Under Counter Dishwasher

EUC.../NUC.../ZUC.../EUCA.../NUCA.../ ZUCA.../FUCA...

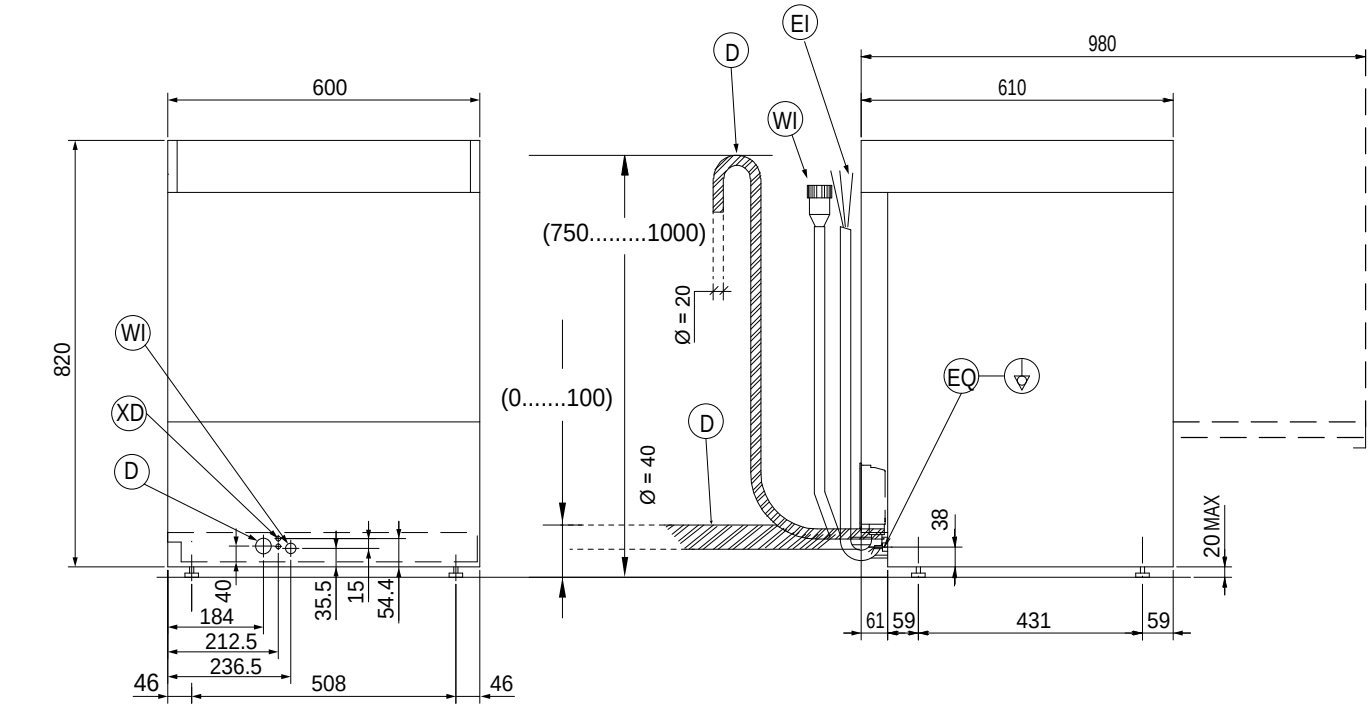
EN Installation and operating manual *

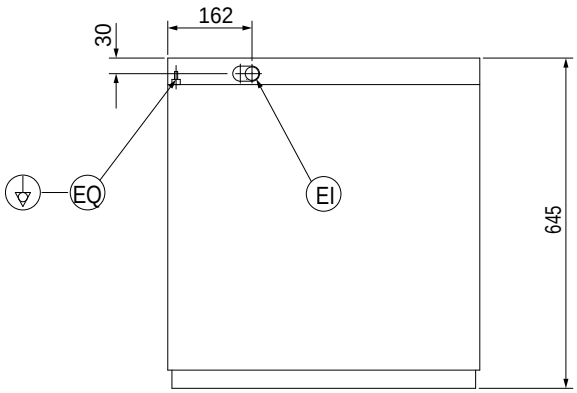
*Original instructions

59566AM03- 2016.09

Installation diagram

EI = Power supply entry
WI = Water Inlet pipe with ⌀ =3/4″ G fittings
XD = Inlet pipe for detergents
EQ = Equipotential screw
D = Drain pipe with internal diameter:
⌀ = 40 mm (Only for model with free-fall drainage)
⌀ = 20 mm (Only for model with drain pump)


600
820
WI
XD
D
40
184
212.5
236.5
46
508
46
35.5
15
54.4
EI
D
WI
980
610
(750.....1000)
Ø = 20
(0.....100)
Ø = 40
D
EQ
38
20 MAX
61
59
431
59


30
162
EQ
EI
645

Foreword

 The installation, use and maintenance manual (hereinafter Manual) provides the user with information necessary for correct and safe use of the machine (hereinafter “machine“ or “appliance“).

The following must not be considered a long and exacting list of warnings, but rather a set of instructions suitable for improving machine performance in every respect and, above all, preventing injury to persons and animals and damage to property due to improper operating procedures.

All persons involved in machine transport, installation, commissioning, use and maintenance, repair and disassembly must consult and carefully read this manual before carrying out the various operations, in order to avoid wrong and improper actions that could compromise the machine's integrity or endanger people. Make sure to periodically inform the user regarding the safety regulations. It is also important to instruct and update personnel authorised to operate on the machine, regarding its use and maintenance.

The manual must be available to operators and carefully kept in the place where the machine is used, so that it is always at hand for consultation in case of doubts or whenever required.

If, after reading this manual, there are still doubts regarding machine use, do not hesitate to contact the Manufacturer or the authorised Service Centre to receive prompt and precise assistance for better operation and maximum efficiency of the machine. During all stages of machine use, always respect the current regulations on safety, work hygiene and environmental protection. It is the user's responsibility to make sure the machine is started and operated only in optimum conditions of safety for people, animals and property.

IMPORTANT

- The manufacturer declines any liability for operations carried out on the appliance without respecting the instructions given in this manual.
- The manufacturer reserves the right to modify the appliances presented in this publication without notice.
- No part of this manual may be reproduced.
- This manual is available in digital format by contacting the dealer or reference customer care.
- The manual must always be kept in an easily accessed place near the machine. Machine operators and maintenance personnel must be able to easily find and consult it at any time.

Contents

A SAFETY INSTRUCTIONS

A.1 Children and vulnerable people safety

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Do not let children play with the appliance.
- Keep all packaging and detergents away from children.
- Cleaning and user maintenance shall not be made by children without supervision.

CAUTION
Do not wash the appliance with direct or high pressure jets of water.

WARNING
If the power cable is damaged it must be replaced by the After-Sales Service or in any case by qualified personnel, in order prevent any risk.

B GENERAL INFORMATION

B.1 Introduction

Given below is some information regarding the machine's intended use, its testing, and a description of the symbols used (that identify the type of warning), the definitions of terms used in the manual and useful information for the appliance user.

B.2 General safety instructions

To ensure safe use of the machine and a proper understanding of the manual it is necessary to be familiar with the terms and typographical conventions used in the documentation. The following symbols are used in the manual to indicate and identify the various types of hazards:

WARNING
Danger for the health and safety of operators.

WARNING
Danger of electrocution - dangerous voltage.

Words further explaining the type of hazard are placed next to the symbols in the text. Warnings serve to ensure the safety of personnel.

B.3 Additional indications

In this manual the risks arising from incorrect use will be marked with:

CAUTION
Risk of damage to the machine or the product.

The parts of the text preceded by the following symbol:

NOTE!
Clarifications and explanations

Provide recommendations to keep in mind during the entire life-cycle of the product.

The drawings and diagrams given in the manual are not in scale. They supplement the written information with an outline, but are not intended to be a detailed representation of the machine supplied.

The numerical values given on the machine installation diagrams refer to measurements in mm.

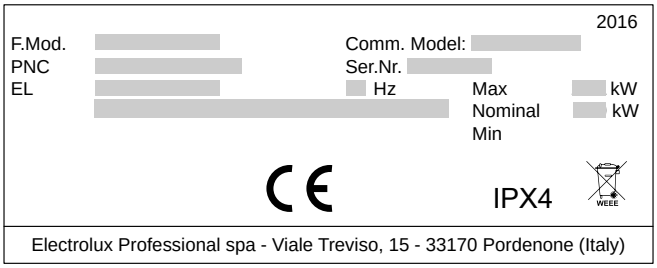
B.4 Definitions

Listed below are the definitions of the main terms used in the manual. It is advisable to read them carefully before use.

Operator	machine installation, adjustment, use, maintenance, cleaning, repair and transport personnel.
Manufacturer	Electrolux Professional SpA or any other service centre authorised by Electrolux Professional SpA.
Operator for normal machine use	an operator who has been informed and trained regarding the tasks and hazards involved in normal machine use.
After-sales service or specialised technician	an operator instructed/trained by the Manufacturer and who, based on his professional and specific training, experience and knowledge of the accident-prevention regulations, is able to appraise the operations to be carried out on the machine and recognise and prevent any risks. His professionalism covers the mechanical, electrotechnical and electronics fields.
Danger	source of possible injury or harm to health.
Hazardous situation	any situation where an operator is exposed to one or more hazards.
Risk	a combination of probabilities and risks of injury or harm to health in a hazardous situation.
Protection devices	safety measures consisting of the use of specific technical means (guards and safety devices) for protecting operators against risks.
Guard	an element of a machine used in a specific way to provide protection by means of a physical barrier.
Safety device	a device (other than a guard) that eliminates or reduces the risk; it can be used alone or in combination with a guard.
Customer	the person who purchased the machine and/or who manages and uses it (e. g. company, entrepreneur, firm).
Electrocution	an accidental discharge of electric current on a human body.

