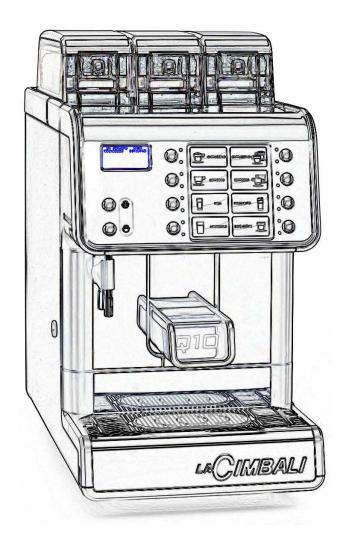


MANUALE DEL TECNICO
ENGINEER'S MANUAL
MANUEL DU TECHNICIEN
TECHNIKERHANDBUCH
MANUAL DEL TÉCNICO
MANUAL DO TÉCNICO

# Q10

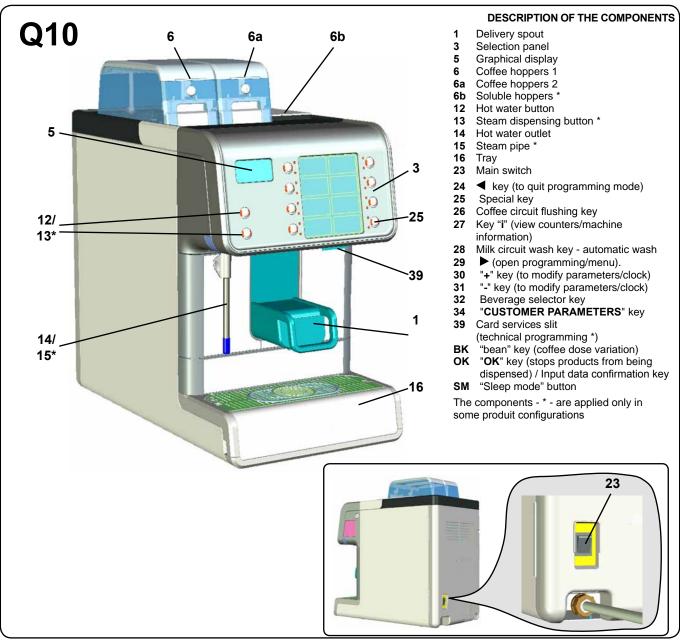


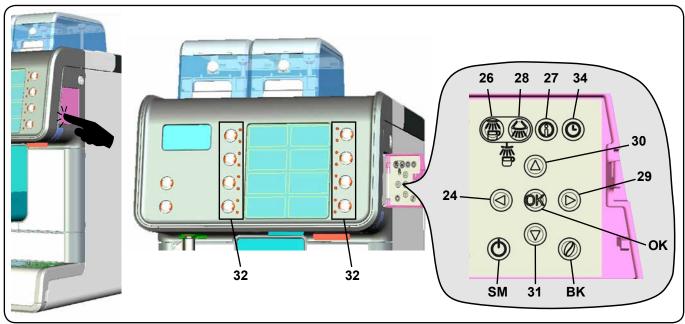


## Index

	P	age		Page
	Description of the machine and		Washing	35
	of the control panel	2	Components	36
1.	Data flow chart - Technician programming	3		
2.	Programming	6	DISASSEMBLY	
2.1	Stop Function	7	Opening front panel	39
2.2	Heating Mode	7		
3.	Key menu - Coffee selection	8	Coffee group removal	40
3.1	Key menu - Milk selection	8	Coffee group repositioning	41
3.2	Key menu - Cappuccino selection	9	Coffee receptacle removal	42
3.3	Key menu - Soluble selection	10	·	
3.4	<b>Key menu - Soluble Mix selection</b> Soluble Mix selection	10	Solubles receptacle removal  Solubles receptacle assembly	43 44
	"Mixed Start" function	11	Solubles receptable assembly	44
3.5	Key menu - Hot water selection	12	Grinder group removal	46
3.6	Key menu - Steam selection	12	Opening the rear panel	47
4.	TEST board	13	Boom and assessment	47
5.	Configuration menu	14	Rear panel cover removal	47
6.	Special keys	15	Thermostat reset	48
7.	Washing options	16	Water inlet assembly removal	48
8.	WiFi configuration	18	•	
9.	Pay per Use	18	Solenoid valve block removal	49
10.	Test menu	19	Boiler/heater assembly removal	50
11.	Weighting	21	Pump assembly removal	51
12.	DATA menu: Counters	22	r ump accombly removal	0.
13.	DATA menu: Accounting	22		
14.	DATA menu: INFO Serial number	<b>23</b> 23	SETTING	
	Version Setup	23 24	Display contrast setting	52
	Entering Standard Data Dip settings	24 25	CPU Dip-Switch	53
15.	DATA menu: Wash Archive	25	Hydraulic circuit	54
16.	DATA menu: MALFUNCTIONS ARCHIVE	26	Hydraulic Diagram Legend	55
17.	Customer parameters menu	26		
	Language selection Service time menu	26 27	Hydraulic circuit snow milk	56
	Date and time	27	Hydraulic Diagram Legend snow milk	57
18.	Defects - Malfunctions	30		
19.	Abnormal functioning (machine and operator) Coffee circuit Milk circuit	<b>34</b> 34 35		

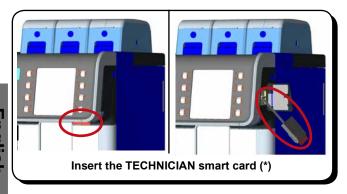


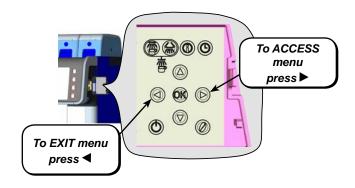






## 1. Data flow chart - Technician programming (1/3)







Type

Coffee	Milk	Cappuccino	Soluble	Mix Soluble
Repetition	Repetition	Repetition	Repetition	Repetition
		Milk dose	Mixer delay	MIVED OTABI
Water dose	Milk dose	Coffee start/Milk start	Wilker delay	MIXED START
Grinder	Emulsion	Emulsion	Time mixer	COFFEE
MM coffee dose	HM/FM	HM/FM	Predose mixer	MILK
	Milk module	Milk module	Predose dispenser	SOLUBLE 1
Start water	·	Cold start		SOLUBLE 2
Water add.	Cold start	Cold milk dose	Dispenser delay	
Heating mode	Cold milk dose	Emulsion fr.	Dispenser type	
Infusion	Emulsion fr.	HM/FM fr.	tot. time dispenser	
Drying	HM/FM fr.	v Mpl cold milk	t on dispenser	
	v Mpl cold milk	v Mpl hot milk	t off dispenser	
	v Mpl hot milk	v Mpl milk HM hot	Step H2O	
		Water dose		
	v Mpl milk HM hot	Grinder	H2O delay	
		MM coffee dose	Cycle delay	

Note: Beverage types and certain data programming flow items are present according to the machine programming set.

## (\*) without the smart card reader:

place the dip 5 of the main CPU board in ON position, then push in the following sequence the OK button and PRG button. Keep pushed the ▶ button for at least 3 seconds

Start water
Water add.
Heating mode
Infusion
Drying



## 1. Data flow chart - Technician programming (2/3)

## CONFIGURATION

Press



SPECIAL KEY

SPECIAL KEYS

Boiler P.

Level sensib.

BOILER

SOLUB. PARAMETERS1

SOLUB. PARAMETERS2

MESAUREMENT UNITS

N° grounds

SOFTNER REGENER.

**CHANGE W. FILTER** 

Customer prog.

Bean key

Prog. lock

Paym system

ACCOUNTING

Buzzer

WASHING OPTIONS

Stop dispens.

Standard data

DATA IN/OUT

Archive reset

WIFI

MAINTENANCE

PAY PER USE

HARDWARE SETUP

## TESTING

Press



MANUAL COMMANDS



## WEIGHTING

Press



(\*) without the smart card reader:

place the dip 5 of the main CPU board in ON position, then push in the following sequence the OK button and PRG button. Keep pushed the ▶ button for at least 3 seconds



## 1. Data flow chart - Technician programming (3/3)

## CUSTOMER

Press



## SERVICE TIME



DATE AND TIME
ON time a
ON time
OFF time
Day off
Day off
Day off
Night ON
Night OFF
WASH 1
WASH 2
WASH 3
WASH 4
WASH 5

ITALIANO	
----------	--

ENGLISH

DEUTSCH

FRANCAIS

POLSKI

ESPANOL

PORTUGÛES

NEDERLANDS

ニホンコペ

PYCCKN

EESTI

中女

## DATA MENU

Press

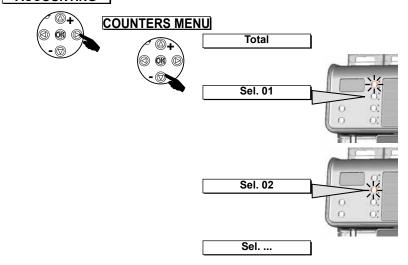


## **COUNTERS MENU**



N° coffees	
N° milk	
N° milk fr.	
N° solub. 1	
N° solub. 2	
N° water	
N° steam	
N° steam + air	
N° t. coffee	
N° cycles	
N° MM1	
N° MM2	

## ACCOUNTING



INFO

SERIEL N°
VERSION SW
SETUP
DIP SETTINGS

## WASH ARCHIVE

Required
Performed
PARTIALS

MALFUNCT. ARCHIVE

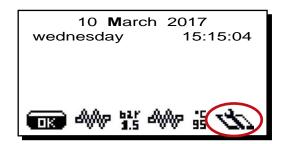


## 2. Programming

How to enter "Programming" menu: there are two possibilities:

- 1) Insert the smart card
- 2) without the smart card reader: place the dip 5 of the main CPU board in ON position, then push in the following sequence the OK button and (29) button. Keep pushed the (29) button for at least 3 seconds

Besides the date and hour, the symbol TECHNICIAN will appear.

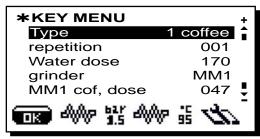


Display of available menus: Press the ((29) key.



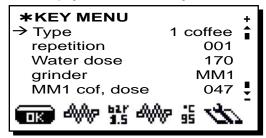
Access to menus: Use the "+" ((30) and "-" ((31) keys to position the cursor on the desired line, then press the ((29) key (press a selection key if the "SELECT KEY" menu appears).

Access and modification of sub-menus: Use the "+" (a) (30) and "-" (31) keys to position the cursor on the desired line, then press the (b) (29) key.



Use the "+"  $\bigcirc$  (30) and "-"  $\bigcirc$  (31) keys also to modify the message or number.

**Note**: When modifying data, the cursor changes to "→".



#### Exiting the programming menu

There are two possibilities:

- 1) Press the **OK** key to confirm changes
- 2) Press the (() (24) key to leave settings unchanged and exit the menu



#### 2.1 STOP Function

Dispensing of the selected beverage can be stopped before the programmed dose is reached in two ways:

- 1) by setting a selection key with the STOP function;
- by setting the "Stop dispensing" parameter in the machine's configuration menu.

Note: in this case, the selection key also functions as the START/ STOP key.  $% \begin{center} \end{center} \begi$ 

N.B.: when "Stop dispensing" is set to YES the beverage reservation function cannot be used.

Note: If the "Stop dispensing" parameter is not set in the machine configuration menu (NO), the **OK** key stops dispensing

Once the  $\mathbf{OK}$  button is pushed it does not change the programmed parameters.

## 2.2 Heating Mode

The heating mode is a setting that maintains the optimum brewing temperature for each type of coffee beverage.

#### How it works

When a dispensing key is pressed, the coffee boiler resistance is activated for the time needed to reach the correct brewing temperature.

The coffee boiler heats when the dispensing cycle is launched and during grinding, before the brewing phase begins.

#### How to program

Nine heating modes (from 0 to 8) can be set in the recipes; active modes ranging from 0 to 4, those from 5 to 8 are not active and are associated with the heating mode 0.

Each mode from 0 to 4 regulates the coffee boiler heating time divided into 5 intervals.

Each interval is related to the time passed from the last coffee dispensed.

#### Heating modes with related boiler resistance activation times

Interval	Interval Value (time passed from last coffee)	Heating mode 0	Heating mode 1	Heating mode 2	Heating mode 3	Heating mode 4
1	From "0" to "2" minutes	0 seconds	0 seconds	0 seconds	0 seconds	0 seconds
2	From "2" to "5" minutes	0 seconds	3 seconds	0 seconds	0 seconds	0 seconds
3	From "5" to "10" minutes	0 seconds	5 seconds	3 seconds	0 seconds	0 seconds
4	From "10" to "20" minutes	0 seconds	8 seconds	5 seconds	5 seconds	0 seconds
5	More than "20" minutes	0 seconds	8 seconds	5 seconds	5 seconds	3 seconds
		Recommended for cappuccinos or beverages with added water	Typical for single espressos	Typical for double espressos	Typical for coffees with cream	Typical for double coffees with cream

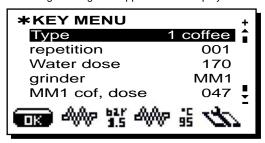
#### Examples of use

- 1) Suppose you want to dispense a coffee with a recipe set for *Heating mode 3* and *13 minutes* have passed from the last coffee dispensed. From the table above, you can see that Interval 4 (from 10 to 20 minutes) intersects with Heating Mode 3 on the square of *5 seconds*, which corresponds to the duration that the boiler resistance is activated before the coffee is dispensed.
- 2) If **Heating mode 1** is set in the recipe and **4 minutes** have passed from the last coffee dispensed, from the table above, you can see that Interval 2 (from 2 to 5 minutes) intersects with Heating Mode 1 on the square of **3 seconds** of boiler heating.
  - If **Heating mode 1** is set in the recipe and **18 minutes** have passed from the last coffee dispensed, from the table above, you can see that Interval 4 (from 10 to 20 minutes) intersects with Heating Mode 1 on the square of **8 seconds** of boiler heating.



## 3. Key menu - Coffee selection

Press one of the coffee dispensing keys (32) (the relative led will remain on). The following message will appear on the display:



The following coffee selection parameters can be modified:

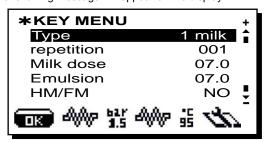
Type (key personalizing, e.g. 1 coffee, 1 cappuccino, 1 milk, 1 soluble 1, 1 soluble 2, 1 mix soluble, 2 coffees, 2 cappuccini, 2 milks, 2 solubles 1, 2 solubles 2, 2 mix solubles, stop, water, null);

- repetition (it represents the number of distributions of the selected drink, from 001 to 099);
- water dose (volumetric dosage pulses, from 0 to 1999, with increments of 1);;
- grinder MM...(grinder number 1 left, 2 right);
- MM... coffee dose (grinde encoder pulses, 0 ÷ 200 with increments of 1);
- start water (determines if water is added at the beginning or end of coffee dispensing, can be set before or after);
- water add. (volumetric dosage pulses, from 0 to 1999, with increments of 1);
- heating mode (acts on the brewing temperature, can be set from 0 to 4. See specific paragraph);
- infusion (infusion time: 0 ÷ 6 seconds, with increments of 0.1);
- drying (pod drying time; 0 ÷ 5 seconds, with increments of 0.1).

Note: the coffee doses for the grinders set in the technical programming menu, are subject to change in the customer programming menu within a range of + 5 of the set value.

## 3.1 Key menu - Milk selection

Press one of the milk dispensing keys (32) (the relative led will remain on). The following message will appear on the display:



Milk selection parameters that can be changed are:

Type (key personalizing, e.g. 1 coffee, 1 cappuccino, 1 milk, 1 soluble 1, 1 soluble 2, 1 mix soluble, 2 coffees, 2 cappuccini, 2 milks, 2 solubles 1, 2 solubles 2, 2 mix solubles, stop, water, null);

- repetition (it represents the number of distributions of the selected drink, from 001 to 099);
- Milk dose (milk dispensing time: 0 ÷ 60 seconds, with increments of 0.1):
- Emulsion (foamed milk dispensing time, from 0 to 60, with increments of 1 second);
- HM/FM (this parameter lets you decide which type of milk (frothed or regular) to dispense first.

YES: regular milk – frothed milk; NO: frothed milk – regular milk);

- milk module (when set to YES, the WM parameter is set to NO by default and cannot be changed)
- cold start (delay beginning dispensing of cold milk)
- cold milk dose (cold milk dose; from 0 to 60 with increments of 0.1 seconds):
- c. emulsion (cold milk dispensing time; from 0,0 to 08,0 with increments of 0,1 seconds);
- C. Nf. milk/f. milk (this parameter enables you to decide whether to dispense first cold non-frothed milk or frothed milk.

YES: - C. Nf. milk/f. milk;

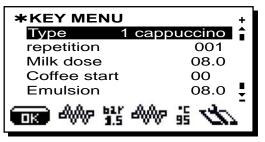
NO: C. f. milk/Nf. milk);

- v Mpl cold milk (cold milk pump motor speed, from 9 to 55% with increments of 1);
- v Mpl hot milk (hot milk pump motor speed, from 9% to 55% with increments of 1. Setting a value of less than 35% is recommended);
   Milk temperature depends from this parameter:
- low value = high milk temperature;
- high value = low milk temperature);
- v Mpl milk HM hot (hot (regular) milk pump motor speed, from 9% to 55% with increments of 1. Setting a value of less than 35% is recommended):



## 3.2 Key menu - Cappuccino selection

Press one of the cappuccino dispensing keys (32) (the relative led will remain on). The following message will appear on the display:



Cappuccino selection parameters that can be changed are:

- Type (key personalizing, e.g. 1 coffee, 1 cappuccino, 1 milk, 1 soluble 1, 1 soluble 2, 1 mix soluble, 2 coffees, 2 cappuccini, 2 milks, 2 solubles 1, 2 solubles 2, 2 mix solubles, stop, water, null);
- repetition (it represents the number of distributions of the selected drink, from 001 to 099);
- Milk dose (milk dispensing time: 0 ÷ 60 seconds, with increments of 0.1);
- Milk start/coffee start \*\* (milk dispensing delayed after coffee dispensing, and vice versa);
- **Emulsion** (foamed milk dispensing time, from 0 to 60, with increments of 1 second);
- HM/FM (this parameter lets you decide which type of milk (frothed or regular) to dispense first.

