Pressure Measurement Bench (SMT-HT-01)

This experimental setup used to measure pressure with Manometers, Bourdon gauges and Pressure Transducers which are fundamental pressure-measuring devices. Pressure Measurement Bench enables students to fully investigate and compare the operation and characteristics of inclined and U-tube manometers, and Bourdon-type vacuum and pressure gauges. It also includes a separate Bourdon gauge with dead-weight calibration apparatus, enabling clear observation of the Bourdon tube mechanism. This setup also has Pressure Transducer with digital display for advance pressure measurement in Modern control systems.

TECHNICAL SPECIFICATIONS

Specifications:

- U-tube and inclined tube manometer. One Bourdon tube pressure gauge each for positive and negative pressure. One Pressure Transducer with digital display.
- Plastic syringe generates test pressures in the millibar range.
- Calibration device with Bourdon tube pressure gauge for calibrating mechanical manometers included in the scope of delivery.

Technical Data:

- Inclined tube manometer: angle 30°.
- Measuring ranges:
  - Bourdon tube pressure gauge: 0 to 100mbar / -100 to 0mbar.
  - U-tube manometer: 0 to 500mmWC. And Inclined tube manometer: 0 to 500mmWC.
  - Pressure Transducer: 0 to 1000mBar
- Dead weight Pressure Calibrator included, and Air compressor Unit (Optional)

Experimental Data:

- Comparison of pressure measurement by manometer, Bourdon gauges and Pressure Transducer.
- Calibration of a pressure gauge.
- Determination of gauge errors as a function of true pressure.

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