

metos

ICE CRUSH MAKER, FLOOR MODEL

Air-condensed
Water-condensed

TYPE: GB 902A, GB 1555A

Installation and Operation Manual



Dear Customer,

Congratulations on deciding to choose a Metos appliance for your kitchen activities. You made an excellent choice. We will do our best to make you a satisfied Metos customer like thousands of customers we have around the world.

Please read this manual carefully. You will learn correct, safe and efficient working methods in order to get the best possible benefit from the appliance. The instructions and hints in this manual will give you a quick and easy start, and you will soon note how nice it is to use the Metos equipment.

All rights are reserved for technical changes.

You will find the main technical data on the rating plate fixed to the equipment. When you need service or technical help, please let us know the serial number shown on the rating plate. This will make it easier to provide you with correct service.

For your convenience, space is provided below for you to record your local Metos service contact information.

METOS TEAM

Metos service phone number:.....

Contact person:.....

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1. General

Carefully read the instructions in this manual as they contain important information regarding proper, efficient and safe installation, use and maintenance of the appliance.

Keep this manual in a safe place for eventual use by other operators of the appliance.

The installation of this appliance must be carried out in accordance with the manufacturer's instructions and following local regulations. The connection of the appliance to the electric and water supply must be carried out by qualified persons only.

Persons using this appliance should be specifically trained in its operation.

Switch off the appliance in the case of failure or malfunction. The periodical function checks requested in the manual must be carried out according to the instructions. Have the appliance serviced by a technically qualified person authorized by the manufacturer and using original spare parts.

Not complying with the above may put the safety of the appliance in danger.

1.1 Symbols used in the manual



This symbol informs about a situation where a safety risk might be at hand. Given instructions are mandatory in order to prevent injury.



This symbol informs about the right way to perform in order to prevent bad results, appliance damages or hazardous situations.



This symbol informs about recommendations and hints that help to get the best performance out of the appliance.

1.2 Symbols used on the appliance



This symbol on a part informs about electrical terminals behind the part. The removal of the part must be carried out by qualified persons only.

1.3 Checking the relation of the appliance and the manual

The rating plate of the appliance indicates the serial number of the appliance. If the manuals are missing, it is possible to order new ones from the manufacturer or the local representative. When ordering new manuals it is essential to quote the serial number shown on the rating plate.

2. Safety instructions

2.1 Safe use

To guarantee the efficiency of the automatic ice crush maker and to ensure its proper operation, it is essential to adhere to the directions provided by the manufacturer and to make sure that any maintenance work is carried out exclusively by professionally qualified staff. The appliance is designed to be used by adult persons. Consequently, prevent any children from gaining access to it, for example with the intention of playing with it.

2.1.1 Modifications

Modifying or attempting to modify this appliance, in addition to rendering any form of warranty null and void, is extremely dangerous.

2.2 Safety instructions in case of malfunction

Under no circumstances, attempt to repair the appliance yourself, since any intervention on the part of persons who are not competent, in addition to being dangerous, may cause serious damage to it. In the event of a failure, contact the dealer who sold you the appliance; he will be able to give you the address of your nearest Authorized Technical Service Centre. We recommend that you insist on having always and exclusively original spares.

2.3 Disposal of appliance

Should you decide to scrap your automatic ice crush maker, first disconnect the power supply cable from the mains, and then cut the cable off. In addition, proceed as follows:

- Break and remove the door in order to prevent the possible danger of a child getting trapped inside.
- Make sure not to disperse the coolant gas and oil contained in the compressor into the environment.
- Dispose of or recover the various materials according to the requirements of current regulations valid in your country.



This appliance does not contain coolant that damages the ozone layer.

3. Functional description

3.1 General

In making ice crush use only cold, pure drinking water. Because ice crush is mainly used for cooling of beverages for internal use, shall the quality of water in making ice crush be considered as important as the pureness and good storage of any other food products.

3.2 Designed use of appliance

The ice crush maker is designed solely for the production of ice crushs.

