

#### I

- 1 ... Pulsante di linea
- 2 ... Pulsante abilitazione partenza ciclo
- 3 ... Selettori tempi
- 4 ... Spia riscaldamento vasca
- 5 ... Spia riscaldamento boiler
- 6 ... Spia ciclo
- 7 ... Spia di linea
- 8 ... Termometro vasca
- 9 ... Pulsante pompa scarico

#### F

- 1 ... Selecteur de ligne
- 2 ... Poussoir mise en cycle automatique
- 3 ... Sélecteur durée
- 4 ... Voyant de chauffage cuve
- 5 ... Voyant de surchauffage
- 6 ... Voyant de cycle
- 7 ... Voyant réseau
- 8 ... Thermomètre cuve
- 9 ... Poussoir pompe vidange

#### ES

- 1 ... Botón de corriente
- 2 ... Botón de inicio de ciclo
- 3 ... Selectores de tiempos
- 4 ... Testigo de calentamiento de la cuba
- 5 ... Testigo de calentamiento de la caldera
- 6 ... Testigo ciclo
- 7 ... Testigo de corriente
- 8 ... Termómetro de la cuba
- 9 ... Botón bomba de desagüe

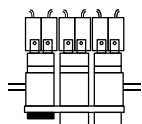
#### GB

- 1 ... Line selector
- 2 ... Automatic cycle push button
- 3 ... Wash time selector
- 4 ... Tank heating lamp
- 5 ... Boiler heating lamp
- 6 ... Cycle lamp
- 7 ... Power lamp
- 8 ... Wash tank thermometer
- 9 ... Drain push button

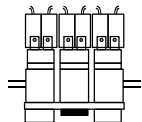
#### D

- 1 ... Taste Stromeinschaltung
- 2 ... Taste Start
- 3 ... Taste Zeit
- 4 ... Kontroll-Lampe Waschbecken
- 5 ... Kontroll-Lampe Boiler
- 6 ... Kontroll-Lampe Zyklus
- 7 ... Kontroll-Lampe Stromeinschaltung
- 8 ... Thermometer Waschbecken
- 9 ... Taste Laugenpumpe

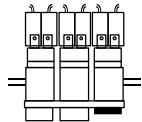
**Nella versione con selettore 3 tempi • Version avec sélecteur 3 cycles • Version with 3 cycles' selector • In der Version 3 Zyklen • En la versión con selector de 3 tiempos:**



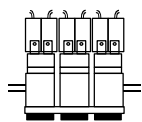
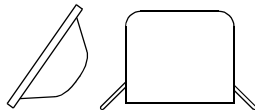
72 sec.



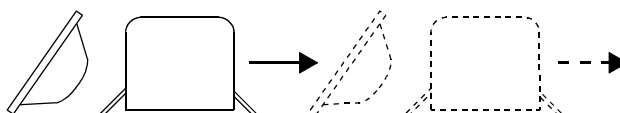
132 sec.



192 sec.



∞



**INDEX**

**INSTALLATION MANUAL**

1.	INTRODUCTION .....	Page	1
2.	INSTALLATION OF THE APPLIANCE .....	"	1
3.	PLUMBING CONNECTIONS .....	"	1
	3.1 Water supply .....	"	1
	3.2 Draining .....	"	1
4.	ELECTRICAL CONNECTIONS .....	"	1
5.	ADJUSTEMENT OF DISPENSER .....	"	1
	5.1 Rinse aid dispenser .....	"	1
	5.2 Rinsing agent dispenser .....	"	1
6.	SAFETY PROVISIONS AND USER TRAINING .....	"	2

**USE AND MAINTENANCE**

1.	INTRODUCTION .....	Page	3
2.	PREPARATION OF THE MACHINE .....	"	3
	2.1 Machine with automatic cycle's start .....	"	3
	2.2 Machine with push-button cycle's start .....	"	3
3.	REGULATIONS AND CHECKS .....	"	3
	3.1 Operating temperatures .....	"	3
	3.2 Rinse aid dispenser .....	"	3
	3.3 Rising agent .....	"	3
	3.4 Checks .....	"	3
4.	OPERATION .....	"	3
	4.1 Instructions for use .....	"	3
	4.2 Washing tips .....	"	3
	4.3 Continuous washing cycle .....	"	4
	4.4 Drain pump .....	"	4
5.	MAINTENANCE .....	"	4
	5.1 Routine maintenance .....	"	4
	5.2 Periodic maintenance .....	"	4
	5.3 Machine idle .....	"	4
	5.4 Sterilization .....	"	4

