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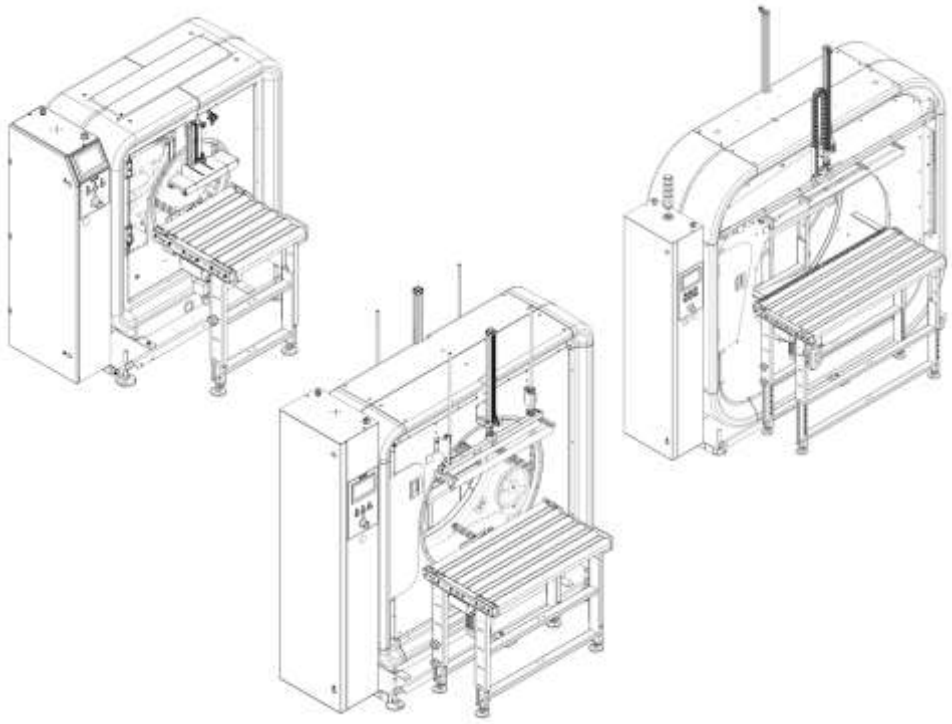

N. matricola • Serial number • Serienummer N. d'identification • Matricula n.	

Cod.: 3709307146	Rev. 00 Ed.: 11/21

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Translation of original instructions

USE AND MAINTENANCE MANUAL

ENG

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INDEX

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 appropriate action must be taken to avoid causing damage or malfunction to the machine.

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.
13. Name.

1.3. TERMS AND DEFINITIONS

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

Maintenance:
The set of operations required to maintain the machine efficient and in good working order.
Normally some operations are scheduled by the manufacturer, who defines the necessary skills and methods of intervention.
Some unscheduled operations must be performed after consulting the manufacturer.

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
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.

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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

Caution - warning
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”.

Danger - warning
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.

Caution - warning
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.

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

Danger - warning
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.

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 machine is designed to be connected to a TN-S infeed system and the impedance value of the PE circuit, to which the machine is connected, must be below 400 mΩ.
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.

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

Danger - warning
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.

Danger - warning
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”, **in particular safety shoes**, 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 document the training carried out for the operators.

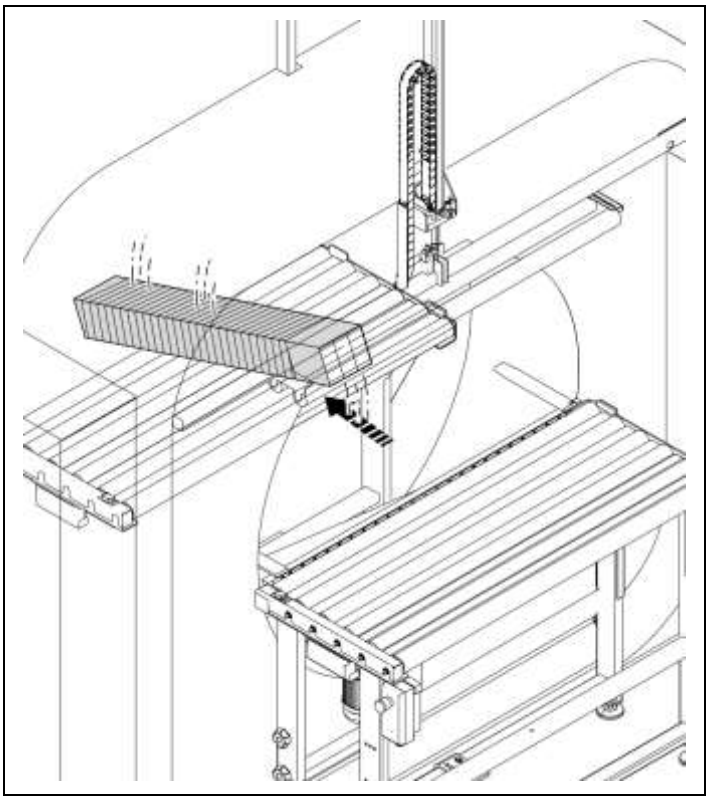
2.5. SAFETY WARNINGS ON RESIDUAL RISKS

Danger - warning

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 **0°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.

A) **Electrical hazard sign**
Electrical shock hazard, do not access inside live element.
B) **Information sign**
It shows the insertion points for the lifting forks.
C) **Prohibition sign**
Do not act on the component with your hands.
D) **Danger sign**
Cutting danger.
E) **Information sign**
Ring rotation direction.
F) **Information sign**
Electrical disconnector.
G) **Danger sign**
Hand crushing danger.
H) **Information sign**
Film winding diagram.
I) **Information sign**
Vernier, position reference.
J) **Information sign**
Film passage plate.
K) **Obligation sign**
Obligation to read instructions.
L) **Prohibition sign**
It prohibits the presence of more than one operator.
M) **Prohibition sign**
Access prohibited.
N) **Danger sign**
Risk of falling objects
O) **Danger sign**
Risk of falling objects

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

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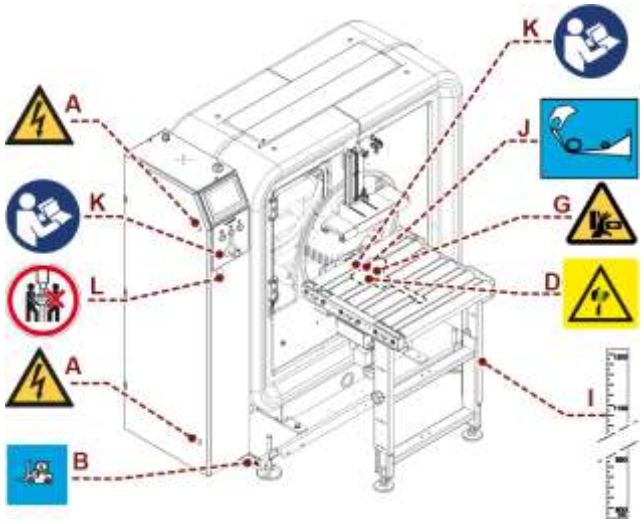

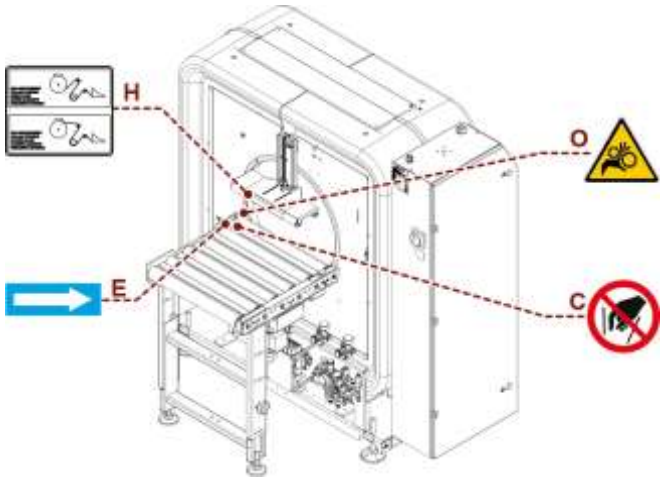

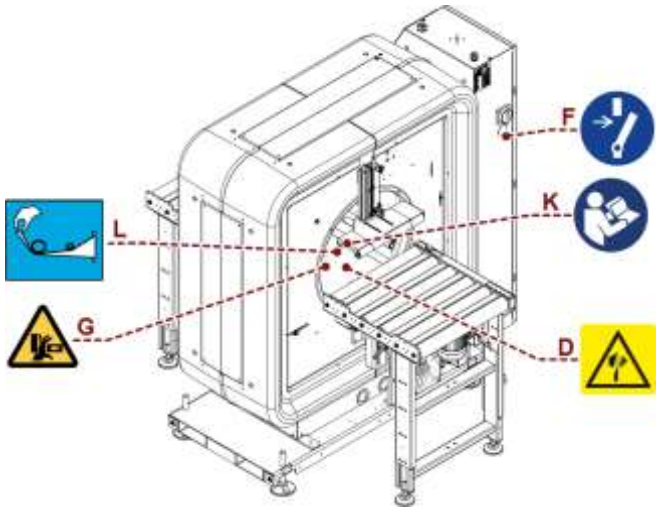

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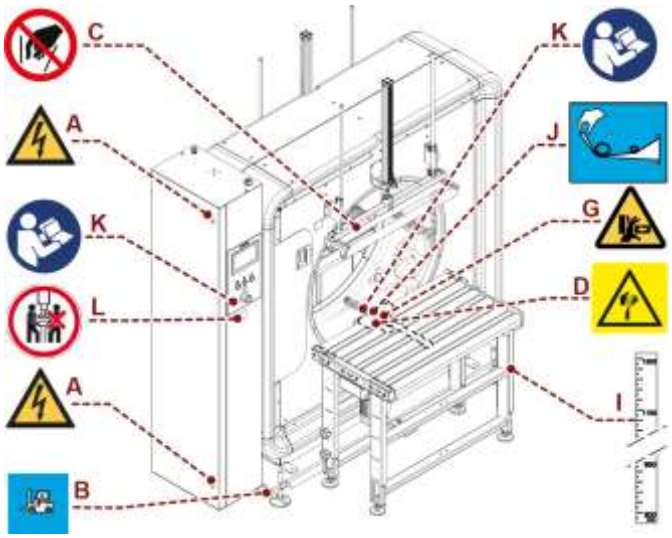

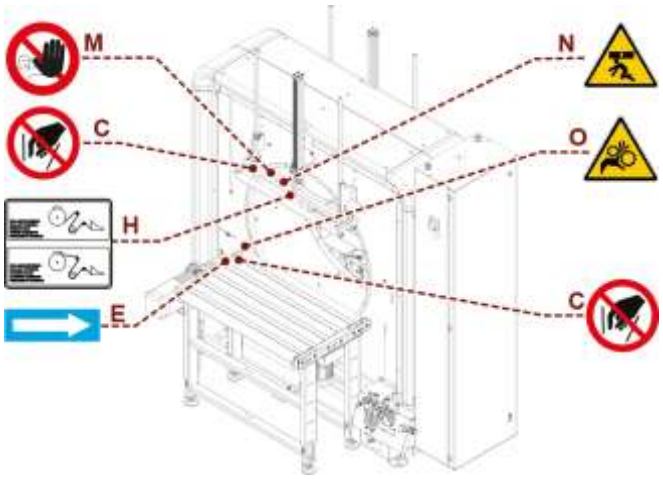

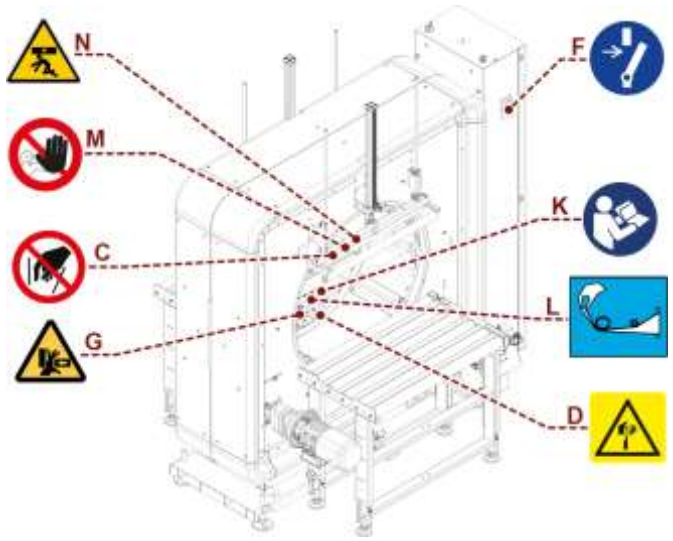

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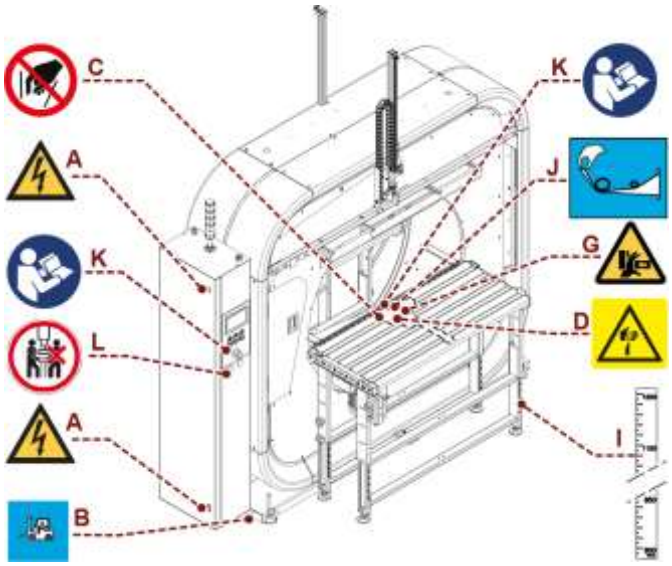
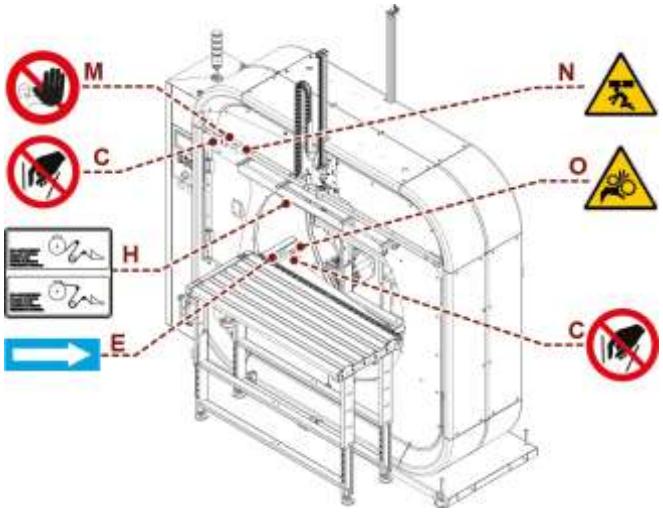
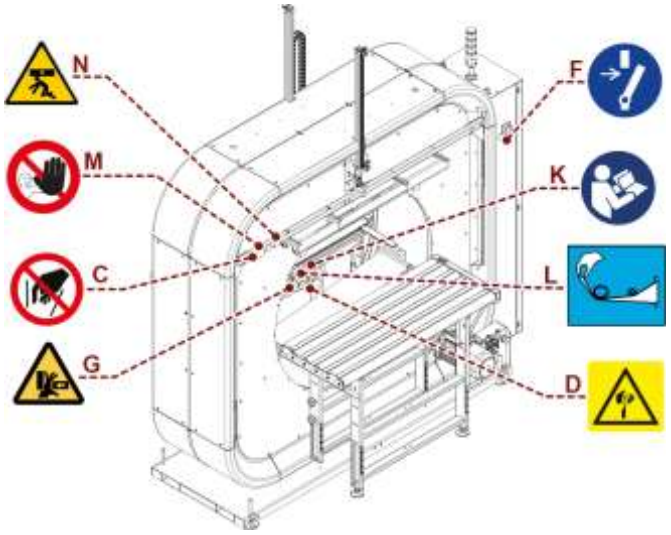




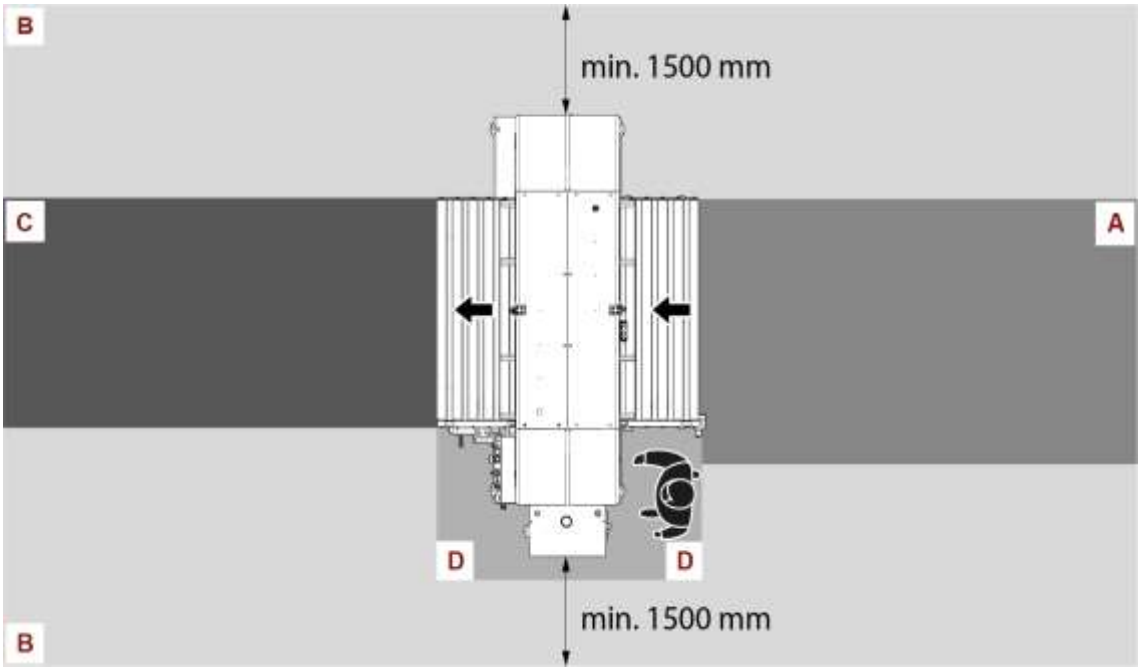


2.9. PERIMETER AREAS

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 reels commonly available on the market are used for wrapping.
Wrapping is performed by combining film reel 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.

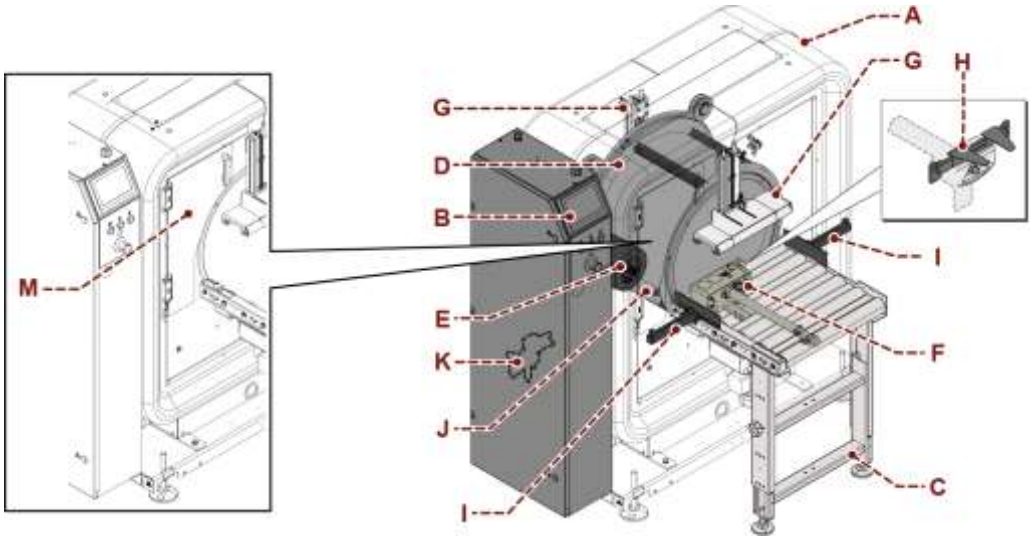
Danger - warning
This machine is normally installed in workshops or industrial environments protected from the atmospheric agents.
Using this machine in explosive environments or when exposed to atmospheric agents is strictly forbidden.

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

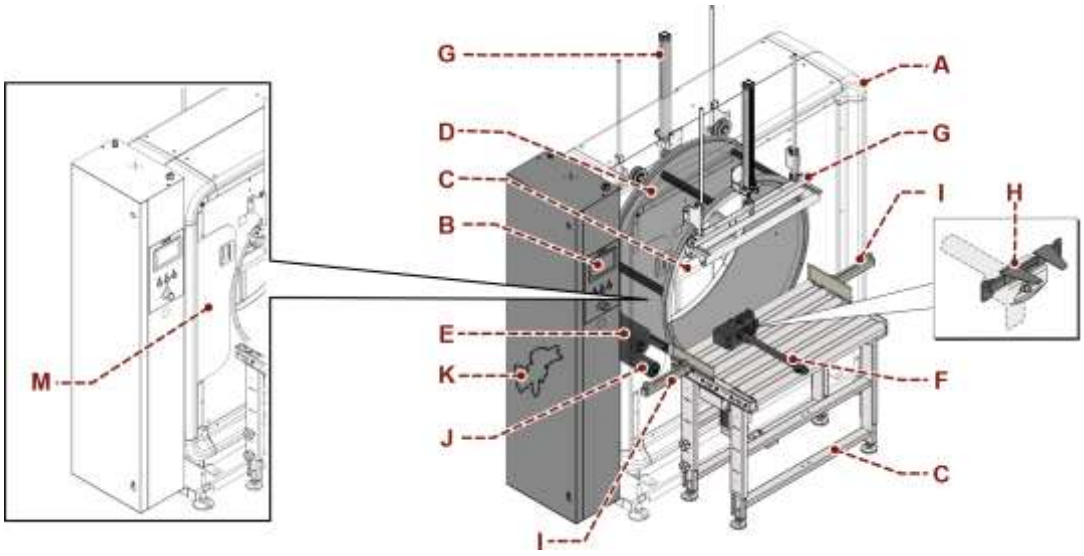
Legend:

A) **Base:**
is the main structure of the machine.
B) **Control panel:**
it allows activating machine functions.
C) **Conveyor:**
system used to transport the product to be wrapped, consisting of motorised roller conveyors.
D) **Rotary ring unit:**
it is made up of a rotary ring with a belt drive, driven by an electric motor controlled by an inverter.
E) **Reel carriage unit:**
it is made up of a quick load reel carriage spindle and an idler roller that controls wrapping tension.
The unit can be accessed through door (**M**).
F) **Clamping and cutting unit:**
it allows clamping and cutting the film at the end of the wrapping operation.
G) **Pressers unit:**
they hold the product against the conveyors.
The positioning is automatic.
H) **Driving axle: (Optional)**
for short product support.
I) **Guides: (Optional)**
adjust the width for product containment.
J) **Reel carriage unit with dancer roller: (Optional)**
it is made up of a quick load reel carriage spindle and an idler roller that controls wrapping tension and by a film recovery device.
The unit can be accessed through door (**M**).
K) **Valve group:**
It controls the pneumatic movements.
L) **Stack light (Optional).**

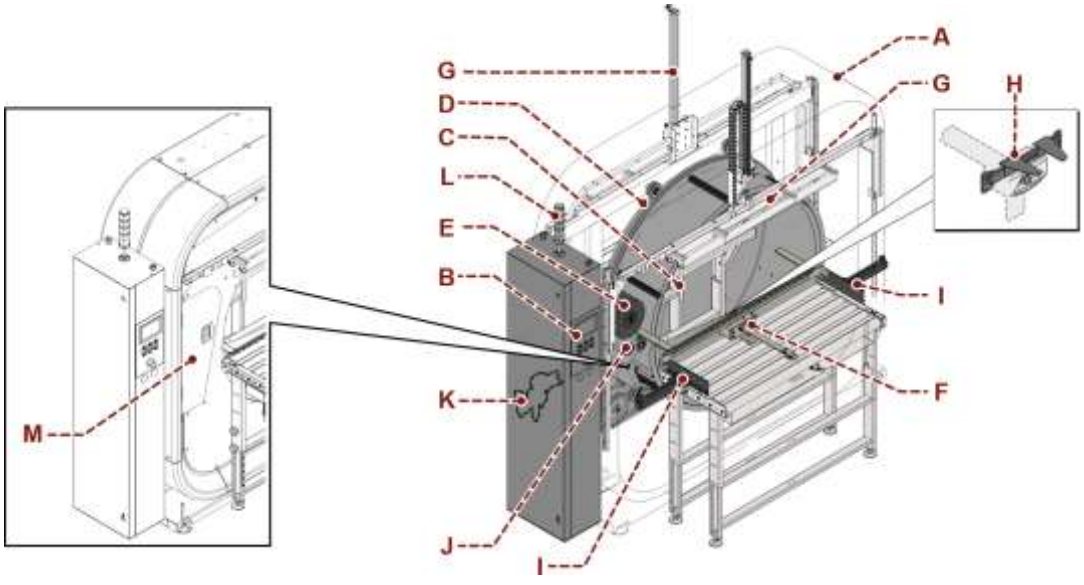
ORBIT R 5



ORBIT R 9



ORBIT R 13



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.

Machine	Reel
ORBIT R 5	125/250
ORBIT R 9	125/250
ORBIT R 13	250

3.2. DESCRIPTION OF THE OPERATION CYCLE

Performable wrapping cycles
Product wrapping can be:

A) **"Total" wrapping**
The product is completely spiral wrapped with additional wraps on head and tail.

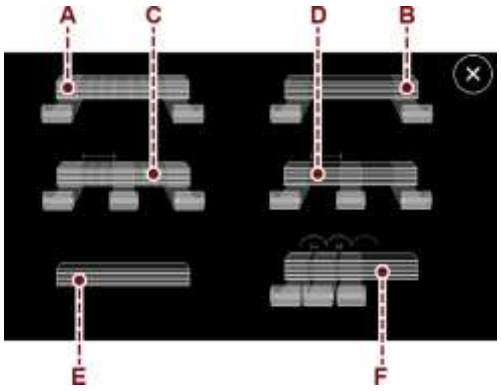
B) **"Head - tail" wrapping:**
The product is only wrapped at the head and tail.

C) **"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.

D) **"Head - tail" and "central bands" wrapping**
The product head and tail are wrapped with a series of reinforcing wrappings spaced using a settable time.

E) **By-pass cycle**
The product passes through the machine without being wrapped.

F) **"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

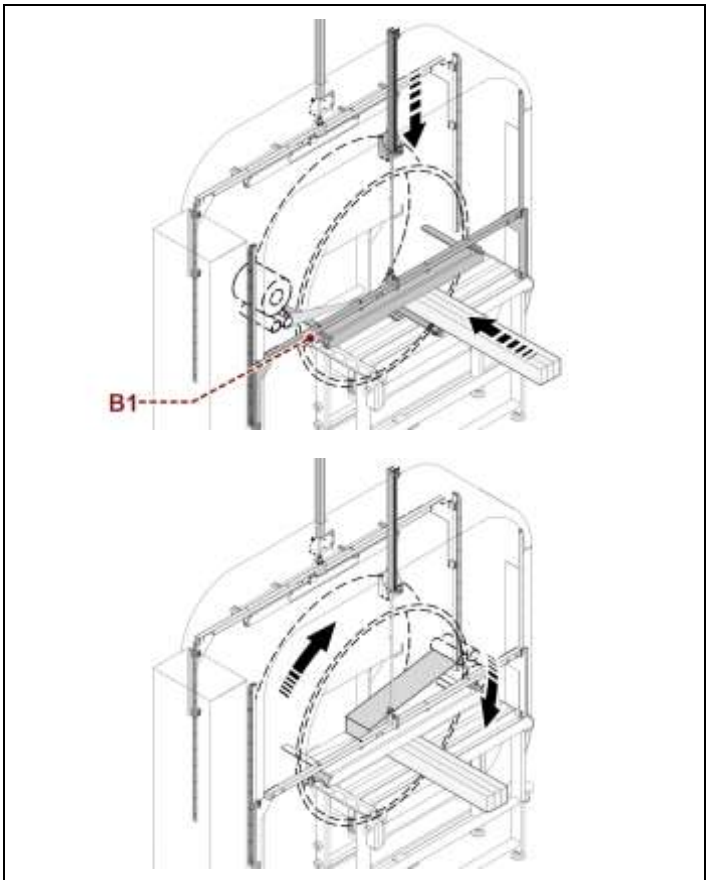
Once the product is placed on the infeed conveyor, press the “Start” button on the control panel to start the work cycle.

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.

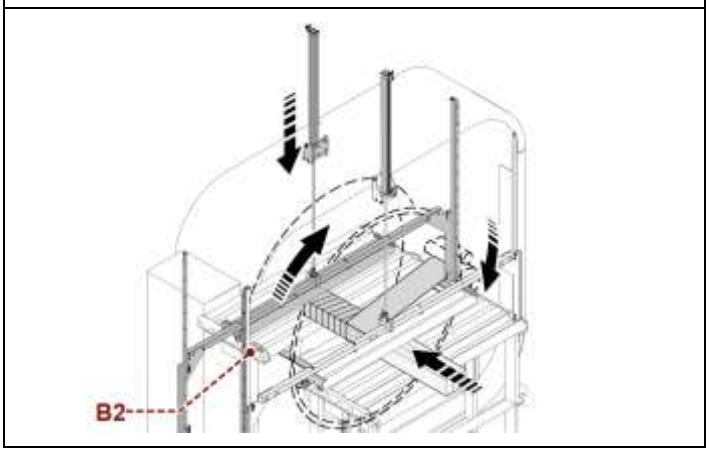
When the timer count is over, the roller conveyor stops, the rotary rings starts and activates the “head and tail wraps” count; the head of the product is wrapped.



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.

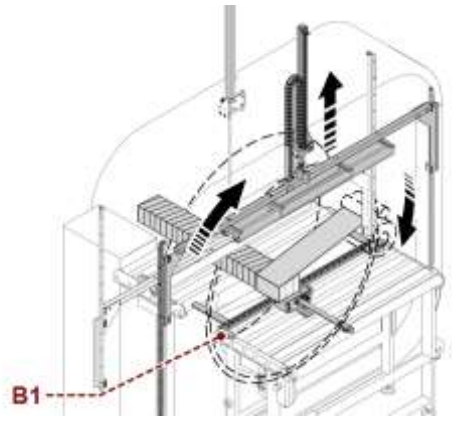


Important

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

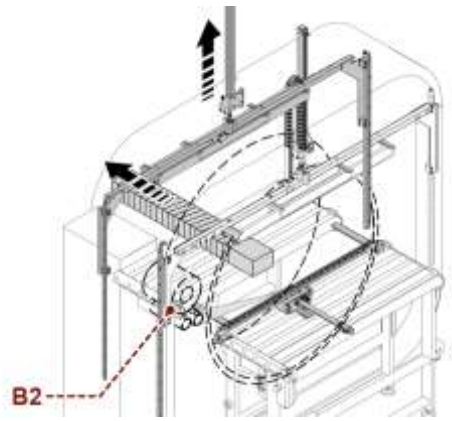
Phase 3

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.



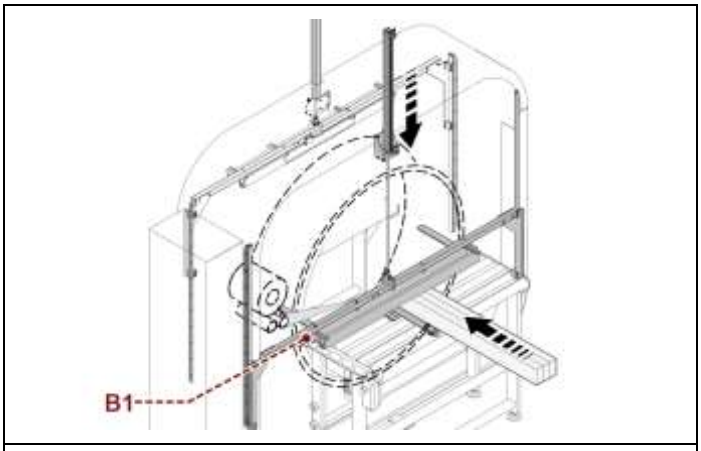
“Head - tail” wrapping

Once the product is placed on the infeed conveyor, press the “Start” button on the control panel to start the work cycle.

Phase 1

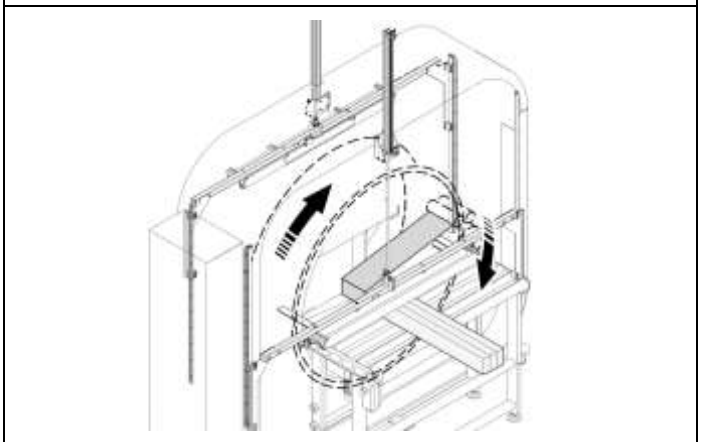
The conveyor starts and moves the product towards the rotary ring.

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.

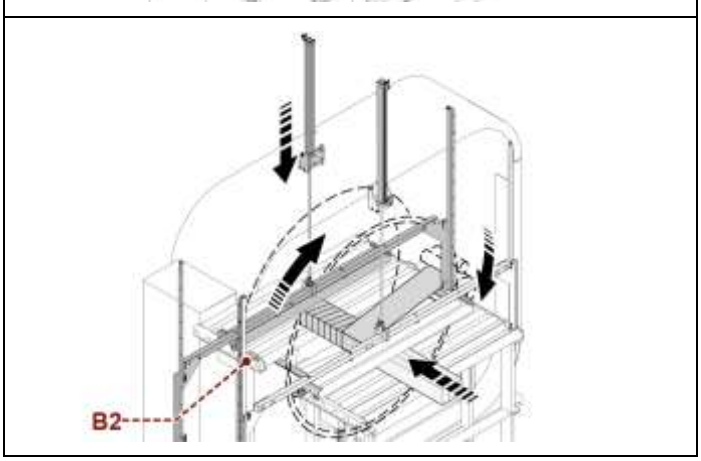


Phase 2

Infeed and outfeed conveyors start.

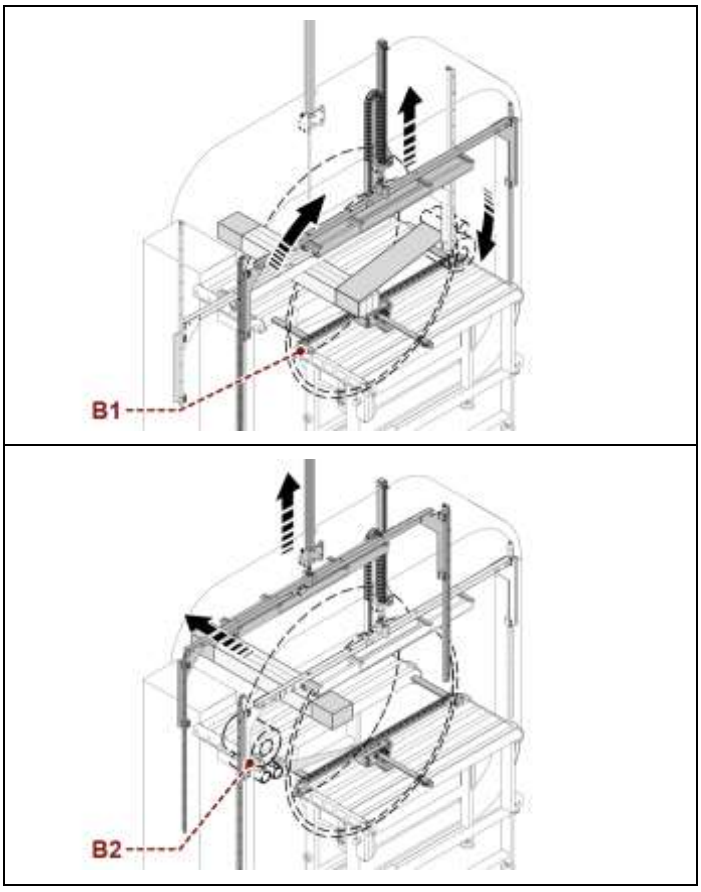
The product moves forward and engages photocell (**B2**).

The outfeed presser lowers on the product.



