

Semi-automatic pallet wrapper **ProWrap**

Operation and maintenance manual

Traduction des "INSTRUCTIONS D'ORIGINE"







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Purpose of the manual

- The purpose of the manual is to inform and train operators so that they can interact with the machine in SAFE CONDITIONS.
- The goal is the reduction of risks in order to limit people incidents and injuries.
- In some cases, accidents may be due to the Operator using the machine carelessly.
- Caution is always necessary. Safety is also the responsibility of all the persons interacting with the machine throughout its operating life.
- Remember that it is too late to think about safety issues when the accident has already occurred.
- It is important to dedicate enough time to read the "Instruction Manual" in order to minimise the risks and to avoid any unpleasant accidents.
- The content of this manual was originally edited by the Manufacturer in the mother tongue (ITALIAN), in compliance with the professional writing standards and the regulations in force.
- Any translation of the manuals shall be carried out directly and without alterations from the texts of the ORIGINAL INSTRUCTIONS.
- This applies also to the translations carried out by the agent or by the person who
 is in charge of delivering the equipment in the specific linguistic area.
- The Manufacturer reserves the right to update the documentation, should this prove necessary.
- All information supplied by the recipients represents an important contribution to the improvement of the after-sales service that the manufacturer will offer to his/ her customers.
- All supplied information is organised into an index and a table of contents, so as to easily track specific topics of interest.
- The SAFETY WARNINGS and the INSTALLATION MANUAL are supplied as hard-copy publications.
- The Manual, the operating diagrams and the post-sale documents can be downloaded from the Manufacturer's Website.
- Keep the manual and the attached documents in a place known and easily traceable, so that you may refer to them whenever necessary.
- Some symbols have been adopted to highlight parts of the text of this manual and relevant characteristics. Their description is as follows.



This symbol indicates potentially hazardous situations which, if ignored, could cause serious harm to personal health and safety.



This symbol indicates that adequate actions must be taken to avoid harm to personal safety and health and economic damages.



This symbol indicates critical technical and operating information that shall be observed.

NOTE

The symbol is used to strengthen the concept of reference information.



Glossary of the terms

his field of operation.

The glossary includes some terms used when processing information, with their definition, in order to facilitate understanding.

- Training: A process aiming at transferring the knowledge, skills and behaviours required to work in an autonomous, correct and hazard-free manner.
- Assistant: person chosen, trained and coordinated in an appropriate manner to minimize the risks in carrying out their tasks.
- Emergency stop: voluntary activation of the special control that stops the dangerous elements of the work unit in the case of imminent risk.
- Stop in alarm conditions: this state causes the components to stop and is activated when the control system detects a problem in the machine operation.
- General shut down: In addition to the normal stop this state also causes the interruption of all the power sources (electrical, pneumatic, etc.).
- Operating Stop: state that does not cut off power supply to the actuators, but ensures control system monitoring in safe conditions.
- Size change: a set of interventions to be carried out before beginning to work with specifications different with respect to the ones previously in use.
- Test-run: a series of operations required to ensure compliance to the design specifications, and to commission the machine under safety conditions.
- Installer: a technician chosen and authorized by the manufacturer or his authorized representative, among those who fulfil the requirements for installation and testing of the machine or plant in question.
- Maintenance technician: technician selected and authorised to perform the operations that cannot be assigned to the operator.
 The maintenance technician must be specifically trained and skilled, especially in
- Routine maintenance: all the operations necessary to maintain the efficiency and safety of the machine.
 - These operations are scheduled by the Manufacturer, who defines the necessary skills and methods of action.
- Unscheduled maintenance: operations to be performed following unpredictable events that are not programmed by the Manufacturer.
 - The unscheduled maintenance operations must be performed ONLY by authorised personnel.
- Operator: a person chosen and authorized, among those who fulfil the requirements, having the knowledge and skills necessary to operate the machine and carry out routine maintenance interventions.
- Production Manager: technician with expertise and knowledge on the use of packaging machines and similar equipment, who is authorised to supervise the production activity.
- Person in charge of the installation: a technical expert who must carry out the installation in compliance with the laws applicable to the workplace and, at the end, assess its compliance.
- Residual risks: all the risks remain even if all the safety solutions have been adopted and integrated when the machine has been designed.
- Expert Technician: A person authorised by the Manufacturer and/or his representative to carry out services that require specific technical skills and abilities.



- Forwarder and Handler: Authorized persons with recognized expertise in the use of means of transport and lifting devices, in safety conditions.
- Intended use: the machine is used according to the information included in the Use and maintenance manual.
- Foreseeable improper use: reasonably foreseeable use other than that recommended in the instruction manual, which may result from human behaviour.

Attached documentation

The SAFETY WARNINGS and the INSTALLATION MANUAL are supplied as hard-copy publications.

- The Manual, the operating diagrams and the post-sale documents can be down-loaded from the Manufacturer's Website.
- The list shows the documentation supplied with the machine.
 - CE Declaration of conformity
 - Operation and maintenance manual
 - Installation manual
 - Wiring diagrams
 - Pneumatic system diagrams
 - Specific Manuals for installed components or sub-assemblies available commercially

General safety warnings

- The machine has been designed and built with all the precautionary measures aimed at minimising the possible risks over its expected life cycle.
- Tampering with and bypassing the safety devices may lead to severe risks for the Operators.
- Before interacting with the machine, and in particular, before its first use, read the SAFETY WARNINGS contained in the manual.
- It is important to dedicate enough time to read the "Instruction Manual" in order to minimise the risks and to avoid any unpleasant accidents.
- Observe the recommendations on the RESIDUAL RISKS that may persist and do not use the machine IMPROPERLY.
- When operating the machine, DO NOT wear clothes and/or accessories that could become caught in the moving or protruding parts.
- Carry out the interventions ONLY according to the modes recommended by the Manufacturer in the "Instructions for use".
- The personnel in charge of carrying out interventions on the machine must have suitable and proven experience in this specific field.
- Please keep safety signs and information legible and follow the instructions.
- The information signals may be of different shapes and colours, to indicate dangers, obligations, prohibitions and indications.
- Signals which are no longer legible must be replaced and repositioned in the same place of origin.
- The non-compliance with the information provided herein may lead to risks for the safety and health of the persons involved and may also lead to economic damages.



Safety Warnings for Handling and Installation

- The machine can be handled and installed ONLY by qualified personnel, with recognised skills in the specific field of operation.
- The Installation manual is enclosed with this Manual and includes the safety information and the operating modes.

Safety Warnings for Operation and Use

- The machine must be used by one single operator ONLY, who must be trained and capable of performing the work and be in suitable conditions.
- Consult the user manual, in particular during the first use, and make sure that you fully understand its content.
- Find out the position and function of the controls and simulate some operations (in particular start and stop) in order to acquire familiarity.
- The machine shall be used ONLY for the purposes and complying with the procedures specified by the Manufacturer.
- Make sure that all the safety devices are properly installed and efficient.
- The machine should be used ONLY with the original safety devices installed by the Manufacturer.
- Ensure the area around the machine, especially the control post, is ALWAYS unobstructed and in good condition to minimize the risks for the Operator.
- According to the type of operation to carry out, wear the Personal Protective Equipment listed in the "Instructions for use" and that indicated by the Labour laws.

Safety Manager Obligations

- The safety manager must train the operator and help him or her familiarise and interact with the machine in an independent, adequate and risk-free manner.
- The operator must be informed about the PROPER USE of the machine and about the remaining RESIDUAL RISKS.
- The operator must demonstrate that he has acquired the relevant skills and has understood the "User Instructions" in such a way as to carry out his activities safely.
- The operator must be able to recognise the safety signals and demonstrate that he is in suitable condition to carry out his assigned duties.
- The safety manager must release educational material to trainees and document the delivered training, so as to be able to produce such documentation in case of litigation.



Safety Warnings on Misuse

- ONLY trained, documented and authorized Operators are allowed to use the machine.
- DO NOT use or allow other persons to use the machine if the safety devices are faulty, disabled and/or incorrectly installed.
- DO NOT use or allow other persons to use the machine for purposes and in ways different from what specified by the Manufacturer.
- DO NOT wear clothes and/or accessories that could become caught in the moving or protruding parts.
- When operating the machine, ALWAYS wear the Personal Protective Equipment specified by the Manufacturer and by the current regulations on safety at work.
- If troubles arise, do NOT continue to use the machine. Stop it immediately and restart only after restoring the normal operating condition.
- DO NOT use the machine if the scheduled routine maintenance interventions have not been carried out.
- DO NOT tamper with, override, bypass or eliminate the safety devices installed on the machine.
- DO NOT modify the manufacturing and functional characteristics of the machine in any manner whatsoever.
- DO NOT perform any interventions other than those specified in the Operation Manual without the explicit authorization of the Manufacturer.
- DO NOT carry out any intervention when the machine is being operated. Stop the machine and put it in safety condition before carrying out any intervention.
- DO NOT clean or wash the machine with water, steam or aggressive products that might irreversibly damage the components.
- DO NOT replace the components with non-genuine spare parts or other components with different design and manufacturing specifications.
- DO NOT dump in the environment any materials, polluting liquids and maintenance waste generated during the operations. Dispose of them according to the regulations in force.
- DO NOT leave the machine unattended during operation and DO NOT leave it at the end of the work without stopping it to safety conditions.

Safety Warnings on Residual Risks

Residual risks: all the risks remain even if all the safety solutions have been adopted and integrated when the machine has been designed.

- Upon designing and building the machine, the Manufacturer has paid particular attention to the RESIDUAL RISKS that may affect the safety and health of the Operators.
- For specific information about residual risks, please refer to the machine user manual.

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Safety Warnings for Maintenance and Adjustments

- Always keep the machine in optimum operating condition and carry out the routine maintenance according to the intervals and procedures specified by the Manufacturer.
- A good maintenance will ensure a stable performance over time, longer working life and constant compliance with the safety requirements.
- The personnel authorized to carry out the ordinary maintenance must have qualified expertise and specific skills in the field of intervention.
- Any work on the electrical system must ONLY be performed by technicians with acknowledged, field-specific skills.
- Mark the intervention area and prevent access to the devices that, if activated, may cause unexpected hazards and jeopardize the safety level.
- According to the type of operation to carry out, wear the Personal Protective Equipment listed in the "Instructions for use" and that indicated by the Labour laws.
- Observe the recommendations on the RESIDUAL RISKS that may persist and do not use the machine IMPROPERLY.
- Before carrying out any intervention, activate all the safety measures, and assess any residual energy which may still be present.
- Carry out the operations in areas which are difficult to access or hazardous ONLY after disconnecting all power sources.
 This operating mode is necessary in order to work under safe conditions.
- Carry out the operations according to the procedures and modes shown by the Manufacturer in the "Instruction Manual".
- All operations must be carried out ONLY with suitable tools which shall be in good condition, in order to avoid damaging any components and parts of the machine.
- Replace the components and/or safety devices ONLY with original spare parts in order not to alter the required safety level.
- The use of similar but not genuine spare parts can lead to non-compliant repairs, impaired performance and economic damage.
- Use the lubricants (oils and greases) recommended by the Manufacturer or lubricants of equivalent chemical and physical characteristics.
- At work completion, restore all the security conditions aimed to prevent and minimize the risks during the human-machine interaction.
- At the end of operations check that there are no other tools or other material near the moving parts or in dangerous areas.
- Refer to the Technical Assistance Service of the Manufacturer, in case interventions not described in the "Instructions for use" are needed.
- All EXTRAORDINARY MAINTENANCE interventions shall be performed only by authorized Technicians with proven and gained experience in the field.
- Some operations may require the use of support devices and/or equipment that shall be used properly in order to avoid any safety risks.



Safety warnings for the electrical equipment

The electrical equipment has been built in accordance with the applicable standards and its efficiency is ensured if the listed conditions are met.

- Ambient temperature and relative humidity between maximum and minimum permitted limits.
- Absence of environmental electromagnetic noise and radiation (X-rays, laser, etc.).
- Absence of environment areas with gas and dust concentration levels potentially explosive and/or at risk of fire.
- Use of products and materials free from contaminants and corrosive agents.
 Products containing chemicals, acids, salts, etc. can come into contact with the electrical components and cause irreversible damage.
- Transport and storage temperatures between minimum and maximum permitted limits.
- Altitude not exceeding the maximum permitted limits.
 Do not carry out the installation under conditions that are different from those allowed.
- Power Cable with section suitable for the current power and intensity values indicated in the data plate.
- Protection class in accordance with data plate indications.
- The power supply line to which the machine must be connected must have identical characteristics to those mentioned in the data plate.



Important

All the listed requirement values are contained in the technical specifications

If one or more of the listed requirements cannot be met, alternative solutions should be agreed at the ordering stage.

Safety warnings for the environmental impact

Each organization is responsible for implementing procedures aimed at identifying, evaluating and controlling the environmental impact of its own activities (products, services, etc.).

- Procedures for identifying significant environmental impact must take account of the factors listed.
 - Discharges for liquids and lubricants
 - Waste disposal
 - Soil contamination
- In order to minimize the environmental risks during the man-machine interaction follow the recommended instructions.
 - Dispose of all packing in accordance with the laws in force in the country of installation.
 - Keep noise level to the minimum to reduce noise pollution.
 - Select materials on the basis of their composition and provide for differentiated disposal in accordance with the laws in force.
 - Avoid dumping polluting materials and products in the environment (oils, greases, electrical and electronic apparatus etc.).

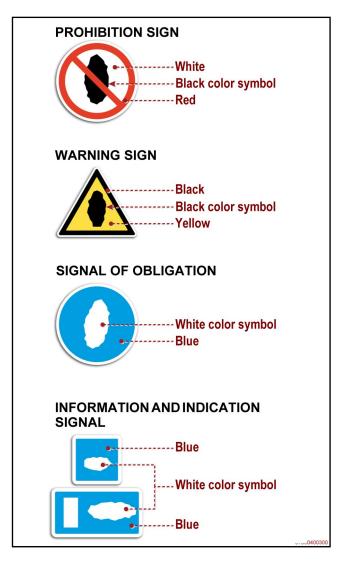
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- All the components of Electrical and Electronic Apparatus contain dangerous substances and are appropriately marked.
- Dispose of Electrical and Electronic Apparatus Waste properly, at authorised collection centres, to avoid harmful and damaging effects.
- Incorrect disposal of dangerous waste is punishable with sanctions regulated by the laws in force on the territory in question.

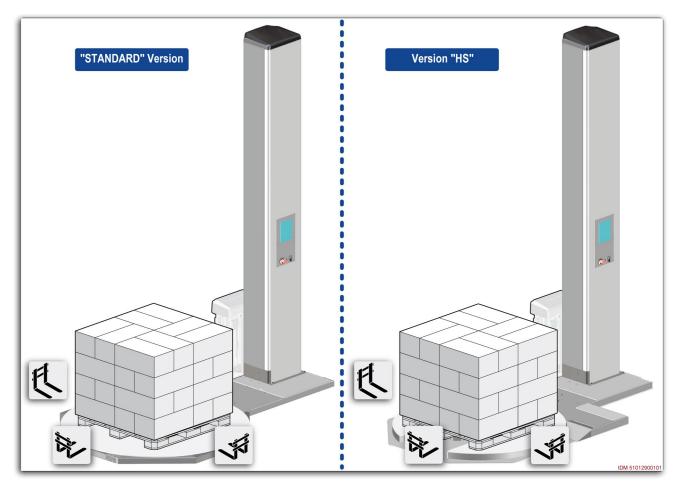
Safety and information symbols

- The information signals may be of different shapes and colours, to indicate dangers, obligations, prohibitions and indications.
- The illustrations show the shapes of the signals that can be applied, with the function indicated
- For more details on the type and position of the signals applied, refer to the paragraph "Position of safety signals and information".
- Please keep safety signs and information legible and follow the instructions.
- Signals which are no longer legible must be replaced and repositioned in the same place of origin.





General description of the machine



The semi-automatic wrapper series "ProWrap" is designed to secure products loaded on pallets using stretch film.

- To wrap loads, commercially available reels of stretch film are used.
- The products to be wrapped must be contained in packages (cases, containers for liquids, etc.) having a regular shape or in any case, such as to allow for stable palletising.
- The containers of liquids or fluids should be hermetically sealed and with suitable characteristics to avoid spilling any content.
- The products to be wrapped have ALWAYS to be positioned in the middle and must NOT protrude from the rotating platform in order to avoid the risk of collision.
- The wrapping surface shall be uniform and smooth (without projections or recesses) in order to prevent the risk of film breaking.
- The products are loaded and unloaded using forklift trucks of suitable capacity.
- Loading should ONLY be carried out from the orthogonal sides of the support base (see figure).
- The machine has been designed, built and equipped by applying integrated safety principles.
- The machine is for professional use only and must be installed in industrial-type settings - factories or workshops.
- The premises must have no areas with gas and dust concentration levels that are potentially explosive and/or at risk of fire.

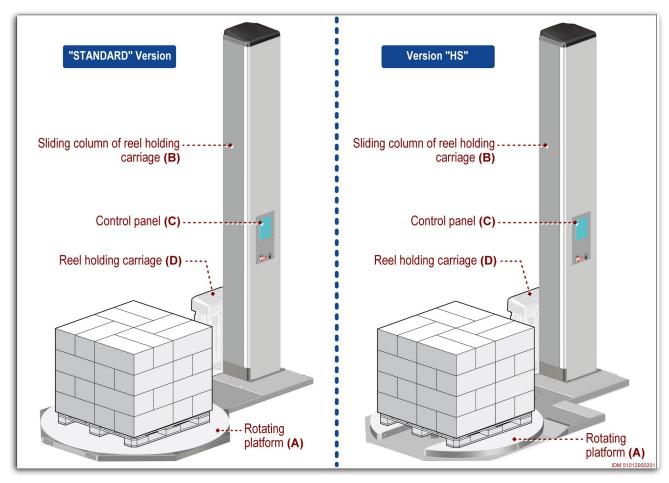


- On request, the machine may be equipped with accessories, either when it is ordered or later.
 - See Optional Accessories for further details.
- The machine must be used by one single operator ONLY, who must be trained and capable of performing the work and be in suitable conditions.
- The operator is in charge of programming and controlling the production cycle, perform the refilling and the scheduled maintenance.



Description of the main components

The image shows the main components and the list reports their description and function.



- A) Rotating platform: area on which are loaded the products to be wrapped.
- The rotating platform is driven by a gear-motor with a chain drive.
- B) Column: it is used for vertical movement of reel holding carriage D.
- **C) Control panel:** it contains the devices to start and control all the operation functions.

D) Reel holding carriage

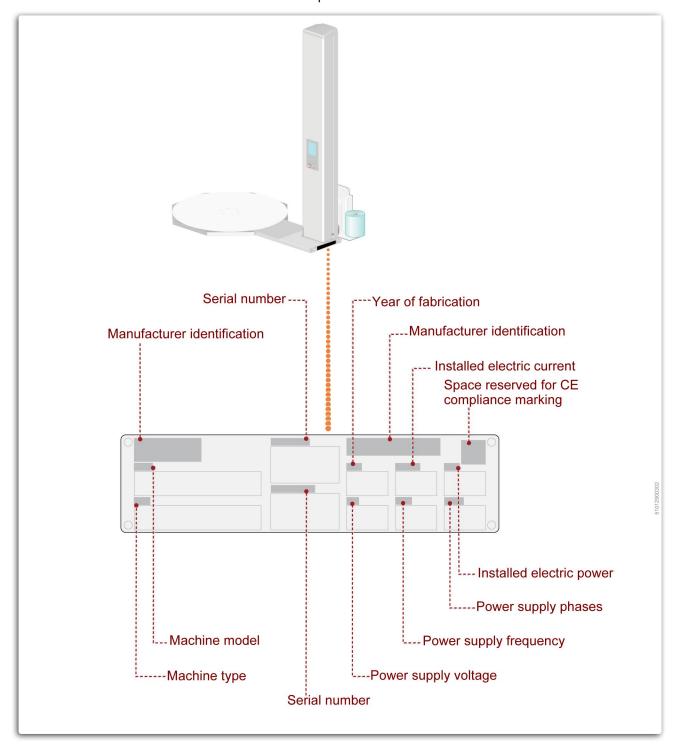
- According to production requirements, in the ordering phase the machine can be equipped with one of the listed carriages.
- Reel-holder carriage (type FM): suitable for wrapping, allows the operator to adjust the film tension from the control panel.
- Reel holding carriage (type PW): specific for wrapping with motorised film pre-stretching and transmission gear ratio adjustment (replacement of the pulleys).
- Reel holding carriage (type VK): specific for wrapping with motorised film pre-stretching and transmission gear ratio adjustment from the control panel.



