ENOITALIA

ENOLOGICAL EQUIPMENTS

INSTRUCTIONS FOR USE AND INSTALLATION - TECHNICAL MANUAL

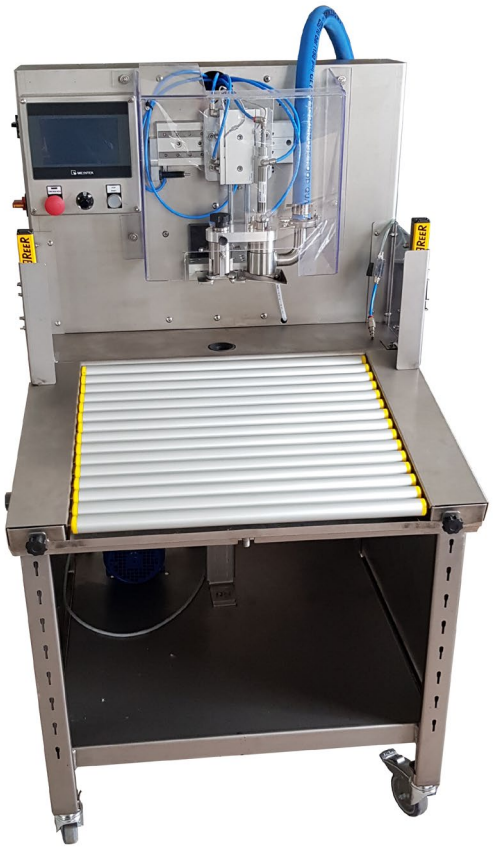
Semi-automatic Bag in Box filling machine

“BB 30”

ENOITALIA *s.r.l.*
50050 CERRETO GUIDI (FI) Italy
Tel.+39 0571 588031
fax +39 0571/588080
www.enoitalia.net
info@enoitalia.net

CAUTION:
This manual should be kept near the machine and in a place known to the personnel responsible for its use, maintenance and repair.

Index



INTRODUCTION

CAUTION! *Prior to installation, carefully read the following instructions, as this manual is an integral part of the machine.*

This machine is intended exclusively for filling plastic bags with liquid foods such as: WINE, MILK, WATER, OIL *, * FRUIT JUICES, CREAMS * ICE CREAM*.

It is not suitable for pumping flammable liquids or for using in environments with risk of explosion; do not use with petrol, concentrated acids or solvents.

The manufacturer declines all liability for damage resulting from improper use of the machine or failure to follow the instructions provided in this manual.

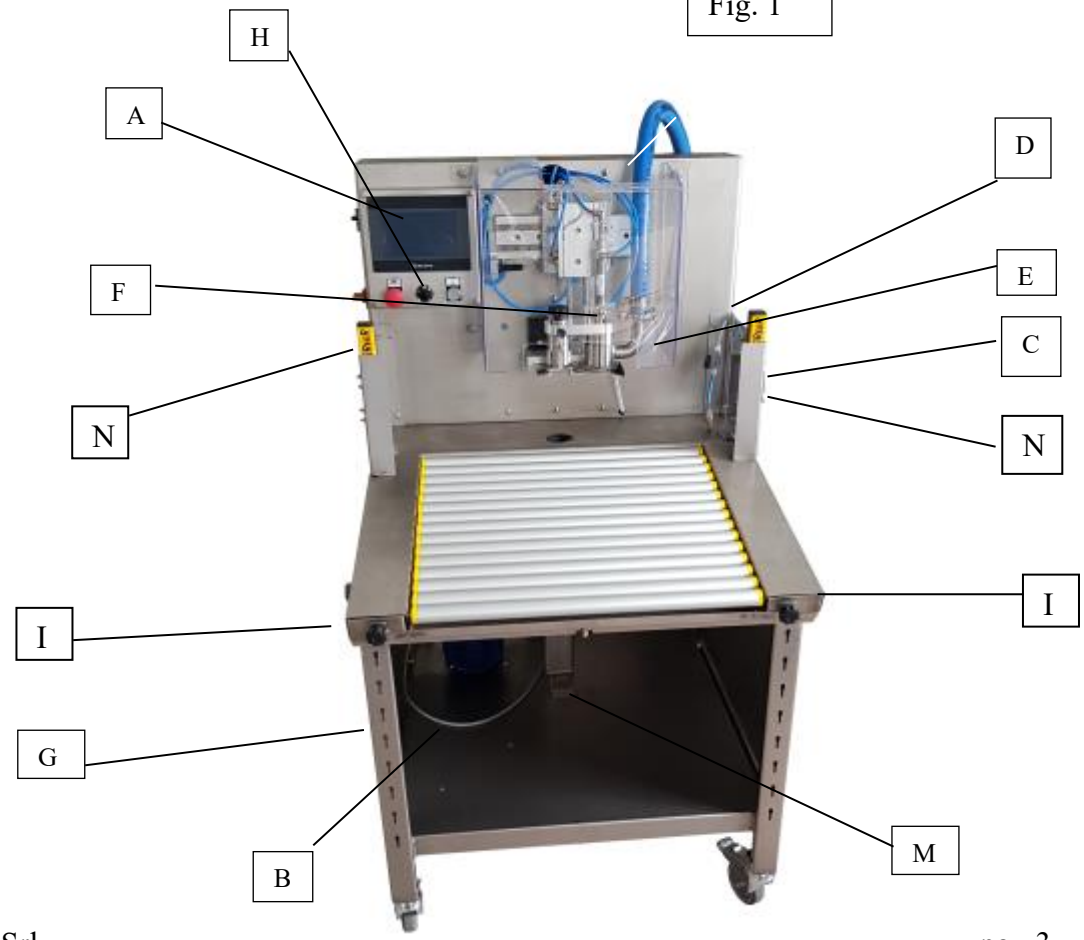
*** = *Request the special filling kit at the moment of placing your order***

1. DESCRIPTION

The machine consists of the following components (fig.1):

- Electrical panel (A), containing the programming touch-screen display, the mains switch, the start and emergency stop buttons, the potentiometer for adjusting the pump speed (optional) (H)
- Stainless steel pump with rubber rotor (B);
- Flow sensor (D)
- Filling head (E) consisting of a clamp for the extraction and insertion of stoppers, and a pneumatic cylinder (F), ready for vacuum and nitrogen injection system (inlet air and nitrogen C),.
- stainless steel trolley on castors (G), with adjustable tray for supporting cardboard box.
- START button for filling (I).
- Pneumatic piston for semiaseptic closing (M)
- Safety barriers (N)

Fig. 1



CAUTION! ***Before any inspection or maintenance disconnect the mains power supply and remove the plug from the wall socket.***

The machine is designed to fill the bags by setting the desired quantity on the display. The extraction of air from the bag is automatic. The extraction and subsequent insertion of the tap is performed by an automatic stainless steel clamp. The electronic system allows you to manage the operation of the pump, the closing valve, the air extraction and nitrogen insertion valves so that all the operations are conducted in the right order at the due time.
The filling machine is designed for use by qualified personnel only as it could be a source of danger. Do not leave the machine unattended while on.

