

ITV | ICEmakers



TECHNICAL SUPPORT DICTIONARY

Service 2017

A

WATER CONNECTION: $\frac{3}{4}$ flexible tube for entry of water to the machines.



B

WATER PUMP: Pump which drives the water from the water tank to the evaporator, for production.



FLOAT: Hollow part which floats and is endowed with a mechanical seal which allows entry of water to the water tank when the level is lower than required.



FLANGE for tube: Plastic or metal clasp system for tubes.



C

COMPRESSOR: A compressor is a machine with the role of sucking the gas coming from the evaporator and transporting it to the condenser, increasing its pressure and temperature.

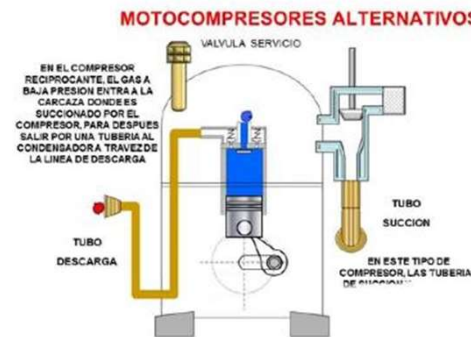
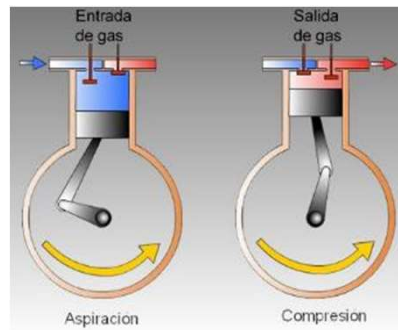
TYPES: Reciprocating/rotary/screw/centrifugal/scroll.

Hermetic: Both the motor and the compressor are inside the same casing and are inaccessible.

Semi-hermetic: Accessible, but the motor and compressor are inside the same casing.

Open: Motor and compressor are separate.

Reciprocating: A gas compressor which works by displacement of a piston within a cylinder (or several) moved by a crankshaft to obtain high-pressure gases.



CONDENSER: Puts the gases coming from the compressor into contact with a medium to liquidise them. In charge of releasing heat originating from water when it cools, into the atmosphere or into water (air or water).



Water



Air

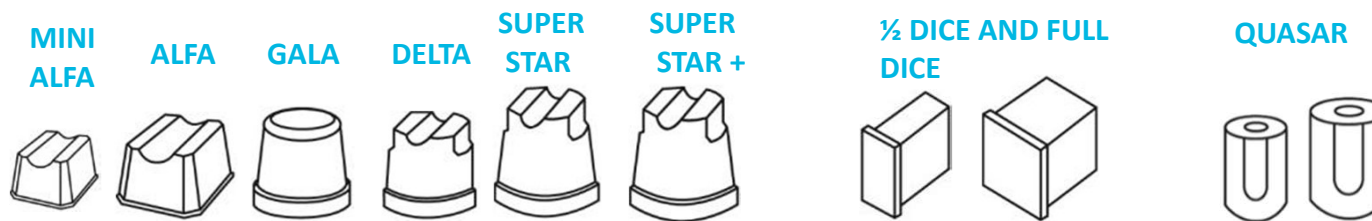
CONTACTOR: Electro-mechanical safety component with the objective of connecting or breaking the passage of current, by means of an interior coil.



PIPE INSULATION / ARMAFLEX: System to cover the refrigerating tubing, to prevent energy loss, of different thicknesses.



CUBE: Ice formed after freezing the water. Of different shapes and sizes:



D

LIQUID TANK: Allows refrigerant to be stored in liquid and gas form to offset changes in the refrigeration circuit.



WATER TANK: Where the water to make the ice is stored.



DISPENSER: Ice store with system to dispense the ice from an opening, into the glass.



DISPLAY: Item with a screen to show the parameters of the machine, normally accompanied by a keyboard.



CIRCUIT BREAKER: Electrical protection element. This is an appliance capable of breaking or opening an electrical circuit when the intensity of the electrical current circulating through it exceeds a certain value.



SPRINKLER: Part composed of collector and injectors which rotates by the force of the water from the water pump and showers the evaporator to form the ice.

E

ELECTROVALVE: Gate valve for liquid, water, with a metal body, a spring and a coil. When voltage is supplied to the coil, the strength of the spring is overcome and water is allowed to pass through.



EVAPORATOR: The evaporator is where the heat exchange between the refrigerant and the medium to cool takes place. The gas enters in liquid form, expands in the expansion valve and progressively captures heat from the medium until turning into vapour and going to the compressor.



F

FILTER: Parts to filter both the refrigerant and the water.

Refrigerant filter: Mesh, bead, compact/porous (ceramic).

Water filter: Filter for calcium, chlorine, solid particles (with or without exchangeable cartridge).



Water



Refrigerant

PHOTOCELL: Light beam stoppage system.



LEADSCREW: Long screw, normally made of stainless steel, used to move the ice generated towards the exit of the evaporator, or to press the ice so that it drops out of the evaporator.