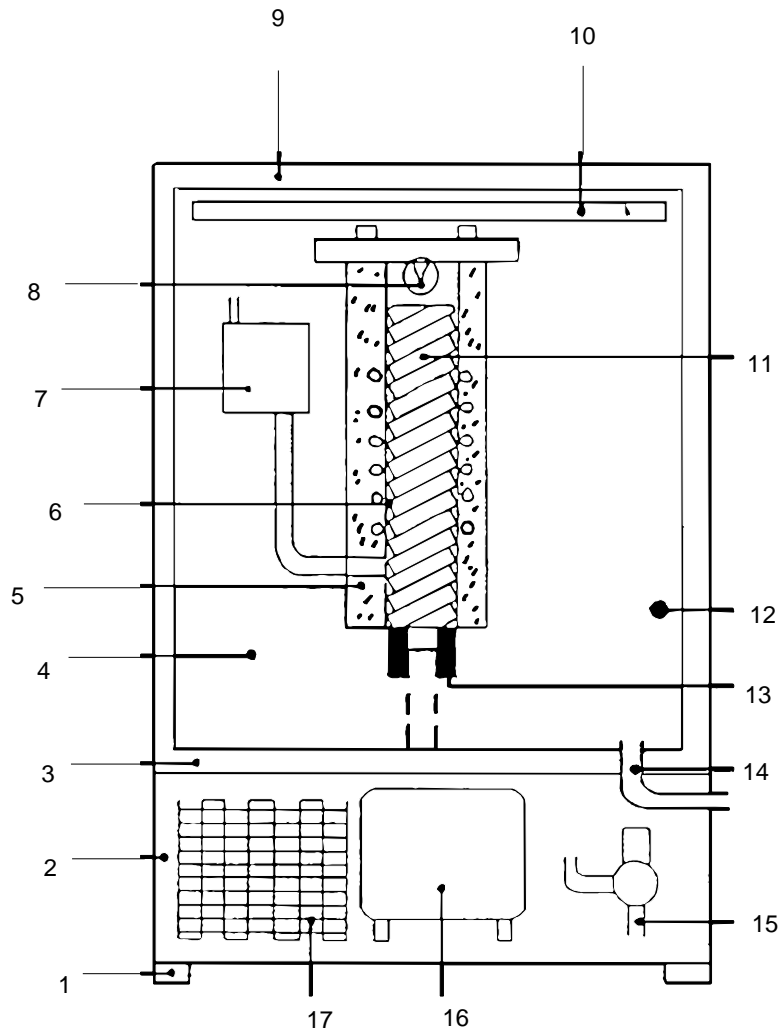
3.2.1 Other than instructed use

Do not use the ice crush container to cool or preserve food or drinks, insofar as these operations could cause the drainage system to get clogged, so leading the container filling up and water leaking out. Any use of the ice crush maker other than for the production of ice crushs, from cold drinking water, is to be considered as improper use.

3.3 Structure

The supporting structure of the ice crush maker is of steel and the outer panels are of stainless steel.

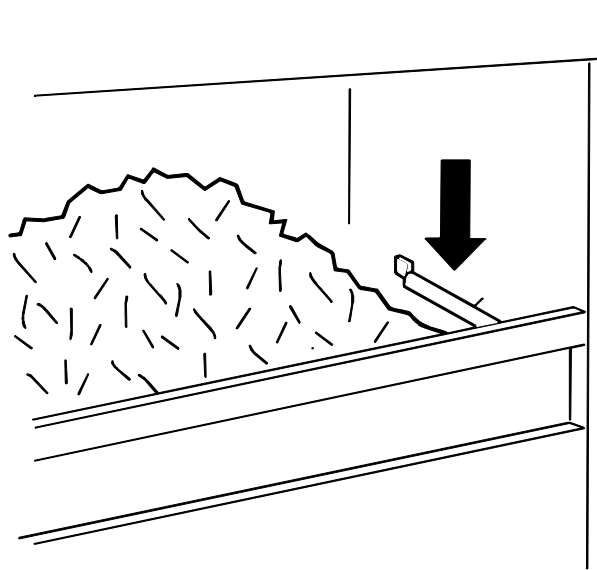
Functional description



1. Adjustable foot
2. Cooling system
3. Insulated storage bin
4. Ice crush basin
5. Copper tube
6. Evaporator
7. Water basin
8. Icebreaker
9. Steel cabinet
10. Door
11. Vertical auger
12. Bin level bulb
13. Bearings
14. Water outlet
15. Water inlet
16. Gearmotor
17. Air/Water condenser

3.4 Functioning principle

The coolant in the cooling system freezes the evaporator to a temperature of -15°C . A water pump sprays an even jet of water into the cylinder shaped evaporator. When the ice is formed into the walls, the auger crushes the ice, looser from the walls of the evaporator and pushes the ice crushes down to the basin. When the ice crushes reach the level of a probe in the basin, the ice forming terminates. When the level of ice crush falls under the level of the probe, then ice forming restarts automatically.



3.4.1 Switches and signal lights

A switch on the front panel switches ON and OFF the appliance.

4. Use instructions

4.1 Before use

4.1.1 Preparations

The ice crush maker has been already cleaned in the factory.

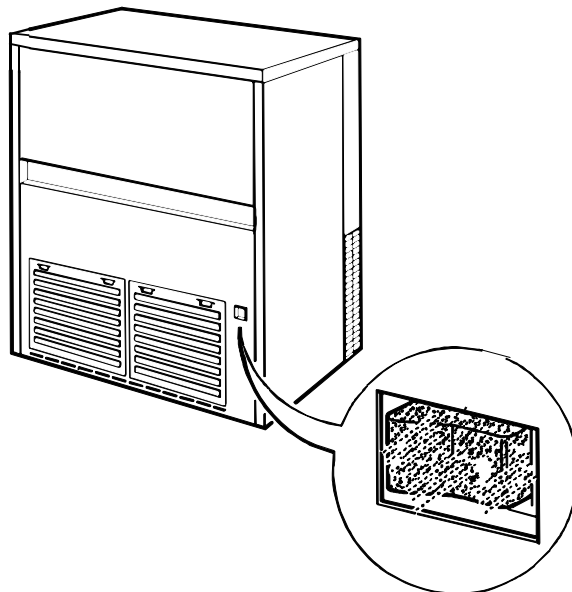


It's recommended to wash the ice crush tank again before using the appliance first time. The internal parts cleaning can be carried out only by the Authorized Technical Service Centre.

