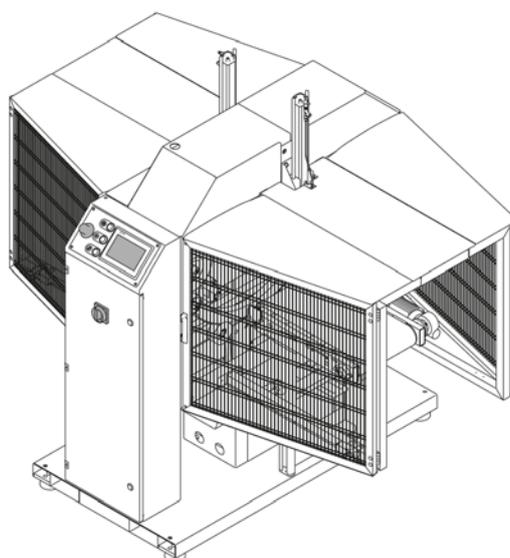
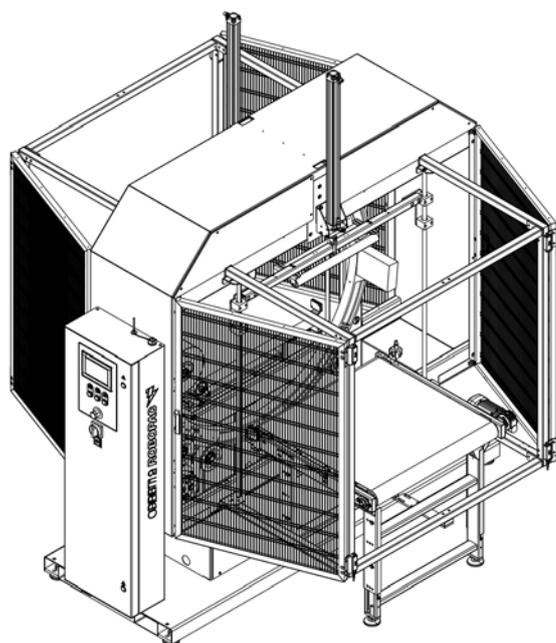


ORBIT 4-6-9-12



N. matricola • Serial number • Serienummer
N.d'identification • Matricula n.

Cod.: 3709303416

Ed.: 06/2018

ROBOPAC S.p.a
Via Fabrizio da Montebello, 81
47892 Repubblica di San Marino
Phone (+378) 0549 910511
Fax (+378) 0549 908549



USE AND MAINTENANCE MANUAL

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1. GENERAL INFORMATION

1.1. PURPOSE OF THE MANUAL

- The manual is an integral part of the machine and is aimed at providing the operator with the “Instructions for use” in order to prevent and minimise the risks that arise from human-machine interaction.
The information has been written by the Manufacturer in Italian (the original language) in full compliance with the professional writing principles and the regulations in force.
The communication principles were chosen according to the target readers in order to ease the reading and understanding of the information.
The information may be translated into other languages to satisfy the legal and/or market requirements.
The manuals must be translated directly from the original instructions, without modifications.
Each translation (including that provided by the purchasing agent or by the company that introduces the machine into the country in question) must specify the message “Translation of the original instructions”.
- Refer to the table of contents in order to easily identify the subjects of interest.
- Some information may not correspond completely to the actual configuration of the machine delivered.
- Any additional information does not affect the readability of the text and the safety level.
- The Manufacturer reserves the right to modify the contents of the manual without prior notice provided that the safety level is not altered.
- Every notification by the recipients can be an important contribution to the improvement of after-sales services that the manufacturer intends to offer to its customers.
- The symbols described below are used to highlight important information or specifications.



Danger - warning

The symbol indicates critically dangerous situations that if neglected can result in serious personal safety and health hazards.



Caution - warning

The symbol indicates that suitable actions must be taken in order to avoid personal safety and health hazards and economic damages.



Important

The symbol indicates particularly important technical and operating information that should not be neglected.

1.2. MANUFACTURER AND MACHINE IDENTIFICATION

The illustrated identification plate is applied directly to the machine. It contains references and indispensable operating safety indications.

- 1) Machine model.
- 2) Machine serial number.
- 3) Year of manufacture.
- 4) Power supply voltage.
- 5) Power supply frequency.
- 6) Power supply phases.
- 7) Absorbed electric current.
- 8) Installed power.
- 9) Air consumption.
- 10) Air supply max. pressure.
- 11) Machine weight.
- 12) Manufacturer's identification.



The diagram shows a rectangular identification plate with a CE mark at the top. A callout '12' points to a light blue rectangular area at the top left. Below the CE mark is another light blue rectangular area. The main body of the plate contains a table of technical specifications with numbered callouts 1 through 11 pointing to specific input fields.

MODELLO	1		
MATRICOLA		2	
DATA	3		
ALIMENTAZIONE		4	V
FREQUENZA	5		Hz
N. FASI		6	
ASSORBIMENTO	7		A
POTENZA TOT.		8	KW
CONSUMO ARIA	9		l/min
PRESSIONE MAX		10	bar
PESO	11		kg

1.3. TERMS AND DEFINITIONS

Some recurring terms found within the manual are described in order to complete their meaning.



Ordinary maintenance:

The set of operations required to maintain the machine efficient and in good working order. Normally these operations are scheduled by the Manufacturer, who defines the necessary skills and methods of intervention.



Extraordinary maintenance:

The set of operations required to maintain the machine efficient and in good working order. These operations are not scheduled by the Manufacturer and must be carried out by the maintenance technician.



Operator:

A person chosen and authorised among those who have the requirements, skills and information necessary for installation, use and ordinary maintenance of the machine.



Maintenance technician:

Technician chosen and authorised among those who have the requirements to perform routine and extraordinary maintenance on the machine. Therefore, the technician must have accurate information and competences with particular skills in the field of intervention.



Format changeover:

Set of operations to carry out on the machine before starting to work with characteristics other than the previous ones.



Training:

Training process aimed at transferring to the new operator the knowledge, skills and behaviours required to operate the machine autonomously, properly and safely.



Installer:

Technician chosen and authorised by the manufacturer or by its representative, among those with the requirements to install and test the machine or the relevant system.



Assistant:

Employee assigned to assist the production processes of the machine or system in question.



Production manager:

Qualified technician, with experience and competence in the field of machinery for the reference sector.

Depending on the production requirements, the production manager can operate the machine directly, or select the operator to be assigned to the task.

1.3.1. PICTOGRAMS INDICATING DANGER

The following table summarises the safety-related pictograms which indicate **DANGER**.



ATTENTION - GENERIC DANGER

This draws the attention of the personnel concerned to the risk of physical injuries caused by the operation described if it is not carried out in compliance with safety regulations.



ATTENTION - DANGER DUE TO CONTACT WITH LIVE PARTS

This indicates to the personnel concerned that the described operation poses, if not carried out in compliance with safety regulations, a risk of electric shock.



ATTENTION - DANGER DUE TO FLAMMABLE MATERIAL



ATTENTION - DANGER DUE TO MOVING PARTS



ATTENTION- DANGER DUE TO HIGH TEMPERATURES



ATTENTION - DANGER DUE TO SUSPENDED LOADS



ATTENTION - DANGER DUE TO CONTACT WITH OVERHEAD OBSTACLES



ATTENTION - TRIPPING OR FALLING DANGER



ATTENTION - TANGLING DANGER

It signals to the concerned personnel that the device bearing this pictogram features parts where there is the risk getting tangled when accessed.



ATTENTION - HAND CRUSHING DANGER



ATTENTION - SHEARING DANGER



ATTENTION - CUTTING DANGER

It signals to the concerned personnel that the device on which the pictogram is located has sharp parts that may injure their hands.



ATTENTION - DANGER DUE TO CARRIAGE MOVEMENT



ATTENTION - EXPLOSION DANGER

1.3.2. PICTOGRAMS INDICATING PROHIBITION

The following table summarises the safety-related pictograms indicating **PROHIBITION**.



GENERIC PROHIBITION



NO SMOKING

Smoking is not allowed in the area where this sign is located.



NO NAKED FLAMES

This symbol prohibits the use of naked flames near the machine or parts of it to prevent a fire hazard.



NO PEDESTRIANS

Pedestrians are not allowed to pass through the area where this signal is located.



DO NOT EXTINGUISH WITH WATER

Any fire that may occur near the machine or parts of it must **NOT** be extinguished with jets of water.



DO NOT INSERT YOUR HANDS



DO NOT PUSH



DO NOT SEAT DOWN



DO NOT CLIMB ONTO THE SURFACE



DO NOT REMOVE THE OPERATOR GUARDS

1.3.3. PICTOGRAMS INDICATING OBLIGATION

The following table summarises the safety-related pictograms indicating **OBLIGATION**.



GENERIC OBLIGATION

The presence of the symbol next to the description indicates the obligation to carry out the operation/manoeuvre as described and in compliance with current safety regulations, in order to avoid risks and/or injuries.



OBLIGATION TO REFER TO THE OPERATOR'S MANUAL

Obligation, before carrying out any operation on the machine, to read the Instruction Manual supplied with the machine.



OBLIGATION TO USE LUBRICANTS RECOMMENDED BY IMA

Obligation, before changing the oil or the lubricants, to read the Instruction Manual supplied with the machine.



OBLIGATION TO WEAR PROTECTIVE GLOVES

The presence of the symbol next to the description requires the use of protective gloves by the operator, since the risk of injury is implicit.



OBLIGATION TO WEAR PROTECTIVE GOGGLES

The presence of the symbol next to the description requires the use of safety goggles by the operator, since the risk of injury is implicit.



OBLIGATION TO WEAR A PROTECTIVE HELMET

The presence of the symbol next to the description requires the use of a protective helmet by the operator since the risk of injury is implicit.



OBLIGATION TO WEAR A PROTECTIVE MASK

The presence of the symbol next to the description requires the use of a respiratory protective mask by the operator, since the risk of injury is implicit.



OBLIGATION TO WEAR SAFETY SHOES

The presence of the symbol next to the description requires the use of protective shoes by the operator, since the risk of injury is implicit.



OBLIGATION TO WEAR PROTECTIVE CLOTHING

The presence of the symbol next to the description requires the use of a protective overall by the operator, since the risk of injury is implicit.



OBLIGATION TO WEAR EARMUFFS FOR PROTECTION AGAINST NOISE

The presence of the symbol next to the description requires the use of earmuffs by the operator as the risk of injury is implicit.

1.4. HOW TO REQUEST ASSISTANCE

Robopac distribution network is at your disposal for any problem regarding technical assistance, spare parts and any new requirement you might need for your business.

For every technical service request regarding the machine, please indicate the data found on the identification plate, the approximate hours of use and the type of fault detected.

Please refer to one of the authorised service centres or directly to the address indicated for any need.

ROBOPAC S.p.A
VIA FABRIZIO DA MONTEBELLO, 81
47892 GUALDICCILO REPUBLIC OF S. MARINO (RSM)
Tel. 0549 (international ++378) 910511
Fax 0549/908549 - 905946
<http://www.aetnagroup.com>

1.5. ATTACHED DOCUMENTATION

The machine is provided with the documentation listed below, unless otherwise agreed.

- EC DECLARATION OF CONFORMITY.
- Warranty conditions.
- Pneumatic diagram.
- Wiring diagram and list of components.
- Manuals of installed commercial devices (if necessary for machine use).
- Unpacking and installation instructions.
- Quick guide for quick start.
- USB pendrive containing the information listed below.
 - Use and maintenance manual translated into various languages.
 - Spare parts catalogue.
 - Machine programming software.
 - Wiring Diagrams.

1.6. HOW TO READ THE INSTRUCTIONS FOR USE

The manual is divided into chapters, each of which describes a specific category of information.



Important

Every operator who interacts with the machine, in addition to reading all the documentation, must read and learn the information that falls within his/her operational competence.

Refer to the abbreviation that precedes the title of the chapters in the index, to search for topics to consult.

These instructions are the result of an automatic system that assembles text and illustrations, so it is possible that when changing pages, there might be interruptions in the flow of text and tables.



Important

Keep this manual for the entire duration of the machine useful life in a well known and easy to access place, available for reference any time the need should arise.

2. SAFETY INFORMATION

2.1. GENERAL SAFETY WARNINGS

- Carefully read the “Instructions for use” specified in the manual and those applied directly to the machine.
- It is important to dedicate a little time to read the “Instructions for use” in order to minimise the risks and avoid unpleasant accidents.
- Before performing any operation, the operator must make sure that he/she has understood the “instructions for use”.
- Pay attention to the safety warnings, do not misuse the machine and assess the possible residual risks.
- Caution is essential.
- Safety is also in the hands of those who interface with the machine throughout its life span.



Important

Sometimes, accidents can be caused by a “careless” use of the machine by the operator. Usually it is too late to remember what should have been done when the accident has already happened.

- Preserve the readability of the information signs and observe the indications given. The information signs may have different shapes and colours, indicating hazards, obligations, prohibitions and indications.
- The Manufacturer has designed the machine observing all the “good manufacturing rules” and the standards in force. The machine has been designed to be manufactured and equipped with devices that ensure intrinsic safety. Tampering with the safety devices and the removal of the same may create risks (even severe) for the operators.
- The personnel authorised to carry out any operation with the machine must have acknowledged experiences in the specific field.



Important

The manufacturer is not responsible for any damage to the packaged product occurred during wrapping, stabilisation and following operations.



Important

Non-compliance with the instructions given may cause risks to the safety and health of people, as well as economic damages.

2.2. SAFETY WARNINGS FOR HANDLING AND INSTALLATION

- The personnel authorised to handle the machine (load and unload) must possess the necessary technical and professional knowledge and skills.
- Handle (load and unload) the machine according to the instructions affixed directly to the machine, to the package and in the user manual.
- During handling use one or more assistants, if required. This may pose unexpected risks. In order to minimise the risks related to assistants’ involvement, you must inform them in advance on the type of work to be carried out and the behaviour to adopt.
- Handling must be carried out with the aid of specific means (crane, forklift truck etc.) by qualified personnel capable of observing the safety requirements.
- When using the lifting means, insert and/or fasten the devices (hooks, forks etc.) only into the points provided on the package and/or on the machine.
- Transport the machine with suitable means of adequate capacity.
- Make sure the machine and its components are properly fastened to the transport mean. Check the machine dimensions and affix proper signs if the machine overall dimensions exceed the values allowed by road regulations.
- The minimum and maximum temperature (during transport and/or storage) must fall within the range allowed in order to prevent damaging the electrical components.
- Install the machine only in spaces with no explosion and/or fire risks. Avoid spaces exposed to atmospheric and corrosive agents.
- Assess, prior to installation, if it is necessary to implement a “safety plan” in order to protect the safety of the personnel involved.
- Provide proper safety conditions when operating in high areas that are dangerous or hard to access.
- Install the machine according to the minimum perimeter spaces indicated by the Manufacturer and the surrounding working activities.

- Prepare a machine installation project if the machine is to interact (directly or indirectly) with another machine or with a production line.
The project must take into account all operating conditions, in order to comply with all laws in force on matter of safety in the workplace.
- Check that the installation space is properly ventilated in order to avoid unhealthy air concentration for the operators.
- Implement the most suitable solutions to minimise noise emission levels and acoustic pollution.
- Carry out the electrical connections in accordance with the best practice and in full compliance with the instructions provided by the Manufacturer and the specific regulations in force.



Important

The electrical connections must be carried out exclusively by operators with acquired and acknowledged skills in the field of intervention.

- The installer must test the machine and check, through a general test, that the machine can be commissioned without any risk for the operator.
- Dispose of all the packaging components in compliance with the standards in force in the Country of installation.



Important

Non-compliance with the instructions given may cause risks to the safety and health of people, as well as economic damages.

2.3. SAFETY WARNINGS FOR USE AND OPERATION

- The operator must be trained and possess the adequate skills required to carry out the specific tasks and must be fit to use the machine safely.
- When using the machine for the first time, the operator must read the manual and identify the control functions and simulate some operations, especially machine start and stop.
- The machine has been designed and manufactured to meet all the operating conditions indicated by the Manufacturer.



Caution - warning

Use the machine only with the original safety devices installed by the Manufacturer.

Do not tamper with, disable, remove or bypass the safety devices installed on the machine.

- Do not modify the constructive and functional characteristics of the machine in any way.
- Do not use the machine with the safety devices not properly installed and efficient.
- Always wear the Personal Protective Equipment indicated in the "Instructions for use" and that provided for by the laws in force on matter of safety in the workplace.
- Always keep the perimeter areas in suitable conditions and free from obstacles in order to minimise the risks for the operator, especially near the control station.
- The machine must be used by one operator only, that must be appointed and authorised by the employer.
- The involvement of one or more assistants when performing some operations or maintenance (ordinary) interventions may pose unpredictable risks.
In order to minimise the risks related to assistants' involvement, you must inform them in advance on the type of work to be carried out and the behaviour to adopt.
- Make sure that no unauthorised persons are within the machine operating area during its production activity and during maintenance.
- It is forbidden to climb onto the rotary table with forklift trucks. In addition to being dangerous, it can also damage the machine.



Important

Non-compliance with the instructions given may cause risks to the safety and health of people, as well as economic damages.

2.4. SAFETY WARNINGS RELATED TO MISUSE

2.4.1. REASONABLY FORESEEABLE MISUSE

- The reasonably foreseeable misuse is: “the use of the machine in a way other than that indicated in the manual, that may stem from the easily predictable human behaviour”.
The machine must be used only for wrapping and stabilising products with regular shape or with a shape that ensures a stable wrapping.
Packages containing liquids or insubstantial materials must have characteristics suitable to the product and be perfectly closed and sealed to prevent the contents from flowing out.
 Do not palletize or wrap products housed in irregularly shaped packages (boxes, liquid containers, etc.) or packages that do not guarantee their stability.
- The machine should only be used for the uses intended by the Manufacturer.
- Do not allow the machine to be used by operators that are not properly trained, informed and authorised.
- Packages containing liquid or insubstantial products must ensure that they do not leak out.
- Do not wrap bulk products of irregular shape and improperly collected to avoid an unsuitable palletization.
- Do not use the machine to wrap and stabilise living beings (animals and persons).
- Do not use the machine with wrapping material other than that provided by the Manufacturer.
- Do not use the machine as a lifting device or as a work surface (e.g. workbench).
- Do not stretch or pre-stretch the film excessively and do not wrap the product with too many wrappings in order to prevent damaging the packages and the products contained in them.
- Do not use or let the machine be used for purposes or in ways other than those intended by the Manufacturer.
- Do not use or let the machine be used with defective, deactivated and/or incorrectly installed safety devices.
- Do not continue to use the machine if malfunctions have been detected.
- Stop the machine immediately and restart it only after the normal conditions of use have been restored.
- Never carry out an intervention with the machine in operation, but only after stopping it properly, under safety conditions.
- Never use the machine without wearing the Personal Protective Equipment indicated by the Manufacturer and provided for by the laws in force on workplaces.
- Never use the machine if the scheduled maintenance interventions have not been carried out.
- Do not clean or wash the machine with aggressive products to avoid damaging the components.
- Do not replace the components with non-original spare parts or part with different design and construction features.
- Do not leave the machine unattended at the end of the production activity without shutting it down first in safety conditions.

2.4.2. EMPLOYER OBLIGATIONS

- The operator must be trained to acquire the required skills in the field of packaging machines or equivalent. Upon completing the training, ensure that the operator has understood the entire content of the operating manual, in particular the safety information.
- The operator must have the required skills and must be fit for the activities to be carried out in safety conditions.
- The employer must inform the operator on the reasonably foreseeable misuses and on the persistent residual risks.
- The operator must be capable of reading and understanding the user manual and must easily identify the safety signs.
- Allow the machine to be used only by operators that are properly trained, informed and authorised.



Important

The employer must record the specific training carried out by the operators in order to exhibit it in case of litigation.

2.5. SAFETY WARNINGS ON RESIDUAL RISKS

During design and manufacturing, the Manufacturer has paid particular attention to the residual risks that may affect the safety and health of the operators.

The residual risks are: "all the risks that persists although all safety solutions have been applied and integrated during machine design".

The list specifies the residual risks specific for this type of machine.



Danger on the infeed conveyor:

The conveyor is able to support products up to a certain length (approximately 700 mm). Longer products or improperly balanced, once placed on the conveyor, may fall onto the operator.

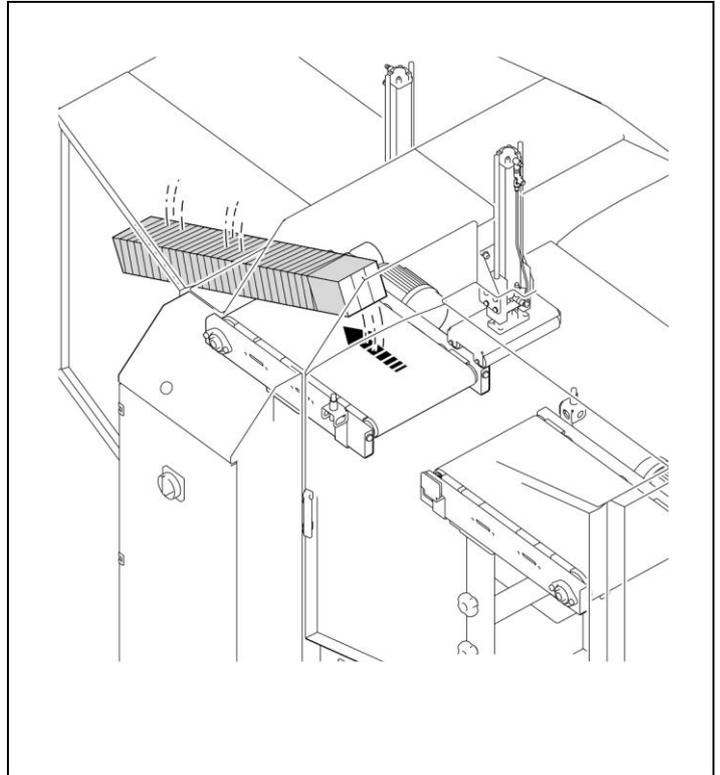
When these types of products require wrapping, arranging a support that can sustain the protruding part of the product being processed is recommended.



Danger on the outfeed conveyor:

The conveyor is able to support products up to a certain length (approximately 700 mm). Longer products or improperly balanced, once placed on the conveyor, may fall onto the operator.

When these types of products require wrapping, arranging a support that can sustain the protruding part of the product being processed is recommended.



2.6. SAFETY WARNINGS FOR ADJUSTMENTS AND MAINTENANCE

- Keep the machine in maximum efficiency conditions and perform all the scheduled maintenance operations provided for by the Manufacturer.
Proper maintenance will provide the best performance, a longer life span and constant compliance with safety requirements.
- Enable all machine safety devices before performing any maintenance and adjustment operations.
- Demarcate the surrounding areas and put in place adequate safety measures, as provided for by the standards on workplace safety, in order to prevent and minimise the risks.
- Maintenance interventions in areas that are not easily accessible or dangerous must be carried out after having ensured the necessary conditions are met.
- The personnel authorised to carry out the ordinary maintenance (adjustments, replacements etc.) must possess the necessary technical and professional knowledge and skills.
- Do not carry out interventions other than those indicated in the user manual without the express authorisation of the Manufacturer.
- Do not use products that contain corrosive and flammable substances or that are harmful to people's health.
- Wear Personal Protective Equipment as required by labour laws and as indicated in the "Instructions for Use" and/or on the machine.
- The use of similar but non-original spare parts may result in improper repairs, altered performance and economic damage.
- Use lubricants (oils or grease) recommended by the Manufacturer or with similar chemical-physical features.
- Do not dispose of polluting liquids, worn parts and maintenance waste into the environment.
- Select the components according to the chemical and physical features of the material and dispose of them separately in accordance with the applicable laws.
- All the extraordinary maintenance interventions shall be carried out only by authorised personnel with experience and expertise in the field of intervention.



Important

Non-compliance with the instructions given may cause risks to the safety and health of people, as well as economic damages.

2.7. SAFETY WARNING FOR THE ELECTRICAL EQUIPMENT

The electrical equipment has been designed and manufactured in accordance with the relevant standards.

These standards consider operating conditions based on the surrounding environment.

The list contains the conditions necessary for the correct operation of the electrical equipment.

- Ambient temperature must be within **5°C** and **40°C**.
- The relative humidity should be between **50%** (measured at **40°C**) and **90%** (measured at **20°C**).
- The installation environment must be immune to and must not be a source of electromagnetic interference or radiation (x-rays, lasers, etc.).
- The environment must not have areas with concentrations of gas and dust that are potentially explosive and/or with a fire risk.
- The products and materials used during production and maintenance must not contain contaminants or corrosive agents (acids, chemicals, salts, etc.) and must not be able to penetrate and/or come into contact with electrical components.
- During transport and storage, the ambient temperature must be between **-25°C** and **55°C**.
- The electrical equipment may still be exposed to a temperature of up to **70°C** provided that the exposure time does not exceed **24** hours.
- The electrical equipment operates correctly up to **1000 m** above sea level.



Important

If it is not possible to comply with one or more of the conditions listed, which are essential for the correct operation of the electrical equipment, it is necessary to agree at the contractual stage which additional solutions to adopt in order to create the most suitable conditions (e.g. specific electrical components, air conditioning equipment, etc.).

2.8. INFORMATION AND SAFETY SIGNS

The figure indicates the position of the safety and information signs affixed to the machine.
For each sign the relative description is specified.

1. **Electrical hazard sign**
Electrical shock hazard, do not access inside live element.
2. **Information sign**
It shows the insertion points for the lifting forks.
3. **Prohibition sign**
Do not act on the component with your hands.
4. **Danger sign**
Cutting danger.
5. **Information sign**
Ring rotation direction.
6. **Information sign**
Electrical disconnecter.
7. **Danger sign**
Hand crushing danger.
8. **Information sign**
Film winding diagram.
9. **Information sign**
Vernier, position reference.
10. **Information sign**
Film passage plate.
11. **Obligation sign**
Obligation to read instructions.
12. **Prohibition sign**
It prohibits the presence of more than one operator.

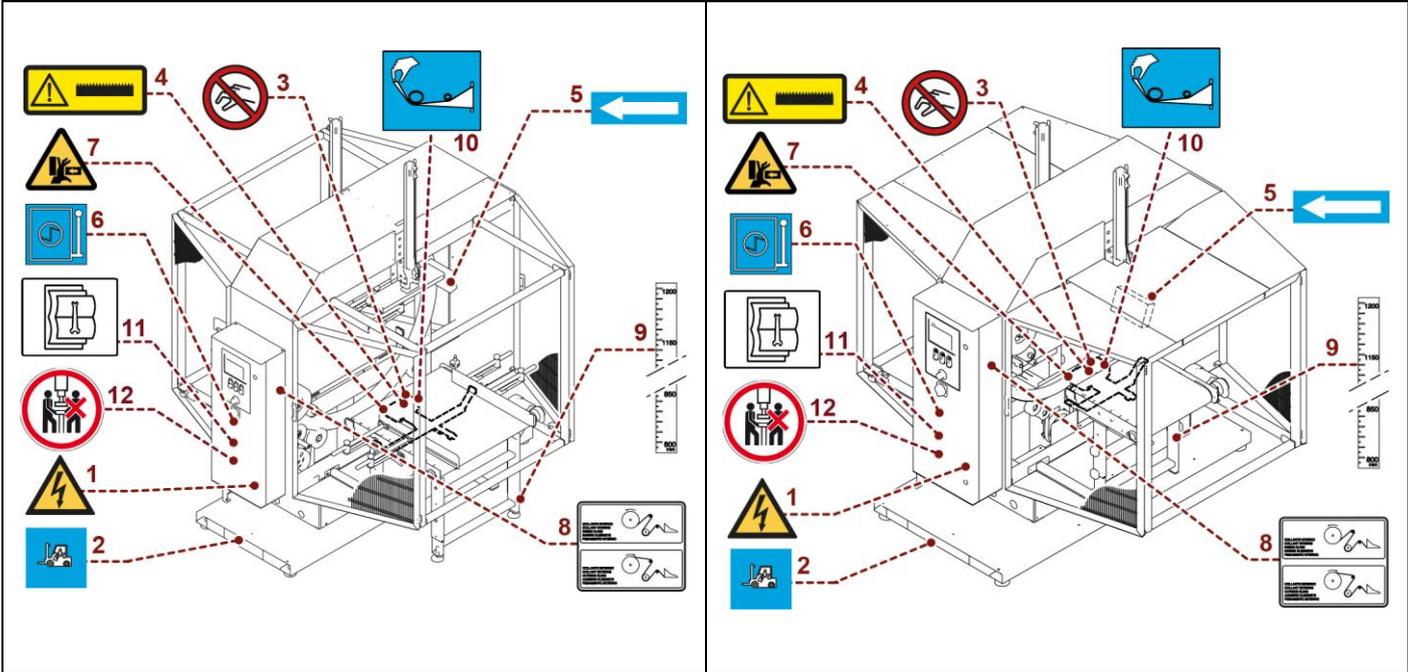


Important

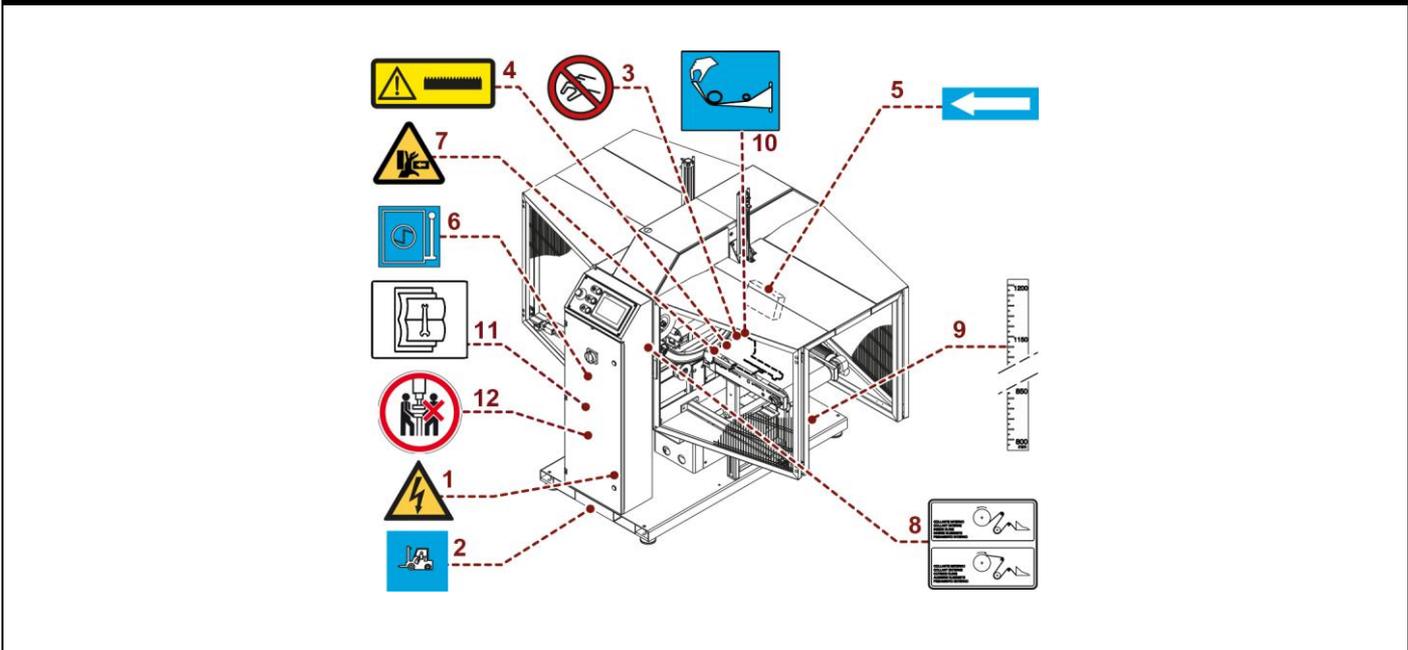
Make sure that the nameplates are clearly legible.
If not, replace and reposition them at the original position.

Orbit 12

Orbit 9



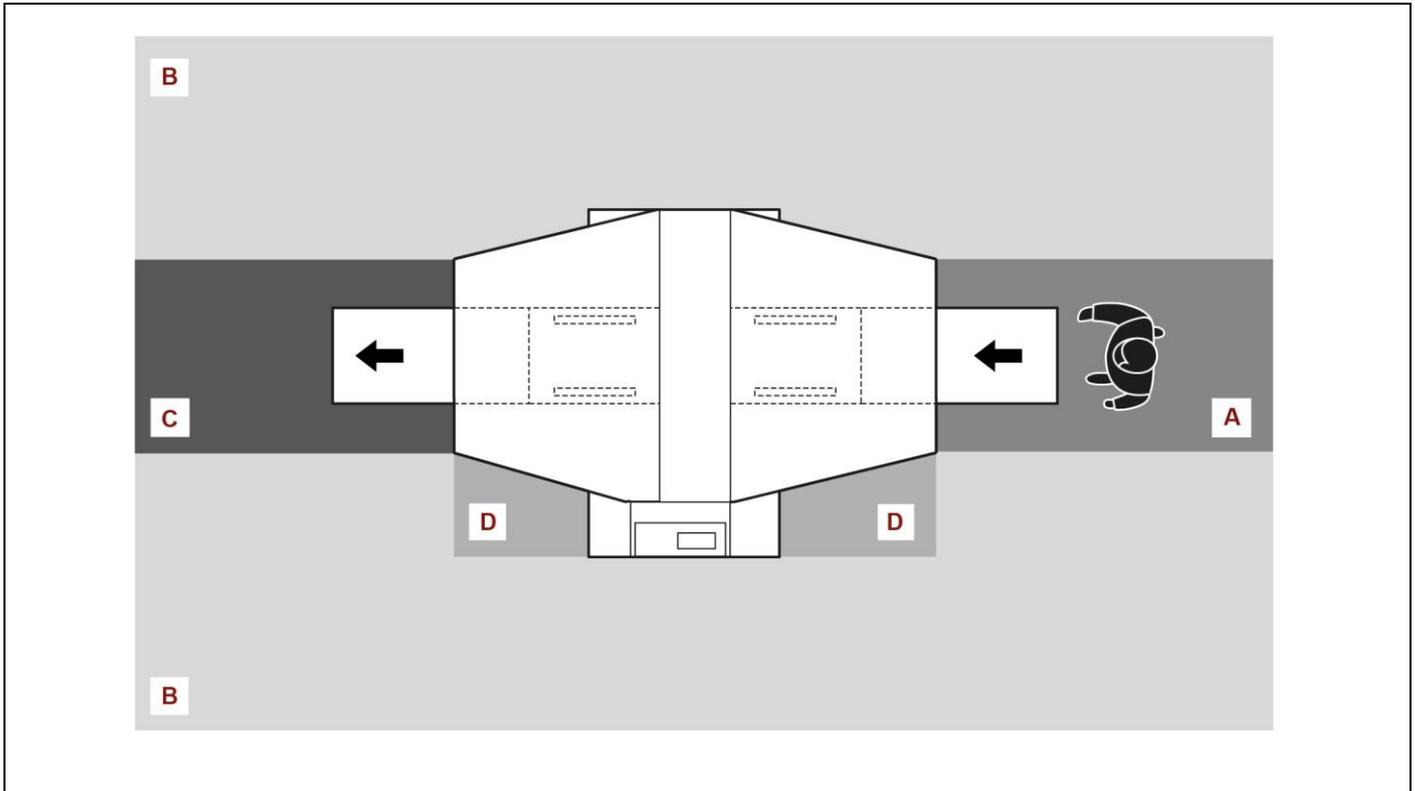
Orbit 4-6



2.9. PERIMETER AREAS

The illustration shows the perimeter working areas of the machine.

- A) Operator workstation: loading and cycle start area (*).
 - B) Perimeter area.
 - C) Product outfeed area (*).
 - D) Lateral guide adjustment area.
- (*) These areas must be suitably sized to the product *being processed*.



3. TECHNICAL INFORMATION

3.1. MACHINE GENERAL DESCRIPTION

The above-mentioned machine is a rotary ring wrapping machine intended to spiral wrap products of varying size and shape.

Stretch film spools commonly available on the market are used for wrapping.

Wrapping is performed by combining film spool rotation with the horizontal movement of the product.

The operator must place the product on the machine and start the cycle using the foot pedal control, subsequent wrapping, length wrapping, film fastening and cutting operations are automatic.

The machine is equipped with a series of safety devices designed to avoid any injuries to the operator or other persons using the machine.



Danger - warning

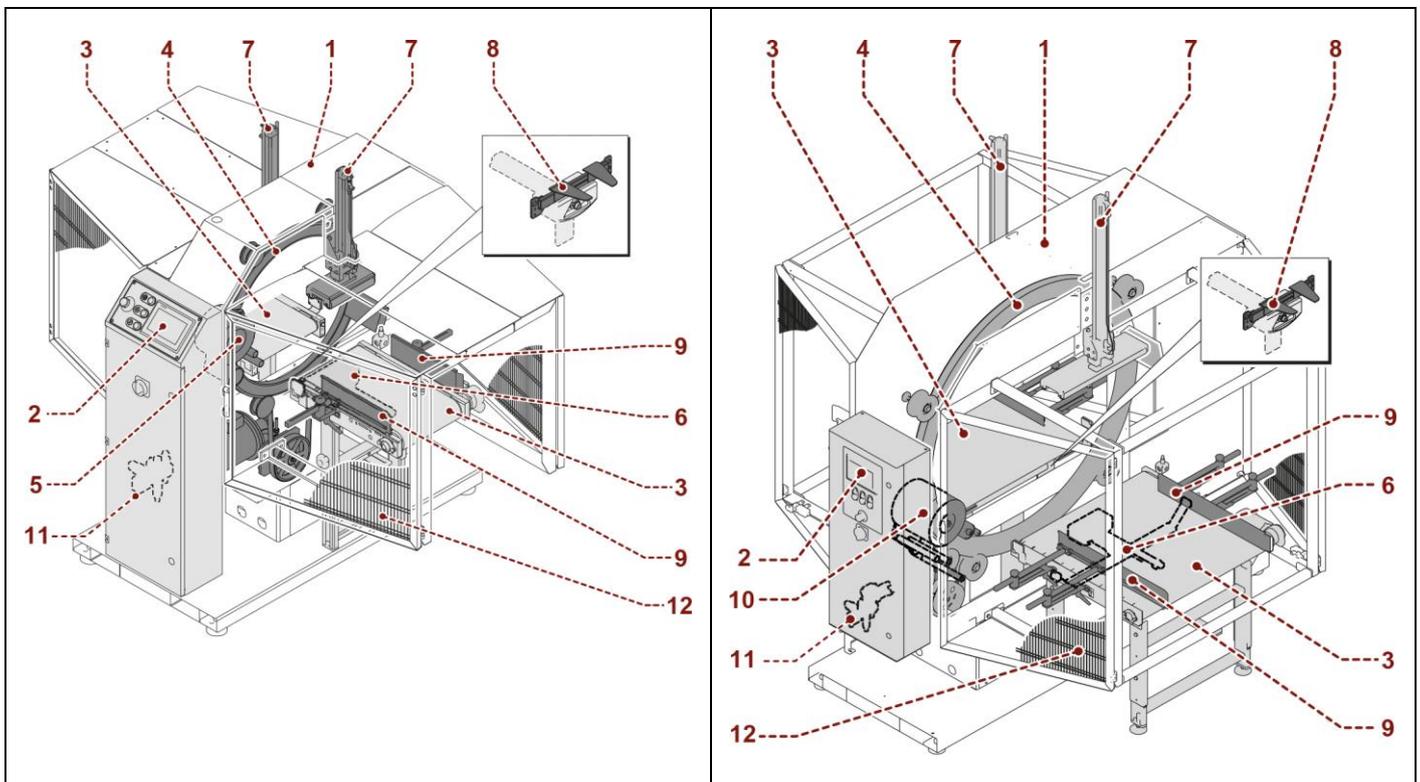
This machine is normally installed in workshops or industrial environments protected from the atmospheric agents.

Using this machine in explosive environments or when exposed to atmospheric agents is strictly forbidden.

The illustration shows, for information purposes only, the machine models, and the legend lists the parts.

Legend:

1. **Base:**
is the main structure of the machine.
2. **Control panel:**
it allows activating machine functions.
3. **Belt conveyor:**
system used to transport the product to be wrapped, consisting of motorised roller conveyors.
4. **Rotary ring unit:**
it is made up of a rotary ring with a belt drive, driven by an electric motor controlled by an inverter.
5. **Spool carriage unit:**
it is made up of a quick load spool carriage spindle and an idler roller that controls wrapping tension.
The unit can be accessed through door (12).
6. **Clamping and cutting unit:**
it allows clamping and cutting the film at the end of the wrapping operation.
7. **Pressers unit:**
they hold the product against the conveyors.
The positioning is automatic.
8. **Driving axle: (Optional)**
for short product support.
9. **Guides: (Optional)**
adjust the width for product containment.
10. **Spool carriage unit with dancer roller (Optional) (Orbit 6-9)**
it is made up of a quick load spool carriage spindle and an idler roller that controls wrapping tension and by a film recovery device.
The unit can be accessed through door (12).
11. **Valve group:**
It controls the pneumatic movements.



3.1.1. MACHINE MODELS DESCRIPTION

During the operating stages just one operator is necessary to perform the product feeding, cycle start and wrapped product unloading operations.

According to the different operating requirements, this machine can be supplied in different models and configurations.

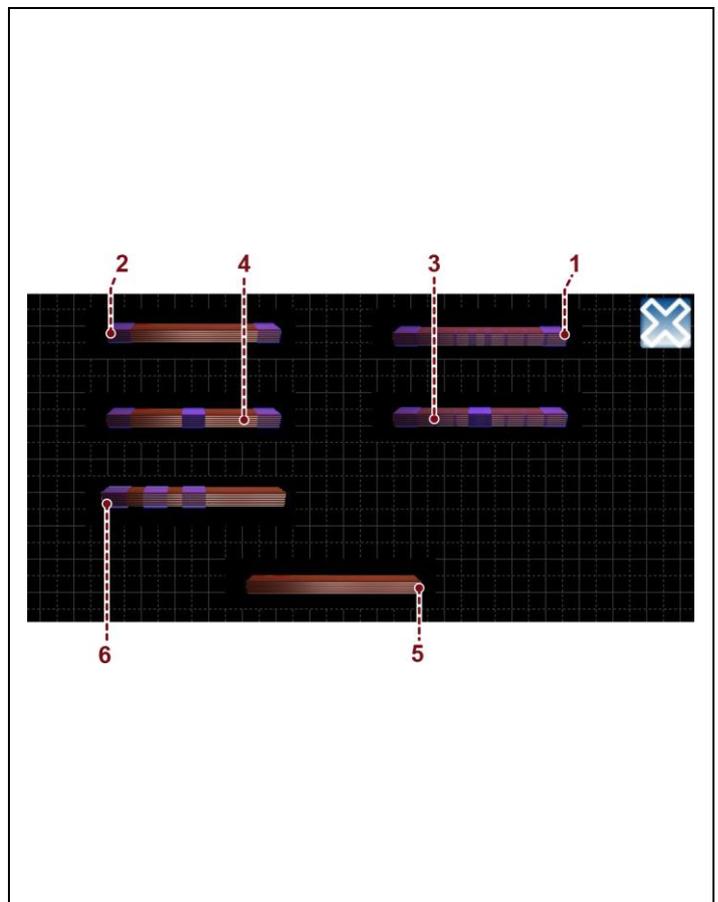
<i>Machine</i>	<i>Spool</i>
Orbit 4	125
Orbit 6	125
Orbit 9	125
Orbit 9	250
Orbit 12	125 / 250

3.2. DESCRIPTION OF THE OPERATION CYCLE

Performable wrapping cycles

Product wrapping can be:

1. **“Total” wrapping**
The product is completely spiral wrapped with additional wraps on head and tail.
2. **“Head - tail” wrapping:**
The product is only wrapped at the head and tail.
3. **“Total” and “central bands” wrapping**
The product is completely wrapped in a spiral, with additional wraps on head and tail, and with a series of reinforcing wrappings spaced using a settable time.
4. **“Head - tail” and “central bands” wrapping**
The product head and tail are wrapped with a series of reinforcing wrappings spaced using a settable time.
5. **By-pass cycle**
The product passes through the machine without being wrapped.
6. **“Head and additional bands” wrapping**
The product is wrapped at the head and with a series of additional reinforcing wrappings in quantities and distances that can be set through the corresponding parameters.