2. POSITIONING, INSPECTION AND INSTALLATION

The machine should be placed on a stable and horizontal surface to the ground and locked by means of the articulated front wheel brake.

2.1 PRELIMINARY INSPECTION The machine is delivered packaged on a pallet, ready for use. Once unpacked make sure all the components of the machine are present and if necessary inform the supplier of any obvious defect. Inform Enoitalia s.r.l. in writing within a fortnight of receipt of the machine.
Check that the machine corresponds to the order specifications.
This machine comes with an instruction manual, an integral part of the machine itself.
Manually check that the filling arm is not blocked, and if necessary remove any obstructions preventing its movement.

2.2 PRE- INSTALLATION CHECK Before connecting up the machine, make sure that the mains voltage corresponds to that of the machine, as shown on the plate of the pump motor.
The electrical safety of the machine is only guaranteed if it is connected to an efficient earthing system, wired in compliance with current legislation on electrics. The inspection and any installation of appropriate electrical components must be performed by qualified personnel. The use of multiple sockets or adaptors is not recommended; should use of the same be unavoidable, use only products complying with current safety legislation, observing the capacity limit in terms of current and maximum power.

2.3 INSTALLATION Place the machine on a level surface, close to the wine storage tank, and block it in place using the brakes provided on the front wheels.
Proceed by connecting the pump to the tank using a rigid and reinforced pipe; it must be fixed to the pump by means of special hose clamps, preventing the formation of bottlenecks which would prevent a smooth flow of the liquid.
It is important to use the right hose clamps since they ensure the perfect functioning of the pump and prevent the leakage of liquid.
The standard fitting on the pump is a Triclover 1,5” (for the model 9400), and DIN 40 (for the model 9401). For the correct functioning of the machine avoid using decanter hoses of larger dimensions than those indicated.

Proceed by checking that the switch on the electrical panel is in the central position "0" then connect the power supply cable of the electrical panel to the wall socket.

Connect the machine to an external air compressor, checking first that the air is filtered and clean.
In case the compressor is not provided of a filter unit, it is necessary install the code 9122 FILTER KIT .

CAUTION!

using untreated air (not clean and not dry) may result in damage to the filler's pneumatic circuit and forfeiture of the warranty

Inside the machine there is a pressure regulator switch which has already been calibrated. Minimum operating pressure is 6 bar, and a safety system is provided which blocks the machine in the case of circuit pressure lower than 5.5 bar. Check the suitability of your air system.

To connect the nitrogen system, make sure that the machine is connected at a pressure of less than 3.0 bar . The machine comes with a pressure reducer set to the right pressure necessary in the circuit.

When connecting the pipe to the storage tank, remember to partially open the upper door of the tank, to avoid vacuum problem when the pump start

2.4 TURNING ON AND GETTING FAMILIAR WITH THE CONTROL PANEL.

The control panel is composed of the:

1) Mains switch (**I** ON - **O** OFF)
2) Stop / Reset button (stop the cycle and reset)
3) Touch screen display.
4) Speed control potentiometer (optional)
5) Emergency stop button (stops the cycle)
6) Start buttons are install lateral side in front of themachine

Turn on the machine by moving the red switch on the control panel to position "I". After a few moments, the display of the electronic panel will turn on showing a screen saver image. Press MENU and **SCREEN 1** will appear

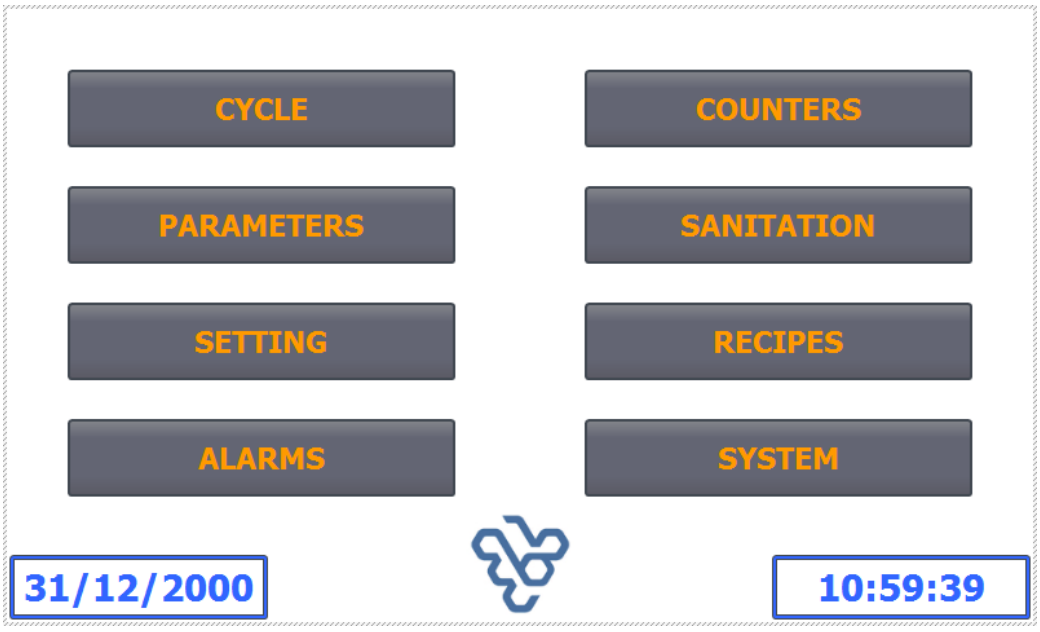


Fig.2

Select the CYCLE option , and the following screen will appear with the values QUANTITY REQUESTED to be set (it is the volume of the bag):

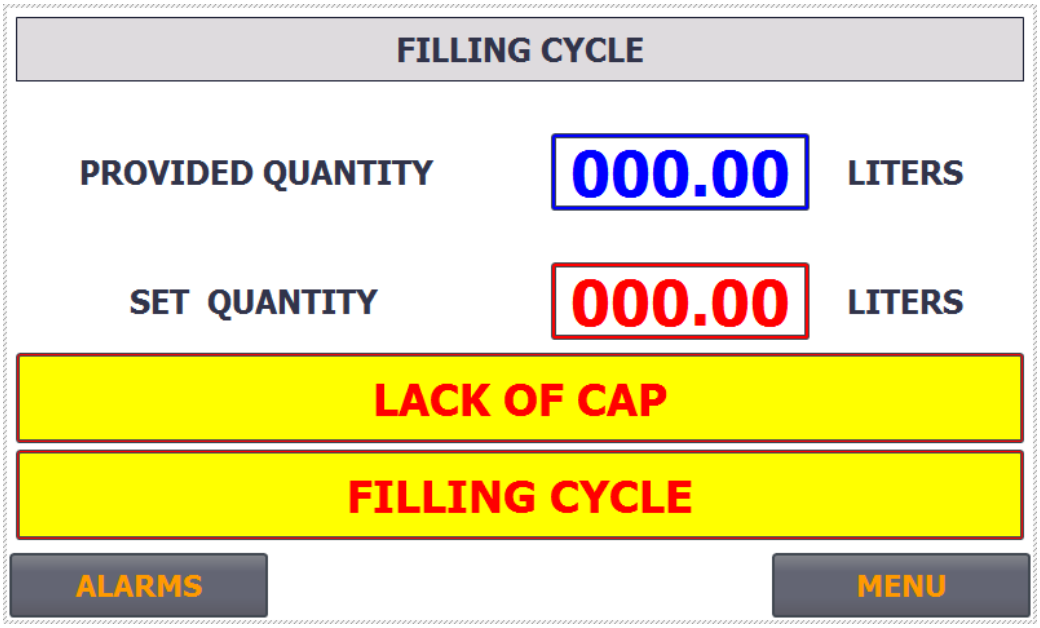


Fig. 3

On the home screen select the SETTINGS option to access the following two sections:

