



CADET

Installation Manual

CDT-1



Under Counter dishwasher

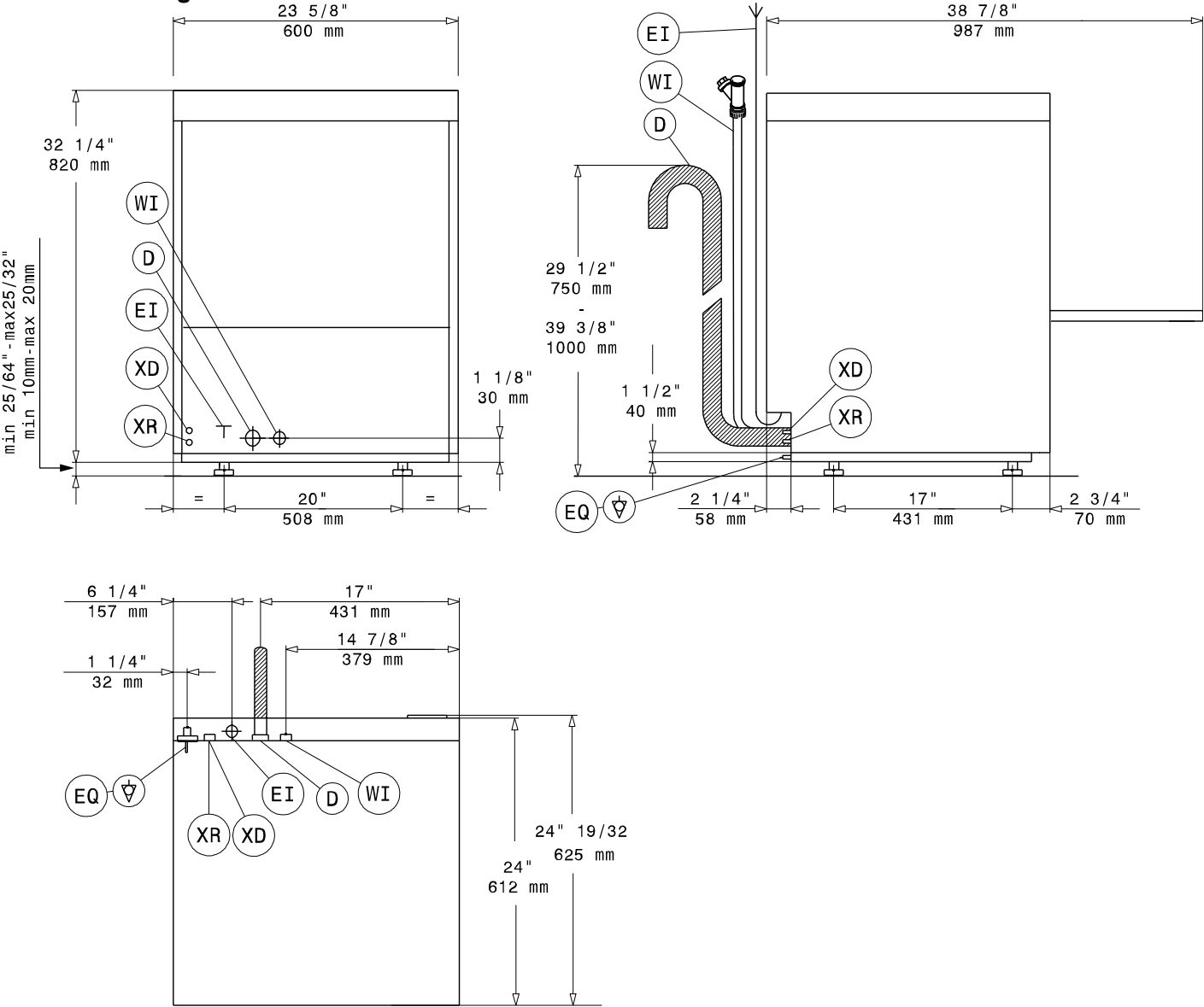
CADET CDT-1



EN-US Installation manual



Installation diagram



EI = Power supply entry

WI = Water inlet pipe with $\varnothing = 3/4"$ G [$\varnothing = 19$ mm] fitting

XD = Inlet pipe for detergents

XR = Inlet pipe for rinse aid

EQ = Equipotential (Ground) screw

D = Outlet pipe with internal diameter: $\varnothing = 11/16"$ [$\varnothing = 18$ mm]

Foreword



The installation, use, and maintenance manual (hereinafter Manual) provide the user with information necessary for correct and safe use of the 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 authorized 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 authorized Service Center 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;
 - downloading the latest and up to date manual on the web site;
- 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.

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A SAFETY INSTRUCTIONS

A.1 General information



IMPORTANT

To reduce the risk of fire, electrical shock, or injury when using your dishwasher, please follow these basic precautions including the following.

