

# TANGO<sup>®</sup> ace



**Thank you for choosing UNIC, the first French manufacturer of professional espresso machines since 1919.**

The manufacturer reserves the right to modify the appliances presented in this publication without notice. Read carefully the safety instructions before use.

TG9066 03/2017

**UNIC**

TECHNICAL NOTE



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# 1- SAFETY INSTRUCTIONS

This device is intended to be used only for its specific use.  
The manufacturer disclaims any liability for damage caused by abnormal use or abuse.

This device is not intended to be used by persons (including children) with reduced physical, mental or sensory capacities, or having a lack of experience and know-how, unless they are supervised or have received instructions on the use of the appliance by a person responsible for their safety.

Supervise children to make sure they do not play with the appliance.  
Do not leave the packaging elements within reach of children. These elements are potentially a source of danger.

The installation must be done by a qualified technician and following local and national regulations. He is the only one to be authorized to access the internal parts of the device for maintenance and repair.

Use only the technical and spare parts manuals for proper functioning of the machine, and avoid compromising safety.

Access to the service area is limited to persons with the necessary knowledge of safety and hygiene as well as practical experience of the device.

Leave enough free space around the machine to facilitate its use and to perform any maintenance operations.

The device **must not be**:

- exposed to the elements of the external environment or placed in damp places,
- exposed to a water jet or splashing.
- installed in areas where the jets or high pressure cleaners are used.

The device **must be**:

- placed on a stable, level and horizontal surface
- used at an ambient temperature of 5°C to 35°C (41°F - 95°F), (if it is stored at an ambient temperature below 5°C (41°F) the water circuit (boiler-piping) must be drained.)

Before connecting the power and water supplies, check that the electrical and water network are in accordance with the technical information plate of the device.

The power supply must be provided with the following safety features: power switch which completely isolates the machine from the mains (gap between contacts of at least 3 mm), efficient earthing and an effective circuit breaker for protection against earthing leaks; section of the conductors appropriate for a power capacity.

Before connecting or disconnecting the power cable, switch the main switch onto position 0. If the power supply cable is damaged, it must be replaced by the manufacturer, by its after-sales service technician or similarly qualified persons, to avoid any danger.

For electrical safety, make sure that the device is properly earthed.

The manufacturer disclaims any liability for damage caused by improper earthing.

The device must be connected to a water network with a pressure of 1 to 8 bar (0.1 to 0.8 Mega Pascal) and a tap readily accessible must be fitted in front of the water supply tube. The device is to be installed with adequate backflow protection to comply with applicable federal state and local codes.

In case of emergency (fire, surge, abnormal noise, etc.) the first thing to do is to cut off the current and close the water tap.

Be careful not to obstruct the air inlets of the machine with towels or other objects.

Beware of hot surfaces such as cup heaters, the unit heads and the hot water and steam outputs.

Never install containers filled with liquid on the top of the machine.

Beware of jets of hot water or steam.

The machine should be descaled only by a qualified technician.

## 2-STANDARD VERSIONS

The ACE range is available in three colors, Brushed stainless steel, White or Black. It is the sides and the rear skirt that change color.

DIMENSIONS	
Width	45.3 cm 17.7"
Height	77 cm 30.3"
Depth	63 cm 24.8"
WEIGHT	
	100 kg 220 Lbs
CAPACITES	
Steam / coffee boiler	6.5 liters
-	-
Coffee grounds tray	100 coffees
Numbers of cups / hour	
	+200

STANDARD				Power	
Country	Rep	Voltage (V)	Current	Total	Boiler
Philippines	0	415V tri + N 60Hz	8.5 A	6120 W	4900 W
Europe	1	400V tri + N 50HZ	8.2 A	5630 W	4500 W
Europe	2	230V Mono 50Hz	24.5 A	5630 W	4500 W
UK	3	415V tri +N 50Hz	8.5 A	6120 W	4900 W
UK	4	240V Mono 50Hz	25.5 A	6120 W	4900 W
Japan	5	200V tri +N 50Hz	12.3 A	4260 W	3400 W
Japan	6	200V Mono 50Hz	21.3 A	4260 W	3400 W
Europe	7	230 tri 50Hz	14.2 A	5630 W	4500 W
USA	8	240V Mono 60Hz	25.5 A	6120 W	4900 W
		208V Mono 60Hz	22.1 A	4600 W	3680 W
USA	9	240V tri 60Hz	14.7 A	6120 W	4900 W
		208V tri 60Hz	12.8 A	4600 W	3680 W
		220V tri 60Hz	13.5 A	5150 W	4120 W

► TANGO ACE



► TANGO ACE MT



► **MODULE FRIGO**

<b>DIMENSIONS</b>	
Width	22.5 cm 8.6"
Height	34.4 cm 13.4"
Depth	46.2 cm 18"
<b>Weight</b>	12 kg 26.4"
<b>CAPACITIES</b>	
Milk tank (liter)	4



### 3-MACHINE INSTALLATION

The machine must be installed on a horizontal plane.

A space of 5 cm (1.9") should be left all around the machine; and do not obstruct the air inlets on the top of the machine.

Provide an electricity supply corresponding to the power of the machine, a water supply and a "waste water" drain.

#### ► Preparation of the machine

The machine is delivered in a cardboard packing case and is screwed to a wooden pallet.

##### ◆ Unpacking the machine

- Cut the banding with shears.
- Open the packing case and remove the box containing the accessories.
- Unscrew the nuts holding the machine to the palette by tilting the pallet slightly.
- Separate the packing case from the pallet
- Remove the machine from the pallet and install it on wooden blocks.
- Remove the transport screws and washers.

##### ◆ Installing the machine

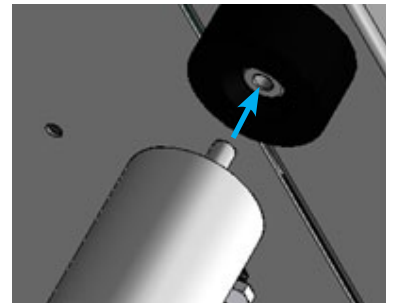
- Position the machine in its final location, and level it using rubber washers if necessary.

##### ◆ Fitting high feet

Reference UNIC feet NSF: **NM-176**

Reference UNIC M8 x 16 bolts: **50402**

For fitting the aluminium feet, once the machine is installed in its location: Screw the 50402 bolts to the aluminium feet, tip the machine onto the front two feet to screw in the aluminium feet at the base of the rubber feet at the back, and then do the same operation for bolting the feet to the front.



#### ► Hydraulic connections

The machine is delivered with a complete connection kit including a stainless steel braided water hose 2 m length and a drain hose 2m (78.7") in length with a clamp located in the box of accessories.

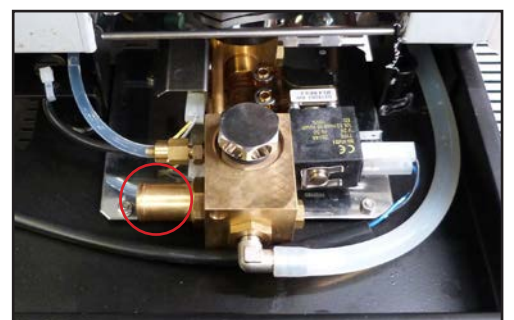
- Slide the lower trims toward the front
- Remove the basin grille
- Remove the basin after unscrewing the central screw.
- Remove the right-hand side of the ACE,
- Screw the angled part (3/8") of the stainless steel braided flexible pipe to the 3/8G fitting of the water safety filter block and the straight part (1/2") on the water softener outlet union.

The water softener must be fed directly by the mains via a shut-off tap allowing a sufficient flow, Ø 8cm (3.1") min.

Do not forget the seals. An opening in the chassis allows the hose to pass through

- Put the softener in the flush position.
- Open the supply tap.
- Run a flush of the softener.
- Put the softener in the working position.
- Fit the drain hose on the fitting located in the centre of the machine
- Check for leaks, and make sure that the drain tube allows a flow to the main drain without any reverse slope.

- Refit the bowl, not forgetting the seal which must be between drain block and the basin, and not between the central screw and the basin.
- Refit the trims and the basin grille.



## ► Electrical connections

### Put the machine main switch in position 0, before any intervention.

The machine is delivered with a 5-core electric cable and a system of straps to allow for 3-phase or single-phase connection according to the installation.

The machine is pre-wired in accordance with the indications on the order and the country of destination. Before connection, check the conformity of the machine with the electrical circuit to which it is going to be connected.

To do this:

Compare the indications on the data plate, inside the drawer housing, with the characteristics of the circuit to which the machine is to be connected. Remove the left side of the machine and check that the connection of the straps on the terminal strip corresponds to the connection required (a diagram is glued to the inside of the side).

### ADAPTATION OF THE TOROIDAL TRANSFORMER TO THE VOLTAGE OF THE CIRCUIT

The machine is equipped with a multi-voltage transformer in order to ensure the correct supply voltage to the electronics and 24-volt motors.

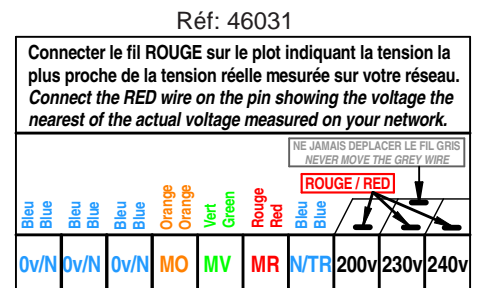
The machine is pre-set in the factory according to the country of destination (see page 6 and/or 7).

E.g.:

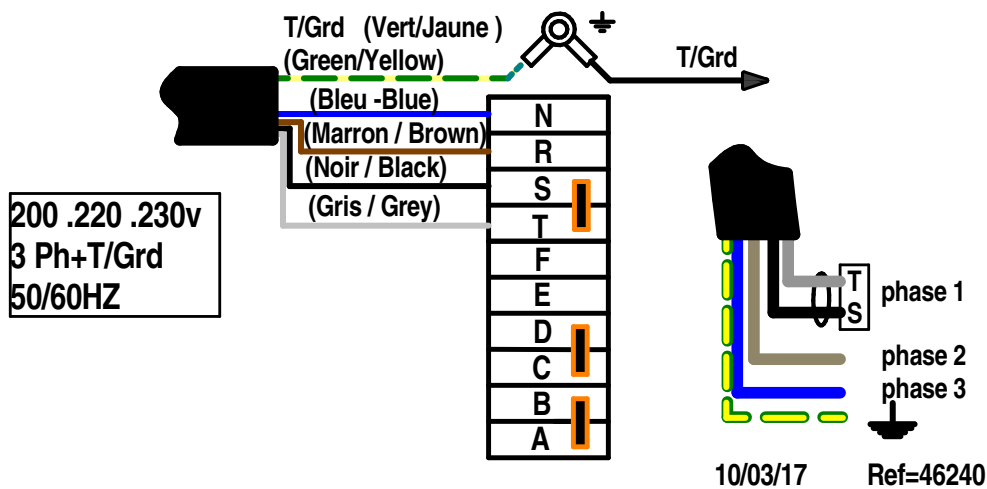
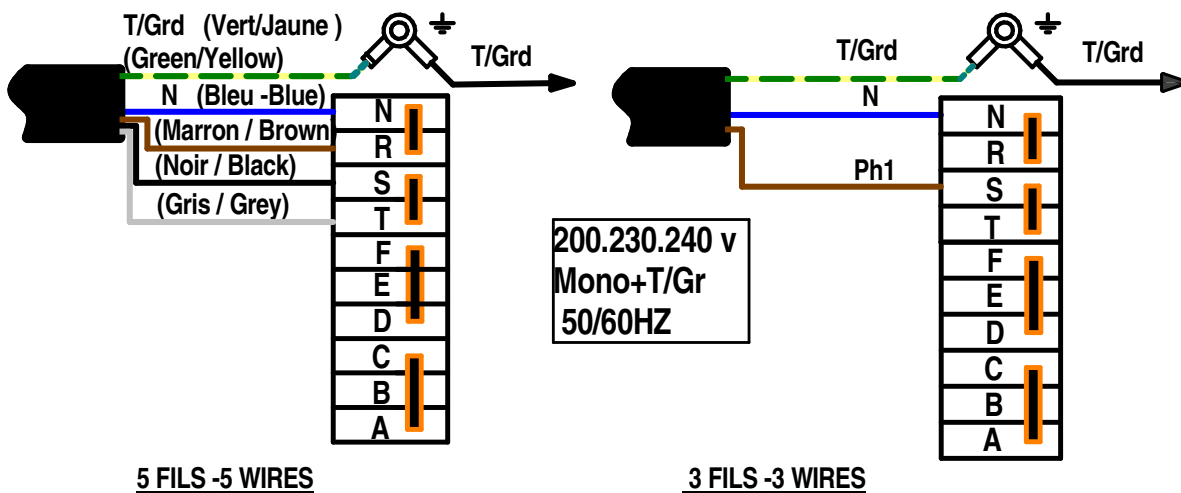
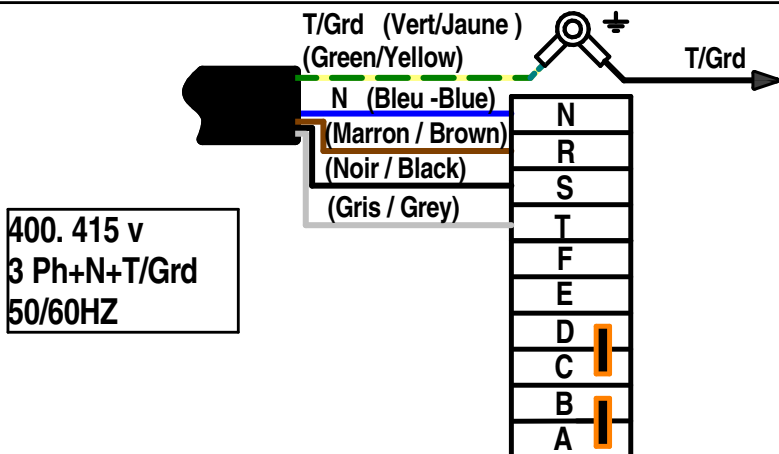
For Europe, the red wire is connected to the 230V terminal.

Once the connection has been performed correctly, it is nevertheless advisable to check that the voltage is  $230V \pm 5\%$ .

The low voltage should be about of 22V. These voltages should be checked with the machine working and the main switch closed.



## BRANCHEMENT BORNIER / TERMINAL CONNECTING

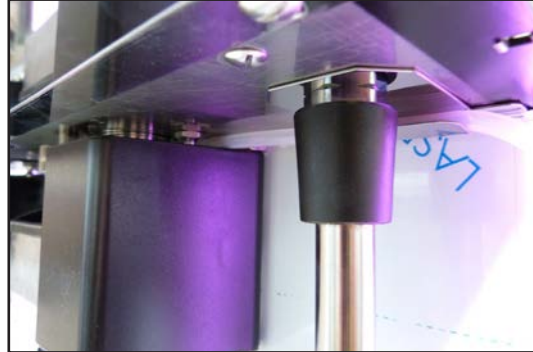


IN ALL CASES THE GREEN/YELLOW WIRE MUST BE CONNECTED TO THE EARTH OF THE INSTALLATION

## ► Connecting the ST module to the machine

### ◆ LC hydraulic part

With a cappuccino LC the refrigerator is delivered with the pipe already fitted in the refrigerator, it remains simply to feed it through the plate prepared for the purpose and fix it to the cappuccino outlet end.



## ► Installing the bins

To avoid damage during transport, machines are delivered with the bins removed

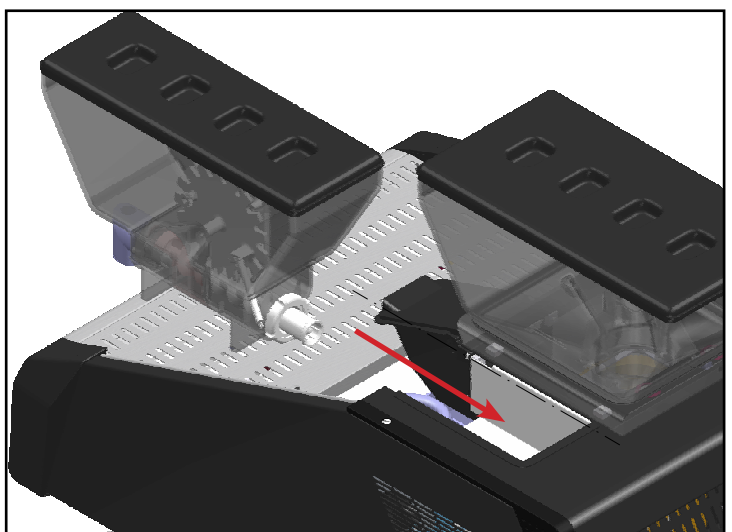
### INSTALLING THE BINS:

- The bins are fixed from behind. Respect the direction of fitting.
- Position the closing trap on the bins; pay attention to the direction of the opening of the trap.
- Access to the trap is by removing the side.
- Capacity: 1.7 kg for the large bin.
- Capacity: 1.2 kg for the small bin.



### INSTALLING POWDER BIN:

- Remove the powder cover forwards (locked by the lock).
- The hoppers are fixed from the rear. Observe the mounting direction (picture).
- Reposition the cover and lock.



