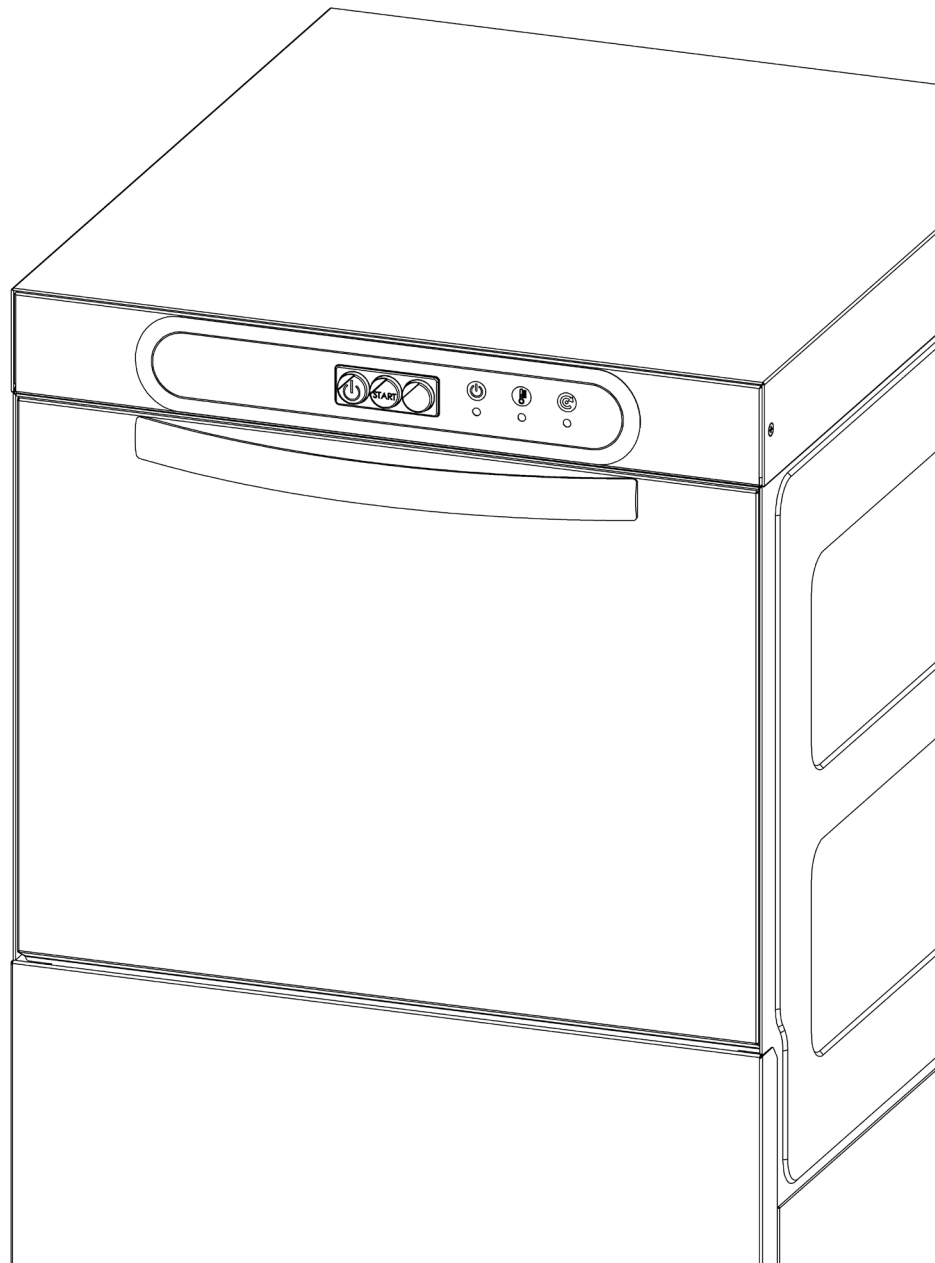




Instruction and Maintenance Manual

Electro-mechanical dishwasher







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SYMBOLS KEY

SYMBOL	DESCRIPTION
	ATTENTION - RISK OF INJURIES This symbol marks information and warnings which if not respected can jeopardise personal safety or damage the appliance.
	ELECTROCUTION HAZARD This symbol marks information and warnings which if not respected can jeopardise personal safety or damage the appliance.
	BURNING HAZARD This symbol marks information and warnings which if not respected can jeopardise personal safety or damage the appliance.
	DANGER OF FALLING This symbol marks information and warnings referring to situations when using the product, where lack of attention can jeopardise personal safety.

WARNINGS

Please read the following general warnings carefully.

- ▶ Please make sure you have fully read and completely understood this manual before using the dishwasher.
- ▶ The manual must be kept within the user's reach so that it can be consulted easily and quickly. Should it be damaged, destroyed or lost, please ask your constructor for a new copy (see para. 1.4 - PART TWO)
- ▶ **Do not use the dishwasher if you cannot consult the manual.**
- ▶ This dishwasher was designed to wash dishes such as glasses and plates normally used in bars and restaurants. Any other kind of usage is strictly forbidden.
- ▶ The dishwasher must only be used by trained operators.
Untrained operators must be supervised by a manager or a colleague with sufficient experience in the use of dishwashers until it is considered they have acquired adequate experience to operate it independently.
- ▶ Shut down the dishwasher once the wash cycle has finished and you no longer need to use it.
- ▶ Follow the Instruction and Maintenance Manual with the utmost care both for use and maintenance operations.
- ▶ Always keep the dishwasher and the area around it clean, so that the operator and their equipment can transit quickly and safely. Do not pile up objects or other material that could prevent easy access to the door.
- ▶ Clean the filter every day.
- ▶ Clean the whole dishwasher at least once a week.
- ▶ In the event of danger, immediately remove the power supply to the dishwasher by pressing the power button or by disconnecting the appliance from the mains.
- ▶ Check the integrity of the power wire daily, especially if the point of connection to the mains is not near the dishwasher.
- ▶ Position the cord appropriately, avoiding situations in which it could be damaged (avoid repeated trampling of the cable, passage of the cable under the doors, etc.).
- ▶ Perform regular maintenance, as indicated in the Instruction and Maintenance Manual.
- ▶ All maintenance must be carried out with dishwasher stopped and disconnected from the mains until the intervention is completed.
The interventions of extraordinary maintenance, repair and the replacement of components must be performed by personnel who are suitably trained and certified.
- ▶ Children must be supervised to ensure they are not playing with the machine;

This appliance is not intended to be used by persons (children included) with reduced physical, sensory or mental capabilities or with insufficient experience and knowledge, unless they have received assistance or instructions for use of the appliance from a person responsible for their safety.

- ▶ The protection degree of the machine is IPX1, and therefore the machine does not have to be washed with wash jets at high pressure.

ATTENTION!**SHOCK HAZARD****PART ONE****1. Purpose of the information contained in PART ONE**

The purpose of the information contained in PART ONE is to inform the Customer about the necessary data for correct identification of the dishwasher.

2. Reference standards

The dishwasher has been designed and manufactured in compliance with EMC Regulations EN55014-1:2006+A1:2009+A2:2011; EN55014-2:2015; EN61000-3-2:2014; EN61000-3-3:2013 Safety Electrical EN60335-2-58:2005 (incl. Corr.:2007)+A1:2008+A11:2010 used in conjunction with EN60335-1:2012; EN62233:2008 (incl. Corr.:2008).

This dishwasher also complies with the Safety and Work Hazard Prevention Regulations (applicable to dishwashers) in force at the date of manufacture.

The dishwasher's connection with a suitable residual current operated circuit-breaker according to IEC 947 standard (type 1 coordination) is highly recommended; the maximum noise level of our dishwashers is 74.3dB and the value $K_{pa}=2.5db$

3. Applicability

The instructions found in this manual are only suited for the type of dishwasher specified.

4. Transportation

The machine is packed in a heavy cardboard crate when transported (fig. 1).

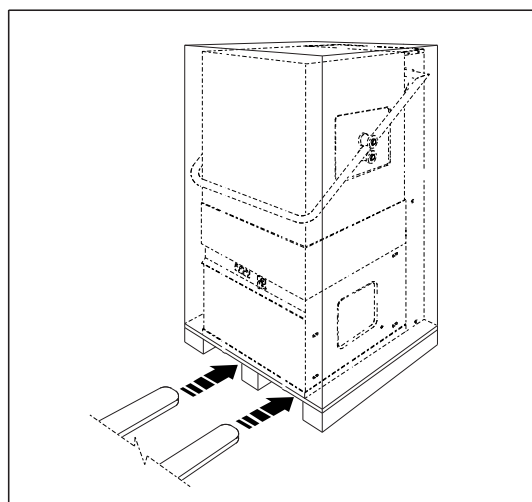
The dishwasher weight may vary between 50 and 170 kg if packed on a pallet, according to the model.

ATTENTION!**INJURY HAZARD**

THE USE OF EQUIPMENT AND THE OPERATIONS NOT SUITED TO LOADING, UNLOADING AND HANDLING OF THE DISHWASHER MAY DAMAGE BOTH THE PERSONNEL IN CHARGE OF SUCH OPERATIONS AND THE MACHINE ITSELF. THE MANUFACTURER RECOMMENDS COMPLYING WITH THE STANDARDS ON LOADING, UNLOADING AND HANDLING IN FORCE IN THE COUNTRY WHERE THE DISHWASHER IS USED.

THE MANUFACTURER DECLINES EVERY RESPONSIBILITY FOR DAMAGE TO THINGS OR PERSONS CAUSED BY IMPROPER USE OF THE EQUIPMENT OR BY PROCEDURES NOT SUITED TO AND/OR NOT SUITABLE FOR LOADING, UNLOADING AND HANDLING OF THE DISHWASHER.

Fig. 1



Once the dishwasher has arrived at its destination, check the transport documents and the number of packs.

Should you find any discrepancy between the documents and the items delivered, contact your Dealer immediately.

Carefully check the condition of the packaging: if it proves to be faulty or broken or with signs of incorrect handling, immediately inform the Supplier.

Please do not throw the packaging accessories away as they may be needed to ship the machine back to your Dealer.

5. Unpacking and assembling instructions

ATTENTION!