B.5 Machine and Manufacturer's identification data

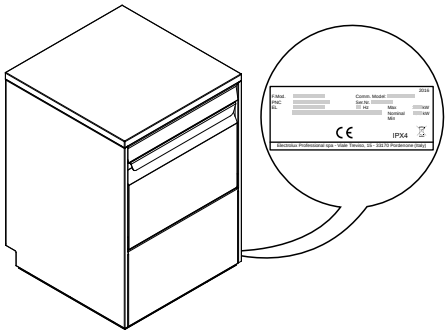
A reproduction of the marking or dataplate on the machine is given below:



The dataplate gives the product identification and technical data; listed below is the meaning of the various information given on it.

F.Mod.	factory description of product
Comm.Model	commercial description
PNC	production number code
Ser.No.	serial number
EL	power supply voltage
230V 3 - 230V 1N	electric convertibility
Hz	power supply frequency
Max – kW	max. power
Nominal – kW	nominal power
IPX4	dust and water protection rating
CE	CE marking
Electrolux Professional SpA Viale Treviso 15 33170 Pordenone Italy	manufacturer

The dataplate is located on the right side panel of the equipment.



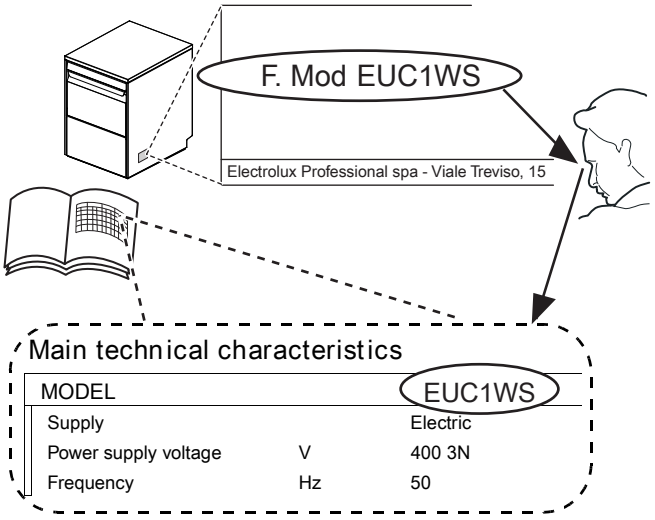
WARNING
Do not remove, tamper with or make the machine marking illegible.

IMPORTANT
When scrapping the machine, the marking must be destroyed.

NOTE!
Refer to the data given on the machine marking for relations with the Manufacturer (e.g. when ordering spare parts, etc.).

B.6 How to identify the technical data

To identify the technical data, read the factory description of the product (F. Mod.) on the dataplate, identify the main machine data and consult D.1 *Main technical characteristics* paragraph.



B.6.1 How to interpret the factory description

The factory description on the dataplate has the following meaning (some examples are given below):

Version						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
E	UC	A	1	DD	G	
N	UC	A	1	G	R	UK
E	UC	1	WS			
N	UC	3	WS			
Z	UC	3	DD	WS		

(1) Brand	E = Electrolux, N = To brand, Z = Zanussi
(2) Machine type	UC = Under counter
(3 - 6) Options	1 = Single phase, 3 = Three phases, A = Atmospheric, DP = Drain pump, WS = Water Softener, DD = Detergent pump, G = Detergent pump + rinse aid pump + drain pump, MS = Multi rack support, R = Additional rack, UK = UK market

B.7 Responsibility

The Manufacturer declines any liability for damage and malfunctioning caused by:

- non-compliance with the instructions contained in this manual;
- repairs not carried out in a workmanlike fashion, and replacements with parts different from those specified in the spare parts catalogue (the fitting and use of non-original spare parts and accessories can negatively affect machine operation and invalidates the warranty);
- operations by non-specialised technicians;
- unauthorised modifications or operations;
- inadequate maintenance;
- improper machine use;
- unforeseeable extraordinary events;
- use of the machine by uninformed and untrained personnel;
- non-application of the current provisions in the country of use, concerning safety, hygiene and health in the workplace.

The Manufacturer declines any liability for damage caused by arbitrary modifications and conversions carried out by the user or the Customer.

The employer, workplace manager or service technician are responsible for identifying and choosing adequate and

suitable personal protection equipment to be worn by operators, in compliance with regulations in force in the country of use. Electrolux Professional SpA declines any liability for inaccuracies contained in the manual, if due to printing or translation errors. Any supplements to the installation, use and maintenance manual the Customer receives from the Manufacturer will form an integral part of the manual and therefore must be kept together with it.

B.8 Keeping the manual

The manual must be carefully kept for the entire life of the machine, until scrapping.

The manual must stay with the machine in case of transfer, sale, hire, granting of use or leasing.

B.9 Recipients of the manual

This manual is intended for:

- the carrier and handling personnel;
- installation and commissioning personnel;
- the employer of machine users and the workplace manager;
- operators for normal machine use;
- specialised technicians - after-sales service (see service manual).

B.10 Copyright

This manual is intended solely for consultation by the operator and can only be given to third parties with the permission of Electrolux Professional SpA.

B.11 Personal protection equipment

Summary table of the Personal Protection Equipment (PPE) to be used during the various stages of the machine's service life.

Stage	Protective garments 	Safety footwear 	Gloves 	Glasses 	Safety helmet 
Transport	—	●	○	—	○
Handling	●	●	○	—	—
Unpacking	○	●	○	—	—
Installation	○	●	○	—	—
Normal use	●	●	●[1]	○	—
Adjustments	○	●	—	—	—
Routine cleaning	○	●	●[1]	○	—
Extraordinary cleaning	○	●	●[1]	○	—
Maintenance	○	●	○	—	—
Dismantling	○	●	○	○	—
Scrapping	○	●	○	○	—
Key:					
●	**PPE REQUIRED**				
○	**PPE AVAILABLE OR TO BE USED IF NECESSARY**				
—	**PPE NOT REQUIRED**				

1. Use heat resistant gloves suitable for contact with water and the substances used (see the safety data sheet of the substances used to check other possible PPE). Failure to use the personal protection equipment by operators, specialised technicians or users can involve exposure to chemical risk and possible damage to health (depending on the model).

C GENERAL SAFETY RULES

C.1 Introduction

The machines are provided with electric and/or mechanical safety devices for protecting workers and the machine itself. Therefore the user must not remove or tamper with such devices.

The Manufacturer declines any liability for damage due to tampering or their non-use.

C.2 Guards

The guards on the machine are:

- fixed guards (e.g. casings, covers, side panels, etc.), fixed to the machine and/or frame with screws or quick-release connectors that can only be removed or opened with tools;
- interlocked movable guards (door) for access inside the machine;
- machine electrical equipment access doors, made from hinged panels openable with tools. The door must not be opened when the machine is connected to the power supply.

WARNING
Several illustrations in the manual show the machine, or parts of it, without guards or with guards removed. This is purely for explanatory purposes. Do not use the machine without the guards or with the protection devices deactivated.

C.3 Safety signs to be placed on the machine or near its area

Prohibition	Meaning
	do not oil, lubricate, repair and adjust moving parts
	do not remove the safety devices
	do not use water to extinguish fires (placed on electrical parts)

Danger	Meaning
	danger of crushing hands
	danger of burns
	danger of electrocution (shown on electrical parts with indication of voltage)

WARNING
Do not remove, tamper with or make illegible the safety, danger and instruction signs and labels on the machine.

C.4 End of use

When the appliance is no longer to be used, make it unusable by removing the mains power supply wiring.

C.5 Instructions for use and maintenance

Risks mainly of a mechanical, thermal and electrical nature exist in the machine. Where possible the risks have been neutralised:

- directly, by means of adequate design solutions.
- indirectly by using guards, protection and safety devices.

Any anomalous situations are signalled on the control panel display.

During maintenance several risks remain, as these could not be eliminated, and must be neutralised by adopting specific measures and precautions.

Do not carry out any checking, cleaning, repair or maintenance operations on moving parts. Workers must be informed of this prohibition by means of clearly visible signs.

To guarantee machine efficiency and correct operation, periodical maintenance must be carried out according to the instructions given in this manual.

Make sure to periodically check correct operation of all the safety devices and the insulation of electrical cables, which must be replaced if damaged.

WARNING
Extraordinary machine maintenance operations must only be carried out by specialised technicians provided with all the appropriate personal protection equipment (safety shoes, gloves, glasses, overalls, etc.), tools, utensils and ancillary means.
Never operate the machine, removing, modifying or tampering with the guards, protection or safety devices.
Before carrying out any operation on the machine, always consult the manual, which gives the correct procedures and contains important information on safety.

C.6 Reasonably foreseeable improper use

Improper use is any use different from that specified in this manual. During machine operation, other types of work or activities deemed improper and that in general can involve risks for the safety of operators and damage to the appliance are not allowed. Reasonably foreseeable improper use includes:

- lack of machine maintenance, cleaning and periodical checks;
- structural changes or modifications to the operating logic;
- tampering with the guards or safety devices;
- failure to use personal protection equipment by operators, specialised technicians and maintenance personnel;
- failure to use suitable accessories (e.g. use of unsuitable equipment or ladders);
- keeping combustible or flammable materials, or in any case materials not compatible with or pertinent to the work, near the machine;
- wrong machine installation;
- placing in the machine any objects or things not compatible with its use, or that can damage the machine, cause injury or pollute the environment;
- climbing on the machine;
- non-compliance with the requirements for correct machine use;
- other actions that give rise to risks not eliminable by the Manufacturer.

WARNING
The previously described actions are prohibited!

C.7 Residual risks

The machine has several risks that were not completely eliminated from a design standpoint or with the installation of adequate protection devices. Nevertheless, through this manual the Manufacturer has taken steps to inform operators of such risks, carefully indicating the personal protection equipment to be used by them. Sufficient spaces are provided for during the machine installation stages in order to limit these risks. To preserve these conditions, the areas around the machine must always be:

- kept free of obstacles (e. g. ladders, tools, containers, boxes, etc.);
- clean and dry;
- well lit.

