CHP200

POSITIVE REFRIGERATION SYSTEM

Experimental capabilities

- **Identifying the components of a positive refrigeration system**
- **Commissioning and functional verification**
- **Study of the basic concept of a refrigeration system.**
- **Study of the thermodynamic cycle on enthalpy diagram.**
- **Study of regulation**
- **The system has an industrial rendering**
- **The kit is delivered assembled, loaded and functional**

DIDATEC– Zone d'activité du parc – 42490 FRAISSES- FRANCE
Tél. +33(0)4.77.10.10.10 – Fax+33(0)4.77.61.56.49 – www.didatec-technologie.com
email : service_commercial@didatec-technologie.com

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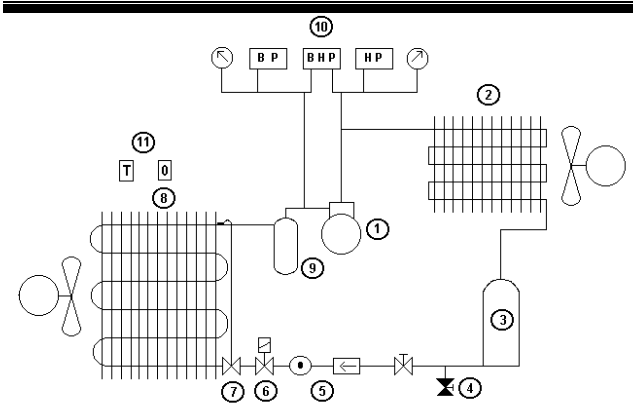
Operating principle

The positive refrigeration kit allows the study of a positive refrigeration system. The system includes all the standard components such as compressor, condenser, expansion valve, evaporator, cylinders, pressure switches.
The kit is delivered complete, assembled and functional. Students will be able to work on component identification, commissioning, adjustment and verification of proper operation. They will also be able to recover the fluid and charge (requires tools not supplied with the bench).
The kit is designed to be assembled with DIDATEC type CHB100 cold rooms.
The rugged design of this equipment makes it perfectly suited for use in a school setting.
Its anodized aluminium structure on wheels gives it a very high robustness as well as great flexibility of integration into your premises. The manufacture of this equipment complies with the European Machinery Directive

Illustrations



1.Hermetic compressor
Evaporation temperature 0°C
Maximum pressure: 32 bar
Power: 900W approx.
Equipped with two service valves
2. Air Condenser
Forced convection
3. Liquid Tank
Vertical Steel
Volume: 1.5L
4. Refrigerant Recovery Valve
5. Dehydrating Station
Solid cartridge dehydrator Ø1/4"
Humidity indicator light Ø1/4"
6. Solenoid 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
Forced convection
Evaporation temperature 0°C
Power: 650W approx.
9. accumulator
Vertical Steel
Volume: 1.5L
10. Regulation and safety system
High pressure gauge
Low pressure gauge
High-pressure pressure switch
Low-pressure pressure switch
Combined safety pressure switch HBP
Safety thermostat

The electrical part is composed of:
- a steel power supply box with a 2P+T socket to connect accessories
- the standard safety elements (master disconnect switch, emergency stop button, RCD, ground connection, white light)
- a thermal magneto circuit breaker for each element
- the relay of the main elements of the installation (evaporator, solenoid valve, compressor, condenser, defrost resistor)
- Indicator lights for each element
- a refrigeration temperature controller with two temperature sensors for the management of all the elements. (Defrosting, evaporator ventilation, etc.)

Services required

- Electrical supply : 230 Vac – 50 Hz – 10 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 980 x 770 x 1810
- 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 diagram
- Enthalpic diagram
- Certificate of conformity CE

Recommended equipment

- Cold chamber
- Ref : CHB100

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