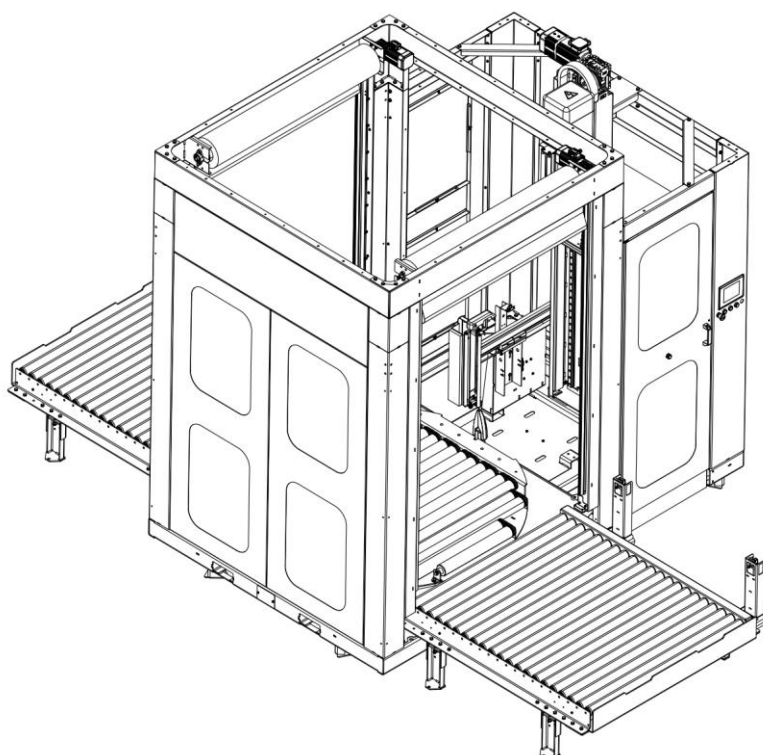


**ROBOPAC**  
Innovation driven by values

**TOPTIER**  
a Robopac company

# RT AUTOMATIC



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

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Cod.:

Rev: 01 - Ed.: 07/20

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Translation of original instructions

USE AND MAINTENANCE MANUAL

ENG

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## INDEX

<b>1. GENERAL INFORMATION .....</b>	<b>6</b>
1.1. PURPOSE OF THE MANUAL .....	6
1.2. MANUFACTURER AND MACHINE IDENTIFICATION .....	7
1.3. TERMS AND DEFINITIONS .....	8
1.3.1. PICTOGRAMS INDICATING DANGER .....	9
1.3.2. PICTOGRAMS INDICATING PROHIBITION .....	10
1.3.3. PICTOGRAMS INDICATING OBLIGATION .....	11
1.4. HOW TO REQUEST ASSISTANCE .....	12
1.5. ATTACHED DOCUMENTATION .....	12
1.6. HOW TO READ THE INSTRUCTIONS FOR USE .....	12
<b>2. SAFETY INFORMATION.....</b>	<b>13</b>
2.1. GENERAL SAFETY WARNINGS .....	13
2.2. SAFETY WARNINGS FOR HANDLING AND INSTALLATION .....	14
2.3. SAFETY WARNINGS FOR USE AND OPERATION .....	15
2.4. SAFETY WARNINGS RELATED TO MISUSE .....	16
2.4.1. REASONABLY FORESEEABLE MISUSE .....	16
2.4.2. EMPLOYER OBLIGATIONS .....	16
2.5. SAFETY WARNINGS ON RESIDUAL RISKS .....	17
2.6. SAFETY WARNINGS FOR ADJUSTMENTS AND MAINTENANCE .....	17
2.7. SAFETY WARNING FOR THE ELECTRICAL EQUIPMENT .....	18
2.8. SAFETY WARNINGS RELATED TO ENVIRONMENTAL IMPACT .....	19
2.9. INFORMATION AND SAFETY SIGNS .....	20
2.9.1. BASIC MACHINE.....	20
2.9.2. PRE-STRETCH CARRIAGE .....	22
2.9.3. CLAMPING UNIT .....	23
2.9.4. HANDLING .....	24
2.10. PERIMETER AREAS .....	25
<b>3. TECHNICAL INFORMATION .....</b>	<b>26</b>
3.1. MACHINE GENERAL DESCRIPTION .....	26
3.1.1. PRE-STRETCH CARRIAGE .....	28
3.1.2. CLAMPING UNIT .....	30
3.1.3. CUTTING - PRESSING (SEALING) UNIT.....	31
3.2. DESCRIPTION OF THE OPERATION CYCLE .....	32
3.3. SAFETY DEVICE DESCRIPTION .....	33
3.4. DESCRIPTION OF ELECTRICAL DEVICES .....	34
3.4.1. BASIC MACHINE.....	34
3.4.2. PRE-STRETCH CARRIAGE .....	35
3.4.3. CLAMPING UNIT .....	36
3.4.4. CUTTING - PRESSING (SEALING) UNIT.....	37
3.4.5. HANDLING .....	37
3.5. DESCRIPTION OF PNEUMATIC DEVICES .....	38
3.5.1. CLAMPING UNIT .....	39
3.5.2. CUTTING - PRESSING (SEALING) UNIT.....	40
3.6. TECHNICAL SPECIFICATIONS.....	41
3.6.1. SPOOL FEATURES .....	41
3.7. NOISE LEVEL .....	41
<b>4. INFORMATION ON HANDLING AND INSTALLATION .....</b>	<b>42</b>
4.1. RECOMMENDATIONS FOR HANDLING AND LOADING.....	42
4.2. PACKING AND UNPACKING .....	42
<b>5. INFORMATION ON ADJUSTMENTS .....</b>	<b>43</b>
5.1. RECOMMENDATIONS FOR ADJUSTMENTS .....	43
5.2. ROLLER CONVEYOR CHAIN ADJUSTMENT.....	43
5.3. FILM SPOOL FEEDING.....	44
5.4. PRE-STRETCH VALUE CHANGE .....	45

<b>6. INFORMATION ABOUT THE USE .....</b>	<b>46</b>
6.1. RECOMMENDATIONS FOR OPERATION AND USE .....	46
6.2. DESCRIPTION OF THE CONTROLS .....	47
6.3. USING THE PANEL .....	49
6.3.1. TYPE OF KEYS AND INDICATORS .....	50
6.3.2. OVERVIEW OF PANEL PAGES .....	51
6.4. TOP NAVIGATION BAR .....	53
6.5. MAIN PAGE .....	54
6.6. "MENU" PAGE .....	56
6.7. "MANUAL CONTROLS" PAGE .....	58
6.7.1. ROTARY TABLE .....	59
6.7.2. CONVEYORS .....	60
6.7.3. CLAMPING UNIT .....	62
6.8. "SETTINGS" PAGE .....	63
6.8.1. PANEL .....	63
6.8.2. CLAMP .....	64
6.8.3. CONVEYORS .....	65
6.9. "MAINTENANCE" PAGE .....	66
6.9.1. GENERAL .....	66
6.9.2. CONVEYORS .....	67
6.10. "RECIPES" PAGE .....	68
6.10.1. MAIN PAGE .....	69
6.10.2. SUB-PAGES .....	70
6.10.3. EDIT / SET .....	71
6.10.4. DELETE .....	75
6.10.5. COPY / PASTE .....	76
6.10.6. INFO .....	77
6.10.7. ARCHIVE .....	78
6.11. "COUNTERS" PAGE .....	79
6.11.1. CURRENT CYCLE .....	80
6.11.2. FILM WEIGHT (OPTIONAL) .....	81
6.11.3. COUNTERS 1 .....	82
6.11.4. COUNTERS 2 .....	83
6.12. "MANUALS" PAGE .....	84
6.13. "FILM TEST" PAGE .....	85
6.14. "R-CONNECT" PAGE .....	86
6.15. "WARNINGS" PAGE .....	87
6.16. "WARNING LIST" PAGE .....	88
6.16.1. TROUBLESHOOTING .....	89
6.17. "ALARM LOG" PAGE .....	90
6.18. "USER" PAGE .....	91
6.18.1. USER MANAGEMENT .....	91
6.19. FILM INSERTION ON CLAMPING UNIT .....	92
6.20. START AND STOP PROCEDURES .....	93
6.20.1. AUTOMATIC CYCLE START .....	93
6.20.2. MANUAL CYCLE START .....	93
6.20.3. CYCLE STOP AND RESTART .....	93
6.20.4. EMERGENCY STOP AND RESTART .....	94
6.20.5. SUDDEN STOP AND RESTART .....	94
6.20.6. RESET OF PALLET TRANSFER CONDITIONS .....	94
6.21. MAINTENANCE AND CARE .....	95
<b>7. MAINTENANCE INFORMATION .....</b>	<b>96</b>
7.1. RECOMMENDATIONS FOR MAINTENANCE .....	96
7.2. SAFETY PROCEDURES .....	97
7.3. LUBRICANT TABLE .....	97
7.4. PERIODICAL MAINTENANCE INTERVALS .....	98
7.4.1. BASIC MACHINE .....	98
7.4.2. PRE-STRETCH CARRIAGE .....	101

7.4.3. CLAMPING UNIT .....	101
7.4.4. CUTTING - SEALING UNIT .....	101
<b>8. PROBLEMS, CAUSES AND SOLUTIONS .....</b>	<b>102</b>
8.1. PRE-STRETCH CARRIAGE .....	102
8.2. CLAMPING UNIT .....	102
8.3. CUTTING - SEALING UNIT .....	103
<b>9. REPLACEMENT INFORMATION .....</b>	<b>104</b>
9.1. RECOMMENDATIONS FOR REPLACING MACHINE PARTS .....	104
9.2. MACHINE DECOMMISSIONING AND SCRAPPING .....	104
9.2.1. MACHINE DECOMMISSIONING .....	104
9.2.2. MACHINE SCRAPPING .....	104
<b>10. WARRANTY CONDITIONS.....</b>	<b>105</b>

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



#### **Danger - warning**

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



#### **Caution - warning**

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





#### **Important**

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

## 1.2. MANUFACTURER AND MACHINE IDENTIFICATION

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

- 1) Voltage / Phases / Frequency
- 2) Absorption
- 3) Short circuit current
- 4) Machine serial number
- 5) Electric scheme
- 6) Electric control board: NEMA protection rating
- 7) Manufacturer's identification

 <b>TOPTIER</b> Simple by Design	
Top Tier LLC 10315 SE Jennifer St. Portland, Oregon USA	
(503) 353.7388	www.toptier.com
Supply Rating	①
Full Load Amperage	②
S.C.C.R.	③
Serial Number	④
Wiring Diagram	⑤
Enclosure Type 12	⑥
 <b>LISTED</b>	
<small>ENCLOSED INDUSTRIAL CONTROL PANEL          No. D48501936          E474521      Made in USA Jan. 2020</small>	

### 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** and **TopTier**, a **Robopac** company, 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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Phone 678-737-2728

#### 1.5. ATTACHED DOCUMENTATION

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

- Pneumatic scheme.
- Electric scheme.
- Manuals of installed commercial devices (if necessary for machine use).
- Unpacking and installation instructions.
- USB pendrive containing the information listed below.
  - Use and maintenance manual translated into various languages.
  - Spare parts catalogue.
  - Machine programming software.
  - Electric schemes.

#### 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.



### 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".

## 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 **32°F (0°C)** and **104°F (40°C)**.
- The relative humidity should be between **50%** (measured at **104°F-40°C**) and **90%** (measured at **68°F-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 **- 77°F (25°C)** and **131°F (55°C)**.
- The electrical equipment may still be exposed to a temperature of up to **158°F (70°C)** provided that the exposure time does not exceed **24** hours.
- The electrical equipment operates correctly up to **3280,84 ft (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. SAFETY WARNINGS RELATED TO ENVIRONMENTAL IMPACT

Every organisation has the task of implementing procedures to identify and control the effect of its own activities (products, services, etc.) on the environment.

The procedure to identify significant environmental impacts must consider the following factors:

- Atmospheric emissions
- Discharges of liquids
- Waste management
- Soil contamination
- Use of raw materials and natural resources
- Local problems concerning the environmental impact

To this end, the manufacturer provides some indications to be considered by all those authorised to interact with the machine during its service life, in order to prevent the environmental impact.



**Important**

All the packaging elements must be disposed of according to the laws in force in the country of use.



**Danger - warning**

During installation, make sure that the space is properly ventilated in order to avoid unhealthy air concentration for the operators.



**Danger - warning**

In case of installation in rooms where there are food products, keep the machine and the operating area clean, in order to prevent the risk of bacterial growth and contamination.



**Danger - warning**

During use and maintenance, avoid dispersing polluting products (oils, greases, etc.) into the environment and dispose of them through separate collection based on the composition of the different products and in compliance with the applicable laws in force.



**Important**

Keep noise at minimum levels to limit noise pollution.



**Important**

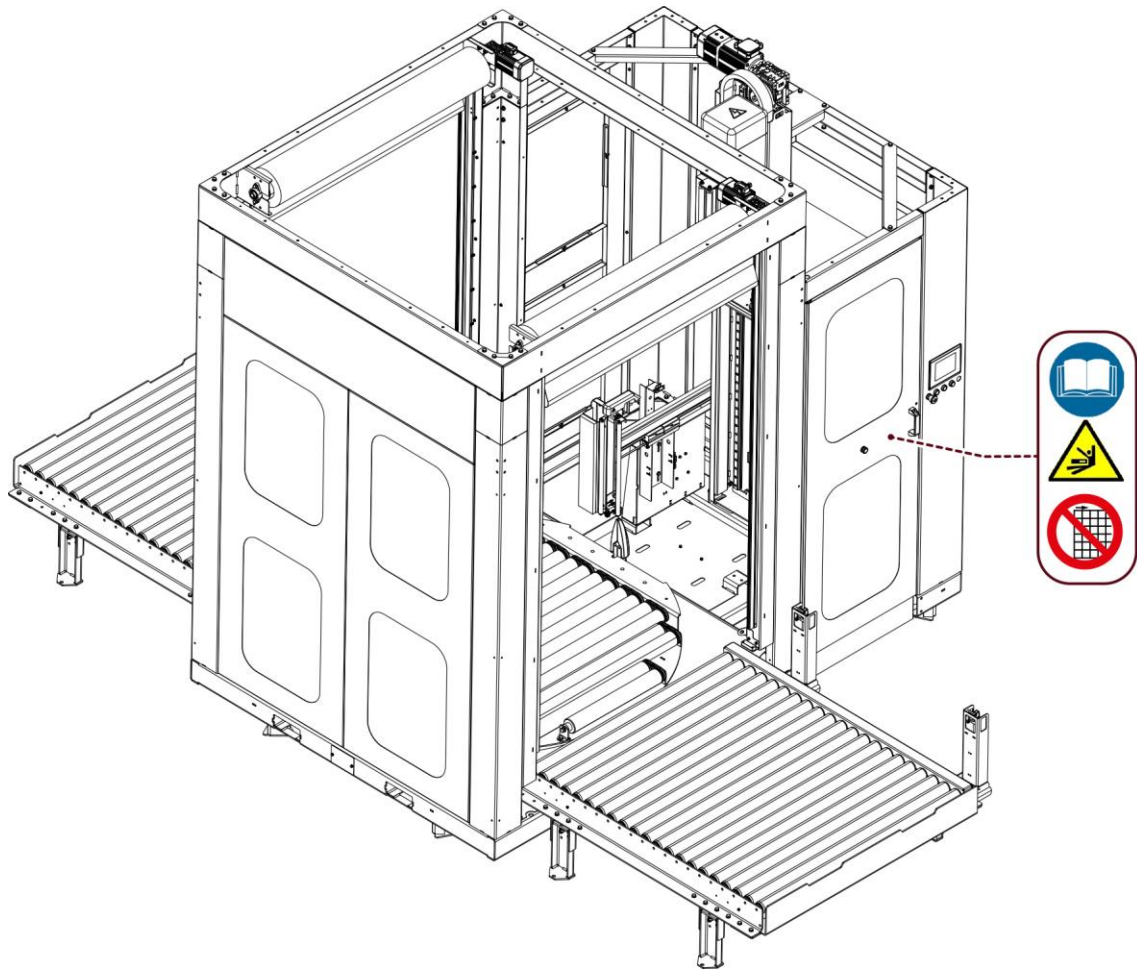
During machine decommissioning, select all the components based on their characteristics and dispose of them separately.






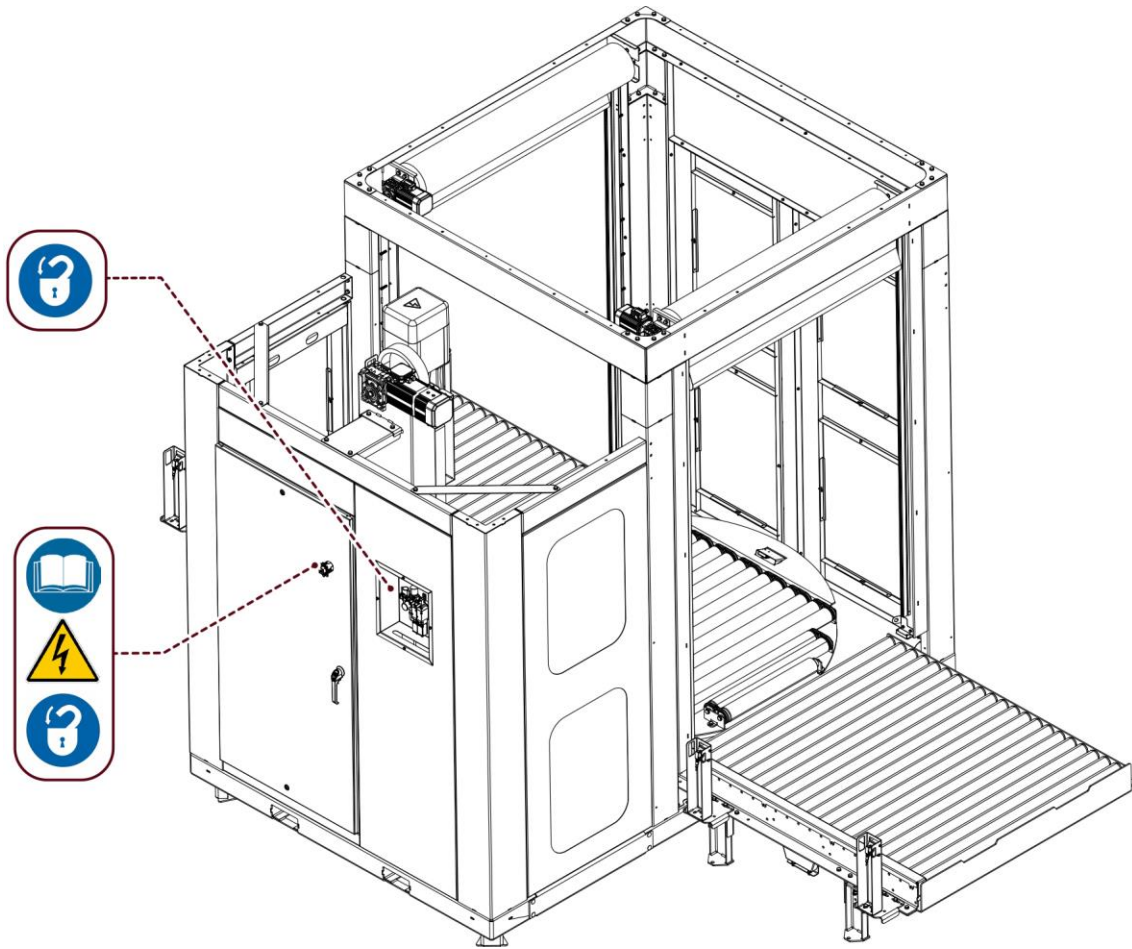
**Important**




Separate ELECTRIC and ELECTRONIC components and dispose of them at the special authorised collection centres.

2.9. INFORMATION AND SAFETY SIGNS  
 2.9.1. BASIC MACHINE

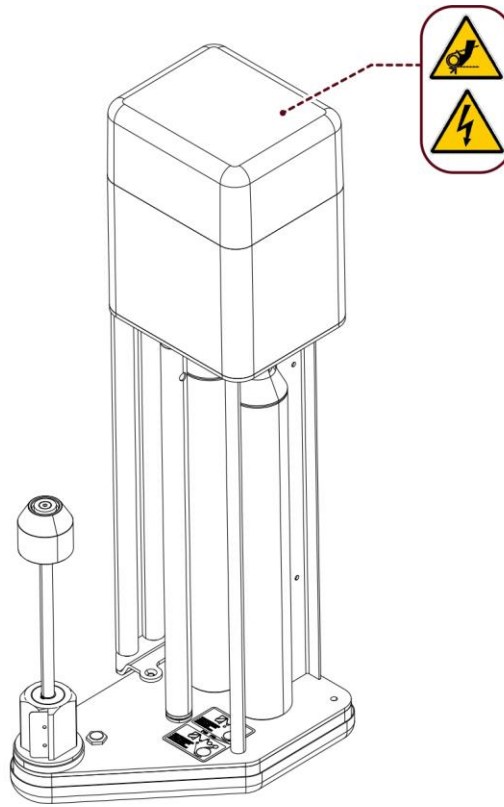




Symbol	Description
	<b>Obligation to read the Use and Maintenance manual</b> Carefully read the use and maintenance manual before performing any type of intervention.
	<b>Crushing hazard</b>
	<b>Prohibition of opening the protections</b>



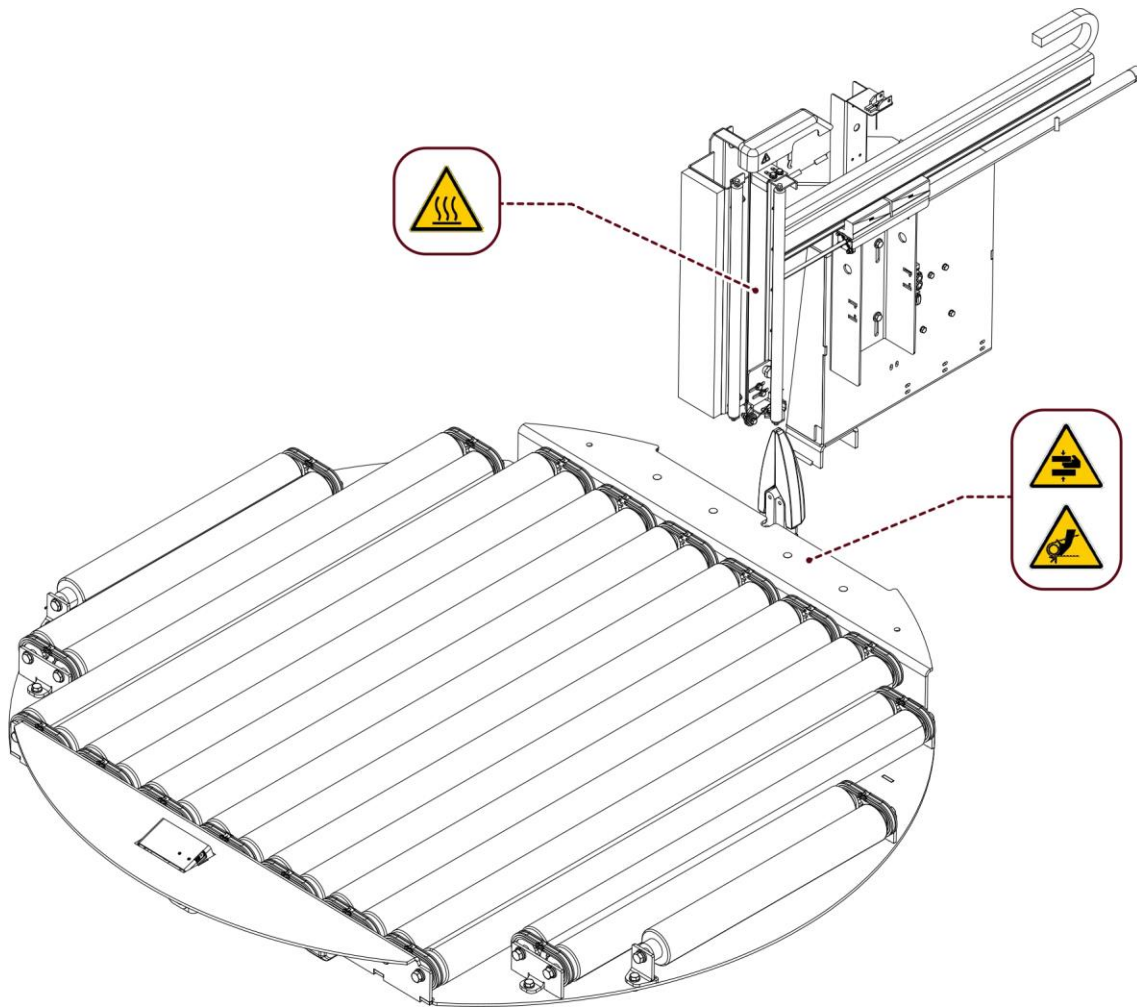
Symbol	Description
	<b>Obligation to read the Use and Maintenance manual</b> Carefully read the use and maintenance manual before performing any type of intervention.
	<b>Electric shock hazard</b> Do not access live element
	<b>Obligation to padlock the component</b> The obligation requires the component to be padlocked during machine operation