Manufacturer and machine identification

The identification plate (pictured) is affixed directly to the machine.

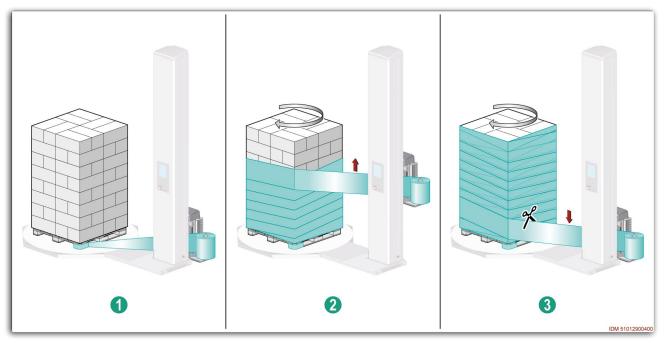
- In addition to the references for identification provided by the Manufacturer, they also list all the essential information for a safe operation.





Cycle

The figure shows the operating cycle with indication of the main operating steps.



Stage 0

- Correctly load the new product to be wrapped in the middle of rotating platform.
- Tie the trailing end of the film to the base of the product to be wrapped.

Stage 2

- Start the wrapping cycle that will be performed based on the previously set parameters.
- Manual wrapping: start the platform and keep the special control pressed to start the wrapping process.
- Release control when wrapping has reached the desired height.
- Automatic wrapping: set up the desired parameters and press the special control to start the cycle.
- The machine carries out wrapping and at the end of the set-up cycle it stops automatically.

Stage 3

- Manually cut the film and cause it to adhere to the wrapped product.
- Remove the wrapped product to be able to load the next one to wrap.
- The machine is ready for a new wrapping cycle.



Types of wrapping

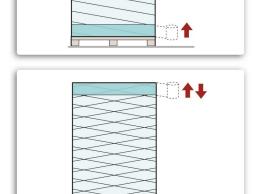
The wrapping can be made in manual or automatic mode.

- With the manual mode, platform rotates, while reel holding carriage is activated by a non-release control.
 - This mode allows for the wrapping to be made on an occasional basis, according to the specifications of the load to be wrapped (See "Control system.").
- With the automatic mode, the wrapping can be programmed according to the specifications of the loads to be wrapped.
- The figures show the types of wrapping that can be programmed with the automatic mode operation.
- Single wrapping: starts at the base of the load to be wrapped and ends in its upper part.
 - Stabilisation wrappings cab be made at the base and in the upper part of the load to be wrapped.
- Reel holding carriage is moved back to the base from control panel in order to start a new wrapping operation.

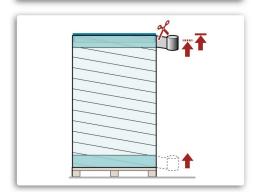


The operator can decide whether to cut the film when the carriage is in the high position or in the low position.

- **Double wrapping:** starts and ends at the base of the load after wrapping it in the lifting and lowering steps of reel holding carriage.
 - Stabilisation wrappings cab be made at the base and in the upper part of the load to be wrapped.



- Single wrapping with sheet feeder: starts at the base of the load to be wrapped and temporarily stops in its upper part. Stabilisation wrappings cab be made at the base and in the upper part of the load to be wrapped.
- After inserting the covering sheet the operator must enable the control to restart the wrapping.
- After completing the upper reinforcement, the wrapping stops. Stabilisation wrappings cab be made in the upper part of the load to be wrapped.
- Reel holding carriage is moved back to the base from control panel in order to start a new wrapping operation.

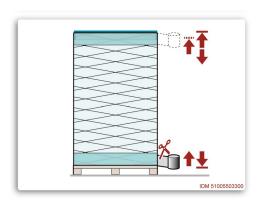


NOTE

The operator can decide whether to cut the film when the carriage is in the high position or in the low position.



- Double wrapping with sheet feeder: starts at the base of the load to be wrapped and temporarily stops in its upper part.
 Stabilisation wrappings cab be made at the base and in the upper part of the load to be wrapped.
- After inserting the covering sheet the operator must enable the control to restart the wrapping.
- After completing the reinforcement at the top of the load, the wrapping continues downwards and stops after the closing wrapping.
 - Stabilisation wrappings cab be made in the upper part of the load to be wrapped.



Residual risks

Residual risks are defined as: "Any risk that remains notwithstanding the safety solutions adopted and integrated during the design phase".

- Each residual risk is signalled with a special sign. Some of them are applied close to the areas where the risk is present, others are placed in an easily visible position.
- The list includes the residual risks that may persist on this type of machine.
- Risk of projection of objects: during operation there may be a risk linked with wrapping product stability characteristics in the event of excessive operation speed.
- The operator must adjust the wrapping speed according to the product features and during operation he/she shall not halt near the machine.
- Risk of slipping: do not climb onto or approach the platform during operation.
- Do not climb on the platform using the lifting equipment during operation.
- Risk of body part crushing: do not stand near and/or approach the area between the column and the product to be wrapped during operation.
- Risk of crushing upper limbs: do not introduce or place upper limbs in/next to any machine moving parts during operation.
- The risk mainly relates to the area between the sliding column and the reel holding carriage.
- Risk of crushing or shearing lower limbs: keep lower limbs away from the platform during operation (fork inserting points version HS).
- Risk of entanglement: do not introduce or place upper limbs in/next to any moving components during operation.



DO NOT wear clothes and/or accessories that could become caught in the moving or protruding parts.

- Risk of electric shock or electrocution: do not access live areas and/or elements without turning off the power supply.
- In addition to the precautions for the signalled risks, the following measures must be implemented.
 - Do NOT approach or allow people to approach the moving parts of the machine in order to avoid dangerous collisions.
 - When the film is inserted, pay special attention in order to prevent collisions, abrasion and crushing of the upper limbs.



Incorrect uses that are reasonably expected

Improper use: reasonably foreseeable use different from what is specified in the use manual, that may be caused by human behaviour.

- ONLY trained, documented and authorized Operators are allowed to use the machine.
- DO NOT use or allow other persons to use the machine for purposes and in ways different from what specified by the Manufacturer.
- NEVER use the tool if the scheduled maintenance interventions have not been carried out accordingly
- DO NOT use the machine in places that are at risk of fire and / or explosion.
- When the products are wrapped, the radius of action of the machine must be kept free from people.
- DO NOT carry out any intervention when the machine is being operated. Stop the machine and put it in safety condition before carrying out any intervention.
- DO NOT clean or wash the machine using aggressive products that may damage its components.
- DO NOT leave the machine unattended during operation and DO NOT leave it at the end of the work without stopping it to safety conditions.

Optional Accessories

Some accessories designed to improve the performance and versatility of the machine are available from the manufacturer. This list contains a description of the main ones.

- Ramp: it makes product loading and unloading easier when a pallet truck driven by a ground-level operator is used.
- Lifting frame: structure under the support base, used to load/unload the products to be wrapped by means of a "stackers" pallet truck.
- Burying frame: structure used to bury the support base of the machine.
- Weighing Unit: device used to weigh the palletised product located on the rotating platform.
- **Top pressor:** this device keeps the product stabilised during wrapping.
- Film cutting device: it cuts the film automatically at the end of wrapping (only for reel holding carriage of type "PW - VK").
- Roping unit: it narrows the film band to carry out folding (only for reel holding carriage of type "PW - VK").

NOTE

The unit can be of mechanical or pneumatic type.

Radio control: optional device that is used as a remote control.

M





Description of the safety devices

The machine is equipped with safety devices that reduce the risks during the man-machine interaction.

- A) Isolator switch: safety control to disconnect power supply.
- B) Emergency stop button.: Safety control to stop the parts the operation of which could imply safety risks.
- The control must be activated ONLY in the presence of an imminent risk.



Important

The activation of the control does not deactivate the power supply.

- The control must remain "locked" until normal operating conditions have been restored.
- Unlock the button with a voluntary action to enable restart.

NOTE

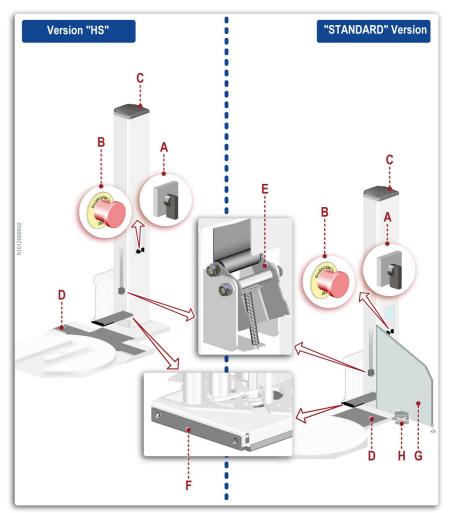
For further details on devices A-B, refer to paragraph "Description of the controls."

- C) Protective guard: safety device preventing access to the dangerous areas.
- The guard is secured in such a way that it can be disassembled only by using tools.
- The guard shall be removed ONLY when the machine is stopped under safe conditions and must be installed before starting it.
- D) Protective guard: safety device preventing access to the dangerous areas.
- The guard is secured in such a way that it can be disassembled only by using tools.
- The guard shall be removed ONLY when the machine is stopped under safe conditions and must be installed before starting it.
- **E)** Fall arrest system: safety device that blocks the fall of reel holding carriage in the event of lifting strap breaking.
- **F)** Feeler: safety device that stops the descent of the reel holding carriage in the presence of an obstacle.
- **G) Protective guard:** safety device preventing access to the dangerous areas.
- The guard is secured in such a way that it can be disassembled only by using tools.
- The guard shall be removed ONLY when the machine is stopped under safe conditions and must be installed before starting it.
- **H)** Laser detector: safety device that stops any parts the operation of which could imply safety risks, when a person exceeds the allowed limit.

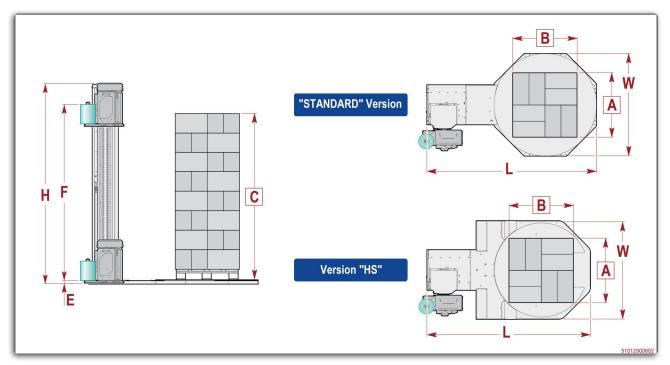


Important

Components G-H installed ONLY on some models.



Technical data of machine



■ Dimensions and weights (Standard version)

ProWrap	Size of the load to be	Weight of the	Diameter of the	Dimensions of the	Max weight of
Model	wrapped AxBxC (mm)	load to be wrapped (kg)	platform (mm)	machine (*) LxWxH (mm)	the machine (kg)
16_L_FM	M: 000000700				504
16_L_PW	Min 600x600x700 Max 1000x1200x2200	100 ÷ 2400	1650	2831x1650x2714	560
16_L_VK	Wax 1000X1200X2200				-
16_M_FM	Min 600x600x700 Max 1000x1200x2600	100 ÷ 2400 1650			514
16_M_PW			1650	2831x1650x3114	570
16_M_VK	Max 1000X1200X2000				-
16_H_FM	Min 600x600x700				524
16_H_PW	Max 1000x1200x3000	100 ÷ 2400	1650	2831x1650x3514	580
16_H_VK					-
18_L_FM	Min 600x600x700				544
18_L_PW	Max 1200x1200x2200	100 ÷ 2400 1800	2892x1800x2714	600	
18_L_VK					-
18_M_FM	Min 600x600x700	100 ÷ 2400			554
18_M_PW	Max 1200x1200x2600		1800	2892x1800x3114	610
18_M_VK					-
18_H_FM	Min 600v600v700	Min 600x600x700 Max 1200x1200x3000			564
18_H_PW	Max 1200x1200x3000		1800	2892x1800x3514	620
18_H_VK					-
22_L_FM	Min 600x600x700				650
22_L_PW	Max 1550x1550x2200	100 ÷ 2400	2200	3382x2200x2714	706
22_L_VK					-
22_M_FM	Min 600x600x700			3382x2200x3114	660
22_M_PW	Max 1550x1550x2600	100 ÷ 2400	2200		716
22_M_VK					-



ProWrap	Size of the load to be	Weight of the	Diameter of the	Dimensions of the	Max weight of
Model	wrapped AxBxC (mm)	load to be wrapped (kg)	platform (mm)	machine (*) LxWxH (mm)	the machine (kg)
22_H_FM	Mir. 000::000::700	100 ÷ 2400			670
22_H_PW	Min 600x600x700 Max 1550x1550x3000		2200	3382x2200x3514	726
22_H_VK	Max 1000x1000x0000				-

Height above ground of the platform 75 mm

(*) Add 128 mm to the machine length for PW reel holding carriages.

Add 211 mm to the machine length for VK reel holding carriages.

■ Dimensions and weights (version HS)

ProWrap	Maximum size of the load	Max weight of	Diameter of the	Dimensions of the	Max weight of
Model	to be wrapped AxBxC (mm)	the load to be wrapped (kg)	platform (mm)	machine (*) LxWxH (mm)	the machine (kg)
HS_L_FM	Mir. 000-4000-700				719
HS_L_PW	Min 800x1200x700 Max 1000x1200x2200	100 ÷ 1200	1650	2874x1736x2732	775
HS_L_VK	Wax 1000X1200X2200				-
HS_M_FM	Min 800x1200x700 Max 1000x1200x2600	100 ÷ 1200			729
HS_M_PW			1650	2874x1736x3132	785
HS_M_VK	Max 1000X1200X2000				-
HS_H_FM	Min 800x1200x700				739
HS_H_PW		1650) 2874x1736x3532	795	
HS_H_VK	Wax 1000x1200x0000				-

Height above ground of the platform 83 mm

Add 211 mm to the machine length for VK reel holding carriages.

Technical specifications

	11 11 6	
	Unit of measurement	Value
OPERATING PROPERTIES		
Height of wrapping start E	mm	20 ÷ 120
Height of wrapping end F		
- Model L	mm	2400
- Model M	mm	2800
- Model H	mm	3200
Rotation speed of the platform	rpm	6 ÷ 12
Maximum level of noise	dB(A)	72.0
Electric supply		
The power supply specifications are those shown in the identification plate applied to the machine.	-	
- With single-phase power supply: install a circuit breaker "A" in the line.	-	-
- With three-phase power supply: install a circuit breaker "B" in the line.	-	-
Electric protection class	-	IP 54
Installed electric power:		
- Reel holding carriage FM	kW	0,716
- Reel holding carriage PW	kW	1,06
- Reel holding carriage PW Roping	kW	1,11
- Reel holding carriage PW CS	kW	1,92

^(*) Add 128 mm to the machine length for PW reel holding carriages.



	Unit of measurement	Value
- Reel holding carriage PW CS Roping	kW	1,97
- Reel holding carriage VK	kW	-
- Reel holding carriage VK CS Roping	kW	-
Environmental conditions		
Maximum operating height (asl)	m	1000
Relative humidity (detected at a temperature included between 20°C and 40°C)	-	80%
Ambient functioning temperature	°C	+5 ÷ 40
Environmental brightness	LUX	150

■ Technical specifications of top pressor (optional)

	Unit of measurement	Value
Weight	kg	-
Operating pressure	bar	6
Air consumption at the working pressure		
- Model I	NI/cycle	9,32
- Model N	NI/cycle	11,77
- Model I	NI/cycle	13,74
Height of the load to be wrapped		
- Model I	_ mm	1500 ÷ 2200
- Model N	I mm	1600 ÷ 2600
- Model I	l mm	1800 ÷ 3000
Height of the load to be wrapped (with optional extension)		
- Model I	_ mm	750 ÷ 2200
- Model N	l mm	850 ÷ 2600
- Model I	l mm	1050 ÷ 3000

■ Technical features of the roping unit (optional)

	Unit of measurement	Value
Supply pressure	bar	6
Operating pressure (Not changeable).	bar	3
Air consumption at the working pressure	NI/cycle	2

SPECIFICATIONS OF THE ACCESSORIES AVAILABLE ON REQUEST

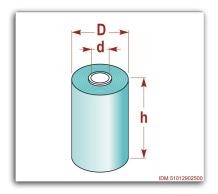
	Unit of measurement	Weight	Capacity
Ramp	kg	58	1000
Weighing unit	kg	260	2000
Floating weighing unit	kg	270	2000
Lifting frame	kg	260	2000
Burying frame	kg	150	-



Technical data of reel

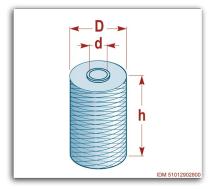
■ Dimensions of film reel

	Unit of measurement	Value
Maximum external diameter D	mm	250
Inside Diameter d	mm	76
Maximum height h	mm	500
Film thickness (Machine with reel holding carriage of type FM).	μm	9-12-17-23
Film thickness (Machine with reel holding carriage of type PW - VK).	μm	17 ÷ 23
Max Weight	kg	17



■ Net reel dimensions

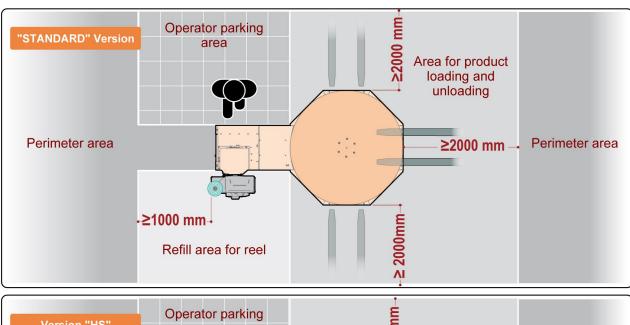
	Unit of measurement	Value
Maximum external diameter D	mm	250
Inside Diameter d	mm	76
Maximum height h	mm	500
Max Weight	kg	17

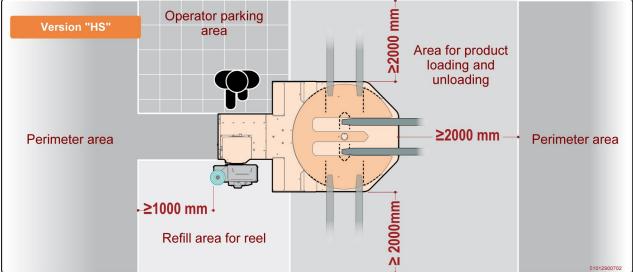




Description of outer areas

The figure shows different areas to be considered in the planning of the installation area.







Safety and information symbols

Please keep safety signs and information legible and follow the instructions.

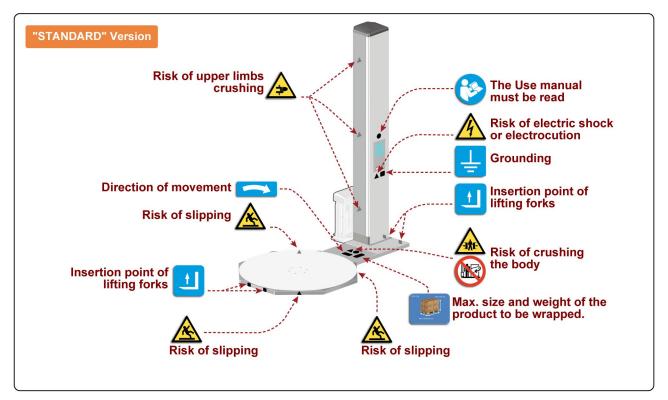
 Signals which are no longer legible must be replaced and repositioned in the same place of origin.