YES: regular milk – frothed milk; NO: frothed milk – regular milk);

- milk module (when set to YES, the WM parameter is set to NO by default and cannot be changed)
- cold milk dose (cold milk dose; from 0 to 60 with increments of 0.1 seconds):
- v Mpl hot milk (hot milk pump motor speed, from 9% to 55% with increments of 1. Setting a value of less than 35% is recommended);
   Milk temperature depends from this parameter:
- low value = high milk temperature;
   high value = low milk temperature);
- v Mpl milk HM hot (hot (regular) milk pump motor speed, from 9% to 55% with increments of 1. Setting a value of less than 35% is
- water dose (volumetric dosage pulses, from 0 to 1999, with increments of 1);;
- grinder MM...(grinder number 1 left, 2 right);

recommended);

- MM... coffee dose (grinde encoder pulses, 0 ÷ 200 with increments of 1):
- start water (determines if water is added at the beginning or end of coffee dispensing; can be set before or after);
- heating mode (acts on brewing temperature, can be set from 0 to 4. See specific paragraph);
- infusion (infusion time: 0 ÷ 6 seconds, with increments of 0.1);
- drying (pod drying time; 0 ÷ 5 seconds, with increments of 0.1).

#### (\*\*) Start milk/Start coffee function

You can use the "+" ((30) and "-" ((31) keys to change the "Start milk" setting (milk dispensing start delayed after coffee dispensing and vice versa) from "00" to "99" with "1" second increments.

If over "99" is set, the "Start milk" setting will become the "Start coffee" setting (coffee dispensing start delayed after the milk dispensing), then the setting returns to "Start milk" in a cycle.

The default settings for cappuccino selections are: Start milk 00.



By setting:

"Milk start 00" - milk will be dispensed after coffee has finished dispensing;

"Milk start 99" starts dispensing coffee and 99 seconds after coffee has finished dispensing, milk is dispensed;

"Milk start 05" starts dispensing coffee and 5 seconds after coffee has finished dispensing, milk is dispensed.

N.B.: if the set time exceeds the coffee dispensing time, milk dispensing will begin immediately after coffee has finished dispensing.

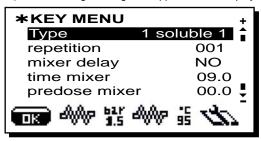
"Start coffee 00" - coffee will begin dispensing after milk has finished dispensing;

"Start coffee 99" or at any time other than zero – coffee will begin dispensing 99.9 seconds (or the time set) after the milk has finished dispensing.



## 3.3 Key menu - Soluble selection

Press one of the soluble dispensing keys (32) (the relative led will remain on). The following message will appear on the display:



Soluble selection parameters that can be changed are:

- Type (key personalizing, e.g. 1 coffee, 1 cappuccino, 1 milk, 1 soluble 1, 1 soluble 2, 1 mix soluble, 2 coffees, 2 cappuccini, 2 milks, 2 solubles 1, 2 solubles 2, 2 mix solubles, stop, water, null);
- repetition (it represents the number of distributions of the selected drink, from 001 to 099);
- mixer delay (YES NO, enables/disables the "mixer delay time" function of the SOLUBLE PARAMETERS" entry in the CONFIGURATION menu. When this function is enabled, the mixer keeps functioning for the set time even after the Gsol soluble solenoid valve has closed. This parameter allows the mixer chamber to empty completely);
- mixer time (mixer activation time, between 0 and 30 seconds with increments of 0.1);

- mixer pre-dose (the mixer starts before the Gsol soluble solenoid valve; can be set between 0.0 and 10.0 with increments of 0.1 seconds);
- pre-dose dispenser (the dispenser starts before the mixer, can be set between 0 and 10 seconds with increments of 0.1);
- dispenser delay (the dispenser starts after the mixer, can be set between 0.0 and 5.0 with increments of 0.1 seconds);
- dispenser type (dispenser mode, chosen between two soluble powder dispensing modes:
- continuous: powder is continuously dispensed for a time equal to the one set at the entry "t tot disp";
- step: powder is dispensed at intervals, where the entry "t on disp" indicates the powder dispensing phase and the entry "t off disp" indicates the standby phase);
- tot time dispenser (total dispenser time, between 0 and 30 seconds with increments of 0.1; this is the dispenser dispensing time corresponding to the total time the dispenser is activated in continuous mode):
- t ON dispenser (dispenser activation time, between 0 and 5 seconds, with increments of 0.1; the parameter is only visible in the step mode);
- t OFF dispenser (dispenser deactivated time, between 0 and 5 seconds with increments of 0.1; the parameter is only visible in the step mode);
- step H2O (the Gsol soluble solenoid valve (hydraulic circuit) is activated in steps to modulate the water dose; between 50 and 100%, with increments of 10);
- H2O delay (dispensing time of just water/steam after the dispenser activation phase, between 0 and 5 seconds, with increments of 0.1).
- cycle delay (the time set to coincide with the closure of the dispensing cycle with the return of the machine in standby, ready for the next dispensing cycle. Can be set between 0 and 20 seconds, with increments of 0.1).

## 3.4 Key menu - Soluble Mix selection

Press one of the mix soluble dispensing keys (32) (the relative led will remain on). The following message will appear on the display:



Mix soluble selection parameters that can be changed are:

Type (key personalizing, e.g. 1 coffee, 1 cappuccino, 1 milk, 1 soluble 1, 1 soluble 2, 1 mix soluble, 2 coffees, 2 cappuccini, 2 milks, 2 solubles 1, 2 solubles 2, 2 mix solubles, stop, water, null);

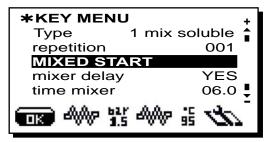
- repetition (it represents the number of distributions of the selected drink, from 001 to 099);
- MIXED START (press the (29) key to access a special screen where you can program the coffee, milk, and soluble beverage dispensing sequence to obtain the desired combination.
   See "Mixed Start" paragraph on the next page;
- "COFFEE" (contains all the parameters described in the "Coffee Selection" paragraph);
- "MILK" (contains all the parameters described in the "Milk Selection" paragraph).
- "SOLUBLE 1" (contains all the parameters described in the "Soluble Selection" paragraph, related to the first type of soluble beverage):
- "SOLUBLE 2" (contains all the parameters described in the "Soluble Selection" paragraph, related to the second type of soluble beverage);

Note: "SOLUBLE 2" (if enabled, otherwise it cannot be changed).

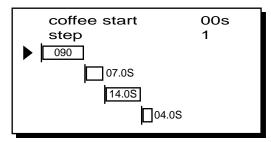


#### Soluble Mix selection - "Mixed Start" function

With the "START COMBO" function, you can program the sequence of dispensing cycles for coffee, milk and soluble beverages to obtain the desired combination.



When the (29), key is pressed, the display will show the following:



The line on which the cursor is positioned is associated with the coffee beverage; the following lines refer, respectively, to milk, soluble 1 and soluble 2.

The duration of the separate beverage cycles (set in the recipe) is represented by rectangles, to the right or inside of which shows:

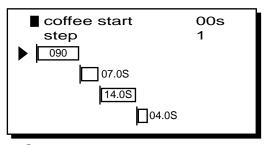
- the pulses, for coffee;
- the total duration in seconds, for milk and soluble beverages.

Using the "+" ((30) and "-" ((31) keys to position the cursor on a beverage, the following parameters are automatically displayed on the first 2 lines:

- start... (dispensing delay of the selected beverage; can be set between 0 ÷ 20 seconds with increments of 1, or with the OFF option that disables the corresponding beverage);
- step (dispensing sequence of the beverages:
  - 1, the beverage is dispensed first;
  - 2, the beverage is dispensed second;
  - 3, the beverage is dispensed third;
  - 4, the last beverage that closes the soluble combo cycle).

Note: Beverages in the cycle cannot be dispensed simultaneously.

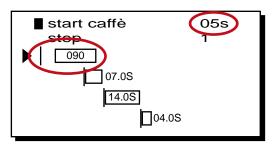
To modify the described settings (*start* and *step*), position the cursor on the line of the desired beverage and press the ((29) key. The cursor will appear next to the first line on the display (start xxxx):



Press the 5 (29) key again to modify the *start* setting. The cursor will turn into  $\rightarrow$ .

Use the "+" ((a) (30) and "-" (() (31) keys to modify the dispensing delay for the selected beverage.

Press the **OK** key to confirm the setting. The effect on the composition of the final cycle will simultaneously appear on the display:

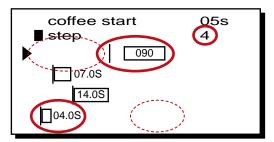


In this case, the coffee beverage will have a 5 second delay on the start of the dispensing cycle.

To change the step parameter, place the cursor on the line reading "step" and press the b key (29); the cursor will change to  $\rightarrow$ .

Using the "+" (a) (30) and "-" (c) (31) keys, the dispensing sequence for the selected beverage can be changed.

Press the **OK** key to confirm the value entered, while also seeing the effect on the composition of the final cycle on the display:



If a coffee beverage replaces soluble beverage 2 in the cycle, it will no longer be the first to be dispensed, but it will close the cycle. The other beverages in the soluble combo do not change their dispensing order.

Follow the same steps to modify the other beverages as preferred.

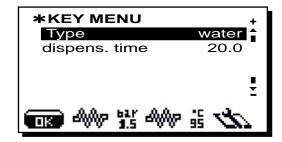


## Key menu - Hot water selection

Press the hot water dispensing key (12). The following message will appear on the display:

The following hot water selection parameters can be modified:

- type (key personalizing, e.g.: water dosed, water stop, null);
  dispensing time (from 0,1 to 60, with increments of 0.1 seconds).

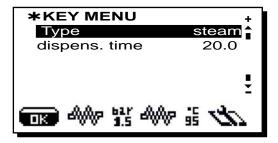


## 3.6 Key menu - Steam selection

Press the hot water dispensing key (13). The following message will appear on the display:

The following hot water selection parameters can be modified:

- type (key personalizing, e.g.: steam dosed, steam stop, null);
- dispensing time (from 0,1 to 60, with increments of 0.1 seconds).

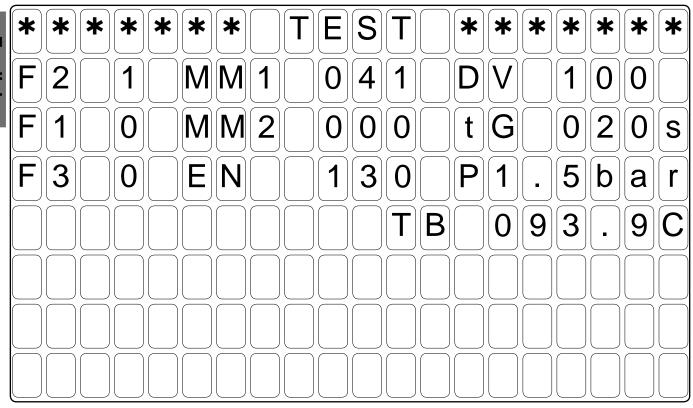




## 4. TEST board

During the view of the drinks, by pushing the "i" ( (27) button, on the display will appear the relevant drink parameters while the drink is delivered by the machine.

On the display will appear, for example:



The parameters displayed refer to:

F1: High limit switchF2: Compression sensorF3: Low limit switch

MM...: coffee extraction impulses

EN: group encoder

**DV**: Volumetric meter impulses**tG**: Dispensing time in seconds

P: boiler pressure



## 5. Configuration menu



**SPECIAL KEY** (KEY **25** in the bottom right hand corner of the selection keypad) - **YES**/NO.

<u>YES</u> – the key can be set with one of the functions described in "SPECIAL KEYS".

NO - it is set like all the other dispensing keys.

From the standard data, the special key is set to YES.

**SPECIAL KEYS** - The key **25** can be personalized with one of the following functions:

disable (disables key);

stop (stop the dispensing).

<u>II choice</u> (second function, dispensing of a second beverage). See paragraph "Special keys - Second selection" on the following pages. <u>water stop</u> (stop the water dispensing).

Normally the special key is Disabled.

**Boiler P.** - indicates the service boiler pressure:  $1,2 \div 1,5$  bar (17  $\div$  22 psi).

**Level sensib. -** Water Level sensitivity: it indicates the level sensitivity of the boiler water probe.

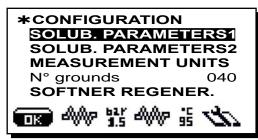
The setting range is from 1 to 3 (the value 3 indicates the hightest probe sensitivity and therefore the machine will refilles the boiler at the minimum water level variation.

**BOILER -** The parameter includes 3 sub-menus:

temp. I - coffee boiler operating temperature; can be set between a minimum of 65 and a maximum of 100° C (149 - 212°F);

temp. II - the temperature added to temperature I; it serves to guarantee a good quality of coffee right from the first coffee dispensed after a certain amount of time; can be set between 0 and 10°C (0 - 18°F):

<u>interval</u> - the minimum time that must pass between two dispensing sessions without increasing the boiler temperature set in <u>temperature</u> <u>II</u>; can be set between 0 and 20 minutes.



**SOLUBLE 1/2 PARAMETERS** - defines the mixer functioning time after the Gsol soluble solenoid valve has closed; can be set between 0 and 5, with increments of 0.1 seconds.

Can be enabled in the soluble beverage recipes at the entry "mixer delay".

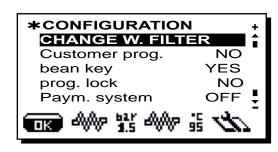
MEASURING UNIT – includes 2 sub-menus:

<u>Temperature</u> – can be set to °C Celsius centigrade or °F Fahrenheit degrees.

<u>Pressure</u> – can be set to bar or psi.

 ${\bf N.~grounds}$  – refers to number of grounds, from 0 (external container) to 80.

**REGENERATION** - includes the parameters for regenerating resinAdd Water hardness: on reaching the limit calculated on the basis of the parameters set on the display a message is displayed which prompts to regenerate the resins (from 0.1 I to 25 I), hardness (from 0°F to 45°F).



**FILTER REPLACEMENT** -On reaching the litre level set on the display a message is displayed which prompts to replace the filter. For both the functions, an efficiency percentage is displayed (Add/ Filter), descending from 100% to 0%.

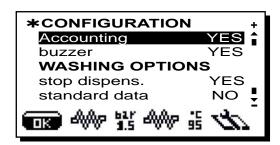
Customer programming - YES/ NO.

Bean Key - allows the client to change the coffee dose: YES/NO.

Programming block - programming block: YES/NO.

With the function active (YES) The customer parameter panel is not open when programming lock-out is on.

**Payment system** – permits configuration of payment system, when connected.



**Accounting** - YES/ NO see section "Accounting data Menu" in the following pages.

**Buzzer** - The machine buzzer can be enabled so that a beep is heard when the keys are pressed.

 $\mbox{WASHING OPTIONS}$  - See paragraph "Washing options" on the following pages.

Stop Dispensing: YES/ NO

YES - each dispensing key functions as a start/stop key.

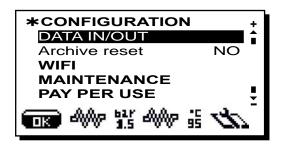
This means that when you press the key during the dispensing phase, it will be interrupted

 $\underline{\it NQ}$  - If the same key is pressed during the dispensing phase, the repeat function is activated.

NB: the repeat function is a recipe parameter that can also be activated when dispensing stop is on.

Standard data - loads standard data. YES/NO





**DATA IN/OUT** – contains three entries:

Key - indicates the key number from 0 to 60.

<u>Data</u> IN transfer from smart card to machine. OUT transfer from machine to smart card.

TX/RX - to start data transfer

**Archive reset** – zeros the error log (Wash Archive and malfunctions archive) stored on the machine: YES/NO

Wi-Fi Menu - see section "Wi-Fi Configuration" in the following pages.

 $\ensuremath{\mathbf{MAINTENANCE}}$  - contains five entries to setting maintenance parameters:

 $\underline{N^{\circ} \ cycles}$  - the number of cycles remaining before the next maintenance session.

 $\underline{N^{\circ} days}$ -the number of days remaining before the next maintenance session.

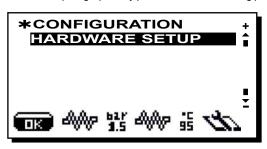
Reset - options are:

 $\ensuremath{\text{NO}},$  count down of cycles and days remaining before the next maintenance session.

**YES**, the settings for number of cycles (40,000) and remaining days (185) are reset.

**OFF**, all controls for programmed maintenance are disabled, and the "N. cycles" and "N. days" counters are zeroed.

PAY PER USE - See paragraph "Pay per Use" on the following pages.



**HARDWARE SET-UP** (PROGRAMMABLE DATA FOR CAPPUCCINO MAKERS ONLY) - includes 2 submenus:

<u>t start</u> - represents the start time of the milk pump at the beginning of the dispensing cycle, which can be set from 00.1 to 20.0 seconds; <u>t inversion</u> - represents the start time of the milk pump at the end of the dispensing cycle, which can be set from 05.0 to 21.0 seconds.

## 6. Special keys Second selection

#### **SECOND SELECTION FUNCTION**

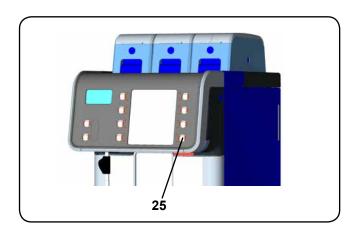
Permits a second type of beverage, associated with the dispensing key, to be dispensed.

