

WOOD PELLET BOILER



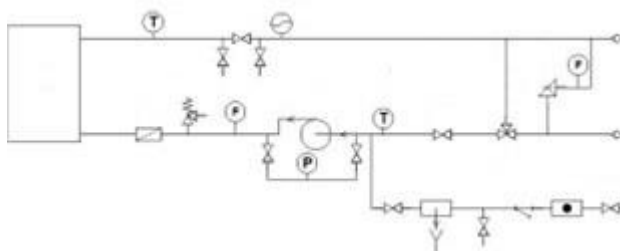
Experimental capabilities

- Technological study of a wood pellet boiler
- Study of heat production
- Commissioning and settings of the wood boiler
- Measurement of the operating characteristics of the variables, such as flow rate, pressure and temperature
- Calculation of the equilibrium, of the efficiency and the capabilities
- Preventive and corrective maintenance of the unit
- Storage of the pellets made from wood chips.

Operating principle

The GRA010 trainer allows the study of a pellet boiler heating system. It consists of a boiler with a pellet silo. The set is provided with the necessary connections for connection and commissioning. The students will have to commission the system (water filling, purging, fuel supply, etc.) and then check the operation by taking measurement points (temperature, flow, pressure, etc.). The instrumentation is integrated for easy handling. The rugged design of this equipment makes it perfectly suited for use in a school setting. Its anodized aluminum structure on wheels gives it great 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).

TECHNICAL DESCRIPTION



- The bench includes the following components:
1. A wood pellet boiler with integrated pellet silo. The walls of the silo are transparent to see the mechanism. The boiler is of the "volcano" type
Power: 20KW
 2. A 3 bar heating safety valve with pressure gauge
 3. A 160-1600L/h flow meter on the boiler outlet
 4. A 0/120°C dial thermometer on the boiler inlet and return
 5. A 25-60 circulator with gauge kit
 6. A differential pressure valve
 7. A TA-type flow control valve
 8. A 25L expansion tank with isolation valve
 9. A sludge separation pot
 10. Two self-sealing connectors for hose connection to the balloon
 11. A termovar return temperature control valve
 12. a water supply line with shut-off valve, meter, filter and disconnector
 13. The bench has an electrical box including a ground fault circuit breaker, an electrical energy meter, an emergency stop button and two electrical plugs
 14. Structure :
The system is installed on an anodized aluminum profile chassis equipped with four directional brake castors

Services required

Documentation

- Electrical supply : 230 Vac – 50 Hz – 16 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Water supply : filling 2 bars
- Smoke exhaust: diameter 139 mm
- Dimensions: (LxWxH mm): 2350 x 900 x 1700
- weight (Kg): 400

- 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

Visualization of the elements



Mechanical system for the pellet feeding



Flame in the furnace-volcano type

Options

- Combustion Analyzer
- Ref : ANA100

Recommended additional equipment

- 200L buffer tank
- Ref : BAL200
- Aerothermal dissipation bench
- Ref : AER033

Compatible add-on equipment

- Radiator bench
- Ref : TCF120
- Underfloor heating
- Ref : TCF121
- Hydraulic balancing bench (radiators)
- Ref : TCF122
- TA Balance Case
- Ref : TCF123
- Convectector fan bench
- Ref : TCF124