



**Instructions for Use and  
Maintenance**

**109244**





Thank you for choosing our machine.

The instructions for installation, maintenance and use found on the following pages have been prepared to ensure a long life and perfect operation of your unit.

Please, do follow the instructions carefully.

We have designed and built this machine using the latest innovative technologies. Now you shall take good care of it.

Your full satisfaction is our greatest reward.



**READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLING THE MACHINE.**



**WARNING: FAILURE TO COMPLY, EVEN PARTIALLY, WITH THE PRESCRIPTIONS IN THIS MANUAL WILL RENDER THE PRODUCT WARRANTY NULL, AND THE MANUFACTURER SHALL NOT BE LIABLE.**

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## WARNINGS

**This instruction booklet must be kept with the machine for future consultation. If this machine is sold or transferred to other users, make sure the booklet always goes with the unit so that the new owner can have all the necessary information on operations and all relevant instructions.**

**The instruction booklet must be carefully read before installation and before starting the machine.**

- **Adaptation of the electrical and water systems for dishwasher installation must only be carried out by qualified operators.**
- This machine must only be used by adults. This is a professional machine to be used by qualified personnel, installed and repaired exclusively by qualified Technical Personnel. The Manufacturer declines any responsibility for improper installation, use, maintenance or repair.
- This appliance can be used by trained youth aged from 15 years and above. It cannot be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge.
- Children shall keep off the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Do not slam the hood when opening and closing.
- Do not put material or objects on the hood.
- Make sure the machine is not standing on the power cable or on the filling/drain hoses. Level the machine flat, by adjusting the support feet.
- Do not use this appliance or any part of it as a stepladder or support as it has been designed exclusively to bear the weight of its rack, containing the items to be washed.
- **This machine is designed exclusively for washing dishes, glasses and crockery with human food type of residue. Do not wash articles polluted with petrol, paint, chips of steel or iron. Do not wash fragile objects or material not resistant to the washing process. Any other use is deemed improper. Do not use acidic corrosive chemical products or alkaline and solvents or chlorine based detergents.**
- Do not open the machine hood when operating. In any case, the machine has a special safety device which immediately stops the unit if the hood is open, thus preventing water spillage. Always switch the machine completely off and drain the water tank, before accessing inside.
- **A suitable omni-polar automatic fuse switch shall be installed and sized according to the absorption provided, in order to completely guarantee the disconnection from the power network, with “category III” overvoltage conditions.**
- **This switch shall be included in the power network, be solely and exclusively used for this purpose and be installed in the immediate vicinity of the machine.**

- **Always turn off the machine by this switch: only this switch gives a full warranty of a complete insulation from the electric network.**
- **Make sure the appliance is linked to an efficient ground connection.**
- The user shall not carry out any repair and/or maintenance operations. In any case contact qualified personnel.
- Servicing of this machine must be performed by authorized personnel only.  
**N.B.: Use genuine spare parts only. Non-genuine parts will void the warranty and the manufacturer will take no responsibility for any damage.**
- **Do not use old water hoses, but new ones only.**
- Some important rules must be followed for using this appliance:
  - 1) never touch the appliance with wet hands or feet;
  - 2) never use the appliance when barefooted;
  - 3) do not install the appliance in places exposed to water splashes.
- Do not dip bare hands into water containing detergent. If this should occur, wash them immediately with plenty of water. Check the emergency instructions on the detergents containers.
- Follow the instructions given in the manufacturer's booklet for cleaning operations (chap. 7).
- **This machine must be disconnected from the main electrical supply after use at the end of the day and for any service/maintenance operation following this procedure:  
Switch the machine off from the control panel.  
Drain the tank by removing the overflow pipe.  
Disconnect the electrical supply by the omni-polar switch (main switch located on the wall).  
Shut the water supply valve(s).  
Disregarding the aforesaid prescriptions is a serious misuse and can cause damages and injures to property and people, and will relieve the manufacturer from whatever liability.**
- This appliance is designed to work at room temperatures from 5°C up to a max. 35°C, in a suitable room.
- Do not use water to extinguish fires on electrical parts.
- Do not cover the intake or dissipation grids.
- Only qualified personnel can access the control panel, when the main power switch is OFF.
- The machine has an IPX3, protection rating against accidental water splashes and is not protected against pressurized water jets. Pressure-cleaning systems shall, therefore, not be used on this machine.
- Water infeed to the machine 400 Kpa maximum.



**ATTENTION: INTERNAL CLEANING OF THE MACHINE SHALL BE CARRIED OUT AT LEAST 10 MINUTES AFTER THE POWER SWITCH HAS BEEN TURNED OFF.**

