

**ENGLISH****GENERAL INSTRUCTIONS AND SAFETY REGULATIONS**

The **present manual** is an integral and essential part of the product and must be delivered to the user. The warnings contained in this manual must be read carefully, as they supply important indications relative to the safety of installation, use and maintenance. Conserve this manual for further consultation.

**After having removed** the packing, check that the equipment is not damaged. In doubt, do not use it and refer to qualified personnel. The packing elements (plastic bags, expanded polystyrene, nails, etc.) must not be left within reach of children, as they are potential sources of danger.

**Before connecting** the equipment, check that the data on the machine label corresponds to that of the electrical supply network. Installation must be effected according to the regulations in force and to the manufacturer's instructions and only by qualified personnel. Erroneous installation can cause damage to people, animals and things and the manufacturer cannot be considered responsible. The equipment is electrically safe only when it is correctly connected to an efficient earth connection, in accordance with the safety regulations in force. It is necessary to verify this basic safety requirement and in doubt, to request an accurate control of the plant by qualified personnel.

The manufacturer cannot be considered responsible for any damage caused by the lack of an earth connection in the plant. Check that the electrical capacity of the plant is sufficient for the maximum capacity indicated on the label.

In doubt, refer to qualified personnel who should also check that the section of the plant cables is suitable for the power absorbed by the machine.

**It is forbidden to use** adaptors, multiple sockets and/or extensions. When use of these is indispensable, only plugs, simple or multiple

adaptors and extensions in compliance with the safety regulations in force may be used and the voltage capacity limit indicated on the simple adaptors and extensions and the maximum power indicated on the multiple adaptors must not be exceeded.

**This machine** may be used only for the purposes for which it was designed. Any other use is to be considered unsuitable and therefore dangerous.

The manufacturer cannot be held responsible for any damage caused by unsuitable, erroneous and irrational use of the same.

**Several basic** rules must be respected when using any type of electrical unit. In particular:

- do not touch the machine with wet or damp hands or feet
- do not use the machine when barefooted
- do not use extensions in rooms used for baths or showers
- do not pull the supply cable in order to disconnect the machine from the supply network
- do not leave the machine exposed to atmospheric agents (rain sun, etc.) unless the machine is expressly prepared for this
- do not allow the machine to be used by children or unfit persons.

**Before effectuating** any type of maintenance operation, disconnect the machine from the electrical supply network by disconnecting the plug or the mains switch.

**When cleaning**, operate as indicated in this manual.

**In the case of failure** and/or if the machine is not working properly, switch it off and do not attempt any direct repairs. Refer exclusively to qualified personnel. Repairs must only be carried out by the manufacturing company or by an authorized service centre and only original spare parts must be used, in order to avoid compromising the safety of the machine.

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**For installation**, it is necessary to prepare an omni-pole switch, in compliance with the safety regulations in force, having an opening distance of the contacts equal or superior to 3 mm.

**In order to avoid** dangerous overheating, it is advisable to unwind the supply cable for the whole length.

**Do not obstruct** the suction or dissipation grids.

**The supply cable** of this machine must not be replaced by the user. Should the cable be damaged, switch the machine off and contact qualified personnel for its replacement.

**Should it be decided** not to use this type of machine anymore, it is advisable to cut the supply cable after having disconnected it from the supply network. Furthermore, it is advisable to render innocuous any parts which may be possible sources of danger.

#### APPLICATION OF SUPPORT ONLY FOR SOME MODELS

After having turned the machine upside down, proceed as follows:

- remove the four feet, the protective part which closes the bottom and the relative locking clips from the machine;
- remove the protective part from the support and assemble it onto the machine, locking it with the apposite screws;
- reassemble the four feet and the protective part onto the support.

