

Use and Maintenance Manual



PLANET SERIES

**Planet 600, Planet 1000,
Planet 1600**

PAY ATTENTION!!! IMPORTANT!

MACHINES WARRANTY GUIDE LINES

We inform all our dear clients that, in order to avoid any misunderstanding, in the vacuum packers the

“VACUUM PUMP” and
“ELECTRONIC BOARD”

are articles

THAT CANNOT BE
REPLACED IN ADVANCE
EVEN IF COVERED BY
WARRANTY.

After 2-3 months of work, the VACCUM PUMP, if not properly used (hot products, corrosive liquids, steams, etc.), can show an abnormal dirt filling which compromises the good performance of it. For this reason, we ask to send it back to manufacturer in order to clean and/or to check it.

NOTHING WILL BE SHIPPED BEFORE
GETTING THE BROKEN PART BACK!!!

For other components this rule is not valid as these parts are not subjected to mechanical wear out.

Chapter 1

IDENTIFICATION OF “INSTRUCTION MANUAL”

Instruction manual is a document issued by the manufacturer and is integral part of the machine. This document is duly identified in order to allow the traceability and/or future reference.

All rights, concerning its reproduction and divulgation and relevant documentation here attached, reserved.

PURPOSE OF THE DOCUMENT

Main purpose of instruction manual is to give to client and to all concerned personnel, necessary information to its correct installation, use and maintenance with particular care to safety conditions.

GENERAL WARNINGS AND MANUFACTURER’S RESPONSABILITIES LIMITS

Every interaction operator-machine, as part of the intended use and all machine’s life long, has been carefully and completely analysed by the manufacturer during project, production and in manual writing phases. Despite this, it being understood that nothing can replace experience, good training and, especially, “good sense” of those acting with the machine. These last requirements are necessary and fundamental either in every operative phase or while reading this present manual.

The missing respect of the precautions or specific advises written in this manual, the use of the machine by non-qualified personnel, violate any security rule relevant to project, production and foreseen use and relieve the manufacturer from any responsibility in case of damages to people or things.

Manufacturer is not responsible for the lack of observance of safety precautions written in this manual by the end user.

REGULATORY REFERENCES

This present document refers to the indications written in

- Attachment "I" to directive 89/932/CEE and following amendments: point 1.7.4;
- UNI EN 292/2 - 1992, Point 5.5

MACHINE MOD.	●	_____	●	●	V	_____	●	HZ
SERIAL NUMBER	●	_____	●				●	
SHIPMENT DATE	●	_____	●				●	
TESTING ENGINEER	●	_____	●				●	

Chapter 2

How to read and use "Instruction Manual"

MANUAL PRESERVATION

This present document is an integral part of the machine; for this reason, it has to be guarded and duly used for machine's life long, also in case it is ceased to a third party.

Eventual requests for further copies of this present document will have to be regularised with a purchase order to the manufacturer. In order to correctly store for a long time this manual, we suggest to:

- Use the manual in order not to damage all or part of its contents. In particular, it is recommended not to abandon the manual during use, and to put it back in the assigned place immediately after the end of the consultation;
- Do not remove, tear or rewrite parts of the manual for any reason. Any assembly to the same must be requested from the manufacturing company;
- Store the manual in areas protected from humidity, heat and other environmental agents that may affect its integrity or duration.

MACHINES' SIGNS

On the machine you will find these safety labels.



CE	
MODEL	
MATRICULATION	
VACUUM PUMP	
ELECTRONIC CARDS	
VOLTAGE	
FREQUENCY	

Check they are not taken away or damaged.

DEFINITIONS

According to CEE 89/3392 and following updates, these definitions are disclosed:

- OPERATOR: the person/s committed with the function, the regulation and the ordinary maintenance or the cleaning of the machine
- USER: the person/s who are responsible and/or owners

MANUFACTURER'S IDENTIFICATION DATA AND LOCATION OF "CE LABEL"

Company's identification as manufacturer of the machine, happens according to current laws by following acts:

- Declaration of conformity
- CE labelling
- Instruction Manual
- A specific label on the machine, write indelibly the information relevant to CE labelling



IT IS STRICTLY FORBIDDEN TO REMOVE THE "CE LABELLING" AND/OR REPLACE IT WITH OTHER LABELS.

If, for accidental reasons, "CE LABELLING" was damaged, detached from the machine or simply manufacturer's seal removed, client must inform manufacturer.

Chapter 3

WARRANTY CERTIFICATE

Manufacturer commits himself, for duration of 12 (twelve) months from shipping date and direct delivery of the goods, to grant to the client or dealer the integrity and good functioning of the components relevant to the machine in object.

All wearing out parts – components that the use wears out constantly – are not covered by warranty. These parts are:

- a) Electrical resistances – Teflon Tissue – Rubber gaskets – Pistons for lid opening – Welding diaphragm – Air filters – Oil filters – Oil – Pump blades.
- b) If an under warranty machine's vacuum pump is delivered to manufacturer for problems relevant to suction or malfunctioning, manufacturer reserves the faculty to double check if any extraneous part had been sucked: liquids, solids, sauces, creams, etc. If this happened, the reparation of the material and working time will be regularly invoiced as the problem is not linked to factory default but to client's negligence during the use.
- c) Eventual problems linked to electronic boards will have to be checked, at least with pictures via email, by manufacturing company before the shipment of the new one under warranty. A short circuit with explosion (really evident) excludes the warranty as it is a damage caused by external agents and it is not due to a factory default. The damage to integrated components, like relés, etc., or non-visible components, will be managed in total warranty.

IT IS VERY IMPORTANT THAT, IN THE PICTURES, THE
INSTALLATION DATE, WRITTEN ON THE CARD ITSELF, CLEARLY
APPEARS.

