# **Under Counter** dishwasher



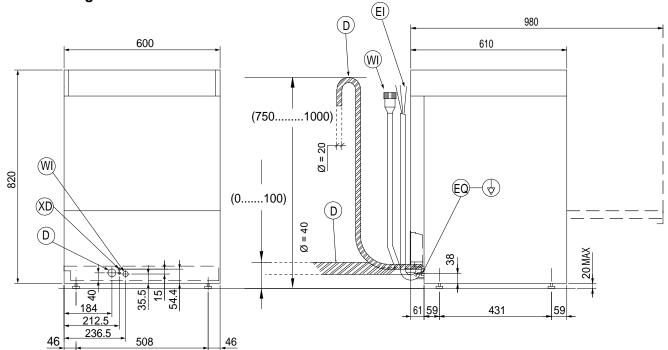
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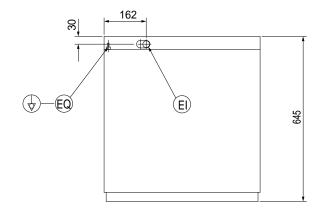
**EN** Installation manual \*





# Installation diagram





EI = Power supply entry

WI = Water Inlet pipe with  $\emptyset$  =3/4" G fittings

XD = Inlet pipe for detergents

EQ = Equipotential screw

D = Drain pipe with internal diameter:

 $\emptyset$  = 40 mm (Only for model with free-fall drainage)

 $\emptyset$  = 20 mm (Only for model with drain pump)

#### **Foreword**



Read the following instructions, including the warranty terms before installing and using the appliance.

#### Visit our website www.electroluxprofessional.com and open the Support section to:



Register your product



Get hints & tips of your product, service and repair information

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

The following must not be considered a long and exacting list of warnings, but rather a set of instructions suitable for improving appliance 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 appliance 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 appliance'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 appliance, regarding its use and maintenance.

The manual must be available to operators and carefully kept in the place where the appliance 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 appliance 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 appliance. During all stages of appliance use, always respect the current regulations on safety, work hygiene and environmental protection. It is the user's responsibility to make sure the appliance 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;
  - downloading the latest and up to date manual on the web site www.electroluxprofessional.com;
- The manual must always be kept in an easily accessed place near the appliance. Appliance operators and maintenance personnel must be able to easily find and consult it at any time.

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#### A SAFETY INFORMATION

### A.1 General information

These appliance is intended to be used for commercial applications, for example in kitchens of restaurant, canteens, hospitals. It must be used for washing plates, dishes, glassware, cutlery and similar articles.

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.



# **CAUTION**

Risk of damage to the appliance or the product.



# **IMPORTANT**

Important instructions or information on the product



Equipotentiality



Read the instructions before using the appliance



Clarifications and explanations

# A.2 General safety

- The machine must not be used by people (including children) with limited physical, sensory or mental abilities or without experience and knowledge of it, unless instructed in its use and supervised by those responsible for their safety.
  - Do not let children play with the machine.
  - Keep all packaging and detergents away from children.
  - Cleaning and user maintenance shall not be made by children without supervision.
- 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.
- For suitable personal protection equipment, refer to chapter "A.3 Personal protection equipment".
- 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 install the machine without the guards or with the protection devices deactivated.
- Do not remove, tamper with or make illegible the safety, danger and instruction signs and labels on the machine.

- Do not remove or tamper with the machine's safety devices.
- Before carrying out any machine installation, always consult the installation manual, which gives the correct procedures and contains important information on safety.
- Unauthorized personnel must not enter the work area.
- Remove any flammable products or items from the work area.
- Machine positioning, installation and disassembly must be carried out by the specialised personnel in conformity with the current safety regulations, regarding the equipment used and the operating procedures.

# A.3 Personal protection equipment

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

Stage	Protective garments	Safety footwear	Gloves	Glasses	Safety helmet				
	M	To.		00					
Transport		•	0		0				
Handling	•	•	0						
Unpacking	0	•	0		_				
Installation	0	•	●1	_	_				
Normal use	•	•	●2	0					
Adjustments	0	•	_	_	_				
Routine cleaning	0	•	● 1-3	0	_				
Extraordi- nary cleaning	0	•	● 1-3	0	_				
Maintenance	0	•	0	_	_				
Dismantling	0	•	0	0	_				
Scrapping	0	•	0	0					
Key:									
•	PPE REQUIRED								
0	PPE AVAILAE	BLE OR TO BE	USED IF NEC	ESSARY					
_	PPE NOT REC	QUIRED							

<sup>1.</sup> During these operations, gloves must be cut-resistant. Failure to use the personal protection equipment by operators, specialized personnel or users can involve exposure to damage to health (depending on the model).

<sup>2.</sup> During these operations, gloves must be heatproof and suitable for contact with water and the substances used (refer to the safety data sheet of the substances used for the information regarding the required PPE). Failure to use the personal protection equipment by operators, specialised personnel or users can involve exposure to chemical risk and cause possible damage to health (depending on the model).

<sup>3.</sup> During these operations, gloves must be suitable for contact with chemical substances used (refer to the safety data sheet of the substances used for information regarding the required PPE). Failure to use the personal protection equipment by operators, specialized personnel or users can involve exposure to chemical risk and cause possible damage to health (depending on the model).

# A.4 Transport, handling and storage

- 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.
- Do not stand under suspended loads during loading or unloading operations. Unauthorized personnel must not enter the work area.
- The weight of the appliance alone is not sufficient to keep it steady.
- For machine lifting and anchoring, do not use movable or weak parts such as: casings, electrical raceways, pneumatic parts, etc.
- Do not push or pull the machine to move it, as it may tip over. Use proper tool to lift the machine.
- Machine transport, handling and storage personnel must be adequately instructed and trained regarding the use of lifting systems and personal protection equipment suitable for the type of operation carried out.

