

# **AUTOMATIC MODULAR SCALE ICE MAKER**

INSTRUCTIONS AND WARNINGS

24850 ed. 06-2012



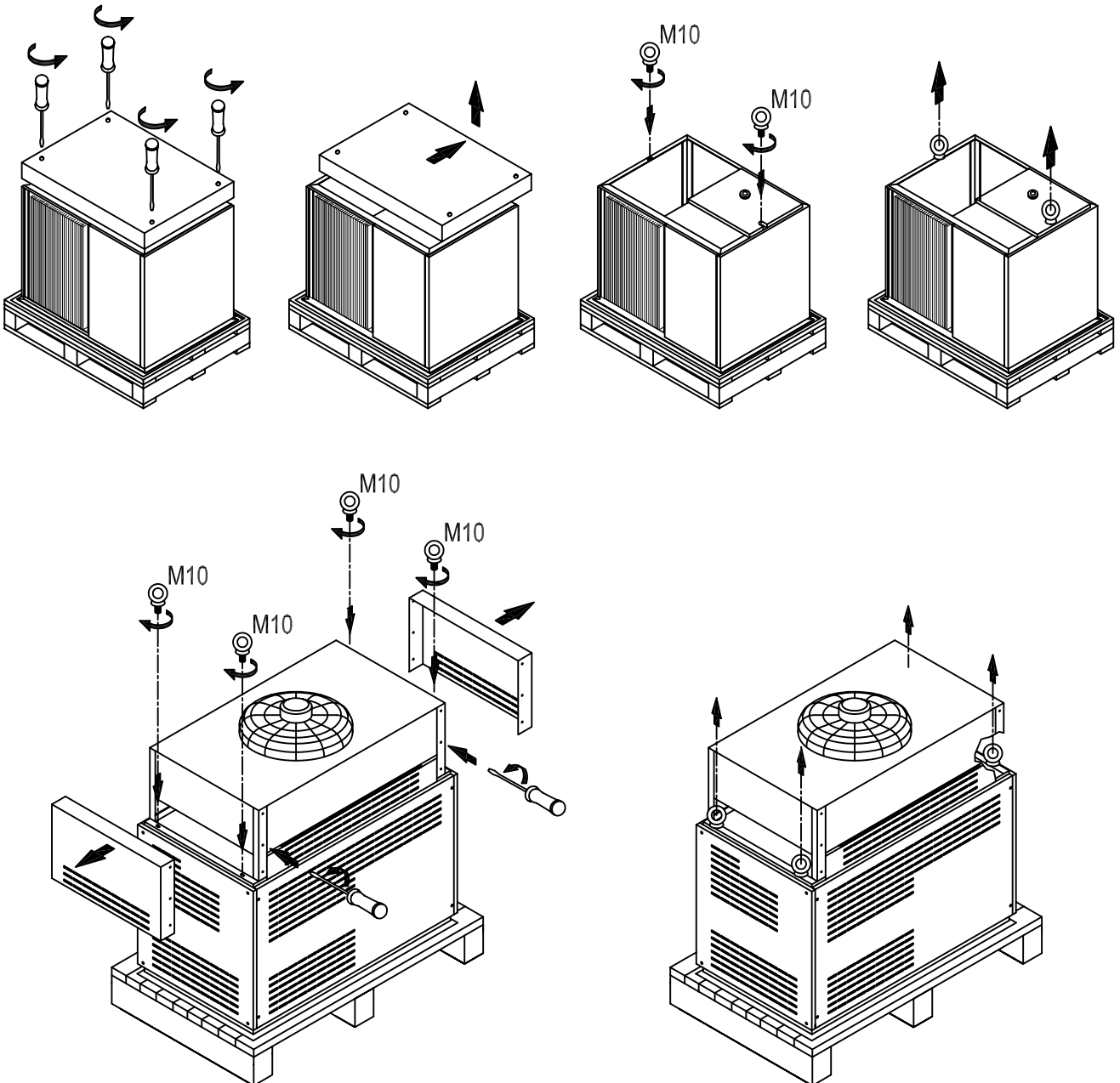
---

It is strictly forbidden to reproduce this manual or any part thereof.

