

<p>© ELECTROLUX HOME PRODUCTS Customer Care - EMEA Training and Operations Support Technical Support</p> <p>Publication number</p> <p>599 76 60-78</p> <p>Edition: 10/2015 - Rev. 02</p> <p>EN</p>	<p>Built-in Ovens</p> <p>STEAM OVENS GENERAL MANUAL “NEW GLOBAL MODULAR STEAM”</p>	
---	--	--

TABLE OF CONTANT

1 INTRODUCTION	4
1.1 PURPOSE OF THIS MANUAL	4
1.2 WARNINGS.....	4
2 PRODUCT DESCRIPTION.....	5
2.1 NEW MODULAR CONCEPT.....	5
3 DIFFERENT TYPES OF STEAM OVENS.....	7
3.1 “SUPER STEAM” (PROJECT “TAMBORA”).....	7
3.2 “PROFI STEAM STEP1” (PROJECT “ETNA”)	8
3.3 “PROFI STEAM STEP 2” (PROJECT “STROMBOLI”)	25
3.4 “MULTI STEAM” (PROJECT “VESUVIUS MODULAR”)	36
3.5 “DIRECT STEAM” (PROJECT “MAYON”)	37
4 ERROR CODES FOR STEAM FUNCTION.....	44
5 REVISIONS	46

1 INTRODUCTION

1.1 PURPOSE OF THIS MANUAL

The purpose of this Manual is to provide information of new “STEAM OVENS”

1.2 WARNINGS

All work with open appliances must be done with the mains supply disconnected.

Work on electrical equipment should only be carried out by qualified personnel.

Before working on a device, check the efficiency of the system casing using appropriate equipment. As an example, refer to the indications described / illustrated in the portal Electrolux Learning Gateway (<http://electrolux.edvantage.net>).



After the work, carry out electrical safety tests and ensure that the all safety devices are working properly.

In the case of manipulation / replacement of the PCB, use the ESD kit (Code 405 50 63-95/4) to prevent electrostatic discharge damage the circuit board see SB No. 599 72 08-09

2 PRODUCT DESCRIPTION

The new steam ovens "New Global Modular Steam" are part of a global project "Mount St. Helen" consists of several sub-projects

2.1 NEW MODULAR CONCEPT

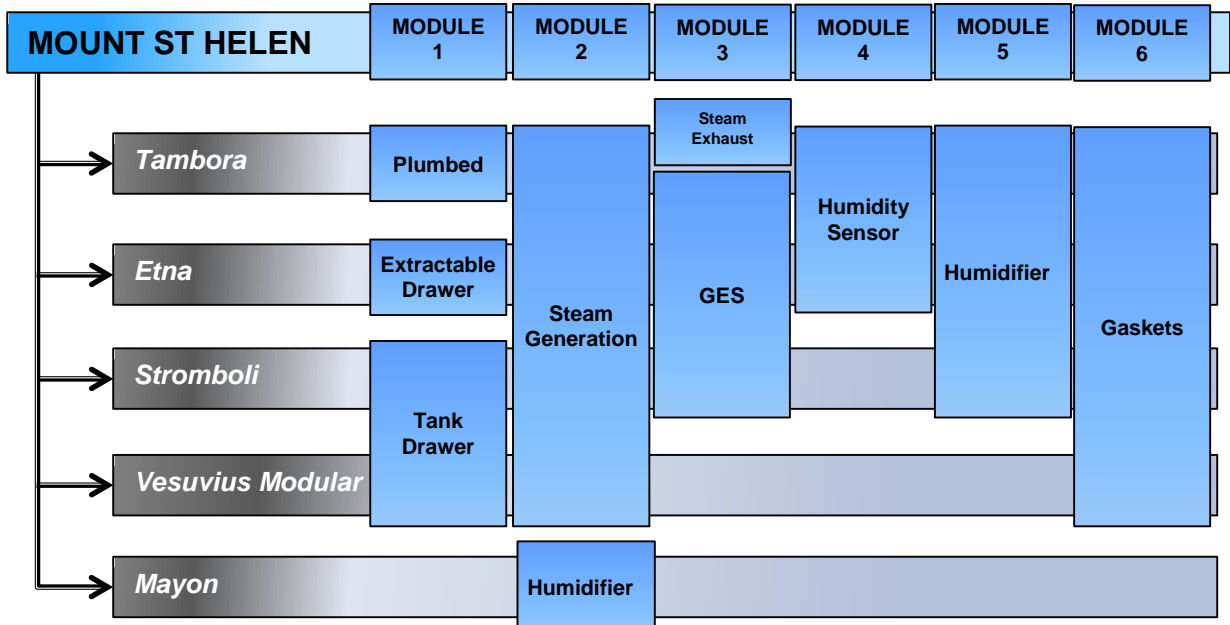
In order to have different types of steam oven on different structures (platforms) produced in different factories trying to standardize components, these new steam ovens "New Global Modular Steam" are designed with a modular concept.

The different parts of the oven regarding functionality steam are composed of modules containing standardized components.

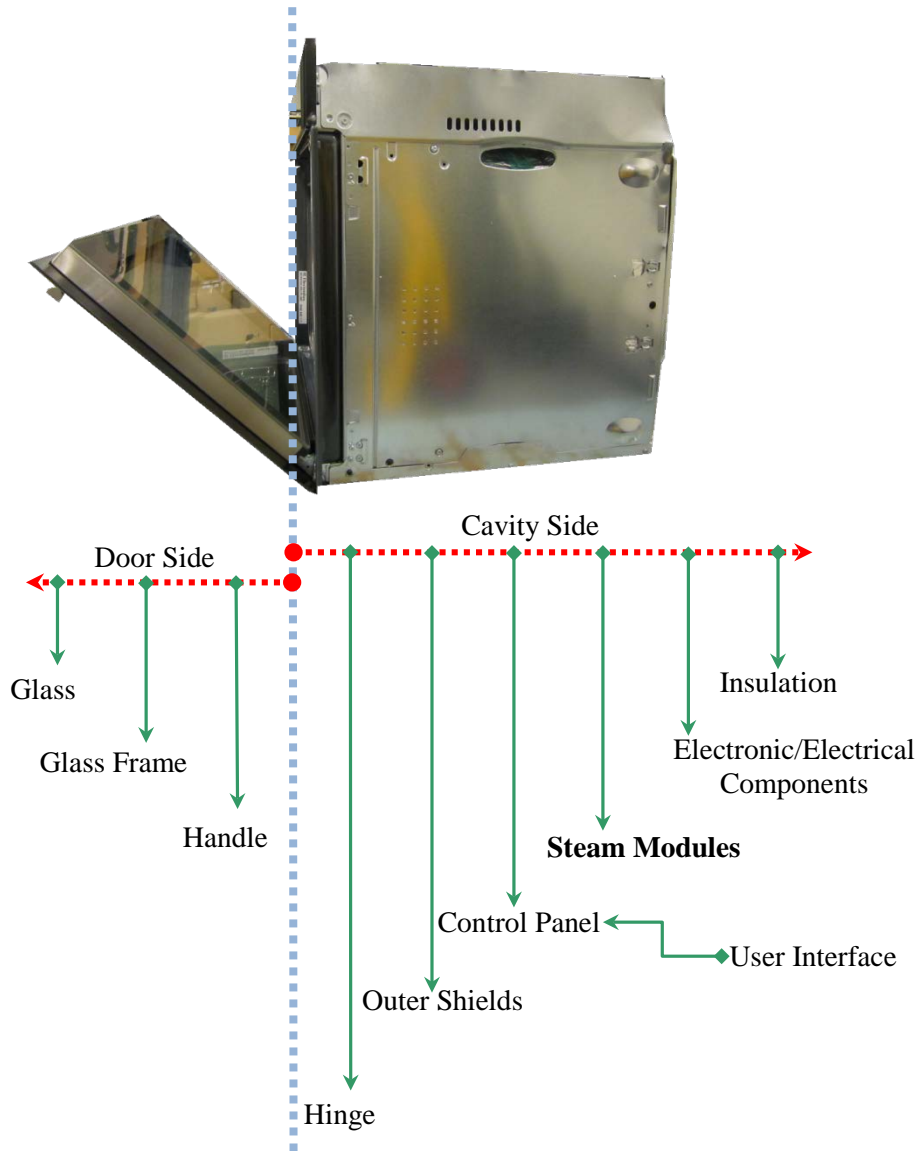
2.1.1 STEAM SEGMENTS

MOUNT ST HELEN			
<i>Technology project</i>	<i>Application project</i>	<i>PL Denomination</i>	<i>Commercial Name</i>
Tambora	Super Steam		
Etna	Profi Steam Step 1	4in1 Oven	ProCombi Plus
Stromboli	Profi Steam Step 2	3in1 Oven	ProCombi
Vesuvius Modular	Multi Steam	2in1 Oven	ThermicSteam
Mayon	Direct Steam		

2.1.2 STEAM MODULE AREA



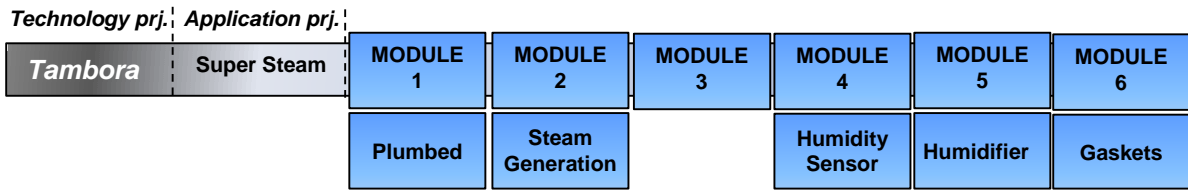
2.1.3 STEAM OVEN STRUCTURE



3 DIFFERENT TYPES OF STEAM OVENS

The new modular concept allows having different types of steam ovens depending on the characteristics required. Below is a brief description of the different types of steam oven.

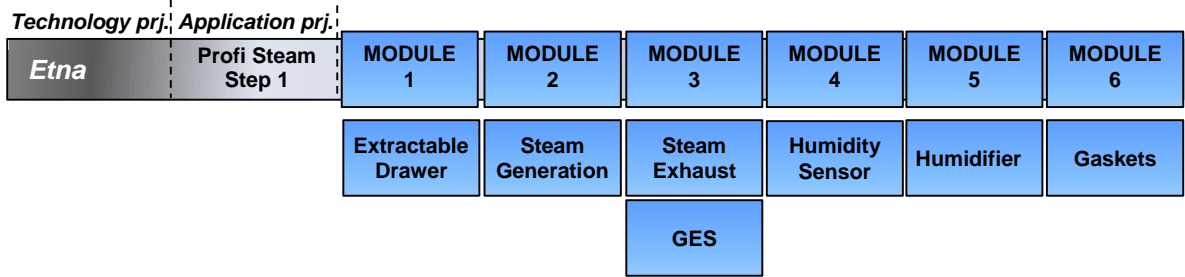
3.1 “SUPER STEAM” (PROJECT “TAMBORA”)



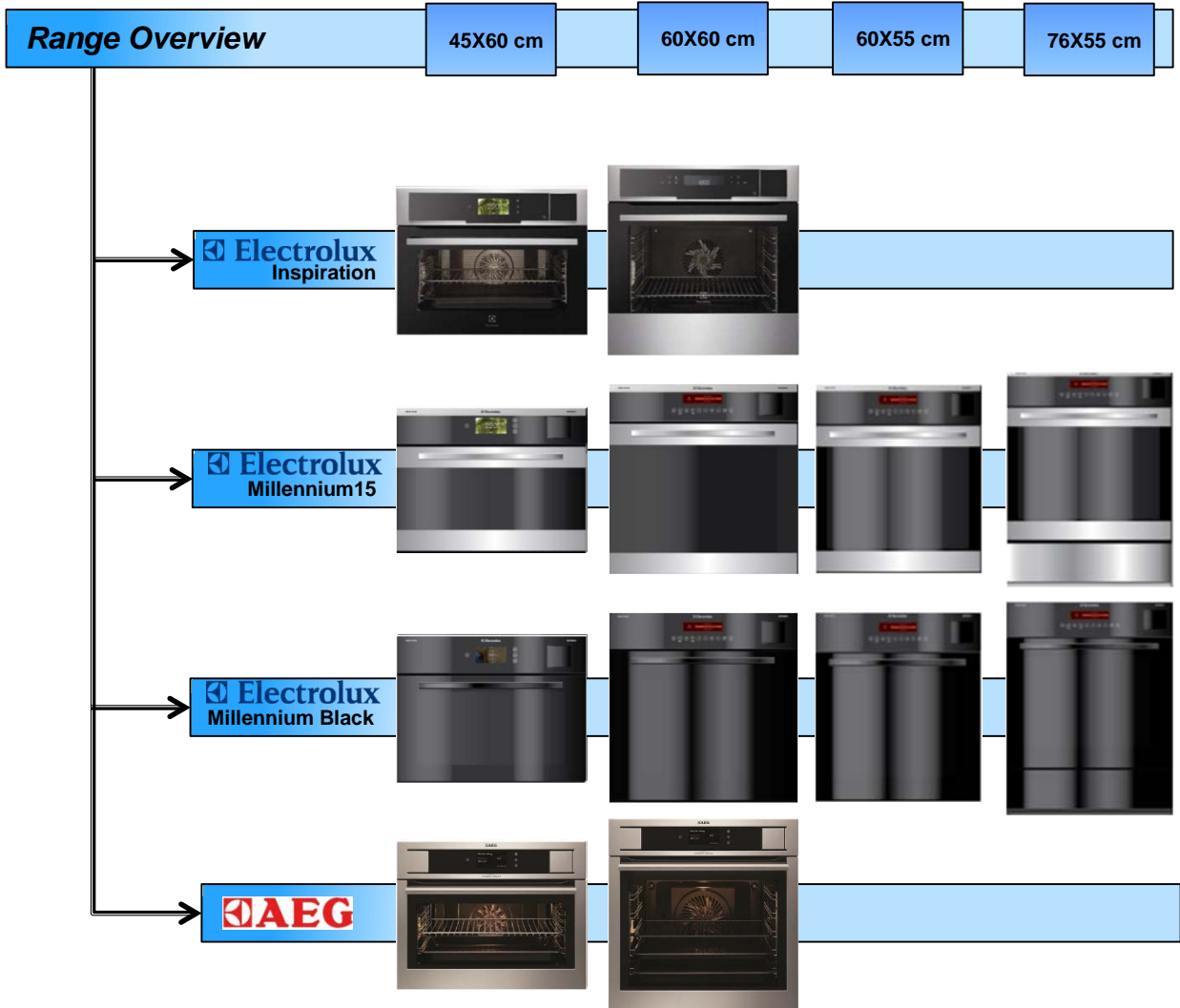
3.1.1 EXAMPLES OF AESTHETICS ON THE VARIOUS BRANDS

Document will be updated during the final check point

3.2 “PROFI STEAM STEP1” (PROJECT “ETNA”)



3.2.1 RANGE OVERVIEW

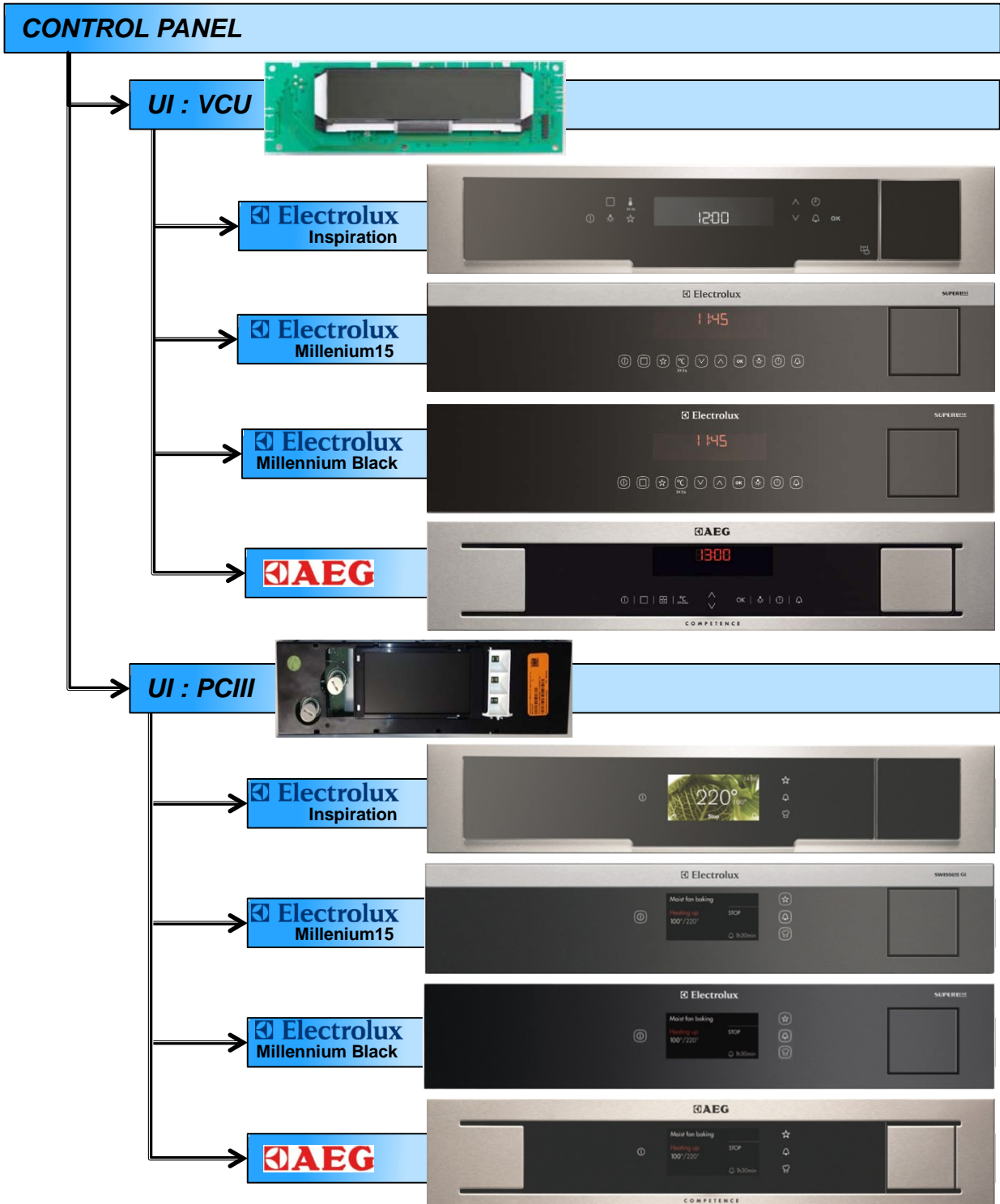


Brand		User Interface	Apollo 60 x 60cm	Ariane 46 X 60cm	Apollo 76 X 55cm	Apollo 60 X 55cm
AEG	New Collection	VCU	✓	✓		
		PCIII	✓	✓		
Electrolux	Inspiration	VCU	✓	✓		
		PCIII	✓	✓		
Electrolux	Millenium 2015	VCU	✓	✓	✓	✓
		PCIII	✓	✓		