For the Customer's complete information, the residual risks remaining on the machine are indicated below: such actions are deemed improper and therefore strictly forbidden.

Residual risk	**Description of hazardous situation**
Slipping or falling	The operator can slip due to water or dirt on the floor
Catching, dragging or crushing	Catching or dragging of the operator or other persons in the drive, during the machine work phase, due to improper actions, such as: • placing an arm inside the machine to remove a stuck rack without stopping the machine by operating an emergency switch; • accessing the rack handling system without stopping the machine by operating an emergency switch. Use of improper clothing with loose parts (e.g. necklaces, scarves, shawls, ties, etc.) or long hair not gathered, which could get caught up in moving parts.
Burns/abrasions (e.g. heating elements, cold pan, cooling circuit plates and pipes)	The operator deliberately or unintentionally touches some components inside the machine without using protective gloves
Burns	The operator deliberately or unintentionally touches some components inside the machine or dishes at the outfeed without using gloves or without allowing them to cool.
Shearing of upper limbs	The operator violently closes the front panels.
Electrocution	Contact with live parts during maintenance operations carried out with the electrical panel powered
Falling from above	The operator intervenes on the machine using unsuitable systems to access the upper part (e.g. rung ladders, or climbs on it)
Crushing or injury	The specialised technician may not correctly fix the control panel when accessing the technical compartment. The panel could close suddenly.

Residual risk	Description of hazardous situation
Crushing or shearing	Possible risk of injury to upper limbs during the hood closing operation.
Tipping of loads	When handling the machine or the packing containing it, using unsuitable lifting systems or accessories or with the load unbalanced
Chemical	Contact with chemical substances (e.g. detergent, rinse aid, scale remover, etc.) without taking adequate safety precautions. Therefore always refer to the safety cards and labels on the products used.

D TECHNICAL DATA

D.1 Main technical characteristics

Model		ZUCA1	ZUCA3 FUCA3DD	EUCA1DDG NUCA1DDG ZUCA1DDG NUCA1GRUK	EUC1GMS NUC1GMS ZUC1GMS	EUC1... NUC1... ZUC1... NUC1DPDD	EUC1G NUC1G ZUC1G	NUC1DUK NUC1DDUK	EUC3... KUC3... NUC3... ZUC3...
Supply voltage: convertible to single-phase version		230V 1N~ - -	400V 3N~ 230V 3~ 230V 1N~	230V 1N~ 400V 3N~ 230V 3~	230V 1N~ - -	230V 1N~ - -	230V 1N~ - -	230V 1N~ - -	400V 3N~ 230V 3~ 230V 1N~
Frequency	Hz	50 or 60							
Max. power	kW	3.65 / 5.65[1]	5.35 / 7.35[1]	5.35	3.65 / 5.65[1]	3.65 / 5.65[1]	2.85 / 4.35[1]	2.85	5.35 / 7.35[1]
Boiler heating elements	kW	2.8	4.5	4.5	2.8	2.8	1.5	1.5	4.5
Tank heating elements	kW	2.0							
Water supply pressure	kPa [bar]	50 - 700 [0.5 - 7]	50 - 700 [0.5 - 7]	50 - 700 [0.5 - 7]	200 - 300 [2 - 3]	200 - 300 [2 - 3]	200 - 300 [2 - 3]	200 - 300 [2 - 3]	200 - 300 [2 - 3]
Water supply temperature	°C	50	50	50	65	50	50	50	50
Water supply hardness	°f/°d/°e	14/8/10 max							
Electric conductivity of water	µS/cm	< 400							
Concentration of chlorides in water	ppm	< 20							
Rinse cycle water consumption	l	3	3	3	3.3[2]	3.3[2]	3.3[2]	3.3[2]	3.3[2]
Boiler capacity	l	5.8							
Tank capacity	l	33							
Standard cycle time with water supply at 50°C[3]	sec.	90 - 120 - 240	90 - 120 - 240 [120 - 180][4]	90 - 180	-	120 - 180	120 - 180	120 - 180	120 - 180
Standard cycle time with water supply at 65°C	sec.	-	-	-	90 - 180	-	-	-	-
Legal noise level Leq[5]	dB(A)	LpA: 63dB - KpA: 1.5dB							
Protection rating		IPX4							
Net weigh	kg	54							
Power supply cable		H07RN-F							

1. If activated by software, coincidence of tank and boiler heating elements.
2. With dynamic feed pressure of 200 kPa [2 bar].
3. Standard cycle time may vary should the inlet water temperature and/or the boiler heating elements be different from that indicated above.
4. Only for FUCA3DD model.
5. The noise emission values have been obtained according to EN ISO 11204.

	400 – 415V 3N		220 – 240V 3		220 – 240V 1N	
	C	S	C	S	C	S
3.35 kW	-	-	-	-	3x2.5 mm²	20A 1P + N
5.35 kW	5x1.5 mm²	16A 3P + N	4x2.5 mm²	20A 3P	3x4 mm²	32A 1P + N
5.65 kW	-	-	-	-	3x4 mm²	32A 1P + N
7.35 kW	5x2,5 mm²	25A 3P + N	4x4 mm²	32A 3P	3x6 mm²	40A 1P + N
C = Power supply cable S = On/Off switch						

D.2 Characteristics of power supply

The AC power supply to the machine must meet the following conditions:

- max. voltage variation ± 5%
- max. frequency variation ± 1% continuous ± 2% for a short period.

Harmonic distorsion, unbalanced three-phase supply voltage, voltage pulses, interruption, dips and the other electric characteristics must respect the provisions of point 4.3.2 of Standard EN 60204-1 (IEC 60204-1).

CAUTION

The machine's power supply must be protected against overcurrents (short circuits and overloads) by fuses or suitable thermal magnetic circuit breakers. A suitable high-sensitivity manual-reset differential omnipolar thermal-magnetic switch with contact gap enabling complete disconnection in category III overvoltage conditions and complying with the current regulations, must be installed between the power cable and the electric line.

WARNING

For protection against indirect contacts (depending on the type of supply provided for and connection of earths to the equipotential protection circuit) refer to point 6.3.3 of EN 60204-1 (IEC 60204-1) with the use of protection devices that ensure automatic cut-off of the supply in case of isolation fault in the TN or TT systems or, for IT systems, the use of isolation controllers or differential current protection devices to activate automatic power disconnection (an isolation controller must be provided for indicating a possible first earth fault of a live part, unless a protection device is supplied for switching off the power in case of a such a fault. This device must activate an acoustic and/or visual signal which must continue for the entire duration of the fault). For example: in a TT system, a differential switch with cut-in current (e.g. 30 mA) coordinated with the earthing system of the building where the machine is located must be installed ahead of the supply.

E TRANSPORT, HANDLING AND STORAGE

E.1 Introduction

Transport (i. e. transfer of the machine from one place to another) and handling (i. e. transfer inside workplaces) must occur with the use of special and adequate means.

WARNING
Due to their size, the machines cannot be stacked on top of each other during transport, handling and storage; this eliminates any risks of loads tipping over due to stacking.

NOTE!
Qualified personnel must:
- have specific technical training and experience in the use of lifting systems;
- have knowledge of the safety regulations and applicable laws in the relevant sector;
- have knowledge of the general safety rules;
- ensure the use of personal protection equipment suitable for the type of operation carried out;
- be able to recognise and avoid any possible hazard.

E.2 Transport: instructions for the carrier

WARNING
Do not stand under suspended loads during loading/ unloading operations. Unauthorised personnel must not enter the work area.
The weight of the appliance alone is not sufficient to keep it steady.

NOTE!
The transported load can shift:
- when braking;
- when accelerating;
- in corners;
- on rough roads.

E.3 Procedures for handling operations

For correct and safe lifting operations:
- use the type of equipment most suitable for characteristics and capacity (e.g. electric pallet truck or lift truck);
- cover sharp edges;

Before lifting:
- send all operators to a safe position and prevent persons from entering the handling area;
- make sure the load is stable;
- make sure no material can fall during lifting. Manoeuvre vertically in order to avoid impacts;
- handle the machine, keeping it at minimum height from the ground.

WARNING
For machine lifting and anchoring, do not use movable or weak parts such as: casings, electrical raceways, pneumatic parts, etc.

E.4 Shifting

The operator must:
- have a general view of the path to be followed;
- stop the manoeuvre in case of hazardous situations.

WARNING
Do not push or pull the appliance to move it, as it may tip over.

E.5 Placing the load

Before placing the load, make sure the way is free and that the floor is flat and can take the load. Remove the appliance from the wooden pallet, move it to one side, then slide it onto the floor.

E.6 Storage

The machine and/or its parts must be stored and protected from damp, in a non-aggressive place, free of vibrations and with room temperatures between -10°C and 50°C. The place where the machine is stored must have a flat support surface to avoid deforming the machine or damage to the support feet.

WARNING
Appliance positioning, installation and disassembly must be carried out by a specialised technician.

CAUTION
Do not make modifications to the parts supplied with the appliance. Any missing or faulty parts must be replaced with original parts.

F INSTALLATION AND ASSEMBLY

F.1 Introduction

To ensure correct operation of the appliance and maintain safe conditions during use, carefully follow the instructions given below in this section.

WARNING
The above operations must be carried out by the specialised technician in conformity with the current safety regulations, regarding the equipment used and the operating procedures.
Before moving the appliance make sure the capacity of the lifting equipment used is suitable for its weight.

F.2 Customer responsibilities

The Customer must provide for the following:

- installation of an adequate electrical power supply ahead of the appliance, according to the equipment's technical specifications (D.1 *Main technical characteristics* and D.2 *Characteristics of power supply*);
- the equipotential connection ⏚ of the workplace electrical system to the metal structure of the machine by means of a copper cable of adequate section (see position "EQ" in *Installation diagram*);
- adducting for the electrical connection between the workplace electric panel and the equipment;
- the water supply and drain connections and other connections as indicated in D.1 *Main technical characteristics* and in the paragraph F.6 *Plumbing connections*.