- Read all instructions before using your dishwasher.
- This Manual does not cover every possible condition and situation that may occur. Use common sense and caution when installing, operating, and maintaining this appliance.
- Do not sit, stand, or lean on the door or racks of a dishwasher.
- Store dishwasher detergent and rinse agents in clearly marked packages with “MSDS” (Material Safety Data Sheets) sheets in a safe place.
- FOR YOUR SAFETY DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUID IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.
- Your dishwasher uses hot water to clean and sanitize a variety of wares. Machine surfaces and wares become hot during and immediately following normal operations. Operators should use caution when loading and unloading wares from the machine. Refer to “A.2 *Personal protection equipment*” for suitable personal protection equipment.
- Do not touch the heating element during or immediately after use.
- The installation of this unit must be installed in accordance with local codes, or in the absence of local codes, installed in accordance with the applicable requirements in the National Electrical Code, “NFPA 70”, Canadian Electrical Code (“CEC”), Part I, “CSA C22.1”, and Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, “NFPA 96”.
- BEFORE SERVICING, DISCONNECT THE ELECTRICAL SERVICE AND PLACE A RED TAG AT THE DISCONNECT SWITCH TO INDICATE WORK IS BEING DONE ON THAT CIRCUIT.



NOTE!

- Contact your authorized service company to perform maintenance and repairs.
- Using any parts other than genuine factory manufactured parts relieves the manufacturer of all warranty and liability.
- Manufacturer reserves the right to change specifications at any time without notice.








WARNING

- The equipment warranty is not valid unless the appliance is installed, started and demonstrated under the supervision of a factory trained installer.
- The unit must be installed by Personnel who are qualified to work with electricity and plumbing. Improper installation can cause injury to personnel and/or damage to the equipment.
- The unit must be installed in accordance with all National Codes governing plumbing, sanitation, safety and good trade practices.

SAVE THESE INSTRUCTIONS

A.2 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	○	●	● ¹	—	—
Normal use	●	●	● ²	○	—
Adjustments	○	●	—	—	—
Routine cleaning	○	●	● ¹⁻³	○	—
Extraordinary cleaning	○	●	● ¹⁻³	○	—
Maintenance	○	●	○	—	—
Dismantling	○	●	○	○	—
Scrapping	○	●	○	○	—
Key:					
●	PPE REQUIRED				
○	PPE AVAILABLE OR TO BE USED IF NECESSARY				
—	PPE NOT REQUIRED				

1. 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 harm to health (depending on the model).

2. 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, specialized personnel or users can involve exposure to chemical risk and cause possible harm to health (depending on the model).

3. 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 harm to health (depending on the model).

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	INSINGER machine company or any other service center authorized by INSINGER machine company.

Operator for normal machine use	an operator who has been informed and trained regarding the tasks and hazards involved in normal machine use.
Customer Care service or specialized 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 recognize 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 data plate on the machine is given below:

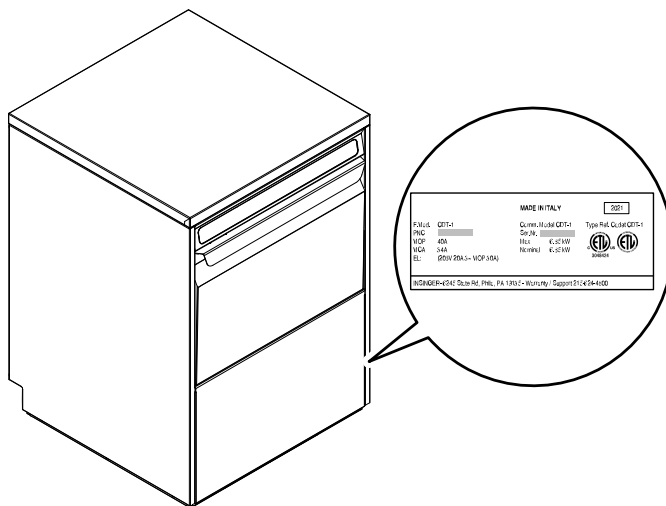
		MADE IN ITALY		2021
F.Mod.	CDT-1	Comm. Model	CDT-1	Type Ref. Cadet CDT-1
PNC		Ser.Nr.		
MOP	40A	Max	6.85 kW	
MCA	34A	Nominal	6.85 kW	
EL:	(208V 20A 3~ MOP 30A)			
INSINGER- 6245 State Rd, Phila, PA 19135 - Warranty / Support 215-624-4800				

The data plate 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
208V 1ph	power supply voltage
208V 3ph	electric convertibility (depending on the model)
60 Hz	power supply frequency
6.85 kW	max. power
6.85 kW	nominal power

IPX4	dust and water protection rating
INSINGER machine company - 6245 State Rd, Phila, PA 19135	manufacturer

The data plate 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 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 original manufacturer warranty).
- operations carried out by non-specialized personnel.
- unauthorized modifications or operations.
- missing, lack or inadequate maintenance.
- improper machine use.
- unforeseeable extraordinary events.
- use of the machine 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.5 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.6 Recipients of the manual

This manual is intended for:

- the carrier and handling personnel;
- installation and commissioning personnel;
- specialized personnel - Customer Care service (see service manual).