2.9.2. PRE-STRETCH CARRIAGE



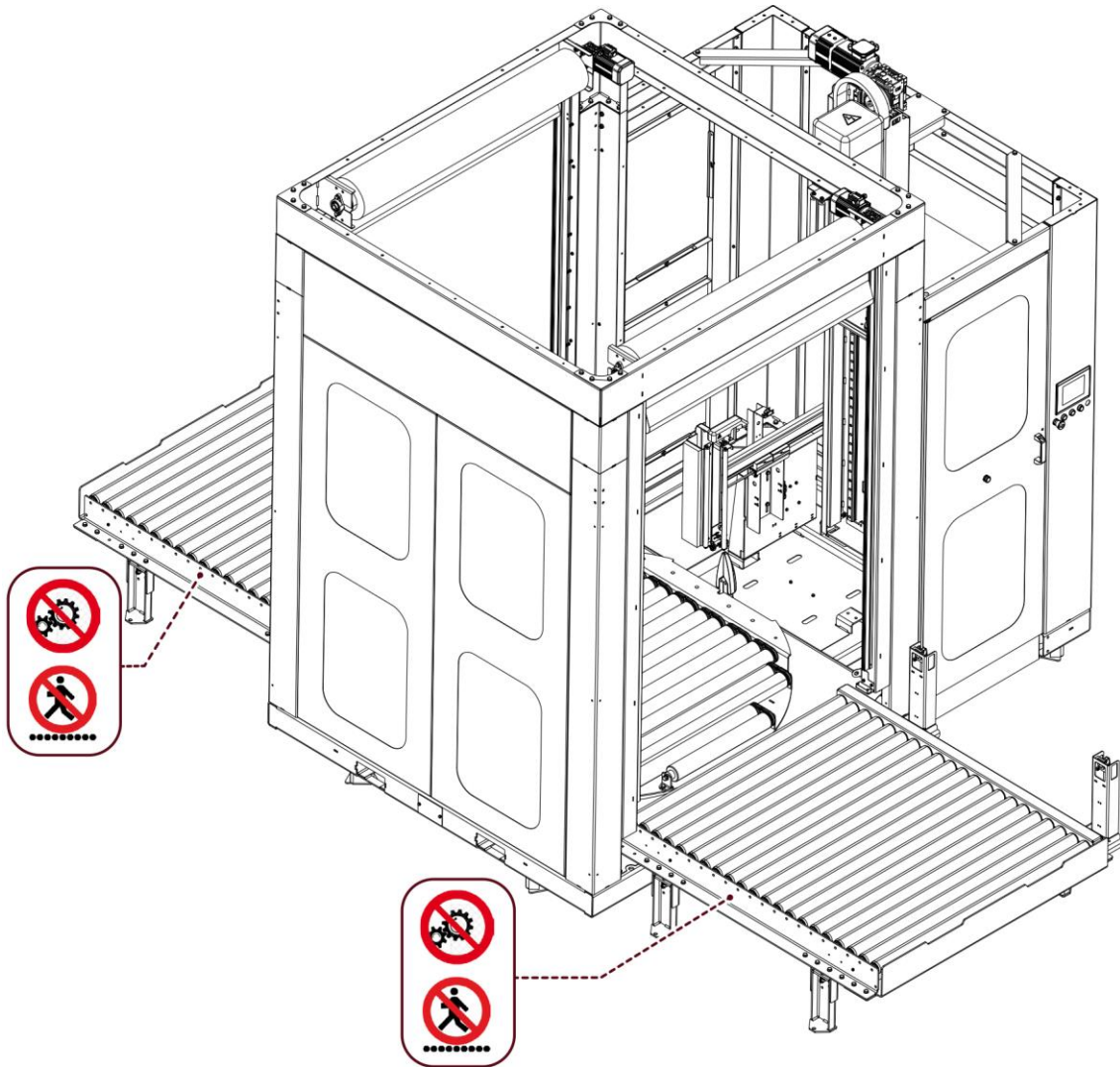
Symbol	Description
	<b>Risk of entrapment of limbs</b>
	<b>Electric shock hazard</b> Do not access live elements.



### 2.9.3. CLAMPING UNIT



Symbol	Description
	<b>Risk of burning</b> Pay attention to hot surfaces.
	<b>Risk of crushing upper limbs</b> Do not insert your hands inside moving parts.
	<b>Risk of entrapment of limbs</b>

2.9.4. HANDLING



Symbol	Description
	<p><b>Prohibition sign</b> Do not remove the safety protections.</p>
	<p><b>Prohibition sign</b> Do not get on the conveyors.</p>

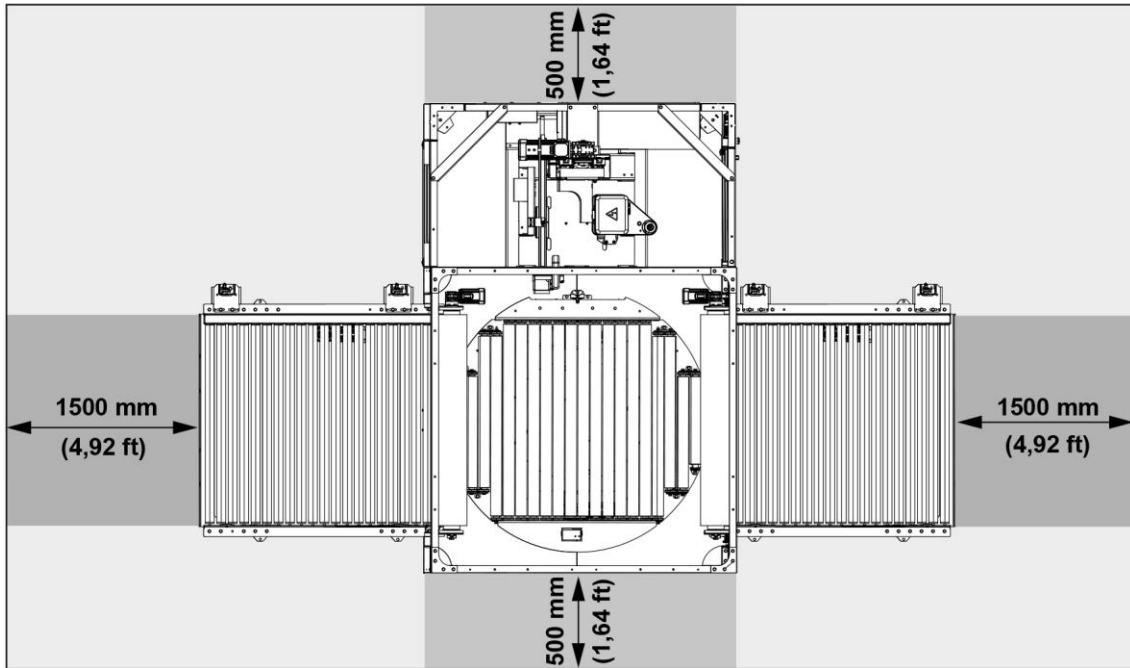


## 2.10. PERIMETER AREAS

The diagram indicates the minimum perimeter required to delimit the product transit areas and the machine access areas under safety conditions. If the protections are requested from the machine's manufacturer, the relevant layout and installation procedures will be provided.

Otherwise, it will be the responsibility of the person in charge of installation to provide the protections suitable for the indicated perimeter.

The illustration shows, for information purposes only, the machine models.



### **3. TECHNICAL INFORMATION**

#### **3.1. MACHINE GENERAL DESCRIPTION**

The machine is an automatic wrapping machine with rotary table for palletised load wrapping and stabilising with stretch film.

The machine consists of a rotary table, which makes the pallet turn, a film carriage, which unwinds and stretches the film, a film cutting unit and a clamping unit, which allows gripping the film at the end of the wrapping cycle. It is manufactured in different versions to meet different operational and production needs.

On request, it can be equipped with other units and/or optional devices (relevant information is given in the specific chapters).

Thanks to a high production capacity and a long operational autonomy, this machine is suitable for installation in industrial environments, at the end of automatic palletisation lines.

It is equipped with a series of electromechanical components which allow controlling the operating phases of the cycle and with safety devices which ensure the safety of operators.

Using this machine in explosive environments is strictly forbidden.

This machine does not require a constant presence of the operator.

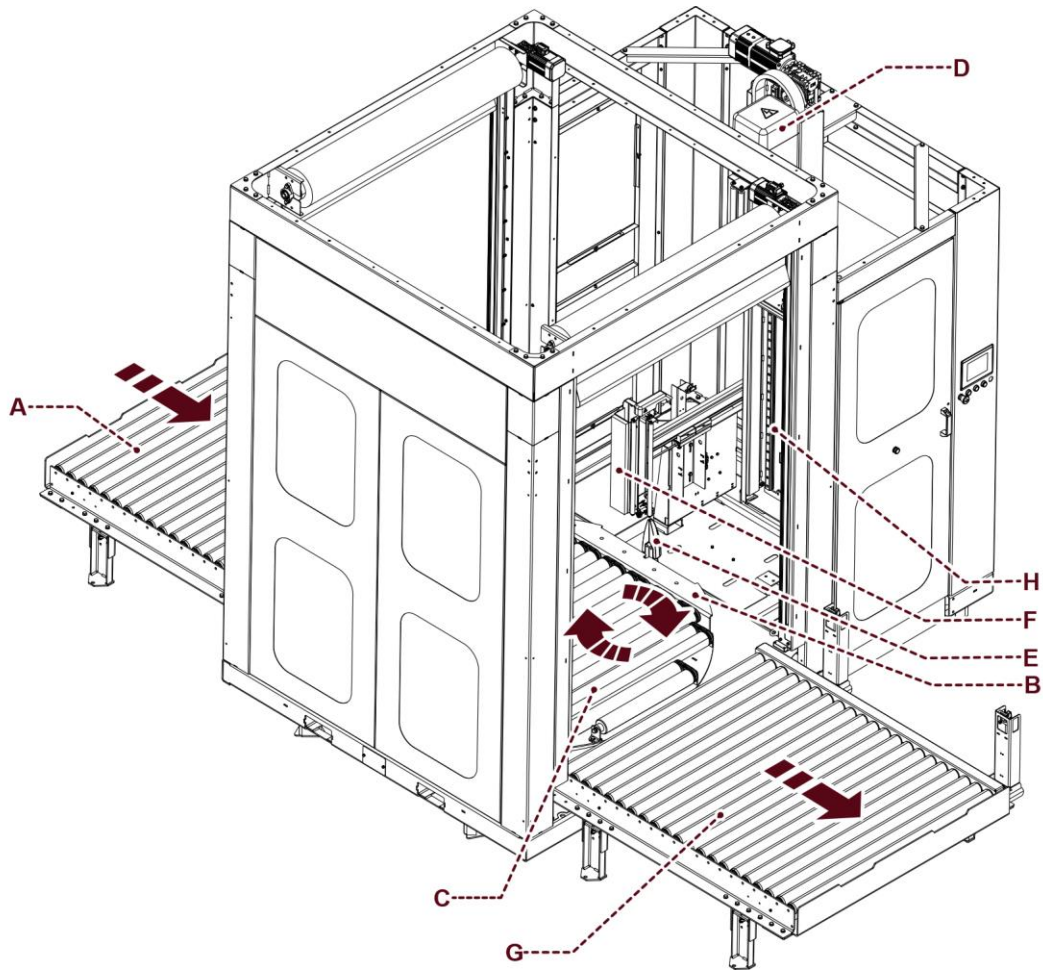
It is sufficient to check its functionality, perform any adjustment required and change the reel when finished.

The cultural and behavioural characteristics that the operator should possess will be defined by the line manager.

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

Legend:

- A) Conveyor unit
- B) Rotary table
- C) Roller conveyor
- D) Film carriage
- E) Clamping unit
- F) Cutting unit
- G) Conveyor unit
- H) Column

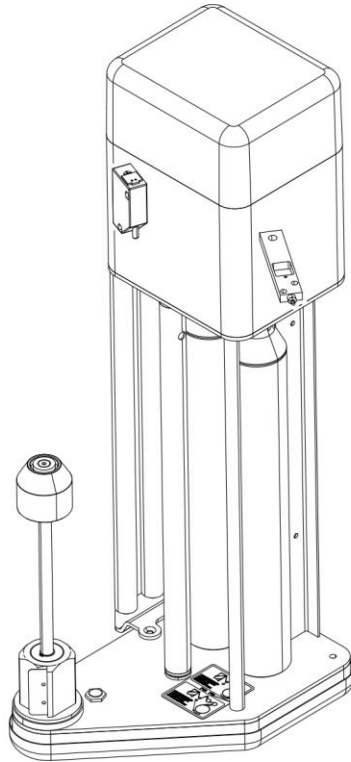


### 3.1.1. PRE-STRETCH CARRIAGE

The film carriage unit has been designed and manufactured to perform the pre-stretch of polythene stretch film. It allows obtaining significant savings thanks to a reduced consumption of film and to an absolutely constant weight of the film used for each pallet. The carriage is equipped with motor-driven pre-stretch rollers that rotate with different peripheral speed.

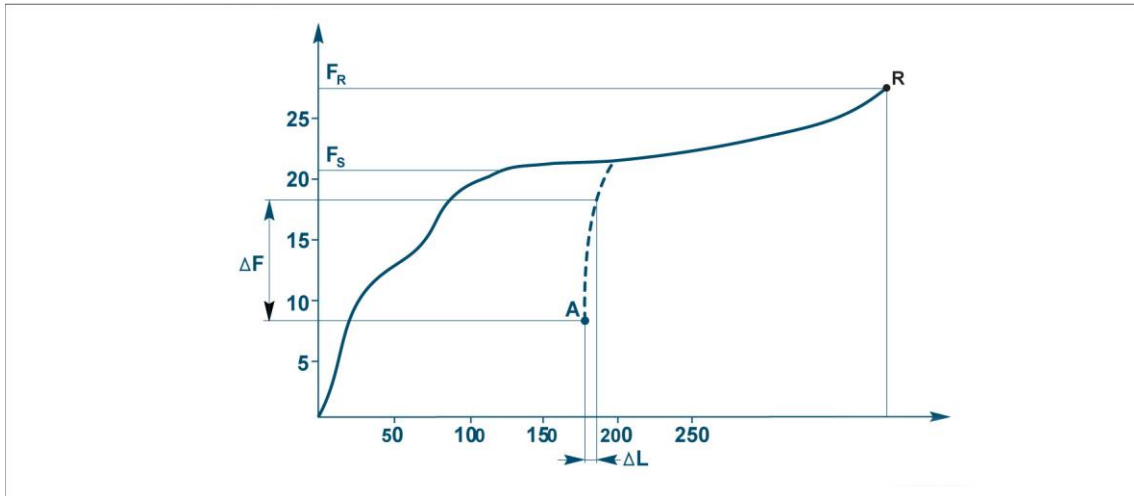
The pre-stretch value can be changed, to pre-set values, by adjusting the pre-stretch roller speed. The stretching effect on the film between the rollers before the wrapping on pallet, besides reducing its section, will lend it physical features that make it more resistant. Moreover, an idle roller device, equipped with load cell, keeps the film tensioning at the required setpoint.

The controls for movements are integrated in the main control panel of the machine.



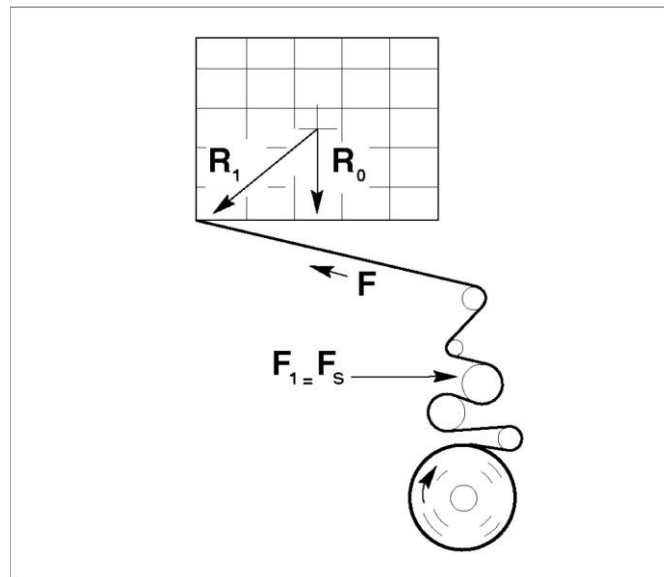
**Wrapping technological information**

If a low-density polythene film is subjected to a progressively increasing tensioning strength, the trend of such strength and of the corresponding deformation is represented by the diagram.



**Fr** - Tensile strength at which the film breaks after being elongated.

**Fs** - Yield strength for which the elongation starts increasing without a significant load increase; when it is reached, the film is considerably elongated without any increase in the deforming force.



**(F)** Wrapping tension.

**(R)** Film breakage point.

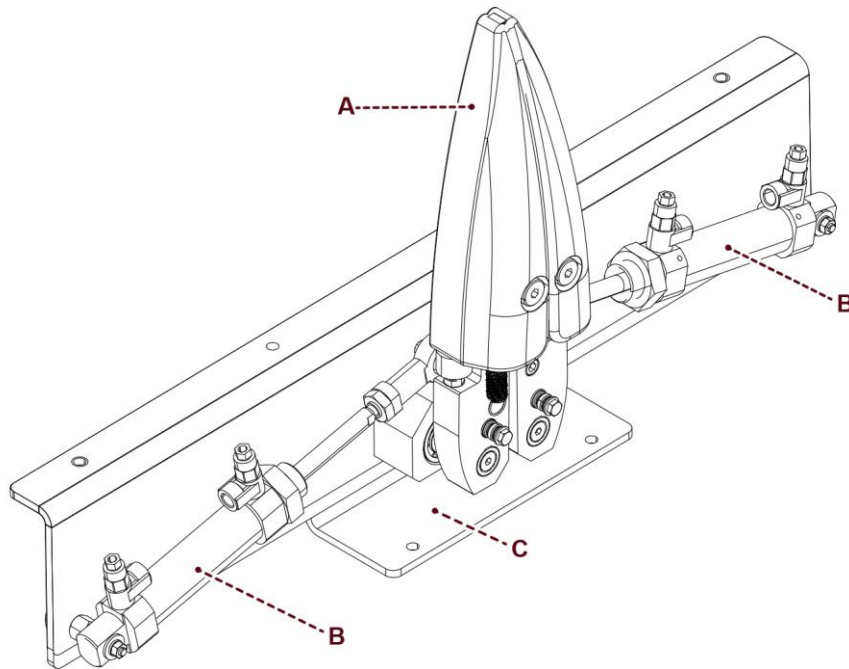
During the pallet wrapping, the film tensioning is not uniform; in fact, the pallet requires more film at the edges. This results in an increase of the wrapping tension (**F**).

The film carriage is equipped with an electronic system ensuring that this tension (**F**) is constant during wrapping.

### 3.1.2. CLAMPING UNIT

The clamping unit is a device used to grip the film at the end of the wrapping cycle. It is equipped with pneumatically controlled double clamps to grip the film. The controls for movements are integrated in the control panel of the machine.

- A) Clamp jaws
- B) Pneumatic cylinder
- C) Structure

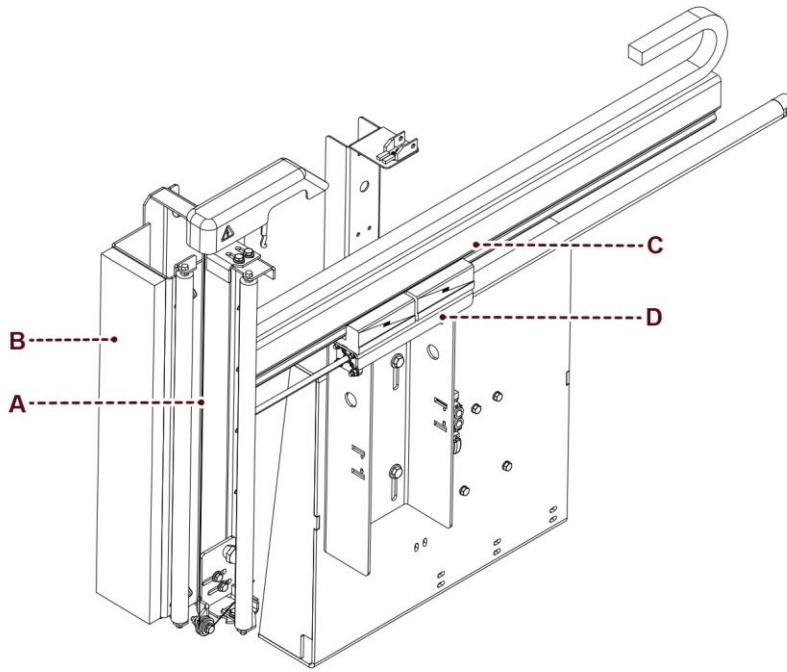


### 3.1.3. CUTTING - PRESSING (SEALING) UNIT

This unit has been designed and manufactured to cut and press (seal) the film at the end of the wrapping cycle. The unit is installed on the wrapping machine structure and is equipped with an adjustable arm (C) (activated by the pneumatic cylinder (D)), which supports the cutting-pressing device.

The cutting-pressing device is equipped with a cutting wire (A) (electrical resistor) used for film cutting and with devices (B) used to press (seal) the end of the film onto the pallet.

The controls to move the machine are integrated in the main control panel of the wrapping machine.



### 3.2. DESCRIPTION OF THE OPERATION CYCLE

The phases of the machine operating cycle are shown and described below.  
 For more details, see the chapters on the installed functional units.

**Phase 1:**

The conveyor unit (A) moves pallet (B) onto rotary table (C).

**Phase 2:**

The rotary table (C) activates and starts the wrapping.

At the same time, the film carriage (D) performs the film pre-stretch.

At the end of the first wrapping cycle, the clamp (E) releases the film end.

The film carriage starts moving up, wraps the pallet and performs a spiral wrapping.

At the end of the upstroke, the carriage moves down and performs a second wrapping, after which the rotary table stops.

**Phase 3:**

The clamp (E) closes again and holds the film flap for the next wrapping.

