
DISHWASHER

INSTALLATION, OPERATION AND MAINTENANCE

Page 4

LAVASTOVIGLIE

INSTALLAZIONE, USO E MANUTENZIONE

Pagina 21

GESCHIRRSPÜLER

INSTALLATION, BEDIENUNG UND WARTUNG

Seite 38

LAVE-VAISSELLE

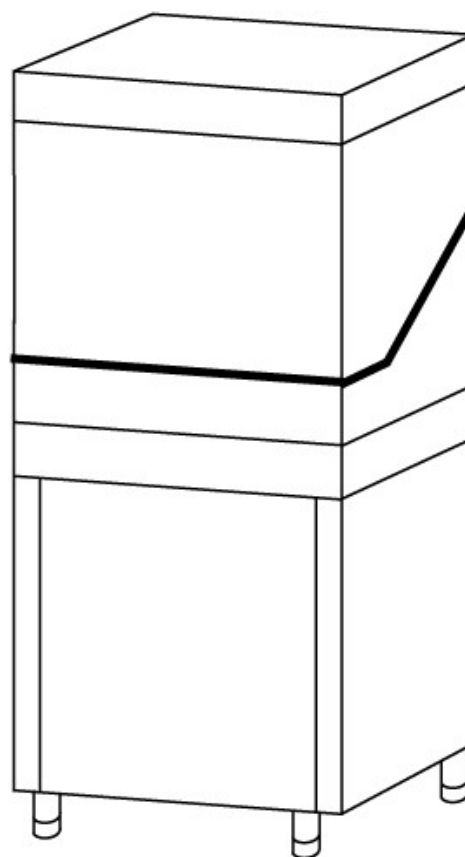
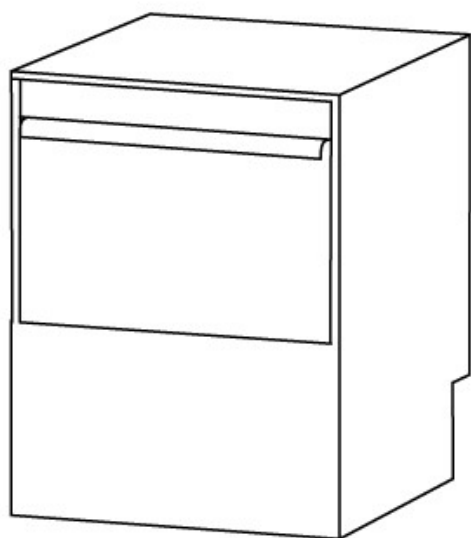
INSTALLATION, EMPLOI ET ENTRETIEN

Page 57

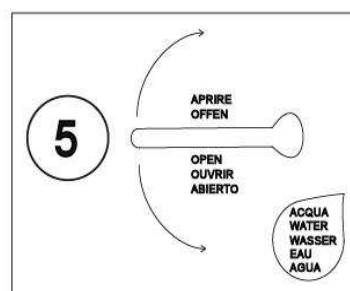
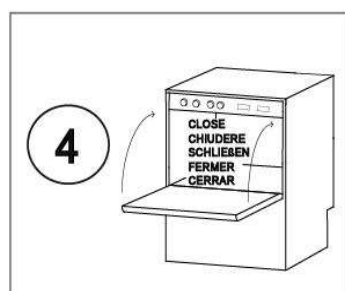
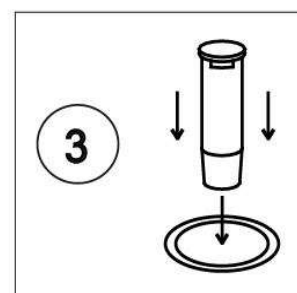
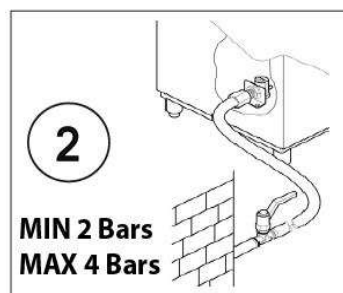
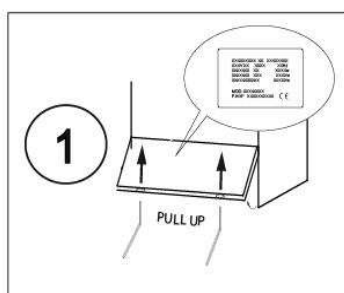
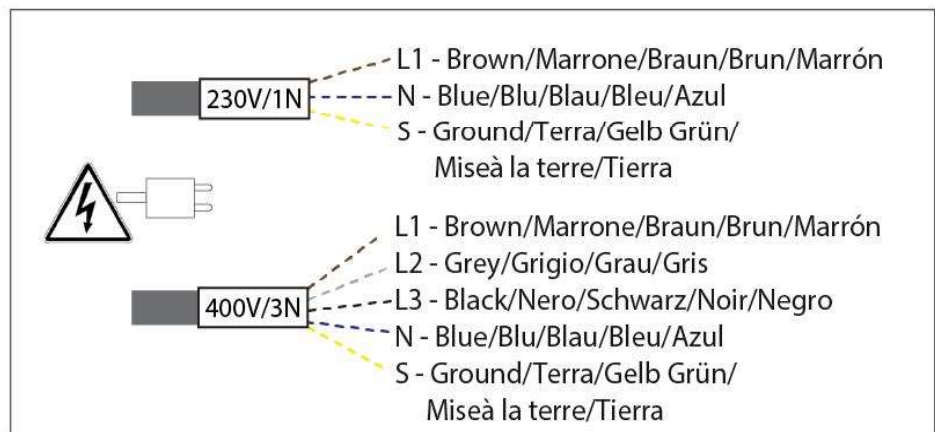
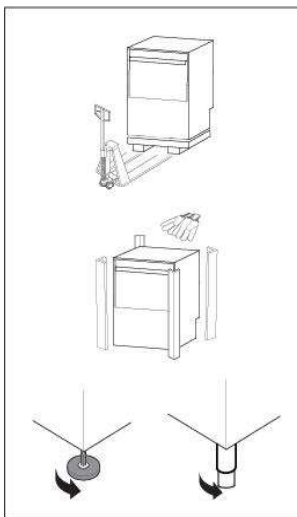
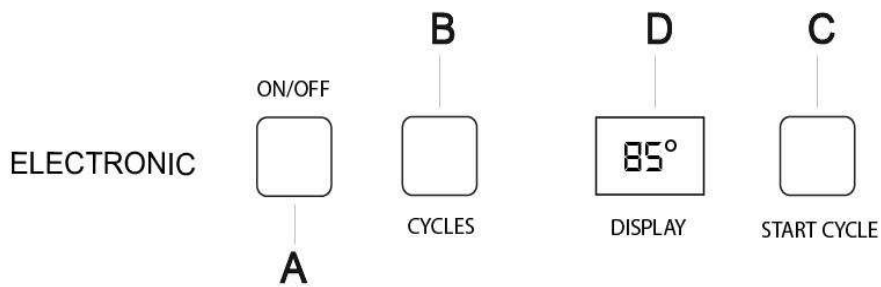
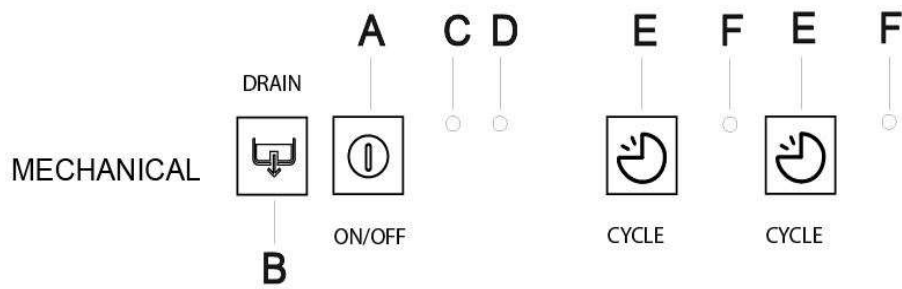
LAVAVAJILLAS