C TECHNICAL DATA

C.1 Main technical characteristics

Model		CADET CDT-1
Supply voltage: field upgrade to		208V 1ph, 33amp 208V 3ph, 20amp
Frequency	Hz	60
Max. power	kW	6.85
Booster heating elements	kW	6.0
Tank heating elements	kW	2.2
Water supply pressure	min	7.25 psi [50 kPa]
	max	101 psi [700 kPa]
Water supply temperature	°F	50 – 122
	[°C]	[10 – 50]
Water supply hardness for models without incorporated continuous water softener	ppm	140
	[°f]	[14 max]
Electric conductivity of water for models without incorporated continuous water softener	µS/in	< 1016
Concentration of chlorides in water	ppm	< 20
Rinse cycle water consumption	gal [L]	0.80 [3]
Booster capacity	gal [L]	3 [12]
Tank capacity	gal [L]	6.1 [23]
Standard cycle time with water supply at 122°F [50°C]	sec.	120 - 240 - 130
Legal noise level Leq ¹	dB(A)	LpA: 63dB - KpA: 1.5dB
Protection rating		IPX4
Minimum Supply - Circuit Ampacity	amp	34
Net weigh	lb [kg]	152 [68]
Shipping weight	lb [kg]	179 [81]
Shipping width	inch [mm]	29 1/8 [740]
Shipping height	inch [mm]	39 3/4 [1010]
Shipping depth	inch [mm]	26 3/8 [670]

1. The noise emission values have been obtained according to EN ISO 11204.

D TRANSPORT, HANDLING AND STORAGE



WARNING

Refer to “SAFETY INSTRUCTIONS”.

D.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.



CAUTION

The machine must only be transported, handled, and stored by specialized 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.

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 machine 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. Maneuver vertically in order to avoid impacts.
- handle the machine, 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 maneuver 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 14°F [-10°C] and 122°F [50°C].

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 INSTRUCTIONS”.

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.1 *Main technical characteristics*).
- 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*).

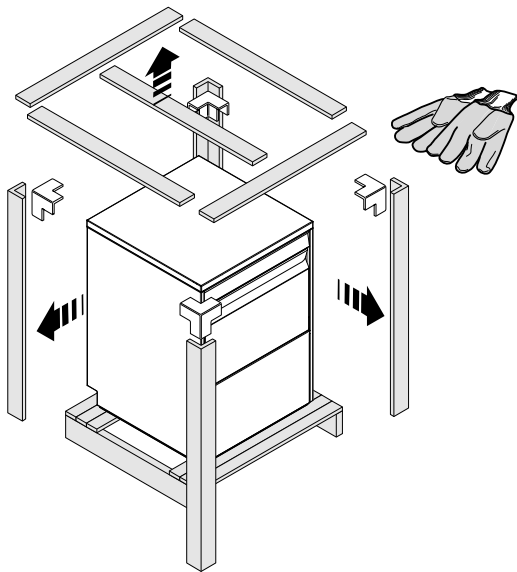
- adducting for the electrical connection between the workplace electric panel and the equipment.
- the water supply and drain connections and other connections as indicated in C.1 *Main technical characteristics* and in the paragraph E.5 *Plumbing connections*;

E.3 Positioning

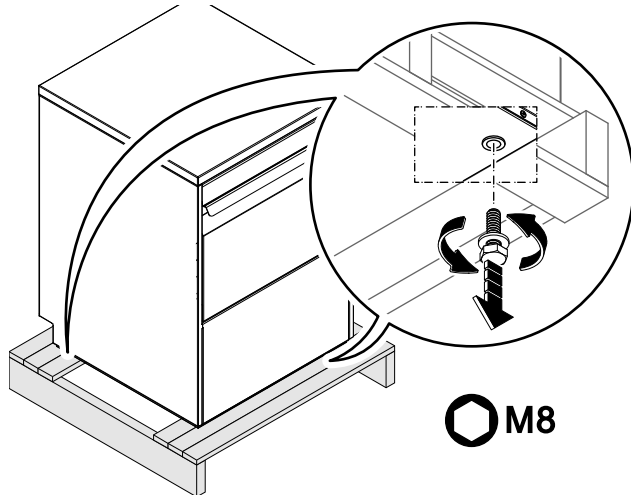
The machine must be taken to the place of installation and the packing base removed only when being installed.