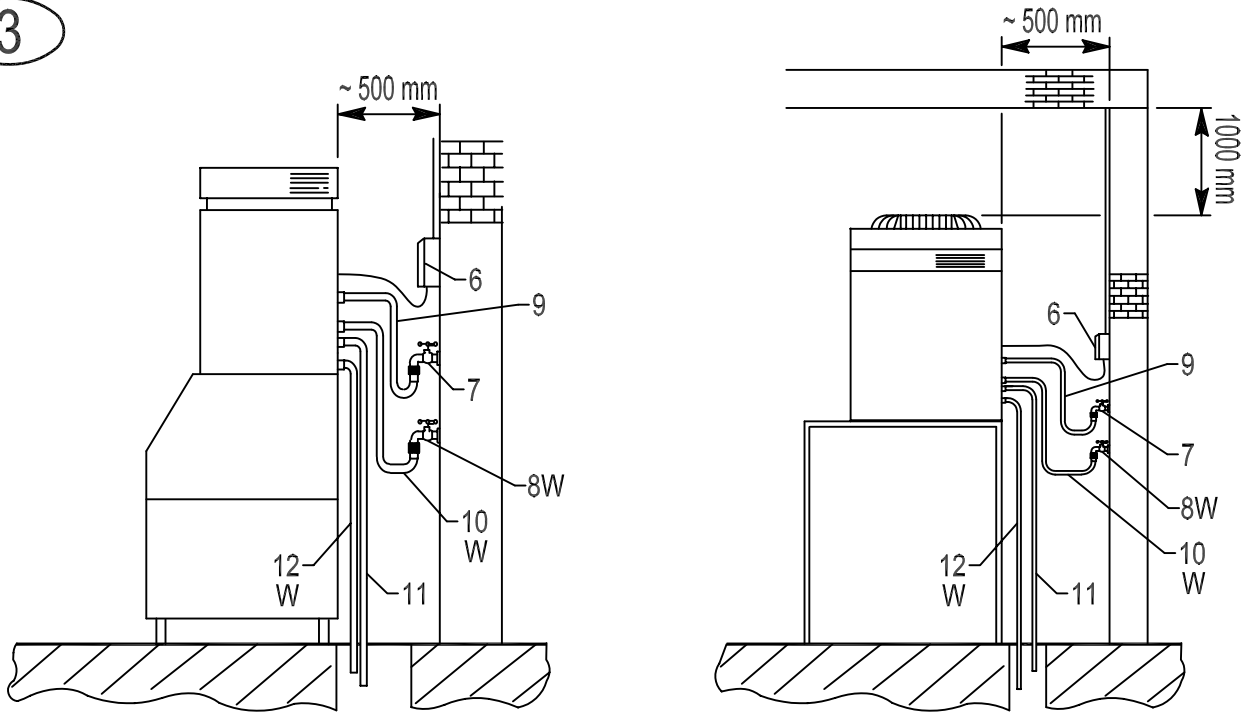
1

5	
3	4
Mod. <input type="text"/>	N. <input type="text"/>
V. <input type="text"/>	W. <input type="text"/>
1	2
☞ CE	

