Product Name : Water Temperature Control Bench

Product Code : EEH0003



Description :

Water Temperature Control Bench

Technical Specification :

Water Temperature Control Bench Manufacturer

Description

The operative part permits to heat and to cool a water tank.

The electrical cabinet receives the control plate wired by the student. This system is water self contained and only need a main power supply 230V. The bench allows to study, then to wire by the student, a complete temperature control system. Following the version of the electrical plate it allow to study. Instrumentation (transmitter, thermostat, controller. Power modulation (static relay, wave train, dimmer. Electric and thermal measurement. The bench is conformed to the last securities standards.

Teaching objectives

Setting and functioning checking.

Wiring of an heating system.

Measurement of electric and physical sizes: current, voltage, temperature.

Control of characteristic sizes of the installation: voltage, current.

This system can be used for electrical authorization.

Setting of the loop control parameters.

After wiring the electrical plate, the student interconnect the electrical plate to the system, then configure and check the good working of the whole control system.

Technical specifications

Operative Part :

The bench is made out of an aluminium frame on castors including:

A 25 litres tank.

A immersed electrical heater.

A temperature sensor.

A " low level" sensor.

A security thermostat.

A stainless steel centrifugal circulation pump.

An aero-refrigerant.

The cooling circuit is made out of a circulation pump and an aero-refrigerant allowing to increase the exchange of calories between the water and the ambient air. It permits to be water self contained. Its purpose is double.

To disturb the temperature control loop.

To cool the water tank in order to restart a new experiment (without having to wait for the natural water cooling).

Option : Data acquisition system

The data acquisition system is proposed in option. It is made out of a data acquisition card to place into a PC computer and a software functioning under Windows ®. This software allow to visualize the sizes in real time and to record them. The card is linked to the bench by the help of a plug on the front side of the electrical cabinet door.

Dimensions

1150 x 670 x 1470 mm

Essential requirements

Electrical power supply: single phase 230 V+T 16A

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