4.2 Use

After the appliance has been correctly connected to the electric supply mains, to the water supply mains and to the water drainage system, you can start the appliance. Turn on the water supply tap and switch on the power supply by means of the relative switch fitted during the installation.

Start by pressing the switch on the front panel.



Use instructions

In making ice crush use only cold, clean drinking water. Because ice crush are mainly used for cooling of beverages for internal use, shall the quality of water in making ice crush be considered as important as the pureness and good storage of any other food products.

Never use the ice container for cooling or storing of food products or beverages, because this may cause an obstruction in the drain for the melt water, which would cause an overflow of water in the container.

4.3 After use

4.3.1 Cleaning



Unplug the power cable from the socket, before you start cleaning operations.

For exterior cleaning operations use an ordinary detergent for washing dishes or a solution of water and 10% of vinegar. You are recommended not to use abrasive detergents or powders, since these might damage the finishings.



Internal parts cleaning and disinfecting can be carried out only by the authorized technical service centers.

4.3.2 Scheduled maintenance

We recommend that you ask your dealer to draw up a scheduled maintenance contract which will cover the following:

- cleaning of the condenser every two months
- cleaning of the filter located on the water inlet solenoid valve every two months
- cleaning of the ice container 2 x year
- check on state of charge of the coolant gas 2 x year
- check of operating cycle 2 x year
- disinfection of the ice crush maker 2 x year.

4.3.3 Layup

If you do not intend using the ice crush maker for a certain period of time, proceed as follows:

- Unplug the power cable from the socket.
- Shut off the water supply by turning off the tap provided during installation.
- Carry out all the operations envisaged for scheduled maintenance of the appliance.

5. Installation

5.1 General

The ice crush maker is delivered attached to a special wooden pallet and protected with cardboard packaging.

Installation must be carried out exclusively by qualified and authorized staff, in compliance with current national standards and following manufacturer's instructions.

5.1.1 Using conditions

The best performance of the ice crush maker is achieved at a room temperature of between 10°C and 35°C and a water supply temperature of between 3°C and 25°C. Avoid installing the appliance where it may be exposed to direct sunlight or near to heat sources, such as radiators, stoves, dish-washers, etc.

This appliance:

- must not be used outside
- must not be installed in damp places or where it is liable to be sprayed with water
- the distance of the appliance from the side walls should be at least 5 cm.

5.2 Possible disturbances from environment (to environment)

If installation is carried out incorrectly, damage and/or injury may ensue to the environment, persons, animals or things. The manufacturer declines all responsibility for any such damage or injury.

5.3 Storage

The net weight and the weight including packaging of the ice crush maker are given on the cover of the packaging. In order to prevent the oil contained in the compressor from flowing into the coolant circuit, make sure to transport, store, and handle the ice crush maker always keeping it standing upright. Follow the instructions given on the packaging.

The special wooden pallet, built so that it can be lifted with a fork-lift truck, enables the appliance to be moved around using ordinary means of handling and lifting.

5.4 Preparing installation

Make sure, that the ice crush maker will be installed on an even surface. Avoid installing the appliance near heat sources. A floor drain should be found near of the place of installation. The maximum distance being 5 m. Make sure that the melt water pipe presents a slope of at least 5% throughout its entire length.

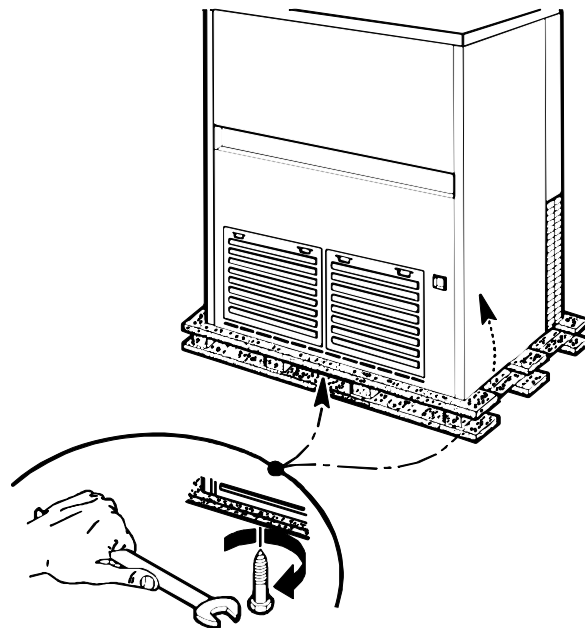
5.5 Unpacking

Remove the cardboard packaging according to the instructions on the box.



Once you have removed the packaging, make sure that the ice crush maker is in perfectly good conditions. If you are in any doubt, don't use it and contact immediately the dealer who sold it to you.

Rest the wooden pallet on the floor and loosen and remove the bolts that fix the appliance to the pallet.



