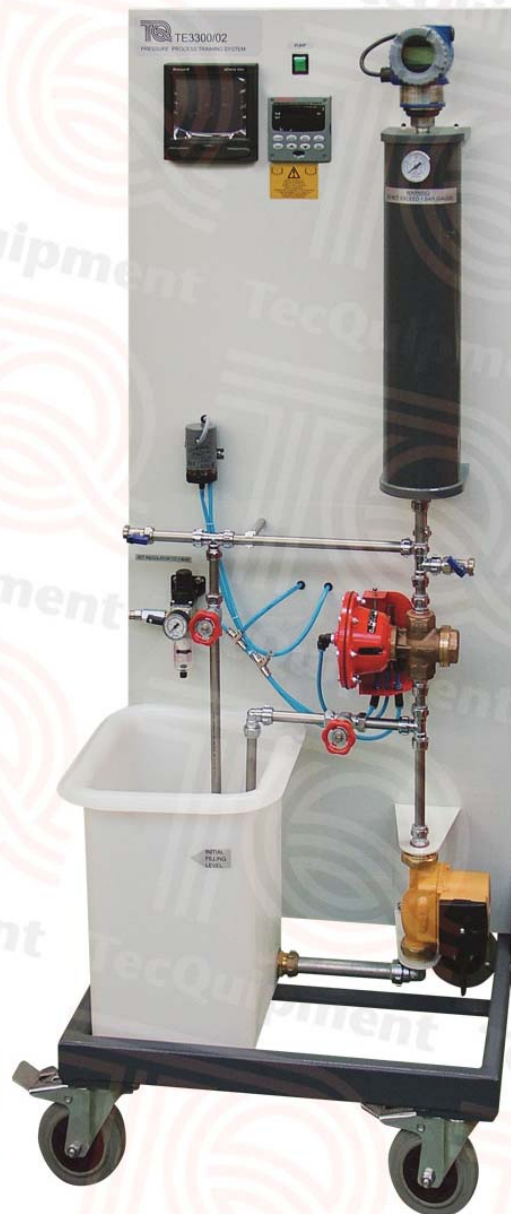




**TE3300/02**

## Pressure Process Training System

*For a wide range of practical experiments in pressure control*



- Shows automatic control of pressure in an accumulator using proportional, proportional plus integral, and proportional, integral plus derivative (PID) control
- Uses industrial-standard parts to make it ideal for industrial, vocational and academic training
- Shows operation, calibration and tuning of controllers, transmitters, converters and valves
- Compact, mobile and fully self-contained
- Connects to the TE3300/03 Flow Process Training System for cascade control
- Connects to the TE3300/06 Computer Control System for distributed control
- Safe, practical and realistic

- TecEquipment Ltd, Bonsall Street, Long Eaton, Nottingham NG10 2AN, UK
- **T** +44 115 972 2611 • **F** +44 115 973 1520 • **E** info@tecequipment.com • **W** www.tecequipment.com
- An ISO 9001 certified company

# TE3300/02

## Pressure Process Training System

### Description

The Pressure Process Training System is a compact and mobile unit for a wide range of experiments in pressure control. It gives students a greater understanding of the stability of simple control systems.

The self-contained unit can do many experiments, but it can also connect to other products in the TE3300 range for extra experiments. For cascade control of flow and pressure, it can link to the optional Flow Process Training System (TE3300/03). For distributed control, it can connect to the optional Computer Control System (TE3300/06).

The main parts of the Pressure Process Training system are:

- Industrial controller with auto-tune feature
- Two-channel chart recorder
- Current-to-pressure (IP) converter
- Gauge pressure transmitter
- Pneumatic control valve
- Pressure accumulator
- Three-speed pump
- Reservoir

To perform experiments, students fill the reservoir with clean water and prime the system. They then set the controller to regulate the flow of water using a pneumatic valve. This alters the pressure in the accumulator. A pressure transmitter measures the accumulator pressure and gives feedback to the controller.

For a realistic experience, the equipment has industrial-standard instrumentation and parts.

The apparatus includes two gate valves. One valve controls the flow at the output (drain) of the accumulator, and the other acts as a flow-bypass valve. A chart recorder shows and logs the changes of the process variable (pressure) and the controller output.

**Note:** The chart recorder is paperless, so you need a suitable computer and colour printer if you need to print out hard copies of the chart recorder traces.

A socket on the side of the apparatus links to the Computer Control System (TE3300/06, available separately).

### Standard Features

- Supplied with comprehensive user guides
- Five-year warranty
- Made in accordance with the latest European Union directives

### Experiments

- Proportional, integral and derivative control
- Setting up and demonstrating automatic control
- The principles of loop control and the calibration and tuning of controllers, transmitters, converters and valves
- Cascade control of flow and pressure (when used with the TE3300/03 Flow Process Training System)
- Distributed control (when used with the TE3300/06 Computer Control System)

### Essential Ancillaries

- Service Module (SM3300)\* or
- Stable supply of 0.5 litres/s of clean, dry, oil-free air at 2–10 bar

### Recommended Ancillaries

- Flow Process Training System (TE3300/03)
- Computer Control System (TE3300/06)

### Ancillary For

- Flow Process Training System (TE3300/03)

### Operating Conditions

*Operating environment:*  
Laboratory

*Storage temperature range:*  
-25°C to +55°C (when packed for transport)

*Operating temperature range:*  
+5°C to +40°C

*Operating relative humidity range:*  
80% at temperatures < 31°C decreasing linearly to 50% at 40°C

### Sound Levels

Less than 70 dB (A)

### Essential Services

*Electrical supply:*  
Single-phase 230 V at 0.3 A or 110 V at 0.6 A, 50/60 Hz (determined by order)

*Compressed air:*  
(see Essential Ancillaries)

### Dimensions and Weights

Nett: 700 mm x 800 mm x 1750 and 120 kg

Packed: Approximately 1 m<sup>3</sup> and 150 kg

- TecEquipment Ltd, Bonsall Street, Long Eaton, Nottingham NG10 2AN, UK
- **T** +44 115 972 2611 • **F** +44 115 973 1520 • **E** info@tecequipment.com • **W** www.tecequipment.com
- An ISO 9001 certified company

*tradition.*

*innovation.*

*integration.*

**infoWERK** is a leading expert in the development of eLearning courseware, learning system solutions, teaching and AV equipment.

**Furthermore infoWERK is the representative and system integrator of "TecQuipment".**

**TecQuipment** is one of the global leaders in technical teaching equipment for engineering. If you are interested in one of TecQuipment's products feel free to contact us at:



**infoWERK Medien & Technik GmbH**

**Martinsbühel 6 / A-6170 Zirl / Austria**

Phone: +43 (0) 5238 52099-0 / Fax: +43 (0) 5238 52099-40

E-Mail: [info@infowerk.at](mailto:info@infowerk.at) / Website: [infowerk.at](http://infowerk.at)

**Otto-Dürr-Straße 25**

**D-70435 Stuttgart, Zuffenhausen/ Germany**

Phone: +49 (0) 711 342471-0 / Fax: +49 (0) 711 342471-11

E-Mail: [info@de.infowerk.at](mailto:info@de.infowerk.at) / Website: [infowerk.at](http://infowerk.at)