

Functioning, Maintenance and
Cleaning instructions.

WF-WFM8-11-18-22-33-40-
55G400 manual

Manufactured on the basis of EN 62079:2002-01 – EN 60204-1

Keep for future consultation.



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Translation of the original instructions.

For any claims or observations the reference text is the original one in the manufacturer's language i.e. Italian.

6. FUNCTIONING INSTRUCTIONS



Attention!

- Any person using this appliance must read this user manual.
- The appliance must only be used by trained persons.
- The appliance cannot be used by persons (including children) with reduced physical, sensorial, mental capacities or with little experience or knowledge unless they have been examined or trained regarding the use of the appliance by suitably trained staff that is responsible for his/their safety.
- The appliance has not been designed to be used in environments subject to the ATEX Standard, relative to explosive atmospheres.
- The appliance cannot handle laundry that has been in contact or soaked in inflammable substances.
- Before performing and cleaning or maintenance, make sure that the hot water, cold water and steam cocks are closed (in the appliances with the type of heating) and the master switch is off.
- Keep inflammable liquids away from the appliance.
- Keep cleaning and soap products away from the appliance and locked in a cabinet.
- Children must be controlled so that they do not play with the appliance.

BIOLOGICAL RISK



Attention!

- The kg8, kg11, kg18 and kg22 appliances are fitted with a WRAS-approved mechanical device (air gap), which prevents the undesired return of water loaded into the appliance back into the water network.
- The kg33, kg40 and kg55 appliances are fitted with a mechanical device (air gap), which prevents the undesired return of water loaded into the appliance back into the water network.
- The appliance has not been designed to disinfect linen.

6.1 FUNCTIONING IN SAFE CONDITIONS



Attention!

- The operator must be able to control the dispenser drawer comfortably; if he is not tall enough, build a suitable platform
- Never open the dispenser when the appliance is running.
- Carry out all soap loading operations when the appliance is not running. A condition that ensures the appliance is not running is with the door open.
- Any injury/damage to persons, animals, objects or environment cause by the non-application of this warning, cannot be blamed on the manufacturer.
- In the event of appliance malfunctioning, remove the power supply via the isolating switch.

Check that the laundry trolleys are lower than the lower limit of the door. Do not allow the trolleys to strike the door, thus causing damage.

The KG 33 G400, KG 40 G400 and KG 55 G400 models are equipped with a sensor that puts the appliance in pause if the dispenser is opened. Close the dispenser and press the start button to re-start the washing program.

6.2 ROUTINE FUNCTIONING (MANUAL, AUTOMATIC FUNCTIONING)

6.2.1 DESCRIPTION OF THE APPLIANCE AND CONTROL PANEL

The figures show the appliances with the main components necessary for functioning as well as the appliance electronic control panel.

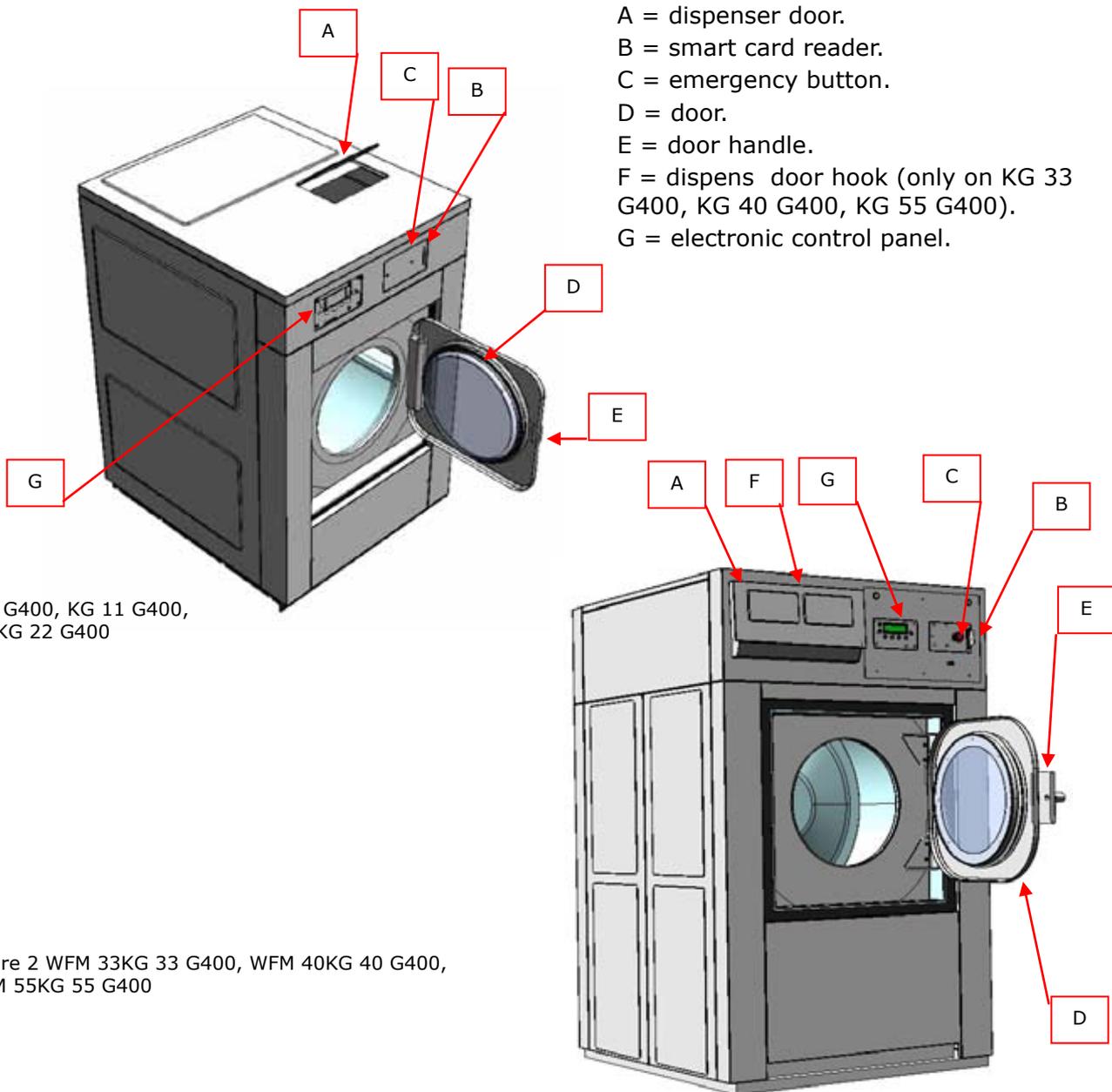
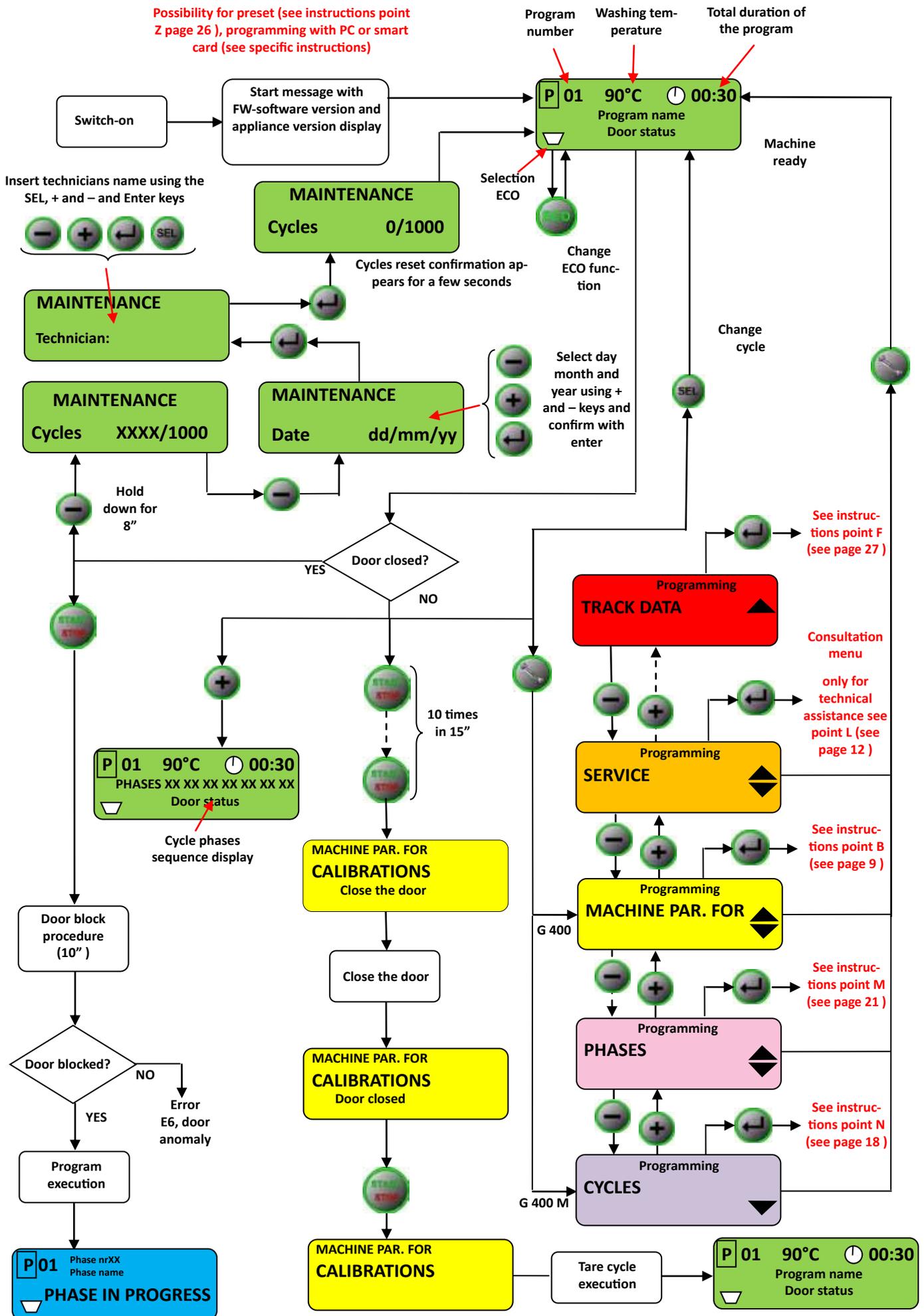


Figure 1 KG 8 G400, KG 11 G400, KG 18 G400, KG 22 G400

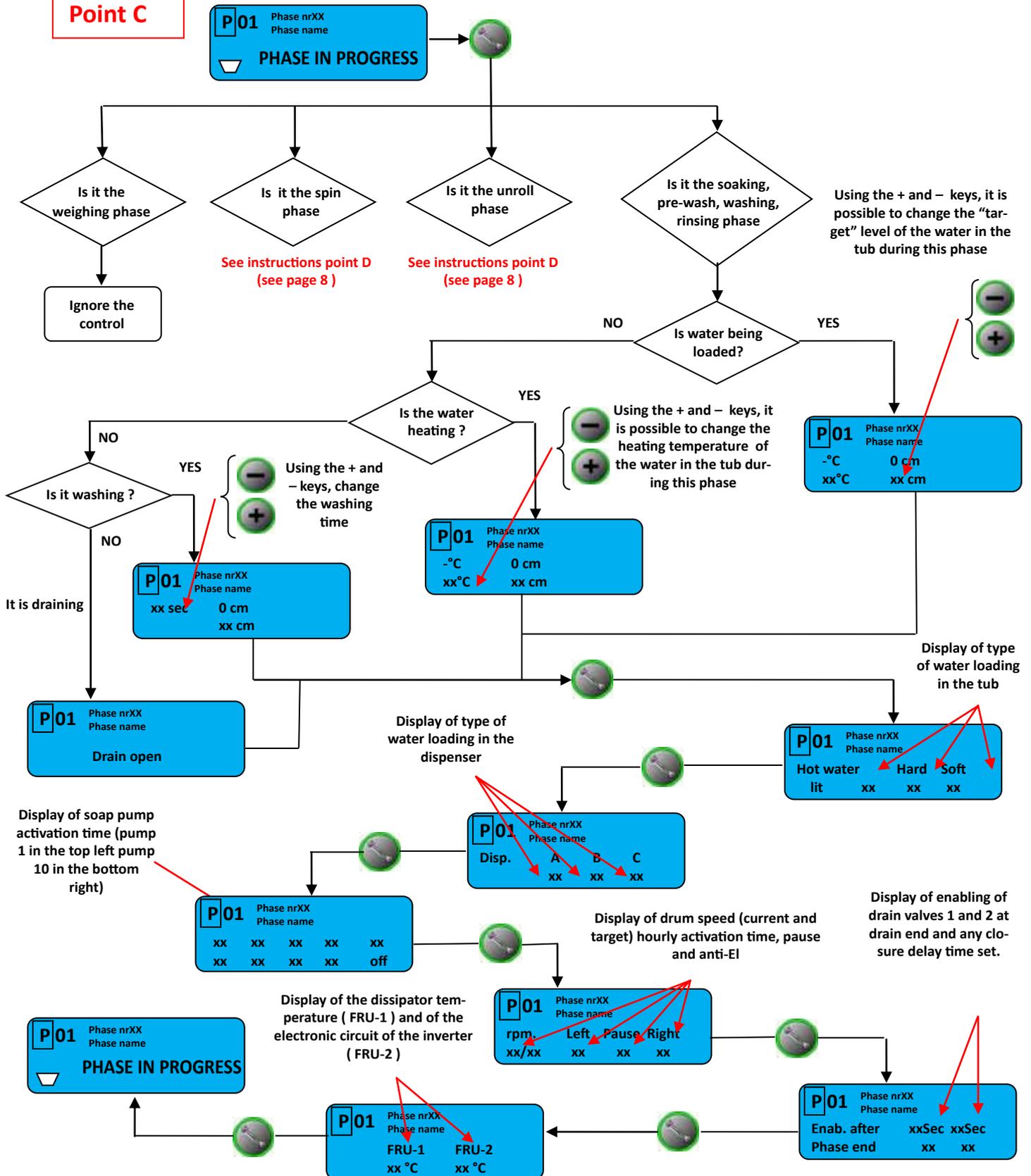
Figure 2 WFM 33KG 33 G400, WFM 40KG 40 G400, WFM 55KG 55 G400

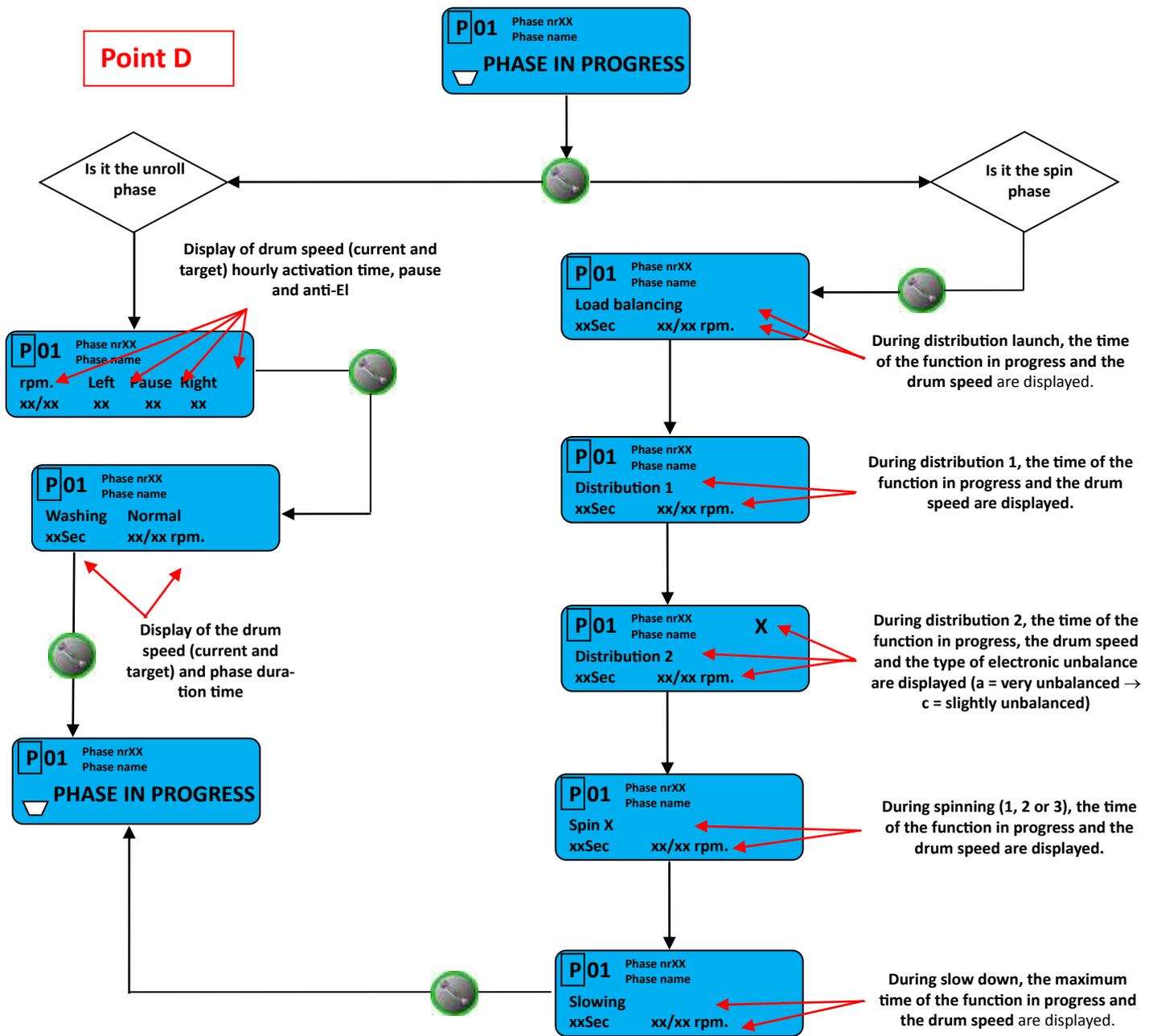
Possibility for preset (see instructions point Z page 26), programming with PC or smart card (see specific instructions)



It is possible to change some functions during the execution of the program, such as: level, temperature or time. In detail, if the mode key is pressed during water loading the level of water loaded can be changed (using the plus and minus keys) or the heating temperature can be changed (if the machine is being heated) or the phase time can be changed (if the machine is not heating or loading water). If the mode key is pressed again or in phases different to Soak, Prewash, Wash or Rinse, only the information available can be consulted.

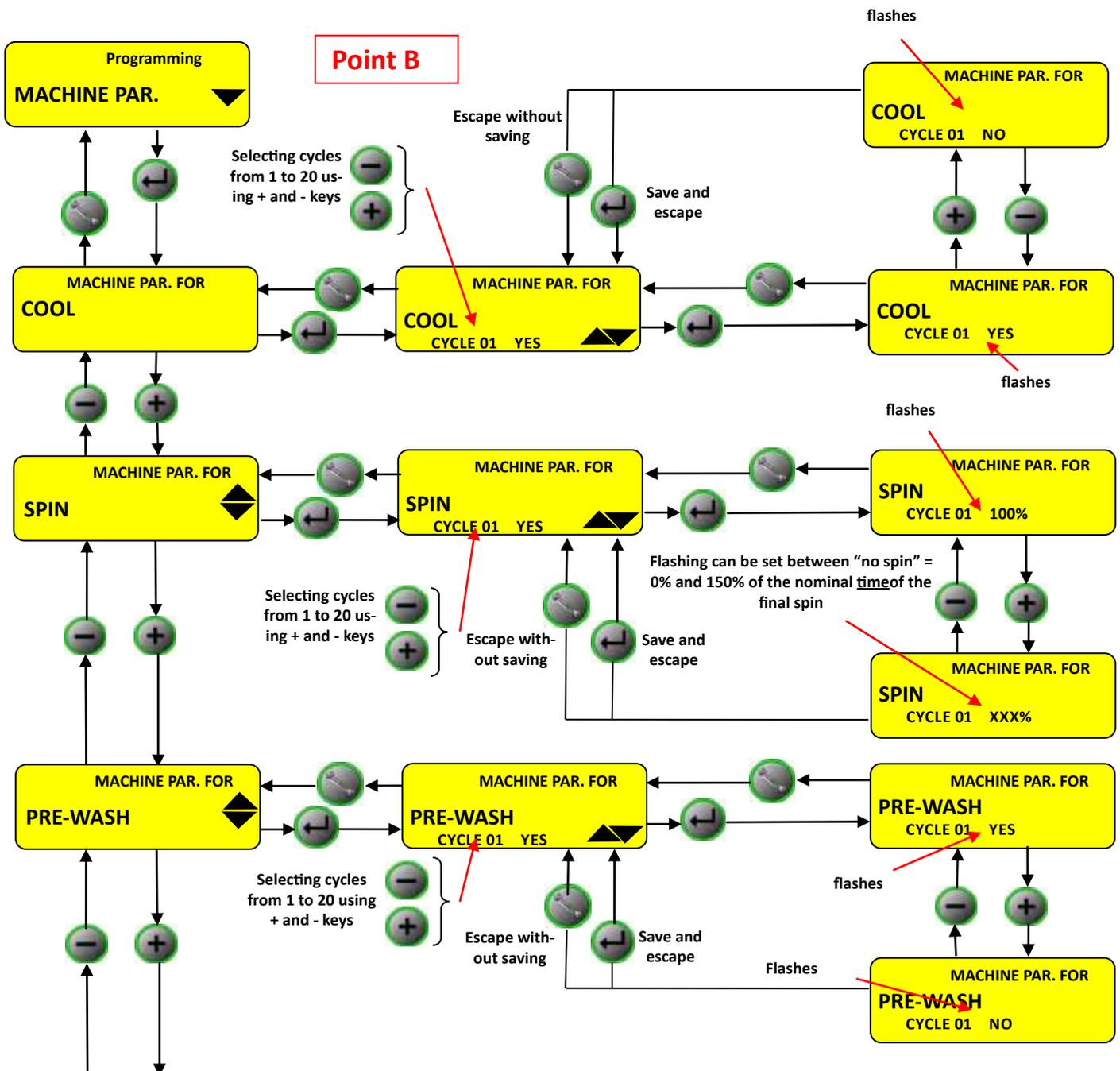
Point C

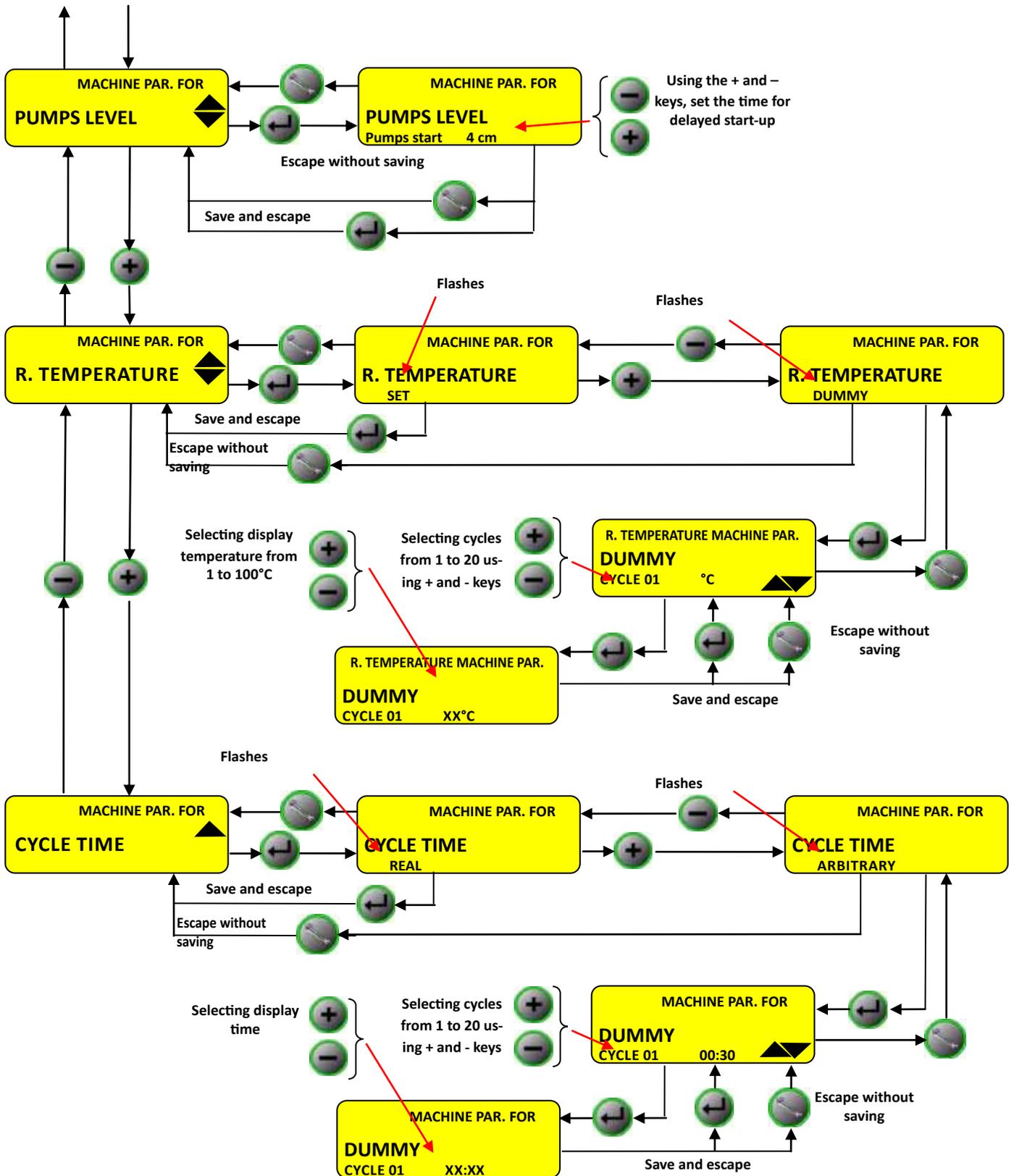




With the door open by pressing the mode key, enter options programming (MACHINE PARAMETERS). From this menu it is possible to:

- hide cooling (if envisioned in the cycle sequence)
- change **the time** (not speed) of the final spin (the value is expressed as a percentage of the nominal time of the final spin)
- hide prewash (if envisioned in the cycle sequence)
- carry out delayed start-up (enable the function and time desired on exiting programming, on pressing the start key the delay countdown will begin)
- the buzzer can be disabled
- it is possible to remove 10 °C of heating (on all cycles and phases) by selecting "reduced".
- cycles can be enabled (in the event of disabling they will be hidden not deleted) that therefore will not be displayed by pressing the SEL key
- the drum can be stopped during loading and draining of water (particularly indicated in wool or delicate cycles)
- the heating hysteresis can be changed
- the activation level of the liquid soap pumps can be changed (only if connected). The minimum level depends on the washing machine version. The level must never exceed the washing level.
- draining can be "forced"(option not recommended) after every loading
- dummy cycle temperatures can be set instead of the real ones (or set)
- fixed cycle execution display times can be set (instead of in self-learning or real)



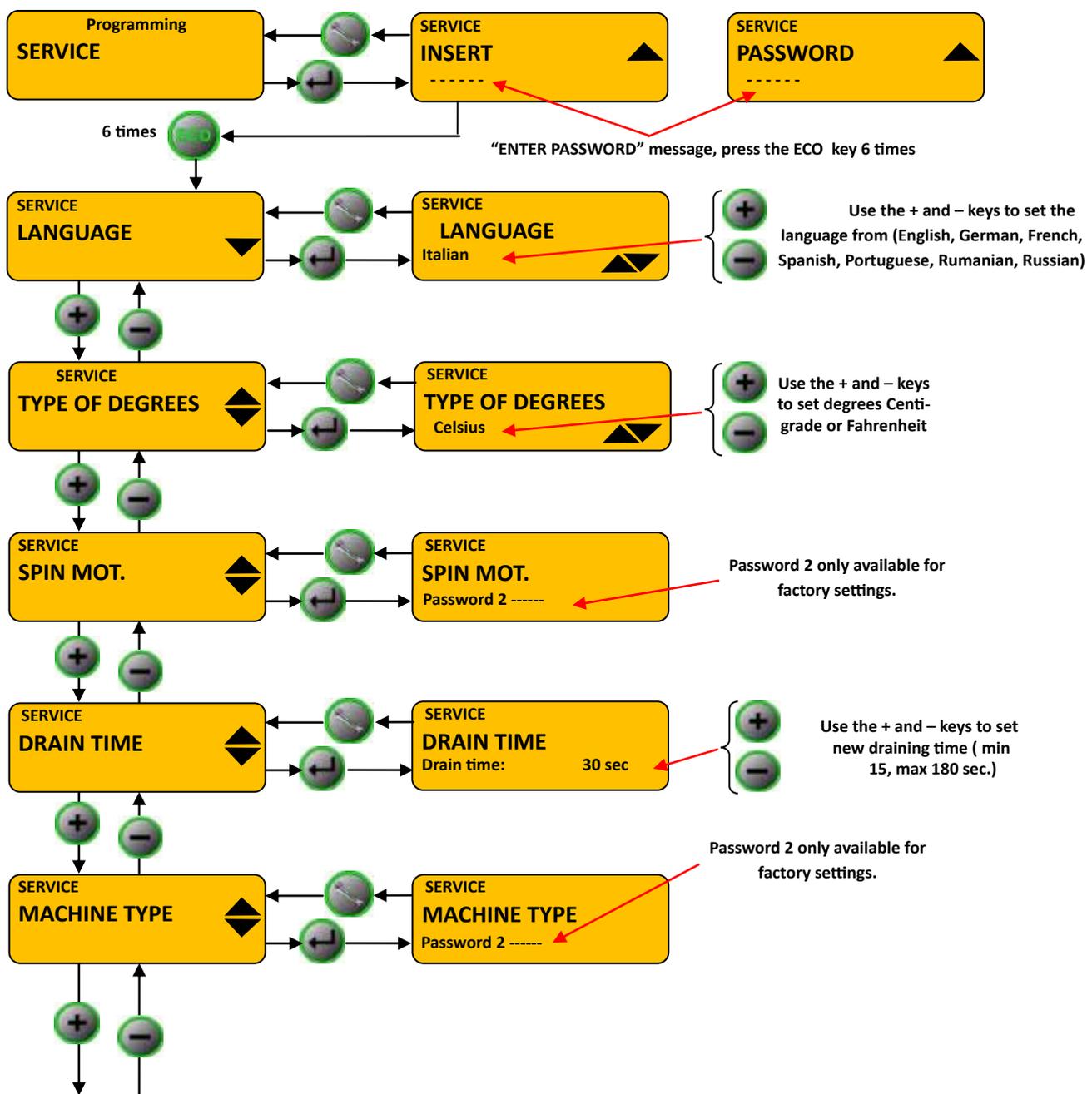


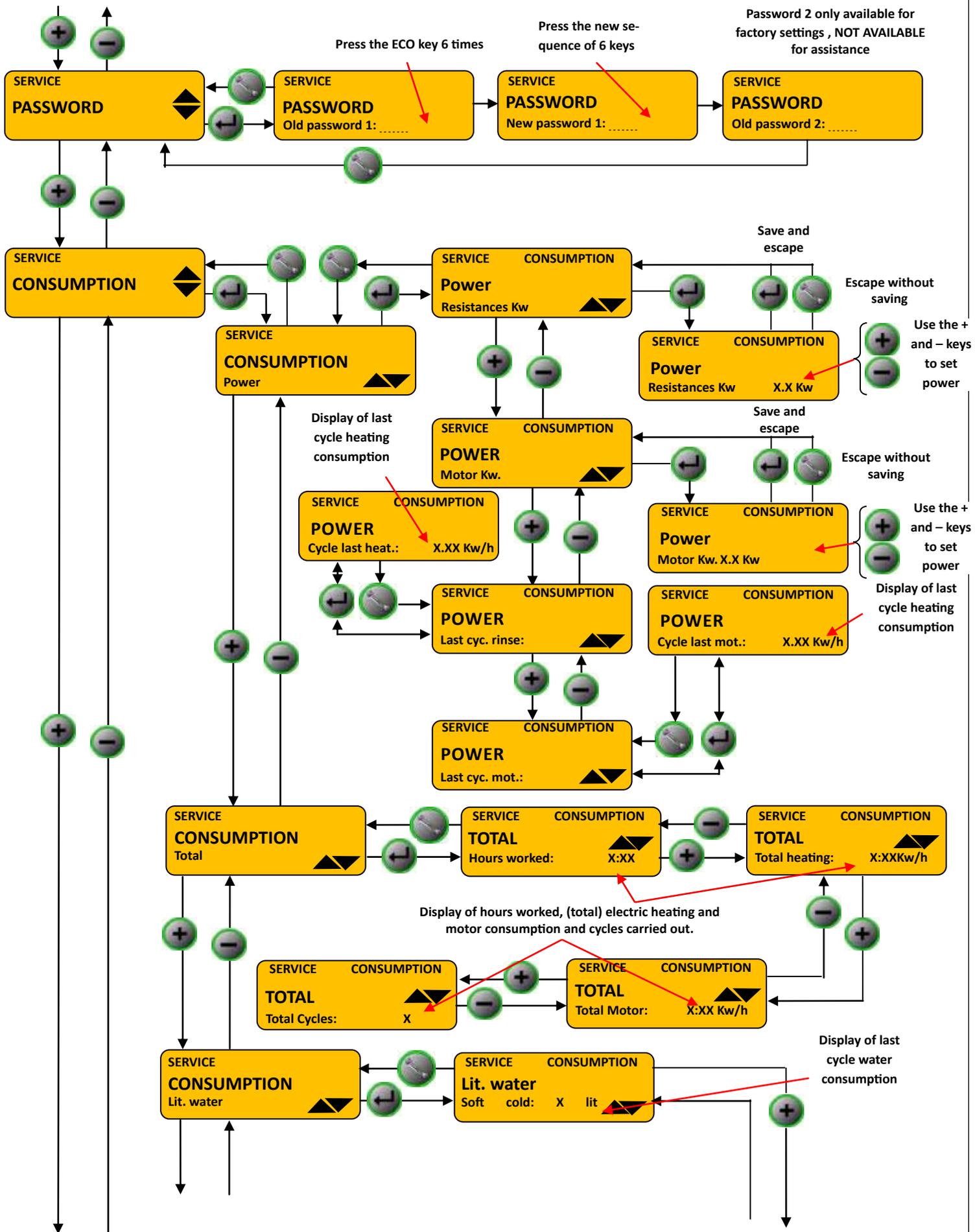
If the mode key is pressed with door open and then the plus key, the SERVICE menu can be displayed. From this menu it is possible to:

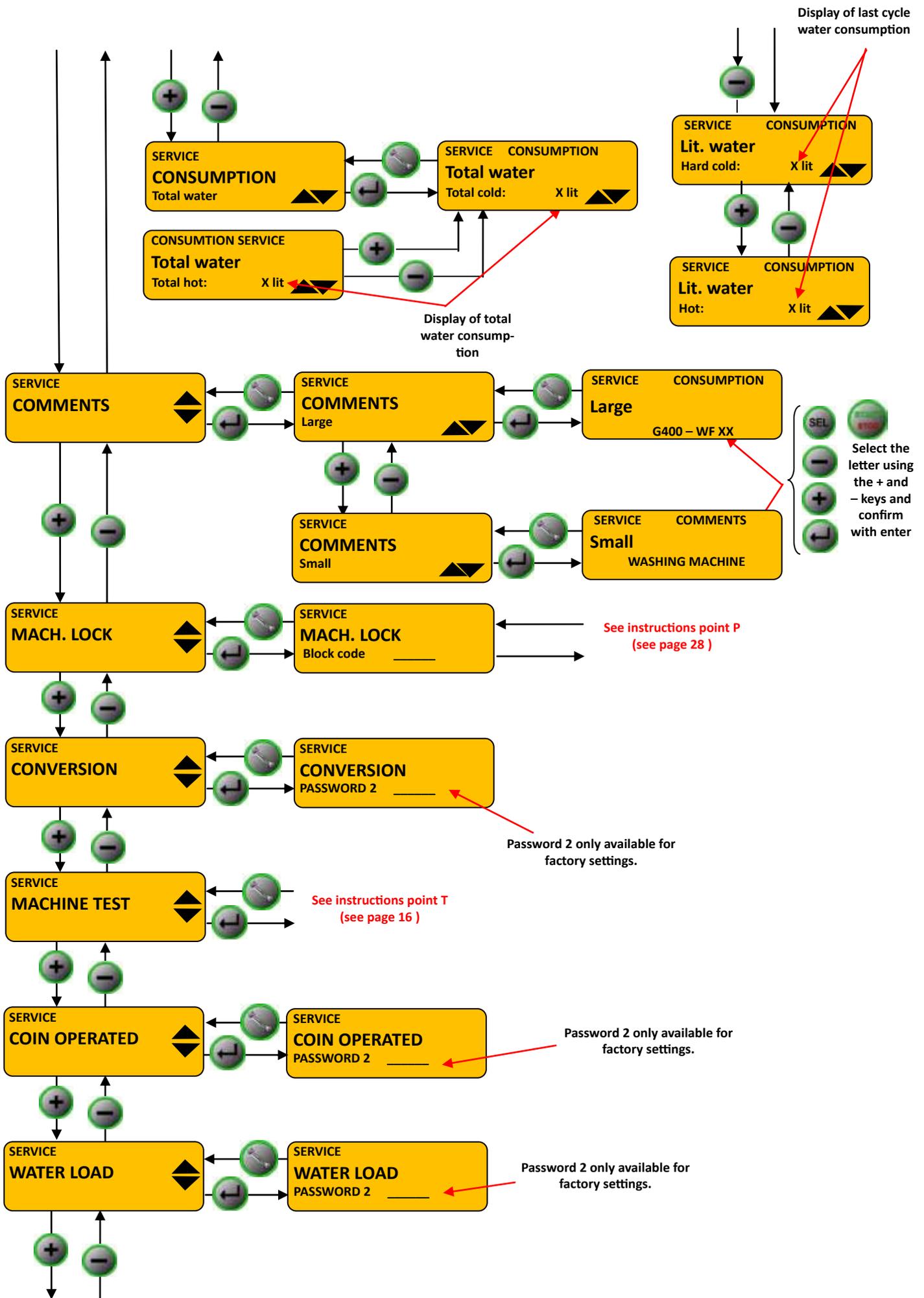
- set the functioning language (8 languages available)
- change the temperature unit of measurement
- lengthen draining time
- change the password
- display the machine log such as, water and electricity consumption divided by the total and last cycle
- set the start message ("large" comment is displayed in the top part of the ignition display, "small" in the lower part, both with maximum of 16 characters)
- block the machine after a certain number of cycles. It can only be unblocked by a code supplied by the manufacturer.
- test all appliance functions /see specific instructions).
- change the times relative to the water draining (E2) and heating (E4) alarms
- set the level given to the economy key (ECO)
- set heating with lower real temperature
- Check the last 10 alarms occurring and stored

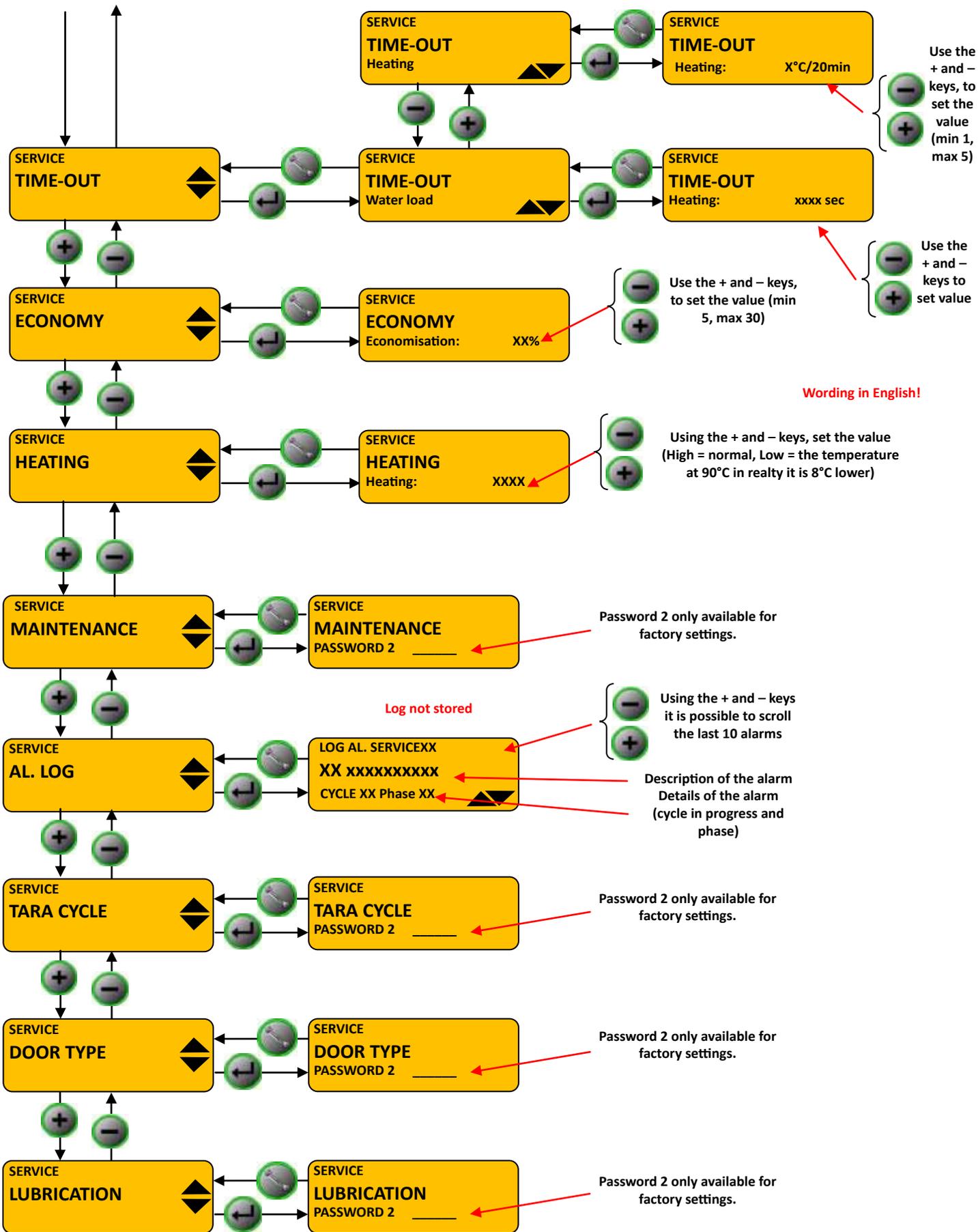
In order to be displayed, the other menu address parameters (SPIN MOTOR, MACHINE TYPE, PASSWORD 2, CONVERSION, COIN OPERATED, WATER LOAD, MAINTENANCE, TARE CYCLE, DOOR TYPE) require a different password (factory password 2), which is only available to factory technicians and not for after-sales assistance.