# A.5 Installation and assembly

- Follow the installation instruction supplied with the machine.
- Do not install a damaged machine. Any missing or faulty parts must be replaced with original parts.
- Do not make any modifications to the parts supplied with the machine.
- Disconnect the machine from the power supply before carrying out any installation procedure. Connect the machine to the power supply only at the end of the installation.
- The machine is not suitable for installation outdoors and/or in places exposed to atmospheric agents (rain, direct sunlight, freeze, humid and dusty location, etc.).
- Do not install the machine over 2000 meters above sea level.
- Make sure that the floor where you install the machine is flat, stable, heat resistant and clean.
- If available, make sure to install the accessory to fix the machine to the floor.
- Use a ladder with suitable protection for work on machines with high accessibility.

#### A.6 Water connection

- The plumbing connections must be carried out by a specialised personnel.
- The machine is to be connected to the water mains using the new supplied hose-sets.
   Do not use old hose sets.
- Always use a new set of joints if you remove and re-install the water inlet pipe to the machine.
- Before connection to new pipes, pipes not used for a long time, where repair work has been carried out or new devices fitted (water meters, etc.), let the water flow until it is clean and clear.
- The operating water pressure (minimum and maximum) must be between:
  - 2 bar [200 kPa] and 3 bar [300 kPa] for appliances without rinse pump;
  - 0.5 bar [50 kPa] and 7 bar [700 kPa] for appliances with rinse pump;
- Make sure that there are no visible water leaks during and after the first use of the machine.
- Install an approved dual check valve upstream according to the regulation of the installation country.

# A.7 Electrical connection

- Work on the electrical systems must only be carried out by a specialised personnel.
- Make sure that the electrical information on the rating plate agrees with the power supply.

- Make sure to install the machine in accordance with the safety regulations and local laws of the country where used.
- If the power cable is damaged it must be replaced by the Customer Care Service or in any case by specialised personnel, in order to prevent any risk.
- The machine must be correctly earthed. The manufacturer is not responsible for the consequences of an inadequate earthing system.
- If present, connected the machine to the equipotential protection circuit  $\nabla$ .
- To protect the power supply of the machine against short circuits and/or overloads, install a thermal fuse or a suitable automatic thermal magnetic circuit breaker, ADS (Automatic Disconnection of Supply).
- To protect the power supply of the machine against current leakages, install a highsensitivity manual reset RCD (Residual Current Device), suitable for overvoltage category III.
- 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 cutoff 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 residual current device 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.
- On all rack type dishwasher, make sure to install an emergency switch at the infeed and outfeed. For all additional modules installed later, move the emergency switch at the ends of the equipment.
- For all the additional modules installed later, make sure that the power cable supply is properly sized.

# A.8 Machine cleaning and maintenance

- Refer to "A.3 *Personal protection equipment*" for suitable personal protection equipment.
- Put the machine in safe conditions before starting any maintenance operation.
   Disconnect the machine from the power supply and carefully unplug the power supply cable, if present.
- Depending on the model and type of electric connection, during maintenance operations, the cable and plug must be kept in a visible position by the operator carrying out the work.
- Do not touch the machine with wet hands or feet or when barefoot.
- Do not remove the safety guards.
- Use a ladder with suitable protection for work on machines with high accessibility.
- Respect the requirements for the various routine and extraordinary maintenance operations. Non compliance with the instructions can create risks for personnel.
- Contact with chemical substances (e.g. detergent, rinse aid, scale remover, etc.) without taking appropriate safety precautions (e.g. personal protection equipment) can involve exposure to chemical risk and possible damage to health. Therefore always refer to the safety cards and labels on the products used.

# Repair and extraordinary maintenance

 Repair and extraordinary maintenance have to be carried out by specialised authorised personnel. The manufacturer declines any liability for any failure or damage caused by the intervention of an unauthorized technician by the Manufacturer and the original manufacturer warranty will be invalidated.

# A.9 Service

Only original spare parts can ensure the safety standards of the appliance.

# A.10 Disposal of packing

 Dispose of each packaging items respecting the current regulation in the country of installation.

# A.11 Machine disposal

- Work on the electrical equipment must only be carried out by a specialised personnel, with the power supply disconnected.
- Dismantling operations must be carried out by specialised personnel.
- Make the appliance unusable by removing the power cable and any compartment closing devices, to prevent the possibility of someone becoming trapped inside.
- Refer to "A.3 *Personal protection equipment*" for suitable personal protection equipment.
- When scrapping the machine, the "CE" marking, this manual and other documents concerning the appliance must be destroyed.



# **IMPORTANT**

Save these instructions carefully for further consultation by the various operators.

#### B GENERAL INFORMATION

#### **B.1** Introduction

This manual contains information relevant to various appliances. The product images in this guide are only an example.

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 appliance supplied.

The numerical values given on the appliance installation diagrams refer to measurements in millimeters and/or inches.

#### **B.2** Definitions

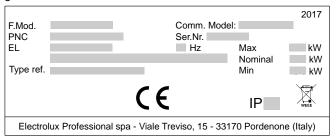
Listed below are the definitions of the main terms used in the manual. It is advisable to read them carefully before use.

