TANGO® ST

TECHNICAL NOTE

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.

Notice applied toTango ST Duo and Tango ST Solo

TG9016 03/2017

UNIC

Contents

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 preform 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

► TANGO SOLO ST

DIMENSIONS	
Width	45.3 cm 17.7”
Height	75.3 cm 29.5”
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	+250

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 DUO ST

DIMENSIONS	
Width	60.3 cm 23.6”
Height	75.3 cm 29.5”
Depth	63 cm 24.8”
WEIGHT	130 kg 286.6”
CAPACITIES	
Coffee boiler	6.5 liters
Steam boiler	6.5 liters
Bac à marc	100 coffees
Numbers of cups / hour	+500

STANDARD				Power		
				Total	Boilers	
Counrty	Rep	Voltage (V)	Current		Steam	Coffee
Philippines	0	415V tri + N 60Hz	Ph 2+3: 7 A Ph 1+N: 21 A	8000 W	2720 W	4760 W
Europe	1	400V tri + N 50HZ	Ph 2+3: 6.5 A Ph 1+N: 20 A	7500 W	2500 W	4370 W
Europe	2	230V Mono 50Hz	32.5 A	7500 W	2500 W	4370 W
UK	3	415V tri +N 50Hz	Ph 2+3: 7 A Ph 1+N: 21 A	8000 W	2720 W	4760 W
UK	4	240V Mono 50Hz	34 A	8100 W	2720 W	4760 W
Japan	5	200V tri +N 50Hz	Ph 2+3: 9.5 A Ph 1+N: 21.5 A	5800 W	1890 W	3300 W
Japan	6	200V Mono 50Hz	28 A	5700 W	1890 W	3300 W
Europe	7	230 tri 50Hz	Ph 2+3: 11 A Ph 1: 24 A	7500 W	2500 W	4370 W
USA	8	240V Mono 60Hz	34 A	8100 W	2720 W	4760 W
		208V Mono 60Hz	31 A	6400 W	2045 W	3890 W
USA	9	240V tri 60Hz	Ph 2+3: 25.5 A Ph 1: 11.5 A	8000 W	2720 W	4760 W
		208V tri 60Hz	Ph 2+3: 23.5 A Ph 1: 11 A	6500 W	2045 W	3890 W

► MODULE FRIGO ST

DIMENSIONS	
Width	26.5 cm 10.2”
Height	51.5 cm 20”
Depth	50 cm 19.6”
Weight	30 kg 66.1”
CAPACITIES	
Milk tank (liter)	4

The ST module is only fitted on the **left side** of the machine when it contains the pump milk unit

Left module ref: TG3070
Right module ref: TG3071
(same part with the folds reversed)

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.

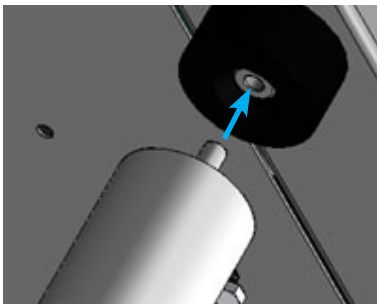
♦ Unpacking the machine

- 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



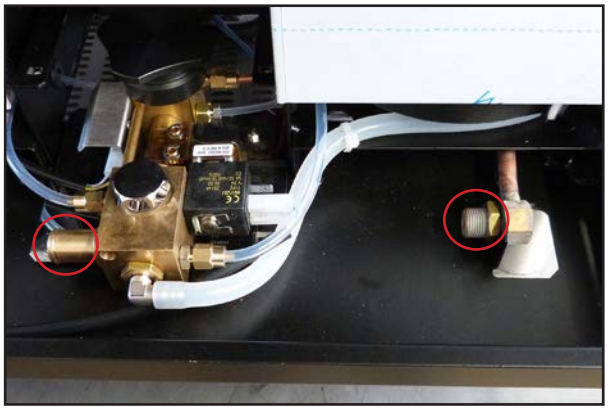
Reference UNIC feet NSF: **NM-176**
Reference UNIC M8 x 16 bolts: **50402**
For fitting the aluminium feet, once the machine is installed in its location:
Screw the 50402 bolts to the aluminium feet, tip the machine onto the front two feet to screw in the aluminium feet at the base of the rubber feet at the back, and then do the same operation for bolting the feet to the front.

► Hydraulic connections

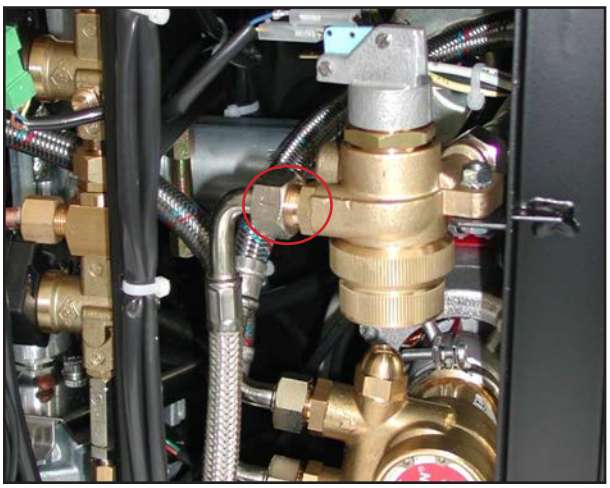
The machine is delivered with a complete connection kit including a stainless steel braided water hose 2 m length and a drain hose 2 m in length with a clamp located in the box of accessories.

♦ Duo

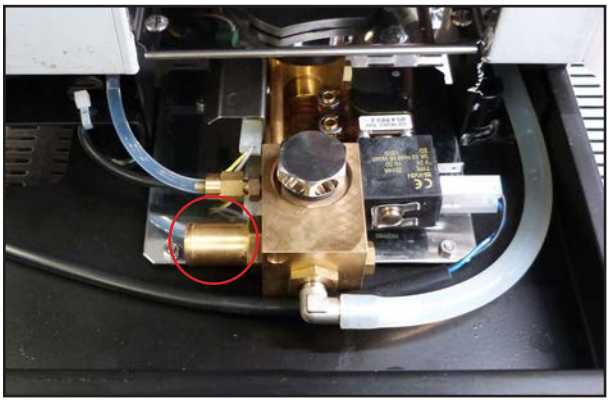
- Slide the lower trims toward the front
- Remove the basin grille
- Remove the basin after unscrewing the central screw.
- Screw the angled part (3/8’) of the stainless steel braided flexible tube on the brass fitting located to the right of the machine, and the straight part (1/2’) on the water softener outlet union. The water softener must be fed directly by the mains via a shut-off tap allowing a sufficient flow, Ø 8 min. Do not forget the seals.
(See specificity for the Solo model)
- 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 in the centre of the machine
- Check for leaks, and make sure that the drain tube allows water to flow to the main drain without any reverse slope.
- Refit the basin, not forgetting the seal which must be between the drain block and the basin, and not between the central screw and the basin.
- Refit the trims and the basin grille.



♦ Solo



- 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 SOLO,
- 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.

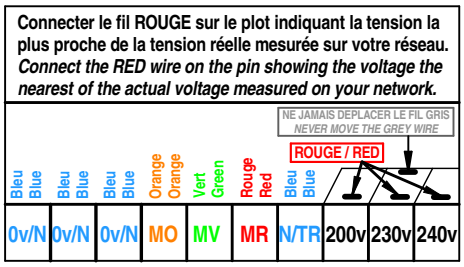
To do this:
Compare the indications on the data plate, inside the drawer housing, with the characteristics of the circuit to which the machine is to be connected. Remove the left side of the machine and check that the connection of the straps on the terminal strip corresponds to the connection required (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± 5 %.
The low voltage should be about of 22V. These voltages should be checked with the machine working and the main switch closed.

Réf: 46031



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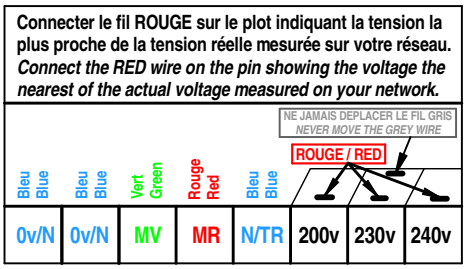
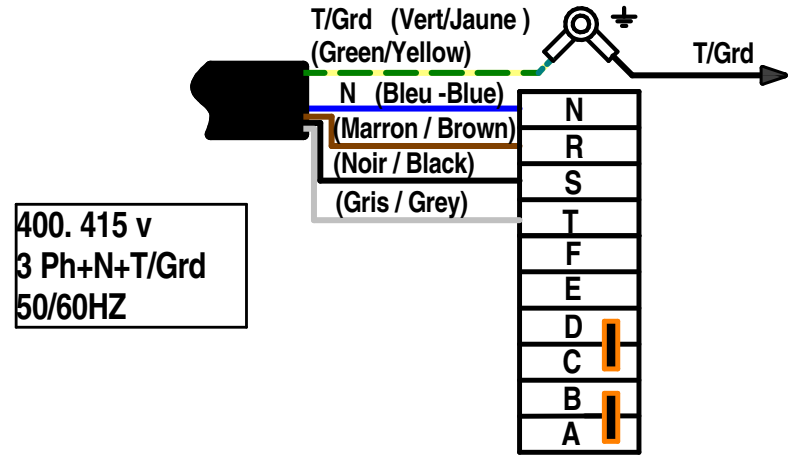
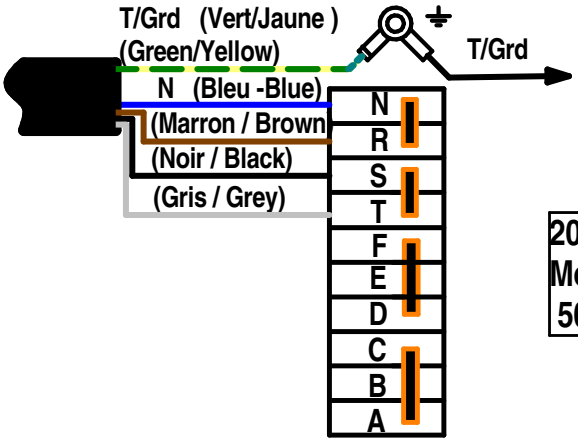


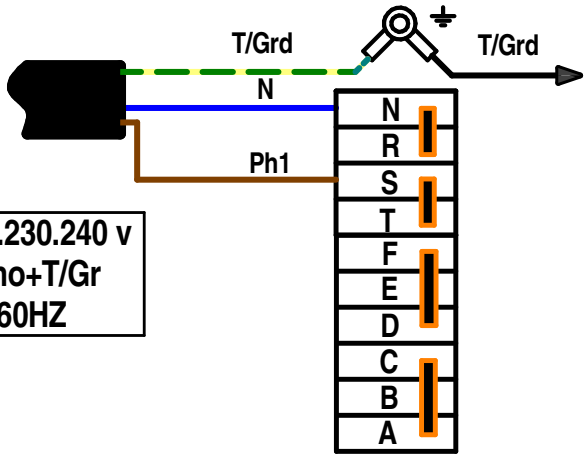
BRANCHEMENT BORNIER / TERMINAL CONNECTING



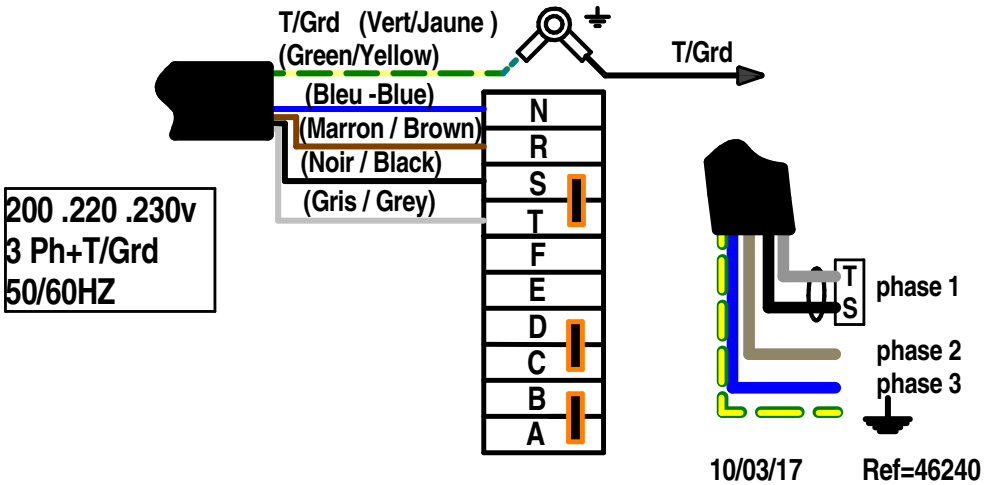
ST



5 FILS -5 WIRES



3 FILS -3 WIRES



10/03/17 Ref=46240

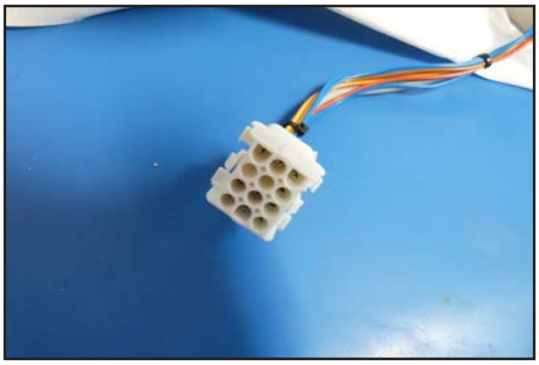
IN ALL CASES THE GREEN/YELLOW WIRE MUST BE CONNECTED TO THE EARTH OF THE INSTALLATION

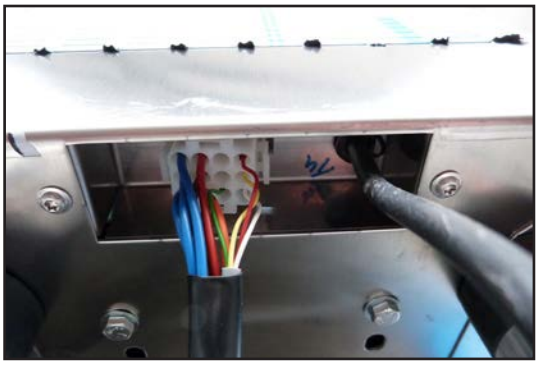
► Connecting the ST refrigerator module to the machine

♦ Electrical part:

The refrigerator is composed of a supply cable for the mains and computer connection to the machine.

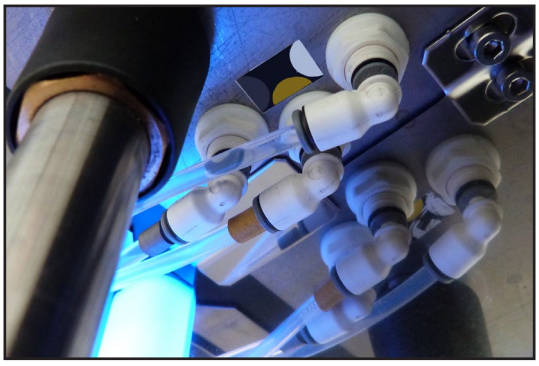
- Place the refrigerator on the left of the machine
- The cable connector has a fool proofing device, if this makes connection difficult, the connector is the wrong way round.
- The connector on the refrigerator is located under the refrigerator at the back.

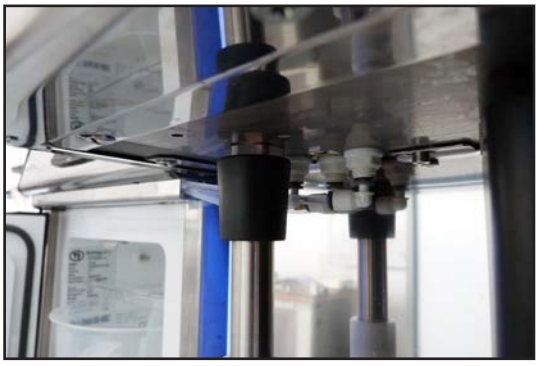




♦ Hydraulic part - milk pump

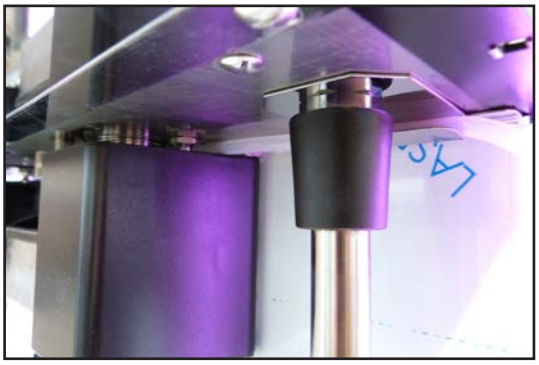
With a pump milk, there are 3 quick couplers differentiated with 3 different colors (yellow, grey, white). Refer to the decal on the chassis for the positioning.





♦ 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.

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.

► Module ST

The temperature display indicates the ambient temperature of the refrigerator.
To adjust the temperature of the refrigerator use the temperature regulator.

♦ <u>Temperature Display</u>

It is an indicative display
If necessary, to adjust the temperature setting (Menu CA I), put a thermometer in the refrigerator for 15 minutes, then adjust the display according to the difference displayed.

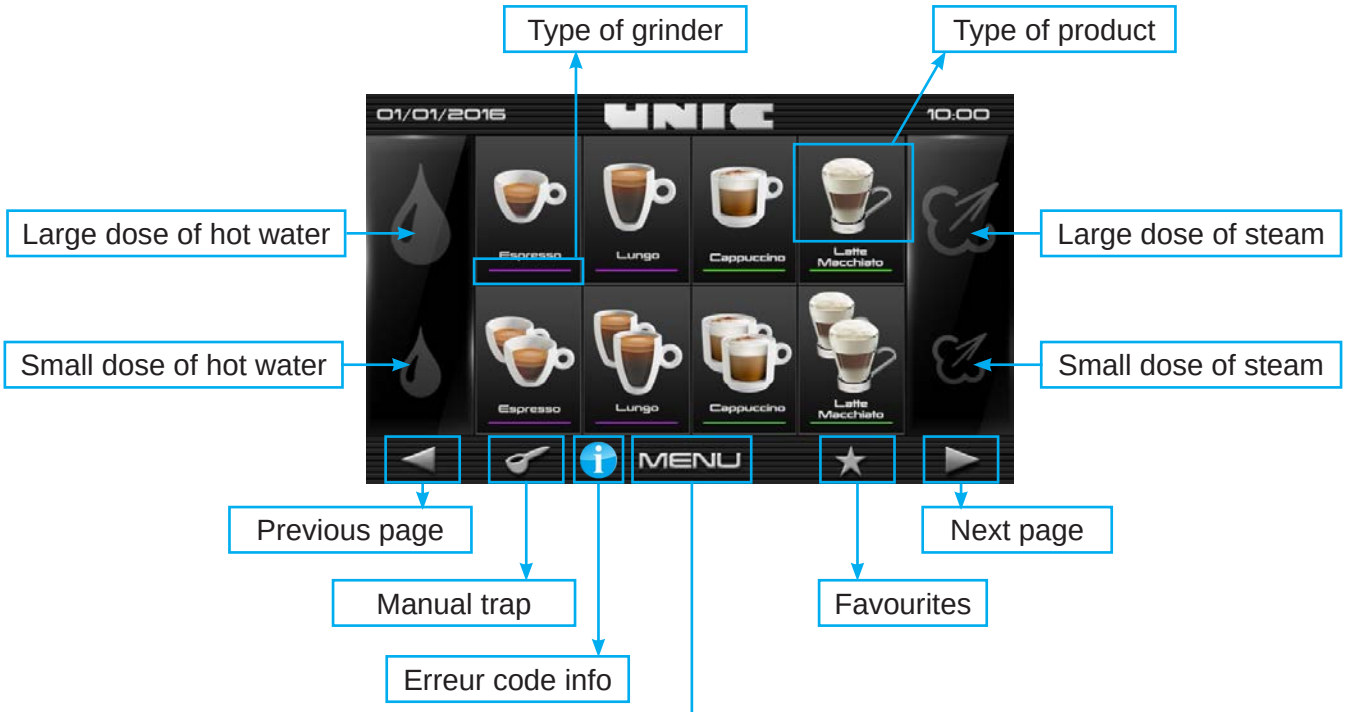
E.g.:
- the thermometer indicates 4°C (in the refrigerator),
- at the same time the display shows 9°C,
- adjust the offset to -5.

UNIC part number for the display: 45036
UNIC part number for the sensor: 34415

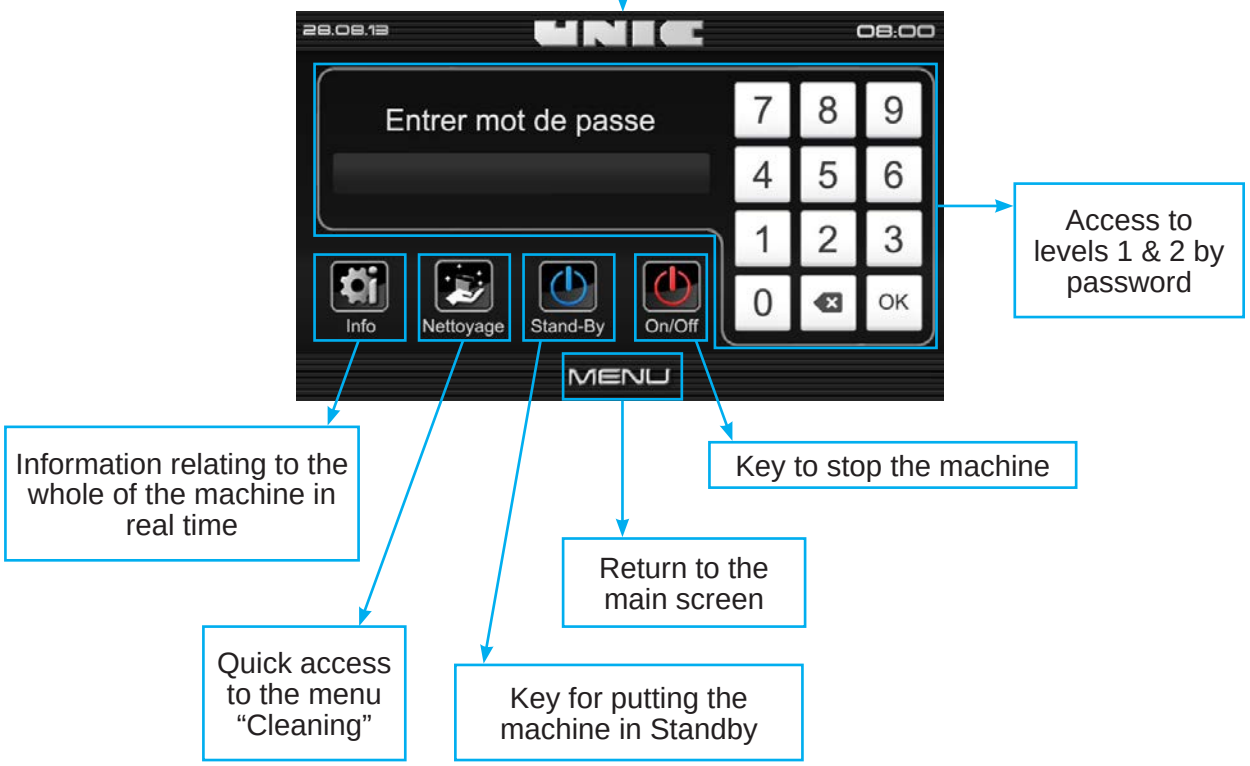
5- INTERFACE

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.