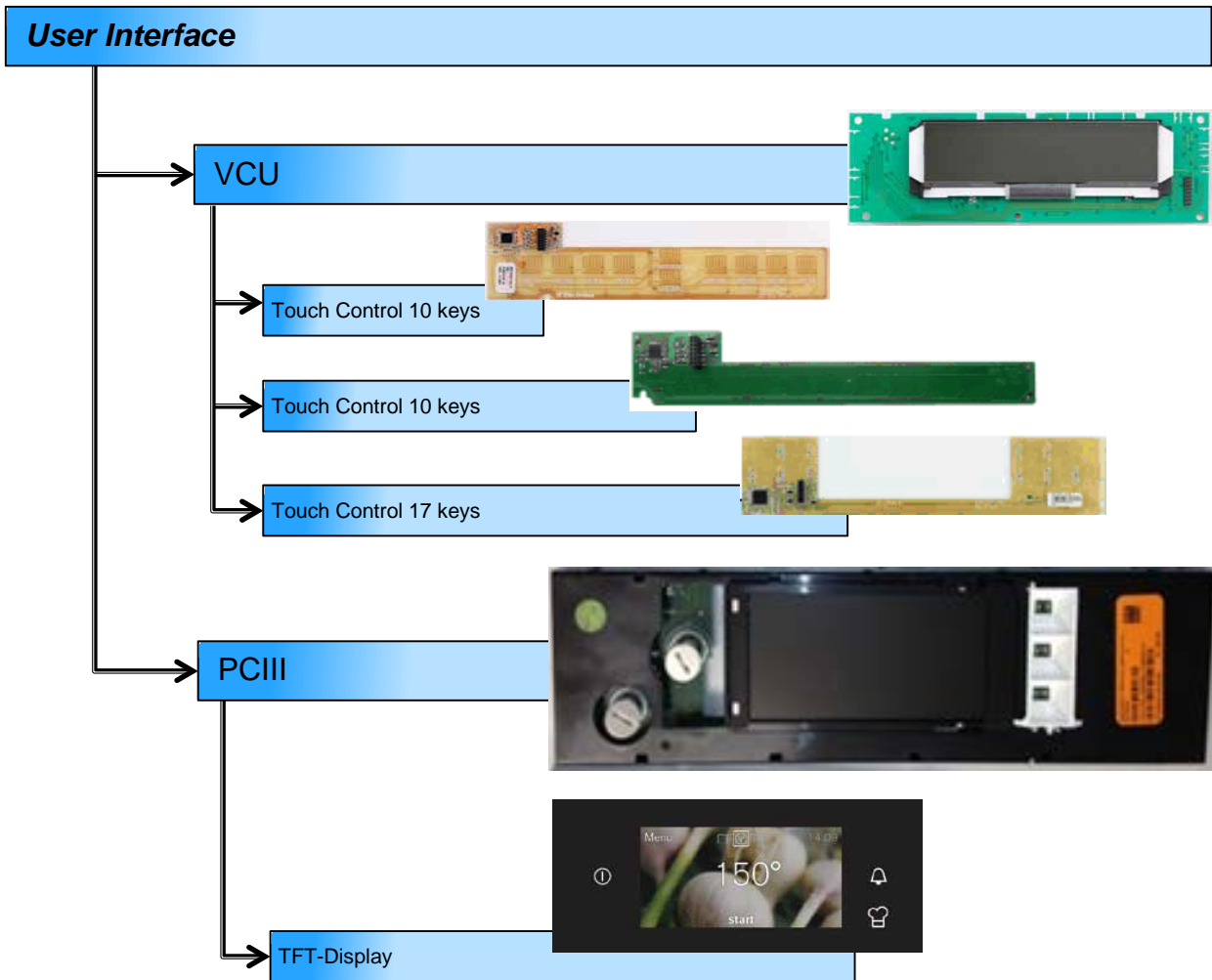
3.2.2 CONTROL PANEL

Etna Control Panel accommodates two types of User Interfaces VCU and PCIII

3.2.2.1 AESTHETICS



3.2.2.2 USER INTERFACE



Refer below documents for detail description and serviceability of the UI

VCU = 599 73 44-69

PCIII = 599 76 80-45

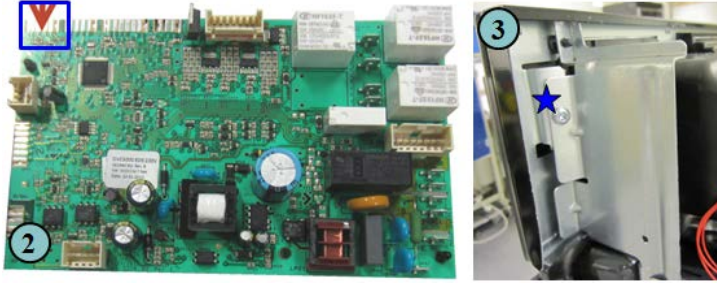
User Interface reference documents covers;

- Panels assembly
- User interface Disassembly / Assembly process
- User Interface configurations
- Error codes

3.2.2.3 CONTROL PANEL DISASSEMBLE / ASSEMBLE

DISASSEMBLE

1. Check the chapter 3.2.3 to access the wiring harness
2. Unsnap the User Interface wiring from the OVC 3000EOS
3. Unscrew the Control Panel 2 * ★



ASSEMBLE

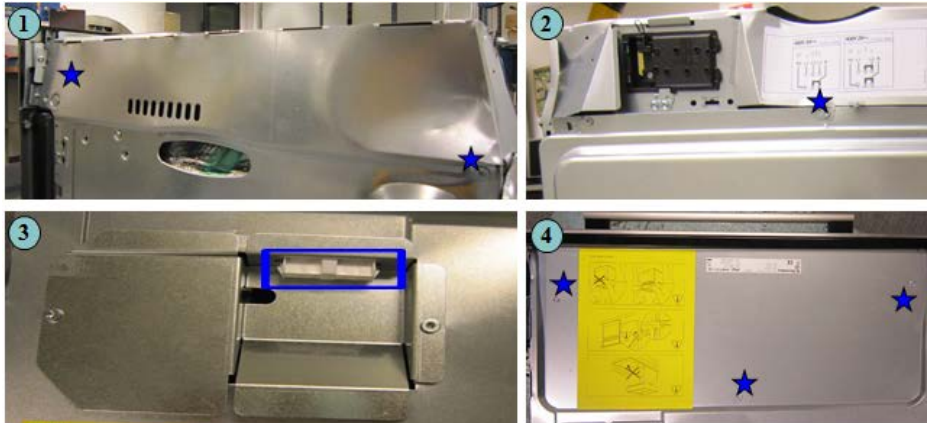
Follow the reverse process from step3 to step1 defined in disassemble process to assemble the Control Panel

3.2.3 ACCESS TO SUB-LEVEL COMPONENTS

1. Unscrew the Top Panel 2* ★left, 2* ★right
2. Unscrew the Top Panel 1* ★rear

Swiss products

3. Unsnap the hob connector and lift the Top panel
4. Special service cover, unscrew the 3* ★to access the User Interface

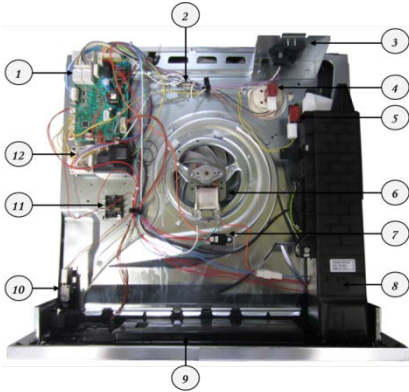


5. Unscrew the Rear panel 2* ★and lift the panel



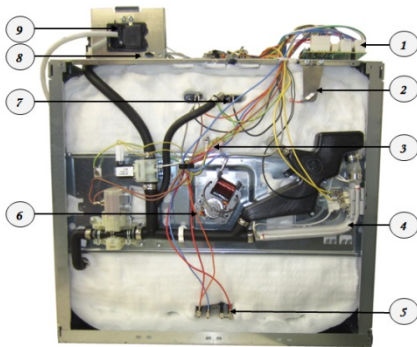
3.2.4 OVER VIEW OF SUB-LEVEL COMPONENTS

Top View with removing Top Cover



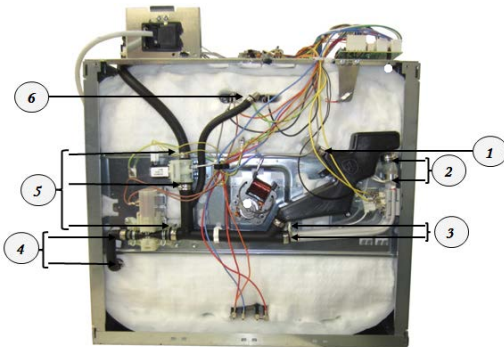
1. Power electronic OVC3000EOS
2. Safety-thermostat
3. Power supply
4. Actuator
5. Micro switch for water drawer
6. Air ventilator
7. Humidity sensor
8. Water drawer
9. User interface PCIII, VCU
10. Door switch for illumination
11. Distributor 5VDC
12. Food probe-electronic + cover

Rear View with removing Rear Cover

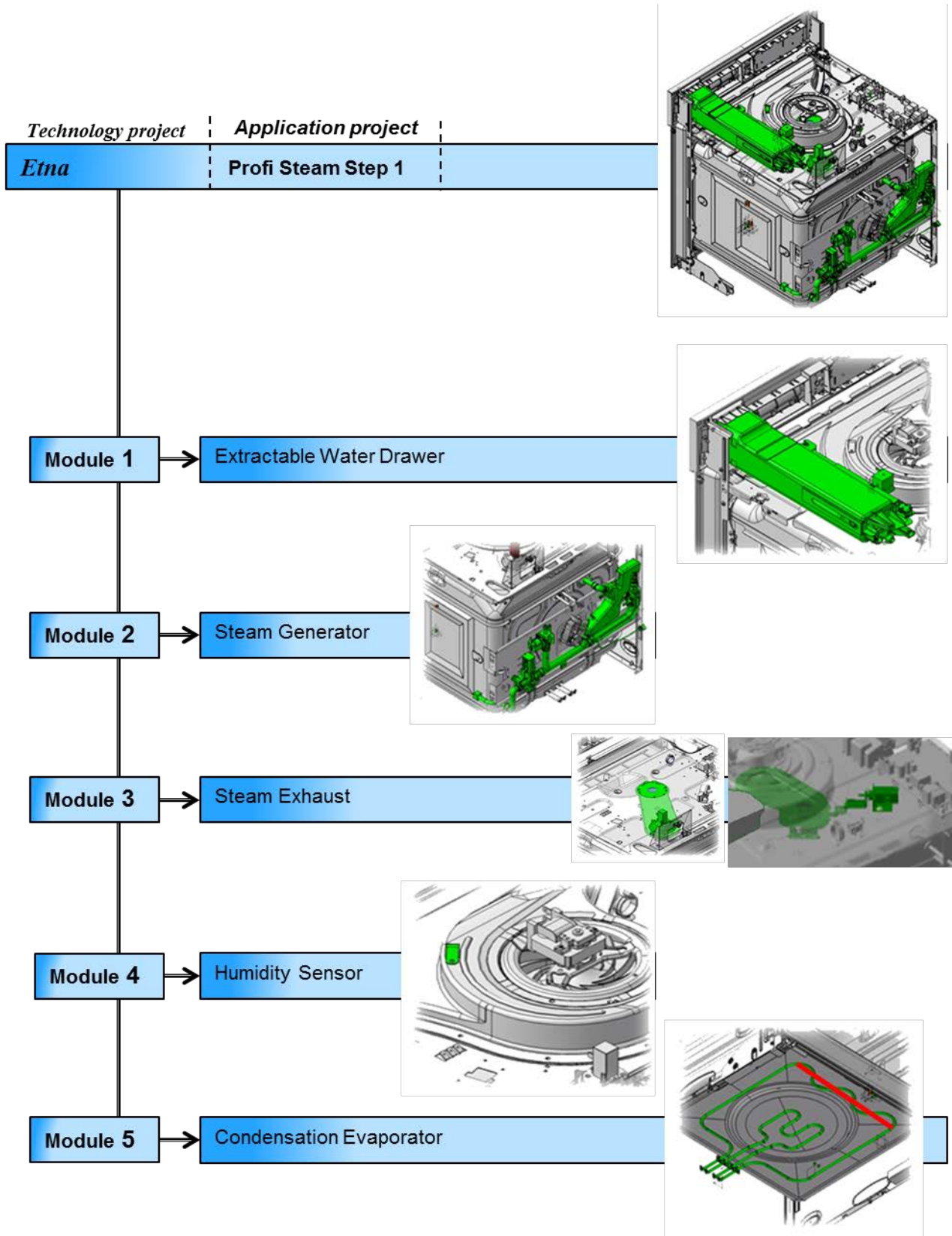


1. Power electronic OVC3000EOS
2. Temperature sensor PT500
3. Ring heater Apollo 2400W
Ariane 1650W
4. Steam generator 1500W
5. Single Bottom heater 1000W
Condensation evaporator both heaters
in serial 500W
6. Hot air ventilator Resistor 130 Ohm
7. Heater grill Apollo 2300W
Ariane 1900W
8. Sidekick connection
9. Power supply

Hose Clamp locations and Dimensions



1. 105117330/8
12mm - 22mm (D16)
2. 899669804108/5
20mm - 32mm (D20)
3. 899669804108/5
20mm - 32mm (D20)
4. 105117330/8
12mm - 22mm (D16)
5. 899669804108/5
20mm - 32mm (D20)
6. 105117330/8
12mm - 22mm (D12)



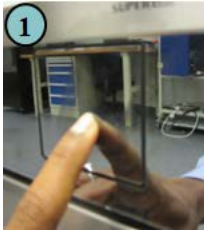
3.2.6 MODULE 1 “EXTRACTABLE WATER DRAWER”

This Module contains Water Drawer and the Drawer Holder. The Water Drawer stores the water and supplies to steam system. The Drawer Holder supports the Water Drawer and the locking components.