F.3 Characteristics of the installation place

The machine is designed for installation in professional and not domestic-type kitchens. Water collection traps/ metal grates must be arranged in the floor at the machine discharges (see the *Installation diagram*), possibly replaceable with a single water trap sized for a flow rate of at least 3 l/s.

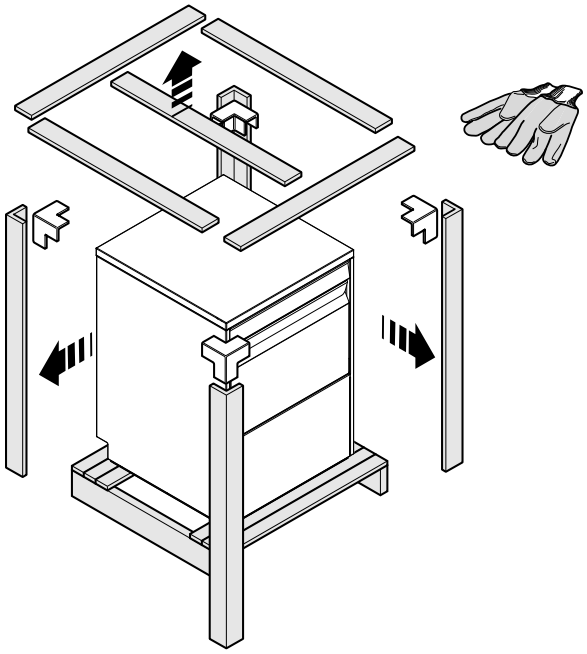
CAUTION
Do not install the appliance over 2000 meters above sea level.

F.4 Positioning

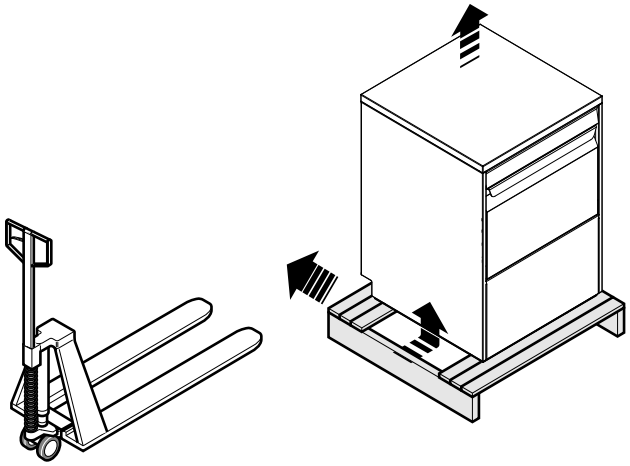
The machine must be taken to the place of installation and the packing base removed only when being installed.

Arranging the machine:

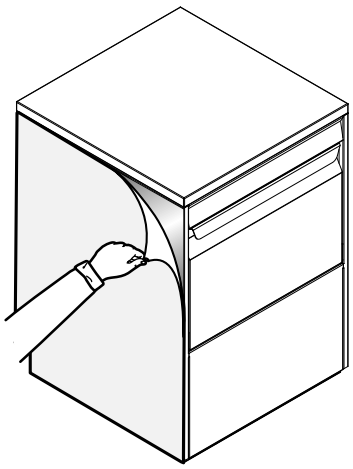
- Wear protective gloves and unpack the machine.



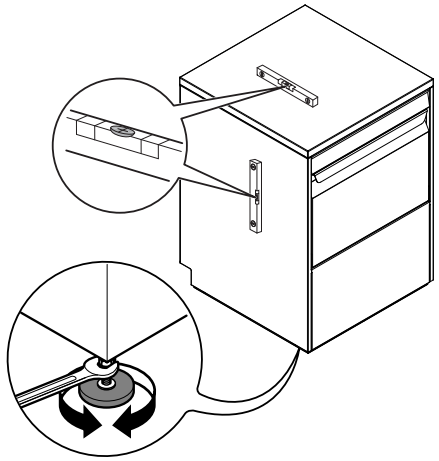
- Lift the equipment with a lift truck, remove the base and position it the place of use.



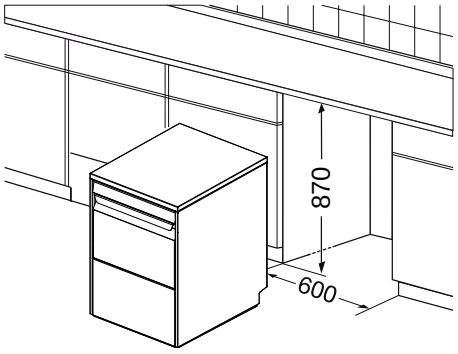
- Carefully remove the protective film from the outer panels without tearing it, to avoid leaving traces of glue.



- Adjust the equipment by turning the special adjustable feet and making sure it is perfectly level, both length wise and crosswise.

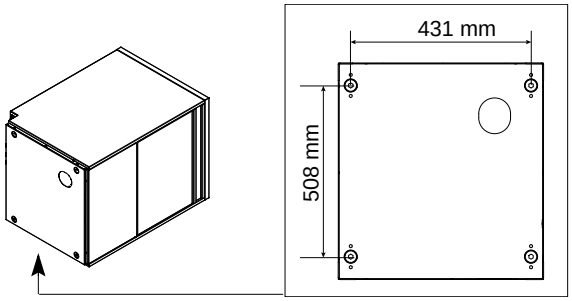


- If the dishwasher is installed under a work plan, the dimensions of the space, where it is inserted, must be the same as those shown in the following figure. Position the dishwasher and level the appliance by turning the relative height-adjustable feet.

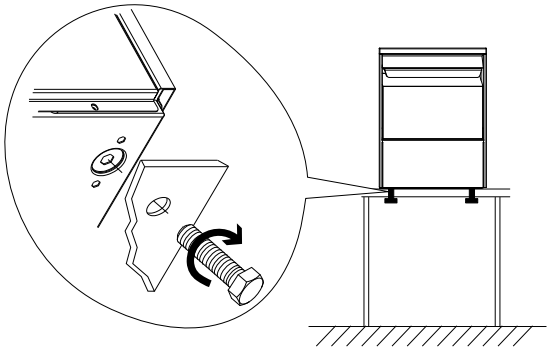


- If the dishwasher is installed on a special support (eg.: work plan), follow these steps:

1. Accessing the appliance bottom panel and unscrew the 4 feet.
2. Make 4 holes ⌀ = 9 mm on the support respecting the distances shown in the figure below.



3. Put the dishwasher on the support by matching the holes just made with the seats of the feet in the appliance bottom panel (see following figure).
4. Fix the dishwasher steadily using screws M8.



F.5 Disposal of packing

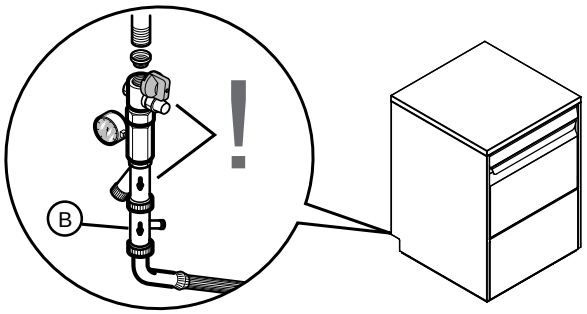
The packing must be disposed of in compliance with the current regulations in the country where the appliance is used. All the packing materials are environmentally friendly. They can be safely kept, recycled or burned in an appropriate waste incineration plant. Recyclable plastic parts are marked as follows:

PE	**Polyethylene** • Outer wrapping • Instructions bag
PP	**Polypropylene** • Straps
PS	**Polystyrene foam** • Corner protectors

NOTE!
The parts in wood and cardboard can be disposed of, respecting the current regulations in the country where the machine is used.

F.6 Plumbing connections

- Connect the appliance water supply pipe “WI“ (see the *Installation diagram*) to the mains, fitting a cut-off tap, the filter provided and a pressure gauge between the appliance and the mains (see figure below).
- In models with incorporated water softener and in some specific models, connect the double non-return valve “B“ supplied and the machine supply pipe (see figure below).