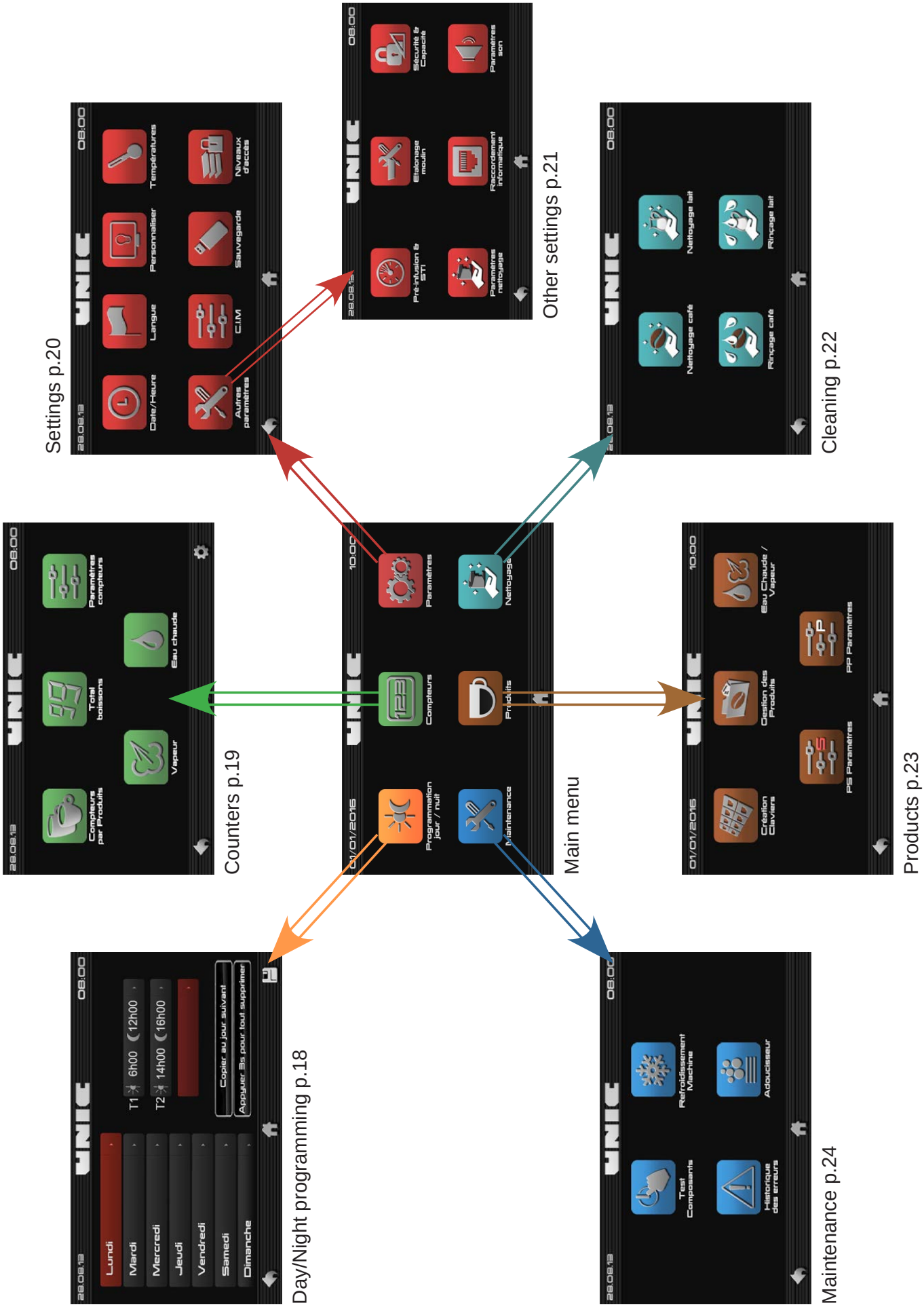
► Main screen



► 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

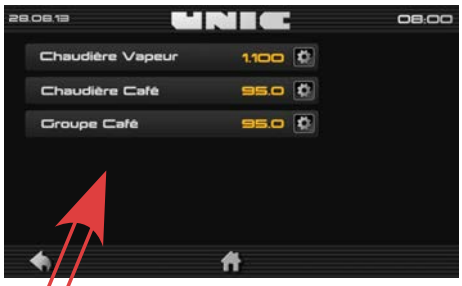
This menu allows you to view the statistics for all the products produced on the machine.
Note: At level 2, it is possible to perform a general reset of all counters.

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

Language p.25

Customizing p.25

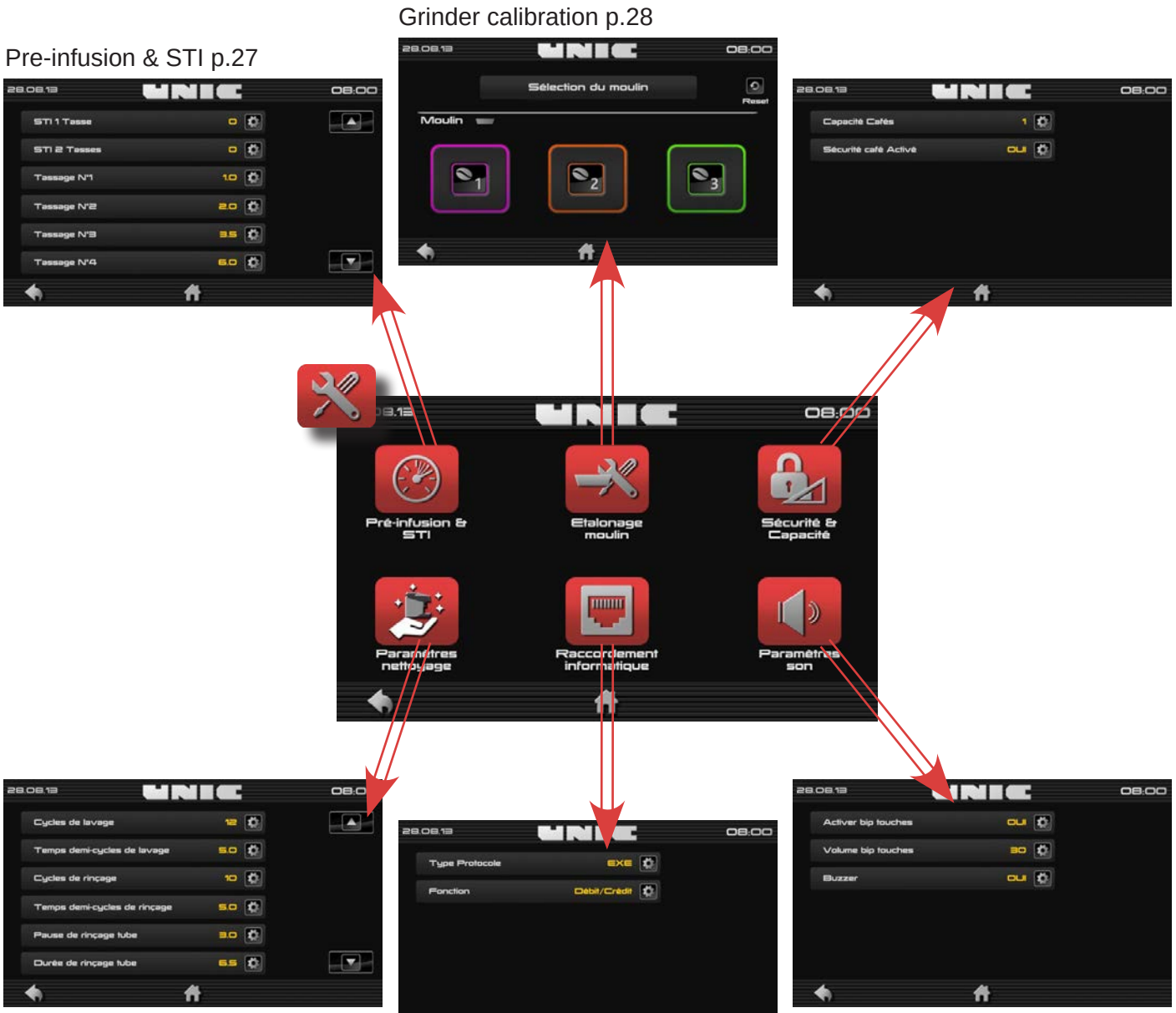


Level 2 (technician) required p:26

Level 2 (technician) required p:26

Level 2 (technician) required p:27

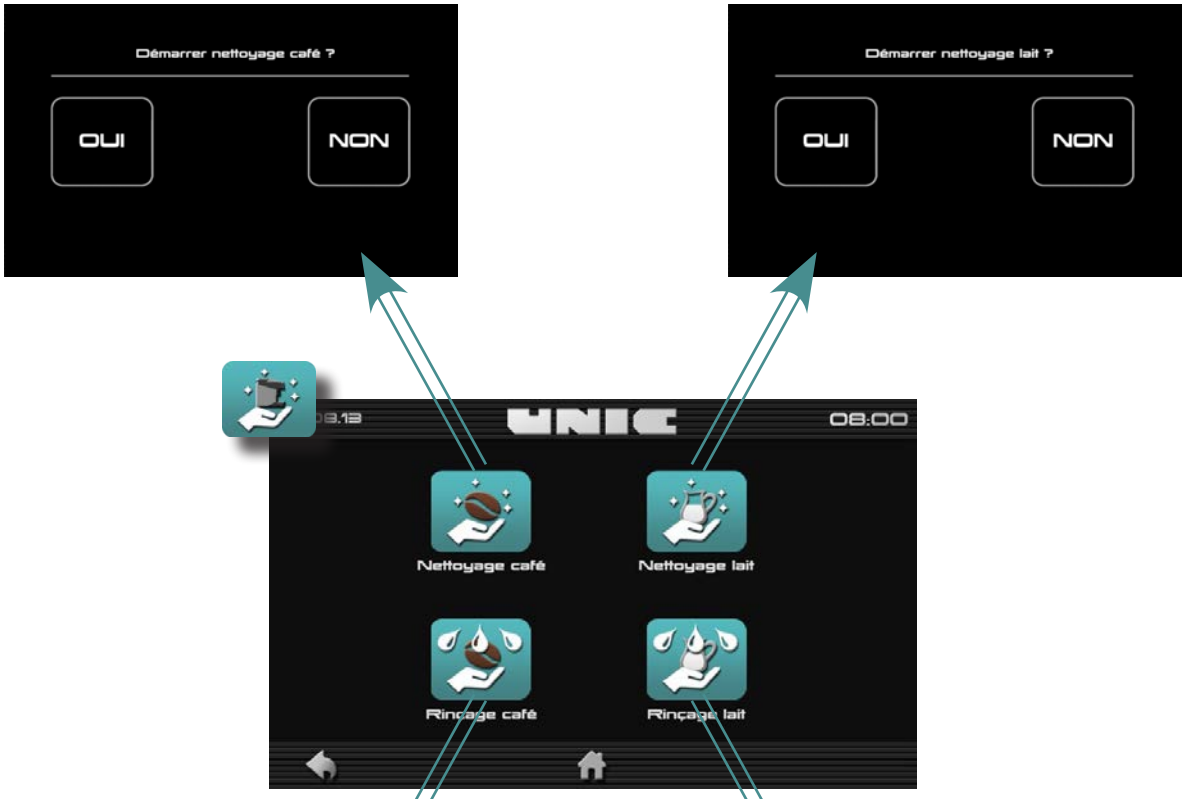
♦ Other settings



► Cleaning

Coffee cleaning p.33

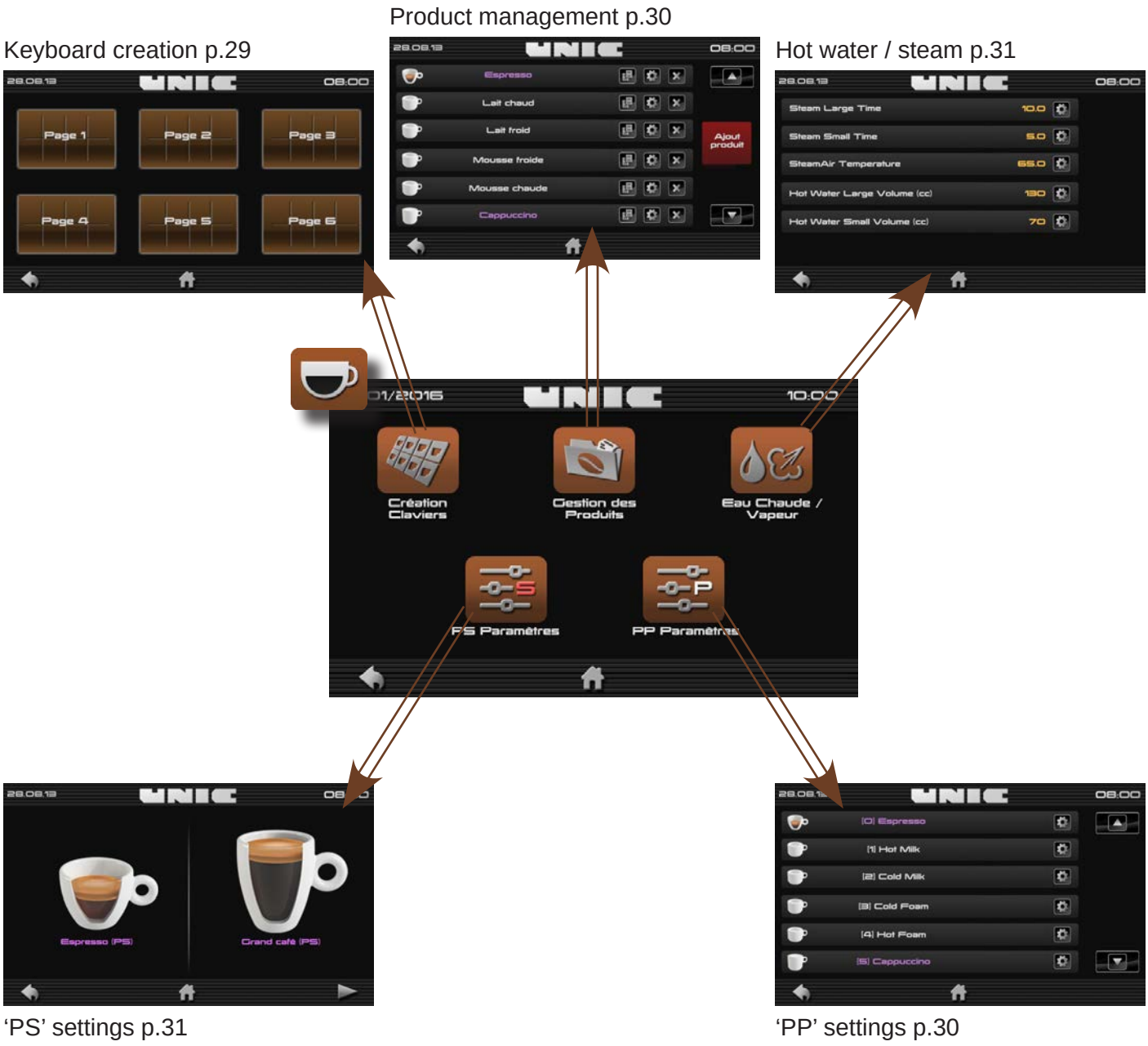
Milk cleaning p.34



Flushing starts automatically once you have pressed the button

Flushing starts automatically once you have pressed the button

► Products


Keyboard creation p.29
Product management p.30
Hot water / steam p.31
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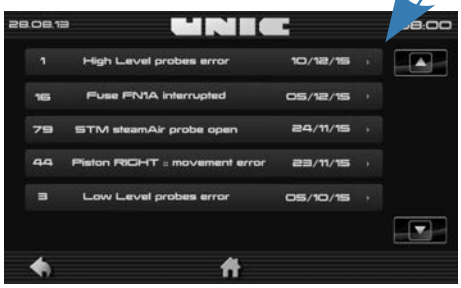
Espresso
Lait chaud
Lait froid
Mousse froide
Mousse chaude
Cappuccino
Ajout produit
Steam Large Time
Steam Small Time
SteamAir Temperature
Hot Water Large Volume (cc)
Hot Water Small Volume (cc)
Création Claviers
Gestion des Produits
Eau Chaude / Vapeur
PS Paramètres
PP Paramètres
Espresso (PS)
Grand café (PS)
[0] Espresso
[1] Hot Milk
[2] Cold Milk
[3] Cold Foam
[4] Hot Foam
[5] Cappuccino
'PS' settings p.31
'PP' settings p.30

► Maintenance

Component test p.42

Cooling machine p.43



History of errors p.43

Softener p.43

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

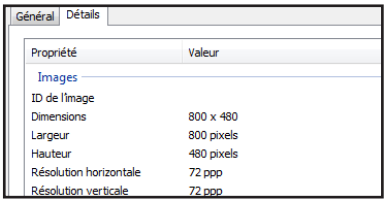
The screen saver and LED background illumination can be changed.

♦ Wallpaper

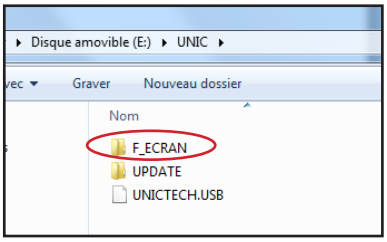
Tap the machine's screen to see a selection of several standard desktops. Tap to select the desired image (the images will step through). The slider allows the time delay to standby screen to be set (cursor left = standby disabled).

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.
DUO, 2 different wallpapers are possible.

♦ LED setting

Tap one of the two LED bars. Three settings can be adjusted:
Color: RGB mode.
Speed: color change (0 for no change).
LED intensity: 0 for LED off.

► 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.

► CIM

Note: level 2 required to change.

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

Type of machine		SOLO ST	DUO ST
Grinders	Purple	X	X
	Orange		X
	Green	X	X
Pre-infusion		X	X
Left milk system	None	X	X
	LC	X	X
	Pompe	X	X
Right milk system	None		X
	LC		X
	Pump		
Self mode		X	X
Water tank		X	X
Milk level sensor		X	X
Milk temperature sensor		X	X
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.

► 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.

► Cleaning settings

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

Machine factory settings (Do not change):

Wash cycles	**10**		
Half-cycle washing times	**5.0**	sec	
Rinse cycles	**8**		20 (to delay coil fouling)
Half-cycle rinsing times	**5.0**	sec	
Tube rinsing pause	**10**	sec	
Tube rinsing time	**7.0**	sec	
Early EWS hot milk	**3.0**	sec	Permits increasing the temperature of the milk **(only)** by preheating the coil if necessary. **(This does not affect the Foam)**
Automatic cleaning delay	**5.0**	min	Automatic 5 min internal rinsing after the first milk-based product. Never set a time less than 3 minutes. During this sequence, a milk-based product cannot be made for 15 secs. A coffee product can still be made.
Milk purge time	**1.8**	sec	Steam purge for the "into the cup" circuit after a milk-based product. Prevents stagnation of milk in the circuit.
Auto milk circuit cleaning interval	**5.0**	min	Internal rinsing for 20 secs of the coffee circuit 5 minutes after the last coffee made. A coffee can still be made at any time.
Auto milk circuit cleaning time	**20**	sec	
EVNR activation with the 1st milk(s)	**3.5**	sec	Primes the water circuit to prevent the bubbling effect after an "Automatic cleaning delay rinse" or a long period of inactivity. **(During 3.5 sec everything remaining in the circuit is directed to the drain)**
EVVS delay with the 1st coffee(s)	**1.5**	sec	Offsets preheating of the heating device to prevent overheating of the milk foam.

► Computer connection

Protocol type: EXE / MDB

Permits selection of the type of computer connection:
- Credit / Debit
- Debit / Credit
- RS 232

► Keyboard Menu creation

A maximum of 6 pages can be created:
SOLO: Up to 8 products per page, for 48 products maximum
DUO: Up to 8 products per page, for 96 products maximum

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

Example with a Solo:
- 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)

► 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.

Icon to copy the drink

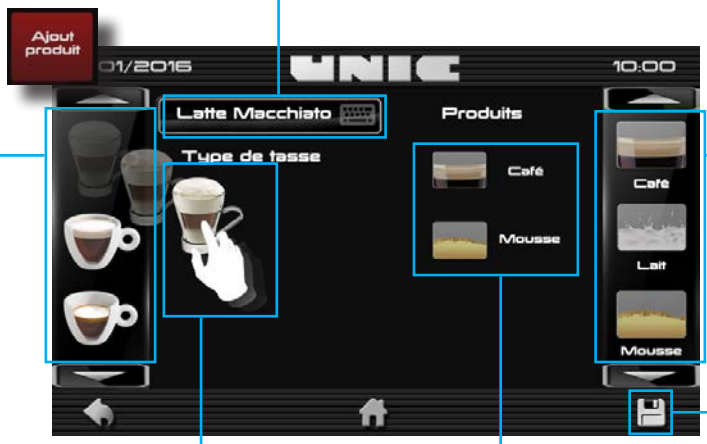
Icon to access settings

Icon to delete the drink

♦ Adding a drink

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

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.

► '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.

► '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
- STI

► Hot water & steam

Large quantities of steam	0 to 100	sec
Small quantities of steam	0 to 100	sec
Temperature steamAir	50 to 90	°C
Large volume of hot water	0 to 1000	cc
Small volume of hot water	0 to 1000	cc

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(S)
SOLO 1 tablet, DUO 2 tablets.
(UNIC reference, box of tablets: 92025)

1

2

3

4

5

6

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

7

♦ Milk cleaning (with pump)

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

Reference UNIC Urnex: 92027
Reference UNIC pitcher: 54212

1

2

3

4

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7

8

9

10

11

12

Cleaning kit for milk and cappuccino circuits.