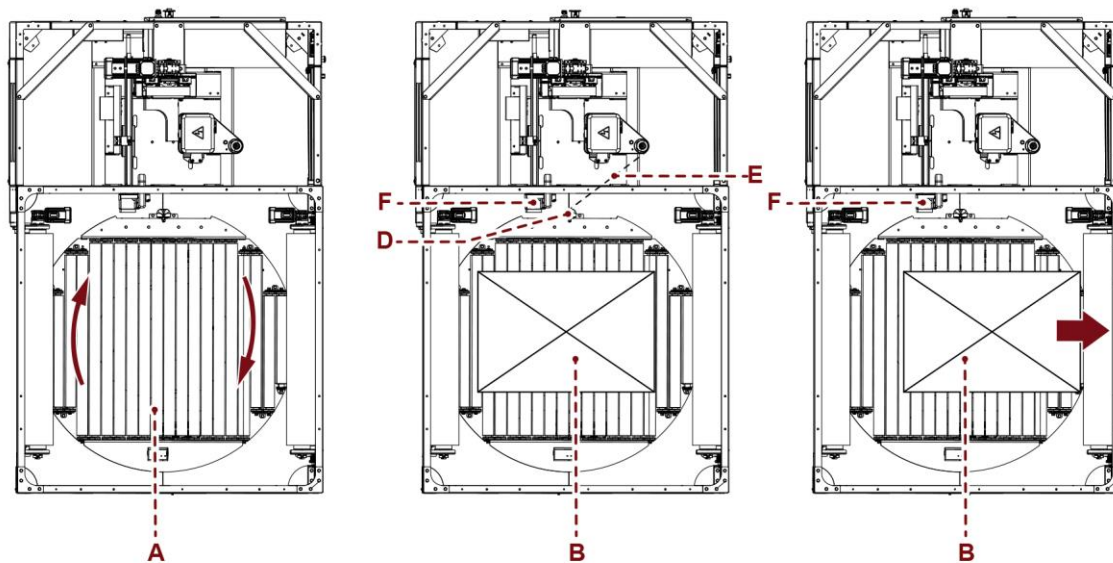
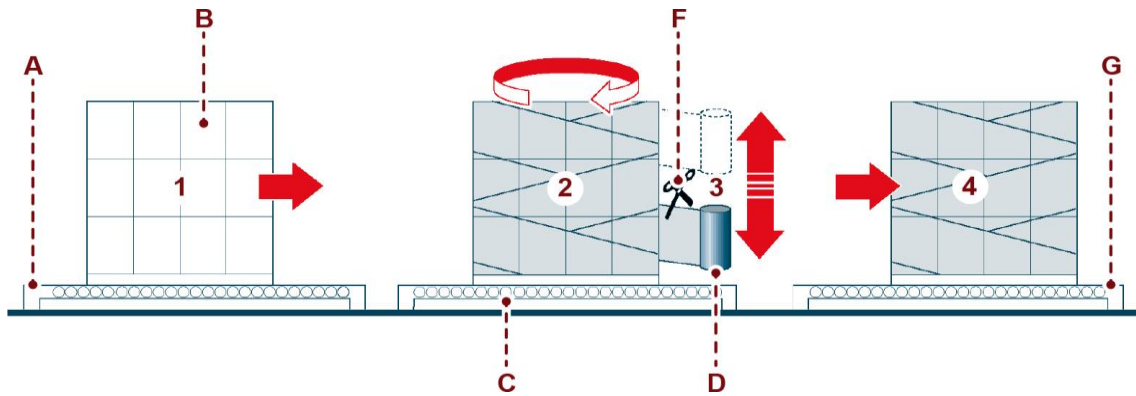
The cutting unit (F) shifts until it rests on the pallet.

The clamping unit (E) closes and grips the film, while the cutting-pressing (sealing) unit cuts and presses (seals) the film onto the one already wrapped around the pallet.

**Phase 4:**

The cutting unit (F) moves back to the rest position, the roller conveyor moves the pallet to the outfeed conveyor unit (G).

In this way the current cycle ends and the next one starts.





### 3.3. SAFETY DEVICE DESCRIPTION

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

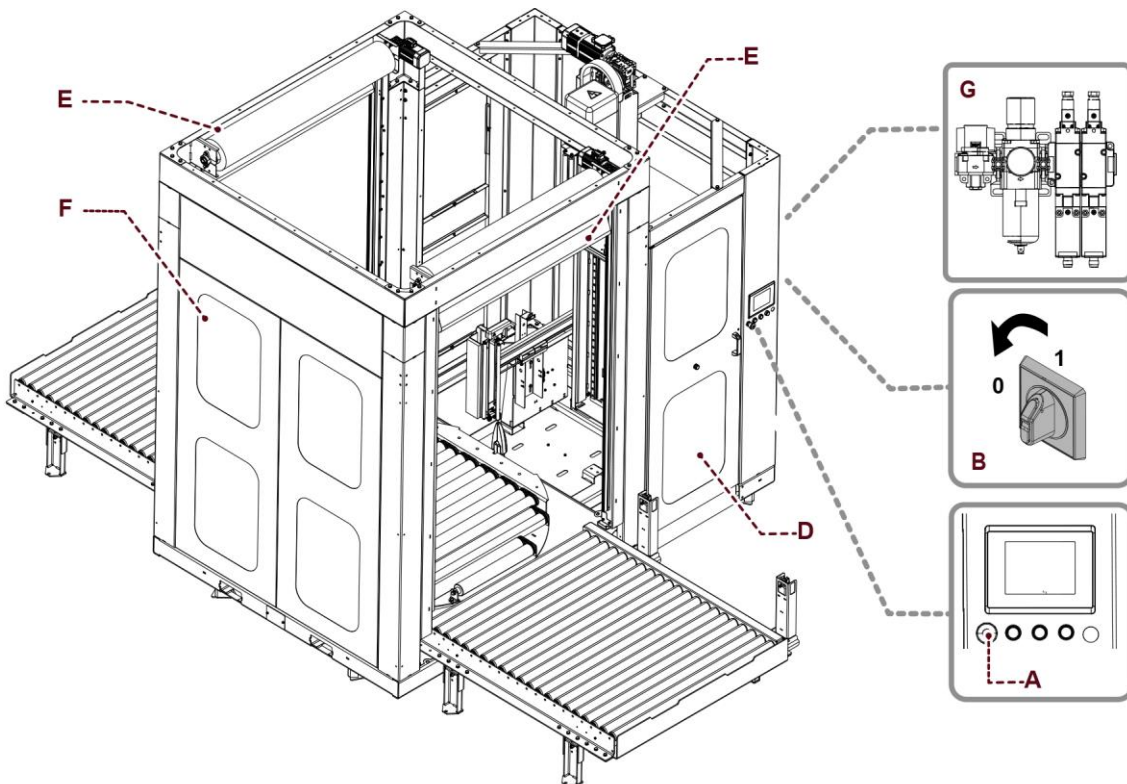
- A) **Padlockable main switch**  
it cuts off the power supply to the machine and can be padlocked to prevent use by unauthorised people.
- B) **Emergency stop button**  
it immediately stops the machine in case of imminent risk. It must be reset to restart the operating cycle.
- C) **Fixed guard**  
it is a perimeter structure preventing operator's access.



**Important**

Some reference dimensions are indicated in the “technical data”.

- D) **Interlocked mobile guard**  
it is a door associated to an interlock electric device. It allows the operator to access the operating area. As soon as it is opened the machine immediately stops; it will restart only after closing the door and resetting the cycle.
- E) **Roll doors**  
they protect against intruders, stopping the machine's functions.
- F) **Fixed guard**  
it prevents access to any dangerous part.
- G) **Lock pneumatic valve**  
it allows disconnecting the machine from the main pneumatic supply line. It can be padlocked to prevent unauthorised people to act on it during machine adjustments and maintenance operations.



### 3.4. DESCRIPTION OF ELECTRICAL DEVICES

#### 3.4.1. BASIC MACHINE

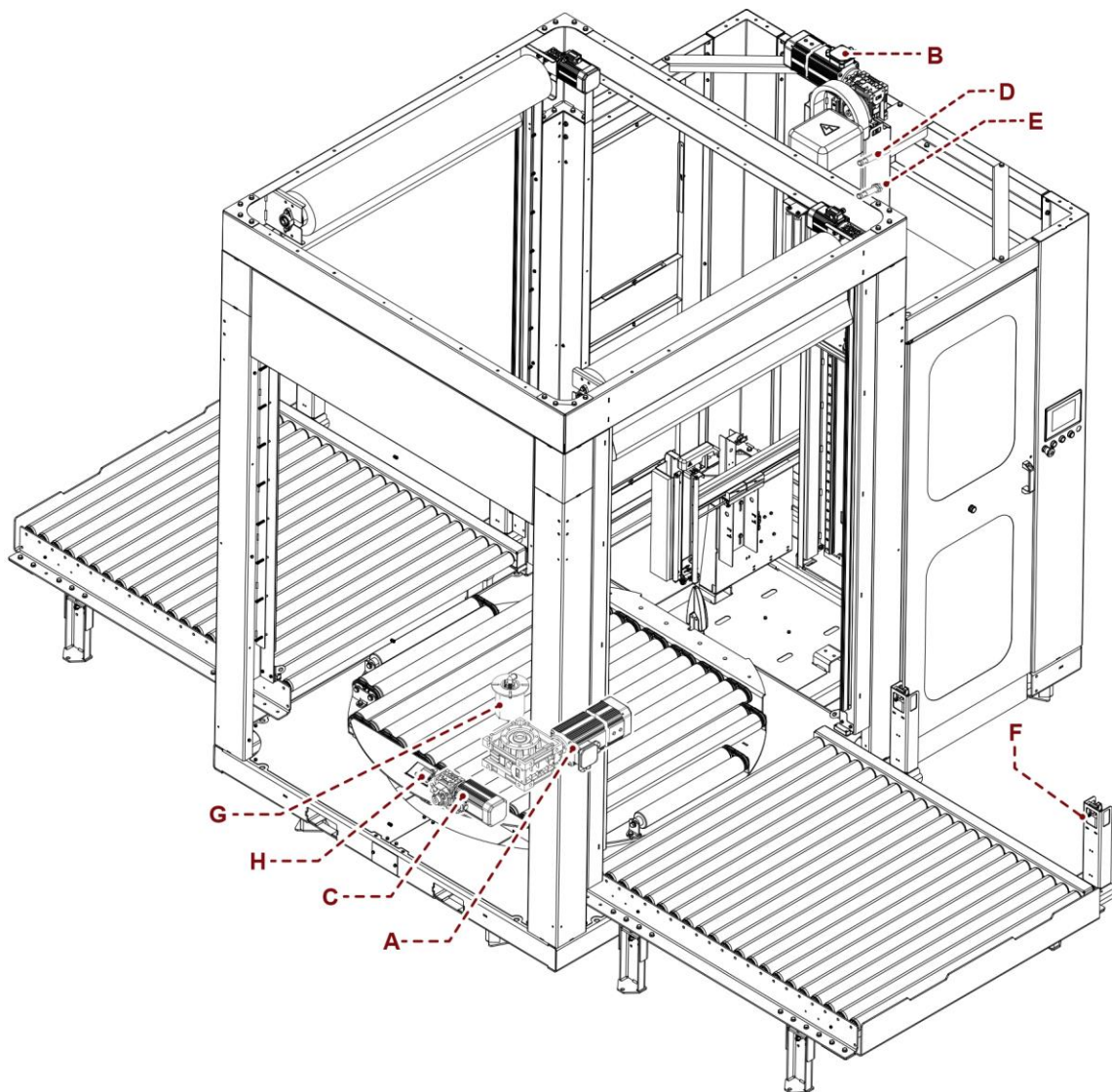
The figure shows the position of the devices on the machine.

- A) **Gearmotor**: it activates the table rotation
- B) **Gearmotor**: it activates the film carriage movement
- C) **Gearmotor**: it activates the roller conveyor unit movement
- D) **Sensor**: it detects the maximum height reachable by the film carriage
- E) **Sensor**: it detects the minimum height reachable by the film carriage
- F) **Sensors**: they detect the pallet position
- G) **Sensors**: they detect the table rotation phases
- H) **Encoder**: it detects the table rotation speed
- I) **Encoder**: it detects the film carriage movement speed



**Important**

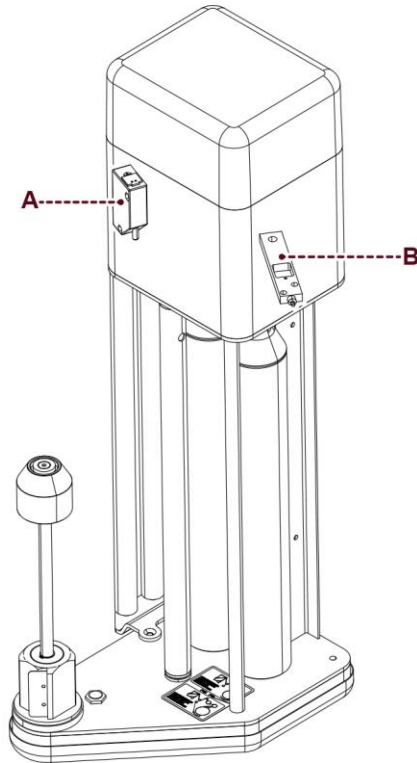
For further details see the electric scheme.



### 3.4.2. PRE-STRETCH CARRIAGE

The figure shows the position of the devices.

- A) **Photocell**: it detects the height and the presence of the load to be wrapped.
- B) **"Load cell" sensor**: it detects the film tensioning during the wrapping and enables the adjustment of the pre-stretch roller speed. If the film breaks or finishes, it also enables the machine stop.



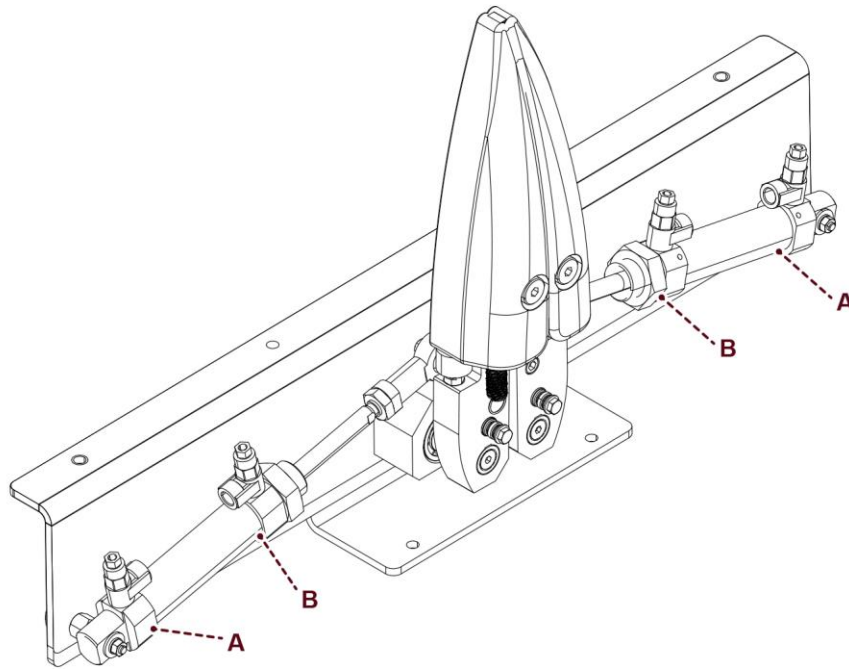
### 3.4.3. CLAMPING UNIT

The figure shows the position of the devices.

- A) Sensor: it detects the clamp "open" position.
- B) Sensor: it detects the clamp "closed" position.



**Important**  
For further details see the electric scheme.



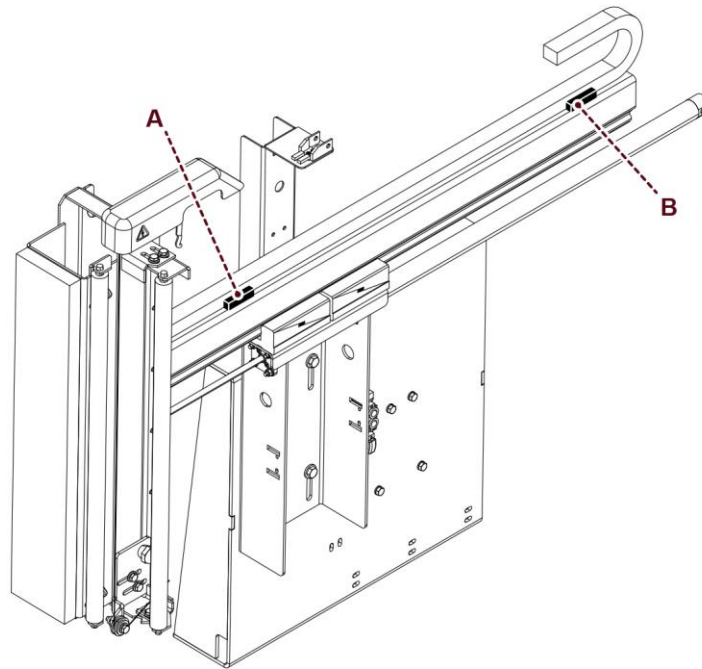
### 3.4.4. CUTTING - PRESSING (SEALING) UNIT

The figure shows the position of the devices.

- A) **Sensor:** it detects the unit position during cutting phase.
- B) **Sensor:** it detects the unit position during resting phase.

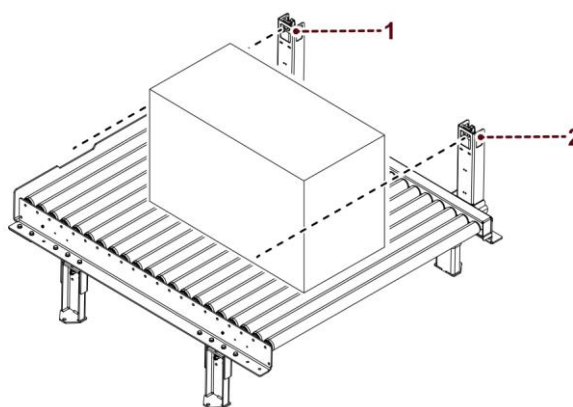


**Important**  
 For further details see the electric scheme.



### 3.4.5. HANDLING

The device with photocell (positioned at infeed **1** and outfeed **2**) detects the transit of the pallet along the roller conveyor, in order to allow moving the pallet based on the wrapping cycle.



### 3.5. DESCRIPTION OF PNEUMATIC DEVICES

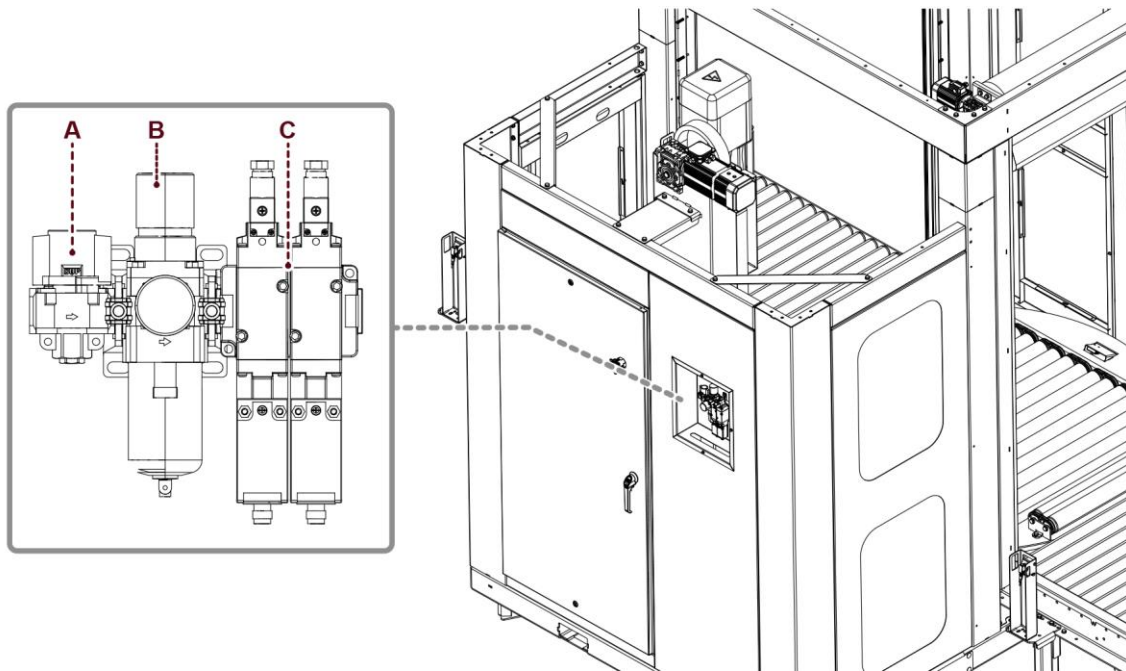
The figure shows the position of the devices on the machine.

- A) **Tap**; used to eliminate the pneumatic pressure inside the machine.
  - B) **Pressure regulator with filter and pressure gauge**; used to adjust the general pressure of the pneumatic system. Turn the knob to change the pressure values indicated on the pressure gauge.
  - C) **Soft starter device**; used to make air enter the system gradually.
- Quick discharge valve**; used to eliminate the pneumatic pressure inside the machine in case of emergency stop.



**Important**

For further details see the pneumatic scheme.



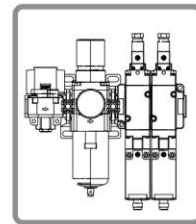
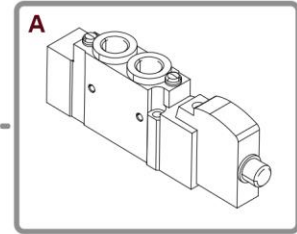
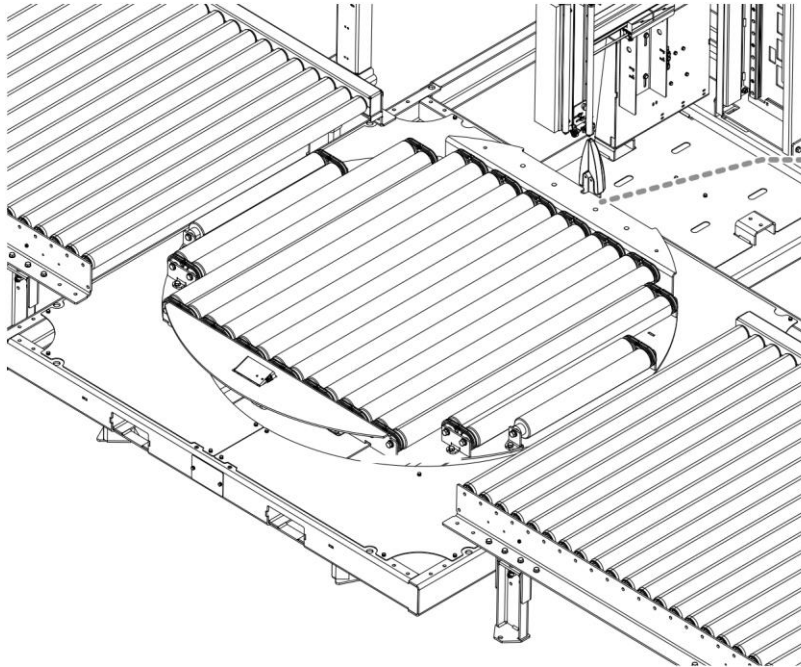
### 3.5.1. CLAMPING UNIT

A) **Solenoid valve:** used to activate the pneumatic cylinder of the clamping unit.



**Important**

For further details see the pneumatic scheme.



### 3.5.2. CUTTING - PRESSING (SEALING) UNIT

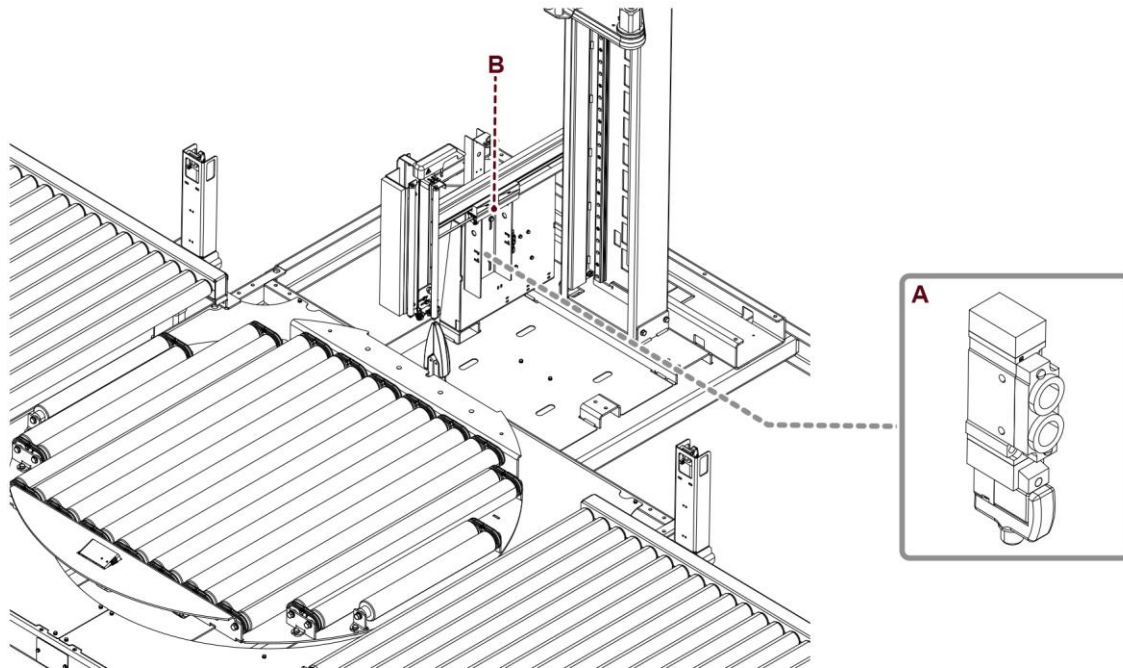
The figure shows the position of the devices.