“Total” wrapping

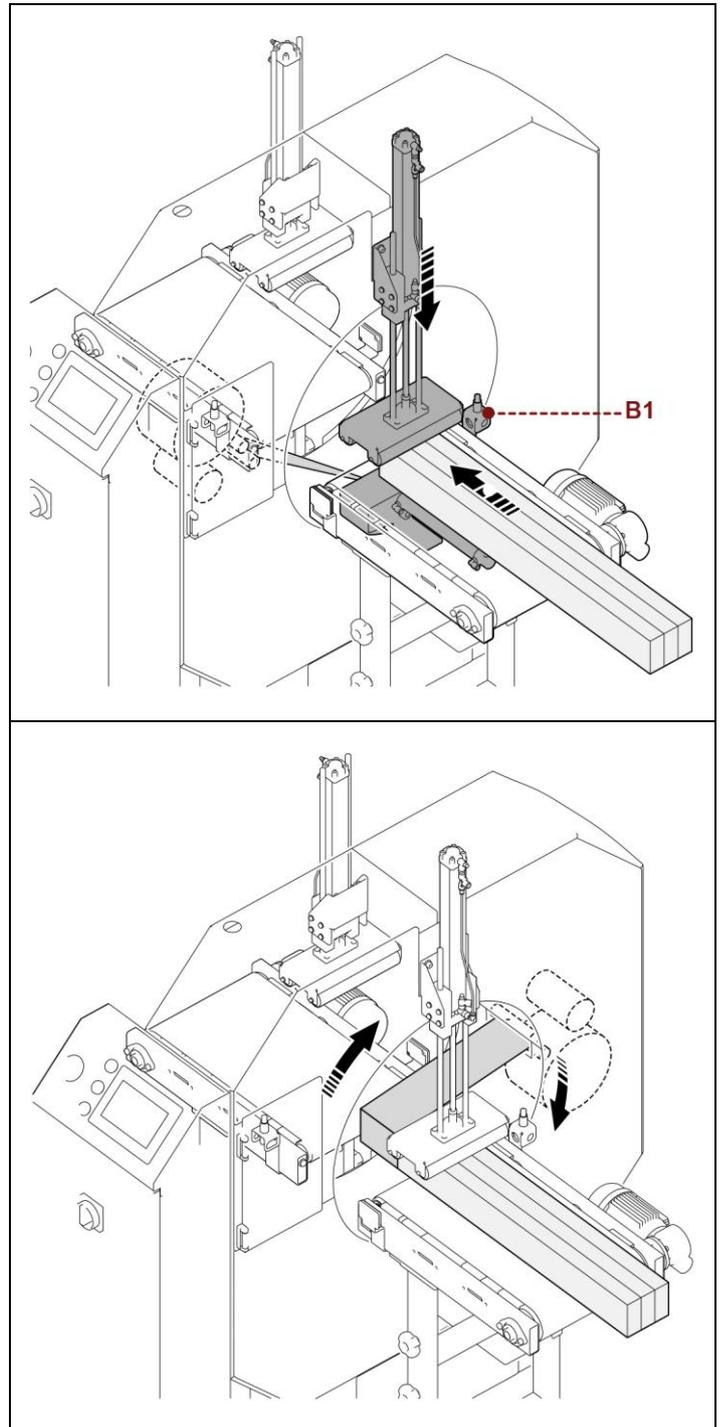
After the product has been placed on the infeed conveyor, press the button “Start” on the control panel to enable the automatism and press the foot pedal control to start the work cycle.

Phase 1

The conveyor starts and moves the product towards the rotary ring.

The product engages photocell (B1), the infeed presser lowers and blocks the product, the “head positioning” timer starts.

When the timer count is over, the roller conveyor stops, the rotary rings starts and activates the “head and tail wraps” count; the head of the product is wrapped.



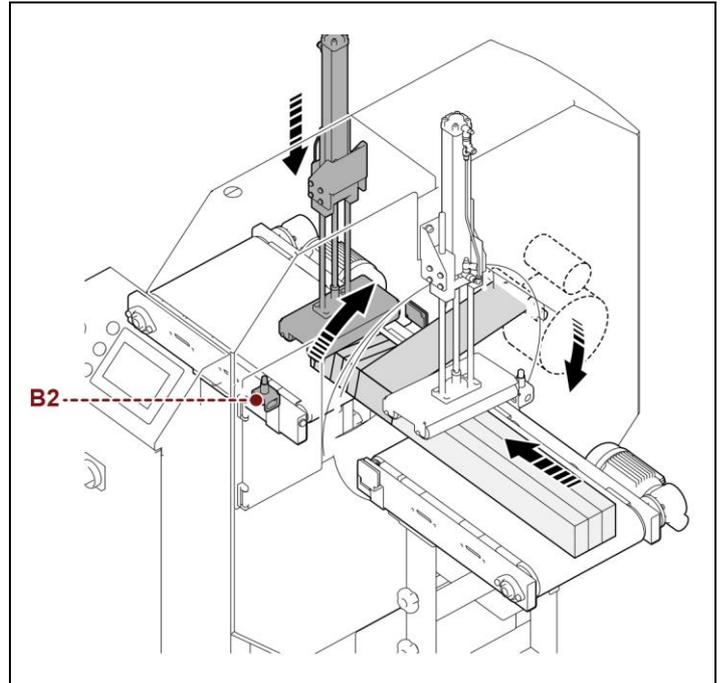
Phase 2

When the “head and tail wraps” count is completed, the conveyor restarts and product length wrapping begins. The product moves forward and engages photocell (B2), the outfeed presser lowers on the product while the machine continues to wrap the product.



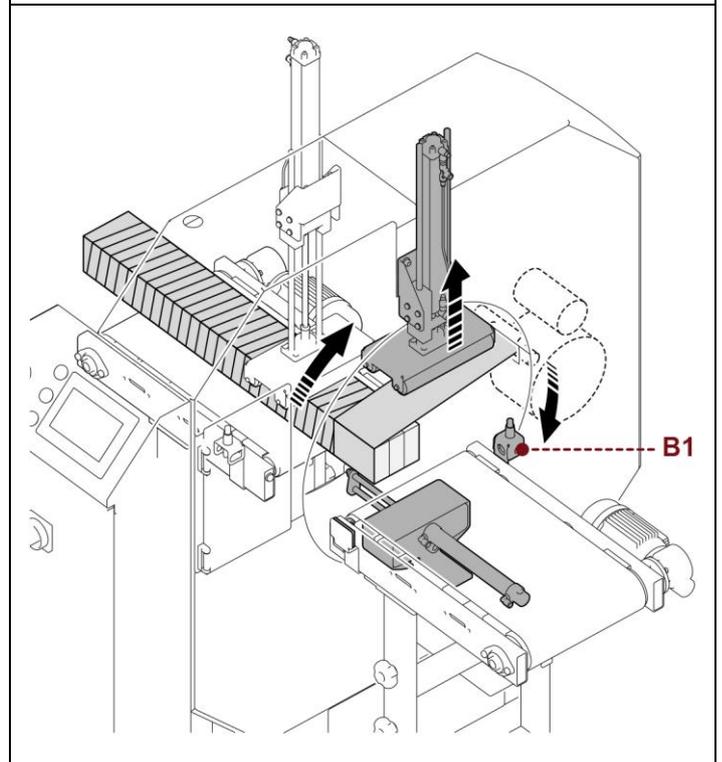
Important

The overlapping of film wraps is defined by the conveyor speed, the slewing ring speed as well as by the film width.



Phase 3

The product moves forward disengaging photocell (B1), the infeed presser rises, the “tail positioning” timer starts. When the timer count is over, the outfeed conveyor stops, the “head and tail wraps” count starts; the tail part of the product is wrapped while the clamp advances to hook the film at the last wrap of the rotary ring.



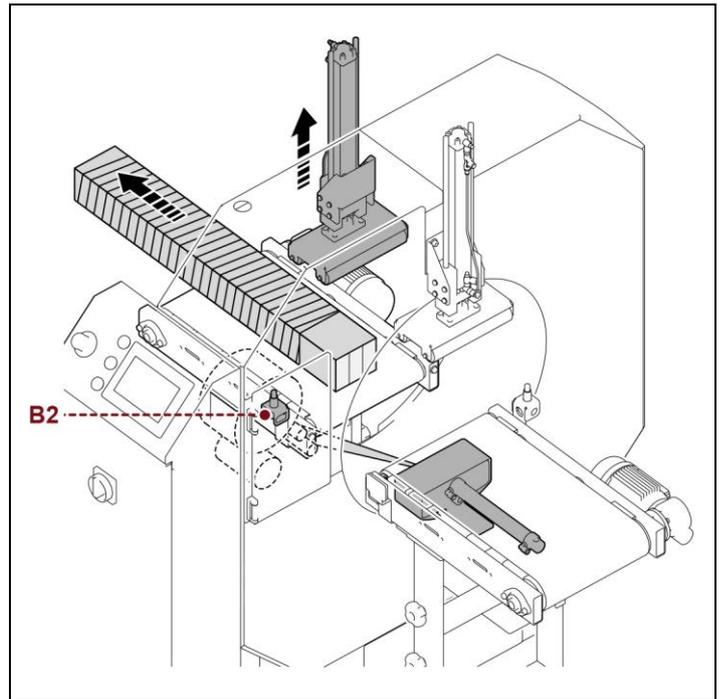
Phase 4

When the “head and tail wraps” count is completed, the rotary ring stops while the clamp blocks and cuts the film as it recedes.

The outfeed conveyor restarts.

The product disengages the photocell (B2), the outfeed presser rises and the “conveyor unloading” timer starts.

When timer count is over, the conveyor stops and the totally wrapped product can be removed from the machine.



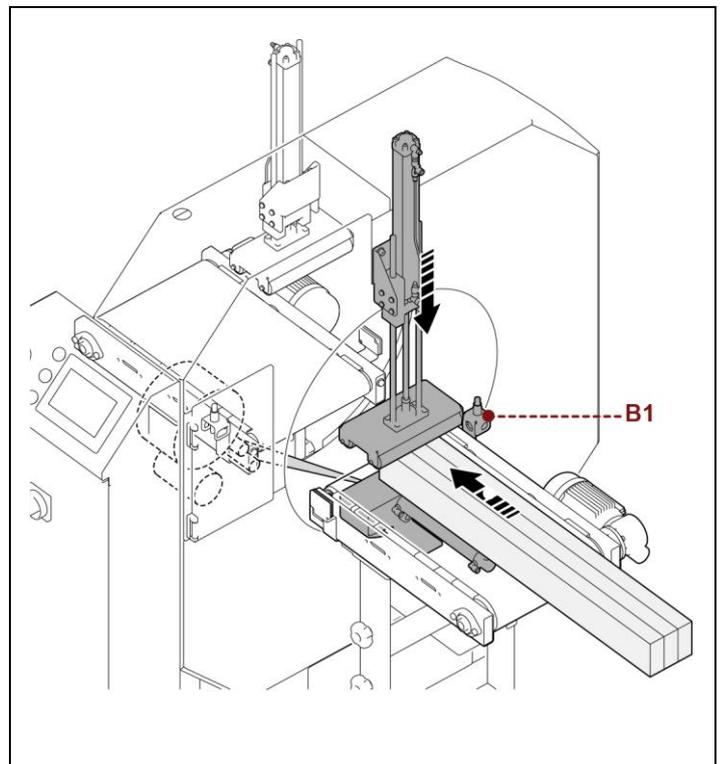
“Head - tail” wrapping

After the product has been placed on the infeed conveyor, press the button “Start” on the control panel to enable the automatism and press the foot pedal control to start the work cycle.

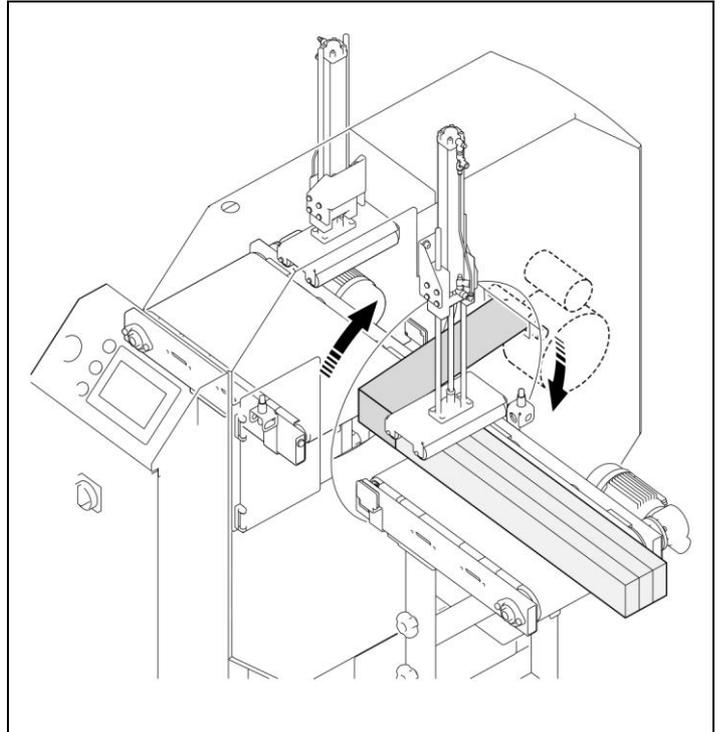
Phase 1

The conveyor starts and moves the product towards the rotary ring.

The product engages photocell (B1), the infeed presser lowers and blocks the product, the “head positioning” timer starts.

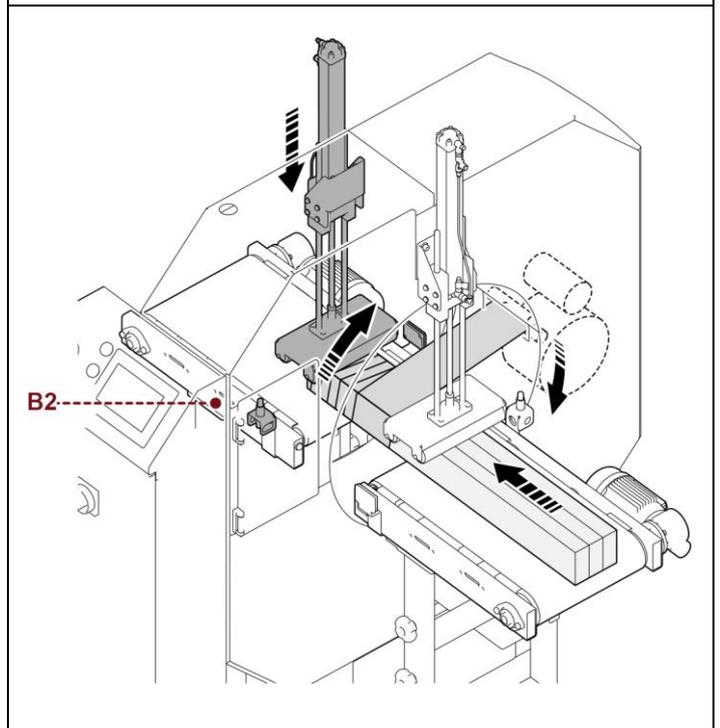


When the timer count is over, the roller conveyor stops, the rotary rings start and activates the “head and tail wraps” count; the head of the product is wrapped. At the last wrap of the rotary ring, the clamp comes out to hook the film; the rotary ring stops while the clamp blocks and cuts the film as it recedes.



Phase 2

Infeed and outfeed conveyors start. The product moves forward and engages photocell (B2). The outfeed presser lowers on the product.

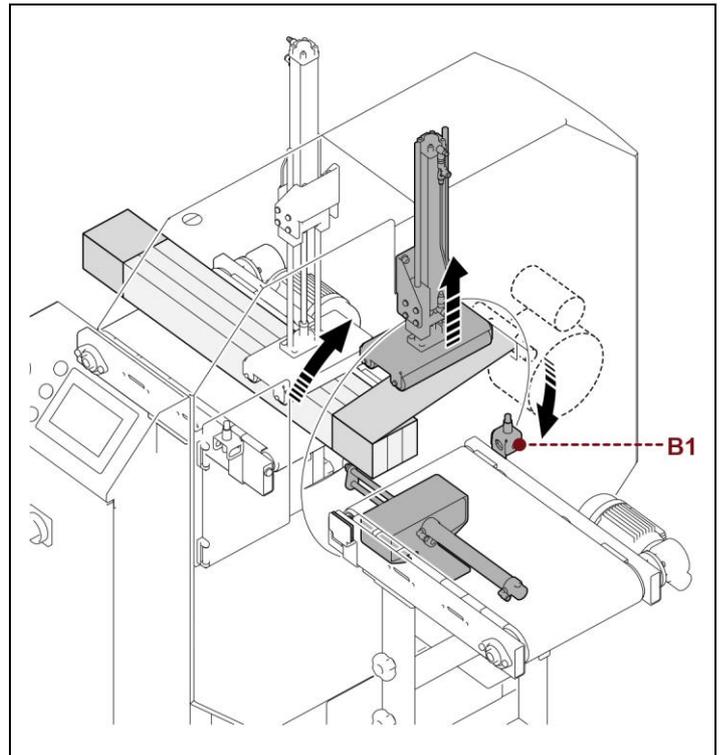


Phase 3

The product moves forward disengaging photocell (B1), the infeed presser rises and the ring starts rotating.

After one revolution, conveyors turn on and the “tail positioning” timer starts.

When the timer count is over, the outfeed conveyor stops, the “head and tail wraps” count starts; the tail part of the product is wrapped while the clamp advances to hook the film at the last wrap of the rotary ring.



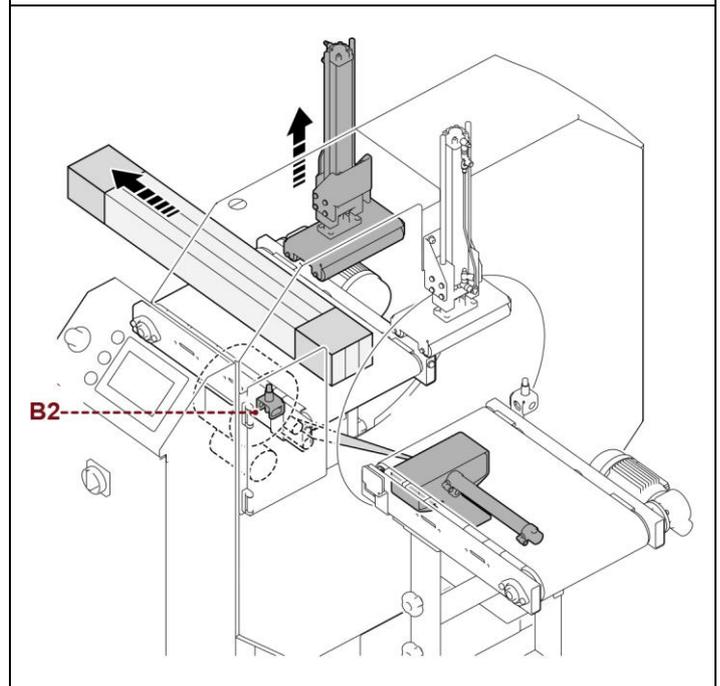
Phase 4

When the “head and tail wraps” count is completed, the rotary ring stops while the clamp blocks and cuts the film as it recedes.

The outfeed conveyor restarts.

The product disengages the photocell (B2), the “conveyor unloading” timer starts.

When timer count is over, the conveyor stops and the totally wrapped product can be removed from the machine.



“Total” and “central bands” wrapping

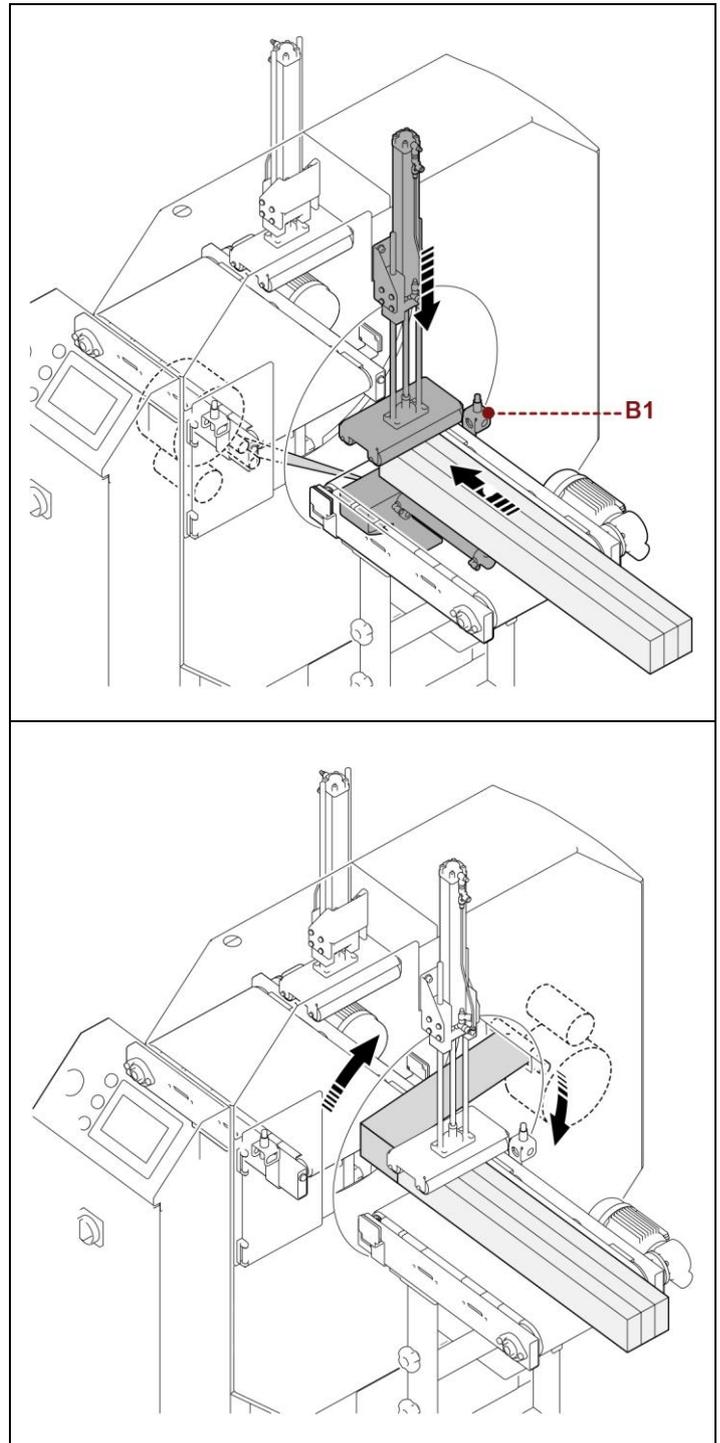
After the product has been placed on the infeed conveyor, press the button “Start” on the control panel to enable the automatism and press the foot pedal control to start the work cycle.

Phase 1

The conveyor starts and moves the product towards the rotary ring.

The product engages photocell (B1), the infeed presser lowers and blocks the product, the “head positioning” timer starts.

After the timer count is over, the conveyor stops; the rotary ring starts counting the “reinforcing wrappings”; the head of the product is wrapped.



Phase 2

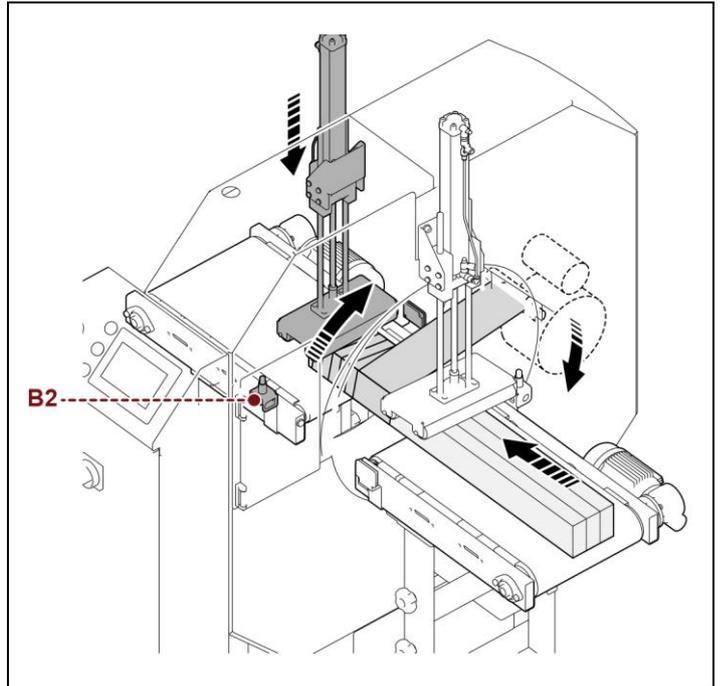
Once the “reinforcing wrappings” count is over, the conveyor restarts and the product is wrapped longitudinally.

The product moves forward and engages photocell (B2), the outfeed presser lowers on the product while the machine continues to wrap the product.



Important

The overlapping of film wraps is defined by the conveyor speed, the slewing ring speed as well as the film width.



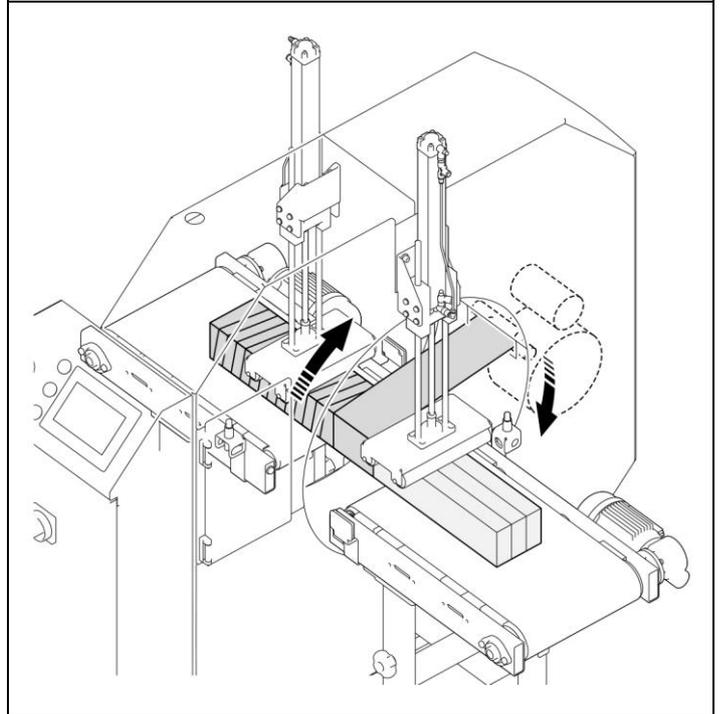
Phase 3

The “central bands” timer starts; at count completed, the conveyor stops, the rotary ring starts and counts the “reinforcing wrappings” set; the product is wrapped for the number of reinforcing wraps set.



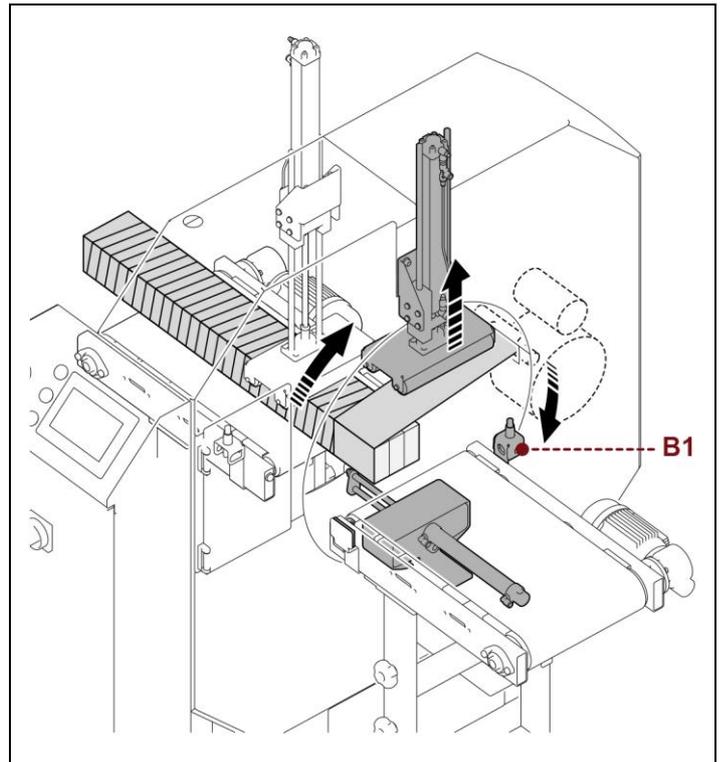
Important

The number of central bands is determined by the “central bands” timer, the conveyor speed and the product length.



Phase 4

The product moves forward disengaging photocell (B1), the infeed presser rises, the “tail positioning” timer starts. After timer count is over, the outfeed conveyor stops and the “reinforcing wraps” count is started; the tail part of the product is wrapped while the clamp advances to hook the film at the last wrap of the rotary ring.



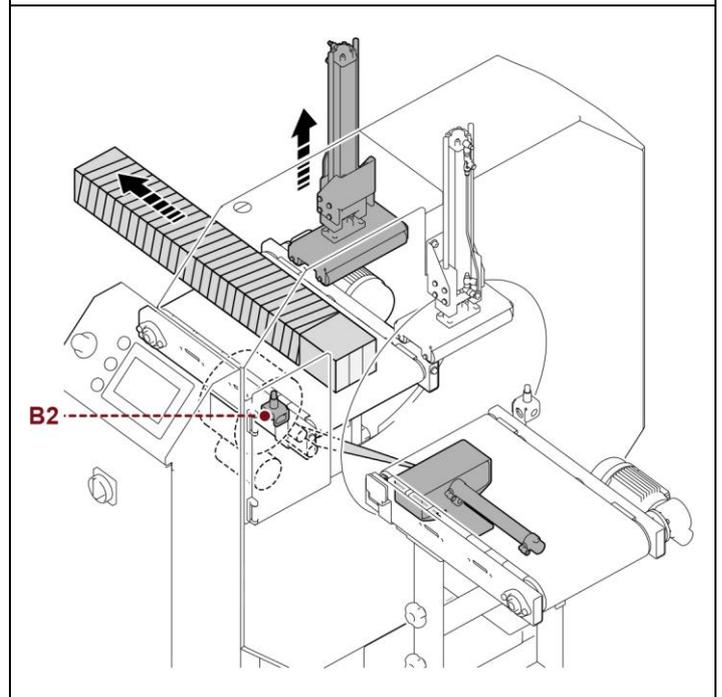
Phase 5

When the “reinforcing wraps” count is completed, the rotary ring stops while the clamp locks and cuts the film while it retracts.

The outfeed conveyor restarts.

The product disengages the photocell (B2), the outfeed presser rises and the “conveyor unloading” timer starts.

When timer count is over, the conveyor stops and the totally wrapped product can be removed from the machine.



“Head-tail” and “central bands” wrapping

After the product has been placed on the infeed conveyor, press the button “Start” on the control panel to enable the automatism and press the foot pedal control to start the work cycle.

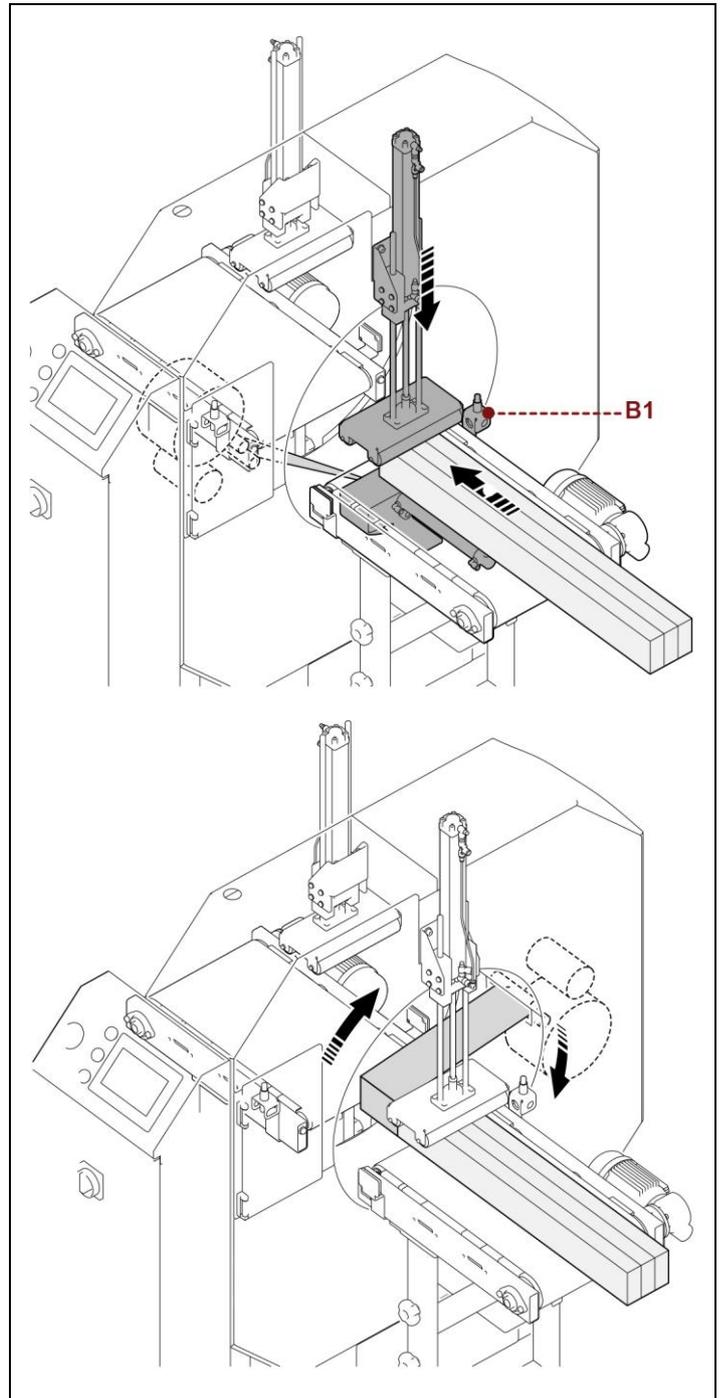
Phase 1

The conveyor starts and moves the product towards the rotary ring.

The product engages photocell (B1), the infeed presser lowers and blocks the product, the “head positioning” timer starts.

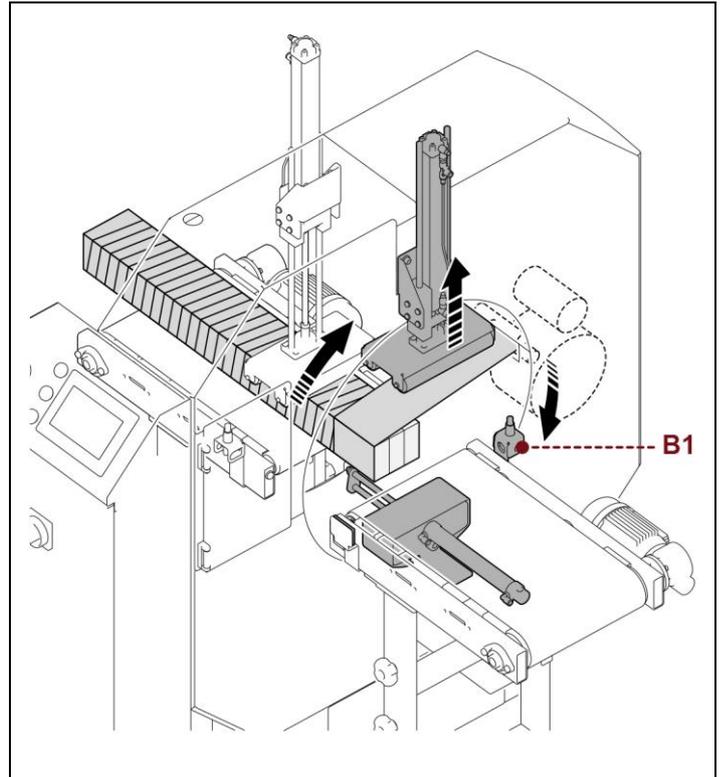
When the timer count is over, the roller conveyor stops, the rotary rings starts and activates the “head and tail wraps” count; the head of the product is wrapped.

At the last wrap of the rotary ring, the clamp comes out to hook the film; the rotary ring stops while the clamp blocks and cuts the film as it recedes.



Phase 2

Infeed and outfeed conveyors start.
 The product moves forward and engages photocell (B2).
 The outfeed presser lowers on the product.

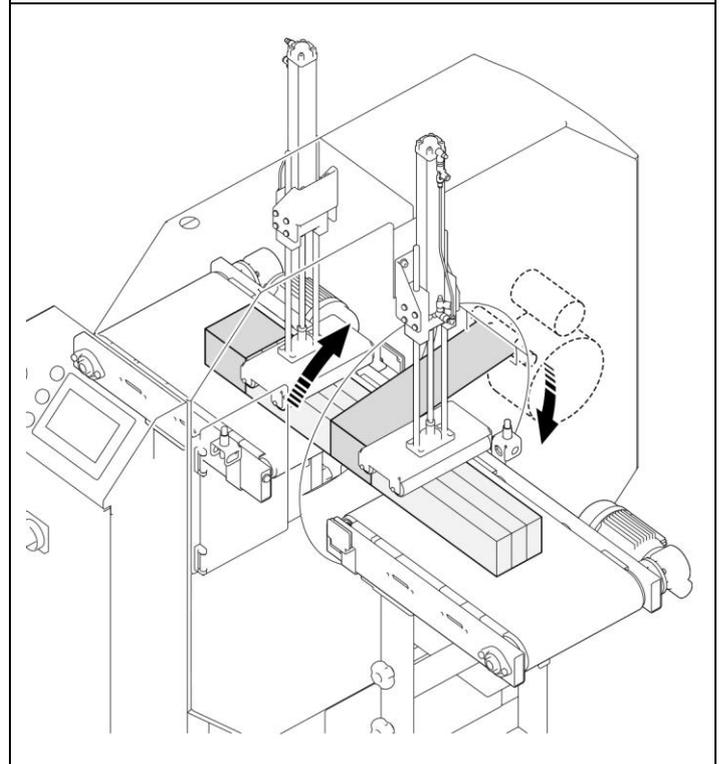


Phase 3

The “central bands” timer starts; at count completed, the conveyor stops, the rotary ring starts and counts the “reinforcing wrappings” set; the product is wrapped for the number of reinforcing wraps set.



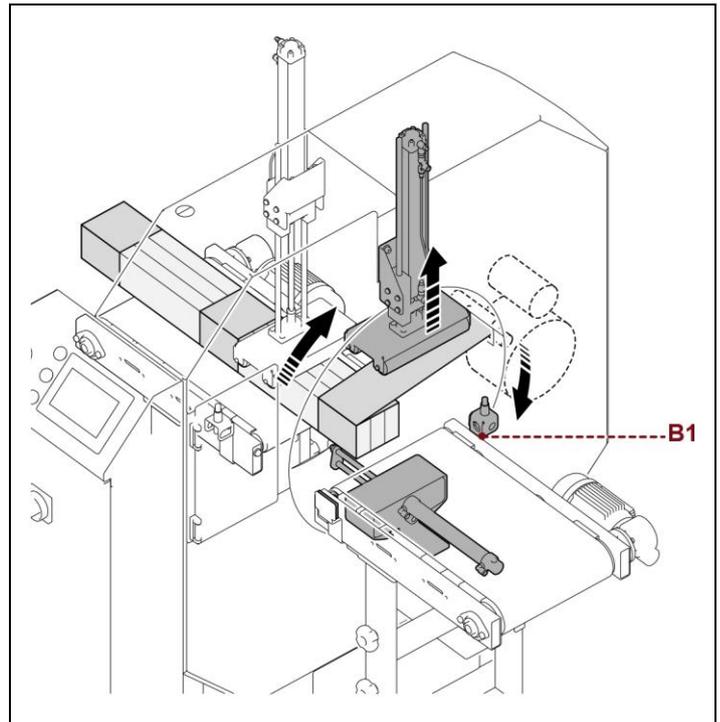
Important
 The number of central bands is determined by the “central bands” timer, the conveyor speed and the product length.



Phase 4

The product moves forward disengaging photocell (B1), the infeed presser rises and the ring starts rotating. After one revolution, conveyors turn on and the “tail positioning” timer starts.

When the timer count is over, the outfeed conveyor stops, the “head and tail wraps” count starts; the tail part of the product is wrapped while the clamp advances to hook the film at the last wrap of the rotary ring.



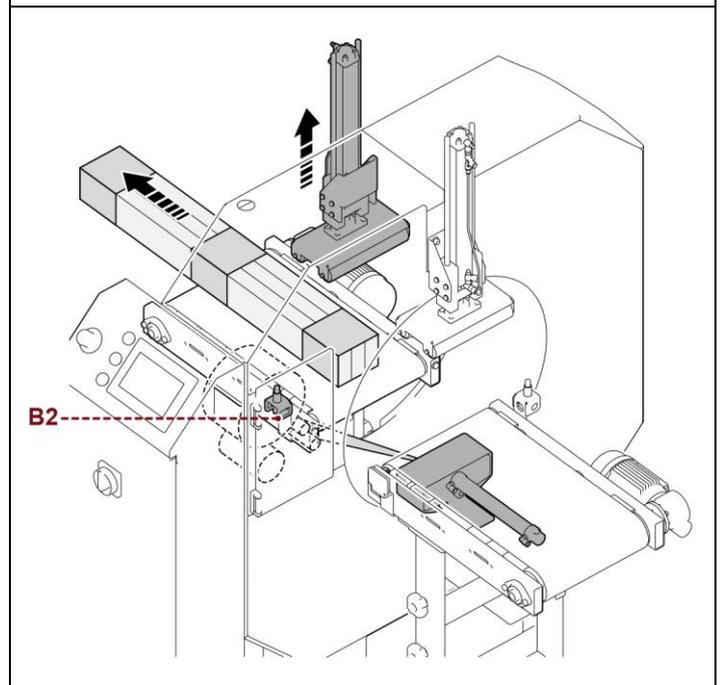
Phase 5

When the “head and tail wraps” count is completed, the rotary ring stops while the clamp blocks and cuts the film as it recedes.

The outfeed conveyor restarts.

The product disengages the photocell (B2), the “conveyor unloading” timer starts.