2 liter pitcher,
UNIC reference: 54212

1 liter bottle Urnex, UNIC
reference: 92027

♦ 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

1

2

3

4

5

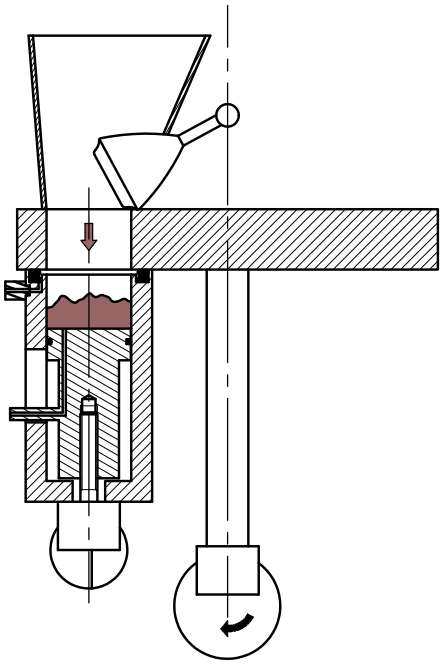
6

7

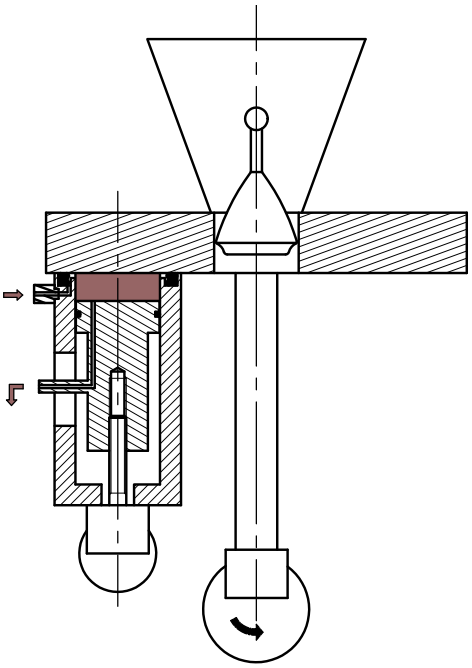
8- MAINTENANCE & TROUBLESHOOTING

► Description of cycles

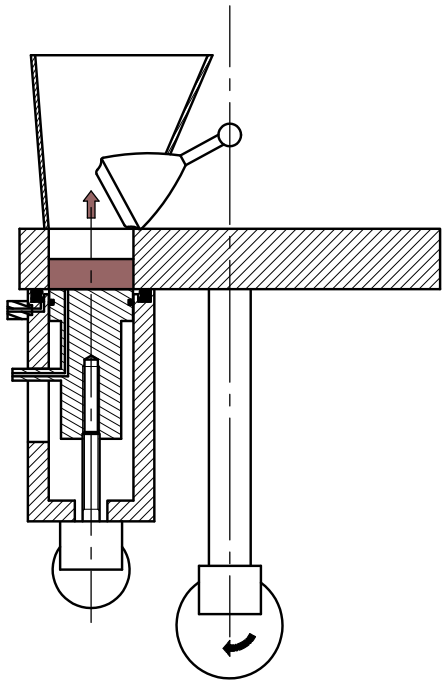
♦ 1 group Cycles



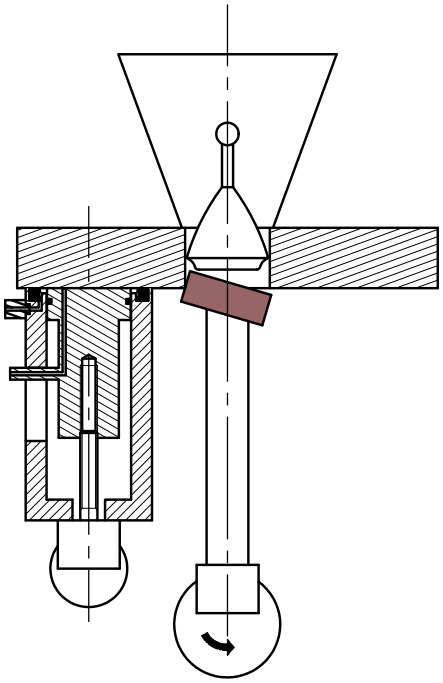
CHARGEMENT CAFE
COFFEE FEEDING



INFUSION
INFUSION

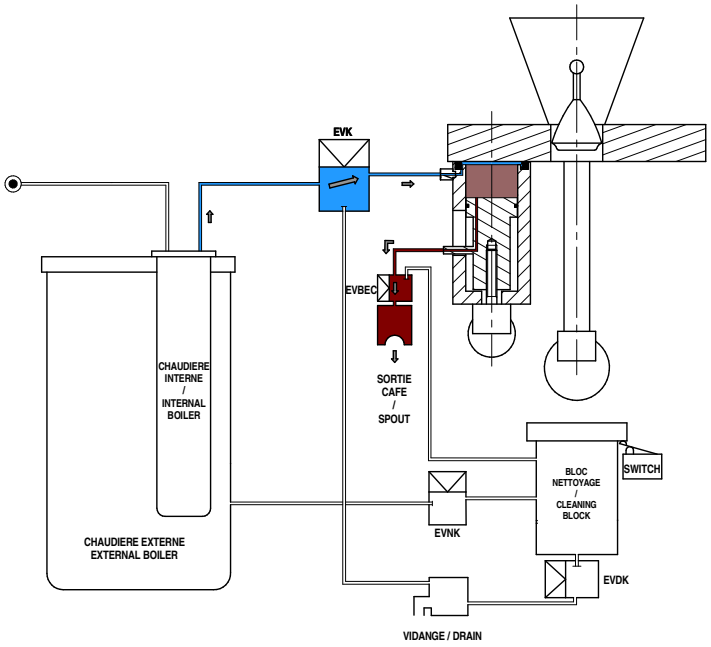


EJECTION DU MARC
EJECTION OF GROUT

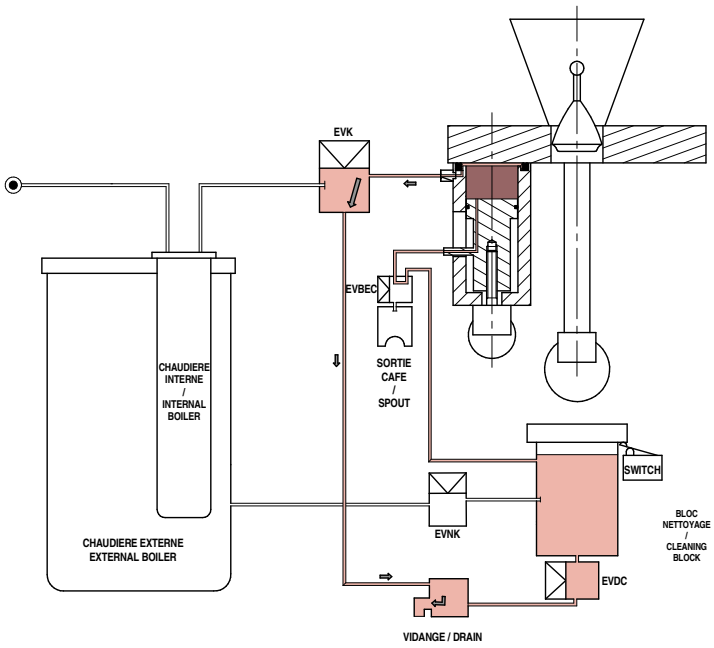


ETAT REPOS
STAND BY

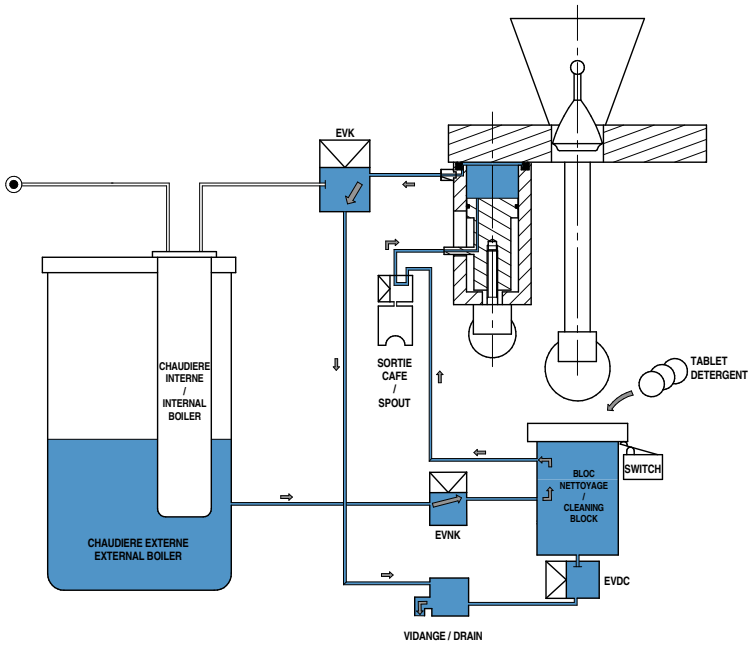
Infusion cycle.



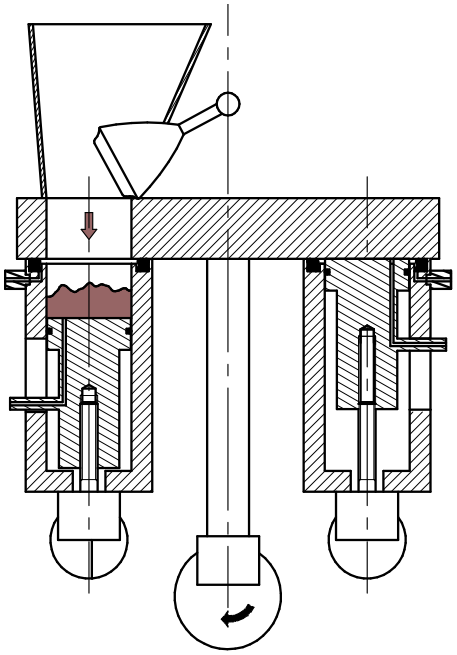
Decompression cycle.



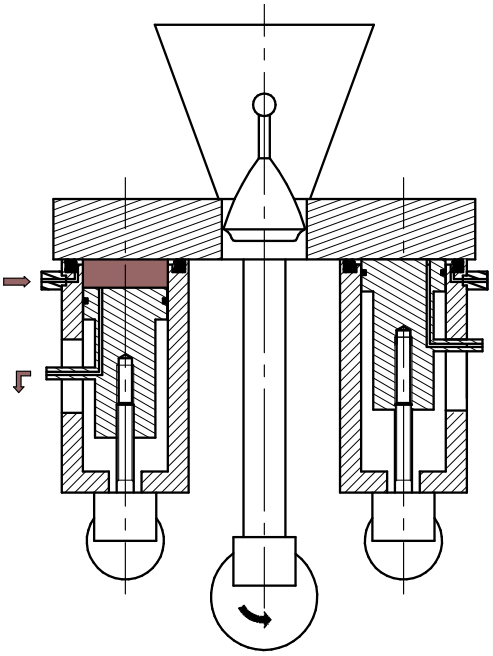
Cleaning cycle.



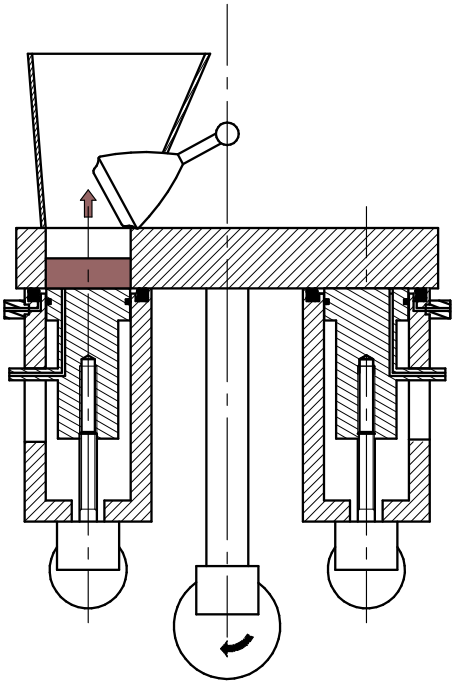
♦ 2 groups Cycles



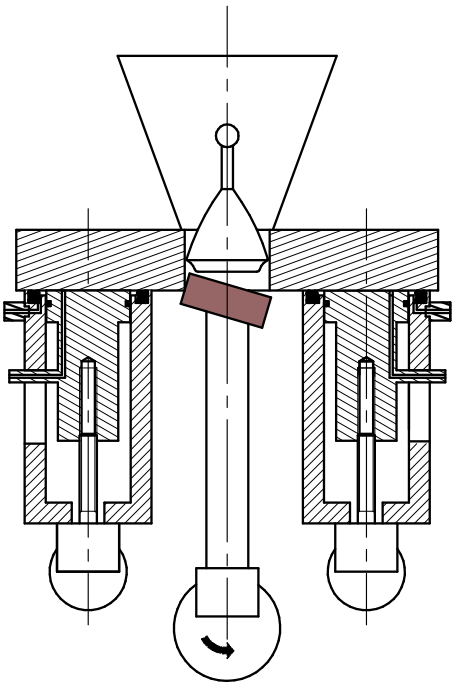
CHARGEMENT CAFE
COFFEE FEEDING



INFUSION
INFUSION

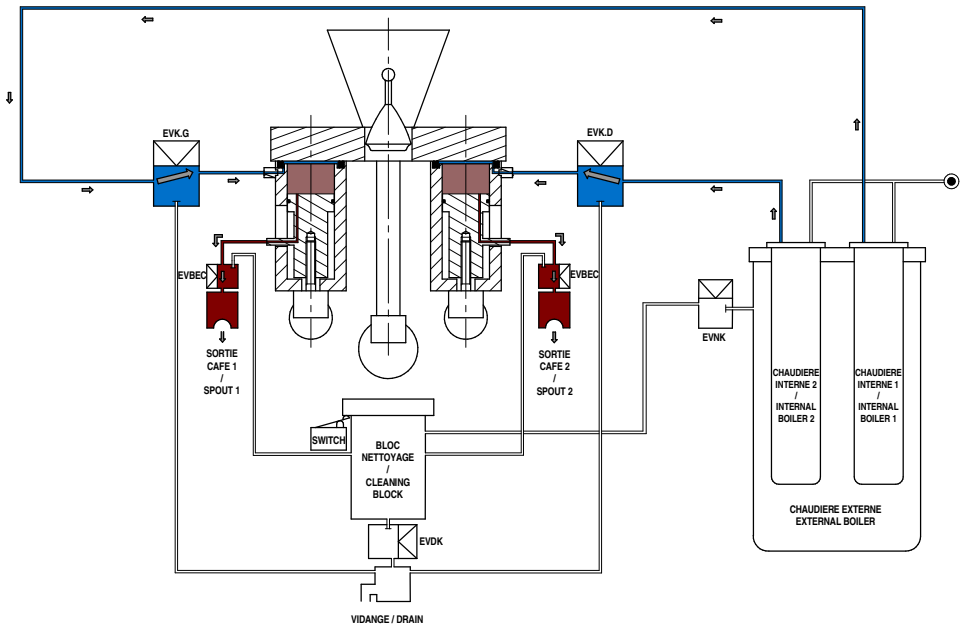


EJECTION DU MARC
EJECTION OF GROUT

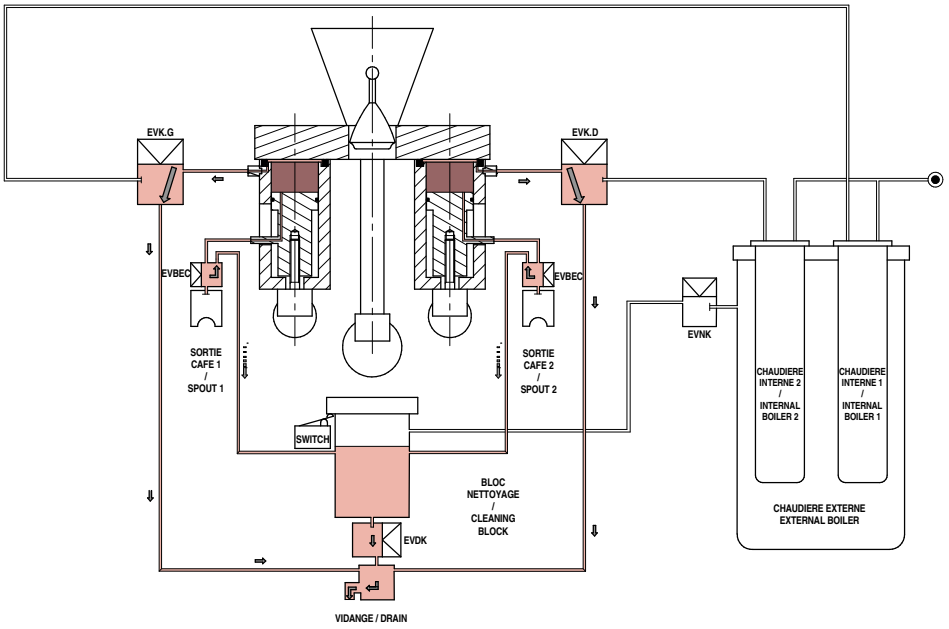


ETAT REPOS
STAND BY

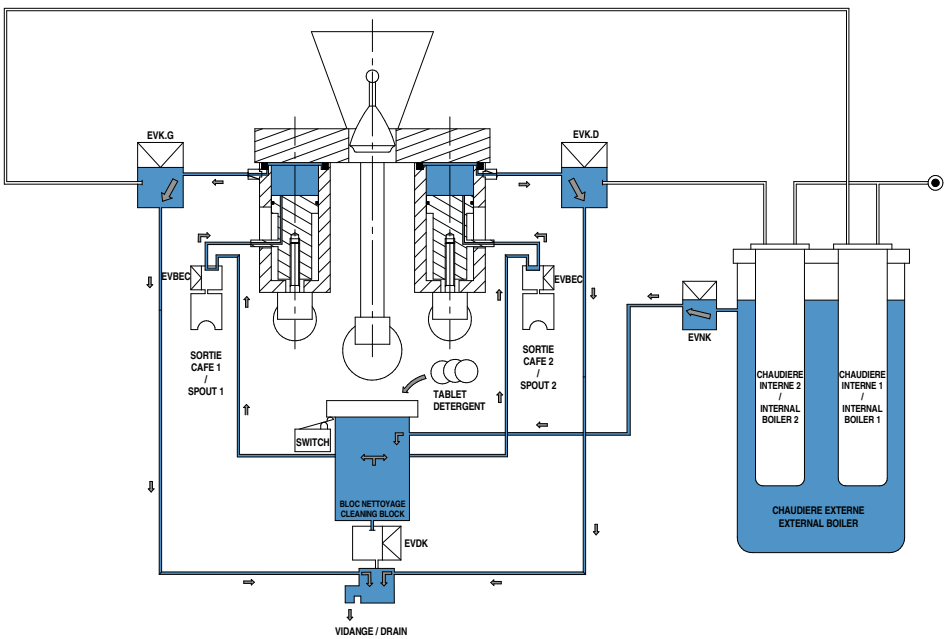
Infusion cycle.



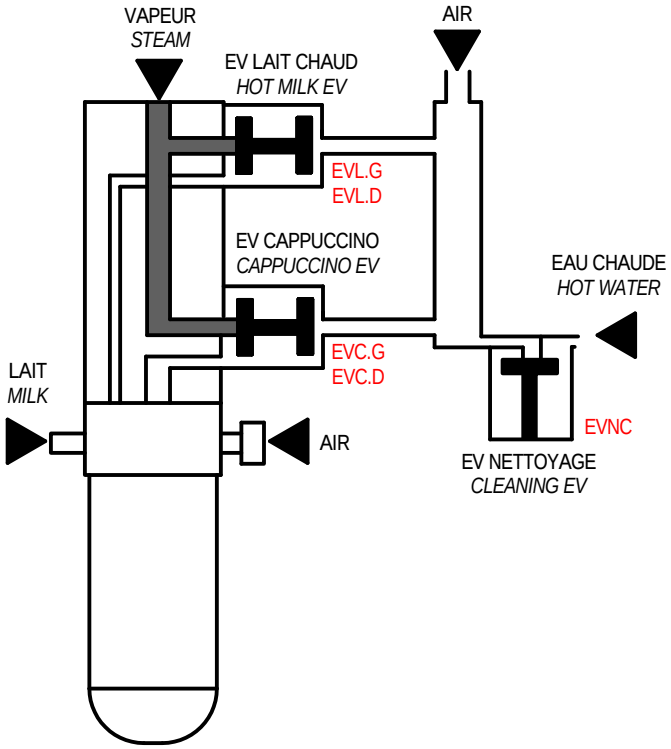
Decompression cycle.



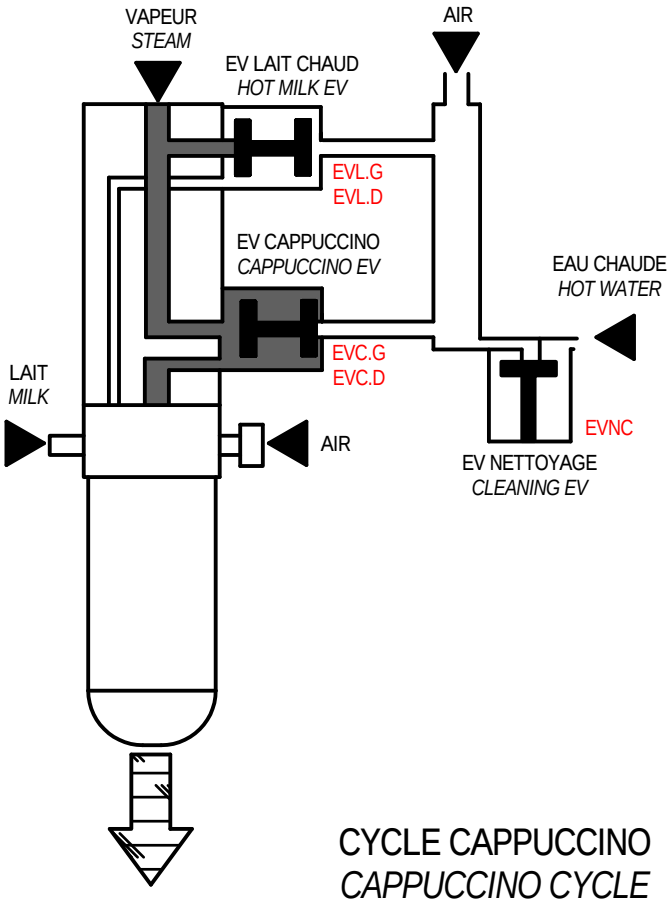
Cleaning cycle.