### CAUTION:

Air must be able to circulate freely around the machine. The ventilation openings located at the rear of the machine and on the top must not be obstructed.

**The machine must not operate without its legs.**

## 4-COMMISSIONING

### ► Switching on the machine and Turning on the heating

Once all the connections are made and checked (water supply, electricity supply and drain).

Set the main switch in position 1.

As soon as the electricity is switched on, the boilers fill automatically.

Remember to open the water tap supplying the machine.

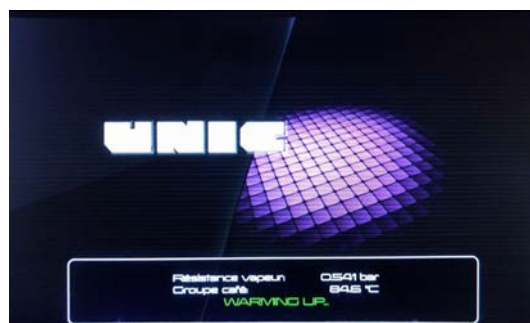
The heating of all the parts starts automatically if the filling is correct.\*

When the machine reaches its operating temperature, it performs a self-check.

These initialization phases are very important for the proper functioning of the machine. They are only possible if the coffee grounds drawer is in place, and they must not be interrupted, for instance by removing the drawer. (The steam pressure and the temperature of the groups are visible on the screen during heating).

The machine is operational once heating has been switched on and the self-check performed.

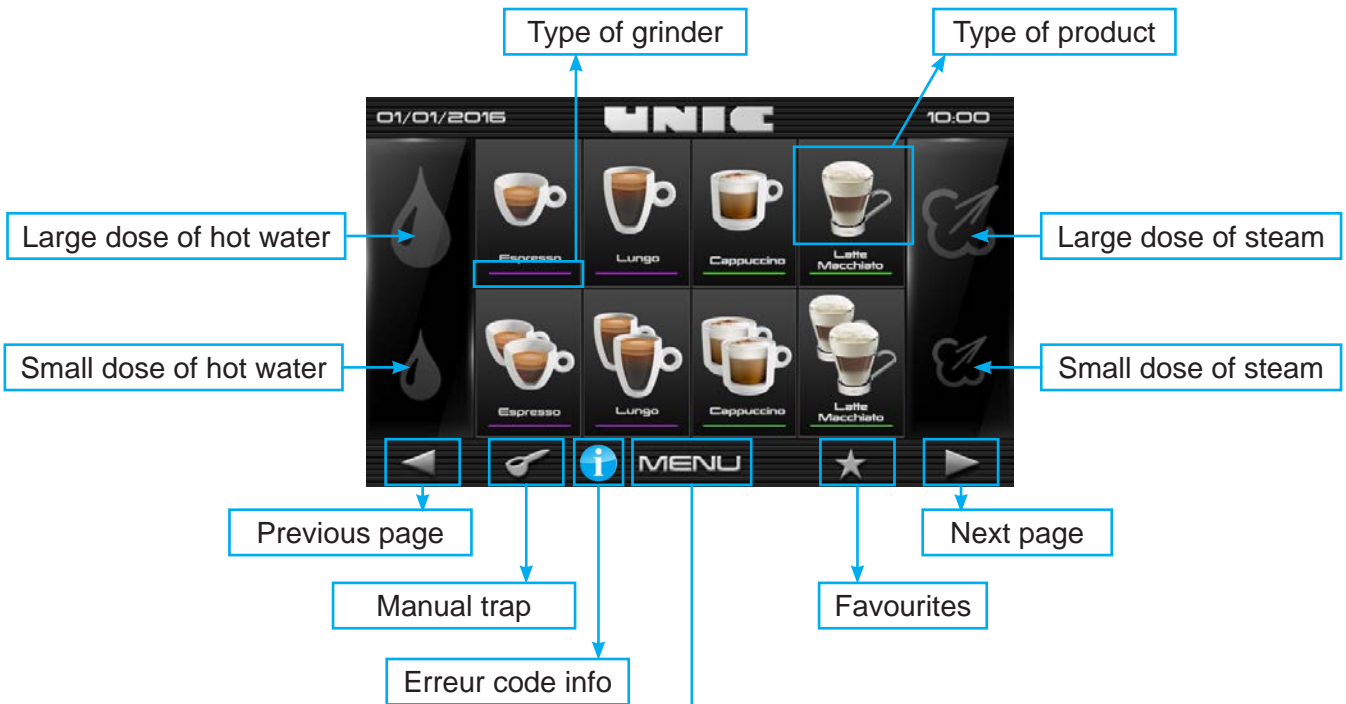
It is advisable to leave the machine heating on permanently.



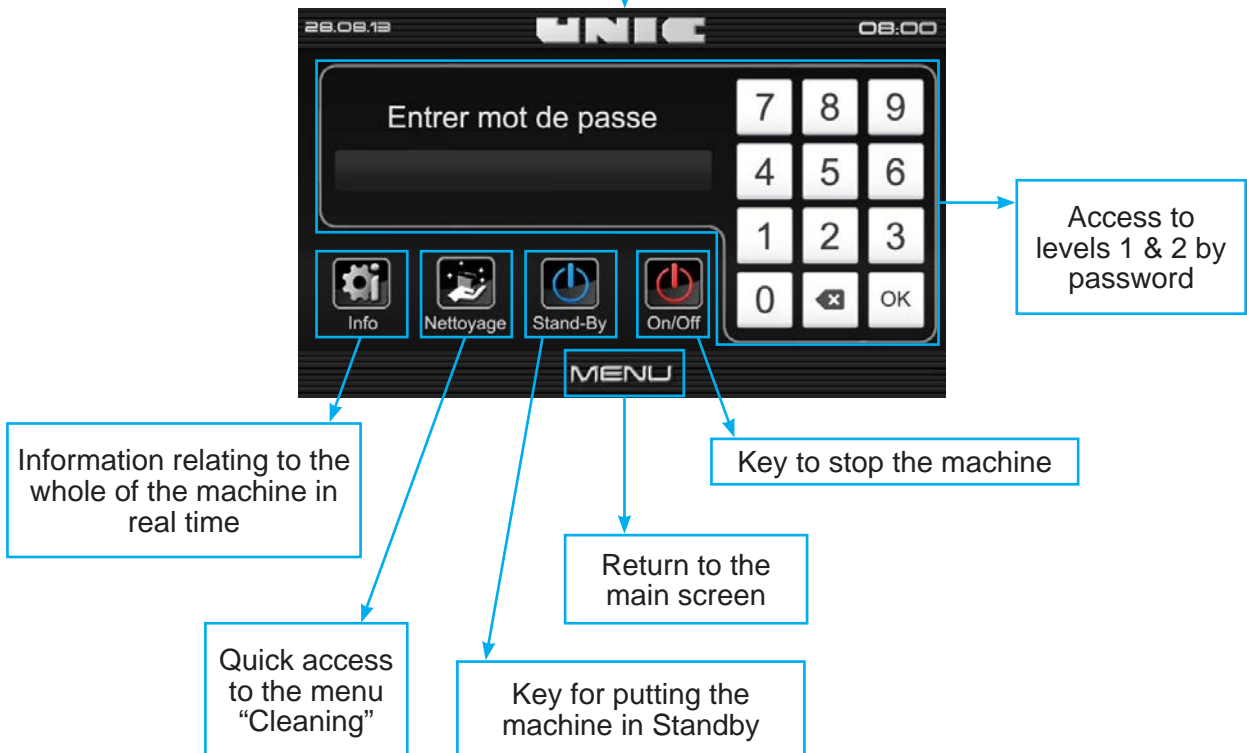
## 5-INTERFACE

The level 0 (User) includes the main screen for making the products, the hot water, the steam and access to the quick access screen, which allows the user to have direct controls such as to Stop the machine or put it in Standby.

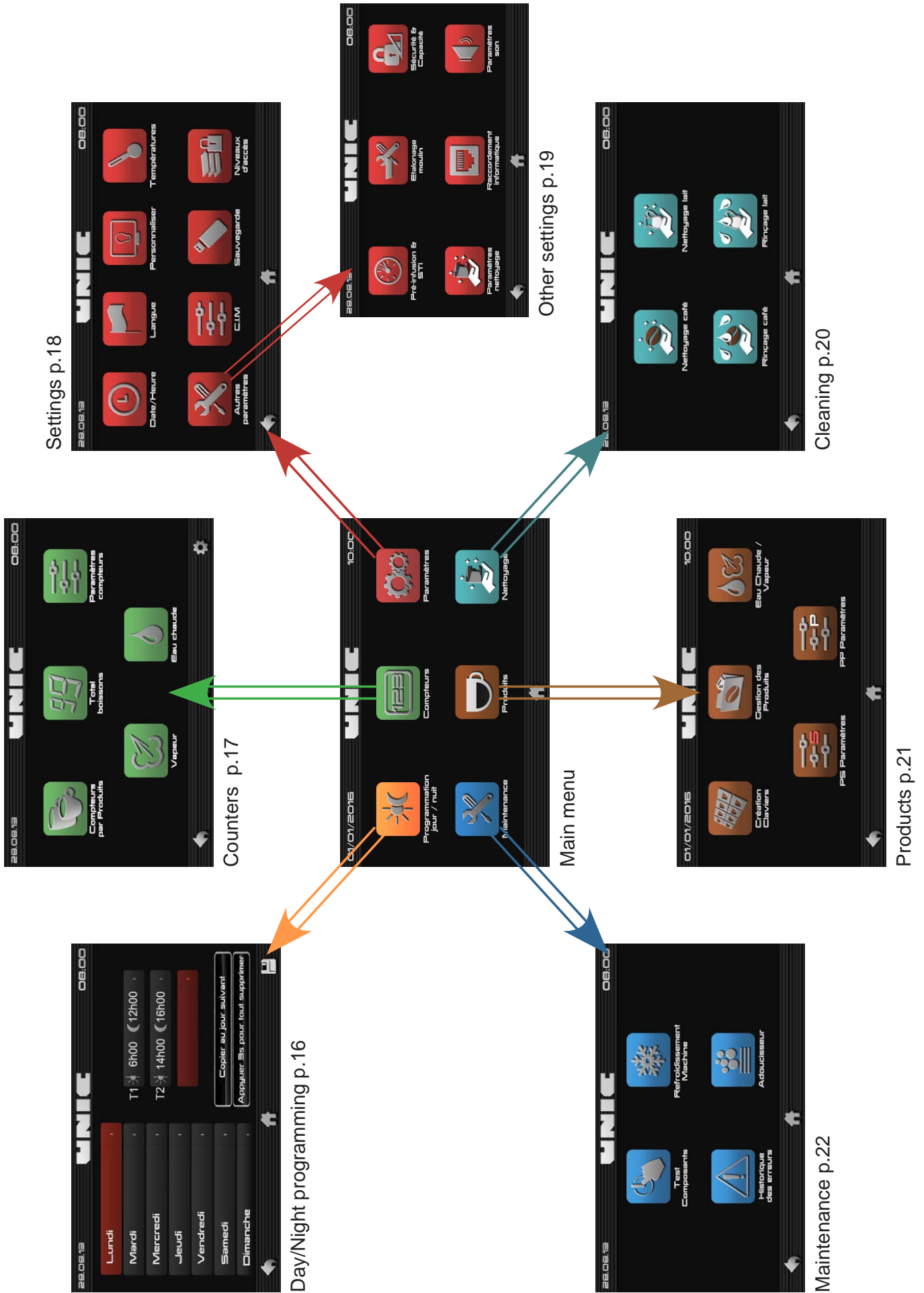
### ► Main screen
















### ► Quick access screen / Code



Once the security code has been confirmed the levels 1 (Customer) or 2 (technician) are accessible (according to the Code).



## ► Miscellaneous icons

	Scrolls the drinks keyboards.
	Icon to access the «Quick access / code» screen
	Return to the main screen
	Return to the previous page
	Key to activate the opening of the cover of the manual trap for 10 seconds; the time required to introduce 1 or 2 doses of ground coffee and close the trap again.
	Access to favourite products on the main screen
	Icon for copying a file and/or data
	Icon for indicating settings (e.g.: settings of a product)
	Icon for saving data and/or parameters
	Icon for confirming data and/or parameters
	Icon for cancelling data and/or parameters
	Icon for indicating the remaining time of the compulsory cleaning of the machine (before blocking).
	Icon for accessing error codes / alarms activated.

## ► Day/night programming

Allows you to schedule the days and times of automatic switching to night mode (machine in standby, reduced heating temperatures), and day mode; may or may not be followed by an automatic cleaning cycle.

To add a time slot:

- Press «Add a time slot»
- Schedule the desired times
- Remember to confirm
- you can then either copy this same time slot for the next day, or add a new one.



If you want to re-schedule your time slots, press the button at the bottom right of the screen for 3s.

**Remember to save your settings.**

*Note: When Standby is enabled the regulation of the group and the coffee boiler goes to 70°C and 0.1 bar for the steam boiler*

*All screens are off*

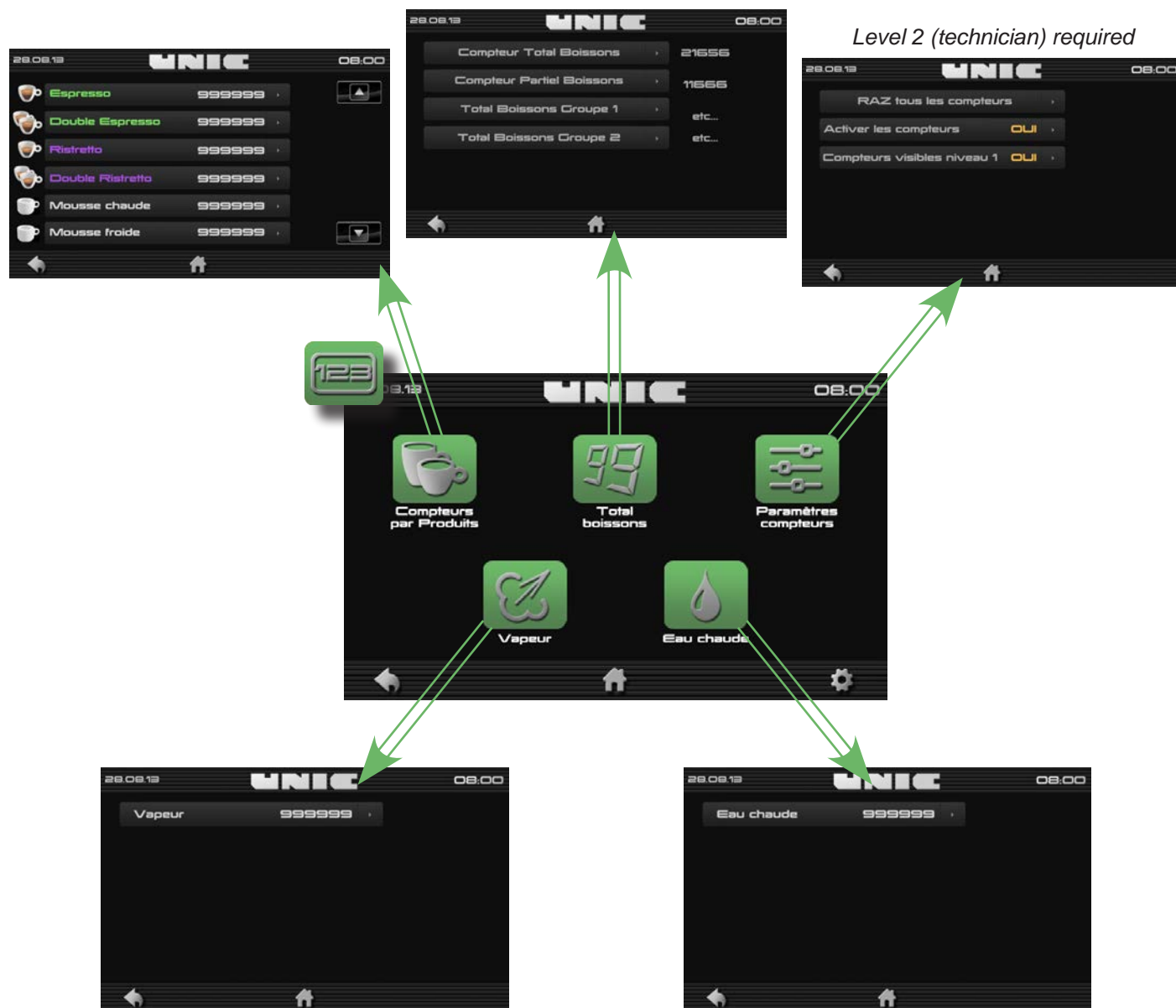
*All safety functions remain activated*

*Standby output: resumption of the normal regulation is done 10 minutes before the exit from standby.*

## ► Counters

This menu allows you to view the statistics for all the products produced on the machine.