Phase 3

The 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

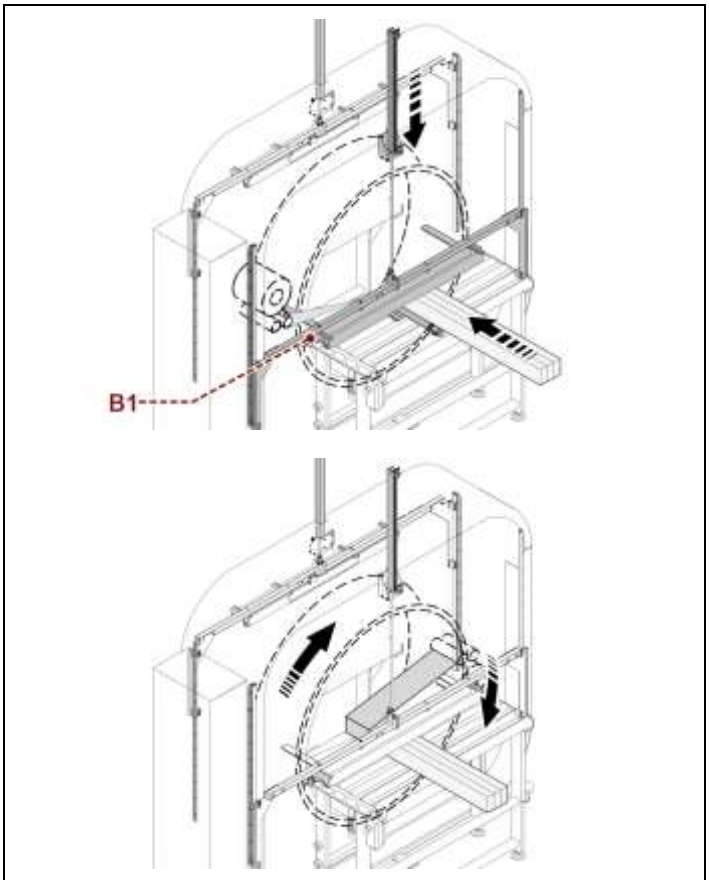
Once the product is placed on the infeed conveyor, press the "Start" button on the control panel to start the work cycle.

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.

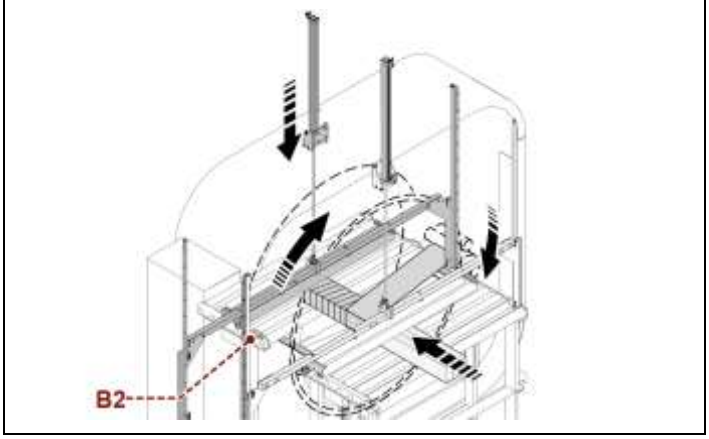
After the timer count is over, the conveyor stops; the rotary ring starts counting the "reinforcing wrappings"; the head of the product is wrapped.



Phase 2

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

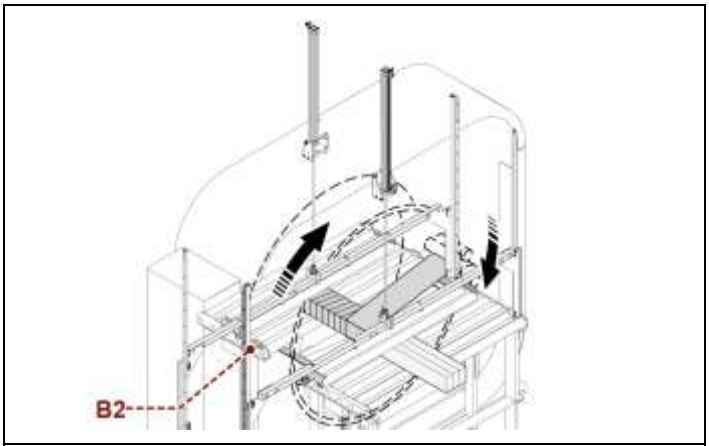
The product moves forward and engages photocell (**B2**), the outfeed presser lowers on the product while the machine continues to wrap the product.



Important

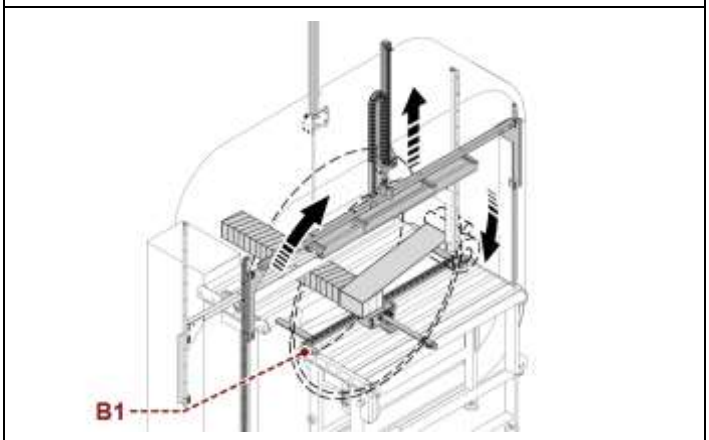
The overlapping of film wraps is defined by the conveyor speed, the slewing ring speed as well as by the film width.

Phase 3
The “central bands” timer starts; when the timer count is completed, the conveyor stops, the rotary ring keeps on turning and the product is wrapped for the number of reinforcing wraps set.

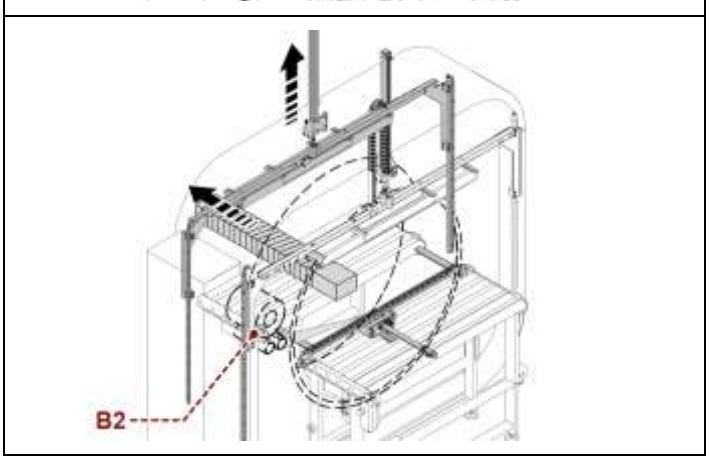


Important
The number of central bands is determined by the “central bands” timer, the conveyor speed and the product length.

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

Once the product is placed on the infeed conveyor, press the “Start” button on the control panel to start the work cycle.

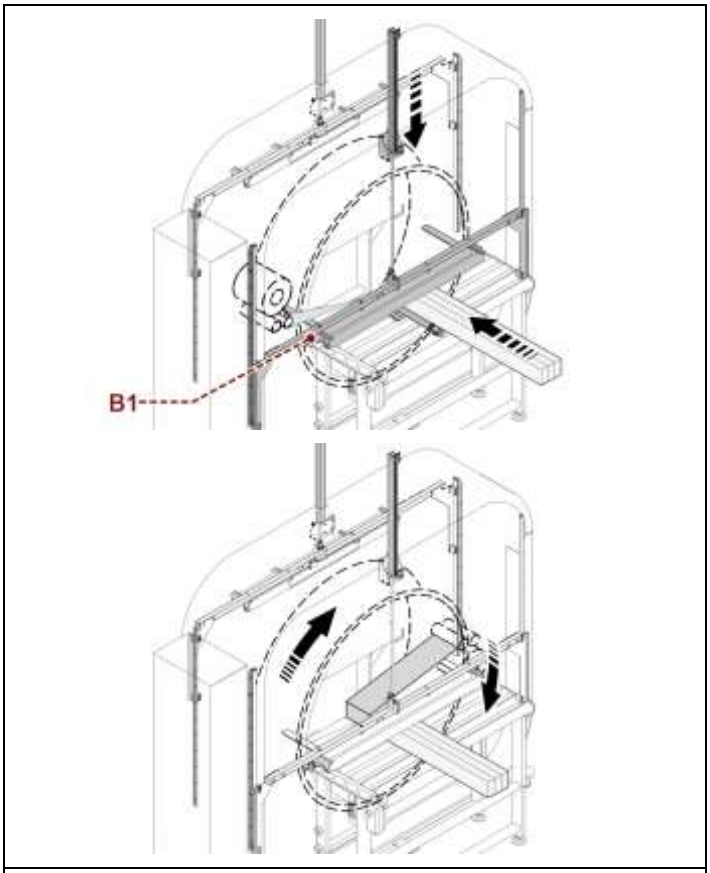
Phase 1

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.

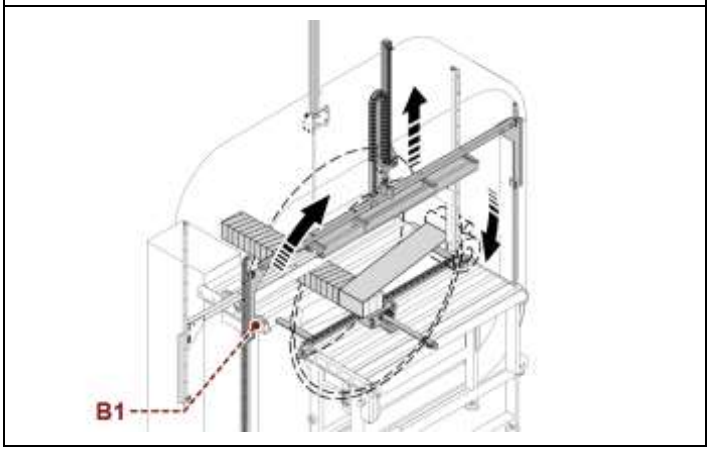


Phase 2

Infeed and outfeed conveyors start.

The product moves forward and engages photocell (**B2**).

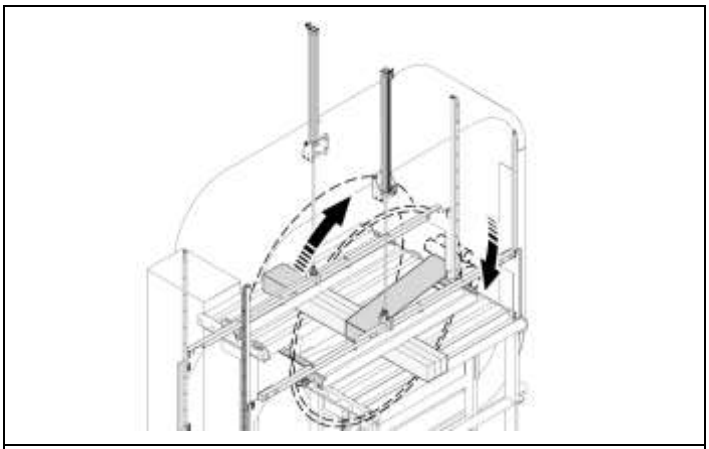
The outfeed presser lowers on the product.



Phase 3

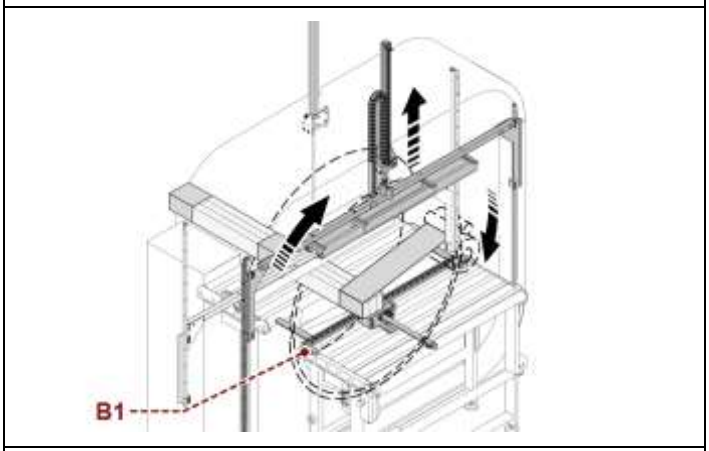
The “central bands” timer starts; at count completed, the conveyor stops, the rotary ring starts and counts the “reinforcing wrappings” set; the product is wrapped for the number of reinforcing wraps set.
At the last wrap of the rotary ring, the clamp comes out to hook the film; the rotary ring stops while the clamp blocks and cuts the film as it recedes.

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



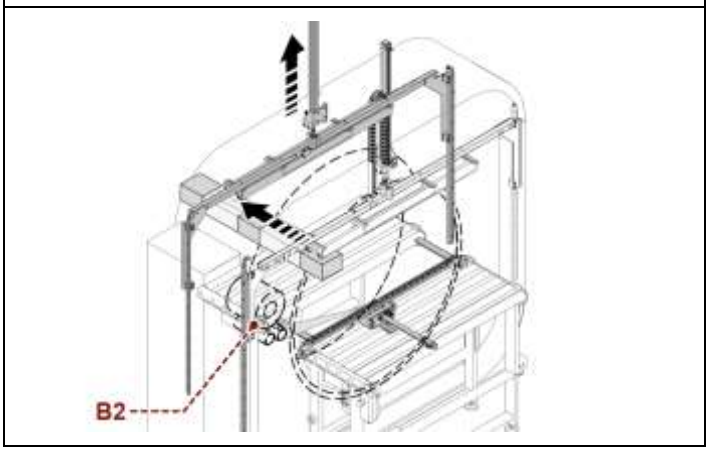
Phase 4

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.



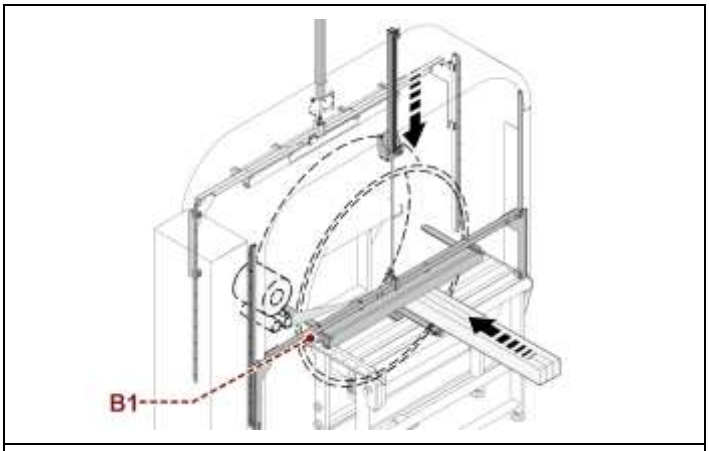
Wrapping with Bypass cycle

Once the product is placed on the infeed conveyor, press the “Start” button on the control panel to start the work cycle.

Phase 1

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

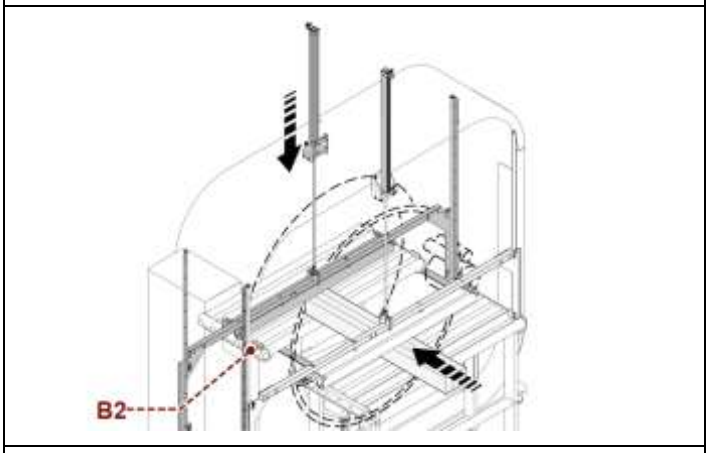
The product engages photocell (**B1**), the infeed presser lowers and blocks the product.



Phase 2

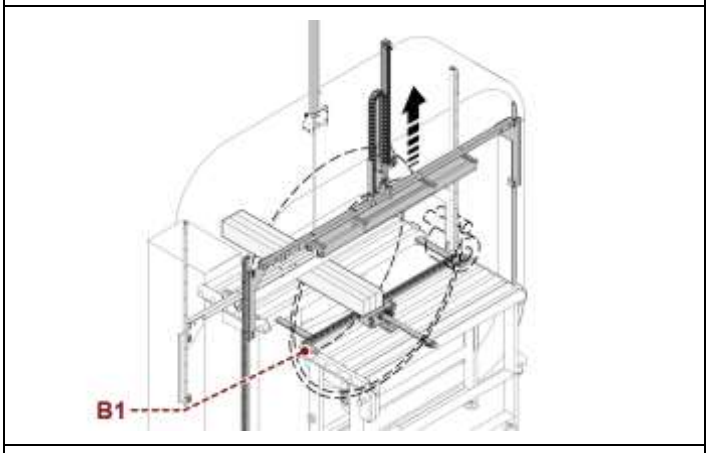
The rotary ring remains still.

The product moves forward and engages the photocell (**B2**), the outfeed presser lowers on the product.



Phase 3

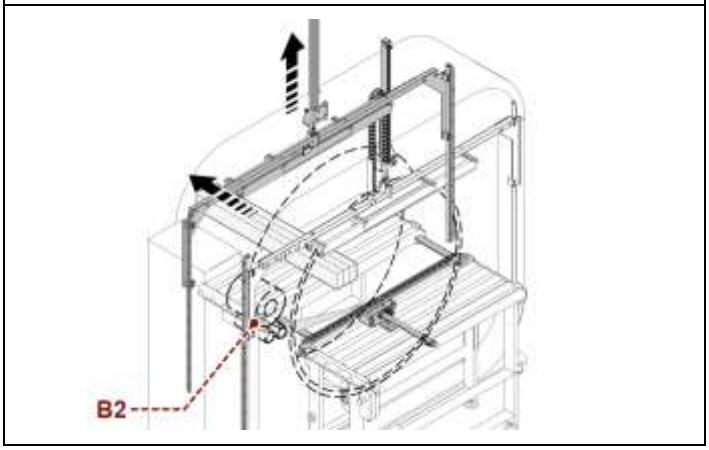
The product moves forward disengaging the photocell (**B1**), the infeed presser rises.



Phase 4

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

When the time count is over, the conveyor stops.



“Head and additional bands” wrapping

Once the product is placed on the infeed conveyor, press the “Start” button on the control panel to start the work cycle.

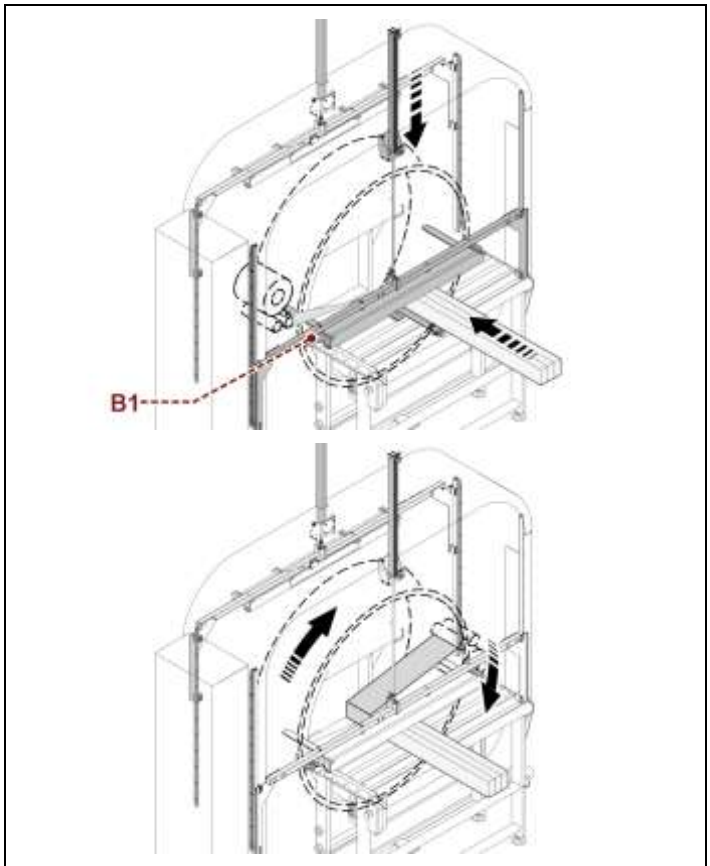
Phase 1

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.

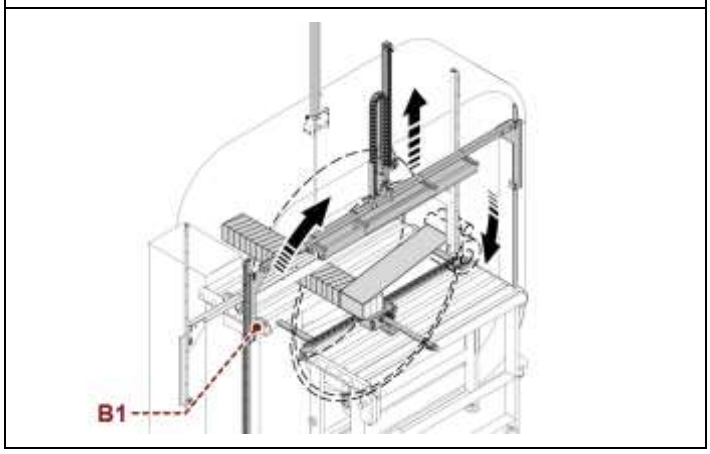


Phase 2

Infeed and outfeed conveyors start.

The product moves forward and engages photocell (**B2**).

The outfeed presser lowers on the product.

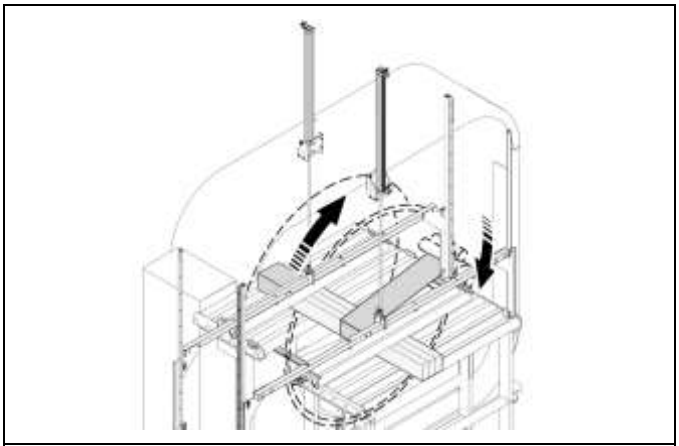


Phase 3

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

Important

The number of additional bands is determined by the relevant parameter on the panel.

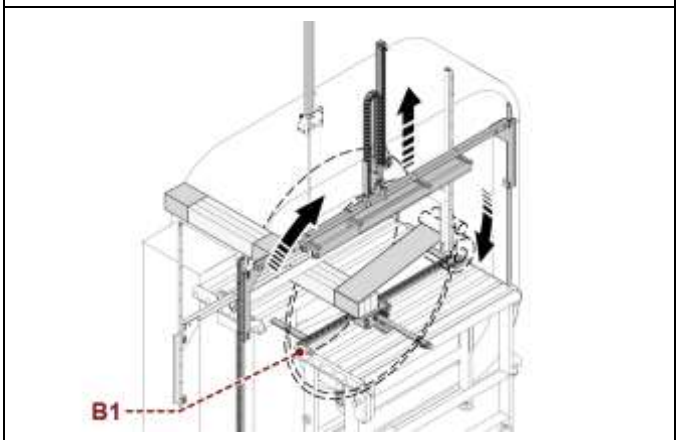


Phase 4

The product moves forward disengaging the photocell (**B1**), the infeed presser rises.

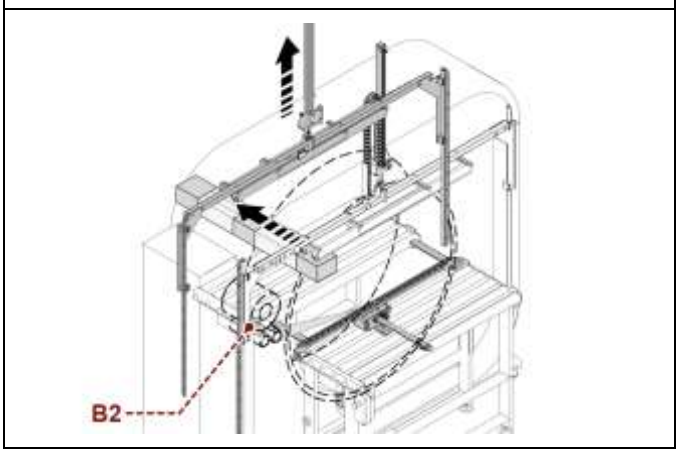
Important

If the photocell (**B1**) is disengaged before all the additional bands set have been carried out, the cycle ends without performing the residual bands.



Phase 5

The product moves forward and disengages the photocell (**B2**), the outfeed presser rises and the “conveyor unloading” timer starts.
When the time count is over, the conveyor stops.



3.3. SAFETY DEVICE DESCRIPTION

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

A) **Main switch**
It cuts off the power supply to the machine and can be padlocked to prevent use by unauthorised people.

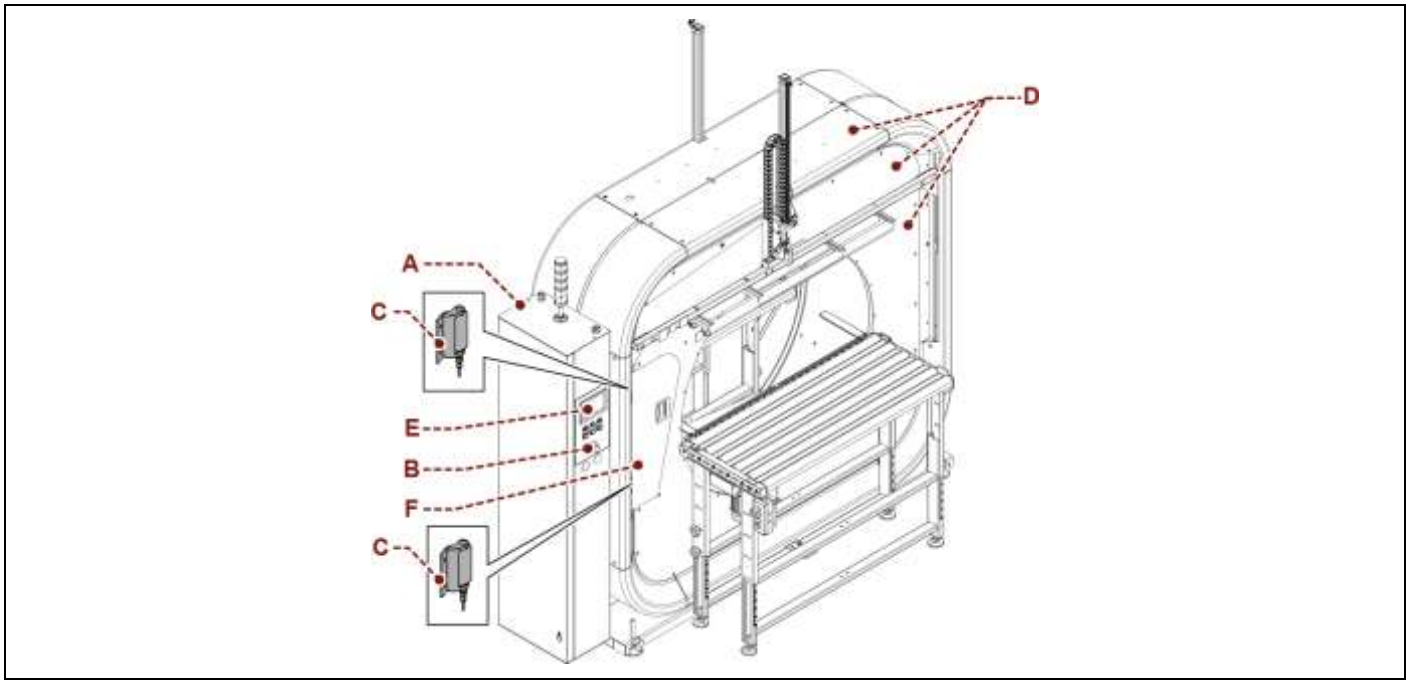
B) **Emergency buttons**
When pressed they immediately stop the machine in emergency conditions.
To reset, rotate the button in the direction indicated by the arrow.

C) **Microswitch on the door**
It disables any function of the machine when the door is opened.

D) **Fixed guards**
They avoid access to the inner parts of the machine.

E) **Alarm warnings**
The panel display indicates any anomalies that may occur on the machine.

F) **Mobile guards**
They avoid access to the inner parts of the machine.



The figure shows the position of the safety devices on the pneumatic unit.

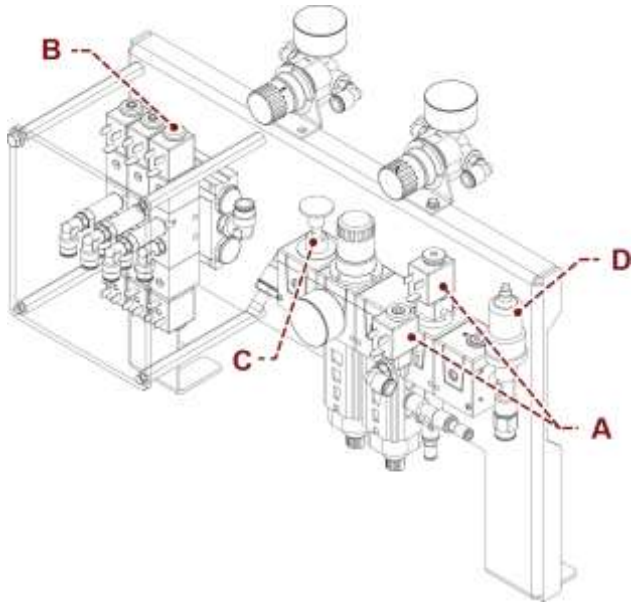
A) **General release solenoid valve:**
It closes compressed air mains supply when the machine is not powered.

B) **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.

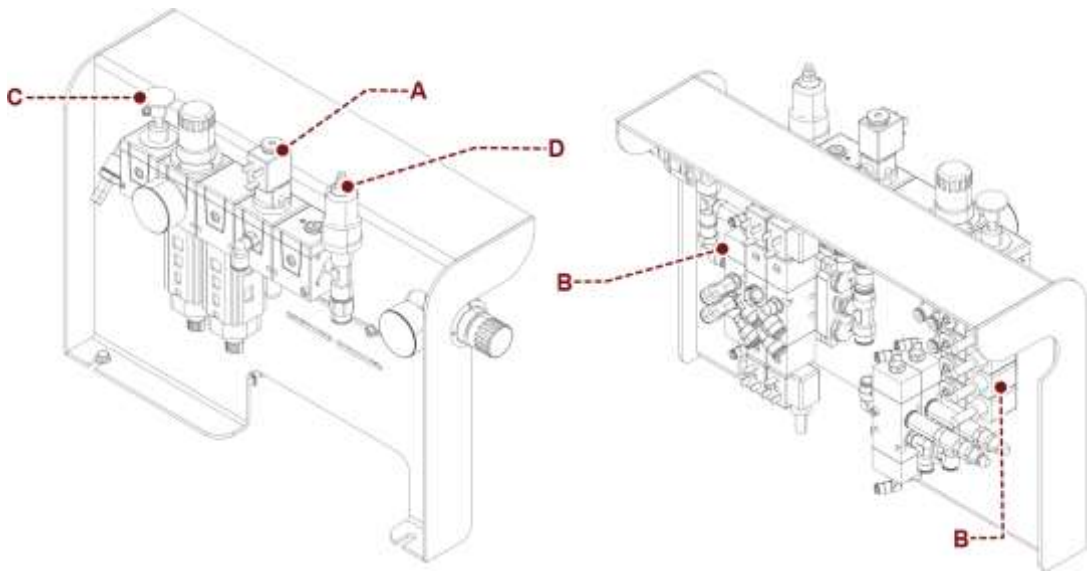
C) **Padlockable air inlet tap:**
If closed and padlocked, machine cannot be started by unauthorised personnel.

D) **Pressure switch:**
It sets the machine to emergency mode when line pressure is lower than the set value.

ORBIT R 5



ORBIT R 9 / ORBIT R 13



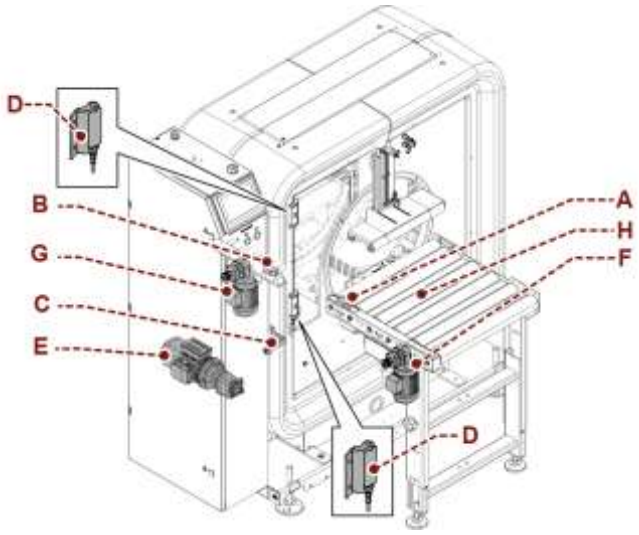
3.4. DESCRIPTION OF ELECTRICAL DEVICES

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

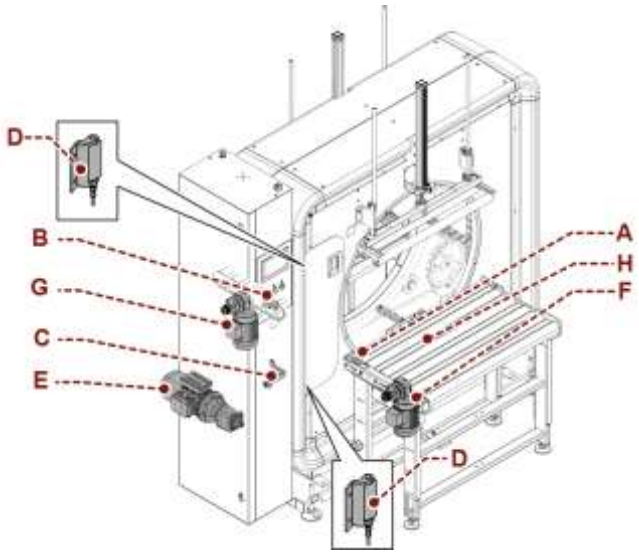
A) **Photocell (B1)**
It detects product presence on the infeed conveyor.
B) **Photocell (B2)**
It detects product presence on the outfeed conveyor.
C) **Timing sensor (SQ3)**
It detects the rotary ring in the start cycle position (machine set up).
D) **Microswitch (SQ1)**
The machine stops when the guard is opened.
E) **Electric motor**
It activates the rotary ring.
F) **Electric motor**
It activates the infeed conveyor.
G) **Electric motor**
It activates the outfeed conveyor.
H) **Sensor**
It detects the clamp in the “back” position.

Important
For further details see the wiring diagram.

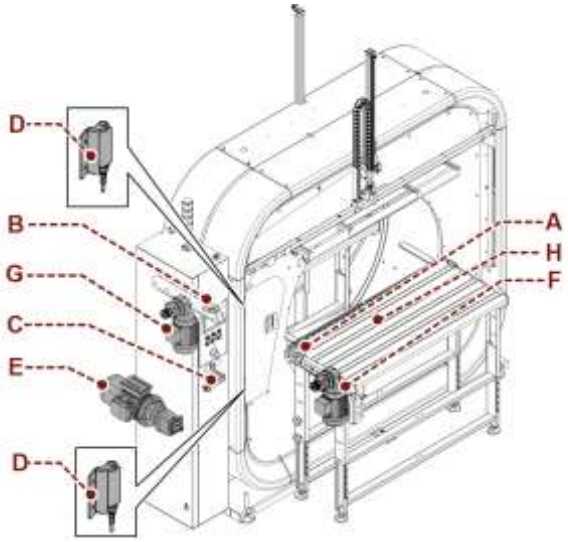
ORBIT R 5



ORBIT R 9



ORBIT R 13



3.5. DESCRIPTION OF PNEUMATIC DEVICES

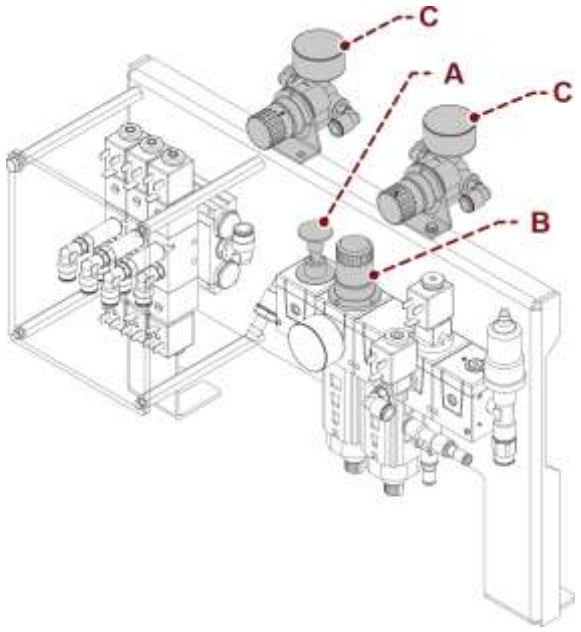
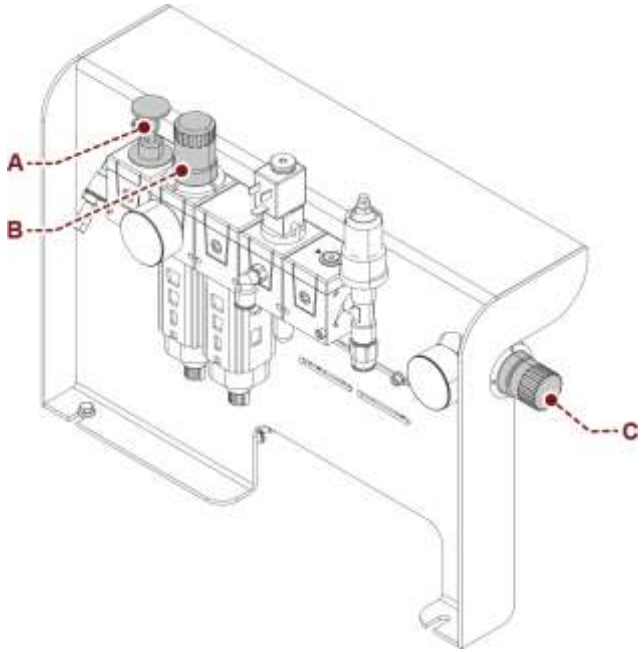
The figure shows the position of the devices on the machine.