**The protective part is indispensable for compliance with the various safety regulations.**

**The manufacturing Company declines any responsibility if these regulations are not observed.**

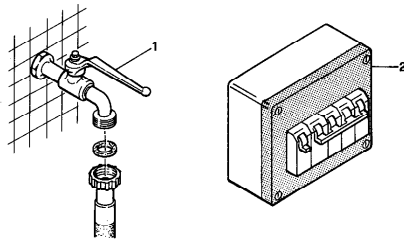
#### CONNECTIONS TO BE PRE-ARRANGED BY THE CUSTOMER

**A** - The water supply pipe must have a minimum section of 3/4" G and must be supplied with an exclusion tap 1. The pressure of the supply water must be between 200 and 400 kPa (2 and 4 kg./cm<sup>2</sup>.).

**B** - The water discharge pipes must have at least the same diameter of the flexible hose supplied and that is  $\varnothing$  35mm. Connect to the existing mains or make a syphon rod discharge drain in the floor.

**C** - Arrange an automatic current interruptor 2 supplied with thermic protection or fuses and having an ammetric capacity which corresponds to the data indicated on the identification plate placed on the side of the machine. Furthermore, there must be at least 3mm. of contact opening. Make sure that the electric plant is supplied with an efficient ground connection.

**The manufacturing Company declines any responsibility if these regulations are not observed.**



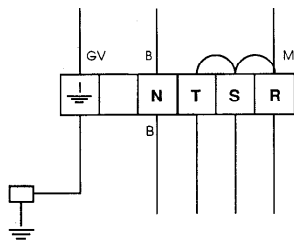
**TRANSFORMATION OF THE ELECTRICAL CONNECTION**

The standard three-phase machine is supplied with electrical connections at 380V 3 N. Should it be necessary to transform the voltage and phase, it is necessary to intervene following the instructions specified here.

- GV - yellow/green
- B - blue
- M - brown
- G - grey
- R - red
- N - black

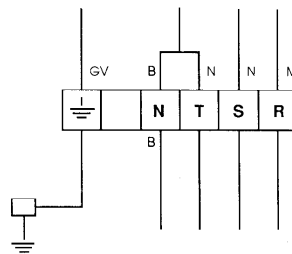
For 220V/1 Ph connection, use a supply cable having 3 section heads suitable for the absorbed current. The connection of the boiler resistance remains the same as that for 380V 3 N.

**Volt 220/1Ph**

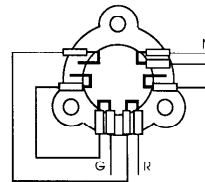


For 220V 3 connection, use the supply cable supplied and connect the wires according to the wiring diagram.