- A) Solenoid valve: activates the pneumatic cylinder used to shift the cutting arm.
- B) Pneumatic cylinder: activates the movement of the cutting arm.



**Important**

For further details see the pneumatic scheme.

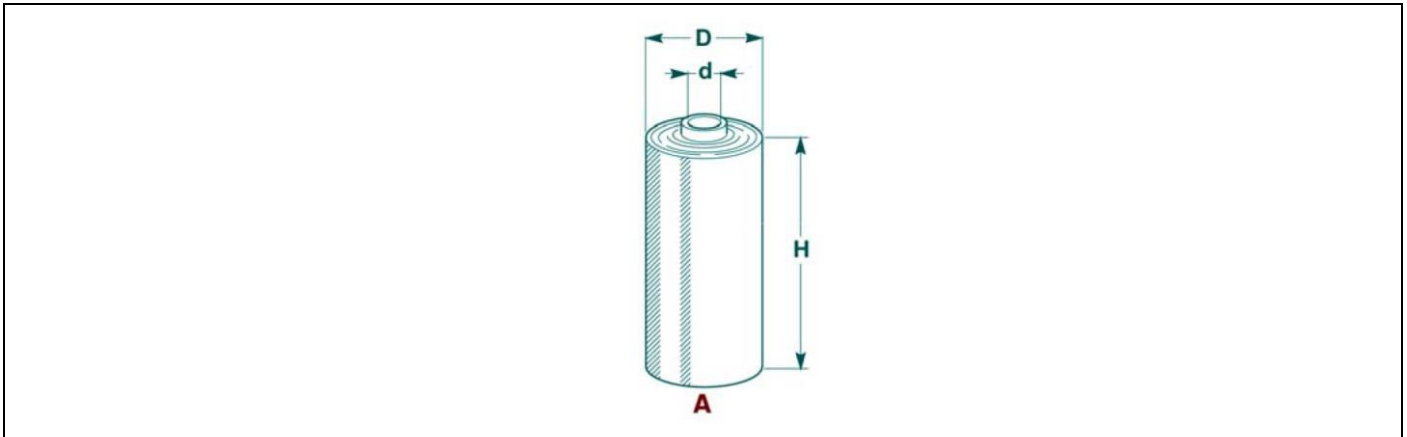




### 3.6. TECHNICAL SPECIFICATIONS

The set of technical data (dimensions, production data, etc.) related to the machine concerned are provided in the layout.

#### 3.6.1. SPOOL FEATURES



Description	Unit of measurement	Value
<b>Film reel dimensions</b>		
Maximum outer diameter (D)	mm	300 (11,8 inch*)
Reel height (H)	mm	500 (20 inches*)
Internal diameter (d)	mm	76 (3 inch*)
Film thickness	µm	12÷30 (50÷120 gauge*)
Reel pin length	mm	515 (21 inch*)

(\*) For “America” reel version.



**Important**

Use high-quality pre-stretchable film for high pre-stretch values.



**Danger - warning**

Do not use reels with different dimensions.

### 3.7. NOISE LEVEL

Detection of average value performed during operation.

Lp = 66.5 [dB (A)]



**Danger - warning**

Prolonged exposure above 75 dB (A) can be harmful. The use of protection devices is recommended (earmuffs, ear plugs, etc.).

## **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.

## 5. INFORMATION ON ADJUSTMENTS

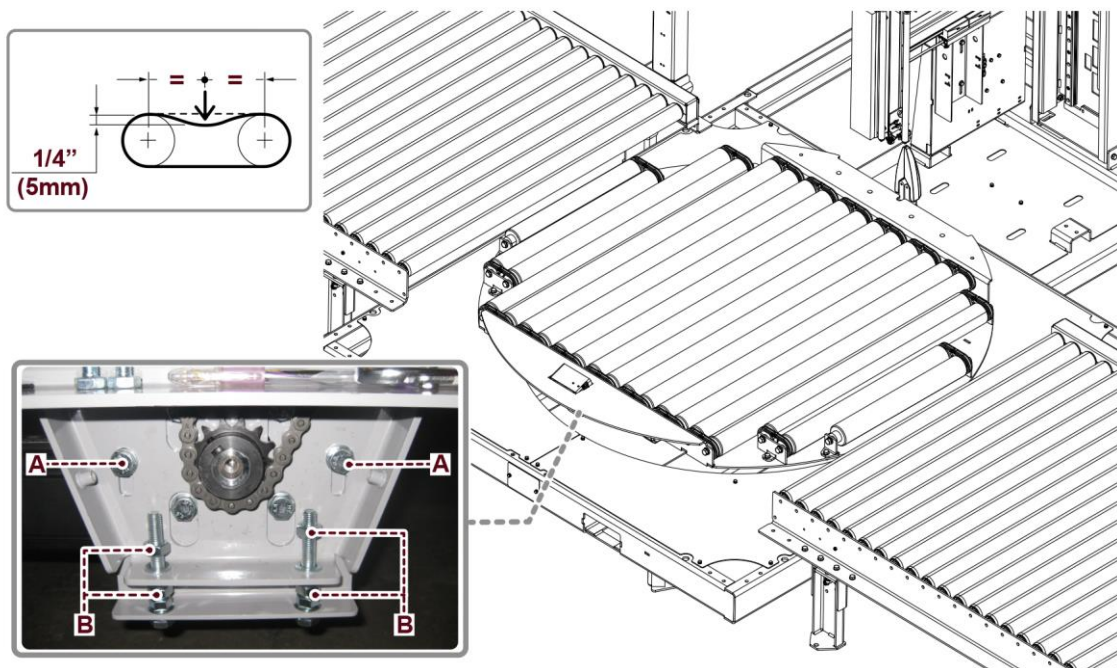
### 5.1. RECOMMENDATIONS FOR ADJUSTMENTS

- 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. ROLLER CONVEYOR CHAIN ADJUSTMENT

Proceed as follows.

1. Loosen the screws (A)
2. Act on adjustment nuts (B) to adjust the chain.
3. Tighten the fastening screws (A).



### 5.3. FILM SPOOL FEEDING

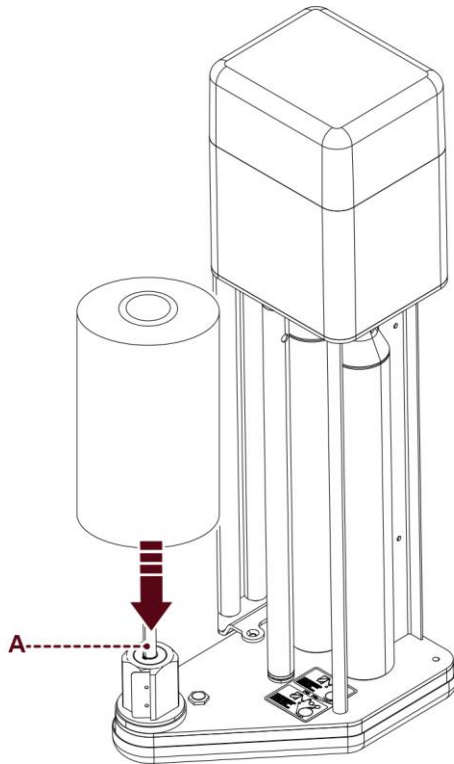


**Important**

Access the area only through the suitable door (interlocked mobile guard). Make sure that such door remains open during the whole reel change phase.

Proceed as follows.

1. Insert the new reel in the film carriage (A).
2. Unwind the film following the path indicated on the suitable plates.
3. Attach the end of the film to the clamp unit (see the chapter Clamp).
4. Exit the reel loading area and close the access door; the machine is now set to be started with “automatic operating cycle”.

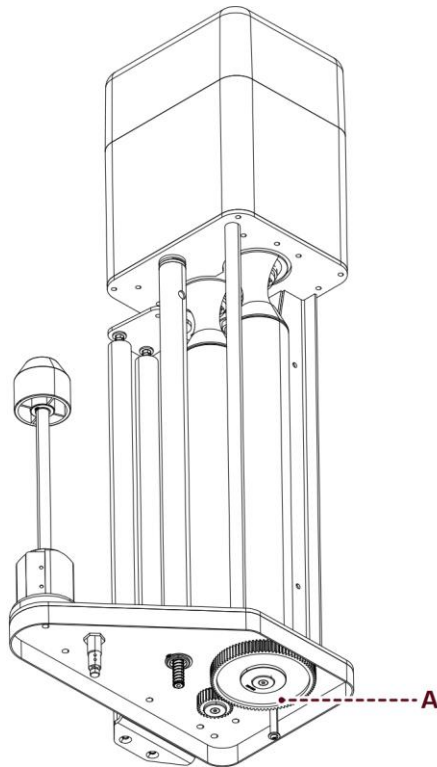


#### 5.4. PRE-STRETCH VALUE CHANGE

Proceed as follows.

1. Stop the machine
2. Deactivate the main electrical disconnecter to set the machine to safety conditions.
3. Remove the protection guard.
4. Replace the gear wheels (A) according to the desired pre-stretch percentage.
5. Refit the guard when finished.
6. Activate the main electrical disconnecter.

The machine is in operating conditions.



**Important**

Set the pre-stretch based on the film specifications (see the manufacturer's technical data sheet).

## 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.
- Daily, before each use of the machine, check that it stops by pressing the emergency button.



#### **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.

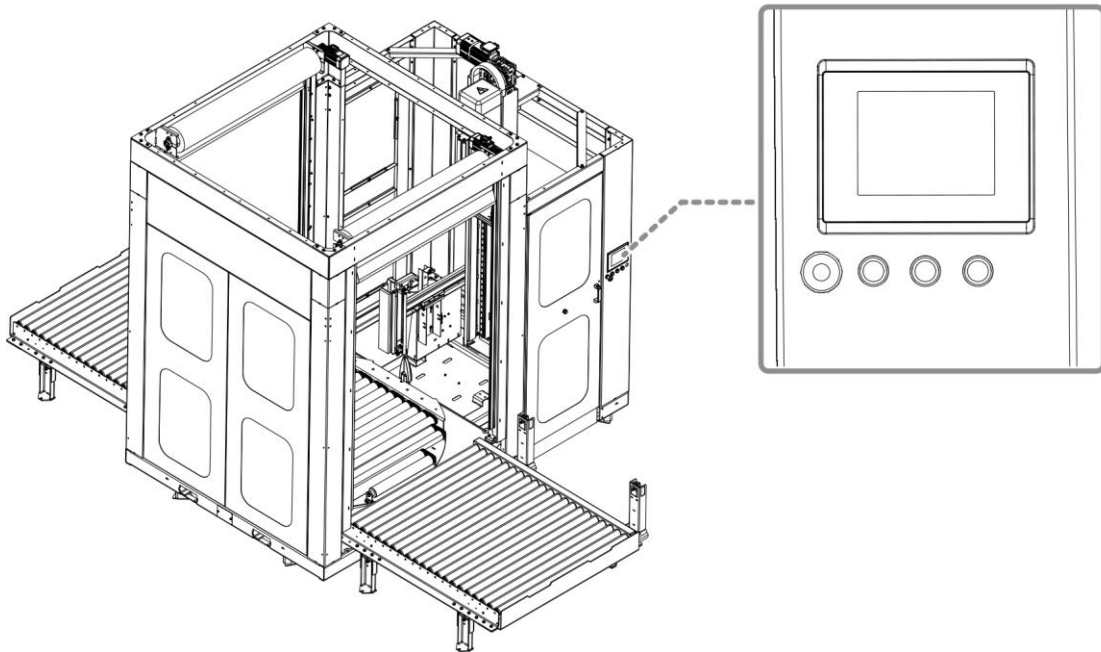
Only carry out the operations foreseen by the Manufacturer and do not tamper with any device to obtain different performance levels.

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 panel is an operator's interface device for monitoring and controlling the machine's devices. It allows setting the working parameters and checking all the operating conditions of the machine.



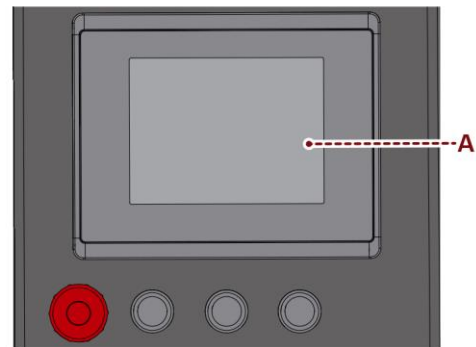
### Description of touch-screen panel

#### A) Operator's panel - Touch-screen multifunction keyboard.

It allows displaying and setting the machine cycle parameters.

It features a touch-screen display that allows activating the various functions by simply "touching" the keys 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, performing some commands, etc.



#### Important

The touch-screen panel can accept only one pressure point at a time.

#### Damage to the touch screen.

Sharp or pointed objects may damage the touch-screen synthetic material surface. Touch the operator's panel touch-screen only with your finger or with the special pen.

#### Activation of unintentional actions.

If several control objects are touched at the same time, unintentional actions may be activated. Touch only one control object at a time on the display.

## Description of controls

### B) "Motor start / Reset" button (blue light)

#### Blinking light:

The machine is not enabled. Press the button to enable the machine.

#### Steady light:

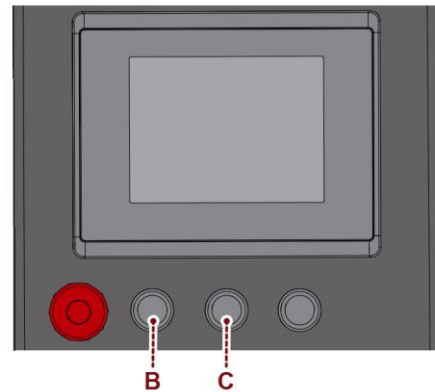
When the machine is in an emergency condition, a short pressure of this button silences the buzzer, while a long pressure of this button directly resets the emergency. When the machine is running in manual mode, a long pressure of this button brings the machine back to its home position.

### C) "Start/Stop" button (white light)

When the machine is running in manual mode, press this button for the time suitable to set the machine to automatic mode.

When the machine is running in automatic mode, press the button to stop the machine in manual operating mode.

When the machine is running in manual mode, if it is ready to set to automatic mode the button will start flashing.



## Description of safety controls

### D) "Normal stop" button (black)

Press this button to stop the machine in manual mode and disable the automatic cycle.

### E) "Emergency stop" button

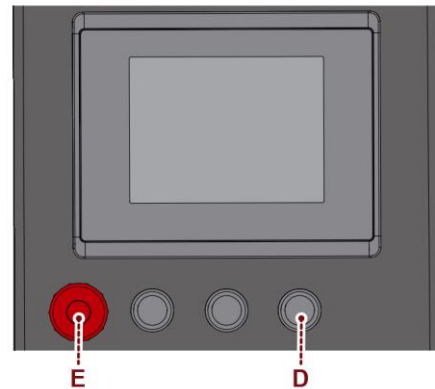
Mushroom-head red button. If pressed during operation it immediately stops all functions of the machine.

To bring the machine back to the starting conditions press the reset button.



#### **Caution - warning**

Avoid using the emergency button for standard stops of the machine.

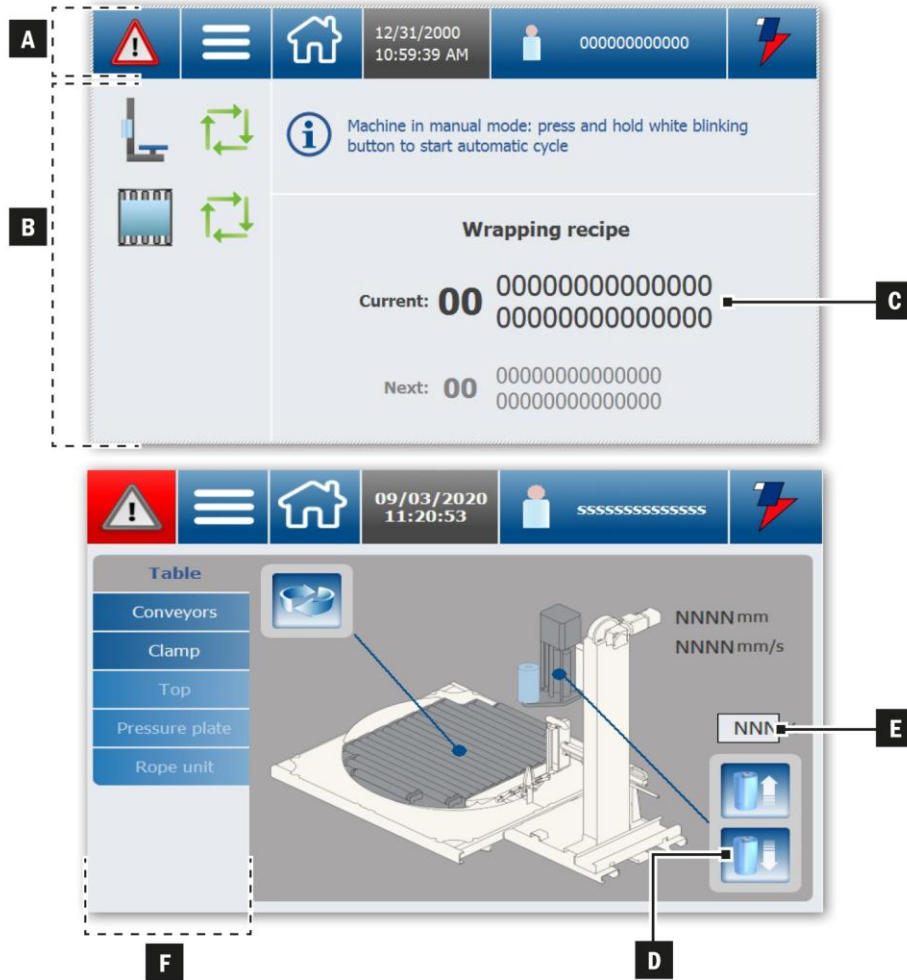




### 6.3. USING THE PANEL

The operator's panel pages consist of:








- A) **Top navigation bar:** always visible.
- B) **Page body:** It can include icons, read-only values (C), buttons (D), editable parameters (fillable fields) (E) and navigation tabs (F).



### 6.3.1. TYPE OF KEYS AND INDICATORS

The buttons in the pages can be clickable or not clickable.



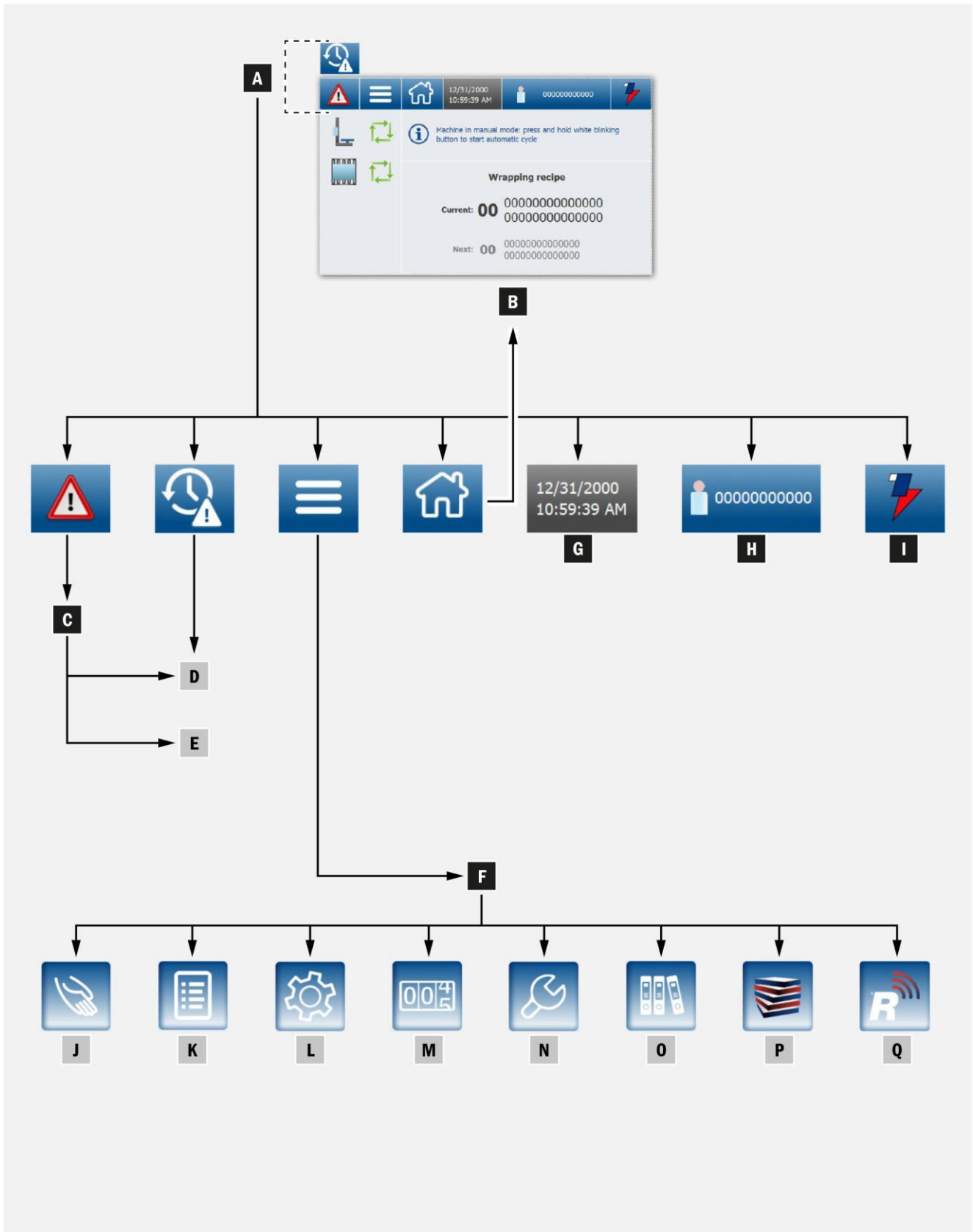
Type	Example	Function
Button		Not clickable
		Clickable -> Not pressed
		Clickable -> Pressed
Indicator dot, not clickable		Off
		On
Switch, clickable		Off
		On
Fields	0000 mm 0000 mm/s	Read-only
	<input type="text" value="000%"/>	Fillable



**Important**

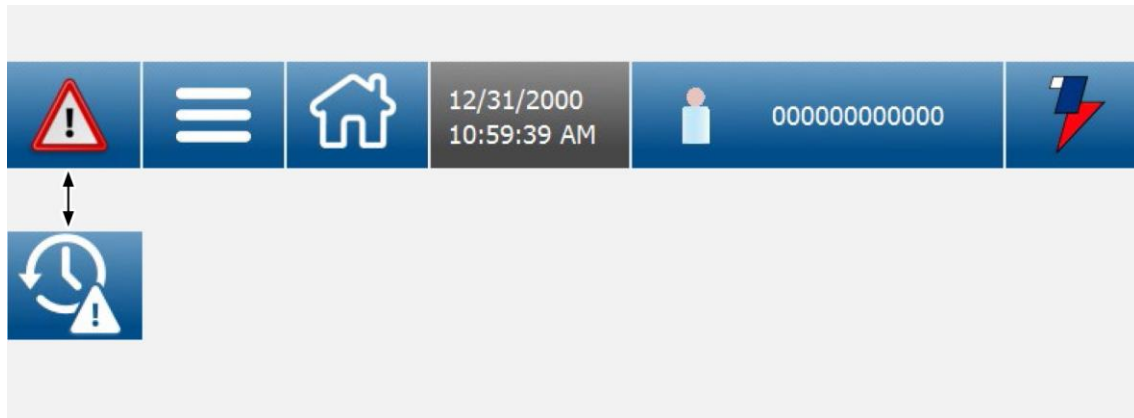
The performed modifications are applied immediately and are stored automatically.








