model:Basic refrigeration-GT1170

Basic Refrigeration Trainer

Features & Technical Specifications:

1. The Refrigerator temperature, pressure, defrosting automatic control, fault diagnosis of configuration testing is available for training.
2. Mechanical part of high-pressure, low-pressure lines is distinguished by the naked eye, and each element has a thermometer depends on changes in the cycle of refrigeration equipment.
3. Molier-diagram drawing in drawing part is available for experimentation and practice.
4. Operable device without the control unit via the control switch of the machine unit.
5. Mechanical and graphics module is integrated and Mechanical part and graphics is consisted of one body.
6. Refrigeration Training Equipment operation circuit is consisted of wiring and jacks.
7. This equipment is possible for operating test and practice.
8. Equipment in the front of the mechanical part of the main components should be arranged in vertical machine is added to replace the graphics module.
9. A condenser fan motor is controlled through a pressure and temperature as possible.
10. There is watt hour meter, to measure the amount of power consumed by the device during operation of the device.
11. Communication with a computer with an USB interface is possible and controlled by a computer program.
12. Overload cut-off when an abnormality occurs during operation temperature, pressure, freezing of teaching equipment, the operation of the pressure switch, safe driving another circuit configuration using the power cutoff device to another of the control unit and the machine part is possible and there capable of fault diagnosis.
13. Enable the output of data for fault diagnosis of the machine unit.
15. This equipment should be possible for operating test and practice.
16. Able to Data auto-save and auto drawing P-I diagram.
17. Monitor and operate computer-controlled machine part (ON-OFF function), IS available for fault diagnosis.

System configuration

Components

Hardware platform	1 set
Data acquisition program	1 copy
Power cable	1 ea
Data cable	1 ea
Manual book	1 book

Specifications

1. Mechanical unit:

1) Compressor: 1/2HP, single phase 220V, with control box, compressor type: reciprocating compressor, refrigerant used: R-134a
2) Condenser: 1/2HP, single-phase 220V, condenser type: air-cooled, fan motor: 9W, fan: 1ea included.
3) Evaporator: 1/3HP, single-phase 220V, condenser type: air cooling, fan motor: 9W, fan: 1ea included.
4) Receiver: 1/2HP, it is made strong enough for pressure.
5) Liquid separator: 1/2HP, it is made strong enough for pressure.
6) Solenoid valve: 3/8" nut fastening type, 220V, 50~60Hz, HFC others, type: direct acting
7) Filter dryer: 3/8" nut fastening type or welding type
8) Sight glass: 3/8" nut fastened or welded,
9) Expansion valve: 3/8", 1/2" nut fastening type, or welding type Refrigerant used: R-134a
10) Charging nipple: 1/4 inch
11) Pressure gauge: refrigeration oil gauge, high pressure 35bar, low pressure 15bar, measuring refrigerant: R-134A size: 68mm dial

2. Automatic control:

1) Relay: Min. 8 pin: 3ea
2) NFB: Rated current: 15A, rated breaking capacity: 220V/5kA
3) Magnetic switch: Rated current: 9A, Rated voltage: DC24V
4) Thermal relay: 9~12A,
5) Watt meter: digital type
6) Lamp: Red, Green, Yellow, White
7) LPS, HPS, DPS: digital pressure device, low pressure side high pressure side: 1.5 MPa 3.3 MPa
10) Select switch: 1a1b
11) Buzzer: DC24V
12) Toggle switch: 1a, 1b
13) Timer: 60sec. DC24V, 8pin
14) Push Button: 1a, 1b
15) Digital thermometer: 7EA (temperature control type)
16) Indicator light: red, green
17) Graphic module: Min. 800 * 600 aluminum
18) Auto module: Min. 800 * 600 aluminum

3. Data board:

1) Refrigeration Trainer Control Board
2) Removable Micro Controller Module (Replacement type)
3) 16-Channel Sensor interface (Option: Temperature, Pressure, Flowmeter, Air flowmeter, Ampere:
4) 16-Channel power relay on/off control.
5) USB Interface

4. Software program:

1) Network control system using ethernet communication.
2) Machine parts are controlled by using a switch of the program and data values of the sensor by setting the control condition.
3) Mechanical diagram displays the sensor values and converter unit option.
4) Output of the sensor data in the graph and save files and print output.
5) Mechanical parts diagram displays the operation status of motion animation.
6) Output of the sensor data in the mollier diagram graph and save image files and print output.
7) The Mollier diagram graph simulated sensor data, and to compare the measured sensor data analysis

5. Product dimension (LxWxH): Min. 1800x720x1850mm