power levels
 - daily, weekly or weekend programming
 - a digital programming screen
 - safety and regulation elements
2. A water supply line including:
 - 2 shut-off valves
 - A volumetric meter
 - A filter with bleed valve
 - A disconnecter

Technical details

3. A heating network including:
 - 0-120°C dial thermometers
 - a pressure gauge 0-4 bar
 - two digital energy meters
 - two balancing valves
 - an anti-condensation valve (termovar)
 - an automatic air vent
 - two quick couplings for connection to dissipations
4. The supply of the bench includes the following accessories:
 - 5 bags of 15kg pellets
 - a 3m hose for connection to the water network
 - a 3m hose for connection to the drainage network
 - fumistery fittings in diameter 80mm black (one 90° elbow, 2 45° elbows, 3 lengths of 1m)
 - the cleaning brushes supplied as standard with the stove

Services required

- Electrical supply : 230 Vac – 50 Hz – 6 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Water supply : filling
- Water drain : on the floor
- Smoke exhaust: diameter 80 mm
- Fuel supply : wood pellet
- Dimensions: (LxWxH mm): 1150 x 825 x 1550
- weight (Kg): 250

Documentation

- User's manual
- Technical documentation of the components
- Lab exercises
- Wiring diagram
- Hydraulic diagram
- 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

Options

Combustion analyzer

Ref : ANA100

Recommended equipment

Aerothermal dissipation bench

Ref : AER033

Radiator bench

Ref : TCF120

Underfloor heating

Ref : TCF121

Hydraulic balancing bench (radiators)

Ref : TCF122

Fan coil bench

Ref : TCF124

200L buffer tank

Ref : BAL200