6.3.2. OVERVIEW OF PANEL PAGES



- A. Navigation bar
- B. Main page
- C. Warning list page
- D. Alarm log
- E. Troubleshooting / Sensors
- F. Menu page
- G. Date / time indicator
- H. User page
- I. Contacts page
- J. Manual controls
- K. Recipes
- L. Settings
- M. Counters
- N. Maintenance
- O. Manuals
- P. Film test
- Q. R-Connect

## 6.4. TOP NAVIGATION BAR








Key	Icon	Description
<b>Warnings / Alarm log</b> (The icon may change depending on the status)		There are signals (faults, anomalies or useful warnings during machine operation). Pressing this key allows accessing the warning list page.
		No alarms are present. Pressing this key opens the Alarm Log.
<b>Menu</b>		Pressing the key will open the Menu page.
<b>Main page</b>		Pressing this key will open the main page.
<b>Date and Time</b>		View of set date and time. These values can be edited from the page.
<b>User</b>		This key indicates the currently logged in user. Pressing this key will open the User management page.
<b>Contacts</b>		Pressing this button allows accessing the manufacturer's reference page.

## 6.5. MAIN PAGE

The first page displayed when the panel is switched on is the Main page. This page can be accessed at any moment by pressing the main page key (A) from the top navigation Bar. This page is for display only and describes the machine operating status. It does not contain any compilation parameters or clickable keys, except for the top navigation Bar.



Control	Description	
<b>Operating status of machine and conveyors (B)</b> The icon for the operating status (C) is next to the machine/conveyors icon.		Manual status
		Automatic status
		Home position reset
		Alarm status
<b>Wrapping recipe box (D)</b>	0000 0000	<b>Current:</b> currently used wrapping recipe <b>Next:</b> next wrapping recipe
<b>Info Box (E)</b> Information on machine status and current operation		The following indications can be found in the Info box: <ul style="list-style-type: none"> <li>- Automatic cycle: wrapping</li> <li>- Automatic cycle: waiting to unload wrapped product</li> <li>- Automatic cycle: waiting for a product to wrap</li> <li>- Automatic cycle: machine is stopping</li> <li>- Automatic cycle: loading/unloading product</li> <li>- Film finished or broken</li> <li>- Machine is starting, please wait...</li> <li>- Machine in alarm: press notifications button (top left corner of the screen) for further details</li> <li>- Machine in manual mode: press and hold white blinking button to start automatic cycle</li> <li>- Machine in manual mode: press and hold blue reset button to move the machine back in position</li> <li>- Doors are open</li> <li>- Press blue reset button to energize the machine</li> </ul>

## 6.6. "MENU" PAGE



Press the menu key (A) from the top navigation bar to access the relevant page, from which it is possible to access the various display sections:

- B. Manual controls
- C. Settings
- D. Maintenance
- E. Recipes
- F. Counters
- G. Manuals
- H. Film test
- I. Warnings






## Description of menu pages

All display sections feature:

- A. Top navigation bar, clickable
- B. Navigation button on the left side tabs.
- C. Tab content.



The pages of the side menu can be clicked or not, depending on whether they are present or not. The colour of the key indicates the status.

	Key clicked (tab open)
	Key clickable (tab present / unit enabled)
	Key not clickable (tab not present / unit disabled)



### Important

The number of pages and indicators may change depending on the type of machine configuration.

### 6.7. "MANUAL CONTROLS" PAGE



Press this key from the Menu page to access the manual controls section, from which it is possible to activate each single unit of the machine in case of maintenance or check, before starting the automatic cycle.



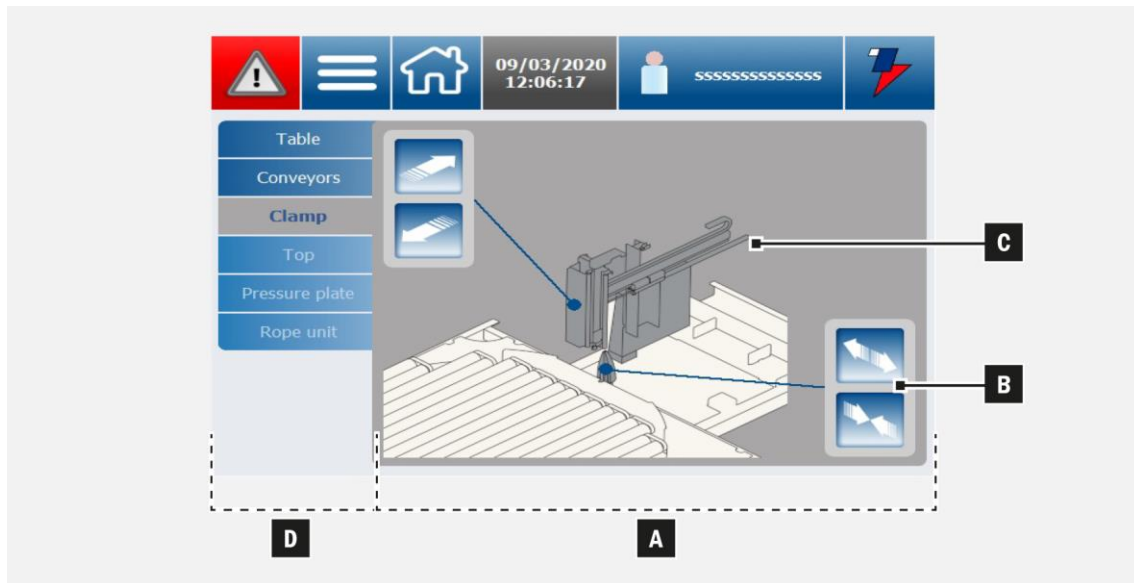
**Important**

It is possible to use the manual controls only if the machine is running in manual mode.

By means of the controls present in this page it is possible to manually perform all the manoeuvres related to conveyors and machine.

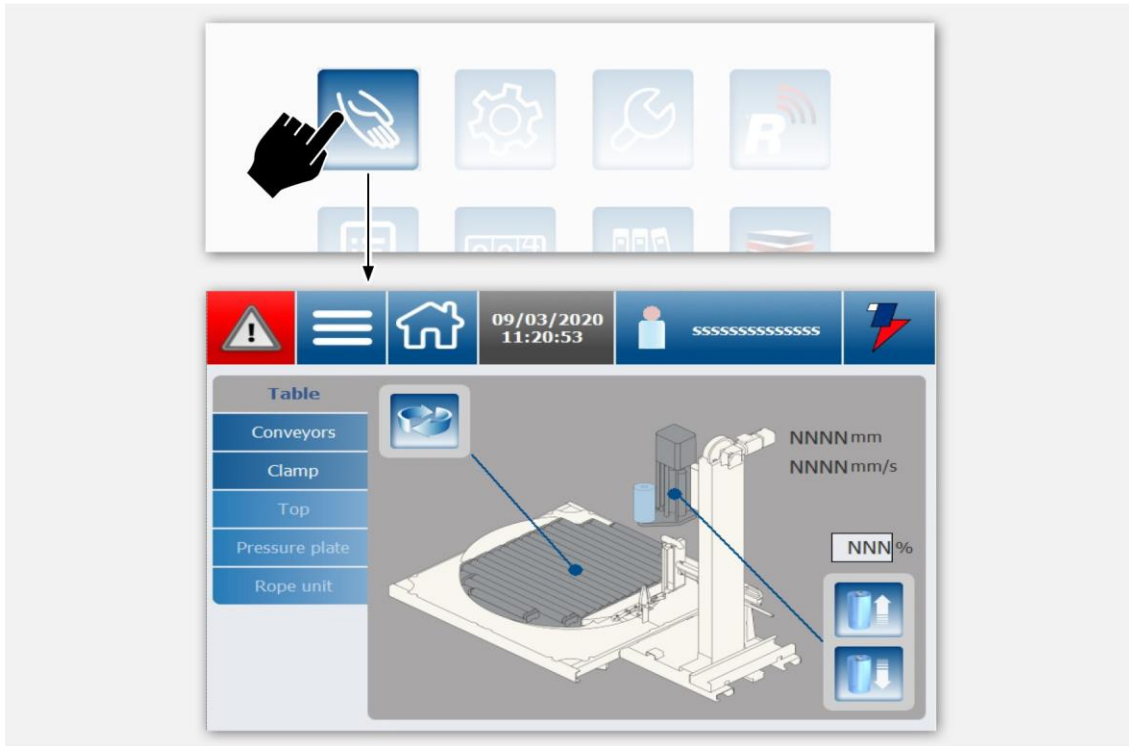
The central page (A) shows the machine unit with the manual controls (B) which can be used for the indicated parts. By pressing the key, the part (C) is commanded to move as visually indicated by the arrows.




The side menu (D) includes the units which make up the machine.



### 6.7.1. ROTARY TABLE

The first page relates to the operations relevant to the controls of the rotary table.



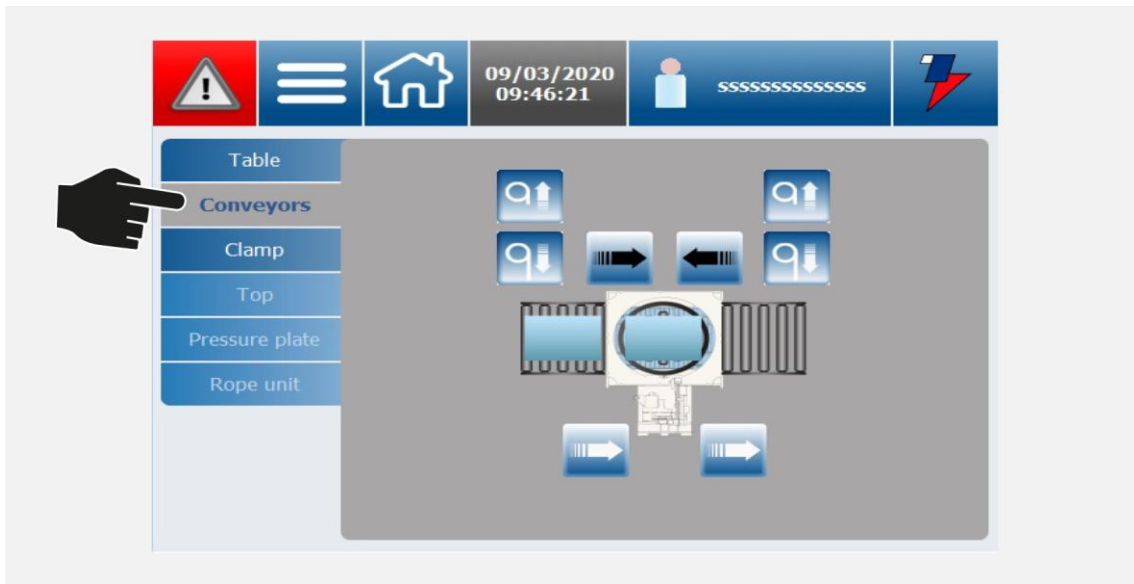
	Rotation of machine rotary table
	Upstroke of pre-stretch carriage / Downstroke of pre-stretch carriage
	Percentage of the speed at which the carriage can move in manual mode. This parameter can be edited by pressing it and entering the value in the numeric page.

#### Read-only parameters

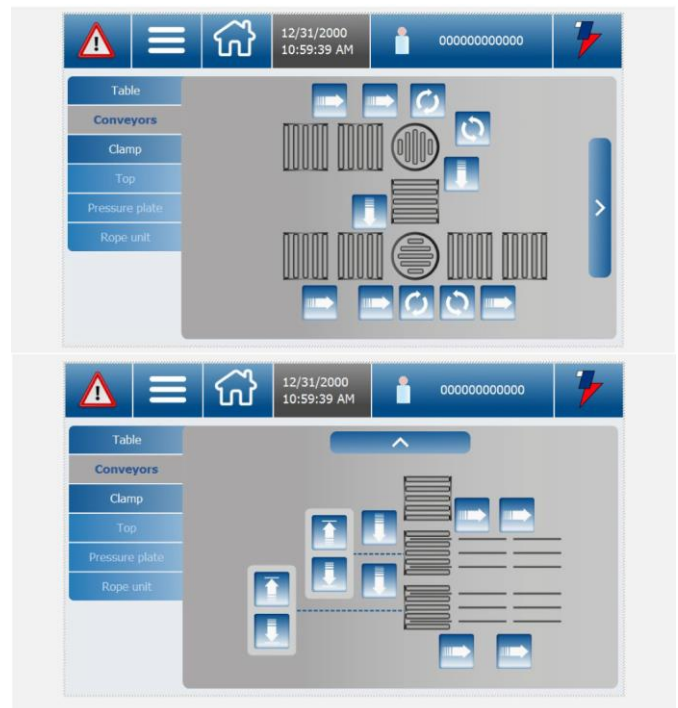
0000 mm	Instantaneous position of the carriage (corresponding to the height of the top of the reel from the ground).
0000 mm/s	Carriage instantaneous speed.






### 6.7.2. CONVEYORS

The second page relates to the controls relevant to the conveyors and represents the line of the machine.



Conveyors page changes according to the configuration chosen by the customer. It faithfully represents the line, made up of roller conveyors and rotary tables. Use the arrow keys to control every single conveyor.

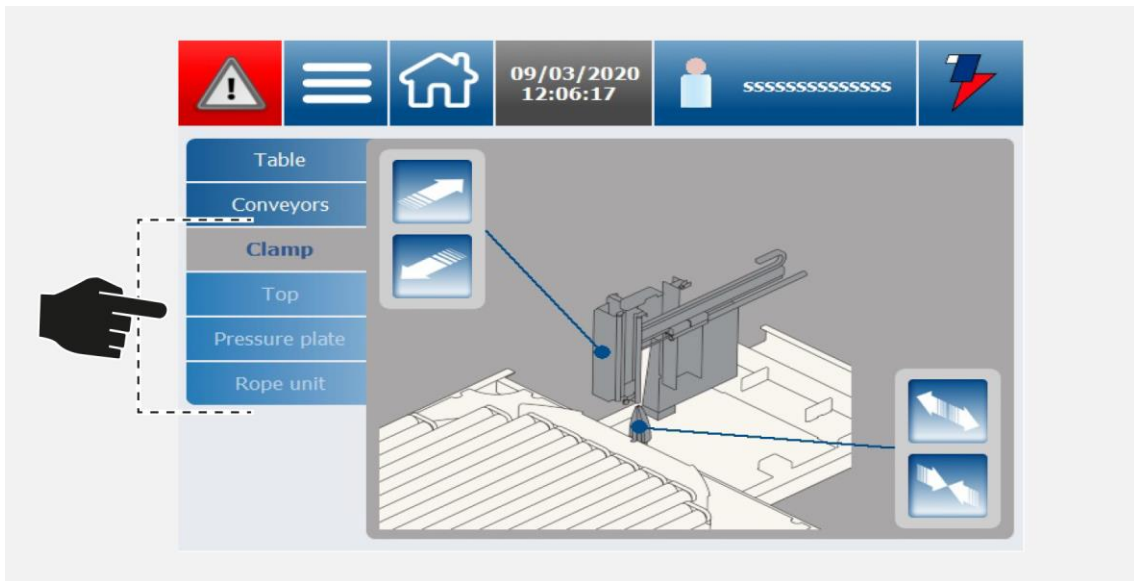


	<p>They allow lifting and lowering the roll doors</p>
	<p>They allow overriding the roller conveyor at machine centre to manually centre and position the pallet.</p>
	<p>They allow moving the conveyors adjacent to the icon.</p>
	<p>They allow the table to be turned.</p>
	<p>They allow navigation towards the other conveyor system areas.</p>








### 6.7.3. CLAMPING UNIT

The next pages refer to the optional units that may be installed on the machine.

The following pages are ONLY present if the corresponding unit is installed on the machine and may vary according to the model.



Below is the list of the possible commands of the various pages of the optional units.

	Part forward / backward movement
	Part opening / closing
	Part upstroke / downstroke
	Pressure plate upstroke / downstroke
	Top roller upstroke / downstroke
	Bottom roller upstroke / downstroke
	Film cutting

#### Read-only parameters

<b>0000 mm</b>	Some read-only parameters could be present next to the control they refer to. These parameters represent the position of the element that may be moved through these controls.
----------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## 6.8. "SETTINGS" PAGE

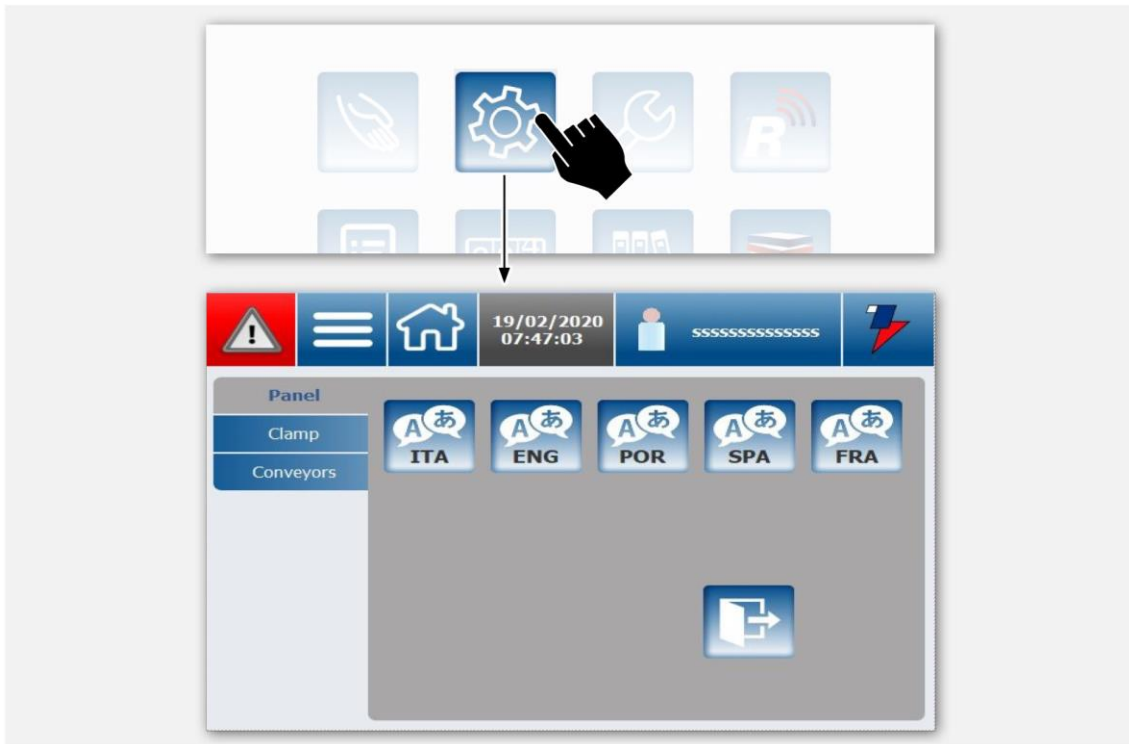




By pressing this key from the Menu page it is possible to access the SETTINGS section, from which machine parameters can be viewed and set. These parameters will apply to all wrapping recipes.

General parameters include all machine functional timers (sealing time, cooling time, pallet positioning time, etc.). In these pages it is also possible to enable or disable the sealing device.

For all present parameters, press on the parameter value to edit it through the following alphanumeric page.





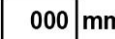
### 6.8.1. PANEL



	<p>Change language                  Press this key to change the software language.                  Available languages vary depending on the machine configuration.</p>
	<p>Quit Robopac pages and back to Windows CE.</p>
<p>mm:gg:aaaa                  hh:mm:ss AM/PM</p>	<p>Change Date/time                  Press the date and time fields to change their settings.</p>

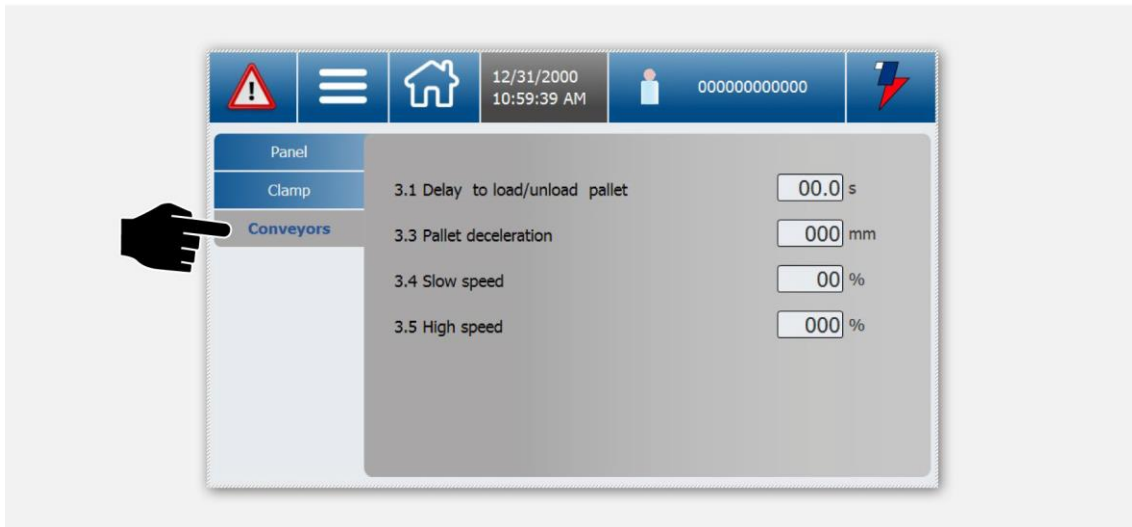
## 6.8.2. CLAMP



	<p><b>1.1 Welder</b> Enables/disables the sealer</p>
	<p><b>1.2 Welding time</b> Time necessary to complete film sealing.</p>
	<p><b>1.3 Cut unit forward time</b> Cutting unit dwell time (including sealing time) in the forward position.</p>
	<p><b>1.4 Welder cooler</b> Time necessary for sealer cooling, after completing the sealing cycle.</p>
	<p><b>1.5 Reel carriage upward for clamp</b> Carriage upstroke at the beginning of the wrapping cycle, in order to reduce the film tail length.</p>



### 6.8.3. CONVEYORS



<input type="text" value="00.0"/> s	<b>3.1 Delay to load/unload pallets</b> Delay time for pallet positioning at centre of the machine
<input type="text" value="00.00"/> s	<b>3.2 Delay for pallet positioning</b> Delay time for next pallet entry.
<input type="text" value="000"/> mm	<b>3.3 Pallet deceleration</b> Deceleration space for pallet positioning.
<input type="text" value="00"/> %	<b>3.4 Slow speed</b> Speed of pallet movement towards machine centre during deceleration. It is expressed as a % of maximum speed.
<input type="text" value="000"/> %	<b>3.5 High speed</b> Speed of pallet movement towards machine centre during loading / unloading. It is expressed as a % of maximum speed.




## 6.9. "MAINTENANCE" PAGE



By pressing this key from the Menu page it is possible to access the MAINTENANCE section.

### 6.9.1. GENERAL






<input type="checkbox"/> OFF <input checked="" type="checkbox"/> ON	<b>10.1 Timeout</b> Disables all machine timeouts.
<input type="checkbox"/> OFF <input checked="" type="checkbox"/> ON	<b>10.2 Cutter cleaning</b> Activates cutting unit cleaning.
<input type="checkbox"/> OFF <input checked="" type="checkbox"/> ON	<b>10.3 Ethernet</b> Activates Ethernet communication.
	Enable/disable automatic pallet loading.
	Manual carriage upstroke to reach carriage maximum speed.
	Button for immediate machine stop.

### 6.9.2. CONVEYORS

From this page it is possible to force commands in case of faulty load transfer from one conveyor to the other. Input and output signals are listed in this page (machine centre and conveyor signals). The page may be different based on whether the machine central conveyor is managed by the customer (**B**) (conveyor already featured) or supplied by the manufacturer (**A**).



Pallet In	
In - PR (in)	“Pallet Ready” - Pallet ready to be received (input signal).
In - RTR (out)	“Ready to Receive” - Conveyor ready to receive the pallet (output signal).
In - EOT (out)	“End Of Transfer” - End of pallet transfer (output signal).
Pallet Out	
Out - PR (out)	“Pallet Ready” - Pallet ready to be received (output signal).
Out - RTR (in)	“Ready to Receive” - Conveyor ready to receive the pallet (input signal).
Out - EOT (in)	“End Of Transfer” - End of pallet transfer (input signal).
PIP (in)	“Pallet in Position” - Pallet in position for wrapping (input signal).
CS (in)	“Conveyor Stop” - Conveyor stopped (input signal).
MIP (out)	“Machine in Position” - Machine in position for pallet transfer (output signal).
EOW (out)	“End of Wrapping” - End of wrapping (output signal).
	Manual pallet loading/unloading operations.
	Signal override button Overrides the relevant signal until released. Signal status is indicated by the relevant indicator dot.
	Signal off/on.