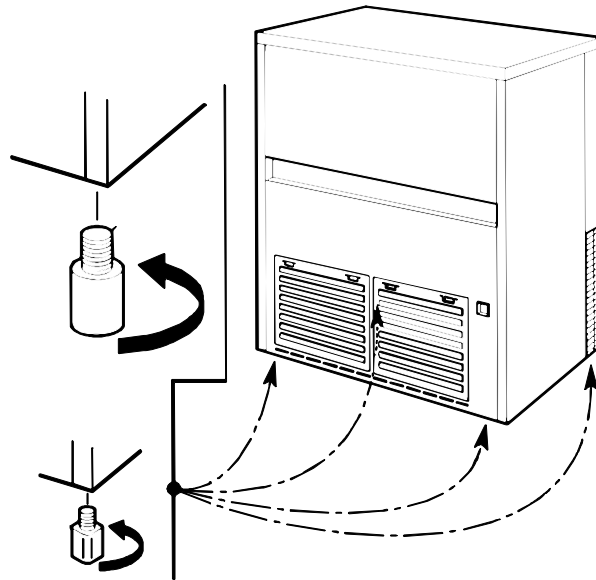
5.6 Disposal of packaging

All the packaging items (plastic bags, cardboard, polystyrene foam, nails, etc.) must not be left within reach of children, in that they are potential sources of danger.

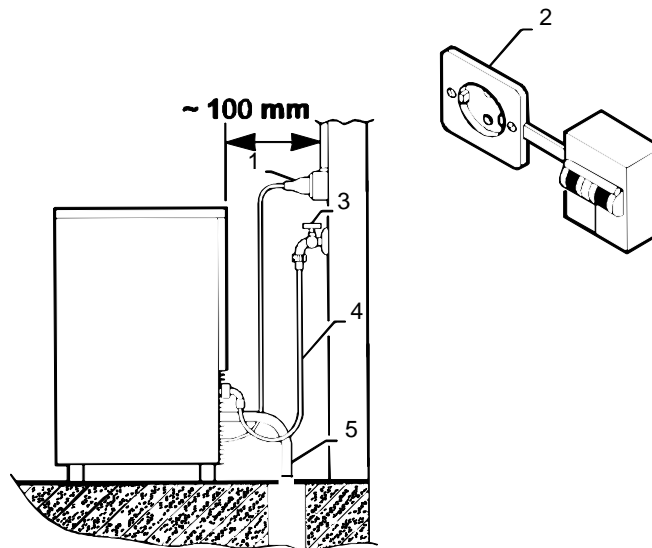
5.7 Installation

Once you have completed the above operations, lift the ice crush maker using equipment fit to bear its weight. Separate the appliance from the wooden pallet.

Screw the supplied feet in the housing on the base plate provided for the purpose.



5.8 Placing of appliance



1. Plug
2. Socket with switch
3. Water tap
4. Water supply pipe
5. Water drain pipe

5.9 Connection to power supply mains

The electrical wiring system scheme is attached inside of the front panel of the ice crush maker.

Electric safety of the ice crush maker is achieved solely when the appliance is properly connected to an efficient earthing system made in compliance with current national safety standards. Make sure that this fundamental safety requirement is respected and, if you are in any doubt, ask for a thorough check of the electric system by professionally qualified and authorized staff. The manufacturer declines all responsibility for damage and/or injury that might ensue from any failure to earth the system properly. It is essential that the electrical wiring system where the appliance is to be installed should have adequate current carrying capacity for the maximum power of the appliance, as shown on the data plate. To achieve a proper and safe installation of the ice crush maker, it is necessary to provide an appropriate earthed socket, with a contact-opening gap of no less than 3 mm, in accordance with current national safety standards. This switch must moreover be equipped with fuses.

Make sure to unroll the power supply cable to its entire length and check that it is not squeezed in any way.

5.10 Connection to water mains

5.10.1 Connection to cold water

The ice crush maker is designed solely for producing ice and must be fed exclusively with cold water for human consumption (drinking water).

The running pressure must be between 1 and 6 Bar.

Connection to the water mains must be made following the manufacturer's instructions by professionally qualified staff.

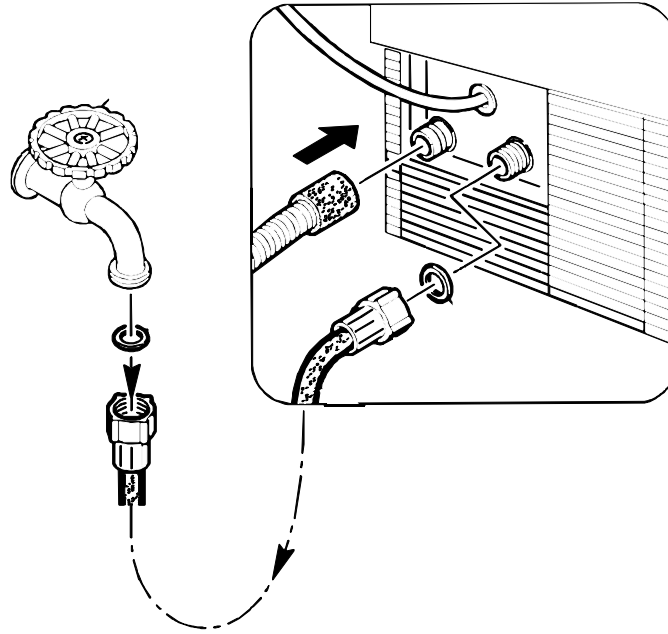
Between the water mains and the charge pipe of the ice crush maker, a tap must be installed so that the water supply may be shut off if need be.