This function can be obtained in this way:

- access to Configuration Menu of the machine;
- SPECIAL KEY parameter = YES;
- SPECIAL KEYS parameter = <u>II choice</u>.
- SPECIAL KEY parameter = can also be set as STOP key and water STOP key (if water from delivery spout is enabled).

At this point, when the special key is pressed (25) and one of the dispensing keys is pressed corresponding to the desired beverage and dosage, the second beverage programmed for the selected dispensing key will be dispensed.

Recipes associated with the second selections are programmed in the *Key Menu* of the machine, by pressing the special key (25) and then the dispensing key.





## 7. Washing options

#### **EXECUTION MODALITY**

*Milk circuit*: Keep the milk circuit washing key (28) pressed for a few seconds and follow the instructions indicated on the display.

Coffee circuit. Keep the coffee circuit washing key (26) pressed for a few seconds and follow the instructions indicated on the display.

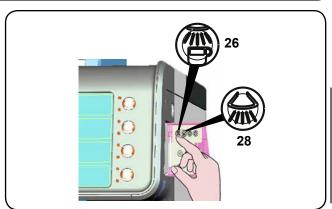
Solubles circuit. Keep the coffee circuit washing (26) and milk circuit washing (28) keys pressed for a few seconds.

The cycles can be activated with the same modality also without a washing demand.

Exit the group or milk-circuit wash start panel by pressing the key (3) (24).

In order to get more detailed information, please consult the machine use and installation manual.

**WASHING OPTIONS** - includes seven sub-menus for setting washing parameters, one of which to program the soluble circuit washing cycle:





#### Washing options - Automatic washing

Depending on the selected setting (OFF/3÷99), the automatic wash is changed.

### Setting "autom. washing OFF":

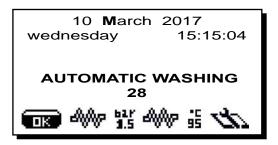
- · timed automatic wash cycle is disabled;
- when the button (28) is pressed, the milk circuit washing cycle is performed.

#### Setting "autom. washing 3...99":

- the timed automatic wash cycle is activated and the set time interval starts;
- when the button (28) is pressed, the milk circuit washing cycle is performed.

The cycle starts automatically. The time interval is set between 3 and 99 minutes. The timer starts at the end of each milk dispensing phase. When the time runs out, the automatic wash cycle begins.

30" before the timer stops, the LEDs on the keys of beverages with milk start blinking. The display appears as follows:



During this standby phase:

If the coffee dispensing key is pressed, the counter will start again 30" from the end of the dispensing cycle (per use);

If a milk/cappuccino key is pressed, the counter will start again from the set time (3' + 99');

If the key (28) is pressed, the automatic washing cycle will be immediately performed.



#### Washing options - Solubles washing

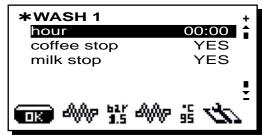
Includes 2 sub-menus:



- wash solub (soluble wash cycle): the time in minutes after which the request appears for the soluble beverage wash cycle. Can be set between 1 and 20 minutes, with increments of 1 minute, or set to OFF (wash request disabled)..
  - At the end of each soluble beverage dispensing cycle, the timer countdown starts. Afterwards the request for a wash cycle message appears on the display.
- block solub (soluble block): When the function is set (YES), if the wash cycle is not performed within 60' from the time when the message appears, the machine is blocked and prevents all soluble beverage selections.

#### Washing options - Washing 1, 2, 3, 4, 5

These are wash cycles set at programmable times, each with four changeable parameters, which are:



hour: when the wash cycle must be performed.
 "WASH 1" cannot be disabled. It is requested daily at the programmed hour and within 24 hours..
 WASH 1, 2, 3, 4 and 5 can be disabled and set to OFF.

- coffee stop: when the function (YES) is set, if the wash cycle does not take place within 60' (30' if short washing) from the moment that the "EXECUTE WASHING GROUP" message appears, the machine is blocked and all selections for coffee are inhibited.
- milk stop: when the function (YES) is set, if the wash cycle does not take place within 60' (30' if short washing) from the moment that the "EXECUTE WASHING MILK CIRCUIT" message appears, the machine is blocked and all selections for milk are disabled.

NOTE: if the "block coffee" and "block milk" entries are set to NO for the "WASH 1, 2, 3, 4 and 5" cycle, the machine will never be blocked. In case of lack of washing operations, they will be recorded in the error "ARCHIVE" ("i" (0) (27) button) as PARTIALS washing.

#### Preset automatic washing cycle (NSF) (no settable)

**Function** - after each milk cycle has terminated, the timer count-down starts (max 210'). At the end, "AUTOMATIC WASHING" appears on the display, with the time remaining before the wash cycle begins.



**Activation** - activation is automatic at the end of the remaining 30" seconds. During this stand-by time:

- if the coffee dispensing key is pressed, the timer count-down will start again from 30" seconds before the end of the dispensing cycle:
- if the milk/cappuccino dispensing key is pressed, the timer countdown will start from the set up time (210').
- If the (28) ( key is pressed, the automatic wash cycle will be

performed immediately.

**Selection block** - always inactive. The wash cycle is performed even if the user does not intervene.

Wash type - with milk or water, completely automatic.

#### Special conditions

- with each washing cycle with detergent (at a preset time) or daily washing cycle:
  - In this case, the entire circuit is washed. Therefore, during the first milk dispensing procedure, the circuit is considered free of residual milk and the timer (210') countdown is not launched.
- 2) each time the machine is switched off while the timer countdown (210') is underway:
  - when the machine is switched on again, if 210' have passed, once the machine reaches its operating temperature, the preset automatic washing cycle is launched and cannot be stopped.



## 8. Wifi configuration

- RSSI - signal intensity:

Values less than -70 dB indicate poor coverage with probable difficulty in transmitting data.

- Net enter the name of the access point.
- Security indicate the type of wireless network security

Open: no protection;

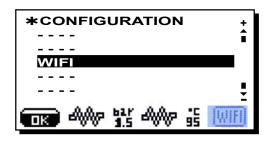
WPA: wpa2-psk protection;

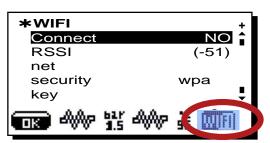
WEP: WEP 128 protection.

- Key enter the password for accessing a protected Wi-Fi network (WPA or WEP)
- URL enter listener.gruppocimbali.com.
- Port enter 10000.
- RESET to restore all factory settings on the machine and Wi-Fi
- MAC address visualization Wi-Fi module.

Position the cursor on the item **CONNECT**, select **YES** and confirm; if the configuration of the Wi-Fi module is correct, the following icon appears on the display **WIFI**:



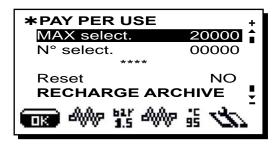




## 9. Pay per Use

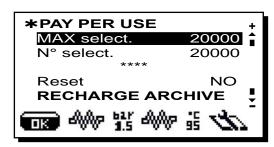
This function makes it possible to control the beverages made with ground coffee. It is activated when a personal numeric code (composed of 4 numbers) is inserted during the initialization phase with standard machine data.

After the function is activated, you must access the "PAY FOR USE" parameter in the configuration menu. Insert your personal code on the line with the asterisks \* and insert the maximum number of dispensed beverages at the entry "MAX select.":



The number of dispensed beverages can be set between 0 and 65,000, with increments of 10.

To enable the count, perform a reset (RESET = YES); the entry " $N^{\circ}$  select" is the same number as the "MAX select" entry:



From this moment on, after each coffee beverage dispensed, the number associated with the "N° select" entry is decreased by 1 unit for a single coffee and 2 units for a double coffee.

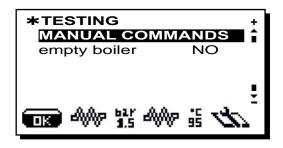
When the number 250 is reached, after each beverage dispensed the display screen shows the remaining number of beverages before the coffee-based beverages selection is blocked.

Beverages not made with ground coffee can still be dispensed.

To enable coffee-based selections again, you must recharge using the same method described above. Each operation of this type is stored in the "Recharge archive" entry.



## 10. Test menu



MANUAL CONTROLS – permit parts to be manually operated using the "+" ((30) and "-" ((31) keys (see paragraph "Manual control panel")

**EMPTY BOILER** - all heating elements can be disabled in order to empty the water from the machine.

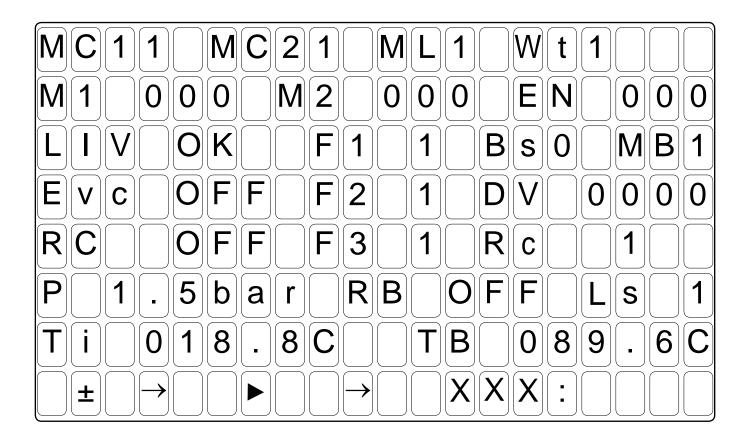
Once emptying operations are complete, the machine must be switched off and switched on again to return to normal operation.



## Manual control panel

Press the (29) key on the "MANUAL COMMANDS" line, the following panel will appear on the display:

#### Panel 1



- Press "+" (a) (30) or "-" (31) to display the various components;
- Press (29) to select the component to move and to switch to the next panel M2;
- Press (a) (24) to quit manual mode.



#### Panel 2

M	C	1	0		M	C	2	0		M	L	0		W	t	1			
M	1		0	0	0		M	2		0	0	0		E	N		0	0	0
		V		0	K			F	1		1		B	S	0		M	B	1
E	V	C		0	F	F		F	2		1		D	V		0	0	0	0
R	C			0	F	F		F	3		1		R	C			1		
P		1	•	5	b	a	r		R	B		0	F	F			S		0
T	i		0	1	8	•	8	C			T	B		0	8	9	•	6	C
	<b>±</b>		$\longrightarrow$						$\longrightarrow$			X	X	X	•				

- Press "+" (a) (30) or "-" (31) to activate the components, if they have a direction, use "+" (a) (30) and "-" (31) to alternate the activations (+Lh/-Rh or +Up/-Down.
- Press (24) to return to panel M1.

## Legend

- F1 Unit limit switch: high Compression sensor
  - F3 Unit limit switch: low

F1 1 | Standby position

F1 0 F2 1 Grinding phase

- MC... "No coffee" sensor (1=no coffee)
   ML "No milk" sensor (1=no milk)
  - Wt No water in the tank
    M... Grinder counter
    EN Group Encoder
  - LIV Water level in boiler
  - Bs Tray MB No cup
  - **DV** Volumetric meter, displays incremental count, zeroed on

entry of M1 menu

RC Service Boiler resistance

Rc Grounds drawer

P Boiler pressure, displayed in "bar" or "psi".

RB Boiler resistance
Ls Drain level
Ti CPU temperature

**TB** Boiler temperature, in C° (or F°)

xxx defines the component that can be accessed for movement.

Below are the symbols used to define the components that can be accessed for movement:

MR Group gear motor
MFp1-6 Pump motor \*
EMFc Load solenoid valve \*
EMFa Water diverter\*
EMFb Delivery spout diverter

EMFb Delivery spout diverter\*
Mav Extractor fan

Ech2 Not active Mmx2 Not active

Mds2Soluble dispenser motor 2EchaSoluble water solenoid valveMmxSoluble mixing motorMdsSoluble dispenser motor 1

Esc Service boiler water outlet solenoid valve
El Cappuccino maker washing solenoid valve

Ets Steam solenoid valve\*

Ear Air solenoid valve

Em Milk solenoid valve

Evc Boiler load solenoid valve

Eac Hot water solenoid valve

G Dispense-coffee solenoid valve

**MP** Pump motor

MM2 Grinding machine motor 2
MM1 Grinding machine motor 1
Mpl Milk pump motor

The components - \* - are only applied with certain product configurations.

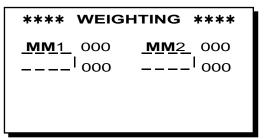


## 11. Weighting

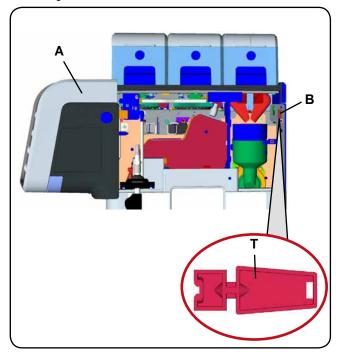
This menu permits the weighing of the ground coffee.



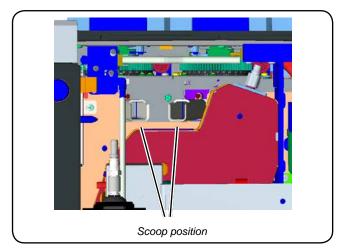
When the (29) key is pressed, the following will appear on the display:



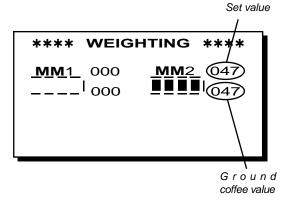
After opening the control panel ( $\bf A$ ), the power supply is switched off. Insert the technical key ( $\bf T$ ) in the special slot ( $\bf B$ ) to restore normal functioning:



Place the provided coffee scoop next to the ground coffee chute and press the selection key that needs checking.



After the grinding phase, the following will appear on the display:



The value set in the test menu and the ground coffee value must be the same.

During the grinding phase, make sure that the ground coffee does not slide off the scoop.

Once the grinding phase has ended, remove the scoop from the machine and weigh the amount of ground coffee on an accurate scale. Note: To obtain the real weight, we recommend performing the coffee grinding phase between 3 and 5 times and then calculating the average. Once the weighing process is concluded, press the (44) key 2 times in a row to bring the unit to the standby position and to exit the programming menu.

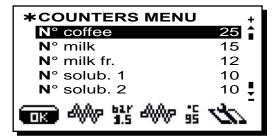


### 12. DATA menu: COUNTERS

Once you have entered the programming menu, access the DATA MENU, pressing the "i" (1) (27) key. The following will be displayed:



Use the "+" (a) (30) and "-" (c) (31) keys to position the cursor on the COUNTER line, then press the (c) (29) key. The following will appear on the display:



Parameters calculated are:

- N. coffee (number of coffee beverages)
- N. milk (number of milk beverages)
- N. milk fr. (number of cold milk beverages)
- **Soluble 1** (number of soluble 1 beverages);
- Soluble 2 (number of soluble 2 beverages);
- N. water (number of times water is dispensed)
- N. steam (number of times steam is dispensed using the turbosteam function)
- N. steam + air (number of times steam and air are dispensed using the turbosteam function)
- N. tot coffee (total number of coffee beverages)
- N. cycles (total number of cycles performed)
- MM1 (number of grinding phases performed by the 1 grinder)
- MM2 (number of grinding phases performed by the 2 grinder).

N.B.: MM1-MM2 can only be reset with the technician card.

Counters can be zeroed by aligning the cursor on the selected entry, pressing the  $\bigcirc$  (29) key, and then pressing the "+"  $\bigcirc$  (30) or "-"  $\bigcirc$  (31) key.

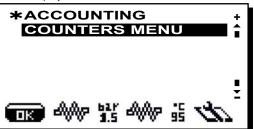
Note: Parameters that cannot be zeroed are:

- N. tot coffee
- N. cycles

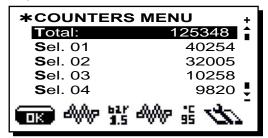
#### 13. DATA menu: ACCOUNTING



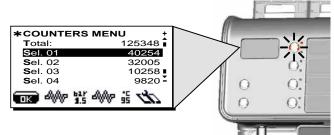
Use the "+" (a) (30) and "-" (c) (31) keys to position the cursor on the ACCOUNTING line, then press the (c) (29) key. The following will appear on the display:

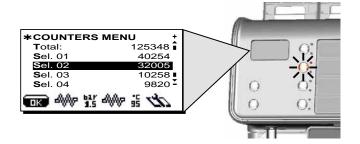


Pressing again the ((29) key, on the display will appear the number of all dispensings performed and the number of dispensing for each selection key:



Placing the cursor on the various selections, the led associated to the key remains ignited:





Note: If the machine has no counting system, the total number and numbers of the selections made are zeroed with the *Counting* and *Director* cards or with Dipswitch 4 in the ON position

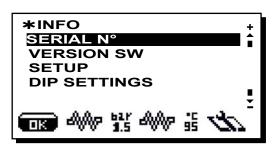


## 14. DATA menu: INFO

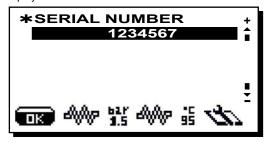


#### Serial number

Use the "+" ((30) and "-" ((31) keys to position the cursor on the INFO line, then press the ((29) key. The following will be displayed.



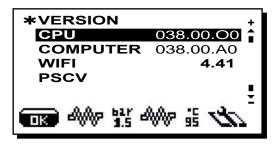
Press the (() (29) key on the "serial n." line. The following will appear on the display.



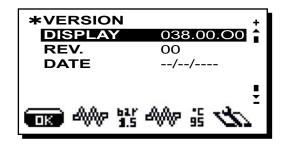
Note: The serial number can only be set once if OFF, until exiting programming. If the serial number is changed, all of the machine counters are automatically reset.

#### Version

The sub-menu of the Version entry shows the memory display version and, if present, also the remote control:



When the (©) (29) key is pressed when the cursor is on each of the two lines, besides showing the version, it also displays the data for the revision date.





