ENOITALIA

ENOLOGICAL EQUIPMENTS

ISTRUCTIONS FOR USE AND INSTALLATION – TECHNICAL MANUAL

Semi-automatic filling machine Bag in Box "BB 50"

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WARNING:

This manual must be kept near the machine and in a place known by the personnel in charge of use, maintenance and repair operations

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INTRODUCTION

WARNING !

Before the installation, carefully read the instructions here below, because the present manual is an integral part of the machine.

This machine is suggested to fill, plastic bags for alimentary liquids (for example, WINE, MILK, WATER, OIL* , FRUIT JUICE *, CREAMS*, ICE CREAM *) or industrial liquids* (the use of which has been specified in the order phase) .

It's not suitable for pumping flammable liquids, or to operate in environments with explosion risk; don't use with petrol, concentrated acids, or solvents.

The manufacturer declines all responsibility for damages deriving from improper use of the machine, or from failure to observe the instructions provided in this manual.

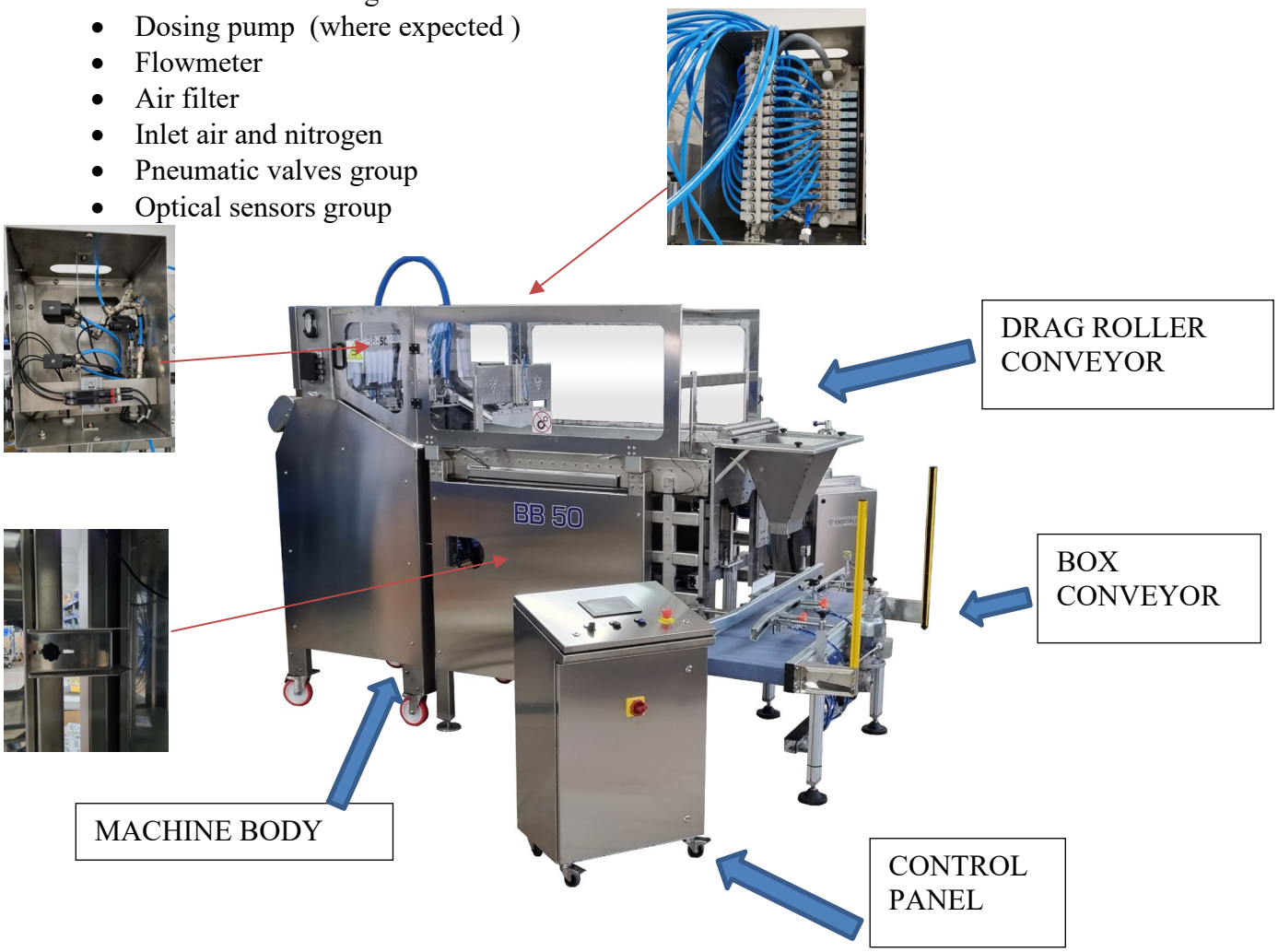
= request when ordering the specific filling kit

1. DESCRIPTION

The machine is composed by the following components (d.1):

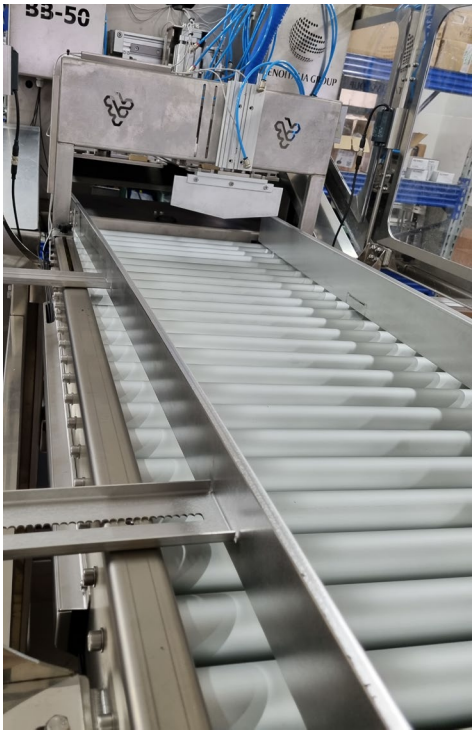
Machine body, composed by :

- Filling head
- Estraction clamp
- Side-forks for closing
- Vacuum plunger
- Plug for control panel
- Wheels with locking brake
- Dosing pump (where expected)
- Flowmeter
- Air filter
- Inlet air and nitrogen
- Pneumatic valves group
- Optical sensors group



Drag roller conveyor composed by :

- Bag position sensor
- Drag rollers motor
- Blade cutting bag
- Sliding bag guide
- Entry bag system
- Cones for bag inserting (one installed, the others 3 included)
- Passing sensor for bags
- Side safety guards
- Register position roller conveyor



Control panel composed by : .

- Touch screen
- Button emergency stop
- Key sensor for doors temporary exclusion
- Reset button and restart security
- Rapid opening forks button
- Potentiometer for pump speed (if expected)
- Connector for remote assistance

Terminal conveyor for boxes composed by :

- Security barriers

- Sensor presence box
- Piston block box
- Shut-off box piston in loading (if expected)
- Sensor full box passing (if expected)
- Bag dragging motor (if expected)

MOTORIZED VERSION

NEUTRAL VERSION

WARNING !

Before any checking operation and maintenance, disconnect the power from the electrical system and remove the plug from the socket.

The machine is designed to fill the flexible bags connected to the belt, setting the desired quantity on the display. The extraction of the air from the bag takes place automatically. The extraction of the cap and the subsequent insertion are carried out automatically by a pneumatic clamp in stainless steel. The bag is cut automatically, separating the filled bag from the one being filled. The insertion of the filled bag inside the cardboard box takes place automatically with a gravity system installed at the end of the line.
The electronic system allows you to manage the operation of the pump, of the accumulation system (optional), of the closing valve, and of the air extraction and nitrogen insertion valves, so that all the operations take place in due succession and timing.
The filler is designed to be used by qualified personnel, as it can be a source of danger for people. Do not leave the machinery running unattended.

2. POSITIONING, CHECKS AND INSTALLATION

The machinery must be placed in a stable and horizontal place with respect to the ground.
The machine is made up of 4 main elements:

1. Body machine with 4 wheels with stabling brakes
2. Motorized roller conveyor with cutting and packaging, equipped with 4 adjustable support feet.
3. Dragging roller conveyor for boxes, equipped with support adjustable feet.
4. Control panel on wheels with locking brakes

To transport the machine body, if lifting is necessary, use the appropriate eyebolts:
During transport, parking feet are inserted, which are not necessary when using the machinery.

The dragging roller conveyor for bags and for boxes, are supplied on pallet.

WARNING! **To positioning the dragging roller conveyor for bags, remove the side protection cartes and raised it from the connection brackets.**

2.1 PRELIMINARY VERIFICATION .

The machine is supplied on pallets and visible on wheels. Once unpacked, check the integrity of all its components and, if necessary, inform the supplier of any evident defect. Give written communication to the company Enoitalia s.r.l. within 15 days of receipt of the machinery.
Verify that the machine corresponds to the specifications of the order.
Together with the machine you will find this instruction manual, an integral part of the machine itself.

2.2 VERIFICATION BEFORE THE INSTALLATION .

Before connecting the machine, make sure that the voltage corresponds to that of the machine, as indicated on the sales documents and on the machine plate.
The electrical safety of the machine is guaranteed only if there is a connection to an effective ground system, carried out in accordance with current electrical standards. The verification and possible installation of the appropriate electrical elements must be carried out by qualified personnel. The use of multiple sockets or adapters is not recommended; if their use is indispensable, it is necessary to use only products that comply with current safety standards, respecting the capacity limit in terms of current value and the maximum power limit.

2.3 INSTALLATION .

Positioning for first the motorized conveyor, choosing a stable place, with at least 2 meters of wiggle room around.
Assist the body machine on wheels, and bloc kit to the roller conveyor with the specific registers:

Positioning the connections wires which are inside the body machine, along the support ducts of the motorized conveyor.

Place the dragging roller conveyor for boxes: use a box with the same capacity of that indicated on the exit cone of the machinery.
Manually extract the cylinder stops and place the box on the roller conveyor.
Install the roller conveyor so that the exit cone was centred at the box just installed.

Verify manually the centering of the cone respect the box.

Effect the air and electrical connections for the dragging box roller conveyor.
Connect the security barriers with relative wires.
Connect the optical sensors present in the left junction box, in the positions of:

- Box presence detection, to place on the boxes handling roller conveyor.
- Box passage detection inside the cone
- Bag position detection on the dragging roller conveyor

Proceed to the installation of the air pipes, and of the sensors on the piston cutting bags

On the right side of the body machine, effect the connection to the air system, making sure to have at least 6 bar of pression and that the air used, was filtered and dry.

WARNING! ***The using of the untreated air damage the pneumatic circuit and makes void the warranty***

Inside the machinery is prepared a pressure switch, pressure regulator, already calibrated.
The minimum operating pressure is 6 bar, and it's expected a security system which block the machinery in case the pressure was lower of 4,8 bar.

Effect the connection to the nitrogen circuit, making sure that the pressure wasn't higher of 3 bar
For the connection of nitrogen system, verify that the pressure to which the machinery is connected, was lower to that indicated, cause the machine is not provided with reducer of low pressure, if necessary, it needs to request it specifically at the time of the order.

Connect the electrical panel to the machinery with the two connectors.

Connect a mains cable in the dedicated connector. Before the delivery of the machinery the buyer has to fill out the form for the setting for the parameters of the remote control.

Proceed checking that the general switch of the electrical panel was positioned on "0", then, connect the power cord of the electrical panel to the power socket.
Connect to the mains and turn on the machinery with the specific general button.

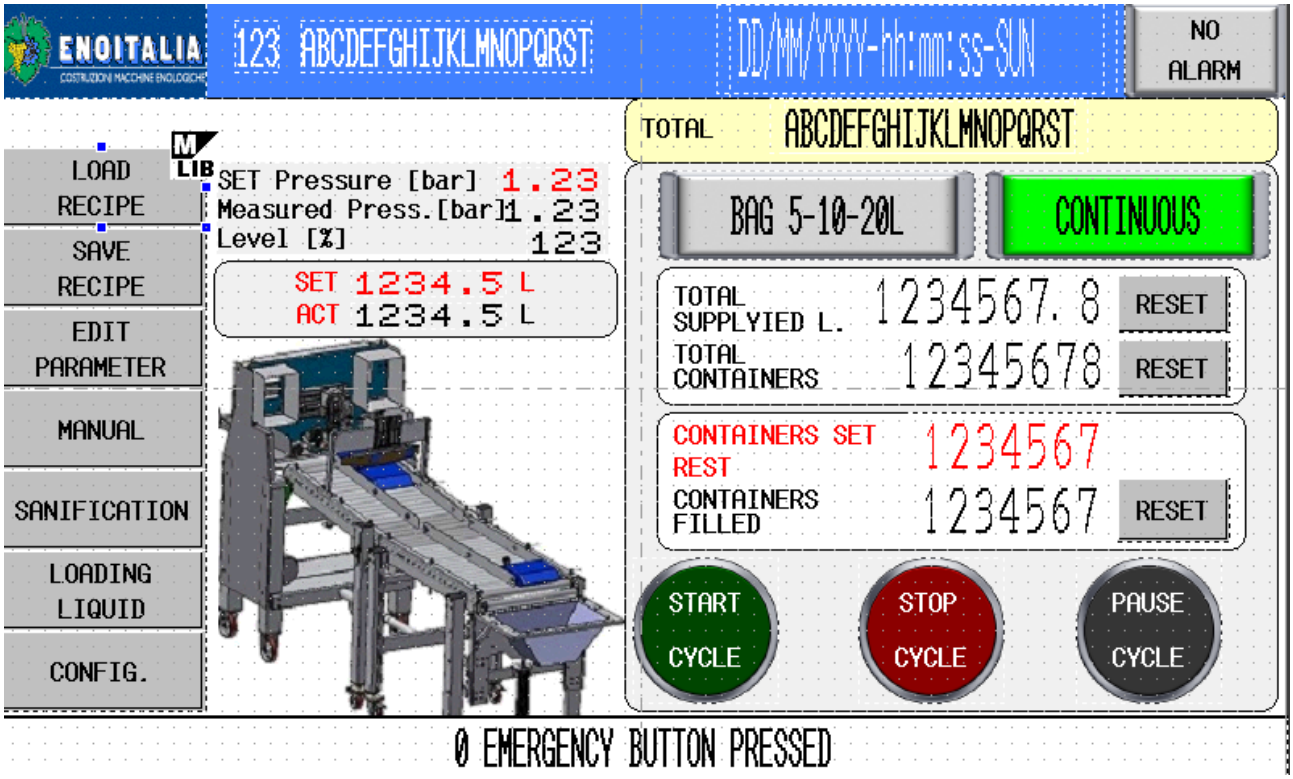
If it was expected a pump on board, proceed connecting the pump to the storage tank, through a transfer pipe. The pipes must be rigid and reinforced, have to be fixed to the pump with specific cable ties, avoiding chokes, that would prevent the right liquid flow.
The cable ties are very important, cause ensure the perfect functioning of the pump, avoiding liquid leaks.

3. IGNITION AND KNOWLEDGEA OF THE CONTROL PANEL

The panel is composed by:

1) Unlock rapid button: stop the cycle and open all the clamps bag support. It's not an emergency security stop, because it doesn't block electrically the machinery, but an opening rapid button of the extraction clamps and of the filling head.
2) Emergency stop button: stop the cycle and put in security the machinery. It doesn't act on the hooks and on the filling heads, which stay blocked.
3) Reset button: restore the electric connections, after having pushed the emergency stop, and every time the machinery starts. If they were active alarms, at the moment of the restore, they're activated.
4) Display with touch screen.
5) Potentiometer speed regulator for filling (if applicable)
6) Selector for temporary deactivation security system doors opening.

