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**Product Name :**  
Computerized Flow Control Trainer

**Product Code :**  
SCHOOL-MES880002



**Description :**

Computerized Flow Control Trainer

**Technical Specification :**

The Trainer provides a comprehensive experimental introduction to the fundamentals of control engineering using an example of flow control. A pump delivers water from a storage tank through a piping system. The flow rate is measured by an electromagnetic sensor, which permits further processing of the measured value by outputting a standardized current signal. A Rota meter indicates the flow rate. The controller used is a state-of-the-art digital industrial controller. The actuator in the control loop is a control valve with electric motor operation. A ball valve in the outlet line enables defined disturbance variables to be generated. The controlled variable X and the manipulating variable Y are plotted directly on an integrated 2-channel line recorder. Alternatively, the variables can be tapped as analogue signals at lab jacks on the switch cabinet. This enables external recording equipment, such as an oscilloscope or a flatbed plotter, to be connected. FEATURES: Construction of the system with components commonly used in industry Digital controller with freely selectable parameters: P, I, D and all combinations Experimental introduction to control engineering using an example of flow control Fundamentals of control engineering Real industrial control engineering components: controllers, transducers, actuators SPECIFICATION: Storage tank: 30L Centrifugal pump : Power consumption: 250W Flow rate: 150L/min Head: 7m Speed: 2800min<sup>-1</sup> Rota meter: 0...1960L/h Electromagnetic flow rate sensor: 0...6000L/h Control valve with electric motor : Kvs: 5,7m<sup>3</sup>/h Stroke: 5mm Characteristic curve equal-percentage Valve-opening position sensor: 0...1000? Line recorder : 2x 4...20mA Feed rate: 0...7200mm/h, stepped Controller : Process variables X, Y as analogue signals: 4...20mA Power required for operation : 230V, 50Hz, 1 phase 230V, 60Hz, 1 phase



## School Educational Instruments

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