INSTALACIÓN, USO Y MANTENIMIENTO

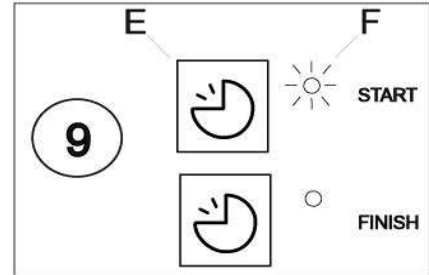
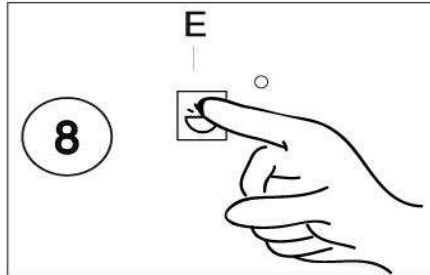
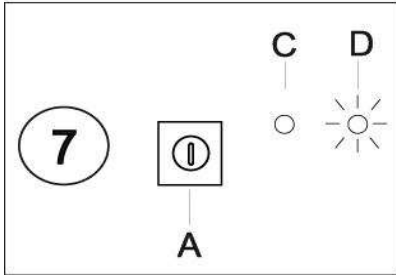
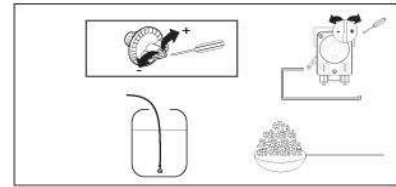
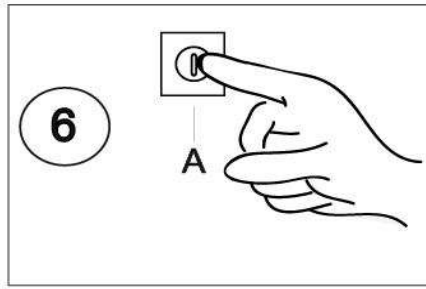
Página 74



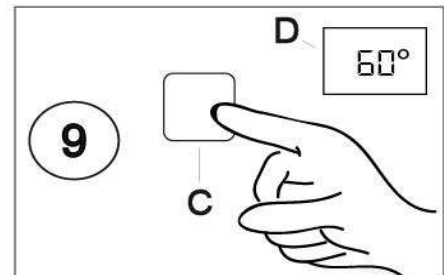
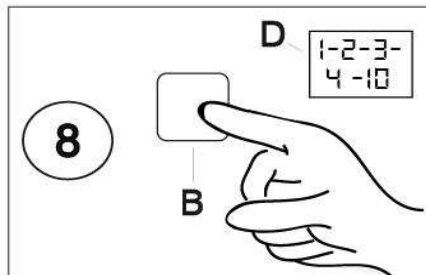
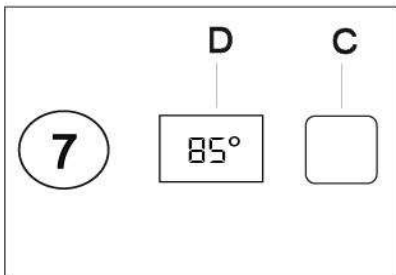
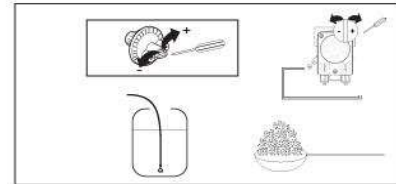
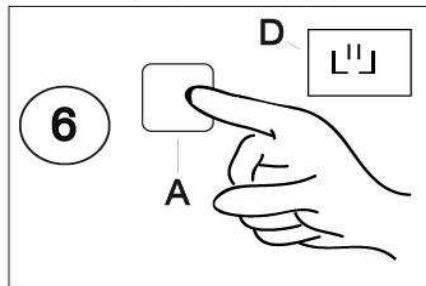
QUICK GUIDE - GUIDA RAPIDA - LEITFADEN SCHNELL - GUIDE RAPIDE - GUÍA RÁPIDA



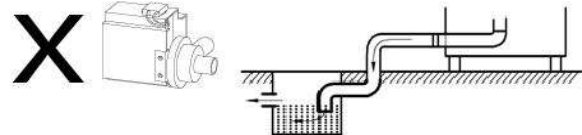
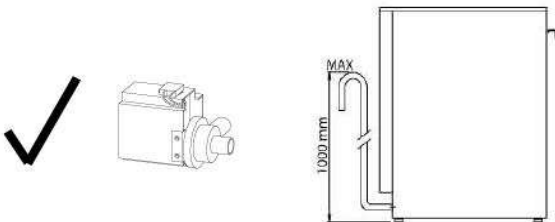
MECHANICAL



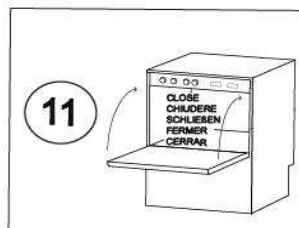
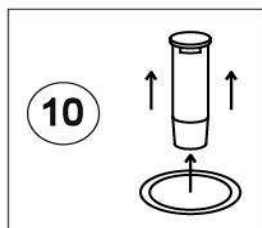
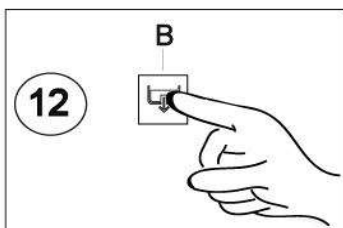
ELECTRONIC



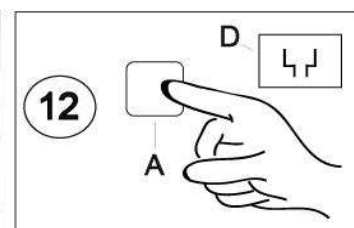
**WATER DRAIN - SCARICO ACQUA - ABWASSEREINLEITUNGEN -
EVACUATION DE L'EAU - FASE DE DESCARGA**



