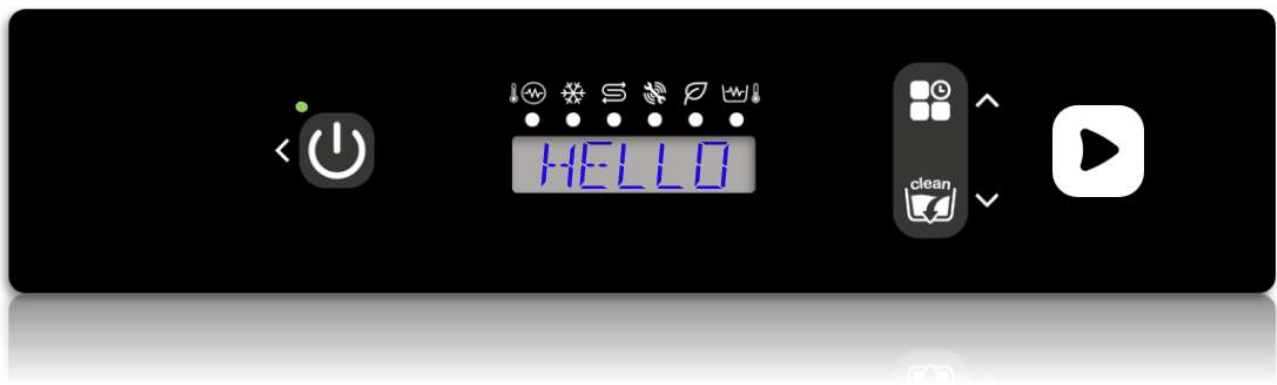


Technical manual

4035-0005 Display



INSTRUCTIONS FOR SETTING THE OPERATING
PARAMETERS AND FOR THE CONFIGURATION OF
THE DISHWASHER



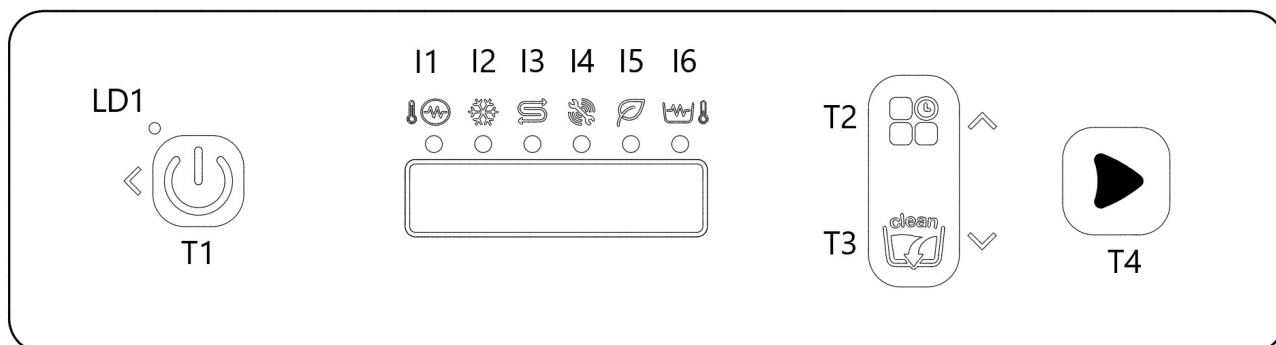
INSTALLER

Contents

1.0	Control panel	3
1.1	Descriptions of coloured START button functions	4
2.0	Wash cycles.....	5
2.1	Autostart.....	6
3.0	Display indications	7
3.1	Dishwasher Power On	7
3.2	Filling	7
3.3	Heating	8
3.4	Wash cycle.....	9
3.5	Thermostop function.....	10
3.6	Door opening	10
3.7	Emptying the tank with the drain pump (optional)	10
3.8	Self-clean.....	11
4.0	Installer menu	12
5.0	Technical parameter specifications.....	15
5.1	Boiler temperature adjustment (°C).....	15
5.2	Tank temperature adjustment (°C).....	15
5.3	Activating boiler Thermostop.....	15
5.4	Activating minimum tank temperature	15
5.5	Setting dosage for rinse aid (RGL) and detergent (DGL)	15
5.6	Filling rinse aid pipes (RIN) and detergent pipes (DET).....	16
5.7	Adjusting rinse times	16
5.8	Regeneration frequency and water softener settings.....	16
5.9	Cycle counter menu and scheduled maintenance	18
5.10	PCB Reset.....	19
5.11	Electronic code.....	19
5.12	Firmware.....	19
5.13	Exhibition mode (DEMO)	19








5.14	Export menu and import menu	20
6.0	User-controllable functions	21
6.1	GREEN Function.....	21
6.2	COLD Function	22
6.3	PREWASH Function	23
6.4	AUTOSTART function.....	23
7.0	Main PCB replacement	24
7.1	Power control boards	25
8.0	Firmware update.....	26
9.0	Warnings.....	27
10.0	Alarms.....	28
10.1	Table of alarms.....	29

1.0 Control panel



Symbol	User mode	Function in parameters menu
T1	ON/OFF button, Self-cleaning upon shutdown	ESC and exit menu
T2	Wash cycle time selection button If held for 6", enables/disables AUTOSTART	With the machine off, allows access to the parameter's menu (see chapter 4.0). " + " value in the parameter's menu.
T3	Drain/self-cleaning cycle selection button	" - " value in the parameter's menu.
T4	Multi-coloured button. Starts the washing cycle	Accesses edit mode, confirms the change of the displayed parameter.
LD1	ON/OFF LED → red OFF, green ON	
I1	Temperature boiler LED: flashing=heating; fixed=set temperature reached	
I2	Cold rinse/pre-wash LED activated (Option available only on certain models)	
I3	Salt shortage LED (option available only on certain models)	
I4	Maintenance required LED	
I5	GREEN function LED enabled	
I6	Tank temperature LED : flashing=heating; fixed=set temperature reached	


1.1 Descriptions of coloured START button functions


	YELLOW: filling, heating, draining YELLOW FLASHING: door open, active warning
	GREEN: dishwasher ready to carry out a wash cycle GREEN FLASHING: wash cycle finished and rack to be removed
	BLUE: wash cycle in progress BLUE FLASHING: door open during the wash cycle
	LIGHT BLUE: cold pre-rinse cycle or cold prewash cycle
	PURPLE: self-cleaning cycle in progress
	RED: alarm RED FLASHING: by-passable alarm
	WHITE: inside the menu WHITE FLASHING: enabling TEST- IN /OUT menu

2.0 Wash cycles

The dishwashers with digital control manage 4 washing cycles identified as C1, C2, C3, and C4.