A) **Tap**
To eliminate the pneumatic pressure inside the machine.

B) **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.

C) **Pressure regulator with pressure gauge**
To adjust the pressure of the infeed/outfeed pressers.

Important
For further details see the pneumatic diagram.

ORBIT R 5	ORBIT R 9 / ORBIT R 13
	

3.6. DESCRIPTION OF ACCESSORIES ON REQUEST

- **Reel holder with 50 mm internal diameter** (ORBIT R 5-9 reel 125)
- **Infeed and outfeed belt conveyor unit** (length 1500 mm and 3000 mm)
- **Side guide unit (roller or skid guides) for standard conveyors**
- **Side guide unit (roller or skid guides) for optional conveyors** (length 1500 mm and 3000 mm)
- **Reel holder unit with dancer roller and pre-stretch**
- **Driving axle**
- **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.
- **S.K.I.D. clamp**
- **Pluripac**
- **Double reel version**

3.7. TECHNICAL SPECIFICATIONS

			Power	Absorption	Air consumption	Max pressure
			kW	A Voltage (V) 400 + N three-phase	Nl/cycle	bar
Machine		**Reel**				
ORBIT R 5	STD clamp	125	1.6	2.7	3.5	6
	SKID clamp		1.8		2.5	
	STD clamp	250	1.7	3.2	5.5	6
	SKID clamp		2		2.5	
	DR - STD clamp		1.7		9	
ORBIT R 9	STD clamp	125	1.7	3.2	13	6
	SKID clamp		1.9		12	
	STD clamp	250	1.7	3.2	15	6
	SKID clamp		1.9		12	
	DR - STD clamp		1.7		18	
ORBIT R 13	STD clamp	250	2.6	5	21	6
	SKID clamp		2.8	5	18	
	DR - STD clamp		2.6	5	25	

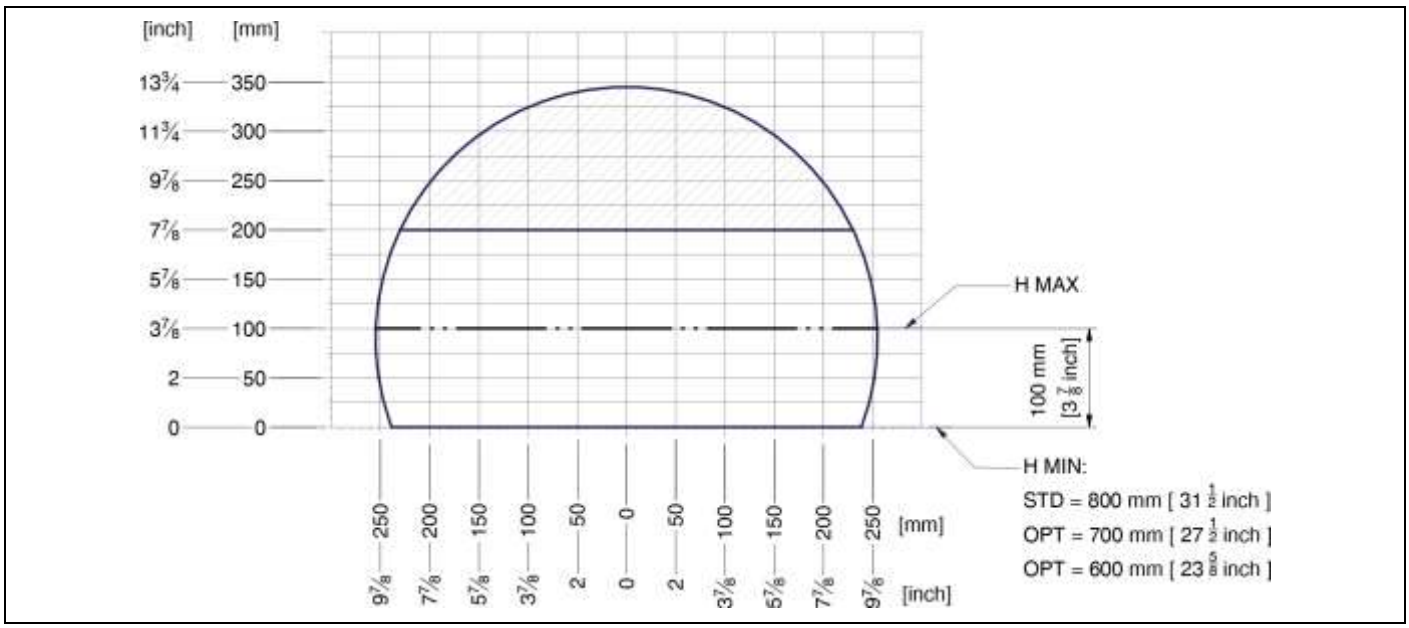
3.7.1. PRODUCT DIMENSIONS

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.

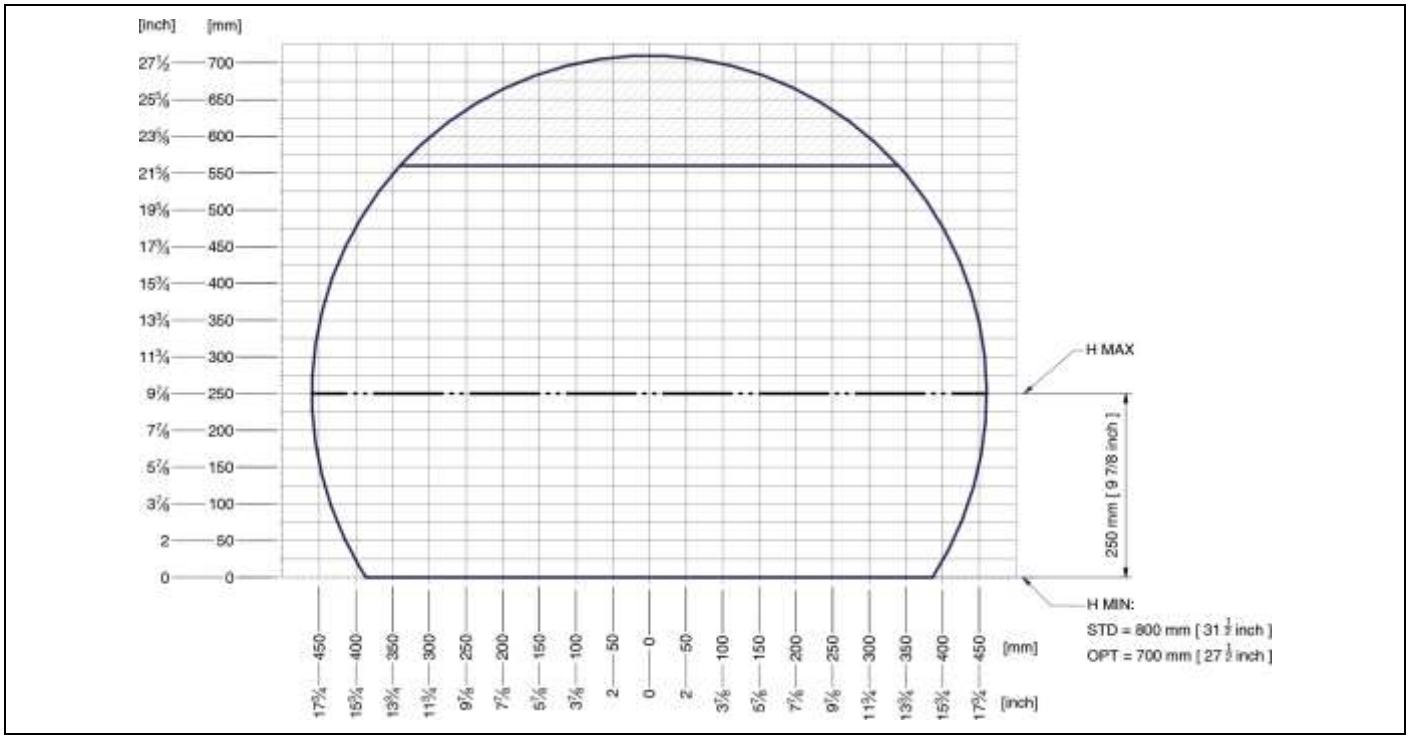
Machine	Reel	Minimum size of product that can be processed (mm)
ORBIT R 5	125	50 x 50 x 600 *
	250	50 x 50 x 725 *
	250 (double reel)	50 x 50 x 1000 *
ORBIT R 9	125	90 x 90 x 625 *
	250	90 x 90 x 750 *
	250 (double reel)	90 x 90 x 1000 *
ORBIT R 13	250	150 x 150 x 800
	250 (double reel)	150 x 150 x 1000

(*): Measures referring to machine basic configuration. For the other measures, contact Robopac.

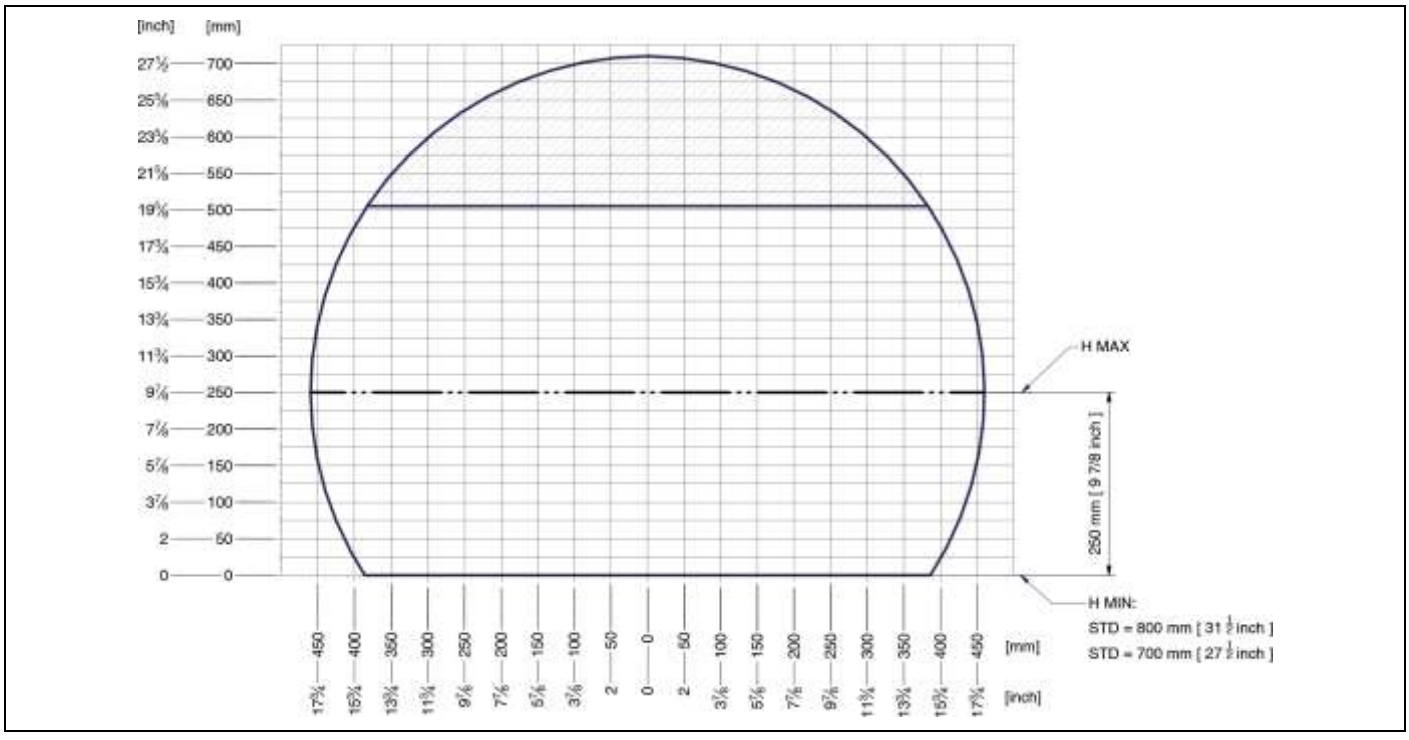
ORBIT R 5 / ORBIT R 5 DOUBLE REEL



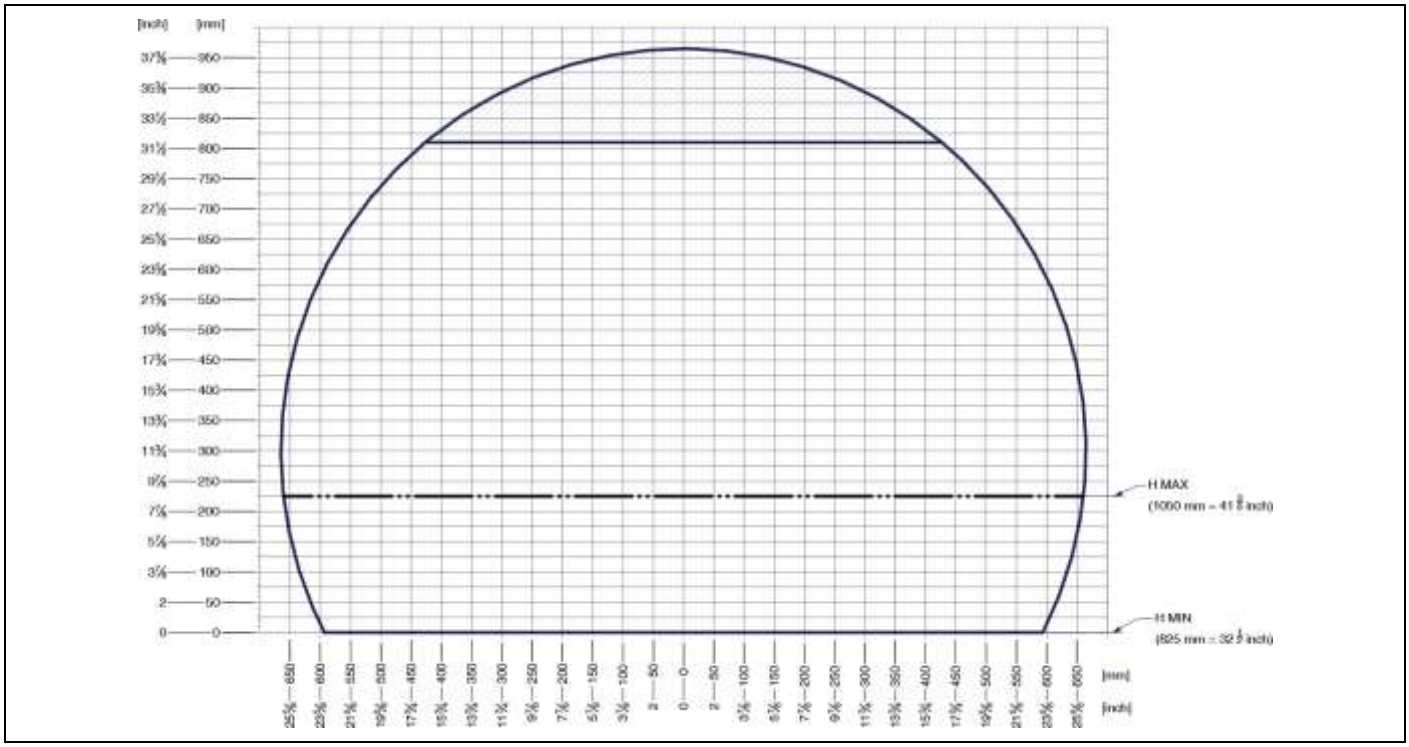
ORBIT R 9



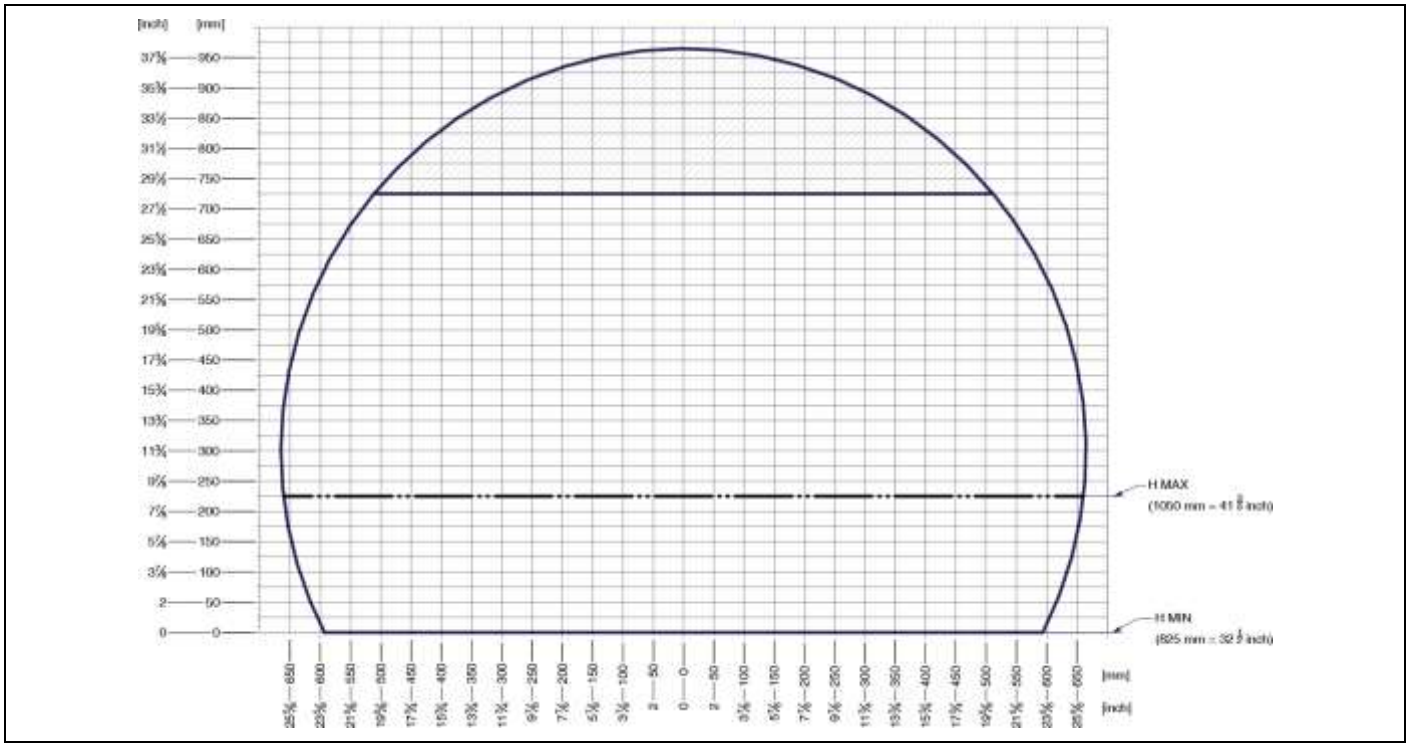
ORBIT R 9 DOUBLE REEL



ORBIT R 13

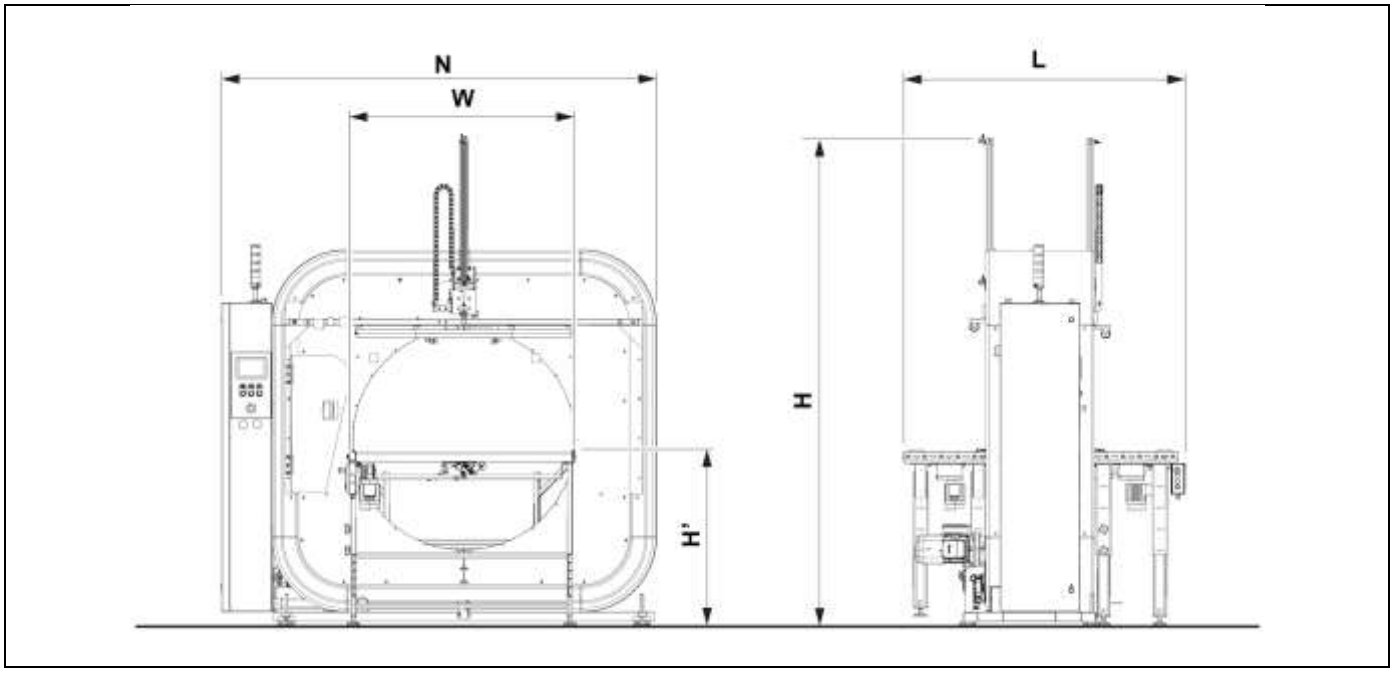


ORBIT R 13 DOUBLE REEL



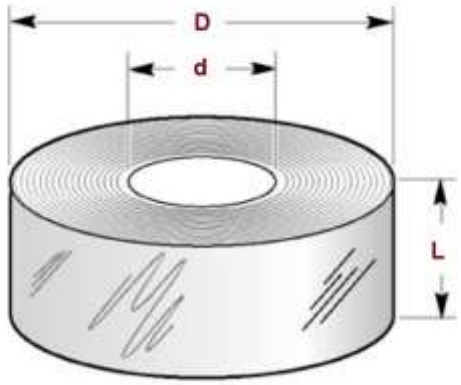
3.7.2. MACHINE DIMENSIONS

(standard L = 1670 mm for ORBIT R 5-9, optional L = 6700 mm for ORBIT R 13)
(standard W = 1300 mm for ORBIT R 5-9, optional W = 900 mm for ORBIT R 13)



			ORBIT R 5		ORBIT R 9		ORBIT R 13	
			STD	OPT	STD	OPT	STD	OPT
L		mm	1585	6585	1585	6585	1700	6700
N		mm	1470		2020		2630	
H		mm	1500		2235		2770	
H'	min.	mm	800		800		825	
	max.	mm	900		1050		1050	
W		mm	500	350	900	600	1300	900

3.7.3. FILM TECHNICAL FEATURES



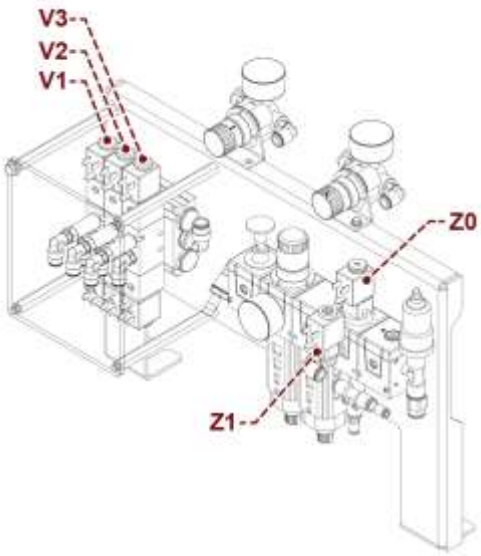
		ORBIT R 5	ORBIT R 9	ORBIT R 13
D	mm	250	250	250
d	mm	76	76	76
d optional	mm	50 (for reel 125 only)	50 (for reel 125 only)	-
L	mm	125 / 250	125/250	250
Thickness	µm	17-35	17-35	17-35

3.7.4. SOLENOID VALVES TECHNICAL FEATURES

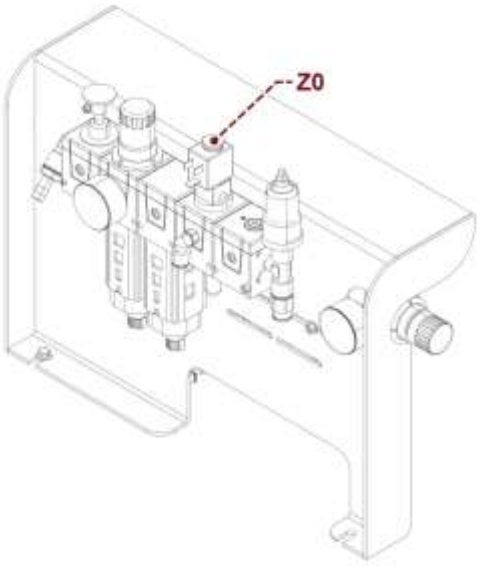
PNEUMATIC SYSTEM WITH STANDARD CLAMP

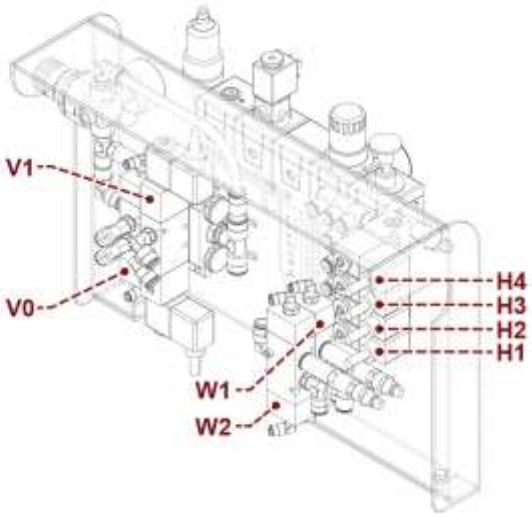
- **Solenoid valve H1:**
  it controls infeed presser down movement.
- **Solenoid valve H2:**
  it controls infeed presser up movement.
- **Solenoid valve H3:**
  it controls outfeed presser down movement.
- **Solenoid valve H4:**
  it controls outfeed presser up movement.
- **Solenoid valve V0:**
  pressure pneumatic selector valve for presser units (controlled by H2 and H4: it supplies presser at the maximum system pressure (6 bar) during upstroke).
- **Solenoid valve V1:**
  it controls clamp opening and closing.
- **Solenoid valve V2:**
  it controls infeed presser up and down movement.
- **Solenoid valve V3:**
  it controls outfeed presser up and down movement.
- **Solenoid valve Z0:**
  it closes compressed air supply when power is disconnected.
- **Solenoid valve Z1:**
  it closes the supply of the presser downstroke lock valve pilots.
- **Solenoid valve W1:**
  infeed presser cylinder activation pneumatic valve (controlled by solenoid valves H1 and H2).
- **Solenoid valve W2:**
  outfeed presser cylinder activation pneumatic valve (controlled by solenoid valves H3 and H4).

ORBIT R 5



ORBIT R 9 / ORBIT R 13

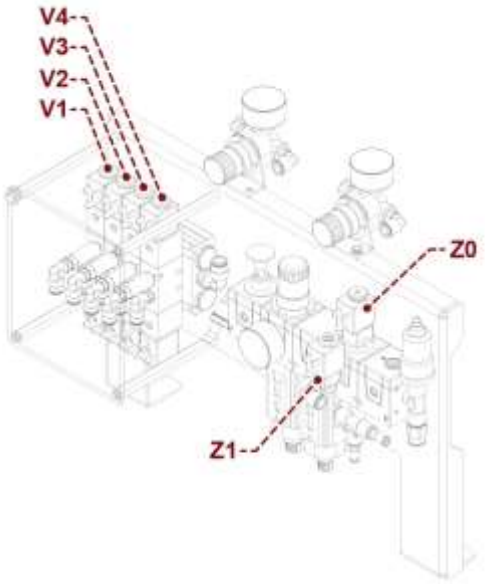




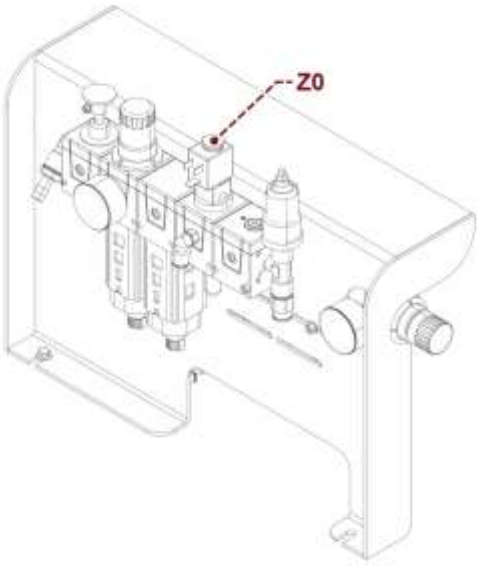
PNEUMATIC SYSTEM WITH S.K.I.D. CLAMP.

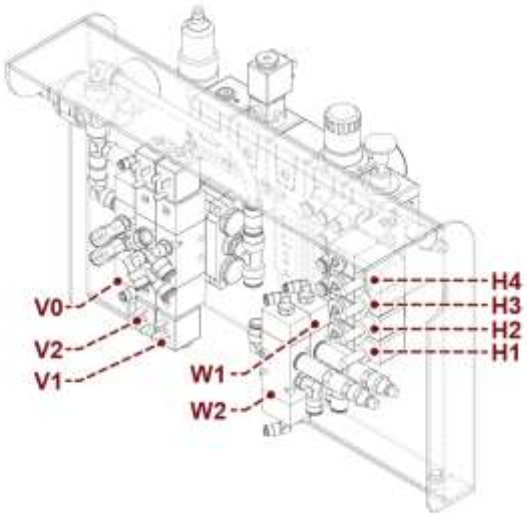
- **Solenoid valve H1:**
  it controls infeed presser down movement.
- **Solenoid valve H2:**
  it controls infeed presser up movement.
- **Solenoid valve H3:**
  it controls outfeed presser down movement.
- **Solenoid valve H4:**
  it controls outfeed presser up movement.
- **Solenoid valve V0:**
- pressure pneumatic selector valve for presser units (controlled by H2 and H4: it supplies presser at the maximum system pressure (6 bar) during upstroke).
- **Solenoid valve V1:**
  it controls clamp/sealer up and down movement
- **Solenoid valve V2:**
  it controls clamp counterplate up and down movement.
- **Solenoid valve V3:**
  it controls infeed presser up and down movement.
- **Solenoid valve V4:**
  it controls outfeed presser up and down movement.
- **Solenoid valve Z0:**
  it closes compressed air supply when power is disconnected.
- **Solenoid valve Z1:**
  it closes the supply of the presser downstroke lock valve pilots.
- **Solenoid valve W1:**
  infeed presser cylinder activation pneumatic valve (controlled by solenoid valves H1 and H2).
- **Solenoid valve W2:**
  outfeed presser cylinder activation pneumatic valve (controlled by solenoid valves H3 and H4).

ORBIT R 5



ORBIT R 9 / ORBIT R 13





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)	Emitted sound power 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.
- A perimeter area that must be left around the machine, also for safety reasons.
- A flat surface, steady and without vibrations with adequate load bearing capacity.

4. INFORMATION ON HANDLING AND INSTALLATION

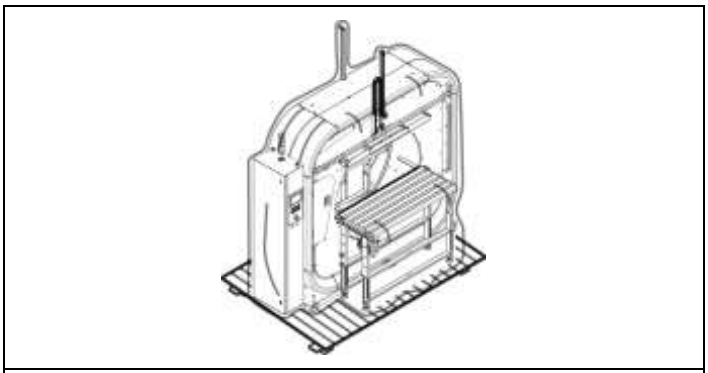
4.1. RECOMMENDATIONS FOR HANDLING AND LOADING

- **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.**

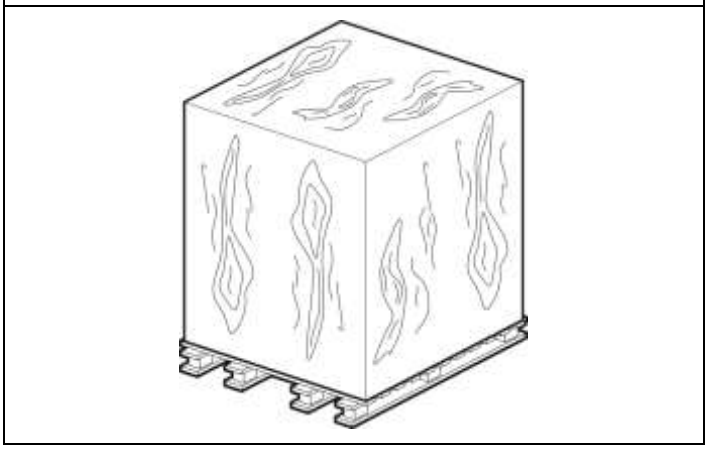
4.2. PACKING AND UNPACKING

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



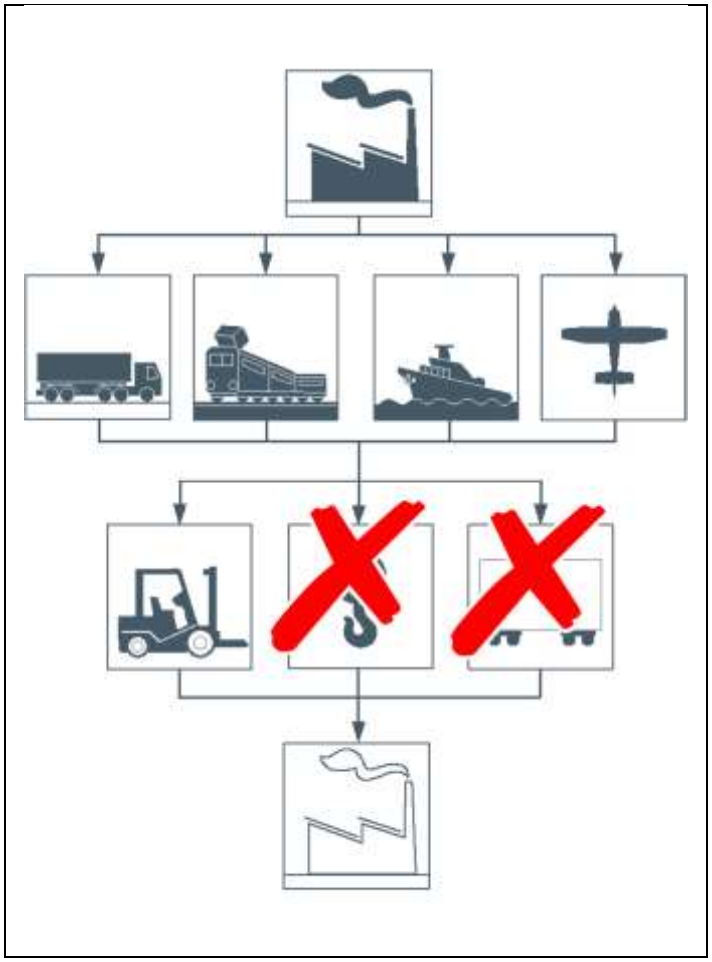
Package in crate



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.