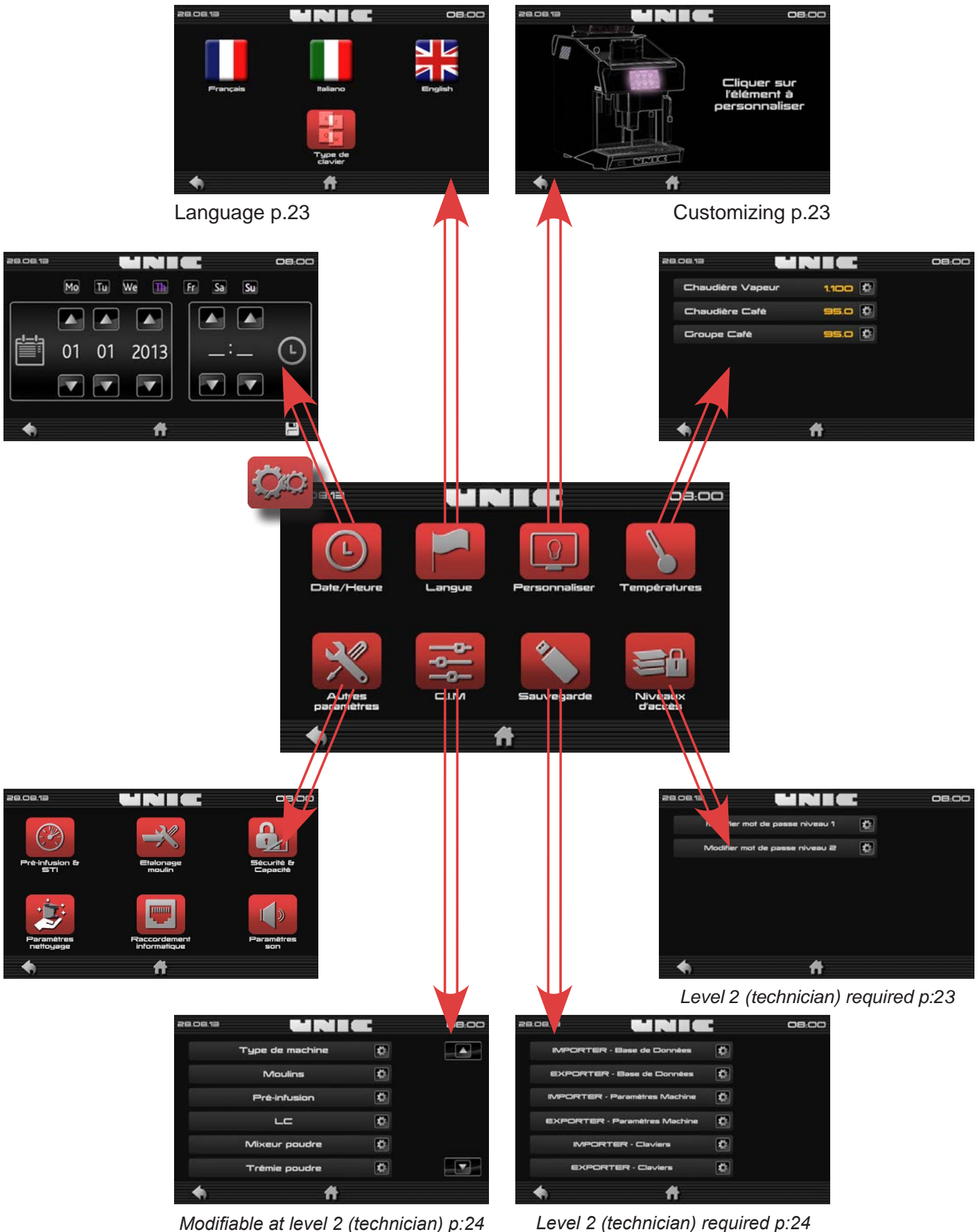
*Note: At level 2, it is possible to perform a general reset of all counters.*



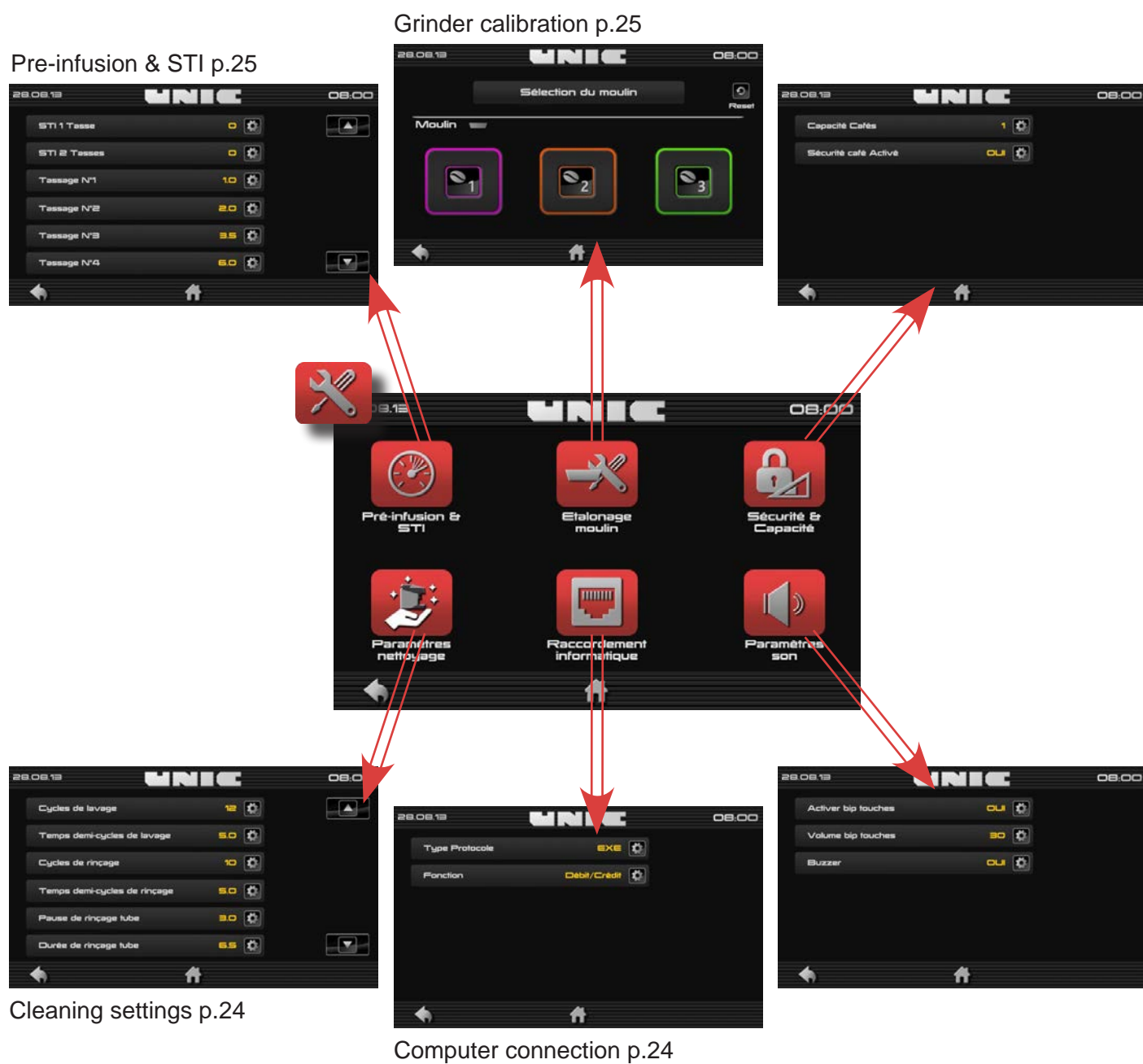
## ► Settings

This menu allows you to adjust the settings of the machine such as the date and time, the desired language, the boiler temperatures and the LED colour and brightness.

Note: Some settings are only accessible or changeable at level 2 (technician).



◆ Other settings



## ► Cleaning

Coffee cleaning p.29



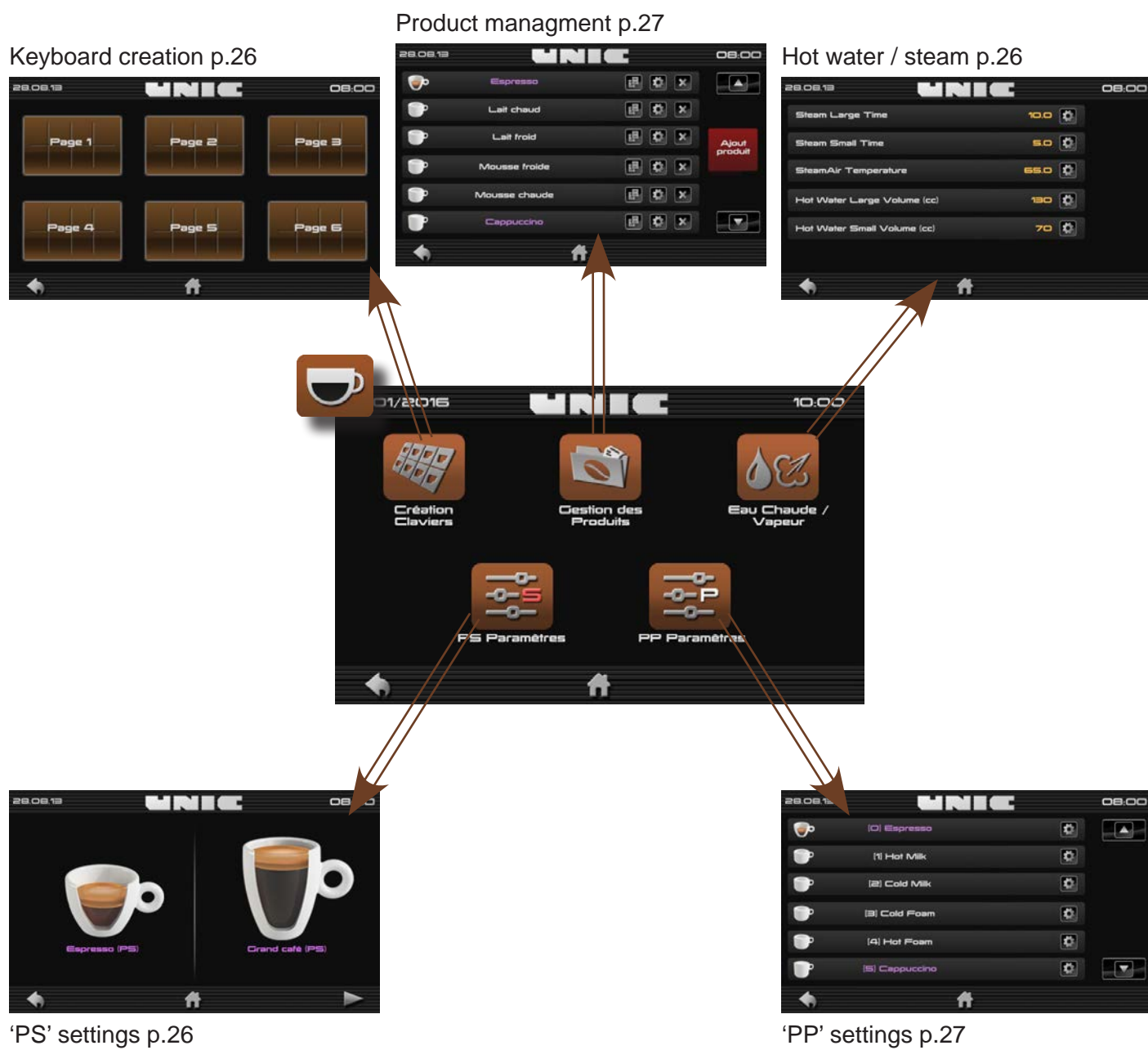
Milk cleaning p.30



Flushing starts automatically  
once you have pressed the  
button

Flushing starts automatically  
once you have pressed the  
button

## ► Products

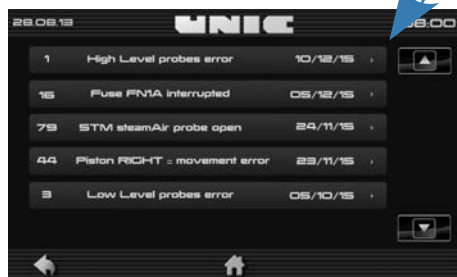


## ► Maintenance

Component test p.34



Cooling machine p.35



History of errors p.35



Softener p.35

## 6-SETTINGS

### ► Language

#### ◆ Language selection

To change the language, tap the icon for the desired language (A confirmation is not required, the change is effective immediately).

#### ◆ Keyboard selection

In this sub-menu the type of keyboard can be changed. There are 2 modes: AZERTY or QWERTY (A confirmation is not required, the change is effective immediately).

### ► Personalization

The screen saver can be changed.

#### ◆ Wallpaper

Tap the machine's screen to see a selection of several standard desktops. Tap to select the desired image (the images will step through). The slider allows the time delay to standby screen to be set (cursor left = standby disabled).

Personal wallpapers can be imported: Insert a USB drive with the images, press the "import" tab, select the image(s) and confirm.

Adding images to the USB drive from a computer: Open the USB drive > open the folder named "UNIC" > open the "F\_ECRAN" folder > copy the image into this folder > follow the instructions on the "Desktop wallpaper" menu

*If there is no "F\_ECRAN" folder on the USB drive, create a new folder in the "UNIC" directory, following the syntax exactly.*

*If the syntax is not exact, or if the "F\_ECRAN" folder is a subfolder to any folder other than "UNIC", the machine will not be able to find your logo.*

*Note: accepted formats are .png or .jpg, resolution 800x480.*

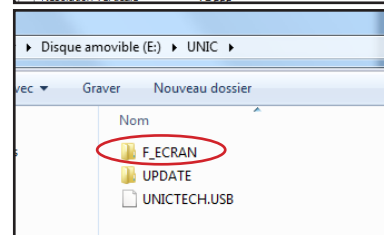
### ► Access level

Most menus are locked by default. Various settings and programs are inaccessible. Access to settings is enabled by entering a code according to two access levels.

To change a code, tap the settings icon, enter the new password then confirm to save the change.



Général		Détails	
Propriété		Valeur	
Images			
ID de l'image			
Dimensions		800 x 480	
Largeur		800 pixels	
Hauteur		480 pixels	
Résolution horizontale		72 ppp	
Résolution verticale		72 ppp	



## ► CIM

Note: level 2 required to change.

Permits access and/or changes to the machine's characteristics, such as:

Type of machine		ACE	ACE MT
Grinders	Purple	X	X
	Orange		
	Green	X	
Pre-infusion		X	X
Left milk system	None	X	X
	LC	X	X
	Pompe		
Self mode		X	X
Water tank		X	X
Milk level sensor			
Milk temperature sensor			
Hot water		X	X
Steam		X	X
Decaf		X	X
Hydraulic system	Basic	X	X
	with EVINF	X	X



## ► Backup

This submenu allows importing (and/or exporting) keyboards, settings, or databases, for configurations already created on a similar machine.



## ► Cleaning settings

This submenu permits adjusting the settings for all cleaning and/or rinsing cycles.



## ► Computer connection

Protocol type: EXE / MDB

Permits selection of the type of computer connection:

- Credit / Debit
- Debit / Credit
- RS 232



## ► Pre-infusion and STI

### ◆ STI

This function is common to all “coffee” cycles. It permits adjusting when in the piston cycle the infusion starts, it is particularly effective for the “1 cup” cycles. The “1 cup” quality is therefore improved and more regular, therefore programming of all the “coffee” key settings can be done by the PP mode.

Settings for 1 or 2 cups are done separately.

STI = 00 is the factory setting (ideal setting in 95% of cases)  
(00 setting includes a small amount of pre-infusion)

STI = +01 to +100: infusion starts later (less pre-infusion)

STI = -01 to -100: infusion starts earlier (more pre-infusion)

STI = > 60 cancels the effect of the STI.



### ◆ Tamping level

There are four tamping levels.

A number gives the intensity of the tamping force; the higher the number, the more force is applied.

Level	Setting range	Default value
1	0,6 to 1,4	0,8
2	1,5 to 2,5	2,0
3	2,6 to 4,0	3,5
4	4,1 to 6,5	6,0

When exiting this setting, the machine automatically carries out self-check phases 1 and 2 to recalculate the piston parameters generated by the new tamping values.

In general:

A small dose of ground coffee infused by a small quantity of water needs heavy tamping: Level 4

A large dose of ground coffee infused by a larger quantity of water needs light tamping: Level 1.

## ► Grinder calibration

The type of coffee used and the grinder collar setting will affect the ground coffee dose. This procedure calibrates the actual ground coffee weight dispensed to match the value in the programmed settings. Select the desired grinder, prepare the weighing kit and the scale, and then follow the procedure.

This procedure is done in 2 steps:

1 – Grinder Tuning (Grinder collar adjustment)

A test cycle displays the time of the extraction in seconds.

Test cycle: 2 cups of 50 cl. using about 14 grams of ground coffee.

The test cycle infusion time is displayed at the end of the cycle.

2 – Grinder dose Calibration

2 grind cycles, one short and one longer, are weighed and recorded. The resulting time needed per gram is automatically calculated and applied to the programming to produce an accurate weight for each dose.

A master reset returns to the initial calibration preset in the machine's memory, in the case of replacing grinder burrs, if no scale is available, or incorrect operation, etc.