#### Setup

The "Setup" entry displays the setup settings introduced during the Data Standard insertion phase:

DATI STANDARD STANDARD Milk module NO 1 Capp. - H2O YES Solub1 NO - VAP Solub2 NO PAY PER USE. NO

#### **Entering Standard Data**

Before performing this operation, switch off the machine and position dipswitch 1 on display screen = **ON**, then switch on the machine. If the procedure described above is not performed (dip1=ON), this message will appear on the display:

NEW SOFTWARE VERSION LOAD STANDARD DATA

When inputting the Standard Data, you are prompted to input data regarding model and type of machine.

- LANGUAGE SELECTION:
- CONFIGURATION: STANDARD;
- <u>H<sub>2</sub>0:</u> water from delivery spout, YES / NO;
- TYPE: coffee, 1 Cappuccino;
- PIPE: type of pipe, OFF (disable),

VAP (steam), H<sub>2</sub>O (water);

- PAY PER USE: YES / NO;
- SOLUBLE 1: soluble 1 beverage, YES / NO;
- SOLUBLE 2: soluble 2 beverage, YES / NO;
- MILK MODULE: YES / NO;

Using the "+" 0 (30) and "-" 0 (31) keys, select the parameters, then press the 0 (29) to confirm the details.

After this operation, switch off the machine and reset the **dipswitch** 1 display screen to **OFF**.

Then

- Switch on the machine again
- Reset date and time, and reset the desired language, if needed:

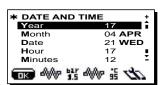
press (34) key:



press the (29) key:



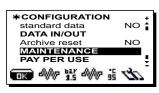
press again the (29) key:



- reset maintenance parameters: press the (29) key:



press again the (29) key:

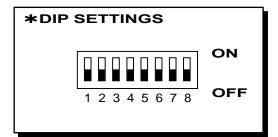


- zero the error and wash log.



#### Dip settings

The "dip setting" entry displays the dipswitch settings.



Under standard conditions, the dip-switches are positioned on OFF.

- DIP 1 = OFF ON Input of standard data
- DIP 2 = OFF
- DIP 3 = OFF ON Simulation of engineer's card
- DIP 4 = OFF ON Simulation of bookkeeping's card
- DIP 5 = OFF ON allows keys sequence to enter programming
- DIP 6 = OFF
- DIP 7 = OFF
- DIP 8 = OFF

For more details, please consult the technical manual at the "Setting - CPU Dip-Switch" paragraph.

## 15. DATA menu: WASH ARCHIVE



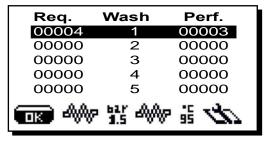
Press the (29) key, the following message appears on the display:



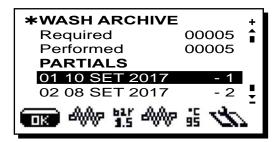
The parameters for the WASH ARCHIVE log that can appear on the display are:

- Requests: number of wash cycles that have been requested by the machine.
- Executed: number of wash cycles that were performed within the timeout time of 60'.
- PARTIALS: in this parameter are collected all the relevant details
  of the 5 washing cycles: wash cycles requested by the machine,
  wash number, number of washing cycles executed.

Pushing the (29) button when the cursor is on the "PARTIALS" line, on the display will appear:



NOTE: If the wash cycles requested occur during the timeout, under the entry "PARTIALS" you will also see a list of the last 10 "failed" wash cycles, with progressive number, date and wash number. The first line refers to the most recent date.



Use the "+" (a) (30) and "-" (31) keys to scroll through the failed wash cycles, then press the (a) (24) key to pass to another menu.



#### 16. DATA menu: MALFUNCTIONS ARCHIVE



If the 0 (29) key is pressed when the cursor is on the "error log" line, the following appears on the display:

*MALFUNC. ARCHIVE						
01	066	00012:25				
02	066	00000:03				
03	003	00001:30				
04	003	00:0000				
05	003	00000:30				
OK		<i>₩</i>				

The figures appearing after the "error code" indicate, in hours and minutes, the time that has passed since the last recorded error.

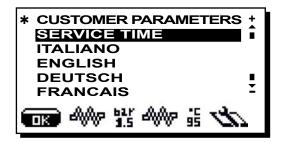
If the 0 (29) key is pressed again, the details page is accessed. The following appears on the display:

- day and hour when the error occurred
- machine status when the error occurred

**\* MALFUNCTION DETAIL**Monday 08/05/17
066 13:36:25
GR: coffee

## 17. Customer parameters menu

To access "Customer parameters" press (34) key; the following message will appear on the display:



### Language selection

To display the messages in a different language from that set, after entering into Programming mode, position the cursor on the desired language by pressing the "+" (a) (30) and "-" (c) (31) keys and then pressing the (c) (29) key. The machine will restart with the messages provided in the selected language.

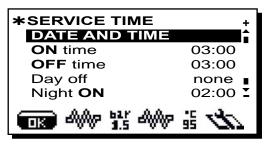
The display (5) provides a choice of the following languages.: Italian, English, German, French, Polish, Spanish, Portuguese, Dutch, Japanese, Russian, Estonian and Chinese.





#### Service time menu

Pressing the (29), the following message will appear on the display:



The following service time parameters can be modified:

- ON time (time the machine switches on);
- OFF time (time the machine switches off);
- day off (day on which the enterprise is closed);
- Night ON (start time for evening beverage price: only when payment system is connected);
- Night OFF (end time for evening beverage price: only when payment system is connected);
- Wash 1 (request every 24 hrs at the programmed hour; cannot be disabled):
- Wash 2 ÷ 5 (hour of scheduled washes from 2 to 5)

#### **General indications**

If there is no day off (i.e. the enterprise never closes), enter "none" for the "day off" item.

Enter the same time for the "ON time" and "OFF time" parameters (for example:

ON time 22:00 OFF time 22:00)

if the automatic switch on/switch off function is not required and you wish to manually switch the machine on and off.

#### "WASH 1" AND "WASH 2 ÷ 5"

These are set for scheduled times. At the time set, the display will show "EXECUTE GROUP WASH", "EXECUTE MILK CIRCUIT WASH", according to the scheduled wash.

After having positioned the cursor on the line to be changed and after having pressed the (29) key, change the value using the "+" (30) and "-" (31) keys. Then press the "OK" key to confirm. Repeat the above operations to change the other wash scheduling times.

#### "Wash 1"

When this function is requested, a long wash cycle is performed (milk circuit and coffee circuit) as described in the "Cleaning operations" paragraph of the user manual.

NOTE: Wash 1 cannot be disabled. It is requested daily at the programmed hour, and always within 24 hours.

#### "Washes 2 ÷ 5"

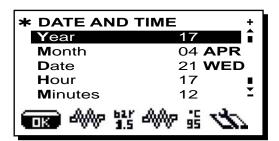
If the set hour for these wash cycles occurs when the machine is switched off, the request will be canceled.

NOTE: Set OFF against the time so as to not activate these wash cycles. OFF is displayed press the "-"  $\bigcirc$  (31) key the indicated time is "00:00".

For more details, please consult at the "Configuration menu - wash options" paragraph.

#### Date and time

To modify the date and hour, press the (29) key for the corresponding line. The following message will appear:



Use the "+" ((30) and "-" ((31) keys to move the cursor (black line) to the entry to be modified, then press the ((29) key. The cursor will turn into an arrow and it becomes possible to change the number for the selected entry by using the "+" ((30) and "-" ((31) keys. Once the operation is completed, press the ((24) key to confirm the data.

Note: the cursor changes back to black line.

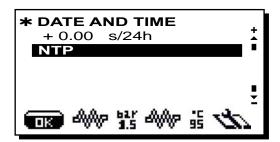
Repeat the operation described above to modify other parameters.

NOTE: a parameter has been introduced which allows the user to compensate for any imprecision of the clock (advancing or going back a certain number of seconds once a week).

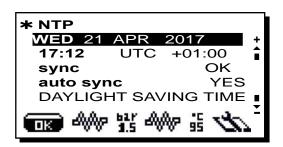


#### Date and time (NTP)

Position the cursor on the line "NTP", using the keys "+" ((30) and "-" (() (31):



Pressing the key (29) at the line "NTP", the display will show the following:



The parameters, relative to the submenu "NTP", have the following views:

- Date view:
- Current time view;
- -Indication of time zone relative to UTC (Coordinated Universal Time) and the possibility of increasing/decreasing it by 15-minute increments;
- sync, synchronisation of the clock via NTP server. Pressing the key in modify mode carries out synchronisation, updating the time on the basis of the time zone set (N.B. the auto synch parameter must be set to YES);
- auto sync, management of automatic synchronisation. If this parameter is set to YES, the time is updated automatically. The time is synchronised automatically before each transmission of data via Wi-Fi and every ping (ten-minute intervals). If this is set to YES, "NTP" menu and DAYLIGHT SAVING TIME parameters can not be altered. If this is set to YES, date, time and correction settings are blocked.
- DAYLIGHT SAVING TIME, submenu for management of daylight saving time. If the daylight saving time parameter is set to anything other than OFF, the start time and the period of application of daylight saving time is displayed (start and end date for periods ending in the next year, the period for the current year is displayed). The periods displayed refer to a table indicating the application of daylight saving time around the world.

N.B. following machine configuration, when the "NTP" menu is accessed, time zone and daylight saving time are configured.

The synchronisation function of the "NTP" server is only available when the machine is connected to the Internet via Wi-Fi.

Note: Regarding the "NTP" submenu, daylight saving time may be set to OFF, i.e. no management of daylight saving time, or a numerical code from 1–20 may be set.

This table indicates the numerical codes and relative correction interval for daylight saving time:

Daylight sav- ing time code	Country	Start	End
OFF			
	Europe		
1	European Union, Eastern Europe and post-Soviet states	Last Sunday in March	Last Sunday in October
	Asia		
1	Lebanon, Kyrgyzstan	Last Sunday in March	Last Sunday in October
	Europe		
2	Greenland	First Sunday in April	Last Sunday in October
	North America and the Caribbean		
2 USA, Canada, Mexico and the Bahamas		First Sunday in April	Last Sunday in October
3	Cuba	1 April	Last Sunday in October
	South America and Antarctica		
4	Brazil	First Sunday in October	Last Sunday in February
5	Chile and Antarctica	First Sunday after 8 October	First Sunday after 8 March
6	Falkland islands	First Sunday after 7 September	First Sunday after 5 April



Daylight sav- ing time code	Country	Start	End
7	Paraguay	First Sunday in October	Last Saturday in February
	Asia		
8	Iraq, Syria	1 April	1 October
9	Israel (approximate because Israel decides the exact day each year)	First Friday in April	First Friday in September
10	Mongolia	Last Sunday in March	Last Sunday in September (Approx.)
11	Palestine	First Friday after 4 April	First Friday after 4 October
	Iran uses the Persian calendar. Exact correspondence between this calendar and the western calendar changes every year. The month of Farvardin begins on 21–22 March and Mehr begins on 23–24 September.		
12	Iran	First day of Farvardin	First day of Mehr
13	Iran	First day of Farvardin	First day of Mehr
	Africa		
14	Egypt	Last Friday in April	Last Thursday in September
15	Namibia	First Sunday in September	First Sunday in April
	Oceania		
16	Australia	Last Sunday in October	Last Sunday in March
17	Australia - Tasmania	First Sunday in October	Last Sunday in March
18	Fiji	First Sunday in November	Last Sunday in February
19	New Zealand	First Sunday in October	First Sunday after 4 March
20	Tonga	First Sunday in October	First Sunday after 14 April



## 18. Defects - Malfunctions (1/3)

MALFUN. Code	DESCRIPTION	POSSIBLE CAUSES	SOLUTIONS
001	Difficult movement of the coffee unit	Excessive dirt causes the lower piston movement roller on the tilting cam to stick.     Increased friction between the upper piston o-ring and the infusion chamber after long periods of inactivity.     Malfunctioning of the coffee unit motor.	No operator intervention is required. Two attempts are made to move the unit via software in case of sticking: - an error 001 is logged (not on the display but in the faults list) if the unit moves to the correct position, following this movement; - error 008 is shown on the display and logged when timeout is reached, should the block situation persist.
002	Coffee group piston descent timeout during the repositioning phase after one minute in the grinding position.	<ul> <li>The motor group is malfunctioning</li> <li>There is a foreign body inside the chamber.</li> <li>The tray has been removed.</li> <li>The coffee grounds drawer has been removed</li> </ul>	Replace the motor group. Check and clean the coffee group.  Ensure correct positioning and operating microswitch (tray / grounds drawer).
	The coffee group piston did not reach the dispensing zone, but the compression sensor has intervened		<ul> <li>Check and, if the case, replace the coffee group.</li> <li>Check and, if the case, reduce the coffee dose.</li> <li>Check and clean the coffee group.</li> </ul>
007	dispensing zone, but the positioning timeout has intervened because the compression	the group is being pulled in an abnormal way by the motor crank.	<ul> <li>Check and, if the case, tight the fastening screw.</li> <li>Check the correct working in manual commands.</li> <li>Check the correct working in manual commands.</li> </ul>
008	Unit movement timeout	•Blocked mechanism	1 Open the machine 2 Activate the manual control panel 3 Start the motor unit - The motor starts - Use the manual control panel to check if the F1, F2, F3 limit switches work - The motor doesn't start - Use the manual control panel to check if the power is on for the motor If the power is switched on: - Check if there is a mechanical block If there is no power - Check the power from the card to contacts: 1 and 2 on the Y12 connector - If there is no power from the card, replace the card.
009	The coffee group piston has not reached the dispensing zone and the positioning timeout was reached because the compression sensor did not intervene.	The compression sensor is malfunctioning. The limit switch signal is lost. The fastening screw is loose and the group is being pulled in an abnormal way by the motor crank	<ul> <li>Check the correct working in manual commands.</li> <li>Check the correct working in manual commands.</li> <li>Check and, if the case, tight the fastening screw.</li> </ul>
011	MM1 grinder encoder impulses are not read  MM2 grinder encoder impulses are not read	<ul><li>The grinder is malfunctioning.</li><li>The encoder is malfunctioning.</li></ul>	1 Open the machine 2 Activate the manual control panel 3 Start the grinder - If the grinder does NOT work - Check motor voltage - If there's power check if any foreign objects are blocking the grinders - Replace the motor
029	LCD display not connected	Break in cabling.     Display fault.	Check cabling     Substitute the display.



## 18. Defects - Malfunctions (2/3)

MALFUN. COD	DESCRIPTION	POSSIBLE CAUSES	SOLUTIONS
041	The overcurrent alarm sounds when the milk pump starts	<ul> <li>There is excessive stress during functioning.</li> <li>The gear pump is malfunctioning</li> </ul>	Replace rhe gear pump.
042	"No water Wi-Fi (SELF or versions with active programme keypad lock only): event not stored in malfunction history, but sent via Wi-Fi to the PLAT-ONE platform. (Error code + 100) = restore normal operating status"		
043	"Spill tray full Wi-Fi (SELF or versions with active programme keypad lock only): event not stored in malfunction history, but sent via Wi-Fi to the PLAT-ONE platform. (Error code + 100) = restore normal operating status"		
044	"No coffee in hopper 1 Wi-Fi (SELF or versions with active programme keypad lock only): event not stored in malfunction history, but sent via Wi-Fi to the PLAT-ONE platform. (Error code + 100) = restore normal operating status"		
045	"No coffee in hopper 2 Wi-Fi (SELF or versions with active programme keypad lock only): event not stored in malfunction history, but sent via Wi-Fi to the PLAT-ONE platform. (Error code + 100) = restore normal operating status"		
047	"No milk 1 Wi-Fi (SELF or versions with active programme keypad lock only): event not stored in malfunction history, but sent via Wi-Fi to the PLAT-ONE platform. (Error code + 100) = restore normal operating status"		
051	Boiler temperature sensor malfunction	The sensor is electrically disconnected.  The sensor is malfunctioning.  There is a CPU card malfunction	Open the machine - Check cabling - Replace the sensor - Replace the card
052	Service boiler heating timeout	The resettable safety thermostat has intervened.  The heating element has been disconnected.  The Triac card is malfunctioning. The heating element wiring and/ or Triac control is disconnected	- Check if the safety thermostat has been triggered



18. Defects - Malfunctions (3/3)				
MALFUN. COD	DESCRIPTION	POSSIBLE CAUSES	SOLUTIONS	
056	Boiler temperature sensor malfunction. Out of range value obtained.	The temperature sensor is malfunctioning. The temperature sensor wiring is disconnected. There is a CPU card malfunction	Replace the sensor	
057	Heating coffee boiler timeout	<ul> <li>The resettable safety thermostat has intervened.</li> <li>The heating element has been disconnected.</li> <li>The Triac card is malfunctioning.</li> <li>The heating element wiring and/or Triac control is disconnected</li> </ul>	Check resistance     Replace the CPU card	
058	Overpressure alarm in service boiler	The Triac card is malfunctioning	Check cabling     Replace the Triac card	
059	Service boiler filling timeout	<ul> <li>The water supply has been cut off.</li> <li>The Evc is malfunctioning or electrically disconnected.</li> <li>The check valve is malfunctioning.</li> <li>The check valve filter is dirty.</li> <li>There is a CPU card malfunction.</li> </ul>	Check the connection at the water supply. Check the Evc solenoid valve. Replace the check valve. Check filtro check valve. Replace the CPU card.	
061	Error while checking the correct filling of the coffee boiler. The malfuncion is only stored and it doesn't appear on the display during the normal machine operation.	is malfunctioning.  Losses in the hydraulic circuit.	If a marked change of coffee dose is noticed, replace the check valve. Check the seals of the hydraulic circuit. Check the Evc solenoid valve.	
066	No reading of coffee circuit volumetric counter pulses during the dispensing cycle.	<ul> <li>The water supply has been cut off.</li> <li>The volumetric counter is malfunctioning or is electrically disconnected.</li> <li>The G solenoid valve is malfunctioning or is electrically disconnected.</li> <li>The pump is malfunctioning (only in case of intake from reservoir)</li> <li>The check valve filter is clogged.</li> <li>The coffee group filters are clogged.</li> <li>The coffee grounds are too fine</li> </ul>	1 Open the machine 2 Use test panel to check if the counter function works during coffee dispensing  - If the counter works only with a few impulses:  - Check the granulometry and quality of the ground coffee  - Clean the filters  - Check if the coffee solenoid valve and coffee hydraulic circuit are clogged  - If the counter does NOT function:  - Check if there is water and if the pump works  - Replace the turbine  - Check the cabling	
067	No reading of coffee circuit volumetric counter pulses during the washing cycle.	<ul> <li>The water supply has been cut off.</li> <li>The volumetric counter is malfunctioning or is electrically disconnected.</li> <li>The G solenoid valve is malfunctioning or is electrically disconnected.</li> <li>The pump is malfunctioning (only in case of intake from reservoir)</li> <li>The check valve filter is clogged.</li> <li>The coffee group filters are clogged</li> </ul>	1 Open the machine 2 Use test panel to check if the counter function works during the wash cycle  - If the counter works only with a few impulses:  - Clean the filters  - Check if the coffee solenoid valve and coffee hydraulic circuit are clogged  - If the counter does NOT function:  - Check if there is water and if the pump works  - Replace the turbine  - Check the cabling	
068	The coffee group racks are unhooked, making the group unstable.	The coffee grounds are too coarse, the infusion time is too long, or group input pressure is below 4 bar. The group rack is malfunctioning. The coffee group motor is malfunctioning	Check the condition of the racks.  Replace group motor.	