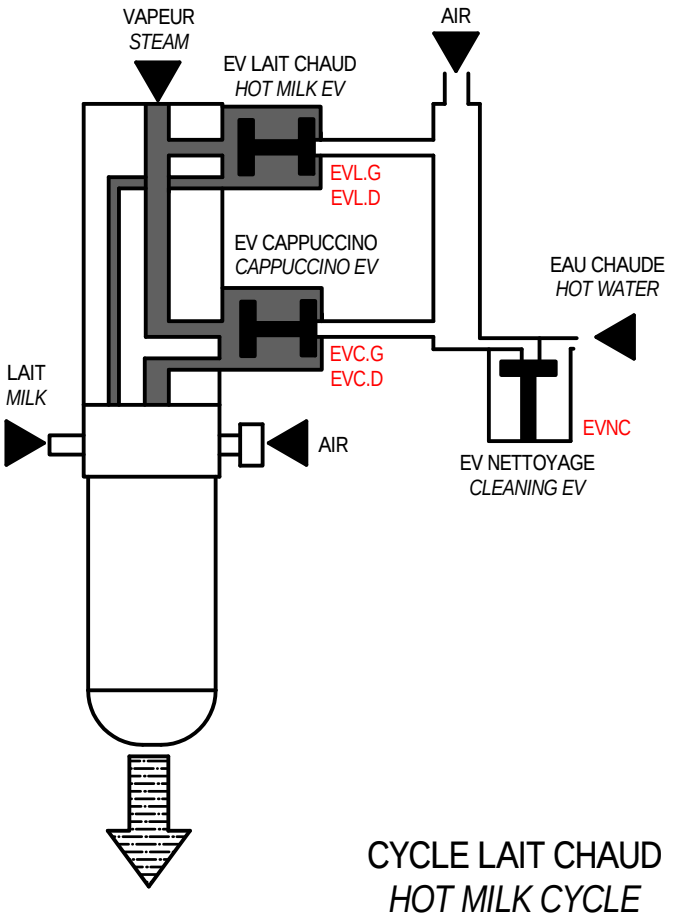
♦ Cappuccino Cycle



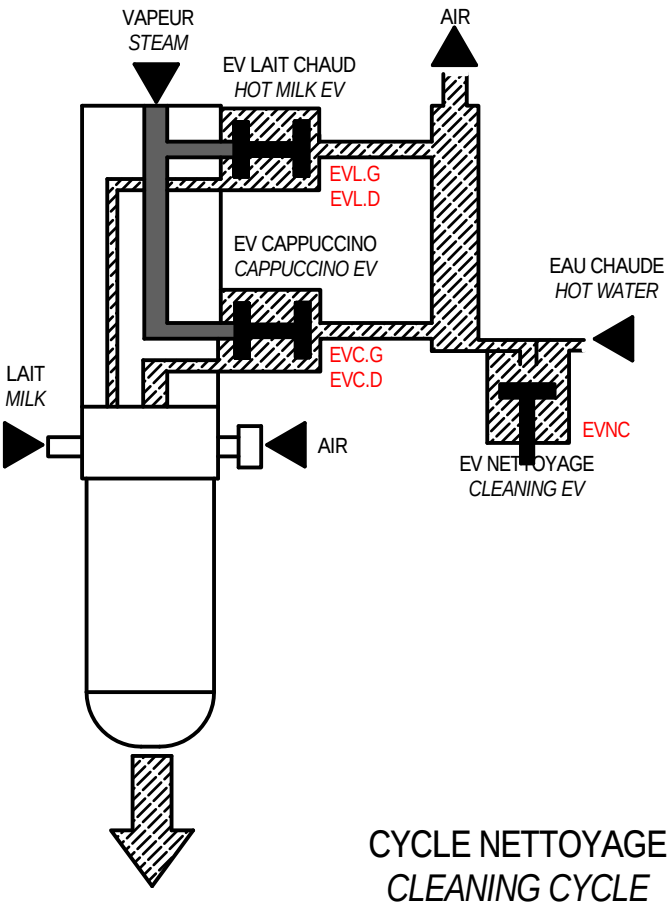
ETAT REPOS
STAND BY



CYCLE CAPPUCCINO
CAPPUCCINO CYCLE

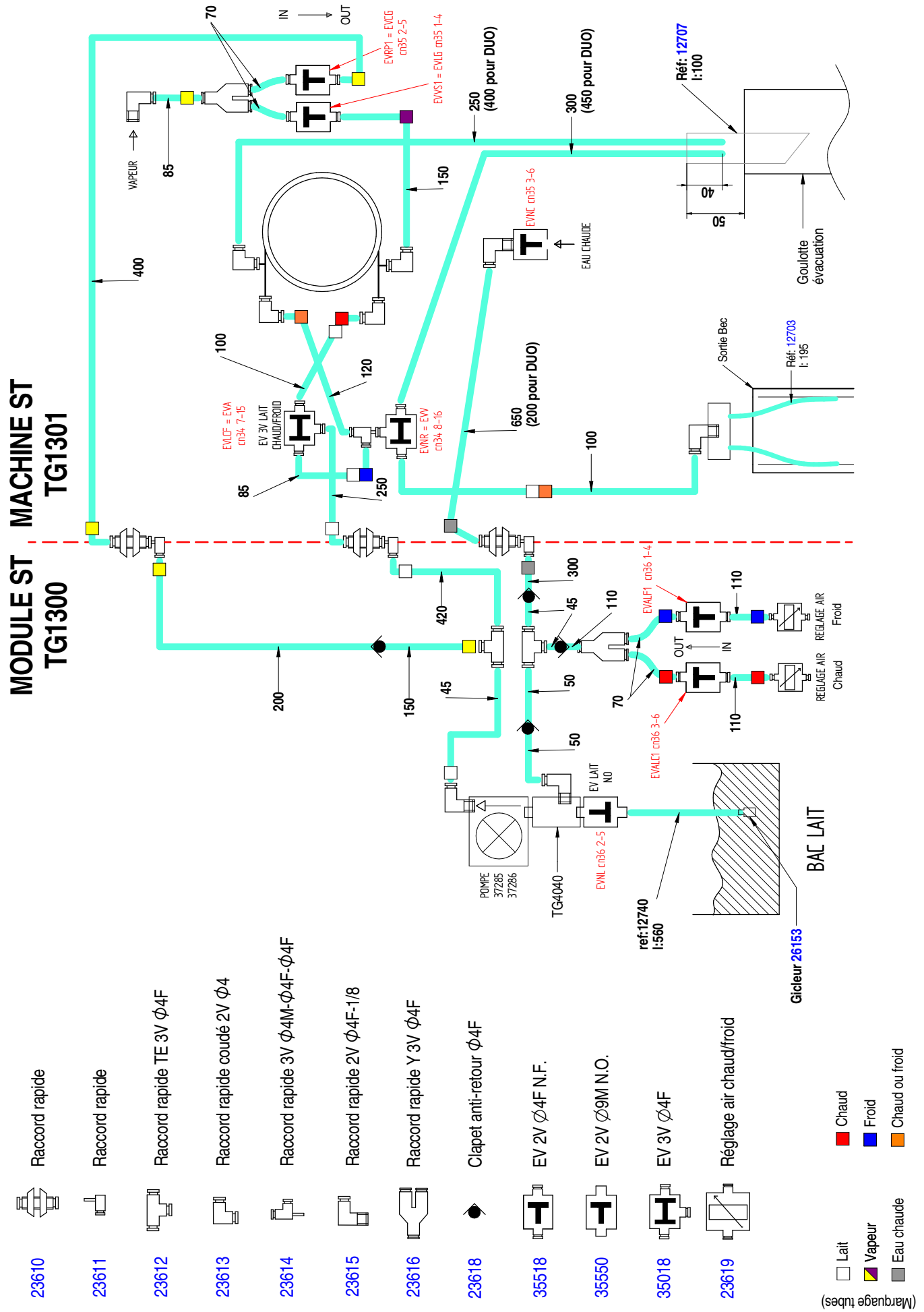


CYCLE LAIT CHAUD
HOT MILK CYCLE



CYCLE NETTOYAGE
CLEANING CYCLE

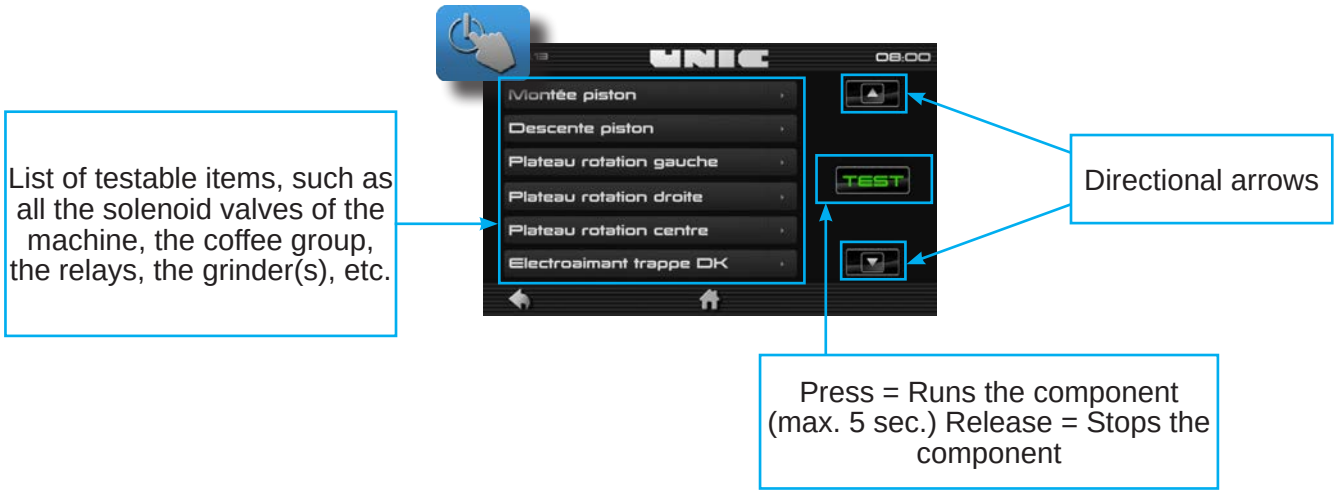
♦ Milk system Cycle



23610	Raccord rapide	
23611	Raccord rapide	
23612	Raccord rapide TE 3V Φ4F	
23613	Raccord rapide coudé 2V Φ4	
23614	Raccord rapide 3V Φ4M-Φ4F-Φ4F	
23615	Raccord rapide 2V Φ4F-1/8	
23616	Raccord rapide Y 3V Φ4F	
23618	Clapet anti-retour Φ4F	
35518	EV 2V Ø4F N.F.	
35550	EV 2V Ø9M N.O.	
35018	EV 3V Ø4F	
23619	Réglage air chaud/froid	

► 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.



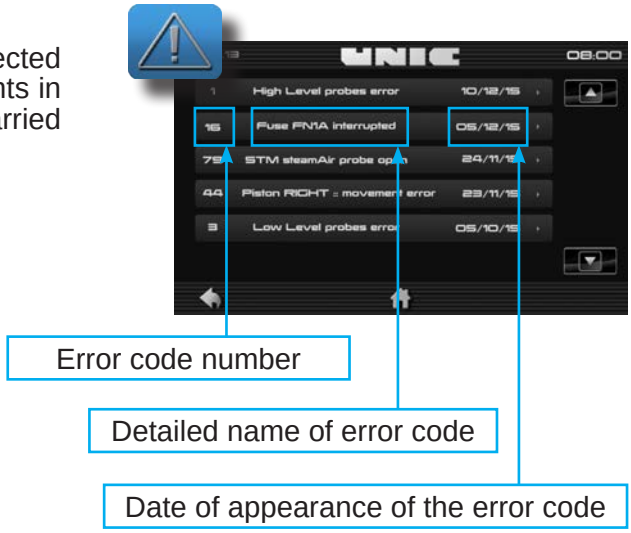
	Piston LEFT up
	Piston LEFT down
	Piston RIGHT up
	Piston RIGHT down
	Plateau to LEFT position
	Plateau to CENTER position
	Plateau to RIGHT position
	Find known plateau position
RSV1	Solid state relay steam 1
RSV2	Solid state relay steam 2
RSV3	Solid state relay steam 3
RSC1	Solid state relay coffee 1
RSC2	Solid state relay coffee 2
RSC3	Solid state relay coffee 3
MAC1	Grinder n°1 (purple)
MAC2	Grinder n°2 (green)
MAC3	Grinder n°3 (orange)
POMP	Motor pump
CHGR	Heating group
EAMAN	Electromagnet of DK door
EVRE	EV filling
EVSE	EV hot water outlet
EVSV	EV steam outlet
EVNK	EV coffee cleaning

EVKG	EV left coffee
EVP1	EV pre infusion 1
EVLCF	Hot-cold milk selection
EVNR	EV steam/EV cleaning-rinsing
EVNO	EV bloc de nettoyage
EVALF1	EV cold milk air
EVNL1	EV cleaning milk
EVALC1	EV hot milk air
EVLG_EVVS	EV left LC latte outlet/EV coil pipe steam
EVAEG	EV water addition left coffee
EVCG_EVRP	EV left LC cappu outlet/EV rinsing purge
EVNC	EV cleaning cappuccino
EVKD_EVM1	EV right coffee/EV mixer 1
EVAED_EVM2	EV water addition right coffee/EV mixer 2
EVCD	EV right LC cappu outlet
EVLD	EV right LC latte outlet
EVP2	EV pre infusion 2
MM1	Motor mixer 1
MM2	Motor mixer 2
MT1	Motor hopper 1
MT2	Motor hopper 2
FAN_SOL	Fan for soluble MT
MPOMP	milk pump

► 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.

► 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 ugrade CPU and Display

STEP 1: CPU's identification

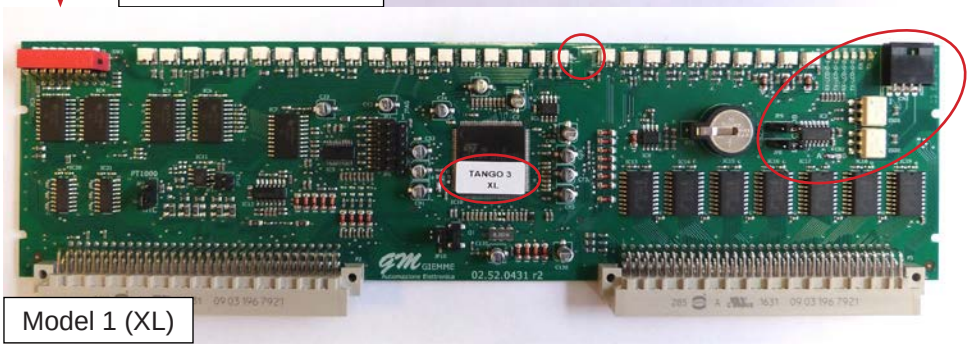
Software — without USB Key

Visually

Before 28.xx.xx → Model 0

After 28.xx.xx → 2 possibilities 'Model 0' or 'model 1'

Model 0 (standard)



Model 1 (XL)

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

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

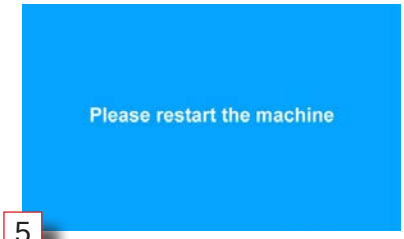
STEP 2: insert USB Key, update display first.

1

2

3

4



5

6

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.

1

2

3

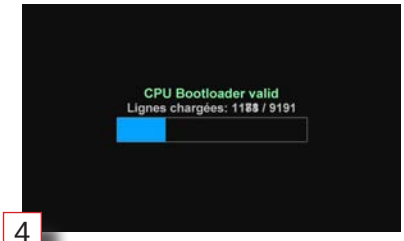
***STEP 3:** Update CPU

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

1

2

3



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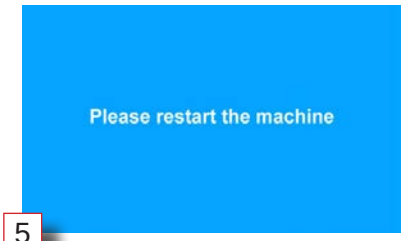
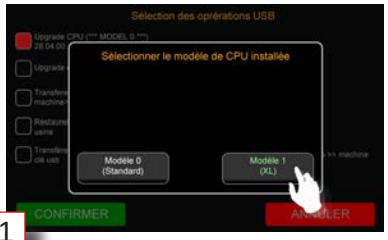


5

6

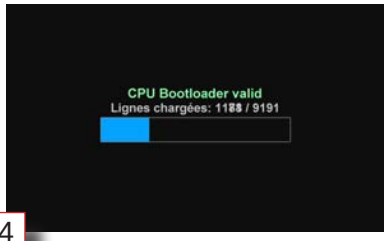
When CPU “model 1” is mounted instead “model 0”
follow process “model 1”



1

2

3



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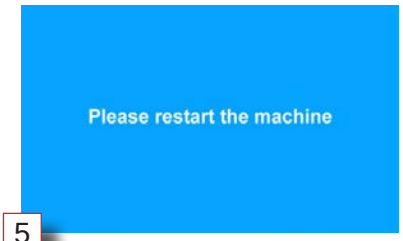
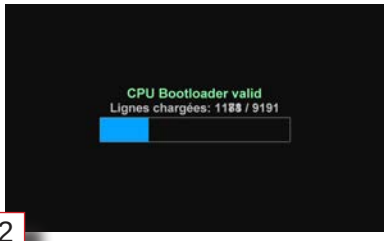


5

6

When CPU “model 1” is already mounted in the machine:
process model will be lunch automatically After confirmation

1



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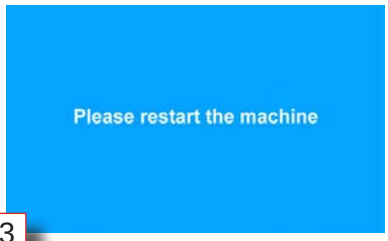


3

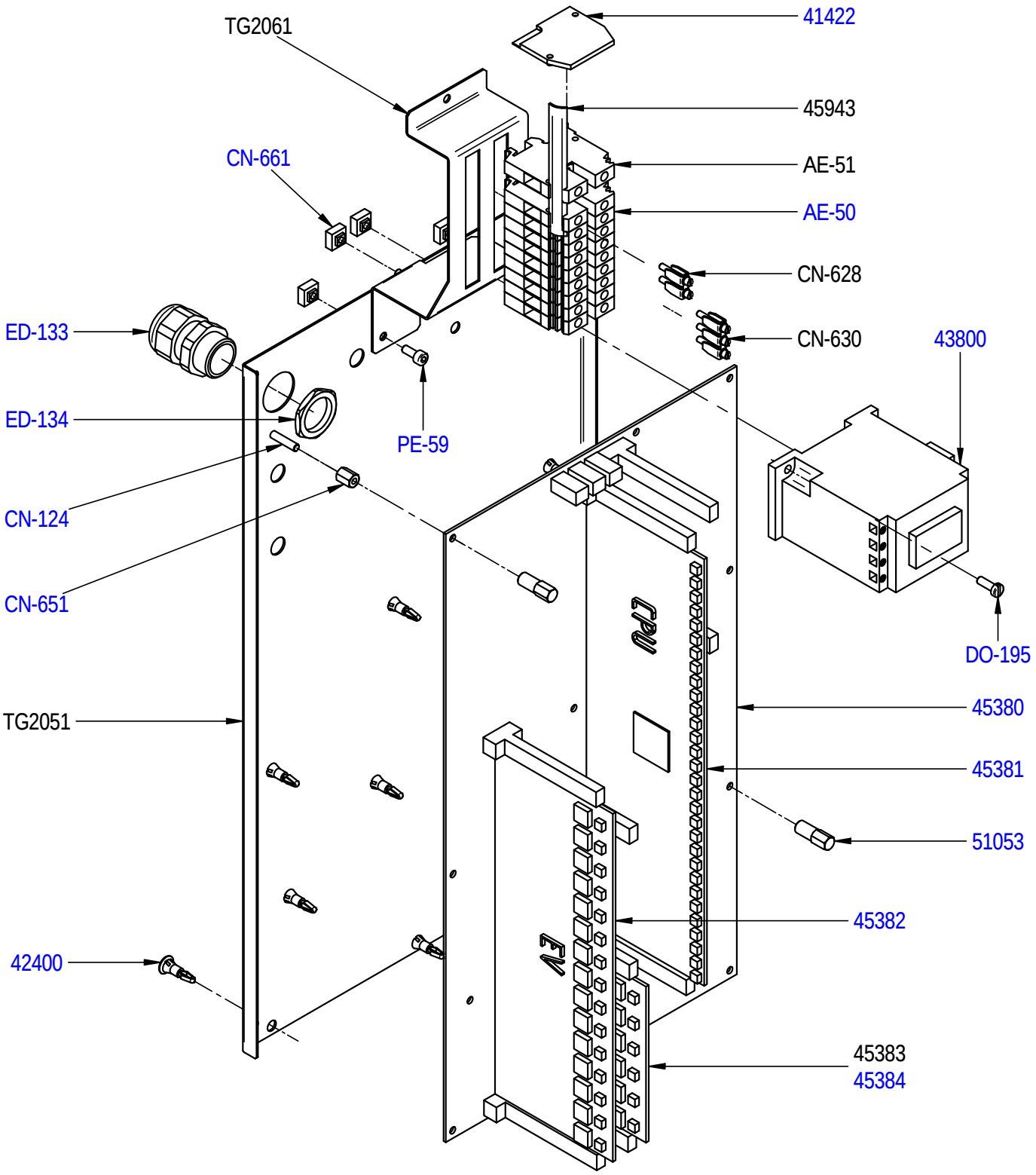
4

► List of wirings

REFERENCE	DESIGNATION	CONNECTOR	NB PINS	VOLTAGE	QUANTITY			
					SOLO	DUO	MT	FRIGO
FR8019	BLUE CABLE CONN. COIL AND CONTACT			High	1	2	2	
FR8029	OPTICAL CELLS WITH CONNECTOR	CN6	16	Low	1			
FR8055	EV SV EV EXTENSION CABLE			Low	1	1	1	
TG8012	USB LINK CABLE	CN2	4	Low	1	1	1	
TG8013	RS 232 TFT SCREEN LEFT	CN3	16	Low	1	1		
TG8014	RS 232 TFT SCREEN RIGHT	CN4	16	Low		1	1	
TG8016	MOTOR TRAY ADAPTER CABLE	CN22	2	Low	1	1	1	
TG8017	STEAM BOILER & MAINS CABLE	CN7	10	Low	1	1	1	
TG8027	THERMOSTAT PROBES & LEVEL PROBES	CN17	10	Low	1	1	1	
		CN26	4					
		CN27	4					
TG8029	RIGHT CONTROL CABLE	CN14	4	Low		1	1	
		CN38	8					
		CN39	4					
TG8030	COFFEE GROUNDS DRAWER SAFETY	CN20	4	Low	1	1	1	
TG8034	BIN, BLENDER, POWDER FAN	CN24	12	Low			1	
TG8037	CABLE, TRAP & PIST. COD. SAFETY MOTOR CTRL	CN8	4	Low	1	1	1	
		CN9	4					
		CN12	6					
		CN15	6					
		CN23	4					
		CN25	2					
TG8038	Cable, STAT relay CONTROL. HOT MT	CN30	6	Low			1	
TG8039	STAT relay CTRL. HOT STEAM / COFFEE	CN29	6	Low	1	1	1	
TG8040	Cable, STAT relay CONTROL. HOT STEAM	CN30	6	Low		1		
TG8041	SV CTRL, REFRIGERATOR PUMP PART 1	CN32	6	Low				1
		CN36	6					
		CN50	12					
TG8042	SV CTRL, REFRIGERATOR PUMP PART 2			Low				1
TG8043	CÂBLE CMD EVRE, EVSE ,EVSV,EVKG	CN34	20	Low	1	1	1	
TG8045	CÂBLE EV CAPPUCCINO LEFT	CN35	6	Low	1	1		
TG8049	CÂBLE CPU GND FRONT PANEL			Earth	1	1	1	
TG8050	CÂBLE GRINDER R,V,O,RES GR,RI,PUMP	CN41	12	High	1	1	1	
		CN44	8					
		CN47	6					
TG8057	CABLE, COFFEE BOILER			High		1		
TG8058	CABLE, COFFEE STEAM GROUP			High	1	1	1	
TG8059	CABLE, STATIC RELAY JUMPER			High		3	1	
TG8060	CABLE, MT BOILER			High			1	
TG8062	CABLE, SWITCH OUTPUT			High	1	1	1	
TG8100	CÂBLE INTER, DISPLAY T°C REG C- F			High				1
TG8101	SUPPLY CABLE			High				1