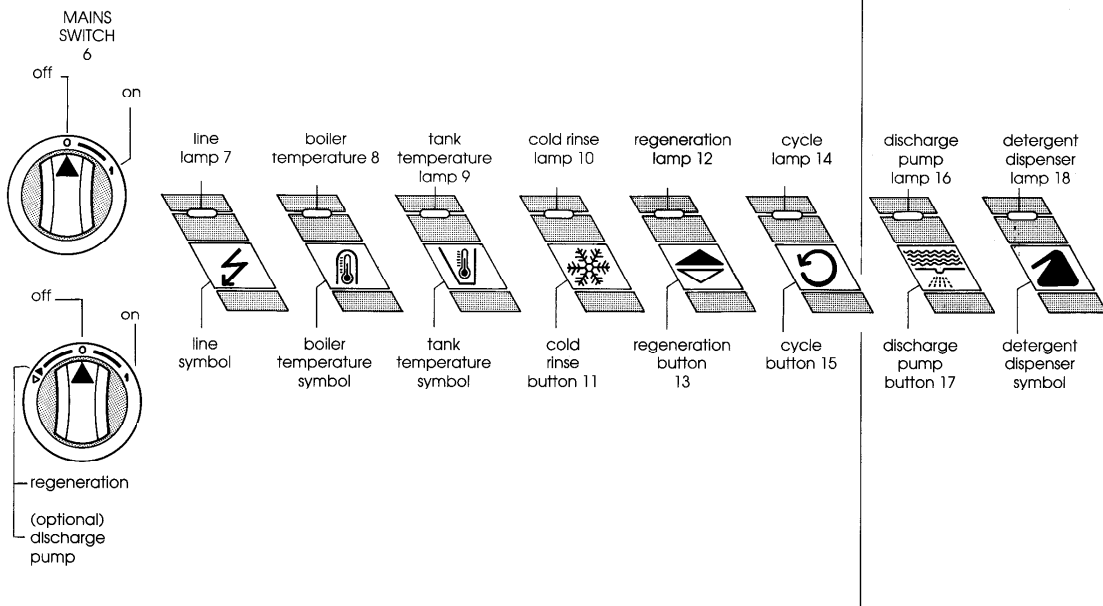
**Volt 220V 3**



Transformation of boiler resistance

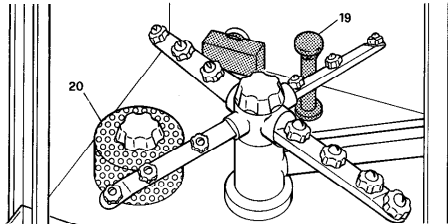


KEY TO COMMAND SIGNALS

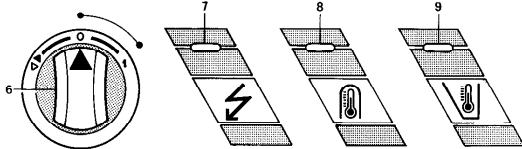


**USE**

**A** - Open the water tap and activate the mains switch of the electrical supply. Verify that the overflow pipe 19 and the filter 20 of the pump are in their positions.



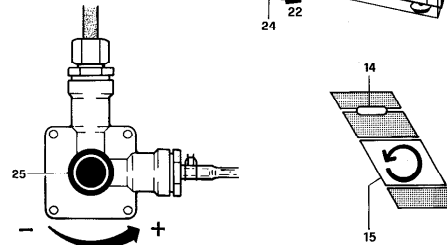
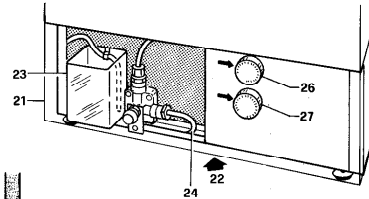
**B** - By turning the line switch 6 in the clockwise direction, lamp 7 switches on and preparation of the machine begins automatically and the boiler and the tank fill up to the required level. Once the required levels have been reached, the boiler heater, marked by the switching on of lamp 8, begins to function and this heats the rinsing water to 80/90°C. Once the required temperature has been reached, lamp 8 switches off and the tank heater, signalled by lamp 9, begins to function, heating the washing water to 55°C. When the temperature in the tank has reached working level and lamp 9 switches off, the machine is ready.



**C** - The following instructions are exclusively for the technical assistance centre or authorized installers.

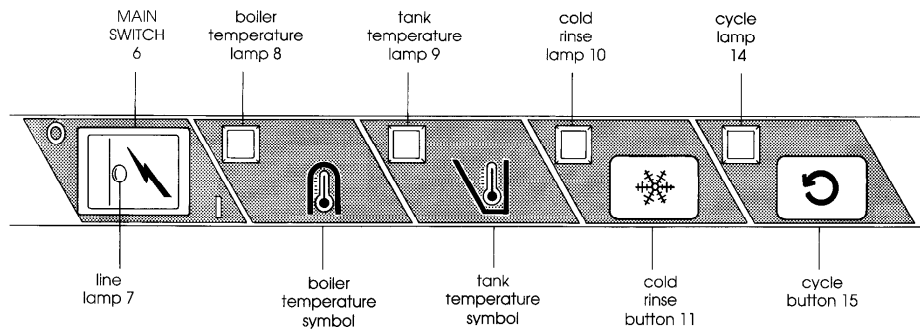
During the heating phase which follows installation, fill up the brightener dispenser by observing the following procedure:

- remove the front panel 21 by unscrewing screws 22;
- pour the brightener previously mixed with 50% water until container 23 is full;
- press button 15 for a few seconds hereby starting the cycle; signaling lamp 14 must remain switched on;
- open and close the door continuously until the transparent pipe 24 is completely full;
- check by looking through the pipe that the required average of the product per cycle is equal to 2 or 3 cm. of suction;
- adjust the capacity of the pump by turning knob 25.