## 6.10. "RECIPES" PAGE



Press this key from the Menu page to open Wrapping recipes section; wrapping recipe parameters can be set from this page.

Recipe Parameters are Wrapping settings that remain valid throughout the whole wrapping cycle and that could be different from recipe to recipe.

These parameters allow setting different types of wrapping and include, if present, any additional devices such as top, pressure plate, etc.

Moreover, it is possible to easily edit parameters or copy set parameters from a recipe to another one.

For all present parameters, press on the parameter value to edit it through the following alphanumeric page.











### **Important**

The number of keys and indicators may change depending on the type of machine configuration.

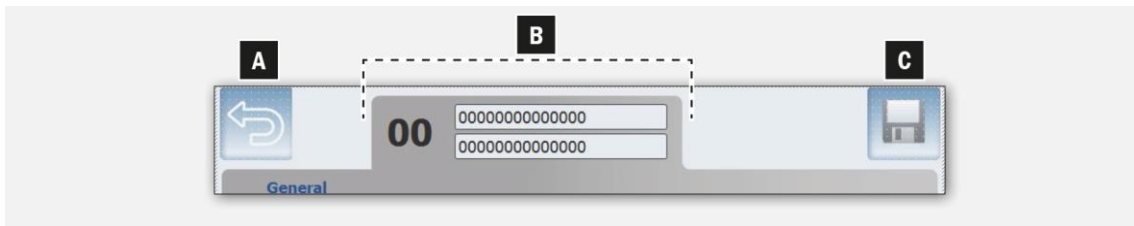
6.10.1. MAIN PAGE


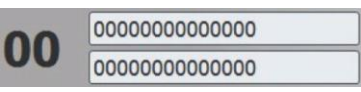



	<b>Edit</b> It is used to set or modify the parameters for the selected recipe.
	<b>Delete</b> It is used to delete the selected recipe
	<b>Copy</b> It is used to copy the parameters of the selected recipe
	<b>Paste</b> It is used to paste the data from a recipe into the selected recipe
	<b>Info</b> It opens the parameters page for the selected recipe
	<b>Archive</b> It is used to store recipes to an external USB device or restore any stored ones
	<b>Run</b> Runs the selected recipe
	<b>Scroll up/down</b> It is used to scroll the central list for a full view of the recipes

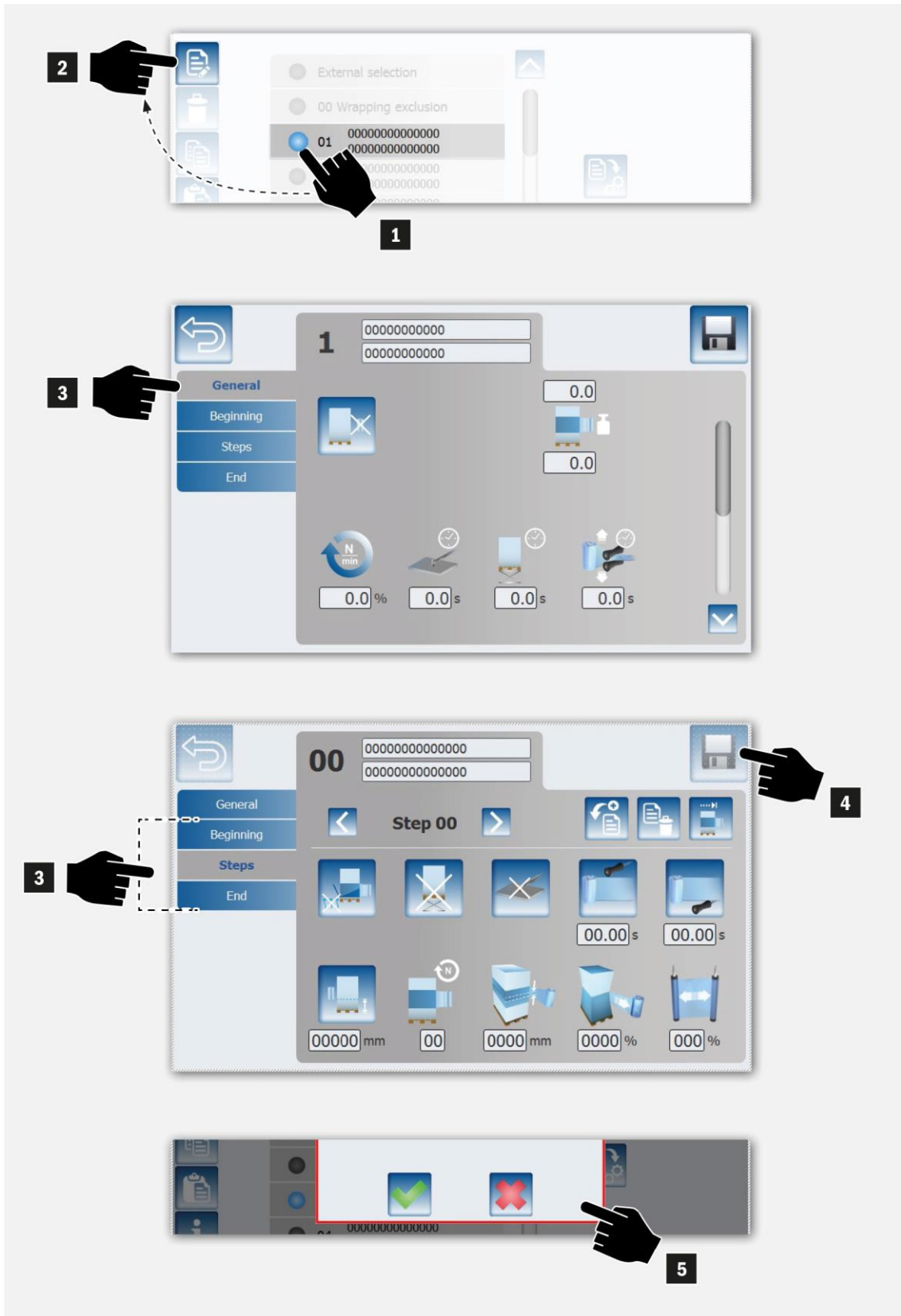
### 6.10.2. SUB-PAGES

The sub-pages of the Recipes section feature the following header that replaces the navigation Bar.



Ref.	Icon	Description
A		<b>Backward</b> It is used to go back to the previous page, cancelling any recent operations. If any changes have been made, upon pressing this key the user will be asked to confirm or cancel the request.
B		<b>Recipe name</b>
C		<b>Save</b> This key is used to save the operations performed. Upon pressing this key the user will be asked to confirm or cancel the request to save.

6.10.3. EDIT / SET



To edit/set the parameters of a recipe:

1. Select the line of the recipe to edit.
2. Press Edit to open the pages of the following editable parameters.
3. From the **"General"** page it is possible to set the parameters valid throughout the wrapping.  
From the **"Start"** page it is possible to set the parameters used at the beginning of the wrapping cycle.  
From the **"Steps"** page it is possible to set recipe steps settings. The pages show the steps to set all recipe parameters. Wrapping cycle setup and writing.  
From the **"End"** page it is possible to set the parameters used at wrapping cycle end (film cutting and clamping).  
From the **"R-Connect"** page (if present) it is possible to set the parameters used for the functions of the R-Connect portal.
4. Set all required parameters, then click "save" to confirm.  
User can at any time save the changes by pressing "save" or go back to recipe management page by pressing "back". If any changes have been made, the user will be asked to confirm each operation.























**Important**























Any changes will be cancelled when user quits the page without confirming the request to save.

5. Press **"V"** to confirm or **"X"** to cancel the operation.

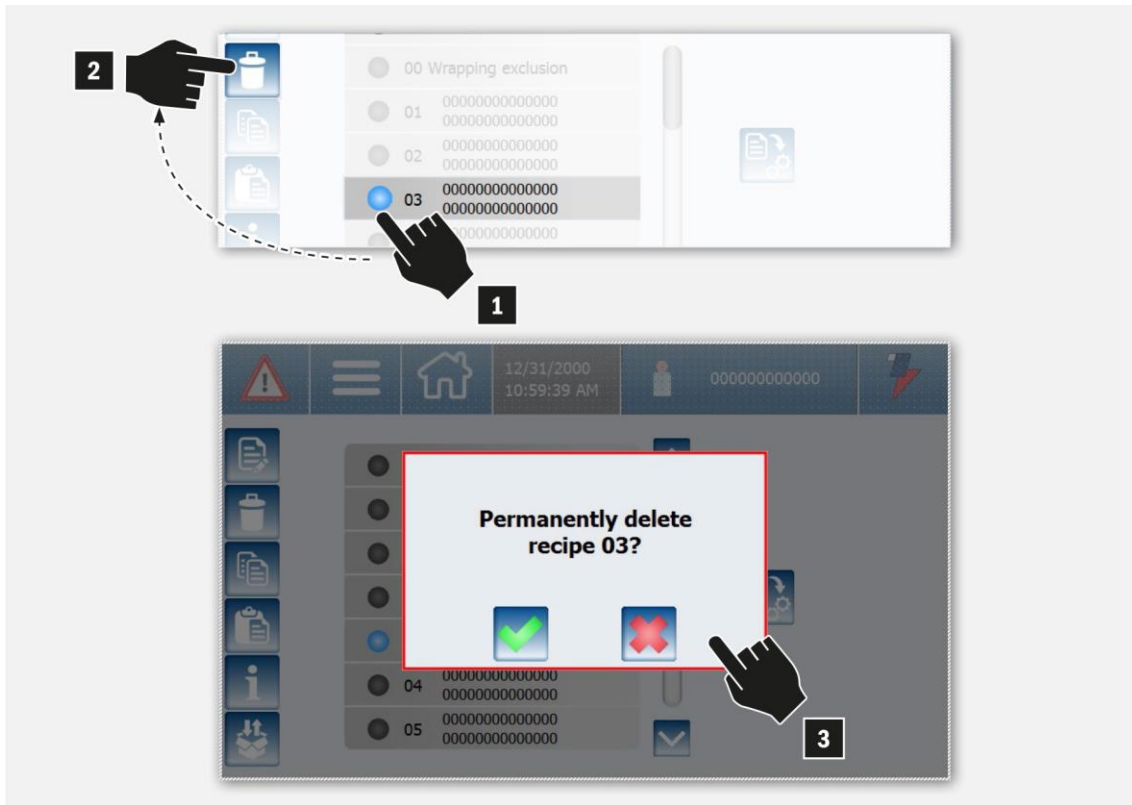


General page (parameters in common to all wrapping recipes)	
	Wrapping enabling / disabling.
 <input type="text" value="00.0"/> s	Delay of lower rope unit opening.
 	Top disabled / Top enabled before wrapping start.
       	Top enabled for waterproof cycle (after steps 2 - 3- 4 - 5 - 6 - 7 - 8).
 <input type="text" value="0000"/> mm	Enter Top sheet length.
 <input type="text" value="0000"/> mm	Top sheet release position.
 <input type="text" value="000"/> mm	Top Carriage downstroke for sheet positioning.

Wrapping Steps page	
	Use the arrow keys to scroll through the wrapping steps, from number 1 to the last one enabled (up to a maximum of 12)
	Press the button to enter a new setup step before the current step.
	Press the button to delete the current setup step.
	Intermediate step icon Indicates that there is a next setup page, i.e. a further step.
	Last step icon Indicates that the page is the last setup step. If pressed, it shifts to intermediate step icon. This is necessary to add other setup steps, up to a maximum of 12.

Beginning / Steps / End / R-connect screen pages			
		<b>Using the blows</b> Enable / disable blows from the bottom.	
		<b>Pressure plate</b> Enable / disable pressure plate	
Rope unit			
from the top	from the bottom	double	
			Rope unit disabled.
			Rope unit enabled only in the turns at a certain height.
			Rope unit always enabled, both in the turns at a certain height and during carriage shifting.
			Entry field under the button allows setting rope unit closing time.
		<input type="text" value="0000"/>	<b>Wrapping height</b> Press the button to select the height reference (pallet measure from the bottom or from the top); press on the value under the button (expressed in mm) to set the value of that height.
		<input type="text" value="00"/>	<b>Wrapping turns</b> Number of turns to be done at the above-specified height.
		<input type="text" value="0000"/>	<b>Film overlapping</b> (parameter missing in the first step of the recipe) Film overlapping to reach the height set in this step.
		<input type="text" value="0000"/>	<b>Film stretch on pallet:</b> enter stretch value.
		<input type="text" value="000"/>	<b>Film pre-stretch on pallet:</b> enter pre-stretch value. 0% corresponds to the lowest pre-stretch value, and 100% to the highest one.
		<input type="text" value="000.0"/>	<b>Rotary table rotation speed.</b>
		<input type="text" value="000.0"/>	<b>Minimum weight of the pallet deposited on the pallet in the last wrapping cycle:</b> enter the minimum film weight which, when exceeded, generates tickets on the R-Connect portal.
		<input type="text" value="000.0"/>	<b>Maximum weight of the pallet deposited on the pallet in the last wrapping cycle:</b> enter the maximum film weight which, when exceeded, generates tickets on the R-Connect portal.

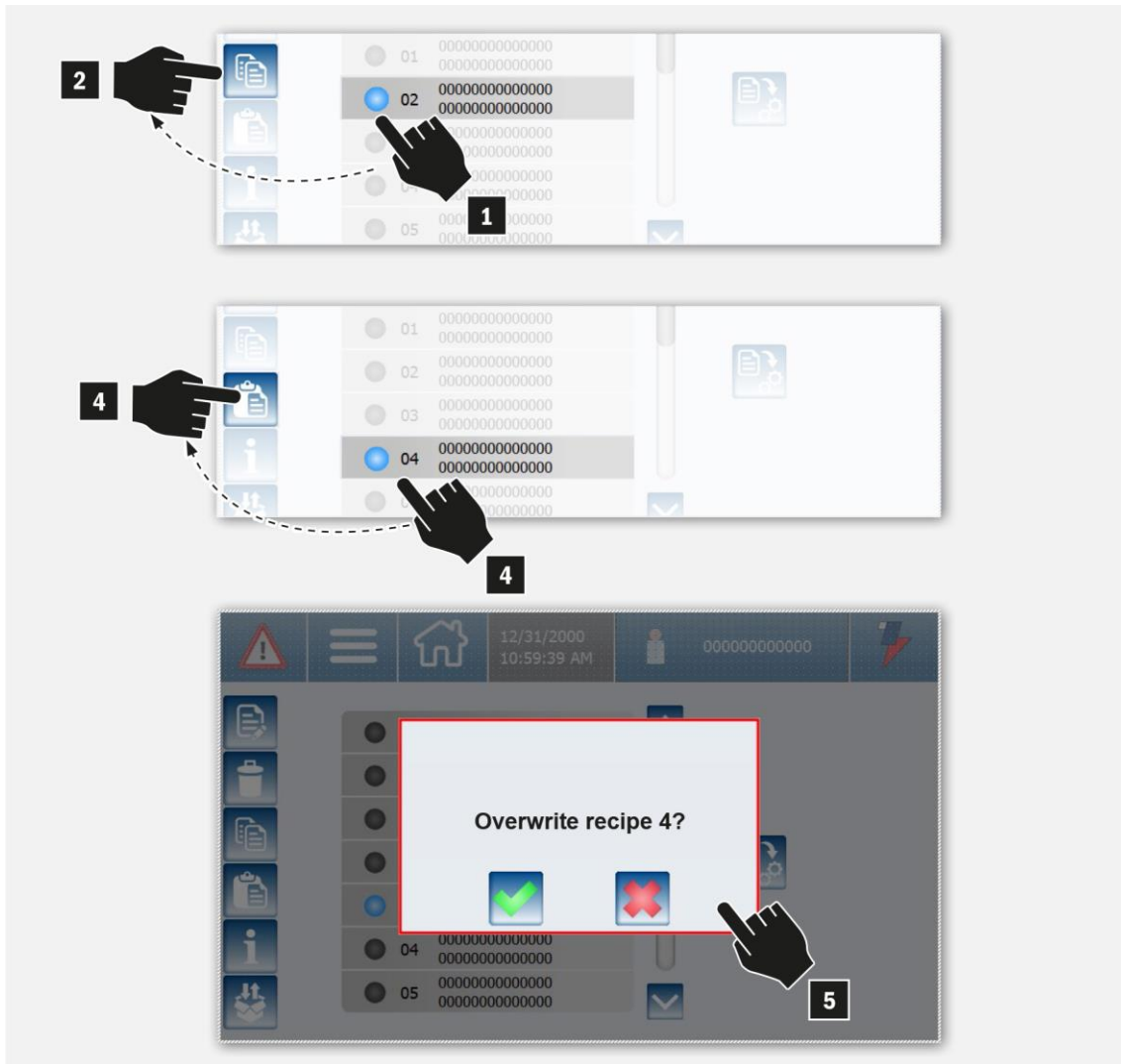
#### 6.10.4. DELETE



To delete a recipe:

1. Select the line of the recipe to delete;
2. Press “delete”;
3. Press “V” to confirm or “X” to cancel the operation.

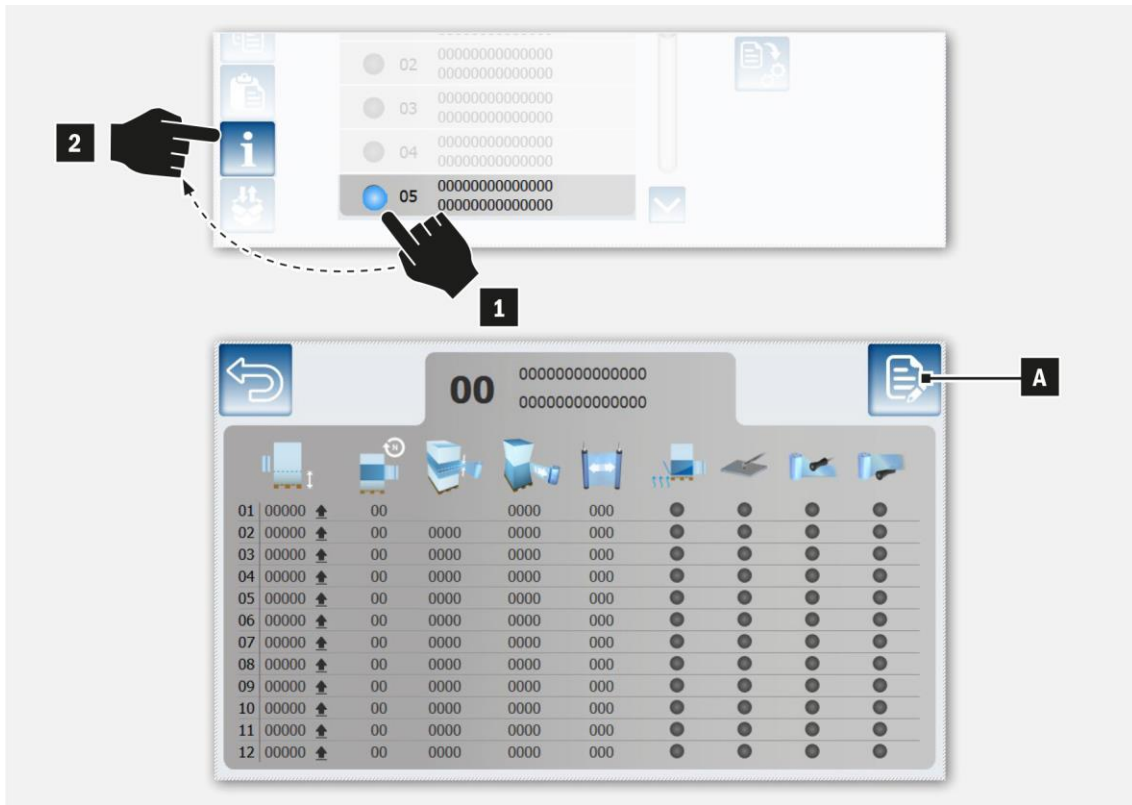
### 6.10.5. COPY / PASTE



To copy set parameters from a recipe to another one:

1. select the line of the recipe to copy;
2. press “copy” to load data from the selected recipe;
3. select recipe to which data should be pasted;
4. press “paste”;
5. press “V” to confirm or “X” to cancel the operation.

### 6.10.6. INFO

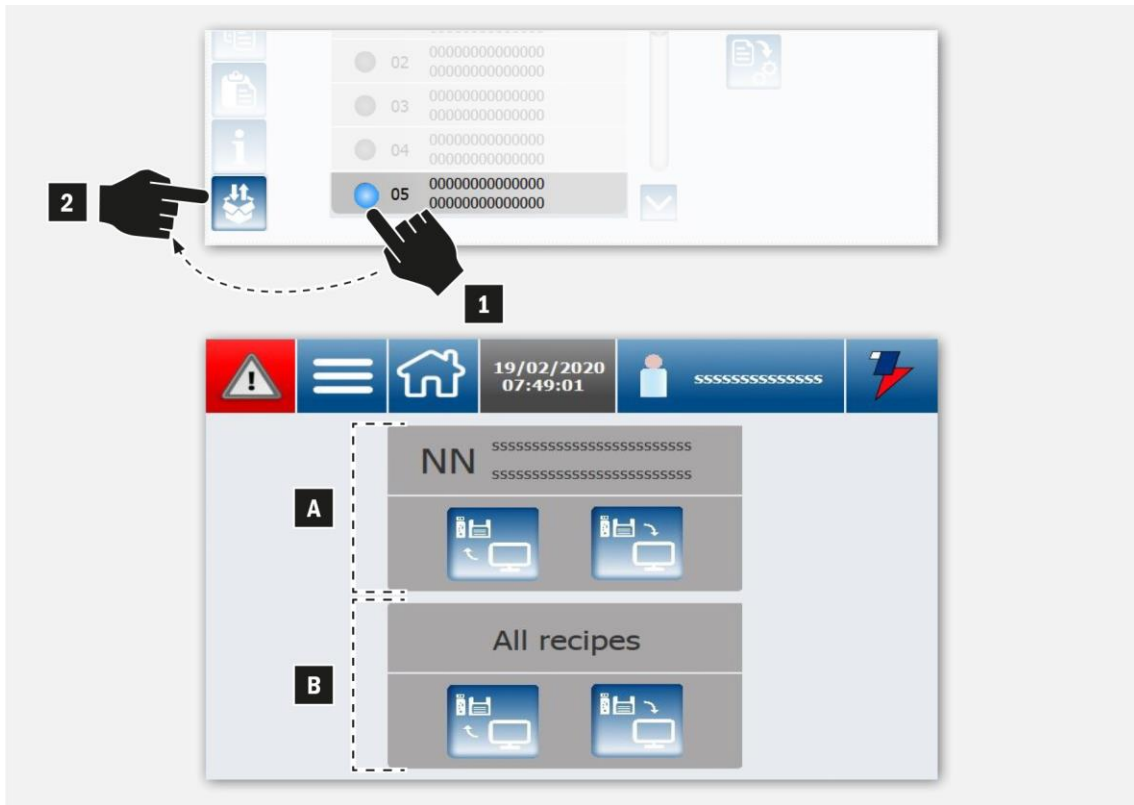


To view the parameters of a recipe:

1. select the line of the recipe to display;
2. press the “info” button to open the page of the set Parameters.



From the set Parameters page it is possible to press the “edit” button (A) to go back to “Recipes - Edit/Set” page and change recipe parameters.

6.10.7. ARCHIVE



To store a recipe:

1. Select the line of the recipe to store;
2. Press the “archive” button to open the page from which the user can store or restore recipes data.

Manual controls	
<b>A</b>	Selected recipe
<b>B</b>	All recipes
	Archive
	Restore

## 6.11. "COUNTERS" PAGE



By pressing this key from the Menu page it is possible to access the machine counters display section.

Through the commands in these pages, different information and data related to the production of the machine will be displayed:

- rotation speed;
- performed wrapping turns;
- upstroke/downstroke speed;
- total number of wrapped pallets;
- partial number of wrapped pallets (resettable);
- total working time.