POINTS (b) AND (c) ARE MANDATORY

- d) Eventual problems to pneumatic, structural or mechanical parts will be regularly managed and solved within general warranty terms without any cost for the client.
- e) During warranty period, for interventions that fall under the warranty itself, no costs for replaced materials will be applied, whereas manpower will be charged.
- f) If during warranty period, our technicians would be asked for external interventions, roundtrip travel costs will be totally charged, no matter the reason of intervention.
- g) All interventions on machines either under warranty or not, should be performed at manufacturer's premises, so no transport costs (roundtrip) will be refunded.
- h) All components, either under warranty or not, supplied and shipped from manufacturer to the client's premises will travel under EXW terms.
- i) All pieces sent to manufacturer either on or out warranty should travel free of charge.
- j) All pieces which arrive with transport costs to be paid will be rejected.
- k) Every part of a machine that is deemed as faulty (pump, card, etc..) and manipulated by the client *during warranty period* will not be considered covered by the warranty itself anymore. It is mandatory to have all interventions done by the manufacturer
- l) If a machine out of warranty would be sent asking for a quotation and after the inspection and offer such a quotation will not be accepted, an invoice for € 30 will be issued in order to cover man-hour and bureaucracy.

WARRANTY FOR SPARE PARTS

1. Spares shipped under warranty will not be covered by warranty anymore.
2. Spares bought out of warranty will be covered for other 6 months if not mis-installed or manipulated by client.



WE KINDLY INVITE YOU TO READ WHAT PER HERE
ABOVE IN ORDER TO AVOID ANY
MISUNDERSTANDING IN CASE THIS KIND OF
CIRCUMSTANCE ARISES.



Chapter 4

GENERAL ACCIDENT-PREVENTIONS PRESCRIPTIONS

Please strictly respect these recommendations:

- Do not ever touch metal parts of the machine with wet or humid hands;
- Do not pull the cable or the machine itself to unplug it;
- Do not allow children or non-capable people to use the machine without supervision;
- Electrical safety of this machine is assured only when it is plugged with a suitable grounding plan as per current laws about electrical safety; it is mandatory to double check this fundamental characteristic and, if any doubt, ask for a check-up by qualified personnel; manufacturer can't be considered responsible for eventual damages caused by a lacking grounding plant;
- In case of a potential damage to the safety grounding, the machine has to be completely switched off to avoid undesired and/or non-voluntary activations;
- Always use protection fuses which comply with current safety rules, with right value and suitable mechanical characteristics;
- Avoid to use repaired fuses and the creation of short circuits on the terminals which are on the fuses-holders;
- Source cable of the machine does not have to be replaced by the user; in case it gets damaged or it needs to be changed, please address exclusively to the manufacturer;
- Keep the cable far from hot sources;
- Always turn off and unplug the machine before starting with any cleaning procedure;
- Clean all surfaces, panels and control key board with dry and soft tissues or lightly soaked with a smooth detergent.

OBBLIGATIONS IN CASE OF MISFUNCTIONING AND/OR POTENTIAL

DANGERS

Operators are compelled to underline to their direct managers any eventual deficiency and/or potential dangerous situation that should arise.

USER'S OBBLIGATIONS

User strictly has to quickly inform the manufacturer if he finds defaults and/or malfunctioning of accident prevention's systems besides whatever supposed danger situation.

It is strictly forbidden that the user or third parties (authorised personnel from manufacturing company excluded) make any change to the machine and its functions as well to this present technical document. In case of malfunctioning and/or dangers due to a lack of observance of what per here above, manufacturer does not respond to the consequences.

We suggest to ask for eventual modifications directly to the manufacturer.

CLEANING INSTRUCTIONS

All stainless steel parts have to be cleaned with proper, degreasing products, if possible **WITHOUT ANY ALCOHOLIC BASIS.**

GOODS PICK-UP



If during goods delivery, the packaging should appear broken, the wooden/plastic base damaged, etc..., accept it with the writing:

“PROVISIONALLY ACCEPTED”

INSTALLATION

Remove the packaging and check the integrity of the machine within 24 hours from reception. In particular, check if the machine looks intact and without any visible damage that can be caused by transport. If any doubt, do not use the packer and inform the manufacturer.

**COMMUNICATIONS RELEVANT TO
DAMAGES RAISED AFTER 24 HOURS
FROM RECEPTION WILL BE
CONSIDERED VAIN.**

**EVENTUALI COMUNICAZIONI, RELATIVE A
DISCORDANZE EVENTUAL
COMMUNICATIONS, RELEVANT TO NON-
COMPLIANT SHIPPED SPARES HAVE TO BE
CLAIMED WITHIN 24 HOURS FROM GOODS**

RECEPTION. AFTER THAT ANY CLAIM WILL BE CONSIDERED VAIN

ENVIRONMENT

Put the packer in a place with a low percentage of humidity and far from heat sources.

VACUUM PACKER DOES NOT HAVE TO BE INSTALLED IN AN EXPLOSIVE ENVIRONMENT

CONNECTIONS

Picture A: Oil
indicator



Before starting, check oil level through the small window on the motor (Picture A).

To reach the window, unscrew the 7 screws which block the back of the carter and take it away.

Before connecting the machine, double check the data on the label correspond to the electrical distribution's ones.

Label is placed on the carter side.

After checking the level and closing everything, plug the machine to a 230V-monophase / 380V-triphas socket.

In case of incompatibility between the plug and the socket, please change the socket with another proper kind by professional and qualified personnel.

They will have to double check, in particular, that the section of the cables from the socket is suitable for the machines' power absorption. In general, it is not recommended the use of adaptors, multiple plugs and/or extensions.

If their use becomes mandatory, it is recommended to use only simple or multiple adaptors and extensions in conformity to current safety rules, paying attention not to exceed the load limits in terms of electricity, and the maximum power load written on the multiple adaptor.

BEFORE STARTING WHATEVER CHECK OPERATION THAT INCLUDES THE DESASSEMBLY OF SOME PARTS, IT IS MANDATORY TO UNPLUG THE POWER SUPPLY

Chapter 6

MACHINE'S DESCRIPTION

Our external suction machines are modern and innovative items, with exchangeable modular card, totally electronic, so they are not subjected to wear. The sealing section, electronically controlled, is composed by a stainless steel with a flat heating element (5mm) that, thanks to a pressure system, grants a balanced and homogenous sealing on all kinds of bags (goffer 90-100um, smooth 100um, cryovac material). Installed vacuum pumps have a very high and up-to-date quality and assure a great level of final vacuum and a surprising operational silence even working for continuous cycles.