Water Drawer

1. Push / Push the rectangular slot to open / close the Water Drawer
2. Water is filled in the slot provided in the front end of the Water Drawer
3. Pull out the Water Drawer to fill the water directly from the tap

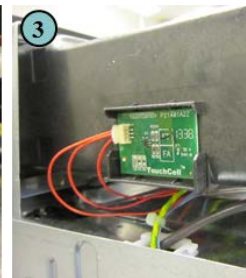
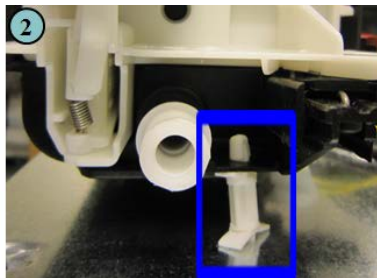
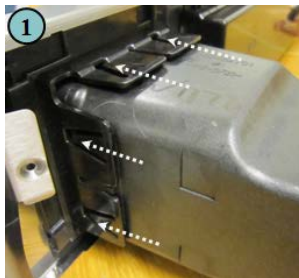


4. Unlatch the lid from the back side for cleaning
5. Parts of the Water Drawer. 6a. Water tank, 6b. Lid support, 6c. Lid, 6d. Non return valve

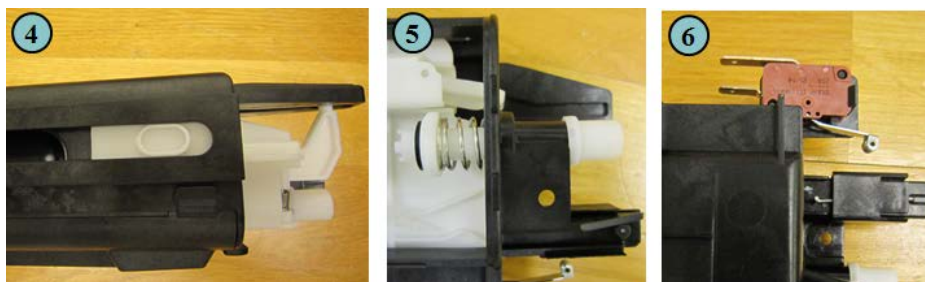


Drawer Holder

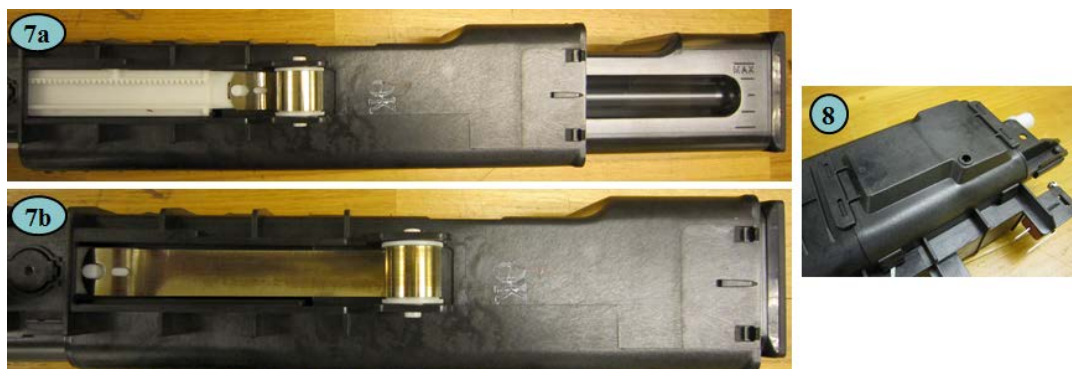
1. Drawer Holder is snapped in the front side to control panel
2. Snapped in the rear side to the Support Pin
3. Capacitive Water level sensor is glued in the right side of Drawer Holder and connected to OVC3000 EOS to get a supply of 5V DC
 - Water level full 5V DC
 - Water level not full <5V DC
 - Water level empty <4,2V DC
 - After the alarm "empty", steamer still works for 255sec



4. The Water Drawer guide (white part) slides in the tack of Drawer Holder to lock the Water Drawer
5. The Spring loaded water outlet with a gasket is assembled in the rear
6. Micro switch for the position of Water Drawer is snapped in the left rear corner and connected to OVC3000 EOS



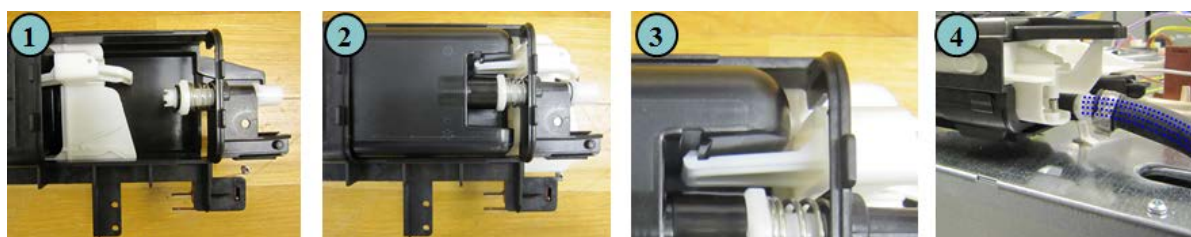
7. Metal Spring Stock is assembled in the left side to provide the spring action when the user push / push the Water Drawer. 7a. Spring tensed (Load) 7b.Spring Expanded (Unload)
8. Overflow cover is snapped in the bottom side of the Drawer Holder



Working Principle

Water is loaded in the Water Drawer in Unload condition (1) and after filling the water push the Water Drawer to get located in the spring loaded water outlet (2) and locked (3) to the Water Drawer Guide. Water is supplied to Steam Generator from the outlet pipe (4). The level of water is measured by the capacitive Water Level Sensor Antenna.

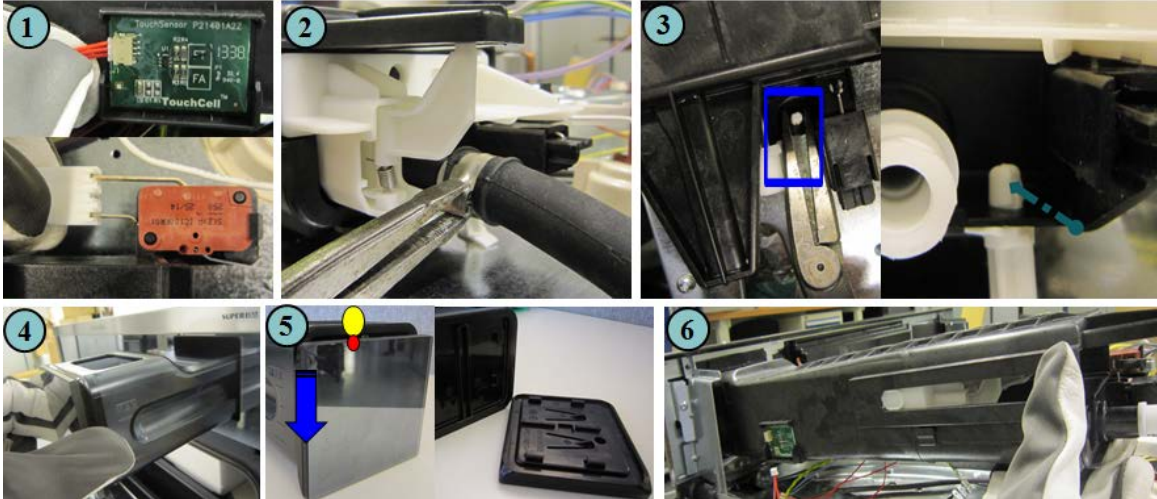
* Pictures are taken with out Overflow cover



3.2.6.1 DISASSEMBLE / ASSEMBLE OF MODULE 1 “EXTRACTABLE WATER DRAWER”

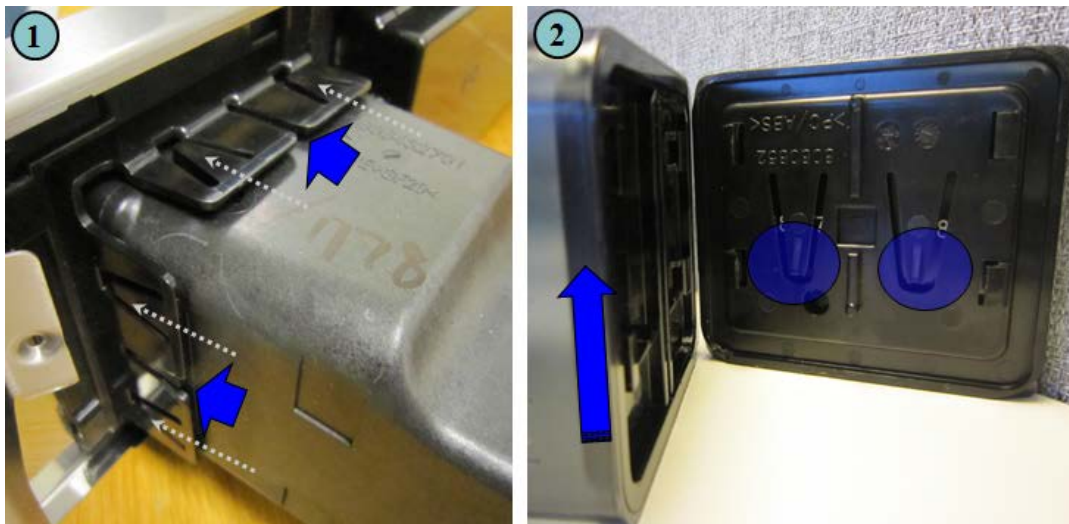
DISASSEMBLE

1. Remove all the wiring harness connectors
2. Unlock the Clamp* and release the Tube
3. Unsnap the Supporting Pin
4. Pull and take out the Water Drawer
5. Release the Drawer Handle from the Water drawer by applying the force and sliding down
6. Lift the Drawer Holder with an angle from the Oven till its unsnapped.



ASSEMBLE

1. Locate the Drawer holder in the slots of the plastic frame glued to the Control Panel and snap
2. Slide and snap the Drawer Handle in the correct direction
3. Follow the reverse process from step4 to step1 defined in disassemble process to assemble the Control Panel

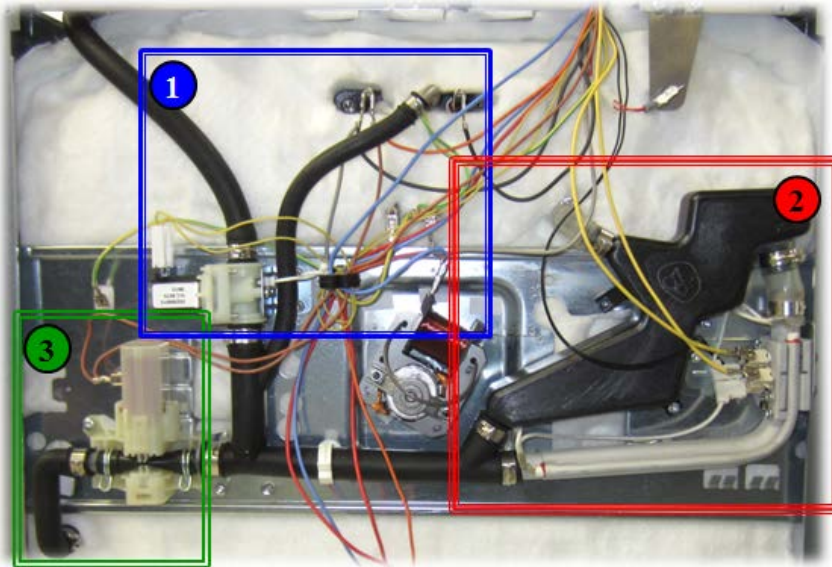


Complete module 1 has to be replaced except Drawer Handle in case of any problem with the sub-components in this assembly.

Clamp*: Use the special tool refer chapter 3.2.7.1

3.2.7 MODULE 2 “STEAM GENERATOR”

Steam Generation system takes the water input and generates the steam out put to the Oven Cavity. It has three main zones (1) *Water Loading Zone*, (2) *Steam Generation Zone* and (3) *Water Outlet Zone*

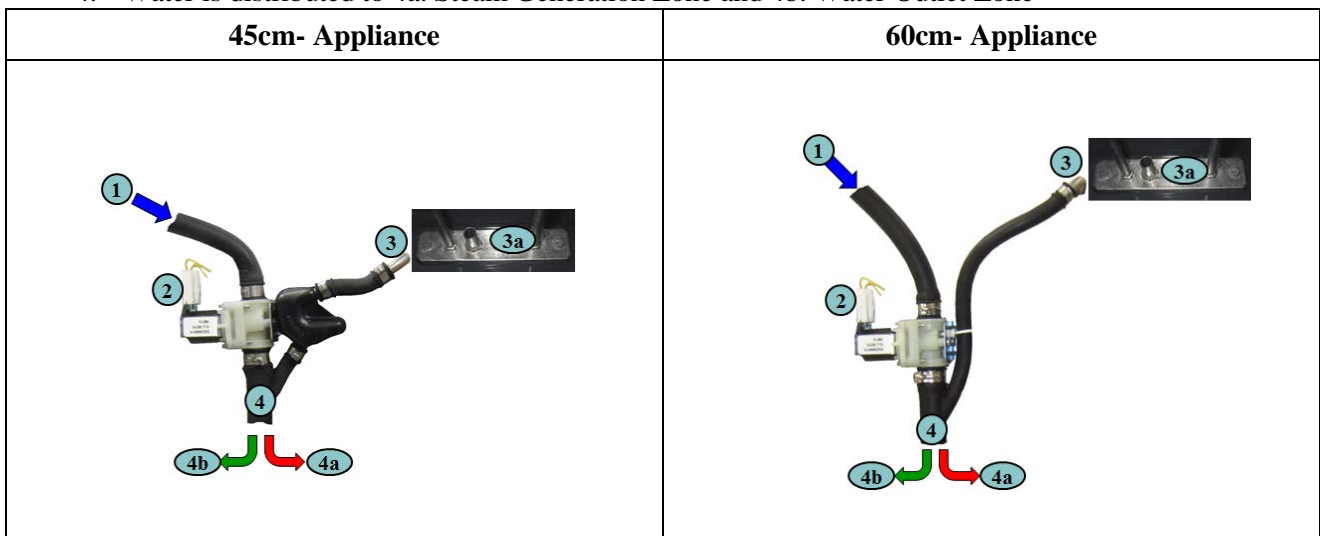


(1)Water Loading Zone

This Zone delivers the controlled water flow from Water Drawer to the Steam Generation Zone

This zone contains:

1. Outlet tube from Water drawer connected to **NTC**
2. Solinoid connected to the OVC 3000EOS to control the opening of the valve based on algorithm
 - Voltage: 230V AV 50Hz
 - Resistor: 3640 Ohm
 - Power: 10W
 - Working pressure: 0 - 0,4bar
3. Air Vent is connected to the Cavity (3a. *integrated to top heater element support*) to avoid the air bubbles in the valve which may block the water inlet when the quantity of water is less in the Water Drawer.
4. Water is distributed to 4a. Steam Generation Zone and 4b. Water Outlet Zone

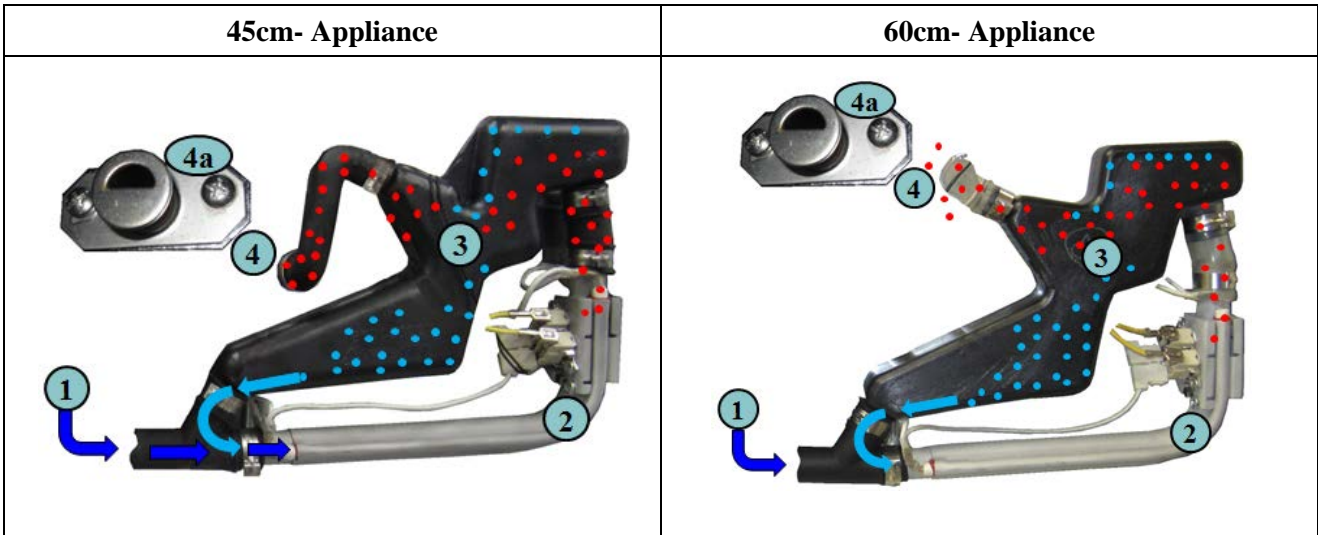


(2) Steam Generation Zone

This Zone Generates the Steam (red dots ●) and deliveries to the cavity and precipitation (blue dots ●) returns back to the Water heater

This Zone contains:

1. Water is loaded to the Steam Generation Zone
2. Water Heater generates the steam and passes it to the Steam Tank
3. Steam tank delivers the steam to the Cavity
4. Steam nozzle is connected to the Steam tank from cavity side (4a. Cavity side view)



Water Heater Parts

Voltage: 230V AV 50Hz

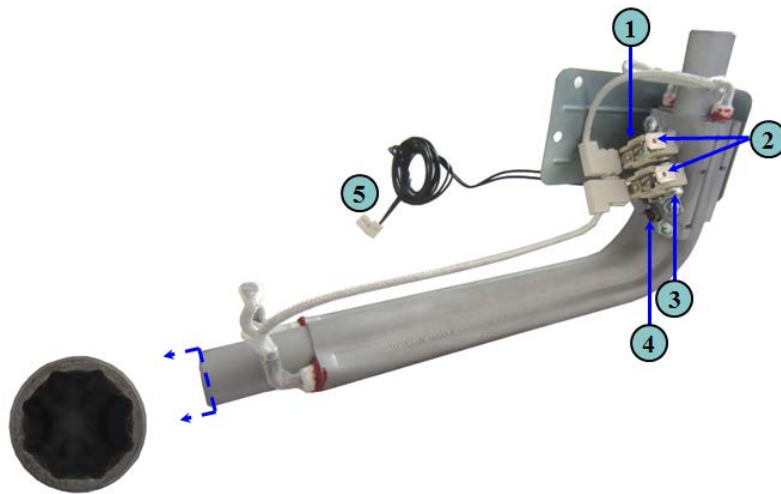
Steam generator: 1500W (old 1300W)