After to have connected the control panel to the machinery with the specific connector, turn on the machine, put the red general button on the "I" position. After a few moments the electronic's panel display will turn on, showing the **1° SCREESHOT .** On the left side of the screen, there're the different settings of the machine:



- LOAD RECIPE: view the recipes saved from the operator.
- SAVE RECIPE: allows to save the parameters set up with a recipe's name, to recall if necessary.
- MODIFY PARAMETERS: contains the list of the parameters that it can set in the filling.
- MANUALS: contains a list of manual operations to activate during the telephonic assistance before the start of the remote control.
- SANITIZATION: contains the washing programs and steam sanitization
- LIQUID LOADING: it's the program to use for the starting of the machinery with the product to fill.
- CONFIGURATION: programming parameters protected by a password
- LOT: allows to insert lot of reference of production cycle

On the right side of the screen is indicated the way of filling, which can be as follow:

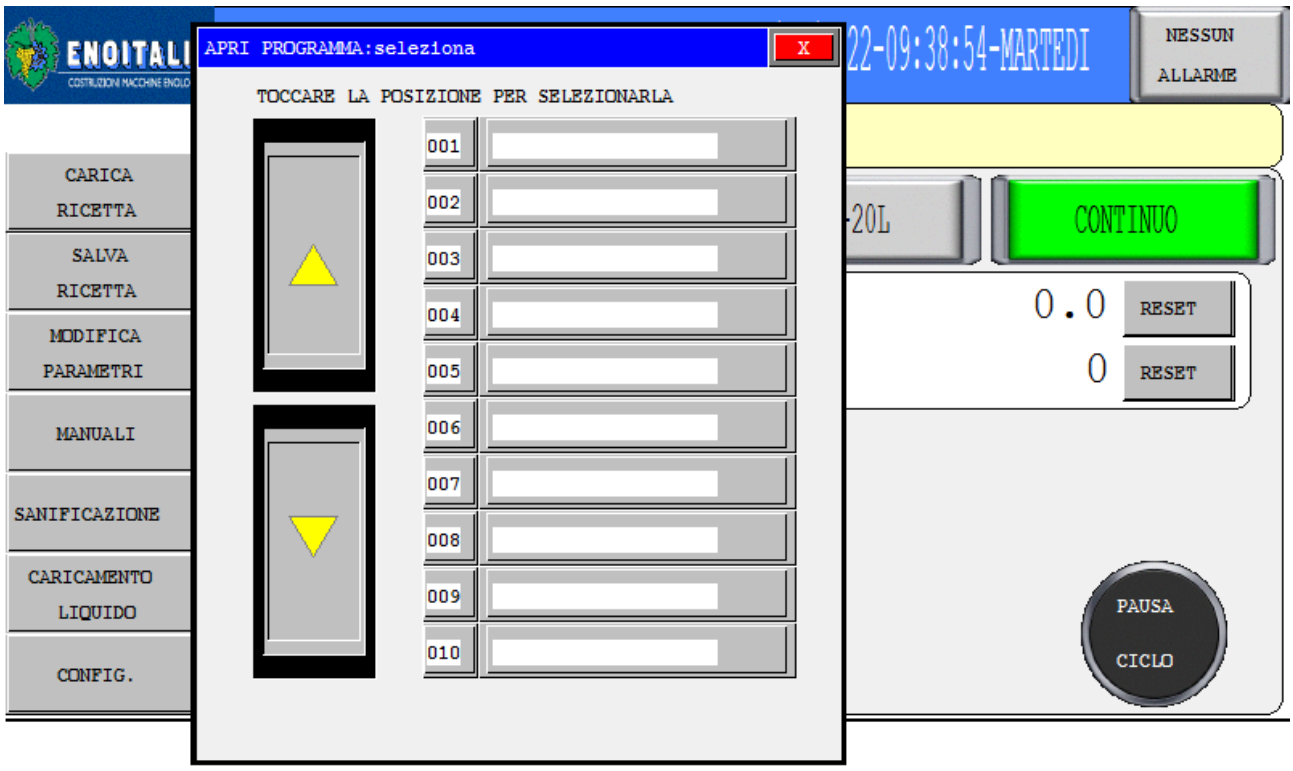
- CONTINUOUS CYCLE : the machinery makes the complete filling cycle, filling the number of bags set by the operator.
- CYCLE STEP BY STEP: the machinery makes all the functions provided in the filling cycle, separately. To go to the next step, the operator ha to push the button START CYCLE. This mode is very useful during the first use of the machinery, to verify the right settings.
- FIRST BAG: manage the loading of the first bag in the machine, allowing to the operator to handle the bag towards the sensors and sealing clamps.
- EMPTY: allows to empty the roller conveyor from the present bags, without proceeding to other filling.

At the button part of the screen there're 3 buttons:

- START CYCLE: to start the machinery.
- STOP CYCLE: to stop the filling cycle, stopping it after to have filled and closed the last bag in the machine.
- PAUSE CYCLE: stop the cycle in the exact moment it makes pushed.

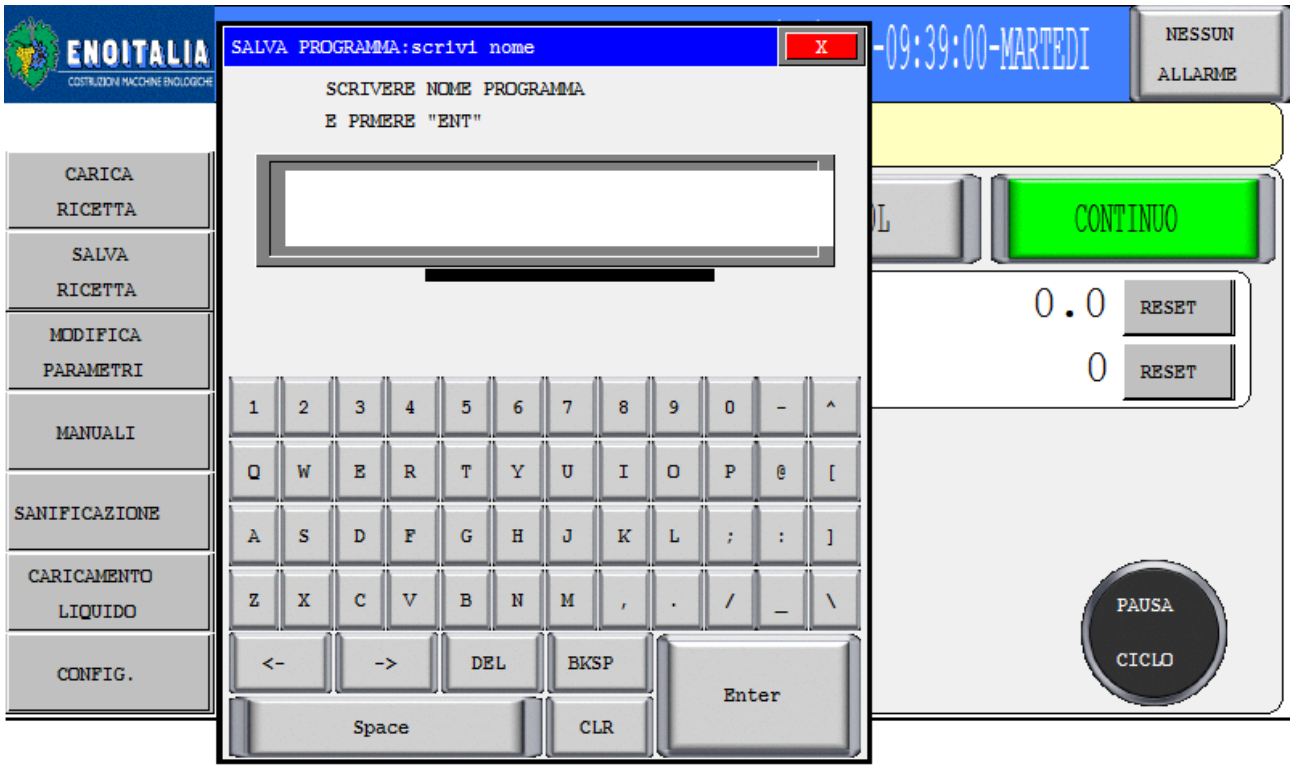
3.1 OPENING RECIPES:

Once pushed the button "OPEN" on the screen appears the list of the recipes saved by the operator. Selected the recipe to use, the machinery asks confirmation and after load the first parameters present in the chosen recipe.



3.2 SAVE RECIPES

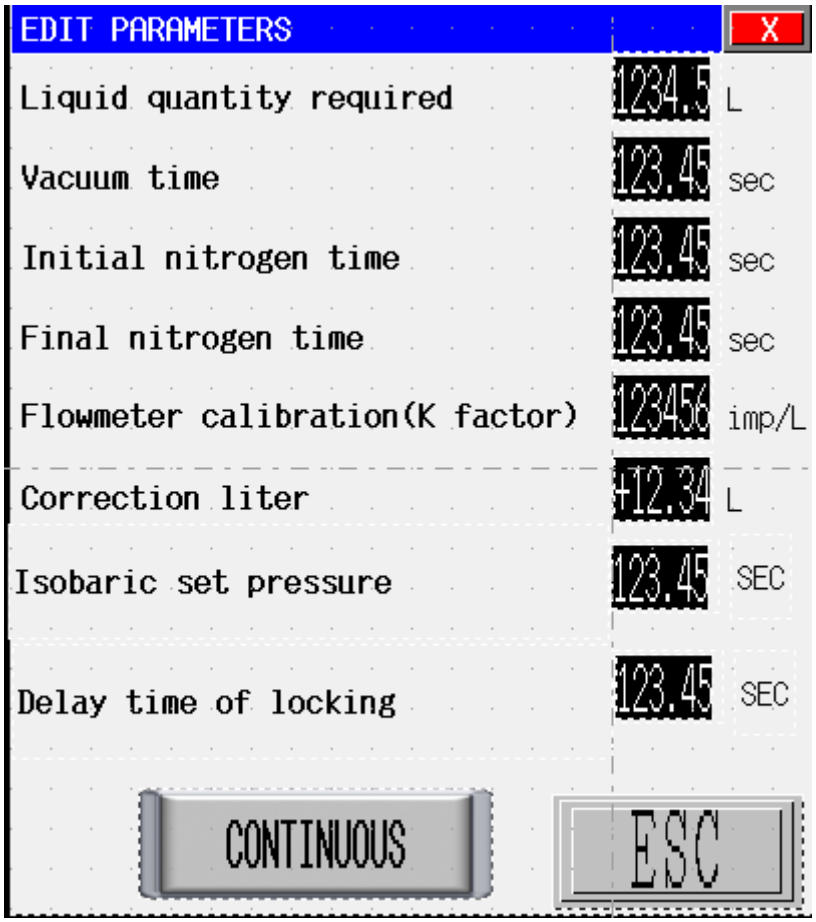
Select the button "SAVE", will appear the following screenshot, to can attribute to the parameters of filling used, a recipe to recall when it's necessary. The system asks to put a name for the recipe and to select a position. Warning: if we use a position already covered by another recipe, the program overwrites and delete the information previously saved.



3.3 MODIFY PARAMETERS

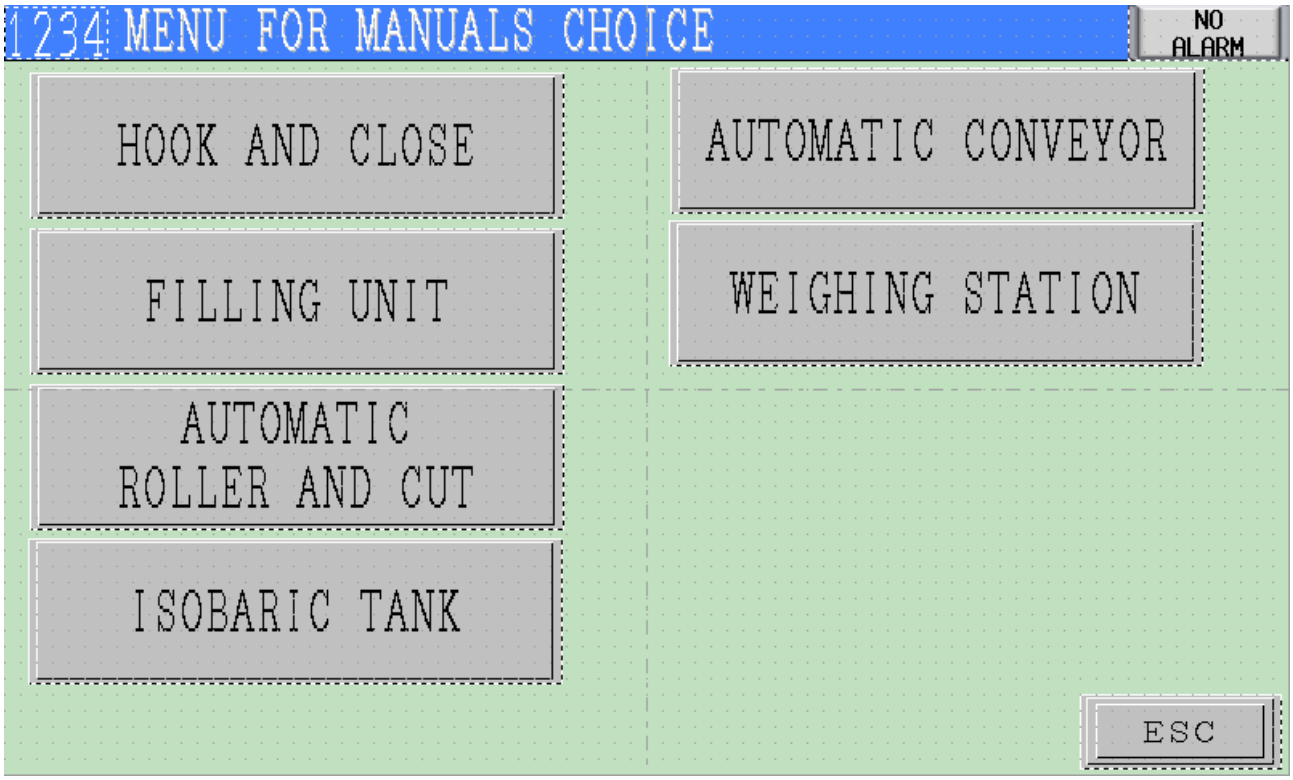
Selecting the button “modify parameters” it opens the list of the parameters used for the filling:

- QUANTITY OF LIQUID REQUESTED: shows the litres which have to be filled.
- TIME INITIAL VACUUM: it’s a parameter which allows to make the extraction the air from the bag.
  It’s possible to set the seconds of air extraction.
- TIME INITIAL NITROGEN: it’s a parameter that allows to set the nitrogen injection at the starting of filling; it’s possible to set the seconds of injection.
- TIME OF FINAL NITROGEN: è un parametro che permette si impostare l’iniezione di azoto alla fine del riempimento. E’ possibile impostare i secondi di iniezione
- COSTANTE CONTALITRI K FACTOR: parameter which allows to make the calibration of the flowmeter, setting the litres/pulses.
- CORRECTION LITERS: parameter which allows to make a micro adjustment; It has to be used to correct lower values at 0,15 lt
- PRESSION ISOBARIC SET: parameter present in the using of the isobaric dosing tank. Using this parameter, it’s possible to increase the speed of filling.