## ► Keyboard Menu creation

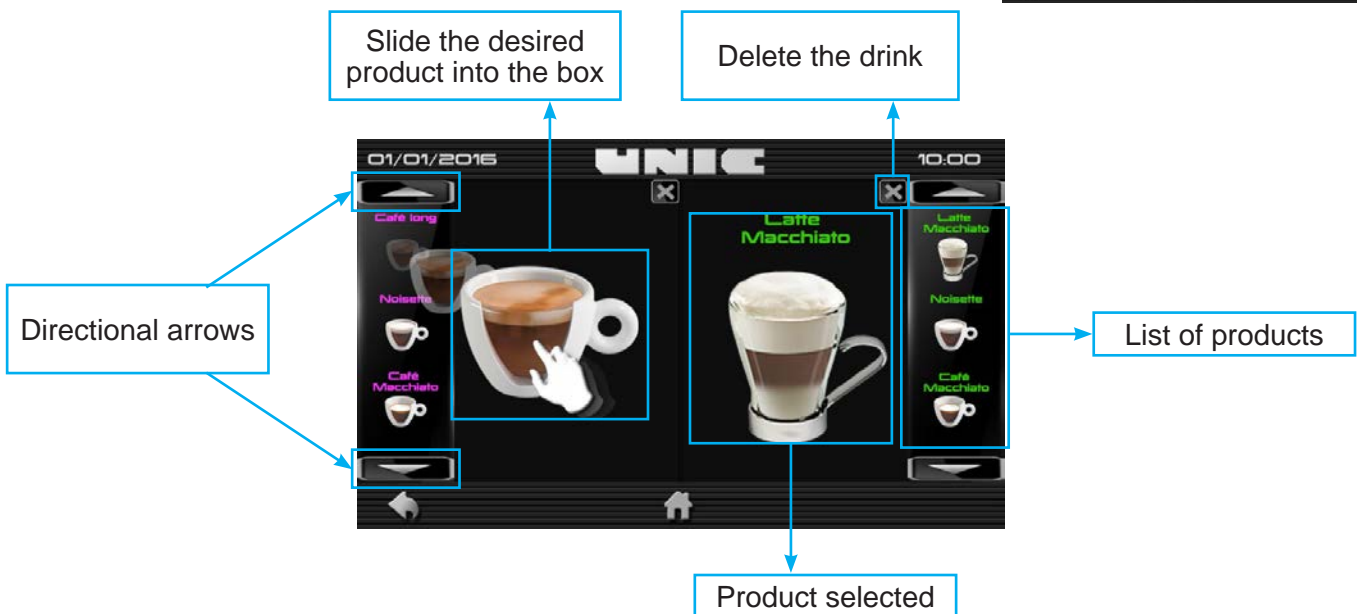
A maximum of 6 pages can be created:  
Up to 8 products per page, for 48 products maximum

To delete an entire keyboard; press and hold the keyboard thumbnail until it disappears.

Example:

- Select the number of products desired (from 2 to 8)
- Slide the desired beverages into the boxes.
- To change, slide the new product into the desired box.
- Scroll with the directional arrows to navigate through all the products.

(The name of the product is displayed in the color of the grinder)



## ► Hot water & steam

Large quantities of steam	0 to 100	sec
Small quantities of steam	0 to 100	sec
Temperature <b>steamair</b>	50 to 90	°C
Large volume of hot water	0 to 1000	cc
Small volume of hot water	0 to 1000	cc



## ► 'PS' Specific program

(Each drink programmed independently)

Displays all the settings for each product present on the machine's keyboard(s).

Changing settings only changes the product selected on the keyboard without altering the common settings. List of settings that can be changed:

- Grinder selection
- Grinder does 1(2) cup(s)
- Manual
- Water dose right (left) coffee
- Add water
- Repetitions
- Coffee tamping level
- Coder offset
- ST1



### ► 'PP' Programmed parameters

(single and double drinks linked)

Permits programming base settings common to each product family (for example: espresso, cappuccino) created during keyboard configuration

Coffee		Milk foam		Milk	
Grinder selection		Left foam time	s	Left milk time	s
1 cup grinder dose	gr	Right foam time	s	Right milk time	s
2 cup grinder dose	gr				
Manual					
Left coffee water dose	cc				
Right coffee water dose	cc				
Add water	%				
Repetitions					

A pause time can be set between execution of the ingredients (expressed in seconds).



Don't forget to validate the product, to save it before leaving.

### ► Product management

This sub-menu permits managing all existing drinks in the machine. Copy a drink and/or access its setting to change the recipe, or just delete the product.

#### ◆ Adding a drink

In this sub-menu a new recipe can be created. Follow the procedure below.



Icon to copy the drink

Icon to access settings

Icon to delete the drink

Name the drink, tap the keyboard then validate the name by tapping **ENTER** (to validate a new drink the name must be entered).

List of different views of cups



List of different ingredients:

Don't forget to validate the drink, save it before leaving.

View of cup selected

Maximum 4 ingredients permitted  
Press and hold an ingredient to remove it.

## 7-CLEANING & MAINTENANCE

### ► Cleaning external outlets / housing

It is advisable to disassemble the coffee and milk outlets daily for thorough cleaning.

#### ◆ Coffee outlet

1. Slide the coffee spout(s) down
2. Pull the spout towards you to remove
3. Clean the spout(s) under a tap or directly in a dishwasher
4. Replace the spout(s) on the machine

#### ◆ Cappuccino outlet

1. Slide the coffee spout(s) down
2. Pull the spout towards you to remove
3. Remove the cappuccino foamer head by turning the assembly to the right and pulling down
4. Separately disassemble each part for individual cleaning, including the silicone suction tube.
5. Reassemble.

#### ◆ Steam wand

After each use, wipe the steam tube with a damp cloth and briefly tap the steam button to purge the small quantity of milk remaining inside the tube. Disassemble the steam outlet nozzle for easier cleaning.

#### ◆ Drip tray

Remove the drip tray by sliding the frame forward and lifting the grate out. Clean the grate using a sponge.

#### ◆ Housing

Use a soft cloth and alcohol for the stainless steel parts, and non-abrasive detergent for the painted parts. The grounds drawer is entirely in stainless steel, it can be easily cleaned with water. Take care not to scratch the painted parts.



## ► Cleaning Cycles

In the 'Cleaning' menu, the rinsing icons   automatically start a rinse cycle (~30 sec) for the milk or coffee systems.

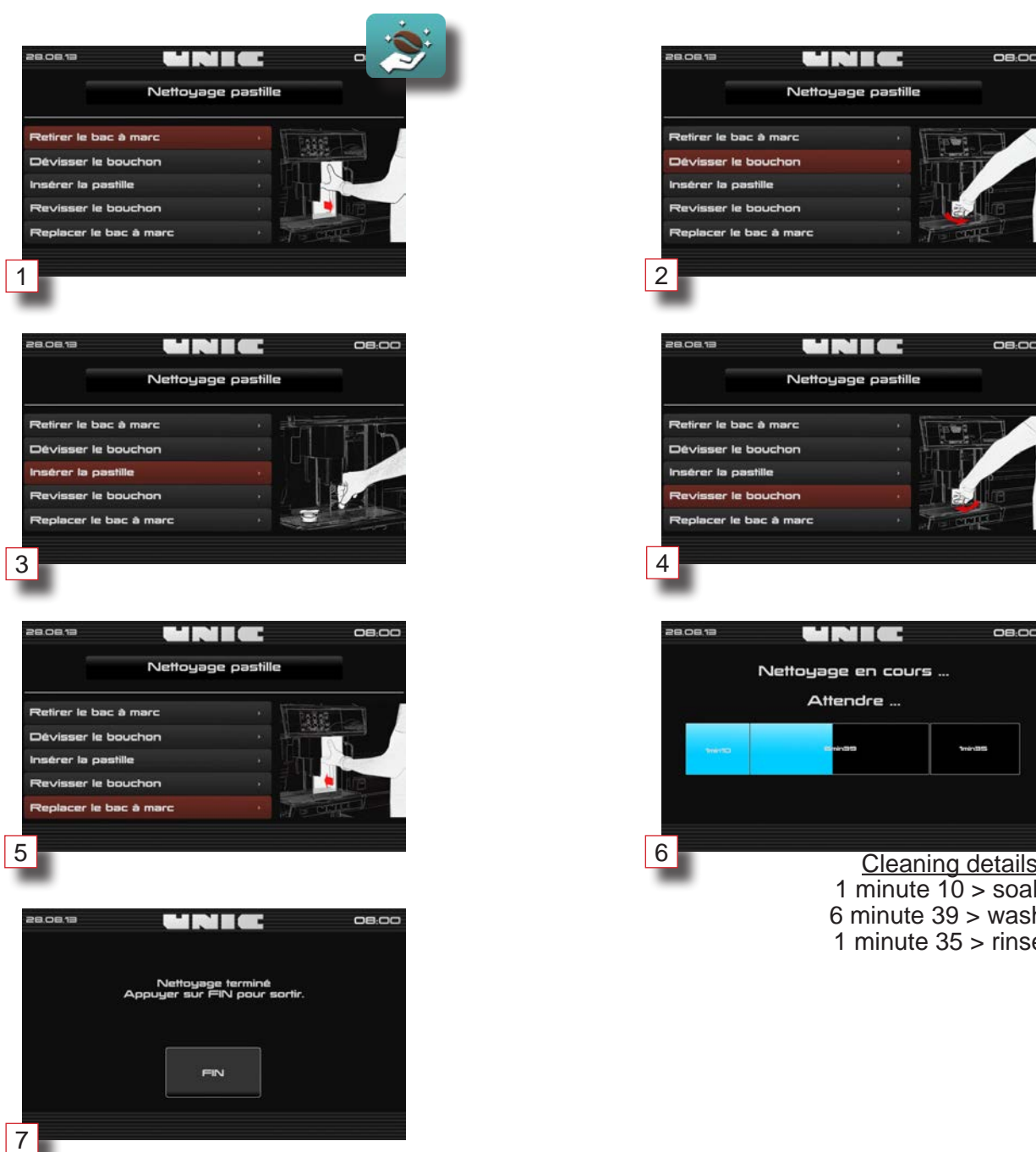
Daily cleaning is required; the machine will stop after 26 hours if a tablet cleaning has not been completed. As soon as the cleaning is finished, the timer restarts for another 26 hours.

*Note: for more information about cleaning products, refer to the manufacturer's safety data sheet.*

### ◆ Coffee cleaning

Tap the "Coffee cleaning" icon to access the procedure and follow it step-by-step.

**DON'T FORGET TO INSERT TABLET (1 tablet)**  
(UNIC reference, box of tablets: 92025)



Cleaning details:  
1 minute 10 > soak  
6 minute 39 > wash  
1 minute 35 > rinse

Cleaning kit for milk and cappuccino circuits.



◆ Cappuccino cleaning (with LC)

This includes internal cleaning of the circuit and external components related to the circuit, such as the milk tray and cappuccino outlet. Use a pitcher of about 2 liters for cleaning.

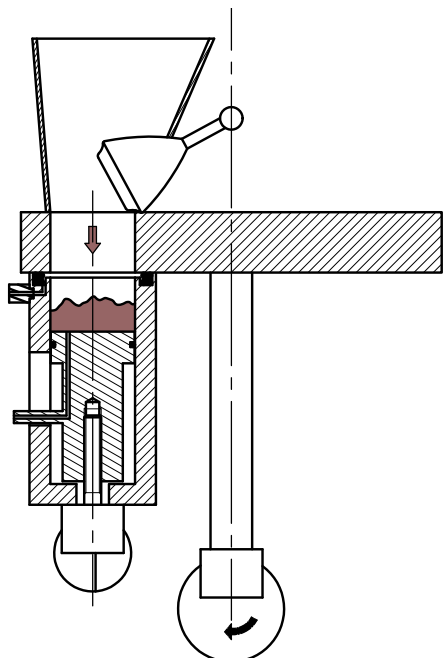
Reference UNIC Urnex: 92027  
Reference UNIC pitcher: 54212



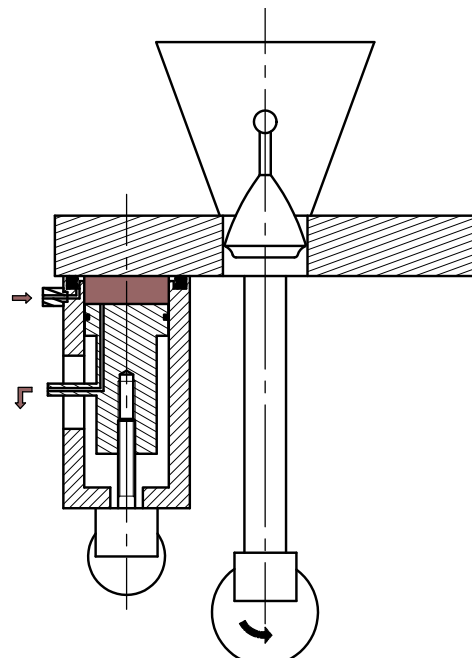
## 8-MAINTENANCE & TROUBLESHOOTING

### ► Description of cycles

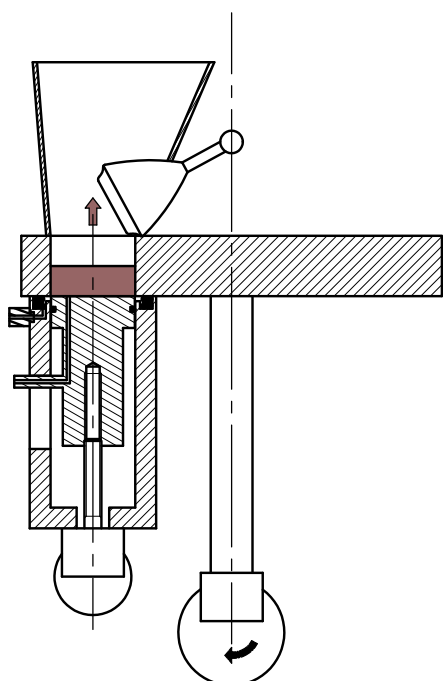
#### ◆ 1 group Cycles



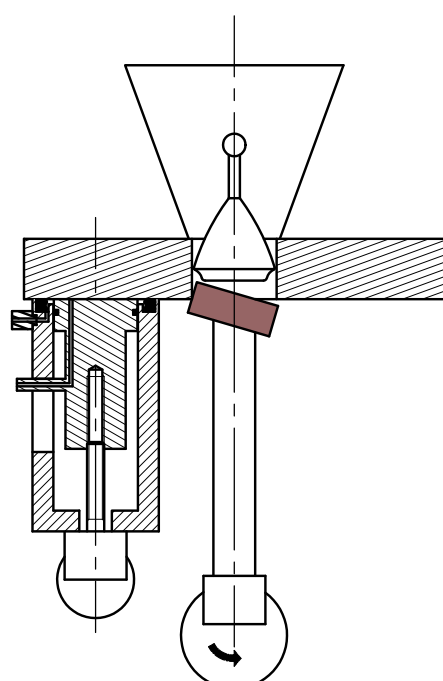
CHARGEMENT CAFE  
COFFEE FEEDING



INFUSION  
INFUSION

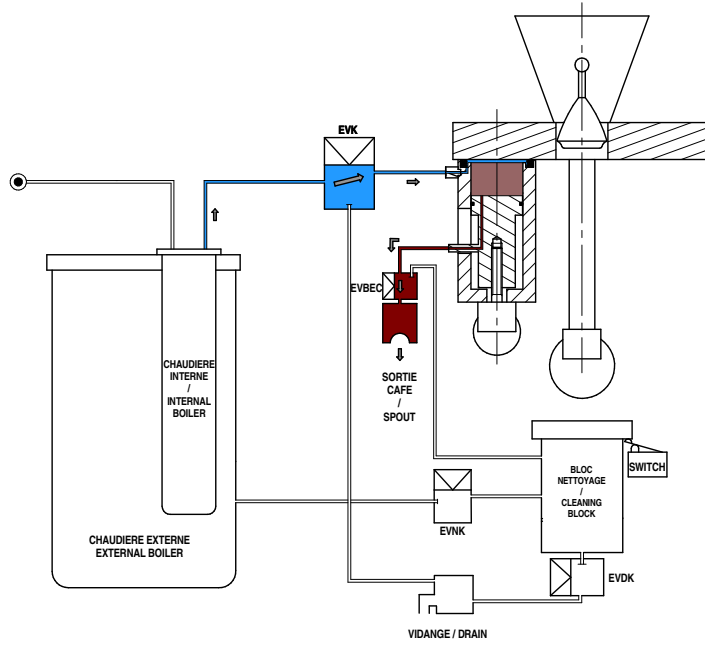


EJECTION DU MARC  
EJECTION OF GROUT

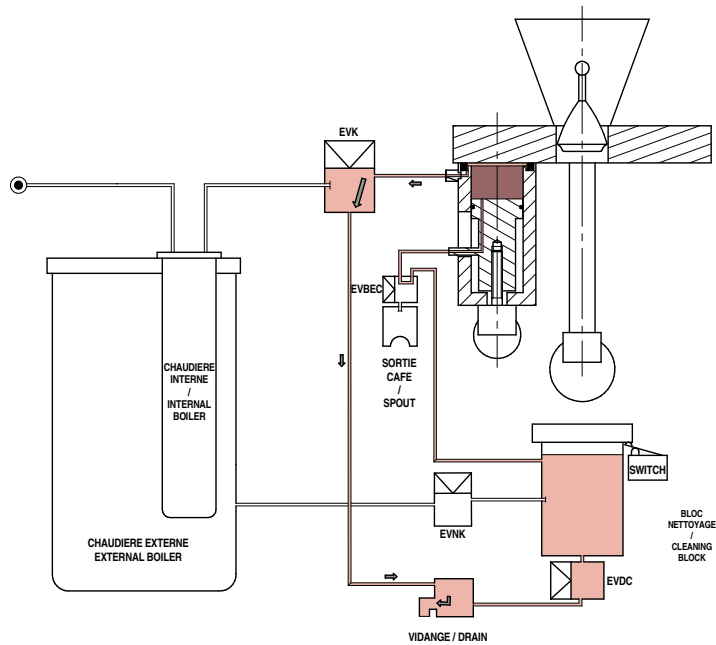


ETAT REPOS  
STAND BY

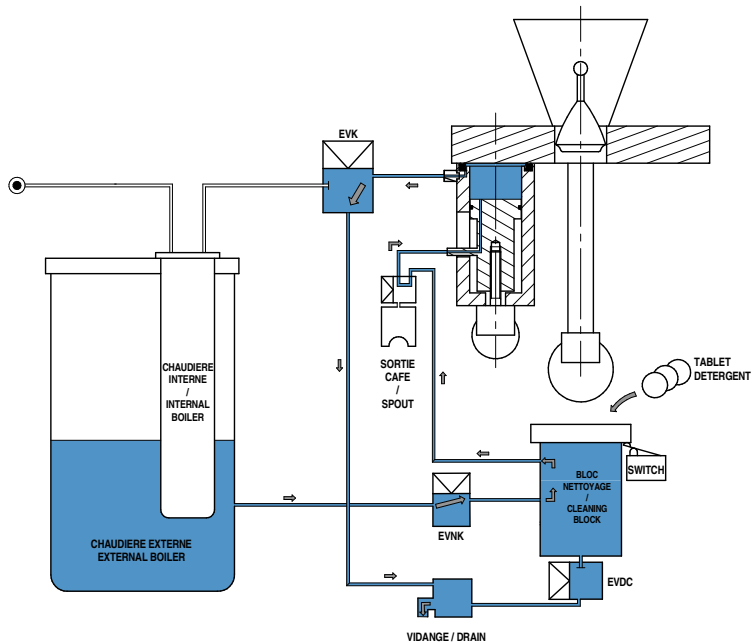
## Infusion cycle.