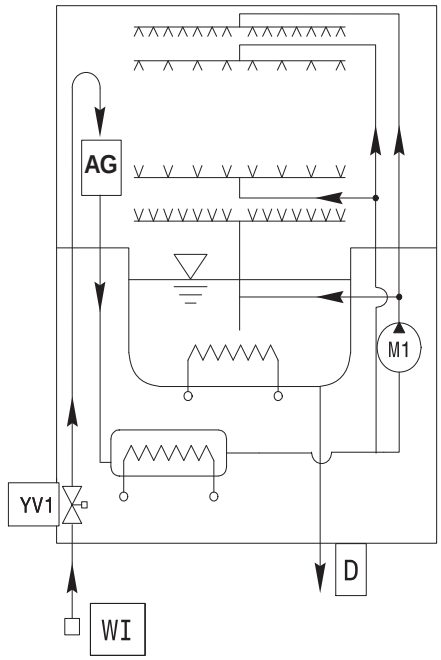
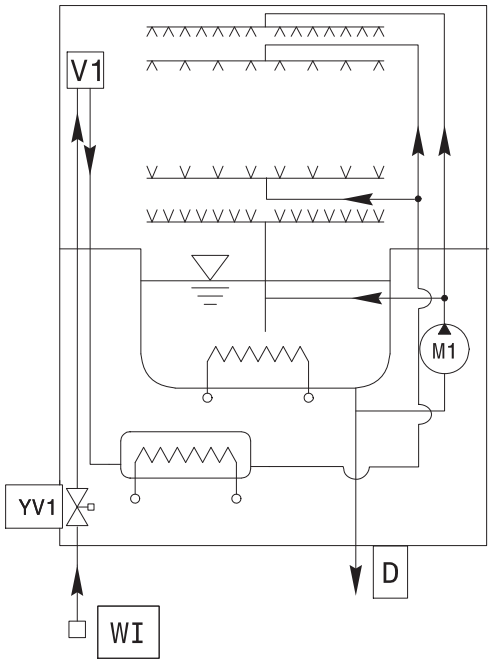
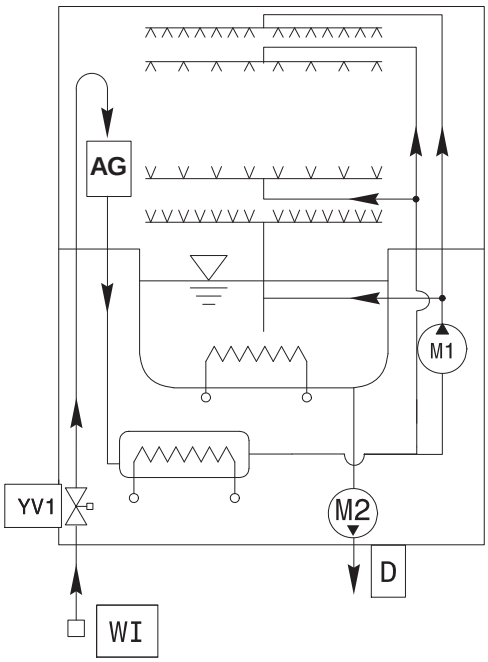
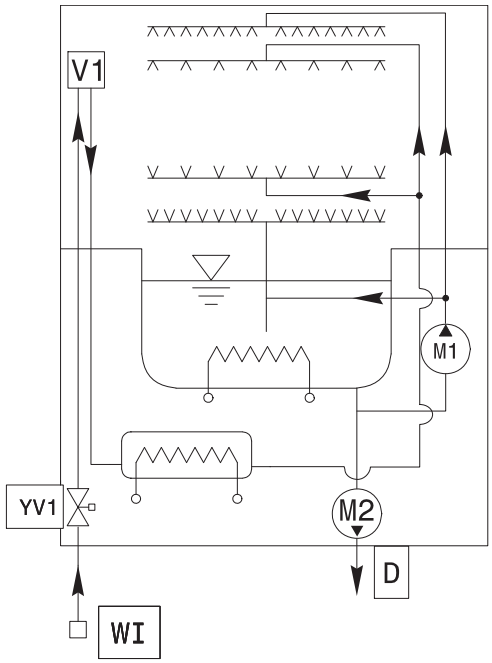
- Check that the dynamic water supply pressure, measured between the appliance and the main, is between 200 and 300 kPa for machines with pressure boiler and between 50 and 700 kPa for machines with atmospheric boiler (test while dishwasher tank or boiler is filling with water).

NOTE!
If the pressure is too high, fit a suitable pressure reducer on the inlet pipe.

– On the model with free-fall drainage:
connect the waste outlet pipe (detail “D“ in the *Installation diagram*) to the main drain pipe, fitting a trap, or place the outlet pipe over an “S“ trap set into the floor.
– On the model with drain pump:
position the outlet pipe at a height anywhere between 750 and 1000 mm from the floor. Check that about 3 litres of water flow out of the outlet pipe during the rinse cycle.

CAUTION
Always use a new set of joints if you remove and reinstall the water inlet pipe to the appliance.

F.7 Plumbing circuits

Appliance with atmospheric water supply - without drain pump	Appliance with pressure water supply - without drain pump
	
Appliance with atmospheric water supply - with drain pump	**Appliance with pressure water supply - with drain pump**
	

LEGEND

WI = Water inlet	AG = Air Gap
D = Drain	YV1 = Filling solenoid valve
M1 = Wash pump	V1 = Non-return valve (hot circuit)
M2 = Drain pump	

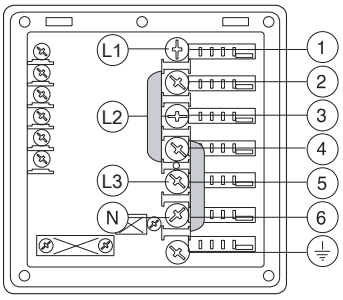
F.8 Electrical connections

WARNING
Work on the electrical systems must only be carried out by a qualified electrician.

- Connection to the power supply must be carried out in compliance with the regulations and provisions in force in the country of use.
- Make sure the machine power supply voltage specified on the rating plate matches the mains voltage.
- Make sure the system power supply is arranged and able to take the actual current load and that it is executed in a workmanlike manner according to the regulations in force in the country of use.
- The earth wire from the terminal board side must be longer (max 20 mm) than the phase wires.
- Connect the power cable earth wire to an efficient earth. The equipment must also be included in an equipotential system, whose connection is made by means of screw EQ (see par. *Installation diagram*) indicated by the symbol ⏚. The equipotential wire must have a section of at least 10 mm^2.

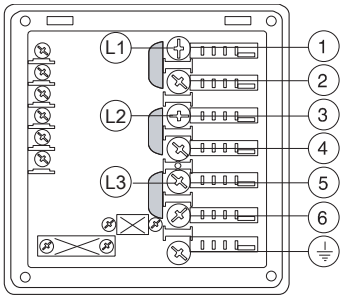
Power supply 400 - 415V 3N

Open the power supply terminal board and insert the jumpers provided as follows: one jumper between terminals 2 and 4 and another between terminals 4 and 6. Using a suitable power supply cable (see D.1 *Main technical characteristics* table), connect the three phases to terminals 1, 3 and 5, the neutral to terminal 6 and the earth wire to the terminal ⏚.



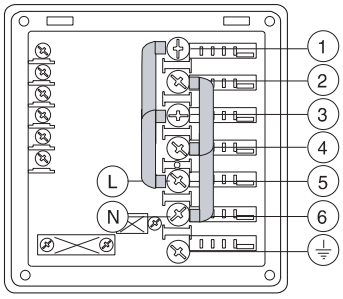
Power supply 220 - 230V 3

Open the power supply terminal board and insert the jumpers provided as follows: one jumper between terminals 1 and 2, one between terminals 3 and 4 and another between terminals 5 and 6. Using a suitable power supply cable (see D.1 *Main technical characteristics* table) connect the three phases to terminals 1, 3 and 5 and the earth wire to the terminal ⏚.



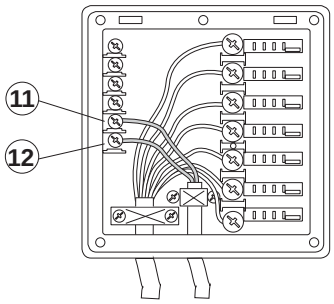
Power supply 220 - 230V 1N

Open the power supply terminal board and insert the jumpers provided as follows: two jumpers between terminals 1, 3, 5 and another two between terminals 2, 4 and 6. Using a suitable power supply cable (see D.1 *Main technical characteristics* table), connect the phase and neutral to terminals 5 and 6 respectively and the earth wire to the terminal ⏚.



F.8.1 Connections provided for energy control

This appliance is designed for an external energy consumption control.



Connect the energy peak controller across terminals 11 and 12.

CAUTION
A normally open (n.o.) contact of the controller must be connected across terminals 11 and 12. When this contact closes the boiler heating elements are disconnected. Using the dishwasher in these conditions may increase the cycle time.

F.9 Safety devices

- An automatic-reset overload protector incorporated in the electric pump windings cuts off the power to the pump in case of faulty operation.
- A device prevents the booster water from returning back into the system in the event of a water supply system fault.
- An overflow pipe connected to the discharge ensures a constant water level in the tank.

IMPORTANT
The Manufacturer declines any liability if the accident-prevention regulations are not respected.

F.10 Detergent/rinse aid dispensers and prearrangements

NOTE!
If the machine is connected to a water softener and/or a reverse osmosis system, contact the detergent supplier for a specific product.

CAUTION
The peristaltic dispensers (detergent and rinse-aid) and the tube inside the rinse-aid dispenser require periodical maintenance (at least once or twice a year) or after prolonged machine idle periods.

1. **Dishwasher with incorporated liquid detergent dispenser (Fig. 1)**
   The pump “R“ delivers about 0.9 g/s of detergent. At the first water filling of the day it delivers approx. 44 g of detergent in 45 seconds, to obtain a concentration of 2g/l. At each cycle the pump “R“ delivers approx. 6 g in 6 sec.
   Dispenser operation time can be modified according to the instructions given in the next paragraph (H.2 *Setting the dispensers*).
   Insert the hose supplied in the detergent container
2. **Dishwashers with incorporated peristaltic rinse-aid dispenser pump (Fig. 1)**
   The pump “S“ dispenses about 0.1 g/s of rinse-aid. It dispenses 0.3 g in 3 sec. at each rinse.
   Dispenser operating time may be changed, following the instructions given in the next paragraph (H.2 *Setting the dispensers*).
   Insert the hose supplied in the rinse-aid container.
3. **Dishwashers with incorporated rinse-aid diaphragm dispenser pump (Fig. 1)**
   The pump “T“ is installed in appliances with pressure boiler.
   Dispensed amounts may be changed according to the instructions given in the paragraph below.
   Insert the supplied hose into the rinse-aid container (in the versions without incorporated rinse-aid dispenser only).

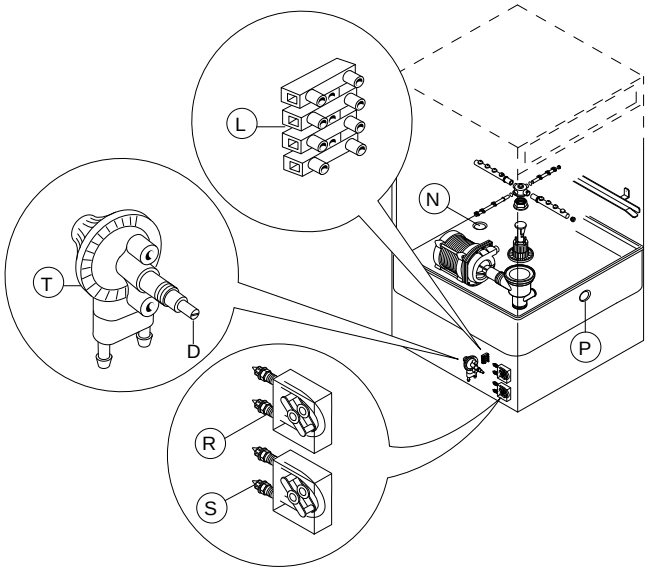


Fig. 1 Automatic dispenser overview

There is a ready-made impression “N“ to be perforated (⌀ 8 mm) for positioning the detergent concentration measuring sensor.

