



**EVOX 30**

**ENGLISH**

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## FOREWORD

- Thank you for your purchase. **ORVED S.p.A.** is pleased to consider you part of its loyal Customers and is confident that this machine shall provide your complete satisfaction.
- This User Manual is used as a reference guide for correct and rapid identification of all the machine parts in any version.
- The diagrams, tables and all that contained in this User Manual are confidential and therefore, no information is to be reproduced in whole or in part or communicated to third parties, without the approval of **ORVED S.p.A.**, who is the sole proprietor.
- In accordance with the Company's policy aimed at continuous quality improvement, **ORVED S.p.A.** reserves the right to make any changes deemed necessary, at any time and without prior notice.

## CE DECLARATION OF CONFORMITY

We, **ORVED S.p.A. (sole proprietorship)**, located in **via dell'Artigianato 30, 30024 Musile di Piave (VE) – Italy**, declare under our own responsibility that the products:

**EVOX 30/8 - EVOX 30/12**

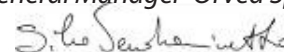
*which this declaration refers to, are manufactured in compliance with:*

- **The safety objectives of the Low Voltage Directive 2006/95/EC (that replaces Directive 73/23/EEC and subsequent amendments).**
- **The safety requirements of the EMC Directive 2004/108/EC.**
- The Standard pertaining to safety of household and similar electrical appliances:  
**EN60335-2-45:2002+A1:2008;**  
**EN60335-1:2002+A11:2004+A1:2004+A12:2006+A2:2006+A1/EC:2007+A13:2008+EC:2009+EC:2010+A14:2010;**  
**IEC60335-2-45:2002+A1:2008;**  
**IEC 60335-1:2001 + Ec1:2002 + A1:2004 + A2:2006 + A2/Ec1:2006**
- The Electromagnetic Compatibility Standard:  
**EN 55014-1 (2006) - EN 61000-3-2 (2006) - EN 61000-3-3 (1995) +A1 (2001) +A2 (2005) +IS1 (2005)**  
**EN 55014-2 (1997) +A1 (2001) +A2 (2008) - EN 50366 (2003) + A1 (2006)**

*They also comply with:*

- Hygiene requirements for food processing machines **UNI EN 1672-2**
- Regulation **EC 1935/2004** and the EHEDG guidelines (European Hygienic Engineering and Design Group), doc. 8, second edition (April 2004), regarding the adequately hygienic construction criteria of machines, equipment and components.

**Sileo Vendraminetto**  
 General Manager Orved SpA



Musile di Piave, November 2012

## 1. GENERAL INFORMATION

### 1.1 THE MANUAL

- This User Manual is used as a reference guide for correct and rapid identification of all the machine parts in any version.
- The diagrams, tables and all that contained in this Operating and Service Manual are confidential and therefore, it is prohibited to pass on any information in whole or in part to third parties, without the approval of **ORVED S.p.A.**
- In accordance with the Company's policy aimed at continuous quality improvement, the Manufacturing Company reserves the right to make any changes deemed necessary, at any time and without prior notice. The descriptions and images contained herein are not binding.
- This manual is to be considered an integral part of the appliance, therefore it must be conserved and kept throughout its duration and use. If the appliance is transferred to third parties, this document must be passed on to the new owner.
- The buyer is obliged to ensure that all personnel assigned to use and service this appliance read this manual carefully, allowing them to consult it freely whenever necessary.
- The manufacturer declines all liability for damage caused to persons, objects or animals deriving from non-compliance with the requirements stipulated in this manual, safety warnings, alterations to the appliance without prior authorisation, tampering with and non-original spare parts being used.

### DIAGRAMS

- It is impossible to include all the various options available due to the many different machine models and versions. However, the diagrams in this manual clearly represent the operating principle of the models referred to on the cover page.

### 1.2 STORING THE MANUAL

- The contents must not be ruined when this document is used. After using the manual, place it in a safe and protected place, which is easily accessible by all operators who use and/or service the appliance. A copy of this manual can be requested, should it be lost, stolen or damaged, by sending a purchase order to **ORVED S.p.A.**, specifying the version, edition, revision and name of the appliance. This information can be found on each page of this document.
- Date of publication of this Operating and Service Manual: **11.2012.**
- Copyright: **ORVED S.p.A. (SOLE PROPRIETORSHIP)** - Musile di Piave (VE)

### 1.3 IDENTIFICATION OF THE MANUFACTURER

Registered and Administrative Office: **ORVED S.p.A. (SOLE PROPRIETORSHIP)**

Via dell'Artigianato, 30 - 30024 MUSILE DI PIAVE (VE) ITALY

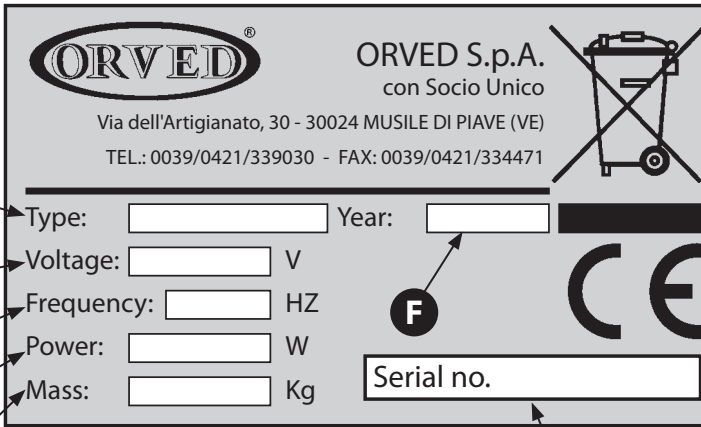
Tel.: ++39 0421 54387 / Telefax: ++39 0421 333100

**E-mail: orved.ve@tin.it - Internet: www.orved.it**

## 1.4 IDENTIFICATION OF THE MACHINE

The machine is identified from a plate on the rear side that bears the following information:

- A** Model.
- B** Voltage and number of phases (Volt).
- C** Frequency (Hertz).
- D** Maximum power consumption (Watt).
- E** Weight.
- F** Year of manufacture.
- G** Serial number.



ORVED S.p.A.  
con Socio Unico  
Via dell'Artigianato, 30 - 30024 MUSILE DI PIAVE (VE)  
TEL.: 0039/0421/339030 - FAX: 0039/0421/334471

Type:  Year:

Voltage:  V

Frequency:  HZ

Power:  W

Mass:  Kg

Serial no.

**A** points to Type  
**B** points to Voltage  
**C** points to Frequency  
**D** points to Power  
**E** points to Mass  
**F** points to Year  
**G** points to Serial no.

## GENERAL INFORMATION

### 1.5 WARRANTY

All **ORVED** products are normally subjected to severe qualitative and functional controls before being installed in order to safeguard and protect the Customers.

#### COVERAGE

**ORVED** guarantees its products from all manufacturing and processing defects and agrees to replace any parts that may be found to be defective by the manufacturer, free of charge.

#### DURATION

**ORVED** guarantees its professional use products for 36 (thirty-six) months from the date of sale shown on the purchase document.

#### GENERAL CONDITIONS

**The ORVED warranty:**

- a) Entitles the user to free replacement of defective components acknowledged by **ORVED** or an authorised representative.
- b) **ORVED's** liability is limited to defective parts being replaced; under no circumstances shall **ORVED** acknowledge compensation claims for anything different.
- c) The defective parts must be returned to **ORVED** and all transport expenses for the parts to be delivered are entirely borne by the Customer.
- d) Normal wear and tear of the components is excluded from the warranty.
- e) The warranty period is not extended if any repairs are performed.

#### TERMINATION

**Besides normal expiry of the period of cover, the warranty is immediately rendered null and void in the following cases:**

- a) The identification plate of the machine being tampered with altered in any way or removed without **ORVED S.p.A.** having been promptly notified.
- b) Altering the machine or its parts without prior written authorization from **ORVED S.p.A.**. Tampering with the machine or its parts relieves **ORVED S.p.A.** from any damage caused to persons, animals or objects, besides rendering the warranty null and void
- c) Failure to comply with the instructions provided in this manual.
- d) Using the machine for purposes other than those indicated in this manual.
- e) Damage or accidents caused to the appliance due to external factors.
- f) Unskilled personnel using, repairing and/or servicing the machine.

### 1.6 REPORTING DEFECTS OR ANOMALIES

Please report any defects or anomalies that go beyond the contents of this manual to the dealer in your area or directly to **ORVED S.p.A.**, who will gladly help resolve the problem.

**Have the following readily available:**

- Name of model
- Serial number

### 1.7 REQUEST FOR PARTS

**Please request spare parts from the dealer in your area or directly from ORVED S.p.A., specifying:**

- Name of model
- Serial number
- Part code



## 2. GENERAL SAFETY STANDARDS AND ACCIDENT PREVENTION

**ORVED** has analyzed the basic operations regarding use and maintenance while designing and creating the machine. The methods of intervention have been studied and included in this manual for them to be performed safely. Failure to comply with these Standards can be extremely hazardous for the safety of the machine –as well as that of the personnel. The manufacturer declines all liability for damage caused to persons, objects or animals deriving from non-compliance with the requirements stipulated in this manual, safety warnings, alterations to the machine without prior authorization, tampering with and non-original spare parts being used.

### 2.1 SYMBOLS ON THE MACHINE

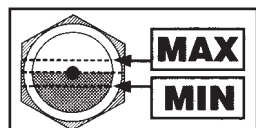
Symbols and warnings are found on the machines, which are an integral part of the safety devices of the machine and highlight potentially hazardous situations for the safety of the machine and/or the operator.



Risk of electric shock; electrical hazard.

DISCONNECT THE POWER PLUG  
BEFORE REMOVING THE PANEL  
(OR OPENING THE MACHINE)

Maintenance: disconnect the power plug before removing the rear panel of the machine.



Maintenance: regularly check the oil level of the vacuum pump.

### 2.2 SYMBOLS IN THE MANUAL

This manual contains symbols to highlight hazardous situations for the safety of the machine and/or the operator, particularly important Standards, recommendations, warnings and precautions to be complied with when using or servicing the machine. These symbols must be understood by the personnel using and servicing the machine before commencing any operation.



#### **ELECTRICAL HAZARD**

Risk of electric shock.



#### **DANGER**

Indicates a potential hazard to life and health.

Failure to comply with these warnings can cause damage to persons, the appliance or the environment.



#### **RISK OF BURNS**

Indicates the risk of burns if contact is made with very hot surfaces.



#### **NOTE**

Indicates recommendations for use and other useful information.

## 2.3 COMPLIANT USE OF THE MACHINE

The vacuum packing machine has been studied and designed to vacuum bags and rigid containers, with a complete standard cycle (vacuum and seal) being performed every 60 seconds.

It is prohibited to use the machine in a manner or for a purpose other than those indicated by **ORVED S.p.A.** in this manual. Proper use of the machine also includes compliance and awareness of the instructions and warnings contained in this instruction manual, as well as the timely implementation of all inspections, servicing and cleaning of the machine.

**ORVED S.p.A.** declines all liability for damage caused to persons, animals or objects deriving from non-compliant use of the machine.

## 2.4 WARNINGS AND HAZARDS DERIVING FROM MACHINE USE

### 2.4.1 HAZARDS DERIVING FROM MACHINE USE



#### **DANGER!**

- The machines are designed and manufactured according to the latest technology available and are compliant with applicable safety Standards. Nevertheless, they may be a source of danger if the safety requirements contained in this manual are not complied with or in the event of improper use.

Strictly comply with the following safety guidelines:

- Before use, make sure the machine is intact and bears no signs of damage.
- If the machine is not used for a long period of time, it must be switched off using the main switch.
- Prevent unauthorized persons from accessing the work area.
- Use suitable work clothes and protection gloves.
- Never use the machine in potentially explosive environments, or in the presence of flammable vapors and gas.
- Make sure there is sufficient ventilation in the workplace.
- Immediately remove all obstacles and interference that can compromise safety.

### 2.4.2 PERSONNEL ASSIGNED TO USE THE MACHINE



#### **DANGER!**

- Only trained personnel can use the machine. Such personnel must be aware of the safety Standards and User Instructions contained in this manual.
- This machine is not suitable for use by persons (including children) with reduced physical, sensory and mental capacities, or unskilled persons, unless they are supervised and trained regarding use of the machine by a person responsible for their safety. Make sure that children do not play with the machine.

### 2.4.3 PROTECTION AND SAFETY DEVICES



#### **DANGER!**

- Before every machine start-up, check that all the protection and safety devices are present, efficient and functional.



#### **2.4.4 ELECTRICAL RISKS**

##### **ELECTRICAL HAZARD**

- The electrical safety of the machine is only guaranteed when it is connected correctly to an efficient earthing system in accordance with the law.

- Only qualified personnel can operate on the power supply system and access live parts.
- Perform regular inspections of the electrical system of the machine (these are only to be performed by qualified personnel).
- Remove and/or immediately replace loose connections or burnt wires (only qualified personnel must replace these parts).
- Replace the power supply cable if damaged. Only qualified personnel must replace this part.
- Use only suitable plugs and sockets that comply with the electrical specifications stipulated on the identification plate of the machine.
- Do not insert objects in the vents of the machine: risk of electric shock!
- It is strictly prohibited to use running water, water jets and/or vapour in the machine installation area: risk of electric shock!



## 2.4.5 HAZARDS DERIVING FROM THE PRESENCE OF HEATING ELEMENTS (SEALING BARS)

### DANGER!

- Risk of scalding: do not touch the sealing bar at the end of the work cycle.



## 2.4.6 MACHINE MAINTENANCE, SERVICE AND REPAIRS

### DANGER!

- Remove the plug from the socket before each intervention.
- Perform all machine maintenance and servicing as scheduled.
- Any damage must only be repaired by qualified personnel.



## 2.4.7 MODIFYING THE APPLIANCE

### DANGER!

- Do not alter the machine in any way without approval from **ORVED S.p.A.**
- Immediately replace all deteriorated, worn or damaged parts (qualified personnel must replace these parts).
- Only original spare parts are to be used.



## 2.4.8 FIRE PREVENTION

### DANGER!

- Keep the vents free from obstacles (at least 10 cm away from any surrounding obstacle).
- Do not place the machine close to flammable products



### DANGER!

- Risk of burns: ventilate the environment if alcohol-based or flammable disinfectants are used. Keep open flames away from the machine! Do not smoke!



## 2.4.9 CLEANING AND DISPOSING OF THE MACHINE

### ATTENTION!

- Clean the machine regularly, following the instructions in this manual.
- Use and handle detergents according to the manufacturer's instructions.
- Demolish and dispose of the machine, its components and detergents used to clean the machine, in compliance with applicable Standards

## 2.5 SAFETY DEVICES ON THE MACHINE

### 2.5.1 NOTES ON SAFETY DEVICES

- Before every machine start-up, check that all the protection and safety devices are present, efficient and functional. The machine must not be used if one or more safety device is missing or damaged.
- Only qualified and trained personnel must perform maintenance and/or repairs or replace safety devices.
- The safety devices must not be excluded or disabled.

**The machine comes standard with the following safety devices:**

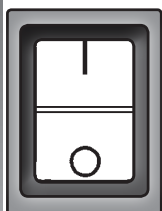
- Safety device to prevent the vacuum pump from overheating.
- Main switch.
- Safety fuses to prevent overloads and short-circuits.
- Vacuum pump fan cover.

### 2.5.2 SAFETY DEVICE THAT PREVENTS THE VACUUM PUMP FROM OVERHEATING

Your vacuum packing machine is equipped with a safety system that eliminates the risk of the pump motor overheating, which could be triggered by galling or a defect, by means of special temperature sensors placed on the motor winding and a number of devices inside the electronic power board.

### 2.5.3 MAIN SWITCH

The power supply of the appliance can be disconnected from the main switch, which can also be used as an emergency switch.



### SINGLE-PHASE VERSIONS

### 2.5.4 SAFETY FUSES THAT PREVENT OVERLOADS AND SHORT-CIRCUITS

The machine has safety fuses to prevent overloads and short-circuits.

### 2.5.5 FAN COVER FOR THE VACUUM PUMP

The vacuum pump has a safety cover that prevents contact with the cooling fan.

## 2.6 HYGIENE

The machine is constructed in compliance with **Directive EN1672-2** (hygiene requirements for food processing machines), **Regulation EC 1935/2004** and the **EHEDG guidelines** (European Hygienic Engineering and Design Group). Materials, surfaces and shapes have been studied and selected so as to minimise or eliminate the risk of exposure and infection between food and the machine user and vice versa, and to minimise or eliminate the risk of food contamination via the operator and the machine itself.

**That said, in the case of vacuum food packing, always comply with the following guidelines:**

- Clean the machine thoroughly before and after use. Clean and disinfect the internal surface of the vacuum chamber with particular attention.
- Work in a hygienic manner, avoiding direct contact between the food and the machine.
- Keep the control panels and the handling elements clean and free from grease and oils.
- Close the lid when the machine is not used: thereby preventing dust and dirt from entering the vacuum chamber.

## 2.7 MAINTENANCE AND TECHNICAL SUPPORT

This User Manual describes, in a clear and distinct manner, the maintenance, repairs and service operations to be performed by the machine operators and those that require qualified and trained technicians from an authorized after-sales and service centre.

**Always comply with the following guidelines when performing maintenance, service or repairs:**

- Switch the machine off using the main switch and remove the plug from the socket.
- Comply with the scheduled maintenance and intervals stipulated in this manual. Delays or lack of maintenance can lead to costly repairs.
- Only use original **ORVED S.p.A.** spare parts, oils and lubricants.
- Use tools that are in good condition; do not leave tools inside the machine after use.
- Never intervene when the operations to be performed require a qualified technician from an authorized after-sales centre.
- The operations must only be performed by Technical Support Centres authorised by **ORVED S.p.A.**.
- Any safety devices that are temporarily disabled or removed by a qualified technician for maintenance to be performed, must be restored once the intervention is complete and their efficiency and functionality must be verified.

### 3. RECOMMENDATIONS TO PROTECT THE ENVIRONMENT




#### PACKAGING

- The packaging material is 100% recyclable and is marked with the recycling symbol.
- Comply with local Standards for disposal.
- Do not dispose of the material in the environment. The packaging material (plastic bags, polystyrene, etc.) must be kept out of the reach of children as they are a potential source of danger.



#### SCRAPPING/DISPOSAL

- The appliance has been constructed with recyclable material. This appliance is marked in compliance with European Directive 2002/96/EC - Waste Electrical and Electronic Equipment (WEEE).
- By ensuring that this appliance is scrapped correctly, you shall help prevent potential negative consequences for the environment and health.
- The symbol  on the appliance or on the accompanying documentation, indicates that this product must not be treated as domestic waste but must be taken to a suitable recycling collection point for electric and electronic equipment.
- Before scrapping, make the appliance unusable by cutting the power cable and removing the lid so that children cannot access the inner part of the appliance.
- Scrap the appliance in compliance with local Standards regarding waste disposal and take it to an appropriate collection point. Do not leave it unattended for even just a few days as it is a source of danger for children.
- For further information regarding treatment, recovery and recycling of this appliance, contact the relative local department, the waste collection service or the dealer where the appliance was purchased.

## 4. HANDLING AND UNPACKING

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**WARNING!**

  - Pay particular attention to staples, nails, rivets, sharp edges or anything else that could be a potential hazard on the packaging. Upon receiving the package, the Customer must verify its integrity, duly reporting any anomalies, missing items or evident damage to the carrier or transport personnel. In any case, this report must be made before any other handling or unpacking operation is implemented.
  - Any damage on the packaging could result in the machine or its components being damaged. If in doubt about the actual integrity of the machine following transport, before any other operation, ask your dealer or ORVED S.p.A. for information.
  - The packed machine must be stored in a protected place, which is dry, covered and not exposed to weathering. The area in question must have a temperature range of 5°C to 40°C and a relative humidity value that does not exceed 80%. Water and steam must be kept at a distance from the installation or storage area.

### 4.1 UNPACKING

- After having removed the packaging, check the integrity of the appliance. If in doubt, do not use the machine and contact the dealer immediately.
- Store the Velcro strap to tie the power cable to the relative support.
- It is recommended to store the packaging intact for any future handling or storage operations.
- Comply with that described in Chapter 3 for disposal and safety of the packaging material.