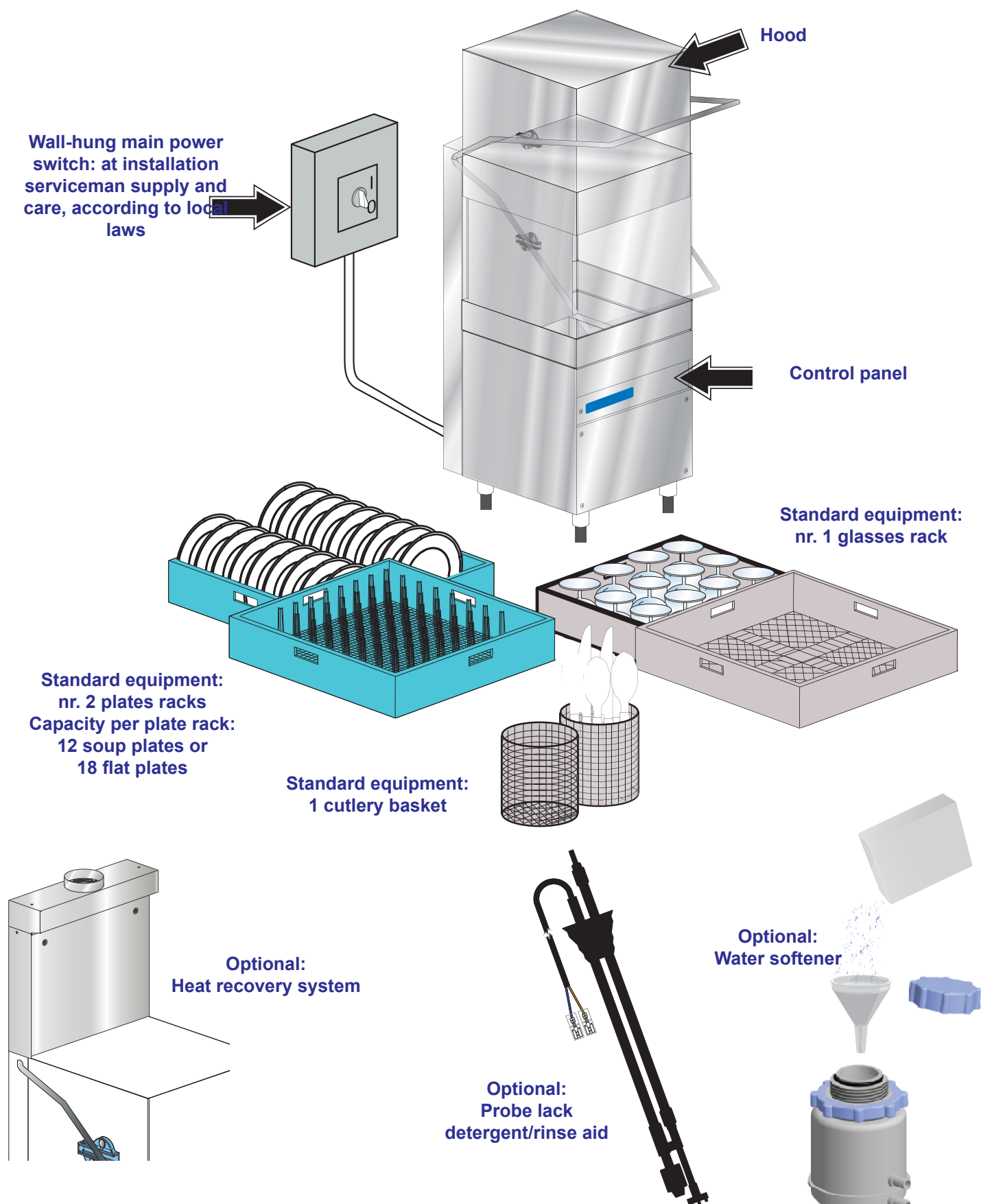


**ATTENTION: DO NOT INSERT HANDS AND/OR TOUCH THE PARTS LOCATED AT THE BOTTOM OF THE WASH TANK AND/OR AT THE END OF THE WASH CYCLE.**

**NOTE: The manufacturer declines any responsibility for accidents to people or any damage deriving from failure to observe the above listed instructions.**

## 1. MACHINE DESCRIPTION

### 1.1 Machine Description



To operate the Hood machine, 3 connections are needed:

- Electrical;
- Water supply;
- Water drain.

This is a cycle machine comprising a 55°C wash cycle with detergent, a 82°C rinse cycle with injection of rinse-aid in the boiler hull. 50x50 cm racks are used.

The machine can be complemented with wash-tables, rinse-showers and dedicated waste collection systems.

A new wash cycle can be started by closing the hood down.

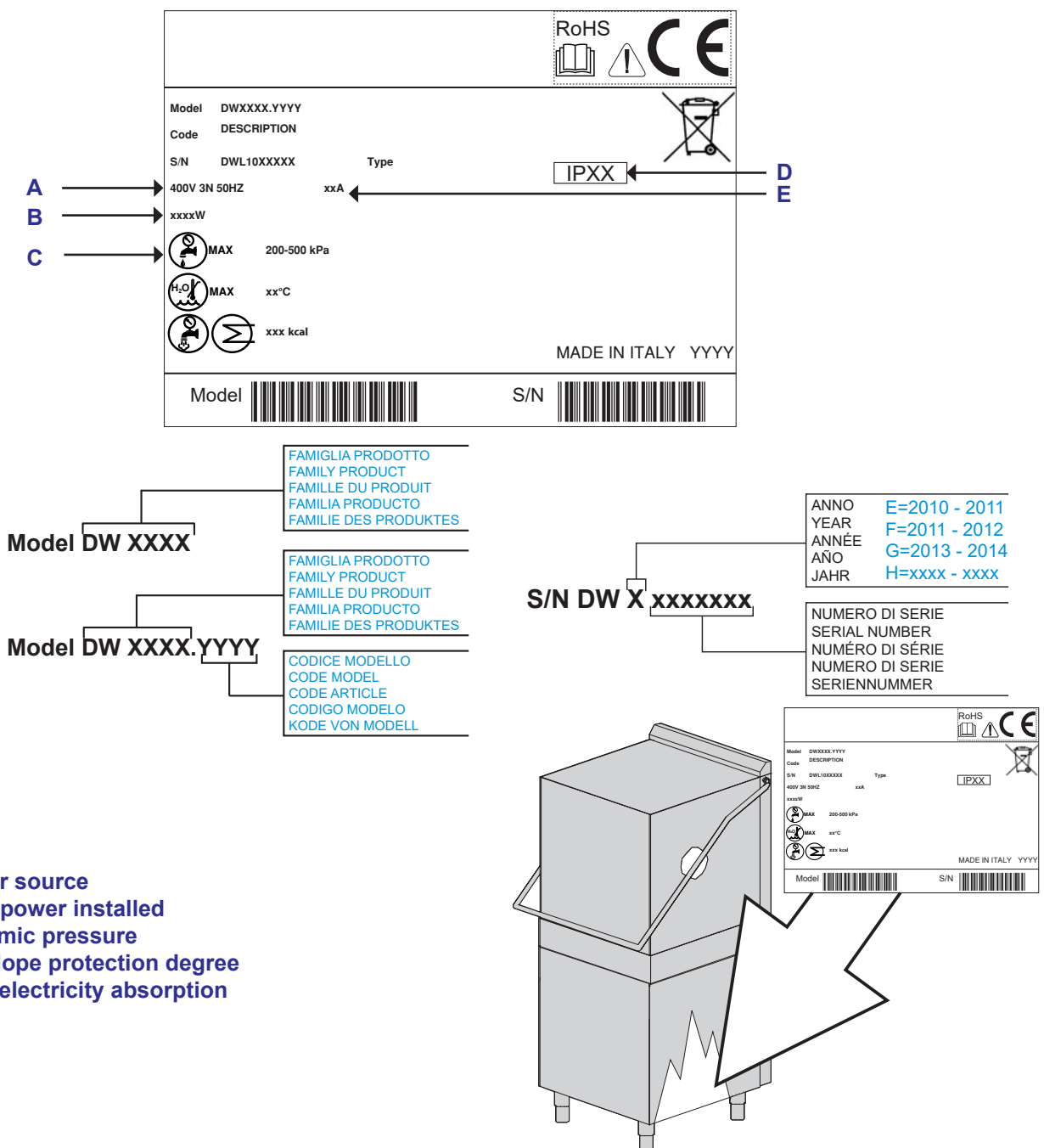
The optional heat recovery system reduces significantly the humidity in the dishwashing-room, recovering the energy that is wasted from the roof, by condensation, by reducing the steam when the door is opened.