Type	60"	90"	120"	180"	360"	540"
Undercounter dishwashers/glasswashers		C1	C2	C3		C4
Hood-type dishwashers	C1		C2	C3		C4
Warewashers			C1	C2	C3	C4

The wash cycles can be scrolled through using the  button when the dishwasher is on and ready for use or in heating phase.

After selecting the wash cycle you can start by pressing the START button .

During the heating phase you can already select the wash cycle but to start the machine it is necessary to wait until the dishwasher is ready for use.

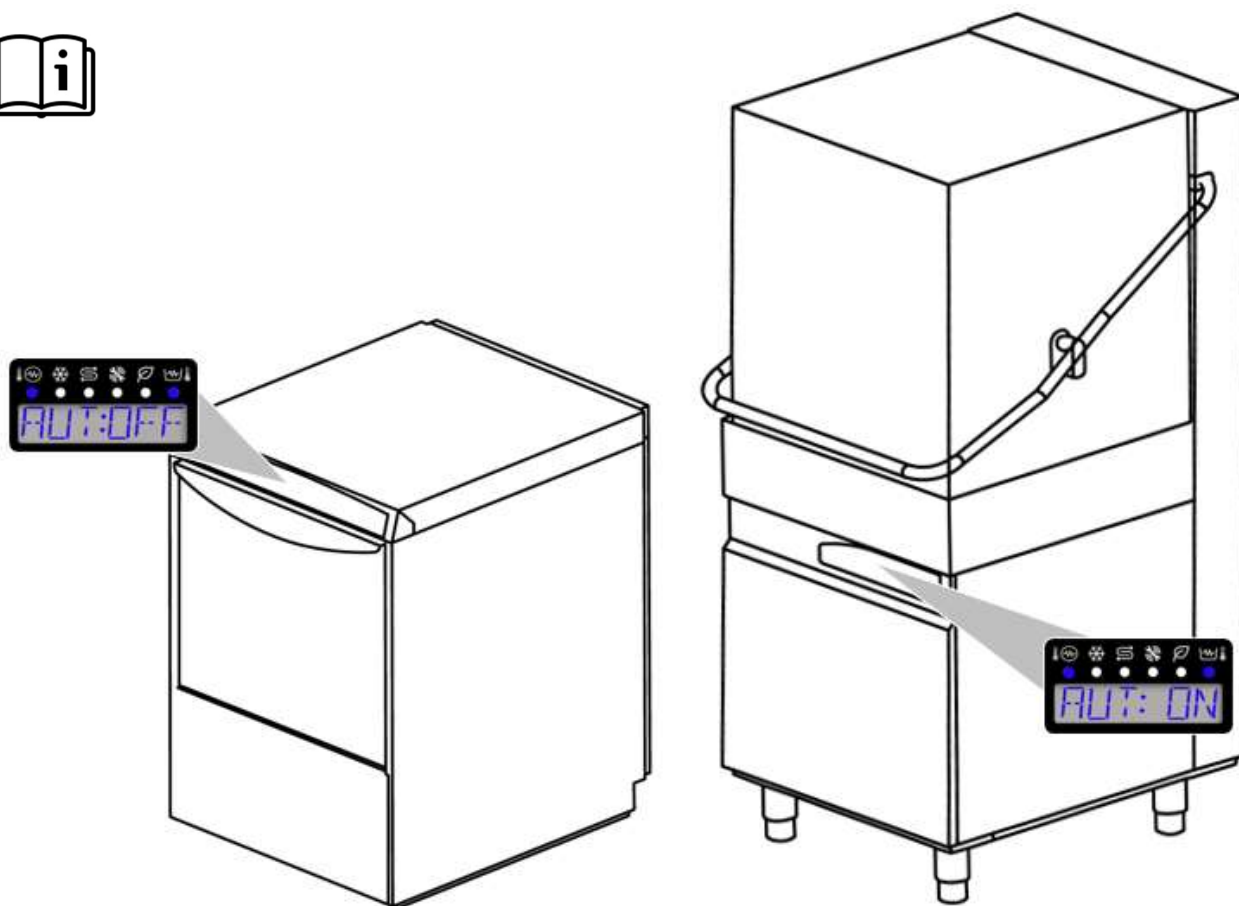
2.1 Autostart

All dishwashers come equipped with the Autostart function as a standard. Autostart allows starting the wash cycle by closing the door/hood of the dishwasher. The Autostart function can be enabled and disabled by holding down the  button (6 seconds) with the dishwasher "ready" (green START  button) or in heating phase (yellow START  button).

The confirmation of enabled/disabled is indicated by the following messages on the display:



As a default the Autostart is enabled on all hood-type dishwashers while it is disabled on all other models.



3.0 Display indications

The digit display does not support multiple languages, all messages are displayed in English and/or with abbreviations.

3.1 Dishwasher Power On

When supplying power to the dishwasher, the message "HELLO" will appear on the display for a few seconds, followed by the version of the installed firmware. After that, the dishwasher will enter stand-by mode, displaying "OFF". The "OFF" message will remain visible for 10 minutes, after which the display will turn off completely.



The LD1 LED remains lit red for the duration that the dishwasher is powered on but turned off (stand-by). To turn on the dishwasher, press and hold the ON/OFF button. The display will show the message "HELLO":



3.2 Filling


The filling starts after the dishwasher has been powered on. During the filling phase the display will show the message "FILL" and the START button will turn to yellow:



In the dishwashers equipped with the drain pump (optional), the pump will carry out some drain cycles as a "safety procedure", during the filling phase.

Once the filling is complete, the heating phase begins.


3.3 Heating


The display will show the last cycle previously used. If a minimum wash temperature hasn't been set the dishwasher will appear to be ready showing the green START  button. It is possible to already start the wash cycle with cold water, in the meantime the heating elements of the boiler and tank heat the temperature to the values that have been set in the menu.



If a minimum wash temperature has been set instead, (see chapter 5.0) and the tank temperature is below the set threshold, the dishwasher transitions to the heating phase and the display will show the message "HEAT" alternating with showing the temperatures:




The LED  flashes while the boiler heating element is operating. The LED will remain lit and fixed once the temperature has been reached .

The LED  flashes while the tank heating element is operating. The LED will remain lit and fixed once the temperature has been reached.