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 an operator who has been inform trained regarding the tasks and he involved in normal machine use.						
Customer Care 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).
Emergency stop device	a group of components intended for the emergency stop function; the device is activated with a single action and prevents or reduces damage to persons/machines/property/animals.
Electrocution	an accidental discharge of electric current on a human body.

# B.3 Machine and Manufacturer's identification data

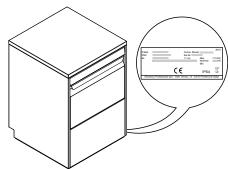
A reproduction of the marking or dataplate on the machine is given below:



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					
400V 3N~	power supply voltage					
230V 3~ - 230V 1N~	electric convertibility (depending on the model)					
Hz	power supply frequency					
Max – kW	max. power					
Nominal – kW	nominal power					
IPX4	dust and water protection rating					
CE	CE marking					
Electrolux Professio- nal 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.

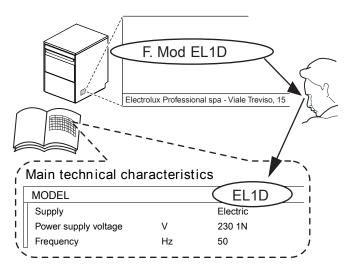


#### NOTE!

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

### B.4 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 C *TECHNICAL DATA* paragraph.



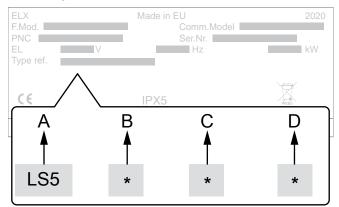
#### B.4.1 How to interpret the factory description

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

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Е	L	1	G	MS		
Е	L	Α	1	W	Р	
Е	L	Α	3	G	TL	6

(1) Brand	E = Electrolux Professional, Z = Zanussi, V = Veetsan, N = To brand, C = Caterkwik.
(2) Machine type	L = Under counter
(3) Rinsing system	A = Atmospheric Empty = Pressure
(4 - 7) Options	1 = Single phase 3 = Three phases 6 = 60 Hz D = Detergent pump installed P = Drain pump installed G = Detergent and drain pumps installed W = Water Softener installed MS = Multi rack support M = for Marine installation OW = On Wheels AG = AutoGrill MCD = Mc Donalds PR = Promotion code TL = Thermal Label compliant U = UK plug S = Shuko plug L = Stainless steel boiler inAISI316

# **B.5** Type reference



#### Legend

# Type of appliance Under counter dishwasher

# B Rinsing type

- 0 = without rinse pump
- 1 = with rinse pump

# C Water treatment

- 0 = without water softener [WS]
- 1 = with water softener [WS]

# D Plug type

- 0 = no plug
- 1 = UK plug (plug type G)
- 2 = Shuko plug (plug type F)

#### **B.6** 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 appliance operation and invalidates the original manufacturer warranty);
- operations carried out by non-specialised personnel;
- · unauthorized modifications or operations;
- · missing, lack or inadequate maintenance;
- · improper appliance use;
- · unforeseeable extraordinary events;
- use of the appliance by uninformed and / or 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.

The Manufacturer 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.7** 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 company.

#### B.8 Keeping the manual

The manual must be carefully kept for the entire life of the appliance, until scrapping. The manual must stay with the appliance 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;
- specialised personnel Customer Care service (see service manual).

#### C TECHNICAL DATA

#### C.1 Main technical characteristics for single phase appliances

Model		EL1 ZL1 NL1 VL1 CL1	CL1G EL1G ZL1G NL1G VL1G	EL1P6 EL1G6M	ELA1W ELA1WP ELA1P ELA1PS	CLA1G ELA1G NLA1G ZLA1G	ELA1G6
Supply voltage:		230V 1N~	230V 1N~	220 - 230V 1N~ [Only for model EL1P6] 230V 1N~	230V 1N~	230V 1N~	220 - 230V 1N~
Convertible to:		-	-	-	-	400V 3N~ 230V 3~	380 - 400V 3N~ 220 - 230V 3~
Frequency	Hz	50	50	60	50	50	60
		3.65 [5.65] <sup>1</sup>	2.85 [4.35] <sup>1</sup>	3.65 [5.65] <sup>1</sup>	3.65 [5.65] <sup>1</sup>	5.35 [7.35] <sup>1</sup>	5.35 [7.35] <sup>1</sup>
Max. power	kW	2.35 [Only for model CL1GU]	3.65 [5.65] <sup>1</sup> [Only for model CL1G]			3.65 [5.65] <sup>1</sup> [Only for model NLA1G]	
		3.65 [Only for model NL1PPR]				5.35 [Only for model NLA1G]	
		2.8	1.5				
Boiler heating elements	kW	1.5 [Only for model CL1GU]	2.8 [Only for model CL1G]	2.8	2.8	4.5	4.5
Tank heating elements	kW	2.0	2.0	2.0	2.0	2.0	2.0