Arranging the machine:

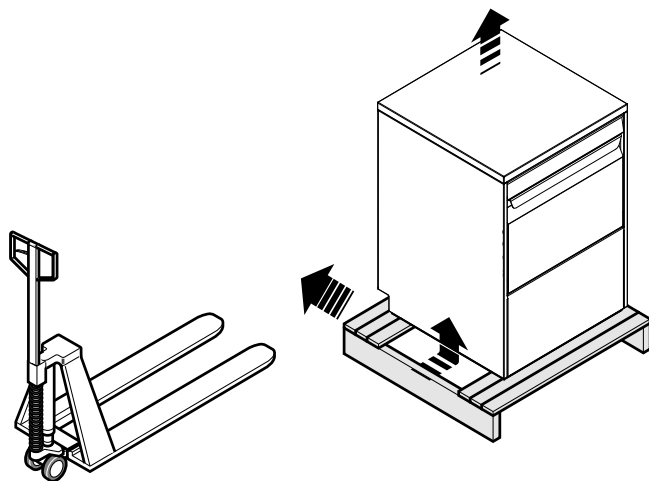
- Wear protective gloves and unpack the machine.



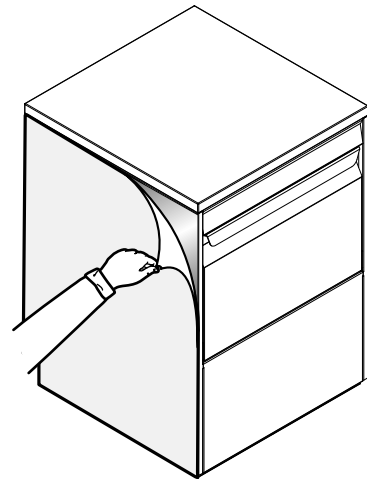
- Remove the two hex screws to unlock the appliance from the wooden pallet.



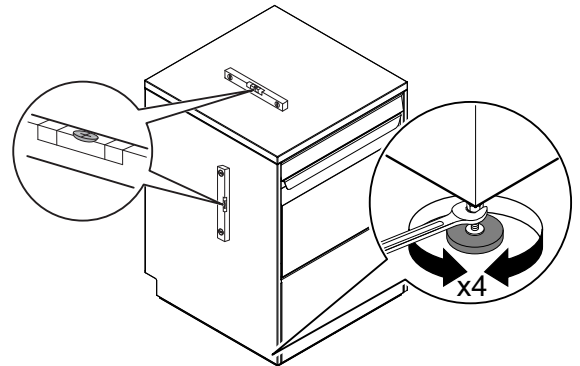
- Lift the equipment with a lift truck, remove the base and position it the place of use.



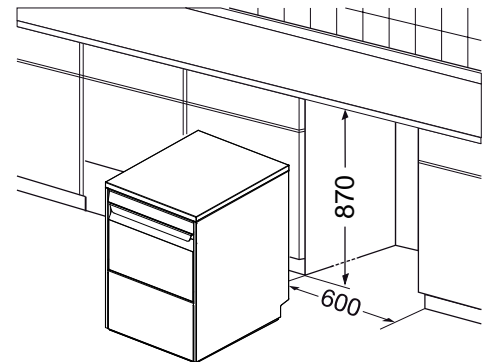
- Carefully remove the protective film from the outer panels without tearing it, to avoid leaving traces of glue.



- 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.

E.4 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:

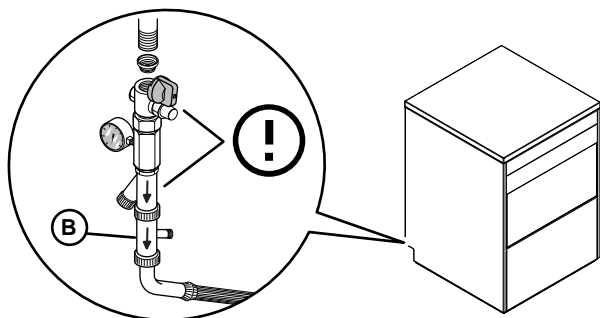
	Polyethylene <ul style="list-style-type: none"> Outer wrapping Instructions bag
	Polypropylene <ul style="list-style-type: none"> Straps
	Polystyrene foam <ul style="list-style-type: none"> Corner protectors

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

E.5 Plumbing connections

Water inlet

- Connect the appliance water supply pipe "WI" (see the *Installation diagram*) to the main, fitting a shutoff valve (not provided), the filter provided and a pressure gauge (not provided) 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:
 - for appliances with pressure booster
 - 29 psi [200 kPa] and 43.5 psi [300 kPa];
 - for appliances with atmospheric booster
 - 7.25 psi [50 kPa] and 101 psi [700 kPa].



NOTE!

Test while dishwasher tank or booster is filling with water.