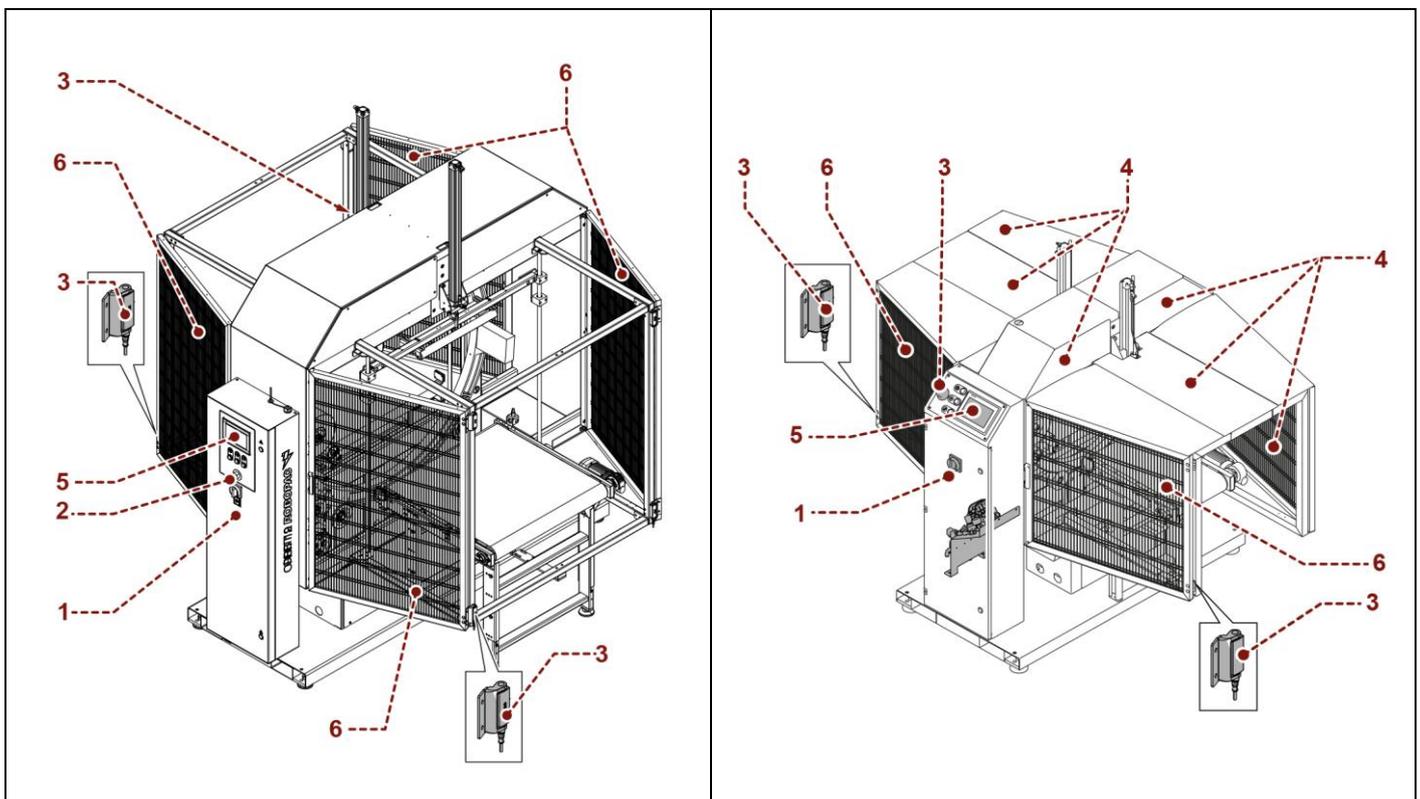
When timer count is over, the conveyor stops and the totally wrapped product can be removed from the machine.



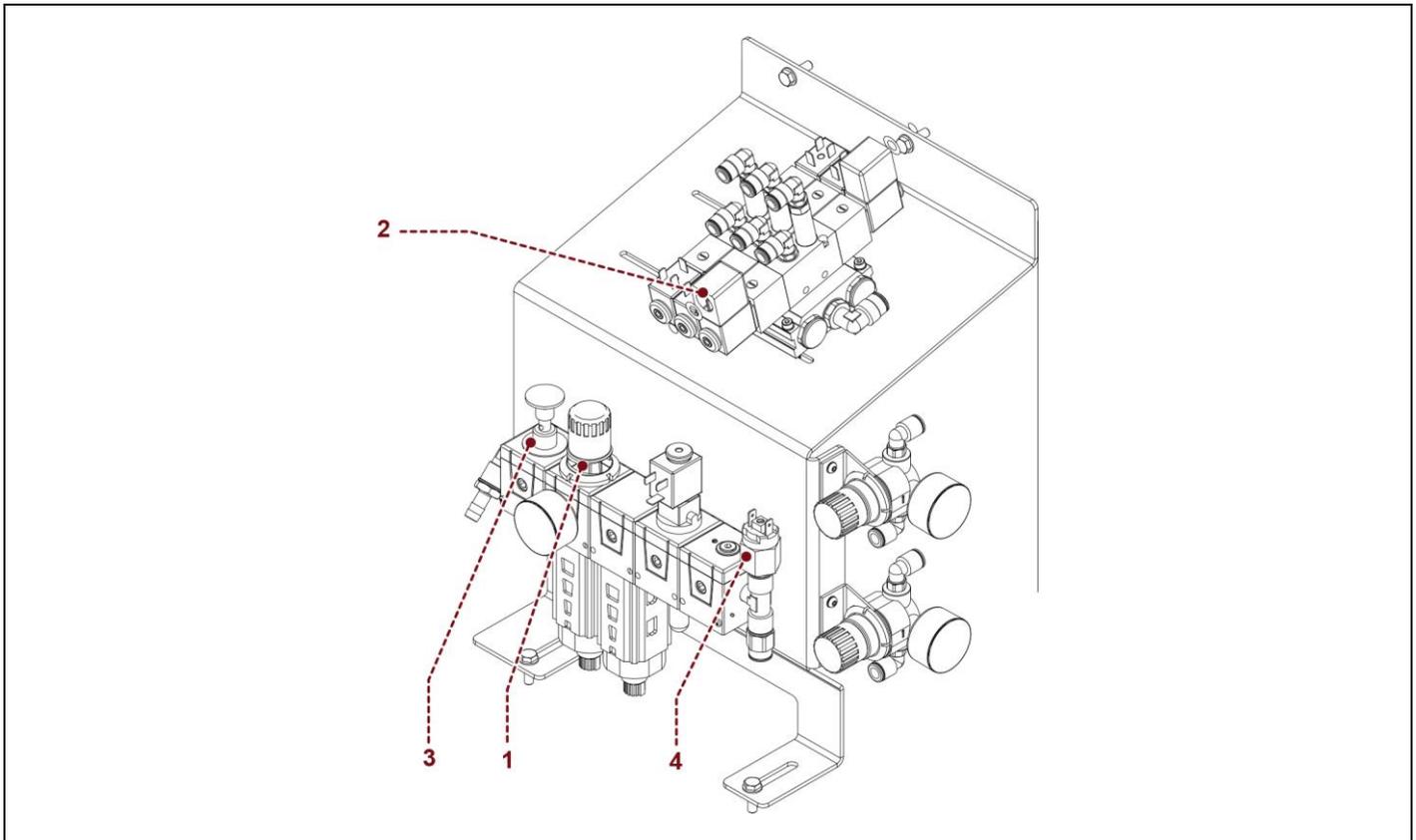
3.3. SAFETY DEVICE DESCRIPTION

The figure shows the position of the devices on the machine.

1. **Main switch**
It cuts off the power supply to the machine and can be padlocked to prevent use by unauthorised people.
2. **Emergency buttons**
When pressed they immediately stop the machine in emergency conditions.
To reset, rotate the button in the direction indicated by the arrow.
3. **Microswitch on the door**
It disables any function of the machine when the door is opened.
4. **Fixed guards**
They avoid access to the inner parts of the machine.
5. **Alarm warnings**
The operator panel display indicates any anomalies that may occur on the machine.
6. **Mobile guards**
They avoid access to the inner parts of the machine.



1. **General release solenoid valve:**
It closes compressed air mains supply when the machine is not powered.
2. **Bi-stable solenoid valve:**
It stops all pneumatically driven movements when electricity is disconnected, both in case of a blackout and when the emergency button is pressed.
3. **Padlockable air inlet tap:**
If closed and padlocked, machine cannot be started by unauthorised personnel.
4. **Pressure switch:**
It sets the machine to emergency mode when line pressure is lower than the set value.



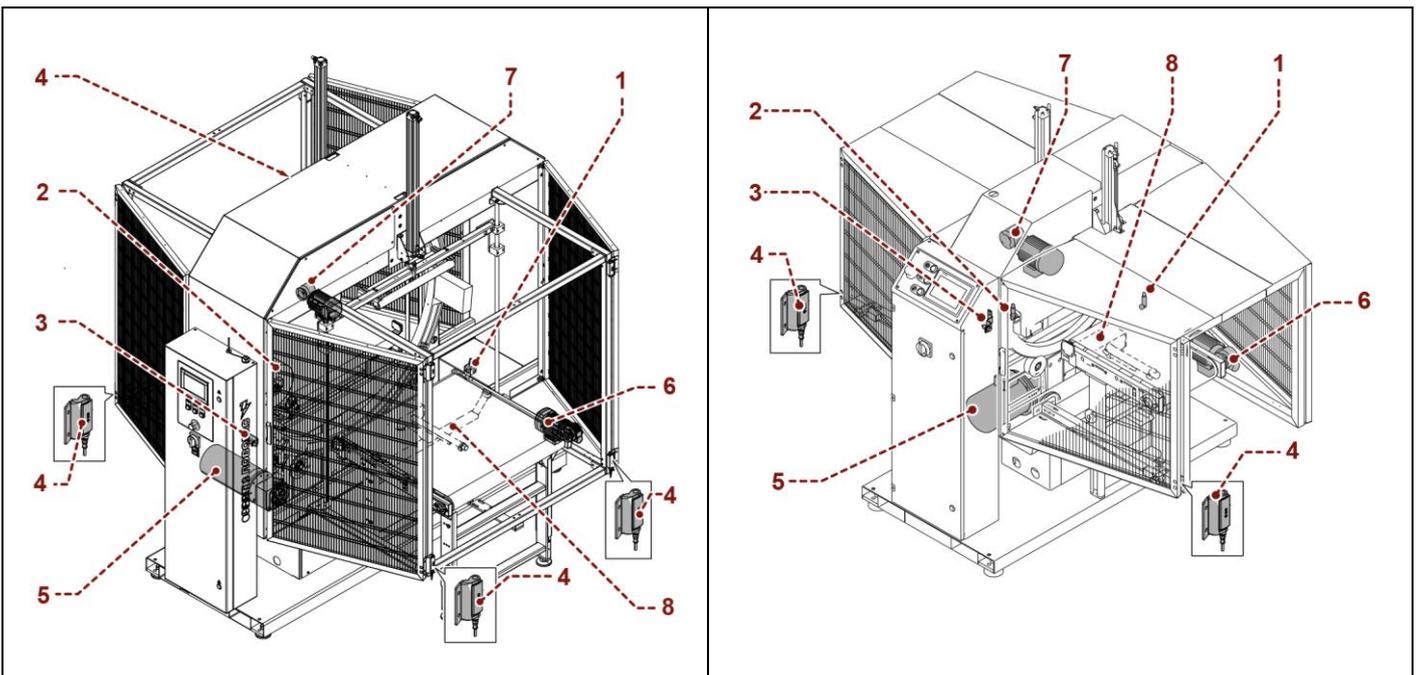
3.4. DESCRIPTION OF ELECTRICAL DEVICES

The figure shows the position of the devices on the machine.

1. **Photocell (B1)**
It detects product presence on the infeed conveyor.
2. **Photocell (B2)**
It detects product presence on the outfeed conveyor.
3. **Timing sensor (SQ3)**
It detects the rotary ring in the start cycle position (machine set up).
4. **Microswitch (SQ1)**
The machine stops when the guard is opened.
5. **Electric motor**
It activates the rotary ring.
6. **Electric motor**
It activates the infeed conveyor.
7. **Electric motor**
It activates the outfeed conveyor.
8. **Sensor**
It detects the clamp in the "back" position.



Important
For further details see the wiring diagram.



3.5. DESCRIPTION OF PNEUMATIC DEVICES

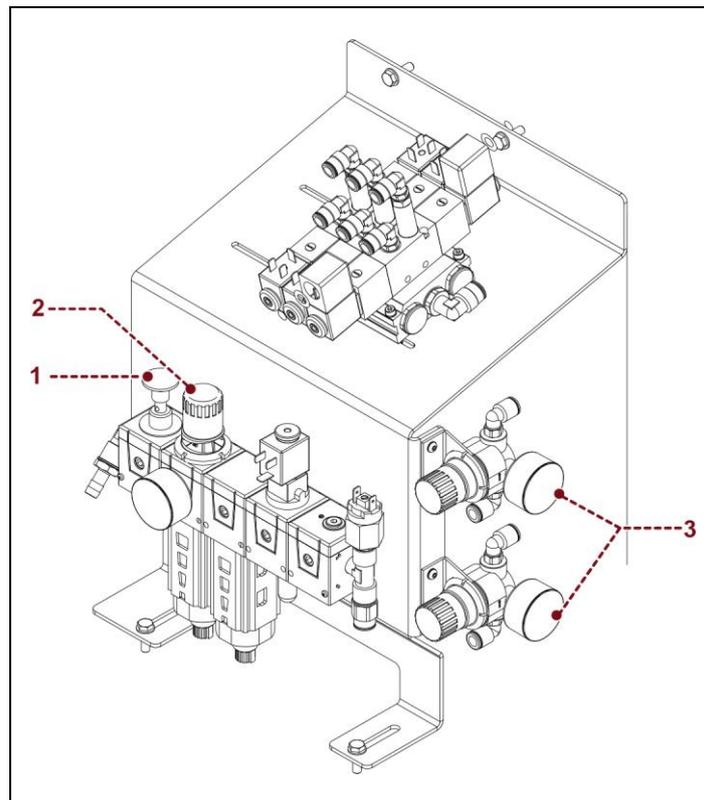
The figure shows the position of the devices on the machine.

1. **Tap**
To eliminate the pneumatic pressure inside the machine.
2. **Pressure regulator with filter and pressure gauge**
To adjust the general pressure of the pneumatic system.
Turn the knob to change the pressure values indicated on the pressure gauge.
3. **Pressure regulator with pressure gauge**
To adjust the pressure of the infeed/outfeed pressers.



Important

For further details see the pneumatic diagram.



3.6. DESCRIPTION OF ACCESSORIES ON REQUEST

- Spool carriage with 50 mm internal diameter (Orbit 4 and 6)
- Infeed and outfeed belt conveyor unit (length 1500 mm and 3000 mm)
- Side guide unit (roller or skid guides) for standard conveyors (length 600 mm)
- Side guide unit (roller or skid guides) for optional conveyors (length 1500 mm and 3000 mm)
- Spool carriage unit with dancer roller (Orbit 6 and 9)
- Driving axle
- Gas spring (Orbit 4 - 6 - 9)
- Infeed and outfeed conveyor unit

Upon request, the conveyors are equipped with idle rollers, 1000 or 2000 mm long, to be connected to the roller conveyors. The conveyors have a double function: product accumulation and extra support.

3.7. TECHNICAL SPECIFICATIONS

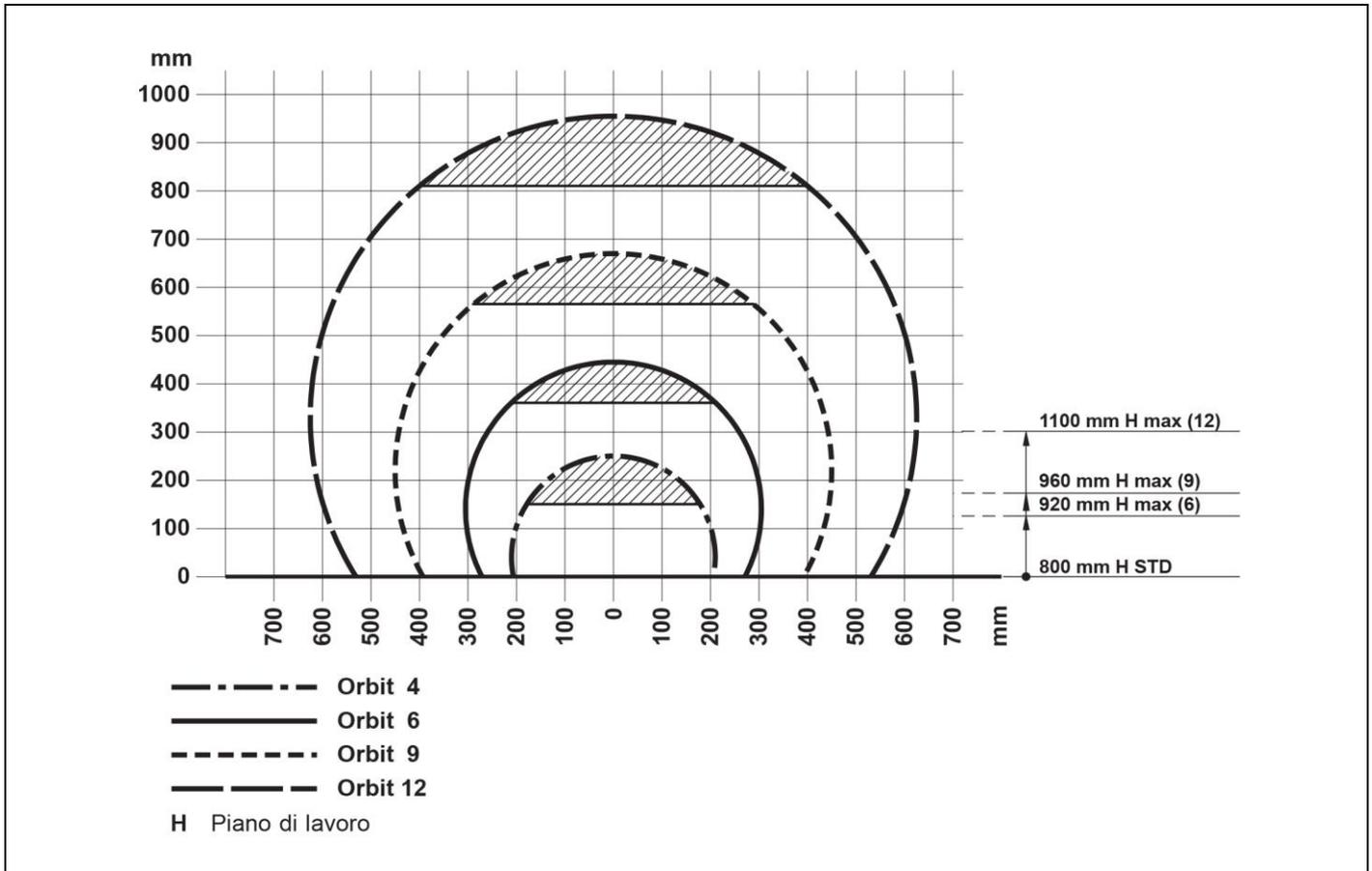
<i>Machine</i>	<i>Spool</i>	<i>Power</i>	<i>Absorption</i>	<i>Air consumption</i>	<i>Max pressure</i>
		kW	A	Nl/cycle	Bar
			Voltage (V)		
			400 + N three-phase		
Orbit 4	125	0.9	5.4	3.5	3/6
Orbit 6	125	1.1	6.7	5	3/6
Orbit 9	125	1.1	6.7	9.4	3/6
Orbit 9	250	1.1	7	10.8	3/6
Orbit 12	125/250	2	12	14.3	3/6

3.7.1. PRODUCT DIMENSIONS

The dimensions (width and height) of the product sections that can be processed must be kept within the limits marked on the chart. The above-mentioned data are valid when the section is uniform for the whole length of the product.

For best quality results, the product cross section should be as close as possible to the machine diameter.

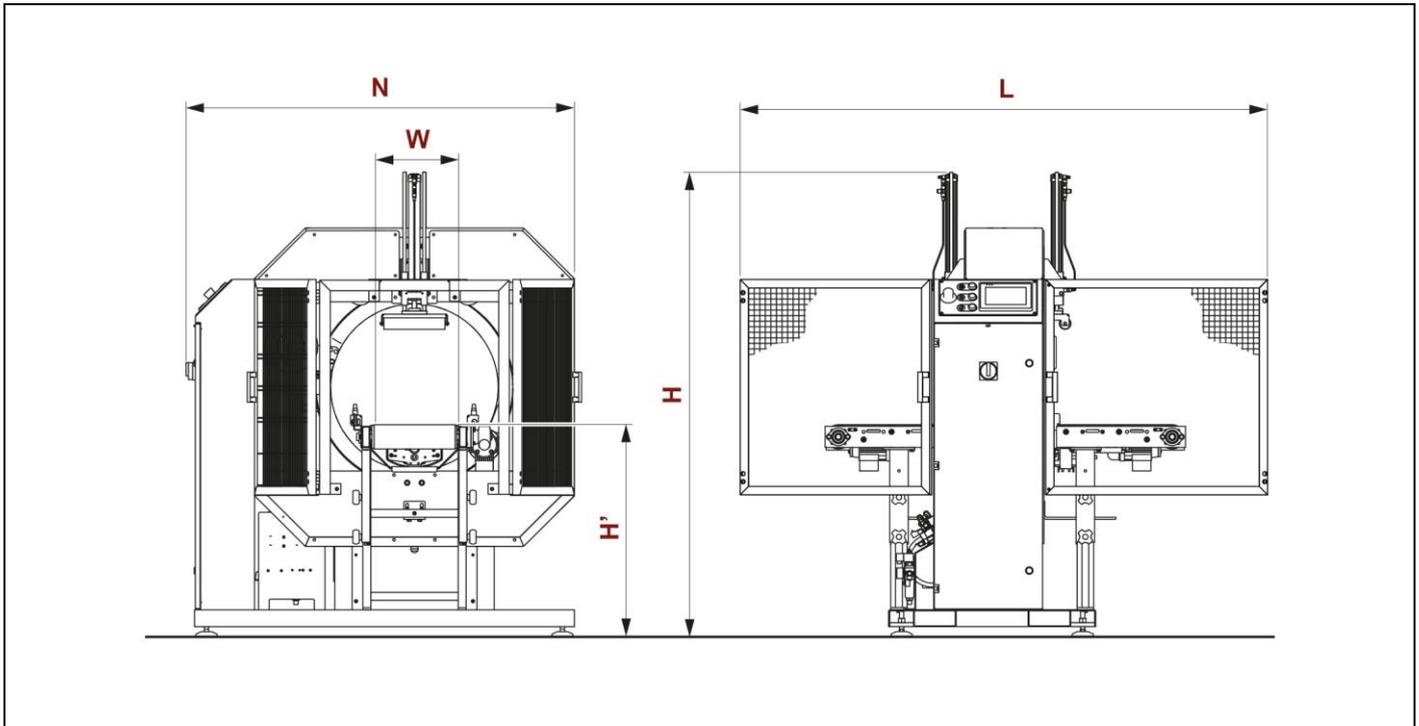
For products that intersect the hatched areas, contact the Manufacturer.



Machine	Spool	Minimum size of product that can be processed (mm)
Orbit 4	125	50 x 50 x 450
Orbit 6	125	70 x 70 x 450
Orbit 9	125	90 x 90 x 450
Orbit 9	250	90 x 90 x 600
Orbit 12	125/250	150 x 150 x 600

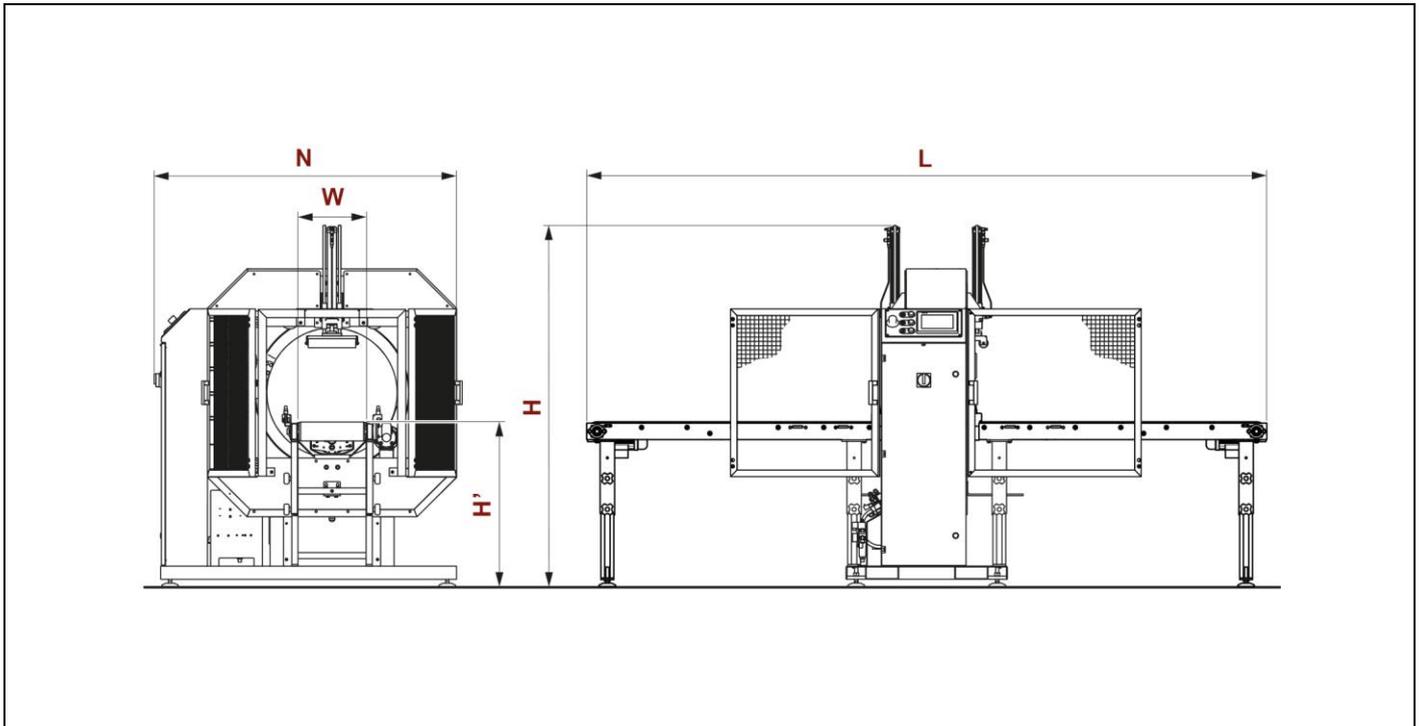
3.7.2. MACHINE DIMENSIONS

(standard L = 600 mm for Orbit 4-6-9, L = 850 mm for Orbit 12)



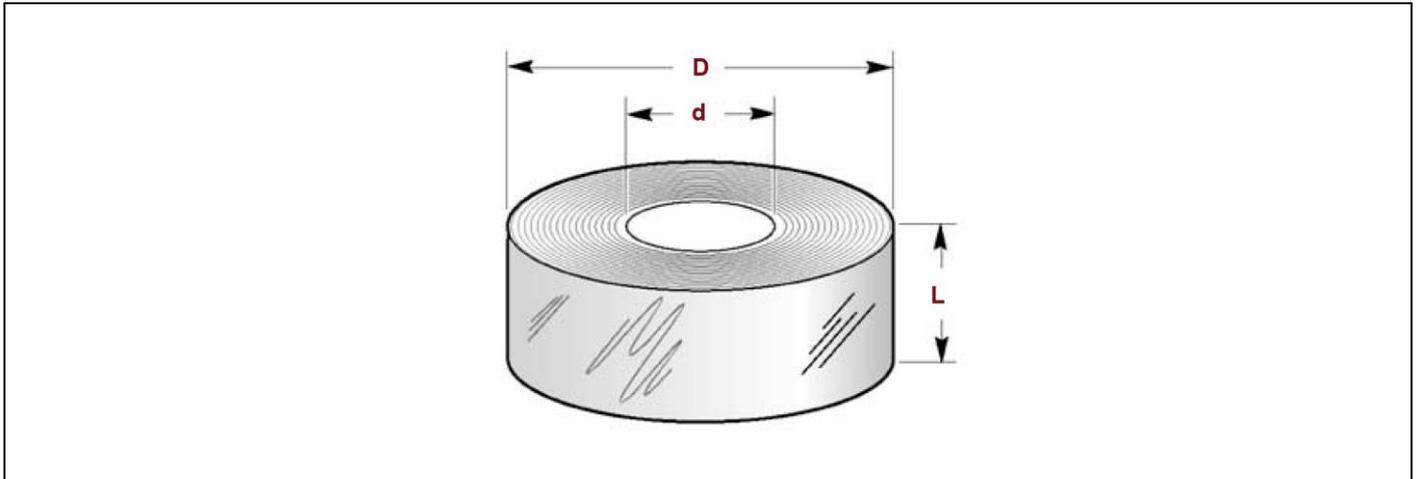
		<i>Orbit 4</i>	<i>Orbit 6</i>	<i>Orbit 9</i>	<i>Orbit 12</i>
L	mm	1985	1983	2162	2243
N	mm	1258	1462	1920	2348
H	mm	1350	1755	2182	2699
H'	min.	800	800	800	800
	max.		920	950	1100
W	mm	220	305	500	815

3.7.3. MACHINE DIMENSIONS WITH CONVEYORS (optionals 1500 mm long)



		<i>Orbit 4</i>	<i>Orbit 6</i>	<i>Orbit 9</i>	<i>Orbit 12</i>
L	mm	3187	3187	3316	3348
N	mm	1258	1489	1920	2348
H	mm	1350	1755	2182	2699
H'	min.	800	800	800	800
	max.		920	950	1100
W	mm	220	305	500	815

3.7.4. FILM TECHNICAL FEATURES



		<i>Orbit 4</i>	<i>Orbit 6</i>	<i>Orbit 9</i>	<i>Orbit 12</i>
D	mm	200			250
d	mm	76			
D optional	mm	50			
L	mm	50/125		125	250
				250 (opt.)	
Thickness	μm	17-50			

3.7.5. SOLENOID VALVES TECHNICAL FEATURES

Solenoid valve Y0:

it closes compressed air supply when power is disconnected.

Solenoid valve Y1:

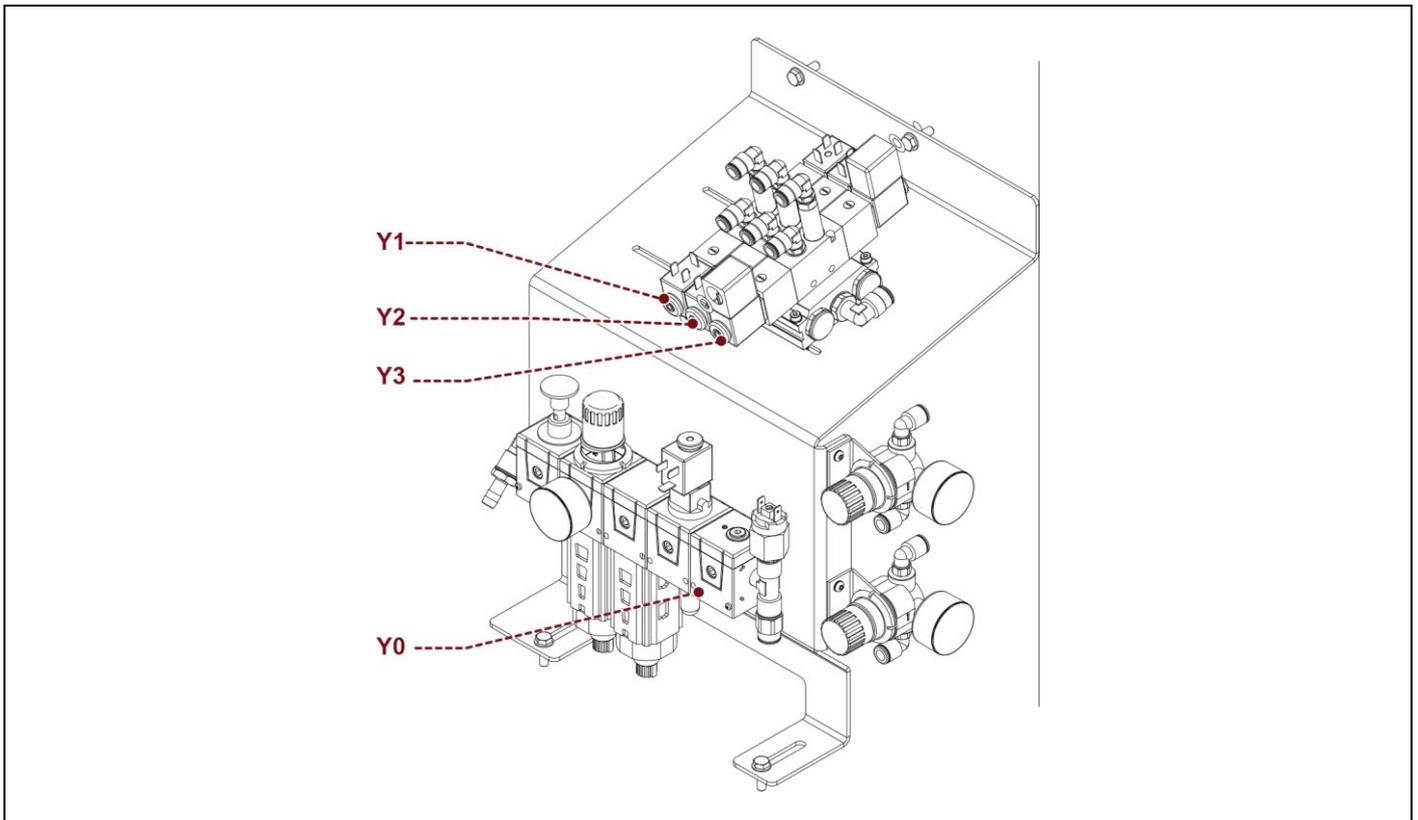
it controls clamp opening and closing.

Solenoid valve Y2:

it controls infeed presser up and down movement.

Solenoid valve Y3:

it controls outfeed presser up and down movement.



3.8. NOISE LEVEL

During the operation the machine reaches the noise levels indicated in the table.

Acoustic power detection carried out in operating conditions according to the following standards:

- ISO 3746-79
- ISO/cd 11202-1997



Caution - warning

Prolonged exposure above **80 dB (A)** can be harmful.



Obligation

The use of appropriate protection systems is recommended (earmuffs, ear plugs, etc.).

Description	Average level of pressure on the measurement surface (Lpm)	Acoustic power output level (Lw)		Level at operator position (Lop)
No load operation	47.0 dB (A)	63.0 dBw (A)	0.00 mW (A)	52.7 dB (A)
Operation in working conditions	67.9 dB (A)	83.8 dBw (A)	0.24 mW (A)	75.3 dB (A)

3.9. INSTALLATION ENVIRONMENT CHARACTERISTICS

The place where the machine is to be installed must be carefully selected taking into account the environment conditions in order to have correct and risk-free operating conditions.

Therefore we suggest to take into account the following prerequisites:

- Ambient temperature between +0°C and 40°C.
- An environment sufficiently ventilated to have, during use, humidity values that are pleasant for the operator.
- The ambient lighting must have a normal value in order to create a pleasant and relaxing environment for those using the machine.
- A perimeter area that must be left around the immediate working area, also for safety reasons, as shown in the figure.
- A flat surface, steady and without vibrations with adequate load bearing capacity.

The area must be equipped with a power supply socket and a compressed air supply socket.

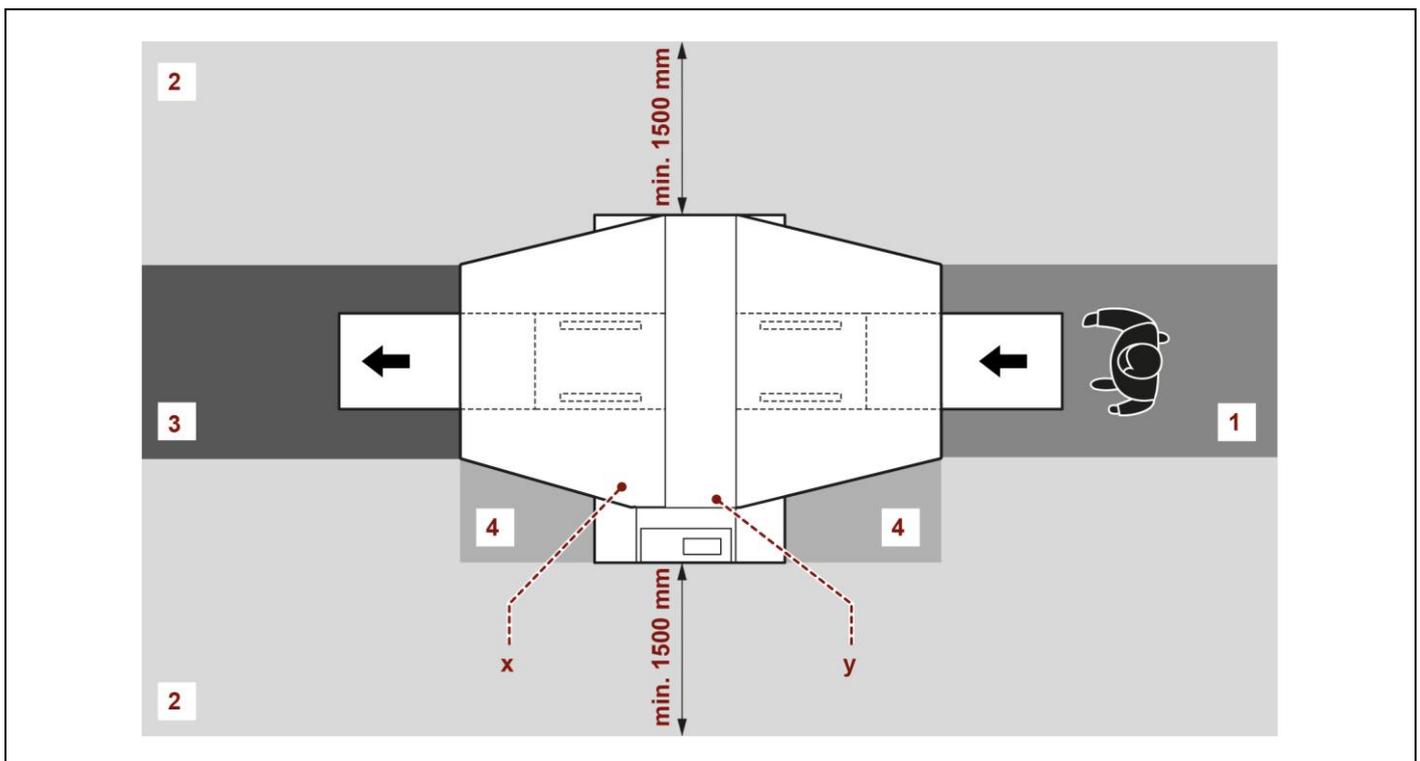
1. Operator workstation (*)
2. Perimeter area
3. Product outfeed area (*)
4. Lateral guide adjustment area
5. Compressed air connection point
6. Power connection point

(*) These areas must be suitably sized to the product being processed.



Danger - warning

Using this machine in explosive environments or when exposed to atmospheric agents is strictly forbidden.



4. INFORMATION ON HANDLING AND INSTALLATION

4.1. RECOMMENDATIONS FOR HANDLING AND LOADING

- Before performing any operation, the authorised operator must make sure to have understood the "Instructions for use".
- Carefully read the "Instructions for use" specified in the manual and those applied directly to the machine and/or the package.
- Provide suitable safety conditions in compliance with the regulations on workplace safety to prevent and minimise the risks.
- Pay attention to the safety warnings, do not misuse the machine and assess the possible residual risks.

4.2. PACKING AND UNPACKING

The packing is realised, keeping the overall dimensions limited, also in consideration of the transport chosen.

To facilitate transport, shipping can be performed with some components disassembled and appropriately protected and packaged.

Some parts, especially electrical equipment, are protected with anti-moisture nylon covers.

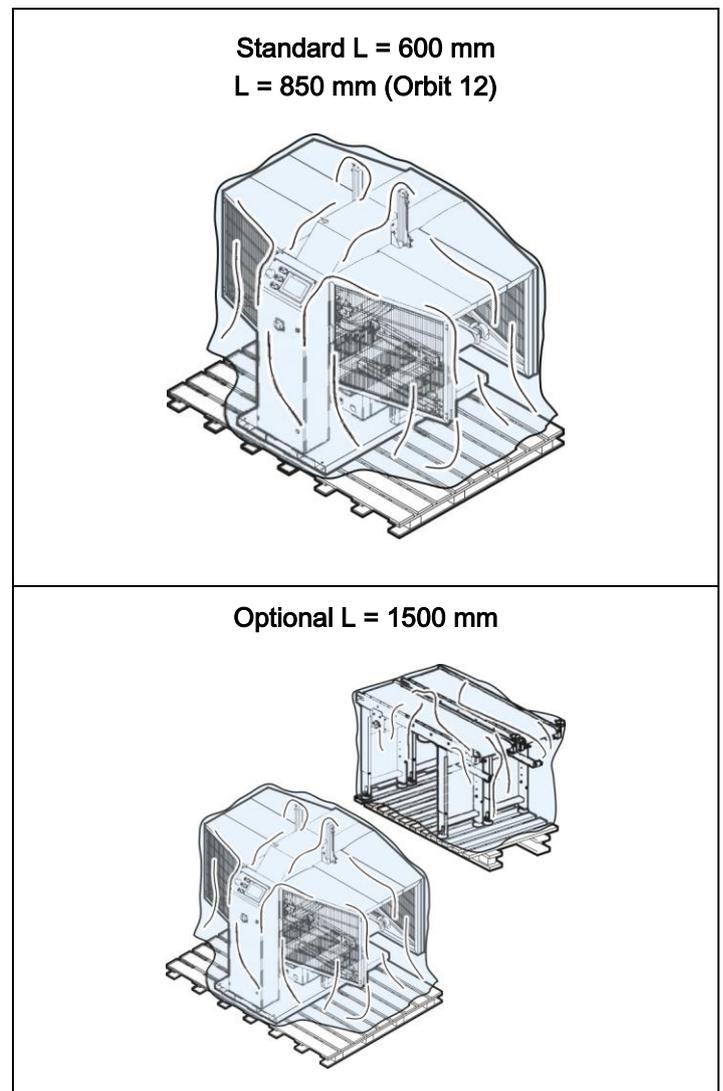
The packages bear all necessary information for loading and unloading.

When unpacking, check the integrity and exact quantity of the components.

Packaging material should be appropriately disposed of according to the laws in force.

The illustrations show the common types of packaging used.

Package on pallet



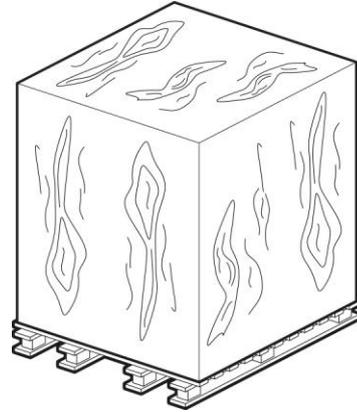
Standard L = 600 mm

L = 850 mm (Orbit 12)

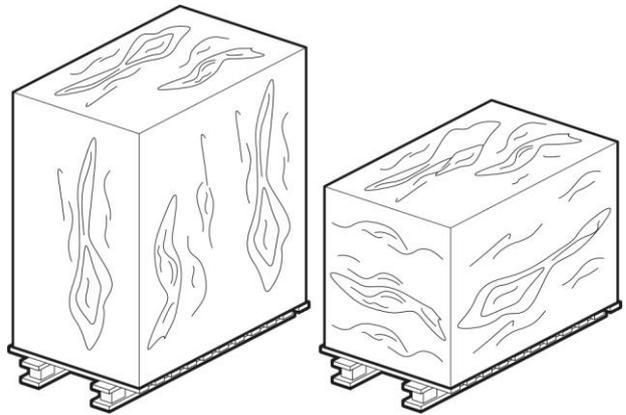
Optional L = 1500 mm

Package in crate

Standard L = 600 mm
L = 850 (Orbit 12)



Optional L = 1500 mm



4.3. TRANSPORT AND HANDLING

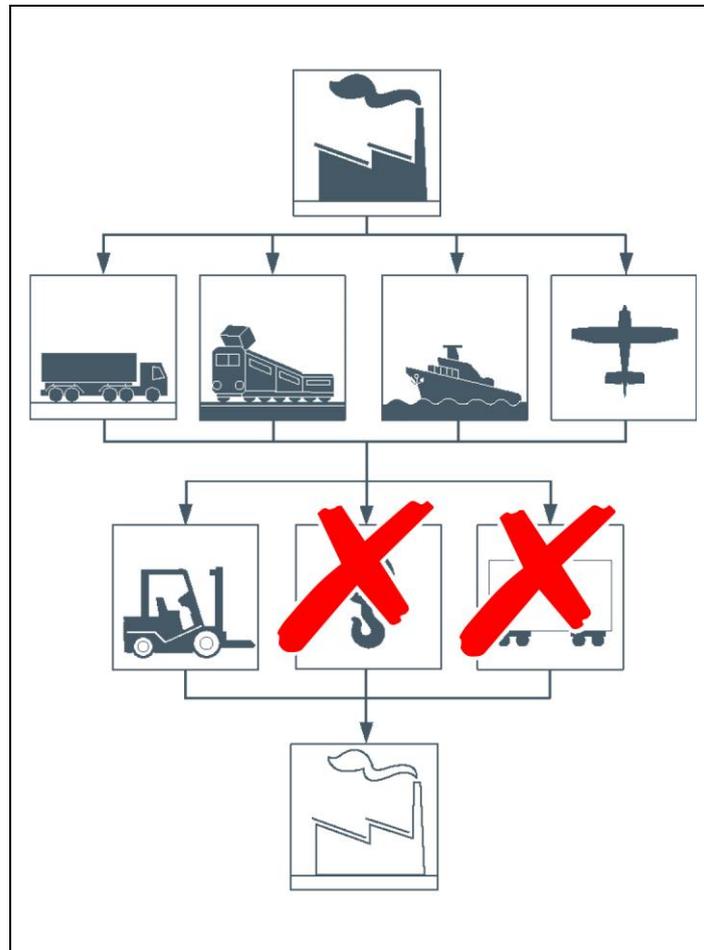
Transport, also according to the destination, can be performed with different vehicles.
The diagram represents the most used solutions.