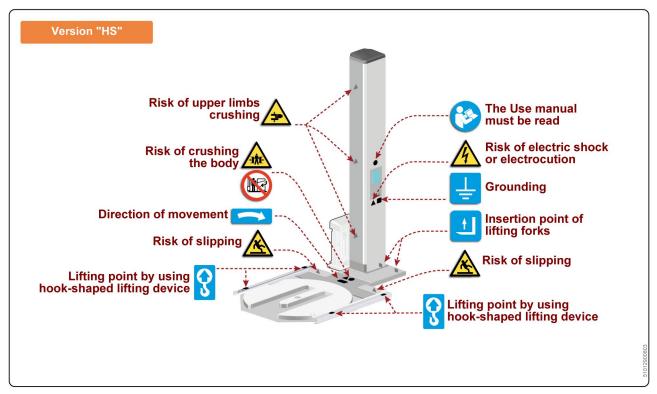


Important

At the time of ordering provide the code of each signal to be replaced that is specified in the spare parts catalogue.

The figure shows the position of the signals applied on the machine.







Recommendations for maintenance interventions

- The recommendations represent a summary of those shown in the SAFETY WARNINGS section.
- The personnel authorized to carry out the ordinary maintenance must have qualified expertise and specific skills in the field of intervention.
- Any work on the electrical system must ONLY be performed by technicians with acknowledged, field-specific skills.
- Properly signal the perimeter areas to show that there are operations in progress.
- According to the type of operation to carry out, wear the Personal Protective Equipment listed in the "Instructions for use" and that indicated by the Labour laws
- Before carrying out any intervention, activate all the safety measures, and assess any residual energy which may still be present.
- Carry out the interventions ONLY according to the modes recommended by the Manufacturer in the "Instructions for use".
- All operations must be carried out ONLY with suitable tools which shall be in good condition, in order to avoid damaging any components and parts of the machine.
- At work completion, restore all the security conditions aimed to prevent and minimize the risks during the human-machine interaction.
- At the end of operations check that there are no other tools or other material near the moving parts or in dangerous areas.
- Refer to the Technical Assistance Service of the Manufacturer, in case interventions not described in the "Instructions for use" are needed.
- In order to avoid safety hazards for the operators and financial losses, follow not only the recommendations but also the information in the SAFETY WARNINGS section.

Scheduled maintenance intervals

Always keep the machine in optimum operating condition and carry out the routine maintenance according to the intervals and procedures specified by the Manufacturer.

- After prolonged inactivity, carefully check that the operating functionality has remained unaltered.
- A good maintenance will ensure a stable performance over time, longer working life and constant compliance with the safety requirements.

IDM 510-129-8

Table: Maintenance intervals

Every working day		
Component	Operation required	Procedures to implement
Safety devices	Checking	Make sure that the listed devices are efficient Emergency stop button Main electric disconnector

Every 40 work hours (max 1 week)		
Component	Operation required	Procedures to implement
Lifting belt for the reel holding carriage	Checking	 Check this component for wear. Replace the belt in case it is excessively worn. (See <i>Replacing the lifting belt of the carriage</i>).
Reel holding carriage sliding guides	Cleaning	 Remove any impurities with a plastic scraper. Clean with a soft cloth soaked in a non-flammable and non-corrosive detergent. Properly dry the surfaces. Do not use water jets.
Load to be wrapped detection photocell	Cleaning	Clean the detection area of the photocell.Use a clean, dry (not abrasive) cloth.

Every 2000 work hours (max 6 months)		
Component	Operation required	Procedures to implement
Air filter (if any)	Cleaning	- Clean the filter or replace it with an original spare part, if necessary (See <i>Cleaning and replacement of the air filter</i>).
Rotating platform rotation chain	Checking	 Check the tension of component. Adjust tension as required - if necessary (See <i>Adjustment of chain controlling the rotation of platform</i>).
	Lubrication	- Lubricate all the greasing points (See <i>Diagram of the points of lubrication</i>).
Film pre-stretch belt (Only for reel holding carriages of type PW).	Checking	 Check the tension of component. Adjust tension as required - if necessary (See <i>Adjustment of drive chain tensioning</i>). Replace the belt in case it is excessively worn.
Film drawing-in rollers (Only for reel holding carriages of type PW-VK).	Cleaning	 Dry clean with a synthetic brush or with non aggressive and non lubricant cleaner. Properly dry the surfaces. Do not use water jets.

Every 5000 work hours (m	ax 12 months)	
Component	Operation required	Procedures to implement
Vertical movement wheels of the reel holding carriage	Checking	Check this component for wear.Replace the component, if it is worn out
Rotation wheels of rotating platform	Checking	Check this component for wear.Replace the component, if it is worn out



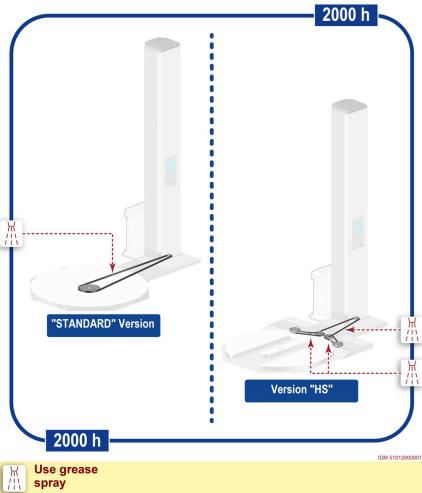
Diagram of the points of lubrication

Lubricate the parts indicated according to the frequency and methods shown.

- Some components (reducers, bearings, etc.) do not request lubrication because they are self-lubricating or life lubricated.
- Use the lubricants (oils and greases) recommended by the Manufacturer or lubricants of equivalent chemical and physical characteristics.
- If the ambient temperature is included between -10°C and +35°C, use lubricants with SAE 20 ISO VG50 or SAE 50 ISO VG 300 viscosity grade.

NOTE

If the ambient temperature is not included in the indicated range, contact the Manufacturer for more information on the type of lubricant to be used.





Problems, causes, remedies

The table shows the list of faults that can occur during the standard operation and it highlights possible remedies.

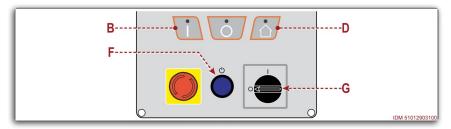


Table: Operation failures		
Problem	Cause	Remedy
With isolator switch G on ON, pilot light does not turn off when button F is pressed.	Emergency stop button pressed	Identify the causes that have caused the stop.Restore normal running conditionsUnlock the emergency stop button with a voluntary action.
When button Start B is pressed, the rotating platform does not start.	The photocell did not detect the load to be wrapped	 Check the functionality of the component. The component must be adjusted (See Sensitivity adjustment for the product to be wrapped detection photocell).
	Rotating platform not in the correct position.	- Press key D .
The reel holding carriage will not go up.	Top limit stop detecting microswitch failure	Check the functionality of the component.The component must be adjusted.
	Failure of the inverter of the reel holding carriage	- Check the error code (See <i>Alarm message table</i>).
The reel holder carriage raises but does not stop at the top of the load to be wrapped.	Top of the load to be wrapped not detected by photocell	 Check the functionality of the component. The component must be adjusted (See Sensitivity adjustment for the product to be wrapped detection photocell).
The ends of the load are wrapped with an excessive amount of reinforcing bands.	Top reinforcing band quantity not correctly set	- Modify the programming.
	Bottom reinforcing band quantity not correctly set	- Modify the programming.
The film is too tightly stretched or too loose.	Tension of film not properly adjusted	- Adjust the tension of film.
The machine stops with the reel holding carriage not correctly positioned.	Presence of any residues or build-up on the sliding guides of reel holding carriage	 Remove any impurities with a plastic scraper. Clean with a soft cloth soaked in a non-flammable and non-corrosive detergent. Properly dry the surfaces. Press key D. Attention Warning Do not use water jets.
	There is an obstacle under the reel holder carriage.	- Remove the obstacle Press key D .
	Braking or excessive wear of the reel holder carriage lifting belt	- Replace belt (See <i>Replacing the lifting belt of the carriage</i>).



Problem	Cause	Remedy
Rotating platform jogging motion.	Rotating platform rotation chain not properly tensioned	- The component must be adjusted (See Adjustment of chain controlling the rotation of platform).
	Presence of residues or dust on the wheels	- Remove any residues. Use brushed with soft plastic bristles.
The noise level is too high.	Rotating platform rotation chain not properly tensioned	- The component must be adjusted (See Adjustment of chain controlling the rotation of platform).
	Wheels of rotating platform worn out or damaged	- Replace the component.
	Failure of gearmotor driving the rotating platform	- Check the functionality of the component.
Reel holding carriage jogging motion.	Presence of any residues or build-up on the sliding guides of reel holding carriage	 Remove any impurities with a plastic scraper. Clean with a soft cloth soaked in a non-flammable and non-corrosive detergent. Properly dry the surfaces. Press key D. Attention Warning Do not use water jets.



Alarm message table

Alarm message	Remedy
01-TABLE LIMIT SWITCH FAULT	"Check sensor operations, connections and/or mechanical positioning. Press the ready button to mute the alarm."
02-CARRIAGE LIMIT SWITCH FAULT/FAULTS	"Check sensor operations, connections and/or mechanical positioning. Press the ready button to mute the alarm."
03-HS TABLE SAFETY ALARM	"Check for objects in the platform transpallet compartment, photocell operations, connections and/or mechanical positioning. Press the ready button to mute the alarm."
04-Safety circuit fault	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists contact the manufacturer's customer service."
05-LOOSE CARRIAGE BELT ALARM	"Check for any obstacles on the carriage route, micro switch operations, connections and/or mechanical positioning. Press the ready button to mute the alarm press the Home button to reposition the reel carriage."
06-NO PALLET ALARM	"Check for the load to be wrapped. Check sensor operations, connections and/or mechanical photocell positioning. Press the ready button to mute the alarm."
08-FILM END ALARM	Check for film, dancing roll potentiometer operations, connections and/or mechanical positioning.
09-TABLE INVERTER INITIALISATION ERROR	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists contact the manufacturer's customer service."
10-TABLE INVERTER POWER ON ERROR	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
11-TABLE MOTOR INVERTER PROTECTION	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
12-TABLE MOTOR OVERLOAD PROTECTION	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0. Check for overloads/mechanical impediments to platform rotation. Turn the machine back on. If the problem persists, contact the manufacturer's customer service."
13-TABLE INVERTER BUS CIRCUIT POWER SURGE ALARM	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
14-TABLE INVERTER OVER TEMPERATURE ALARM	"High operating temperature. Turn off the machine by rotating the main switch to 0. Let the machine cool. Next restore normal operations. If the problem persists, contact the manufacturer's customer service."
15-TABLE INVERTER MAXIMUM CURRENT ALARM	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."



Alarm message	Remedy
16-TABLE INVERTER COMMUNICATION TIMEOUT	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
17-CARRIAGE INVERTER INITIALISATION ERROR	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
18-CARRIAGE INVERTER POWER ON ERROR	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
19-CARRIAGE MOTOR INVERTER PROTECTION	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
20-CARRIAGE MOTOR OVERLOAD PROTECTION	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0. Make sure there are no mechanical overloads/impediments on the carriage lift. Turn the machine back on. If the problem persists, contact the manufacturer's customer service."
21-CARRIAGE INVERTER BUS CIRCUIT POWER SURGE ALARM	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
22-CARRIAGE INVERTER OVER TEMPERATURE ALARM	"High operating temperature. Turn off the machine by rotating the main switch to 0. Let the machine cool. Next restore normal operations. If the problem persists, contact the manufacturer's customer service."
23-CARRIAGE INVERTER MAXIMUM CURRENT ALARM	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
24-CARRIAGE INVERTER COMMUNICATION TIMEOUT	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
25-PRE-STRETCH INVERTER INITIALISATION ERROR	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
26-PRE-STRETCH INVERTER POWER ON ERROR	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
27-PRE-STRETCH MOTOR INVERTER PROTECTION	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
28-PRE-STRETCH MOTOR OVERLOAD PROTECTION	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0. Make sure there are no mechanical overloads/impediments on pre-stretch rotation. Turn the machine back on. If the problem persists, contact the manufacturer's customer service."
29-PRE-STRETCH INVERTER BUS CIRCUIT POWER SURGE ALARM	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."



Alarm message	Remedy
30-PRE-STRETCH INVERTER OVER TEMPERATURE ALARM	"High operating temperature. Turn off the machine by rotating the main switch to 0. Let the machine cool. Next restore normal operations. If the problem persists, contact the manufacturer's customer service."
31-PRE-STRETCH INVERTER MAXIMUM CURRENT ALARM	"Press the ready button to mute the alarm. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
32-PRE-STRETCH INVERTER COMMUNICATION TIMEOUT	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
34- Machine in emergency conditions	"Press the ready button to mute the alarm. If the problem persists, check safety devices."
35-TABLE PHONIC WHEEL SENSOR FAULT	"Check sensor operations, connections and/or mechanical positioning. Press the ready button to mute the alarm."
36-CARRIAGE PHONIC WHEEL SENSOR FAULT	"Check sensor operations, connections and/or mechanical positioning. Press the ready button to mute the alarm."
37-PRE-STRETCH PHONIC WHEEL SENSOR FAULT	"Check sensor operations, connections and/or mechanical positioning. Press the ready button to mute the alarm."
38-SCANNER LASER SENSOR MIRROR DIRTY	"Clean according to the manufacturer's instructions. Press the ready button to mute the alarm."
39-PRE-CHARGE RESISTANCE BYPASS RELAY ALARM	Check the operation of the bypass relay or precharge resistors. Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service.
40-NO PNEUMATIC CIRCUIT AIR	"Check for air supply and pressure. Press the ready button to mute the alarm."
41-CUTTING-HOOKING ARM CYLINDER TIMEOUT	"Check position, arm drive, cylinder and relevant sensors. Press the ready button to mute the alarm and reposition the elements."
42-CUTTING LEVER CYLINDER TIMEOUT	"Check position, arm drive, cylinder and relevant sensors. Press the ready button to mute the alarm and reposition the elements."
43-WELDING CYLINDER TIMEOUT	"Check position, arm drive, cylinder and relevant sensors. Press the ready button to mute the alarm and reposition the elements."
44-CUTTING-HOOKING UNIT NOT IN POSITION	Check sensor operations, connections and/or mechanical positioning.
45-CUTTING BLADE CONTACTOR FAULT	Contact the manufacturer's customer service centre.
46-WELDING CONTACTOR FAULT	Contact the manufacturer's customer service centre.
47-COMMUNICATION ERROR WITH KEYBOARD BOARD	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
48-COMMUNICATION ERROR WITH EXPANSION BOARD	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."



Alarm message	Remedy
49-TIMEOUT COMMUNICATION BOARD INVERTER EXPANSION DM	Attempt silence via ready button or remove and restore power to the equipment. In case the alarm persists it is necessary to replace the mentioned card or the connection cable.
50- ROPING LIMIT STOP FAULT/ FAULTS	"Check sensor operations, connections and/or mechanical positioning. Press the ready button to mute the alarm."
51-ROPING COMMAND TIMEOUT	"Check sensor operations, connections and/or mechanical positioning. Press the ready button to mute the alarm."
55-Driven pre-stretch Master drive alarm	"Check power, protection or mechanical trip. Press the ready button to mute the alarm."
56-Driven pre-stretch Slave drive alarm	"Check power, protection or mechanical trip. Press the ready button to mute the alarm."
99-COMMUNICATION ERROR WITH MOTHER BOARD	"Turn off the machine by rotating the main switch to 0 and turn back on. If the problem persists, contact the manufacturer's customer service."
A_NoCom	No Communications

Cleaning and replacement of the air filter

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.



Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

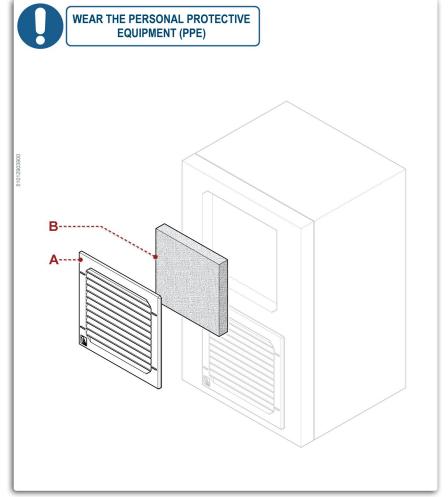
- Rotate main disconnector to position "O" (OFF) to deactivate the power supply.
- Lock the main disconnecting switch with the padlock, in order to avoid any interference by non-authorised personnel.
- 4. Unhook the grid A.
- 5. Remove the filter B.
- **6.** Clean the filter with dry compressed air.
- Check the condition of the filter; if damaged, replace it with original spare parts.

NOTE

Replace the components ONLY with GENUINE SPARE PARTS or with other components of equiv-

alent design and functional specifications.

- 8. Re-install the filter B.
- **9.** Attach the grid **A**.
- **10.**At the end of operations, check that there are no tools or other materials in the risk areas.
- 11. Remove the padlock from the main disconnecting switch.
- **12.**Rotate main disconnector to position "I" (ON) to activate the power supply.
- **13.**Start the machine and make sure that the operation has been carried out properly.





Adjustment of chain controlling the rotation of platform

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.



Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- 1. Properly signal the perimeter areas to show that there are operations in progress.

NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

- 2. Rotate main disconnector to position "O" (OFF) to deactivate the power supply.
- 3. Lock the main disconnecting switch with the padlock, in order to avoid any interference by non-authorised personnel.
- 4. To reach high, not easily accessible or otherwise hazardous areas, implement adequate safety measures to avoid risks.
- 5. Disassemble the top pressor (See Disassembly and re-assembly of the top pressor).
- 6. Disassemble the reel holding carriage (See Disassembly and assembly of reel holder).



Only for reel holding carriages of t

7. Remove the fastening elements A and remove the component B.

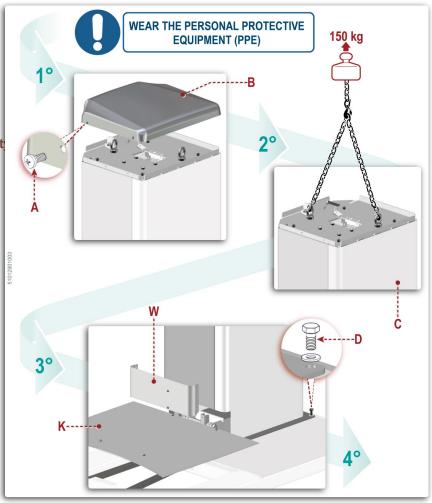
20

8. Attach the column C to a lifting device.

 3°

9. Disassemble the guards K-W.

10.Loosen the screws D.



M



- **11.**Bring the column to a horizontal position.
- Insert the shim E under the column to keep it horizontal.
 - **5°**
- **12.**Slightly loosen the nuts **F**.
- **13.**Adjust the tension of chain **G** by means of the adjusting system H.



Important

Do not overtighten so as not to cause any malfunctioning.

14.Tighten the nuts **F**.



15.Lift the column to its vertical position.



Attention Warning

Keep reel holding carriage conveying belt tensioned until column is in vertical position. Do not remove the locking devices of reel holding carriage until column is in vertical posi-

16. Secure the column to the support base with the special screws D.



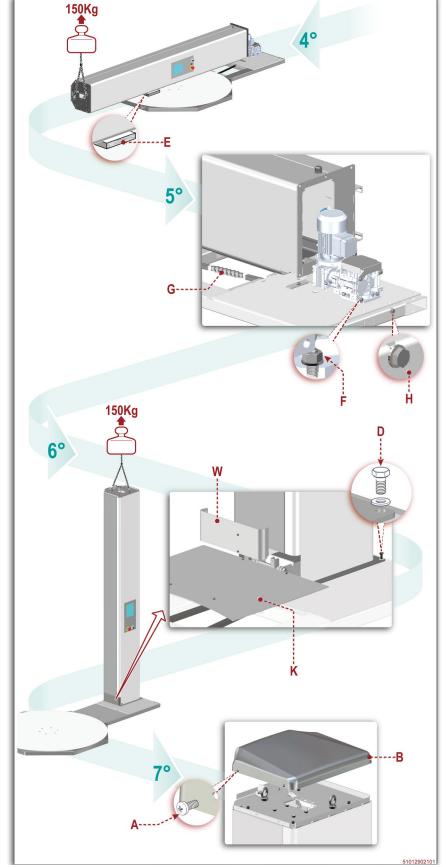
Attention Warning

Check that in column base electric or pneumatic cables are not crushed and that there is no interference with machine or external elements.

- 17.Re-install the guards K-W.
- 18. Remove the lifting device.



