



H.W. LARSEN

Use and Maintenance Manual



**Eco Small, Eco Elix,
Eco Medium**

PAY ATTENTION!!! IMPORTANT!

MACHINES WARRANTY GUIDE LINES

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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 RE-
PLACED 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 GET-
TING THE BROKEN PART BACK!!!

For other components (transformers, electronic boards, micro-switches, etc.), 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.

IDENTIFICATION DATA:

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

Chapter 2

How to read and use "Instruction Manual"

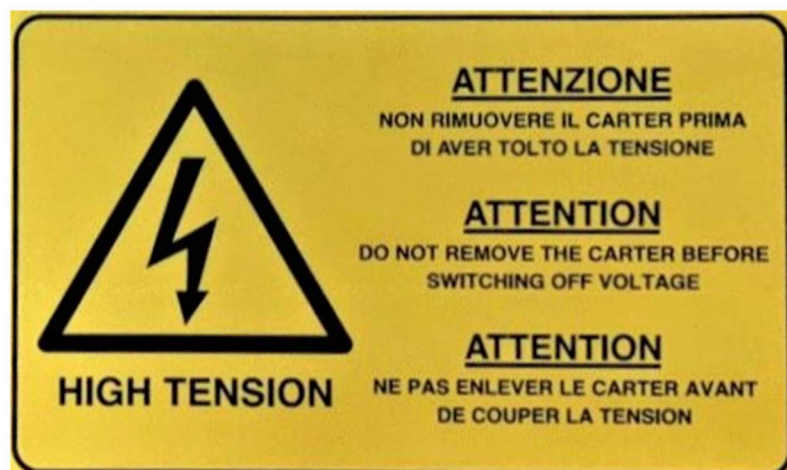
MANUAL PRESERVATION

This present document is 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.

MACHINE'S 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 mechanic 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) makes 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.**

Machine does not need lubricants.

Chapter 5

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.**

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

Before plugging the vacuum packer, be sure that the label data correspond to those of the electrical distribution.

Label is located on the side of the machine.

After checking and setting everything, plug the machine at 230V.

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.

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, ny-pol material).