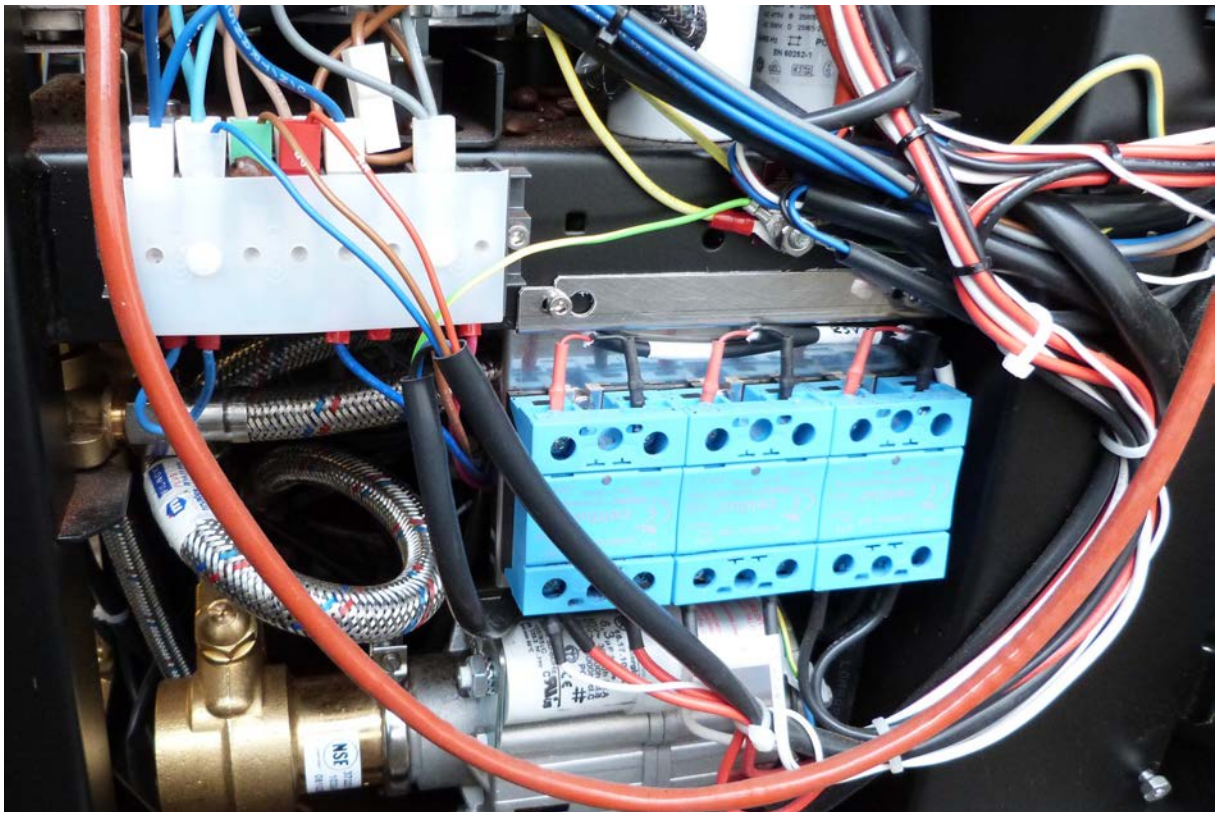
► Electronic Cards

♦ Turntable set

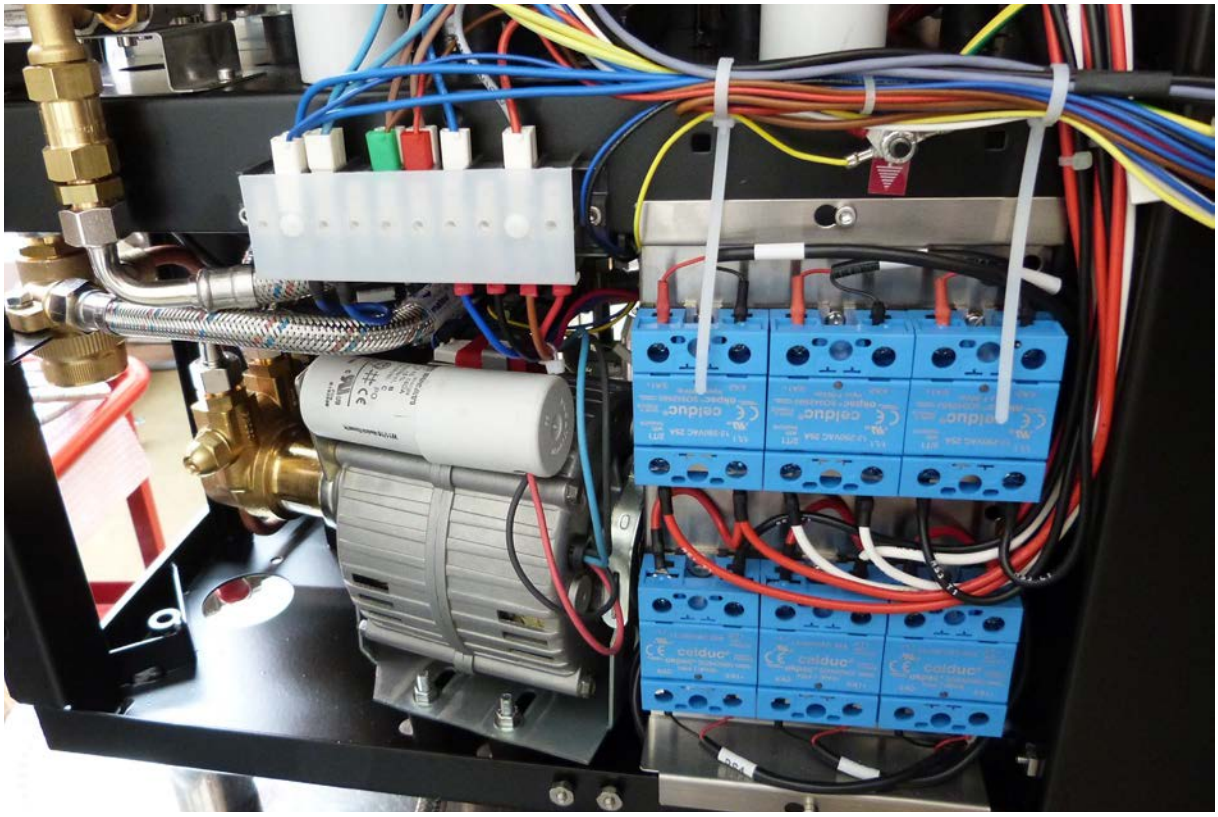


♦ Static relays

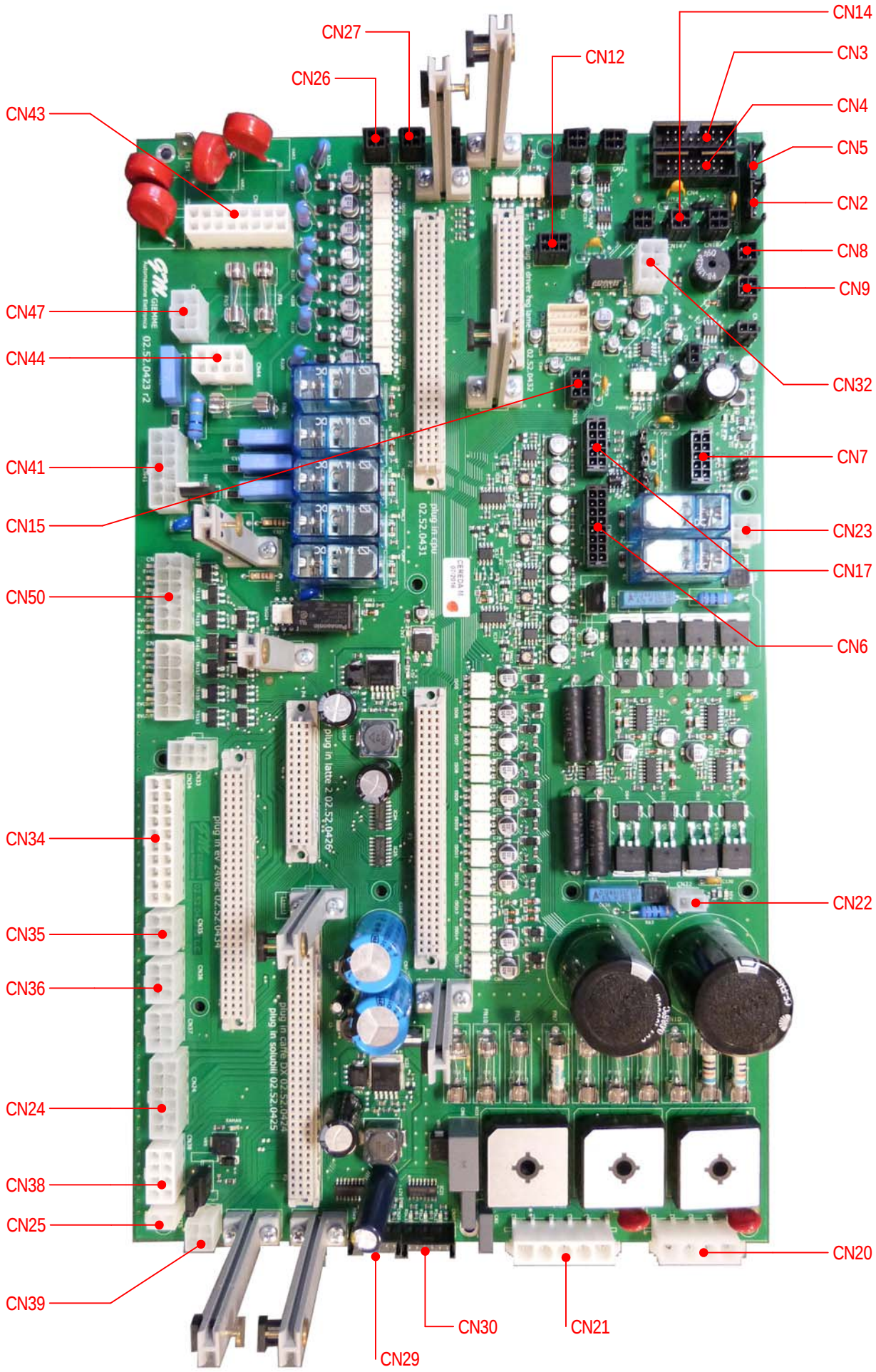
SOLO



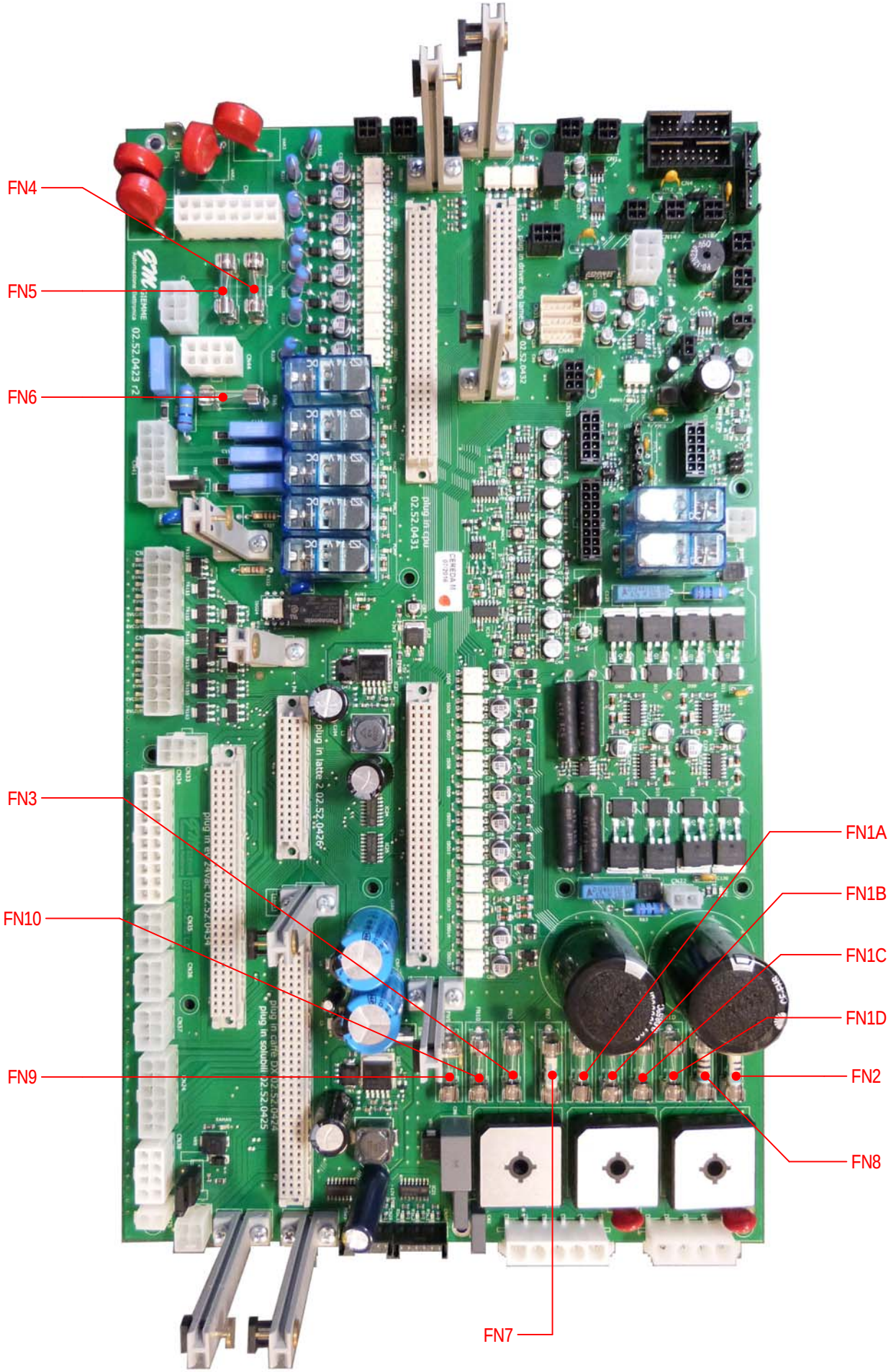
DUO



♦ Connectors


CN14
CN27
CN3
CN12
CN26
CN4
CN43
CN5
CN2
CN8
CN9
CN47
CN44
CN32
CN41
CN7
CN15
CN23
CN17
CN50
CN6
CN34
CN22
CN35
CN36
CN24
CN38
CN25
CN20
CN39
CN30
CN21
CN29

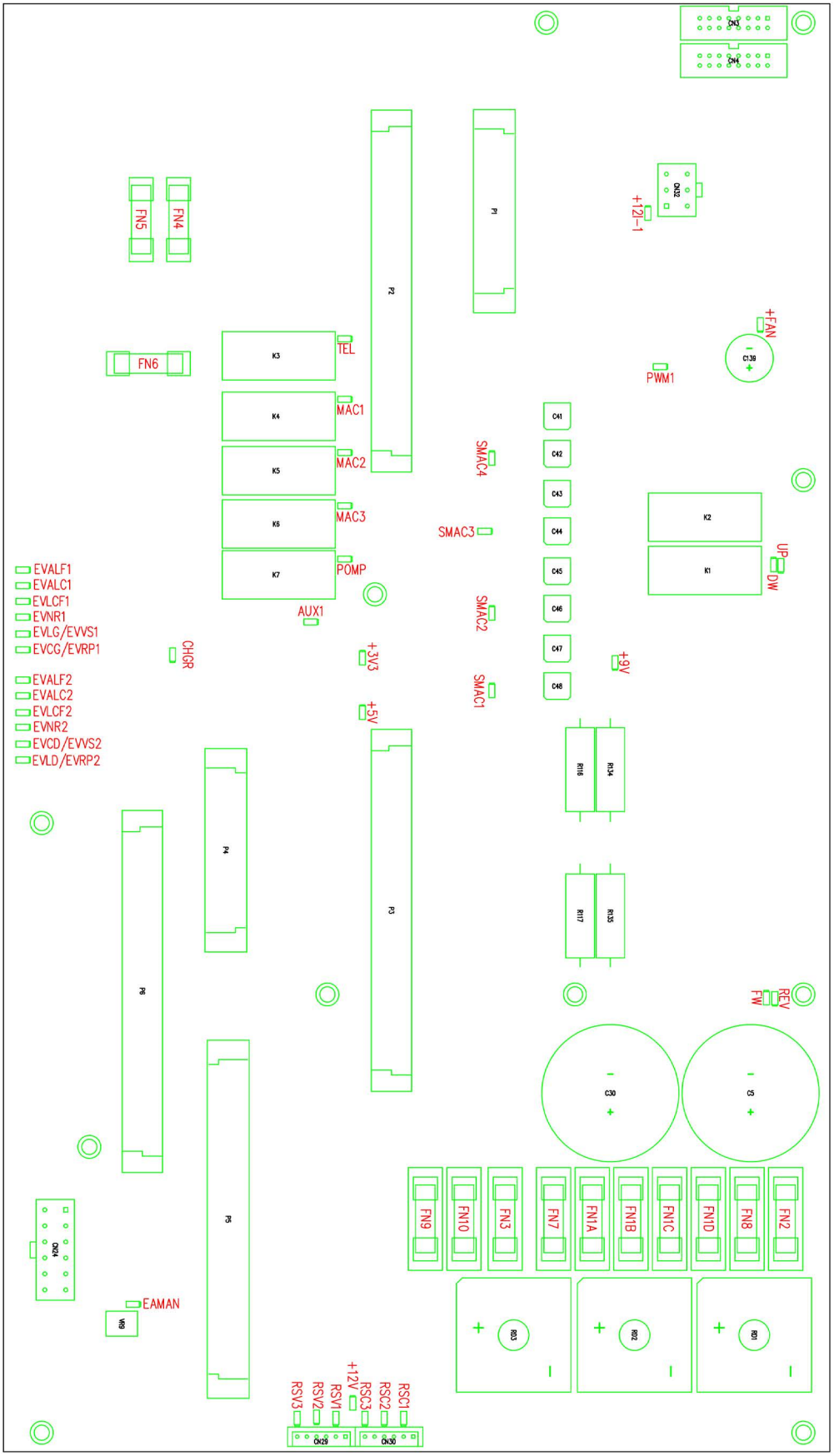
♦ Fuses



► LED Identification on board

Identification LED sur carte mère 45380

EVALF1	Cold milk air SV
EVALC1	Hot milk air SV
EVLCF1	
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



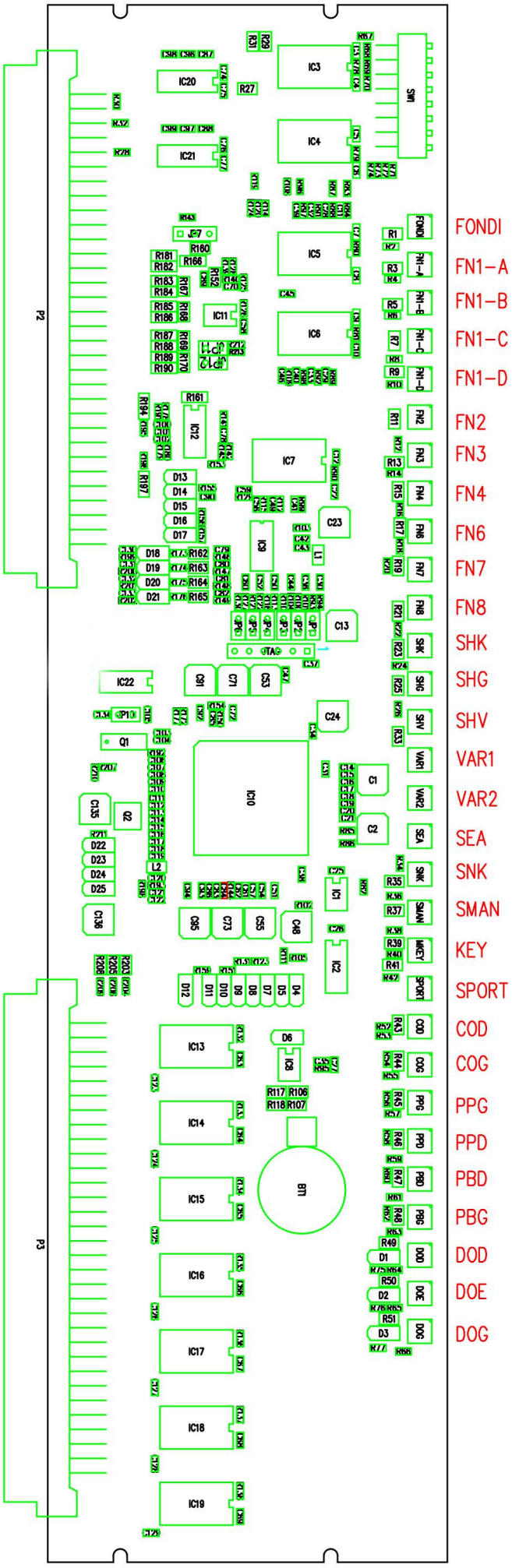
Identification

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



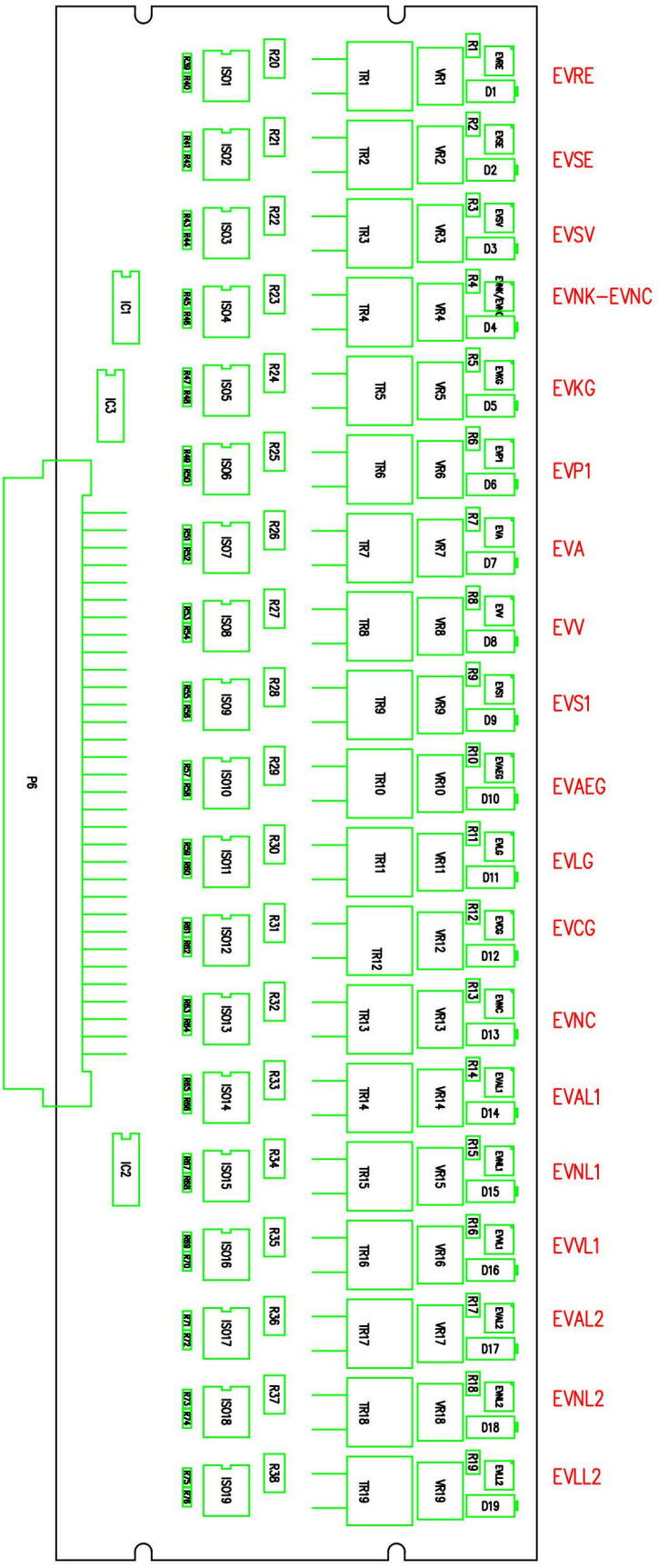
Identification

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	

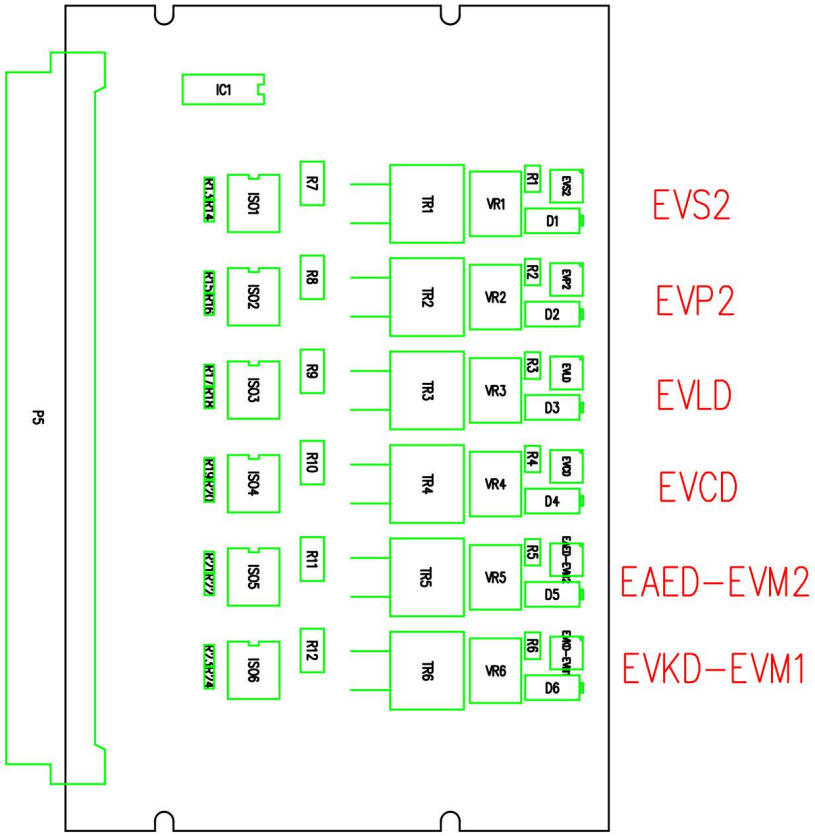


Identification

LED module

groupe 2

45384



EVS2	
EVP2	Pre-infusion 2 SV
EVLD	Latte from the LC outlet, right SV
EVCD	Cappuccino from the LC outlet, right SV
EAED / EVM2	SV add water at coffee outlet, right
EVKD / EVM1	Right coffee SV

