

**Product Name :**  
Training System Flow Control HSI

**Product Code :**  
AR184



**Description :**

Training System Flow Control HSI

**Technical Specification :**

Training System: Flow Control, HIS

The device offers basic experiments on a flow controlled system. A pipe section, through which media flows, serves as the controlled system. The flow rate in the pipe represents the controlled variable, which is measured by a measuring element, in this case a turbine wheel flow rate sensor. The output signal from the sensor is fed to the software controller. The output signal from the controller influences the actuator, in this case the electromagnetic proportional valve. The valve position changes the flow rate in the pipe. The pump speed “ and therefore the delivery rate “ can be controlled via the software in order to study the effect of disturbance variables. The control response is displayed in the form of a time dependency. There is a rotameter located inside the pipe, allowing the flow rate to be observed at any time.

Experimental unit for control engineering experiments

Flow control system with variable-area flow meter

Electromagnetic proportional valve as actuator

Turbine wheel flow sensor

Generation of disturbance variables by altering pump speed

Software-based controlled system simulation

Process schematic on front panel

Networkable software

Software with control functions and data acquisition via USB under Windows 7, 8.1, 10 including PC1 Computer-System with 21" TFT-Monitor Win 10 engl.

Technical Data:

Storage tank

Capacity: 3000mL

Pump

Power consumption: 18W

Flow rate: 8L/min

Head: 6m

Rotameter: 20...250L/h

Proportional valve: Kvs: 0,7m<sup>3</sup>/h

Flow sensor: 0,5...3L/min

Software controller configurable as P, PI, PID and switching controller

Software

Process schematic with controller type selection (manual, continuous controller, two- or three-point controller, programmer)

Time functions

Simulation function

Disturbance variable input

230V, 50Hz, 1 phase

## Naugralabequipments

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