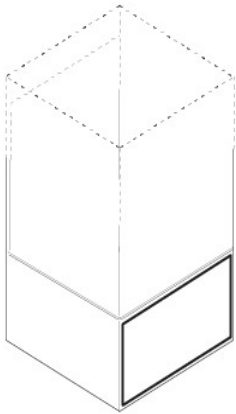
MECHANICAL



ELECTRONIC

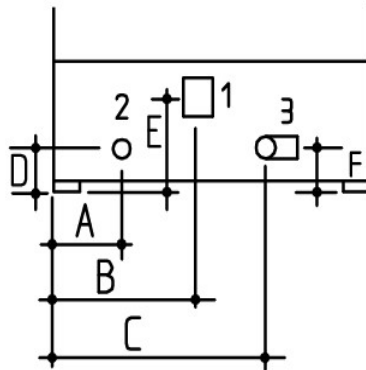


**INSTALLATION DIAGRAMS / SCHEMI INSTALLAZIONE/
MONTAGE-SCHEMA / SCHEMA D'INSTALLATION / DIAGRAMA DE INSTALACIÓN**

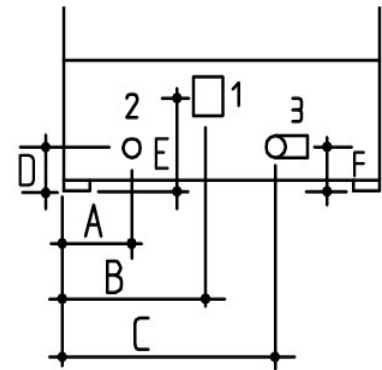


BACK OF THE MACHINE/
POSTERIORE DELLA MACCHINA/
RÜCKSEITE DER MASCHINE/
ARRIERE DE LA MACHINE/
PARTE TRASERA

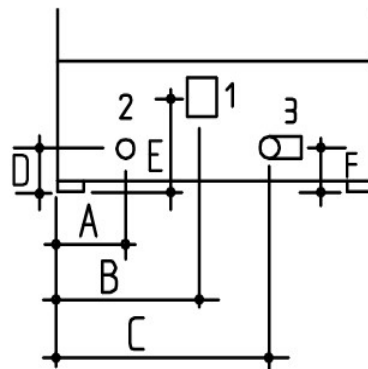
ECO35/EVO35/BS35



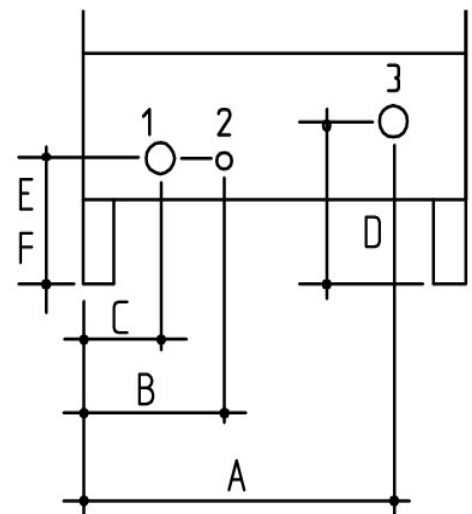
ECO40/EVO40/BS40/



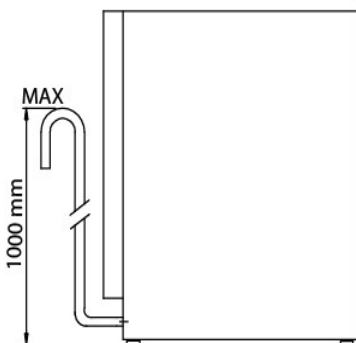
ECO50/EVO50/BS50



ECO1000/EVO1000/BS1000/



DRAIN PUMP MODELS
MODELLI POMPA SCARICO
ABLAUFPUMPE MODELLE
MODELES POMPE DE VIDANGE
MODELO DE BOMBA DE DRENAJE



①

ELECTRICAL CONNECTION/ALIMENTAZIONE ELETTRICA/
STROMVERSORGUNG/ALIMENTATION ELECTRIQUE/
CONEXION ELECTRICA

②

WATER CONNECTION/ALIMENTAZIONE IDRAULICA/
ZUFLUSSWASSER/ALIMENTATION HYDRIQUE/
CONEXION AGUA

③

DRAIN/SCARICO/
WASSERABLAUF/VIDANGE/
SALIDA

MODELS/MODELLI/MODELLE/MODELES/MODELOS	A	B	C	D	E	F
ECO35 / EVO35 / BS35	175	220	300	38	85	38
ECO40 / EVO40 / BS40	190	230	295	38	85	38
ECO50 / EVO50 / BS50	240	300	365	50	85	50
ECO1000 / EVO1000 / BS1000	470	210	150	370	180	180

measures/misure/maßnahmen/mesures/medidas = mm

INDEX

<u>1</u> - GENERAL RECCOMMENDATIONS	p.5
1A - HANDLING	p.5
1B - UNPACKING	p.5
1C - DISPOSAL	p.6
1D - TECHNICAL DATA	p.6
<u>2</u> - INSTALLER AND MAINTENANCE PERSON INSTRUCTIONS	p.7
2A - WATER CONNECTION	p.7
2B - ELECTRICAL CONNECTION	p.8
2C - WARNING MESSAGES DISPLAYED ON THE CONTROL PANEL	p.9
2D - DETERGENT AND RINSE AID DISPENSERS AND SETTINGS	p.10
2E - MANTEINANCE	p.11
2F - UNINSTALL (long period of inactivity).....	p.11
<u>3</u> - USER INSTRUCTIONS	p.12
3A - GENERAL RECCOMENDATIONS AND WARRANTY	p.12
3B - STARTING / WASH CYCLES (ELECTRONIC version)	p.13
3C - STARTING / WASH CYCLES (MECHANICAL version).....	p.15
3D - DAILY CLEANNING / END OF WORK	p.16
3E - UNDERCOUNTER DISHWASHER WITH BUILT- IN WATER SOFTENER	p.17
3F - WARNING MESSAGES DISPLAYED ON THE CONTROL PANEL	p.19
<u>4</u> - TROUBLESHOOTING	p.20

1 - GENERAL RECOMMENDATIONS

ATTENTION

Carefully read this instructions booklet, as it contains important advice for safe installation, operation and maintenance. Keep this booklet to hand in a safe place for future reference by other operators.

Installation, use and service of the machine can be performed only by qualified personnel, especially trained to follow instructions:

WARNING!

- The manufacturer cannot be held responsible for injuries or damages of any kind occurred to persons, machine or others, due to lack of conformity with the operation instructions indicated in this documentation and for abuse, misuse and lack of conformity with the instructions indicated in this documentation as well as installation, uninstal, service, tune-up, maintenance requiring the removal of the safety barriers not performed BY TRAINED AND AUTHORISED SPECIALISTS, will result in the IMMEDIATE LOSS OF THE WARRANTY.
- Loss of warranty will result also from any service performed to the machine, when: Safety barriers are removed without disconnecting the power line and the water supply. When any safety provision of the machine has been bypassed, removed or excluded.
- Machine is installed in provisional, improper or unsafe conditions for lack of compliance with safety provisions (fuses, main breaker, ground line, or water inlet and discharge valves).
- When unauthorized modifications or additions of devices which modify the operation cycles indicated on the data chart delivered with the machine.
- When not genuine spare parts are used.
- Installation or storage in inadequate spaces according to the indications of manufacturer.
- Machine utilization different from the scope foreseen as written in the documentation (ex. Dishes of type or sizes different from specified).
- Utilization of dispensers with corrosive products, not pure or dry.

1A – HANDLING

Use suitable means to move the appliance: a lift truck or fork pallet trucks (the forks should reach more than halfway beneath the appliance).

1B – UNPACKING

Before opening the boxes, verify the conditions and in case indicates damages on delivery slip. After unpacking, check the machine conditions, in case the machine is damaged, communicate immediately to the dealer.

Do not proceed with the installation if damages are relevant to operate safely and wait for qualified and authorized assistance person. Save boxing components (plastic bags, expanded polystyrene, nails, etc.) outside the reach of children for safety reasons.

- 1- Wear protective gloves to unpack the appliance from the boxing. (Fig. 1)

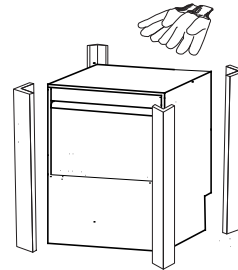


Fig.1

- 2- Lift the appliance using a lift truck. (Fig. 2)

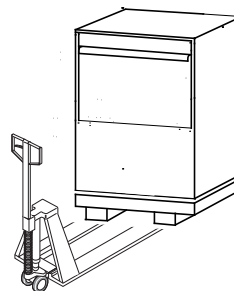


Fig.2

- 3- Remove the protection film of the appliance. (Fig. 3)

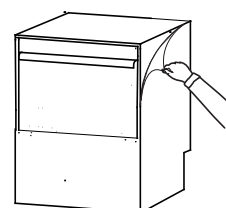


Fig.3

1C – DISPOSAL

This appliance is marked according to the European directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE). By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The symbol:



on the product, or on the documents accompanying the product, indicates that this appliance may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. Disposal must be carried out in accordance with local environmental regulations for waste disposal. For more detailed information about treatment, recovery and recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

1D – TECHNICAL DATA

WATER CONNECTION

Temperature	°C	50
	°F	122
Pressure	kPA	200 - 500
	Bar	2 - 5
	PSI	29 - 72
Flow	Lt/min	20 - 30
Hardness	°f	7 - 14
	°dH	4 - 7,5
	°e	5 - 9,5
	ppm	70 - 140
Mineral residues	mg/l	300 / 400
Conductivity	µS/cm	300 / 400

ELECTRICAL CONNECTION

Voltage	V	± 6 %
Frequency	Hz	± 1 %
Wash Cycle	°C	55
Rinse Cycle	°C	85

INSTALLATION ENVIRONMENT

Operating Temperature	°C	5 - 35
	°F	41 - 95
Storage Temperature	°C	10 - 70
	°F	50 - 158

1D1– NOISE LEVEL

Environment noise level cannot exceed the values as per Standards of place of installation. The noise of the machine, measured at the manufacturer site, has been less than 70dB, approximately 58dB.

When using the machine following data must be complied with the storage, transportation, utilization and maintenance of the machine. Values of this documentation can be updated according to the state-of-the-art and manufacturer can reserve the rights to modify present values.

2 - INSTALLER AND MAINTENANCE PERSON INSTRUCTIONS

ATTENTION

Specialists that install the machine are foreseen to train the operators about machine utilization and safety procedures to be followed. They must provide a real "demonstration" and verify that machine instructions are available to the operators. Following attentions should be taken:

WARNING!

DO NOT OPEN THE DOOR QUICKLY IF CYCLE IS NOT ENDED.

DO NOT DIP BARE HANDS IN WASHING SOLUTION.

DO NOT TAKE OFF THE MACHINE PANELS IF THE MACHINE HAS NOT BEEN DISCONNECTED FROM THE POWER AND WATER SUPPLY.

DO NOT BYPASS THE MACHINE PROTECTIONS (MICROSWITCHES, PANELS, OR OTHERS) PROVIDED BY THE MACHINE MANUFACTURER IF NOT AT THE PRESENCE OF TRAINED SPECIALISTS THAT CAN TAKE PROPER CAUTIONS.

