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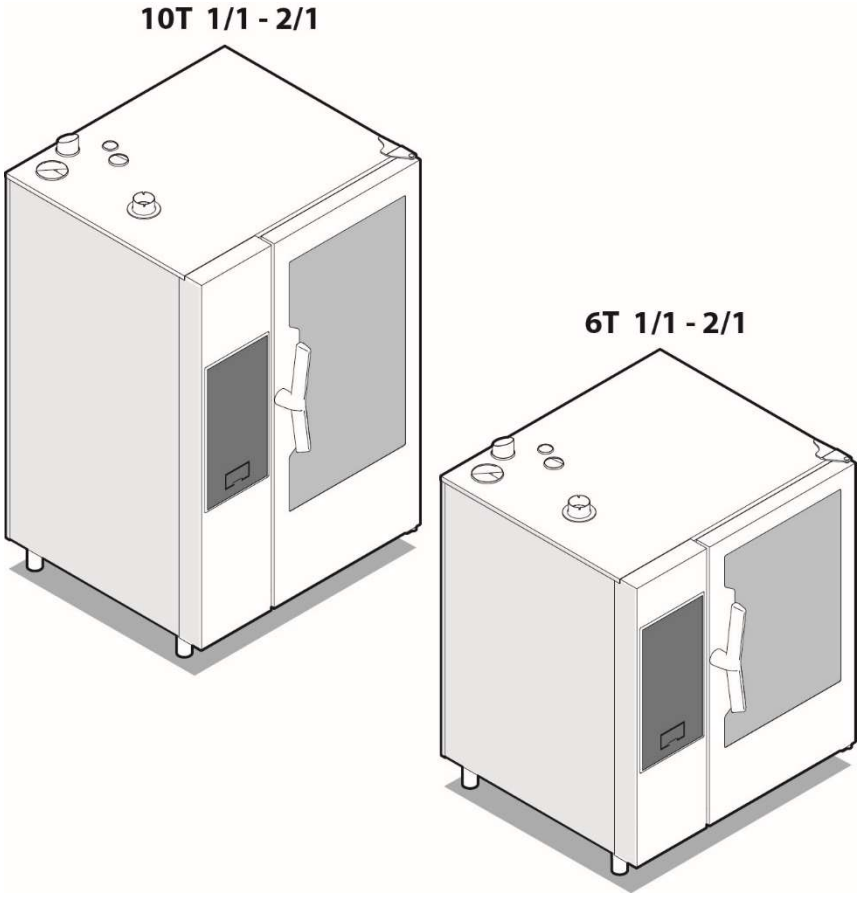
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Diamond

SERVICE MANUAL

SKYLINE OVEN 6-10 ELECTRIC



Document made by Product Care – Technical Training & Service – Vallenoncello PN/Italy

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REVISIONS UPDATE:

EDITION	DESCRIPTION	DATE
1.00	First edition of Service Manual	**April 2019**
1.01	Inserted § 6.3.3 (door handle) and some updates regarding software update (digit & touch)	**May 2019**
1.02	Update in wizard procedure and new § 2.6.1.1 –General update	**June 2019**
1.03	Update on: settings and service area,parameter list, boiler maintenance, by-pass environment, software update, lambda, ISG water injection timing, alarms	**July 2019**

Foreword

 The service manual (here in after Manual) provides the engineer 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.

If, after reading this manual, there are still doubts regarding machine use, do not hesitate to contact the Manufacturer or the Customer Care to receive prompt and precise assistance for better operation and maximum efficiency of the machine. During all stages of machine assessment, 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 without the consent of the manufacturer.
- This manual is available in digital format by:
    - contacting the dealer or reference customer care;
    - downloading the latest and up to date manual/technical bulletin(s) on the web site: www.Diamond.com/professional.

The manual must always be part of the documentation available when servicing the machine.

THIS MANUAL IS FOR 6-10 ELECTRIC OVENS, IN SPECIFIC, THE MODELS COVERED BY THE SERVICE MANUAL ARE:

MODEL LEGEND	
Z	Model for Zanussi LW
T	Model for Alpeninox/Multibrand LW
D	Model for Horecaland (Diamond)
E	Model for Diamond LW
CO	Combi
E	Electric
~~G~~	~~Gas~~
61	6 GRIDS 1/1
62	6 GRIDS 2/1
101	10 GRIDS 1/1
102	10 GRIDS 2/1
~~201~~	~~20 GRIDS 1/1~~
~~202~~	~~20 GRIDS 2/1~~
661	6 GRIDS 1/1 on 6 GRIDS 1/1
662	6 GRIDS 2/1 on 6 GRIDS 2/1
611	6 GRIDS 1/1 on 10 GRIDS 1/1
612	6 GRIDS 2/1 on 10 GRIDS 2/1
T2	boiler touch / 2-GLASS
T3	boiler touch / 3 GLASS
K2	boilerless touch / 2 GLASS
K3	boilerless touch / 3 GLASS
B2	boiler digital / 2 GLASS
B3	boiler digital / 3 GLASS
C2	boilerless digital / 2 GLASS
C3	boilerless digital / 3 GLASS
A	STD el. (380-415 3N 50/60Hz)
B	Greene King (400 3N 50/60Hz)
C	Norway (230 3 50/60Hz) e HORECALAND
D	Marine (440 3 60Hz)
E	Marine (400 3 50Hz)
F	Marine (480 3 60Hz)
~~G~~	~~STD gas (230 1 50/60Hz)~~
~~H~~	~~LPG gas (230 1 50/60Hz)~~
I	Usa el (480 3 60Hz)
L	USA el. (208 3 60Hz)
M	USA el. (240 3 60Hz)
~~N~~	~~USA gas (208 2 60Hz)~~
~~O~~	~~USA gas (120 1N 60Hz)~~
P	JAPAN el. (200 3 50/60Hz)
~~Q~~	~~Japan gas (100 50/60Hz)~~
~~K~~	~~Japan lpg (100 50/60Hz)~~
S	Australia (el. 415-440)
T	Coop
~~U~~	~~Australia (gas 220-240)~~
0	NO VARIANTS
1	BOILER 316L
2	P84-P85 NORDIC
S	SMOKER
~~K~~	~~kit GPL~~
L	LEFT HINGED DOOR
B	BAKERY (40X60)
V	VARIANTS (WASH, PROBE, SHELVES)
W	WASHING

EXAMPLE:

PNC : 217720

FACTORY MODEL :

ECOE61T2A0

Refer also to § DATA PLATE (IDENTIFICATION STICKER)

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1 GENERAL INFORMATION

1.1 GENERAL INFORMATION

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 machine or the product.



WARNING
Danger of magnetic fields.



IMPORTANT
Important instructions or information on the product



Read the instructions before using the appliance



Clarifications and explanations

- Only specialized personnel are authorized to operate on the machine.
- This appliance must not be used by minors and adults with limited physical, sensory or mental abilities or without adequate experience and knowledge regarding its use.
  – Do not let children play with the appliance.
  – Keep all packaging and detergents away from children.
  – Cleaning and user maintenance shall not be made by children without supervision.
- Do not store explosive substances, such as pressurized containers with flammable propellant, in this appliance or close to the appliance
- Do not remove, tamper with or make the machine “CE“ marking illegible.
- Refer to the data given on the machine’s data plate “CE“ marking for relations with the Manufacturer (e.g. when ordering spare parts, etc.).
- When scrapping the machine, the “CE“ marking must be destroyed.

1.2 SAFETY INFORMATION/PRECAUTIONS

• Risks mainly of a mechanical, thermal and electrical nature exist in the machine. Where possible the risks have been neutralized:
– directly, by means of adequate design solutions.
– indirectly by using guards, protection and safety devices.
• During maintenance several risks remain, as these could not be eliminated, and must be neutralized by adopting specific measures and precautions.
• Do not carry out any checking, cleaning, repair or maintenance operations on moving parts. Workers must be informed of this prohibition by means of clearly visible signs.
• To guarantee machine efficiency and correct operation, periodical maintenance must be carried out according to the instructions given in this manual.
• Make sure to periodically check correct operation of all the safety devices and the insulation of electrical cables, which must be replaced if damaged.
• Extraordinary machine maintenance operations must only be carried out by specialized Technicians provided with all the appropriate personal protection equipment (safety shoes, gloves, glasses, overalls, etc.), tools, utensils and ancillary means.
• Never operate the machine, removing, modifying or tampering with the guards, protection or safety devices.
• Before carrying out any operation on the machine, always consult the manual which gives the correct procedures and contains important information on safety.

1.2.1 PERSONAL PROTECTION EQUIPMENT

Summary table of the **P**ersonal **P**rotection **E**quipment (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	—	●	●[2]	●	—
Normal use	●	●	●[1]	○	—
Adjustments	○	●	○	○	—
Routine cleaning	○	●	●[1 or 2]	○	—
Extraordinary cleaning	○	●	●[1 or 2]	○	—
Maintenance	○	●	○	○	—
Dismantling	○	●	○	○	—
Scrapping	●	●	●	●	—
Key:					
●	PPE REQUIRED				
○	PPE AVAILABLE OR TO BE USED IF NECESSARY				
—	PPE NOT REQUIRED				

1. During Normal use, gloves must be heatproof to protect hands from contact with hot food or hot parts of the appliance and/or when removing hot items from it. Failure to use the personal protection equipment by operators, specialized personnel or users can involve exposure to chemical risk and possible damage to health (depending on the model).
2. During these operations, the worn 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)

1.2.2 GENERAL INFORMATION

- The machines are provided with electric and/or mechanical safety devices for protecting workers and the machine itself. Therefore the user must not remove or tamper with such devices. The Manufacturer declines any liability for damage due to tampering or their non-use.
- Never operate the machine, removing, modifying or tampering with the guards, protection or safety devices.
- Do not make any modifications to the parts supplied with the appliance.
- Several illustrations in the manual show the machine, or parts of it, without guards or with guards removed. This is purely for explanatory purposes. Do not use the machine without the guards or with the protection devices deactivated.
- Do not remove, tamper with or make illegible the safety, danger and instruction signs and labels on the machine.
- Air recirculation must take into account the air necessary for combustion, 2 m³/h/kW of gas power, and also the "well-being" of persons working in the kitchen.
- Inadequate ventilation causes asphyxia. Do not obstruct the ventilation system in the place where this appliance is installed. Do not obstruct the vents or ducts of this or other appliances.
- Place emergency telephone numbers in a visible position.

- The measured sound level emitted “A“ does not exceed 70 dB (“A“).
- Turn the appliance off in case of fault or poor operation.
- Do not use products (even if diluted) containing chlorine (sodium hypochlorite, hydrochloric or muriatic acid, etc.) to clean the appliance or the floor under it.
- Do not use metal tools to clean steel parts (wire brushes or Scotch Brite type scouring pads).
- Do not allow oil or grease to come into contact with plastic parts. Do not allow dirt, fat, food or other residuals to form deposits on the appliance.
- Do not spray water or use steam to clean the equipment.
- Do not store or use gasoline or other flammable vapors, liquids or items in the vicinity of this or any other appliance.
- Do not spray aerosols in the vicinity of this appliance while it is in operation.
- Never check for leaks with an open flame.

1.2.3 RESIDUAL RISKS

- The machine has several risks that were not completely eliminated from a design standpoint or with the installation of adequate protection devices. Nevertheless, through this manual the Manufacturer has taken steps to inform operators of such risks, carefully indicating the
personal protection equipment to be used by them. Sufficient spaces are provided for during the machine installation stages in order to limit these risks.
To preserve these conditions, the areas around the machine must always be:
– kept free of obstacles (e.g. ladders, tools, containers, boxes, etc.);
– clean and dry;
– well lit.
For the Customer's complete information, the residual risks remaining on the machine are indicated below: such actions are deemed improper and therefore strictly forbidden.

Residual risk	Description of hazardous situation
Slipping or falling	The operator can slip due to water or dirt on the floor
Burns/abrasions (e.g. heating elements)	The operator deliberately or unintentionally touches some components inside the machine without using protective gloves
Electrocution	Contact with live parts during maintenance operations carried out with the electrical panel powered
Sudden closing of the lid/ door/oven door (if present, depending on the appliance type)	The operator for normal machine use could suddenly and deliberately close the lid/door/oven door (if present, depending on the appliance type)
Tipping of loads	When handling the machine or the packing containing it, using unsuitable lifting systems or accessories or with the load unbalanced

Mechanical safety characteristics, hazards
- The appliance does not have sharp edges or protruding parts. The guards for the moving and live parts are fixed to the cabinet with screws, to prevent accidental access.

Protection devices installed on the machine
- The guards on the machine are:
  – fixed guards (e.g. casings, covers, side panels, etc.), fixed to the machine and/or frame with screws or quick-release connectors that can only be removed or opened with tools

Safety signs to be placed near the machine area

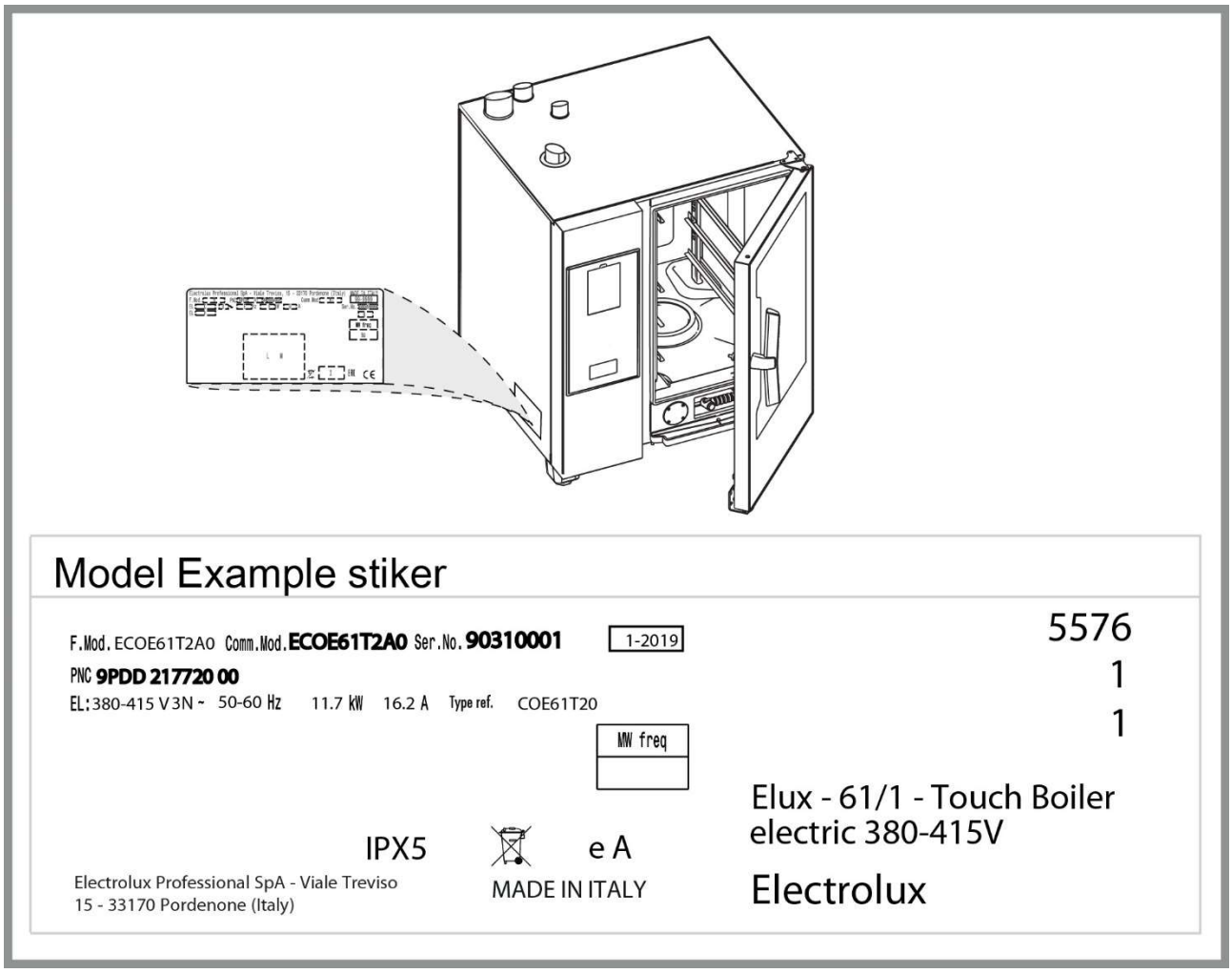
Prohibition	Meaning
	do not remove the safety devices
	do not use water to extinguish fires (placed on electrical parts)
	Keep the area around the appliance clear and free from combustible materials. Do not keep flammable materials in the vicinity of the appliance
	Install the appliance in a well-ventilated place to avoid the creation of dangerous mixtures of unburnt gases in the same room

Danger	Meaning
	danger of burns
	danger of electrocution (shown on electrical parts with indication of voltage)
	risk of electromagnetic fields
	Access forbidden to wearers of electrical stimulator (pacemakers)

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

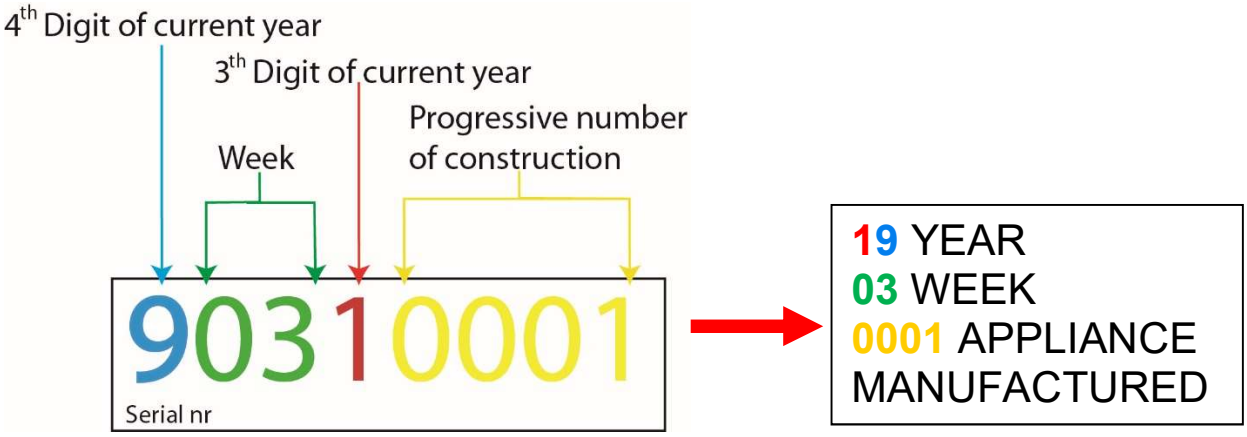
1.3 DATA PLATE (IDENTIFICATION STICKER)

The identification sticker is located on the side panel. The meaning of the various information is listed below:



SERIAL NUMBER (PRODUCTION DATE) is necessary to find the correct spare part or to ask tech. support.

EXAMPLE: Serial Number 9 03 1 0001



1.4 TECHNICAL DATA

ELECTRIC MODELS

No. of grids		MODELS											
		6 GN 1/1		6 GN 2/1		10 GN 1/1		10 GN 2/1		20 GN 2/1		20 GN 2/1	
Power supply voltage	V	380–415	220–240	380–415	220–240	380–415	220–240	380–415	220–240	380–415	220–240	380–415	220–240
Phases	No.	3N~	3~	3N~	3~	3N~	3~	3N~	3~	3N~	3~	3N~	3~
Maximum rated current	A	17	28,7	32	55,7	29	46,6	53	91,8	56	97,5	98,6	170,5
Frequency	Hz	50–60		50–60		50–60		50–60		50–60		50–60	
Electrical power absorbed	kW	10 – 11.9		19.3 – 23		17.2 – 20.6		31.9 – 38.1		33.9 – 40.5		58.5 – 70.8	

No. of grids		MODELS					
		6 GN 1/1	6 GN 2/1	10 GN 1/1	10 GN 2/1	20 GN 2/1	20 GN 2/1
Fan motor power rating	kW	0.56	0.94	0.56	0.94	1.1	1.9
Steam unit power rating	kW	9	18	18	36	36	54
Convection unit power rating	kW	10	20	18	34	36	68

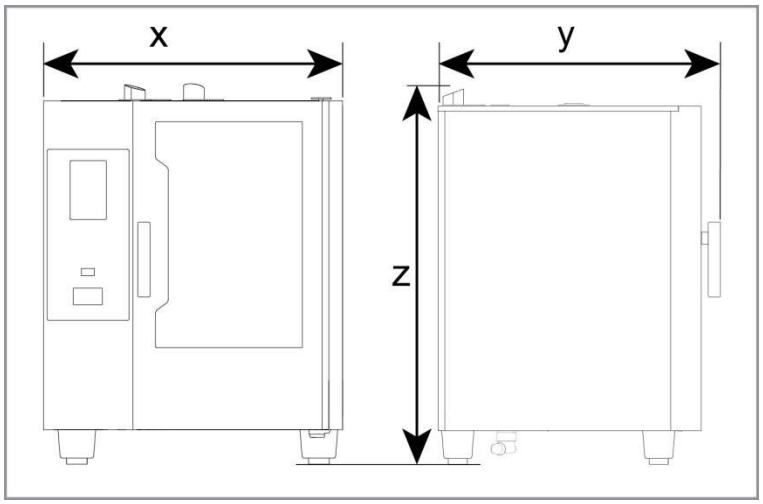
Dimensions / connections:

CWI1= G3/4” (water inlet)

CWI2 = G3/4” (water inlet)

D = 1 ¼” (water drain)

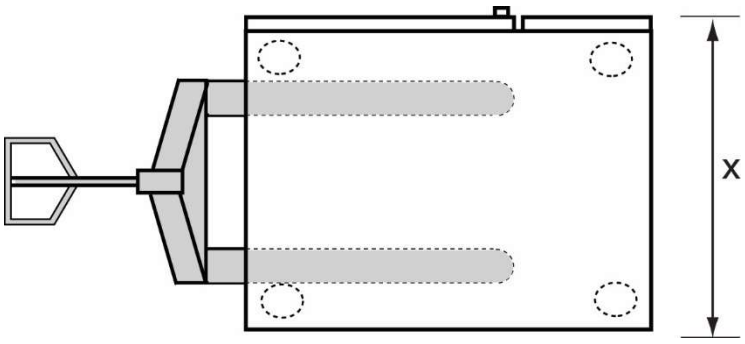
1.5 OVERALL DRAWINGS WITH MEASUREMENTS



Models	Width		Depth		Height	
	x		y		z	
	mm	inches	mm	inches	mm	inches
6 grids 1/1	867	341,33	851	335,03	858	337,79
6 grids 2/1	1090	429,13	1047	412,20	858	337,79
10 grids 1/1	867	341,33	851	335,03	1108	436,22
10 grids 2/1	1090	429,13	1047	412,20	1108	436,22

The minimum entrance dimension, <u>if you dismantle the handle</u> is:

Required entrance dimension, without handle!!	Appliance Models			
	6 GN 1/1	6 GN 2/1	10 GN 1/1	10 GN 2/1
X mm	775	971	775	971



NOTES

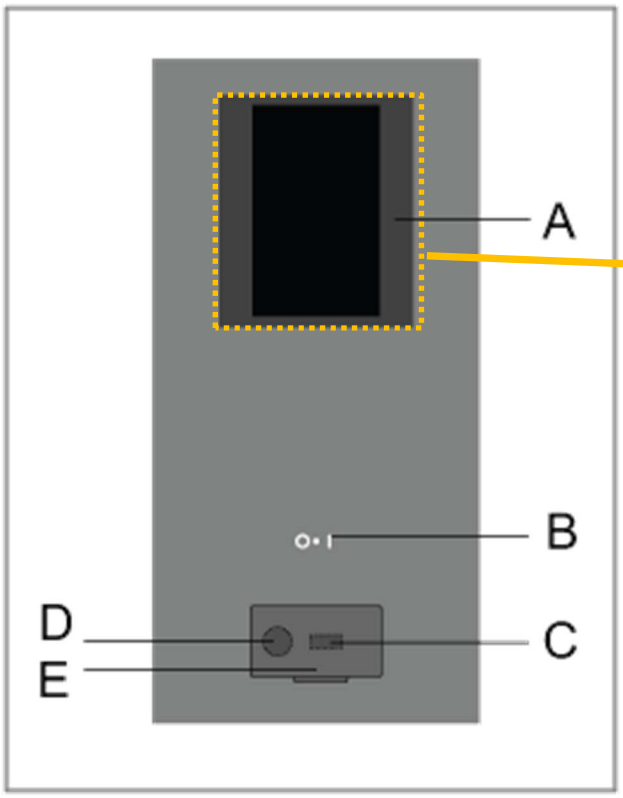
When removing the handle

1.6 CONTROL PANEL INTERFACES

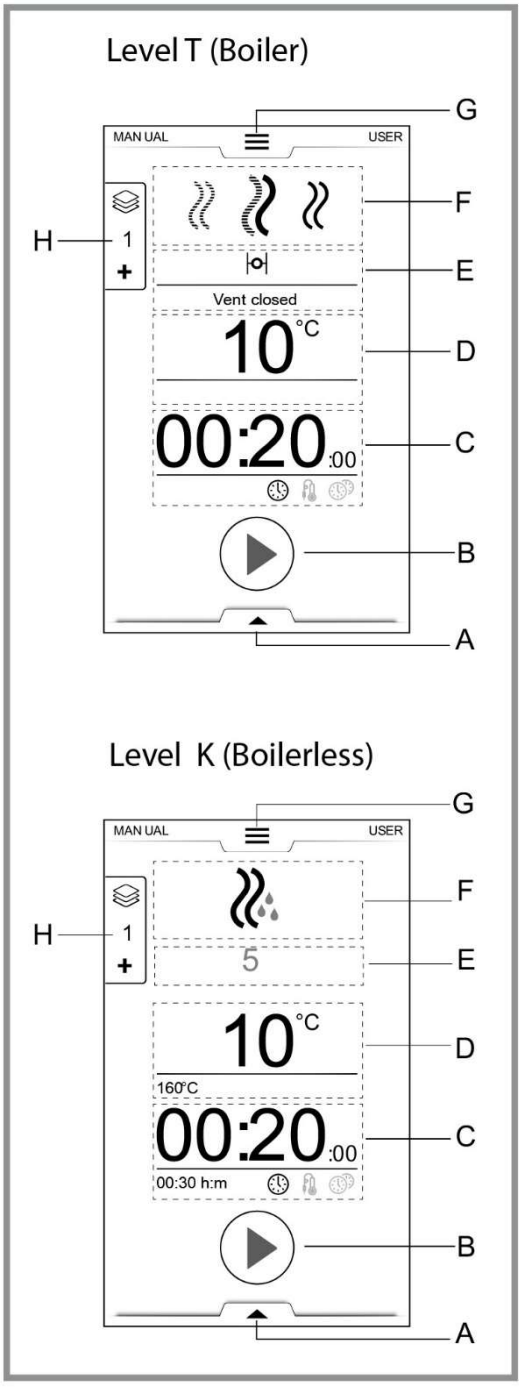
There are two type of interfaces (U.I) :

- **Level T, K** are **TOUCH** (touch screen)
- **Level B,C** are **DIGIT** (buttons)

1.6.1 LEVEL T,K (TOUCH SCREEN)



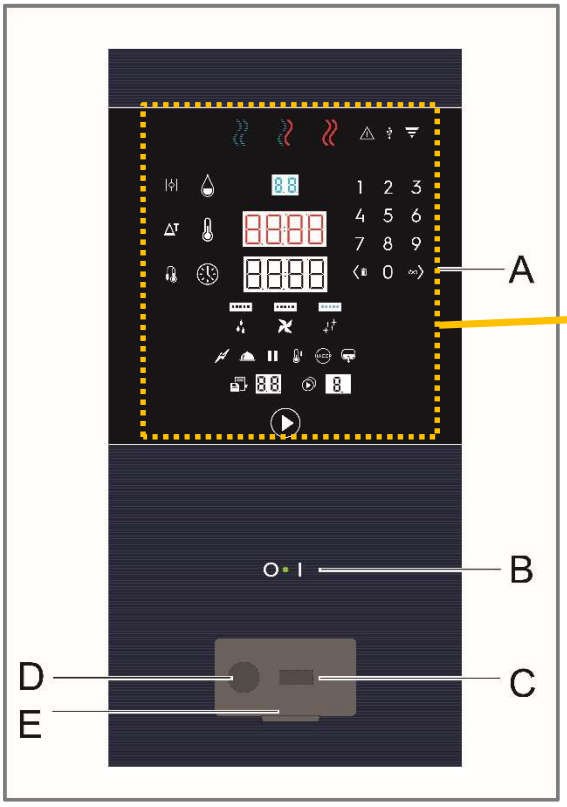
A. Control panel screen
B. ON/OFF button
C. USB key in/out
D. Print out
E. Openable flap



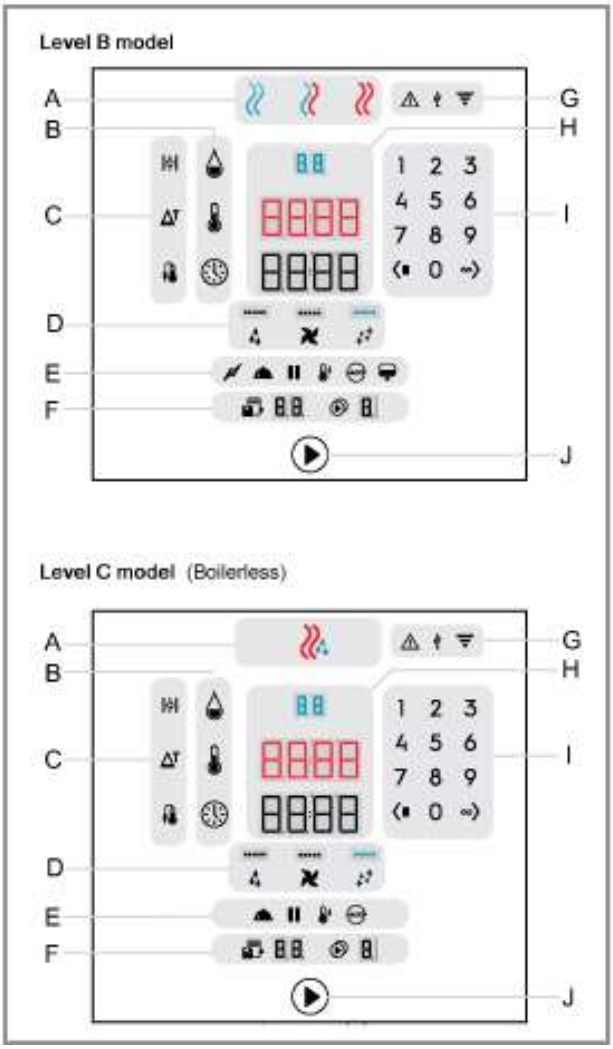
A. Utilities drawer (lower drop down menu)
B. start button
C. Time / food probe area
D. Cavity temperature
E. Cavity humidification
F. Cooking cycles
G. Main menu (drop down menu)
H. Multiphase drop down menu

1.6.2 LEVEL B, C (DIGIT)

Level B (with boiler) & C (appliance without boiler / boiler less)



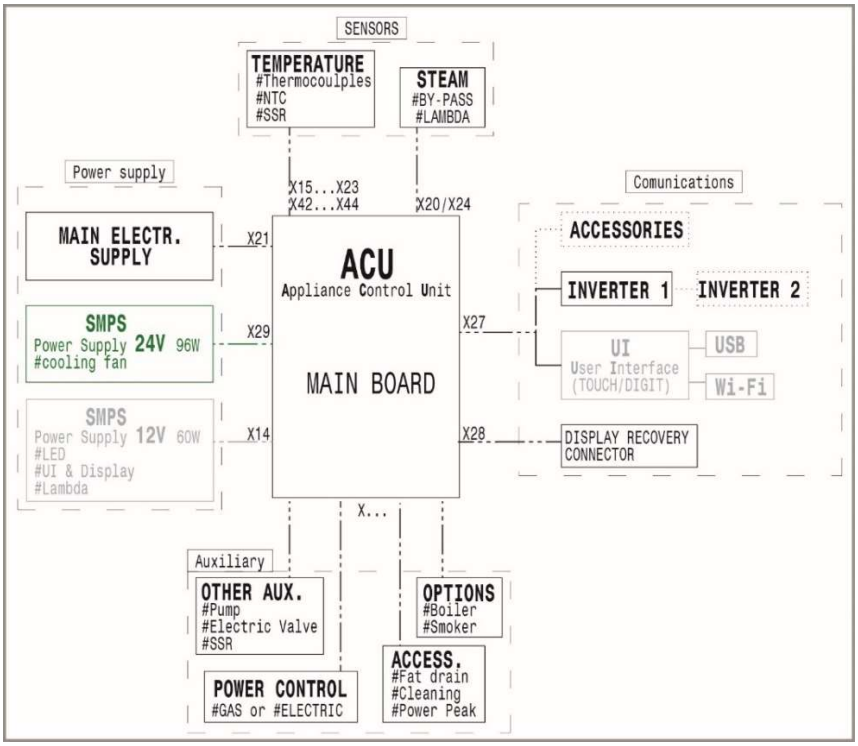
A. Control panel screen
B. ON/OFF button
C. USB key in/out
D. Print out
E. Openable flap



A. Cooking cycles
B. Cooking parameters
C. Cooking option
D. Special functions
E. Utilities
F. Programs and Multi phase
G. Indicator Lights
H. Digits display
I. Key pad
J. Start button cycle

1.7 GENERAL REFERENCE TO APPLICABLE PRODUCT CERTIFICATIONS

1.8 EQUIPMENT MODULES AND INTERACTIONS



1.9 DEFINITIONS/GLOSSARY

COMPONENTS	DEFINITION	EXPLANATION
Power board	**ACU**	Appliance control unit
=	**PRIDE-SERVICE PORTAL- AGE-LUX**	Web portals available for technical documentation consultation
User Board	**UI**	Different for touch and digit appliances
	EWD	Electric wiring diagram
	CAVITY	inner liner, inside cooking chamber
	§	chapter / paragraph
Water supply	**WTS**	water treatment system
Probe	**NTC**	Temperature probe
	ISG	instant steam generator (level C & K)
	Fresh air intake	Normal air temperature, to be considered temperature below 30C°
	SSR	Solid state relay
	Level T,K B,C	Refer to the model legend Page 3

2 INSTALLATION AND COMMISSIONING

2.1 INSTALLATION

The following chapters are intended only for authorized technicians / engineers

2.1.1 GENERAL EQUIPMENT SPECIFICATIONS / SCOPING OF WORKS

For authorized technicians refer to the documentation available on the web sites (PRIDE-SERVICE PORTAL-AGELUX etc..) In case of any doubt, refer to your local country customer care.

2.1.2 GENERAL INSTALLATION

All the non-standard or out-of-standard situations should be reported on the commissioning form and duly documented for future reference.

2.1.2.1 UNPACKING AND POSITIONING THE EQUIPMENT

Install the appliance, taking all the safety precautions required for this type of operation, also respecting the relevant fire-prevention measures.
Handle the appliance with care in order to avoid damage or danger to people. Use a pallet for handling and positioning. In case of use of a trans pallet be careful to not damage any pipe connections located beneath the appliance.
The installation diagram § TECHNICAL DATA gives the appliance overall dimensions and the position of connections (gas, electricity, water). Check that they are available and ready for making all the necessary connections.
If the appliance is installed in a place where there are corrosive substances (chlorine, etc.), it is advisable to go over all the stainless steel surfaces with a cloth soaked in paraffin oil to create a protective film. Prevent the areas where the machine is installed to be polluted with corrosive substances (chlorine, etc.). In case such prevention cannot be guaranteed, the entire stainless steel surface has to be coated by a paraffin protective film spread by using a rag soaked with paraffin. The manufacturer declines any liability for corrosive effects due to external causes.
The appliance can be installed separately or combined only with other appliances.
Leave a space of at least 50 mm between the appliance, side walls and rear wall, or in any case an adequate space to enable subsequent servicing or maintenance operations.
Suitably insulate surfaces that are at distances less than that indicated.
Maintain a distance of at least 350 mm between the appliance and any combustible walls. Do not store or use flammable materials and liquids near the appliance.
Check and, if necessary, level the appliance after positioning. Incorrect levelling can cause appliance malfunctioning.

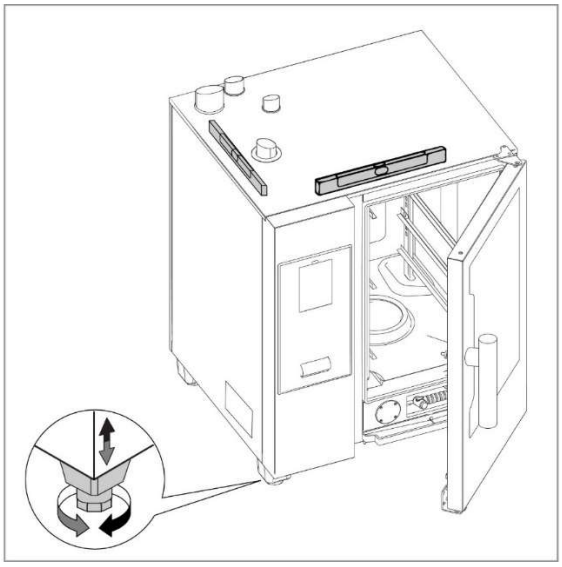


WARNING / CAUTION !

Before any operation on the machine read Chapter SAFETY INFORMATION/PRECAUTIONS. We recommend for any phase involving the removal of the packaging to use cut-resistant gloves



Carry out the following operations:
-cut the straps and remove the protective film, taking care not to scratch the surface if scissors or blades are used;
-remove the top, the polystyrene corners and the vertical protection pieces;
for the stainless steel cabinet, remove the protective film very slowly without tearing it, to avoid leaving glue stuck to the surface; should this happen, remove the traces of glue with a non-corrosive solvent, rinsing it off and drying thoroughly; go over all stainless steel surfaces vigorously with a cloth moistened with paraffin oil in order to create a protective film.
In case of permanent connection: the device lockable in the open position must be accessible even after the appliance is installed in its place.



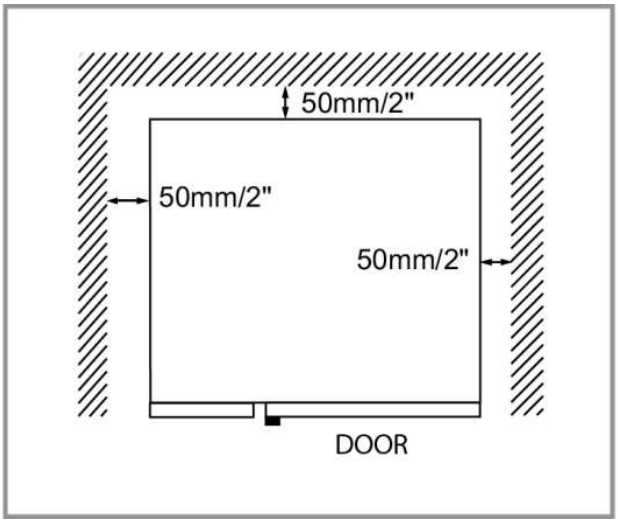
Position the appliance on a flat surface. If necessary adjust the height of the appliance by means of the adjustable levelling feet, where present, or adjust the stand's feet.

2.1.2.2 ROOM REQUIREMENTS

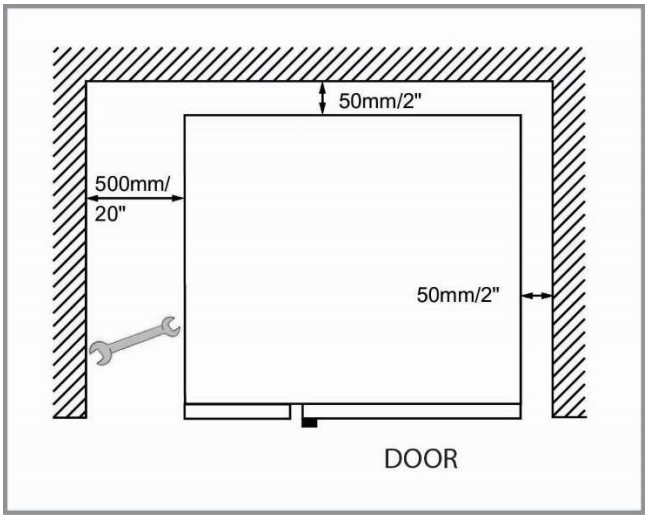
To guarantee continuous operation, the room temperature range must be between 5°C and 40°C.
Outdoor functioning is strictly allowed only if the machine can be protected against any conditions being out of the above temperature range and against any atmospheric agents.
On a hot cupboard base take precaution to install a baffle for preventing hot air to reach the oven fresh air intake; this could create malfunctioning.
High room humidity may cause water to condensate on electric components hence causing short circuit.

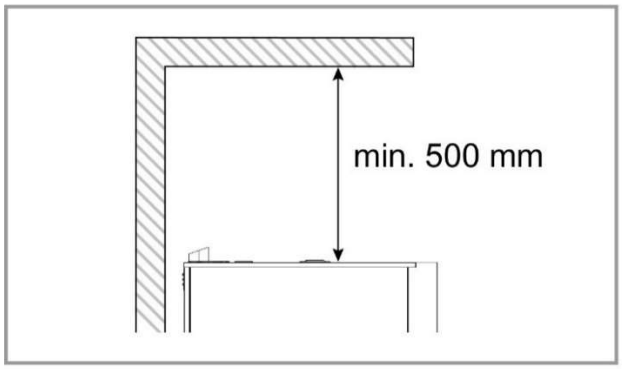
2.1.2.3 LIMITATIONS

All appliance sides must remain at 50 mm from any surface. In case of no access to the side panels it will be necessary to predispose flexible supply connections sufficiently long to permit extraction of the appliance for maintenance.

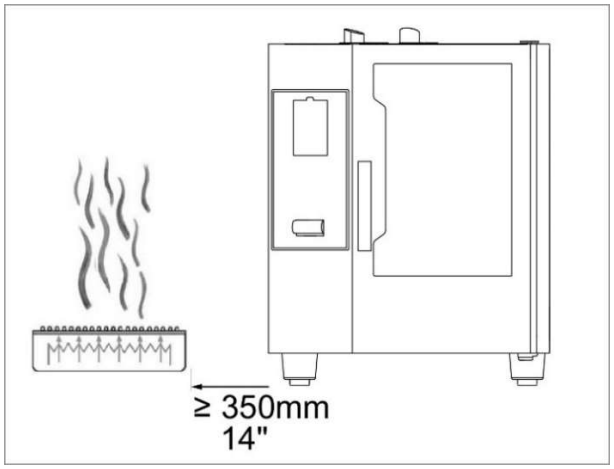


When possible leave a space of at least 500 mm between the left side of the appliance and the other surfaces to enable maintenance operations





If steam from the ventilation pipe cannot be directed into an exhaust hood or a ventilating ceiling, there must be at least 500mm clearance space above the appliance.



If heat sources are acting on the left side of the appliance the gap required is minimum 350mm.

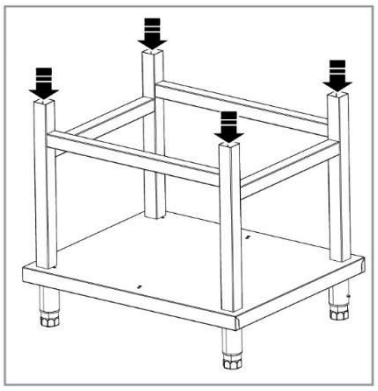
This gap is necessary to avoid over heating of the appliance.

In case that it's not possible to comply the mandatory distance it is necessary to install the "HEAT SHIELD" available as an accessory (not supplied with the appliance).

2.1.2.4 LIST OF POSSIBLE INSTALLATION SOLUTIONS

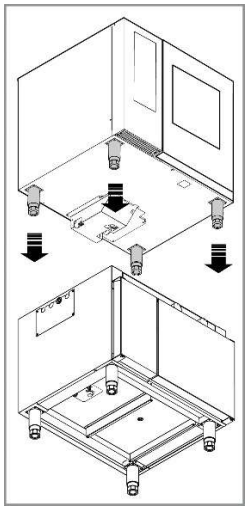
Hereinafter, the instructions for the main installation possibilities. The different accessories have a dedicated I.M; please refer also to these documents provided with the accessories or available on PRIDE.

2.1.2.4.1 MOUNTING ONTO AN OVEN STAND (SIZE GN 1/1 – 2/1)



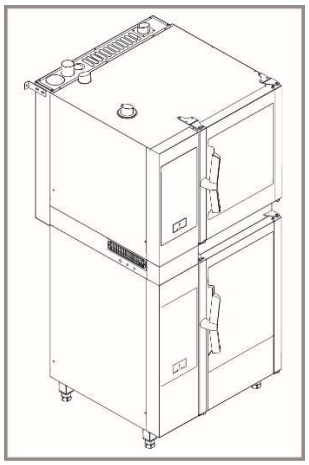
Place the oven onto the stand by inserting the locating feet into the tubular uprights.
Refer to the dedicated installation manual provided with the accessory.

2.1.2.4.2 MOUNTING ONTO A HEATED BASE (SIZES GN 1/1 – 2/1)



Refer to the dedicated installation manual provided with the accessory.

2.1.2.4.3 STAKING



Refer to the dedicated installation manual provided with the joint accessory.

2.1.2.4.4 STACKING INSTALLATIONS & HYGIENIC REQUIREMENTS

STAKING INSTALLATIONS indicated here after for safety reasons MUST be fixed to the wall or to the floor by means of the appropriate accessories included in the appliance or to be ordered, according to your model (kit “Wall brackets "or kit “Flanged feet“).

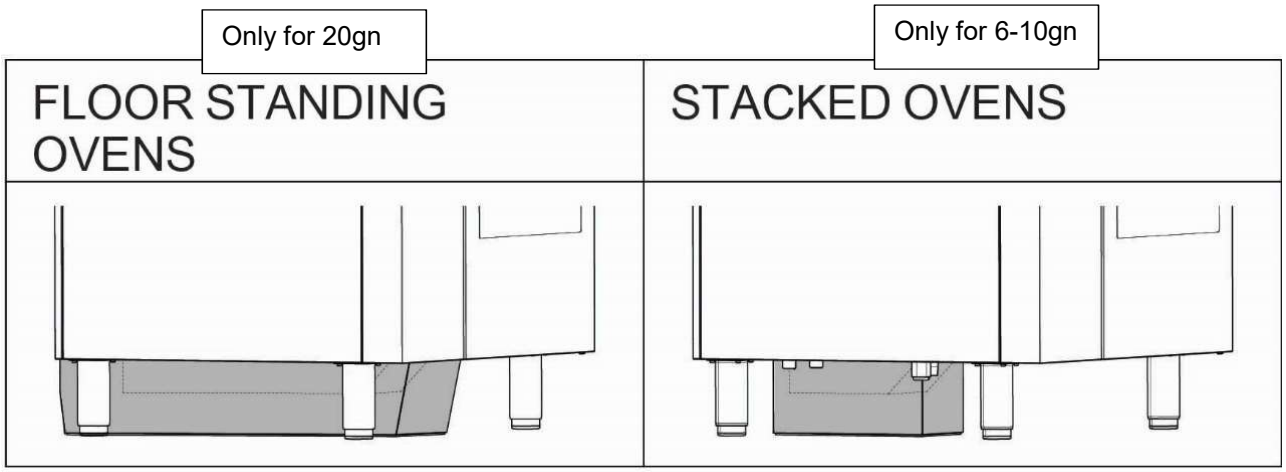
OVENS 6 GN 1/1 – 6 GN 2/1

Position	Appliance / base type	
ABOVE	OVEN 6 GN 1/1	OVEN 6 GN 2/1
BELOW	OVEN 6 GN 1/1[1] or OVEN 10 GN 1/1[1] or OPEN SUPPORT[1] or NEUTRAL CUPBOARD[1] or HEATED CUPBOARD[1] or BLAST CHILLER 30kg[1]	OVEN 6 GN 2/1 or OVEN 10 GN 2/1 or OPEN SUPPORT or NEUTRAL CUPBOARD or HEATED CUPBOARD

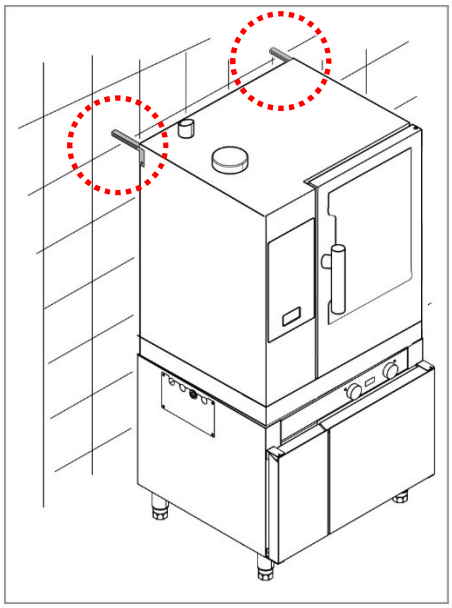
OVENS 10 GN 1/1 – 10 GN 2/1

Position	Appliance / base type	
ABOVE	OVEN 10 GN 1/1	OVEN 10 GN 2/1
BELOW	OPEN SUPPORT or NEUTRAL CUPBOARD or HEATED CUPBOARD or BLAST CHILLER 30kg	OPEN SUPPORT or NEUTRAL CUPBOARD or HEATED CUPBOARD

HYGIENIC REQUIREMENTS US, for hygiene reasons and in according to the StandardNSF4 a cover must be installed all around the AIR BREAK box. This cover is supplied with floor standing ovens and is included in the stacking kit, available also as accessory.



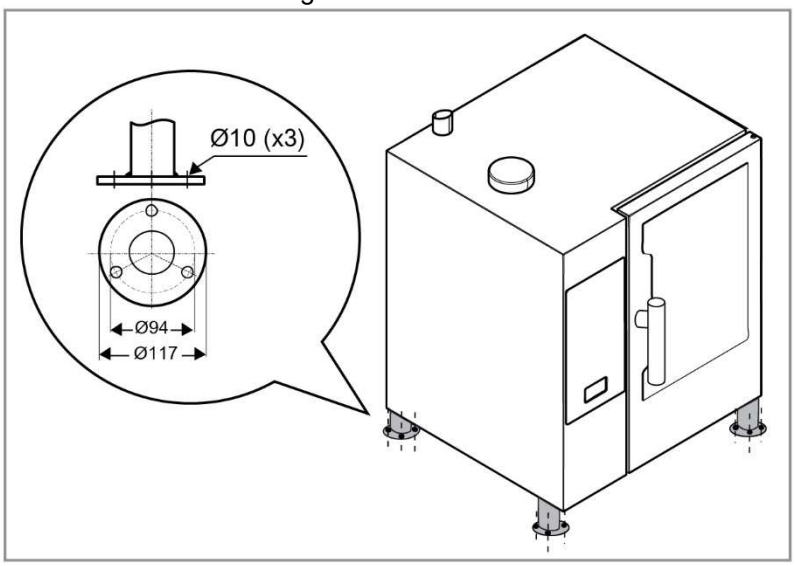
2.1.2.4.5 WALL FIXING – WALL BRACKETS



Fix the stacked oven to the wall by means of the 2 brackets; Refer to the dedicated installation manual provided with the accessory.

2.1.2.4.6 FLOOR FIXING – FLANGED FEET

If the stacked ovens cannot be fixed to the wall it is necessary to fix them to the floor. Use the “Flanged feet“ with 3 holes base for fixing to the floor.



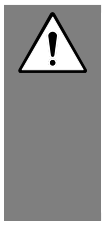
Refer to the dedicated installation manual provided with the accessory.

2.1.3 APPLIANCE REQUIREMENTS

2.1.3.1 POWER (VOLTS)

Refer to the volts range data indicated in the tech specs table § TECHNICAL DATA

2.1.3.2 WATER



IMPORTANT !

The periodical check (PREVENTIVE MAINTENANCE) of filter functionality, according the manufacturer, avoids compromising appliance operation and prevents the risk of corrosion.• For good operation of the water softeners and filters make sure to service them regularly.
To prevent damaging the appliance, at every periodical regeneration, do a filter wash cycle without introducing water in the oven. The manufacturer declines any liability in case of incorrect maintenance.

Refer also to the § WATER CONNECTION

2.1.3.2.1 PRESSURE

The water pressure supply upstream of the oven must be 100 – 450 kPa (1.0 – 4.5bar / 14,5 – 65 psi).



CAUTION !

For water system supply with pressure higher than 4.5 bar, it is recommend to install a water pressure regulator. .

The pressure has to be measured in dynamic conditions, i.e. during the boiler filling and washing phase and at a temperature of 30 C° / 86F°.
The water flow rate for CWI1 is 10 l/min ±10%
The water flow rate for CWI2 (treated water) is 2,95 l/min ±10%

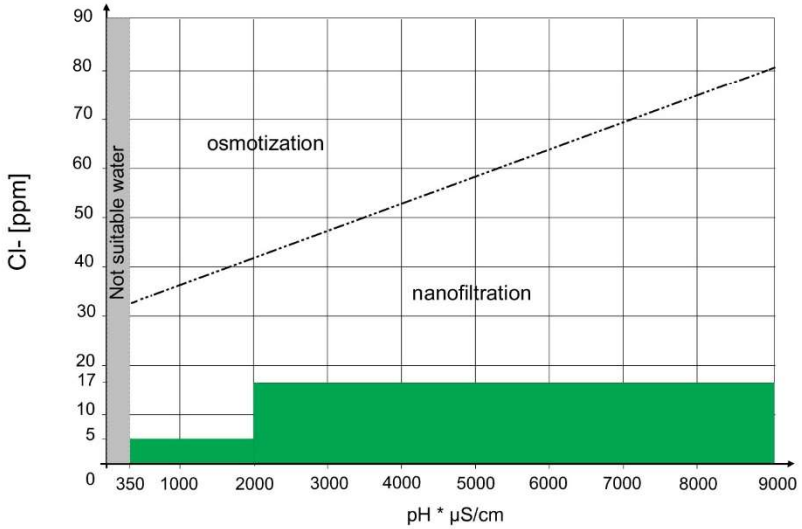
2.1.3.2.2 CHEMICAL CHARACTERISTICS

In **CWI2** inlet the appliance must be supplied with suitable drinking water (in particular Ph 6,5 ÷ 8,5 and conductivity > 50 µS/cm).
To guarantee correct appliance operation, some water treatment systems may therefore have to be installed.
For that purpose, follow the indications given in the following charts according to your models:

Models with boiler – (Lev . T – B)

MODELS WITH BOILER				
CONDUCTIVITY [µS/cm]	CHLORIDE [ppm]	HARDNESS	TREA TMENT	TREA TMENT CHECK
> 285	< 17	-	NO	NO
> 285	17 < ppm < 32	-	NANOFIL TERS	TREA TED WATER TO FALL INTO THE GREEN AREA OF THE GRAPH A
> 285	> 32	-	WTS + GRAPH	
< 285		-	WTS + GRAPH	

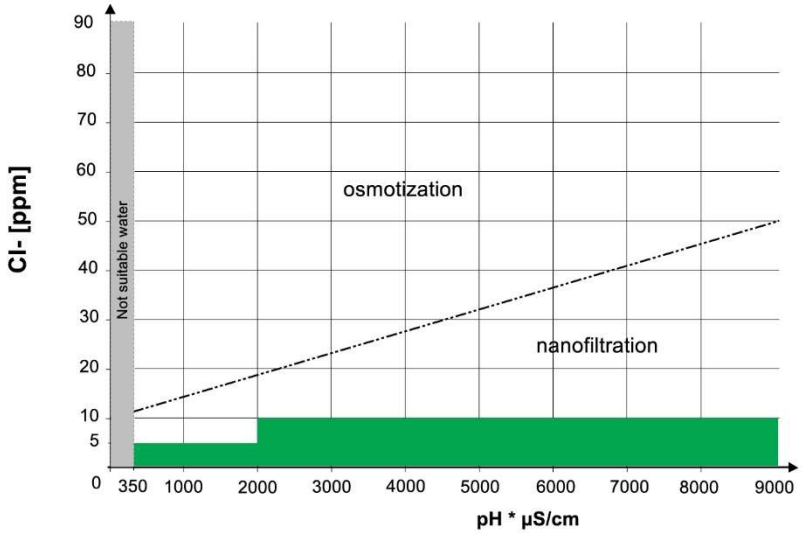
MODELS WITH BOILER – WTS GRAPH A (in case of treatment, check the treated water parameters falling into the green area; in no cases the values have to fall into the grey area)



Models without boiler (Lev. K – C)

MODELS WITHOUT BOILER				
CONDUCTIVITY [µS/cm]	CHLORIDE [ppm]	HARDNESS [°f]	TREA TMENT	TREA TMENT CHECK
> 285	< 10	< 5	NO	NO
> 285	< 10	> 5	SOFTNER	AFTER SOFTENING, CHECK HARDNESS < 5 °f
> 285	10 < ppm < 20	-	NANOFIL TERS	TREA TED WATER TO FALL INTO THE GREEN AREA OF THE GRAPH B
> 285	> 20	-	WTS + GRAPH	
< 285		-	WTS + GRAPH	

MODELS WITHOUT BOILER – WTS GRAPH B (in case of treatment, check the treated water parameters falling into the green area; in no cases the values have to fall into the grey area)



General advices

• Periodical maintenance of the water treatment devices avoids compromising appliance operation and prevents risk of corrosion.

• To prevent damaging the appliance, at every periodical regeneration of the water softener filter, do a filter wash cycle without introducing water into the oven.

2.1.3.2.3 CONVERSION TABLE FOR WATER TREATMENT

	°dH	°f	°e	ppm	mmol/l	gr/gal (USA)	mval/kg
1 °dH	1	1,79	1,25	17,9	0,1783	1,044	0,357
1 °f	0,56	1	0,70	10,0	0,1	0,584	0,2
1 °e	0,8	1,43	1	14,32	0,14	0,84	0,286
1 ppm	0,056	0,1	0,07	1	0,01	0,0584	0,02
1 mmol/l	5,6	0,001	0,0007	100	1	0,00058	2
1 gr/gal (USA)	0,96	1,71	1,20	17,1	0,171	1	0,342
1 mval/kg	2,8	5,0	3,5	50	0,5	2,922	1

	CaO [mg/l]	$CaCO_3$ [mg/l]	Ca^{2+} [mg/l]
°dH (Germany)	10,0	17,86	7,14
°f (France)	5,60	10,0	4,00
°e (Great Britain)	8,01	14,3	5.72
ppm (USA)	0.56	1,0	0.40
mmol/l (chem. cons.)	56,00	100,0	39,98
gr/gal (USA)	9,60/64,8	17,11	6,85
mval/kg (milliequivalent)	28,00	50,0	19.99

2.2 ELECTRIC CONNECTION



WARNING !
Take GREAT CARE when connecting / testing anything with live current, if you are unsure what you are doing and how to use your equipment safely, then **DON'T DO IT.**

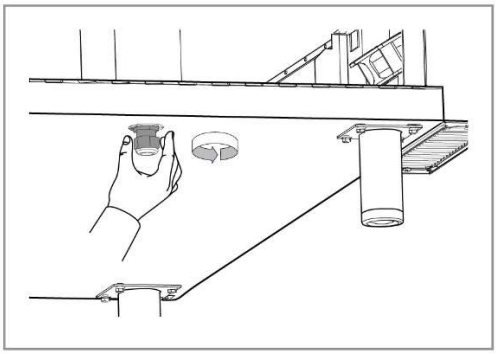


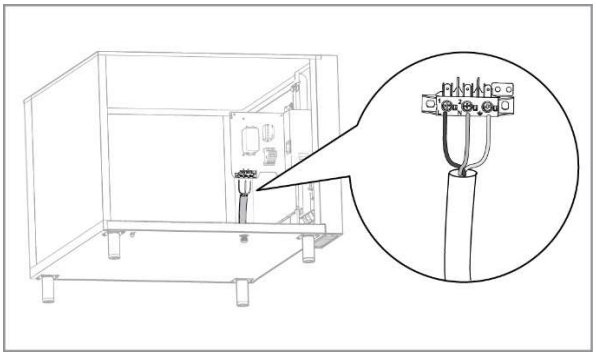
IMPORTANT !

The connection to the electrical power supply must be in compliance with the current national and local regulations

Before connecting, make sure the voltage and frequency match that given on the data plate. Connect the appliance to the power supply in a permanent way with an H07 RN-F type cable.
Install the power cable in a metal or rigid plastic cable guard pipe without any sharp parts exposed that could damage to the cable (cuts).
Install ahead of the appliance an Omni polar switch of suitable capacity with contact opening distance of at least 3 mm. Insert the plug into the building's electrical system, in the immediate vicinity of the appliance.
Appliance max. leakage current is 5 mA.
Install ahead of the appliance a device (interlocked plug, lockable switch or similar devices) lockable in the open position during maintenance. Connect the appliance to an efficient earthling system.

For that purpose, the connection terminal block has a terminal with the symbol ⏚ for connecting the earth wire. Include also the appliance into an equipotential system. The equipotential wire must have a section of at least 10 mm2; this connection is made with the setscrew marked ⏚ ,located externally near the power cable entry.
To connect the power cable to the appliance, proceed as follows:
1. Remove the left side panel Refer to §PANELS REMOVAL
2. Connect the cable to the terminal block as shown in the wiring diagram.
3. Secure it with the special cable gland.





CAUTION / IMPORTANT !

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. The manufacturer declines any liability if the current national and local regulations and possible safety regulations are not respected

2.2.1 HOW TO RECOGNIZE PHASE AND NEUTRAL

WARNING!

Take GREAT CARE when testing anything with live current, if you are unsure what you are doing and how to use your equipment safely then **DON'T DO IT**

Please note that ELECTRIC appliances are single THREE PHASE supplied **(L1+L2+L3+N)** .
Normally this job is up to a skilled electric engineer that carries out his work before ours, however; in case of need, some basic tips on how to check the supply wires before our main terminal board.

Put your meter in AC Volts setting. Connect supply to the main terminal board **MA** but do not turn on the appliance. Connect the meter test leads to the terminal board contacts; the readings should be:

The readings should be:

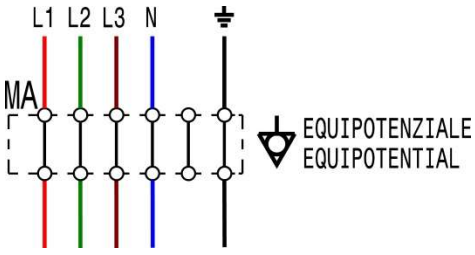
L1 / L2 / L3 + N* (Phase and Neutral) = **230 Volts** (+/- 6% based on European standards)

L1 / L2 / L3 +⏚ (Phase and Earth) = **230 Volts**

L1 and/or L2 + L3 (Phase and Phase) = **400 Volts / 440Volts**

N +⏚ (Neutral and Earth) = **0 Volts (or approx. zero V)**

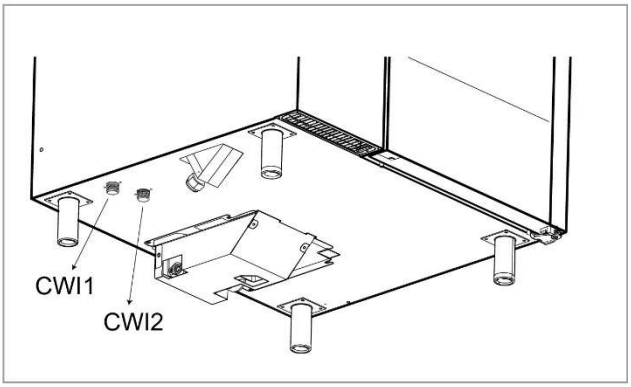
The combination and results obtained will permit you to find all wires: PHASE, NEUTRAL and EARTH.



2.3 WATER CONNECTION

2.3.1 TABLE TOP

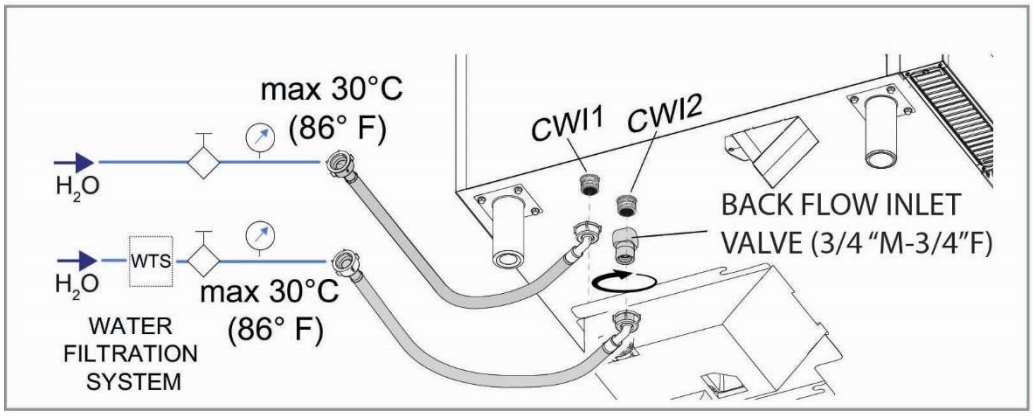
The oven (with boiler or boilerless) has two separate water supply inlets:
CWI1 = G3/4" connection for cleaning water and steam condensing
CWI2= G3/4" connection (treated water) boiler filling and ISG. Refer to the § WATER for the chemical characteristics required.



The feed pipes of both inlets must be provided with a mechanical filter and a shutoff valve. Before installing the filters run certain amount of water to clear the pipe of any solid particles. Refer to the § WATER for the chemical characteristics required.
The appliance is provided with a **backflow inlet valve**. This component is not installed on board but is packed in the accessory bag supplied with each new appliance and must be installed (NOT for UK installations)..

For UK:
A WRAS compliant double check valve or some other no less effective device providing backflow prevention protection to at least fluid category three shall be provided by the installer technician.

On the **backflow inlet valve** 3/4" M -3/4" F; is indicated with an arrow the flow direction of the water. The valve must be installed on the CWI2 inlet connection (also for staked ovens).



Dimensions / connections:

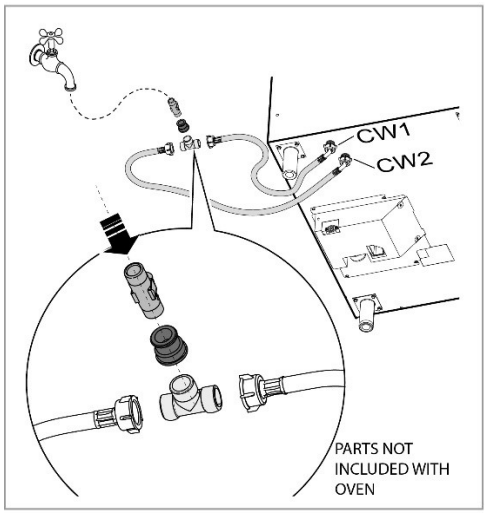
CWI1= G3/4" (water inlet)

CWI2 = G3/4" (water inlet)

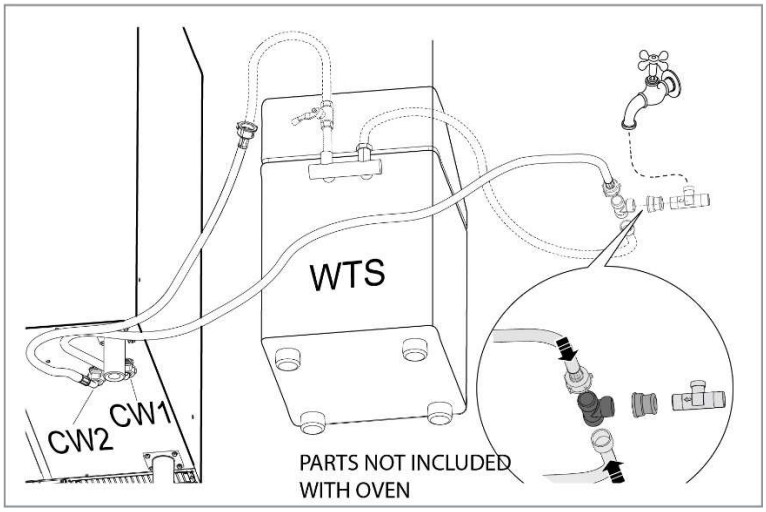
G = ½" M (gas inlet)

D = 1 ¼" (water drain)

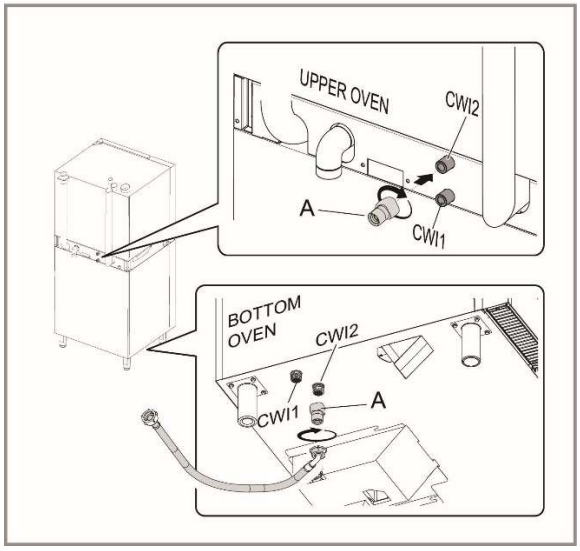
Equipment for models WITHOUT water treatment – Suggested installation



Equipment for models WITH water treatment (WTS)- Suggested installation



2.3.2 STACKING INSTALLATIONS



A = Back flow inlet valve 3/4" M -3/4" F; This component is not installed on board but is packed in the accessory bag supplied with each new appliance and must be installed (NOT for UK installations).

For UK:
A WRAS compliant double check valve or some other no less effective device providing backflow prevention protection to at least fluid category three shall be provided by the installer technician.

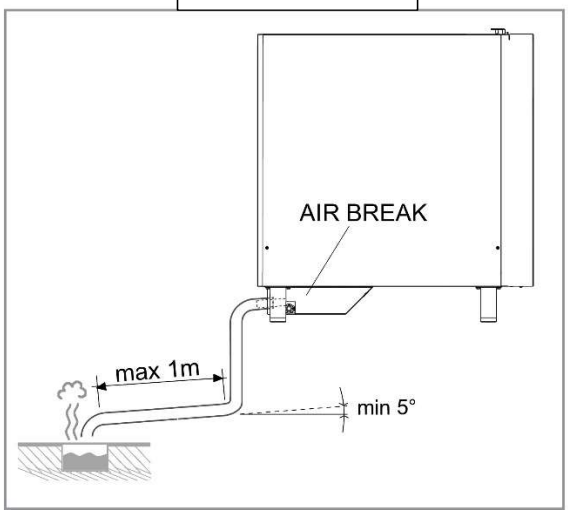
CWI1 = G3/4" connection for cleaning water and steam condensing

CWI2= G3/4" connection (treated water) boiler filling and ISG. Refer to the § WATER for the chemical characteristics required.

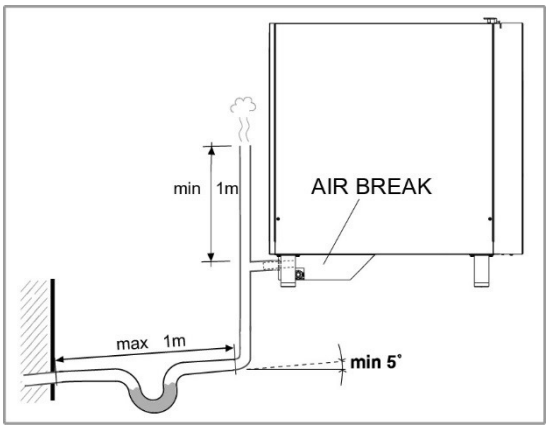
2.4 DRAIN SYSTEM

The oven has an **AIR-BREAK**, anti-backflow device inside to prevent any backflow from the drainage system entering the internal pipes and the oven compartment. This device allows the drain pipe to be connected directly to the floor grate or discharging into a mains system. The drain pipe – rigid or flexible type – can be run to the side or back, if the oven is not placed against a wall, excluding the front part with rack support structure.

Floor grate drain



Mains system drain



Make sure that:
• the drain pipe is not more than 1 meter long, with inside diameter not less than that of the oven **discharge pipe (1" 1/4)**, the drain pipe must be able to withstand temperatures of at least 100°C.
• there are no constrictions in hoses or elbows in metal pipes, along the entire drain path.
• horizontal sections where water can collect and stagnate (minimum slope 5%) are avoided

2.5 INSTALLATION ACCESSORIES

All documentation for each ACCESSORY is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

2.6 FIRST START UP

Once that all the supplies connections have been carried out it's time to startup the appliance.
Remove the entire protective film from all the paneling's and door; the protective film can be easily removed when the appliance has not been heated up. If the appliance is run for a long period without removing the protective film the film could melt and then be difficult to remove / damage the paneling's finishing.

Before you turn on the appliance make sure that:

CHECK THE INTERIOR
Open the door, make sure that all parts are placed in correct location.
Make sure that there are no irrelevant parts inside the machine (for example: hanging cloth, screws, nuts, tools, packaging materials, etc.).

WATER SUPPLIES: Water is present in the pipelines and available pressure is rated suitable to supply correctly the appliance. Make sure that the inlet mains pipes have been flushed so that any debris will not jam the inlet water filters/system of the oven.

ELECTRIC SUPPLIED APPLIANCES: the mains voltage and frequency match those indicated on the appliance data plate at § ELECTRIC MODELS

Fasten all terminals in the control box, check if all of them are tightened, visual test for all the electrical equipment if they are in good condition, (for example: switches, cables, motor shell, etc.), and test all the functions of power switch.

2.6.1 WIZARD AUTOMATIC, FIRST STARTUP

The “Wizard setup” is an assisted first start up of the appliance carried out trough the electronic board with a series of images shown on the display. This setup is meant to be carried out by an authorized technician.

!!! AS THE WIZARD IS NOT YET IMPLEMENTED, PLEASE REFER TO THE PICTOGRAM PROVIDED WITH THE OVEN FOR THE MANUAL TEST TO BE PERFORMED AFTER THE INSTALLATION!!!

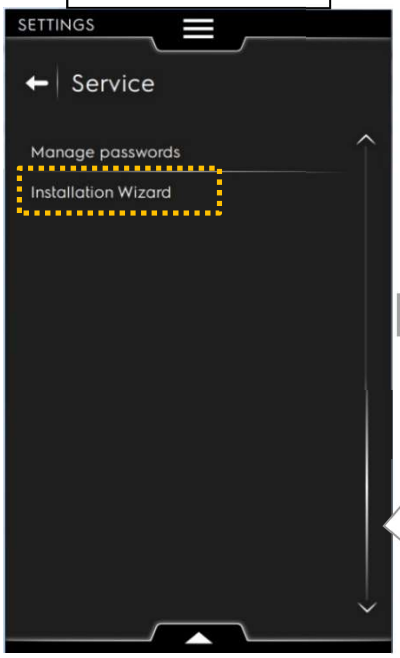
2.6.1.1.1 REACTIVATE THE WIZARD PROCEDURE / WIZARD RECAP

In case of need to restart a wizard cycle , for example if you have replaced an ACU, or you if somebody else carried out the cycle etc., you will need to enter into the “service area “ APPLIANCE PARAMETERS and set the **parameter to LAIP to one “1”** (if LAIP is 0, this means it is completed). Turn off / on the appliance and the cycle will start in automatic.