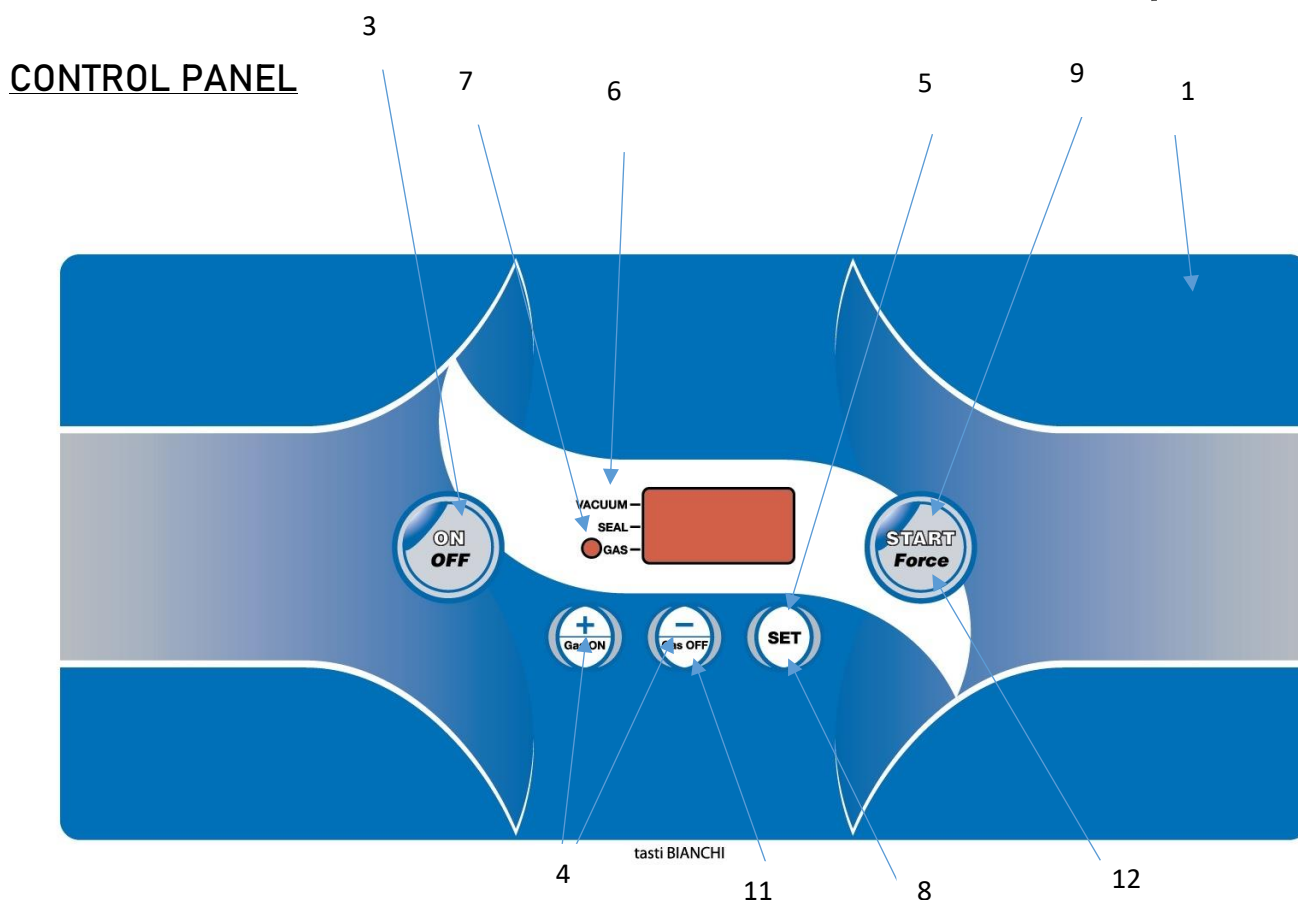


THE MACHINES HERE DESCRIBED HAVE BEEN EXPRESSLY CONCEIVED FOR THE VACUUM PACKAGING ACCORDING TO THE INSTRUCTIONS IN THIS PRESENT MANUAL AND WILL HAVE TO BE DESTINED ONLY TO THIS PURPOSE. ANY OTHER USE IS CONSIDERED IMPROPER AND CONSEQUENTLY DANGEROUS. MANUFACTURER CAN'T BE CONSIDERED RESPONSIBLE FOR EVENTUAL DAMAGES WHICH DERIVE FROM IMPROPER, WRONG AND UNREASONABLE USES



1. Structure in stainless steel
2. Lid in stainless steel
3. Basement in stainless steel
4. Aluminium hinge to fix the lid and jack for the opening.
5. Food-atotoxic filling plates
6. Silicone counterbar
7. Main line switch
8. LCD display for cycles checking and vacuum in %
9. Digital control panel
10. Silicone and nylon wheels

Chapter 7



1. Thermo-formed control panel.
2. Press the general line button on the side of the machine to power up.
3. **ON/OFF**: it turns on/off the machine. The machine has 9 working programs P1-P2-P3 etc. which can be set up with the selected parameters by the operator.
4. The **▲ / ▼** buttons are used to modify the parameters, increasing and decreasing the values.
5. **SET**: Putting the setting on. By pressing this button, "P1" will appear on the display.
6. A luminous marker will show on the display a sign for the cycle you are setting.
 1. For Vacuum Cycle, we suggest 30/32 sec as a standard setting (the red dot "." stands for ½ second).
 2. For Sealing Cycle, we suggest 3/4 sec as a standard setting the red dot "." stands for ½ second).
7. By pressing SET and making the display in P1-P2-P3 flash, it is possible with **▲/▼** (in flashing mode) to switch the gas cycle on and off (the red light will turn on and off).
8. **CLEAN PUMP**: Oil pump auto cleaning button. Keeping the SET button pressed for 3 seconds, "CPL" will appear on the display. The lid has to be now closed to allow the pump to work for 45 min in order to clean the oil inside it.
9. **START**: it is a FORCE button.
 1. Pressed while the lid is open, it activates the PRE-HEATING function, usually done before starting working on the machine. Pressed again, the pump turns off.