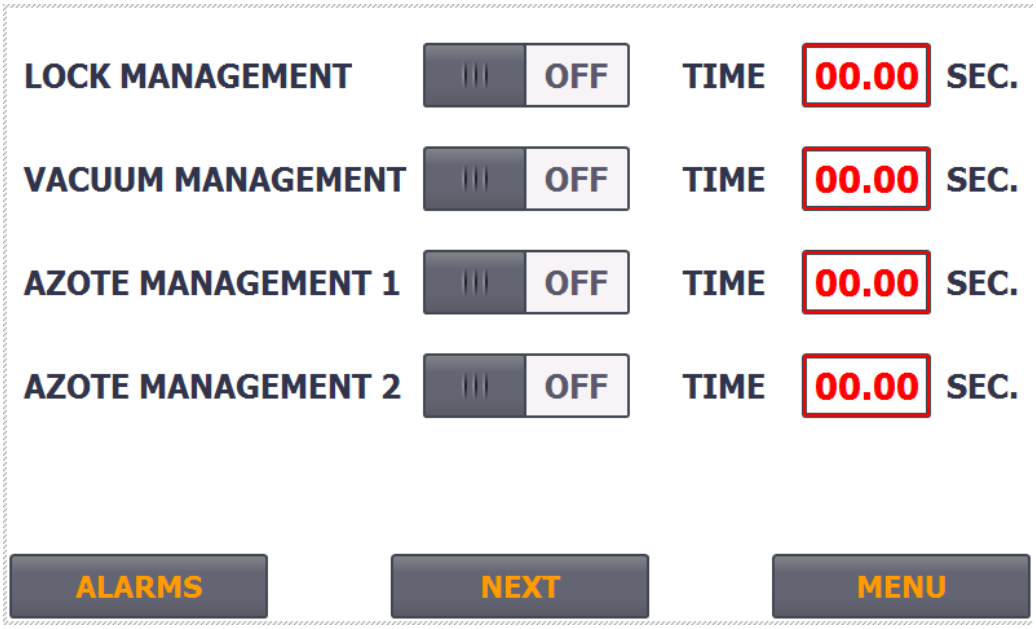


Fig. 4

- LOCK MANAGEMENT : this parameter allows you to control the locking piston of the filling head, allowing you to turn it off if necessary. CAUTION: We suggest you contact technical support before changing this parameter
- VACUUM MANAGEMENT: this parameter allows you to extract the air from inside the bag. You can set the number of seconds of air extraction.
- NITROGEN MANAGEMENT 1 : this parameter allows you to set the nitrogen injection at the start of filling. You can set the number of seconds of injection.
- NITROGEN MANAGEMENT 2 : this parameter allows you to set the nitrogen injection at the end of filling. You can set the number of seconds of injection.

Press NEXT to access the second screen:

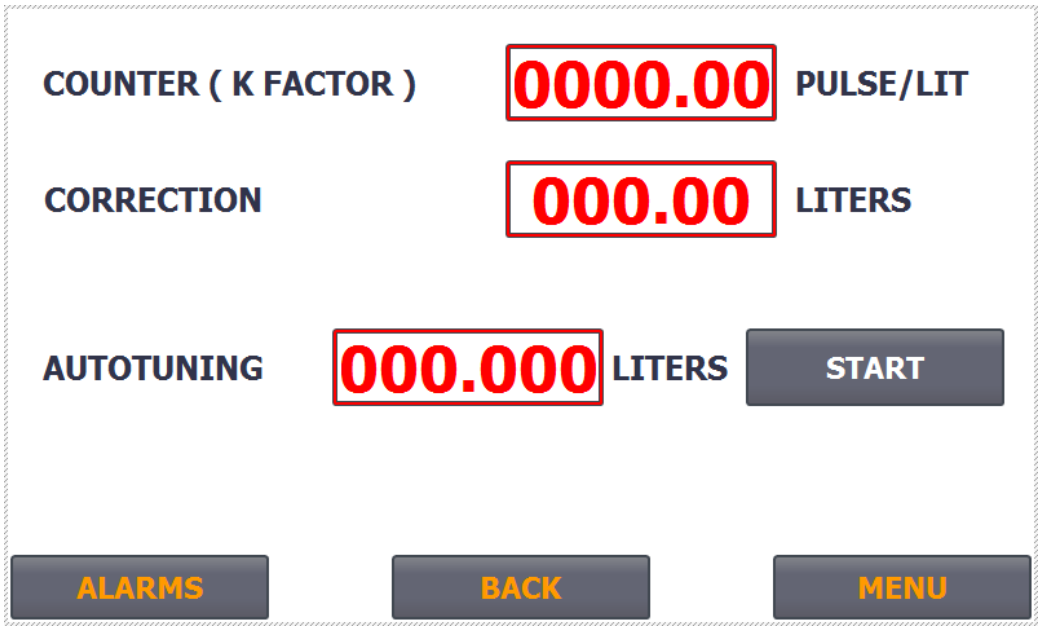


Fig. 5

- COUNTER (K FACTOR): this parameter allows you to calibrate the meter, setting the impulses per litre.
- CORRECTION: is the parameter for making MICRO-ADJUSTMENTS. Use to correct values less than 0.15 l
- AUTOTUNING: this parameter lets you automatically calibrate the instrument after an initial fill. To access this section, the operator must first enter a password (see fig.17). Subsequently enter the value of the quantity actually filled and not the quantity required (for example, if a quantity of 5 litres was selected and the first filling gave a value of 4.850, the operator must type 4.850 into the Auto-tuning field). Press START The machine automatically performs the calculation and correctly modifies the K-factor. Set the Auto-tuning value to zero before the next filling. At this point you can perform a second filling.

On the home screen select the SETUP option to access the following four sections:

CAUTION: Before accessing and modifying the parameters notify technical assistance and agree on the appropriate changes

Fig. 6

These list of parameter are set by Enoitalia before delivery and before to change it is necessary contact Technical Service in Enoitalia.

CLOSING TIME CAP: it is a time used to close the tap at the end of the cycle. It is set during installation and it is not necessary to change.

CAUTION!