Model		EL1 ZL1 NL1 VL1 CL1	CL1G EL1G ZL1G NL1G VL1G	EL1P6 EL1G6M	ELA1W ELA1WP ELA1P ELA1PS	CLA1G ELA1G NLA1G ZLA1G	ELA1G6
Water supply pressure	bar [kPa]	2 [200] 3 [300]	2 [200] 3 [300]	2 [200] 3 [300]	0.5 [50] 7 [700]	0.5 [50] 7 [700]	0.5 [50] 7 [700]
Water supply temperature	°C	50 [65] <sup>2</sup>	50	50	50	50	15 - 60
Water supply hardness	°f/°d/°e	14/8/10 max	14/8/10 max	14/8/10 max	48/27/33.7 max [14/8/10 max] <sup>3</sup>	14/8/10 max	14/8/10 max
Electric conduc- tivity of water	μS/cm	< 400	< 400	< 400	< 400	< 400	< 400
Concentration of chlorides in water	ppm	< 20	< 20	< 20	< 20	< 20	< 20
Rinse cycle water consumption	ı	3	3	3	3	3	3
Boiler capacity	I	5.8	5.8	5.8	5.8	5.8	5.8
Tank capacity	I	33	33	33	33	33	33
		120 - 180			120 - 180		
Standard cycle time with water supply at 50°C.	sec.	90 - 180 [Only for model ZL1GMS]	120 - 180	120 - 180	90 - 120 - 240³	90 - 180	60 - 120
Legal noise level Leq <sup>4</sup> dB(A)		LpA: 63dB - KpA: 1.5dB					
Protection rating		IPX4					
Power supply cable	е			H0	7RN-F		

#### **C.2** Main technical characteristics for three phases appliances

Model		EL3 ZL3 NL3 VL3	EL3G ZL3G NL3G VL3G	ELA3W ZLA3W NLA3W VLA3WG ELA3GWP	ELA3G ZLA3G VLA3G	ELA3GTL EL3PO- WAG ZLA3	ELA3G6 ELA3GTL6
Supply voltage:		400V 3N~	400V 3N~	400V 3N~	400V 3N~	400V 3N~	230V 3~
Convertible to:		230V 3~ 230V 1N~	230V 3~ 230V 1N~	230V 3~ 230V 1N~	230V 3~ 230V 1N~	230V 3~ 230V 1N~	400V 3N~ 230V 1N~
Frequency	Hz	50	50	50	50	50	60
Max. power	kW	5.35 [7.35] <sup>1</sup>	5.35 [7.35] <sup>1</sup>	5.35 [7.35] <sup>1</sup>	5.35 [7.35] <sup>1</sup>	5.35 [7.35] <sup>1</sup>	5.35 [7.35] <sup>1</sup>
Boiler heating elements	kW	4.5	4.5	4.5	4.5	4.5	4.5
Tank heating elements	kW	2.0	2.0	2.0	2.0	2.0	2.0
Water supply pressure	bar [kPa]	2 [200] 3 [300]	2 [200] 3 [300]	0.5 [50] 7 [700]	0.5 [50] 7 [700]	0.5 [50] 7 [700]	0.5 [50] 7 [700]
Water supply temperature	°C	50	50	50	10 - 60	10 - 60 50 [Only for models EL3PO- WAG - ZLA3]	10 - 60
Water supply hardness	°f/°d/°e	14/8/10 max	14/8/10 max	48/27/33.7 max	14/8/10 max	14/8/10 max	14/8/10 max
Electric conduc- tivity of water	μS/cm	< 400	< 400	< 400	< 400	< 400	< 400

If activated by software, coincidence of tank and boiler heating elements.
Only for models EL1GMS - VL1GMS - ZL1GMS.
Only for model ELA1P
The noise emission values have been obtained according to EN ISO 11204.

Model		EL3 ZL3 NL3 VL3	EL3G ZL3G NL3G VL3G	ELA3W ZLA3W NLA3W VLA3WG ELA3GWP	ELA3G ZLA3G VLA3G	ELA3GTL EL3PO- WAG ZLA3	ELA3G6 ELA3GTL6
Concentration of chlorides in water	ppm	< 20	< 20	< 20	< 20	< 20	< 20
Rinse cycle		1 3	3 [2.1] <sup>2</sup>	3	3 [2.3] <sup>3</sup>	3 [Only for models EL3PO- WAG - ZLA3]	3 [Only for model ELA3G6]
consumption	I					3 for cycle 1 4 for cycle 2 3.5 for cycle 3	3 for cycle 1 4 for cycle 2 3.5 for cycle 3
Boiler capacity	1	5.8	5.8	5.8	5.8	5.8	5.8
Tank capacity	I	33	33	33	33	33	33
Standard cycle time with water	ater sec.	sec. 120 - 180	120 - 180	120 - 180 90 - 180 [Only for model	75 - 180 - 120 120 - 180 - 240 [Only for model ELA3GMCD]	90 - 120 - 240	75 - 180 - 120 90 - 120 - 240 [Only for model ELA3GTL6]
supply at 50°C.				VLA3WG]	90 - 180 [Only for model VLA3G]		
Legal noise level dB(A)		LpA: 63dB - KpA: 1.5dB					
Protection rating		IPX4					
Power supply cable	е	H07RN-F					

- If activated by software, coincidence of tank and boiler heating elements.

- Only for model NL3G Only for model ELA3G The noise emission values have been obtained according to EN ISO 11204.

#### **C.3** Characteristics of power supply cable

	400 – 4	15V 3N	220 –	240V 3	220 – 240V 1N		
	С	C S C S		С	S		
3.35 kW	-	-	-	-	3x2.5 mm <sup>2</sup>	20A 1P + N	
5.35 kW	5x1.5 mm <sup>2</sup>	16A 3P + N	4x2.5 mm <sup>2</sup>	20A 3P	3x4 mm <sup>2</sup>	32A 1P + N	
5.65 kW	-	-	-	-	3x4 mm <sup>2</sup>	32A 1P + N	
7.35 kW	5x2,5 mm <sup>2</sup>	25A 3P + N	4x4 mm <sup>2</sup>	32A 3P	3x6 mm <sup>2</sup>	40A 1P + N	

C = Power supply cable

#### **C.4** Characteristics of power supply

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

- max. voltage variation ± 6%
- 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).