Resistor: 34, 6 Ohm

Working temperature: 120°C

Max. Temperature: 180°C

1. Safety thermostat cut-out : 150°C
2. Power supply
3. Safety thermostat cut-out : 130°C
4. NTC-sensor approx.104 Ohm / 20°C (Temperature is checked for every 0.5 sec. NTC-tolerance: 1%)
5. Water Heater connected to the OVC 3000EOS



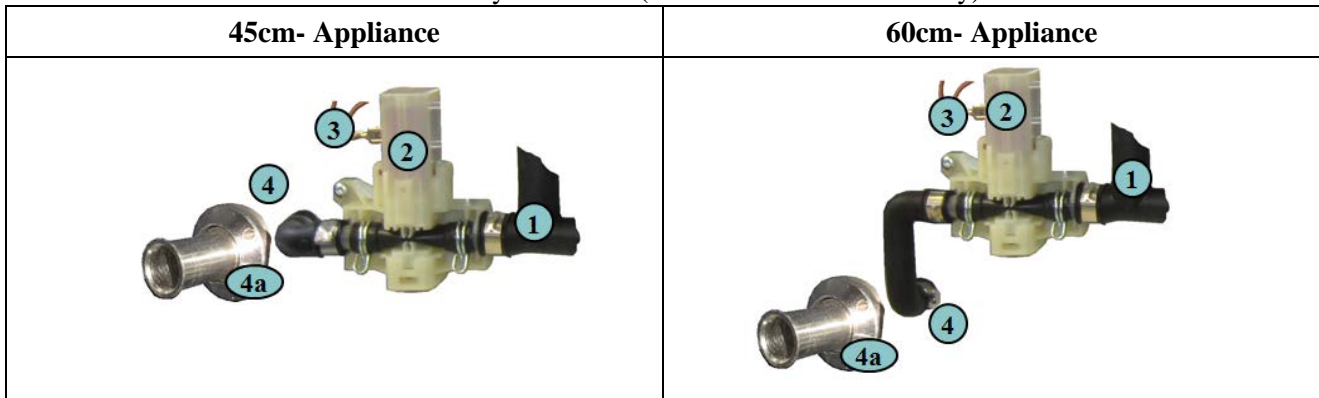
! The new heater (position of thermostat) is covered in PSS2, which will also be added in PSS1 for new production

(3) Water Outlet Zone

This zone gets activated when the descaling function is selected. During the descaling process, the wax actuator gets the voltage and expands. Due to this expansion the lower part of actuator moves down and the hose is open. Descaled liquid passes through this open hose and comes out of outlet. During this function, place a baking tray under the outlet

This Zone contains:

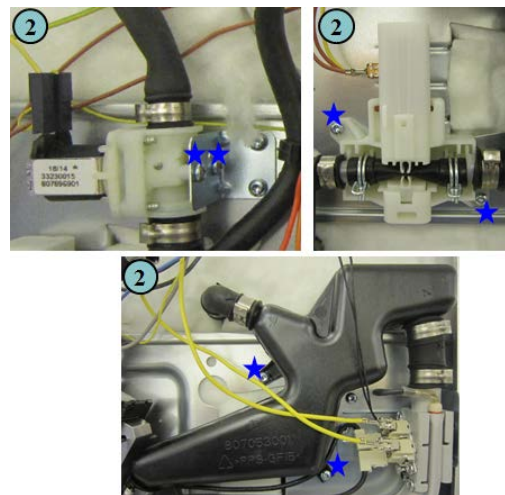
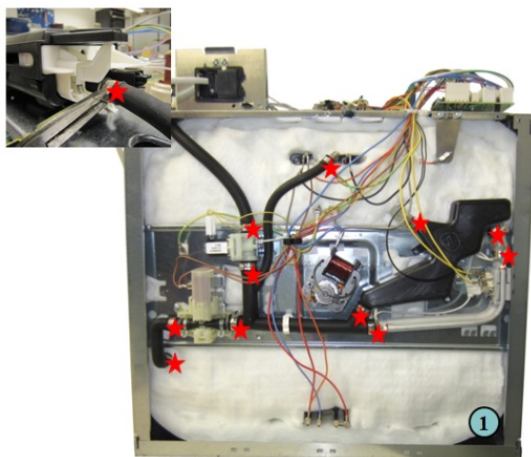
1. Water loading hose
2. Wax Actuator
 - Voltage: 230V AC 50Hz
 - Resistor: 1360 Ohm
3. Wax Activator connected to OVC 3000EOS
4. The descaled water comes out by the out let (4a. Outlet view from cavity)



3.2.7.1 DISASSEMBLE / ASSEMBLE OF MODULE 2 “STEAM GENERATOR”

DISASSEMBLE




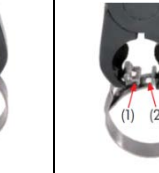
1. Release the required clamp's* ★ to dismount the individual components in the Steam Generation Zone
2. After releasing the clamp's*, unscrew ★ the screws for the components to be replaced
3. Release the wiring harness



ASSEMBLE

1. Replace the component and screw it in the correct position
2. Clamp* the disconnected hoses by proper insertion
3. Connect the wiring harness

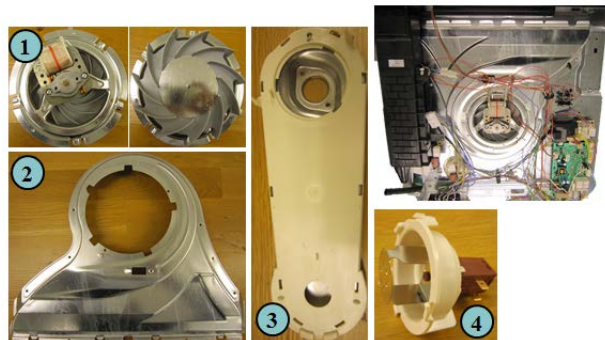
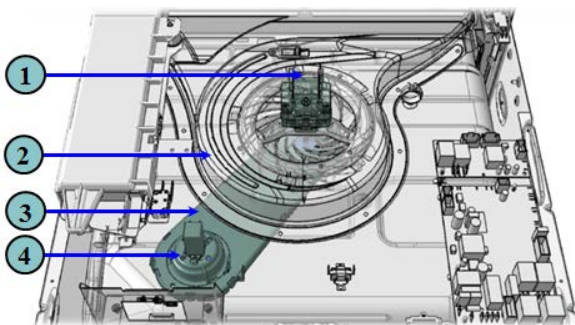
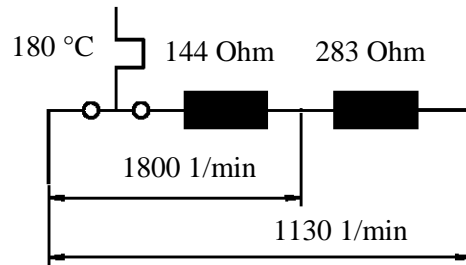
* Clamp's: Use the hose clamp pliers (Supplier: Würth / Gedore) to release the clamps.

Würth		Gedore	
Disassembly	Assembly	Disassembly	Assembly
			
Unlatch the hose clamp via inner cheeks of the pliers.	Place the pliers under the locking point and open the clamp	Place the hose clamp pliers to the hose clamp	Latch the hook (1) into the locking point (2) of the left shaft
			To latch and to unlatch the hose clamp, you need to respectively rotate 180° the hose clamp pliers.

3.2.8 MODULE 3 “STEAM EXHAUST”

The Steam Exhaust system provides the channel for the hot air to escape from the cavity when it's not required or to maintain the required humidity levels.

- Radial Air Ventilator
 - Voltage : 230V AV 50Hz
 - Power : 36/26W
 - Resistor : 144/283 Ohm
 - Speed : 1800/1130 1/min
- Steam Exhaust Cover
- Air Channel
- Actuator



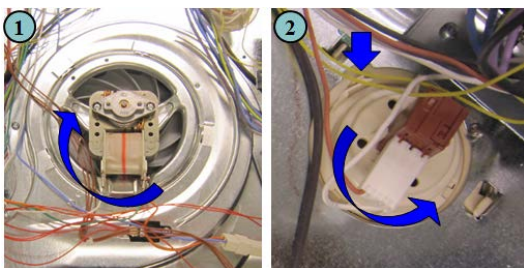
! GES (Reffer to chapter 3.3.8) is implemented in all new production replacing Steam Exhaust

3.2.8.1 DISASSEMBLE / ASSEMBLE OF MODULE 3 “STEAM EXHAUST”

Access to sublevel components check chapter 3.2.3

DISASSEMBLE

- Radial Air Ventilator : disconnect the harness and rotate the component holding the motor
- Actuator : disconnect the harness , unsnap and rotate the component



ASSEMBLE

Place the component in position and rotate in opposite direction till it fits perfectly, connect the wiring harness.

3.2.9 MODULE 4 “HUMIDITY SENSOR”

The humidity sensor measures the relative humidity and the amount of humidity in the cooling channel

Humidity is controlled over 3 levels (Low, Medium, High) for combi steam functions. Sensor is not used for Full steam functions (99°C)

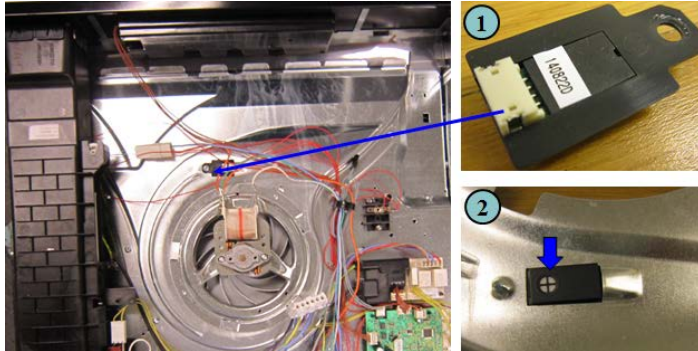
Humidity control set temperature working range: 80°C to 230°C. Temperature control (humidity saturation) below 80°C.

Two humidity values are going to be compared in order to reach the humidity target for a specific function/recipe:

- Humidity index (from the humidity sensor).
- Estimated humidity in the cavity.

Humidity sensor is assembled on the Steam Exhaust Cover and the sensor is exposed to the air flow

1. Humidity Sensor
2. Sensor location : exposed inside the cooling channel



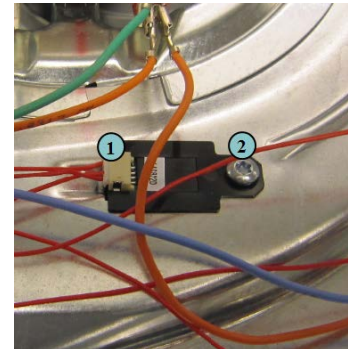
3.2.9.1 DISASSEMBLE / ASSEMBLE OF MODULE 4 “HUMIDITY SENSOR”

DISASSEMBLE

1. Disconnect the Wiring harness
2. Unscrew and lift the Humidity sensor

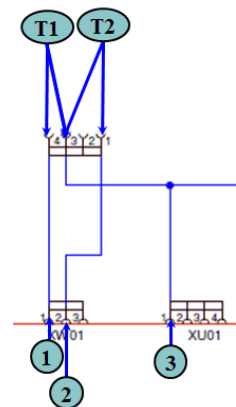
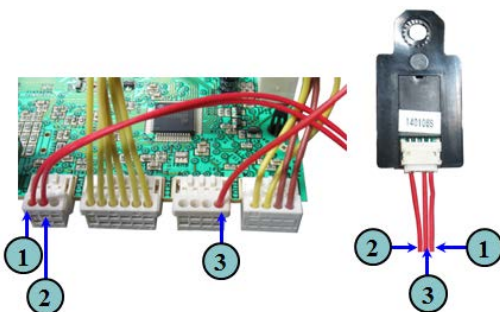
ASSEMBLE

1. Replace the Humidity sensor in the correct direction.
2. Screw it to the Steam Exhaust Cover and connect the Harness



Wiring Harness of Humidity sensor

1. A1
2. 2. Ground (GND)
3. 3. +5VDC



Test points for the Humidity sensor functioning; T1: 9.46 kOhm, T2: 1630 Ohm

3.2.10 MODULE 5 “CONDENSATION EVAPORATOR”

This heating element is to support the evaporating of condensation in the cavity, which occurs during the steam cooking and to get a dry cavity after the cooking process.

Functions supported with Evaporator:

- Full Steam function
- Combi Steam functions with high humidity level.

Functions supported without Evaporator:

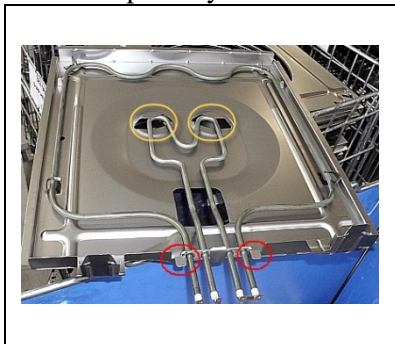
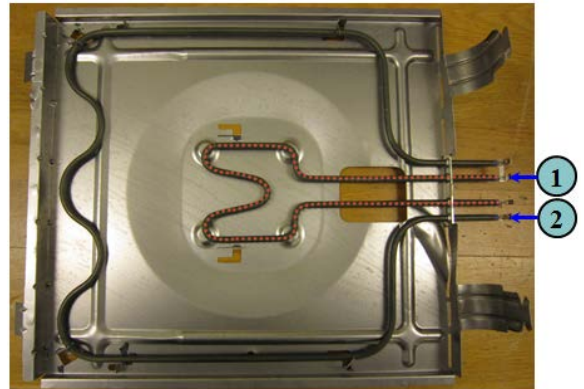
- Combi Steam functions with low humidity high temperature
- Function with low set temperature <40°C (Yoghurt, Dough)
- Sous vide function: the evaporator can not be used in order not to compromise the food quality (use of evaporator leads to uneven cooking between the different levels). Evaporator in this function just used for dehumidify phase.

1. Condensation Evaporator:

The condensation heater is switched in serial with the bottom heater and is activated via relay KR01 on the food probe electronic. Heating result 2 x 250W

2. Bottom Heating:

The bottom heater 1000W is activated via relay KR02 on the food probe electronic separately.



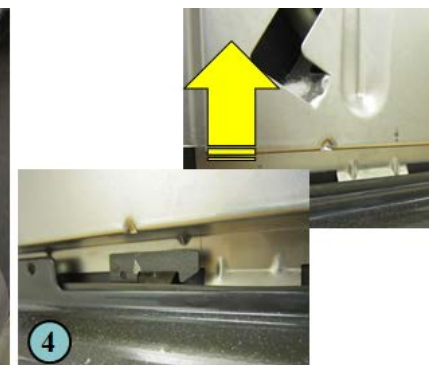
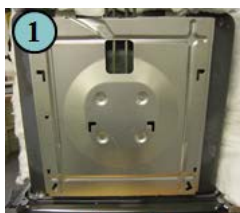
New Variant of Heating element support is provided with two support brackets to hold the Condensation Element in correct place and to avoid the dents in the cavity.

3.2.10.1 DISASSEMBLE / ASSEMBLE OF MODULE 5 “CONDENSATION EVAPORATOR”

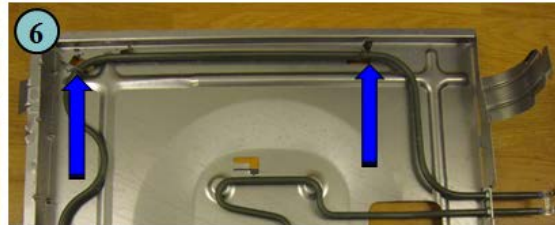
Disassemble / Assemble of this module mean the complete opening of the side, top, bottom housing and opening the glass wool.

DISASSEMBLE

1. Bottom Heater Shield
2. Remove the wiring harness
3. Flatten the sheetmetal in the rear side (both sides) of the oven and slide the shield out of the slots
4. Slide the shield to come out of the front slots of the oven



5. Lift the sheetmetal
6. Twist the sheetmetal and take out the Bottom Heating Element



ASSEMBLE

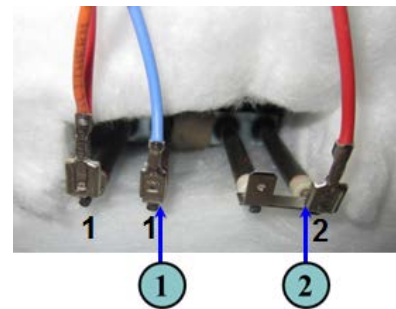
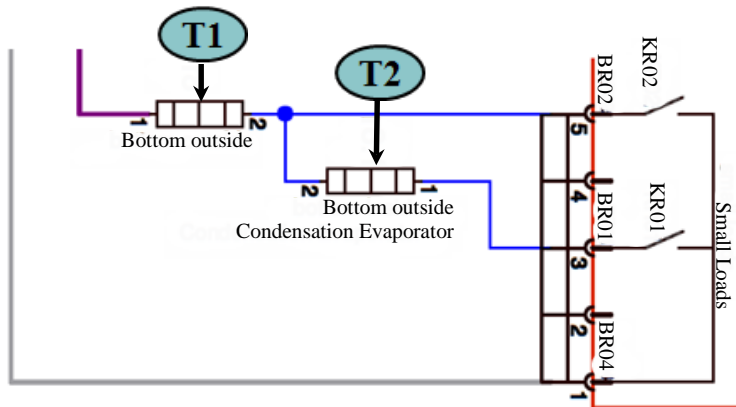
1. Replace the part and follow the reverse process from step6 to step1 defined in disassemble process to assemble the Bottom Heating element

Wiring harness of Condensation Evaporator

Test point for the Bottom Heater T1 : Resistor: 52,9Ohm, Power:1000W

Test point for the Condensation Heater T2: Resistor: 52,9Ohm, Power:1000W

1. Connector 4,8mm
2. Connector 6,3mm



3.2.11 DESCALING FUNCTION

Step 1 needs duration 1h 42min

1. ! Remove all accessories from the cavity
2. Put the baking tray under the outlet (first shelf position) and press "Ok".
3. Put 250ml descaling agent in the water tank.