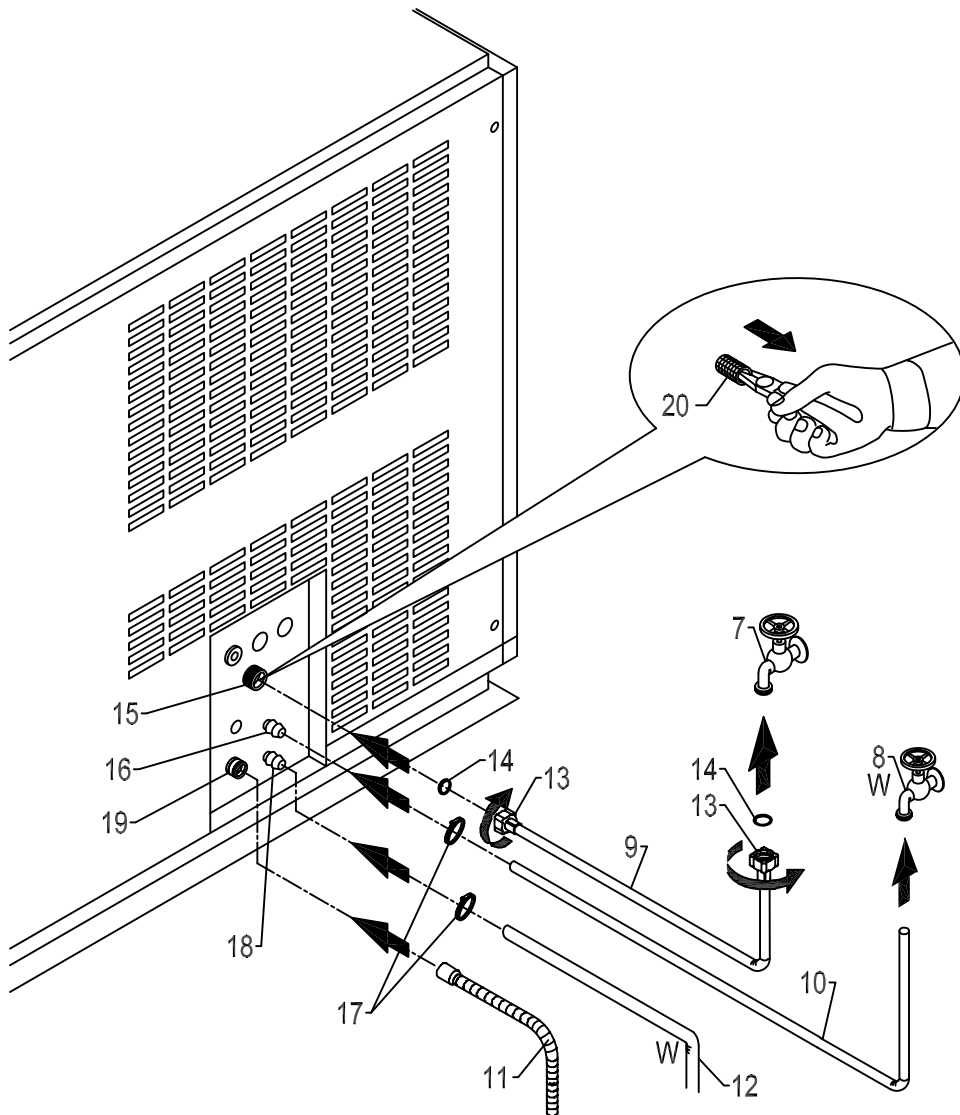
2



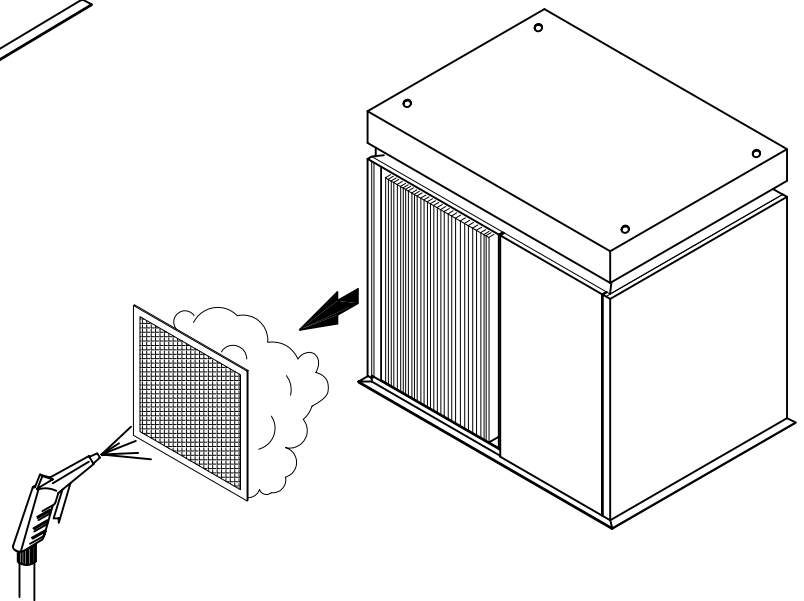
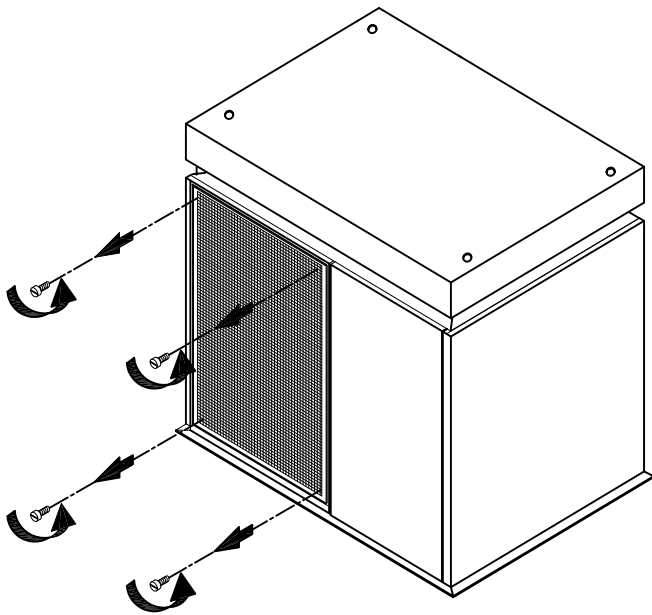
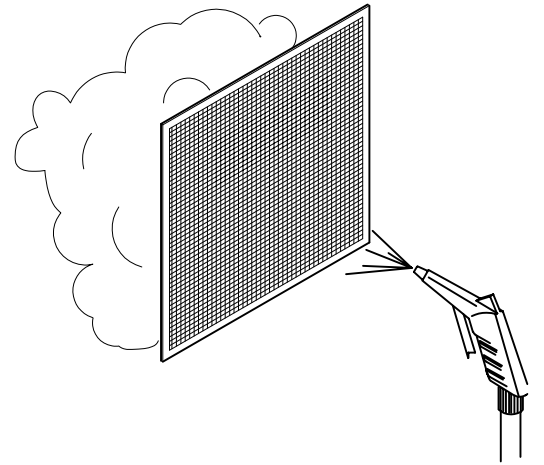
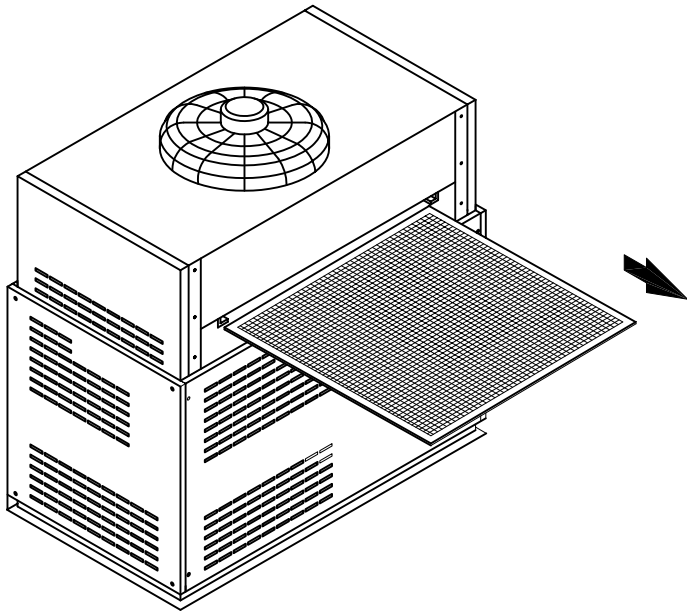
3