#### D TRANSPORT, HANDLING AND STORAGE



# **WARNING**

Refer to "Safety Information".

#### **D.1** Introduction

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

S = On/Off switch



#### **CAUTION**

The appliance must only be transported, handled and stored by specialised personnel, who must have:

- specific technical training and experience in the use of lifting systems;
- knowledge of the safety regulations and applicable laws in the relevant sectors;
- · knowledge of the general safety rules;
- personal protection equipment suitable for the type of operation carried out;
- · the ability to recognize and avoid any possible hazard.



#### **IMPORTANT**

Immediately check for any damage caused during transport.

Inspect the packaging before and after unloading.

# D.2 Transport: Instructions for the carrier



#### **IMPORTANT**

The transported load can shift:

- · when braking;
- · when accelerating;
- in corners;
- · on rough roads.

### D.3 Handling

Arrange a suitable area with flat floor for appliance unloading and storage operations.

# D.3.1 Procedures for handling operations 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 appliance, keeping it at minimum height from the ground.

#### 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;
- check the forks and lifting procedures according to the instructions given on the packing.

#### D.3.2 Shifting

#### The operator must:

- · have a general view of the path to be followed;
- stop the manoeuvre in case of hazardous situations.

#### D.3.3 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.

#### D.4 Storage

The appliance 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 [14°F] and 50°C [122°F].

The place where the appliance is stored must:

- can take the appliance load,
- have a flat support surface to avoid deforming the appliance or damage to the support feet.

#### D.5 Customer packaging checks

- The forwarder is responsible for the goods during transport and delivery.
- Make a complaint to the forwarder in case of visible or hidden damage.
- · Specify any damage or shortages on the dispatch note.
- The driver must sign the dispatch note: the forwarder can reject the claim if the dispatch note is not signed (the forwarder can provide the necessary form).
- For hidden damage or shortages becoming apparent only after unpacking, request the forwarder for inspection of the goods within and no later than 15 days after delivery.

#### After packaging checks

1. Remove the packaging.

Take care when unpacking and handling of the appliance to not cause any shocks on itself.

2. Keep all the documentation contained in the packaging.

#### E INSTALLATION AND ASSEMBLY



# **WARNING**

Refer to "Safety Information".

#### E.1 Introduction

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

#### **E.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 (C TECHNICAL DATA and C.4 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 C TECHNICAL DATA and in the paragraph E.6 Plumbing connections;

#### E.3 Characteristics of the installation place

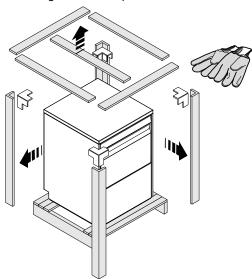
The machine is designed for installation in professional and not domestic-type kitchens. Water collection traps/ metal grates must be arranged in the floor at the machine discharges (see the *Installation diagram*), possibly replaceable with a single water trap sized for a flow rate of at least 3 l/s.

#### E.4 Positioning

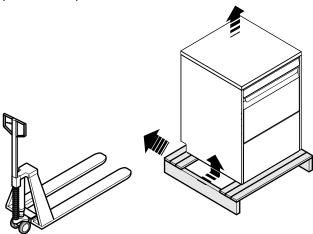
The machine must be taken to the place of installation and the packing base removed only when being installed.

Arranging the machine:

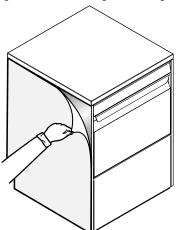
· Wear protective gloves and unpack the machine.



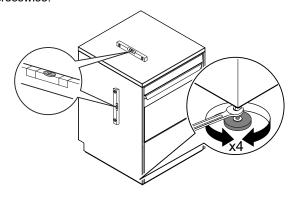
 Lift the equipment with a lift truck, remove the base and position it the place of use.



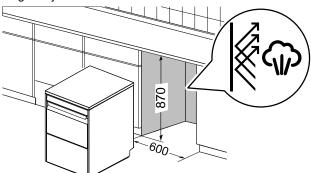
 Carefully remove the protective film from the outer panels without tearing it, to avoid leaving traces of glue.



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.

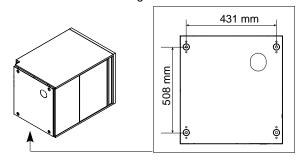




# CAUTION

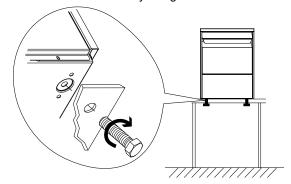
During the washing cycles, small amounts of steam may escape from the dishwasher door. Protect all unsuitable materials exposed to the dishwasher steam and detergents. If you must insert the dishwasher under a work plan, make sure to shield all surfaces close to the dishwasher with materials resistant to moisture and steam.

- If the dishwasher is installed on a special support (eg.: work plan), follow these steps:
  - Accessing the appliance bottom panel and unscrew the 4 feet
  - 2. Make 4 holes o = 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.



### E.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:



#### Polyethylene

- Outer wrapping
- · Instructions bag



#### Polypropylene

Straps



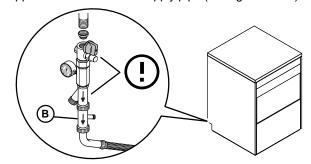
#### Polystyrene foam

Corner protectors

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

### E.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 2 bar [200 kPa] and 3 bar [300 kPa] for machines with pressure boiler and between 0.5 bar [50 kPa] and 7 bar [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 mm and 1000 mm from the floor. Depending on the model, check that from 2 L to 3 L of water flow out of the outlet pipe during the rinse cycle.