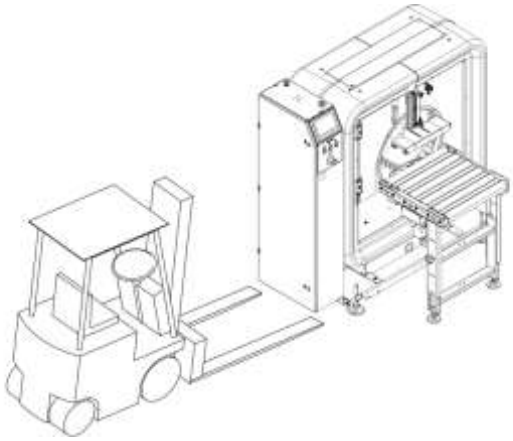
Important
For further transportations, recreate the initial packaging conditions for transport and handling.



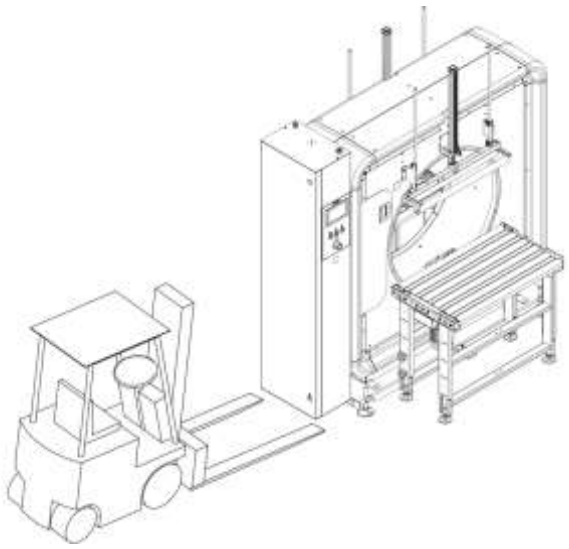
4.4. HANDLING AND LIFTING

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.

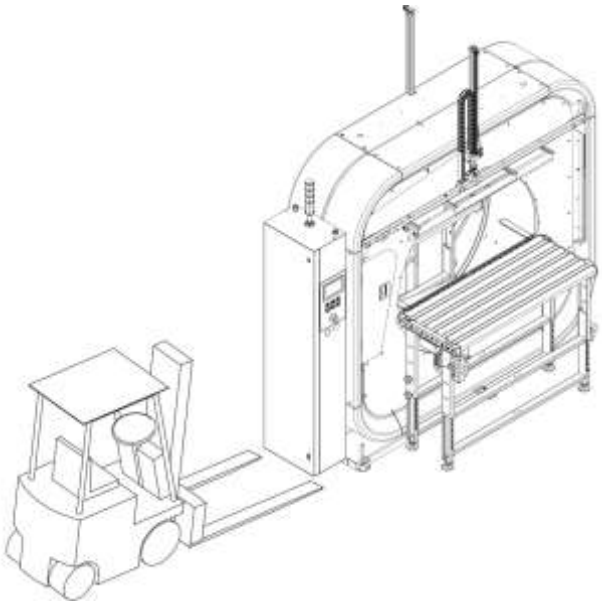
ORBIT R 5



ORBIT R 9



ORBIT R 13



4.5. INSTALLATION OF THE MACHINE

Proceed as follows:

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.

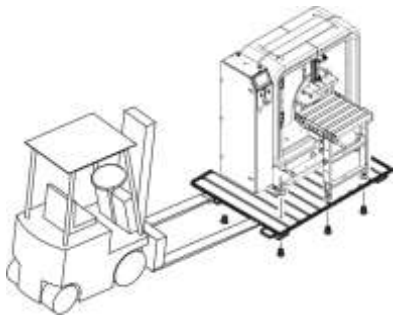
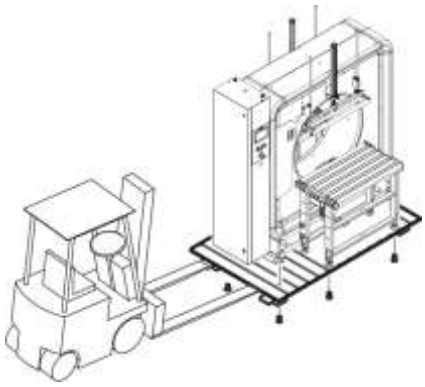
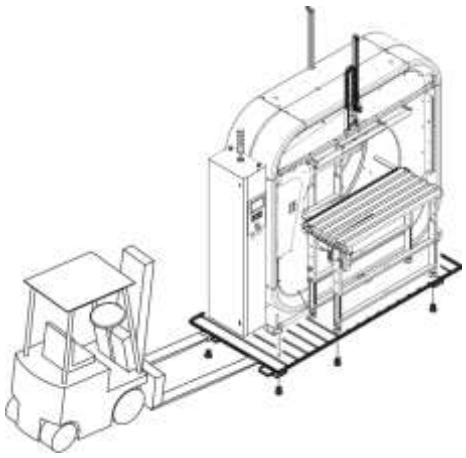
Important
You are advised to keep the packaging material.

How to carry out the standard assembly:

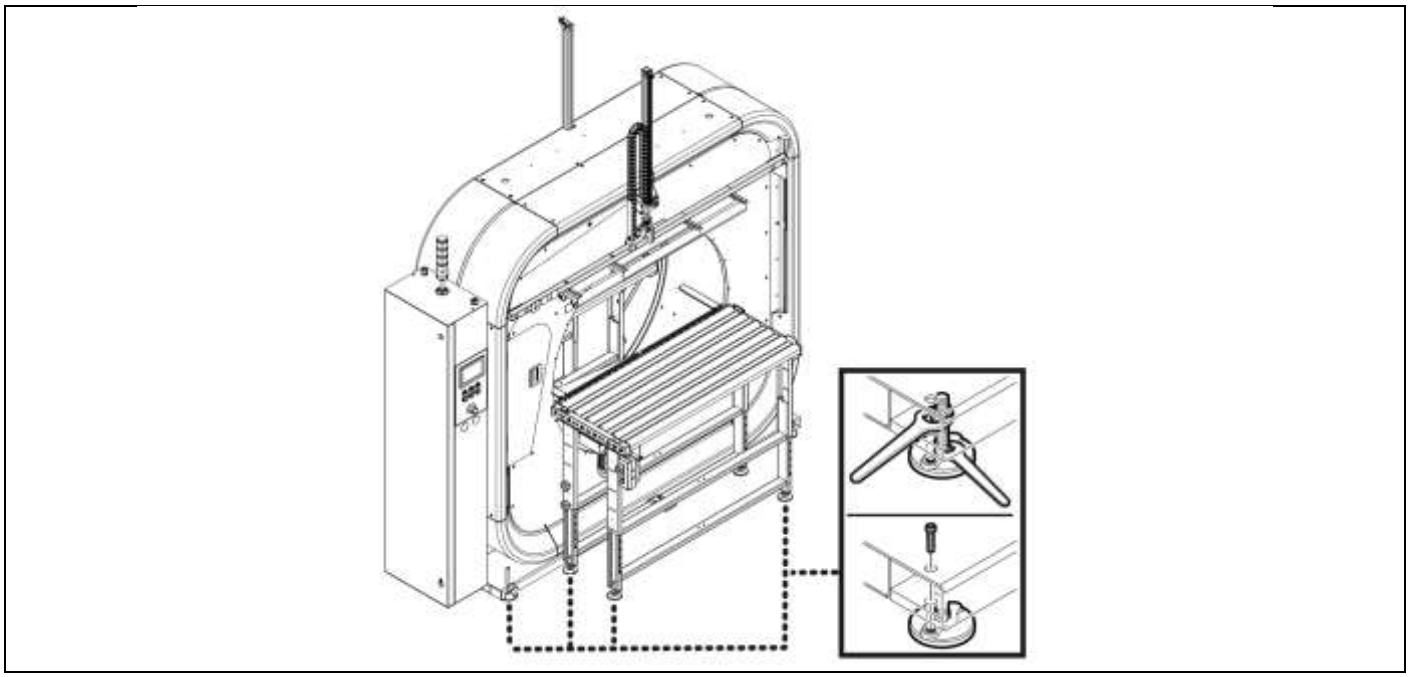
Danger - warning
Authorised technical service personnel must perform installation and assembly operations.

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.

ORBIT R 5	ORBIT R 9	ORBIT R 13
		

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.



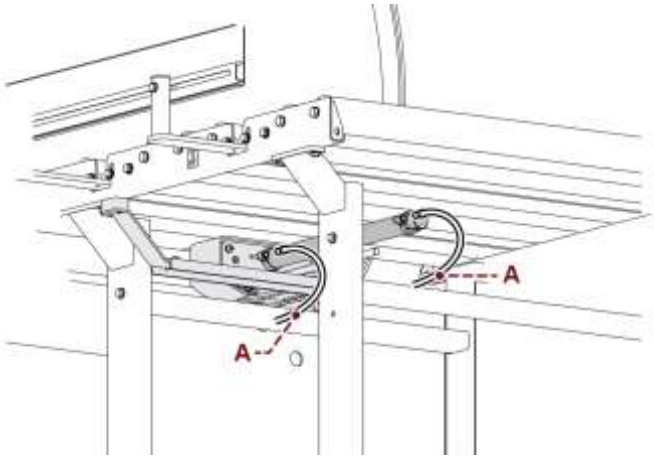
4.5.1. CONVEYORS ASSEMBLY (length 1500 mm / 850 mm)

Proceed as follows.

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 (**A**) to the cylinder of the clamp unit after conveyor assembly (see following pages).

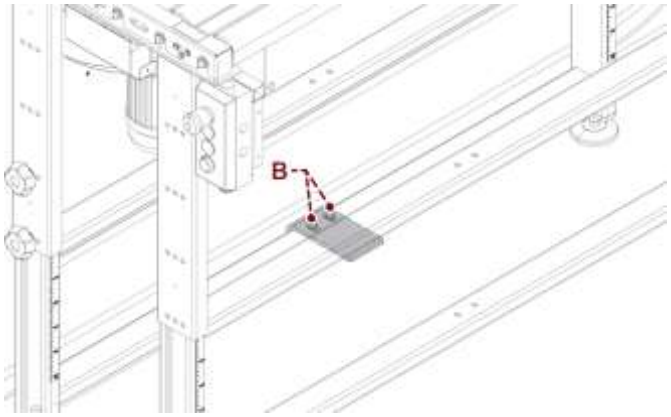
Important
Remember that the tube that controls the exit of the clamp is marked with a "**6**" while the one that controls its return is marked with a "**5**".



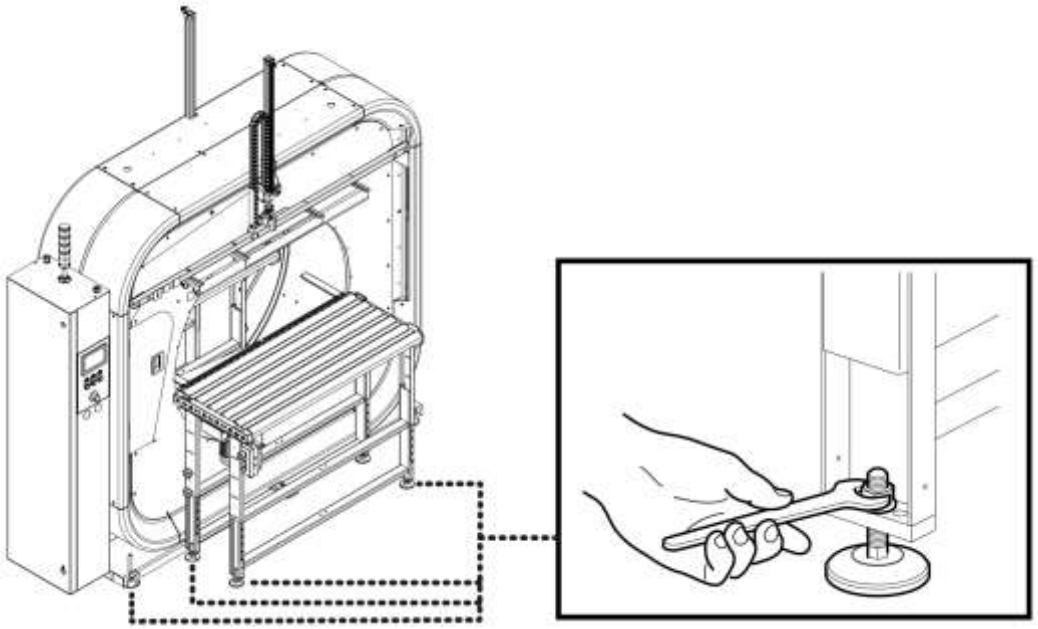
7. Connect the infeed conveyor to the base and tighten screws (**B**).

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

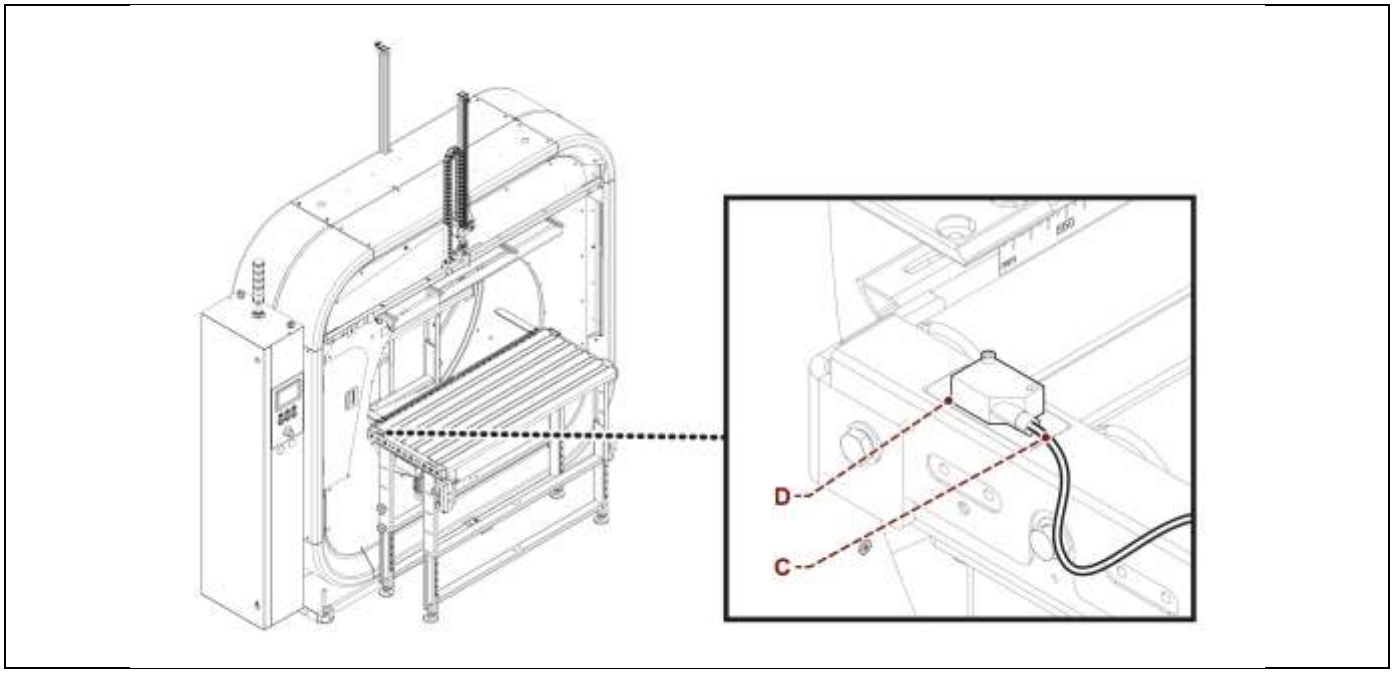
Caution - warning
During the operation pay attention not to damage the clamp unit.



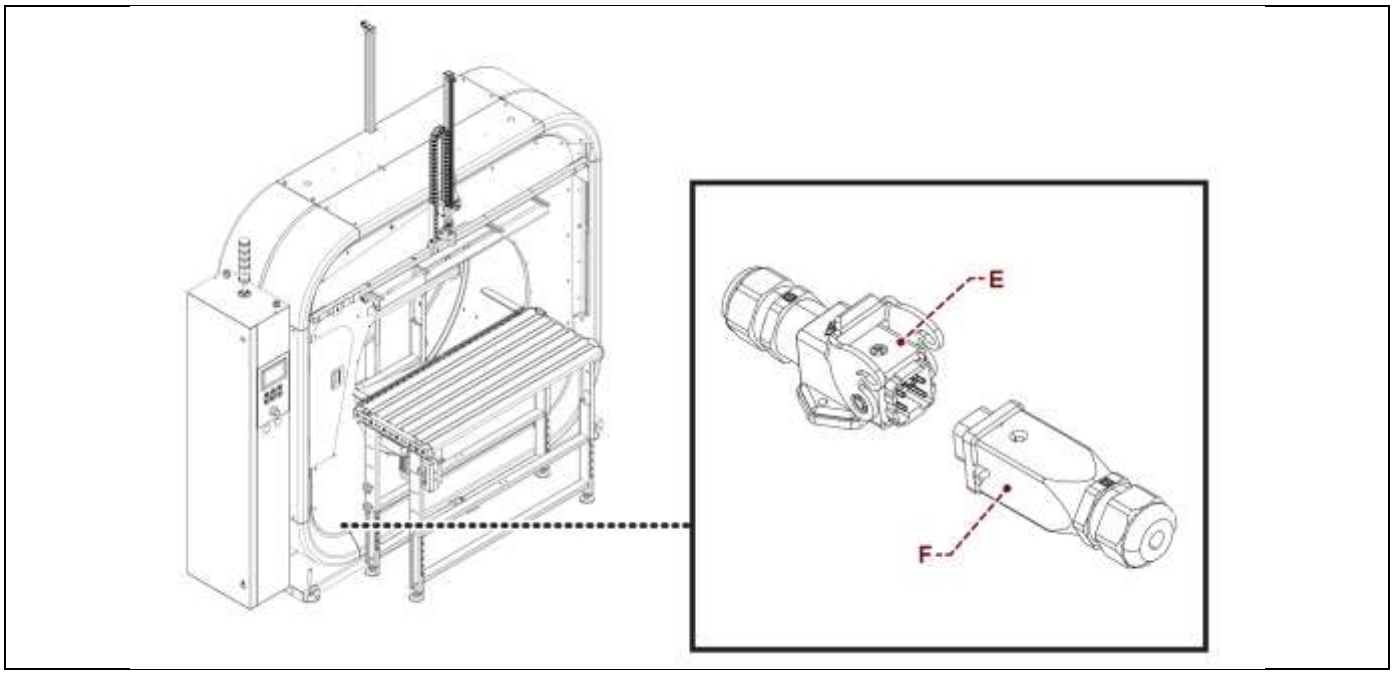
8. Use the support feet to level the machine.



9. Connect the photocell (**D**) cable (**C**).



10. Insert plug (**E**) into socket (**F**).
11. Fasten the electrical cable to the machine using self-locking ties.
12. Repeat the same operations for the outfeed conveyor.

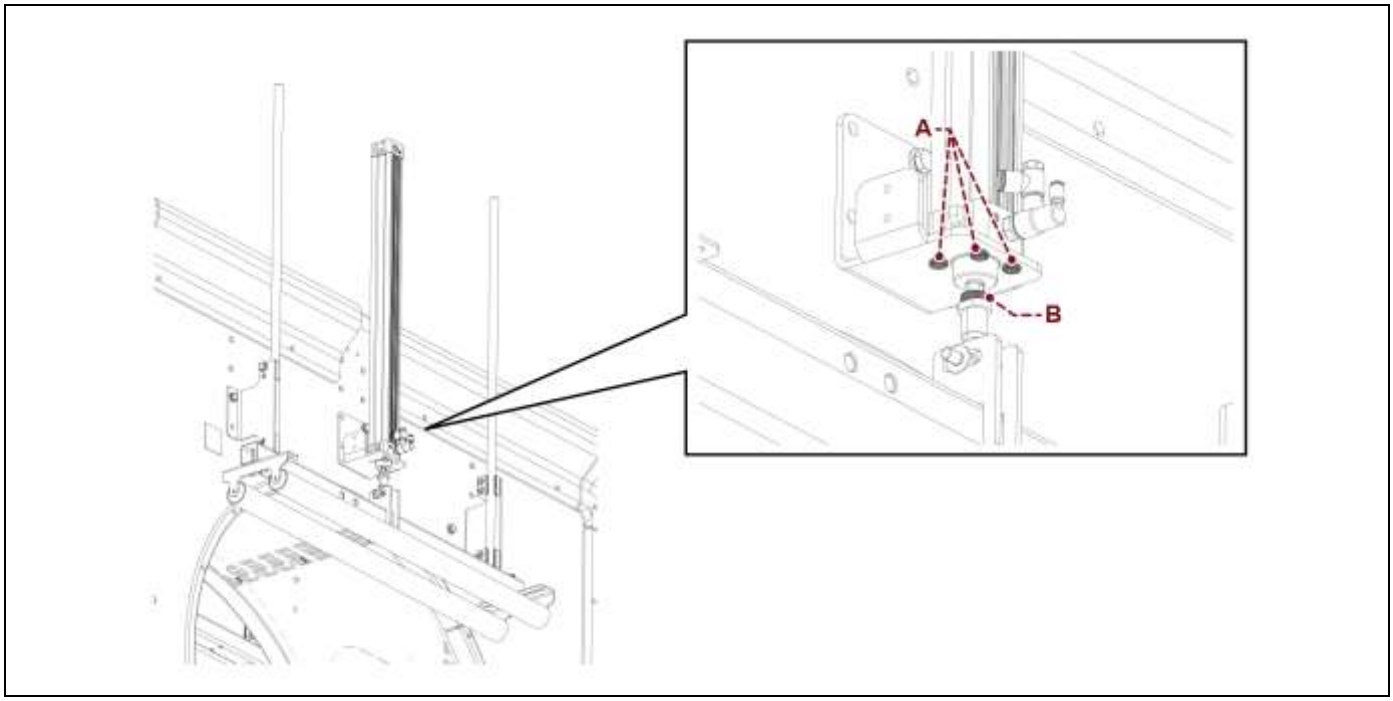


4.5.2. PRESSER UNIT INSTALLATION (for ORBIT R 9 and ORBIT R 13 only)

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

1. Fix the cylinder to the structure in correspondence of the four screws (**A**).
2. Tighten the fork nut (**B**) to the cylinder.
3. Connect the pneumatic tubes paying attention to the reference numbers.

Caution - warning
During the operation pay attention not to damage the presser unit.



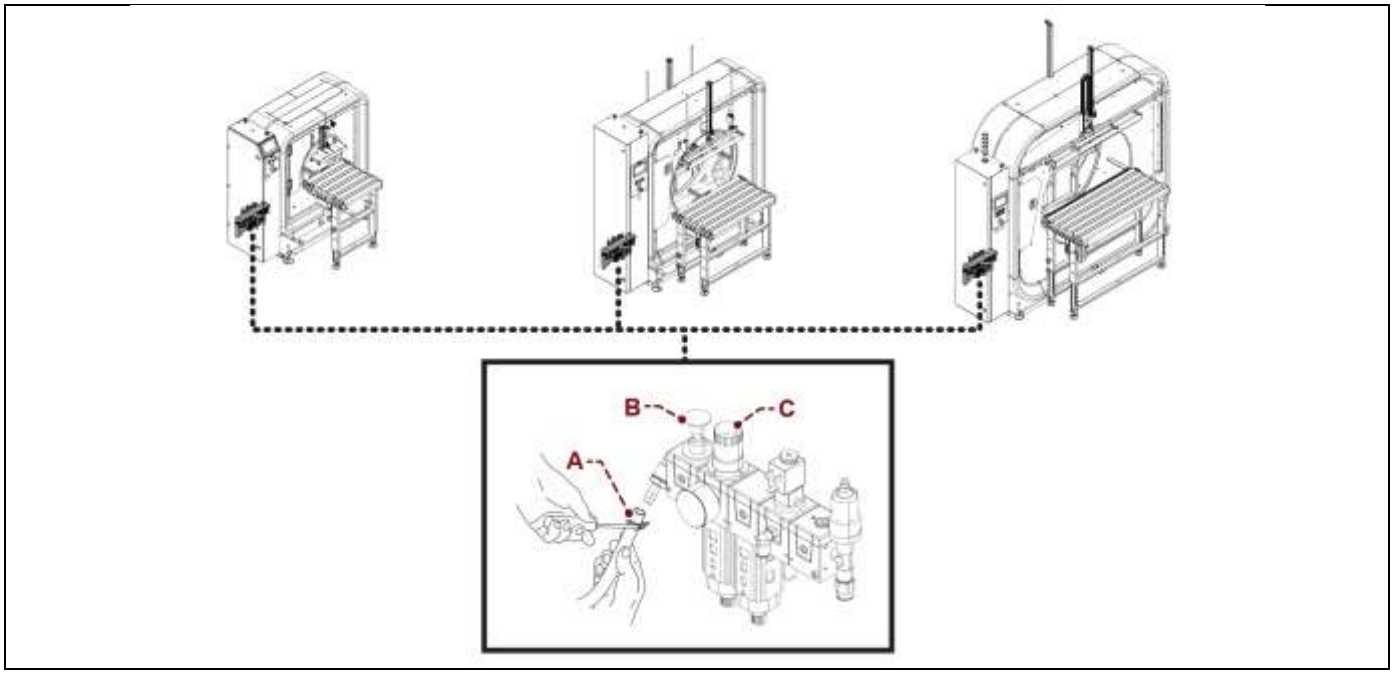
4.6. RECOMMENDATIONS FOR CONNECTIONS

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.

4.6.1. PNEUMATIC CONNECTION

Proceed as follows.

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.



4.6.2. ELECTRICAL CONNECTION

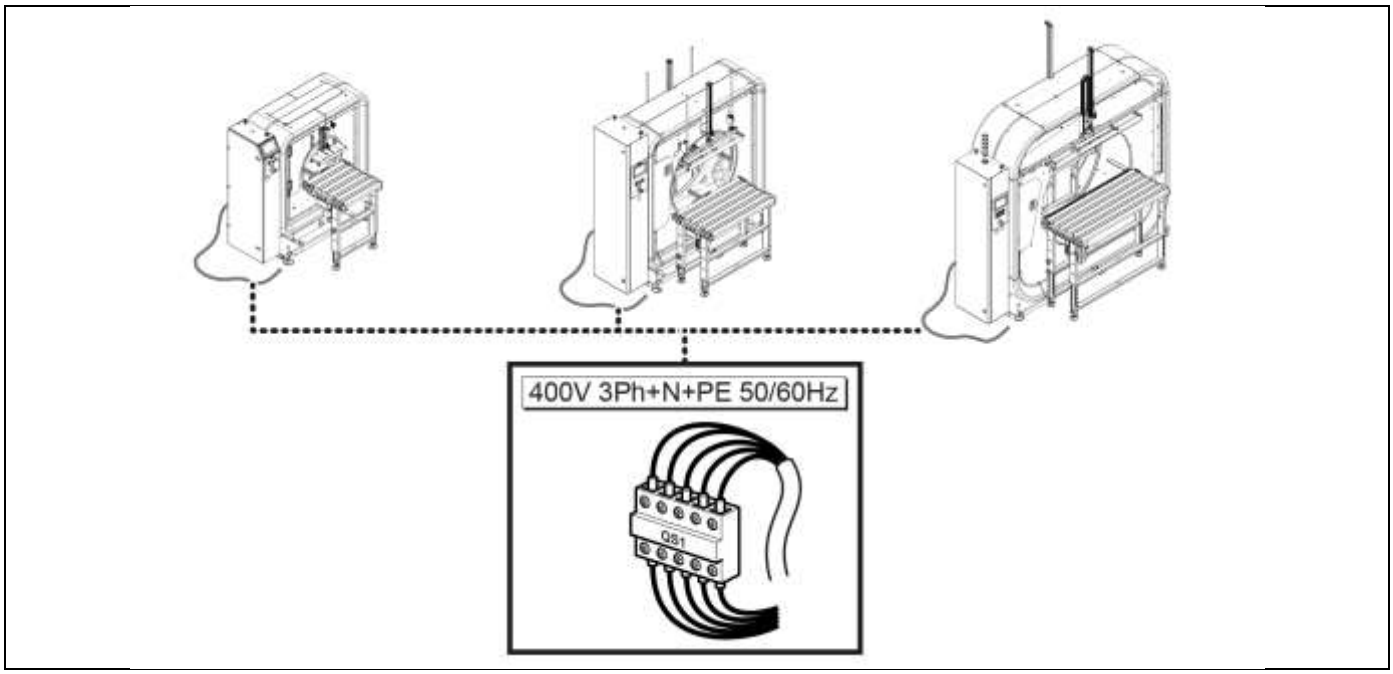
Standard machines work with the following mains voltage values:

- 400 V 3Ph+N 50/60 Hz

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

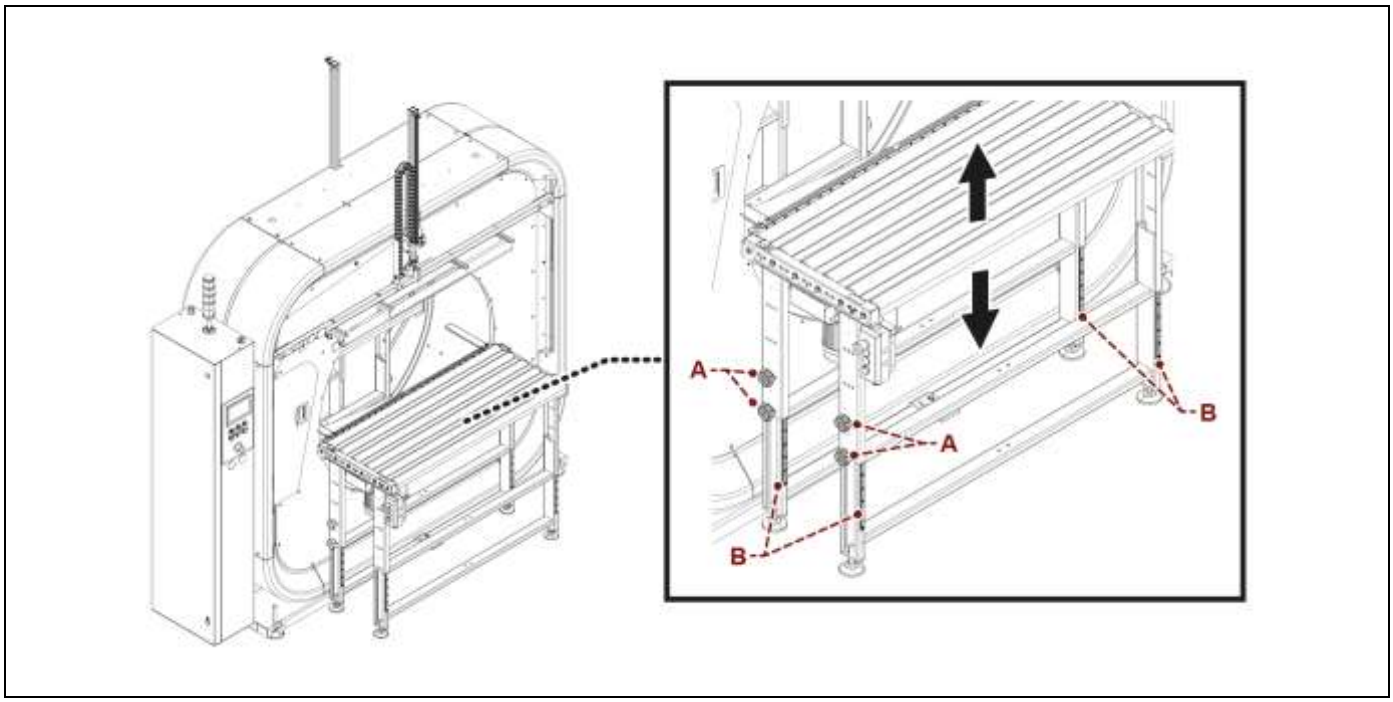
According to the product to be wrapped, adjust the infeed and outfeed conveyor height as follows:

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 "Technical Specifications").



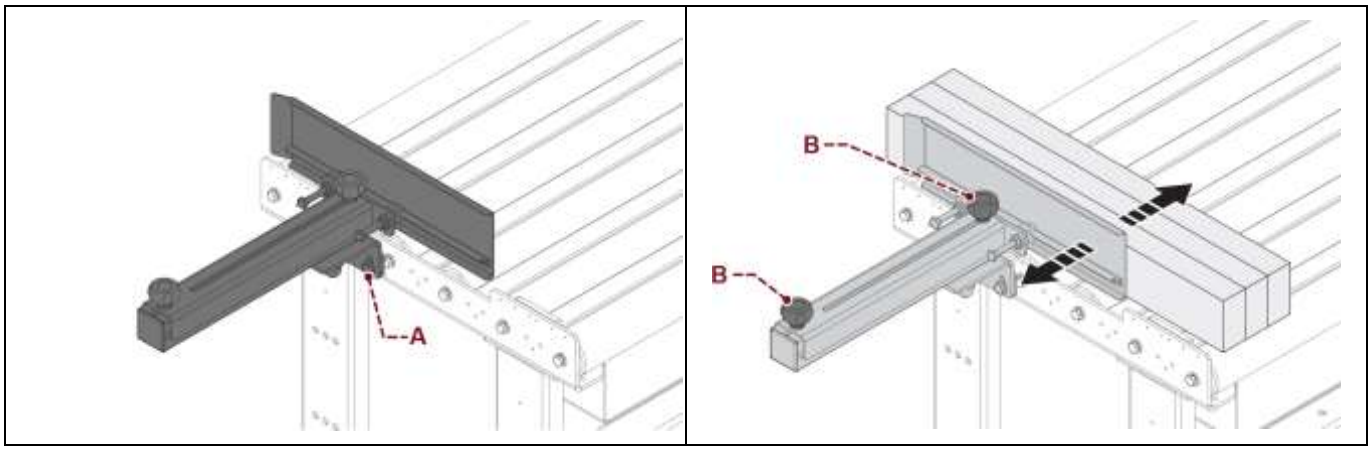
5.3. ROLLER OR SKID GUIDES ADJUSTMENTS (OPTIONAL)

To adjust the roller guides, proceed as follows

Width

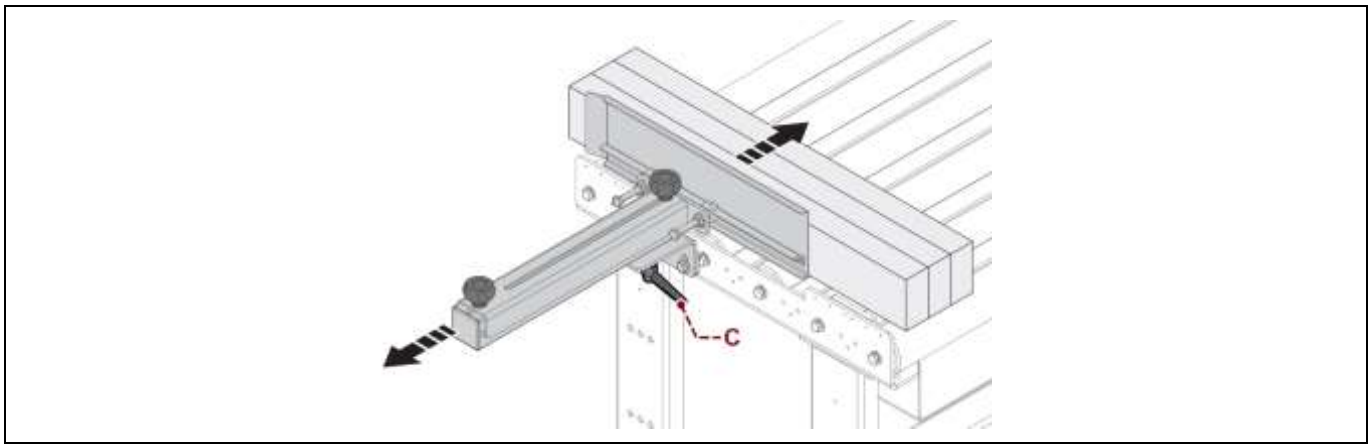
1. Insert the guides on the side of the conveyors in positions (**A**).
2. Fix the guides with screws.
3. According to the product to be wrapped, adjust the guides by regulating knobs (**B**).
4. Adjust guide position so as to keep the product as much as possible in the middle of the belt.

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 (**C**).

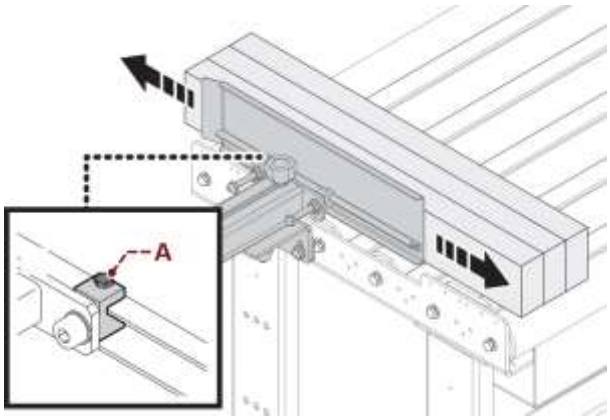
Important
Remember that in case of products wider than the conveyors, the position of the photocells must also be adjusted.