## 18. Defects - Malfunctions (4/3)

MALFUN.	DESCRIPTION	POSSIBLE CAUSES	SOLUTIONS
069	"Check boiler" phase failed: machine out of use.  Some anomalies did not allow the correct loading of the hydraulic circuit.	<ul> <li>completely filled.</li> <li>Volumetric meter is malfunctioning.</li> <li>Reiler inlet check valve is blacked.</li> </ul>	Connect the machine at the water supply.  Open the water supply. Insert a water tank completely filled. Remove and re-insert the water tank. Replace the volumetric meter. Replace the inlet check valve. Check the solenoid valve on the inlet water circuit. Clean the filter (Fi) of the safety solenoid valve.  Switch off the machine and then switch it back on Replace the card.
070	Wrong data reading by RAM clock or by EEPROM	There is a card malfunction.	Softener maintenance.
090	<ul> <li>Payment system anomaly         Wi-Fi (SELF or versions with active         programme keypad lock only): event         not stored in malfunction history,         but sent via Wi-Fi to the PLAT-ONE         platform.         (Error code + 100) = restore normal         operating status"</li> </ul>		
092	Need to regenerate the resins of the water softener.		Replace the water-softner filter.
093	Need to replace water filter.		Carry out ordinary maintenance.
096	Need to carry out maintenance.		
098	Error log and washing log reset.	Initialization has begun for the er- ror log and washing log structure.	
099	Default data loading.		
158	Boiler excess temperature anomaly.	Water level low or boiler empty.     Heating element continuously supplied.     Triac/CPU board anomaly	Check level     Check wiring     Replace board



# 19. Abnormal functioning (machine and operator) Coffee circuit

DESCRIPTION	POSSIBLE CAUSES / SOLUTIONS
The machine does not dispense the requested beverages	<ul> <li>The nominal boiler temperature has not been reached: check that the machine is ready to use.</li> <li>There is no coffee.</li> <li>The coffee receptacles are closed or obstructed.</li> <li>The group was not installed correctly.</li> <li>The outlet tube from the group in the coffee dispenser nozzle was not installed correctly</li> </ul>
The coffee receptacle cannot be positioned correctly in the machine	<ul> <li>Remove any coffee grounds on the top panel of the machine or in the upper part of the grinders.</li> <li>Check that the receptacle doors are closed.</li> <li>Check that the receptacle blocking pin is in the "open" position.</li> </ul>
The group does not move correctly	Check the correct installation of the group: the connecting rod button must be inserted in the crank slot.     The fastening pin must be correctly locked
The beverage temperature is too low/too high	The boiler temperature is incorrect. The heating method is incorrect. The safety thermostats have intervened. The temperature probe is malfunctioning
Ground coffee residues on the group and/or on the main door	The MM1/MM2 coffee nozzles are unprotected. The coffee grounds are ground too coarsely
Bubbles forming and/or bad texture	<ul> <li>Air is seeping from the dispensing nozzle.</li> <li>There are water residues inside coffee circuit tubes. The tubes are incorrectly lodged inside the machine</li> </ul>
Uneven coloring	There are coffee residues inside the tubes after dispensing. Perform the coffee circuit washing cycle
No or partial dispensing from nozzle	There are problems with the water supply/inlet. There is a volumetric counter anomaly. The tube exiting the dispensing group is partially clogged
Water dripping from dispenser nozzle (excluding washing cycle)	The coffee receptacles are empty. The coffee receptacles are clogged/blocked. Inefficient machine discharge: Check that circuit is clean and intact



## 19. Abnormal functioning (machine and operator) Milk circuit

DESCRIPTION	POSSIBLE CAUSES / SOLUTIONS
requested beverages	The nominal boiler temperature has not been reached:check that the machine is ready to use. There is no milk. The intake tube was incorrectly positioned in the milk container. The milk intake tube is clogged/blocked. The start settings are incorrect. The gear pump is malfunctioning
ů ,	The EM solenoid valve anti-suction cycle failed. The solenoid valve is malfunctioning or disconnected. There are limescale deposits inside the heat exchanger
Steam leaking from the steam nozzle and steam entering the refrigerator.	There is no milk in the refrigerator. The milk intake tube is clogged/blocked
The milk temperature is too hot compared to set temperature; there is boiling inside the steam nozzle	The milk temperature inside the refrigerator is higher than 5° C, the reference temperature for the machine setting. The milk intake tube is clogged/blocked
The milk is not frothed	The EAR solenoid valve is malfunctioning or disconnected electrically
	The water supply is cut off. The inversion setting is incorrect. The EL solenoid valve is malfunctioning or disconnected.
There are water residues in the washing circuits after dispensing	The inversion setting is incorrect. The EL solenoid valve is malfunctioning or disconnected.
There is a combination of water/steam in the cup at the start of the dispensing cycle	

## 19. Abnormal functioning (machine and operator) Washing

DESCRIPTION	POSSIBLE CAUSES / SOLUTIONS	
After the washing sequence starts, the machine remains in standby for almost a minute	The steam boiler or water boiler has not reached the correct temperature/pressure	
Washing lasts longer than usual	The coffee filters may be clogged	
Steam leaking from the steam nozzle and steam entering the refrigerator.	There is no water in the washing tank The milk intake tube is clogged/blocked	



# 19. Abnormal functioning (machine and operator) Components

	Components
DESCRIPTION	POSSIBLE CAUSES / SOLUTIONS
There is dampness in the receptacles or inside the front panel	The steam intake fan is malfunctioning The back or front doors not closed properly
The coffee grounds drawer has water inside	The grinder settings for the coffee dose are incorrect The drying temperature is too low The top piston OR is worn
The coffee grounds drawer has grounds underneath the group (left part)	The ground coffee dose is higher than maximum dose allowed
The dispensing group receptacle is clogged with coffee; the dispensing group is blocked and "full" of coffee.  Total blockage of the tube can mechanically block the grinder blade.	<ul> <li>Triac grinder has short-circuited</li> <li>The setting for the ground coffee dose is incorrect and higher than the maximum capacity of the coffee group</li> </ul>
The machine does not switch on	The display panel is not closed correctly There is no electrical power supply The ON/OFF switch is off or malfunctioning
The coffee boiler and service boiler temperature do not increase	The wiring is disconnected/malfunctioning The safety thermostats have intervened The Triac has short-circuited
The display is off	The display card is malfunctioning The switching power supply is malfunctioning The wiring is disconnected
The programming keypad is not working	<ul> <li>The programming block is enabled</li> <li>The programming keypad card key switch is malfunctioning</li> <li>The wiring is disconnected</li> </ul>
The Selection keypad is not working	The key on the keypad is disabled The programming keypad card key switch is malfunctioning The wiring is disconnected
The LED key on the Selection keypad is not working	The key on the keypad is disabled The programming keypad card key switch is malfunctioning The wiring is disconnected
There is no lighting on the machine work surface	The lighting LEDs are malfunctioning     The wiring is disconnected
The Safety valve has intervened	There is an anomalous reading by the boiler pressure sensor (tube blocked, sensor malfunction, etc.) The boiler is flooded The level sensor is malfunctioning
There is liquid dripping from the machine base	The seal on the draining tray connector is worn The tray is incorrectly inserted in the machine
There are noticeable variations in the temperature and quality of the beverages	The dispenser nozzle is set at the incorrect height
The beverages spill outside of the cups during dispensing	The cups are incorrectly positioned



## 19. Abnormal functioning (machine and operator) Components

DESCRIPTION	POSSIBLE CAUSES / SOLUTIONS
, ,	The tray micro switches are malfunctioning     The wiring is disconnected
	The coffee grounds tray micro switches is stuck/malfunctioning     The wiring is disconnected
When the tray is removed, liquid always drips from the outlet connector	The connector seal is worn The tray was removed after dispensing/washing cycle without letting the system have time to correctly drain the fluids

## **IT** AVVISI IMPORTANTI



ATTENZIONE! Questi capitoli del manuale sono ad uso del personale tecnico qualificato e autorizzato. Togliere tensione alla macchina prima di eseguire tutte le operazioni (\*).

## **EN** IMPORTANT WARNINGS



WARNING! These chapters in the manual are to be used by qualified, authorized technical staff. Switch off the power to the machine before performing these steps.

## **FR** AVIS IMPORTANTS



ATTENTION! Ces chapitres du manuel sont à l'usage du personnel technique qualifié et autorisé. Débrancher la machine avant d'effectuer toutes les opérations.

## **DE WICHTIGE WARNUNGEN**



ZU BEACHTEN! Diese Kapitel des Handbuches wenden sich an qualifizierte und offiziell befugte Fachtechniker.

Vor Ausführung gleich welcher Arbeitsschritte die Spannungsversorgung der Maschine unterbrechen.

## **ES** ADVERTENCIAS IMPORTANTES



ATENCIÓN! Estos capítulos del manual son para su uso por parte del personal técnico cualificado y autorizado.

Desconectar la tensión de la máquina antes de efectuar todas las operaciones.

## PT AVISOS IMPORTANTES

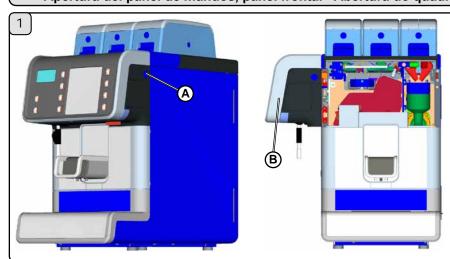


ATENÇÃO! Estes capítulos do manual são para serem utilizados pelo pessoal técnico qualificado e autorizado.

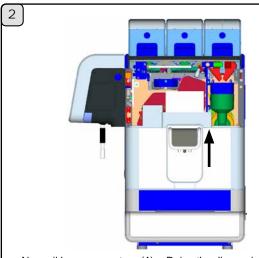
Retirar a tensão à máquina antes de executar todas as operações.

- (\*) Gli interventi sul gruppo caffè richiedono operazioni da effettuare con macchina accesa.
- (\*) Any work performed on the coffee group must be done with the machine switched on.
- (\*) Les interventions sur le groupe de café requièrent des opérations devant être effectuées lorsque la machine est allumée.
- (\*) Die auf die Kaffeeabgabeeinheit bezogenen Arbeitsschritte müssen bei eingeschalteter Maschine ausgeführt werden.
- (\*) Las intervenciones en el grupo café requieren operaciones que se tienen que efectuar con la máquina encendida.
- (\*) As intervenções no grupo café exigem operações a efectuar com a máquina acesa.

## Apertura cruscotto, pannello frontale - Opening front panel Ouverture du tableau de bord, du panneau frontal - Öffnen der Armaturentafel (Frontpaneel) Apertura del panel de mandos, panel frontal - Abertura do quadro de comandos, painel dianteiro



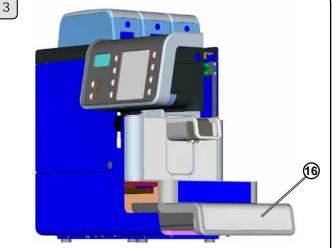
Aprire la serratura (A) e il cruscotto comandi (B). Open the lock (A) and the control panel (B). Ouvrir la serrure (A) et le tableau de bord (B). Die Verriegelung (A) und die Armaturentafel (B) öffnen. Abrir la cerradura (A) y el panel de mandos (B). Abrir a fechadura (A) e o painel de comandos (B).



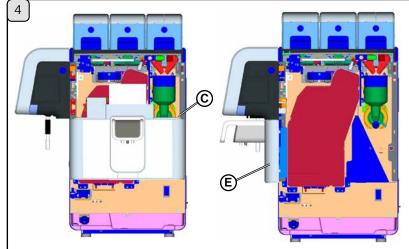
Alzare il becco erogatore (1). - Raise the dispensing nozzle (1).

Lever le bec de débit (1). - Das Ausflußstück (1) anheben.

Levantar la boquilla erogadora (1). - Levantar o bico distribuidor (1).



Rimuovere la bacinella (16). - Remove the tray (16). Retirer la bassine (16). - Die Wanne (16) herausnehmen. Desmontar la bandeja (16). - Remover o tabuleiro (16).



Premere il perno di chiusura (C) e aprire parzialmente il pannello frontale (E). Scollegare il tubo caffè dal becco erogatore e, se presenti, i tubi solubili e acqua dal becco, quindi aprire completamente il pannello frontale (E).

Press the closing pin (C) and partially open the front panel (E). Disconnect the coffee tube from the dispensing nozzle and, if present, the tubes for soluble beverages and water from the nozzle, then completely open the front panel (E).

Appuyer sur le pivot de fermeture (**C**) et ouvrir partiellement le panneau frontal (**E**). Débrancher le tuyau de café du bec de débit et, si besoin est, les tuyaux des solubles et de l'eau du bec, puis appuyer complètement sur le panneau frontal (**E**).

Auf den Sperrstift (C) drücken und das Frontpaneel (E) teilweise öffnen. Die Kaffeeleitung und (sofern vorhanden) die Leitungen für lösliche Produkte und Wasser vom Ausflußstück abziehen, anschließend kann das Frontpaneel (E) ganz geöffnet werden.

Presionar el perno de cierre (C) y abrir parcialmente el panel frontal (Y). Desconectar el tubo de café de la boquilla erogadora y, si están instalados, los tubos de los productos solubles y del agua de la boquilla, por último abrir completamente el panel frontal (Y).

Premir o pino de fecho (**C**) e abrir parcialmente o painel dianteiro (**E**). Desconectar o tubo do café do bico distribuidor e, se presentes, os tubos dos solúveis e da água do bico, e por fim abrir completamente o painel dianteiro (**E**).

## Rimozione gruppo caffè - Coffee group removal Retrait du groupe de café - Ausbau Kaffeeabgabeeinheit Desmontaje del grupo café - Remoção do grupo café

Per facilitare il riposizionamento del gruppo caffè accendere la macchina e premere il tasto "sleep mode" (SM); attendere qualche secondo, quindi rispegnere la macchina. Prima di procedere con lo smontaggio scollegare dal gruppo caffè i tubi idraulici e i connettori elettrici, posizionati rispettivamente nei punti 1 e 2 della figura a lato.

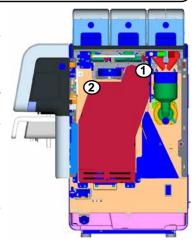
To make it easier to reposition the coffee group, switch on the machine and press the "Sleep Mode" key (SM). Wait a few seconds and then switch off the machine. Before removal, disconnect the water tubes and electric connectors from the coffee group positioned respectively at points 1 and 2 in the figure opposite.

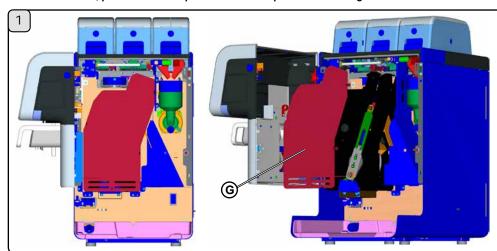
Pour faciliter le repositionnement du groupe de café, mettre la machine en marche et appuyer sur la touche "sleep mode" (SM); attendre quelques secondes puis éteindre à nouveau la machine. Avant de procéder au montage, débrancher du groupe de café les tuyaux hydrauliques et les prises électriques, placés respectivement aux points 1 et 2 de la figure ci-contre.

Zur Vereinfachung des erneuten Einbaus der Kaffeeabgabeeinheit die Maschine einschalten und die Taste "sleep mode" (SM) drücken; einige Sekunden abwarten und die Maschine erneut ausschalten. Vor dem Ausbau die Wasserleitungen und die elektrischen Steckverbinder (siehe Punkte 1 und 2 u der seitl. Abb.) von der Kaffeeabgabeeinheit abziehen.

Para facilitar la instalación del grupo café, encender la máquina y presionar la tecla "sleep mode" (SM); esperar unos segundos y luego apagar la máquina. Antes de realizar el desmontaje desconectar del grupo café los tubos hidráulicos y los conectores eléctricos, situados respectivamente en los puntos 1 y 2 de la figura que está al lado.

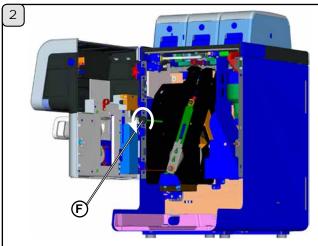
Para facilitar o reposicionamento do grupo café acender a máquina e premir a tecla "sleep mode" (SM); aguardar alguns segundos e seguidamente voltar a desligar a máquina. Antes de proceder à desmontagem desconectar do grupo café os tubos hidráulicos e os conectores eléctricos, posicionados respectivamente nos pontos 1 e 2 da figura ao lado.