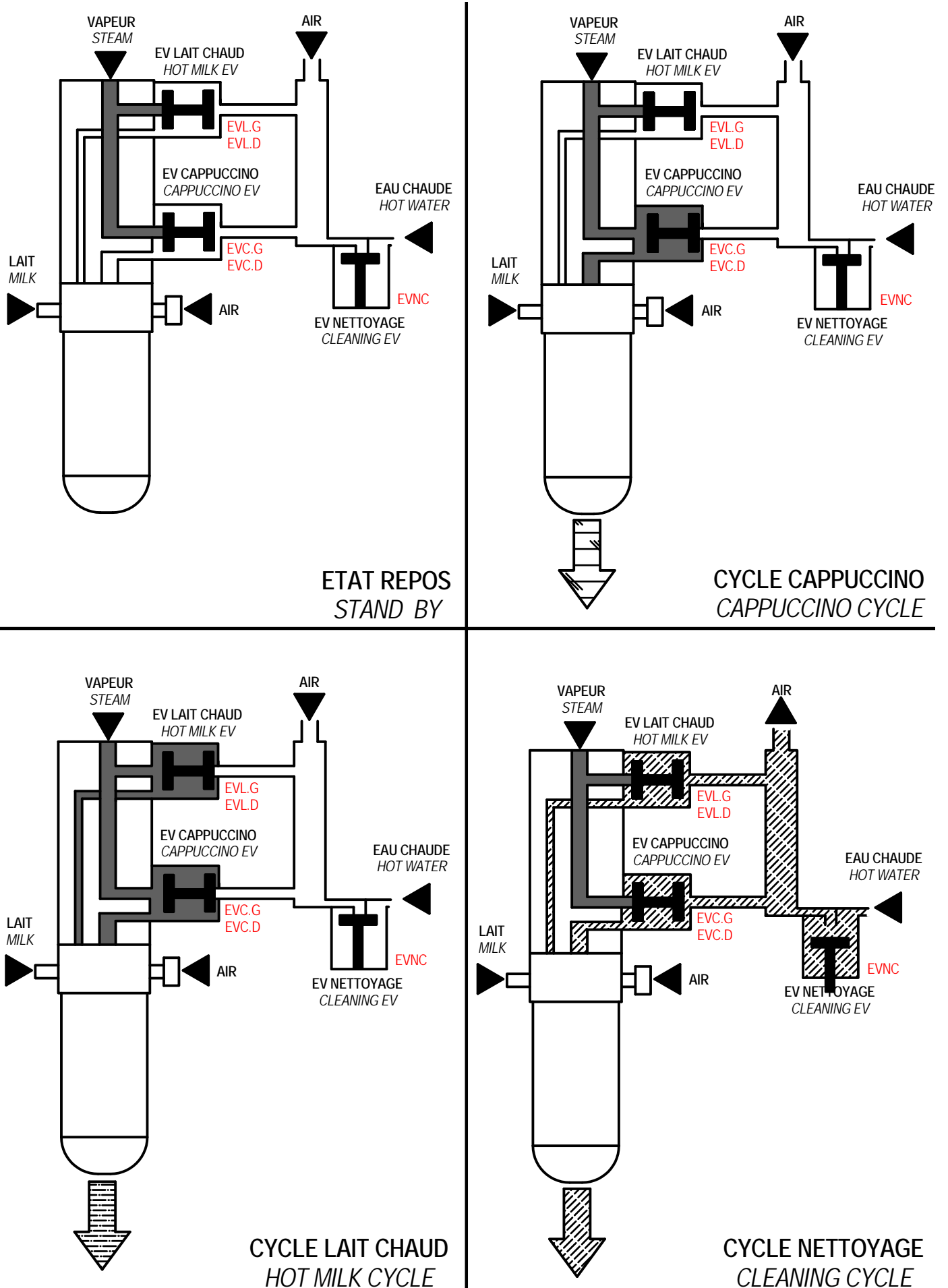
## Decompression cycle.



## Cleaning cycle.



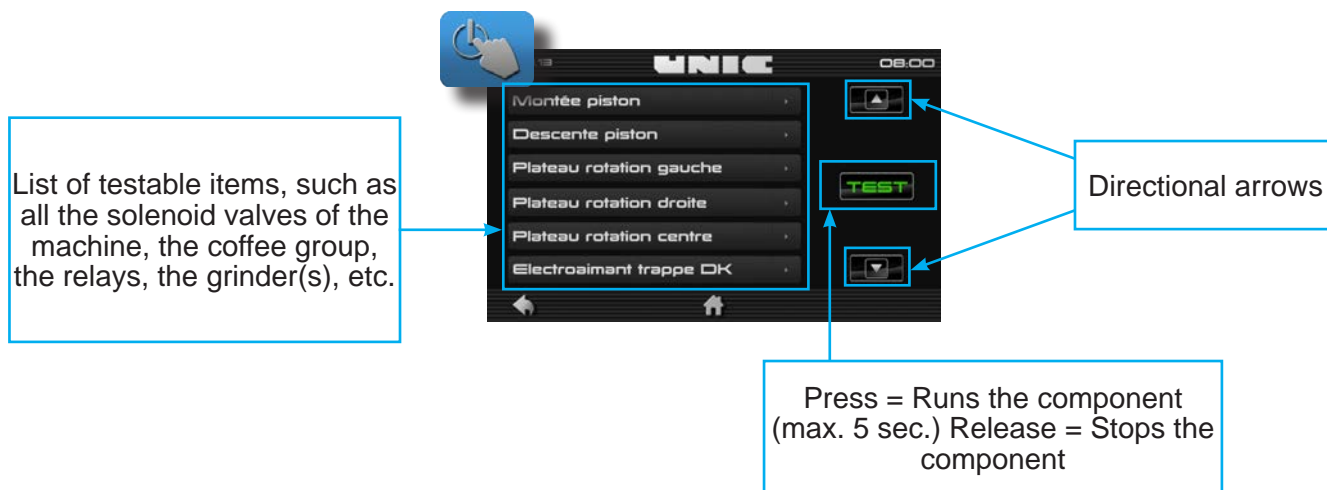
◆ Cappuccino Cycle



## ► Component test

When entering the menu the machine switches to the "test" mode (on the duo the right screen is disabled), the group and steam heating are disabled.

*Note: Self-checks 1 and 2 are carried out after having left the test menu, and then the machine goes into normal operation.*



	Piston LEFT up	EVKG	EV left coffee
	Piston LEFT down	EVP1	EV pre infusion 1
	Piston RIGHT up	EVLCF	Hot-cold milk selection
	Piston RIGHT down	EVNR	EV steam/EV cleaning-rinsing
	Plateau to LEFT position	EVNO	EV bloc de nettoyage
	Plateau to CENTER position	EVALF1	EV cold milk air
	Plateau to RIGHT position	EVNL1	EV cleaning milk
	Find known plateau position	EVALC1	EV hot milk air
RSV1	Solid state relay steam 1	EVLG_EVVS	EV left LC latte outlet/EV coil pipe steam
RSV2	Solid state relay steam 2	EVAEG	EV water addition left coffee
RSV3	Solid state relay steam 3	EVCG_EVRP	EV left LC cappu outlet/EV rinsing purge
RSC1	Solid state relay coffee 1	EVNC	EV cleaning cappuccino
RSC2	Solid state relay coffee 2	EVKD_EVM1	EV right coffee/EV mixer 1
RSC3	Solid state relay coffee 3	EVAED_EVM2	EV water addition right coffee/EV mixer 2
MAC1	Grinder n°1 (purple)	EVCD	EV right LC cappu outlet
MAC2	Grinder n°2 (green)	EVLN	EV right LC latte outlet
MAC3	Grinder n°3 (orange)	EVP2	EV pre infusion 2
POMP	Motor pump	MM1	Motor mixer 1
CHGR	Heating group	MM2	Motor mixer 2
EAMAN	Electromagnet of DK door	MT1	Motor hopper 1
EVRE	EV filling	MT2	Motor hopper 2
EVSE	EV hot water outlet	FAN_SOL	Fan for soluble MT
EVSU	EV steam outlet	MPOMP	milk pump
EVNK	EV coffee cleaning		

## ► Cooling machine

Select the boiler to be cooled down and then press the 'refroidir' (cool) key. The temperatures and pressure are shown in real time.

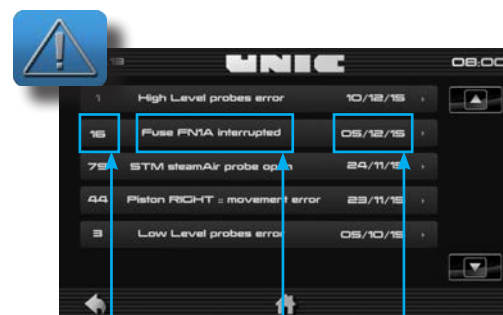
The Water key disables the heating of the Water/Steam boiler SOLO.

The Group coffee key disables the heating of the Coffee infusion Group Shutting down of the cooling is done manually.



## ► History of errors

This menu has no action on the electronics of the items affected by the error codes of the machine. It is simply a log of events in which the technician can leave a record of interventions carried out. The consultation of the aid is for information purposes.



Error code number

Detailed name of error code

Date of appearance of the error code

## ► Softener

Unic SA, uses two softener suppliers. BRITA® and BESTMAX™

Have the hardness of the water tested in the mains, and then refer to the technical documentation of the softener used to find the best settings.

*Note: a softener must be changed every year, even if it does not reach the end of its filtering capacity.*




## ► Descaling

The machine should be descaled only by a qualified technician.

► How to upgrade CPU and Display

**STEP 1: CPU's identification**

Software *without USB Key*



**WARNING:** to avoid CPU's destruction, you must be sure about CPU's identification

Visually



Before 28.xx.xx

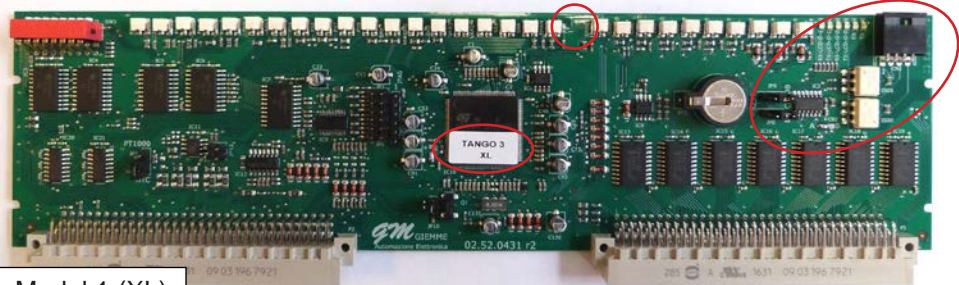
Model 0

After 28.xx.xx

2 possibilities 'Model 0' or 'model 1'



Model 0 (standard)



Model 1 (XL)

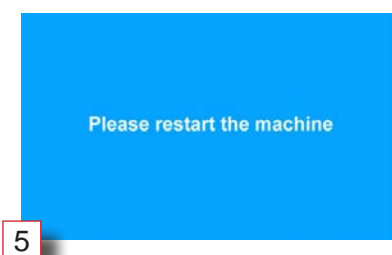
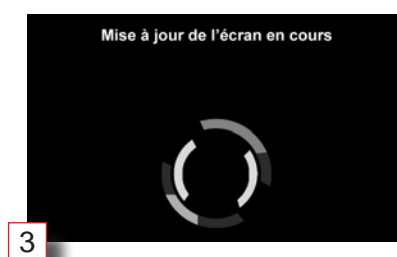
*Advice: leave the USB stick always connected to his socket.  
For the Duo the Display's upgrade is done automatically on both side.*

*When you insert USB Key, several possibilities:*

- Update CPU
- Update Display
- Import/export parameters
- Import/export data drinks



**STEP 2:** insert USB Key, update display first.



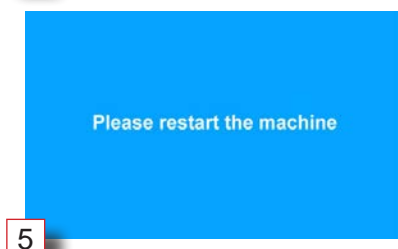
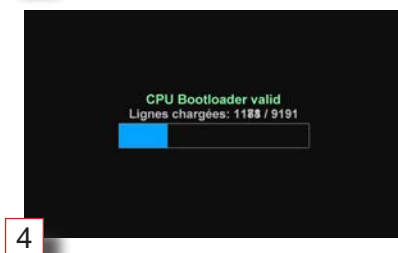
**STEP 3:** Update CPU. Follow process (page n°46)

**STEP 4:** Export / import data drink if it's necessary, The procedure does not change from previous versions.

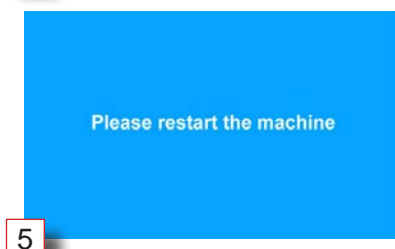
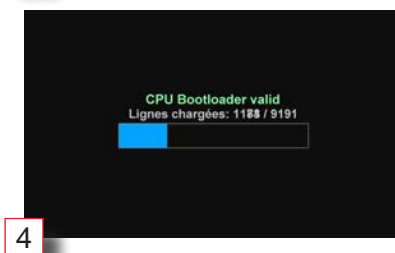


### \*STEP 3: Update CPU

When the CPU is “model 0”  
follow process “model 0”

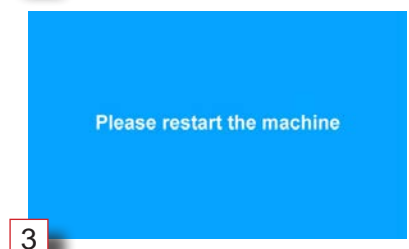
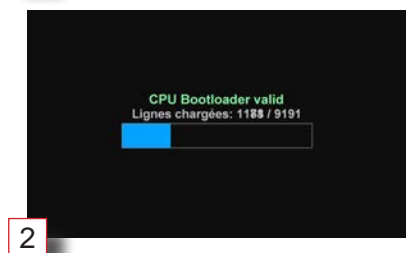


When CPU “model 1” is  
mounted instead “model 0”  
follow process “model 1”