DO NOT UTILISE THE MACHINE TO WASH GOODS OUTSIDE THE SCOPE FOR WHICH IS PROVIDED FOR, OBJECTS OF SHAPE, TYPE, SIZE, AND MATERIAL NOT COMPATIBLE.

DO NOT OPERATE THE MACHINE IF NOT PROPERLY CONNECTED, ACCORDING TO THE SPECIFICATIONS AND REQUIREMENTS OF THE LOCAL LAW AND PRESCRIPTION OF MANUFACTURER, MAKING SURE THAT ALL SAFETY DEVICES ARE OPERATIVE.

ID/RATING/DATA PLATE

ID/ Rating plate of the appliance contains identification and technical data and is located on the front inside panel.

- Extract the front panel with Allen tool or similar by inserting it inside the holes on the inferior part of the panel. Pull up the panel carefully. For Hoodtype models, unscrew the two screws located on the bottom of the panel. (Fig.4)

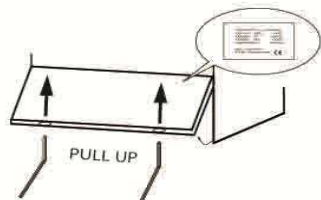


Fig.4

2A – WATER CONNECTION

N.B.

Shut-off valve, single direction, spool, sphere, lid control type, which can shut water supply off quickly and totally, selected to assure water pressure and flow as requested in the data diagram supplied with each machine.

1- Position the dishwasher and level the appliance by turning the relative height-adjustable feet. (Fig.5)

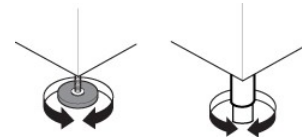


Fig. 5

2- Connect the solenoid valve, which feed the machine, to water shut valve, using a flexible line. (Fig.6) **Each machine must have its own water line supply.**

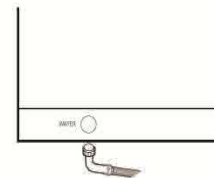


Fig. 6

2A1 – WATER SUPPLY PRESSURE

Check that dynamic water supply pressure, measured between the appliance and the main, is between 200 and 500kPa. **If the pressure is too high, fit a suitable pressure reducer on the inlet pipe. If the pressure is low, install an additional external pressure motor pump. (par.1D – Technical Data)**

- In case of new or long term appliance inactivity, drain the water line to eliminate air bubbles and foreign bodies present in new or unused water lines, which can damage the machine.

2A2 – WATER HARDNESS

If water hardness is higher than acceptable, install a water softener if in the machine is not provided with an internal one, of adequate size prior the feed solenoid valve. (par.1D – Technical Data)

If there is a high concentration of mineral residues in the water or high conductivity, we recommend installing the demineralization filter for 5/7° f.

2A3 – MODELS WITH FREE FALL DRAINAGE

N.B.

The drainage line consists of a sump pit, free flow, of proper size capable to dispose twice the water flow indicated on the data diagram. It must be close to the drain pipe of the machine without bending, stretching, jointing the pipe.

- Drain line must reach sump pit with free flow without constraints, stretching, bends, kinks, or being forced.
- Connect the waste outlet pipe to the main drain pipe, fitting a trap, or place the outlet pipe over an "S" trap set into the floor.

2A4 – MODELS WITH DRAIN PUMP

- Position the outlet pipe at a height anywhere between 750 and 1000mm from the floor. (Fig.7)

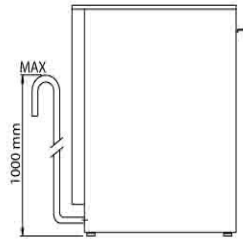


Fig. 7

2B - ELECTRICAL CONNECTION

N.B.

All contacts must be mechanically open, ground line included, min. distance between contacts 3 mm, with magnetic overload or fuses, calibrated for a max, sustained current agree with machine plat. It must be installed outside the machine but close to it. It must feed one machine only at time.

Machine cannot be connected to mains using adapters, plug, cables or cable extensions not properly sized and adequate to the machine power requirements.

- Verify main specifications must comply with indicated requirements on the data plate located inside of the front bottom panel of the machine (par. ID/RATING/DATA PLATE), that exists for the connection, a main breaker with proper size suitable for the machine and a proper ground system.

WARNING!

THE MANUFACTURER IS NOT RESPONSIBLE FOR DAMAGES OR INJURIES CAUSED FOR IMPROPER GROUNDING. THE GROUND AND THE ELECTRICAL CONNECTIONS SHOULD BE IN COMPLIANCE WITH NATIONAL REGULATIONS.

The line cable can be replaced only with a spare cable supplied by the manufacturer. For replacement indicate machine type, machine serial number and possible modifications of the installation. Power cable cannot be stretched kinked, pressed, during normal operation, service or anytime.

Earth equilibrating point on machine must be connected to nearest appliance terminal according to Safety Standards using a 2.5 – 10 mm.

2C – WARNING MESSAGES DISPLAYED ON THE CONTROL PANEL (Electronic version only)

N.B.

If the machine is in OFF mode, warning messages are not displayed. Turn ON the machine to visualize the type of warning message on the appliance.

Following warning messages on the display are provided:

ntcb

E-01 BOOSTER TEMPERATURE PROBE

Booster temperature probe not connected or faulty.

Verify that the probe is correctly and well connected to the electronic board.

Verify that the probe is correctly positioned inside the booster and there is not presence of limestone on it.

ntcu

E-02 TANK TEMPERATURE PROBE

Tank temperature probe not connected or faulty.

Verify that the probe is correctly and well connected to the electronic board.

Verify that the probe is correctly positioned inside the tank and there is not presence of limestone on it.

fill

E-03 WATER FILL

Water fill not completed during the available maximum time (10min).

Verify that water supply is correctly connected, opened and free of obstructions.

Verify that solenoid valve filter is free of possible obstructions and deposit.

Verify that water supply pressure is adequate (par.1D – Technical Data).

Verify that machine's door is completely closed and the overflow device is correctly positioned inside the tank.

N.B.

If water fill timing expires or in case of water level signal is not respected solenoid valve is automatically interrupted. To restart solenoid valve press any button on the control panel.

Tbo

E-04 BOOSTER TEMPERATURE LIMIT

Booster temperature maximum set point reached (set point +14°C / 57°F).

SUBSTITUTE THE ELECTRONIC BOARD

TUA

E-05 TANK TEMPERATURE LIMIT

Tank temperature maximum set point reached (set point +7°C / 44°F).

SUBSTITUTE THE ELECTRONIC BOARD

drA

E-06 DRAIN ANOMALY

Drainage not completed on the maximum programmed timing.

Verify that the overflow device is completely removed and not obstructions are present on the water drain line.

Verify that drain wires is correctly connected to the electronic board.

Bnot

E-07 BOOSTER HEATING

Maximum booster heating time reached (15min).

Verify that heater element wires are correctly connected to the electronic board.

Verify that heater element works correctly and there is not presence of limestone on it.

Unot

E-08 TANK HEATING

Maximum tank heating time reached (30min).

Verify that heater element wires are correctly connected to the electronic board.

Verify that heater element works correctly and there is not presence of limestone on it.

SEruICE

E-09 PARAMETERS ERROR OR DAMAGED BOARD

Memory parameters error or damaged board.
SUBSTITUTE THE ELECTRONIC BOARD

ACTIONS FOLLOWED TO THE WARNINGS:

Booster and tank heating elements are interrupted, all loads are disactivated, the electronic board displays warning codes and it is inactivated. All control panel leds are Off. Cycle is interrupted "hold mode" until the -

breakdown is reseted. It is always possible to turn Off and On the appliance trough the button.

SAFETY THERMOSTAT

All machines are provided with a safety heatswitch that shuts machine off in case of overheating (120°C/248°F). To reset the thermonstat device press the push-button behind the control panel of the thermostat.

2D – DETERGENT AND RINSE AID DISPENSERS AND SETTINGS

Before starting a new cycle the dispenser and its pipe must be completely filled. Check the level of the detergent or rinse aid and eventually fill-up the tank.

N.B.

The level in the detergent or rinse aid tank must not get empty or filled with corrosive or inadequate products. The warranty does not cover damages caused by improper use of dispenser. The dispenser is calibrated at manufacturer site: dispenser settings after installation can be performed only by qualified specialists.

- 1- Extract the front panel with Allen tool or similar by inserting it inside the holes on the inferior part of the panel. Pull up the panel carefully. For Hoodtype models, -

unscrew the two screws located on the bottom of the panel. (Fig.8)

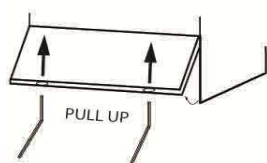


Fig.8

Before removing the front panel make sure the machine is disconnected from the main breaker.

