

MAINTENANCE OF AN ICE MACHINE



Experimental capabilities

FAILURE SIMULATION ON COLD CIRCUIT AND ELECTRIC BY INFRARED REMOTE CONTROL

Evaporator thermostat default
Thermostat default too full ice tray
Compressor default
Condenser default
Pump default
Default solenoid valve hot gas
Water solenoid valve default

STUDY AND CALCULATION

Power to the compressor
Power to the condenser
Power to the evaporator

Operation and maintenance of an ice machine

System of molding and demolding of ice cubes

Operation of a refrigeration system, injection mechanism (for demolding)

Operating principle

The maintenance system is based on a machine, a pallet ice machine. It includes a refrigeration unit, a molding system and demolding ice, a storage tray and conservation of ice cubes and all the accessories and components necessary for operation of the machine.

The upper wall is transparent in order to visualize the process of manufacturing and demolding of ice. The bench is fully instrumented in order to analyze the system operation.

A remote control allows the creation of 7 failures in the system.

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

The equipment is set up on an Anodized aluminium frame on caster 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



Technical details

1. Electrical box
2. Power supply switch.
3. Voltage presence light.
4. Pallet ice machine
5. Drip tray of ice cubes with drainage (bottom right) for water and thermostat "full tray" (the thermostat was lowered in order to reduce the time to reach the fill level.
6. Operating setting switch of the ice machine.
7. Safety pressure switch
8. Low pressure manometer - 1 to 10 bars for R134a.
9. High pressure manometer - 1 to 29 bars for R134a.
10. Float flowmeter of refrigerant by magnetic transmission
11. Sight glass with humidity indicator
12. Support chassis profile anodized aluminum with shutter equipped with 4 directional wheels with brake
13. Failures creation system with remote control

Services required

- Electrical supply : 230 Vac – 50 Hz – 10 A
- Electrical network : 1 phase(s) + Neutral + Earth.
- Water supply : 10 L/min – 2 bars
- Water drain : on the floor
- Dimensions: (LxWxH mm): 600 x 600 x 1500
- weight (Kg): 65

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
- Wiring diagram
- Schematic diagram
- Lab exercises
- Certificate of conformity CE