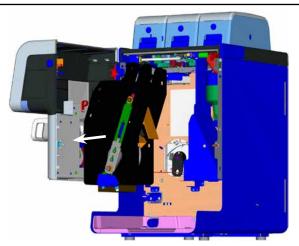




Rimuovere la copertura (**G**) del gruppo. Remove the cover (**G**) on the group. . Retirer la couverture (**G**) du groupe. Die Abdeckung (**G**) der Kaffeeabgabeeinheit abnehmen.

Quitar la cubierta (**G**) del grupo. Remover a cobertura (**G**) do grupo.



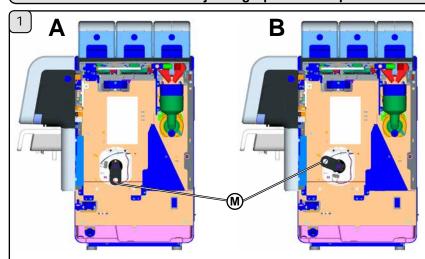


Svitare la vite di fissaggio (**F**) ed estrarre il gruppo. - Unscrew the fastening screws (**F**) and remove the group.

Dévisser la vis de fixation (**F**) et extraire le groupe. - Die Schraube (**F**) lösen und die Einheit herausnehmen.

Destornillar el tornillo de fijación (**F**) y desmontar el grupo. - Desaparafusar o parafuso de fixação (**F**) e extrair o grupo.

## Riposizionamento gruppo caffè - Coffee group repositioning Repositionnement du groupe de café - Erneuter Einbau der Kaffeeabgabeeinheit Montaje del grupo café - Reposicionamento do grupo café



Qualora la manovella motore (**M**) non si trovasse nella corretta posizione (figura B), accendere la macchina e premere il tasto "sleep mode" (**SM**); attendere qualche secondo, quindi rispegnere la macchina.

If the motor crank (**M**) is not in the correct position (Figure B), switch on the machine and press the "Sleep Mode" key (**SM**). Wait a few seconds and then switch off the machine.

Au cas où la manivelle du moteur (M) ne se trouverait pas dans la bonne position (figure B), mettre la machine en marche et appuyer sur la touche "sleep mode" (SM); attendre quelques secondes, puis éteindre à nouveau la machine.

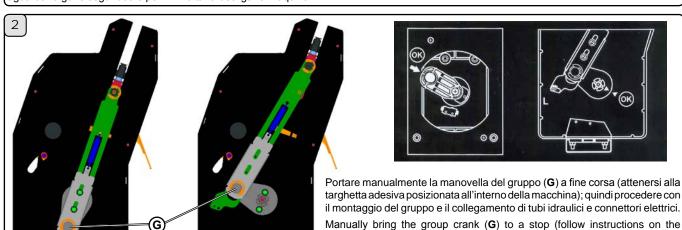
adhesive plate inside the machine). Proceed with assembling the group and

connecting the water tubes and electrical connectors.

Sollte sich die Motorwelle (**M**) nicht in der korrekten Position befinden (Abb. B), die Maschine einschalten und die Taste *"sleep mode"* (S**M**) drücken; einige Sekunden abwarten und die Maschine erneut ausschalten

En el caso de que la manivela motor (**M**) no se encontrase en la correcta posición (figura B), encender la máquina y pulsar la tecla "sleep mode" (**SM**); esperar unos segundos y luego empujar la máquina.

Caso a manivela do motor (M) não se encontre na posição correcta (figura B), acender a máquina e premir a tecla "sleep mode" (SM); aguardar alguns segundos e por fim voltar a desligar a máquina.



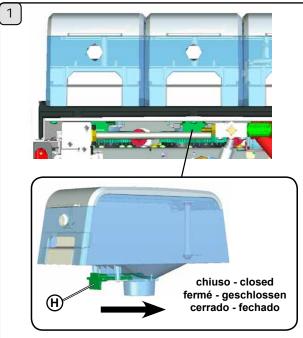
Amener manuellement la manivelle du groupe (**G**) en fin de course (s'en tenir à la plaquette adhésive placée à l'intérieur de la machine); puis procéder au montage du groupe et au branchement des tuyaux hydrauliques et des prises électriques.

Die Welle der Einheit (G) bis zum Anschlag positionieren (siehe Klebeschuld im Innenbereich der Maschine); anschließend die Einheit einsetzen und die Wasserleitungen und die elektrischen Steckverbinder wieder anschließen.

Colocar manualmente la manivela del grupo (G) en el final de carrera (atenerse a la tarjeta adhesiva colocada en el interior de la máquina); luego realizar el montaje del grupo y la conexión de los tubos hidráulicos y los conectores eléctricos.

Deslocar manualmente a manivela do grupo (**G**) até alcançar o fim de corrida (respeitar o que consta da placa adesiva posicionada no interior da máquina); em seguida proceder à montagem do grupo e à conexão dos tubos hidráulicos e dos conectores eléctricos.

## Rimozione tramogge caffè - Coffee receptacle removal Retrait des trémies de café - Ausbau Kaffeetrichter Desmontaje de las tolvas de café - Remoção das tremonhas do café



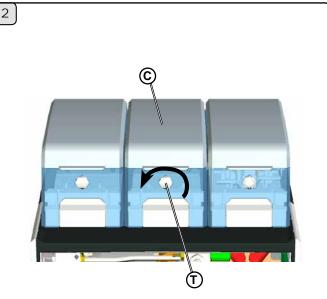
Spingere il dispositivo di chiusura tramoggia (H) verso il retro della macchina.

Push the hopper closing device (**H**) towards the back of the machine. Pousser le dispositif de fermeture de trémie (**H**) vers l'arrière de la machine.

Schieben Sie den Trichterverschluß (H) nach hinten.

Empujar el dispositivo de cierre de la tolva  $(\mathbf{H})$  hacia la parte posterior de la máquina.

Empurrar o dispositivo de fecho da tremonha (H) em direcção da parte traseira da máquina.



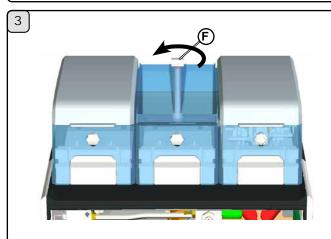
Aprire la serratura della tramoggia (T) e rimuovere il coperchio (C). Open the hopper lock (T) and remove the cover (C).

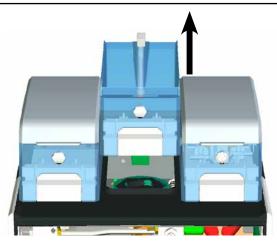
Ouvrir la serrure de la trémie (T) et retirer le couvercle (C).

Entsperren Sie die Sperrvorrichtung des Trichters  $(\mathbf{T})$ , und nehmen Sie die Abdeckung  $(\mathbf{C})$  ab.

Abrir la cerradura de la tolva (T) y quitar la tapadera (C).

Abrir a fechadura da tremonha (T) e remover a tampa (C).





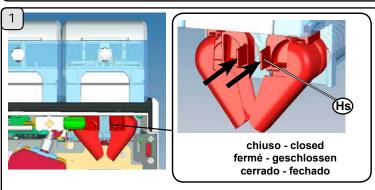
Con l'ausilio di un utensile ruotare in senso antiorario il dispositivo di fissaggio (F) e separare la tramoggia caffè dalla macchina.

Use a tool to turn the fastening device (F) counter-clockwise and remove the coffee hopper from the machine.

Au moyen d'un ustensile, tourner le dispositif de serrage (F) dans le sens contraire des aiguilles d'une montre et séparer la trémie de café de la machine. Drehen Sie die Vorrichtung zur Trichterbefestigung (F) mit einem geeigneten Werkzeug gegen den Uhrzeigersinn, und nehmen Sie den Trichter von der Maschine ab.

Con la ayuda de una herramienta girar en sentido contrario a las agujas del reloj el dispositivo de fijación (**F**) y separar la tolva de café de la máquina. Com a ajuda de uma ferramenta rodear para a esquerda o dispositivo de fixação (**F**) e separar a tremonha do café da máquina.

### Rimozione tramogge solubili - Solubles receptacle removal Retrait des trémies de solubles - Ausbau Trichter lösliche Produkte Desmontaje de las tolvas de los productos solubles - Remoção das tremonhas dos solúveis

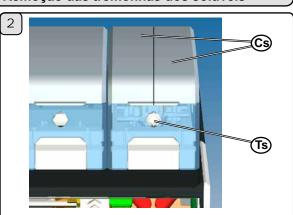


Spingere il dispositivo di chiusura tramoggia (**Hs**) verso il retro della macchina Push the hopper closing device (**Hs**) towards the back of the machine.

Pousser le dispositif de fermeture de trémie (**Hs**) vers l'arrière de la machine. Schieben Sie den Trichterverschluß (**Hs**) nach hinten.

Empujar el dispositivo de cierre de la tolva (**Hs**) hacia la parte posterior de la máquina.

Empurrar o dispositivo de fecho da tremonha (**Hs**) em direcção da parte traseira da máquina.

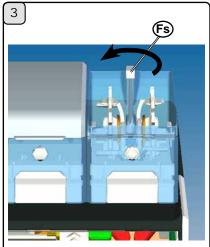


Aprire la serratura della tramoggia (Ts) e rimuovere il coperchio (Cs).

Open the hopper lock (Ts) and remove the cover (Cs).

Ouvrir la serrure de la trémie (**Ts**) et retirer le couvercle (**Cs**). Entsperren Sie die Sperrvorrichtung des Trichters (**Ts**), und nehmen Sie die Abdeckung (**Cs**) ab.

Abrir la cerradura de la tolva (**Ts**) y quitar la tapadera (**Cs**). Abrir a fechadura da tremonha (**Ts**) e remover a tampa (**Cs**).



Con l'ausilio di un utensile ruotare in senso antiorario il dispositivo di fissaggio

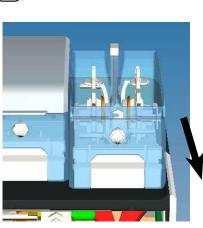
Use a tool to turn the fastening device (Fs) counter-clockwise.

Au moyen d'un ustensile, tourner le dispositif de serrage (Fs) dans le sens contraire des aiguilles d'une montre.

Drehen Sie die Vorrichtung zur Trichterbefestigung (**Fs**) mit einem geeigneten Werkzeug gegen den Uhrzeigersinn.

Con la ayuda de una herramienta girar en sentido contrario a las agujas del reloj el dispositivo de fijación (**Fs**).

Com a ajuda de uma ferramenta rodear para a esquerda o dispositivo de fixação (**Fs**).



Spostare la tramoggia verso la parte anteriore della macchina.

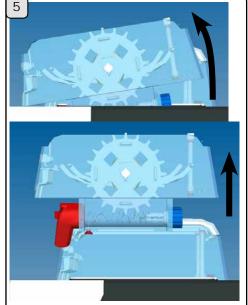
Move the hopper towards the front of the machine.

Déplacer la trémie vers la partie antérieure de la machine.

Schieben Sie den Trichter nach vorne.

Desplazar la tolva hacia la parte anterior de la máquina.

Deslocar a tremonha na parte dianteira da máquina.



Sollevare leggermente la parte posteriore della tramoggia e separare la tramoggia solubile dalla macchina.

Slightly raise the rear of the hopper and remove the solubles hopper from the machine.

Soulever légèrement la partie postérieure de la trémie et séparer la trémie soluble de la machine.

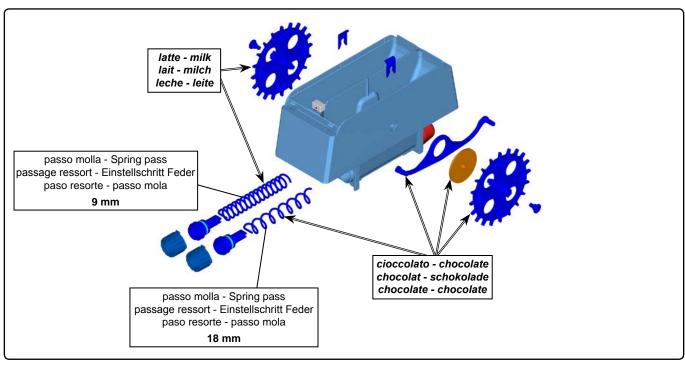
Heben Sie den rückseitigen Teil des Trichters leicht an, und nehmen Sie den Trichter für lösliche Produkte von der Maschine ab.

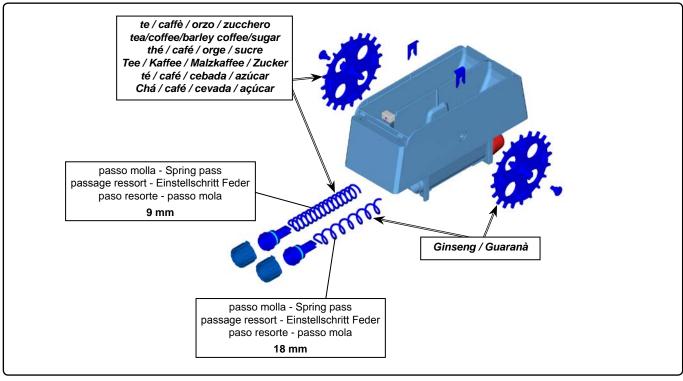
Levantar ligeramente la parte posterior de la tolva y separar la tolva para solubles de la máquina.

Levantar levemente a parte traseira da tremonha e separar a tremonha solúvel da máquina.

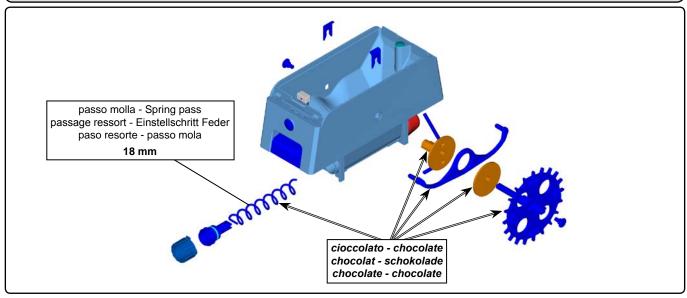
## Assemblaggio tramogge solubili - Solubles receptacle assembly Assemblée des trémies de solubles - Montage Trichter lösliche Produkte Montaje de las tolvas de los productos solubles - Montagem das tremonhas dos solúveis

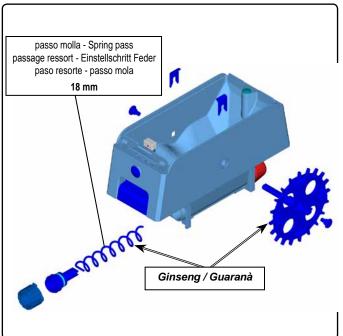
Tramoggia doppia - Double receptacle - Trémie double - Doppeltrichter - Tolva doble - Tremonha dupla

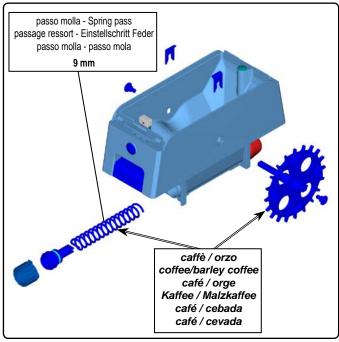


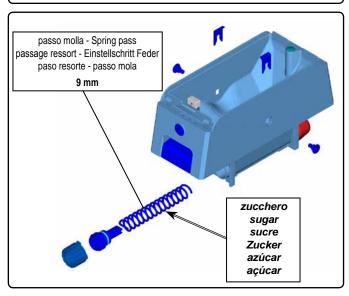


### Tramoggia singola - Single receptacle - Trémie simple - Einzeltrichter - Tolva individual - Tremonha individual

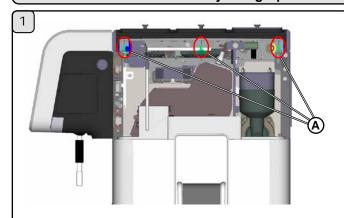








## Rimozione gruppo macinini - Grinder group removal Retrait du groupe des moulins - Ausbau Mahlwerk Desmontaje del grupo molinillos - Remoção do grupo moinhos



Rimuovere le 3 viti (A) situate nella parte anteriore della macchina.

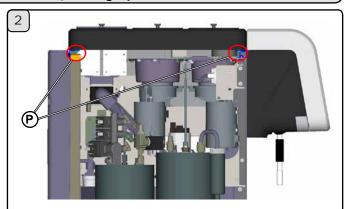
Remove the 3 screws (A) on the front part of the machine.

Retirer les 3 vis (A) situées dans la partie antérieure de la machine.

Die 3 Schrauben (A) auf der Vorderseite der Maschine lösen.

Desmontar los 3 tornillos (A) situados en la parte anterior de la máquina.

Remover os 3 parafusos (A) situados na parte anterior da máquina.



Rimuovere le 2 viti (**P**) situate nella parte posteriore della macchina.

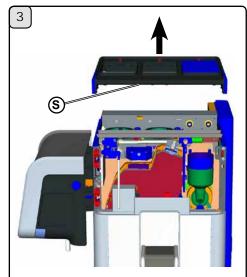
Remove the 2 screws (**P**) at the back of the machine.

Retirer les 2 vis (**P**) situées dans la partie postérieure de la machine.

Die beiden Schrauben (**P**) auf der Rückseite der Maschine lösen.

Desmontar los 2 tornillos (**P**) situados en la parte posterior de la máquina.

Remover os 2 parafusos (**P**) situados na parte posterior da máquina.



Rimuovere il pannello superiore (S).

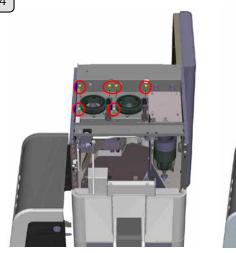
Remove the top panel (S).

Retirer le panneau supérieur (S).

Das obere Paneel (S) abnehmen.