Point L

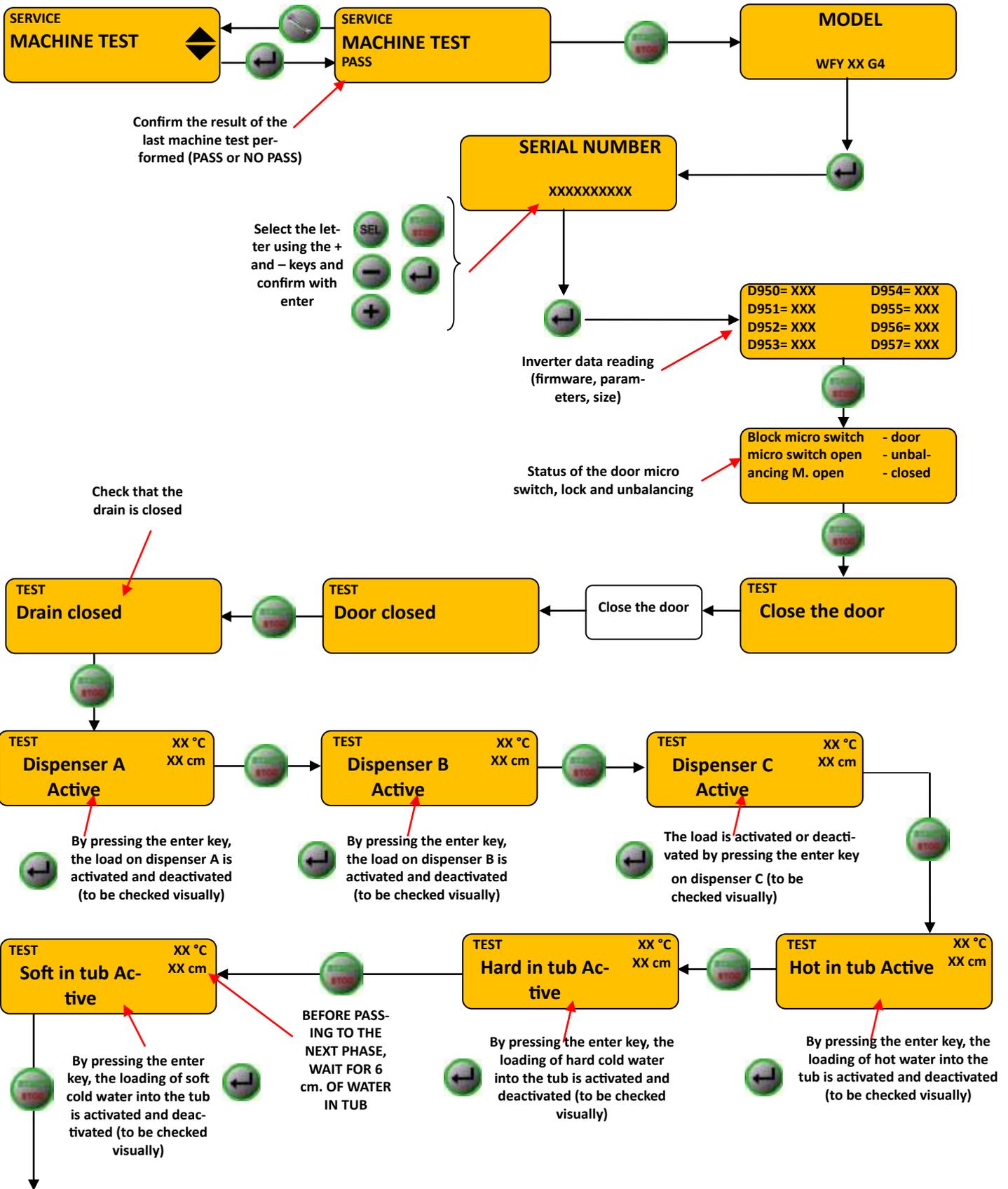


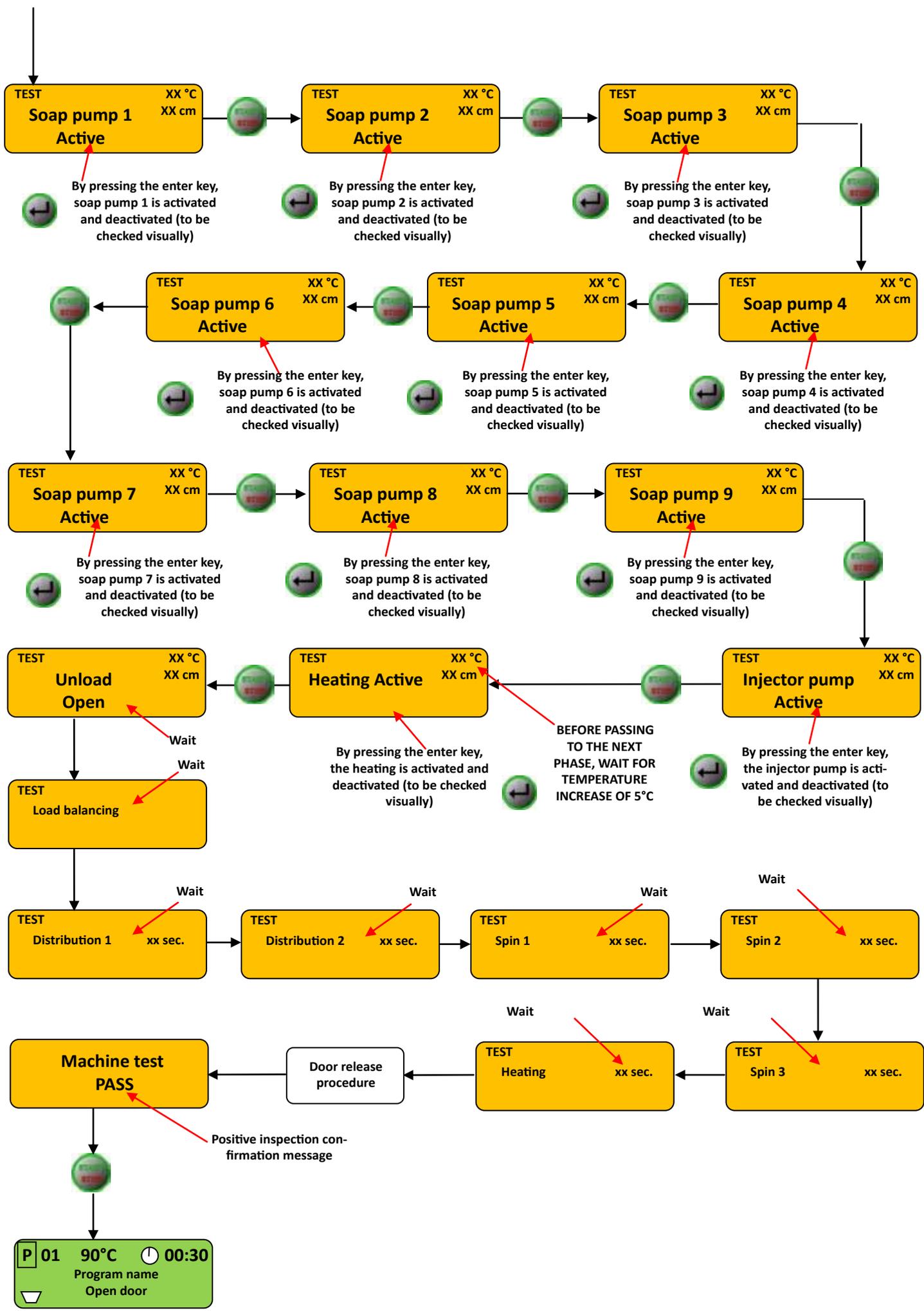


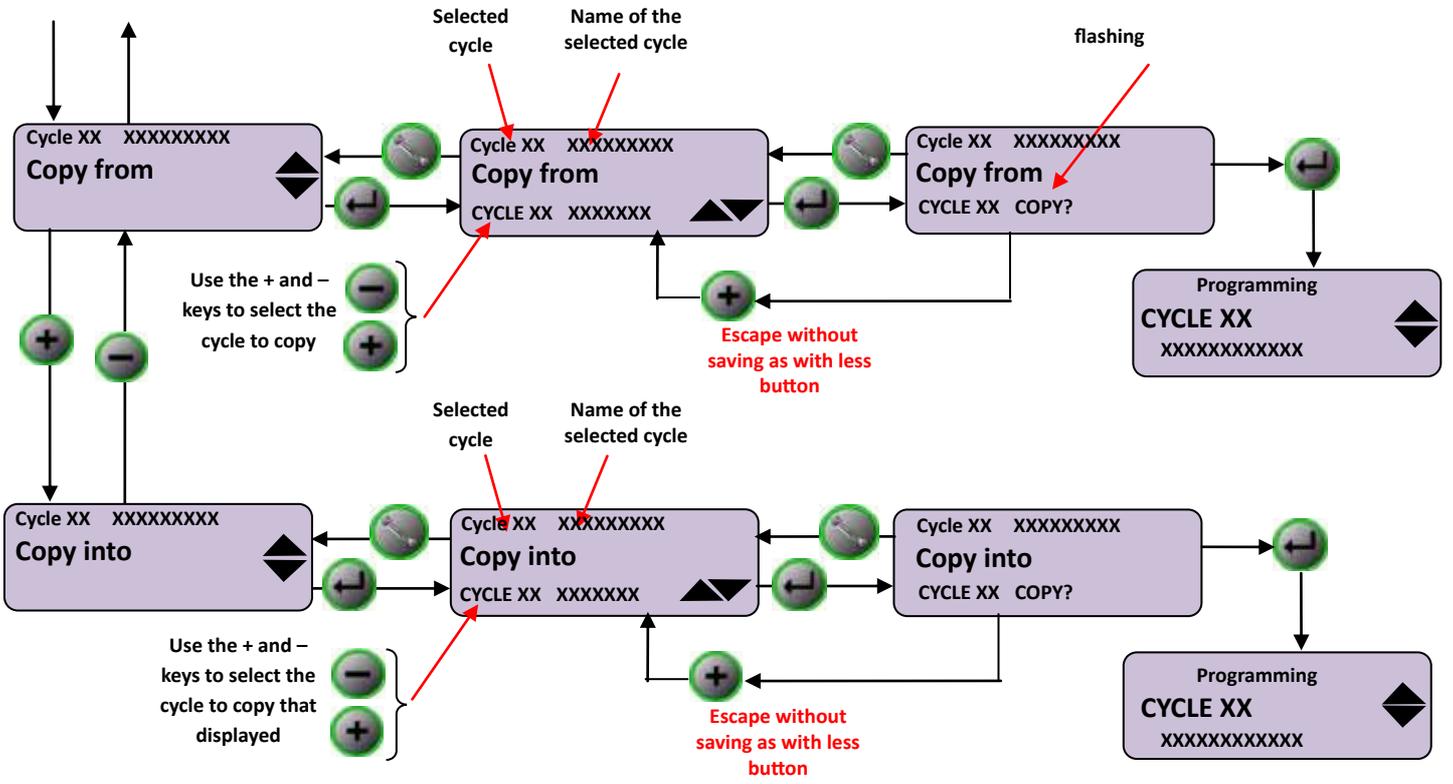




Point T







With G400 M, by pressing the mode key with door open and then the plus key, the details of the individual phases can be changed (level, temperature, duration, drum movement, etc.). In detail, in the PHASES menu it is possible:

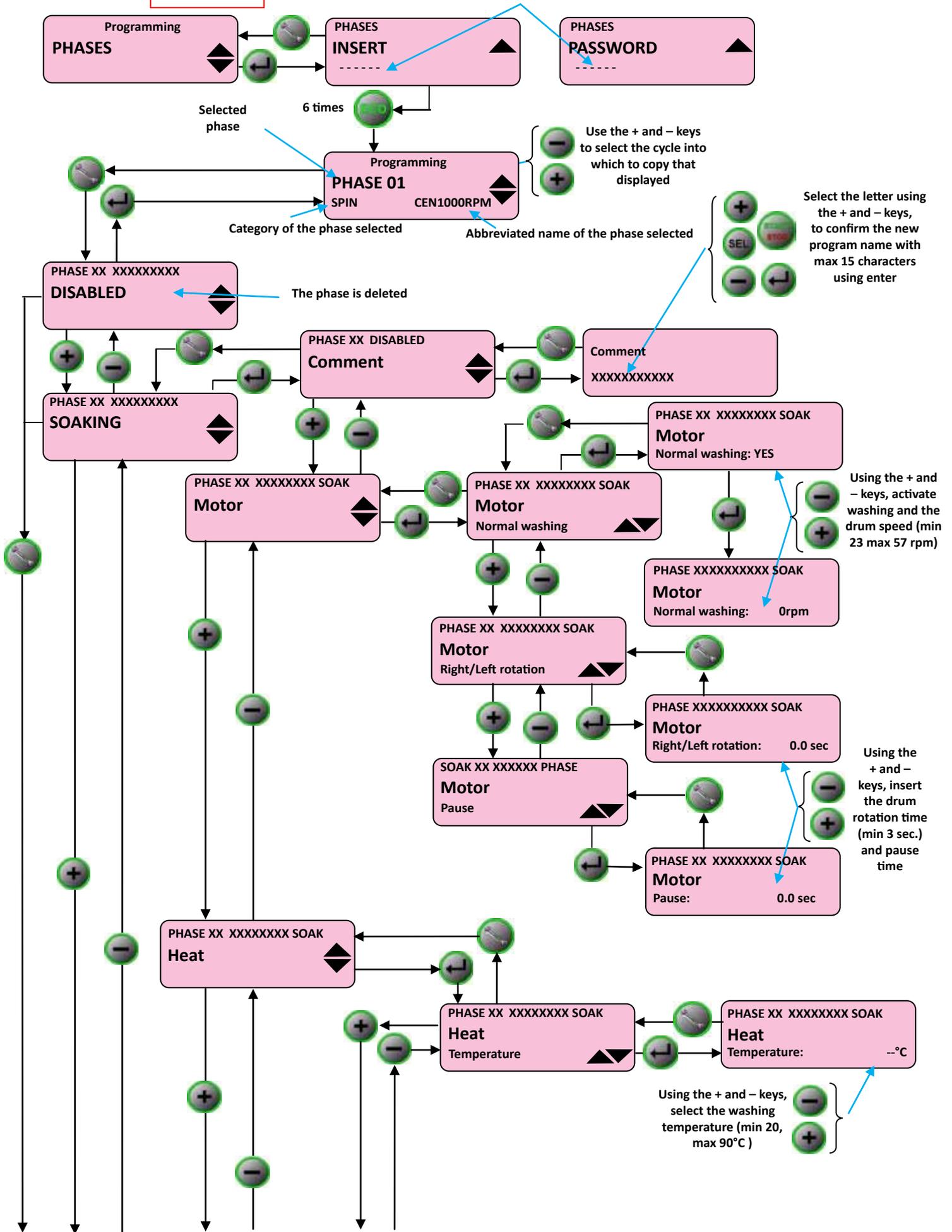
- Disable a phase (it is deleted). If this phase has been inserted in a program, the same will be by-passed.
- Change the destination between soak, prewash, wash, rinse, spin or unrolling
- In the soak, prewash, washing, rinse phases, it is possible to set:
 - an abbreviation of the phase name
 - to set the type of drum movement (rotation time, pause and speed)
 - heating temperature and temperature maintenance time
 - cooling and water level to maintain during this function (attention not to set a cooling temperature higher than the heating temperature or a cooling temperature lower than the inlet cold water temperature. Level 1 **must be** equal to the previous washing level.
 - The water level in the tub during these phases and the time to maintain this level if there is no heating function. If the load level is set after 99 cm, "overflow" appears and in this phase the machine loads water for the maintenance time in continuation. **The minimum water level depends on the version of the machine** (in the event of level lower than the resistances, heating does not take place).
 - The water load the tub with several water valves (hot suggested on cycles with high heating temperature, hard cold suggested on rinses or soft cold suggested on low temperature heating cycles)
 - Loading the small soap tanks (soap drawer) A (powder for prewash), B (powder for wash) or C (liquid for softener at last rinse). The load in the small tanks starts to reach the load level set.
 - enable draining at phase end, particularly useful if final spin must be performed, which if carried out with distribution with water in tub, has better load balance or if successive phases must be performed without draining the water.
 - The liquid soap loading time (on machines with pumps card option and pumps) where it is possible to activate the pumps for a determined period of time. The pumps from 1 to 9 are activated for the time set on reaching the pumps level set in the "MACHINE PARAMETERS" menu. However, if the injector pump is set differently to 0 seconds, it is powered for the entire phase when the water in the tub is at a level higher than the safety level.
- The following can be set in the spin phases:
 - the distribution time 1 (set minimum 10 sec. if distribution 2 is also used).
 - the distribution time 2 (set minimum 10 sec. if spin 1 is also used).
 - the distribution time 1 (set minimum 70 sec. if distribution 2 is also used).
 - the spin time 2 (set minimum 40 sec. if spin 3 is also used).
 - spin 3 time (do not set times longer than 180 sec. Longer times have no real impact on the result)
 - the maximum number of re-starts if unbalancing is detected
 - whether to perform start-up with water in tub; particularly useful for better balancing before final spinning
 - (the previous phase must have the phase end draining disabled!).
- The following can be set in the unrolling phases:
 - the phase time
 - the type of drum movement (rotation time, pause and speed)
- A phase can be copied instead of a different one using the COPY IN or COPY FROM controls.

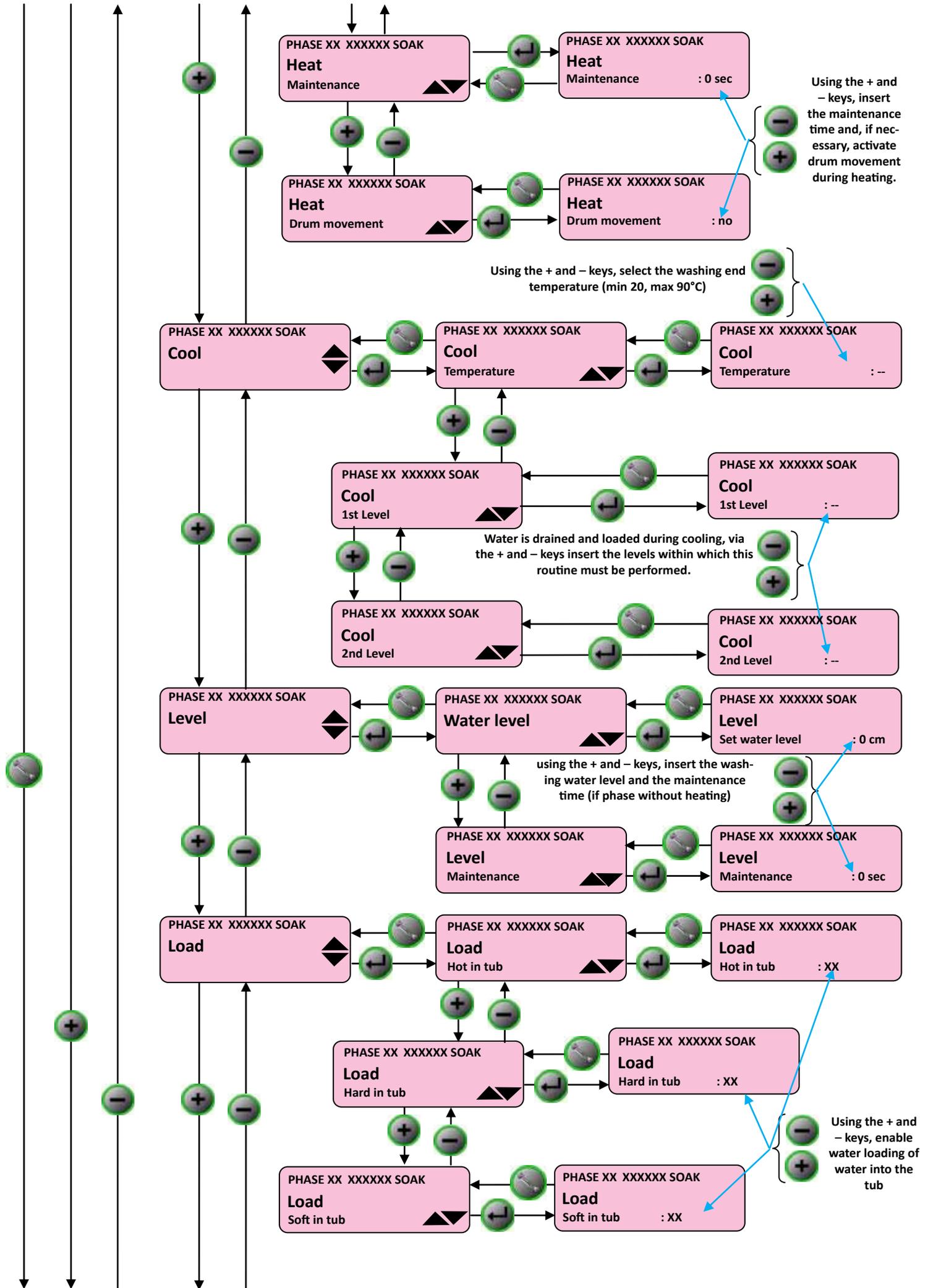
Attention, on completion of all phase modifications, confirmation is requested for storage of these modifications. They will be stored if the enter key is pressed. If **the plus or minus key is pressed programming will be exited without saving!**

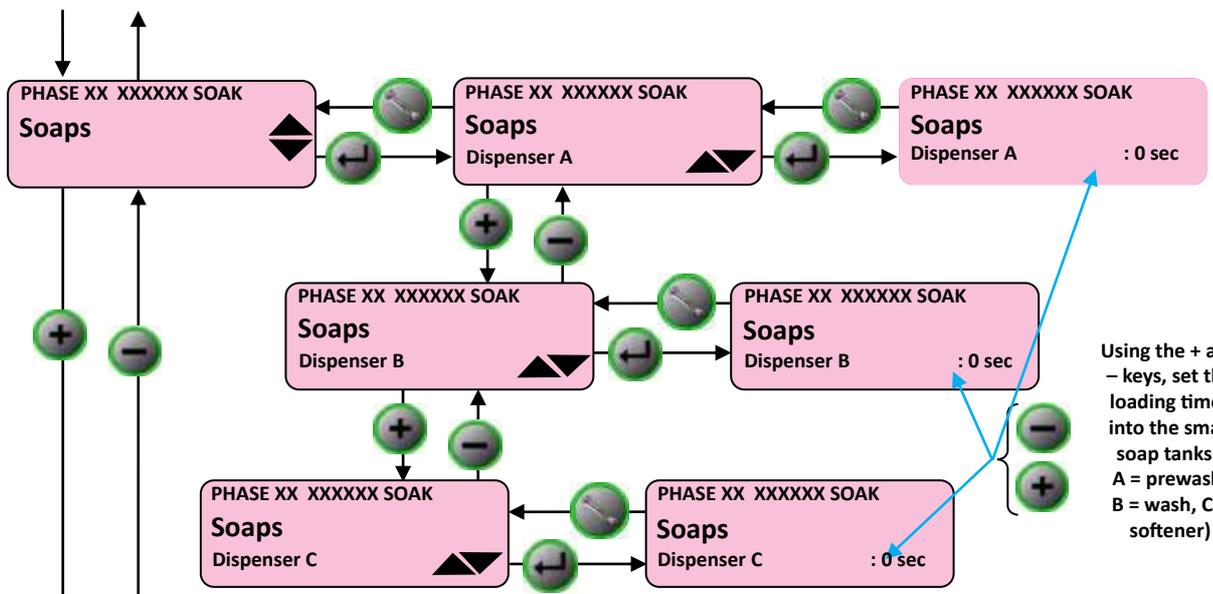
Phase 45 is dedicated to the weighing function that cannot be performed in the kg 33, kg 40 and kg 55 washing machine models and can be inserted only as first phase.

Point M

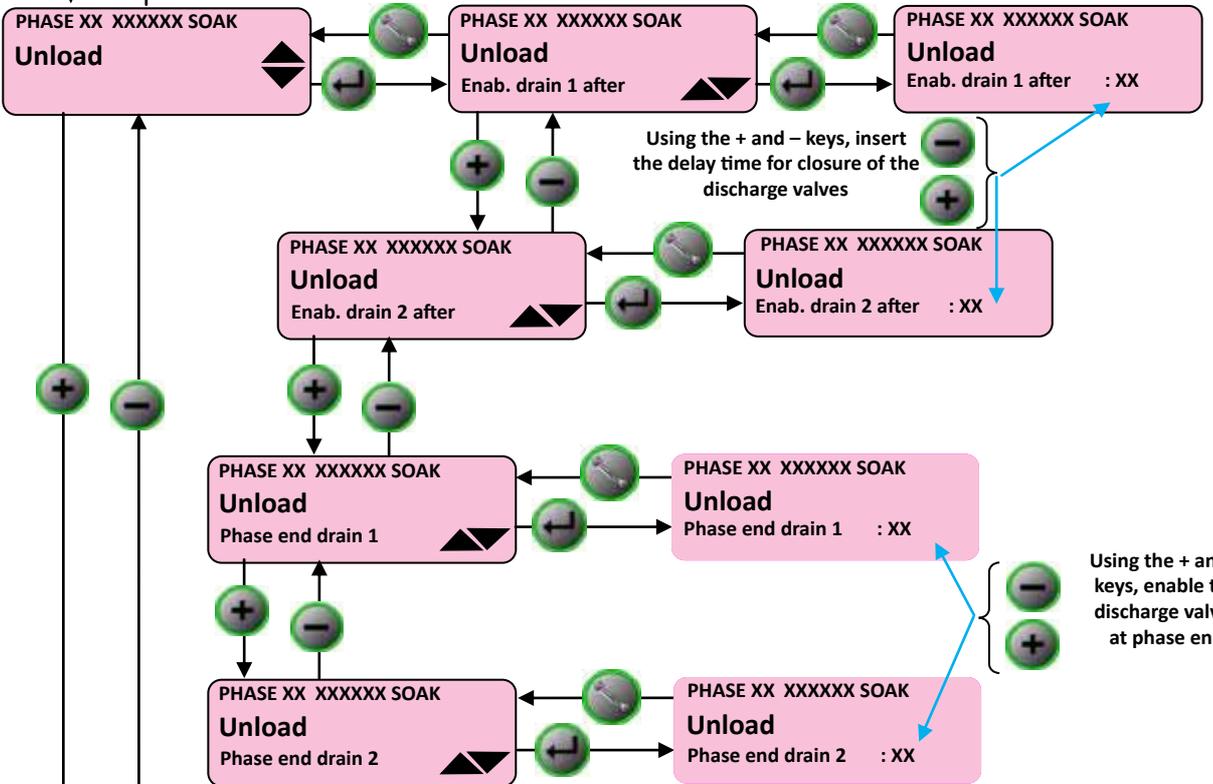
"ENTER PASSWORD" message, press the ECO key 6 times





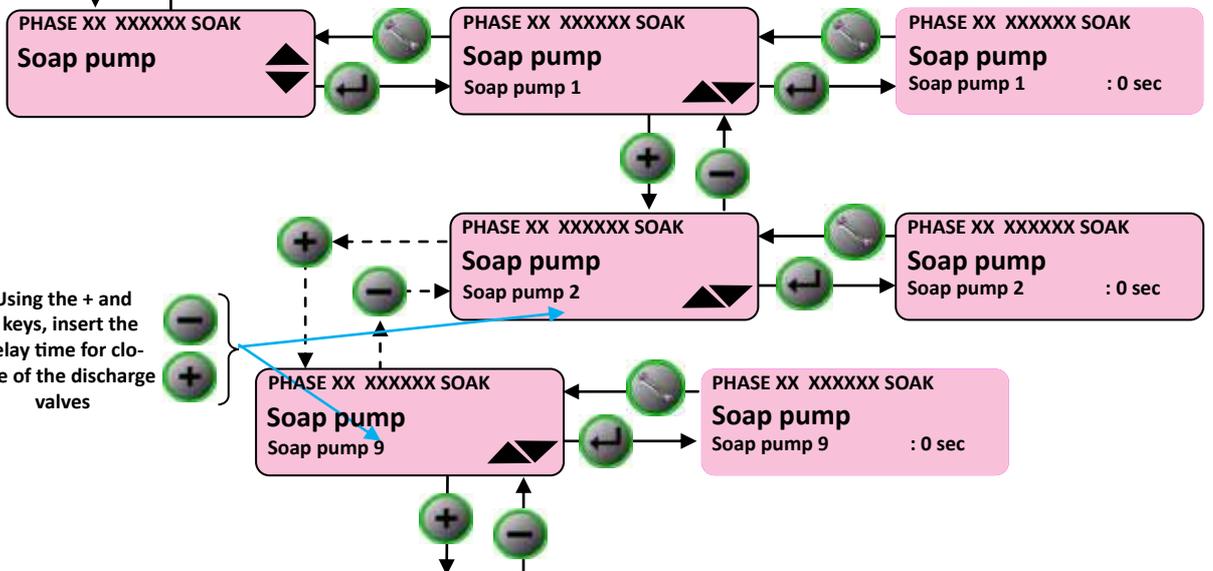


Using the + and - keys, set the loading times into the small soap tanks (A = prewash, B = wash, C = softener)