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

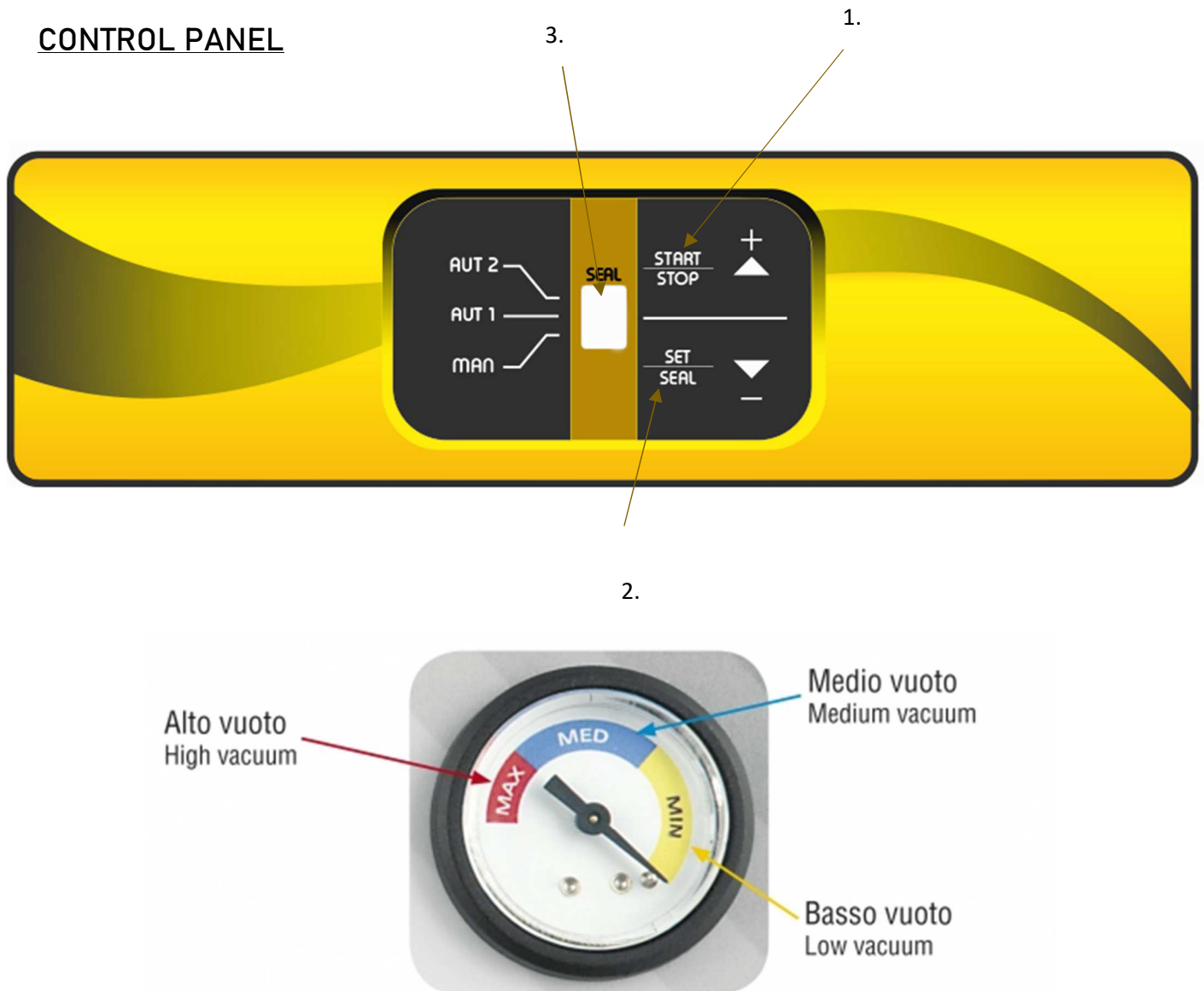
External Suction Vacuum Packaging Machines



1. Structure in stainless steel
2. General switch
3. Control panel with manual and automatic working cycle
4. Vacuum gauge

Chapter 7

CONTROL PANEL



1. Button START. If the button is pressed once again, the cycle stops.
2. Button with double function:
 - A) When the motor is not working it can be used to set the manual or automatic cycle or to set the desired sealing time.
 - B) When the motor is working, pressing SEAL, the sealing phase starts.
3. Display that highlights the chosen vacuum cycle and the selected sealing time.
4. Vacuum gauge that shows the reached vacuum level.

WORKING CYCLE

- Put the product inside a bag.
- Lay the open side of the bag on the lower part under the “L” bar I stainless steel.
- Push down the upper bar and press START/STOP (1), making a light pressure on the plate's sides, creating depression in the chamber and starting the vacuum cycle.
- Once air is completely sucked out, push SET/SEAL (2) to start the sealing. The machine stops by itself.
- In 6/7 seconds air re-introduction will open the chamber.

SETTING

Turning on the line switch a horizontal line appears in the middle of the display. It indicates that the machine is in stand-by.

- **MANUAL CYCLE**: Pushing START/STOP the cycle begins with an infinite time (on the display an A will appear). Once reached desired vacuum in the bag, the operator will have to push SET/SEAL to start the sealing cycle and consequently the pump stops.
- **AUTOMATIC CYCLE**: When the machine is in stand-by, pushing SET/SEAL the central line moves on MAN. Then pushing >START/STOP (rise) the line goes on AUT. Automatically the card shows the sealing time (Default 3,5 seconds) that can be modified with “+” and “- “. Pushing START/STOP aspiration begins and after the set time it will automatically pass to the sealing and relevant end of the cycle.
 - AUT 1: Ideal for small bags (250mm X 350mm)
 - AUT 2: Ideal for medium-large bags (350mm X 450mm).
 - For large bags manual cycle is preferred.