The wash cycle cannot be started until the tank temperature has reached 40°C (minimum temperature by default). If an attempt is made to start the cycle, the message "WAIT" will appear on the display:







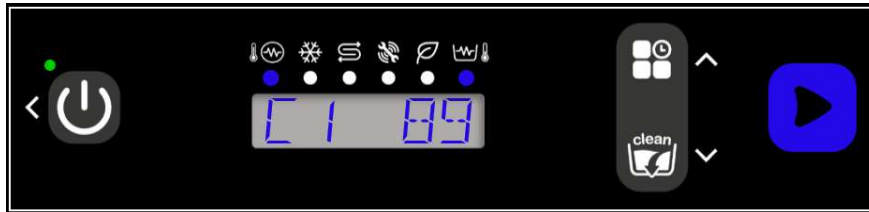
Once the minimum tank temperature has been reached the dishwasher will be ready showing the green START  button and the display will indicate the previous wash cycle used.


The heating takes place giving priority to the boiler. Some models may have the HD option enabled, in which case the heating of the boiler and of the tank can take place simultaneously.

3.4 Wash cycle

By repeatedly pressing the  button it is possible to scroll through the wash cycles. If the START  button is green it is possible to start the selected wash cycle.

The wash cycle can be started by either pressing the START  button or alternatively by enabling the "Autostart" function, closing the door/hood. The Autostart function can be enabled by holding down the  button when the dishwasher appears ready (green START  button) or during the heating phase (yellow START  button).





During the wash cycle the display will show the countdown and the START  button will be BLUE. The wash cycle consists of:


- Washing
- Pause
- Rinsing

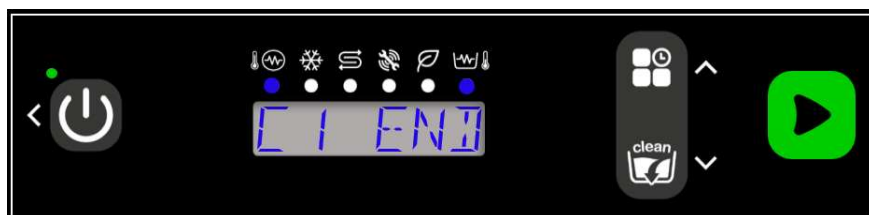
If the dishwasher is equipped with a drain pump (optional), a number of drain cycles are performed based on the following format:

- at the start of the wash cycle a 5 second drain takes place
- during the pause between washing and rinsing the drain pump intervenes to eliminate the water in the drain
- 5 seconds after the beginning of the rinsing phase the drain pump operates and continues for a further 10 seconds after the end of rinsing.
- The last drain phase takes place in pulses for 16 seconds.

To start the following wash cycle it is not necessary to wait until the end of the drain cycle.

It is possible to cancel the wash cycle by pressing and holding the START  button or by turning off the dishwasher by holding down the ON/OFF  button.

At the end of the cycle, the START  button will be flashing green and the message "END" will appear on the display as well as the code of the cycle just completed:



This visual will remain on the display until the door is opened.

3.5 Thermostop function



If the Thermostop function is enabled (boiler temperature check before proceeding with the rinsing phase), the wash cycle will be extended until the set temperature, according to the "BT" parameter has been detected (see chapter 5.0). On the display, the countdown indication will be substituted by the message "HEAT". Once the set boiler temperature has been reached, the cycle proceeds with the pause and rinsing phases.

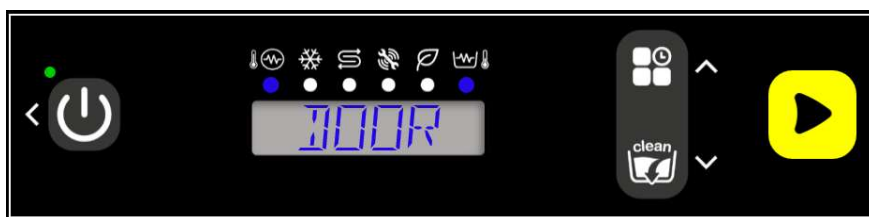


3.6 Door opening


Opening the door interrupts the cycle:




If the door is closed within 10 seconds, the cycle restarts from the beginning however if the door remains open for more than 10 seconds the cycle is cancelled. The display will indicate the open door with the message "DOOR" and the START button  will be flashing blue in the event of the cycle being suspended or the START button  will be flashing yellow in every other case:



3.7 Emptying the tank with the drain pump (optional)


If the dishwasher is equipped with a drain pump, the drain cycle can be started by pressing and holding the  button.

The drain cycle can also be started by turning off the dishwasher by pressing and holding the ON/OFF  button.



During the drain cycle the display shows the message "DRAIN" and the drain pump empties the tank. At the end of the drain cycle the dishwasher switches off.


N.B. Remember to remove the overflow pipe, if in place, otherwise at the end of the drain phase the dishwasher will signal alarm 04.



The drain cycle can be cancelled at any moment by pressing and holding the ON/OFF  button.

3.8 Self-clean

The Self-clean function is a standard feature by default. It can be activated by pressing the ON/OFF  button or the "DRAIN"  button, after the removal of the overflow pipe, if in place. If the dishwasher is equipped with the drain pump the self-clean function is activated once the tank has been emptied.

During the Self-cleaning phase the order of actions performed is as follows: tank is emptied, rinsing and once again the tank is emptied. The display will show the message "CLEAN" and the START  button will be purple until the cycle has finished, following which the dishwasher will switch off.



N.B: In the dishwashers with the SMART DRAIN function enabled, the self-cleaning cycle lasts longer and includes tank washing with hot water.

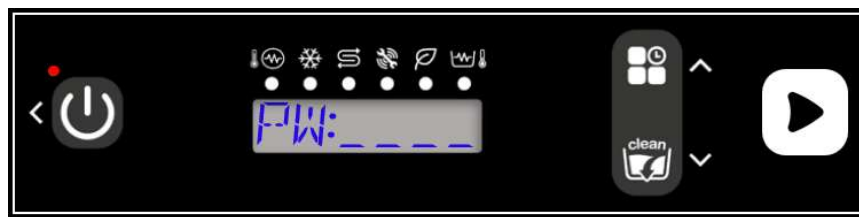
4.0 Installer menu

An installer menu is available, where a number of operating parameters of the dishwasher can be configured.





The menu is secured with a password. It is recommended not to disclose the password to untrained personnel to prevent tampering that could compromise the proper functioning of the dishwasher.

To access the installer menu, make sure the dishwasher is powered on but turned off.

- Press and hold for 2 seconds the  button.
- The display will show a message requesting a password and will appear as follows:



The password is the numerical code which can be found on the data plate fixed on the right-hand side of the dishwasher. The numerical code is written next to the acronym "PW".



- The first digit can be modified with the   and  buttons.
- Confirm the displayed digit with the START  button. Confirming will then pass to the following number.
- This procedure is repeated for the remaining digits.
- Upon confirming the fourth digit, providing the password is correct, the menu is accessed. If the password is wrong, the display will indicate a message of error.




- In the event of error, it is necessary to wait for a few seconds until the display indicates a password request message to then repeat the operation.