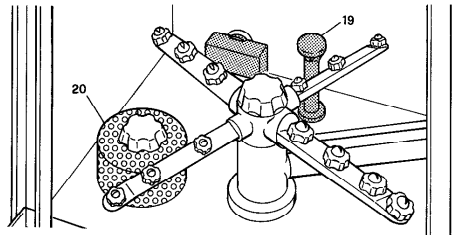
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KEY TO COMMAND SIGNALS

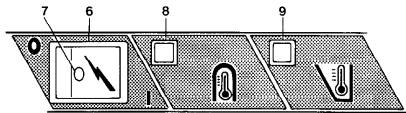


## USE

**A** - Open the water tap and activate the mains switch of the electrical supply. Verify that the overflow pipe 19 and the filter 20 of the pump are in their positions.



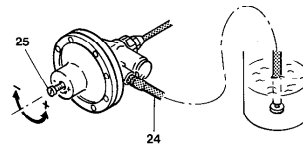
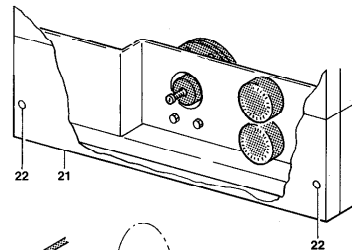
**B** - Press the line switch 6 in the clockwise direction, lamp 7 switches on and preparation of the machine begins automatically and the boiler and the tank fill up to the required level. Once the required levels have been reached, the boiler heater, marked by the switching on of lamp 8, begins to function and this heats the rinsing water to 80/90°C. Once the required temperature has been reached, lamp 8 switches off and the tank heater, signalled by lamp 9, begins to function, heating the washing water to 55°C. When the temperature in the tank has reached working level and lamp 9 switches off, the machine is ready.



## C - The following instructions are exclusively for the technical assistance centre or authorized installers.

During the tank filling up (see chapter B), fill up the brightener dispenser by observing the following procedure:

- remove the front panel 21 by unscrewing screws 22;
- put the suction pipe with filter in the brightener container (check that the filter is clean and in good conditions);
- press repeatedly at a few seconds intervals the line switch 6 until the transparent pipe 24 is completely full;
- check by looking through the pipe that the required average of the product per cycle is equal to 2 or 3 cm. of suction;
- adjust the capacity of the pump by turning knob 25.



N.B. The exact quantity of brightener should be established in practice during normal functioning of the machine in as much as it is closely connected to the hardness of the water, the product brand and the type of detergent used.

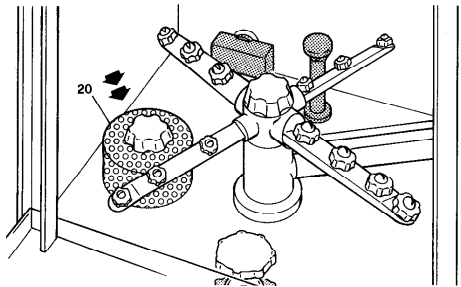
Before closing the front panel, the temperatures of the rinsing water heating (boiler) and the washing water (tank) indicated by knobs 26 and 27 can be checked.

**D** - Pour the detergent directly onto filter 20. The detergent must be suitable for industrial dishwashers, not frothy, and the quantity must correspond to that prescribed by the product manufacturing company.

An automatic detergent dispenser kit code 15-710-001 is available on request for liquid detergents.

Press button 15 in order to effectuate a complete cycle with the machine empty so that the detergent mixes with the water.

It is advisable to wash the crockery immediately after use, so that residues and dirt do not stick to them.



**E** - Load the basket and put it into the machine in the washing position (for round models, check that the basket turns freely by pushing it lightly), close the door and start the cycle by pushing button 15.

Lamp 14 remains on during the whole cycle which includes:

- washing with jets of hot water in pressure mixed with detergent;
- intense rinsing with jets of hot clean water mixed with doses of brightener (for models without a boiler, the rinsing water is cold and does not contain brightener).