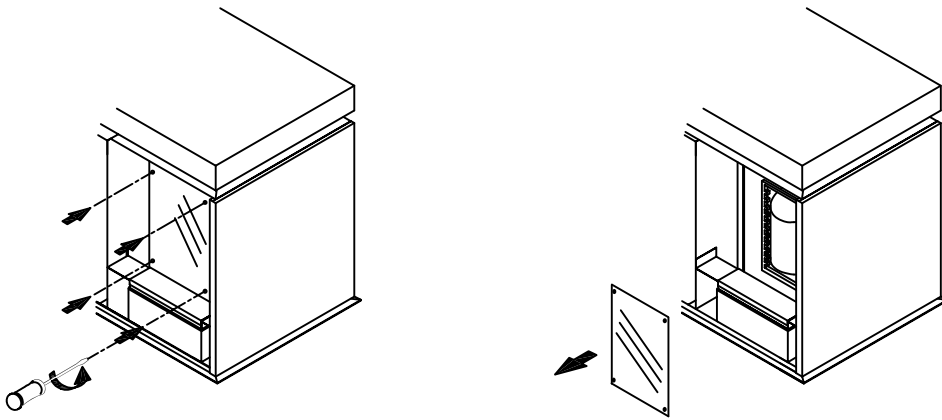
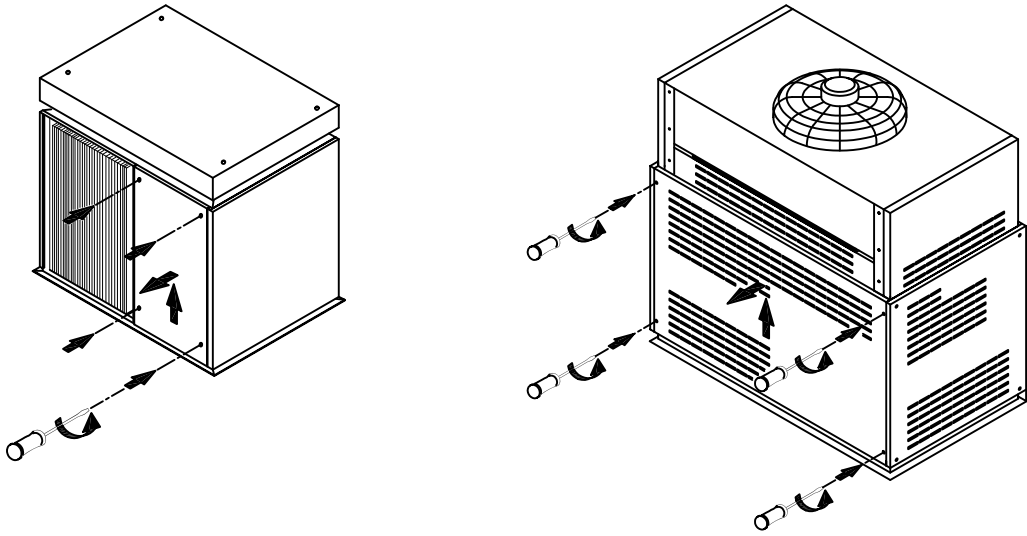
4



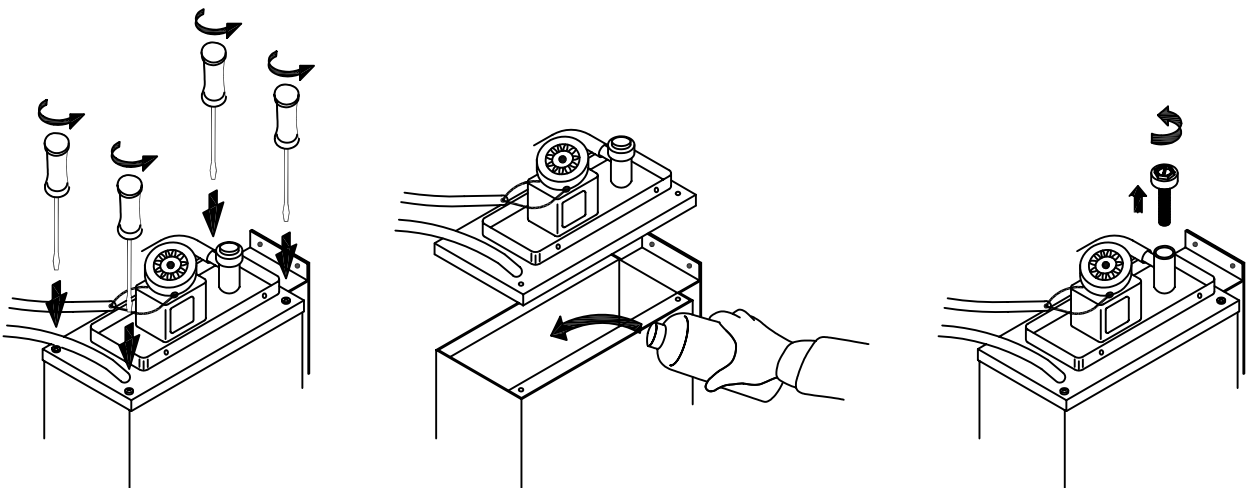
5



6



7



Dear Customer, Congratulations on having chosen a top-quality product, which is sure to live up to your expectations. Thank you for having purchased one of our products. Please **read this instruction manual carefully before using** your new modular automatic scale ice maker.

## TABLE OF CONTENTS

- 1 IMPORTANT ADVICE AND RECOMMENDATIONS**
- 2 TECHNICAL SPECIFICATIONS**
- 3 ADVICE ABOUT TRANSPORTATION**
- 4 UNPACKING**
- 5 INSTALLATION**
  - 5.1 CONNECTION DIAGRAM
  - 5.2 POSITIONING
  - 5.3 CONNECTION TO WATER MAINS
    - 5.3.a WATER SUPPLY
    - 5.3.b DRAIN
  - 5.4 CONNECTION TO THE ELECTRICITY MAINS
- 6 START-UP**
  - 6.1 CLEANING INTERNAL PARTS
  - 6.2 START-UP
- 7 MAIN CAUSES OF OPERATING FAILURE**
- 8 OPERATION**
- 9 MAINTENANCE**
  - 9.1 HOW TO CLEAN WATER SUPPLY UNION FILTER
  - 9.2 AIR-COOLED MODELS
  - 9.3 CLEANING AND SANITIZING OPERATIONS
    - 9.3.a CLEANING
    - 9.3.b SANITIZING
- 10 PERIODS AT A STANDSTILL**

The figures in this manual are of a general nature. Some details may therefore differ depending on the specific model.