When CPU “model 1” is  
already mounted in the  
machine:

process model will be  
lunch automatically After  
confirmation

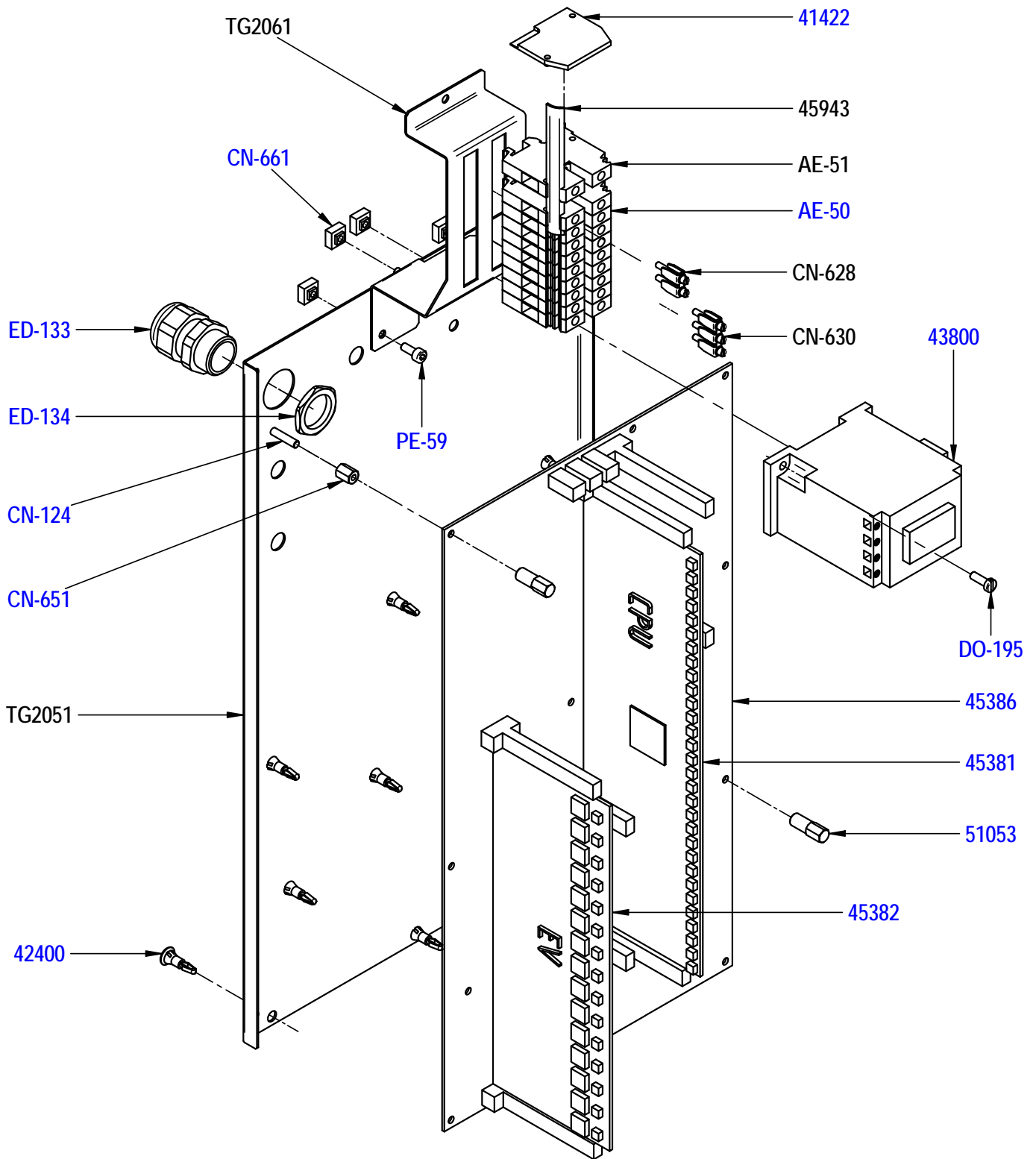


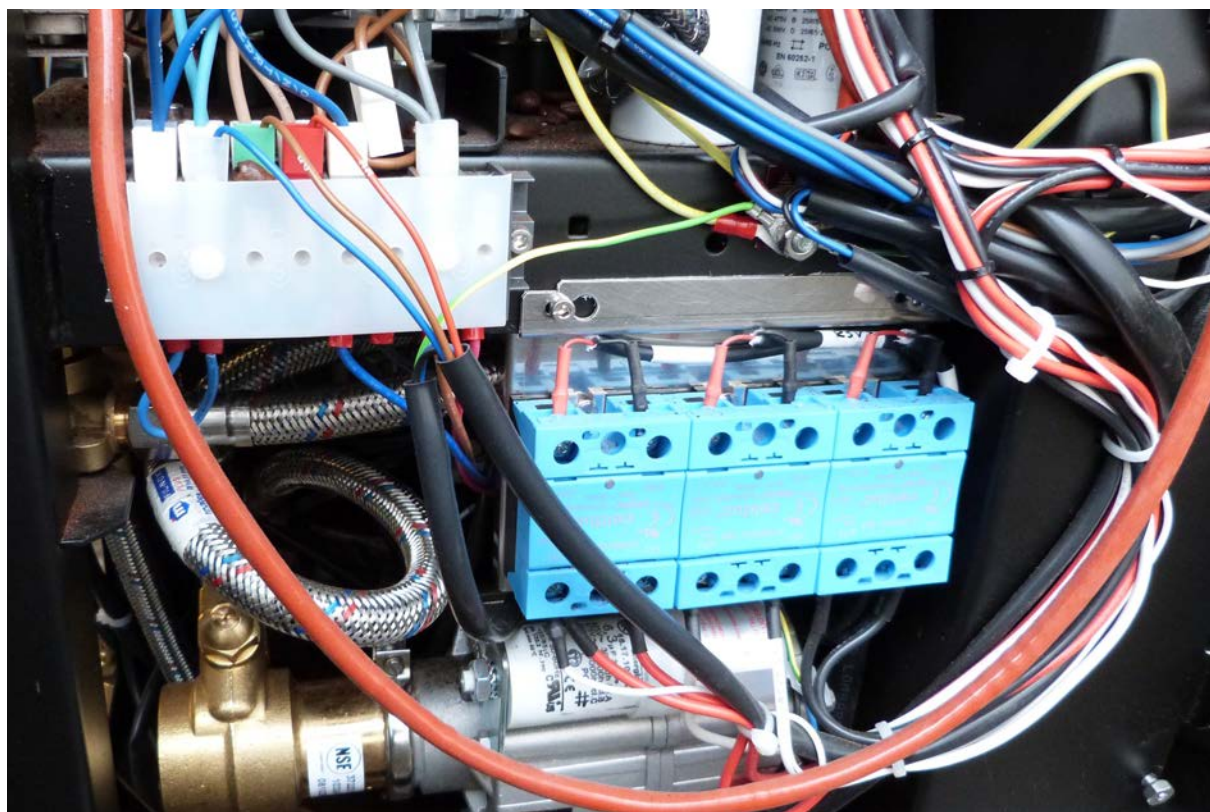
## ► Lists of cables

REFERENCE	DESIGNATION	CONNECTOR	NB PINS	VOLTAGE	QUANTITE		
					ACE	ACE MT	FRIGO
FR8019	BLUE CABLE CONN. COIL AND CONTACT			High	1	1	
FR8029	OPTICAL CELLS WITH CONNECTOR	CN6	16	Low	1	1	
FR8055	EV SV EV EXTENSION CABLE			Low	1	1	
TG8012	USB LINK CABLE	CN2	4	Low	1	1	
TG8013	RS 232 TFT SCREEN LEFT	CN3	16	Low	1	1	
TG8016	MOTOR TRAY ADAPTER CABLE	CN22	2	Low	1	1	
TG8017	STEAM BOILER & MAINS CABLE	CN7	10	Low	1	1	
TG8027	THERMOSTAT PROBES & LEVEL PROBES	CN17	10	Low	1	1	
		CN26	4				
		CN27	4				
TG8030	COFFEE GROUNDS DRAWER SAFETY CABLE	CN20	4	Low	1	1	
TG8034	BIN, BLENDER, POWDER FAN	CN24	12	Low			
TG8037	CABLE, TRAP & PIST. COD. SAFETY MOTOR CTRL	CN8	4	Low	1	1	
		CN9	4				
		CN12	6				
		CN15	6				
		CN23	4				
		CN25	2				
TG8039	STAT relay CONTROL. HOT STEAM / COFFEE	CN29	6	Low	1	1	
TG8043	CTRL Cable, EVRE, EVSE ,EVSV,EVKG	CN34	20	Low	1	1	
TG8045	SV CABLE, CAPPUCCINO LEFT	CN35	6	Low	1	1	
TG8049	CABLE, CPU & GRILLE EARTH			Terre	1	1	
TG8050	CABLE, GRINDER, R,V,O,RES GR,RI AND PUMP	CN41	12	High	1	1	
		CN44	8				
		CN47	6				
TG8057	CABLE, COFFEE BOILER			High		1	
TG8058	CABLE, COFFEE STEAM GROUP			High	1	1	
TG8062	CABLE, SWITCH OUTPUT			High	1	1	
TG8100	CABLE, INTER* T°C REG C- H DISPLAY			High			1
TG8101	SUPPLY CABLE			High			1