During transport, in order to avoid sudden movements, adequately anchor the machine to the vehicle.



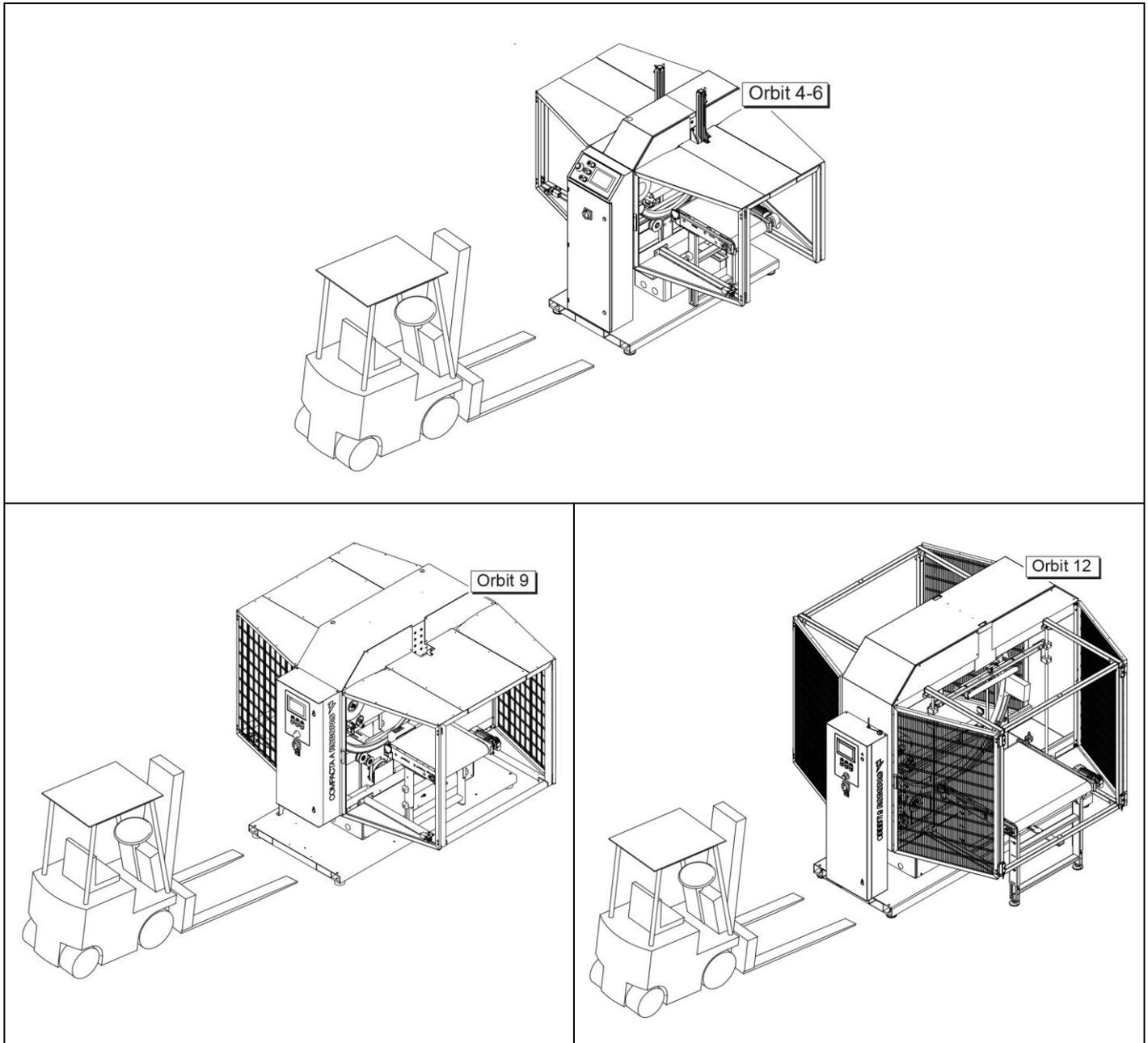
Important

For further transportations, recreate the initial packaging conditions for transport and handling.



4.4. HANDLING AND LIFTING

The machine can be moved with a forklift truck with suitable load capacity by inserting the forks in the points indicated directly on the machine.



4.5. INSTALLATION OF THE MACHINE

Unpacking

1. Take off the cover cloth.
2. Remove the fasteners from all components (plastic strap or wooden anchors).
3. Visually check the material making sure it is not damaged in any way.



Important

You are advised to keep the packaging material.

How to carry out the standard assembly



Danger - warning

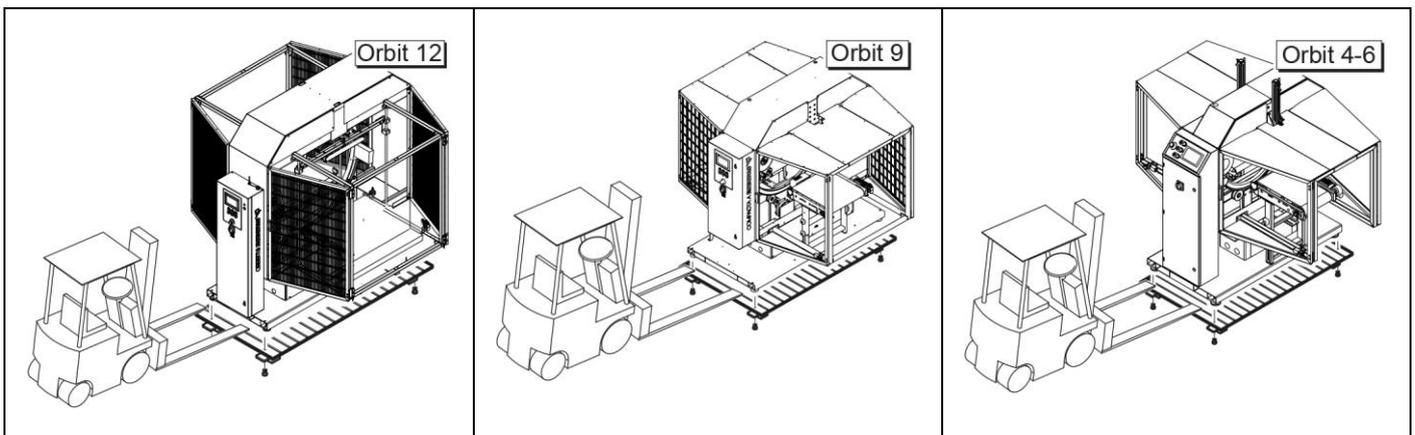
Authorised technical service personnel must perform installation and assembly operations.

1. Remove the screws that retain the machine to the wooden pallet.
2. Insert the forklift truck forks in the specially designed spaces provided in the base.
3. Lift the machine from the pallet.
4. Insert support feet in the place of the fastening screws.
5. Place the machine in the area assigned for assembly.

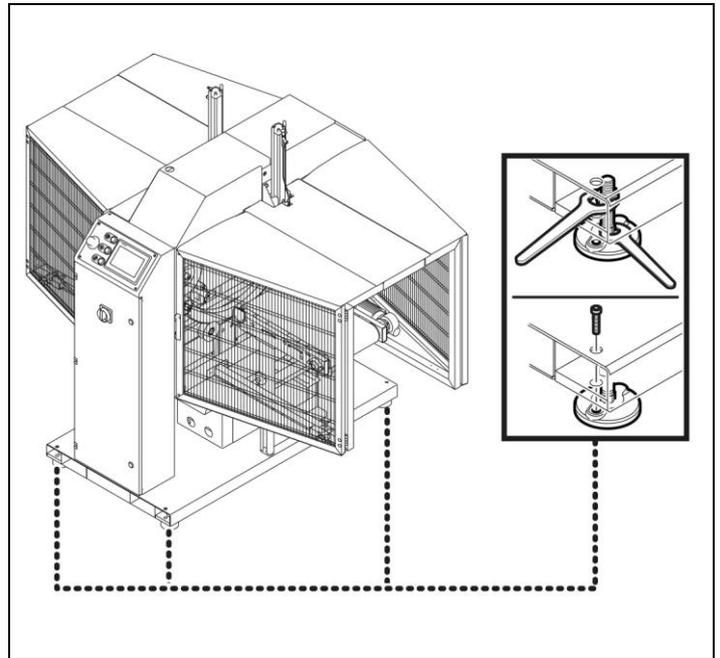
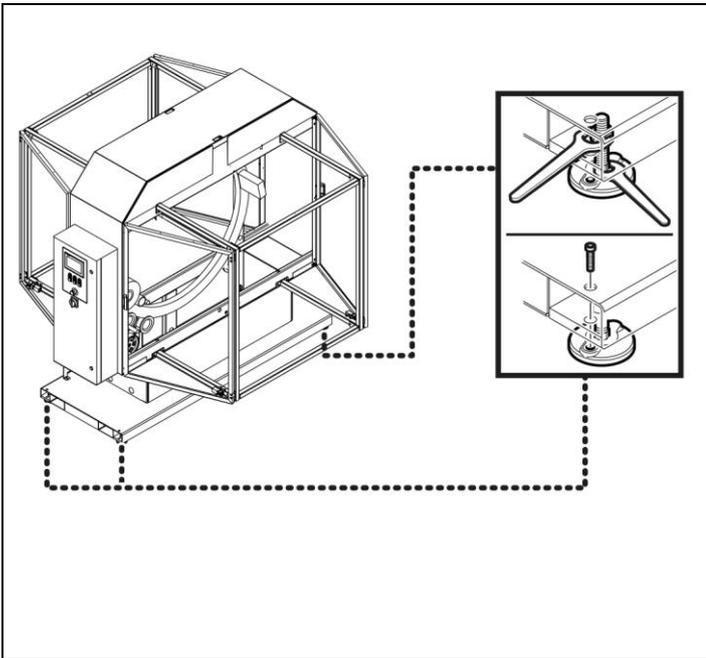


Danger - warning

To perform the operation in safety conditions, insert some wooden blocks under the forks of the forklift truck and place everything on the floor.

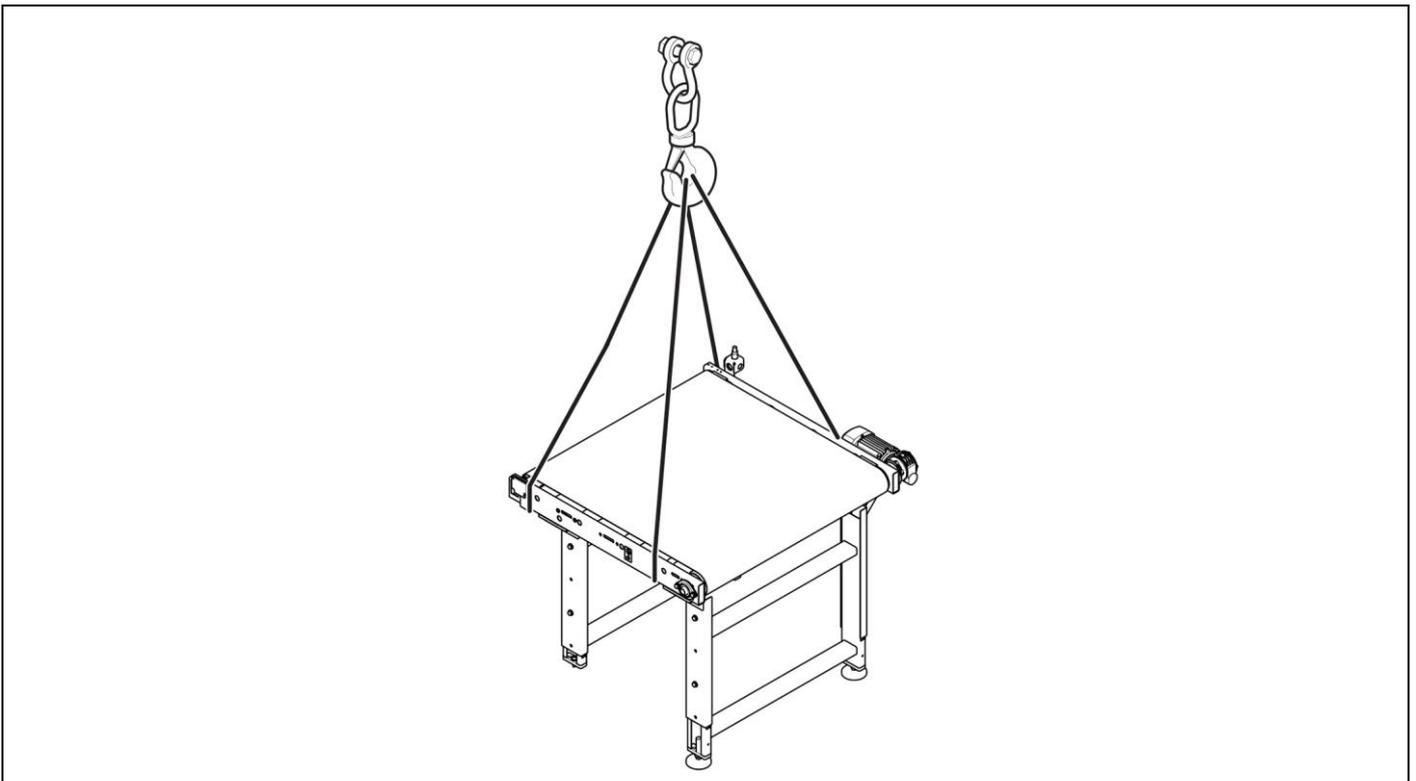


6. Use the support feet to level the machine.
7. The machine can be fastened to the floor, if required, by drilling holes in the walls prepared on the support feet.



4.5.1. CONVEYORS ASSEMBLY (length 1500 mm / 850 mm)

1. Unpack the conveyors.
2. Remove the screws that fasten the conveyor.
3. Connect the conveyor and support it to avoid damaging the conveyor belt.
4. Lift the conveyor and screw the adjustable feet to the frame.
5. Fasten the conveyor to the machine base.

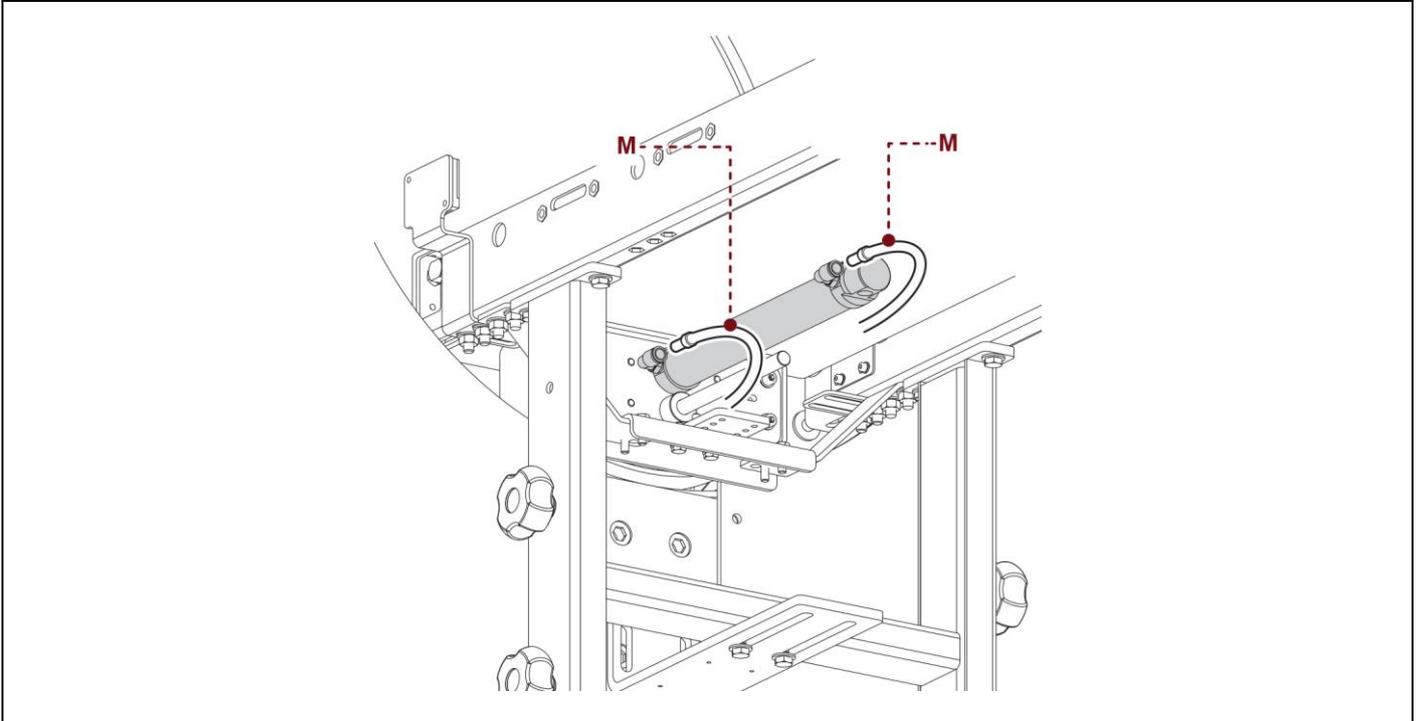


6. Connect the pneumatic tubes (M) to the cylinder of the clamp unit after conveyor assembly (see following pages).



Important

Remember that the tube that controls the exit of the clamp is marked with a “6” while the one that controls its return is marked with a “5”.



7. Connect the infeed conveyor to the base and tighten screws (C).



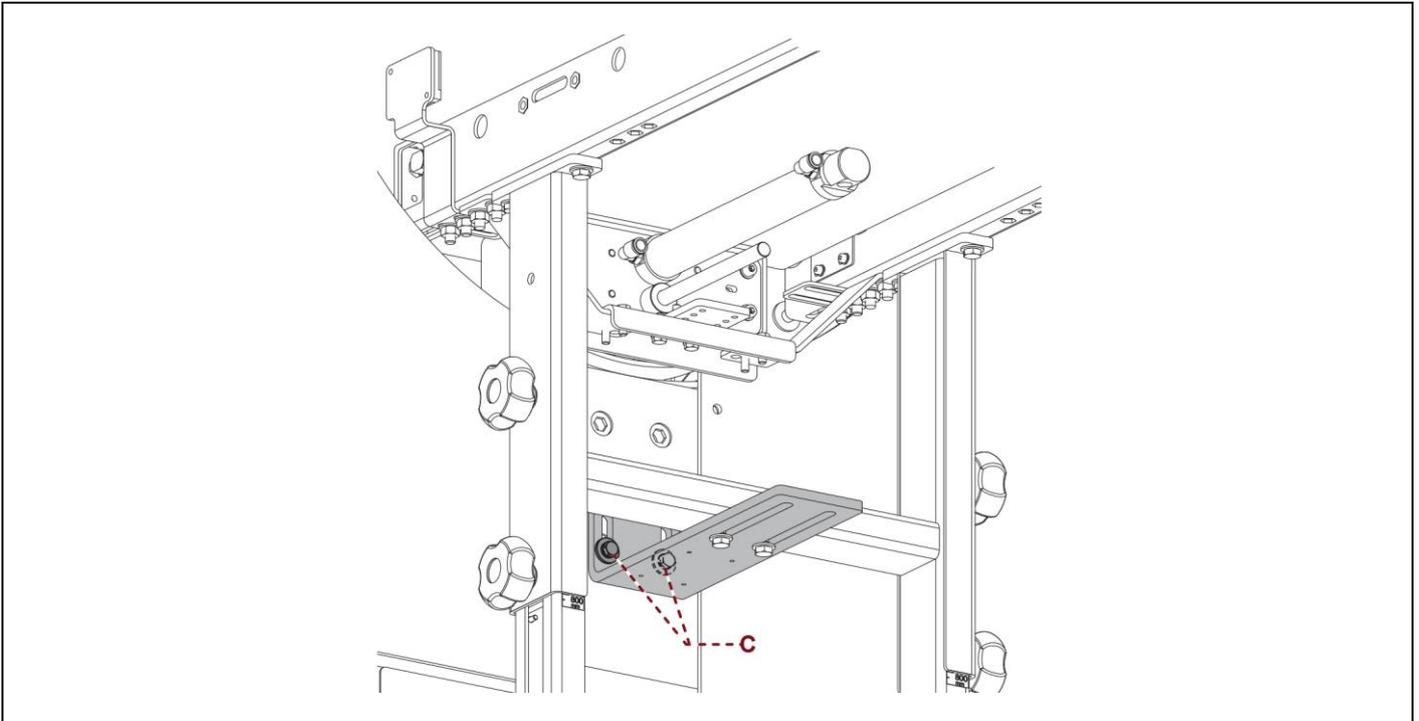
Important

Remember that the adhesive arrows on the conveyors indicate the normal operating direction.

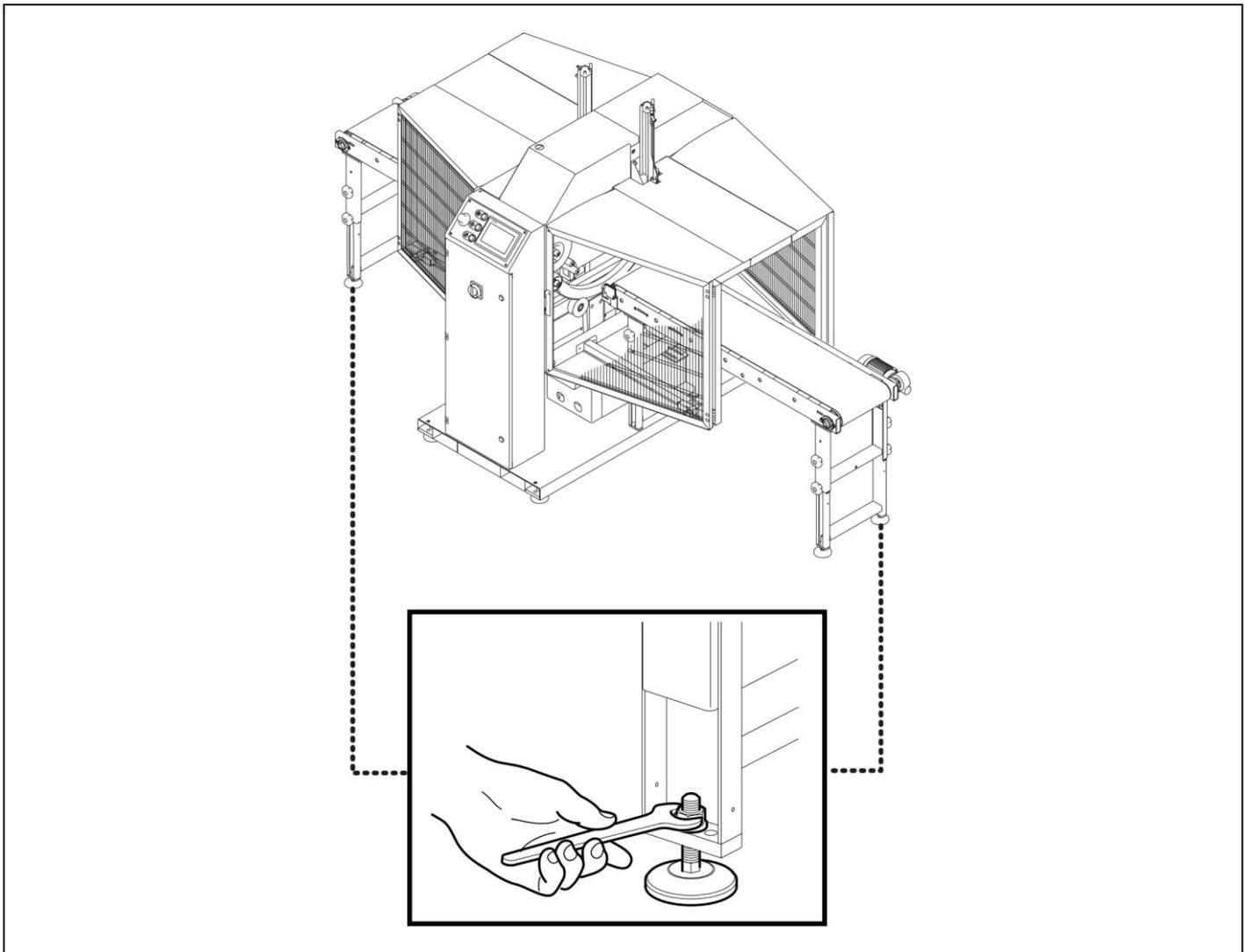


Caution - warning

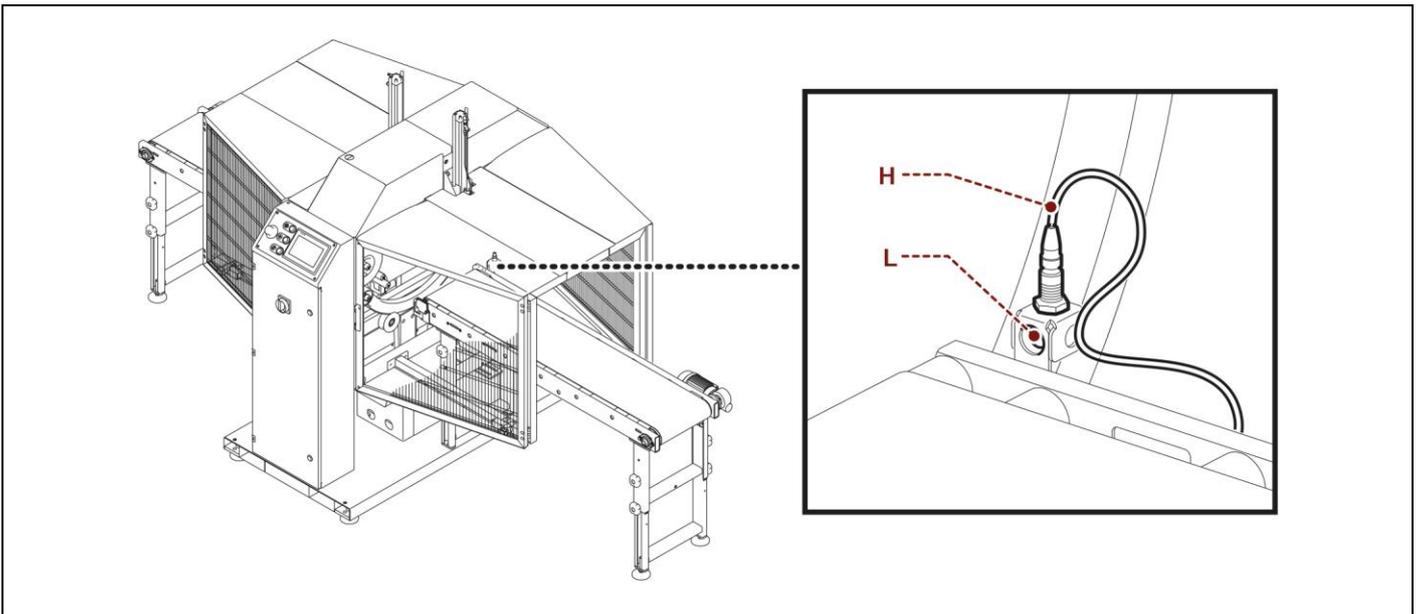
During the operation pay attention not to damage the clamp unit.



8. Use the support feet to level the machine.



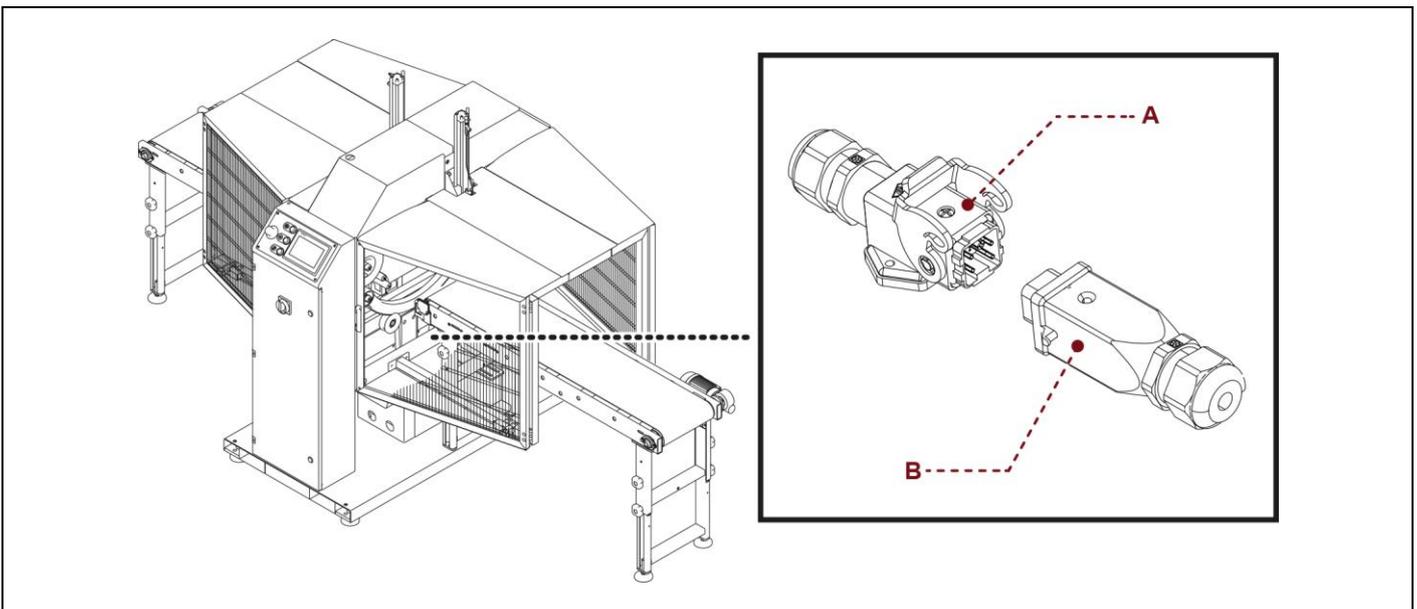
9. Connect the photocell (L) cable (H).



10. Insert plug (A) into socket (B).

11. Fasten the electrical cable to the machine using self-locking ties.

12. Repeat the same operations for the outfeed conveyor.



4.5.2. PRESSER UNIT INSTALLATION (only Orbit 9 - 12)

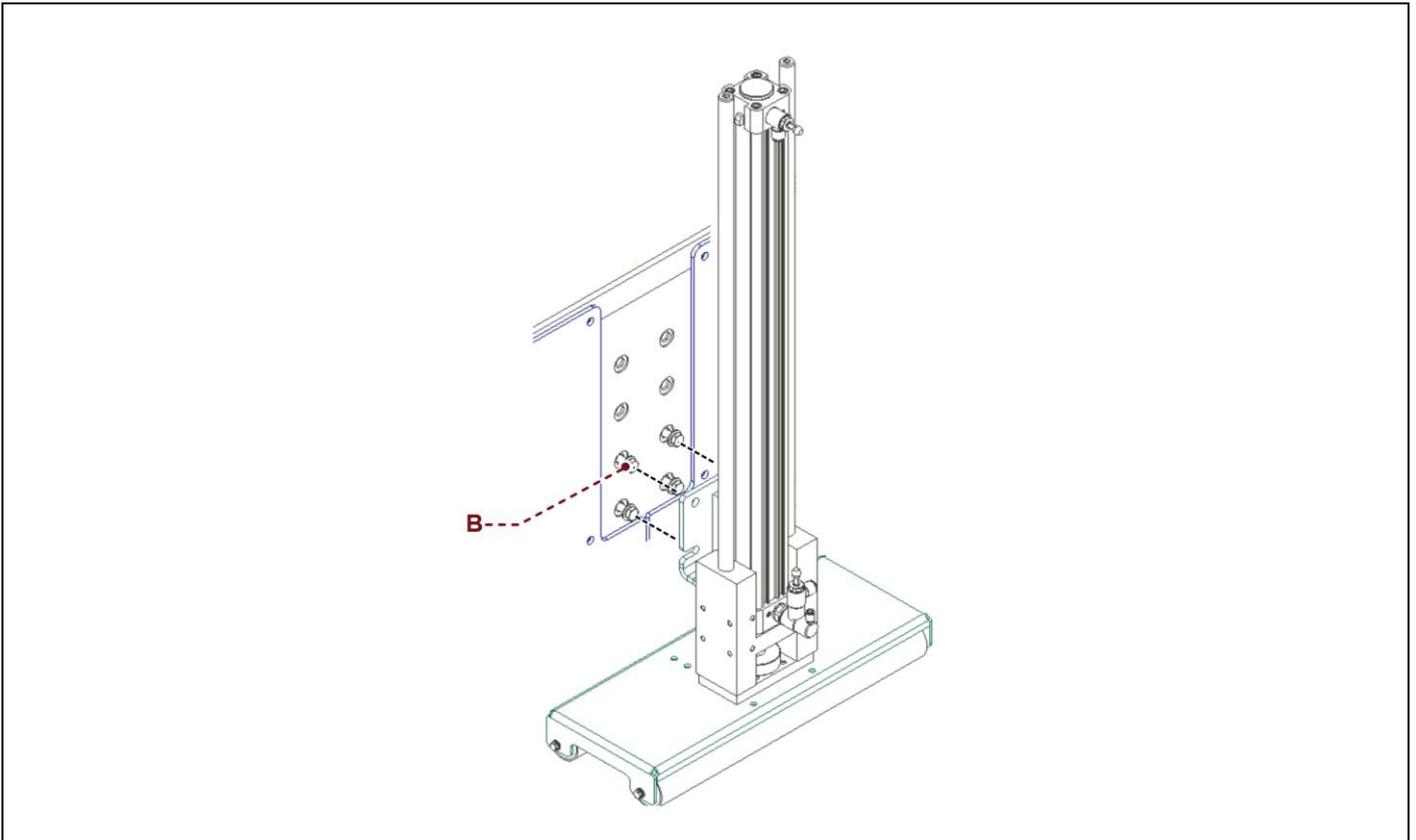
The machine arrives with the pressers to be positioned.
Proceed as follows to install the pressers correctly.

1. Fix the presser to the structure in correspondence of the 4 screws (B).
2. Connect the fork of the presser to the crosspiece (for Orbit 12 only).
3. Connect the pneumatic tubes paying attention to the reference numbers.



Caution - warning

During the operation pay attention not to damage the presser unit.



4.6. RECOMMENDATIONS FOR CONNECTIONS

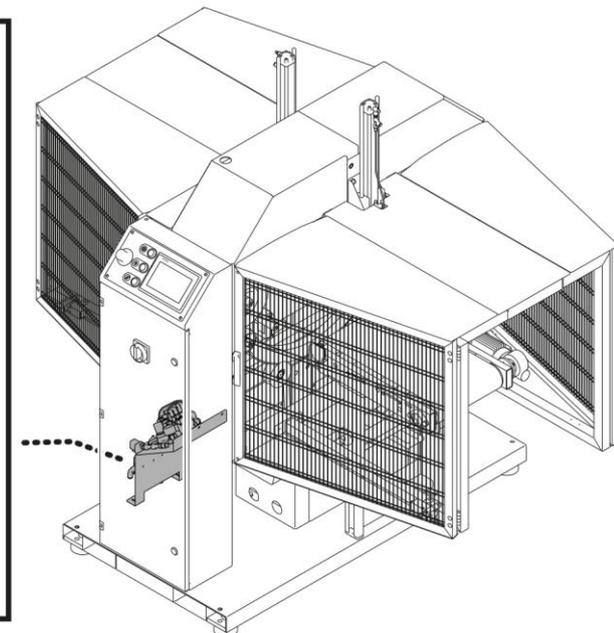
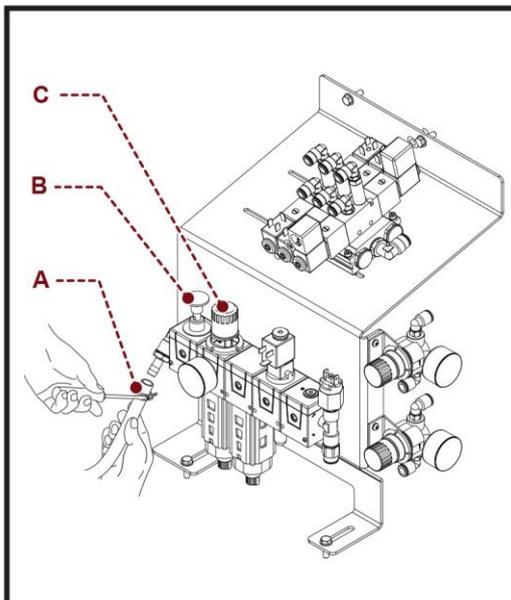
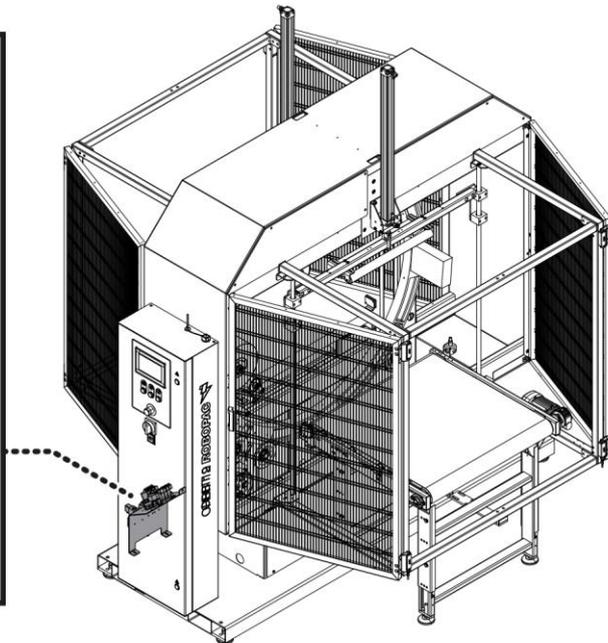
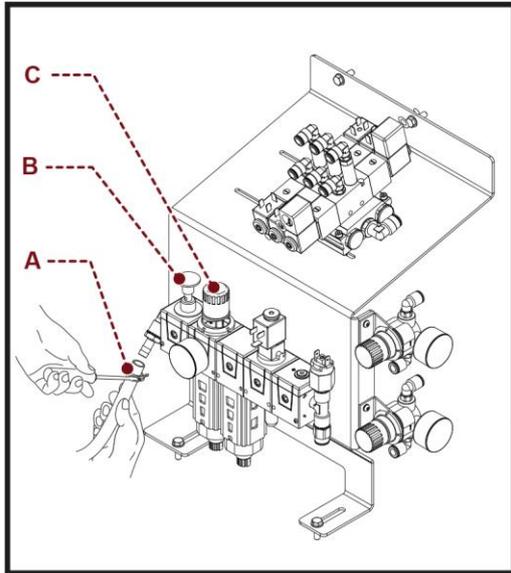


Important

The connections must be made in accordance with the specifications supplied by the Manufacturer in the enclosed diagrams. The person authorised to carry out said operation must have the skills and experience acquired and acknowledged in the specific sector, must perform the connection in accordance with the best practice and take into account all the regulatory and legislative requirements. Once the connection has been completed, before commissioning the machinery, it is necessary to perform an overall check to verify if said requirements have been complied with.

4.7. PNEUMATIC CONNECTION

1. Insert a flexible hose in the end of the hose barb fitting and fasten it with a metallic screw clamp (A).
2. Check that the valve (B) is in the "OPEN" position.
3. Activate the supply line pressure.
4. Check that the pressure gauge indicates at least 6 bar and use the knob (C) to compensate any pressure difference. Repeat this operation when the machine is running.



4.8. ELECTRICAL CONNECTION

Standard machines work with the following mains voltage values:

- Standard machines work with the following mains voltage values:

Proceed as follows for the electrical connection.

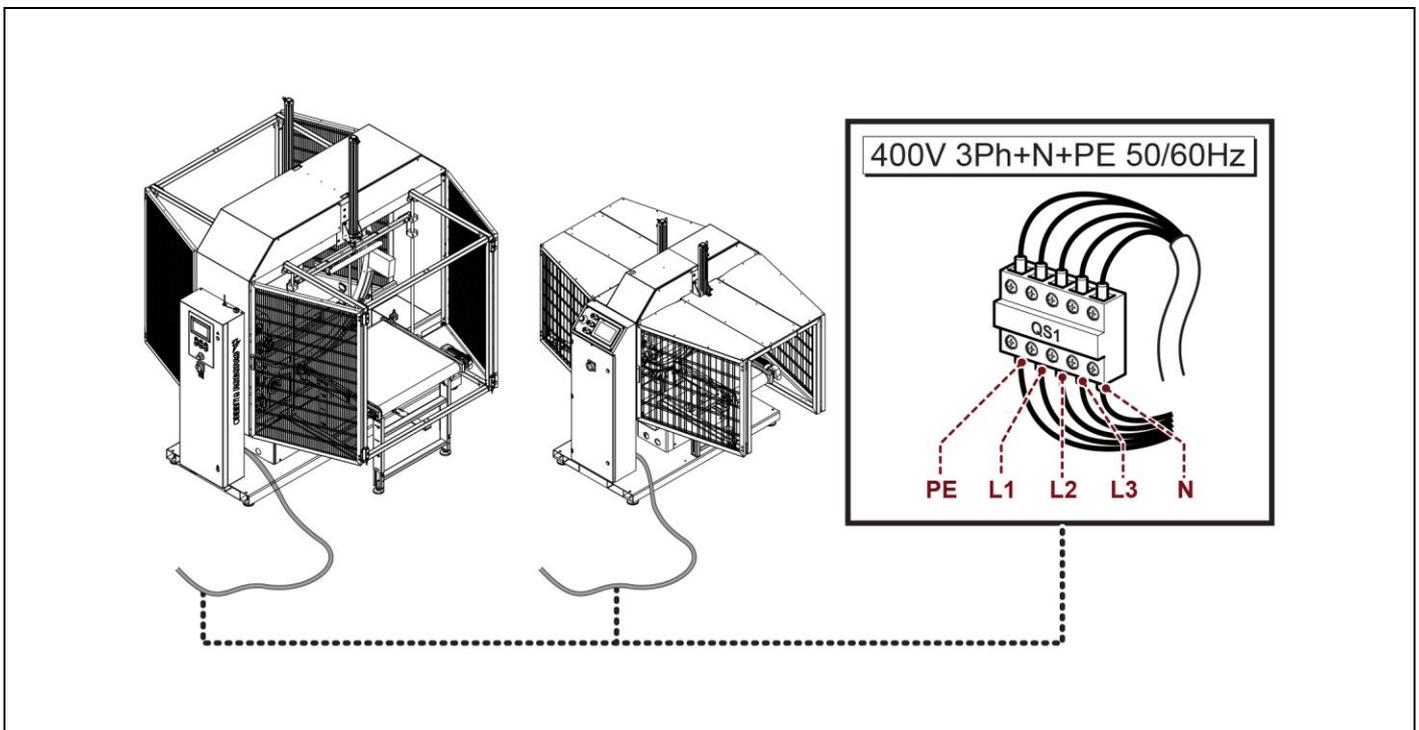
1. Check that the line voltage (V) and frequency (Hz) correspond to those of the machine (see identification plate and wiring diagram).
2. Turn main switch to pos. 0 - (OFF).
3. Connect the power cable as shown in the figure.
4. Power the machine using the main switch.
5. Press the **START** pedal.