- 19.Install the component B and lock it in place with the fastening elements A.
- 20.Install the reel holding carriage (See Disassembly and assembly of reel holder).





510-129-8

M

Important

Only for reel holding carriages of type PW-VK

21.Install the top pressor (See Disassembly and re-assembly of the top pressor).



- **22.**At the end of operations, check that there are no tools or other materials in the risk areas.
- 23. Remove the padlock from the main disconnecting switch.
- 24. Rotate main disconnector to position "I" (ON) to activate the power supply.
- 25. Start the machine and make sure that the operation has been carried out properly.

Sensitivity adjustment for the product to be wrapped detection photocell

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.



Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- The sensitivity adjustment is required when the photocell does not detect the presence of the load to be wrapped.
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

- **2.** Correctly load the new product to be wrapped in the middle of rotating platform.
- **3.** Move the reel holder carriage to match the load to be wrapped.
- **4.** Check if the photocell detects the load to be wrapped.
- The light A lighting up (green light) indicates that the photocell is powered.
- When pilot light B turns on (yellow light), it means that the load to be wrapped has been detected
- When the light **B** is off, slowly rotate the control **C** until the indicator light illuminates.

NOTE

Do NOT increase the photocell sensibility excessively in order to prevent it from detecting elements that are not to be wrapped.

WEAR THE PERSONAL PROTECTIVE EQUIPMENT (PPE)

COMBANDIAN STANDARD" Version

Version "HS"

The detection of elements that are not to wrapped can alter the point of stop of reel holding carriage.

IDM 510



Replacing the rotating platform wheels (standard version)

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.



Warning

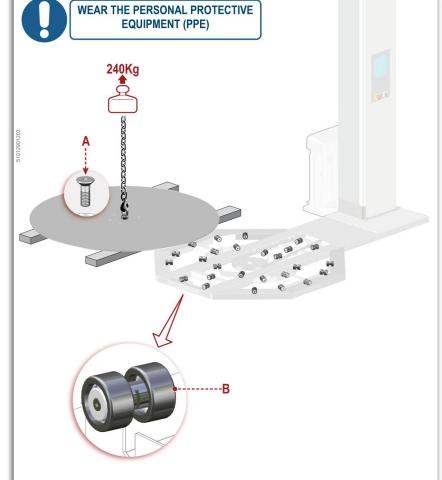
Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- 1. Properly signal the perimeter areas to show that there are operations in progress.

NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

- 2. Rotate main disconnector to position "O" (OFF) to deactivate the power supply.
- 3. Lock the main disconnecting switch with the padlock, in order to avoid any interference by non-authorised personnel.
- 4. Loosen the screws A.
- 5. Fit the eyebolt on the rotating platform.
- 6. Set up a hook-shaped lifting device with a suitable capacity.
- 7. Attach the lifting device to the eyebolt.
- 8. Lift and move the rotating platform on the side.
- 9. One at a time, remove all the wheels B.
- 10. One at a time, fit all the new wheels.





Important

Replace the components ONLY with GENUINE SPARE PARTS or with other components of equivalent design and functional specifications.

- **11.** Adjust the platform in its original position.
- **12.**Remove the lifting device.
- 13. Remove the eyelet.



- 14. Tighten the screws A.
- **15.**At the end of operations, check that there are no tools or other materials in the risk areas.
- **16.**Remove the padlock from the main disconnecting switch.
- 17. Rotate main disconnector to position "I" (ON) to activate the power supply.
- 18. Start the machine and make sure that the operation has been carried out properly.

Replacing the rotating platform wheels (version HS)

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

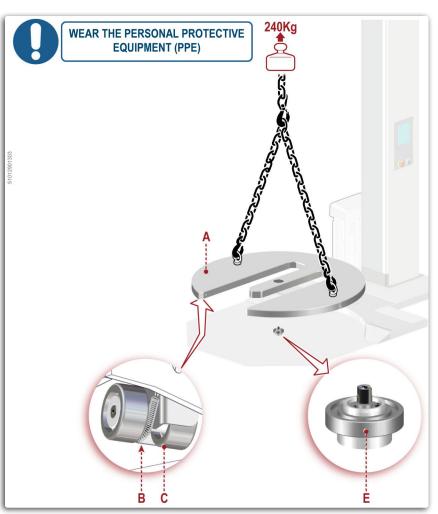


Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

NOTE

- **2.** Rotate main disconnector to position "**O**" (OFF) to deactivate the power supply.
- **3.** Lock the main disconnecting switch with the padlock, in order to avoid any interference by non-authorised personnel.
- **4.** Disconnect all connectors from their sensors.
- **5.** Fit the eyebolts on the rotating platform.
- **6.** Set up a hook-shaped lifting device with a suitable capacity.
- **7.** Hook the lifting device using the eyelets.
- **8.** Lift the rotating platform **A** and place it on supports to facilitate the operation.





Important

The lifting device must be kept tensioned, to avoid sudden falls and the associated body parts crushing risks.

- 9. One by one, undo the retaining springs B and remove the wheels C.
- 10. One at a time, fit all the new wheels and fasten the retaining springs B.
- **11.**Check the integrity of the bearing **E** and, if necessary, replace it.



Replace the components ONLY with GENUINE SPARE PARTS or with other components of equivalent design and functional specifications.

- **12.**Slightly lift the platform, remove the supports and reposition it on the base.
- During repositioning, be careful that the pin of the platform properly engages in bearing E.
- 13. Remove the lifting device.
- 14. Remove the eyebolts
- 15. Connect the connectors to their sensors.
- **16.**At the end of operations, check that there are no tools or other materials in the risk areas.
- **17.**Remove the padlock from the main disconnecting switch.
- 18. Rotate main disconnector to position "I" (ON) to activate the power supply.
- **19.**Start the machine and make sure that the operation has been carried out properly.



Replacing the lifting belt of the carriage

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

Attention Warning

Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

- Rotate main disconnector to position "O" (OFF) to deactivate the power supply.
- **3.** Lock the main disconnecting switch with the padlock, in order to avoid any interference by non-authorised personnel.
- **4.** To reach high, not easily accessible or otherwise hazardous areas, implement adequate safety measures to avoid risks.
- Disassemble the top pressor (See Disassembly and re-assembly of the top pressor).
- Disassemble the reel holding carriage (See <u>Disassembly</u> and assembly of reel holder).



Only for reel holding carriages of type PW-VK

10

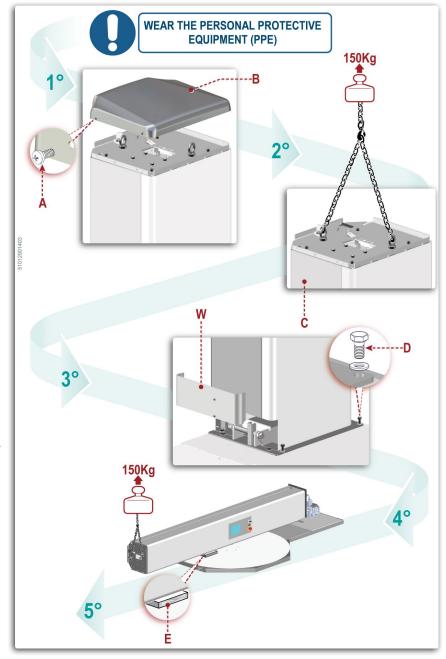
Remove the fastening elements
 A and remove the component
 B.

2°

8. Attach the column **C** to a lifting device.

3°

9. Remove the guard W.



IDM 510-129

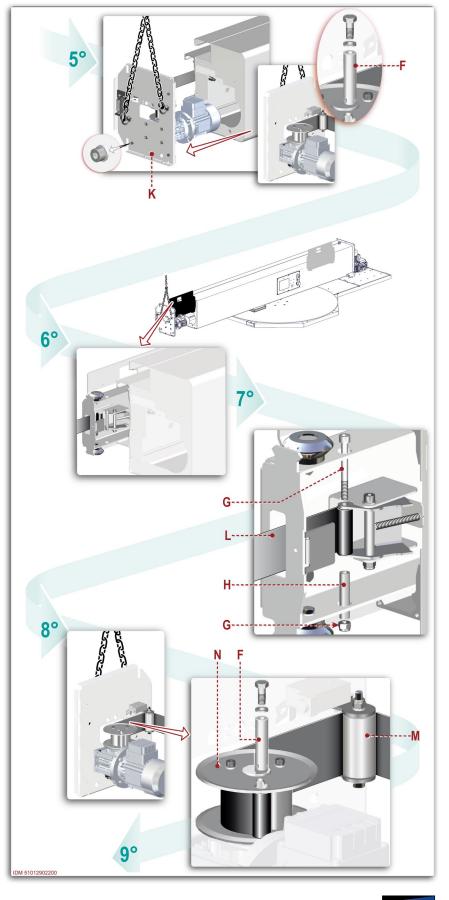
- 10.Loosen the screws D.
 - **4°**
- **11.**Bring the column to a horizontal position.
- Insert the shim E under the column to keep it horizontal.
 - 5°_
- **12.**Remove the fastening elements and remove the component **K**.
- **13.**Disconnect all connectors from their sensors.
- 14. Slip out pin F.
 - 6°.
- **15.**Partially remove the reel holder carriage to reach the fastening elements.
 - 7°.
- 16. Remove the fasteners G.
- **17.**Remove the bushing **H** and remove the damaged belt **L**.
- **18.**Insert the bushing **H** in the new belt.



Important

Replace the components ONLY with GENUINE SPARE PARTS or with other components of equivalent design and functional specifications.

- **19.**Secure the end of the belt (with bushing) by means of the fastening elements **G**.
- **20.**Remount the reel holder carriage.
 - 8°.
- 21.Lead the belt over the roller M.
- **22.**Insert the pin **F** to connect the end of the belt to the pulley **N**.





9°

- 23.Install the component K and lock it in place with the fastening elements.
- **24.**Connect the connectors to their sensors.
- 25. Keep the belt taut and move the reel holder carriage to match the base of the column.

10°

26.Lift the column to its vertical position.



Attention Warning

Keep reel holding carriage conveying belt tensioned until column is in vertical position.

Do not remove the locking devices of reel holding carriage until column is in vertical position.

27.Secure the column to the support base with the special screws D.



Attention Warning

Check that in column base electric or pneumatic cables are not crushed and that there is no interference with machine or external elements.

- 28.Install the guard W.
- 29. Remove the lifting device.

11°

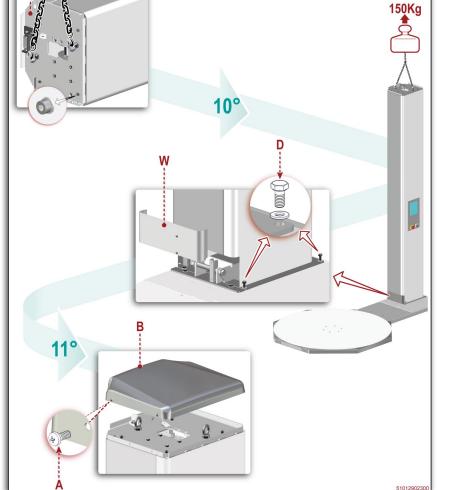
- **30.**Install the component **B** and lock it in place with the fastening elements **A**.
- 31.Install the reel holding carriage (See Disassembly and assembly of reel holder).



/i Important

Only for reel holding carriages of type PW-VK

- 32.Install the top pressor (See Disassembly and re-assembly of the top pressor).
- 33.At the end of operations, check that there are no tools or other materials in the risk areas.
- **34.**Remove the padlock from the main disconnecting switch.
- 35. Rotate main disconnector to position "I" (ON) to activate the power supply.
- 36. Start the machine and make sure that the operation has been carried out properly.



90



Description of the main components of the top pressor

The Top pressor keeps the product stabilised during wrapping.

- **A) Top pressor disc:** it rests on the product to keep it stable.
- **B) Pneumatic actuator:** it is used to vertically move the top pressor disc.





Disassembly and re-assembly of the top pressor

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

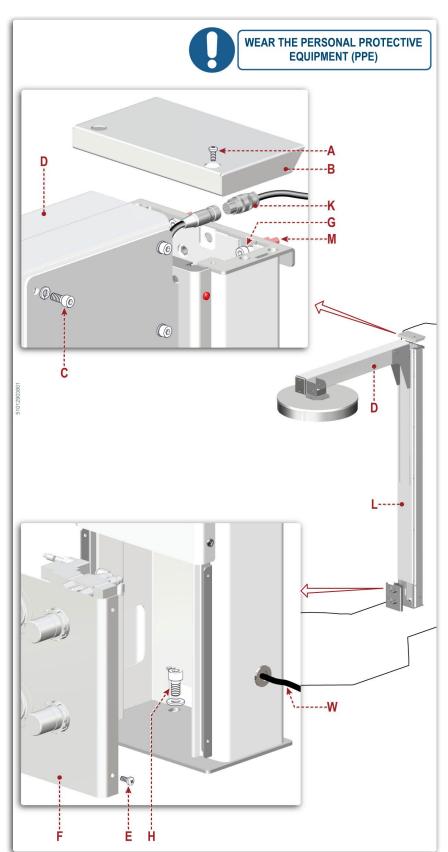
Attention Warning

Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

NOTE

- Rotate main disconnector to position "O" (OFF) to deactivate the power supply.
- Lock the main disconnecting switch with the padlock, in order to avoid any interference by non-authorised personnel.
- **4.** Close the valve to turn off the pneumatic supply.
- To reach high, not easily accessible or otherwise hazardous areas, implement adequate safety measures to avoid risks.
- Loosen the screws A and remove the cover B.
- **7.** Loosen the screws **C** and remove the component **D**.
- 8. Unplug connectors K.
- Disconnect pneumatic supply
 W.
- **10.**Loosen the screws**E** and disassemble the front panel **F**.
- 11.Loosen the screws G.





- 12.Loosen the screws H.
- 13. Remove the component L.
- 14. Remove small columns M from column.
- **15.**Position the component **L** in a suitable place so that it does not constitute any obstacle.

■ Re-assembly of the top pressor

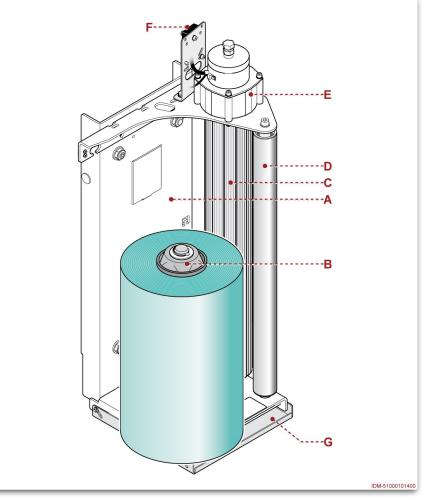
- 1. Install small columns M on column.
- 2. Fit the component L and secure it with the screws H.
- 3. Introduce and tighten the screws G.
- 4. Re-install the front panel F and fasten it with the screws E.
- 5. Re-plug connectors K.
- 6. Connect pneumatic supply W.
- 7. Fit the component **D** and secure it with the screws **C**.
- 8. Install the cover B and fasten it with the screws A.
- **9.** At the end of operations, check that there are no tools or other materials in the risk areas.
- 10. Open the valve to activate the pneumatic supply.
- 11. Remove the padlock from the main disconnecting switch.
- 12. Rotate main disconnector to position "I" (ON) to activate the power supply.
- **13.**Start the machine and make sure that the operation has been carried out properly.



Reel holding carriage (FM)

Main components

- A) Structure: it is equipped with wheels for vertical shifting of carriage on column.
- In the structure a fall arrest system is installed, which stops the carriage in case of lifting belt failure.
- **B) Reel holder:** it is equipped with braking system to avoid reel unwinding.
- **C) Roller:** designed to tension the film.
- Roller is coated with inserts in order to ensure film pulling during wrapping.
- D) Roller (idle)
- **E)** Electromechanical brake: device that adjusts the tension of the film.
- F) Photocell: it detects the presence and the height of the load to be wrapped in order to stop the upward movement of reel holding carriage.
- On request, a "black" version of the photocell can be supplied, specifically designed to detect wrapped items or products with a prevalence of dark surfaces.
- **G)** Feeler: safety device that stops the descent of the reel holding carriage in the presence of an obstacle.





■ Film Coil Feeding

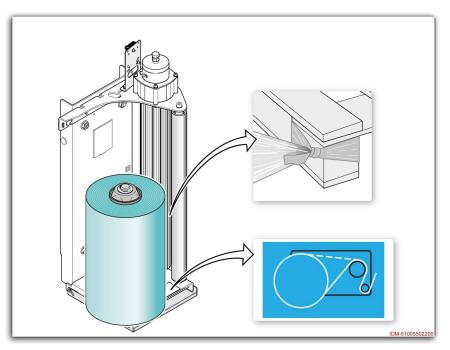
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Lower the reel holding carriage until its endstroke.
- **2.** Remove the cardboard core of the reel.
- 3. Insert the new reel.

NOTE

Check whether the wrapping film has the same chemical-physical properties as that installed in the reel holder carriage.

If film characteristics appear to be different, consider whether you should adjust the film tension.

Insert film according to the required direction of the adhesive size.



<u>î</u>

Important

In order to avoid transferring impurities to the surfaces of the guiding rollers, discard the outer wrapping film layer on the reel.

- **5.** Tie the trailing end of the film to the base of the product to be wrapped.
- 6. Start wrapping.



Cleaning and replacement of brake disc

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

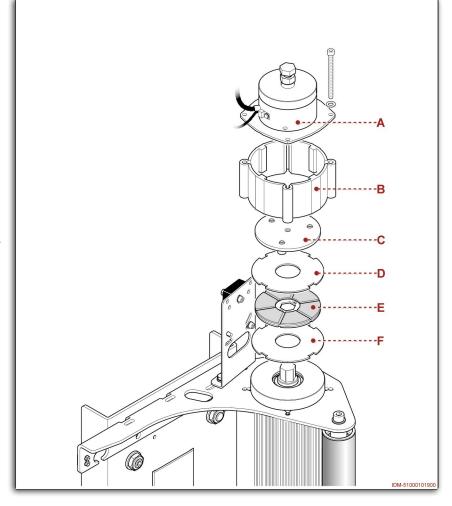
Attention Warning

Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- 1. Properly signal the perimeter areas to show that there are operations in progress.

NOTE

- **2.** Remove the fastening elements and remove the actuator **A**.
- **3.** Remove in a sequence the components **B-C-D-E-F**.
- **4.** Clean the contact surfaces of the brake discs **D-F**.
- **5.** Check the wear level of the friction material of the disc **E**.
- In the case of excessive wear, replace the component.
- **6.** Install in a sequence the components **F-E-D-C-B**.
- **7.** Install the component **A** and lock it in place with the fastening elements.
- Adjust brake.
 See Adjustment of brake for further details.



- **9.** At the end of operations, check that there are no tools or other materials in the risk areas.
- **10.**Start the machine and make sure that the operation has been carried out properly.



Adjustment of brake

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

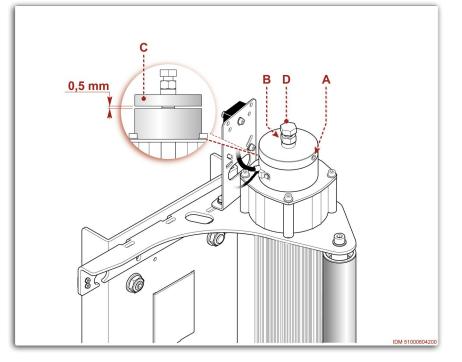
Attention Warning

Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

NOTE

- 2. Loosen the screw A.
- 3. Loosen the lock nut B.
- **4.** Insert thickness gauge (thickness0,5 mm) under disc **C**.
- **5.** Keep disc **C** in proper position and regulate screw **D** to adjust brake.
- Clockwise: the distance gets higher.
- Counter clockwise: distance gets shorter.
- 6. Tighten lock nut B.
- 7. Tighten the screw A.
- **8.** At the end of operations, check that there are no tools or other materials in the risk areas.
- **9.** Start the machine and make sure that the operation has been carried out properly.