Below is a brief description of the parameters found within the menu; further paragraphs following provide detailed explanations.




Use the arrows to scroll through the items in the menu ( ^ and  v buttons)

To exit the menu, press and hold the  ON/OFF button.
















Following 3 minutes of inactivity the dishwasher will return to OFF.

To access parameter editing press the START  button,

Change the value with the  ^ and/or the  v buttons.

Save changes by pressing the START  button again.

If you accidentally access parameter editing, press the ON/OFF  button to exit..

Display						Menu item	Field	Default	Action
B.	T.	:		8	5	Adjust boiler temperature (°C)	5÷95	85°C	<p>press START  to enter in edit mode.</p> <p>Press the arrows  to edit the displayed value.</p> <p>Press START  to confirm the change.</p>
T.	T.	:		6	5	Adjust tank temperature (°C)	5÷75	60°C	
B.	T.	S:		O	N	Activate boiler Thermostop	ON÷OFF	ON	
T.	M.	T:		O	N	Activate minimum tank temperature	ON÷OFF	ON	
R.	G.	L:		0.	8	Set rinse aid dosage (gr/l)	0÷19,5	0.8 gr/l	
D.	G.	L:		3.	0	Set detergent dosage (gr/l)	0÷66,9	3.0 gr/l	
R	I	N:	O	F	F	Fill rinse aid pipes (filling time 240sec)	ON÷OFF	OFF	<p>Press START  to enter in edit mode.</p> <p>Use the arrows  to enable/disable the dispenser.</p> <p>Press START  to confirm.</p>
D	E	T:	O	F	F	Fill detergent pipes (filling time 70sec)	ON÷OFF	OFF	
R.	T.	:		1	6	Adjust rinsing time	5÷30	12(PRS=ON) 16(PRS=OFF) 23(warewasher)	<p>Press START  to enter in edit mode.</p> <p>Use the arrows  to edit the displayed value.</p> <p>Press START  to confirm the change.</p>
W.	S.	F:		2	5	Incorporated water softener regeneration frequency (optional)	OFF÷30	25	
N.	C	Y	C	L	E	Cycle counter menu	-	-	Press START  to access the sub-pages and view the total and partial cycles (since the last reset).
T	O	T	A	L		→ Total cycles	-	-	The word TOTAL alternates every 3 seconds with the indication of the total cycles completed by the dishwasher.
P	A	R	T	A	L	→ Partial cycles	-	-	The word PARTIAL alternates every 3 seconds with the indication of the partial cycles completed by the dishwasher. By pressing and holding the START  button for 6 seconds the value resets to zero.
R	E	S:	P	C	B	Reset PCB	-	-	Press and hold the START  button for 6 seconds to launch the reset of the PCB. After resetting it is necessary to reinsert the electronic code.
E.	C.	*	*	*	*	Electronic code	-	-	This is a field to solely display the electronic code which has been set.
F	W:	*	*	*	*	Firmware version	-	-	This is a field to solely display the firmware version installed in the PCB
D	E	M:	O	F	F	Exhibition mode	-	-	Press START to access edit mode. Use the  button to enable the exhibition mode (demo).
E	X	P	O	R	T	Export parameter menu		-	Press and hold the START  button for 6 seconds to begin the export procedure. This field is accessible only with the USB drive inserted in the port.
I	M	P	O	R	T	Import parameter menu		-	Press and hold the START  button for 6 seconds to begin the import procedure. This field is accessible only with the USB drive inserted in the port.

5.0 Technical parameter specifications

5.1 Boiler temperature adjustment (°C)

This entry allows for the adjustment of the boiler temperature. A factory-set hysteresis of -2°C for heating and -5°C for cooling has been configured. This means that by setting a boiler temperature at 85°C, during the heating phase the heating element will disconnect at 83°C (85-2), the temperature will then rise further due to thermal inertia.

During the cooling phase the heating element will re-engage at 80°C, (85-5).

It is recommended to never set a temperature above 88°C in order to avoid issues of boiling water in the boiler. Higher temperatures must be agreed upon with the manufacturer based on the installation conditions.

5.2 Tank temperature adjustment (°C)

This entry allows for the adjustment of the tank temperature. A factory-set hysteresis of 0°C for heating and -3°C for cooling has been configured. This means that by setting the tank temperature at 60°C, during the heating phase the heating element will disconnect at 60°C (60-0).

During the cooling phase the heating element will re-engage at 57°C (60-3)

5.3 Activating boiler Thermostop

By enabling the boiler Thermostop ensures the rinsing will be at the temperature set in the "BT" parameter. Upon completion of the wash cycle the boiler temperature is checked: if it is above or equal to the value set in the menu, the cycle will proceed with the pause phase followed by the rinsing phase, alternatively the wash cycle will be extended until the water temperature in the boiler reaches the value set in the "BT" parameter (hysteresis of -2°C).

5.4 Activating minimum tank temperature

By enabling this parameter, the dishwasher allows the wash cycle to proceed only if the temperature of the water in the tank is equal to or above 40°C. This ensures a correct washing cycle at such a temperature to prevent foam buildup in the tank.

5.5 Setting dosage for rinse aid (RGL) and detergent (DGL)

For the calibration of rinse aid and detergent dosage (if installed), it will be sufficient to specify the recommended dose expressed in grams per litre, which can be directly obtained from the container or from the technical data sheet of the product used. The PCB automatically calculates the amount of product to be dosed both during the initial load and during replenishment between cycles.





At the end of the filling phase, both the detergent dispenser and the rinse aid dispenser operate for the time required to dose the amount of product needed for the initial load.


The replenishment of detergent and rinse aid takes place 10 seconds after the start of the washing cycle.

If the rinse time is changed, the replenishment doses are automatically recalculated.

5.6 Filling rinse aid pipes (RIN) and detergent pipes (DET)

These 2 settings allow for the rinse aid and detergent dispensers to be actioned for the time necessary to fill the small tubes.

- Press START  to enter in edit mode.
- Use the   button to change the value from OFF to ON
- Confirm with the START  button.

The dispenser is actioned for a pre-set timeframe (240 seconds for the rinse aid and 70 seconds for the detergent). The display will indicate a countdown. It is not necessary to wait until the end of the operation to move on to successive settings; simply press the ON/OFF  button to return to the other menu settings.

N.B. exiting the parameters menu will interrupt the action of the dispensers.

5.7 Adjusting rinse times

This setting allows to modify the rinsing timeframes. Increasing or decreasing this value will not alter the total wash cycle time but only the duration of the rinsing.