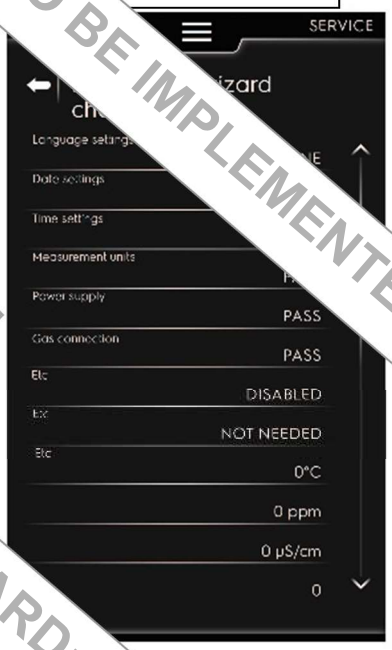
NOTE THAT: In the service … stored a recap of the wizard data already inputted by the wizard cycle (if it has been already carried … that somebody has already carried out the cycle and you would like to see how the appliance was … can find the saved data.

Enter with password into the ser… d open the "installation wizard" to get a recap window like shown in the next images:

SERVICE AREA



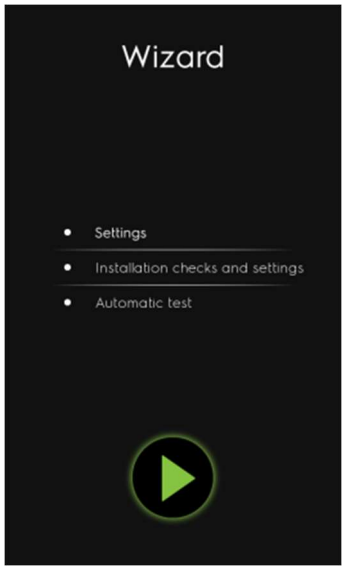
RECAP WINDOW



WIZARD: TO BE IMPLEMENTED

WIZARD: TO BE IMPLEMENTED

2.6.1.1.2 FIRST TIME POWER ON



On the first time the appliance is switched on at the customer site an installation verification and appliance performances procedure is started, the default language is English up to the selection of the user. This procedure must be completed to guarantee the performances of the appliance and allowing the customer to use it.

Three main steps can be identified for the verification procedure:

- settings;
- installation checks and settings;
- automatic test.

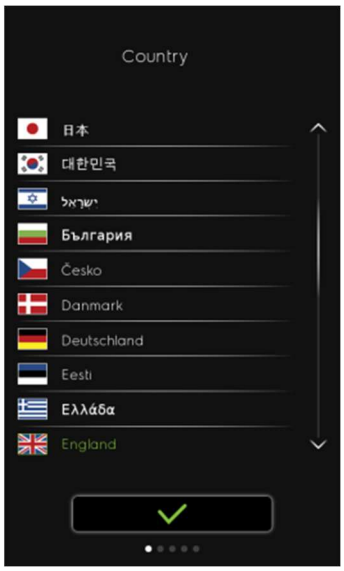
Pressing [redacted] the procedure.

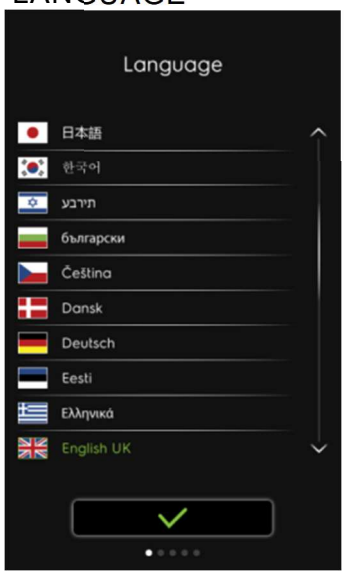
WIZARD: TO BE IMPLEMENTED

2.6.1.1.3 WIZARD: SETTINGS

The phase is dedicated to the set of general information that c[redacted]nterface. Most of the settings done during this phase can be modified in the *Settings* environment SE[redacted]he bottom of each page there is a series of grey/white points to show the user the status of this part [redacted].

2.6.1.1.4 COUNTRY AND LANGUAGE





The first step is the [redacted] the country of the installation and [redacted] of the interface:

The user selects the country, [redacted] color turns to green. After the selection the user can press the ✓ button to pass to the selection of the language. The user selects the language, the color turns to green.

The selection is confirmed by pressing ✓.

2.6.1.1.5 SPECIAL CONFIGURATION

According to the country selection on the pressure of the ✓ button after the selection of the language a keyboard can appear to enter a code that loads a configuration for specific clients. In case the input is left blank the standard configuration will be loaded.

2.6.1.1.6 DATE

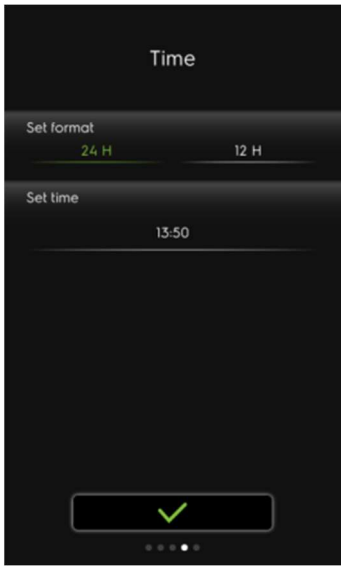


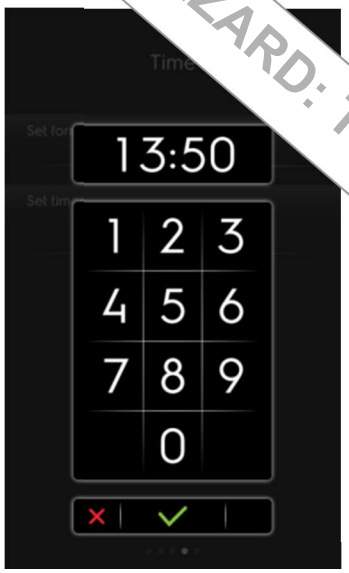
In this page the user can set the date format and input the current one

Using the angular brackets the user can change the current date, while the selected date format is green colored.

2.6.1.1.7 TIME

The user can select the time format an rrent one

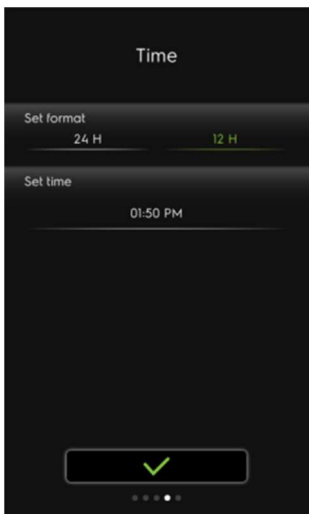


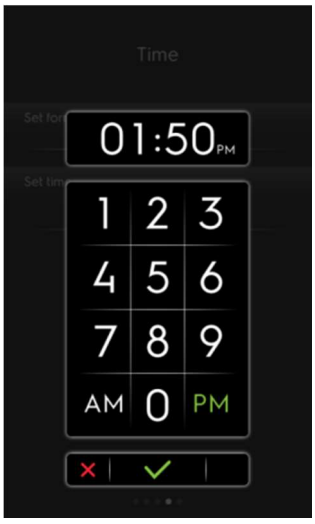


lected time format
olored, while to
set time the
the “Set
pen a

WIZARD: TO BE IMPLEMENTED

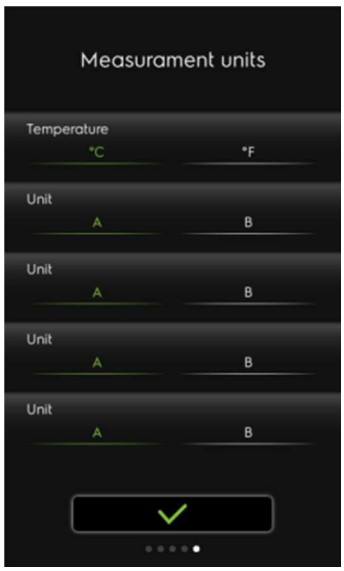
Selecting the “12H” format the display appears as:





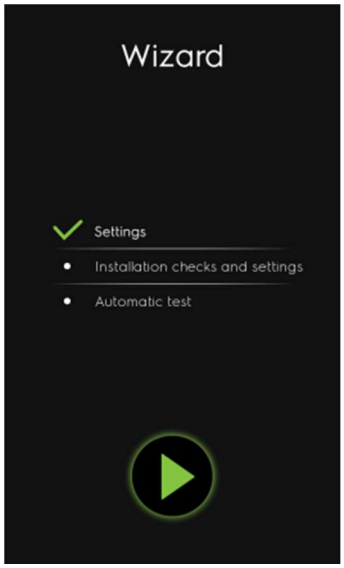
2.6.1.1.8 MEASUREMENT UNITS

This step allows the user the set the preferred unit for the data shown on the display (the image shows the generic page).



2.6.1.1.9 SETTINGS END

When the afore mentioned steps are concluded the ...ws a recap of the status of the wizard. The *Settings* phase is marked concluded ✓, while the othe... be performed.



Pressing the ▶ button starts the *Installation checks and settings* part.

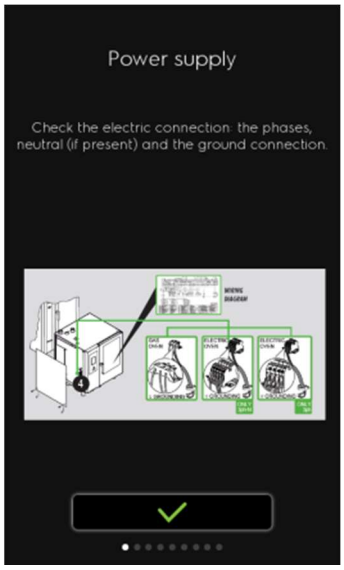
WIZARD: TO BE IMPLEMENTED

2.6.1.1.10 WIZARD: INSTALLATION CHECKS AND SETTINGS

This part of the procedure mainly regards visual confirmation of the correct installation of the appliance.

2.6.1.1.11 POWER SUPPLY

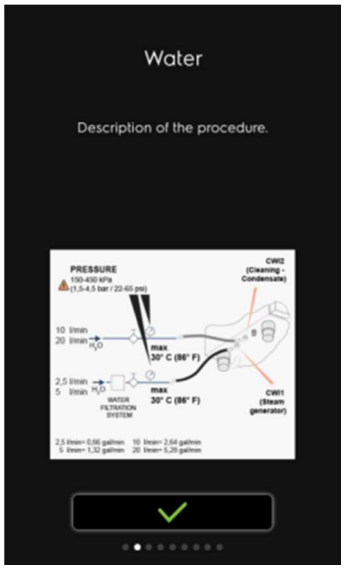
The operator has to confirm the installation of the appliance power supply according to the following instructions:



Refer also to § ELECTRIC C N

WIZARD: TO BE IMPLEMENTED

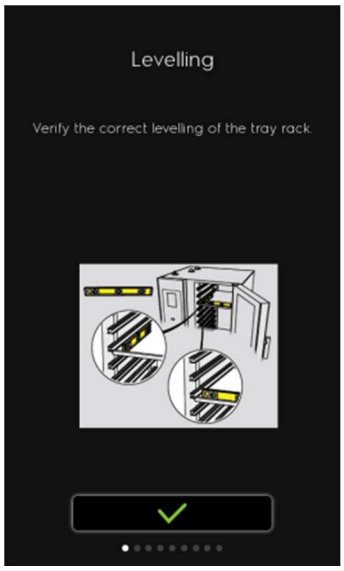
2.6.1.1.12 WATER



The operator has to confirm the installation of the water connection according to the following instructions:

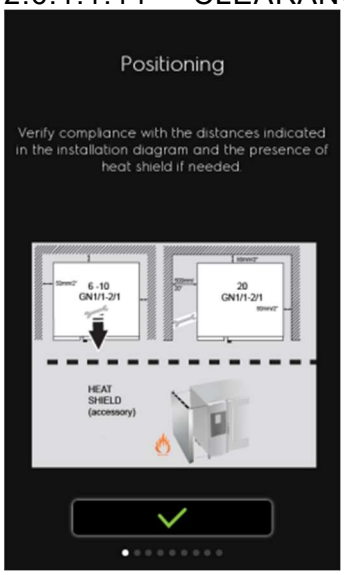
Refer also to §WATER CONNECTION

2.6.1.1.13 LEVELLING



The operator has to confirm the levelling of the oven and the rack structure:

2.6.1.1.14 CLEARANCES

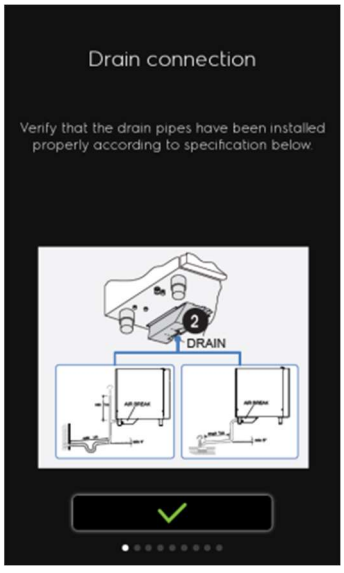


The operator has to confirm the clearance around the appliance:

WIZARD: TO BE IMPLEMENTED

Refer also to § LIMITATIONS

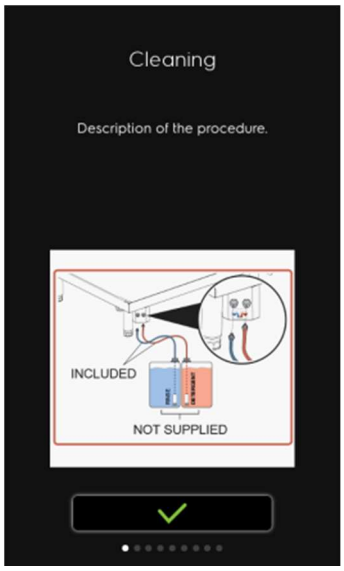
2.6.1.1.15 DRAIN CONNECTION



The operator has to confirm the installation of the drain pipe according to the instructions:

Refer also to § DRAIN SYSTEM

2.6.1.1.16 CLEANING (EXTERNAL LIQUID KIT ONLY)

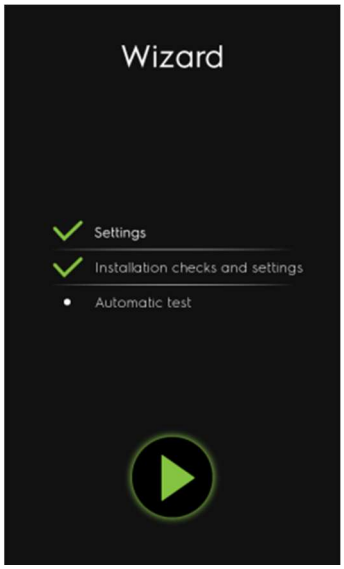


PAR_FAB_CLEAN_LIQ ENABLED The operator has to confirm the installation of the liquid chemical kit according to the specifications:

WIZARD: TO BE IMPLEMENTED

2.6.1.1.17 MANUAL SETTINGS END

When the afore mentioned steps are concluded the d[illegible] a recap of the status of the wizard. The *Manual Settings* phase is marked concluded while the re[illegible] have to be performed.



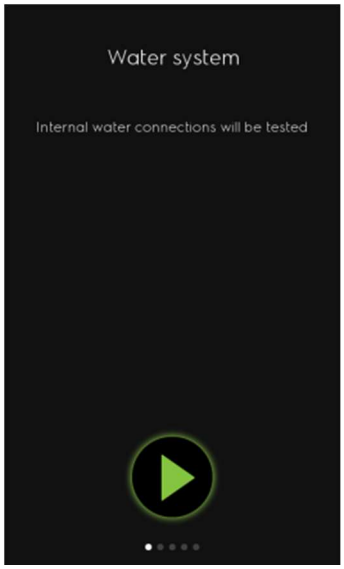
Pressing the  button starts the *Automatic test* part.

2.6.1.1.18 WIZARD: AUTOMATIC TEST

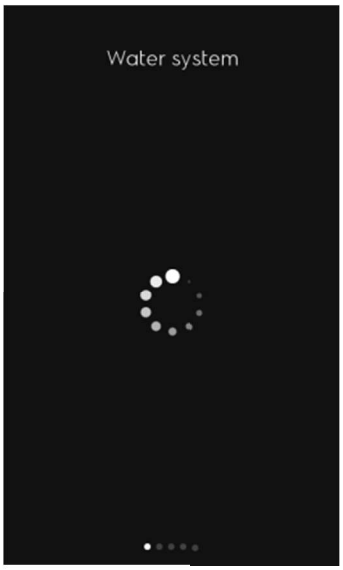
This part is meat to test the performance of the appliance in an automatic mode. The operator is involved on visual check to unforeseen behaviors.

2.6.1.1.19 WATER SYSTEM

This step is meat to the automatic testing of the water system. All the available pipes connections for the water are tested and the user is asked to verify the absence of leakage on the external connection.

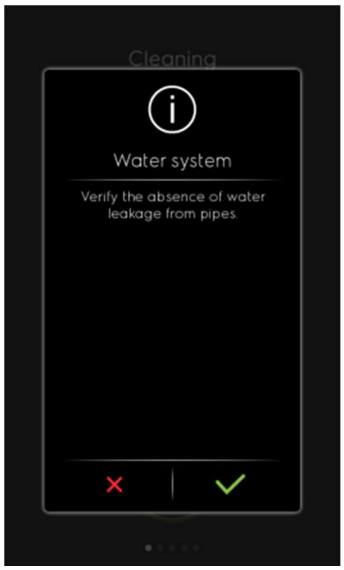


Pressing the  button starts the internal automatic procedure during which the display shows the animation:



of the testing proce-
du asked to verify the
abse leakages on the
water co

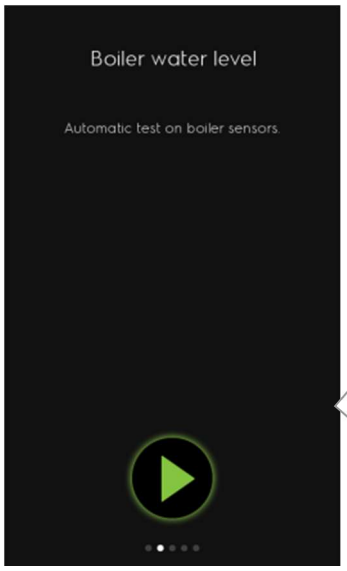
WIZARD: TO BE IMPLEMENTED



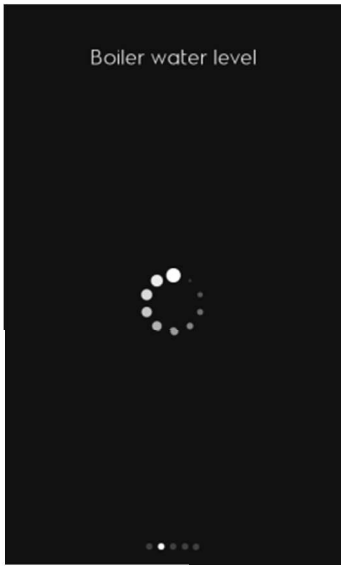
On positive response by the operator the step is considered concluded and the wizard moves to the next one. In case of negative response the operator is asked to power off the appliance, to repair the water connection and switch on the appliance again to repeat the test.

2.6.1.1.20 BOILER WATER LEVEL

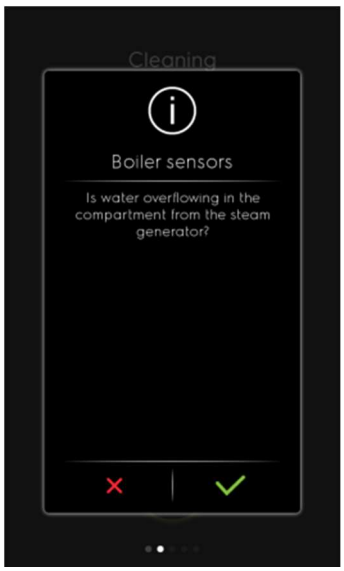
This test checks the correct working of the boiler water level system.



Pressing the  button starts the internal automatic procedure during which the display shows the animation:



WIZARD: TO BE IMPLEMENTED



The test consists i… e boiler, filling it up to the safety level and then working wit…

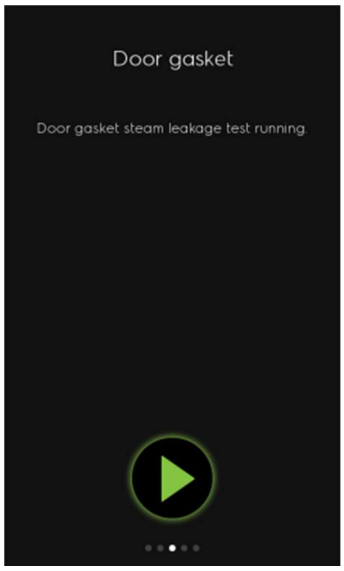
When the procedure end… …t has reached the described condition the user is asked t… …bsence of water inside the cavity. On negative response t… …ncluded and the wizard moves on.

On positive response the user is warne… …crease in sensibility of the sensor and that the test will be … …popup confirmation the test starts. This can be done u… …mes, on the sixth a message is shown about the failure of the … …r level system.

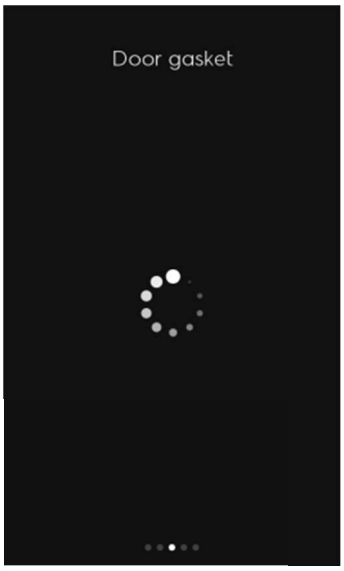
If the test is concluded by timeout the user is warned about the failure of the test, the increase in sensibility of the sensors and that the test will be carried out again. The test is limited to 5 repeatable cycles. If the test does not conclude successfully, it will be necessary to increase the water conductivity and repeat the test.

2.6.1.1.21 DOOR GASKET

This test is meat to the check of the sealing of the door gasket to the cabinet.

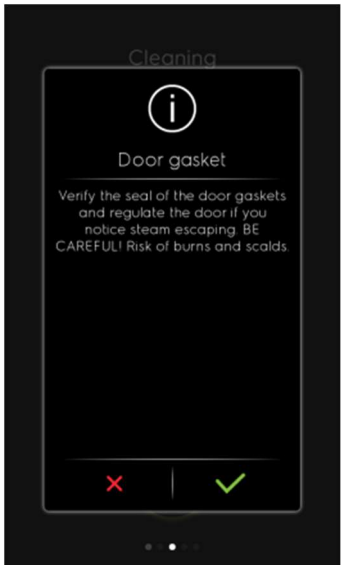


Pressing the button starts the internal automatic procedure during which the display shows the animation:



WIZARD: TO BE IMPLEMENTED

The test consists in creating steam inside the cavity up to ...tion level in order to see if any steam leakage can be seen from the door gasket.

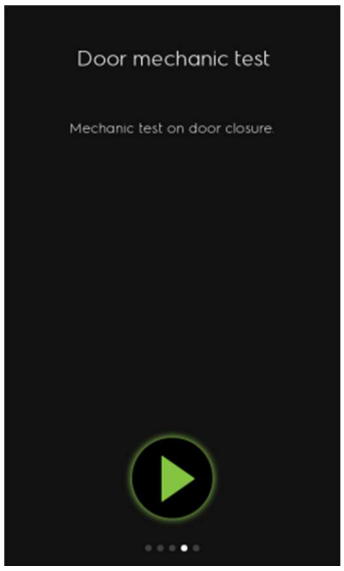


Once the user confirms the step is considered concluded. If the user presses the test starts again.

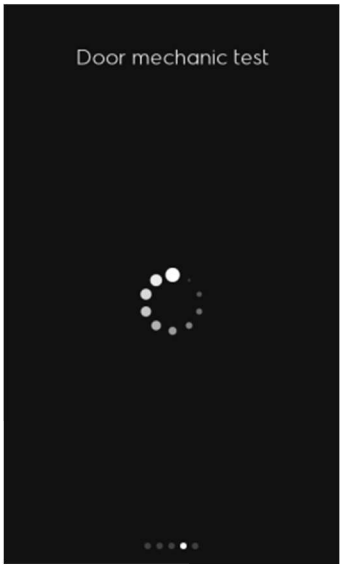
Refer also to §DOOR REGULATION & DOOR LATCH

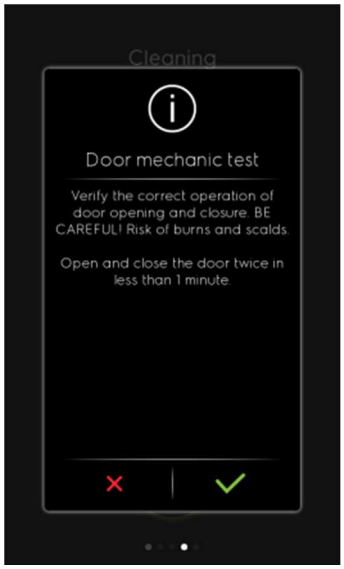
2.6.1.1.22 DOOR MECHANIC TEST

The test is devoted to the check of the behavior of the door mechanism at high temperature.

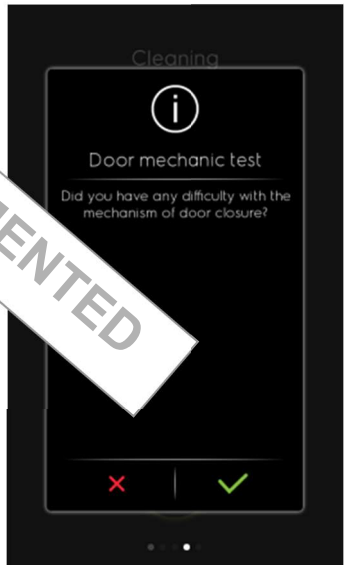


. Pressing the  button starts the internal automatic procedure during which the display shows the animation:





The test consists i… tempera-ture of 300°C heating …ucture and then testing the ope… …sing of the door. When the syste… second closure of the door wit… timeous the message changes.

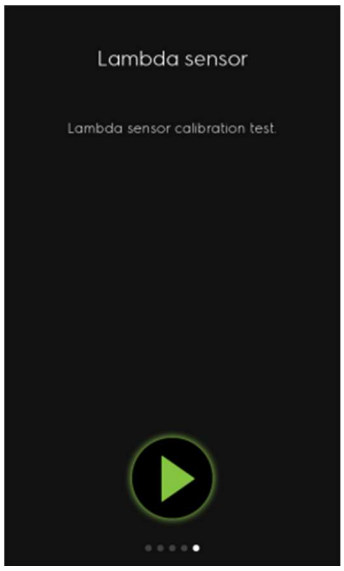


On negative response the test is considered concluded and the wizard moves to the next step. On any other case, difficulties to close or impossibility to operate the closure twice, another message is shown warning the user: “Follow the steps:
1) Switch off the unit
2) Regulate the door
3) Switch on the unit
When switched on, the test must be repeated.”. Refer also to §DOOR REGULATION & DOOR LATCH

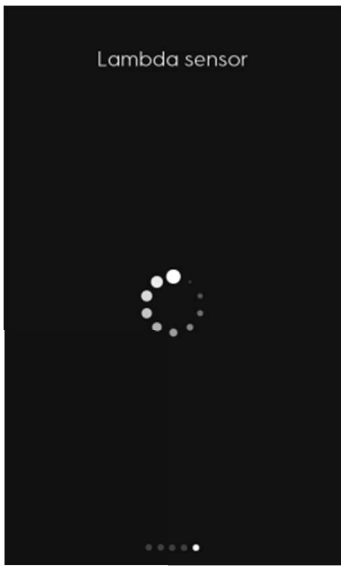
WIZARD: TO BE IMPLEMENTED

2.6.1.1.23 LAMBDA CALIBRATION (WHEN PRESENT)

This part of wizard is devoted to the calibration of the lambda probe.



Pressing the button starts the internal automatic procedure during which the display shows the animation:

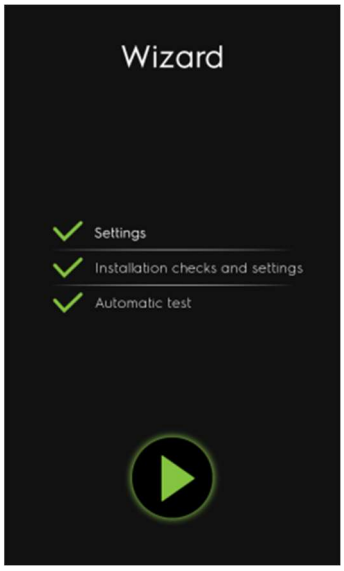


WIZARD: TO BE IMPLEMENTED

During the test the oven detects the dry point and the s tion point of the oven.
When the sensor output for these two points is measured e is concluded.
In any other case the operator is shown the following messag
" A failure occurs, follow the steps:
1) Switch off the unit
2) Replace the Lambda with a new sensor
3) Switch on the unit
When switched on, this test must be repeated."

2.6.1.1.24 WIZARD: END

When all the previous steps are concluded a recap page is shown:

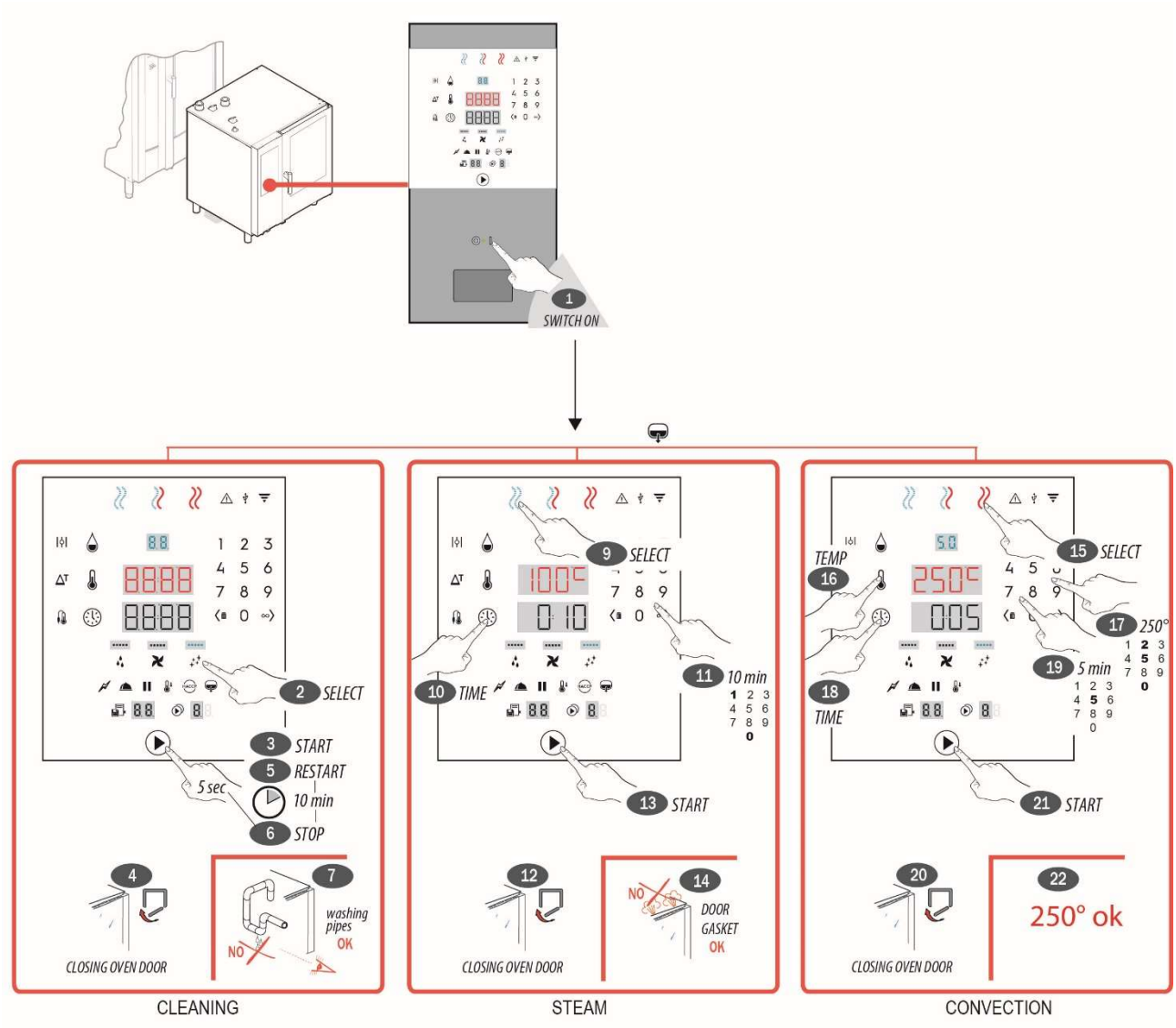


Pressing concludes the wizard procedure and opens the *Manual* environment.

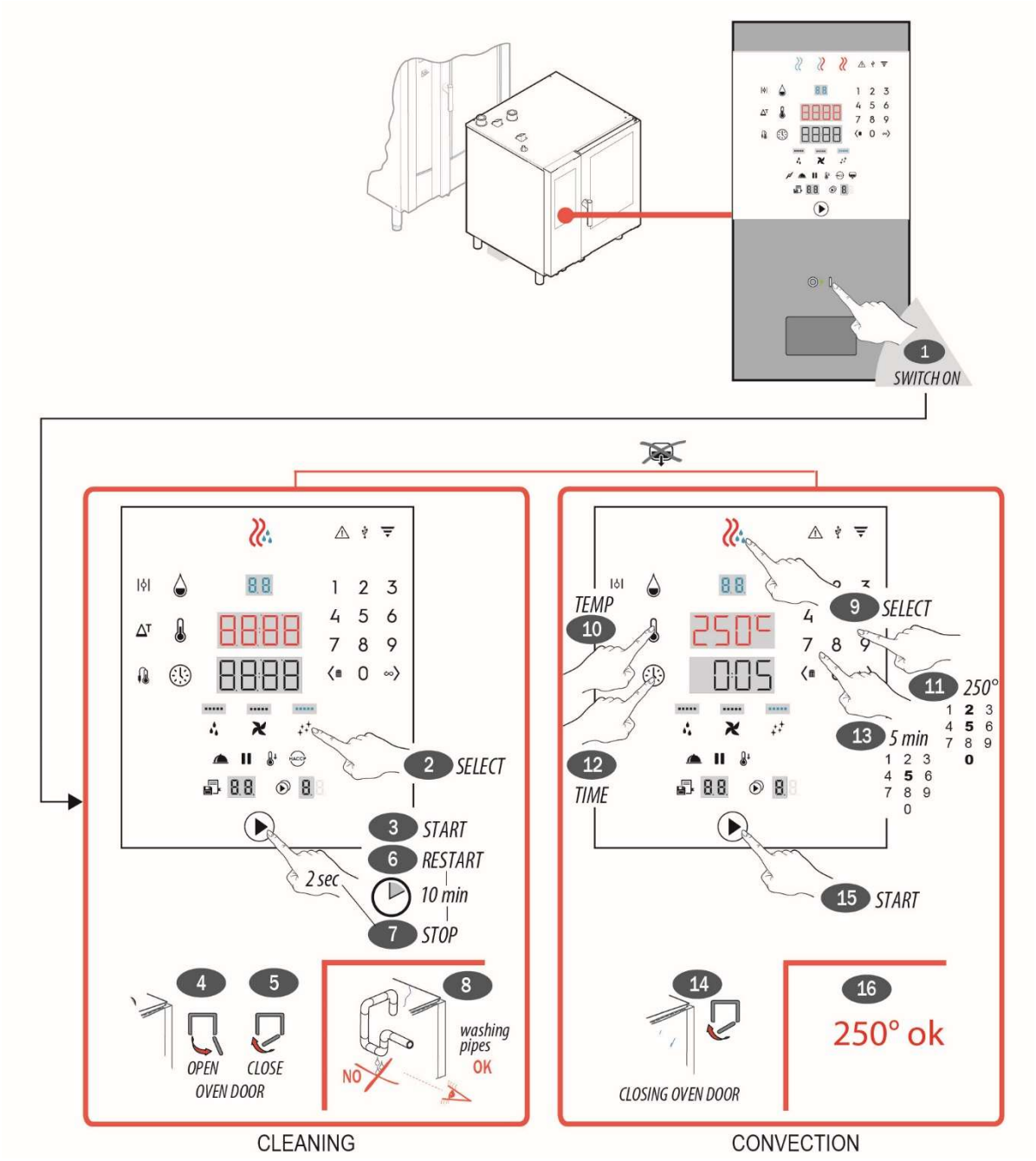
2.6.2 LEVEL B,C (DIGIT)

The appliance is a "plug in" you will have to carry out a manual testing for water leakages and performance test.

- **TEST FOR LEVEL B** (Boiler) APPLIANCES (PLEASE REFER TO THE PICTOGRAM PROVIDED WITH THE APPLIANCE-PICTURE BELOW IS AN EXTRACT)



- **TEST FOR LEVEL C** (Boiler less) APPLIANCES (PLEASE REFER TO THE PICTOGRAM PROVIDED WITH THE APPLIANCE-PICTURE BELOW IS AN EXTRACT)



2.7 COMMISSIONING

Please refer to the Commissioning form; the document is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) In case of any doubt, refer to your local country customer care.

3 USE OF APPLIANCE

3.1 OPERATING INSTRUCTIONS

Please refer to the Installation and User Manual of the appliance; the document is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) In case of any doubt, refer to your local country customer care.

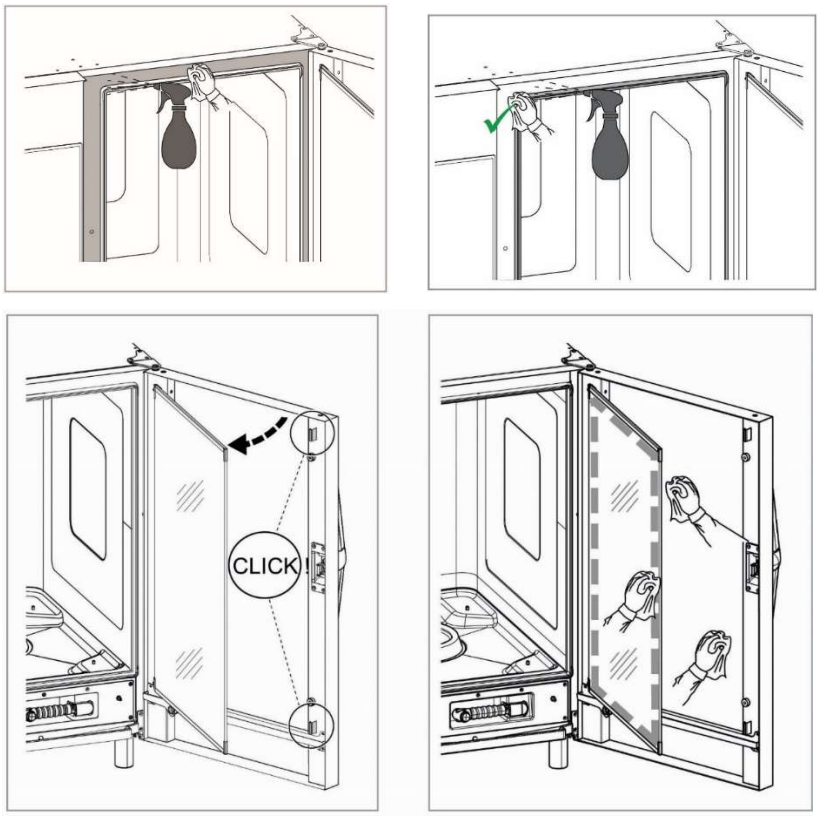
3.2 PREVENTIVE ROUTINES/MAINTENANCE FOR THE OPERATOR

Please refer to the dedicated document available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) In case of any doubt, refer to your local country customer care.

3.2.1 CLEANING ,DOOR, GASKET AND GLASS

Regular clean the oven door after cooking cycle; the oven door, its internal glass ,the seal and the area around the door perimeter may become easily dirty due to greasy vapors coming out from the oven. It is strongly recommended to clean regularly the internal glass especially near the edge, the rubber seal and the area al long the entire door perimeter. These operations must be done with the door glass cold, without using abrasive detergents.

Clean thoroughly the oven area along the perimeter of the door as indicated.



3.2.2 CAVITY CLEANING

The cavity is normally clean by automatic washing cycles:

3.2.2.1 LEVEL B, AND C (DIGIT)

“Cleaning“ function allows to clean the oven cavity automatically choosing the most suitable program. (5 cycles).:
Press repeatedly the indicated button to set one of the cleaning cycles.



In the figure above (for example) 2 dashes are indicated corresponding to a Medium wash (CLn2).

This is the cleaning cycles list to choose:
Soft CLn1= Soft washing cycle
Medium CLn2= Medium washing cycle
Strong CLn3 = Strong washing cycle
Extra Strong CLn4 = Extra strong washing cycle
Rinse CLn5 = Rinse cycle, rinsing with cold water

Refer to the amount and type of detergent/rinse aid to use as indicated in the User Manual.

3.2.2.2 LEVEL T, AND K (TOUCH SCREEN)

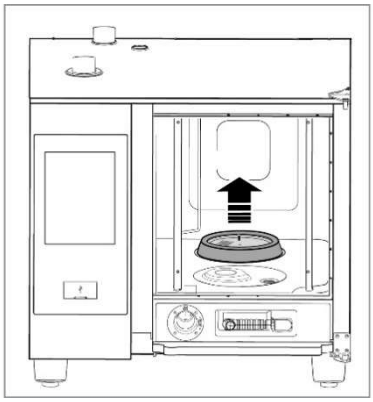
“Cleaning“ function allows to clean the oven cavity automatically choosing the most suitable program.
Open the upper drawer on the touch screen and press the cleaning icon.
The display shows a list of available cycles. Select the required one.



Soft = Soft washing cycle
Medium = Medium washing cycle
Strong = Strong washing cycle
Extra Strong = Extra strong washing cycle

Refer to the amount and type of detergent/rinse aid to use as indicated in the User Manual.

3.2.3 FILTER, CAVITY



The filter located at the bottom of the cavity helps to prevent a pump damage and/or a cleaning system clogging. It is recommended to clean it periodically.

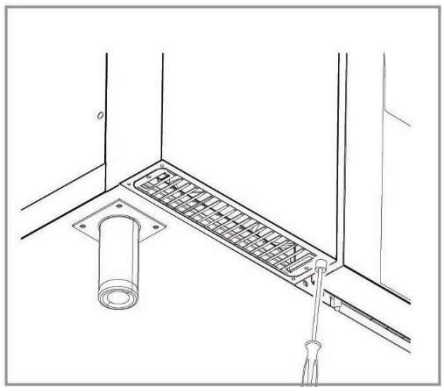
Undo the screw from the center of the filter / remove and wash it in a basin with normal soap liquid.

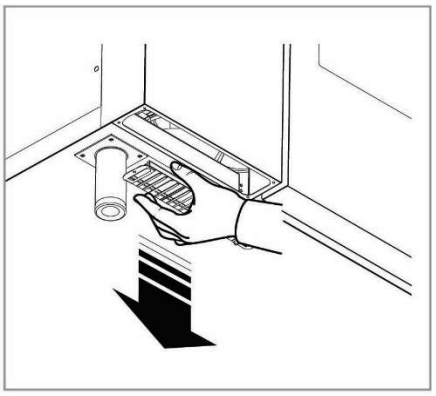
3.2.4 FILTER, AIR INTAKE

Clean the air filter, located under the control panel, at least once a month.
If the control panel shows the alarm icon "**ASCH**", it is necessary to clean it.
Proceed as follows:

1. Unscrew the screws fixing the air filter;
2. Remove the filter;
3. Clean it with water and detergent for manual cleaning of dishes or surfaces.
4. Refit into its housing fixing the screws. Non-compliance with the above will result in filter inefficiency and produce anomalous effects in cooking.

ATTENTION **The oven is equipped with a filter safety switch; if the filter is not positioned into its housing correctly a pop up message (ACF) will appear on the display**





3.2.5 BOILER DESCALE

During the routine washing cycles carried out with the suggested chemicals (rinse & descale tablets) the boiler is maintained scale free (refer to the amount and type of detergent/rinse aid to use as indicated in the User Manual).

In case of excessive scale in the boiler the display may show a message with “**dESC**“ error code; in this case the user can carry out a descale cycle (refer to the amount and type of rinse & descale aid to use as indicated in the User Manual).

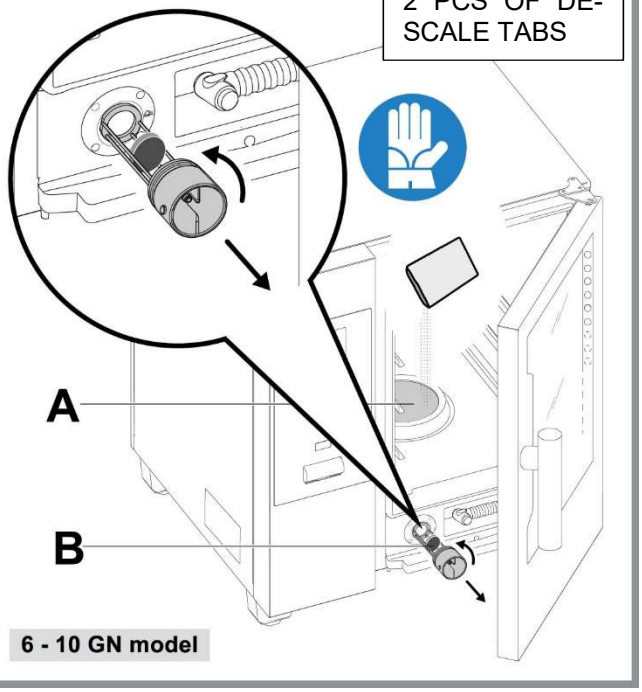
"**dESC**" will be shown on the display if the temperature of the boiler will exceed the stetted value of parameter called "**bSct**" (**B**oiler **Sc**ale build up **t**hreshold) set at 115C°.

If the user descale cycle alarm "**dESC**" still shows on the display the boiler cycles will be stopped and you must to carry out the specific descaling cycle depending on the level of your appliance (refer to next chapters) .

3.2.5.1 LEVEL B (DIGIT)

The boiler descale cycle can be carried out (customer or service), by running a cleaning program (CLn1 to CLn4) including the rinse aid and descale cycle using 2 tablets “C25“ only instead of the usual quantity.
If, after carrying out the boiler descale cycle, the display shows again the error code “**dESC**“ then you must check the boiler/water level probes etc.

6–10 GN model			
Cleaning Cycle	A Detergent	B Rinse aid / Descaling	dESC Descaling C25 TABLETS
	Quantity	Quantity	Quantity
CLn1	1	1	2
CLn2	2	1	2
CLn3	3	1	2
CLn4	4	1	2
CLn5	0	0	0



6 - 10 GN model

Please note that acid or descale products cannot be inserted “manually” into the boiler , this because the boiler is not equipped with an external access on the top, like in previous models.

The illustrations of the hydraulic system in function during a “Boiler Maintenance” cycle can be found at § CLEANING SYSTEM .

3.2.5.2 LEVEL T (TOUCH SCREEN)

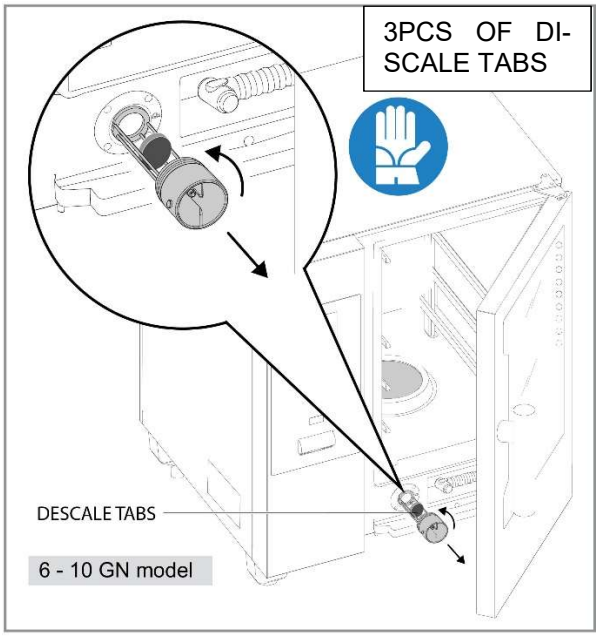
The boiler descale cycle can be carried out through a "special" cycle (available only to the service engineer) started directly from the service area, called “**Boiler maintenance**”; refer also to the § SETTINGS AND SERVICE AREA to gain access.

Insert three descale tabs C25 into the front drawer then carry out the “Boiler Maintenance” cycle.

If, after carrying out the boiler descale cycle, the display shows again the error code “**dESC**“ then you must check the boiler/water temperature sensor.

If the cycle is completed without interruption the dedicated "descale counter " will add 1 unit (+1); refer also to the §COUNTERS .





Please note that acid or descale products cannot be inserted “manually” into the boiler , this because the boiler is not equipped with an external access on the top, like in previous models.

The illustrations of the hydraulic system in function during a “Boiler Maintenance” cycle can be found at § CLEANING SYSTEM .

3.3 PREVENTIVE MAINTENANCE PLAN (FOR SERVICE): OPERATION FREQUENCY

Please refer to the PREVENTIVE MAINTENANCE PLAN document that is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) In case of any doubt, refer to your local country customer care.

4 DETAILED APPLIANCE AND COMPONENTS DESCRIPTION/FUNCTIONING

The following chapters are intended only for authorized technicians / engineers

WARNING !

Take GREAT CARE when connecting / testing anything with live current, if you are unsure what you are doing and how to use your equipment safely, then **DON'T DO IT.**

4.1 FUNCTIONAL / TECHNICAL DESCRIPTION

4.1.1 SWITCHING ON / OFF

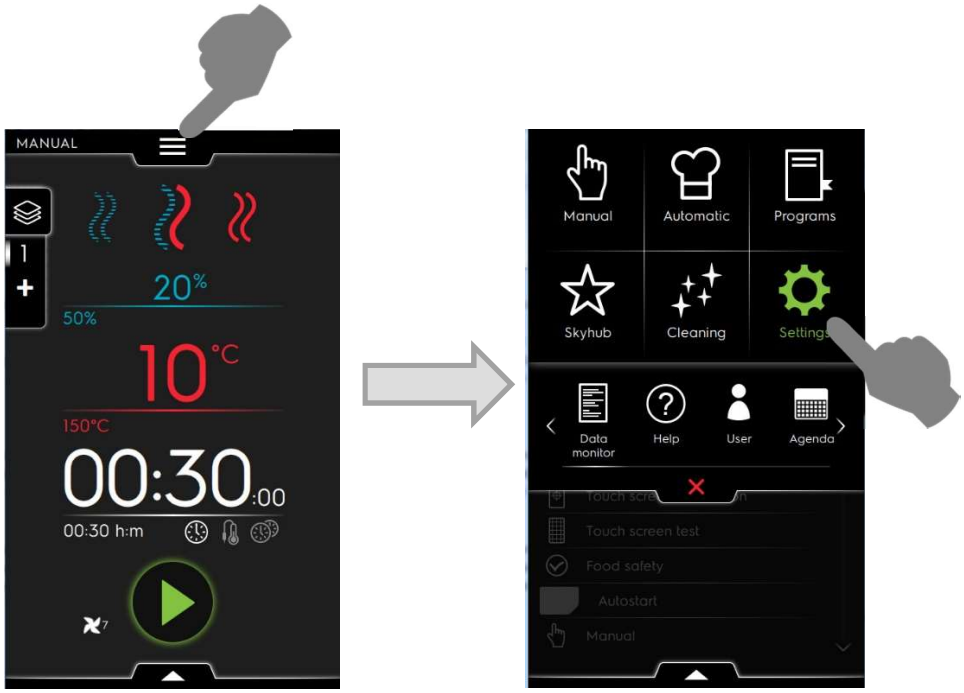
Please refer to User Manual of the appliance; the document is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) In case of any doubt, refer to your local country customer care.

4.2 SETTINGS

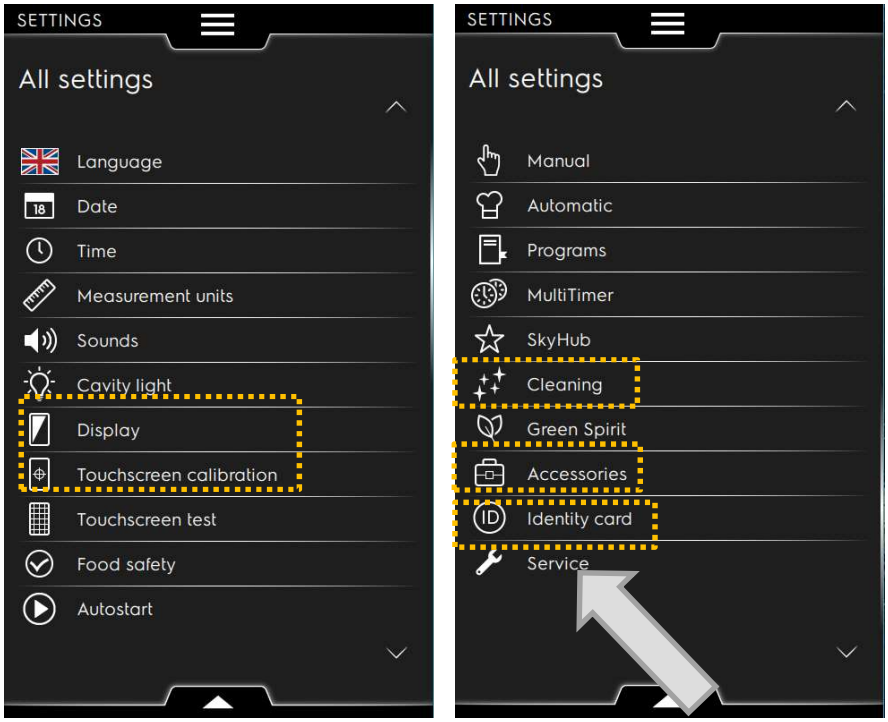
4.2.1 LEVEL T, K (TOUCH SCREEN)

4.2.1.1 SETTINGS AND SERVICE AREA

The SETTING AREA is accessible in the main screen view by pressing the menu drop down menu. The access of this area does not require a password.



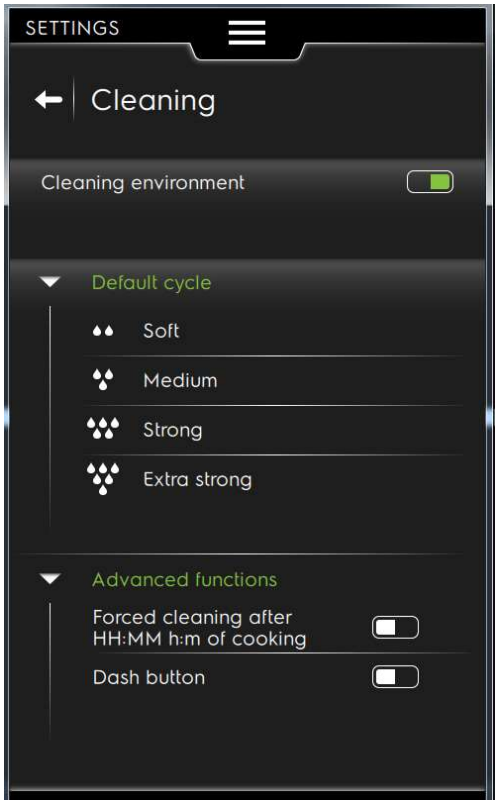
In the SETTING AREA are located some features that are useful for technicians, these features have been highlighted in the next two pictures and will be discussed in separate chapters



Highlighted chapters useful for technician settings

4.2.1.1.1 CLEANING

Before starting any washing cycle the appliance will check the inner cavity temperature, if the inner temperature is too hot the appliance will proceed to a "Forced cooling"

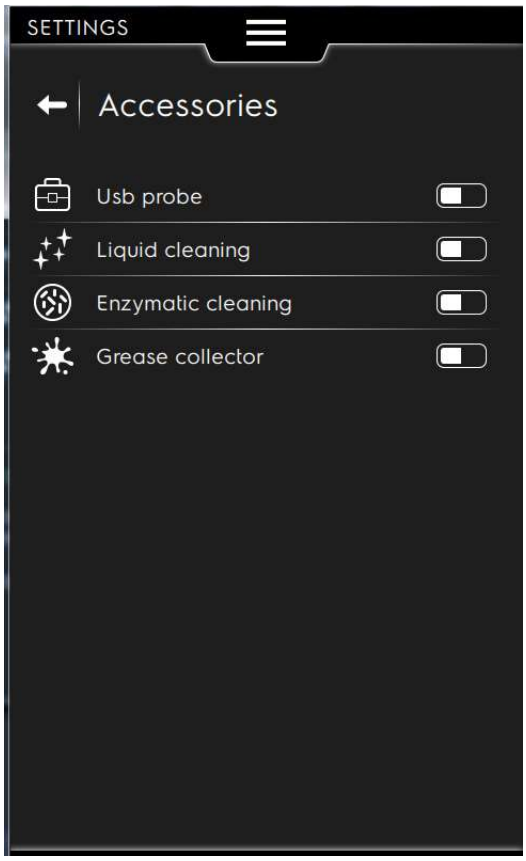


Cycle stop Keep hold to stop the cycle; The Stop button will be available when the function can be performed. After the selection the display will show the remaining time for the rinsing of the cavity and of the boiler.

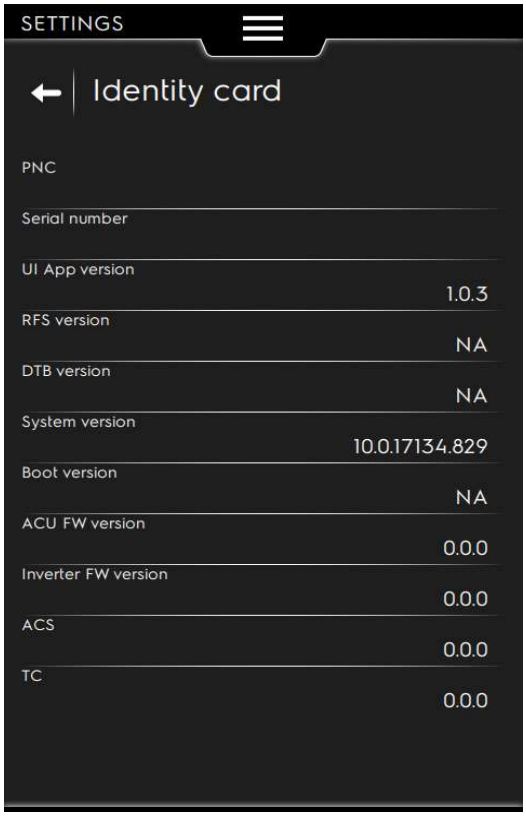
Forced rinse if you have stopped a running cleaning cycle, the appliance may proceed to perform a forced rinse to washout all the chemicals from the cavity. During this count down the door cannot be opened.

4.2.1.1.2 ACCESSORIES

If any accessories are connected to the oven it may be necessary to grant the item.



4.2.1.1.3 OVEN IDENTITY CARD

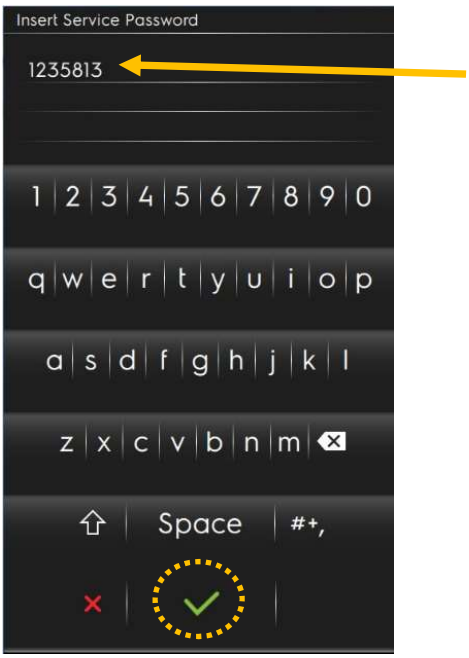


4.2.1.1.4 SERVICE

“Service” will be accessed through password in Settings->Service. Once the password is correctly entered the “Service” credentials will be active for 15 minutes while navigating the interface. The 15 minutes timeout is continually reset while the appliance is in running state and every time the interface detects a touch.
With “Service” credentials correctly inserted (password) the user interaction will be granted for all menu in the "service /setting" area as well as in the USB (service functions).

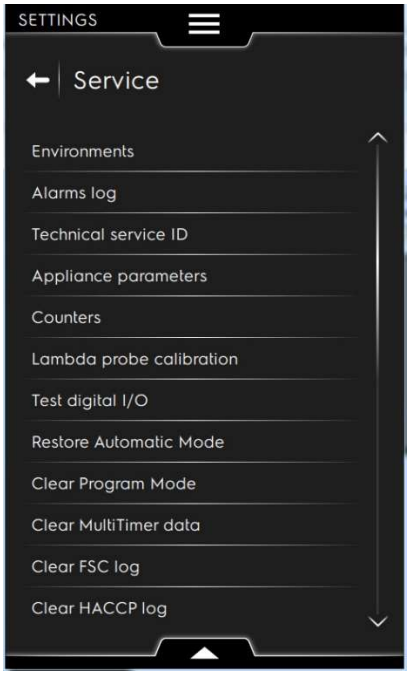
Remember to EXIT the “Service credentials" at the end of your operations by turning the appliance OFF, or by waiting time out (15 minutes / without touching the display).

The USB area , only when correctly accessed, has complete upload/download options for the technician. For the USB technician area, refer to § USB (SERVICE FUNCTIONS)

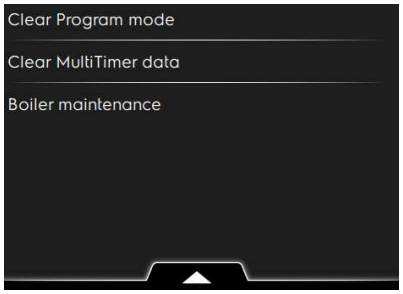


PASSWORD : 1 1 2 3 5 8 13

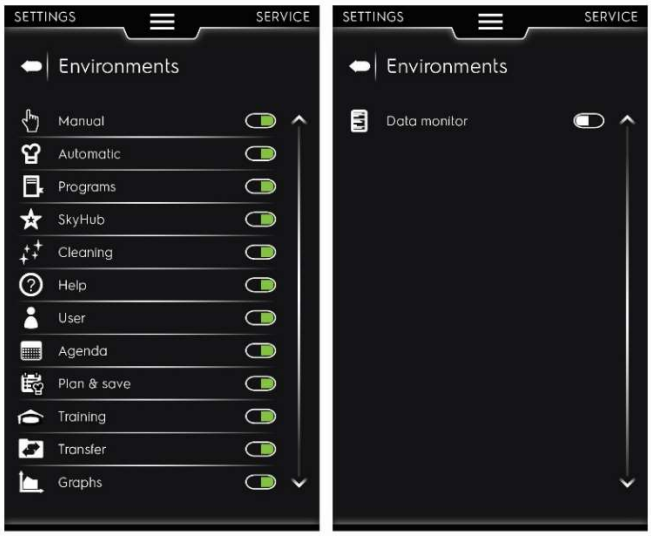
First character = **1**
1+0= **1**
1+1= **2**
2+1= **3**
3+2= **5**
5+3= **8**
8+5= **13**



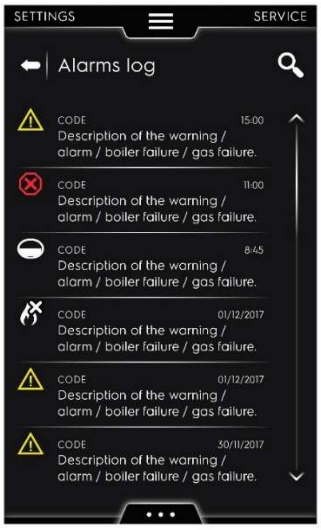




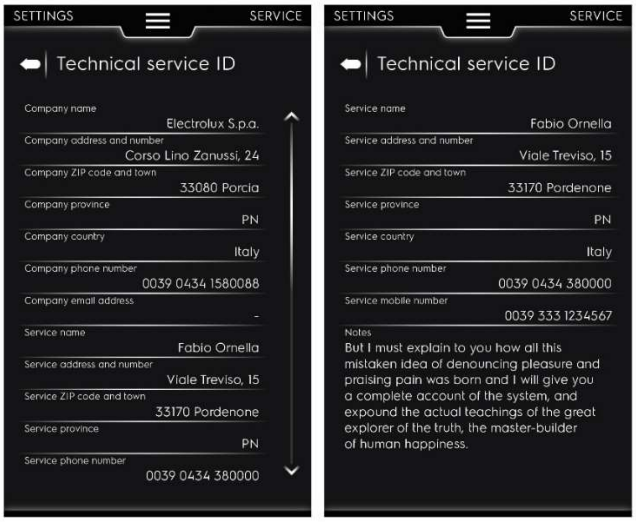
ENVIRONMENTS



ALARM LOGS



TECHNICAL SERVICE ID

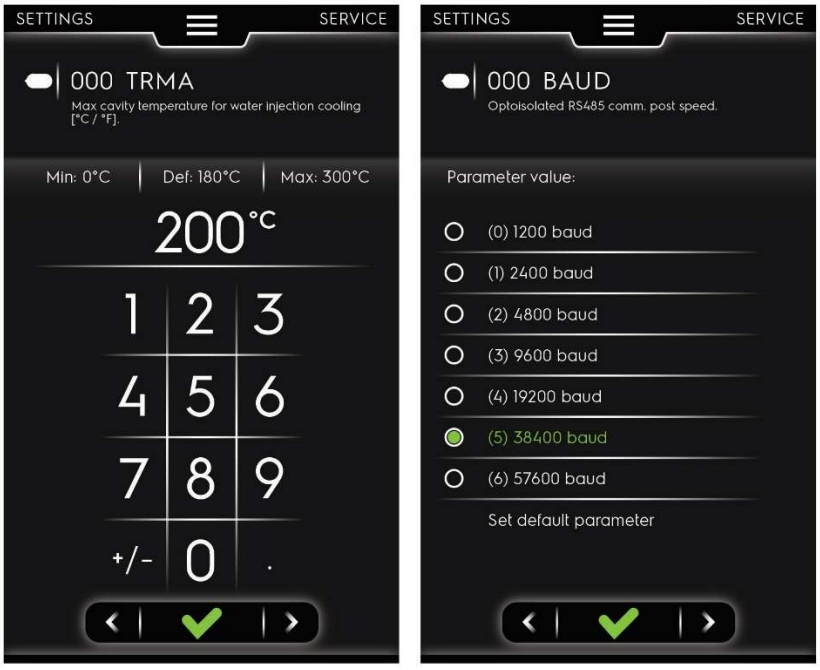


PARAMETERS LEVEL T, K (TOUCH SCREEN)

The parameters are included in the software that is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) In case of any doubt, refer to your local country customer care.

Identification of parameter and value to set or change.
Reset the default parameter setting





PARAMETER LIST (LEVEL T,K,B,C):

All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

The list below refer to the visible parameters for Touch Combi Models. All other models (Digit/boiler-less…) will have less parameters. It is possible to use this list as a reference for all the models.