### 4.2 HANDLING AND STORING

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**WARNING!**

  - During transport and handling, the machine must always be kept in a horizontal position so as to prevent the oil leaking from the pump.
  - Use the special plastic locking screws on the rear part to block the lid.
  - Sealing bars and panels must be set in place so as to prevent them from moving inside the vacuum chamber.
  - If the machine is stored, the area must be protected, dry, ventilated, covered and not exposed to weathering.
  - The area in question must have a temperature range of 5°C to 40°C and a relative humidity value that does not exceed 80%
  - Water and water vapour must be kept at a distance from the installation or storage area.

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**WARNING!**

After having been stored for a long time, perform the following operations:

  - The pump oil must be replaced before starting-up, as described in the instructions found in the "MAINTENANCE" chapter. The oil replacement must be carried out exclusively by authorised and specialised personnel, in compliance with the instructions and the requirements in this manual.
  - A dehumidification cycle must be run, as described in the "OPERATION" chapter.

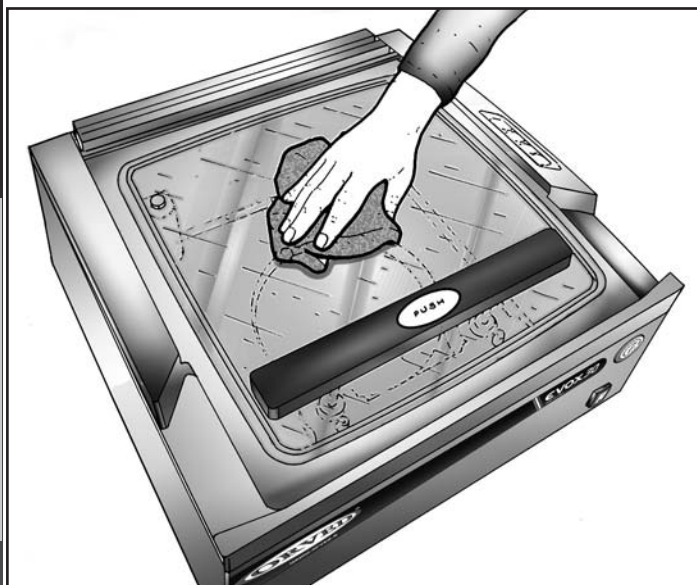


## 5. BEFORE USING EVOX 30

We supply the following notions regarding the best use of **EVOX 30**.

### 5.1 VACUUM CHAMBER AND LID PRELIMINARY CLEANING

- Before using the machine, the vacuum chamber and lid must be cleaned using a damp cloth and drinking water.
- It is recommended not to use aggressive detergents, stainless steel scrubbers, scrapers or abrasive, acid or aggressive substances, which could damage the stainless steel surface inside the vacuum chamber irreparably.
- After cleaning, rinse thoroughly with drinking water.



### 5.2 MACHINE DESCRIPTION

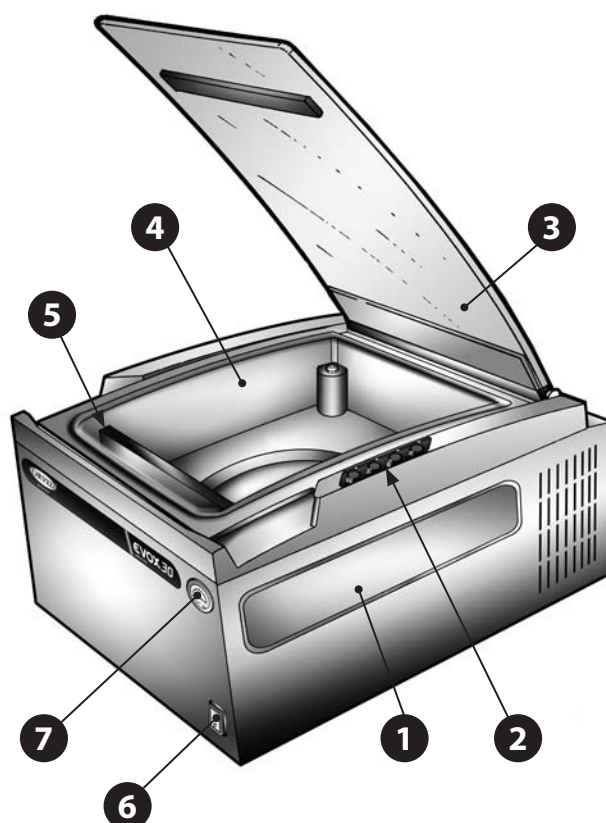
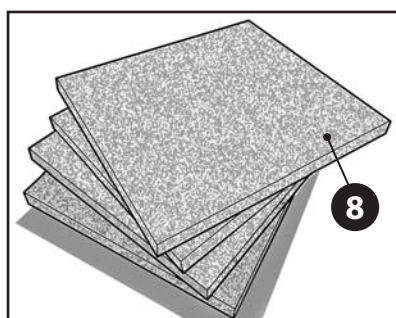
The machine is made up from an machine body **1** that includes the vacuum chamber **4** and relative lid **3** for closure.

There is a sealing bar inside the vacuum chamber **5**, whose function is to seal the bags hermetically.

The machine is switched-on using the switch **6**.

The shelves **8** reduce the quantity of air to be sucked, with consequent reduction of cycle duration.

- 1** Machine body
- 2** Control panel
- 3** Vacuum chamber lid in tempered glass
- 4** Vacuum chamber
- 5** Sealing bar
- 6** Main switch ON/OFF
- 7** Vacuum Gauge
- 8** Polyethylene filler for reduction of the air volume to be sucked





### 5.3 NOTIONS ON THE POSSIBLE OPERATIONAL METHODS

The foodstuffs must be prepared previously inside the relative vacuum bags (for cooking or preservation) or inside the rigid containers for vacuum packing ("vuoto box").

The bag or the container, is positioned inside the vacuum chamber, inside which the evacuation of the air takes place and, when vacuum pack bags are used, also the sealing of the same.

#### 5.3.1 OPERATING VACUUM USING VACUUM BAGS (§ 7.3.1)



× **1. Storage vacuum cycle.** The vacuum level is high, the air inside the bag is removed totally. The total duration of the cycle is about 40seconds, but it depends on the volume of the product and the number of fillers inside the vacuum chamber.



× **2. Cooking vacuum cycle.** The vacuum level is the high level. The air is removed both around and from the heart of the product, in a way to obtain a uniform transmission of heat from the outside to the heart of the product in the successive cooking phase, inside a steam oven, of the foodstuff packed in the relevant cooking bag. The total duration of the cycle is about 60seconds, but it depends on the volume of the product and the number of fillers inside the vacuum chamber.

**PA/PE** bags are used in the storage vacuum cycle and **OPA/PP** bags for vacuum cooking cycles. Whenever the successive cooking of the food stuff is envisioned in a steam oven inside the packing, the use of bags in **OPA/PP** specific for cooking is indispensable. Therefore, with **OPA/PP** bags the foodstuffs can be stored and cooked, with **PA/PE** bags they can only be stored.

#### 5.3.2 OPERATING VACUUM USING VACUUM CONTAINERS (§ 7.3.2 and 7.3.3)



Used for rigid vacuum packing containers and resistant to the high vacuum level (containers in thick glass, professional vacuum packing containers).

The vacuum cycle ends pressing the **STOP** button.

#### 5.3.3 OPERATING VACUUM USING VACUUM CHanneled BAS OUTSIDE THE VACUUM CHAMBER (§ 7.3.3)



**EVOX 30** allows operating the vacuum in vacuum channeled bags, positioned outside the vacuum chamber. Doing so, we can vacuum foodstuff exceeding the vacuum chamber size.

The vacuum cycle ends with the bag sealing, by pressing the **SEAL** button.

#### 5.3.4 SEALING TIME ADJUSTMENT



× **1, × 2, × 3, × 4.** The sealing time (and therefore the sealing strength) can be adjusted by pressing 1, 2, 3 or 4 times the button **SEAL**.

## 5.4 NOTIONS ON PUMP OIL AND THE PACKING TEMPERATURES OF THE PRODUCTS



**WARNING.** If the following simple and basic rules are complied with, the machine can be operated with no problems occurring in terms of the result (optimal product preservation, which lasts as long as possible) and in terms of pump duration and output. These rules are explained more precisely in the paragraphs below. It is important for the pump oil (specific for food vacuum applications and FDA certified) to always be kept in optimal conditions: fluid and clean, i.e. free from grit and watery parts.

In order to prevent any damage to the pump, the machine records the number of operated cycles and remind the user to change the oil, through a visual and acoustic signal, that automatically activate at each switch once the maximum vacuum cycles number has been exceeded. **The following suggestion must be followed:**

- 1) **The products to be vacuum packed must have been cooled to 3°C in a refrigerator or a blast chiller.**  
At this temperature:
  - Bacterial growth is blocked and optimal preservation duration and output is achieved.
  - The transfer of moisture in the form of water vapour, which is drawn by the pump and thereby causes oxidation of the internal surfaces, is minimised.
- 2) **Periodically check the oil level and perform an oil dehumidification cycle at least once a week (refer to Chapter 7.4.1).**
- 3) **The oil must be replaced according to the work load, however, at least every 6 months or every 100 operating hours.**
- 4) **The oil must be replaced before start-up if the machine is not used for more than a month.** In case an oil change were not possible, it's necessary to run a dehumidification cycle. Oxidation and liquid residue, which settle at the bottom of the pump oil tank when the machine is not used, are drained together with the spent oil.
- 5) **The temperature of the room where the machine is installed must possibly not be lower than 10°C, in order to prevent an excessive increase in oil density.** The more the oil is fluid the easier the pump starts-up when cold.



**WARNING .** In order to prevent any damage to the pump, the machine records the number of operated cycles and remind the user to change the oil, through a visual and acoustic signal, that automatically activate at each switch once the maximum vacuum cycles number allowed has been exceeded.

## 5.5 NOTIONS ON VACUUM BAGS

The bags used for vacuum preservation and/or cooking foodstuffs are characterized by an external nylon layer (barrier layer), which prevents the passage of oxygen from outside towards the inside of the bag, thus preserving the organoleptic properties of the packed food.

The bags suitable for the use described in this manual are:

- **STORAGE BAGS (in PA/PE):** the external barrier layer is made of nylon (Polyamide/PA) and the sealing layer (internal) is made of polyethylene (PE). They are smooth and opaque and normally have a thickness of 90 micron. They are suitable for storing and coming into contact with food. Orved S.p.A guarantees their compliance with the applicable legislation.



**They are not suitable for the vacuum cooking culinary technique.**

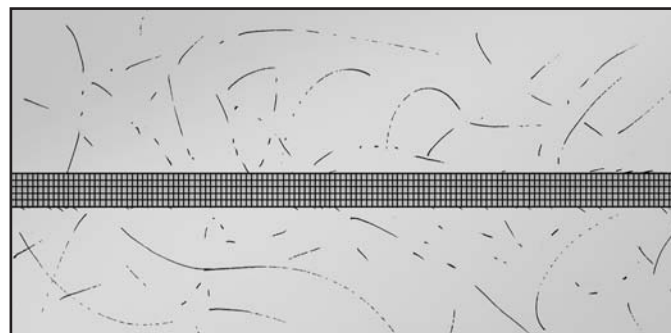
- **BAGS FOR COOKING (in OPA/PP):** they differ from the storage bags due to the sealing layer, which is in polypropylene. They are smooth and shiny and normally have a thickness of 75-85 micron. They are indicated for storage and above all for Sous-vide cooking.

With this technique, the maximum temperature reached is 100°C for some types of vegetables, while most foodstuffs are cooked at 60-65°C.

These bags are therefore suitable to resist temperatures up to 100°C.

The vacuum bags are indicated for packing products that cannot be easily crushed (meat, sliced meats, hard cheeses, legumes, etc...).

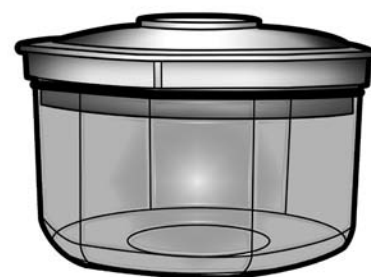
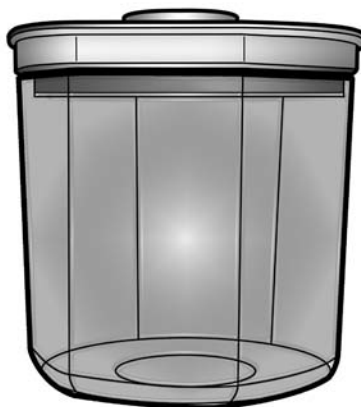
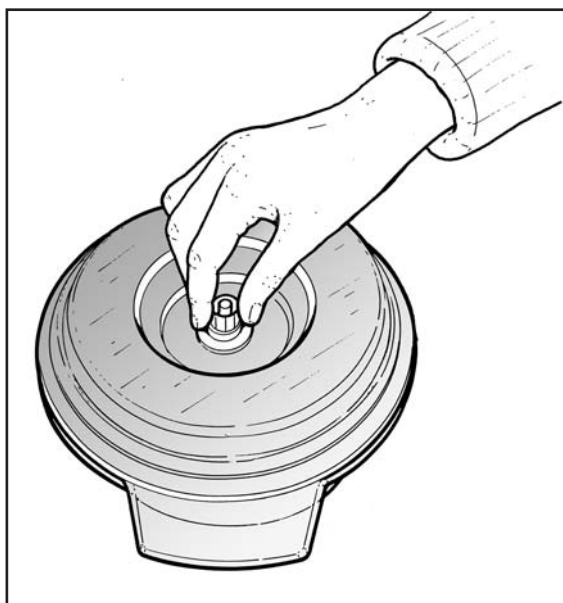
**Perfect sealing is essential, which is highlighted via a well-marked seam without burns.**



Example of an optimal sealing band

## 5.6 NOTIONS ON VACUUM CONTAINERS

- Transparent plastic (polycarbonate) vacuum containers are usually found on the market. These are designed for domestic use not for professional vacuum levels (i.e. equal to about 80% of the absolute volume). The lids of these containers have a valve through which the air is evacuated.
- These accessories are useful for preserving products that can be easily crushed and for the preservation of liquids. They are not used in the vacuum cooking technique.
- If, you have rigid steel or glass containers available that can resist a high vacuum level, as in the case of **EVOX 30**, a longer cycle can be set, which takes the vacuum inside the container near to zero.



## 5.7 NOTIONS ON STORAGE OF VACUUM PACKED FOODSTUFF

**Here are several fundamental rules to be respected for perfect results in the kitchen.**

Do not use the system to preserve products that are already altered or impoverished from a nutritional point of view, **lost quality cannot be recovered.**

Foodstuffs that are kept too long at room temperature or that have just been prepared or cooked, loose humidity and initial quality (colour, perfume, taste, etc..) and are more subject to bacterial contamination.

**It is therefore recommended to vacuum pack products that have been cooled in the fridge for a time sufficient to take them to 3°C.**

This important solution also helps to preserve the pump from oxidation.

- If bags are used to vacuum pack raw or cooked foods, remember to distribute them uniformly in order to make it easier for the air to escape. Do not fill them excessively as the hermetic sealing could be jeopardized.
- It is good practice to fill the bags up to 2/3 of their volume with the product to be packed.

- It is preferable that **vegetables and fruit** are dried after washing, in order to prevent the stagnation of liquids, which could make them flaccid.
- To preserve **meats** for a reasonably long time, remember to cool them in the fridge for at least 2 hours in order to slow down bacterial proliferation. Before vacuum packing, dry them to obtain a good percentage of absence of air. If the meat is on the bone, e.g. spare ribs, pork chops or other, cover it with aluminum foil to prevent the bag being ripped.
- Regarding **fish**, it must first be washed well, eliminate the scales, remove the entails and gills, dry it and as for meat, cool it well before vacuum packing. Preserve it in the fridge at a temperature that does not exceed +3°.
- For **hard cheeses**, such as Parmesan, Goat's milk cheese etc, do not have particular requirements, while soft cheeses must be wrapped in cellophane or preserved in the vacuum pack containers to prevent them being crushed.
- For **cold pork meats and salads**, if vacuum containers are used, no preparations are required. If they are to be packed in bags, dry them before carrying out the procedure.
- For **saucers**, proceed as follows: once prepared as usual, pack them in glass jars and then pasteurize them in a microwave for 12 minutes at maximum power. Place the container in water and ice to cool the sauce and then make the vacuum by pouring the product into the vacuum pack container.

### INDICATIVE PRESERVATION TIMES

The preservation times listed are purely indicative and depend on the initial quality of the product to be preserved, the temperature of preservation, cooling time in the case of cooked foods, the level of vacuum reached as well as the quality of the bag used for vacuum packing.

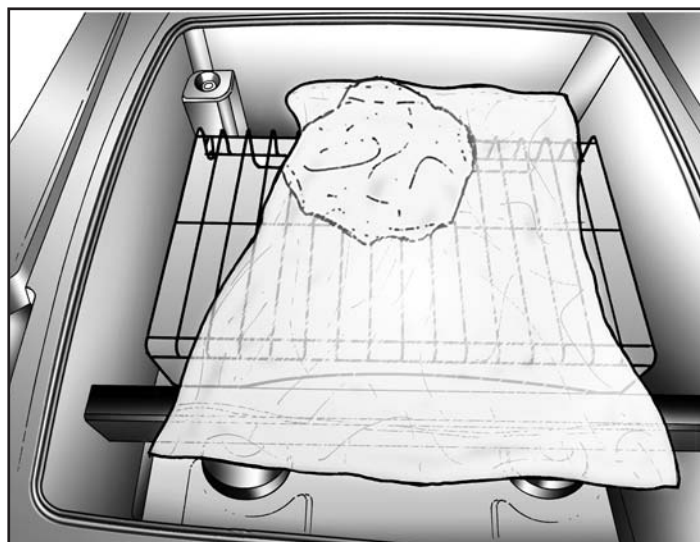
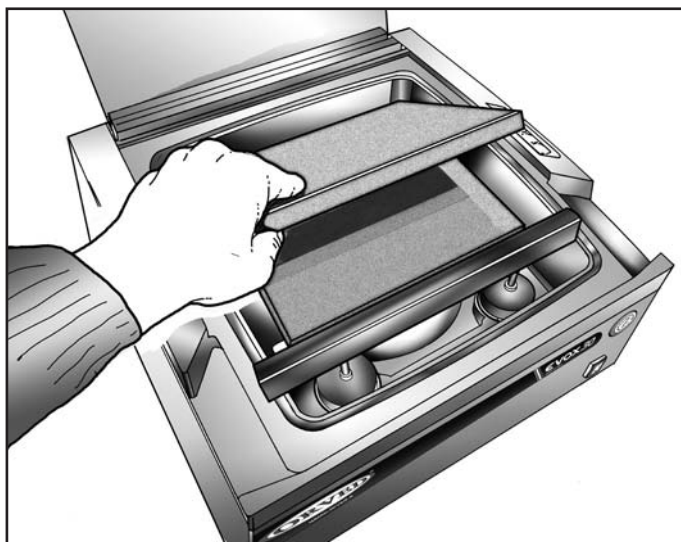
- **Fresh salads:** up to 12 days
- **Fresh cheeses:** up to 20 days
- **Fresh fish:** up to 7 days
- **Fresh meat:** up to 15 days