IMPORTANT

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

Water drainage

- On the model with free-fall drainage:
 - connect the waste outlet pipe (detail "D" in the *Installation diagram*) to the main drainpipe, fitting a trap, or place the outlet pipe over a trap set into the floor.
- On the model with drain pump:

- place the outlet pipe at a height anywhere between 29 1/2" [750 mm] and 39 3/8" [1000 mm] from the floor. Depending on the model, check that from 0.53 gal [2 L] to 0.8 gal [3 L] of water flow out of the outlet pipe during the rinse cycle.



IMPORTANT

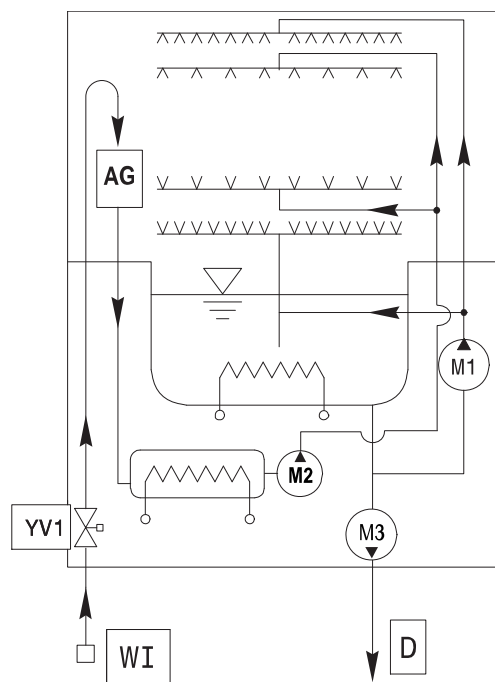
Make sure drainpipe does not kink, pinch or twist, resulting in a water flow restriction.



CAUTION

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

E.6 Plumbing circuits



Appliance with atmospheric water supply with drain pump

WI	Water inlet
D	Drain
M1	Wash pump
M2	Rinse pump
M3	Drain pump
AG	Air Gap
YV1	Filling solenoid valve


E.7 Electrical connections




CAUTION

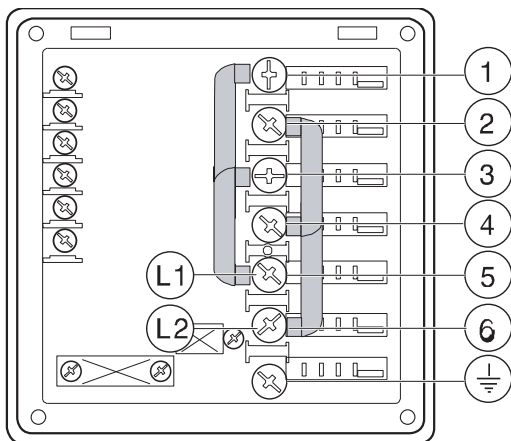
The installation of this unit must conform to local codes or, in the absence of local codes, to all National Codes governing plumbing, sanitation, safety and good trade practices.

- 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 3/4" [20 mm] longer 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 ground wire must have a cross section of AWG 8/8.35 mm². Do not use the wiring conduit or other piping for ground connections. If necessary, have the electrician supply the ground wire.

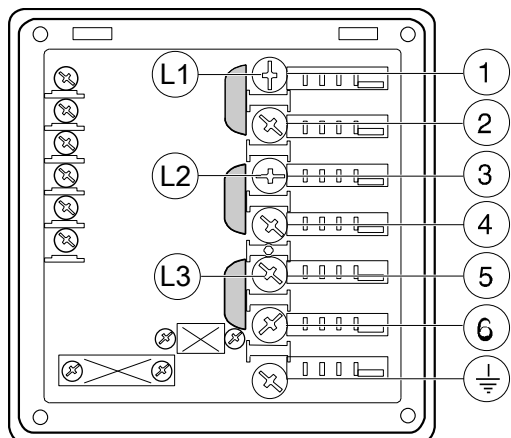
Power supply 208V 1ph

Open the power supply terminal box 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 connect L1 and L2 to terminals 5 and 6 respectively and the ground wire to the terminal .

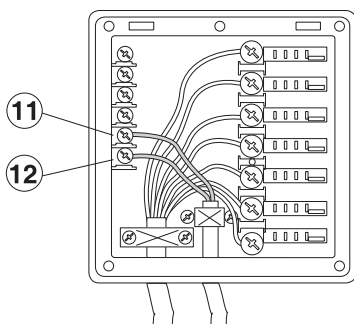


Power supply 208V 3ph

Open the power supply terminal box 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, connect the three phases to terminals 1, 3, 5, and the earth wire to the terminal .



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.8 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.9 Detergent/rinse aid dispensers and prearrangements



IMPORTANT

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.