2. Pressed while the lid is closed, it performs an immediate sealing and unloads the machine. The lid opens automatically.
3. Pressing twice consecutively while the lid is closed, the machine unloads and the lid opens immediately: VAC STOP (12).
10. Pressing SET and scrolling on the display to the end, you get to "UNLOAD".
CONT: this is a continuous discharge while the machine unloads.
11. SOFT VAC, it activates the gradual re-injection of air inside the chamber. Air won't get back to the chamber in one solution, but in phases divided by pauses, avoiding violent pressure of the bag on the product.

Turning on the main switch and pressing the SET button, you read "CYC" on the display. This is a cycle counter, i.e. the number of the cycles that this machine has performed up to this moment.

The number that appears must be usually multiplied by 10 to obtain the exact number of the correct performed cycles.

In case of VACUUM SENSOR (option on request), VAC TIME and GAS TIME functions will be based on the percentage of sucked out oxygen and injected gas in the chamber during the vacuum cycle, before bag's sealing, or:

VACUUM CYCLE: it will indicate on the display the vacuum percentage.
The average suggested percentage is 95-99%.

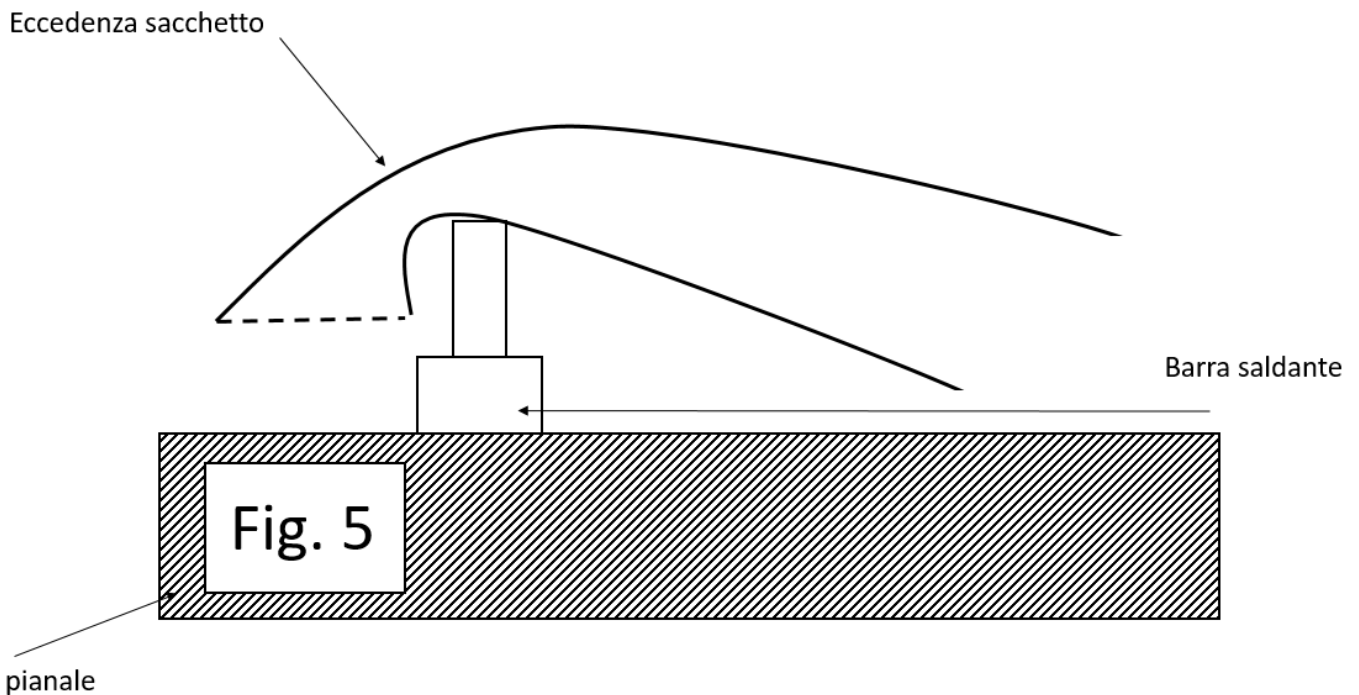
GAS CYCLE: it indicates on the display the percentage of gas injection.
The average suggested percentage varies from product to product (see the table at the end of the manual).

Machine completes the vacuum cycle automatically. Once vacuum is done, the machine seals and, after that, it inputs air in the chamber to assure a perfect adherence to the product and allows the Plexiglas lid lifts up.

WORKING CYCLE

Dry products

- Plug the machine in a proper 220V/240V or 380V socket.
- Push the general line-switch. With this operation the circuit activates and feeds the electronic boards for the automatic cycle phases.
- Set desired vacuum and sealing time (See the scheme "Control panel" on previous page).
- Put the bag/s inside the vacuum chamber laying the open side of the bag on the sealing bar in a totally flat plane. If the bag had a lot of exceeding, it is mandatory to place it in the space in between the chamber and the sealing bar.
- Inside the chamber there are 2/3 filling plates, they are made in non-toxic polyethylene for food. Use them to level the product in correspondence of the sealing bar. Filling plates can be used if needed or taken away if not.
- Close the lid making some pressure in order to keep it closed and at the same time push the button "start/stop".
- Different cycle phases are automatic and after reaching the desired vacuum, lid will open in order to allow a new cycle start.