The Manufacturer declines all liability for any inaccuracies in this instruction manual due to printing or transcription errors. The Manufacturer also reserves the right to make any modifications to the products that may be necessary or useful, also in the interests of the user, without impairing the products' essential features of functionality and safety.

## 1 IMPORTANT ADVICE AND RECOMMENDATIONS

**This instruction manual forms an integral part of the modular automatic flat flaked-ice maker (subsequently referred to as “the appliance”), and should be kept for possible future consultation.**

In the event of the appliance being sold or transferred to another person, this manual must be handed over to the new user, in order to enable him to become familiar with the operation of the equipment and the corresponding advice and recommendations.

**!! Before installing and using the appliance, read the advice and recommendations contained in this instruction manual very carefully. They are given in order to ensure safe installation, use and maintenance of the appliance.**

- always remove the plug from the power socket before proceeding with any cleaning or maintenance operations
- to ensure the appliance operates efficiently and correctly, it is essential to comply with the Manufacturer’s instructions and to make sure that maintenance is performed by specially qualified personnel
- do not remove any of the panels or grilles
- do not rest objects on the appliance or in front of the ventilation grilles
- always lift the appliance to move it, even slightly. Do not push or pull it
- any use of the appliance other than the ice production using cold drinking water will be deemed improper
- do not obstruct the ventilation and heat-dissipation grilles, since poor aeration - in addition to reducing efficiency and causing poor operation - may also cause serious damage to the appliance
- if the appliance breaks down and/or operates in a faulty way, switch it off by means of the main switch fitted during the installation phase, and turn off the water tap(s). Do not make any attempt to repair the appliance yourself. Contact only professionally qualified and authorized personnel
- in addition to rendering any form of warranty null and void, modifying (or attempting to modify) this appliance is extremely dangerous
- do not use the ice bin to cool or store food or drinks, because these operations could obstruct the drainage outlet, causing the bin to fill up with water and overflow
- 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. Always insist on having original spare parts mounted
- any specific information or diagrams regarding particular models will be attached to this manual

**!! Use of this electrical appliance requires compliance with certain fundamental rules; in particular:**

- do not touch the appliance with wet or damp hands or feet
- do not use the appliance when you are barefoot
- do not use extensions in premises such as bathrooms or shower rooms
- do not tug on the power supply cable to disconnect it from the mains
- do not allow the appliance to be used by children, incapable or inexperienced persons, unless they are supervised or instructions have been issued about the use of the appliance by a person responsible for their safety
- supervise children to ensure that they do not play with the appliance

Should you decide to scrap appliance, first disconnect the power cable from the mains, and then cut the cable off.

In addition, proceed as follows:

- do not allow the coolant gas and oil in the compressor to disperse into the environment
- dispose of or recover the various materials according to the provisions established by the current laws in force in your Country

**This appliance does not contain coolant that damages the ozone layer. It contains fluorinated greenhouse gases covered by the Kyoto Protocol.**

**!!** The Manufacturer shall not be liable for any damage to the environment, animals, persons or objects caused by incorrect installation.

## 2 TECHNICAL DATA (Fig. 1)

The voltage and frequency are given on the data plate on the appliance. Refer to this data plate to check compliance.

Voltage (1), power (2), model (3), serial No. (4), Manufacturer (5).

The weighted equivalent continuous sound level A of this appliance is less than 70 dB(A). The measurements were taken 1 metre from the surface of the appliance and 1.60 metres above ground, during ice production.

The wiring diagram is glued to the lid of the junction box of the appliance.

To access it, switch off the appliance, loosen the screws securing the left-hand side panel (the front panel in the case of the model with daily production of 2200 kg), lift and release the panel.

## 3 ADVICE ABOUT TRANSPORTATION

The net weight and the weight including packaging of the appliance are given on the cover of this instruction manual. Please refer to the instructions on the packaging in order to correctly transport and lift the appliance.

To prevent the oil in the compressor from flowing back into the coolant circuit, always make sure that the appliance is kept upright during transport, storage, and handling. Follow the instructions given on the packaging.

## 4 UNPACKING

**The appliance must be installed by authorized personnel, in compliance with the current laws in force and the Manufacturer's instructions.**

Once you have removed the packaging according to the instructions on the box, MAKE SURE THAT THE APPLIANCE IS IN A PERFECTLY GOOD CONDITION. IF IN DOUBT, DO NOT USE IT AND IMMEDIATELY CONTACT THE DEALER who sold it to you.

**All the packaging items (plastic bags, cardboard, polystyrene foam, nails, etc.) must be removed and put out of the reach of children, as they are potential sources of danger.**

With the pallet resting completely on the ground, lift the appliance with lifting gear suited to its weight and separate it from the wooden pallet.

### **⚠ NOTE FOR INSTALLER:**

**This operation must only be performed by professionally qualified and authorized personnel.**

The appliances contain threaded holes for hooking eyebolts (Fig. 2).

To prevent damage to the appliance, the lifting bolts should be kept vertical during lifting.

To lift the model with daily production of 2200 kg, remove the panels that close the condenser compartments, then screw the eyebolts into the threaded holes.

## 5 INSTALLATION

### **5.1 CONNECTION DIAGRAM (Fig. 3)**

- 6.electrical connection controlled by omnipolar circuit-breaker with residual current device
- 7.ice-making water supply tap
- 8.cooling water supply tap (W)
- 9.water supply pipe for ice making
- 10.water supply pipe for water cooling (W)
- 11.water drainage pipe
- 12.cooling water drainage pipe (W)



## **5.2 POSITIONING**

**!!** The appliance must be installed in a hygienically clean location; it is advisable to avoid rooms like cellars and store-rooms, because failure to meet hygiene requirements is likely to lead to the formation and proliferation of bacteria in the appliance.

