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Product Name :
Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws)

Product Code :
LBNY-0002-710023



Description :

Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws)

Technical Specification :

Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws)

The Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Law), allows to demonstrate two fundamental gas laws: Boyle's Law (isothermal change of state) and Charles's Law (isochoric change of state).

The unit consists of a rigid frame containing two transparent vessels, that enables to observe the change of state in the test gas (air).

In the first vessel, for investigation of isochoric change of state, the temperature of the test gas is increased by a computer controlled electrical heating element, and the resulting pressure rise is measured. The volume of the enclosed gas remains constant. A valve at the bottom of the vessel allows students to normalize the air in the vessel to room conditions.

In the second vessel, for investigation of isothermal change of state, students use a compressor/vacuum pump to increase or decrease the pressure in a reservoir vessel that moves a "liquid piston" of oil in the test vessel. This piston compresses or decompresses a trapped column of air in the test vessel. If the changes occur slowly, the change of state takes place at an almost constant temperature.

Temperatures, pressures and level are measured by means of sensors. The unit includes two pressure switches and relief valves to ensure the safety of the user.

A PID control enables constant temperature operation by controlling the power of the electrical heating element in the first vessel.

Two solenoid valves and two pressure regulator valves enables to control the level of oil inside the second

vessel.

The unit uses air that behaves as an ideal gas within the range of pressures used in this unit.
Computer to be made available by the user.

Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws), Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws) Equipments, Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws) Tools, Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws) Tool Kits, Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws) Manufacturers, Computer Controlled Gas Laws Unit (Boyle and Gay-Lussac Laws) Suppliers from India, China, Kenya



Laboratory Instrument India