



USE

The installation is built in anodized aluminum profiles on directional castors with brake.

An electricity supply is required and a receiving beaker is installed at the bottom of the equipment to collect the condensate which flows down under gravity.

The small electrical box (Professor) manages the electrical safety devices, safety pressure switch, trapped person alarm and emergency stop.

This bench allows the study of a cold room, the concrete realization of a portion of the refrigerant circuit, wiring and setting the terms of the regulation.

All the component parts of the installation are of industrial origin and are easily accessible.

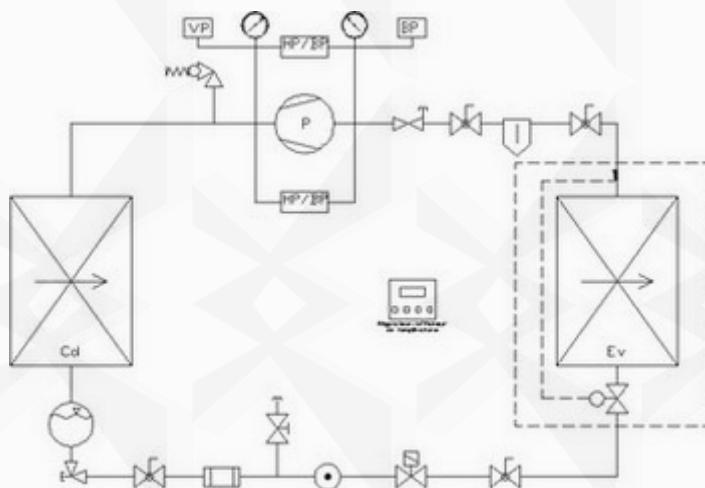
The large electrical control box (Student) is at working height for easy access and configuration. On the door, switches, push buttons and LEDs, as well as inside electrical components, can be eventually re-wired for training purpose, because all their connections arrive at terminals in lower part.

The used refrigerant is R134a which is universally accepted by the new European regulation.

EDUCATIONAL CAPABILITIES

- Study of the concept of a refrigerating machine at single stage compression - Sizing components
- Theoretical refrigeration cycle drawing
- Study and implementation of a part of the refrigerating copper circuit, leak detection and fill w/ R134a.
- Study and realization of the electrical box, wiring diagram, wiring work
- Start-up - handling - safety rules - settings of regulation instruments
- Filling an intervention report
- Use of enthalpy diagram - Taking different points of measurements
- Plot the real refrigeration cycle - Deduction of enthalpies, with subcooling, overheating, coefficient of performance

DRAWING - SPECIFICATIONS



Condensing unit

Hermetic compressor 840W at $T_0=0^{\circ}\text{C}$ - R134a
 Condenser w/ pressostatic rotation speed inverter
 Liquid receiver with intervention valve

Cold room

Dimensions: 830x830xH1830mm, panels thickness 60mm
 With floor and hinged isothermal doors with panic-exit handle

Refrigeration components

Forced convection evaporator
 Thermostatic expansion valve
 Safety pressure switch (two) and LP pressure switch
 Filter-drier, sight glass, close valves, solenoid valve
 Accumulator

Electrical components

Electric box Professor (Management of safety devices and power up of Student's electrical housing)
 Student's electric box (Designed to be un-wired and re-wired)

Dimensions: 1600 x 1100 x H2100 - Weight: 200Kg



230V-1~50/
60Hz-16A