Inside the tank there is a hole “P“ (⌀ 10 mm) closed with a plug, which may be used for mounting a liquid detergent injector.

The sensor and liquid detergent injector should be installed without prejudicing the watertightness of the appliance.

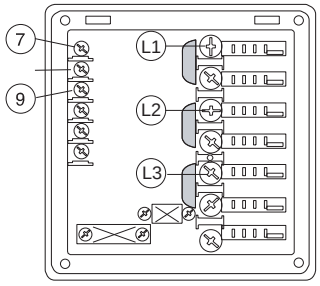
F.10.1 Electrical connections for automatic detergent and rinse-aid dispensers

Single-phase version

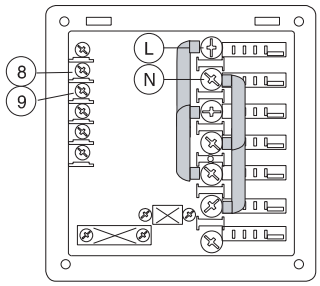
- The appliance has a terminal board for the power supply of dispensers operating at 230 V, max. power 30VA.
  Connect to the terminal board “L“ (Fig. 1) to terminals 1 and 2 for dispensing during the rinse cycle or to terminals 3 and 4 for dispensing during the wash cycle.

Three-phase versions

- Terminals are available on the power supply terminal board for the electrical connection of external dispensers working at 220 – 240 V. Max. power 30 VA.



Connect the **detergent dispenser** between terminals 7 and 9.
These connection points are live for a set time during filling of the tank and at the start of the wash cycle (see paragraph H.2 *Setting the dispensers*).



Connect the **rinse-aid dispenser** between terminals 8 and 9. These connection points are live during filling of the tank and at the end of the rinse cycle for a set time (see H.2 *Setting the dispensers* paragraph).

G COMMISSIONING

G.1 Preliminary checks, adjustments and operational tests

WARNING

These operations must only be carried out by specialized technicians provided with adequate personal protection equipment (e.g. safety footwear, gloves, glasses, etc.), tools and suitable ancillary equipment with the appliance switched off and cold.

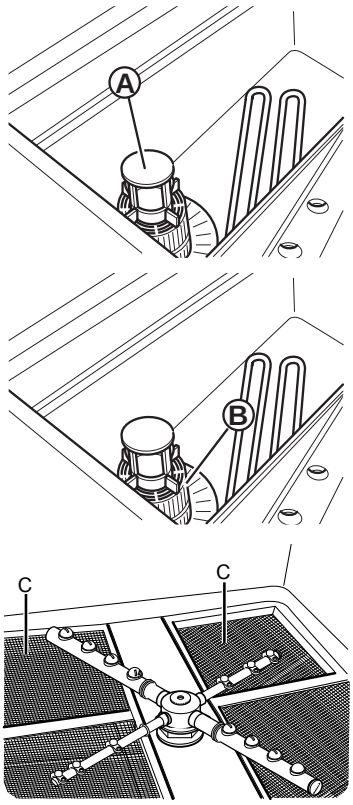
Electrical and plumbing checks

Before starting the machine:

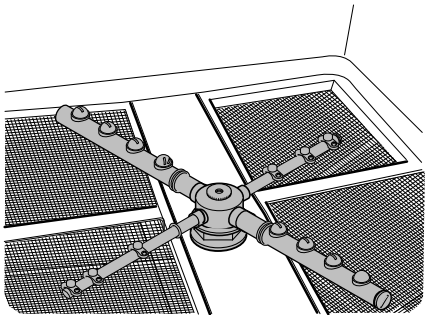
- check correct connection of the electrical wires that feed the machine;
- make sure the power supply voltage and frequency match the data given in the technical data table (D.1 *Main technical characteristics*);
- check correct connection of the water supply and drain pipes (see paragraph F.6 *Plumbing connections*);
- make sure all the guards, safety devices and emergency switches are in place and efficient.

Check the positioning of tank components

- Make sure that, the overflow “A“, the tank filter “B“, and the flat filters “C“ are correctly fitted.



- Make sure the upper and lower wash and rinse arms are correctly fitted.

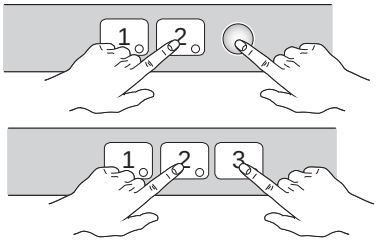


H BEFORE FIRST USE

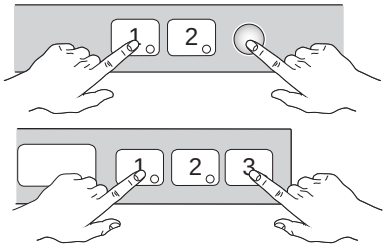
H.1 Manual activation

Whenever the detergent containers are replaced, it may be necessary to activate the dispensers manually in order to fill the hoses and eliminate any air. Simultaneously press the buttons, as shown in the figures below. If necessary, repeat this operation several times.

Detergent dispenser



Rinse-aid dispenser



H.2 Setting the dispensers

All the operations must be carried out with the machine switched on, the door open and no cycle selected.

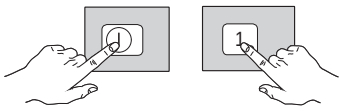
Legend

⬆	Increase
⬇	Decrease
☞	Confirm or select next parameter

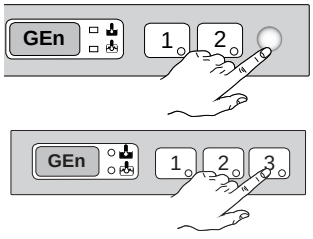
H.2.1 Peristaltic dispenser

Sequential start

1. Press the indicated buttons simultaneously for 5 seconds:

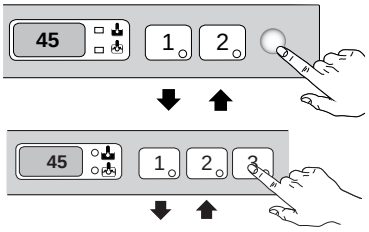


2. Display of programming mode:



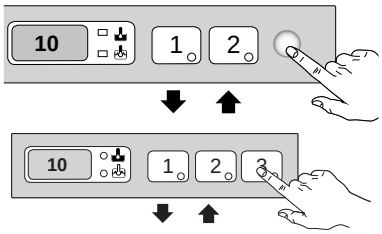
3. Initial amount of detergent:

4. Setting the activation time:



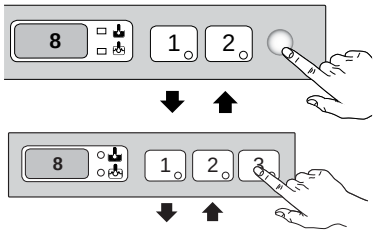
5. Initial amount of rinse-aid:

6. Setting the activation time:



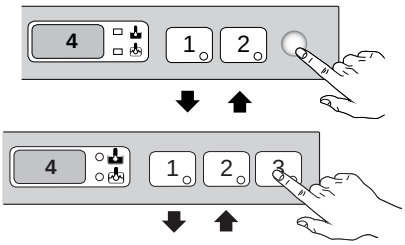
7. Amount of detergent during the cycle:

8. Setting the activation time:

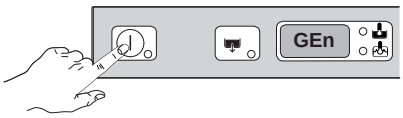


9. Amount of rinse-aid during the cycle:

10. Setting the activation time:



11. Exit from programming mode:



Notes for external dispensers:

- if the setting is: `det = 181`, the **detergent dispenser** only operates during wash pump operation; terminals **7**-**9** of the main terminal board are powered at the same time.

- if the setting is: `det = 182`, the **detergent dispenser** only operates during filling electrovalve operation for restoring the boiler level; terminals **7**-**9** of the main terminal board are powered at the same time.
- if the setting is: `rai = 61`, the **rinse-aid dispenser** only operates during filling electrovalve operation for restoring the boiler level; terminals **8**-**9** of the main terminal board are powered at the same time.
- if the setting is: `rai = 62`, the **rinse-aid dispenser** only operates during wash pump operation; terminals **8**-**9** of the main terminal board are powered at the same time.

NOTE!
For connections, see the wiring diagram.

Example

Supposing that an external detergent dispenser has been connected with a tank concentration measuring sensor, a standard setting could be as follows:

`dln = 0`	the dispenser is not activated during filling of the tank.
`det = 181`	the dispenser is activated during wash pump operation and, thanks to the concentration measured by the conduction sensor, the correct amount of detergent is dispensed.