- 2- Insert included dispenser tube inside the detergent or rinse aid tank. (if available). (Fig.9)

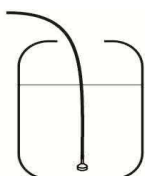


Fig.9

2D1 – PRESSURE RINSE AID DISPENSER

Setting of rinse aid dispenser is performed acting on the screw accessible after removal of front panel, under the tank door. (see Fig.8)

- 1- Close gently all the way down the dispenser by screwing anticlockwise the needle valve of the dispenser.
- 2- Open up until reached necessary quantity by screwing clockwise the needle valve of the dispenser. (Fig.10)



Fig.10

Quantity for the first setting should be according to the installer after evaluating the hardness of the water and the type of rinse aid used. Recommended vacuum standard quantity of rinse aid from the included tube 4 x 6 correspond to approximately 4 cm = 0,5cc = 0,5 gr. for each 50 x 50 standard rack machine. Otherwise, approximately 2,5 cm = 0,3 = 0,3 gr. for 35 x 35 and 40 x40 standard rack glasswasher. Maximum dosing permit is approximately 25,8 cm = 3,6 cc = 3,6 gr.

After first setting rinse aid dosage must be optimize by evaluating washing results after few cycles.

2D2 – PERISTALTIC RINSE AID AND DETERGENT DISPENSER

Setting of rinse aid dispenser is performed acting on the screw accessible after removal of front panel, under the tank door. (see Fig.8)

- 1- Close gently all the way down the dispenser by screwing anticlockwise the needle valve of the dispenser.
- 2- Open up until reached necessary quantity by screwing clockwise the needle valve of the dispenser. (Fig.11)

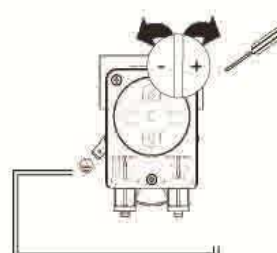


Fig.11

Quantity for the first setting should be according to the installer after evaluating the hardness of the water and the type of rinse aid used. Recommended rinse aid standard quantity is 0,16 gr/sec that correspond to the maximum flow rate of the dispenser. Recommended detergent standard quantity is 0,77 gr/sec that correspond to the maximum flow rate of the dispenser.

SUGGESTION

To check the effectiveness of the rinse aid, look at freshly washed glasses against the light. Drops of water remaining on the glass indicate an insufficient amount while streaks indicate an excess. (next page)

In case of light coated presence that block dispenser functions, remove the coat by soaking the dishes for 30 minutes in a solution water soap (1:10) before starting machine cycle.

2D3 – DISHWASHERS WITHOUT DETERGENT DISPENSER

Manually add recommended detergent quantity from the supplier every 5 cycles. Doses differ depending on water hardness and soiled quantity that remain on the dishes.

N.B.

All dishwashers are ready to be installed external dispenser or specific dispenser kit through injector and relative tube or through the hole with relative cap located on the tank of the machine. If changing to a different detergent or rinse aid type (even one by the same manufacturer), you must rinse the suction and pressure hoses with fresh water before connecting the new detergent or rinse aid container. Otherwise, the mixing of different types of detergent or rinse aid will cause cristallisation, which may result in a breakdown of the dosing pump. Failure to observe this condition will invalidate the guarantee and product liability.

<p>WARNING! DETERGENT SELECTION AND DOSAGE ARE FUNDAMENTAL FOR WASHING GOOD RESULTS AND TO MANTAIN MACHINE PERFORMANCES FOR LONG TIME AND EXTENDED LIFE. FOLLOW ALWAYS THE INSTRUCTIONS OF THE MANUFACTURER OF CLEANNING AGENTS. IMPROPER DOSAGES RESULT IN UNSATISFACTORY WASHING RESULTS AND REPRESENT SOURCES OF RIVERS AND SEAS POLLUTION. DO NOT USE</p>
--

CORROSIVE OR POLLUTANT PRODUCTS TO PROTECT AND MAINTAIN MACHINE, NEVER EXCEED DOSAGES INDICATED BY DETERGENT MANUFACTURER. NEVER LEAVE THE DISPENSER DRY OR CHARGED WITH CORROSIVE OR FOREIGN PRODUCTS WHICH WILL RESULT IN LOSS OF WARRANTY.

2E – MAINTENANCE

- 1- Descale the boiler, the internal surface of the tank and the appliance water piping once or twice a year.
- 2- Descale the rinse and wash jets every month using vinegar or a descaling agent.
- 3- The internal hose of the rinse aid and detergent peristaltic dispenser should undergo periodic maintenance (once or twice a year).
- 4- Clean solenoid valve filter by extracting it from the inside of the valve and by unplugging the water inlet tube.

2F – UNINSTALL (Long period of inactivity)

Machine can be taken out of operation only by trained specialists authorized for the purposes, who will provide for:

- 1- Shut water line off (water valve) and electric supply (main breaker).
- 2- Completely drain the tank.
- 3- Remove and carefully clean the filters.
- 4- Completely drain the incorporated dispenser hoses, removing them from the containers.
- 5- Drain the detergent and rinse aid nozzles with fresh water first and after with water and glycerine (50% - 50%) taking care that nozzles remain clean and lubrified inside.
- 6- Drain completely the booster by removing the screw located under the machine.
- 7- Spread a thin film of vaseline oil over all the stainless steel surfaces.

INSTALLATOR REMARKS

INSTALLATION DATE: _____
INSTALLATION PLACE: _____
INSTALLATOR NAME: _____
MACHINE SERIAL NUMBER: _____
SIGNATURE: _____

3 - USER INSTRUCTIONS

3A – GENERAL RECCOMENDATIONS AND WARRANTY

Our appliances have been studied and optimised to give high performance. This appliance must be used exclusively for the purpose for which it has been designed, i.e. for washing dishes with water and specific detergent. Any other use is to be considered improper.

WARNING!

BEFORE ANY CLEANING OR MAINTENANCE OPERATION, DISCONNECT THE DISHWASHER BY SWITCHING OFF THE ELECTRICITY AT THE MAINS OR PULLING THE PLUG OUT.

DO NOT LEAVE THE DISHWASHER SWITCHED ON UNNECESSARILY.

IF ANY FAULT IS DETECTED, DISCONNECT THE DISHWASHER FROM THE MAINS, CLOSE THE MAIN WATER SUPPLY AND CALL IMMEDIATELY THE SERVICE ASSISTANCE.

DO NOT USE THE DISHWASHER OPEN DOOR PULLING THE TOP FRONTWARDS.

DO NOT USE THE DISHWASHER IN A EXPLOSIVE ATMOSPHERE.

DO NOT WAS OR CLEAN THE MACHINE WITH DIRECT BOLT OF WATER AND/OR WITH HURTFUL MATERIAL.

AVOID THE MACHINE IS EXPOSED TO HEAT AND/OR HUMIDITY SOURCES.

DO NOT USE THE MACHINE IF THE SUPPLY CABLE IS DAMAGED.

THE MANUFACTURE DECLINES ANY LIABILITY FOR DAMAGES TO PERSONS AND/OR THINGS DUE AND TO AN IMPROPE, WRONG AND/OR UNREASONABLE USE OF THE MACHINE.

NEVER CLOSE THE WATER COCK WHILE THE MACHINE IS WORKING.

DO NOT DISCONNECT THE SUPPLY PLUCKING THE SUPPLY CABLE BUT DISCONNECT SEIZING THE PLUG.

USE ONLY PROFESSIONAL DETERGENTS AND RINSE AID AND STORE THEM IN A

COOL AND DRY PLACE, OUT OF THE REACH OF CHILDREN.

DO NOT REMOVE ANY PROTECTION AND/OR PANELS REQUIRING A TOOLING TO BE REMOVED.

THE MACHINE IS EQUIPPED WITH SAFETY MICROSWITCH TO STOP THE OPERATION IN CASE THE DOOR WOULD BE OPENED DURING THE PRECESS. MOTOR PUMP IS EQUIPPED WITH A THERMICAL PROBE TILL 160°C (320°F) TO AVOID THE OVERHEATING. IMPOSSIBILITY TO BE IN CONTACT WITH ELECTRICAL PARTS WITHOUT USING A TOOL.

TO AVOID VIBRATIONS, THE MACHINE IS EQUIPPED WITH FOUR ADJUSTABLE FEET.