When lamp 14 switches off, the cycle is finished and the basket with the clean crockery can be extracted.

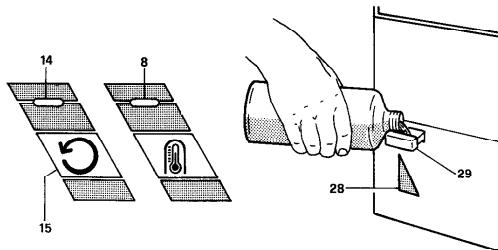
If the basket is removed immediately at the end of the cycle, drying of the crockery is favoured by evaporation.

The machine is ready for another cycle.

However, it is advisable to wait until the boiler temperature lamp 8 switches off.

Reintegrate the quantity of detergent in the water in the tank by adding some every 4-5 cycles according to necessity.

The level of the brightener should be controlled periodically through vent 28 and added to if necessary by pouring the product into the extractable drawer 29.





N.B. The machine is supplied with a micro-safety switch, which interrupts the work cycle if the door is accidentally opened. By closing the door, the cycle starts again from where it stopped.

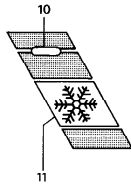
#### Cold rinse

Whenever it is necessary to cool down the crockery before extracting it from the machine, it is necessary to:

**round basket** - open the door and turn the basket slightly, close the door again and keep the apposite button 11 pressed for the desired time.

**fixed basket** - keep the apposite button 11 pressed for the desired time.

The maximum time for cold rinsing must not exceed twenty seconds.



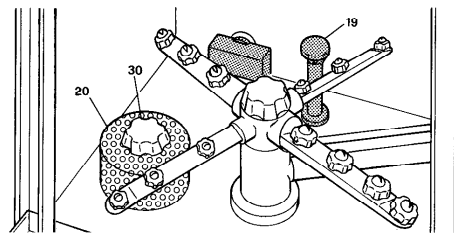
If the machine is not used for some time, it is advisable to leave the door open in order to avoid stagnation of bad smells.

#### DAILY CLEANING AND CHECKING

##### IMPORTANT:

When cleaning stainless steel, it is indispensable to avoid the use of steel wool or common steel brushes which may deposit ferrous particles which, on oxidizing, provoke rust.

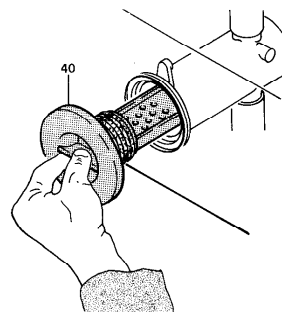
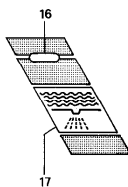
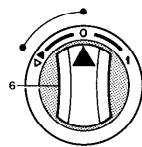
- Switch off the machine, deactivate the mains switch and close the water supply tap;
- remove the overflow pipe 19 and let the water run out from the tank (for models with a discharge pump, see the instructions on the next page on how to empty the tank);
- clean the tank with a jet of clean water;
- unscrew knob 30, remove the pump filter 20 and clean it under running water with a non metallic brush in order to eliminate any impurities, which may block the holes;
- wash and degrease the internal and external parts of the machine by using a sponge and detergent;
- replace the filter and lock it with the relative knob 30;
- assemble the overflow pipe 19.



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**DAILY CLEANING AND CHECKS FOR MODELS HAVING AN INCORPORATED DISCHARGE PUMP (OPTIONAL)**

- Turn the selector 6 anti-clockwise and close the water supply tap;
- remove the overflow pipe 19;
- keep button 17 pressed until the tank is completely empty;
- clean the tank with a jet of clean water and empty it again by repeating the previous procedure;
- unscrew knob 30, remove the pump filter 20 and clean it under running water with a non metallic brush in order to remove any impurities blocking the holes;
- replace filter 20 and lock it with the relative knob 30;
- wash and degrease the internal and external parts of the machine with a sponge and detergent;
- rinse thoroughly with clean water, then empty the tank again;
- insert the overflow pipe 19;
- switch off the machine by placing selector 6 on zero and deactivate the mains switch;
- clean the protective filter at the discharge pump 40.