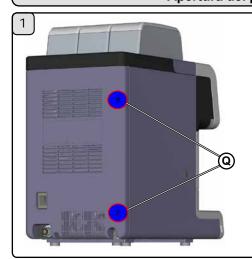
Desmontar el panel superior (S).

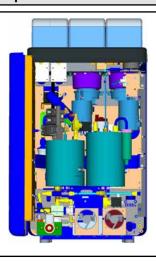
Remover o painel superior (S).





## Apertura pannello posteriore - Opening the rear panel Ouverture du panneau supérieur - Öffnen rückseitiges Paneel Apertura del panel posterior - Abertura do painel posterior





Rimuovere le 2 viti (**Q**) situate nella parte posteriore della macchina e aprire il pannello.

Remove the 2 screws (**Q**) at the back of the machine and open the panel.

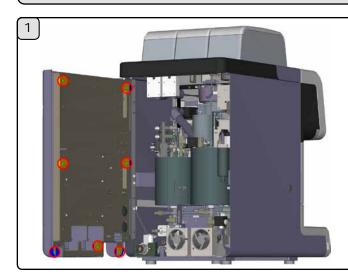
Retirer les 2 vis (**Q**) situées dans la partie postérieure de la machine et ouvrir le panneau.

Die beiden Schrauben (Q) auf der Rückseite der Maschine lösen und das Paneel öffnen.

Desmontar los 2 tornillos (**Q**) situados en la parte posterior de la máquina y abrir el panel.

Remover os 2 parafusos (**Q**) situados na parte posterior da máquina e abrir o painel.

Rimozione copertura pannello posteriore - Rear panel cover removal Retrait de la couverture du panneau postérieur - Ausbau Abdeckung rückseitiges Paneel Desmontaje de la cubierta del panel posterior - Remoção da cobertura do painel posterior



Svitare le viti di fissaggio indicate in figura.

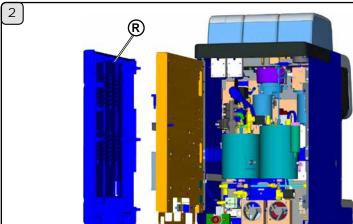
Unscrew the fastening screws indicated in the figure.

Dévisser les vis de fixation indiquées sur la figure.

Die in der Abbildung angegebenen Befestigungsschrauben lösen.

Destornillar los tornillos de fijación indicados en la figura.

Desaparafusar os parafusos de fixação indicados na figura.

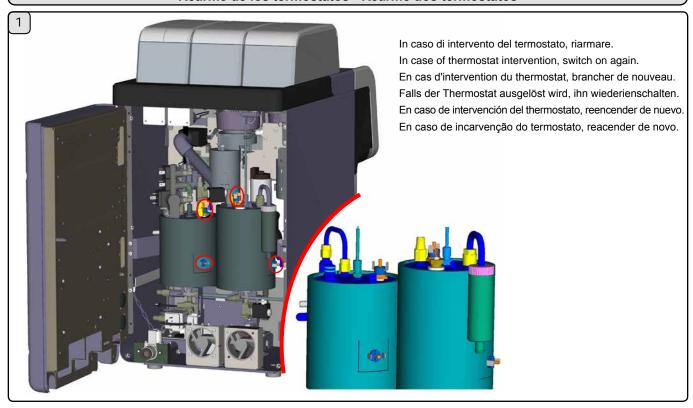


Rimuovere la copertura del pannello posteriore ( $\mathbf{R}$ ). - Remove the cover to the rear panel ( $\mathbf{R}$ ).

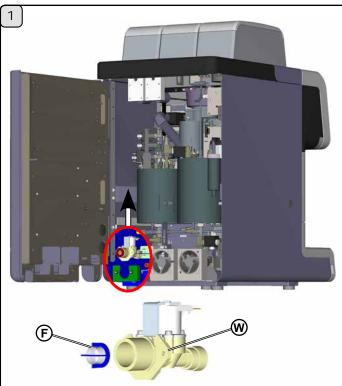
Retirer la couverture du panneau postérieur (R). - Die Abdeckung des rückseitigen Paneels (R) abnehmen.

Desmontar la cubierta del panel posterior  $(\mathbf{R})$ . - Remover a cobertura do painel posterior  $(\mathbf{R})$ .

## Riarmo termostati - Thermostat reset Réarmement des thermostats - Rücksetzung Thermostate Rearme de los termostatos - Rearme dos termóstatos



Rimozione assieme ingresso acqua - Water inlet assembly removal Retrait de l'ensemble de l'entrée de l'eau - Ausbau der Einheit Wassereinlauf Desmontaje del grupo de entrada agua - Remoção do conjunto da entrada da água



Rimuovere l'assieme ingresso acqua  $(\mathbf{W})$  tirandolo verso l'alto. Nota: l'estrazione del filtro  $(\mathbf{F})$  può avvenire anche senza lo smontaggio dell'assieme ingresso acqua  $(\mathbf{W})$ .

Remove the water inlet assembly  $(\mathbf{W})$  by pulling it upward. Note: the filter  $(\mathbf{F})$  can be removed even without dismantling the water inlet assembly  $(\mathbf{W})$ .

Retirer l'ensemble de l'entrée de l'eau (**W**) en le tirant vers le haut. Note: on peut extraire le filtre (**F**) sans démonter obligatoirement l'ensemble de l'entrée de l'eau (**W**).

Die Einheit Wassereinlauf  $(\mathbf{W})$  ausbauen, indem sie nach oben hin herausgezogen wird.

Anmerkung: Der Filter  $(\mathbf{F})$  kann auch ohne Ausbau der Einheit  $(\mathbf{W})$  ausgebaut werden.

Desmontar el grupo de entrada agua ( $\mathbf{W}$ ) tirando de él hacia arriba. Nota: la extracción del filtro ( $\mathbf{F}$ ) se puede realizar incluso sin el desmontaje del grupo entrada agua ( $\mathbf{W}$ ).

Remover o conjunto da entrada da água (**W**) puxando-o para cima. Nota: a extracção do filtro (**F**) pode ocorrer mesmo sem desmontar o conjunto da entrada da água (**W**).

## Rimozione blocco EV - Solenoid valve block removal Retrait du bloc EV - Ausbau Einheit Magnetventile Desmontaje del bloque EV - Remoção do grupo EV

Prima di procedere con lo smontaggio scollegare dal blocco elettrovalvole i tubi idraulici e i connettori elettrici. Before dismantling, disconnect the water tubes and electric connectors from the solenoid valve block.

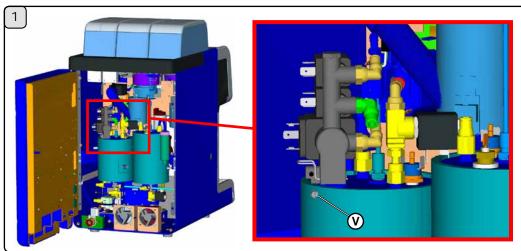


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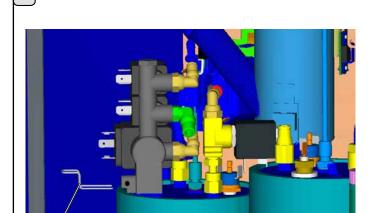
Avant de procéder au démontage, débrancher les tuyaux hydrauliques et les prises électriques du bloc des soupapes électriques. Vor dem Ausbau die Wasserleitungen und die elektrischen Steckverbinder von der Einheit Magnetventile abziehen.

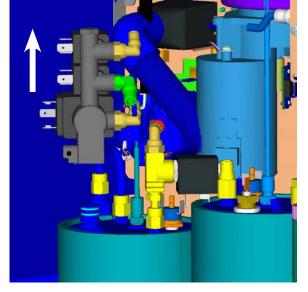
Antes de realizar el desmontaje, hay que desconectar del bloque de electroválvulas los tubos hidráulicos y los conectores eléctricos.

Antes de proceder à desmontagem desconectar do grupo das electroválvulas os tubos hidráulicos e os conectores eléctricos.



Rimuovere la vite di fermo (V).
Remove the fastening screws (V).
Retirer la vis d'arrêt (V).
Die Feststellschraube (V) lösen.
Desmontar el tornillo de fijación (V).
Remover os parafusos de bloqueio (V).





Estrarre la spina di bloccaggio (**S**) e rimuovere il gruppo elettrovalvole tirandolo verso l'alto. Remove the lock pin (**S**) and remove the solenoid valve group by pulling it upward.

Extraire la cheville de blocage (**S**) et ôter le groupe de soupapes électriques en le tirant vers le haut.

Den Sperrstift (**S**) herausziehen und die Einheit Magnetventile ausbauen, indem sie nach oben hin herausgezogen wird.

Sperrstift (S) nerauszienen und die Einneit Magnetventile ausbauen, indem sie nach oben nin nerausgezogen wird Quitar la clavija de bloqueo (S) y desmontar el grupo electroválvulas tirando de él hacia arriba.

Extrair a ficha de bloqueio (S) e remover o grupo das electroválvulas puxando-o para cima.

## Rimozione assieme caldaia/boiler - Boiler/heater assembly removal Retrait de l'ensemble chaudière/chauffe-eau - Ausbau Einheit Wasserkessel / Boiler Desmontaje del grupo caldera/calentador - Remoção do conjunto caldeira/boiler

Prima di procedere con lo smontaggio scollegare tutti i tubi idraulici e i connettori elettrici collegati all'assieme caldaia/boiler. NOTA: la sonda temperatura (T) è collegata direttamente alla scheda CPU (connettore Y14).

Before removal, disconnect all the water tubes and electric connectors connected to the boiler/heater. NOTE: the temperature probe (T) is directly connected to the CPU card (Y14 connector).

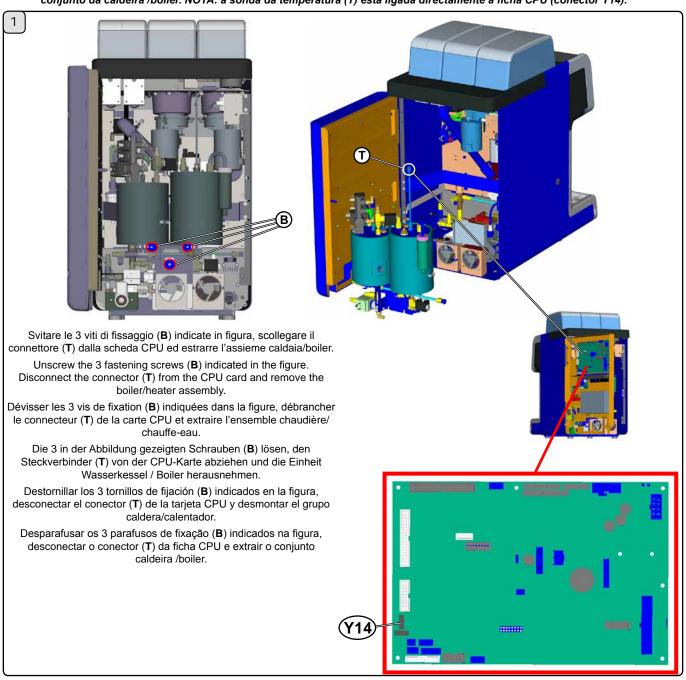


Avant de procéder au montage, débrancher tous les tuyaux hydrauliques et les prises électriques reliés à l'ensemble chaudière/chauffe-eau. NOTE : le capteur de la température (T) est reliée directement à la carte CPU (connecteur Y14).

Vor dem Ausbau die Wasserleitungen und die elektrischen Steckverbinder von der Einheit Wasserkessel / Boiler abziehen. ANMERKUNG: Der Temperaturfühler (T) ist direkt an der CPU-Karte angeschlossen (Steckverbinder Y14).

Antes de realizar el desmontaje hay que desconectar todos los tubos hidráulicos y los conectores eléctricos conectados al grupo caldera/calentador. NOTA: la sonda temperatura (T) está conectada directamente a la tarjeta CPU (conector Y14).

Antes de proceder à desmontagem desconectar todos os tubos hidráulicos e os conectores eléctricos conectados ao conjunto da caldeira /boiler. NOTA: a sonda da temperatura (T) está ligada directamente à ficha CPU (conector Y14).



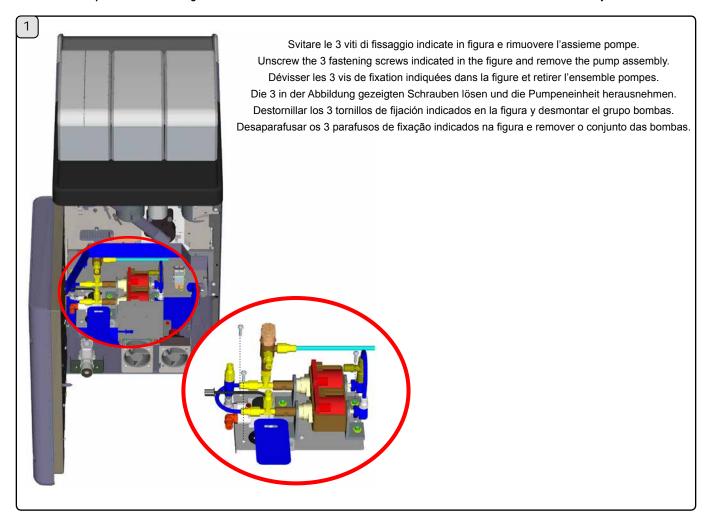
## Rimozione assieme pompe - Pump assembly removal Retrait de l'ensemble pompes - Ausbau Pumpeneinheit Desmontaje del grupo bombas - Remoção do conjunto das bombas

Prima di procedere con lo smontaggio scollegare tutti i tubi idraulici e i connettori elettrici collegati all'assieme pompe. Before removal, disconnect all the water tubes and electric connectors connected to the pump assembly.

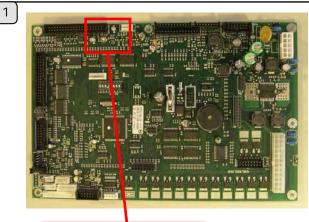


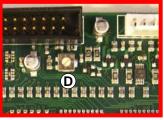
Avant de procéder au montage, débrancher tous les tuyaux hydrauliques et les prises électriques reliés à l'ensemble pompes. Vor dem Ausbau die Wasserleitungen und die elektrischen Steckverbinder von der Pumpeneinheit abziehen.

Antes de realizar el desmontaje hay que desconectar todos los tubos hidráulicos y los conectores eléctricos conectados al grupo bombas. Antes de proceder à desmontagem desconectar todos os tubos hidráulicos e os conectores eléctricos conectados ao conjunto das bombas.



## Regolazione contrasto display - Display contrast setting Reglage du contraste du display - Einstellung des kontrasts der Display Regulación del contraste del display - Reglage do contraste do display





Agire sul trimmer (**D**) posto sulla scheda elettronica affinchè sul display si leggano i messaggi in modo chiaro.

Adjust trimmer (D) located on the electronic card until the messages may be clearly read on the display.

Agir sur le trimmer (**D**) plaçé sur la fiche électronique afin de pouvoir lire clairement les messages qui apparaissent sur le display.

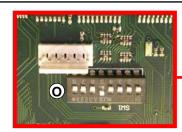
Stellen Sie den auf der Elektronikkarte installierten Reger  $(\mathbf{D})$  so ein, daß die Meldungen auf der Anzeige in gutem Kontrast abgebildet werden und gut abgelesen werden können.

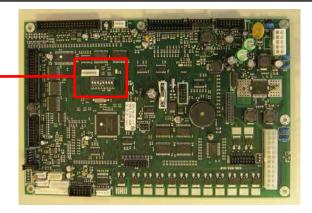
Utilizar el trimmer  $(\mathbf{D})$  situado en la tarjeta electrónica para que se lean los mensajes claramente en el visualizador.

Utilizar o trimmer (**D**) colocado sobre a ficha electrónica para que sobre o mostrador se leiam as mensagens de modo claro.

## Dip-Switch CPU - CPU Dip-Switch Dip-Switch CPU - Dip-Switch CPU Dip-Switch-Schalter CPU - Dip-Switch CPU







#### ATTENZIONE!

### Il cambiamento di posizione dei Dip-Switch deve essere effettuato RIGOROSAMENTE a macchina SPENTA.

Nelle condizioni standard i Dip-Switch sono posizionati su OFF.

Agendo sui Dip-Switch (O) si attivano le seguenti funzioni: - DIP 1 = OFF - ON inserimento dati standard (\*)

- DIP 2 = OFF

- DIP 3 = OFF -ON simulazione chiave tecnico

- DIP 4 = OFF -ON contabilità

- DIP 5 = OFF -ON abilitazione sequenza tasti per

ingresso in programmazione

- DIP 6 = OFF - DIP 7 = OFF

- DIP 8 =

(\*) Al termine delle operazioni di inserimento dati standard, riportare il DIP 1 sulla posizione OFF.

### When changing the position of the Dip-Switch, the machine MUST BE SWITCHED OFF.

Under standard conditions, the dip-switches are positioned on OFF. The dip-switches (O) have the following functions:

- DIP 1 = OFF - ON Input of standard (\*) data

- DIP 2 = OFF

OFF - ON Simulation of engineer's key - DIP 3 =

- DIP 4 = OFF -ON Bookkeeping

- DIP 5 = OFF -ON allows keys sequence to enter

programming

- DIP 6 = OFF

- DIP 7 = OFF

- DIP 8 = OFF

(\*) Upon completion of the standard data input operations, position DIP 1 to OFF again.

### ATTENTION!

#### Le changement de position des Dip-Switch doit être RIGOUREUSEMENT effectué lorsque la machine est ETEINTE.

En phase de standard, les Dip-Switch sont plaçés sur OFF.

Utiliser les Dip-Switch (O) pour activer les fonctions suivante:

- DIP 1 =

ON introduction informations standard (\*)

- DIP 2 = OFF

- DIP 3 = OFF -ON simulation clef technique

- DIP 4 = OFF -ON comptabilité

OFF -

DIP 5 = OFF -ON habilite la séquence de touches

pour entrer en programmation

- DIP 6 = OFF

- DIP 7 = OFF

- DIP 8 = OFF

(\*) à la fin des opérations d'introduction des informations standard, remettre le DIP 1 sur la position OFF.

