

POSITIVE REFRIGERATION SYSTEM



Experimental capabilities

- Identification of components of a positive refrigerating system
- Commissioning and verification of operation
- Study of the basic concept of a refrigeration plant to R134A
- Study of the thermodynamic cycle on enthalpic diagram
- Study of the regulation
- The system with industrial rendering
- The kit comes assembled, loaded and functional

Operating principle

The bench CHP 234 allows the study of positive refrigerating system. The system includes all the standard components such as compressor, condenser, expansion valve; evaporator, bottles, pressure switches.

The kit is supplied complete, assembled and functional. Students can work on identifying the components, commissioning, adjustment and the verification of operation. They will also be able to recover the fluid and the load (requires the tooling not supplied with the bench).

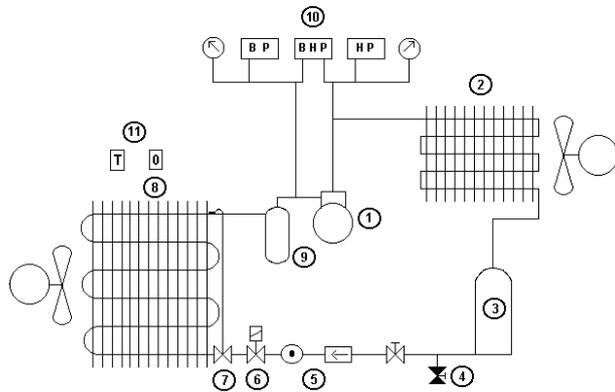
The kit is intended to be assembled with the cold rooms type CHB100 of DIDATEC brand.

The robust design of this equipment makes it perfectly suited for use in schools.

Its structure in anodized aluminum on wheels gives it great strength as well as great flexibility of integration into your premises.

The manufacturing of this equipment meets European machine directive.

Illustrations



1. A hermetic compressor
Refrigerant: R134a
Condensing temperature +40°C
Evaporation temperature 0°C
Maximum pressure: 32 bars
Power: 916W 0°C/32°C
Equipped with two service valves
2. Air condenser
forced convection
3. Fluid reservoir
Steel vertical
Volume: 1.5L
4. Refrigerant recovery valve
5. Dehydration station
Solid cartridge dehydrator Ø1/4 "
Fluid state LED Ø1/4 "
6. An electromagnetic valve
Normally closed
Straight passage Ø1/4 "

Technical details

7. Thermostatic expansion valve
Internal pressure equalization with calibrated orifice (-40°C /+10 °C)
8. Air evaporator
With forced convection
Evaporation temperature 0°C
Power: 665W pour dT=8K
9. A suction line accumulator.
Steel vertical
Volume: 1.5L
10. Control and safety system
High pressure manometer -1 to 30bars
Low pressure manometer -1 to 10bars
High pressure switch control
Low pressure switch control
HLP combined safety pressure switch
Safety thermostat

The electrical side of the system includes :

- a circuit breaker for each element
- a refrigeration temperature controller with 2 probes to manage all the components (defrost, ventilation...)

Services required

- Electrical supply : 230 Vac – 50 Hz – 10 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 800 x 800 x 1700
- weight (Kg): 105

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

Documentation

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Fluidic and electric diagram
- Certificate of conformity CE

Recommended equipment

- Colde room

- Ref : CHB 100

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