Never turn the water supply tap off when the appliance is working.

Where the feed water is particularly hard, you are advised to install a softener. Any solid particles (e.g., sand) may be eliminated by installing a mechanical filter, which must be periodically inspected and cleaned. These filters must be in compliance with the relevant national standards in force.

Insert the special seals provided in the two threaded ring nuts of the water supply pipe supplied with the appliance.

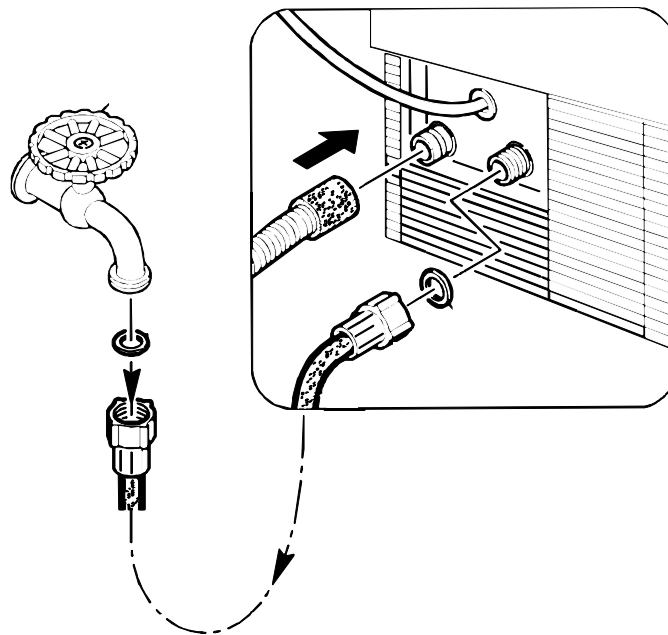


Without exerting excessive force in order not to risk cracking the unions, firmly tighten a threaded ring nut inlet of the solenoid valve in the back of the appliance.

The other threaded ring nut must be screwed to the water tap, this must be threaded too.

5.10.2 Connection to water drain pipe

Fix the water drain pipe in the housing provided on the back of the appliance.



Make sure that:

- The internal diameter of the pipe is 22 mm.
- The water drain pipe is not throttled in any point throughout its length.
- The drain pipe presents a slope of at least 5% on its entire length and there are no air pockets in the pipe.
- Lead the discharge pipe into an open drain trap, head of the pipe must stay over the drain trap.

5.11 Distance of other fixtures



Do not obstruct the ventilation and heat-dissipation grills, since poor aeration, in addition to reducing efficiency and causing poor operation, may also cause serious damage to the appliance.

Leave distance at least 50 mm from the sides and 100 mm from the back of the ice crush maker, to make sure that air conditioning is sufficient.

6. Main causes of operating failure

Should the appliance fail to produce ice, before calling on the Authorized Technical Service Centre, first check carefully that:

- The water supply tap provided in the installation phase is open.
- The electric power is reaching the appliance, the plug is properly inserted, and the corresponding switch is in the “on” position.
- In the event of excessive noise, check that the appliance does not come into contact with furniture or sheet metal that may cause noise or vibrations.
- Should any traces of water appear, check that the discharge hole of the container is not obstructed, that the water feed and discharge pipes are correctly connected up and do not present any throttling or damage.

Once the above checks have been made, if the appliance were still to present malfunctioning, switch off the power supply via the switch provided during the installation phase, pull out the plug from its socket, close the tap connecting the appliance up to the water supply, and call the nearest Authorized Technical Service Centre.

In order to obtain a faster and more efficient intervention, when you call the Centre, indicate the model of the appliance precisely, and its serial number. These can be read on the matriculation label stuck on the rear of the appliance or on the cover of this manual.

Table 1:

MALFUNCTION	Possible cause	Operation
Ice crush maker does not function	Appliance does not function	Check power supply
	Thermostat in the container does not func.	Change the thermostat
	Safety thermostat of the condenser does not function.	Change the thermostat
	Contacteur does not function/burned down	Change contactor
	Lack of water in the water basin	Check the solenoid valve
		Check the microswitch of the water basin
	Start up relay is malfunctioning	Change the relay
	Safety thermostat for the evaporator does not function	Change the evaporator thermostat
	Overcurrent protection for the gearmotor does not switch on	Change the overcurrent protection
Appliance functions, but does not make proper ice	There is no coolant gas	Find leakage, fix it, vacuumize and fill up
	Compressor does not pump	Change the compressor
	Air condensed models:	Check the fan, change if needed
	Condenser fan does not function	Check the function. of the pressure switch
Water basin receives no water	Solenoid valve does not open or is blocked	Change the valve, clean the filter

Main causes of operating failure

Table 1:

