

## Convection exchanger

### DESCRIPTION

- This unit consists of a fan, which draws air through a rectangular duct. -The rate of airflow can be adjusted by a valve and the opening on the central part of the duct allows placing several types of heating elements for testing.
- The instruments provided enable the operator to measure the rate of airflow, the heating component temperature, the dispersed power, and the temperature of the air that has passed over the heating component. This makes it possible to calculate the coefficient of exchange.
- The PTC 050 equipment is delivered fully equipped and includes a technical manual and instructions.



### SUGGESTED APPLICATIONS

Determination of the heat transfer and the coefficient of exchange for a pipe, which is placed transversely in the duct.

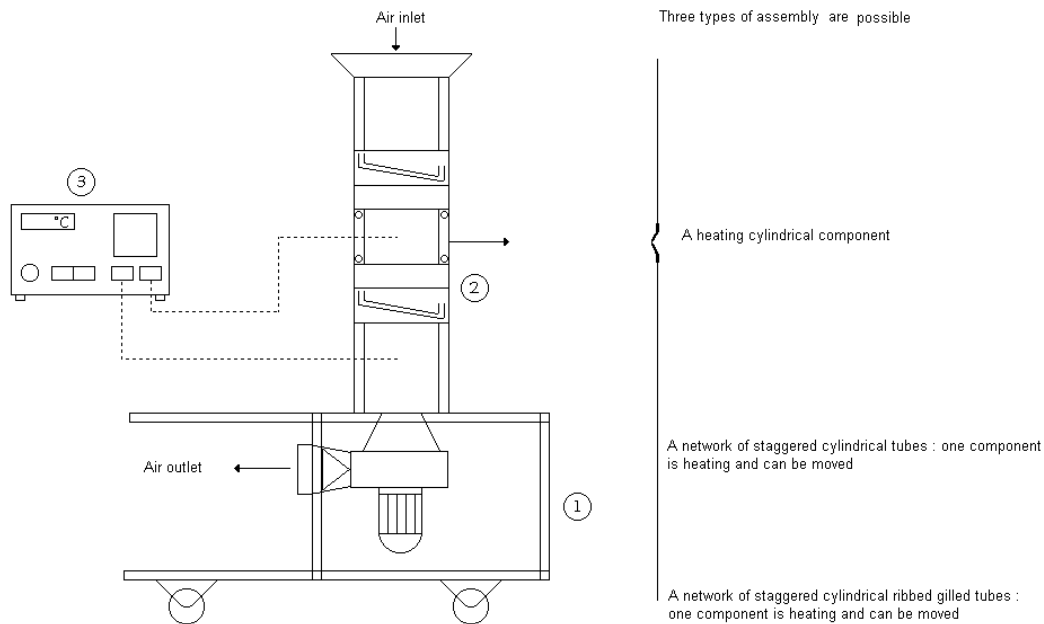
Determination of the coefficient of exchange for a pipe which is placed in a network of staggered pipes.

Determination of the coefficient of exchange for a cross flow heat exchanger with staggered pipes.

Determination of the REYNOLDS, PRANDTL and NUSSELT numbers.

Same applications for a ribbed gilled tube in an exchanger with staggered lines.

## DESCRIPTION OF THE UNIT



1. Motor fan assembly – power : 2 kW  
Equipped with a valve in the outlet in order to control the flow.
2. Measuring vein equipped with two manometers to measure the flow and with a thermocouple to measure the temperature.  
This vein can be equipped with one of the above types of assembly.
3. Control console equipped with :
  - A switch to turn on the unit
  - A fan switch
  - The switch for the heating of the heating cylinder (the cartridge is equipped with a thermocouple) with power indication
  - Display of the air vein temperature

## UTILITIES

Electricity: 230 V single-phase – 50 Hz  
Power 1 kW

## INSTALLATION VOLUME

Length : 800 mm  
Width : 500 mm  
Height : 1800 mm  
Weight : 30 kg