#### ACHTUNG:

### Die Verstellung der Dip-Switch-Schalter darf nur bei ABGESCHALTETER Maschine vorgenommen werden!

Bei normalen Betriebsbedingungen müssen die Dip-Switch-Schalter auf OFF gestellt sein. Nachstehend werden die Funktionen bei entsprechender Einstellung der Dip-Switch-Schalter (O) aufgeführt:

- DIP 1 = ON Eingabe Standarddaten (\*) OFF -

- DIP 2 = OFF

- DIP 3 = OFF -ON Simulation Monteurschlüssel

- DIP 4 = OFF -ON Buchführung

- DIP 5 = ON ermächtigen Sie die Anschlagsequenz OFF um in Programmierung hineinzugehen

- DIP 6 = OFF

- DIP 7 = OFF

- DIP 8 = OFF

(\*) Nach Abschluß der Eingabe der Standarddaten muß der Dip-Switch-Schalter 1 auf OFF zurückgestellt werden.

#### **:ATENCIÓN!**

### El cambio de posición de los Dip-switch (O) se tiene que efectuar RIGUROSAMENTE con la máquina APAGADA.

En condiciones estándares los Dip-switch están colocados en OFF. Por medio de los Dip-Switch (O) se activan las siguientes funciones:

- DIP 1 = OFF - ON introducción datos estándares (\*)

- DIP 2 = OFF

- DIP 3 = OFF -ON simulación llave técnico

- DIP 4 = OFF -ON contabilidad

- DIP 5 = OFF -ON habilita la secuencia de teclas para entrar

en programación

- DIP 6 = OFF

- DIP 7 = **OFF** 

- DIP 8 =

(\*) Al final de las operaciones de introducción datos estándares, restablecer el DIP 1 a la posición OFF.

#### ATENÇÃO!

### A mudança de posição dos Dip-Switch deverá ser efectuada RIGOROSAMENTE com a máquina DESLIGADA.

Nas condições standard os Dip-Switch estão posicionados em OFF.

Actuando nos Dip-Switch (O) activam-se as funções a seguir indicadas:

- DIP 1 = OFF -ON introdução dados standard (\*)

- DIP 2 = OFF

- DIP 3 = OFF -ON simulação chave técnico

- DIP 4 = OFF -ON contabilidade

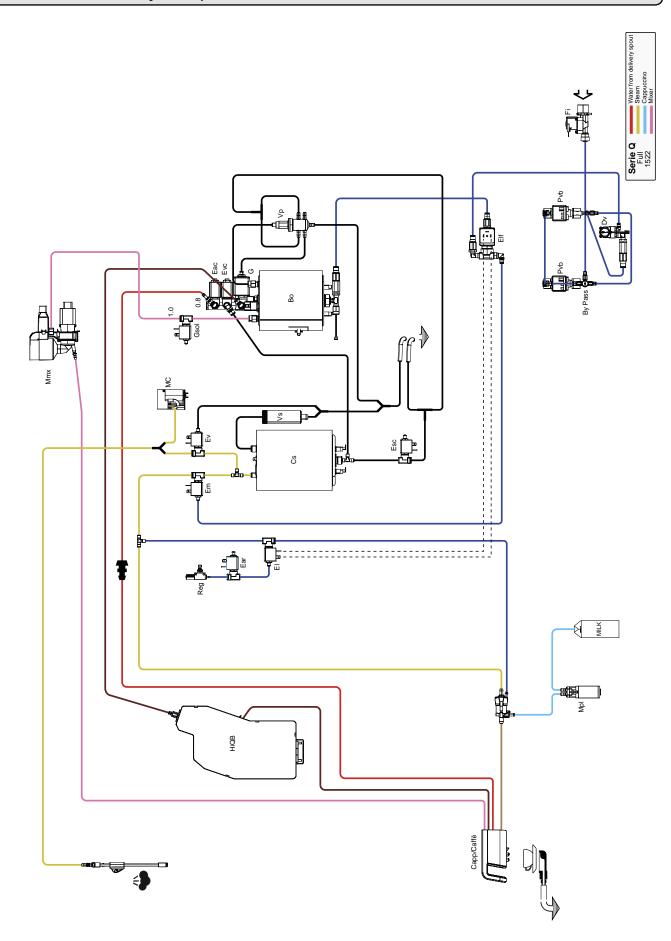
- DIP 5 = OFF -ON habilita a sequência das teclas para entrar em programação

- DIP 6 = OFF

OFF - DIP 7 =

OFF - DIP 8 =

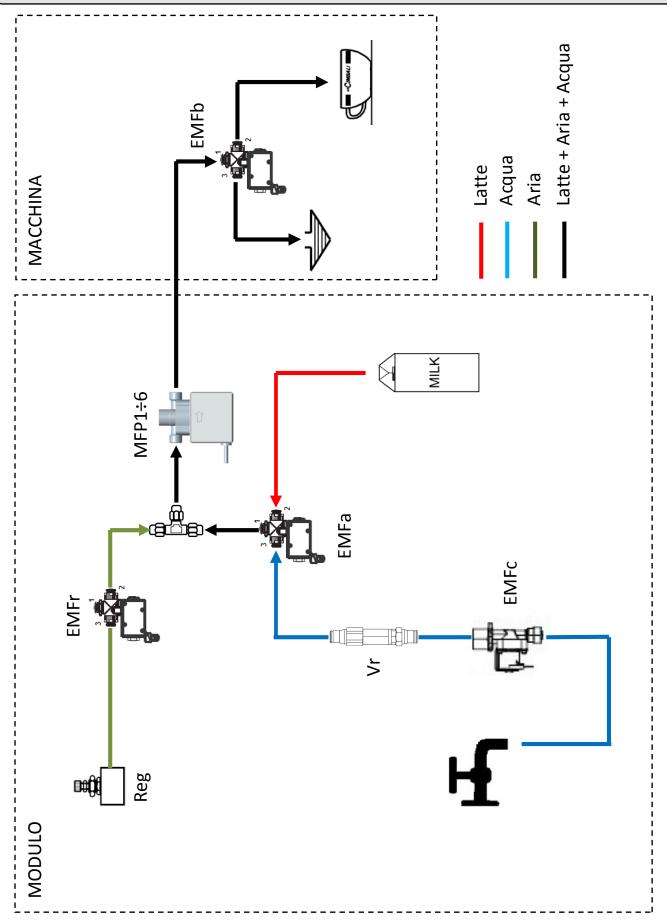
(\*) No fim das operações de introdução dos dados standard, recolocar o DIP 1 na posição OFF.



## Legenda schema idraulico - Hydraulic Diagram Legend - Legende du Schema Hydraulique Legende Zu Wasserkreis - Leyenda Esquema Hidraulico - Legenda Esquema Hidráulico

$( \ \ IT \ )$			(EN)			(FR)		
Во	=	Boiler	Во	=	Coffee boiler	Во	=	Boiler
Cs	=	Caldaia servizi	Cs	=	Service boiler	Cs	=	Chaudière services
DV	=	Dosatore volumetrico	DV	=	Volumetric meter (flowmeter)	DV	=	Doseur volumétrique
Eac	=	Elettrovalvola acqua calda	Eac	=	Hot water solenoid valve	Eac	=	Electrovanne eau chaude
Ear	=	Elettrovalvola aria	Ear	=	Air solenoid valve	Ear	=	Electrovanne de l'air
El	=	Elettrovalvola lavaggio	EI	=	Washing solenoid valve	El	=	Electrovanne lavage
Elf	=	Elettrovalvola lavaggio	Elf	=	Washing solenoid valve	Elf	=	Electrovanne lavage
Em	=	Elettrovalvola milk	Em	=	Milk solenoid valve	Em	=	Electrovanne lait
Esc	=	Elettrovalvola scarico caldaia	Esc	=	Service boiler water outlet	Esc	=	Électrovanne bac collecteur
Ev	=	Elettrovalvola vapore	_		solenoid valve	_		chaudière
Evc	=	Elettrovalvola carico caldaia	Ev	=	Steam solenoid valve	Ev	=	Electrovanne de la vapeur
Fi	=	Filtro	Evc	=	Boiler supply solenoid valve	Evc	=	Electrovanne de remplissage
G	=	Elettrovalvola erogazione caffè	Fi	=	Filter	<b>-</b> :		chaudiére
Gsol	=	Elettrovalvola solubili	G	=	Coffee dispensing solenoid valve	FI G	=	Filtre
MC Mmx	=	Motore compressore	Gsol MC	=	Soluble solenoid valve	Gsol	=	Electrovanne du cafè
Mpl	=	Motore mixer cioccoliatiera  Motore pompa latte	Mmx	=	Motore compressore  Hot chocolate pot mixer motor	MC	=	Électrovanne solubles Moteur comprimeur
Pvb	=	Pompa a vibrazione	laM	=	Milk pump motor	Mmx	=	Moteur comprimeur  Moteur mixeur machine à
Reg	=	Regolatore aria	Pvb	_	Vibration pump	IVIIIIX	=	chocolat chaud
Vp	=	Valvola di sovrapressione	Reg	=	Air regulator	Mpl	=	Moteur pompe lait
-		'	Vp	=	Expansion valve	Pvb	_	Pompe vibrante
Vs	=	Valvola di sicurezza caldaia	Vs	=	•	Reg	=	Regulateur de 'aire
			VS	-	Boiler safety valve	Vp	=	Clapet de surpression
						Vs	=	Soupape de sécurité chaudière
						••		Coupapo do cocamo criadalero
DE			EQ			DT		
DE			ES			PT		
DE Bo	=	Boiler	ES Bo	=	Boiler	PT Bo	=	Boiler
	=	Boiler Zusatzheizkessel		=	Boiler Caldera servicios		=	Boiler Caldeira serviços
Во		Zusatzheizkessel Mengenzähler	Во			Во		Caldeira serviços Doseador volumétrico
Bo Cs	=	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil	Bo Cs	=	Caldera servicios	Bo Cs DV Eac	= = =	Caldeira serviços Doseador volumétrico Electroválvula água quente
Bo Cs DV Eac Ear	= =	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft	Bo Cs DV Eac Ear	= = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire	Bo Cs DV Eac Ear	= = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar
Bo Cs DV Eac Ear	= = = = =	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil	Bo Cs DV Eac Ear	=	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado	Bo Cs DV Eac Ear	= = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio
Bo Cs DV Eac Ear EI	= = = =	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung	Bo Cs DV Eac Ear El	= = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado	Bo Cs DV Eac Ear El	= = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem
Bo Cs DV Eac Ear EI EIf	= = = = =	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch	Bo Cs DV Eac Ear EI EIf	= = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche	Bo Cs DV Eac Ear El Elf	= = = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk
Bo Cs DV Eac Ear El Elf Em	= = = = = =	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass	Bo Cs DV Eac Ear El Elf Em	= = = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera	Bo Cs DV Eac Ear El Elf Em	= = = = = = = = = = = = = = = = = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira
Bo Cs DV Eac Ear El Elf Em Esc Ev	= = = = = = =	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil	Bo Cs DV Eac Ear EI EIf Em Esc Ev	= = = = = = = = = = = = = = = = = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor	Bo Cs DV Eac Ear El Elf Em Esc Ev	= = = = = = = = = = = = = = = = = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira Electroválvula do vapore
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Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi	= = = = = = = = = = = = = = = = = = = =	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc Fi	= = = = = = = = = = = = = = = = = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc	= = = = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G		Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc Fi	= = = = = = = = = = = = = = = = = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula café	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc	= = = = = = = = = = = = = = = = = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G	= = = = = = = = = = = = = = = = = = = =	Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe Magnetventil Instantgetränke	Bo Cs DV Eac Ear Elf Em Esc Ev Evc Fi G	= = = = = = = = = = = = = = = = = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula café Electroválvula solubles	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc	= = = = = = = = = = = = = = = = = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro Elètroválvula cafè
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G		Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe Magnetventil Instantgetränke Motor Kompressor	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc Fi G	= = = = = = = = = = = = = = = = = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula café Electroválvula solubles Motor compressor	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc	= = = = = = = = = = = = = = = = = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro Elètroválvula cafè Eletroválvula solúveis
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G Gsol MC Mmx		Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe Magnetventil Instantgetränke Motor Kompressor Motor Schokoladenmischwerk	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc Fi G Gsol MC Mmx	= = = = = = = = = = = = = = = = = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula café Electroválvula solubles Motor compressor Motor mixer chocolatera	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc	= = = = = = = = = = = = = = = = = = = =	Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro Elètroválvula cafè
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G		Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe Magnetventil Instantgetränke Motor Kompressor	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc Fi G	= = = = = = = = = = = = = = = = = = = =	Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula café Electroválvula solubles Motor compressor	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc		Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro Elètroválvula cafè Eletroválvula solúveis Motor compressor
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G Gsol MC Mmx Mpl		Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe Magnetventil Instantgetränke Motor Kompressor Motor Schokoladenmischwerk Motor Milchpumpe	Bo Cs DV Eac Ear El Elf Em Esc Evc Fi G Gsol MC Mmx Mpl		Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula solubles Motor compressor Motor mixer chocolatera Motor bomba leche	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc Fi G Gsol MC Mmx		Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettrovalvola milk Eletroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro Elètroválvula cafè Eletroválvula solúveis Motor compressor Motor mixer chocolate
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G Gsol MC Mmx Mpl Pvb		Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe Magnetventil Instantgetränke Motor Kompressor Motor Schokoladenmischwerk Motor Milchpumpe Vibrationspumpe	Bo Cs DV Eac Ear El Elf Em Esc Evc Fi G Gsol MC Mmx Mpl Pvb		Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula solubles Motor compressor Motor mixer chocolatera Motor bomba leche Bomba a vibración	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc Fi G Gsol MC Mmx Mpl		Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro Elètroválvula cafè Eletroválvula solúveis Motor compressor Motor mixer chocolate Motor da bomba leite
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G Gsol MC Mmx Mpl Pvb Reg		Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe Magnetventil Instantgetränke Motor Kompressor Motor Schokoladenmischwerk Motor Milchpumpe Vibrationspumpe Lüftregler Überdruckventil	Bo Cs DV Eac Ear Elf Em Esc Ev Evc Fi G Gsol MC Mmx Mpl Pvb Reg Vp		Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula solubles Motor compressor Motor mixer chocolatera Motor bomba leche Bomba a vibración Regulador aire Válvula de sobrepresión	Bo Cs DV Eac Ear El Elf Em Esc Ev Evc Fi G Gsol MC Mmx Mpl Pvb		Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro Elètroválvula cafè Eletroválvula solúveis Motor compressor Motor mixer chocolate Motor da bomba leite Bomba de vibração
Bo Cs DV Eac Ear EI EIf Em Esc Ev Evc Fi G Gsol MC Mmx Mpl Pvb Reg Vp		Zusatzheizkessel Mengenzähler Heißwasser-Magnetventil Magnetventil Luft Reinigung-Magnetventil Magnetventil Spülung Magnetventil Milch Magnetventil Wasserkesselauslass Dampf-Magnetventil Wasserzugabe-Magnetventil Filter Magnetventil Kaffeeabgabe Magnetventil Instantgetränke Motor Kompressor Motor Schokoladenmischwerk Motor Milchpumpe Vibrationspumpe Lüftregler	Bo Cs DV Eac Ear El Elf Em Esc Evc Fi G Gsol MC Mmx Mpl Pvb Reg		Caldera servicios Dosificador volumétrico Electroválvula agua caliente Electroválvula aire Electroválvula lavado Electroválvula lavado Electroválvula leche Electroválvula descarga caldera Electroválvula vapor Electroválvula carga caldera Filtro Electroválvula café Electroválvula solubles Motor compressor Motor mixer chocolatera Motor bomba leche Bomba a vibración Regulador aire	Bo Cs DV Eac Ear Elf Em Esc Ev Evc Fi G Gsol MC Mmx Mpl Pvb Reg		Caldeira serviços Doseador volumétrico Electroválvula água quente Electroválvula ar Elettrovalvola lavaggio Eletroválvula lavagem Elettroválvula descarga caldeira Electroválvula do vapore Electroválvula carregamento caldeira Filtro Elètroválvula cafè Eletroválvula solúveis Motor compressor Motor mixer chocolate Motor da bomba leite Bomba de vibração Dispositivo de regulação do ar

Circuito idraulico snow milk - Hydraulic circuit snow milk - Circuit hydraulique snow milk Hydraulikplan snow milk - Circuito hidraulico snow milk - Circuito hidraulico snow milk



Legenda schema idraulico snow milk - Hydraulic Diagram Legend snow milk -Legende du Schema Hydraulique snow milk - Legende zu Wasserkreis snow milk -Leyenda Esquema Hidraulico snow milk - Legenda Esquema Hidráulico snow milk

IT

Reg

**EMFa** Deviatrice acqua **EMFb** Deviatrice becco **EMFc** Deviatrice carico acqua **EMF**r Deviatrice aria Vr

Valvola antiritorno Regolatore aria

EN

**EMFa** Water diverter **EMFb** Delivery spout diverter **EMFc** Water load diverter **EMF**r Air diverter Check valve ۷r Reg Air regulator

FR

**EMFa** Déviation eau **EMFb** Déviation bec verseur **EMFc** Déviation chargement eau

Déviation air **EMF**r Clapet antiretour ۷r Reg Regulateur de 'aire

DE

Wasserverteiler **EMFa EMFb** Verteiler Auslauf Verteiler Wasserladung **EMFc EMF**r Luftverteiler

Rückschlagventil ۷r Lüftregler Reg

ES

**EMFa** Desviadora agua **EMFb** Desviadora boquilla = **EMFc** Desviadora carga de agua **EMF**r

Desviadora aire Válvula antirretorno ۷r Reg Regulador aire

PT

**EMFa** Desviadora da água **EMFb** Desviadora do bico

**EMFc** Desviadora da carga da água

**EMF**r Desviadora do ar ۷r Válvula de não retorno Dispositivo de regulação do ar Reg

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