For dishwashers with a network pressure boiler, the rinse time adjustment must be carried out based on the dynamic pressure of the dishwasher's water supply. The recommended parameters are as follows:

Pressure (BAR)	Rinsing time (sec)
2,5 ÷ 3,0	14
2,0 ÷ 2,4	16
1,5 ÷ 1,9	18

For dishwashers with an atmospheric boiler (PRS), adjusting the rinse time parameter largely depends on the type of dishware to be rinsed.

5.8 Regeneration frequency and water softener settings

This parameter only appears in dishwashers with an incorporated water softener and allows to set the number of wash cycles needed to be performed prior to carrying out the resin regeneration.

The process of regeneration takes place automatically during downtime in the course of the washing cycle time. During the regeneration phase the wash cycles may be extended so as to allow the completion of the regeneration process.

The selection of the regeneration frequency is subject to the hardness of the water supplied and can be seen in the table that follows:

Water hardness (°f)	Water hardness (°d)	Regeneration frequency
> 35	> 19,7	Install external water softener
31 ÷ 35	17,5 ÷ 19,7	16
28 ÷ 30	15,3 ÷ 17,4	20
24 ÷ 27	13 ÷ 15,2	22
20 ÷ 23	10,8 ÷ 12,9	26
16 ÷ 19	8,5 ÷ 10,7	30
11 ÷ 15	5,7 ÷ 8,4	35
0 ÷ 10	0 ÷ 5,6	No water softener

For the regeneration process to be successful, coarse salt must be present in the salt container. If the salt is missing, the display will show the message "SALT" in each of the following conditions:

- at the start of each wash cycle
- at the end of each wash cycle
- every time the door is opened
- every 30 seconds at all other stages

The low salt warning indicator will remain lit on the display.



The salt shortage message does not interrupt the normal function of the dishwasher; however, it is recommended to replenish the salt container as soon as possible to ensure the proper functioning of the water softener.

The presence of salt is detected by a float switch located in the body of the water softener. The float switch controls a reed switch, which is connected to the power board. By adding salt to the container, a brine solution is created with a density that allows the float switch to float, moving away from the reed switch and resetting the salt shortage indicator.

The low salt warning is cleared only once the added salt has at least partially dissolved.

5.9 Cycle counter menu and scheduled maintenance

At the display prompt N.CYCLE, pressing START gives access to the submenu which includes 2 items:

- Total cycles (TOTAL)
- Partial cycles (PART.AL)

These two parameters show the number of cycles (namely all the wash cycles performed starting from the first installation) and the number of partial cycles, (namely the cycles performed starting from the last reset).

To view the cycles no action is required: simply wait for 3 seconds at the display of TOTAL or PART.AL to see the number of cycles indicated.


The cycle counter manages the scheduled maintenance tasks. After 40,000 cycles (approximately 1.5 years of operation), each time the dishwasher is turned on, the display will show the message "**SERVICE REQUIRED**", and the maintenance indicator will remain lit.



The **SERVICE** message does not block the normal operation of the dishwasher; however, it is recommended to perform the scheduled maintenance as per the following table as soon as possible, to ensure the continued proper functioning of the dishwasher and to extend its lifespan.


Scheduled maintenance
General inspection of the dishwasher and replacement of worn components.
Limescale cleaning
Cleaning of rotors and nozzles
Cleaning of boiler
Replacement of boiler gasket
Cleaning of the solenoid valve filter
Assess the condition of the hydraulic circuit
Assess the condition of the electrical circuit
Check the condition of the electrical cable
Check the condition of the electrical connections
Check electrical components performance (heating elements, dispensers, auxiliary pumps)
Reset partial cycle counter

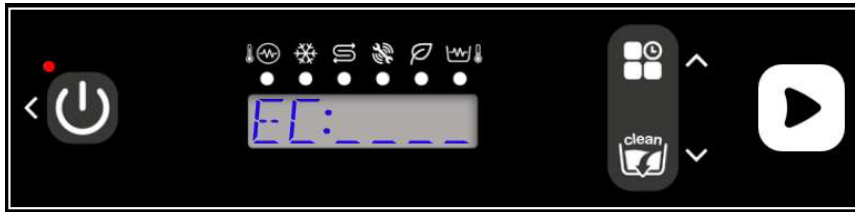
After carrying out the maintenance, it is possible to remove the warning message by resetting the partial cycle counter.




To reset the partial count, simply press and hold the START  button for 6 seconds at the "**PART.AL**" option. During the reset, the message "RES:CYC" will flash on the display, and the dots above the screen will progressively light up. Once the reset is complete, the display will stop flashing, and the partial cycle count will be reset to 0.

5.10 PCB Reset

Resetting the control board restores the power board to its initial configuration and resets all parameters to their default values. **After the reset it will be necessary to re-enter the electronic code (a parameter found on the dishwasher's data plate identified as "electronic code").**

To launch the reset, navigate to the "RES:PCB" parameter, then press and hold the START  button for 6 seconds. During the reset, the message "RES:PCB" will flash on the display and the dots above the screen will progressively light up. Once the reset is complete the display will immediately request to enter the electronic code:



The first dash will be flashing. Use  and  to scroll the digits and confirm with the START  button. Confirming moves on to the next digit.

Repeat the procedure for the remaining digits. Upon confirming the fourth digit the dishwasher turns off and moves into stand-by mode.

N.B. resetting the control board does not reset the partial/total cycle counter.

5.11 Electronic code




The EC field: in the installer menu this serves only view the electronic code which has been set in the control board.

5.12 Firmware

La FW field in the installer menu is simply a data point for consultation which shows the firmware version installed in the control board.

5.13 Exhibition mode (DEMO)

The exhibition mode DEMO can be used at exhibitions or in showrooms to demonstrate the features of the dishwasher without having to connect to the water supply. Simply:

- 1- Power the dishwasher
- 2- Navigate to the "DEM:OFF" field in the installer menu.
- 3- Press START  to enter edit mode.
- 4- Use the  button to change the parameter from OFF to ON
- 5- Confirm by pressing START 


By enabling exhibition mode, the dishwasher launches a simulation program excluding the loads. (filling, heating etc.). The display will indicate the temperatures of 85°C for the boiler and 60°C for the tank and the dishwasher will appear to be ready allowing the display of settings in demo mode.

In DEMO mode, upon switching on the dishwasher, the message HELLO is substituted with the message DEMO. The same message is repeated on the display every 30 seconds.

To exit the DEMO mode, simply power-off and then power-on the dishwasher again or reposition the parameter "DEM" to OFF.

5.14 Export menu and import menu



At the end of the installer menu there are two items (EXPORT e IMPORT) which allow you to transfer and save all the parameters of the menu onto a USB drive. This allows you to quickly "clone" other dishwashers with the same settings saved on the drive.