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. PRESSERS ADJUSTMENT

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

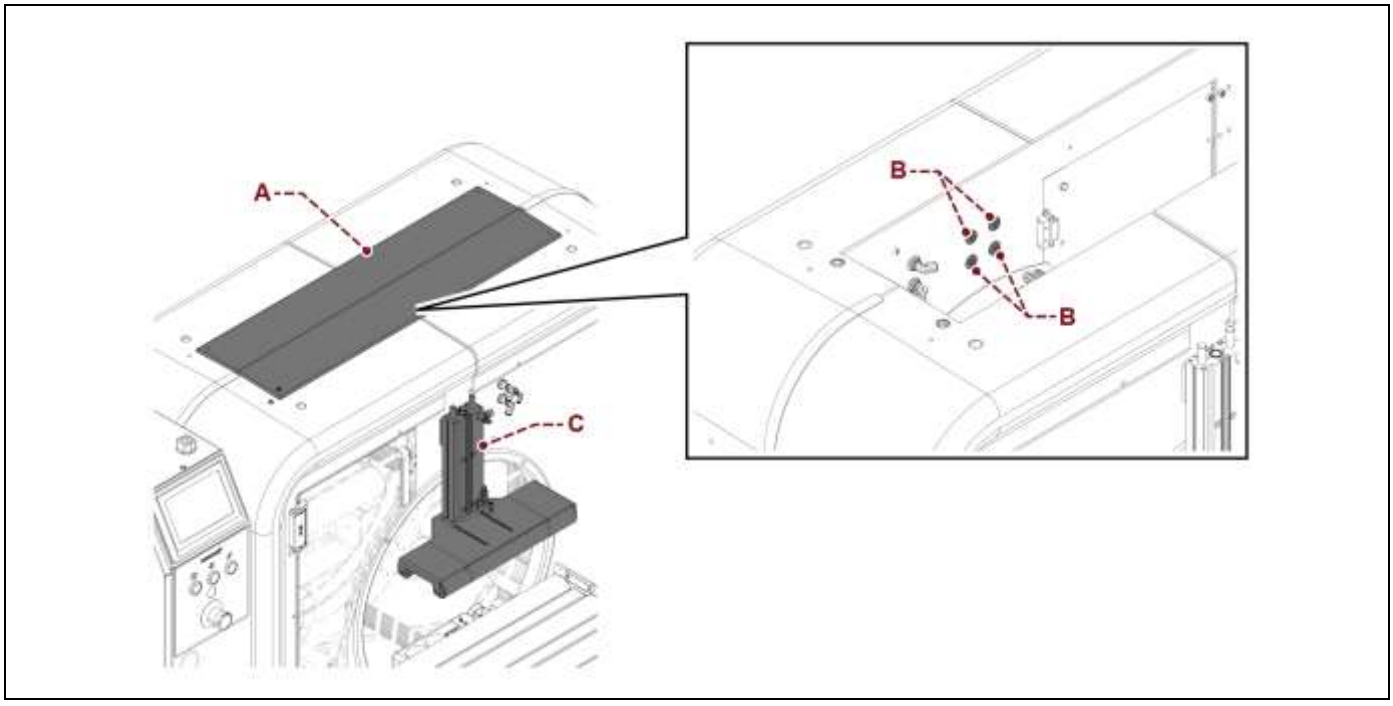
Height position

To adjust the presser height, proceed as follows.

ORBIT R 5

1. Remove the upper panel (**A**).
2. Loosen the screws (**B**).
3. Adjust the cylinder (**C**) height.
4. Tighten the screws (**B**).
5. Refit the upper panel (**A**).

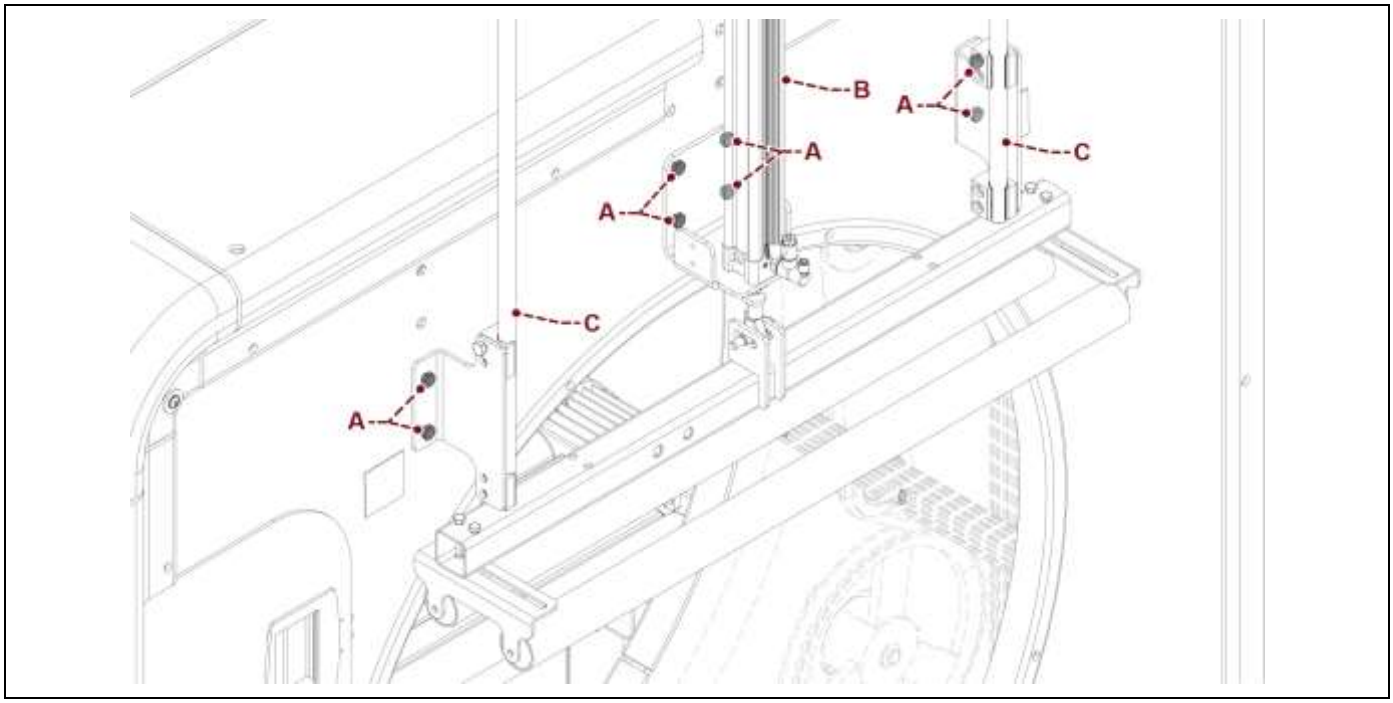
Caution - warning
Between pressers in top position and the product there must always be space.



ORBIT R 9

1. Loosen the screws (**A**).
2. Adjust the height of cylinder (**B**) and supports (**C**).
3. Tighten the screws (**A**).

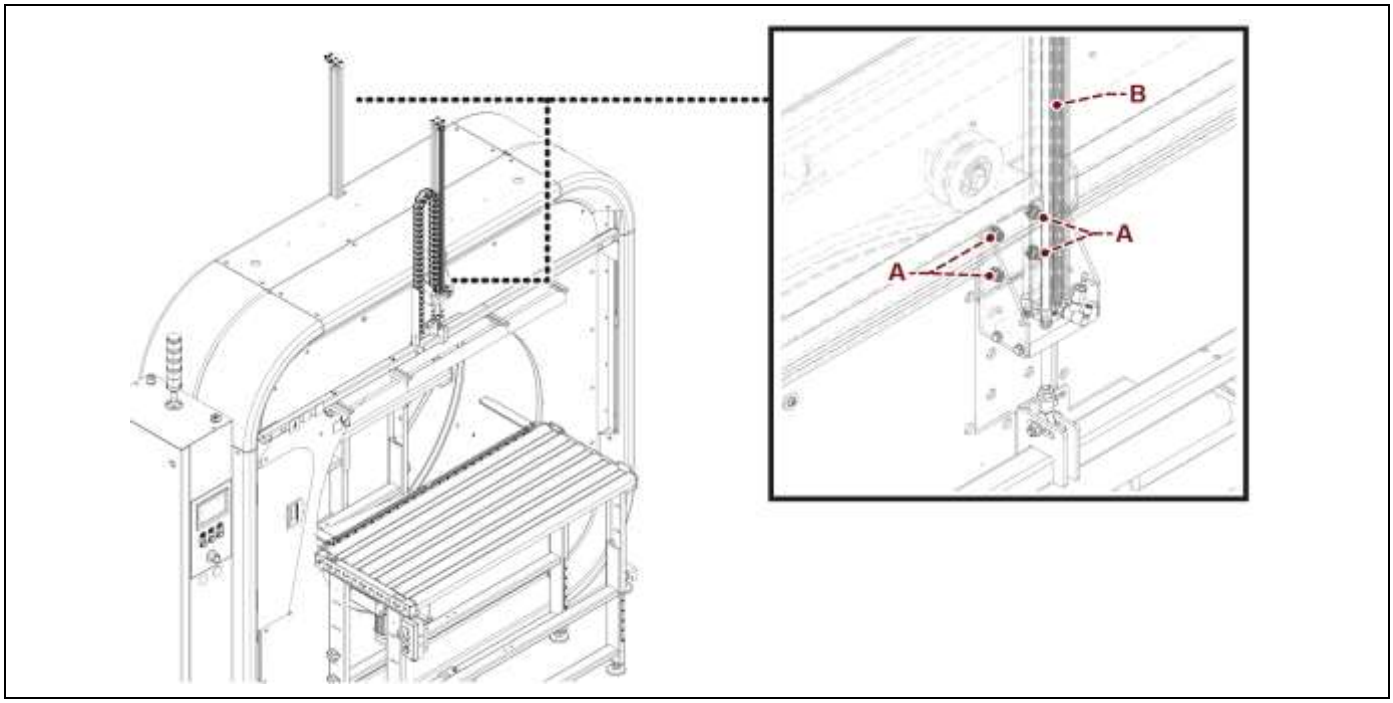
Caution - warning
Between pressers in top position and the product there must always be space.



ORBIT R 13

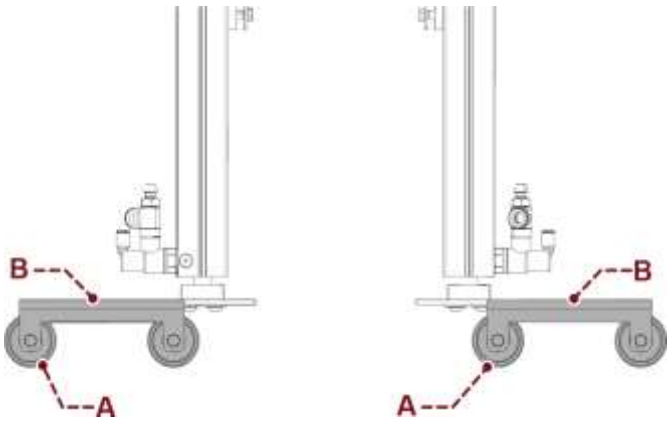
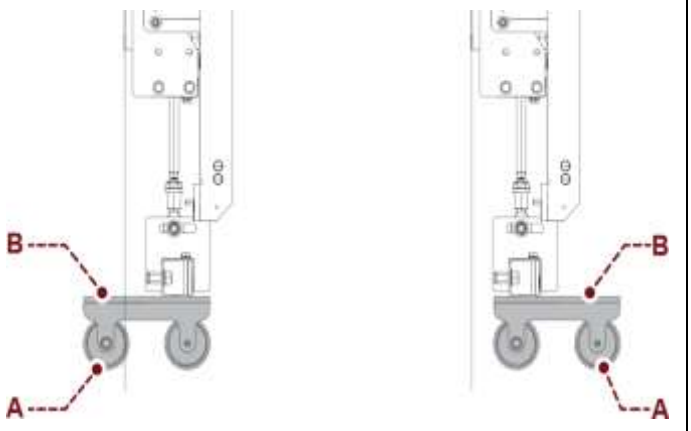
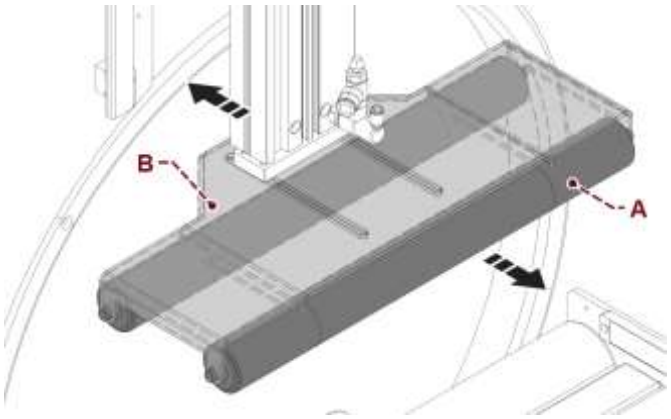
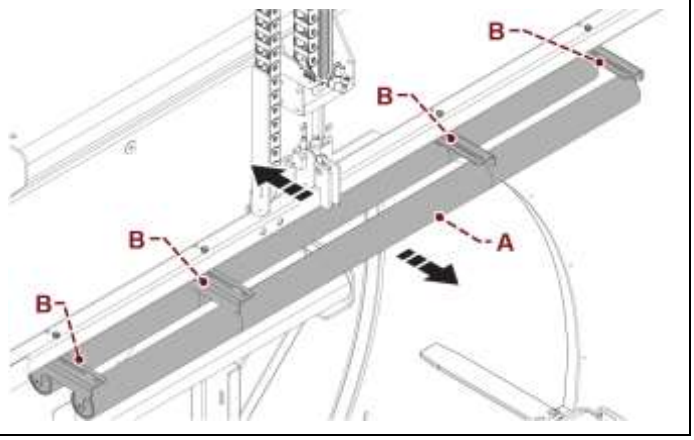
1. Loosen the screws (**A**).
2. Adjust the cylinder (**B**) height.
3. Tighten the screws (**A**).

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.
To check the position, control the down movement of pressers using the relevant manual controls on the panels (see par. “Description of control panel manual controls”).

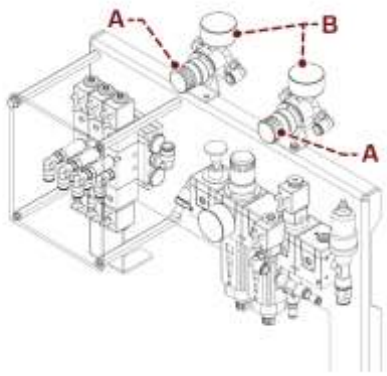
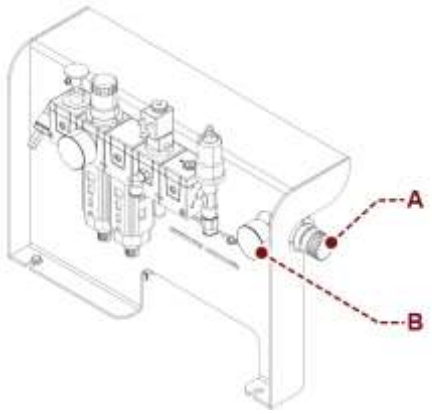
Important
When processing very heigh products, the roller (**A**) of both pressers could interfere with the rotary ring.
In this case, you must loosen the support screws (**B**) and adjust them as far as possible from the rotary ring. Adjust the presser height.

ORBIT R 5	ORBIT R 9 / ORBIT R 13
	
	

5.5. PRESSER PRESSURE ADJUSTMENT

Proceed as follows.

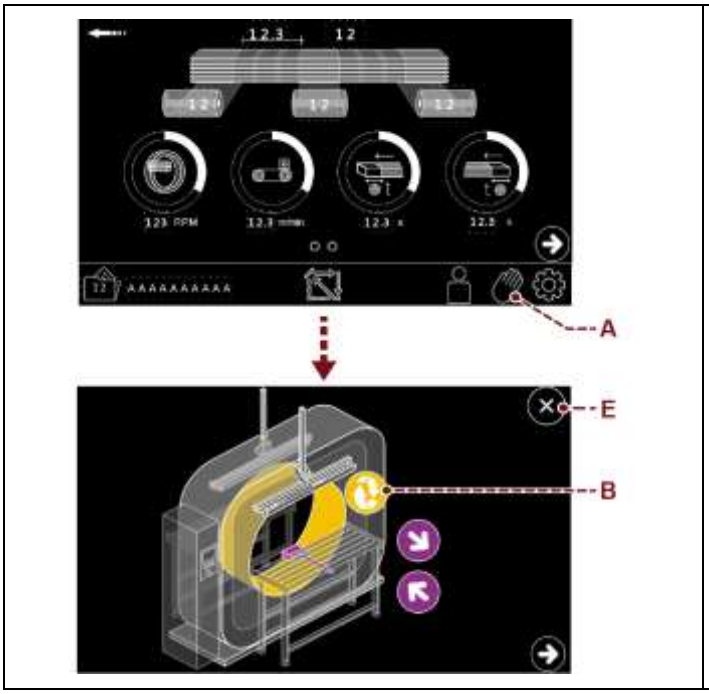
Based on the type of product, adjust the pressure using the knob (**A**) so that the pressers securely hold the product without deforming it.
Pressure can be read on the pressure gauge (**B**).

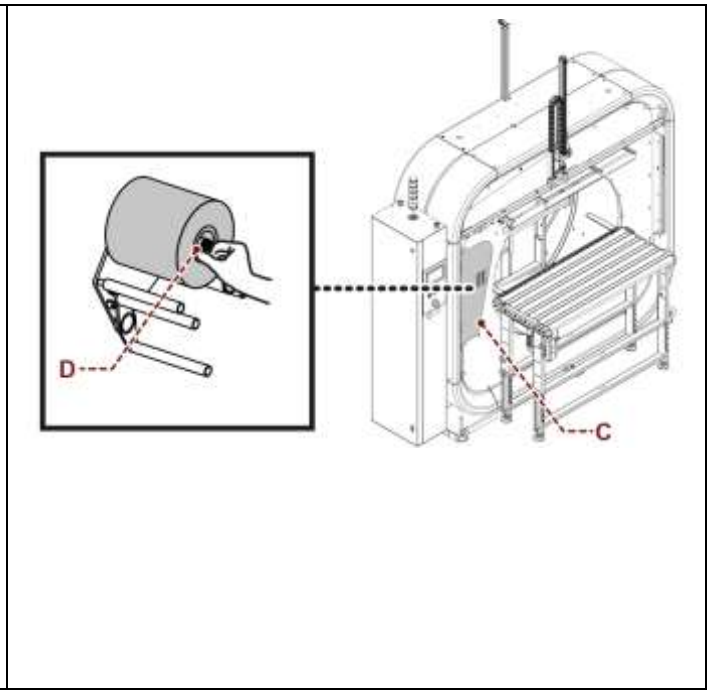
ORBIT R 5	ORBIT R 9 / ORBIT R 13
	

5.6. ADJUSTMENT OF SPOOL CARRIAGE ROLLER CLUTCH

The reel carriage roller clutch avoids that, due to reel inertia, too much film than required is unwound during the cycle. The optimum adjustment must be performed with the heaviest reel available, that is, the one with greater inertia, and must guarantee that the film wraps always remain well compacted on the reel.
To perform the adjustment, proceed as follows.

1. Touch the button (**A**) from the main page to access the manual movements.
2. Press the fifth wheel/reel change button (**B**) and hold it until the reel holder is in front of the door (**C**).
3. Open the door (**C**) to access the reel clutch adjustment.
4. Adjust the clutch on the reel carriage roller using the knob (**D**); turn clockwise to increase the braking effect.
5. Close the door and press the reset button.
6. Press the key (**E**) to return to the main page and to set up the machine.



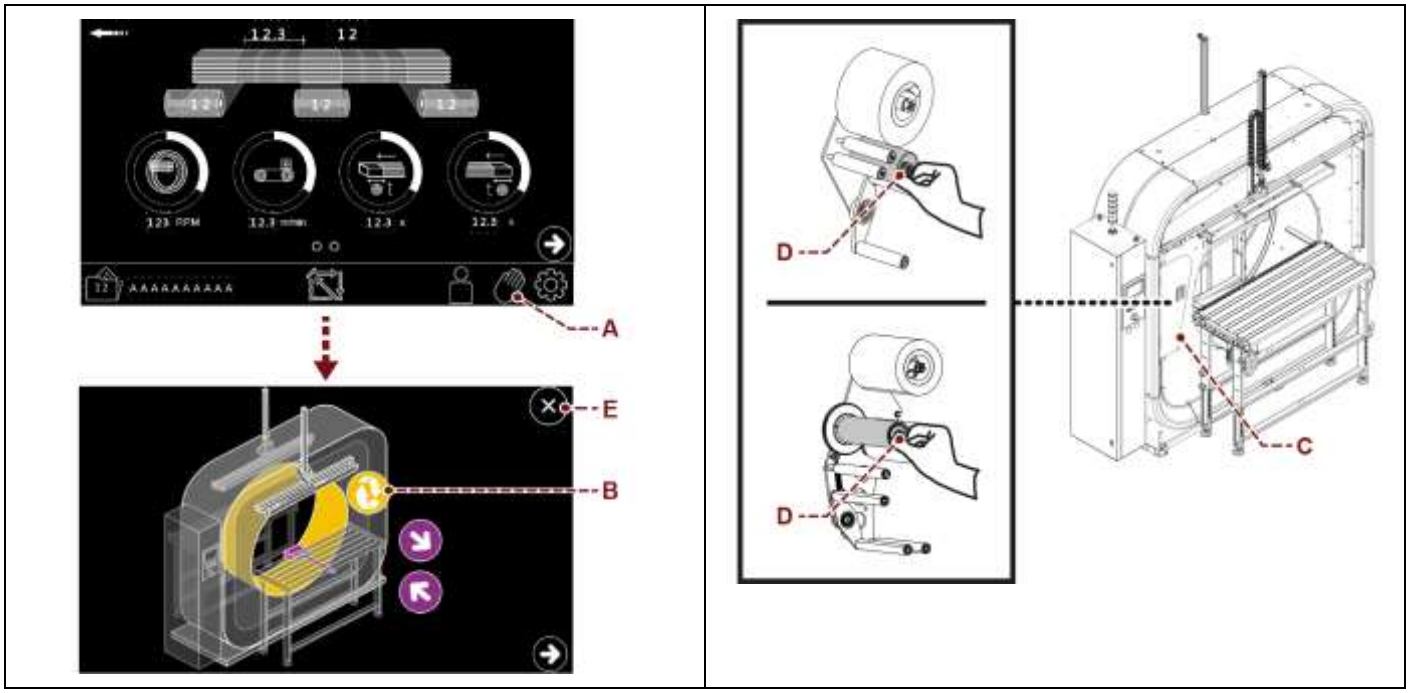


5.7. WRAPPING TENSION ADJUSTMENT

Proceed as follows:

1. Display the main page.
2. Touch the key (**A**) to access the manual movements (see paragraph “Description of control panel” - “Description of control panel manual controls”).
3. Touch the fifth wheel/reel change key (**B**) and hold it until the reel holder is in front of the door (**C**).
4. Open the door (**C**) to access the clutch roller adjustment.
5. Use knob (**D**) 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” (**E**) 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

The figure shows machine main controls and the list includes their description and function.

A) **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.

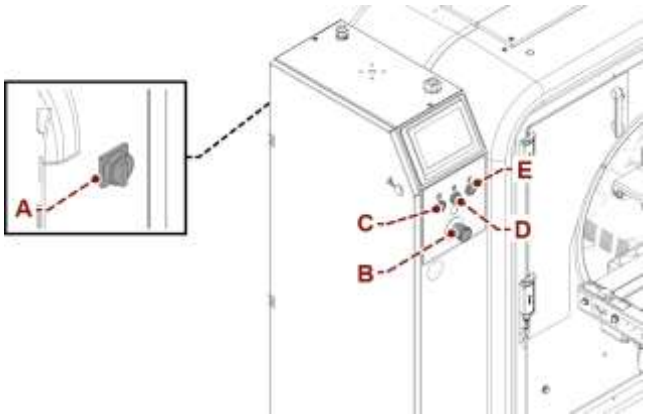
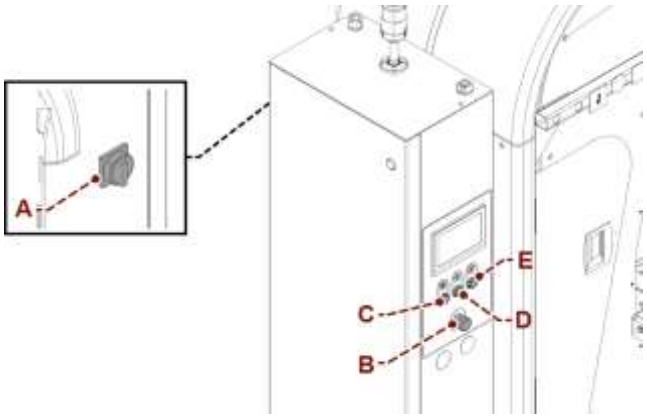
B) **Emergency button**
It immediately cuts off the power supply in emergency situations stopping the machine.

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

C) **Stop button**
Press the button to interrupt the automatic wrapping cycle.

D) **Start button**
Press the button to enable the automatic work cycle.

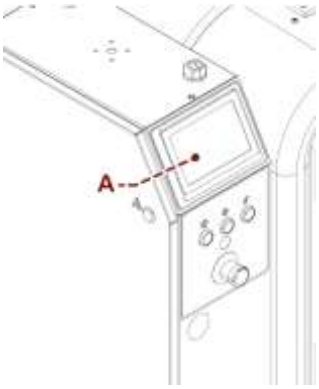
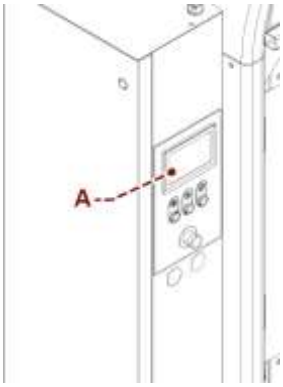
E) **Reset button**
Press the button to set up the machine.
Press to reset the machine before restarting it after an emergency stop or after a shut-down due to the disconnection of the power supply.

ORBIT R 5	ORBIT R 9 / ORBIT R 13
	

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 (**A**) 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.

ORBIT R 5	ORBIT R 9 / ORBIT R 13
	

6.3.1. USING THE PANEL

To use the panel, proceed as follows.

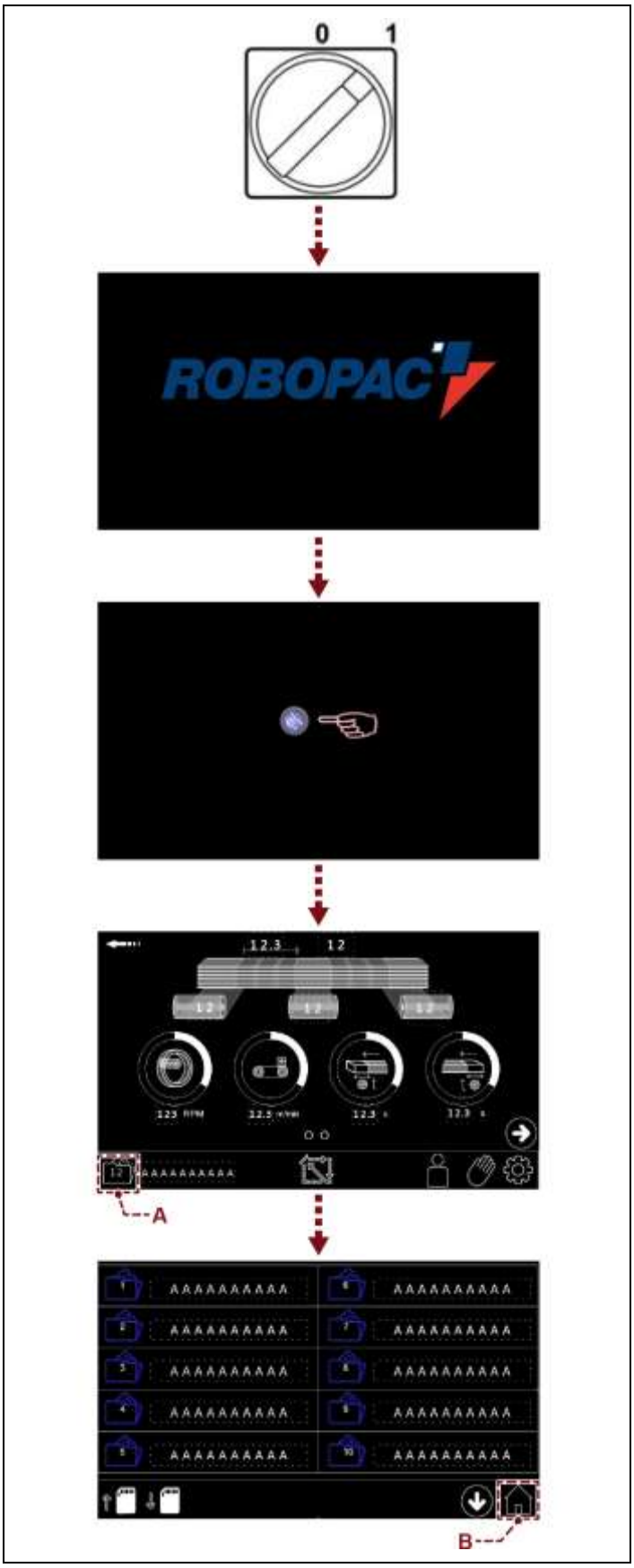
1. Turn the power supply switch to “ON”.
   Upon switching on the machine, the introduction page with the Manufacturer's logo is displayed.
2. A screen indicating to press the “Reset” key is displayed.
3. The machine is ready when the main page is displayed.
4. Press the “START” button on the control panel to start the work cycle and the preselected recipe.

To select another recipe, touch the key (**A**) to display the list of recipes.

1. Select the desired recipe by selecting the relevant number and press the button (**B**) to go back to the main page, thus confirming the recipe.

Important
To compose the recipe, see the paragraph “Cycle parameters setting”.

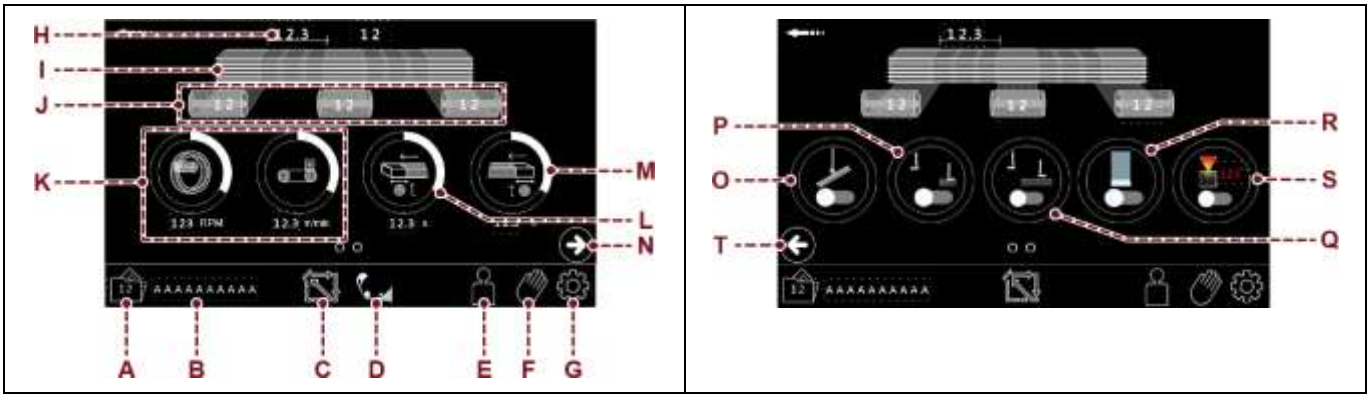
2. The machine is ready to run in automatic mode all the cycle parameters displayed on the main screen.
3. Press the “START” button on the control panel to start the work cycle.



6.3.2. MAIN PAGE

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

- **A)** Button to access the recipe list.
- **B)** It displays the name of the recipe in use.
- **C)** Cycle reset key.
- **D)** Key to insert the film in the clamp
- **E)** It displays the enabled operator.
- **F)** Key to access manual movements.
- **G)** Operator panel setting key.
- **H)** Key to access the setting of the product wrapping time.
- **I)** Main display, shows the wrapping cycle selected in the recipe.
- **J)** Key to access the wrapping number setting.
- **K)** Keys to access the setting of the speed of the rotary ring and the conveyors.
- **L)** Key to access the setting of the wrapping start time.
- **M)** Key to access the setting of the product wrapping end time.
- **N)** Key to access the following page
- **O)** On-off key that enables/disables the downstroke of the pressers during the cycle (Optional).
- **P)** On-off key that enables/disables the advance of the outfeed presser downstroke (Optional).
- **Q)** On-off key that enables/disables the “head or tail pieces” cycle
- **R)** On-off key that enables/disables the film breakage control (Optional).
- **S)** On-off key that enables/disables the heat sealing and, if enabled, the heat sealing allows setting the sealing time (Optional).
- **T)** Key to access the previous page.



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.

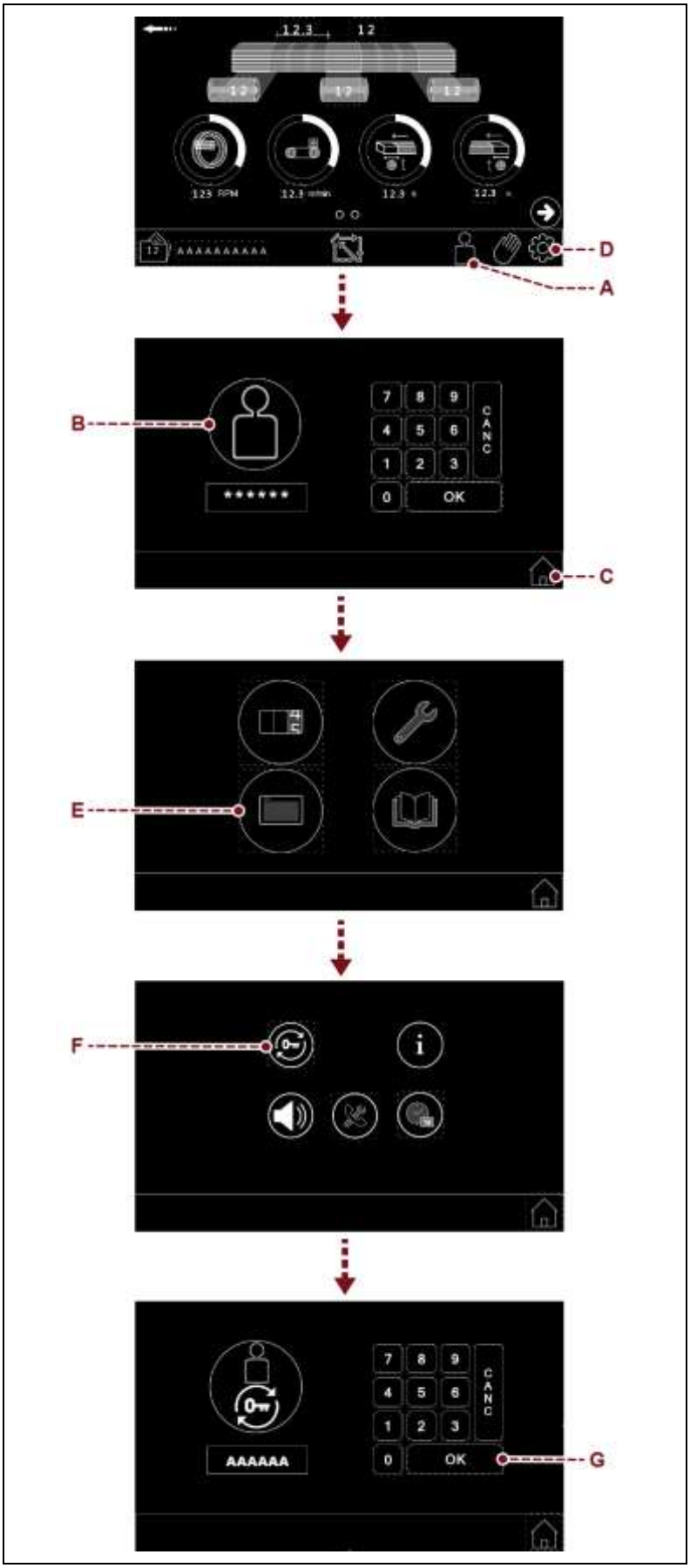
Operator change

Access the main page and:

1. Touch the key (**A**) to display the operator change page.
2. Touch the (**B**) key to change the reference operator.
3. Once the operator has been changed and confirmed, in the main page, the icon (**A**) 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 key (**D**) to display the setting page.
3. Touch the key (**E**) to display the H.M.I. setting page.
4. Touch the key (**F**) to display the password change page.
5. Enter the new password and confirm it by touching the key (**G**).