INJURY HAZARD

PLEASE PAY SPECIAL ATTENTION DURING UNPACKING AND ASSEMBLING OPERATIONS BECAUSE OF THE INSTABILITY OF THE DISHWASHER.

The unpacking/assembling instructions are only valid if the machine is installed by the Customer themselves.

1. Open the cardboard packaging carefully (fig. 2).

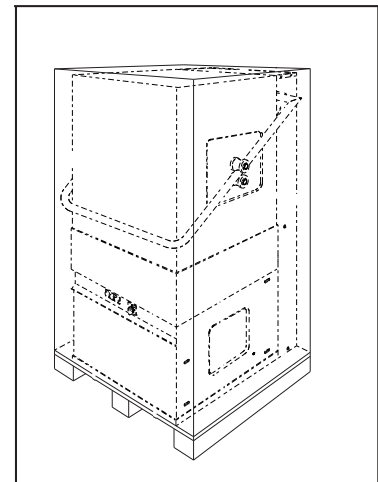


Fig. 2

2. Loosen the two A screws that fasten the dishwasher to the transportation pallet (fig. 3)

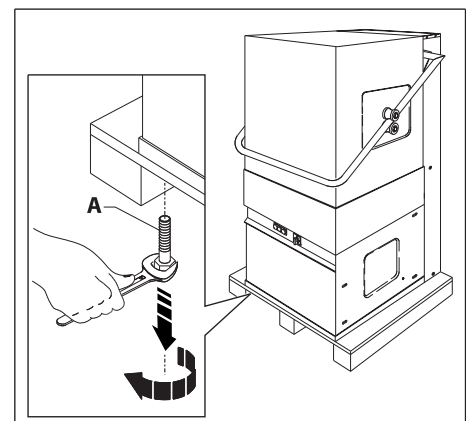


Fig. 3

3. Move the machine on the pallet until freeing of two of the four holes for insertion of the support feet (fig. 4).
Take one of the supplied feet and tighten the screw in one of the two seats vacated (fig. 4).
Proceed with installation of the second foot following the same procedure (fig. 4).

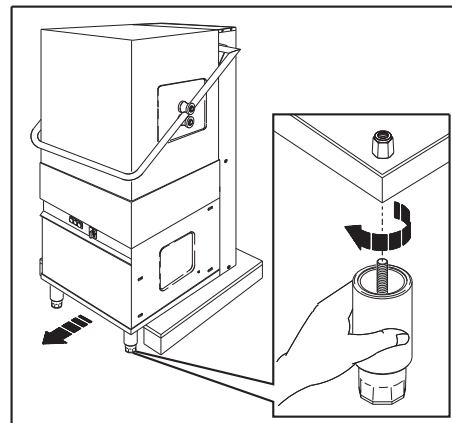


Fig. 4

4. Move the machine until it is positioned on one side on the mounted feet and the other on the pallet in order to free the other two holes, then proceed with assembly with the same procedure.

6. Dishwasher identification and marking

The dishwasher bears the following identification marks:

- Company name
- CE marking
- Indication of model and type
- Year of manufacture
- Test certificate

This information is shown on the plate situated on the dishwasher (fig. 5) and can also be found on the declaration of conformity enclosed herewith.

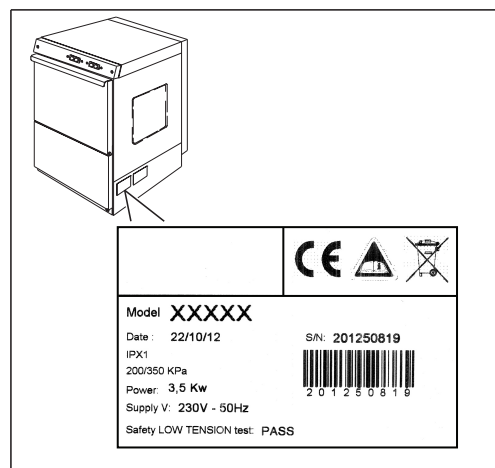


Fig. 5

PART TWO

1. Purpose of the Manual

The purpose of this Instruction and Maintenance Manual is to provide a description of the safety measures necessary for the use which must be observed when using the dishwasher.

This Instruction and Maintenance Manual is to be considered an integral part of the dishwasher.

The term User comprises not only the purchaser of the dishwasher, but also the personnel involved in the operating, maintenance, checking and handling operations.

The information contained in this manual concerns installation, putting into service and maintenance operations.

1.1. Who should read this manual

This manual is intended for the dishwasher operator and maintenance technician.

1.2. Use and preservation of this manual

The purpose of this manual is to provide all the information needed to use and maintain the dishwasher properly, according to the safety standards established by the Machine Directives and the Unified Standards.

For this reason, even if operation of the dishwasher is very simple, the manual must be kept intact and be readily available if required: it must remain close to the place of use, and be clean, legible and intact.

1.3. Duration and validity of this manual

This manual is to be considered valid for the entire life of the dishwasher.

It has been drawn up according to the current state-of-the-art technology existing at the time of construction of the dishwasher.

The manual therefore specifically refers to the dishwasher it was provided with, and is also to be considered valid in the event of future updates.

1.4. Request for a copy or a new manual

Should your copy of this Manual be lost or damaged, please ask your Manufacturer for a new one.

Copies of the Instruction and Maintenance Manual can be requested by stating the serial number, registration number and year of manufacture of the dishwasher (fig. 5).

Copies are only available for a fee.

1.5. Update

The Manufacturer reserves the right to modify the dishwasher whenever necessary and/or to update previous manuals without giving prior notice, except in special cases.

The manual will be updated by the Manufacturer in the following cases:

- if the dishwasher is returned to the Manufacturer for modifications or improvements
- if the manual contains errors or omissions that may prejudice suitable use of the dishwasher in conditions of total safety.

In such cases, the original Manual supplied to the Customer must be returned to the Manufacturer who will provide a new updated copy.

1.6. Transfer of ownership

In case of sale or transfer of ownership of the dishwasher, the customer is required to give notice to the manufacturer, specifying the address of the new owner and the date of validity of the sale contract so that the manufacturer may inform the new owner of the limits of their liability.

1.7 Customer's suggestions

Customers are invited to communicate any suggestions or proposals they consider helpful to improve the use, legibility or preservation of this manual, in the spirit and terms of our Standards.

To communicate your suggestions, please contact the Manufacturer of this dishwasher.

1.8. Liability Limits

1.8.1. Use Limits

This appliance must only be used for the function for which it was designed, that is to wash glasses, cups and similar items which do not exceed the maximum height of the door opening, together with the basket that contains them, as specified for the different models.

The limits of use are determined by the space available and the overall dimensions of the baskets, as well as that of the dishes that may be washed.

The dishwasher may only be used to wash plates and glasses commonly used in bars and restaurants.

The dishwasher was NOT designed to:

- Wash plates, glasses or other accessories made of plastic*
- Wash glass items that could explode when in contact with boiling hot liquids*
- Wash baby feeding-bottles or other plates and food containers for babies.*

1.8.2. Regulations to be observed

The regulations to be observed refer in particular to:

- ▶ *safety of the operator*
- ▶ *safety of the dishwasher*

The Manufacturer will accept no responsibility whatsoever if the dishwasher is used in such a way as to be in conflict with or that violates the safety regulations in force in the country of use, even if they enter into force during or after purchase.

1.8.3. Liability

The Manufacturer will accept no responsibility whatsoever for damage or injury to things or persons in any of the following situations:

- *Misuse of the dishwasher*

The term misuse refers to use of the dishwasher with dishes and items other than those recommended in the paragraph on the Use Limits (para 1.8.1 - PART TWO), which could result in damage or soiling of rotating parts and the splintering and/or explosion of the dishes.

Misuse is also to be considered the use of detergents or rinse aid products other than those recommended (such as dishwashing powder, laundry detergents specific for household dishwashers) or corrosive decalcifying products, acids and other unsuitable liquid or powdery cleaning products.

- *Use of the dishwasher by untrained personnel*

The dishwasher must only be handled by trained personnel. Untrained personnel using the machine should be supervised by a person in charge of the machine, until a certain degree of skill and safety has been achieved in correct use of the dishwasher.

- *Use not in compliance with national safety standards*

The use of the machine by operators who are not legally employed is forbidden.

- *Incorrect installation*

The dishwasher must be properly installed, both mechanically and electrically, and positioned in a suitable place that does not create difficulties for operators during its use.

This manual provides instructions referring to proper installation, when this is carried out by the Customer.

- *Faulty power supply*

A faulty mains power supply can cause damage to the internal motor pump and to the electrical parts of the dishwasher.

The Manufacturer accepts no responsibility for any damage caused by use of the machine with power supply voltages not in accordance with the relative Standards, namely:

- *lower voltage limit: -10% of nominal voltage rating*
- *upper voltage limit: 250 Vac for 220 V single-phase nominal voltage rating and 440 V for three-*

phase nominal voltage rating 380 V.

- Failure to carry out regular, prescribed maintenance (see chap.6 – PART TWO)

Failure to carry out regular, ordinary maintenance is likely to cause damage or malfunction.

- Unauthorised modifications or tampering

The dishwasher cannot be modified or tampered with in any part whatsoever.

- Use of non-original or unsuitable spare parts for the specific model

We recommend contacting the authorised sales office when purchasing spare parts and, in any case, using spare parts only recommended or supplied by the Manufacturer.

- Total or partial non-observance of the instructions for use

ATTENTION!



SHOCK HAZARD

THIS MANUAL MUST BE READ CAREFULLY AND UNDERSTOOD BEFORE INSTALLING AND USING THE DISHWASHER.

Total or partial ignoring of the instructions for use of the dishwasher may expose personnel to safety hazards and cause damage to the machine.

- Natural events

In the case of exceptional events such as earthquakes, flooding, etc., the Manufacturer does not assume any responsibility for damage to things or persons due to the use of the dishwasher in the afore-mentioned conditions or even for total or partial reconditioning of the same.

2. Installation

ATTENTION!



SHOCK HAZARD

Installation operations are to be carried out by qualified personnel in compliance with the following instructions.

2.1 Positioning and levelling

The Manufacturer delivers the dishwasher already assembled and complete with all the accessories necessary to be used properly.

If possible, place the dishwasher close to the electric and water mains connections. The machine must be levelled on a flat surface by turning its 4 adjustable feet (fig. 6).