4. Fill the remaining part of the water tank with water to the maximum level.
5. Fit the water tank into the appliance and press “Ok”.

Step 2 needs duration 35min

1. Empty the baking tray and put it on the first shelf position again.
2. Press “Ok”.
3. Clean the water tank from descaling agent and fill the water tank with fresh water.
4. Fit the water tank into the appliance and press “Ok”.

Descaling reminder:

- The alarm for descaling can be ignored once or twice
- Power failure the value is stored

Water Hardness Level	Maximum time of Steaming (h)	
	For the soft reminder	For the hard remainder
1	18.0	20.0
2	18.0	20.0
3	12.0	13.3
4	09.0	10.0

3.2.12 GENERAL OVEN COMPONENTS

3.2.12.1 POWER ELECTRONICS OVC 3000

The Power Electronics OVC 3000 has successor verion OVC 3000EOS, the new power board has low power consumption in stand-by to meet the regulations on the reduction of energy consumption and there is no change in the characteristics and function.

The Difference between OVC 3000 and OVC 3000EOS is the power pack (Transformer)

The Difference on the relays

Printing: OVC 3000 : "012" --> 12V

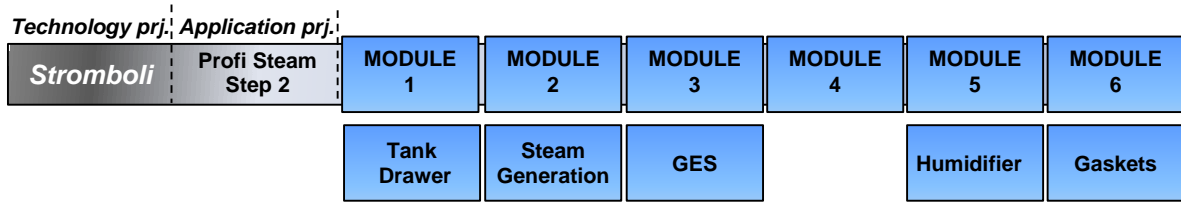
EOS 3000 : "005" --> 5V



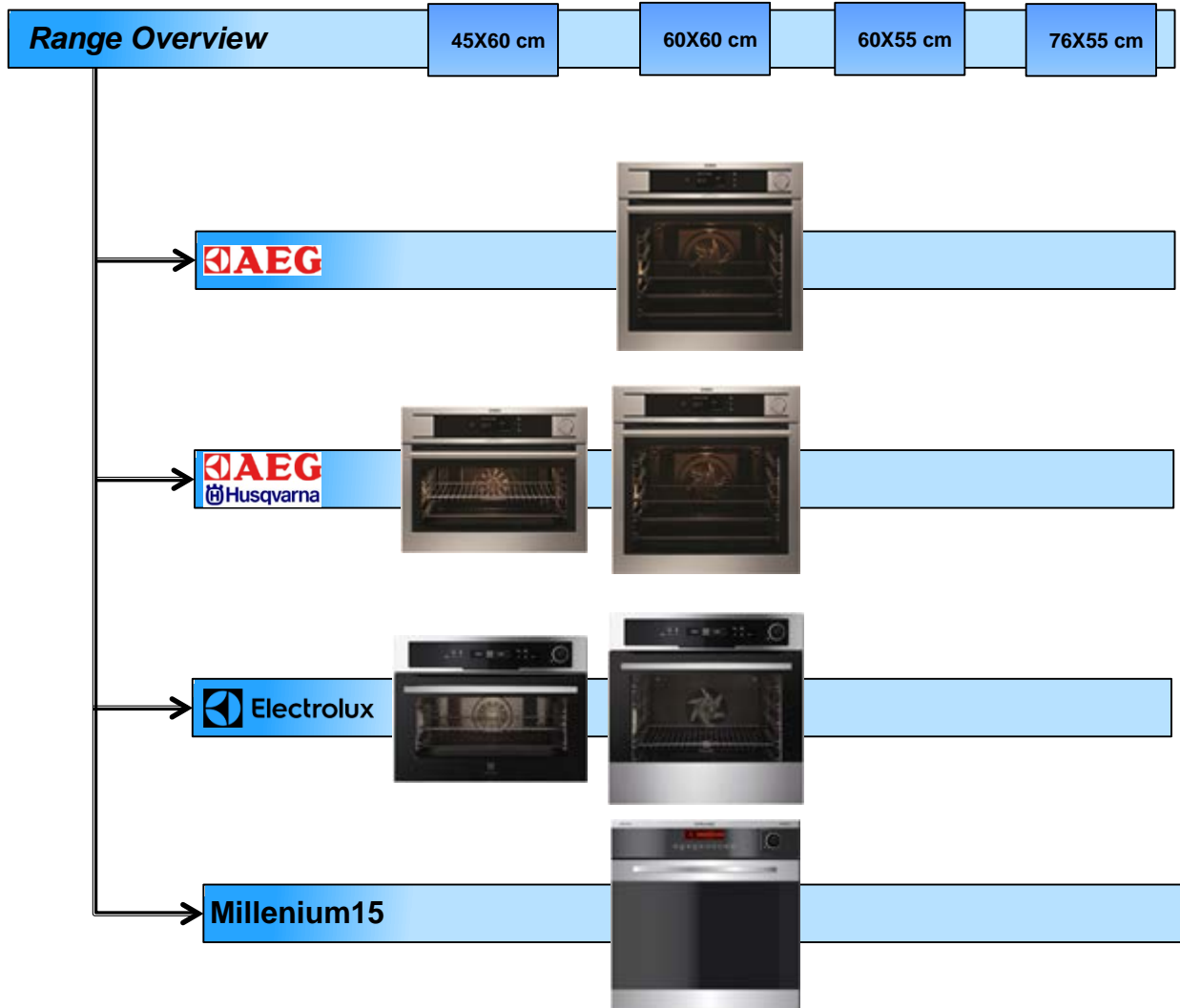
*check the doc 599 73 09-98 for a detail understanding of:

- Power Electronics OVC 3000 and 3000EOS
- Thencal features
- Electric / Electronic Components connected to Powerboard
- Failure Tree Analysis

3.3 “PROFI STEAM STEP 2” (PROJECT “STROMBOLI”)



3.3.1 EXAMPLES OF AESTHETICS ON THE VARIOUS BRANDS

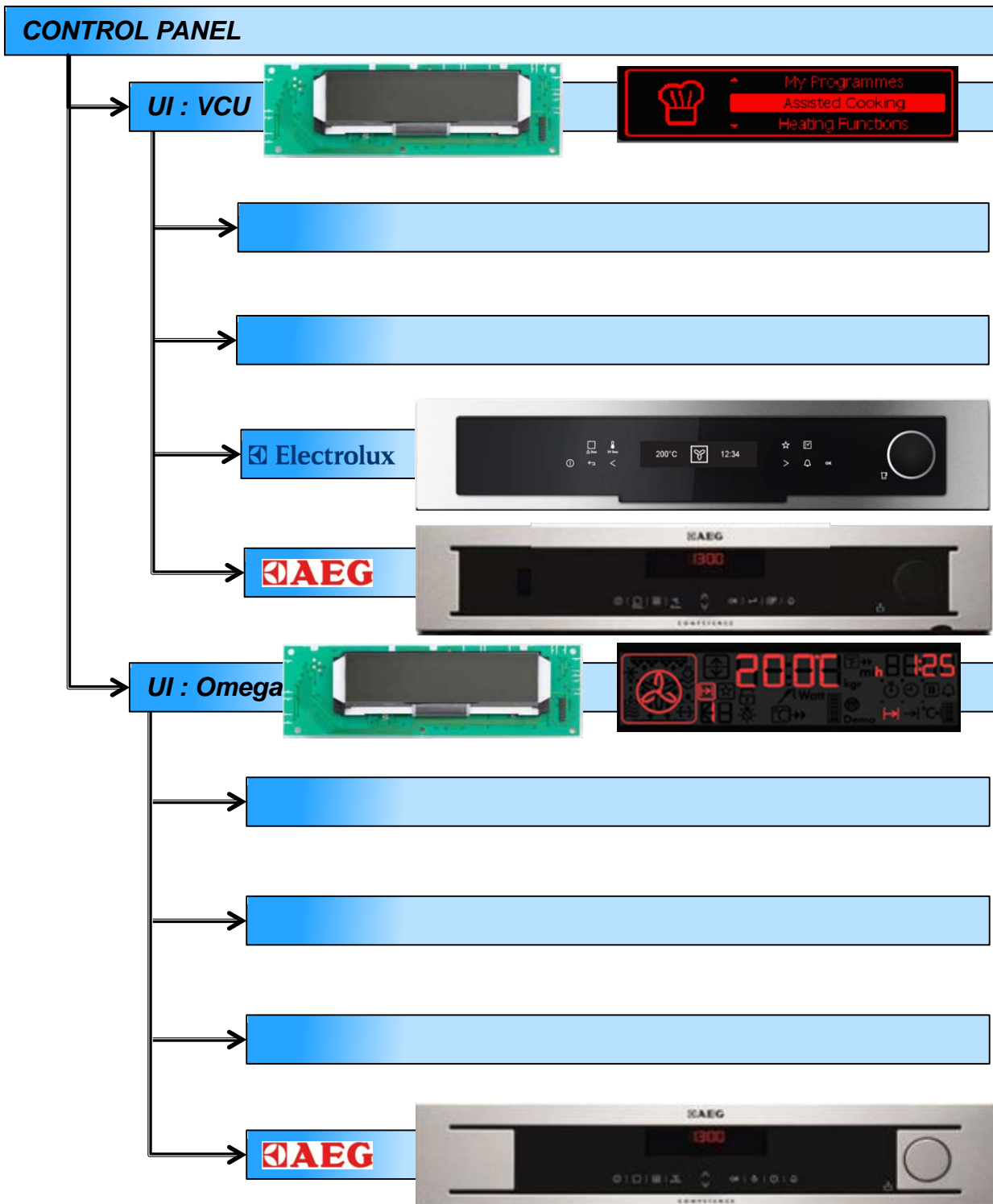


Brand		User Interface	Apollo Combi steamer 60 x 60cm	Ariane Combi steamer 46 X 60cm	Ariane Solo steamer 46 X 60cm	Apollo 76 X 55cm	Apollo 60 X 55cm
AEG Husqvarna	New Collection	VCU	✓	✓	✓		
		Omega	✓				
Electrolux	Inspiration	VCU	✓	✓			
		Omega	✓				
Electrolux	Millenium 2015	VCU					
		Omega	✓				

3.3.2 CONTROL PANEL

Etna Control Panel accomidates two types of User Interfaces VCU and Omega

3.3.2.1 AESTHETICS



Reffer below documents for detail description and servicebility of the UI

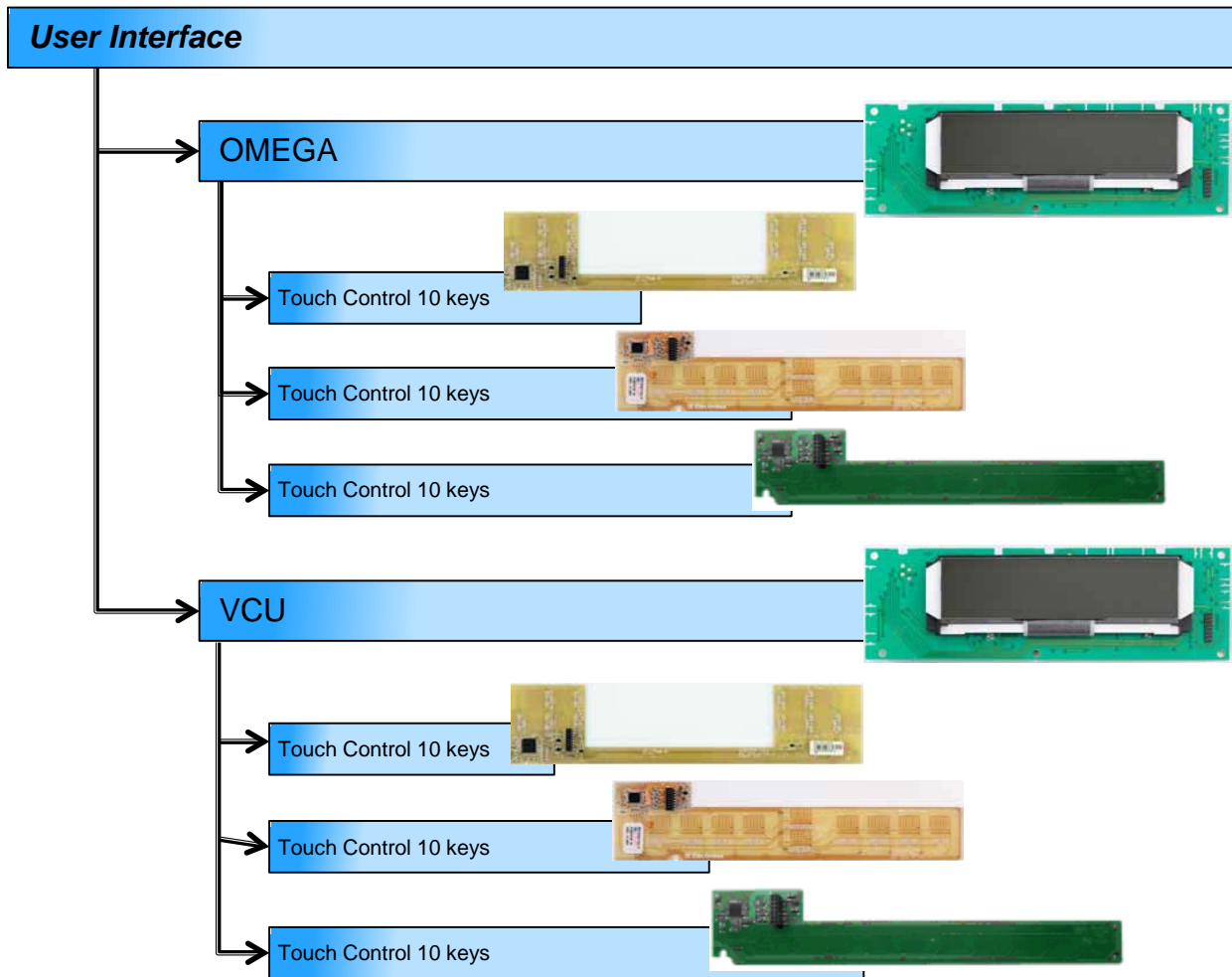
VCU = 599 73 44-69

Omega = 599 73 44-70

User Interface reference documents covers;

- Panels assembly
- User Interface configurations
- Error codes

3.3.2.2 USER INTERFACE



Refer below documents for detail description and serviceability of the UI

VCU = 599 73 44-69

Omega = 599 73 44-70

User Interface reference documents covers;

- Panels assembly
- User Interface configurations
- Error codes

3.3.2.3 CONTROL PANEL DISASSEMBLE / ASSEMBLE

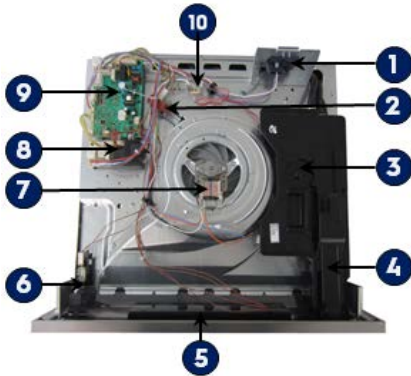
Refer to chapter 3.2.2.3

3.3.3 ACCESS TO SUB-LEVEL COMPONENTS

Refer to chapter 3.2.3

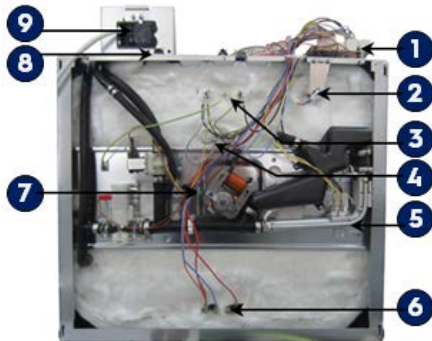
3.3.4 OVER VIEW OF SUB-LEVEL COMPONENTS

Top View with removing Top Cover



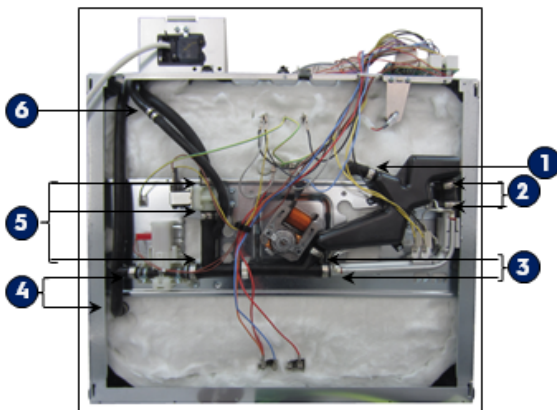
1. Power supply
2. Actuator
3. Micro switch for water tank
4. Water drawer and water tank
5. User interface VCU, Omega
6. Door switch for illumination
7. Air ventilator
8. Food probe-electronic + cover
9. Power electronic OVC3000EOS
10. Safety-thermostat