Para-meter ID	Parameter name	Mne-monic	Short Description	Table	Min	Max	De-fault
1	PAR_FL_AB_GAS	GAS	Appliance type	{0, "Electric"} {1, "Gas"}	0	1	0
3	PAR_FL_AB_FAHR	FAhr	Temperature Scale	{0, "°C"} {1, "°F"}	0	1	0
5	PAR_FL_AB_RUN_OPNDOOR	rod	Cooking with open door	{0, "Disabled"} {1, "Enabled"}	0	1	0
6	PAR_FL_AB_LAMBDA	LAMb	Lambda Probe	{0, "Disabled"} {1, "Enabled"}	0	1	1
7	PAR_FL_FAB_CLEAN	FCln	Cleaning environment (factory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	1
9	PAR_FL_AB_PPM	PPM	Power Peak Manage-ment	{0, "Disabled"} {1, "Enabled"}	0	1	0
10	PAR_AB_DEMO_MODE	dEMo	Demo Mode	{0, “Disabled”} {1, “Event mode”} {2, “Portable”}	0	2	0
12	PAR_FL_AB_PREHBOLSTOP	Phbo	Preheat the boiler in stop mode	{0, "Disabled"} {1, "Enabled"}	0	1	0
13	PAR_FL_FAB_MANUAL	FMAn	Manual mode (factory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	1
14	PAR_FL_AB_PREHEAT	PrEh	Cavity preheating	{0, "Disabled"} {1, "Enabled"}	0	1	1
15	PAR_FL_FAB_AUTOMATIC	Faut	Automatic mode (fac-tory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	1
22	PAR_FL_FAB_FSC	FFSC	Food Safe Control (fac-tory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	1
24	PAR_LEVEL	APPL	Appliance level	{0, "Combi"} {1, "Convection"}	0	1	0
25	PAR_MODEL	APPM	Appliance model	{0, "LW 6 1/1"} {1, "LW 6 2/1"} {2, "LW 10 1/1"} {3, "LW 10 2/1"} {4, "LW 20 1/1"} {5, "LW 20 2/1"}	0	5	0
26	PAR_BOL_PREH_TEMP	bPHt	Boiler preheating tem-perature		0	99	97
30	PAR_HEIGHT_SEALEVEL	SEAL	Height above the sea level		0	4000	0
31	PAR_MAXT_MANWATERINJ	tHMA	Maximum temperature for manual water injec-tion		180	300	220

Parameter ID	Parameter name	Mnemonic	Short Description	Table	Min	Max	Default
32	PAR_MAXT_WATERCOOL	trMA	Maximum temperature to use water in cool down		150	300	180
33	PAR_MINT_WATERCOOL	trMn	Minimum temperature to use water in cool down		0	180	30
38	PAR_FL_FAB_ADV_REC	ArEC	Advanced recovery mode	{0, "Disabled"} {1, "Enabled"}	0	1	1
39	PAR_FL_FAB_GREEN	grEn	Green Options (factory settings)	{0, "Disabled"} {1, "Enabled"}	0	1	1
44	PAR_DEF_CLEAN_CYCLE	Clnd	Default cleaning cycle	{0, "Extra Strong"} {1, "Strong"} {2, "Medium"} {3, "Soft"} {4, "Rinse"}	0	4	2
45	PAR_CLEAN_CHEM	ClnC	Cleaning cycle chemicals	{0, "Solid"} {1, "Enzymatic"} {2, "Liquid"} {3, "Powder"}	0	3	3
46	PAR_FAB_CLEAN_ENZ	FCLE	Cleaning – enzymatic detergent (factory settings)	{0, "Disabled"} {1, "Enabled"}	0	1	0
47	PAR_FAB_CLEAN_LIQ	FCLL	Cleaning – liquid (factory settings)	{0, "Disabled"} {1, "Enabled"}	0	1	0
55	PAR_FAB_CLEAN_SOLID	FCLS	Cleaning – solid (factory settings)	{0, "Disabled"} {1, "Enabled"}	0	1	1
56	PAR_FAB_CLEAN_DRAWER	FCLd	Cleaning – solid without drawer (factory settings)	{0, "Disabled"} {1, "Enabled"}	0	1	1
57	PAR_FL_FAB_GREEN_EXT_TIME	FgEt	Green Options – extend time (factory settings)	{0, "Disabled"} {1, "Enabled"}	0	1	1
62	PAR_FL_AB_MULTIPHASE	MPH	Manual multiphase environment	{0, "Disabled"} {1, "Enabled"}	0	1	1
63	PAR_FL_AB_EXPERT	SSM	Show set and current values	{0, "Disabled"} {1, "Enabled"}	0	1	0
74	PAR_STEAM_FAN_DEF	SFd	Steam cycle fan speed default	{1, "Fan speed 1" } {2, "Fan speed 2" } {3, "Fan speed 3" } {4, "Fan speed 4" }	1	4	4
79	PAR_COMBI_FAN_DEF	CFd	Combi cycle fan speed default	{1, "Fan speed 1" } {2, "Fan speed 2" } {3, "Fan speed 3" } {4, "Fan speed 4" } {5, "Fan speed 5" } {6, "Fan speed 6" } {7, "Fan speed 7" }	1	7	5

Parameter ID	Parameter name	Mnemonic	Short Description	Table	Min	Max	Default
84	PAR_HOTAIR_FAN_DEF	HFd	Hot air cycle fan speed default	{1, "Fan speed 1" } {2, "Fan speed 2" } {3, "Fan speed 3" } {4, "Fan speed 4" } {5, "Fan speed 5" } {6, "Fan speed 6" } {7, "Fan speed 7" }	1	7	5
86	PAR_FL_FAB_ECODELTA	FECd	Delta T cooking (factory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	1
88	PAR_PRB_CAV_DTMIN	PdtC	Minimum difference between cavity and probe set temperatures		0	10	5
90	PAR_FAB_PRB_TYPE	Prb	Food core temperature probe type	{0, "None"} {1, "1-Point"} {2, "6-Point"}	0	2	2
114	PAR_FL_AB_INFO_DRW	IbAr	Bottom drawer info bar	{0, "Disabled"} {1, "Enabled"}	0	1	1
115	PAR_FL_FAB_SMOKER	FFuM	Smoker feature (factory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	0
118	PAR_FL_FAB_AROMA	FArM	Aroma feature (factory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	0
130	PAR_FRC_FSC_SET	FFSC	Force FSC risk setting on start	{0, "Disabled"} {1, "Enabled"}	0	1	0
131	PAR_FSC_DISP	dISF	Display F value on screensaver	{0, "Disabled"} {1, "Enabled"}	0	1	0
132	PAR_FSC_RISK_DEF	FSrd	FSC default risk level	{0, "Standard"} {1, "High"}	0	1	1
149	PAR_FL_FAB_SHOW_CONS	FSCn	Show consumption estimation (factory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	0
151	PAR_FL_FAB_A_SHOW_GRAPH	AFSb	Automatic – show recipe graph form (factory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	0
168	PAR_FL_FAB_AUTOSWITCH_OFF	FASo	Automatic switching off (factory setting)	{0, "Disabled"} {1, "Enabled"}	0	1	1
169	PAR_AUTOSWITCH_OFF_TEMP_TH	FASt	Automatic switching off temperature threshold (factory setting)		35	60	40
184	PAR_FL_FAB_FATDRAIN	FAtd	Fat drain system	{0, "Disabled} {1, "Enabled"}	0	1	0
226	PAR_CALIB_LAMBDA_LOWHUM_VALUE	CLLn	Low humidity value calibration for lambda sensor		1000	3500	2696
227	PAR_CALIB_LAMBDA_HIGHHUM_VALUE	CLHn	High humidity value calibration for lambda sensor		1000	3500	1480
232	PAR_MAX_FAN_LEVEL_STEAM	hFLS	Maximum fan speed level in steam		1	7	4
235	PAR_OVERLAPPED_MODE	OLt	Stacked type	{0, "Single"} {1, "Top"} {2, "Bottom"}	0	2	0

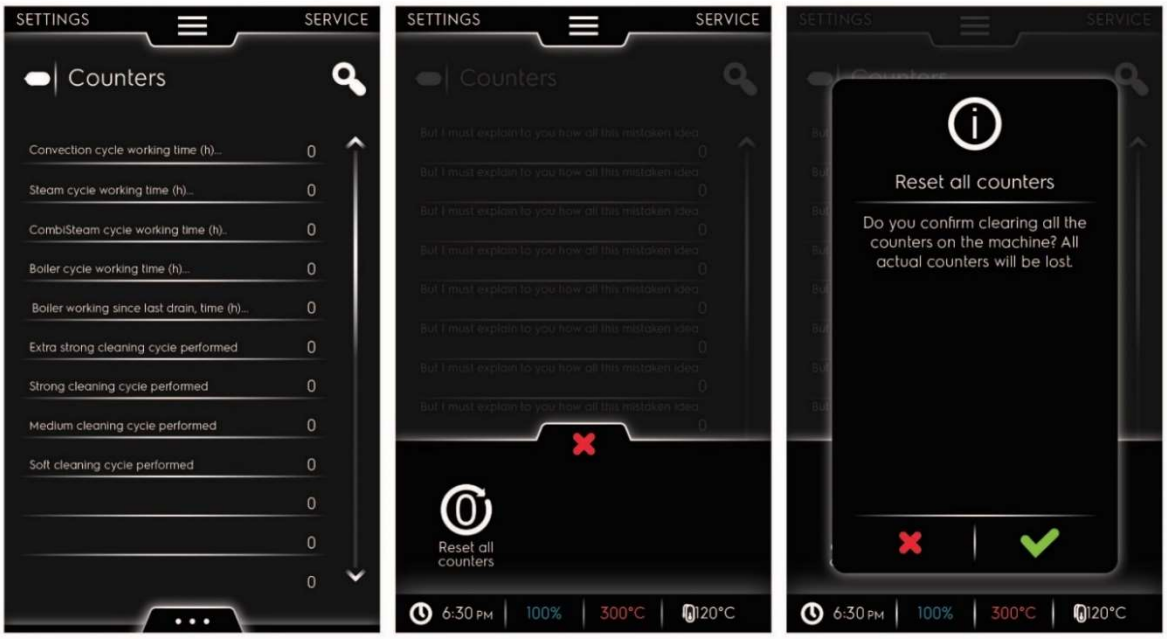
Parameter ID	Parameter name	Mnemonic	Short Description	Table	Min	Max	Default
237	PAR_DISPL_LUM_LEVEL	dILL	Sets display backlight luminosity level		0	100	100
238	PAR_MSTANDBY	Stby	Sets the inactivity time after which the machine enters in standby mode. Set 0 to disable standby		0	3599	900
275	PAR_FL_FAB_TRAINING_ENABLED	tSE	Training secondary menu enabled	{0, "Disabled} {1, "Enabled"}	0	1	0
276	PAR_FL_FAB_CHILLER_ENABLED	CSE	Chiller secondary menu enabled	{0, "Disabled} {1, "Enabled"}	0	1	0
277	PAR_FL_FAB_BASE_ENABLED	bSE	Base secondary menu enabled	{0, "Disabled} {1, "Enabled"}	0	1	0
301	PAR_FL_FAB_EOLT_ENABLED	EOLt	Enables the End of Line Testing functionality	{0, "Disabled} {1, "Enabled"}	0	1	0
313	PAR_SPEC-CYC_SOUSVIDE_FAN_SPEED	ASSF	Sous vide fan speed	{1, "Fan speed 1" } {2, "Fan speed 2" } {3, "Fan speed 3" } {4, "Fan speed 4" }	1	4	4
329	PAR_LAUNCH_WIZARD	LAIP	Launch Wizard at startup	{0, "Disabled"} {1, "Enabled"}	0	1	1
345	PAR_GASTYPE	GASt	Gas Type Index	{0, "G20(Methane)"} {1, "G25(Holland)"} {2, "G25.1(Hungary)"} {3, "G25.3(New Holland)"} {4, "G30(Buthane)"} {5, "G31(Propane/LPG)"} {6, "G20(USA Methane"} {7, "G31(USA Propane/LPG"}	0	7	0
346	PAR_SEL_BRAND	BrAn	Selects the brand of the appliance. This selection impacts on function names and availability	{0, “Diamond”} {1, “Zanussi”} {2, “Diamond”} {3, “Multi Brand”}	0	5	0
347	PAR_HOOD_TYPE	Hood	Select the hood level installed	{0, "Not installed”} {1, “Level 1”} {2, “Level 2”} {3, “Level 3”} {4, “Level 4”}	0	4	0
348	PAR_RTC	rtCE	Enables the RTC	{0, "Disabled} {1, "Enabled"}	0	1	1
349	PAR_FL_HALF_POWER_OPTION	hPOE	Enables the possibility to set the half power functionality	{0, "Disabled} {1, "Enabled"}	0	1	1
352	PAR_CONNECTIVITY	Conn	Enables the connectivity	{0, "Disabled} {1, "Enabled"}	0	1	1
353	PAR_DB_SOUND_END	ECSn	End cooking sound		0	7	1
354	PAR_DB_FAN_SPEED_1	FSP1	Fan speed 1		300	1800	300
355	PAR_DB_FAN_SPEED_2	FSP2	Fan speed 2		300	1800	600
356	PAR_DB_FAN_SPEED_3	FSP3	Fan speed 3		300	1800	900

Parameter ID	Parameter name	Mnemonic	Short Description	Table	Min	Max	Default
357	PAR_DB_FAN_SPEED_4	FSP4	Fan speed 4		300	1800	1200
358	PAR_DB_FAN_SPEED_5	FSP5	Fan speed 5		300	1800	1500
359	PAR_DB_STEAM_FAN_DEF	SFd	Steam cycle fan speed default	{1, "Fan speed 1" } {2, "Fan speed 2" } {3, "Fan speed 3" }	1	3	3
360	PAR_DB_HOTAIR_FAN_DEF	HFd	Hot air cycle fan speed default	{1, "Fan speed 1" } {2, "Fan speed 2" } {3, "Fan speed 3" } {4, "Fan speed 4" } {5, "Fan speed 5" }	1	5	4
361	PAR_DB_COMBI_FAN_DEF	CFd	Combi cycle fan speed default	{1, "Fan speed 1" } {2, "Fan speed 2" } {3, "Fan speed 3" } {4, "Fan speed 4" } {5, "Fan speed 5" }	1	5	4
362	PAR_DB_HOTAIR_HUMINI_DEF	HIHd	Hot air cycle cavity initial humidification set default		0	5	0
363	PAR_DB_HOTAIR_HUMINI_STEP	HIHS	Hot air cycle cavity initial humidification step duration		1	255	20
364	PAR_DB_MAX_FAN_LEVEL_STEAM	hFLS	Maximum fan speed level in steam		1	5	3
365	PAR_DT_CAVITY_UP	OCAU	Offset for upper cavity thermocouple		-5	5	0
366	PAR_DT_CAVITY_DW	OCAd	Offset for lower cavity thermocouple		-5	5	0
367	PAR_DT_PROBE_POINT1	OPb1	Offset for food probe point 1 thermocouple		-5	5	0
368	PAR_DT_PROBE_POINT2	OPb2	Offset for food probe point 2 thermocouple		-5	5	0
369	PAR_DT_PROBE_POINT3	OPb3	Offset for food probe point 3 thermocouple		-5	5	0
370	PAR_DT_PROBE_POINT4	OPb4	Offset for food probe point 4 thermocouple		-5	5	0
371	PAR_DT_PROBE_POINT5	OPb5	Offset for food probe point 5 thermocouple		-5	5	0
372	PAR_DT_PROBE_POINT6	OPb6	Offset for food probe point 6 thermocouple		-5	5	0
373	PAR_OFFSET_GAS_START_CUP	OSCU	Offset PWM start upper cavity burner		0	5	0
374	PAR_OFFSET_GAS_START_CDW	OSCd	Offset PWM start lower cavity burner		0	5	0
375	PAR_OFFSET_GAS_START_BUP	OSbU	Offset PWM start upper boiler burner		0	5	0
376	PAR_OFFSET_GAS_MAX_CUP	OMCU	Offset PWM max power upper cavity burner		0	5	0
377	PAR_OFFSET_GAS_MAX_CDW	OMCd	Offset PWM max power lower cavity burner		0	5	0
378	PAR_OFFSET_GAS_MAX_BUP	OMbU	Offset PWM max power upper boiler burner		0	5	0

Parameter ID	Parameter name	Mnemonic	Short Description	Table	Min	Max	Default
379	PAR_INDEX_LEVEL_SENSING	IndL	Index for boiler level sensing sensitivity		1	5	1
381	PAR_BOL_STOP_TEMP	bPHt	Boiler temperature to be kept in stop mode		0	99	84
408	PAR_sPRN_HACCP	tPrn	User HACCP data log sample time.		60	3600	60
410	PAR_PREH_DT_END	PdtE	Delta temperature to stop the preheating in advance for temperature lower than 100°C		0	100	20
415	PAR_DT_CLEANING_PRECOOL	dtCP	Cleaning pre-cool set-point delta		0	50	10
416	PAR_FAB_CLEAN_POWDER	FCLP	Cleaning – powder (factory settings)	{0, "Disabled"} {1, "Enabled"}	0	1	1

COUNTERS

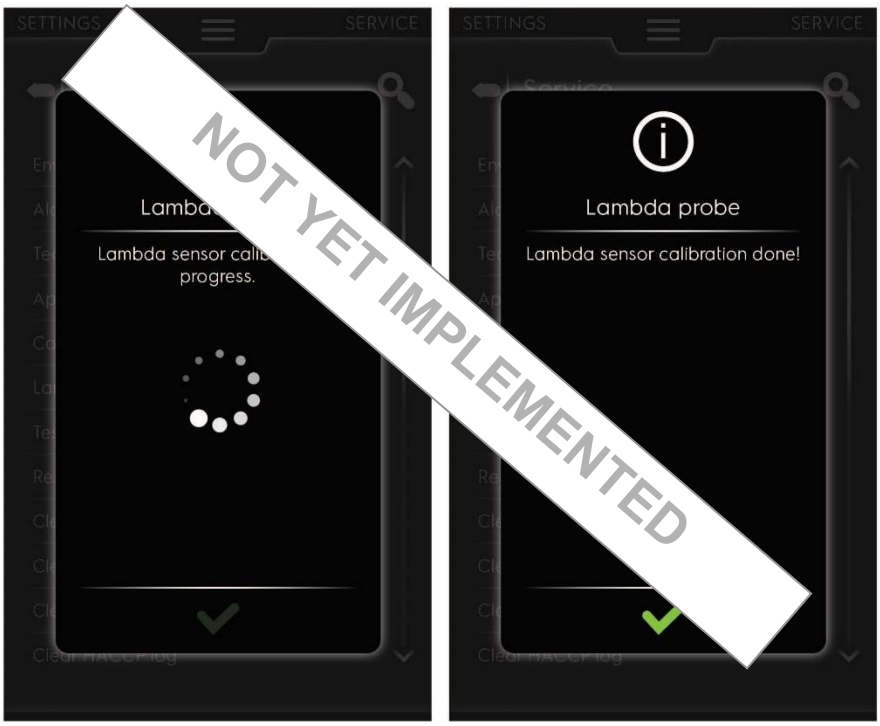
Here it is possible check the time and cycle used in the units, as:
-How many cycle used
-How many hours used
-Reset the counters



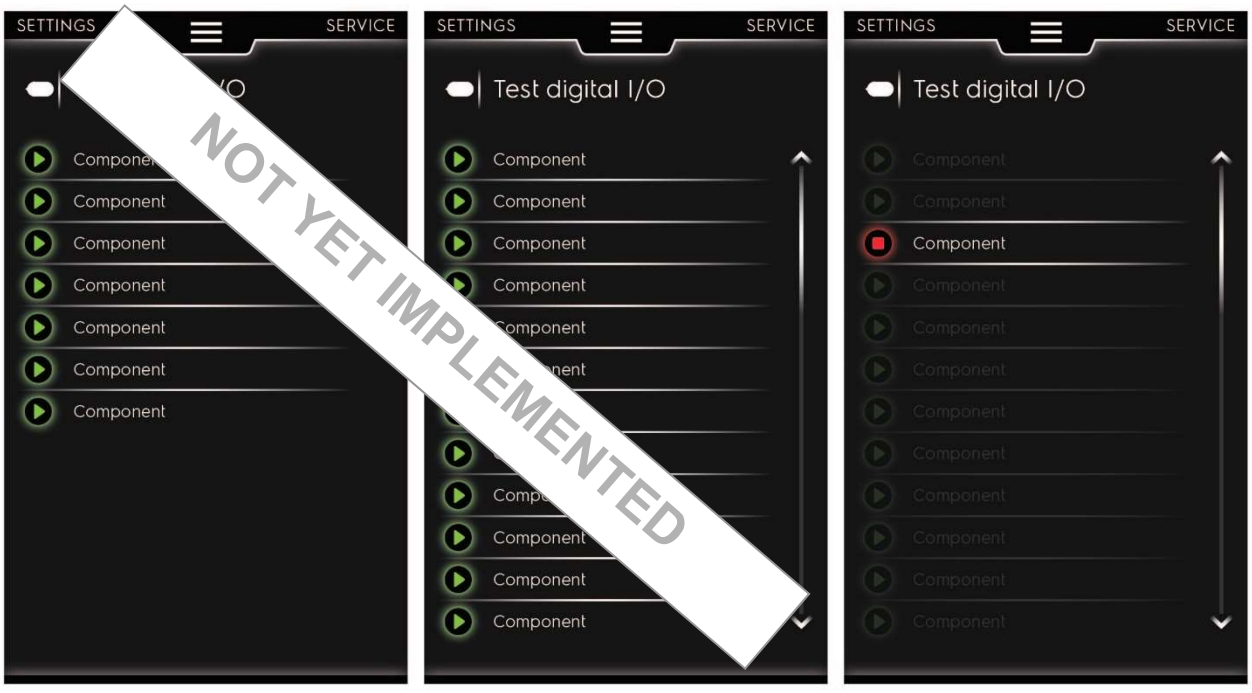
Counter name	Mnemonic	Description
CNT_CLN_XS	CCL4	Counter extra strong cleaning cycles
CNT_CLN_S	CCL3	Counter strong cleaning cycles
CNT_CLN_M	CCL2	Counter medium cleaning cycles
CNT_CLN_SF	CCL1	Counter soft cleaning cycles
CNT_CLN_R	CCL0	Counter rinse cleaning cycles
CNT_CLN_ABORTED	CCLA	Counter aborted cleaning cycles
CNT_HH_ON	CHHO	Hours with machine on
CNT_FLAP_OPENING	CFOP	Flap openings
CNT_FLAP_CLOSING	CFCL	Flap closings
CNT_QUENCHING_ACTIVATIONS	CEGA	Quenching activations (EV2)
CNT_HH_QUENCHING_ON	CHqA	Quenching active time (EV2)
CNT_BURNER_TOP_ACTIVATIONS	CbtA	Gas burner top cavity activations
CNT_BURNER_BOTTOM_ACTIVATIONS	CbbA	Gas burner bottom cavity activations
CNT_BURNER_BOILER1_ACTIVATIONS	Cb1A	Gas burner boiler 1 activations
CNT_BURNER_BOILER2_ACTIVATIONS	Cb2A	Gas burner boiler 2 activations
CNT_BOILER_FILL_ACTIVATIONS	CbFA	Boiler filling valve activations (EV5)
CNT_BOILER_FILL_ACTIVATIONS	CHbF	Boiler filling valve on time (EV5)
CNT_HH_COOKING	CHCO	Hours cooking
CNT_HH_STEAM	CHSt	Hours steam
CNT_HH_COMBI	CHCi	Hours combi
CNT_HH_CONVECTION	CHCn	Hours convection
CNT_HH_OVER40DEG	CH40	Hours with cavity above 40°C
CNT_HH_GASKET_LIFE	CHEL	Equivalent hour of gasket life
CNT_ISG_ACTIVATIONS	CISA	ISG activations (EV1)
CNT_HH_ISG_ACTIVATE	CHIS	ISG active time (EV1)

Counter name	Mnemonic	Description
CNT_WATER_SPRAY_ACTIVATIONS	CSPA	water sprayer activations (EV4)
CNT_HH_WATER_SPRAY_ACTIVATE	CHSA	water sprayer active time (EV4)
CNT_INLET_WATER_ACTIVATIONS	CInA	inlet water cleaning valve activations (EV7)
CNT_HH_INLET_WATER_ACTIVATE	CHIA	inlet water cleaning valve active time (EV7)
CNT_DRAWER_LOADING_ACTIVATIONS	CdLA	drawer loading valve activations (EV11)
CNT_HH_DRAWER_LOADING_ACTIVE	CHdL	drawer loading valve active time (EV11)
CNT_DRAWER_DRAIN_ACTIVATIONS	CddA	drawer drain valve activations (EV12)
CNT_HH_DRAWER_DRAIN_ACTIVE	CHdd	drawer drain valve active time (EV12)
CNT_RECIRC_PUMP_ACTIVATIONS	CrPA	recirculating pump activations (M8)
CNT_HH_RECIRC_PUMP_ACTIVE	CHrP	recirculating pump active time (M8)
CNT_BOILER_DRAIN_OPENINGS	CbdO	boiler drain openings (BV6)
CNT_BOILER_DRAIN_CLOSINGS	CbdC	boiler drain closings (BV6)
CNT_CAVITY_DRAIN_OPENINGS	CcdO	cavity drain openings (BV3)
CNT_CAVITY_DRAIN_CLOSINGS	CcdC	cavity drain closings (BV3)
CNT_LIQUID_DETERGENT_ACTIVATIONS	CLdA	Liquid detergent activations (P1)
CNT_LIQUID_DETERGENT_ACTIVE	CHLd	Liquid detergent active time (P1)
CNT_LIQUID_RINSE_ACTIVATIONS	CLrA	Liquid rinse aid activations (P2)
CNT_LIQUID_RINSE_ACTIVE	CHLr	Liquid rinse aid active time (P2)
CNT_HH_SMOKER_AROMATIZER_ACTIVE	CHSA	Smoker/Aromatizer activation time
CNT_PREHEATING_SKIPPED	CPrS	Preheating skipped
CNT_CYCLES_STOPPED_USER	CCSU	Cycles stopped by user
CNT_CYCLES_STOPPED_ALARM	CCSA	Cycles stopped by alarm
CNT_AUTOMATIC_CYCLES	CACL	Automatic cycles launched
CNT_MANUAL_CYCLES	CCLA	Manual cycles launched
CNT_PROGRAM_CYCLES	Cpro	Programs launched
CNT_SORT_AND_SAVE	CSAS	Sort & Save used
CNT_AGENDA_FEATURE_LAUNCHED	CAFL	Counts features launched by agenda
CNT_SKYDUO_REQUESTED	CSdr	Counts skyduo cycles requested
CNT_SKYDUO_ACCEPTED	CSdA	Counts skyduo cycles accepted
CNT_OPEN_DOOR	CdOP	Counts door openings
CNT_OPEN_DOOR_COOKING	CdOC	Counts door openings during a cooking cycle
CNT_OPEN_DOOR_CLEANING	CdCL	Counts door openings during a cleaning cycle
CNT_POWER_ON	CPOn	Counts how many times the machine has been powered on
CNT_POWER_FAIL	CPFA	Counts how many times a power fail occurred

LAMBDA PROBE CALIBRATION



TEST DIGITAL I/O

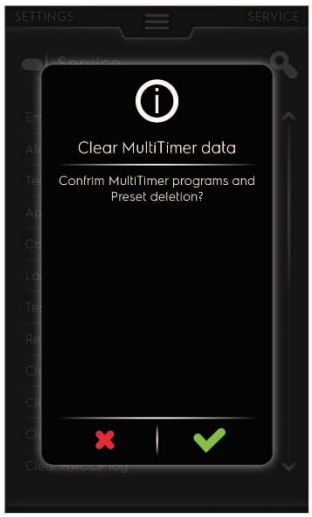


RESTORE AUTOMATIC MODE

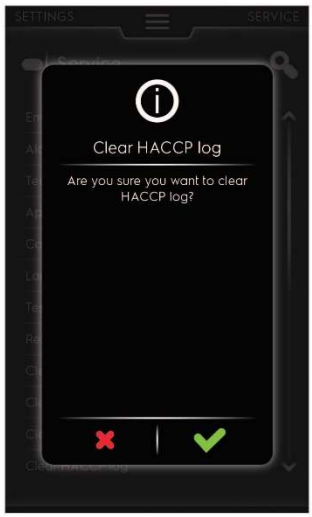


CLEAR: PROGRAM MODE, MULTI TIMER DATA, FSC LOG, HACCP LOG

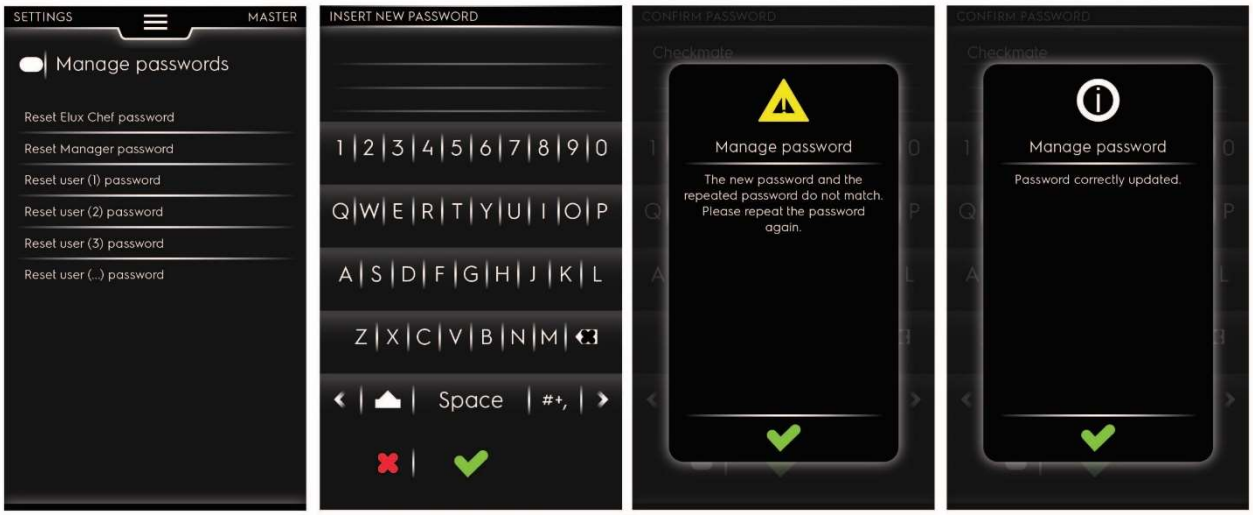








MANAGE PASSWORDS



INSTALLATION WIZARD RECAP

Here you will find a RECAP of the wizard ... out in the wizard setup, if you would like to see what was set by the previous installer/commissioner.

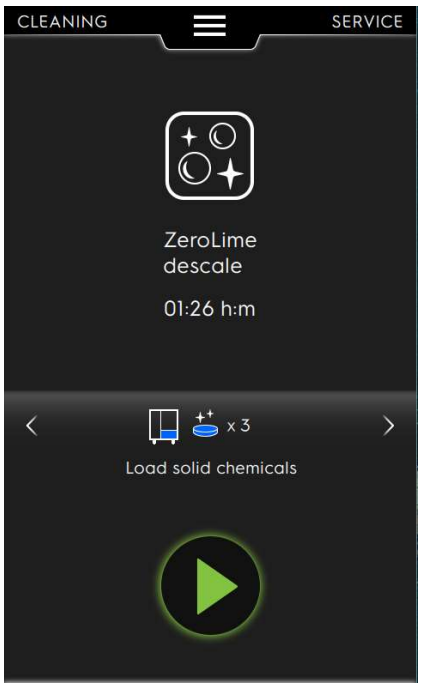


WIZARD: TO BE IMPLEMENTED

BOILER MANTENANCE

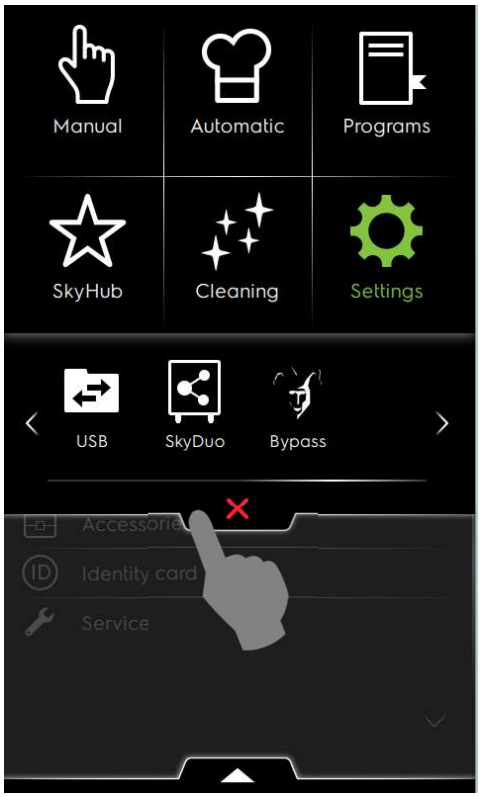
The boiler descale operation cannot be carried out “manually”; the boiler is not equipped with an external access like in previous models. The boiler maintenance is carried out trough a "special" cycle started directly from the service area. Refer also to the § SETTINGS AND SERVICE AREA .

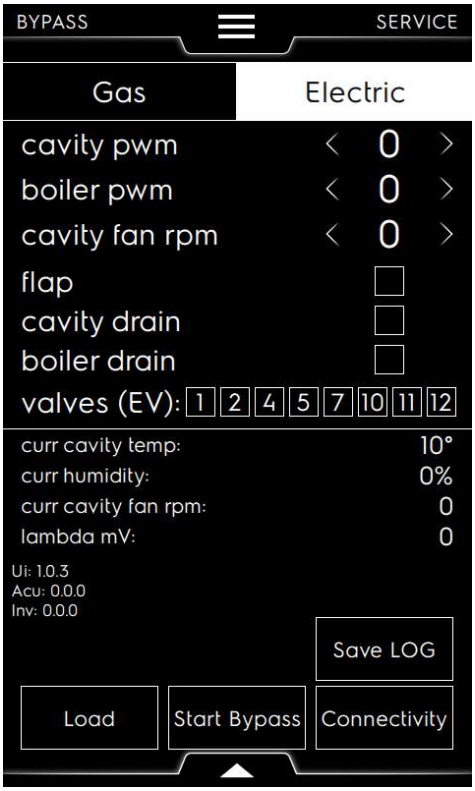
If the cycle is completed without interruption the counter parameter relative to the descale will add 1 unit (+1); Refer also to the §COUNTERS



4.2.1.2 BY-PASS ENVIRONMENT

Once you are logged as SERVICE § SETTINGS AND SERVICE AREA the By-Pass environment is automatically available in the secondary menu



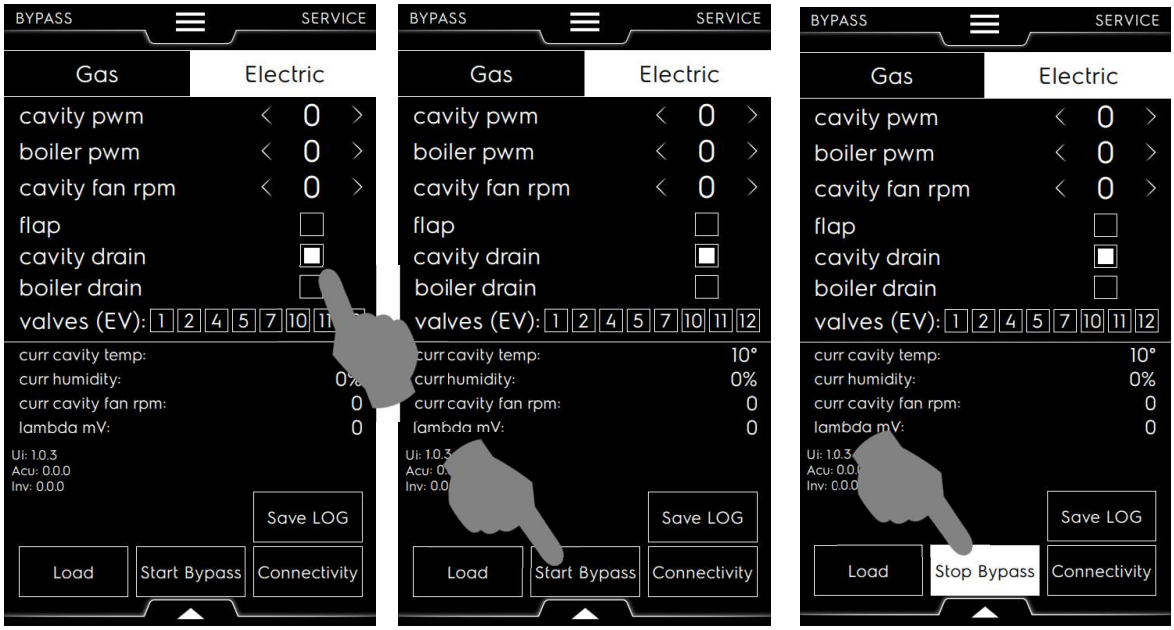


From this environment it is possible to manually activate the following devices:

- Cavity flap venting valve VV1 (cavity air intake)
- Cavity drain valve (BV3)
- Bolier drain valve (BV6)
- The valves EV1-EV2-EV4-EV5-EV7-EV10-EV11-EV12

Refer to § COMPONENTS TECHNICAL DESCRIPTION/FUNCTIONING

Below the example on how to START and STOP the cavity drain valve:



4.2.1.3 USB TRANSFER AMBIENT (SERVICE FUNCTIONS)

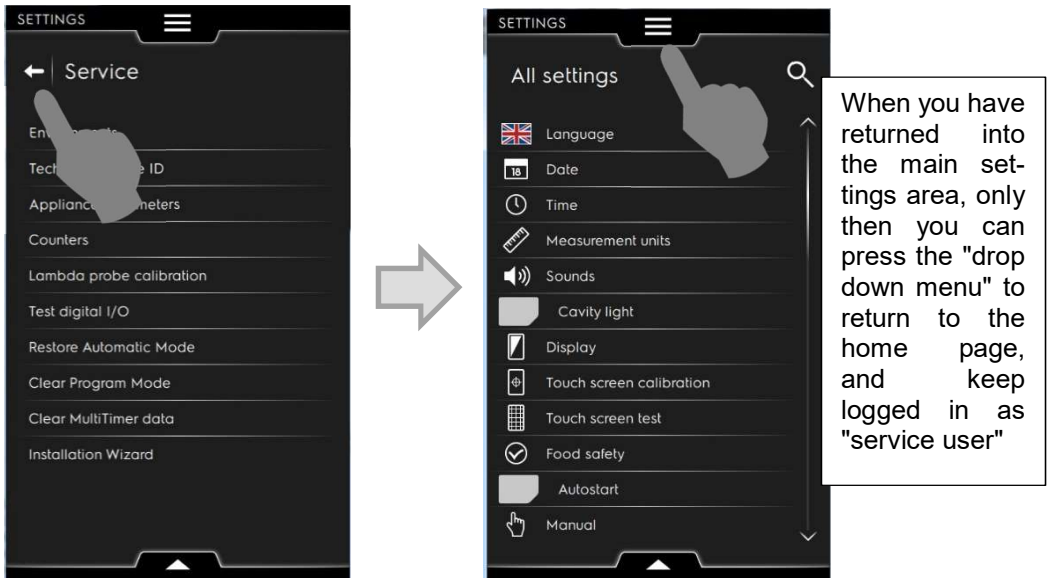
The Transfer ambient is used to manage data transfer between UI and a USB key. It contains four functionalities:

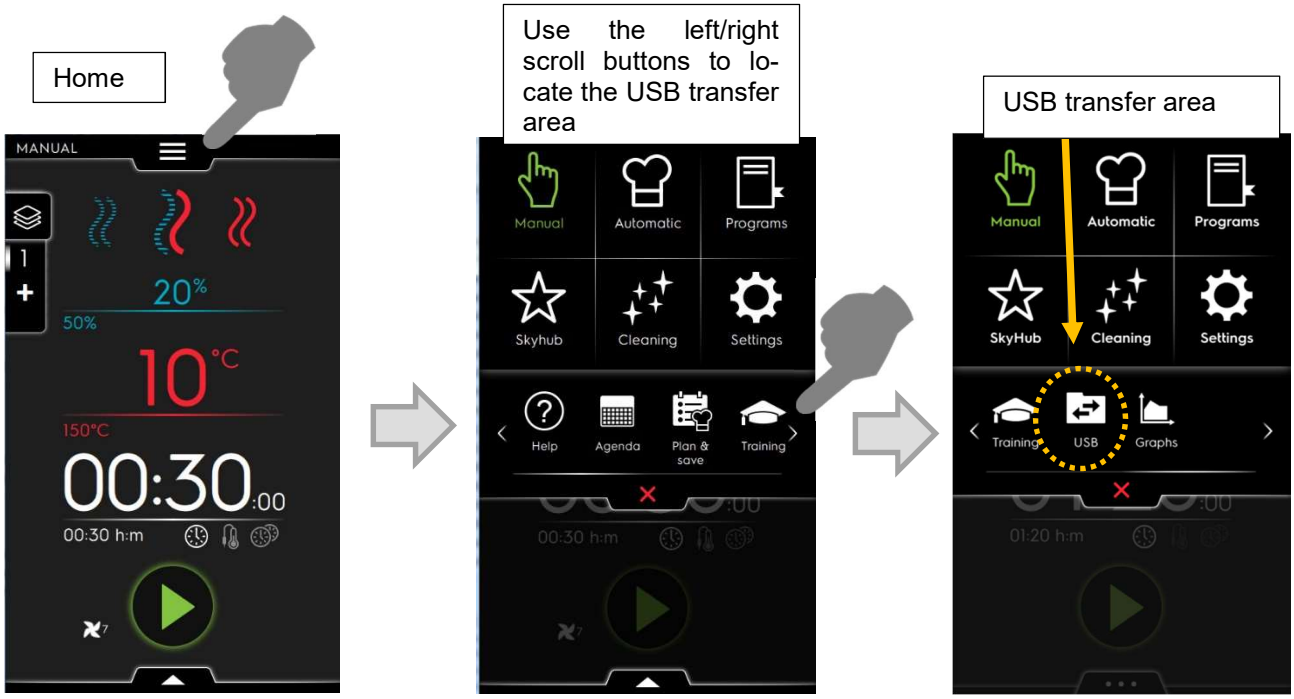
- Download all: Used to copy all data (parameters, recipes,…) from UI to USB key;
- Upload all: Used to copy all data from USB key to UI;
- Download selection: Used to select, from a single category (parameters, recipes,…), which items to copy from UI to USB key;
- Upload selection: Used to select, from a single category, which items to copy from USB key to UI.

The usb ambient can be accessed in two ways: **SERVICE credentials - USER credentials (chef or generic user)**
The navigation in this ambient will be the same for the "Service User" and the "generic User", but the effects on the download/upload operations will be different

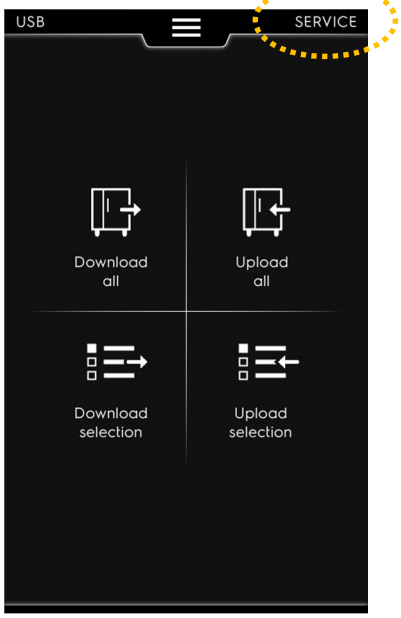
SERVICE:.To obtain the complete service user functions of the usb transfer ambient it will first be necessary to log into the service area like described in SETTINGS AND SERVICE AREA / SERVICE

Once that you have logged into the service area press the "back arrow" , DO NOT PRESS THE DROP DOWN MENU, or you will loose the " rights " to then see all the service functions in the USB transfer area.





The presence of the "SERVICE" icon means that you are logged in as "service user". If “User” credentials are active, the space will be left blank.



“Service” credentials will be active for 15 minutes while navigating the interface. The 15 minutes timeout is continually reset while the appliance is in running state and every time the interface detects a touch. Remember to EXIT the “Service credentials" at the end of your operations by turning the appliance OFF, or by waiting time out (15 minutes / without touching the display).

With “Service” credentials the user interaction will differ from "user credentials) for the following points:

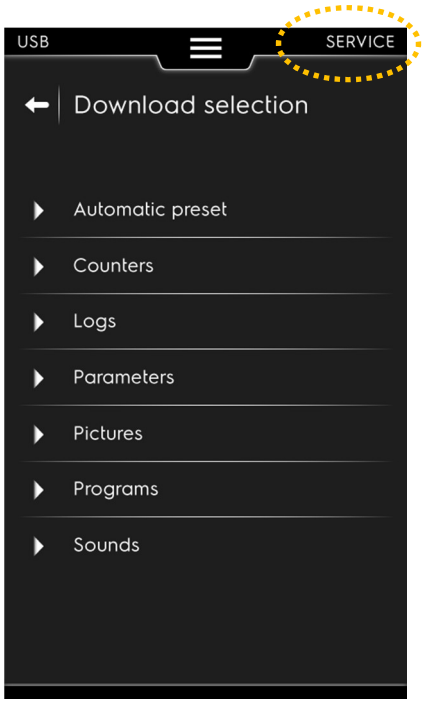
- The download/upload functionalities will include Service parameters, and other characteristics related to the machine model.

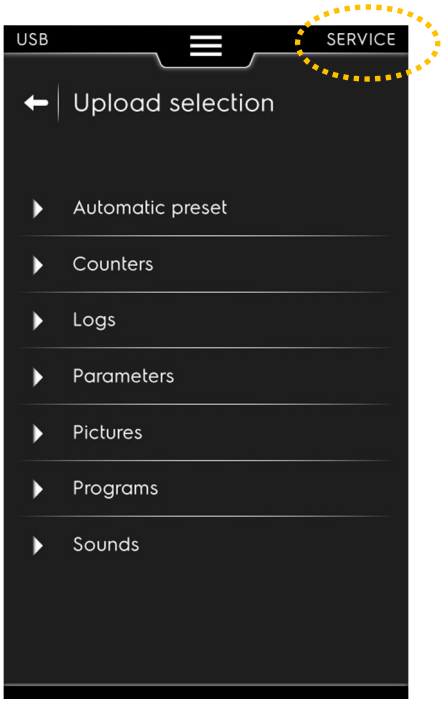
- The download functionalities for logs will include additional logs for debugging or "post-mortem" analysis purposes.

- In running state the user will have access to the top drawer. Only the data monitor button will be active.

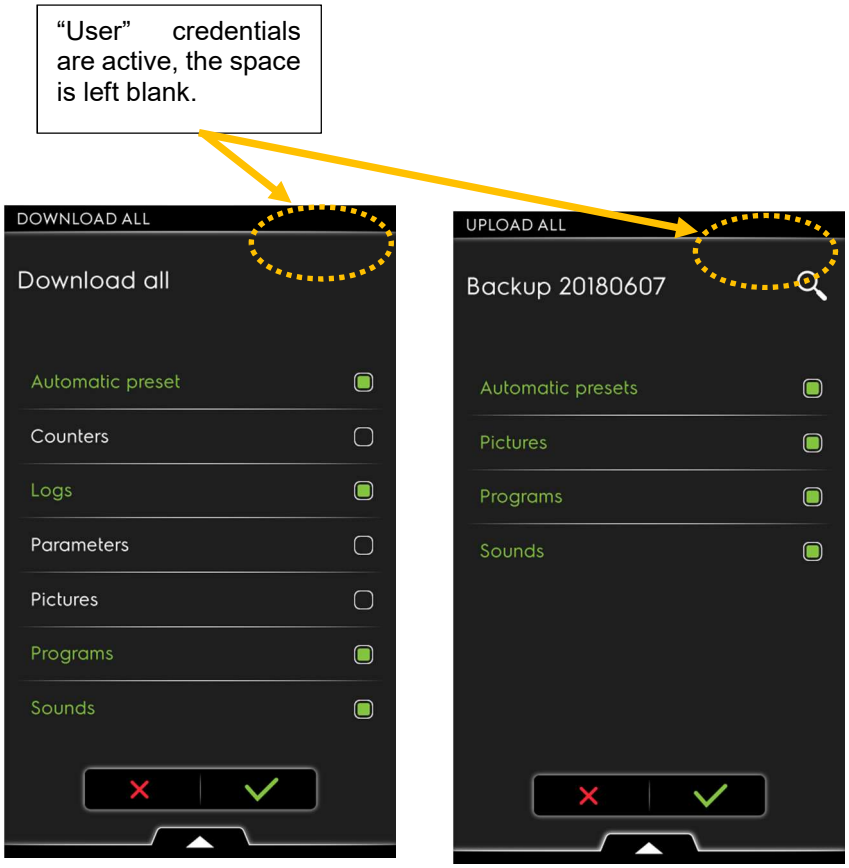
- The service user will have full access to Service parameters setting and data monitor.

SERVICE VIEW OF USB AREA:





USER (chef or generic user) SERVICE VIEW OF USB AREA



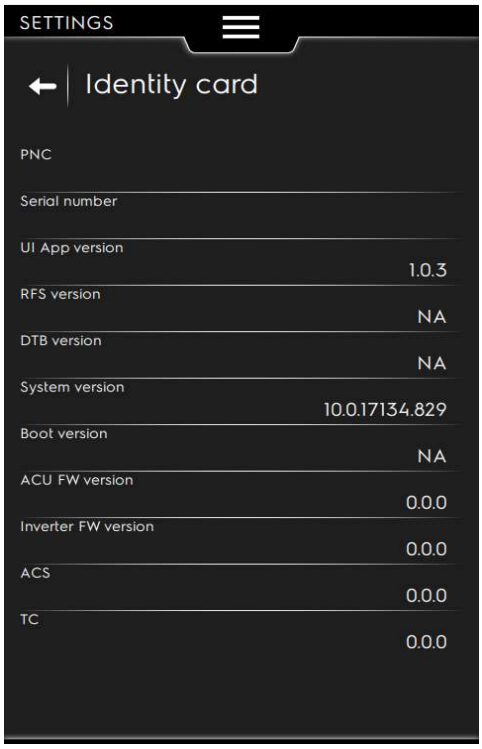
Not all folders can be selected with User credentials !!.

4.2.1.4 FIRMWARE RELEASE, RECOVERY MODE

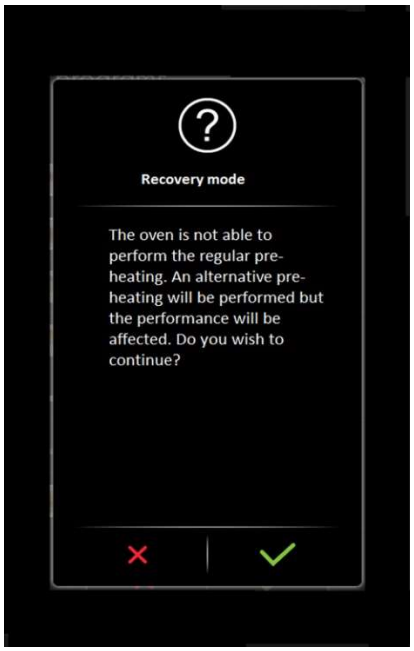
4.2.1.4.1 FIRMWARE RELEASE

In the Identity card is possible to check the complete software release, made of 3 main environments:

- UI App version
- ACU FW version
- Inverter FW version
-



4.2.1.4.2 RECOVERY MODE

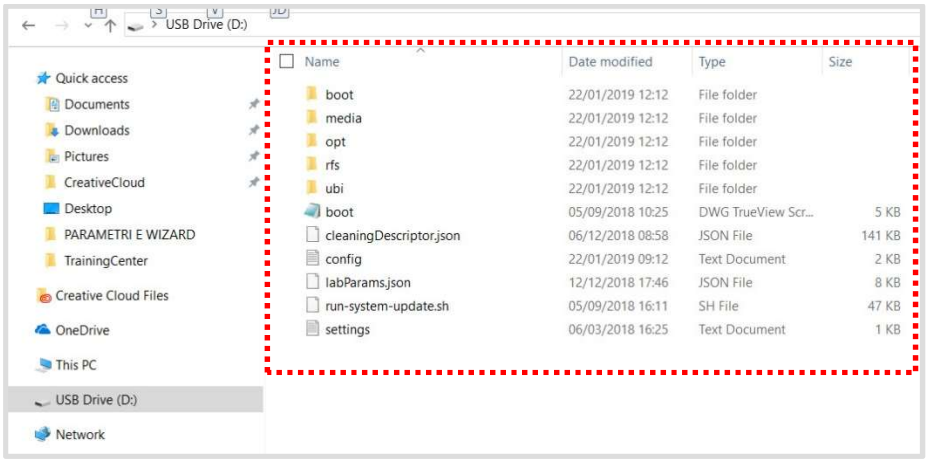


4.2.1.5 SOFTWARE UPDATE(LEVEL T,K)

The software for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in a zip file. For those that do not have access to the web sites, refer to your local country customer care.

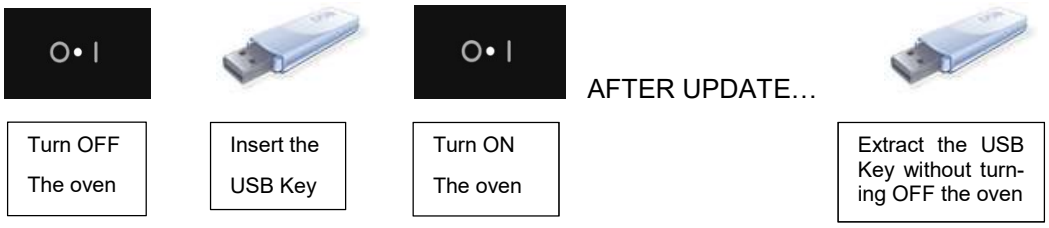
The software that contains all the parameters is specific and unique for each PNC.

EXAMPLE: a software for an oven 6/1 GAS could be uploaded into an oven 10/1 GAS but this would cause malfunctions to the appliance!!.
Download zipped software file from the web site and unzip it into a USB key into the main root (not in sub folders / refer to the example picture of how the software will distribute into the main root folder of the USB key).



It is preferable to have the following USB type:

USB TYPE 2.0 8Gb or 16Gb FAT 32 FORMATTED



The software will install automatically and on the display you will have a pop up indicating the operation is in progress.

The software will update the **UI, ACU, BRIDGE electronic boards**.

At the end of installation the display will show an image "Software updated" "turn OFF". Turn back ON the oven to complete installation.

NOTE:

- in case of power loss during installation, in case of extraction of the USB Key during installation or other maneuver error, don't worry; The update process can be restarted again without damaging the appliance.

- In case of errors or problems with the detection of the USB Key, upload the software into another type of USB key (manufacturer/dimension size) it could be that some USB key manufacturers cannot be read by the oven.

4.2.2 LEVEL B, C (DIGIT)

4.2.2.1 UTILITIES ACTIVATED WITH OVEN ON

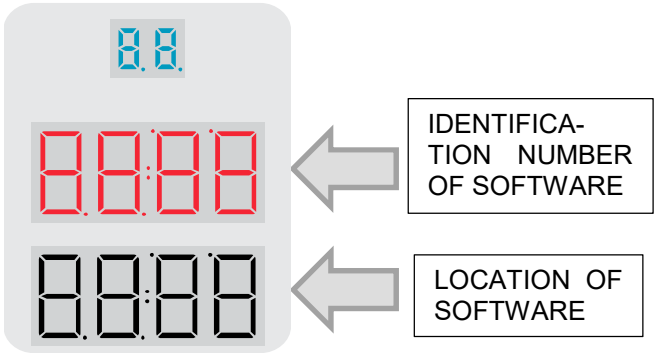
These functions can be accessed directly from the user board without entering service area, the access is granted when the appliance is turned ON

4.2.2.1.1 FIRMWARE RELEASE

The firmware of the USER / ACU / INVERTER electronic boards can be read following the procedure :
Appliance turned ON, but no cycles must be active.

push the button 1,5", on the display you will read for a few seconds the different locations/identification number, once that all locations have been scrolled through, the electronic board will exit and return into standard mode.

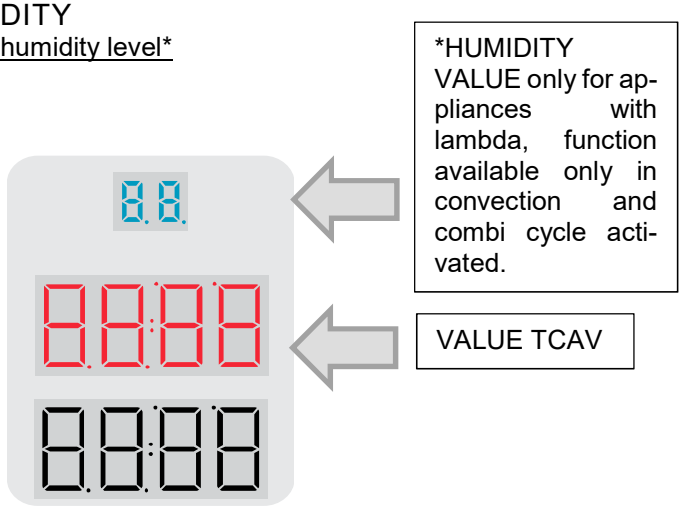
identification number of soft-ware	Location of software
X.Y.Z.	**UI** - (user board)
0.1.2.3.4	**ACU** (power board)
A.B.C.D	**MD** (inverter / motor drive)



4.2.2.1.2 CAVITY TEMPERATURE / HUMIDITY

Appliance turned ON, cycles must be active to see humidity level*

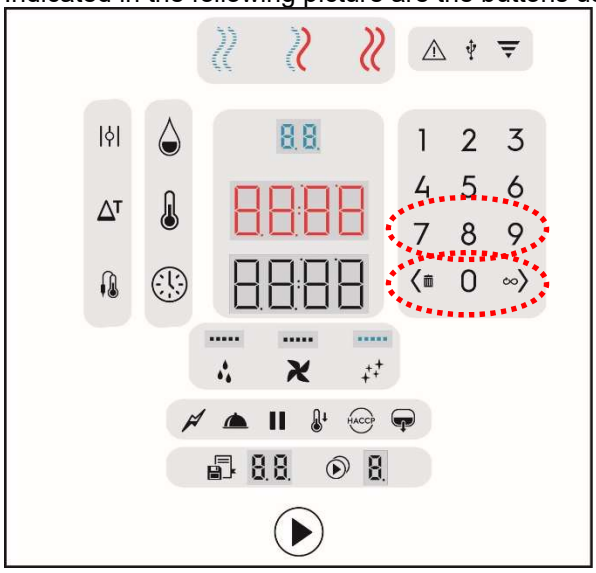
push the button 1,5" to see on display actual temperature of the TCAV, cavity probe; on the display.



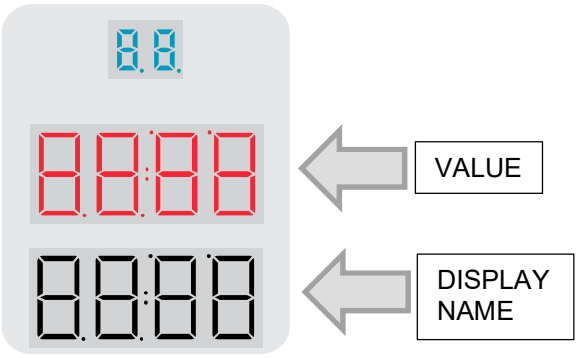
4.2.2.1.3 PROBE TEMPERATURES READINGS

The following temperatures can be read during the functioning of the appliance; press the indicated combination of buttons on the user board to gain access:

Indicated in the following picture are the buttons used for access.



On the Display you will see:



〈🗑 0 ∞〉 press one of the following indicated combinations for 1,5" to visualize the value and name on the display

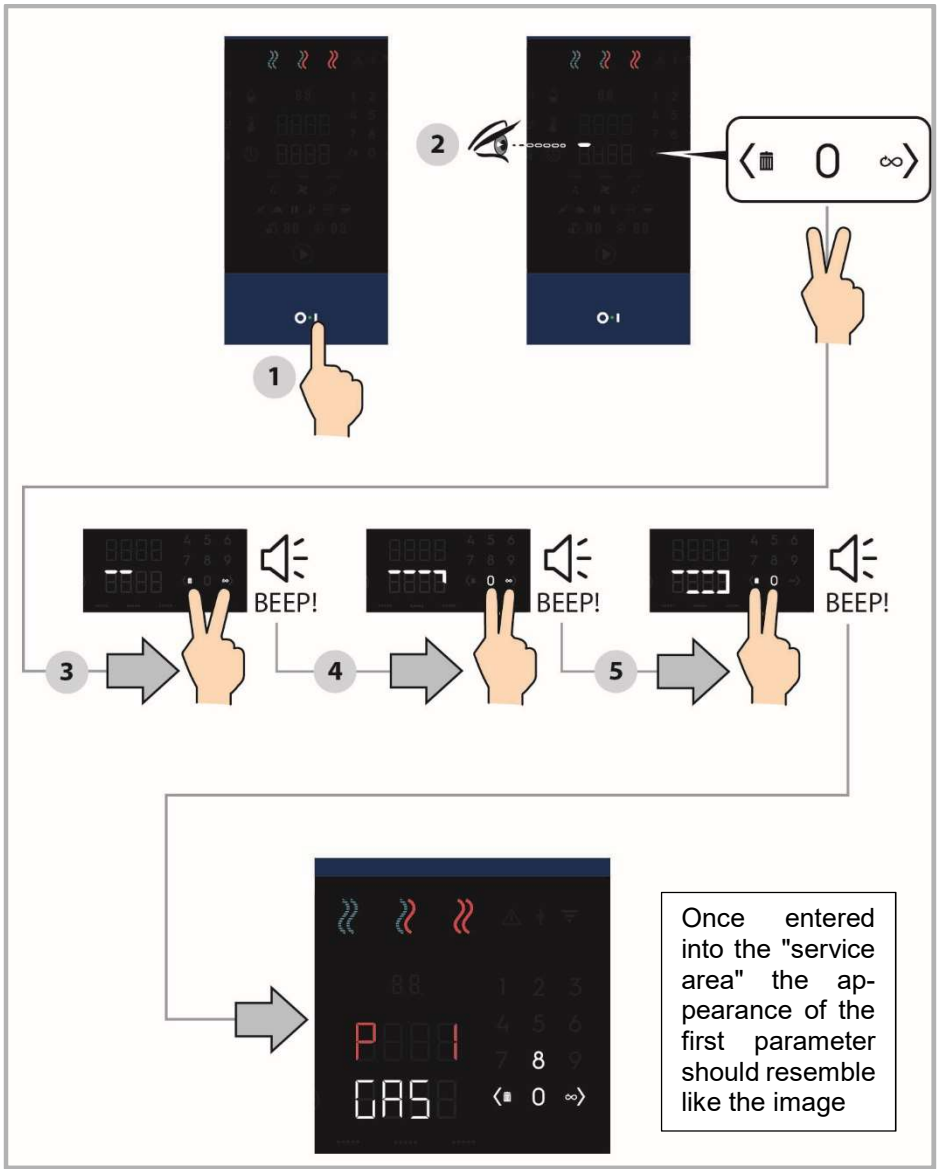
Button combination	DISPLAY NAME	Meaning of the DISPLAY NAME
〈🗑 + 0	tOS	QUENCHING
0 + ∞〉	tFP	FOOD PROBE (lowest temp. point)
〈🗑 + ∞〉	tBOI	BOILER TEMPERATURE
〈🗑 + 0 + ∞〉	nCC	COMPONENTS COMPARTMENT

7 8 9 press one of the following indicated combinations for 1,5" to visualize the value and name on the display

Button combination	Display NAME	Meaning of the NAME on the display
7+9	nM8	NTC PUMP
7+8	nHSC	NTC CAVITY SOLID STATE RELAY TEMP.
8+9	nHSb	NTC BOILER SOLID STATE RELAY TEMP
7+8+9	LAMb	MILLIVOLT READING OF LAMBDA PROBE

4.2.2.2 SERVICE AREA AND UTILITIES

To enter into the dedicated “Service area ” ; follow the procedure by pressing a combination of BUTTONS:

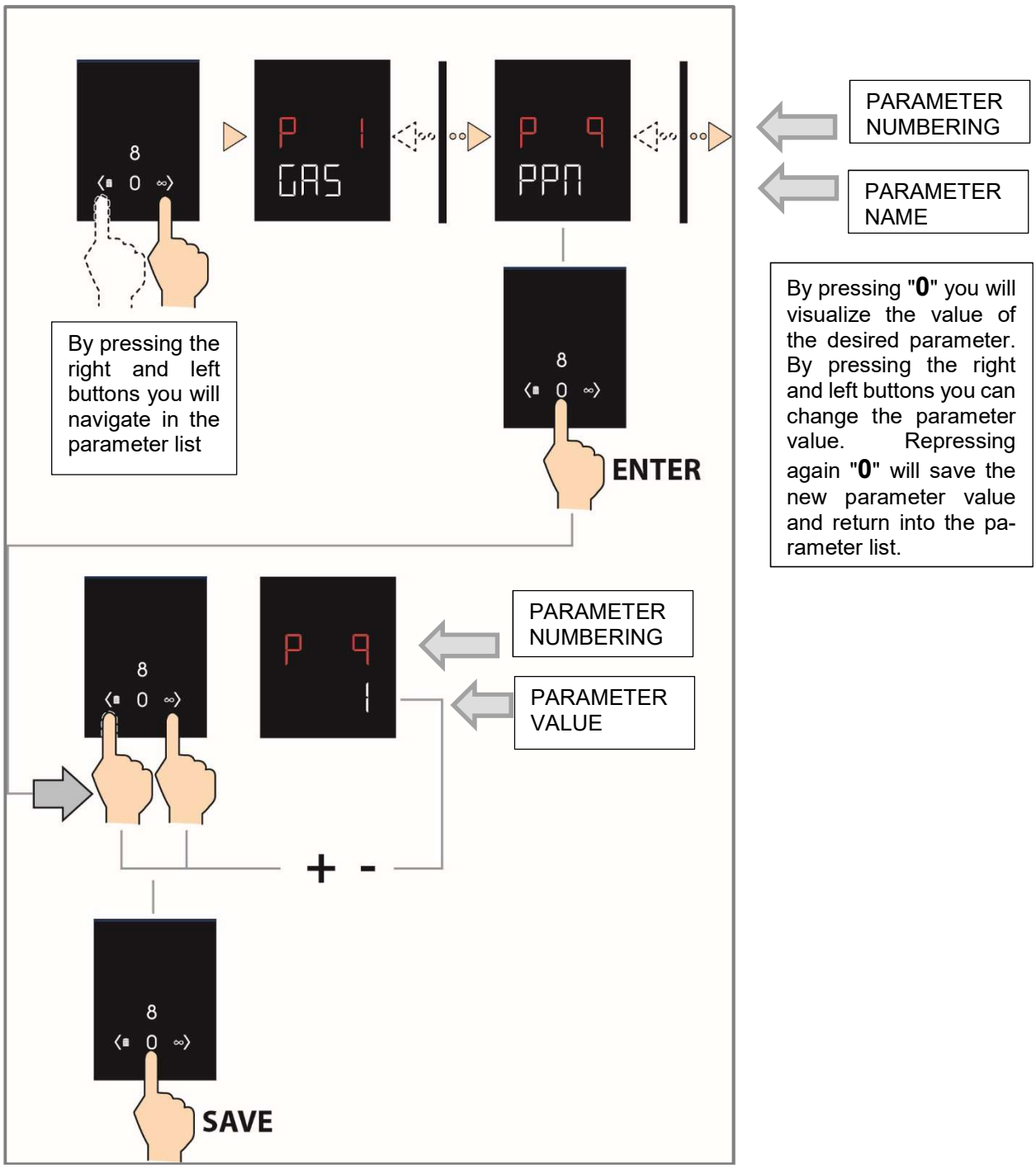


Start pressing the combination of buttons immediately after the first digit appears on the display or the access to the service area will not be granted

Once entered into the "service area" the appearance of the first parameter should resemble like the image

4.2.2.2.1 PARAMETER SETTING

Once entered into the service area



4.2.2.2.2 PARAMETERS LIST, LEVEL B, C (DIGIT)

All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

REFER TO THE PARAMETER LIST FOR TOUCH MODELS §PARAMETER LIST (LEVEL T,K,B,C):

4.2.2.2.3 DEFAULT OF A SINGLE PARAMETER

In case you do not remember a default value of a specific parameter or you do not want to default all the hole parameter list there is a possibility to reset to default only a single parameter:

In area service / parameters accessed

press "**0**" to view the value of any parameter, then press "**8**"



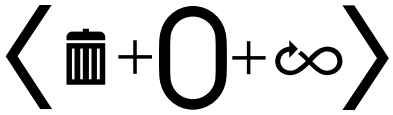
By pressing "**8**" you will reset the selected parameter to the default value of the specific electronic board when it was programmed at Diamond factory.

Repressing again "**0**" will save the new parameter value and return into the parameter list.

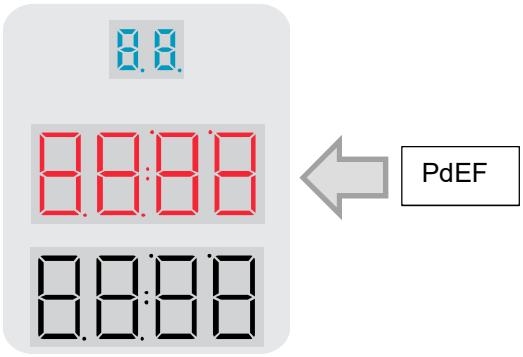
4.2.2.2.4 DEFAULT OF ALL PARAMETERS

In case you need to default all the hole parameter list:
In area service / parameters accessed

The buttons that activate this function are



Press the three buttons together for 3"; all parameters will be set to the default value of the specific electronic board when it was programmed at Diamond factory.



4.2.2.2.5 ACTIVATION OF LOADS

In case you need to activate specific components for testing purpose:
In area service / parameters accessed

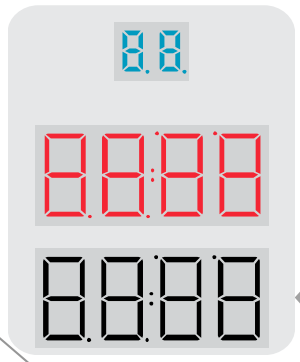
The buttons that activate this function are



1= Load activation
2= Scroll DOWN
3= Scroll UP

Press for 3" the button " **2** or **3**" ... display will visualize the value NAME (do1/do2 ... first component.

To activate the output press **1**. The output ... sequentially activated and on the time display ... be displayed the activated relay with the message **do2**, etc.



DO1 / DO2 etc. will show on the display only when pressing the activation button "**1**"

ACTIVATION OF LOADS: TO BE IMPLEMENTED

TO BE IMPLEMENTED

Display NAME	Meaning of the NAME on the display	GAS OVE...	...TRIC OVEN
do1/ KB1	Boiler solid state relay1	X	
do2/KB2	Boiler solid state relay2	X	
Do3/acs			

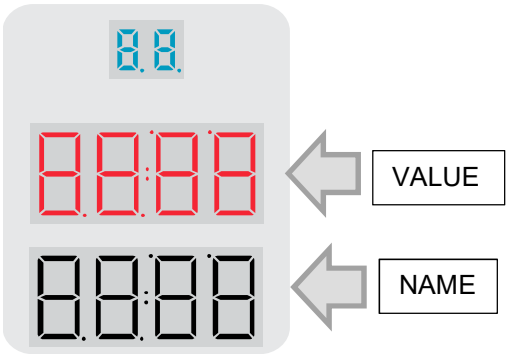
4.2.2.2.6 PROBE TEMPERATURES READINGS

In area service / parameters accessed

The button that activates this function is 4, by pressing button "**4**" for 1,5" on the display will be shown the first NAME, by pressing rapidly "**4**" the list will be scrolled sequentially :

NOTE: depending on the functional level of the appliance some probes my not be present.

Display NAME	Display VALUE	Available PROBE
tCAU	CAVITY TEMPERATURE	Level b,c
tbOL	BOILER TEMPERATURE	Level b
tOS	QUENCHING	Level b,c
nM8	SAFETY PUMP	Level b,c
nCC	ELECTRIC COMPO-NENTS COMPARTMENT	Level b,c
nHSC	SOLID STATE RELAY CAVITY	Level b,c
nHSb	SOLID STATE RELAY BOILER	Level b
tFP	Food probe single point	Level b,c
tFP1	Food probe first probe temperature reading	On request
tFP2	Food probe second probe temperature reading	On request
tFP3	Food probe third probe temperature reading	On request
tFP4	Food probe fourth probe temperature reading	On request
tFP5	Food probe fifth probe temperature reading	On request
tFP6	Food probe sixth probe temperature reading	On request



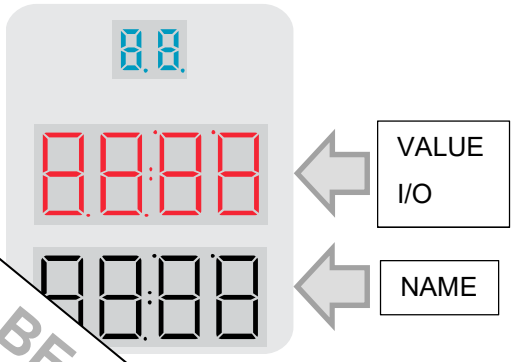
4.2.2.2.7 DIGITAL INPUT and I/O

In area service / parameters accessed

The buttons to activate these functions are **5** **6**

by pressing **5** for 1,5" on the display will be shown the first NAME of the digital input, by pressing rapidly "5" the list will be scrolled manually

Display NAME	Description	Display VALUE	Available function
drS	Dispenser presence		Level b,c
SAF	Air filter presence	I / O	Level b,c
dS	Door switch	I / O	b,c
SUU1	Vent valve open	I / O	
SUU2	Vent valve close	I / O	Level



DIGITAL INPUT and I/O : TO BE IMPLEMENTED

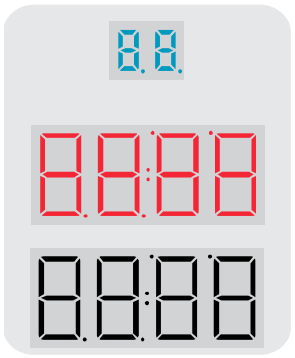
By pressing **6** for 1,5" you will view the boiler water level probes, once that the last item has been shown on the display if you press rapidly again the button the next item will be shown.

Display NAME	Description	Display VALUE	Available probe/item
UL	Working Water level	I / O	Level b
SL	Safety water level	I / O	Level b

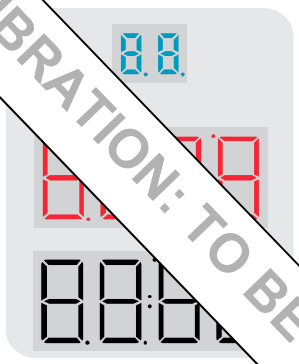
4.2.2.2.8 LAMBDA PROBE CALIBRATION

In case of need to reset the Lambda probe or if replaced; in area service / parameters accessed, start the automatic r dure, press

for e display you will see



CAL



LAMB

led digits become illuminated and rotate "snake manner" until the procedure been completed; once mpleted "END" ppear

Then press (start/stop)
On the display you will see

If you start the procedure but then press (start/stop), before that the cycle mpleted the Lambda value already stored in the ACU will not be overwritten. Only if the calibration been completely carried out and "END" has appear on the display then new Lambda values will be ACU.

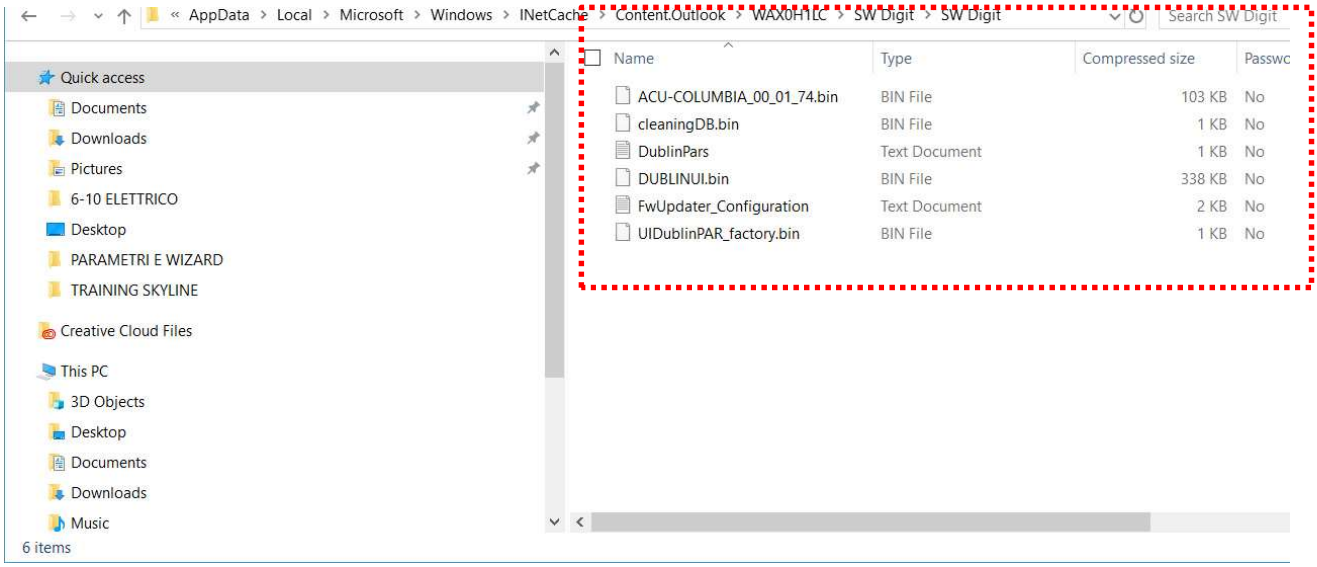
LAMBDA SENSOR CALIBRATION: TO BE IMPLEMENTED

4.2.2.3 SOFTWARE UPDATE(LEVEL B,C)

The software for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in a zip file. For those that do not have access to the web sites, refer to your local country customer care.

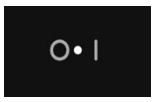
<u>The software that contains all the parameters is specific and unique for each PNC</u>.

EXAMPLE: a software for an oven 6/1 ELECTRIC could be uploaded into an oven 10/1 ELECTRIC but this would cause malfunctions to the appliance!!.
Download zipped software file from the web site and unzip it into a USB key into the main root (not in sub folders / refer to the example picture of how the software will distribute into the main root folder of the USB key).



It is preferable to have the following USB type:

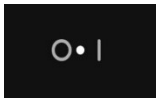
USB TYPE 2.0 8Gb or 16Gb FAT 32 FORMATTED



Turn OFF
The oven



Insert the
USB Key



Turn ON
The oven

AFTER UPDATE…



Extract the USB Key without turning OFF the oven

The software will install automatically. The software will update the **UI and ACU electronic boards**.

At the end of installation the display will show a blinking message "turn OFF". Turn back ON the oven to complete installation.

NOTE:

- in case of power loss during installation, in case of extraction of the USB Key during installation or other manovering error don't worry, start again the update process the process can be restarted again.

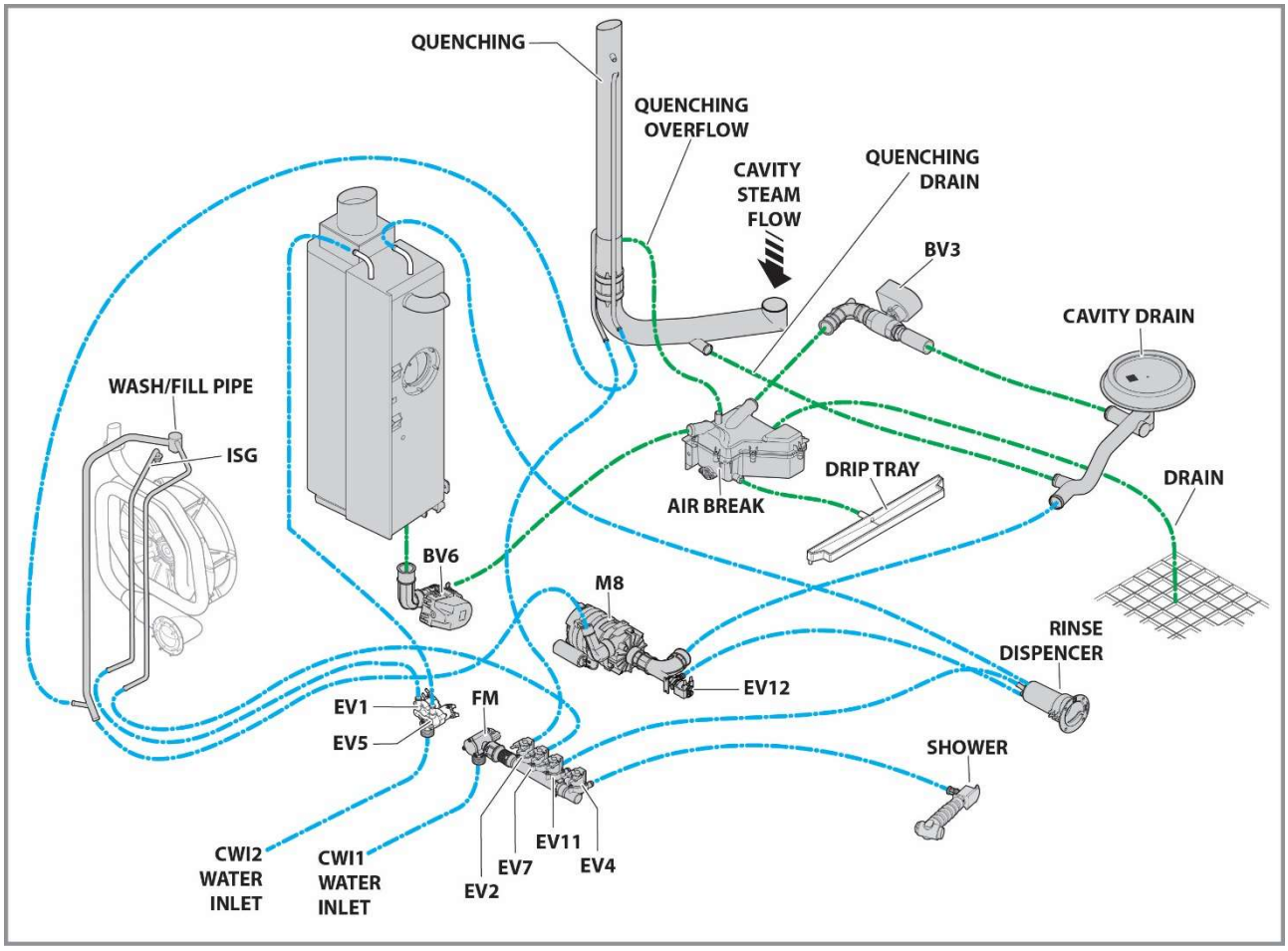
- In case of errors or problems with the detection of the USB Key, upload the software into another type of USB key (manufacturer/dimension size) it could be that some USB key manufacturers cannot be read by the oven.