12 months warranty – Mechanical Parts

6 months warranty – Electrical Parts

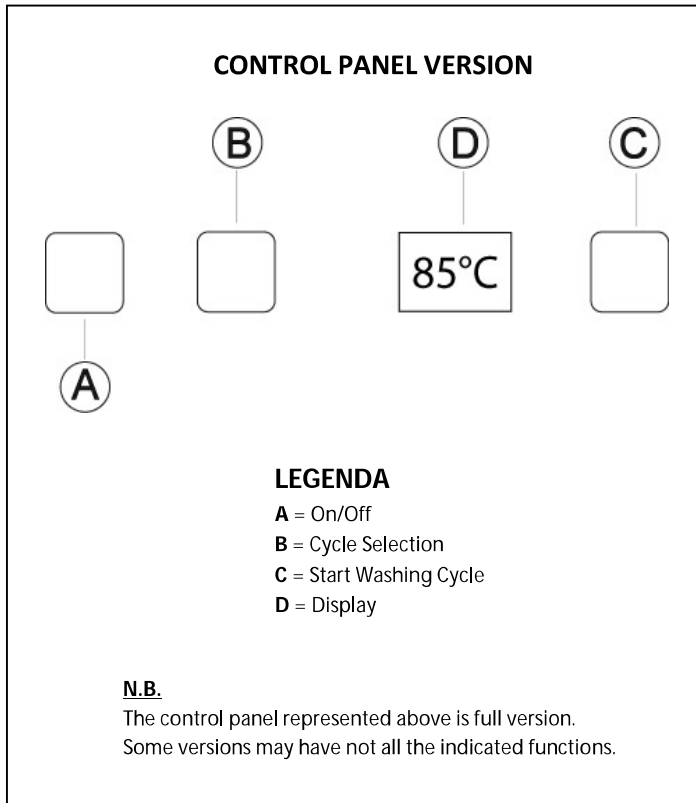
N.B.

Damages, breakdown based on lack of conformity with the operation instructions indicated in this documentation and for abuse, misuse and lack of conformity with the instructions indicated in this documentation or service by unauthorized and non specialist persons will result in the IMMEDIATE LOSS OF THE WARRANTY.

3A1– SUGGESTION BEFORE USING THE DISHWASHER

- Carry out a couple of cycles without dishes to flush out any industrial grease which has remained in the tank and piping.
- Avoid washing decorated dishes.
- Do not allow silverware to come in contact with other metals.
- Do not allow food to dry on the dishes.
- Remove large food scraps from the dishes to prevent clogging the filters.
- Pre-wash the dishes by spraying them with cold or lukewarm water, without using any detergent.
- To have best washing results place all cutlery in the cutlery basket with the handles downwards paying attention to avoid potential injuries.
- Use automatic dispenser for the detergent.
- If there is no automatic dispenser, put non-foaming detergent into tank when the water has reached the washing temperature.

3B – STARTING / WASH CYCLES (ELECTRONIC version)



- If during this process door is opened, display is blinking. Consequently close the door.

- During filling and water heating process AMBER indicator light is visualized on button "C".

- After water heating process is finished and the temperature is reached, indicator light is visualized on button "C" machine READY to use.

3B2 – DETERGENT FILLING PROCESS (versions without automatic detergent pump only)

Glasswasher Models:

- Begin filling the tank with 3 detergent spoons and 1 spoon in between 2/3 washing cycles.

Dishwasher Models:

- Begin filling the tank with 5/6 detergent spoons and 1 spoon in between 2/3 washing cycles.

N.B.

All dishwashers are pre-set for electrical connection of external automatic detergent pump or automatic detergent pump kit through the injector and related tube or by the hole located on the back tank of the machine.

THIS MODIFICATION, IF REQUIRED, MUST BE CARRIED OUT BY QUALIFIED TECHNICIAN ONLY.

3B1 – STARTING THE MACHINE

1- Open the door and verify that all internal components, water flow device included, are in the correct position. (Fig.12)

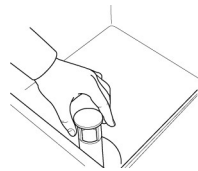


Fig.12

2- Open main water supply cock.
3- Switch on at the mains.
4- Close the door and press button "A" to turn ON the machine. (Fig.13)



Fig.13

- During water fill process filling icon is displayed. (Fig.14)



Fig.14

3B3 – WASHING CYCLE

The wash cycle includes one wash with hot water and detergent at 60°C (140°F) and one rinse cycle with hot water and rinse aid at 85°C (185°F).

When the machine reaches the correct temperature and it is ready to start a new cycle, GREEN indicator light is visualized on button "C", then: (next page)

1- Open the door.
2- Add recommended quantity of detergent inside the tank – only models without automatic dispenser included – (see par. 3B2)

- 3- Insert dirty loaded dishes basket and close the door.
- 4- Press one of the available cycles by pressing button "B". (Fig.15)

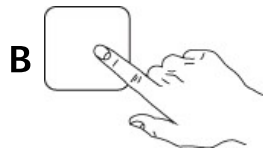


Fig.15

- 5- Press button "C" start washing cycle. (Fig.16)

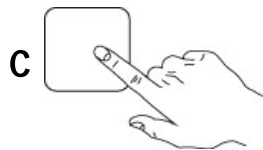


Fig.16

- 6- Wait until the end of the cycle when button "C" will stop blinking, open the door and download clean dishes basket. (Fig.17)

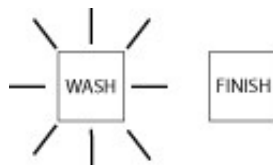


Fig.17

- During washing cycle light is blinking on button "C".
- If during this process door is opened, washing cycle is interrupted and button "C" is blinking. To start a new cycle press button "C" start cycle.

N.B.

The machine is equipped with different kind of washing cycles. Use short cycle for light dirt dishes. Medium cycle for medium dirt dishes and long cycle for heavy dirty dishes.

3B4 – THERMO STOP VERSION

This system allows the machine to final rinse always at minimum temperature 85°C to satisfy norms of each country.

Machines with THERMO STOP system may have cycle time longer than standard machine in case minimum booster temperature water is not enough hot for the final rinse. This device ensures correct final sanitization on the dishes.

3B5 – STANDARD LOADING RACKS

- 1- Load plates in frontal position. (Fig.22)

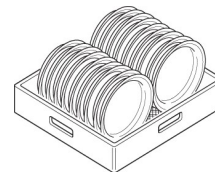


Fig.22

- 2- Load glasses and bowls in upside down position. (Fig.23)

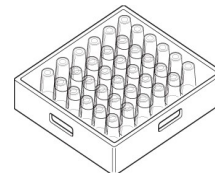


Fig.23

- 3- Load cutlery vertically inside its containers. (Fig.24)



Fig.24

- 4- Load rack machine with dishes as described on the figure. For undercounter models load the rack front side. For hoodtype models load the rack front side or sideways (if necessary switch rack support clockwise). (Fig.25)

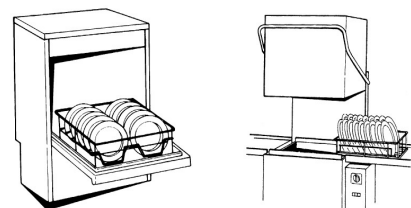
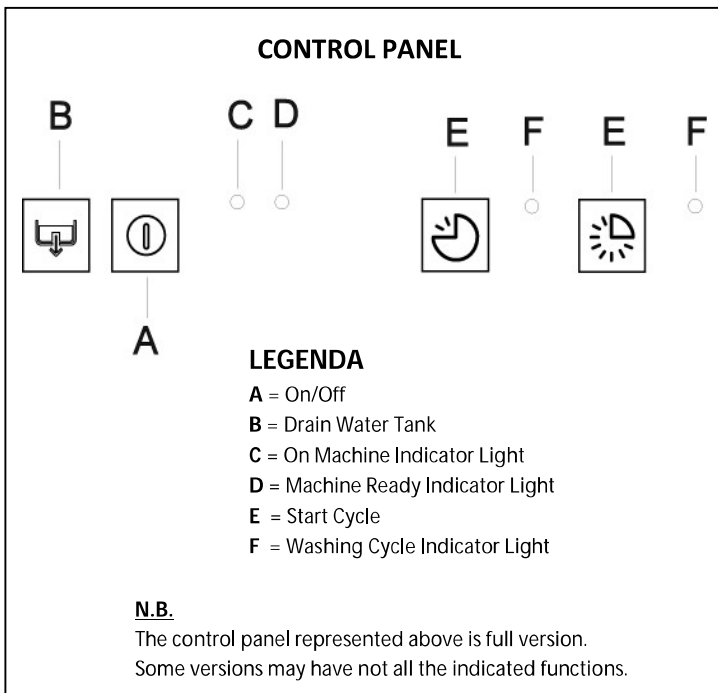


Fig.25

3C – STARTING / WASH CYCLES (MECHANICAL version)



3C2 – DETERGENT FILLING PROCESS (versions without automatic detergent pump only)

- Glasswasher Models:
 - Begin filling the tank with 3 detergent spoons and 1 spoon in between 2/3 washing cycles.
- Dishwasher Models:
 - Begin filling the tank with 5/6 detergent spoons and 1 spoon in between 2/3 washing cycles.