In case it is changed the speed of pneumatic piston or the pressure inside the pneumatic circuit, this time must be changed. Contact always Enoitalia before to select any different value

Fig. 7

The machine BB30 has the possibility to select 2 different cycle of filling:

1. **Filling cycle with nitrogen injection**. SELECTION NITROGEN 2 ON (parameter option)
2. **Filling cycle without nitrogen injection** SELECTION NITROGEN 2 OFF (parameter option)

The filling cycle work as following: open the tap – vacuum – filling – injection nitrogen – close the tap.

During the cycle there is the open and close of the bags valve from the bottom (position M Fig.1): this system allow the keep the bags always closed, and avoid contamination and oxidation of the liquid.

In case the nitrogen injection is not present (nitrogen 2 off in parameter), It is necessary to select the DELAY LOCK DOWN: normally it is 0,2 second. This time allow the simultaneous movement of the closing tap and open bottom valve.

In case the nitrogen injection is present (nitrogen 2 on in parameter), the option DELAY LOCK DOWN is disconnected. But there is an additional possibility for the filling cycle:

A. At the end of the filling, the bottom valve close the bags. Then there is injection of nitrogen. It is the standard use and we suggest this solution. Select NITRO 2 ENABLE LOCK YES

B. At the end of the filling, there is first the nitrogen injection, then the bottom valve close the bags. To use this solution the NITRO 2 ENABLE LOCK must be selected NO

Parameter Delay Start and Delay Stop must be change only under technical assistance

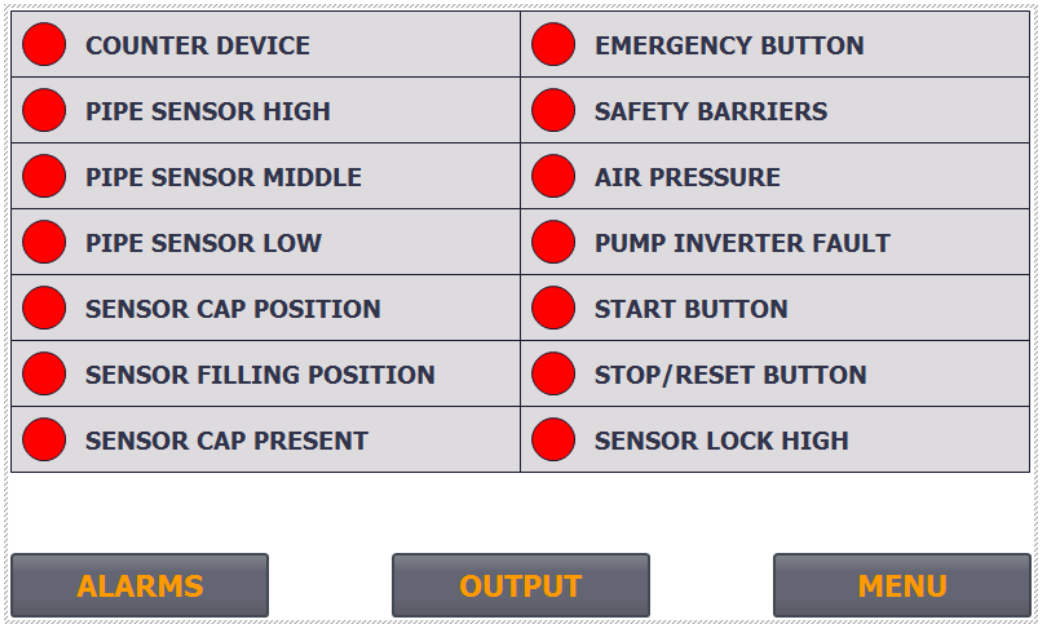


Fig. 8

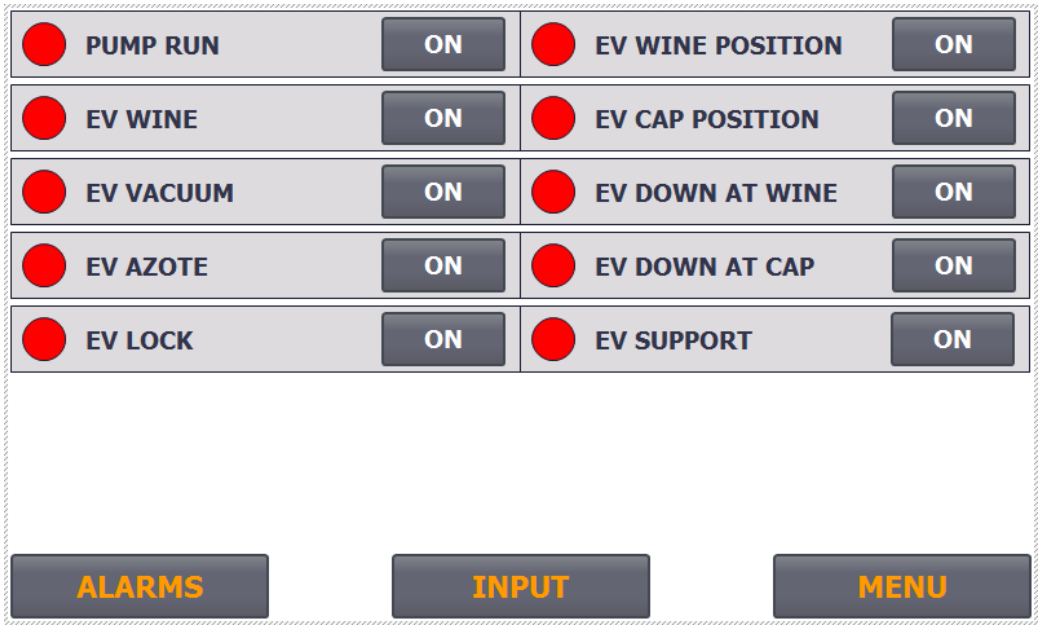


Fig. 8 BIS

All these indicators are necessary in case of technical assistance to check possible problem

On the home screen select the ALARM option to enter the next section where you can turn off the alarm connected to the liter counter (indicating lack of liquid inside the machine):