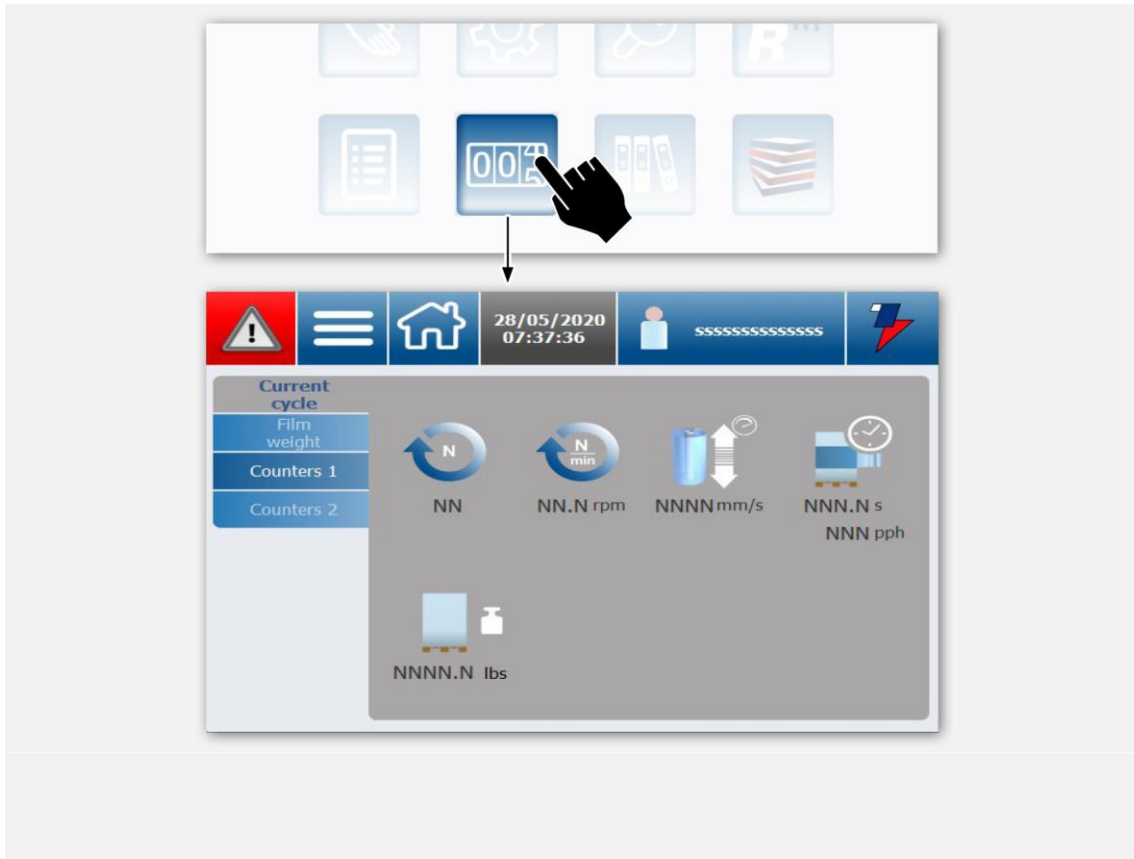







### **Important**

The details on these pages are only for display and can be used only for information. The only operation that can be performed is resetting the Wrapped Pallet Counter.

### 6.11.1. CURRENT CYCLE

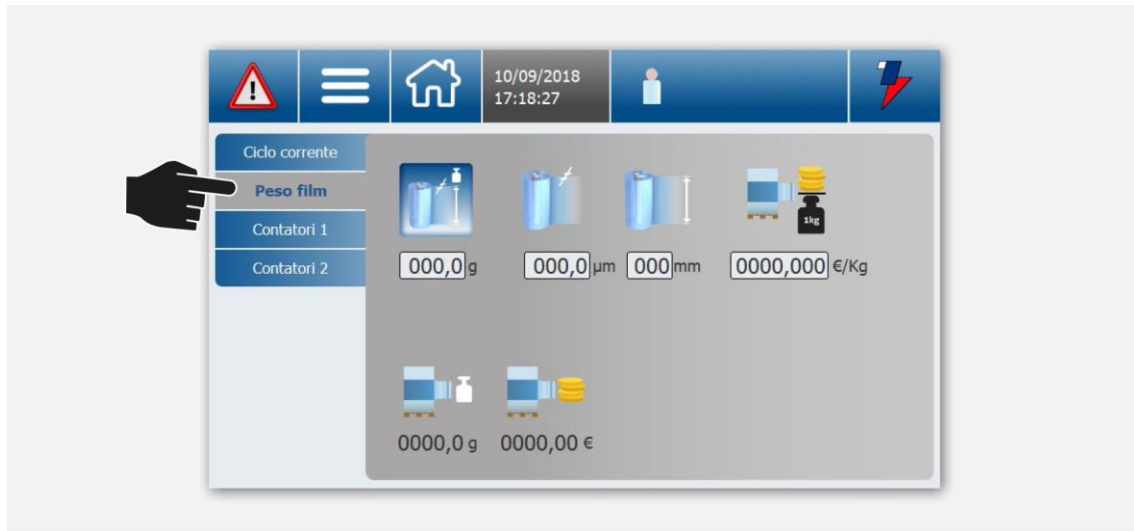
The first page refers to the operations concerning the current wrapping cycle or the one just completed.










 <b>000</b>	Total number of turns performed during wrapping.
 <b>00.0 rpm</b>	Rotary table rotation speed (rpm).
 <b>0000 mm/s</b>	Pre-stretch carriage instantaneous speed (upstroke/downstroke).
 <b>000.0 s 000 pph</b>	Wrapping cycle time and hourly production (machine production rate).
 <b>NNNN.N lbs</b>	Weight of the load that is currently being wrapped. This information will remain displayed until a new load is transferred into the machine

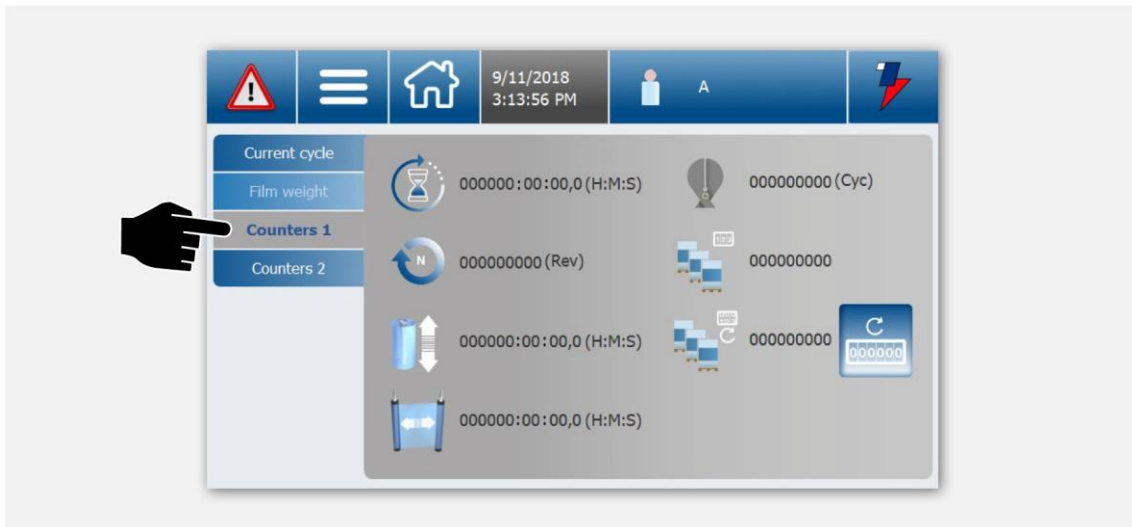










### 6.11.2. FILM WEIGHT (OPTIONAL)



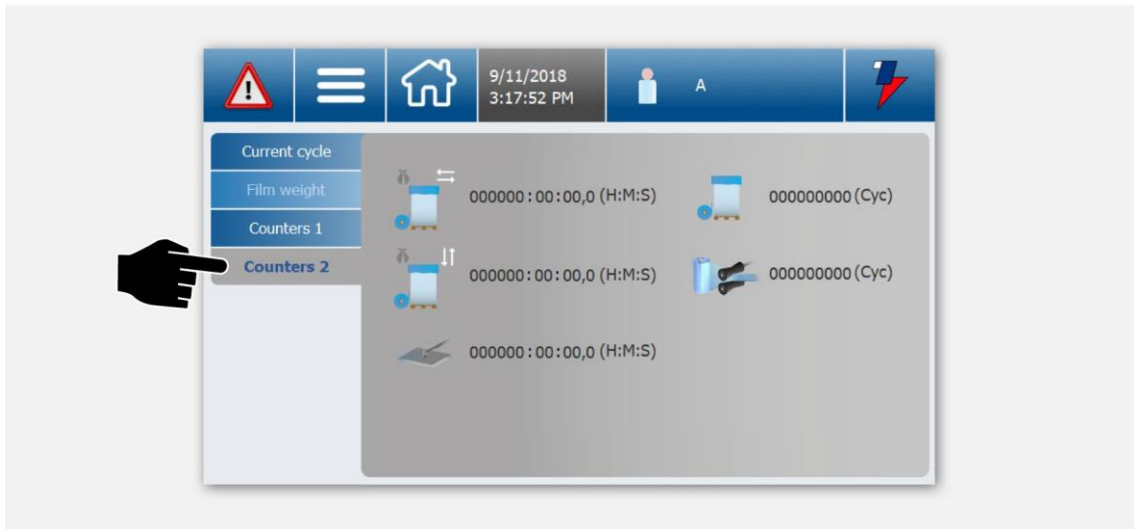
 <input type="text" value="000,0"/> g	Estimate of the film weight obtained indicating film height and thickness.
 <input type="text" value="00,0"/> g	Estimate of the film weight obtained indicating the weight of a 5-metre not pre-stretched film taken from the reel. If the button has been pressed, it is possible to enter the weight of the 5-metre film in the numeric field.
 <input type="text" value="000,0"/> μm	Film thickness.
 <input type="text" value="000"/> mm	Reel height.
 <input type="text" value="0000,000"/> €/kg	Cost of 1Kg film.
 <input type="text" value="0000,0"/> g	Weight of the film deposited on the pallet.
 <input type="text" value="0000,00"/> €	Cost of the film deposited on the pallet.






### 6.11.3. COUNTERS 1



	Total machine wrapping cycle time.
	Total number of machine turns.
	Total upstroke/downstroke handling time of pre-stretch carriage.
	Total rotation time of pre-stretch rollers.
	Total number of clamp cycles.
	Total number of wrapped pallets.
	Partial number of wrapped pallets (resettable).
	Partial counter reset button.

#### 6.11.4. COUNTERS 2



	H:M:S	Total time of Top forward/backward movement.
	H:M:S	Total Top upstroke/downstroke time.
	Cyc	Total number of Top cycles.
	Cyc	Total number of pressure plate cycles.
	Cyc	Total number of rope unit cycles (top and bottom).

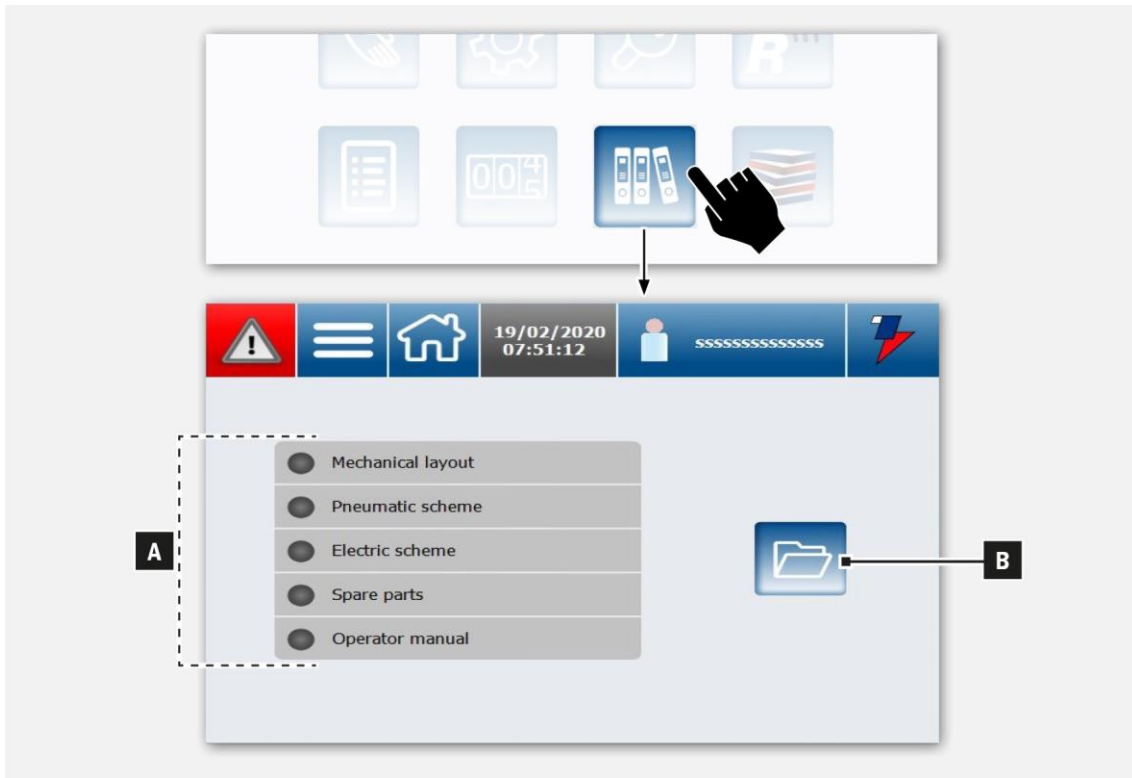
## 6.12. "MANUALS" PAGE




By pressing this key from the Main Page it is possible to access the Manuals page.

### Manuals page

The available documentation (A), in PDF format, can be downloaded from the Manuals page.



Icon	Description
	Open

Available documents:

- Layout
- Pneumatic scheme
- Electric scheme
- Spare parts
- Use and maintenance manual

To download a file, select it and click on the "Open" icon (B).

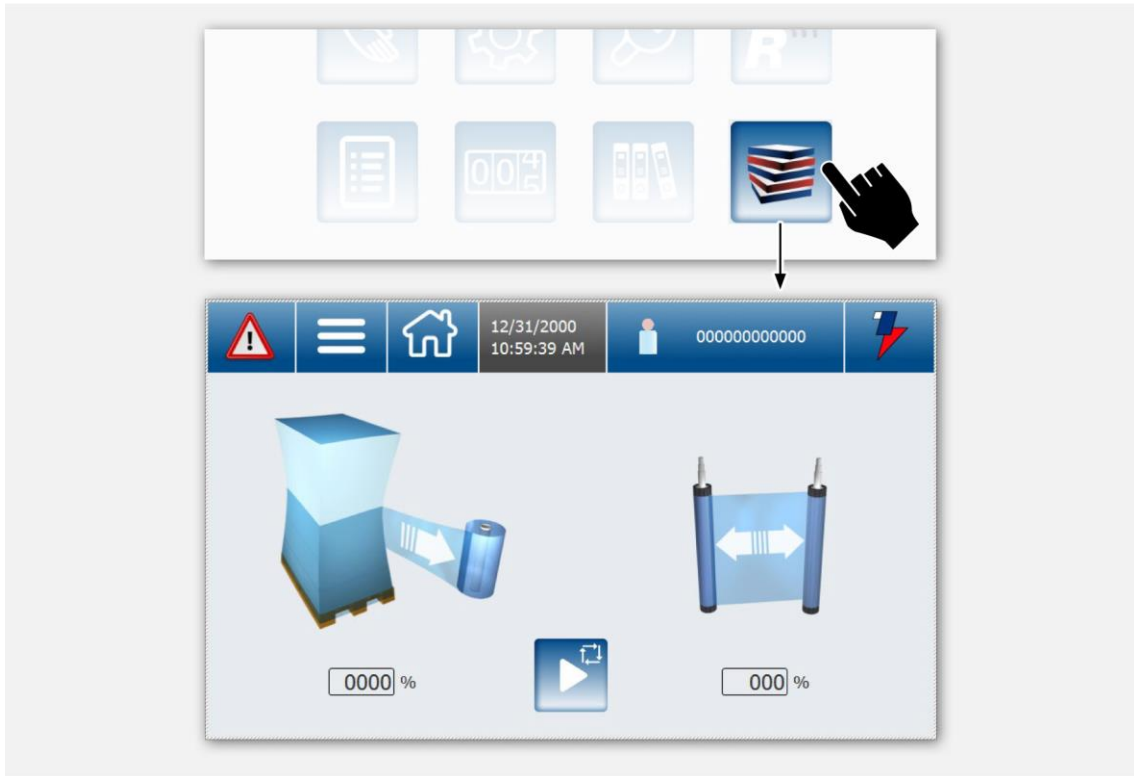
### 6.13. "FILM TEST" PAGE






By pressing this key from the Main Page it is possible to access the Film Test page.

#### Test page

Test cycle is used to evaluate film quality in an approximate manner. Position pallet at machine centre, activate "pre-stretch test cycle" function.



	<p>Hold the button pressed to start the automatic film test cycle (pre-stretch increases by 10% every second).</p>
 <div style="border: 1px solid black; padding: 2px; display: inline-block;">0000 %</div>	<p>Initial stretch: enter stretch value. Quantity of film provided for each turn of the rotary table. 0% corresponds to the lowest stretch value, and 100% to the highest one.</p>
 <div style="border: 1px solid black; padding: 2px; display: inline-block;">000 %</div>	<p>Film pre-stretch: enter pre-stretch value. 0% corresponds to the lowest pre-stretch value, and 100% to the highest one.</p>

## 6.14. "R-CONNECT" PAGE



By pressing this key from the Main Page it is possible to access the R-Connect page.

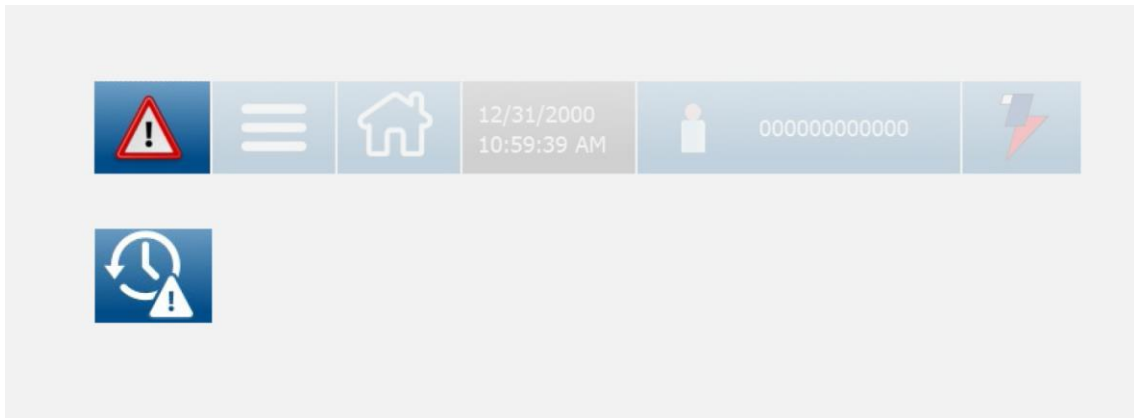
### R-Connect page

This page shows overall information on the R-Connect device and technology.





Frame the QR-Code to open the R-Connect portal.

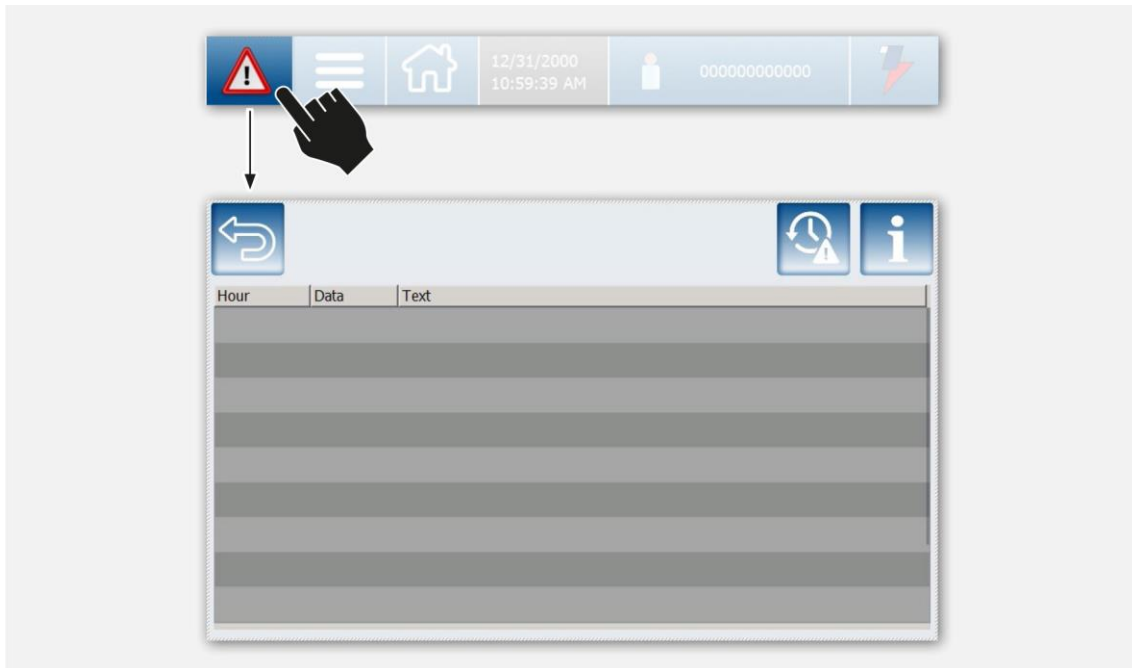
## 6.15. "WARNINGS" PAGE





The "Warnings" key may change aspect and function depending on whether any signalling is present or not.

	<p>If the key looks like this in the top navigation Bar, it means that no signalling is present. Press this key to open the Warning List page.</p>
	<p>If the key looks like this in the top navigation Bar, it means that NO signalling is present, but it is possible to access the log of already acknowledged warnings. Press this key to open the Alarm Log page.</p>

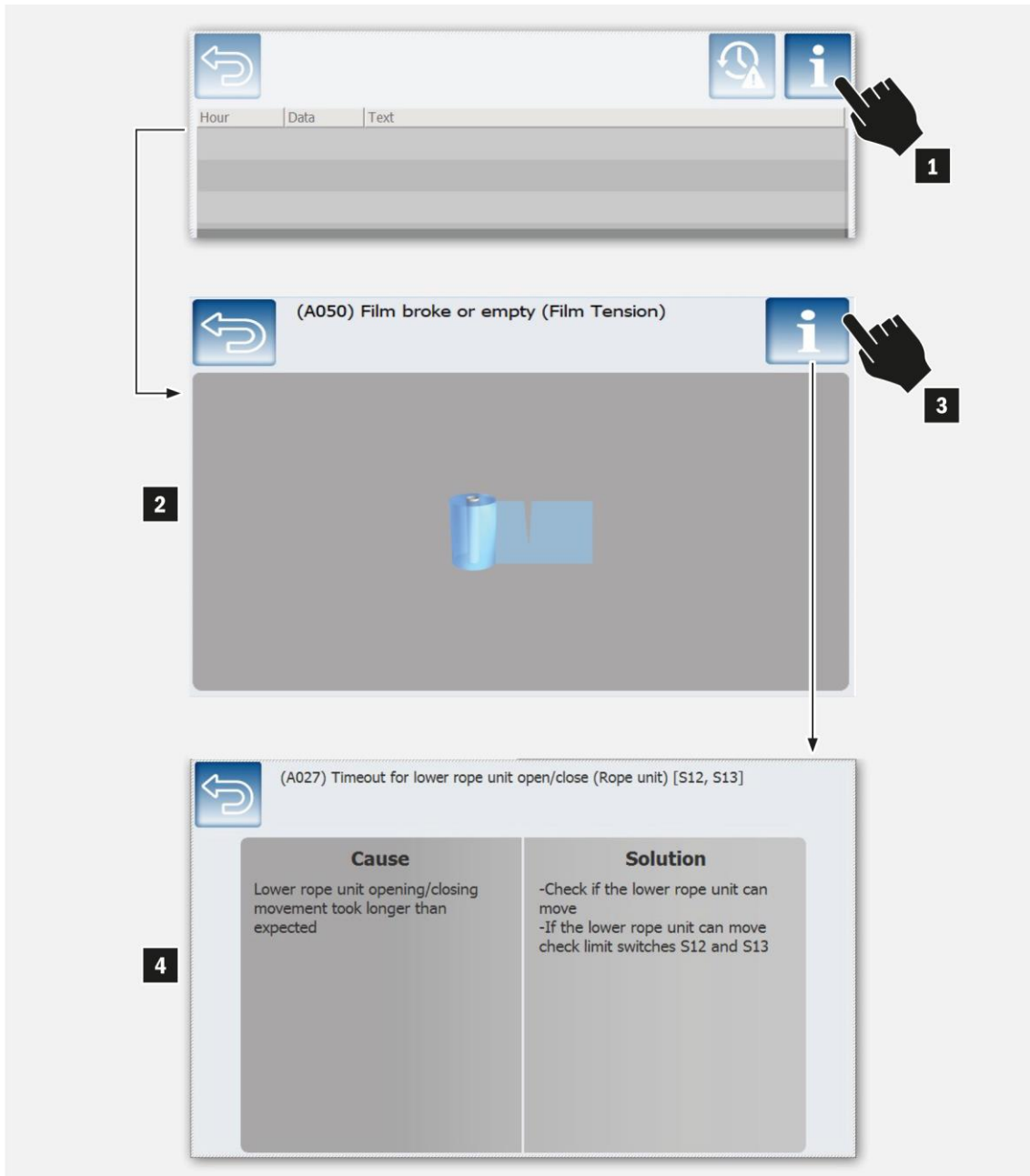
## 6.16. "WARNING LIST" PAGE



Alarm description lines	
Hour	Indicates the time at which signalling was triggered.
Date	Indicates the date on which signalling was triggered.
Text	This field describes type of warning and code. Warning signalling (W): useful for the operator, but it does not stop the machine (e.g. film about to finish). Alarm signalling (A): alarm signal due to an emergency, malfunction or other causes preventing machine operation. The machine stops automatically.
Buttons	
	Troubleshooting page: opens the page indicating the position of sensors on the machine / selected unit and troubleshooting (causes/solutions of any signalled faults).
	Alarm log page: opens Alarm log page.



