TCF102

WALL MOUNTED BOILER UNIT

Experimental capabilities

- **Identification of the components of a wall-mounted boiler installation**
- **Commissioning of a gas boiler**
- **Setting a wall-mounted boiler (combustion, regulation, requires the optional combustion analyzer)**
- **Maintenance of a wall-mounted boiler**
- **Possibility of installation works (boiler replacement)**
- **Thermal study of a wall-mounted boiler installation (production of heating and production DHW)**
- **Study of the boiler efficiency**

DIDATEC– Zone d'activité du parc – 42490 FRAISSES- FRANCE
Tél. +33(0)4.77.10.10.10 – Fax+33(0)4.77.61.56.49 – www.didatec-technologie.com
email : service_commercial@didatec-technologie.com

version : FT-TCF102-STD-C

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Operating principle

The TCF102 bench allows the study of a gas wall-mounted boiler. The installation comprises a starting of heating and DHW production that is used on a sink located next to the boiler.
The hydraulic circuit includes all the components of a conventional domestic heating circuit.
Students will begin by identifying the components of the circuit and draw the hydraulic diagram. Then they will proceed with the commissioning and system setting and will end up by analyzing the operation by recording the parameters (temperature, flow rate, pressure).

The bench is available in 4 different versions according to the type of boiler and the associated production (DHW and heating) .The dissipation can be achieved by various optional benches.

The robust design of this equipment makes it perfectly suited for use in schools.
Its anodized aluminum frame with legs gives it great strength as well as great flexibility of integration into your premises. The manufacturing of this equipment meets the European machine directive
This equipment can be used alone or with other compatible equipments in our range (see last section of this document).

Illustrations

1. Wall-mounted boiler:
Version 1: Power around 24KW , DHW micro accumulated, 1 direct heating start
Version 2: Power around 24KW , DHW micro accumulated, 1 direct heating start, condensing boiler
Version 3: Power around 24KW , DHW micro accumulated, 1 direct heating start 1 controlled heating start, condensing boiler
Version 4: Power around 24 KW, DHW by tank, 1 direct heating start, 1 controlled heating start, condensing boiler

Technical specifications

2. Gas supply line composed of standard elements:
- Pressure manometer 0-60mbars
- Volumetric gas meter
- Stop valves before and after meter

3. Use of Domestic Hot Water (DHW) composed of:
- A stainless steel sink with siphon
- A mixing valve mixer
- Instrumentation: flowmeter, thermometer and pressure manometer for each line (hot and cold water)

4. Starting heating circuit. The bench can have two types of start:
- Direct circuit comprising: a flowmeter, two thermometers, a balancing valve on the return, a differential valve, two quick connectors.
- Regulated circuit comprising: a three-way valve, a circulator, a flowmeter, two thermometers, a balancing valve on the return, a differential valve, two quick connectors.
Version 1: 1 direct heating start
Version 2: 1 direct heating start
Version 3: 1 direct heating start, 1 regulated heating start
Version 4: 1 direct heating start, 1 controlled heating start

5. Power electric box including a main switch, circuit breakers, a white indicator light for voltage presence and commissioning button.

6. Water supply line comprising two stop valves, a meter, a filter, an anti-pollution check valve.

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Services required

- Power supply: 230 Vac – 50 Hz – 6 A
- Power supply type: 1 phase(s) + Neutral + Earth.
- Water supply: 10 L/min – 2 bars
- Water disposal: at ground level
- Evacuation of fumes: suction cup diameter 60/100mm
- Supply in fuel: Natural gas (butane possible on request)
- Dimensions: (LxWxH mm): 2000 x 800 x 1950
- weight (Kg): 170

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
- Certificate of conformity CE

Options

• Portable combustion analyzer	• Ref : KIG100

Additional compatible equipments

• Floor heating bench	• Ref : TCF121
• Radiators bench	• Ref : TCF122
• Dissipation unit heater	• Ref : AER033

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