

**Product Name :**  
Pressure Process Control Trainer

**Product Code :**  
CE196



#### Description :

Pressure Process Control Trainer

#### Technical Specification :

##### Pressure Process Control Trainer

The Pressure Process Control Training System is a single loop pneumatic control system. It enables the study of the principles of both pressure regulation of a process and the control of flow in a pressurised system. The system comprises a low-pressure air circuit supported on a bench-mounted panel, making it suitable for individual student work or for group demonstration. The trainer requires a compressed air supply at a recommended input pressure of 40 psi (not supplied). An input filter/drier is used to clean the supplied air. Separately regulated branches provide air for the process and for valve control. The process branch comprises a regulator, a variable area flow meter, a pneumatically operated control valve, an orifice block with changeable orifice plates and both differential and point of measure pressure sensors. The process air flow can be discharged to atmosphere via adjustable diffused outlets. An air receiver tank can be switched in and out of the circuit. The valve control branch comprises a regulator and an electrically operated current to pressure input converter. This is used to regulate the pneumatic control valve in the process line. The input converter operates from a 4-20 mA signal. Signal conditioning for the sensors is provided by pressure transmitters. The Differential Pressure Transmitter gives a linear differential pressure sensor output. The system is fully equipped with pressure gauges to indicate the pressures around the system.

##### Curriculum Coverage

Pressure safety, familiarisation & calibration  
I/P converter & pneumatic control valve operation  
Controller familiarisation & calibration  
Automatic control systems

Serial communication  
Pressure sensor  
Transmitter & I/P converter - linearity & hysteresis  
Pneumatic control valve  
Characteristics at different pressure ranges  
System response & air receiver  
Principles of proportioning valve & proportional process control  
Study of P, PI and PID control of pressure  
Calibration of the differential pressure sensor & transmitter  
Flow control in the process rig

**Features:**

Safe, low pressure operation  
Fully gauged for pressure & flow rate  
Differential & Gauge pressure sensors  
Current controlled (4-20 mA) pneumatically operated control valve  
Standard industrial components  
Self-sealing outlets for the manometer  
Safety valves fitted as standard  
Air used as the process fluid  
Comprehensive experiment manual

**Technical data:**

4-20 mA operation  
Dimensions (net): width 900 mm x depth 460 mm x height 720 mm  
Weight: gross 110 kg, net 72 kg

## Naugralabequipments

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