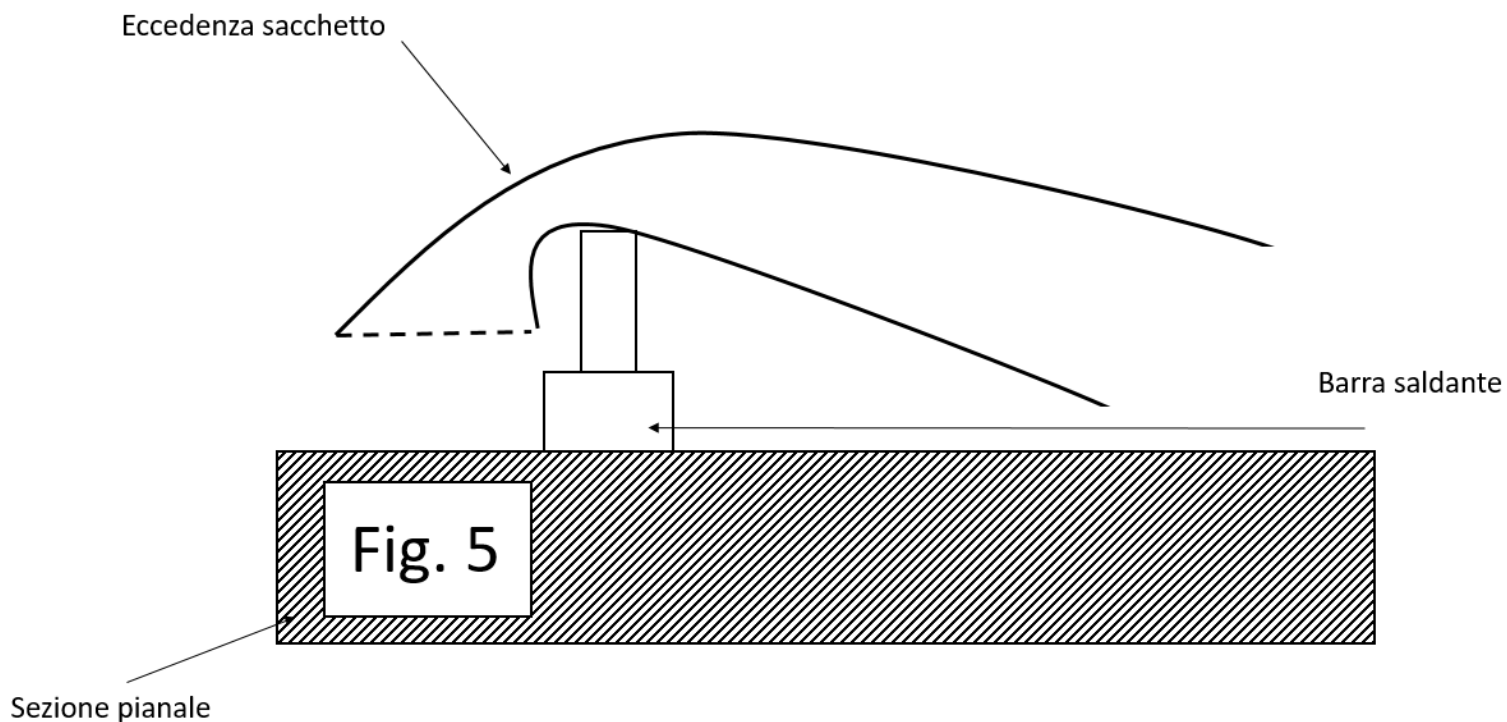


Liquid or semi-liquid products

With this vacuum packing machine it is possible to process liquid or semi-liquid products (ex. Soups, sauces, creams, etc.), making the shelf life longer and keeping hygiene and taste unvaried.

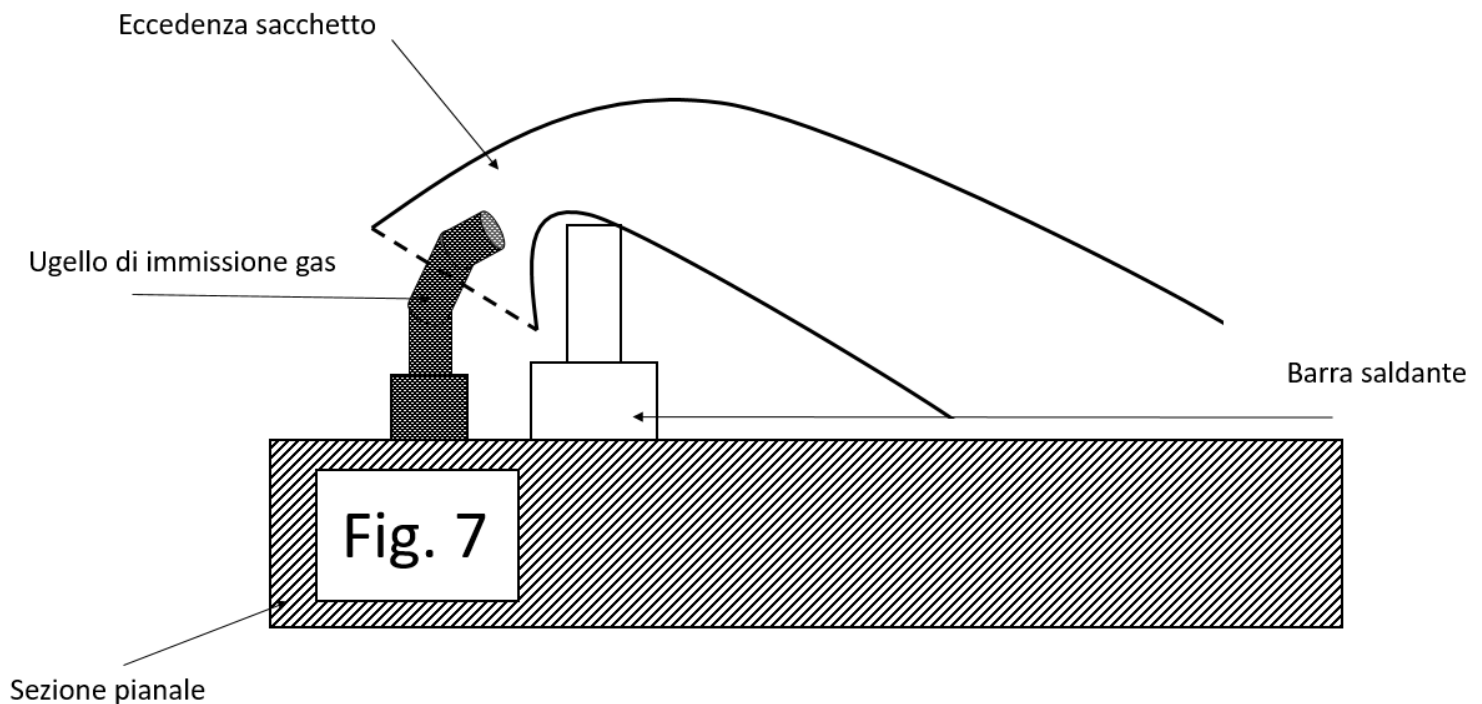
In these cases, remember not to fill the bags up to the top but maximum till 50% of the capacity, paying attention to keep the edge of the bag unlevelled to the sealing bar (take away the filling plates) or using an inclined plane.