Important

The earth wire (yellow-green) must be connected to its earth terminal PE.

Refer to the wiring diagram in the machine power supply page to check the correct dimensions of the power cable and of the protection device.



5. INFORMATION ON ADJUSTMENTS

5.1. RECOMMENDATIONS FOR ADJUSTMENTS

- Before performing any operation, the authorised operator must make sure to have understood the "Instructions for use".
- Activate all the safety devices provided, stop the machine and assess whether there is any residual energy before carrying out the operations.
- Provide suitable safety conditions in compliance with the regulations on workplace safety to prevent and minimise the risks.
- Pay attention to the safety warnings, do not misuse the machine and assess the possible residual risks.

5.2. INFEED AND OUTFEED CONVEYOR HEIGHT ADJUSTMENTS

Adjustments of conveyor height (Orbit 4-6-9)

According to the product to be wrapped, adjust the infeed and outfeed conveyor height.

1. Loosen knobs (A).
2. Position the conveyors checking the height on the graduated scale (B).
3. Tighten knobs (A).



Important

Use a spirit level to adjust conveyor horizontality and coplanarity.



Important

If the optional gas spring is installed under each conveyor, keep in mind that: once the knobs have been loosened, the conveyor tends to move upwards by itself.



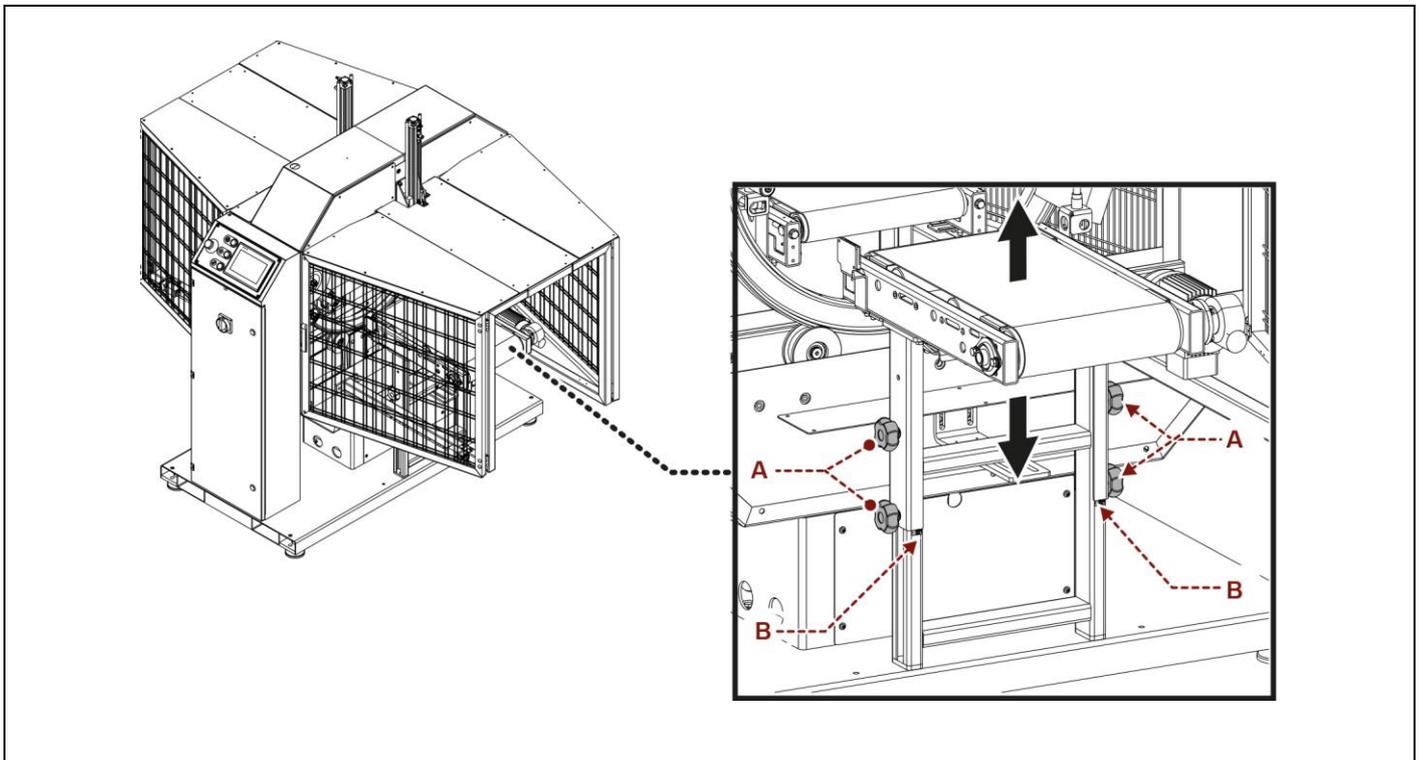
Important

Conveyors must be coplanar to each other; however, only in particular cases, the outfeed conveyor can be few millimetres below the infeed one.



Important

When processing very wide products you must lift the conveyors up to their maximum height from the ground within the product height limits (*see section 3.6. "Technical specifications"*).



Adjustments of conveyor height (Orbit 12)

According to the product to be wrapped, adjust the infeed and outfeed conveyor height.

1. Loosen knobs (A).
2. Position the conveyors checking the height on the graduated scale (B).
3. Tighten knobs (A).



Important

Use a spirit level to adjust conveyor horizontality and coplanarity.



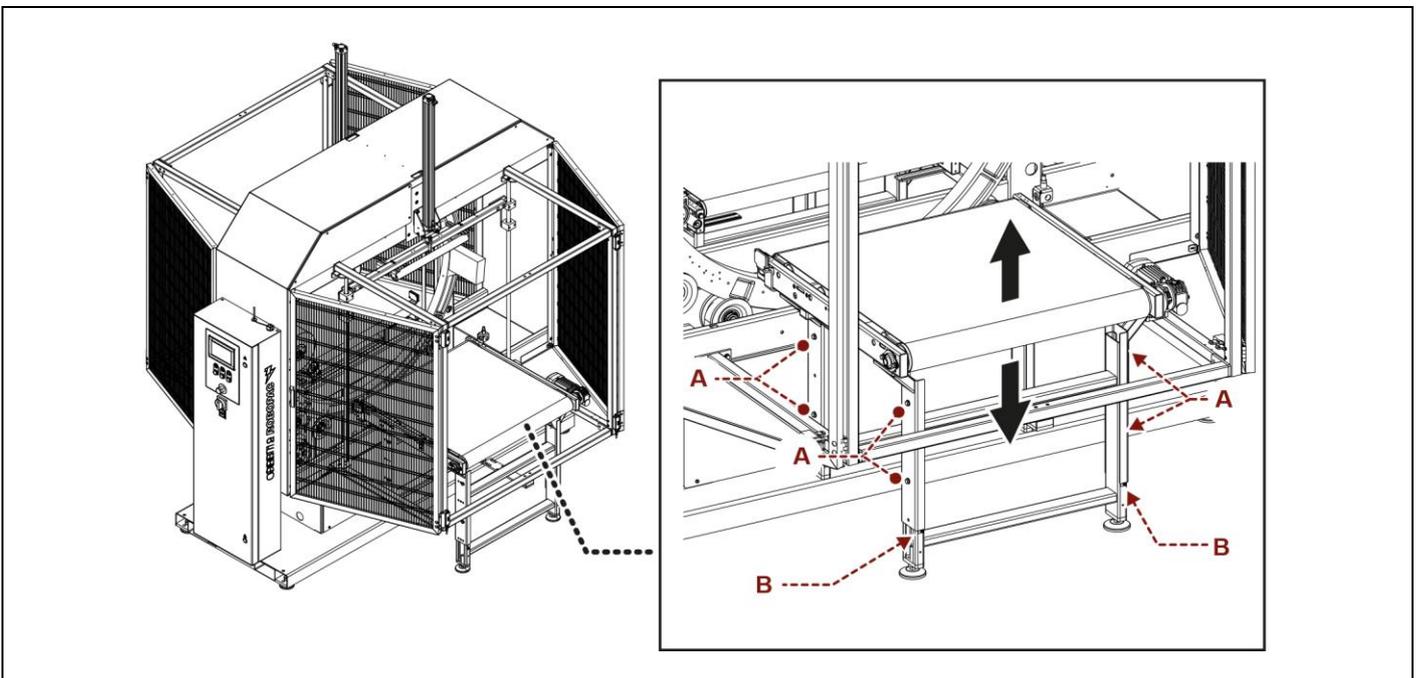
Important

Conveyors must be coplanar to each other; however, only in particular cases, the outfeed conveyor can be few millimetres below the infeed one.



Important

When processing very wide products you must lift the conveyors up to their maximum height from the ground within the product height limits (*see section 3.6. "Technical specifications"*).



5.3. ROLLER OR SKID GUIDES ADJUSTMENTS (OPTIONAL)

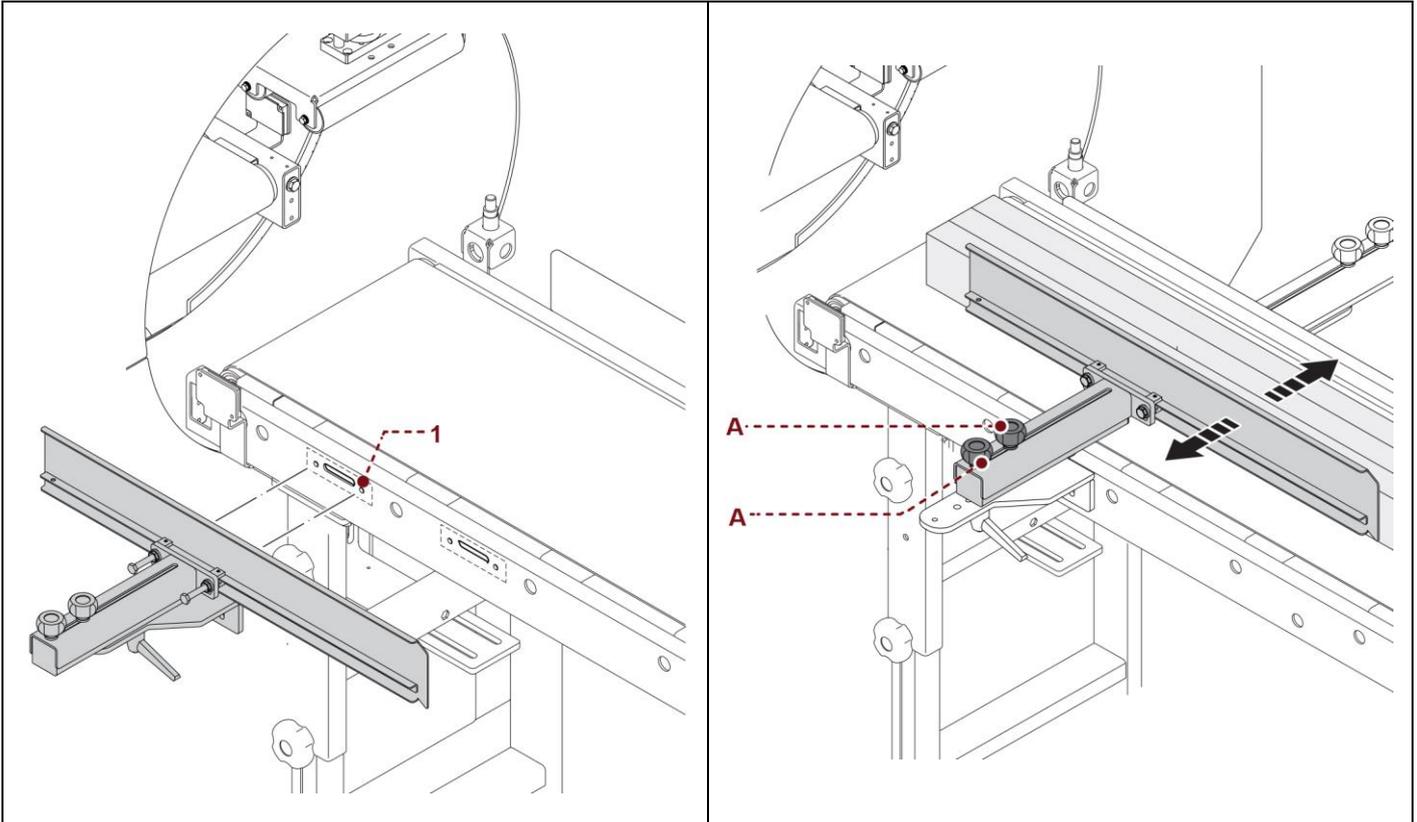
Width

1. Insert guides on the side of the conveyors in positions 1.
2. Fix the guides with 2 M8 screws.
3. According to the product to be wrapped, adjust the guides by regulating knobs (A).
4. Adjust guide position so as to keep the product as much as possible in the middle of the belt.



Caution - warning

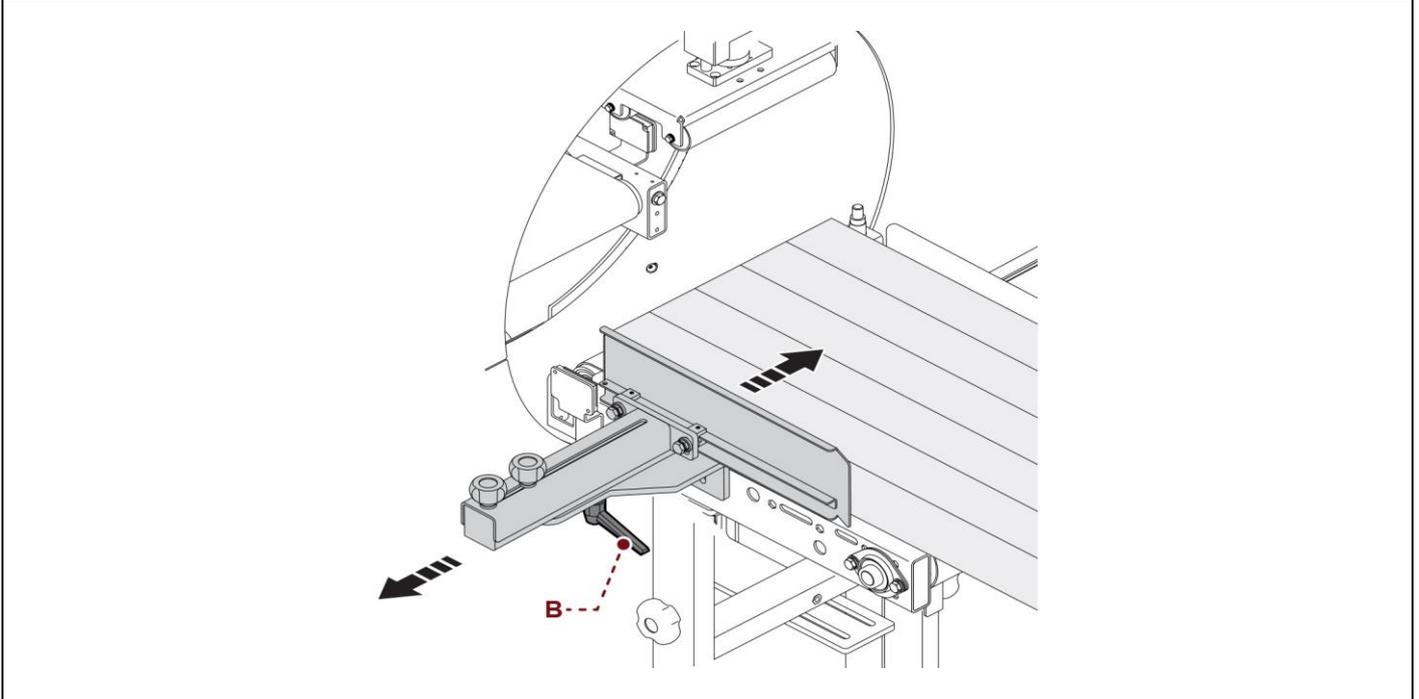
To prevent the guides from squeezing the product leave 1÷3 cm between the product and the guides on each side.



When wrapping very wide products, guide supports must be moved after loosening the handles (**B**).

**Important**

Remember that in case of products wider than the conveyors, the position of the photocells must also be adjusted.



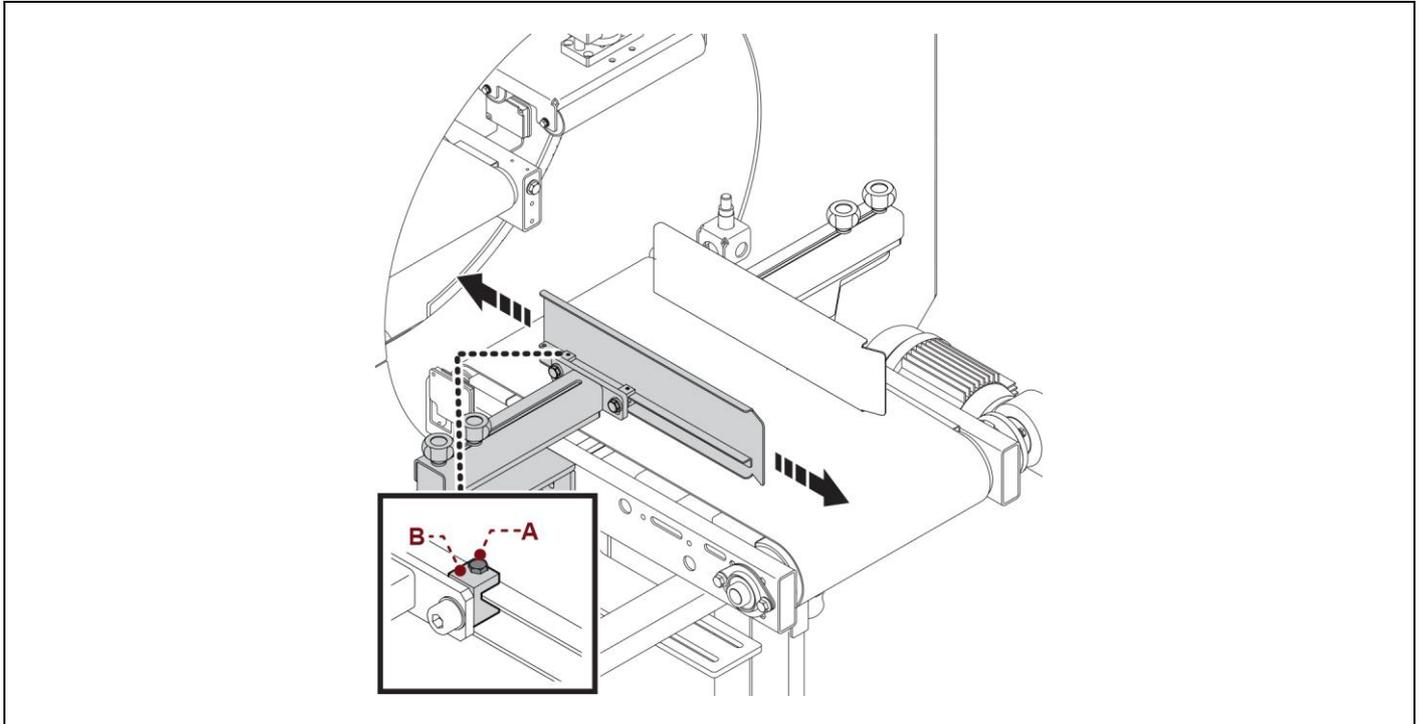
Guide position

1. Adjust the position of the guides according to the product to be wrapped, after loosening the screws (A).
2. Check that the guides do not engage the photocells.



Caution - warning

Keep the guides on the infeed and outfeed conveyors as close to the rotary ring as possible; for extremely short products, prevent the pressers from lowering onto the guides.



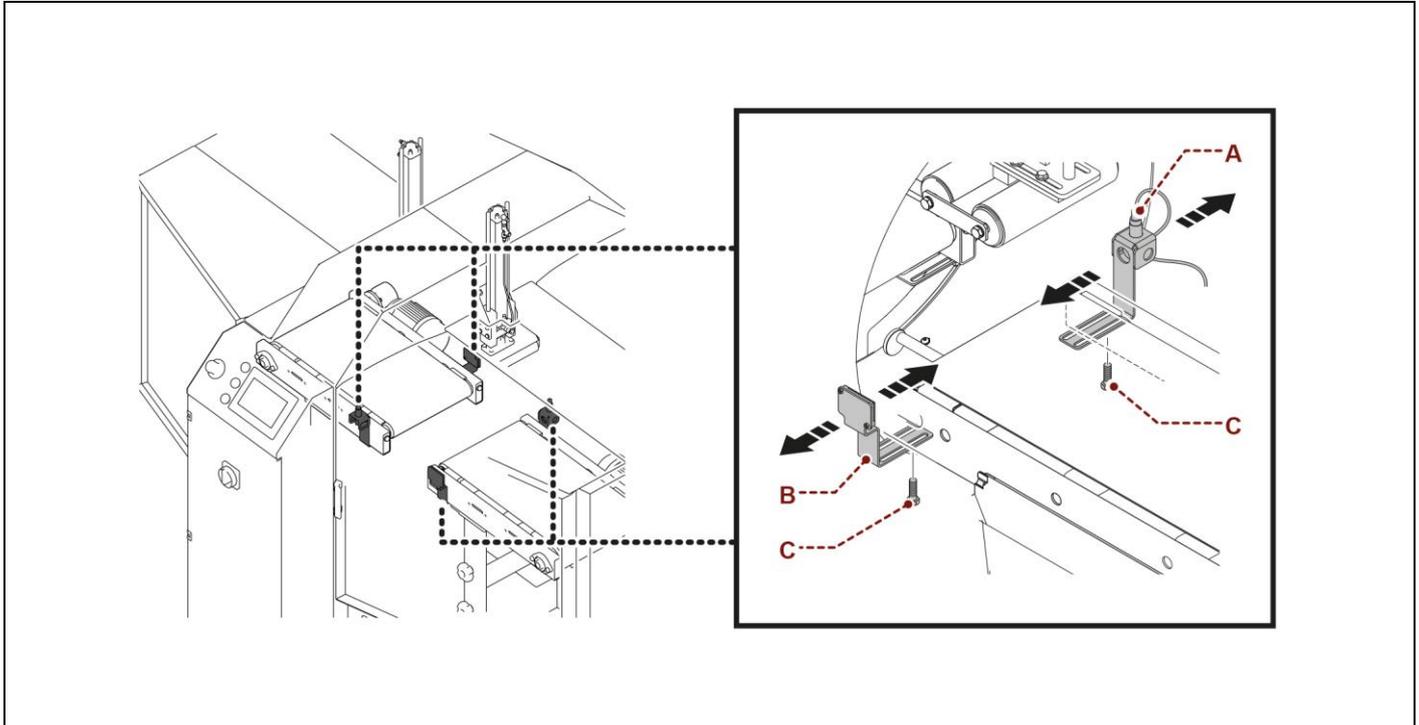
5.4. POSITION OF PHOTOCELLS

1. Should the width of the product be greater than the conveyors, it is necessary to move the position of photocells (A) and of the reflectors (B) by acting on screws (C) without removing them.



Important

The photocells and reflectors can be moved along the conveyors. However, to avoid malfunctions, it is important that they are aligned.



5.5. PRESSERS ADJUSTMENT

Height position

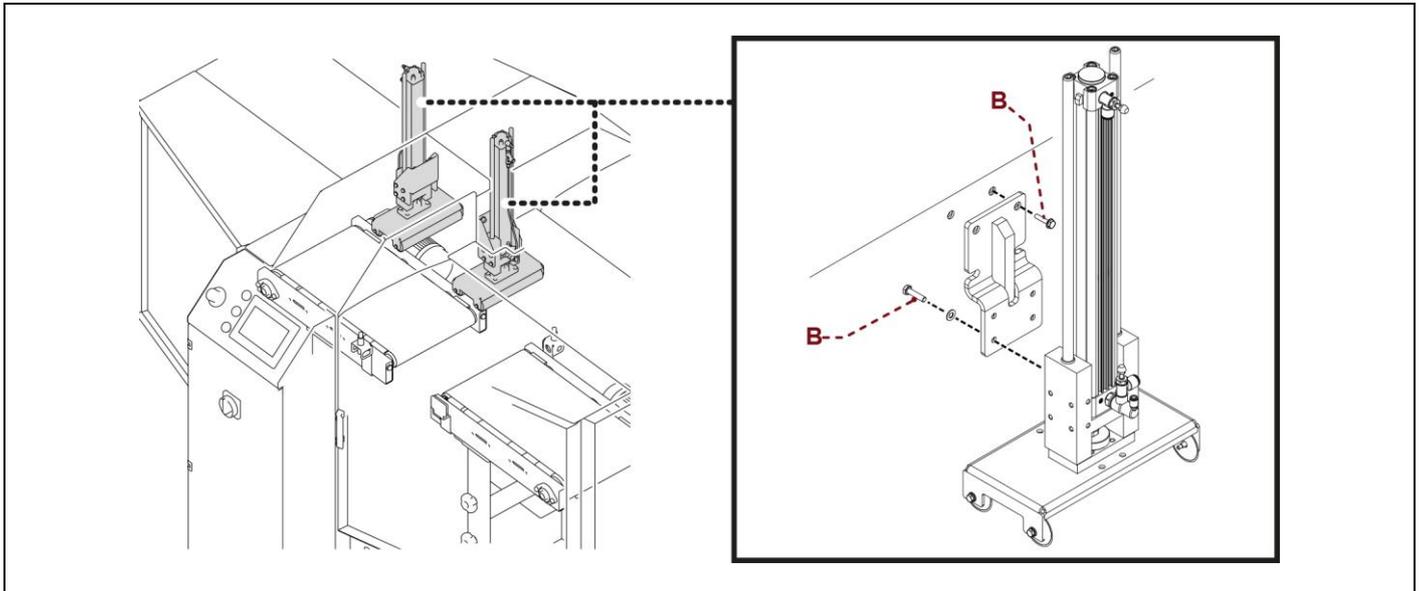
When processing round and very high products, move the pressers in top position:

2. Disassemble the supports by removing screws (B).
3. Reinstall them to the desired position.



Caution - warning

Between pressers in top position and the product there must always be space.



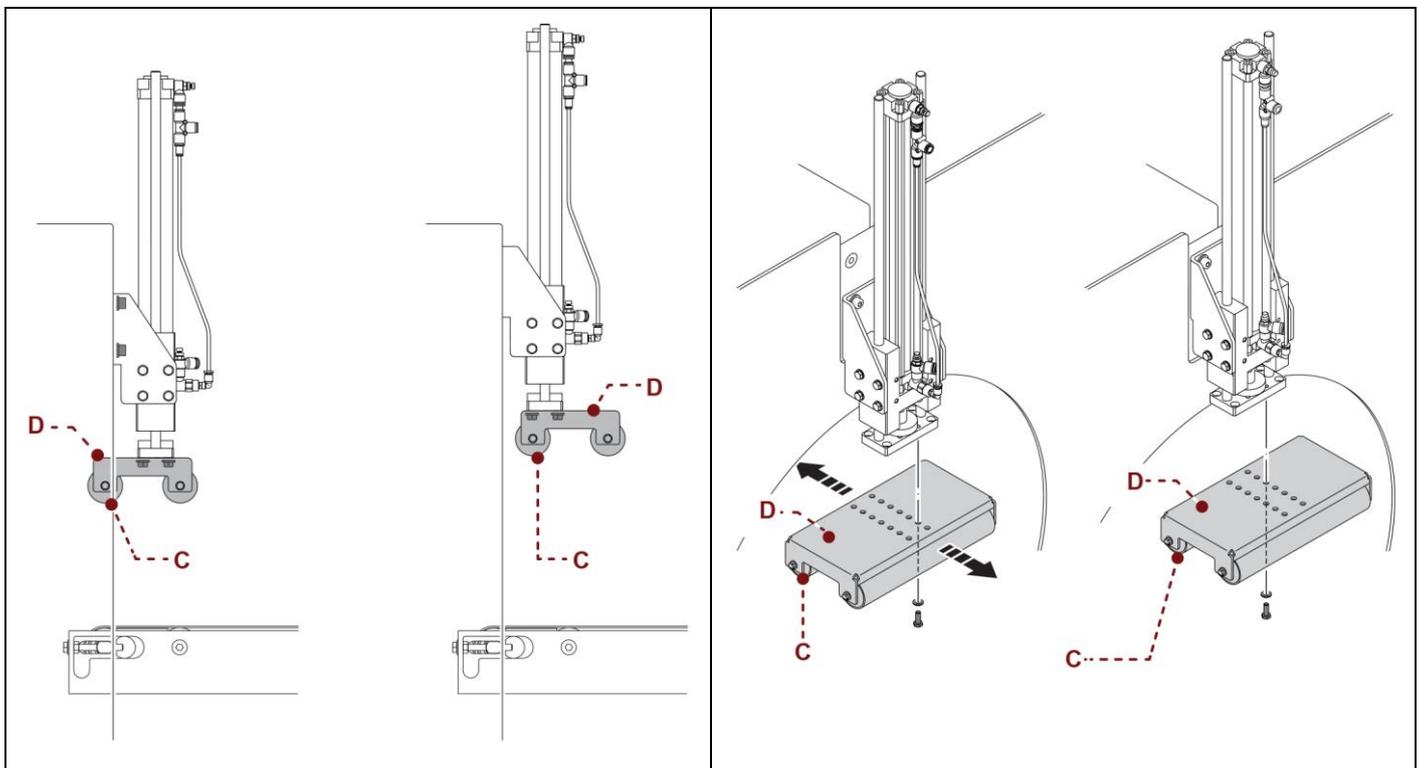
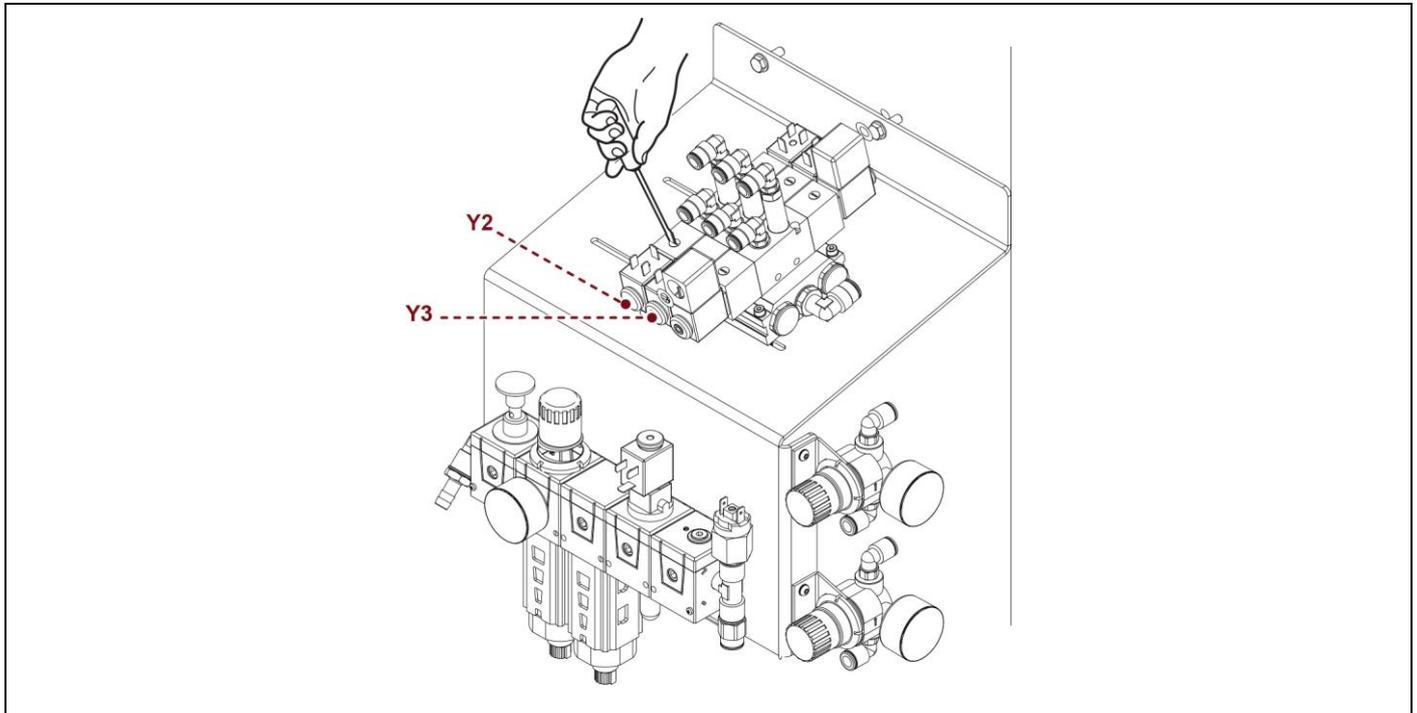
The pressers, when in the low position, must not rest against the conveyor but must keep a distance of 10/15 mm.

Check the position, operate the corresponding solenoid valve (Y2/Y3) manually with a screwdriver to lower the presser.



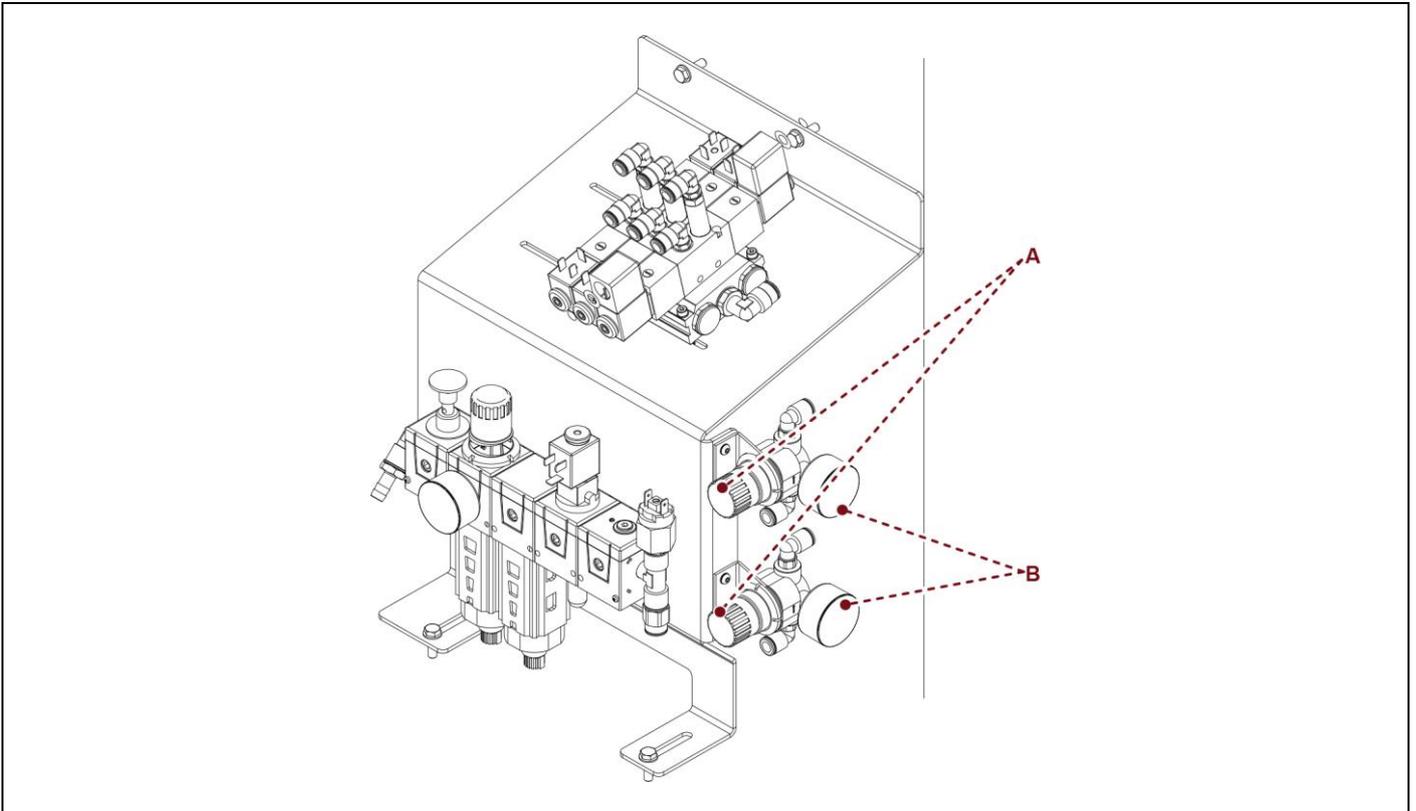
Important

When processing very high products, the roller (C) of both pressers could interfere with the rotary ring. In this case, you must disassemble the supports (D) and mount them back into the farthest holes from the rotary ring. Adjust the presser height.



5.6. PRESSER PRESSURE ADJUSTMENT

1. Based on the type of product, adjust the pressure using the knob (A) so that the pressers securely hold the product without deforming it.
Pressure can be read on the pressure gauge (B).

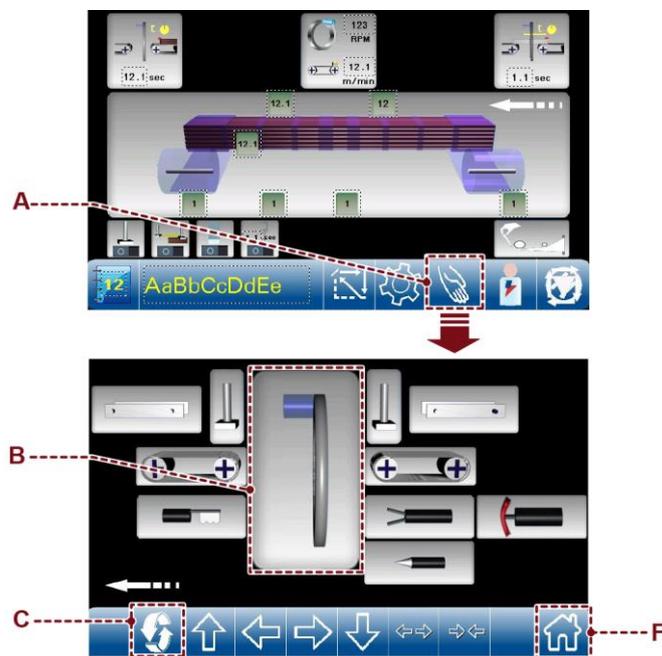


5.7. ADJUSTMENT OF SPOOL CARRIAGE ROLLER CLUTCH

The spool carriage roller clutch avoids that, due to spool inertia, too much film than required is unwound during the cycle.

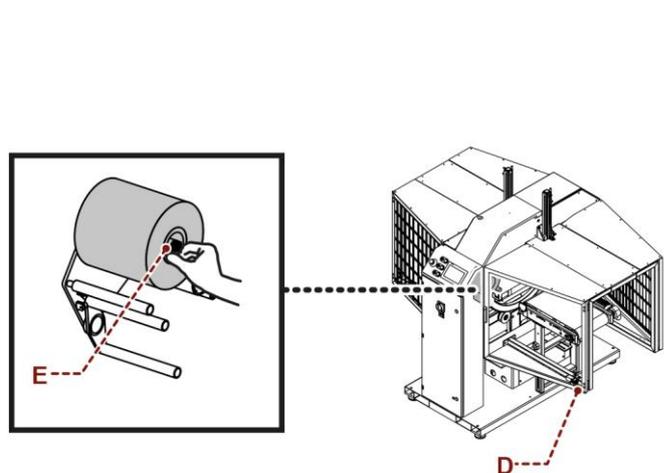
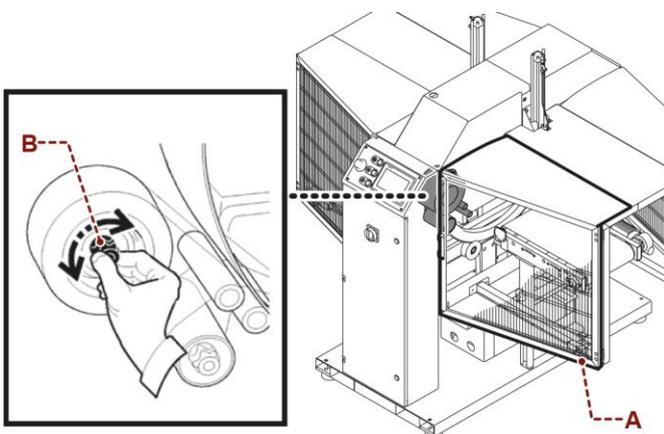
The optimum adjustment must be performed with the heaviest spool available, that is, the one with greater inertia, and must guarantee that the film wraps always remain well compacted on the spool.

1. Display the main page.
2. Touch the key (A) to access the manual movements (see paragraph 6.3. "Description of control panel" - "Description of control panel manual controls").
3. Touch the slewing ring (B) key to enable it and then the "spool" key (C).
The spool carriage unit automatically moves in front of the door (D).
4. Open the door (D) to access to the spool clutch adjustment.
5. Adjust the clutch on the spool carriage roller using the knob (E); turn clockwise to increase the braking effect.
6. Close the door and press the reset push-button.
7. Press the "Home" (F) key to return to the main page and to set up the machine.