Rear View with removing Rear Cover

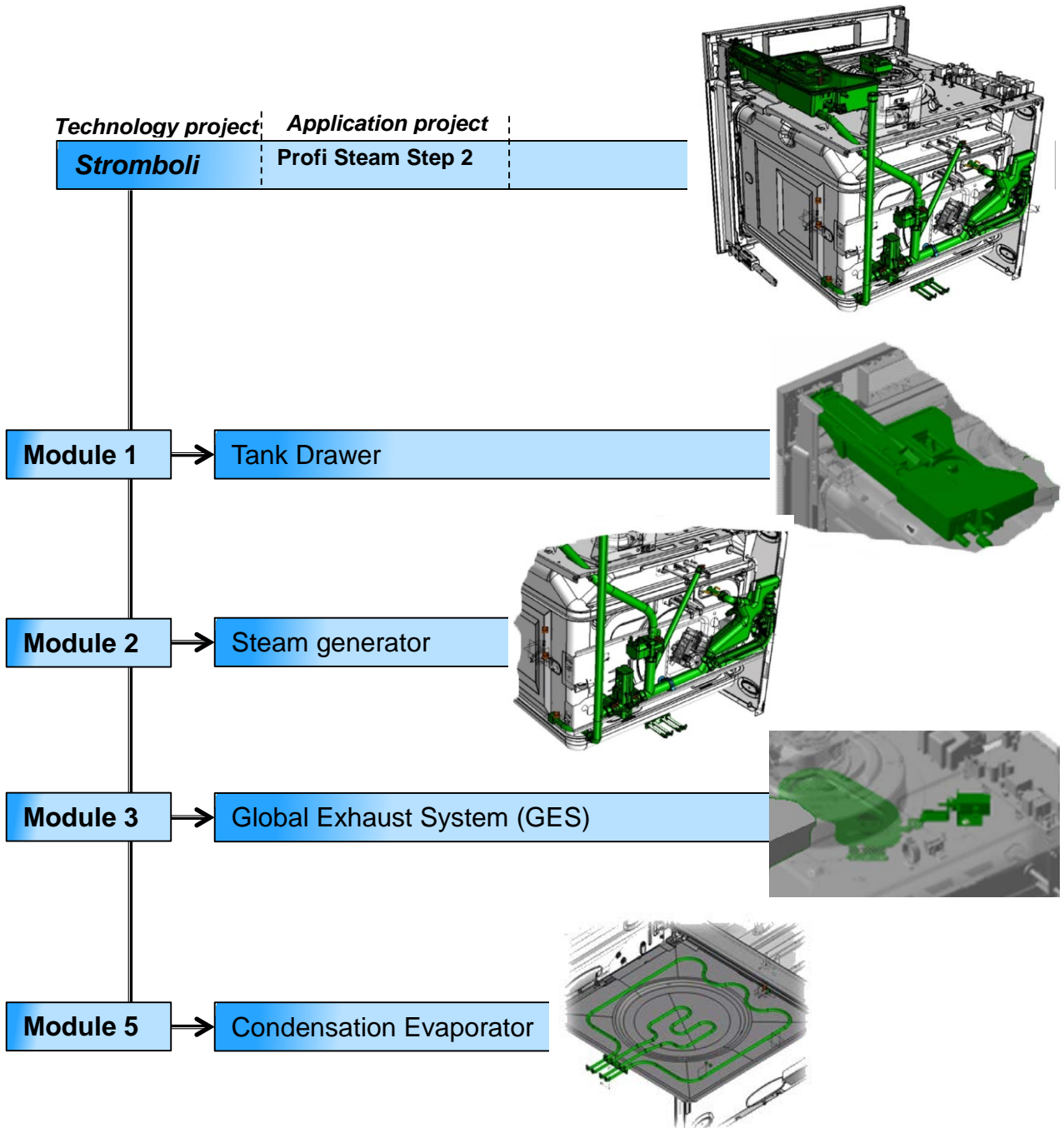


1. Power electronic OVC3000EOS
2. Temperature sensor PT500
3. Heater grill Apollo 2300W
Ariane 1900W
4. Ring heater Apollo 2400W
Ariane 1650W
5. Steam generator 1500W
6. Single Bottom heater 1000W
Condensation evaporator both
heaters in serial 500W
7. Hot air ventilator Resistor 130 Ohm
8. Sidekick connection
9. Power supply

Hose Clamp locations and Dimentions



1. 105117330/8
12mm - 22mm (D16)
2. 899669804108/5
20mm - 32mm (D20)
3. 899669804108/5
20mm - 32mm (D20)
4. 105117330/8
12mm - 22mm (D16)
5. 899669804108/5
20mm - 32mm (D20)
6. 105117330/8
12mm - 22mm (D12)



3.3.6 MODULE 1 “TANK DRAWER”

This Module contains a Tank Drawer which provides the channel to fill the Water Tank. The Water Tank lower housing supplies water to the Steam Generator.



Tank Drawer

1. Push / Push the circular slott to open / close the Tank Drawer.
2. Water is filled in the slot provided in the front end of the Tank Drawer. Tank Drawer is not detachable from the Water Tank.



Water Tank (Water Laod Capacity 900ml)

1. Tank Drawer to fill the water in the Water Tank
2. Lower Housing to store the water
3. Electrical connection for water level sensor
4. Water level sensor reads the level of water in the tank and indicates it on the User Interface
5. Upper Housing
6. Air ventilation
7. Slot for rear fixation of Water Tank







! To avoid the blocking of the water drawer on the panel, it is necessary to use the right distance fixation



Brand	Shape & Color
 Electrolux Inspiration 3D	
 Electrolux Inspiration 2D	
 AEG New Collection Millennium	

8. Over Filling
9. Water inlet
10. Floater with ring magnet
11. Reed-switch

Water Level Indication on User Interface

Water Level	Empty ~3,8 Ohm <200ml	Full ~21,8 Ohm approx.200ml – 1100m	Overfill 0,0 Ohm >1100ml
Sectional View			
VCU	Please fill water in the tank	No message	Please stop filling
OMEGA (White Display)	Symbol empty 	Symbol Full 	Symbol Over Full 

3.3.6.1 DISASSEMBLE / ASSEMBLE OF MODULE 1 “TANK DRAWER”

DISASSEMBLE

1. Unlock the Clamp* and release the Tube
2. Remove Water Tank connection from the OVC 3000
3. Press the fixation snaps to lift the Water Tank



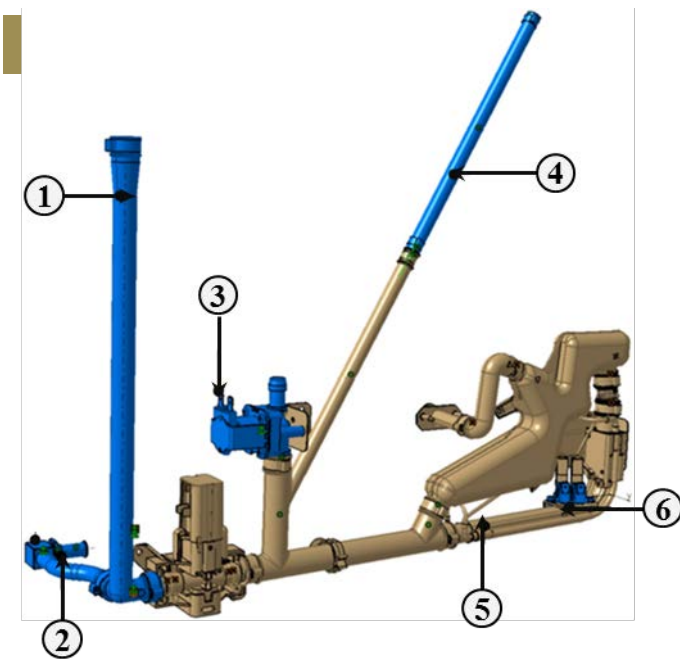
4. Rotate the Tank Drawer Handle to remove it during the replacement of tank
5. Lift the Water Tank from the rear side in an angle to release from the lower snaps and slide from upper notch.



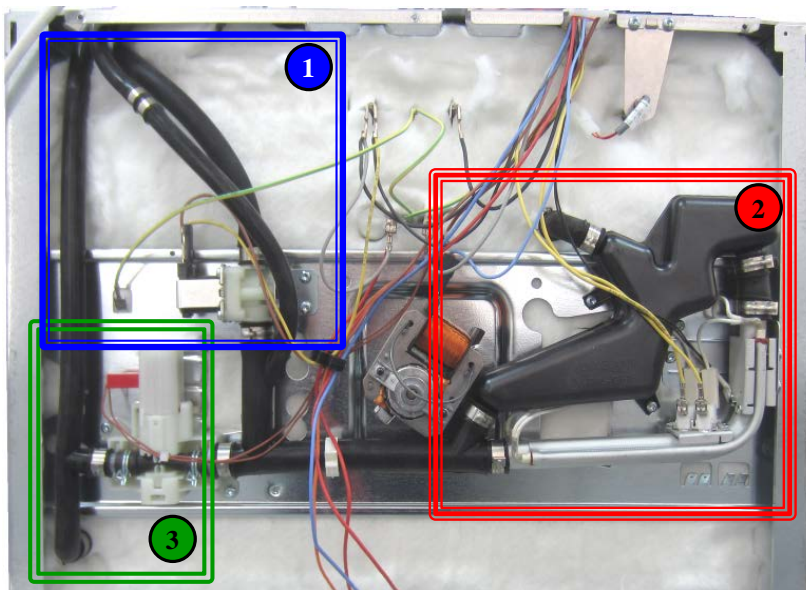
Repeat the steps from 5 to 1 with the reverse activities to Assemble the Water Tank Clamp*: Use the special tool refer chapter 3.2.7.1

3.3.7 MODULE 2 “STEAM GENERATOR”

The Steam Generation System is similar to Etna with the minor changes



1. Descaling Elbow
2. Descalling Pipe AL alloy
3. Inlet Valve
4. Air Vent Connection for 60cm appliance
5. Steam Generator
6. Thermostat Cut-Out

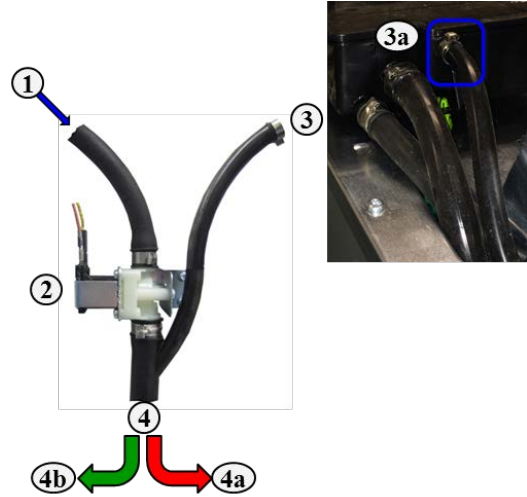


(1) Water Loading Zone

The Water Loading Zone is similar to the Etna except the tube 3 is connected to the Water Tank

3. Air Vent is connected to the Water Tank at the slot 3

! 60cm- Appliance needs an additional extension hose to the water tank.



(2) Steam Generation Zone

All the technical features of steam generation zone remain same as Etna except the position of the safety thermostats

(3) Water Outlet Zone

All the mechanism remains same except the extended tube connected to the Water Tank at slot 2



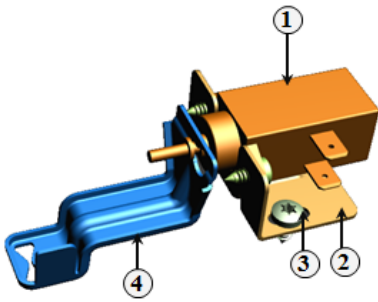
3.3.7.1 DISASSEMBLE / ASSEMBLE OF MODULE 2 “STEAM GENERATOR”

Reffer to chapter 3.1.7.1

3.3.8 MODULE 3 “GLOBAL EXHAUST SYSTEM (GES)”

The new steam exhaust system is GES contains three Modules

- Drive Module

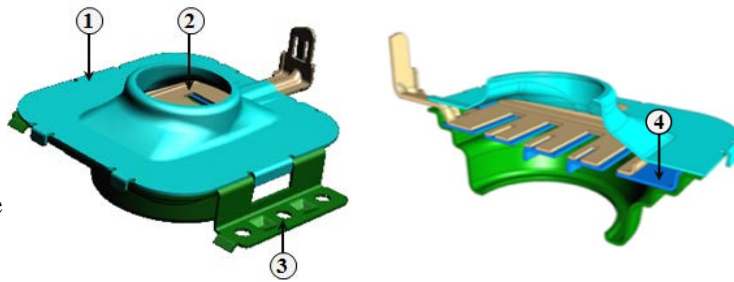


1. Actuator
2. Bracket to hold Actuator
3. Slotted hole for fixation
4. Bracket Arm

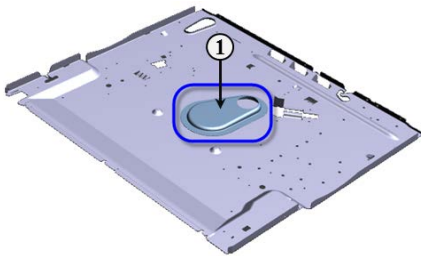
- Global Exhaust Slider Module

7. Cover
8. Sliding Grid
9. Housing
10. Fixed Grid

! Smell Filter is not available



- Steam Channel

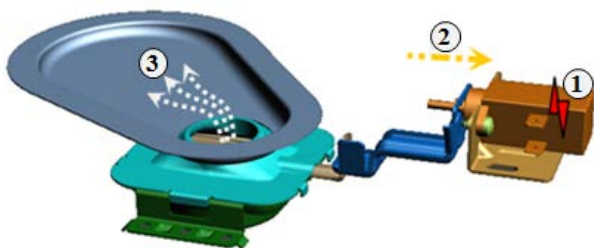


1. Steam Channel toxed to Carrier

Working Principle:

When the Drive module gets the feed it activates the sliding grid linked by Bracket Arm to have more gap for the steam exhaust.

! GES is activated when the user selects the ECO function and for all the functions the GES is open



1. Power feed to Drive Module
2. Activator moves the Bracket Arm
3. Sliding Grid is moved and the Steam is let out from Steam Channel

Sliding Grid Open	Sliding Grid Close

Reffer 3.2.8 Module 3 “Steam Exhaust” for the Radial Air Ventilator (1) and Steam Exhaust cover (2) details

3.3.8.1 DISASSEMBLE / ASSEMBLE OF MODULE 3 “STEAM EXHAUST”

- Drive Module
 1. Reffer 3.2.3 Access to Sub-Level Components
 2. Remove the electrical connections and unscrew the two screws for replacing the Drive Module



- Global Exhaust Slider Module
 1. Reffer 3.2.3 Access to Sub-Level Components
 2. Reffer 3.3.6.1 Disassemble / Assemble Of Module 1 “Extractable Water Drawer”
 3. Remove all the wiring harness, to take out the carrier
 4. Unscrew the carrier screws
 5. Lift the carrier to access the GES
 6. Unscrew the screws of GES inside the Oven Cavity

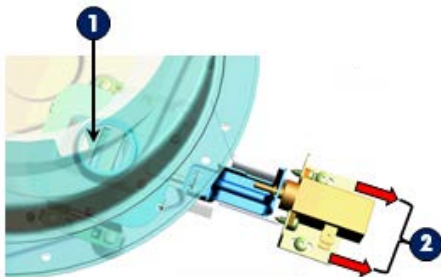
! Take care of the Glass wool during this process



Repeat the steps with the reverse activities to Assemble the GES

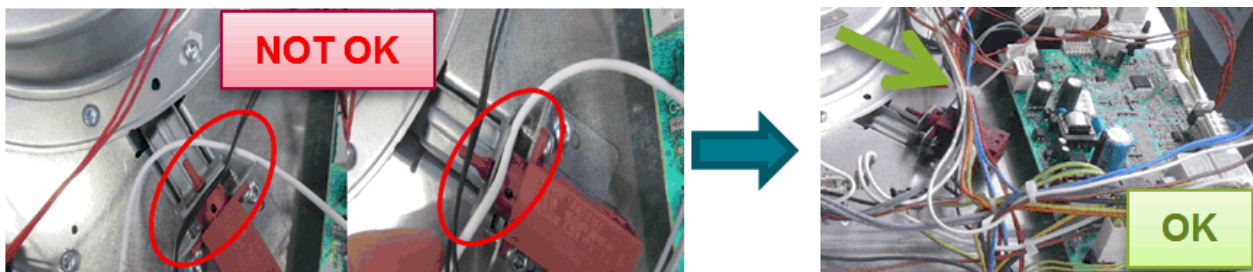
! Replacing:

- The GES and the actuator must be installed in open state



1. Sliding grid must be open
2. Before fixing the screws, pull back the support.

- Fix the wiring properly and assure that the wires are not drop in to moving parts