- Vacuum cycle stays the same as before detailed for the dry products.
- Being the liquids non-squeezable, they do not need gas injection for MAP.
- All packs can be stocked in fridges and regularly overlaid.



Modified atmosphere (Optional)

1. Chose on the control panel the working cycle with gas flushing, setting relevant time values.
2. Once connected the pipe coming from the gas bottle to the hole in the side/back of the machine, set the manometer on the bottle for a pressure equal to 1 ATA.
3. Put the bag containing the product inside the vacuum chamber, making the nozzle for the gas get inside the bag, paying attention no folds block the gas injection.



RECOMMENDED BAGS

We suggest to use “SMOOTH” bags (thickness 100 μ), available on stock in different sizes.

SPECIAL WARNINGS

- (a) We suggest to turn off the line pressing the button "OFF" obtaining the complete switch off for the overnight.
- (b) On all SUPERTECH series machines with tri-phase power supply, pay attention to motor's rotation direction, that is indicated on a sticker on the pump itself (-1 Picture A). if motor turns on the opposite direction (you notice it by a loud metallic noise and by the impossibility to keep the lid closed), invert 2 on 3 cables of the plug (excluding the yellow-green grounding cable).



Foto A

- (c) In case a change from a star tri-phase motor (380V/3) to a triangle one (220V/3) was needed, it is sufficient to invert the position of the small brass bars in the terminal block. Act then on the two transformers moving the plugs connected on the 380V block to the 220V one.
- (d) During regular functioning, it is not necessary to clean the chamber or the lid between one cycle and the following one. But if necessary because of some product pours out, we suggest to use a cloth with some degreasing product or detergent non-alcoholic.

DO NOT PACK FOAMING LIQUID OR SUGARY PRODUCTS WITHOUT USING "STEP VAC", AS DURING SUCTION PHASE, FOAMINESS INCREASES AND CAN CAUSE THE PRODUCT POURS OUT FROM THE BAG.



BEFORE CLEANING UNPLUG THE MACHINE.

DURING WINTER TIME WE SUGGEST TO START WITH A HEAT PUMP PROGRAM IN ORDER TO MAKE THE OIL FLUID BEFORE STARTING THE WORKING SHIFT: PUSH HEAT PUMP BUTTON IN ORDER TO START WITH OIL WARM UP.

Chapter 8

CHECK UP AND MAINTENANCE



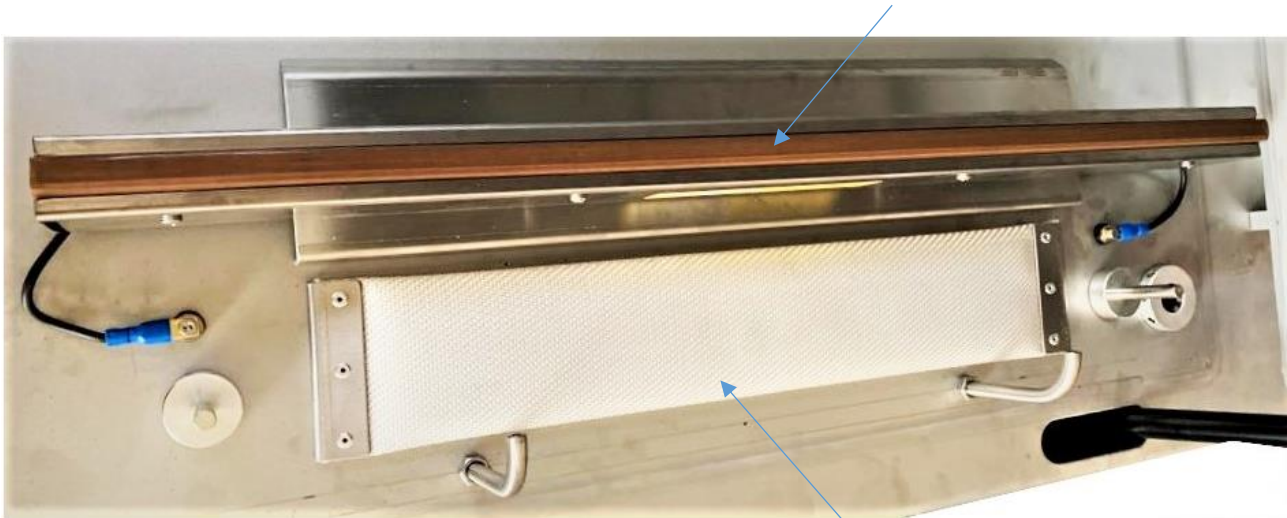
INTERNAL MAINTENANCE OF THE MACHINE HAS TO BE EXCLUSIVE DEPUTY OF A SPECIALISED TECHNICIAN. IN CASE SOMEONE ELSE OPENS THE MACHINE OF HIS OWN WILL, THE MANUFACTURER DECLINES ANY CIVIL AND PENAL RESPONSIBILITY ON EVENTUAL ACCIDENTS AND DAMAGES INCURRED TO PERSONS OR THINGS.

ALL INTERNAL COMPONENTS ARE PROTECTED INSIDE THE MACHINE AND TO REACH THEM THE PROTECTION CARTER HAS TO BE REMOVED. FOR ANY OPERATION INSIDE THE MACHINE UNPLUG IT



MAINTENANCE:

- Clean sealing bar every 15/20 days with degreasing products without alcoholic basis (Pictures A, B, C).