Orbit 4-6-9

Orbit 6-9-12 with dandy roller group



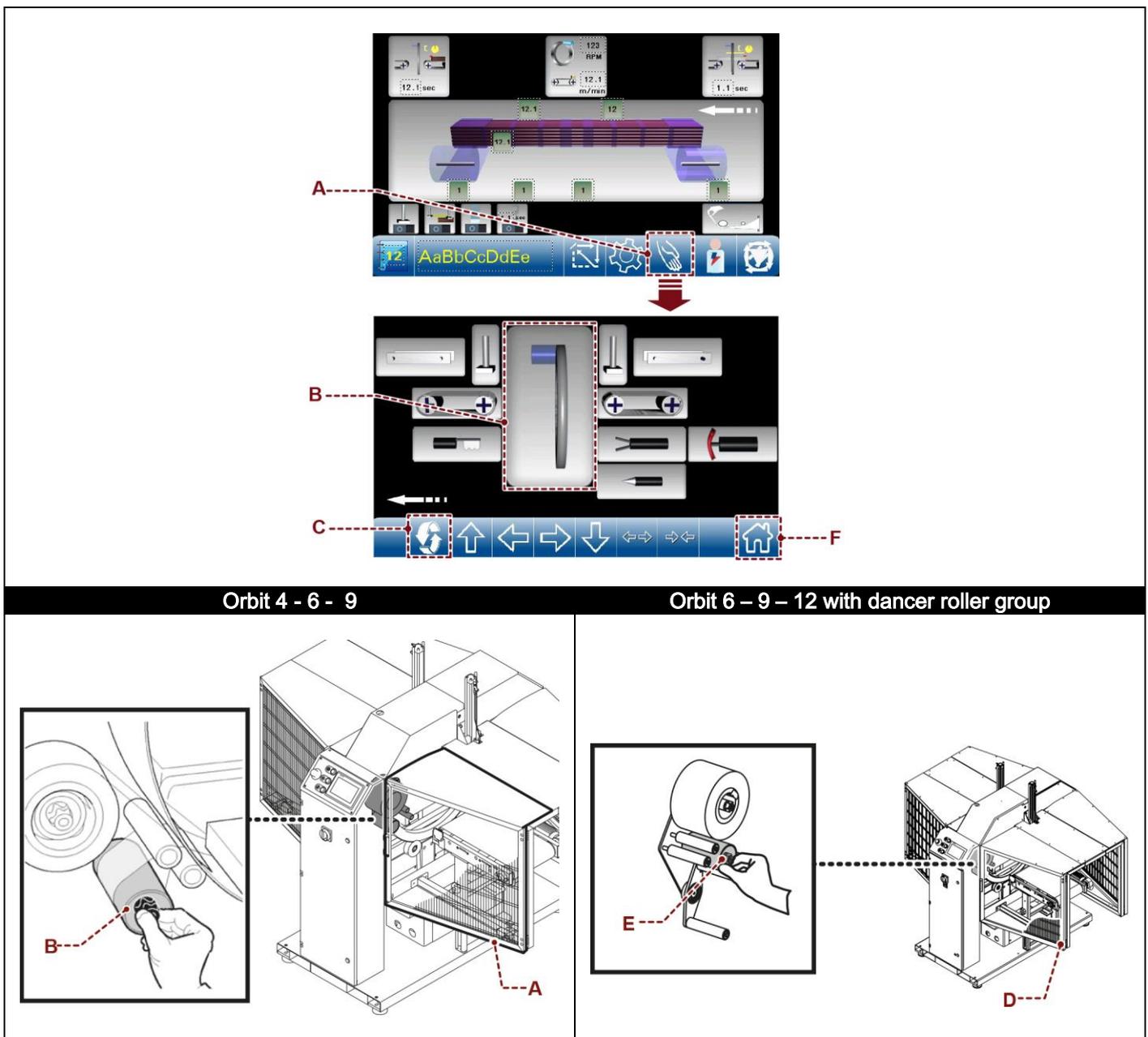
5.8. WRAPPING TENSION ADJUSTMENT

1. Display the main page.
2. Touch the key (A) to access the manual movements (see paragraph 6.3. “Description of control panel” - “Description of control panel manual controls”).
3. Touch the slewing ring (B) key to enable it and then the “spool” key (C).
The spool carriage unit automatically moves in front of the door (D).
4. Open the door (D) to access to the clutch roller adjustment.
5. Use knob (E) on the roller with clutch to adjust film wrapping tension; the roller is equipped with mechanical clutch, turn clockwise to increase the braking effect and the film stretch.
6. Close the door and press the reset push-button.
7. Press the “Home” (F) key to return to the main page and to set up the machine.



Caution - warning

Do not excessively increase the braking effect.



6. INFORMATION ABOUT THE USE

6.1. RECOMMENDATIONS FOR OPERATION AND USE

- When using the machine for the first time, the operator must read the manual and identify the control functions and simulate some operations, especially machine start and stop.
- Make sure that all safety devices are properly installed and efficient.
- Only carry out the operations foreseen by the Manufacturer and do not tamper with any device to obtain different performance levels.



Important

The frequency of the accidents derived from machine use depends on many factors that cannot always be foreseen and controlled.

Some accidents may be caused by unpredictable environmental factors, others are mainly due to users' behaviours.

On first use, and if required, in addition to being authorised and appropriately informed, the personnel must simulate some manoeuvres to identify the main controls and functions.

Only carry out the operations foreseen by the Manufacturer and do not tamper with any device to obtain different performance levels.

Make sure the safety devices are properly installed and efficient before use.

Users, besides complying with these requirements, must apply all the safety regulations and carefully read the descriptions of the controls and commissioning.

6.2. DESCRIPTION OF THE CONTROLS

1. Main switch

It turns the power supply on and off.

Position 0 (OFF) indicates that the machine is not powered.

Position 1 (ON) indicates that the machine is powered.

2. Emergency button

It immediately cuts off the power supply in emergency situations stopping the machine.



Important

After the emergency button activation, you must press the reset button to enable the automatic cycle.

3. Stop button

Press the button to interrupt the automatic wrapping cycle.

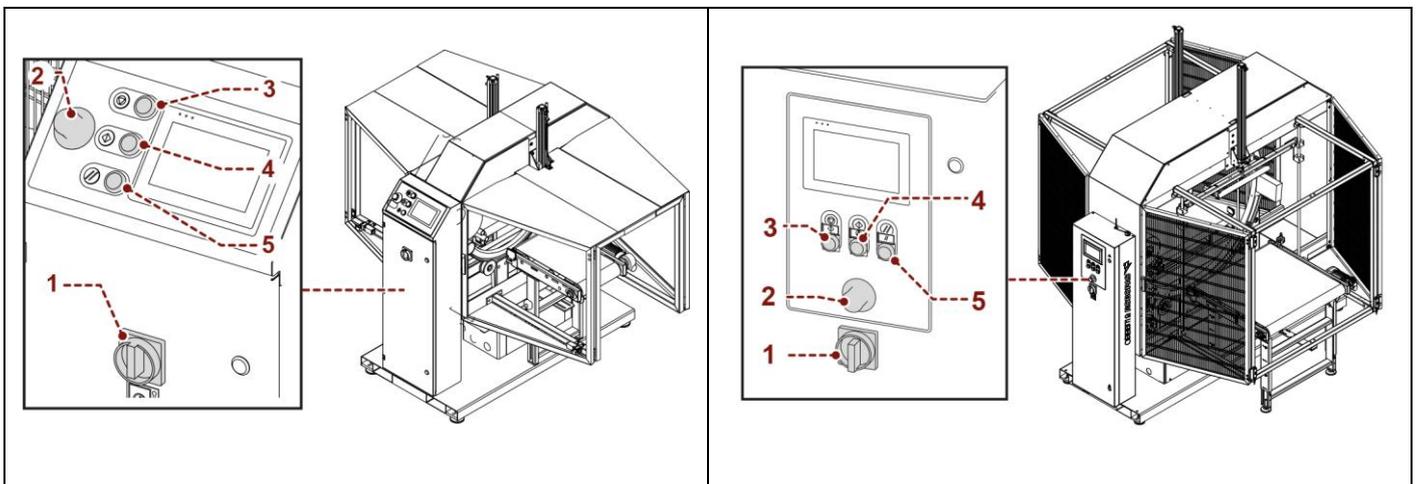
4. Start button

Press the button to enable the automatic work cycle.

5. Reset button

Press the button to set up the machine.

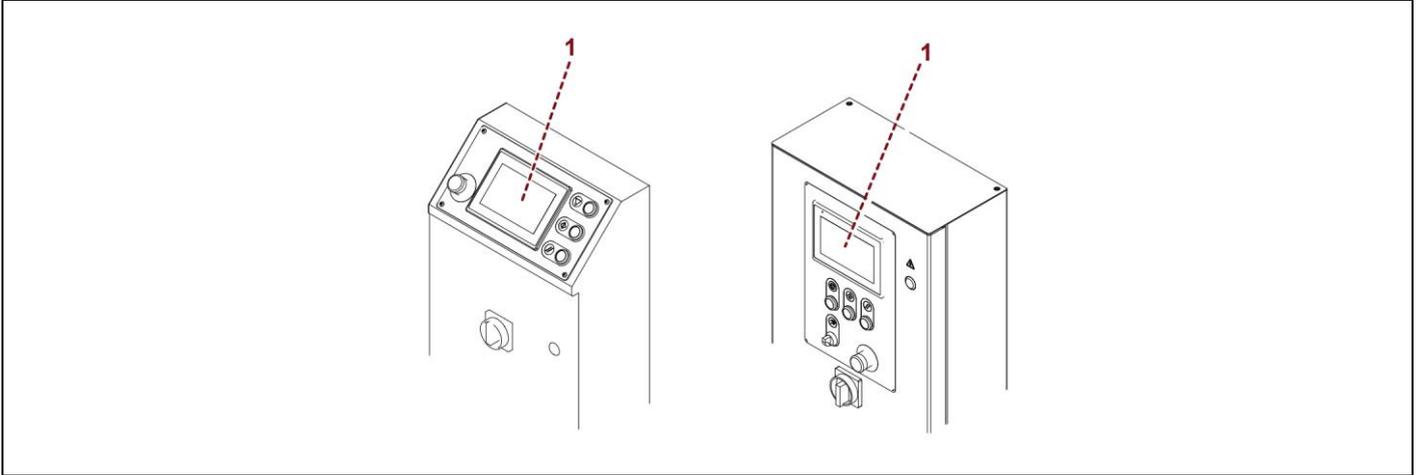
Press to reset the machine before restarting it after an emergency stop or after a shut-down due to the disconnection of the power supply.



6.3. DESCRIPTION OF CONTROL PANEL

The control panel is a device that allows you to set the working parameters and to check all the operating conditions of the machine. It has a display (1) that allows you to activate the various functions by simply "touching" the images and texts that appear on it. The keys to move from one page to the other are shown on each displayed page. If necessary, there are also keys that allow setting the parameters, perform some commands, etc.

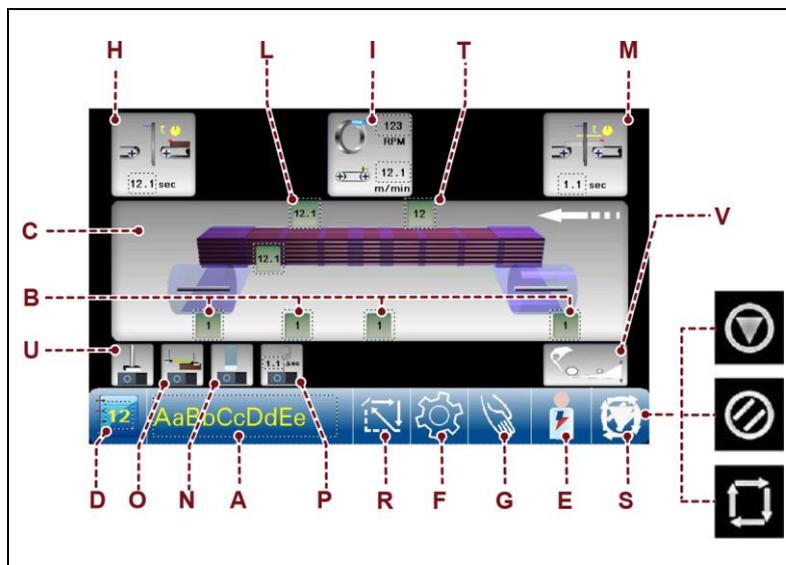
The light blue keys are keys that can be pressed (function keys), while the grey keys are inactive or read-only keys.



6.3.2. MAIN PAGE

The page displays the wrapping values currently in use and gives access the other pages.

- A) It displays the name of the recipe in use.
- B) Key to access the wrapping number setting (See "Cycle parameters setting").
- C) Main display, shows the wrapping cycle selected in the active recipe (See "Cycle parameters setting").
- D) Button to access the recipe list.
- E) It displays the enabled operator.
- F) Software changes key (see "Description of control panel"-“Date and time setting”).
- G) Key to access manual movements.
- H) Key to access the setting of the wrapping start time (See "Cycle parameters setting").
- I) Key to access the setting of the speed of the rotary ring and of the conveyors (See "Cycle parameters setting").
- L) Key to access the setting of the product wrapping interval time (See "Cycle parameters setting").
- M) Key to access the setting of the product wrapping end time (See "Cycle parameters setting").
- N) On-off key enables/disables film breakage control (Optional).
- O) On-off key enables/disables the advance of the outfeed presser downstroke (Optional).
- P)On-off key enables/disables the heat sealing and if enabled the heat sealing allows to set the sealing time (Optional).
- R) Cycle reset key.
- S) It displays the machine status.
 - S1: Machine in Stop.
 - S2: Machine in Reset.
 - S3: Machine in Automatic mode.
- T) Key to access to the setting of additional band number (the key is only present if the “Head and additional bands wrapping” cycle has been selected).
- U)On-off key enables/disables the downstroke of the pressers during the cycle (Optional).
- V) Film insertion key (Clamp forward-backward).



6.3.3. OPERATOR AND PASSWORD CHANGE

Some settings can only be accessed by the machine manager after entering the password (editable), in order to prevent accidental changes by unqualified personnel.



Caution - warning

The factory manager should assign the passwords to authorised personnel only and each password is to be considered secret and confidential.

Operator change

Access the main page and:

1. Touch the (A) key to display the general parameters page.
2. Touch the (A1) key to access the general parameters page.
3. Touch the (B) key to change the reference operator.
4. Enter the password (1111) assigned to machine manager (B1).

B1) Machine manager (head of department).

B2) Assistance Service (dealer).

B3) Software administrator (Robopac).

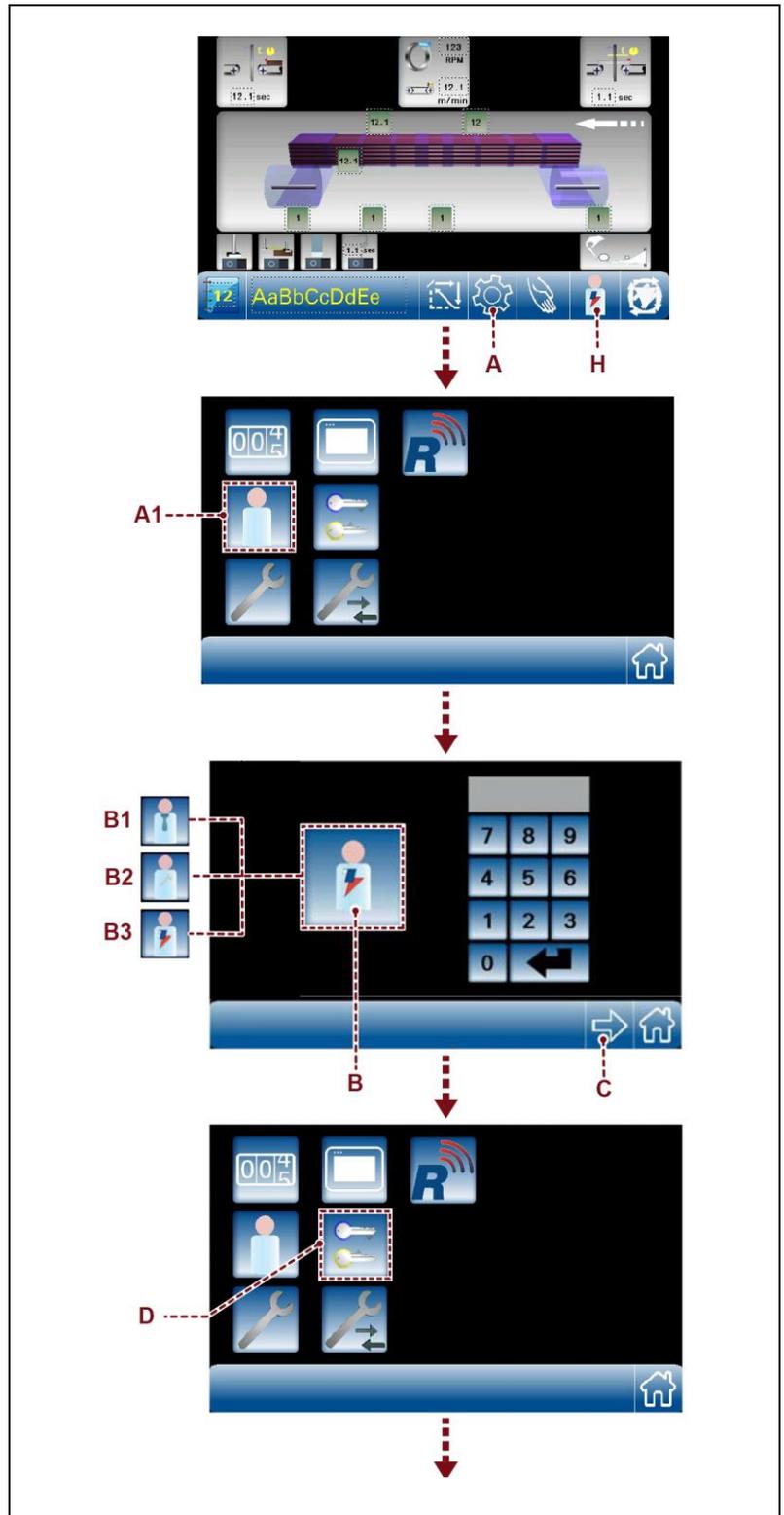
Once the operator is changed and confirmed

the (H) icon on the main page will become that of the confirmed operator.

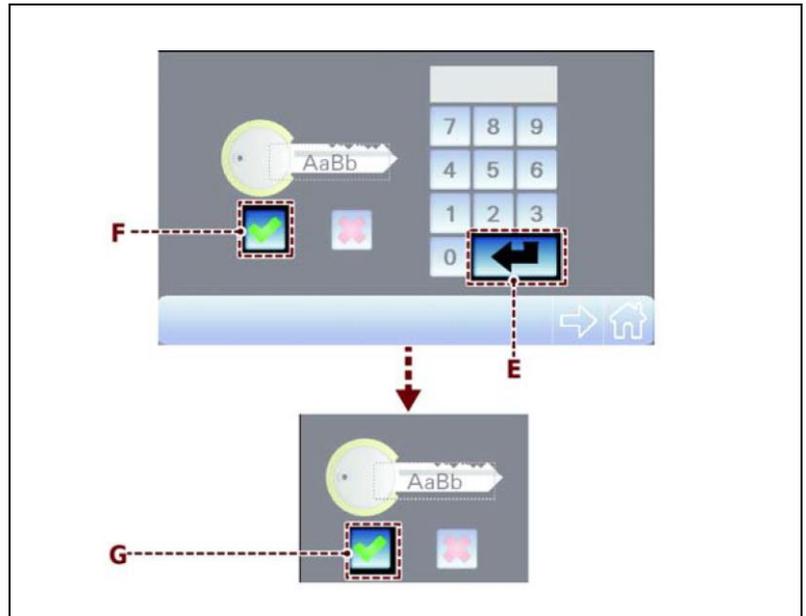
At this point, all protected functions are unlocked and you can change some of the settings, including the password.

Password change

1. Touch the key (C) to return to the general parameters page.
2. Touch the (D) key to display the keypad, type the new password and confirm by touching the key (ENTER) (E).



3. If it is correct, confirm by touching key (F), confirm again in the pop-up window by touching key (G).



6.3.4. DEFAULT PASSWORD RESET

If you need to reset the default password in case you have forgotten the set password or for other reasons, proceed as indicated:

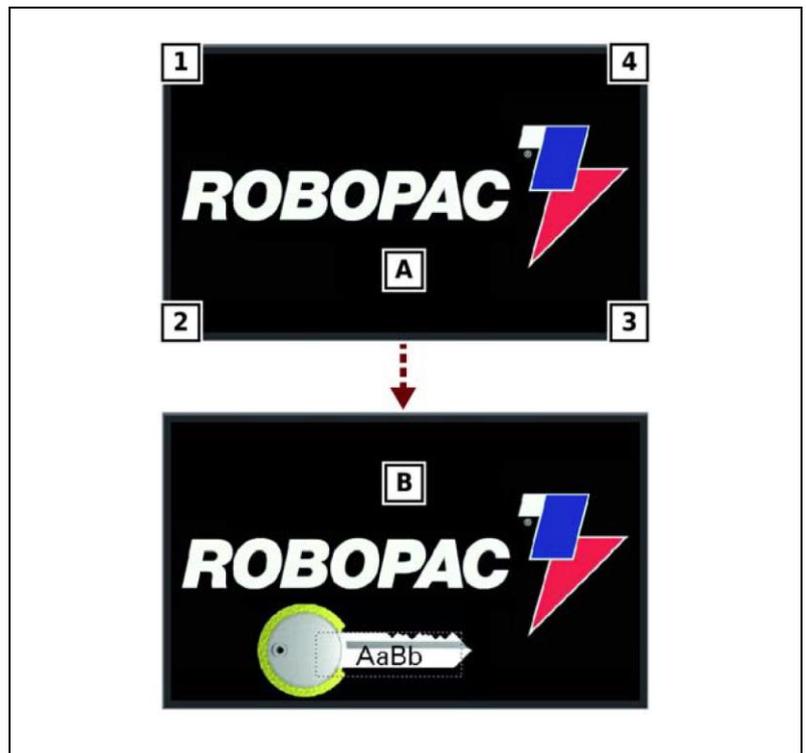
1. Upon starting the software, when page (A) is displayed, touch the 4 corners of the display in the sequence indicated.



Important

Carry out the operation quickly; the page will remain displayed for 5 seconds.

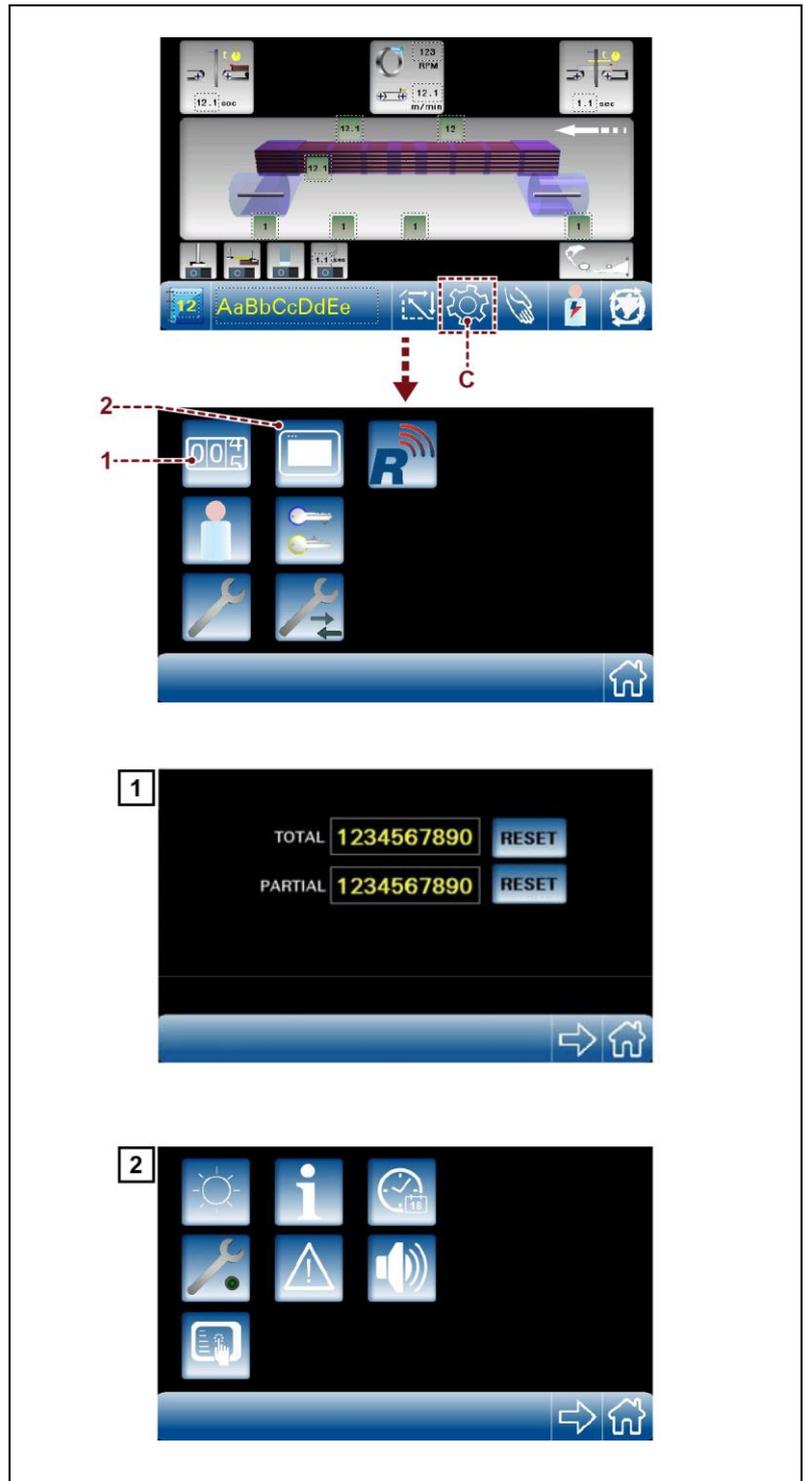
The operation has been completed successfully if the page (B) containing the password is displayed.



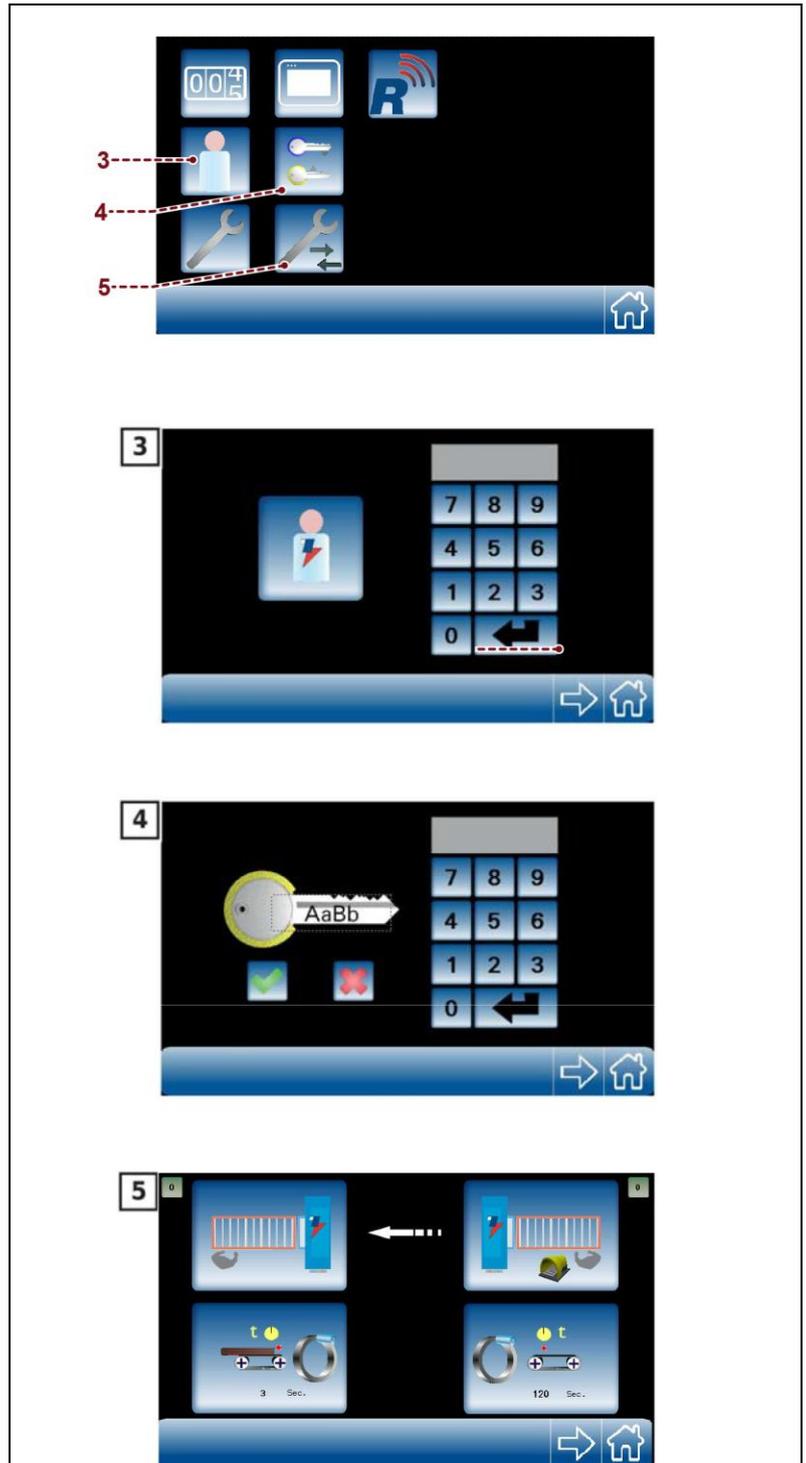
6.3.5. GENERAL PARAMETER SETTINGS

From the main page, touch key (C) to access the "General parameters" page.

- Touch key (1) to access "Production counters".
- Touch key (2) to access "H.M.I. Enabling" (See "Software settings and displays").



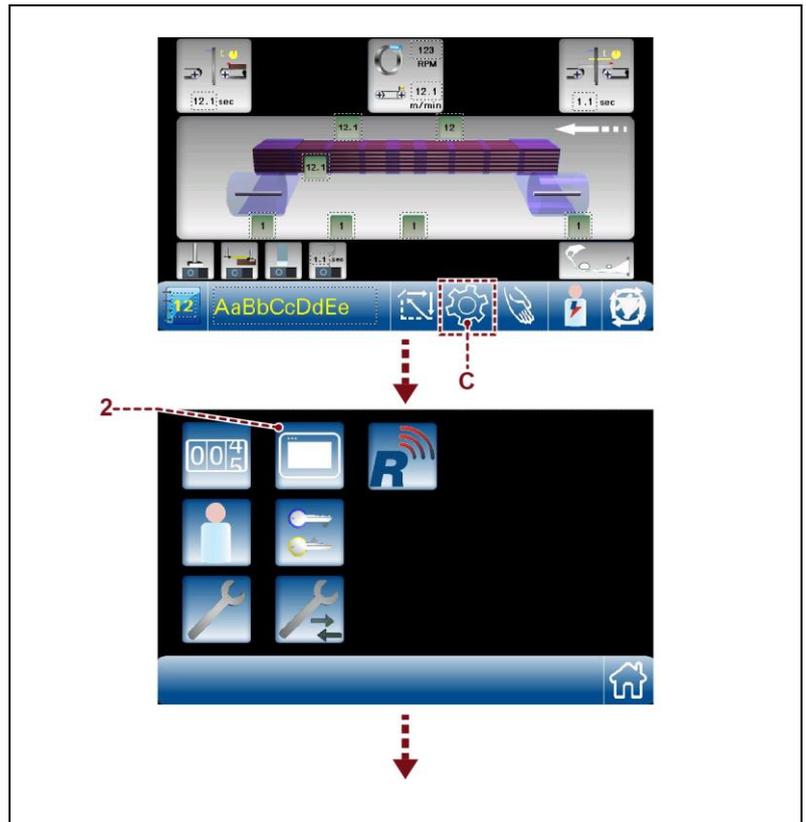
- Touch key (3) to access "Password login" (See "Operator change").
- Touch key (4) to access the password change (See "Password change").
- Touch key (5) to access the "Product loading and unloading" page.



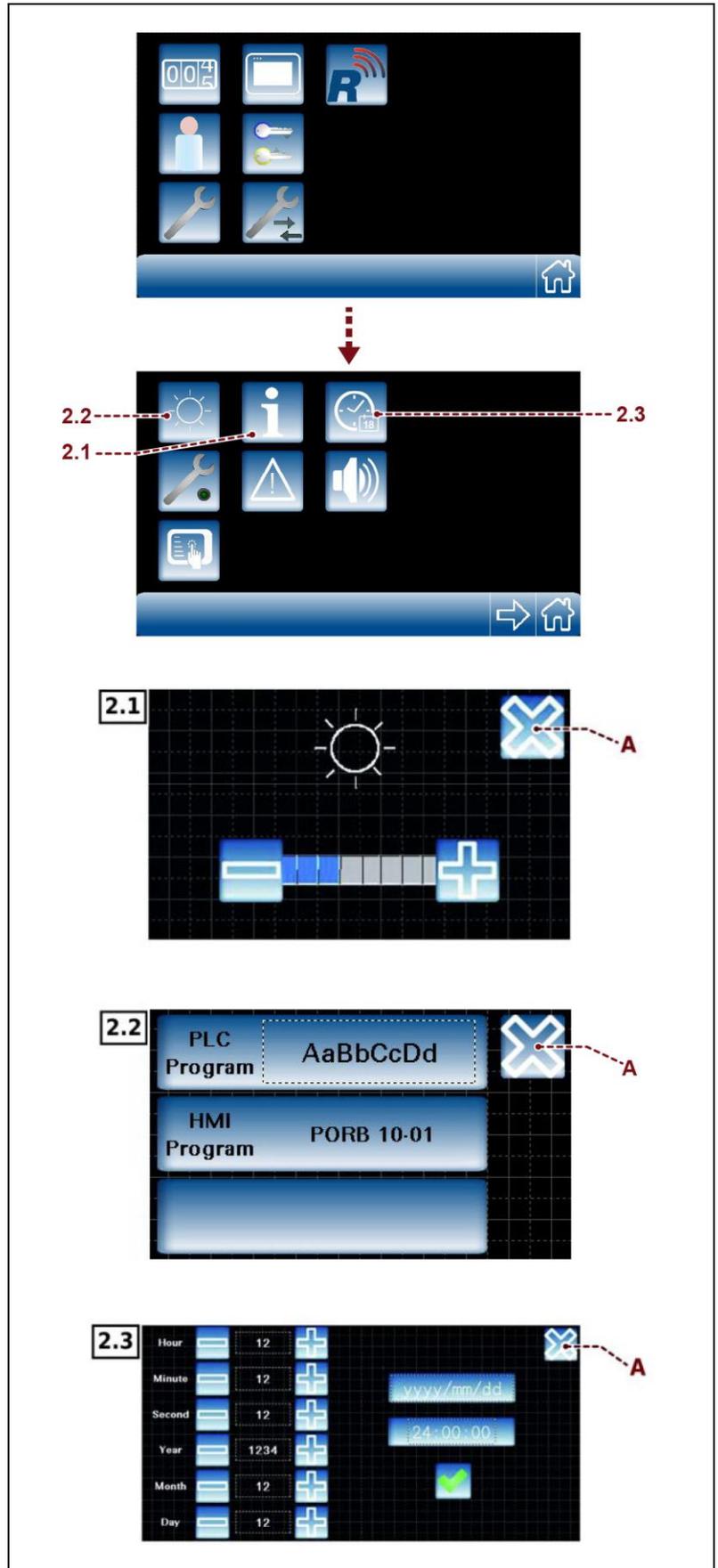
6.3.6. SOFTWARE SETTINGS AND DISPLAYS

From the main page, touch key (C) to access the "General parameters" page.

- Touch key (2) to access the "H.M.I. Enabling" page.



- 2.1) Set the display light brightness.
- 2.2) Display information about the software version.
- 2.3) Set the date and time.



- 2.4) Display information on machine status for assistance purposes.
- 2.5) Display a summary of the last alarms tripped on the machine.
- 2.6) Enable / disable the key sound.
- Change the various parameters and confirm with "ESC" (A).
- *) These keys are only displayed if the machine manager accesses the software using passwords (see "Description of control panel"-"Operator and password change").

2.4

State Auto	123456	PLC IN	1010101010101010
State Strip	123456	AUX1 IN	1010101010101010
State StopCut	123456	AUX2 IN	1010101010101010
State Charge	123456	AUX3 IN	1010101010101010
State Discharge	123456	PLC OUT	1010101010101010
Supervisor	AaBbCcDdEe	AUX1 OUT	1010101010101010
		AUX2 OUT	1010101010101010

2.5

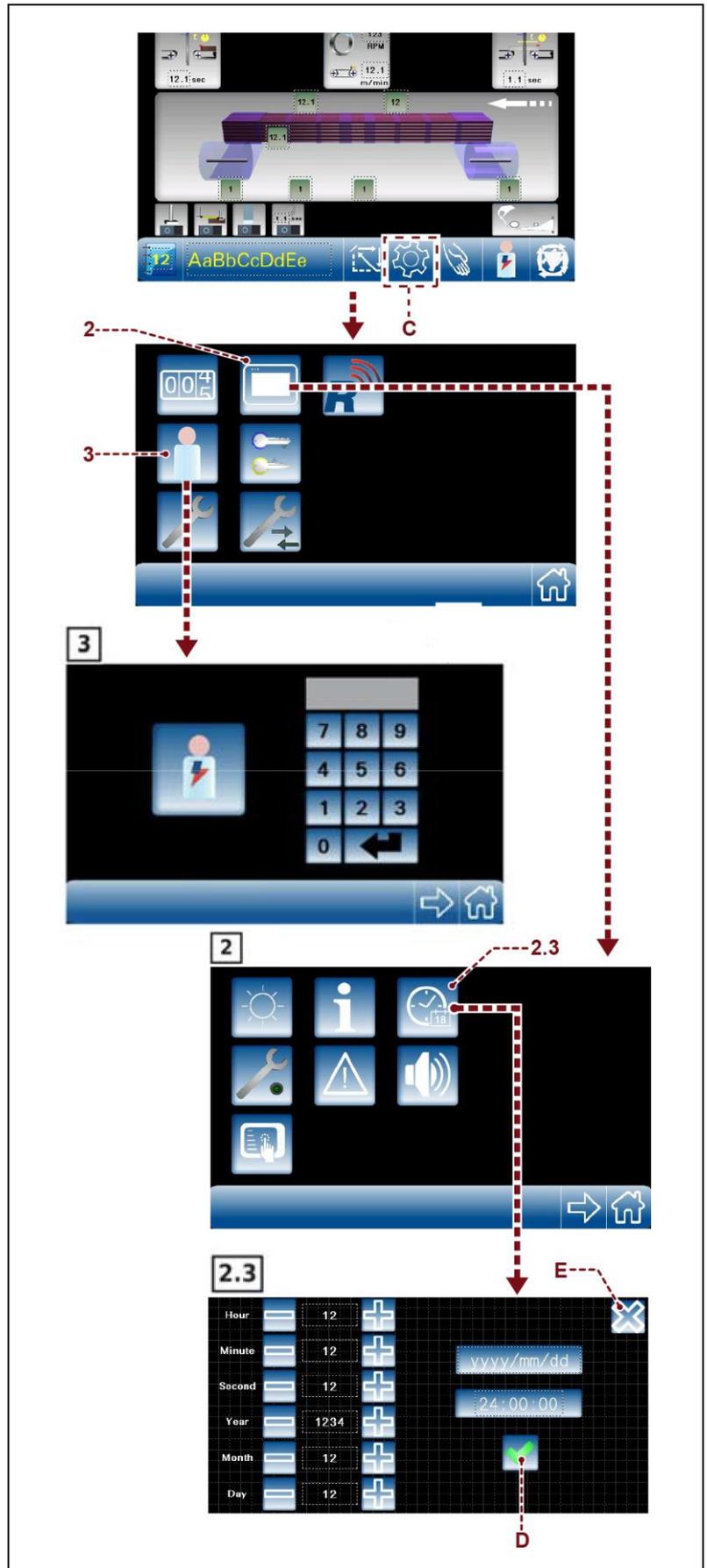
2.6

Hour: 12
Minute: 12
Second: 12
Year: 1234
Month: 12
Day: 12

yyyy/mm/dd
24:00:00

6.3.7. DATE AND TIME SETTING

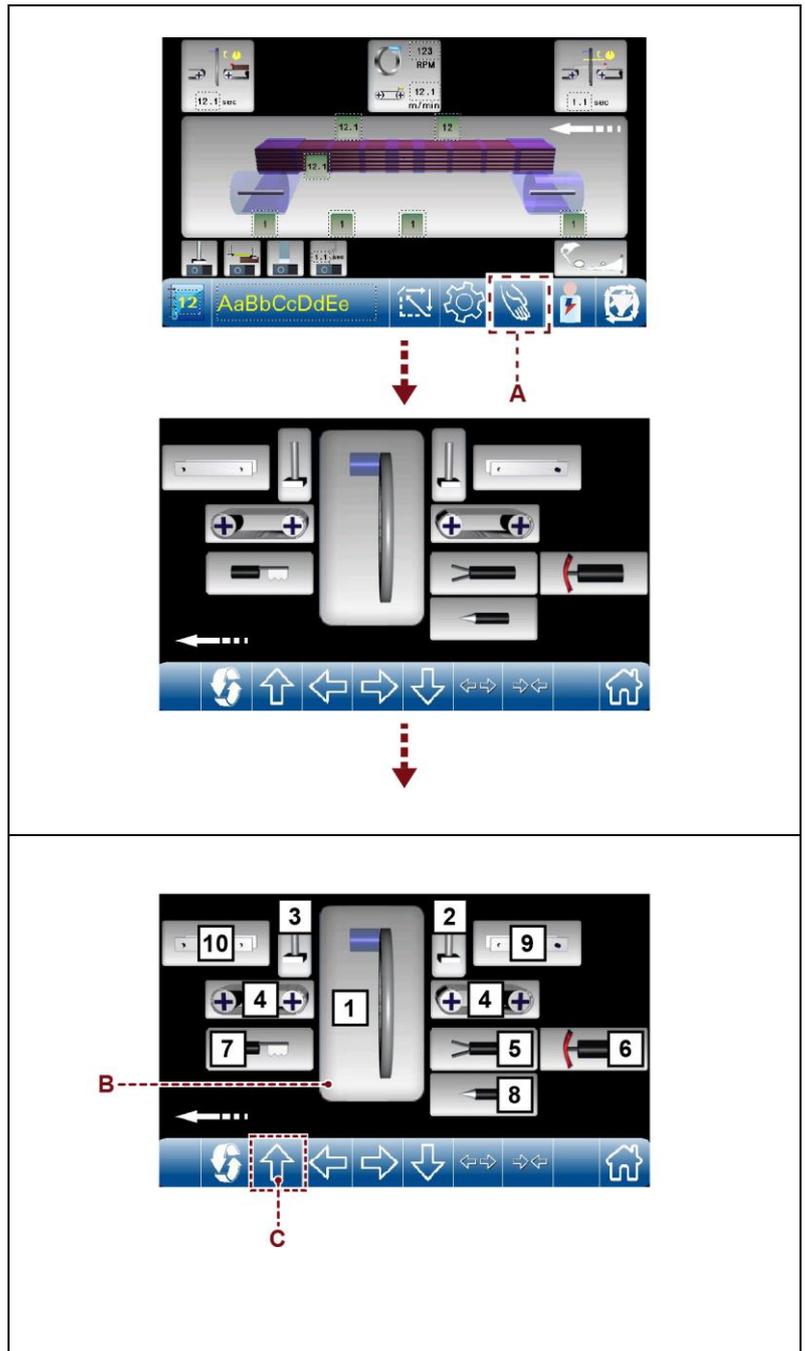
1. Display the main page (see “Description of control panel”-“Main page”).
2. Touch key (C) to access the general parameters page.
3. Touch key (3) and access with the password as machine manager (see “Description of control panel”- “Operator and password change”).
4. Touch key (2) to access the "H.M.I. Enabling" page.
5. Touch key (2.3) to display the date and time setting page.
6. Once the time and date have been set, confirm with button (D). Confirm with key (E) to return to the main page.



6.3.8. DESCRIPTION OF CONTROL PANEL MANUAL CONTROLS

Manual controls are to be used to individually operate the machine moving parts, in case of service or check before the automatic cycle start-up.

By touching the key (A) from the main page, you can access the manual movements.



By touching the image of the object you want to move, you will enable the keys corresponding to the possible movement.

For example, by touching the image of the slewing ring (B), key (C) will be displayed (light blue, therefore enabled).

Key (C) (if present) moves the slewing ring.

Key (C) (impulse key) moves the slewing ring for "spool change".

1. Rotation of the slewing ring/spool change.

2. Incoming product presser upstroke/downstroke.

3. Outgoing product presser upstroke/downstroke.

4. Product infeed/outfeed conveyor forward/backward.

5. Rotary cutting unit exit/return.

6. Clamp exit/return.

7. Sealer/block on the striker plate upstroke/downstroke.

8. Exit/return of the cutting blade.

9. Opening/closing of the guides at product infeed.

10. Opening/closing of the guides at product outfeed.



6.4. SETTING MODIFICATION MODE

- Texts and values editing.
- Progressive adjustment of values.



Important

The performed modifications are applied immediately and are stored automatically.