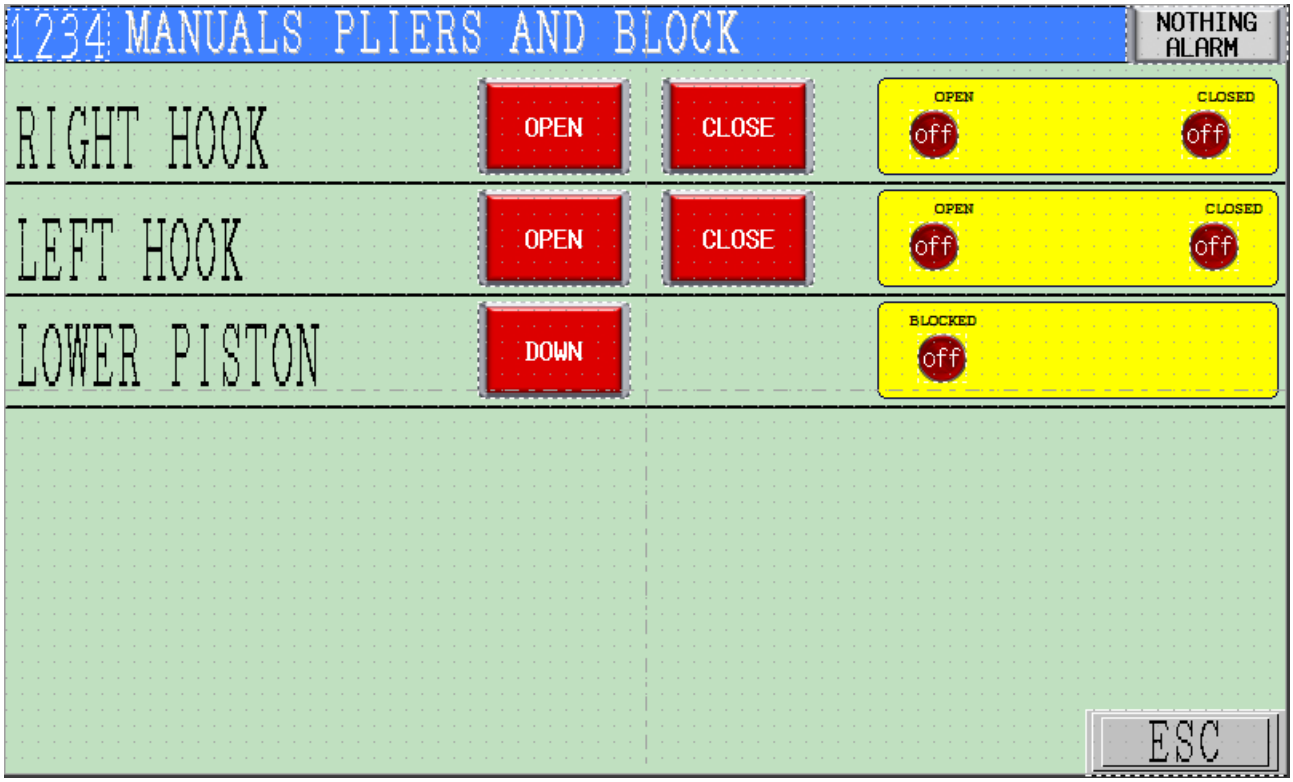
3.4 MANUALS

Selecting this button is accessed to a manual management, for the different mechanical components included in the machinery. This section must be used in cases of remote assistance with Enoitalia' data, to verify eventual failure or block. It's telephonic assistance, and not tele service (which is activated if the verification of mechanical components given negative result). It shows the following screen shot :



Push the button HOOKS AND CLOSE to use the manual management of the following components:

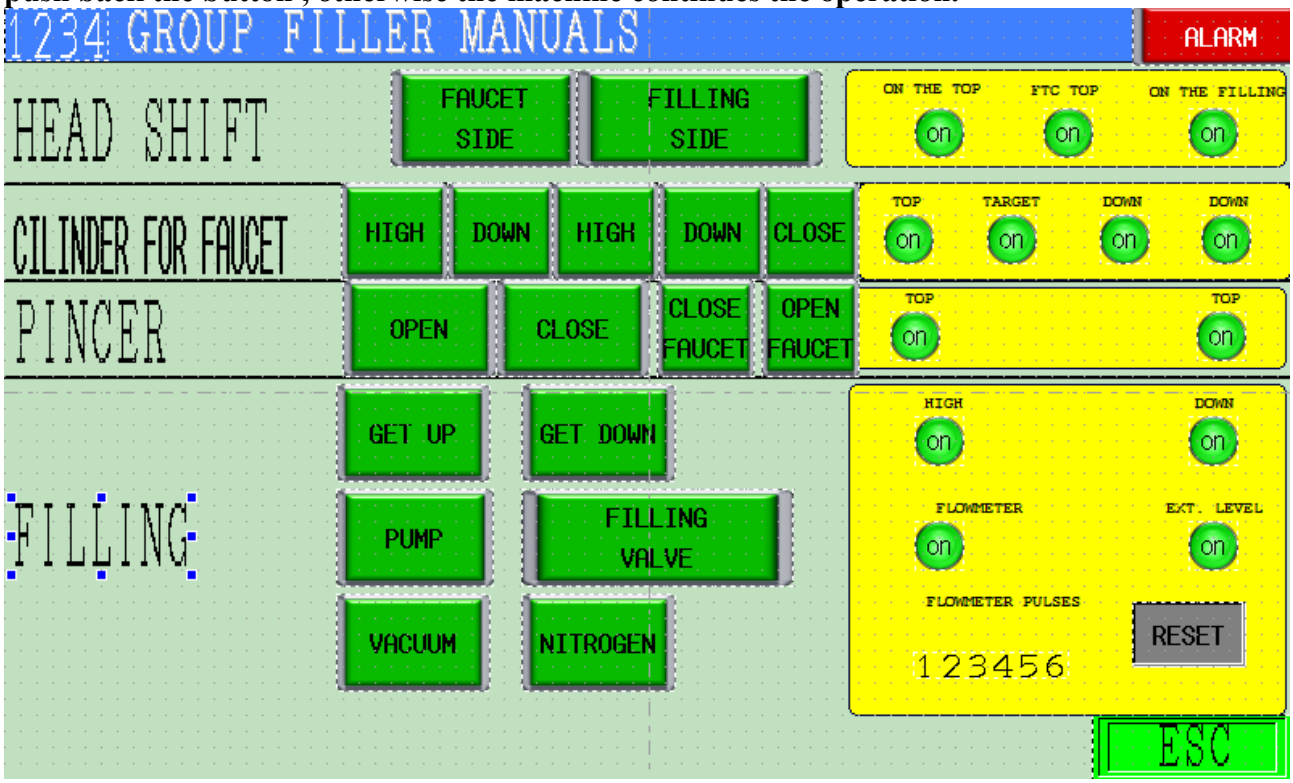
- LEFT HOOK: allows to open and close the front hook (as D.7) . Pushing buttons OPEN and CLOSE, is operated the movement of the hook, and on the left of the screen, the led open and closes, are illuminated. During this operation, some of the following situations can happen:
    - The hook doesn't move, and the LED of open and closed, don't switch on. PLC's problem, to solve in tele assistance.
    - The hook doesn't move, but the LED are on. Problem with the electro valve to verify with our technician in remotely.
    - The hooks moves and LED are on. In this case, there're not electronic problems or with electro valves.
- RIGHT HOOK: allows to open and close the back hook (as D.7) . Pushing buttons Open and Close, is operated the movement of the hook, and on the left of the screen, are illuminated the two LED open and closed. During this operation, can occur the following situations:
    - The hook doesn't move, and the LED of open and closed, don't switch on . PLC's problem, to solve in tele assistance.
    - The hook doesn't move, but the LED are on. Problem with the electro valve to verify with our technician in remotely.
    - The hooks moves and LED are on. In this case, there're not electronic problems or with electro valves. UNDER SUPPORT: allows to verify the right functioning of the vacuum's piston: Operating from the below, this piston keeps sealed the bag, during opening steps, insertion head's filling, bag closing. Pushing, the piston gets up, and the button becomes green, with the inscription HIGH . Also in this case, the side LED, allows to verify the problems of the PLC and electro valve.
- LOWER PISTON: allows to check the correct operation of the vacuum piston. Acting from below, this piston keeps the bag sealed during the opening, head insertion and bag closing. By pressing the piston it rises and the button turns green with the word HIGH. Also in this case, the side LED allows to check the PLC or solenoid valve problems



Push the button FILLING UNIT to enter at the checking of the following components:

- HEAD SHIFT: makes the movement of the block of filling head and the clamp of grip cork to the right (filling side) or to the left (cork side). As wrote before, the two lateral LED allow to find problems on PLC or electro valve. IN addition to this position, we find a LED called CORK FTC: it's a photocell which identifies the presence of the cork. This photocell emits a red light, which has to be addressed to the direction of the cork of the filling bag. If it doesn't find the presence of the cork, or in a wrong position, it stops the machine.
- CILINDER FOR FAUCET: makes move the cylinder dedicated to the taking of the cork and to the closing. This cylinder has 4 positions: heigh C35 e Low C35 are the extraction position of the cork; Heigh C15 and low C15 are two positions of cap closing. As before, the lateral LED, allow to verify possible problems of the PLC or for the electro valve.
- PINCER: make the checking of the automatic grip clamp cap. The buttons open and close, allows to verify the movements of the clamp. The buttons uncork and cork, make the complete cycle of the extraction cork and closing cork, involving the control of Take cap, and control clamp. As before, the lateral LED, allow to verify the PLC or the electro valve.
- FILLING: makes the management of all the filling components. Rise up and lower, refers to the movement of all the block head. Pump refers to the turn on and turn off the volumetric pump on board (if it was expected the isobaric tank, this checking makes the opening of the electro valve's exit and of the tank). Filling valve: it refers to the closing piston and opening of the filling circuit. Nitrogen: it refers to the opening and closing of the electro valve, which control the nitrogen injection. Vacuum: it refers to the opening and closing of the electro valve which control the vacuum inside the bags.

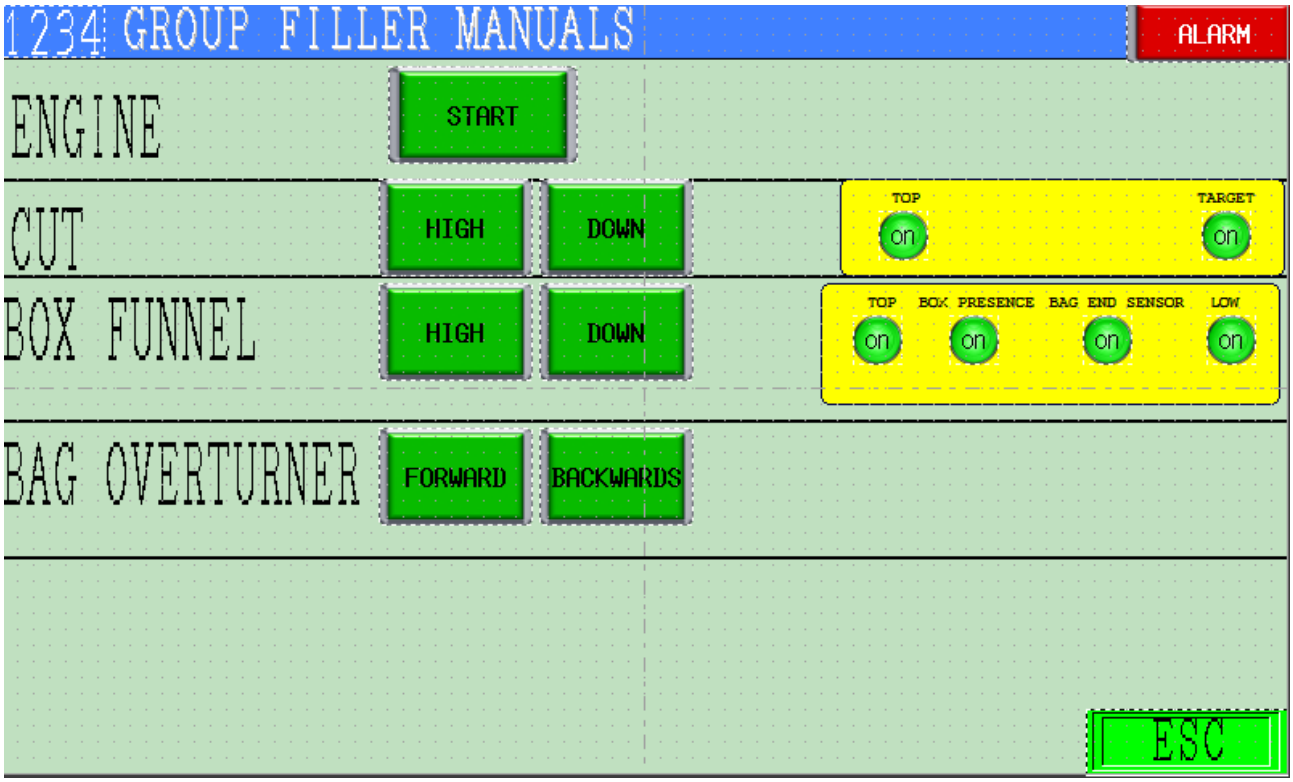
WARNING: the commands above mentioned aren't timed. To stop the program, it needs to push back the button , otherwise the machine continues the operation.



Push the button AUTOMATIC ROLLER AND CUT to enter the following check:

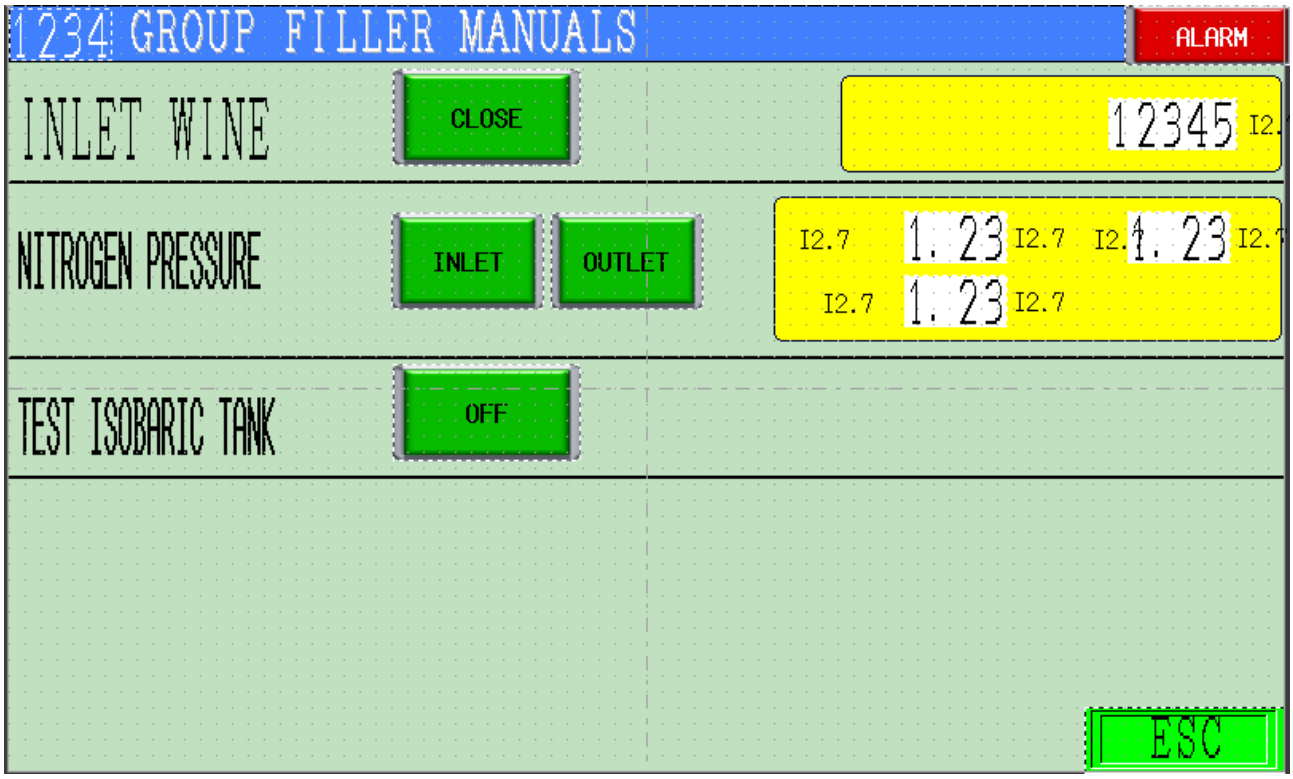
- ENGINE: push the button START to enter the movement bags dragging roller conveyor.
- CUT: push the buttons HEIGH and DOWN to check the movement cut blade.
- BOX FUNNEL: push the buttons HEIGH and DOWN to move the packaging cone. The sensor of BOX P. indicates the functioning of the photocell which notes the presence's box in the right position under the cone. The sensor END BAG notes the right functioning of the sensor inside the cone, which notes the passing of the bag.