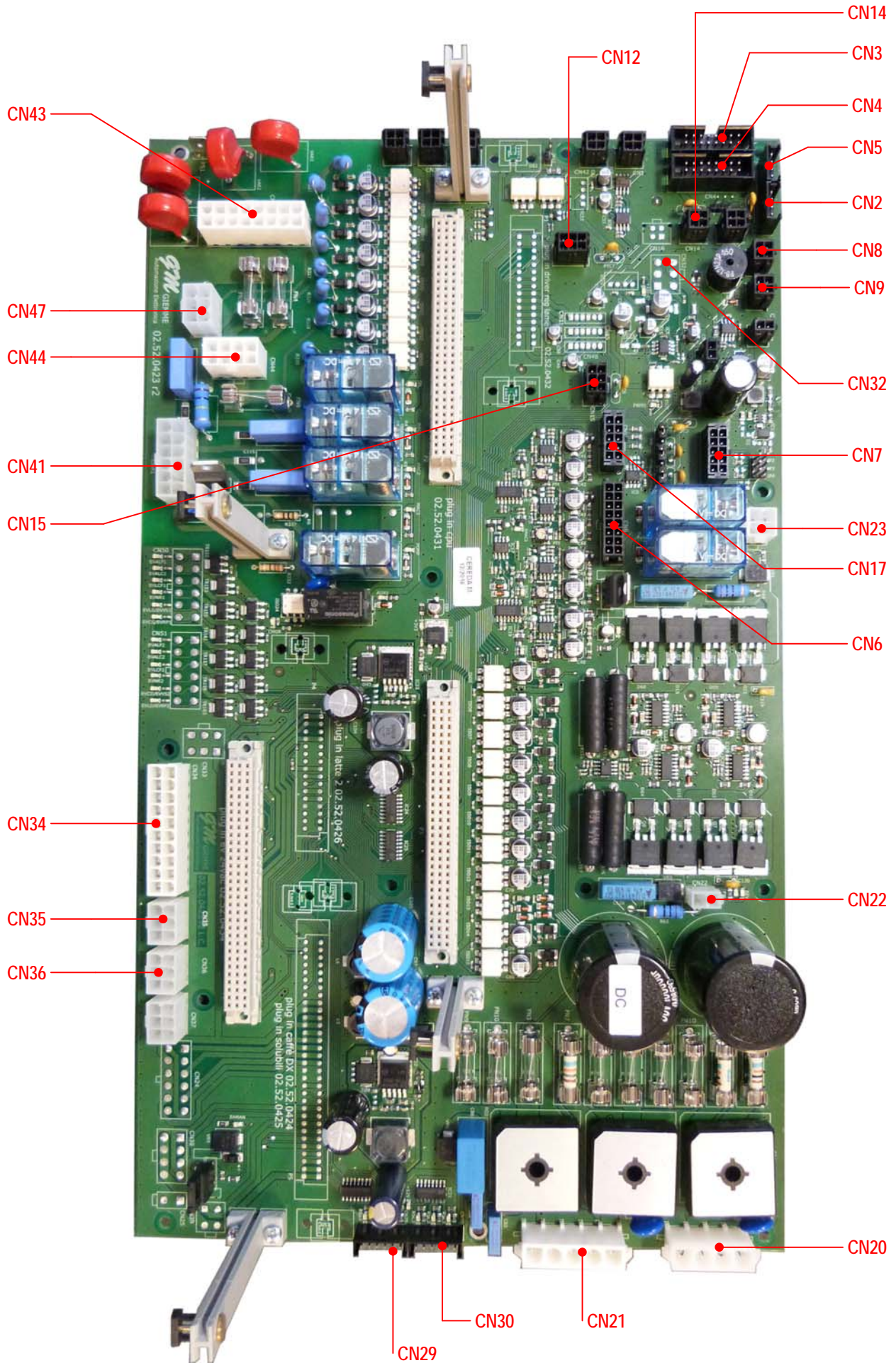
## ► Electronic Cards

### ◆ Turntable set

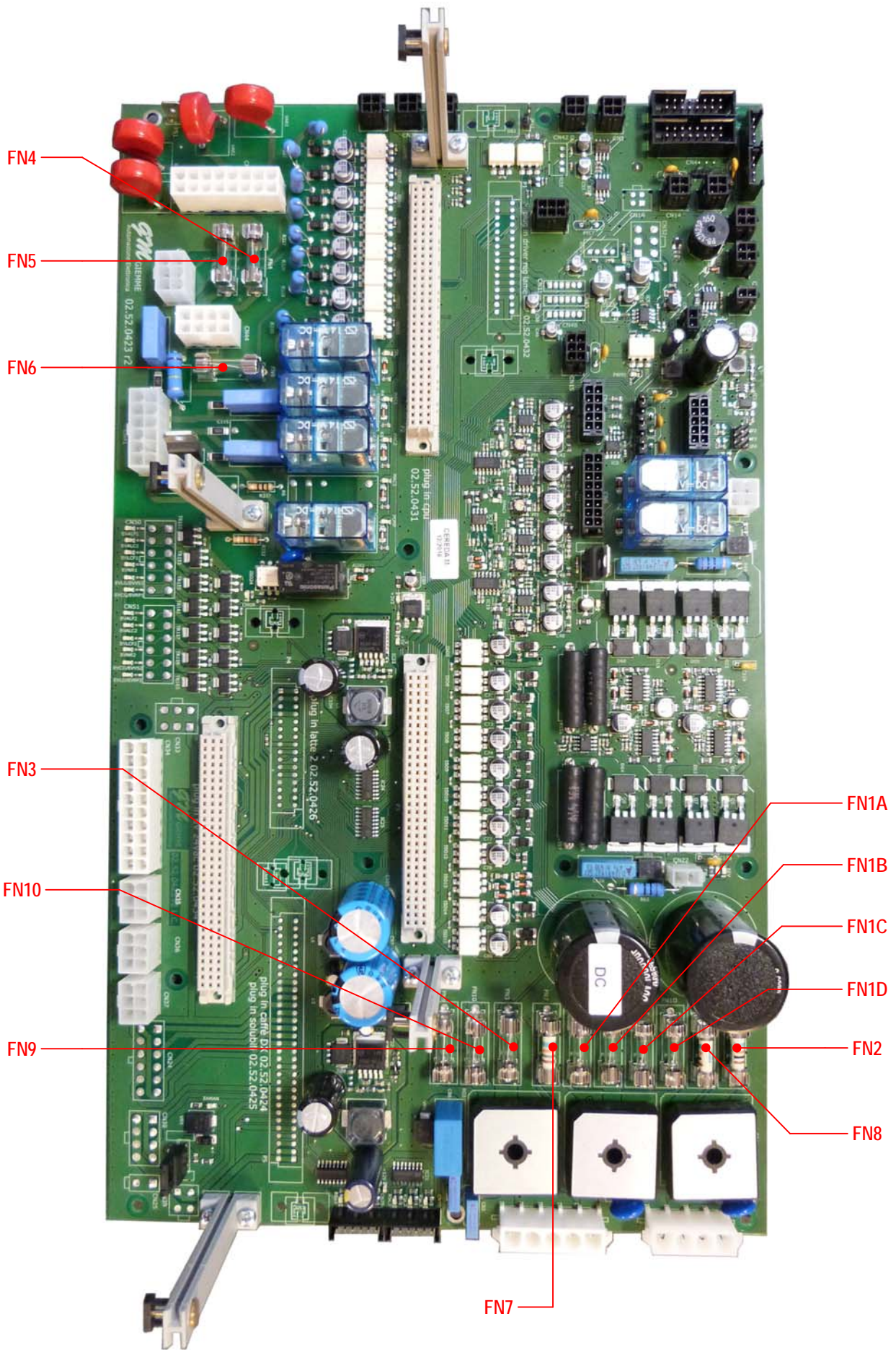


◆ Static relays

◆ Connectors



◆ Fuses



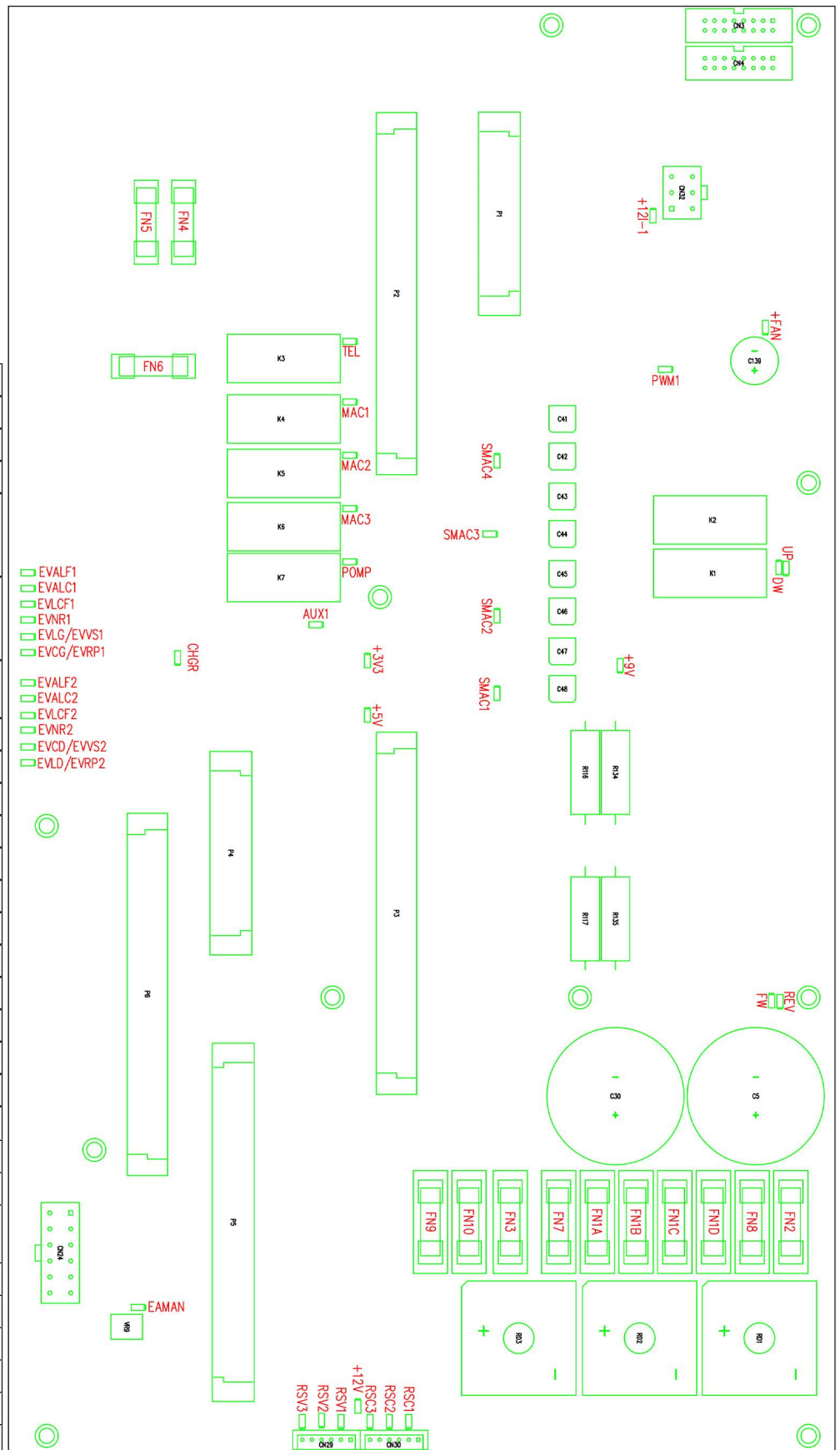
## ► LED Identification on card

## Identification

LED sur  
carte mère

45386

EVALF1	Cold milk air SV
EVALC1	Hot milk air SV
EVLFC1	
EVNR1	
EVLG / EVVS1	SV, latte from the LC outlet, left / steam coil SV
EVCG / EVRP1	SV, cappu. LC Output left / Cleaning steam, purge and flush SV
EAMAN	Electro-magnet manual door
RSC1	Static coffee relay 1
RSC2	Static coffee relay 2
RSC3	Static coffee relay 3
RSV1	Static steam relay 1
RSV2	Static steam relay 2
RSV3	Static steam relay 3
POMP	Electric pump
MAC1	Grinder no 1 (purple)
MAC2	Grinder no 2 (green)
MAC3	Grinder no 3 (orange)
TEL	Main switch
SMAC1	Coffee safety no 1
SMAC2	Coffee safety no 2
SMAC3	Coffee safety no 3
SMAC4	Not used
CHGR	Heating element of the Group
AUX1	
+3V3	
+5V	5V supply on light
+9V	9V supply on light
+12V	12V supply on light
+FAN	Fan supply light

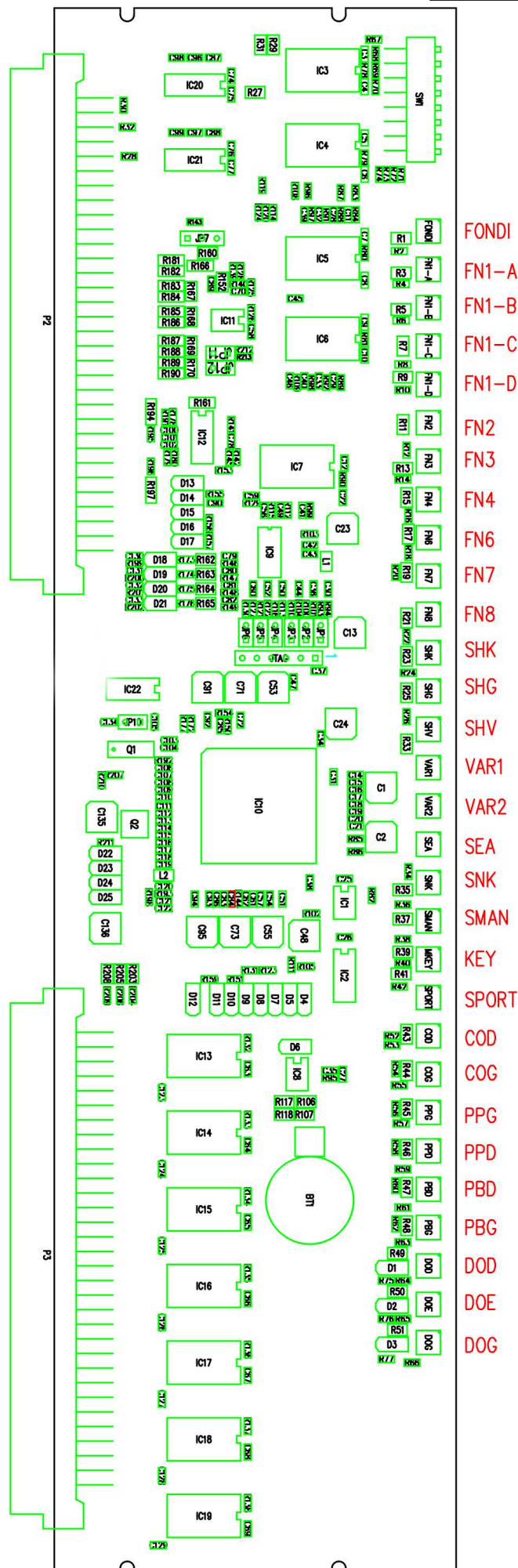


# Identification

## LED sur carte CPU

### 45381

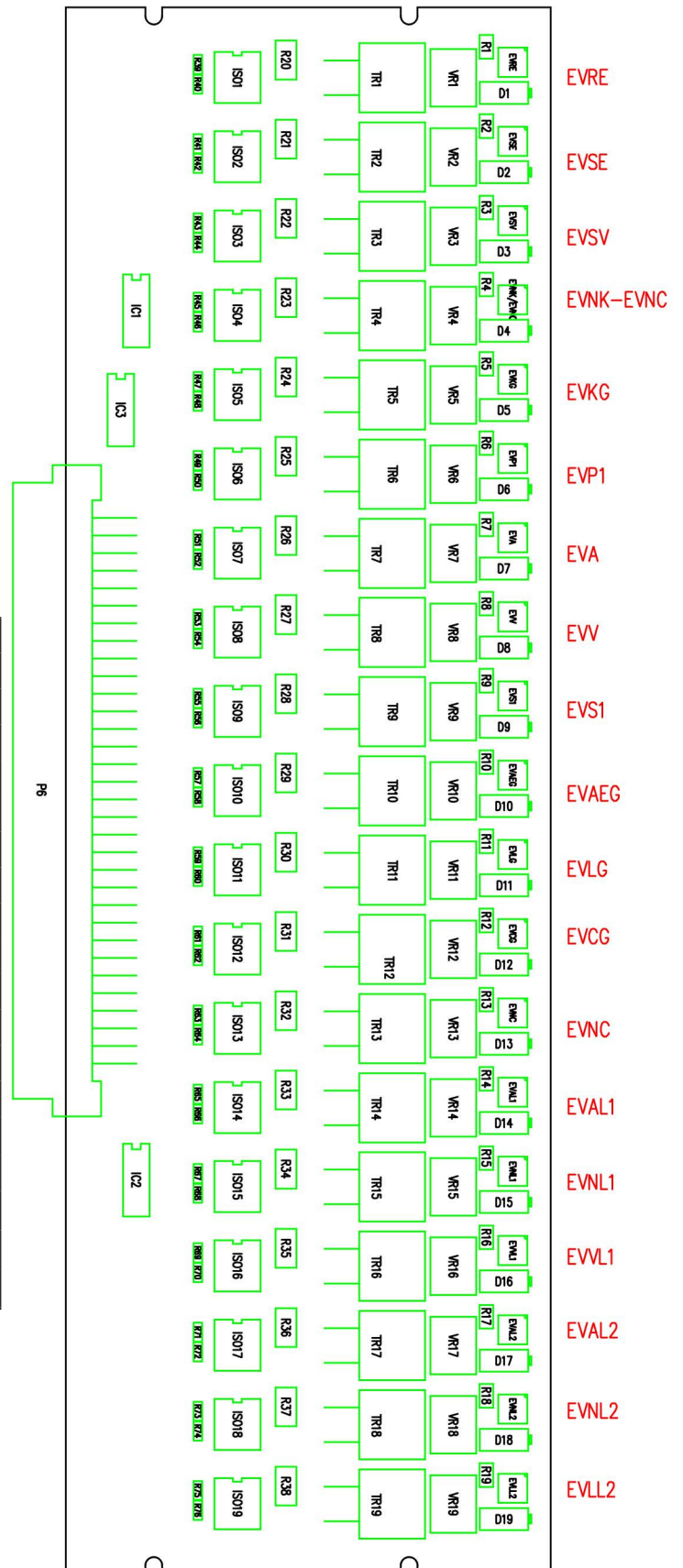
FONDI	Coffee grounds tray
FN1A	MODULE 24V: EVRE - EVSE - EVSV - EVNC - EVNK/EVNC - EVA - EVV
FN1B	MODULE SOLUBLE: MT1 - MT2 - FAN SOL - EVKD/EVM1 - EAED/EVM2 MODULE CAFE DX: EVKD/EVM1 - EAED/EVM2 - EVCD - EVP2 - EVLD - EVS2
FN1C	MODULE 24V: EVNKG - EVAEG - EVLG - EVCG - EVP1 - EVS1
FN1D	MODULE 24V: EVAL1 - EVNL1 - EVVL1 - EVAL2 - EVNL2 - EVLL2
FN2	Piston and tray motor supply
FN3	+24V
FN4	Main switch
FN6	MAC1 - MAC2 - MAC3 - GET1 - GET2 - GET3 - POMPA - AUX1 - CHGR
FN7	Tray motor
FN8	Piston motor
SHK	Heater element safety system, coffee boiler
SHG	Heater element safety system, group
SHV	Heater element safety system, steam boiler
VAR1	
VAR2	
SEA	Water presence safety system
SNK	Plug safety system for the group cleaning circuit
SMAN	Manual door safety system
KEY	
SPORT	
COD	Encoder, right cylinder
COG	Encoder, left cylinder
PPG	Tray position to the left
PPD	Tray position to the right
PBD	Right cylinder low position
PBG	Left cylinder low position
DOD	Right volumetric meter
DOE	Hot water outlet volumetric meter
DOG	Left volumetric meter



# Identification

## LED sur carte EV 45382

EVRE	Filling SV
EVSE	Hot water outlet SV
EVSV	Steam outlet SV
EVNK / EVNC	Coffee cleaning SV
EVKG	Left coffee SV
EVP1	Pre-infusion 1 SV
EVA	Air SV
EVV	Steam SV
EVS1	
EVAEG	SV add water at coffee outlet, left
EVLG	Latte from the LC outlet, left SV
EVCG	Cappuccino from the LC outlet, left SV
EVNC	Cappuccino cleaning SV
EVAL1	Cold air SV
EVNL1	Milk SV
EVVL1	Hot air SV
EVAL2	
EVNL2	
EVLL2	



## ► Active components

OPTION LC	
SM1	Coffee safety system, grinder no 1
SM2	Coffee safety system, grinder no 2
SM3	Coffee safety system, grinder no 3
SM4	Coffee safety system, grinder no 4
CHU	Moisture sensor
CPV	Steam pressure sensor
CPR	Mains pressure sensor
MGET1	Coin acceptor no 1 micro switch
MGET2	Coin acceptor no 2 micro switch
SNB	Low level probe
SNH	High level probe
THV	Steam boiler thermostat probe
THG	Group thermostat probe
THK	Coffee boiler thermostat probe
CO. D	Encoder, right cylinder
PB. D	Right cylinder low position
EVK.D	Right coffee SV
EVAE.D	SV add water at coffee outlet, right
EVINF.D	Infusion D (cleaning) SV
EVS2	
EVC.D	Cappuccino from the LC outlet, right SV
EVL.D	Latte from the LC outlet, right SV
MM1	Mixer motor 1
MM2	Mixer motor 2
MT1	Bin 1 motor
MT2	Bin 2 motor
SFAN	Soluble fan
SMAN	Manual door safety system
SEA	Water presence safety system
SNK	Plug safety system for the group cleaning circuit
DO. D	Right volumetric meter
DO. G	Left volumetric meter
DO. E	Hot water outlet volumetric meter
CO. G	Encoder, left cylinder
PP. D	Tray position to the right
PP. G	Tray position to the left
PB. G	Left cylinder low position
EA.MAN	Manual door electro-magnet
RSV1	Static steam relay 1
RSV2	Static steam relay 2
RSV3	Static steam relay 3
RSC1	Static coffee relay 1

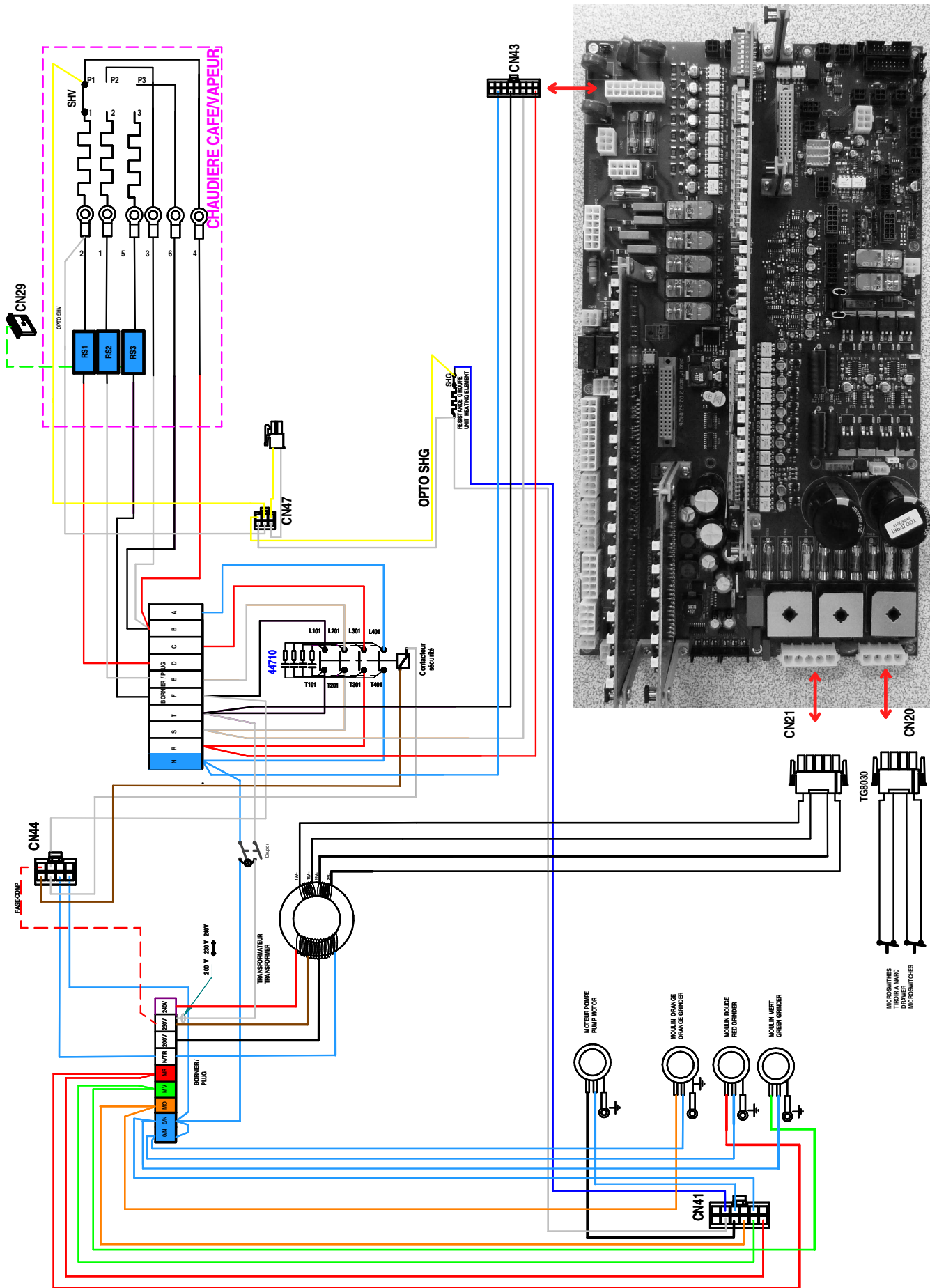
RSC2	Static coffee relay 2
RSC3	Static coffee relay 3
EVALF1	Cold milk air SV
EVNL1	Milk cleaning SV
EVALC1	Hot milk air SV
EVRE	Filling SV
EVSE	Hot water outlet SV
EVKN	Coffee cleaning SV
EVK.G	Left coffee SV
EVP1	Pre-infusion 1 SV
EVA	Air SV
EVV	Steam SV
EVDC	DISCHARGE (cleaning) SV
EVAE.G	SV add water at coffee outlet, left
EVL.G	Latte from the LC outlet, left SV
EVC.G	Cappuccino from the LC outlet, left SV
EVNC	Cappuccino cleaning SV
MAC 1	Grinder no 1 (purple)
MAC 2	Grinder no 2 (green)
MAC 3	Grinder no 3 (orange)
POMP	Pump motor
SNL1	Milk level probe 1
SNL2	Milk level probe 2
EVALF2	Cold milk air 2 SV
EVNL2	Milk cleaning 2 SV
EVALC2	Hot milk air 2 SV
GET1	Coin acceptor coil no 1
GET2	Coin acceptor coil no 2