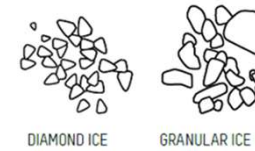


H

FLAKE ICE: Dry, flat, subcooled ice.



GRANULAR



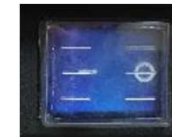
GRANULAR ICE: Wet, crushed ice.

I

HEAT EXCHANGER: Connects the suction tube and the liquid tube to improve heating/subcooling.



SWITCH: Electrical device which allows the current to be broken (on and off).



INJECTOR: Part which allows water to be sprinkled, through a collector, over the evaporator to produce the ice.



Injector



Collector

M

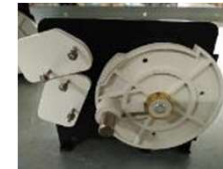
COMPACT MACHINE: Ice-producing machine, with tank to store the ice, also known as an under-counter machine.

MODULAR MACHINE: Ice-producing machine, without storage tank.

STIRRER MOTOR: Electric motor which turns the production blades.



ROTATOR MOTOR: Electric motor which moves the water and ice cube tank.



GEAR MOTOR: Electric motor connected to a gear reducer.



O

VALVE STEM: Valve with stopper which allows a hose or other piece to be connected order to read the refrigerant pressure, and to load, empty.



ORIFICE: Component which allows the expansion of gas as it passes through. Located in the expansion valve.



P

FOOT: Part used to raise the unit, dismountable or not. Allows the height of the unit to be adjusted.



PRESSURE SWITCH: System to read the pressure. The fluid exerts pressure on an internal piston, making it move until two contacts come together. UPPER or LOWER

Mini pressure switch: Small, nonadjustable pressure switch, for valve stem.

Differential pressure switch: Works by selecting an adjustable pressure differential.



PROGRAMMER: Motor in charge of timing the duration of the ice production cycle and of passing over to ice detachment. Controlled by the cycle thermostat (evaporator temperature) and the stock thermostat (stoppage when full).



R

REFRIGERANT: Body or substance which acts as a cooling agent, absorbing heat from another body or substance. R404A, R134A, R717, R744



RELAY: Electromagnetic system which functions as an electric switch, by means of a coil and an electromagnet.



PHASE MONITORING RELAY: Relay which keeps a three-phase motor always rotating in the same direction. If the entry of the phases (direction of rotation) varies, it activates the system alarm.



S

THICKNESS SENSOR: Sensor to control the thickness of the ice. Makes contact with the body of the machine.



BALL BEARING: Type of bearing, which is a mechanical part that reduces friction between an axle and the pieces connected to it by means of races, which serve to support it and facilitate its movement.



SILO: Vessel for storing the ice.



EXPANSION SYSTEM: The purpose of the expansion pieces is to control the passage of refrigerant and to separate the upper from the lower part:

•**CAPILLARY TUBE:** System controlling expansion of the refrigerant. When the refrigerant enters the capillary tube, a strangulation (increase in velocity and decrease in pressure) is produced due to the fact that part of the liquid evaporates on change of pressure.



•**THERMOSTATIC EXPANSION VALVE:** System controlling expansion of the refrigerant. Includes a bulb loaded with the same refrigerant as that to control. This acts on the orifice of the valve in accordance with the exit temperature from the evaporator. The higher the temperature, the wider the opening. Includes a heating screw to adjust the passing pressure.



•**KVP:** System controlling expansion of the refrigerant. Mounted on the suction section. Keeps the evaporator pressure constant, based on a certain temperature.



•**ELECTRONIC EXPANSION VALVE:** System controlling expansion of the refrigerant. Consists of a solenoid valve connected to a microprocessor with two temperature probes. DRIVER V800 + KEYBOARD + VALVE



WATER LEVEL PROBE: Magnetic water level probe.



PRESSURE PROBE: System to read refrigerant pressure and with signal for digital reading.



TEMPERATURE PROBE: Probe in charge of reading the temperature, normally of the evaporator, connected to an electronic board.



T

THERMAL FUSE BOX: Adjustable safety part. Allows the electricity to the machine to be cut when the current is too high.



CYCLE THERMOSTAT: Thermostat with bulb in the evaporator. In charge of sending voltage to the programmer in order to begin the cycle time, normally adjusted from -8°C to -12°C, adjustable.



STOCK THERMOSTAT: Thermostat which carries out the stoppage of the machine when its bulb reads a temperature of below 5 degrees, as a result of ice accumulating in the ice tank. Adjustable from 3°C to 5°C.



DRAINAGE TUBE: Plastic tube for exit of water from the stock tank or water tank.



V

SOLENOID VALVE: Valve with opening through a coil.



VARIABLE SPEED DRIVE: Electronic system for varying the rotational speed of a motor by modifying its supply frequency, always three-phase.



FAN: Mechanical part which moves the air by means of blades, in order to cool the condenser by air flow.