Replacing the outer surface of roller

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

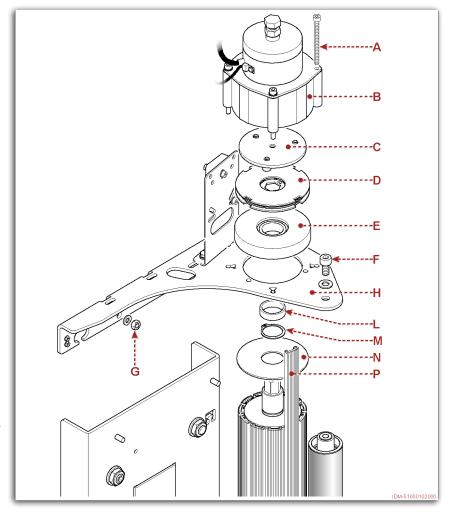
Attention Warning

Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- 1. Properly signal the perimeter areas to show that there are operations in progress.

NOTE

- 2. Loosen the screws A.
- **3.** Disassemble the brake assembly **B**.
- **4.** Remove in a sequence the components **C-D-E**.
- 5. Unscrew screw F.
- 6. Unscrew the nuts G.
- 7. Remove the plate H.
- 8. Extract spacer L.
- **9.** Remove stop ring **M**.
- **10.**Remove the component **N**.
- **11.**Remove all the external cylinder surface inserts **P**, one at a time.
- **12.**Thoroughly clean the grooves of the roller.
- **13.**Insert in a sequence, one at a time, all the new external cylinder surface inserts.
- 14.Install component N.
- 15. Reinstall the retainer ring M.
- **16.** Install the spacer **L**.
- 17. Fit back the plate **H** and fix it with the nuts **G** without tightening.
- 18.Insert screw F and tighten it.
- 19. Adjust the position of the plate H and tighten the nuts G.
- 20.Install in a sequence the components E-D-C.
- 21. Install the brake assembly B and fix it with the screws A.
- **22.** At the end of operations, check that there are no tools or other materials in the risk areas.
- 23. Start the machine and make sure that the operation has been carried out properly.







Reel holding carriage (PW)

■ Main components

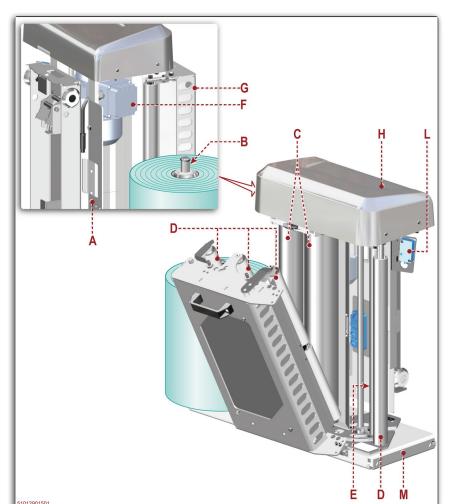
- A) Structure: it is equipped with wheels for vertical shifting of carriage on column.
- In the structure a fall arrest system is installed, which stops the carriage in case of lifting belt failure.
- **B)** Reel holder: it is equipped with braking system to avoid reel unwinding.
- **C) Rollers:** they are used to prestretch the film.
- The rollers are activated by a chain drive, which is operated by an independent electric motor.
- The film pre-stretch can be modified by changing the drive ratio by replacing the pulleys.
- **D) Rollers:** idle rollers which are used to insert the film.
- **E)** Dancer roller (idle): it is equipped with sensor to detect the film tension.
- The roller is equipped with a sensor that interfaces with the electric motor F to adjust the speed of the rollers C.
- **F) Electric motor:** it drives the pre-stretch rollers.
- **G) Interlocked mobile guard:** safety device preventing access to the dangerous areas.
- The guard is connected to a safety device that stops all dangerous elements, when opened.
- When guard closes, the operation does NOT restart automatically, but it enables the start procedure.
- DO NOT open any interlocked guard to stop operation.



Important

The emergency stop shall be performed ONLY with a voluntary action on the emergency button.

- H) Protective guard for the drive system of rollers
- **L) Photocell:** it detects the presence and the height of the load to be wrapped in order to stop the upward movement of reel holding carriage.
- On request, a "black" version of the photocell can be supplied, specifically designed to detect wrapped items or products with a prevalence of dark surfaces.
- **M)** Feeler: safety device that stops the descent of the reel holding carriage in the presence of an obstacle.



English language



■ Film Coil Feeding

- The figure shows the points of intervention and the description shows the procedures to be adopted.
- 1. Lower the reel holding carriage until its endstroke.
- 2. Open the cover A.
- 3. Remove the cardboard core of the reel.
- 4. Insert the new reel.

NOTE

Check whether the wrapping film has the same chemical-physical properties as that installed in the reel holder car-

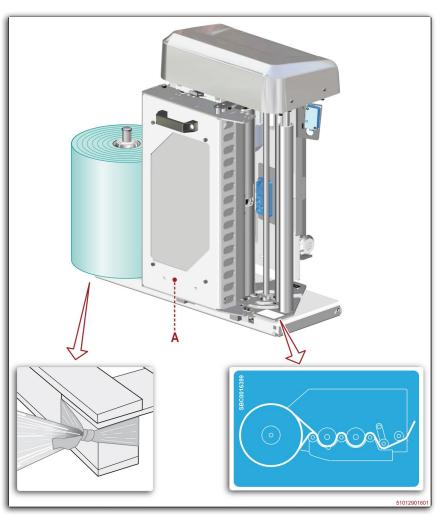
If film characteristics appear to be different, consider whether you should adjust the film ten-

5. Insert film according to the required direction of the adhesive size.

Important

In order to avoid transferring impurities to the surfaces of the guiding rollers, discard the outer wrapping film layer on the

- **6.** Tie the trailing end of the film to the base of the product to be wrapped.
- 7. Close the cover A.
- 8. Start wrapping.





Adjustment of drive chain tensioning

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.



Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- Properly signal the perimeter areas to show that there are operations in progress.

NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

Loosen screws and remove guard A.

Adjustment of motor belt

- 3. Slightly loosen screws B.
- Manually adjust the motor unit C to regulate the tension of belt D and, at the same time, tighten the screws B.



Important

Do not tighten component excessively in order to avoid the deterioration of the rotating parts.

Adjustment of pre-stretch belt

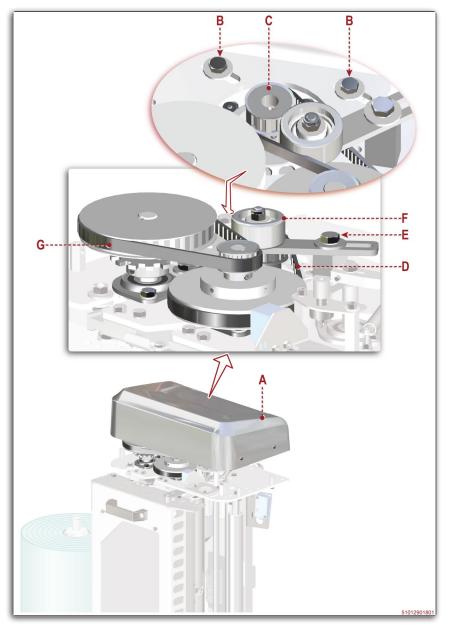
- **5.** Slightly loosen screws **E**.
- Manually adjust the tightener F
 to regulate the tension of belt G
 and, at the same time, tighten
 the screw E.



Important

Do not overtighten so as not to cause any malfunctioning.

- **7.** Assemble the guard **A**, and then fasten it by using the screws.
- **8.** At the end of operations, check that there are no tools or other materials in the risk areas
- 9. Start the machine and make sure that the operation has been carried out properly.





Pre-stretch percentage variation (film pre-stretch kit)

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

Attention Warning

Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.



2. Loosen screws and remove guard **A**.



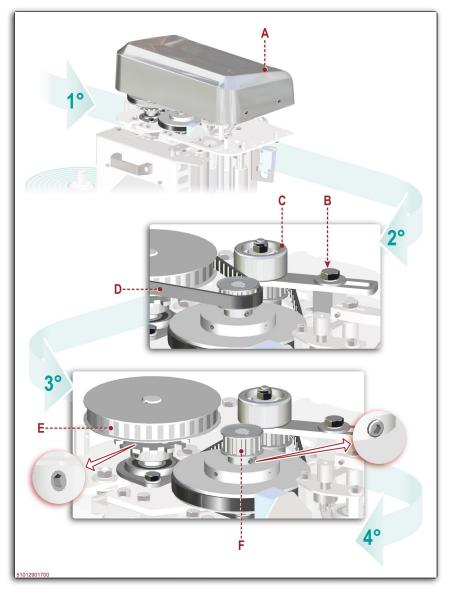
- Loosen the screw B and move the tightener support C in order to completely loosen the belt D.
- 4. Remove the belt D.



- **5.** Remove the fastening elements from the pulleys **E-F**.
- 6. Remove the pulleys E-F.
- **7.** Select the pulleys for the new film pre-stretch percentage.
- **8.** Install the pulleys and lock them with the fastening elements.



Make sure that the pulleys are perfectly aligned one to the other.





- The table shows the pre-stretching percentage values.

Pre-stretch-	Full kit	Pulley E			Pulley F			Belt D	
ing percentage	Code	Model	Code	Number of teeth	Model	Code	Number of teeth	Code	Number of teeth
100%	SBA0002595	21L050	SCA0000632	21	14L050	SCA0000628	14	SCA0000637	165
125%	SBA0003924	28L050	SCA0000633	28	17L050	SCA0000630	17	S3400140ZZZ	187
150%	SBA0003289	30L050	SCA0000634	30	16L050	SCA0000629	16	S3400140ZZZ	187
175%	SBA0003922	44L050	SCA0000639	44	21L050	SCA0000632	21	S3400078ZZZ	225
200%	SBA0003923	32L050	SCA0000635	32	14L050	SCA0000628	14	S3400140ZZZ	187
225%	SBA0003287	21L050	SCA0000632	21	13L050	SCA0000631	13	S3400140ZZZ	187
250%	SBA0003926	32L050	SCA0000635	32	12L050	SCA0000627	12	S3400140ZZZ	187
275%	SBA0010980	40L050	SCA0000636	40	14L050	SCA0000628	14	SCA0000638	202
300%	SBA0002596	40L050	SCA0000636	40	13L050	SCA0000631	13	SCA0000638	202
360%	SBA0014582	44L050	SCA0000639	44	12L050	SCA0000627	12	S3400282ZZZ	210



- **9.** Re-install the belt **D** on the pulleys.
- 10.Manually adjust the tightener C to regulate the tension of belt D and, at the same time, tighten the screw B.

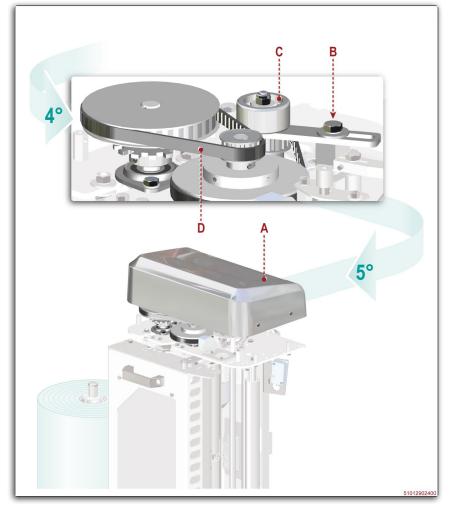


Important

Do not overtighten so as not to cause any malfunctioning.



- **11.** Assemble the guard **A**, and then fasten it by using the screws.
- **12.**At the end of operations, check that there are no tools or other materials in the risk areas.
- **13.**Start the machine and make sure that the operation has been carried out properly.





Disassembly and assembly of reel holder

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

Attention Warning

Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- 1. Properly signal the perimeter areas to show that there are operations in progress.

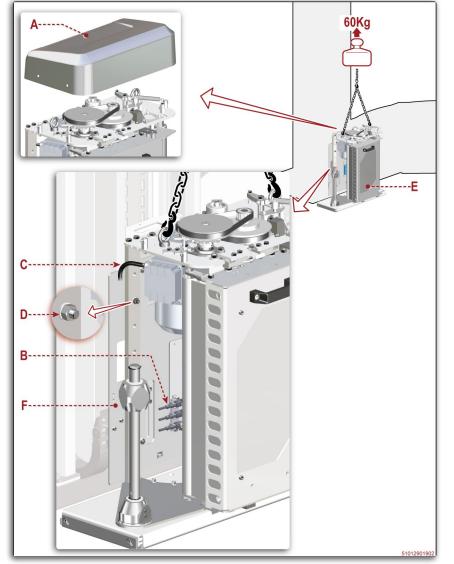
NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

- **2.** Set up a hook-shaped lifting device with a suitable capacity.
- **3.** Loosen screws and remove guard **A**.
- **4.** Hook the lifting device using the eyelets.
- **5.** Slightly lift lifting device to keep it tensioned.
- **6.** Unplug connectors **B**.
- 7. Disconnect the earthing cable.
- **8.** Disconnect the electrical connections of motor **C**.
- 9. Unscrew the nuts D.
- 10.Remove reel holder E
- **11.**Position component in a suitable area and rest it gently in order not to damage feeler.
- 12. Remove the lifting device.

Assembly of reel holder

- **1.** Hook the lifting device using the eyelets.
- 2. Install reel holder E on support F.
- 3. Tighten the nuts D.
- 4. Connect the electrical connections of motor C.
- 5. Connect the earthing cable.





6. Re-plug connectors B.

NOTE

Carry out the operation according to the numbers applied on the components.

- 7. Remove the lifting device.
- **8.** Assemble the guard **A**, and then fasten it by using the screws.
- **9.** At the end of operations, check that there are no tools or other materials in the risk areas.
- **10.**Start the machine and make sure that the operation has been carried out properly.

English language



Reel holding carriage (VK)

■ Main components

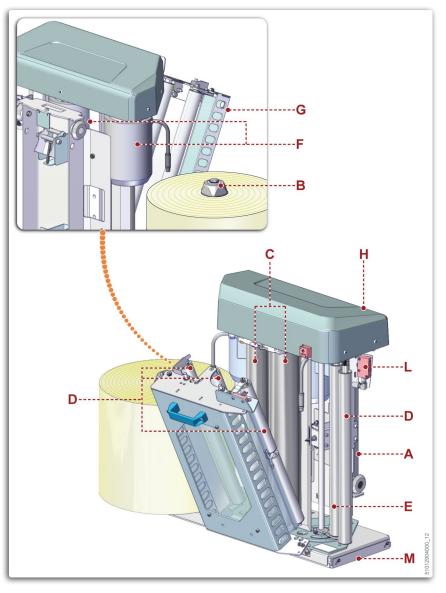
- A) Structure: it is equipped with wheels for vertical shifting of carriage on column.
- In the structure a fall arrest system is installed, which stops the carriage in case of lifting belt failure.
- **B)** Reel holder: it is equipped with braking system to avoid reel unwinding.
- **C)** Rollers: they are used to prestretch the film.
- The activation of rollers is made by a chain drive, operated by independent electric motors F.
- The film pre-stretch can be varied from the machine control system.
- **D) Rollers:** idle rollers which are used to insert the film.
- **E)** Dancer roller (idle): it is equipped with sensor to detect the film tension.
- Roller is equipped with a sensor that interfaces with the electric motors F to adjust the speed of rollers C.
- **F) Electric motor:** it drives the pre-stretch rollers.
- **G)** Interlocked mobile guard: safety device preventing access to the dangerous areas.
- The guard is connected to a safety device that stops all dangerous elements, when opened.
- When guard closes, the operation does NOT restart automatically, but it enables the start procedure.
- DO NOT open any interlocked guard to stop operation.



The emergency stop shall be performed ONLY with a voluntary action on the emergency button.

H) Protective guard for the drive system of rollers

- **L) Photocell:** it detects the presence and the height of the load to be wrapped in order to stop the upward movement of reel holding carriage.
- On request, a "black" version of the photocell can be supplied, specifically designed to detect wrapped items or products with a prevalence of dark surfaces.





M) Feeler: safety device that stops the descent of the reel holding carriage in the presence of an obstacle.

■ Film Coil Feeding

- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Lower the reel holding carriage until its endstroke.
- 2. Open the cover A.
- **3.** Remove the cardboard core of the reel.
- 4. Insert the new reel.

NOTE

Check whether the wrapping film has the same chemical-physical properties as that installed in the reel holder carriage.

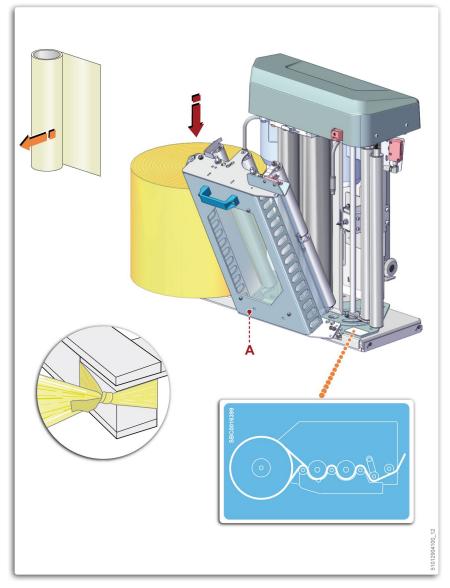
If film characteristics appear to be different, consider whether you should adjust the film tension.

Insert film according to the required direction of the adhesive size.

Important

In order to avoid transferring impurities to the surfaces of the guiding rollers, discard the outer wrapping film layer on the reel.

- **6.** Tie the trailing end of the film to the base of the product to be wrapped.
- 7. Close the cover A.
- 8. Start wrapping.





Adjustment of drive chain tensioning

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.

Attention Warning

Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

- **2.** Loosen screws and remove guard **A**.
- 3. Slightly loosen screws B.
- Manually adjust the tightener C
 to regulate the tension of belt D
 and,at the same time, tighten
 the screw B.



Important

Do not overtighten so as not to cause any malfunctioning.

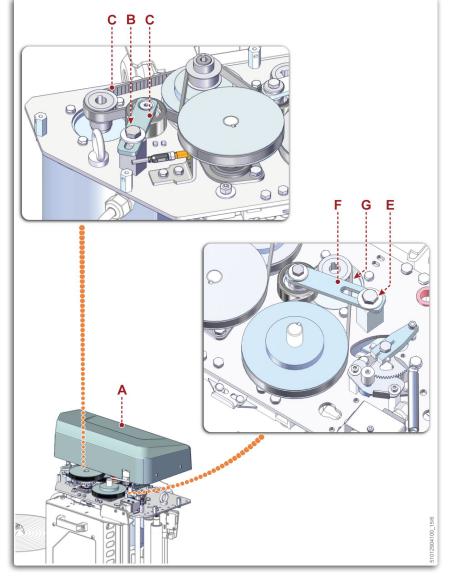
- 5. Slightly loosen screws E.
- Manually adjust the tightener F
 to regulate the tension of belt G
 and,at the same time, tighten
 the screw E.



Important

Do not overtighten so as not to cause any malfunctioning.

- **7.** Assemble the guard **A**, and then fasten it by using the screws.
- **8.** At the end of operations, check that there are no tools or other materials in the risk areas.
- **9.** Start the machine and make sure that the operation has been carried out properly.





Disassembly and assembly of reel holder

The operation must be carried out by the maintenance technician or by personnel with suitable competences, skills and knowledge.

Make sure to fulfil the required requirements in order to work under safe conditions.



Always wear suitable personal protective equipment in order to avoid safety and health hazards.

- This service should be carried out with the reel holding carriage lowered and the machine "switch OFF".
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Properly signal the perimeter areas to show that there are operations in progress.

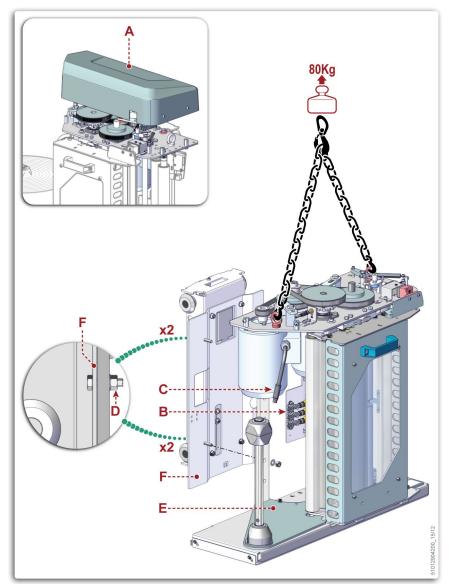
NOTE

This condition is necessary to prevent access to the controls that may endanger the safety, in case they are activated.