If the machine is recessed in undercounter installations, its side and back panels may be joined to adjacent furniture or walls. The load and drain pipes may be left or right oriented, but once the machine is positioned, the pipes and the electric cable must not be bent or compressed.

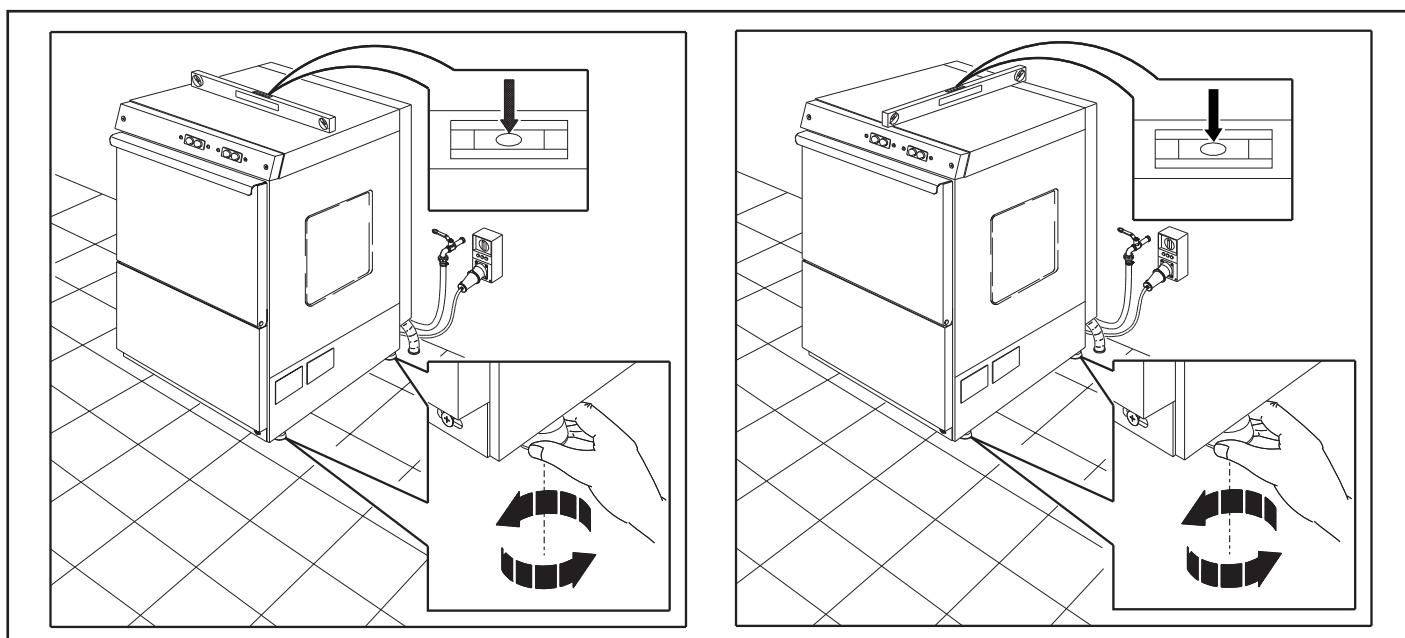


Fig. 6

2.2 Electric connection



ATTENTION!

The electrical connection must be carried out in compliance with the laws in force in the country in which the machine is installed.

Before connecting the machine, make sure that the voltage and the frequency of the electrical supply system correspond to that indicated on the plate and that the machine is connected to an efficient earthing system;

On the back of the machine there is a clamp marked with the  symbol, necessary for the equipotential connection between the different appliances.

The machine must be protected upstream against overcharges and short-circuits by an omnipolar thermal magnetic switch, with sufficient power of interruption, or by a load switch and gL-type fuses with adequate rate of flow.

A residual current circuit breaker coordinated with the resistance value of the user's earthing system against indirect contacts must be installed immediately downstream of the magnetothermal switch or of the circuit breaker/fuses.

The power cable supplied with the machine is H07RN-F-type.

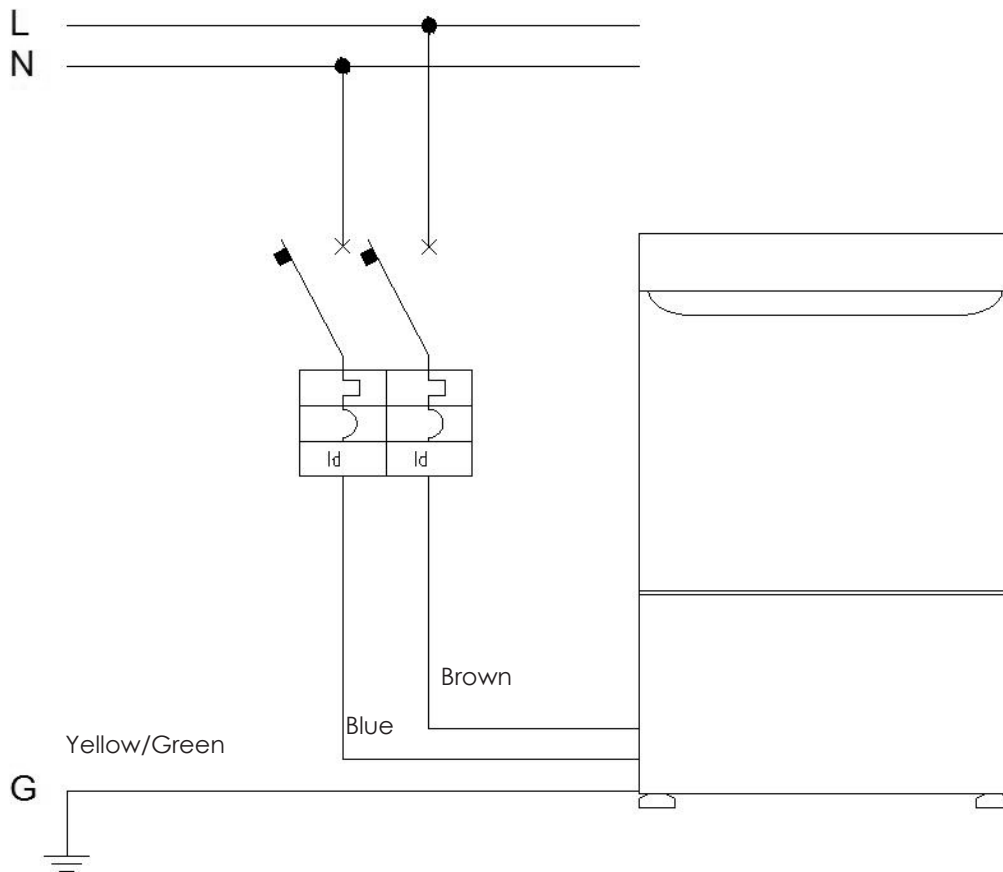
ELECTRICAL INSTALLATION OF A SINGLE-PHASE DISHWASHER

Single-phase dishwasher with Schuko 230V+T plug

If the dishwasher is fitted with a plug, insert it into the wall socket. Connect the device to the equipotential system via the appropriate terminal on the back of the dishwasher.

Single-phase dishwasher without 230V+T plug

If the dishwasher does not have an electrical plug, perform connection as follows:



Brown wire: line

Blue wire: neutral

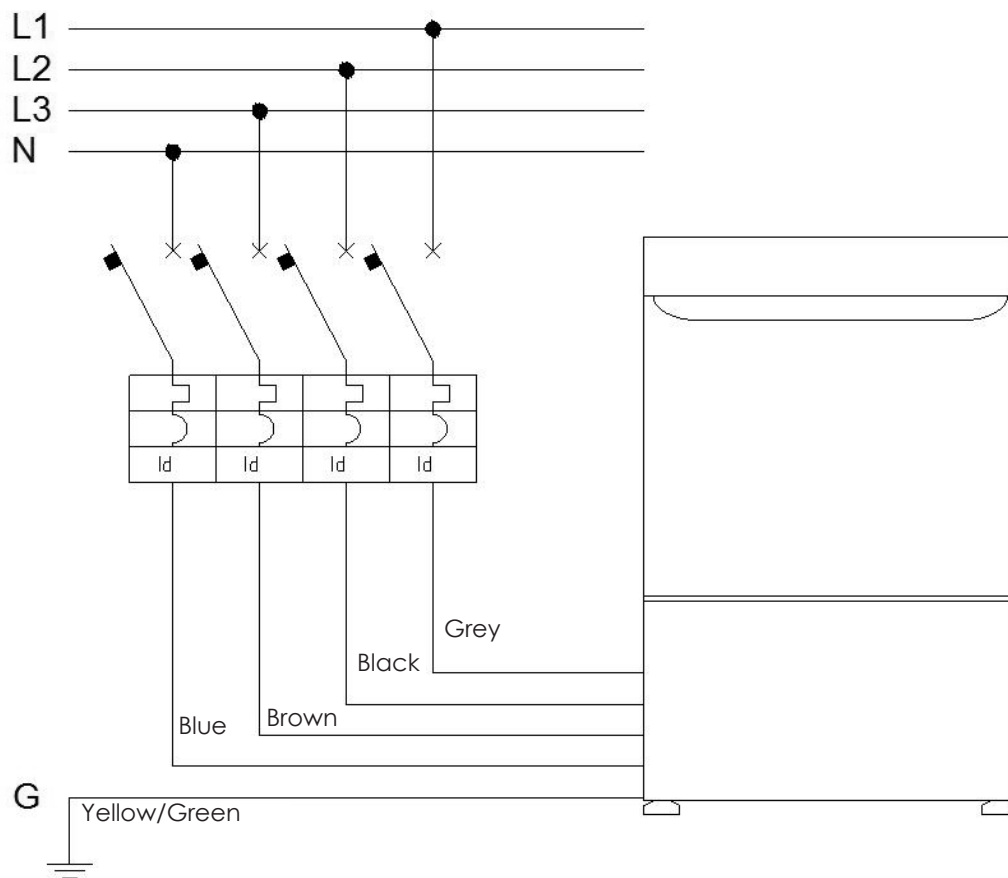
Yellow/green wire: earthing system

Connect the device to the equipotential system via the appropriate terminal on the back of the dishwasher