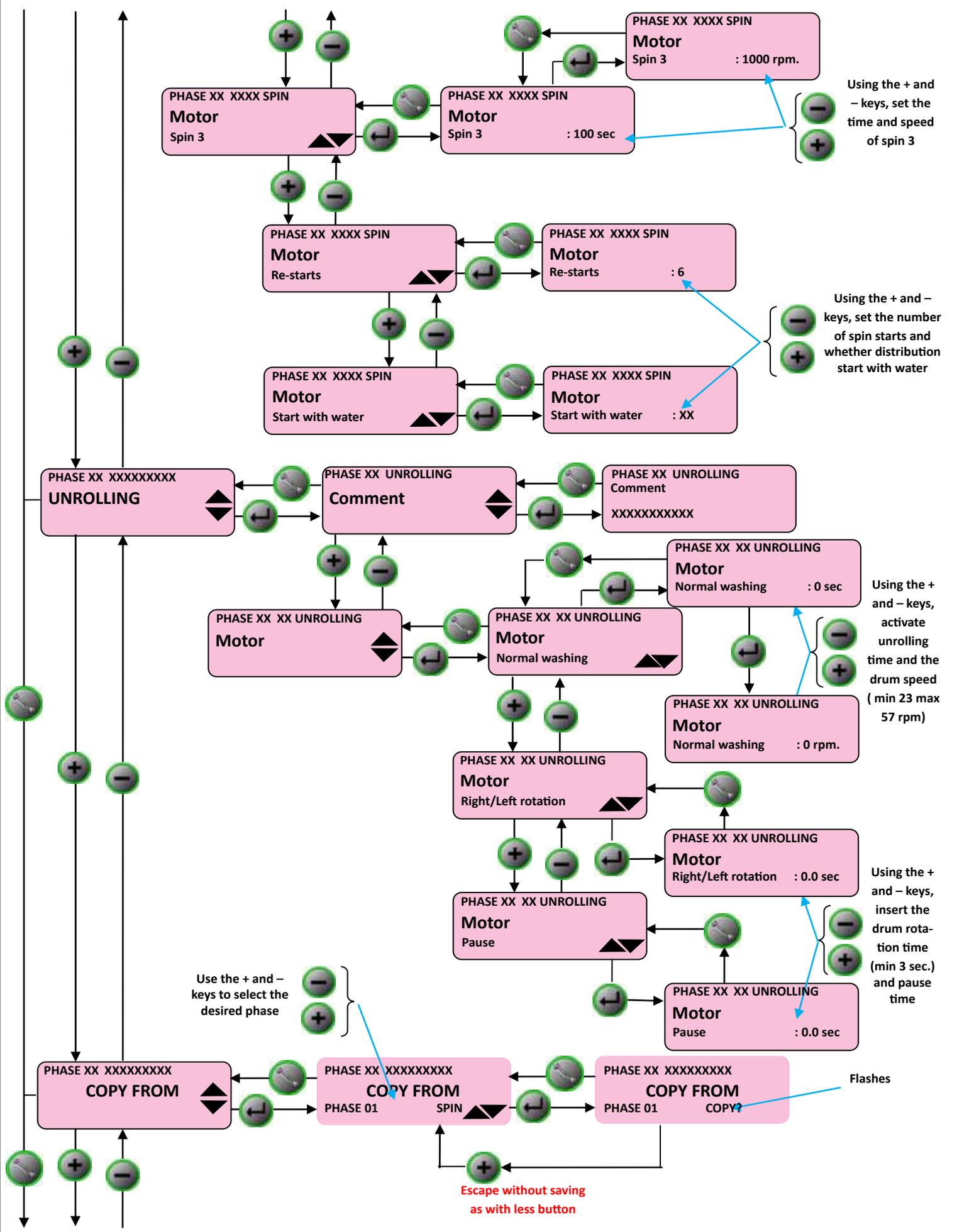


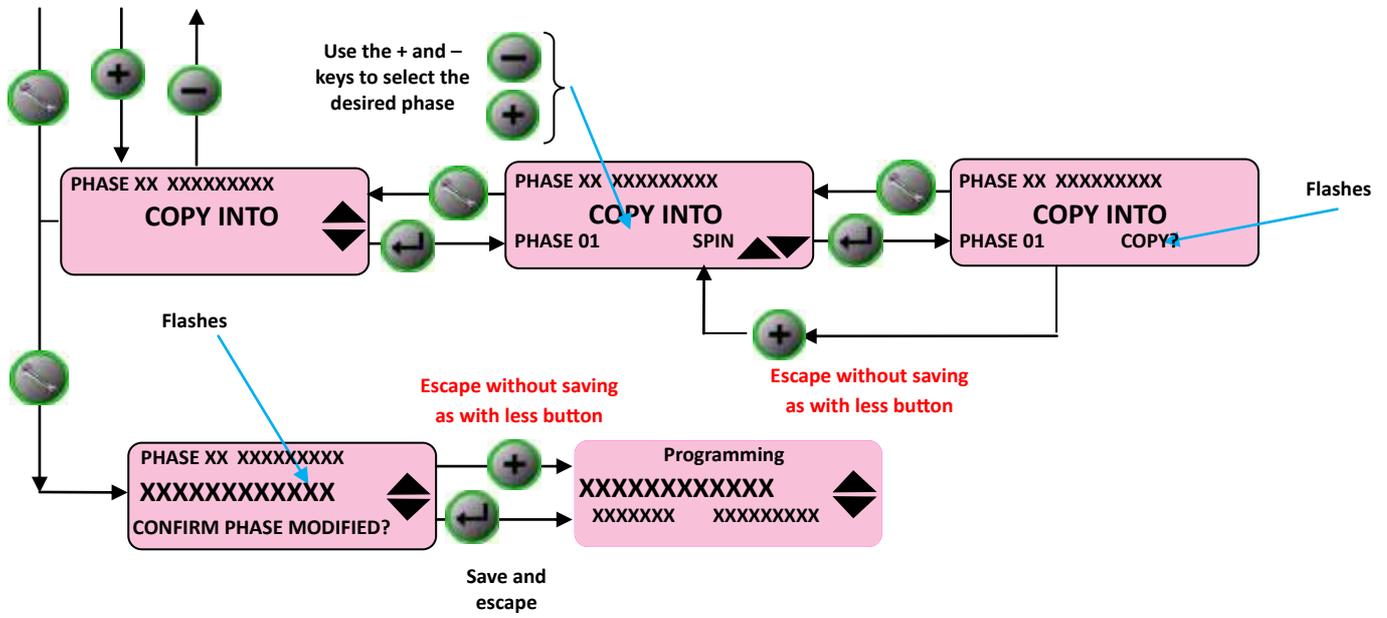
Using the + and - keys, insert the delay time for closure of the discharge valves

Using the + and - keys, enable the discharge valves at phase end



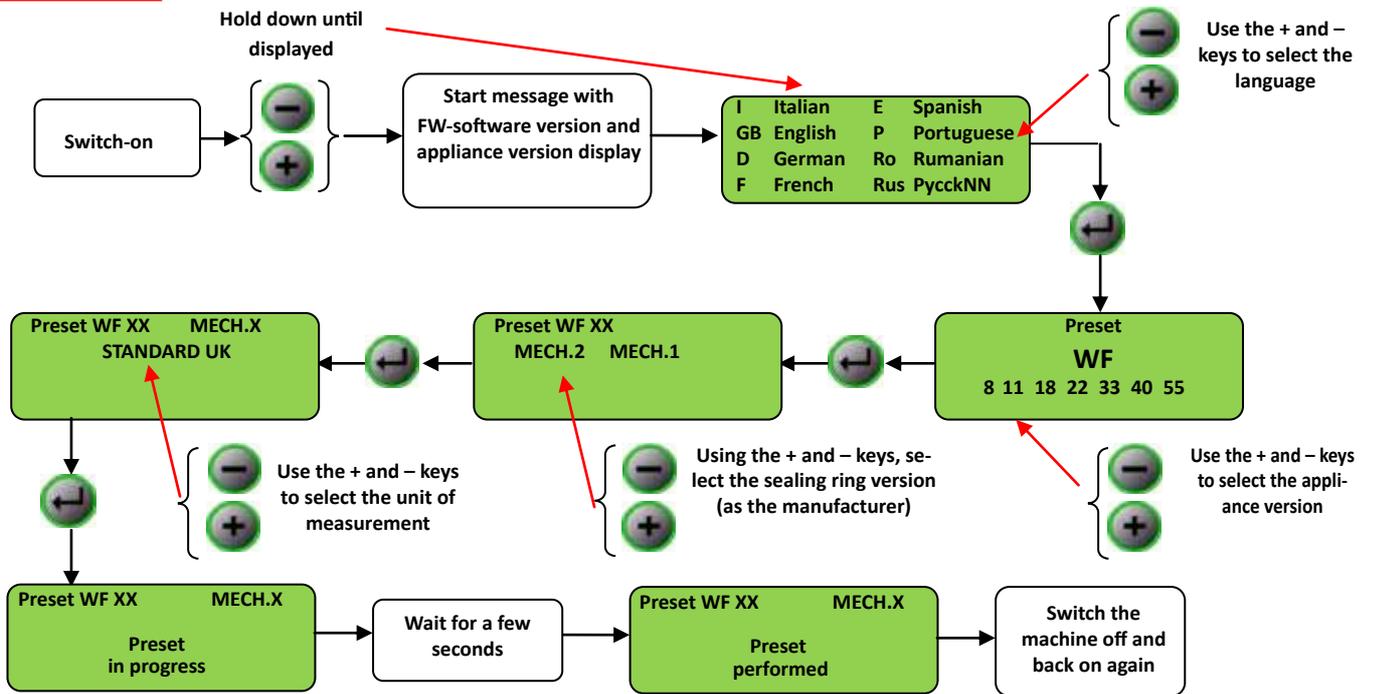
Using the + and - keys, insert the delay time for closure of the discharge valves



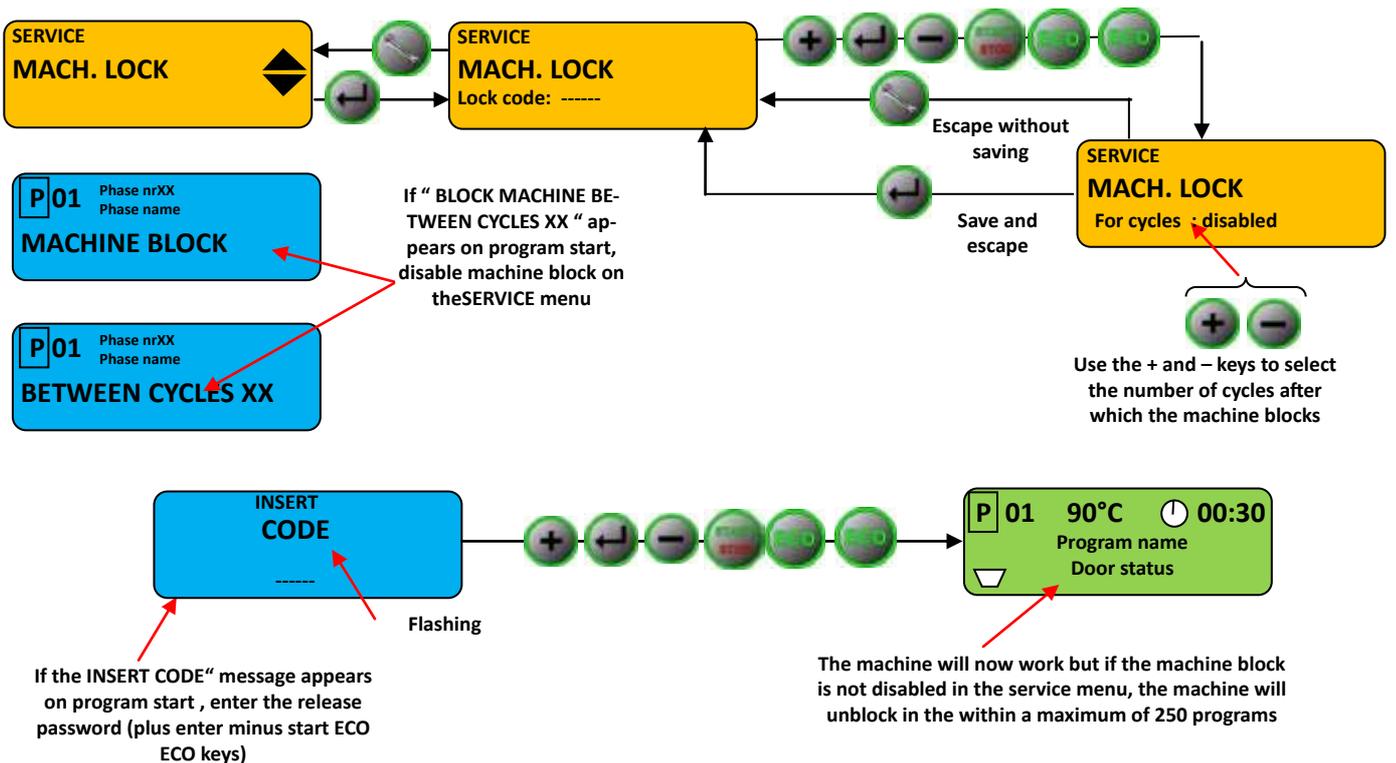


Attention, if the preset procedure is performed incorrectly, it can cause faults and malfunctioning. This procedure MUST be performed by qualified personnel, scrupulously following the instructions given.

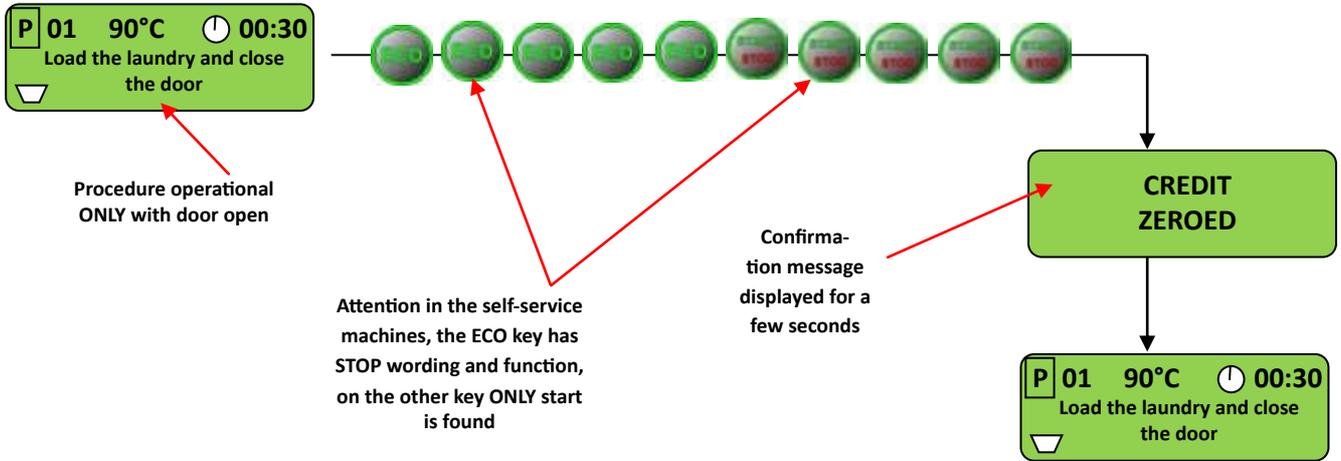
Point Z



Point P



Zeroing the credit on token machines



G400 → G400M → G400 passage with 16K smart card

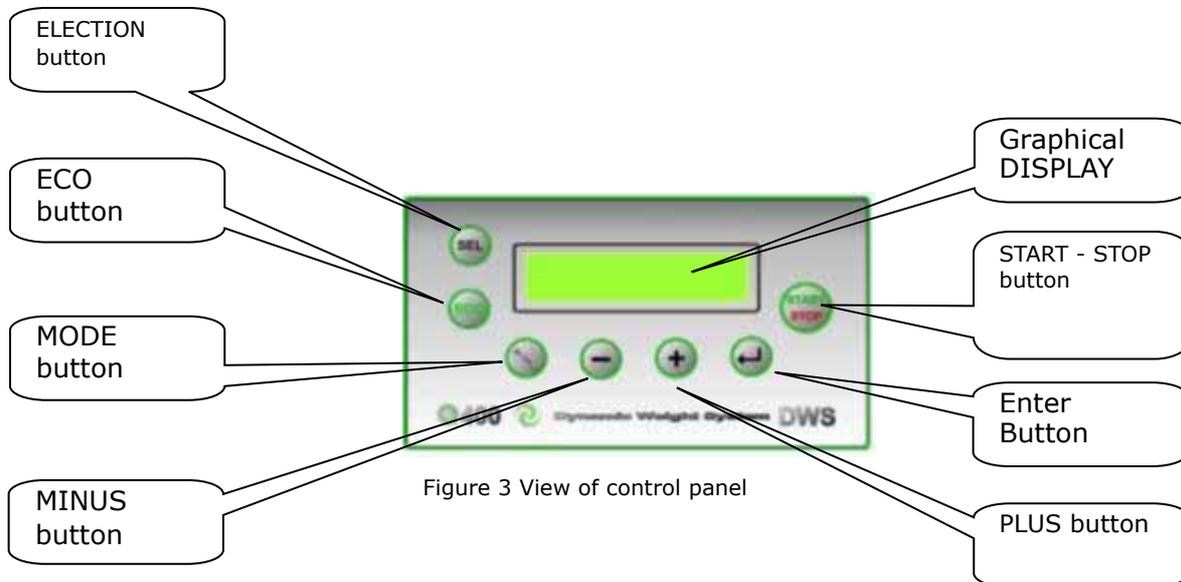
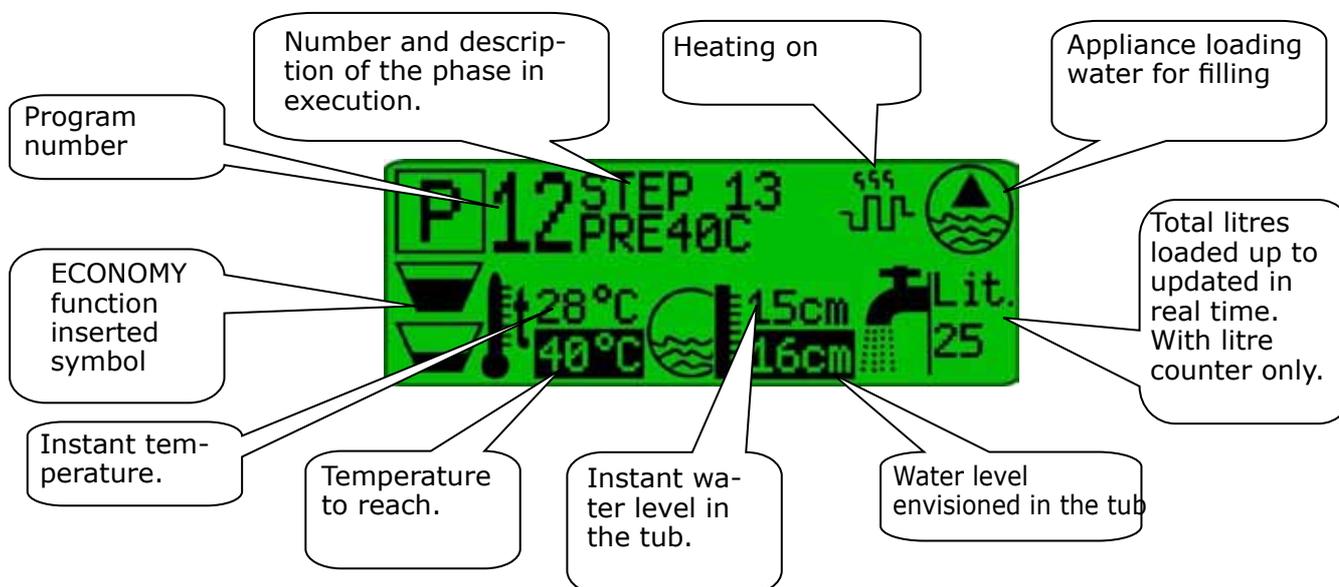


Figure 3 View of control panel

Cycle in progress and standard display.

	<p>During functioning the appliance displays the number of the washing cycle selected, the number and comment relative to the specific phase in progress and the icons that indicate, as described below, the activation of the various functions such as heating and load/unload of water from the tub.</p>
	<p>The display changes at regular intervals, indicating the estimated time remaining to the end of the washing cycle for a few seconds.</p>

Press the MODE button with the washing cycle in progress: the display changes to the following one and indicates the functional parameters if the drying cycle in progress.



Press the MODE button to pass to the following displays.
 Successive pressing of the MODE button takes the display to initial conditions.



Attention!

- **These modifications are not saved in the memory and therefore on the successive execution of the washing cycle, this will start as per original program.**
- **For all conditions where this is possible, the modifications to the programmed values are made using the "+" and "-" buttons and are immediately active, without confirmation.**

The screens are as shown below .

	<p>Read only screen. The active water inlets are highlighted (hot, hard and soft) for the phase of the washing cycle in progress and how many litres of water have been loaded up to that moment.</p>
	<p>Read only screen. The active water inlets at the dispenser for the phase of the washing cycle in progress are highlighted along with how many seconds of activation have been envisioned. At the end of activation, the amount relative to the active condenser will be "0" but will remain highlighted to indicate its activation.</p>
	<p>Read only screen. The active liquid soap pumps for the phase of the washing cycle in progress are highlighted along with how many seconds of activation have been envisioned. At the end of activation, the amount relative to the active pump/s will be "0" but will remain highlighted to indicate its activation. The OZONE injector signal just has the ON/OFF status.</p>
	<p>Read and modify screen. The motor activation setting is highlighted with rotation times and relative pauses. In the G400M version, the rotation speed in rpm can be varied with the washing cycle in progress.</p>
	<p>Read only screen. The activation setting of drain 1 and optional drain 2 is highlighted. A time different to 0sec indicates a closure delay of drain 1 or drain 2 or both.</p>
	<p>Read only screen. The temperature of the motor control electronic circuit is highlighted along with its dissipator, both situated in the appliance wiring compartment. IT IS NOT the motor temperature.</p>
	<p>Read and modify screen. For spin phases ONLY. The motor activation setting is highlighted with rotation times and relative speeds. The spin duration time can be changed. In the G400M version, the rotation speed in rpm can also be varied with the washing cycle in progress. The quality of the distribution of the laundry inside the drum is expressed via the letters A, B and C is expressed in the top right. A = bad distribution, long acceleration ramps and maximum speed reduced with respect to that envisioned. B = discrete distribution, medium acceleration ramps and maximum speed slightly reduced with respect to that envisioned. C = excellent distribution, very quick acceleration ramps and spin speed as per program.</p>

6.3 SELF-SERVICE

Indications valid only for kg8, kg11, kg18 and kg22 models.

6.3.1 INSTALLATION OF THE EMERGENCY STOP BUTTON

On the basis of the following Standard

ISO10472-1: paragraph 5.2

The emergency stop device is facultative on the appliances envisioned for self-service.

The models set-up for self-service, do not have an emergency stop mounted as per standard and therefore they must be made available in the room where the appliances will be installed; proceed as follows:

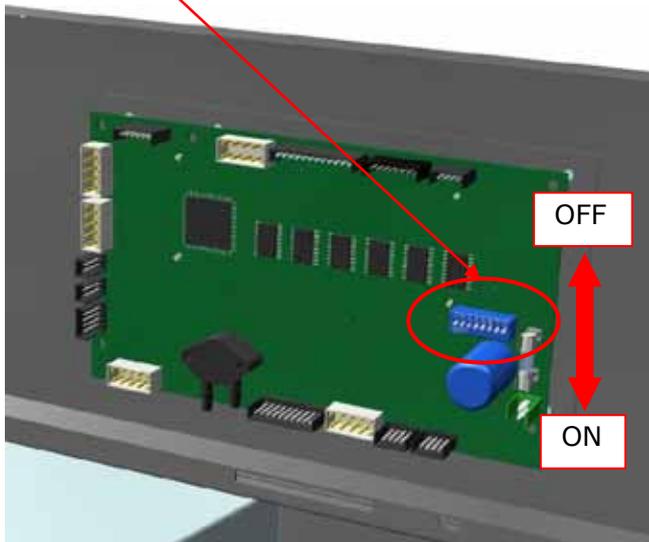
- There must be sufficient emergency stop device in the room, in a number such that at least one is always at a minimum distance of 2 mt from the appliances.
- Each emergency stop device must be positioned at a maximum distance of 8 mt from the areas destined to the operators.
- If the device consists in an emergency stop button, this must be positioned at a height between 70 cm and 170 cm above the ground or from the platform destined for the operators.

The emergency stop device or devices must be connected to the appliance electric power supply source in a way that on their intervention, they can remove the voltage indistinctly to all appliances present in the room used for self-service.

6.3.2 CARD SETTING

Using dip switch n°3 the appliance can be enabled to function by means of a mechanical or electronic coin operated device.

DS3 **APPLIANCE STATUS**
ON **WITH COIN OPERATION**
OFF **WITHOUT COIN OPERATION**



The "economy" function is not available in the coin operated versions and the ECONOMY button input becomes "rapid advancement". The START button therefore assumes just the cycle start function.

By programming from the push button control panel, set the number of tokens necessary to perform each washing cycle present on the appliance.

In order to start the cycle, the board must count just as many activations of the KGETT input (one activation at every token).

Washing cycle start then takes place as always using the START key.

6.3.3 VERSIONS

These versions can be present:

Coin operated
Central payment unit
Stepper
N° of payments: 1 – 10 (default 3)

6.3.4 DISPLAY INDICATIONS

As well as the normal display indications in wash cycle START stand-by condition, the following indications will also be displayed depending on the type of SELF SERVICE setting:

Coin operation with stepper

Writing displayed, with appliance waiting for payment and before activation of the START button:

"Insert n. tokens: xx"

External coin operation or central payment unit

Writing displayed, with appliance waiting for payment and before activation of the START button:

"Make the payment"

Electronic coin operation on the machine

Writing displayed, with appliance waiting for payment and before activation of the START button:

"Make the payment of €:xx.xx"

In this version the following message is also given:

"the machine does not give change".

6.3.5 CYCLE COST SETTING

To set the washing cost/cycle, apply voltage to the appliance with the **PRGET** contact closed, which is positioned on the rear of the same.

According to the type of SELF SERVICE management activated, there may be the following options:

Coin operation with stepper

The display shows the price (n. tokens) of the selected washing cycle with a display such as:

**Pxx :(program number from 01 to 20)
Cycle cost: xx (01-10)**

using the "PLUS" and "MINUS" buttons, the price can be modified (field 1...10) while using the "SEL" button, the washing cycle can be modified.

All cycles stored in the appliance are proposed, also those that are present but not enabled.

External coin operation or central payment unit

No price can be programmed because everything is managed with the remote payment system. The appliance is enabled for start-up with just one impulse of at least 200msec coming from the central payment unit.