Picture A: Standard bar with diaphragm
(1 = diaphragm; 2 = Sealing bar)

1

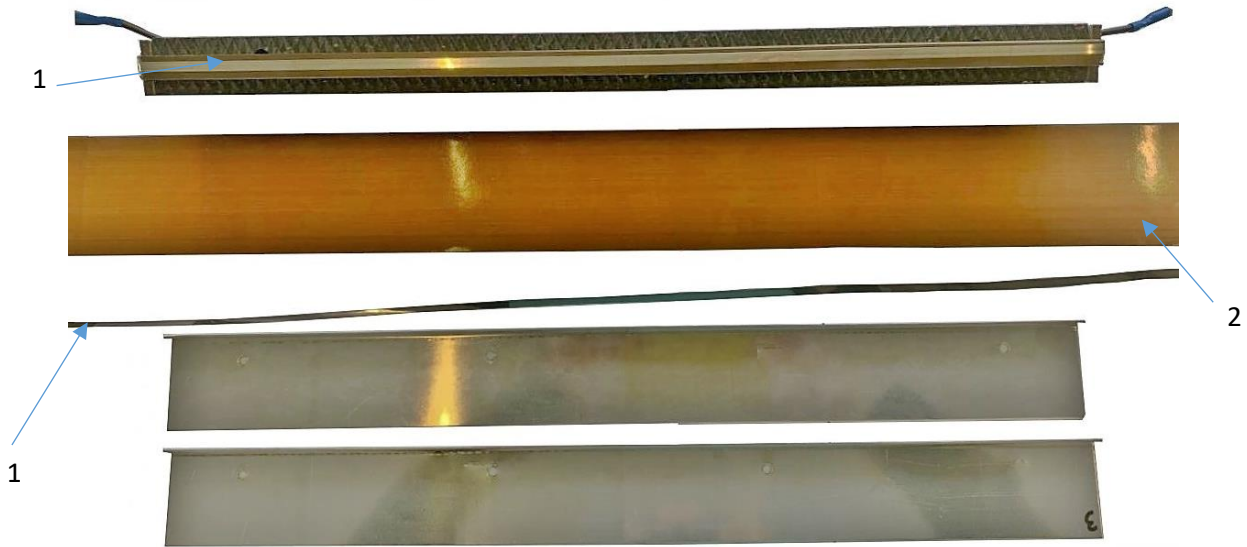


Picture B: Optional bar with pistons
(1 = Pistons; 2 = Sealing bar)

1

External Suction Vacuum Packaging Machines

- Replace heating elements (1), Teflon (2) on the sealing bar, and rubber gasket every 5000/6000 cycles.



- Change the sealing diaphragm if needed (in case it was broken or loses pressure during the sealing phase).



External Suction Vacuum Packaging Machines

- Change counterbar silicone (1) if needed.



- Check pump blades, filters and solenoids every 9000/10000 cycles.

OIL CHANGE

- Change oil every 8000/10000 cycles (this data can vary according to the kind of product). Once this amount is reached, on the display the writing CSE appears. It means you have to proceed with regular maintenance and oil change.

**BEFORE PROCEEDING WITH OIL CHANGE, BRING THE MACHINE
TO AN ADEQUATE PLACE AND UNPLUG THE MACHINE.**

External Suction Vacuum Packaging Machines

- To change oil, reach the inside part unscrewing the 7 screws at the back of the carter



Picture A

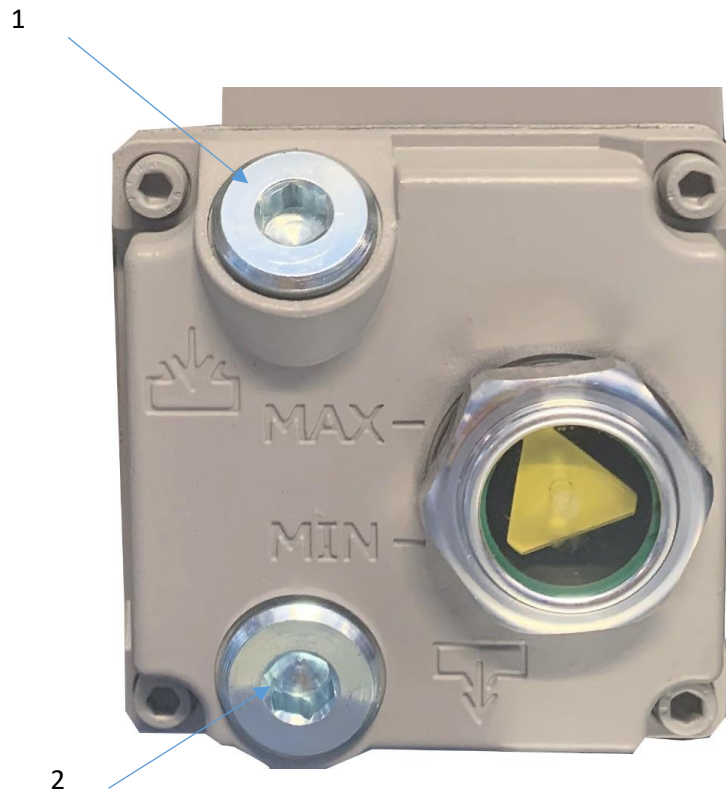
External Suction Vacuum Packaging Machines

- Open back door.



Picture B

- Put a container under oil unload point.
- Take away the screw-tap close to oil indicator (-2 Picture C.)