THREE-PHASE DISHWASHER ELECTRICAL INSTALLATION

400V3N+T three-phase dishwasher

The 400V three-phase dishwashers are always 5-pole and therefore fitted with a neutral conductor. Perform connection as follows:



Brown wire: line 1

Black wire: line 2

Grey wire: line 3

Blue wire: neutral

Yellow/green wire: earthing system

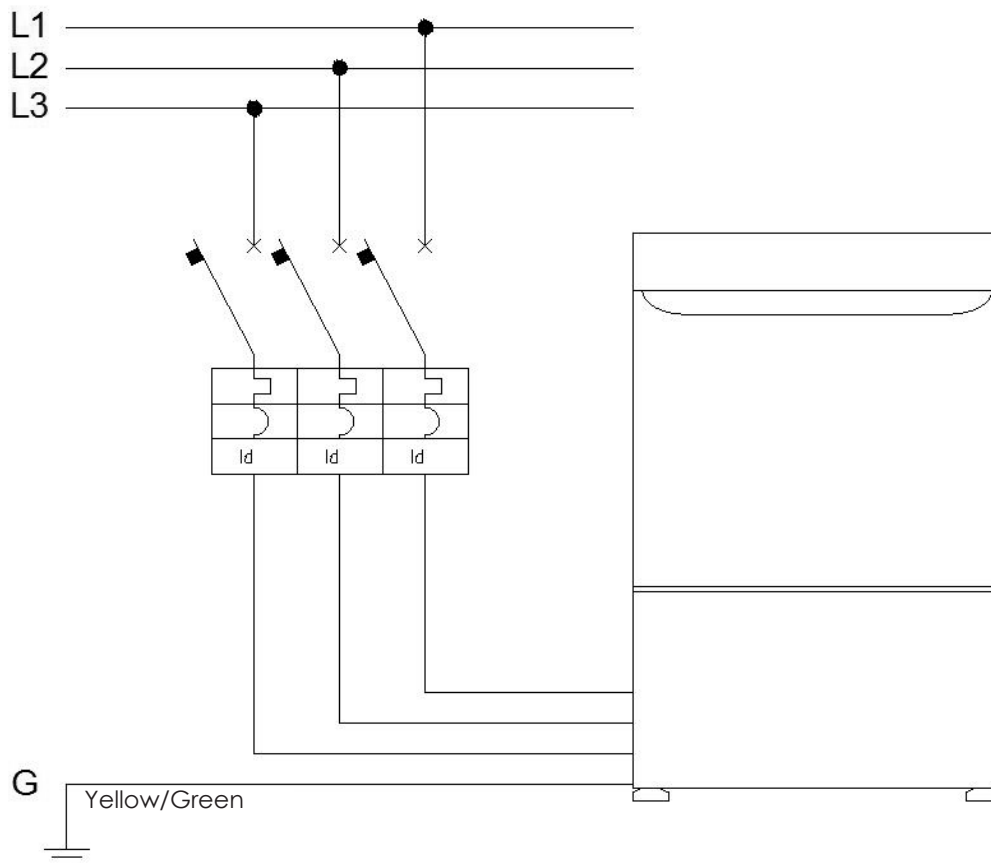
If the dishwasher is provided with a three-phase motor, check for correct rotation of the pump following the instructions supplied with the dishwasher.

If the pump should rotate in the direction opposite to the arrow on the pump cover, invert L1 and L2.

Connect the device to the equipotential system via the appropriate terminal on the back of the dishwasher.

230V3+T three-phase dishwasher (optional upon request)

230V three-phase 4-pole dishwashers are only provided upon express request when ordering. Subsequent transformation of the dishwasher may require the replacement of certain components. Perform connection as follows:



Brown wire: line 1

Black wire: line 2

Grey wire: line 3

Yellow/green wire: earthing system

If the dishwasher is provided with a three-phase motor, check for correct rotation of the pump following the instructions supplied with the dishwasher.

If the pump should rotate in the direction opposite to the arrow on the pump cover, invert L1 and L2. Connect the device to the equipotential system via the appropriate terminal on the back of the dishwasher.

Dishwasher without power cord

If the dishwasher is supplied without an electric cable, follow the attached instructions to connect it to the mains.

Connect the device to the equipotential system via the appropriate terminal on the back of the dishwasher.

2.3 Earthing

The dishwasher must be connected to the earthing system of the building or to another tested and approved system in compliance with the safety regulations.



ATTENTION!

It must however be understood that an efficient earthing system is not enough on its own to ensure safe conditions. It will therefore be necessary to install suitable safety devices capable of interrupting the mains power supply with intervention times in compliance with the IEC 64-8 Regulations or with the other equivalent European Standard referring to electrical systems in public buildings.

2.4 Water supply

Connect the load pipe supplied with the dishwasher to a $\frac{3}{4}$ " water intake, using it to replace any existing pipes.

The highest water supply temperature is 55°C.

The water supply pressure must respect the limits indicated in the technical data (200/350kPa).

Further indications:

- *It is advisable to use the pressure regulators if hydraulic supply takes place through autoclave at a pressure greater than that of normal operation of the water mains.*
- *If the water pressure available is less than 1.5 bar, to ensure rinsing it is necessary to install an external pump to increase pressure.*
- *If the water has a hardness above 14°f, a water softener should be used to prevent external lime deposits and unsatisfactory washing results.*
- *If water hardness is higher than 14°f, limestone forms.
If water hardness is lower than 8°f, the dishes will not be rinsed properly.*

The connection to the water supply is to be carried out by means of a normal screw-on attachment to a water valve fitted with a handle or hand wheel (fig. 8).

It is advisable to place a suitable gasket in the connection between the supply hose and the tap (fig. 8).

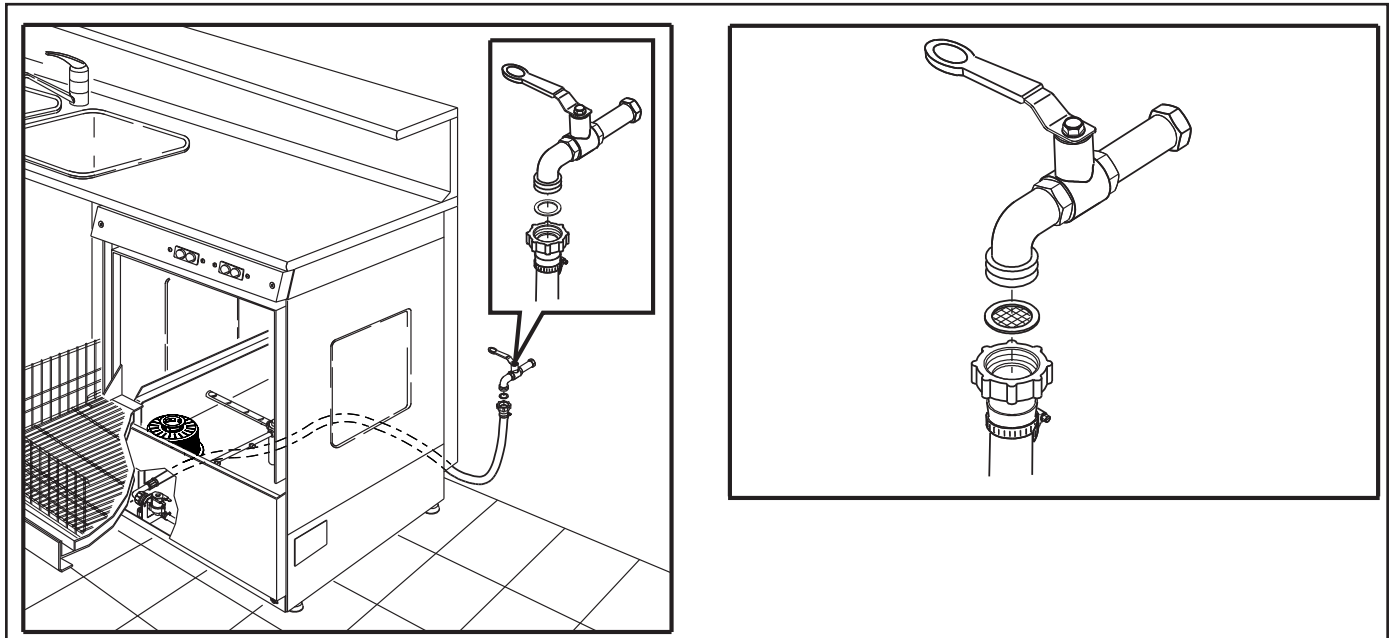


Fig. 8

2.5 Connection to the water drain

On the back of the machine there is an elbow connector which can be easily orientated towards the nearest drain well. (fig.9)

Whenever water drain cannot be by gravity, the model with a built-in drain pump must be specifically requested (fig.10): see in this regard para. 2.6 - PART 2.

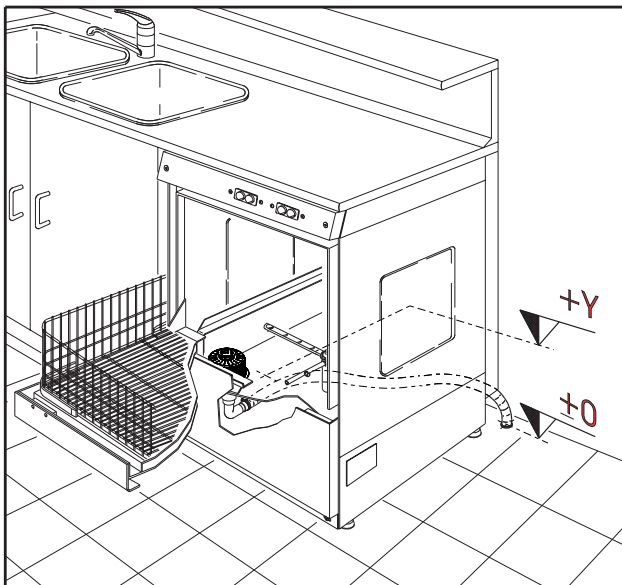


Fig. 9

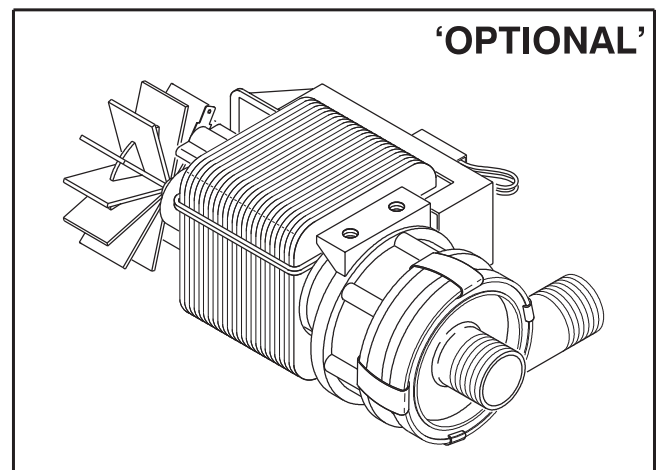


Fig.10

2.6 Model with drain pump

The end of a drain hose can be hooked-up to the edge of a sink, or connected to an outlet in the wall; this outlet must be provided with an air breather or have a diameter larger than that of the drain hose to allow the passage of air.