H.2.2 Rinse-aid diaphragm dispenser

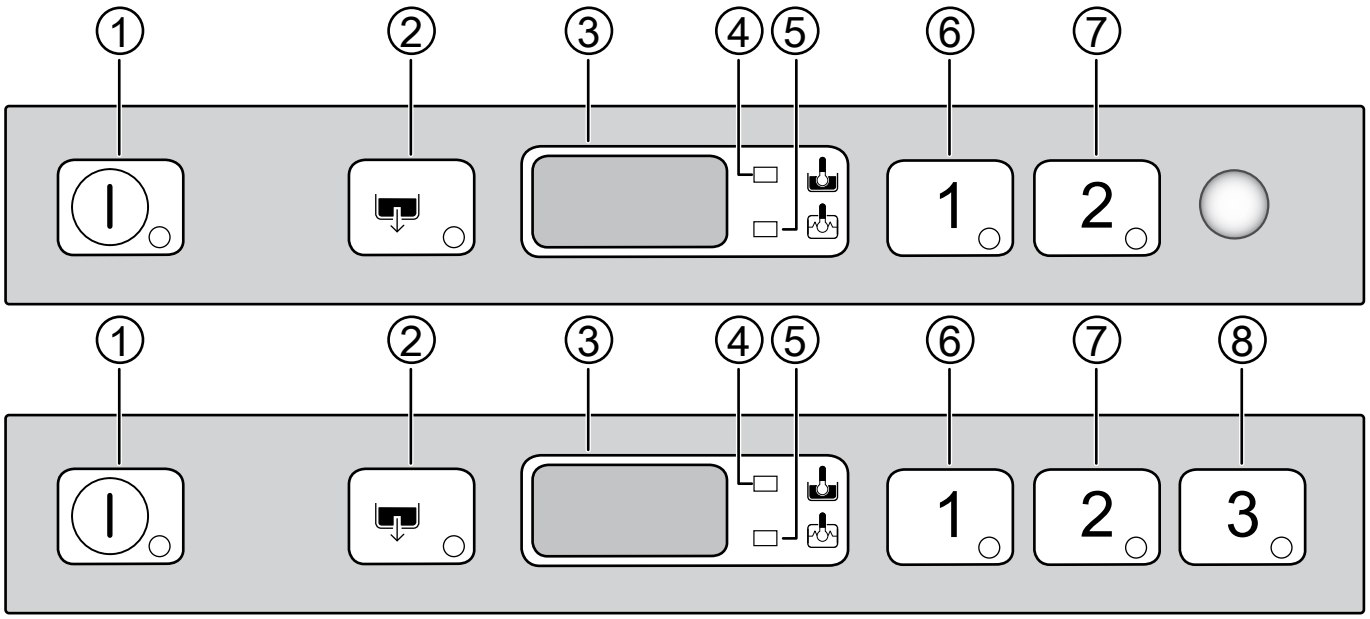
To change the dispensed amount, turn on screw “D“ accordingly (Fig. 1).

NOTE!
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.

CAUTION
If changing to a different detergent/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/ rinse-aid container. Otherwise, the mixing of different types of detergent/rinse-aid will cause crystallization, which may result in a breakdown of the dosing pump. Failure to observe this condition will invalidate the guarantee and product liability.

I CONTROL PANEL

I.1 Control panel description



LEGEND

1	on/off
2	drain/self-cleaning cycle
3	display
4	tank temperature indicator
5	boiler temperature indicator
6	wash cycle 1
7	wash cycle 2
8	wash cycle 3

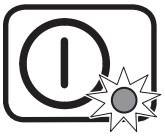
NOTE!
The temperature shown on the display refers to the boiler if the indicator “5“ is lit up or to the tank, if the indicator “4“ is lit up.
The tank temperature is displayed during the wash phase and the boiler temperature during the rinse phase.

I.2 Basic Controls

Described below are all the single buttons and functions available in the various control panel models listed above. Some functions are common to all models of the range, whereas others are available only on some versions.

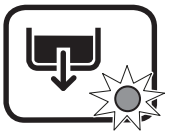
I.2.1 On/Off

This button indicates equipment status: on or off. When the equipment is on, the button indicator is lit up.



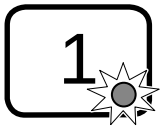
I.2.2 Drain / self-cleaning cycle

This button starts a drain/self-cleaning cycle. When the cycle is selected, the button indicator is lit up.



I.2.3 Wash cycle 1

This button starts **Wash cycle 1**. When the cycle is selected, the button indicator is lit up. This cycle is recommended for washing not very dirty dishes.



I.2.4 Wash cycle 2

This button starts **Wash cycle 2**. When the cycle is selected, the button indicator is lit up. This cycle is recommended for washing normally dirty dishes.

I.2.5 Wash cycle 3

This button starts **Wash cycle 3**. When the cycle is selected, the button indicator is lit up. This cycle is recommended for washing very dirty dishes.

J NORMAL MACHINE USE

J.1 Foreseen use

Our appliances are designed and optimised to ensure high performance and efficiency. This equipment must only be used for its expressly designed purpose, i.e. washing dishes with water and specific detergents. Any other use is deemed improper.

This appliance does not carry out the rinse cycle should there be no supply water; it stops all functions with an error message “A1“ (also see Alarms).

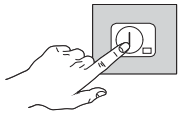
J.2 Characteristics of personnel enabled to operate on the machine

The Customer is responsible for ensuring that persons assigned to the various duties:

- read and understand the manual;
- receive adequate training and instruction for their duties in order to perform them safely;
- receive specific training for correct machine use.

J.3 Starting

- Open the water supply tap.
- Switch on at the mains.
- Open the door and check that all the components are in their correct position.
- Close the door and press On/Off button.

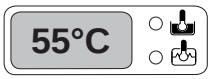


The indicator light of On/Off button comes on, indicating that the dishwasher is powered and that water is being introduced and heated. The word “FILL“ is shown on the display during the entire filling and heating stage:

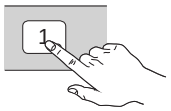
NOTE!
For atmospheric versions only: this dishwasher does the first tank filling through several consecutive hot rinse cycles, while the display shows the message “FILL“ (flowing). This system let save up to 30% of time than traditional models.

If the door is opened during this stage the message “CLOSE“ will appear on the display:

The filling and heating stage has finished when the display shows the tank temperature:



To display the boiler temperature during heating of the tank, open the door and press the **Wash cycle 1** button.



J.4 Wash cycles

The wash cycle includes one wash with hot water and detergent (min 55 °C) and one rinse with hot water and rinse-aid (min 82 °C).

Table of times: standard cycle time with supply water at 50 °C

	1	2	3
EUC... / KUC... / NUC... / ZUC... / FUCA3DD	120 sec	180 sec	-
EUCA1... / NUCA1... / NUCA1... / EUC1GMS / NUC1GMS / ZUC1GMS	90 sec	180 sec	-
ZUCA...	90 sec	120 sec	240 sec

A device lengthens the cycle time if the water in the boiler has not reached the minimum temperature for correct rinsing.

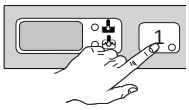
The cycle times and the temperature may be personalised (e. g. increase of the rinse time and temperature). The cycle times should only be set by a specialised technician.

J.5 Operation

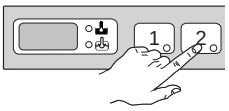
The filling and heating stage has finished when the display shows the tank temperature:

The appliance is then ready for use:

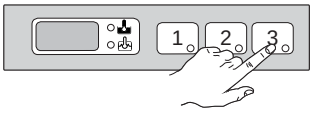
- Open the door.
- Pour the required amount of detergent into the tank.
- Insert the rack containing the dirty dishes.
- Close the door and select the suitable wash cycle; the corresponding indicator light comes on and the wash cycle starts:
- **Cycle I**
  For lightly soiled dishes: press button **Wash cycle 1** (see table of times).



- **Cycle II** (recommended)
  For very dirty dishes: press button **Wash cycle 2** (see table of times).



- **Cycle III**
  For very dirty dishes: press button **Wash cycle 3** (see table of times).



- To stop the wash cycle, just press the selected cycle button or open the door.
- To continue the wash cycle, press the cycle button again or close the door. The cycle starts again from where it was stopped.
- At the end of the wash, the dishwasher emits a series of beeps and the message “END“ blinks on the display:

- Open the door and remove the rack containing the clean dishes.

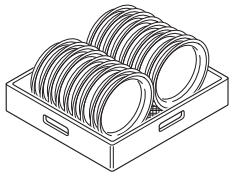
CAUTION
The appliance will not remove burnt food deposits from dishes. Dishes with burnt-on food deposits should be cleaned mechanically/chemically (for example, pre-wash under running water) before putting them in the dishwasher.
The use of “foaming”/non-specific detergents or in any case detergents used in different ways from that prescribed by the manufacturer, can cause damage to the dishwasher and compromise washing results.
Failure to remove the residuals of detergent possibly used for manual prewash can cause malfunctioning of the dishwasher and compromise washing results.

IMPORTANT
Change the water in the tank at least twice a day.

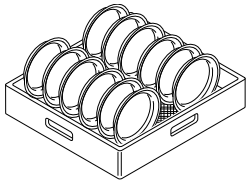
NOTE!
The number of wash cycles control is enabled in EUC3DPCAG versions. When the appliance reaches the set number of cycles, the display shows the message “drn“ and “drn End“, at the start and end of the wash cycle respectively. A tank water drain cycle must now be done to ensure wash cycles with sufficiently clean water.
If the tank water drain cycle is not done, the appliance does not shut down but will continue to carry out wash cycles, showing the messages “drn“ and “drn End“.

J.6 Type of racks and loading

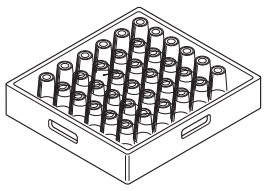
- YELLOW rack: for 18 plates with maximum diameter of 240 mm.



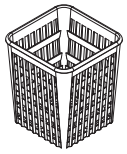
- GREEN rack: for 12 bowls with maximum diameter of 240 mm.



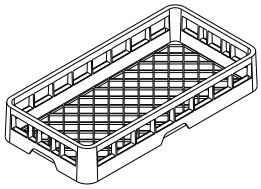
- BLUE rack for glasses: the glasses should be placed upside down.



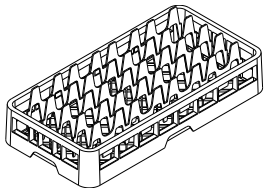
- YELLOW container for cutlery: insert items, with the handles pointing downwards, in each container.



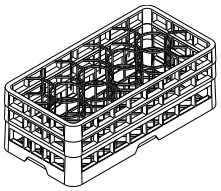
- Half size basket - universal (500 x 250 mm)



- Half-size basket for plates (500 x 250 mm)



- Half size basket for glasses (500 x 250 mm)



Available as accessories: dividers for glasses and rack for dishes with maximum diameter of 320 mm.