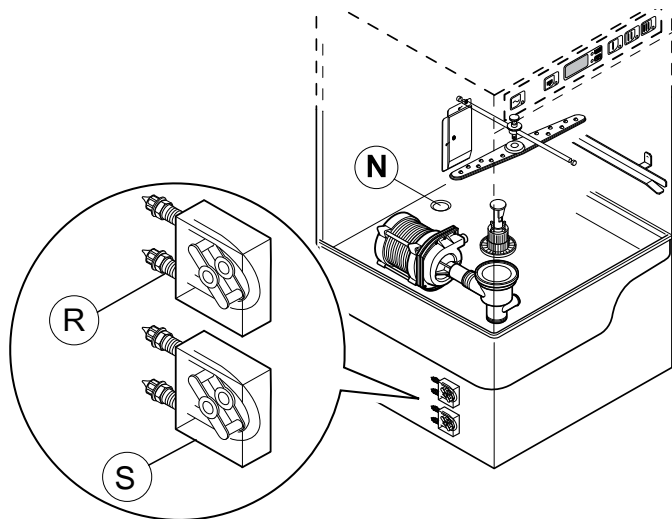
Dishwasher with incorporated liquid detergent dispenser pump

When the appliance is filled with water for the first time in the day, pump "R" dispenses a detergent quantity in the tank. At each cycle, pump "R" dispenses a detergent quantity in the tank to keep proper detergent concentration. Insert the hose provided in the kit into the detergent container.

Dishwashers with incorporated peristaltic rinse-aid dispenser pump

When the appliance is filled with water for the first time in the day, pump "S" dispenses a rinse-aid quantity in the booster. At each rinse cycle, pump "S" dispenses a rinse-aid quantity in the booster to keep proper rinse-aid concentration. Insert the hose provided in the kit into the rinse-aid container.

E.9.1 Mechanical connections for automatic detergent dispenser

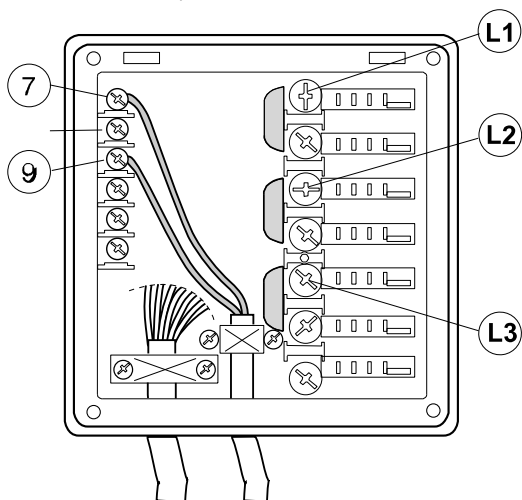


There is a ready-made impression "N" (inside dishwasher chamber floor) to be perforated [$\varnothing = 5/16"$ (8 mm)] for positioning the detergent concentration measuring sensor. The sensor should be installed without compromising the watertightness of the appliance.

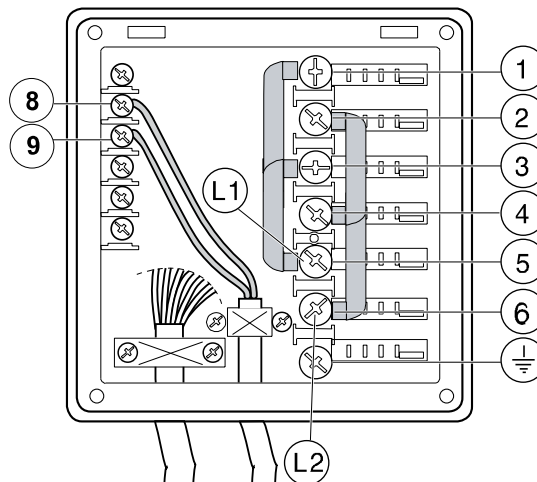
E.9.2 Electrical connections for automatic detergent and rinse-aid dispensers

Terminals are available on the power supply terminal box for the electrical connection of external dispensers working at 208V. 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*).

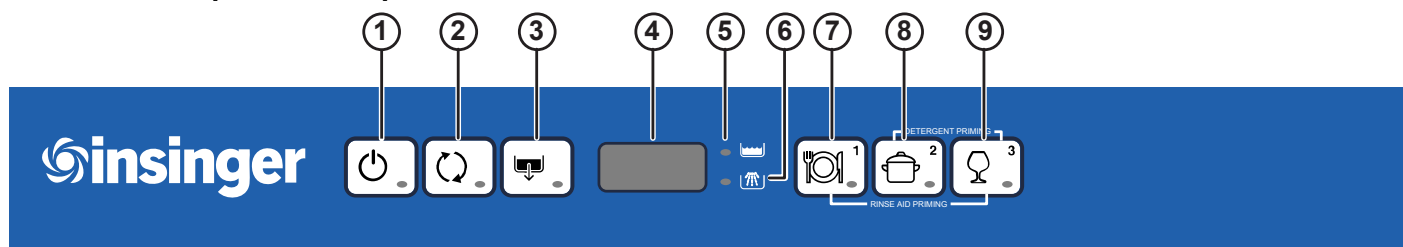


- Connect the rinse-aid dispenser between terminals **8** and **9**. These connection points are live during filling of the tank and at the end of the rinse cycle for a set time (see H.2 *Setting the dispensers* paragraph).