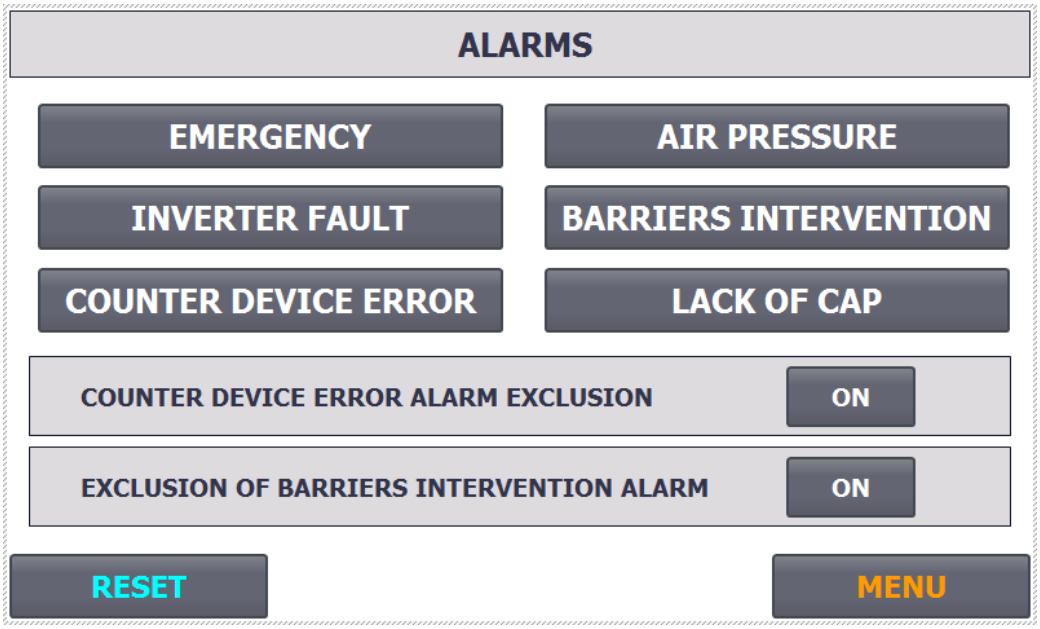


Fig. 10

On the home screen select the COUNTER option to enter the next section, which displays the total number of containers filled and liters dispensed.

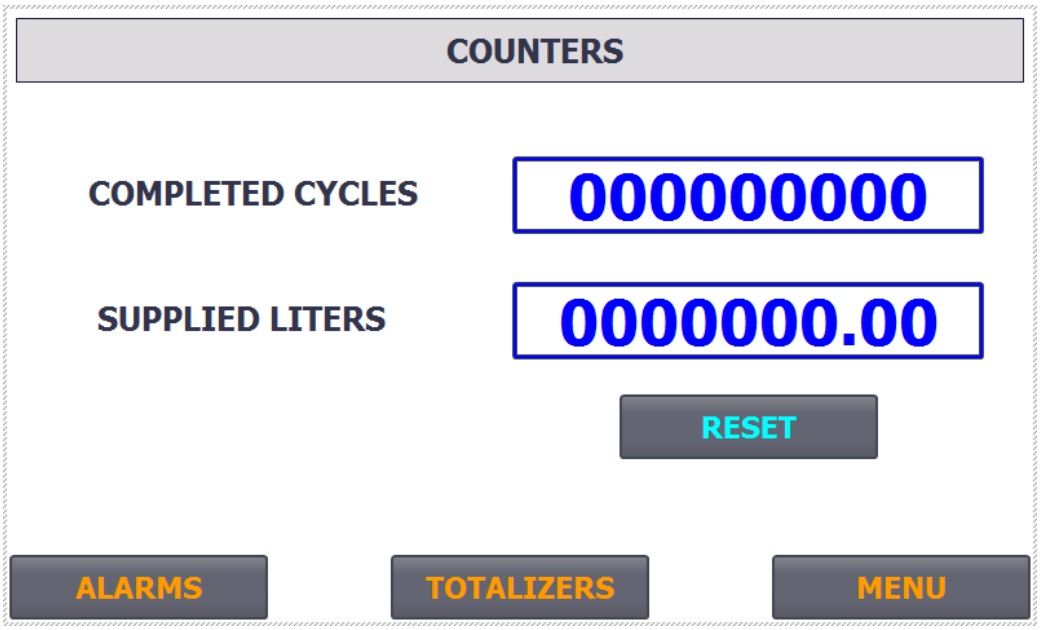
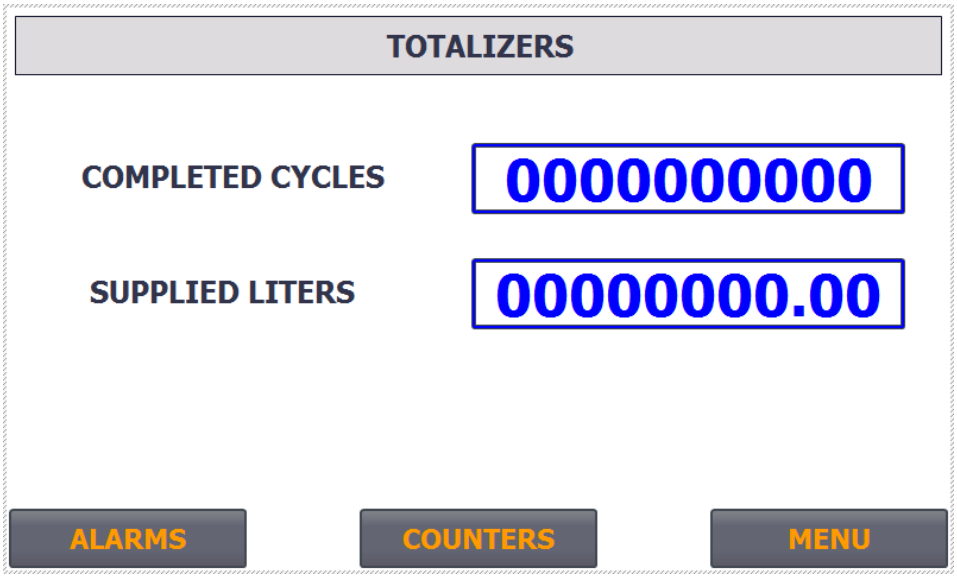


Fig. 11



On the next screen select the SANITATION option to access the following four sections:

Fig. 12

Select the type of sterilization: washing with sanification fluid, the following screen appears

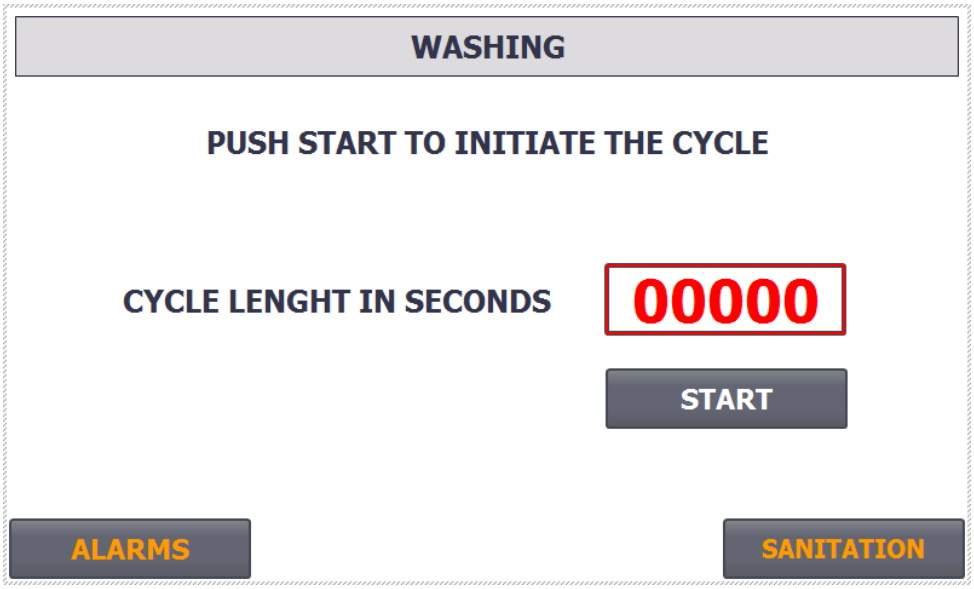


Fig. 13

Press the START button and the machine starts to perform a wash cycle displaying the time in seconds
Before to press start it is necessary install the washing tap included with the machine