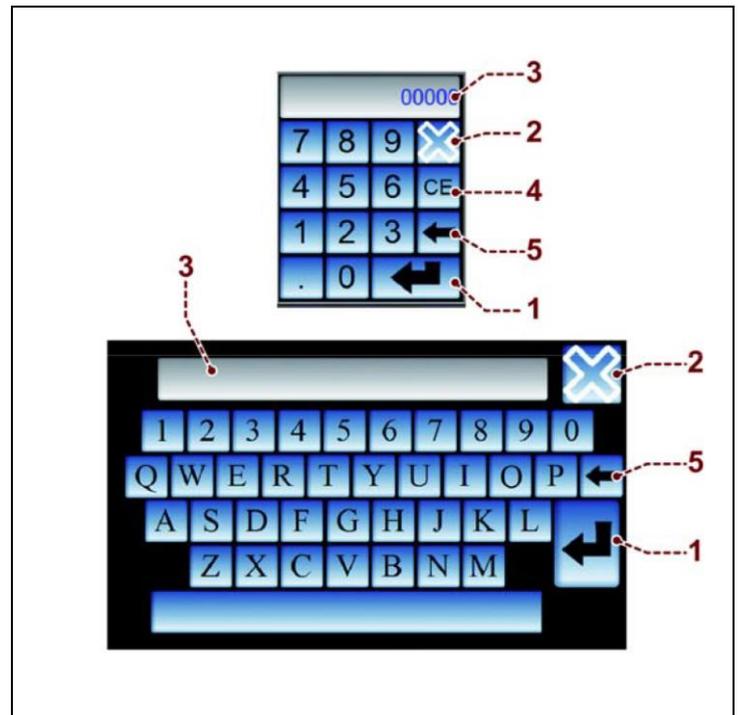
6.4.1. TEXTS AND VALUES EDITING

The keypad is displayed each time the editable or programmable functions are enabled.

Type the requested value or name and confirm by pressing "ENTER" (1).

Touch the "ESC" (2) key to disable the editing mode.

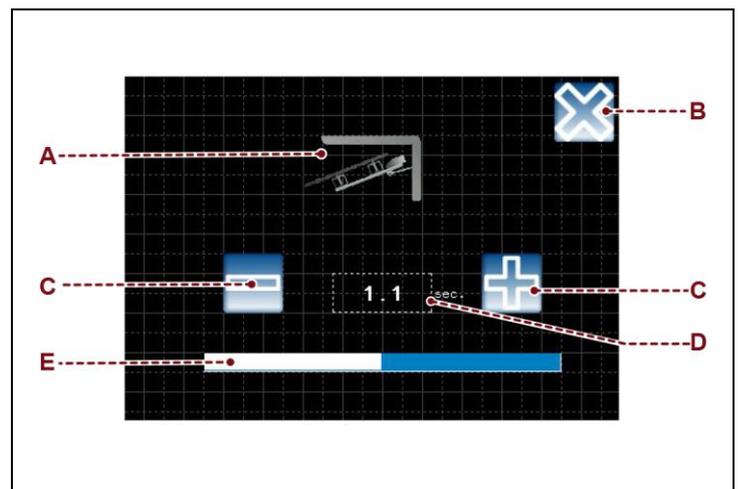
1. Key to confirm and save the text or value entered.
2. "Esc" button to disable the editing mode and to close the page.
3. Display showing the values and texts edited.
4. Button to delete the text or value selected.
5. Button to delete one character at a time (starting from right).



6.4.2. PROGRESSIVE ADJUSTMENT OF VALUES

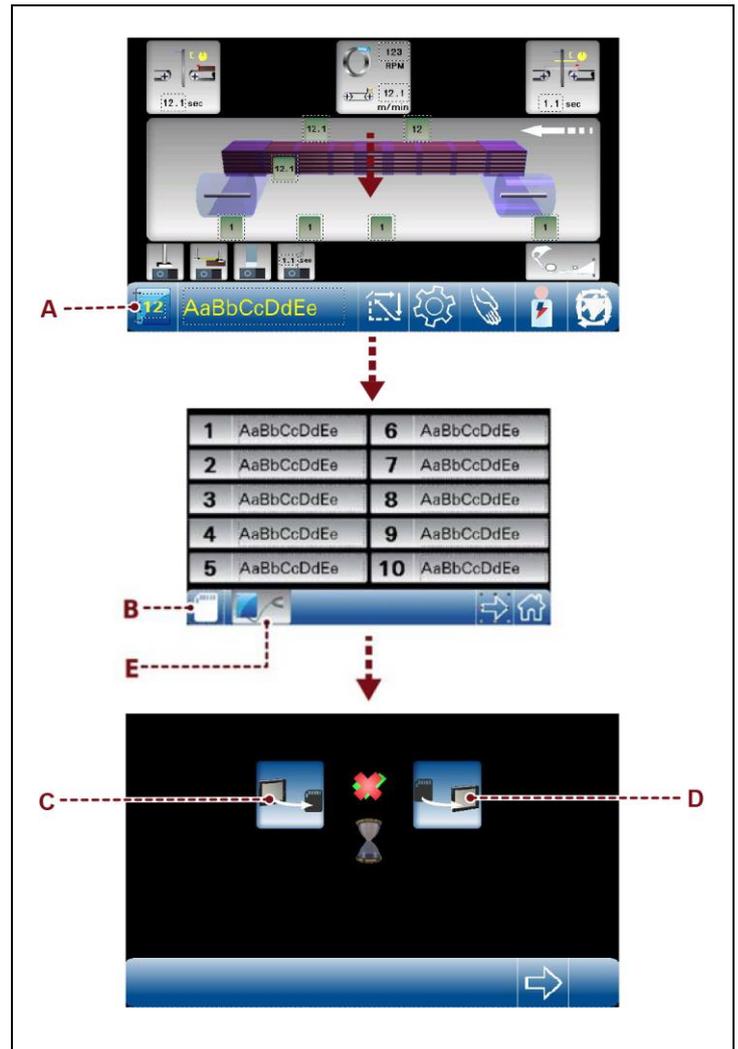
The page is displayed each time the editable or programmable functions are enabled.

- A) Display showing the figure to be set.
- B) "Esc" button for closing the page.
- C) Buttons to increase or decrease the value, displayed in the (D) area.
- D) Displays the value typed with buttons (D) and cursor (E).
- E) The graphic bar represents the set value in relation to the allowed values.



6.4.3. "COPY RECIPES" FUNCTION

1. Display the main page (see "Main page").
2. Press key (A) to display the recipe list.
3. Press key (B) to access the "Copy Recipes" page.
4. Press key (C) to copy recipes from the control panel to the SD card (supported by a PC).
5. Press key (D) to copy recipes from the SD card from a PC to the control panel.
6. Press the optional key (E) to change recipes using external devices.



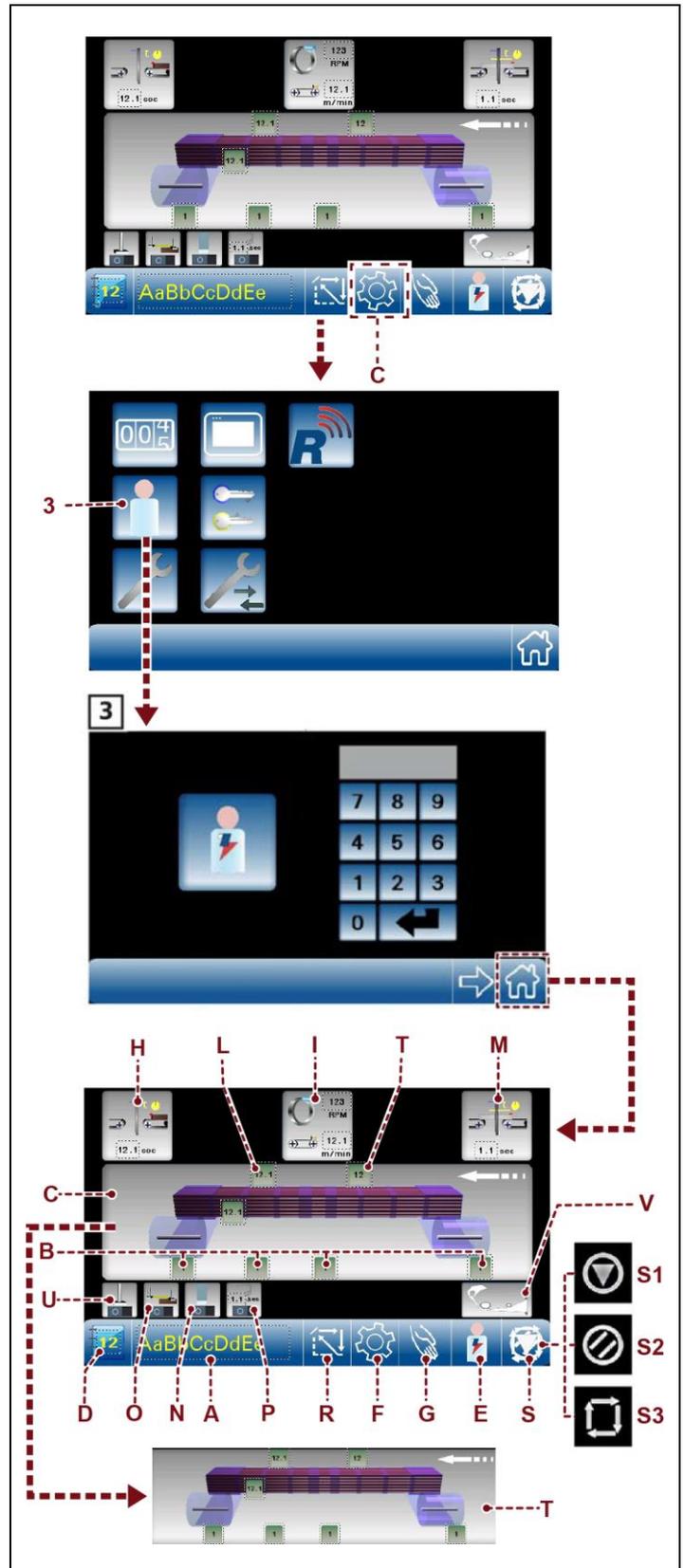
6.5. CYCLE PARAMETER SETTING (RECIPE COMPOSITION)

1. Display the main page (see “Description of control panel”-“Main page”).
2. Touch key (C) to access the general parameters page.
3. Touch key (3) and access with the password as machine manager (see “Description of control panel”-“Operator and password change”).
4. Touch the home key to return to the main page.
5. Touch one of the keys (B, C, H, I, L, M, N, O, P, Q, T) to display the page containing the required parameter.



Important

Key (T) appears only if the "Head and additional bands wrapping" cycle is selected.



6. Press keys “+” and “-” to increase or decrease the parameter value.
The graphic bar represents the value set for admitted values (see “Setting modification mode”).

7. Touch the key (Z) to return to the previously displayed page.

The screenshots illustrate the following parameter settings:

- I:** RPM parameter set to 123. The graphic bar shows a range from 0 to 123.
- Q:** Time parameter set to 1.1 sec.
- B1:** RPM parameter set to 1.
- B2:** RPM parameter set to 1.
- B3:** RPM parameter set to 1.
- M:** Time parameter set to 12.1 sec.
- H:** Time parameter set to 1.1 sec.
- L:** Time parameter set to 12.1 sec.
- T:** RPM parameter set to 12.
- C:** No numerical value is displayed.

In each screenshot, the 'Z' key is indicated by a red dashed line, representing the 'Back' or 'Return' function.

The parameters of the wrapping cycle are the following:

B1) Number of wrappings (varying from 1 to 9).

It allows you to set the number of additional wraps to be carried out at the beginning of the wrapping cycle (product head).

B2) Number of wrappings (varying from 1 to 9).

It allows you to set the number of additional wraps that must be carried out at the centre of the product.

B3) Number of wrappings (varying from 1 to 9).

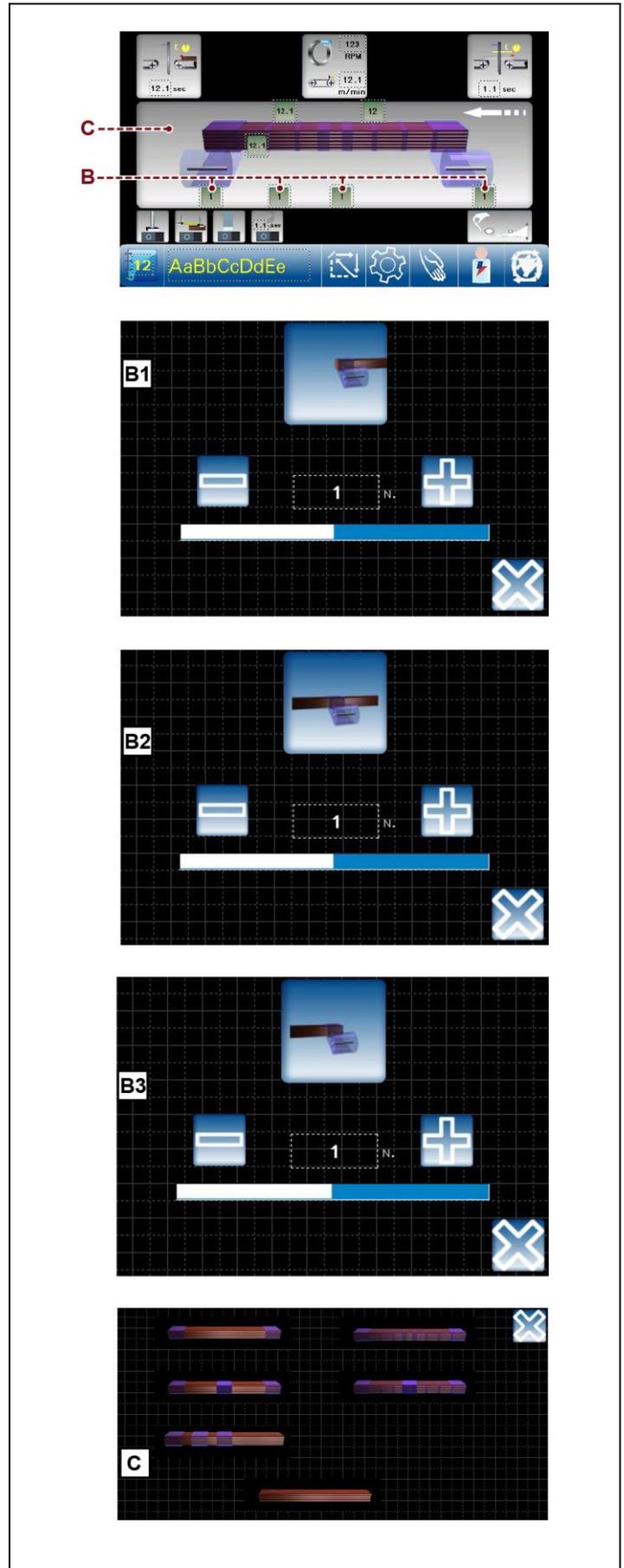
It allows you to set the number of additional wraps that must be carried out at the end of the wrapping cycle (product tail).

C) Product wrapping cycles.

- *"TOTAL" wrapping.*
The product is completely spiral wrapped with additional wraps on head and tail.
- *"Head - tail" wrapping.*
The product is only wrapped at the head and tail.
- *"Total" and "central bands" wrapping.*
The product is completely wrapped in a spiral, with additional wraps on head and tail, and with a series of reinforcing wrappings spaced using a settable time.
- *"Head-tail" and "central bands" wrapping.*
The product head and tail are wrapped with a series of reinforcing wrappings spaced using a settable time.
- *"Head and additional bands" wrapping (Optional).*
The product is wrapped at the head and with a series of additional reinforcing wrappings in quantities and distances that can be set through the corresponding parameters.

"Bypass" cycle.

The product passes through the machine without being wrapped.

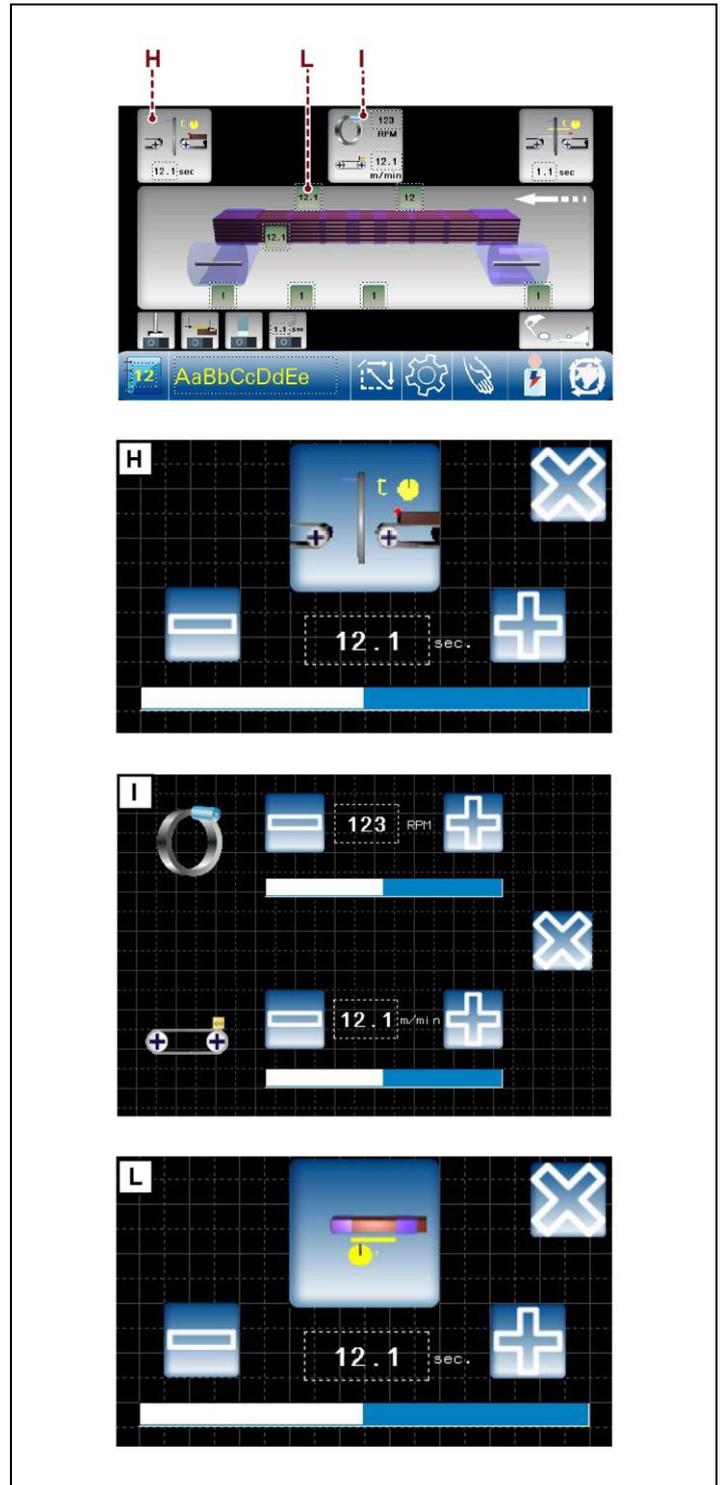


- H) Product wrapping start time (head).**
It is the time that determines the position of wrapping start with respect to the product head.
- I) Rotary ring and conveyor speed function.**
- *Rotary ring speed function.*
To increase or decrease rotary ring speed; this allows to speed up or slow down the process and to respectively decrease or increase film overlapping.
 - *Conveyor speed function.*
To increase or decrease the speed of the infeed and outfeed conveyors; this allows to speed up or slow down the process and to respectively decrease or increase film overlapping.
- L) Product wrapping time (central bands).**
It is the time that determines the position and quantity of central bands with respect to product head.



Important

The key (L) is present only with central band wrapping.

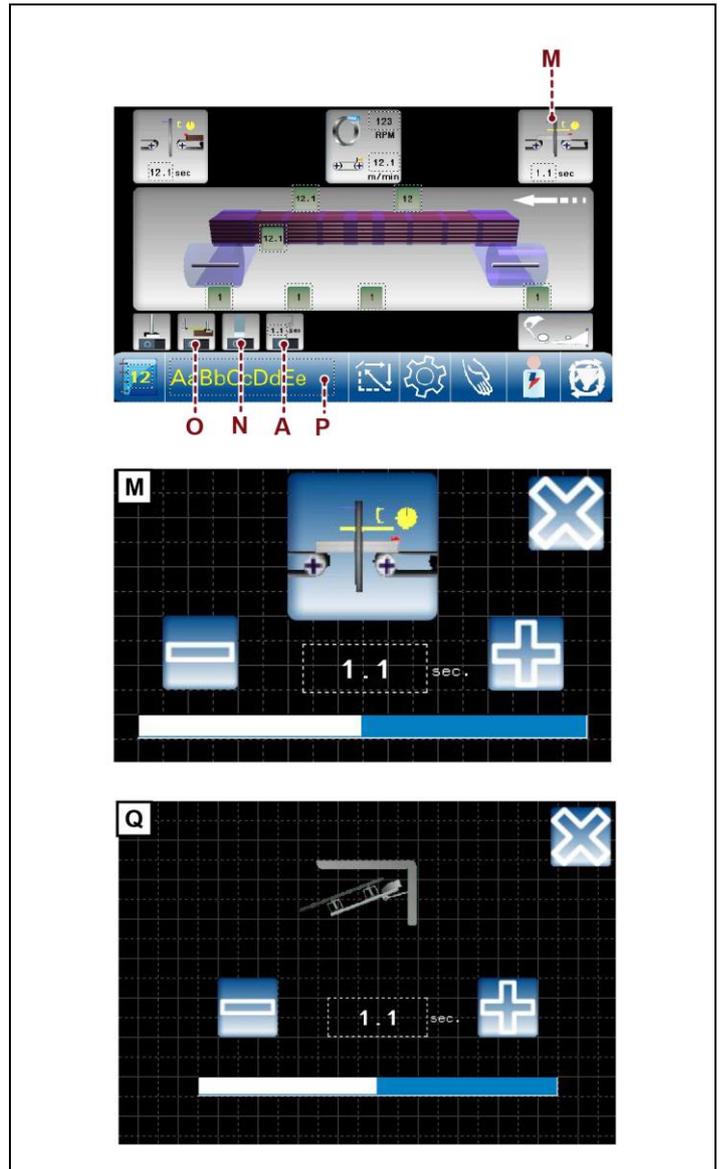


- M) Product wrapping end time (tail).**
It is the time that determines the position of wrapping end with respect to the tail of the product.

! **Important**
To rename the recipe, tap key (P).
Once the keypad is displayed, follow the instructions in the paragraph "Setting modification mode".

- N) Key to enable/disable the film breakage control.**
Press to enable the function, press again to disable.
- O) Key to enable/disable the advance of the downstroke of the presser at outfeed.**
Press to enable this function when processing short products.
Press again to disable.
- A) Key to enable/disable the heat sealing.**
Press to enable the function, press again to disable.
In the (Q) area the closing time of the sealer is visible and can be set.

! **Important**
The (Q) area is only present if sealing is enabled through the key (P).

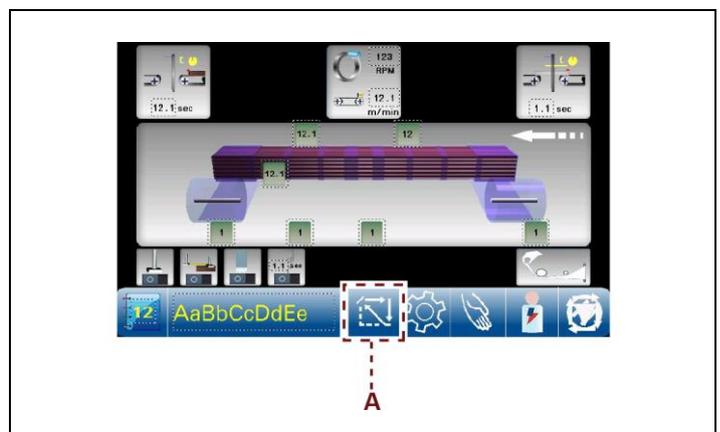


6.6. CYCLE RESET

If the machine is stopped or turned off while wrapping a product using the START button, wrapping can be resumed from where it stopped by restarting the cycle without any other operation.

Otherwise, proceed as indicated.

1. Display the main page.
2. Touch key (A) to reset the wrapping cycle.
3. Remove product from the machine.



6.7. MACHINE STATUSES

Machine isolated from the power supplies

This machine status is requested to perform any intervention in dangerous areas or in their immediate surroundings. It is obtained in the following way:

- Main switch in pos. "0".
- Air inlet tap closed.

Machine on

This machine status is necessary to perform all those machine interventions that need power and pneumatic supply. It is obtained in the following way:

- Inspection door closed.
- Main switch in pos. I.
- Air inlet tap open.

Machine ready for the cycle

This machine status is necessary to start the process. It is obtained in the following way:

- Machine on.
- Synchronised rotary ring.
- The film must be blocked in the clamp.

6.8. PREPARATION OF THE MACHINE FOR OPERATION

- Infeed and outfeed conveyor height (→ "Information on adjustments").
- Conveyor position (→ "Information on adjustments").
- Guide width (→ "Information on adjustments").
- Guide position (→ "Information on adjustments").
- Pressers height (optional) (→ "Information on adjustments").
- Position of infeed presser (→ "Information on adjustments").
- Wrapping tension (→ "Information on adjustments").
- Spool carriage roller clutch (→ "Information on adjustments").
- Cycle parameters setting (recipe composition or change) from where you can set, for example:
 - number of wraps for each operating cycle
 - the rotary ring speed etc.

6.9. MACHINE START-UP

- The inspection door must be closed.
- All safety devices must be in good conditions and efficient.
- The machine must be clean and in order.
- Compressed air supply must be open and pressure adjusted to 6 bar.
- The film spool must be sufficiently full to guarantee operations (→ "Spool replacement").
- The film must be blocked in the clamp (→ "Film insertion in the clamp").
- The rotary ring must be synchronised (→ "Synchronisation of the rotary ring").
- Turn main switch to pos. I.
- Follow the indications displayed.

The machine is ready to perform the operation.



Important

At first start-up after a change of operation, it is necessary to perform some test cycles to check the quality of the wrapping operation and detect any fault.

Synchronisation of the rotary ring

The machine does not operate and does not block the film in the clamp if the rotary ring is not synchronised.

No matter what the position of the rotary ring is, when the START pedal is pressed, the machine will synchronise the rotary ring instead of starting the operations.

Then, processing can be started.

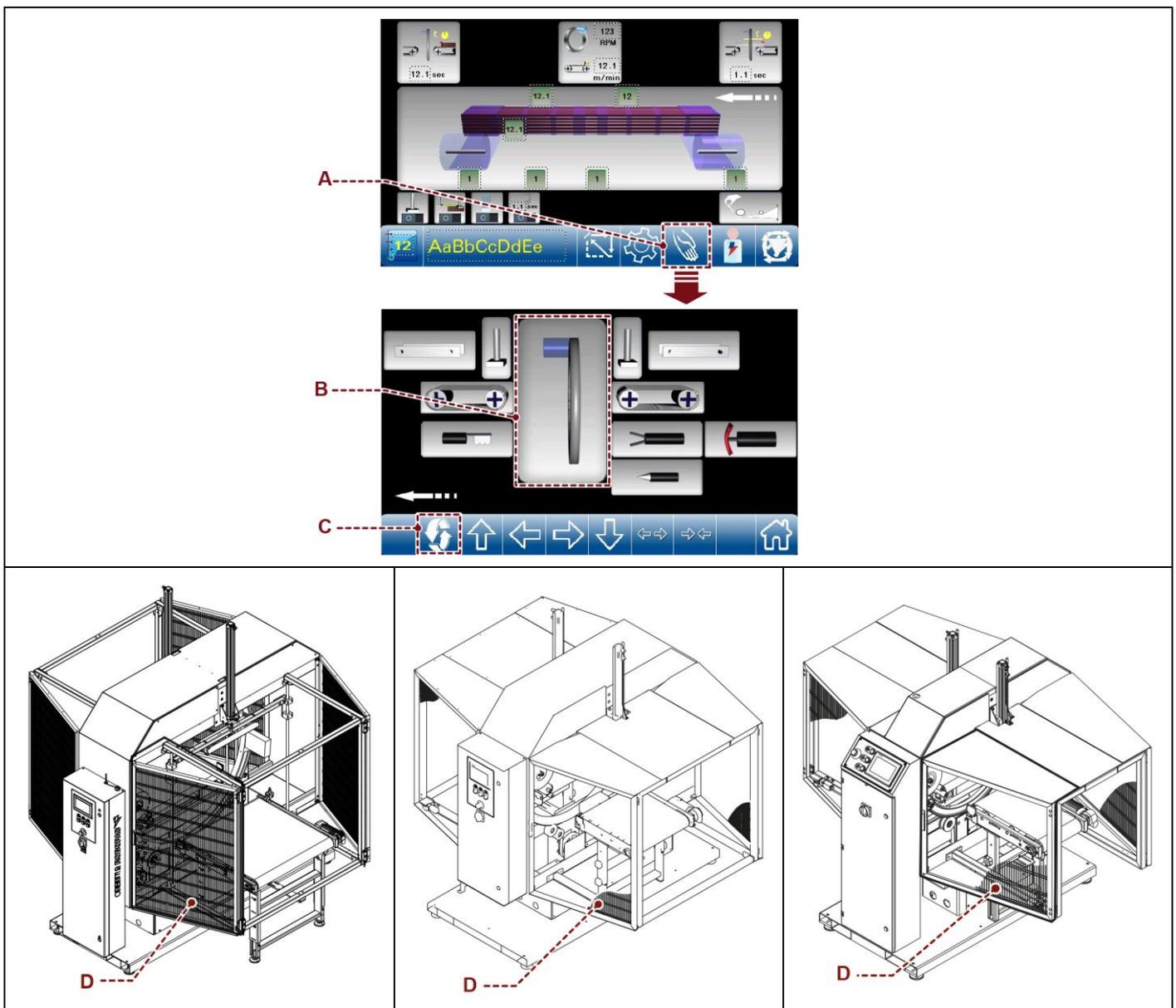
Spool replacement

1. Display the main page.
2. Touch the key (A) to access the manual movements (see 6.3. "Description of control panel" - "Description of control panel manual controls")
3. Touch the "slewing ring" (B) key to enable it and then the "spool" key (C).
The spool carriage unit automatically moves in front of the door (D).
4. Open the door (D) to access the spool.



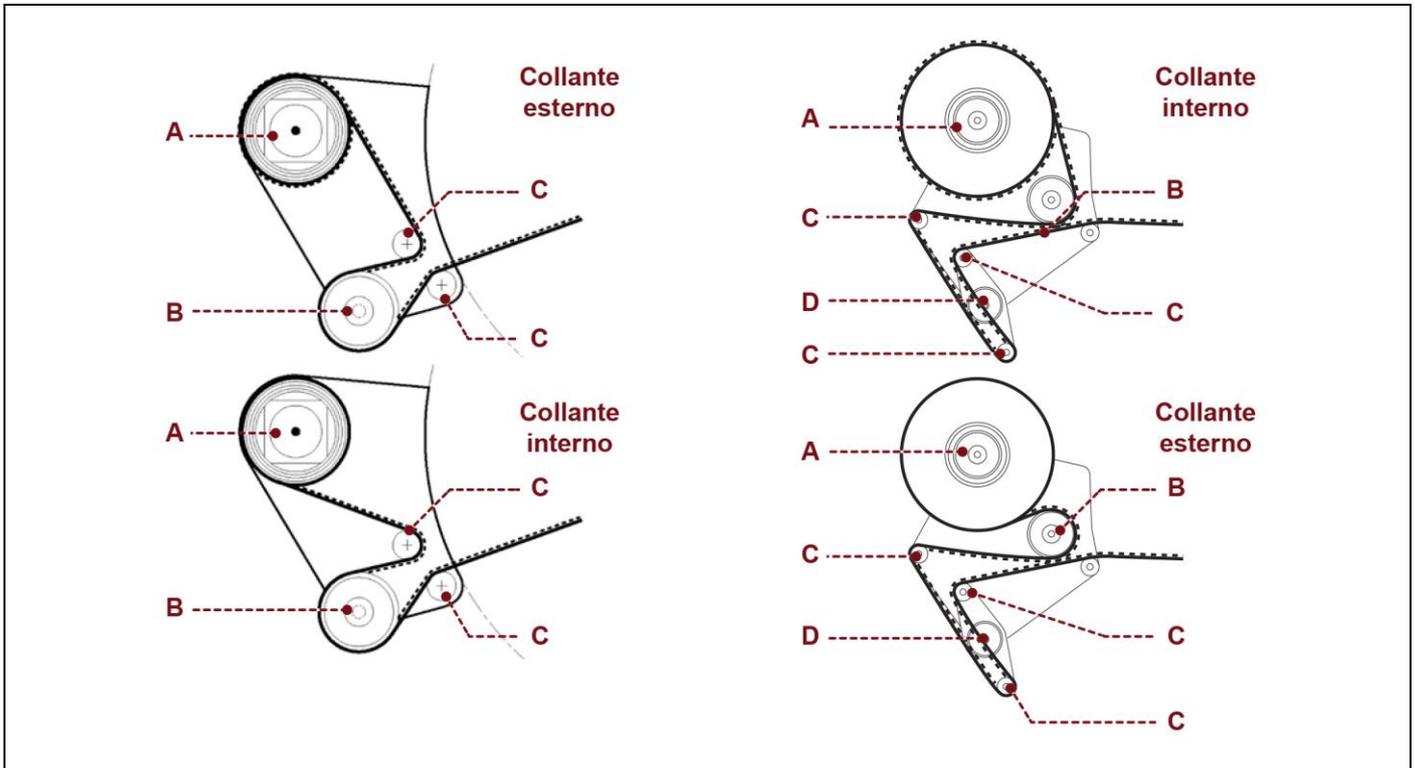
Important

The adhesive side of the film must always face the product to be wrapped.

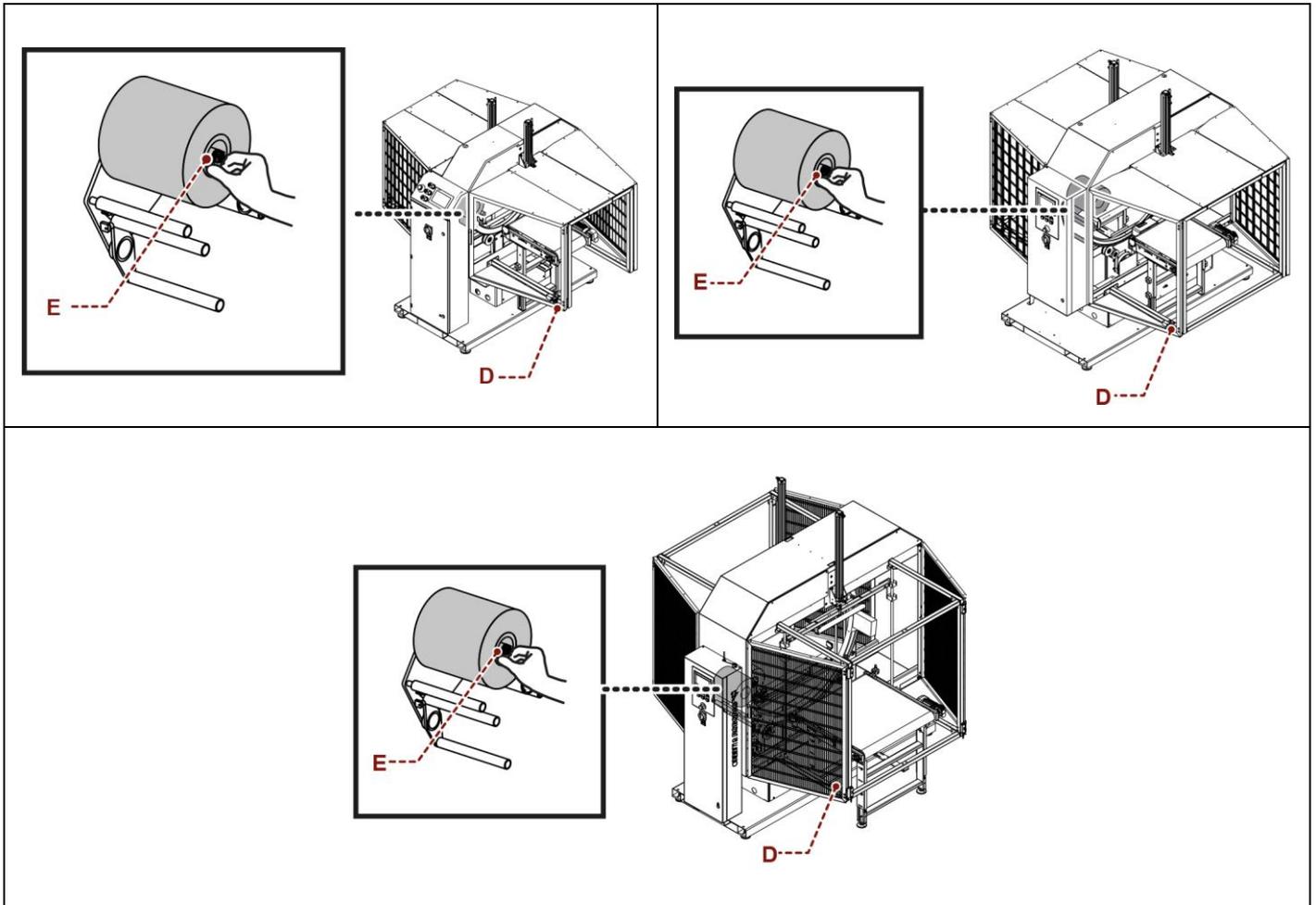


5. Insert the spool on the roller following the diagram in the figure.
 The hatching shows the adhesive side (internal or external) of the film.
 Unwind the film out of the protection ring.

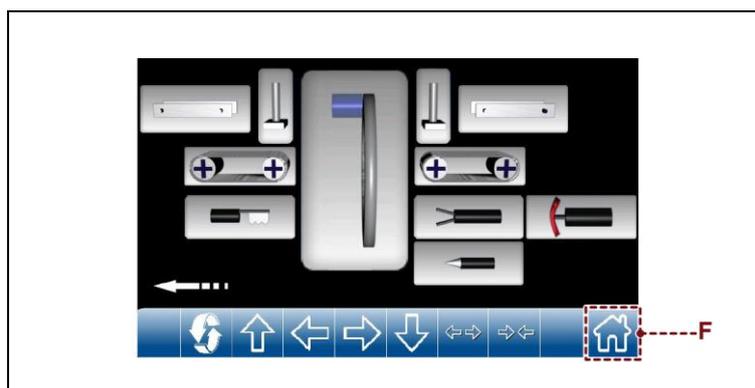
- A) Spool carriage roller
- B) Roller with clutch
- C) Idler rollers
- D) Dancer roller



6. Adjust the clutch on the spool carriage roller using the knob (E); turn clockwise to increase the braking effect.
7. Close the door (D) and press the "Reset" button.



8. Press the "Home" (F) key to return to the main page and to set up the machine.



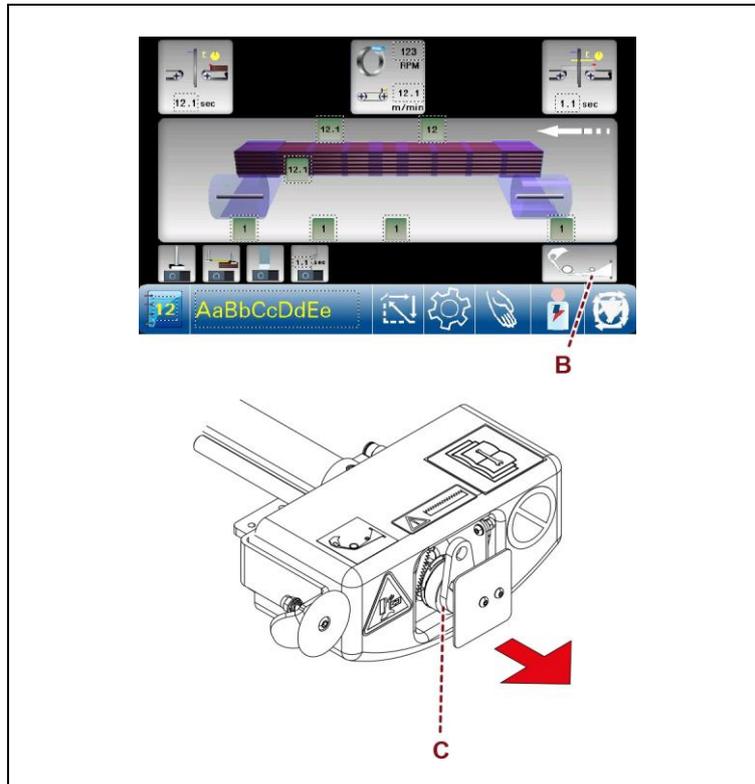
Film insertion in the clamp

1. Display the main page.
2. Check that the rotary ring is synchronised.
3. Touch button (B) to let the clamp (C) come out completely.

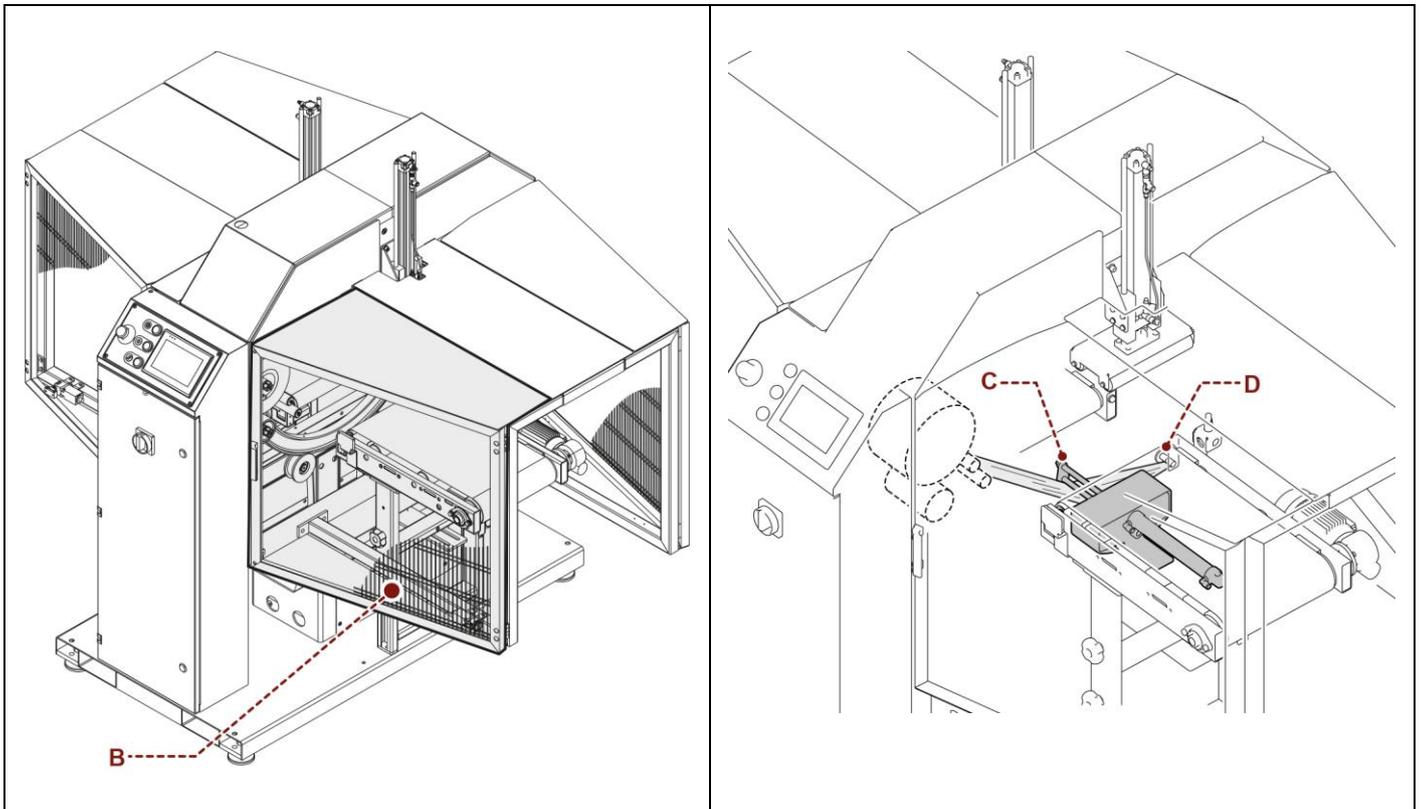


Danger - warning

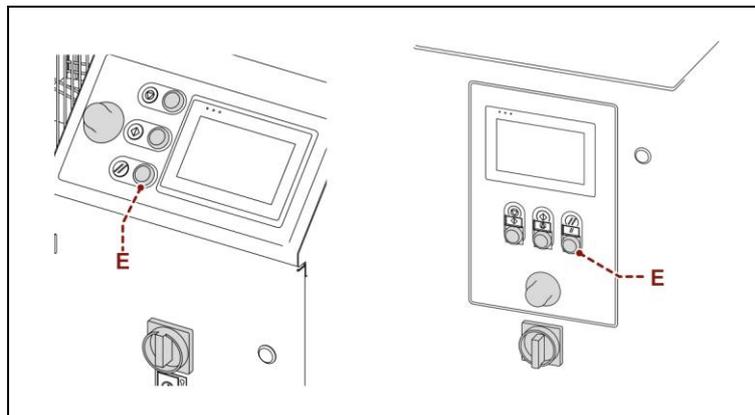
Do not expose your hands to the cutting area.