- BAG OVERTUNER: press Forward and backwards to test the correct function of this option



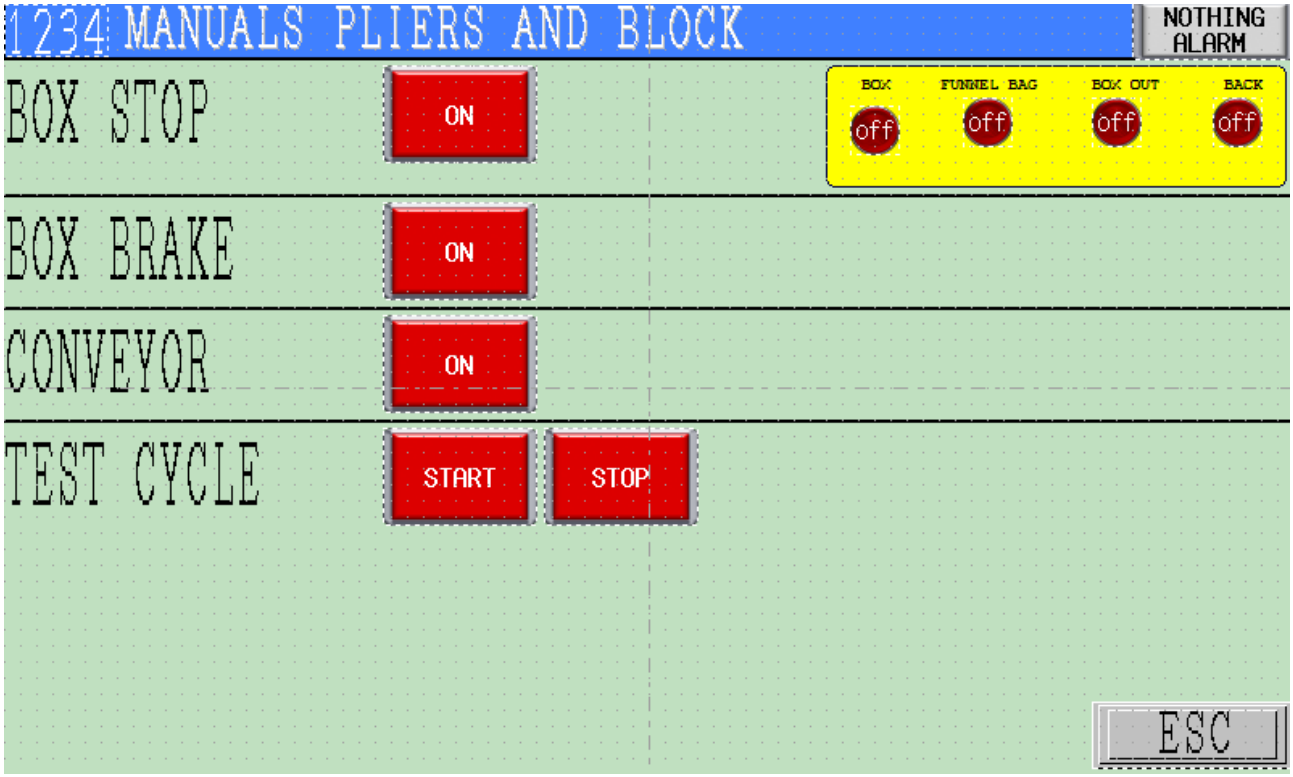
Push the button ISOBARIC TANK, to enter the following commands:

- INLET WINE: drives inlet liquid valve inside the tank.
- NITROGEN PRESSURE : push the buttons INLET and EXIT to operate the two valves of inlet and nitrogen discharge inside the tank. The values indicated on side of this sigh, indicate the pressure detected incoming and in exit of the tank.
- TEST : once pushed automatically, takes the pressure inside the tank, to 1,5 bar, managing the opening and discharge of the vacuum's valves.



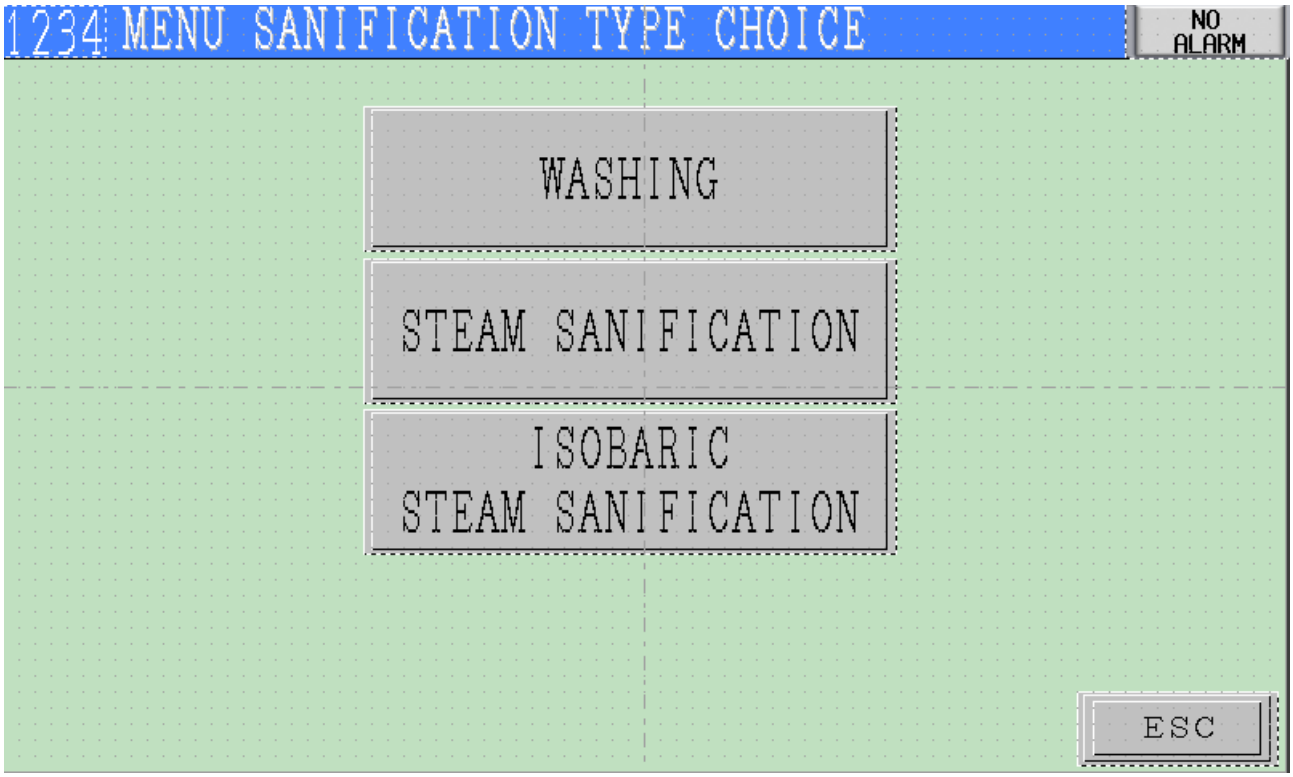
Push the button AUTOMATIC CONVEYOR to enter the following commands:

- BOX STOP: allows to check the lock piston of the box under the exit cone of the bag. Then, there're the checking of the following electro valves: Box, is the photocell of box presence under the cone; funnel bag, is the passing photocell bag, inside the funnel; Exit box, is the photocell which notes the exit of the box from the belt.
- BOX BRAKE: allows the checking of the piston, which dosing the second box incoming at the packaging.
- COVEYOR: allows to operate the rotation.
- TEST CYCLE: allows to operate all the commands of the motorized belt.

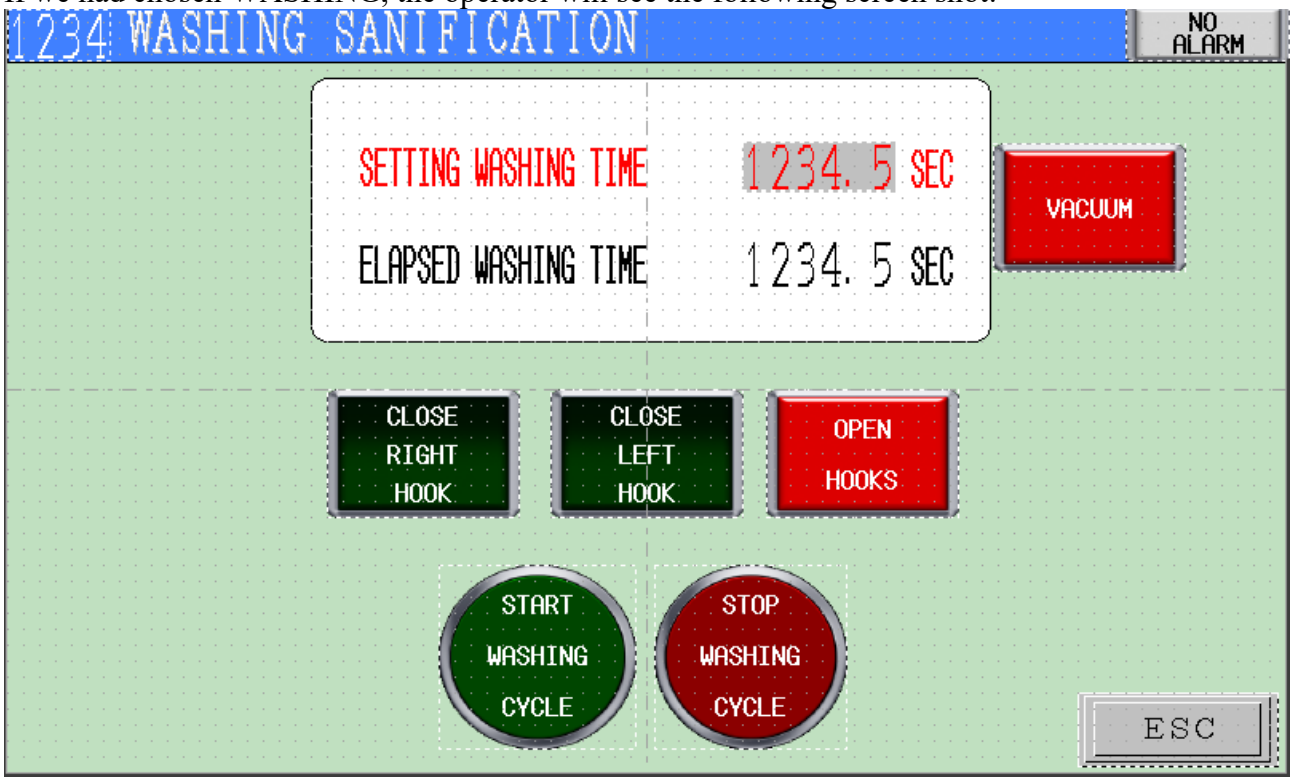


3.5 SANITIZATION:

Push the button sanitization, it opens a screenshot which allows to select the kind of sanitization we prefer to use: WASHING SANITIZATION / STEAM SANITIZATION, if it was expected, STEAM WITH ISOBARIC.



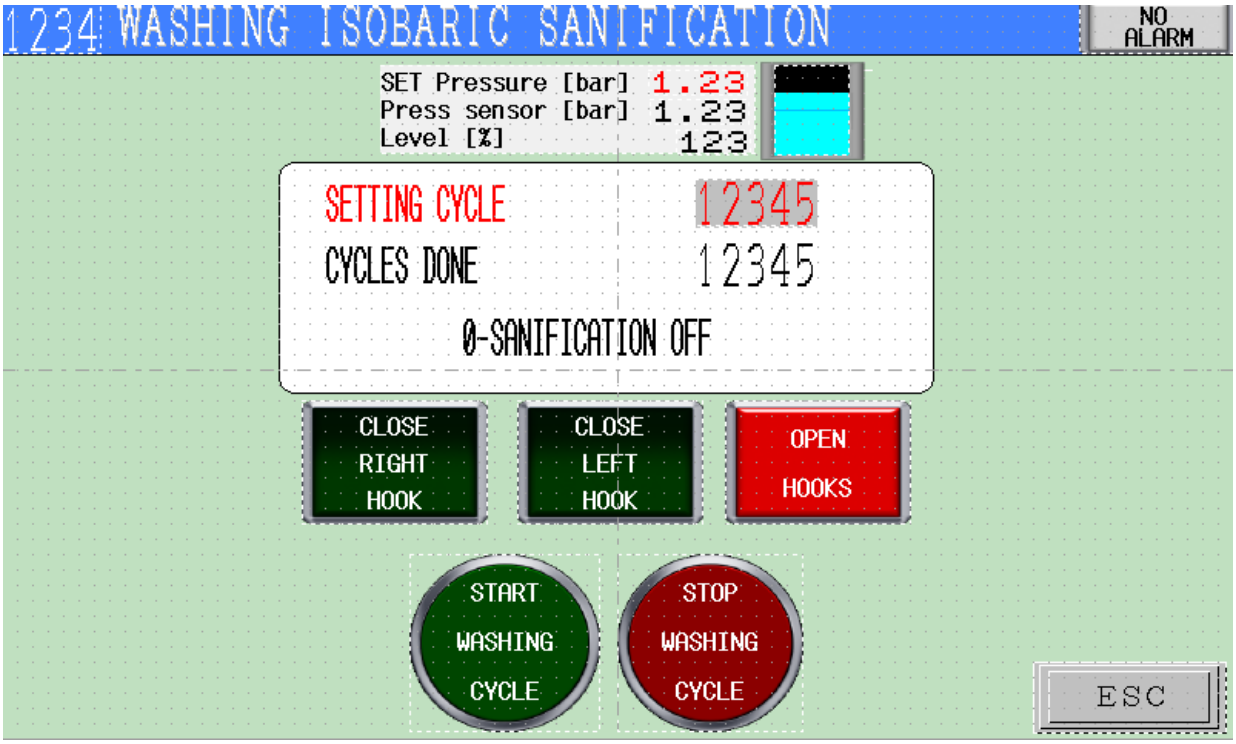
In both programs, it needs to have a washing fitting (see the paragraph washing machinery).
If we had chosen WASHING, the operator will see the following screen shot:



The operator use the buttons CLOSE RIGHT HOOK and CLOSE LEFT HOOK, to install rightly the washing fitting. After to have set a washing time, pushing START WASHING CYCLE: the machine starts to make flow the sanitizing liquid, prepared by the operator, through the pump. Passed the time, it stops by itself. Eventually, it's possible to start back the washing and do a new cycle. The button STOP WASHING CYCLE, stops the machinery and the sanitization. The button HOOKS OPEN, opens both the hooks and raise the filling head.
If we use an isobaric tank, the washing cycle remains the same. The washing supply water must take place through the specific inlet on the trap.
To sanitise and clean the vacuum circuit, through the washing liquids, push the vacuum button, and keep it pushed for 5-10 seconds. In this way, the machine sucks the sanitizing liquid inside the vacuum

valve and remove eventual fouling in the circuit. This procedure gives an extension of the efficiency in the vacuum circuit.

In case the option “STEAM SANIFICATION” has been selected, it will show the following screenshot.



The operator uses, the buttons CLOSE THE FRONT HOOK and CLOSE THE BACK HOOK to install right, the washing fitting. After to have set the number of cycles for sanitization to do, pushing START CYCLE:
the machine starts to make circulate the steam through the pump with a generator (not supplied with the machinery). Passed the different steps it stops by itself. Eventually, it’s possible to start back the sanitization, setting new cycles. The button STOP CYCLE, stops the machinery and the sanitization. The button OPEN HOOKS open both the hooks and raise up the filling head.