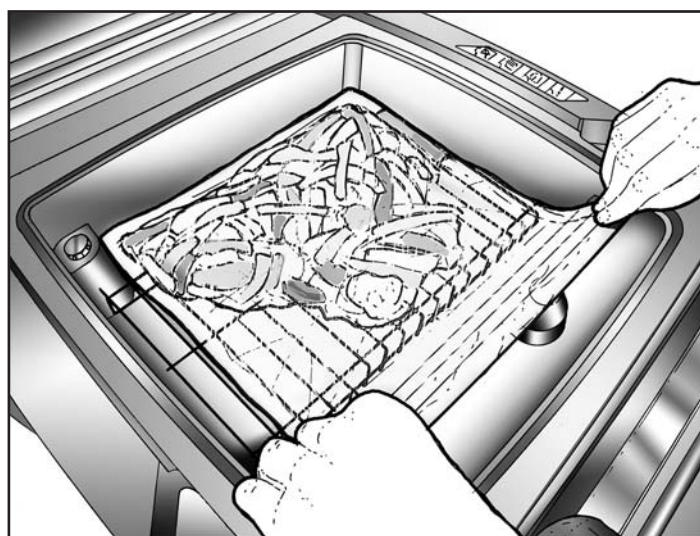
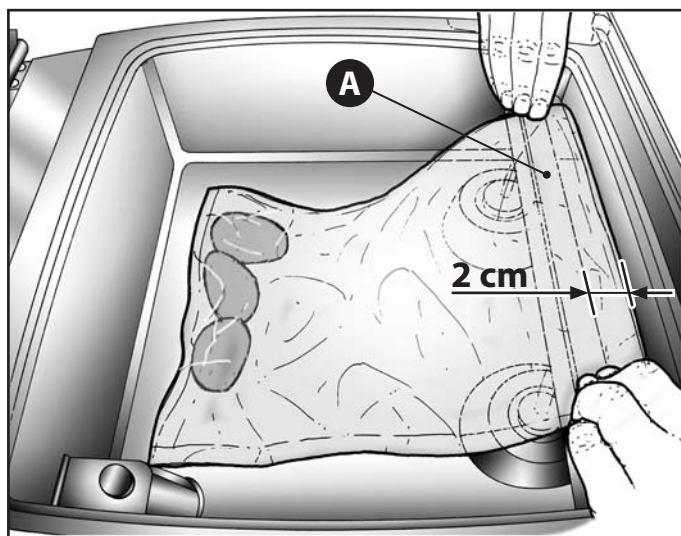
## 6. PREPARATION

### 6.1 VACUUM BAGS USE

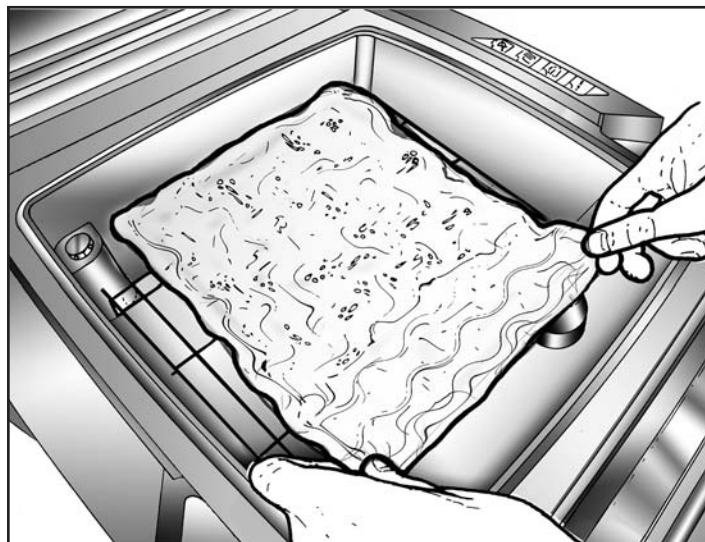
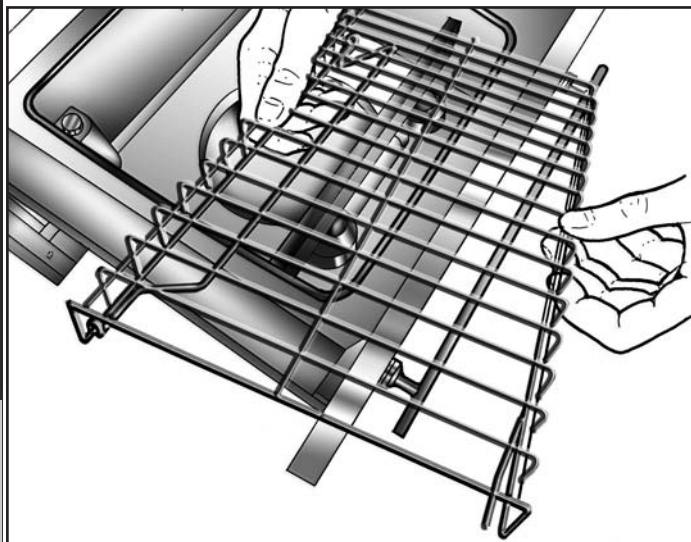
- 1) Vacuum sensor calibration: before using the machine for the first time, it's necessary to calibrate the vacuum sensor, complaining to the atmosphere pressure (depending on the altitude). To operate the calibration, switch on the machine keeping the **VAC** button pressed, release the button after 2 seconds and then close the lid. The machine will automatically start the calibration. The calibration procedure takes about 2 min. and end by air return in the vacuum chamber. The calibration needs to be repeated only in case the machine was moved to another place at a different altitude.
- 2) Choose the vacuum bag, according to the function (storage or coking) and to the product size (the product should not take more than 2/3 of bag usable volume).
- 3) Open the lid and ensure that the vacuum chamber and the product are both dry. When placing the food into the bag, be careful not to dirty or wet the inside of the bag near the opening, so as not to compromise the sealing function.
- 4) Place the PE fillers inside the chamber based on product size (**Fig. 1**); inserting the maximum number of fillers relative to the size of the bag will save time during the preparation cycle, by reducing the amount of air needed to be sucked.
- 5) If the "bag support grill" option is available, and depending on the size of the product, place the bag on this support for smaller sealed bags, or place the bag on horizontal side in the case of larger bags (**Fig. 2**).



- 6) Place the vacuum bag containing the product onto the grill, in a central position onto the sealing bar **A**, so that the open side must overpass at least **2 cm** the sealing bar.

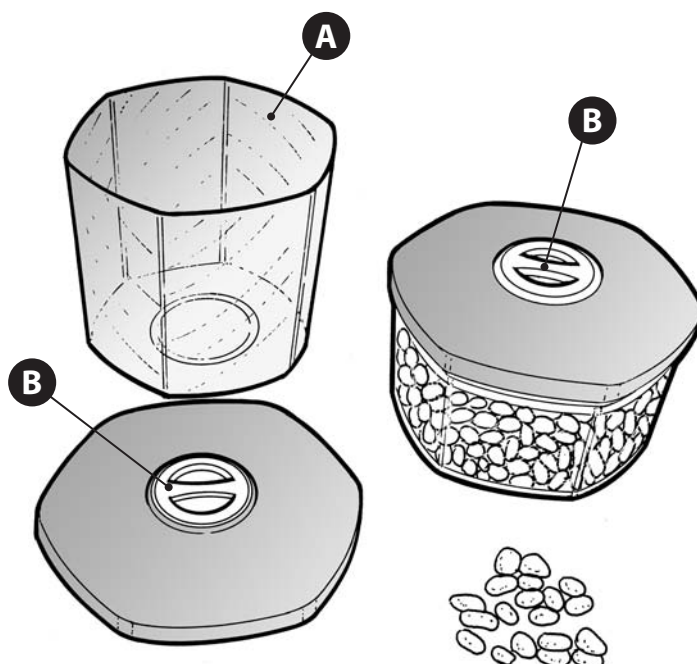
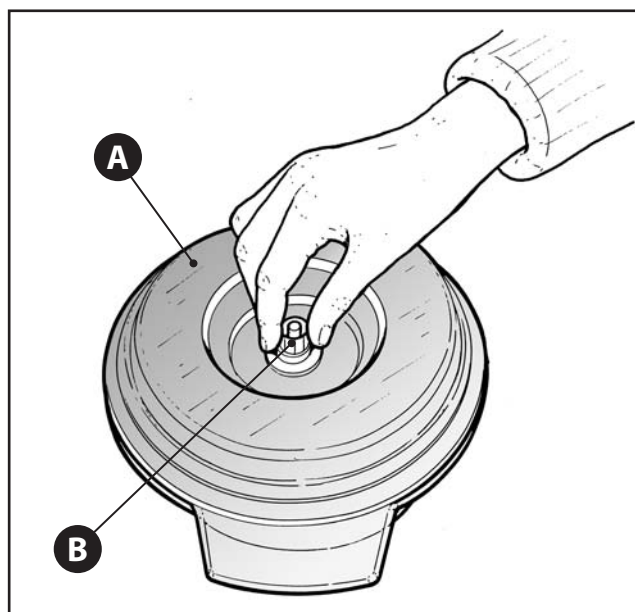


- 7) When preparing liquid products, be careful **not to fill the bag up to more than half of its total volume**; place the bag support grill into the container by tilting and pushing down the bracket at the back. Place the bag containing the liquid on the tilted grill so that the liquid will remain at the bottom of the bag.
- 8) Close the machine lid.



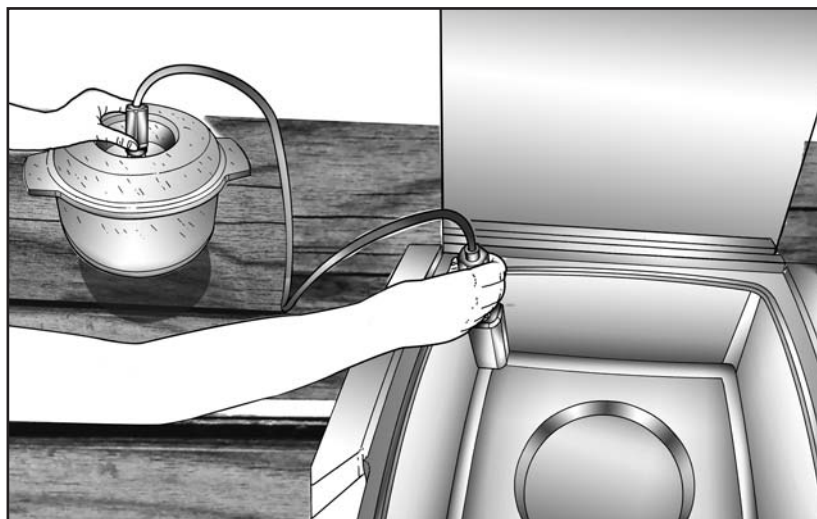
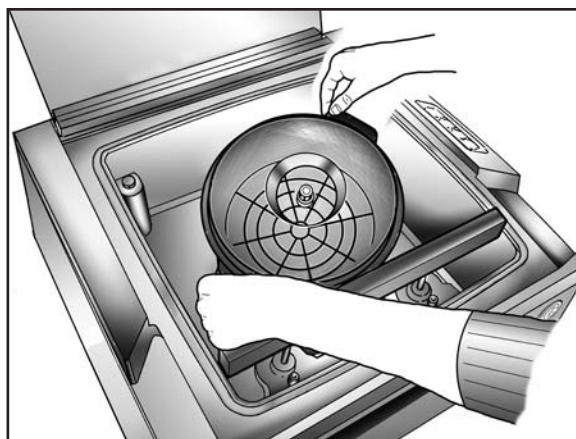
## 6.2 VACUUM CONTAINER USE

- 1) Before using the machine for the first time, it's necessary to calibrate the vacuum sensor, complaining to the atmosphere pressure (depending on the altitude). To operate the calibration, switch on the machine on keeping the **VAC** button pressed, release the button after 2 seconds and then close the lid. The machine will automatically start the calibration. The calibration procedure takes about 2 min. and end by air return in the vacuum chamber. The calibration needs to be repeated only in case the machine was moved to another place at a different altitude.
- 2) Lid valves need to be open in order to allow vacuum creation inside the container: prepare a container or a vacuum lid **A** with the open valve **B**, in order to allow vacuum creation inside the container.





- 3) Fill the container with the product to be vacuumed to max  $\frac{3}{4}$  of usable volume, in case of liquid products.
- 4) Place the container inside or outside the vacuum chamber, according to the size. If outside, suction device is necessary.

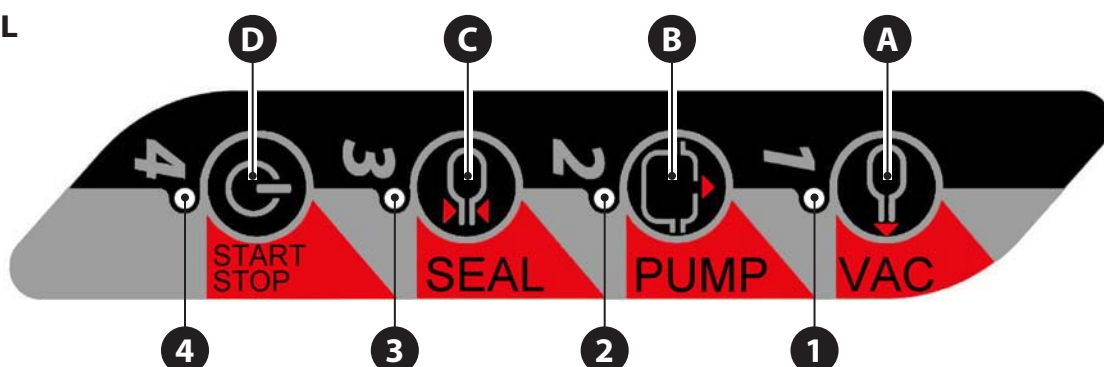


## 7. OPERATION

### 7.1 COMMAND PANEL

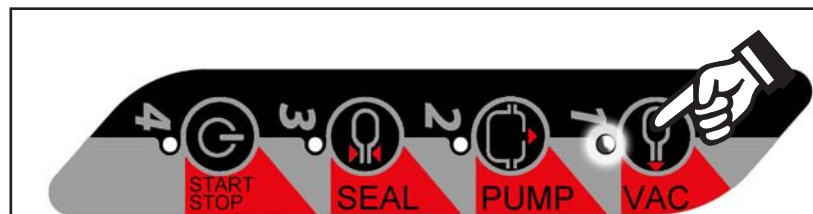
A-D: Keys

1-4: LED



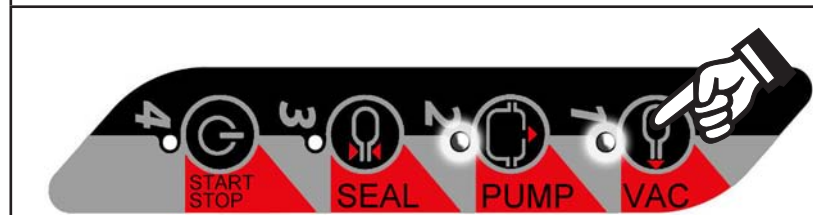
**A – VAC. Start key to operate vacuum in bags.** It allows to start the vacuum cycle in bags according to “storage” and “cooking” functions (pay attention to § 5.3.1).

**Vacuum cycle in bags selections according to “storage” and “cooking” functions:** at the power, the machine is set on “storage cycle”. Pressing **VAC** key once, the “cooking cycle”, is activated. It is identified by LED **1** and **2** on. Pressing **VAC** key once more, the machine comes back to “storage cycle”, identified by LED **1** on.



**LED 1 ON  
(FACTORY SETTING):**

Vacuum cycle in bags: “storage” function.

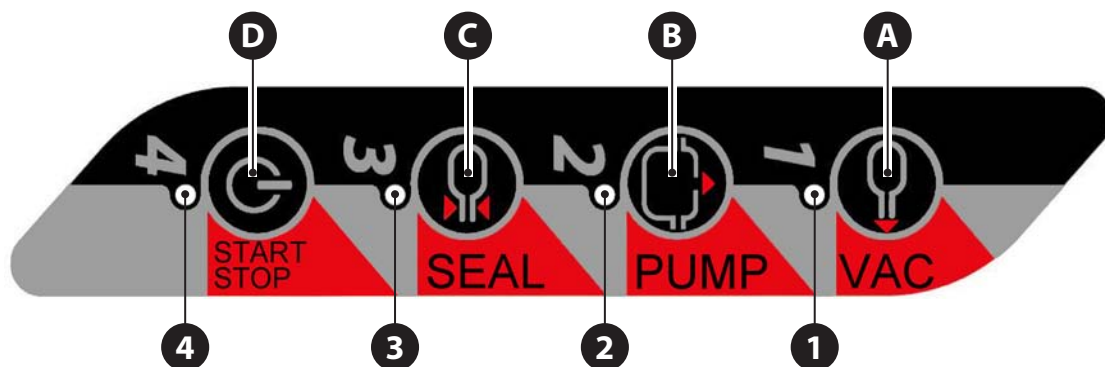


**LED 1 + 2 ON:**

Vacuum cycle in bags: “cooking” function.

#### Other functions of VAC key:

- Keeping it pressed for 5 seconds, the pump dehumidification cycle is activated. All LED flash.
- Pressed at power moment, allows activating the vacuum sensor calibration.



**B – PUMP. Containers and external channeled bags vacuum cycle start key.**

It allows activating the vacuum cycle in containers or channeled bags placed outside the vacuum chamber (LED **2** on).

**Vacuum in containers:** once the required vacuum level has been reached the cycle ending press **STOP** key.

**Vacuum in channeled bags (outside the chamber):** pressing the **SEAL** key, the cycle ends with bag sealing.



**C – SEAL. Sealing button.** It allows to adjust the sealing time, to activate the sealing in case of Vacuum in channeled bags outside the chamber and to anticipate the sealing moment compared the standard cycle duration (to obtain a partial vacuum).

**Welding adjustment:** each time **SEAL** key is pressed, corresponds to the lighting of a LED, up to four maximum, corresponding to the usable different sealing times. The sealing time needs to be adjusted according to the thickness and materials used to manufacture the vacuum bag.

	<p><b>LED 1 + 2 ON:</b> <b>(FACTORY SETTING):</b> PA/PE storage vacuum bags, 90 micron thickness.</p>
	<p><b>LED 1 + 2 + 3 ON:</b> PA/PE storage vacuum bags, 100 micron thickness. OPA/PP cooking bags, 60-80 micron thickness.</p>
	<p><b>LED 1 + 2 + 3 + 4 ON:</b> PA/PE storage vacuum bags, 140 micron thickness.</p>
	<p><b>LED 1 ON:</b> PA/PE storage vacuum bags, 60-70 micron thickness.</p>



**D – START/STOP. Cycle start and stop key.** Allow to start the vacuum cycle or to stop it proceeding to the immediate air return in the vacuum chamber.



## 7.2 FACTORY SETTINGS

**EVOX 30** is provided with the following factory settings:

	<p><b>VACUUM:</b> storage vacuum cycle (led <b>1</b> ON).</p>
	<p><b>SEALING:</b> sealing time suitable for storage vacuum bags, 90 micron thickness (led <b>1</b> + <b>2</b> ON).</p>

In case the Vacuum and Seal parameters are not modified, the machine will work as per the above mentioned values.

To change vacuum level or sealing time, proceed as per § 7.1.

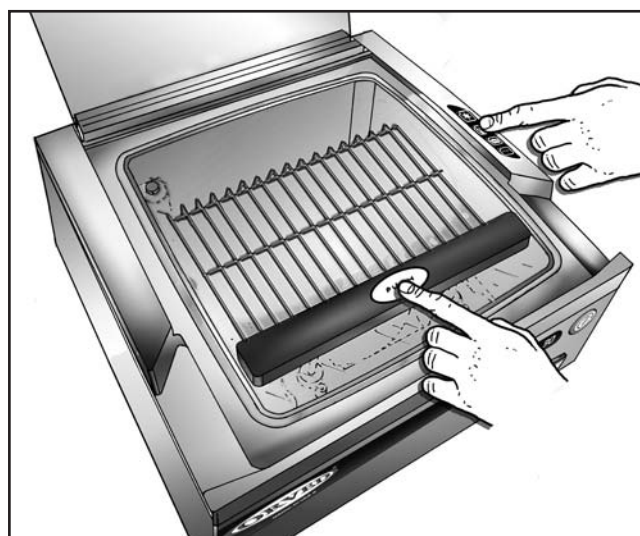
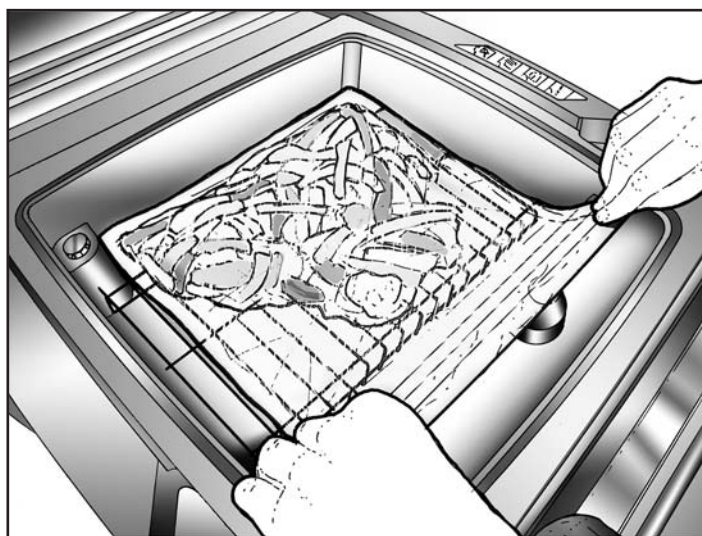
## 7.3 OPERATION: VACUUM USING BAGS / VACUUM USING CONTAINERS

### 7.3.1 CREATING VACUUM IN VACUUM BAGS

- 1) Switch the machine on using the switch placed on the front right of the machine body.
- 2) In case of first use, run the vacuum sensor calibration as described at § 6.1.
- 3) Once the pack has been prepared inside the vacuum chamber as described in the "PREPARATION" (cap.6), press **START** key and close the lid exerting a slight pressure on the front.
- 4) Once the vacuum cycle ended, and the vacuum chamber has been decompressed, it's possible to open the lid and take the sealed bag out. Verify the sealing quality and the lack of air bubbles inside the bag.