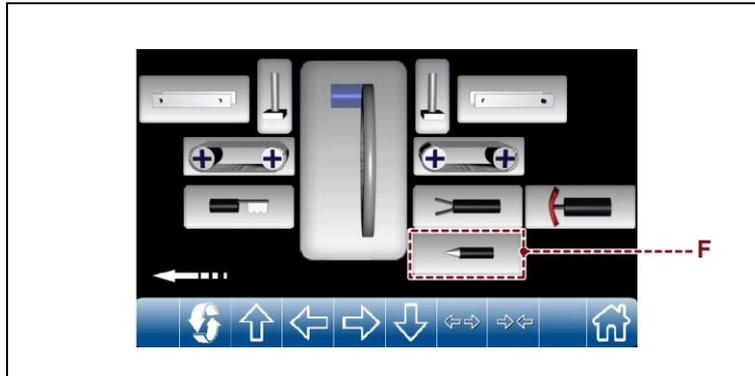
4. Open the guard (B).
5. Manually unwind the film and let it pass, well stretched, under and against the clamp bar (C) and engage it onto the disc (D).
6. Close the guard (B).



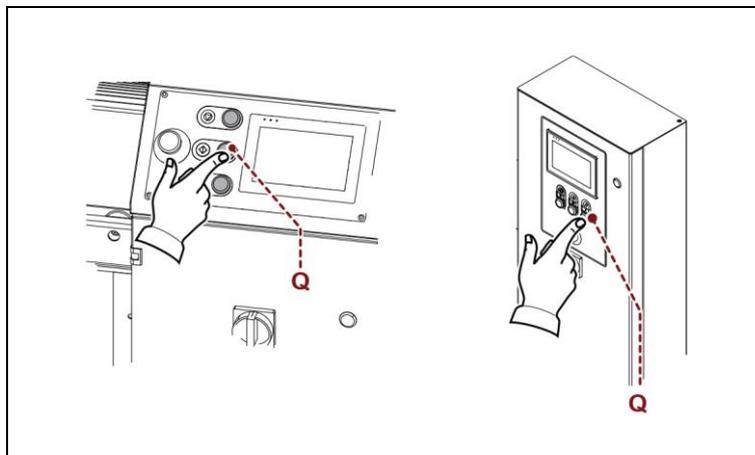
7. Press the "Reset" button (E).



8. Press button (F) to retract the clamp, cutting and blocking the film.



9. By pressing the “Cycle start” button (Q) the machine completes the cycle and stops automatically.



6.10. CYCLE START

1. Make sure that the film is blocked in the clamp.
2. Make sure that the machine is set up.
3. Place the product to be wrapped on the infeed conveyor.
4. Select the recipe from the control panel (see 6.3. "Description of control panel" - "Use of the panel").
5. Press the "Start" button on the control panel to start the work cycle.
The machine will carry out the wrapping automatically.
6. After the product has been transported onto the outfeed conveyor, pick it up.

6.11. STOP AND RESTART TYPES

During production, there can be voluntary or unforeseen conditions that will cause the machine to stop

The possibilities are as follows:

- Temporary stop (voluntary);
- Stop due to blackout;
- Production end stop;
- Emergency stop.

Temporary stop (voluntary)

It may occur for a short work break, a few minutes.

Press the STOP button.



Danger - warning

The machine is still in operation, just press the START button to restart it.

Stop due to blackout

In case of sudden blackout, the machine stops immediately.

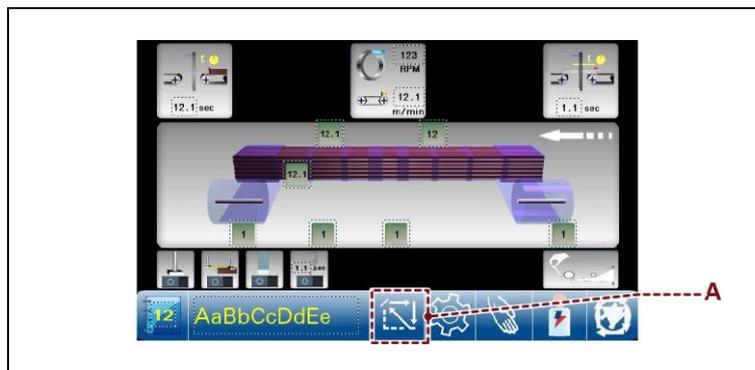
The electric motors stop and the pneumatically operated components remain still in their position.

When power is back on, the machine does not continue its operating cycle but remains in the same position.

To restart operation:

1. Press the key (A) to synchronise the various parts (rotary ring, pressers) (see 6.9. "Machine start-up"- "Synchronisation of the rotary ring").
2. If necessary, remove the product to be wrapped or partially wrapped from the machine.
3. If necessary, block the film in the clamp (see 6.9. "Machine start-up" - "Film insertion in the clamp").

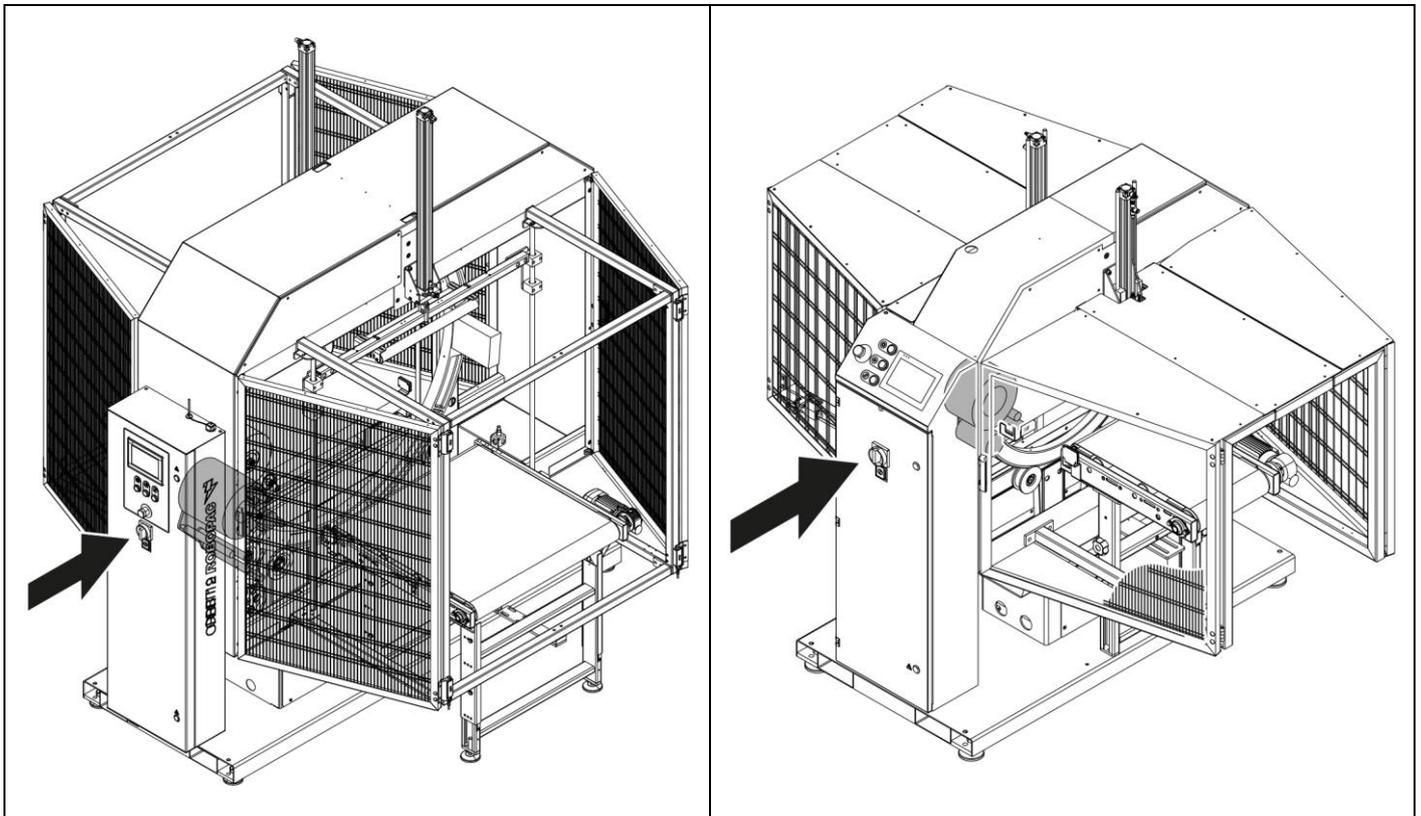
The machine is ready to start a new processing cycle.



Production end stop

This situation occurs when the work shift or machine use is over or when the machine remains inactive or not attended for a certain period of time.

1. Turn main switch to pos. 0.



Emergency stop

Press the EMERGENCY button.

Machine functions stop immediately.

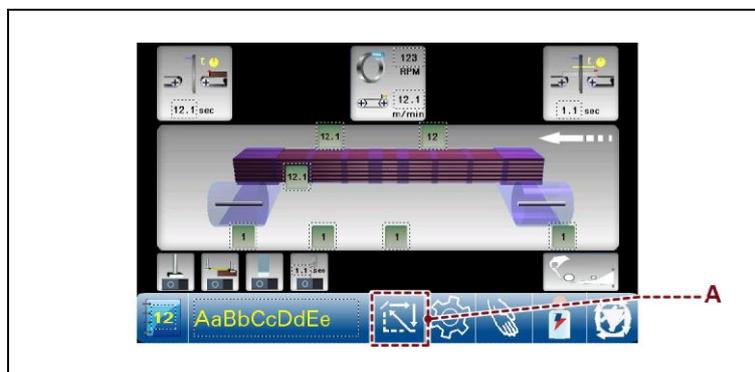
After setting the working conditions back to normal, release the emergency stop button to allow machine operation.

If you wish to continue the interrupted wrapping operation, press the START button.

If you wish to start a new processing, proceed as follow:

1. Remove product from the machine.
2. Press the key (A) to set up the machine or press the “Reset” button.
3. Block the film in the clamp.

The machine is ready for a new wrapping cycle.



7. MAINTENANCE INFORMATION

7.1. RECOMMENDATIONS FOR MAINTENANCE

- Proper maintenance will allow a longer life span and constant compliance with safety requirements.
- Before performing any operation, the authorised operator must make sure to have understood the "Instructions for use".
- Pay attention to the safety warnings, do not misuse the machine and assess the possible residual risks.
- Carry out the interventions with all the safety devices enabled and wear the required PPE.
- Indicate the intervention areas and prevent access to the devices that, if activated, could cause unexpected hazards and compromise safety.
- Do not carry out interventions that are not described in the manual but contact an service centre authorised by the Manufacturer.
- Do not dispose of materials, polluting liquids and the waste generated during the interventions into the environment but dispose of them according to the standards in force.



Danger - warning

Before performing any maintenance operation, activate all safety devices provided and evaluate whether it is necessary to inform the personnel operating on the machine and the personnel nearby.

In particular, demarcate the neighbouring areas to prevent access to the devices that could, if activated, cause unexpected hazardous conditions posing a risk for people's safety and health.



Danger - warning

Maintenance operations must be performed with the machine disconnected from the power and pneumatic supplies.

The periodical check of the operation of some of the most important parts of the machine, may help to avoid operation problems and to maintain the machine to the maximum operating levels.

Therefore, monthly check that:

- no oil or grease leaks out from the reduction units;
- there is no excessive backlash or stretching in the chains, belts and relevant tensioners;
- dust and dirt build-up in moving parts does not hinder their movement;
- the rotary ring belt fabric is not worn out or frayed at the sides.

7.2. PERIODICAL MAINTENANCE INTERVALS



Important

Keep the machine in maximum efficiency conditions and perform all the scheduled maintenance operations provided for by the Manufacturer.

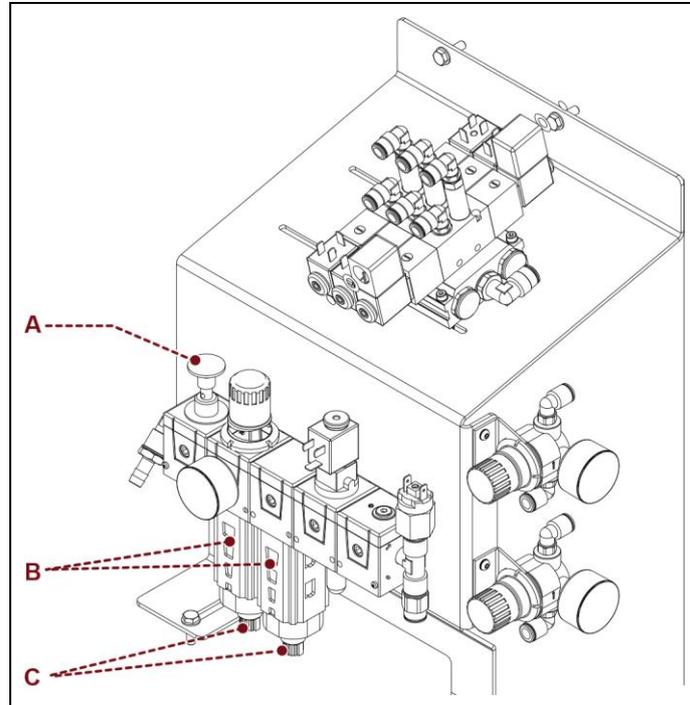
Proper maintenance will provide the best performance, a longer life span and constant compliance with safety requirements.

Maintenance interval table

Frequency	Component	Type of intervention	Intervention mode	Reference
Every 200 hours	Machine	General check	Clean with a cloth or air jet.	-
Every 2000 hours	Rotary ring belt	General check	Check for wear and replace, if necessary. Contact the assistance service.	-
			Tension adjustment	See "Rotary ring belt - Adjustment".
	Conveyors	General check	Check belt for wear and replace, if necessary. Contact the assistance service.	-
			Tension adjustment	see "Infeed conveyor, outfeed conveyor – Belt adjustment".
	Safety devices	Efficiency check	Replace the damaged components.	-
	Reducer filter		Condensation check	Drain condensation.
Cleaning			Clean with an air jet and alcohol.	See "Cleaning the air filter".
Every 5000 hours	Cutting blade	Efficiency check	Replacement	See "Film cutting blade replacement".

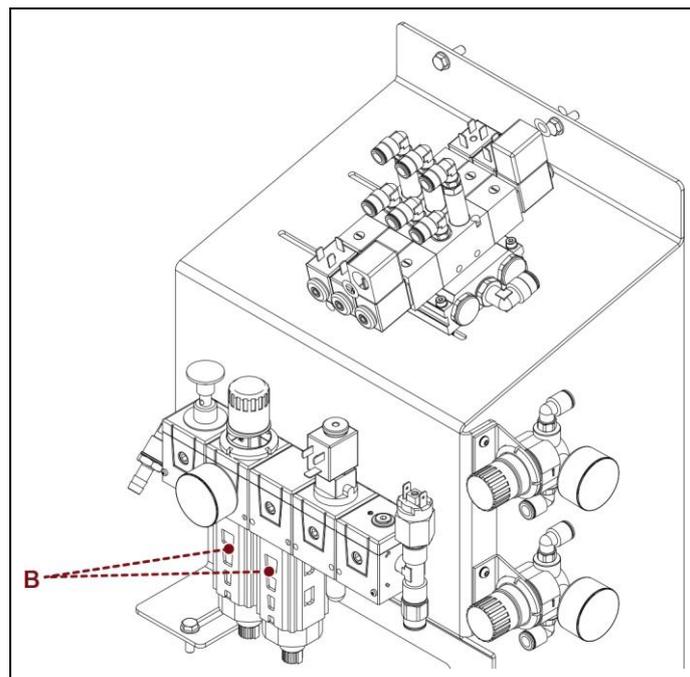
7.3. CONDENSATE DRAINAGE

1. Close the tap (A) and check the level of condensation in the container (B).
2. Unscrew, if necessary, the valve (C) to drain the condensation.
3. Push the valve (C) upwards until all condensation is let out.
4. Tighten the valve (C) again.



7.4. AIR FILTER CLEANING

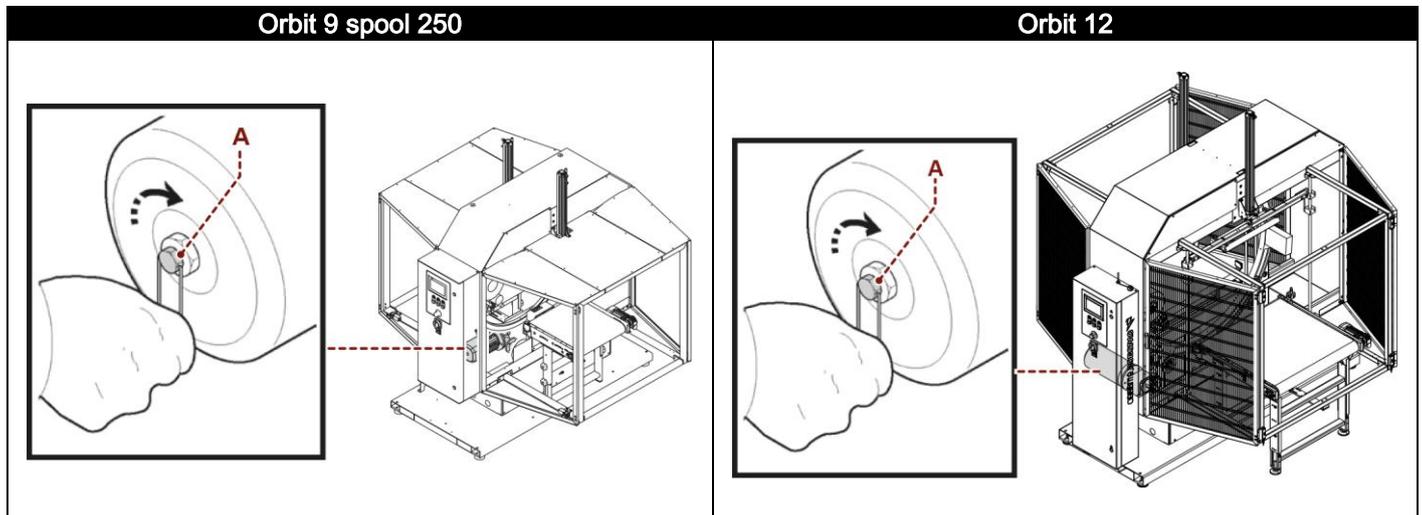
1. Unscrew the container (B) with the specific wrench.
2. Remove the filter, clean it with compressed air and wash it, if necessary, with petrol or trichloroethylene.
3. Refit the filter and tighten the container (B).



7.5. ROTARY RING HANDLING

The ring will always stop with spool synchronised; if manual spool carriage unit rotation is necessary proceed as follows.

1. Switch the machine off.
2. Release the motor brake by tightening the screw (A) completely; the spool carriage unit is now free to rotate.
3. Completely loosen the screw to block motor brake again; screw removal is recommended when not in use.



7.6. ROTARY RING BELT ADJUSTMENT

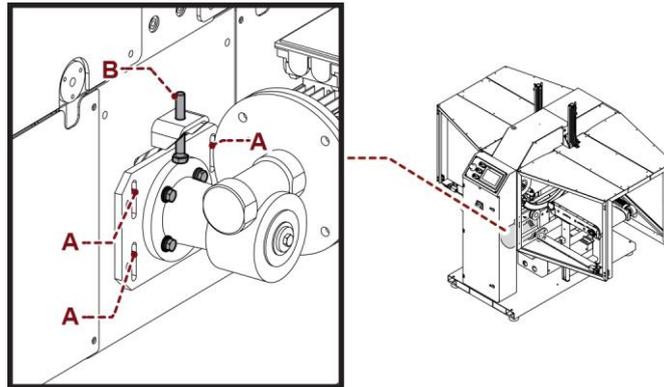
1. Loosen the fastening screws (A) of the reduction unit.
2. Act on screw (B) to achieve correct belt tension.
3. Tighten the reduction unit fastening screws (A) when adjustment is completed.



Important

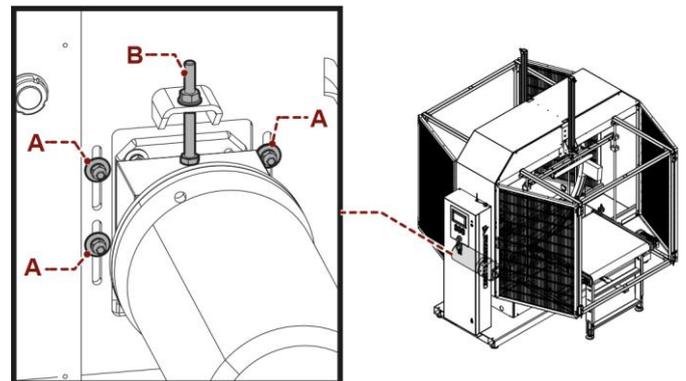
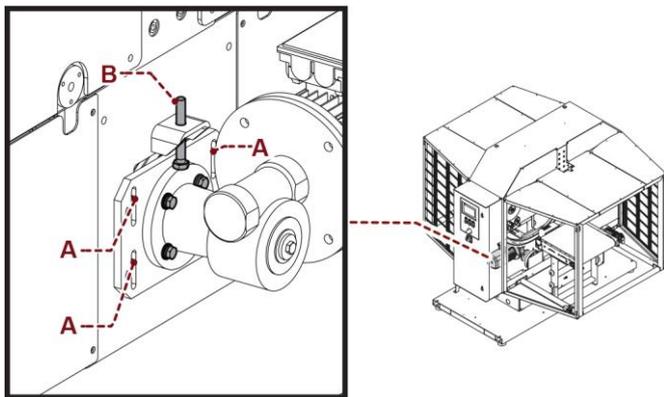
To avoid transmission overload, do not excessively tighten the belt.

Orbit 4-6



Orbit 9

Orbit 12



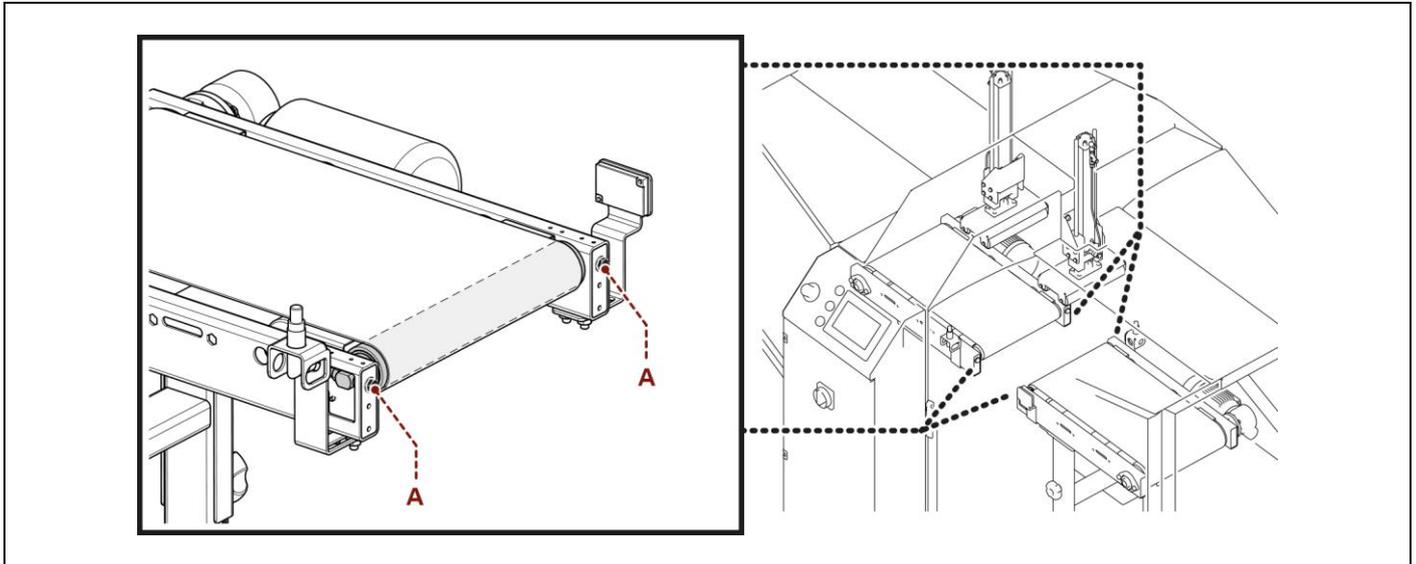
7.7. INFEEED AND OUTFEED CONVEYOR BELT ADJUSTMENT

1. Loosen the fastening nuts.
2. Tighten the screws (A).
3. Tighten the nuts.



Important

Tensioning must be performed equally on both sides of the conveyor so as to maintain the belt centred during its movement.



7.8. MACHINE CLEANING

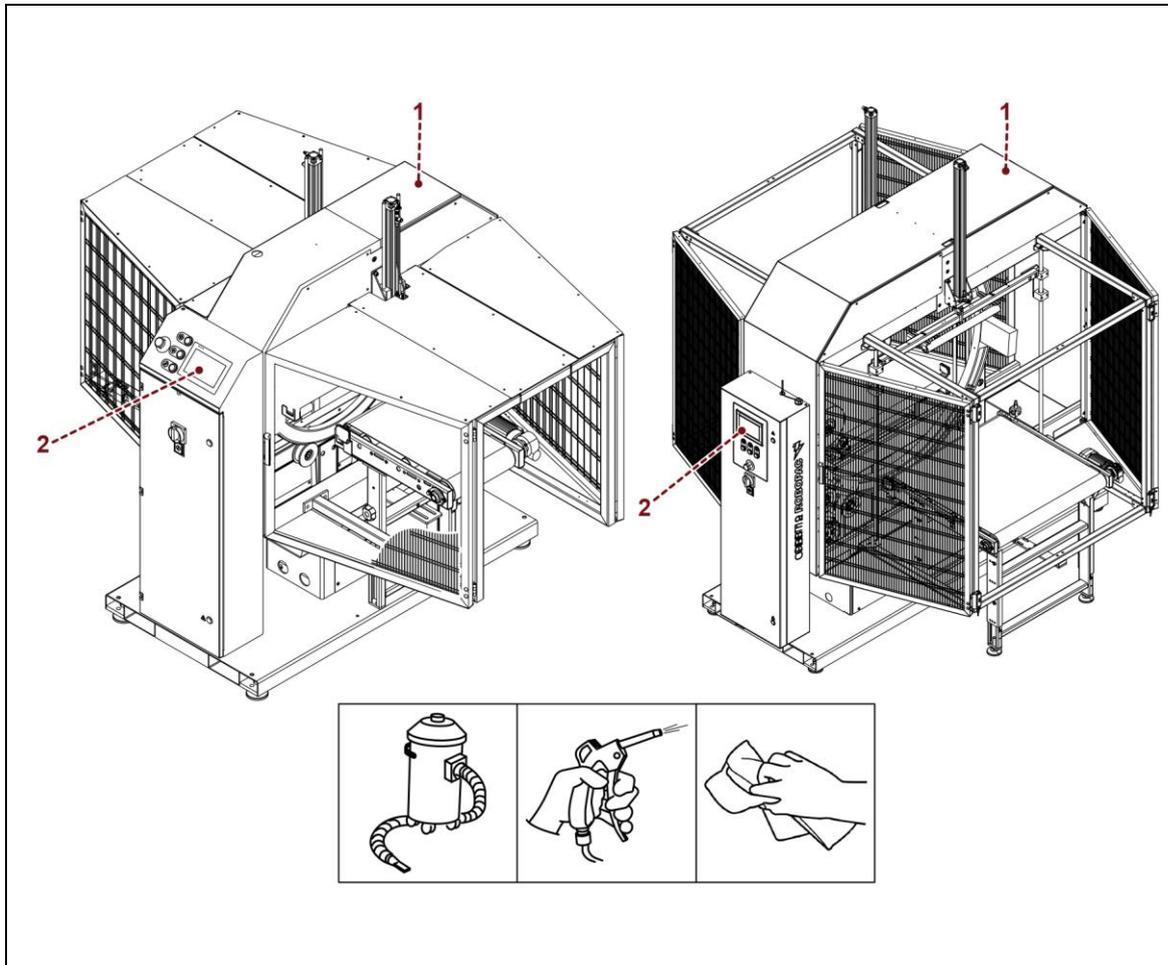
General cleaning of the machine is fundamental to guarantee its efficiency over time.

The whole machine must be kept free from dust, dirt and foreign bodies.

The chrome-plated shafts must be cleaned with a cloth and slightly lubricated with a cloth soaked in Vaseline oil.

The parts in plastic material (1) must be cleaned with a slightly damp cloth; do not use alcohol, petrol or solvents. Use only a dry cloth to dust the control panel (2).

For the cleaning of the parts inside the machine consult our technical assistance service.



8. FAULT INFORMATION

8.1. SOME SUGGESTIONS ON OPERATION

Following are some problems that might occur during operation and their solution.

Problem	Solution
Film is too slacken during the wrapping operation	Increase the braking effect of the roller with clutch.
Film is too slacken during the wrapping operation	Reduce the braking effect of the roller with clutch
Film overlaps too little on the product	Decrease conveyor speed
Film overlaps too much on the product	Increase conveyor speed
Wrapping begins too close to the product edge	Increase the "head positioning" time
Wrapping begins too far from the product edge	Decrease the "head positioning" time
Wrapping terminates too close to the product edge	Decrease the "tail positioning" time
Wrapping terminates too far from the product edge	Increase the "tail positioning" time
Wrapping overlaps are not compact	Check if the spool has been mounted correctly according to the film adhesive side

8.2. ALARM MESSAGES

In the event of a breakdown during operation the machine stops automatically and alarm messages appear on the display.

The table lists the displayed messages, the type of problem, the causes and possible solutions.

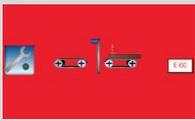


Important

For these operations a precise technical expertise or ability is required; therefore, these operations must be exclusively performed by qualified personnel with certified experience acquired in the specific field of intervention.

List of alarms

Code	Problem	Cause	Solution
E01 	Emergency mushroom-head button alarm.	Emergency mushroom-head button pressed	Reset the button and press the "Reset" button
E02 	"No air" alarm	Faulty pressure switch or no air supply in the system.	Check pressure switch or reactivate air supply.
E10 	Protection cover open alarm	Protection cover open.	Close the cover and press the Reset button.
		The microswitch does not work.	Replace the microswitch.
E20 	Thermal cutouts alarm	Thermal or magneto-thermal relays have been triggered.	Eliminate the overload cause, reactivate the protections. Press the "Reset" button.
E30 	Inverter alarm	Overload of an inverter.	Eliminate the cause of the overheating and press the "Reset" button.

Code	Problem	Cause	Solution
E60 	Product infeed photocell alarm	The photocell detects that the product is not in the correct position or that the reflector is not properly aligned.	Remove the product or align the photocell with the reflector.
E61 	Product outfeed photocell alarm	The photocell detects that the product is not in the correct position or that the reflector is not properly aligned.	Remove the product or align the photocell with the reflector.
E62 	"Clamp forward" alarm	Clamp cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
E64 	"Film breakage" alarm	The film has broken or spool is finished.	Insert the film or replace spool.
E69 	Glued remote switch contacts	Use the counter	Contact the assistance service
E50 	"CanOpen" communication alarm	Interrupted communication between PLC and remote devices.	Check the Can Open connections from the PLC to the devices connected to it

9. REPLACEMENT INFORMATION

9.1. RECOMMENDATIONS FOR REPLACING MACHINE PARTS

- Carry out the interventions with all the safety devices enabled and wear the required PPE.
- Do NOT carry out interventions that are not described in the manual but contact a Service Centre authorised by the manufacturer.
- Do NOT dispose of materials, polluting liquids and the waste generated during the interventions into the environment but dispose of them according to the standards in force.



Important

Before performing any maintenance operation, activate all safety devices provided and evaluate whether it is necessary to inform the personnel operating on the machine and the personnel nearby. In particular, demarcate the neighbouring areas to prevent access to the devices that could, if activated, cause unexpected hazardous conditions posing a risk for people's safety and health.

When replacing worn parts, use only original spare parts.

The Manufacturer is not responsible for any damage to property or injuries to people caused by the use of non-genuine spare parts or which may result from repairs not authorised by the Manufacturer.

When ordering new spare parts, follow the instructions given in the spare parts catalogue.

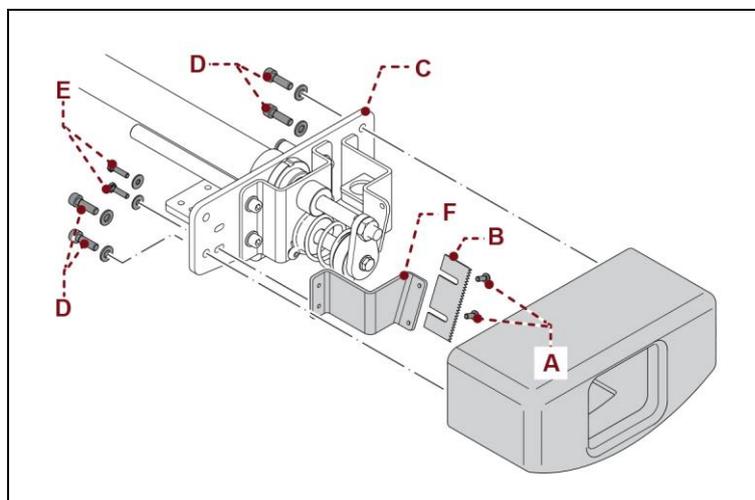
9.2. FILM CUTTING BLADE REPLACEMENT

1. Remove the guard by removing the four screws (D) of the support (C).
2. Remove the blade support (F) by removing the two screws (E).
3. Loosen the fastening screws (A).
4. Remove blade (B) and replace it with a new one.
5. Tighten the screws (A) when finished.
6. Refit the blade support (F) and the guard.



Caution - warning

Handle with care as the blade is very sharp.



9.3. RECOMMENDED SPARE PARTS LIST

List of the spare parts that wear easily and that should be always available to avoid long machine downtimes.

- Cutting blade.

To order them, contact your local dealer and refer to the spare parts catalogue.



Important

Replace worn parts with original spare parts.

Use oils and greases recommended by the Manufacturer.

All the above will ensure the proper operation of the machine and the correct level of safety.

9.4. MACHINE DECOMMISSIONING AND SCRAPPING



Important

These operations must be performed by specialised operators in accordance with the standards in force on workplace safety.

Do not dispose of non-biodegradable products, lubricant oil and non-ferrous components (rubber, PVC, resins, etc.) into the environment.

Dispose of them in compliance with current regulations.

Useful information for the disposal of machines and machine parts.

Scrapping must be performed by qualified personnel.

Construction materials:

- low-density linear polyethylene (L.L.D.PE);
- steel, aluminium and cast iron;
- copper and silver for the electrical/electronic components;
- rubber, resins and fibres.

None of the components is harmful or toxic.

Pay special attention when disposing of oil or grease residues used in motor reducers.

Do not dump these materials in the environment and do not dispose of them as household waste.

10. ANNEXES

10.1. WARRANTY CONDITIONS

Robopac S.p.A. commits, within the limits described herein, to replace or repair, free of charge, the parts that are defective during the 12 (twelve) months following the date indicated on the company's shipping documents.

To utilise the warranty, the user must immediately notify the company of the detected fault, always referring to the machine serial number.

Robopac S.p.A., in its final judgement, will decide whether to replace the defective part or request it to be shipped for tests and/or repair.

By replacing or repairing the defective part, **Robopac S.p.A.** fully complies with its warranty obligations and will be released from all liabilities and obligations relative to transport, travel and lodge expenses for technicians and installers.

Robopac S.p.A. will in no case be held responsible for any losses due to lack of production or injuries to persons or damage to things caused by malfunctions or forced downtime of the machine covered by the warranty.

THE WARRANTY DOES NOT COVER:

- Transport failures.
- Damage due to incorrect installation.
- Improper use of the machine or negligence.
- Tampering with or repairs by unauthorised personnel.
- Lack of maintenance.
- Parts subject to normal wear and tear.

For purchased components and parts, **Robopac S.p.A.** offers the user the same warranty conditions that the company obtains from the suppliers of the aforementioned components and/or parts.

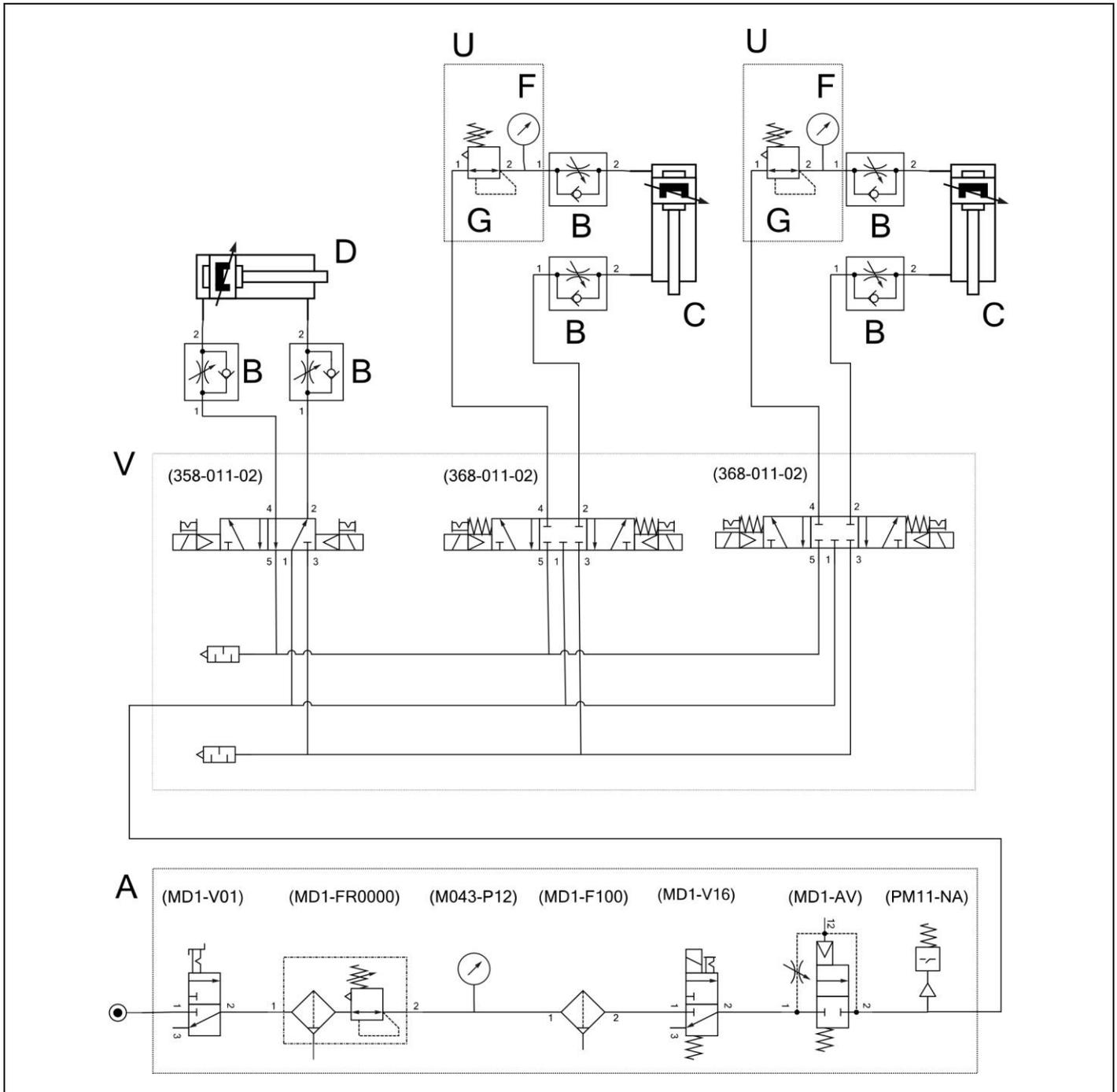
Robopac S.p.A. does not guarantee the conformity of machines to current standards in countries that are not part of the European Union.

Any adjustment to the regulations in force in the Country in which the machine is installed, will fall under the full responsibility of the user, who will be responsible also for the changes made, releasing **Robopac S.p.A.** from any obligation and/or liability relative to any claim that may be submitted by third parties due to non-compliance with the referenced standards.

10.2.STANDARD MACHINE PNEUMATIC DIAGRAM

Legend:

- A) Air treatment unit.
- B) Pressure regulator.
- C) Input/output pressure cylinder.
- D) Clamp cylinder.
- F) Pressure gauge.
- G) Flow regulator.



EC DECLARATION OF CONFORMITY

(Annex II A DIR. 2006/42/EC)

Robopac S.p.A.

Via Fabrizio da Montebello, 81 - 47892
Gualdicciolo Republic of San Marino

DECLARES THAT THE MACHINE

		
ROBOPAC MACHINERY Robopac S.p.A. Via Fabrizio da Montebello, 81 47892 – Gualdicciolo Repubblica di San Marino http://www.robopac.com/		
		
MODELLO MODEL		
MATRICOLA SERIAL NUMBER		
DATA DATE OF MANUF.		
ALIMENTAZIONE SUPPLY VOL.		[V]
FREQUENZA FREQUENCY		[HZ]
N° FASI PHASE		
ASSORBIMENTO ABSORPTION		[A]
POTENZA TOT. TOTAL POWER		[kW]
CONSUMO ARIA AIR CONSUMPTION		[nl/min]
PRESSIONE MAX MAX PRESSURE		[bar]
PESO WEIGHT		[kg]

COMPLIES WITH THE DIRECTIVES

DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2006 on machinery, and amending Directive 95/16/EC.

DIRECTIVE 2014/30/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility.

Reference to harmonised standards and their annexes, at the applicable points:

EN ISO 12100:2010, EN 60204-1:2006/A1:2009, EN 415-5:2010, EN 415-6:2013, EN 415-10:2014.

THE PERSON AUTHORISED TO DRAFT THE TECHNICAL BOOKLET IS

<u>Engineer Pierangelo Laghi - R&D Manager</u>	<u>c/o Aetna Group S.p.A.</u>	
<u>S. P. Marecchia, 59</u>	<u>47826 Villa Verucchio</u>	<u>Rimini, Italy</u>
<u>Document date and place</u>		<u>Engineer Pierangelo Laghi - R&D Manager</u>
<u>San Marino,</u>		<u>Signature</u>

ROBOPAC MACHINERY
Robopac S.p.A.
 Via Fabrizio da Montebello, 81
 47892 Gualdicciolo
 Repubblica di San Marino

tel. (+378) 0549 910511
robopacmachinery@robopac.com
www.robopac.com

Decreto Riconoscimento del 05/12/1983
 Capitale Sociale € 1.000.000 Cod. Op. Ec. 02346