

RCD200



FLOW CONTROL STUDY UNIT



Experimental capabilities

- Study of a flow regulating loop
- Identification of components: Sensors, Regulator, Actuator, disruptive element
- Setting the regulator via interface
- PID control parameters
- Visualization of different signals by software
- Characteristics curves

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As part of the continuous improvement of our products, this technical specification may be modified without previous notifying

Operating principle

The RCD 200 bench allows the study of the regulation of water flow rate. A pump ensures the water supply in a transparent test reservoir. A float flowmeter and another with magnetic transmission measuring the water flow rate crossed. A digital PID controller receives flow rate information and must adjust the opening of the regulating valve to achieve the setpoint.

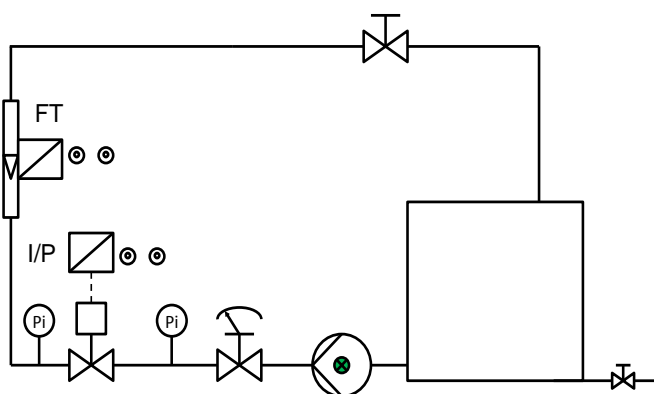
The unit comes complete with instrumentation, technical and educational materials in french as well as all the accessories required for proper operation (Included supervision software)

The robust design of this equipment makes it perfectly suited for school use.

Its anodized aluminum structure on wheels makes it very robust as well as a great flexibility of integration into your premises.

The manufacture of this equipment meets the European machine directive.

Illustrations



Technical details

Polyethylene tank with drainage

Centrifugal feed pump

Centrifugal pump with stainless steel body
Flow rate regulating valve at the outlet

Flowmeter with magnetic transmission

4-20 mA analog output

Regulating valve

Equipped with pneumatic actuator

PID microprocessor regulator

Accuracy class: 0.2
Scope of configurable range
4-20 mA analog output
2 programmable relay outputs

Disruptive elements

Ball valve with graduated scale

Monitoring software

Control and monitoring of the process
of regulation
Representation of relevant data on PC
Operation and setting of equipment regulator
Recording and storage of developments in the
time

Synoptic taking the bench diagram

Sensor and actuator signals are returned
on the bushings of the diagram
Two power supplies 24 VAC for two LEDs
alarm
A status indicator of the pump, bushings
of inputs and outputs and of the indicator

Services required

- Electricity: 230 VAC single - 50 Hz
- Water supply: 75 L
- Dimensions: (LxWxH mm): 1000 x 800 x 1600
- weight (Kg): 75

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
- Lab exercises
- Certificate of conformity CE

RCD200

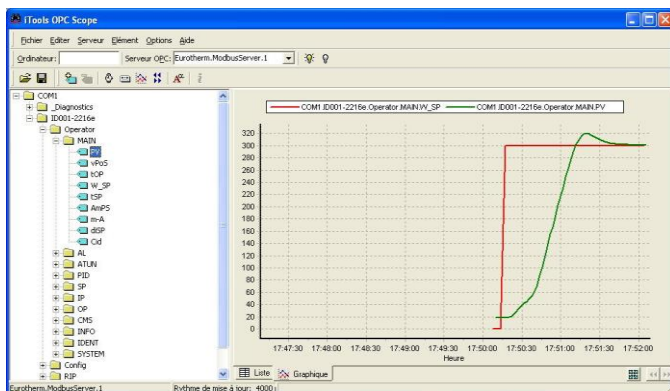
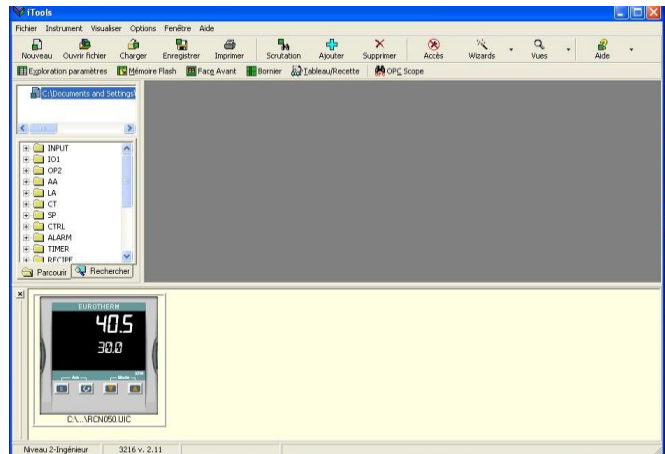


Supervision : Parameters, Plot curves

The bench is also equipped as standard with a supervision and setting software. The connection to the PC is made by a standard USB port. The software is divided into two parts:

SETTING :

This section provides access to the regulator parameters directly via a data browser similar to that of Windows. The front panel of regulator is reproduced on the PC screen and the operator can actuate the buttons and controls as if he was on the pilot.



Plotting the curves

This section allows you to draw curves with the signals of the regulator. For example on this image below we visualize the setpoint and the real-time measurement, but it is possible to add other parameters such as the output signal ... The data stored during the plot can then be saved in a file in Excel format.