Electronic coin operation on the machine

The display shows the price and cycle selected with a display that is:

**Pxx :(program number from 01 to 20)
Cycle cost: xx,xx €**

Using PLUS" and MINUS the price can be modified (field variable from 0.00€ to 99.95€with minimum steps of 0.05€) and with SEL button, the washing cycle can be modified, to which the sale price can be applied. All cycles stored in the appliance are proposed, also those eventually present and not enabled. To end programming,take the PRGET selector switch to "0" and remove and re-apply voltage to the appliance.

With the coin operation function enabled, switch the appliance on, the display shows:

The washing cycle selected with the maximum temperature envisioned.

The time programmed for the countdown.

"Insert n. tokens: xx"

Or **"Make the payment"**

Or **"Make the payment of €: xx.xx"**

Depending on the possible different payment method settings.

"xx" and "xx,xx" correspond to the value previously introduced, expressed as a number of tokens or cost in €, for that particular drying cycle.

During the insertion of tokens or coins the cost of the washing cycle will reduce until on introduction of the last token/'coin, the display indicates:

"00" flashing

The following wording appears with the door closed:

"PRESS START"

Press the START button to start the washing cycle.

With the door open, two different wordings appear:

**"load the laundry"
"close the door"**

On start-up of the drying cycle, the display shows the normal indications present also on appliances that are not envisioned for self-service.



Attention!

- The number of tokens or coins already inserted and not used remains memorised if there should be a power cut.
- The maximum credit, i.e. the maximum number of tokens counted is 10.
- The maximum credit, i.e. the maximum value that can be accumulated is 20.00€.

The residual credit can be zeroed with machine in stand-by to start the washing cycle and with the door open, following the procedure illustrated here. This must be concluded within the maximum time of 10 seconds:

Press the ECO key 5 times consecutively;
Press the START key 5 times consecutively;

The confirmation of zeroing of any residual credit takes place with the message covering the entire display:

“CREDIT ZEROED”

NOTE

The 10 second count starts from the first time the ECO key is pressed.



Attention!

- Only enabled washing cycles can be carried out;
- It is not possible to access programming of optional parameters;
- It is not possible to insert a pause during the washing cycle;
- In the event of a power cut during a wash cycle, when the voltage returns re-starts only occurs after the START button has been pressed, without having to insert other tokens/coins.
- The optional parameters enabled before insertion of DS3 remain active even after enabling of coin operation (except for “Cycle delayed start”).

6.4 OPENING AND CLOSING THE DOOR

To open the door, refer to figure:

- On KG 8 G400, KG 11 G400, KG 18 G400, KG 22 G400, pull the handle
- On KG 33 G400, KG 40 G400, KG 55 G400 turn the handle clockwise until the handle reaches the vertical position and faces down, now pull the door.



Figure 5 Figure 5 front view. KG 8 G400, KG 11 G400, KG18G400, KG 22 G400. Grip the handle and pull.

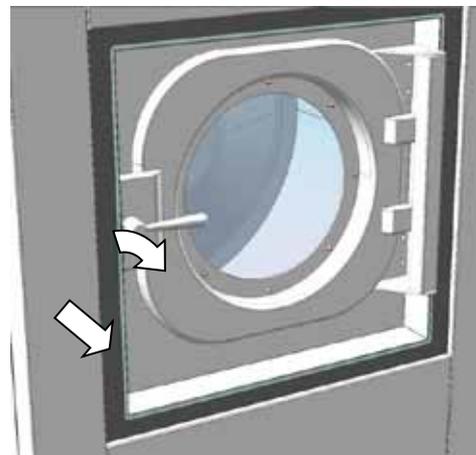


Figure 4 front view. KG 33 G400, KG 40 G400, KG 55 G400.

Turn the handle downwards clockwise to vertical position and then pull the door.

To close the door, refer to the figures:

- KG 8 G400, KG 11 G400, KG 18 G400, KG 22 G400 approach the door to the lock with handle pulled and then push the handle to end run (parallel to the door).
- KG 33 G400, KG 40 G400, KG 55 G400 approach the door to the lock with handle in vertical position (facing downwards) and then turn the handle anti-clockwise until it is completely locked (in horizontal position facing the right)



Figure 7 Approach the door and push the handle.

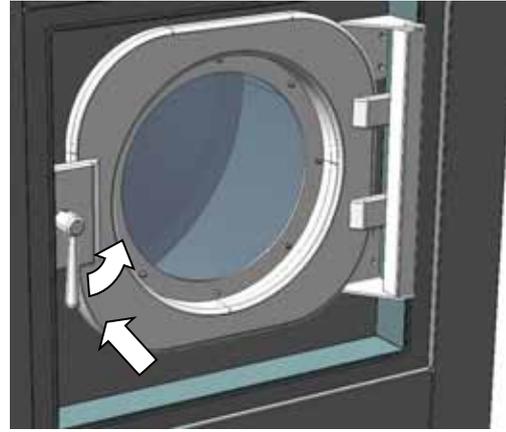


Figure 6 Approach the door to the lock and turn the handle anti-clockwise (keeping the door pressed) until the horizontal position of the handle.

6.4.1 LOADING THE SOAP IN THE DISPENSER DRAWER



Attention!

- **Use the I.P.D. devices recommended by the soap supplier when loading the dispenser drawer. In the event of contact with the soap, follow the indications suggested by the soap supplier.**
- **Only use non-foaming soap.**

KG 8 G400, KG 11 G400, KG 18 G400, KG 22 G400

Lift the rubber lid to open the dispenser drawer and load the soap.

KG 33 G400, KG 40 G400, KG 55 G400 Turn the dispenser door closing hook and accompany the door, turning it downwards.

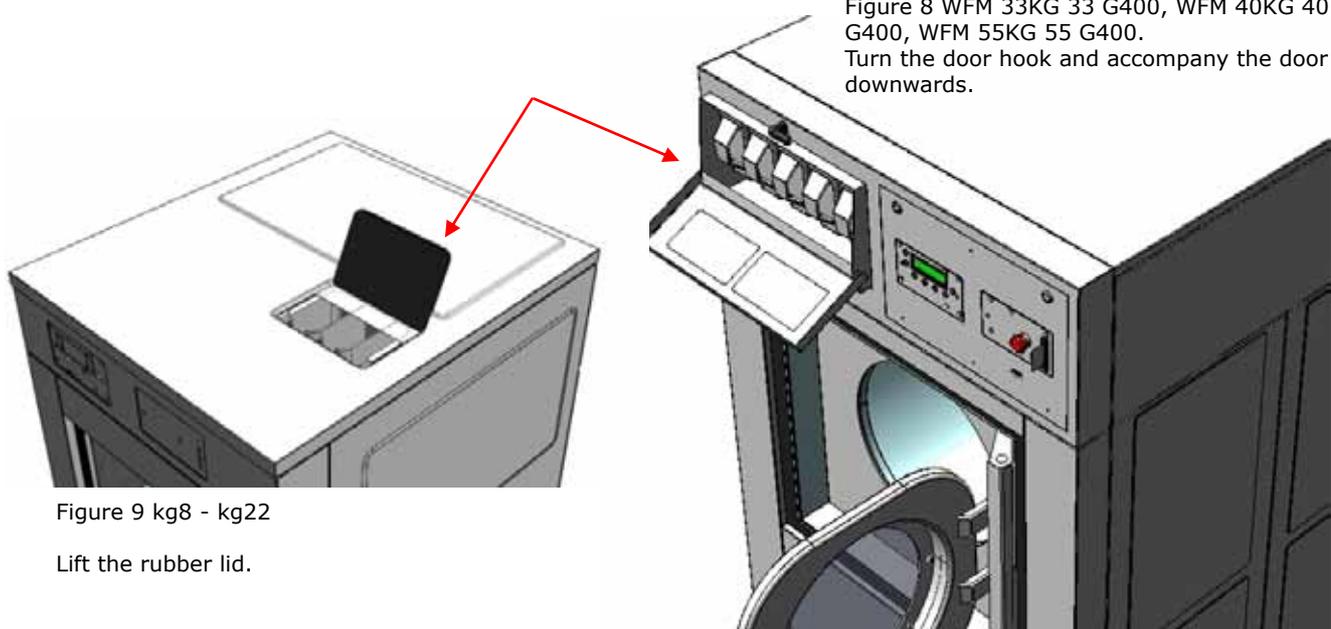


Figure 8 WFM 33KG 33 G400, WFM 40KG 40 G400, WFM 55KG 55 G400. Turn the door hook and accompany the door downwards.

Figure 9 kg8 - kg22

Lift the rubber lid.

When the dispenser drawer is open, load the soap depending on:

- indications of the soap supplier (quantity and type)
- indications stated on the label of the item to be washed
- type of cycle selected (if with pre-wash, washing, etc.)

Refer to the following figures to load the soap.

			Dispenser drawer. KG 8 G400, KG 11 G400, KG 18 G400, KG 22 G400
A	B	C	
Soap for cycles with prewash and/or soak	Soap for cycle with washing	Softener	
Powder soap only	Powder soap only	Liquid soap only	

			Dispenser drawer. KG 33 G400, KG 40 G400, KG 55 G400
A	B	C	
Soap for cycles with prewash and/or soak	Soap for cycle with washing	Softener	
Powder or liquid soap	Powder or liquid soap	Powder or liquid soap	

KG 33 G400, KG 40 G400, KG 55 G400

The soap containers can be extracted from the drawer and used to be loaded more comfortably from the soap container.

When the soap has been loaded, put the soap container back in the dispenser drawer, paying attention that it remains in a horizontal position.

Close the dispenser drawer and block it using the hook.



Attention!

- **If one of the 5 soap containers is missing, do not use the appliance!**
- **Do not introduce more soap than that suggested by the supplier.**
- **Excess soap contributes to increasing environmental pollution, worsening washing efficiency.**
- **Excessive hypochlorite concentrations can cause oxidation of the metal parts also if not in direct contact with the same.**
- **Keep the powder soap away from possible contact with water.**
- **Incorrect concentrations of soaps or additives used during the washing phases can reduce the life span of the appliance and its performance.**
- **Keep the soap in a closed cabinet and out of the reach of unauthorised persons.**
- **Always keep the technical cards relative to the soaps used on hand.**

6.5 RECOMMENDATIONS FOR USING THE APPLIANCE

The nominal laundry load means carried out with dry laundry and in compliance with the Standard ISO 9398-4:2003.

For resistant fabrics such as cotton or linen, the use of the nominal load is recommended, while for delicate-synthetic fabrics, the use of a half load is recommended.

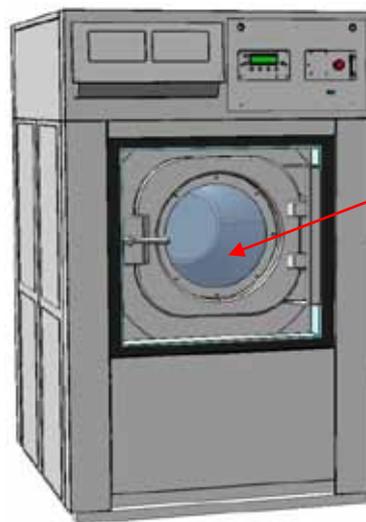
The amount of soap to be used must be recommended by the supplier of the same depending on the hardness of the water used.

Where it is not strictly necessary, it is recommended to carry out cycles with reduced water load and heating temperature in order to decrease appliance water and energy consumption, with consequent reduction of execution times of the cycle itself.



Attention!

- **Do not touch the door glass as during functioning it can reach 90°C.**



6.5.1 SYMBOLS (LABEL) APPLIED TO THE FABRICS

Symbols	Basic symbols
	Washing: the tub is the symbol for washing.
	Chlorine bleach: the chlorine bleach symbol is a triangle.
	Ironing: for ironing the symbol is the shape of an iron.
	Professional textile care.
	Professional washing.
	Tumble drying: A square containing a circle is the symbol for tumble drying.
Symbols	Basic symbols
	Treatment not allowed: as well as the previous symbols, St. Andrew's cross positioned on the symbol means that the treatment expressed by that particular symbol must not be performed.
	Moderate treatment: as well as the 5 symbols, the bar under the tub or the circle indicates that the treatment must be carried out moderately with respect to the treatment corresponding to the same symbol without bar.
	Very moderate treatment: as well as the 5 symbols, the interrupted bar under the tub indicates a very moderate washing treatment.
Symbols	Additional symbols
	Maximum temperature: 95°C. Normal machine action. Normal rinse. Normal spin.
	Maximum temperature: 95°C. Gentle machine action. Cool down rinse (due to gradual introduction of cold water). Short spin.
	Maximum temperature: 70°C. Normal machine action. Normal rinse. Normal spin
	Maximum temperature: 60°C. Normal machine action. Normal rinse. Normal spin
	Maximum temperature: 60°C. Gentle machine action. Cool down rinse (due to gradual introduction of cold water). Short spin
	Maximum temperature: 50°C. Gentle machine action. Cool down rinse (due to gradual introduction of cold water). Short spin
	Maximum temperature: 40°C. Gentle machine action. Cool down rinse (due to gradual introduction of cold water). Short spin
	Maximum temperature: 40°C. Gentle machine action. Normal rinse. Normal spin. Do not twist
	Maximum temperature: 40°C. Gentle machine action. Normal rinse. Short spin

	Hand wash only. Do not machine wash - maximum temperature 30°C. Handle with care
	Do not wash. Handle with care when wet.
Symbols	Tumble drying
	Tumble drying allowed. Normal drying program
	Tumble drying allowed. Low temperature drying program
	Do not tumble dry
Symbols	Natural Drying
	Line dry. The article is dried by hanging it WET on a line after having removed the excess water.
	Drip dry. The garment is hung wet, dripping, with or without re-shaping, without removing any excess water.
	Dry flat. The garment is re-shaped and dried on a flat surface after the removal of any excess water.
	Dry in the shade. This symbol is placed at the side of the line drying, drip dry or flat dry symbols to indicate that the process must be performed away from the action of direct sunlight.
Symbols	Bleaching
	Chlorine-based bleaching allowed only in a cold and dilute solution.
	Do not use chlorine bleach.
	Any oxidising agent bleach allowed.
	Only oxidising bleach without chlorine allowed.
	DO NOT bleach.
Symbols	Ironing
	Iron at a maximum sole-plate temperature of 200°C.
	Iron at a maximum sole-plate temperature of 150°C.
	Iron at a maximum sole-plate temperature of 110°C. Steam ironing may be risky.
	Do not iron. Steam ironing and treatments are not allowed.
Symbols	Professional textile care.
	Dry cleaning in all solvents normally used for dry cleaning including the solvents indicated for P symbol as well as trichloroethylene and 1.1.1. trichloroethane.
	Dry cleaning with tetrachloroethylene, monofluorotrichloromethane as well as all solvents indicated for F symbol. Normal washing treatments, without restrictions.

	Dry cleaning using solvents indicated in previous point. Strict limitations on the addition of water and/or mechanical action and/or temperature during cleaning and/or drying. Self-service cleaning is not allowed.
	Dry cleaning with trifluorotrichloroethane, hydrocarbons (boiling point between 150°C and 200°C, flash-point between 38°C and 60°C). Normal washing treatments, without restrictions.
	Dry cleaning using solvents indicated in previous point. Strict limitations on the addition of water and/or mechanical action and/or temperature during cleaning and/or drying. Self-service cleaning is not allowed.
	Professional washing. Normal procedure.
	Professional washing. Delicate procedure.
	Professional washing. Very delicate procedure.
	Do not dry clean. No stain removal with solvents.

6.6 WASHING CYCLE START-UP

For the maximum load of laundry, see table below, drawn-up on the basis of the ISO9398-4:2003.

- Check the drum is empty and clean.
- Load laundry with the same mechanical features (type of fabric) and the same washing requirements (type of dirt, colour).
- Check the labels on every item and follow the indications given. Before washing any garment, make sure that any buttons, zips, clips and buckles face inwards.
- Check the pockets: they must be empty.
- Load the soap and check the amount of soap present in the liquid soap tanks: there must be at least that necessary for the washing cycle selected.
- Open the water and any steam and condensate drain/recovery gate valves (for appliances with this type of heating).
- Power the appliance. Check switch-on of the appliance display. Wait a few seconds for the cycle selection stand-by configuration to appear on the appliance display.
- Select the cycle **WITH DOOR OPEN** using the SEL button according to that stated on the labels of the garments to be washed and the indications of the soap supplier.
- Close the door and press the START/STOP button.

Start-up of washing cycle: follow the instructions below.

Appliance maximum load capacity (dry laundry)						
kg 8 G400	kg 11 G400	kg 18 G400	kg 22 G400	kg 33 G400	kg 40 G400	kg 55 G400
8.1 kg	10.5 kg	18.3 kg	24.4 kg	37.2 kg	44.4 kg	57.5 kg

At this point the door is blocked and the washing cycle starts. When the cycle has finished, the appliance signals program end with an acoustic message and the "open door" message appears on the display.

**Attention!**

- **The door must be opened without force; opening must be manual and only once release has occurred does "open door" appear.**
- **Before opening, always make sure that the drum is at a standstill, that the water has been drained and that the internal temperature has dropped below 40°C.**
- **Do not put laundry into the machine that has been cleaned, wet, washed or stain-removed with flammable or explosive materials. Proceed by hand washing.**

End of work: carry out the following operations.

- Leave the door open.
- Remove the voltage to the appliance via the master switch.
- Close the hot, cold water cocks and that of the steam and condensate recovery/drain (on the appliances with this type of heating).
- Disconnect the appliance from the mains electricity.

**Attention!**

- **Do not leave the appliance uselessly powered by the mains electricity.**
- **Switch the appliance master switch OFF when the same is not being used.**

6.7 AUTOMATIC EXECUTION OF A PROGRAM

The electronic control is already supplied with some standard programs.

On pressing the START button, the electronic control performs the phases necessary for the washing cycle selected. The basic washing cycle sequence envisions:

- weighing phase
- soak phase
- low speed spin phase
- prewash phase
- low speed spin phase
- washing phase
- low speed spin phase
- two rinsing phases with intermediate low speed spin
- final rinsing phase with final maximum speed spin
- unrolling phase.

**Attention!**

- **One or more phases may not be present on all programs!**

Every phase has a drum movement action, water level and dedicated temperature for the type of textile to be handled.

6.8 DESCRIPTIONS OF THE STANDARD PROGRAMS SUPPLIED WITH THE APPLIANCE

Table 15

Cycle 1: Very soiled whites		Phase	Cycle 6: Terry cloth		Phase
Weighing		45	Weighing		45
40°C prewash with energetic wash action, low level, 6' washing after temperature reached, small tank A loading 30", pump 1 enabled 15"		11	40°C prewash with gentle wash action, medium level, 8' washing after temperature reached, small tank A loading 30", pump 1 enabled 15"		25
Short 500 rpm spin for 90 seconds		4	Short 500 rpm spin for 90 seconds		4
90 °C wash with energetic wash action, low level, 10' washing after temperature reached, small tank B loading 30", pump 2 enabled 15" cooling at 55°C.		5	60 °C wash with gentle wash action, medium level, 10' washing after temperature reached, small tank B loading 30", pump 2 enabled 15"		22
Short 500 rpm spin for 90 seconds		4			
Energetic rinse, medium level, 2' washing		16	Delicate rinse, medium level, 2' washing		17
Short 500 rpm spin for 90 seconds		4	Short 500 rpm spin for 90 seconds		4
Energetic rinse, medium level, 2' washing		19	Delicate rinse, medium level, 2' washing		18
Short 500 rpm spin for 90 seconds		4	Short 500 rpm spin for 90 seconds		4
Energetic rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"		21	Delicate rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"		20
Final spin at 1000 rpm 100 seconds		1	Final spin at 1000 rpm 100 seconds		1
Unrolling 90"		23	Unrolling 90"		23
Cycle 2: soiled whites		Phase	Cycle 7: delicate with soak		Phase
Weighing		45	Weighing		45
			40°C soak with delicate movement, high level, 10' washing after reaching temperature, pump 1 enabled for 15"		3
40°C prewash with energetic wash action, low level, 8' washing after temperature reached, small tank A loading 30", pump 1 enabled 15"		13	40°C prewash with energetic wash action, low level, 6' washing after temperature reached, small tank A loading 30", pump 1 enabled 15"		11
Short 500 rpm spin for 90 seconds		4	Short 500 rpm spin for 90 seconds		4
60 °C wash with energetic wash action, low level, 10' washing after temperature reached, small tank B loading 30", pump 1 enabled 15"		10	40 °C wash with energetic wash action, low level, 6' washing after temperature reached, small tank B loading 30", pump 2 enabled 15"		9
Short 500 rpm spin for 90 seconds		4	Short 500 rpm spin for 90 seconds		4
Energetic rinse, medium level, 2' washing		16	Energetic rinse, medium level, 2' washing		16
Short 500 rpm spin for 90 seconds		4	Short 500 rpm spin for 90 seconds		4
Energetic rinse, medium level, 2' washing		19	Energetic rinse, medium level, 2' washing		19
Short 500 rpm spin for 90 seconds		4	Short 500 rpm spin for 90 seconds		4
Energetic rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"		21	Energetic rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"		21

Final spin at 1000 rpm 100 seconds	1	Final spin at 1000 rpm 100 seconds	1
Unrolling 90"	23	Unrolling 90"	23
Cycle 3: soiled coloureds	Phase	Cycle 8: very soiled with soak	Phase
Weighing	45	Weighing	45
		40°C soak with delicate movement, high level, 10' washing after reaching temperature, pump 1 enabled for 12"	3
40°C prewash with energetic wash action, low level, 6' washing after temperature reached, small tank A loading 30", pump 1 enabled 15"	11	60 °C wash with energetic wash action, low level, 10' washing after temperature reached, small tank B loading 30", pump 1 enabled 15"	10
Short 500 rpm spin for 90 seconds	4	Short 500 rpm spin for 90 seconds	4
40 °C wash with energetic wash action, low level, 6' washing after temperature reached, small tank B loading 30", pump 2 enabled 15"	9	90 °C wash with energetic wash action, medium level, 10' washing after temperature reached, small tank B loading 30", pump 2 enabled 15" cooling at 55°C.	5
Short 500 rpm spin for 90 seconds	4	Short 500 rpm spin for 90 seconds	4
Energetic rinse, medium level, 2' washing	16	Energetic rinse, medium level, 2' washing	16
Short 500 rpm spin for 90 seconds	4	Short 500 rpm spin for 90 seconds	4
Energetic rinse, medium level, 2' washing	19	Energetic rinse, medium level, 2' washing	19
Short 500 rpm spin for 90 seconds	4	Short 500 rpm spin for 90 seconds	4
Energetic rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"	21	Energetic rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"	21
Final spin at 1000 rpm 100 seconds	1	Final spin at 1000 rpm 100 seconds	1
Unrolling 90"	23	Unrolling 90"	23
Cycle 4: delicate coloureds	Phase	Cycle 9: soiled with soak	Phase
Weighing (on KG 8-11-18-22)	45	Weighing	45
Delicate cold prewash, medium level, 5' washing, tank C loading 30", pump 1 enabled 15"	14	40°C soak with delicate movement, medium level, 10' washing after temperature reached	12
25°C wash with gentle wash action, medium level, 5' washing after temperature reached, small tank B loading 30", pump 2 enabled 15"	7	40°C prewash with energetic wash action, low level, 6' washing after temperature reached, small tank A loading 30", pump 1 enabled 15"	11
Short 500 rpm spin for 90 seconds	4	Short 500 rpm spin for 90 seconds	4
Delicate rinse, medium level, 2' washing.	17	90 °C wash with energetic wash action, low level, 10' washing after temperature reached, small tank B loading 30", pump 2 enabled 15" cooling at 55°C.	5
Delicate rinse, medium level, 2' washing.	18	Short 500 rpm spin for 90 seconds	4
Delicate rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15".	20	Energetic rinse, medium level, 2' washing	16
Final spin at 800 rpm 100 seconds	2	Short 500 rpm spin for 90 seconds	4
Unrolling 90"	23	Energetic rinse, medium level, 2' washing	19

Cycle 5: very delicate items	Phase	Short 500 rpm spin for 90 seconds	4
Weighing	45	Energetic rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"	21
Delicate cold prewash, medium level, 1' washing, tank C loading 30", pump 1 enabled 15"	15	Final spin at 1000 rpm 100 seconds	1
25°C wash with gentle wash action, medium level, 5' washing after temperature reached, small tank B loading 30", pump 2 enabled 15"	7	Unrolling 90"	23
Delicate rinse, medium level, 2' washing	17	Cycle 10: rinse and spin	Phase
Delicate rinse, medium level, 2' washing	18	Energetic rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"	21
Delicate rinse, medium level, 3' washing, tank C loading 30", pump 3 enabled 15"	20	Final spin at 1000 rpm 100 seconds	1
Final spin at 500 rpm 90 seconds	24	Unrolling 90"	23
Unrolling 90"	23		



Attention!