4.3 EQUIPMENT FUNCTIONING

4.3.1 WATER SYSTEM

		CWI2 TREATED WATER		CWI1 TAP WATER			
Function		*BOILER FILL*	*ISG / HUMIDIFIER **	*STEAM QUENCHING*	*FILL CLEANING*	*FILL DESCALING*	*SHOWER*
Solenoid valve		**EV5**	**EV1**	**EV2**	**EV7**	**EV11**	**EV4**
		[l/min] ±10%	[l/min]±0.05	[l/min]±10%	[l/min]±10%	[l/min]±10%	[l/min]±10%
061;101; 062;102	**nominal flow rate**	2,7	0,25	2,7	8,4	1,1	FREE
	color flow reducer	BLACK	RED	BLACK	ORANGE	WHITE	GREEN TAG

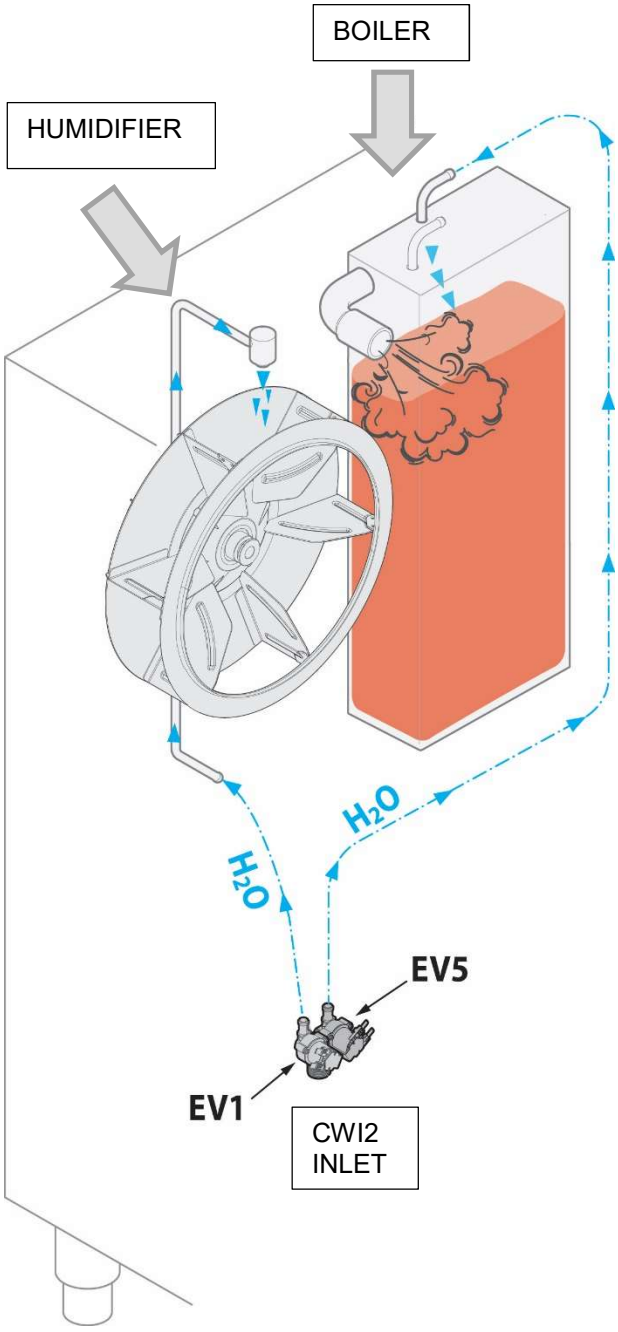
* DEPENDING ON LEVEL



BV3= Cavity drain valve
BV6= Boiler Drain Valve
CWI1= Cold water inlet
CWI2= Cold water inlet (treated water)
EV1 = HUMIDIFIER / ISG (depending on level) valve
EV2= Quenching valve
EV4 = Shower
EV5= Boiler fill
EV7= Cleaning / water fill valve
EV11= Detergent dispenser fill, for boiler descale cycle;
EV12= drain dispenser aid
FM= Flow meter
M8= Pump

4.3.2 STEAM SYSTEM

4.3.2.1 APPLIANCE WITH BOILER & HUMIDIFIER



The steam generated in the cavity during this cycle is obtained by the means of filling the **BOILER** or injecting water trough a pipe called also **HUMIDIFIER .**

Not all appliances are provided with these devices, refer to the below levels.

The appliance manages the humidity in different ways:

Level T,B / BOILER : the lambda probe will manage the boiler activation

Level T / HUMIDIFIER manually time controlled (min 10sec max 120 sec) for humidifier (function achievable only in convection cooking cycle)

Level B / HUMIDIFIER manually time controlled with 5 levels (preset at 10/20/30/40/50 sec) for humidifier (function achievable only in convection cooking cycle).

The **BOILER** will inject steam directly into the cavity, the **HUMIDIFIER** will inject a water spray directly onto the cavity fan.

The water then changes status becoming steam once it encounters the cavity heaters (gas or electric). The obtained steam is then mixed with air and put in circulation through the fan.

The dedicated water valves EV1 and EV5 have different flow rate:

EV1 = Humidifyer flow 0,25 l/min

EV5= Boiler fill, rated water flow 2,7 l/min

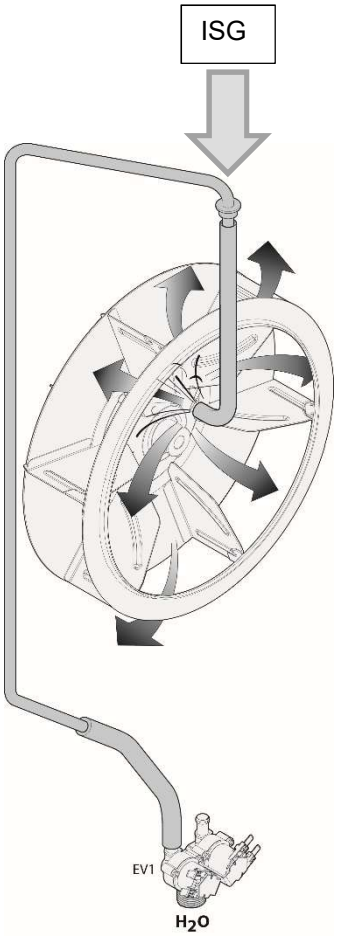
EV1&EV2 valves are the CWI2 inlet (treated water).

4.3.2.2 APPLIANCE WITHOUT BOILER - ISG

The functional level “K, C” do not have a boiler; they manage 10 levels of humidity which are obtained by injecting water directly on the cavity fan. The steam generated in the cavity during this cycle is obtained by the means of injecting water trough a pipe called also **ISG** (instant steam generator).

The appliances can be equipped with or without a lambda sensor to detect the amount of humidity in the cavity; therefore appliances:
With lambda sensor, the ISG activation is automatically managed.
Without lambda sensor, the ISG is managed through a duty cycle.

Because the cavity volume is different (6/1GN - 6/2GN - 10/1GN - 10/2GN) the water injection through the EV1 have different duty cycles.



EV1 = ISG (instant steam generator) valve, rated water flow 0,25 l/min. EV1 valve is in the CWI2 inlet (treated water).

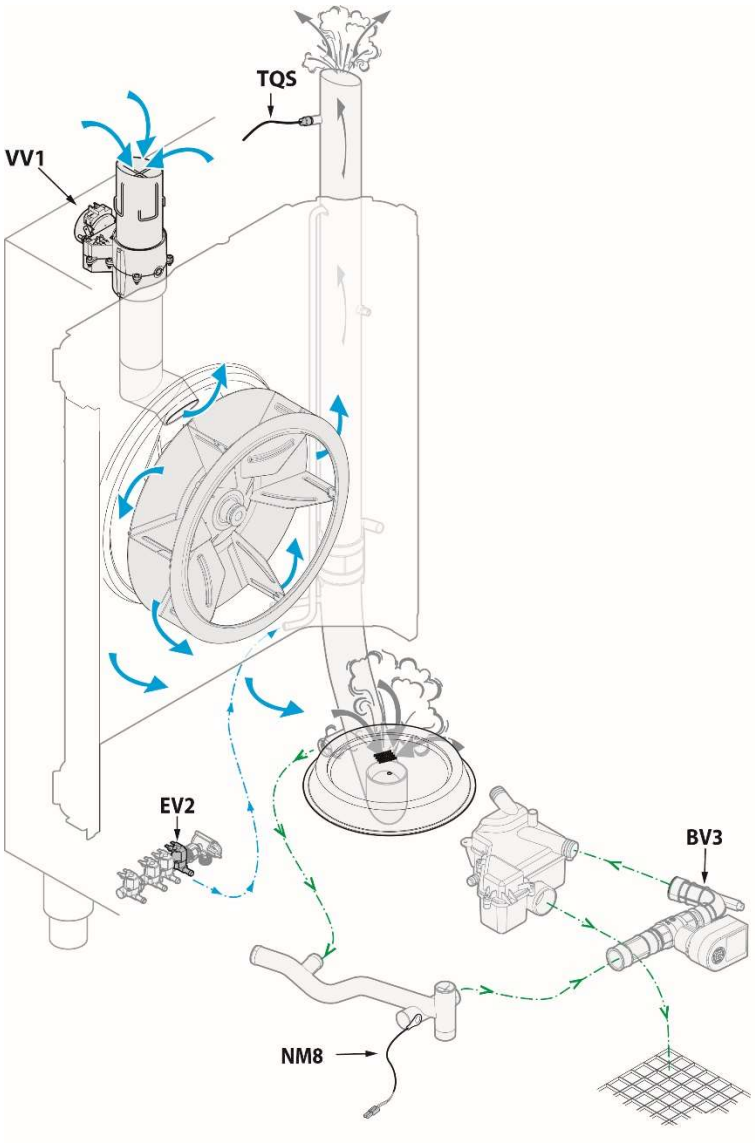
		6/1E	6/2E	10/1E	10/2E
Humidity level	**EV1 VALVE Time on (sec)**	**EV1 VALVE Time off (sec)**	**EV1 VALVE Time off (sec)**	**EV1 VALVE Time off (sec)**	**EV1 VALVE Time off (sec)**
1	1	500	400	500	560
2	1	300	180	330	235
3	1	180	125	150	110
4	1	120	70	90	65
5	1	80	50	60	45
6	1	55	33	40	33
7	1	40	25	27	25
8	1	25	15	20	17
9	1	15	10	12	12
10	3	7	7	7	7

The water then changes status becoming steam once it encounters the cavity heaters (gas or electric). The obtained steam is then mixed with air and put in circulation through the fan.

A dedicated water valve (EV1) with nominal flow rate of **0,25 l/min** is used for the above purpose.

The 10 humidity levels are the result of a different timing of the water solenoid valve EV1 opened (on) and closed (off)

4.3.3 QUENCHING SYSTEM AND STEAM



Circumstances that activate the quenching (EV2 Valve):
-The quenching will be activated for a few seconds when the appliance is turned on, this to be sure that all pipes are full of water (refer also to SAFETY / PUMP (NM8).
- If probe NM8 detects a high temperature of the syphon on the display will appear: a warning **Eotd** 75C°= high temperature on drain or error **Htd** 90C°= temperature above safety limit on drain; in both cases the quenching will automatically inject water for a short period to be sure that all pipes are full of water and cool down.

NOTE. In any case, every 600sec (parameter qSSP) the quenching cycle will be activated for a few seconds, this to keep the drain syphon full of water.

Activation of quenching in normal use:
The steam generated in the cavity during a cooking cycle (steam generated from the humidity contained in the cooking food stuff) , could need to be evacuated out from the cavity if it exceeds the setted value desired for a determinated recipe.

The excess steam is eliminated trough the quenching pipe.

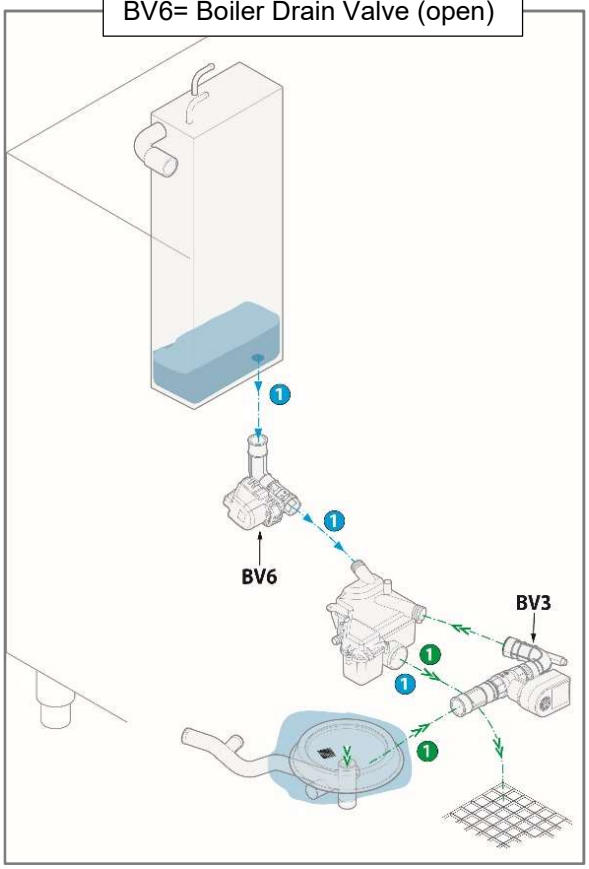
The VV1 pipe entrance is place behind the fan; when the fan is in function this area is in "depression" so fresh air will be sucked into the cavity from outside, consequentially the steam will be displaced from the quenching pipe outside the cavity. The VV1 inlet can exchange approximately 70m3 of fresh air / hour.

However the quenching EV2 injection could still NOT be active; the activation of the water spray is activated by the TQS probe only at 140C°(Par.#221). The injection of cold water is regulated by a duty cycle and consequentially also the drain valve BV3 is open during cooking to release the quenching discharge water.

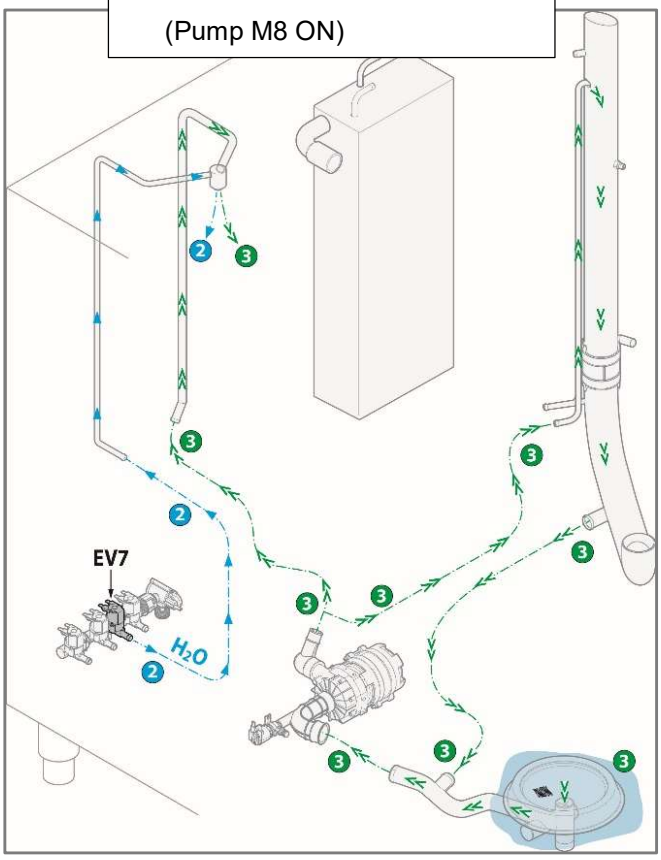
4.3.4 CLEANING SYSTEM

LEVEL T, B (BOILER)
Refer also to the § SETTINGS AND SERVICE AREA

1= BOILER DRAIN
BV3= Cavity drain valve (close)
BV6= Boiler Drain Valve (open)



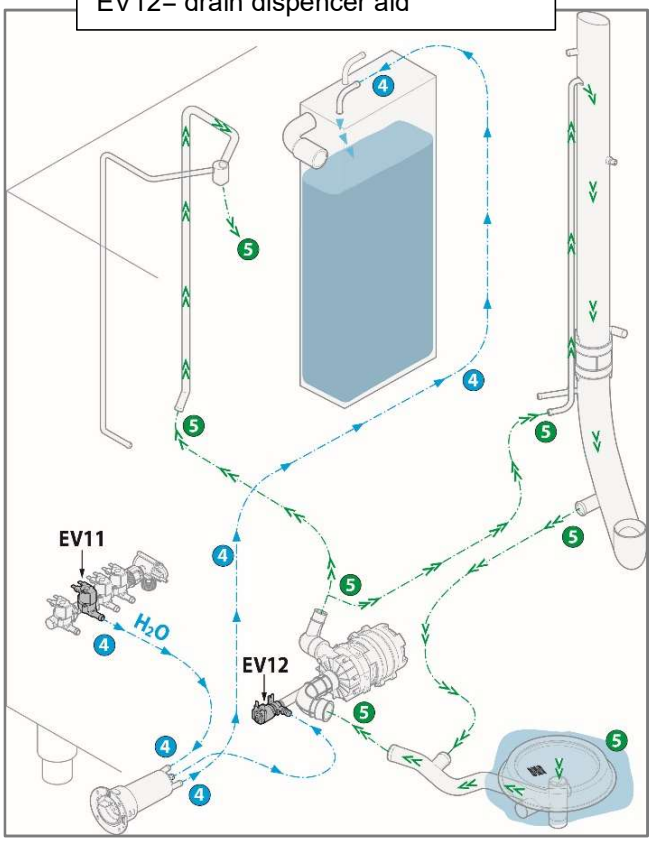
2= WATER FILL (EV7 ON)
3= DETERGENT RECIRCULATION – CAVITY CLEANING
(Pump M8 ON)



4= BOILER DESCALE (EV11 ON)

5= CAVITY RINSE AID (EV11 ON – EV12 ON – Pump ON)

EV11= D dispencer fill, for boiler de-scale cycle;
EV12= drain dispencer aid

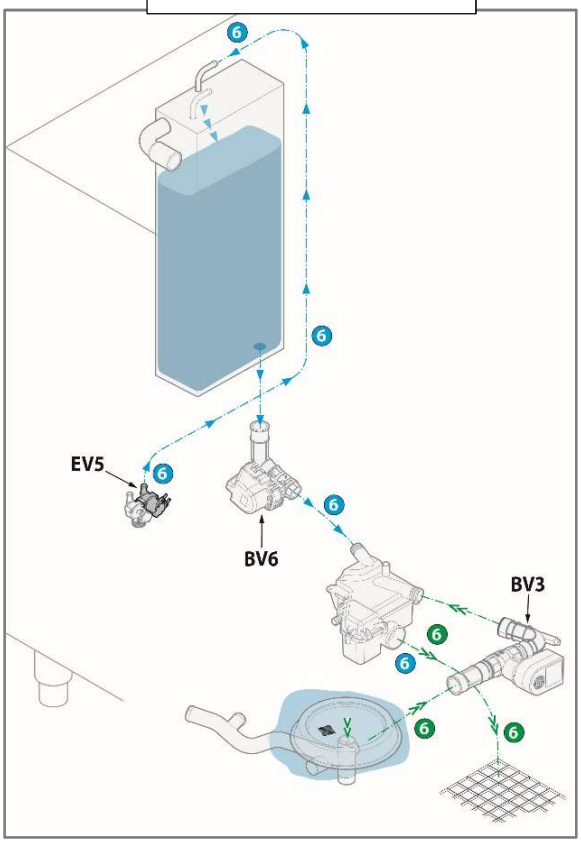


6= BOILER CLEANING

BV3= Open

BV6= Close & Open

EV5= On & Off



4.4 COMPONENTS TECHNICAL DESCRIPTION/FUNCTIONING

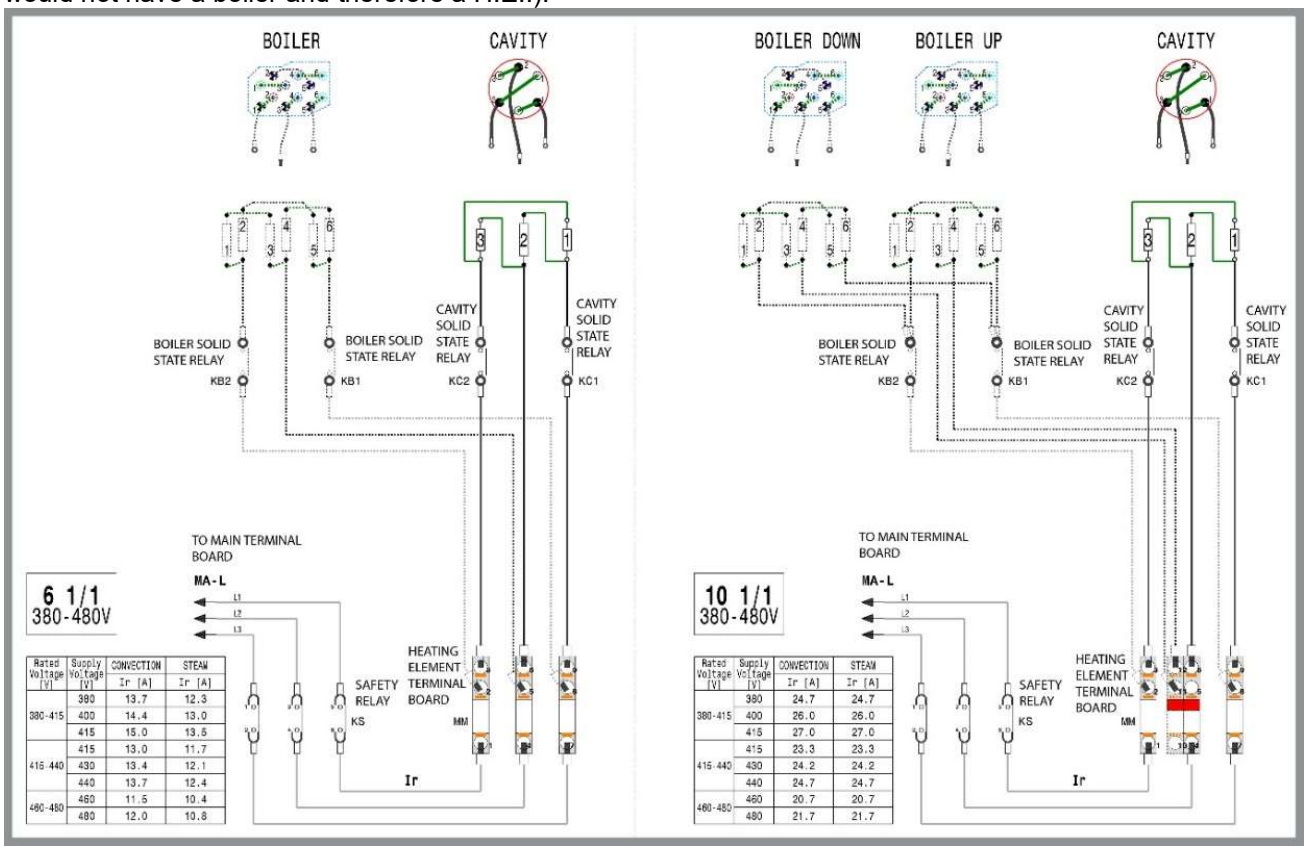
IMPORTANT !

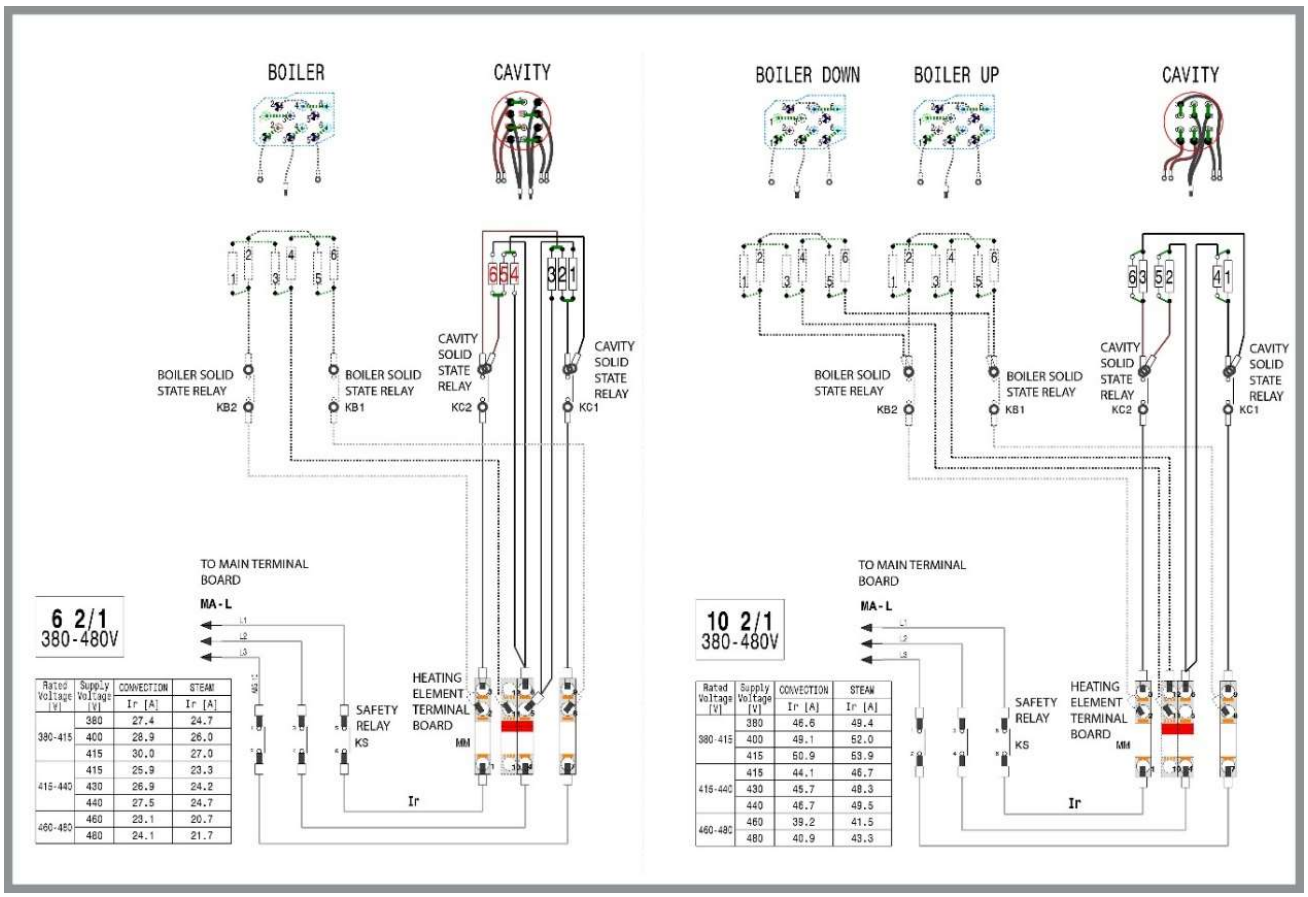
Some illustration EWD's are example illustrations, the specific EWD for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be down-loaded in file. For those that do not have access to the web sites, refer to your local country customer care.

4.4.1 HEATING ELEMENT CAVITY / BOILER

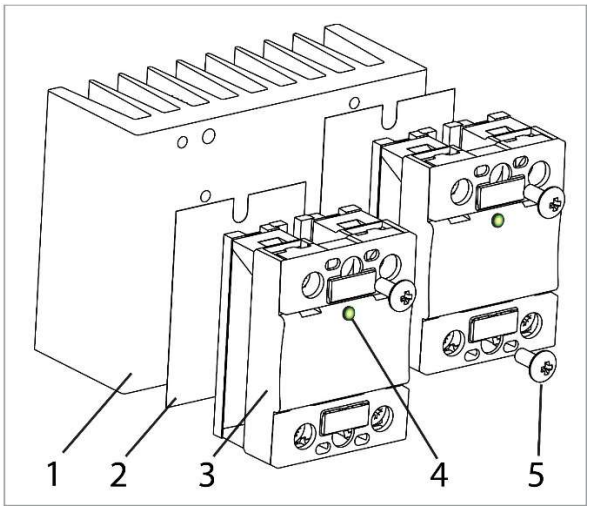
KC1 = Cavity solid state relay, coil is activated by X30 of the ACU and controls the cavity H.Element
KC2 = Cavity solid state relay, coil is activated by X30 of the ACU and controls the cavity H.Element
KB1 = Boiler solid state relay, coil is activated by X31 of the ACU and controls the boiler H.Element
KB2 = Boiler solid state relay, coil is activated by X31 of the ACU and controls the boiler H.Element
KS = Safety relay, coil is activated by the **TSB/TSC** safety thermostats.
MM = Heating element terminal board
MA-L = main terminal board

EXAMPLE WIRING DIAGRAM (not all heating elements could be present on all ovens; EX: boiler less ovens would not have a boiler and therefore a H.E..).



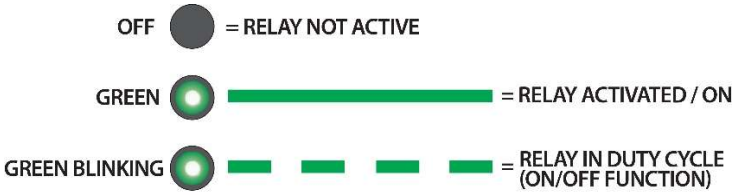


4.4.2 SOLID STATE RELAY (SSR = KC1,KC2,KB1,KB2)



1 = Cooling heat sink
2 = Conductive thermal pad
3 = SSR relay
4 = Green led
5 = Fix screw

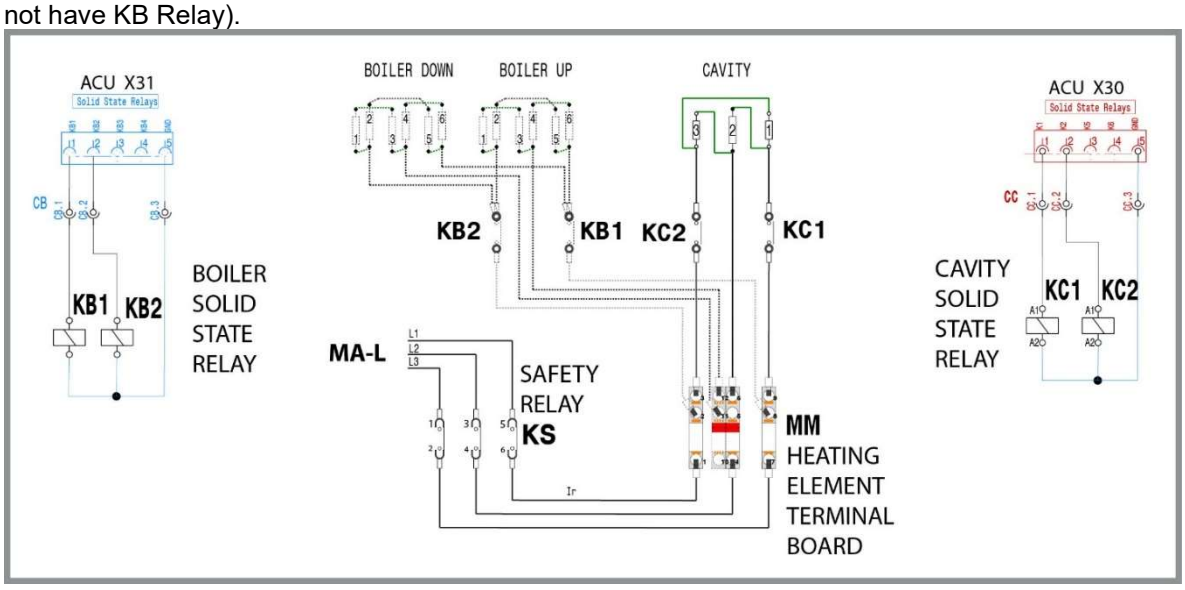
Functioning of the LED and it's meaning:



WARNING !
Even if the led is not turned "on" this does not mean that the relay is not power supplied and could become active in any moment!

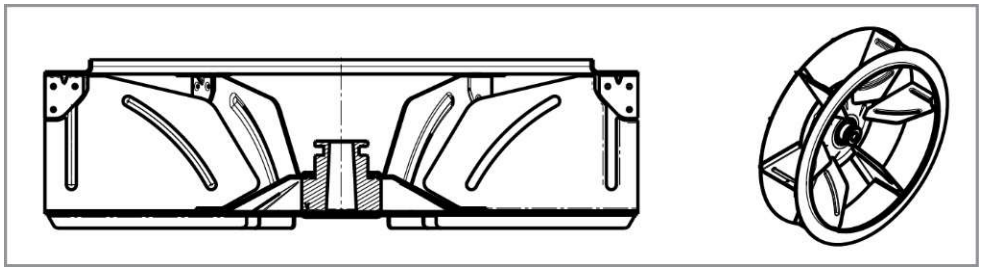
KC1 = Cavity solid state relay, coil is activated by X30 of the ACU and controls the cavity H.Element
KC2 = Cavity solid state relay, coil is activated by X30 of the ACU and controls the cavity H.Element
KB1 = Boiler solid state relay, coil is activated by X31 of the ACU and controls the boiler H.Element
KB2 = Boiler solid state relay, coil is activated by X31 of the ACU and controls the boiler H.Element
KS = Safety relay, coil is activated by the **TSB/TSC** safety thermostats. They will cut out the H.Elements power supply.
MM = Heating element terminal board
MA-L = main terminal board

EXAMPLE WIRING DIAGRAM (not all components could be present on all ovens EX: boiler less ovens would not have KB Relay).



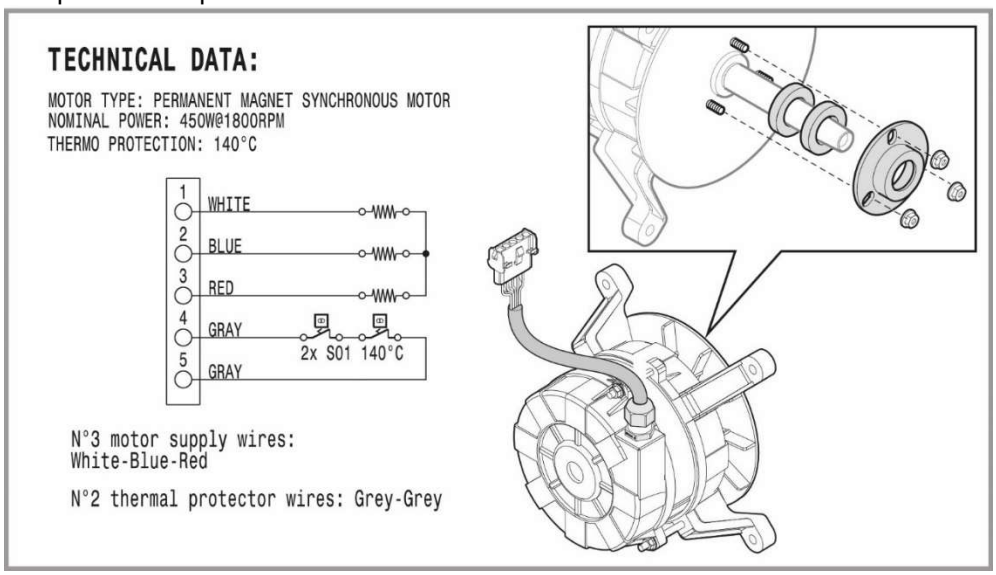
4.4.3 FAN

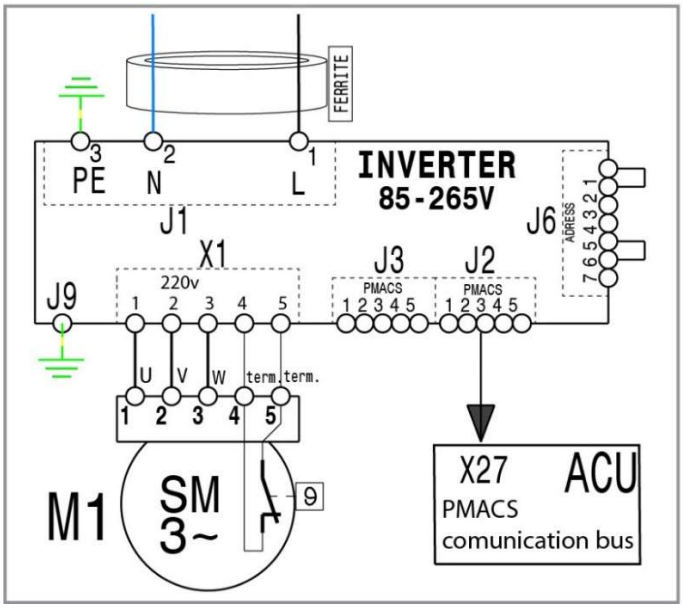
Aisi 303 hub connection, conical, AISI 304 fan. The fan rotate clockwise and counter clock wise. The fan blades are radial.



4.4.4 MOTOR FAN (M1)

The motor fan will rotate clockwise and counter clock wise for cooking uniformity reasons.
Ovens 6/1- 10/1 = 450W Model : Hanning
Ovens 6/2 /10/2 = 750W Model: Fir
300rpm to 1500rpm



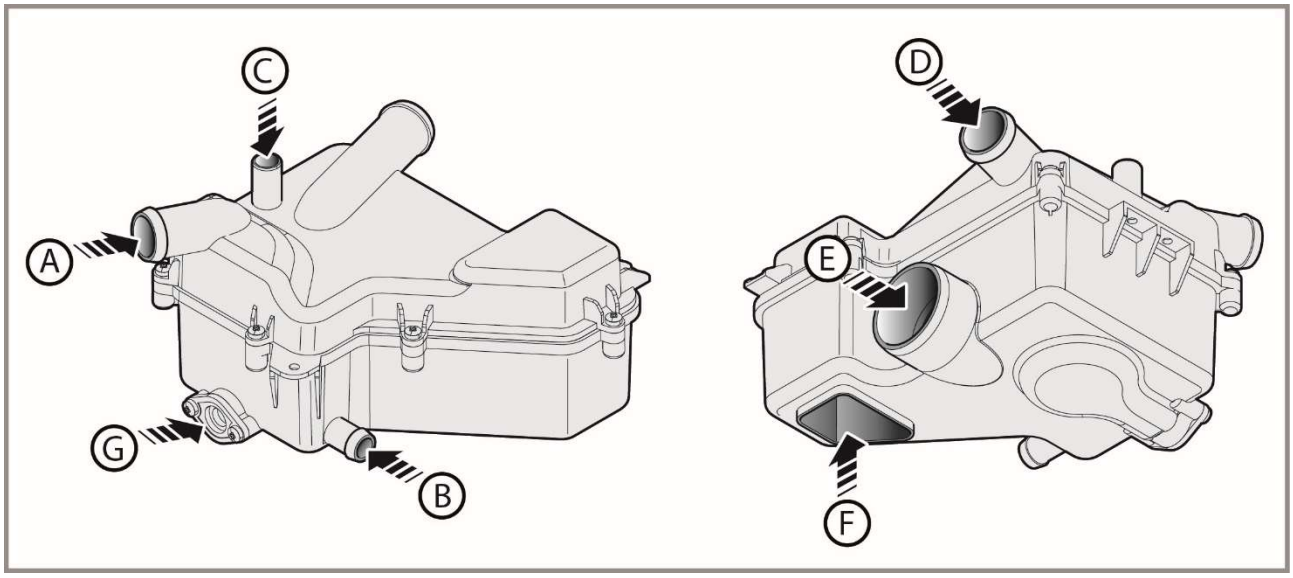


Note: the J2 PMACS can be connected to any X27 (A-B-C-D) connection on the ACU.

4.4.5 AIR BREAK

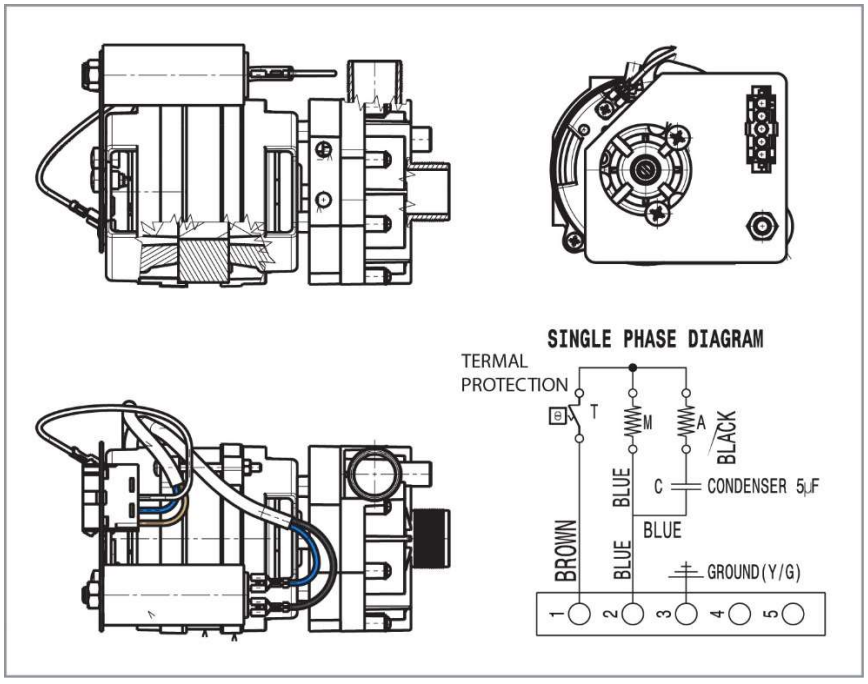
A = Boiler drain / **B** = Door condense drain / **C** = Condense overflow / **D** = Cavity drain valve

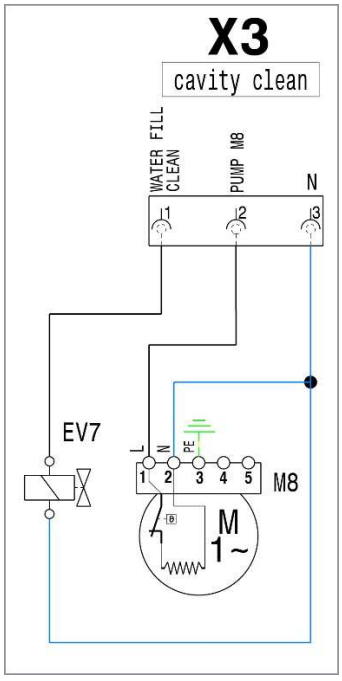
E = Oven Drain / **F** = Safety overflow / **G** = Inspection access (screwed plug)



4.4.6 WASH PUMP(M8) AND WATER FILL (EV7)

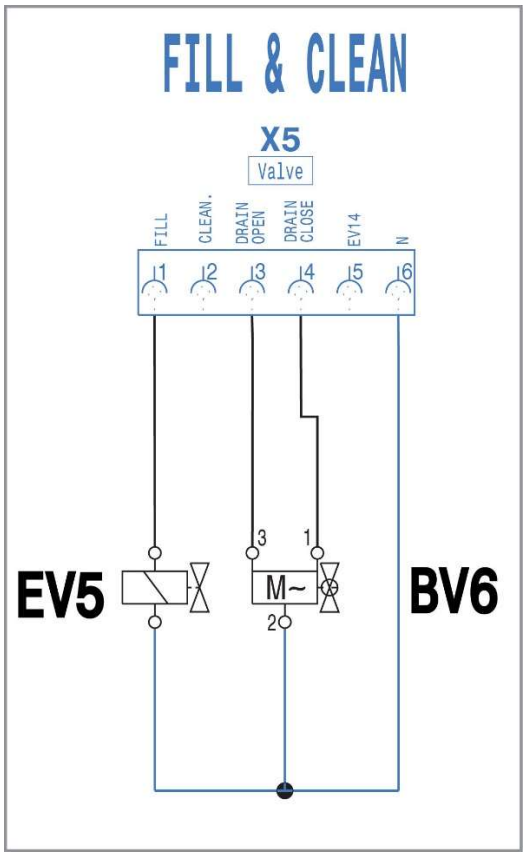
Power 160-230W at 220-240V / 50-60Hz - Absorbed current 0,7/1 Amp - Condenser 5µF

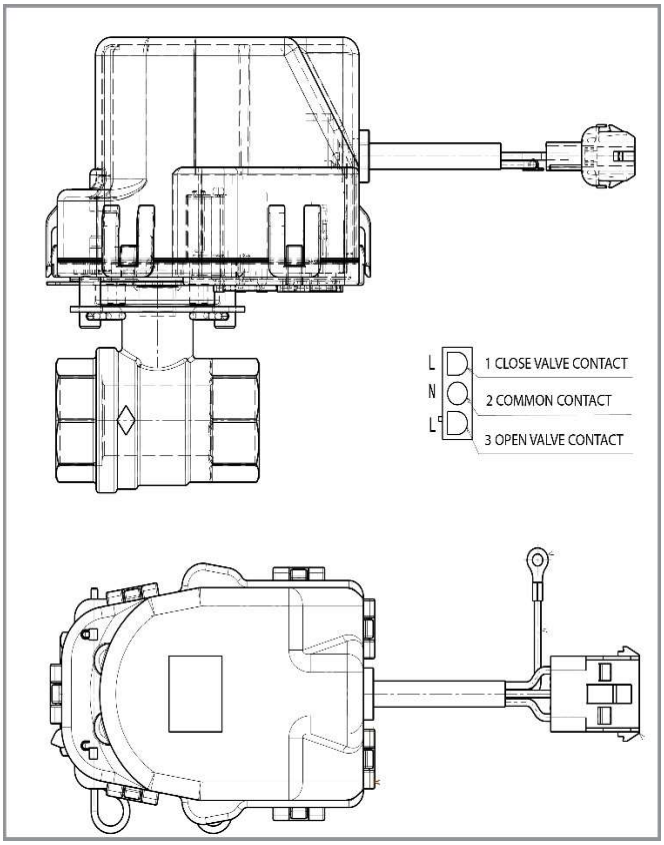




4.4.7 DRAIN VALVE BOILER (BV6)

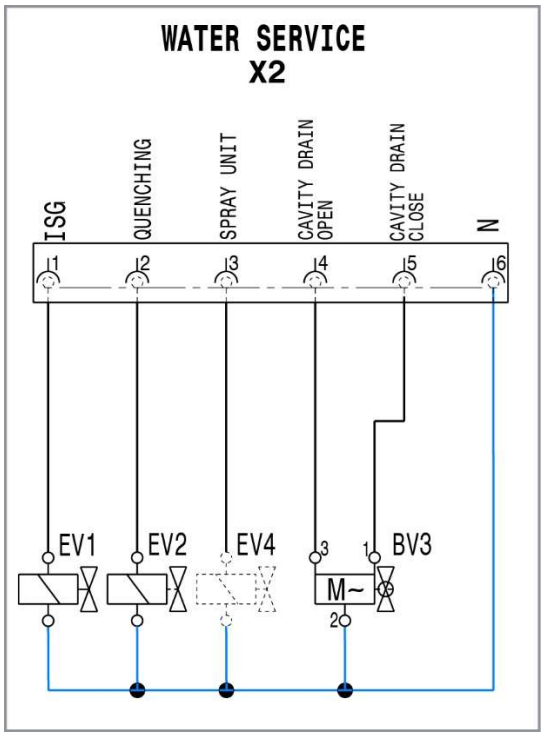
Drain valve 1" GRUNER (CE) 220-240V 50/60HZ

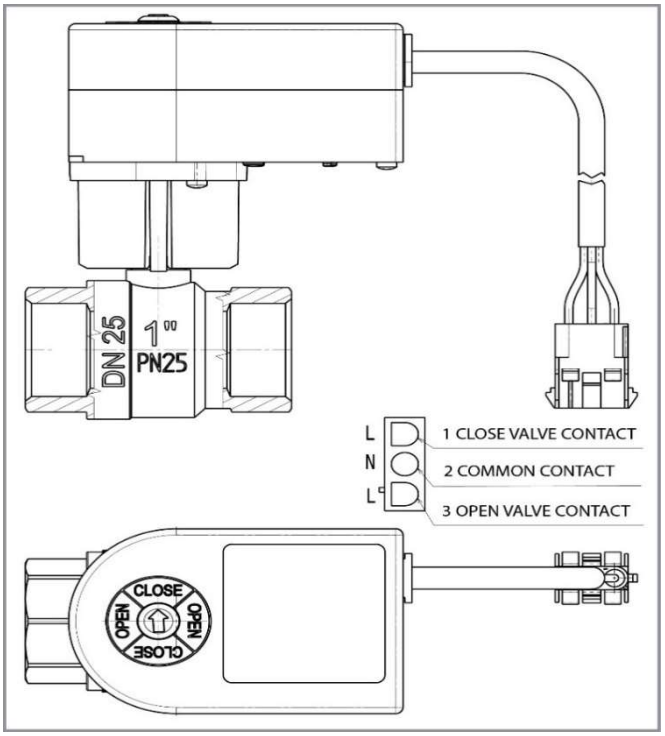




EV5 = BOILER FILL VALVE / BV6= BOILER DRAIN

4.4.8 DRAIN VALVE CAVITY (BV3)



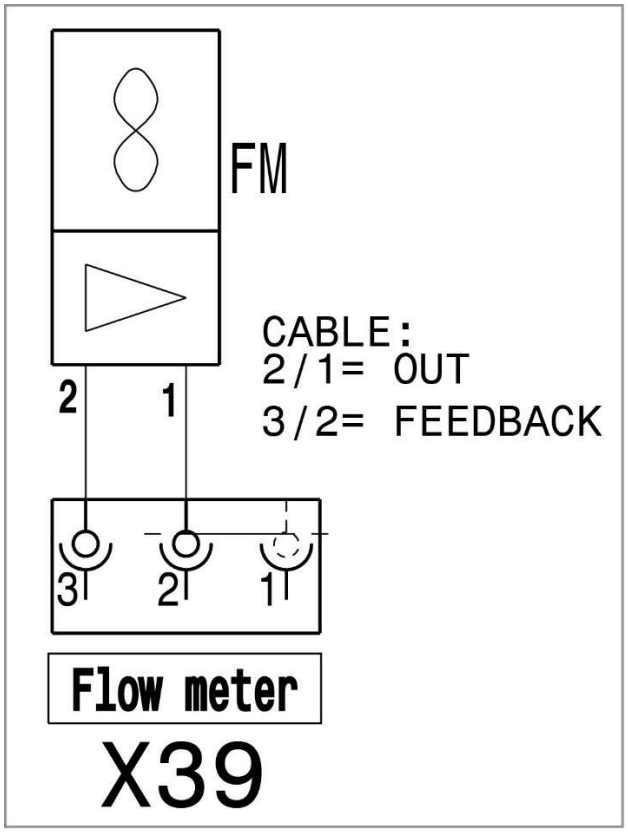


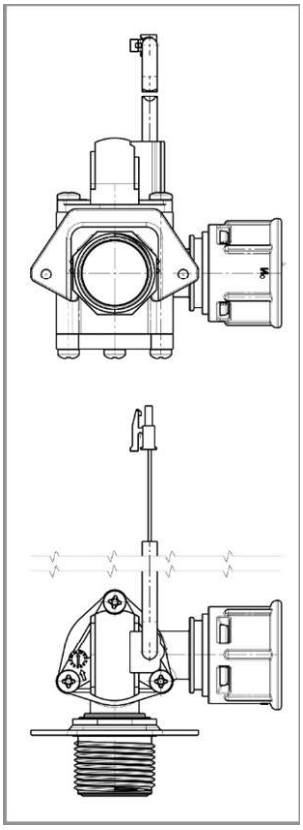
EV1= ISG / EV2= QUENCHING / EV4= SHOWER / BV3= DRAIN VALVE

4.4.9 FLOW METER (FM)

FM= Flow meter, is also the CWI1 (not treated water) water inlet point.

Connection dimension ¾" male flanged. Inside is a magnet, a signal output sent to the ACU X39.





4.4.10 WATER VALVES (FM, EV 2, EV7, EV11 AND EV4).

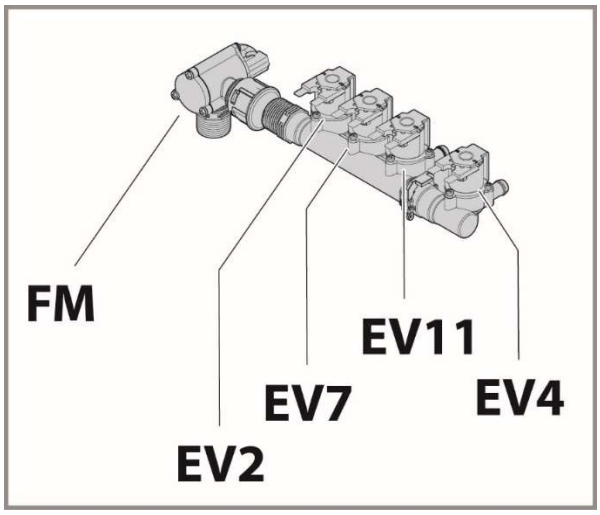
FM= Flow meter (X39), is also the CWI1 (not treated water) water inlet point.

EV2= Quenching (X2)

EV7= Cleaning / water fill valve (X3), refer also to § WASH PUMP,M8 AND VALVE EV7

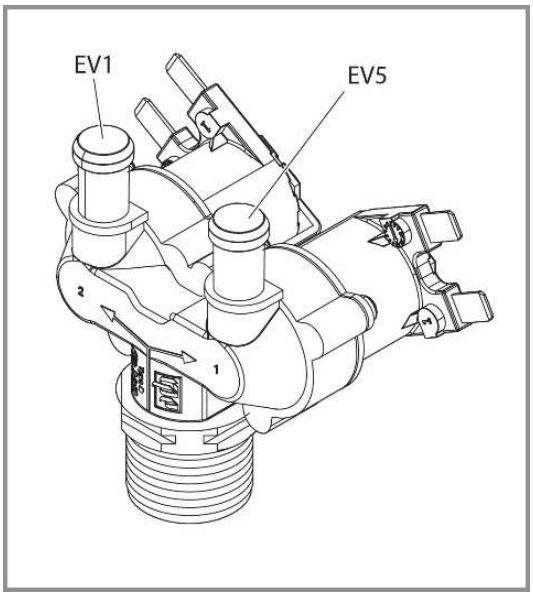
EV11= Detergent dispenser fill, for boiler descale cycle (X4)

EV4 = Shower (X2)



4.4.11 INLET WATER VALVES (EV1 / EV5)

This valve is the CWI2 (treated water) inlet point



EV1 = ISG (X2)

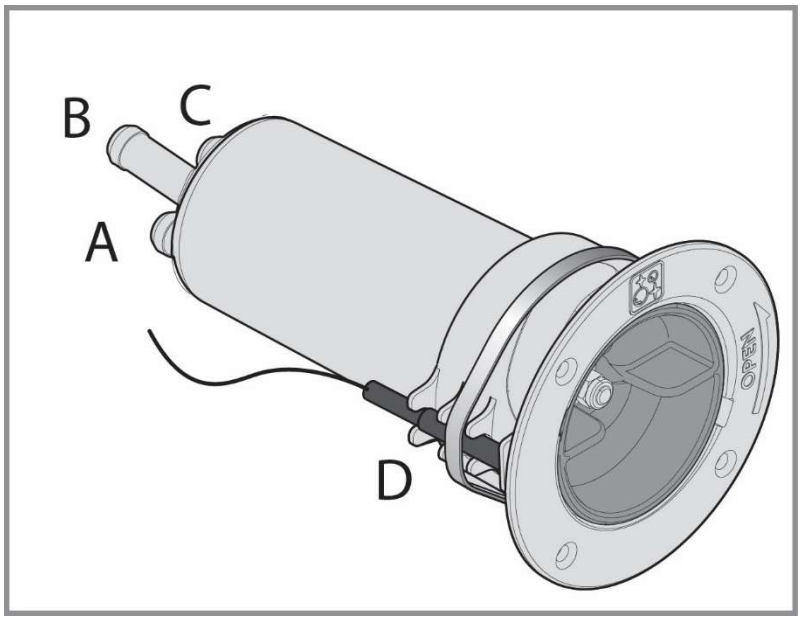
EV5= BOILER FILL (X5)

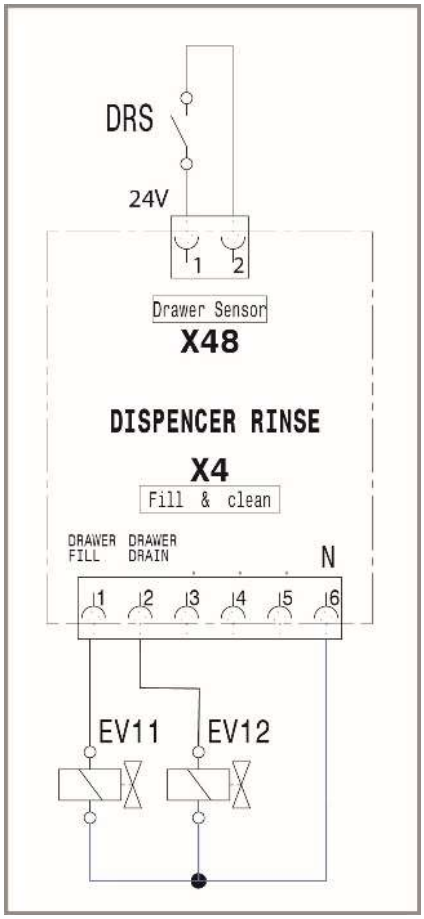
		CWI2 TREATED WATER		CWI1 TAP WATER			
Function		*BOILER FILL*	*ISG / HUMI-DIFYER **	*STEAM QUEN-CHING*	*FILL CLEA-NING*	*FILL DE-SCALING*	*SHOWER*
Solenoid valve		**EV5**	**EV1**	**EV2**	**EV7**	**EV11**	**EV4**
		[l/min] ±10%	[l/min]±0.05	[l/min]±10%	[l/min]±10%	[l/min]±10%	[l/min]±10%
061;101; 062;102	**nominal flow rate**	2,7	0,25	2,7	8,4	1,1	FREE
	color flow re-ducer	BLACK	RED	BLACK	ORANGE	WHITE	GREEN TAG

* DEPENDING ON LEVEL

4.4.12 DISPENSER RINSE AID / SENSOR (DRS); VALVES (EV11 EV12)

Note: the magnets used to close off the contact of the reed sensor DRS are inserted into the removable drawer cup.



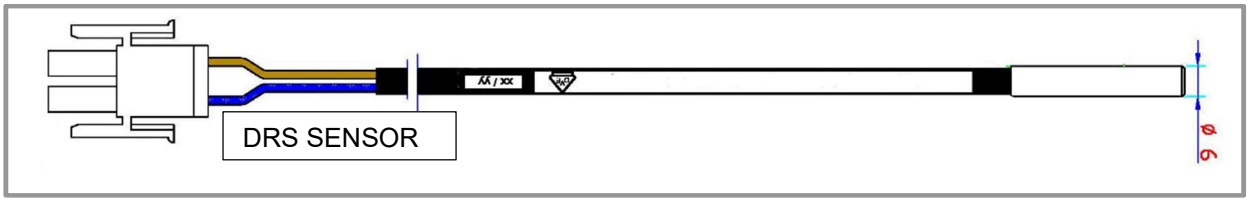


A= pipe to EV12, drain dispenser aid

B= pipe to EV11, water inlet

C= pipe to boiler for descale cycle

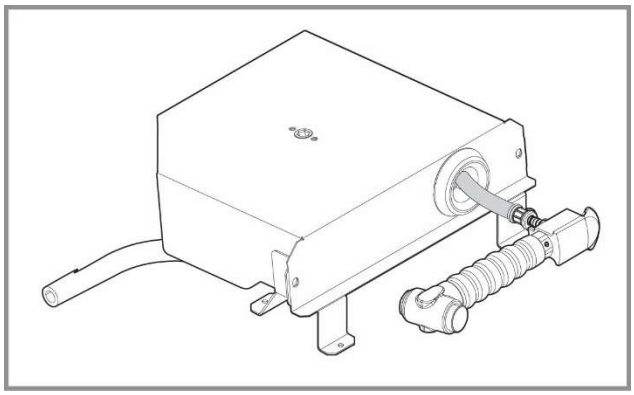
D= magnetic reed DRS sensor to check that the plug cap is present. The activation magnet is located into the drawer cap.

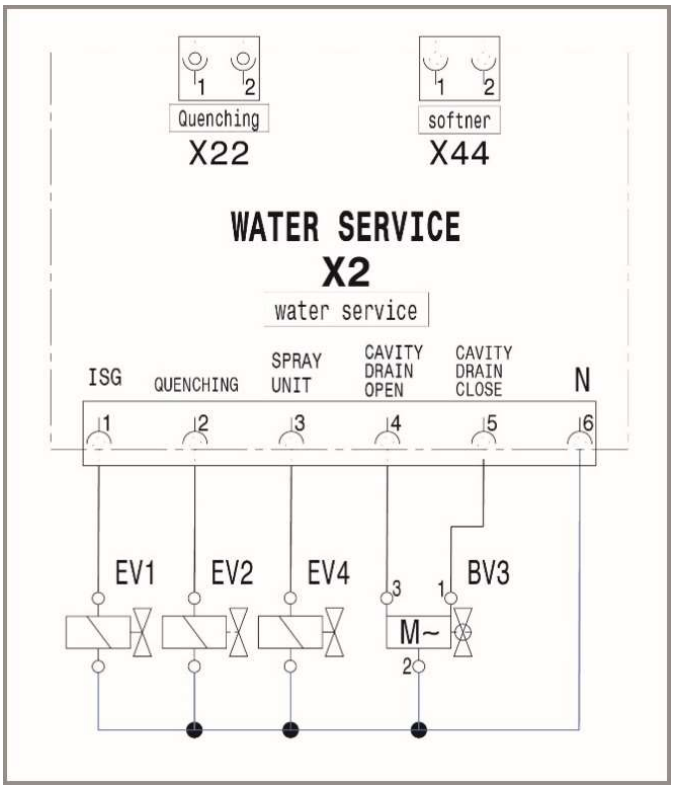


4.4.13 SHOWER ASSEMBLY AND VALVE (EV4)

The shower assembly drawer will be supplied with water when EV4 is power supplied.

EV4 is normally closed; when the door opens the reed sensor DS Refer to § MICROSWITCH AIR INTAKE FILTER PRESENCE (AFS) AND DOOR (DS) will consense and permit power supply to contact X2/3 and therefore open the EV4 valve so that the spay will be water supplied.





EV2= Quenching

EV1 = ISG

EV4 = Shower

BV3 = Cavity drain

		CWI2 TREATED WATER		CWI1 TAP WATER			
Function		*BOILER FILL*	*ISG / HUMI-DIFYER **	*STEAM QUEN-CHING*	*FILL CLEA-NING*	*FILL DE-SCALING*	*SHOWER*
Solenoid valve		**EV5**	**EV1**	**EV2**	**EV7**	**EV11**	**EV4**
		[l/min] ±10%	[l/min]±0.05	[l/min]±10%	[l/min]±10%	[l/min]±10%	[l/min]±10%
061;101; 062;102	**nominal flow rate**	2,7	0,25	2,7	8,4	1,1	FREE
	color flow re-ducer	BLACK	RED	BLACK	ORANGE	WHITE	GREEN TAG

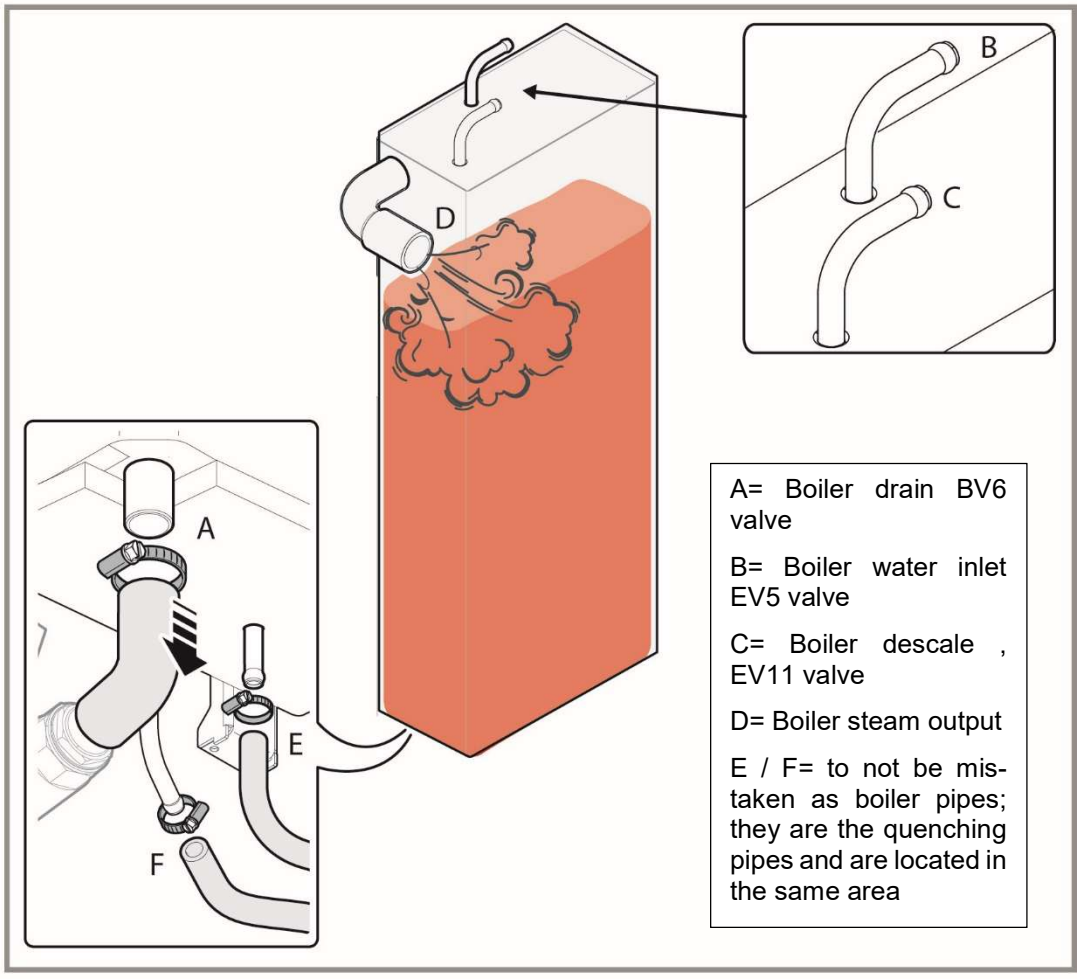
* DEPENDING ON LEVEL

4.4.14 BOILER

There are available two different models of boiler: material AISI 316 / AISI 304.Identification of the material can be found using the "model legend" (explained at page 3) and the model of your oven located (that can be found on the data plate identification sticker).

Detailed chapter regarding the probes can be found at § BOILER PROBES
Alarms/warnings related to the boiler

Anomaly	Type of anomaly	Description
bntC	Stops boiler	boiler SSR NTC failure (NHSB)
BoLt	Stops cycle (if the cycles needs the boiler)	Boiler water loading timeout (EV5)
BSHt	Warning	Boiler SSR NTC high temperature (NHSB)
BSOt	Stops boiler	Boiler SSR NTC over temperature (NHSB)
dESC	Stops boiler	Descale boiler, called "bSct" (Boiler Scale build up threshold) set at 115C°.
EbOL	Stops cycle (on pre-heat "combi")	Boiler thermocouple failure (TBOI)
Etb	Stops cycle	Boiler safety switch triggered (TSB)
EtUb	Stops cycle (if the boiler is used)	Boiler over temperature (TBOI)



A= Boiler drain BV6 valve

B= Boiler water inlet EV5 valve

C= Boiler descale , EV11 valve

D= Boiler steam output

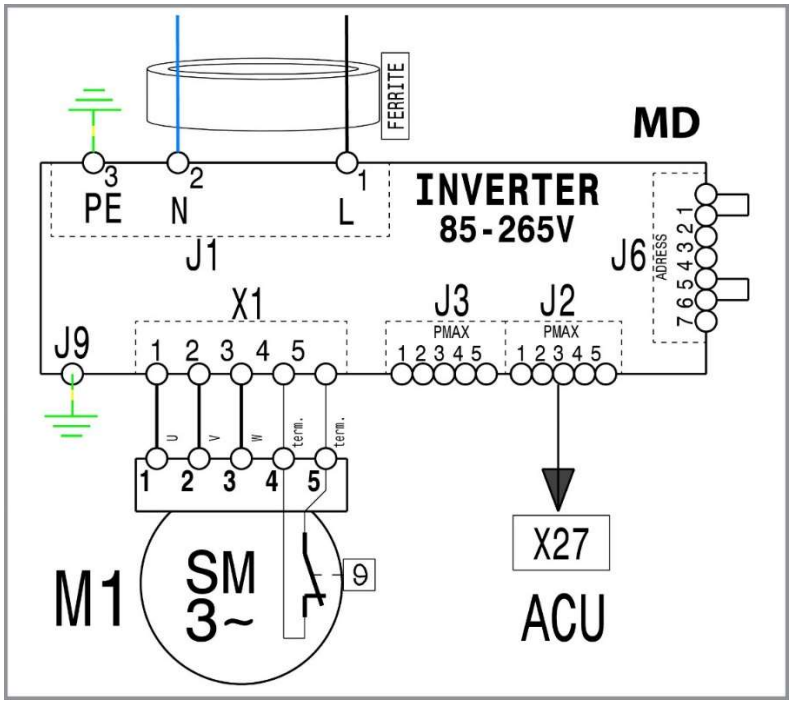
E / F= to not be mis-taken as boiler pipes; they are the quenching pipes and are located in the same area

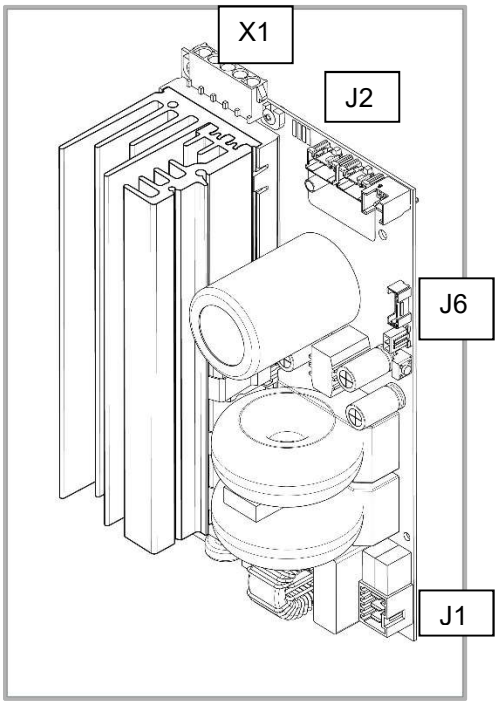
4.4.15 INVERTER (MD / MOTOR DRIVE)

WARNING!

Danger of electrocution - dangerous voltage.

Before checking any electric components, be sure to disconnect the main supply and verify with a meter the main electrolytic capacitors (i.e. being fitted on Inverter, SMPS) are discharged to safe voltage levels. The charge capacitor may hold high-voltage even after the power is disconnected. Use caution to prevent the possibility of electric shock





Note: the J2 PMACS can be connected to any X27 (A-B-C-D) connection on the ACU

4.4.16 SWITCHING FEEDERS (SMPS)

WARNING!

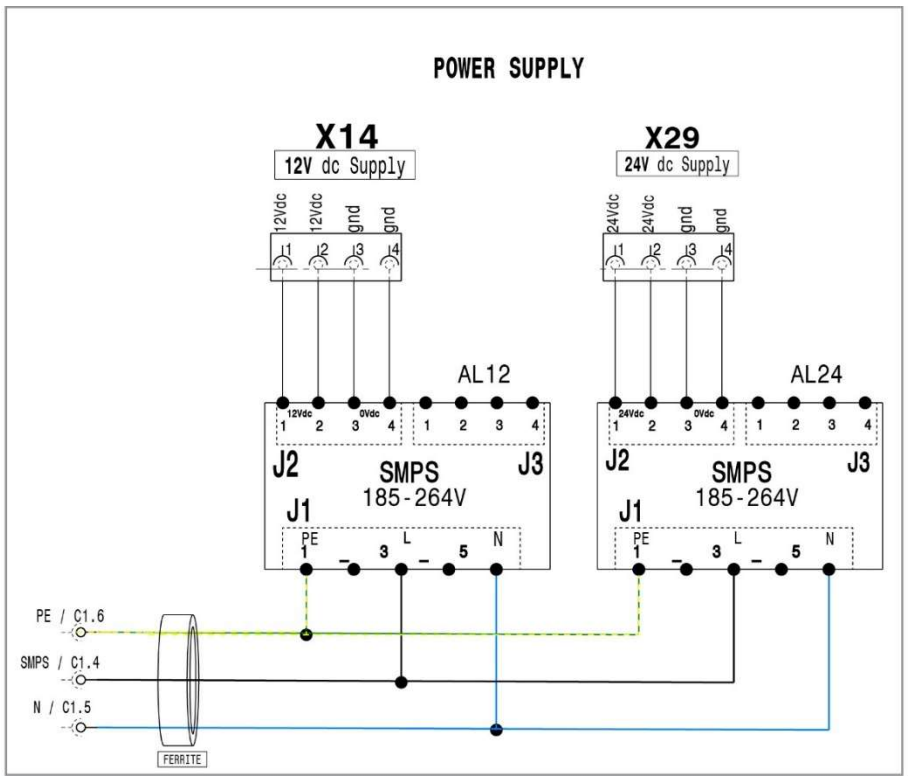
Danger of electrocution - dangerous voltage.

Before checking any electric components, be sure to disconnect the main supply and verify with a meter the main electrolytic capacitors (i.e. being fitted on Inverter, SMPS) are discharged to safe voltage levels. The charge capacitor may hold high-voltage even after the power is disconnected. Use caution to prevent the possibility of electric shock

The following EWD is relative to the switching feeder boards **AL12 / AL24** (12/24V).

