



## Pressure Control (SMT-9206)

The Pressure Control System (Model: SMT-9206) developed by ESOLS Engineering Solutions is a compact, self-contained training and testing module designed to measure and control air pressure in real-time. Engineered for academic laboratories, research institutions, and industrial training centers, this unit offers comprehensive learning and experimentation capabilities on pressure control using state-of-the-art PID control techniques. The system features a built-in reservoir, precision pressure transducer, and interactive manual controls for simulating disturbances, ensuring a hands-on and safe learning experience.

Integrated with advanced Windows-based graphical software, the SMT-9206 enables real-time monitoring, control, and data acquisition through a USB interface. The graphical interface provides users with detailed process visualizations and PID control responses. Designed for ease of use, the module includes LED indicators, manual switches, and clear graphical representations on the front console to help users better understand system dynamics, making it an ideal choice for both education and industrial demonstration purposes.

## TECHNICAL SPECIFICATIONS

### Specifications Data:

- Used for control and measurement of air pressure
- PID control system with data acquisition and monitoring
- Windows-based graphical software interface
- USB connectivity for PC communication
- Self-contained bench-top unit
- Low-pressure operation for safe handling
- Integrated air-based process system
- Front console with graphical process layout
- Built-in manual valve for generating pressure disturbances
- Pressure gauge and precision pressure sensor
- LED indicators for system status
- Three operation switches: Power On, Pump On, Valve Open
- One master power switch
- power supply Compatible with standard 100–250V AC @ 50/60Hz



## Technical Data:

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- **Reservoir Tank Volume:**
  - 0.4 Liters (+10%)
- **Pump/Compressor Type:**
  - Brush motor diaphragm pump (24V)
- **Needle Valves:**
  - Manually adjustable
- **Pressure Transducer Range:**
  - 0 to 2 bar
- **Control Console:**
  - Front-mounted with graphical process display
- **Connections:**
  - 1 × Power Connector
  - 1 × USB Connection
- **Indicators and Switches:**
  - 3 × Status LEDs (Power On, Pump On, Valve Open)
  - 1 × Main Power Switch
- **Power Supply:**
  - 100–250V AC @ 50/60Hz
- **Software Features:**
  - Graphical process control
  - Real-time data acquisition and monitoring
  - PID control interface