## 1.2 Machine features

The machine's sound level is  $L_{pa} = 66,4\text{dBA} \pm 0,7\text{dB(A)}^{**}$

*\*\*test made according to EN 60335-2-58/A11*

## 1.3 Dataplate

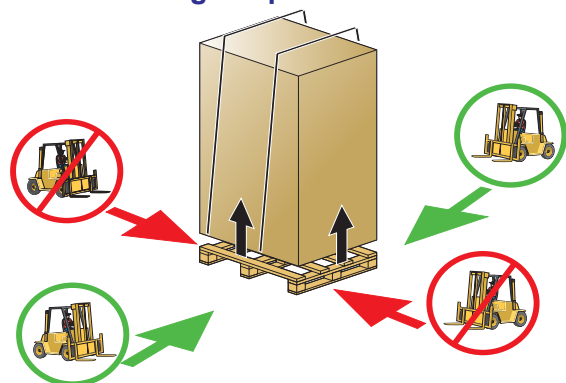




## 2. MACHINE INSTALLATION

### 2.1 Handling

#### 2.1.1 Handling the product



Pict. 1

Before accepting the machine, verify that all the data on the data-plate corresponds to the required ones (as shown on par. 1.1) and to the ones of the available electrical supply.

The machines must be handled strictly as shown in pict. 1 regarding the grip points indicated for lifting with a lift truck. Latch the machine in a way that secures no vibration or shocks during transportation.

**N.B.:** Slings with ropes not recommended.

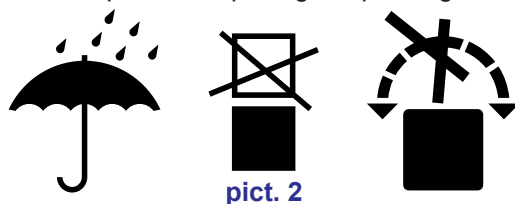
After removing the packaging, make sure that the machine was not damaged during transportation. Should this be the case, please notify the seller immediately. If safety has been compromised, do not install the machine.

The installation and the starting of the machine must be carried out by trained operators only, even if the machine is coming from another site and it has been used, already.

Adaptation of the electrical and water system for dishwasher installation must be carried out by only qualified operators.

This machine has to be used in a place with room temperature between 5°C and 35°C max. The room has to be dry and ventilated.

See chap. 9 for disposing the packing material.



pict. 2

#### 2.1.2 Storage

Storage temperature: min. +4°C – max. +50°C – humidity <90%.

The stored parts should be checked periodically to detect any sign of deterioration. Do not store the machine exposing it to atmospheric agents (rain, sun, cold, etc.). Do not place material on the packed machine. Do not rotate the machine in the storing phase (see pict. 2).

### 2.2 Machine equipment

Use and maintenance manual

Wiring diagrams

A copy of the wiring diagrams must be kept inside the electrical board.

### 2.3 Prepare for installation

This is just a guide-line for the machine installation.

The installation must be performed by a qualified engineer.

#### 2.3.1 Room features

Install the machine, in a room closed to weather and with a guaranteed temperature-range between 5 and 35°C.

**The machine is equipped with thermostatic sensors to manage the temperatures. To guarantee a proper functionality these sensor shall not operate at a room temperature below 5°C.**

For this reason, it is fundamental that before starting the machine reaches the room temperature.

#### 2.3.2 Water supply connection - Characteristics

Water connections characteristics:

Water characteristics table	Min	Max
Static Pressure*	200Kpa	400Kpa
Dynamic Pressure	150Kpa	350Kpa
Water hardness**	5°f	8°f
Cold water-supply temperature***	5°C	50°C
Hot water-supply temperature****	50°C	60°C
Capacity	10l/min	

table 1

\*Should the water supply pressure be more than 400 kPa, a pressure reducer must be installed (only for those versions where it is not a standard supply, already).

**\*\*It is compulsory to install a water-softener, in case of water with average hardness above 8°f.** Washed objects will be cleaner and the machine will last much longer.

The machine can be equipped with a water softener, on request. If the machine is equipped with a water-softener, a regeneration of the resins shall be done on regular basis (see par. 4.6).

In those machines equipped with **water softener** the water supply temperature shall not exceed 40°C, to avoid damages to the filters' resins.

**Note:** Any damage caused by limestone (calcareous water higher-up than 8°f and without water-softener) will not be covered by warranty.

Once a year a supplied-water hardness check is highly recommended.

**\*\*\*The machine must be supplied with cold water, if equipped with the Heat Recovery System (max 15°C).**



**IT IS STRICTLY FORBIDDEN TO CONNECT THE MACHINE'S VENT DIRECTLY WITH THE OUTDOOR!  
COLD WEATHER CONDITIONS MIGHT SERIOUSLY DAMAGE THE THERMAL RECOVERY SYSTEM AND  
THE STEAM CONDENSER.**

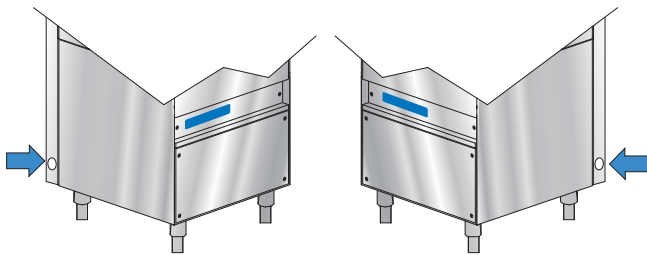
Machines shall be made with extra power in case of cold water infeed.

\*\*\*\*The water supply temperature shall never exceed 60°C.

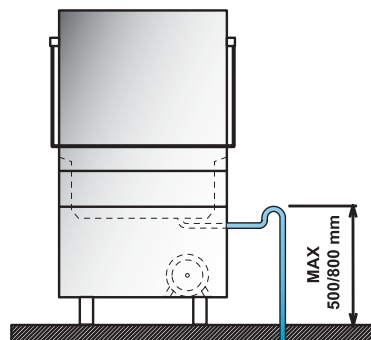
Connect the machine draining hose to the connection located low on the side (see pict. 3), making sure that the water flows freely (giving, therefore, minimum slope).

The drain tube shall always be connected to a siphon in order to prevent the release of odors.

Maximum drain height = cm. 50 (see pict. 4).



pict. 3



pict. 4

### 2.3.3 Water supply characteristics

The water supply must be potable, in compliance with Directive 98/83/EC.

The inlet water must also meet the parameters given in the table 2.

table 2

Water parameters table	Min	Max
Chlorine <sup>1</sup>		2mg/l
pH	6,5 <sup>1</sup>	8,5 <sup>3</sup>
Water hardness	2°f	8°f <sup>2-3</sup>
Iron <sup>3</sup>		0,2 mg/l
Dry residue <sup>3</sup>		500 mg/l
Manganese <sup>4</sup>		0,05 mg/l

<sup>1</sup> Out of range values might lead to corrosion and jeopardize the life of the machine.

