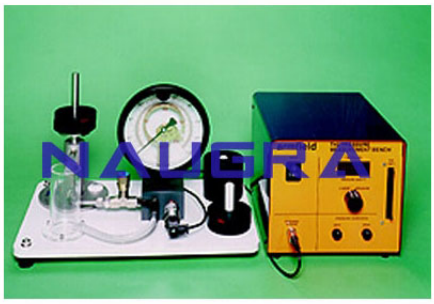
NAUGRA®

Product name:	Product code:
Pressure Measurement and Calibration	TLI0005



Description

Pressure Measurement and Calibration

Technical specification

- Includes simple Dead-weight Pressure Calibrator using water for safety and ease of use
- Bourdon gauge and electronic sensor included for calibration
- Operating mechanism of Bourdon gauge visible through clear scale
- Electrical sensor can be logged using a PC (optional teaching software available)

Description:

A bench top unit designed to introduce students to pressure, pressure scales and common devices available to measure pressure.The equipment comprises a Dead-weight Pressure Calibrator (DPC) to generate a number of predetermined pressures, connected to a Bourdon gauge and electronic pressure sensor to allow their characteristics, including accuracy and linearity, to be determined. The DPC consists of a precision ground piston and cylinder with a set of weights giving an operating range of 20 kNm-2 to 200 kNm-2. The Bourdon gauge and pressure sensor are mounted on a manifold block with a separate reservoir to contain the hydraulic fluid (water for safety and ease of use). Valves allow for easy priming, restricted flow of water to demonstrate the application of damping and the connection of alternative devices for calibration. The gauge supplied is a traditional 6? diameter industrial instrument but fitted with a clear rotary scale to allow observation of the Bourdon tube and indicator mechanism. The scale is calibrated in degrees of rotation (independent of units of pressure) in addition to the usual scale calibrated in units of kNm-2. The electronic pressure sensor supplied incorporates a semi-conductor diaphragm that deflects when pressure is applied by the working fluid. This deflection generates a voltage output that is proportional to the applied pressure.

Pressure Measurement and Calibration

- A bench top unit comprising a simple Dead-weight Pressure Calibrator with weights to generate a range of predetermined pressures that is connected to a Bourdon gauge and electronic pressure sensor. The Bourdon gauge incorporates an arbitrary scale in addition to the pressure scale and a clear acrylic front face allows observation of the Bourdon tube and the operating mechanism. A reservoir with isolating valve allows the calibrator, Bourdon gauge and pressure sensor to be easily primed.
- An electrical console houses the necessary electronics with current protection devices and an RCD for operator protection. A digital meter with selector switch displays the output from the pressure sensor as well as the conditioned reading in engineering units. Corresponding signals are routed to an I/O Port for connection to a PC. An optional interface device with educational software package is available.
- The Dead-weight Pressure Calibrator, Bourdon gauge and pressure sensor are mounted on a common PVC baseplate. The electrical console is free standing.
- Pressure sensors, manometers or Bourdon gauges other than those supplied can be calibrated over the range 20 kNm-2 to 200 kNm-2.
- A comprehensive instruction manual is included with a range of fully detailed Laboratory Teaching Exercises.

Key Features:

NAUGRA®
Civil Laboratory Equipment Manufacturers and Suppliers India Civil Lab Exports India
Email us at: export@civilmechanicalindia.com