The appliance can operate at an ambient temperature of between 10°C and 43°C.

The best performance will be obtained by installing the appliance in a place with an ambient temperature of between 10°C and 35°C and a water temperature of between 3°C and 25°C.

**Avoid direct exposure to sunlight and do not install near heat sources.**

**!!** This appliance:

- **must be installed in a place where it can be supervised by skilled personnel**
- must not be used outdoors
- must not be installed in damp places or where it is liable to be sprayed with water
- must be allowed a clearance of at least 20 cm all around
- must not be cleaned with jets of water
- a clearance of at least 1 metre must be allowed above the top of the appliance to ensure correct aeration (model with daily production of 2200 kg)

**!!** The appliance must be installed on a bin.

For correct installation on our bins, see the diagrams supplied with the bins.

In any event the instructions and advice contained in this manual must be complied with, especially those relating to connection to the electricity and water supply.

Use a spirit level to ensure that the appliance is standing perfectly level. If necessary, adjust the legs fitted to our bins.

**!!** The manufacturer declines all liability for installation on bins made by other manufacturers.

## **5.3 CONNECTION TO THE WATER MAINS**

**!!** IMPORTANT:

- the appliance must be connected to the water mains by professionally qualified personnel in accordance with the Manufacturer's instructions
- this appliance must be only be supplied with cold water for human consumption (drinking water)
- the operating pressure must be between 0.1 and 0.6 MPa
- a tap must be installed between the water mains and each feed pipe of the appliance, so that the water supply may be shut off if necessary
- 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 devices must comply with the standards in force in the Country of use
- never turn the water supply tap(s) off when the appliance is working
- only new hose-sets supplied with the appliance are to be used to connect the appliance to water mains, old hose-sets should not be reused

### **5.3.a FILLING WITH WATER (Fig. 4)**

Insert the special seals provided (14) in the two threaded ring nuts (13) of the ice-making water supply pipe (9) supplied with the appliance.

Without exerting excessive force (otherwise the union could crack), firmly tighten one of the threaded ring nuts on the outlet of union (15) located in the rear of the appliance. Screw the other threaded ring nut onto ice-making water tap (7), also threaded.

In the case of water-cooled models, connect union (16) to cooling water supply tap (8) with a water supply pipe (10), using a hose clip (17).

### **5.3.b DRAIN (Fig. 4)**

Fix the water drain pipe (10) in the housing (19) provided on the rear of the appliance.

Make sure that:

- the pipe is a hose
- the internal diameter is 22 mm, as required
- the water drain hose is not throttled at any point throughout its length
- the drain hose slopes downwards by at least 15%

In the case of water-cooled models, connect union (18) to a drainage outlet with a water drainage pipe (12), using a hose clip (17).

It is advisable to drain the water straight into an open drain trap.

## **5.4 CONNECTION TO THE ELECTRICITY MAINS**



### **IMPORTANT:**

- **models with daily production of 2200 kg must be connected to a 32A interlocked receptacle**
- the appliance must be connected to the electricity mains by professionally qualified personnel in accordance with the Manufacturer's instructions
- before connecting the appliance to the electricity mains, make sure that the mains voltage rating corresponds to the value indicated on the rating plate
- make sure that the appliance is connected to an efficient earthing system
- make sure that the capacity of the power supply system suits the maximum power value indicated on the rating plate of the appliance
- as the appliance is designed to be permanently connected to the mains power supply, it must be fitted with an omnipolar thermomagnetic circuit breaker (6 in Fig. 3) with a minimum contact opening distance of 3 mm, which meets current national safety standards, fitted with fuses, with associated residual current device, positioned in such a way that it can easily be reached. **This operation must be performed by a skilled technician**
- make sure that you fully uncoil the power supply cable and check that it is not crushed in any way
- should the supply cable be damaged, it must be replaced by a specialised technician using a special cable available from the Manufacturer or from the Technical Service Centres

## **6 START-UP**

### **6.1 CLEANING INTERNAL PARTS**

The appliance will have already been cleaned in the factory. However, you are advised to wash the internal parts again before using the appliance. Make sure that the power supply cable is unplugged before carrying out the above cleaning operation.

**For information about cleaning and sanitizing operations, see chapter 9.3 of this manual.**

Use ordinary washing-up liquid or a water and vinegar solution for cleaning operations; after cleaning, rinse thoroughly with cold water and discard the ice produced during the first 30 minutes after cleaning, together with any ice present in the bin.

It is advisable to avoid using abrasive detergents or powders, since these might damage the finish.

### **6.2 START-UP**

Once the appliance has been correctly connected to the electricity mains, water mains and water drain system, it can be started up as follows:

- a) turn on the water supply tap(s) (7 and 8 in Fig. 3)
- b) switch on power supply with the switch (6 in Fig. 3) installed at the installation stage

## **7 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(s) (7 and 8 in Fig. 3), fitted during the installation phase, has/have been turned on
- there is no power cut, and the switch (6 in Fig. 3) is in the "ON" position
- none of the safety devices described in chapter 8 has operated

Furthermore:

- if there is excessive noise, make sure that the appliance is not touching furniture or sheet metal which can give rise to noise or vibrations
- should any trace of water appear, check the drain hole of the bin to ensure that it is not clogged, that the water fill and drain pipes are correctly connected and are not throttled or damaged
- make sure that the temperature of the air or water does not exceed the installation limit values (see paragraph 5.2)
- make sure that the water inlet filter is not clogged (see paragraph 9.1)
- check that the holes in the spray ring are not obstructed by limescale

If the fault still persists after the above checks have been made, switch off the appliance with the switch fitted during the installation stage, turn off the water supply tap(s), and contact the nearest Authorized Service Centre.