## 1. INTRODUCTION

The dishwashers have been conceived and realised in conformity with the following norms:

- Low Voltage Directive;
  - EN 60335-1 Electric Appliances' Security;
  - EN 60335-52 Particular Norms regarding dishwashers for catering.
- The instructions contained in this manual provide important information regarding safety for installing, operating and maintaining the appliance. The manufacturer recommends that this manual be carefully stored in the wash area where it can be consulted by technicians and operators. Installation must be carried out according to the manufacturer's instructions and by professionally qualified and expert persons. This appliance must be connected to supply mains through a main switch only. Install the electrical, water and drain lines in the wash area according to the instructions given in the technical sheet of the machine.

## 2. INSTALLATION OF THE APPLIANCE

Carry the machine to the installation site and remove its packaging materials (plastic bags, polystyrene, nails etc. can be dangerous). Check that the appliance is in perfect condition.

If it shows signs of damage, immediately inform the seller and the shipper of this damage. If there is any doubt do not use the appliance until it has been checked by authorised personnel.

**THE MANUFACTURER CANNOT BE HELD LIABLE FOR DAMAGE CAUSED BY THE SHIPPER.**

**THE PERSON ACCEPTING DELIVERY IS RESPONSIBLE FOR CHECKING FOR DAMAGE AND SHOULD SEND ANY CLAIMS DIRECTLY TO THE SHIPPER RESPONSIBLE FOR THE DAMAGE.**

Put the machine in position, being careful to level it perfectly by rotating the adjustable feet. To have a good stability, we recommend to connect the base with the floor by means of the square supplied with the machine (A-14).

To prevent damage caused by steam coming out of the appliance during normal operation, make sure that any nearby material will not deteriorate if it comes into contact with the same. Before connecting the machine to the water and electric mains, make sure the general characteristics and data, furnished by the manufacturer on the nameplate (A-8) and the technical sheet, have been taken into due consideration when preparing the installation site.

Repairs must be done exclusively with original spare parts. Only these, in fact, can guarantee perfect conformity of our machines with design data.

**Repairs not carried out by qualified personnel and with non original spare parts, will invalidate the guarantee.**

## 3. PLUMBING CONNECTIONS

### 3.1 Water supply

Before connecting the appliance, make sure that there is a gate valve between it and the water mains in order to be able to shut off the water supply when necessary or in case of repair.

Insert a non-return valve between the gate valve and the machine connection. This non-return valve must conform to European (en 50084) or National Standards and is not supplied with the machine. An installation kit exists which can be obtained from your local authorized dealer.

Minimum water supply pressure, measured at the machine water intake during final rinsing (flow pressure), must not be less than 150 kPa (1.5 bar) or more than 400kPa (4 bar), even when other taps are open on the same line.

To prevent pressure or load drops, we recommend that each machine should have its own supply pipeline, that is sufficiently short and of adequate size. If the static pressure is higher than 4 Bar, then a pressure reducer must be installed upstream from the supply pipeline. The supply pipeline to the machine must not have a flow rate that is less than 15 l/min.

Make sure that the supply water temperature is equal to the values given in technical sheet.

To obtain good washing results, we recommended that the hardness of the supply water be within 7 and 12°F.

If the hardness of the water is higher than 12°F and the machine has no built-in water softener, we recommend installing a water softener upstream from the fill-up solenoid valve, rated for 5-7°F residual hardness.

**GOOD MACHINE OPERATION DEPENDS ENTIRELY ON COMPLIANCE WITH THESE VALUES.**

Use a flexible hose to connect the fill-up solenoid valve to the supply tap. In case of accidental break-down demand to the after-sale service an hose with the same sizes.

The inlet hose must be conform to the EN50084 norm sez. 22.106: nominal pressure 10 bar (1000 kPa); explosion pressure 20 bar (2000 kPa). **Respect all current National or Regional regulations.**

### 3.2 Draining

The drain pipe must be connected to a well or to an air-trap made in the floor.

Make sure that the drain pipelines in the wash area are not choked and that they afford a quick water outflow. The wall drain pipe must withstand a minimum temperature of 70°C.