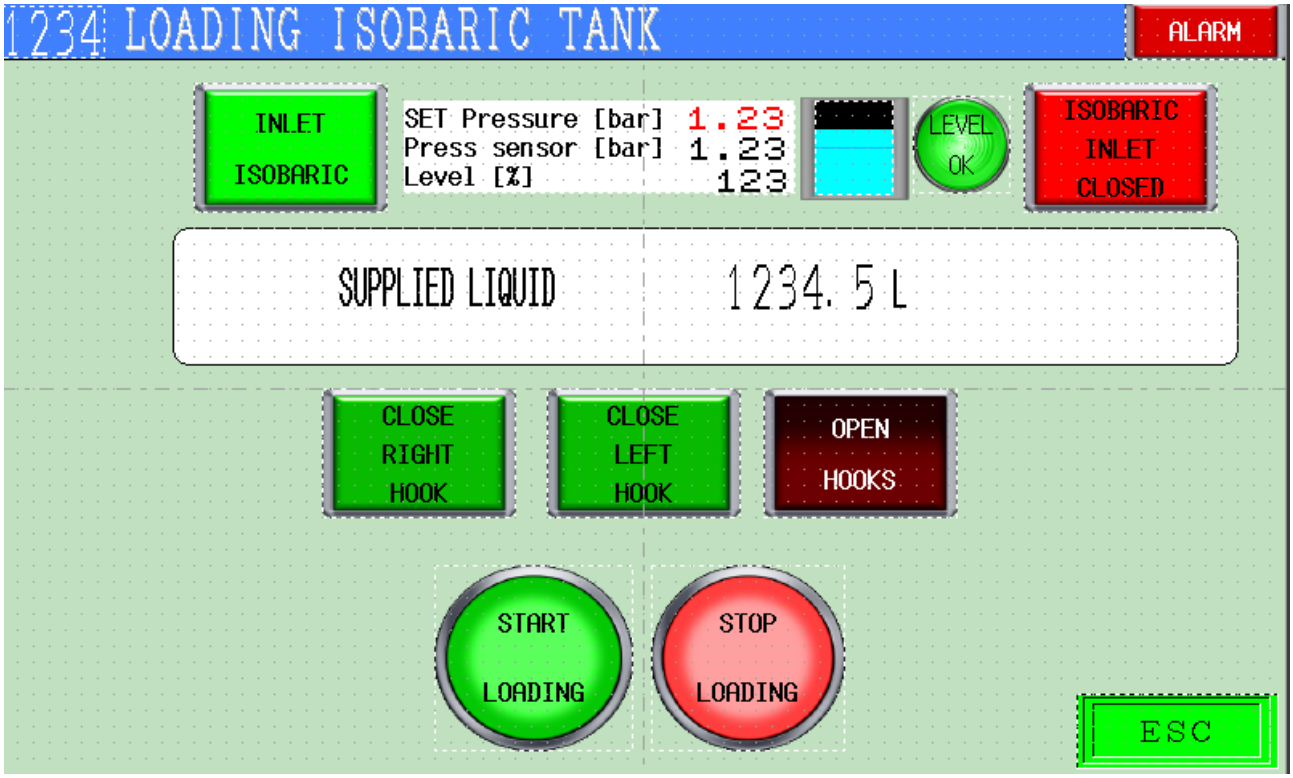
The parameters of during and repetition for the different phases, are set in default. To modify the parameters, it's enough to enter in CONFIGURATION section.

In case of machinery equipped of isobaric tank, select ISOBARIC STEAM, and follow the indications put previously. The steam generator must be connected to the inlet valve of the isobaric tank.

3.6 LOADING LIQUID

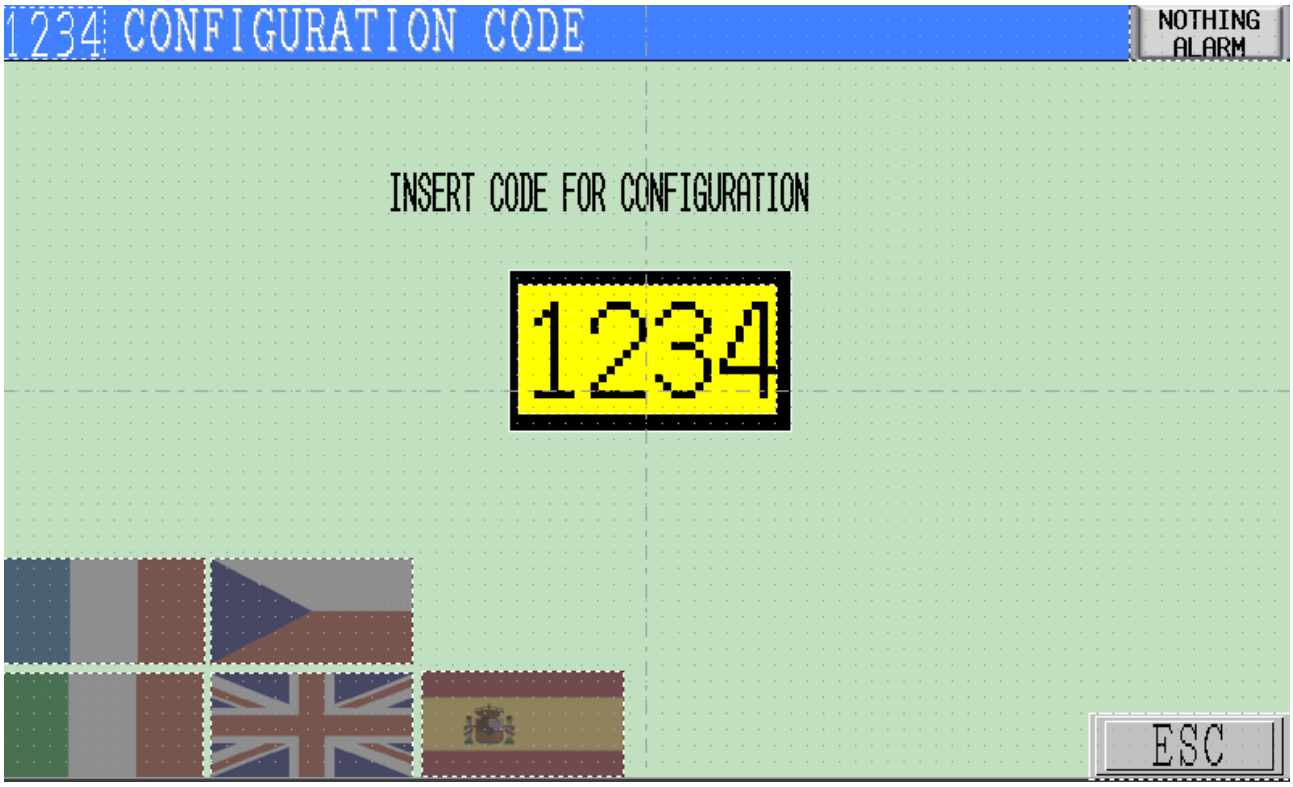
Selecting the button LOADING LIQUID, is accessed to a necessary function for the first start of the machinery, to allow the filling of pipes and the exit of the air.
The operator uses the buttons CLOSE RIGHT HOOK, and CLOSE LEFT HOOK to correctly install the washing fitting. Pushing LOADING START, the machine starts to make circulate through the pump the liquid. When the operator verifies which, the product comes out in fluid manner, without air, push STOP LOADING, the machines stop and raise up the filling head. The button OPEN HOOKS, open both the hooks to get free the washing fitting.
In case of use an Isobaric tank it is necessary first load the isobaric with liquid, pressing INLET ISOBARIC. When the LEVEL becomes green, it is possible start the loading of liquid inside the filler

If the operation to perform is **CHANGE PRODUCT**, it needs to drain the tank, close the ISOBARIC INLET. In this way, the tank, will drain completely the liquid inside the pipe, and it will be ready to load a new product.



3.7 CONFIGURATION

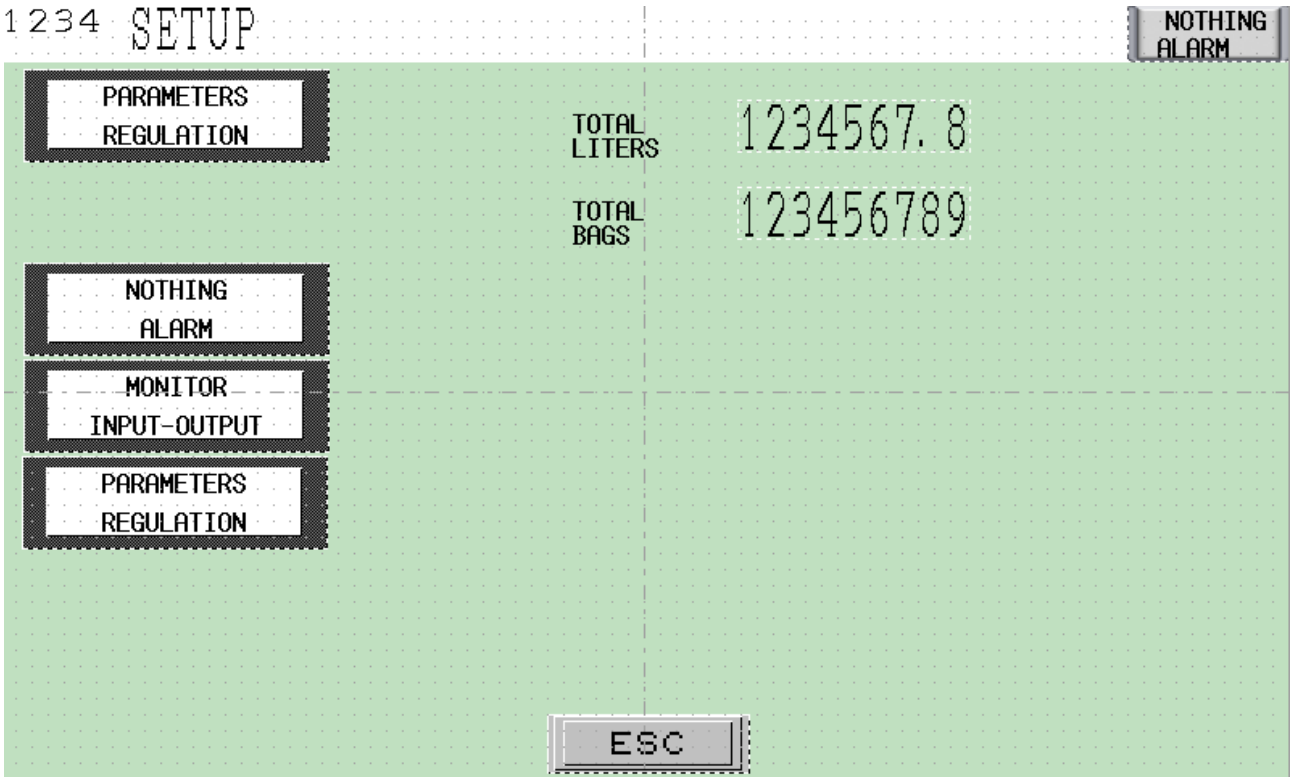
By selecting the button CONFIGURATION, is accessed to a programming menu, protected by a PASSWORD.



WARNING: all the following parameters are protected by an inlet da password. Before accessing and modify the parameters, notify the technical assistance, and agree the most appropriate modifications.

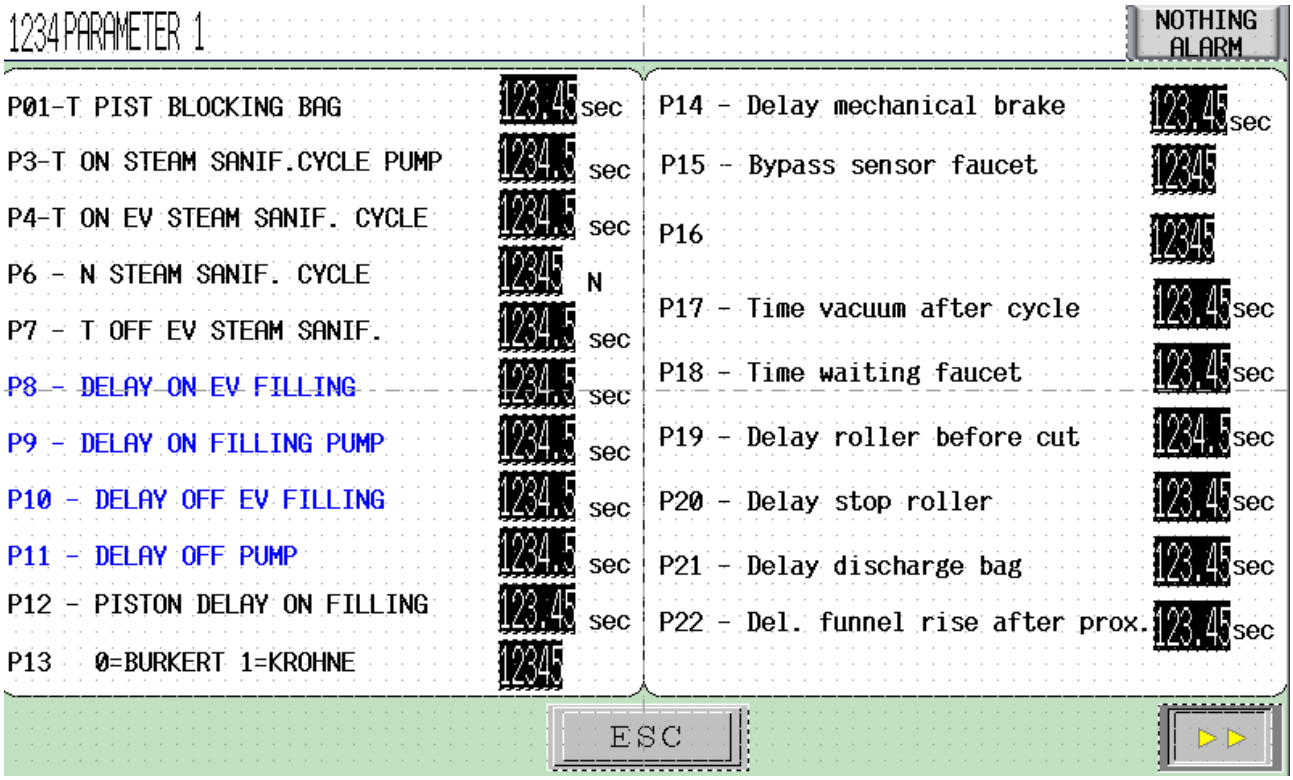
the password is: 7472.

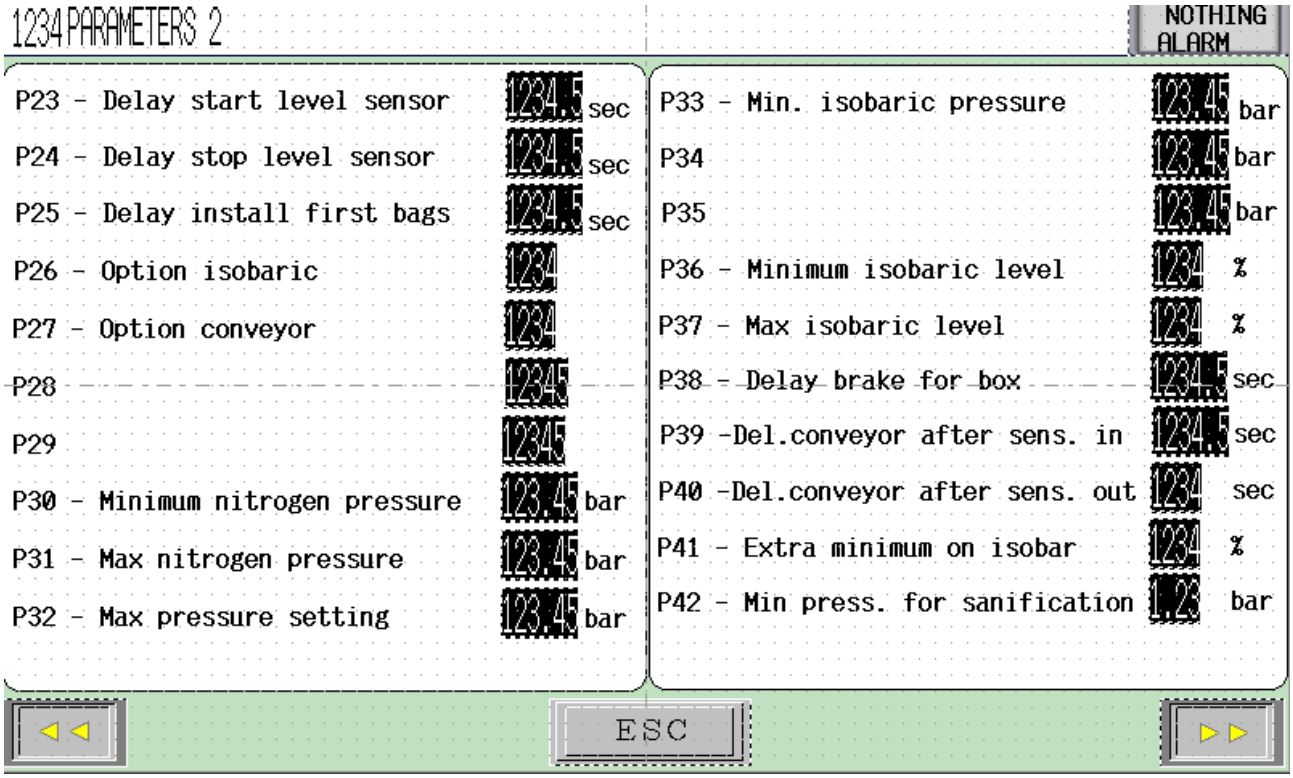
You enter at the following screenshot:

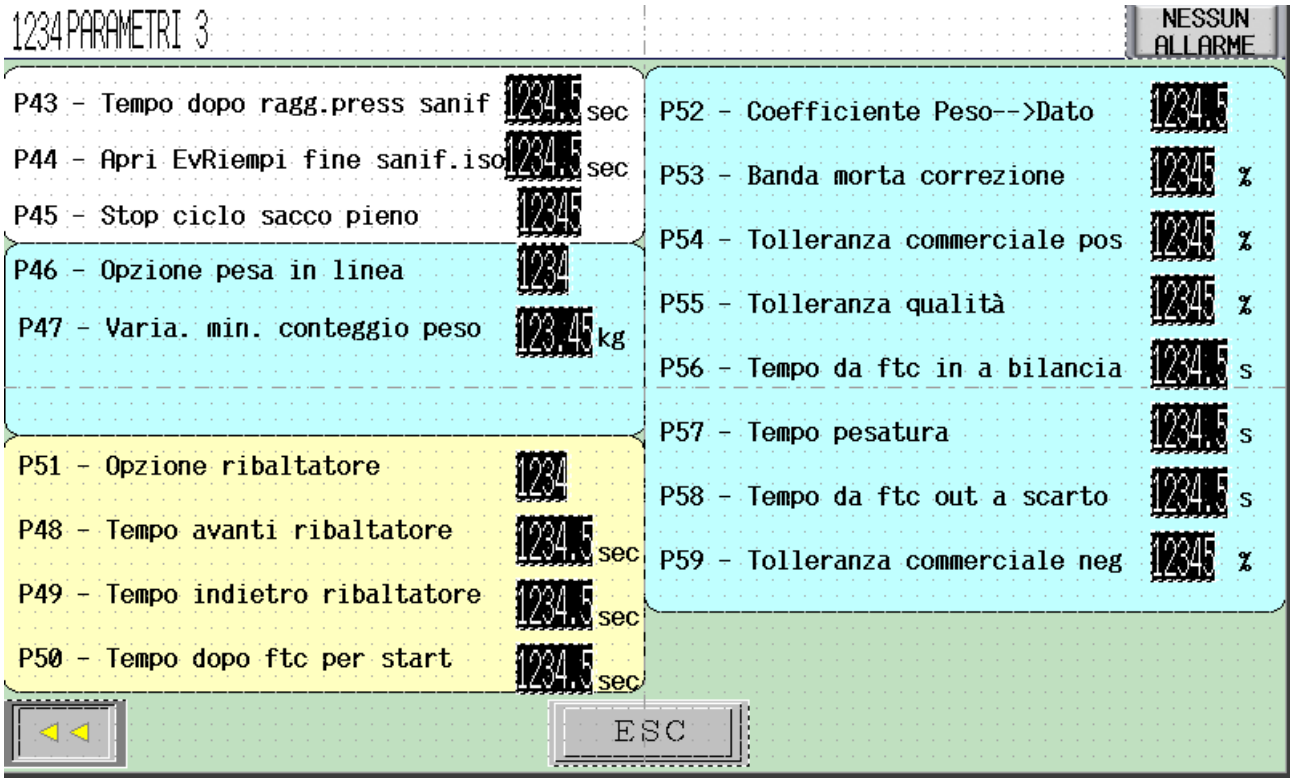


On the right there're some counters not resettable, necessary to verify the maintenance at the machinery.
The 3 buttons on the left, allow to access to a section for complex parameters:

PARAMETERS OF SETTING

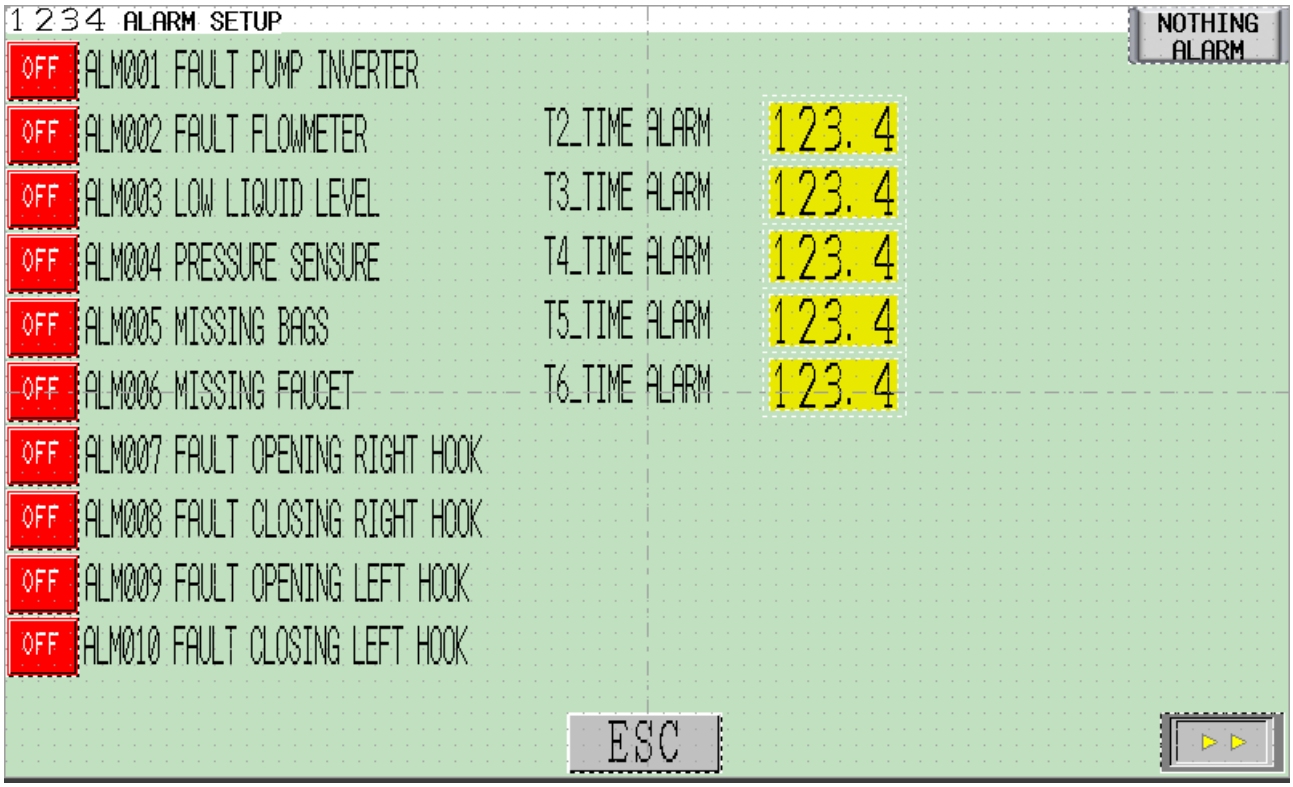


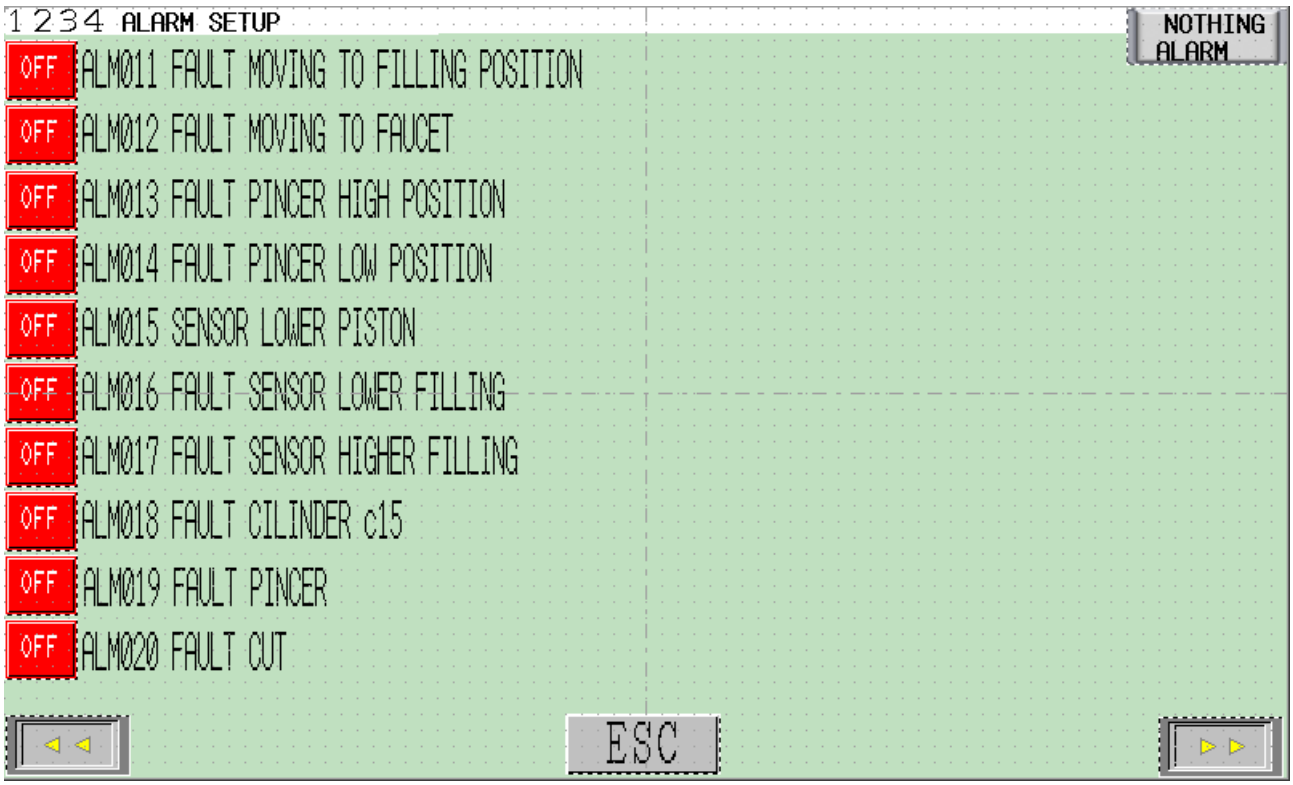


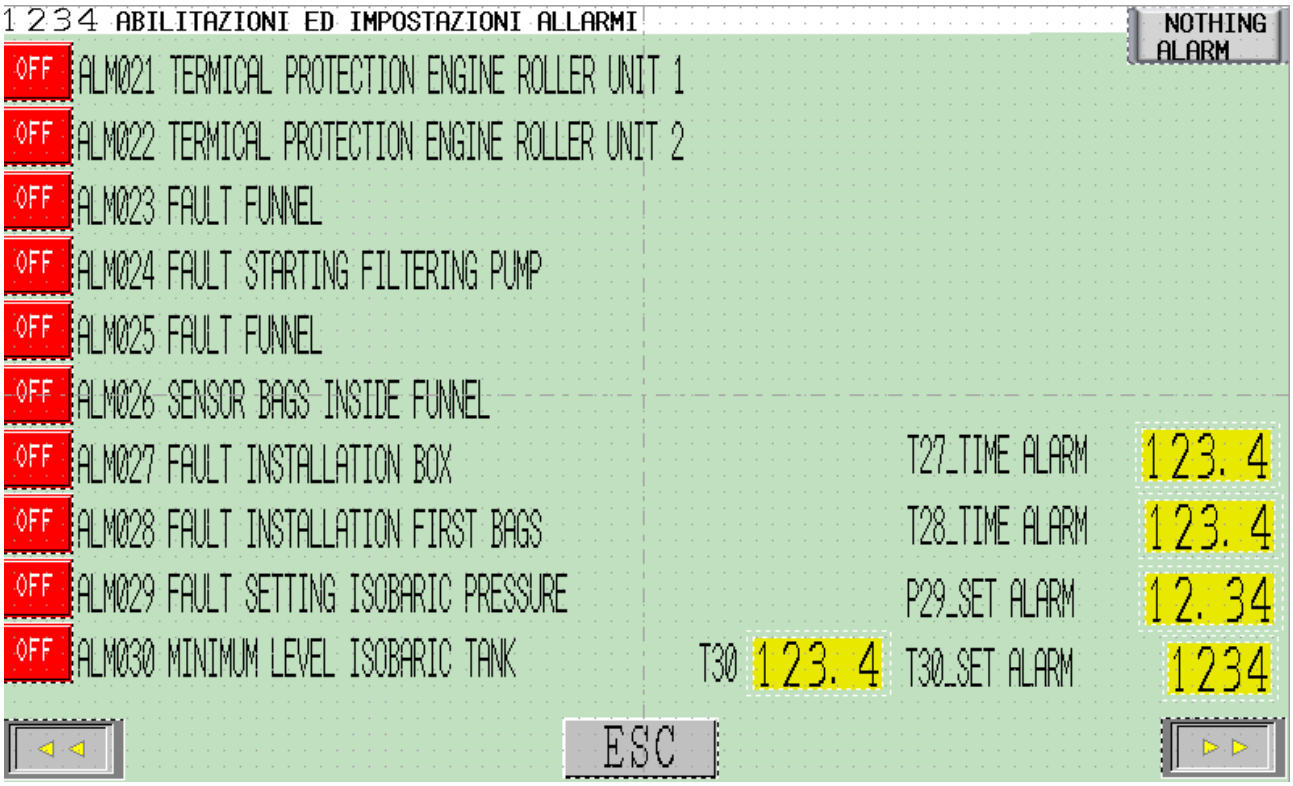


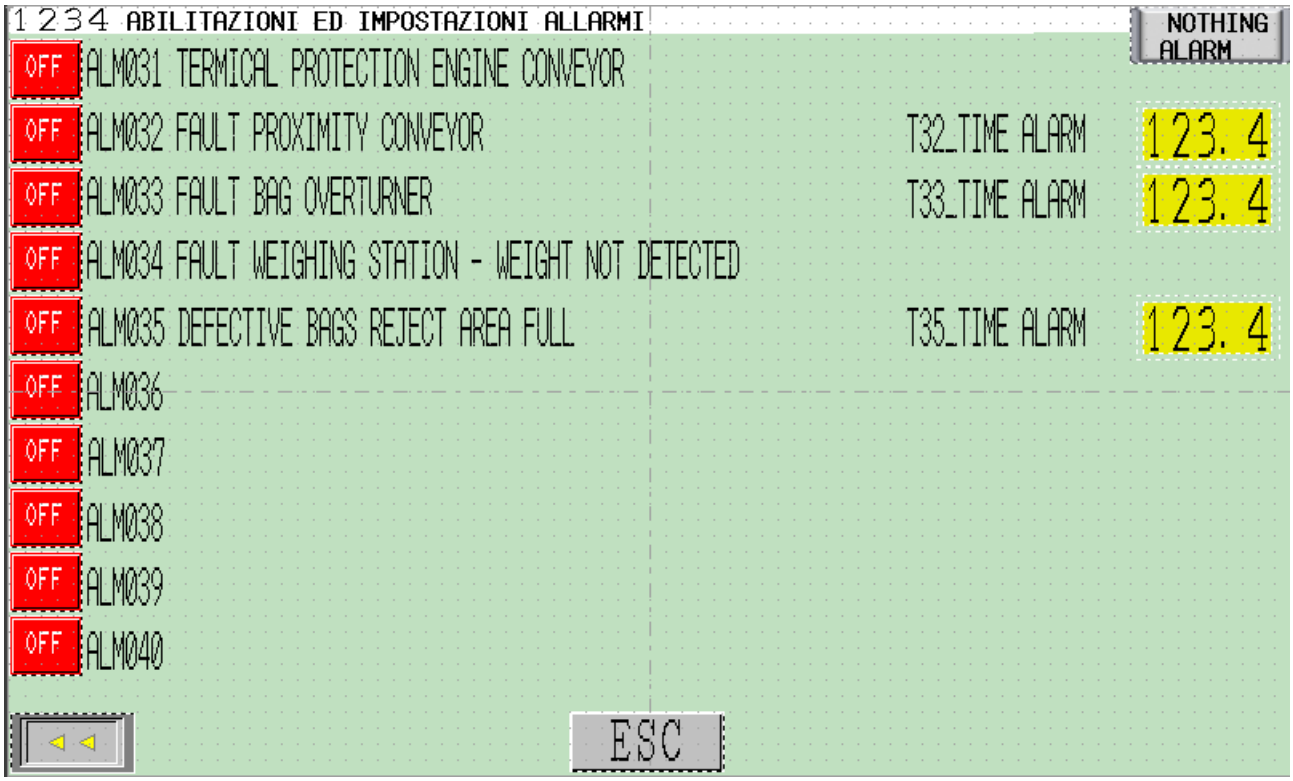
The parameters at line P3-4-6-7 are suitable to manage the sanitization the steam cycle.
The other parameters are set by default: before to apply a modification, notify the Enoitalia's technical assistance, to value the changes will result from.
The parameter P52 to P59 are in use in case of a weight control system
P52: set to zero in case of wine. Change in case of different liquid to compensate the rate Liter/kg
P53: set on 2
P54: set the percentage allowed in increase compare to the target capacity. All the higher weight will be refused
P55: set on 10
P56: this time depend on the speed selected for the conveyor. Keep on 1,3 sec. Before to change contact Enoitalia service
P57: select 0,1
P58: select on 1
P59: set the percentage allowed in decrease compare to the target capacity. All the lower weight will be refused