#### IMPORTANT

Make sure drain pipe does not kink, pinch or twist, resulting in a water flow restriction.



#### **CAUTION**

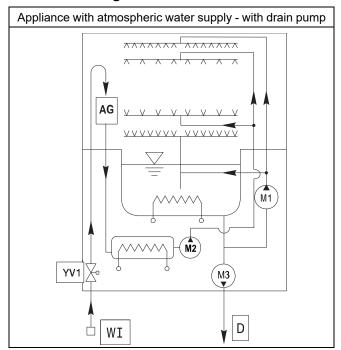
Always use a new set of joints if you remove and reinstall the water inlet pipe to the appliance.



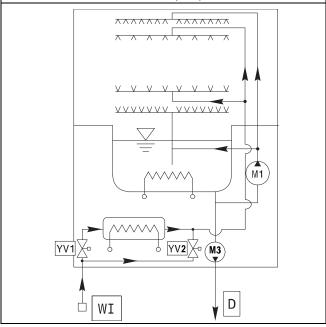
#### **IMPORTANT**

- Watermark labelled appliances must be installed in accordance with Plumbing Code of Australia (PCA).
- ONLY for Singapore market:
- for all the appliance with pressure rinse, INSTALL in the main hydraulic circuit a pressure reducer;<sup>1</sup>
- start the appliance and, during filling phase of the wash tank, set the pressure reducer to 2 bar [200 kPa].

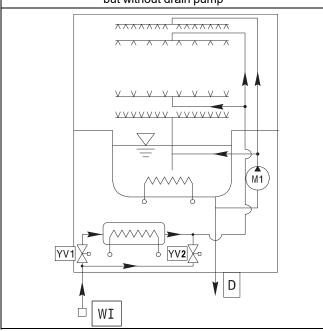
# E.7 Plumbing circuits



# Appliance with pressure water supply - with cold rinse cycle and with drain pump and



# Appliance with pressure water supply - with cold rinse cycle but without drain pump



#### LEGEND

WI	Water inlet
D	Drain
M1	Wash pump
M2	Rinse pump
М3	Drain pump
AG	Air Gap
YV1	Filling solenoid valve
YV2	Cold rinse solenoid valve

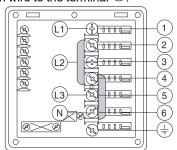
#### E.8 Electrical connections

- 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.

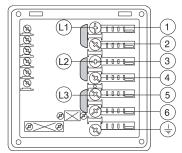
#### Power supply 380-415V 3N

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 C *TECHNICAL DATA* table), connect the three phases to terminals 1, 3 and 5, the neutral to terminal 6 and the earth wire to the terminal  $\bigoplus$ .



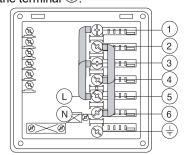
#### Power supply 220 - 230V 3

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 C TECHNICAL DATA table) connect the three phases to terminals 1, 3 and 5 and the earth wire to the terminal .



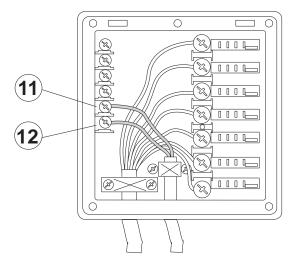
### Power supply 220 - 230V 1N

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 C *TECHNICAL DATA* table), connect the phase and neutral to terminals 5 and 6 respectively and the earth wire to the terminal  $\bigoplus$ .



#### E.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.

# E.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.
- If the water level in the tank is too high, the drain pump (if present) automatically activates to empty out the excess water.



#### **IMPORTANT**

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

# E.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.

# 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

#### 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).

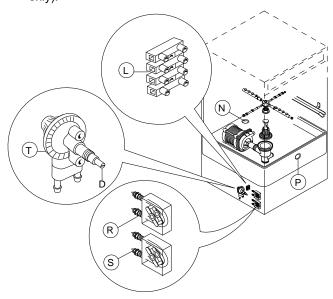


Fig. 1 Automatic dispenser overview

There is a ready-made impression "N" to be perforated ( $\varnothing$  8 mm) for positioning the detergent concentration measuring sensor.

Inside the tank there is a hole "P" ( $\varnothing$  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.

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

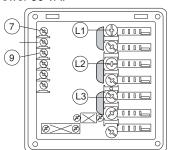
#### Single-phase version

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

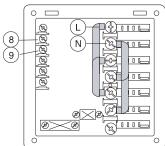
Terminals are available on the power supply terminal board for the electrical connection of external dispensers working at 220 - 240 V. Max. power 30 VA.



Connect the detergent dispenser between terminals 7 and 9.

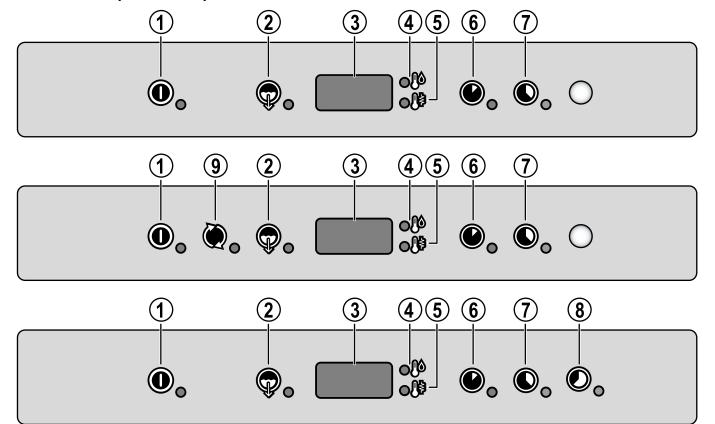
These connection points are live for a set time during filling of the tank and at the start of the wash cycle (see paragraph H.2 Setting the dispensers).