Appliance does not stop when the container is filled	Thermostat of the ice container	Check the probe, adjust/change the thermostat
Safety thermostat stops the appliance	Water supply valve does not open	Check the pressure switch
		Check the valve, change if needed
Lack of water	Water supply or drain pipe is not connected	Check the connections
	Bad pipe connections	Check the pipe connections
Compressor is noisy or functions irregularly	Malfunctions in the electrical system	Check the electrical system
	Start condenser is malfunctioning	Change the condense
	Start relay is malfunctioning	Change the relay
	Uneven start	Change the compressor
	Shakes at start up	Change the compressor
	Extremely noisy functioning	Change the compressor
Ice crush production reduces	The condenser or the air filter is blocked	Clean the condenser or the filter
	Not enough liquid	Find leakage, fix it, vacuumize and fill up
	The suction valves of the compressor leak	Renew the compressor
Safety thermostat of the evaporator functions unevenly	Evaporator does not receive enough water	Check the water supply
	Gearmotor does not function	Check the motor and the fuses
Gearmotor functions unevenly or leaks oil	Gearmotor is stuck	Change the motor or the gears
	Gearmotor does not start	Renew the run condenser of the motor
	Unclean evaporator	Clean or change the evaporator
	Defective O-ring	Change the oil in the gearbox and the oi

8. Technical specifications

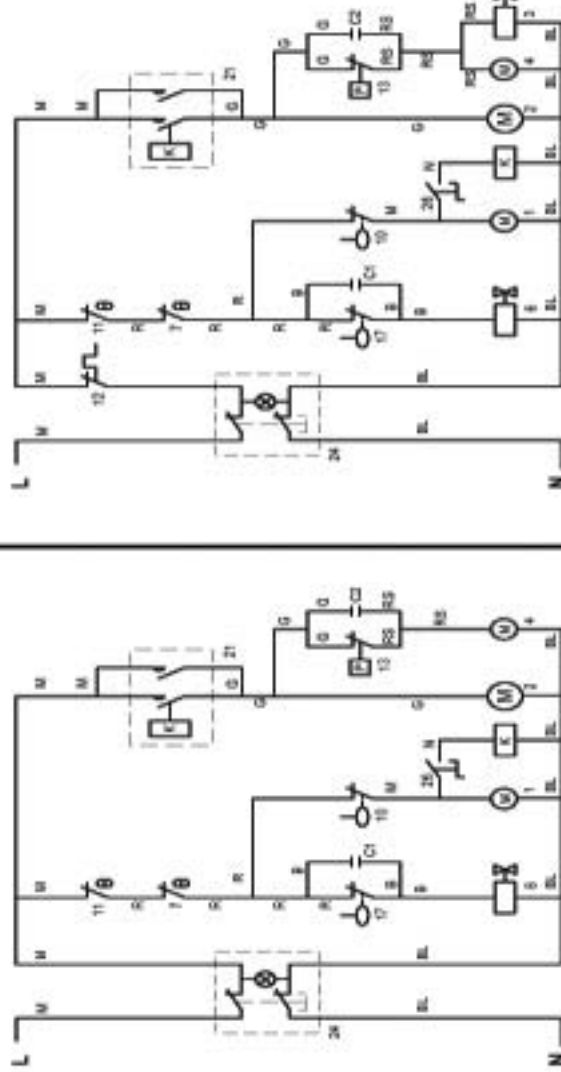
Electric diagram GB 902A, GB1555A

Installation drawing GB 902A

Installation drawing GB 1555A

Marine foot

SCHEMA ELETTRICO / ELECTRIC DIAGRAM



VETRINE AD ACQUA / WATER COOLERS

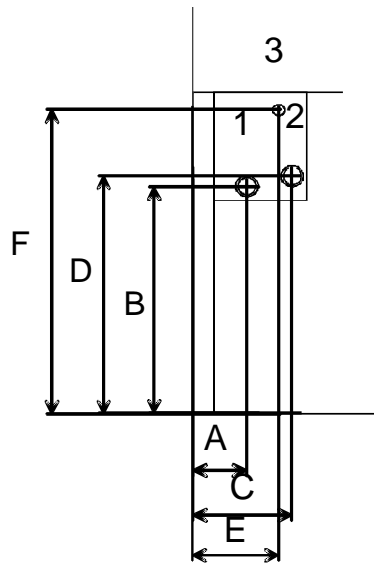
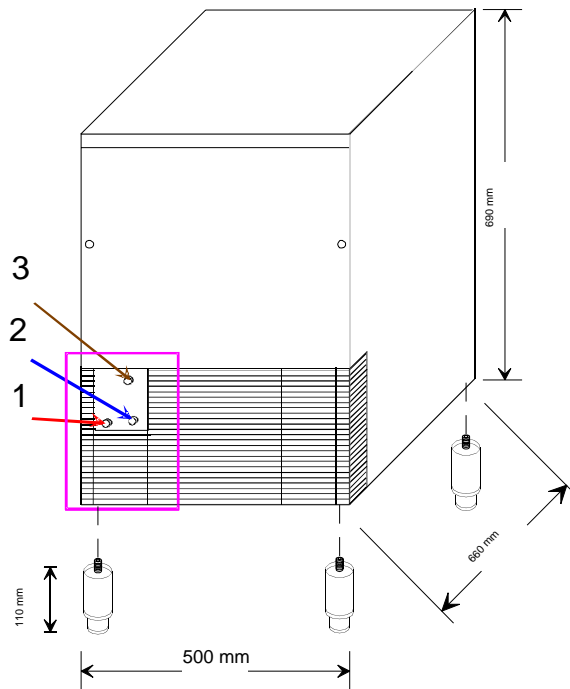
VETRINE AD ARI / AIR COOLERS