► List of error codes

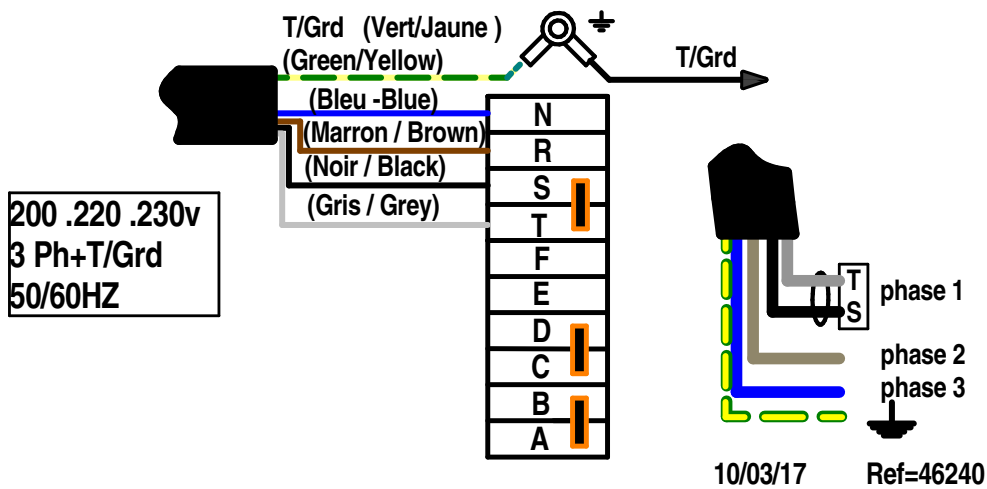
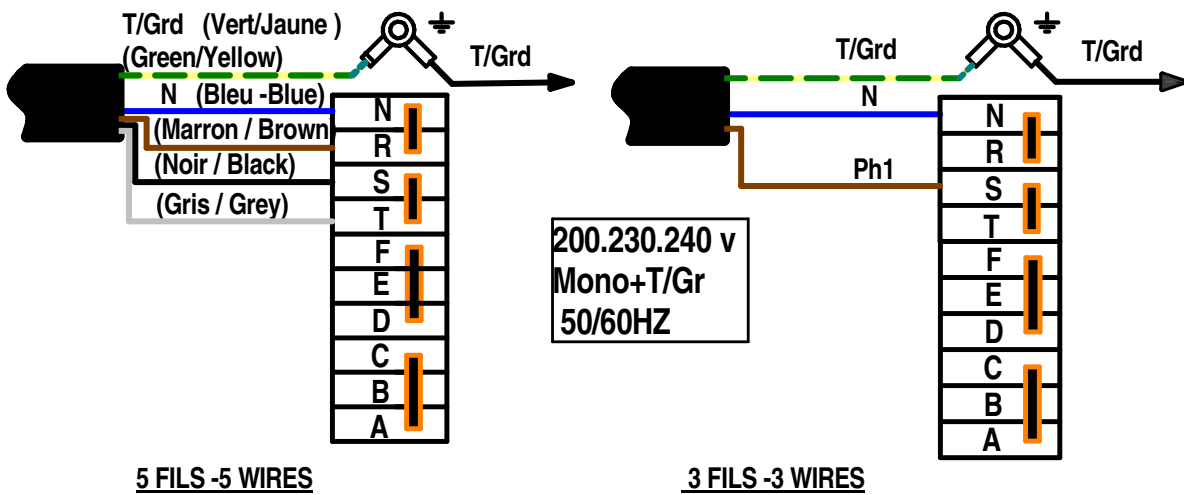
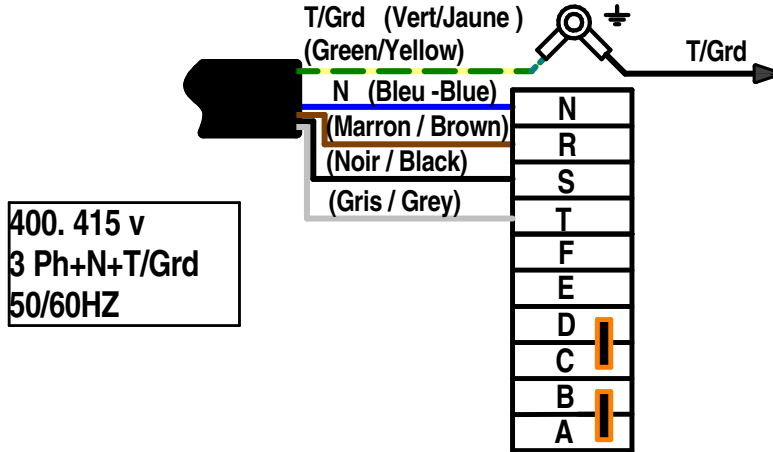
Error code no	Component	Error code description
1		High level probe
2		Connection error, level probes
2		The two level probes not covered
3		Low level probe error
4		Tray rotation time-out
5	SHK	Coffee boiler heater overheating safety device
6	SHV	Steam boiler heater overheating safety device
7	SHG	Group boiler heater overheating safety device
8	SNK	Pellet cleaning unit plug open
9		Coffee grounds drawer out
10	Left piston	Lowering Time-out disconnected
10.1	Left piston	Lowering Time-out motor slow
10.2	Left piston	Lowering Time-out transmission
11	Right piston	Lowering Time-out disconnected
11.1	Right piston	Lowering Time-out motor slow
11.2	Right piston	Lowering Time-out transmission
13		Communication error, left screen
14		Communication error, right screen
15		Decaffeinated trap safety system
16	FN1A	Fuse broken
17	FN2	Fuse broken
18	FN3	Fuse broken
19	FN1B	Fuse broken
20	FN8	Fuse broken
21	FN1C	Fuse broken
22	FN1D	Fuse broken
23	FN4	Fuse broken
24	FN6	Fuse broken
25	FN7	Fuse broken
26		Screen fan over-voltage
27	THV	Steam overheating safety device
28	THG	Group overheating safety device
29	THK	Coffee overheating safety device
30		Boiler filling time-out
31	Left piston	Encoder Fault
31.1	Left piston	Encoder Fault
32	Left piston	Low position fault
33	Left piston	Does not rise safety time-out
34	Left piston	Movement error
35	Left piston	Rise safety time-out fault
35.1	Left piston	TKC Rise safety time-out fault

36	Left piston	Jammed or simultaneous faults on the encoder and the PMBas
37	Left piston	Does not move backwards
38	Left piston	Encoder Fault
41	Right piston	Encoder Fault
41.1	Right piston	Encoder Fault
42	Right piston	Low position fault
43	Right piston	Does not rise safety time-out
44	Right piston	Movement error
45	Right piston	Rise safety time-out fault
45.1	Right piston	TKC Rise safety time-out fault
46	Right piston	Jammed or simultaneous faults on the encoder and the PMBas
47	Right piston	Does not move backwards
48	Right piston	Encoder Fault
50	THK	Coffee boiler thermostat probe disconnected
51	THK	Coffee boiler thermostat probe, short circuit
52	Left piston	Over-voltage during descent
57	Left piston	Over-voltage during expulsion
60	THV	Steam boiler thermostat probe disconnected
61	THV	Steam boiler thermostat probe, short circuit
62	Right piston	Over-voltage during descent
66	Right piston	Over-voltage during expulsion
67		Volumetric meters reversed
70	THG	Group thermostat probe disconnected
71	THG	Group thermostat probe disconnected
72	CPV	Error
73	CPV	Short circuit
74	CPR	Error
75	CPR	Short circuit
76	CHU	Error
77	CHU	Short circuit
78	SEA	Inlet water pressure error
79	STM	Steamair probe disconnected
80	STM	Steamair probe disconnected in short circuit
81	DOG	Jammed
82	DOD	Jammed
83	DOE	Jammed
90		Machine settings corrupted
91		Piston settings corrupted
92		Calibration settings corrupted

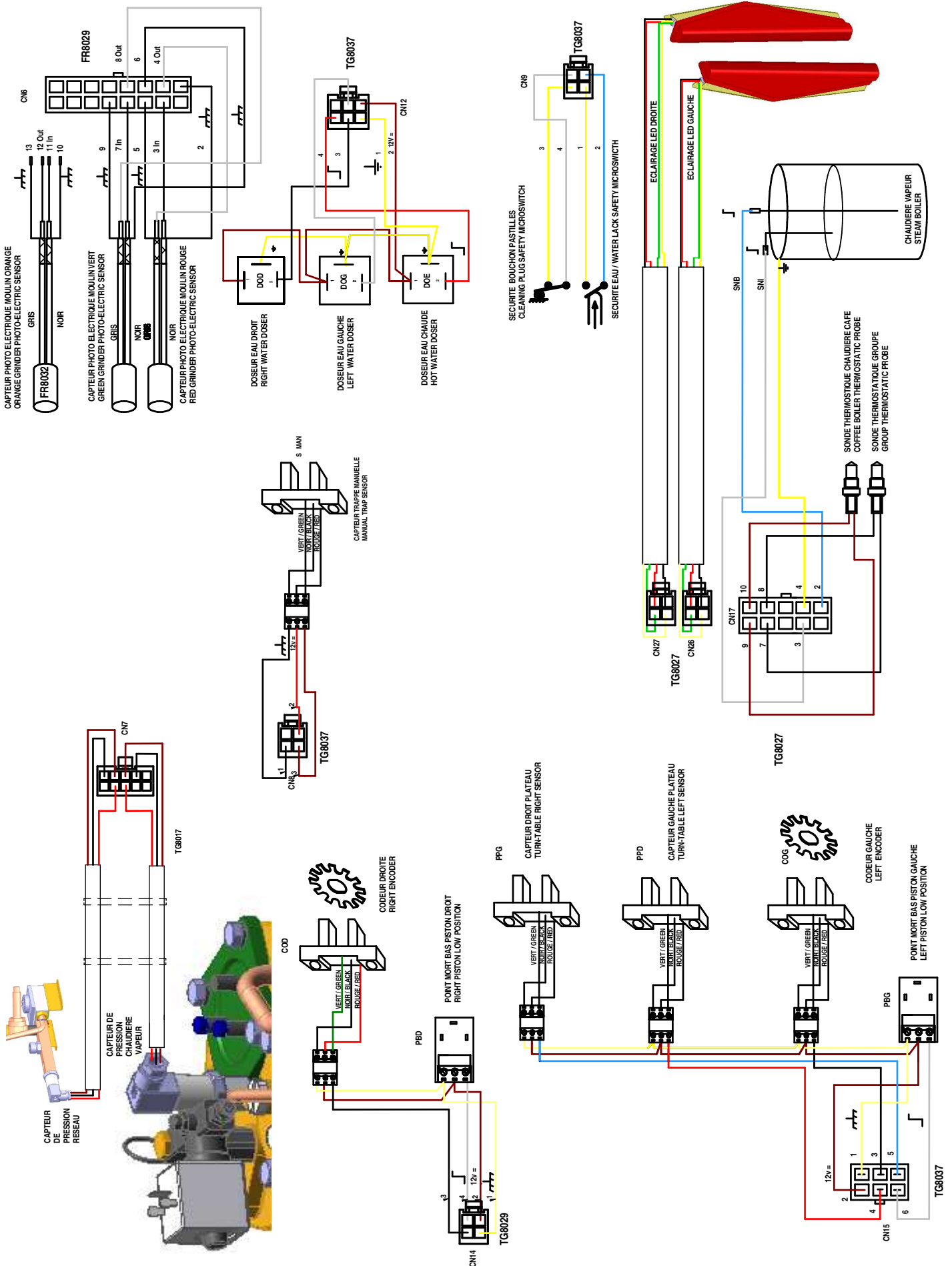
► Electric wirings



## BRANCHEMENT BORNIER / TERMINAL CONNECTING



◆ Electric wirings 5/12V





## ► Front panel replacement

Tools:  
-Phillips screwdriver  
-Flat screwdriver

Remove the cup rack and unscrew the 2 front screws of the cup warmer.



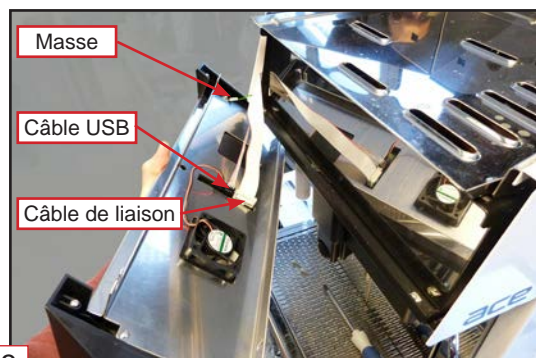
1

Unscrew the 2 screws of the bottom of the front panel. **Hold the grille** so it does not fall off.



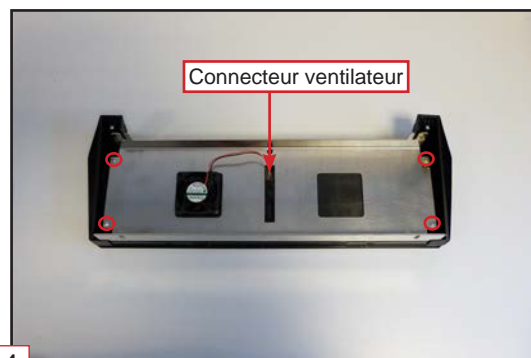
2

Remove the grille and disconnect the 3 connectors.



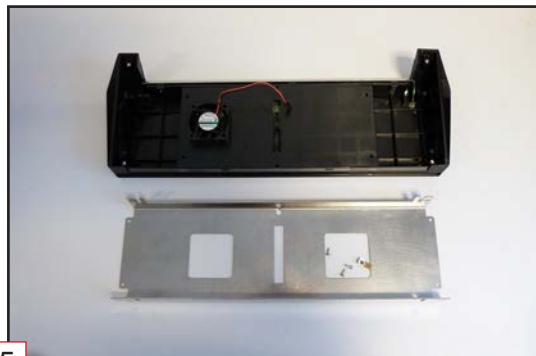
3

Unscrew the 4 screws and disconnect the fan connector.



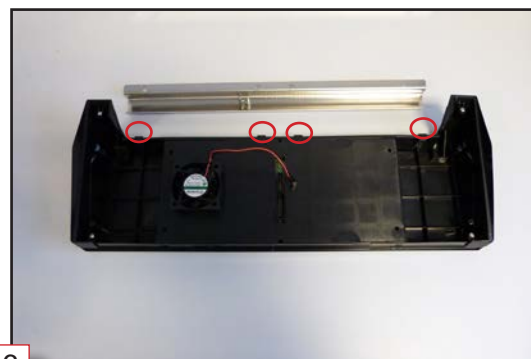
4

Remove the support plate from the grille



5

Unscrew the 4 screws from the top of the grille



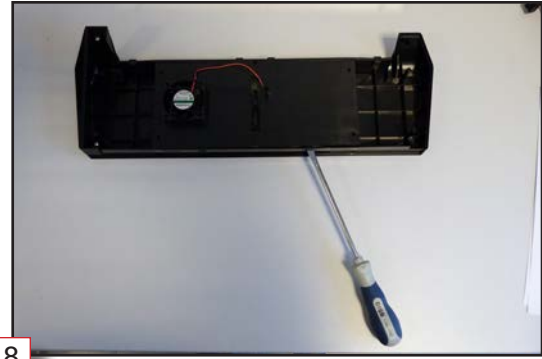
6

Unscrew the 2 Phillips screws and then remove the ears (right and left)

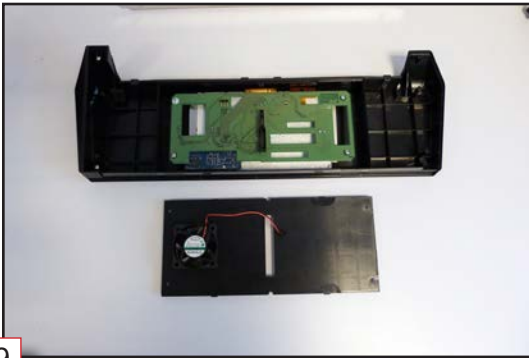


7

Remove the rear cover using a screwdriver in the notches.



8



9

**Installing the new screen:**  
Replace the cover with the fan on the new screen, then proceed to assemble by repeating all previous operations in the reverse order.