J2 / X14 Will output 12V on connector X24 (**Lambda**) and X27 (user board **UI**)

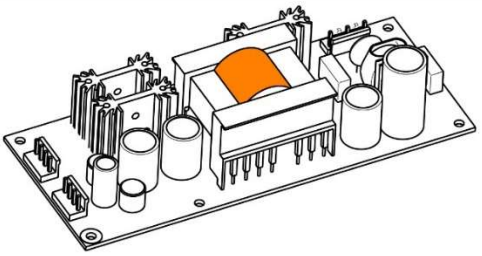
J2 / X29 Will output 24V on connectors X32-X33-X34(cooling fan **FAN1**) / X45 (door sensor **DS** and micro air filter **AFS**) / X48 (drawer feeder **DRS**)

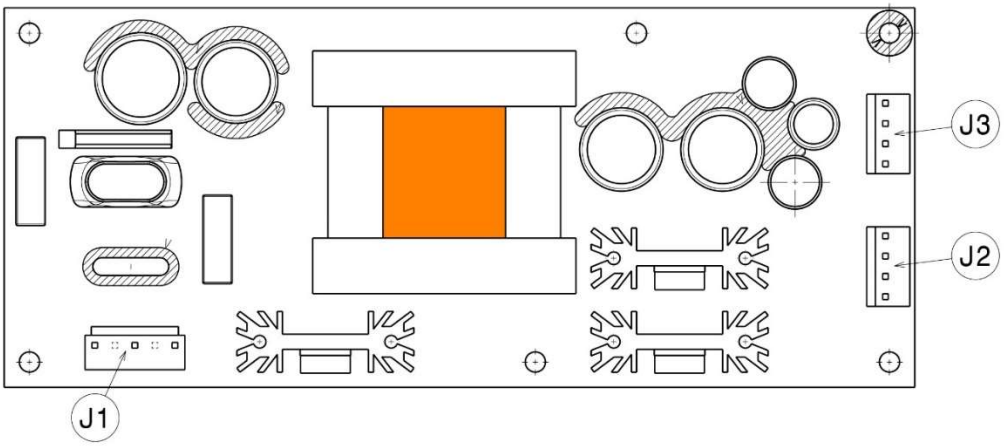


4.4.16.1 12V

The device can be identified in an easy manner: it has WHITE CONNECTORS

SIGLE	FUNCTION
J1	VOLTAGE INPUT 220V
J2	VOLTAGE OUTPUT 12V
J3	VOLTAGE OUTPUT NOT USED

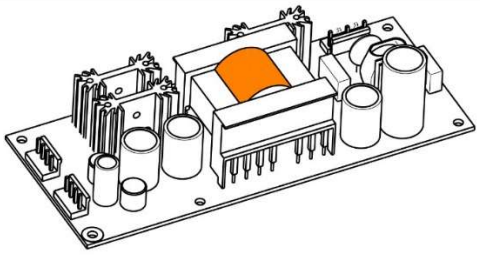


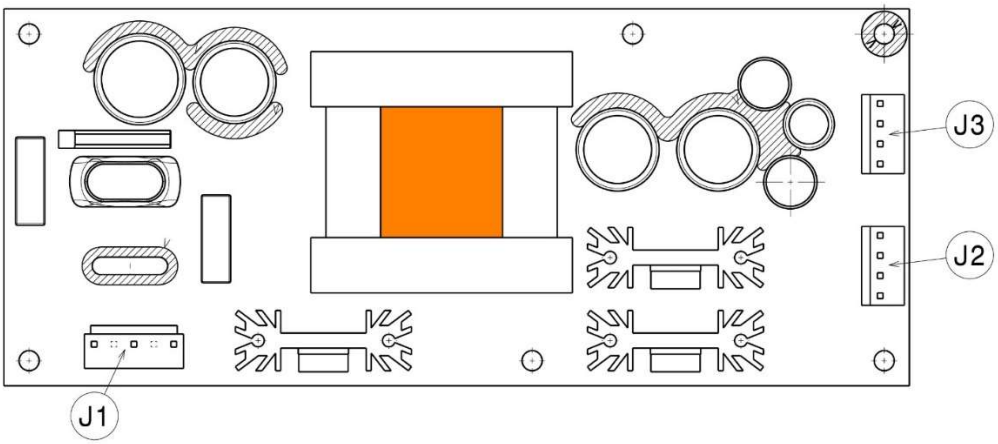


4.4.16.2 24V

The device can be identified in an easy manner: it has GREEN CONNECTORS

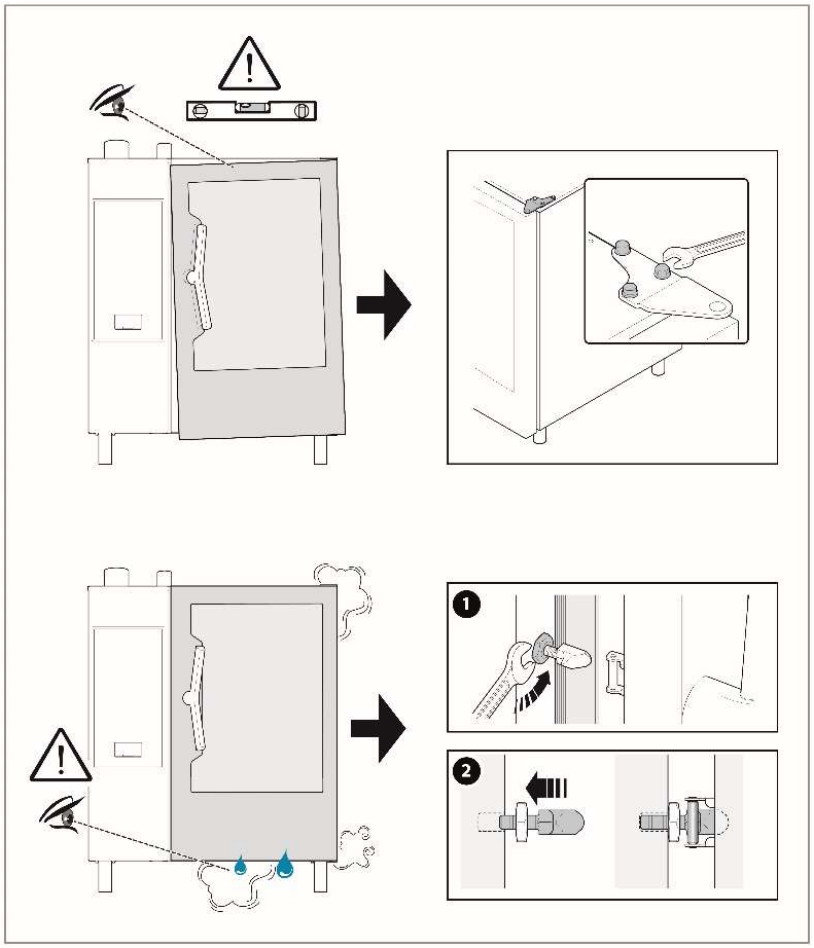
SIGLE	FUNCTION
J1	VOLTAGE INPUT 220V
J2	VOLTAGE OUTPUT 24V
J3	VOLTAGE OUTPUT NOT USED



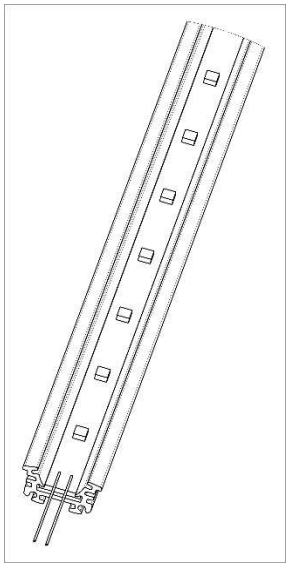


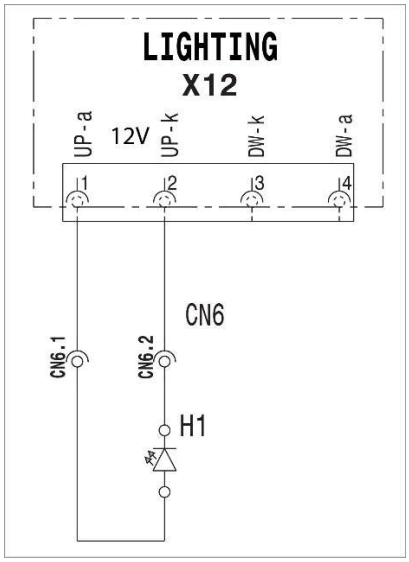
4.4.17 DOOR ADJUSTMENT & DOOR LATCH

Door handle refer to DOOR REMOVAL, LED BAR & DOOR HANDLE



4.4.18 DOOR LED BAR (H1)





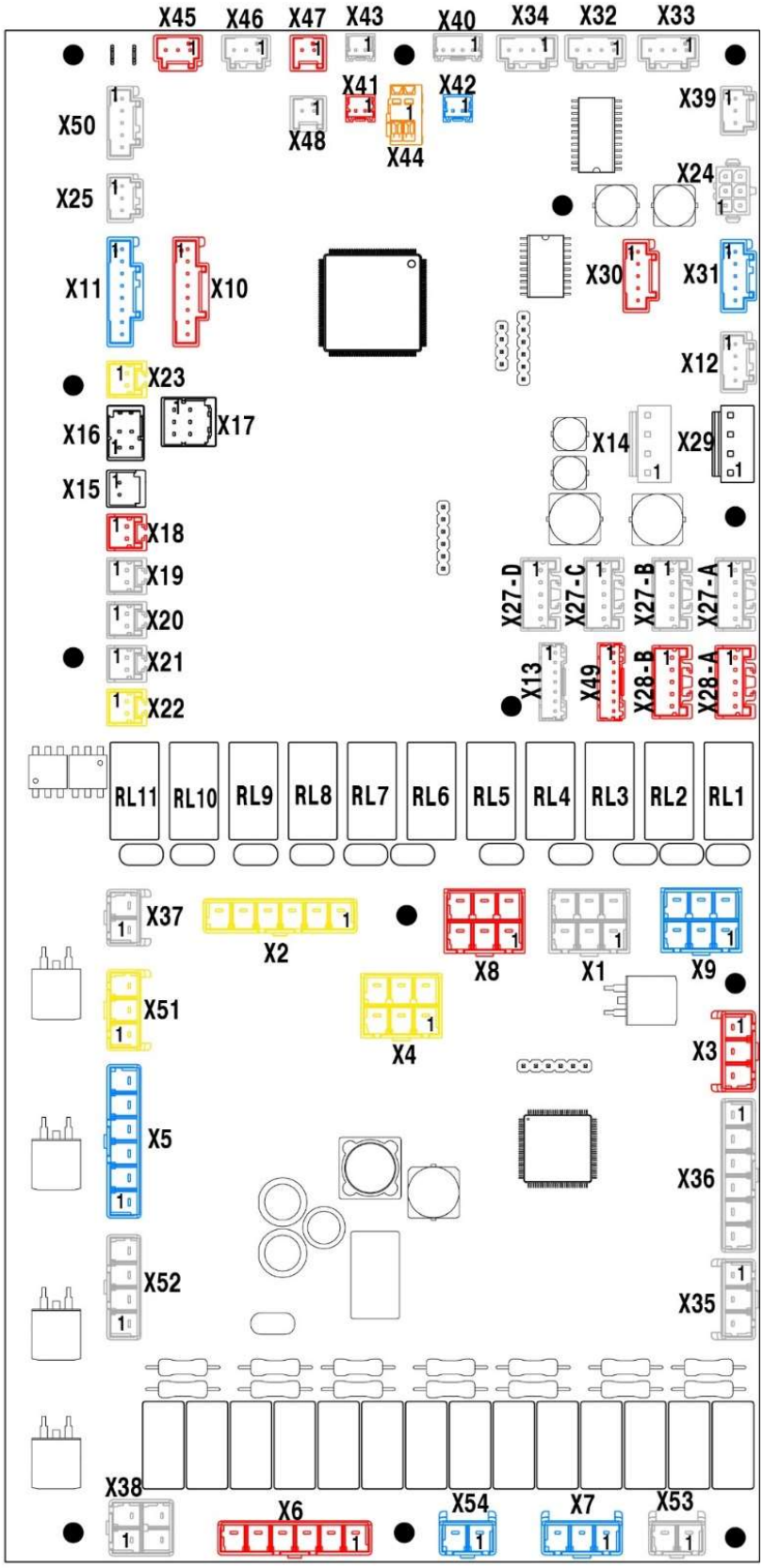
Supplied through X12 of the ACU

CURRENT ABSORPTION : 400mAmp

VOLTAGE = 12V

TEMPERATURE COLOR = 5600K

4.4.19 POWER BOARD (ACU)



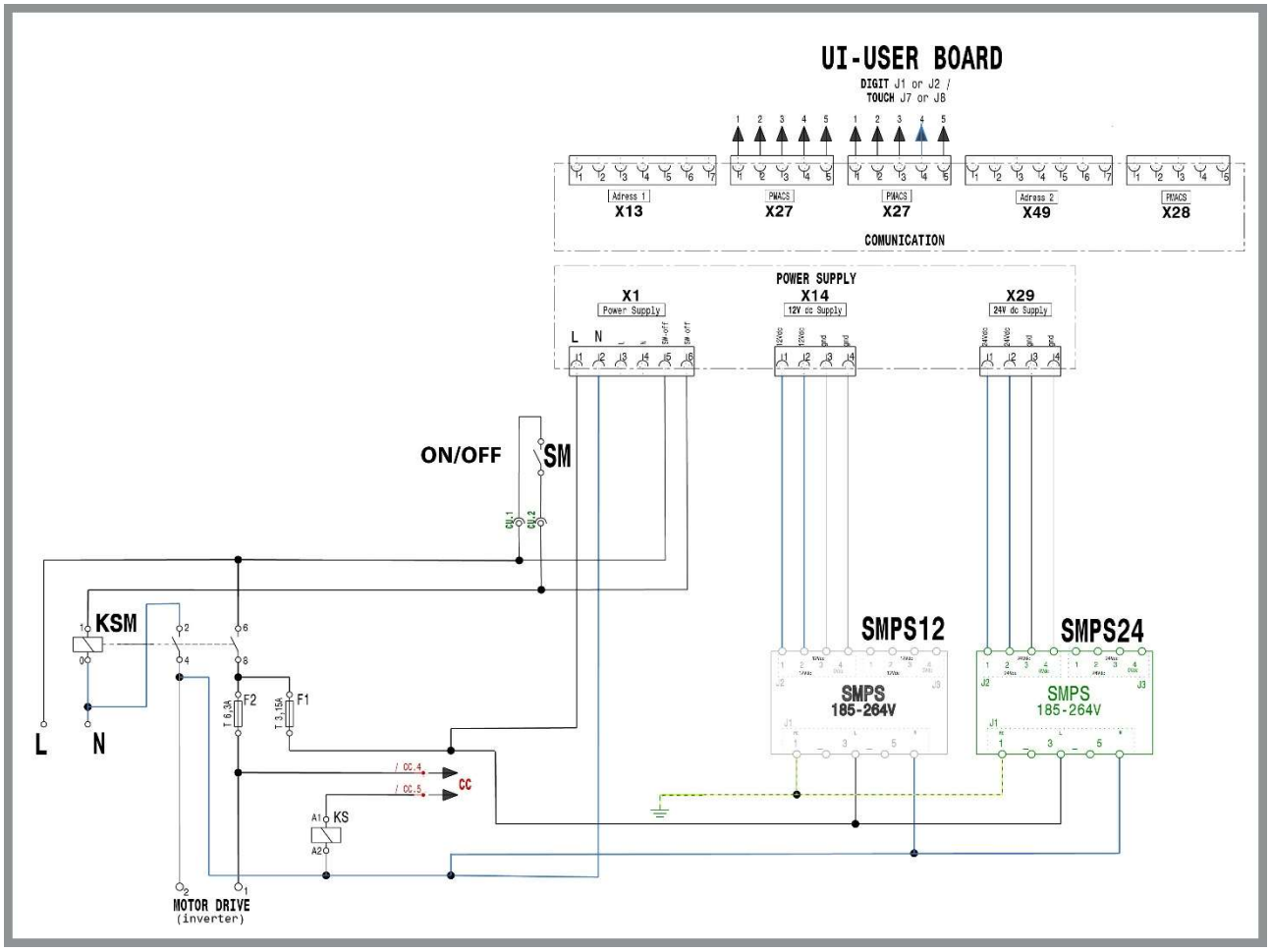
Ref.	Group	Pin	Direct.	Function
X1	Power Supply	1	IN	**L** Power Supply
		2	IN	**N** Power Supply
		3	IN	**L** Power Supply
		4	IN	**N** Power Supply
		5	IN	**SW-OFF** Auto switch off
		6	OUT	
X2	Water Service	1	OUT	**EV1** Instant steam solenoid valve
		2	OUT	**EV2** Quenching solenoid valve
		3	OUT	**EV4** Spray unit solenoid valve
		4	OUT	**BV3** Cavity drain ball valve OPEN
		5	OUT	**BV3** Cavity drain ball valve CLOSE
		6	OUT	**N**
X3	Clean. Syst. Basic	1	OUT	**EV7** Cleaning water fill solenoid valve
		2	OUT	**M8** Cleaning pump
		3	OUT	**N**
X4	Cleaning System Drawer Rinse	1	OUT	**EV11** Drawer fill solenoid valve
		2	OUT	**EV12** Drawer drain solenoid valve
		3	OUT	
		4	OUT	
		5	OUT	
		6	OUT	**N**
X5	Boiler Fill & Clean	1	OUT	**EV5** Boiler fill solenoid valve
		2	OUT	
		3	OUT	**BV6** Boiler drain ball valve OPEN
		4	OUT	**BV6** Boiler drain ball valve CLOSE
		5	OUT	
		6	OUT	**N**
X6	Sensing	1	IN	**TSC** Cavity safety thermostat
		2	IN	**BBC1** Cavity gas blower burner
		3	IN	
		4	IN	**HVI4** Motor drive fuse
		5	IN	
		6	IN	
X7	Sensing	1	IN	**TSB** Boiler safety thermostat
		2	IN	**BBB1** Boiler gas blower burner
		3	IN	
X8	Cavity GAS **burner**	1	OUT	**N**
		2	OUT	**FCU** Cavity flame control unit reset
		3	OUT	
		4	IN	**FCU** Cavity flame control unit power supply IN
		5	OUT	**FCU** Cavity flame control unit power supply OUT
		6	OUT	
X9	Boiler GAS **burner**	1	OUT	**N**
		2	OUT	**FBU** Boiler flame control unit reset
		3	OUT	
		4	IN	**FBU** Boiler flame control unit power supply IN
		5	OUT	**FBU** Boiler flame control unit power supply OUT
		6	OUT	
X10	Cavity GAS **blower**	1	OUT	**VTCU** Cavity blower control Power supply
		2	IN	**VTCU** Cavity blower control Tachometer
		3	IN	
		4	OUT	**VTCU** Cavity blower control Speed
		5	IN	
		6	IN	
		7	OUT	
		8	OUT	**VTCU** Boiler blower control GND
X11	Boiler GAS **blower**	1	OUT	**VTBU** Boiler blower control Power supply
		2	IN	**VTBU** Boiler blower control Tachometer
		3	IN	
		4	OUT	**VTBU** Boiler blower control Speed control
		5	IN	
		6	IN	
		7	OUT	
		8	OUT	**VTBU** Boiler blower control GND
X12	Led	1	OUT	**H1** LED lighting 1 anode
		2	IN	**H1** LED lighting 1 catode
		3	IN	**H2** LED lighting 2 catode
		4	OUT	**H2** LED lighting 2 anode
X13				Adress
X14	12V	1	IN	**+12V** dc
		2	IN	
		3	IN	**0V** dc
		4	IN	
X15	Food probe temperature	1	IN	**TFP** 1st point food probe temperature
		2	IN	
X16		1	IN	**TFP** 2nd point food probe temperature
		2	IN	
		3	IN	**TFP** 3rd point food probe temperature
		4	IN	
X17		1	IN	**TFP** 4th point food probe temperature
		2	IN	
		3	IN	**TFP** 5th point food probe temperature
		4	IN	
		5	IN	**TFP** 6th point food probe temperature
		6	IN	
X18	Temper.	1	IN	**TCAV** Cavity Thermocouple
		2	IN	
X19	Temper.	1	IN	**TBOI** Boiler Thermocouple
		2	IN	

Ref.	Group	Pin	Direct.	Function
X20	Temper.	-- NOT USE --		
X21	Temper.	-- NOT USE --		
X22	Temper.	1	IN	**TQS** Quenching System Thermocouple
		2	IN	
X23	Temper.	1	IN	**TAR** Aromatizer Thermocouple
		2	IN	
X24	Lambda			Lambda sensor
X25	Boiler level	1	IN/OUT	**SL** Boiler safety level dection probe
		2	IN/OUT	**WL** Boiler working level dection probe
		3	IN	**REF** Boiler level detection probes reference
X27-A			IN/OUT	**PMACS** comunication BUS
X27-B			IN/OUT	**PMACS** comunication BUS
X27-C			IN/OUT	**PMACS** comunication BUS
X27-D			IN/OUT	**PMACS** comunication BUS
X28-A			IN/OUT	**PMACS** Recovery comunication BUS
X28-B			IN/OUT	**PMACS** Recovery comunication BUS
X29	24V	1	IN	**+24V** dc
		2	IN	
		3	IN	**0V** dc
		4	IN	
X30	Cavity SSR	1	OUT	**KC1** Cavity 1 solid state relay
		2	OUT	**KC2** Cavity 2 solid state relay
		3	OUT	
		4	OUT	
		5	OUT	**0V** dc
X31	Boiler SSR	1	OUT	**KB1** Boiler 1 solid state relay
		2	OUT	**KB2** Boiler 2 solid state relay
		3	OUT	
		4	OUT	
		5	OUT	**0V** dc
X32	Cooling Fan 1	1	OUT	**FAN1** Cooling fan 1 power supply 24Vdc
		2	IN	**FAN1** Cooling fan 1 tachometer sensor
		3	OUT	**FAN1** Cooling fan 1 speed control
		4	OUT	**FAN1** Cooling fan 1 power supply 0Vdc
X33	Cooling Fan 1, **ONLY 6/1 OVEN**	1	OUT	**FAN1** Cooling fan 1 power supply 24Vdc
		2	IN	**FAN1** Cooling fan 1 tachometer sensor
		3	OUT	**FAN1** Cooling fan 1 speed control
		4	OUT	**FAN1** Cooling fan 1 power supply 0Vdc
X35	Vent. Valve	1	OUT	**VV1** Venting valve 1 cw rotation
		2	OUT	**N**
		3	OUT	**VV1** Venting valve 1 ccw rotation
X36		-- NOT USE --		
X37	KS	1	OUT	**KS** Safety contactor
		2	OUT	
X38	Smoker	1	OUT	**N**
		2	OUT	**R1** (Smoker heating element)
		3	OUT	
		4	IN	
X39	Flow meter	1		
		2	OUT	**FM** Flow meter reference
		3	IN	**FM** Flow meter feedback
X40	Temper.	1	OUT	**NCC** NTC cabinet components
		2	IN	
		3	OUT	**NM8** NTC pump M8
		4	IN	
X41	Temper.	1	OUT	**NHSC** NTC Cavity SSR heatsink
		2	IN	
X42	Temper.	1	OUT	**NHSB** NTC Boiler SSR heatsink
		2	IN	
X43	Temper.	-- NOT USE --		
X44	Softner	1	OUT	**SSW1** Softner interface
		2	IN	
X45	Switch	1	OUT	**24V** Reference
		2	IN	**DS** Door switch
		3	IN	**AFS** Air filter switch
X46	switch	1	OUT	**24V** Reference
		2	IN	**SVV1** Venting valve CLOSE switch
		3	IN	**SVV1** Venting valve OPEN switch
X47		1	OUT	**0V** dc
		2	IN	**SF** Fat drain valve status switch
X48	Switch	1	OUT	**24V** Reference
		2	IN	**DRS** Cleaning drawer switch
X49				Recovery Adress
X50		1	OUT	**24V** Reference
		2	IN	**HER** Hood error
		3	IN	
		4	IN	
		5	IN	
X51	Liquid Clean. Syst.	1	OUT	**P1** Liquid dergent pump
		2	OUT	**P2** Liquid rinse pump
		3	OUT	**N**
X52		1	OUT	**HS2** Hood speed 2
		2	OUT	**HS1** Hood speed 1
		3	OUT	**HON** Hood ON
		4	OUT	**N** Neutral
X53		1	IN	**PPM1** Peak power managment 1
		2	IN	**PPM2** Peak power managment 2
X54		-- NOT USE --		

4.4.20 USER INTERFACE (UI)

The user board UI, is supplied trough relay **KSM** that is activated with the **ON/OFF** button **SM**.

Phase and Neutral (L/N) will arrive to the Switching feeders **SMPS 12V** and **24V** that then will supply voltage to their X14 & X29 connectors. The UI is supplied via X27 with 12V.

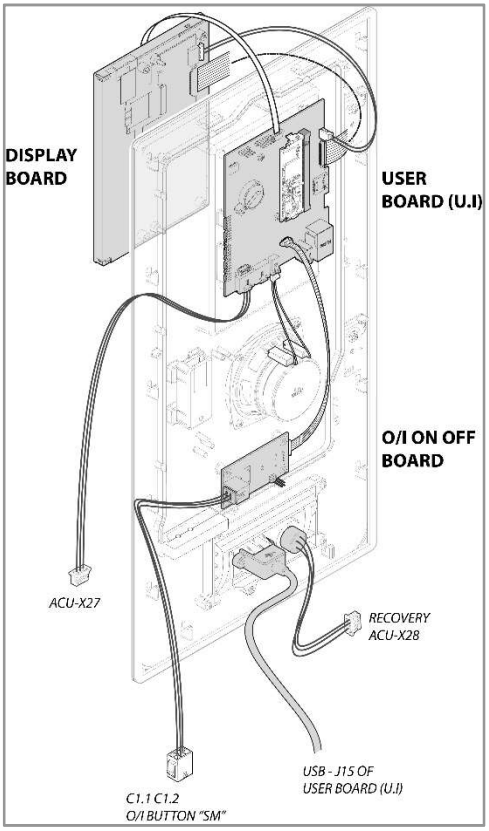


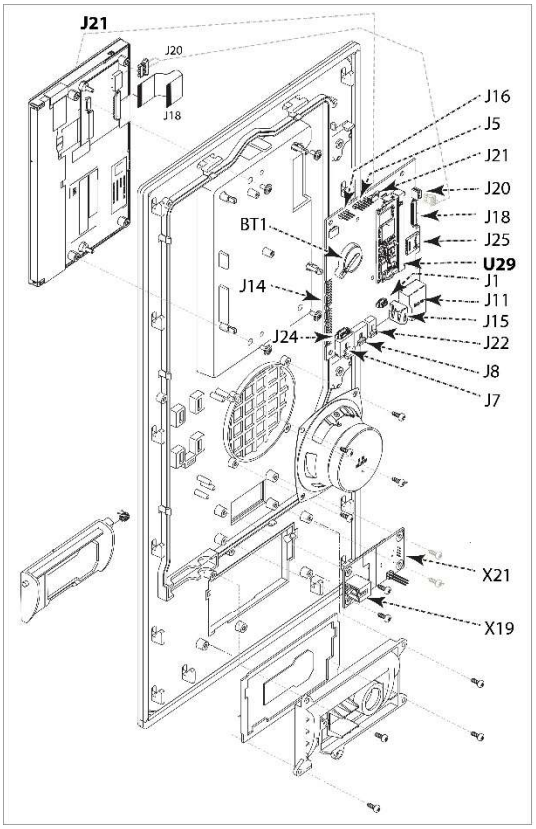
4.4.20.1 LEVEL T,K (TOUCHSCREEN)

The UI of the touchscreen appliances is supplied from the ACU connector X27 into contact J7/4.

If the user interface (user board) cannot communicate with any other board for more than a determinated time (ex 15") any running cooking cycle will be stopped. The error icon will show a message "**ECom**". No cooking cycle can be launched till the comunication is established again.

DISPLAY BOARD= connects to the U.I on J18 / J20 / J21
USER BOARD (U.I)= connects to the O/I board J1 to X21 / J7 connects to the ACU X27. J15 is the usb cable
O/I ON OFF BOARD (SM)= connects into the EWD and supply's the KSM (on of relay) when turned ON.



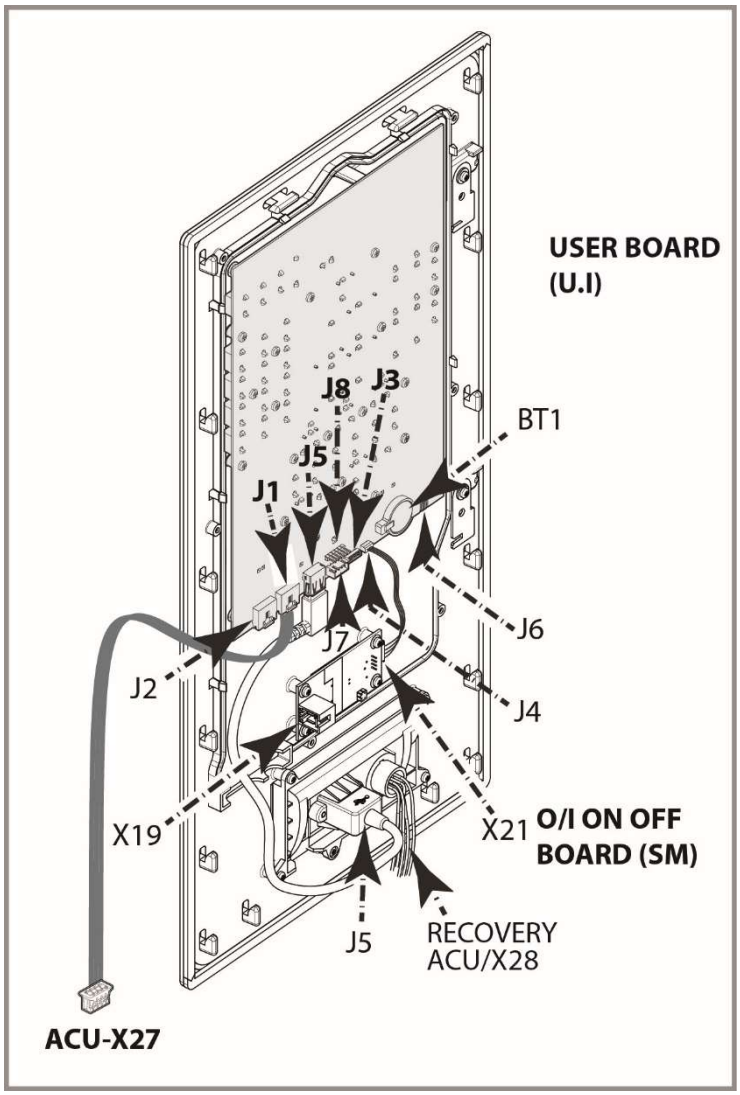


CONNECTOR	FUNCTION	NOTES
BT1	BATTERY CR2032	DATE / TIME MEMORY
J1	ON / OFF	12V AND 0/1 SWITCH STATE
J5	U9 CONTROL	NOT USED / EMPTY
J7	PMACS	**J7 is CONNECTED TO ACU** (POWER BOARD) **INTO ANY X27 CONNECTOR** . Pins of J7: J7-1= RS485 J7-2= RS485 J7-3= GND J7-4=+12V J7-5= GND
J8	PMACS	*see note
J11	ETHERNET	NOT USED / EMPTY
J14	NIU	FOR WIFI ANTENNA
J15	USB	USB PORT ON DISPLAY
J16	DEBUG	NOT USED / EMPTY
J18	LCD DISPLAY	FLAT CABLE
J20	LCD BACK LIGHT	CABLE
J21	**DISPLAY BOARD**	**TOUCH SENSING RESISTIVE**
J22	SPEAKER	CABLE
J24	ADDRESS	NOT USED / EMPTY
J25	MICRO SD	MEMORY CARD (LOGS/IMAGES)
U29	**CORE BOARD**	**CPU**
X21	COMUNICATION CABLE	12V AND 0/1 SWITCH STATE
X19		PHASE 230V IN, CONNECTED TO C1.1 & C1.2 of EWD "SM"
RECOVERY		**CONNECTED TO ACU** (POWER BOARD) **X28**

*** Note**: the J7/ PMACS can be connected to any X27 connection of the ACU. J7 vs J8 are interchangeable.
X21 & X19 are the numberings of the ON/OFF board, but also the ACU has the same numberings!!

4.4.20.2 ♦LEVEL B,C (DIGIT)

If the user interface (user board) cannot communicate with any other board for more than a determinated time (ex 15") any running cooking cycle will be stopped. The error icon will show a message "**ECom**". No cooking cycle can be launched till the comunication is established again.



CONNECTOR	FUNCTION	NOTES
BT1	BATTERY CR2032	DATE / TIME MEMORY
J1	PMACS	**J1 IS CONNECTED TO ACU** (POWER BOARD) **X27**. **Pins of J1:** = J1-1= RS485 J1-2= RS485 J1-3= GND J1-4=+12V J1-5= GND
J2	PMACS	*see note
J3	ADDRESS	NOT USED / EMPTY
J4	ON / OFF	12V AND 0/1 SWITCH STATE
J5	USB	USB PORT
J6	NIU	FOR WIFI ANTENNA
J7	DEBUG	NOT USED / EMPTY
J8	BOARD PROGRAMMING	NOT USED / EMPTY
X21	COMUNICATION CABLE	12V AND 0/1 SWITCH STATE
X19		PHASE 230V IN, CONNECTED TO C1.1 & C1.2 of EWD "SM"
RECOVERY		**CONNECTED TO ACU** (POWER BOARD) **X28**

*** Note**: the J1/ PMACS can be connected to any X27 connection of the ACU. J1 vs J2 are interchangeable. X21 & X19 are the numberings of the ON/OFF board, but also the ACU has the same numberings!!

4.4.21 SAFETY THERMOSTATS (TSC-TBS)

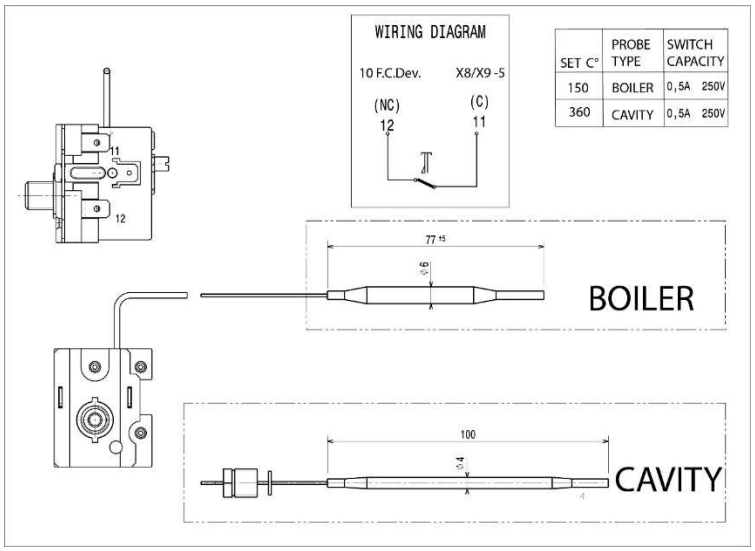
In case of tripping of the safety thermostat TSC (cavity) or TBS (boiler) any cooking cycle in function will be stopped.
If the issue is present:
LEVEL T,K (touch) appliances, the dedicated icon will blink on the display "**EtC**" or "**EtB**" will be shown.
LEVEL B,C (digit) appliances, the "temperature display" will show the message " **EtC** " or "**EtB**" .
NOTE, level K,C do not have a TSB because are boiler less.

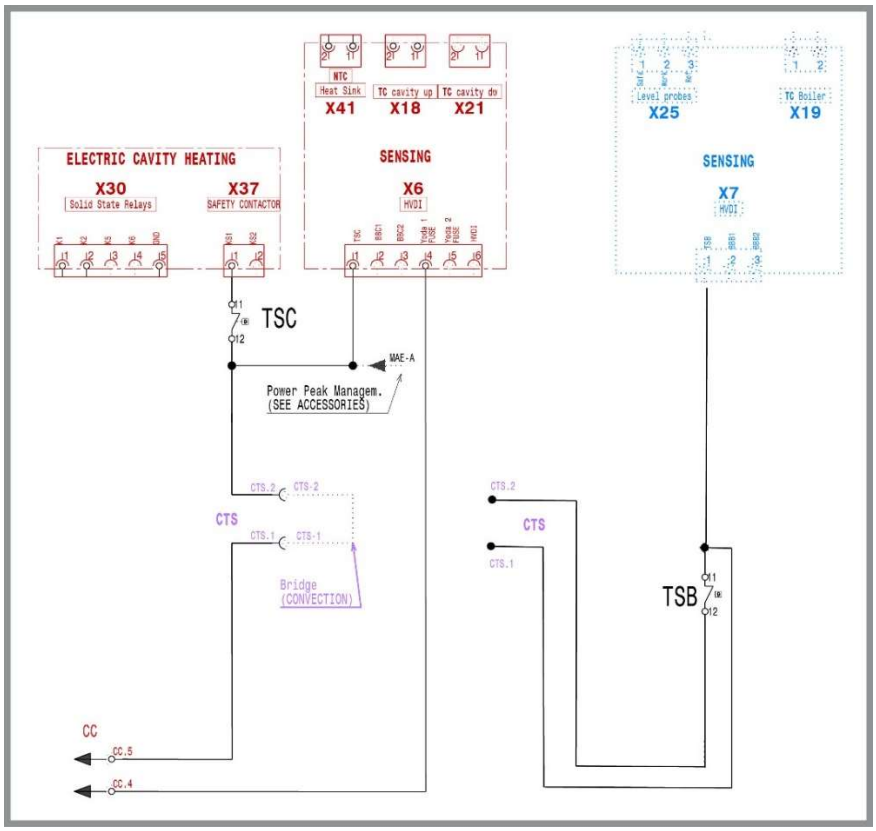
The safety thermostats are manually reset by pressing the on built button.

TSC is set to trip at 360° = will appear EtC “cavity over temperature reach”

TBS is set to trip at 150°= will appear EtB “boiler over temperature reach”

Refer also to § TROUBLESHOOTING



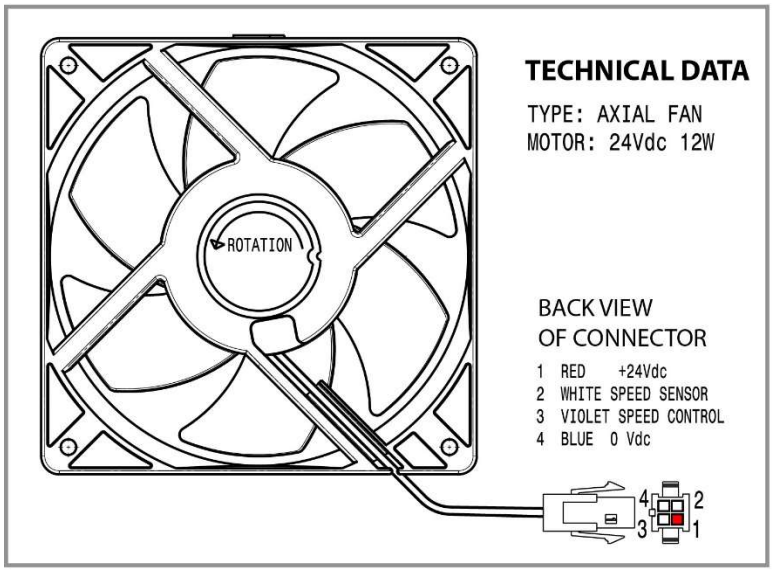


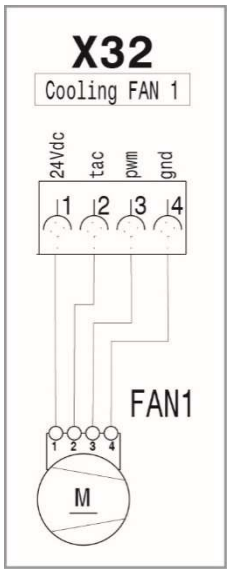
4.4.22 COOLING FAN (FAN1)

The control of the fan is regulated according to the temperature of the inner electronic compartment. Once the appliance is turned on the ventilator will turn on at low speed. If the temperature of the inner electronic compartment reaches 60°C to 70°C a warning message will be shown on the display "**ASCH**"
If the temperature is higher than 70°C , if any cycles are active they will be stopped automatically and the alarm **ESCH** will be displayed.

All ovens except 6/1 gas oven has cooling fan supplied by the ACU connector X32 that receives power from the switching feeder board connected to X29 SWITCHING FEEDERS SMPS.
The cooling fan is equipped with a PWM signal to manage the speed; there are different speeds according to the temperature sensed across the appliance: the different probes of the appliance feedback to the ACU, depending on the overall temperature of the compartment the speed will adapt accordingly. If the required speed is not reached the warning **FSmr**= fan speed not reached , will appear on the display.
Refer also to § TROUBLESHOOTING.
6/1 gas oven cooling fan is supplied by the ACU connector X33. The cooling fan of 6/1gas ovens has a smaller dimension but it works in the same manner and has the same EWD.
The motor ventilator is controlled by the ACU that , trough the reading of other probes place across the appliance, can tell if the electronic compartment is heating up and change (PWM function increase/decrease) the speed rotation.

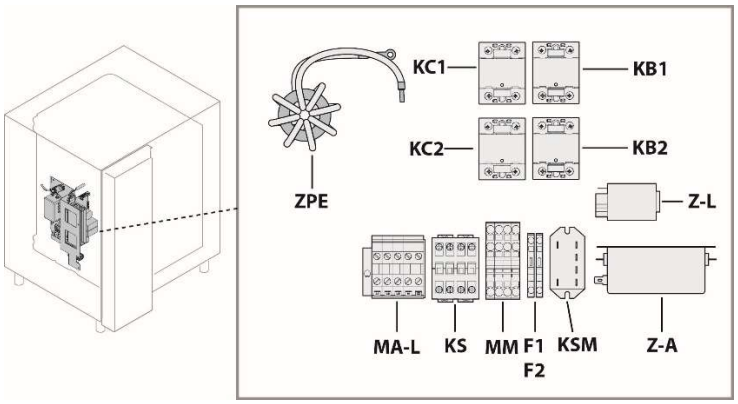
X33 ON 6/1 GAS ONLY!!!





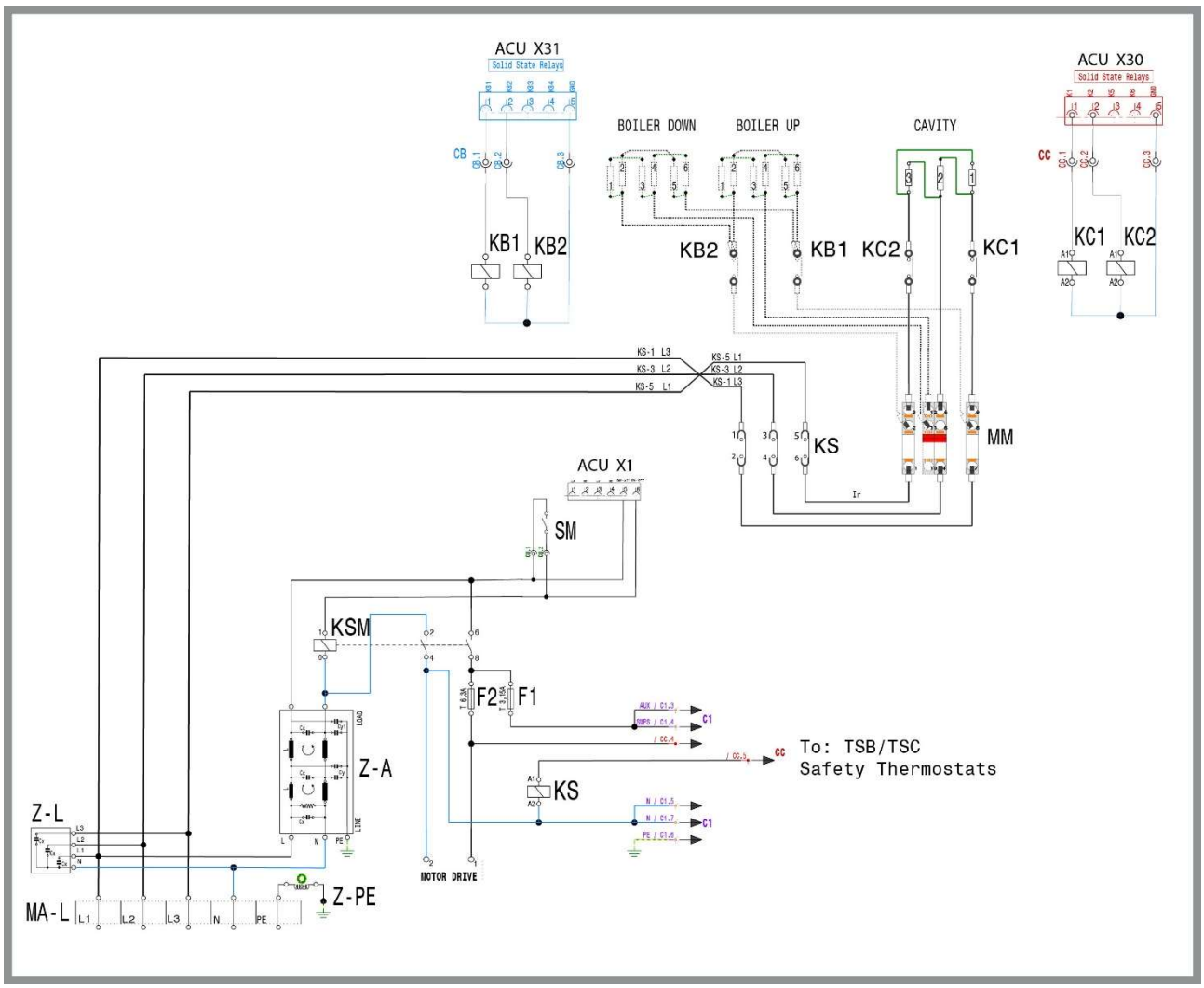
4.4.23 ELECTRIC COMPONENTS ASSEMBLY

The electric components and their function.



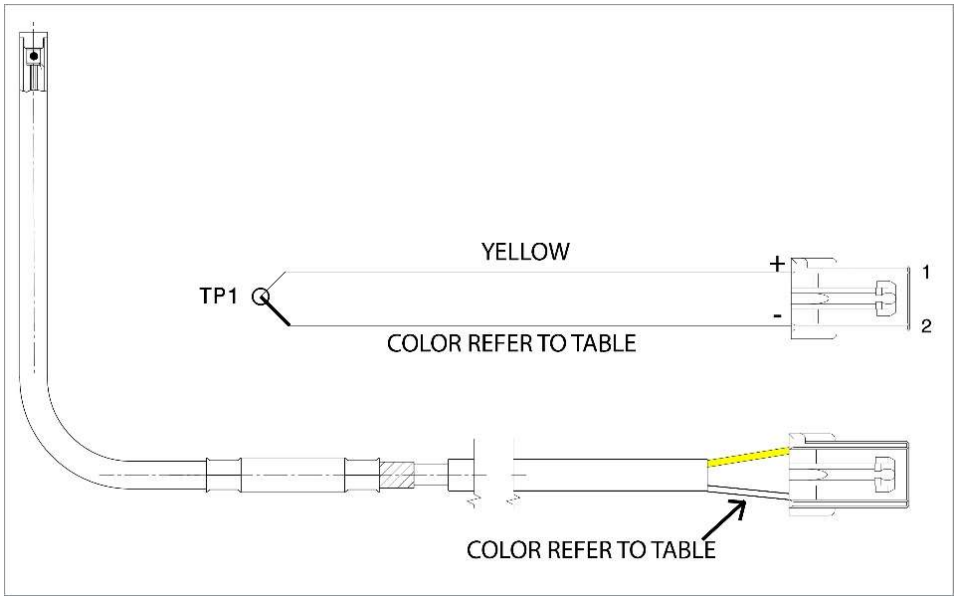
KC1 = Cavity solid state relay, coil is activated by X30 of the ACU and controls the cavity H.Element
KC2 = Cavity solid state relay, coil is activated by X30 of the ACU and controls the cavity H.Element
KB1 = Boiler solid state relay, coil is activated by X31 of the ACU and controls the boiler H.Element
KB2 = Boiler solid state relay, coil is activated by X31 of the ACU and controls the boiler H.Element
ZPE = Toroidal choke filter
MA-L = Main terminal board
KS = Safety contactor, coil is activated by the **TSB/TSC** safety thermostats. They will cut out the H.Elements power supply.
MM = Heating element terminal board
F1/F2 = Fuses = F2 (motor drive 6,3 amp) / F1 (auxiliary 3,15 amp)
KSM = On/off relay
Z-A = Auxiliary filter
Z-L = Capacitive filter
SM = ON/OFF MAIN SWITCH

EXAMPLE WIRING DIAGRAM (not all components could be present on all ovens EX: boiler less ovens would not have KB Relay).



4.4.24 PROBES

Cavity (TCAV) , Boiler (TBOI) and quenching (TQS) Probes are all thermocouple type " K " and have the same design. For the tech specifications, refer to sheet enclosed. Specific chapters are dedicated for each thermocouple.



Cavity (TCAV), Boiler (TBOI) Quenching (TQS) thermocouple probes

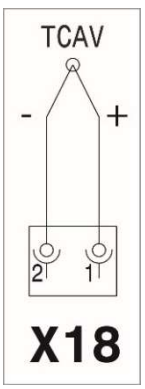
CODE	LENGTH mm	MARKING	COLOR	USE	ACU BOARD CONN.
83040BX00	300	X18 TCAV	RED	CAVITY	X18
83040BY00	1200	X19 TBOI	BLUE	BOILER	X19
83040C000	1700	X22 TQS	WHITE	QUENCHING	X22

Refer to the troubleshooting at § THERMOCOUPLE PROBES TYPE " K "

4.4.24.1 CAVITY (TCAV)

If the cavity temperature is higher than the stetted PAR_MAX_TCEL parameter any running cycle will be stopped. No cooking cycles can be started until the temperature has reached a value lower than PAR_MAX_TCEL.

The TCAV thermocouple probe type " K " is placed in the side top side of the cavity. The probe is communicating with the ACU and gives feedback regarding the cavity temperature.



It is connected on contact X18 2/1.

If the probe will reach temp 320C° (PAR_MAX_TCEL) the alarm **EtUC** ,cavity over temperature will appear on the display and block the cycle; steam cycle will still be functional.

Refer also to § TROUBLESHOOTING Refer to the troubleshooting at § THERMOCOUPLE PROBES TYPE " K "

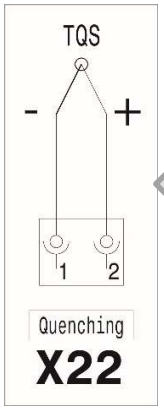
Refer to technical pictures at §PROBES

TCAV wire color:
2 = red color
1= yellow color

4.4.24.2 QUENCHING (TQS)

Refer to technical pictures at § PROBES

TQS wire color:
1 = white color
2= yellow color



The TQS thermocouple probe type " K " is placed in the quenching pipe. The purpose of this probe is to sense the temperature. High temperature equals to the presence of steam that is generated in the cavity and pushed through the cavity drain into the quenching pipe.

The quenching EV2 injection will be active if the probe senses 140C°. The injection of cold water is regulated by a duty cycle.

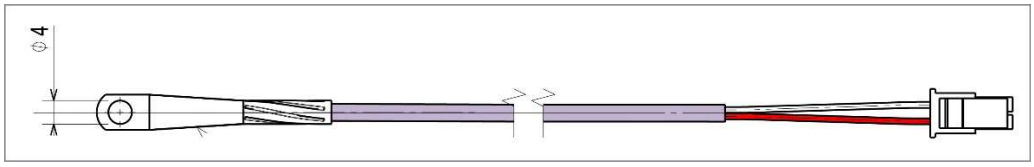
In presence of high temperature detection , TQS will feed to the ACU; ACU will consent for the opening of the water valve EV2 that will inject water into the quenching pipe.

If the probe fails the error **EbYP** will be displayed, the quenching will work with EV2 working in "predetermined duty cycle" (more water consumption).

Refer to the troubleshooting at THERMOCOUPLE PROBES TYPE " K "

4.4.24.3 SAFETY / PUMP (NM8)

The NM8 probe NTC 10K is placed onto the syphon of the cavity drain, its located before the wash pump.
The purpose of this probe is to sense if the drain syphon is emptying (water evaporation), if the probe "gets hot" it will permit the electronic board to understand that hot air of the cavity could reach the pump and damage it. In case of detection of high temperature of the syphon on the display will appear a warning **EOTD** 75C°= high temperature on drain or error **Htd** 90C°= temperature above safety limit on drain.
NOTE. Every 600sec (parameter qSSP) the quenching cycle will be activated for XX seconds, this to keep the drain syphon full of water.

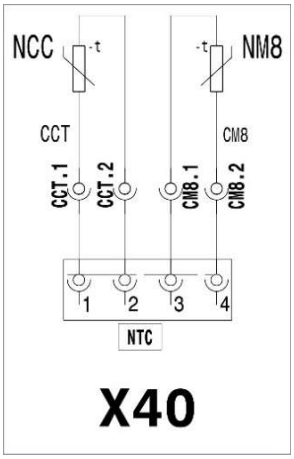


The NTC NM8 probe is connected to the ACU on contacts X40 3/4 .

The thermistor's resistance varies significantly with temperature: the resistance decreases with increasing temperature.

It is possible to verify the values of the thermistor using a multimeter. The typical values of the thermistor are the following:

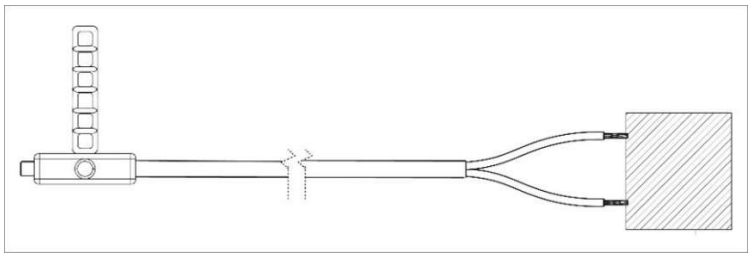
Temperature (°C)	Temperature (°F)	Resistance (Ω)
0	32	27K
10	50	17K
20	68	12K
25	77	10K
30	86	8K
40	104	5K

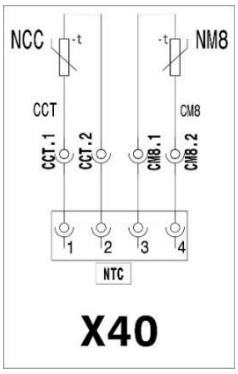


Short circuit values or infinite resistance values indicate malfunctioning.
NOTE: the NTC probe in use on this appliance is a high temp resistant model; we recommend to not use standard refrigeration NTC probes as a replacement probe.

4.4.24.4 COMPONENTS COMPARTMENT (NCC)

The probe is an NTC 10K sensor, it is connected to the ACU on contacts X40 1/2





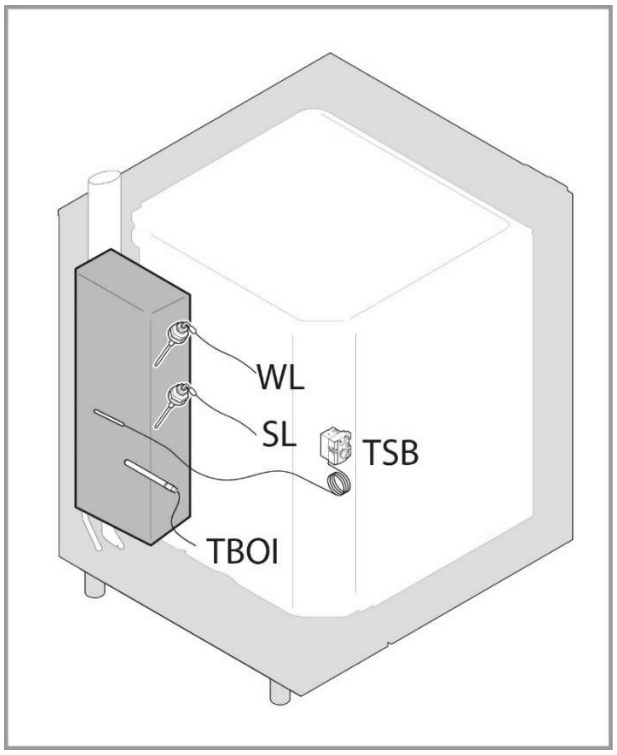
The NCC probe is placed in the side electronic compartment. The purpose of this probe is to sense if the compartment is heating up. If the probe will reach temp 65C° the warning notification **ASCH** will be displayed. If the probe will reach temp 75C° the stop notification **ESCH** will be displayed; the appliance will stop and only the cooling fan will be functional until the compartment will cool down.

In case of probe fail the alarm **ENTC** will be displayed.

The thermistor's resistance varies significantly with temperature: the resistance decreases with increasing temperature. It is possible to verify the values of the thermistor using a multimeter. The typical values of the thermistor are the following:

Temperature (°C)	Temperature (°F)	Resistance(Ω)
0	32	27K
10	50	17K
20	68	12K
25	77	10K
30	86	8K
40	104	5K

4.4.24.5 BOILER PROBES



SL (safety level) & **WL** (work level) are the water level probes

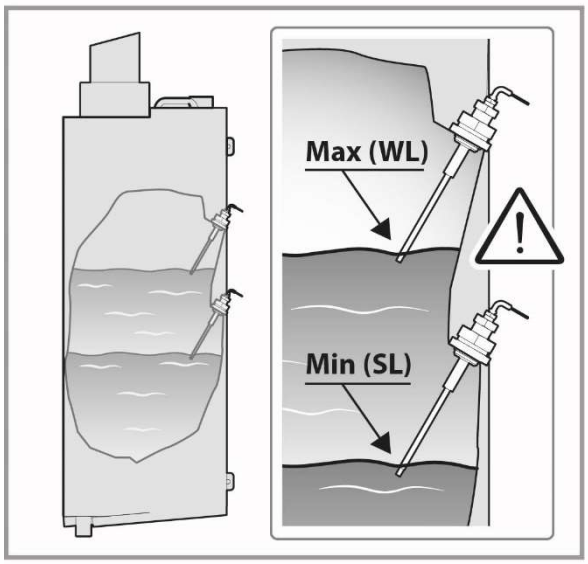
TSB is the safety thermostat

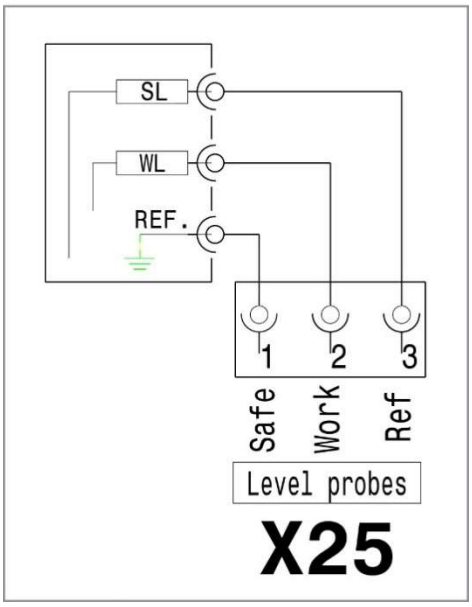
TBOI is the water temperature probe

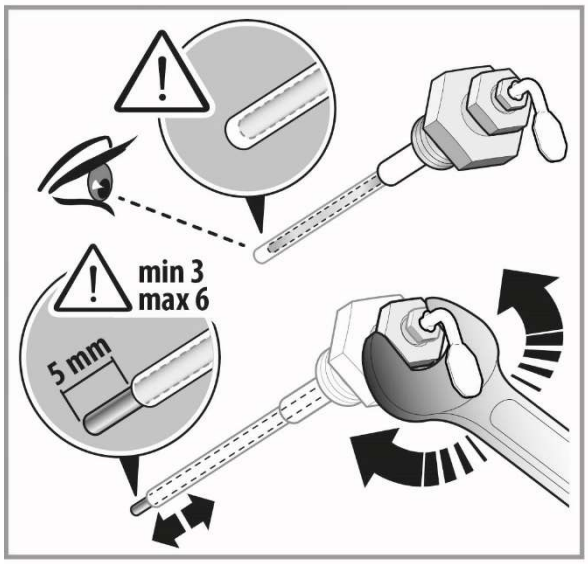
4.4.24.5.1 LEVEL PROBES (SL-WL)

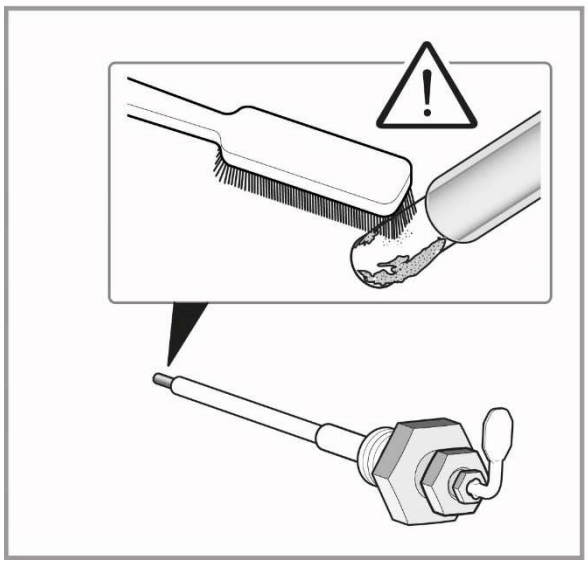
When the water level inside the boiler is lower than the **SL** the cooking cycle is paused till the water level is not restored to **SL**. In case of low water level:

LEVEL T (touch) appliances, the dedicated icon will blink on the display.
LEVEL B (digit) appliances, the "temperature display" will show the message "**Fill**".









The SL & WL probes are places on the side of the boiler.
The appliance is equipped with two sensors in order to regulate the filling of the boiler during start up and cycling.
If water will reach the tip of the sensor it will ground and feedback to the ACU that a level has been reached.
Only 5mm of the tip of the probe must be exposed to water the rest of the probe has a Teflon cover.

NOTE: minimum ohmnic value to feedback the water presence is 250Kohm

The tech. characteristics of the water are key for an efficient water detection / level; please refer to the tech characteristics of water at § WATER

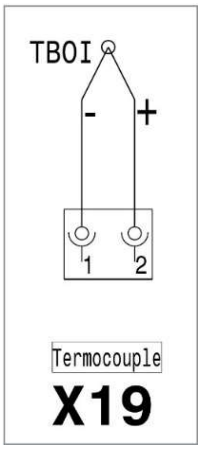
In case of scale build up the probe may not sense correctly the water presence, cleaning could be necessary.

4.4.24.5.2 TEMPERATURE (TBOI)

SEE PICTURES AT PROBES.

If the boiler temperature is higher than the stetted PAR_MAX_TBOL parameter, any running cycle will be stopped. No cooking cycles can be started until the temperature has reached a value lower than PAR_MAX_TBOL. If the alarm is present:

LEVEL T,K (touch) appliances, the error icon will light up and a message on the displayed " **EtuB** " will show.
LEVEL B,C (digit) appliances, the error icon will light up and on the temperature display " **EtuB** " will show



In case that the probe will fail the error "**Estb**" will be shown on the display and steam cooking cycles will not be active. With the presence of this alarm:
LEVEL T,K (touch) appliances, allows the execution of combi cooking cycles (with boiler less function mode/ISG) steam cycles will not be achievable.
LEVEL B,C (digit) appliances, no cooking cycle, except convection, can be activated.
Refer to the troubleshooting at THERMOCOUPLE PROBES TYPE " K "

4.4.24.5.3 SAFETY (TSB)

A dedicated chapter can be found in § SAFETY THERMOSTATS TSC-TBS

4.4.24.6 LAMBDA

If there is a failure in the lambda sensor any cooking cycle involving the humidity control will be stopped.
If the failure is present:
LEVEL T,K (touch) appliances, the error icon will light up and a message on the displayed " **ELMb** " will show.
LEVEL B,C (digit) appliances, the error icon will light up and on the temperature display " **ELMb** " will show
Only cooking involving the following cycles can be performed:

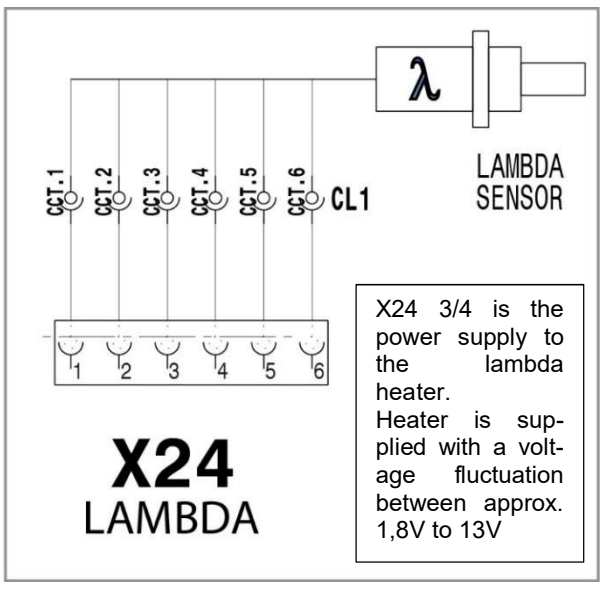
- Convection mode with vent valve closed
- Steam mode with a cavit[illegible]erature set lower than the limit to work with content saturated control
- Combi mode boiler less[illegible]n

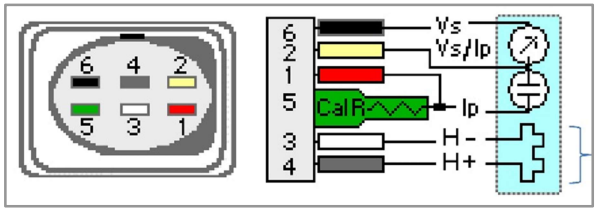
WIZARD AND LAMBDA CALIBRATION NOT YET IMPLEMENTED

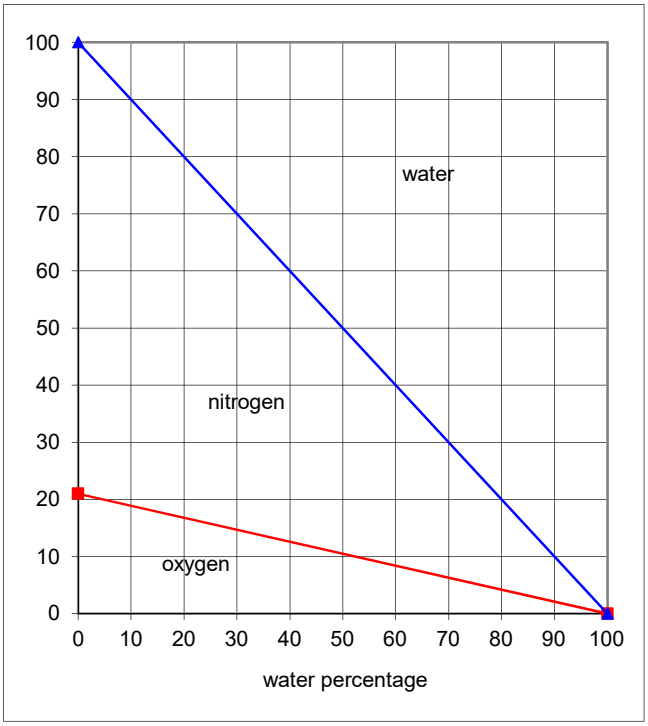
In the lev. T, B ovens the lambda [illegible]to measure the humidity. The calibration of the lambda sensor can be done automatically by the wiza[illegible]ns level T,K (touch screen) , chapter § WIZARD AUTOMATIC SETTING or for ovens level B,C (d[illegible] LAMBDA PROBE CALIBRATION

The lambda sensor permits measurement of oxy[illegible]tion through a solid electrolyte (ceramic element).

The ceramic part of the probe is in the form of a tube closed[illegible] The inside and outside surfaces of the ceramic sensor have a micro porous platinum layer (electrode)[illegible]platinum layer, which is in contact with the analyzed gas, is covered with a highly porous protective ceramic layer.
The ceramic sensor ($ZrOB_2$ – solid electrolyte) is heated from inside by means of a ceramic heater so that the temperature of the sensor ceramic remains above 350 °C. Starting from 300°C, the $ZrOB_{2B}$ sensor becomes conductive for the oxygen ions so that if there is a different concentration of oxygen at the two sides of the sensors (one side is in contact with the analyzed gas, the other side is in contact with the external), a voltage is generated.
Since the Oxygen/Nitrogen ratio in the air is constant, a measurement of the concentration of oxygen enables the percentage of a third gas (in this case water vapor) to be determined. In fact the addition of a third gas to a sample of air has the effect of reducing in a proportional manner the presence of oxygen and nitrogen so that, as said, determining the relative concentration of oxygen allows the amount of the third introduced gas of the mixture to be determined (see the diagram).







Lambda sensor is sequentially feeded from approximately 8V to 13V on pin 3 and 4, after a first warm up period where the supplied voltage is <2V to avoid any thermal chock on ceramic sensor.

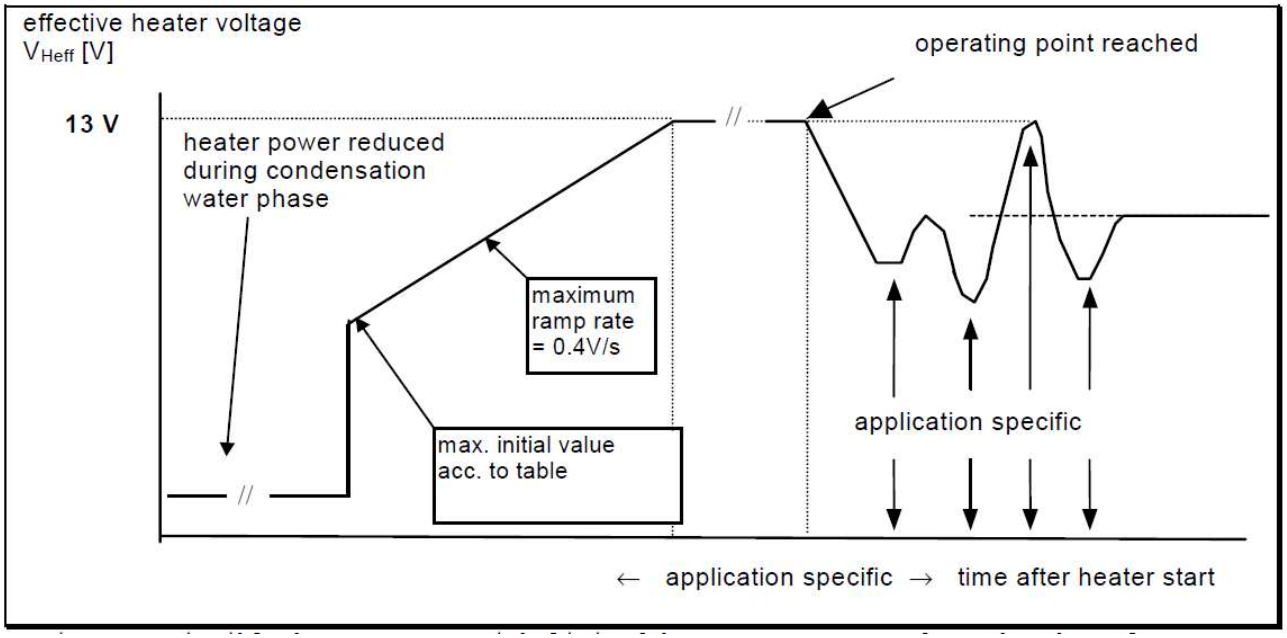
At the switch on of the oven the Lambda is cold and there may be some water condensation on it. After a first warm up, the Lambda is the ready for a correct oxygen reading. This may take some minutes so that, the humidity % given is not precise in this warm up period.

The graph below give an indication of the voltage supplied to the sensor throught pin 3 and 4.

Warm up period where Lambda feeding is <2V dc.

Ramp up period to reach approx. 13V dc.

Sequential voltage fluctuation between approximately 8V to 13V dc

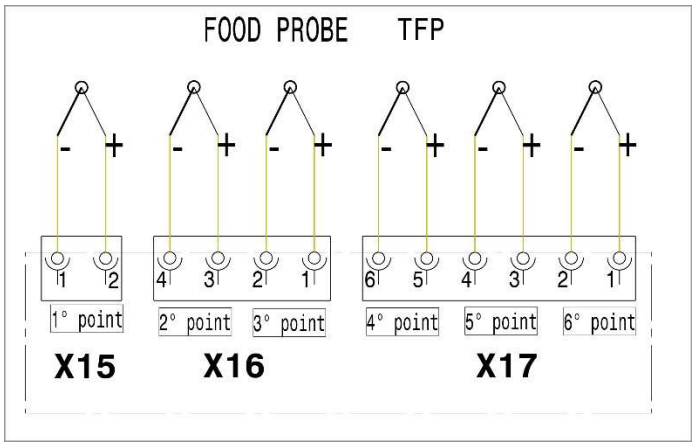


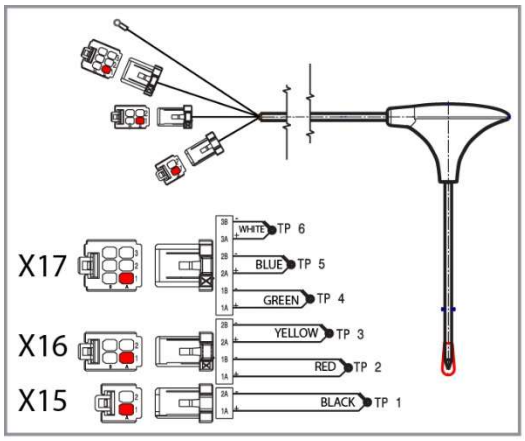
4.4.24.7 FOOD PROBE (TFP)

If one of the food measuring points fails the message " **Eprb**" will be shown on the display; any cooking cycle involving the probe will be stopped.

If the alarm is active:

LEVEL T,K (touch) appliances have a multipoint food probe, core temperature cycles will be active only if the appliance is equipped with a multi sensor food probe and at least one "point" is still reading correctly the temperature. When selecting a core cycle with this condition a notification of the failed "point" will be shown on the display, but the appliance will carry out the cycle with the remaining functioning "point" in a "single sensor probe" mode activated.
LEVEL B,C (digit) appliances have a single food probe , NO cooking cycle involving the probe can be used, other cycles (timed) will be selectable.



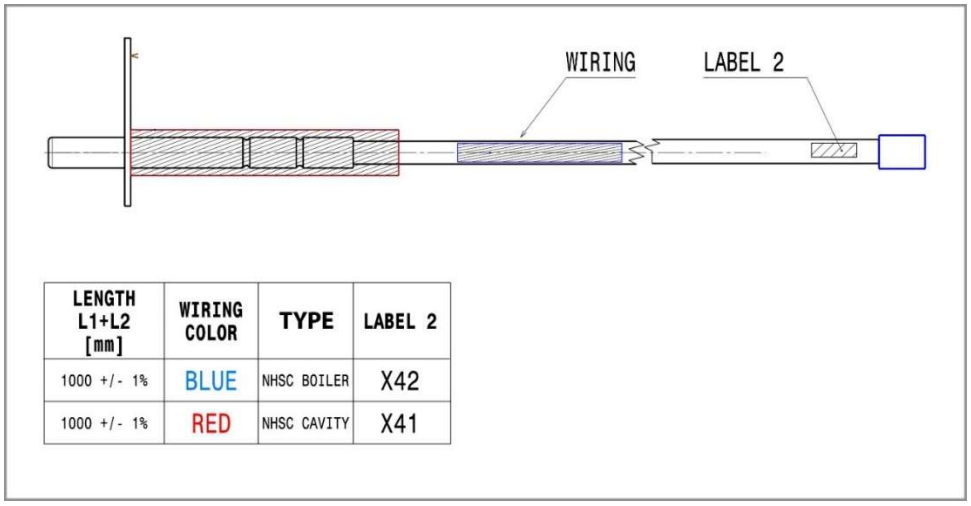


4.4.24.8 SAFETY PROBE SSR (NHSC, NHSB)

The NHSC & NHSB probe NTC 10K is placed onto the SSR relay, it is located inside the electronic compartment
§ SAFETY PROBE (SSR)

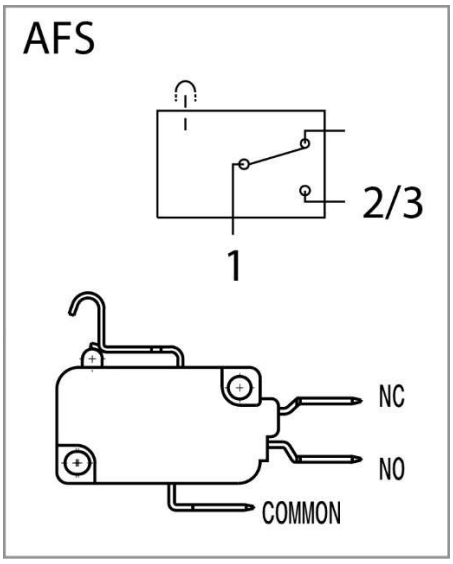
The purpose of this probe is to sense if the relay is over heating.
In case of detection of high temperature of the SSR relay on the display will appear:

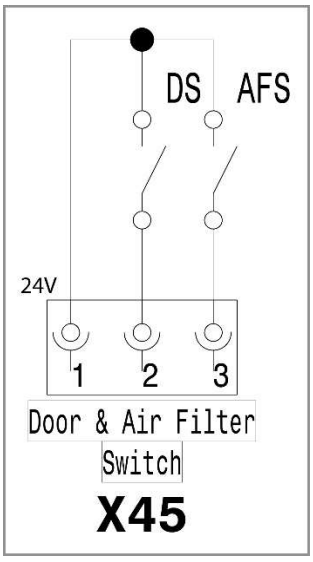
Anomaly	Type of anomaly	Description
CSHt	Warning	Cavity SSR NTC high temperature (NHSC) AT 85C°
CSOt	Stops machine	Cavity SSR NTC over temperature (NHSC) AT 95C°

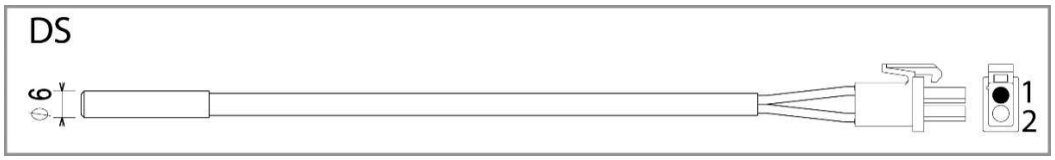


4.4.25 MICROSWITCH COOLING AIR FILTER PRESENCE (AFS) AND DOOR (DS)

In case that the contact of the micro switch AFS is OPEN the feedback to the ACU will result in "air filter absent"; a warning message will be displayed "ACF".
The door sensor DS is the door read that will detect if the door is open/closed. Both devices are 24V supplied. The DS will also give consents to the EV4 (shower valve).







4.4.26 VENTING VALVE (VV1)

The venting air valve , when opened, will help to eliminate the humidity from the cavity. The negative pressure behind the fan will cause dry air from the kitchen be sucked into the cavity (refer also to QUENCHING SYSTEM AND STEAM).