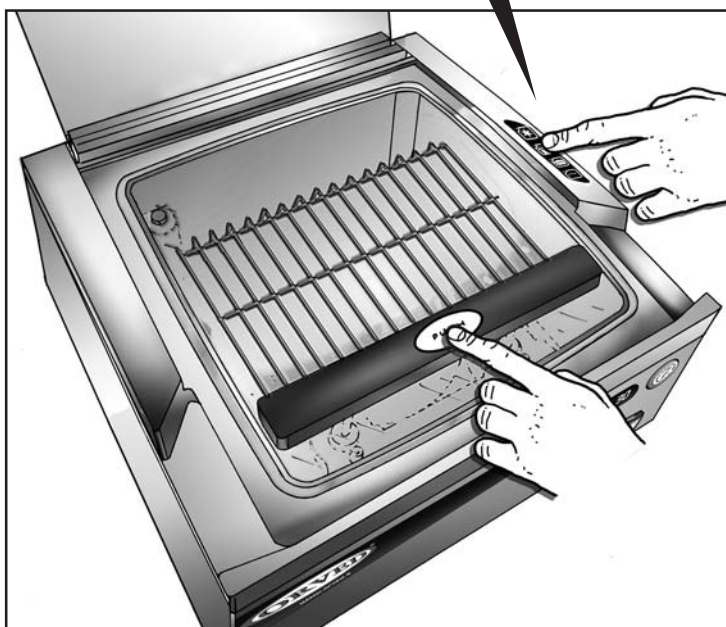
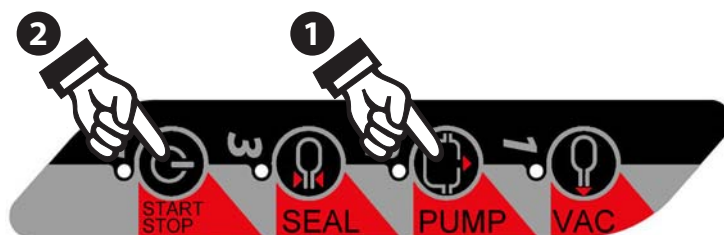
After the cycle ending an acoustic signal advice that the machine is ready for a new vacuum cycle.

	<p><b>Pressing SEAL key, during the vacuum cycle, the machine switches immediately to the sealing.</b></p> <p><b>The vacuum cycle can be interrupted before the end, pressing STOP key. The machine interrupts the cycle and the vacuum chamber is decompressed.</b></p>
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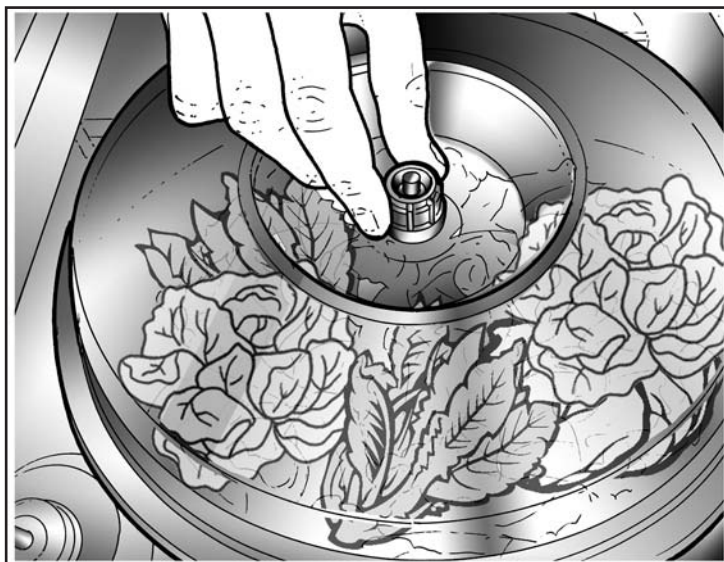
### 7.3.2 CREATING VACUUM IN VACUUM CONTAINERS (CONTAINER INSIDE THE VACUUM CHAMBER)

- 1) Switch the machine on using the switch placed on the front right of the machine body.
- 2) In case of first use, run the vacuum sensor calibration as described at § 6.1.
- 3) Put the container inside the vacuum chamber as described in the "PREPARATION".
- 4) Press **PUMP** key.
- 5) Start the vacuum cycle by pressing the **START** key and close the lid exerting a slight pressure on the front.



- 6) Once the required vacuum level (detectable through the vacuum gauge) has been reached press **STOP** key
- 7) Take the container out from the vacuum chamber and close the valve on the lid, in order to avoid any air return on the container.  
Verify the cover seal.

After the cycle ending an acoustic signal advice that the machine is ready for a new vacuum cycle.

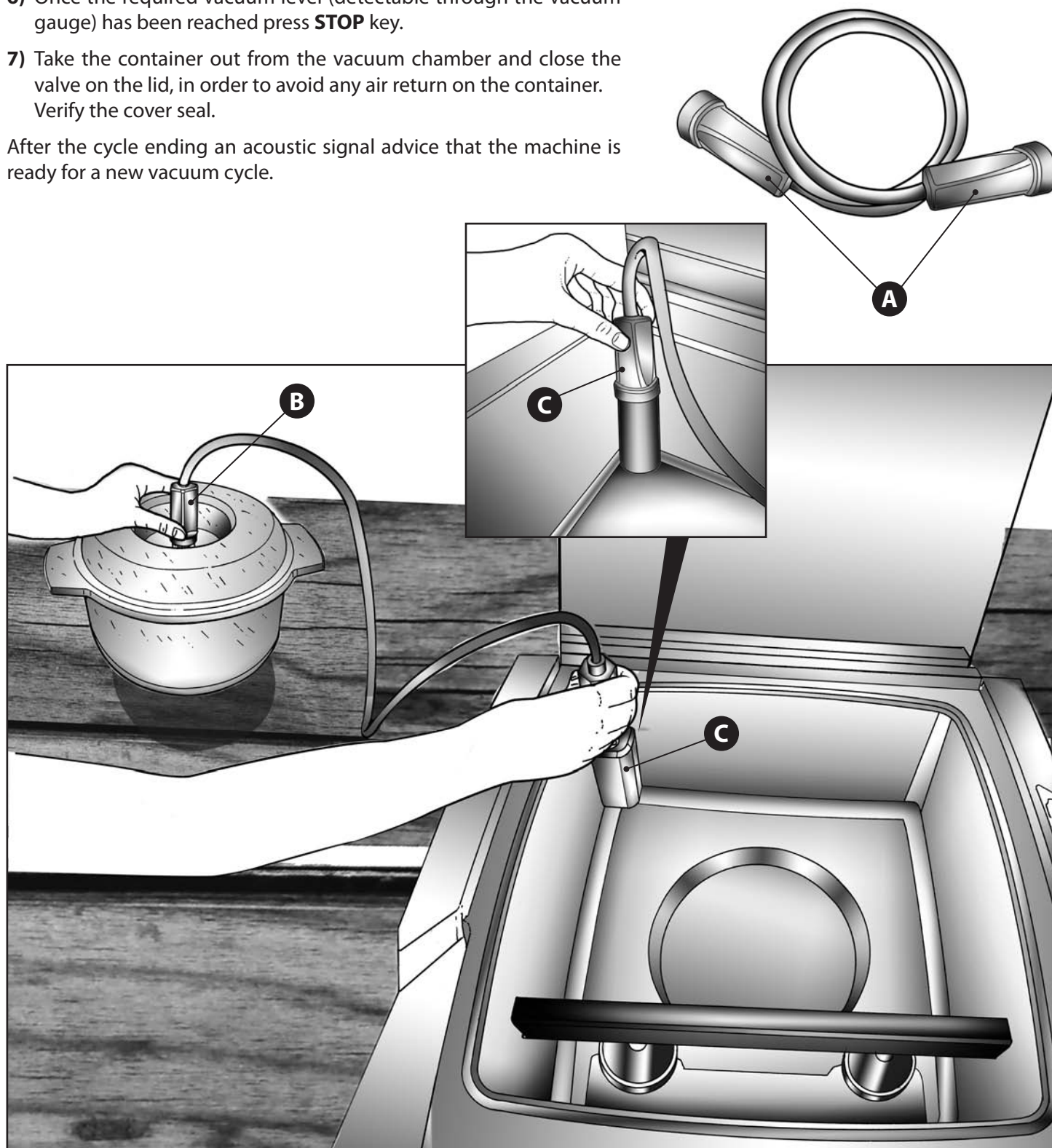




### 7.3.3 CREATING VACUUM IN VACUUM CONTAINERS (CONTAINER OUTSIDE THE VACUUM CHAMBER)

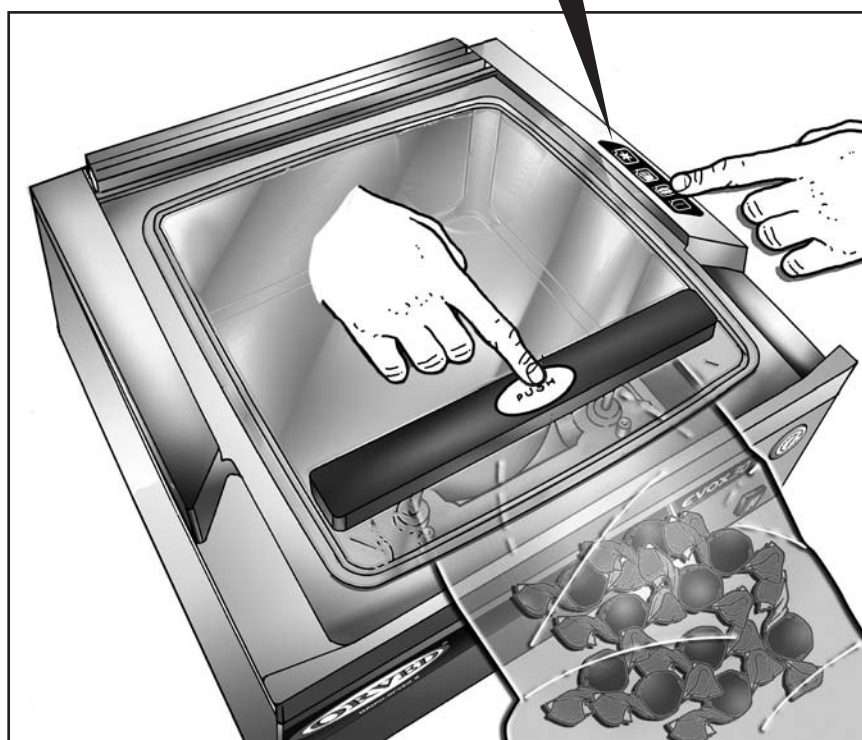
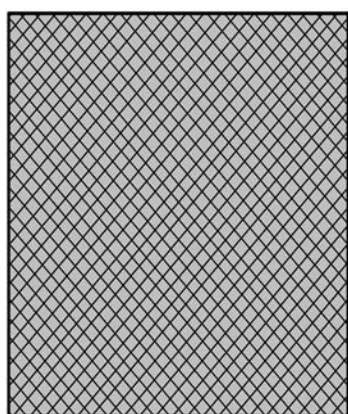
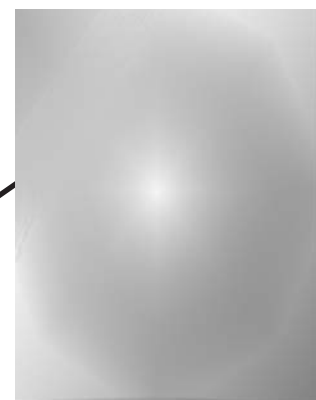
- 1) Switch the machine on using the switch placed on the front right of the machine body.
- 2) In case of first use, run the vacuum sensor calibration as described at § 5.8-5.9.
- 3) Place the container close to the packing machine on a flat, stable place.
- 4) Press **PUMP** key, then **START** to start the vacuum cycle.
- 5) Simultaneously press the two suction devices **A**, on container lid **B** and on the suction point of vacuum chamber **C**.
- 6) Once the required vacuum level (detectable through the vacuum gauge) has been reached press **STOP** key.
- 7) Take the container out from the vacuum chamber and close the valve on the lid, in order to avoid any air return on the container. Verify the cover seal.

After the cycle ending an acoustic signal advice that the machine is ready for a new vacuum cycle.



### 7.3.4 CREATING VACUUM IN CHANNELED BAGS OUTSIDE THE VACUUM CHAMBER

- 1) Switch the machine on using the switch placed on the front right of the machine body.
- 2) In case of first use, run the vacuum sensor calibration as described at § 6.1.
- 3) Place the channeled bag containing the product outside the vacuum chamber on frontal side, with the smooth side in upper position and channeled one in downer position. The open side must overpass at least **2 cm** the sealing bar.



- 4) Press **PUMP** key, then **START** to start the vacuum cycle.
- 5) Close the lid exerting a slight pressure on the front.
- 6) Once the required vacuum level (detectable through the vacuum gauge) has been reached press **SEAL** key. Verify the sealing quality and the lack of air bubbles inside the bag.

After the cycle ending an acoustic signal advice that the machine is ready for a new vacuum cycle.

## 7.4 OTHER FUNCTION AND ALARM SIGNAL

### 7.4.1 AUTOMATIC PUMP DEHUMIDIFICATION CYCLE

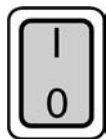


× 5 Sec.

It activates keeping the **VAC** key pressed for 5 seconds. It allows to pull out the steam that forms inside the pump due to the machine use. The duration is 20 minutes.

It is recommended to run it at least once a week, after a machine long inactivity and any time the pump has to work hard (vacuum of liquid or not really cold products).

### 7.4.2 VACUUM SENSOR CALIBRATION

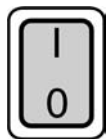


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In order to adjust the sensor to the altitude detection, at the first use and any time the machine is moved from a place to another at a different altitude, it's necessary to operate the vacuum sensor calibration. To do it, it's necessary to keep the **VAC** key pressed while turning the machine on, after 2 seconds release the **VAC** Key and close the lid.

### 7.4.3 ACTIVATION/ DEACTIVATION OF ACOUSTIC SIGNAL



+



Keep the **STOP** key pressed while turning the machine on; after 2 seconds release the **STOP** key.

### 7.4.4 RECALL FROM LOW CONSUMPTION

Press any key. The vacuum packing machine turns from the low consumption (intermittent LED flash) to the Stand-by status (ready to be used).

### 7.4.5 TEMPORARY BLACK-OUT

In case a temporary black-out occurs during a vacuum cycle, as soon as the power supply is restored, the vacuum chamber is decompressed, the machine is on and comes back to the factory settings of vacuum and sealing.

### 7.4.6 INSUFFICIENT VACUUM ALERT

In case the minimum 500 millibar vacuum cannot be reached in 30 seconds, the vacuum packing machine stops the cycle. All LED flash together with an acoustic signal.

### 7.4.7 OIL CHANGE ALARM

In order to avoid any damage to the pump, the machine records all the run cycles and help the user to remember when it's time to change the oil through a visual and acoustic signal that activates every time the machine is turned on (once the number of allowed vacuum cycles has been exceeded).

The technician will proceed to the oil change and to reset the alarm.



## 8. REGULAR MAINTENANCE

Implementing the scheduled maintenance regularly, as described further on in this manual, minimizes and/or eliminates potential faults and interference and increases the machine lifetime significantly.

Failure to perform regular maintenance can lead to significant repair costs, and in certain cases, render the guarantee null and void.

Furthermore, a good standard of hygiene is maintained if that indicated is complied with.

### 8.1 BASIC SAFETY STANDARDS FOR MACHINE MAINTENANCE

The information and instructions given in this chapter are destined for all staff operating on the machine: the user and the maintenance technician.



#### ATTENTION!

**Do not try to repair or modify any part of the appliance: as well as making the warrant null and void, it can be potentially dangerous. Entrust specialized technicians only.**

#### 8.1.1 ELEMENTARY SAFETY STANDARDS

To carry out cleaning and routine maintenance operations in safety, follow the regulations given below:

- Disconnect the machine from the power supply mains without pulling the power supply cable;
- Do not touch the machine with bare, humid or wet hands or feet;
- Do not insert screwdrivers, kitchen instruments or other between the guards and moving parts.



**DANGER! It is prohibited to remove the guards and safety devices in order to carry out routine maintenance operations. The Manufacturer declines all liability for accidents caused due to the failure to comply with the above-mentioned obligation.**

**ATTENTION! Do not scrape the surfaces with pointed or abrasive objects!**

**ATTENTION! For any maintenance, handling, installation and cleaning operations on the appliance, always use relevant prevention and protection devices (gloves etc.).**

#### 8.1.2 EXTERNAL SURFACES CLEANING

##### MACHINE BODY

The stainless steel external surfaces of **EVOX 30** must be cleaned using a soft cloth or sponge with neutral detergent following the direction of the satin finish.

It is recommended not to use stainless steel scrubbers, scrapers or abrasive, acid or aggressive substances, which could damage the stainless steel surface irreparably.

After cleaning, it is recommended to protect the external surfaces with specific oil-based products for stainless steel.



#### ATTENTION!

**Do not remove the serial number plates during cleaning. These supply important information regarding the machine for the technical after-sales service.**

### 8.1.3 VACUUM CHAMBER CLEANING (Fig. 1)



#### ATTENTION!

**Remove the electric power supply before intervening for maintenance.**

In order to guarantee hygiene and protect the quality of the food products packed, the inside of the vacuum chamber must be cleaned after every use.

The chamber conformation allows quick cleaning.

The use of a soft cloth or non-abrasive sponge and a neutral detergent or alcohol-based disinfectant is recommended.

### 8.1.4 TEMPERED GLASS LID CLEANING (Fig. 2)



#### ATTENTION!

**Remove the electric power supply before intervening for maintenance.**

In the same way, it is recommended to clean the glass lid after use.

The use of a soft cloth or non-abrasive sponge soaked in drinking water or specific products for cleaning glass is recommended.

