

Thermal installation

Production–Utilization–Control–Regulation



Noncontractual photograph

- The thermal installation bench is composed of a traditional boiler on the ground fuel (possibility of gas or fuel/gas).
- The boiler feeds two circuits on two levels of temperature as well as an heating ECS.
- Bench TCF 201 is connected to benches of transmitters in option (heating floor, radiators, unit heater) using fast hydraulic clutches.
- Part of the production of heat is evacuated outside by a unit heater via two exchangers with plates.
- The produced ECS feeds a sink fixed on the bench.
- The bench is delivered with its teaching handbook and its didactic interest is directed towards the formations of energy genius.

Teaching applications

- Handling practice real elements of heating
 - Choice of the equipment
 - Installation
 - Research and identification of the components
 - Startup
 - Adjustment
 - Preventive and curative Maintenance
 - Safety Member
 - Water Supply – water treatment of boilers
 - Device of expansion of water...

- Use of the instrumentation
 - Measurement of the flows, pressures, temperatures
 - Consumption
 - Measurement of the emissions in chimney (option)

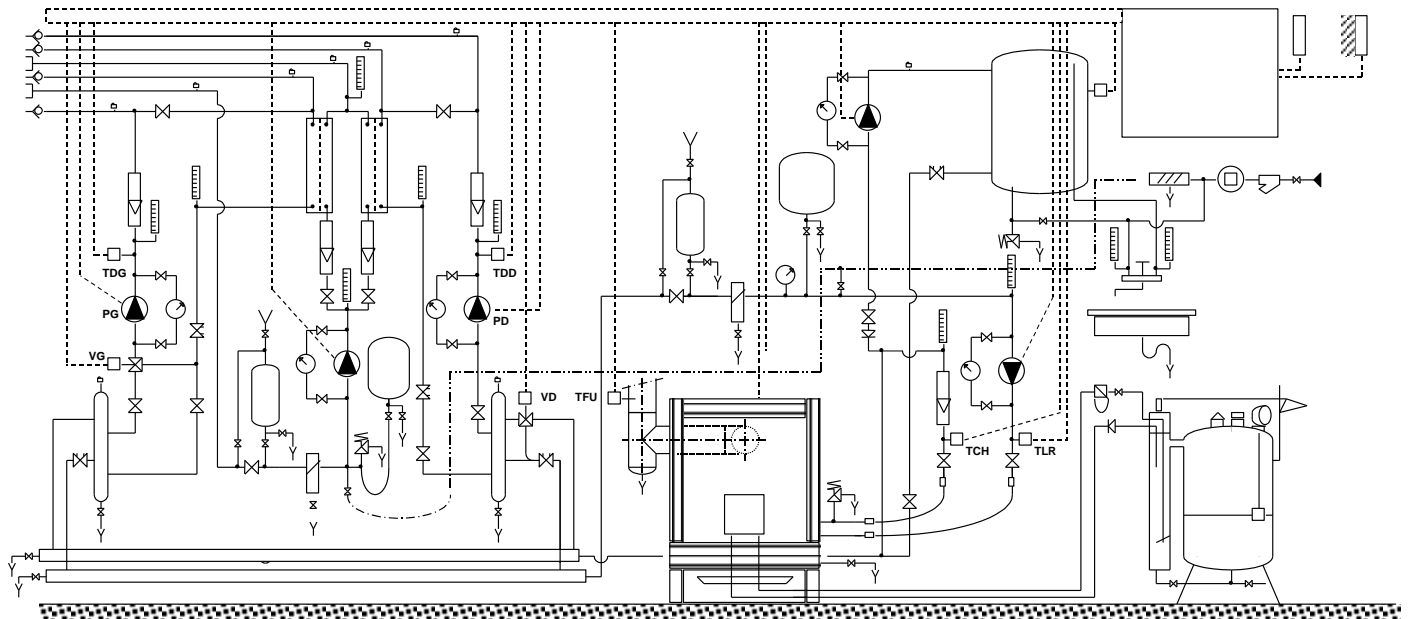
- Concepts approached:
 - Thermal Transfers in an exchanger to plates
 - Thermal Power
 - Power heating ECS
 - Assessments
 - Outputs
 - Regulation on valve three ways (mixture and division)...

Description

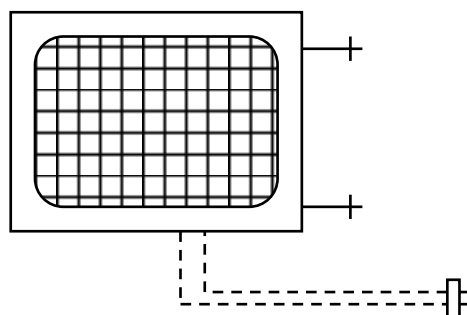
- 1 BOILER ON THE GROUND FUEL
- 2 TANK FUEL
- 3 BALLOON ECS
- 4 ELECTRICAL EQUIPMENT BOX
- 6 CIRCUIT LOW TEMP: BOTTLE OF DECOUPLING WITH MIXTURE
- 7 CIRCUIT HIGH TEMP: BOTTLE OF DECOUPLING WITHOUT MIXTURE
- 8 EXCHANGER WITH PLATES (DISSIPATION) EXTERNAL UNIT HEATER
- 9 PROCESSING CIRCUIT OF WATER
- 10 PRIMARY EDUCATION CIRCUIT (PUMP OF LOAD)
- 11 DISCONNECTING – FILTER – METER
- 15 EXTERNAL UNIT HEATER
- 16 FLEXIBLE DEVICES OF CONNECTIONS FAST TEAMS OF COUPLERS (6)

General diagram

BENCH OF HOT WATER PRODUCTION AND MEDICAL HEAT AND REGULATION



UNIT HEATER OF DISSPATION OUTSIDE



Options

The TCF 201 can be equipped with the following instrumentation:

- Analyzer of combustion for the measurement of the rejections in chimney (with or without measurements of the NO1, NO2)
- Thermometer of contact
- Meter (S) of calories
- Balancing with material MT other marks on request.

Dimensions

Length 510 cm
Width 200 cm
Height 250 cm
Weight 450 kg (without water)

Utilities

WATER: network 3 bars
ELECTRICITY: 230 V Mono
SMOKE: 1 exit chimney Ø
139 mm

Evacuation Used Water to envisage

The utilities must be with a maximum of 2,5 m of the installation