<sup>2</sup> Should the water hardness is higher it is compulsory to install a water softner and check periodically its operation.

<sup>3</sup> Out of range values might lead scaling and sediments with a consequent lower performance, functionality, and expected life of the machine.

<sup>4</sup> Desired value: Out of range values might lead stainless steel blackening/tarnishing.

It is recommended a water test once a year.

### 2.3.4 Electrical connection

Only qualified and properly trained personnel can operate on the electric board and connections.

#### Before the installation:

Make sure that the voltage is the same as reported on the data-plate.

Make sure the line voltage matches the machine power and voltage indicated on the machine data-plate (as shown on par. 1.1).

Electrical connection must be carried out in compliance with the current local standards.

Use the data reported on the data-plate to check dimensions and electrical connections.



**It is necessary to install a suitable omni-polar automatic fuse switch sized according to the absorption that assures the complete disconnection from the network in an overvoltage category III condition.**

**This switch must be incorporated in the supply network, dedicated only and exclusively to this circuit and installed in the immediate vicinity.**

**The machine has to be absolutely turned off by this switch: only this switch gives the full warranty of complete detachment from the electric network.**

**Make sure the appliance is linked to an efficient ground connection.**



**WARNING:** check very carefully if the "ground connection" of the machine is properly sized and fully efficient, and that not too many units are connected to it. An undersized or poor "ground connection" might lead to corrosion and/or pitting effect on the stainless steel plates, even to perforation.

The machine has a terminal on the back panel indicated by the symbol  that is meant to link the metal structures of different appliances, to prevent electro-static shocks (see electrical safety standards).

**IMPORTANT:** connect the clamp to other appliances.

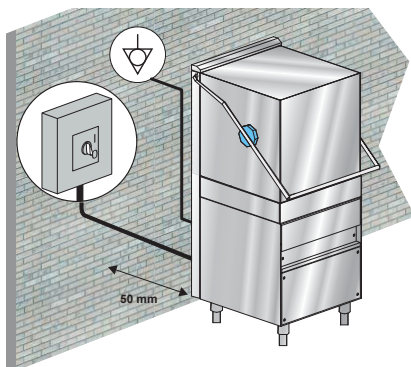
To dimension supply cables and switches, please refer to the maximum power expressed in Watts (W) and Amperes (A) specified on the machine serial number plate.

**Feed cable:** the retailer - importer - installer must ensure that the feed cable complies with the cable insulation category of the workplace, in conformity with current Technical Standards.

### 2.3.5 Steam evacuation

In accordance with regulations of environmental hygiene, for the proper functioning of the machine and a healthy environment for the operator who working in there, it should be at least 10 air volume changes per hour in the room where the machine is installed.

For small wash rooms we recommend at least 15 air volume changes per hour.



pict. 5

## 2.4 Installation

### 2.4.1 Positioning the machine

Remove the packing with care.

Lift the machine as described in par. 2.1.1 Handling the product.

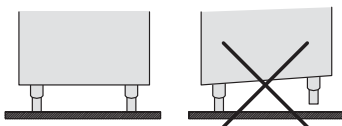
Position the machine as shown on the installation diagram (lay-out) approved at the time of the offer.

Maintain a minimum distance of about 50 mm from the walls, so that motors are ventilated (see pict. 5). Install suction hoods to assure proper ventilation of the room, in order to eliminate steam and excessive humidity.

Check that the machine is properly levelled, by adjusting the legs (see pict. 6).

Make sure the machine is not standing on the power cable or on the filling/drain hoses. Level the machine flat, by adjusting the support feet.

The electrical supply cable must be new, flexible, and according to "har" H07RN-F or a local valid equivalent. The cable size is dimensioned according to the power.



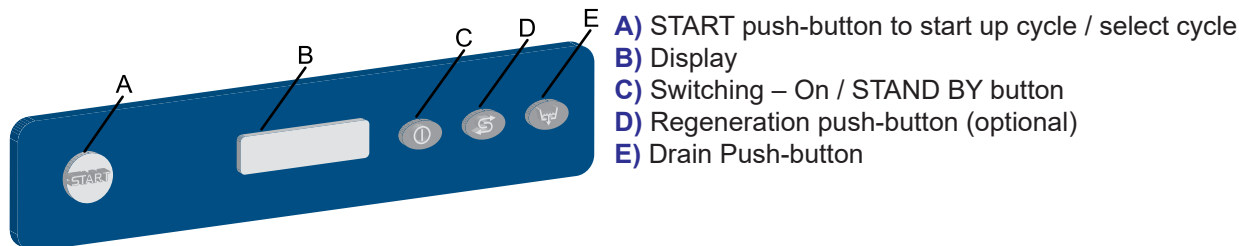
pict. 6

Should the electrical supply cable get damaged it shall be changed by the Manufacturer, or his Authorized Service, or other technician with equivalent qualification, to prevent any risk.

### 2.4.2 Start-up

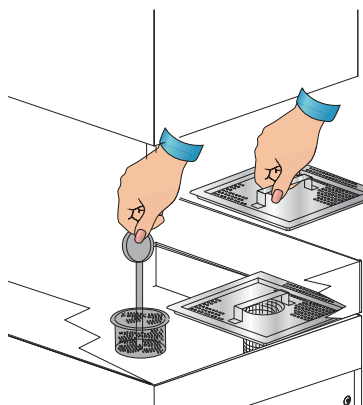
At installation engineer's care.

## 3. CONTROL PANEL AND RELATIVE SYMBOLS OPERATION



## 4. OPERATION

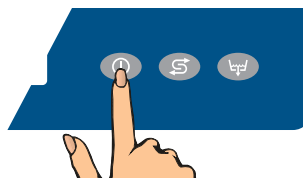
### 4.1 Machine start-up



pict. 7

#### 4.1.1 Start-up

- Check if the pump suction filter is properly inserted in its seat in the wash-tank bottom (see pict. 7).  
This filter must be cleaned every 20 wash-cycles or whenever necessary.  
**DO NOT use the appliance without the filter.**
- Put the surface filters in place (see pict. 7).
- Shut the dishwasher hood.
- Turn the water valve "open".
- Turn the main power switch ON.
- The machine is on **STAND-BY**. In the **B** display, the message **STAND-BY** will appear.
- Turn the button **C**.



The machine start will be active when the **A** button will light in red and on the **B** display the **STAND-BY** message will be off.

The water filling of the wash-tank is done by pre-heating via the boiler. On the **B** display, the messages **FILLING WATER** and **HEATING** will alternate. Should the machines be equipped with the WRAS certified Break Tank, the tank filling phase is extended.

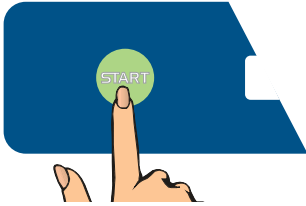


The display will read **HEATING**, till wash-tank and boiler will reach the set temperatures. During this process, the machine will not allow any cycle selection or start.