SETTING ALARMS


1 2 3 4 ALARM SETUP
NOTHING ALARM
OFF ALM001 FAULT PUMP INVERTER
OFF ALM002 FAULT FLOWMETER
OFF ALM003 LOW LIQUID LEVEL
OFF ALM004 PRESSURE SENSURE
OFF ALM005 MISSING BAGS
OFF ALM006 MISSING FAUCET
OFF ALM007 FAULT OPENING RIGHT HOOK
OFF ALM008 FAULT CLOSING RIGHT HOOK
OFF ALM009 FAULT OPENING LEFT HOOK
OFF ALM010 FAULT CLOSING LEFT HOOK
T2_TIME ALARM 123.4
T3_TIME ALARM 123.4
T4_TIME ALARM 123.4
T5_TIME ALARM 123.4
T6_TIME ALARM 123.4
ESC

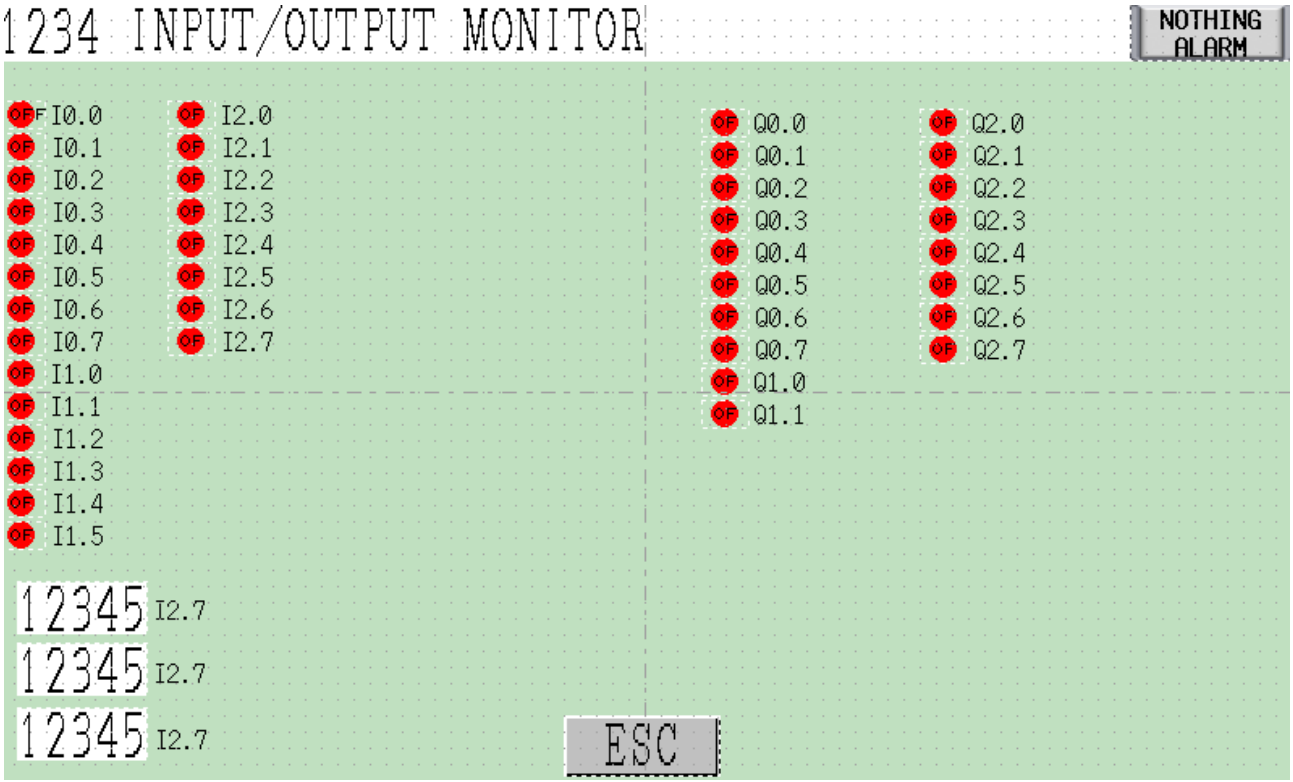

1 2 3 4 ALARM SETUP
NOTHING ALARM
OFF ALM011 FAULT MOVING TO FILLING POSITION
OFF ALM012 FAULT MOVING TO FAUCET
OFF ALM013 FAULT PINCER HIGH POSITION
OFF ALM014 FAULT PINCER LOW POSITION
OFF ALM015 SENSOR LOWER PISTON
OFF ALM016 FAULT SENSOR LOWER FILLING
OFF ALM017 FAULT SENSOR HIGHER FILLING
OFF ALM018 FAULT CILINDER c15
OFF ALM019 FAULT PINCER
OFF ALM020 FAULT CUT
ESC





It’s about all the active alarms on the machinery. They can be disabled, but this involves some risks for functioning: contact previously the Enoitalia’s technical assistance.

MONITOR IMPUT OUTPUT



Are reported all the sensors and electro-valves, managed by the PLC.

4. REGULATION

For a correct calibration of the machinery and verification about the precision of filling, it needs the availability of a balance, or of a measuring cup.

The parameters to regulate the filling are the FLOWMETERS, K FACTOR" and the parameter "LITERS CORRECTION LITERS".
The K factor express the measure of "steps" used by the sensor, for the measurement of 1 litre of liquid racked. This function changes depending on the liquid to transfer, by the kind of pump used, by the length and diameter of the pipe, by the pressure applied by the liquid inside the pipe. At the first use, the K factor, is set at 700 around; this value changes, according to the viscous of the product, it has to be increased, if the weight of the filled bag was lower compared to the theoretical weight of the quantity to fill. Vice versa, it must be reduced, if the weight of the filled bag is higher to the theoretical weight to fill.
The variation to apply to the K value depends by the kind of mistake: we suggest to take action on this parameter, **only if the mistake is over to ± 200 g**r. In these cases, we must apply some modifications from 2 at 4 unit in the K value, repeat the filling, and verify the weight obtained.
When the filling mistake is lower than 200 gr, we can act on the parameter "LITERS CORRECTION": **increasing** this value (so applying positive values) we determinate an increasing for the quantity of the liquid into the bag.
Vice versa, decreasing that value (so applying negative values) is determined a reduction of the quantity for the liquid.
ATTENTION: to insert positive or negative values, we must push over the corresponding number, and it will appear on the display, a kind of alphanumeric screen shot, where modify the set value.
Attention: this parameter is expressed in litres. In this case the modifications to apply, depend by the level of the mistake (if I have to fill 10 lt, and I measure a filling of 9,850 lt, I must set LITRES CORRECTION 0,150 LIT).

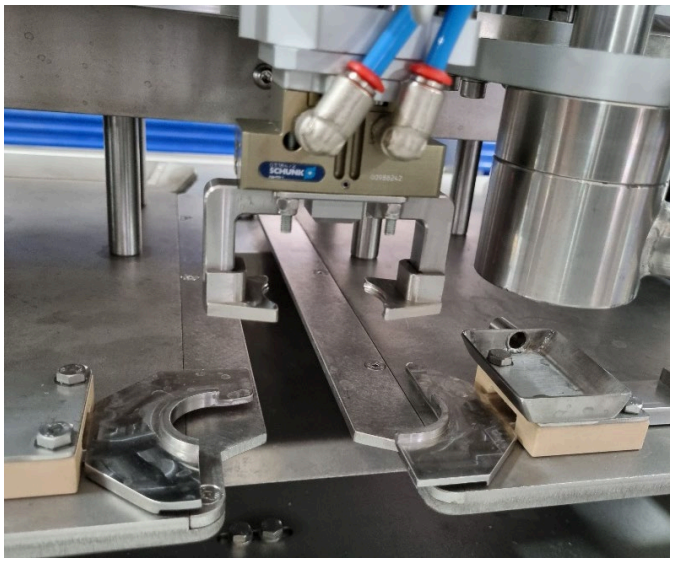
5. FILLING

5.1 FIRST USE AND WASHING.

Before starting with the filling, at the first use, is appropriate proceed with a washing of the machinery, to sanitize the pipes, and remove eventual residual manufacturing.
Install a flexible pipe of ø o 30mm, on the washing fitting, supplied as standard equipment, locking it, with suitable cable ties.
Select, SANITIZATION, with the machinery on, and then, SANITIZATION WASHING.

To access easily to the installation of the washing faucet, disable temporally, the lateral security barrels, using the specific key selector.
WARNING: this operation disables temporally the security protection for the access at the machinery, to help the progress of the functions of the installation. It must be done only by technical staff responsible for the machinery. Passed 5 minutes, the security protection is activated, and if the lateral doors were open, the alarm will start. During the progress of these operations, we suggest the presence of only one operator, to do all the step-in security.

The machine has both the hooks open. Put the washing fitting, supplied with the machine, inside the guideway, as the picture:



Push the button CLOSE LEFT HOOK, on the display, and then, drag the washing fitting, making pull over to the frontal clamp, as the picture.

Push, CLOSE RIGHT HOOKS. The machinery will appear in the following position:

The machine is ready to start with the sanitization cycle with washing.
Close the by-pass of the transfer pump (perpendicular position at the body pump). Dip the pipes in a tank with sanitizer solution (we suggest citric acid) or hot clean water, in a way to create a circuit.
Set the better duration and push the START button of the display.
The transfer pump starts, and the liquid will come into the pipes, and after few seconds will exit by the drainpipe installed. To stop the washing, whenever you want, push the STOP button. If we want to do another washing, set again a during and push START.
If we want to stop the cleaning, we must discharge the pipes; to do that, it's enough turn on the machine for few seconds, taking care to extract the suction pipe of the cleaning solution.
To remove eventual liquid inside the circuit, it must disconnect the flexible pipes from the body pump and from the flowmeter and open the total discharge faucet of the body pump.

This operation of WASHING must be repeat also when the machine will not use for long time. In this case, is advisable put inside the body pump, some drops of glycerine, to keep lubricated the rubber impeller.

If we use an isobaric tank, it must connect a pump inlet to the washing sphere of the isobaric tank. This pump must push the sanitizing liquid inside the tank.
Activate the washing cycle, as wrote above, installing the drainpipe. After activated the washing cycle, put the sanitizing liquid.
Stop the external pump and stop the washing cycle when the pipes will be empty.
WARNING: the loading external pump of the sanitizing liquid, must be switched on and off always while the washing cycle is on.

5.2 AUTOMATIC FILLING

To do the continuous filling of the bags, it needs to install them on the back of the machinery, as the pictures below, be careful that the belt wasn't to be tensioned.
Check to have received the bags, packaged with the exit cap at the end of the bag. Otherwise, it needs to flip the box.

5.3 LOADING PRODUCT

Finished the washing, proceed with the liquid to fill inside the pipes, removing the air and eventual residue of the washing. Connect the pump to the storage tank of the liquid and keep closed the bypass present on the body pump.
Select the program of LOADING. Connect the pipe yet with the washing fitting, following the same procedure indicated for the washing program (opening and closing hooks).
Push the START button. When the liquid come out from the pipe regularly, push STOP.

In case of using of an isobaric tank, the program of loading product, allows as well as the loading of the liquid in the machine, also the filling of the storage tank. On the display appears the indication LEVEL OFF, if the level is not reached. After having stopped the loading cycle, the machine continues to load the liquid inside the tank. It stops when is activates the indication LEVEL ON

5.4 FILLING FIRST BAG AND ADJUSTEMENT CUT

Select the mode of filling as FIRST BAG and select the program 3Lt or 5-10-20 Lt depending on the bag used.

Verify that the cut blade installed, was suitable for the format used: small blade for 3 and 5 lt, big blade for 10 and 20 lt.
If we use bags of 3 and 5 lt, verify the position of the central blade cut (for bag with central cap) or lateral (for bags with lateral faucet)

1. Go on setting the parameters of the cycle for filling which we'll carry out:
2. Set the capacity requested, the correction factor, and time of vacuum and nitrogen.
3. Set on the home screen, the BAGS SET TO DO: numbers of bag to fill.
4. Set the production batch

5. Put the plastic bag on the fork of support, with the cap inserted, as we see in the pic. Check that the rest of bags, were not blocked inside the carton box, and eventually free them.

6. Put a box inside the entry of the conveyor belt (verify that the box's dimension coincides with the bag's capacity and with the kind of cone installed).

7. Turn the deactivation selector security opening. The machine will keep deactivated the security block for limited time, enough to start the cycle.

8. Press the START button on the control panel. It starts the belt conveyor, taking the box under the cone. If other boxes have been loaded, they're blocked in entry, by the blocked piston. The frontal hook of the machine open.

9. Open the left side door of the machinery. Drag the bag to the closed hook. Arrived in position, in it will close the back hook, blocking the bag in position.

10. Close the side trap of the machinery and restore the security selector.

11. Press the START button: the machine makes the filling of the bag, and it stops after to have it plugged, with the bag still blocked by the hooks.

12. Press the button FAST OPENING OF THE HOOKS on the control panel. Verify that the bag was fell on the belt conveyor. If not (the bag is still hanging on the support) manually operate the conveyor: access to MANUALS; come into conveyor/ end line, operate MOTOR, one moment to make move the bag.

13. With the bag on the roller's unit, come into MANUALS, and hooks and block, go to act right hook.

14. Access again to the conveyor, following the indications above, as long as the second bag arrive in position. So, close LEFT HOOK.

15. Tension the bag through the MOTOR. proceed with the cut settings.

16. Open the two lateral doors and verify the position of the pre-cut surface of the bag. If this position falls not on an empty space, but on a roller, it must center the machinery, following this procedure (we suggest acting this operation with two operators):
    a) Unlock the parking brakes of the filling's wheels.
    b) Unlock the lateral stop knobs, which fix the machine to the conveyor.
    c) Remove or get close the machinery, centre the pre-cut at the empty part of the rollers .
    d) Block again the two lateral knobs
    e) Apply the parking brakes

Check where the blade cut, respect the pre-cut area, and align it acting on the graduate guide.

After having closed back the lateral protections, following the procedure MANUALS/ END LINE CONVEYOR, act the cut test and verify about the separation of the bags.

If the bags aren't separated, it needs to remove the blade cut in better position.