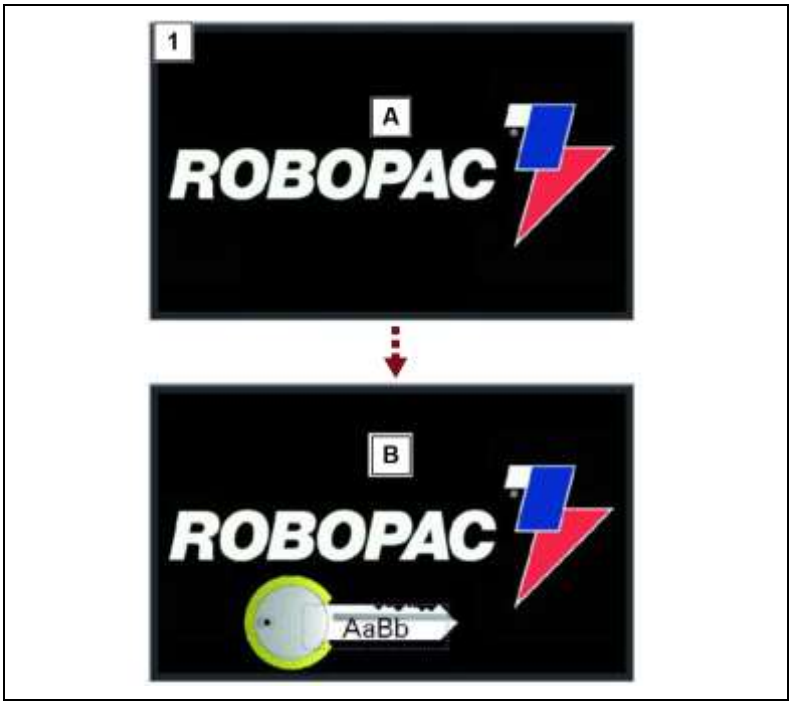
6.3.4. DEFAULT PASSWORD RESET

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

Upon starting the software, when page (**A**) is displayed, touch the corner **1** of the display.

Important
Carry out the operation quickly; the page will be shown for **5 seconds.**

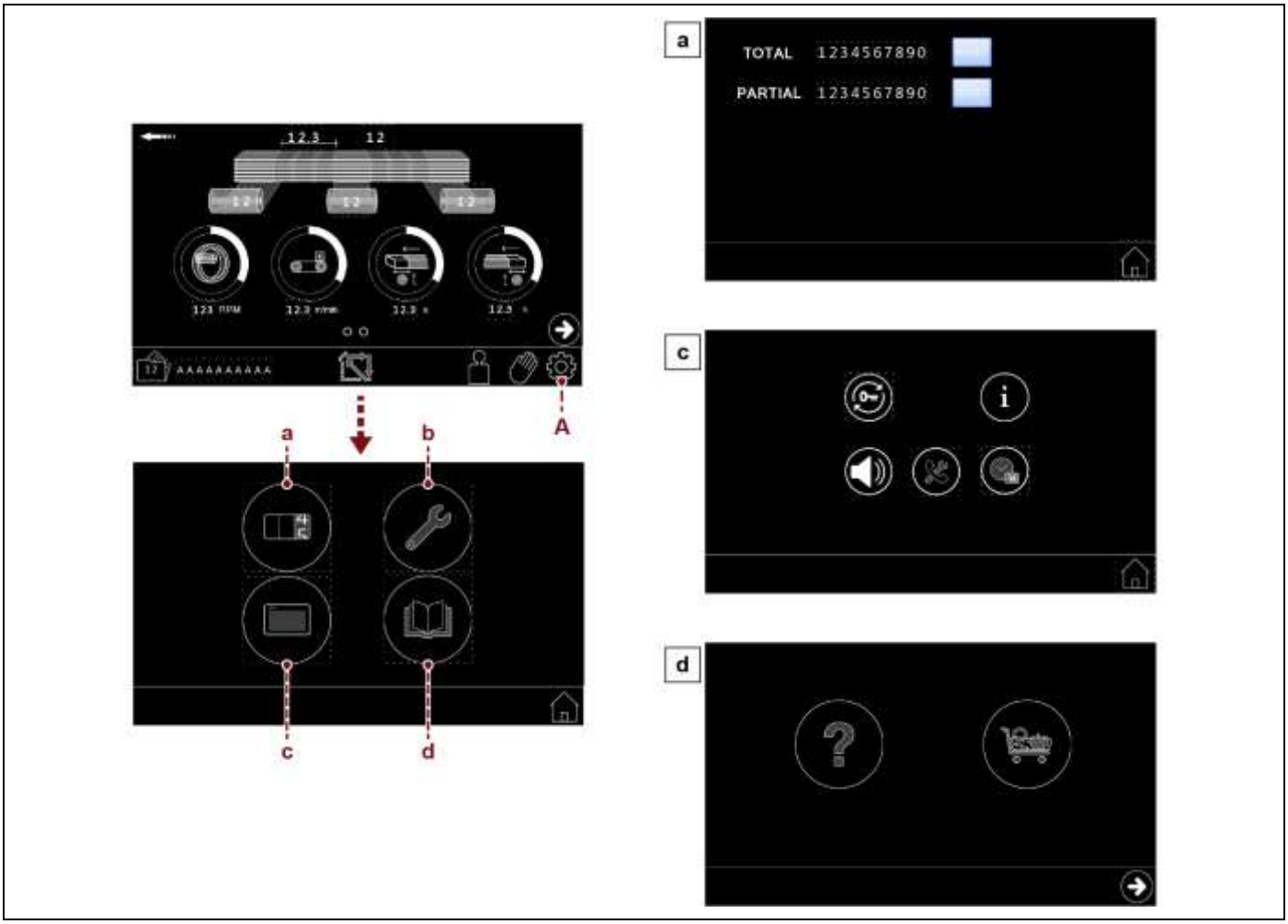
The operation has been completed successfully if the page (**B**) containing the password is displayed.



6.3.5. GENERAL PARAMETER SETTINGS

From the main page, press the key (**A**) to access the "General parameters" page.

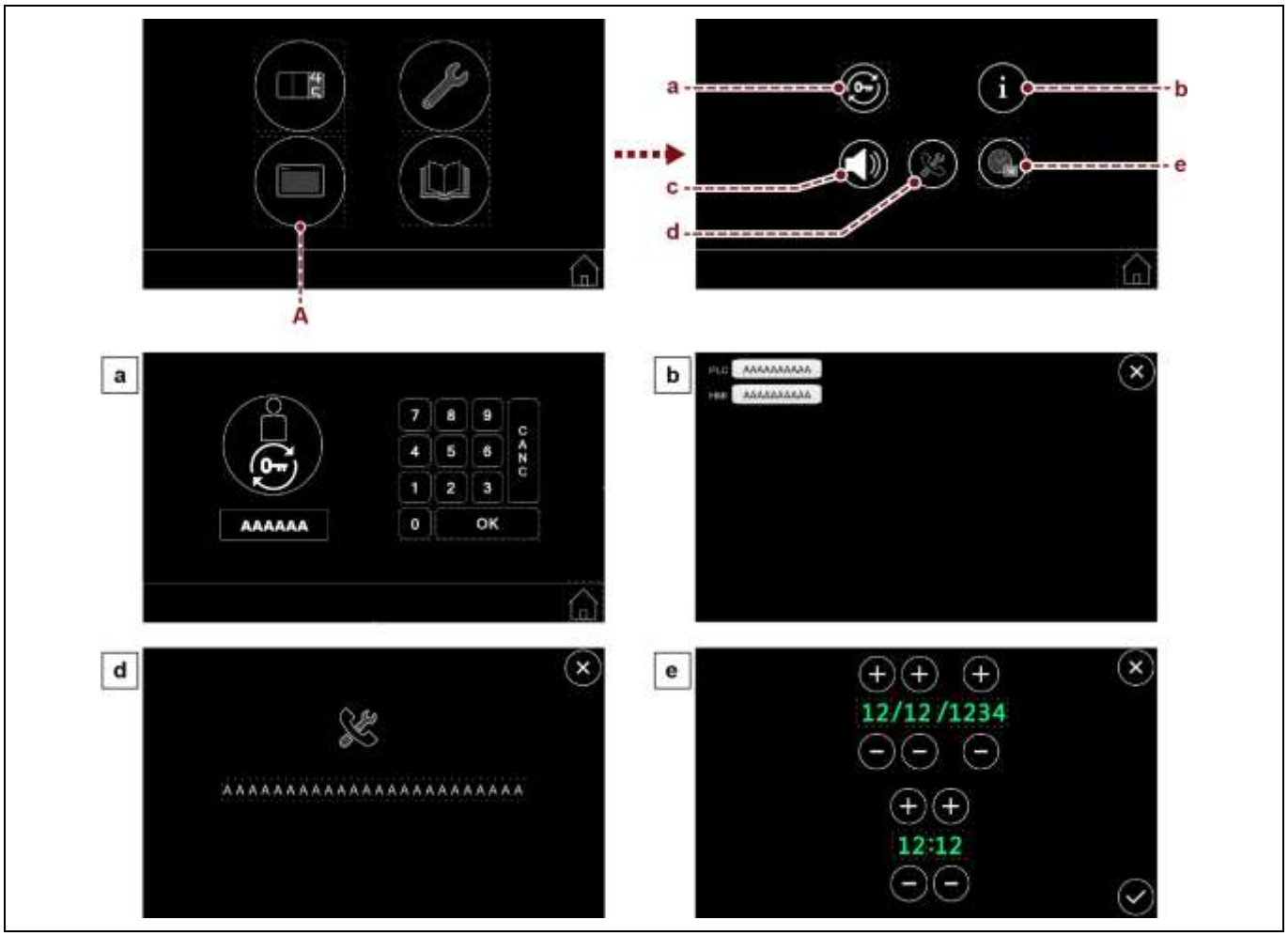
- **a)** Button: it is used to display the “Production counters” page.
- **b)** Button: it is used to access the “Machine internal parameters” page.
- **c)** Button: it is used to display the “H.M.I. settings” page.
- **d)** Button: it is used to display the “Manuals” page.



6.3.6. “HMI SETTINGS” PAGE

The page displays the controls to customise the user interface operating mode.
To access the page, press the button (A) in the settings page.

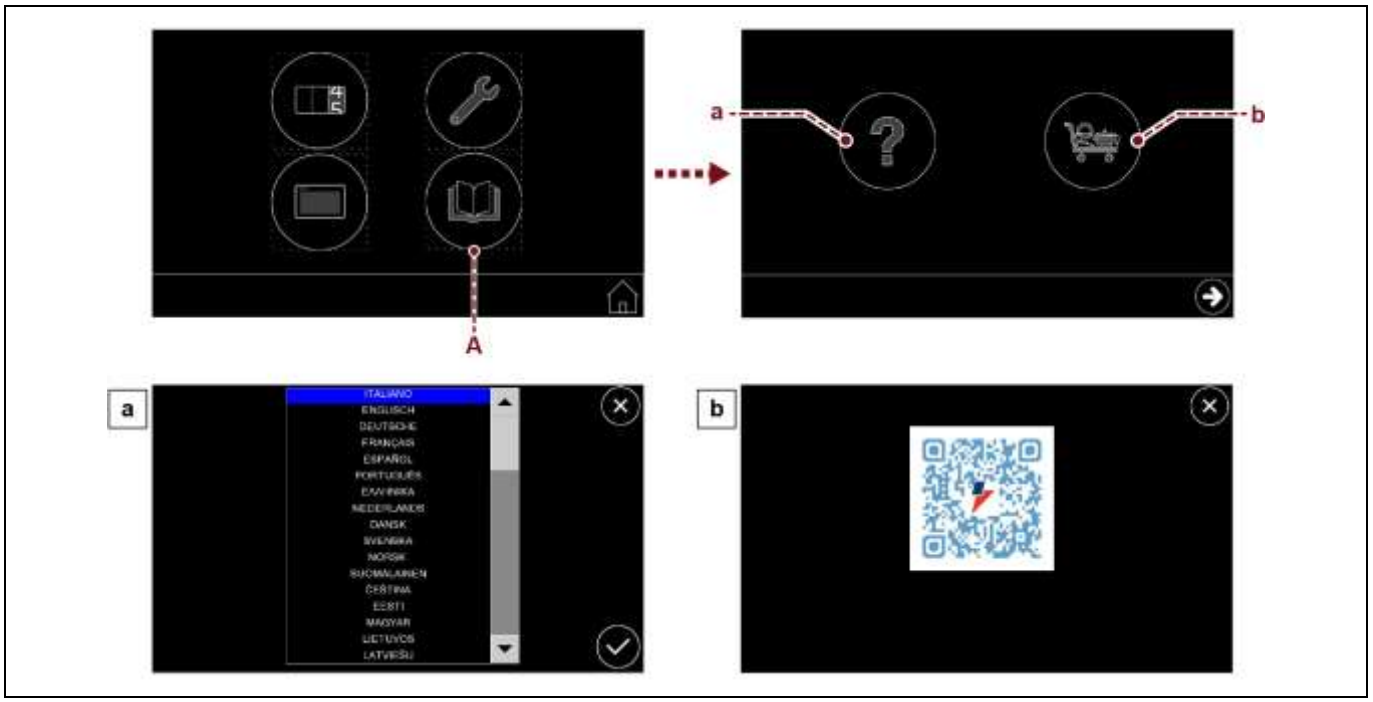
- **a)** Button: it is used to display the “change password” page .
  The function is active only if the system is accessed by a “machine manager” user.
- **b)** Button: it is used to display the page with the software version.
- **c)** Button: it is used to enable and disable the display acoustic signal.
- **d)** Button: it is used to display the telephone number of the dealer.
- **e)** Button: it is used to display the page for setting date and time.



6.3.7. “MANUALS” PAGE

The page allows access to the user manual and the machine spare parts catalogue.
To access the page, press the button (**A**) in the settings page.

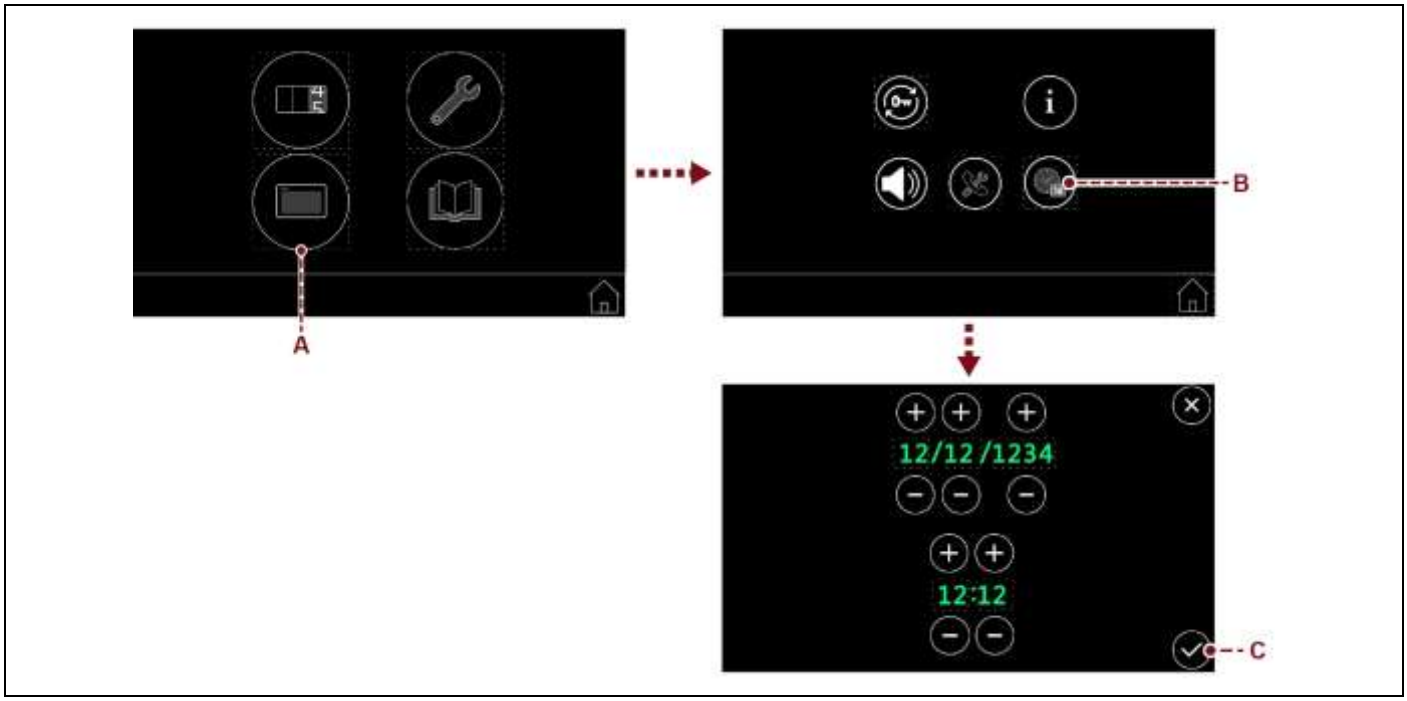
a) Button: it is used to consult the translation of the machine manual.
b) Button: it is used to access the QR to display the spare parts catalogue.



6.3.8. DATE AND TIME SETTING

The page allows setting the date and time of the machine.
To access the page, proceed as follows.

1. Press the button (**A**) in the settings page.
2. Press the button (**B**) to display the date and time setting page.
3. Use the "**+**" and "**-**" buttons to set the various data.
4. Confirm the data by pressing the button (**C**).

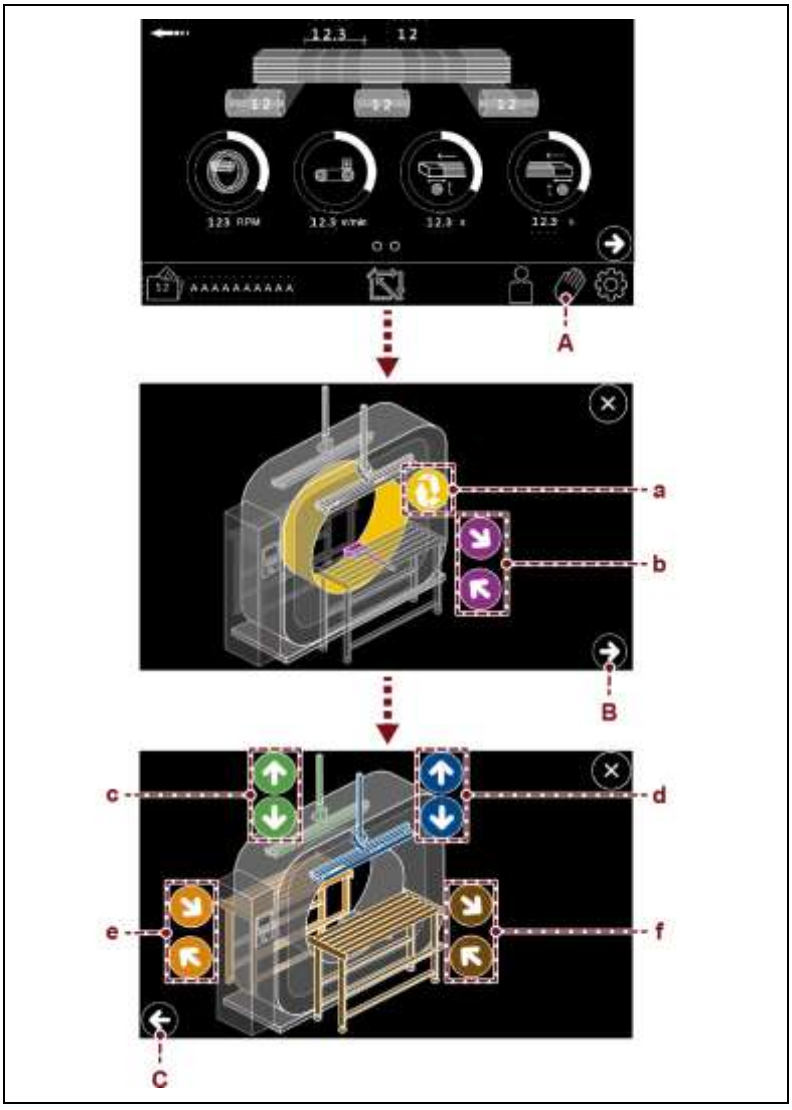


6.3.9. DESCRIPTION OF CONTROL PANEL MANUAL CONTROLS

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.
Touch the button (**A**) from the main page to access the manual movements.
Each unit is associated with one or more buttons of the same colour. Press the button related to the unit you want to move.
Press the button (**B**) to access the following page.
Press the button (**C**) to access the previous page.

Below are the functions of the various buttons:

- **a)** Rotation of the slewing ring/reel change.
- **b)** Clamp exit/return.
- **c)** Outgoing product presser upstroke/downstroke.
- **d)** Incoming product presser upstroke/downstroke.
- **e)** Product outfeed conveyor forward/backward.
- **f)** Product infeed conveyor forward/backward.



6.4. SETTING MODIFICATION MODE

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

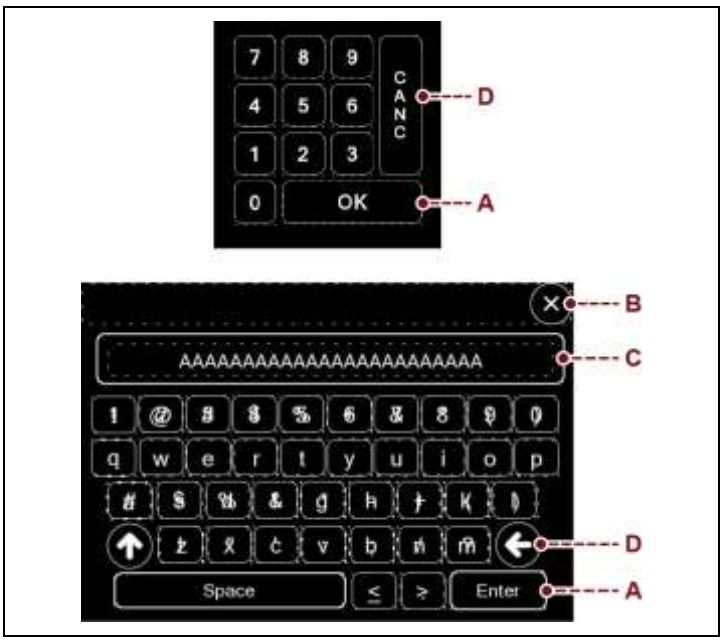
Important
The performed modifications are applied immediately and are stored automatically.

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” / “Ok” (**A**).
Press the “X” key (**B**) to quit the editing mode.

Below are the functions of the various keypad elements:

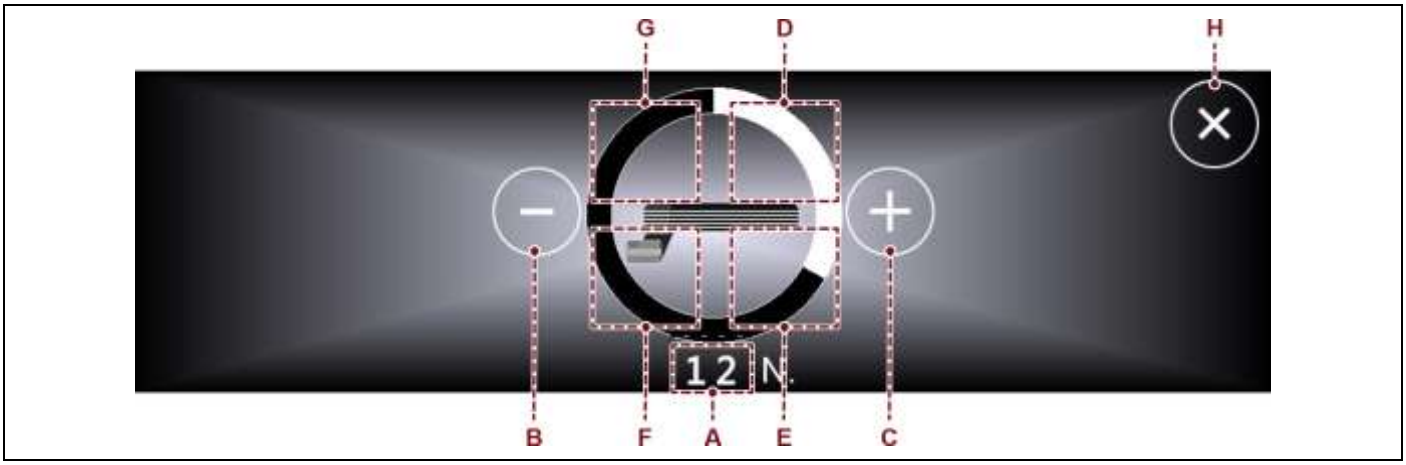
A) Key to confirm and save the text or value entered.
B) “X” button to quit the editing mode and to close the page.
C) Display showing the values and texts edited.
D) Button to delete one character at a time (starting from right).



6.4.2. PROGRESSIVE ADJUSTMENT OF VALUES

The page is displayed each time the editable or programmable functions are enabled.
Below are the functions of the various buttons:

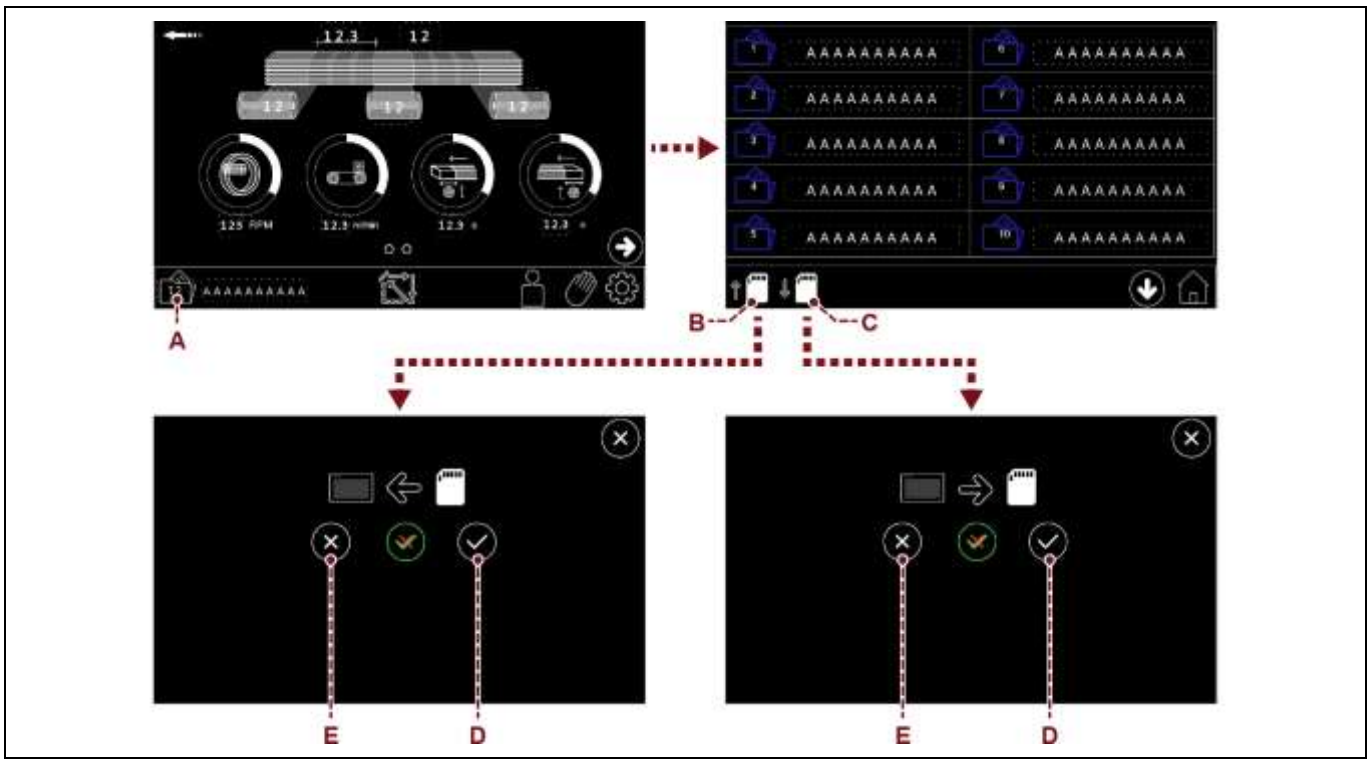
A) Value set for the function
B) Button: it is used to decrease the value (**A**).
C) Button: it is used to increase the value (**A**).
D) Short-cut: press on the area to set the value to 25%.
E) Short-cut: press on the area to set the value to 50%.
F) Short-cut: press on the area to set the value to 75%.
G) Short-cut: press on the area to set the value to 100%.
H) Button: it is used to exit the page.



6.4.3. “COPY RECIPES” FUNCTION

To copy the recipes, proceed as follows.

1. Press the button (**A**) from the main page to display the recipe list.
2. Press the key (**C**) to copy recipes from the control panel to an SD card.
3. Press the key (**B**) to copy recipes from an SD card to the control panel.
4. Press the key (**D**) to confirm the operation or the key (**E**) to cancel it.

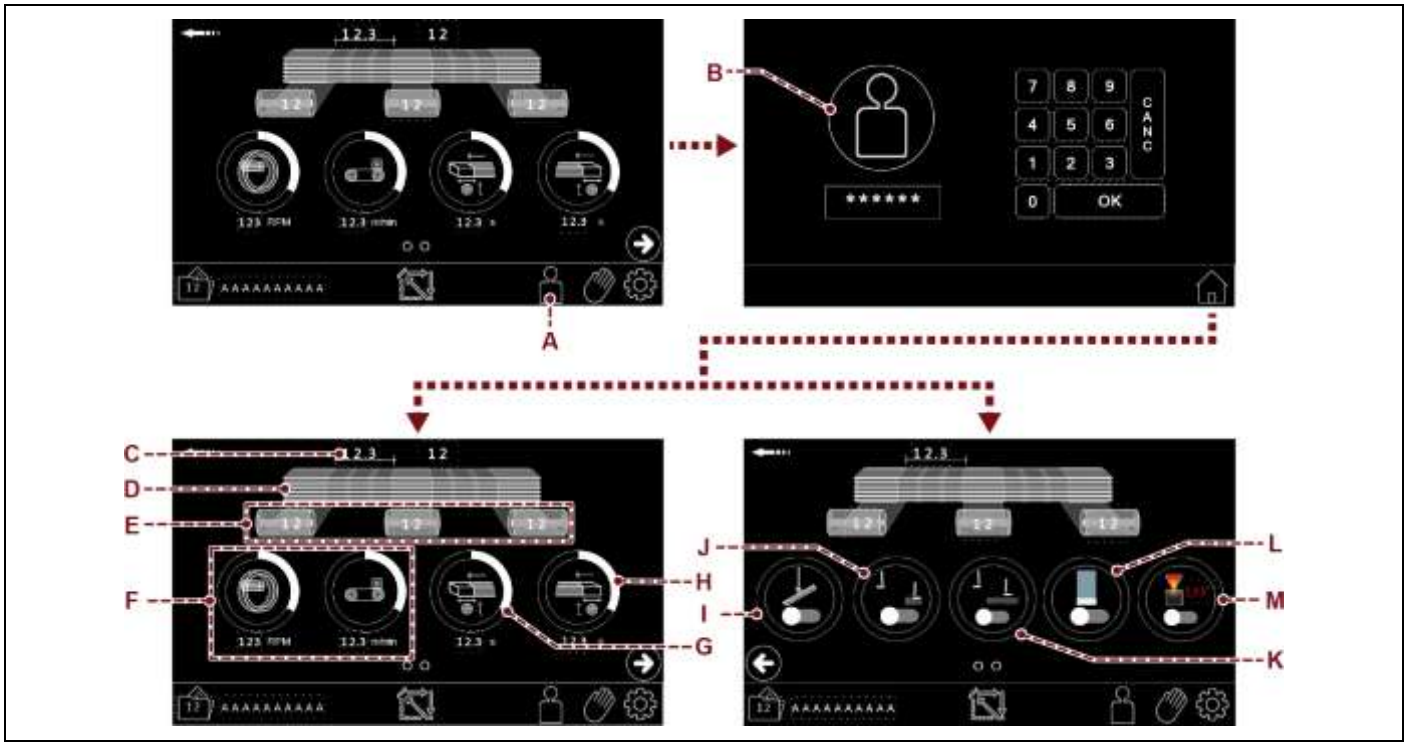


6.5. CYCLE PARAMETER SETTING (RECIPE COMPOSITION)

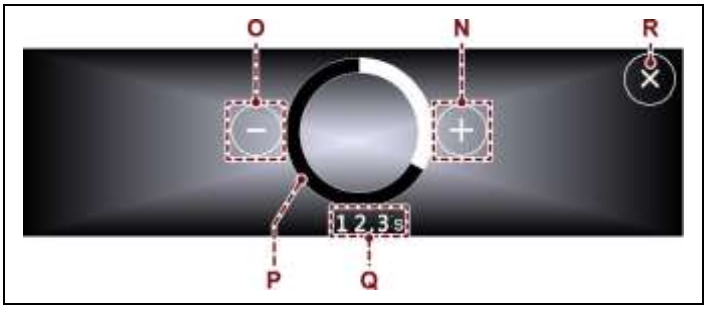
To set the cycle parameters, proceed as follows.

1. From the main page, press the key (**A**) to access the "General parameters" page.
2. Touch the key (**B**) and access with the password as machine manager (see “Operator and password change").
3. Touch the Home key to return to the main page.
4. Touch one of the keys (**C, D, E, F, G, H, I, J, K, L, M**) to display the page containing the required parameter.

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



5. Press the keys "**+**" (**N**) or "**-**" (**O**) to increase or decrease the parameter value.
   The graphic bar (**P**) represents the value set (**Q**) for admitted values (see “Setting modification mode”).
6. Touch the key (**R**) to return to the previously displayed page.



The parameters of the wrapping cycle are the following:

C) Product wrapping time (central bands).
It is the time that determines the position and quantity of central bands with respect to product head.

Important
Key (**C**) is present only with central band wrapping.

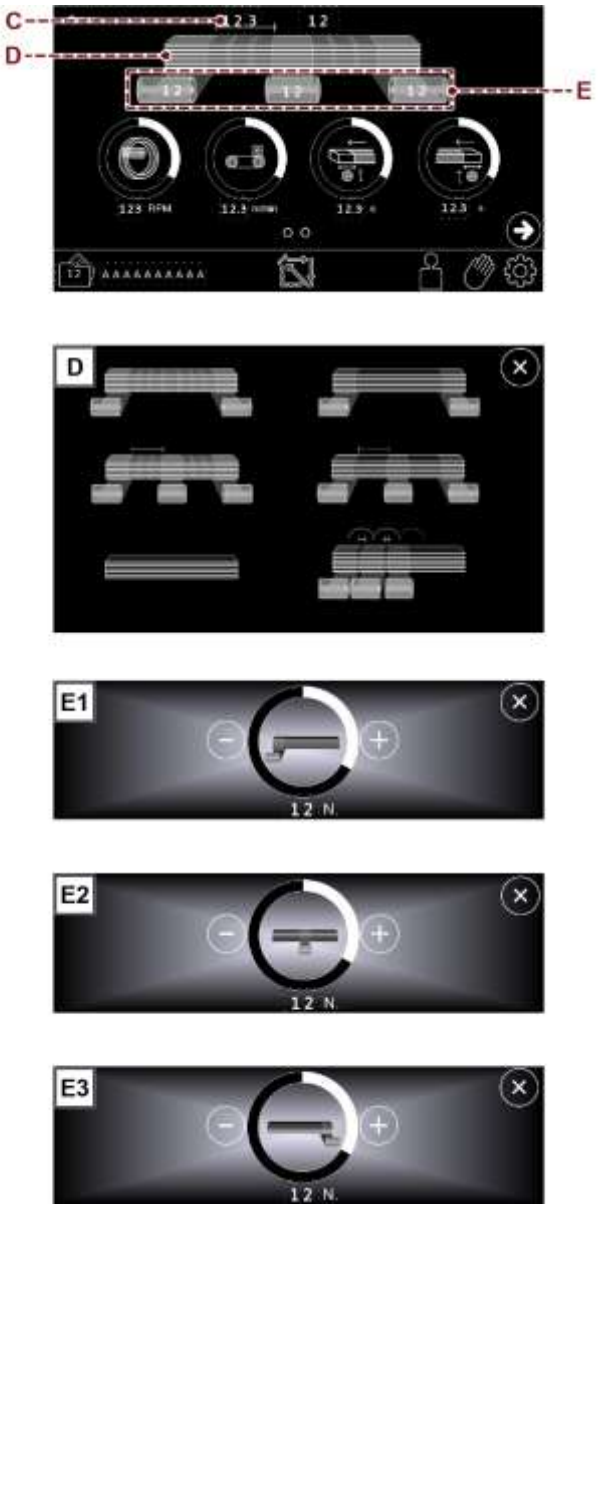
D) Product wrapping cycles.

- "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.

E1) Number of wrappings (varying from 1 to 99).
It allows you to set the number of additional wraps to be carried out at the beginning of the wrapping cycle (product head).

E2) Number of wrappings (varying from 1 to 99).
It allows you to set the number of additional wraps that must be carried out at the centre of the product.

E3) Number of wrappings (varying from 1 to 99).
It allows you to set the number of additional wraps that must be carried out at the end of the wrapping (product tail).