If the machine is in standard configuration, with hot water in-feed (50°C), with no extra power, the **A** button will light in green after some 20 min.

Should the machine be equipped with integrated heat recovery system, must be definitely supplied with cold (10°C) water in-feed. In this case the **A** button will light in green after some 45 min.

At the end, the **B** display will show the last used cycle.



#### 4.1.2 Operation

- Insert the rack filled with dishes to wash. The plates must be correctly placed in the rack (see par. 4.2).
- Select the wanted washing cycle by pushing the green START button **A**; the display will show in sequence all these available programs. Once the wanted program is displayed, do release the button.



- Close the hood; the wash cycle starts automatically. The button **A** will light in blue. All wash-time long the display will read the wash-tank temperature and the boiler temperature. Below the temperatures indications line-bar is displayed to show the progression of the wash-cycle.



When the wash-cycle ends, the partial draining of the washing water activates. After that, the hot rinse cycle will take place. After that, the hot rinse cycle will take place. A blue/green flashing on the button **A** will indicate the **CYCLE ENDED**. By selecting the option **SELECT CYCLE** the wash-cycle will not start, when lowering the hood. This function is meant to shut the hood without activating the wash-cycle, in order to keep the machine closed and reduce cooling-down during stand-by periods.



**NB:** At cycle-end, keeping the hood closed, dishes will not dry. Take out the rack or keep the hood open to allow evaporation, helping the drying of the dishes.

When opening the hood, the button **A** will turn green, indicating that the machine is ready for a new wash-cycle.

We recommend to change water at least twice a day, or whenever needed.

The machine is set to change all the wash-water automatically, every 300 cycles.

#### 4.1.3 Switching OFF

- Turn the button **C**. The display will show **STAND-BY**.



See paragraph 4.5 to drain the wash-tank.

- At the end of the day, clean the machine (see chap. 7 Maintenance).
- Shut the water valve.
- Switch the main power switch OFF.

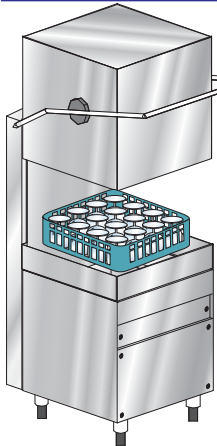
## 4.2 Cutlery and crockery loading

Before cutlery and crockery loading in the machine, coarsely clean them from the leftover food.

It isn't necessary to rinse the cutlery and crockery under water.



**ATTENTION: Do not wash articles polluted with petrol, paint, chips of steel or iron, ash, sand, wax, lubricant grease. These substances damage the machine. Do not wash fragile objects or material not resistant to the washing process.**



pict. 8

Note the following recommendations:

- Crockery and cutlery should not be inserted inside one another, covering each other.
- Place the crockery in order to all surfaces can be reached by water; otherwise the dishes are not washed.
- Make sure all the crockery are in a stable position and that the hollow containers don't overturn (cups, glasses, bowls, etc.) .
- Place in the rack all the hollow containers such as cups, glass, etc. **upside-down**.
- Place the crockery with deep hollow with upper face downwards, so that water can flow out.
- Make sure the smaller crockery do not fall from the rack.
- Check all the wash arms runs freely and they are not blocked by too tall or too prominent crockery. Eventually, run a manual rotation of the arms to check it.

Some foods, such as carrots, tomatoes, and others, may contain some natural dyes substances, that in large amounts, can alter the crockery and plastic parts colors.

Any discoloration does not mean that the plastic is not heat resistant.

### Crockery and cutlery not suitable for dishwasher

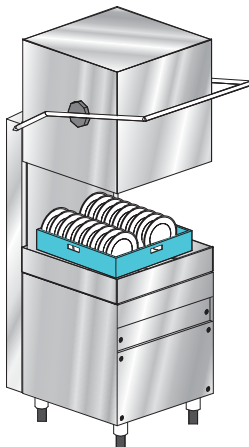
Not suitable for dishwasher:

- Wooden crockery and cutlery or with wooden parts; water at high temperature causes deformation to wood. Also the adhesives used are not suitable for treatment in the dishwasher; a consequence could be the handles detachment.
- Crafts, precious vases or decorated glasses.
- Not heat-resistant plastic crockery.
- Copper, brass, pewter or aluminum objects: they may become discolored or opaque.
- The decorations on glass, after a certain number of washes, can lose gloss.
- Fragile glasses or crystal items, if often washed, can become opaque.

We recommend to buy exclusively crockery and cutlery suitable for dishwashing.

After several washes, the glass can become opaque.

**It is mandatory to repeat the washing cycle if at the end of the cycle the crockery are not well clean or if there are washing residues (glasses, cups, bowls, etc. with liquid inside).**



pict. 9

## 4.3 Detergent use

The machine has a standard detergent dispenser. The machine automatically sucks the product.

The detergent shall be the NO FOAM type, suitable for industrial dishwashers.

The detergent must be introduced in the tank. The use of good quality liquid detergents is recommended. By request the dishwasher can be equipped with an electric detergent dispenser (always recommended).

Follow the manufacturer's recommendations for chemical dosage, related to the local water hardness. 1cm. of the product drawn into the tube is equal to about 0.15 g. A correct amount of detergent is very important for a successful wash.

Should the detergent lack, the display will show **DETERGENT LEVEL** (only with optional "Sensor for Chemicals Low Level").

DETERGENT LEVEL



#### 4.4 Rinse aid use

The machine has a standard rinse aid dispenser. The machine automatically sucks the product. The rinse-aid chemical, shall be suitable for professional glass and dishwashers.



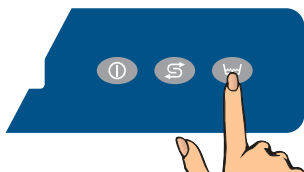
The recommended amount is 2-5 cm of product measured on the suction hose. 1 cm of the product drawn into the hose is equal to about 0.13g. A correct amount of rinse aid is very important for a quick and proper drying.

**N.B.:** Excessive amount of chemicals or foam will reduce wash pump efficiency. Should the detergent lack, the display will show **RINSE-AID LEVEL** (only with optional "Sensor for Chemicals Low Level").

#### 4.5 Drain pump system

To drain completely the wash-tank keep the machine ON and shut the hood.

Press the key **E** till the display will show **TANK DRAINING**.



The discharge pump will automatically drain the wash-tank. During the drain process, the button **A** will light in blue and will be flashing. After the draining is complete, the machine will turn automatically in **STAND-BY** mode.

If you want to refill the machine for a new cycle, see par. **4.1 Machine start-up**.

