

WIRING TRAINER OF A REFRIGERATING INSTALLATION



Experimental capabilities

- Study of the starting mode of a single-phase asynchronous electric motor compressor.
- Study of the components necessary for the start-up of an engine.
- Wiring of the power circuit of the motor compressor.
- Study and wiring of pressure switches and thermostat
- Wiring of a complete refrigeration system with evaporator and condenser fans and solenoid valve.
- Powering up and testing.
- Pressure Switch Adjustment

The circuit is pressurized and functional, the bench works without refrigerant.

Operating principle

The students will first have to identify the components of the installation, then make the electrical connection and proceed with the commissioning.

The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises. The manufacture of this equipment complies with the European standard for machinery manufacturing.

Illustrations

The bench has the following elements:

1. A hermetic piston compressor
2. A high-pressure pressure gauge with double temperature/pressure graduation
3. A high-pressure pressure switch
4. A manual valve on the high-pressure line
5. A low-pressure pressure gauge with double temperature/pressure graduation
6. A low-pressure pressure switch
7. A manual valve on the low-pressure circuit
8. A TOR thermostat
9. A capacitor
10. A klixon
11. A starting relay
12. A condenser with a fan
13. An evaporator with fan
14. A solenoid valve
15. A thermostatic expansion valve

Technical details

16. A white voltage presence light
17. A 30mA RCD with single-pole disconnect switch
18. A voltmeter
19. An ammeter

The terminals of the components are linked to double well terminals on the front panel. A set of cords is provided to allow students to make the wiring.

The circuit is pressurized and functional, the students can adjust the pressure switches. It is equipped with a safety valve.

Services required

- Electrical supply : 230 Vac – 50 Hz – 6 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 1000 x 700 x 1550
- weight (Kg): 80

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
- Technical documentation of the components
- Lab exercises
- Wiring diagram
- Fluidic diagram
- Certificate of conformity CE