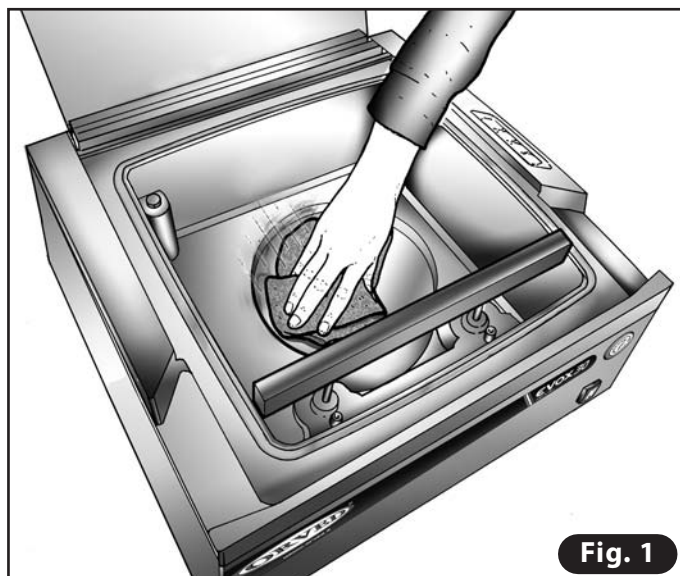


Fig. 1

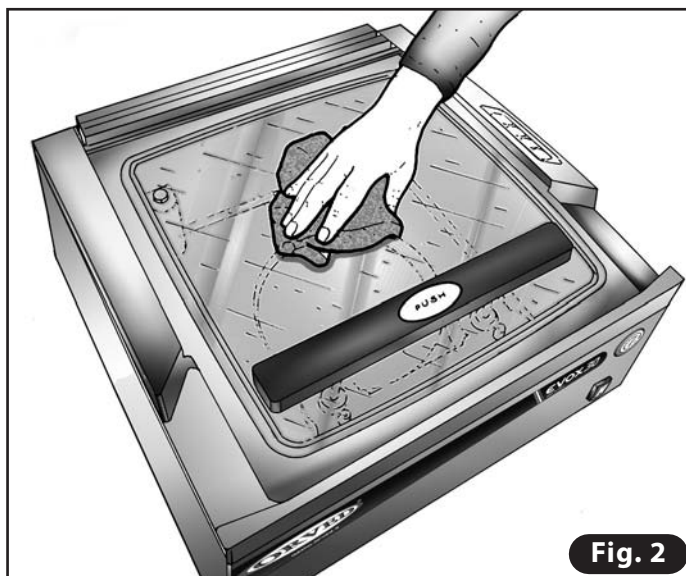


Fig. 2

### 8.1.5 SEALING BAR CLEANING (Fig. 3)



#### ATTENTION!

**Remove the electric power supply before intervening for maintenance.**

It is recommended to clean the sealing bar every month in a way to remove any residues that could cause deterioration of the bag sealing quality.

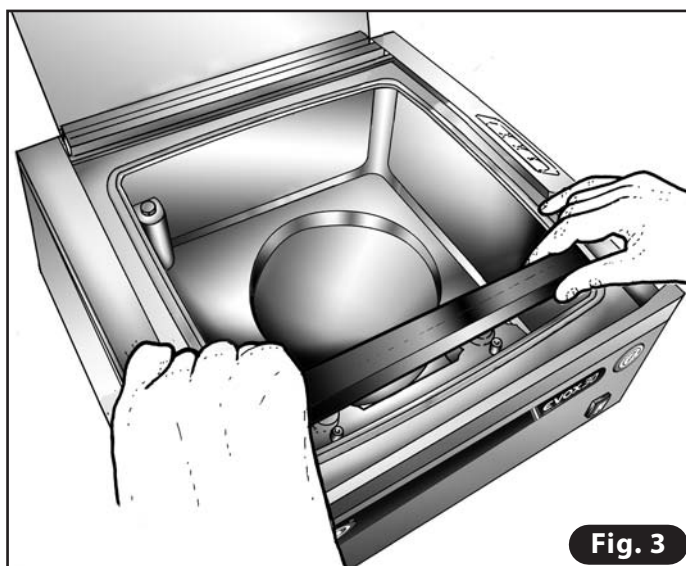


Fig. 3

To make the operation easier, lift the sealing bar upwards **A** extracting it from the two pins **B**.

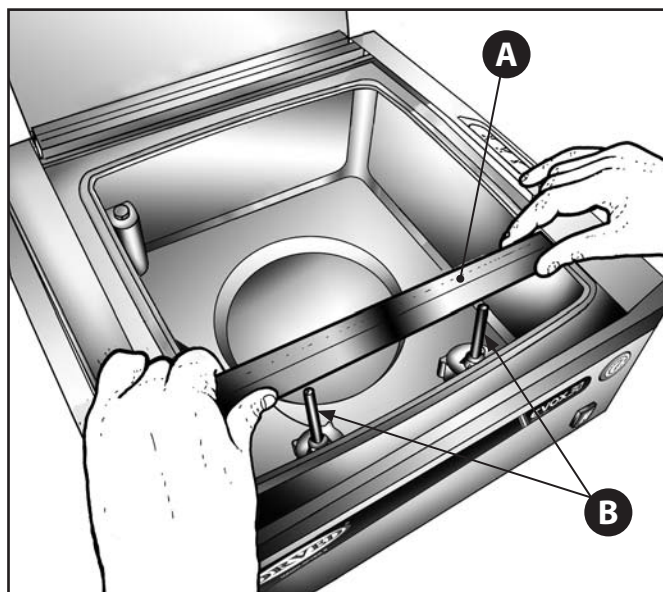
The use of a soft cloth or non-abrasive sponge and a neutral detergent or alcohol-based disinfectant is recommended.

Finally, install the bar on the two pins **B** centering the two holes on the lower part of the bar and check correct engagement.



**ATTENTION: do not remove the black Teflon strip!**

**Do not use scrapers or abrasive tools!**



### 8.1.6 OIL PUMP DEHUMIDIFICATION

The core of the machine is the vacuum pump. Carry out the following instructions to preserve the inside surfaces of the pump from oxidation, which blocks the rotor due to oxidized residue, which occurs when the steam, sucked in together with air, condenses and remains inside the pump body for a long time:

- 1) Always pack the product while it is cold, possibly at 3-4°C. The hotter the product is, the less it lasts and the more condensation is formed inside the pump, thereby oxidizing and damaging it.
- 2) If the device is used only every now and then, before packing the products, carry out a vacuum chamber machine heating cycle, pressing **PUMP** key. 3-4 minutes later, interrupt the cycle pressing **STOP** key. This allows the temperature of the pump oil to be brought to a steady level and to evacuate the steam.
- 3) We recommend carrying out the dehumidification cycle of the pump oil once a week (§ 7.4.1).

### 8.1.7 PERIODS OF INACTIVITY

If the machine is to remain at a standstill for a long period of time, clean the inside and outside thoroughly and protect the external surfaces with specific oil-based products for stainless steel.



**ATTENTION! Disconnect the plug until further use.**

**ATTENTION! Before new use, control the integrity of the machine and clean EVOX 30 carefully**

When re-starting, carry out an automatic dehumidifying cycle of the pump oil pressing the "**VAC**" key for 5 seconds. The cycle lasts 20 minutes. (§ 7.4.1).

### 8.1.8 MALFUNCTIONING



**ATTENTION! In the case of malfunctioning, before calling the Dealer to request after-sales assistance, check the perfect insertion of the power supply cable and make sure electricity is present.**

Moreover, check that the lid gasket is well inserted and that the sealing bar is correctly engaged on the two pins.

If, after having carried out the suggested controls, EVOX 30 still does not work, disconnect the machine from the mains and call the Dealer or authorized after-sales centre, communicating the machine serial number.

**ATTENTION! Do not try to repair or modify any part of the appliance: as well as making the warrant null and void, it can be potentially dangerous. Entrust specialized technicians only.**

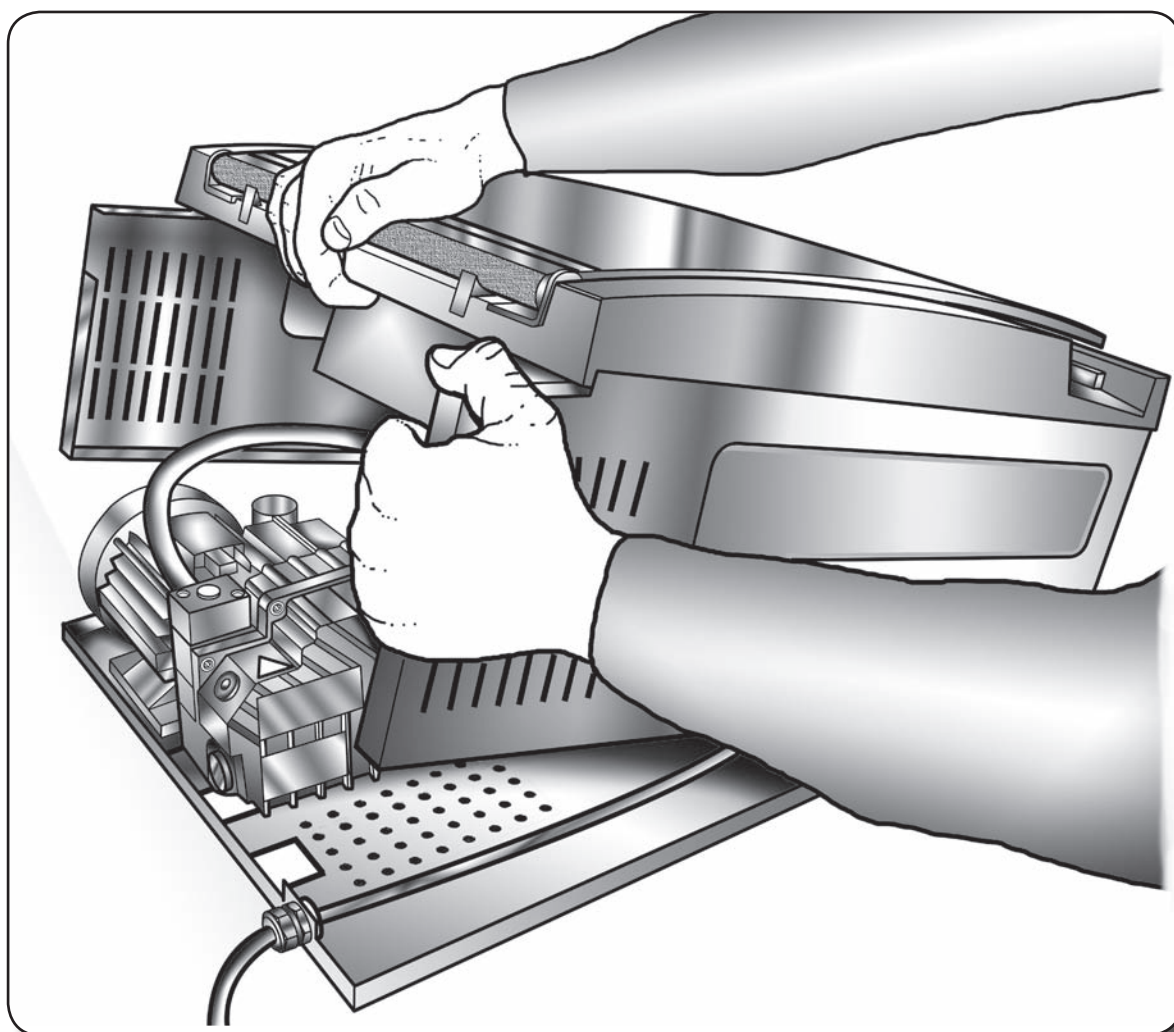


## 8.2 SCHEDULED ROUTINE MAINTENANCE

FREQUENCY	MACHINE PART	INTERVENTION
<b>Before each start-up</b>	Pump	Check the level and colour of the oil; top-up or replace, if the colour is too dark or whitish.
	Power cable	Verify its integrity; replace if defective (contact a specialised after-sales centre).
	Lid	Verify its integrity; if there are any cracks or streaks, contact the after-sales centre to replace the lid.
	Silicone counterpart bar and lid gasket	Replace if defective or worn.
	Machine and Vacuum chamber	Clean impurities, oil and grease.
	Sealing bar connection	Check that it is inserted well on to the two contact pins.
<b>Weekly</b>	Sealing bar	Clean the upper part with a damp cloth. Clean the two contact pins.
	Pump	Run the pump oil dehumidification cycle.
	Machine, vacuum chamber, lid and panels	Disinfect
<b>Every 5000 work cycles</b>	Appliances with 8 m <sup>3</sup> /h	Replace the pump oil (contact a specialised after-sales centre).
<b>Every 5000 work cycles</b>	Appliances with 12 m <sup>3</sup> /h	
<b>Every other oil change</b>	Pump.	Replace the pump purifier filter (contact a specialised after-sales centre).
<b>Every 6 months and after having been idle for a long time</b>	Pump.	Replace the pump oil (contact a specialised after-sales centre).
<b>Yearly</b>	Lid hinges	Lubricate the pins with suitable grease that is certified for food use (contact a specialised after-sales centre).

## 8.3 TROUBLESHOOTING GUIDE

FUNCTIONAL ANOMALY	POSSIBLE CAUSES	SOLUTION
All 4 LED flash, together with an intermittent sound signal	<ul style="list-style-type: none"> <li>Insufficient vacuum in the chamber.</li> </ul>	<ul style="list-style-type: none"> <li>Not pressed lid before the cycle start.</li> <li>Wrongly positioned container lid</li> <li>Wrongly positioned or worn lid gasket</li> <li>Technician intervention to check the air circuit, the board sensor and the vacuum pump.</li> <li>Technician intervention to check the solenoid valves correct work.</li> <li>Vacuum pump in thermal protection: turn the machine off and wait 15 minutes.</li> </ul>
The vacuum cycle starts (LED flash) but the pump doesn't start working.	<ul style="list-style-type: none"> <li>Intervention of thermal overheating protection.</li> </ul>	<ul style="list-style-type: none"> <li>Turn the machine off and wait 15 minutes before turning it on again.</li> </ul>
The machine doesn't turn on	<ul style="list-style-type: none"> <li>Lack of power supply.</li> </ul>	<ul style="list-style-type: none"> <li>Check the electric connection.</li> </ul>
Insufficient vacuum into the bag	<ul style="list-style-type: none"> <li>Irregular sealing</li> <li>Irregular weld bead</li> <li>Dirty or broken bag.</li> <li>Insufficient sealing.</li> <li>Bag size not suitable for product size.</li> <li>Pump insufficient efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>Place the bag correctly.</li> <li>Check Teflon cover status. Technician intervention to replace Teflon cover and checks the sealing wire.</li> <li>Change the bag.</li> <li>Choose a bag where the product didn't exceed the 2/3 of bag volume.</li> <li>Technician intervention to check the pump status.</li> </ul>
The machine doesn't seal the bags.	<ul style="list-style-type: none"> <li>Dirty contacts.</li> <li>Broken sealing wire.</li> <li>Lack of power supply.</li> <li>3-way solenoid valve blocked or dirty.</li> </ul>	<ul style="list-style-type: none"> <li>Remove the sealing bar from the two pins and clean the two contact holes with a brush.</li> <li>Technician intervention to replace it.</li> <li>Technician intervention to check the wiring and power board.</li> <li>Technician intervention to replace it.</li> </ul>
On switch-on, all luminous indicators on the control panel flash for 3 seconds and an acoustic signal is heard (long beep).	<ul style="list-style-type: none"> <li>Warning that oil change is required as 5000 functioning cycles have been performed.</li> </ul>	<ul style="list-style-type: none"> <li>Intervention of a technician to replace the pump oil.</li> </ul>



# Installer

## 9. INSTALLATION INSTRUCTIONS

### 9.1 FOREWORDS



**ATTENTION!** Installation must be carried out exclusively by authorized and specialized staff, respecting the instructions and the prescriptions in this manual.

- Before installing the machine, make sure that any pre-existing electric plants are in compliance with the Law and suitable for the plate data of the machine to be installed (V, kW, Hz, N° of phases and power available).
- The installer must also check any prescriptions on the subject of fire-prevention.
- The Manufacturer declares compliance with the European Standards in force

### 9.2 WARNING FOR INSTALLER

This manual is an integral part of the product and supplies all indications necessary for correct installation and maintenance of the machine.



**ATTENTION!** It is mandatory for the user and installer to read this manual carefully and always make reference to it. Moreover, it must be kept in place that is known and accessible to the authorized operators (installer, user, maintenance technician).

The machine is only intended for the use for which it was designed, i.e. for vacuum packing foodstuffs. All other use must be considered improper and potentially dangerous.

The manufacturer declines any liability and all warranty obligations, whenever damage/injury occurs to persons, the machine and objects that can be blamed on:

- Incorrect installation and/or that is not in compliance with the laws in force,
- Modifications or interventions that are not specific for the model,
- Use of non-original spare parts or those are not specific for the model,
- Failure to comply, even partial, with the instructions in this manual,
- Failure to comply with Accident-prevention Standards and the Laws in force during installation.

### 9.3 BASIC SAFETY STANDARDS

The main Safety Standards regarding installation are given below:

- Do not touch the machine with humid, wet or unprotected hands/feet (suitable gloves and shoes);
- Do not insert screwdrivers, kitchen instruments or other between the guards and moving parts;
- **Operate after having disconnected the machine (do not pull the power supply cable).**
- For any maintenance, handling, installation and cleaning operations on the machine, always use relevant prevention and protection devices (gloves etc.).

### 9.4 TRANSPORT AND HANDLING

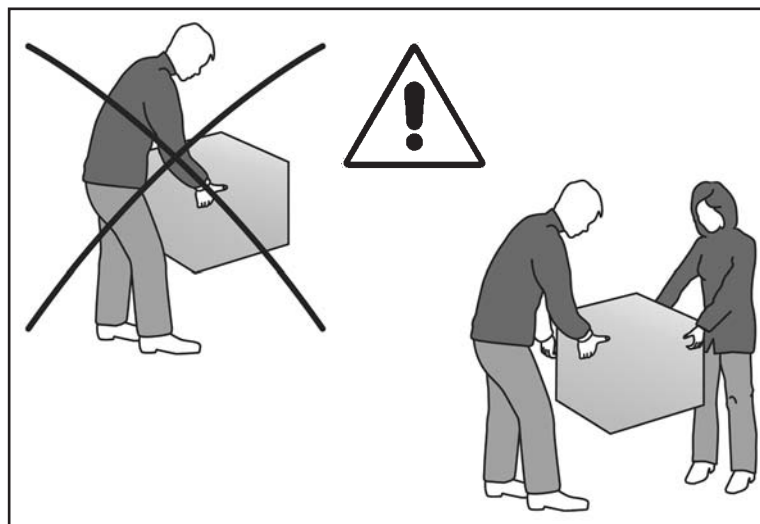
The loading and unloading of the machine from the means of transport can be performed using suitable means or by two persons.



**ATTENTION!**

**The vacuum pump contains oil. Always keep the packaging and the machine in a horizontal position to prevent the oil leaking from the pump vent.**

**All necessary precautions must be adopted when handling the machine in order not to damage it, or cause injury/damage to persons or objects, respecting the indications positioned on the packaging.**



## 10. INSTALLATION

Operate following the instructions from 1 to 9:

- 1) **Verify the working conditions: room temperature and air change.** The room temperature of working place must be between 10°C to 35°C. In the working place, a suitable air change must be ensured.
- 2) **Machine unpacking (see cap. 4).**



### ATTENTION!

- After having removed the packaging, check the integrity of the machine. If in doubt, do not use the machine and contact the dealer immediately.
- Never tilt or turn the machine over: always move it in the upright position. This prevents the oil leaking from the vacuum pump.
- Only use man power with utmost care to move the machine.



### ECOLOGICAL NOTES:

All of the various packaging components must be disposed of according to the Standards in force in the Country where the appliance is used. In all cases, nothing must be dispersed into the environment.

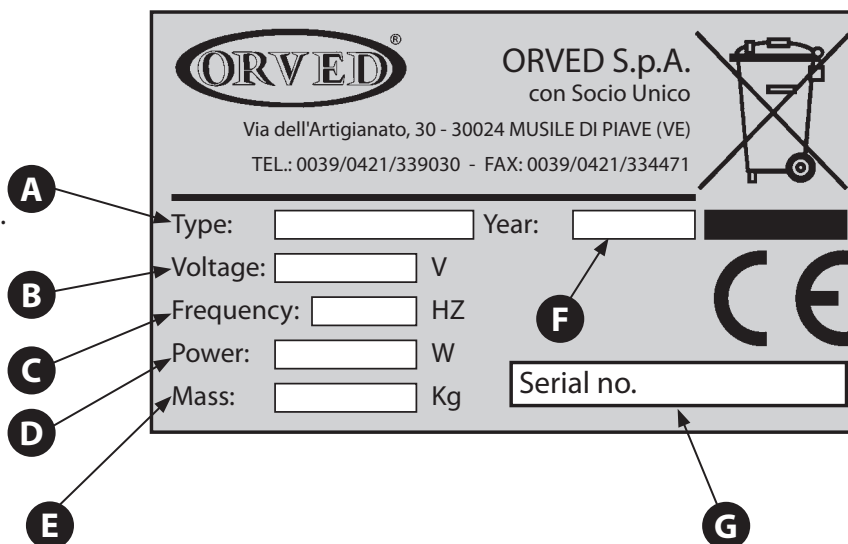


### WARNING!

- The packaging components can be potentially dangerous for children and animals, make sure that they are kept out of their reach!
- The machines must be installed and inspected in complete respect with the Accident-prevention Standards, the traditional legislation and Standards in force.