- 1- Disconnect the dishwasher from the power supply (either turn off the circuit breaker or unplug the power cord).
- 2- Insert an empty USB drive formatted as FAT32 into the designated port on the power board.
- 3- Reconnect the dishwasher to the power supply.
- 4- Access then installer menu and select "EXPORT" (to export data from the board to the USB drive) or "IMPORT" (to import data from the USB drive to the power board)
- 5- Press and hold the START  button for 6 seconds to initiate the data transfer.
- 6- Upon successful completion, the display will show the message "FINISH". If errors are detected and the operation fails, the display will show the message "FAIL".

P.S. When performing the import procedure, it may occur that some parameters cannot be transferred from the USB drive to the power board. This typically occurs when attempting to import data stored on a power board with a different firmware version. In such cases, the display will show the message "PART" indicating that the transfer was only partially successful.

NOTE: The IMPORT and EXPORT options will only appear if an empty and correctly formatted USB drive is inserted into the USB port.





6.0 User-controllable functions

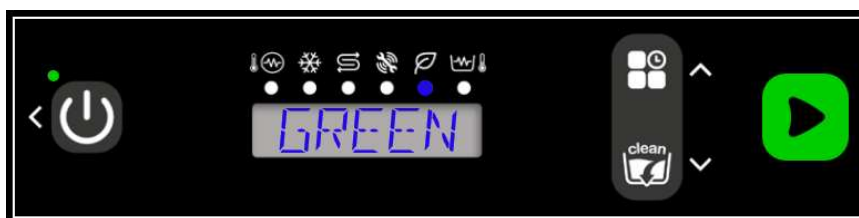
With the dishwasher turned on and ready, the customer can use the multifunction   button not only to scroll through and select the washing cycles but also to activate some auxiliary functions:

- **GREEN:** Energy-saving function.
This function is always available on all dishwashers.
- **COLD:** Cold rinse.
This function is available only subject to the electronic code.
- **P.WASH:** Cold pre-wash.
This function is available only subject to the electronic code.
- **AUT:OFF:** Autostart
This function is always available on all dishwashers.

6.1 GREEN Function

The GREEN function enables the heating of the boiler to be managed in an intelligent manner in order to reduce energy consumption. At the end of the wash cycle the boiler temperature is not taken to its set value but rather to a lower temperature. It will be sufficient to open the door to introduce a new rack or to launch a new wash cycle to reactivate the heating of the boiler temperature. During the wash cycle the boiler will automatically reach the correct temperature for rinsing.

This function is advisable when there are not so many consecutive wash cycles to run. To activate it scroll through the programs with the   button until the message "GREEN" appears. Press the START  button to enable or disable this function. The activation of the GREEN function is identified by the  LED switched on.



GREEN function enabled



GREEN function disabled





6.2 COLD Function

The COLD function is available only if factory-installed and specified by the electronic code.

By activating the COLD function, at the end of the standard wash cycle and after a 5 second pause, an 8 second cold water rinse is added, without rinse aid. The total cycle time is therefore extended by 13 seconds (unless otherwise configured by factory settings).

During the COLD cycle the START  button will appear light blue.

This function is recommended when washing beer glasses as it not only cools the glass but also removes any trace of rinse aid.

To activate the COLD function, scroll through the programs with the   button until the message "COLD" appears. Press the START  button to enable or disable this function. The activation of the COLD function is identified by the  LED switched on.



COLD function enabled



COLD function disabled

6.3 PREWASH Function

The PREWASH function is available only if factory-installed and specified by the electronic code.

By activating the PREWASH function, upon launching a wash cycle, a 15 second pre-wash will take place, with cold water and without rinse aid. Following a 5 second pause, the standard wash cycle will begin. The total wash cycle time will therefore be extended by a further 20 seconds. (unless otherwise configured by factory settings).

During the PREWASH cycle the START  button will appear light blue.

This function is recommended when washing meat handling equipment.

To activate the PREWASH function, scroll through the programs with the   button until the message P.WASH appears. Press the START  button to enable or disable this function. The activation of the P.WASH function is identified by the  LED switched on.






PREWASH function enabled



PREWASH function disabled

6.4 AUTOSTART function

The AUTOSTART function can be enabled and disabled by pressing and holding the  button (for 6 seconds) with the dishwasher "ready" (START  button appears green) or when in heating phase (START  button appears yellow). See paragraph 2.1.

7.0 Main PCB replacement

The 4035-0005 display can manage 3 power control boards:

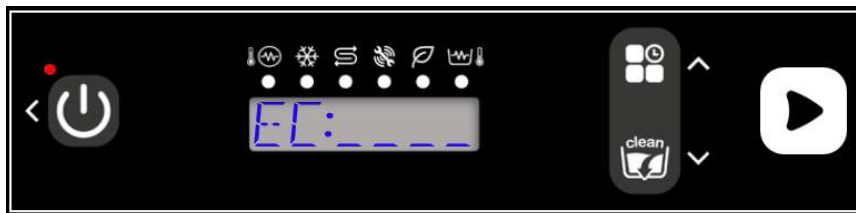
4030-0011: Dishwashers with boiler in net pressure, with or without drain pump, but without water softener, without cold rinse and without cold pre-wash.




4030-0008: Dishwashers with atmospheric boiler (PRS) with or without drain pump but without water softener, without cold rinse and without cold pre-wash.

4030-0009: Ware-washers with double wash pump, dishwashers with incorporated water softener, cold rinse function and cold pre-wash function.

The 4030-0009 PCB is universal and can be used in alternative to the other 2 PCBs.

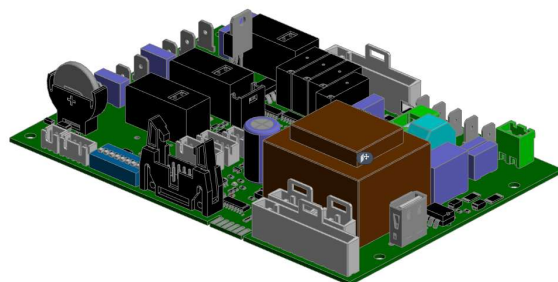
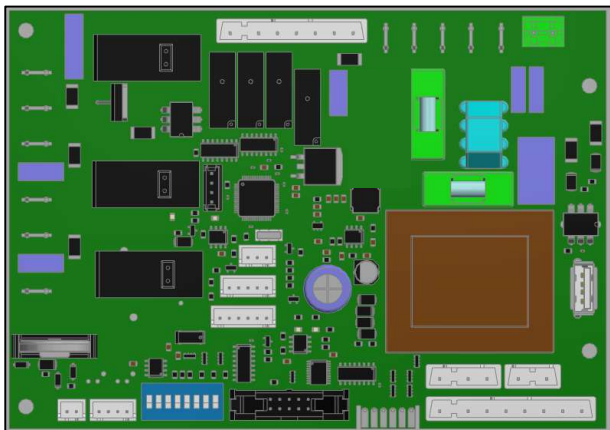
After installing the power board, at the first start up, the display will request the entry of the electronic code (parameter found on the dishwasher's data plate identified as "electronic code").