VACUUM GAUGE

The machine is produced with a vacuum gauge as a standard feature, on the right side of the control panel.

That manometer is characterised by 3 colours (yellow, blue and red) that indicate a growing percentage of vacuum really achieved inside the bag during the working cycle, allowing the operator to activate the advanced sealing according to the actually desired vacuum level for different products.

RECOMMENDED BAGS

We suggest to use “GOFFER” bags (thickness 100 μ), that we have on stock in different sizes.

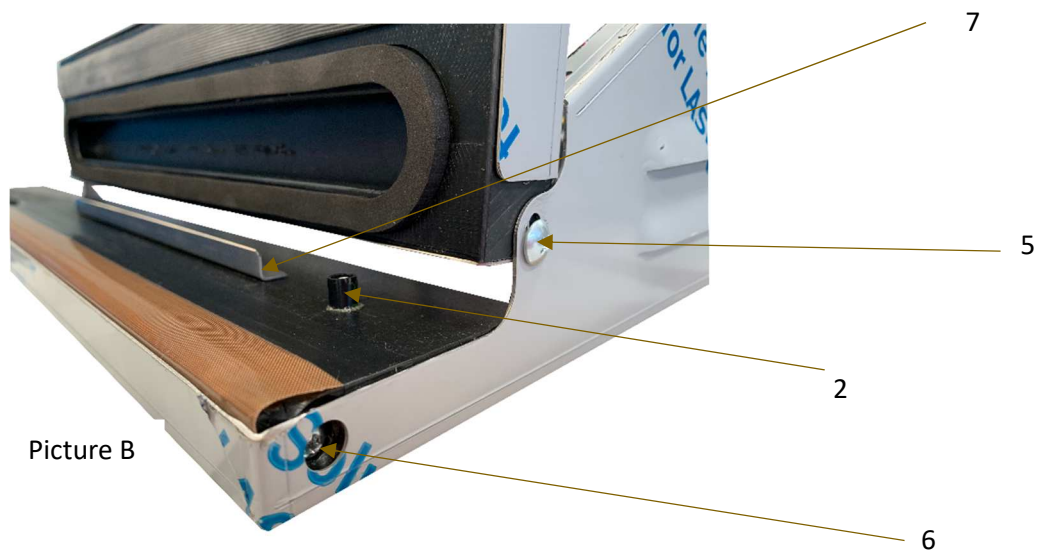
It is also possible to use regular smooth bags (thickness 100 μ) by bending the lateral edges in order to obtain folds.

Anyhow, please consider that goffer bag is, so far, the elected bag for this kind of packaging.