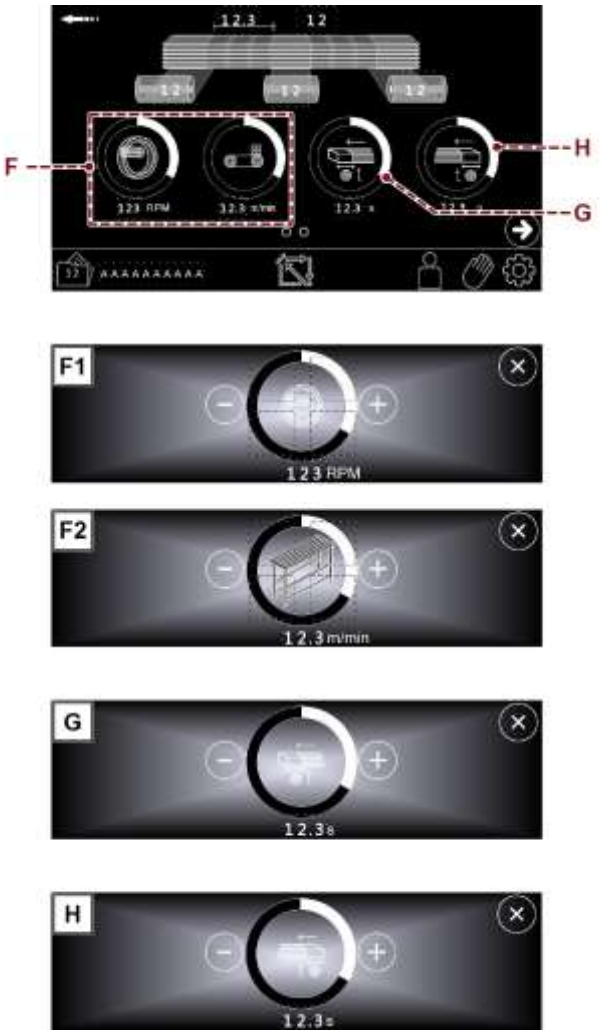


F) Rotary ring and conveyor speed function.

- *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.

G) Product wrapping start time (head).
It is the time that determines the wrapping start position with respect to product head.

H) Product wrapping end time (tail).
It is the time that determines the wrapping end position with respect to product tail.



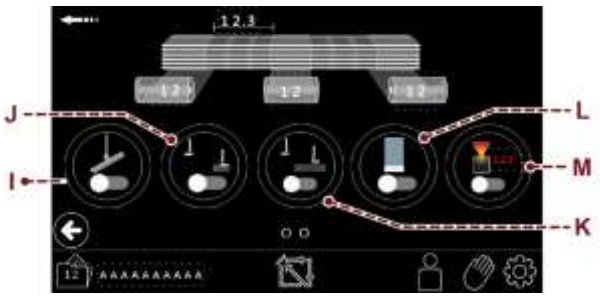
I) Key to enable/disable the pressers.
Press to enable the function, press again to disable.

J) 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.

K) Key to enable and disable the protruding parts cycle.
Press to enable this function when processing front or rear protruding parts.
Press again to disable.

L) Key to enable/disable the film breakage control.
Press to enable the function, press again to disable.

M) Key to enable/disable the heat sealing.
Press to enable the function, press again to disable.



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

To start the machine proceed as described below, performing the following checks:

- The inspection door must be closed.
- All safety devices must be in good conditions and efficient.
- The machine must be clean and in order.
- The compressed air supply must be open and pressure adjusted to 6 bar.
- The film reel must be sufficiently full to guarantee the processing (see “Reel replacement”).
- The film must be blocked in the clamp (see “Film insertion in the clamp”).
- The rotary ring must be synchronised (see “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.

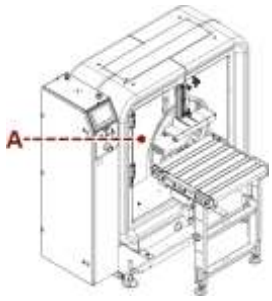
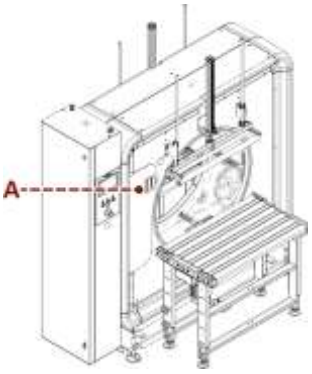
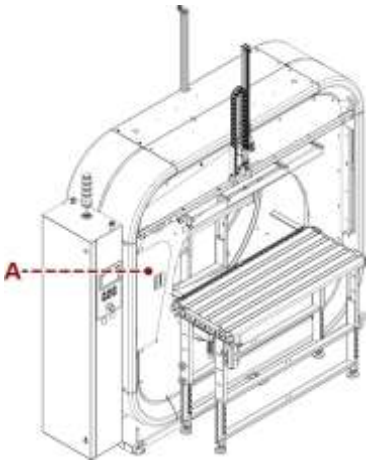
Then, processing can be started.

Reel replacement

To replace the reel, proceed as follows:

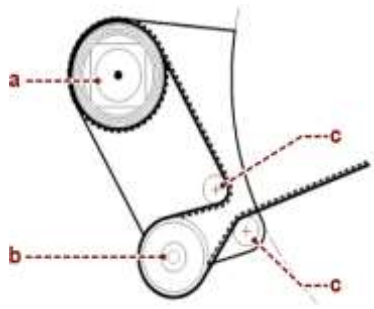
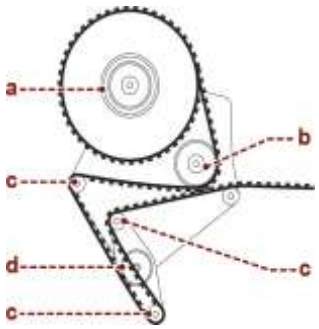
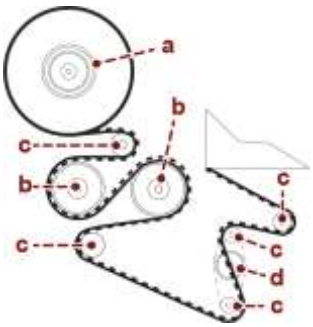
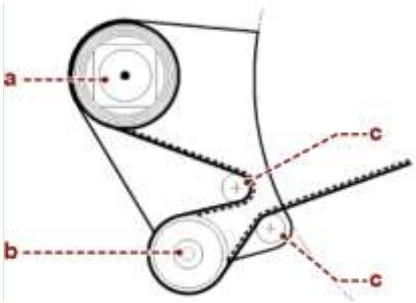
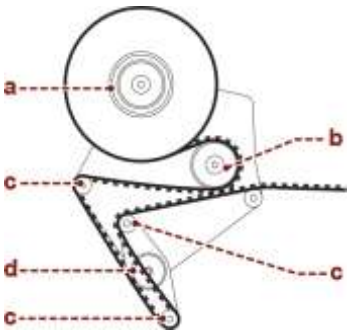
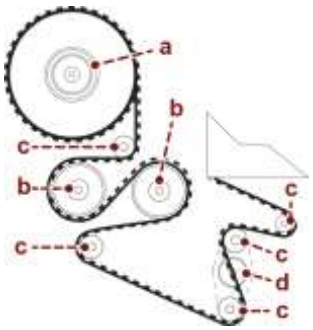
1. Open the door (**A**) to access the reel.

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

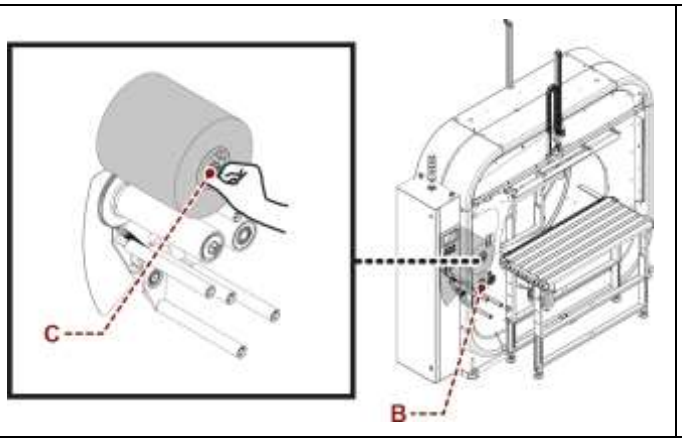
ORBIT R 5	ORBIT R 9	ORBIT R 13
		

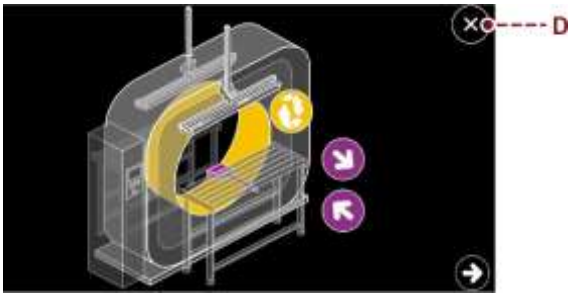
2. Insert the reel on the roller following the diagram in the figure.
   The hatching shows the adhesive side (internal or external) of the film.
   Unwind the film out of the protection ring.

   a) Reel carriage roller
   b) Roller with clutch
   c) Idler rollers
   d) Dancer roller

Internal adhesive		
		
External adhesive		
		

3. Adjust the clutch on the reel carriage roller using the knob (**B**); turn clockwise to increase the braking effect.
4. Close the door (**C**) and press the “Reset” button.
5. Press the button (**D**) to return to the main page and to set up the machine.



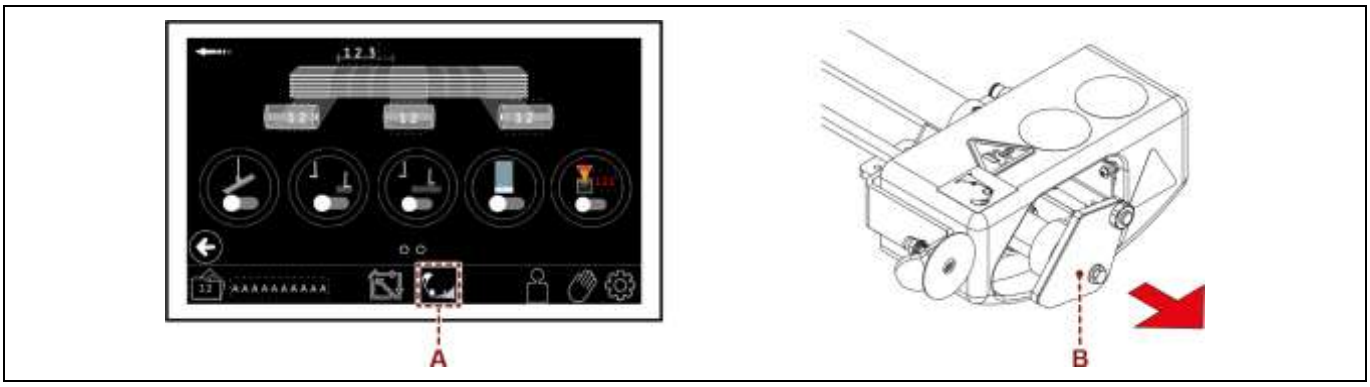


Film insertion in the clamp

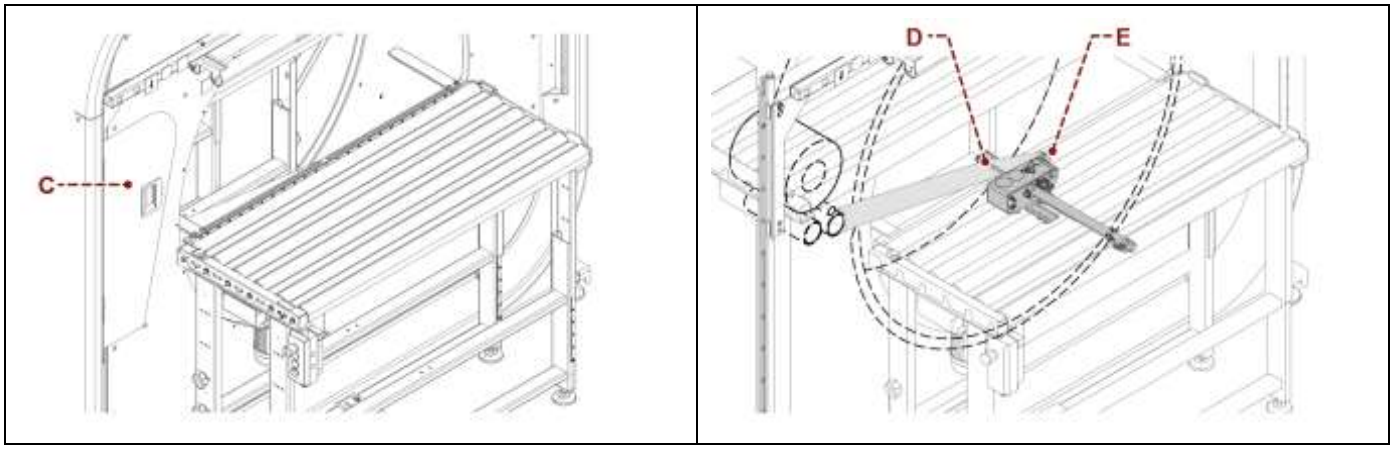
To insert the film in the clamp, proceed as follows:

1. Display the main page.
2. Check that the rotary ring is synchronised.
3. Press the button (**A**) to make the clamp (**B**) come out completely.

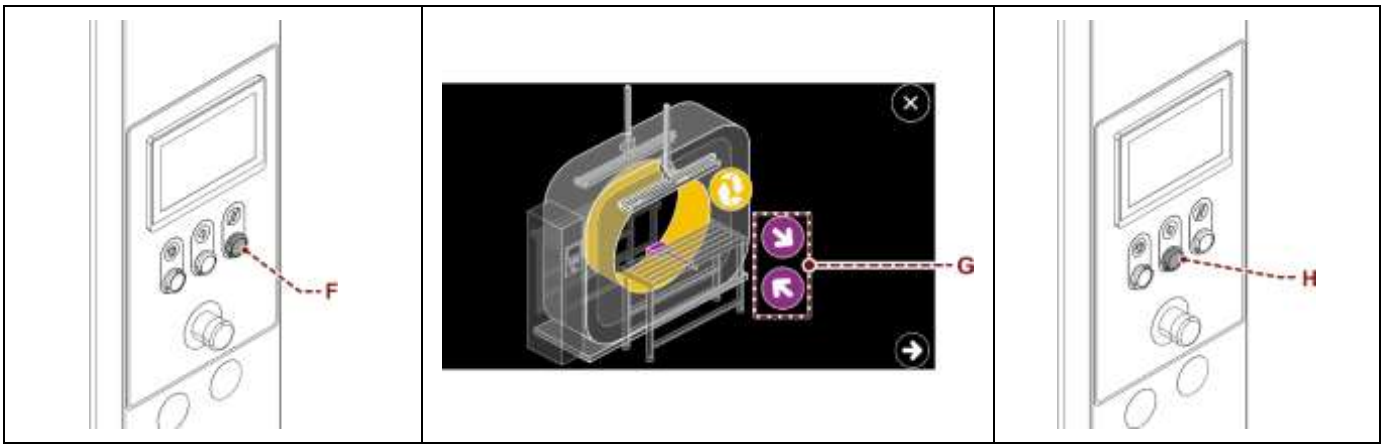
Danger - warning
Do not expose your hands to the cutting area.



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



7. Press the “Reset” button (**F**).
8. Press the key (**G**) to retract the clamp, cutting and blocking the film.
9. By pressing the “Cycle start” key (**H**) 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.

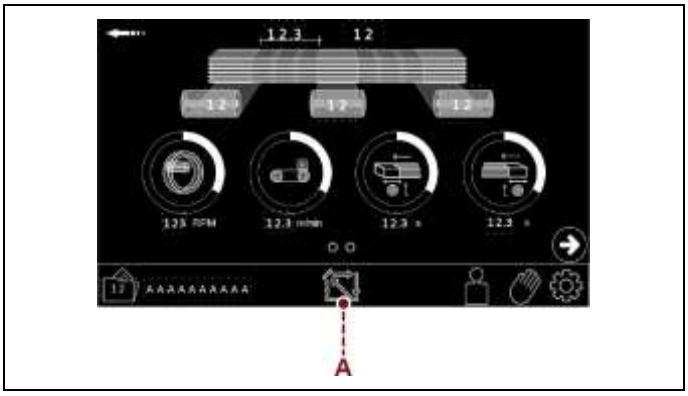
Stop due to blackout

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 button (**A**) to synchronise the various parts (rotary ring, pressers).
2. If necessary, remove the product to be wrapped or partially wrapped from the machine.
3. If necessary, block the film in the clamp.

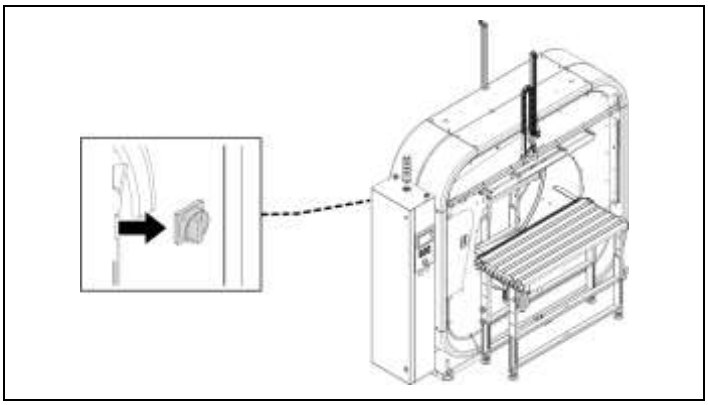
The machine is ready to start a new processing cycle.



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.

To stop the machine, 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 button (**A**) to synchronise 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.

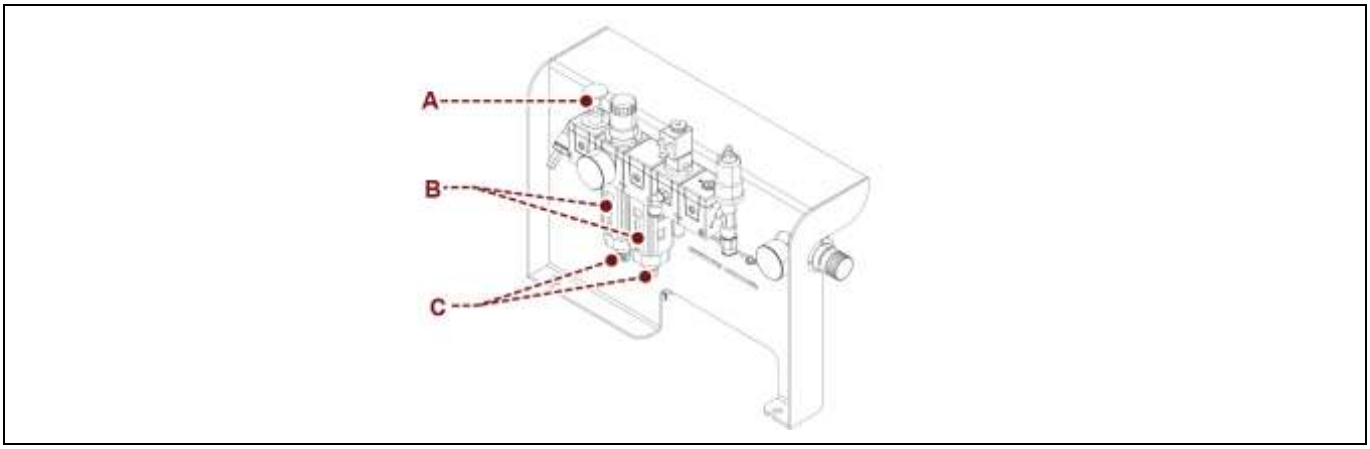
Maintenance interval table

Frequency	Component	Type of intervention	Intervention mode	Reference
Every 40 hours	Rotary ring support wheels	General check	Clean.	-
		Eccentric adjustment check	Check the correct preload.	See par. 7.6
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 rollers and drive belts for wear and replace them, if necessary. Contact the assistance service.	-
	Safety devices	Efficiency check	Replace the damaged components.	-
	Reducer filter	Condensation check	Drain condensation.	See “Condensate drainage”.
		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

To drain the condensate, proceed as follows.

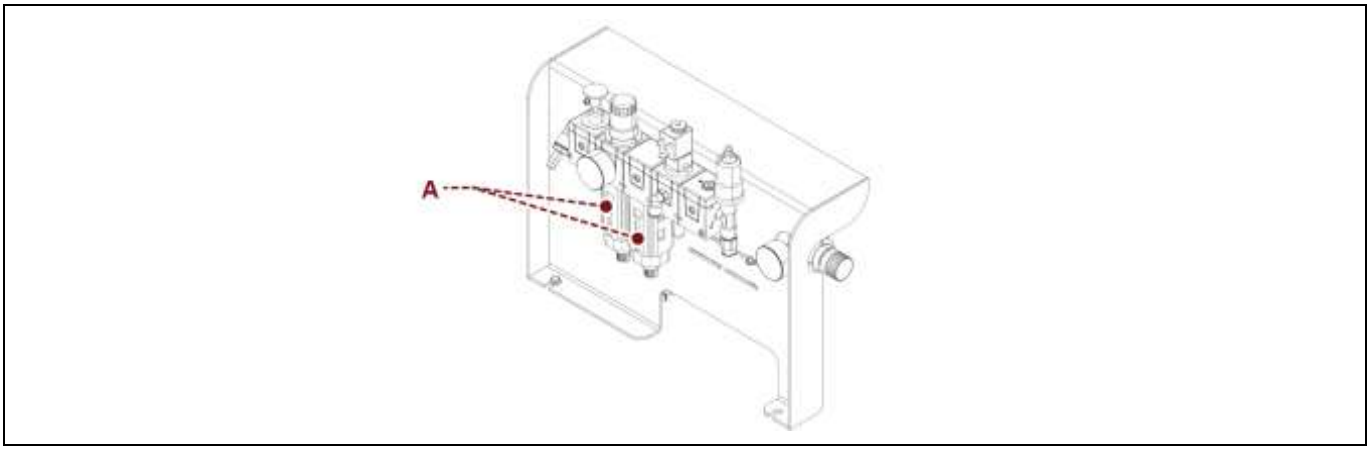
1. Close the tap (**A**) and check the level of condensation in the container (**B**).
2. Unscrew, if necessary, the valve (**C**) to drain the condensation.
3. Push the valve (**C**) upwards until all condensation is let out.
4. Tighten the valve (**C**) again.



7.4. AIR FILTER CLEANING

To drain the condensate, proceed as follows.

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**).



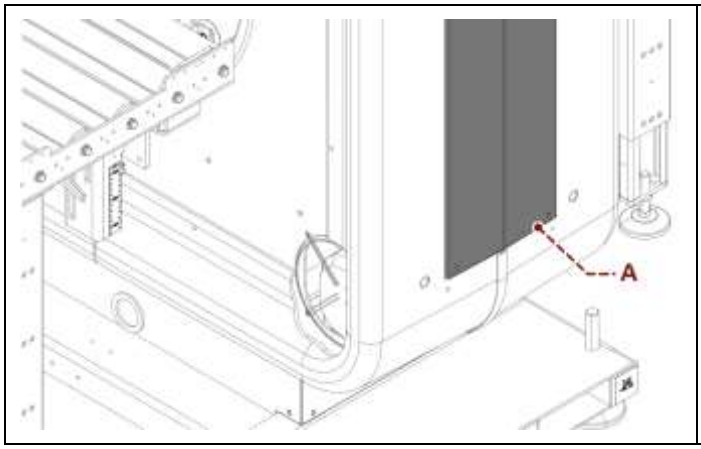
7.5. ROTARY RING HANDLING

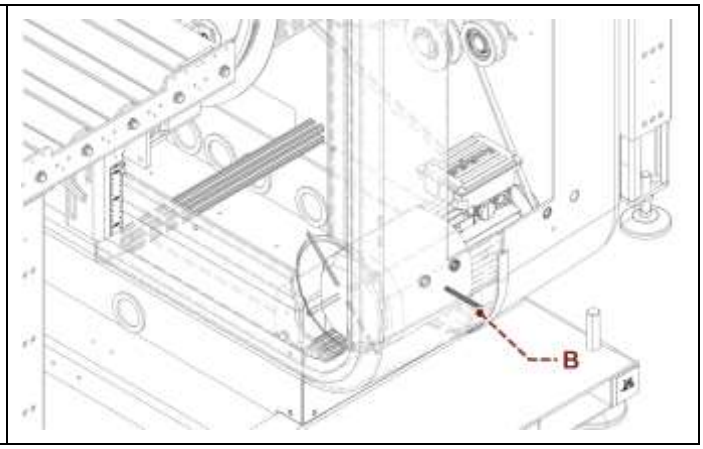
The ring will always stop with reel synchronised; if manual reel holder unit rotation is necessary proceed as follows.

ORBIT R 5

1. Switch the machine off.
2. Remove the panel (**A**).
3. Pull the motor brake lever (**B**) and keep it pulled, releasing the lever will reactivate the motor.
4. Move the rotary ring as required.
5. Release the lever (**B**).
6. Refit the panel (**A**).

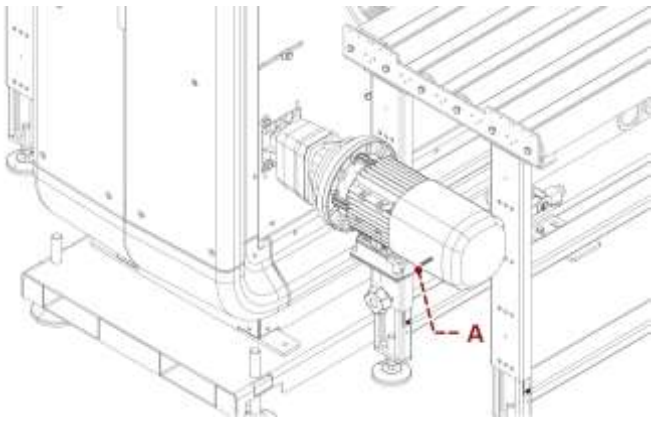
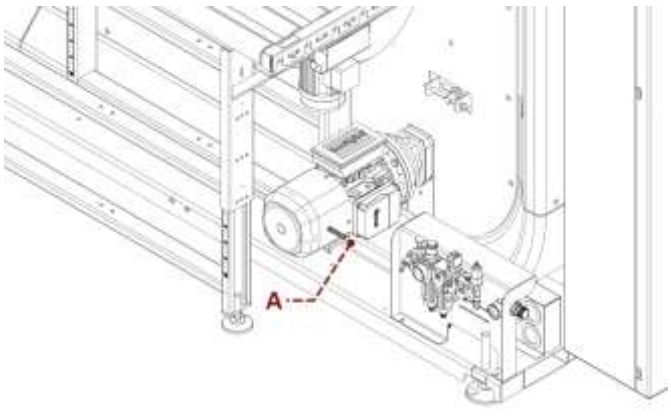
Important
The ORBIT R 5 - 125 model does not feature the motor brake, therefore it is not necessary to perform the rotary ring handling procedure.





ORBIT R 9 / ORBIT R 13

1. Switch the machine off.
2. Pull the motor brake lever (**A**) and keep it pulled, releasing the lever will reactivate the motor.
3. Move the rotary ring as required.
4. Release the lever (**A**).

ORBIT R 9	ORBIT R 13
	

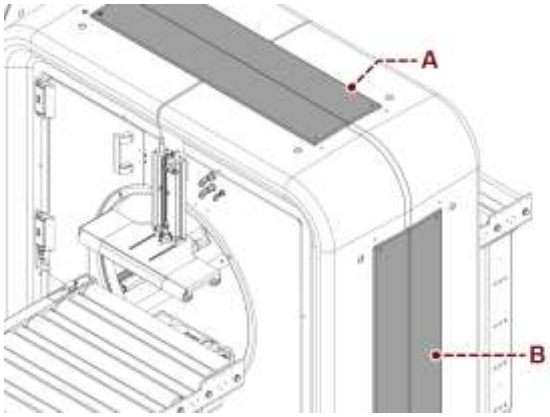
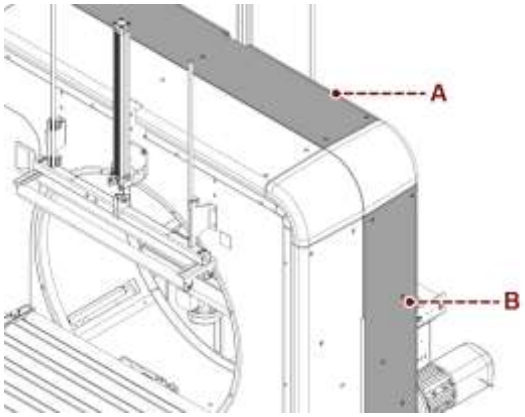
7.6. ROTARY RING SUPPORT WHEEL ECCENTRIC ADJUSTMENT

To adjust the rotary ring belt, proceed as follows.

ORBIT R 5 / ORBIT R 9

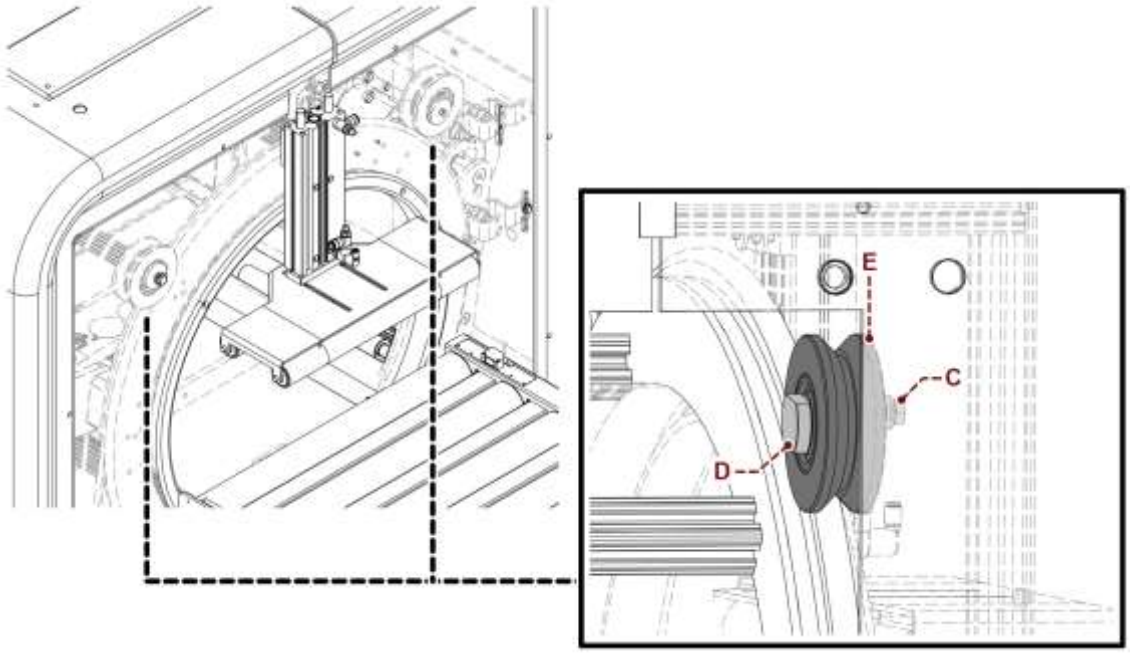
1. Remove all the fastening screws of upper (**A**) and side (**B**) guards.
2. Remove the guards (**A**) and (**B**) to access the upper and side wheels mounted on the eccentric pins.

Important
The two lower wheels on which the rotary ring rests are mounted on fixed pins and do not need any adjustment.

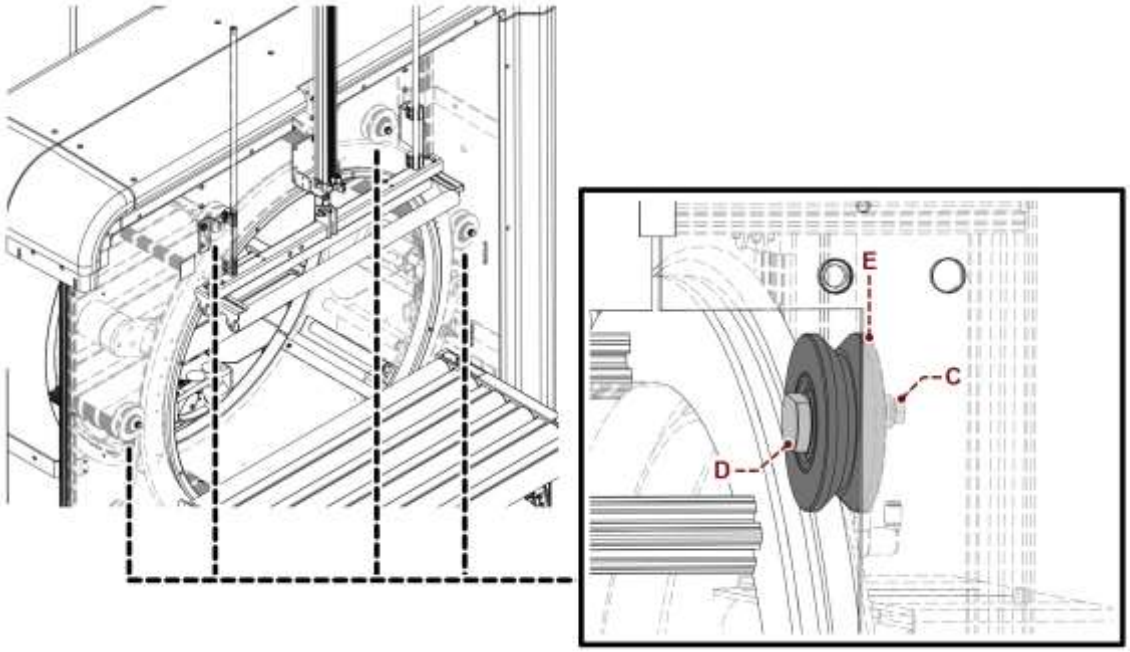
ORBIT R 5	ORBIT R 9
	

3. Loosen the screw (**C**) tightening the eccentric pins (**D**).
4. Work on the pin (**D**) base with an hex wrench of suitable dimensions to turn the pin and bring the wheel (**E**) against the rotary ring.
5. At the end of the adjustment, tighten the screw (**C**) to lock the pin (**D**) in the correct position.

ORBIT R 5



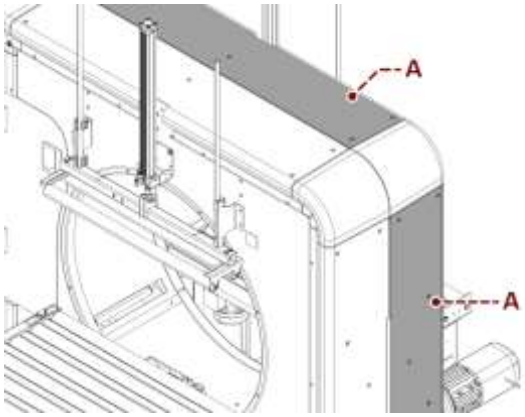
ORBIT R 9



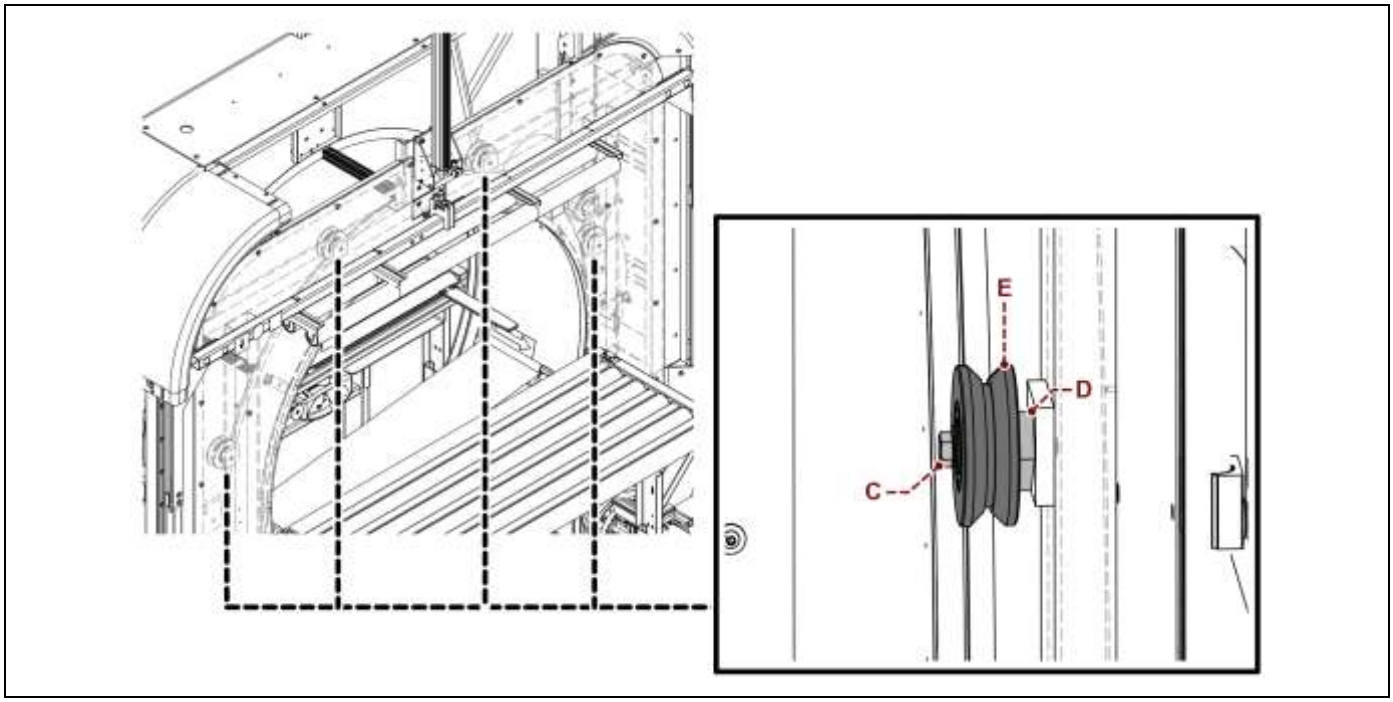
ORBIT R 13

1. Remove all the fastening screws of upper (**A**) and side (**B**) guards.
2. Remove the guards (**A**) and (**B**) to access the upper and side wheels mounted on the eccentric pins.