**FOR MODELS HAVING AN INCORPORATED AUTOMATIC LIQUID DETERGENT DISPENSER (OPTIONAL)**

**Connection**

For the machines supplied with this device, it is necessary to proceed as follows:

- prearrange a transparent container with the detergent near the machine;

put the suction tube into it, making sure that the filter placed at its extremity is clean and in good condition.

The device starts automatically every time water is loaded and the cycle starts.

**WARNING!**

The suction tube with which the machine is connected must not be lengthened for any reason whatsoever.

## REGENERATION

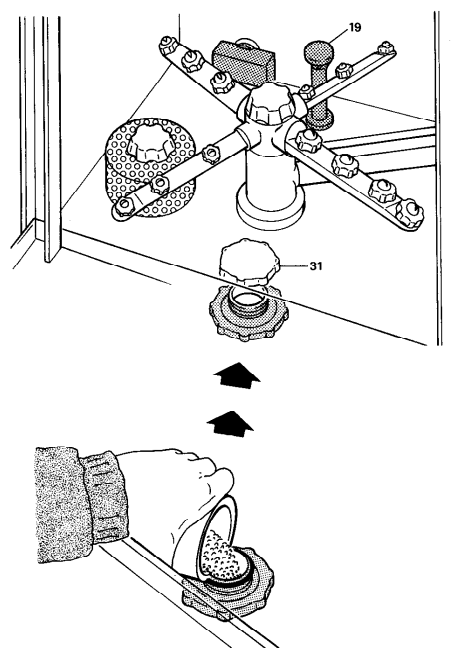
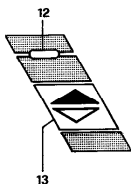
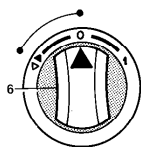
Only for models with a water softener.

**IMPORTANT!** For maximum efficiency of the machine, regeneration must be effectuated at the end of every working day.

- Unscrew cover 31 and put about 1 kg. of cooking salt into the container, then fill to the brim with water to form a brine solution;
  - clean the mouth of the container and rescrew the lid, tightening it completely;
  - remove the overflow pipe 19 and leave it outside the machine during the entire operation of regeneration;
  - open the water supply tap and activate the mains switch;
  - close the door and turn selector 6 clockwise;
  - press button 13 for a few seconds until lamp 12 remains switched on.
- In this way, the automatic regeneration cycle of the softener resins starts and it lasts about 20 minutes.

During regeneration the machine must not be used.  
The quantity of salt must be topped up after having effectuated about 5 automatic regeneration cycles.

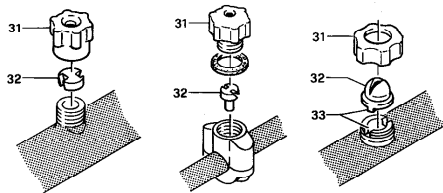
At the end of each working day, the water supply tap must be closed and the mains switch deactivated.  
If the machine is not used for some time, it is advisable to leave the door open to avoid stagnation of bad smells.



### PERIODIC CLEANING AND CHECKS

In order to maintain maximum efficiency of your dishwasher, it is indispensable to clean the washing and rinsing jets periodically.

- Unscrew rings 31 and extract nozzles 32;
- check that the nozzle vent is free from encrustation and if necessary remove it without damaging the shape;
- wash the components and reassemble them, making sure that the nozzle is placed in its opposite seat 33.