KG 8 G400, KG 11 G400, KG 18 G400 and KG 22 G400

- The washing programs from n° 11 to n°19 are identical to washing cycles from 1 to 9 without the initial weighing phase.
- The minimum water level in the drum is electronically fixed at 4 cm.

KG 33 G400, KG 40 G400 e KG 55 G400

- The washing programs are from 1 to 10 and always without weighing, not possible on these models.
- If the appliance has been re-programmed via PC or from the keyboard or several special functions have been activated, do not refer to table 15.
- The manufacturer reserves the right to modify the features of the pre-loaded programs at any time.
- The minimum water level in the drum is electronically fixed at 22cm.

6.8.1 WEIGHING FUNCTION

The appliance is fitted with a particular patented function that allows to measure how many kilograms of fabric are loaded in the drum.

The weighing function takes place in automatic mode and the operator must only load the laundry, which must be dry, select the desired washing program (from 1 to 9 with weighing), close the door and press the "START / STOP" button.

The weighing procedure has duration of about 1 minute and cannot be by-passed via the START button.

The quantity of water, soap and the washing speed normally set are halved if the drum is empty. The nominals remain if the drum load measured corresponds with the capacity of the appliance. All intermediate load levels are proportional.



Attention!

- **Carrying out a cycle without laundry means seeing the water level in the tub halved and a very slow drum rotation speed!**
- **To change the automatic weighing and to set it in manual, the settings must be changed via the PC connection and the relevant software or with 16kB smart card,. Contact the after-sales service for further details.**
- **The weight value read from the appliance is never shown on the display in the automatic weighing procedure. This only takes place in the event of the manual procedure.**
- **The weighing function detects the weight of the loaded laundry and therefore if this is wet, the value is falsified.**
- **The weighing function requires taring every 50 cycles performed with weighing. Follow that stated below for the tare operation.**

6.9 CALIBRATION OF THE DWS SYSTEM



Attention!

- **Every 50 cycles the display show a message that calls the operator's attention to perform calibration.**

Perform the operations summarised here in sequence:

1. Empty the drum completely;
2. Switch the appliance on;
3. Keep the door open;
4. Press the START button 10 times quickly and consecutively;
5. The calibration procedure starts;
6. Close the door;
7. Press the START button.

The appliance carries out the complete calibration procedure autonomously.

This operation reduces water and electric consumption of the appliance.

6.10 SECONDARY FUNCTIONS

At least one of the following conditions is required in order to change temperatures, levels and times of the individual phases:

- Have a smart card programmed with the necessary modifications (previously programmed via request to the technical after-sales service);
- Personal computer with WipWizard installed as well as serial cable (attention the serial port is optional on WF8G400, WF11 G400 and WF18G400);
- To have the G400M programmer, programmable from keyboard (standard for KG 22 G400, KG 33 G400, KG 40 G400, KG 55 G400).

A RS232 serial port is installed for programming via PC.

For the activation of the "data transmission and reading" mode, the appliance must be switched on using the "MODE" button, holding it down until the display shows the "WIZARD" indication and the icons of a PC and the appliance connected.

For further information:

- Contact the dealer or the technical assistance service.
- Consult the manual accompanying the programming via PC software.



Attention!

- **Do not try to read or program the appliance if you are not in possession of the appropriate serial cable and WipWizard application installed in the PC: the operation could damage the circuit boards.**
- **Contact the dealer or the after-sales service if appliance programming must be modified. The serial cable, the application to install in the PC and the instructions to make the requested modifications will be supplied.**

To modify programs, parameters, etc. of the appliance via Smart card, refer to figure 35.

The appliance has a smart card with which it is possible:

- To update the control electronics firmware with two 128kB smart cards.
- To modify programs and parameters (software) with 16kB smart card.

If you are interested, contact the dealer or after-sales service and supply details regarding the necessary modifications.

The smart card will be sent with the relative instructions for use. The optional is on the price list.



Attention!

- **Do not try to read or program the appliance using the smart cards that are different to the original ones (cash card, credit card, video hire card etc.) as it would be damaged irreparably. The manufacturer is NOT liable for incorrect and improper use of the smart card reader present in the appliance.**

6.10.1 INTRODUCTION TO THE PROGRAM

The structure of the washing cycles is defined by the manufacturer on the basis of most market requests. It is however possible with this manual:

- **G400 control:** to change the options (KG 8 G400, KG 11 G400, KG 18 G400).
- **G400M control:** to change all data of the individual functions in terms of level, duration, temperature, etc. (kg 8 G400, kg 11 G400, kg 18 G400, kg 22 G400, kg 33 G400, kg 40 G400, kg 55 G400).

During the execution of the washing cycle, it is possible to display some information regarding the phase in progress and several parameters can be changed (on conclusion of the phase, all modified parameters will go back to their original value) while the options or data of the individual phases can be modified only with appliances in stand-by for cycle start (door open). When modified they will remain as such until a new modification.

G400 CONTROL

It is possible to modify several options of the individual cycles such as:

- Modify the spin, exclude it or change duration (the speed can also be changed in the G400M control).
- Enable or disable the prewash, the undesired washing cycles, the buzzer, the cooling function.
- Set a delayed washing cycle, to be re-set every time necessary.
- Reduce the temperature of all washing cycles by 10°C.
- Change the heating hysteresis or the basic level at which the soap pumps are activated (if connected).
- Change the display off the time remaining to the end of the cycle or display mode of the washing cycle temperature.



Attention!

- **Some options, even if enabled, may not be envisioned. Therefore, they will not be performed (cooling on cycles with low temperature is not envisioned therefore even if enabled it will not be performed).**

G400M CONTROL

It is possible to modify all parameters of the individual operations performed in addition to that described for the G400 control.

In order to make modifications, consider that every program is made up from a group of phases put into sequence that can be recalled several times in the same washing cycle but, most of all, they can be used on several washing cycles.

The modifications can be made to the washing cycle (different phases inserted or others cancelled) or to the phases (change level, duration, temperature, etc.) but **every modification carried out on a phase means that all cycles that use this phase are modified.**

PROGRAMMING LIMIT FOR G400 AND G400M

20 washing cycles.

The library is made up of a maximum of 45 phases (of which 1 is forcedly the pressure).

At maximum, a washing cycle is made up of 19 phases.

6.11 SYMBOLS OF THE ICONS USED IN OPTIONS AND PROGRAMMING MODIFICATIONS

Symbol	Name	Description
	START/STOP	Cycle start button, forced advancement button of the washing cycle and cycle end. Used in the "comments" text to delete the character selected.
	MODE	Button used to enter and escape the menu address, escape without confirming variations or display information during execution of the program.
	ECO	Button used to reduce the amount of water of the selected washing cycle (only if without weighing).
	MINUS	Button used to change item in the menu, decrease the value displayed, shift to the left in the texts or comments.
	PLUS	Button used to change item in the menu, decrease the value displayed, shift to the right in the texts or comments.
	ENTER	Button used to confirm the value displayed, enter the menu item displayed or confirm the character to be modified.
	SEL	Button used to select the program (with door open) or select the letters (if texts, comments or maintenance technician name are inserted).

DISPLAY

The background colours used in this manual are only to help to understand the part of the menu in progress. The display on the appliance is always green with the text, icons and all parameters in black.

6.12 INSERT THE VARIOUS FLOW DIAGRAMS HERE

For immediate understanding of the instructions, these are displayed with flow diagrams.



Attention!

- **If voltage should be missing during the modify MACHINE, SERVICE, CYCLES, PHASES PARAMETERS, the data is not stored and the procedure must be repeated from the start.**

APPLIANCE SWITCH-ON AND RELATIVE BASIC FUNCTIONS

A beep is heard every time the button is pressed. At the end of the washing cycle the appliance emits a sequence of beeps for 15 seconds.

This sequence can be interrupted by pressing the – (minus) button. It is also possible to completely eliminate buzzer functioning if it is not necessary.

Setting on the relative BUZZER item in the MACHINE PARAMETERS menu.



Attention! **ECONOMY FUNCTION**

- **This function simply reduces the amount of water and soap load normally envisioned by the manufacturer.**
- **It is not to be intended as the "½ load button".**
- **It is only active in the cycles without weighing.**
- **The ECONOMY function reduces the water level in the tub and the reduction corresponds to a value of 20%, but this can be modified.**

6.12.1 MODIFICATIONS AND DISPLAYS DURING THE PERFORMANCE OF A PROGRAM

The washing cycle duration time displayed is programmed in "self-learning" mode i.e. at every washing cycle the appliance measures the real time passed from when the START/STP button was pressed up to the end of the washing cycle and re-proposes the time measured and updated on the next selection.

In the event of forced advancement of the washing cycle via the START/STOP button, this time is forcibly falsified. The appliance will perform the phases in the correct sequence even if the time displayed is 00:00.



Attention!

- **This washing cycle duration times are not however to be considered restricting for the performance of the cycle.**
- **They are used only to give a maximum indication. In fact, the duration of the cycle depends on different factors that can vary every time (amount of laundry loaded, temperature of the water loaded, etc.).**
- **During the PAUSE function, all functions are temporarily suspended, the water is not drained and the door remains blocked.**
- **The time self-learning function does not consider the duration of the pause inserted.**

It is possible to change some functions during the execution of the program, such as:
Proceed as follows.

- Water level in the tub;
- The temperature of the water in the tub;
- The maintenance time;
- The drum rotation speed.

Pressing the mode button again or during the different Soak, Prewash, Washing or Rinsing, Spin phases it is only possible to consult the information available.

- Pressing the MODE button while loading the water into the tub. The load water level can be changed (via the plus or minus keys);

- Pressing the MODE button while heating the water in the tub. The heating temperature can be changed;
- Pressing the MODE button during the countdown that determines the duration of the phase. The phase time can be changed;
- Pressing the MODE button during drum rotation. The drum speed can be changed.

NOTE.

All water level, temperature, time variations are performed by action on the PIUS and MINUS buttons.

6.12.2 APPLIANCE PARAMETERS MENU

With the door open and pressing the mode button, enter optional programming (APPLIANCE PARAMETERS). From this menu it is possible to:

- Not carry out cooling (if envisioned in the cycle sequence).
- Change the time (but not the speed) of the final spin (the value is expressed as a percentage of the nominal time of the final spin)
- Not carry out prewash (if envisioned in the cycle sequence). Any spin after the prewash will also not be performed.
- Perform a delayed start-up (the function and time desired are enabled). On exiting programming, on pressing the START button, the countdown will begin. This function must be reset every time it has to be activated.
- Disable the buzzer.
- Remove 10 °C of heating (on all cycles and phases) by selecting "reduced".
- Enable/Disable the cycles (in the event of disabling they will be hidden not deleted).
- Stop the drum during loading and draining of water.
- Change the heating hysteresis.
- Change the activation limit of the liquid soap load pumps (only if connected). The minimum level depends on the appliance version. The level must never exceed the washing level.
- "Force" draining at the end of every phase.
- Set the washing cycle temperature to be displayed as dummy, real or set.
- Set fixed arbitrary washing cycle execution display in self-learning or real mode.

6.12.3 SERVICE MENU

Press the MODE button with door open and then press the PLUS button to display the SERVICE menu.

A first level password is required to access the SERVICE menu. The factory setting of the same is pressing the ECONOMY button six times. From this menu it is possible to:

- Set the functioning language (9 languages available)
- Change the unit of measurement of the temperature (degrees Centigrade or Fahrenheit).
- Lengthen draining time.
- Change the password.
- Display the appliance log, such as water and electricity consumption divided by totals and last washing cycle performed.
- Set the start message ("large" comment is displayed in the top part of the display on ignition, "small" in the lower part, both with maximum of 16 characters).
- Verify the block status of the appliance.
- Test all appliance functions.
- Change the times relative to the water draining (E2) and heating (E4) alarms
- Set the economy button action percentage button (ECO).
- Set the heating with real temperature 10°C lower.
- Check the last 10 alarms occurring, with indication of the washing cycle and the phase when the event took place.

In order to be displayed, the other menu parameters (SPIN MOTOR, MACHINE TYPE, PASSWORD 2, CONVERSION, COIN OPERATED, WATER LOAD, MAINTENANCE, TARE CYCLE, DOOR TYPE) require a different password (password 2), which is only available to service technicians and not generally necessary for after-sales assistance.

6.12.4 TEST CYCLE

The appliance electronics envision a TEST cycle in order to verify all functions available during a washing program.

Follow the blocks diagram to identify how to perform the test cycle.



Attention!

- **Carry out the test cycle always with drum empty.**
- **The test cycle must only be performed by an enabled technician or an informed person.**

6.12.5 CYCLES MENU (ONLY WITH G400M ELECTRONIC PROGRAMMER)

With G400M, by pressing the MODE button with door open, the sequences of the phase that make up the washing cycles can be changed.

In particular, from the CYCLES menu it is possible:

- Replace one phase with another.
- Delete a phase.
- Insert a phase after a phase selected.
- Insert a phase before a phase selected.
- Copy a cycle onto a different cycle.

6.12.6 PHASES MENU (ONLY WITH G400M ELECTRONIC PROGRAMMER)

With G400 M, by pressing the MODE key with door open and then the PLUS key, the details of the individual phases can be changed (level, temperature, duration, drum movement, etc.). In detail, in the PHASES menu it is possible:

- Disable a phase (it is cancelled and not hidden!).
- If this phase is inserted in a washing cycle, this automatically does not contemplate it in the execution of the list of phases to perform.
- Change the destination between soak, prewash, wash, rinse, spin or unrolling (on the basis of the type of name change, all or part of the data inserted into the phase may be lost).
- In the soak, prewash, washing, rinse phases, it is possible to set:
 - The phase name.
 - the type of drum movement (rotation time, pause and speed)
 - Heating temperature and temperature maintenance time
 - Cooling and water level to maintain during this function.



Attention!

- **Do not set a cooling temperature that is higher than the heating temperature or a cooling temperature lower than the inlet cold water. Level 1 must be at maximum the same as the previous washing level.**

- The water level in the tub and the time this level must be maintained, if heating is not enabled. If the water load level is set over 99 cm, the wording on the display changes from "cm" to "overflow". The appliance therefore loads water for the entire maintenance time, without ever switching the inlet valves off.
- The minimum water level depends on the version of appliance being programmed (in the event of water level below the safety level, necessary at least to cover the heating resistances) the heating function cannot take place. It is not performed even if it is not performed.
- The water load in the tub with different water valves.
- Hot water inlet valve suggested in the cycles with high heating temperature.
- Hard cold water inlet valve suggested for rinsing.
- Soft cold water inlet valve suggested with low temperature heating or however when there are chemical products loaded in the tub.
- Loading the small tanks contained in the soap drawer.
- Enable the phase end draining, particularly useful in the final spin.
- The liquid soap loading time (on appliances with pumps card option and pumps)



Attention!

- **Small tank A. Corresponds to the left tub in the kg 8 G400, kg 11G400, kg 18 G400, kg 22 G400 appliances, while it corresponds to the first 2 left containers in the kg 33 G400, kg 40 G400, kg 55 G400 appliances.**
- **Small tank B. Corresponds to the central tub in the kg 8 G400, kg 11G400, kg 18 G400, kg 22 G400 appliances, while it corresponds to the first 2 central containers in the kg 33 G400, kg 40 G400, kg 55 G400 appliances.**
- **Small tank C. Corresponds to the right tub in the kg 8 G400, kg 11G400, kg 18 G400, kg 22 G400 appliances, while it corresponds to the first 2 right containers in the kg 33 G400, kg 40 G400, kg 55 G400 appliances.**

- where it is possible to activate the pumps for a determined period of time.
- The pumps from 1 to 9 are activated for the time set, starting from when the level of water in the tub set in the "MACHINE PARAMETERS" menu is reached.
- If the "Injector pump" is set with a value different to "0" seconds, it remains powered for the entire phase, starting from when the water in the tub is at a higher level than the safety level.
- It is possible to set the activation times of the different speeds in the spin phases:
 - The distribution time 1 (set minimum 10 sec. if distribution 2 is also used).
 - The distribution time 2 (set minimum 10 sec. if spin 1 is also used).
 - The spin time 1 (set minimum 70 sec. if spin 2 is also used).
 - The spin time 2 (set minimum 40 sec. if spin 3 is also used).
 - Spin time 3 (do not set times longer than 300 sec.).
 - Longer times have no impact on the extraction capacity result of the water.
 - The maximum number of re-starts if unbalancing is detected
 - If start-up is to be performed with water in the tub, useful for improved balancing of the load before the spin starts. The previous phase must however have the "phase end draining" disabled.
- The following can be set in the unrolling phases:
 - The duration of the phase.
- the type of drum movement (rotation time, pause and speed)
- A phase can be copied instead of another one using the COPY IN or COPY FROM controls.



Attention!

- **A storage confirmation of the modifications made is requested at the end of any phase modification made.**
- **Press the ENTER button to store**
- **Press the PLUS or MINUS button to escape without saving!**
- **Phase 45 is exclusively dedicated to the weighing function that is not performed by the KG 33 G400, KG 40 G400 and KG 55 G400 models appliances and can only be inserted as first phase on every washing cycle.**

6.12.7 PRESET OPERATION



Attention!

- If the preset procedure is performed incorrectly, faults and malfunctioning can be caused.
- It must be performed by an enabled technician or informed person.
- This procedure eliminates all modifications and any special programs installed on the appliance. Reset all standard values and programs by returning to the factory configuration.

6.13 FUNCTIONS/EXCEPTIONAL SITUATIONS

In the event of a power cut during the execution of a program, the appliance stops in safety until the power supply is restored.



Attention!

- The water in the tub flows into the drain and the door remains blocked.

When the power supply voltage returns the, appliance performs countdown and “**power fail**” appears on the display.

At the end of the countdown the appliance displays the “**START ?**” message.

Press the START/STOP button to re-start.

The washing cycle re-starts from the beginning of the phase in which the power cut occurred.

During the functioning of the appliance the functioning conditions are monitored constantly with the indication of an alarm code if an anomaly is detected. The code is “**E**” followed by a number.

For safety reasons the door is released with a delay of 90 seconds with respect to the display of the alarm itself.

After 5 min. the alarm display resets automatically but the event remains memorised.

If the cause that generates the anomaly persists, on appliance switch-on or on re-start of the washing cycle (the operator must press the **START** button again) the anomaly signal will be present again

6.13.1 ABORT PROGRAM IN THE EVENT OF ANOMALIES



Attention!

- The alarms generated by motor management and the inverter, request a long time in order to be reset, therefore do not switch the appliance back on immediately. Wait at least 5 minutes.
- Appliance switch-on before the 5 minutes envisioned can lead to the alarm being signalled again as time has not been given to the components to cool down and/or discharge.

After 5 minutes, release the door (refer to the relevant paragraph) and power the appliance again using mains voltage.

The "power fail" message will appear on the display and the appliance will go back to normal display after a few seconds.

6.13.2 DOOR RELEASE IN EMERGENCY

Door closed/open condition

The door opening and closing operation takes place via operator intervention, who uses the handle to open and close.

Door locked/released condition

The door lock and release operation takes place via the electric lock that is controlled electronically by the G400 electronic control.

The door is blocked, therefore the operator cannot open the door using the handle.

The door released state can only take place in two conditions:

- 1) At the end of the washing cycle the electronic control releases the door and opening is possible by the operator.
- 2) For emergencies via the manual release device. See the warnings below.



Attention!

- **Door release can be forced.**
- **Follow the instructions stated in this paragraph and before proceeding with release, check the following conditions:**
 - Drum at standstill.
 - Water drained completely.
 - Internal temperature below 40°C.
 - Switch the isolating switch off.

KG 8 G400, KG 11 G400, KG 18 G400 and KG 22 G400 DOOR RELEASE

The handle is released and the door can be re-opened.

Refer to figure 47 to identify the release cord.

If there is a power cut during the execution of a washing cycle, the door opening handle remains blocked. To release the handle, remove the front service panel and pull the emergency release cord, positioned on the lower left corner, downwards.

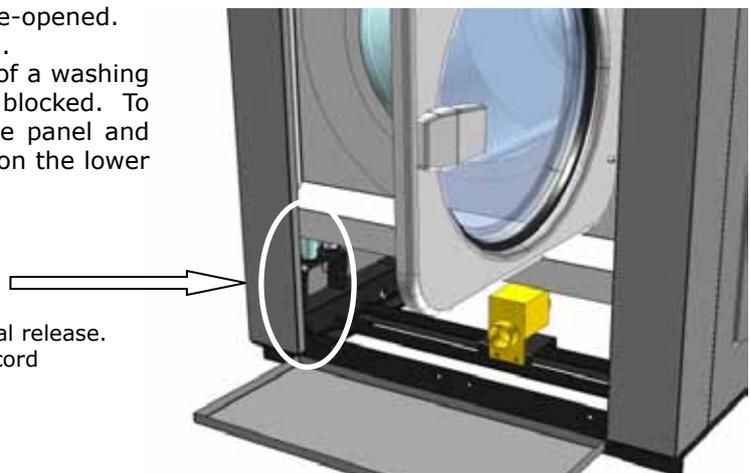


Figure 10 Door manual release.
Blocked lock release cord

KG 33 G400 , KG 40 G400 , KG 55 G400 DOOR RELEASE

If there is a power cut during the execution of a program, the door opening handle remains blocked. To release the handle, insert a flat head screwdriver with max. diameter 5.5 mm into the hole in the rubber protection near to the lock and press delicately (horizontally) and then open the door. Refer to figure 11 to identify the hole for introduction of the screwdriver.

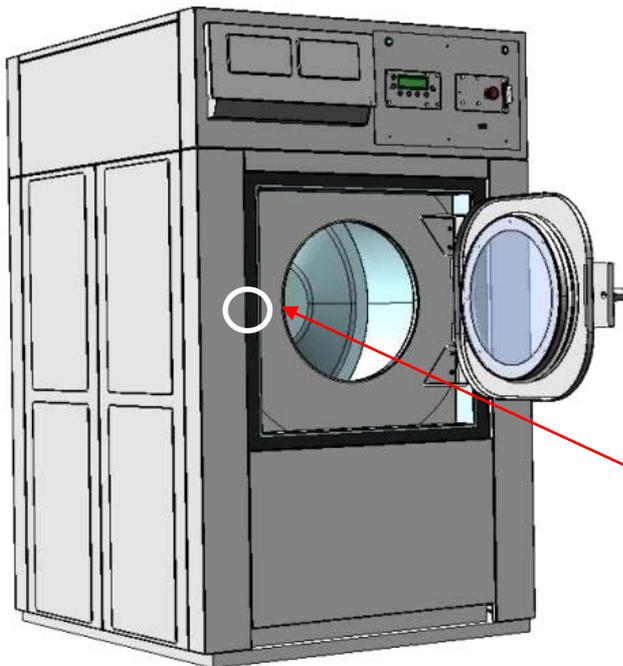


Figure 12 Hole on lock to release handle

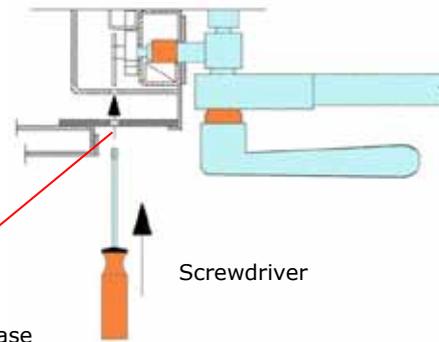


Figure 11 Door release mechanism.

6.14 SIGNS TO OBSERVE

Different messages or icons can appear on the display. For the identification of these, refer to the points highlighted successively.

6.15 INDIVIDUAL PROTECTION

Refer to the indications given in the technical sheets of the soaps used for identification of the individual protection devices during movement or loading of the soaps into the dispenser drawer.

6.16 OPTIONAL MODULES, ADDITIONAL

The following optional modules can be requested for the appliances, which increase the performance of the appliance in terms of control versatility:

- Liquid soap pumps control board kit. Possibility of controlling up to 5 soap pumps with just one kit.
- A maximum of 2 kits can be installed for a total of 9 soap pumps.
- Both kits are standard supply of the KG 33 G400, KG 40 G400, KG 55 G400 models.
- Liquid soap pumps kit (specify the amount of pumps desired and the capacity of the same).
- Serial port for communication with PC (standard for appliance with G400M programmer).

6.16.1 QUICK REFERENCE INSTRUCTIONS

Refer to the block diagrams for the execution of a program.

6.16.2 DISPOSAL OF WASTE

When the appliance is no longer to be used, it must be made non-operational, eliminating the materials and keeping that already stated in the paragraph "Putting the product out of service" paragraph in mind.

In compliance with the Standards regarding disposal of waste that are in force in the individual countries and for respect of the environment in which the appliance is installed, all appliance parts must be divided in a way that they can be disposed of separately or appropriately recovered.

All parts making up the appliance are assimilable to solid urban waste with exception of metal parts, which however, are not listed among special waste in most European countries.

