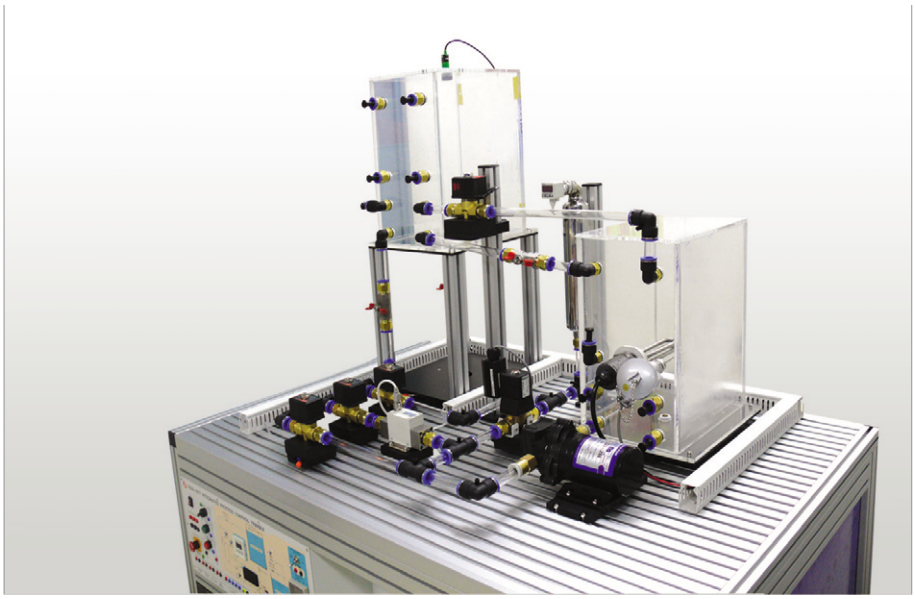
New

FLUID PROCESS CONTROL TRAINER

ED-FPC

- Control of pressure, flow, level and temperature which are essential for process control
- Capable of stand-alone control and mixed combination in various types
- Real-time measurement and monitoring using data collection and signal conditioning
- Measurement of flow's status and gain of the controlled data
- Built-in temperature compensation system and correction system(Feedback System)
- Analog element control using the pump's speed control proportional control valve
- Built-in PID control system
- Standard Controller: PC based control(WAGO)

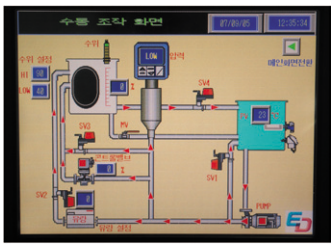
※ User can select other types of controller for customization : PLC or LabVIEW control



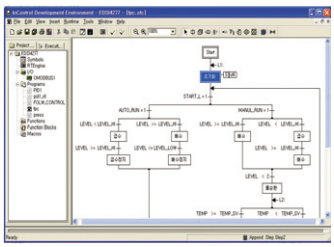
▲Automation Control Laboratory, Korea Polytec College IV (Sooncheon Campus)

> EXPERIMENTS

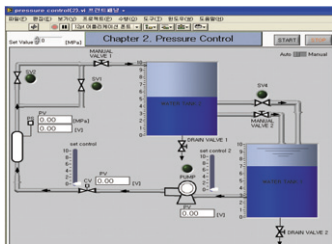
- Sensor output characteristics by the change of physical volume
- Basic control programming essential for instrumentation control
- Level control using the Analog Ultrasonic Sensor
- Measurement of a storage tank's pressure using the Analog Pressure Sensor
- Measurement of the fluid's flow inside a pipe using the Analog Flow Sensor
- Measurement of the water tank's temperature using the Analog Temperature Sensor
- Various control techniques using the PID Temperature Regulator



Touch Panel Control Screen



PC-based Control Screen



LabVIEW Control Screen

FLUID PROCESS CONTROL TRAINER

ED-FPC

> SPECIFICATIONS

- **Controller**
  - » Standard : PC based Control
  - » Customization : PLC(Programmable Logic Controller) or LabVIEW
- **Container(2ea)**
  - » Acryl 1ot
  - » Dimension : 200(W) x 360(H) x 265(D)mm
- **Profile Plate(1ea)**
- **Piping Hose**
  - » Pipe : Diameter 16
  - » Materials : PVC
- **2/2-way Solenoid Valve(1ea)**
  - » Direct Type
  - » Applied Voltage : DC 12~24V
  - » Diameter : 1/2″ (inside tube)
- **2/2-way Solenoid Valve(3ea)**
  - » Pilot Type
  - » Voltage : DC 12~24V
  - » Diameter : 1/2″ (inside tube)
- **Motor Pump(1ea) Diaphragm type**
  - » Voltage : 12V DC
  - » Max. Torque : 16l/min
- **Proportional Control Valve(1ea)**
  - » Applied Voltage : DC 24V
  - » Input : DC 0~10V
- **Heating Unit(1ea) Voltage**
  - » Voltage : AC 220V
  - » Operates by SSR Output
- **Pressure Tank(1ea)**
  - » Working Pressure : 10kg/cm²
  - » Capacity : 1*l*
  - » Connection Bridge : PT $\frac{1}{2}$
- **Pressure Switch(1ea)**
  - » Displays a pressure value and enters the analog input
  - » Applied Voltage : DC12~24V
  - » Output Voltage : 1~5V
- **Flow Switch(1ea)**
  - » Displays a flow value and enters the analog input
  - » Applied Voltage : DC12~24V
  - » Flow Range : 2~16*l*/min
- **Flow Sensor(1ea)**
  - » Voltage : DC12~24V
  - » Working Pressure : 0~10Bar
  - » Flow Range : 2~16*l*/min
  - » Output Voltage : 1~5V
- **Analog Ultrasonic Sensor(1ea)**
  - » Level sensor for measuring the level
  - » Voltage : DC12~24V
  - » Sensing Range : 7~20 ±1cm
  - » Output Voltage : 1~5V
- **Temperature Sensor(1ea)**
  - » Pt100Ω
  - » Input Range : -50~400˚C
  - » Output : 4~20mA(2wire)
- **Temperature Controller(1ea)**
  - » PID Controller for controlling the Temperature Sensor
- **Manual Valve(4ea)**
- **Piping Connector(6ea)**
  - » For connecting pipes
  - » T type : 16ø, L type : 16ø
- **Fittings(10ea)**
  - » For connecting pipes
  - » L type : PT1/2, - type : PT1/2
- **Tap(16ea)**
  - » For tapping the container
- **Clamp(4ea)**
  - » For mounting valves and other parts
- **Valve Bracket(5ea)**
  - » Bracket for fixing the valve
- **Experimental Table(1ea)**
  - » Four processes(Pressure, Level, Flow and Temperature) as integrated are mounted on the Experimental Plate
  - » Dimension : 1500(W) x 700(H) x 869(D)mm
  - » Mobile caster mounted
- **Relay(6ea)**
  - » For operating the Valve, Pump and Heater
  - » 2a-2b
- **Cable Duct(1ea)**
  - » For wiring practice

ACCESSORIES

- Fitting and Pipes : 1set
- Communication Cable : 1set
- AC Power Cord : 1ea
- User Manual : 1ea

OPTIONS

- Controller(Programmable Logic Controller or LabVIEW)
- Touch Panel for PLC Controller
- HMI Software for PLC or PC based Controller