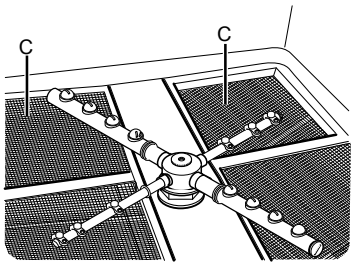
NOTE!
if only one type of dish rack is to be used, it is advisable to choose the GREEN rack.

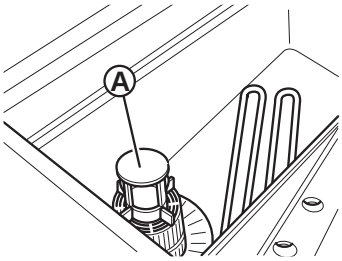
K CLEANING AND MAINTENANCE

K.1 End of service and daily cleaning

The appliance is designed to carry out an automatic cleaning cycle to help flush out any residues and to guarantee greater health and hygiene:

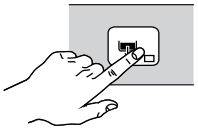
- Open the door and take out the rack containing the clean dishes.
- Remove the flat filters “C“ and the overflow “A“ .





Close the door.

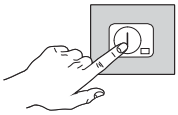
- Select the drain cycle by pressing button Drain/Self cleaning cycle.



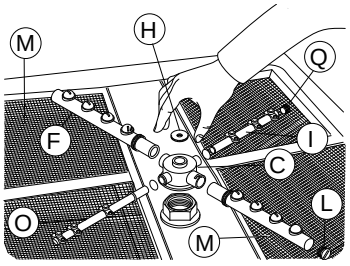
- The message “CLE“ will be displayed throughout the drain cycle:

- After a few minutes, 3 beeps indicate the end of the cleaning cycle and the message “END“ blinks on the display:

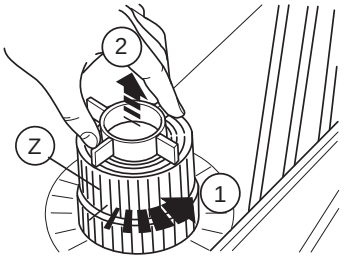
- Switch off the dishwasher by pressing ON/OFF button.



- Switch off at the mains.
- Close the water supply tap.
- Replace the filters and the overflow.
- Unscrew the ring nuts “H“ and remove the header units “C“.

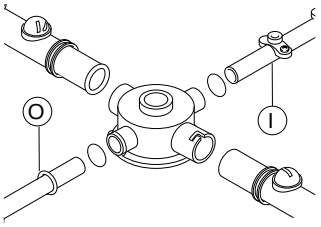


- Release the arms “F“, “I“ and “O“ from the hub, remove the threaded plugs “L“ and “Q“.
- Carefully clean all the parts with a water jet and neutral detergent/detersive, if necessary using a soft brush or sponge. Do not use sharp implements to clean the nozzle holes, which could otherwise be damaged.
- Only if the filters “M“ are present in the appliance, remove and clean them under a water spray.
- Remove the filter “Z“ and clean away any remained food in order to avoid blocking the draining system.



CAUTION

The rinse arms “I“ and “O“ are not symmetrical; the rinse arm with raised ring (“O“) should be fitted onto hub socket.



- Upon completion of cleaning operations, replace the parts removed previously.

K.1.1 Cleaning the exterior surfaces

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

CAUTION

Clean the stainless steel surfaces using warm soapy water; never use detergents containing abrasive substances nor steel scrapers, common wire wool, brushes or scrapers; rinse thoroughly using a wet cloth and carefully wipe dry. Clean the control panel using a soft damp cloth and a neutral detergent if necessary. Do not wash the appliance using direct or high-pressure water jets.

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%).

K.2 Maintenance

The inspection and maintenance intervals depend on the actual machine operating conditions (total wash hours) and ambient conditions (presence of dust, damp, etc), therefore precise time intervals cannot be given. In any case, careful and periodical machine maintenance is advisable in order to minimise service interruptions.

Therefore, it is advisable to:

- Descale the boiler, inner surfaces of the tank and the machine's pipes once or twice a year (call the After-Sales Service).

- Every month descale the prewash, wash and rinse jets with vinegar or scale remover.
- The internal tube of the peristaltic rinse aid and detergent dispenser must undergo periodical maintenance (once or twice a year).

It is also advisable to sign a preventive and scheduled maintenance contract with the After-Sales Service

K.2.1 Prolonged period of inactivity

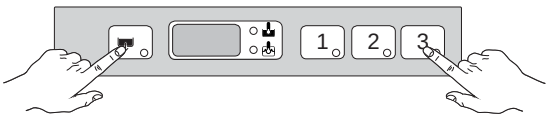
If the dishwasher is not to be used for a long time, proceed as follows:

- Close the water supply tap.
- Completely drain the tank.
- Remove and carefully clean the filters.
- Completely drain the incorporated dispenser hoses, removing them from the containers. Repeat the procedure described in the paragraph H.1 *Manual activation* at least 3 times.
- Completely drain the boiler (see paragraph K.3 *Boiler drainage (only for atmospheric versions)*).
- Spread a thin film of Vaseline oil over all the stain-less steel surfaces.

K.3 Boiler drainage (only for atmospheric versions)

If the appliance is not to be used for a long time, empty out the boiler to prevent any malfunction and/or mildew and unpleasant odours.

- Press simultaneously the buttons as shown in the figure.



- A buzzer indicates completion of drainage.

K.4 Introduction

WARNING
Dismantling operations must be carried out by qualified personnel.

WARNING
Work on the electrical equipment must only be carried out by a qualified electrician, with the power supply disconnected.

K.5 Waste storage

At the end of the product's life-cycle, make sure it is not dispersed in the environment. The doors must be removed before scrapping the appliance.

SPECIAL waste materials can be stored temporarily while awaiting treatment for disposal and/or permanent storage. In any case, the current environmental protection laws in the user's country must be observed.

K.6 Procedure regarding appliance dismantling macro operations

Before disposing of the machine, make sure to carefully check its physical condition, and in particular any parts of the structure that can give or break during scrapping.

The machine's parts must be disposed of in a differentiated way, according to their different characteristics (e.g. metals, oils, greases, plastic, rubber, etc.).

Different regulations are in force in the various countries, therefore comply with the provisions of the laws and competent bodies in the country where scrapping takes place. In general, the appliance must be taken to a specialised collection/ scrapping centre.

The symbol on the product indicates that this product should not be treated as domestic waste, but must be correctly disposed of in order to prevent any negative consequences for the environment and human health. For further information on the recycling of this product, contact the local dealer or agent, the after-sales service or the local body responsible for waste disposal.

WARNING
Make the appliance unusable by removing the power cable and any compartment closing devices, to prevent the possibility of someone becoming trapped inside.

NOTE!
When scrapping the machine, the “CE“ marking, this manual and other documents concerning the appliance must be destroyed.

L TROUBLESHOOTING

L.1 Common faults

DISHWASHER DOES NOT WASH WELL	1. Check if the suction filter is dirty and clean it thoroughly. 2. Check if the wash jets are clogged by solid food remains. 3. Check that the initial amount of detergent or subsequent additions are correct. 4. The selected wash cycle is too short. Repeat the cycle. 5. Check that the tank temperature is between 55 °C and 65 °C. 6. Check that the dishes are stacked correctly in the racks.
GLASSES AND DISHES ARE NOT DRIED PROPERLY	1. Check the instructions for the amount of rinse-aid (see H.2 *Setting the dispensers* paragraph). 2. Check that there is rinse-aid in the container and if necessary top up. 3. Check the set amount of rinse-aid (see H.2 *Setting the dispensers* paragraph). 4. Check that the water temperature is between 80°C and 90°C.
CONDENSATION ON GLASSES	1. Check that there is rinse-aid in the container and if necessary top up. 2. Check the set amount of rinse-aid (see H.2 *Setting the dispensers* paragraph). 3. Remove the rack of glasses immediately the cycle has ended.
STAINS ON THE GLASSES	1. Only use “non-foaming” products for professional dishwashers.
EXCESSIVE FOAM IN THE TANK	1. Check that the wash water temperature is not less than 50°C. 2. Check if the amount of product dispensed by the detergent dispenser is excessive (see H.2 *Setting the dispensers* paragraph). 3. Ensure that the tank has not been cleaned with unsuitable cleaners. Drain the tank and rinse thoroughly before new wash cycles. 4. If a foaming detergent has been used, drain and refill the tank with water until the foam disappears.
SMEARS OR SPOTS ON THE GLASSES	1. Reduce the amount of rinse-aid (see H.2 *Setting the dispensers* paragraph)
THE WASH OR RINSE ARMS TURN SLOWLY	1. Remove and thoroughly clean the arms. 2. Clean the wash pump suction filter.

L.2 Alarms

A1	NO WATER	• Check that the tap is open. • Check that the water inlet filter is clean. • Check the minimum mains pressure. • Check that the overflow pipe is inserted (only for appliances without drain pump).
B1	INEFFICIENT DRAINAGE	• Check if the overflow has been removed. • Check for obstruction on the waste outlet pipe and the overflow aperture.
B2	TANK WATER LEVEL TOO HIGH	• Check for obstruction on the waste outlet pipe and the overflow aperture.
C1 – C8	CALL THE SERVICE CENTRE	
E1 – E8	CALL THE SERVICE CENTRE	• The appliance continues to operate, but appropriate checks by a technician are recommended.
F21 – F22[1]	CALL THE SERVICE CENTRE	• Resin regeneration cycles are not performed. The appliance continues to operate without water softener.

1. Only for appliances with incorporated continuous water softener.

CE

Electrolux Professional SPA
Viale Treviso 15
33170 Pordenone
www.electrolux-professional.com