

CONTROL UNIT WITH 3 WAYS VALVE



Experimental capabilities

- Identification of components of a heating control loop by three-way valve
- Commissioning of heating control system by three-way valve
- Parameter setting of the controller (heating curve ...)
- Measurement of flow rates, temperatures and pressures

THE BENCH NEEDS A CONNECTION ON A UNIT OF PRODUCTION AND A DISSIPATION UNIT.

Operating principle

The VVP100 bench allows the study of a control system by three-way valve. It is composed of a control valve, a water pump, a heating controller and a temperature sensor. Students will initially connect the system on a production module (boiler ...) and a dissipation module (heating floor, radiators, unit heater ...). They will then impoundment and commissioning. They will have to set the controller in order to obtain an operation in keeping with the dissipation units connected.

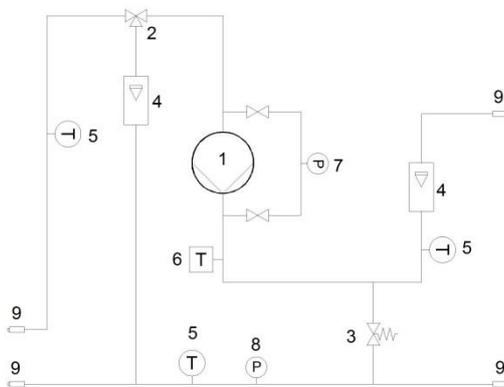
They can also measure the temperatures, flow rates and pressures in order to qualify hydraulically and thermally the system.

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

The bench is installed on an aluminum profile frame equipped with four swivel castors with brake.

It includes an electrical box with main power switch and 30mA differential circuit breaker.

1. Water circulating pump type 80-25
2. Control 3-way valve with electric actuator DN15
3. Differential valve
4. Float flow meter 100-1000L/h
5. Dial thermometer 0/120°C
6. temperature sensor for regulation
7. Manometric kit for measuring the pump TDH with manometer 0-4 bars
8. Pressure manometer of the installation 0-4bars
9. Quick couplings for connection towards the dissipation or production units
10. Digital controller with access to control parameters (heating curve ...), to the hourly parameters (program, reduced operation ...) and visualization of the measured parameters (temperatures). The outside temperature is simulated by a potentiometer.

Services required

- Electrical supply : 230Vac – 50 Hz – 6A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 800 x 500 x 1450
- weight (Kg): 80

Documentation

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

Recommended equipment

- Wall mounted boilers unit
- Wall mounted boilers unit
- Combustion test unit
- Wood pellet boiler
- Heater 33kw
- Radiators unit
- Heating floor
- Hydraulic balancing unit
- Fan coil unit
- Ref : TCF101
- Ref : TCF102
- Ref : TBF059
- Ref : GRA010
- Ref : AER033
- Ref : TCF120
- Ref : TCF121
- Ref : TCF122
- Ref : TCF124