

**Product Name :**  
Computerized Flow Control Trainer**Product Code :**  
MLE0002 LAB ENGINEERING**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-1  
Rota meter: 0...1960L/h  
Electromagnetic flow rate sensor: 0...6000L/h  
Control valve with electric motor :  
Kvs: 5,7m3/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

 **LAB ENGINEERING**

**Elab Engineering Equipments Manufacturers**