- 3) **Verify the data plate.** Always cite the **model and serial number** of the machine (see section 1.4) in order for us to ensure efficient support and to best answer your questions. There is an identification plate on the back of the machine bearing the following information:

- A** Model.
- B** Voltage and number of phases (Volt).
- C** Frequency (Hertz).
- D** Maximum power consumption (Watt).
- E** Weight.
- F** Year of manufacture.
- G** Serial number.



The identification plate contains the following information:

- ORVED logo**
- ORVED S.p.A. con Socio Unico**
- Via dell'Artigianato, 30 - 30024 MUSILE DI PIAVE (VE)**
- TEL.: 0039/0421/339030 - FAX: 0039/0421/334471**
- Type:** [ ] **Year:** [ ]
- Voltage:** [ ] **V**
- Frequency:** [ ] **HZ**
- Power:** [ ] **W**
- Mass:** [ ] **Kg**
- Serial no.** [ ]
- CE mark**
- Waste disposal symbol** (crossed out)

- 4) Place the machine on a surface that is flat, stable and suitable for the load.



### ATTENTION!

- The machine must be positioned so as to be accessible from all sides.
- Do not obstruct passage-ways, escape or service routes with the machine. Do not position the machine in front of exits or emergency doors.
- Make sure the machine is ventilated properly, leaving a gap of about 10 cm around the entire appliance. The ventilation slots must remain free and unobstructed in order to maintain the pump temperature at a normal level.

## INSTALLATION

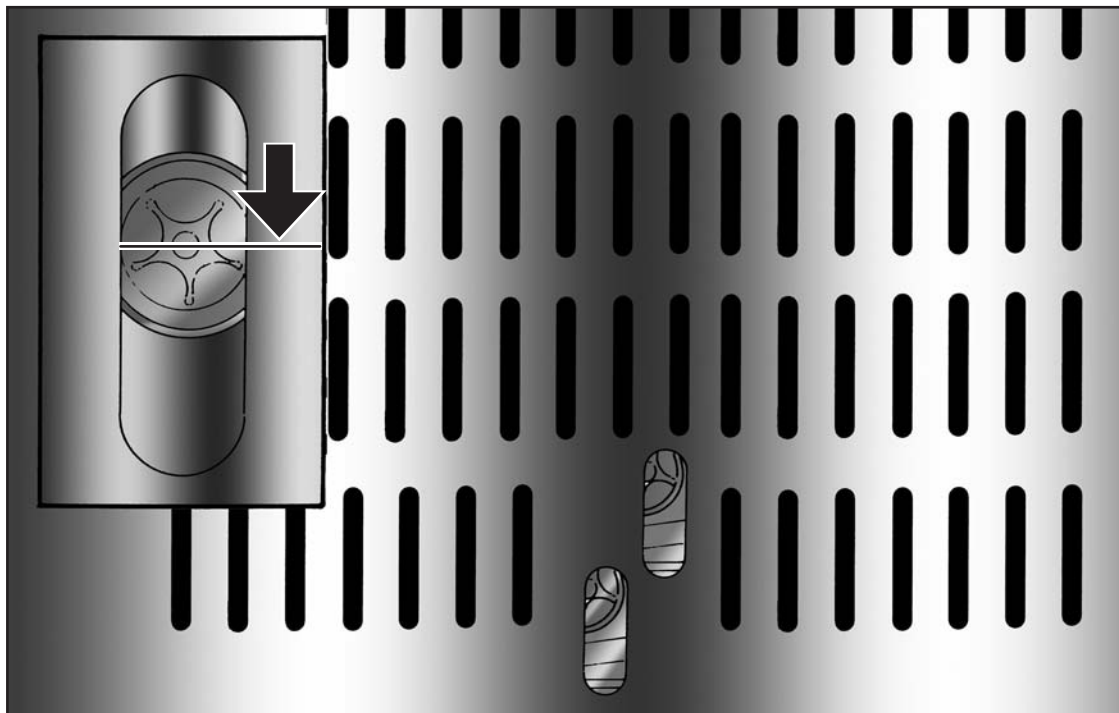


## 5) Check the pump oil level.

- Fill the oil in the machines supplied without oil (the warning label is found on the packaging).
- In machines with pre-filled oil, check the correct level through the opening on the rear or lateral side, as shown.
- The ideal level corresponds with the centerline of the inspection window.

**WARNING!**

- **Never start the machine if there is no oil in the pump!**
- **Do not remove, damage or change the plates applied to the machine.**

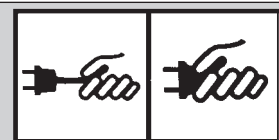


## 6) Electric connection.

- Before installing the machine, make sure that any pre-existing electric plants are in compliance with the Law and suitable for the plate data of the machine to be installed (V, kW, Hz, and power available).
- The machines are supplied with a power supply cable measuring 200 cm with standard Schuko 16A plug. The socket must have a 10A fuse and must be easily accessible.

**ELECTRICAL HAZARD!**

- **Verify that the power cable wasn't damaged or restrained.**
- **Put and remove the plug applying the traction on the plug same, and never on the cable.**

**WARNING!**

- **Make sure that the plug is accessible even after the unit has been installed!**
- **If the machine plug is not easily accessible, the power supply network must be equipped with devices for the omnipolar disconnection with an opening distance of the contacts that allows complete disconnection in overvoltage category III conditions.**
- **If the entire length of the cable is not used, DO NOT roll it up but leave it free and make sure that it does not obstruct or endanger the passage of persons. Also make sure that it is not crushed or bent.**
- **Make sure that the power supply cable does not come into contact with any types of liquid, sharp or hot objects and corrosive substances.**
- **Do not allow children or animals to play with the power supply cable.**

7) **Proceed to the preliminary clearing of vacuum chamber and lid.** See chap.5.1

8) **Final checks.**

**Carry out the following checks before switching the machine on:**

- Check the correct electric connection.
- Check the pump oil.

**When these checks have been completed:**

- Calibrate the vacuum sensor, complaining to the atmosphere pressure (depending on the altitude). To operate the calibration, switch the machine on keeping the **VAC** button pressed, release the **VAC** button after 2 seconds and then close the lid.
- Check the absorption using an ammeter.
- Carry out at least one complete vacuum packing functioning cycle for bags.
- Inform the customer regarding the exact use of the machine with specific reference to use and the requirements of the customer himself.



## 11. MAINTENANCE

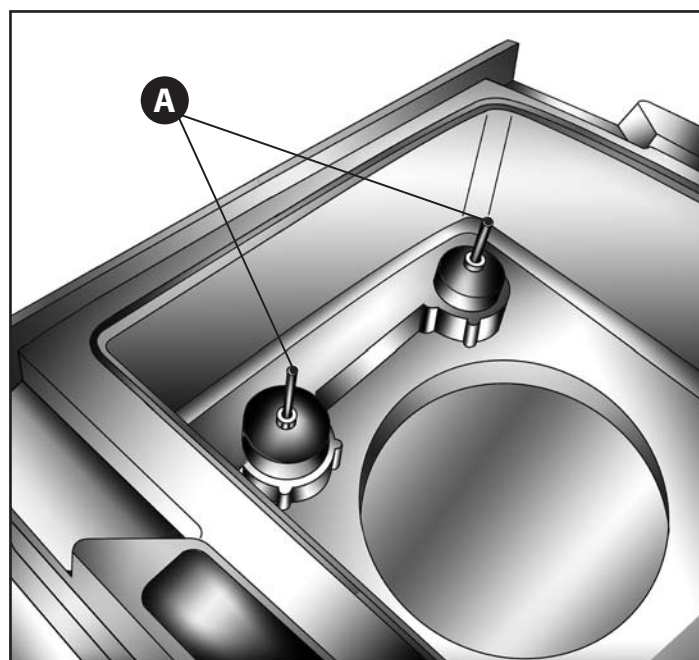
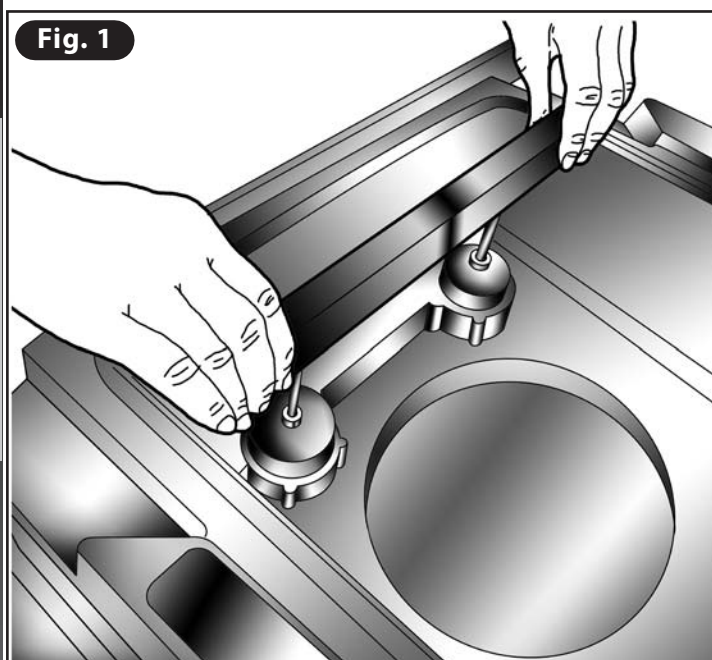


### ATTENTION!

- Do not replace the Teflon when the bar is still hot because you could burn yourself.
- Always unplug the appliance before carrying out any maintenance.

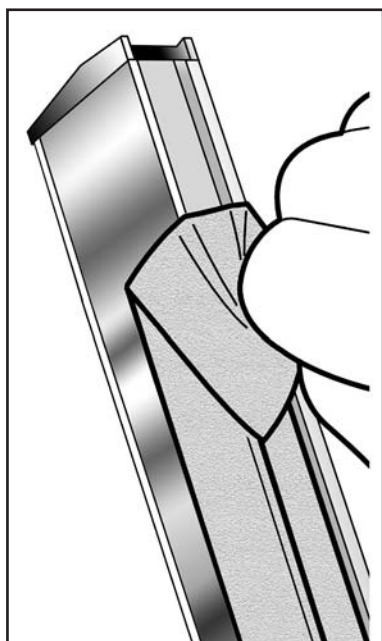
### 11.1 REPLACEMENT OF COMPLETE SEALING BAR

- Extract the sealing bar from the vacuum chamber by lifting it horizontally from the sides (**Fig. 1**).
- Place the new one, making sure it engages correctly with the electrical contacts **A**.

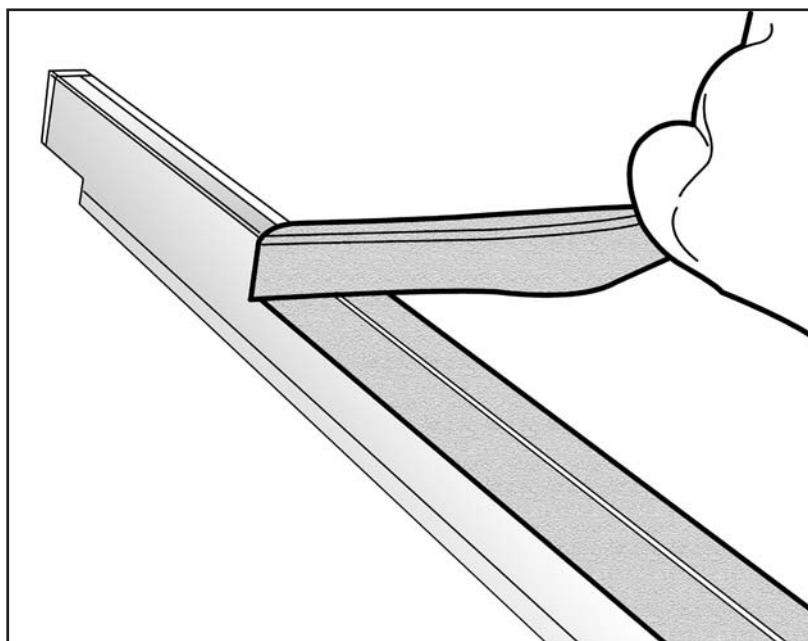


### 11.2 REPLACEMENT OF SEALING BAR TEFLON COVER

- 1) Extract the sealing bar from the vacuum chamber by lifting it horizontally from the sides (**Fig. 1**).
- 2) Remove the Teflon covering (**Fig. 2**).



**Fig. 2**





- 3) Clean the aluminum sealing bar carefully using a cloth soaked in alcohol (**Fig. 3**).

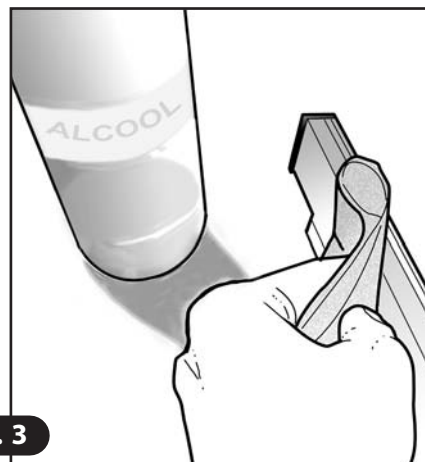
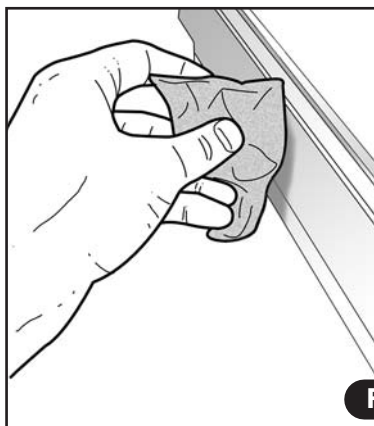


Fig. 3

- 4) Put on the new Teflon covering, cutting off any excess at the ends (**Fig. 4**).

- 5) Put the sealing bar back in the vacuum chamber, making sure it engages correctly with the electrical contacts.

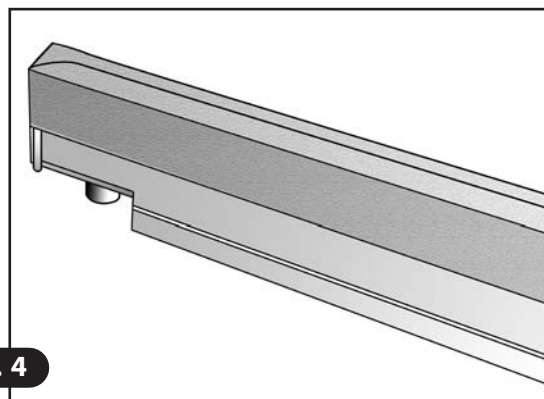
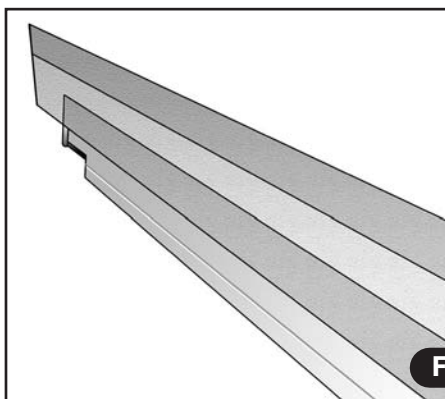


Fig. 4

### 11.3 REPLACEMENT OF PUMP OIL

- 1) Run the pump for about 10 minutes in Jar function (pressing **PUMP** key) to make the oil fluid.
- 2) Press **STOP** button to stop the pump.
- 3) Switch the machine off using **ON/OFF** main switch and remove the plug.
- 4) Remove the PE fillers from the vacuum chamber (**Fig. 5**).
- 5) Uninstall the back panel. Unscrew the screws using a setscrew wrench (**Fig. 6-7-8**).

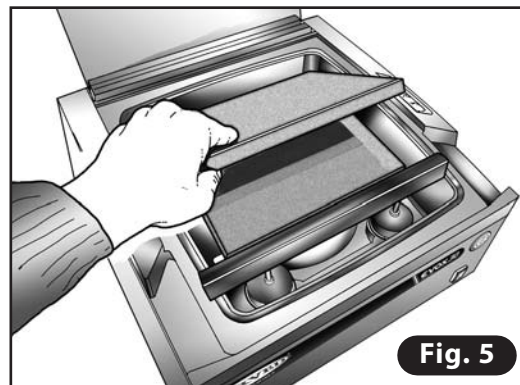


Fig. 5

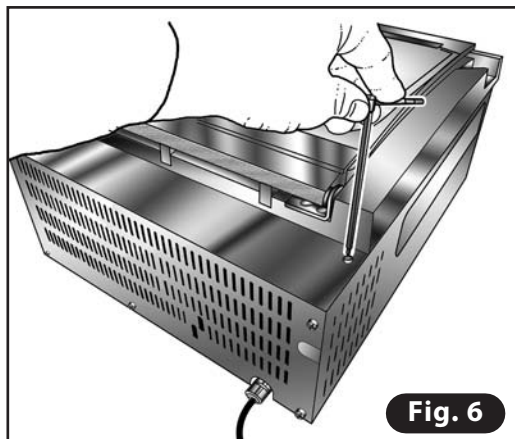


Fig. 6

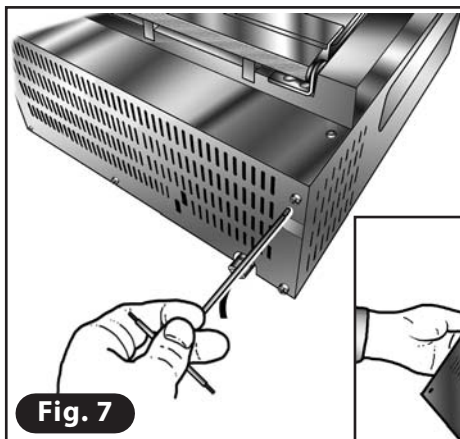


Fig. 7

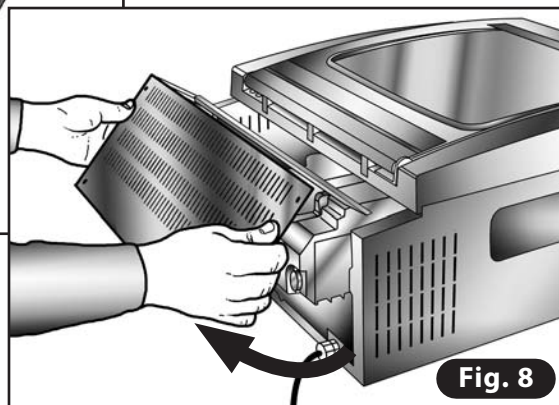
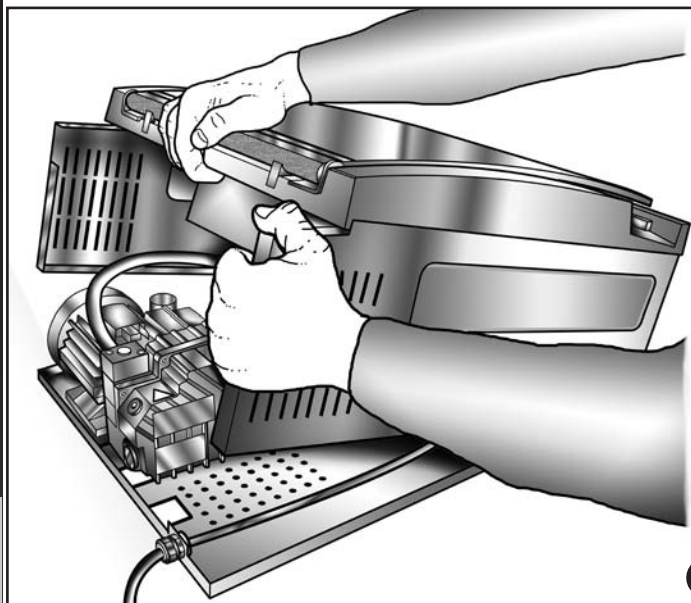


Fig. 8

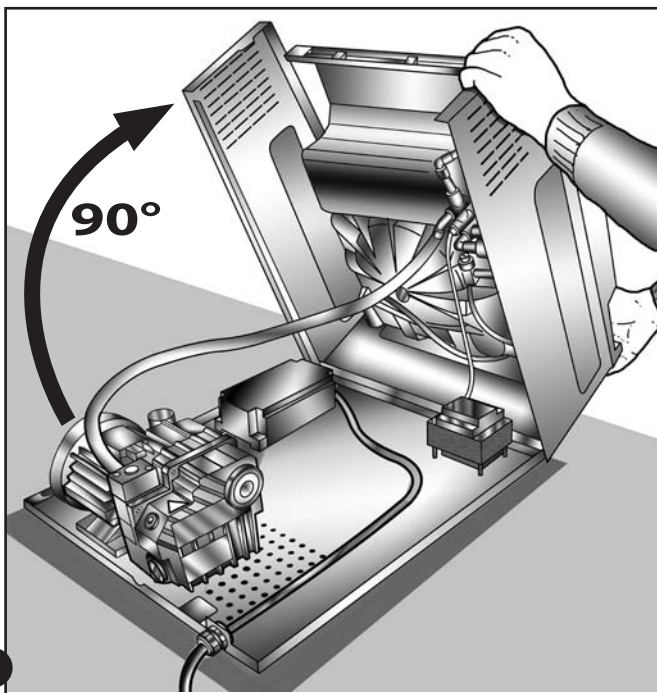
# MAINTENANCE



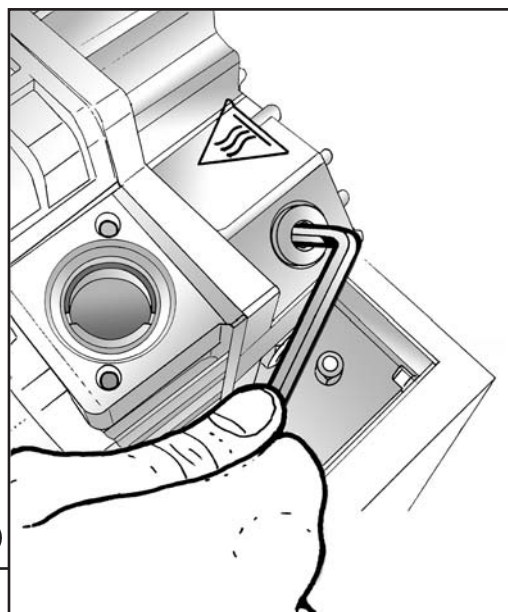
- 6) Lift the machine body using both hands and lay it on the front (on the work table) (**Fig. 9**).