► Active component

OPTION LC		24VDC pump option	
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	EVVS2	Steam coil SV
EVL.D	Latte from the LC outlet, right SV	EVRP2	Steam cleaning purge-flush 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		

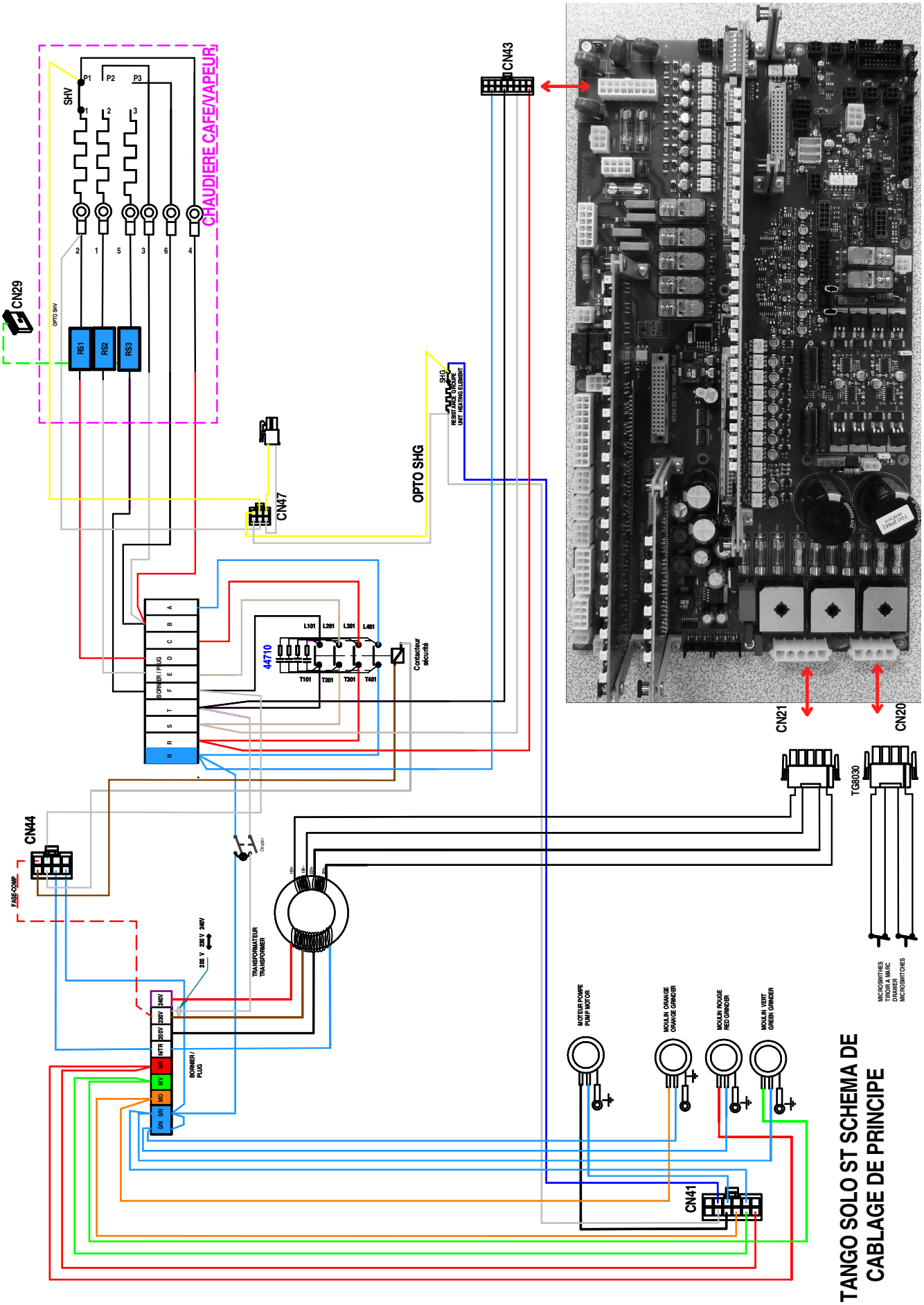
RSC2	Static coffee relay 2		
RSC3	Static coffee relay 3		
EVALF1	Cold milk air SV	EVALF1	Cold air SV
EVNL1	Milk cleaning SV	EVNL1	Milk SV
EVALC1	Hot milk air SV	EVALC1	Hot air SV
EVRE	Filling SV		
EVSE	Hot water outlet SV		
EVKN	Coffee cleaning SV		
EVK.G	Left coffee SV		
EVP1	Pre-infusion 1 SV		
EVA	Air SV	EVLCF	Hot / cold milk selection SV
EVV	Steam SV	EVNR	Clean / flush SV
EVDC	DISCHARGE (cleaning) SV		
EVAE.G	SV add water at coffee outlet, left		
EVL.G	Latte from the LC outlet, left SV	EVVS1	Steam coil SV
EVC.G	Cappuccino from the LC outlet, left SV	EVRP1	Steam cleaning purge-flush SV
EVNC	Cappuccino cleaning SV	EVNL	Milk pump 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	EVALF2	Cold air SV
EVNL2	Milk cleaning 2 SV	EVNL2	Milk SV
EVALC2	Hot milk air 2 SV	EVALC2	Cold / hot air SV
GET1	Coin acceptor coil no 1		
GET2	Coin acceptor coil no 2		

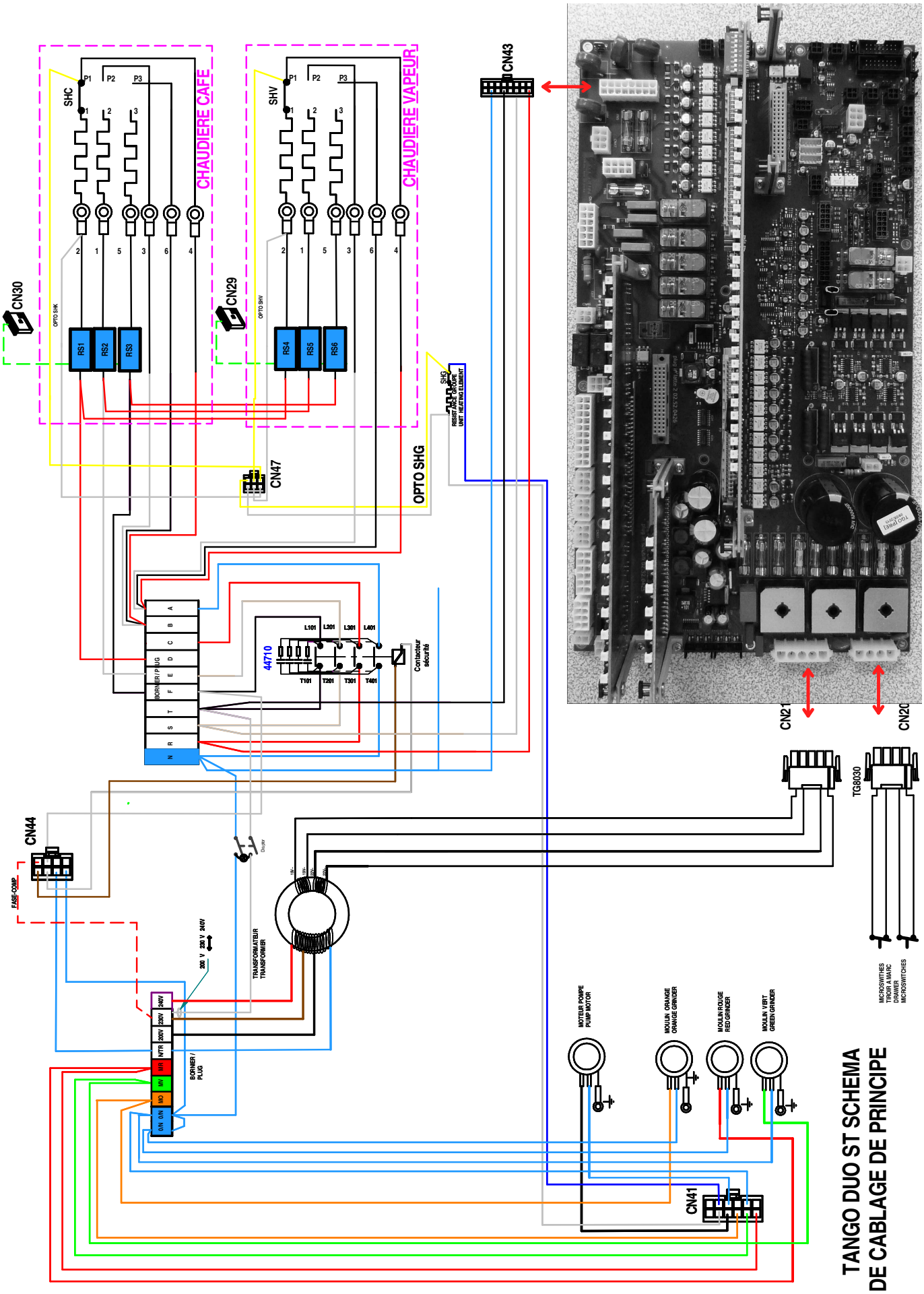
► List of error codes

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

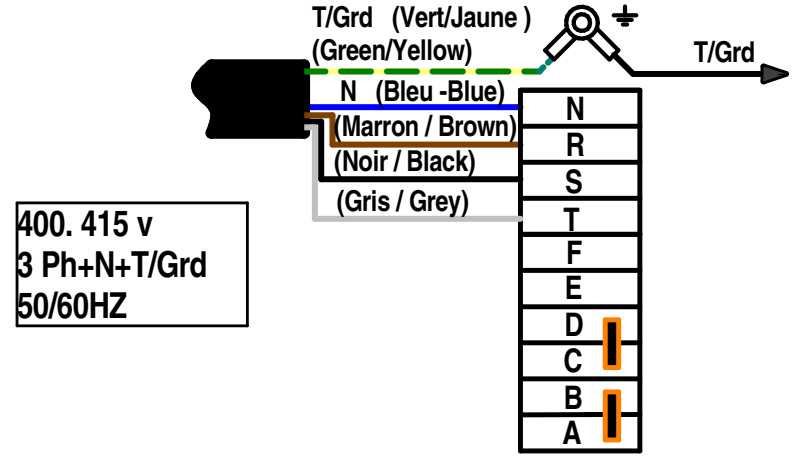
36	Left piston	Jammed or simultaneous faults on the encoder and the PMBas
37	Left piston	Does not move backwards
38	Left piston	Encoder Fault
41	Right piston	Encoder Fault
41.1	Right piston	Encoder Fault
42	Right piston	Low position fault
43	Right piston	Does not rise safety time-out
44	Right piston	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

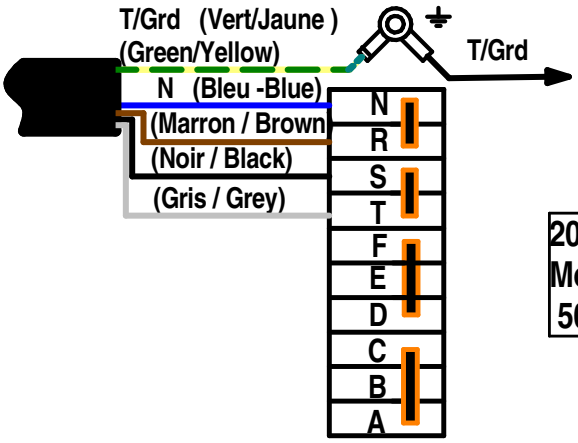



CHAUDIERE CAFE
CHAUDIERE VAPEUR
SHC
SHV
P1
P2
P3
CN30
CN29
CN43
CN47
CN44
CN41
CN21
CN20
RS1
RS2
RS3
RS4
RS5
RS6
OPTO SHG
OPTO SHC
OPTO SHV
44710
Contacteur sécurité
TRANSFORMATEUR
TRANSFORMER
BORNIER / PLUG
FASE-COMP
TG8030
MOTEUR POMPE
PUMP MOTOR
MOULIN ORANGE
ORANGE GRINDER
MOULIN ROUGE
RED GRINDER
MOULIN VERT
GREEN GRINDER
MICROSWITHES
TIROIR A MARC
DRAWER
MICROSWITCHES
TANGO DUO ST SCHEMA
DE CABLAGE DE PRINCIPE

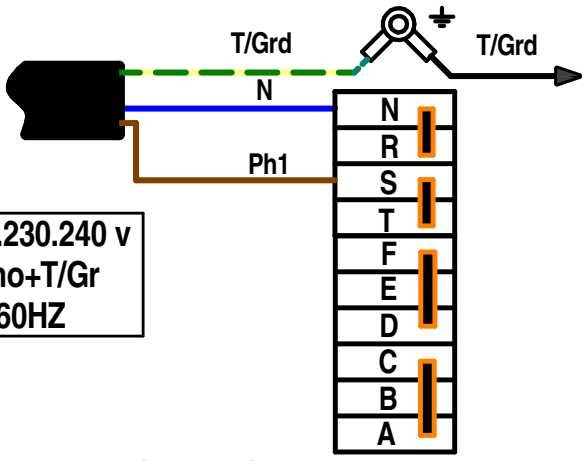
BRANCHEMENT BORNIER / TERMINAL CONNECTING



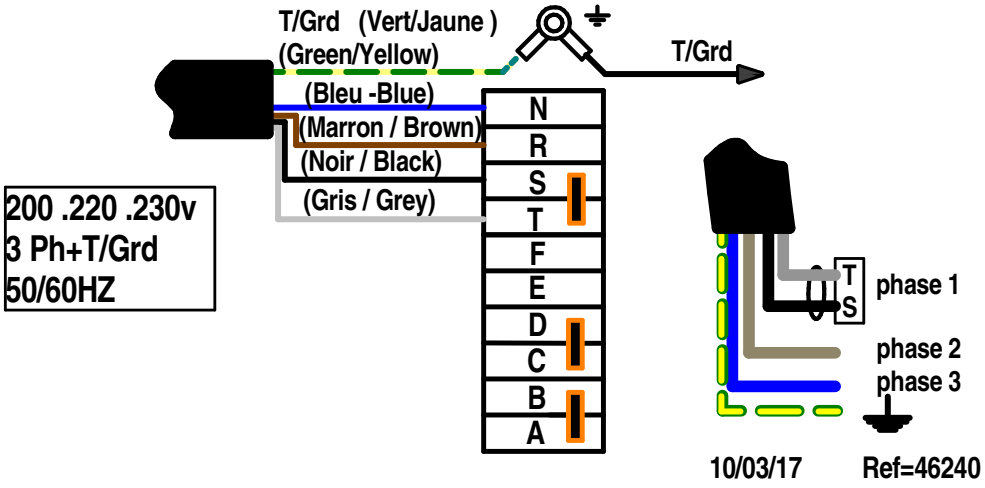
ST



5 FILS -5 WIRES

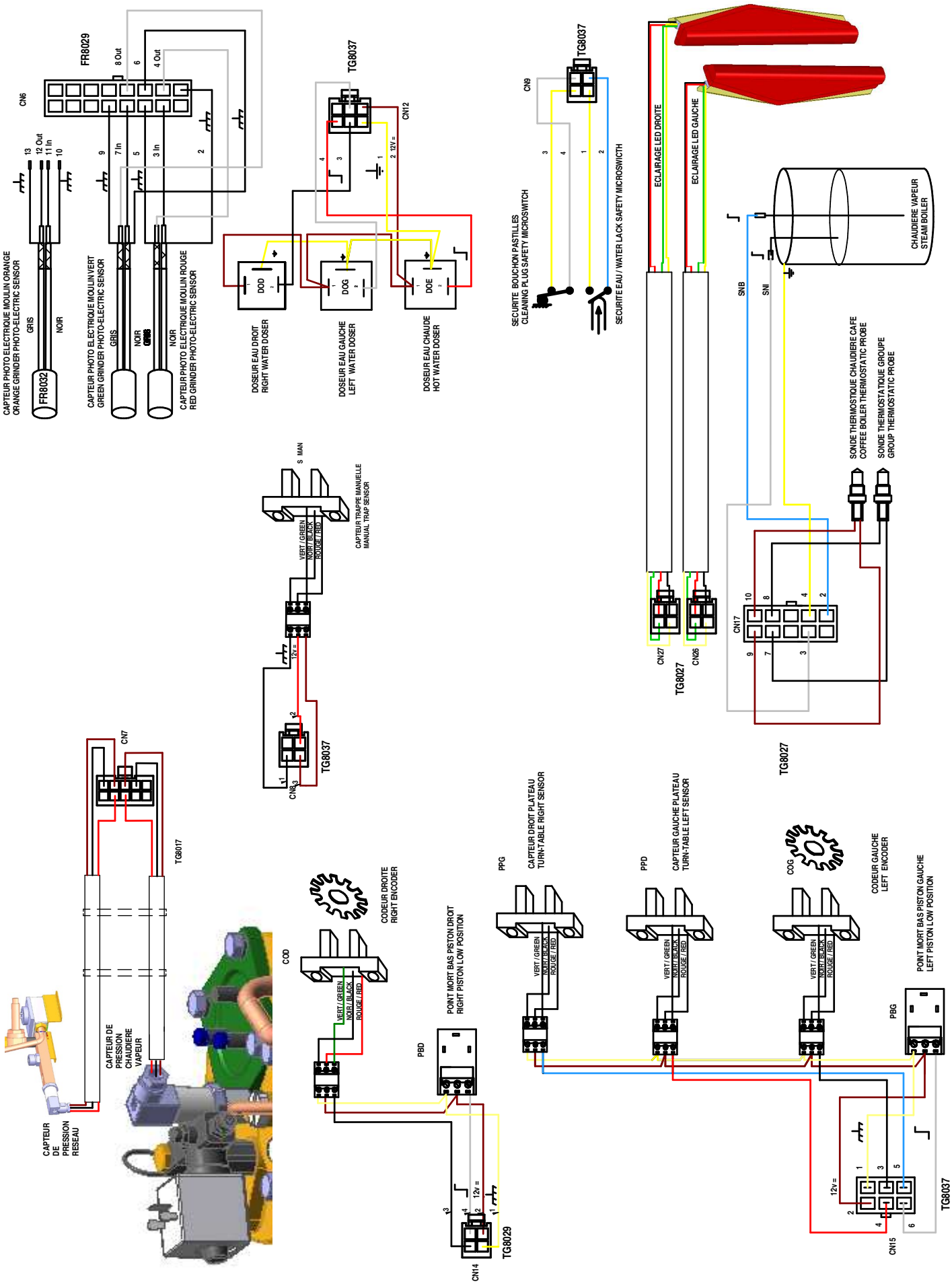


3 FILS -3 WIRES

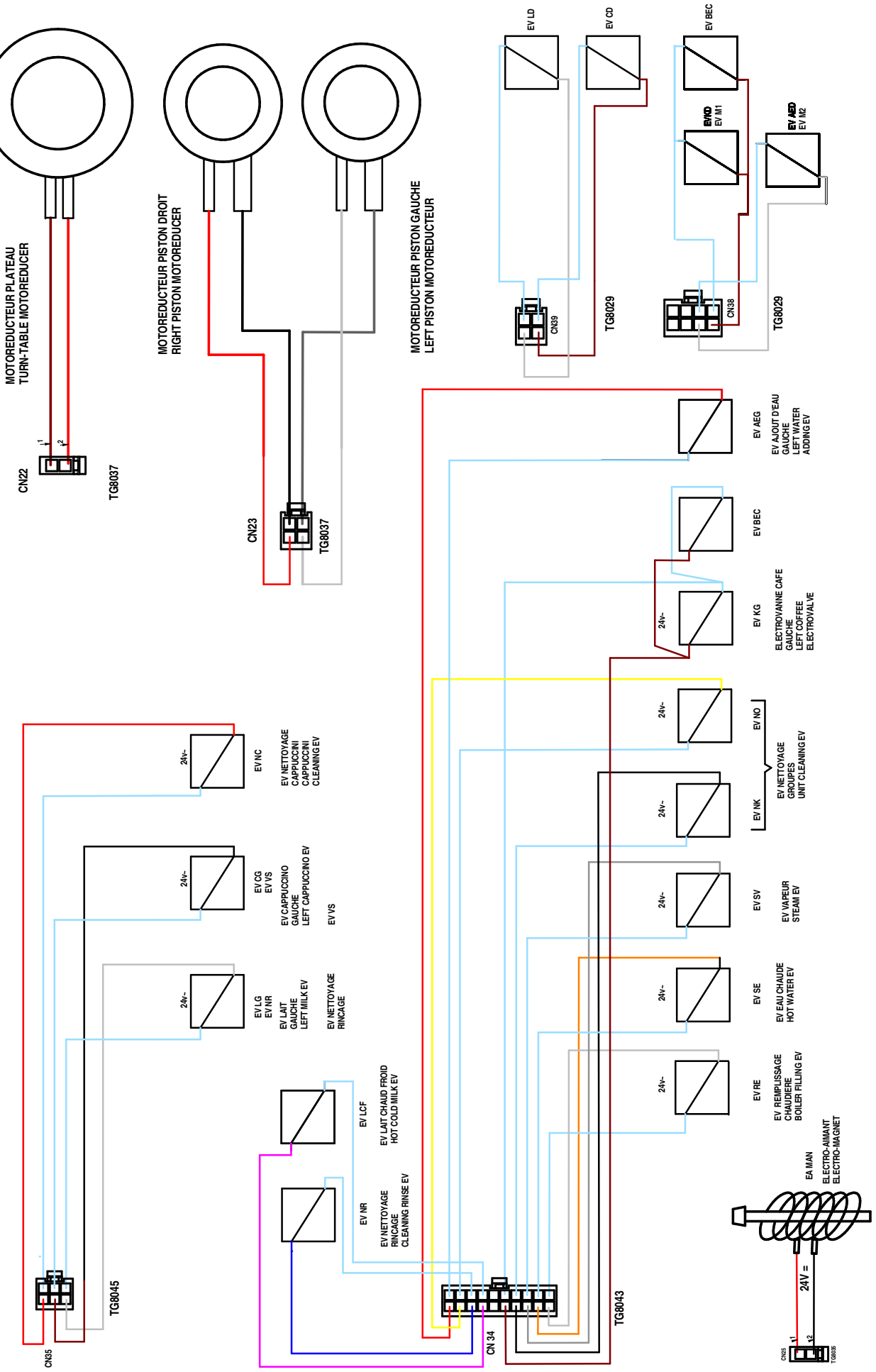


10/03/17 Ref=46240

♦ Electric wirings 5/12V



♦ Electric wiring 24V



▶ TFT screen replacement

Example with a grille of the Tango Solo ST

Tools:
-Phillips screwdriver
-Flat-blade screwdriver

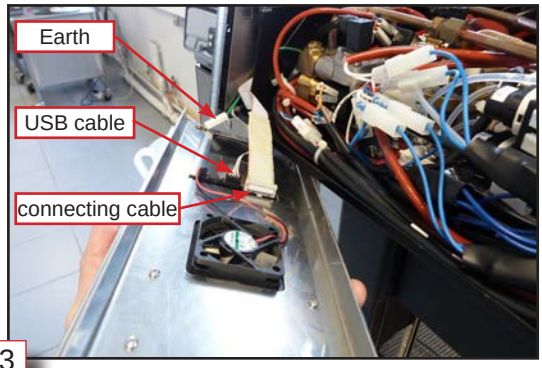
Remove the glass cover of the cup heater and unscrew the 2 screws at the front.

1

Unscrew the 2 screws underneath, while holding the grille so that it does not fall.

