

STUDY GROUP OF THE ADIABATIC GAS LAW

REFERENCE : ET1010



Non contractual photo

**SERVICE : 9 V POWER SUPPLY;
MONOATOMIC (ARGON), DIATOMIC
(NITROGEN) AND POLYATOMIC (CARBON
DIOXIDE) GAS PC
DIMENSIONS : 600 X 200 X 400 MM**

WEIGHT : 10KG

Isothermal and adiabatic transformations are difficult processes for students to understand. This apparatus offers a perfect demonstration by the experimental verification of the mathematical formulas of these transformations.

Educational Objectives :

- Realization of an adiabatic transformation.
- Verification of the laws $PV^\gamma = \text{cste}$ and $TV^{(\gamma-1)} = \text{cste}$.
- Determination of the amount of work provided to compress or dilate an adiabatically gas and comparison with the internal energy change.
- Determination of the ratio of specific heats $\gamma = C_p / C_v$.
- Comparison of γ of monoatomic, diatomic and polyatomic gas.
- Study of compression and isothermal expansion

Technical specifications :

Composition: apparatus of study of the adiabatic law of gases;
acquisition interface; analog adapter;