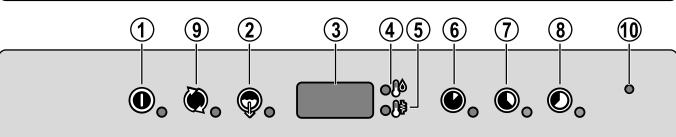
Connect the **rinse-aid dispenser** between terminals 8 and 9. These connection points are live during filling of the tank and at the end of the rinse cycle for a set time (see H.2 Setting the dispensers paragraph).



# F CONTROL PANEL DESCRIPTION

# F.1 Control panel description





- 1 On/Off
- 2 Drain/self-cleaning cycle
- 3 Display
- 4 Tank temperature indicator
- 5 Boiler temperature indicator
- 6 Wash cycle 1



NOTE! Only for Singapore market, consider this wash programme for normal soiled washware.

7 Wash cycle 2

- 8 Wash cycle 3
- **9** Regeneration cycle (depending on the model)
- 10 Active/Wash Safe Control indicator



#### 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.

#### F.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.

#### On/Off

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



#### Regeneration cycle

When on the display appears "**rEG**", press this button to activate the regeneration cycle of the water continuous softener. Please refer to chapter I.1 Regeneration cycle.



#### Drain / self-cleaning cycle

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



#### 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.



#### 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.



#### 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.



#### **Active/Wash Safe Control indicator**



In the Active/Wash Safe Control models a special device checks the temperature of the rinse phase. The GUARANTEED RINSE SYSTEM [GRS] is an automatic rinse time/temperature control system.



#### The GUARANTEED RINSE SYSTEM is active:

- during the wash cycle and the indicator light is OFF;
- during the rinse cycle and the indicator light comes on and is GREEN;
- at the end of the rinse cycle. The indicator light is GREEN if the rinse temperature and time have been carried out as per the programme, otherwise the indicator light is RED;
- upon opening the door, the indicator light GOES OUT.



#### NOTE!

If the indicator light is RED, for example should the boiler waiting time be disabled, wait for a couple of minutes and then repeat the wash cycle.

# **G** COMMISSIONING

# G.1 Preliminary checks, adjustments and operational tests



# **WARNING**

These operations must only be carried out by specialised personnel 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

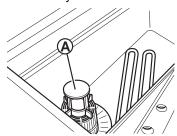
Before starting the machine:

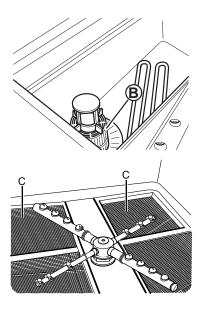
 check correct connection of the electrical wires that feed the machine:

- make sure the power supply voltage and frequency match the data given in the technical data table (C TECHNICAL DATA):
- check correct connection of the water supply and drain pipes (see paragraph E.6 Plumbing connections);
- make sure all the guards, safety devices and emergency switches are in place and efficient.

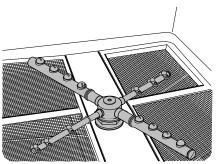
#### Check the positioning of tank components

 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.

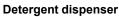


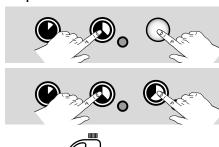
### H BASIC MACHINE SETUP

### 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.



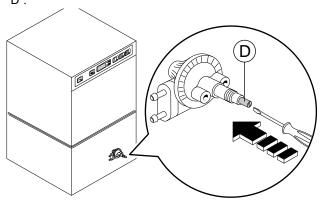








In the appliances with pressure boiler, the diaphragm dispenser pump may be manually activated by pressing screw "D".



### H.2 Setting the dispensers

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

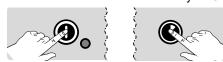
#### Legend

•	Increase
-	Decrease
S. C.	Confirm or select next parameter

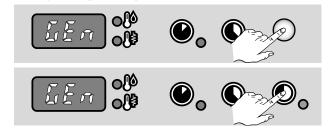
#### H.2.1 Peristaltic dispenser

#### Sequential start

1. Press the indicated buttons simultaneously for 5 seconds:



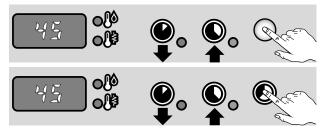
2. Display of programming mode:



3. Initial amount of detergent:



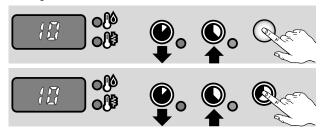
4. Setting the activation time:



5. Initial amount of rinse-aid:



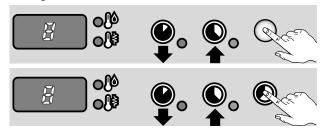
#### 6. Setting the activation time:



7. Amount of detergent during the cycle:



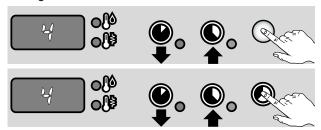
8. Setting the activation time:



9. Amount of rinse-aid during the cycle:



10. Setting the activation time:



11. Exit from programming mode:





#### NOTE!

To obtain excellence washing performance, use detergent, rinse aid and descaling agent suggested by Electrolux Professional. In the Electrolux Professional web site, open the "Accessories and Consumables" web page and navigate into the dishwashing equipment tab to order most suitable detergents and accessories.