This appliance has a gravity drain, therefore the outlet of dishwasher should be lower than the tank inlet. If the machine is fitted with a drain pump, the maximum gap between the pump and the draining must be lower than 600mm.


## 4. ELECTRICAL CONNECTIONS

**An efficient earthing system guarantees the safety of the appliance and its operator.**

This is an essential requirement that must be checked and, if in doubt, have the entire electric system checked by the professionally qualified personnel who made the connections to the electric mains.

**THE MANUFACTURER WAIVES ALL RESPONSIBILITY FOR ANY DAMAGE CAUSED BY LACK OF AN ADEQUATE EARTHING SYSTEM FOR THE APPLIANCE.**

It is strictly forbidden to use plug adapters, multiplication plugs and extension cords. Check that the electric power supply complies with technical specifications (A-8).

The machine must be connected to an equipotential system, in accordance with local regulations. Connect using the screw with the marking  and using a terminal conform to a 10 mm<sup>2</sup> section, as per norm CEI 64.8. Connection to electric mains must be done using a multipolar magnetothermic differential switch rated with a contact gap equal to or greater than 3 mm.

When selecting the type and size of the power cable, bear in mind the distance between the machine and the power point, the installed power indicated on the ratings plate (A-8) and the mains voltage. The cross section of the cables must not be less than 2.5 mm<sup>2</sup>. Avoid any strain on the power cable.

Use a H07RN-F cable if the power cable needs to be replaced connecting it to the terminal box placed on the back of the machine.

**The installation must be conform to CEI 64.8 (IEC 364) norm.**

## 5. ADJUSTMENT OF DISPENSERS

**(N.B. only qualified personnel can remove the panels)**

### 5.1 Peristaltic dispenser

Switch off at the mains and remove the front panel. Then use the adjustment screw on the dispenser (Fig. H), turning this clockwise or anti-clockwise to increase or decrease the amount delivered. Dosage time: from 1 to 25 sec.

### 5.2 Rinsing agent dispenser ( on request)

The operations to regulate or replace the internal tube are the same as for the peristaltic dispenser. Time for dosing from 1 to 18 sec.

## 6. SAFETY PROVISIONS AND USER TRAINING

The skilled personnel which make the installation and the electric connections are required to instruct the user aptly about the operation of the appliance and the safety provisions to be complied with. The installer must also give the user practical demonstrations of its use and must leave with him the written instructions which are furnished together with the appliance itself.

### **This appliance is equipped with following technical documents:**

- installation drawing with the relevant dimensions and electrical connections;
- technical sheet;
- wiring diagram;
- sheet with noise level.

## 1. INTRODUCTION

Carefully read the instructions contained in this booklet: they provide important information regarding operating safety and cleaning. Store the booklet properly. This appliance is designed only for the function for which it is specifically conceived: to wash glasses, cups, dessert plates and similar objects.

Any other use should be considered as improper and dangerous. The appliance must only be used by persons that are properly trained to use it. The manufacturer waives all liability for any injury to persons or damage to property caused by:

- disregard of these instructions;
- maintenance, adjustment or repairs not performed by professionally qualified personnel;
- modifications, fitted devices or dispensers which somehow could alter the original operation of the appliance.

## 2. PREPARATION OF THE MACHINE

Open the water tap and turn on the main switch upstream from the machine. Close the hood and push the line button (Q-1) on position "I". The indicator lamp (Q-7) will light up. The machine will automatically fill up with water. Once full, the boiler heating element will switch on (Q-5). When the proper water temperature is reached, the boiler heating element and the relevant indicator lamp is switched off and the tank heating element is switched on (Q-4). After a few minutes the machine will be ready for use. Both the indicator lamps (Q-4 and Q-5) will light down.

### 2.1 Machine with automatic cycle's start

Push the automatic cycle's button (Q-2). Open and close the hood to activate the wash cycle. When it starts, the indicator lamp will light on (Q-6). From now on, any time the hood will be closed, the machine will start a washing cycle. This function is stopped when releasing the button (Q-2).

### 2.2 Machine with push-button cycle's start

Push the START button (Q-2). When it starts, the indicator lamp (Q-6) will light on.