Cod. 24287 - Rev. 02

1. MOTORE DEL RIDUTTORE GEAR REDUCTION MOTOR	10. PRESSOSTATO CONTROLLO CONDENSATORE CONDENSER CONTROL PRESSURE SWITCH
2. COMPRESSORE COMPRESSOR	11. MICRO CONTROLLO LIVELLO ACQUA BACINELLA BASIN WATER'S LEVEL MICRO SWITCH
3. ELETTROVALVOLA INGRESSO ACQUA PER CONDENSATORE CONDENSER'S WATER INLET VALVE	14. INTERSUTTORE LUMINOSO SWITCH-ON-OFF (GREEN LIGHT)
4. MOTORE VENTILATORE FAN MOTOR	16. DISGIUNTORE CENTRIFUGO DEL MOTORE RIDUTTORE GEAR REDUCTION MOTOR CENTRIFUGAL SWITCH
5. ELETTROVALVOLA INGRESSO ACQUA BACINELLA BASIN'S WATER INLET VALVE	
7. TERMOSTATO DI SICUREZZA EVAPORATORE EVAPORATOR SAFETY THERMOSTAT	
8. MICRO CONTROLLO MANCANZA ACQUA BACINELLA BASIN'S WATER'S LACK MICRO SWITCH	
11. BINA TERMOSTAT	
12. TERMOSTATO DI SICUREZZA CONDENSATORE CONDENSATOR SAFETY THERMIC	

- B = BIANCO / WHITE
- BL = BLU / BLUE
- G = GRIGIO / GREY
- MB = MARRONE / BROWN
- N = NERO / BLACK
- R = ROSSO / RED
- RS = ROSA / PINK