The first dash will flash. Use the  and  buttons to scroll through the characters and confirm with the START  button. Confirm to move on to the next digit.

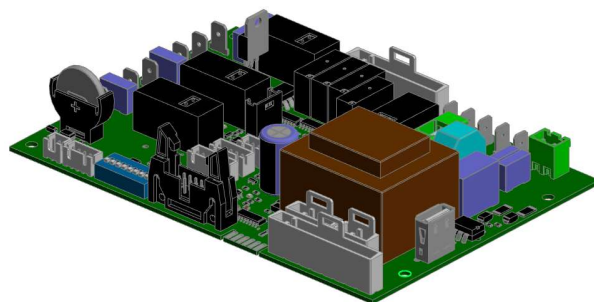
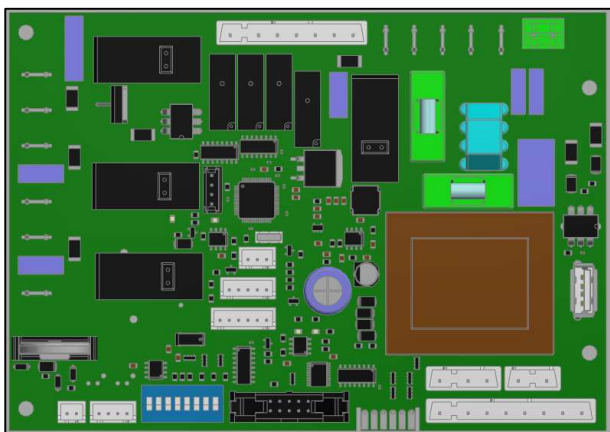
The procedure is repeated for the remaining digits, confirming the fourth digit, the dishwasher saves the electronic code and switches off.

7.1 Power control boards



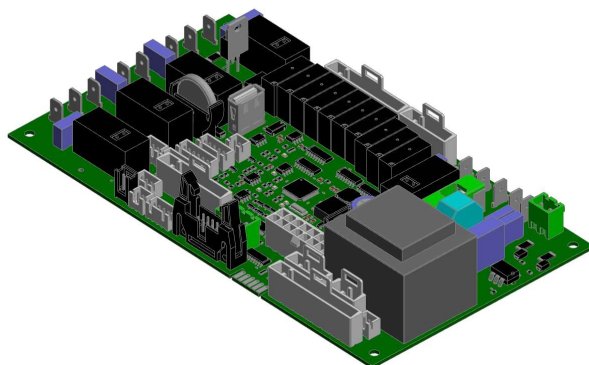
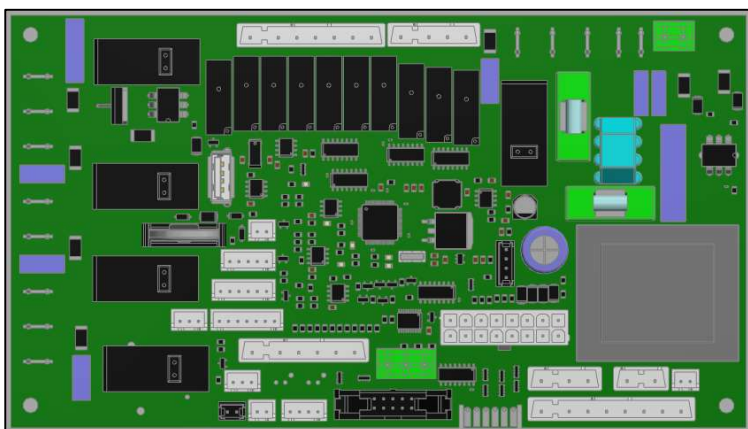
4030-0011 basic 7 relay board

Manages standard dishwashers (therefore does not include: atmospheric boiler, soft-start, smart-drain, incorporated water softener, cold rinse, cold pre-wash)



4030-0008 basic 8 relay board

Manages standard dishwashers, with atmospheric boiler, smart-drain and soft-start (therefore does not include: incorporated water softener, cold rinse and cold pre-wash)



4030-0009 universal 15 relay board

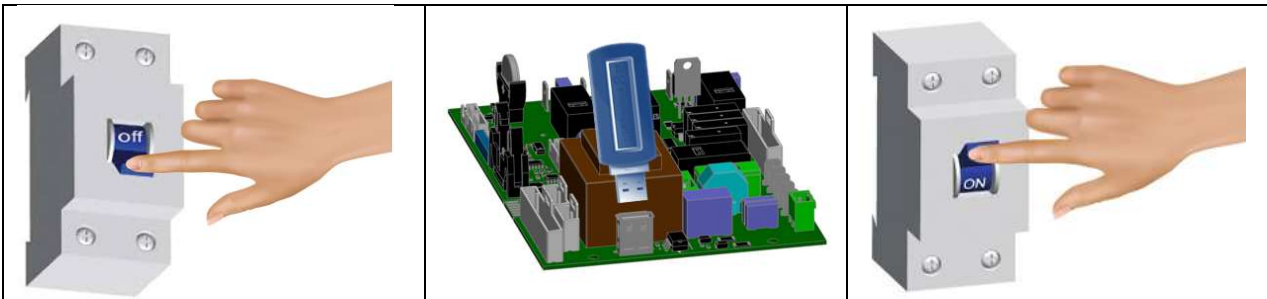
8.0 Firmware update

It is possible to perform firmware updates via a USB drive.

Request the updated firmware from the manufacturer. Be sure to provide the serial number of the dishwasher on which you wish to perform the update. The serial number is essential to verify the compatibility of the dishwasher with the new firmware.

Save the firmware file onto the USB drive. It is recommended to use an empty USB drive, preferably formatted as FAT32.

1. Turn off the power to the dishwasher.
2. Insert the USB drive into the designated port on the power board.
3. Power on the dishwasher.



Wait for the operation to complete. Once the installation of the new firmware is finished, the display will turn on.

Before removing the USB drive, it is recommended to turn off the power to the dishwasher again, remove the USB drive, wait for 10 seconds, and then power back on.



9.0 Warnings

Warning notifications may appear on the display in cases where conditions arise that could compromise the proper washing of dishware. No warning notification interrupts the normal operation of the dishwasher; however, it is recommended to address them as soon as possible to ensure the dishwasher continues to function correctly.