The drain pump will run even before each rinse cycle, to drain the excess water from the wash tank.

#### 4.6 Regeneration device (optional)



Should the machine be equipped with a water-softener circuit, this will be fully automatic. When needed, a 120" regeneration cycle will automatically activate. During this phase, the display will show the letter **R**.

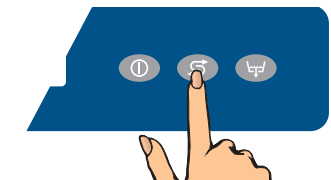
If needed, the **R** cycle can be activated even during the wash-tank loading. If the activation happens during the wash-cycle, this will be elongated.

The circuit board is designed to call periodically for a 20 min. manual regeneration cycle. This regeneration cycle can also be activated by the user, should the rinse quality be dissatisfactory.



When the display shows **PRESS WATER SOFTNER REGENERATION KEY** or when the users want to activate the **R** regeneration cycle, start the following procedure:

- Should the display show **SALT LEVEL**, fill the special container, placed on the inside of the tank, with coarse salt (0,500 kg - 1-4 mm. grains), being careful not to spill it into the sump. A strong concentration of salt can negatively affect the correct functioning and service life of the machine and generate rust and the steel oxidation. After filling with salt, lock the plug tightly. Rinse the tank immediately if salt is spilled in it.
- With the machine in **STAND-BY** mode, the water valve open, the wash-tank empty and the hood shut, press the **D** button. The button **A** will start flashing in blue.
- During this cycle, the display will show the steps in progress and the time remaining.



- This cycle cannot be interrupted and the normal operation is inhibited.
  - At the cycle end, the machine will switch in **STAND-BY** mode, automatically.
- At this moment, it is possible to switch the machine OFF (see par. **4.1.3 Switching OFF**) or start a normal operation phase (see **4.1.2 Operation**).

**In case of water hardness above 35°F an external water softener is recommended.**

## 5. ECOLOGICAL ASPECTS



### 5.1 Recommendations for optimal use of energy, water and additives

**Salt dosing:** A pre-set (by the manufacturer) quantity of salt is injected in the resins at each regeneration cycle. It is important to observe the number of regeneration cycles recommended in paragraph **4.6 Regeneration device** in order to avoid salt spills or lime deposits.

**Use the machine fully loaded when possible:** This shall prevent detergent, rinse aid, water and energy consumption waste.

**Detergent and rinse-aids:** Use detergents and rinse-aid chemicals with high biodegradability, to best respect the environment. Verify proper dosage in relation to water hardness at least once a year. Excess product pollutes rivers and seas while an insufficient dose results in unsatisfactory dish washing and/or hygiene.

**Boiler and Wash-Tank temperatures:** The boiler and tank temperatures are set by the manufacturer in order to obtain the best washing results with detergents on the market. The temperatures can be reset by the installer in relation to your detergent.

**Pre-washing:** Carefully pre-wash with a moderate amount of water at room temperature to facilitate the removal of animal fats. To remove encrusted materials warm water soaking is recommended.

**Note:** Wash objects as soon as possible to avoid deposits from drying and compromise effective washing.

For effective washing routine dishwasher cleaning and maintenance is advised (see chap. 7).

**Disregarding the points listed above and of any the information contained in this manual can cause energy, water and detergent waste with a subsequent increase in running costs and/or performance reduction.**

## 6. H.A.C.C.P. AND HYGIENE REGULATIONS

- When starting the machine ON, no wash-cycle will be starting until the set boiler and wash-tank temperatures are reached. During operation, the machine will not start the rinse cycle till the set boiler temperature is reached.
- Remove carefully all solids from the objects to be washed, to avoid obstruction of filters, nozzles and piping.
- Drain the wash tank and clean the filters at least twice a day.
- Check if the detergent and rinse-aid dosage are correct (as recommended by the manufacturer). In the morning, before starting the machine, check that the quantity of chemicals in the canisters is enough for daily supply.
- Keep your working tables clean.
- Extract the rack with clean hands or gloves to avoid finger marks.
- Do not dry or polish the washed objects with cloths, brushes or rags that are not sterile.



## 7. MAINTENANCE

### 7.1 Routine maintenance

**WARNING:** The machine is not protected against pressurized water jets. Do not use pressure cleaning system against the machine.

It is recommended to contact the seller of chemicals for proper cleaning instructions, in order to have detailed indications on methods and products for the correct periodical machine sanitation.

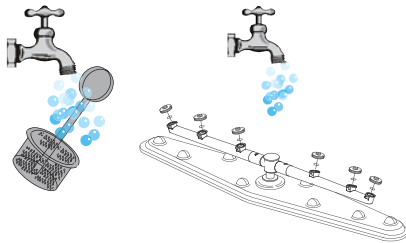
**Do not use bleach or chlorine based detergents.**

Daily cleaning is needed to ensure that the machine runs perfectly. The following shall be carried out:

- Turn the machine in **STAND-BY** mode, by pressing the push-button **C** of the control panel (see chap. 3).



- See paragraph 4.5 to drain the wash-tank.
- Remove the surface filters and thoroughly clean them under running water.
- Remove the pump filter and clean with a brush and a water shower.
- Remove the arms by loosening the fixing screws, and thoroughly clean them, and the nozzles under running water.



- Reassemble the parts and reposition the wash pipes firmly in place. Take extreme care to re-assemble the nozzles in the right position (open and / or closed nozzles) and that the arms are installed with the right axial angle.
- Clean the tank very carefully, with specific cleaning products.
- It is recommended to leave the machine hood open at the end of the day.

**Automatic cycle of machine self-cleaning/rinsing:** recommended at each day end.

Turn the machine on **STAND-BY** mode, to drain the tank (see paragraph 4.5).



Press the blue-flashing **A - START** button. A 30" automatic self-cleaning program will run. At the end, the machine will be in **STAND-BY** mode.



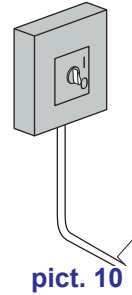
- **For machines equipped with the optional heat recovery:**

Press the blue-flashing **A - START** button. A 30" automatic self-cleaning program for the Heat Recovery will run. At the end, a 30" self-cleaning program activates.

After the self-cleaning cycle the machine will go in **STAND-BY** mode.

Push the **START** button **A** to drain the boiler

- Shut the water valve.
- Turned off the machine by switching the main power switch OFF (see pict. 10).



## 7.2 Extraordinary Maintenance – by qualified Service Personnel

At least once per year, the machine should be supervised by qualified Service Personnel:

- 1 Clean the solenoid-valve(s) filters
- 2 Remove scale from the heating elements
- 3 Control the status of the seals
- 4 Control for components integrity and/or consumption
- 5 Control the dispenser(s) efficiency
- 6 Check the efficiency of the door safety switch.