The humid air will be displaced and pushed through the cavity drain into the quenching pipe. The venting valve can exchange approximately 70m3 hour.

To the device are related four display notifications:

BEtc (warning: excessive time on closing when cleaning)

Beto (stops cleaning: excessive time on opening when cleaning).

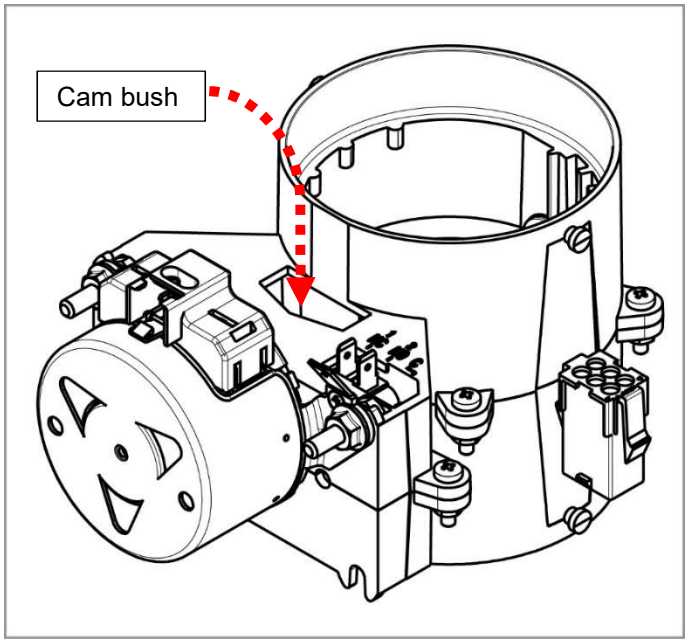
Bhtc (warning: excessive time on closing operation during cooking).

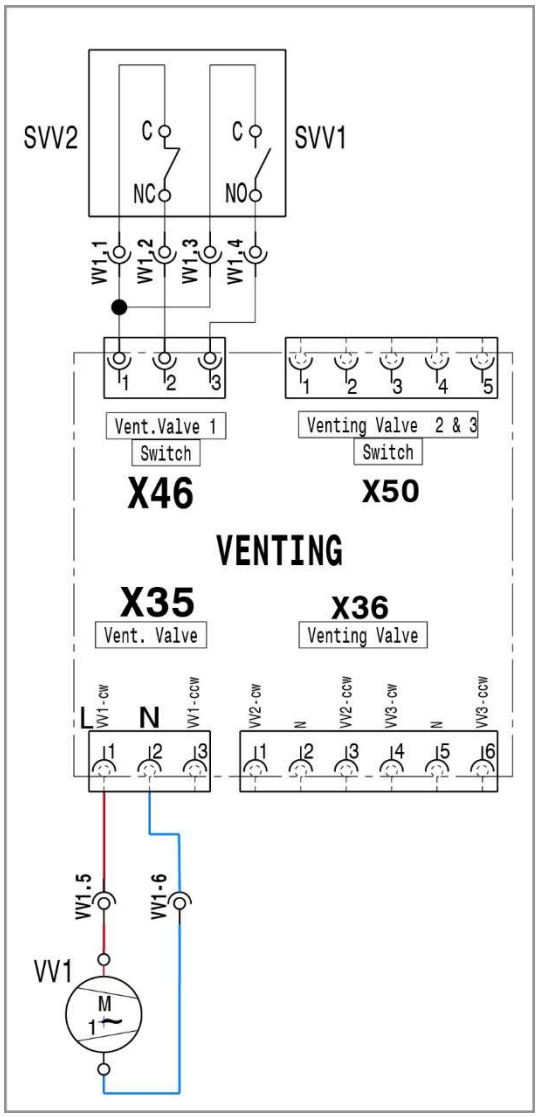
Bhto (warning: excessive time on opening operation during cooking).

SWITCH IDENTIFIER IS PRINTED ON THE CAM BUSH:

I = THE MICRO SWITCH ON THIS SIDE IS SW1 (CONNECTION TERMINAL NC)

II = THE MICRO SWITCH ON THIS SIDE IS SW2 (CONNECTION TERMINAL NO)





5 TROUBLESHOOTING

5.1 INTRODUCTION

The following chapters are intended only for authorized technicians / engineers.

5.2 TECHNICIAN TROUBLESHOOTING

5.2.1 ALARMS & WARNINGS

Anomaly	Type of anomaly	Description	Possible causes	Instructions to User	Action for Service
N°323 **ACF**	Warning	Air filter absent, microswitch AFS	Filter non present. Microswitch AFS interrupted	Air filter absent, it is possible that this causes damage to internal electric and electronic components. Refit the filter.	Check filter microswitch connections; Check cable integrity; Check X45 on ACU §POWER BOARD
N°200 **ACUM**	Stops machine	ACU not identified	Comunication cable failure. ACU failure	Communication error with electronic board. Switch off and on the appliance.	Restart the oven. Check comunication cable integrity and check continuity on 8-poles connector between UI & ACU. Check J7 or J8 on UI TOUCH §LEVEL T,K (TOUCHSCREEN) Check J1 or J2 on UI DIGIT §LEVEL B,C (DIGIT) Check X27 (one of A-B-C-D) on ACU §POWER BOARD
N°292 **ASCH**	Warning	Component compartment temperature warning (NCC)	Air intake filter is dirty; Too high room temperature.	Check room temperature considering the oven needs fresh air to cool electronic compartment. Clean air intake filter. Allow oven to cool before cooking.	Activates at 65C°. Check room temperature considering the oven needs fresh air to cool electronic compartment. Clean the filter. Check inner lack of cavity insulation/other heat transmissions from cavity to electronic compartment. If needed fix it.
N° 110 **bAtt**	Warning	Battery is low	Ageing	Call service to replace battery	Replace the CR2032 type battery on the UI §LEVEL T,K (TOUCHSCREEN) §LEVEL B,C (DIGIT)
N°243 **BEtc**	Warning	Error, excessive time on closing operation of the vent valve during cleaning (VV1)	Mechanical or electrical problem with vent valve	The oven has detected a problem with cavity vent operation. It is not possible to perform/complete the cleaning cycle. Service issue.	Check cleanness of vent valve. Check X35 & X46 on ACU §POWER BOARD Verify harness continuity and connectors §VENTING VALVE, VV1 Activate the vent valve in service mode to check functionality. Replace vent valve. §CAVITY AIR VENT VALVE Restart the oven to let the cleaning procedure to complete
N°242 **BEto**	Stops cleaning	Error, excessive time on opening operation of the vent valve during cleaning (VV1)	Mechanical or electrical problem with vent valve	The oven has detected a problem with cavity vent operation. It is not possible to perform/complete the cleaning cycle. Service issue.	Check cleanness of vent valve. Check X35 & X46 on ACU §POWER BOARD Verify harness continuity and connectors §VENTING VALVE, VV1 Activate the vent valve in service mode By-pass to check functionality. §BY-PASS ENVIRONMENT Replace vent valve. §CAVITY AIR VENT VALVE Restart the oven to let the cleaning procedure to complete

Anomaly	Type of anomaly	Description	Possible causes	Instructions to User	Action for Service
N°224 **BEtr**	Warning	Boiler excessive temperature raising time (Tbol)	Broken heating element Broken Solid State relay Dirty burner	The oven has detected a low performance in the boiler. Please verify cooking results.	Verify boiler heating element; Solid state relay; Burner cleanness; PWM malfunctioning/wrong values
N°241 **Bhtc**	Warning	Warning on excessive time on closing operation of the vent valve during cooking (VV1)	Flap (venting valve) motor reducer or micro switch failure; Obstruction at the venting valve inlet	It is possible to continue using the oven; Cooking results maybe different from usual; With the oven OFF and cold, check if any obstruction at the ventilation chimney on the top of the oven.	Check cleanness of vent valve. Check X35 & X46 on ACU §POWER BOARD Verify harness continuity and connectors §VENTING VALVE, VV1 Activate the vent valve in service mode to check functionality. Replace vent valve. §CAVITY AIR VENT VALVE Restart the oven to let the cleaning procedure to complete
N°240 **Bhto**	Warning	Warning on excessive time on opening operation of the vent valve during cooking (VV1)	-Flap (venting valve) motor reducer or micro switch failure -Obstruction at the venting valve inlet	It is possible to continue using the oven; Cooking results maybe different from usual; With the oven OFF and cold, check if any obstruction at the ventilation chimney on the top of the oven.	Check cleanness of vent valve. Check X35 & X46 on ACU §POWER BOARD Verify harness continuity and connectors §VENTING VALVE, VV1 Activate the vent valve in service mode to check functionality. Replace vent valve. §CAVITY AIR VENT VALVE Restart the oven to let the cleaning procedure to complete
N°313 **bntC**	Stops boiler	Boiler SSR NTC failure (NHSB)	Temperature sensor issue	The oven has detected a problem with boiler operation. Verify cooking results.	Check NTC resistance; §SOLID STATE RELAY PROBE, NHSC, NHSB Check X42 on ACU; §POWER BOARD Replace NTC probe §SAFETY SSR PROBE
N°223 **BoLt**	Stops cycle (if the cycles needs the boiler)	Boiler water loading timeout (EV5)	No water supply. Water low conductivity. Cable disconnected. Teflon protection slipped down. Bad ground continuity	Check if the water supply is open; Check if the water pressure is not too low; Verify if the water filter is clogged. Clean it or replace it; Mechanical problem with boiler operation.	Check water supply pressure. Check water conductivity (>50 us/cm). Increase sensors sensitivity through parameter 379; Cable disconnected on water level sensors. Check X25 on ACU. §POWER BOARD Teflon protection slipped down on water sensors. §LEVEL PROBES (SL-WL) Bad ground continuity. Low voltage signals lacking to ground.
N°101 **butn**	Stops machine	One of the panel buttons is permanently blocked	The panel has been accidentally hit or damaged	Press all buttons to possibly unlock the wrong one	Unscrew a little bit some of the fixing screws of the UI board §LEVEL B, C (DIGIT) . Replace UI
N°315 **BSHt**	Warning	Boiler SSR NTC high temperature (NHSB)	Inlet air filter dirty; Cooling fan failure; Cooling inlet air sucking warm/hot air; Oven installed by hot machine; Steam/Heat leakage in the electronic compartment; SSR is overheating	Do not switch the oven Off; Wait for the temperature to decrease; Clean the air intake filter; Check with a thin strip of paper whether a consistent- tent air flow can be detected at the cooling air in let; Check if the inlet cooling air may be affected by heat produced in the kitchen (in case the Oven is located by hot units, stop working with those units)	Activates at 85C°. Check room temperature considering the oven needs fresh air to cool electronic compartment. Clean the air intake filter. Check inner lack of cavity insulation/other heat transmissions from cavity to SSR. If needed fix it. Verify heat sink integrity. Check X42 on ACU; §POWER BOARD Change thermal pad ; Replace SSR. §ELECTRIC COMPONENTS ASSEMBLY

Anomaly	Type of anomaly	Description	Possible causes	Instructions to User	Action for Service
N°314 **BSOt**	Stops boiler	Boiler SSR NTC over temperature (NHSB)	Inlet air filter dirty; Cooling fan failure; Cooling inlet air sucking warm/hot air; Oven installed by hot machine; Steam/Heat leakage in the electronic compartment; SSR is overheating	Do not switch the oven Off; Wait for the temperature to decrease; Clean the air intake filter; Check with a thin strip of paper whether a consistent air flow can be detected at the cooling air in let; Check if the inlet cooling air may be affected by heat produced in the kitchen (in case the Oven is located by hot units, stop working with those units).	Activates at 95C°. Check room temperature considering the oven needs fresh air to cool electronic compartment. Clean the air intake filter. Check inner lack of cavity insulation/other heat transmissions from cavity to SSR. If needed fix it. Verify heat sink integrity. Check X42 on ACU; §POWER BOARD Change thermal pad ; Replace SSR. §ELECTRIC COMPONENTS ASSEMBLY
N°260 **Cdo**	Stops cleaning	Cleaning drawer absent (DRS)	The cleaning drawer has not been inserted or properly inserted in its housing, The detection devices (magnet/magnetic reed) have issues.	The oven can continue to cook but cleaning cycle could not be performed until the drawer will be in place; Ensure that the cleaning drawer is in its housing and inserted properly in order to trigger the detection devices; If the error persists, clean/rinse the oven manually .	Check the microswitch is connected on wiring harness; Check harness continuity; Check X48 on ACU; §POWER BOARD Replace microswitch §DISPENSER RINSE AID
N°294 **CFbL**	Warning	Cooling fan stopped (FAN1-2-3)	Cooling fan motor overload due to dirt or oxidation; Other electric / mechanical issue.	The oven will be operative until the components compartment will reach a critical temperature.	Check for any object stopping the fan; Check cooling fan is 24V feeded from X32, X33 or X34 on ACU. §POWER BOARD §COOLING FAN, FAN1
N°203 **CPUA**	Stops machine	Cavity SSR NTC failure (NHSC)	Connector failure, NTC sensor failure; ACU failure;	Cavity SSR temperature sensor damaged. Cooking impossible.	Check NTC resistance; §SOLID STATE RELAY PROBE, NHSC, NHSB Check X41 on ACU; §POWER BOARD Replace NTC probe §SAFETY SSR PROBE
N°204 **CPUt**	Stops machine	ACS micro does not communicate	ACU failure.	ACS IC broken on ACU.	Replace ACU §POWER BOARD, ACU
N°312 **CSHt**	Warning	Cavity SSR NTC high temperature (NHSC)	Inlet air filter dirty; Cooling fan failure; Cooling inlet air sucking warm/hot air; Oven installed by hot machine; Steam/Heat leakage in the electronic compartment ; SSR is overheating.	Do not switch the oven Off; Wait for the temperature to decrease; Clean the inlet air filter; Check with a thin strip of paper whether a consistent air flow can be detected at the cooling air inlet; Check if the inlet cooling air may be affected by heat produced in the kitchen (in case the Oven is located by hot units, stop working with those units).	Activates at 85C°. Check room temperature considering the oven needs fresh air to cool electronic compartment. Clean the air intake filter. Check inner lack of cavity insulation/other heat transmissions from cavity to SSR. If needed fix it. Verify heat sink integrity. Check X41 on ACU; §POWER BOARD Change thermal pad ; Replace SSR. §ELECTRIC COMPONENTS ASSEMBLY
N°311 **CSOt**	Stops machine	Cavity SSR NTC over temperature (NHSC)	Inlet air filter dirty; Cooling fan failure; Cooling inlet air sucking warm/hot air; Oven installed by hot machine; Steam/Heat leakage in the electronic compartment ; SSR is overheating	The oven can continue to work in recovery mode: cooking cycles will not use the boiler. Do not switch the oven off; Wait for the temperature to decrease; Clean the inlet air filter; Check with a thin strip of paper whether a consistent air flow can be detected at the cooling air inlet; Check if the inlet cooling air may be affected by heat produced in the kitchen (in case the Oven is located by hot units, stop working with those units)	Activates at 95C°. Check room temperature considering the oven needs fresh air to cool electronic compartment. Clean the air intake filter. Check inner lack of cavity insulation/other heat transmissions from cavity to SSR. If needed fix it. Verify heat sink integrity. Check X41 on ACU; §POWER BOARD Change thermal pad ; Replace SSR. §ELECTRIC COMPONENTS ASSEMBLY

Anomaly	Type of anomaly	Description	Possible causes	Instructions to User	Action for Service
N° **dESC**	Warning	Descale boiler	Parameter bSCt has been reached.	Scale in the boiler	Activates at 115C°. Carry out a descale cycle with C25; check boiler & probes For level Touch perform boiler maintenance command §LEVEL T, AND K (TOUCH SCREEN) For Digit appliance perform a cleaning cycle §LEVEL B, AND C (DIGIT)
N°222 **EbOL**	Stops steam/combi cycle	Boiler thermocouple failure (TBOI)	Connector failure; TC sensor failure; ACU failure.	Boiler temperature sensor failure. The oven can continue to work without preheating (check the cooking results).	Check thermocouple signal §THERMOCOUPLE PROBES TYPE " K " Check X19 on ACU §POWER BOARD Replace Thermocouple §BOILER PROBE
N°250 **EbYP**	Warning	Quenching thermocouple failure (TQS)	Connector failure; TC sensor failure; ACU failure.	Steam exhaust temperature sensor failure. It is possible that water consumption increases. The oven will continue to cook.	Check thermocouple signal §THERMOCOUPLE PROBES TYPE " K " Check X22 on ACU §POWER BOARD Replace Thermocouple §QUENCING PROBE
N°212 **ECEu**	Stops cycle (unless the cycle running is a steam 100°C)	Top cavity thermocouple failure (TCAV UP)	Connector failure; TC sensor failure; ACU failure.	Cavity temperature sensor failure. It is not possible to cook. Only 100°C steam will be available.	Check thermocouple signal §THERMOCOUPLE PROBES TYPE " K " Check X18 on ACU §POWER BOARD Replace Thermocouple §CAVITY PROBE
N°327 **EH2O**	-	Water measured inconsistent with valves state (FM)	Water supply valve closed or partly closed; Temporary lack of water supply pressure; Flowmeter failure; Water system issue.	Problems with the hydraulic system. The oven can continue to work (check the cooking results); Check if the water supply valve is open; Check the water pressure is > 1,5 bar.	Check water system / pressure
N°322 **ELMb**	Stops all cycles except convection without humidity control and steam under 100°C	Lambda sensor failure	Lambda probe failure.	Oven has detected a problem with lambda probe. It is possible to continue using the oven in Steam under 100 ℃ Cooking results in Steam mode may be different from usual.	Check lambda is sequentially feeded from 7.8V to 12.4V sequentially on pin 3 and 4 §LAMBDA Check X24 on ACU §POWER BOARD Replace Lambda sensor §LAMBDA
N°290 **EntC**	Stops machine	Component compartment NTC failure (NCC)	Connector failure; TC sensor failure; ACU failure.	Electronic board temperature sensor damaged. Cooking impossible.	Check NTC signal §COMPONENTS COMPARTMENT (NCC) Check X40 on ACU §POWER BOARD Replace NCC §COMPONENTS COMPARTMENT PROBE (NCC)
N°251 **Eotd**	Warning	High temperature on drain (NM8)	Possible lack of water in the drain system.	high temperature on drain; Check that the oven has water supply; Pour some water inside the cavity on the bottom cavity filter.	Activates at 75C°. Cool down NM8, pour some water inside the cavity on the bottom cavity filter.

Anomaly	Type of anomaly	Description	Possible causes	Instructions to User	Action for Service
N°320 /**Epr1** N°321 /**Epr6**	Stops only food probe cycles	Core probe failure	Food probe misuse (for example, wire pulled or squeezed); Connector failure; Probe failure; ACU failure.	It is possible to run cycles based on time (without food probe); If available, use the accessory USB food probe.	Check X15, X16 and X17 on ACU §POWER BOARD Check food probe §FOOD PROBE TFP Replace food probe §FOOD PROBE
Ertc	-	Failure on RTC	Issue with software or hard- ware (for example battery clock exhausted).	Problem with internal clock, It is possible that some functionality do not work (for example HCCP).	Check battery BT1 on user board (U.I) §LEVEL T,K (TOUCHSCREEN) §LEVEL B,C (DIGIT)
N°291 **ESCH**	Stops machine, except cooling fan	Component compartment temperature error (NCC)	Filter is dirty; Too high room temperature	Temperature too high on electronic boards compartment. Check room temperature considering the oven needs fresh air to cool electronic compartment; Clean air intake filter; Allow oven to cool before cooking.	Activates at 75C°. Temperature too high on electronic boards compartment. Check room temperature considering the oven needs fresh air to cool electronic compartment; Clean air intake filter; §FILTER, AIR INTAKE Allow oven to cool before cooking.
N°253 **EStd**	Stops if flowmeter does not read water	Fail on NTC safety hydraulic drain (NM8)	Connector failure; NTC sensor failure; ACU failure.	Drain temperature sensor failure. The oven will continue to cook.	Check cable and connectors continuity from sensor to ACU Check X40 on ACU §POWER BOARD Replace sensor §SAFETY (PUMP- NM8)
N°220 **Etb**	Stops cycle	Boiler safety switch triggered (TSB)	Missing water in the boiler; Limestone accumulation in the boiler; Wrong insertion of the TC probe sensor; The safety thermostat bulb or the capillary are damaged; Leakage of heat in the safety thermostat body area; The parameter BOT is set too high; Room temperature <5°C.	Boiler over temperature reached. The oven is not able to produce steam with the boiler. An alternative device will be used, but the performance will be reduced.	Reset Safety Switch §SAFETY THERMOSTAT CAVITY AND BOILER Descale boiler For level Touch §LEVEL T (TOUCH SCREEN) For level B (Digit) §LEVEL B (DIGIT) Check X7 on ACU §POWER BOARD
N°210 **EtC**	Stops cycle	Cavity safety switch triggered (TSC)	The cavity is dirty; The parameter COT is set too high; The safety thermostat bulb or the capillary are damaged; The motor fan is blocked while the heat is still On; The temperature TC sensor provides erratic measurements; Leakage of heat in the safety thermostat body area; Room temperature <5°C.	Cavity over temperature reached.	Reset Safety switch §SAFETY THERMOSTAT CAVITY AND BOILER Check X6 and X37 on ACU §POWER BOARD Check cavity temperature sensor readings §CAVITY (TCAV) Check correct cavity temperature sensor positioning (5 mm gap from protection plate inside the cavity) Replace temperature sensor §CAVITY
N°221 **EtUb**	Stops cycle (if the boiler is used)	Boiler over temperature (TBOI)	Missing water in the boiler (electric heated units only); Limestone accumulation in the boiler; The parameter BOT is set too low.	Wait for the boiler temperature to cool down (alarm ETUB will disappear); For Digit oven version run a cleaning program including the rinse and descale cycle and use 2 tabs C25 only. For Touch oven version perform the Boiler Maintenance procedure. (Follow the procedure as per User Manual); In case the alarm re-appears, descale the boiler again.	Descale boiler For level Touch §LEVEL T (TOUCH SCREEN) For level B (Digit) §LEVEL B (DIGIT)

Anomaly	Type of anomaly	Description	Possible causes	Instructions to User	Action for Service
N°211 **EtUC**	Stops cycle	Cavity over temperature (TCAV)	The cavity is dirty; The parameter COT is set too low.	Launch a cooling cycle; if not possible open the door and let the oven to cool down; clean the cavity. When the temperature drops it is possible to launch a new cooking cycle.	Check cavity temperature sensor readings §CAVITY (TCAV) Check correct cavity temperature sensor positioning (5 mm gap from protection plate inside the cavity) Replace temperature sensor §CAVITY
N°324 **FA8H**	After cooking cycle end, blocks oven cooking	Oven worked 8 hours without air inlet filter	Restore the air intake filter checking its cleanness before fitting it back in place.	Restore the air intake filter	
N°225 **FILS**	Stops cycle (if the boiler is used)	Boiler level under working timeout (WL)	Water supply valve closed or partly closed; Temporary lack of water supply pressure; Boiler water level sensor failure; Boiler leakage: drain valve or fracture.	The oven has detected a problem with the water level in the boiler. Verify that water supply is open and restart the oven.	Check main water supply Check X25 on ACU §POWER BOARD Check boiler drain valve leackage BOILER AND CAVITY, DRAIN VALVE
N°293 **FSnr**	Warning	Cooling fan speed not reachable (FAN1-2-3)	Cooling fan dirty/failure. Clean control panel filter. Filter not present	The oven has detected a problem with the cooling fan. Verify control panel filter cleanliness. The oven will continue to cook.	Check control panel filter presence Check control panel filter cleanless §FILTER, AIR INTAKE Check X32, X33 or X34 on ACU §POWER BOARD §COOLING FAN (FAN1)
FUXX (XX = 00 - 17)	Stops machine	Top motor fail (M1)	Diagnostic according to error number (from 00 to 17) displayed.	Top motor failure XX.	See related § INVERTER ERROR TABLE
N°325 **GrCo**	Stops cleaning	Grease collector valve opened	Misuse	<dedicated popup>; Ensure to close the grease collector drain valve before restarting the cleaning cycle.	
N°282 **Hd01**	For boiler less stops humidification For boiler Stops humidification and combi cycles under 100°C Stops cleaning	Water solenoid valve EV1 not working		Switch the oven Off/On; If the error persists, manually clean/rinse the oven cavity	Instant steamer not working. For service, check X2 §POWER BOARD
N°254 **Hd02**	Warning	Water solenoid valve EV2 not working Quenching valve.		Switch the oven Off/On;If the error persists, manually clean/rinse the oven cavity.	The steam exhaust management system does not work. Insert 0.2L of water from the outlet air duct to avoid duct overheating. Service, check X2. §POWER BOARD
N°326 **Hd03**	Stops machine	Cavity drain valve BV3 not working		Switch the oven Off/On; If the error persists, manually clean/rinse the oven cavity.	Cavity drain valve not working. It is impossible to use the machine. For service, check X2 §POWER BOARD

Anomaly	Type of anomaly	Description	Possible causes	Instructions to User	Action for Service
N°228 **Hd05**	Stops cleaning, stop cooking cycles, excluding convection and combi under 100°C	Water solenoid valve EV5 not working. Boiler fill solenoid valve.		Switch the oven Off/On; If the error persists, manually clean/rinse the oven cavity	boiler filling not working. For service, check X5 §POWER BOARD
N°229 **Hd06**	Stops cleaning	Boiler drain valve BV6 not working		Switch the oven Off/On; If the error persists, manually clean/rinse the oven cavity.	boiler drain valve not working. Cleaning impossible. For service, check X5 §POWER BOARD
N°261 **Hd07**	Stops cleaning	Water solenoid valve EV7 not working		Switch the oven Off/On; If the error persists, manually clean/rinse the oven cavity.	Cavity water inlet valve not working. Cleaning impossible. For service, check X3 §POWER BOARD
N°264 **Hd08**	Stops cleaning	Cleaning pump M8 not working		Switch the oven Off/On; If the error persists, manually clean/rinse the oven cavity.	Recirculation pump. Cleaning impossible. For service, check X3 §POWER BOARD
N°262 **Hd11**	Stops cleaning	Water solenoid valve EV11 not working		Switch the oven Off/On; If the error persists, manually clean/rinse the oven cavity.	Cleaning drawer inlet valve not working. Cleaning impossible. For service, check X4 §POWER BOARD
N°263 **Hd12**	Stops cleaning	Water solenoid valve EV12 not working		Switch the oven Off/On; If the error persists, manually clean/rinse the oven cavity.	Cleaning drawer drain valve not working. Cleaning impossible. For service, check X4 §POWER BOARD
N°265 **HdPP**	Stops liquid cleaning	Valves/pumps activations (ACS feedback)			Liquid cleaning pumps not working. Cleaning impossible with liquid cleaning. For service, check X51. §POWER BOARD
HFnI	Stops humidifier	ISG is active but humidity does not increase	Verify the water supply valve is fully open and the water filter has no obstructions (clean it if needed).	The oven has detected a problem with the humidifier(ISG). It is only possible to cook in convection.	
N°252 **Htd**	Stops machine	Drain temperature above safety limit (NM8)	temperature above safety limit on drain; Possible lack of water in the drain system.	Check that the oven has water supply. Pour some water on the bottom cavity filter. Wait for the alarm to blink off.	Activates at 90C°.
N°227 **LPln**	Stops cycle	Working probe on, Safety probe off (WL-SL)	Humid lime shortcutting boiler level sensors Insulation issues with the boiler level sensors	The oven has detected a problem with the water level in the boiler.	For service, check X25 on ACU. §POWER BOARD The oven can continue to operate in convection or in ISG mode. There is a problem with the water level in the boiler: run a descaling cycle to clean the boiler level sensor.
N°201 **MCtM**	Stops machine	Inverter top not identified (MD1)	Issue with the motor inverter; Connection or electrical issue.	Communication error with top cavity motor inverter. Switch the oven Off/On; .	Check comunication cable integrity between ACU and Inverter (X27 to J2). Check X27 on ACU §POWER BOARD Check J2 on the inverter, §INVERTER, MD §INVERTER .
PdEF	Stops machine	Memorized default parameters corrupted		Parameters memory corrupted; Try to switch the oven Off/On	Default all parameters / reload software

Anomaly	Type of anomaly	Description	Possible causes	Instructions to User	Action for Service
PFAC	Stops machine	Memorized parameters corrupted	Issue with the SW or with the HW	Parameters memory corrupted; Try to switch the oven Off/On	Default all parameters / reload software
N°226 **SLUS**	Stops cycle (if the boiler is used in the phase in execution)	Boiler water level under safety for more than X min (SL)	Ensure the water supply mains are fully open and the water filter has no obstructions (clean it if needed). The oven can continue to work in Convection mode unless the water is missing from the mains, the oven can continue to work in recovery mode.	Water supply valve closed or partly closed; Temporary lack of water supply pressure; Boiler water level sensor failure; Boiler leakage: drain valve or fracture.	Open water supply Clean mesh filter on water hose Check X25 on ACU §POWER BOARD Descale boiler For level Touch §LEVEL T (TOUCH SCREEN) For level B (Digit) §LEVEL B (DIGIT)

5.3 INVERTER ERROR TABLE

Error label	AlertCodes	Solution
FU00	Inverter UP OutShortCircuit	
FU01	Inverter UP SoftOvercurr	
FU02	Inverter UP MotorNotFollowing	
FU03	Inverter UP UnderVoltage	
FU04	Inverter UP OverVoltage	
FU05	Inverter UP OutPhasesOpen	
FU06	Inverter UP DriverHighTemperature	
FU07	Inverter UP KlixonOpen	
FU08	Inverter UP Overtorque	
FU09	Inverter UP InterlockCircuitFailure	
FU10	Inverter UP DriveRequestWithoutInterlock	
FU11	Inverter UP UndervoltaveAc	
FU12	Inverter UP OvervoltageAc	
FU13	Inverter UP CommErr	
FU14	Inverter UP ParamConfErr	
FU15	TBD	
FU16	TBD	
FU17	Inverter UP OutputPhaseOpen	

5.4 TROUBLESHOOTING OTHERS

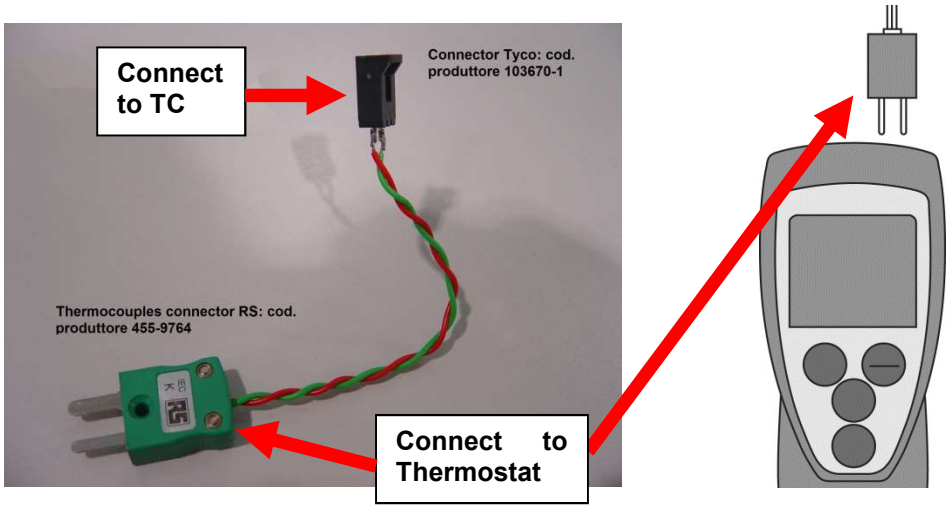
5.4.1 THERMOCOUPLE PROBES TYPE " K "

The thermocouple probe "K" is connected to the boiler, is communicating with the ACU and gives feedback regarding the temperature.



To check if the TC is working correctly with a standard volt meter; set to the Ohm's /Continuity function by checking across the positive and negative leads, in order to determine if the probe circuit is open or not. If finding that the thermocouple does not read, the problem is most likely a bad connection, broken wiring, or open internally within the thermocouple probe circuit.

If you suspect that you have a defective thermocouple, the best way to evaluate a used thermocouple is to place a new one or known good thermocouple adjacent to the suspect one in order to compare and document readings between both.



TECH TIP: In order to compare and document readings between TC's we suggest to make an adapter to standard thermom-eter.

6 SERVICING THE APPLIANCE

The following chapters are intended only for authorized technicians / engineers

WARNING !

Take GREAT CARE when connecting / testing anything with live current, if you are unsure what you are doing and how to use your equipment safely, then **DON'T DO IT.**

6.1 LIST OF NEEDED TOOLS

Complete Socket & Wrench set (from 6 to 24)

Complete allen key set

Bent long nose pliers

Screwdrivers Philips "small / medium / large"

Screwdrivers flat "small / medium / large"

Clamp amp meter

Multimeter (voltage reader)

Tongue groove pliers (water & gas pipes)

Grip lock plier

Water pressure gauge

Water analysis case , °f, Ph, Cl° ppm, μS/cm

Protective gloves

Flow meter l/min

Conductive paste.



6.2 REPLACING EQUIPMENT COMPONENTS

Integral explanation according to the systems reported in section FUNCTIONAL/TECHNICAL DESCRIPTION

6.3 DISASSEMBLY/REASSEMBLE OF COMPONENTS

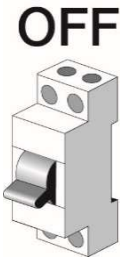
This chapter explains how to remove various parts of the equipment to access its functional components: please always refer to this guide to access various parts.

To locate the component of interest, please refer to the ELECTRIC COMPONENTS AND PROBES and HEATING AND HYDRAULIC SYSTEM illustrations.
Each component is marked with a name/number and a page which explains in detail how to take it apart. Depending on the component to reach, you may need to remove some panels: in this case, in the disassembly of the component, refer to the figures "A" below first.

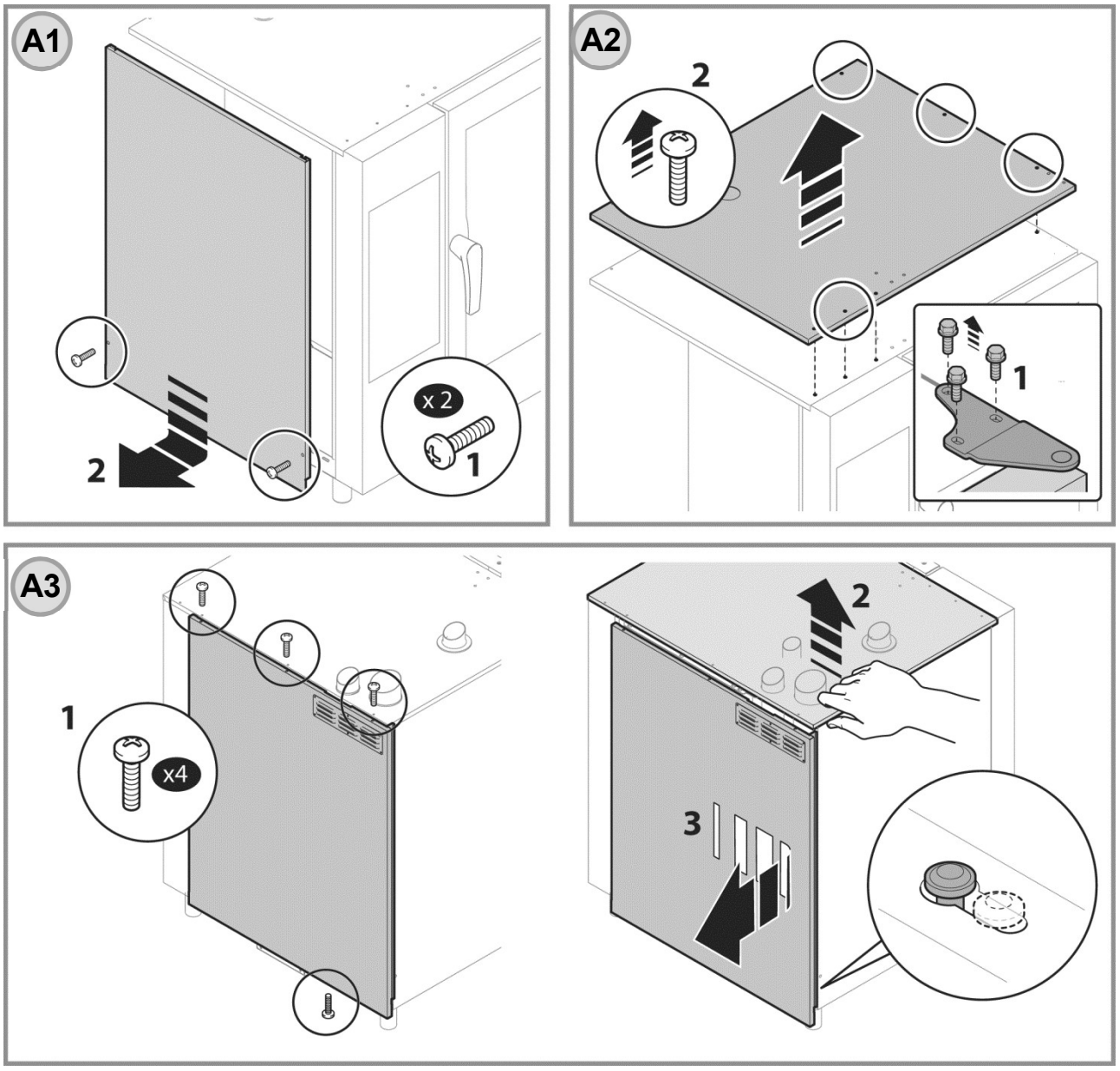
WARNING / CAUTION !

Before any operation on the machine read Chapter SAFETY INFORMATION/PRECAUTIONS. We recommend for any phase involving the removal of the components to use cut-resistant gloves



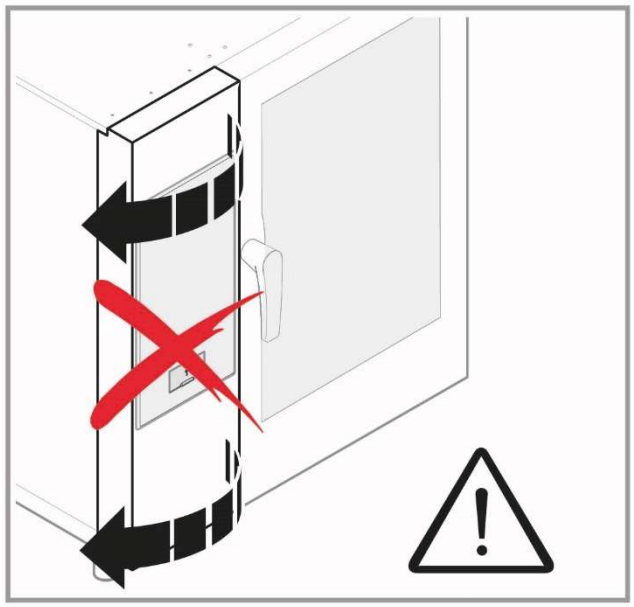


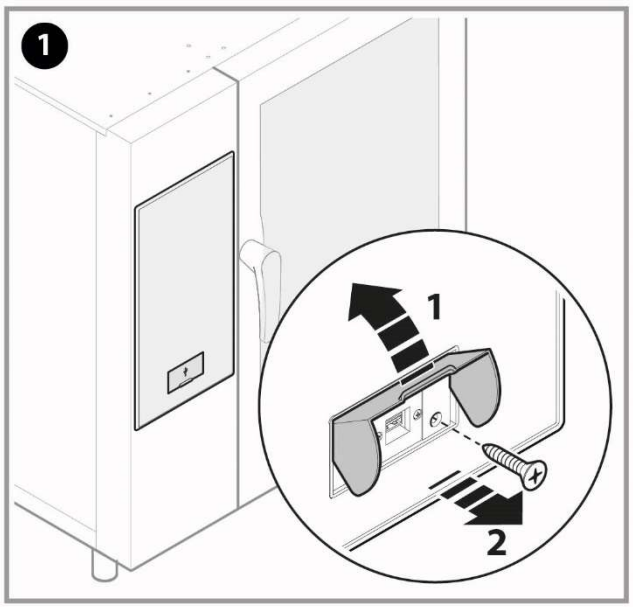
6.3.1 PANELS REMOVAL

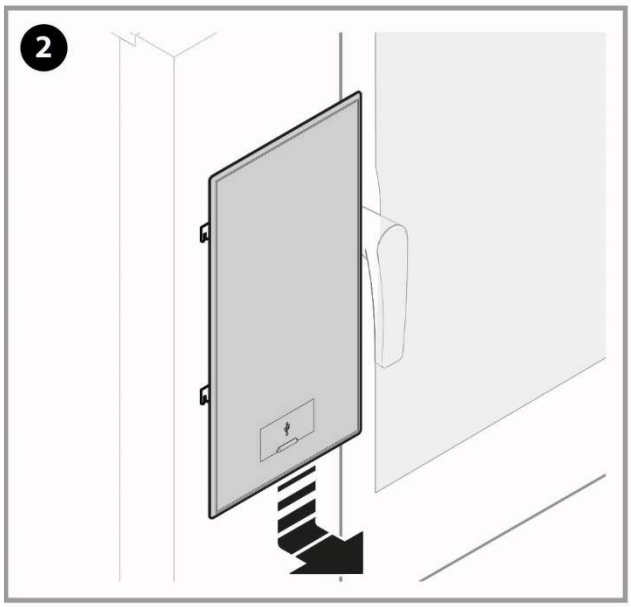


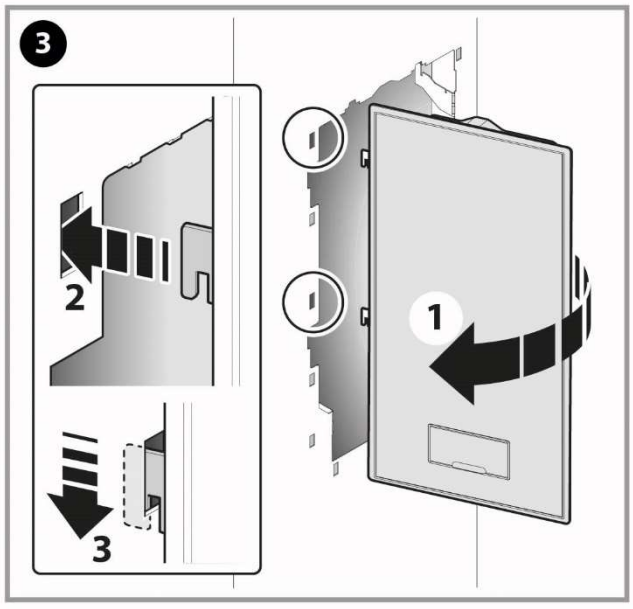
6.3.2 CONTROL PANEL

ATTENTION
The stainless steel control panel is **NOT** removable like previous models!! It is fixed to the oven frame. Only the panel of the electronic board can be opened like indicated

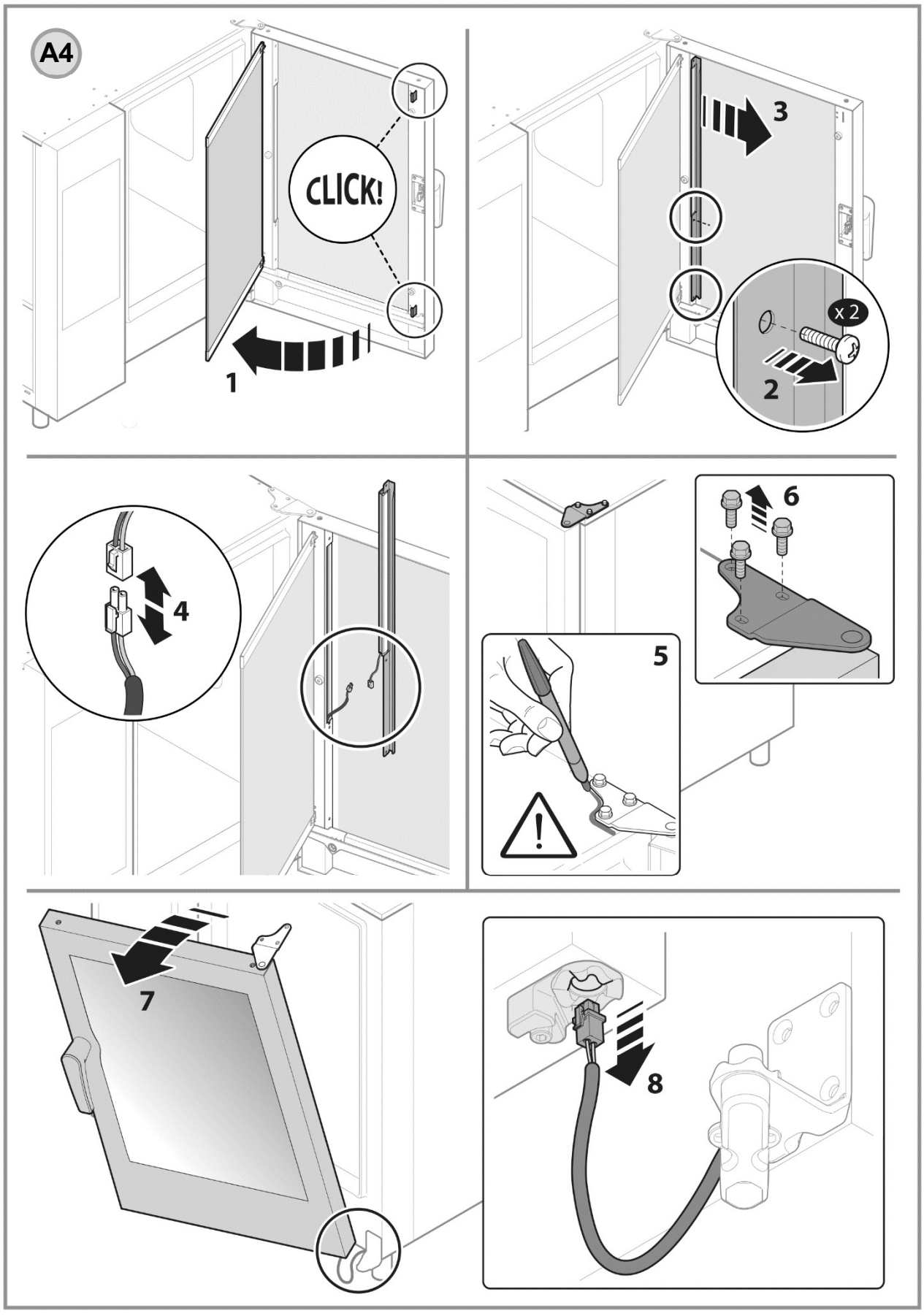


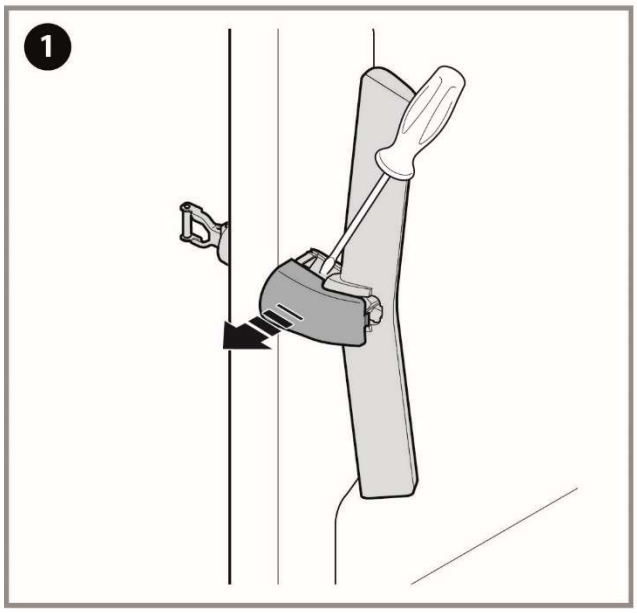


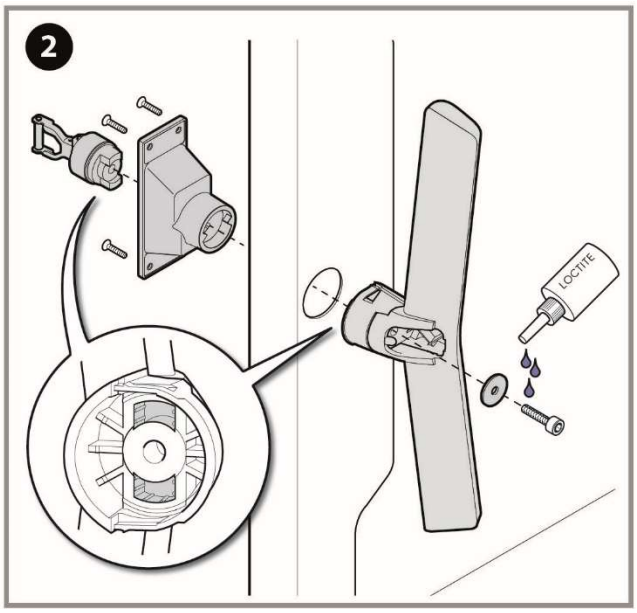




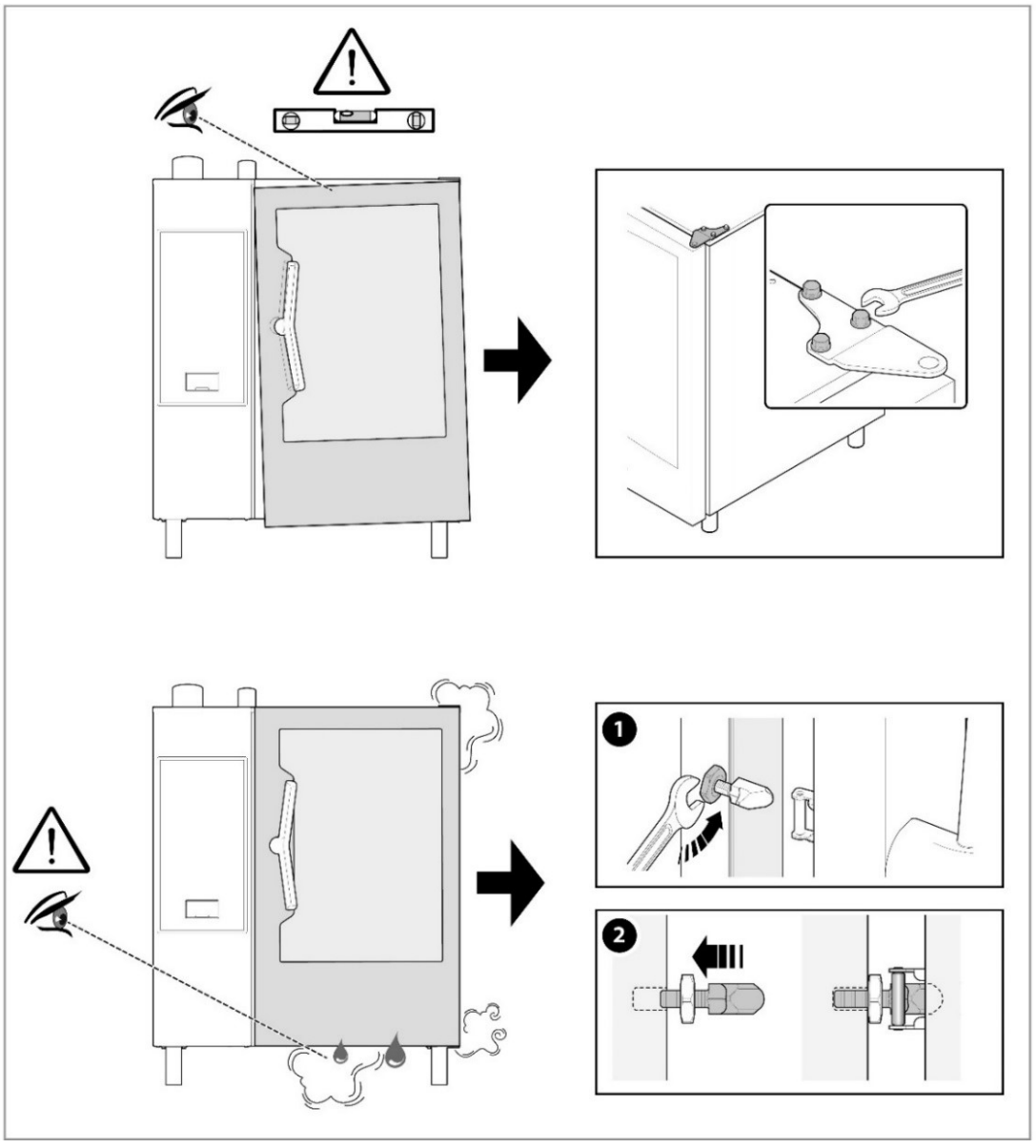
6.3.3 DOOR REMOVAL, LED BAR & DOOR HANDLE



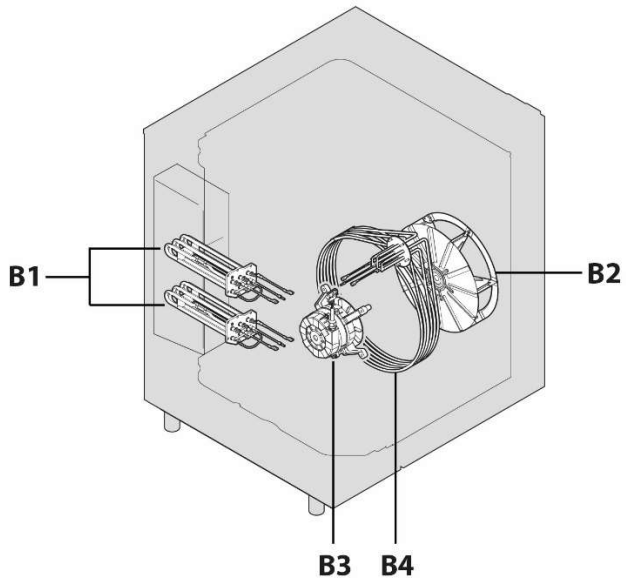


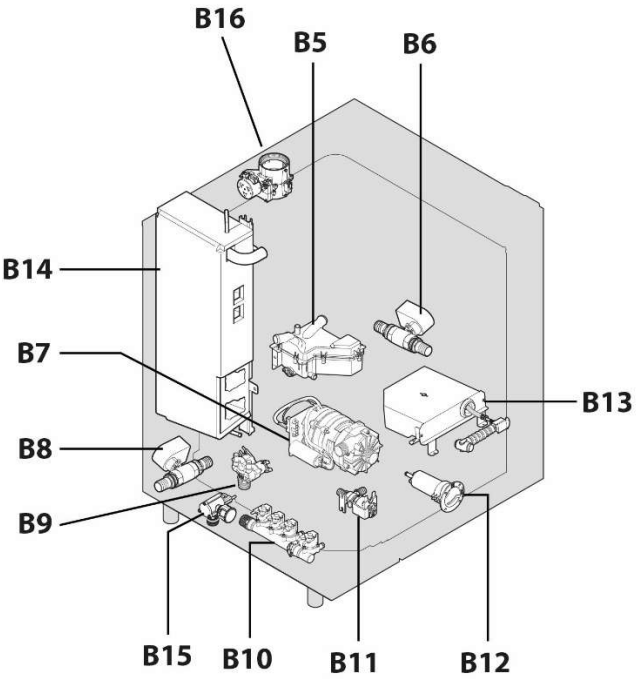


6.3.3.1 DOOR ADJUSTMENT



6.3.4 HEATING AND HYDRAULIC SYSTEM

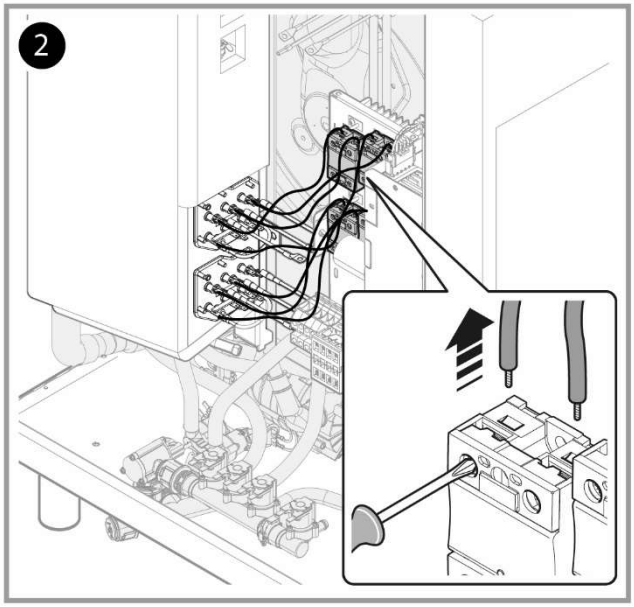


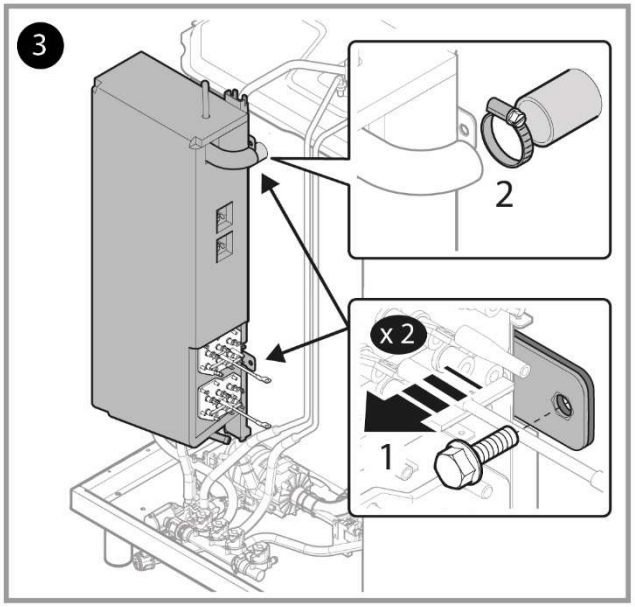


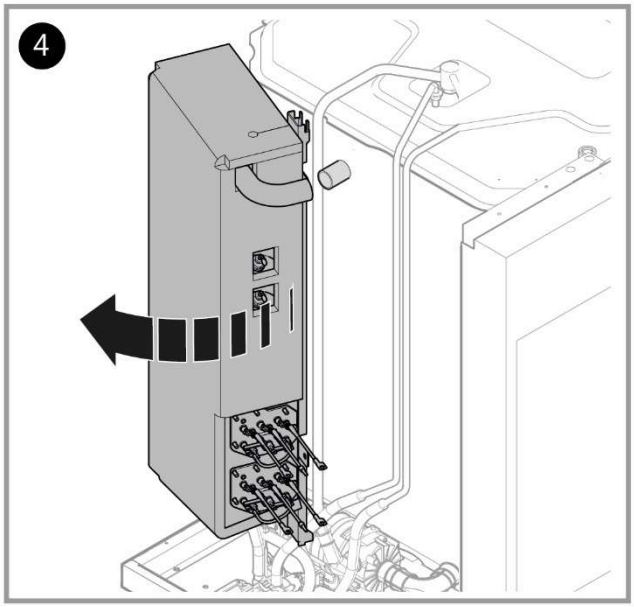
Pos.	Component	§.
B1	Boiler heating element	6.3.4.1
B2	Fan	6.3.4.3
B3	Motor ventilator	6.3.4.3
B4	Cavity heating element	6.3.4.2
B5	Air Break	6.3.4.4
B6	Cavity drain valve	6.3.4.5
B7	Wash pump	6.3.4.6
B8	Boiler drain valve	6.3.4.5
B9	Inlet water valves	6.3.4.7
B10	Valves assembly	6.3.4.8
B11	Shower valve	6.3.4.10
B12	Dispenser rinse aid	6.3.4.9
B13	Shower assembly	6.3.4.10
B14	Boiler	6.3.4.11
B15	Flowmeter	6.3.4.12
B16	Cavity air vent valve	6.3.4.13

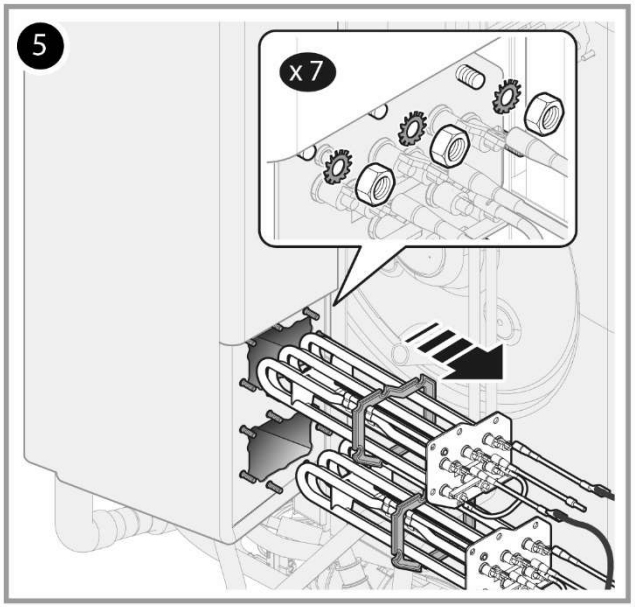
6.3.4.1 BOILER HEATING ELEMENT

1		Remove the panels	A1	At page PANELS REMOVAL



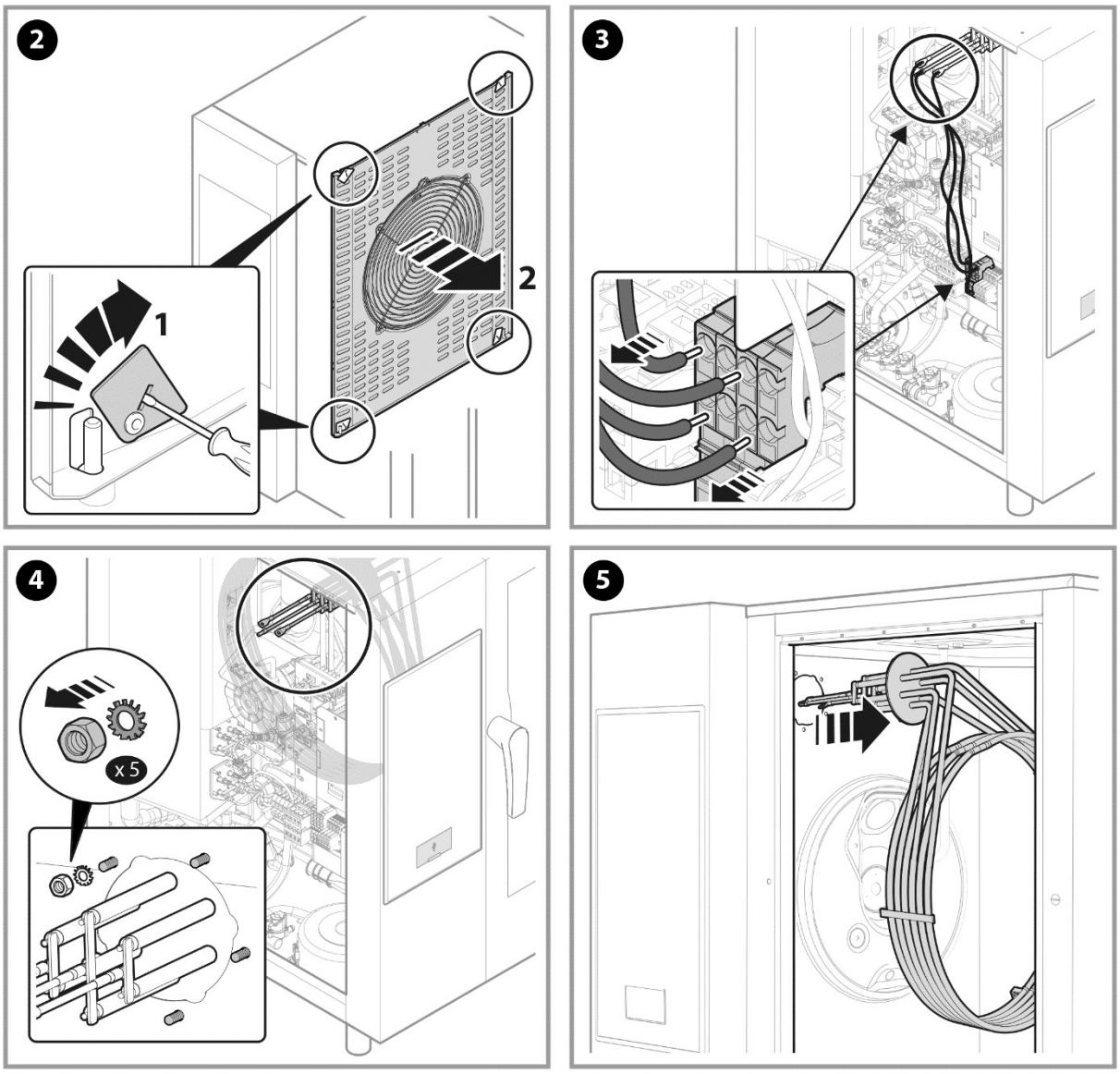






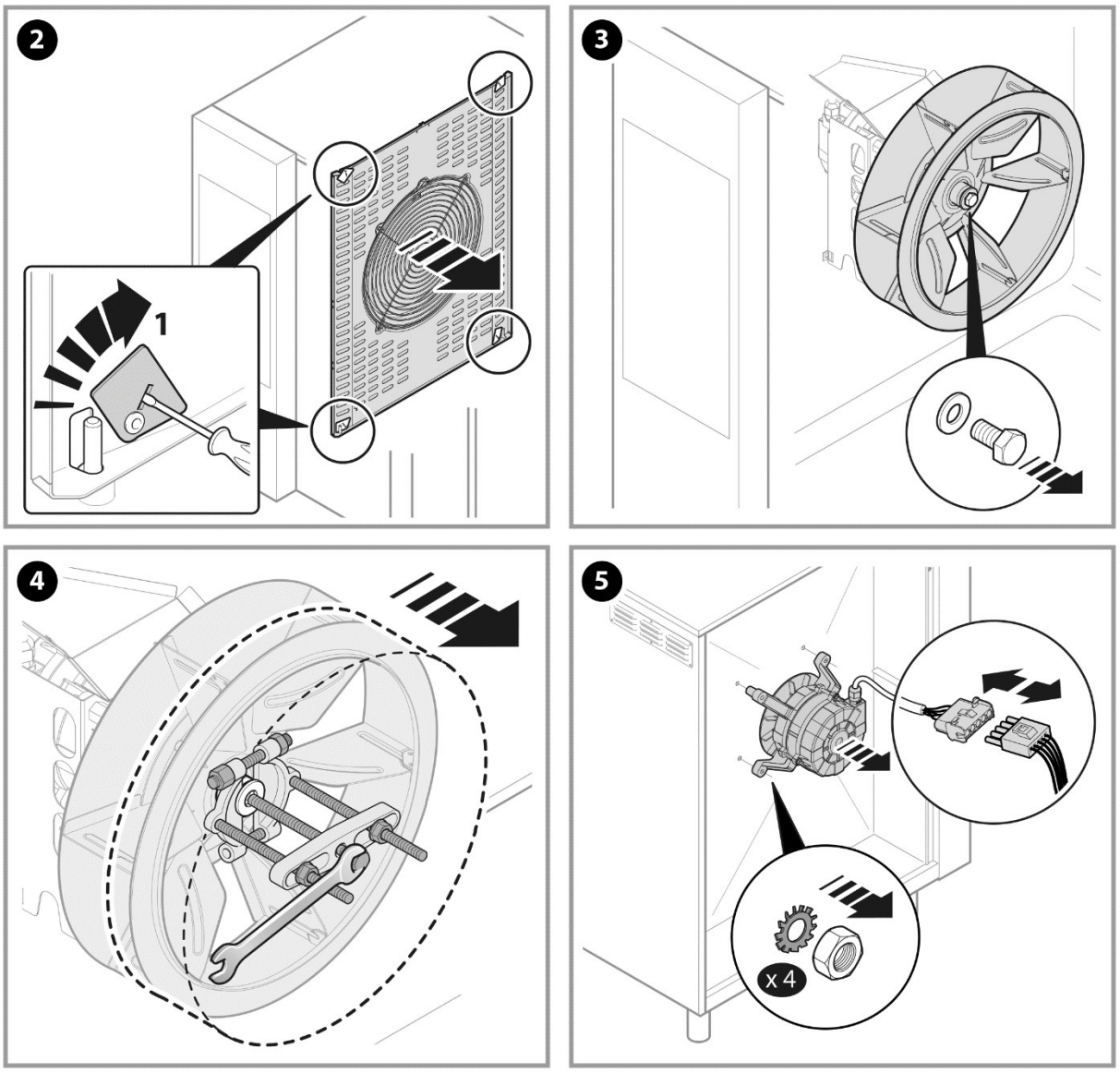
6.3.4.2 CAVITY HEATING ELEMENT

1	Remove the panels	A1	A3	At page PANELS REMOVAL



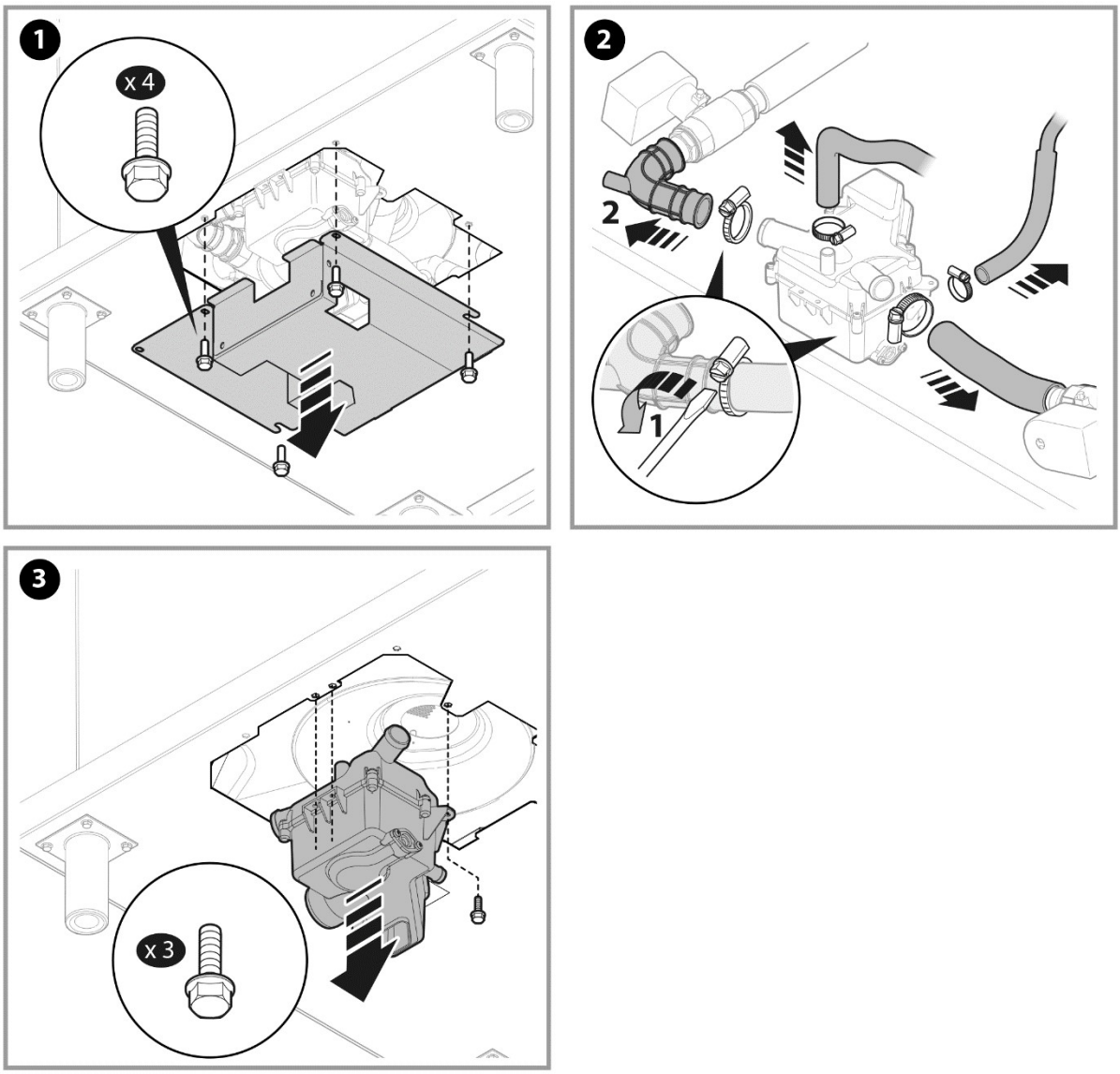
6.3.4.3 FAN AND MOTOR VENTILATOR

1		Remove the panels	A1	At page PANELS REMOVAL



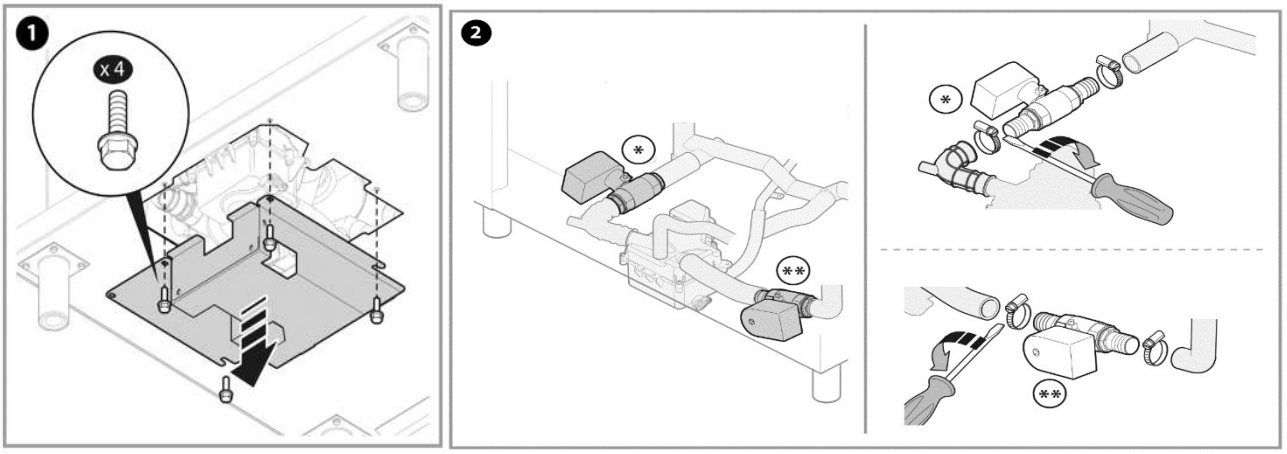
6.3.4.4 AIR BREAK

1	Remove the panels	A1	A3	At page PANELS REMOVAL



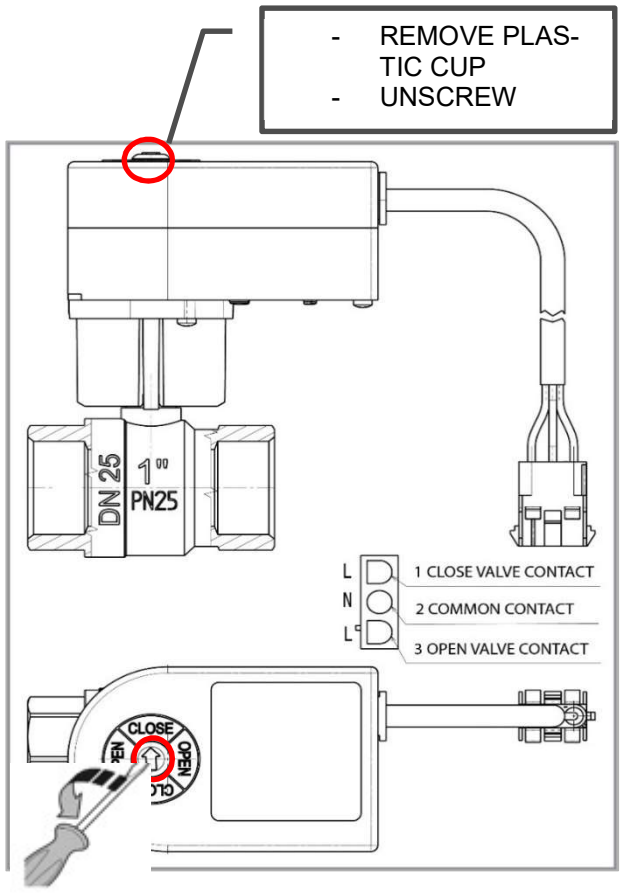
6.3.4.5 BOILER AND CAVITY, DRAIN VALVE

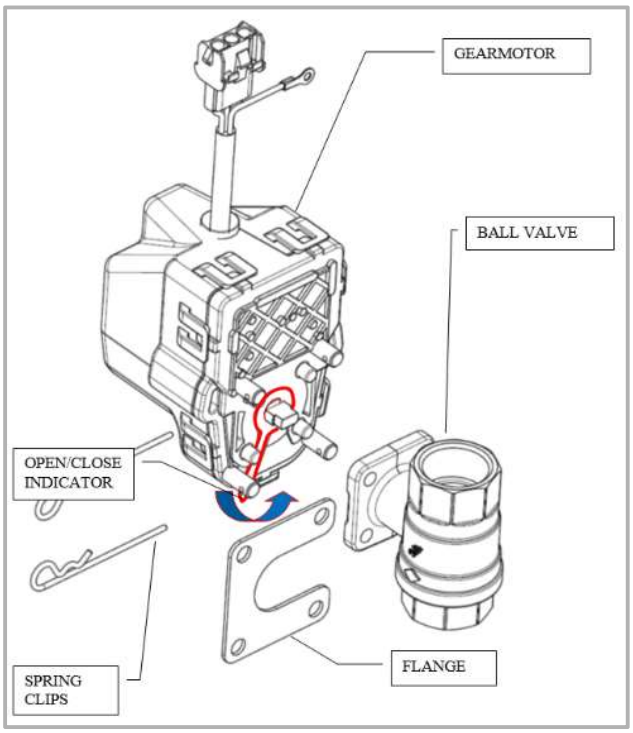
1	Remove the panels	A1	A3	At page PANELS REMOVAL