- **2.** Set up a hook-shaped lifting device with a suitable capacity.
- **3.** Loosen screws and remove guard **A**.
- **4.** Hook the lifting device using the eyelets.
- **5.** Slightly lift lifting device to keep it tensioned.
- **6.** Unplug connectors **B**.
- **7.** Disconnect the earthing cable.
- **8.** Disconnect the electrical connections of motor **C**.
- 9. Unscrew the nuts D.
- 10.Remove reel holder E
- 11. Position component in a suitable area and rest it gently in order not to damage feeler.
- 12. Remove the lifting device.

Assembly of reel holder

- **1.** Hook the lifting device using the eyelets.
- 2. Install reel holder E on support F.
- 3. Tighten the nuts **D**.
- 4. Connect the electrical connections of motor C.
- 5. Connect the earthing cable.
- 6. Re-plug connectors B.





NOTE

Carry out the operation according to the numbers applied on the components.

- 7. Remove the lifting device.
- **8.** Assemble the guard ${\bf A}$, and then fasten it by using the screws.
- 9. At the end of operations, check that there are no tools or other materials in the risk areas.
- 10. Start the machine and make sure that the operation has been carried out properly.



Recommendations on Operation and Use

- The machine must be used by one single operator ONLY, who must be trained and capable of performing the work and be in suitable conditions.
- Consult the user manual, in particular during the first use, and make sure that you fully understand its content.
- Find out the position and function of the controls and simulate some operations (in particular start and stop) in order to acquire familiarity.
- The machine shall be used ONLY for the purposes and complying with the procedures specified by the Manufacturer.
- Make sure that all the safety devices are properly installed and efficient.
- Ensure the area around the machine, especially the control post, is ALWAYS unobstructed and in good condition to minimize the risks for the Operator.
- DO NOT leave the machine unattended during operation and DO NOT leave it at the end of the work without stopping it to safety conditions.
- Keep the reel suitably refilled to prevent to avoid interrupting the wrapping due to absence of film.
- Check whether according to the "Instructions for use" the operators are obliged to wear Personal Protective Equipment during use and operation.
- ALWAYS keep to the laws applicable to the workplace.
- In addition to the recommendations, carefully read the SAFETY WARNINGS for the safety of all people involved.
- Caution is always necessary. Safety is also the responsibility of all the persons interacting with the machine throughout its operating life.



Control description

The illustration shows the main commands and their description and function are listed.

- **A) Operator interface:** control system that programmes and displays the operating status.
- The operator interface has a touch-screen colour display with active matrix.
- B) Start button: control that carries out the listed functions.
- Start of the automatic wrapping: only with enabled automatic mode
- Start of platform rotation: only with enabled manual mode.
- If LED is on, the function is active.
- C) Cycle stop button: control that carries out the listed functions.
- Stop of automatic wrapping: only with enabled automatic mode
- Stop of platform rotation: only with enabled manual mode.
- If LED is on, the function is active.
- **D) Key "Homing":** reset control, matched with LED, that times the working units (rotating platform and reel holding carriage) in order to be able to start wrapping.
- LED off: working units in wrapping start position.
- LED on: working units not in wrapping start position.
 Press control to move working units to position.
- **E) Emergency stop button:** Safety control to stop the parts the operation of which could imply safety risks.
- The control must be activated ONLY in the presence of an imminent risk.



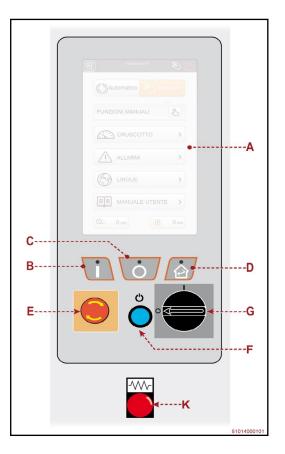
The activation of the control does not deactivate the power supply.

- The control must remain "locked" until normal operating conditions have been restored.
- Unlock the button with a voluntary action to enable restart.
- **F) Illuminated button (blue light):** control designed to activate electric power supply.
- Blue light off: activated power supply line.
- Blue light on: power supply deactivated.

NOTE

Control enabled only with isolator switch G in position "I" (ON).

- **G) Isolator switch:** safety control to disconnect power supply.
- Position "O" (OFF): power supply off
- Position "I" (ON): power supply on
- Control can be padlocked in order to avoid operations by non-authorised personnel.





- **K)** Indicator light (red light): when on, it shows that the heating elements in the control panel are active.
- When the indicator light turns off, the machine is operating.

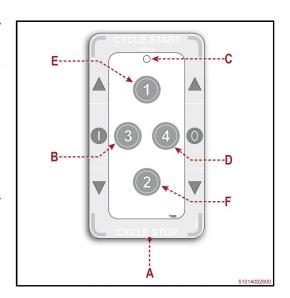
NOTE

The control is available only in the machines that are enabled to operate at negative temperature.

Description of radio control

The illustration shows the main commands and their description and function are listed.

- **A) Radio control:** optional device that is used as a remote control.
- **B)** Switching-on control
- C) LED showing that device is on
- **D)** Switching-off control
- E) Control that starts wrapping
- **F)** Control that interrupts the wrapping process in a point other than the programmed point.



Description of the operator interface

Operator interface is a control system that displays the parameters and the operating status of the machine, sets the values and programmes the wrapping cycles.

- The control system interacts with the machine PLC and is equipped with a touchscreen colour display with active matrix.
- Just tap the display areas to see the different functions.
- The functions develop over several screens, which can be accessed by means of the navigation keys (See "Operator interface navigation diagram (standard)" -"Operator interface navigation diagram (advanced)").
- Only suitably trained personnel can use the operator interface.
- Certain functions are exclusive and password-protected with different authorization levels.

NOTE

Enter the password to access the screen pages with protected functions (See "Password entering mode").

- "Advanced" level password: only for the personnel authorised to supervise the production activity.
- "Maintenance technician" level password: only for the operator in charge of maintenance.

NOTE

The activities to be performed by operators do not require any password.

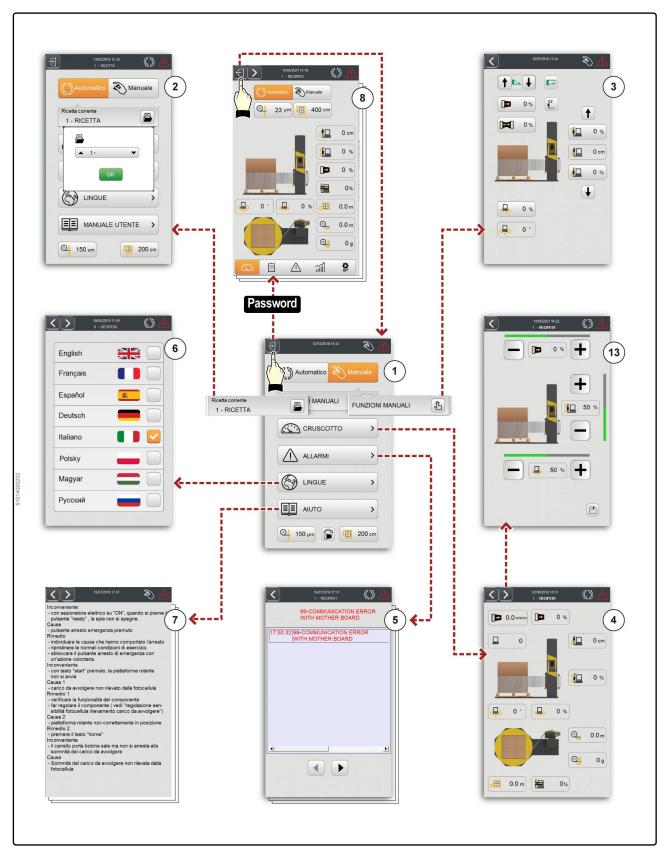
English language



Operator interface navigation diagram (standard)

The figure shows the navigation logic diagram and the list includes the description and the function of the screens.

Certain screens of the navigation logic diagram may develop in several displays.





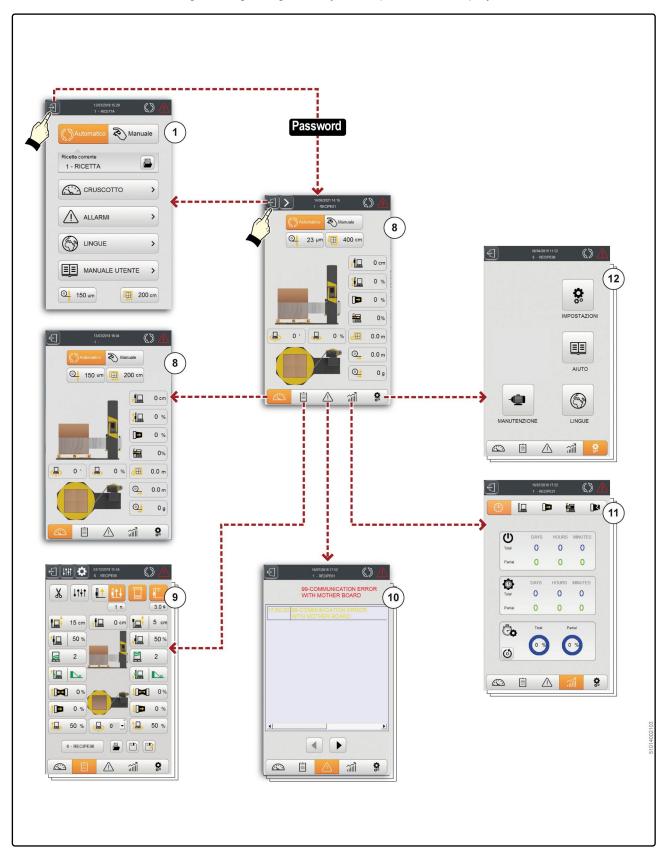
no.	Name	Function description
1	MAIN screen	- Screen appears after loading the software and shows the keys to access the other functions.
2	RECIPES screen	 Screen displays the list of programmed recipes. The controls in screen are enabled only during the operation in "automatic mode."
3	MANUAL FUNCTIONS screen	 Screen displays the controls that activate operation in "manual mode." The controls in the screen are enabled only during operation in "manual mode."
4	DASHBOARD screen	- Screen displays the instant values of the operating parameters.
5	ALARMS screen	- Screen shows the list of current alarms in chronological order (starting from the most recent alarm).
6	LANGUAGES screen	- Screen is used to select the desired language.
7	USER MANUAL screen	- Screen is used to fix the most common issues.
8	ADVANCED DASHBOARD screen	 Screen displays the parameters that are intended only for the personnel authorised to supervise the production activity and to create or modify the recipes.
13	QUICK BUTTONS screen	 The screen displays the controls used to change and save the wrapping parameters. The screen can be displayed ONLY if it has been enabled (See <i>How to display the Setup parameters</i>).



Operator interface navigation diagram (advanced)

The figure shows the navigation logic diagram and the list includes the description and the function of the screens.

- Certain screens of the navigation logic diagram may develop in several displays.





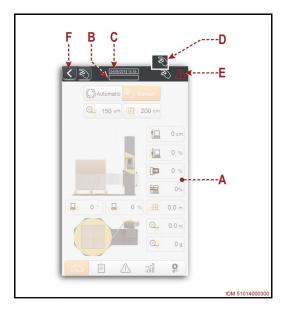
no.	Name	Function description
1	MAIN screen	- Screen appears after loading the software and shows the keys to access the other functions.
8	ADVANCED DASHBOARD screen	 Screen displays the parameters that are intended only for the personnel authorised to supervise the production activity and to create or modify the recipes.
9	PARAMETERS screen	- Screen displays the parameters that are used to programme the recipes.
10	ALARMS screen	- Screen shows the list of current alarms in chronological order (starting from the most recent alarm).
11	COUNTERS screen	- Screen displays the general production data counters.
12	TOOLS screen	- Screen displays the controls that are used to access the relevant functions.



Description of a typical screen

The figure shows an example of a "typical screen" and the areas in common with other screens are highlighted; the list includes the description of the relevant functions.

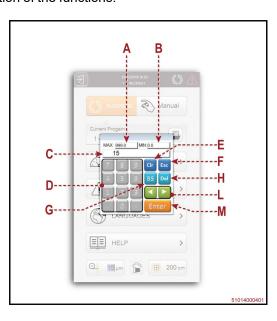
- Carefully read the functions of the elements in common with all the screens in order to "navigate" in an easier and more intuitive way.
- A) Main area: it displays the parameters (diagrams, numbers, etc.) concerning the different operating functions of every individual screen.
- B) Field: displays the alarm and information messages.
- C) Field: it displays the date and the current time.
- **D) Field:** it displays the operating mode.
- "Hand" icon: wrapping in "manual mode."
- "Circular arrows" icon: wrapping in "automatic mode."
- **E)** "Triangle" icon: it shows the operating status.
- Green colour: normal operation (no alarms).
- Orange colour: operation with a warning.
- Red colour: stopped operation due to an alarm.
- F) Icon: it is used to display the previous screen.



Description of the keyboard

Some values that are displayed in the areas of every screen may be suitably programmed.

- Any time you press a programmable or editable area, the keyboard will appear in the display.
- The figure shows the keyboard and the list shows the description of the functions.
- A) Field that displays the maximum value that can be entered
- B) Field that displays the minimum value that can be entered
- C) Field that displays the entered value
- D) Numeric keys
- E) Key to delete all entered characters
- F) Key that closes the screen without storing the entered values
- G) Key deletes the characters before the cursor, one at a time
- H) Key deletes the characters after the cursor, one at a time
- L) Keys to move the cursor
- M) Key to store the entered value





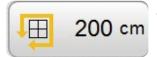
Function description of the displayed icons

The figures show the displayed icons and the list includes the relevant function.

Icons to enter the values (shaded grey background)



 To enter the film thickness (only for reel holding carriage of type PW - VK).



 To enter the perimeter of the load to be wrapped (only for reel holding carriage of type PW - VK).



To enter the tension of the wrapping film.



 To enter the value of the film pre-stretch (only for reel holding carriage of type VK).



- To enter the lifting speed of reel holding carriage.

The value is expressed as a percentage compared with the programmed operating speed.



- To enter the lowering speed of reel holding carriage.

The value is expressed as a percentage compared with the programmed operating speed.



To enter the rotation speed of platform.

The value is expressed as a percentage compared with the programmed operating speed.



To enter the lowering level of reel holding carriage that is necessary to insert the protection sheet.

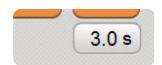


 To enter the level (from the ground) of the wrapping start of reel holding carriage.



To enter the number of repetitions of the set working cycle.





 To enter the delay time between the descent of pressing roller and the start of rotating platform (only for machines equipped with Pressing Roller).



- To enter the lifting level of reel holding carriage beyond the edge of the load to be wrapped.

If image is touched, control appears for the insertion of the lifting



- To enter the lifting time of reel holding carriage beyond the edge of the load to be wrapped.

If image is touched, control appears for the insertion of the lifting level.



To enter the lifting speed of reel holding carriage.

The value is expressed as a percentage compared with the programmed operating speed.

If image is touched, control appears for the insertion of the overlapping percentage of the film during the lifting step.



 To enter the overlapping percentage of the film during the lifting of reel holding carriage.

If image is touched, control appears for the insertion of the lifting speed of reel holding carriage.



To enter the lowering speed of reel holding carriage.

The value is expressed as a percentage compared with the programmed operating speed.

If image is touched, control appears for the insertion of the overlapping percentage of the film during the lowering step.



 To enter the overlapping percentage of the film during the lowering of reel holding carriage.

If image is touched, control appears for the insertion of the lowering speed of reel holding carriage.



Top enter the amount of bottom reinforcing band wrappings.



Top enter the amount of upper reinforcing band wrappings.



 To enter the tension of the wrapping film during the lifting of reel holding carriage.



- To enter the tension of the wrapping film during the lowering of reel holding carriage (Only with enabled double automatic wrapping).



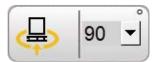


 To enter the rotation speed of platform during the lifting of reel holding carriage.

The value is expressed as a percentage compared with the programmed operating speed.



 To enter the rotation speed of platform during the lowering of reel holding carriage (Only with enabled double automatic wrapping).
 The value is expressed as a percentage compared with the programmed operating speed.



To enter the angular position of rotating platform to load the products to be wrapped (Only for rotating platform of type HS).
 Touch image to swipe from the loading to the unloading position (Not available on machines of model ProWrap CW).



 To enter the angular position of rotating platform to unload the products to be wrapped.

Touch image to swipe from the unloading to the loading position (Not available on machines of model ProWrap CW).



 To enter the pre-stretch percentage of the film during the lifting of reel holding carriage (only for reel holding carriage of type VK).



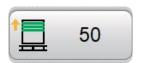
 To enter the pre-stretch percentage of the film during the lowering of reel holding carriage (only for reel holding carriage of type VK).
 The function is enabled only with double automatic wrapping.



It selects the desired recipe in the drop-down menu.



To enter the height of the load to be wrapped.
 If you enter the value, the photocell that detects the load height will be disabled.



- To enter the amount of upper folds (Upward movement of reel holding carriage).



- To enter the amount of lower folds (Upward movement of reel holding carriage).



 To enter the amount of lower folds (Downward movement of reel holding carriage).



Display icons (gray background)



Distance from the starting point of reel holding carriage



- Angular position of rotating platform



Film unwinding speed (only for reel holding carriage of type PW - VK).



Tensioning of the film for the wrapping (only for reel holding carriage of type FM - PW - VK).



Speed (rise and descent) of reel holding carriage
 The value is expressed as a percentage compared with the programmed operating speed.



- Platform rotation speed

The value is expressed as a percentage compared with the programmed operating speed.



 Length of the film unwound from reel from the start of the cycle (only for reel holding carriage of type PW - VK).



 Weight of the film unwound from reel from the start of the cycle (only for reel holding carriage of type PW - VK).



 Length of the wrapped film from the start of the cycle (only for reel holding carriage of type PW - VK).



Total percentage of film extension (pre-stretch and tension)
 The function is enabled only for reel holding carriages of type PW - VK.



- Number of loads that can be wrapped with the reel being used



Non-release hold keys (shaded gray background)



- It activates the lifting of the reel holding carriage.



The activation of the key will be enabled only in case of "manual mode" operation.



- It activates the lowering of the reel holding carriage

NOTE

The activation of the key will be enabled only in case of "manual mode" operation.

Single-action keys (orange or shaded gray)

- Orange background: enabled function.
- Shaded gray background: disabled function.



 It enables and disables the film cutting device (only for machines equipped with CW system).



- It enables and disables the advanced settings



It enables the single automatic wrapping (lifting of the reel holding carriage)



 It enables the double automatic wrapping (lifting and lowering of the reel holding carriage)



It enables and disables the working cycle with sheet feeder



It enables and disables the Pressing Roller



It enables and disables the film sealing (only for machines equipped with CW system).





- It enables and disables the creasing system during the lifting of the reel holding carriage.

Touch right icon to select the type of fold (upper or lower side of the film).



- It enables and disables the creasing system during the lowering of the reel holding carriage (Only with enabled double automatic wrapping).

Touch right icon to select the type of fold (upper or lower side of the



- To activate the lifting or lowering manual control of low folding system.



To activate the lifting or lowering manual control of upper folding system.



To activate the lifting or lowering manual control of pressing roller.



- To confirm the complete refilling of film reel (See "How to confirm the refilling of film reel").



It loads the selected recipe in the PLC memory in order to execute it.



It saves the changes to the selected recipe.



It saves the changes in a new recipe



Language selection mode

The figure shows the points of intervention and the description shows the procedures to be adopted.

- **1.** Display the LANGUAGES screen **(6)** (See "Operator interface navigation diagram (standard)").
- 2. Touch the icon that corresponds to the desired language.
- The text that is to be found in all screens will immediately update to the selected language.



Password entering mode

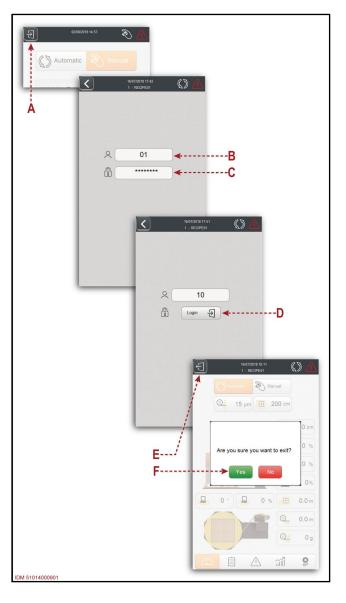
The figure shows the points of intervention and the description shows the procedures to be adopted.