#### 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.



#### NOTEL

For connections, see the wiring diagram.

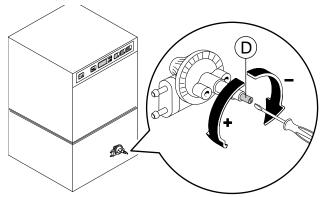
#### Example

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.





#### 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/rinseaid 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 quarantee and product liability.

#### I INCORPORATED WATER SOFTENER

# I.1 Regeneration cycle

To reduce problems caused by the presence of calcareous substances in the water supply, a water softener device has been fitted in the rinse circuit of the dishwasher. This device removes the calcareous substances from the feed-water, supplying decalcified water necessary for the washing.

For the correct operation of the water softener, the periodical regeneration of the resins, whose frequency depends on the number of washing cycles and water hardness, must be carried out.

This dishwasher has a built-in counter which keeps track of how many wash cycles can be carried out before a regeneration cycle must take place. The relevant water supply company will be able to provide all the instructions regarding the water hardness.

#### **Degrees of water hardness**

Level	Cycles	Degrees		
		°fH	°dH	°cH
1	soft	0 – 5.5	0 – 3	0 – 4
2	medium	7 – 14	4 – 8	5 – 10
3	hard	16 – 26.5	9 – 15	11 – 18.6
4	very hard	> 27	> 16	> 19

# Water hardness in °fH, °dH, °cH / Regeneration frequency in nr of cycles

°fH	°dH	°cH	Nr
9 – 15	5.6 – 8.4	9 – 15	200
16 – 20	9.0 – 11.2	9 – 15	140
21 – 25	11.8 – 14.0	9 – 15	100
26 – 30	14.6 – 16.8	9 – 15	70
31–35	17.4 – 19.6	9 – 15	50
36 – 40	20.2 – 22.4	25.3 – 28	30



#### NOTE!

The water softener device is factory-set to the value of 20 cycles since this is generally sufficient for most uses. During installation of the appliance, the installation technician should nonetheless check the correct setting of this value.

The regeneration of the resins is carried out by means of a special regeneration cycle with coarse salt, following the instructions described hereinafter.



#### **CAUTION**

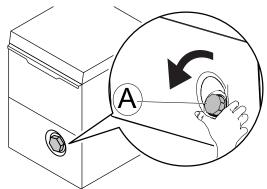
Only use coarse salt with a purity level of 99.8% NaCl. The use of salt with a lower purity level can cause clogging of the salt container filter and malfunctioning of the water softener.

#### Activation of the regeneration cycle

 When the message "REG" appears on the display, activate the cycle to regenerate the resins.

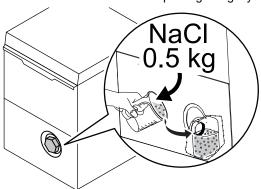


Open the salt container.



 Pour approximately 0.5 Kg of coarse salt [NaCl] (the amount necessary to fill the salt container up to the rim) into container "A".

Remove any salt residue from around the salt container hole and screw the salt container top on again tightly.

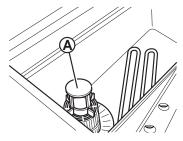




#### **CAUTION**

Only salt may be placed in the salt container. Do not introduce any other chemical substances such as detergent, rinse aid or descaling agent, since these would inevitably damage the appliance. Such damage invalidates any warranty and relieves the manufacturer of all liability.

Open the door and remove the overflow "A".



- Close the door.
- Start the regeneration cycle by pressing the REGENER-ATION cycle button for at least 5 seconds.





#### **CAUTION**

Do not open the salt container during the entire regeneration cycle as the saline solution could spill out. During this process it is normal to hear a metallic sound for a short period.

 During the regeneration cycle the display alternately blinks two symbols: "0" and "[]":



After about 50 minutes, 3 beeps indicate the end of the regeneration cycle and "END" blinks on the display:



- Replace the overflow.
- · Close the door.

The dishwasher is now ready to start the normal working functions.



#### **IMPORTANT**

If the regeneration cycle is accidentally started, it can be switched off by pressing the regeneration cycle button for at least 5 seconds.

### The regeneration cycle is temporarily stopped:

- in the event of a power failure,
- · if the door is opened,
- · if the machine is switched off.

When normal conditions are reinstated, the symbols "0" and "[]" will flash alternately on the display.

# J TROUBLESHOOTING

### J.1 Alarms

Anomaly	Type of anomaly	Possible causes	Actions
A1	NO WATER	The tap is close. The water inlet filter is clogged. Too low pressure in hydraulic circuit. Overflow not inserted (only for appliances without drain pump).	Open the tap. Clean the water inlet filter. Check the minimum mains pressure. Insert properly the overflow.
B1	INEFFICIENT DRAINAGE	Overflow not removed.  The waste outlet pipe and/or the overflow aperture obstructed.	Remove the overflow. Remove any obstruction from the waste outlet pipe and/or the overflow aperture.
B2	TANK WATER LEVEL TOO HIGH	The waste outlet pipe and/or the overflow aperture obstructed.	Remove any obstruction from the waste outlet pipe and/or the overflow aperture.
C1 – C8			CALL THE SERVICE CENTRE
E1 – E8		The appliance continues to operate, but appropriate checks by a technician are recommended.	CALL THE SERVICE CENTRE
F21 – F22 <sup>1</sup>		Resin regeneration cycles are not performed. The appliance continues to operate without water softener.	CALL THE SERVICE CENTRE

<sup>1.</sup> Only for appliances with incorporated continuous water softener.

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