*= CAVITY DRAIN VALVE

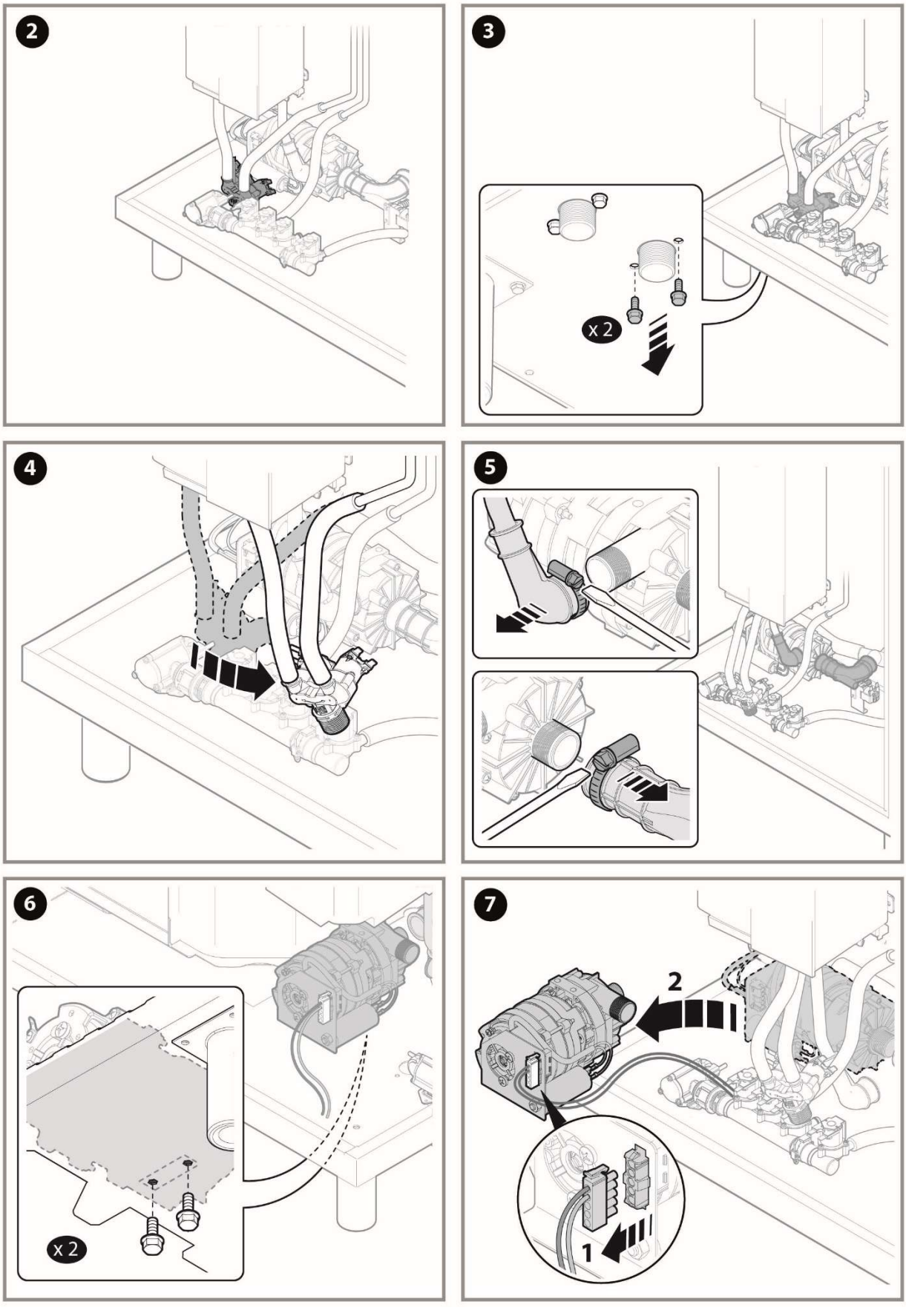
**= BOILER DRAIN VALVE





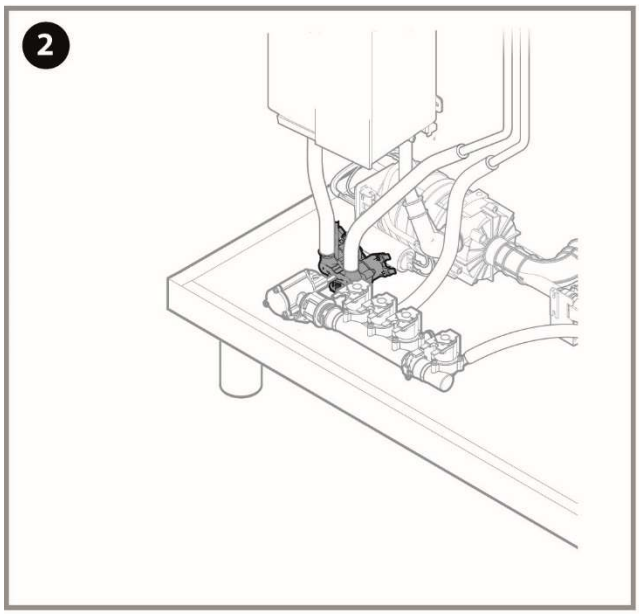
6.3.4.6 WASH PUMP

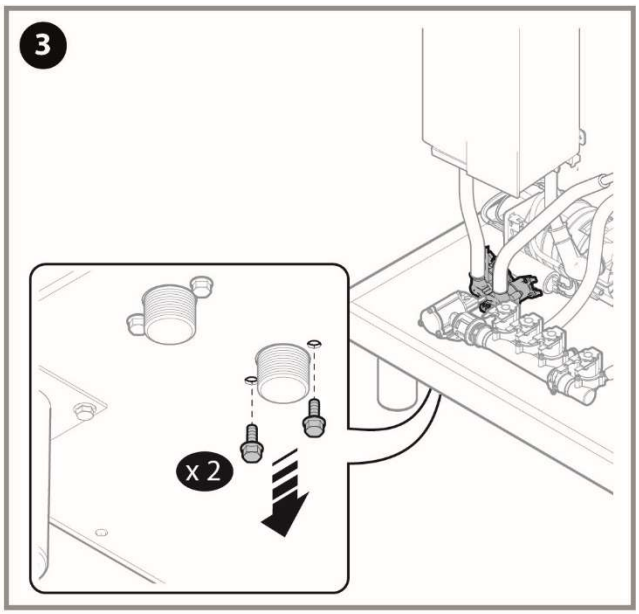
1		Remove the panels	A1	A3	At page PANELS REMOVAL

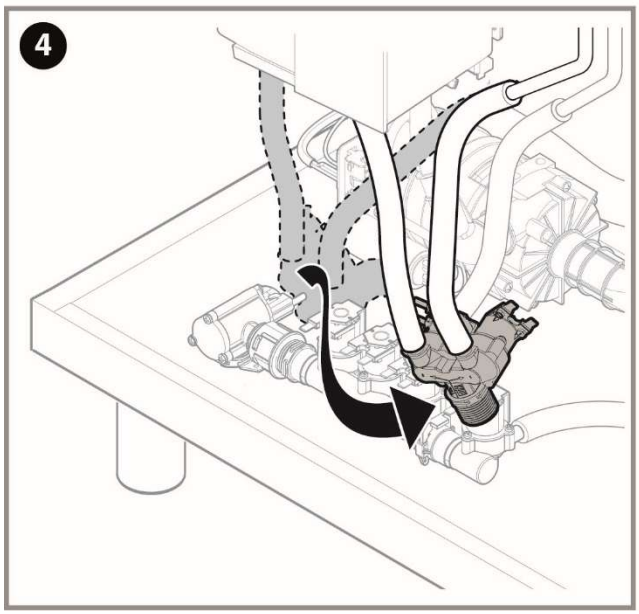


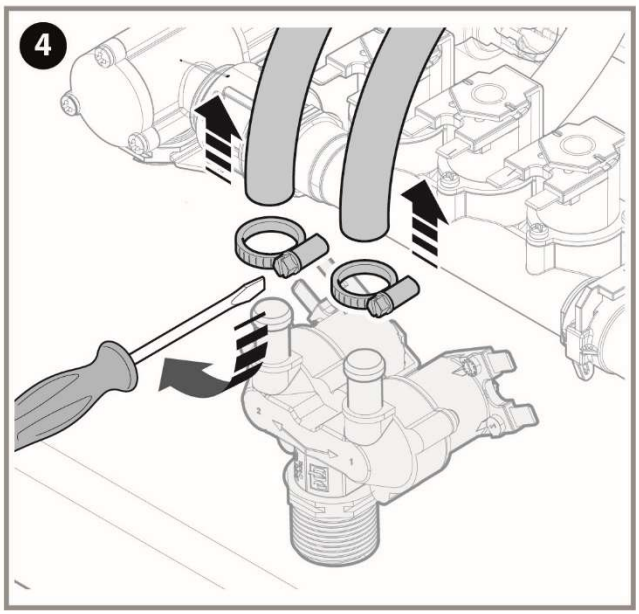
6.3.4.7 INLET WATER VALVES

1		Remove the panels	A1	At page PANELS REMOVAL



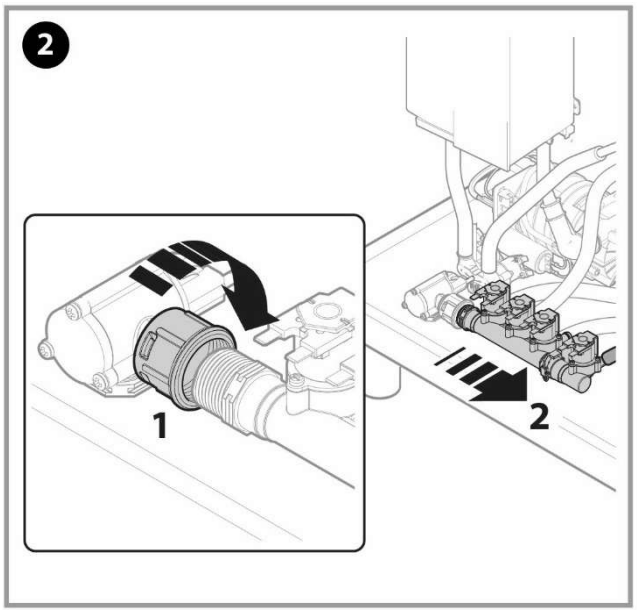


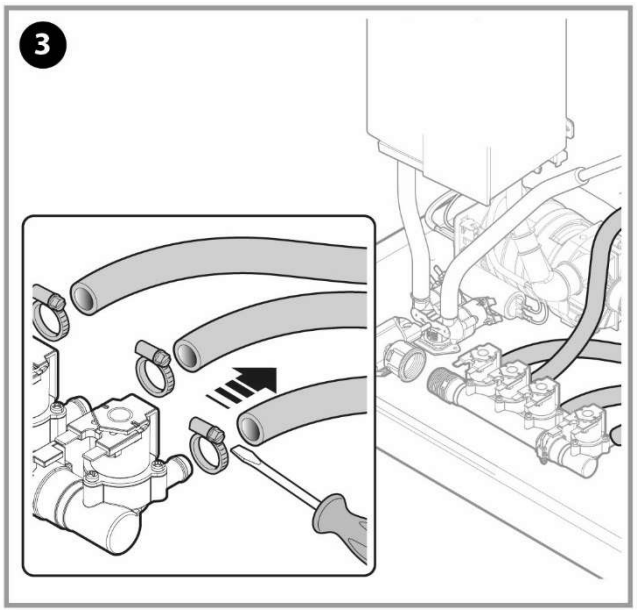




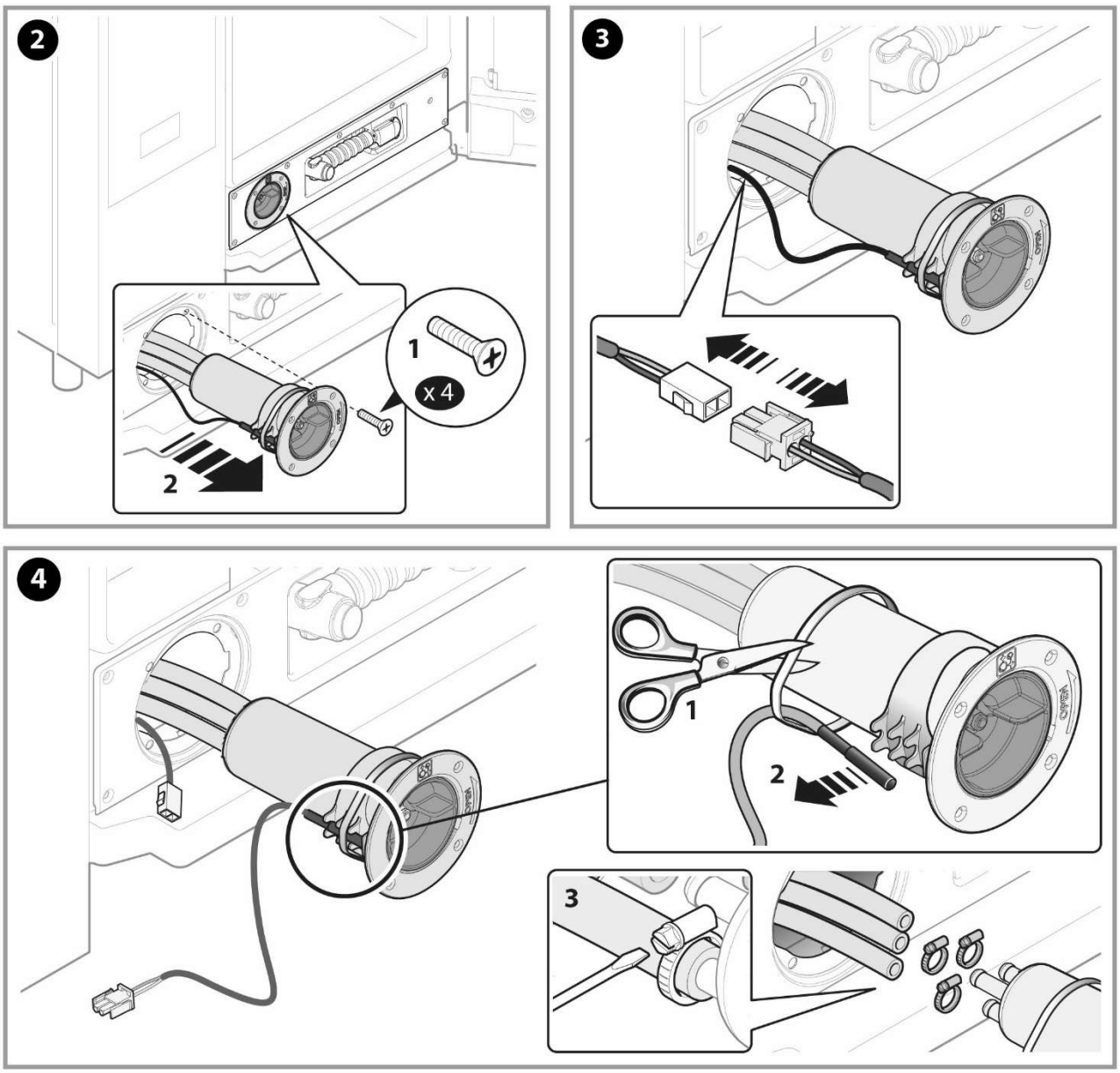
6.3.4.8 VALVE ASSEMBLY

1		Remove the panels	A1	At page PANELS REMOVAL

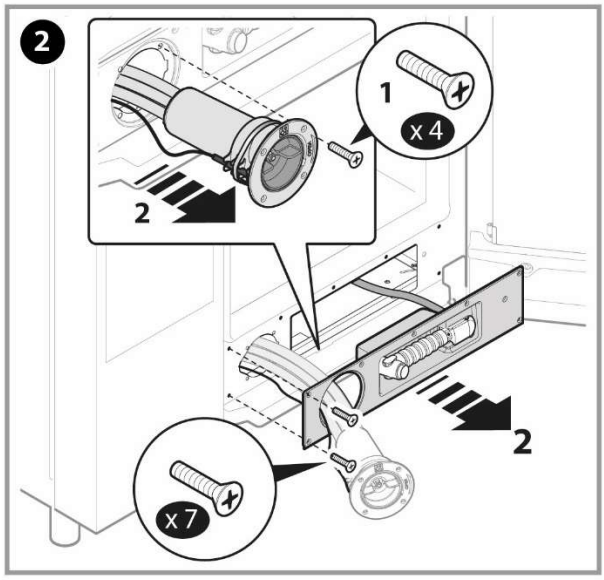


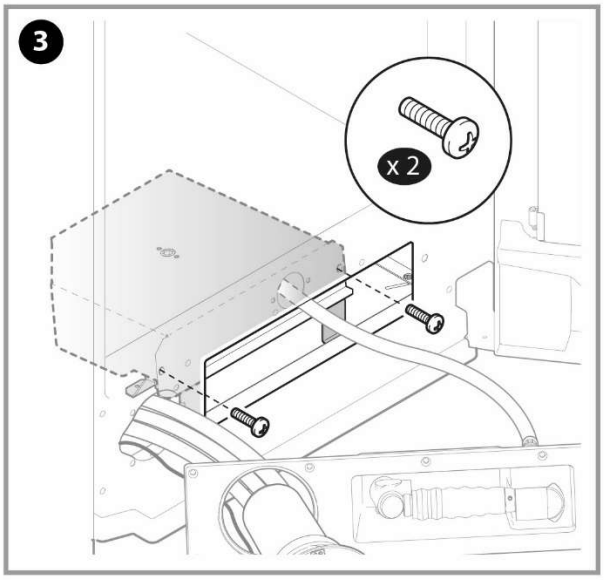


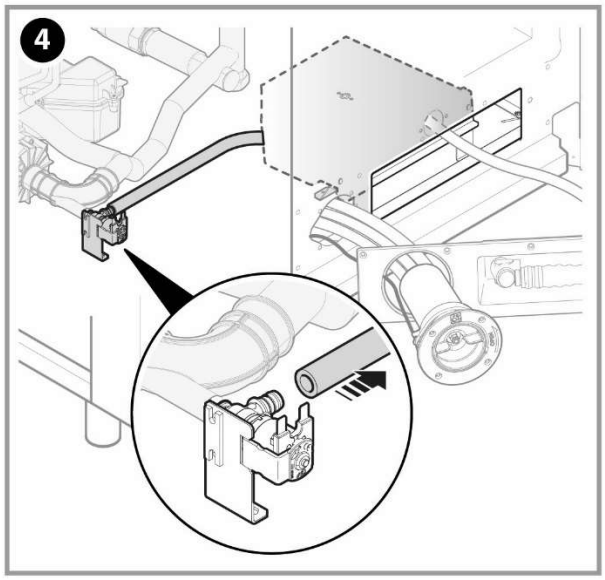
6.3.4.9 DISPENSER RINSE AID

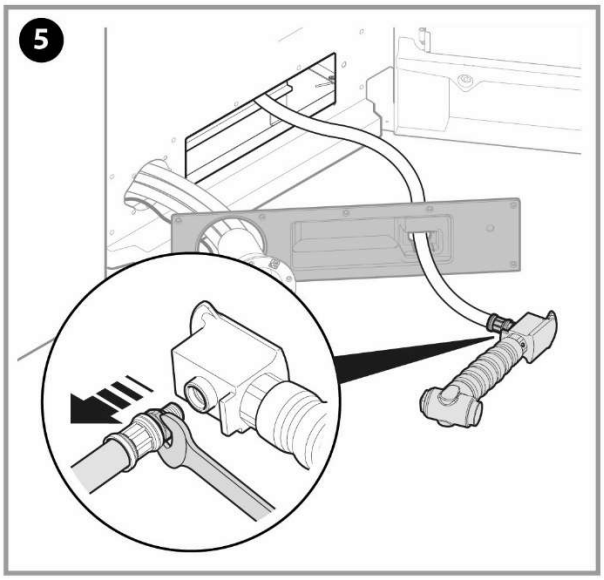


6.3.4.10 SHOWER ASSEMBLY & VALVE





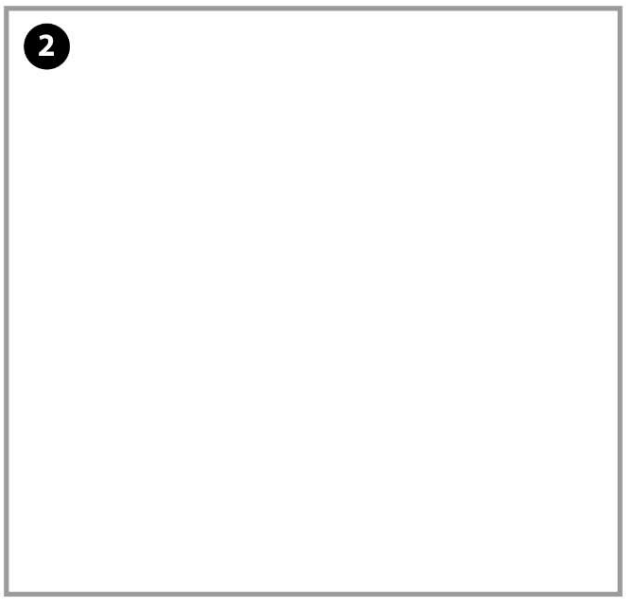


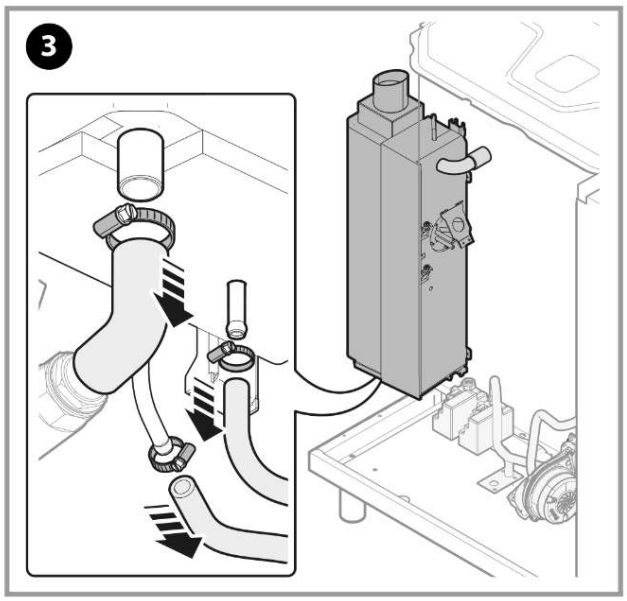


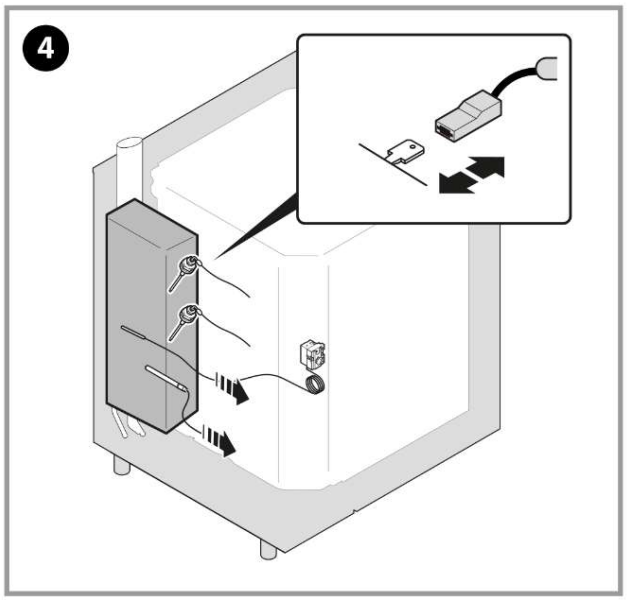


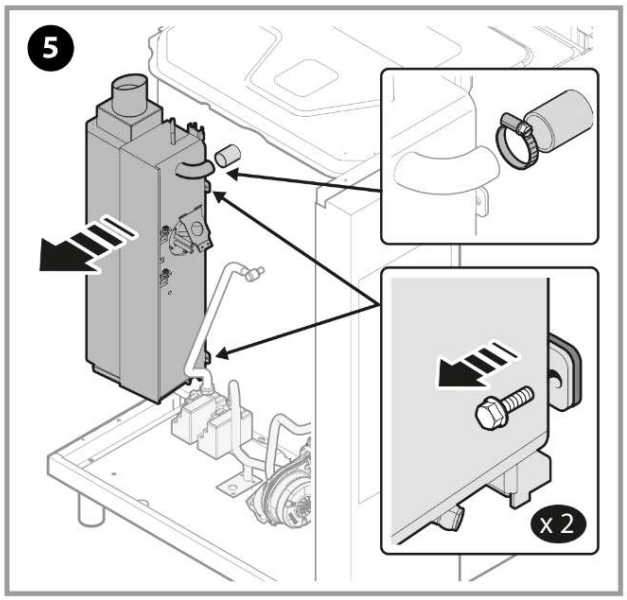
6.3.4.11 BOILER

1		Remove the panels	A1 A3	At page PANELS REMOVAL



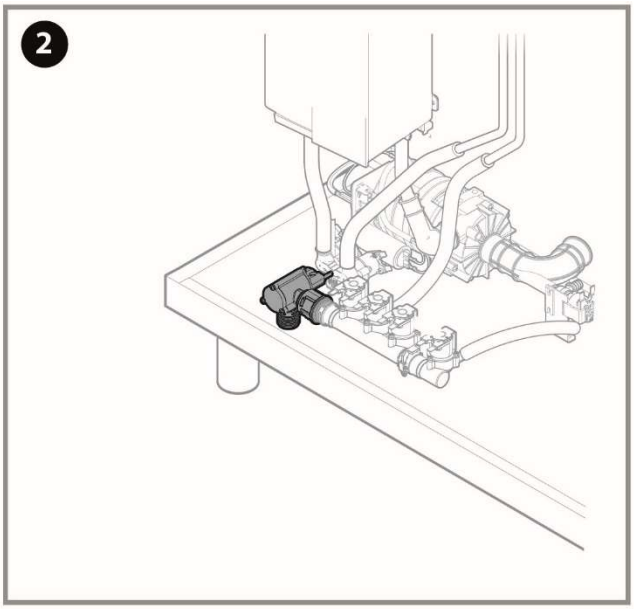


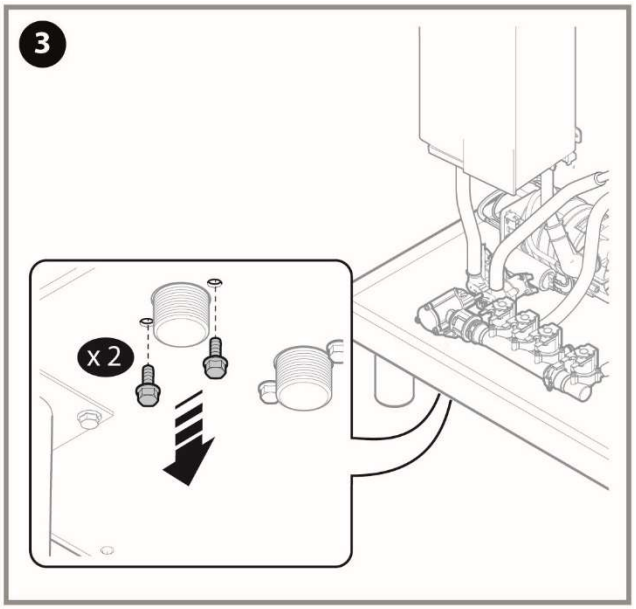


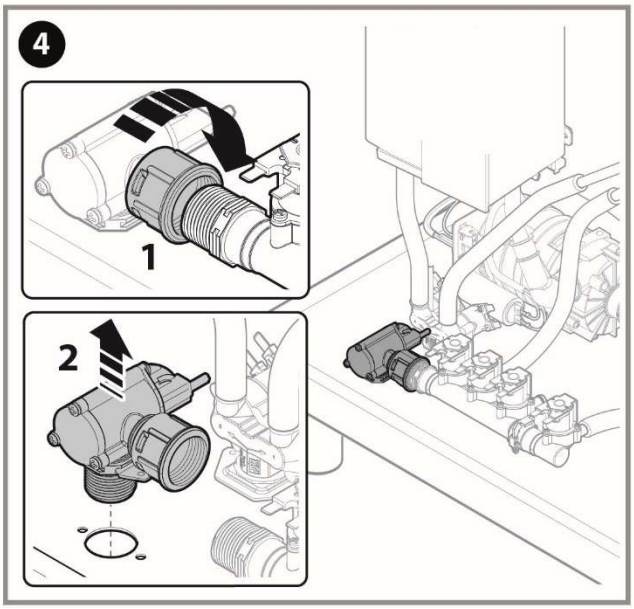


6.3.4.12 FLOWMETER

1		Remove the panels	A1	At page PANELS REMOVAL

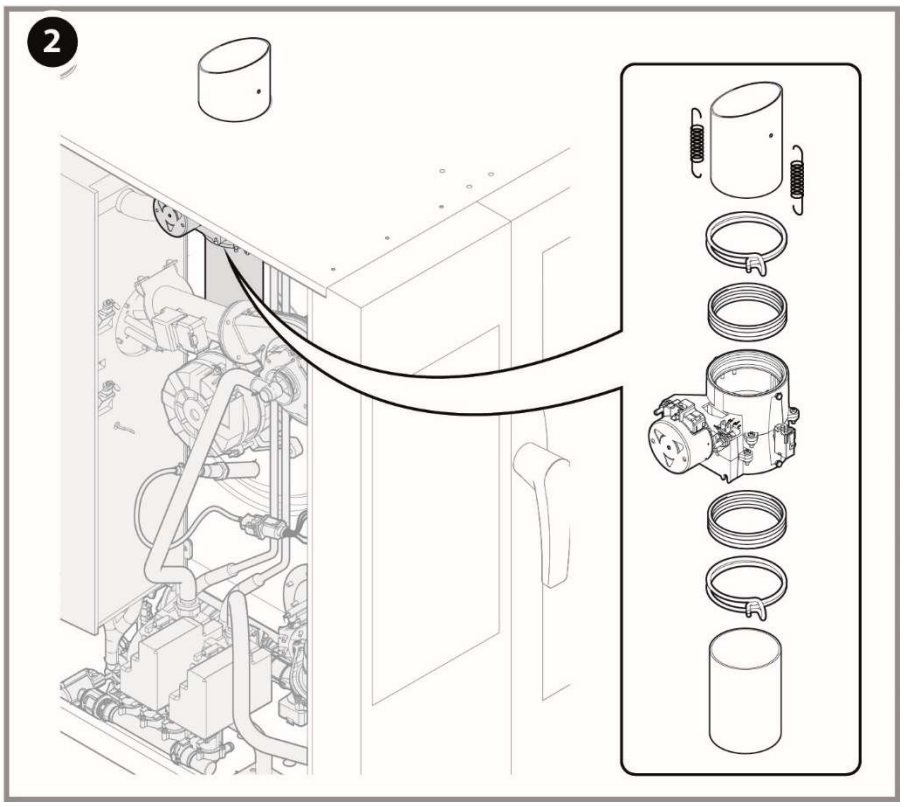




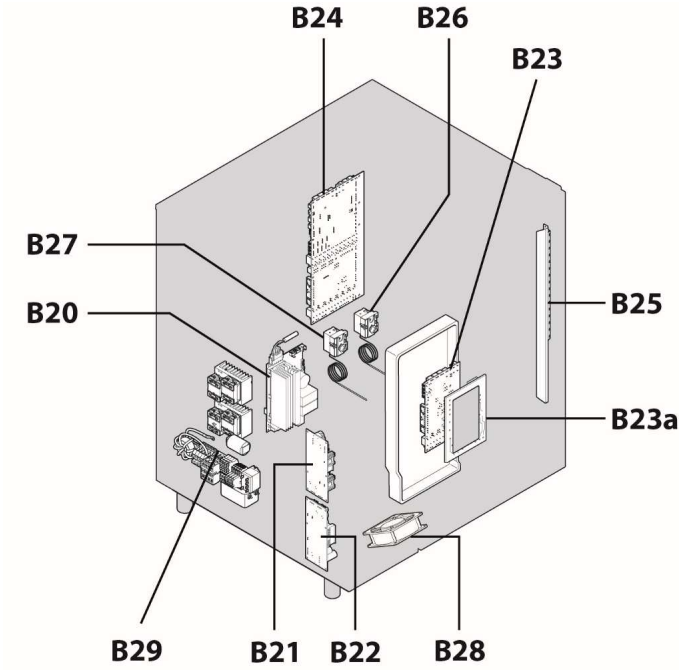


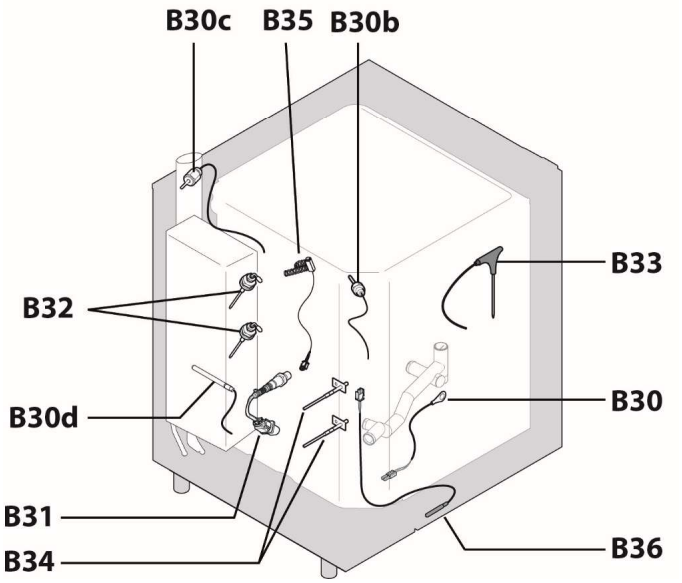
6.3.4.13 CAVITY AIR VENT VALVE

1		Remove the panels	A1	At page PANELS REMOVAL



6.3.5 ELECTRIC COMPONENTS AND PROBES





Pos.	Component	§.
B20	Inverter	6.3.5.1
B21	Switching feeder 1	6.3.5.2
B22	Switching feeder 2	6.3.5.2
B23	User board Level T.K	6.3.5.3
B23	User board Level B,C	6.3.5.3
B23a	Display Level T.K.	6.3.5.4.1
B24	Power board	6.3.5.5
B25	Door led bar	6.3.3
B26	Safety thermostat cabinet	6.3.5.6
B27	Safety thermostat boiler	6.3.5.6
B28	Cooling down motor ventilator.	6.3.5.8
B29	Ele. Comp. assembly	6.3.5.7
B30	Safety Pump probe	6.3.5.9.1
B30b	Cavity probe	6.3.5.9.2
B30c	Quenching probe	6.3.5.9.3
B30d	Boiler probe	6.3.5.9.4
B31	Lambda probe	6.3.5.9.5
B32	Water level SL-WL	6.3.5.9.6
B33	Food probe	6.3.5.9.7
B34	Safety SSR Probe	6.3.5.9.8
B35	Components Compartment probe	6.3.5.9.9
B36	Door sensor	6.3.5.9.10

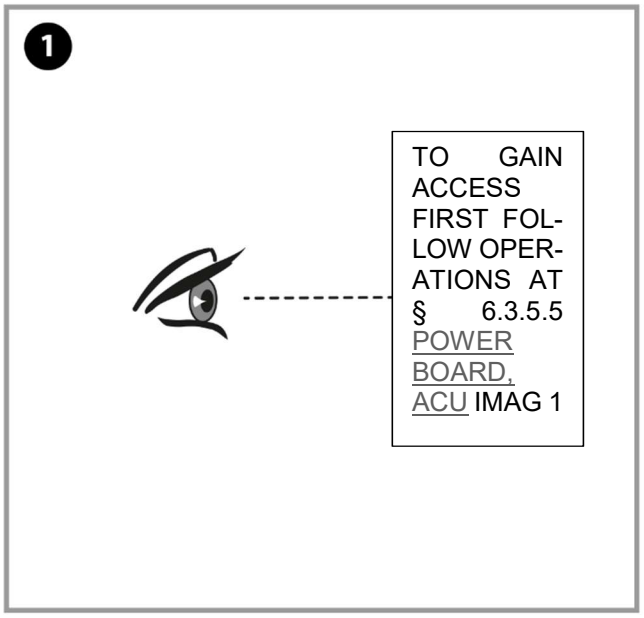
6.3.5.1 INVERTER

1		Remove the control panel	At page PANELS REMOVAL

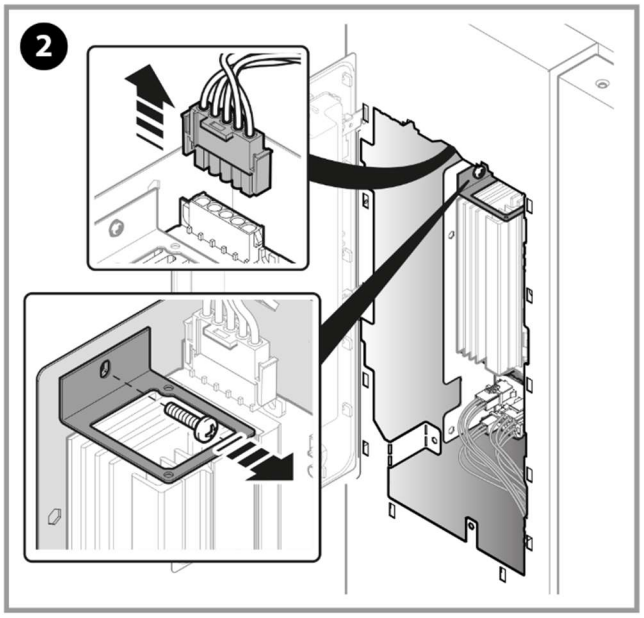
WARNING!

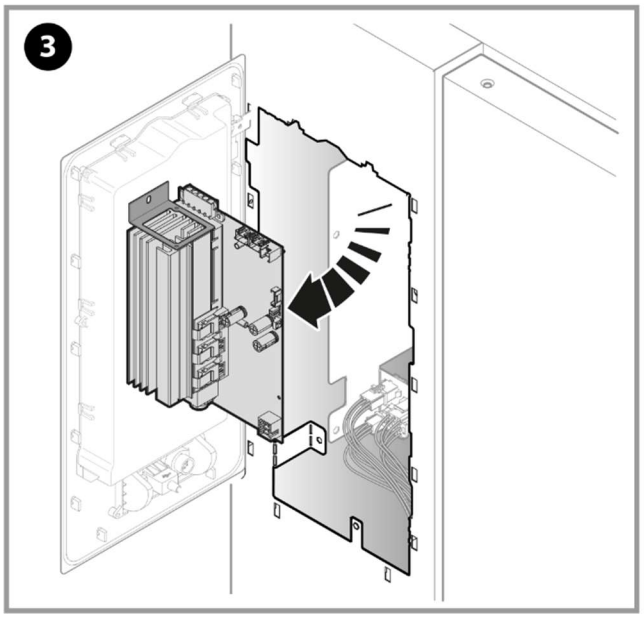
Danger of electrocution - dangerous voltage.

Before checking any electric components, be sure to disconnect the main supply and verify with a meter the main electrolytic capacitors (i.e. being fitted on Inverter, SMPS) are discharged to safe voltage levels. The charge capacitor may hold high-voltage even after the power is disconnected. Use caution to prevent the possibility of electric shock



Disconnect all cables and fixing screws





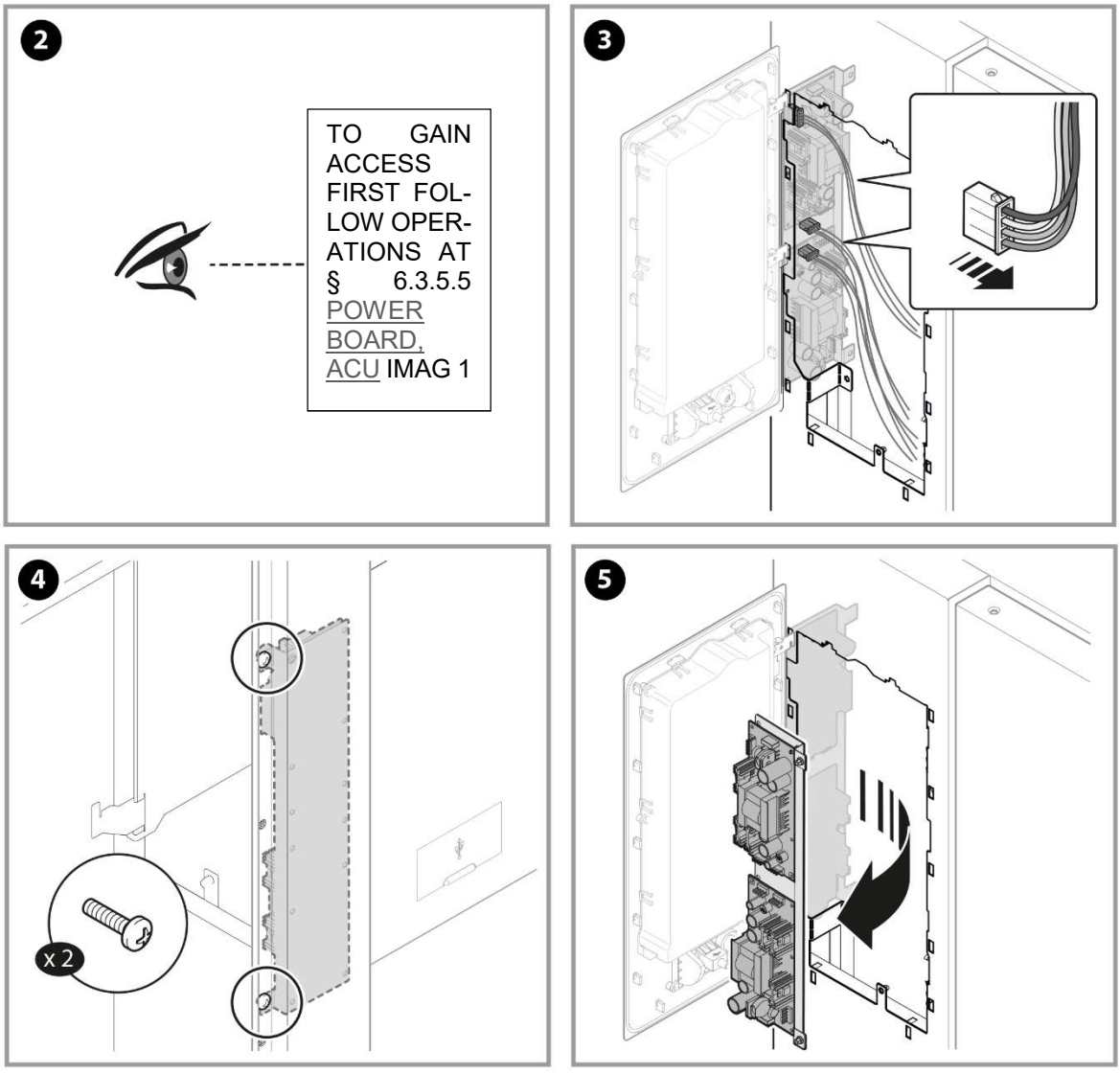
6.3.5.2 SWITCHING FEEDER 1 AND 2

1		Remove the control panel	At page PANELS REMOVAL

WARNING!

Danger of electrocution - dangerous voltage.

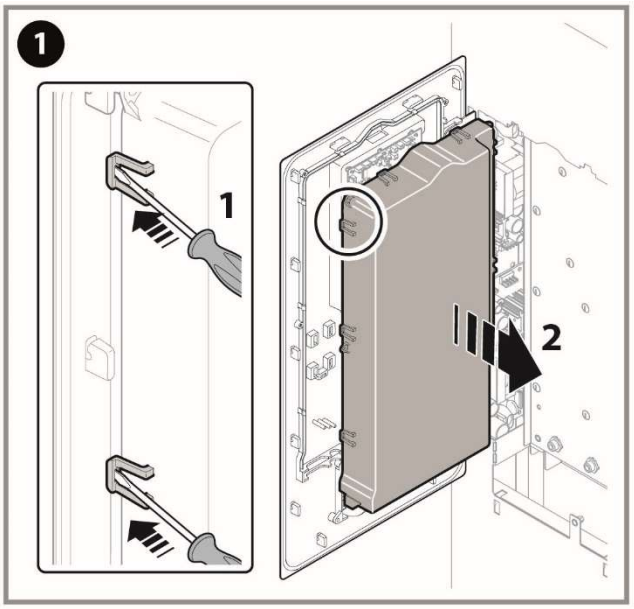
Before checking any electric components, be sure to disconnect the main supply and verify with a meter the main electrolytic capacitors (i.e. being fitted on Inverter, SMPS) are discharged to safe voltage levels. The charge capacitor may hold high-voltage even after the power is disconnected. Use caution to prevent the possibility of electric shock

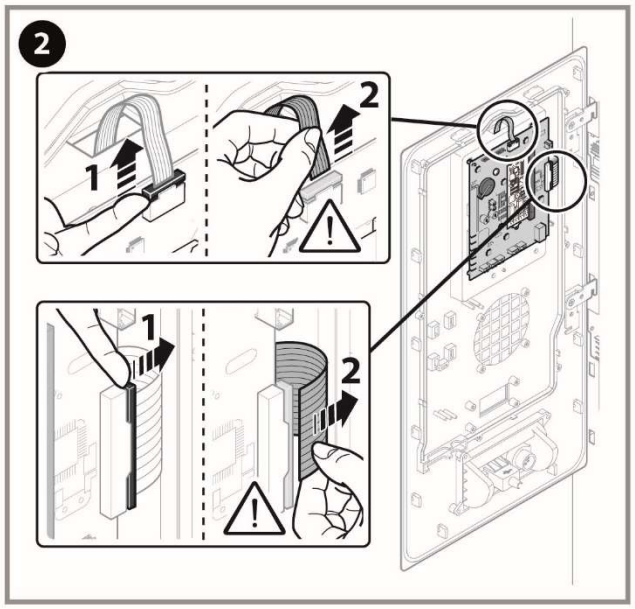


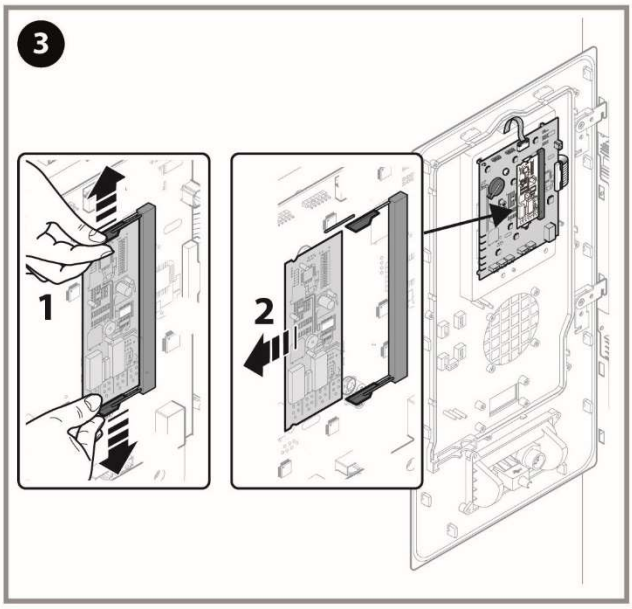
6.3.5.3 USER BOARD

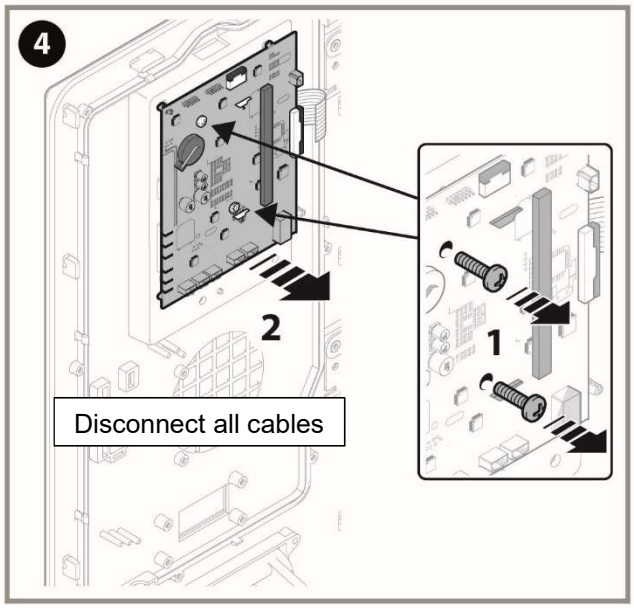
1		Remove the control panel	At page PANELS REMOVAL

6.3.5.3.1 LEVEL T, K (TOUCH SCREEN)

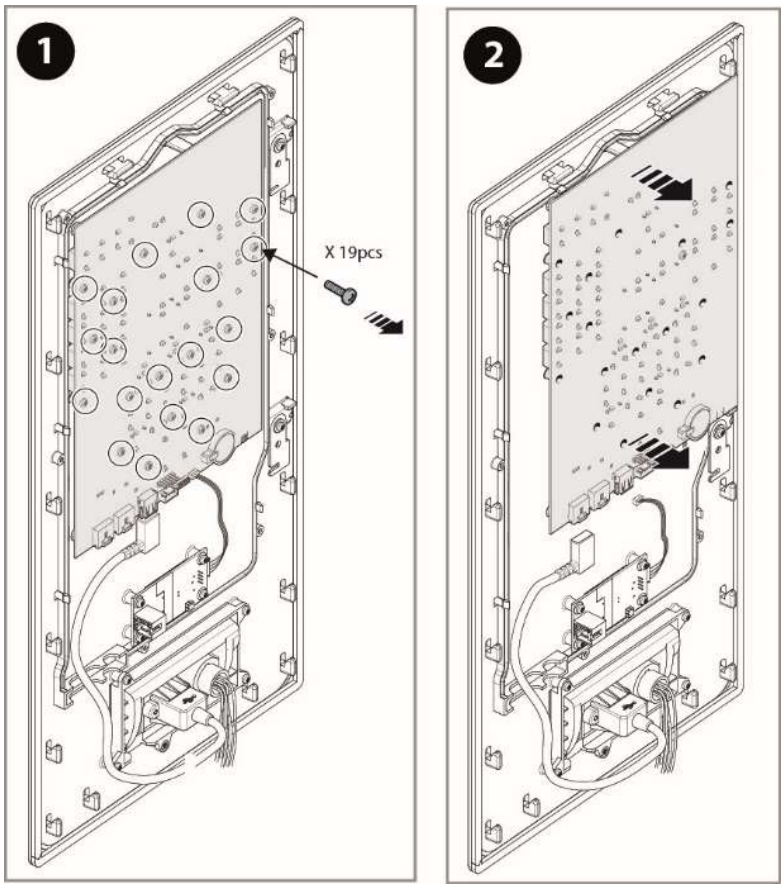








6.3.5.3.2 LEVEL B, C (DIGIT)

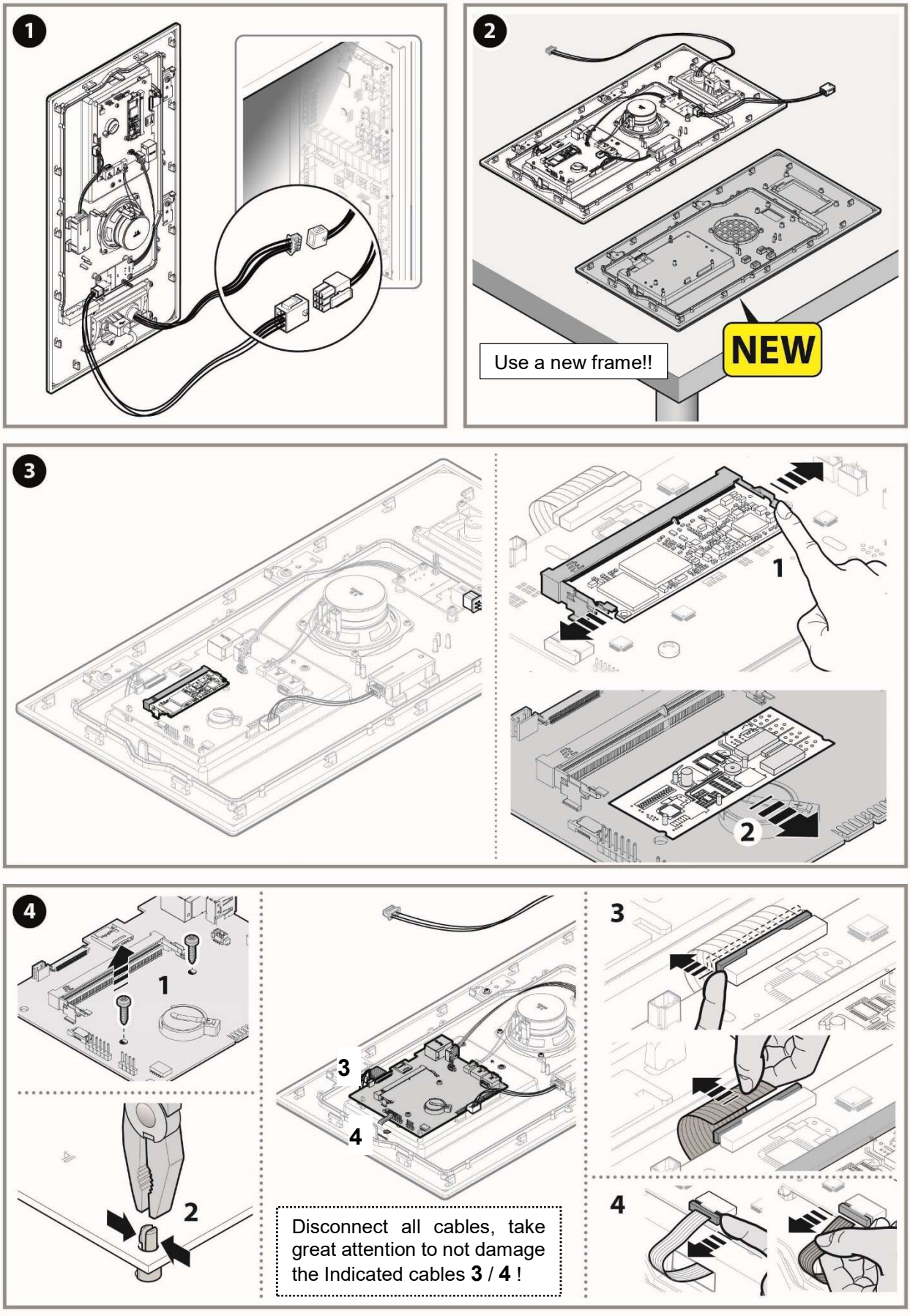


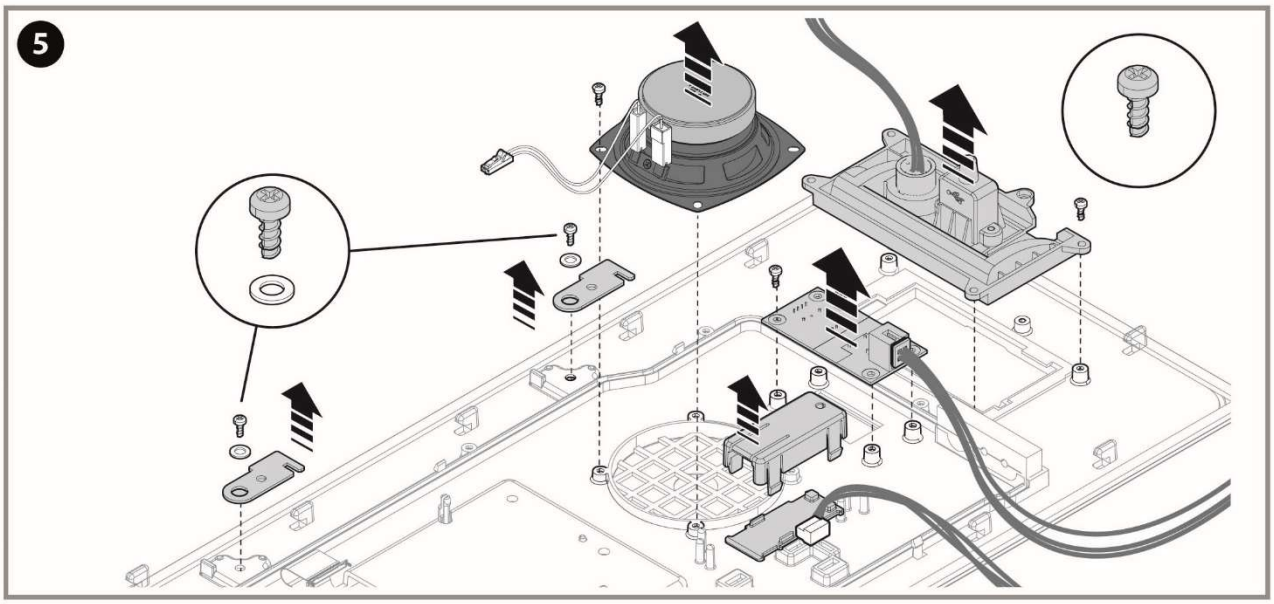
6.3.5.3.3 ACCESS DISPLAY AND REPLACEMENT OF MEMBRANE STICKER

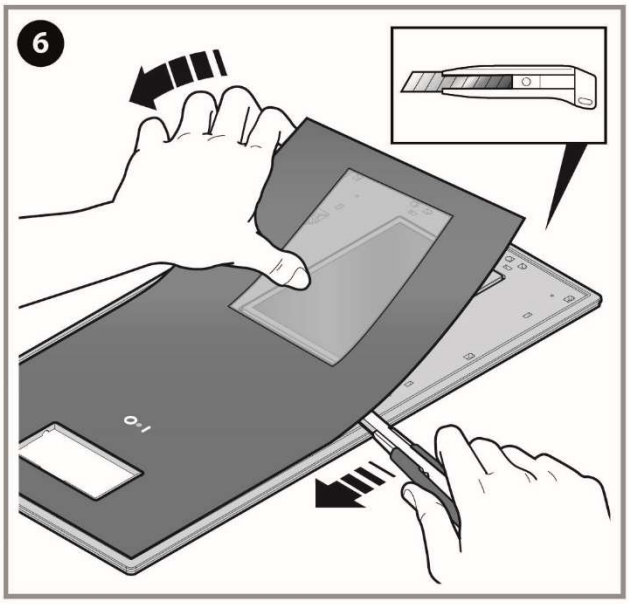
ATTENTION
The replacement of the membrane sticker requires also the replacement of the frame, this because the glue of the membrane cannot be removed as it is a particular adhesive glue/resin and once exposed to air becomes very difficult to take off and clean.

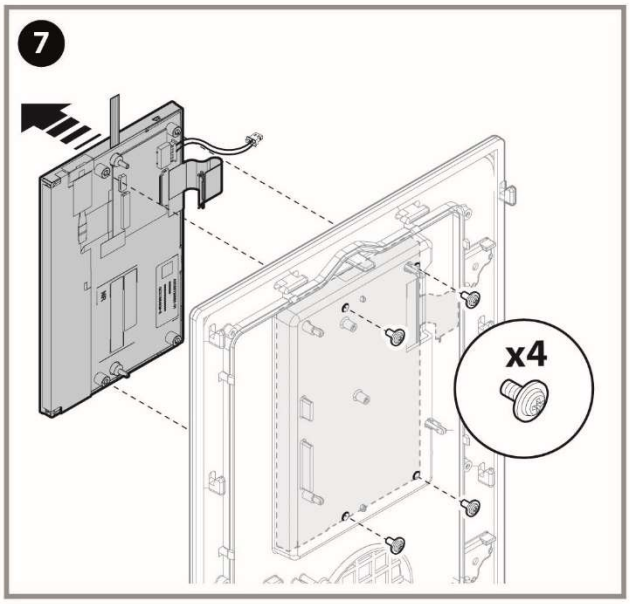
1		Remove the control panel	At page PANELS REMOVAL

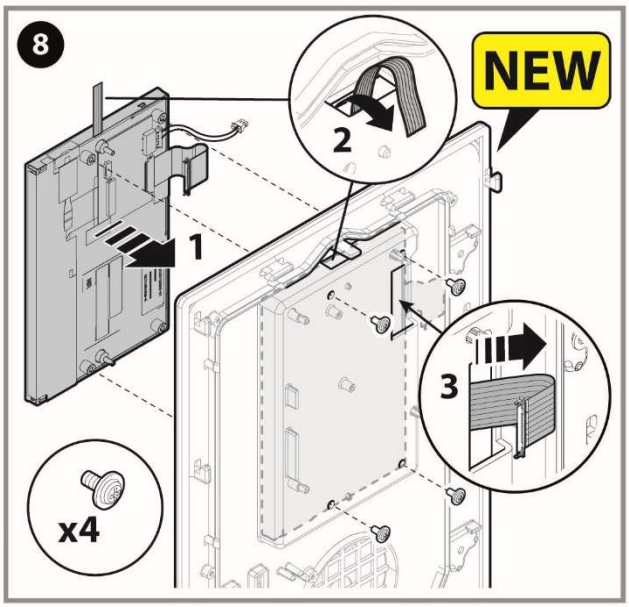
LEVEL T, K (TOUCH SCREEN)

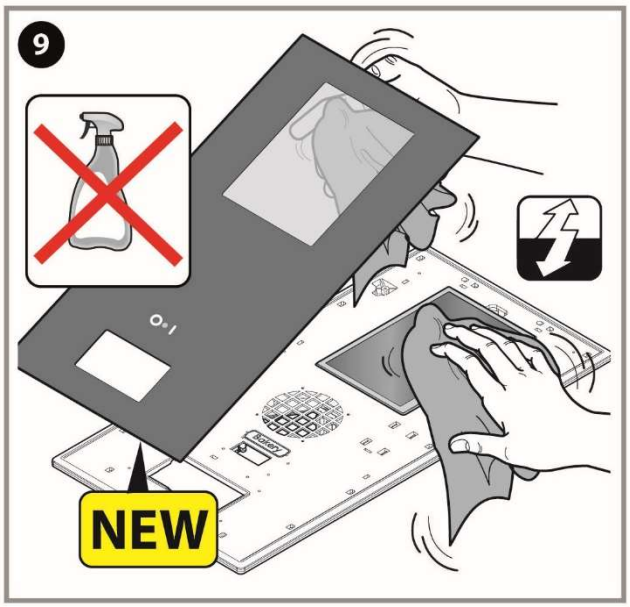


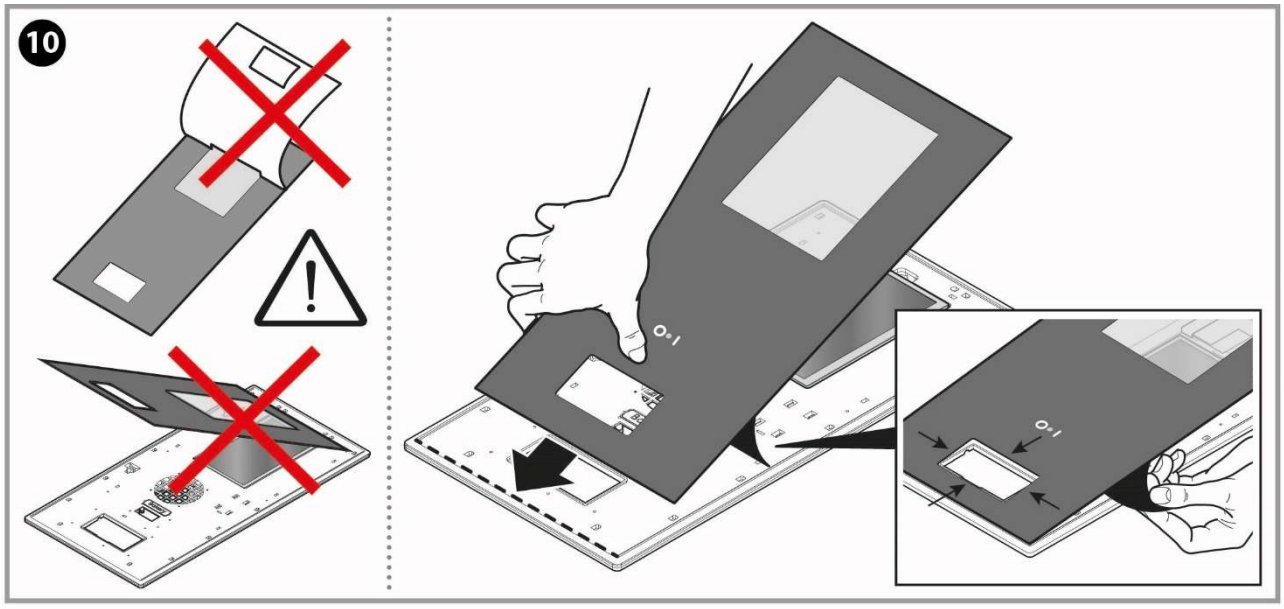

5

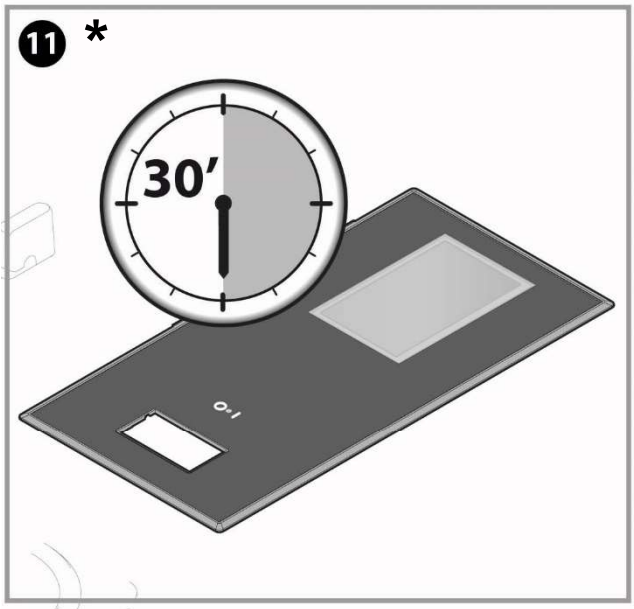

6

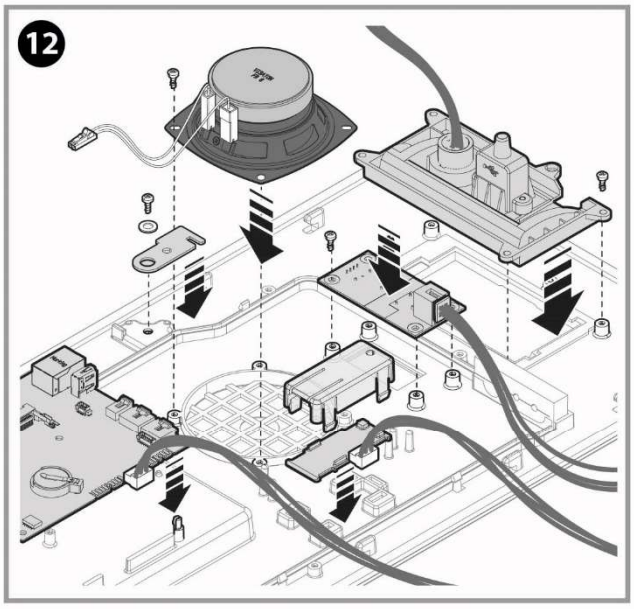

7
x4

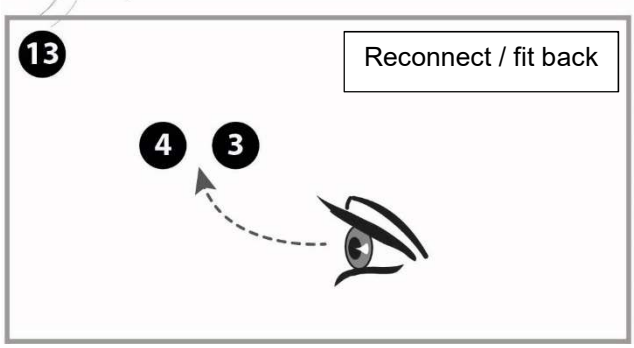

8
NEW
2
1
3
x4


9
NEW





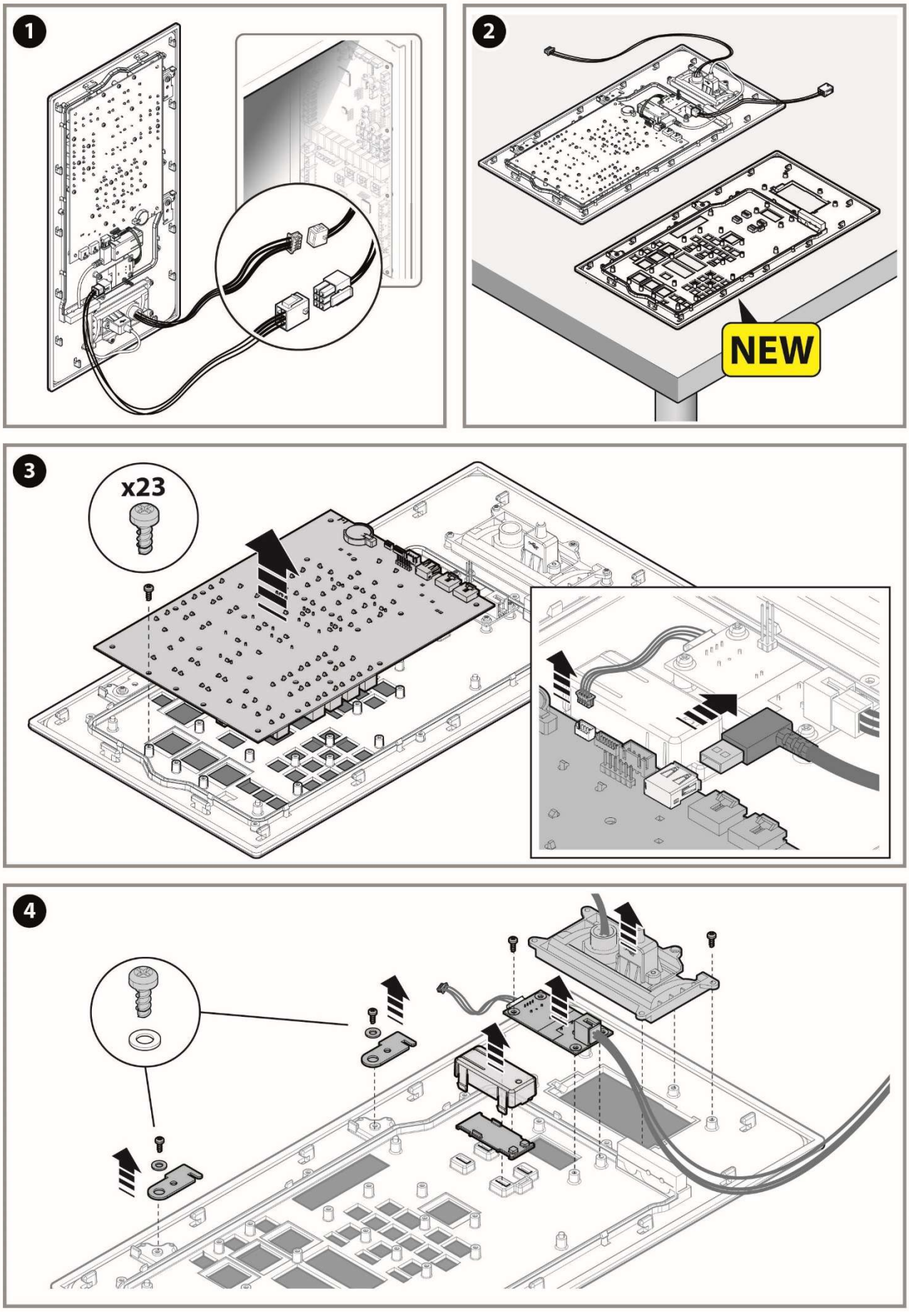


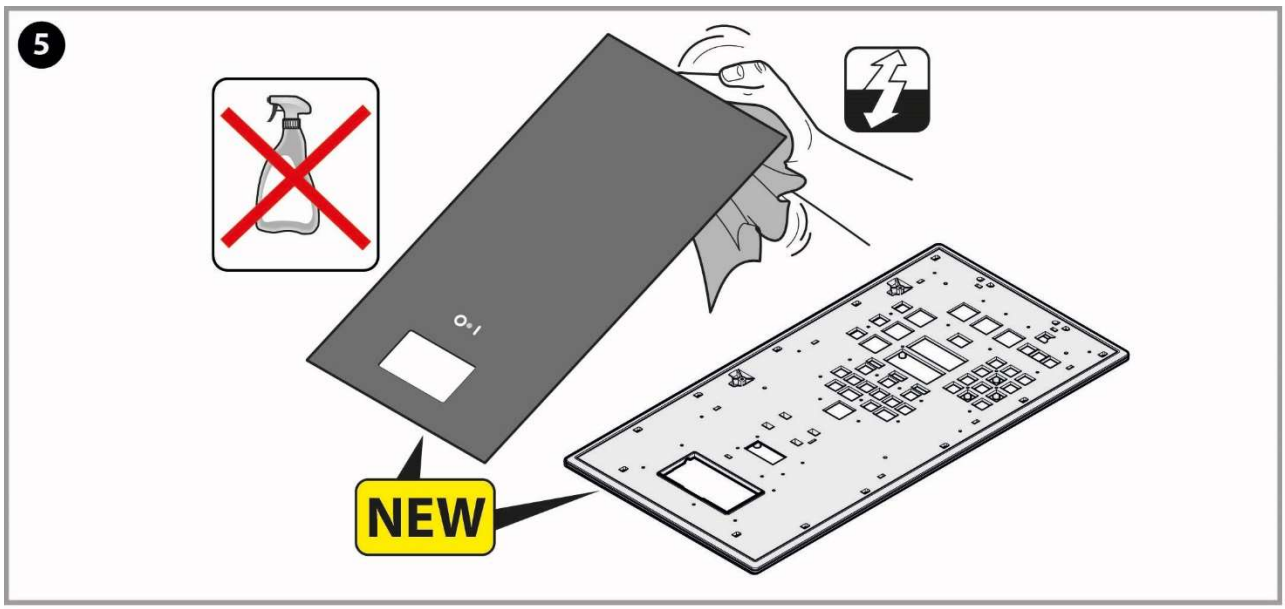


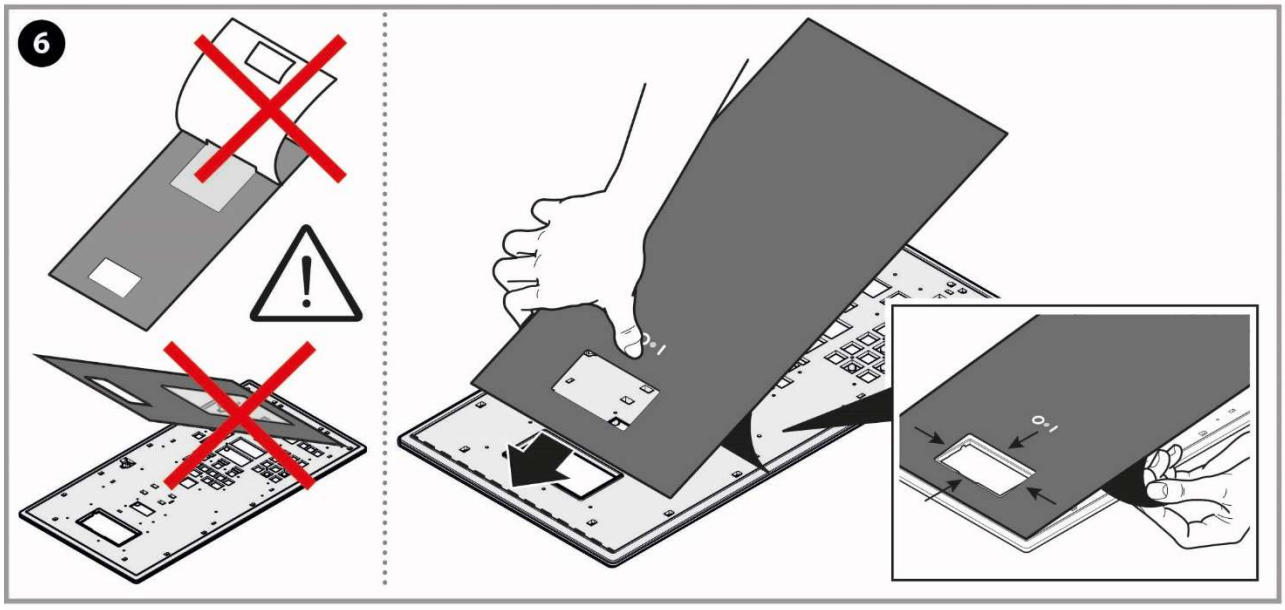
ATTENTION

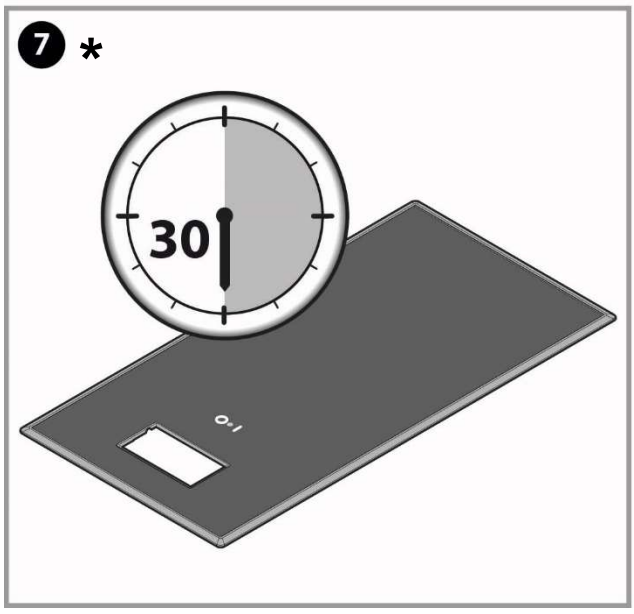
11* = the particular adhesive glue/resin of the membrane , once exposed to air, becomes very difficult to remove. The reaction will be complete in approx. 30 minutes. In case of need to realign the new membrane time is very limitated