Important
The two lower wheels on which the rotary ring rests are mounted on fixed pins and do not need any adjustment.



3. Loosen the screw (**C**) tightening the eccentric pins (**D**).
4. Work on the pin (**D**) base with an hex wrench of suitable dimensions to turn the pin and bring the wheel (**E**) against the rotary ring.
5. At the end of the adjustment, tighten the screw (**C**) to lock the pin (**D**) in the correct position.



7.7. ROTARY RING BELT ADJUSTMENT

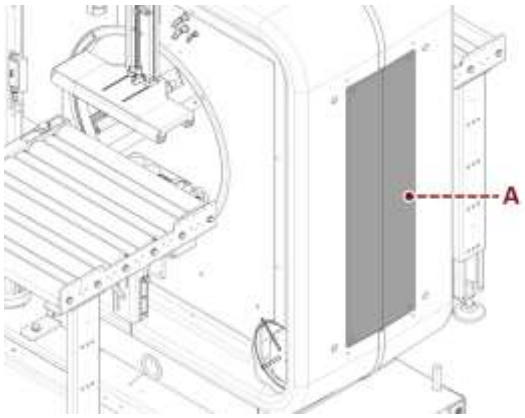
To adjust the rotary ring belt, proceed as follows.

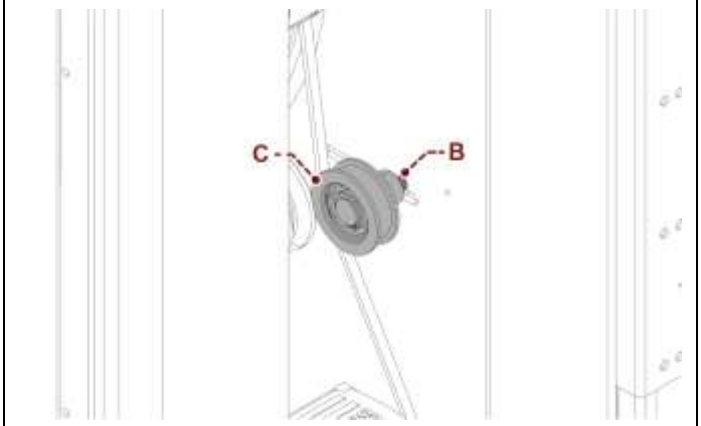
ORBIT R 5 / ORBIT R 9

1. Remove guard (**A**).
2. Loosen screw (**B**)
3. Press on the pin (**C**) in the required direction to increase or decrease the belt tension.
4. At the end of the adjustment, tighten the screw (**A**) to lock the pin (**B**) in the correct position

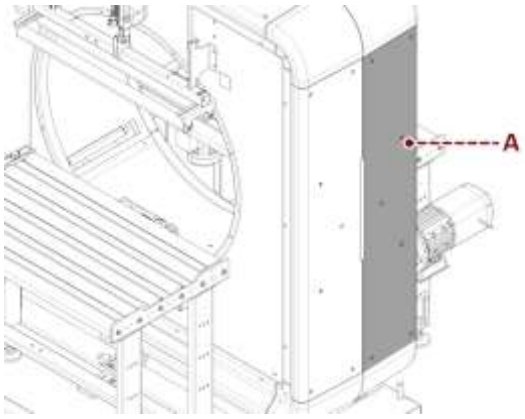
Important
To avoid transmission overload, do not excessively tighten the belt.

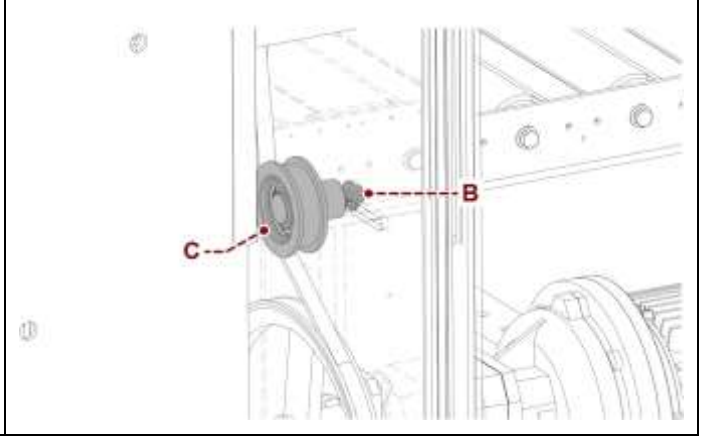
ORBIT R 5





ORBIT R 9





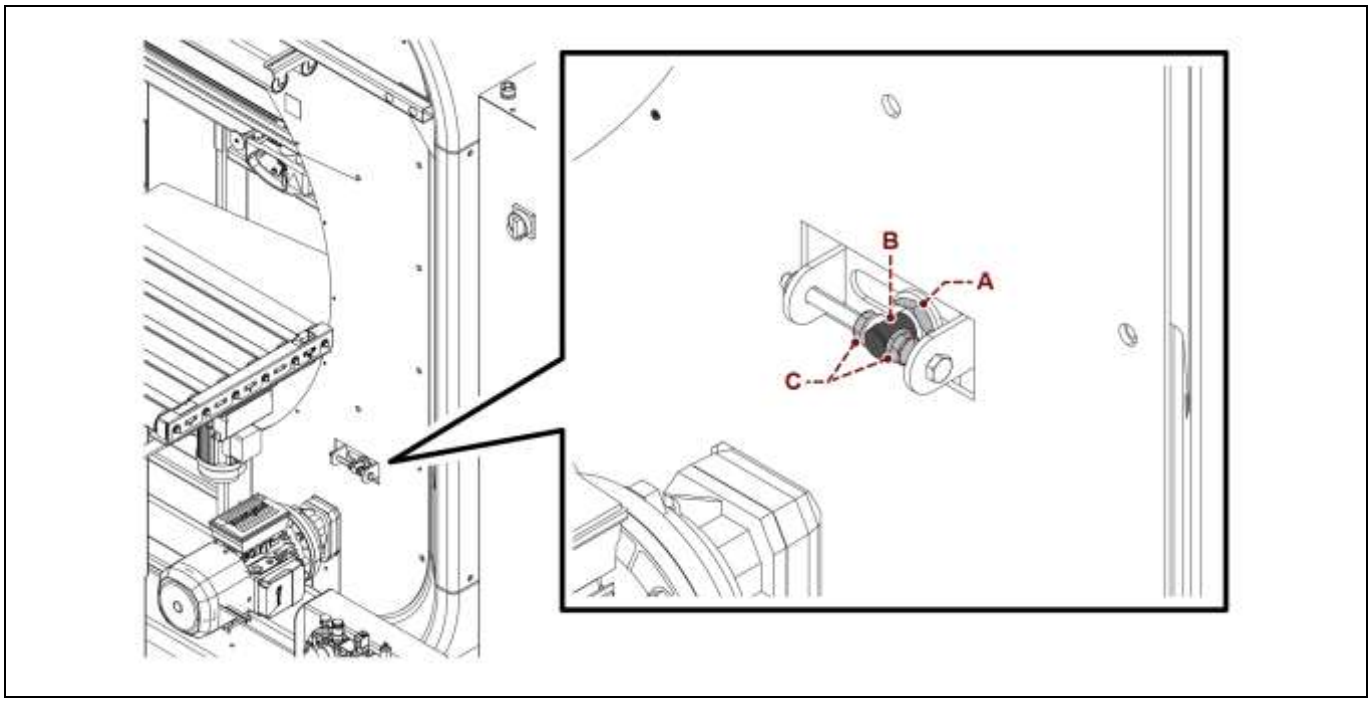
ORBIT R 13

1. Loosen the nut (**A**) tightening the pin (**B**).
2. Adjust nuts (**C**) to move the pin (**B**) in the required direction.

Important
Move the pin (**B**) to the left to increase the belt tension, move the pin (**B**) to the right to decrease the belt tension.

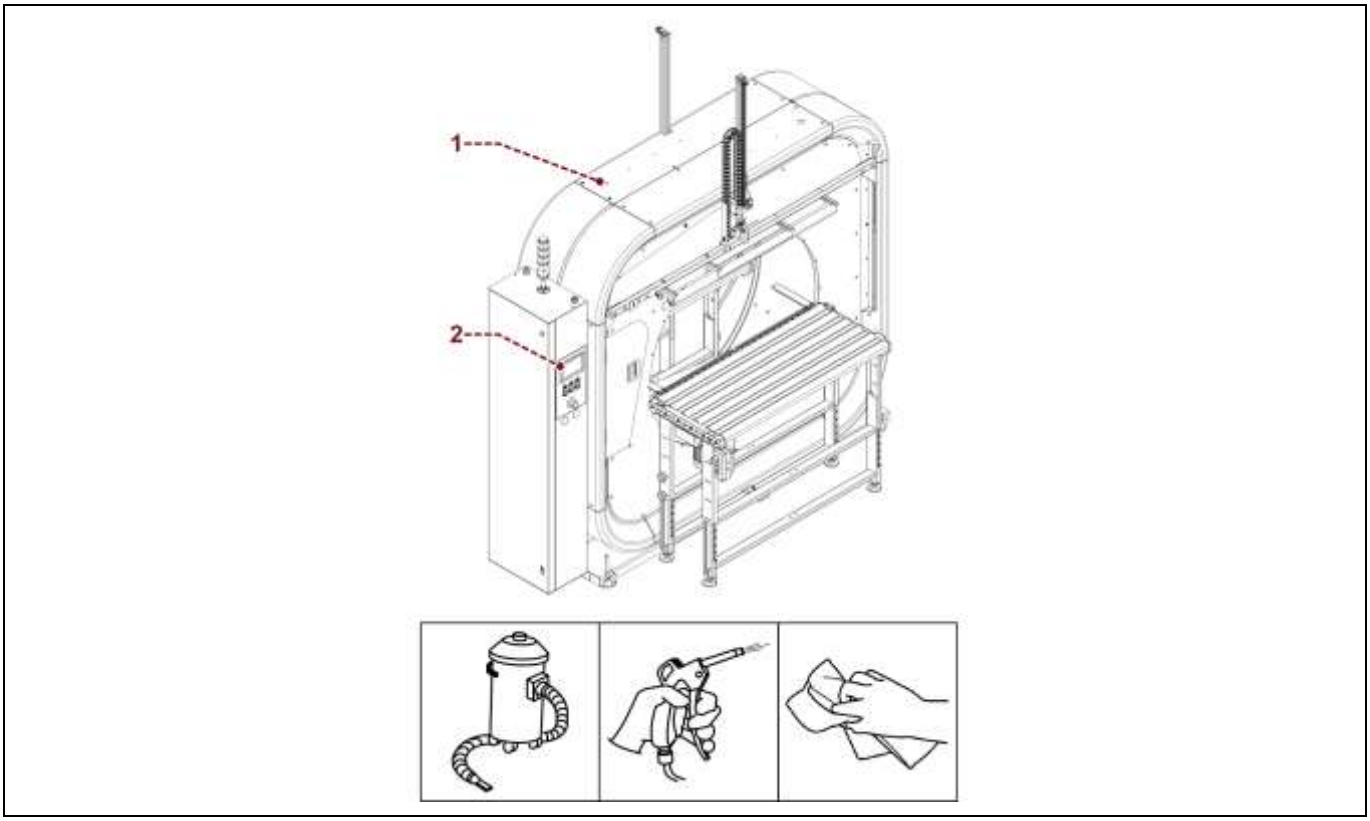
3. At the end of the adjustment, tighten the nut (**A**) to lock the pin (**B**) in the correct position.

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



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 taut 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 reel 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
1001	Emergency button	Emergency button pressed	Reset the button and press the “Reset” button
1010	Line emergency (from Customer)	Line emergency	Reset the emergency circuit of the line and press the "Reset" button
1020	Cover open.	Protection cover open.	Close the cover and press the Reset button.
		The microswitch does not work.	Replace the microswitch.
2001	Thermal cutouts	Thermal or magneto-thermal relays have been triggered.	Eliminate the overload cause, reactivate the protections. Press the “Reset” button.
3110	Ring inverter alarm	Ring inverter overload.	Eliminate the cause of the overheating / malfunction and press the Reset button.
3210	Infeed conveyor inverter alarm	Infeed conveyor inverter overload	Eliminate the cause of the overheating / malfunction and press the Reset button.
3310	Outfeed conveyor inverter alarm	Outfeed conveyor inverter overload	Eliminate the cause of the overheating / malfunction and press the Reset button.
5001	Sealer temperature alarm	Sealer not yet at the correct temperature, or probe faulty	Check the temperature reading probe
6501	“No air”	Faulty pressure switch or no air supply in the system.	Check pressure switch or reactivate air supply.
6502	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.
6503	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.
6504	“Film breakage” alarm	The film has broken or reel is finished.	Insert the film or replace reel.

6505	Rotary ring not synchronised	Ring timing sensor faulty or incorrectly positioned	Check the ring timing sensor
6506	Ring and sealer not synchronised	Both ring and sealer are not synchronised	Synchronise the fifth wheel by hand by releasing the motor brake
6507	Upper clamp alarm (DR MODEL ONLY)	Upper clamp cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6508	Cut alarm	Cutting cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6509	Contrast alarm (OPTIONAL)	Contrast cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6510	Sealer alarm	Sealer cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6511	ST clamp alarm	Clamp cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6512	SKID clamp alarm (OPTIONAL)	Clamp cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
6513	Upper cut alarm	Upper cut cylinder magnetic sensors not properly working.	Check and replace the sensor if necessary.
7001	Safety device retraction	Safety relay locked	Check the safety relay, testing it by switching the machine off and on again.
8010	PLC/Ring inverter Can Bus error	no connection between PLC/Ring Inverter	Check CAN OPEN communication cable
8110	PLC/Infeed conveyor inverter Can Bus error	no connection between PLC/Infeed conveyor Inverter	Check CAN OPEN communication cable
8210	PLC/Outfeed conveyor inverter Can Bus error	no connection between PLC/Outfeed conveyor Inverter	Check CAN OPEN communication cable
8310	PLC/Air handling valves Can Bus error	no connection between PLC/Air handling valves	Check CAN OPEN communication cable
8410	PLC/HMI Can Bus error	no connection between PLC and HMI	no ETHERNET connection between PLC and HMI
8510	PLC/Seneca Can Bus error	no connection between PLC and Seneca	no ETHERNET connection between PLC and SENECA MODULE

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.

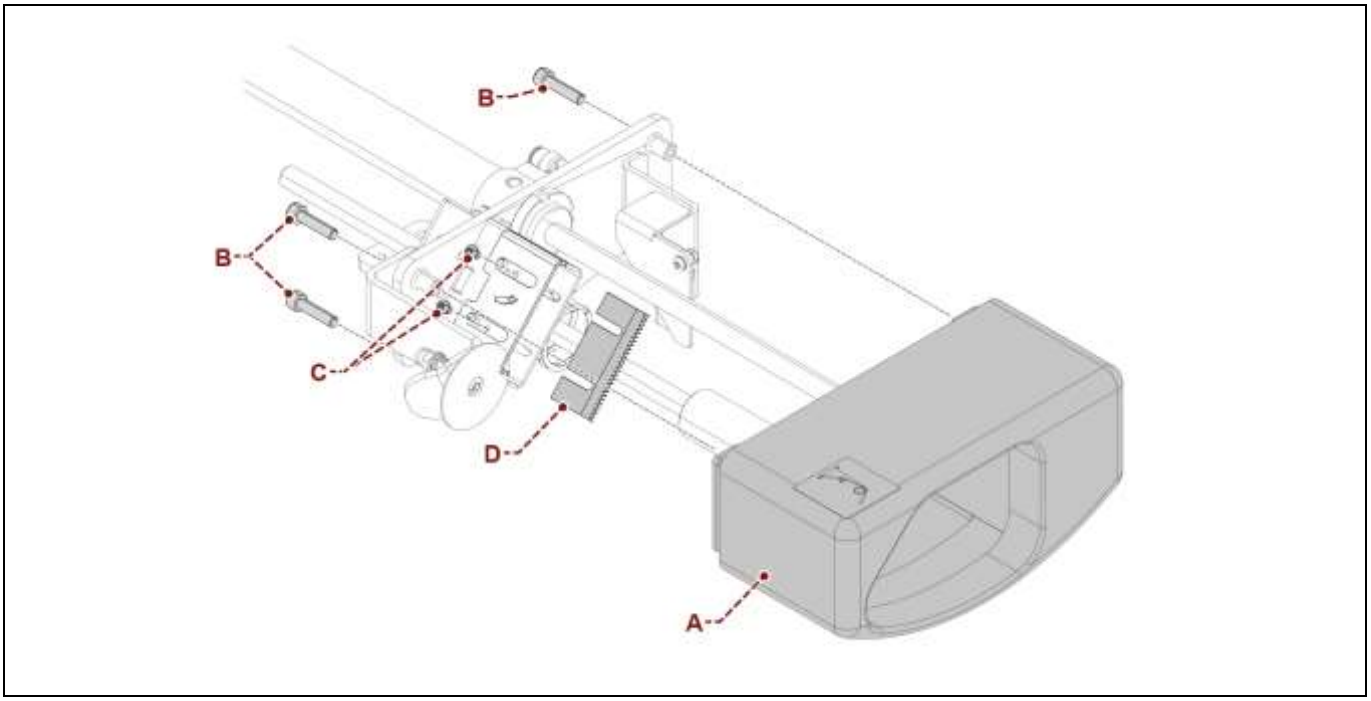
9.2. FILM CUTTING BLADE REPLACEMENT

To replace the film cutting blade, proceed as follows.

1. Remove guard **(A)** by loosening the four screws (**B**).
2. Loosen the fastening screws (**C**).
3. Remove the blade (**D**) and replace it with a new one.
4. Tighten the screws (**C**) when finished.
5. Refit guard (**A**) by tightening screws (**B**).

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
- Rotary ring support wheel

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.

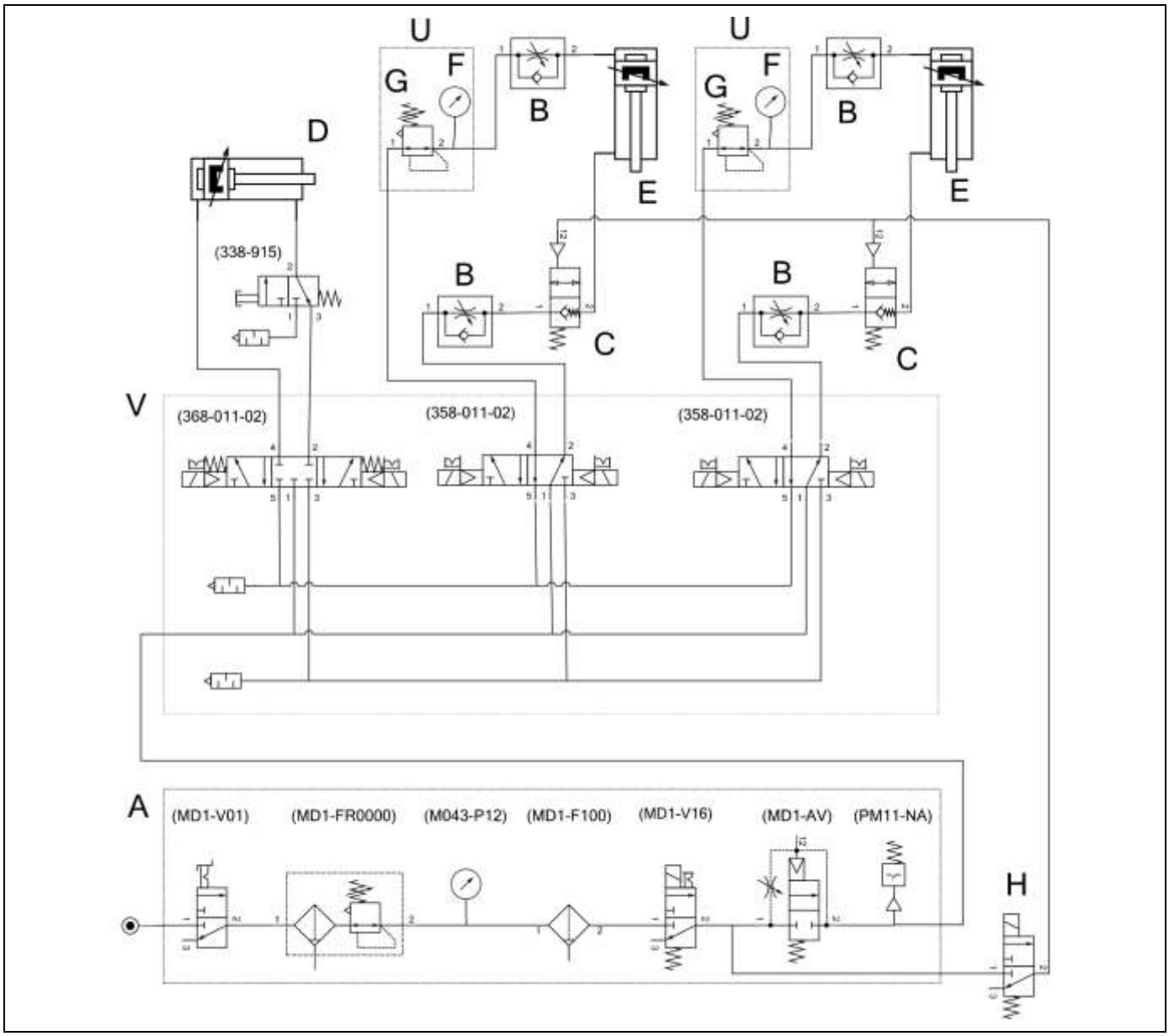
For purchased components and parts, **Robopac S.p.A.** offers the user the same warranty conditions that the company obtains from the suppliers of the aforementioned components and/or parts.
Robopac S.p.A. does not guarantee the conformity of machines to current standards in countries that are not part 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.PNEUMATIC DIAGRAM

ORBIT R 5

Legend:

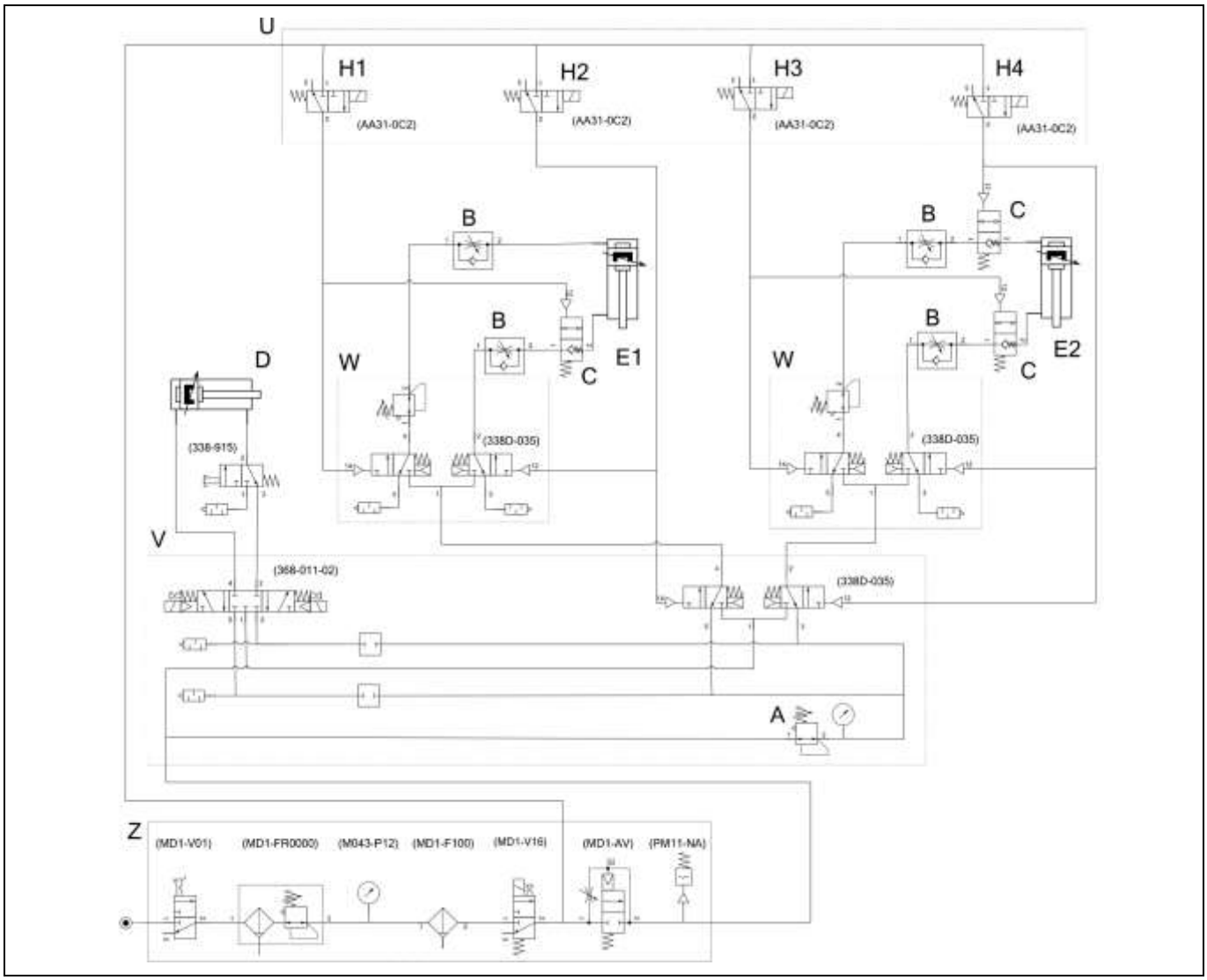
- **A)** Air handling unit
- **B)** Flow regulator
- **C)** Lock valve
- **D)** Clamp movement cylinder
- **E)** Presser cylinder
- **F)** Pressure gauge
- **G)** Pressure regulator
- **H)** Solenoid valve
- **U)** Pressure regulator unit
- **V)** Solenoid valve unit



ORBIT R 9 / ORBIT R 13

Legend:

- **A)** Pressure regulator
- **B)** Flow regulator
- **C)** Lock valve
- **D)** Clamp movement cylinder
- **E1)** Presser cylinder (infeed)
- **E2)** Presser cylinder (outfeed)
- **G)** Clamp release manual valve
- **H)** Solenoid valves
- **U)** Valve group
- **V)** Pneumatic valve unit
- **W)** Air handling unit

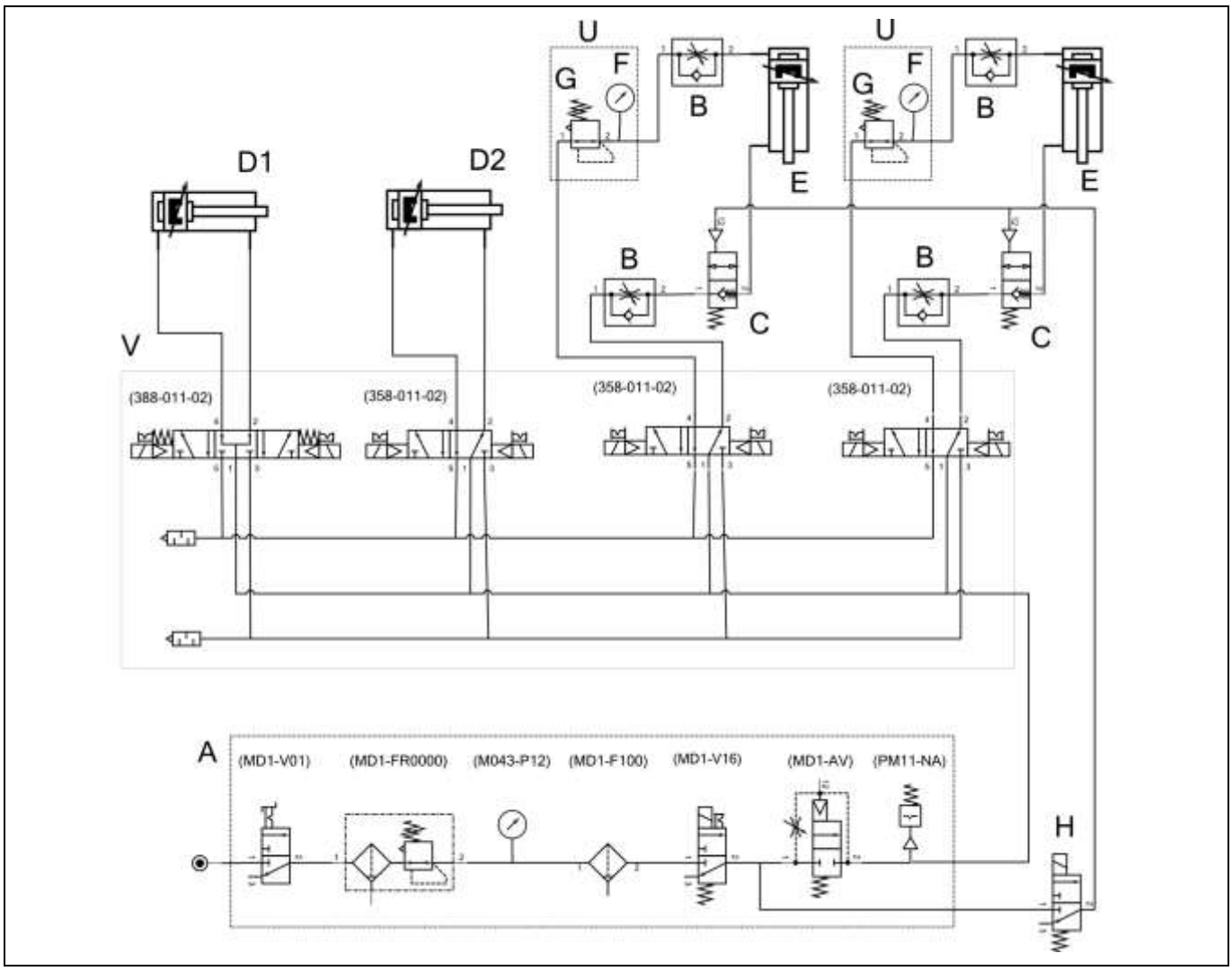


S.K.I.D. MACHINE PNEUMATIC DIAGRAM

ORBIT R 5

Legend:

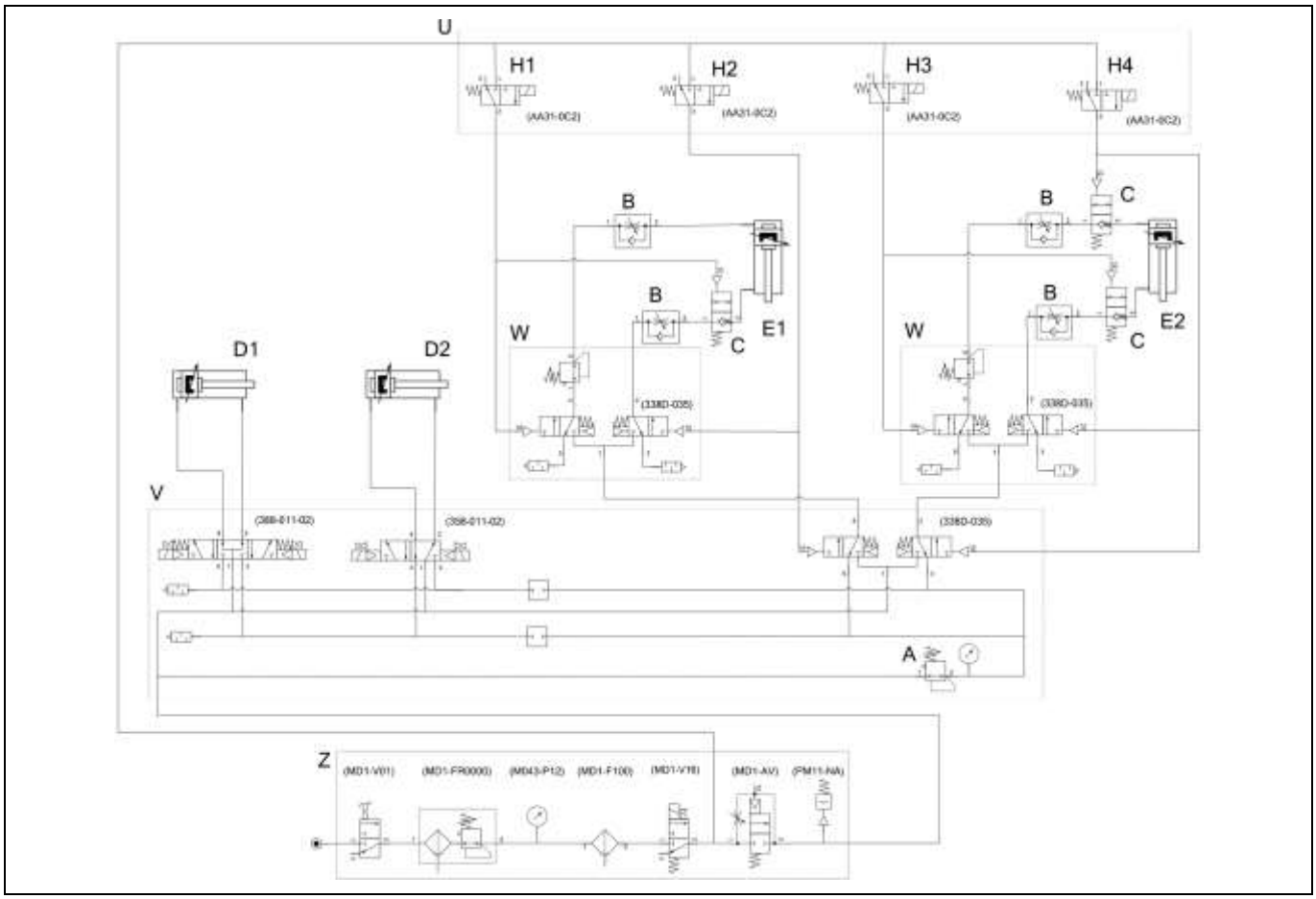
- **A)** Air handling unit
- **B)** Flow regulator
- **C)** Lock valve
- **D1)** Cutting-clamping device movement cylinder
- **D2)** Cutting-clamping counterplate movement cylinder
- **E)** Presser cylinder
- **F)** Pressure gauge
- **G)** Pressure regulator
- **H)** Solenoid valve
- **U)** Pressure regulator unit
- **V)** Solenoid valve unit



ORBIT R 9 / ORBIT R 13

Legend:

- **A)** Pressure regulator
- **B)** Flow regulator
- **C)** Lock valve
- **D1)** Cutting-clamping device movement cylinder
- **D2)** Cutting-clamping counterplate movement cylinder
- **E1)** Presser cylinder (infeed)
- **E2)** Presser cylinder (outfeed)
- **U)** Solenoid valves
- **V)** Valve group
- **W)** Valve unit
- **X)** Pneumatic valve unit
- **Z)** Air handling unit



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ROBOPAC
Innovation driven by values

DECLARATION OF CONFORMITY

(Annex II 1.A of Directive 2006/42/EC)

The manufacturer:

Robopac S.p.A.
Via Fabrizio da Montebello, 81
47892 - Gualdicciolo
Republic of San Marino

of the machine identified as follows:

DENOMINAZIONE **DENOMINATION**	
MODELLO **MODEL**	
MATRICOLA **SERIAL NUMBER**	

DECLARES

under its own responsibility that this machine is compliant with the following European 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;

and with the following harmonised standards at the applicable points:

EN ISO 12100:2010, EN 60204-1:2018, EN 415-10:2014.

THE PERSON AUTHORISED BY THE MANUFACTURER TO PREPARE THE TECHNICAL REPORT AND DRAW UP THE DECLARATION OF CONFORMITY IS:

Engineer Cristiano Casale
R&D Manager

c/o Aetna Group S.p.A.

S. P. Marecchia, 59 | **47826 Villa Verucchio** | **Rimini (Italy)**

Date and place of signature

San Marino,

Robopac S.p.A.

Engineer Cristiano Casale
R&D Manager

ROBOPAC MACHINERY
Robopac S.p.A.
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robopac@robopac.com
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Decreto Riconoscimento del 05/12/1983
Capitale Sociale € 1.000.000 Cod. Op. Ec. 02348

ROBOPAC SPA

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