CRM012

MAINTENANCE OF AN ICE MACHINE

Experimental capabilities

Evaporator thermostat default
-Identification and mapping of an ice machine refrigeration system operating with R290
-Simulation of failures on cold and electrical circuit by touch screen (7 failures)
-Study and calculation
- **-Compressor power**
- **-Condenser power**
- **-Power at the evaporator**
- **-plotting the refrigeration cycle**

-Operation and maintenance of an ice maker
-Molding mechanics and demoulding of ice cubes
-Operation of a refrigeration system, injection mechanism (for demoulding)
-Measurement of electrical power, temperatures, pressure and refrigerant flow

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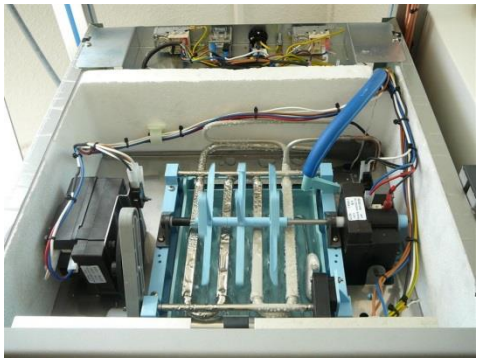
Operating principle

The maintenance system is based on a machine a pallet ice maker. It includes a refrigeration unit, an ice molding and demoulding system, an ice storage and preservation bin and all the accessories and components necessary for the operation of the machine.
The upper wall is transparent in order to visualize the process of making and demoulding ice cubes. The bench is fully instrumented to analyze the operation of the system.
A touch screen allows the creation of 7 failures on 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

The trainer is installed on an aluminum profile structure equipped with 4 directional castors with brake

1. Electrical power supply box with general disconnector, white voltage indicator light and differential circuit breaker
2. Color touch screen for the display of measurements (temperatures x7, electrical power consumed) and activation of failures
3. Pallet ice maker running on R290 with transparent walls to visualize the compressor area and transparent cover to visualize the molding part of the ice cubes
4. Ice cube recovery tray with drain for water and "full tank" thermostat (the thermostat has been lowered to reduce the time to reach the filling level)."
5. Ice machine start-up switch.
6. HP and LP safety pressure switch
7. Low pressure manometer
8. High pressure manometer
9. Float refrigerant flow meter by magnetic transmission

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): 1030 x 695 x 1580
- 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
- Technical documentation of the components
- Wiring diagram
- Schematic diagram
- Lab exercises
- Certificate of conformity CE

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