If the operator selects steam sterilization the following 2 screens appear (**be sure to have install the special flowmeter induction type in stainless steel before to start this program**)

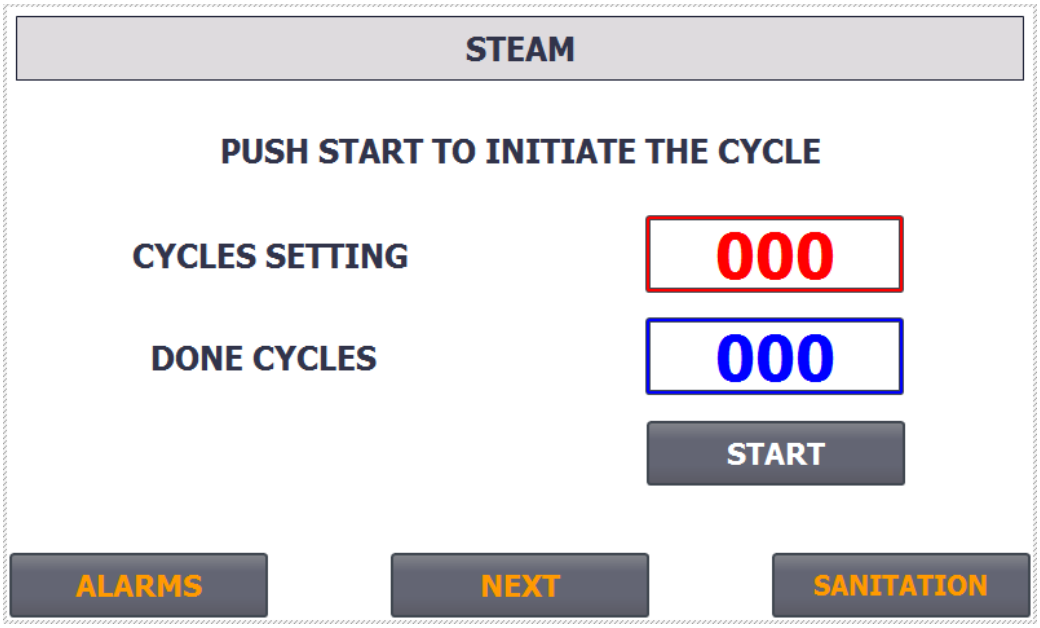


Fig. 14

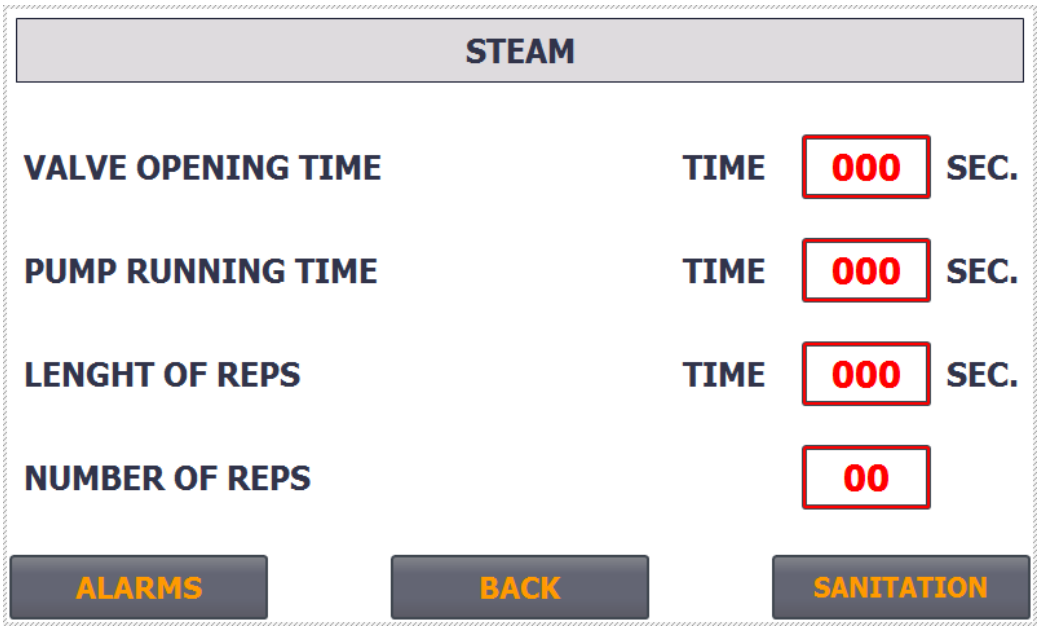


Fig. 15

The operator must set the number of cycles to be performed, while the duration of the various phases is already set at the factory. These values can be modified on the basis of specific needs. After connecting a steam generator to the priming connection of the pump, turn on the machine and start the sterilization program.

On the home screen select the FORMULA option to access the following section: after setting the above parameters, it is possible to store these values matching them to a formula which can be called up at a later date.

Fig. 16

3. ADJUSTMENT

A scales or calibrated container should be provided to verify the accuracy of filling and correct functioning of the machine.

The parameters to act on to adjust the filling are the LITRE-COUNTER (K FACTOR) and "LITRE CORRECTION". After the first filling is possible to activate the AUTO-TUNING function to immediately identify the correct value
The K factor is a measure of the "steps" used by the sensor to measure 1 liter of decanted liquid. This factor varies in relation to the type of fluid, the type of pump used, the length and diameter of the hose and the pressure of the liquid inside the hose. At the time of purchase the value is set to 100 K (if using the kit for fruit juices and thick liquids, the special induction sensor used is set to 1000).
This value should be INCREASED if the weight of the filled bag is less than the theoretical weight of the quantity to be filled. Conversely it should be DECREASED if the weight of the filled bag is greater than the theoretical weight to fill.
The change to be made to the K value depends on the extent of the error: **we recommend acting on this parameter only if the error is greater than ± 200 g**r. In this case change the K value by 5 to 10 units, repeat the filling and check the weight obtained.
When the filling error is less than 200 grams, you can use the "LITRE CORRECTION" parameter: **it is an increase or decrease of liter**. **Increasing** the value (therefore attributing positive values), causes an increase in the amount of liquid in the bag; conversely, **decreasing** the value (therefore attributing negative values), causes a decrease in the amount of liquid in the bag;
NB. to enter positive or negative values press the corresponding number and the alphanumeric display will appear on screen where you can change the set value.

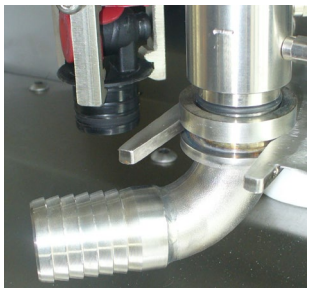
Attention: this parameter is in liters. In this case, the changes to be made depend on the extent of the error (if you have to fill 10 liters and measure a filling of 9.850 litres, you must set the LITRE CORRECTION to 0.150 LIT).