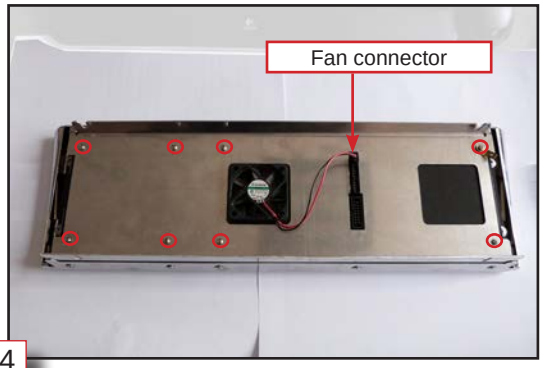
2

Remove the grille and disconnect the 3 connectors.



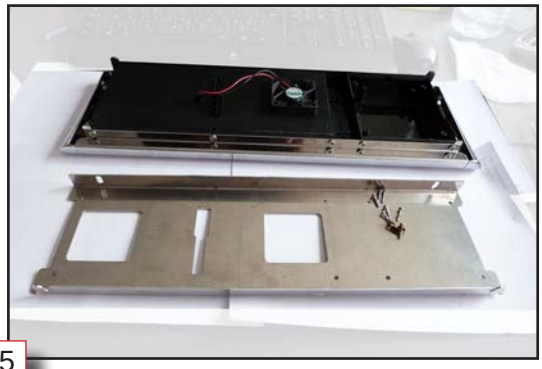
3

Unscrew the 8 screws and disconnect the fan connector.



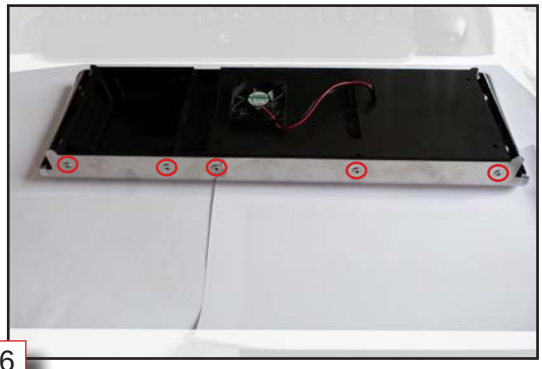
4

Remove the support plate from the grille.



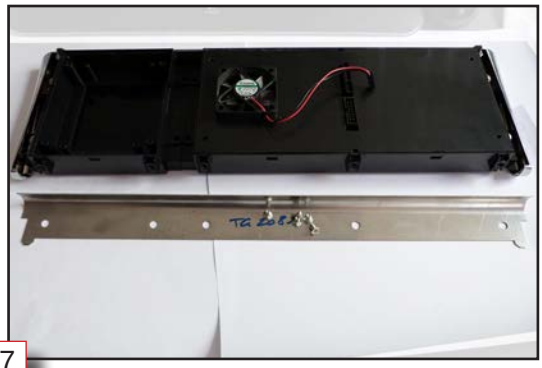
5

Unscrew the 5 screws from the underneath.



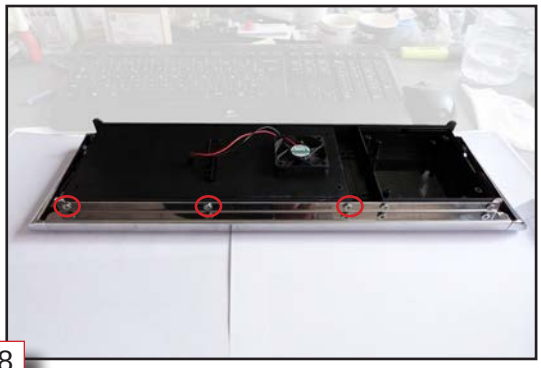
6

Remove the underneath of the grille.



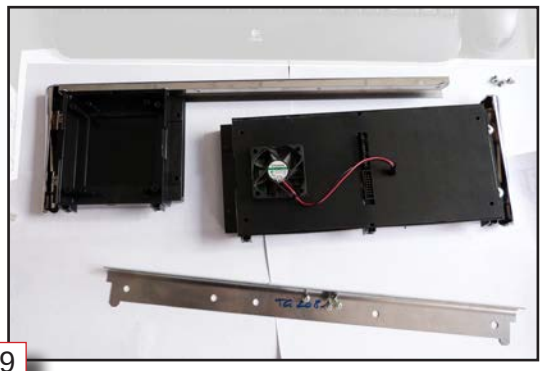
7

Unscrew the 3 screws from the top of the grille



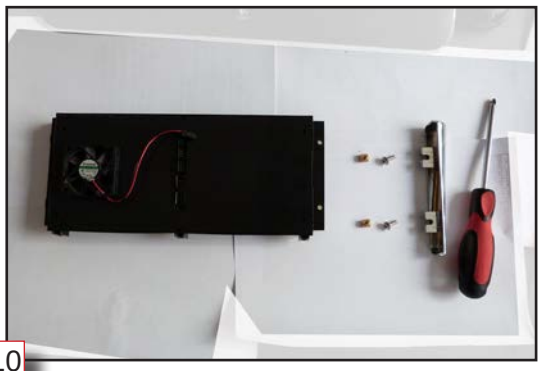
8

Detach the screen.



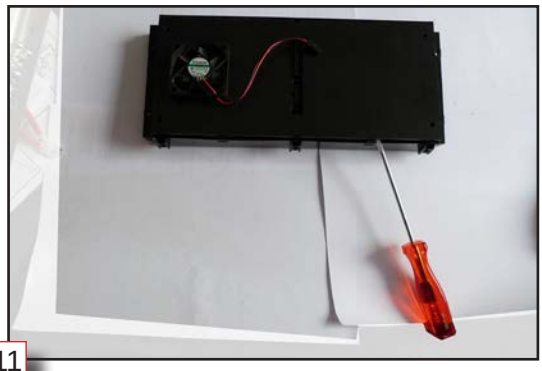
9

Unscrew the 2 Phillips screws and then remove the ear and recover the screws and the brass pins.

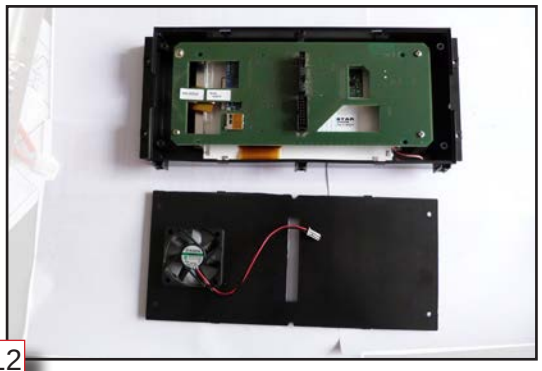


10

Remove the rear cover using a screwdriver in the notches.



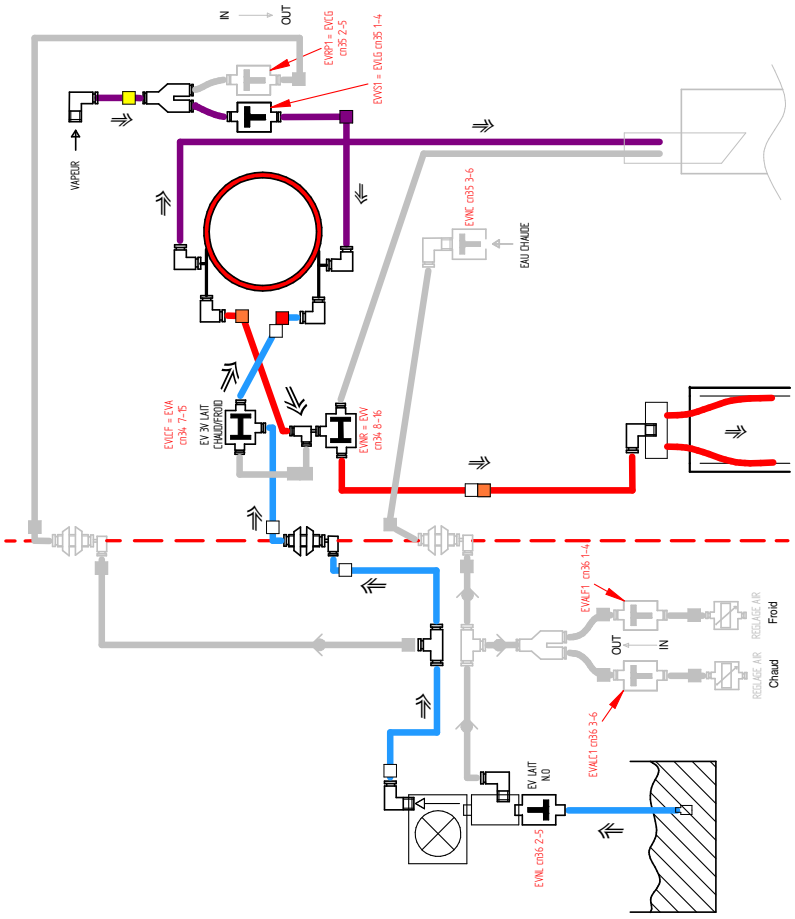
11



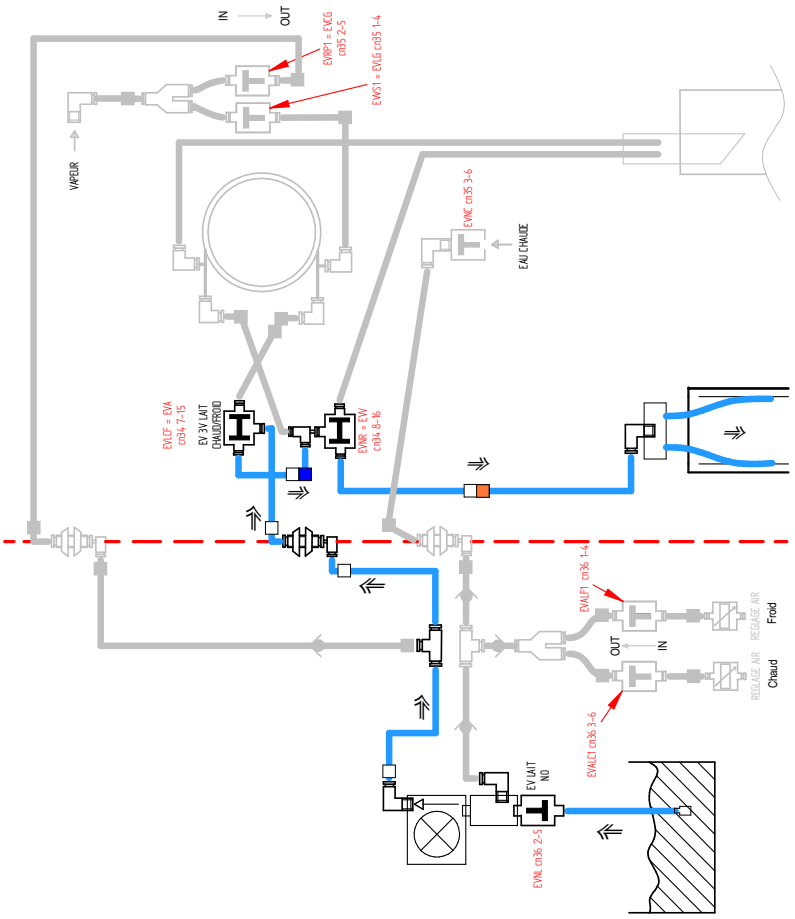
12

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.

▶ Milk system

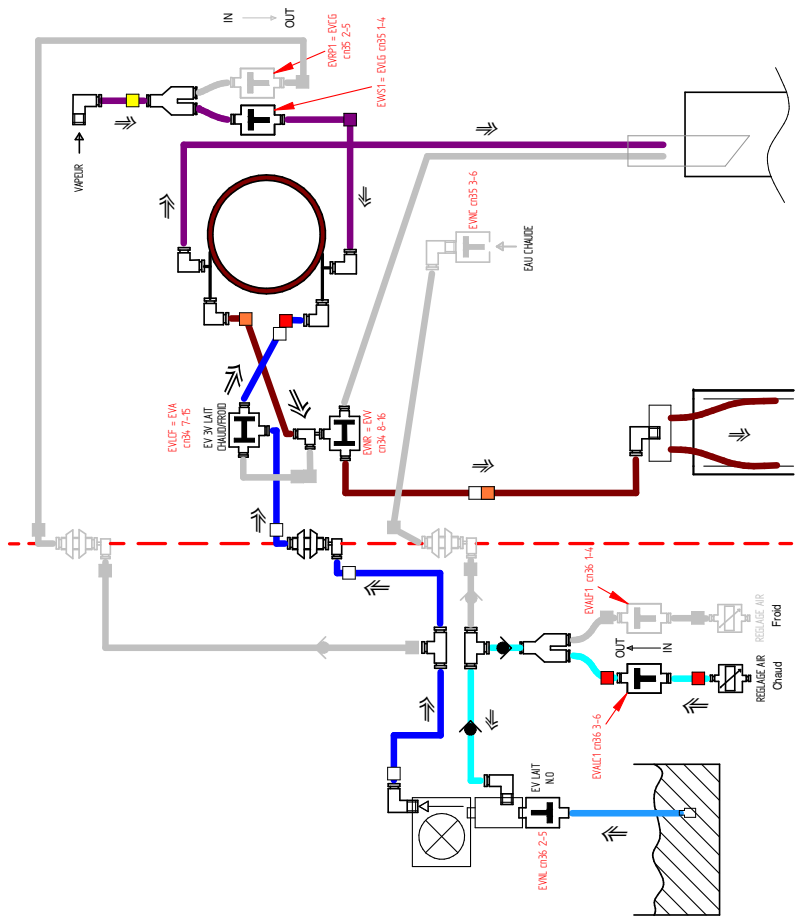


CIRCUIT LAIT CHAUD
HOT MILK CIRCUIT

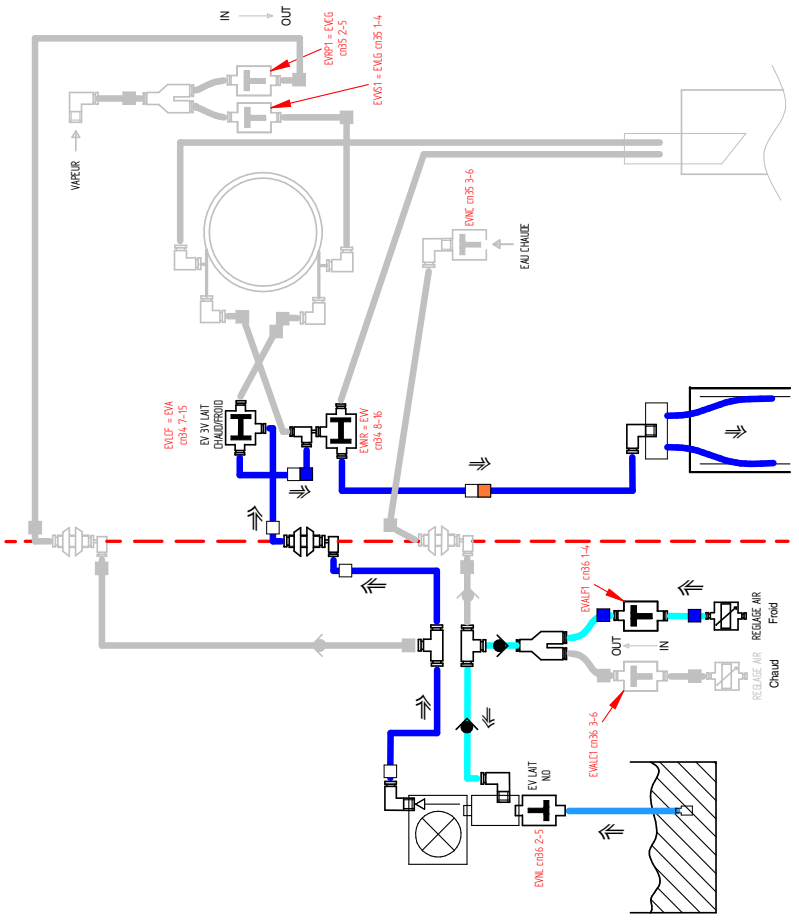


CIRCUIT LAIT FROID
COLD MILK CIRCUIT

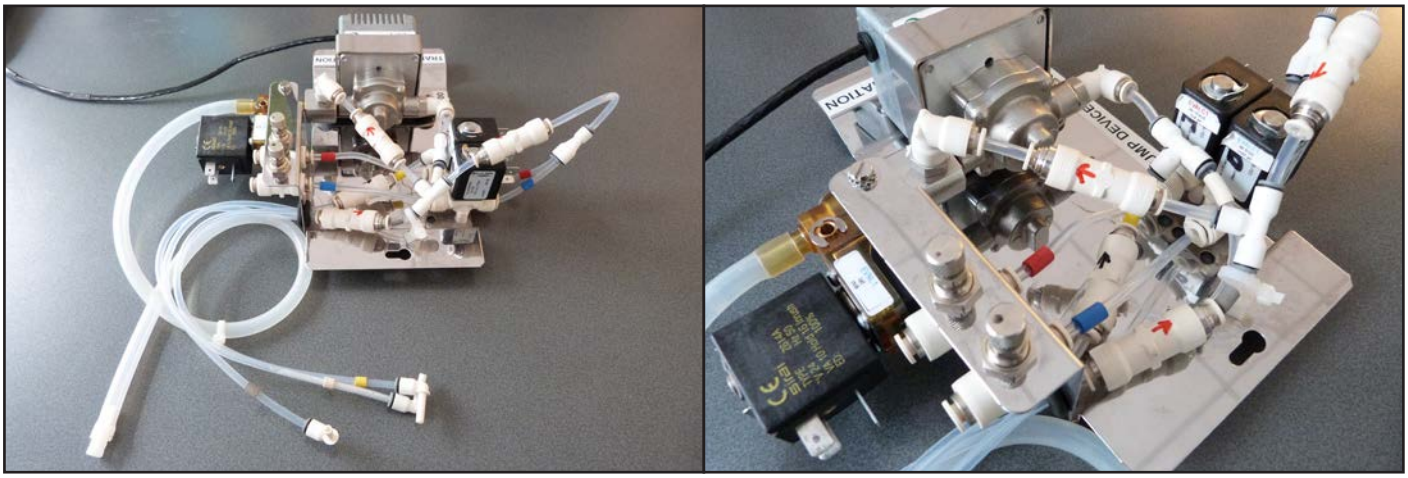
CIRCUIT MOUSSE CHAUDE
HOT FOAM CIRCUIT

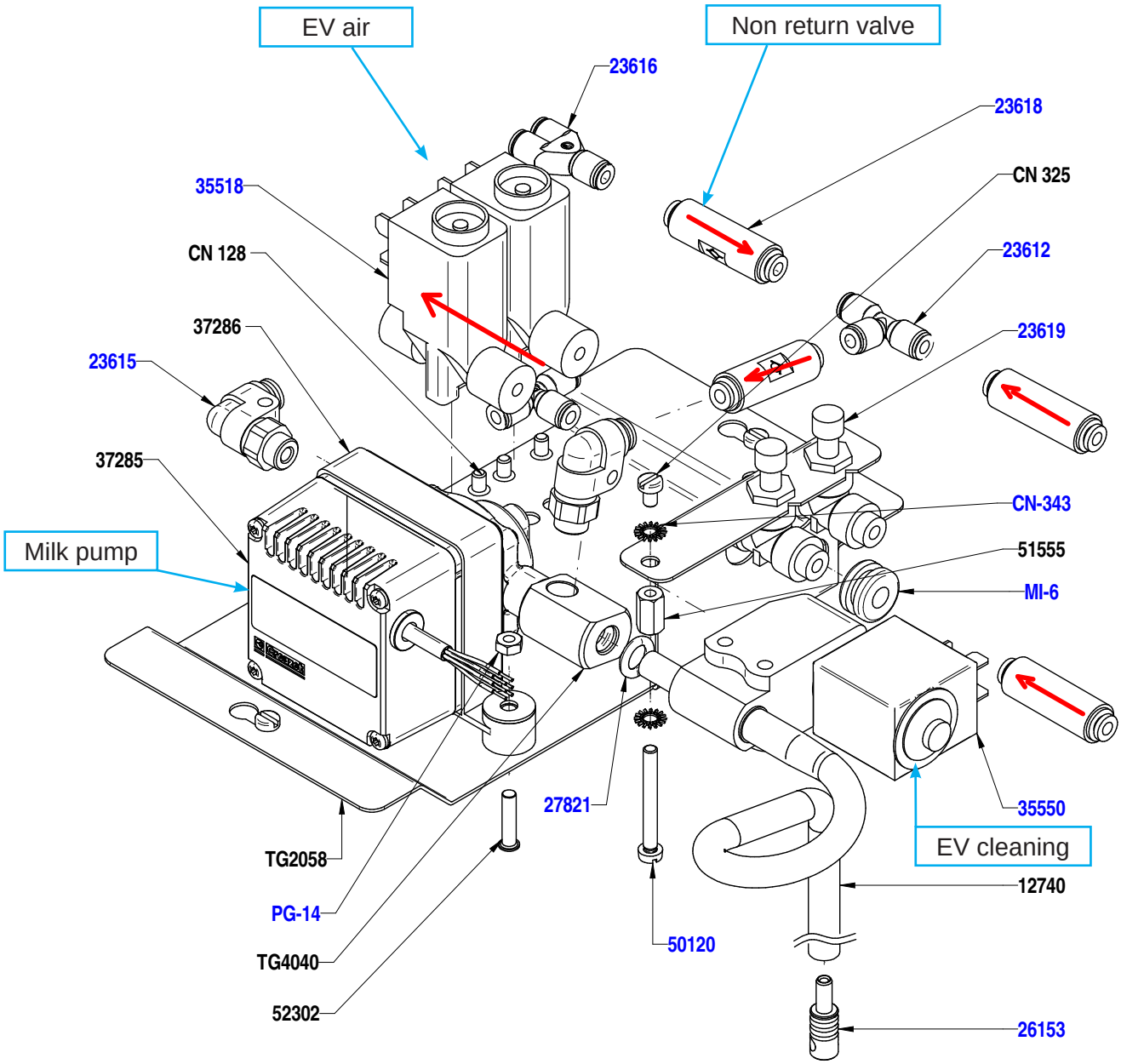


CIRCUIT MOUSSE FROIDE
COLD FOAM CIRCUIT



♦ Subassembly TG1300



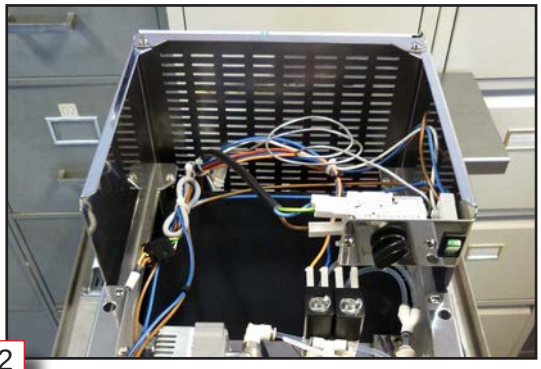


♦ Removing the TG1300 sub-assembly

Remove the cup heater grille, then unscrew the 4 screws from the cup heater

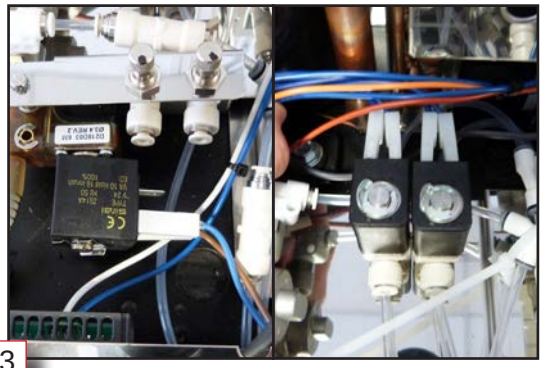
1

Remove the top plate, TG3048.