If an extension is required, it must not exceed 2 m in length. Avoid exceeding the difference of 40 cm between the point of connection of the drain hose and the base of the dishwasher.

Avoid exceeding the difference of 40 cm between the point of connection of the drain hose and the base of the dishwasher.



ATTENTION!

In the case of attaching to the edge of a sink, position the free end of the hose so that the drain water cannot reach plugs or electrical equipment

2.7 Detergents installation

The dishwasher is equipped with a blue tube for drawing of the rinse aid and a yellow tube for drawing of the detergent. Before inserting the tubes into their respective tanks, it is advisable to apply the weight and the filter supplied with the dishwasher to the end of these tubes (fig.A). The ceramic weight ensures drawing of the product from the bottom of the tank.

Important: never place the tubes into the tanks without having installed the filter; any crystallised parts of the product will seriously damage the dispensers.

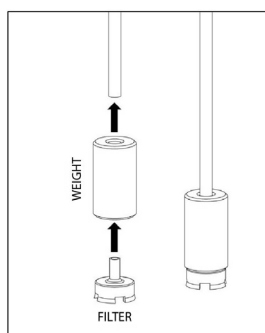


Fig.A

It is advisable to keep the detergent and rinse aid tanks in sight in order to continuously verify the presence of the product. Replace the tanks as soon as the product runs out.

3 How to use the dishwasher

3.1 Type of use

The dishwasher has been designed for washing dishes commonly used in bars and restaurants.

3.2 Use conditions

The dishwasher may be used under any condition, providing that the operating temperature range is between +10 and +50°C.

It must only be used with an operator present.

In any case, avoid using the dishwasher in open spaces, such as in uncovered areas, improvised sheds, or other temporary installations. The operating temperatures of dishwashers are 55/60°C for the tank and 85°C for the boiler

3.3 Dishwasher types

Items that can be washed:

- *for the glass washer model: glasses, cups, coffee cups, wine glasses, saucers and fruit plates, in compliance with the paragraph on Use Limits (para. 1.8.1 – PART TWO).*

- *for all the other models: all types of dishes, crockery and glasses within the limits determined by the size of the baskets, in compliance with the standards stated in the paragraph on Use Limits (para. 1.8.1 – PART TWO).*

3.4 Use limits

The dishwasher must be used for washing dishes stacked flat in the basket inside the machine, up to its full carrying capacity, with no overlapping (fig. 11).

Moreover, make sure that the dishes do not prevent the rotors from turning.

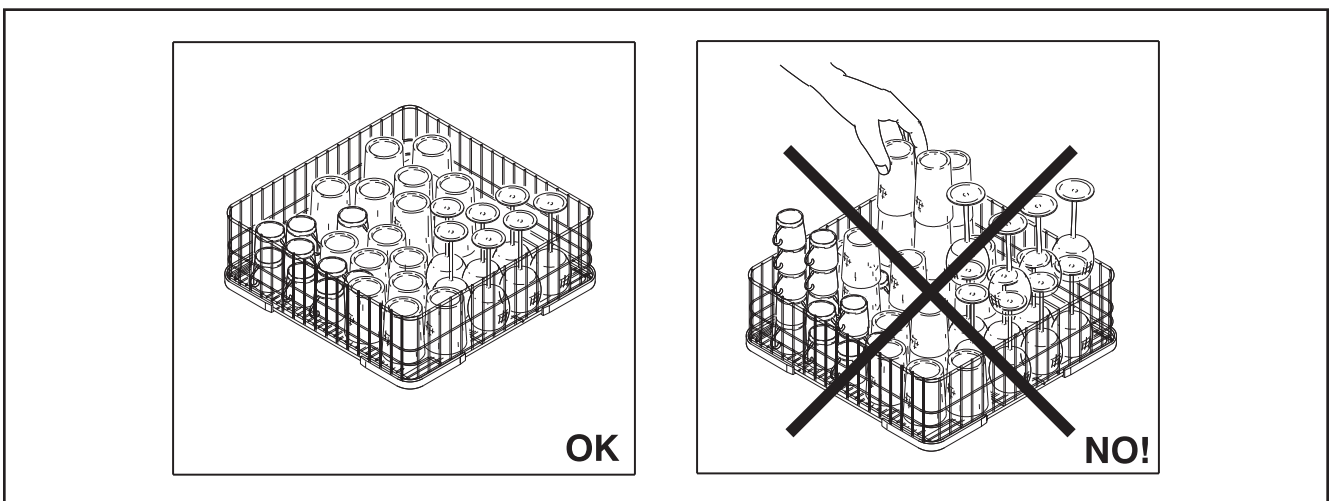


Fig. 11

3.5 Operator

The operator should have sufficient experience in the use of equipment commonly supplied to public businesses to prevent incorrect handling.

In any case, the simple commands and ease of operation when using the dishwasher facilitate acquiring of the necessary experience in a very short space of time.

The operator must always be aware of the risks (i.e. shock and burn hazards) due to use of any dishwasher.

The operator must be trained with special attention in the following cases:

- *temporary employees, with little or no experience;*
- *personnel with little or no service practice;*
- *personnel with local language comprehension difficulties;*
- *physically disabled personnel with limited movement capabilities.*

4 Instructions for use of the electro-mechanical dishwasher

This appliance must only be used by trained personnel and employed solely for the washing of glasses, saucers, cups and similar item, in compliance with the Use Limits described in par. 1.8.1 – PART TWO).

4.1 Check general operation

Before starting up normal operation, the User should check the functional characteristics of the installation by a visible inspection of connections to the dishwasher.

Regular inspection is also recommended regarding the conditions of connection of hoses and electric power supply cables (see chap.6 – PART TWO).

4.2 Safety devices

4.2.1 General safety devices

The dishwasher is enclosed inside metal cabinets that can only be opened using appropriate tools.

4.2.2 Alarm signals

No alert signals are installed.

4.2.3 Indicators and signalling on the electro-mechanical dishwasher

RED POWER-ON LIGHT

The power supply is ON



CYCLE INSERTED LIGHT

The washing cycle is running



TANK TEMPERATURE LIGHT OK

Temperature water tank = 60°C



4.2.4 Interlock devices

As an interlocking device, a microswitch is used, fitted on the dishwasher door and positioned in such a way that it cannot be tampered with

This micro switch stops the water intake in the event that the door is opened, without switching off the power supply on the machine.

4.2.5 Removable and adjustable safety guards

No adjustable or removable guards are provided, as they are not necessary.

4.3 Safety measures

Several basic rules must be complied with when using the dishwasher:

- The dishwasher must never be removed from its original position when working
- Make sure the water supply tap is open before turning the appliance on
- Never clean with corrosive products acids, steel wool or steel brushes
- Never wash the appliance with direct or high-pressure jets of water
- At the end of daily use, switch off the dishwasher
- Inspect the general situation of the machine before use, with particular attention to the electric power supply connections and the operation controls
- The dishwasher must be clean and possibly free from residues from previous wash cycles and in a good working condition. All the auxiliary accessories must be installed correctly and be efficient
- if the dishwasher, for any reason, must remain unused, it is advisable to display a sign with the wording "Out of Service" If necessary, disconnect the dishwasher from the mains
- In the event that a spoon or other small object falls inside the tank, the tank will need to be emptied:

1. turn off the dishwasher using the **POWER SWITCH** (see para. 4.6) and disconnect it from the mains
2. remove the overflow pipe (fig. 16)
3. if supplied, operate the drain pump by holding down the **DRAIN PUMP BUTTON** (see para. 4.6)

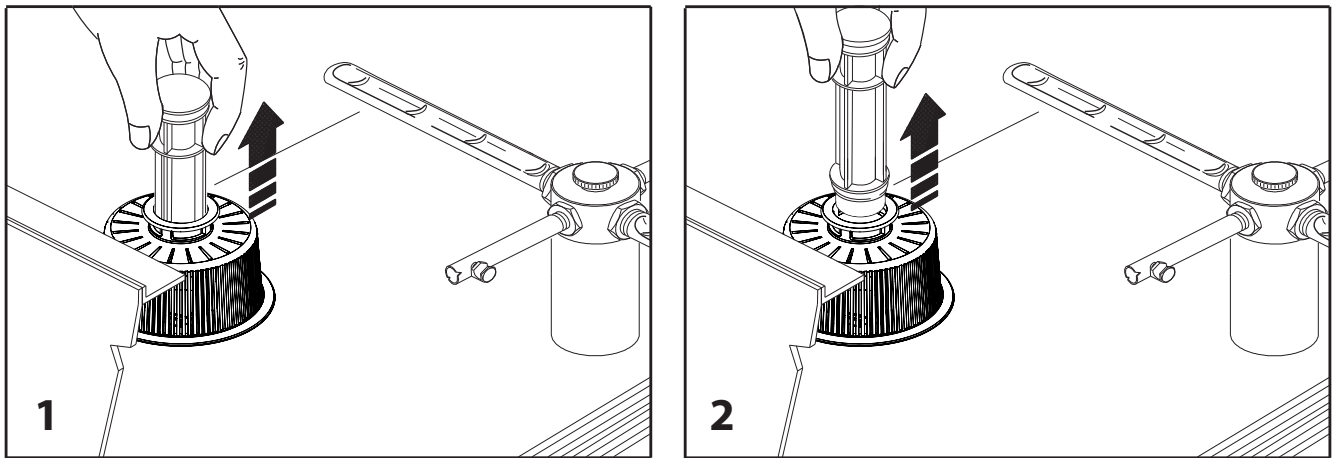


Fig. 16

Wait approximately five minutes to allow the heating elements to cool down before attempting to recover any fallen objects.