N.B.
 All dishwashers are pre-set for electrical connection of external automatic detergent pump or automatic detergent pump kit through the injector and related tube or by the hole located on the back tank of the machine.

THIS MODIFICATION, IF REQUIRED, MUST BE CARRIED OUT BY QUALIFIED TECHNICIAN ONLY.

3C1 – STARTING THE MACHINE

- 1- Open the door and verify that all internal components, the water flow device included, are in the correct position. (Fig.26)

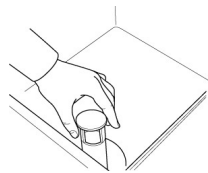


Fig.26

- 2- Open main water supply cock.
- 3- Switch on at the mains.
- 4- Close the door and press button "A" to turn ON the machine. Indicator light "C" is ON. (Fig.27)

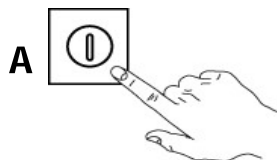


Fig.27

- If during this process door is opened, the filling water tank process is interrupted. To continue filling process close the door.
- After water heating process is finished and the temperature is reached, indicator light is visualized on position "D" machine READY to use. (Fig.28)



Fig.28

3C3 – WASHING CYCLE

Washing cycle is composed by one hot cycle with detergent at 60°C (140°F) and one hot final rinse with rinse aid at 85°C (185°F).

When the machine reaches the correct temperature and it is ready to start a new cycle, indicator light is visualized on position "D", then:

- 1- Open the door.
- 2- Add recommended quantity of detergent inside the tank – only models without automatic dispenser included – (see par.3C2).
- 3- Insert dirty loaded dishes basket and close the door. (next page)
- 4- Press button "E" start washing cycle. Indicator light "F" is ON for the entire period of washing. (Fig.29)

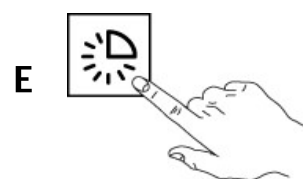


Fig.29

5- Wait until indicator light "F" is OFF. Open the door and download clean dishes basket.

- If during this process door is opened, the washing cycle is interrupted until door is closed. To continue and finish washing cycle you must close the door.

WARNING!

THE APPLIANCE WILL NOT REMOVE BURNT FOOD DEPOSITS FROM DISHES. DISHES WITH BURNT-ON FOOD DEPOSITS SHOULD BE CLEANED MECHANICALLY/CHEMICALLY (FOR EXAMPLE, PRE-WASH UNDER RUNNING WATER) BEFORE PUTTING THEM IN THE DISHWASHER.

THE USE OF "FOAMING" AND NOT SPECIFIC DETERGENTS OR IN ANY CASE DETERGENTS USED IN DIFFERENT WAYS FROM THAT PRESCRIBED BY THE MANUFACTURER OR FAILURE TO REMOVE THE RESIDUALS OF DETERGENT POSSIBLY USED FOR MANUAL PREWASH CAN CAUSE MALFUNCTIONING OF THE DISHWASHER AND COMPROMISE WASHING RESULTS.

3C4 – STANDARD LOADING RACKS

1- Load plates in frontal position. (Fig.34)

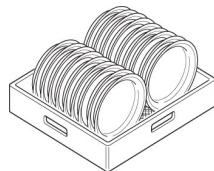


Fig.34

2- Load glasses and bowls in upside down position. (Fig.35)

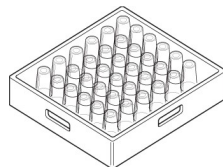


Fig.35

3- Load cutlery vertically inside its containers. (Fig.36)



Fig.36

4- Load rack machine with dishes as described on the figure.

For undercounter models load the rack front side. For hoodtype models load the rack front side or sideways (if necessary switch rack support clockwise). (Fig.37)

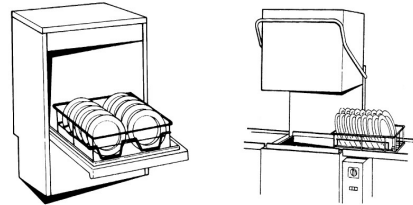


Fig.37

3D – DAILY CLEANNING / END OF WORK

In order to have excellent washing results and a cleaned tank, it is recommended to change the water of the machine at least twice a day and clean accurately all the filters inside the tank. Filters must be removed only once all the water is drained out of the machine.

3D1 – WATER DRAIN (MECHANICAL MACHINE WITHOUT DRAIN PUMP INCLUDED)

- 1- Turn OFF the machine by pressing button "A" On/Off.
- 2- Open the door and remove the water flow device and close the door. (Fig.38)

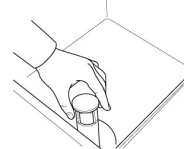


Fig.38

- 3- Wait until all the water is completely drained out from the tank and turn OFF the machine by pressing button "A".

3D2 – WATER DRAIN (ELECTRONIC MACHINE)

- 1- Turn OFF the machine by pressing button "A" On/Off.
- 2- Open the door and remove the water flow device and close the door. (Fig.39)

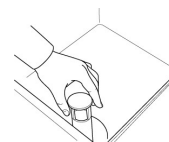


Fig.39

- 3- On the display will appear water drain message during process. (Fig.40)

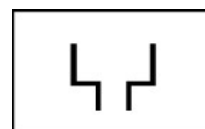


Fig.40

- 4- Wait until all the water is completely drained out from the tank. The machine will turn OFF automatically after completing drain process.

3D3 – WATER DRAIN (MECHANICAL MACHINE WITH DRAIN PUMP INCLUDED)

- 1- Open the door and remove the water flow device and close the door. (Fig.41)



Fig.41

- 2- Press button "B" to start drain out the water and wait until all the water is completely drained out from the tank. (Fig.42)

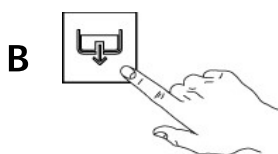


Fig.42

- 3- Turn OFF the machine by pressing button "A" On/Off.

3D4 – FILTERS CLEANING

- 1- Turn OFF the machine by pressing button "A" On/Off.
- 2- Manually remove side or central filters or by unscrewing the ferrule located on the top rounded filter inside the tank. (Fig.43)

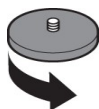


Fig.43

- 3- Wash and clean filters accurately on running fresh water.
- 4- Repositionated all filters and components inside the machine.

3D5 – EXTERNAL SURFACES CLEANING

Before carrying out any cleaning operations, turn off the power at the mains.

To reduce the emission of pollutants into the environment, clean the appliance (externally and where necessary internally) with products having a biodegradability of over 90%.

WARNING!

CLEAN STAINLESS STEEL SURFACES BY USING WARM SOAPY WATER; NEVER USE DETERGENT CONTAINING ABRASIVE SUBSTANCES NOR STEEL SCRAPERS, COMMON WIRE WOOL, BRUSHES OR

SCRAPES; RINSE THOROUGHLY USING A WET CLOTH AND CAREFULLY WIPE DRY. DO NOT WASH THE APPLIANCE BY USING DIRECT OR HIGH PRESSURE WATER JETS.

3D6 – TURNING OFF THE MACHINE

- 1- Drain out completely the water from the tank. (see par.3D1/2/3)
- 2- Turn OFF the machine by pressing button "A" On/Off.
- 3- Close the door and turn off the power at the mains.

3E – UNDERCOUNTER DISHWASHER WITH BUILT- IN WATER SOFTENER

These models have continuous softener in the dishwasher water circuit. By means of special resins, this device removes the calcareous substance from the feed water, supplying decalcified water for washing.