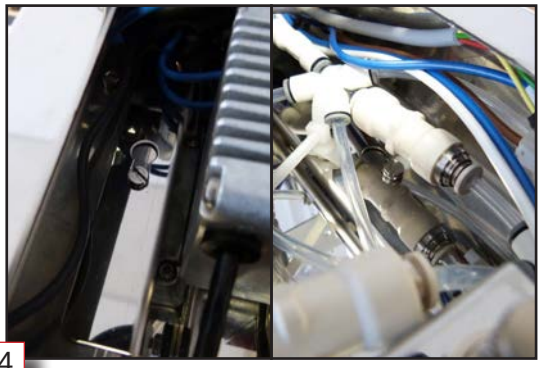
2

Disconnect connectors of the solenoid valves and the pump.



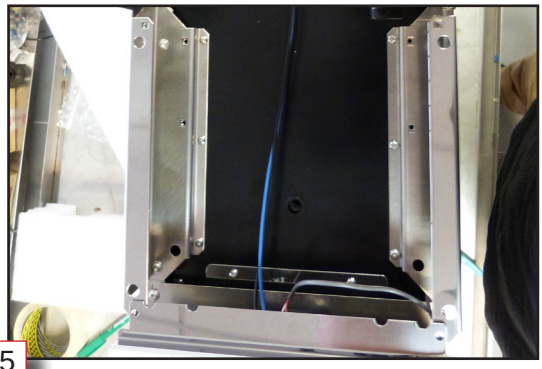
3

Unscrew (not fully) the two screws; then simply slide the unit forwards to extract the ST module.



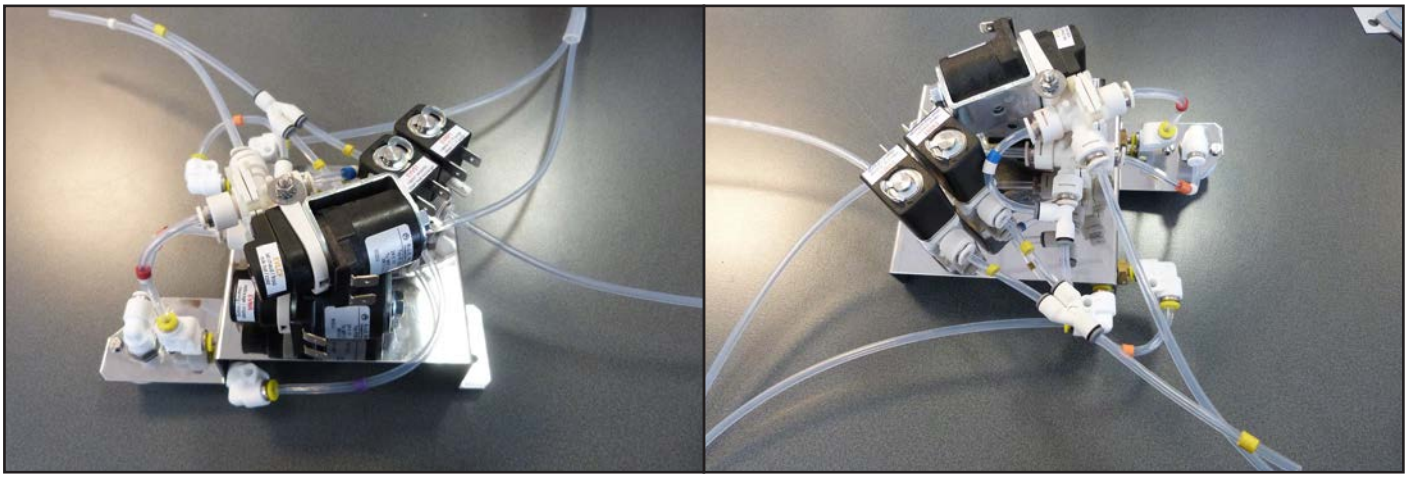
4

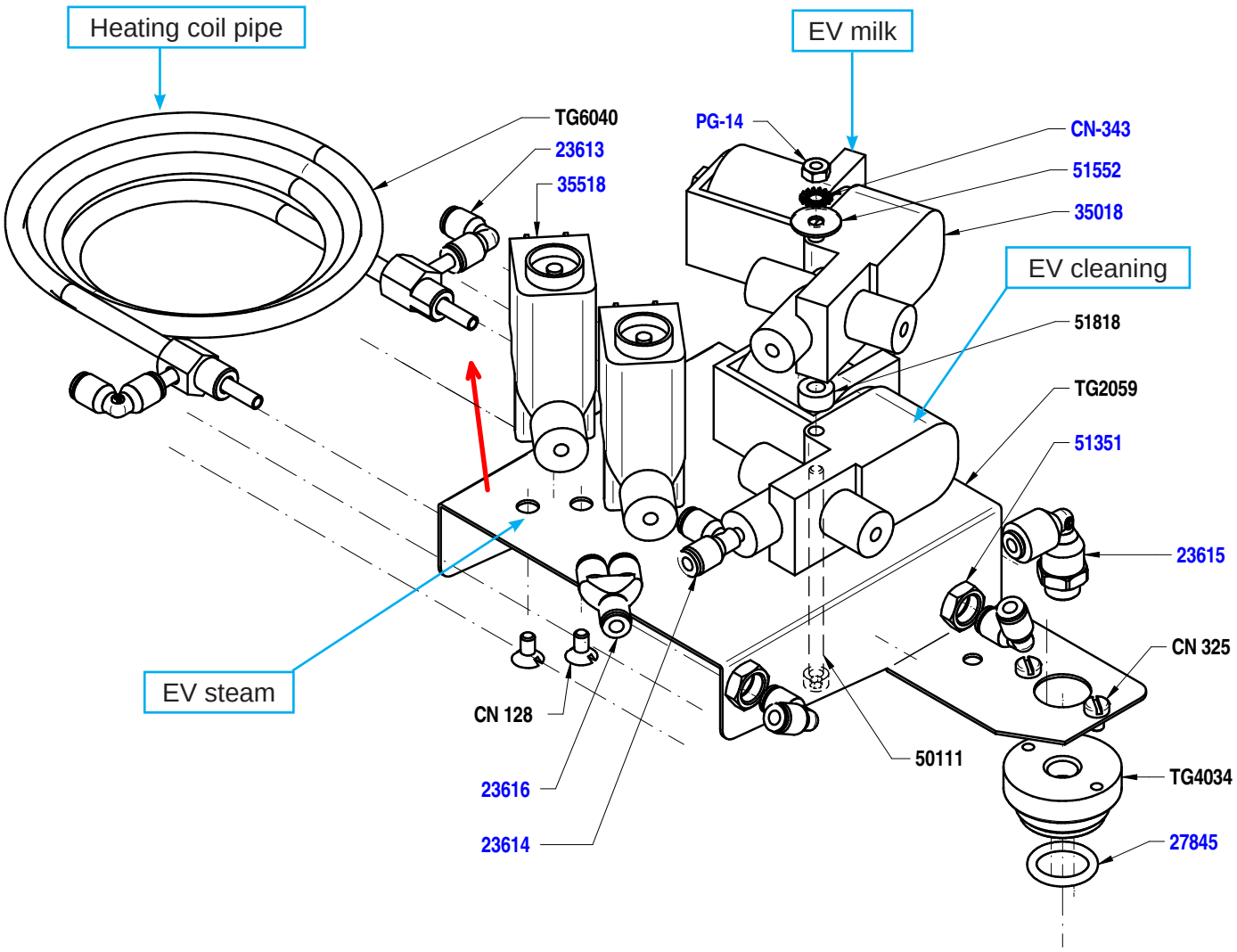
Module without the TG1300 unit.



5

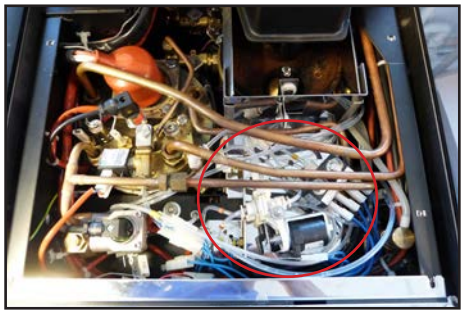
♦ Subassembly TG1301





♦ Removing the TG1301 sub-assembly

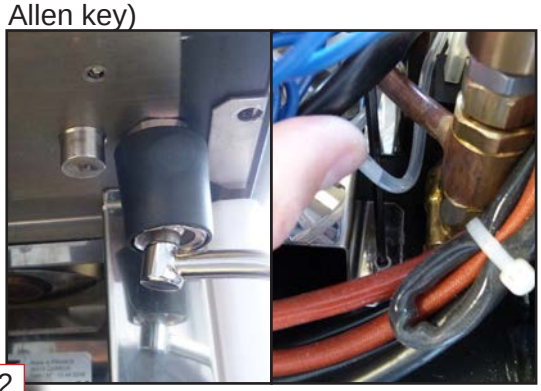
Note: Perform this operation after having removed the grille from the machine (see «Replacement of the TFT screen» part, p:62).



Unscrew the milk outlet on the nozzle.

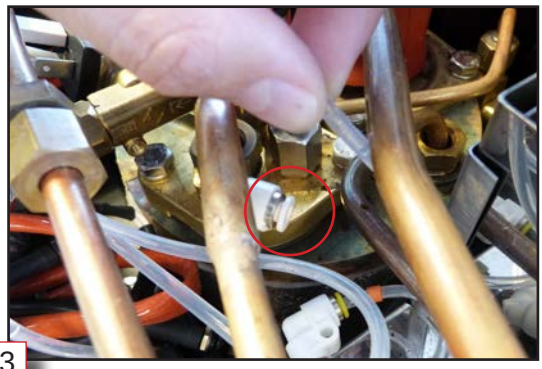
1

Unscrew the coffee grounds drawer stop, which also serves to hold it (tool: 3mm Allen key)



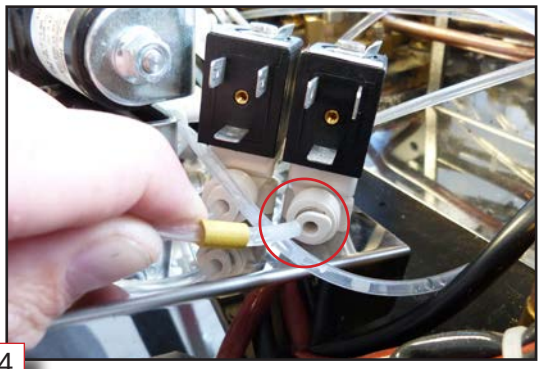
2

Disconnect the boiler steam tube



3

Disconnect the steam outlet tube from the EVRP1

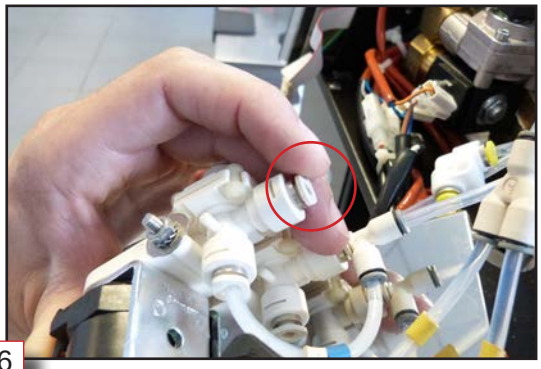


4

Disconnect the outlet tube from the EVNR (3-way solenoid valve)

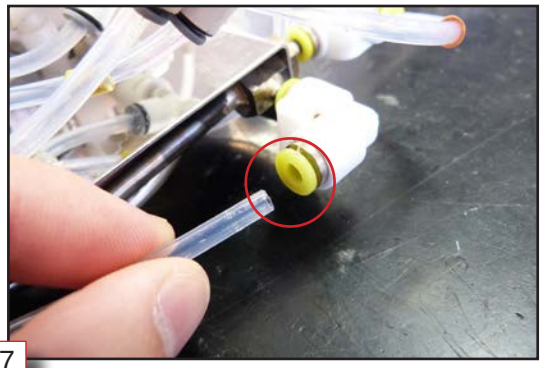
5

Disconnect the milk tube from the EVLCF



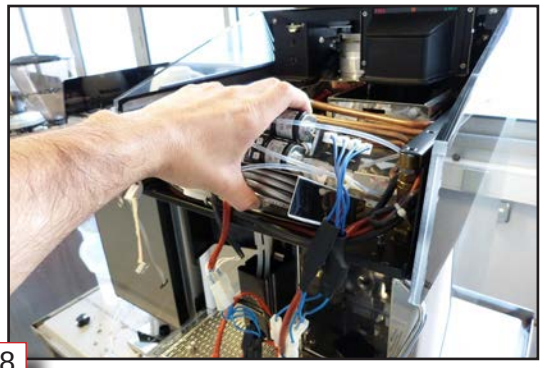
6

Disconnect the steam bleeder tube from the coil.



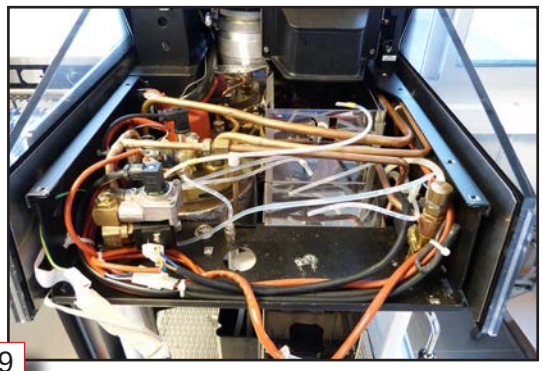
7

Disconnect the connectors from the 4 solenoid valves, then take out the unit.



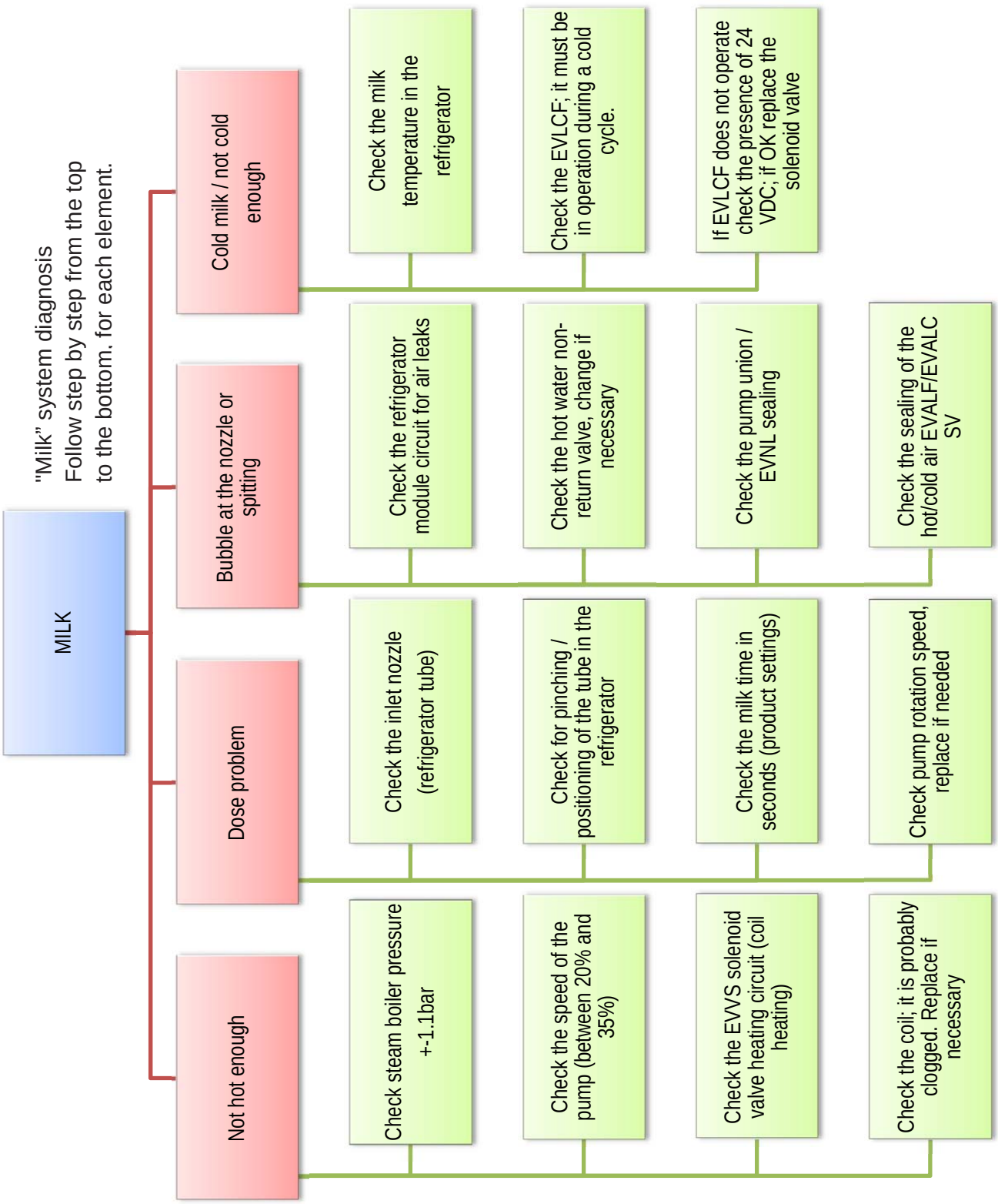
8

Machine without the TG1301 unit.

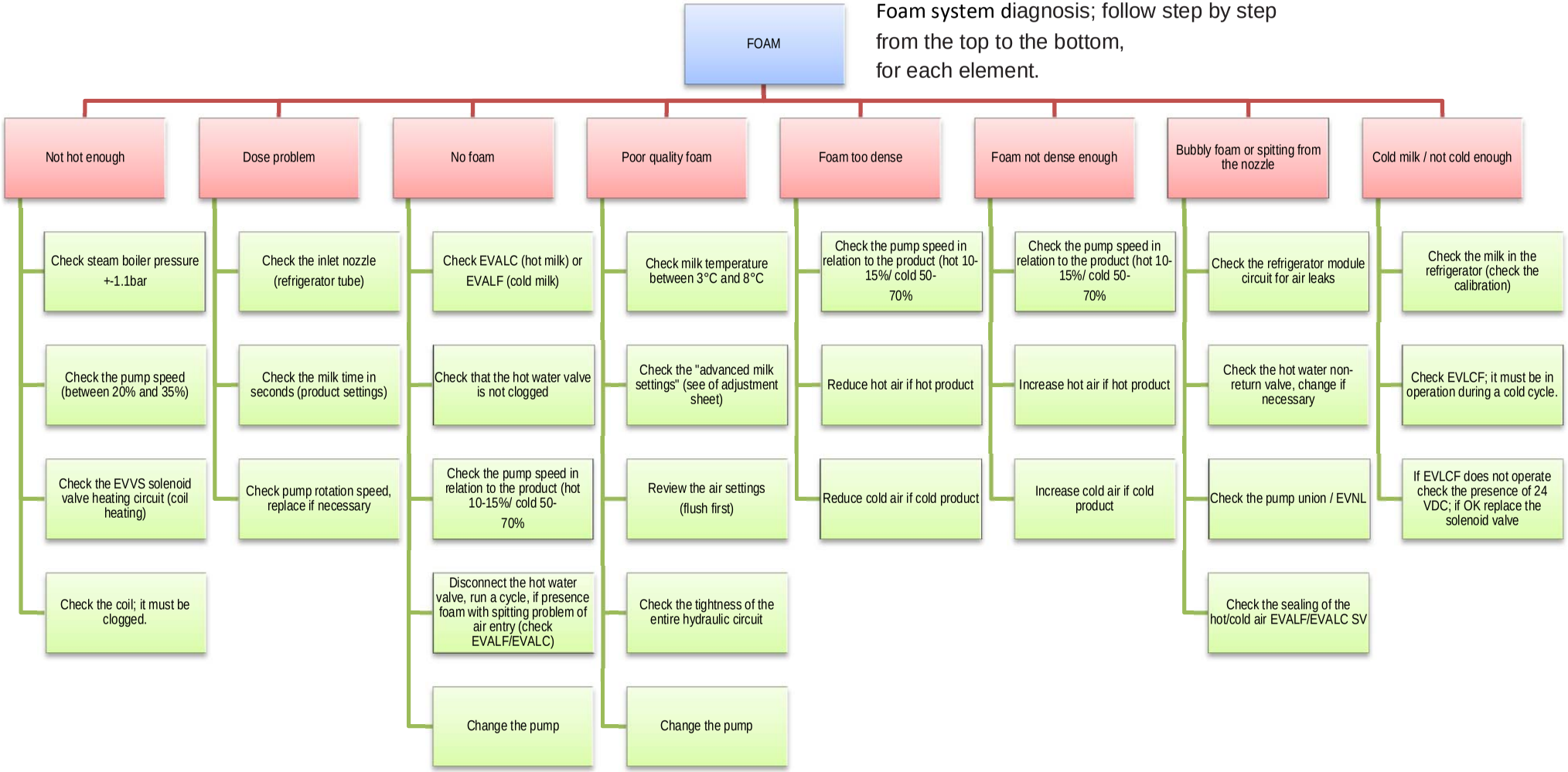


9

♦ Troubleshooting



Foam system diagnosis; follow step by step from the top to the bottom, for each element.



♦ Emergency list

PIECES DETACHEES DE 1ERE URGENCE SPECIFIQUES AUX TANGO STP

REF	DESIGNATION	DESIGNATION	QTE
12740	TUBE SILICONE 5 X 9	SILICONE PIPE 5 X 9	1m
12734	TUBE PTFE DIA:4	PIPE PTFE DIA:4	3m
23610	RACCORD RAPIDE DROIT PASSE CLOISON	QUICK FITTING BULKHEAD	2
23611	EQUERRE RACCORD RAPIDE PASSE CLOISON	BULKHEAD CONNECTOR	2
23613	RACCORD RAPIDE COUDE 2V D:4 F-F	ELBOW QUICK FITTING 2W D:4 F-F	2
23615	RACCORD RAPIDE COUDE D:4 F-1/8G	ELBOW QUICK FITTING D:4 F-1/8G	4
23616	RACCORD RAPIDE Y D:4 F-F-F	QUICK FITTING Y D:4 F-F-F	2
23618	CLAPET ANTI-RETOUR D:4 F-F	NON RETURN VALVE D:4 F-F	6
23619	REGLAGE AIR MICROMETRIQUE C/F D:4 F-F	SETTING AIR HOT/COLD D:4 F-F	1
26124	GOUPILLON NETTOYAGE	CLEANING BRUSH	1
26153	REDUCTEUR CAPPUCCINATORE D2.5	CAPPUCCINATORE REDUCER D2.5	3
27821	JOINT TORIQUE 1.78 X 12.42	O-RING 1.78 X 12.42	4
35018	ELECTROVANNE 3V D4F 24V-DC	ELECTROVALVE 3W 24V-DC D4F	1
35518	ELECTROVANNE 2V D4F 24V-DC	ELECTROVALVE 2W 24V-DC D4F	1
37285	MOTEUR POMPE 24V AVEC CABLE	PUMP MOTOR 24V	1
37286	ENSEMBLE FIXATION POUR POMPE 24V	FIXING SET FOR 24V PUMP	1
92027	DETERGENT LIQUID ACID - LAIT 1000 ML	LIQUID DETERGENT ACID - MILK 1000ML	1
TG6040	TUBE SERPENTIN VAPEUR INOX	HEATING COIL PIPE FOR STEAM	1
ref RS: 722198	COUPE TUBE	PIPE CUTTING	1
44321	VENTILATEUR CABLE AVEC CONNECTEUR	FAN WITH WIRE	1
45148	BOITIER BTX TANGO ST	BTX ELECTRONIC BOX TANGO ST	2
45381	CARTE CPU	CPU CARD	1
45382	CARTE DRIVER EV	ELECTROVALVE DRIVER CARD	1
45384	CARTE MODULE 2EME PISTON	MODULE CARD 2ND PISTON	1