

## Heat transmission study unit

### DESCRIPTION

- v The heat transmission study unit is delivered complete with instrumentation and includes a technical and instruction manual.
- v This unit allows students to study the three modes of heat transmission : conduction, convection (free or forced) and radiation.
- v This unit is designed for different levels and various fields of study.



### SUGGESTED APPLICATIONS

Study of thermal exchanges on forced convection plate.

Influence of plate inclination on heat transmission to the surrounding air by free convection and radiation.

Study of thermal conductivity of different insulating materials.

Influence of heating plate finish (unpolished black or bright).

The heat transmission unit is made up of :

- Aluminium profiled chassis equipped with a support for the variable positioning and inclination of the heating and an inclined control console.
- Two heating plates of different types
  - Homogeneous heating using power under 300 watts
  - Low thermal inertia
- A set of different insulating material plates, which are studied to determine their conductivity.
- An adjustable velocity fan (adjustable flow) to study the heat transmission by forced convection.
- Instruments
  - A regulator which controls the power supplied to the unit in order to maintain the temperature between room temperature and 70° C.
  - A fan speed control
  - A voltmeter and an ammeter to measure the power to maintain the temperature at a specific level.
  - A surface temperature and an ambient temperature probe
  - Electrical safety features

## **UTILITIES**

Electricity : 230 V single phase - 50/60 Hz

## **DIMENSIONS**

Length : 880 mm - Width : 530 mm - Height : 570 mm - Weight : 20 kg