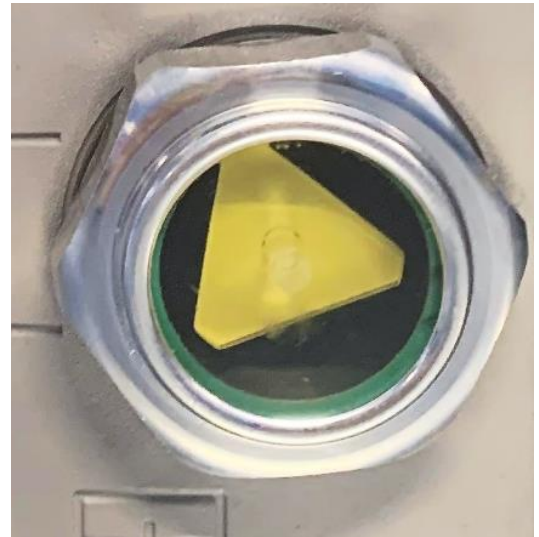


Picture C

- In order to achieve a quick oil expulsion, unscrew and take away the filling tap (- 1 Picture C).
- Add some new oil mixed up with some gasoline and make pump turns for some minutes, then empty the pump again till the complete clean up.
- Once discharged the reservoir, screw again the tap (- 2 Picture C, D) and close it firmly
- Fill the reservoir through the hole for oil indicated by the producer (-1 Picture C, D).

WE SUGGEST HYDRAULIC OILS- VISCOSITY 100

- Once the maximum level is reached (around $\frac{3}{4}$ oil indicator), close the filling hole (- 1 Picture C) and close the carter (Picture B) with its screws (Picture A).



**DISPOSE OF EXHAUSTED OILS
ACCORDING TO LOCAL LAWS!!**

Chapter 9

PROBLEMS AND SOLUTIONS

AFTER PLUGGING THE MACHINE DOES NOT LIGHT UP

- a) Check that the machine is well plugged in and eventually check the inside contacts of the plug itself.
- b) Check the fuses on the electronic board, above all the one relevant to the motor (FUSE 5x20, 10A).
- c) Check that closing the lid micro switch inside the chamber is correctly solicited.
- d) In the case of a tri-phase motor, after unplugging the machine, open the back door and check if magneto thermic intervened.



MACHINE SUDDENLY STOPS WHILE WORKING

- a) Check all protection fuses on the electronic board are intact.
- b) In case of tri-phase motor, check if magneto thermic intervened.
- c) In the case of a tri-phase motor, after unplugging the machine, open the back door and check if magneto thermic intervened.



MACHINE WORKS PROPERLY BUT WHEN LID RISES THE BAG IS NOT SELAED

- a) Rise up sealing bar and check if the power cables (24V) are strictly connected to the sealing bar and the connectors to the chamber.
- b) Lift up Teflon and check if heating element is intact and fixed on lateral clamps.



MACHINE DOES NOT REACH A PERFECT VACUUM

- a) Put the "Vacuum Tester" inside the chamber and close the lid. Once reached the 90% of vacuum stop the machine and see if display keeps the position or goes backwards.
 - In the first case no losses are detected, so there isn't any air infiltration.
 - In the second one the decreasing of the vacuum tester indicates a loss, it means that some pipes can be loosen or gaskets like "o-ring" are broken, as well as tubes in PVC. These parts then, need to be changed.
- b) Check the welding diaphragm. If it is broken or torn or open on the edges. If any of these scenarios are applicable, it needs to be changed.



- c) If all these first three possibilities are excluded, check the status of the pump (internal cleaning, blades, filters, etc.). The failure of these components could cause a decreasing in the level of vacuum.

IN ORDER TO CHECK THE STATUS OF VACUUM INSIDE

THE CHAMBER

WE SUGGEST TO USE

“VACUUM TESTER”,

THAT YOU CAN FIND IN OUR CATALOGUE.

Disposal

Machine disposal

At the end of its service life, this equipment must be disposed of as follows:

- Contact the service center to have the oil in the machine recovered and recycled.
- Consign the machine to an authorized collection center according to local legislation.

Recycled materials disposal

Lubricants must be consigned to an used oil collection center.

Packaging disposal



Electronic and electrical service equipment must never be disposed of with domestic waste, but recycled appropriately. The packaging must be disposed of in conformity with local legislation. This contributes to protecting the environment.

Chapter 10

SHELF LIFE FOR VACUUMED PRODUCTS KEPT AT +0° / +3° C

(merely indicative data according to variable parameters)

FRESH MEAT	
Beef	20 days
Veal	20 days
Pork	15 days
White meats	15 days
Rabbit/Game with bones	20 days
Lamb/Goat	20 days
Sausage/Cold cuts	20 days
Offal (liver, heart, brain, tripe, etc)	10-12 days
FISH	Average shelf life 7/8 days with extremely fresh product
CURED COLD CUTS	Optimal shelf life for more than 3 months.
HARD CHEESE (Parmesan, Pecorino, etc.)	120 days
FRESH CHEESE (Mozzarella, brie, etc.)	30-60 days
VEGETABLES	Around 15/20 days

MODIFIED ATMOSPHERE EXAMPLES

PRODUCT	OXYGEN % (O ₂)	DIOXIDE % (CO ₂)	NITROGEN % (N ₂)
Cold cuts	-	20	80
Roasted meat	80	20	-
Beer/canned drinks	-	100	-
Biscuits and oven products	-	100	100
Coffee	-	100	100
Fresh meat	70/80	30/20	-
Freeze-dried spices or meat	-	-	100
Minced meat	-	-	100
Chocolate	-	100	-
Fresh cheese / Mozzarella	-	20/-	80/100
Hard cheese / Cream / Butter / Margarine	-	-	100
Fresh Salad / Parsley	-	50	50
Yogurt / Puff Pastry	-	100	-
Powder Milk	-	30	70
Dry Yeast Powder	-	100	100
Apples	2	1	97
Bacon	-	35	65
Bread/Toast Bread	-	100	-
Rusks	-	80	20
Pasta	-	-	100
Fresh Pasta / Tortellini / Lasagne	-	70/100	30/-
Potatoes/Chips/Snacks/Hop	-	-	100
Blue Fish	-	60	40
White Fish	30	40	30
Pizza	-	30	70
Poultry	-	75	25
Tomatoes	4	4	92
Pre-cooked food	-	80	20
Sausages	-	20	80
Meat in slices	70	20	10
Fruit Juices	-	-	100
Trout	-	100	-
Wine/Oil	-	-	100