To obtain a faster and more efficient reply when you call the Centre, state the model of the appliance precisely, together with its serial number or manufacturing number. This information is given on the serial N° plate (Fig. 1) affixed to the rear of the appliance and on the cover of this instruction manual.


## 8 OPERATION

**The appliance is fitted with a start-up delayer. Wait around 10 minutes for the ice maker to start.**

The appliance is fitted with the following safety devices:

- all models are fitted with a safety microswitch which shuts down the appliance if ice enters the evaporator chamber. The appliance automatically restarts when the evaporator chamber is clear of excess ice
- models with a daily production of 250 kg, 400 kg, 620 kg, 900 kg and 1500 kg are fitted with a safety thermostat which shuts down the appliance when the ice which has accumulated in the bin reaches the probe connected to the thermostat. When ice is removed from the bin, the appliance is automatically reactivated
- all models are fitted with a safety maximum pressure switch which shuts down production in the event of a malfunction of the cooling circuit such as start-up in an excessively warm environment, fan malfunction or dirty finned condenser (air-cooled models), lack of water to condenser or water-operated condenser obstructed (water-cooled models), etc. If the appliance shuts down when the bin is not full of ice, to check the operation of the protective devices wait for 3 minutes and firmly press the reset button (if any) located on the left wall of the appliance. If the fault persists, the appliance will shut down again; in this case, disconnect the appliance from the mains power supply, close the water supply tap(s), and contact the nearest Authorized Service Centre
- all models are fitted with a safety minimum pressure switch which operates in the event of a malfunction such as shutdown of scraper, lack of ice-making water, etc. If the appliance shuts down when the bin is not full of ice, to check the operation of the protective devices wait for 3 minutes and firmly press the reset button (if any) located on the left wall of the appliance. If the fault persists, the appliance will shut down again; in this case, disconnect the appliance from the mains power supply, close the water supply tap(s), and contact the nearest Authorized Service Centre
- the model with daily production of 900 kg is fitted with a second safety maximum pressure switch, connected to the low pressure branch of the cooling circuit; the protective devices come into operation if the appliance operates in an excessively warm environment. When the appliance is started up, check that this protective device has not come into operation (e.g. after a period of storage or inactivity in a hot environment, or after transport), by firmly pressing the reset button located on the back of the appliance. If the fault persists, the appliance will shut down again; in this case, disconnect the appliance from the mains power supply, close the water supply tap(s), and contact the nearest Authorized Service Centre

### NOTE FOR INSTALLER:

 The model with daily production of 2200 kg is fitted with a device which controls the sequence of the electrical power phases; if the appliance fails to operate once connected to the mains power supply, and none of the protective devices described so far has operated, disconnect the appliance from the mains power supply and invert two of the three phases.

**This operation must only be performed by qualified, authorized personnel.**

If the appliance does not resume normal service after this operation, disconnect the appliance from the mains power supply, turn off the water supply tap(s) and contact the nearest Authorized Service Centre.

### **!! IMPORTANT:**

**DO NOT USE** the safety microswitch to control the level of ice accumulated in the bin; install a dedicated device for that purpose. The device can be one of two types:

- a level control installed in the bin (photocell, etc.) which shuts down the appliance when the established level is reached and reactivates the ice-cube maker when ice is removed from the bin
- a timer that switches the appliance on and off according to ice consumption and the capacity of the bin

## **9 MAINTENANCE**

### **9.1 HOW TO CLEAN WATER SUPPLY UNION FILTER (Fig. 4)**

**!!** Clean filter (20) on water supply union at least every 2 months, as follows:

- **switch off power supply** with the switch (6 in Fig. 3) installed at the installation stage
- **cut off water supply** by turning off ice-making water supply tap (7 in Fig. 3) installed at the installation stage
- unscrew threaded ring nut (13) of water supply pipe at outlet of union (15) located on back of appliance
- using a pair of pliers, remove the filter (17) from its seat without damaging the water feed pipe connector
- place the filter under a strong jet of water to remove residue, but replace the filter if it is excessively dirty

When the cleaning operation has been completed, refit filter and water supply pipe, taking the precautions described at the start of this manual.

**When the operations have terminated, turn on both the electricity supply and water supply.**

### **9.2 AIR-COOLED MODELS (Fig. 5)**

For air-cooled models, it is very important to keep the finned condenser and its external filter (if any) clean.

Have the finned condenser cleaned at least once every two months by an Authorized Technical Service Centre, which can include this operation in the scheduled maintenance programme.

The external filter must be cleaned at least once a month, as follows:

- switch off appliance and **cut off power supply** with the switch (6 in Fig. 3) fitted at the installation stage
- unscrew knobs that hold filter in place
- remove filter and keep it at a distance from the appliance
- remove dust from filter by blowing with compressed air
- replace filter in its seat and secure with knobs

MODELS WITH DAILY PRODUCTION OF 2200 kg:

- shut down appliance and **switch off power supply** with the switch (6 in Fig. 3) installed at the installation stage
- lift filter and remove from its seating under the condenser fan
- keeping the filter distant from the appliance, remove dust by blowing with compressed air
- return filter to its seating

### **9.3 CLEANING AND SANITIZING OPERATIONS**

#### **✂ NOTE FOR INSTALLER:**

The cleaning and sanitizing operations described below must only be performed by professionally qualified, authorized personnel.