ATTENTION!



BURN HAZARD

4.4 Unladen test

Before starting the dishwasher, it is advisable to perform an unladen test to make sure that the machine was installed correctly.

4.5 Washing operations

A few basic rules must be observed to ensure correct hygiene for the items being cleaned:

- Remove any residual food from the dishes before washing them in the dishwasher (fig. 13)

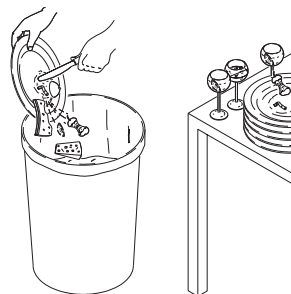


Fig. 13

- frequently replace the water in the tank according to the number of wash cycles that have been performed - at least 3 times a day.
- dry the washed dishes with a clean cloth
- do not place the dishes on rubber cloths or on other water-retaining materials
- The washing pump filter must be kept clean and placed correctly (see chap.6 – PART TWO).
- The overflow must be positioned correctly

4.6 Electromechanical dishwasher operation

On fig. 14a, 14b, 14c you can see the control panel of the dishwasher and the reference to each control, according to the model of the dishwasher and the presence or absence of the drain pump.

FRONT LOADING DISHWASHER

CONTROLS	REF.
IGNITION SWITCH	1
CYCLE START BUTTON	2
MANUAL RINSE BUTTON	3
POWER LIGHT	4
WATER TEMPERATURE LIGHT	5
CYCLE INSERTED LIGHT	6

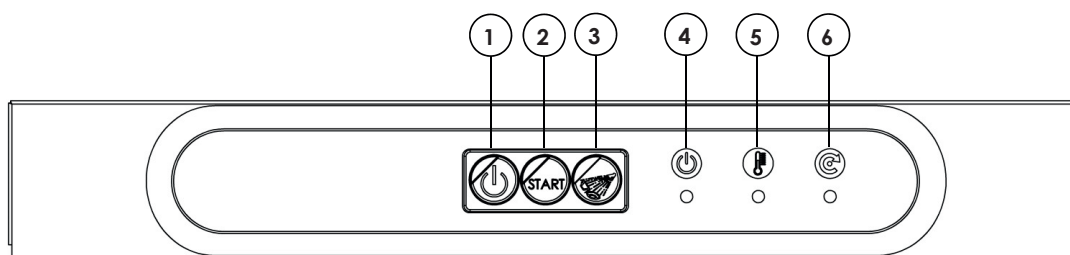


Fig. 14a

FRONT LOADING DISHWASHER WITH DRAIN PUMP

CONTROLS	REF.
IGNITION SWITCH	1
CYCLE START BUTTON	2
DRAIN PUMP BUTTON	3
POWER LIGHT	4
WATER TEMPERATURE LIGHT	5
CYCLE INSERTED LIGHT	6

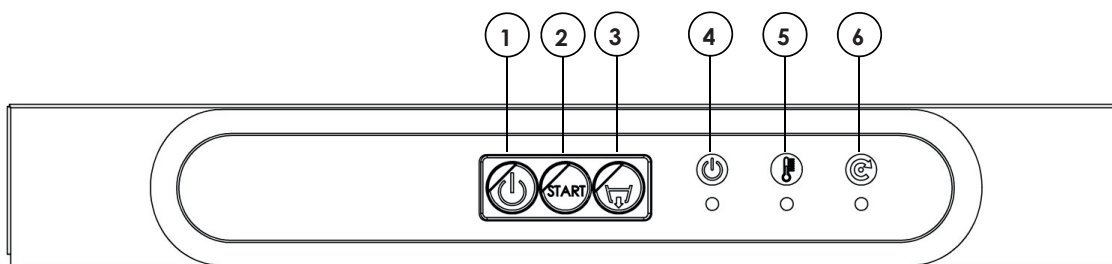


Fig. 14b

LID DISHWASHER

CONTROLS	REF.
POWER LIGHT	1
IGNITION SWITCH	2
DRAIN PUMP BUTTON	3
WATER TEMPERATURE LIGHT	4
CYCLE INSERTED LIGHT	5
WASHING TIMES SELECTOR	6

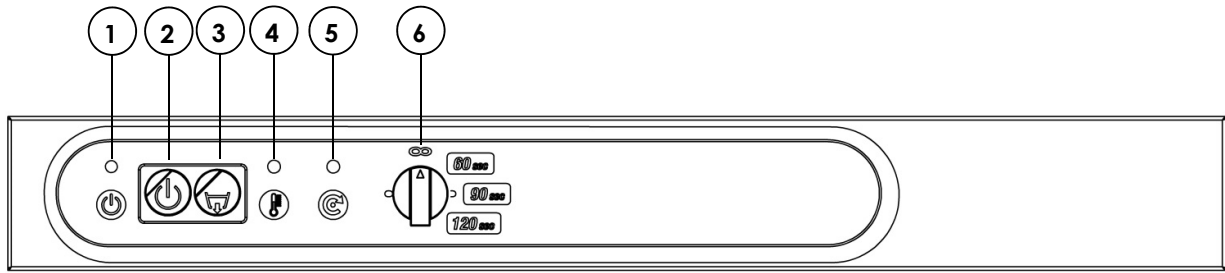


Fig. 14c

The sequence of operations to be carried out for the washing operation is shown below: some of these operations are performed automatically by the dishwasher.



ATTENTION

**PAY ATTENTION WHEN THE OPENING AND CLOSING THE DOOR/LID OF THE DISHWASHER.
DO NOT USE THE DISHWASHER WHEN WEARING CLOTHING/ITEMS THAT COULD BECOME CAUGHT IN THE DISHWASHER COMPONENTS, LIMITING CAPACITY FOR NORMAL MOVEMENT.**

PHASE	DISHWASHER TYPE/REFERENCES FIGURE	
	Front loading dishwasher (ref. fig. 14a or 14b)	Dish washer with lid (ref. fig. 14c)
0. Initial checks	Check that the tank is completely empty and clean Check that the rotors are clean and free to turn Check that the filter is clean and reaches the bottom of the container. Check that the overflow tube is properly inserted in its housing	
1. Switch-on	Close the door of the dishwasher. Push the IGNITION SWITCH (1): the IGNITION SPY LIGHT (4) turns on.	Close the lid of the dishwasher. Push the IGNITION SWITCH (2): the IGNITION SPY LIGHT (1) turns on.
2. Water loading	The water is automatically loaded into the wash tank until it automatically reaches the top overflow pipe.	
3. Water heating	The water is automatically heated. Before starting actual washing, wait for the water heating time in the wash tank. Upon reaching of the pre-fixed water temperature, the WATER TEMPERATURE LIGHT (5) comes on.	Water heating takes place automatically Before starting actual washing, wait for the water heating time in the wash tank. Upon reaching of the pre-fixed water temperature, the WATER TEMPERATURE LIGHT (4) comes on.

PHASE	DISHWASHER TYPE/REFERENCES FIGURE	
4. Detergents and rinse additive dosage	<p>All dishwashers are equipped with automatic systems for the dosing of detergent and rinse aid; the settings are imposed by the installer at the time of installation.</p> <p>The detergent is dosed automatically during tank loading and during the rinse phase, while the rinse aid is dosed automatically during the washing phase.</p>	
5. Selecting the washing time		<p>Before starting washing, select the desired washing time with the WASH TIME SELECTOR (6).</p> <p>Position 1: 45 sec. wash 15 sec. rinse Total time:60 sec.</p> <p>Position 2: 75 sec. wash 15 sec. rinse Total 90 sec. cycle</p> <p>Position 3: 105 sec. wash 15 sec. rinse Total 120 sec. cycle</p> <p>Position O: Position O is a special position that BLOCKS the current function in use: - if the machine is washing, it will continue washing indefinitely; - if the machine is rinsing, it will continue rinsing indefinitely; -- if the machine is stopped, it cannot start by opening and closing the lid.</p>
6. Washing	<p>Open the door, introduce the basket with the dishes (making sure the arrangement of the dishes respects the description contained in para. 3.4 – PART 2), close the door and press the CYCLE START KEY (2) to start the wash cycle: the CYCLE INSERTED LIGHT (6) comes on.</p> <p>The cycle ends when the CYCLE INSERTED LIGHT (6) turns off.</p>	<p>Raise the lid, insert the basket with dishes (making sure the arrangement of the dishes respects the description in para. 3.4 - SECOND PART), lower the lid and press the lid closure handle downwards: the CYCLE INSERTED LIGHT (5) comes on.</p> <p>The washing/rinse cycle starts automatically</p> <p>The cycle ends when the CYCLE INSERTED LIGHT (5) turns off.</p>
7. Supplementary rinse	<p><u>If the machine is set to activate the rinse cycle manually (fig. 14a) and for more than one rinse cycle to be performed, keep the MANUAL RINSE BUTTON (3) pressed for as long as you want the cycle to last.</u></p>	

PHASE	DISHWASHER TYPE/REFERENCES FIGURE	
8. Dishes unloading	<p>To remove the basket with the dishes open the door.</p> <p>If the dishwasher is set for manual activation of rinsing (fig. 14a), to remove any misting from the dishes:</p> <ol style="list-style-type: none"> 1. insert the basket with the dishes back into the dishwasher 2. close the door 3. perform a second rinse, holding down the MANUAL RINSE BUTTON (3) for the desired rinse time 	Lift the lid to remove the basket with the dishes.

4.7 End of service

Every day, after use:

1. turn off the dishwasher using the POWER SWITCH (fig. 14a, 14b or 2 fig. 14c)
2. remove the overflow pipe (fig. 16)
3. let the dishwasher drain completely,
if the dishwasher is equipped with a drain pump, operate it, keeping the DRAIN PUMP BUTTON pressed (3 Fig. 14b, 14c)
4. remove the electric power by turning off the main switch installed upstream of the dishwasher or disconnect it from the electric network
5. Remove and clean the wash pump filter (fig. 17) and any tank filters if present
6. carefully clean the wash tank
7. check and, if necessary, unscrew and clean the wash and rinse pipes
8. replace all the dishes removed, proceeding in reverse order
9. Leave the door/lid open for the time the machine is off.