USER INFORMATION

For the purpose and effects of Directives 2002/95/CE, 2002/96/CE and 2003/108/CE, relative to the reduction of use of dangerous substances in electric and electronic appliances, as well as the disposal of waste" the crossed-bin symbol on the appliance indicates that the product must be collected separately from other waste at the end of its useful life.

The separate collection of this appliance at the end of its life is organised and managed by the manufacturer.

If a new appliance is purchased, the user that wants to dispose of this appliance must therefore contact the manufacturer and follow the system that the latter uses to allow separate collection of the appliance at the end of its life. The adequate separate collection for the successive start-up of the appliance to be re-cycled, treatment and environmentally compatible disposal contributes to preventing possible negative effects on the environment and favours the re-cycling of materials that make up the appliance. Abusive disposal of the product by the user leads to the application of administrative sanctions envisioned by the Standards in force.

Refer to the WEEE European Directive regarding the recovery of parts (only for countries that are part of the European Community).



Figura 13



Attention!

- **When the appliance is put out of service, remember to remove - dismantle the door!.**

If it possible to dismantle the individual parts and take them to a differentiated collection centre, refer to the cataloguing groups of the individual parts.

If required, the cataloguing groups can be found in the website: www.euwas.org

7. MAINTENANCE AND CLEANING

Maintenance is divided into five different levels:

Corrective or necessary maintenance

Call-out intervention due to fault or sudden malfunctioning.

Routine maintenance

It has the purpose of preserving the efficiency and safety of the appliance.

Preventive maintenance

Intervene on the appliance in advance to prevent faults or malfunctioning on the basis of the manufacturer's experience.

Improval maintenance

Generally, adaptation for improving the protection rating of the appliance or adaptation to the amended Standards in force.

Extraordinary maintenance

All important modernisation interventions aimed at prolonging the life span of the appliance or the efficiency of the same, without modifying the functional features and the structure of the appliance.

The first three types of maintenance must be considered normal activities, which an appliance may and should undergo.

In the last two types of maintenance instead, significant variations can be made to appliance functionality. Repercussions 'occur at a Standards and legislative point of view, which must be taken into consideration.

Any improvement or extraordinary maintenance must be performed by authorised after-sales centres or by duly trained personnel.

All maintenance interventions not included in this manual exclude all liability of the manufacturer, which considers itself foreign to any possible repercussion of a legal character.

7.1 SAFETY PRECAUTIONS

All appliances must undergo regular technical maintenance and all defects detected, which can jeopardise the worker's health and safety, must be eliminated as soon as possible. All staff involved in the maintenance ad repair operations must be specifically qualified for these tasks.



Attention!

- **Before any maintenance operation, remove the voltage to the appliance and isolate all other power sources such as steam/ condensate drain or gas.**
- **Check the drum is at a standstill.**
- **Check that the internal temperature is below 40°C.**
- **Check there is no water in the tub before opening the door.**

The personnel assigned to maintenance of the appliances at any of the 5 levels envisioned, must be in possession of all the information necessary for the correct performance of the task assigned.

This manual supplies an important part of the information as well as the specific instructions supplied with the new component that replaces the equivalent faulty element.

Pay attention to all signals and follow all specific requests from the suppliers of the products necessary for cleaning and maintenance of the appliance. Read the instructions attached to these products and comply with the indications relative to the individual protection devices.

7.2 SAFETY FUNCTIONS WITH WHICH THE APPLIANCE IS SUPPLIED



Attention!

- **The appliance is supplied with the safety devices listed below.**

- Door closed detection micro switch.
- Door blocked detection micro switch. Cuts off the power supply to the auxiliary circuit, stopping the appliance.
- "Air-Break" system in the soap drawer. Prevent the pollution of the water network in the event of depressions.
- Drain valve normally open. If there is a power cut from the electric mains, the water is drained immediately.
- Unbalancing micro switch. Reduces mechanical damage to a minimum in the event of incorrect/anomalous loads of laundry.
- Heating resistances equipped with thermo-fuse. The electric power supply is cut-off in the event of an anomaly.
- Mushroom-shaped button. Allows to interrupt the cycle in the event of an emergency.
- Water level in tub sensor:
 - Do not power the heating in the presence of insufficient water.
 - Do not allow spinning until the water has been drained completely.
 - Check if the water level is too high.
- Temperature sensor. Control the temperature of the water.
- Micro switch on the dispenser drawer door. Interrupts the water load if opened during the washing cycle (only on kg 33 G400, kg 40 G400 and kg 55 G400).
- Inverter. Regulates motor speed, checks and protects the motor and itself from malfunctioning, such as: excessive temperatures of the circuits or heat dissipators, overcurrents, short circuits, etc.).
- Drain for "overflow" device. It is a pipe on the rear of the tub which, in the event of malfunctioning of the waster load valves, drains the excess water directly into the drain pipe, by-passing the discharge valve and preventing flooding (anti-overflow function)

7.3 MAINTENANCE AND CLEANING PERFORMED BY THE USER

7.3.1 CALIBRATION OF THE WEIGHING FUNCTION



Attention!

- Operation to be performed with appliance completely unloaded.
- Valid only for kg 8 G400, kg 11 G400, kg 18 G400, kg 22 G400 models.
- A calibration operation performed incorrectly (with drum not completely empty for example) compromises the performance of the appliance, both in terms of washing and consumption.
- Failure to perform the calibration function does not block use of the appliance.
- Continuing with use without performing calibration quickly deteriorates the performance of the appliance in terms of washing quality and energy consumption.

At least every 50 cycles, the appliance requests the TARE function via flashing **"PERFORM TARE"** on the display.

Press the START button 10 times with the door open. The display will show:

"CALIBRATIONS - close the door"

Close the door ("**door closed**" appears) and press the START button.

Start the calibration procedure, that ends after a few seconds, after which the door can be opened and the appliance can be used again.



Attention!

- A calibration operation at the start of every shift helps to keep the appliance particularly efficient.

7.3.2 DAILY AND WEEKLY CLEANING

- Keep the door gasket clean as this guarantees tub sealing. Do not use acid solvents or grease to clean the gaskets!
- Clean the soap drawer from any product residues.

7.3.3 MONTHLY CLEANING

- Wash the covering panels using a damp cloth, paying particular attention to keeping the parts around the dispenser clean.
- Do not use inflammable or abrasive products. For a better result follow the direction of the satin finish.



Attention!

- Always keep the forced cooling apertures free from dust (cooling fans) realised in the rear of the appliance, where the inverter is housed.
- Clean the display surface and control panels in general using

a slightly damp cloth. Solvents and/or abrasive substances irreparably damage these surfaces.

- Do not exert too much pressure.
- If body parts should come into contact with the liquid leaking from a damaged display unit, wash using soap and water.
- In the event of accidental ingestion of the fluid escaping from the damaged display glass, consult a doctor.
- Never use direct jets of water to clean the appliance.

The formation of condensate on the display glass can irreparably damage the display. Even if machine start-up is not envisioned, any drops of water must be dried immediately. Similarly to all electronic components, the display is sensitive to electrostatic discharges. At the end of appliance use, switch it off. Close the load gate valves (water and steam if present) and leave the door open.

7.3.4 DAILY, WEEKLY AND MONTHLY MAINTENANCE AND CLEANING REGISTER

Below find an example of how a routine maintenance register can be structured (type 2) to accompany the appliance.

Starting the appliance					
OK	KO	Activity	Date	Signature	Note
		Open the water and steam gate valves if envisioned.			
		Check the soap level of the appliance is with liquid soap.			
		Power the appliance.			
		Calibrate with empty drum (on Kg 8, Kg 11, Kg 18 and kg 22 only).			
		Record any functioning anomalies.			
End of the day					
OK	KO	Activity	Date	Signature	Note
		Close the electric power supply (main and differential switch).			
		Close the water and steam gate valves if envisioned.			
		Clean the tub contact area of the door gasket.			
		Clean and rinse the soap drawer from residues (rinse softener siphon on kg 8, kg 11, kg 18 and kg 22).			
		Check drum is empty and clean.			
		Leave the door open.			
		Record any functioning anomalies.			

7.4 ROUTINE MAINTENANCE AND CLEANING BY NOTIFIED OR TRAINED PERSONNEL



Attention!

- **Respect all indications relative to safety.**
- **Even if the isolator switch is in the off position, the input clamps can be powered and are therefore live!**
- **In the event of interventions on the motor or on the inverter (speed regulator), wait 5 minutes from switch-off of the isolating switch in a way that the residual voltage in the inverter has been discharged. If necessary, check that the voltage is lower than 30 Vdc on the inverter terminal board clamps identified with the “+” and “-” symbols.**

Never by-pass the safety devices for any reason.

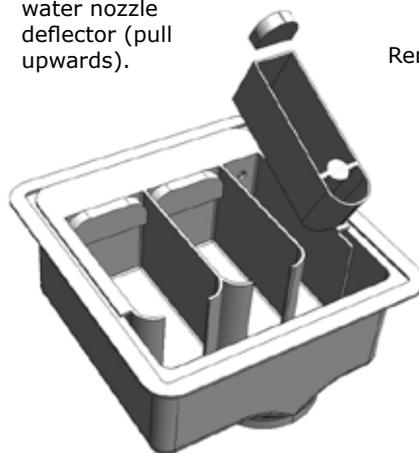
Only use original spare parts and if in doubt, consult the technical after-sales service as soon as possible, stating the model and serial number that can be found on the plate positioned on the rear of the appliance.

7.4.1 ROUTINE MAINTENANCE. MONTHLY CONTROL VALID FOR ALL MODELS

Check after the first 200 functioning hours or monthly and in all cases when one of the conditions below is reached:

- Check that the washing cycle does not start with the door open and that the door cannot be opened with the washing cycle in progress.
- Check that the water load electrovalves filters are clean.
- Check that the steam electrovalves filter is clean (in appliances with this type of heating).
- Use a dynamometric wrench to check the fastening screws used to fix the appliance to the floor
 - The floor bolts must be closed with a torque of 49 Nm for the kg 22 G400 model or 210 Nm for kg 33 G400, kg 40 G400 and kg 55 G400 models.
- Raise the appliance lid and clean the siphon in compartment C - softener (for kg 8, kg 11, kg 18, kg 22 only)

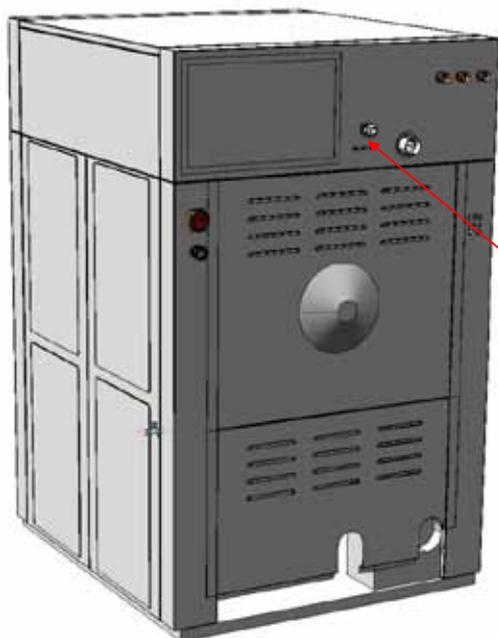
↑ Remove the water nozzle deflector (pull upwards).



Remove the softener tank.

Remove the softener siphon and rinse it.

7.4.2 ROUTINE MAINTENANCE. MONTHLY LUBRICATION (KG 33 G400, KG 40 G400, KG 55 G400 ONLY)



For kg 33 G400, kg 40 G400 and kg 55 G400 appliance models, every 200 functioning hours or once a month it is necessary to introduce lithium-based greases with additives for high pressures (NLGI 2) e.g. **SKF-LGEP2** or **ESSO-BEACON EP2** into the 3 greasing points positioned on the rear of the appliance.

Identify the lubrication points of the bearings in the figure at the side.

Figure 14 Position of bearing and sealing ring greasing attachments kg33G400, kg40G400, kg55G400.



Attention!

- **The grease is only used to lubricate the sealing ring, front and rear bearings.**
- **Excessive lubrication can be just as damaging as poor lubrication. During insertion of the grease, turn the drum at washing speed, e.g. perform washing cycle 1 and carry out the operation during the prewash phase.**
- **A grease thrust speed that is too high can deform the sealing ring and jeopardise functioning.**
- **Never use petrol-based lubricants with silicone-based lubricants.**

The appliance automatically signals the request for greasing at the start of the next cycle on reaching 200 hours of functioning.



Attention!

- **The grease introduced cannot reach areas of the appliance where the laundry is normally loaded.**
- **Introduce the grease slowly. To have an indication regarding the grease loading time, consider that every grease gun run must not last more than 12 seconds.**

The amount of grease to be introduced must be 2 cm³ for each greasing nipple (rear bearing, front bearing and sealing ring).

If the type of grease used is different from that indicated, check that the 2 types of grease are compatible. Lithium-based lubricants are compatible with calcium-based lubricants but not sodium-based.

Once lubrication has been performed, the message can be cancelled by zeroing the counter, following the zeroing procedure requested. See attached block diagram.

7.4.3 ROUTINE MAINTENANCE. YEARLY CONTROL VALID FOR ALL MODELS

The electronic control counts cycles and functioning hours of the appliance. Indicates the request for maintenance every 1000 cycles or yearly (as soon as one of the conditions is reached).

On appearance of the indication on the display, follow the activities below:

- Make note of the number of cycles performed and state it on the maintenance form.
- Check the correct functioning of the differential switch (where envisioned by the type of installation) by pressing the test button.
- Clean the drum motor cooling fan.
- Check closure of the floor fixing nuts (where envisioned).
- Check the correct closure of the power electricity connection screws on the remote control switches for heating and on the isolating switch.
- Remove the discharge valve and clean the inside to remove threads. Check that the water leaking through the drain during the washing cycle can be ignored.
- Check resistances functioning and remove any lime scale and threads.
- Check that the unbalancing micro switch functions correctly:
 - Intervene manually on the unbalancing micro switch during the spin.
 - Spinning must stop.
 - The micro switch rod is always centred in the clamp window, joined to the oscillating part of the appliance.
 - The distance between the micro switch actuator and the micro switch lever is about 0.2 mm.
 - Refer to the following paragraphs to access the unbalancing micro switch.
- Reset the maintenance manual as per procedure contained in the technical attachment relative to programming.

7.4.4 ACCESS TO THE UNBALANCING MICRO SWITCH

To access the unbalancing micro switch, access the inside of the 'appliance: refer to the first chapters of the manual for indications regarding how to identify the unbalancing micro switch.

7.4.5 ROUTINE MAINTENANCE. SPECIFIC ANNUAL CONTROL FOR KG 8 G400, WF11 G400, WF18 G400

TENSIONING THE DRIVE BELTS

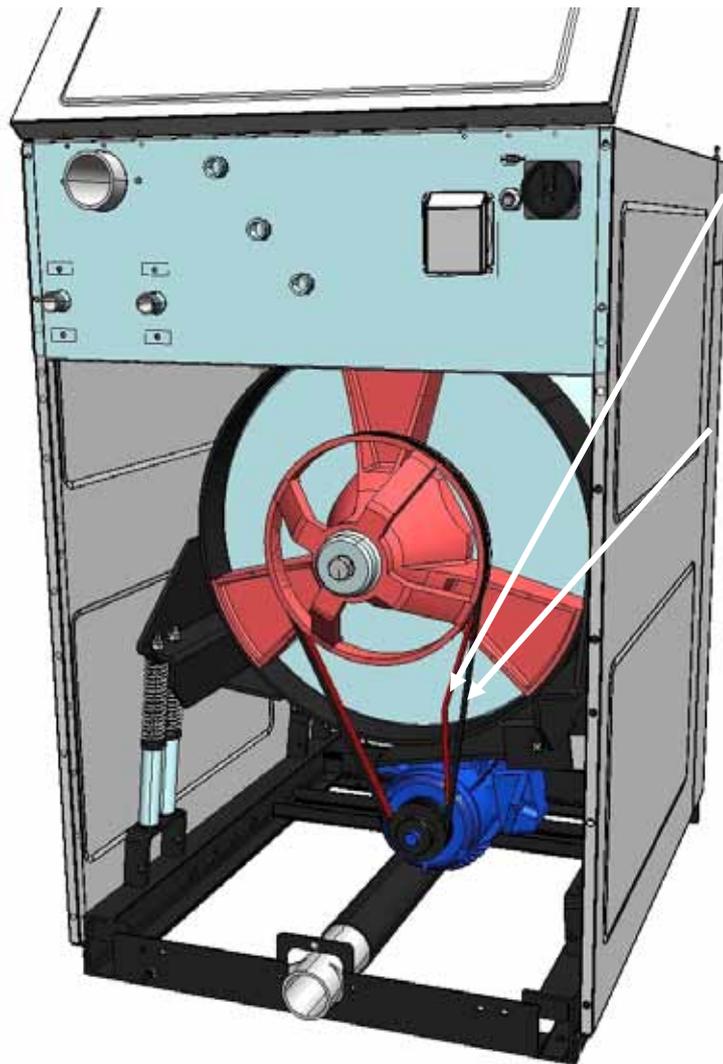
Check the state of wear of the belts and replace them if necessary. If more than one, replace the entire set.

To check the correct tensioning of the belts, apply a force of 60N on the central point between motor and belt (apply the force perpendicularly and only on one belt at a time). Measure belt offset.

Offset between 15 and 20 mm: the tension is correct. Offset < 15mm reduce the tension.

Offset >20mm increase tensioning.

Operate on the screw and regulation and blocking bolt of the motor support in order to obtain the value indicated.



Belt offset 15-20mm

Point of force application (the distance between the drum pulley and the motor must be the same).



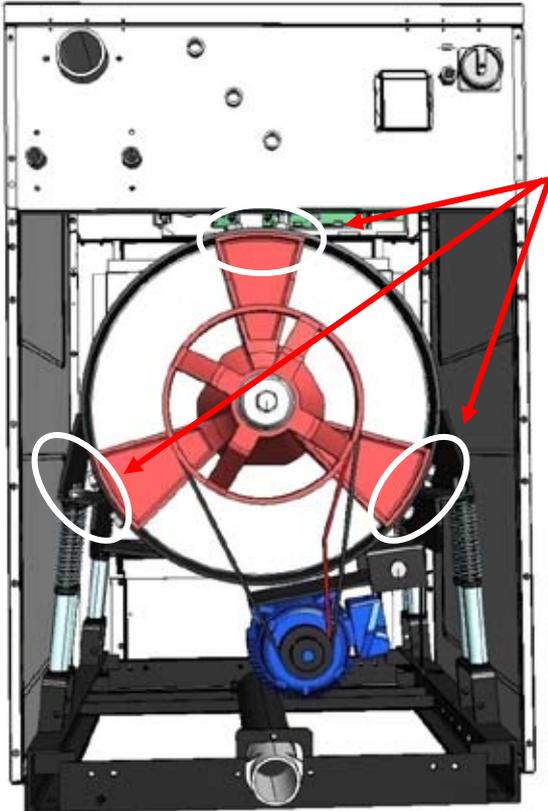
Attention!

- A belt that is too tight is more greatly worn.
- A belt that is too slack is more greatly worn and tends to slip.
- Do not use any tools to lever the belt during replacement.
- Loosen the motor regulation screws and bolts, lift the motor and remove the belt.
- Check that the motor pulleys and drum are always aligned.

TIGHTNESS OF THE SCREWS

Check tightness:

- Of the lower metal clamp fixing screws on the rear part (and front on kg 8 G400 and kg 11 G400), which hold the panelling in place.



Of the screw fasteners of the bearings seat with the tub.
The screws must be tightened with a torque as per table 16.

Table 16

M6 8.8	M8 8.8	M10 8.8	M12 8.8	M16
10 Nm	25 Nm	45 Nm	80 Nm	200 Nm

Figure 15 Tightness of bearings seat screws.

7.4.6 ROUTINE MAINTENANCE. SPECIFIC ANNUAL CONTROL FOR KG 22 G400, KG M33 G400, KG 40 G400, KG 55 G400

TENSIONING THE DRIVE BELTS.

Proceed as per kg 8 G400, kg 11 G400 and kg 18 G400 models. To verify belt tensioning, a force must be applied as in the table:

Model	Force applied	Margin accepted for offset
Kg 22 G400	54 N	15 ÷ 20mm
Kg 33 G400	54 N	
Kg 40 G400	69 N	
Kg 55 G400	69 N	

TIGHTNESS OF THE SCREWS

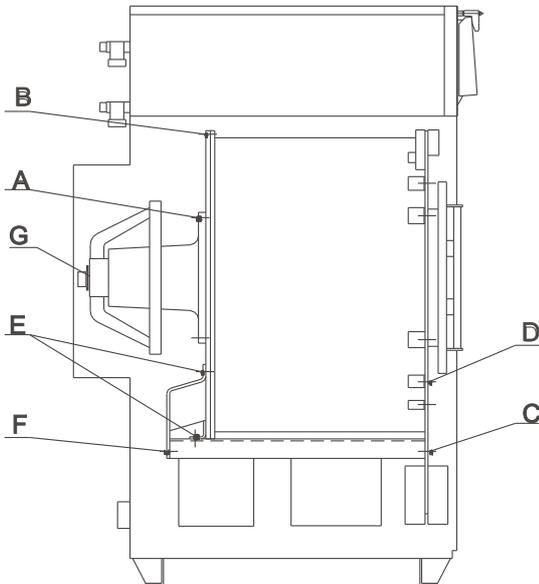


Figure 16 kg 22 G400.

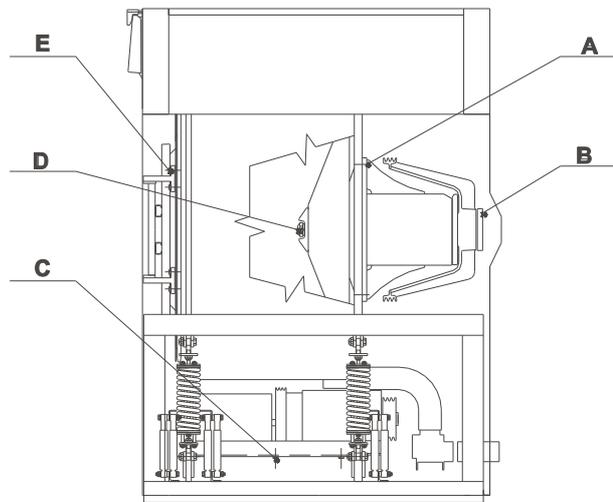


Figure 17 kg 33 G400, kg 40 G400, kg 55 G400.

Model	Function	Pos. figure	Dimensions	Number of pieces	Closing strength (Nm)
kg 22	Fixing bearings seat on bottom of tub.	A	M12 x 40	16	78
kg 33, kg 40, kg 55			M20 x 65	24 or 12	600
kg 22	Fixing tub bottom with tub	B	M8 x 40	24	11
kg 22	Fixing motor support	C	M12 x 35	3 + 2	36
kg 33, kg 40, kg 55				6	70
kg 22	Fixing tub front	D	M8 x 30	12	11
kg 22	Damper rear fixing	E	M10 x 30	10	20
kg 22 - kg 33	Fixing drum pulley	F	KM 13	1	450
kg 40, kg 55			M12 x 30	8	70
kg 33, kg 40, kg 55	Fixing internal drum	G	M30 x 80	1	800
kg 33, kg 40, kg 55	Fixing door hinge	H	M12 x 38	4	25

On the KG 33 G400, KG 40 G400 and KG 55 G400 appliance models, check that the tub (without laundry and water) is horizontal. Grease the sliding parts (the wheels below and above the springs) of the spring dampers. For correct regulation of the spring dampers.

Tighten the bolts counting that they are tightened with the same amount of turns. The vertical distance between the highest point of the base and the oscillating part must be 55 mm (see reference in figure) on all 4 corners of the appliance.

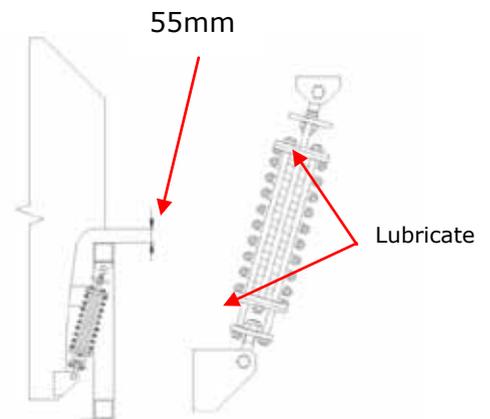


Figure 18 Regulation and lubrication of the dampers.

Lubricate the threaded part of the handle and the hinges on the door as illustrated in the figure.

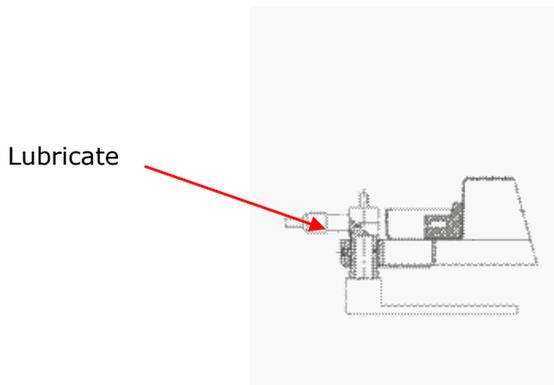


Figure 20 Greasing the handle.