F CONTROL PANEL DESCRIPTION

F.1 Control panel description



1	On/Off
2	De-lime cycle
3	Drain/self-cleaning cycle
4	Display
5	Tank temperature indicator light
6	Booster temperature indicator light
7	Wash cycle 1
8	Wash cycle 2
9	Wash cycle 3



NOTE!

The temperature shown on the display is that of the booster if the indicator light "6" is on or, of the tank if the light "5" is on.

The tank temperature is displayed during the wash cycle and the booster temperature during the rinse cycle.

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.



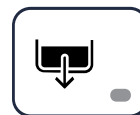
De-lime cycle

This button starts the de-lime cycle. To be used if there are signs of lime deposits (a white, chalky substance) on the inside walls and on the wash arms.



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 lightly soiled dishes or glasses.



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 normally dirty dishes.



Wash cycle 3

This button starts **Wash cycle 3**. When the cycle is selected, the button indicator is lit up. This is a specific cycle for glasses.



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

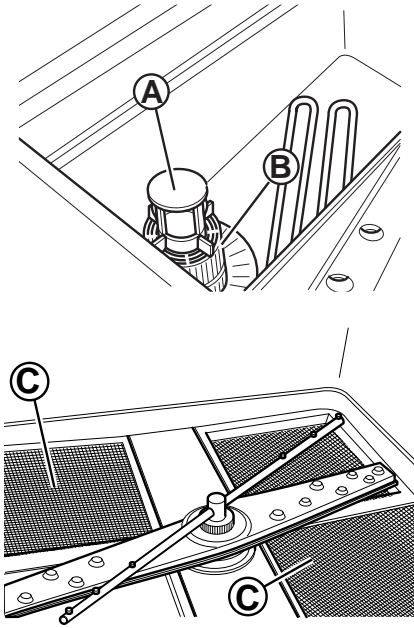
Before starting the machine:

- check correct connection of the electrical wires that feed the machine.

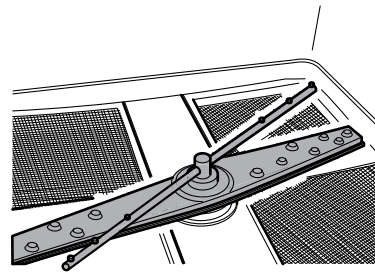
- make sure the power supply voltage and frequency match the data given in the technical data table (C.1 *Main technical characteristics*).
- check correct connection of the water supply and drainpipes (see paragraph E.5 *Plumbing connections*).
- make sure all the guards, safety devices and emergency 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.



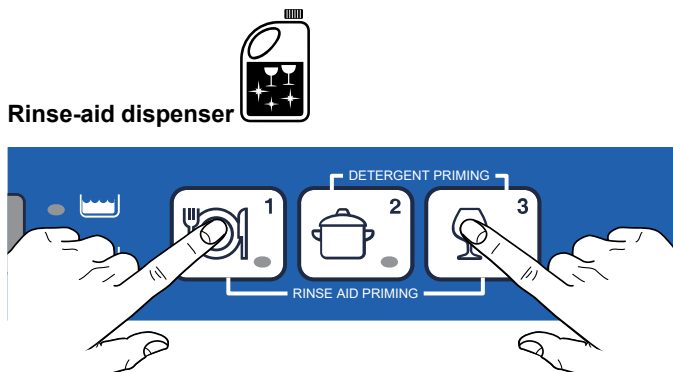
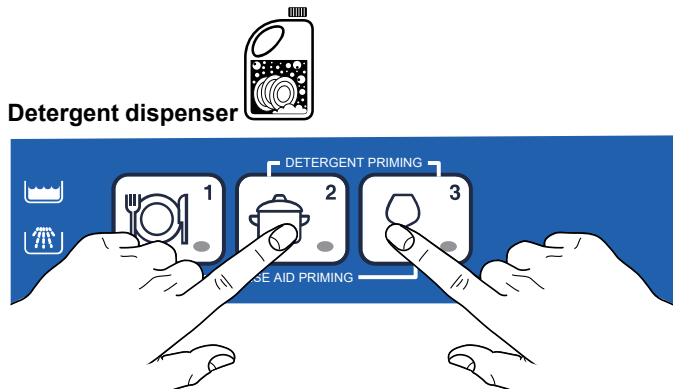
- Make sure the upper and lower wash and rinse arms are correctly fitted.