Automatic watersoftener works properly if the resins are regenerated periodically, with frequency depending on the hardness of the water and the number of wash cycles carries out.

3E1 – SALT CONTAINER / FILLING

The water can be only softened if there is salt in its container. The salt container must be filled when the dishwasher is used for the first time and before starting a new cycle.

3E2 – MECHANICAL VERSIONS

It is necessary to fill the salt container approximately every 5 watersoftener regenerations.

3E3 – ELECTRONIC VERSIONS

If available, fill salt container everytime the message "Add SALT" is displayed or during blinking button on the control panel.

Add
SALT



ADD SALT

N.B. (Mechanical / Electronic Versions)

It is not possible to start a new watersoftener regeneration if salt container is empty. Watersoftener regeneration process must be made only after draining out completely the water inside the tank. Salt container has always water on its inside; however it is normal if some water comes out of salt container while filling it.

3E4 – ALL MODELS

- 1- Turn OFF the machine by pressing button "A" On/Off.
- 2- Unscrew the cap of salt container located inside the tank by turning it anticlockwise. (Fig.44)

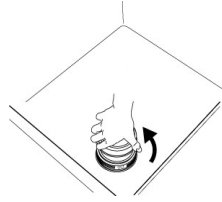


Fig.44

- 3- Pour approx. 1 kg of coarse salt [NaCl] in the container. (Fig.45)

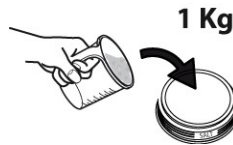


Fig.45

- 4- Screw the cap of salt container by turning it clockwise.

WARNING!

ONLY SALT MUST BE PLACED INSIDE THE SALT CONTAINER. DO NOT INTODUCE ANY OTHER CHEMICAL SUBSTANCES SUCH AS DETERGENT, RINSE AIS OR DESCALING AGENT, SINCE THESE WOULD INEVITABLY DAMAGE THE APPLIANCE. SUCH DAMAGE INVALIDATES ANY WARRANTY AND RELIEVES THE MANUFACTURER OF ALL LIABILITY.

3E5 – RESINS CHART RANGE

Water Hardness (french degrees)	20°F	30°F	40°F
Water Liters Treatment	240	150	120
Cycles Number	120	75	60

3E6 – WATERSOFTENER REGENERATION

It is important to follow the Resins Chart Range in order to have correct regeneration with the watersoftener.

- 1- Ensure that salt container is full.
- 2- Turn OFF the machine by pressing button "A" On/Off.
- 3- Open the door and remove the water flow device. (Fig.46)

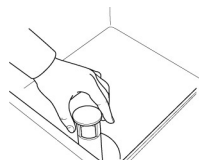


Fig.46

- 4- Drain out completely the water from the tank. For models with Drain Pump see par. 3D.
- 5- Keep pressing for few seconds regeneration button on the control panel until it starts regeneration process. (Fig.47) On electronic version, keep pressing button "C" until Regeation icon will be on the display.



Fig.47

- The machine automatically complete the regeneration process in approx. 18 min.

3F – WARNING MESSAGES DISPLAYED ON THE CONTROL PANEL (Electronic versions only)

N.B.

If the machine is in OFF mode, warning messages are not visualized on the display. Turn ON the machine to visualize type of error or breakdown.

The following warning messages are visualized on the display:

ntcb

E-01 BOOSTER TEMPERATURE PROBE

Booster temperature probe not connected or faulty.

CALL TECHNICAL SERVICE ASSISTANCE

ntcu

E-02 TANK TEMPERATURE PROBE

Tank temperature probe not connected or faulty.

CALL TECHNICAL SERVICE ASSISTANCE

fill

E-03 WATER FILL

Water fill not completed during the available maximum time (10min).

Verify that water supply is correctly connected, opened and free of obstructions.

Verify that solenoid valve filter is free of possible obstructions and deposit.

Verify that water supply pressure is adequate (par.1D – Technical Data).

Verify that machine's door is completely closed and the overflow device is correctly positioned inside the tank.

N.B.

If water fill timing expires or in case of water level signal is not respected solenoid valve is automatically interrupted. To restart solenoid valve press any button on the control panel.

Tbo

E-04 BOOSTER TEMPERATURE LIMIT

Booster temperature maximum set point reached (set point + 14°C / 57°F).

CALL TECHNICAL SERVICE ASSISTANCE

TUA

E-05 TANK TEMPERATURE LIMIT

Tank temperature maximum set point reached (set point + 7°C / 44°F).

CALL TECHNICAL SERVICE ASSISTANCE

drA

E-06 DRAIN ANOMALY

Drainage not completed on the maximum programmed timing.

Verify that the overflow device is completely removed and not obstructions are present on the water drain line.

bnot

E-07 BOOSTER HEATING

Maximum booster heating time reached (15min).

CALL TECHNICAL SERVICE ASSISTANCE

Unot

E-08 TANK HEATING

Maximum tank heating time reached (30min).

CALL TECHNICAL SERVICE ASSISTANCE

SEruICE

E-09 PARAMETERS ERROR OR DAMAGED BOARD

Memory parameters error or damaged board.

CALL TECHNICAL SERVICE ASSISTANCE

FOLLOWING ACTIONS AFTER MACHINE ERROR OR BREAKDOWN:

Booster and tank heating elements are interrupted, water load is deactivated, control panel display visualizes the error and the electronic card is inactivated. All led buttons are OFF. Washing cycle is interrupted (standby mode) and restored if the problem is solved. It is always possible to turn OFF the machine by pressing button "A" ON/OFF, and if the problem is solved, warning messages are not more displayed.

4 – TROUBLESHOOTING

THE DISHWASHER DOES NOT WORK ?

- 1- Verify inlet main water supply is correctly connected, open and free from any obstructions.
- 2- Verify main electrical supply is working without any electrical breakdown connections.
- 3- Verify the door is properly closed.

DISHWASHER DOES NOT WASH WELL ?

- 1- Verify if the filters are cleaned, in case not, clean them. (see par. **3D4**)
- 2- Verify if the washing water jets on the washing arms are not obstructed by any solid residues.
- 3- Verify if used a correct amount and quality of detergent and rinse aid. (see par. **3B2/3C2**)
- 4- Verify if the dishes are correctly loaded on the dishwasher. (see par. **3B6/3C7**)
- 5- Washing cycle used is too short. Use another cycle (if available) or repeat the washing cycle.

THE DISHES ARE NOT RINSED WELL?

- 1- Verify if the rinse water jets on the washing arms are not obstructed by any solid residues.
- 2- Verify solenoid valve filter is free from any obstructions such as lime or scale.
- 3- The inlet water pressure is inferior of 2 bar – 200 kPa. Install an external pressure device to ensure and increase the inlet water pressure inside the machine.

THE DISHES ARE NOT DRIED WELL ?

- 1- Ask the assistance service to verify the instruction for the rinse aid dosing. (see par. **2D**)
- 2- Verify if the rinse aid container is empty. If yes, fill it with rinse aid product. (see par. **2D**)
- 3- Verify the quality and the quantity of the rinse aid used and check with the assistance service. (see par. **2D**)
- 4- Verify the rinsing temperature is between 80°C (176°F) to 90°C (194°F) degrees.

CONDENSATION ON GLASSES ?

- 1- Verify if the rinse aid container is empty. If yes, fill it with rinse aid product. (see par. **2D**)
- 2- Verify the quality and the quantity of the rinse aid used and check with the assistance service. (see par. **2D**)
- 3- Download the glasses rack immediately after the end of each cycle.

STAINS ON GLASSES ?

- 1- Use only non foaming products for professional dishwashers.

EXCESSIVE FOAM IN THE TANK ?

- 1- Verify washing water temperature is not less than 50°C (122°F) degrees.
- 2- Ask the assistance service to verify the instruction for the rinse aid dosing. (see par. **2D**)
- 3- Ensure the tank has not been cleaned with unsuitable cleaners. Drain the tank and rinse thoroughly before new wash cycles.
- 4- If foaming detergent has been used, drain and refill the tank with water until the foam disappears.

SMEARS OR SPOTS ON THE GLASSES ?

- 1- Ask the assistance service to verify the instruction for the rinse aid dosing.

<p style="text-align: center;">EMERGENCY IN CASE OF FIRE A POWDER EXTINGUISHER MUST BE USED. IN CASE OF DANGER CUT-OFF IMMEDIATELY THE AUTOMATIC GENERAL ELECTRICAL SWITCH.</p>

The Manufacturer reserves the right to modify the appliances presented in this publication without notice.