ATTENTION!



INJURY HAZARD



FALL HAZARD

WHEN THE DISHWASHER DOOR IS OPEN IT CAN BE AN OBSTACLE TO PERSONS AND TO OBJECTS NEAR THE MACHINE ITSELF.

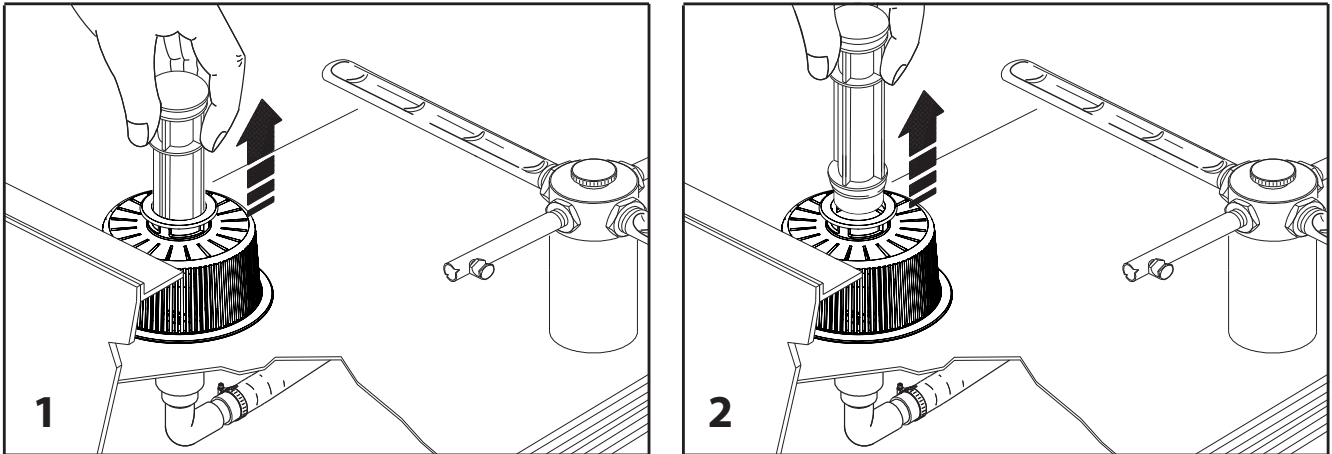


Fig. 16

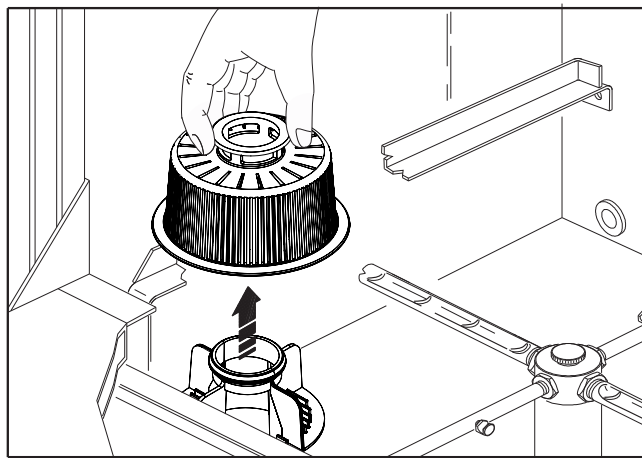


Fig. 17

5 Instructions for disassembly

ATTENTION!



INJURY HAZARD

DAMAGE HAZARD FOR THE DISHWASHER

Only skilled personnel should be allowed to disassemble the dishwasher.

The dishwasher should therefore be taken to the nearest authorised dealer to disassemble all or part of the dishwasher.

6 Maintenance

ATTENTION!



INJURY HAZARD





BURN HAZARD

MAINTENANCE MUST ONLY BE CARRIED OUT WHEN THE MACHINE IS SWITCHED OFF, DISCONNECTED FROM THE POWER SUPPLY NETWORK AND THE TANK IS EMPTY.

MOREOVER, MAINTENANCE SHOULD ONLY BE CARRIED OUT AFTER THE HEATING ELEMENTS HAVE COOLED DOWN (WAIT AT LEAST FIVE MINUTES).

THE ONLY EXCEPTION TO THIS RULE IS WHEN CHECKING THAT THE MICROSWITCH IS FUNCTIONING (SEE THE TABLE BELOW).

The table below shows a list of the necessary maintenance operations and their frequency. In case of technical problems, contact your Dealer.

MAINTENANCE	FREQUENCY	NOTES
Wash tank cleaning	Daily	To be carried out with care.
Rotor cleaning	Daily	Dismantle the rotor by unscrewing the retaining nut and pulling it upwards (fig.18). Wash the rotor with water. Carry out the same operations for the upper rotor.
Wash pump filter cleaning	Daily	Remove the wash pump filter by pulling it upwards, then wash it and rinse it (fig. 19).
Cleaning of wash tank filters (if present)	Daily	Remove the wash tank filters by pulling them upwards then wash and rinse them.
Rotor rotation check	Daily	Check manually that the rotor rotates freely.
Outer surfaces cleaning	Every 1-2 days	Do not use solvents on the control panel.
Micro switch functioning check	Weekly	Check that the door microswitch works properly when the machine is on by opening/closing the door or by lifting/lowering the lid.
Power supply cable and water hose check	Every 6 months	<p style="text-align: center;">ATTENTION!</p> <p> ELECTROCUTION HAZARD</p> <p> INJURY HAZARD</p> <p><u>In case these parts are damaged, disconnect the dishwasher from the power supply without touching the electric cable</u> (turn the switch upstream of the dishwasher to the "off" position or disconnect the entire power supply network to which the dishwasher is connected). <i>Immediately contact your Dealer and have the machine repaired by qualified personnel.</i></p> <p><u>Do not use the dishwasher until it has been repaired.</u></p>

The degree of protection of the dishwasher is IPx1 therefore it is absolutely forbidden to use water jets to clean any part of the dishwasher. It is also prohibited to wash floors, walls or any other object installed near the dishwasher with a water jet or high-pressure cleaners. During normal maintenance and cleaning of the floor, do not wet the base of the dishwasher excessively. Avoid stagnating water near the dishwasher.

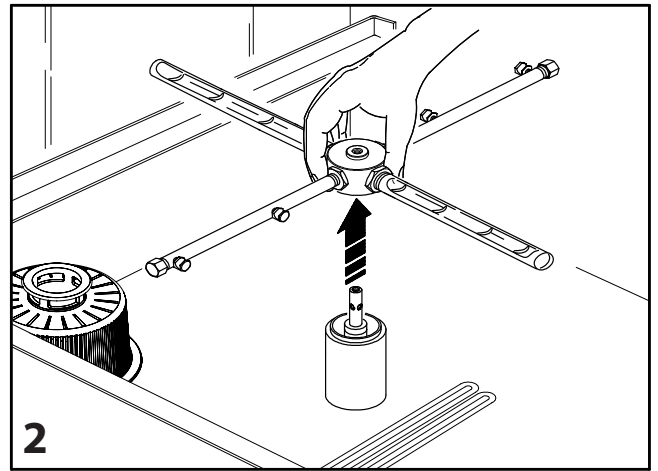
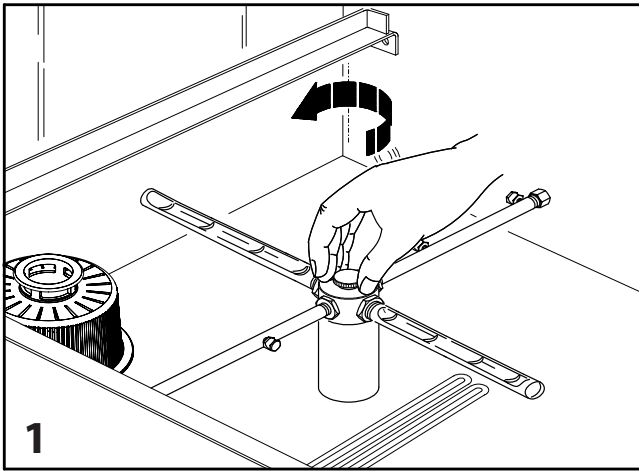


Fig. 18

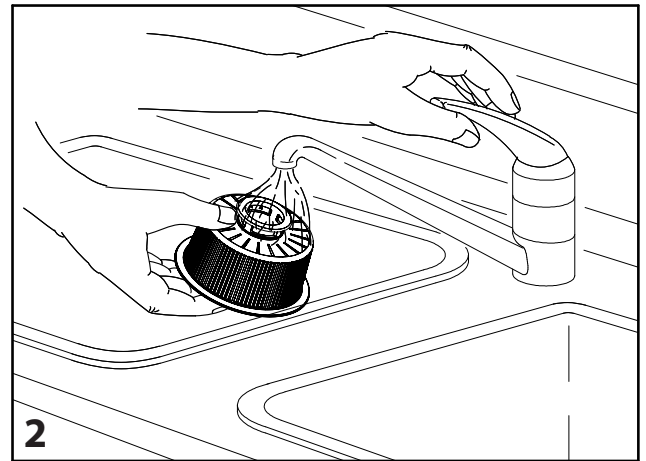
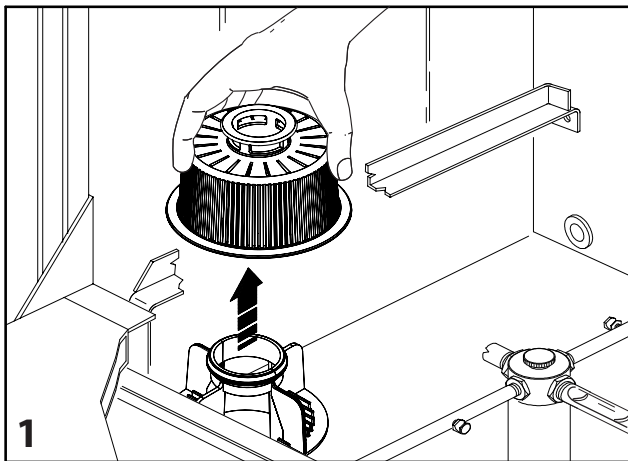
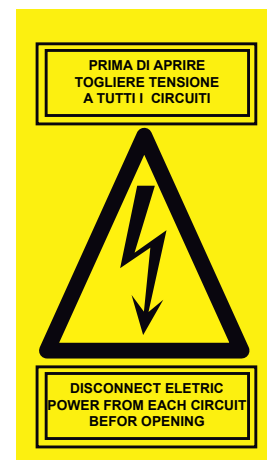


Fig. 19

7 Residual hazards

The alternating current mains power supply represents a source of residual hazard.