**Do not use jets of water to clean the appliance.**

The frequency of cleaning and sanitizing operations can vary, depending on:

- temperature and environmental conditions
- temperature and quality of water (hardness, presence of grit, etc.)
- quantity of ice produced, or time of use of appliance
- periods of non-use of appliance



#### **WARNING:**

- the operations described in this manual must only be performed by professionally qualified, authorized personnel
- a cleaning and sanitizing kit specifically designed for this appliance is available from your dealer
- do not use corrosive substances to remove limescale from the appliance, because this will invalidate the guarantee, and may cause serious damage to the materials and components of the appliance
- gloves suitable to protect against cuts must be worn when performing all operations involving handling of sheet metal parts in particular
- gloves suitable to protect the skin against the substances used must be worn when performing all cleaning and sanitizing operations
- wear suitable goggles during cleaning and sanitizing operations to protect the eyes against splashes of the substances used
- take care not to spill water or solutions on the wiring or the power cable

TO ENSURE CORRECT CLEANING AND SANITIZING OF THE ICE MAKER, PERFORM THE OPERATIONS DESCRIBED BELOW AT LEAST ONCE A MONTH.

#### **9.3.a CLEANING**

Use a 25% solution of water and white vinegar for cleaning operations, and proceed as follows:

- to remove front panel, remove closing caps, loosen fixing screws, and raise panel to release it (Fig. 6)
- close ice-making water supply tap (7 in Fig. 3) leaving the cooling water (if any) supply tap (8 in Fig. 3) open, and wait for the water in the pump basin to run out (the ring does not spray water onto the evaporator)
- switch off power supply with the switch (6 in Fig. 3) installed at the installation stage
- remove pump basin lid by removing fixing screws (Fig. 7)
- fill basin with the water and vinegar solution (Fig. 7)
- close basin and reposition lid
- connect appliance to mains electricity supply and operate appliance until all solution has been used up
- fill basin 5 times and wait for it to empty
- switch off appliance and disconnect from mains power supply
- remove lid of water supply basin
- unscrew pump filter (Fig. 7)
- clean walls of pump basin, lower part of lid and pump filter with ordinary washing-up liquid using a non-abrasive sponge
- remove transparent panel by removing fixing screws (Fig. 6)
- clean evaporator, transparent panel and scraper with ordinary washing-up liquid, using a non-abrasive sponge. **Be careful of the sharp edges of the scraper.** Remove any sediment from the basin under the evaporator
- clean basin under evaporator and spray ring with the same washing-up liquid, using a brush with soft bristles, cleaning the holes in the spray ring particularly thoroughly
- thoroughly rinse evaporator, scraper, spray ring and basin with cold water
- rinse, dry and refit transparent panel
- rinse and refit lid of pump basin and filter
- turn on the ice-making water supply tap (7 in Fig 3)
- connect the appliance to the mains power supply and operate it for 5 minutes

### **9.3.b SANITIZING**

For sanitizing operations use a 200 mg/l solution of sodium hypochlorite and water or one of the solutions commonly used to disinfect babies' feeding bottles; in this case, check that the sanitizing product is:

- authorized by your country's Ministry of Health
- suitable for use with food-making machinery
- not harmful to the materials and components of this appliance

For the directions for use and concentrations, please refer to those shown on the packaging and recommended by the manufacturer. We recommend using the solution at the temperature of 25°C.

Proceed as follows:

- close ice-making water supply tap (7 in Fig. 3) leaving the cooling water (if any) supply tap (8 in Fig. 3) open, and wait for the water in the pump basin to run out (the ring does not spray water onto the evaporator)
- switch off power supply with the switch (6 in Fig. 3) installed at the installation stage
- remove lid of pump basin
- fill basin with sanitizing solution (Fig. 7)
- close basin and reposition lid
- connect appliance to mains electricity supply and operate appliance until all solution has been used up
- fill basin 5 times and wait for it to empty
- switch off appliance and disconnect from mains power supply
- remove lid of pump basin
- unscrew pump filter (Fig. 7)
- remove transparent panel by removing fixing screws (Fig. 6)
- remove pump filter and transparent panel and immerse in sanitizing solution for at least 30 minutes
- wipe evaporator, spray ring, basin under evaporator and scraper with sanitizing solution using a non-abrasive sponge. **Be careful of the sharp edges of the scraper**
- rinse evaporator, scraper, scraper ring and basin under evaporator thoroughly with cold water
- thoroughly rinse, dry and refit transparent panel, checking that it does not interfere with the correct operation of the safety microswitch
- thoroughly rinse the lower part of the basin lid and refit, tightening the fixing screws
- thoroughly rinse pump filter and replace in its seating
- turn on the ice-making water supply tap (7 in Fig. 3)
- refit front panel and tighten fixing screws

The ice maker can now be reactivated as specified in the previous chapters.



#### **WARNING:**

- **all the ice produced during the first 30 minutes after cleaning and sanitizing operations must be discarded**
- **when the appliance is cleaned and sanitized, its bin must also be cleaned and sanitized**

You are advised to ask your dealer to draw up a scheduled maintenance contract that will cover the following:

- cleaning the condenser
- cleaning filter on water supply union
- cleaning the ice-tray
- checking the charge of coolant gas
- checking the operating cycle
- sanitizing the appliance

## **10 PERIODS AT A STANDSTILL**

If you do not intend to use the appliance for a certain period of time, proceed as follows:

- switch off power supply with the switch (6 in Fig. 3 ) installed at the installation stage
- shut off the water supply by turning off the water supply tap(s) (7 and 8 in Fig. 3)
- carry out all the operations envisaged for scheduled maintenance of the appliance
- clean filter of water supply union as described in chapter 9.1
- clean filter of air condenser (if any) as described in chapter 9.2