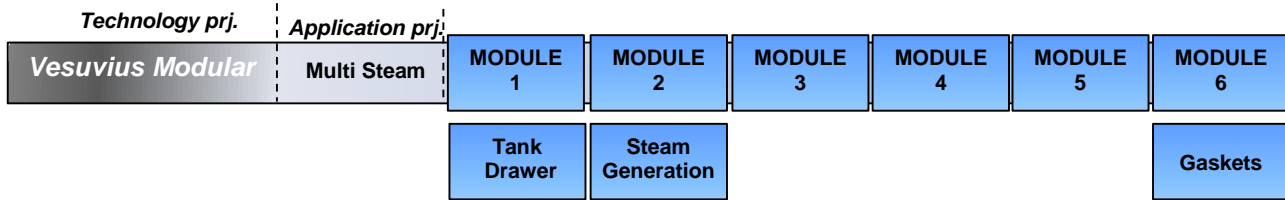


Reffer 3.2.8.1 Disassemble / Assemble Of Module 3 “Steam Exhaust” for Radial Air Ventilator (1)

3.3.9 MODULE 5 “CONDENSATION EVAPORATOR”

Reffer 3.2.10 Module 5 “Condensation Evaporator”

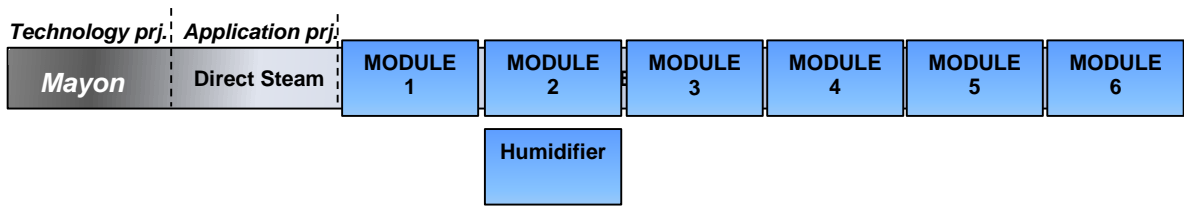
3.4 “MULTI STEAM” (PROJECT “VESUVIUS MODULAR”)



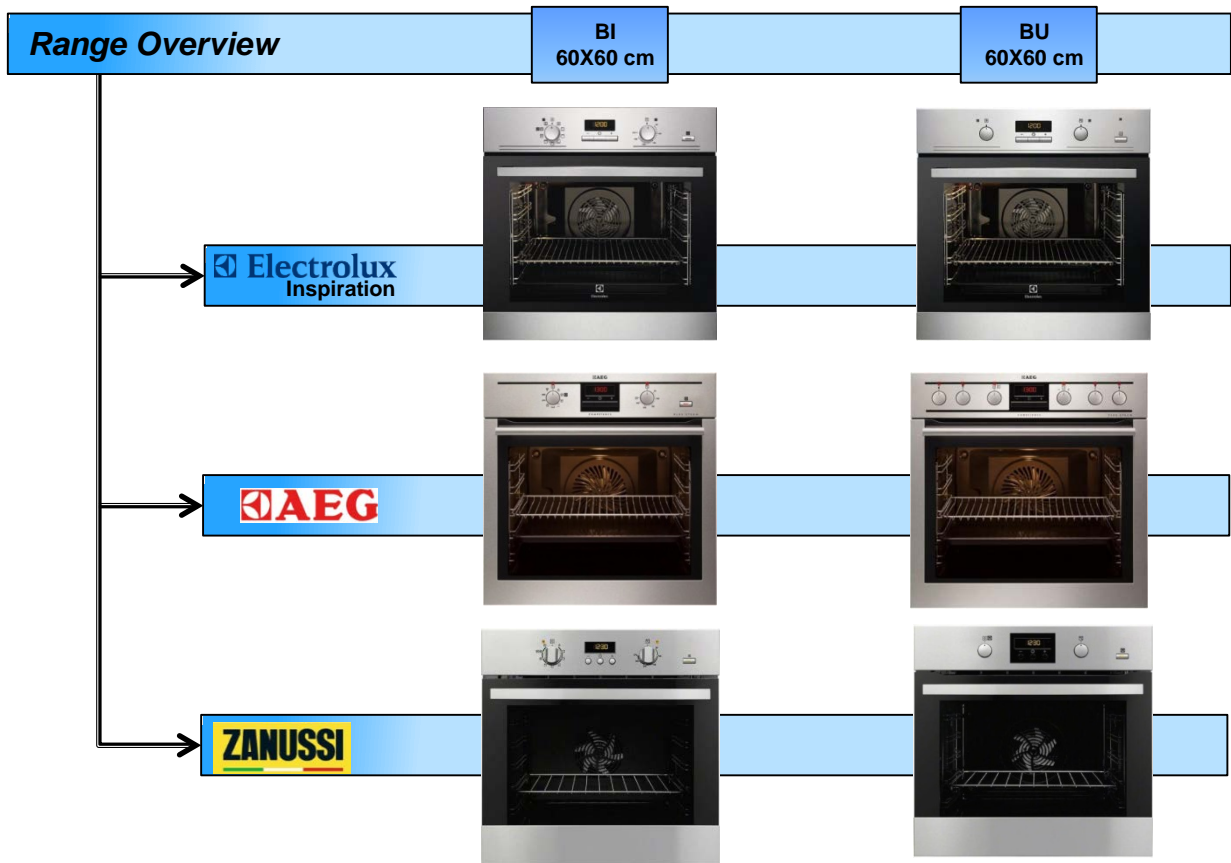
3.4.1 EXAMPLES OF AESTHETICS ON THE VARIOUS BRANDS

Document will be updated during the final check point

3.5 “DIRECT STEAM” (PROJECT “MAYON”)



3.5.1 RANGE OVERVIEW

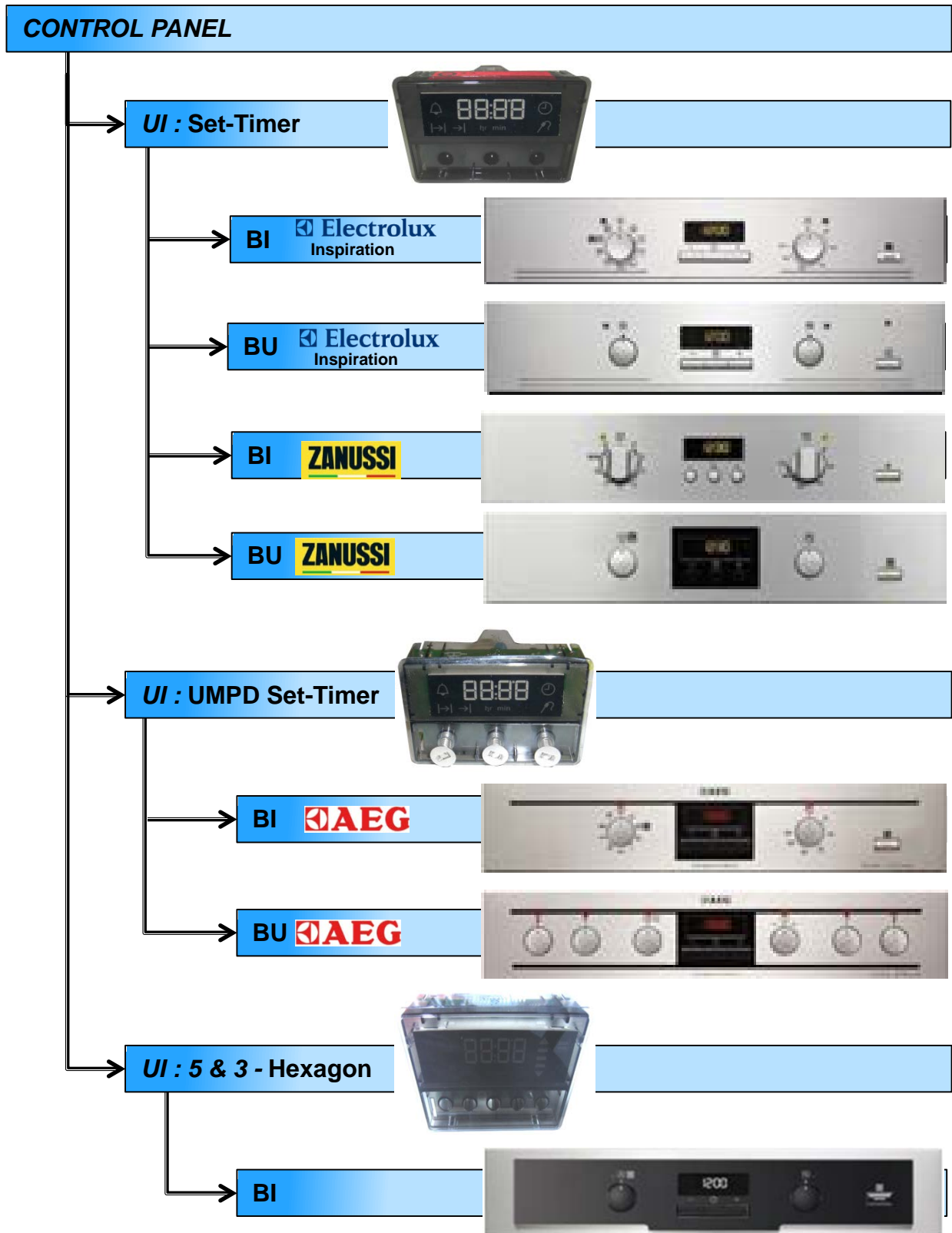


Brand		Plat	User Interface	60 x 60cm	60 X 60cm
Electrolux	Inspiration	Sputnik	Set-Timer white	✓	✓
AEG	New Collection	Apollo	UMPD Set-Timer red	✓	✓
Zanussi	-	Sputnik	Set-Timer amber	✓	✓

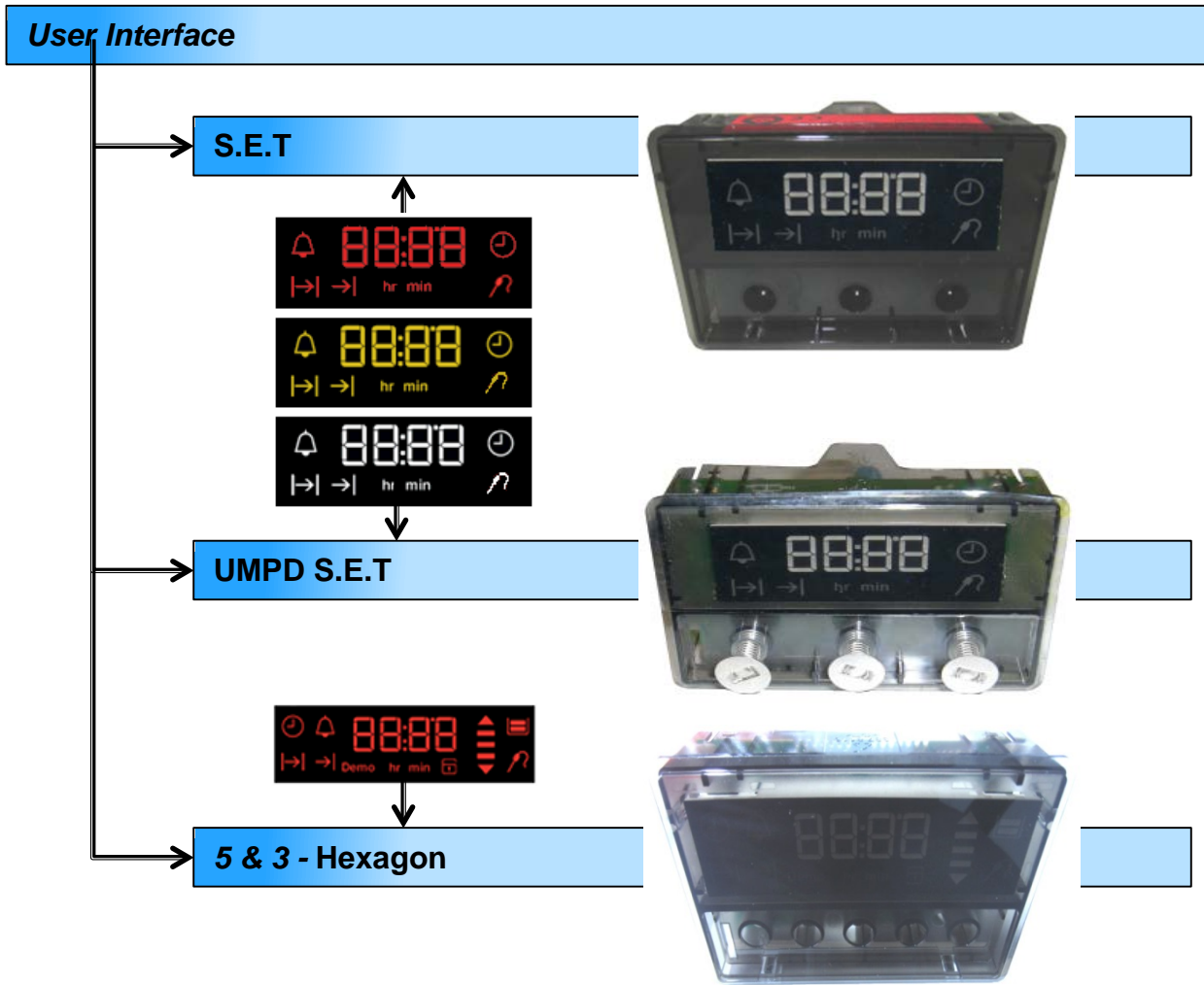
3.5.2 CONTROL PANEL

Mayon Control Panel accommodates User Interfaces UMPD Set-Timer , Set-Timer and Hexagon

3.5.2.1 AESTHETICS



3.5.2.2 USER INTERFACE



Refer below documents for detail description and serviceability of the UI

S.E.T : 599347439

UMPD S.E.T : Food Probe sensor is used in this version of S.E.T

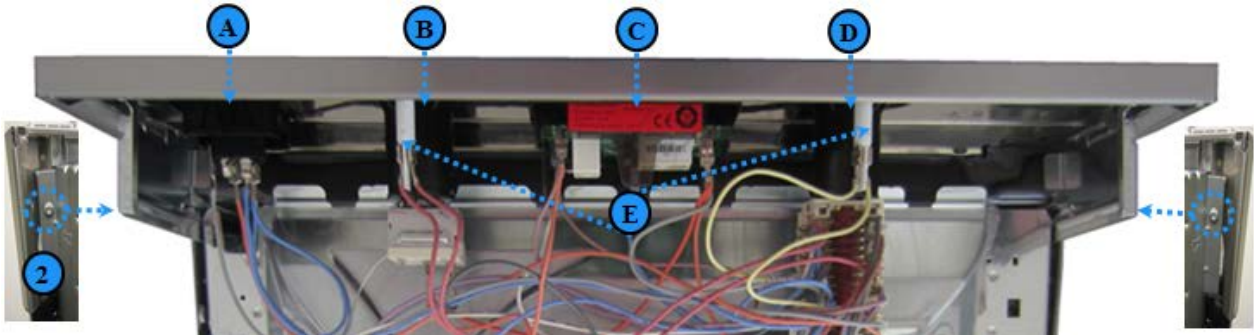
Hexagon : 599737823

SPUTNIK PLATFORM

3.5.2.3 CONTROL PANEL DISASSEMBLE / ASSEMBLE

DISASSEMBLE

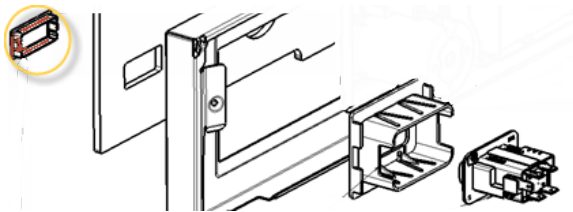
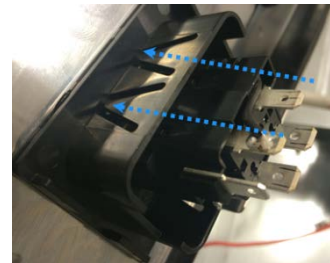
1. Check the chapter 3.5.3 to access the wiring harness
2. Unscrew the Control Panel 2 * Screws , if you need to access the subcomponents



A. Push button for steam function

Push button is snapped to the plastic holding glued to the panel. Lift the four snaps to take out the Push Button.