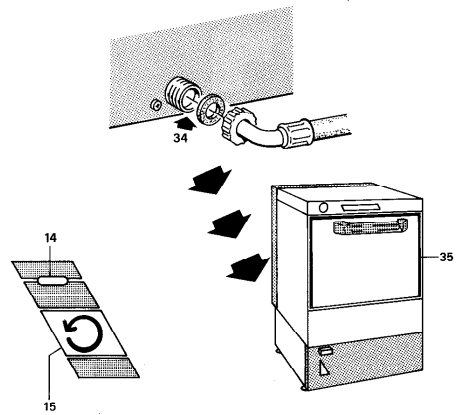


**Before requesting intervention from the technical service, check the following:**

- if by activating the mains switch the machine does not switch on, check the fuses;
- if when switching on the machine, water does not load, check that the water supply tap is open and that the water network receives supply;
- if on opening the water supply tap, water does not load, check the electrovalve filter 34 and the loading pipe;
- if there is water on the floor, check that the loading and discharge

pipes are not squashed or broken;

- if on pressing the cycle start button 15, the machine does not start, check for correct closure of the door and if necessary clean the shoulder channel 35 and check that the safety microswitch is not blocked.

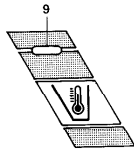


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**THE MOST COMMON INCONVENIENCES: CAUSES AND REMEDIES**

**Dirty cups and glasses**

- The tank filter is dirty; clean it and make sure that all solid waste is removed from the crockery before placing it in the machine.
- The washing jets are blocked; clean them.
- The washing water is not hot enough; before starting the cycle, wait until lamp 9 switches off.

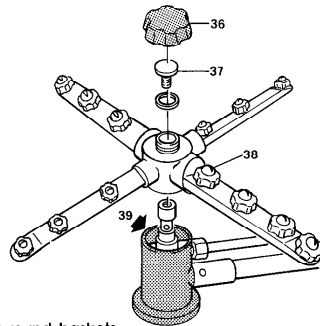


- The detergent is not suitable or the dosage is not correct; use industrial detergents only and in the quantities recommended by the manufacturing company; do not use old and hardened detergents.
- Crockery is washed a long time after use; do not let the crockery dry, wash it within two hours of use, otherwise leave it to soak before putting it into the machine.

**Only for fixed basket:**

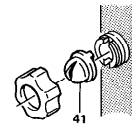
- The washing and rinsing impellers do not turn; check that there is nothing impeding rotation by disassembling them as follows:
  - A - unscrew knob 36 and the knurled screw 37;
  - B - remove impeller 38;
  - C - wash everything and check that support 39 is not dirty;
  - D - reassemble by following the disassembly instructions inversely.

making sure that each component is positioned correctly.  
E - try the rotation of the impellers by pushing slightly.



**Only for round baskets**

- The basket support does not turn; pull out the basket support and check that there are no impediments between the pinion and its seat (dirt, encrustation, solid waste, etc.) or check that water jet 41 is clean.



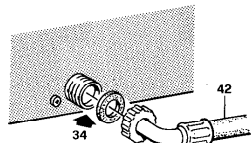
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**Cups and glasses have white stains or streaks**

- The water has not been decalcified and is extremely hard; instal a water softener with suitable capacity (for models having a water softener, regenerate various times during the day).

If this is not possible, dry the cups and glasses by hand to avoid the above mentioned inconvenience.

- The rinsing jets are blocked; clean them.
- The electrovalve filter is dirty; disassemble the supply pipe 42, extract filter 34 and clean it under running water.



- The water pressure is not sufficient; check the water network and if necessary, instal a pressure electropump.

**Cups and glasses with lipstick stains**

- The detergent is not sufficient; increase the concentration of the detergent. It is however advisable to remove the stains manually before washing.

**Cups and glasses with coffee or tea stains**

- The dirt has dried on the crockery; soak the crockery in hot or cold water immediately after use or use a chlorine detergent for washing

**Excess foam**

- The washing temperature is less than 55°C; leave more time lapse between cycles so that the temperature reaches the required level, or check for correct functioning of the tank heater.

- Too much brightener; the capacity of the brightener dispenser should be diminished by specialized personnel as specified on page 51.

**Insufficient drying (excluding models having a cold rinse)**

- The brightener pump does not suck; check the quantity of brightener in the apposite container and get the specialized personnel to check functioning of the pump as specified on page 51.

- The water temperature is too low; wait for the temperature to reach the required level for rinsing between cycles, this is indicated by the switching off of lamp 8, or call the technical service to check the temperature.