EXTERNAL TECHNICAL COMPONENTS



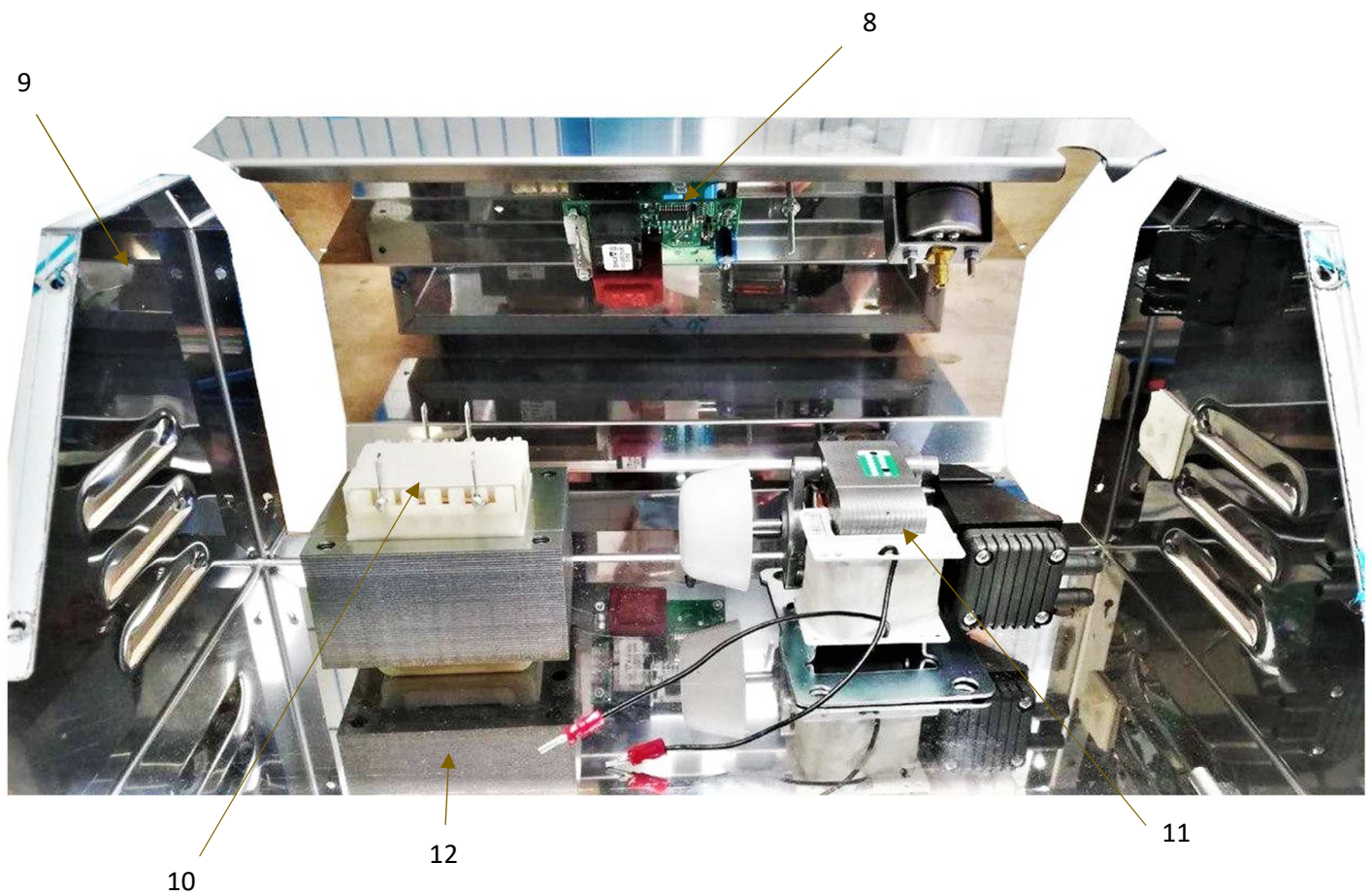
Picture A



Picture B

1. Sealing bar with teflon on the top of it (thickness 0.127 μ).
2. Suction fitting to connect discharge pipe to containers with valve.
3. Plate gasket.
4. Counterbar knurled silicone.
5. Hinge for plate opening
6. Internal screw for heating element fixing.
7. Indicative line for bags placing.

INTERNAL TECHNICAL COMPONENTS



- 8. Electronic card
- 9. Stainless steel carter
- 10. Electrical transformer
- 11. Vacuum pump
- 12. Basement in stainless steel.

Chapter 9

VACUUM PACKING OF HUMID PRODUCTS

No limits of packaging exist on dry and/or seasoned products (cold cuts, all kind of cheese, coffee, frozen products), because the lack of humidity allows the reaching of a high level of vacuum, without any liquid absorption.

In the case of fresh meat (beef, sheep, etc., fish in general, pre-cooked meals) it is recommended, in order to avoid that during the final phase of suction some liquid is absorbed, to wrap the product, before putting it in the bag, with a transparent film (polyethylene for food) to hold humidity, or with vegetal paper for food.

Advantages are: a better level of final vacuum and an excellent sealing and welding.



External suction machines
ARE NOT INDICATED
FOR LIQUIDS OR
SAUCES PACKAGING!!

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