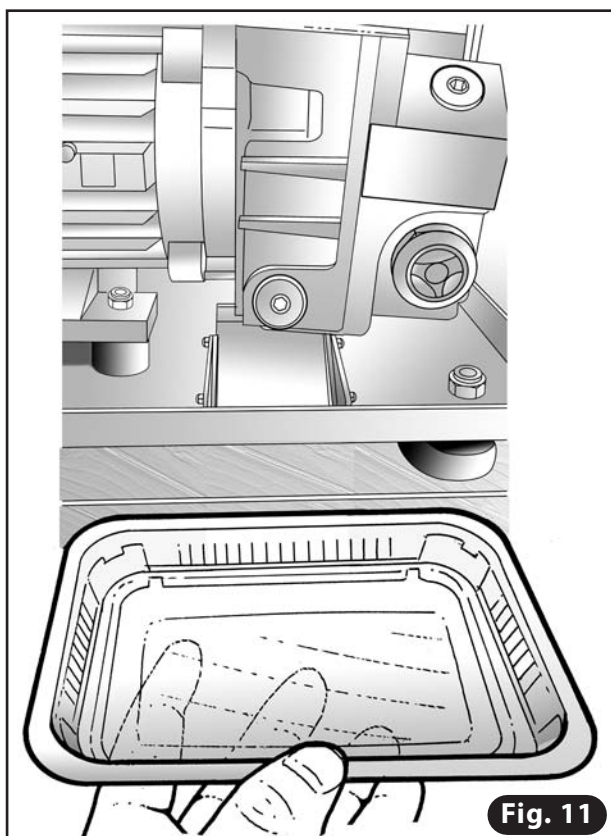
**Fig. 9**



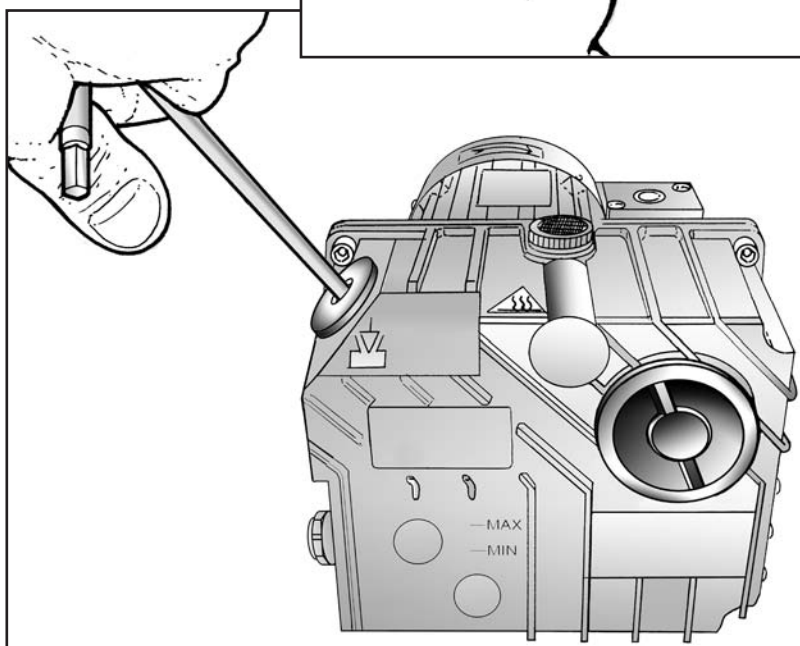
- 7) Use a setscrew wrench to undo the oil filling cap at the top of the pump (**Fig. 10**).
- 8) Place a container large enough (0,5 L) close to the drainage hole (**Fig. 11**). Use the same wrench to undo the drain cap and leave the oil to flow into the container for about ten minutes.



**Fig. 10**



**Fig. 11**





9) Refasten the drain cap at the bottom of the pump and refill the pump with oil up to the correct level: in the sight-glass, the level of oil should be near the top line (**Fig. 12**).

10) Fasten the filling cap.

11) Down and close the machine body, paying attention to position it correctly.

12) Re-install the back panel and fasten the screws.

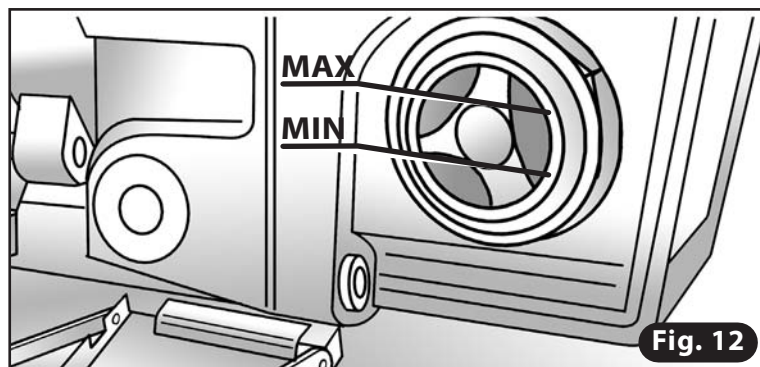
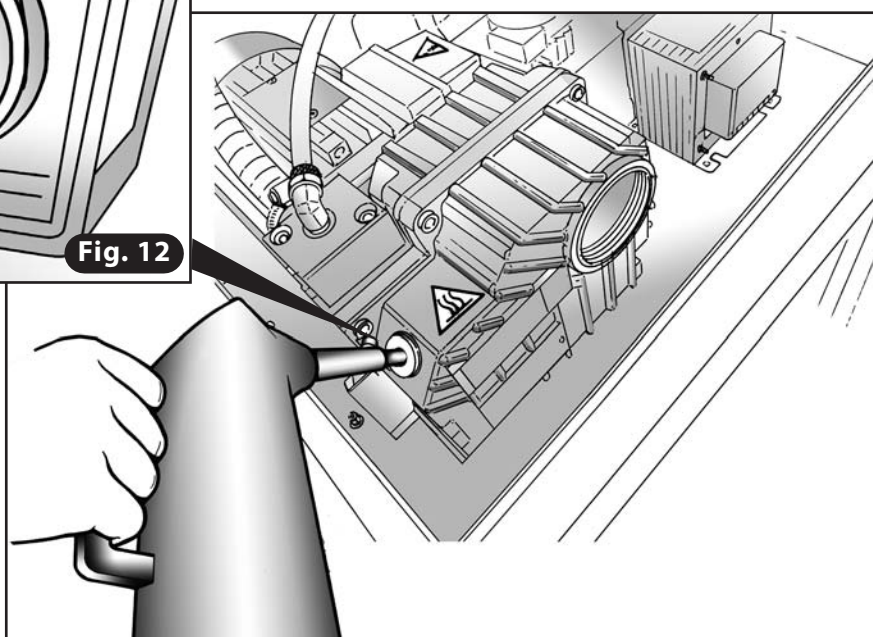


Fig. 12



## 11.4 REPLACEMENT OF EXHAUST FILTER

1) To reach the pump for maintenance, follow the procedure described at points from 3 to 6 in chap. 11.3.

2) Use pliers to undo the cap of the exhaust filter on the body of the pump. Remove the exhaust filter (**Fig. 13-14**).

3) Position the new filter with o-ring and use the pliers to screw on the new cap provided with the filter.

4) Down and close the machine as described in chap. 11.3

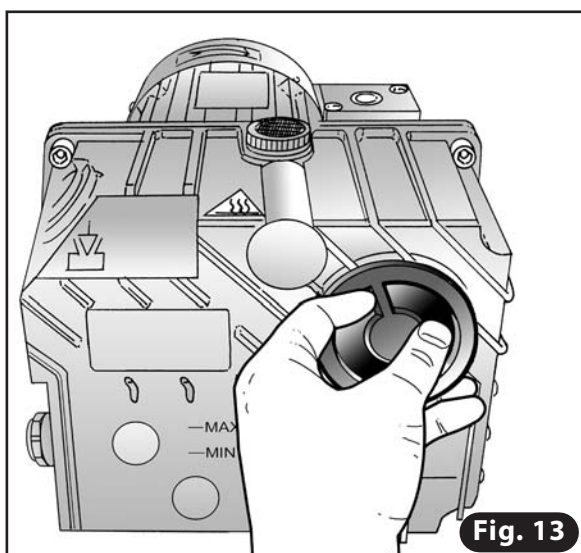
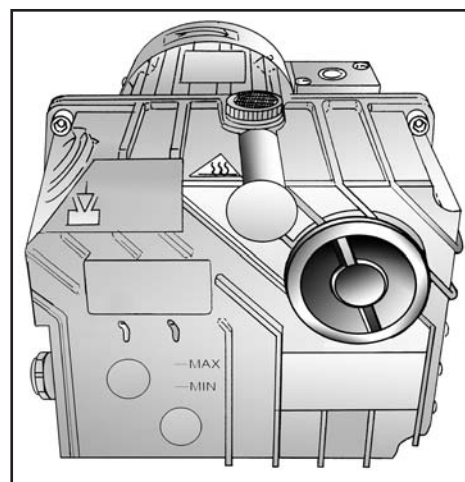


Fig. 13

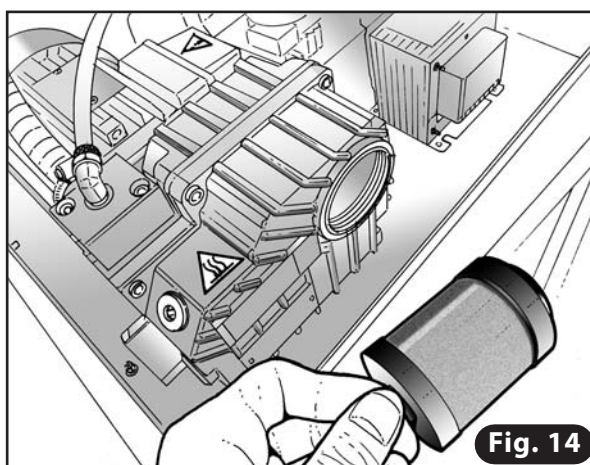


Fig. 14

## 11.5 REPLACEMENT OF PUMP SHUTTER

- 1) To reach the pump for maintenance, follow the procedure described at points from 3 to 6 in chap. 11.3
- 2) Locate the pump intake block on which is fastened the transparent pipe with metal coil **A**, that connects the pump to the vacuum chamber.
- 3) Using a setscrew wrench to undo the two screw fasteners on the block. Lift the intake block (**Fig. 1**).
- 4) Remove first the rubber shutter and then the steel one. Check the condition of the accessible intake section and clean it if necessary with a cloth soaked in alcohol (**Fig. 2**).

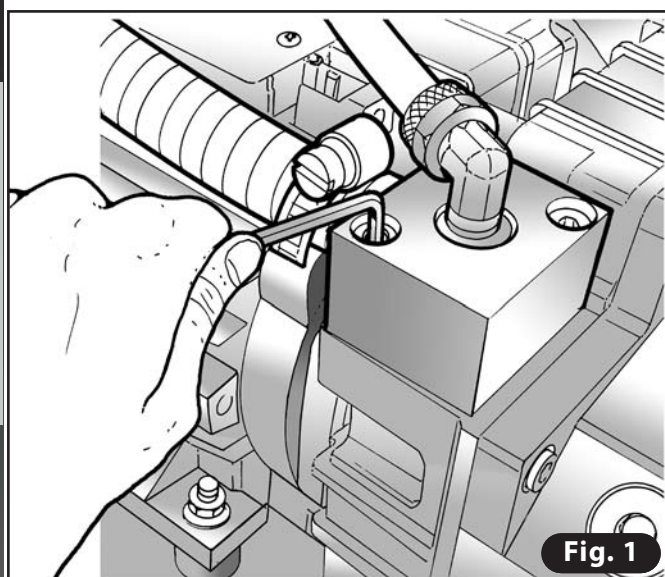
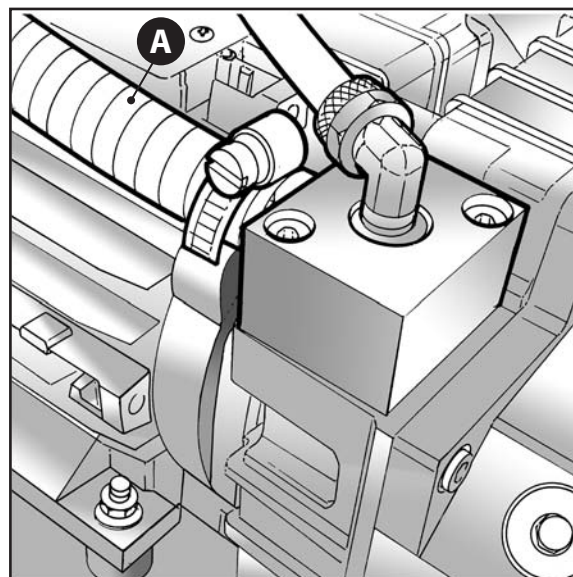


Fig. 1

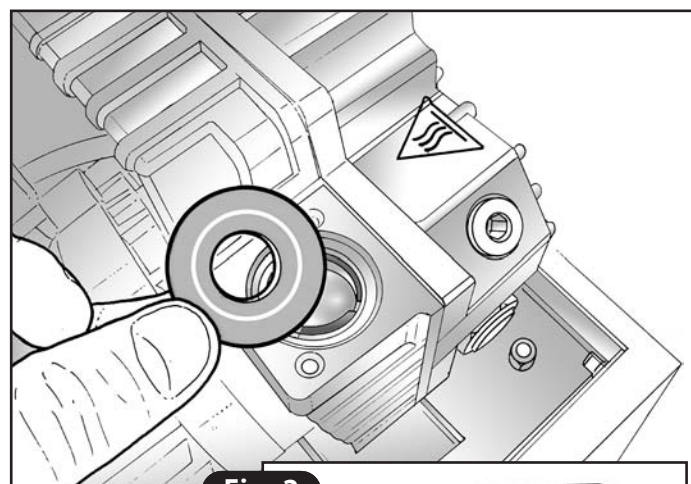


Fig. 2

- 5) Put in the new rubber and steel shutters (**Fig. 3**).
- 6) Put the intake block back in place and fasten the two screws (**Fig. 1**).
- 7) Down and close the machine as described in chap. 11.3

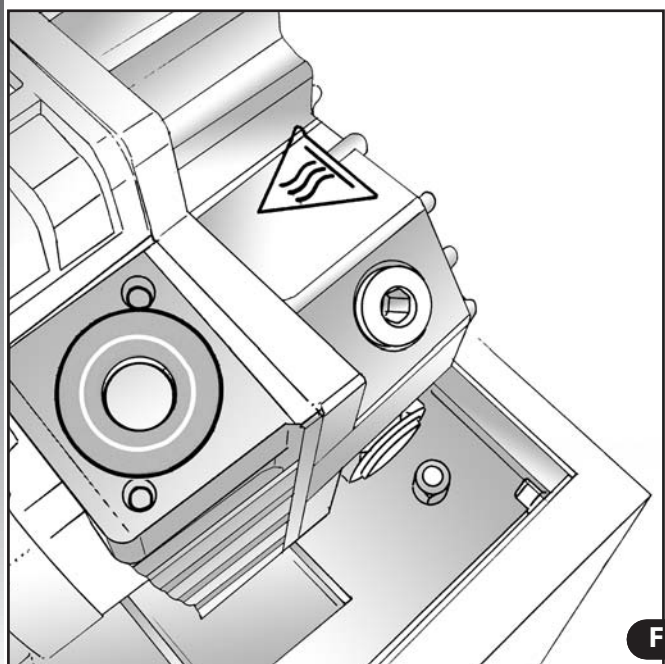
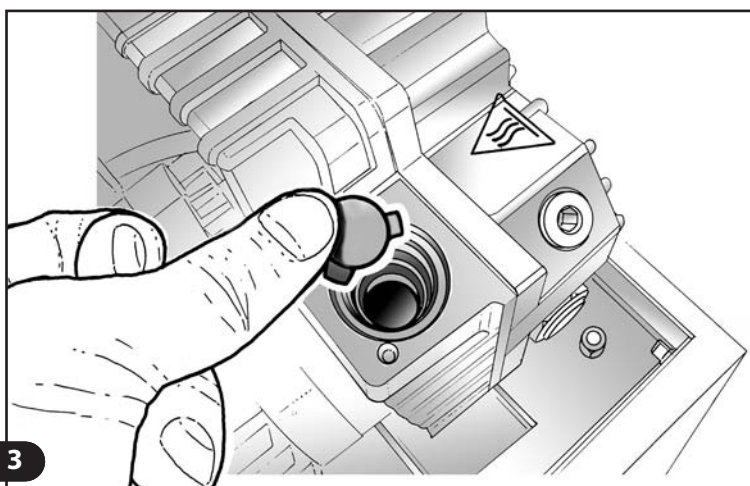


Fig. 3





## 11.6 OIL TANK CLEANING

Fig. 5

- 1) To reach the pump for maintenance, follow the procedure described at points from 3 to 6 in chap. 11.3
- 2) Drain the pump oil as described in chap § 11.3.
- 3) Use a setscrew wrench to undo the two screw fasteners on the block. Lift the intake block (Fig. 4).
- 4) Clean carefully all the oil tank, using a cloth soaked in the same kind of oil used for pump (Fig. 5).
- 5) Clean the gasket slot carefully and replace the gasket same, in case you find it worn or damaged.
- 6) Re-install the oil tank.
- 7) Refill the pump with oil up to the correct level and close the machine body.

