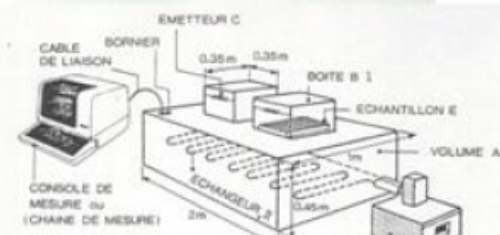


STUDY OF MEASUREMENTS OF THE THERMOPHYSICAL CHARACTERISTICS



Non contractual photo

SERVICE : EI702: 2-CELL CONDUCTIVITY MEASURING CELL FOR SIMULTANEOUS CONDUCTIVITY MEASUREMENT OF 2 SAMPLES AND DIFFUSIVITY MEASUREMENT WITH OPTION EI700C1
DIMENSIONS : 200 X 100 X 80 CM

WEIGHT : 140KG

REFERENCE : SERIE EI700

The EI700 measuring cell uses the so-called steady-state "box" method: it consists in producing a unidirectional heat flow through a sample of material to be tested by carrying out the measurements after obtaining the steady state.

Educational Objectives :

It allows the measurement of the characteristics necessary for the evaluation of the thermal balances: the thermal conductivity, the thermal diffusivity, the specific heat, in a short time compared to other methods of one or two samples depending on the configuration of the cell.
It can be used in the fields of education, research and industry.

Technical specifications :

An enclosure (highly insulated) maintained at low temperature (-5°C) thanks to a brine cooler, powered by a cryostat.
One or more boxes, depending on the configuration chosen:
for the measurement of the thermal conductivity, the box is coated on the inner part of its upper face with a heating film whose heat emission is regulated by means of a rheostat;
- for the measurement of thermal diffusivity, the box is equipped with an incandescent lamp.
The specific heat is determined from measurements of thermal conductivity and diffusivity.
The entire wiring of the temperature probes and the heating film feed leads to a terminal block which is connected to a measuring console supplied with the device.