

# BENCH FOR THE STUDY OF THE ICE MAKER

## Mod. TGE/EV

## INTRODUCTION

The bench has been designed for the study of the thermodynamic cycle of a refrigerator for ice production. The evaporator is provided with special profiles where atomized water is sprayed by a set of nozzles. An increasingly thicker ice coat adheres to the evaporator. When the ice is formed, a timer periodically stops the atomization and sends hot gas to the evaporator, this causing the fall of the ice cubes. The ice production capacity can vary according to the cycle efficiency depending on the ambient conditions.

## TRAINING PROGRAM

- Study of the operation of an ice maker
- Analysis of the system behavior depending on the water temperature and the room temperature
- Use of the pressure enthalpy diagram of the refrigerant gas as work and diagnosis instrument: cycle drawing
- Data collection and calculation of:
  - specific thermal balances at the evaporator, condenser, compressor
  - EER

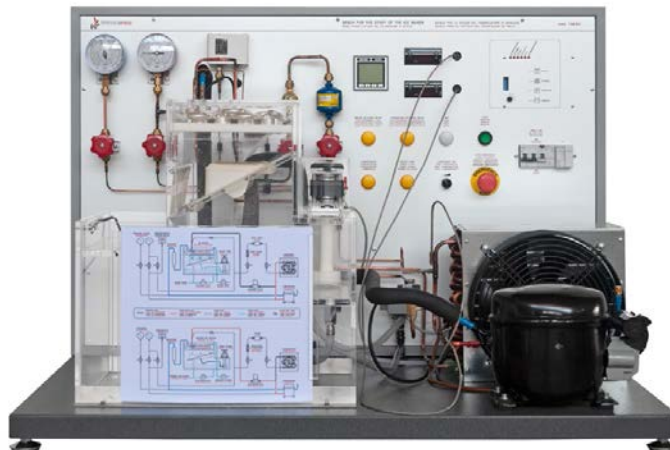
## TECHNICAL SPECIFICATIONS

- Hermetic compressor
- Forced air condenser
- Capillary tube for gas expansion
- Water pump
- Series of spraying nozzles
- Ice making process automatic regulation
- Transparent structure for the ice maker enabling a whole view of the cooling process
- Solenoid valves, manual valves, sight glass, dehydrating filter
- Valve for plant vacuum, gas charge and gas recovery
- High and low pressure gauges
- 2 digital thermometers with Pt100 sensors to be inserted into many test points along the hydraulic circuit
- Digital multimeter
- Potentiometer for adjusting the air speed of the condenser fan
- High pressure switch
- Thermomagnetic - earth leakage control button
- Emergency push button

**Power supply:** 230 Vac 50 Hz single-phase  
(Other voltage and frequency on request)

**Dimensions:** 110 x 70 x 78 cm

**Net weight:** 68 kg



## REQUIRED

### UTILITIES (PROVIDED BY THE CUSTOMER)

- Tap water, 6 bar max

## SUPPLIED WITH

### EXPERIMENTAL HANDBOOK