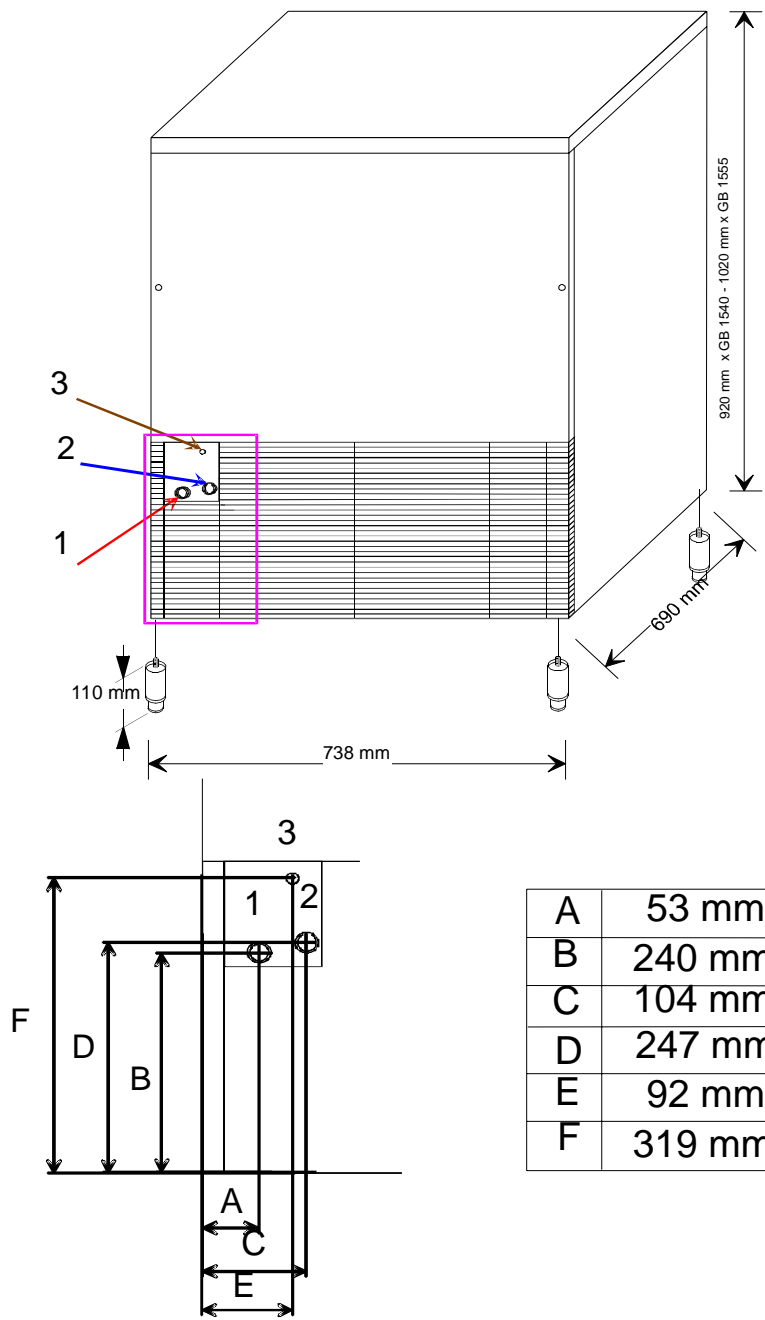
GB 902



A	48 mm
B	151 mm
C	99 mm
D	158 mm
E	87 mm
F	230 mm

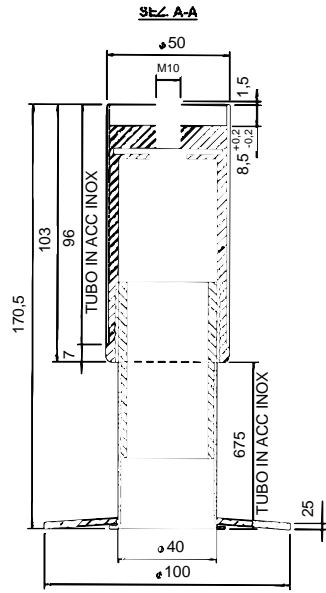
1. Water OUT, diam. 24mm
2. Water IN, diam. 3/4"
3. Power cable

GB 1555

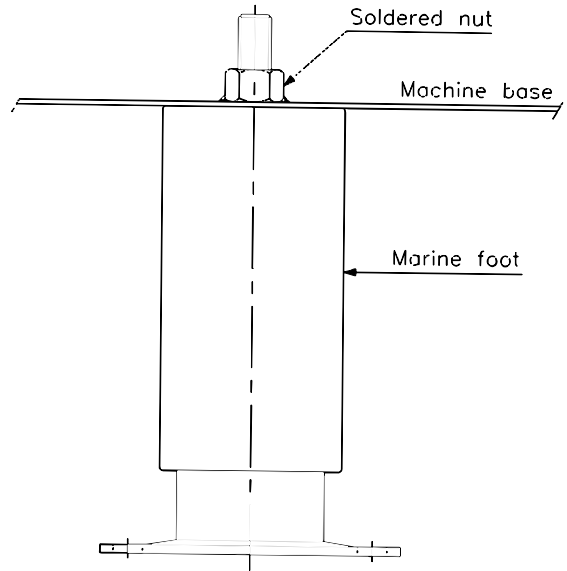


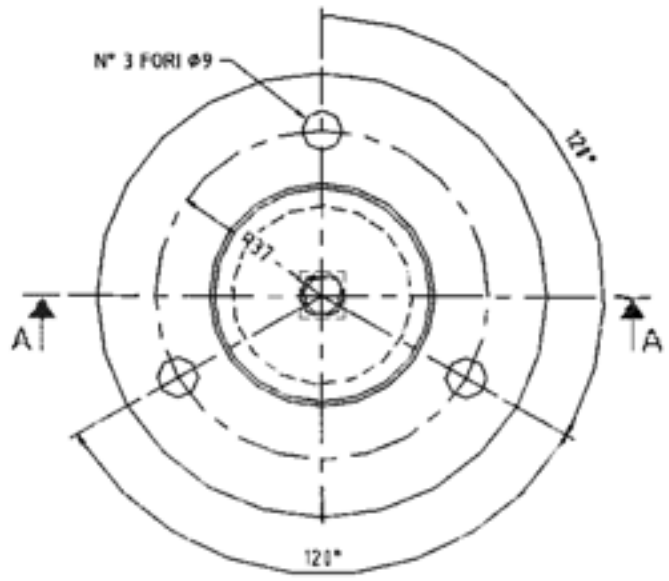
1. Water OUT, diam. 24mm
2. Water IN, diam. 3/4"
3. Power cable

New marine foot



Installation of marine foot:





Technical specifications

Item	Model	Type	Specification
Production in 24h, till		902	90 kg
Production in 24h, till		1555	150 kg
Storage capacity		902	20 kg
Storage capacity		1555	55 kg
Cooling system		902	A,W
Cooling system		1555	A,W
Fluid refrigerant		902	R404A
Fluid refrigerant		1555	R404A
Standard voltage		902	220-240/1/50
Standard voltage		1555	220-240/1/50
Input power		902	550W
Input power		1555	700W
Water consumption	A	902	1 l/kg
Water consumption	A	1555	1 l/kg
Water consumption	W	902	6,3 l/kg
Water consumption	W	1555	6,4 l/kg
Feet		902	110 mm
Feet		1555	110 mm
Size (WxDxH)		902	500x660x690 mm
Size (WxDxH)		1555	738x690x1020 mm
Size (with packing) (WxDxH)		902	540x700x790 mm
Size (with packing) (WxDxH)		1555	780x730x1125 mm
Weight net		902	59 kg
Weight net		1555	94 kg
Weight gross		902	67 kg
Weight gross		1555	105 kg
Refrigerant R404A	A	902	210g
Refrigerant R404A	W	902	190g
Refrigerant R404A	A	1555	240g
Refrigerant R404A	W	1555	200g

A=Air-cooled , W=Water-cooled

902=GB 902A, 1555=GB 1555A

B=~250V 16A 50Hz