## 3. REGULATIONS AND CHECKS

### 3.1 Operating temperatures

The water supply should be at a temperature between 10°C and 50°C. The temperature of the water in the wash tank is regulated by a thermostat fixed at about 65°C. This temperature ensures the proper action of the chemicals contained in industrial dishwashing detergents. The boiler temperature, set by a thermostat, is at about 85°C. The machine is fitted with a device that ensures the correct rinsing temperature. If the temperature of the water supply is below that indicated in the technical data, the machine will pause during short washing cycles until the correct rinsing temperature is reached.

### 3.2 Rinse aid dispenser

During washing, the rinse aid dispenser (H) is enabled to inject the rinse aid in the boiler. **The rinse aid dispenser and its feed tube must be filled before using the machine. To do this, make sure that the rinse aid tank is full. To fill the plastic rinse aid feed tube only: make the machine perform an empty washing cycle.** Push on/off the cycle push button (Q-1) with short sequences spaced out of min. 10 sec. during the washing cycle, until the tube is full. Refer to an expert technician to calibrate.

If adjustment is needed, seek the assistance of a qualified technician. An excessive amount of the rinsing agent causes bluish stripes on the dishes and creates foam in the wash tank. If the dishes are covered with droplets of water and dry rather slowly, this means that the amount of rinsing agent is insufficient or that the dishes are covered with starch. In this case soak the dishes for some minutes (1:10) before placing them in the machine.

### 3.3 Rinsing agent dispenser (if fitted)

During the rinsing stage, the rinsing agent dispenser will be activated to inject the rinsing agent into the boiler. Before starting the cycle, the dispenser and the associated supply tube must be filled. To this effect make sure that the cup of the rinsing agent container is full of liquid.

### 3.4 Checks

Before starting to use the machine, the following checks should be made:

- 1) Check the water level and its temperature.
  - 2) Check the rinsing agent level.
  - 3) Check the washing detergent level.
  - 4) Check the temperature of the water supply.
  - 5) Check the washing agents (supply tube filled, tank holes are not clogged).
- When filling the wash tank the first time, the water must stop entering when its level is 1 cm. from the top level of the overflow plug filter (A-10).
  - Water must be distributed, at high pressure, from all the sprayers. The rotary wash (A-11) and rinsing arms (A-12) must be free to rotate due to the pressure of the water.
  - The washing and rinsing water temperatures must correspond to the temperatures indicated in paragraph 3.1 "Operating temperatures".
  - With every wash cycle the dispensers must draw the proper amount of rinsing agent and detergent. Check the levels of the liquids in the containers and, if necessary, replace them or top them up.
  - The pump filter (A-9) must be clean.
- When the wash cycle is terminated, the perfectly clean dishes must dry almost instantly by evaporation the moment the basket is removed from the appliance.

## 4. OPERATION

### 4.1 Instructions for use

Place the basket in the tank, close the hood. Select the cycle the most suitable for the dishes to be washed, by means of the push-button Q-3. For the model without automatic detergent dosing device, pour the recommended dose of industrial no-foam detergent into the tank. If using powdered detergent, we recommend pouring this evenly into the tank to avoid lumps.

Stir the water with a tool. **The powder must be an industrial no-foam powder.** Press the "START" button (Q-2). Wash cycle indicator light (Q-6) comes on and the appliance performs a full wash cycle. When indicator light (Q-6) goes off, the wash cycle is terminated. Remove the basket from the appliance and expose it to the air to dry for a few seconds. When the machine is running, **DON'T OPEN THE HOOD TOO QUICKLY.** Always use protective gloves.

### 4.2 Washing tips

Place dishes, cups, glasses and cutlery upside down in the baskets (B). The machine is equipped with different types of basket, specially designed for stocking, that can be stacked. Place the dishes in the special basket with supports, making sure that the plate face upwards. Place cutlery and coffee spoons with their handles facing down. Never place silverware and stainless steel cutlery in the same basket. This could cause the silver to burnish and the stainless steel to corrode. When possible, rinse glasses dishes before placing in the machine or wash with fresh water.

To save on detergent and electricity only wash when the baskets are full, but do not overload them. Do not stack the dishes. WE RECOMMEND PRE-CLEANING the dishes in order to minimise machine maintenance. The quality of final wash results will be greatly improved by first removing paper, food particles, lemon peels, toothpicks, olive pits, etc. which could partially clog the tank filter and impair washing efficiency. We recommend washing the dishes before food particles dry on their surface. It is good practice, when dried food scraps are involved, to first soak the dishes in soapy water before introducing them into the machine.