Cover for button hole is added for 3D glass panels which is snapped



B. Temperature Selector

1. Press and wait for the knob to pop out
2. Pull the knob opposite to the appliance direction
3. Unscrew the 2 *screws to take out the temperature selector



C. Set – Timer, UMPD, Hexagon

The UI is snapped to the plastic holding glued to the panel, Lift the two snaps to take out the UI

D. Oven Function Selector

Follow the same procedure of Temperature selector (B)

E. Indicator Lights

Untread holding the Light holder





3.5.3 ACCESS TO SUB-LEVEL COMPONENTS

Dismounting Outer Shilded

1. U – Chassis : Removing chassis is not defined since it's not available as spares and more over changing chassis is replacing the complete oven

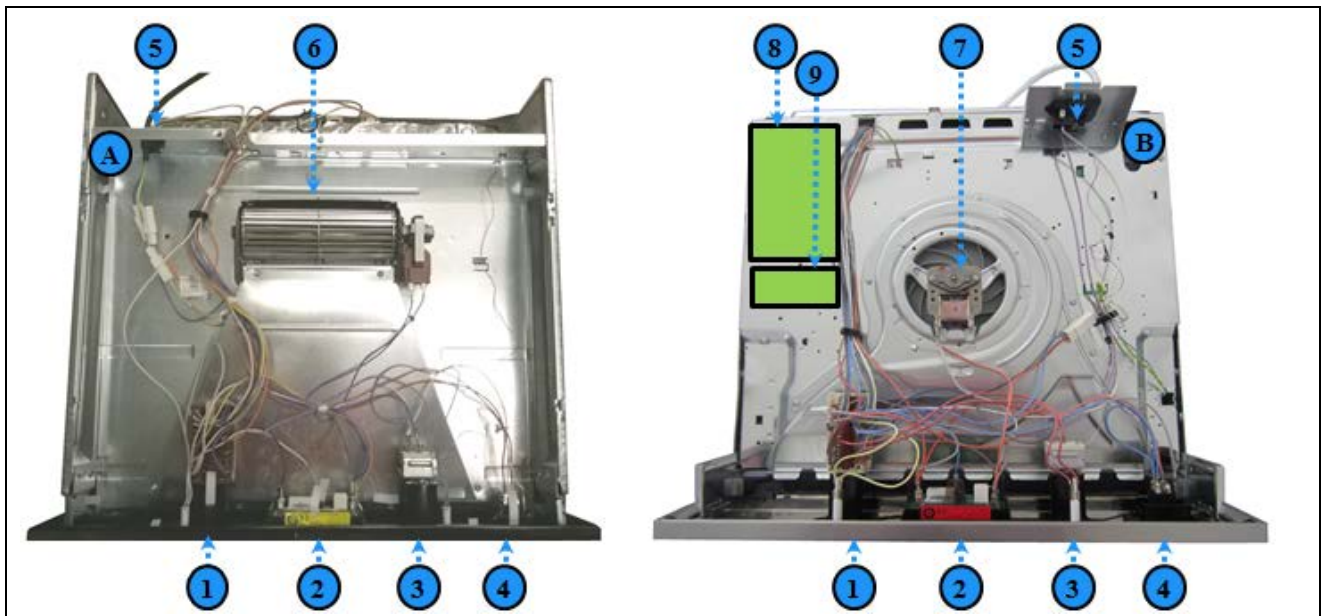
Accessing Internal Components

2. Upper Protection Cover : Remove the 6 *  screws to open
3. Back Protection Cover : Remove the 4 *  screws to open



3.5.4 OVER VIEW OF SUB-LEVEL COMPONENTS

Top View with removing Top Cover

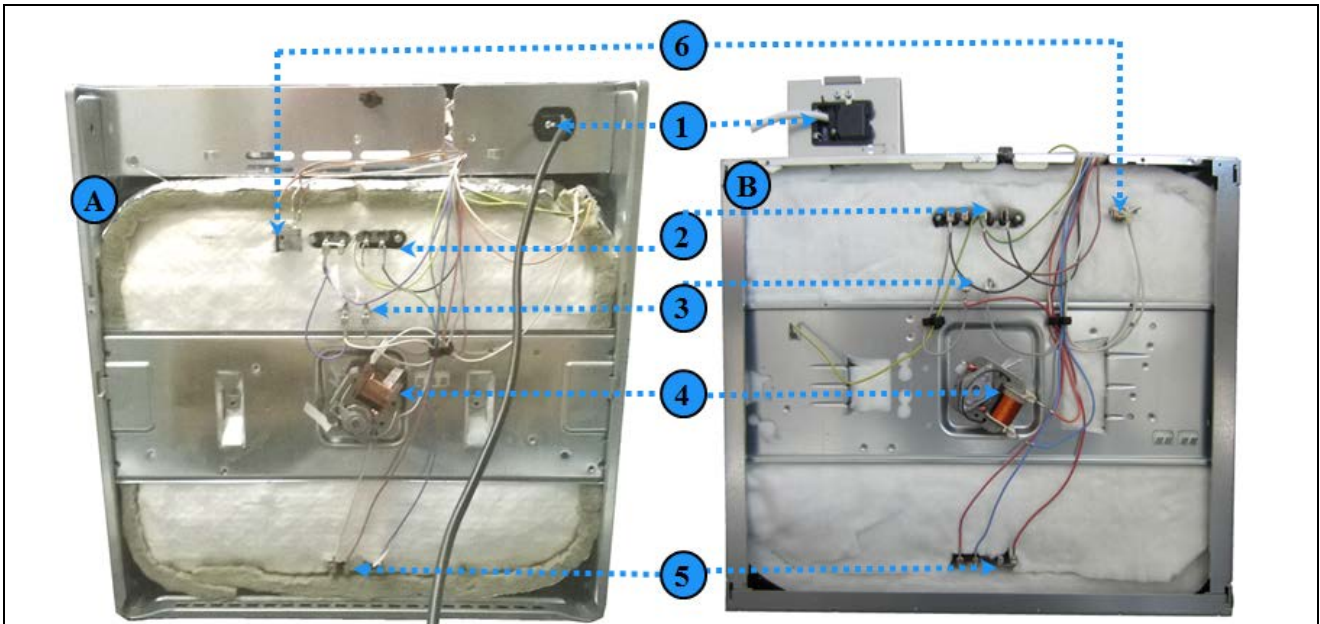


- A. Sputnik
- B. Apollo
- 1. Oven Function selector
- 2. UI : Set-Timer , UMPD, Hexogan
- 3. Temperature Selector
- 4. Push Button Steam
- 5. Power supply
- 6. Air Ventilator Tangential
- 7. Air Ventilator Radial

Variant Hexogan

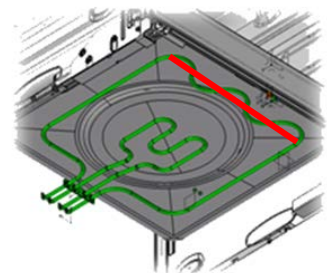
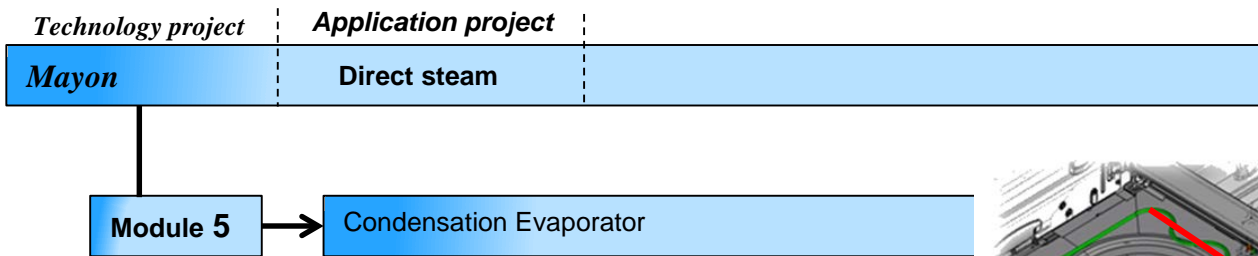
- 8. OVC 3000
- 9. Food Probe

Rear View with removing Rear Cover



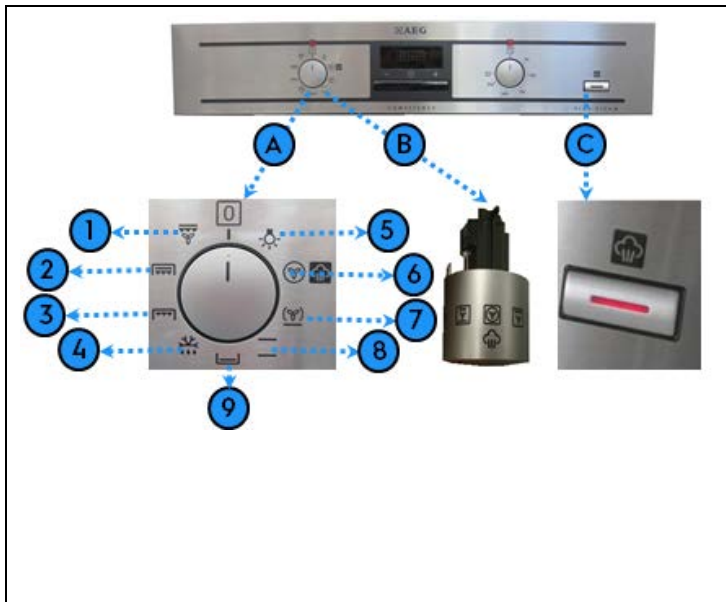
- A. Sputnik
- B. Apollo
- 1. Power supply
- 2. Top heater 1000W, Heater grill 1700W
- 3. Ring heater 1900W / 10A 2400W / 16A
- 4. Hot air ventilator
- 5. Single Bottom heater 1000W (Condensation evaporator both heaters in serial 500W)
- 6. Safety-thermostat

3.5.5 MODULES



3.5.5.1 DISASSEMBLE / ASSEMBLE OF MODULE 5 “CONDENSATION EVAPORATOR”

Refer chapter 3.2.10.1



3.5.6 STEAM FUCTION

A. Built-in : Steam function is printed on the panel

1. Grill + Top heater + Hot ventilator 1700W + 1000W / 14,00A
2. Grill+Top heater 1700W + 1000W / 14,00A
3. Grill 1700W / 9,75A
4. Defrosting 70W / 0,30A
5. Lamp 40W / 0,17A
6. Ring heater 2400W / 10,60A & Ring heater + Steam 2400W / 2x250W / 12,75A
7. Ring + Bottom heater 2400W + 1000W / 14,80A
8. Top- Bottom heater 1000W / 1000W / 9,30A

9. Bottom heater 1000W / 4,77A

B. Built-under Steam function is printed on the knob

C. Push button activates the Steam function: By pressing the push button, you activate the condensation evaporator to generate steam.

3.5.6.1 STEAM PROGRAM

Program : Hot air with steam function

Temperature adjustment : 200°C

Max. Water filling : 150ml (1)

Hot air ventilator : on

Air ventilator : on

Ring heater : on

Condensation evaporator : on

Power : 12,75A
(16A)

Temperature reached : 3x switched off ring heater and condensation evaporator

Water compl. Evaporated: after 16 -17 min. (2)

The condensation evaporator generated by the water filled the required steam for the cooking process.



3.5.6.2 CAVITY CLEANING

It is necessary to remove the limestone after each cooking cycle

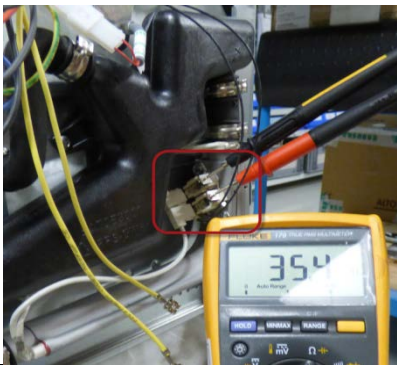
- Procedure:
- 150ml vinegar on the limestone
 - Switch on for 15min the oven (condensation heater)
 - Clean the oven



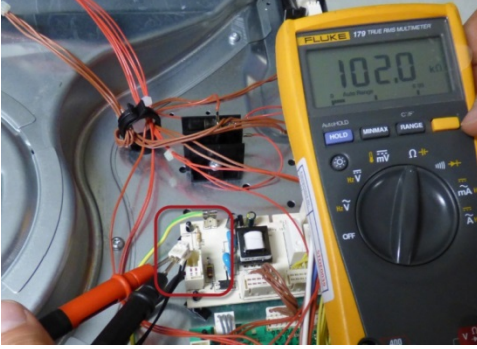
4 ERROR CODES FOR STEAM FUNCTION

F142 (NTC thermal sensor out of normal range): Go through each step below, if any of the component in the below steps is showing the abnormal behavior then plan the replacement of the spare part to avoid the F142

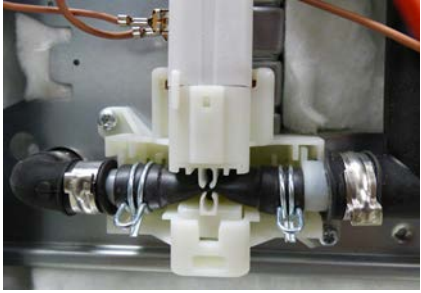

1. Check on steam generator - check ohmic value in cold condition

Correct Behaviour	if no damages present on steam generator, nominal ohmic value is 35 Ohms (tolerances(33.1~36.5)) @ 230 V
Procedure : Place the tongs of Ohm Meter in the two points of the Power Supply of Safety thermostat	
Abnormal Behaviour	<ul style="list-style-type: none"> • If only one brach damaged 70 Ohms are detected • If both branches damaged you get 0L

2. Check on NTC thermal sensor - check ohmic value in cold condition

Correct Behaviour	If no damage on NTC, reference value @ 24 °C ambient temp is 102 Kohm
Procedure : Place the tongs of Ohm Meter in the rast connector	
Abnormal Behaviour	In ambient condition (steam generator cold), if measured resistance is grether than 232 K, means the ambient is too cold (oben placed in cold ambient), or if measured resistance is 0L (means NTC component presents failure)

3. Check on descaling actuator - see if descaling closed in standby

Correct Behaviour	When oven in standby, check if descaling actuator is closed in normal condition (1)	
Procedure : Place the tongs of Ohm Meter in the rast connector	1. Actuator Closed	2. Actuator Open
		
Abnormal Behaviour	If in normal condition (oven in standby), no functions runnung for more than 5 min, means descaling actuator presents failure and do not close correctly (2)	

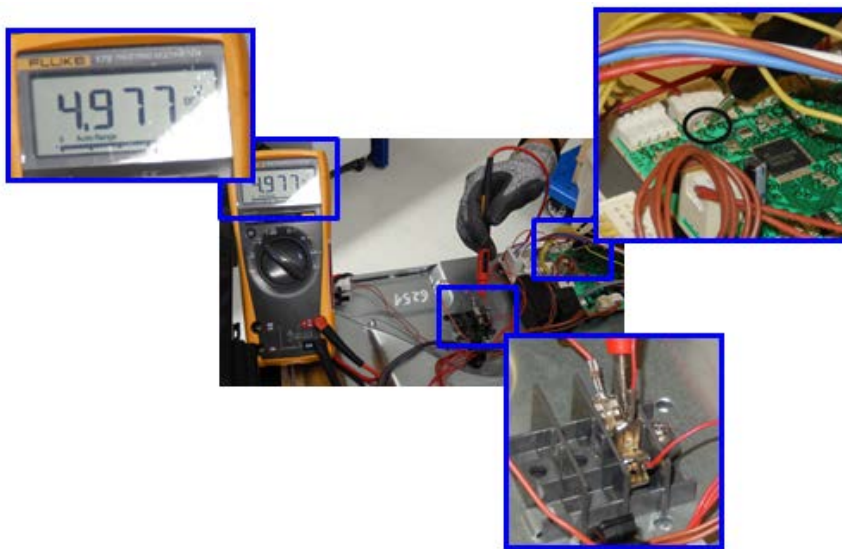
4. Check on water level sensor placed on water tank drawer

Check if the water level sensor (capacitive one) is working correctly which means it is communicating correctly the minimum water level reached in the water drawer and so the steam generator is stopped. If its not working, means steam generator do not get any information that water lack is detected in the drawer and running without water; the temperature detected by the NTC is high and goes out of range, which shows F142.

Correct behaviour: In order to check the water level sensor, a suggestion would be to run steam function (Example: full steam), without any water inside the drawer; if sensor is working fine means you get a message "Please put water in tank" on UI.

Abnormal behaviour: Run steam function (Example : full steam) without any water inside the drawer; if sensor is not working correctly, means you do not get any information about water missing , sensor is presenting failure.

F 143 (only ETNA): Humidity sensor not working

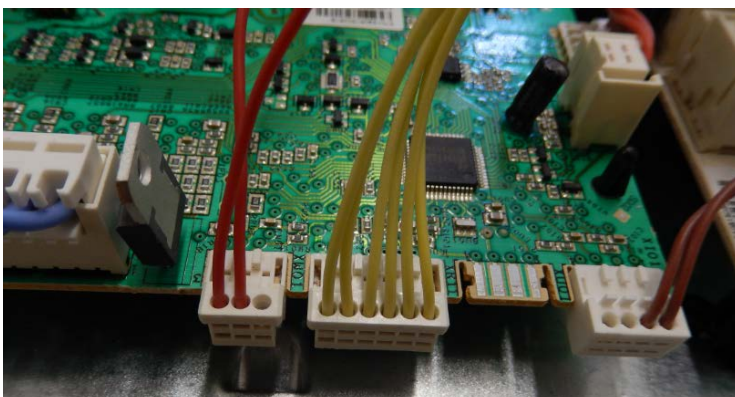


Check if power supply (4,97 V) are present on humidity power connector (make sure the oven is in supply when performing this check).

Change the spare part if the power shown in the multimeter is less then the indicated value.

F 144 (only STROMBOLI): Water level sensor in tank (reed switch based)

Check if connector is properly plugged to Power Board



5 REVISIONS

Revision	Date	Description	Author	Approved by - on
00	12/2014	<ul style="list-style-type: none">• Document Creation• Profi Steam Step 1	BSP	
01	08/2015	<ul style="list-style-type: none">• Profi Steam Step 2• Steam Error Codes	BSP	
02	10/2015	<ul style="list-style-type: none">• Direct Steam• Simplified Index with 2 levels	BSP	