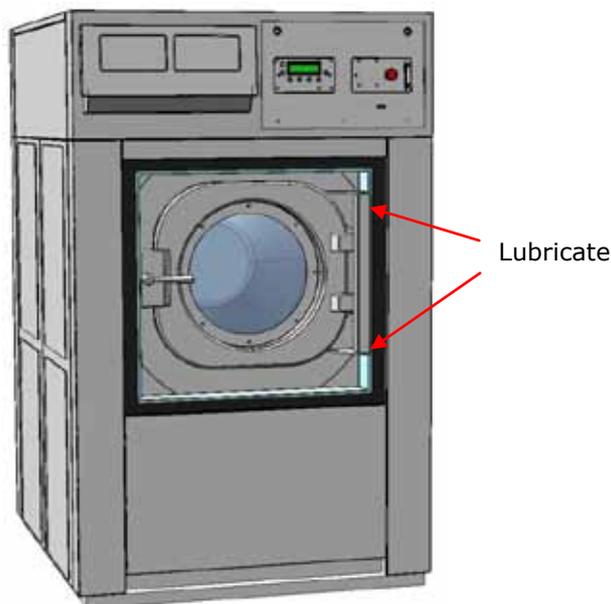


Figure 19 Greasing the hinge. Insert HD photo.

7.5 MODULE MAINTENANCE AND CLEANING BY QUALIFIED PERSONNEL

Installation					
OK	KO	Activity	Date	Signature	Note
		Check the plate data			
		Check the power supply voltage			
		Removal of the transport clamps			
		Check unbalancing micro switch position			
		Fixing to the floor (where envisioned)			
		Levelling the appliance			
		Leaks from load pipes			
		Functioning of the differential device			
		Check load gate valves			
		Check water and condensate drain (if envisioned)			
		Carry out calibration cycle and test cycle			
		Check first cycle with laundry			
1st Maintenance every 200 hours or monthly, not to be performed over _____ cycles carried out from installation					
		Check start-up only with door closed and locked during the execution of the washing cycle.			
		Check that door is closed and blocked during execution of the washing cycle.			
		Check load valves filters cleanliness.			
		Cleanliness of powdered soap drawer.			
		Check cleanliness of the ventilation areas.			
		Lubrication of bearings and sealing ring (kg 33 G400, kg 40 G400 and kg 55 G400).			
		Tightening of fastening screws to the floor (if requested).			
		Check tensioning and state of the belts.			

2nd Maintenance every 200 hours or monthly, not to be performed over _____ cycles carried out from installation				
		Check start-up only with door closed and locked during the execution of the washing cycle.		
		Check that door is closed and blocked during execution of the washing cycle.		
		Check load valves filters cleanliness.		
		Cleanliness of powdered soap drawer.		
		Check cleanliness of the ventilation areas.		
		Lubrication of bearings and sealing ring (kg 33 G400, kg 40 G400 and kg 55 G400).		
		Tightening of fastening screws to the floor (if requested).		
		Check tensioning and state of the belts.		
3rd Maintenance every 200 hours or monthly, not to be performed over _____ cycles carried out from installation				
		Check start-up only with door closed and locked during the execution of the washing cycle.		
		Check that door is closed and blocked during execution of the washing cycle.		
		Check load valves filters cleanliness.		
		Cleanliness of powdered soap drawer.		
		Check cleanliness of the ventilation areas.		
		Lubrication of bearings and sealing ring (kg 33 G400, kg 40 G400 and kg 55 G400).		
		Tightening of fastening screws to the floor (if requested).		
		Check tensioning and state of the belts.		
Yearly maintenance or on reaching 1000 cycles, not to be performed over _____ cycles carried out from installation				
		Check start-up only with door closed and locked during the execution of the washing cycle.		
		Check that door is closed and blocked during execution of the washing cycle.		
		Check load valves filters cleanliness.		
		Cleanliness of powdered soap drawer.		
		Check cleanliness of the ventilation areas.		
		Lubrication of bearings and sealing ring (kg 33 G400, kg 40 G400 and kg 55 G400).		
		Lubrication of washers outside the spring dampers (kg 33 G400, kg 40 G400 and kg 55 G400).		
		Check tightness of screws on remote controls and isolating switch.		
		Check functioning of the unbalancing micro switch, positioning of the same and distance between actuator and rod.		
		Check screw tightness between pannelling and chassis.		
		Check tightening of screws used for fixing to the floor (where envisioned).		
		Check tensioning and state of the belts.		
		Check functioning of the differential where envisioned by the type of installation.		
		Check closure of discharge valve and cleanliness of the same.		
		Check absorption of the heating on the different phases.		
		Check equipotential and earth clamp connection.		
		Cycles count reset.		
		Carry out calibration cycle and test cycle.		

7.6 TROUBLESHOOTING. DIAGNOSIS AND REPAIRS, DISPLAY MESSAGES

In the event of various anomalies, power cut on over-heating or water levels in the drum, the appliance signals this by various types of alarms that will be seen on the DISPLAY on the front panel.

All details are described in the following paragraphs called ALARMS DESCRIPTION and DISPLAY MESSAGES.

The appliance can store the last 10 alarms that have occurred.

To display these alarms, enter the SERVICE menu and go to the

ALARMS LOG item. For more detailed references, consult the block diagram attached.



Attention!

- **If a component not available is to be replaced, padlock the isolating switch in the off position.**
- **Place a sign on the appliance stating "APPLIANCE OUT OF SERVICE, DO NOT USE" and re-position all previously remove panels.**

7.7 ALARMS DESCRIPTION

The display of any alarm will stay active for 300 seconds, after which the machine resets the message automatically going back to cycle start stand-by.

If the cause that generated the alarm is still present the next time the START button is pressed, the signal will appear on the display again

The buzzer is only activated when the washing cycle is interrupted.

That is, the appliance carries out an alarm signalling phase on the display and does not stop any activity in the event of functional alarms that do not jeopardise operator safety or the integrity of the components making up the appliance itself.

See the table below for more details.

After 300 seconds from the signal, if the anomaly has not been solved, the buzzer is activated and the appliance stop procedure begins, according to the specific details of each alarm.

In the event of anomalies that can jeopardise the safety of the operator or the integrity of the components making up the appliance, at the same time as the immediate activation of the buzzer, all activities that the appliance was performing stop.

ALARM E1	WATER PRESENCE IN TUB
DESCRIPTION ON DISPLAY	E1: water presence in tub.
DESCRIPTION	The pressure sensor indicates the presence of water (level over 4 cm) when the appliance is switched on or at the start of a washing cycle.
ALARM RESET	The alarm is removed by switching the appliance off and back on again.
WHAT TO CONTROL	<ul style="list-style-type: none"> • Cleanliness of drain channel. • Functioning of the discharge valve. • Pressure sensor air chamber sealing. • Status of the tub/pressure sensor connection pipe.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Cleaning and control of the discharge channel. • Cleaning and control of the drain valve. • Cleaning and control of the pressure sensor air chamber. • Disconnect the pressure sensor pipe and blow it to eliminate any water bubbles. • Perform level calibration on the circuit board. • Replace the tub/pressure sensor connection pipe.

If the problem persists, contact the technical after-sales centre.

ALARM E2	WATER LEVEL TIMEOUT
DESCRIPTION ON DISPLAY	E2: no water.
DESCRIPTION	During the washing cycle, on expiry of the programmed TIME-OUT, the set water level has not been reached. The water load and the cycle continue normally for a further 5 minutes with the alarm active signalled on the display.
ALARM RESET	The alarm is switched-off automatically when the level is reached. The appliance requests washing cycle re-start via the signal: "START:?", if the level envisioned has not been reached in 10 minutes.
WHAT TO CONTROL	<ul style="list-style-type: none"> • Opening of all gate valves that supply the appliance. • Cleaning the water load filters in the electrovalves. • Functioning and sealing of the discharge valve. • Pressure sensor air chamber. • Status of the tub/pressure sensor connection pipe. • Real opening of at least one load valve during the phase in progress.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Cleaning and control of the drain valve. • Cleaning and control of the water loading valves. • Disconnect the pressure sensor pipe and blow it to eliminate any water bubbles. • Perform level calibration on the circuit board. • Replace the tub/pressure sensor connection pipe.

If the problem persists, contact the technical after-sales centre.

ALARM E3	WATER DRAINING TIMEOUT
DESCRIPTION ON DISPLAY	E3: no water draining.
DESCRIPTION	During the washing cycle, after 1 minute from the start of water draining, the water has not dropped below the minimum level; water draining and the cycle continue normally.
ALARM RESET	The alarm is removed automatically when the water has dropped below the minimum level.
WHAT TO CONTROL	<ul style="list-style-type: none"> • Cleanliness of drain channel. • Functioning of the discharge valve. • Pressure sensor air chamber sealing. • Status of the tub/pressure sensor connection pipe. • Effective diameter of the drain to which the appliance is connected and height of the same from the appliance connection.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Cleaning and control of the discharge channel. • Cleaning and control of the drain valve. • Cleaning and control of the pressure sensor air chamber. • Disconnect the pressure sensor pipe and blow it to eliminate any water bubbles. • Perform level calibration on the circuit board. • Replace the tub/pressure sensor connection pipe. • Enter the SERVICE menu under DRAIN TIME and, if necessary, increase the time corresponding to this alarm.

NOTE.

To check the correct closure of the discharge valve, start the program with water load phase, wait until the level defined for the phase in progress is reached and then pause the appliance (press the + and - keys together).

Wait for about 20 minutes and then press the start button again.

If the appliance goes back to loading a lot of water, it means that the discharge valve must be replaced.



Attention!

- **Proceed as follows to eliminate any water bubbles present inside the tub/sensor connection pipe.**
- **Disconnect the pipe from the sensor side.**
- **Blow the pipe with great force.**
- **Re-connect the pipe to the sensor.**
- **Do not disconnect the pipe from the tub side in order to blow it as the level sensor would be irreparably damaged.**
- **If necessary, disconnect the pipe on both ends and clean it.**

ALARM E4	HEATING TIME OUT
DESCRIPTION ON DISPLAY	E4: slow heating.
DESCRIPTION	If after 20 minutes of continuous heating, the temperature has not increased by at least 5°C, the display will show "E4: slow heating", while the washing cycle continues regularly.
ALARM RESET	The alarm is removed automatically when the temperature reaches the threshold calculated or the envisioned maintenance value.
WHAT TO CONTROL	<ul style="list-style-type: none"> • Check that water is not seeping from the drain valve. • Cleaning and functioning of the heating elements. • Pressure available on the steam network (only on appliances with this type of heating) • Steam inlet filter. • Check functioning of the heating timer or the steam valve. • Correct functioning of the fuses on the interlocked socket or on the machine. • Correct sealing of the loading valves. • If the phases have been modified (via PC or G400M), check that the values inserted are coherent and correct.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Cleaning and control of the drain valve. • Cleaning and control of the water loading filters. • Sealing of the water loading valves. • Cleaning the steam filter. • Replacing the faulty heating elements. • Replacing the heating counter/s or the steam valve. • In the SERVICE menu under "HEATING TIME OUT": 5°C/20 minutes", check that the value introduced is correct. If necessary, lower this value to 1°C/20 minutes for steam appliance with supply pressure lower than 200KPa. • If the appliance water load levels have been modified, check that the values inserted are correct and coherent.

ALARM E5	OVER-HEATING OR PROBE DISCONNECTED
DESCRIPTION ON DISPLAY	E5: probe 1 over-heating
DESCRIPTION	At any time, if the TEMP1 temperature probe is not connected or if a temperature over 95°C is measured, the cycle will be terminated automatically.
ALARM RESET	The alarm is removed by switching the appliance off and back on again.
WHAT TO CONTROL	<ul style="list-style-type: none"> • Integrity of the temperature probe: cable, sensitive element, connector. The temperature probe is a PT1000 resistor i.e. at 0°C it has resistance of 1000 ohm and at 100°C has resistance of 1385 ohm. • Correct connection on the circuit board. • Correct functioning of the heating or steam valve remote control switch.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Replacement of the faulty probe with a new one. • Restore the connection on the circuit board. • Replacing the heating timer or the steam valve with a new one.

ALARM E6	LOCK/RELEASE DOOR TIME OUT
DESCRIPTION ON DISPLAY	E6: no lock/release
DESCRIPTION	If the door is not locked or released within 10 seconds from the start of the lock control (pressing START button) or release control (at cycle end), the control is interrupted.
ALARM RESET	The alarm has been removed: <ul style="list-style-type: none"> • By pressing START • Opening the door manually via the specific procedure envisioned for each appliance model.
WHAT TO CONTROL	<ul style="list-style-type: none"> • Manual closure of the door not performed correctly. • Forcing the handle: the lock micro switches or its activation mechanisms have been damaged.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Open and close the door and re-start the cycle. • Replacement of the faulty micro switch/es or the entire lock group.

ALARM E7	DOOR ANOMALY
DESCRIPTION ON DISPLAY	E7: Door anomaly
DESCRIPTION	If there is no voltage during the cycle at the door micro switch input, called MPORT, or at the door lock signal input called MBLOC, the washing cycle in progress is interrupted.
ALARM RESET	The appliance requests whether the cycle must re-start or not. "START:?"
WHAT TO CONTROL	<ul style="list-style-type: none"> Forcing the handles during work cycle: the lock micro switches or its activation mechanisms have been damaged.
CORRECTIVE ACTION	<ul style="list-style-type: none"> Replacement of the faulty micro switch/es or the entire lock group.

ALARM E8	LEVEL ANOMALY
DESCRIPTION ON DISPLAY	E8: Level anomaly
DESCRIPTION	If reading of the water level in the tub is at least 10 cm over that set, the washing cycle is interrupted.
ALARM RESET	Once the water level in the tub has dropped below the safety value, the display shows START.? in a way to re-attempt execution of the phase in progress from the start or reach the end of the washing cycle and recover the laundry.
WHAT TO CONTROL	<ul style="list-style-type: none"> Functioning of the water loading valves. They must switch off when the set level is reached (switch-off of the icon on the display). Sealing of the water loading valves. Pressure sensor air chamber. Type and quantity of the soap (it must be the non-foaming type). If the liquid soaps are managed outside the appliance, make sure that this does not lead to further water loads than that requested (rinsing the soap load pipe for example).
CORRECTIVE ACTION	<ul style="list-style-type: none"> Cleaning and control of the water loading valves. Contact the supplier of the soap control unit and check whether rinsing times of the soap loading pipe can be shortened. Insert a condensate discharger onto the steam supply piping in the appliance with this type of heating. DO NOT use soaps that generate a lot of foam.

If this problem persists, contact the technical after-sales service.

ALARM E9	UNBALANCING
DESCRIPTION ON DISPLAY	E9: Unbalancing
DESCRIPTION	The intervention of the unbalancing micro switch (the contact connected to the input called MSBIL opens), it signals a mechanical hazard is in progress, linked to drum movement and the distribution of the weight inside the same. The alarm is only active in the spin and weighing phases. The display of the last programmed re-start attempt and the washing cycle is interrupted.
ALARM RESET	Alarm reset takes place at the end of the phase in which it intervened, simultaneously with door release.
WHAT TO CONTROL	<ul style="list-style-type: none"> • Correct positioning of the unbalancing micro switch rod inside the mobile window. • Check the appliance is level. • In the event of modifications to the washing cycle (G400M electronic control or via PC) the last phase before the final spin must have the PHASE END DRAINING phase set at NO. The last spin phase must have the START WITHOUT WATER condition set at NO and the number of spin phase execution attempts must be equal to 6. • The load of laundry must be as uniform as possible. • Dampers and shock absorbers must work correctly and not be discharged or worn (during the execution of the spin phase they should become warm).
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Position the unbalancing micro switch rod correctly inside the mobile window. • Level the appliance. • In the event of modifications to the washing cycle (G400M electronic control or via PC) the last phase before the final spin must have the PHASE END DRAINING phase set at NO. The last spin phase must have the START WITHOUT WATER condition set at NO and the number of spin phase execution attempts must be equal to 6. • Optimise the load of laundry. • Replace worn or discharged dampers and shock absorbers.

EO ALARM	MOTOR PROTECTION INTERVENTION WITH ALARMS IN AUTORESET
DESCRIPTION ON DISPLAY	1 "EF Motor anomaly" 2 "OC Motor over-current" 3 "OV Motor over-voltage" 4 "UV Over-voltage UV" 5 "OCH Motor anomaly" 6 "ST Motor anomaly" (this should have been removed)
DESCRIPTION	These 6 alarms are displayed according to their intervention with decreasing priority. When the inverter has entered error conditions, wait for automatic reset by the G400 control.
ALARM RESET	The G400 control makes the first reset attempt and the display shows the "START?" request. After 5 consecutive interventions of the alarm, the signal must be considered fixed and can only be eliminated by removing voltage to the appliance for 5 minutes and then re-applying it.
WHAT TO CONTROL	<ul style="list-style-type: none"> • The appliance's power supply voltage must be in the range envisioned by the plate data. • The load of laundry must not exceed the nominal load of the appliance.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Connect the appliance to an electric power supply mains that guarantees the correct supply voltage. • Optimise the load of laundry.

EO ALARM	MOTOR PROTECTION INTERVENTION WITH ALARMS NOT IN AUTORESET
DESCRIPTION ON DISPLAY	"OH Inverter over-heating" "OLi Inverter overloading" "OLM Motor overloading" "OLR Braking overloading" "OT Motor torque overloading" "PH No inverter phase" "FU Inverter inlet fuse" "OP1 No communication" "OP2 No communication" "BF No communication" "OHS Inverter over-heating" "LF Inverter limit condition" "SHC Motor short circuit" "PHO " "PHI " "Ohr " "Olr"
DESCRIPTION	These 16 alarms are displayed according to their intervention with equal priority.
ALARM RESET	The signal must be considered fixed and can only be eliminated by removing voltage to the appliance for 5 minutes and then re-applying it. The display will show the writing corresponding to the alarm that has intervened and the indication to "switch the appliance off".
WHAT TO CONTROL	ATTENTION! Many possible causes lead to the intervention of the MAINTENANCE TECHNICIAN in order to be resolved.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • "OH Inverter over-heating": The appliance must be installed in a place that respects the plate data. Check cleanliness and functioning of the inverter cooling fans • "OLi Inverter overloading": Optimise the load of laundry. • "OLM Motor overloading": Optimise the load of laundry. • "OLR Braking overloading": Optimise the load of laundry. • "OLM Motor torque overloading": Optimise the load of laundry. • "PH No inverter phase": Restore the electric connection. • "FU Inverter inlet fuse": Contact the local after-sales centre. • "OP1 No communication": Contact the local after-sales centre. • "OP2 No communication": Contact the local after-sales centre. • "BF No communication": Contact the local after-sales centre. • "OHS Inverter over-heating" The appliance must be installed in a place that respects the plate data. Check cleanliness and functioning of the inverter cooling fans • "LF Inverter limit condition" Optimise the load of laundry. • "SHC Motor short circuit" Contact the local after-sales centre. • "PHO" No power supply phase to the motor. • "PHI" No power supply phase to the inverter. • "Ohr" • "Olr"

EO ALARM	MOTOR PROTECTION INTERVENTION WITH ALARMS NOT IN AUTORESET
DESCRIPTION ON DISPLAY	No additional description of the E0; START? wording
DESCRIPTION	This alarm is displayed if the RS485 serial communication with the inverter is not successful. It can appear on appliance switch-on or during the execution of the program.
ALARM RESET	The alarm is removed by switching the appliance off and back on again after at least 5 minutes.
WHAT TO CONTROL	<ul style="list-style-type: none"> • The correct inverter power supply voltage. • The powered inverter must have at least on LED on. • On the appliances with single-phase appliances, pay attention that the phase that powers the G400 control electronics and that which powers the inverter are different. • Check the fuses of all appliance power supply phases. • The RS485 serial connection between G400 and inverter.
CORRECTIVE ACTION	<ul style="list-style-type: none"> • Replace any fuse/s tripped. • Insert the connector onto the G400 board and the terminals onto the inverter correctly.



Attention!

- **To remove the E0 alarm completely, the appliance must be switched off.**
- **This condition is obtained only after the power supply has been removed to the appliance for at least 5 minutes, via the isolating switch.**
- **If a new cycle must be started in which an alarm has occurred, follow the instructions as per attached block diagram.**

7.7.1 ATTENTION MESSAGE DISPLAYED

TARE REQUEST MESSAGE

The appliances fitted with weighing function require reset of the empty appliance value at least every 50 cycles performed with weighing. See the relative paragraph for further details.

MAINTENANCE MESSAGE

The number of cycles that the appliance performs is automatically stored and every 1000 cycles the appliance shows a message starting from the execution of cycle number 1001 onwards. Precisely, when the START button is pressed when it is time to start a new cycle, the appliance displays "**MAINTENANCE REQUEST**" flashing for 10 seconds. However, the washing cycle proceeds normally.

From the 50th washing cycle before the time set expires, the display shows the imminence of the event for 8 seconds with "**MAINTENANCE AT: 50 CYCLES**".

On display of this message, proceed as per the annual control envisioned for maintenance of the appliance.

To eliminate the wording, refer to the attached block diagram.

To begin the count of the 1000 drying hours from the start, press the MINUS button for at least 5 seconds with the door closed.

The display shows the total number of washing cycles effectively carried out and on pressing the MINUS button within 10 sec. the introduction of data and a text is requested, first asking the question "data: 01/01/01".

The cursor finds itself automatically on the first "0" and using the PLUS and MINUS keys it is possible to select the number, confirming it using the ENTER button.

The cursor automatically passes to the second character of the data "1" and consequently proceeds up to the end of the data.

On pressing the ENTER button, the G400 control states the "**technician**" question and writes the name/code of the operator that performed the maintenance.

By pressing the SEL button, the cursor enlarges and using the PLUS and MINUS keys it is possible to select the character, which will be confirmed using the ENTER key. Using the PLUS key, shift to the next position and select the character as already indicated.

Zeroing cannot be performed without these two values.

These two pieces of information are stored in the SERVICE menu under MAINTENANCE for successive consultation, along with the washing cycles performed since previous maintenance and total washing cycles reached at the time of maintenance.

"ENERGY SAVING SWITCH ME OFF" MESSAGE

If the **"ENERGY SAVING – SWITCH ME OFF"** message appears, it means that the appliance is not used for at least 5'.

To remove the the message just touch any button on the panel or close the door.

If the appliance remains unused for a long time, it is advised to switch it off and back on again only when effectively necessary

LUBRICATION REQUEST MESSAGE (KG 33 G400, KG 40 G400, KG 55 G400 ONLY)

See the maintenance chapter on how to proceed in this particular case.

OPEN DISPENSER MESSAGE (ON KG 33 G400, KG 40 G400, KG 55 G400 ONLY)

On appearance of the **"dispenser open"** message, all functions that the appliance was performing are suspended except for the maintenance of the water in the tub and locking of the door. When the soap drawer door is closed again, just press the START button and the appliance will re-start the washing cycle from the point where all activities were stopped.

PAUSE MESSAGE

The message only appears if the PLUS and MINUS buttons are pressed simultaneously during the execution of a washing cycle.

On appearance of the **"PAUSE"** message, the appliance suspends all activities that it was performing except for the maintenance of the water in the tub and locking of the door.

To eliminate the message just press the START button and the appliance will re-start the washing cycle from the point where all activities were stopped.

DIFFERENT MESSAGES

MACHINE, SERVICE, CYCLES, PHASES, DATATRACK PAR. or messages from the sub-menu of the same phases.

Other types of messages may be displayed (Machine Parameters or Service or Cycles or messages belonging to the sub-menus mentioned previously).

In this case, it mean that the MODE button has been pressed with the door open. To cancel this type of message:

- Switch the appliance off and back on again
- Press the MODE button several times until the standard washing cycle start stand-by display is restored.

BLOCK APPLIANCE BETWEEN "XX" CYCLES MESSAGE

If the **"BLOCK APPLIANCE BETWEEN "XX" CYCLES XX"** message appears after the START button is pressed, call the after-sales service.

POWER FAIL MESSAGE

If the "**POWER FAIL**" message appears and is followed by a countdown in seconds, it means that the electric power supply to the appliance has been removed during a washing cycle.

Wait for the countdown to be completed.

If the door is still closed, the appliance displays the "**START:?**" message. On pressing the START button, the appliance re-starts from the beginning of the phase during which the power cut occurred.

WIZARD MESSAGE

If the "**WIZARD**" message appears on the display the appliance has been switched on with the MODE button pressed.

In this condition, the appliance is set-up for RS232 serial communication with a personal computer fitted with the WipWizard application.

To remove the message, switch the appliance off and back on again without pressing any button.