### 4.3 Continuous washing cycle

Pushing all closing the cycles selection buttons (Q-3) at the same time and closing the hood, it is possible to select the continuous washing cycle. To stop the washing cycle, once the time desired has passed, select a cycle (Q-3). The machine will automatically carry out a rinsing cycle; when it will be finished, the indicator lamp (Q-6) will turn off.

### 4.4 Drain pump (optional)

Leave the line button (Q-1) on position "I". Take the overflow pipe (A-10) off from the drain hole. Leave the hood open for some centimeters to disconnect the door microswitch and to always be able to access to the push-buttons on the control panel. Push the drain pump button (Q-9) and keep it pushed until the tank is completely empty. Release the drain pump button and switch the machine off pushing on the line button on position "0". If this last operation is not carried out, when closing the hood, the tank will start filling again automatically.

## 5. MAINTENANCE

**(N.B. only qualified personnel can remove the panels)**

### 5.1 Routine maintenance

The machine **MUST BE** cleaned inside at least twice a day or whenever there are solid particles in the wash pump filters (A-9). If fitted, remove the tank filters (A-13) and clean them. Drain the water by unplugging the overflow (A-10). For machine equipped with drain pump: remove the overflow; press push button (Q-9) until the tank is completely empty; push main switch button (Q-1) on "0" position. When the machine is completely empty, remove filters and clean them. Clean the tank and remove any small residues and solid particles. Make sure that the rotary wash arms (A-11) and rinse arms (A-12) are free to rotate. If the nozzle holes are clogged by solid particles, remove them carefully with a fine tipped tool. Leave the appliance hood open for the entire period. To avoid oxidation or chemical attack hazards in general, the steel surfaces of the appliance must be kept thoroughly clean.

**Never wash the appliance with high pressure or direct jets of water**, since water could penetrate into electrical devices and prejudice the efficient operation of the appliance and its safety systems. Inobservance of this instruction will invalidate the guarantee. **NEVER USE THE MACHINE WITHOUT THE PUMP PROTECTION FILTER.**

### 5.2 Periodic Maintenance

**(to be done at least every 2-3 days)**

- Drain the water completely from the appliance as described at 5.1.
- Turn the appliance off by pushing the line button on position "0".
- Turn off the electric power supply by disconnecting the main switch installed upstream from the appliance.
- If fitted, remove the tank filters (A-13) and clean them.
- Remove the pump filter (A-10) and drain filter (C-5) (optional) and clean them.
- Dismantle the upper and lower rinsing arms (A-12) by unscrewing their central fastening ring nut.
- Check and clean all the sprayers.
- Dismantle the upper and lower wash arms (A-11) by removing them from the rotary pivots.
- Check and clean all the jets.
- Thoroughly clean the tank.
- Replace all the parts that were removed, proceeding in the reverse order.
- Leave the appliance hood open for the entire period that the appliance is at rest, to make the internal surfaces completely dry and to avoid smells.
- Clean the outer surfaces of the appliance with soap and water. Rinse these surfaces and dry them with care.

**Never clean stainless steel with steel shavings, wool or brushes.**

Lime deposits and scale will build up on the inner surfaces of the boiler tank, the pipelines and tank due to calcium and magnesium salts present in the water.

These scales and deposits can prejudice proper appliance operation. The appliance must be periodically descaled and we recommend that this be done by an expert. If the machine fails to operate correctly or breaks down, disconnect from the electricity mains and call a qualified service centre.

### 5.3 Machine idle

Whenever the appliance will be inactive for a long period of time, follow these steps for hygiene purposes:

- fill the machine with water (no detergent);
- make a few wash cycles without any dishes;
- drain the machine completely.

Repeat these steps until the drained water is clean and free of any residues of dirt or detergent. Grease steel surfaces with vaseline oil if the machine will be inactive for long periods. Have an expert drain all the water out from the boiler and the internal circuits to avoid the danger of ice formation.

### 5.4 Sterilization

At least once a week, sterilize the machine by using specific disinfectants, finishing with repeated rinsing for several minutes (fill the tank without the over-flow (A-10).