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.



H.2 Setting the dispensers

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

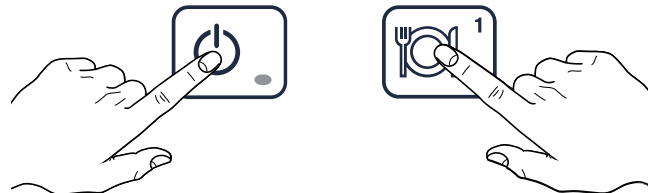
Legend

↑	Increase
↓	Decrease
☞	Confirm or select next parameter

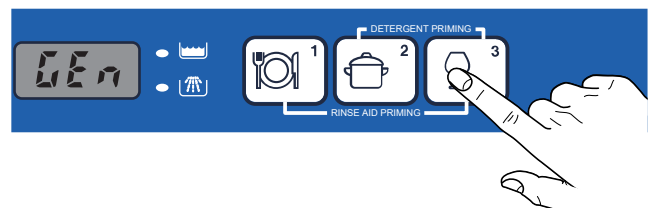
H.2.1 Peristaltic dispenser

Sequential start

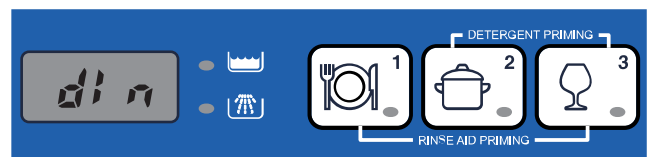
- Press the indicated buttons simultaneously for 5 seconds:



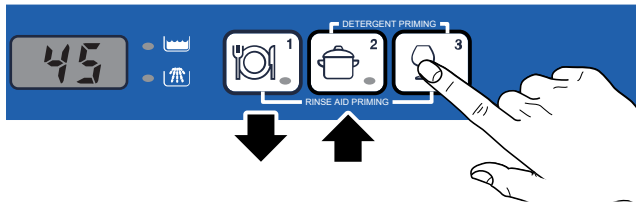
- Display of programming mode:



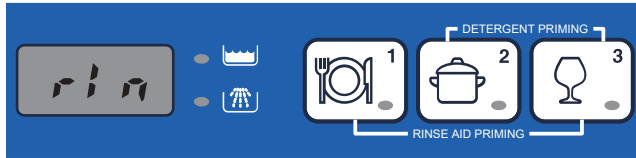
- Initial amount of detergent:



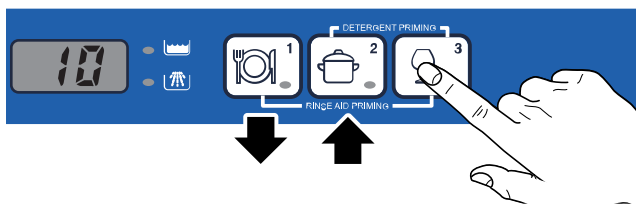
4. Setting the activation time:



5. Initial amount of rinse-aid:



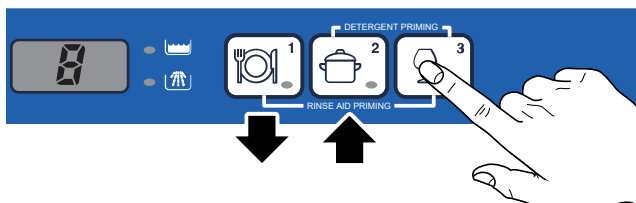
6. Setting the activation time:



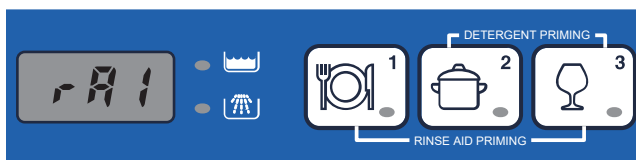
7. Amount of detergent during the cycle:



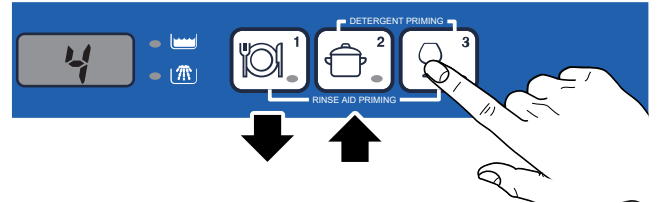
8. Setting the activation time:



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 electro valve 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 electro valve 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:

<code>dln = 0</code>	the dispenser is not activated during filling of the tank.
<code>det = 181</code>	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.

I TROUBLESHOOTING

I.1 Alarms

Anomaly	Type of anomaly	Possible causes	Actions
A1	NO WATER	The valve 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 valve. 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 CENTER
E1 – E8		The appliance continues to operate, but appropriate checks by a technician are recommended.	CALL THE SERVICE CENTER



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