4. FILLING

4.1 FIRST USE AND WASHING

Before the FIRST USE, it is recommended that you wash the machine to sterilize the hoses and remove any manufacturing residues.

With the machine turned off, and the plugs removed from the wall sockets, fit the stainless steel adapter onto the support fork of the bags, and apply a suitable hose to the hose connection, tightening it with hose clamps. Fit a hose onto the pump. Close the pump's by-pass (perpendicular to the pump body). Immerse the hoses in a vessel containing disinfectant solution (we recommend citric acid) or clean hot water, so as to create a circuit.



Connect the plug of the control panel to the wall socket, checking in advance that the voltage of the machine corresponds to that of the mains.
Turn ON the machine. On the "SANITATION" option, select the "WASHING" option.
Press the START button on the display of the machine
The pump will start and the liquid will enter the hoses, coming out after a few seconds from the drain hose installed. To stop washing press the STOP button on display. If you wish to wash further, press the START button again .
If you wish to finish cleaning you need to **empty the hoses**; to do this, simply start the machine for a few seconds, taking care to remove the uptake hose from the cleaning solution.
This operation should be short (maximum 10 seconds) to avoid overheating to pump body. To stop the machine press the STOP /RESET button. To completely empty the hoses of any remaining liquid, open the total drain valve install on the pump body .
This WASHING operation should be repeated before storage of the machine. In this case we recommend putting a few drops of glycerin inside the pump body to keep the rubber rotor lubricated.

Alternative it is possible to clean the machine with STEAM: it is not necessary the installation of the inox tap. It is necessary install a steam generator directly to the pump priming fitting. Then select the program SANITATION – STEAM, select then n umber of cycle and press START.
CAUTION: this operation could be used only if the machine is equipped with flowmeter induction type in stainless steel.

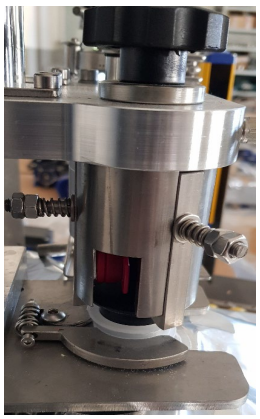
4.2 LOADING LIQUID INSIDE THE CIRCUIT

Before to start the filling it is necessary full the machine with liquid, removing all the air inside the circuit. To do this operation follow the same step of washing indicate above. When the liquid start to come out continually without air press stop. The machine is ready to fill bags.
During the first start-up, when the hoses are empty, set the by-pass of the pump to the CLOSED position. After terminating the first loading check that the hoses are full, then it is possible to open the bypass valve to avoid foam during filling (in case of foam, it is possible to reduce also the speed of the pump)

4.3 FILLING
Place the plastic bag on the fork support with the plastic part as in the photo n ° 4.

N°4

Adjust the pincer tool to the position of the tap: the pincer tool could be rotate till the position is the correct one like in the photo



Enter the quantity of liquid to be filled, the seconds of vacuum, and the seconds of nitrogen injection (there are 2 value of nitrogen: nitrogen 1 is an injection after the vacuum before the filling; nitrogen 2 is a injection after the filling). It is possible to select OFF vacuum and nitrogen injection. Normally time of vacuum is around 1 second, and time for nitrogen less than 1 second.

Press the START buttons, and the filling cycle will start.

CAUTION The machine is designed with a two safety barriers (position N fig. 1): the cycle will be immediately blocked if anything will pass through them. It is no possible to touch the filling head or the pincer tool during the cycle. If there is any problem press the EMERGENCY STOP. If the machine is blocked by emergency stop, the cycle stay in stand-by. As soon as the safety barriers are free, it is possible to press START and the machine continue the cycle.
This system is a SAFETY GUARD, and as such its correct functioning should be checked. In the event of incorrect functioning suspend use of the machine immediately and contact technical support.

 IT IS PROHIBITED TO DEACTIVATE OR OVERRIDE THE FUNCTIONING OF THE BARRIERS. ANY TAMPERING WILL RELEIVE ENOITALIA SRL FROM ANY LIABILITY FOR DAMAGE TO PERSONS OR PROPERTY

To stop the machine during filling, press the EMERGENCY STOP button.

To restart the machine in the case of an emergency stop, release the emergency stop button by turning it anti-clockwise and hold the RESET button down until the head returns to its initial position (pincer tool positioned over the tap)

The filling cycle is the following:

1. Close the bags with the semiaseptic piston (part number M in fig. 1)
2. Open the tap
3. Insert the filling head inside the bags, and simultaneously remove of the semiaseptic piston
4. Vacuum for the set second, and the eventually nitrogen injection (if option Nitrogen 1 is set)
5. Filling for the quantity
6. Close the bags with semiaseptic piston
7. Nitrogen injection (it is possible to select the possibility to inject nitrogen before the semiaseptic piston is activate. See point 2.4 CONFIGURATION fig.7)
8. Install the tap inside the bag

The bag is then ready to be inserted in a cardboard box.

At this point, check the weight of the bag and if necessary change the K Factor and "LITRE-CORRECTION" parameters as shown in the ADJUSTMENTS section. To such purpose, we suggest using temporary taps until the correct value of the correction parameters has been determined so as to be able to empty the bags easily.

Once the correct values is found, the machine will repeat filling with the set amount continuously.
The accuracy between any filling could be +-0,5% in case of electromagnetic flow meter, and +-0,2% in case of induction flowmeter

Any changes may depend on the following factors:

- Relevant variation in the circuit pressure: it could depend in different capacity of the storage tank, or ,in case of filter install on the circuit, progressive clogging of the membranes, open/close by-pass valve on the pump
- Wear of the rubber rotor of the pump.
- Change of the pump's speed

ATTENTION: do to the special semiaseptic filling cycle , it is not relevant on this filler to set the level of the liquid inside the bags, because bags are fill always closed without air inside

4.4 CHANGING THE BAG FORMAT

To change the size of the bags used, just make the following adjustments:

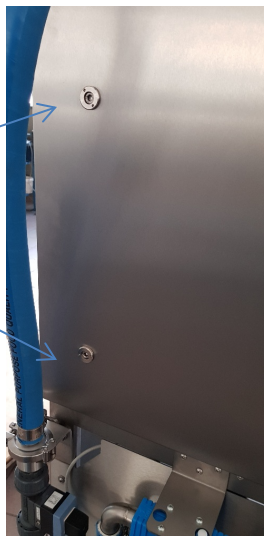
- Set the liters needed to fill the new size of bag.
- If necessary change the LITRE-CORRECTION parameter only.
- Before starting the machine for the first filling, press the RESET button for 5 seconds, and check that the QUANTITY DISPENSED meter is at 0. If the value is different, hold down the RESET button until it shows the value 0.