PROCEDURE ONLY FOR BAGS OF 3 LT OR LOWER: In case of use of tanks with capacity of 3 lt or lower, the procedure above described, is different for the necessity to the cut at the second filled bag.
So, we must proceed as follow:

- To regulate the cut position, it must set the 3 lt filling program.
- Repeat all the steps till the point 13.
- After to have filled the first bag, and have dropped it to the support plane, press the RESET button on the control panel, and repeat again all the operations, till the point 15.

WARNING! **After verifying that the cutting position is correct, we suggest marking the identified position both on the graduated axis of the bag cutting and on the fixing plate of the filler with the roller conveyor, to make a quick adjustment the next time.**

5.5 CONTINUOUS FILLING

After carrying out the cutting adjustment operations, the machine is ready to be able to carry out continuous filling.
Clearly, if the bags used are always the same, the adjustment of the cut and machine position can be done simply by aligning the components to the previously identified points.

Set the quantity of pieces you need to fill.
By selecting the FIRST BAG program, follow the bag loading operations as mentioned above up to point 11.

Then select the CONTINUOUS program (the machine already offers it automatically), and press START.

1. The machine automatically performs the following operations:
2. Starting the dragging roller
3. Positioning of the second bag and blocking it with the hooks and with the lower piston
4. Cutting the first bag
5. Start filling the second bag.

6. Simultaneously the first bag is dragged towards the exit cone, where a photocell intercepts its arrival.
7. The outlet cone is already in position inside the cardboard box and therefore the bag is advanced inside the cone and consequently inside the box.
8. The cone rises (the bag passage sensor confirms that it has been unloaded)
9. The cardboard box lock releases and the box is transported off the belt,
10. When the box exits the belt, the blocking brake is deactivated which allows a new box to pass and subsequently blocks the incoming one.
11. The outlet cone drops back into the cardboard box and the cycle repeats.
12. In the case of containers of 3 liters or less, after selecting the program, repeat the FIRST BAG procedure twice and then launch the CONTINUOUS program.

5.6 FUNCTION STEP BY STEP

This type of program allows you to carry out all the operations of the cycle in single steps, which always require the consent of the start button to access the next function.
This method is useful in two situations:
• During a service intervention to identify the function that is not performed by the machinery correctly
• During the bag calibration phase, as it allows you to fill one bag at a time, test it and, if necessary, quickly fill the next

5.7 EMPTYING FUNCTION

This type of program allows you to carry out all the operations of the cycle in single steps, which always require the consent of the start button to access the next function.
This method is useful in two situations:
• During a service intervention to identify the function that is not performed by the machinery correctly
• During the bag calibration phase, as it allows you to fill one bag at a time, test it and, if necessary, quickly fill the next

5.8 CALIBRATION

During the FIRST BAG filling phase, use the filled and cut bag to check the weight, and if necessary, modify the values of the Factor K and "LITRE CORRECTION" parameters, as indicated in the ADJUSTMENT section.

- Once the correct values have been entered, the machine will continuously repeat the filling of the set quantity. Any variations may depend on the following factors:
- Significant change in the capacity of the filling tank.
- Clogging of a possible filter installed upstream of the filler.
- Wear of the rubber impeller of the pump

If an atmospheric storage tank is used, the filling error can only depend on wear on the impeller, or on a significant variation in the speed of the pump.

If the isobaric storage tank is used, the variation may depend on a change in the pressure set inside the tank.

6. FORMAT CHANGE

To modify the format of the bags to be used it is necessary to proceed with the following modifications:

• Set the program on the capacity we need to fill (3 liters or 5-10-20 litres)

• Check that the cutting blade is correct

• Check the sliding guides of the roller conveyor

• Check the size of the outlet cone and replace if necessary

• Check the correct position of the cardboard box with respect to the outlet cone (use the MANUAL commands)

• Center the cardboard box slide rails and brake position for the second box

7 FUNCIONING ROLLER CONVEYOR BOXES

The machine can be equipped with two alternative types of terminal roller conveyor:

1. Roller conveyor with motorized belt, automatic motorized

2. Roller conveyor with manual idle rollers

7.1 AUTOMATIC CONVEYOR

This type of solution provides for the supply of an automatic belt equipped with:

- Box lock
- Box presence sensor
- Box outfeed sensor
- coming box locking brake
- Safety barriers

The drive and movement control takes place from the control panel.
The safety barriers stop the rotation of the belt and at the same time prevent the movement of the exit cone.
The filling cycle is automatically reactivated when the barriers are free.

The loading of boxes inside the belt can take place manually by an operator, or automatically by connecting the machine to carton-forming machines.

WARNING!

In the case of manual box loading, the operator must position himself at the entrance of the belt and not frontally.

7.2 MANUAL CONVEYOR

This type of solution provides a belt with idle rollers equipped with:

• Box lock

• Box presence sensor

• Safety barriers

The loading of the boxes takes place by the operator, who must push the box up to the blocking point. At the end of the packaging after the cone has lifted, the operator pushes the box beyond the stop block and installs a new box.

WARNING!

The operator must carry out these operations by standing in front of the belt to intercept the safety barriers.

8 STORAGE TANK

On request, the machine is supplied equipped with a stainless-steel storage tank.
There are 2 different option:

1. Atmospheric tank with a capacity of 200 liters
2. Isobaric tank with 100-liter capacity

8.1 OPERATION WITH ATMOSPHERIC TANK

The storage tank is supplied on a palletizable platform, equipped with the following accessories:

• Three-phase electrical panel with level probe control and activation of an external pump

• 2 minimum and maximum level probes

• Normally closed pneumatic inlet valve

• Super minimum sensor to be connected to the filler

• DIN 40 total drain valve to be connected to the filler

• Nitrogen input for saturation

• Reinforced manhole cover with two-way safety valve

It needs the following connections:

- Power threephase 380V 50hz
- Air connection with pipe 6mm
- Nitrogen connection with 6mm size fast connection

The wiring connection with filler, allows to activate the alarm 003 for missing liquid: the filler complete a cycle of one bags and then stop.

8.2 OPERATING WITH ISOBARIC TANK

The isobaric tank is used for continuous dosing of the filling liquid, and the filler is supplied without the filling pump and variable speed drive.
The pressure inside the tank must be set lower than the liquid inlet pressure, in a range between 0.8 and 1.5 bar. Values below 0.8 can make filling too slow, while values above 1.5 can create accuracy problems.
The maximum operating pressure is 1.8 bar, above which the safety valve intervenes.
La riempitrice è fornita con un programma speciale, in cui, oltre alle funzioni base sono previste le seguenti funzioni:
The filling machine is supplied with a special program, in which the following functions are provided in addition to the basic functions.

A. Isobaric tank pressure adjustment within CYCLE PARAMETERS
B. Adjustment and function test of the isobaric lung within MANUAL
C. On the main page of the control panel, the set pressure, the pressure detected inside, and the product level (as a percentage of the total capacity) are displayed at the top left.
D. In the PRODUCT LOADING program, the function that delays the program stop until the maximum tank level is reached is activated.
E. The STEAM SANITIZATION program is specially designed for the Isobaric tank version.

During operation of the filling machine, the tank opens the liquid outlet valve for the Loading and Filling programs. Also, during these two phases the liquid inlet valve is activated, which opens and closes following the minimum and maximum level signal.

During both the filling and pause phases, the tank constantly monitors the internal pressure, and constantly activates the nitrogen inlet and outlet valves to keep the internal pressure stable.

An external on/off signal output is provided within the Isobaric tank cabinet, to be used for feeding the lung.

9 ALARMS

The machine is equipped with an alarm signaling system which can intervene both in hazardous situations (safety opening) and in situations of incorrect operation.
The current alarm is indicated in the last line of the main screen: once pressed, the current alarm page opens, with the possibility of pressing the RESET button to deactivate it.
Depending on the type of alarm, the machine can act in two modes:

- Immediate stop in its current position
- Warning of the alarm, but completion of the container filling and capping phase in progress, remaining in the waiting position with the container installed inside the hooks

Once the alarm is displayed, you must perform the necessary operation to remove it, and then press the Reset button on the screen to clear it. If the alarm is not cleared, the operation to be performed must be checked again or must be contacted technical assistance.

The complete list of alarms can be found in section 2.4.6

10 MAINTENANCE

To improve the life cycle of the machine, we recommend the following periodic checks:

- At the end of the working day, manually start the EMPTY cycle for 1 minute, in order to dry the pipes by removing any drops of liquid left inside.
- At the end of the working day, check for the presence of condensation inside the air filters installed on the machine, and empty them if necessary.
- At the end of the working day, clean the sliding surface of the bags and the hooks with detergent solutions. Remove any liquid leaks on board the machine
- Monthly check the degree of clogging of the air filters and replace them if necessary, following the specific manual enclosed with the machine.
- Lubricate the air circuit monthly by adding a few drops of specific anti-condensation lubricant to the piping exiting the filter unit. After adding this lubricant, manually perform all pneumatic movements of the machine (install a bag inside the hooks to avoid damaging the head)
- Every month add a few drops of spray lubricant on the cap extraction grippers and hook slide guides, and on the pneumatic slide cylinders.
- Lubricate the drive chain of the drive rollers (to access the chain, remove the side protection covers and the lower drop tray)
- Check the integrity of the pump: open the pump body and wash the rotor internally. In the event of liquid leakage from under the motor remove and replace the mechanical seal

11. POSSIBLE CAUSES OF MALFUNCTION

WARNING ! ***All repairs must be carried out directly by Enoitalia srl or by qualified and specialized personnel***

In the case of any repair work, original spare parts must be used, contacting the retailer or the manufacturer directly.

INCONVENIENTS	**RIMEDIES**
The filling machine does not respond to commands.	Check that an alarm is not active. Check that the RESET button on the control panel is not on and press it if necessary. Check the correct connection of the connectors between the control panel and the machine, in particular check the connection of the data cable. Open the control panel and check for any active red emergency lights and contact Enoitalia for assistance.
The filling machine stops after a few litres without reaching the set level.	Press the reset button and check that all counters show the correct value.
The filling head enters the bags with difficulty	Check the centering of the head and adjust the adjustment screws if necessary. CAUTION. At the beginning of the machine's life after about 3000-4000 pieces the centering operation must be carried out because of the penumatic settlement of the various components

The clamp can't extract the cap.	Check for possible clamp wear and replace. Check that the plug is compatible with the collet used and contact the manufacturer if necessary. Check the centering of the head and adjust if necessary.
Vacuum air pipe fills with liquid	If these are small drops, this is not a problem as they are expelled from the pipe when it is next filled and deposited in the tray under the worktop.
Liquid leakage from the filling head	Replace the buffer on the closing piston
Liquid leakage on the lower deck	Check that the pump connections are tight. If it is liquid droplets that are ejected from the vacuum air outlet, put a drain hose connected to the collection tray. Such drops do not cause any damage to the system, but place a container under the drainpipe of the drip tray to collect them.
Leakage of liquid from the transfer pump.	Check and replace mechanical seal on pump
Filling machine is blocked, does not start and does not reset	Access the INPUTS screen, and contact the service centre, stating which sensors are active
The filler does not start, no liquid flows out of the filling head and does not perform the vacuum (vacuum) cycle.	Check that you have pressed the RESET button and unlocked the EMERGENCY STOP Check that the side guards are closed and that there are no obstacles inside the front safety barriers Check any safety devices on the electrical system. Check that the two circuit breakers inside the electrical panel are active. Check internal fuses .
The counter does not count and the machine does not stop	Check during a filling, in the MANUAL section, whether the counter selector switch is switched on and is counting. Check the parameters entered for the K value and Offset correction Contact technical support
The filling machine does not start, no liquid escapes from the filling head, but performs the vacuum cycle (vacuum).	Check that the pneumatic valve opens. Check that the pump motor turns on. Check that the pump is priming the liquid and close the by-pass if necessary. Check the presence of liquid inside the storage tank
The machine is foaming	Check that the non-return valves installed on the filling head are intact Check that the head closes tightly inside the bag and centre if necessary. Check that the filling head moves freely without hitting the structure of the machine. Check the integrity of the filling head closing

12. WARNINGS

- Place the machine in a dry place protected from the weather and protect it from humidity.

- Do not use the machine for transferring flammable or explosive liquids or in explosive atmospheres, as the motor is not of the explosion-proof type.
- The temperature of the liquids to be transferred must be between +5° C and 110°C; higher temperatures lead to a deterioration in the overall performance of the machine.
- The noise level detected is within the limits set by directive 2006/42 EEC (<85dB)
- Before starting the machine, check that it has not suffered any damage during transport (breakages or dents) that could affect its operation.
- Never carry out the electrical connection, operation of the controls or any other operation on the electrical components with wet hands.
- Never remove the protective cover when working on the machine, and when washing.
- Read this manual carefully in all its parts before using the machine and keep it carefully for future reference.
- The company Enoitalia S.r.l. is not liable for damage resulting from any modifications made to the machine by third parties.
- The company Enoitalia S.r.l. reserves the right to make construction changes at any time without obligation to notify
-

- **6. WARRANTY**

The warranty covers the machine for the first twelve months after start-up. In the event of immediate non-use, the guarantee covers up to eighteen months from the date of delivery, thereafter it lapses.

The warranty does not cover the transport of the machine, which is the responsibility of the purchaser, and shall expire in the event of use that does not comply with the instructions in the manual.

The repair is intended ex our factory in Cerreto Guidi, (FI); it does not cover transport, which is the responsibility of the purchaser.

Excluded from the guarantee and entailing the termination of any obligation are defects resulting from

- Incorrect installation
- Tampering with the machinery
- Inexperience, lack of maintenance, untimely reporting of defects
- Non-compliance with the provisions of this instruction manual.
- Repair by personnel not authorised by Enoitalia s.r.l.
- Transport damage, which cannot be traced back to manufacturing or packaging defects.
- Installation work and housing in electrical systems other than the instructions in the manual and on the nameplate on the engine.
- Transport costs and risks when sending the machine to authorised service centres.
- Electrical components.
- Consumable materials and routine maintenance costs in the aforementioned manual.

The warranty does not extend to the obligation to pay compensation for damage to property or persons resulting from the use of our product even in the event of breakage or defect.

Failure to comply with the agreed terms of payment shall result in the immediate termination of warranty obligations.

All claims, if any, must be communicated by the purchaser within 8 days of purchase, in writing, to ENOITALIA s.r.l.

Reservation of title, as provided for by the executing articles 1523-1524 of the civil code, the transfer of ownership of the goods object of the sale shall take place only after full payment of the agreed amount.

The place of jurisdiction for any disputes arising from this contract is Florence.

For foreign citizens or goods supplied abroad, any dispute shall be governed by Italian law

ENOITALIA s.r.l.

Via Prov. Pisana, 162 - Cerreto Guidi (Fi)

EC Declaration of Conformity for Machinery

(All.IIA DIR.2006/42/CE)

ENOITALIA s.r.l.

Via Prov. Pisana, 162 Cerreto Guidi (Fi)P.iva 03987590480

DECLARES THAT THE MACHINE

COD. 9450
BB50 FILLING MACHINE
YEAR OF CONSTRUCTION: 2022

complies with the prescriptions

- Of Directive 2006/42/EC (Machinery Directive) and subsequent amendments and national implementing provisions.
- Of Directive 2014/35/EC (Low Voltage Directive) and national implementing provisions.
- Of Directive 2014/30/EC (Electromagnetic Compatibility Directive) and national implementing provisions.

The machine also complies with Harmonized Standards:
UNI EN: 349; 954/1; 1050; 547-1-2-3; 894-1-2-3; 953; 981; 1005-1-2-3-4-5; 1037.
UNI EN ISO: 3744; 7000; 12100-1-2; 11202; 11205; 11688-1-2; 14121-1; 13857;
UNI EN ISO 1186.
Technical standards and specifications CEI EN 60204/1.
National standards and technical specifications: UNI ISO 1819; UNI ISO 7149;
UNI 7544; 45020; 60447.

AND AUTHORISES

the Production Manager Mr. Menichetti Stefano, residing at Via Provinciale Pisana 166, Cerreto Guidi, Florence, Italy

TO COMPILE THE TECHNICAL FILE ON HIS BEHALF

Cerreto Guidi,

Il Responsabile