

PERFECT GASES LAW STUDY UNIT



Experimental capabilities

- To show the relation between the pressure and the volume of a perfect gas at a fixed temperature.
- Demonstration of gas temperature change during compression and decompression
- To show the law of Boyle by the experiment
- Unit with data acquisition

BET050



Operating principle

The BET 050 study unit makes it possible to show the relation between the pressure and the temperature of a perfect gas. The student must increase or decrease the pressure in the cylinders and measure the pressure, the temperature and the volume.

The user can then analyze the parameters and show the law of Boyle.

The strong design of this device makes it suitable for the use in schools.

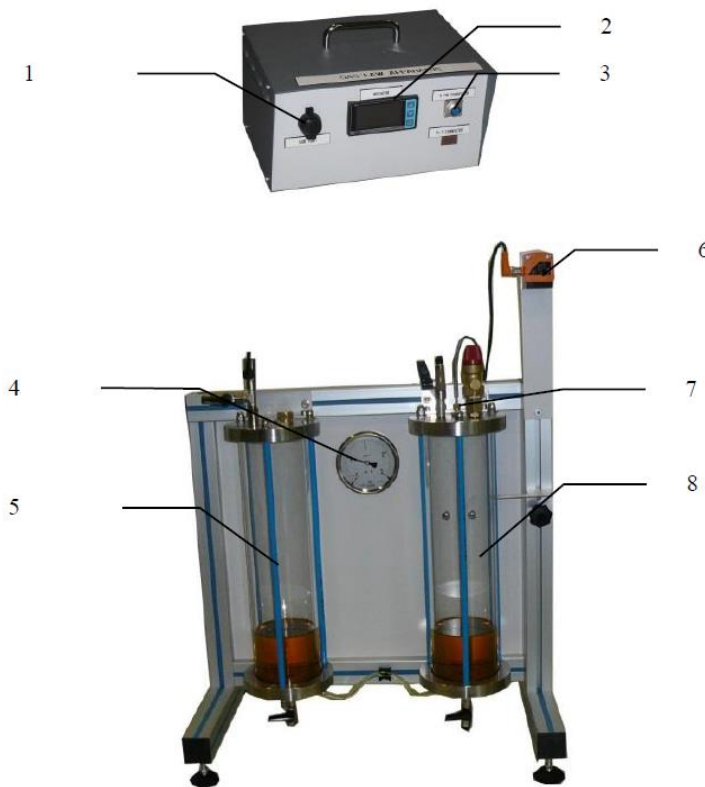
The equipment is made with an aluminum anodized frame and feet making it possible to be installed on a table.

That gives toughness and great flexibility of integration in your laboratories.

La fabrication de cet équipement répond à la directive machine européenne.

Illustrations

Technical details



Data acquisition system

1. USB connection to a PC
2. Digital indicator multiple-lines which displays the pressure, the temperature, the inside volume of cylinder N°2
3. Connection of major unit (return sensors)

Main unit

4. Pressure gauge (- 1 to 6 bars)
5. Cylinder N°1 (Volume 3,1 L) with connection for the air pumps and the drainage sluice.
6. Level sensor (used to calculate the air volume inside cylinder N°2)
7. Temperature sensor (T type thermocouple)
8. Cylinder N°2 (Volume 3,1 L) with drainage sluice, higher valve, valve of security and connection to the cylinder N°1

Included accessories

- Manual vacuum pump
- Manual hand pump for the pressure

Services required

Documentation

- Power supply : 230 VAC mono - 50Hz - 6A
- Water supply : 3 to 5 L/min – 3 bars
- Dimensions: (LxWxH mm): 600 x 500 x 600
- weight (Kg): 40

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Certificate of conformity CE

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

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