A qualified electrician, should check all electric connections inside the machine, at least once a year.

## 8. SIGNALS AND ALARMS

### 8.1 Signals

The signals messages are displayed, based upon their meaning.

When displaying **PRESS WATER SOFTNER REGENERATION KEY** a total regeneration is needed (only with optional water softener).

When displaying **DETERGENT LEVEL** add detergent in the detergent tank (only with optional "Sensor for Chemicals Low Level").

When displaying **RINSE-AID LEVEL** add rinse-aid chemical in the rinse-aid tank (only with optional "Sensor for Chemicals Low Level").

When displaying **SALT LEVEL** add salt in the container in the wash-tank (only with optional water softener).

When displaying **SHUT HOOD** means that the open hood does not allow the maneuver tried, or a wash cycle was in progress, when lifting the hood.

When displaying **DRAIN WATER IN WASH TANK** means that a full wash-tank does not allow the maneuver tried.

When displaying **SELF-CLEANING: REMOVE FILTERS AND PRESS START** the machine requires a self cleaning cycle.

When displaying **SELF-CLEANING CYCLE OVER** the machine ended the self-cleaning cycle.

### 8.2 Alarms

The alarm messages are displayed, based upon their meaning.

TYPE OF ALARM	CAUSE	REMEDIES
B1	BOILER FILLING FAIL	Open the water supply valve
B2	BOILER PROBE FAIL.	Contact Technical Service
B3	BOILER HEAT. ALARM	Contact Technical Service
B4	RINSING FAILED	Contact Technical Service
B5	BOILER OVERHEATING	Contact Technical Service
E1	WATER LOAD FAILED	Open the water supply valve
E2	TANK PROBE FAIL.	Contact Technical Service
E3	TANK HEATING ALARM	Contact Technical Service
E5	TANK OVERHEATING	Contact Technical Service
E6	TANK DRAINING FAIL.	Contact Technical Service
E7	WASH PUMP THERMAL RELAY	Contact Technical Service
Z4	TANK SENSOR FAILURE	Contact Technical Service
Z5	TANK HIGH LEVEL	Contact Technical Service
Z6	TANK LOW LEVEL	Contact Technical Service
Z9	REGENERATION FAIL	Contact Technical Service
Z10	ALARM SL8 - BREAK TANK HIGH LEVEL	Contact Technical Service

table 3

## 9. ENVIRONMENTAL ASPECTS

### 9.1 Packaging



Packaging is made of the following components:

- a wooden pallet
- a nylon sack (LDPE)
- a multi-layer carton
- polystyrene (PS) strips
- polypropylene (PP) banding.

All above materials, shall be disposed and treated in accordance with the Local Laws in force.

### 9.2 Disposal



The symbol WEEE/RAEE used on this product indicates that it cannot be treated as domestic waste. Proper disposal of this product contributes to protecting the environment. For more information on product recycling, contact the local authorities, domestic waste authorities or the dealer where the product was purchased.

For product or parts disposal, follow the Council directives 2011/65/UE and 2012/19/UE as amended and/or application legislative decrees.

The present product or parts cannot be disposed of as urban waste but shall be collected in separate containers (see the waste bin on wheels symbol with an "X" on the product).

At the time of product disposal, the user shall refer to the waste electrical and electronic equipment (WEEE/RAEE) specification.

The manufacturer guarantees the absence of dangerous substances in the EEA used in conformity to the directive 2011/65/UE.

If the user does not comply with the regulations he/she shall be subject to the penalties foreseen by each member state.

Disconnect electricity and water before disposal.

Cut away the electrical cable to ensure that further use is impossible.

All metal parts are recyclable as they are made of stainless steel.

Recyclable plastic parts are marked with the plastic material symbol.

## 10. TROUBLESHOOTING

Type of Problem	Possible Causes	Cure
The machine does not turn on.	Main switch not ON.	Turn switch ON.
The machine does not load water.	Water valve shut.	Open the hot and/or cold water valve.
	Rinse area nozzles or solenoid-valve filter blocked and/or scaled with limestone.	Clean the rinse arm nozzles, conductors and solenoid-valve filter. Check that the water hardness is <10°f.
	Defective pressure-switch.	Replace pressure-switch (call the Technical Assistance service).
Cycle LED <b>A</b> flashing (red colour)	See chapter <b>8 Alarms</b>	---
Washing results are unsatisfactory.	The washing nozzles are obstructed or the rack does not rotate.	Clean the nozzles carefully, and check the right positioning of the wash-arm, tightening firmly.
	Foam is present.	Use no-foam detergents or reduce the dose in use. Check the rinse-aid dosage.
	Fats or starches not removed.	Insufficient detergent concentration.
	Filter is dirty.	Remove filter, clean with brush under a jet of water and replace in original position.
	Check tank temperature (which must be between 55°C and 60°C).	Adjust the thermostat or check correct heating element operation (call the Technical Assistance service).
	Wash time insufficient for the type of dirt.	Select a longer wash-cycle, if possible, otherwise repeat the wash cycle.
	Wash water is dirty.	Drain the tank water, clean the filters; refill the tank and replace the filters correctly.

Type of Problem	Possible Causes	Cure
Objects are not properly dried.	Not enough rinse aid.	Increase dosage by turning the dispenser screw (see par. "Rinse aid dispenser" - call the Technical Assistance service).
	The rack is not suitable for the objects	Use the suitable rack which gives the objects an inclined position so that water can rinse away.
	The washed items may have been sitting in the wash chamber too long.	As soon as the cycle stops, remove the rack with objects so that they can dry more quickly in the air.
	Rinse temperature under 80°C.	Check the boiler thermostat temperature.
	Surface of objects too rough or porous for material wear.	Replace type of objects used. If the dirt on the objects is dry and old, soak before washing.
Streaks and spots on objects	Too much rinse-aid chemical.	Reduce the rinse aid amount by turning the micrometric dispenser screw (see par. "Rinse aid dispenser" - call the Technical Assistance service).
	Too hard water.	Check the water quality. Water must not exceed 8°f in hardness.
	For appliances with softener: too little salt in the salt container or the resins have not been properly regenerated.	Fill the salt container (coarse salt: 1-2 mm grains) and regenerate the resins more often. If lime deposits are also observed on the body of the machine, have a qualified technician check the operation of the water softener.
	Salt present in dishwasher sump.	Thoroughly clean and rinse the appliance, and avoid spilling salt when filling the container.
The machine suddenly stops during operation.	The machine is connected to an overload device.	Connect the machine on a own overload device (call the Technical Assistance service).
	A machine safety device was triggered.	Check the electrical devices (call the Technical Assistance service).
The machine stops during the wash stage and starts refilling water.	The previous day's water was not changed.	Drain the tank totally and refill.
	Excessive water temperature in tank.	Call Service to check thermostat and pressure-switch.
	Defective pressure switch.	
The washing pump doesn't work	The pump is blocked	Call the Technical Assistance service

**N.B. Per altri eventuali disturbi rivolgersi all'Assistenza Tecnica.  
Il costruttore si riserva di modificare senza preavviso le caratteristiche tecniche.**

## 11. EU DECLARATION

The machine purchased is in compliance with the norms stated in the EU declaration attached to the machine in original. Please find attached below the facsimile of this declaration, with the general data of the machine purchased. For the absorption data refer to the data-plate on the machine.