- 1. Touch the icon A.
- 2. Press the field **B** and enter the operator ID.
- 3. Press the field C and enter the password.
- **4.** Press the key **D** to confirm.

NOTE

Any time you deactivate the power supply of the machine, you must repeat the procedures to enter the password.

- To prevent operations by unauthorised people, cancel the password as specified.
- **5.** Touch the icon **E**.
- 6. Press the key F to confirm.

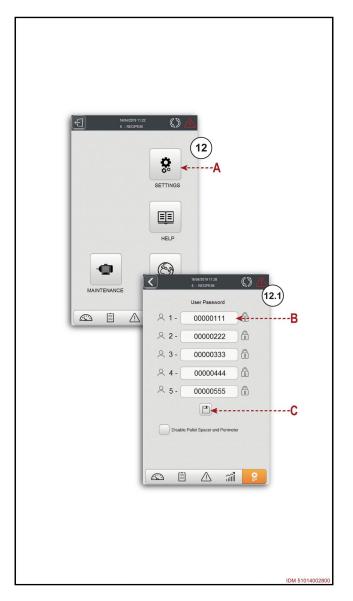




Password assignment mode

The figure shows the points of intervention and the description shows the procedures to be adopted.

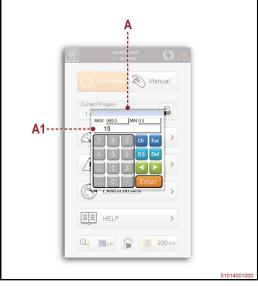
- **1.** Display the TOOLS screen page **(12)** (See "Operator interface navigation diagram (advanced)").
- 2. Press key A.
- The SETTINGS screen page (12.1) appears on display.
- **3.** Press field **B** and enter the new password.
- **4.** Repeat the operation in order to assign the other passwords involved.
- 5. Press the key C to save all changes made.



How to enter or modify the parameters

The figure shows the points of intervention and the description shows the procedures to be adopted.

- 1. Stop the machine
- **2.** Display the desired screens (one at a time) where you need to programme or edit the values.
- 3. Touch the desired area.
- The keyboard A is displayed.
- 4. Enter the new value.
- The area A1 displays the entered value.
- 5. Press "ENTER" to confirm.



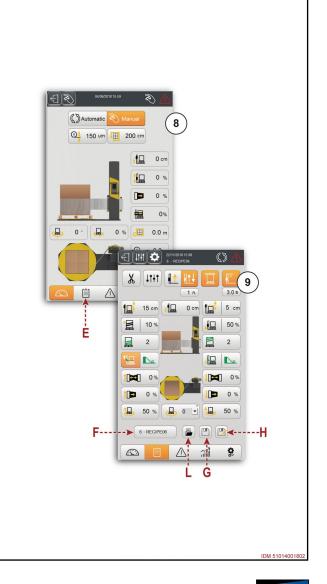
Recipe management

How to programme a new recipe

NOTE

You can programme up to 12 recipes.

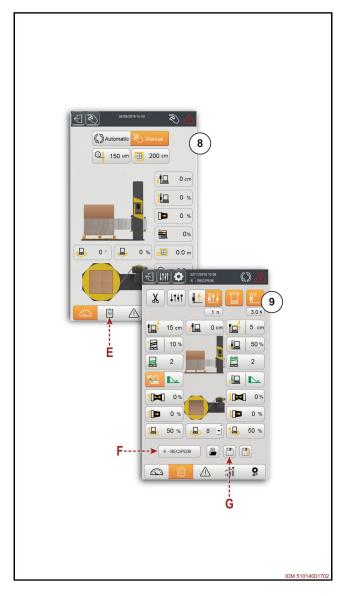
- Display the ADVANCED SETTINGS screen (8)
 (See "Operator interface navigation diagram (standard)").
- 2. Press key E.
- The display shows the PARAMETER screen (9).
- 3. Press key L.
- **4.** Select the desired recipe from the drop-down menu.
- ${f 5.}$ Press the key ${f H}$ to duplicate the selected recipe.
- **6.** Select the first available ID from the drop-down menu.
- If there are 12 are already programmed recipes, select one of them that is not used any more in order to overwrite it.
- 7. Touch the area F.
- The keyboard is displayed.
- **8.** Enter the new name of the recipe and press the "ENTER" key to confirm.
- **9.** Change the desired parameters.
- **10.**Press the key **G** to save the new recipe.





Modifying a recipe

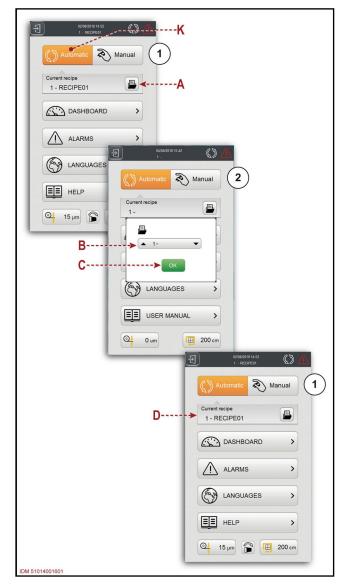
- 1. Display the ADVANCED SETTINGS screen (8) "Operator interface navigation diagram (standard)").
- 2. Press key E.
- The display shows the PARAMETER screen (9).
- 3. Touch the area F.
- 4. Select the desired recipe from the drop-down
- **5.** Press the "check" key to confirm.
- 6. Change the desired parameters.
- 7. Press the key **G** to save all changes made.





■ Loading a recipe

- **1.** Display the MAIN screen **(1)** (See "Operator interface navigation diagram (standard)").
- 2. Press key K.
- 3. Touch the area A.
- The display shows the RECIPES screen (2).
- 4. Touch the area B.
- **5.** Select the desired recipe from the drop-down menu.
- 6. Press the key C to confirm.
- The selected recipe will be automatically loaded.
- The field **D** displays the loaded recipe.



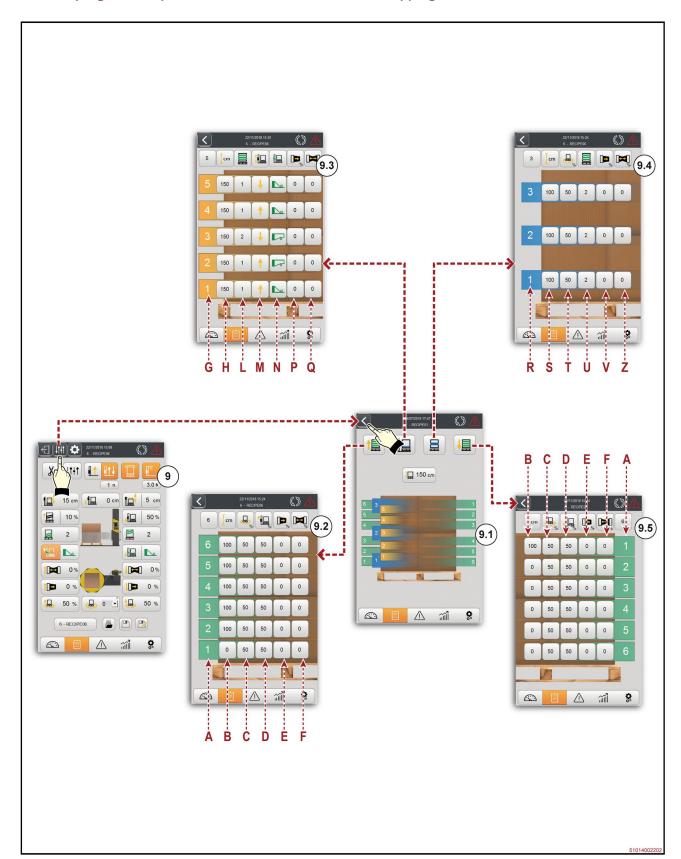


How to programme the bands and the wrapping reinforcements

The figure shows the screens to programme the wrapping and the reinforcements.

NOTE

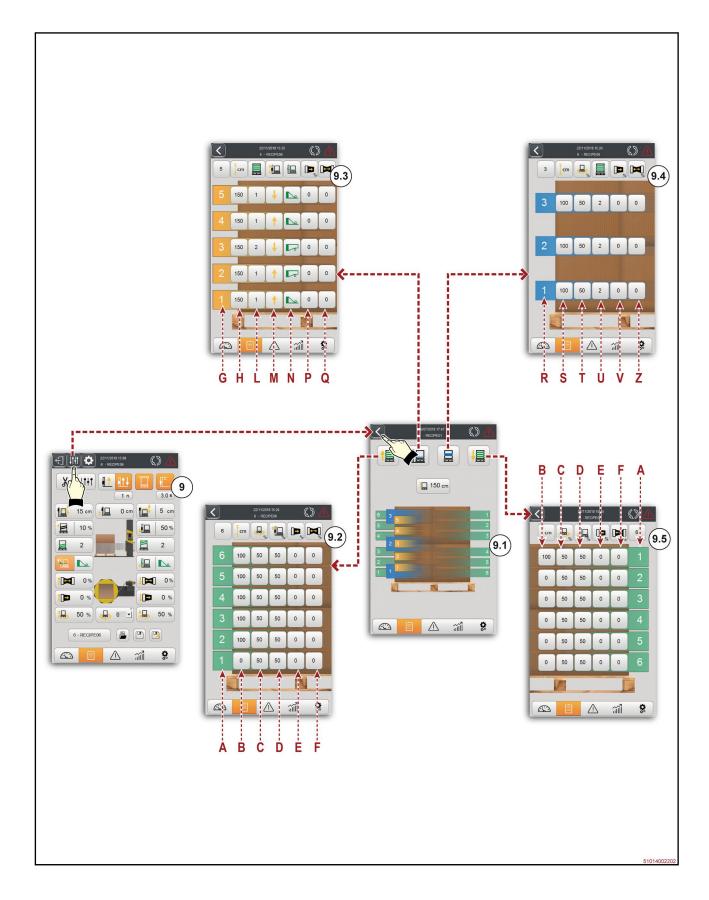
You can programme up to 6 different reinforcement and wrapping areas.





no.	Name	Function description
9	PARAMETERS screen	Press the key to display the WRAPPING screen (9.1).
9.1	WRAPPING screen	 The screen displays the controls that are used to access the reference functions. The summary shows (in different colours) the quantity and the type of the programmed wrapping and reinforcement bands. Green: wrapping areas. Blue: reinforcing bands. Orange: reinforcing bands (with folding system).
9.2	WRAPPING AREAS screen (LIFTING)	 The screen displays the fields that are used to programme the wrapping parameters. Column A: ID of the wrapping area. Column B: height of the corresponding wrapping area. Column C: rotating speed of the platform within the corresponding wrapping area (The value is expressed as a percentage compared with the programmed operating speed). Column D: lifting speed of the reel holding carriage within the corresponding wrapping area (The value is expressed as a percentage compared with the programmed operating speed). Column E: tensioning of the film within the corresponding wrapping area. Column F: pre-stretch of the film within the corresponding wrapping area (only for reel holding carriage of type VK).
9.3	REINFORCEMENT BANDS (WITH CREASING SYSTEM) screen	 The screen displays the fields that are used to programme the wrapping parameters. Column G: identification of reinforcing area. Column H: height of the corresponding reinforcing area. Column L: amount of bands in the corresponding reinforcing area. Column M: direction of movement of reel holding carriage in the corresponding reinforcing area. Column N: direction of movement of folding system in the corresponding reinforcing area. Column P: tension of film in the corresponding reinforcing area. Column Q: pre-stretch of film in the corresponding reinforcing area (only for reel holding carriage of type VK).
9.4	REINFORCEMENT BANDS (WITHOUT CREASING SYSTEM) screen	 The screen displays the fields that are used to programme the wrapping parameters. Column R: identification of reinforcing area. Column S: height of the corresponding reinforcing area. Column T: platform speed of rotation in the corresponding reinforcing area (The value is expressed as a percentage compared with the programmed operating speed). Column U: amount of bands in the corresponding reinforcing area. Column V: tension of film in the corresponding reinforcing area. Column Z: pre-stretch of film in the corresponding reinforcing area (only for reel holding carriage of type VK). Important To copy the same value in all fields of a column, touch the icon in the upper part.





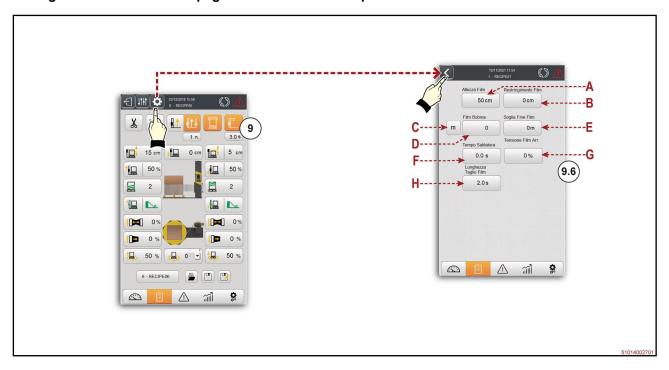


no.	Name	Function description
9.5	WRAPPING AREAS screen (LOWERING)	 The screen displays the fields that are used to programme the wrapping parameters. Column A: ID of the wrapping area. Column B: height of the corresponding wrapping area. Column C: rotating speed of the platform within the corresponding wrapping area (The value is expressed as a percentage compared with the programmed operating speed). Column D: lowering speed of the reel holding carriage within the corresponding wrapping area (The value is expressed as a percentage compared with the programmed operating speed). Column E: tensioning of the film within the corresponding wrapping area. Column F: pre-stretch of the film within the corresponding wrapping area (only for reel holding carriage of type VK).



How to programme the general parameters

The figure shows the screen pages and the modes of operation.

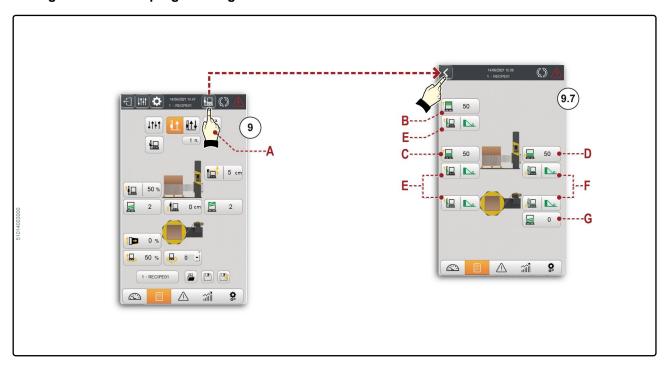


no.	Name	Function description
9	PARAMETERS screen	Press key to display the GENERAL PARAMETERS screen page (9.6).
9.6	GENERAL PARAMETERS screen page	 Screen page displays the fields used to programme the general operating parameters. A: film height. B: film height narrowing during the wrapping process. C: unit of measurement. D: film length in the reel. E: residual film length for reel change alarm. F: film sealing time (only for machines equipped with CW system). G: film tension at end of cycle. H: film length before cut.



How to set-up the folding parameters

The figure shows the programming screens.

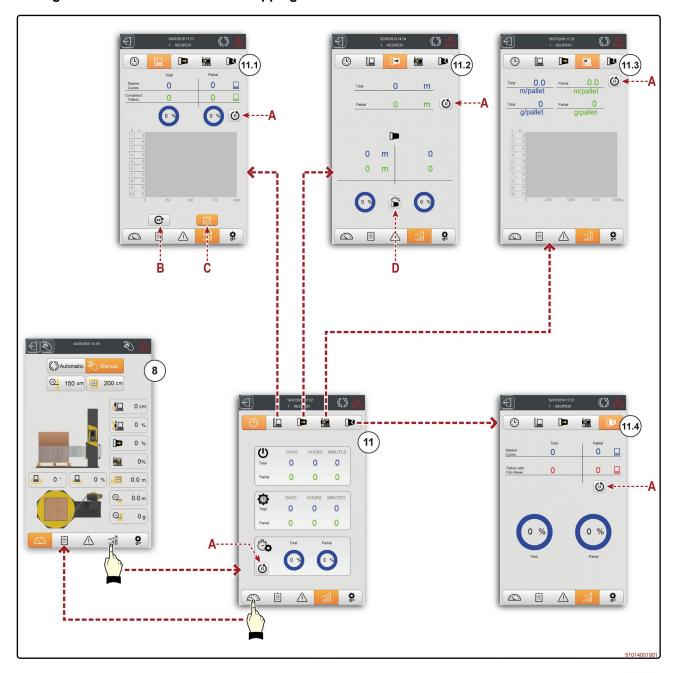


no.	Name	Function description
9	PARAMETERS screen	Press key A . The FOLDING screen (9.7) appears on display.
9.7	FOLDING screen	 The screen displays the fields that are used to programme the wrapping parameters. B: Number of upper fold revolutions. C: Number of lower fold revolutions (Upward movement of reel holding carriage). D: Number of lower fold revolutions (Downward movement of reel holding carriage). E: Enables and disables the folding process (Upward movement of reel holding carriage). F: Enables and disables the folding process (Downward movement of reel holding carriage). G: Number of additional wrappings, with extended film, in the product lower area (without folding).



How to display the wrapping statistics

The figure shows the screens with wrapping statistical data.



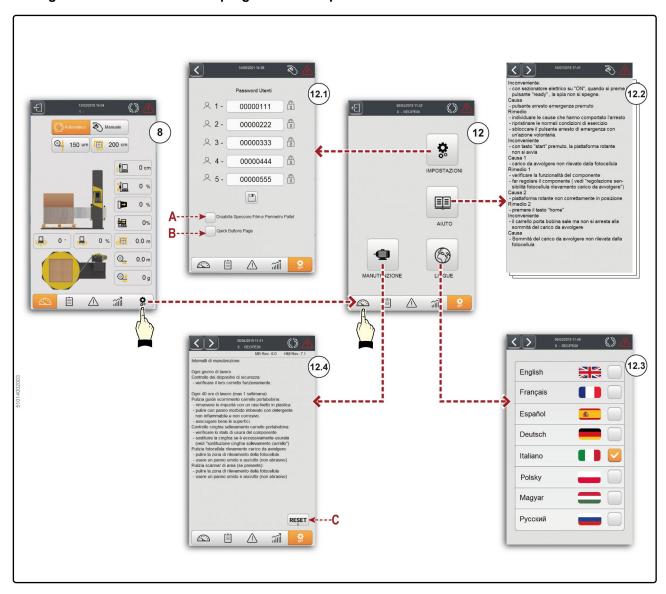


no.	Name	Function description
8	ADVANCED DASHBOARD screen	Press the key to display the COUNTERS screen (11).
11	COUNTERS screen	 The screen displays the controls that are used to access the reference functions. The areas show some machine operation statistics. Machine (partial and total) operating hours. Machine (partial and total) real wrapping hours. Diagrams showing machine (partial and total) operating and wrapping percentages. Key A: it zeroes (resets) all the data of the partial counters.
11.1	PALLET screen	 The screen includes the controls to display the corresponding production diagrams for the wrapped loads (partial and total values). Key A: it zeroes (resets) all the data of the partial counters. Key B: control that displays the daily production diagram. Key C: control that displays the monthly production diagram.
11.2	FILM REEL screen	 The screen includes all controls to display the film consumption for the reel being used (partial and total). Key A: it zeroes (resets) all the data of the partial counters. Key D: it confirms the complete refilling of film reel (See How to confirm the refilling of film reel).
11.3	FILM screen	- The screen includes the controls to display film consumption diagrams (partial and total values). Key A : it zeroes (resets) all the data of the partial counters.
11.4	FILM BREAKS screen	- The screen displays the film break diagrams (partial and total values). Key A : it zeroes (resets) all the data of the partial counters.



How to display the Setup parameters

The figure shows the screens to programme the operation of the machine.