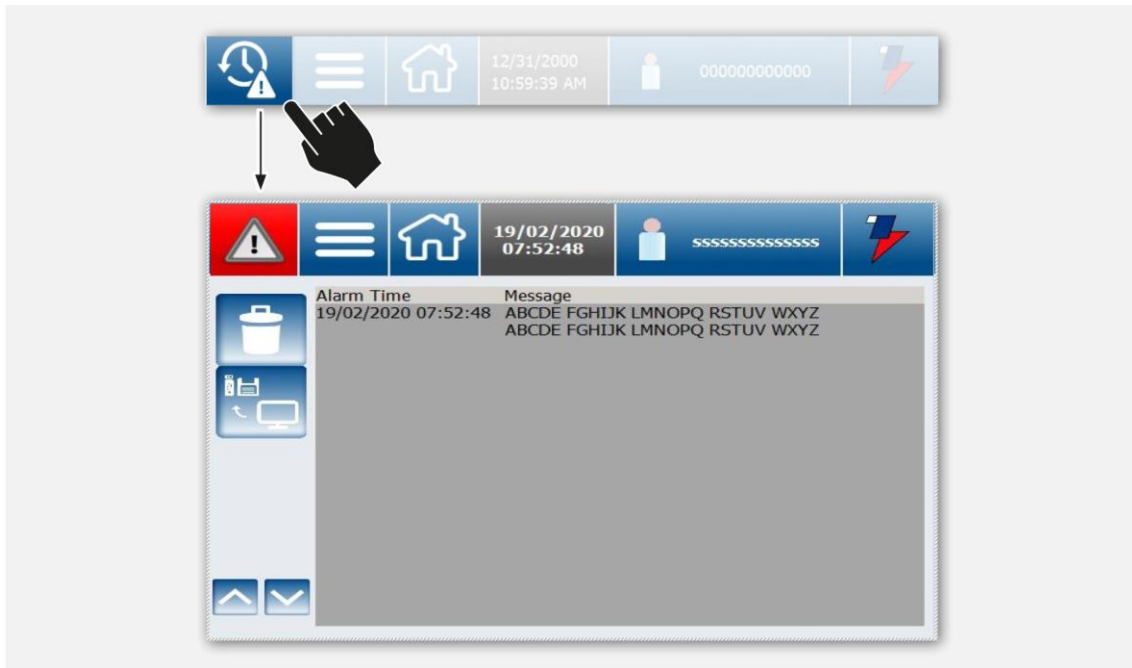
## 6.16.1. TROUBLESHOOTING



To view the causes/solutions of a certain fault:

1. Press "Info" from the Warning List page;
2. The "Identify sensors" page will open showing the reference codes and their position on the unit;
3. Press "Info" from the Identify sensors page;
4. The "Troubleshooting" page will open showing how to solve the signalled issues.

## 6.17. "ALARM LOG" PAGE




### Alarm description lines

This page can show up to 500 lines. If space is not sufficient, "older" lines will be overwritten.

<b>Date</b>	Indicates the date on which signalling was triggered or turned off.
<b>Hour</b>	Indicates the time at which signalling was triggered or turned off.
<b>Text</b>	This field describes type of alarm and code.

## 6.18. "USER" PAGE



	Press this key on the top navigation Bar to open User management page.
-----------------------------------------------------------------------------------	------------------------------------------------------------------------

### 6.18.1. USER MANAGEMENT



User management table allows viewing the users and selecting the user type. A different number of details is shown, depending on the user type.

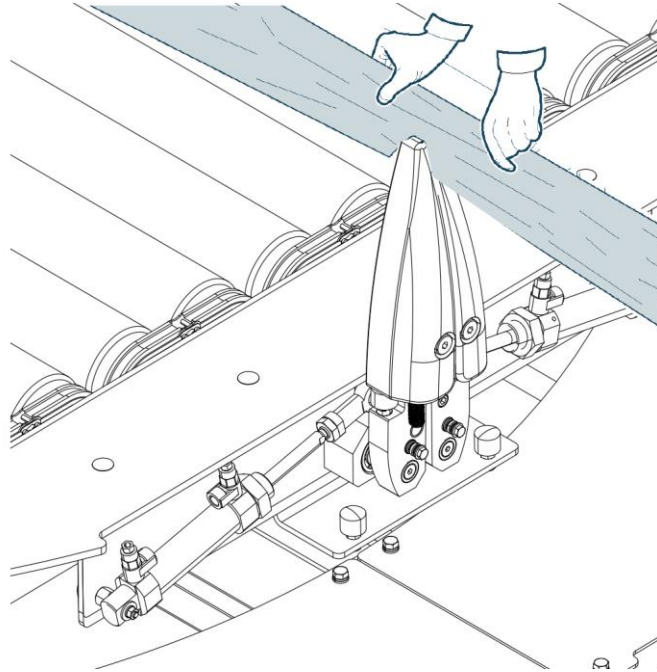
- **User type A:**
  - Access to all information and details
- **User type B:**
  - Recipes (new, copy, edit, delete, reset)
  - Maintenance (general and conveyors)
  - Film test
  - Operator's panel reset
- **User type C:**
  - Recipes (load recipe)
  - Clamp (adjustments)
  - Conveyors (adjustments)
  - Statistics (pallet count reset)

	<p><b>Login</b> Login with username and password entered in the fields on the left of the button</p>
	<p><b>Logout</b> Logout of currently logged in user.</p>

## 6.19. FILM INSERTION ON CLAMPING UNIT

Proceed as follows.

1. Select the "manual cycle".
2. Activate clamp closing.
3. Unwind the film and insert it in the clamp.
4. The machine is ready to start the cycle.



## 6.20. START AND STOP PROCEDURES

### 6.20.1. AUTOMATIC CYCLE START

- Activate the main switch, the Motor start / Reset button blinks.
- Press the Motor start / Reset button.
- Press the Motor start / Reset button to bring the machine to the beginning of the cycle, until the light of the Start/Stop button blinks.
- Select the desired programme.
- Press the Start/Stop button for at least two seconds. A sound is emitted to confirm the correct start.



#### **Important**

During the first wrapping cycles, check the correct packaging of products and, if necessary, optimise parameters (sealing, beading, etc.).

At any moment of the processing, it is possible to edit any one of the programmes provided and to set a programme for the next pallet.



#### **Danger - warning**

If you want to use a different programme on the pallet being processed, select it, set the machine to Manual mode and press Reset until the Automatic Operation button blinks.

### 6.20.2. MANUAL CYCLE START

- Press the Start/Stop button, the machine stops in a controlled way.
- Select the desired function using the keyboard.

### 6.20.3. CYCLE STOP AND RESTART



#### **Danger - warning**

To stop the machine under normal conditions, do not use the emergency button. Use it only in case it is strictly necessary, due to a possible damage to property and/or persons.

For a temporary stop of the processing, proceed in one of the indicated ways.

#### **During pallet wrapping**

- Stop the machine using the Start/Stop button.  
This command stops the machine in a controlled way.
- Stop the machine using the Door Opening Request button.  
This command causes a controlled stop of the machine.

#### **To restart, it is possible to:**

- Resume the cycle from the stop position, by pressing the Start/Stop button;
- Start a new wrapping by pressing the Motor start / Reset button until the Start/Stop button starts blinking.

#### **During pallet transfer**

- Stop the machine using the Start/Stop button;
- Stop the machine using the Door Opening Request button.

These commands stop the machine immediately, without allowing the transfer to be completed.

#### 6.20.4. EMERGENCY STOP AND RESTART

Press the emergency button of the machine, in situations of imminent risk.  
After resetting the operating conditions restart the cycle as follows.

- Release the emergency button.
- Follow the “Automatic Cycle Start” procedure.

#### 6.20.5. SUDDEN STOP AND RESTART



**Danger - warning**

After a sudden stop, do not perform any instinctive manoeuvres.

Press the emergency button and inform the system manager, who will have to perform the following checks.  
If an inverter fault is signalled, proceed as follows.

- Check for any alarm messages on the display.
- Consult the machine manual and eliminate the fault.
- Bring the machine back to its functional conditions by means of a reset and restart the automatic cycle.

If an emergency due to thermal alarm is signalled, proceed as follows.

- Check the functional status of the auxiliary equipment and/or devices.
- Check the mains voltage on all the phases;
- Check that all the circuits inside the electrical cabinet are properly working.

#### 6.20.6. RESET OF PALLET TRANSFER CONDITIONS

Should it be necessary to reset the pallet transfer conditions in the machine conveyor, set the machine to manual operation and simultaneously press the Start/Stop and Motor start / Reset buttons until the Start/Stop button starts blinking quickly.

## 6.21.MAINTENANCE AND CARE

The operator's panel requires minimal maintenance.  
Regularly clean the touch screen and the membrane keypad.



### **Important**

In case of failure or faults of the operator's panel, contact the manufacturer's Service Support.



### **Caution - warning**

While cleaning the touch screen, keys may be unintentionally touched, causing an unexpected reaction of the controller.



### **Important**

Before cleaning the display, switch off the operator's panel in order to avoid accidental reactions.



### **Caution - warning - Damage caused by unallowed detergents**

The use of compressed air, high-pressure cleaners, aggressive cleaners or abrasive products can damage the operator's panel.

Do not use compressed air or high-pressure cleaners to clean the operator's panel.

Never use aggressive solvents or abrasive products.

## **Procedure**

Use a damp cloth and a detergent.

Proceed as follows:

- Disconnect the operator's panel;
- Spray a specific cleaner on a cloth and not directly on the operator's panel;
- Clean the operator's panel.

The display must be cleaned starting from the edges and then moving inwards.

## 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.



## 7.2. SAFETY PROCEDURES

During use or maintenance operations inside the hazardous area, delimited by protections, the operator or the maintenance technician must ALWAYS follow the procedure below, required to prevent the door from accidentally closing.

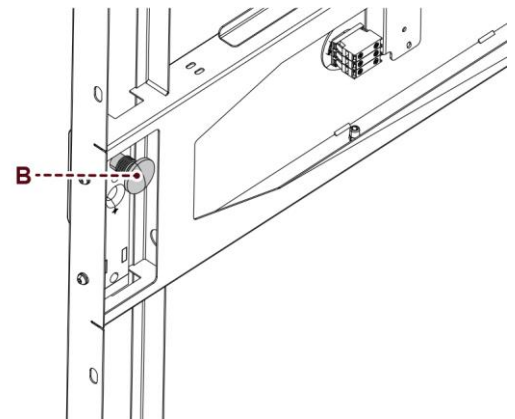
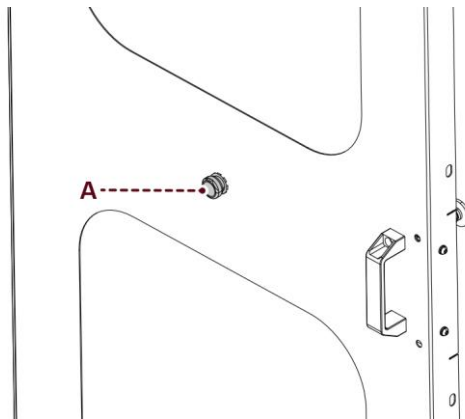
- Open the door with the button (A).

Inside the door there is an additional safety device, i.e. an emergency opening button (B) which allows the operator to exit in the case that he/she gets accidentally trapped inside the operating area.



### Caution - warning

If the button is different from the one shown here, refer to the additional documentation supplied by the manufacturer and attached to the manual.



## 7.3. LUBRICANT TABLE

Application	Lubricant type	Brand / type / characteristics	
Bearings with Slewing ring support	Molybdenum disulphide grease		
	Lithium grease		
Film carriage lifting chain.	Synthetic oil	- 41°F(5°C) a +41°F( 5°C) VG 68 (SAE 20)	Use oil with a viscosity suitable for the workplace temperature.
Conveyor unit chains.		+ 41°F(5°C) a +77°F (25°C) VG 100 (SAE 30)	
		+77°F (25°C) a +113°F (45°C) VG 150 (SAE 40)	
	+113°F (45°C) a +158°F (70°C) VG 220 (SAE 50)		



### Important

Do not mix together lubricants of different brands or having different characteristics.

## 7.4. PERIODICAL MAINTENANCE INTERVALS

### 7.4.1. BASIC MACHINE

#### Inspection

Frequency	Component	Check	Correction
Every 200 hours	Air filter unit	Check condensation.	If necessary, drain condensation. (Procedure M1)

\* See the procedures in the relevant chapter of section “II. Machine description”.

#### Cleaning

Frequency	Component	Description	Tools
Every 200 hours	Air filter unit	Clean with compressed air eliminating any impurities.	Compressed air and alcohol. (Procedure P1)
	Machine	Clean with a cloth or air jet.	Cloth or compressed air.

#### Lubrication



#### Important

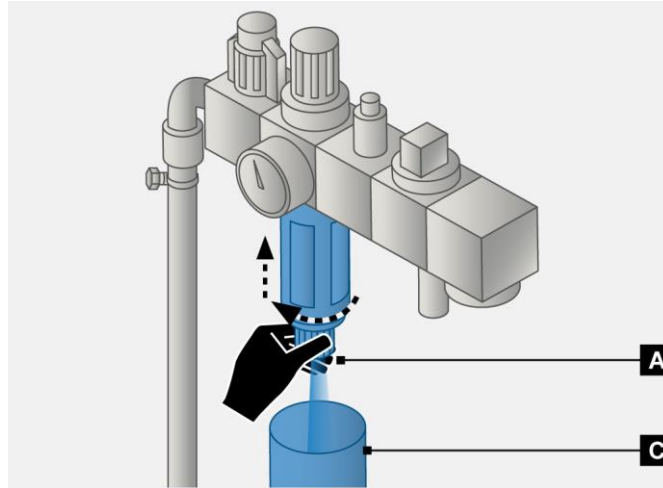
Check the type of oil and grease in the “Lubricant table”.

Frequency	Component	Description	Quantity
Every 4 months	Film carriage lifting chain	Clean with solvent, dry and lubricate with oil.	
	Roller conveyor chain	Clean with solvent, dry and lubricate with oil.	
Every 1000 hours	Slewing ring teeth	Grease. (Procedure L1)	

\*\* Reduction units and gearmotors can be lubricated with grease, oil or for life, depending on their type. Topping up and/or change must not be performed in case of life-lubed reduction units and gearmotors. For the lubricant change frequency see the technical manual by the manufacturer of the gearmotors.

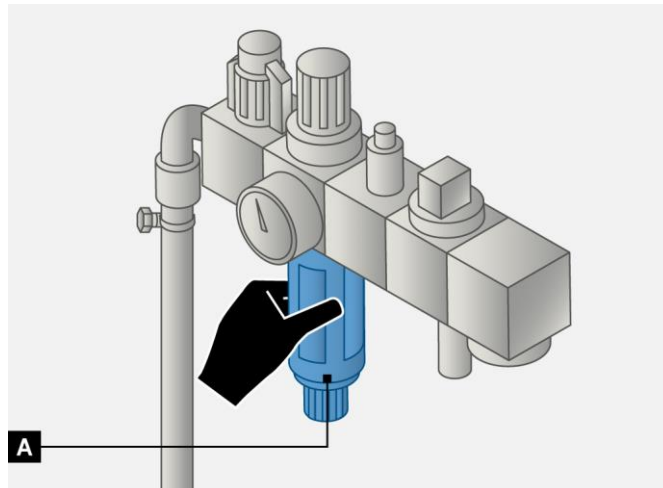
### Procedure M1 - Draining the condensation

1. Place a container (C) under the drain valve (A).
2. Release the valve by turning it in the direction shown by the arrow and pushing it up. Keep it pressed until the condensate has been completely drained.
3. Lock the valve (A) again.



### Procedure P1 - Cleaning the air filter

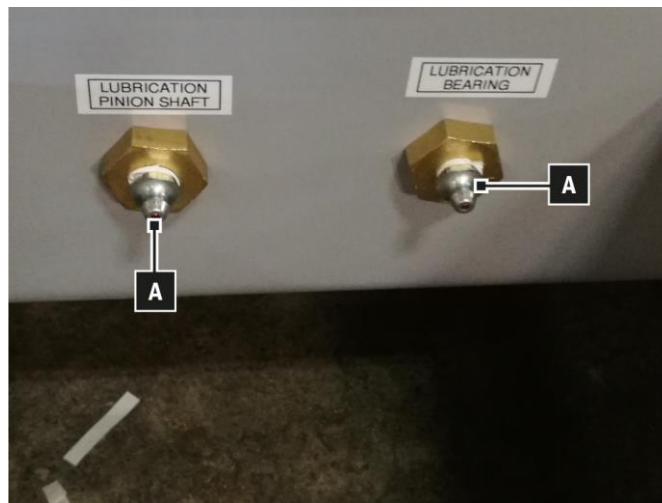
1. Place a container (C) under the drain valve (A).
2. Release the valve by turning it in the direction shown by the arrow and pushing it up. Keep it pressed until the condensate has been completely drained.
3. Lock the valve (A) again.



### Procedure L1 - Lubricating the table rotation slewing ring

Both the rolling track of bearings and the slewing ring teeth must be lubricated periodically.

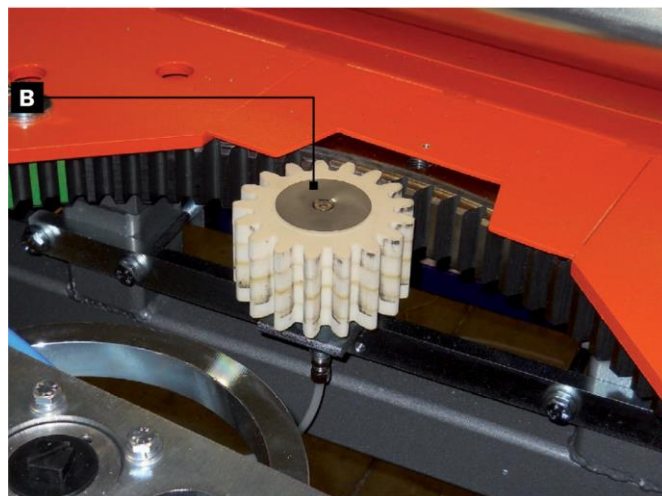
1. Lubricate using the greasing points (A).



#### **Danger - warning**

Lubricate with the table rotating (at low speed).

Do not lubricate with the table stopped: RISK OF BREAKAGE OF LUBRICATOR GEAR (B)!



### 7.4.2. PRE-STRETCH CARRIAGE

#### Inspection

Frequency	Component	Check	Correction
Every 5000 hours	Pre-stretch carriage supports	Check the tightening of screws.	If necessary, tighten them.
	Rollers	Check the tightening of screws.	If necessary, tighten them.

#### Cleaning

Frequency	Component	Description	Tools
Every 40 hours	Rubber rollers	Clean with compressed air, cloth with alcohol.	Compressed air and cloth with alcohol.

### 7.4.3. CLAMPING UNIT

Frequency	Component	Check	Tools
Every 50 hours	Clamp jaws	Clean with a cloth or compressed air jet.	Cloth, compressed air.

### 7.4.4. CUTTING - SEALING UNIT

#### Cleaning

Frequency	Component	Description	Tools		
Every 100 hours	Cutting wire	Clean with cloth and solvent.	Cloth, solvent.	1	00:10

## 8. PROBLEMS, CAUSES AND SOLUTIONS

The machine can be equipped with multifunction keyboard.

The display shows the alarm messages of the main faults that may occur during the machine operation.



### Important

Following a sudden cycle stop, check for the presence of any alarm on the display.

Below are the generic faults of each unit, with the relevant causes and possible solutions.

### 8.1. PRE-STRETCH CARRIAGE

Faults	Cause	Solution
The rotary table does not stop in the position aligned with pallet infeed or outfeed.	The sensors detecting the phases are not working or incorrectly positioned.	Check and replace the sensor if necessary.
The roller conveyor of the rotary table does not stop when the load reaches the wrapping position.	The load detection photocells are not working or incorrectly positioned.	Check and replace the photocells if necessary.
The machine does not stop at the end of the film	Film breakage sensor or photocell loosened or faulty.	Check and replace the sensor or the photocell if necessary.
	Dirty sensor or photocell.	Clean.

### 8.2. CLAMPING UNIT

Faults	Cause	Solution
The clamp does not open and/or close	Faulty clamp solenoid valve.	Check the voltage of solenoid valve coils.
		Check the efficacy of the pneumatic system (see pneumatic scheme).
	Clamp cylinder magnetic sensors not properly working.	Check the operation and position of sensors.
	PLC outputs.	Check PLC output signals.

### 8.3. CUTTING - SEALING UNIT

Faults	Cause	Solution
Cutting is not performed and cutting wire does not heat up.	Faulty cutting solenoid valve.	Check the voltage of solenoid valve coils.
		Check the operation of the pneumatic system and consult the pneumatic scheme.
	Faulty "forward-backward" cutting sensors.	Check the operation and position of sensors.
	Fuse damaged.	Replace the fuse.
	Resistor electrical connection fault.	Check the continuity of the cutting wire, the supports and the insulating washers.
	PLC outputs.	Check PLC output signals.

## 9. REPLACEMENT INFORMATION

### 9.1. RECOMMENDATIONS FOR REPLACING MACHINE PARTS

- Before performing any operation, the authorised operator must make sure to have understood the “Instructions for use”.
- Carry out the interventions with all the safety devices enabled and wear the required PPE.
- Mark the surrounding areas and implement adequate safety measures, as provided for by the standards on safety at work, in order to prevent and minimise the risks.
- 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.
- Replace parts only with original spare parts.



#### **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.

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. MACHINE DECOMMISSIONING AND SCRAPPING

#### 9.2.1. MACHINE DECOMMISSIONING

- Disconnect the supply lines of the machine (electrical, pneumatic, etc.).
- Empty the systems containing harmful substances in compliance with the laws in force.

#### 9.2.2. MACHINE SCRAPPING

- Scrapping must be performed by authorised centres with experienced personnel and by using the appropriate equipment for safe operating conditions.
- The person who performs the scrapping must identify any possible residual energies and implement a “safety plan” to eliminate risks.
- The components must be selected according to the chemical and physical features of the material and disposed of separately, in accordance with the applicable laws.
- Empty the systems containing harmful substances in compliance with the laws in force.



## 10. WARRANTY CONDITIONS

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

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** 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.

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