4.5 AIR AND NITROGEN PRESSURE REGULATOR

Lateral side of the machine there are 2 fast connection for air and nitrogen. Connection for pipe 8mm

Inside the panel control there are the pressure regulator. In case the pressure of the air is under 5 bar, the filler stop and an alarm inform to check the pressure inside the circuit

Opening pneumatic and electric circuit



CAUTION!

All repairs must be made directly by Enoitalia srl or by qualified and specialized personnel

In the event of any repairs use original spare parts only, contacting the dealer or the manufacturer directly.

PROBLEM	REMEDIES
The filling machine does not stop when it reaches the number of liters set.	Check that the compressor is turned on and that the air hoses are open. Check that the pressure is above the minimum set by checking that the red light on the electronic pressure switch is off. Make sure that the air hose is connected to the pneumatic valve. Check the closing gasket inside the filling head is not damage
The filling machine stops after a few liters without reaching the number of liters set.	Press the reset button and check that all the counters have the correct initial value.
The filling head has difficulty entering the bags.	Check the centring of the head and if necessary regulate the support of the bags by the screw install inside the panel control. Check the spring to fix the bags inside the support
The pincer tool is unable to extract the tap	Check the correct orientation of the tap with the pincer and if necessary adjust it with the knob. Check the springs of the pincer and call technical assistance how to regulate Check the pincer's wear and replace if necessary Check that the tap is compatible with the pincer used and if necessary contact the manufacturer (VITOP IS THE STANDARD PINCER).
Leakage of liquid from the filling head	Replace the special red gasket on the closing piston.
Leakage of liquid onto the lower floor.	Check that the pump connectors are tight. If drops are expelled from the buffer collection install inside the machine, connect a pipe to this buffer
Leakage of liquid from the pump.	Check and replace the mechanical seal of the pump.
The filling machine is blocked, it will not start and will not reset	See if there is any alarm ON. Navigate to the INPUT screen and contact the service center , indicating which sensors are active
The filling machine does not switch on.	Check that the machine is powered with the right voltage. Do not use extension cables of insufficient diameter which could cause voltage drops. Check any safety devices of the electrical system inside the panel are ON.
The litre-counter does not count, and the machine does not stop	Check the Settings/Inputs section during filling to see if the liter-counter is switched on (light blue) or off (dark blue). In the case of fruit juice kits it is always light blue. If the liter-counter is in the light blue position check the parameters inserted for the K value,

	correction and auto-tuning, and if necessary reset the last two values to zero and the K value to 100, or 1000 Contact technical support in the case of no signal (dark blue color)
The filling machine does not start, no liquid comes out of the filling head, but the vacuum cycle is performed.	Make sure that the air pressure valve opens. Check that the pump motor turns on. Verify that the pump takes up the liquid and if necessary close the by-pass.

5. PRECAUTIONS

- Place the machine in a sheltered, dry place and protect it from damp
- Do not use the machine to decant flammable liquids, explosives or in an explosive atmosphere since the motor is not explosion-proof
- The temperature of the liquid should be between 5°C and 60° C (if there is the induction flow meter up to 110 C°); higher temperatures lead to a deterioration of the overall performance of the machine.
- The level of noise detected falls within the limits laid down in Directive 2006/42 EEC (<85dB)
- Before starting the machine, check that no damage has occurred during transport (cracks or dents) which could affect its operation.
- Never connect up to the electricity supply, operate the controls or perform any other operation on the electric parts with wet hands.
- Never remove the protective cover while the machine is on or during washing.
- Please read this manual in its entirety before using the machine, and keep it safe for future reference.
- Enoitalia S.r.l.is not liable for any damage arising from modifications made to the machine by third parties.
- Enoitalia S.r.l. reserves the right to make structural changes at any time without prior notice

- **6. WARRANTY**

The warranty covers the machine for twelve months from the start-up date. In the event of non-immediate use the warranty covers the machine up to eighteen months from the delivery date, and lapses subsequently.

The warranty does not apply to transport of the machine which is the purchaser's responsibility and lapses in the case of improper use in disregard of the instructions contained herein.

Repairs are understood as at our plant in Cerreto Guidi (Florence); any transport must be organized and paid for by the purchaser.

The following defects are excluded from the warranty and will result in the termination of any obligation:

- Incorrect installation
- Tampering with the machine
- Inexperience, lack of maintenance, untimely reporting of defects.
- Failure to comply with the instructions in this manual.
- Repair by anyone not authorized by Enoitalia S.r.l..
- Shipping damage, which cannot be attributed to manufacturing defects or packaging.
- Installation work and housing in electrical systems other than those indicated in the manual and on the rating plate on the motor.
- Costs and risks of transport in the case of sending the machine to authorized service centers.
- Electrical components
- Consumables and costs of normal maintenance as indicated in this manual.

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

Non-fulfilment of the agreed payment terms will result in the immediate lapsing of the warranty obligations.

Any complaints must be notified by the purchaser within 8 days of purchase, in writing, to Enoitalia S.r.l.

Retention of title as provided for by art. 1523-1524 and following of the Italian civil code, the transfer of ownership of the goods sold, will take place only after full payment of the agreed amount.

The competent court for any dispute arising in relation to this contract is in Florence.

For foreign citizens or goods supplied abroad, all disputes will be regulated by Italian law

EC DECLARATION OF CONFORMITY

ENOITALIA s.r.l.

Via Prov. Pisana, 162 Cerreto Guidi (Fi)

declares, in sole responsibility, that the following product:

FILLING BB 30

SERIAL NUMBER :

Referred to in this declaration conforms with the following directives and standards

- 2006/42/CE and subsequent amendments and national provisions implementing (D.Lgs 17/2010)
- 2006/95/CE and subsequent amendments and national provisions implementing
- 2004/108/CE and subsequent amendments and national provisions implementing.

The machine also complies Harmonised 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.
Standards and technical specifications CEI EN 60204/1.
Standards and technical national specifications UNI ISO 1819; UNI ISO 7149; UNI 7544; 45020; 60447; 60447.

Declare the machine is made in stainless steel AISI 304 18/10, and all the component are certified foodstuff use (including pipe, valve, flow meter, fitting) in conformity to D.M. of 21/03/1973 and D.M. nr.220 of 26/04/1993 and following modifications.

Cerreto Guidi 01/07/2021

The Production Manager
Stefano Menichetti

Integration for remote assistance filling machine BB30

1. Connect an ethernet network cable to the red WAN port of the device named SEVIO

2. Accept that this cable provides internet access

3. Accept that the IP address 192.168.1.242 is free on the customer's network

4. Turn on the machine after making the connections described above

ULTRA CLEAN FUNCTION

If the ULTRA CLEAN system is installed on the purchased machinery, the programming PLC provides an additional configuration screen:

It is possible to set the sanitation times with nebulizer both at the start of the cycle and at the end of the cycle.

In addition, the two left and right jets can be adjusted manually both in the direction of the jet (by moving and tilting the support), and in the width (by acting on the regulator placed above the valve).
The suction pipe is positioned under the worktop to facilitate the installation of the sanitizing liquid.