DICHIARAZIONE DI CONFORMITA' UE  
EU DECLARATION OF CONFORMITY  
DÉCLARATION EU DE CONFORMITÉ  
EU-KONFORMITÄTSERKLÄRUNG  
DECLARACIÓN EU DE CONFORMIDAD  
DECLARAÇÃO EU DE CONFORMIDADE



Il sottoscritto (1), autorizzato dall'azienda (2), dichiara che la lavastoviglie elettrica per uso collettivo (3) è stata progettata e costruita in conformità alle norme armonizzate (4) secondo quanto prescritto dalle seguenti direttive e successivi emendamenti (5) e in applicazione a quanto previsto dalle direttive citate, è stata dotata di Marcatura CE e sono stati predisposti i fascicoli tecnici presso la nostra sede (2). Tale dichiarazione riguarda esclusivamente la macchina nello stato in cui è stata immessa sul mercato, escludendo i componenti aggiunti e/o le operazioni effettuate successivamente dall'utente finale. Declina ogni responsabilità per sinistri a persone, a cose o ad animali derivanti da manomissione della macchina da parte di terzi, ovvero da carenze di manutenzione, di riparazione o di installazione della stessa da parte di personale non qualificato. (\*)

The undersigned (1), authorized by the company(2), hereby declares that the commercial electric dishwashing machine (3) is in compliance with the harmonised standards (4) according to the following directives and further amendments (5) and pursuant of the above mentioned directives, the CE Marking have been applied. Furthermore, adequate technical files have been prepared and are available at our offices (2). This declaration relates exclusively to the machinery in the state in which it was placed on the market, and excludes components which are added and/or operations carried out subsequently by the final user. Declines all responsibility for damages to people, properties and animals resulting from bad servicing of the machine by third parties as from inadequate maintenance or repairs or installation by unskilled technicians.

Le soussigné (1), désigné par la société (2), déclare que le lave-vaisselle électrique à usage collectif (3) est conforme aux normes harmonisées (4) selon les prescriptions et directives suivantes et les amendements successifs (5) et en application des directives citées, il porte le Marquage CE. Les dossiers techniques sont déposés dans notre siège (2). Cette déclaration concerne exclusivement la machine dans l'état dans lequel elle a été mise sur le marché et exclut les composants ajoutés et/ou les opérations effectuées par la suite par l'utilisateur final. Décline toute responsabilité pour tout sinistre à personnes, choses ou animaux résultant de l'endommagement de la machine par un tiers, c'est-à-dire dû à une maintenance, des réparations ou une installation inadéquates effectuées par du personnel non-qualifié.

Der Unterzeichnete (1) berechtigt von der Firma (2), erklärt, daß die elektrischen Spülmaschinen für den gewerblichen Gebrauch (3). In Übereinstimmung mit den harmonisierten Normen ist (4) gemäß folgender Richtlinien und deren nachfolgenden Änderungen (5) und daß in Übereinstimmung mit den erwähnten Richtlinien die CE-Kennzeichnung angebracht wurde und daß die relevanten technischen Unterlagen zusammengestellt wurden (2). Diese Erklärung bezieht sich nur auf die Maschine in dem Zustand, in dem sie in Verkehr gebracht wurde; vom Endnutzer nachträglich angebrachte Teile und/oder nachträglich vorgenommene Eingriffe bleiben unberücksichtigt. Jede Verantwortung für an Personen, Sachen und Tieren verursachten Schäden, die durch die Manipulation seitens Dritten, beziehungsweise auf mangelhafte Wartung und Reparaturarbeiten oder Installation von unqualifiziertem Personal zurückzuführen sind, werden abgelehnt.

Quien subscribe (1), elegido de la empresa (2), declara que el lavavajilla eléctrico de uso colectivo (3) es conforme a las normas armonizadas (4) como la prescripción de la siguientes directivas y sucesivas enmiendas (5) y, conforme con lo previsto en las citadas directivas, han recibido el Marcado CE. Existe asimismo los específico expediente técnico relativo disponible en nuestro domicilio (2). Esta declaración se refiere únicamente a las máquinas en el estado en que se comercialicen, con exclusión de los elementos añadidos y/o de las operaciones que realice posteriormente el usuario final. Declina toda responsabilidad por daños a personas, cosas o animales producidos del mal servicio de la máquina por terceras partes así como por reparaciones o mantenimiento inadecuados o de instalaciones por parte del personal no cualificado.

O abaixo-assinado (1), autorizado pela empresa (2), vem por este meio declarar que a máquina de lavar louça para uso comercial (3) esta de acordo com as normasharmonizadas (4) de acordo com o previsto pelas seguintes diretivas e posteriores alterações (5) a Marcação CE foi aplicada no seguimento das diretivas mencionadas. Os processos técnicos estão preparados e adequados e encontram-se disponíveis na nossa sede (2). Esta declaração diz respeito apenas à máquina tal como se encontra no momento da colocação no mercado, excluindo-se os componentes adicionados e/ou as operações efectuadas posteriormente pelo utilizador final. Declina toda e qualquer responsabilidade por danos causados a pessoas, bens e animais, resultantes do mau manuseamento da máquina por parte de terceiros assim como manutenção incorrecta ou reparações inadequadas ou instalação por pessoal não qualificado.

(\*) Lingua originale / Original language / Originalsprache / Langue originale / Idioma original / Idioma original

2)	3)
4) EN 60335-1:2012; EN 60335-2-58:2005; EN 55011:2009; EN55014:2006; EN 61000 3-2:2006; EN 61000 3-3:2008; EN61000 3-11:2000; EN 61000 3-12:2005; EN 61000 4-2:2009; EN61000 4-4:2010; EN 61000 4-5:2006; EN 61000 4-6:2009; EN61000 4-11:2004	5) 2014/30/EU; 2006/42/EC; 2011/65/EU; 2012/19/EU
1) Preposto/Person in Charge	Firmato in originale e conservato presso la nostra sede (2). Original document signed and available at our office (2). Dieses Dokument ist im Original unterzeichnet und bei uns aufbewahrt (2). Signé en original et gardé à notre siège (2). Firmado en original y conservado en nuestro domicilio (2). Original assinado e armazenado na nossa sede (2).