Warnings placed in convenient positions on the dishwasher warn operators of these hazards, in compliance with the Safety Standards, as shown here to the side.



8 Instructions for emergency situations



ATTENTION

Emergency situations that are likely to arise during use of the dishwasher are:

- *loss of insulation*
- *electric shock*

In all situations in which the dishwasher is not working, or not working properly, thus generating possible hazardous circumstances, the electric power supply must be immediately disconnected by switching off the switch upstream and by disconnecting the mains power cord.


In the event of electrocution or electric shock, carefully follow the precautions set out by the Safety Regulations. Do not touch the injured person directly, but switch off the switch upstream.


In all situations in which the dishwasher is not working, or not working properly, thus causing the hazardous situations described above, or after one of these situations has occurred, do not use the dishwasher and have it checked and repaired by qualified personnel.

9 Troubleshooting

Before leaving the factory, each machine is thoroughly tested by specialist engineers to make sure that it works perfectly.

However, in the event of a fault, before calling for service, the following trouble shooting operations may be attempted.

PROBLEM	POSSIBLE CAUSE	SOLUTION
0. The dishwasher does not turn on	THE POWER SWITCH (fig. 14a or 14b or 14c, depending on the model) is in the "off" position	Turn the IGNITION SWITCH (fig. 14a or 14b or 14c, according to the model) to the ON position.
	The switch upstream of the dishwasher is in the OFF position.	Turn the switch upstream of the dishwasher into the "on" position
	The plug or the power cable are damaged. ATTENTION!  ELECTROCUTION HAZARD	<u>In case these parts are damaged, disconnect the dishwasher from the power supply without touching the electric cable</u> (turn the switch upstream of the dishwasher to the "off" position or disconnect the entire power supply network to which the dishwasher is connected). <i>Immediately contact your Dealer and have the machine repaired by qualified personnel.</i> <u>Do not use the dishwasher until it has been repaired.</u>
1. The dishwasher does not fill with water	There is no electricity.	Wait for electricity to come back.
	Dishwasher door/lid not closed	Open the water supply valve
	Water supply valve filter clogged	Clean the water supply valve supply valve
	Supply valve closed	Open the supply valve
	Filling up of water softener upstream	Wait until filling up is completed
2. Even if you press the STARTING CYCLE SWITCH the cycle does not start	Dishwasher door/lid not closed	Close the door/lid of the dishwasher
	The switch upstream of the dishwasher is in the OFF position.	Turn the switch upstream of the dishwasher into the "on" position
	The STARTING CYCLE SWITCH was not pressed for at least 2 seconds.	Press the STARTING CYCLE SWITCH for at least 2 seconds again.
3. Washing is noisy	The wash pump filter (fig. 19) is clogged.	Wash and rinse the wash pump filter (fig 19).
	The washing arms of the rotor (fig. 18) knock the parts to be washed protruding from the basket	Position the dishes so that they cannot be struck by the washing arms of the rotor by following the instructions in para. 3.4 – PART TWO
4. Inadequate rinsing	Water supply pressure is less than 1.5 bar	Contact an installer to install a supplementary pump to increase the supply water pressure
	Water supply valve filter clogged	Clean and rinse the water supply valve filter
	The nozzles of the rotor are blocked.	Wash and rinse the nozzles of the rotor.
	The rotor arms do not turn freely	- Position the dishes so that they are not struck by the washing arms of the rotor, following the instructions in para. 3.4 – PART TWO - Wash and rinse the rotor.

PROBLEM	POSSIBLE CAUSE	SOLUTION
5. The wash produces excessive foam.	The dishwasher has not finished the phase of heating of the water in the tank	Before starting actual washing, wait for the water heating in the washing tank. When the pre-set water temperature is reached, the WATER TEMPERATURE LIGHT comes on
	Excessive rinse aid has caused this foaming	Contact the installer to reduce the amount of rinse aid.
	Soaking of the dishes with unsuitable detergent	Avoid soaking with foaming detergents
6. The rotor does not turn freely	The washing arms of the rotor (fig. 18) knock the parts to be washed protruding from the basket	Place the dishes so that they do not become hit by the washing arms of the rotor by following the instructions in para. 3.4 – PART TWO
	The rotor needs cleaning	Wash and rinse the rotor
7. The dishwasher does not drain the water	The drain pipe (fig. 21) is blocked or compressed	Remove the blockage from the drain pipe
	The drain pump filter (if supplied – fig. 21) is clogged	Wash and rinse the drain pipe filter.
	The pump does not drain properly	Contact the installer to reduce the replacement of the drain pump
8. The wash result is unsatisfactory	The dishwasher has not finished the phase of heating of the water in the tank	Before starting actual washing, wait for the water heating time in the wash tank. When the pre-set water temperature is reached, the WATER TEMPERATURE LIGHT comes on
	Water in the tank is excessively dirty	Change the water
	The washing arms of the rotor (fig. 18) knock the parts to be washed protruding from the basket	Place the dishes so that they do not become hit by the washing arms of the rotor by following the instructions in para. 3.4 – PART TWO
	The rotor needs cleaning	Wash and rinse the rotor
	The nozzles of the rotor are blocked.	Wash and rinse the nozzles of the rotor.
	No detergent	Contact the installer to increase the amount of rinse aid.
9. The water tank is full of limestone	Excessive hardness of the inlet water	Contact the installer to install a softener upstream
		Perform descaling of the tank with specific products for industrial dishwashers. Follow the instructions provided by the manufacturer of the descaling agent. ATTENTION!  WARNING RISK OF BURNS FROM ACID

PROBLEM	POSSIBLE CAUSE	SOLUTION
10. Presence of brown spots or grease in the tank after emptying	The tank is stained with coffee or grease	Increase daily water refills and contact the installer to increase the amount of detergent.
11. Spots of rust in the wash tank	Use of detergent with high content of chlorine	Change the type of detergent according to the instructions given in paragraph 11. Remove rust with specific products without scratching the surface of the steel
	Using bleach in the tank	Never use bleach. Remove rust with specific products without scratching the surface of the steel
	Introduction into the tank of crockery previously cleaned with iron scourers	Never use scouring pads or wire brushes in the manual pre-wash. Remove rust with specific products without scratching the surface of the steel
	Washing of dishes or iron items	Do not wash iron items

If the problem persists even after you have followed these instructions, please contact the nearest officially appointed Service Station, reporting model data (fig. 5) and type of failure.

10 Personnel training

The personnel must be trained regarding the operations for loading, unloading and preparation for use of the machine.

All these operations are relatively simple and require normal prudence in order to avoid injuries and accidents.

11 Helpful hints

Here are some useful tips to complete dishwasher operation:

- Check the level of rinse aid and detergent in the outer container, and replace if necessary (fig. 22)
- The washing and rinsing arms must be clean and equipped with jets and taps
- Use only industrial and low-foam detergents
- Use only industrial detergent and rinse aid that we supply or equivalent
- Use the doses recommended by the detergent manual (para. 4.6 – PART II) or by the manufacturer of the detergent itself
- Do not fill the detergent and rinse aid containers with new product to prevent crystallisation of the product which, aspirated by the dispensers, damages the tubes
- Upon each tank change clean the tubes. In this regard, before inserting the tubes into the new tanks, place the suction tubes into a basin filled with warm water and perform 2 cycles of vacuum cleaning.
- The detergent and rinse aid tubes must be replaced at least 1 time per year or as soon as the maintenance request message appears (only for electronic dishwashers)
- Make sure that the detergent and rinse aid intake filters are always installed in the respective tubes and thoroughly clean. Replace them if they are excessively dirty and clogged with crystallised detergent.

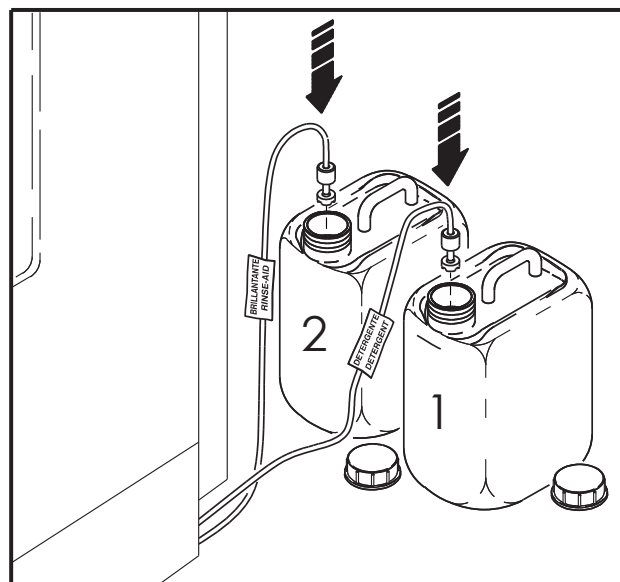


Fig. 22

12 Instructions for disposal

Instructions for the disposal of electrical devices.

The label shown to the right is applied to electrical devices you have bought and means that the appliance cannot be disposed of as common waste but must be disposed of separately.

In fact, waste deriving from electrical or electronic devices must undergo special treatment in order to prevent the pollutants contained in the devices from being dispersed and to protect the environment and human health. Moreover, it will be possible to reuse/recycle part of the material of which this waste is made up, thus reducing the depletion of natural resources and the quantity of waste to be recycled.

WARNING

**DUE TO ITS POLICY OF CONTINUOUS PRODUCT IMPROVEMENT, THE MANUFACTURER RESERVES THE RIGHT TO MAKE ANY CHANGES DEEMED NECESSARY.
THE MANUFACTURER CANNOT BE HELD RESPONSIBLE IF THE INSTRUCTIONS CONTAINED IN THIS MANUAL ARE NOT OBSERVED.**