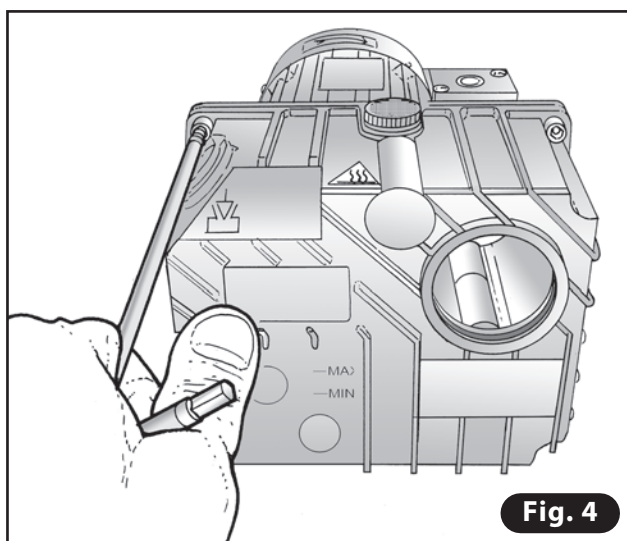


Fig. 4

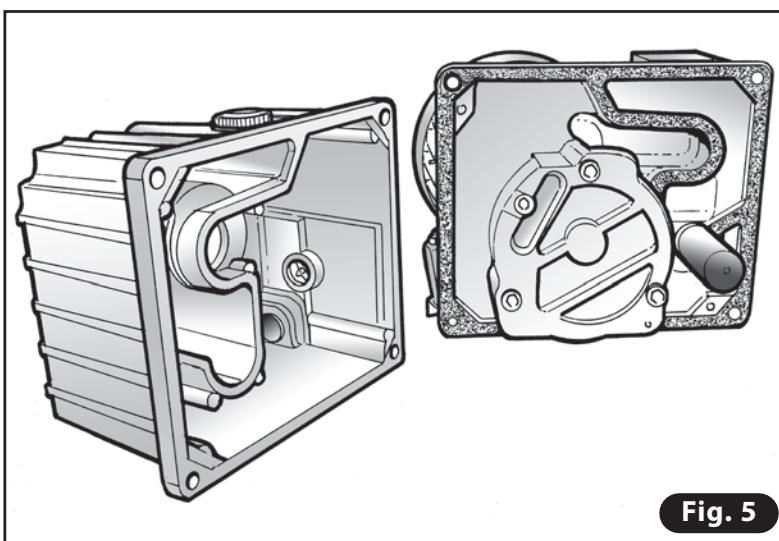


Fig. 5

## 11.7 REPLACEMENT OF VACUUM CHAMBER GASKET

In case of lack of vacuum/ insufficient vacuum, check the gasket. In case it was worn, it should be replaced.

**The gasket needs to be cut using a Cutter.**

- 1) Open the lid.
- 2) Remove the gasket on the vacuum chamber and clean the gasket slot carefully (Fig. 6).
- 3) Insert the new gasket into its place pressing it deeply. Cut the correct size with a cutter (Fig. 7).
- 4) Operate a vacuum cycle, in order to adjust the gasket.

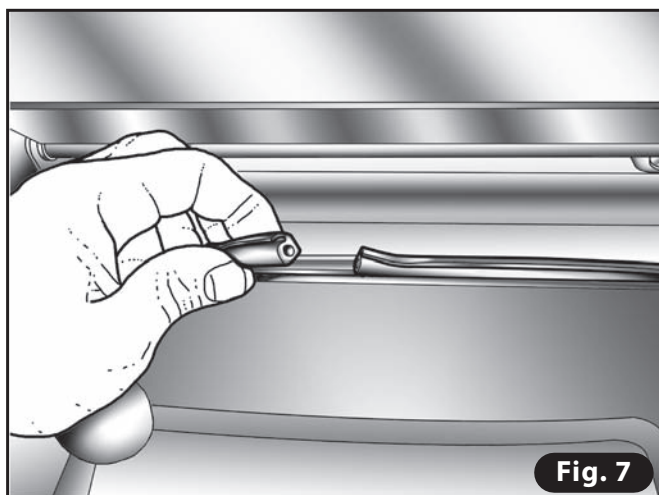


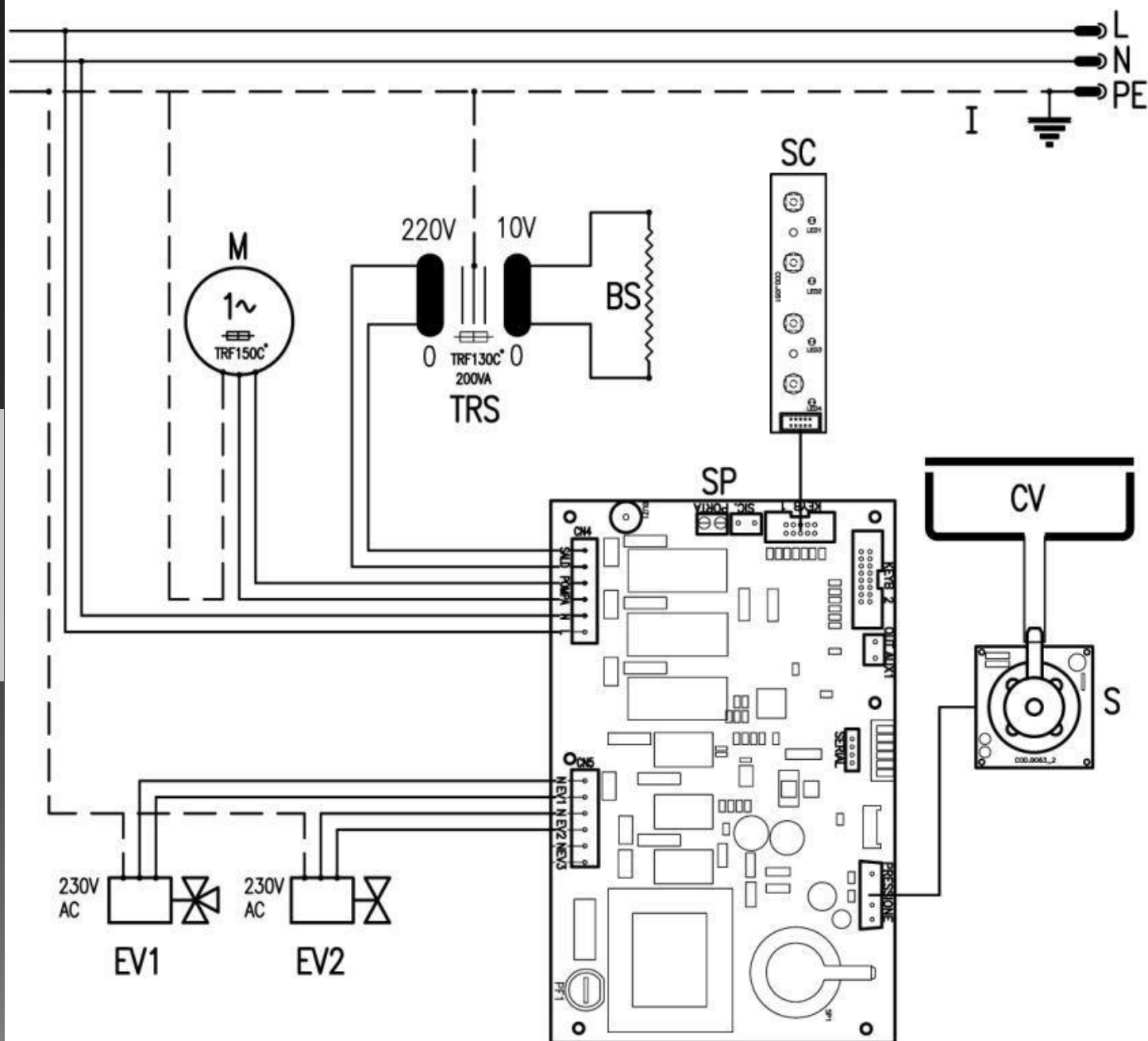
Fig. 7



Fig. 6

WIRING DIAGRAM

12. WIRING DIAGRAM



REF.	DESCRIPTION
TRS	SEALING TRANSFORMER
BS	SEALING BAR
M	230/115V VACUUM PUMP
I	MAIN SWITCH
EV1	3-WAY SOLENOID VALVE 230V AC, SEALING B. ACTIVATION
EV2	2-WAY SOLENOID VALVE, Ø11 230V AC, AIR RETURN
SC	4 KEYS COMMAND BOARD J051
SP	POWER BOARD J084 230/115V
CV	VACUUM CHAMBER
S	PRESSURE TRANSDUCER MODULE CARD B063_2

## 13. TROUBLESHOOTING

FUNCTIONAL ANOMALY	POSSIBLE CAUSE	SOLUTION
<b>The machine does not work</b>	• Machine off.	• Switch the machine on using the main switch ON/OFF.
	• No power connection.	• Connect the plug (verify the voltage!). • Verify the connection wire entirety.
	• Damage on the machine.	• Call the service center.
<b>Insufficient vacuum in the chamber</b>	• Insufficient pump efficiency.	• Check the oil. • Check the exhaust filter
	• Worn lid gasket.	• Replace the lid gasket.
<b>The machine doesn't operate the vacuum into the chamber.</b>	• Insufficient pressure on the lid at the start.	• Close the lid using both hands on the sides and use a higher pressure.
	• Pump doesn't work.	• Check pump connections, check pump shaft rotation, working on the fan. In case it's blocked, proceed to an overhaul.
<b>The lid doesn't close.</b>	• Worn lid gasket.	• Replace the lid gasket.
	• Blocked hinges.	• Replace the hinges.
<b>Weak vacuum in the bag.</b>	• Wrongly positioned bag.	• Place the bag centrally on the sealing bar, to allow the open side to overpass the sealing bar 20 mm
	• Punched bag.	• Choose a thicker bag and wrap the product with film.
	• Insufficient sealing.	• Enlarge the sealing time
	• Defective bag.	• Replace the bag.
	• Dirt on bag opening.	• Change the bag and pay attention not to dirt the opening side.
	• Wrong bag size.	• Scegliere un formato di busta adatto alle dimensioni del prodotto.
<b>There are bubbles or burning on sealing.</b>	• Too long sealing time.	• Shorten the sealing time.
<b>Thin and irregular sealing.</b>	• Too short sealing time.	• Enlarge the sealing time.
<b>The machine does not seal the bags.</b>	• Dirty contacts.	• Clean the contact.
	• Broken sealing bar contacts.	• Fix the sealing bar contacts.
	• Broken sealing bar wire.	• Replace the sealing bar.
	• Defective lifting piston.	• Replace the lifting piston.
<b>Bad sealing.</b>	• Dirty sealing bar.	• Clean the sealing bar.
	• Too short sealing time.	• Enlarge the sealing time.
	• Worn sealing bar Teflon.	• Replace the sealing bar Teflon.
	• Worn sealing silicon.	• Replace the sealing silicon.
<b>Not possible to operate vacuum in containers.</b>	• Wrongly positioned lid.	• Reposition the lid and operate vacuum gently pressing the lid.

## 14. TECHNICAL DATA

### 14.1 EVOX 30 PROVIDED WITH 12 M<sup>3</sup>/H PUMP

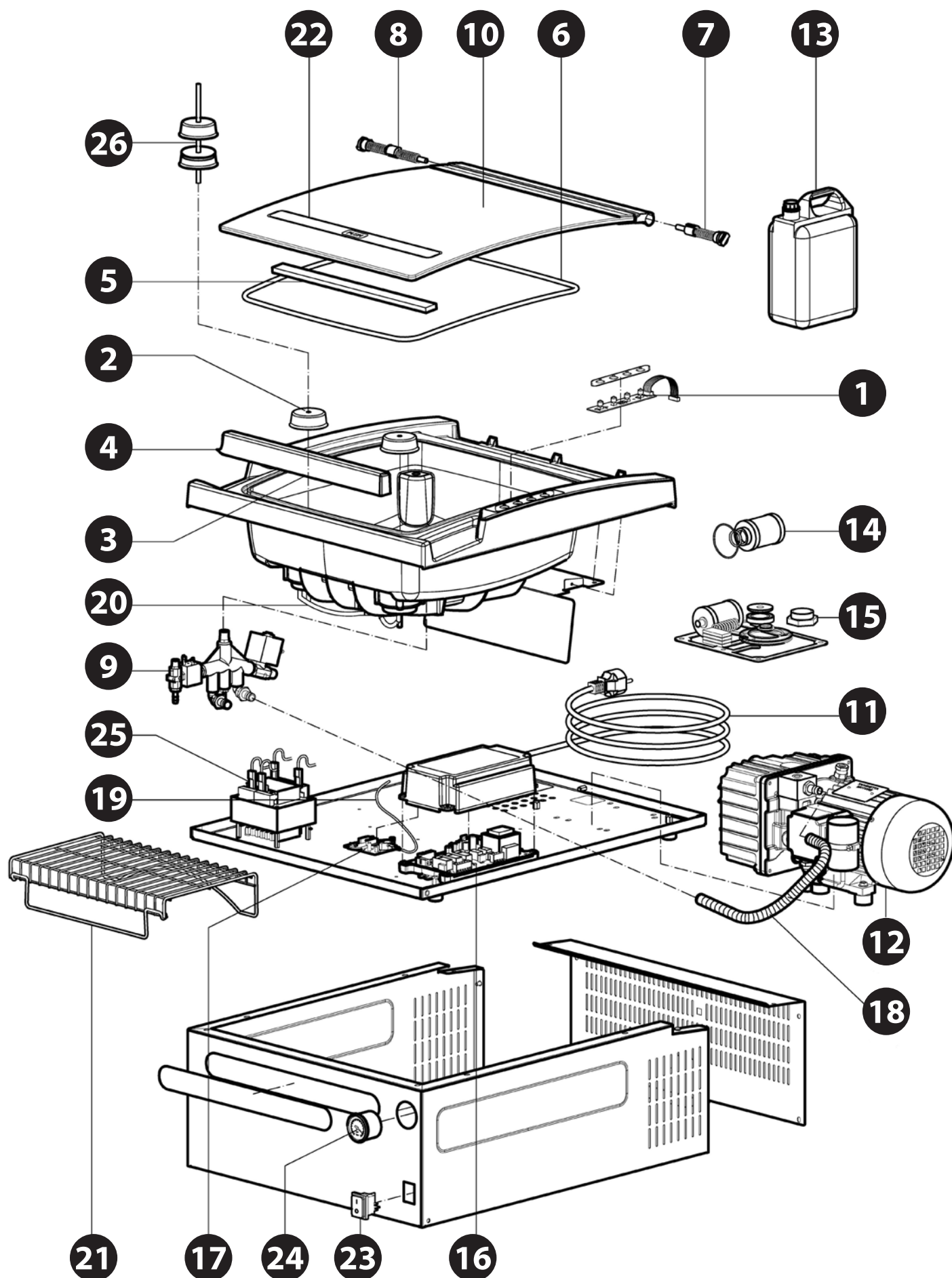
Maximum power input (PUMP on):	450W
Voltage:	230V 50/60Hz (Standard) - 110-120V 60Hz (Special)
Vacuum pump flow rate:	12 m <sup>3</sup> /h
Final pressure:	2 millibar
Vacuum adjustment:	By electronic vacuum sensor
Functions:	<p>2 Vacuum levels (storage / cooking)</p> <p>4 sealing levels: 1-bags th.60-70μ, 2-bags th.90μ, 3-bags th.100μ and cooking bags, 4-bags th.140μ</p> <p>Vacuum in containers inside and outside of the vacuum chamber</p> <p>Vacuum creation in channeled external bags</p> <p>Acoustic and visual signals</p>
Controls:	4 keys
Maximum bag size:	Width 300 mm × length 400 mm
Total cycle times (with empty vacuum chamber):	Storage: 43 sec. / Cooking: 58 sec.
Total cycle times (with fillers inside):	Storage: 32 sec. / Cooking: 47 sec.
Usable sealing length:	306 mm
Vacuum chamber dimensions:	width 355 mm × length 365 mm × height 184 mm
Vacuum chamber volume:	17,10 lt.
Vacuum chamber material:	Injected thermoplastic, suitable for contact with foodstuffs, (FDA Standard Cfr.21 certified) light grey - RAL 7045
Machine body material:	Stainless steel
Lid:	High-resistance hardened glass with safety film
Lid maximum opening angle:	61°
Weight:	Kg 35,00 / Packaged 48 kg including pallet
Size:	mm 495 × 600 × h 288
Pump Type:	DVP LC12
Noise:	62dB 50Hz – 64dB 60Hz
Type of vacuum pump oil:	SW40 (specific for vacuum pumps)
Vacuum pump oil load:	0,35-0,40 dm <sup>3</sup>
Vacuum containers:	Vuotobox Ø270 mm, Conserbox 0,7 and 1,4 lt, Bormioli glass jars up to 1 lt.

**14.2 EVOX 30 PROVIDED WITH 8 M<sup>3</sup>/H PUMP**

<b>Maximum power input (PUMP on):</b>	350W
<b>Voltage:</b>	230V 50/60Hz (Standard) - 110-120V 60Hz (Special)
<b>Vacuum pump flow rate:</b>	8 m <sup>3</sup> /h
<b>Final pressure:</b>	2 millibar
<b>Vacuum adjustment:</b>	By electronic vacuum sensor
<b>Functions:</b>	<p>2 Vacuum levels (storage / cooking)</p> <p>4 sealing levels: 1-bags th.60-70μ, 2-bags th.90μ, 3-bags th.100μ and cooking bags, 4-bags th.140μ</p> <p>Vacuum in containers inside and outside of the vacuum chamber</p> <p>Vacuum in containers inside and outside of the vacuum chamber</p> <p>Vacuum creation in channeled external bags</p> <p>Acoustic and visual signals</p>
<b>Controls:</b>	4 keys
<b>Maximum bag size:</b>	Width 300 mm × length 400 mm
<b>Total cycle times (with empty vacuum chamber):</b>	Storage: 53 sec. / Cooking: 68 sec.
<b>Total cycle times (with fillers inside):</b>	Storage: 40 sec. / Cooking: 55 sec.
<b>Usable sealing length:</b>	306 mm
<b>Vacuum chamber dimensions:</b>	Width 355 mm × length 365 mm × height 184 mm
<b>Vacuum chamber volume:</b>	17,10 lt.
<b>Vacuum chamber material:</b>	Injected thermoplastic, suitable for contact with foodstuffs, (FDA Standard Cfr.21 certified) light grey - RAL 7045
<b>Machine body material:</b>	Stainless steel
<b>Lid:</b>	High-resistance hardened glass with safety film
<b>Lid maximum opening angle:</b>	61°
<b>Weight:</b>	Kg 29,00 / Packaged 48 kg including pallet
<b>Size:</b>	mm 495 × 600 × h 288
<b>Pump Type:</b>	DVP LB8
<b>Noise:</b>	58dB 50Hz – 60dB 60Hz
<b>Type of vacuum pump oil:</b>	SW40 (specific for vacuum pumps)
<b>Vacuum pump oil load:</b>	0,20 dm <sup>3</sup>
<b>Vacuum containers:</b>	Vuotobox Ø270 mm, Conserbox 0,7 and 1,4 lt, Bormioli glass jars up to 1 lt



# 15. SPARE PARTS



Nr.	Spare Part		8 MC/H	12 MC/H
1	Command board with plexiglas panel		1603817	1603817
2	Protective cap		1601924	1601924
3	Sealing bar with teflon strip and sealing wire		1601928	1601928
4	Teflon band (Mt goods)		1601911	1601911
5	Silicone rubber		1601929	1601929
6	Cover seal (Mt goods)		1601930	1601930
7	Hinges	RIGHT	1601931	1601931
8		LEFT	1601932	1601932
9	Solenoid valve unit	230V	1601906	1601906
		115V	1601907	1601907
10	Cover		1601910	1601910
11	Power cable	EUROPA / SCHUKO	1603292	1603292
		USA	1603295	1603295
12	Vacuum pump	230V	1601638	1601639
		110V -UL- USA/CANADA	1602979	1601640
13	Pump Oil	1 CHANGE	1601422	1601423
		10 LT	1601037	1601038
14	Minor Kit for vacuum pump		1601010	1601622
15	Major Kit for Vacuum pump		1600832	1601525
16	Power board	230V	1601836	1601836
		115V	1601835	1601835
17	Vacuum sensor board		1603278	1603278
18	Spiral tube armorvinpress		1603290	1603290
19	Ø5×3 hose for vacuum sensor (Meter goods)		1601939	1601939
20	Ø8×6 hose (Meter goods)		1603289	1603289
21	Bag support grid		1602020	1602020
22	"PUSH" sticker		1601940	1601940
23	Main Switch		1601637	1601637
24	Vacuum gauge Ø40		1100027	1100027
25	Sealing transformer		1400721	1400721
26	Piston assembly		1602044	1602044