Notifications are indicated by the START button flashing yellow. They appear on the display when they occur and are repeated:

- At the start of each wash cycle
- At the end of each wash cycle
- Each time the door is opened
- Every 30 seconds at all other stages
except for the SERVICE notification, which is only signalled when the dishwasher is turned on.



The following notifications are defined as shown:



Warning	Cause	Solution	Display
SALT MISSING	The salt is missing in the water softener tank (only applicable to dishwashers with an incorporated water softener).	Add salt to the water softener	SALT  The light turns on
SERVICE	The threshold of 40,000 wash cycles has been reached or exceeded, and scheduled maintenance is required	Perform the scheduled maintenance and reset the partial cycle counter	SERVICE REQUIRED  And the light turns on
RINSE AID CANISTER EMPTY	The notification can only appear if the canister level sensor (optional) has been requested. It indicates the lack of rinse aid in the canister.	Substitute the rinse aid canister	R:EMPTY
DETERGENT CANISTER EMPTY	The notification can only appear if the canister level sensor (optional) has been requested. It indicates the lack of detergent in the canister.	Substitute the detergent canister	D:EMPTY

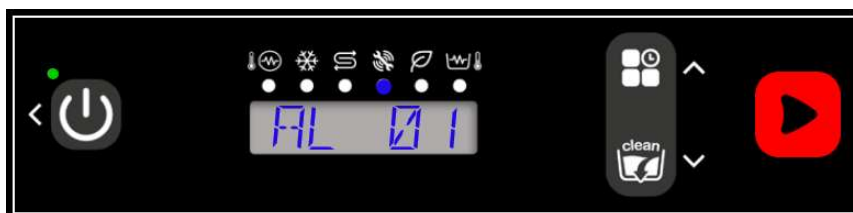
10.0 Alarms

An alarm message may result in the event of a malfunction in a component of the dishwasher or due to an incorrect operation by the user.

Some alarms completely stop the machine until the issue is resolved, while others can be bypassed, allowing the dishwasher to operate with reduced functionality.

Alarms are displayed on the screen with the abbreviation **AL** followed by an error code. If the alarm is critical, the START  button lights up fixed red, while if the alarm is by-passable, the START  button flashes red.

To bypass an alarm, press and hold the START  button for 5 seconds. "ALARM BYPASS" will appear on the display. From this moment the dishwasher will operate with reduced functionality until the issue is resolved. A bypassed alarm is indicated by the illumination of the  LED



To cancel the bypass simply switch off and switch back on the dishwasher.

10.1 Table of alarms

Alarm	Cause	User checks	Installer checks
AL01 (critical-blocking)	Tank filling failure. During the filling process, the dishwasher did not reach the required level within the expected time.	Water supply tap closed. Overflow not inserted or incorrectly inserted. Supply hose crushed. Rinse nozzles clogged.	Faulty solenoid valve Dirty solenoid valve filter Boiler clogged with limescale Faulty tank pressure switch Broken or dirty air chamber Damaged pressure switch tube Damaged solenoid valve relay
AL02 (bypassable)	Boiler heating failure. During the heating phase, the boiler temperature did not increase within the expected time.	Request technical assistance. It is possible to bypass the alarm by disabling the boiler heating. The dishwasher will rinse with cold water, so be cautious of possible foam buildup.	Faulty boiler heating element. Heating element covered in limescale. Faulty solenoid valve. Compromised electrical connections. Faulty relay on the board. Faulty three-way resistance contactor.
AL03 (bypassable)	Tank heating failure. During the heating phase, the tank temperature did not increase within the expected time.	Request technical assistance. It is possible to bypass the alarm by disabling the tank heating. The dishwasher will rinse with cold water, so be cautious of possible foam buildup.	Faulty tank heating element. Heating element covered in limescale. Faulty solenoid valve. Compromised electrical connections. Faulty relay on the board.
AL04 (critical-blocking)	Tank draining failure. At the end of the draining cycle, the tank did not empty completely.	Overflow inserted (if present). Clogged filter. Drain hose blocked, improperly positioned, or crushed.	Drain pump blocked or clogged. Faulty drain pump relay. Damaged tank pressure switch. Clogged air chamber.
AL05 (critical-blocking)	Boiler filling failure.	Water supply tap closed. Supply hose crushed.	Faulty solenoid valve. Dirty solenoid valve. Boiler clogged with limescale. Faulty boiler pressure switch. Damaged boiler pressure switch tube. Faulty solenoid valve relay.
AL06 (bypassable)	Boiler sensor temperature out of range.	Request technical assistance. It is possible to bypass the alarm by disabling the boiler heating. The dishwasher will rinse with cold water, so be cautious of possible foam buildup.	Check the temperature sensor connections both on the board and on the probe. Replace the sensor if necessary.
AL07 (bypassable)	Tank sensor temperature out of range.	Request technical assistance. It is possible to bypass the alarm by disabling the tank heating. The dishwasher will rinse with cold water, so be cautious of possible foam buildup..	Check the temperature sensor connections both on the board and on the probe. Replace the sensor if necessary.
AL08 (bypassable)	Thermostop timeout. During the Thermostop phase, the boiler fails to heat the water within 8 minutes.	Request technical assistance. It is possible to bypass the alarm by disabling the boiler heating. The dishwasher will rinse with cold water, so be cautious of possible foam buildup.	Faulty boiler heating element. Faulty solenoid valve. Compromised electrical connections. Faulty boiler heating element relay. Faulty three-phase heating element contactor.
AL 09 (bypassable)	Boiler safety thermostat triggered due to overheating.	Request technical assistance. It is possible to bypass the alarm by disabling the boiler heating. The dishwasher will rinse with cold water, so be cautious of possible foam buildup.	Faulty boiler pressure switch. Faulty boiler sensor. Damaged boiler heating element relay. Faulty three-phase heating element contactor. Reset the safety thermostat.
AL 10 (bypassable))	Tank safety thermostat triggered due to overheating.	Request technical assistance. It is possible to bypass the alarm by disabling the tank heating. The dishwasher will rinse with cold water, so be cautious of possible foam buildup.	Faulty tank pressure switch. Faulty tank sensor. Damaged tank heating element relay. Reset the safety thermostat.
AL 14 (bypassable)	Safety pressure switch triggered on SMART type dishwasher.	Water level in the tank too high. The drain pump is unable to restore the correct level.	Clogged filter. Blocked drain. Drain pump blocked or clogged. Damaged drain pump relay.

ALARM RESET: By turning the dishwasher off and on again, all alarms are reset; however, if the cause of the problem has not been resolved, the alarm message will appear again.

With a view to improving the product, the manufacturer reserves the right to modify its features without prior notice.