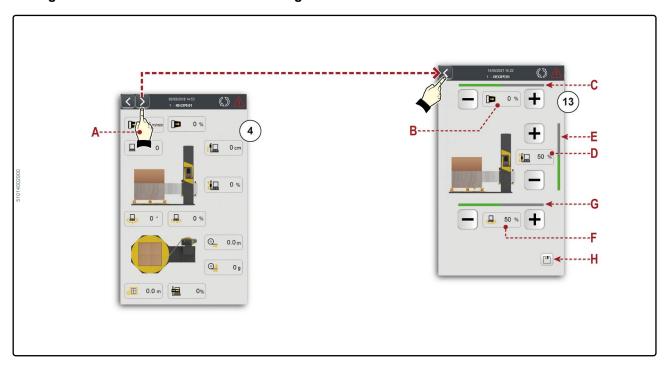


no.	Name	Function description
8	ADVANCED DASHBOARD screen	Press the key to display the TOOLS screen (12).
12	TOOLS screen	- Screen displays the controls that are used to access the relevant functions.
12.1	SETTINGS screen	 Screen is used to assign the password to the operators (See <i>Password assignment mode</i>). Area A: it is used to enable and disable the relevant buttons of the ADVANCED DASHBOARD screen page (8). Area B: it is used to enable and disable the relevant keys of the QUICK BUTTONS screen (13).
12.2	USER MANUAL screen	- Screen is used to read the use and maintenance manual in electronic format. (if any)
12.3	LANGUAGES screen	- Screen is used to select the desired language.
12.4	MAINTENANCE screen	 The screen displays the indications for the machine maintenance. Button C: it zeroes (resets) the maintenance counter.



How to change the values of the QUICK BUTTONS parameters

The figure shows the screens for value change.



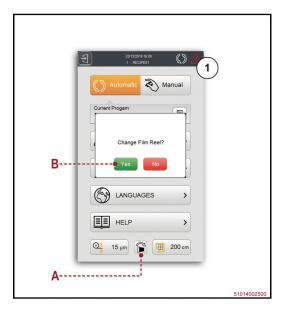
no.	Name	Function description
4	DASHBOARD screen	Press key A . The QUICK BUTTONS screen (13) appears on display.
13	QUICK BUTTONS screen	 The screen displays the controls used to change and save the wrapping parameters. Keys B: to change the film unwrapping speed. The set-up value is expressed as a percentage and is displayed in the graphic bar C. Keys D: to change the speed of the reel holding carriage. The set-up value is expressed as a percentage and is displayed in the graphic bar E. Keys F: to change the rotating speed of the platform. The set-up value is expressed as a percentage and is displayed in the graphic bar G. Key H: to save the changes to the active recipe.



How to confirm the refilling of film reel

When the film refilling is complete, the procedure must be confirmed.

- The figure shows the points of intervention and the description shows the procedures to be adopted.
- 1. Replace reel.
- **2.** Display the MAIN screen **(1)** (See "Operator interface navigation diagram (standard)").
- 3. Press key A.
- 4. Press the key B to confirm.



Manual wrapping

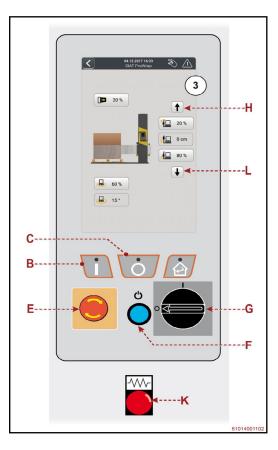
The figure shows the points of intervention and the description shows the procedures to be adopted.

- Check whether the wrapping film has the same chemical-physical properties as that installed in the reel holder carriage.
- If film characteristics appear to be different, consider whether you should adjust the film tension.
- 2. Rotate main disconnector **G** to position "I" (ON) to activate the power supply.
- The pilot light of button F turns on.
- **3.** Wait until the indicator light **K** turns off. (if any)
- **4.** Press the push-button **F**.
- The pilot light of button **F** turns off.
- **5.** Correctly load the new product to be wrapped in the middle of rotating platform.



Remove the lifting device.

- **6.** Tie the trailing end of the film to the base of the product to be wrapped.
- **7.** Display the MANUAL FUNCTIONS screen **(3)**. See "Operator interface navigation diagram (standard)"
- **8.** Enter the values of all the wrapping parameters.



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NOTE

The rotation speed must be adapted to the specifications of the load to be wrapped (type and stability).

- 9. Press key B.
- The buzzer is activated to warn the personnel that machine operation is about to start.
- The platform begins to rotate.
- The wrapping cycle starts when performing the lower reinforcing band.
- **10.**When the reinforcing band is completed, press and hold button **H** to make reel holder carriage rise.

Intermediate reinforcing band

- Release button H when the reel holder carriage reaches the height of interest.
- Press and hold button **H** to wrap the remaining part.

Upper reinforcing band with reel holder carriage descent (single wrapping)

- Release button **H** when the reel holder carriage reaches the upper part of the product.
- Press button C when the reinforcement band has been completed.
- Rotating platform stops in phase.
- Manually cut the film and cause it to adhere to the wrapped product.
- Press and hold button L to move reel holder carriage to the low position.

NOTE

As an alternative, reel holding carriage can be placed in a low position, the film can be cut manually and cause it to adhere to the wrapped product.

Upper reinforcing band with reel holder carriage descent (double wrapping)

- Release button **H** when the reel holder carriage reaches the upper part of the product.
- Press and hold button L when the upper reinforcement band has been completed
- Release button L to perform the intermediate reinforcement band.
- Press and hold button L and release it when the upper reinforcement band has been completed.
- Press key C.
- Rotating platform stops in phase.
- Manually cut the film and cause it to adhere to the wrapped product.
- 11. Remove the wrapped product.
- **12.**Correctly load the new product to be wrapped in the middle of rotating platform.
- **13.**Wrap the new product by following the same procedures.



Keep the reel suitably refilled to prevent to avoid interrupting the wrapping due to absence of film.



Normal stop

- Manually cut the film and cause it to adhere to the wrapped product.
- Press and hold button **L** to move reel holder carriage to the low position.
- Remove the wrapped product.
- Rotate electric selector G to position "O" (OFF).

(Single or double) automatic wrapping

The figure shows the points of intervention and the description shows the procedures to be adopted.

- 1. Check whether the wrapping film has the same chemical-physical properties as that installed in the reel holder carriage.
- If film characteristics appear to be different, consider whether you should adjust the film tension.
- 2. Rotate main disconnector **G** to position "I" (ON) to activate the power supply.
- The pilot light of button F turns on.
- 3. Wait until the indicator light K turns off. (if any)
- 4. Press the push-button F.
- The pilot light of button F turns off.
- **5.** Correctly load the new product to be wrapped in the middle of rotating platform.

i Important

Remove the lifting device.

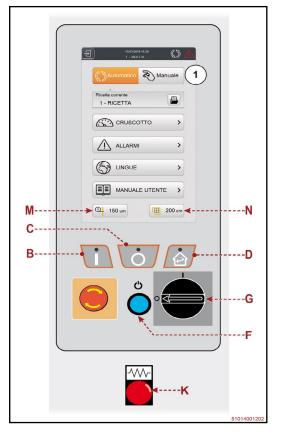
- **6.** Tie the trailing end of the film to the base of the product to be wrapped.
- **7.** Select and activate the recipe of interest. See "Recipe management" for further details.
- Touch icon M to enter the film thickness (only for reel holding carriage of type PW - VK).
- Touch icon N to enter the perimeter of the load to be wrapped (only for reel holding carriage of type PW - VK).



To prevent the correct operation from being compromised, programme the values in a thorough way.

10.Press button **B** to start the wrapping cycle.

- If the LED of key **D** is flashing, press key **D** to time working units...
- When working units are timed, the LED of key **D** turns off.
- To restart the wrapping cycle, press key B again.
- Audible warning device is activated to warn that the machine is operating.
- The machine stops as previously described, based on the selected type of wrapping.





NOTE

Press button C to stop wrapping; press button B to continue. Wrapping will start at the point where it has been stopped.

- Single mode: the wrapping stops automatically with the reel holder carriage at the upper side of the load.
 - Press button **D** to move reel holder carriage to the start of the cycle (lower part).
- Double mode: the wrapping stops automatically with the reel holder carriage at the starting point (lower side of the load).
- 11. Manually cut the film and cause it to adhere to the wrapped product.



Important

Keep the reel suitably refilled to prevent to avoid interrupting the wrapping due to absence of film.

- 12. Remove the wrapped product to be able to load the next one to wrap.
- **13.**Correctly load the new product to be wrapped in the middle of rotating platform.
- With a product having the same features, press button B to start the wrapping cycle.
- Wrapping is carried out in the same modes.

Normal stop

- Make sure that the wrapping process has been completed.
- DO NOT control a machine stop if the wrapping cycle has not been completed.
- Manually cut the film and cause it to adhere to the wrapped product.
- Remove the wrapped product.
- Rotate electric selector G to position "O" (OFF).



(Single or double) automatic wrapping with sheet feeder

The figure shows the points of intervention and the description shows the procedures to be adopted.

- Check whether the wrapping film has the same chemical-physical properties as that installed in the reel holder carriage.
- If film characteristics appear to be different, consider whether you should adjust the film tension.
- 2. Rotate main disconnector **G** to position "I" (ON) to activate the power supply.
- The pilot light of button **F** turns on.
- **3.** Wait until the indicator light **K** turns off. (if any)
- 4. Press the push-button F.
- The pilot light of button **F** turns off.
- **5.** Correctly load the new product to be wrapped in the middle of rotating platform.



Remove the lifting device.

- **6.** Tie the trailing end of the film to the base of the product to be wrapped.
- Select and activate the recipe of interest.See "Recipe management" for further details.
- **8.** Touch icon **M** to enter the film thickness (only for reel holding carriage of type PW VK).
- Touch icon N to enter the perimeter of the load to be wrapped (only for reel holding carriage of type PW - VK).



To prevent the correct operation from being compromised, programme the values in a thorough way.

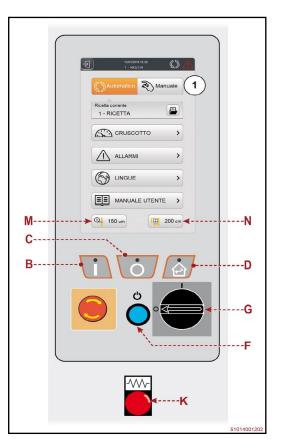
10.Press button **B** to start the wrapping cycle.

- If the LED of key **D** is flashing, press key **D** to time working units..
- When working units are timed, the LED of key **D** turns off.
- To restart the wrapping cycle, press key B again.
- Audible warning device is activated to warn that the machine is operating.
- The machine stops as previously described, based on the selected type of wrapping.

NOTE

Press button C to stop wrapping; press button B to continue. Wrapping will start at the point where it has been stopped.

- Single mode: the wrapping stops automatically with the reel holder carriage at the upper side of the load.
- Insert the covering sheet.





- Press the key **B** to complete the wrapping of the covering sheet.
 Press button **D** to move reel holder carriage to the start of the cycle (lower part).
- Double mode: the wrapping stops automatically with the reel holder carriage at the upper side of the load.
- Insert the covering sheet.
- Press key **B**.
- The machine completes the wrapping cycle and stops automatically with the reel holder carriage at the lower side of the load.
- 11. Manually cut the film and cause it to adhere to the wrapped product.



Important

Keep the reel suitably refilled to prevent to avoid interrupting the wrapping due to absence of film.

- **12.**Remove the wrapped product to be able to load the next one to wrap.
- **13.**Correctly load the new product to be wrapped in the middle of rotating platform.
- With a product having the same features, press button B to start the wrapping cycle.
- Wrapping is carried out in the same modes.

Normal stop

- Make sure that the wrapping process has been completed.
- DO NOT control a machine stop if the wrapping cycle has not been completed.
- Manually cut the film and cause it to adhere to the wrapped product.
- Remove the wrapped product.

Operation and maintenance manual

- Rotate electric selector **G** to position "O" (OFF).



Stop in alarm conditions and restart

The figure shows the points of intervention and the description shows the procedures to be adopted.

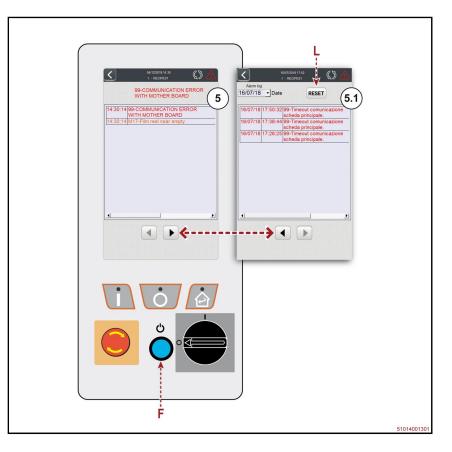
- All moving devices will automatically stop in case of alarm conditions any time there is an irregular operation.
- The display shows the ALARMS screen (5).
- **1.** Find out the causes of the anomaly.



Important

For more details on information and alarm messages, read the attached documents.

- **2.** Restore normal running conditions
- 3. Press the push-button F.
- Every solved alarm will automatically disappear.
- **4.** Press key if you need to consult the ALARM LOG screen (5.1).
- Press key L to reset the alarms.
- **5.** Start the wrapping process.



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Emergency stop and new start-up

The figure shows the points of intervention and the description shows the procedures to be adopted.

- In the presence of an imminent risk press emergency button
 E.
- All moving devices immediately stop.
- The pilot light of button **F** turns on.
- 2. Identify the causes that have caused the stop.
- 3. Restore normal running conditions



Important

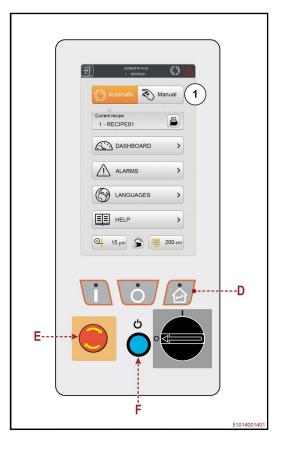
The recovery operations that are not within the operator's field of competence shall be carried out by authorised personnel and with recognised skills.

4. Manually cut the film and cause it to adhere to the wrapped product.

NOTE

Decide whether to remove or to leave the already wrapped film.

- **5.** Unlock the emergency stop button with a voluntary action.
- **6.** Press the push-button **F**.
- The push-button lamp F shuts off.
- 7. Press key D.
- 8. Wait for the units to synch and become automatically timed.
- **9.** Tie the trailing end of the film to the base of the product to be wrapped.
- 10. Start the wrapping process.





Use of the weighing unit (optional)

Weighing shall be carried out ONLY with the system stopped, before starting or after completing the wrapping.

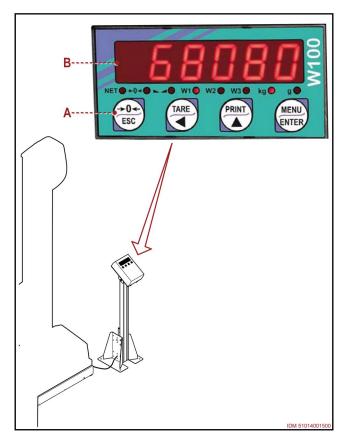
NOTE

The measured value is not valid for fiscal use.

- The figure shows the points of intervention and the description shows the procedures to be adopted.
- 1. Activate the power supply of weighing unit.
- 2. Wait for the weighing unit to start.
- 3. Press the key A to reset the tare.
- **4.** Properly place the new load to be wrapped in the middle of the rotating platform.
- The operation is to be carried out using a forklift truck of adequate capacity, with the forks inserted in the intended points.
- **5.** Remove the lifting device.
- **6.** The display **B** shows the weight of the load.

NOTE

For more details on the functions and controls of the weighing unit, see the specific reference documentation.





Calculation of film pre-stretch

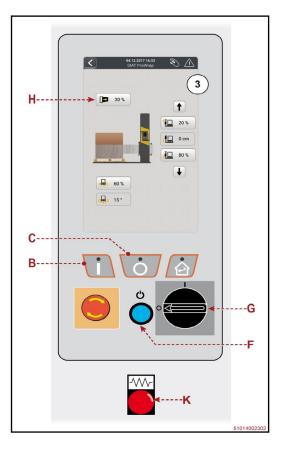
The procedure is used to check if the set film pre-stretch corresponds to the real one.

- The figure shows the points of intervention and the description shows the procedures to be adopted.
- **1.** Rotate main disconnector **G** to position "I" (ON) to activate the power supply.
- The pilot light of button **F** turns on.
- 2. Wait until the indicator light K turns off. (if any)
- 3. Press the push-button F.
- The pilot light of button **F** turns off.
- **4.** Introduce a sample product to be wrapped in the middle of the rotating platform.
- **5.** Tie the trailing end of the film to the base of the product to be wrapped.
- Display the MANUAL FUNCTIONS screen (3).See "Operator interface navigation diagram (standard)"
- **7.** Enter the value 0% in the area **H** (film tensioning).
- 8. Press key B.
- The buzzer is activated to warn the personnel that machine operation is about to start.
- The platform begins to rotate.
- **9.** Press the key **C** after the rotating platform has completed a known number of wrappings (e.g. 20).
- Rotating platform stops in phase.
- **10.** Apply the formula to find the length of the film that was used.

Number of wrappings x Perimeter of sample product (m) = Length of the used film (m)

- 11. Manually cut the film.
- **12.**Unwrap the film that was used for the wrapping.
- 13. Weigh the film using a precision scale.
- 14. Apply the formula to find the weight per meter of the film that was used.

- 15. Unwrap 10 meters of film from the reel.
- **16.**Weigh the film using a precision scale.
- 17. Apply the formula to find the specific weight of the film.





18. Apply the formula to find the film pre-stretch value.

Specific weight of the film (g/m) - Weight per meter of the used film (g/m)

Weight per meter of the used film (g/m) = Pre-stretch

19.Check that the film pre-stretch corresponds to the set value.



If the values do not match, call the manufacturer's Technical Assistance Service.

Calculation of film tensioning

The procedure is used to check if the programmed film tensioning corresponds to the real value.

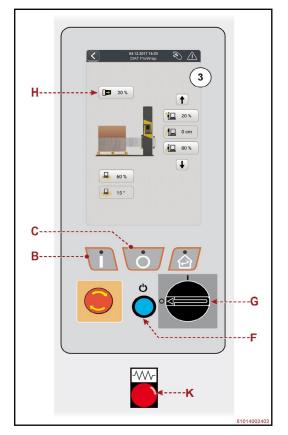
- The figure shows the points of intervention and the description shows the procedures to be adopted.
- Rotate main disconnector G to position "I" (ON) to activate the power supply.
- The pilot light of button **F** turns on.
- 2. Wait until the indicator light K turns off. (if any)
- **3.** Press the push-button **F**.
- The pilot light of button **F** turns off.
- **4.** Introduce a sample product to be wrapped in the middle of the rotating platform.
- **5.** Tie the trailing end of the film to the base of the product to be wrapped.
- Display the MANUAL FUNCTIONS screen (3).See "Operator interface navigation diagram (standard)"
- **7.** Enter the value 20% in the area **H** (film tensioning).
- 8. Press key B.
- The buzzer is activated to warn the personnel that machine operation is about to start.
- The platform begins to rotate.
- **9.** Use a specific tool to detect the peripheral speed of the film outfeed roller.
- **10.**Use a specific tool to detect the peripheral speed of the load to be wrapped.
- 11. Press key C.
- Rotating platform stops in phase.
- **12.** Apply the formula to find the tensioning of the film.

Peripheral speed of the product Peripheral speed of film outfeed roller = Film tensioning

13. Check that film tensioning corresponds to the set value.



If the values do not match, call the manufacturer's Technical Assistance Service.





Machine Disposal and Scrapping

Machine dismantling

- Disconnect the supplies form the energy sources (electrical, pneumatic, etc.) in order to prevent any restart.
- Carefully drain the systems containing hazardous substances, according to the applicable regulations on safety at work and environmental protection.
- Position the machine in a place that is not easily accessible by non authorised people.

■ Machine Scrapping

- The machine is to be scrapped at the authorized centres by skilled personnel equipped with all the necessary means to operate in safety conditions.
- The personnel carrying out the scrapping of the machine must identify any residual energy and implement a "safety plan" to avoid any unexpected hazard.
- Check whether there are any residual risks and take all necessary measures in order to work under safe conditions.
- Dispose of all polluting materials and liquids and all waste generated during the operations according to the laws in force.
- Dispose of Electrical and Electronic Apparatus Waste properly, at authorised collection centres, to avoid harmful and damaging effects.





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