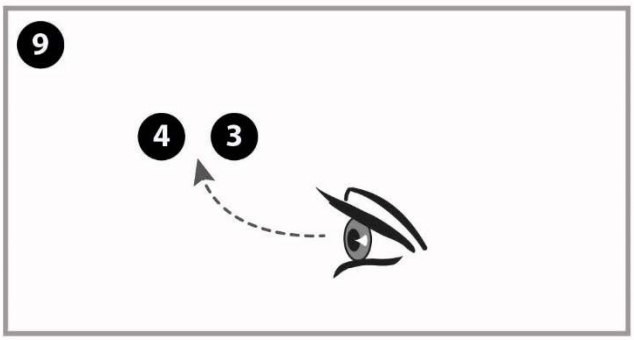
LEVEL B, C (DIGIT)









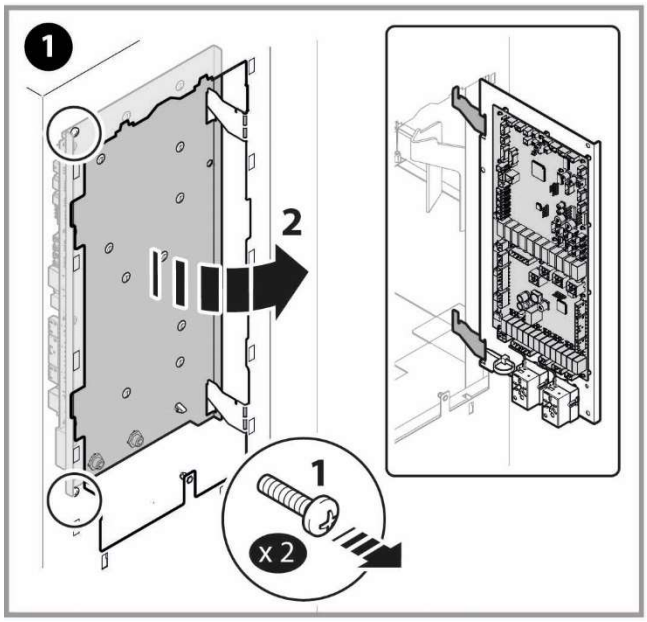


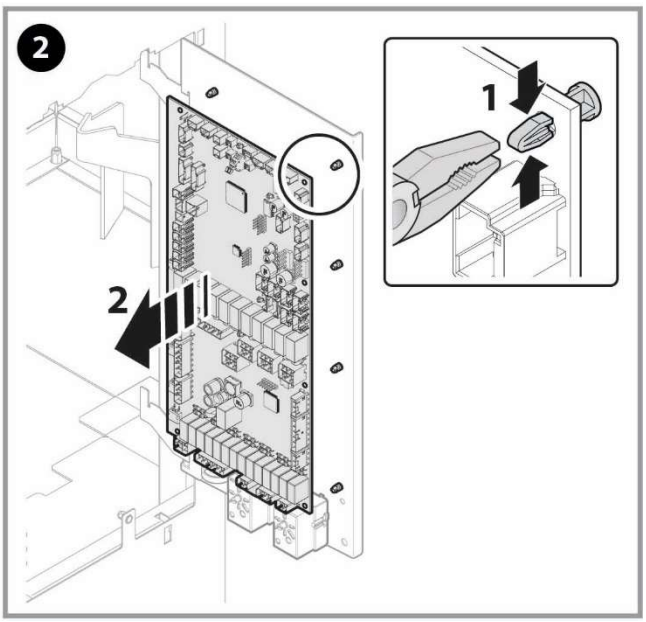
ATTENTION

7* = the particular adhesive glue/resin of the membrane , once exposed to air, becomes very difficult to remove. The re-action will be complete in approx. 30 minutes. In case of need to realign the new membrane time is very limitated

6.3.5.4 POWER BOARD, ACU

1		Remove the control panel	At page PANELS REMOVAL





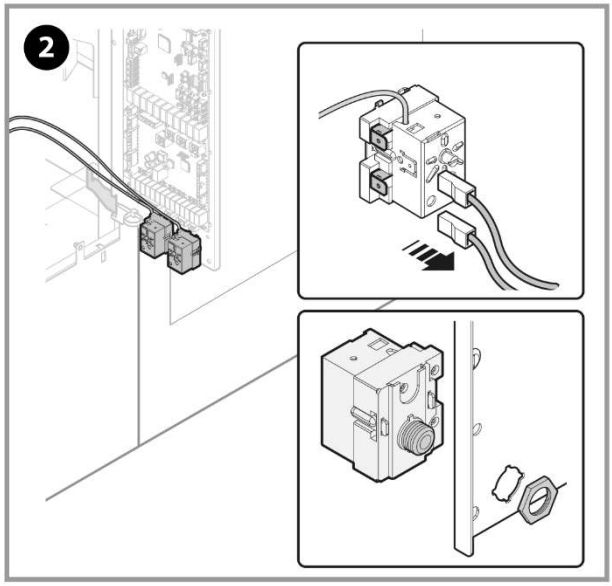
6.3.5.5 SAFETY THERMOSTAT CAVITY AND BOILER

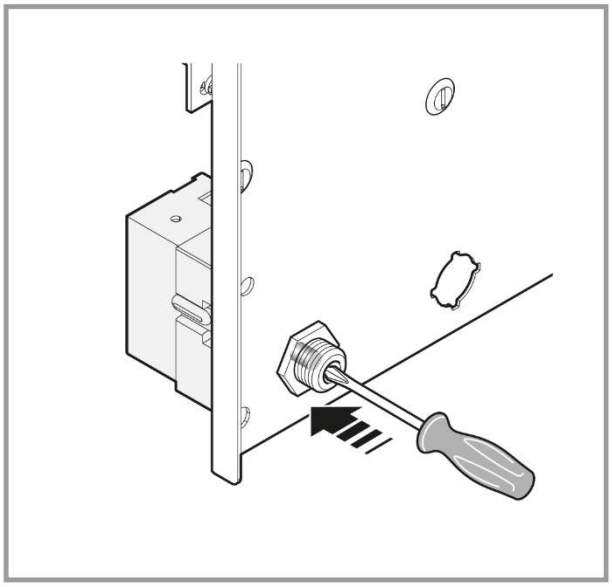
1		Remove the panels	A1	At page PANELS REMOVAL

1

TO GAIN ACCESS FIRST FOLLOW OPERA-TIONS AT § POWER BOARD

2



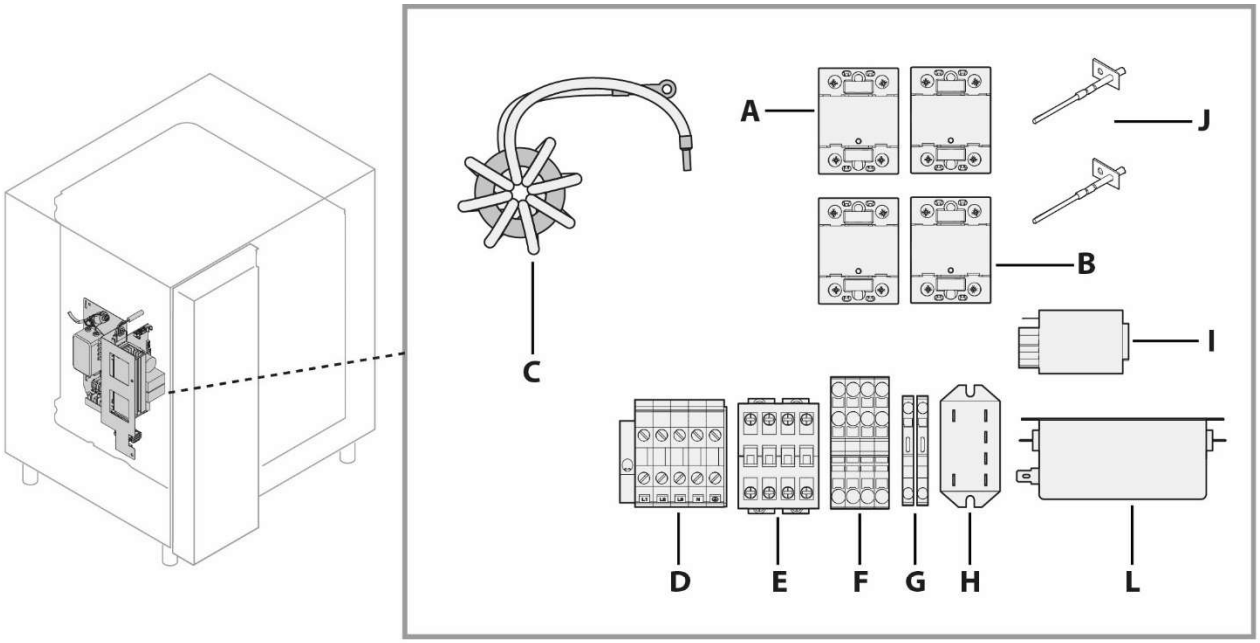


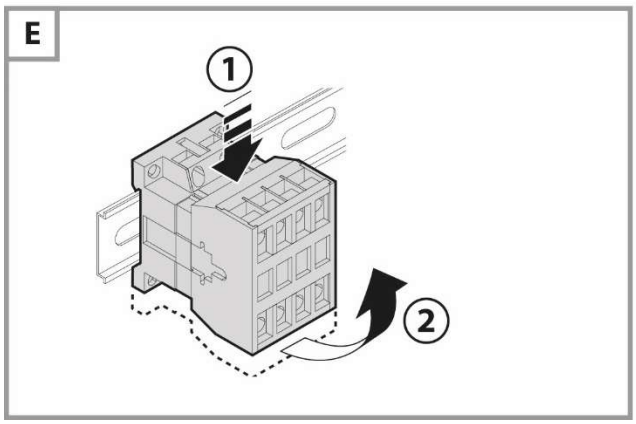
Additional information

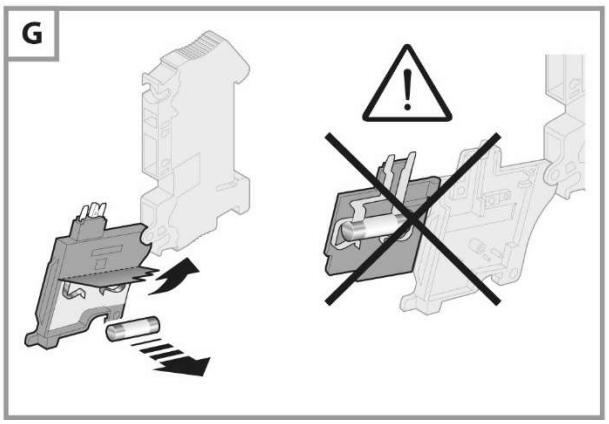
RESET THE SAFETY THERMOSTAT AS INDICATED.

6.3.5.6 ELECTRIC COMPONENTS ASSEMBLY

1		Remove the panels	A1	At page PANELS REMOVAL



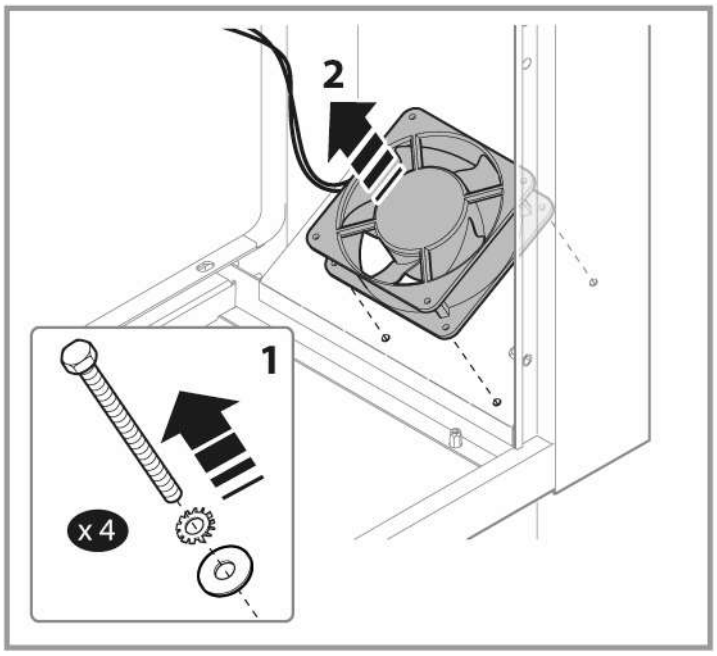




A = SOLID STATE RELAY H.E. CAVITY **KC1 KC2**
B = SOLID STATE RELAY H.E. BOILER **KB1, KB2**
C = TOROIDAL CHOKE COIL
D = TERMINAL BOARD
E = CONTACTOR/RELAY, **KS**
F = CLAMP JOINT
G = FUSE TERMINAL, **F1, F2**
H = RELAY
I = 3 PHASE FILTER, **Z-L**
J = NTC SOLID STATE RELAY PROBE **NHSB**(BOILER) **NHSC** (CAVITY)
L = EMC FILTER, **Z-A**

6.3.5.7 COOLING DOWN MOTOR VENTILATOR

1		Remove the panels	A1	At page PANELS REMOVAL

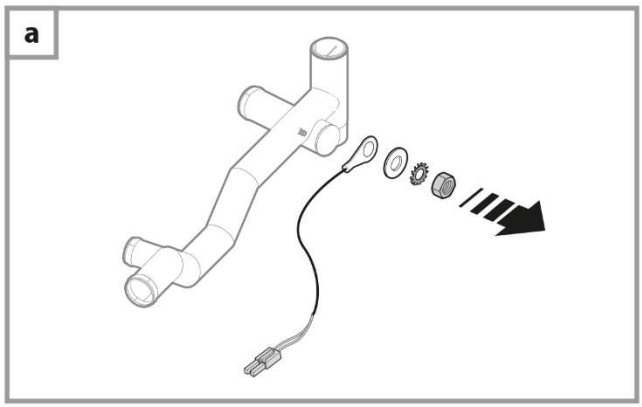


6.3.5.8 PROBES

1		Remove the panels	A1	At page PANELS REMOVAL

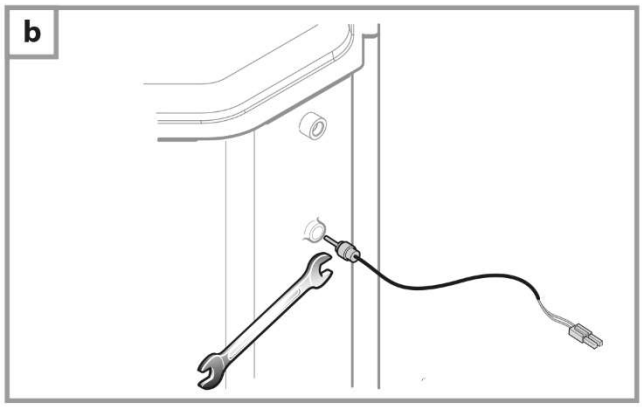
6.3.5.8.1 SAFETY PUMP (NM8)

The drain probe is positioned behind the shower assembly, please refer to this chapter before to proceed § SHOWER ASSEMBLY



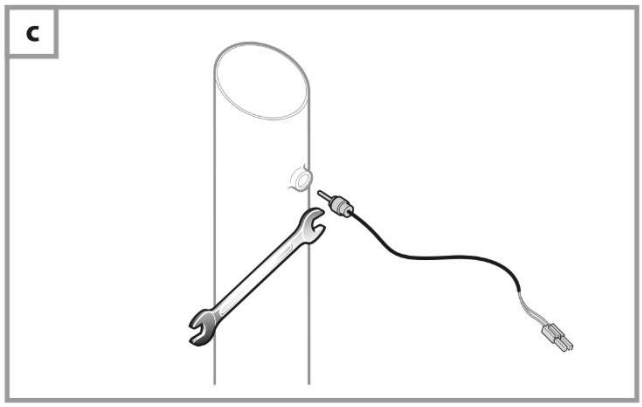
6.3.5.8.2 CAVITY (TCAV)

To gain access follow the dismantling instructions of chapter § POWER BOARD ; refer ti image 1/2/3/4.



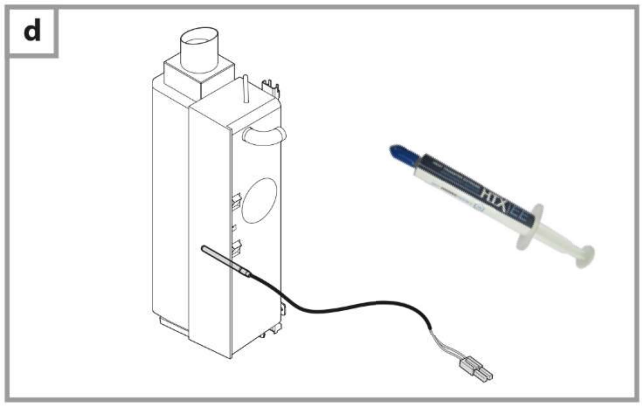
6.3.5.8.3 QUENCHING (TQS)

To gain access follow the dismantling instructions of chapter § PANELS REMOVAL



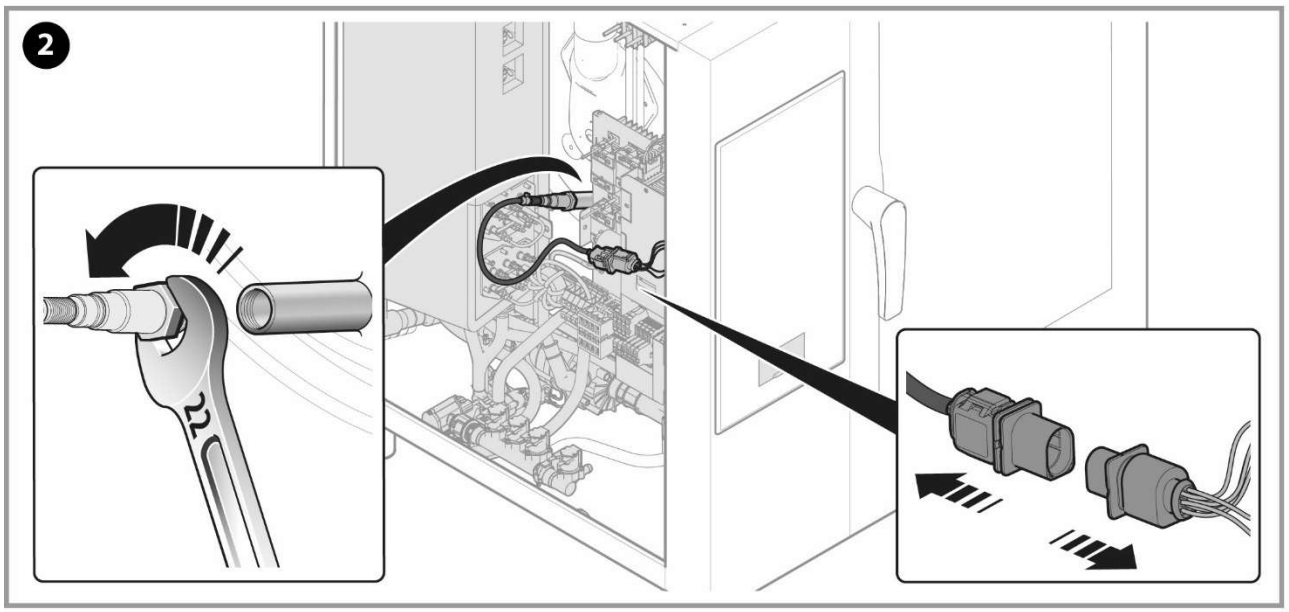
6.3.5.8.4 BOILER PROBE

To gain access follow the dismantling instructions of chapter § PANELS REMOVAL
The probe is drowned in conductive paste.



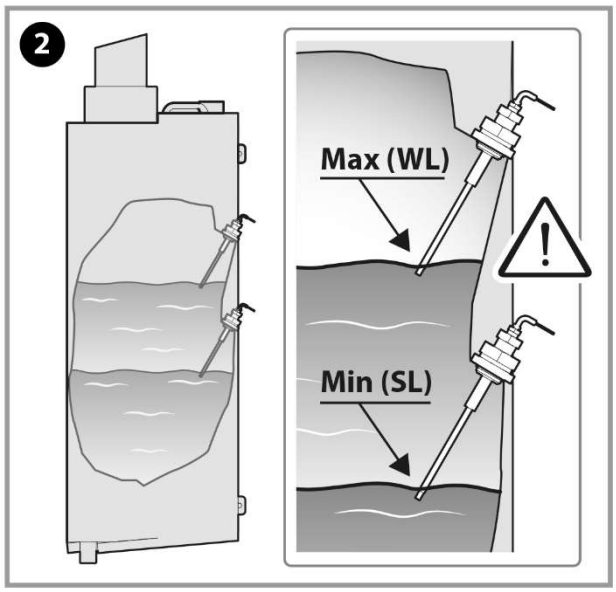
6.3.5.8.5 LAMBDA

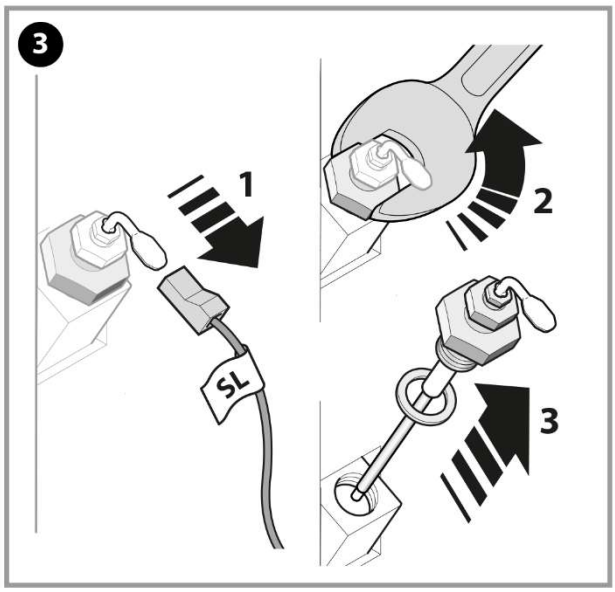
1		Remove the panels	A1	At page PANELS REMOVAL

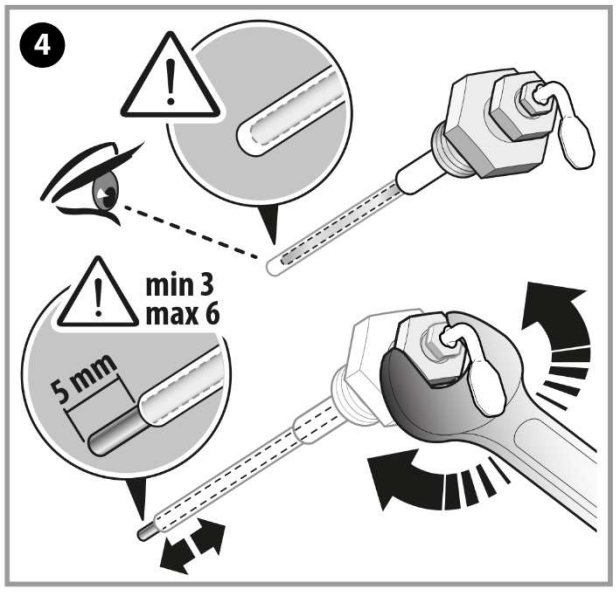


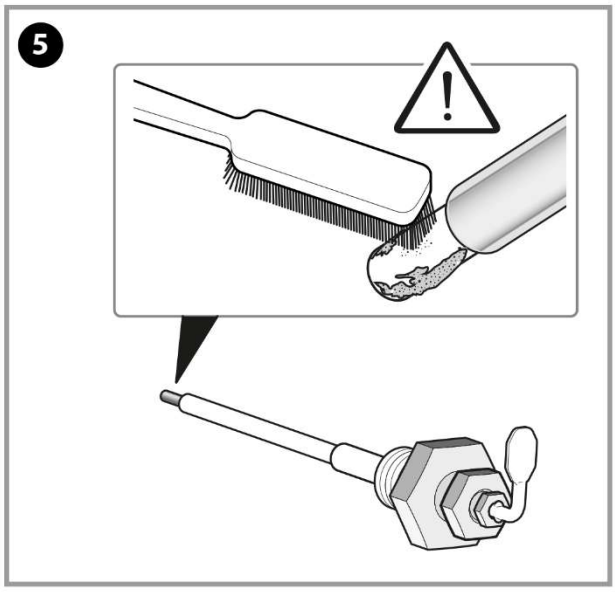
6.3.5.8.6 WATER LEVEL SL-WL

1	Remove the panels	A1	At page PANELS REMOVAL	



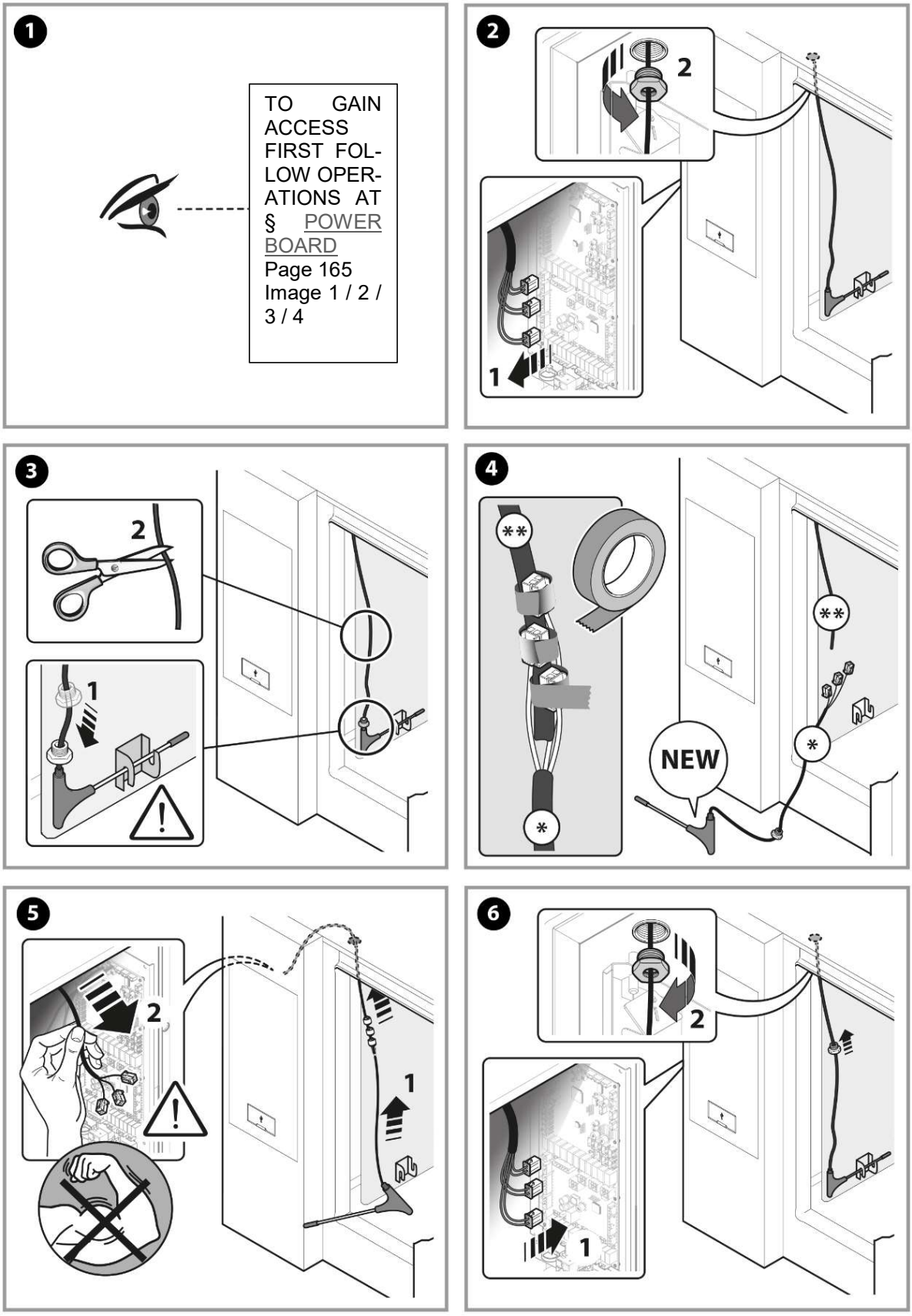






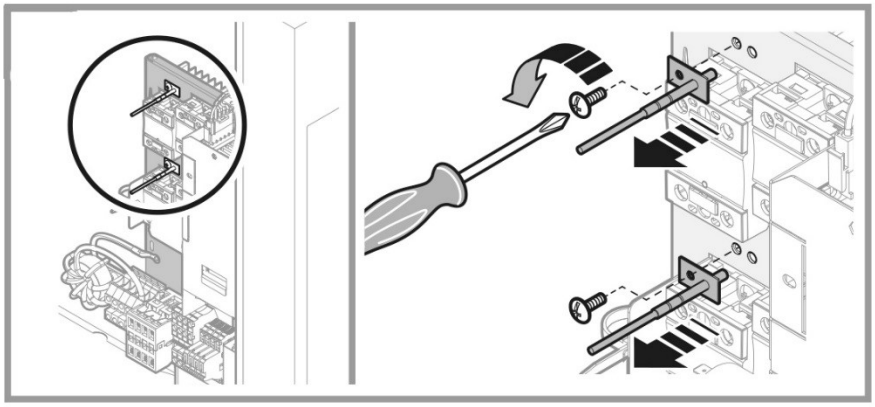
6.3.5.8.7 FOOD PROBE

1	Remove the panels	A1	At page PANELS REMOVAL	



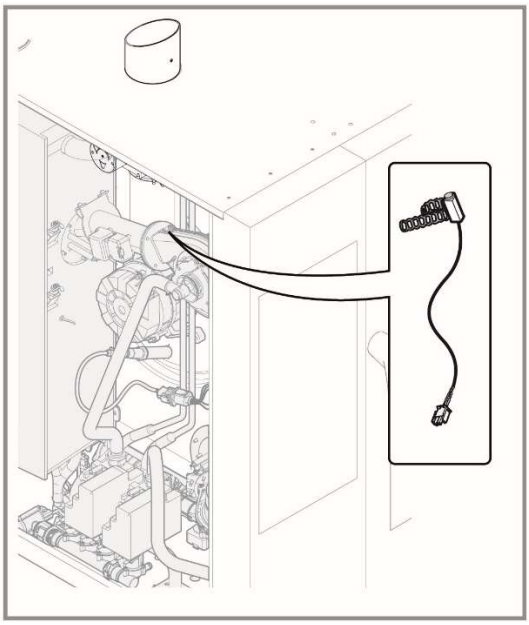
6.3.5.8.8 SAFETY PROBE (SSR)

1		Remove the panels	A1	At page PANELS REMOVAL



6.3.5.8.9 COMPONENTS COMPARTMENT PROBE (NCC)

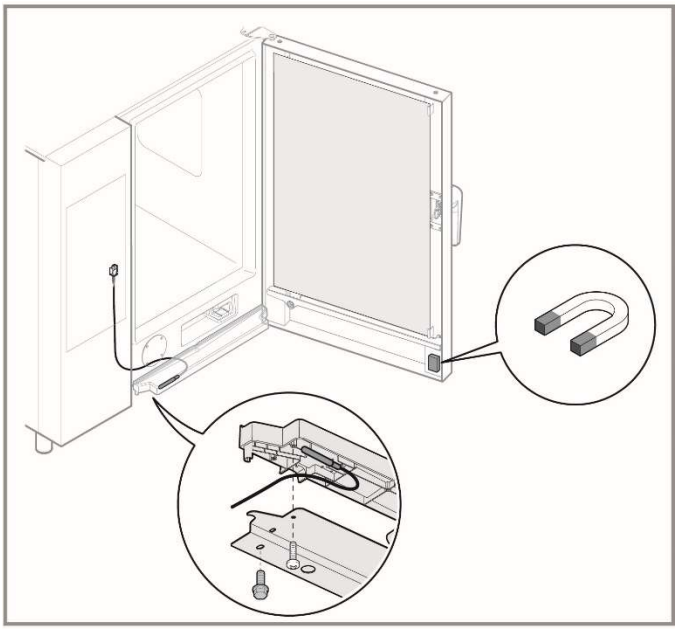
1		Remove the panels	A1	At page PANELS REMOVAL



6.3.5.8.10 DOOR SENSOR (DS)

1		Remove the panels	A1	At page PANELS REMOVAL

The DS sensor is located under the drip tray.



6.4 PREVENTIVE MAINTENANCE

All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

7 RELATED DOCUMENTS

7.1 EXPLODED VIEW

All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

7.2 LIST OF THE VITAL PARTS / CONSUMABLES / WEAR AND TEAR

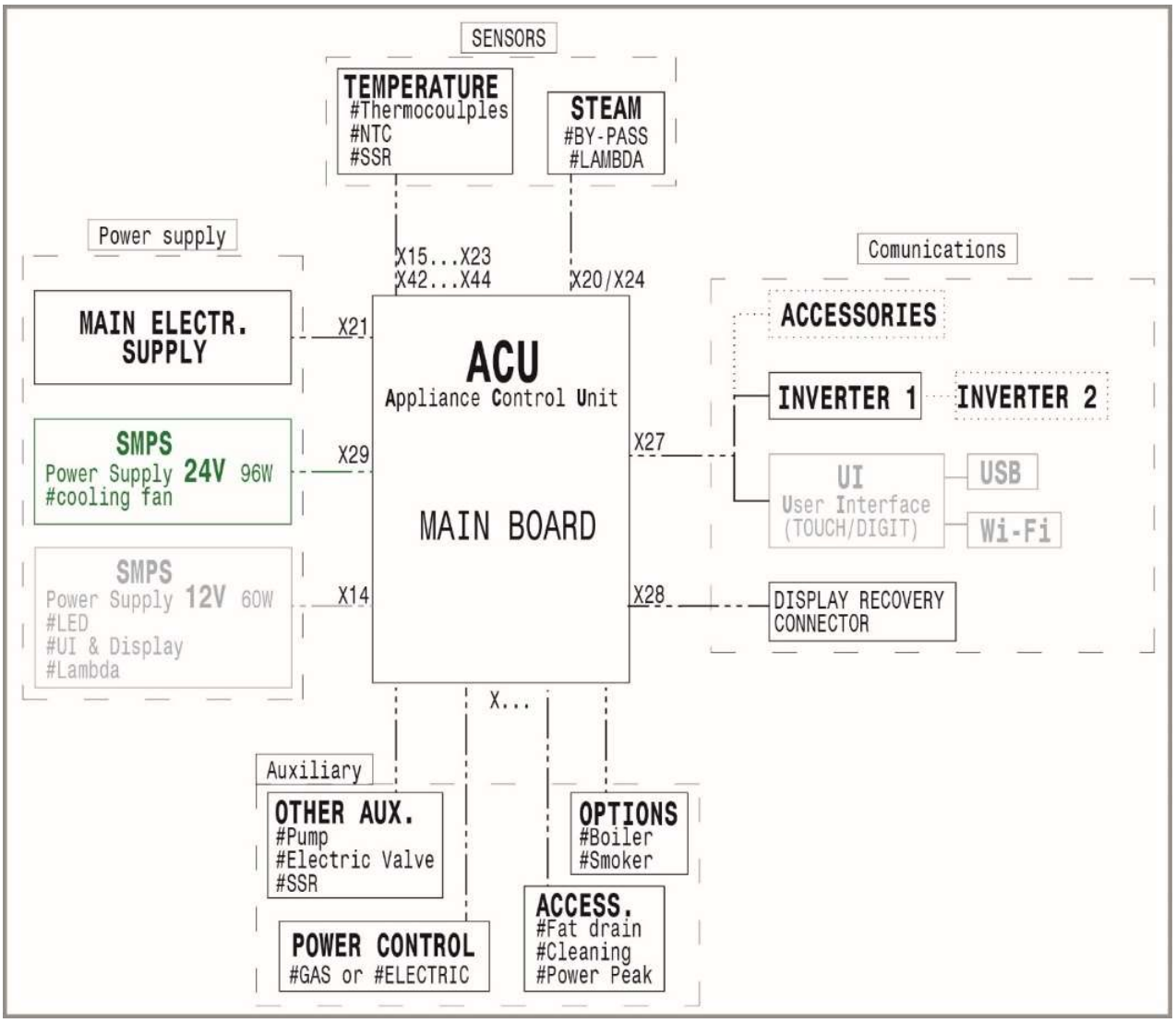
All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.
Please refer to the Spare Parts Catalogue of the appliance, column "**V = Vital spare part" C = Consumable"** "**W&T = Wear and Tear"**

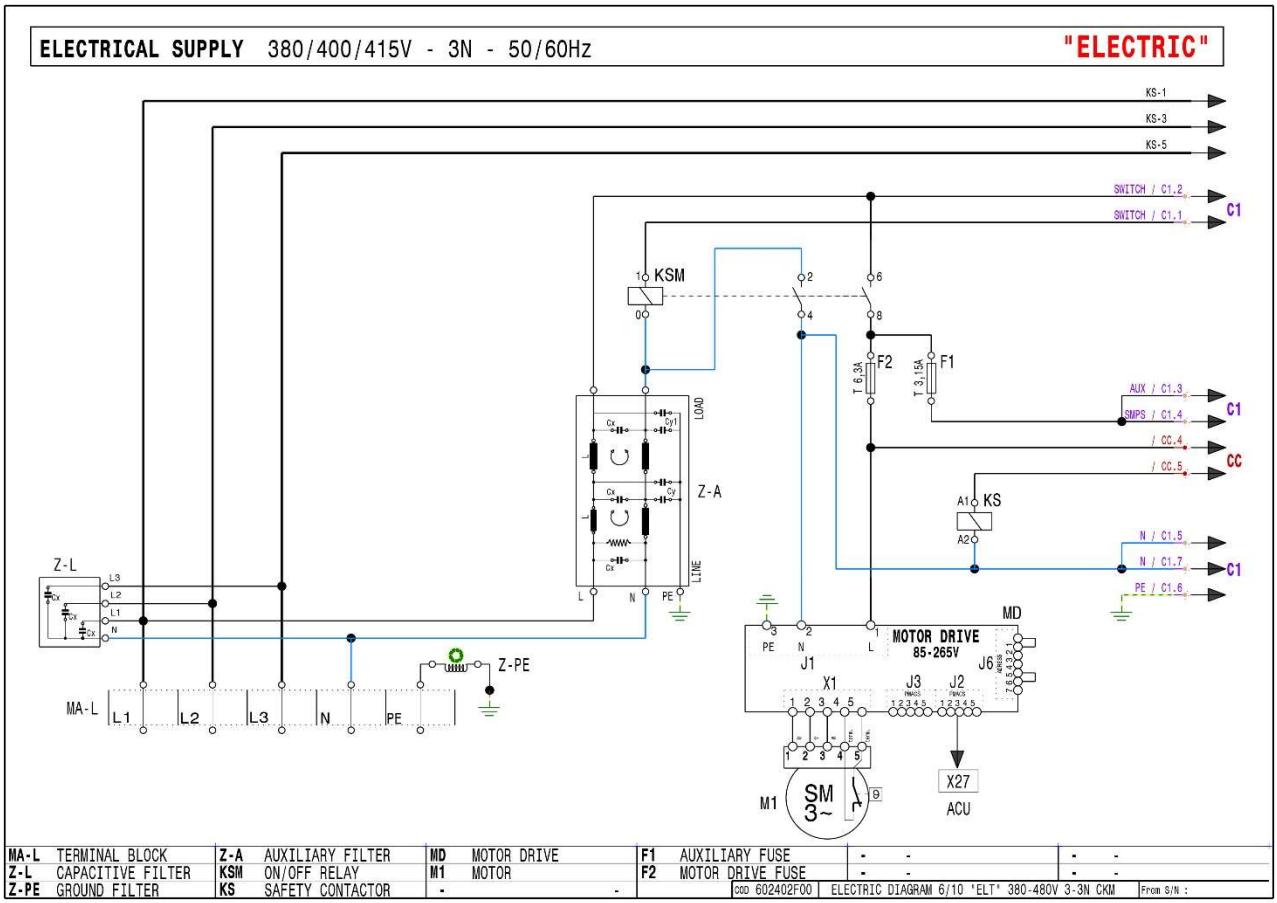
7.3 ELECTRICAL WIRING DIAGRAM

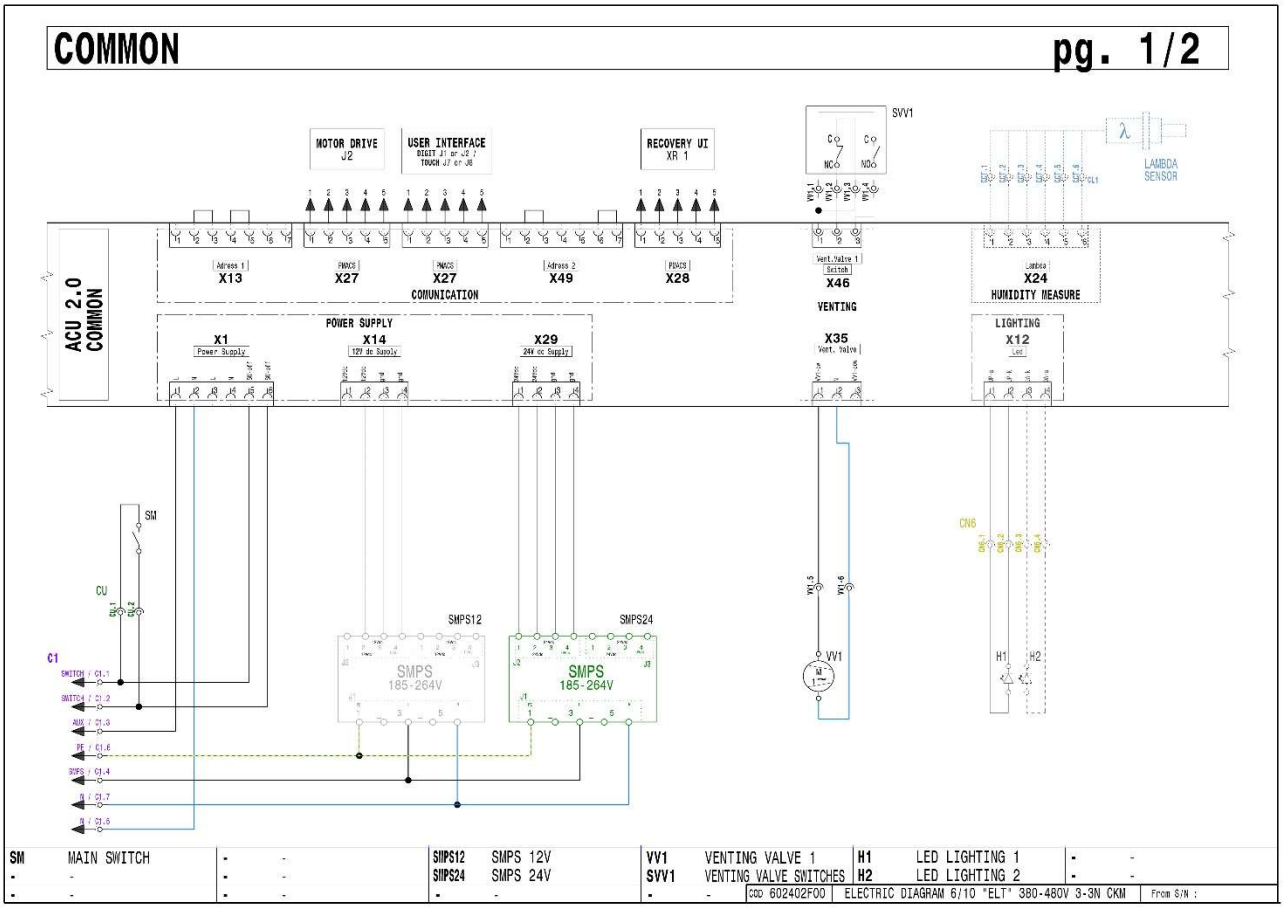
All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

Refer also to the specific EWD of the user board panel/display § USER INTERFACE (UI) refer to the different EWD's of the UI according to the level of your appliance.

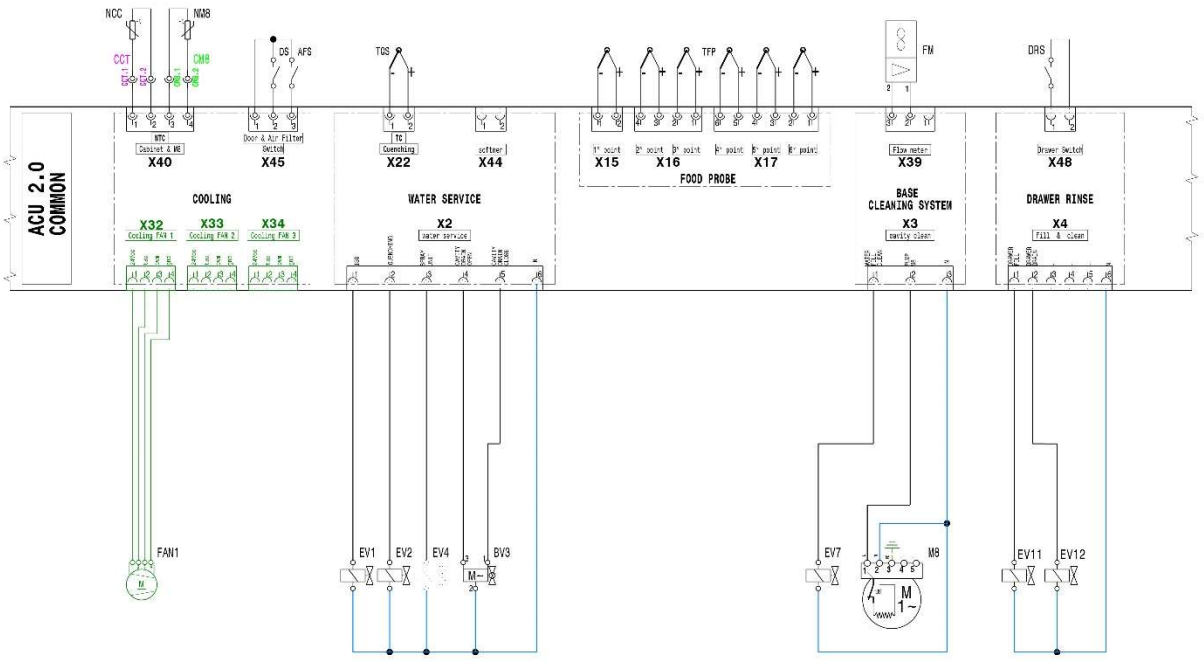
The following EWD is a generic 6/10gn Electric 380-415V scheme for illustrating purpose.




ELECTRICAL SUPPLY 380/400/415V - 3N - 50/60Hz
"ELECTRIC"
KS-1
KS-3
KS-5
SWITCH / C1.2
SWITCH / C1.1
C1
KSM
F2
F1
T 6,3A
T 3,15A
AUX / C1.3
SMPS / C1.4
/ CC.4
/ CC.5
CC
A1 KS
A2
N / C1.5
N / C1.7
C1
PE / C1.6
Z-A
LOAD
LINE
Z-L
Z-PE
MA-L
L1
L2
L3
N
PE
MD
MOTOR DRIVE
85-265V
J1
J2
J3
J6
X1
X27
ACU
M1
SM
3~
MA-L TERMINAL BLOCK
Z-L CAPACITIVE FILTER
Z-PE GROUND FILTER
Z-A AUXILIARY FILTER
KSM ON/OFF RELAY
KS SAFETY CONTACTOR
MD MOTOR DRIVE
M1 MOTOR
F1 AUXILIARY FUSE
F2 MOTOR DRIVE FUSE
COD 602402F00
ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM
From S/N :

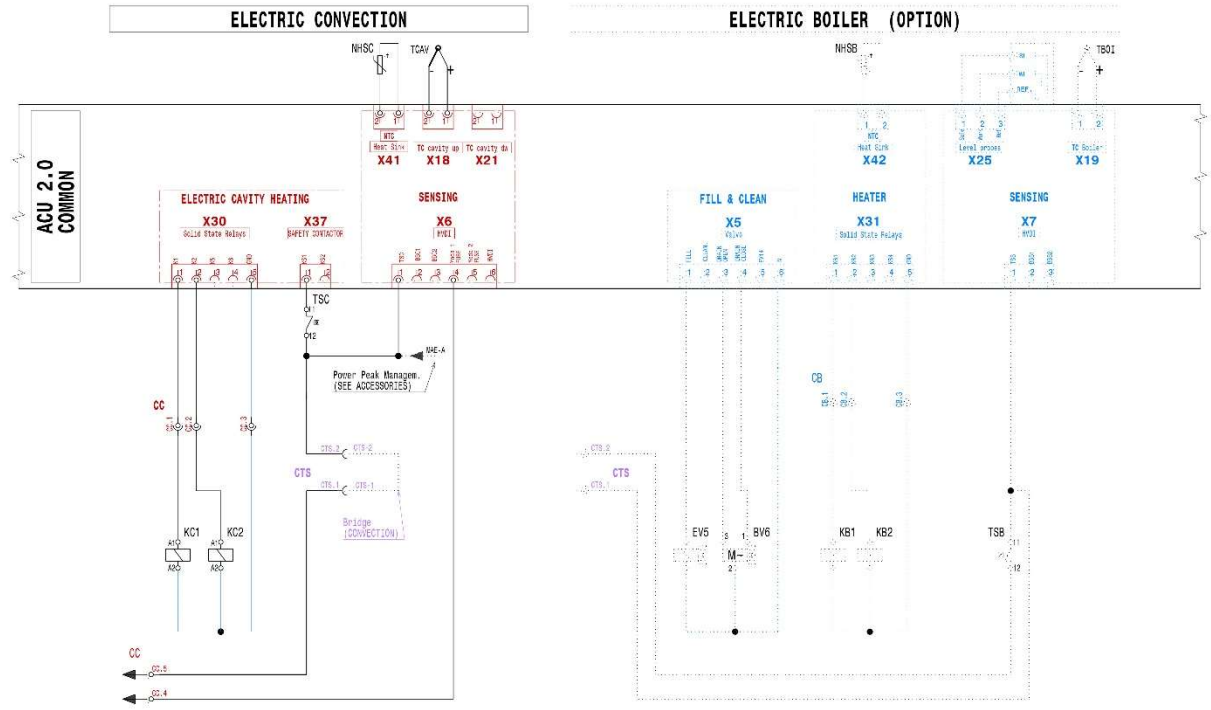

COMMON
pg. 1/2
MOTOR DRIVE
J2
USER INTERFACE
RECOVERY UI
XR 1
SVV1
LAMBDA SENSOR
ACU 2.0
COMMON
X13
X27
X27
X49
X28
COMUNICATION
POWER SUPPLY
X1
X14
X29
X46
VENTING
X35
X24
HUMIDITY MEASURE
LIGHTING
X12
SM
CU
SMPS12
SMPS24
SMPS
185-264V
C1
CN6
VV1
H1
H2
SM MAIN SWITCH
SMPS12 SMPS 12V
SMPS24 SMPS 24V
VV1 VENTING VALVE 1
SVV1 VENTING VALVE SWITCHES
H1 LED LIGHTING 1
H2 LED LIGHTING 2
COD 602402F00
ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM
From S/N :

COMMON pg. 2/2



FAN1	COOLING FAN	**DS**	DOOR SWITCH	**TFP**	FOOD PROBE TEMPERATURE	**FM**	FLOW METER	**DRS**	DRAWER SWITCH
NCC	NTC CABINET COMPONENTS	**AFS**	AIR FILTER SWITCH	**EV1**	INSTANT STEAM SOLENOID VALVE	**EV7**	CLEANING WATER FILL S. VALVE	**EV11**	DRAWER FILL S. VALVE
NM8	NTC PUMP M8	**TQS**	QUENCHING THERMOC.	**EV2**	QUENCHING SOL.VALVE	**M8**	CLEANING PUMP	**EV12**	DRAWER DRAIN S. VALVE
-	-	-	-	**BV3**	CAVITY DRAIN BALL VALVE	COD 602402F00	ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM	From S/N :	

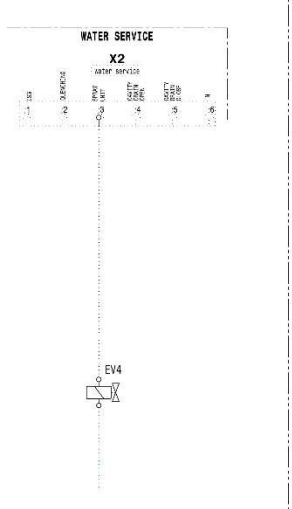
SPECIFIC "ELECTRIC"



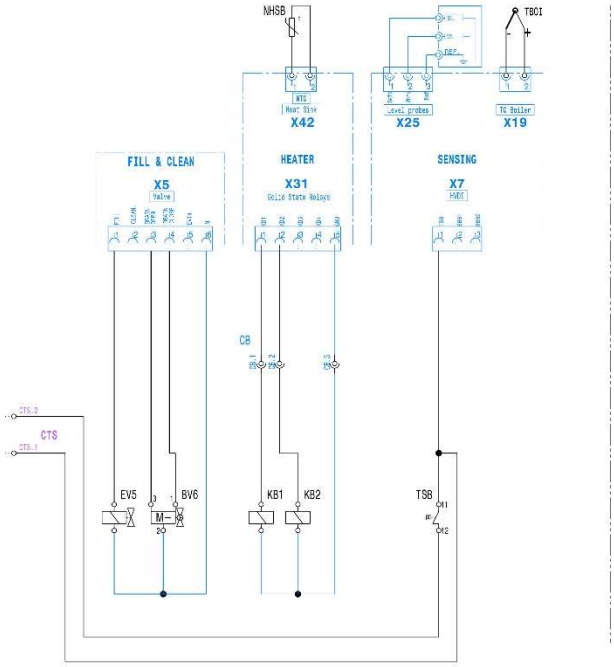
-	-	**KC1**	CAVITY SOLID STATE RELAY 1	**NHSC**	NTC CAVITY SSR HEAT SINK	-	-	-	-	-	-
-	-	**KC2**	CAVITY SOLID STATE RELAY 2	**TCAV**	CAVITY THERMOCOUPLE	-	-	-	-	-	-
-	-	**TSC**	CAVITY SAFETY THERMOSTAT	-	-	-	-	COD 602402F00	ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM	From S/N :	

OPTIONS "ELECTRIC"

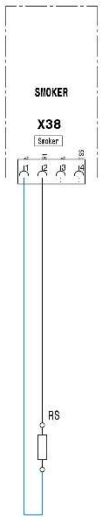
WATER SPRAY



ELECTRIC BOILER (OPTION)



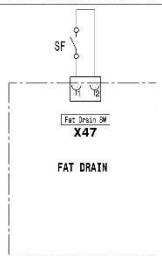
SMOKER



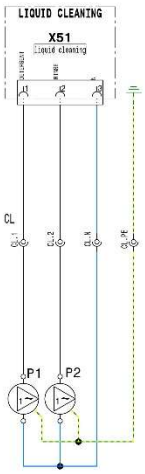
EV4	SPRAY UNIT	-	-	EV5	BOILER FILL SOLENOID VALVE	NHSB	NTC BOILER SSR HEAT SINK	-	-	RS	SMOKER HEATER
-	-	-	-	BV6	BOILER DRAIN BALL VALVE	TSB	BOILER SAFETY THERMOSTAT	-	-	-	-
-	-	-	-	KB1	BOILER SOLID STATE RELAY 1	TBOI	BOILER THERMOCOUPLE	-	-	-	-
-	-	-	-	KB2	BOILER SOLID STATE RELAY 2	-	-	COD 602402F00	ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM		From S/N :

ACCESSORIES 1/2 "ELECTRIC"

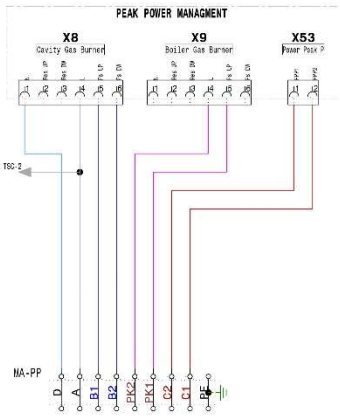
FAT DRAIN SYSTEM



LIQUID CLEANING



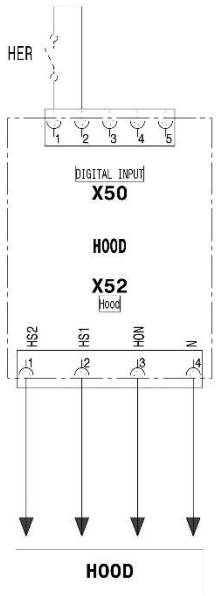
PEAK POWER MANAGMENT



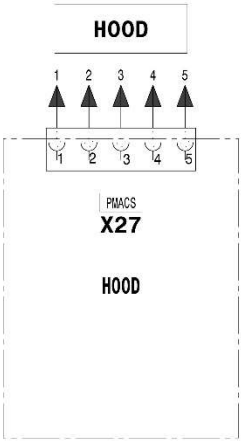
SF	FAT DRAIN SWITCH	-	-	P1	RINSE PUMP	-	-			MA-PP	TERMINAL BLOCK PEAK POWER MANAGEMENT
-	-	-	-	P2	DETERGENT PUMP	-	-			-	-
-	-	-	-	-	-	-	-	COD 602402F00	ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM		From S/N :

ACCESSORIES 2/2 "ELECTRIC"

EXTRACTION HOOD
CONDENSATION HOOD

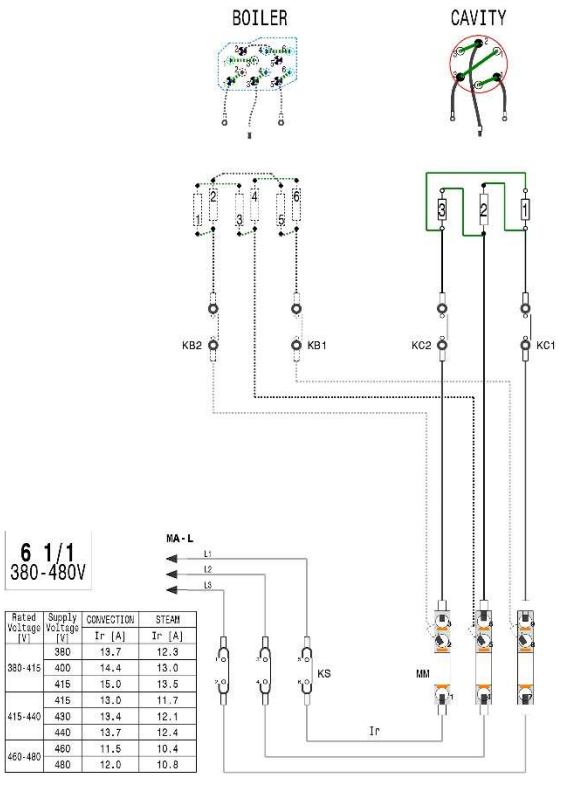


ODOURLESS HOOD

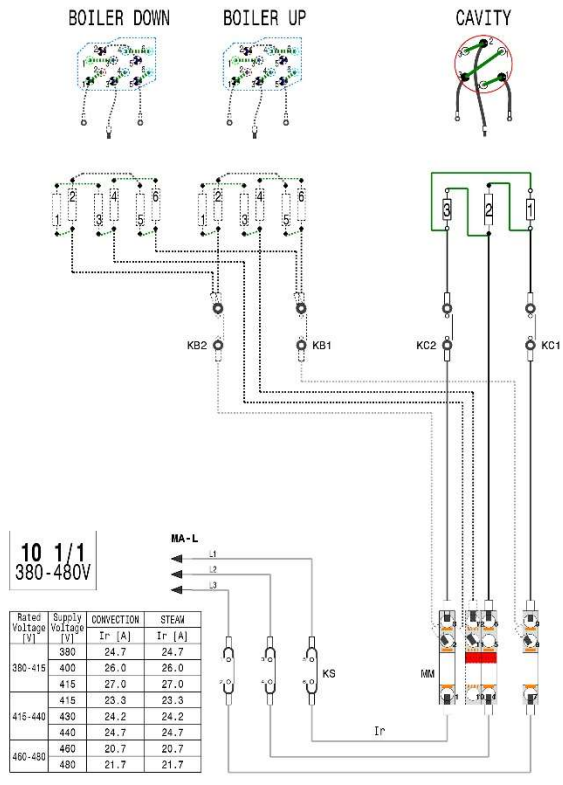


COD 602402F00 | ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM | From S/N :

ELECTRICAL POWER WIRING "ELECTRIC"



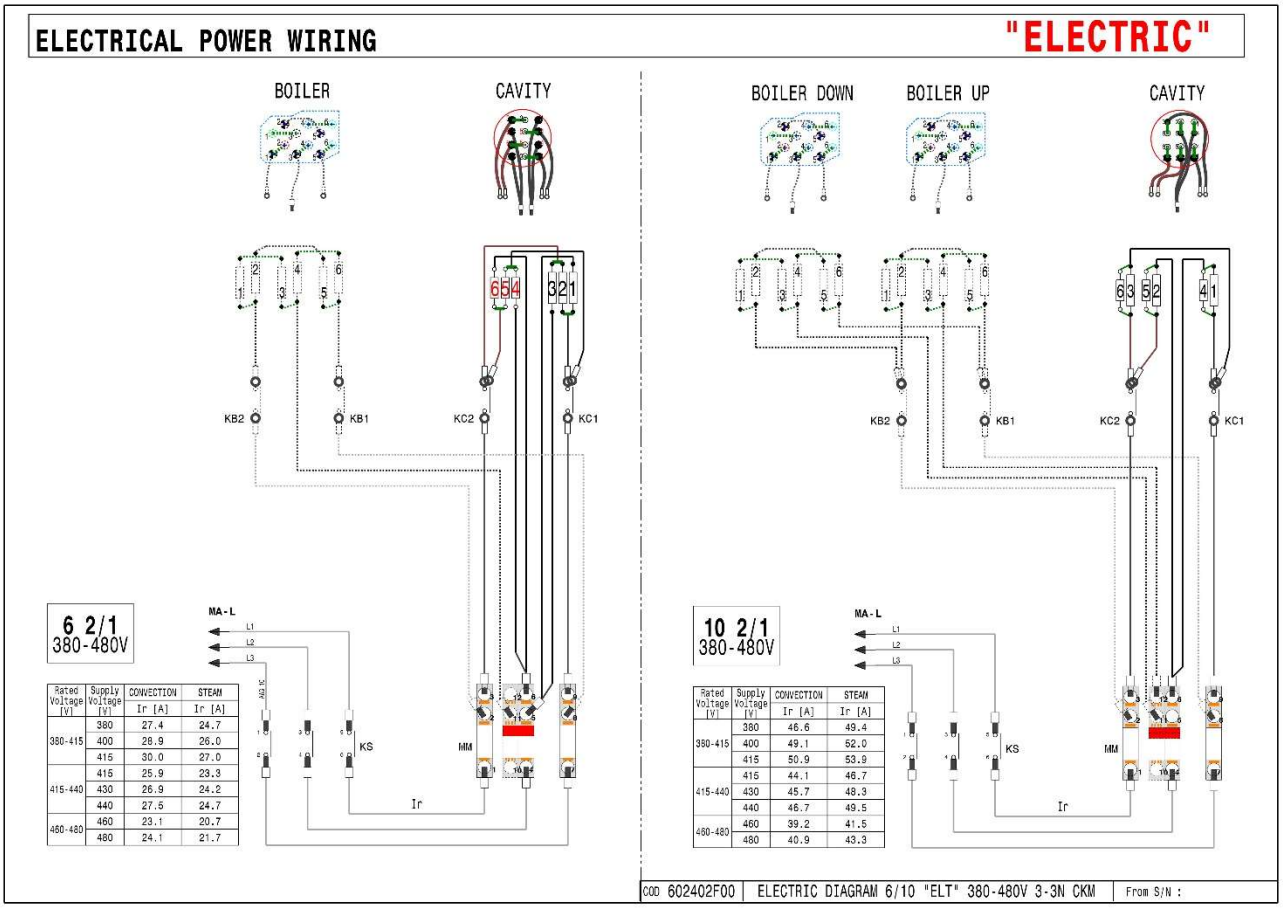
Rated Voltage [V]	Supply Voltage [V]	CONVECTION Ir [A]	STEAM Ir [A]
380-415	380	13.7	12.3
	400	14.4	13.0
	415	15.0	13.5
415-440	415	13.0	11.7
	430	13.4	12.1
	440	13.7	12.4
460-480	460	11.5	10.4
	480	12.0	10.8



Rated Voltage [V]	Supply Voltage [V]	CONVECTION Ir [A]	STEAM Ir [A]
380-415	380	24.7	24.7
	400	26.0	26.0
	415	27.0	27.0
415-440	415	23.3	23.3
	430	24.2	24.2
	440	24.7	24.7
460-480	460	20.7	20.7
	480	21.7	21.7

COD 602402F00 | ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM | From S/N :

ELECTRICAL POWER WIRING "ELECTRIC"

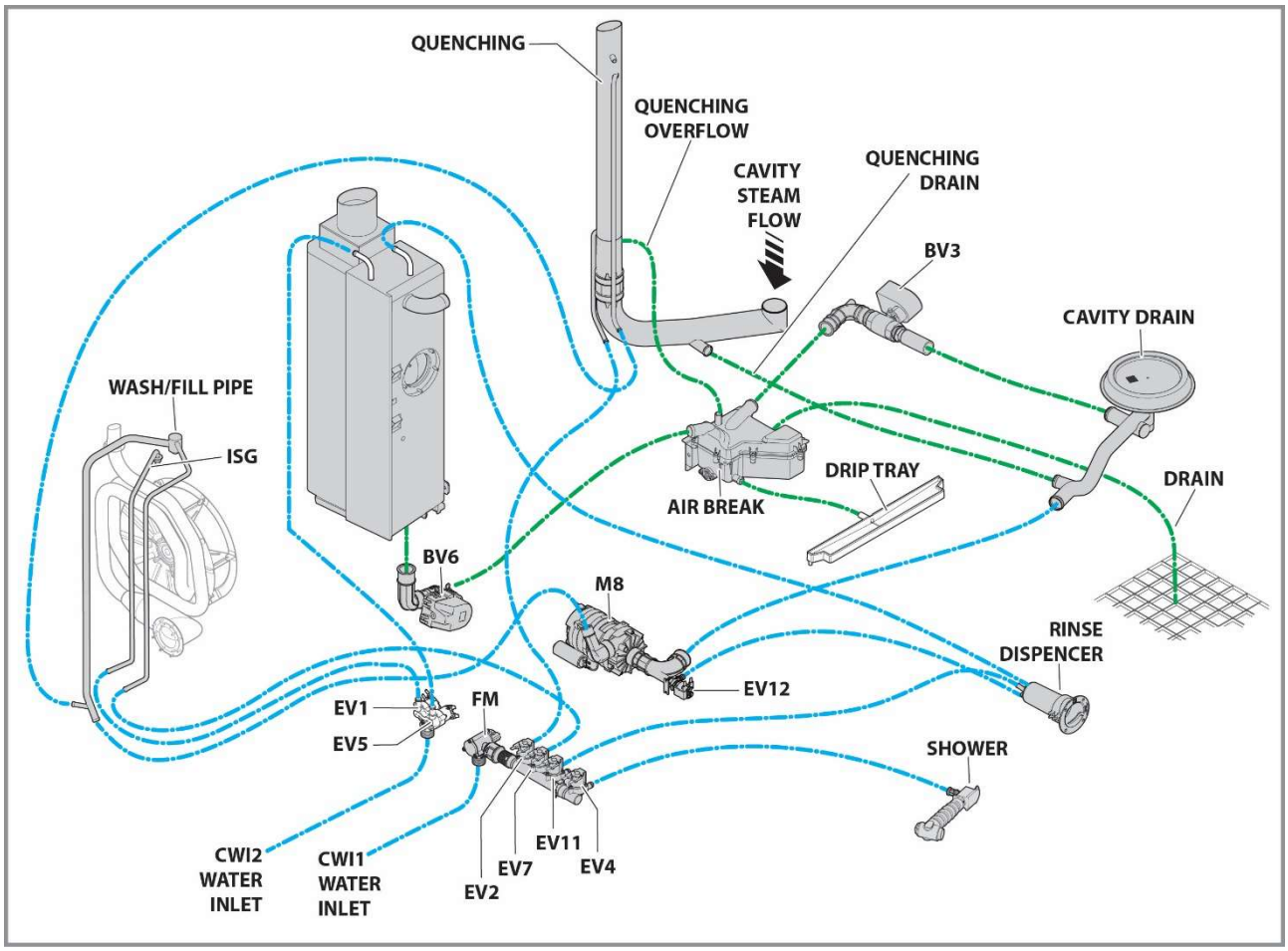


Rated Voltage [V]	Supply Voltage [V]	CONVECTION Ir [A]	STEAM Ir [A]
380-415	380	27.4	24.7
	400	28.9	26.0
	415	30.0	27.0
415-440	415	25.9	23.3
	430	26.9	24.2
	440	27.5	24.7
460-480	460	23.1	20.7
	480	24.1	21.7

Rated Voltage [V]	Supply Voltage [V]	CONVECTION Ir [A]	STEAM Ir [A]
380-415	380	46.6	49.4
	400	49.1	52.0
	415	50.9	53.9
415-440	415	44.1	46.7
	430	45.7	48.3
	440	46.7	49.5
460-480	460	39.2	41.5
	480	40.9	43.3

COD 602402F00 | ELECTRIC DIAGRAM 6/10 "ELT" 380-480V 3-3N CKM | From S/N :

7.4 WATER PIPING DIAGRAM



BV3= Cavity drain valve
BV6= Boiler Drain Valve (depending on level)
CWI1= Cold water inlet
CWI2= Cold water inlet (treated water)
EV1 = HUMIDIFIER / ISG valve (depending on level)
EV2= Quenching valve
EV4 = Shower
EV5= Boiler fill
EV7= Cleaning / water fill valve,
EV11= Rinse dispenser, for boiler descale cycle
EV12= Drain dispenser aid
FM= Flow meter
M8= Pump

7.5 CERTIFICATES OF CONFORMITY

All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

7.6 PARAMETERS LIST

All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

7.7 LIST OF AVAILABLE ACCESSORIES

A complete list of all accessory codes can be found, for each PNC, available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be consulted. For those that do not have access to the web sites, refer to your local country customer care.
Here is a little part of codes as example to accessory codes available:

PNC	Description	Oven Range	Power Outlet	Oven Size
926980	OPEN BASE+TRAY SUPPORT 6&10X1/1GN LW-MAR	LW	Gas & Electric	61-101
920002	WATER SOFTNER WITH CARTRIDGE C500	LW	Gas & Electric	ALL
920003	WATER SOFTENER WITH CARTRIDGE STEAM 1200	LW	Gas & Electric	ALL
921180	S/S 1/2 GN PERFORATED CONTAINER H=40MM	CWLW	Gas & Electric	ALL
921181	S/S 1/2 GN CONTAINER H=40MM	CWLW	Gas & Electric	ALL
921182	S/S 1/2 GN WIRE GRID H=5MM	CWLW	Gas & Electric	ALL
921183	ALUMINUM 1/2 GN BAKING PLATE H=5MM	CWLW	Gas & Electric	ALL
921305	AUTOMATIC WATER SOFTENER FOR OVENS	CWLW	Gas & Electric	ALL
921306	RESIN SANITIZER FOR WATER SOFTENER	CWLW	Gas & Electric	ALL
922003	WHEEL KIT FOR BASE OF 6&10X1/1 & 2/1 LW	LW	Gas & Electric	61-101-102
…….	…….	……..	……..	…….

Diamond Professional SpA
Sede legale
Viale Treviso, 15
33170 Pordenone, ITALY
Fax (+39) 0434 380 201 http:// professional.Diamond.com