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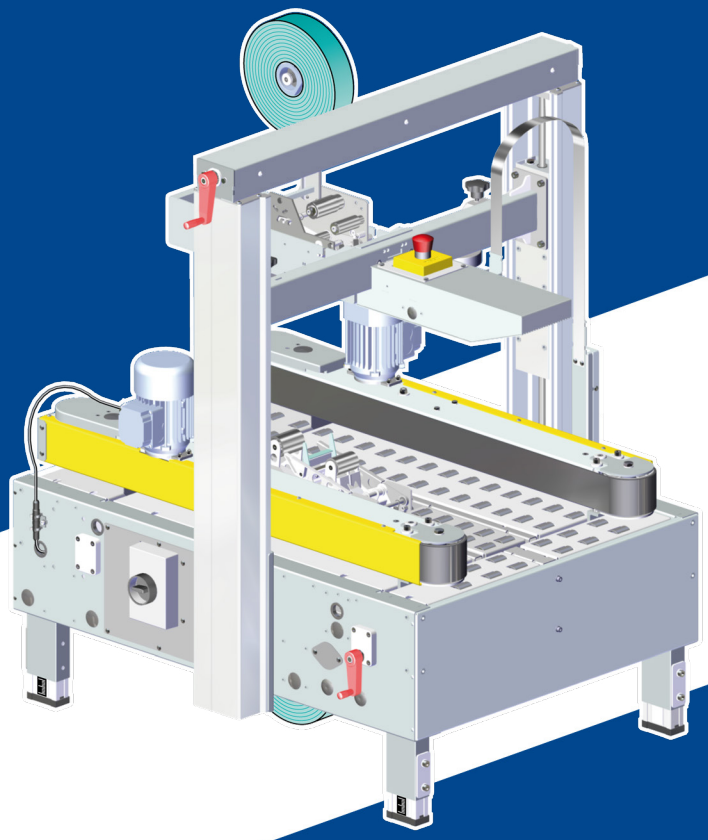
Semi-automatic sealer



Nastro-SB M5/M6/M8

Operation and maintenance manual

Translation of the “ORIGINAL INSTRUCTIONS”

Code**SBC0040853** ed. 12-2022 - rev. 1

Summary

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.

Danger Warning

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

Attention Warning

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

Important

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

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 his field of operation.
- **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.

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– **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 downloaded 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.

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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.

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 table.

– **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.).

- 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

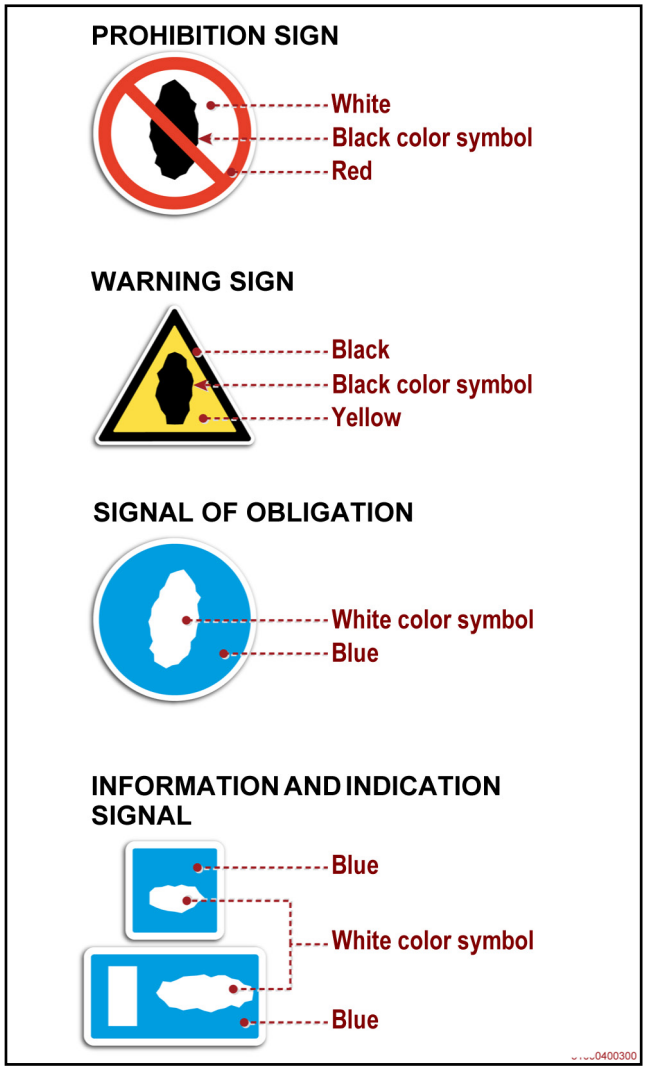
– The information signals may be of different shapes and colours, to indicate dangers, obligations, prohibitions and indications.

– 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

Nastro-SB M5/M6/M8 case sealer is a semi-automatic machine that closes and seals the lower and upper flaps of cardboard cases or cartons.

– The machine adjustment to the dimensions of the cases to be sealed must be carried out with mechanical manual operations.

– When the machine is ordered, it can be fitted according to the type of sealing.
- **Nastro-SB M5/M6/M8-S (TB)**: upper and lower sealing (standard cases or packs).
- **Nastro-SB M5/M6-L (TB)**: upper and lower sealing (cases or packs with ≥ 50 mm height).
- **Nastro-SB M5/M6/M8-S (OT)**: upper sealing (standard cases or packs).
- **Nastro-SB M5/M6-L (OT)**: upper sealing (cases or packs with ≥ 50 mm height).
- **Nastro-SB M5/M6/M8 (OB):** lower sealing (cases or packs with ≥ 50 mm height).

– 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.

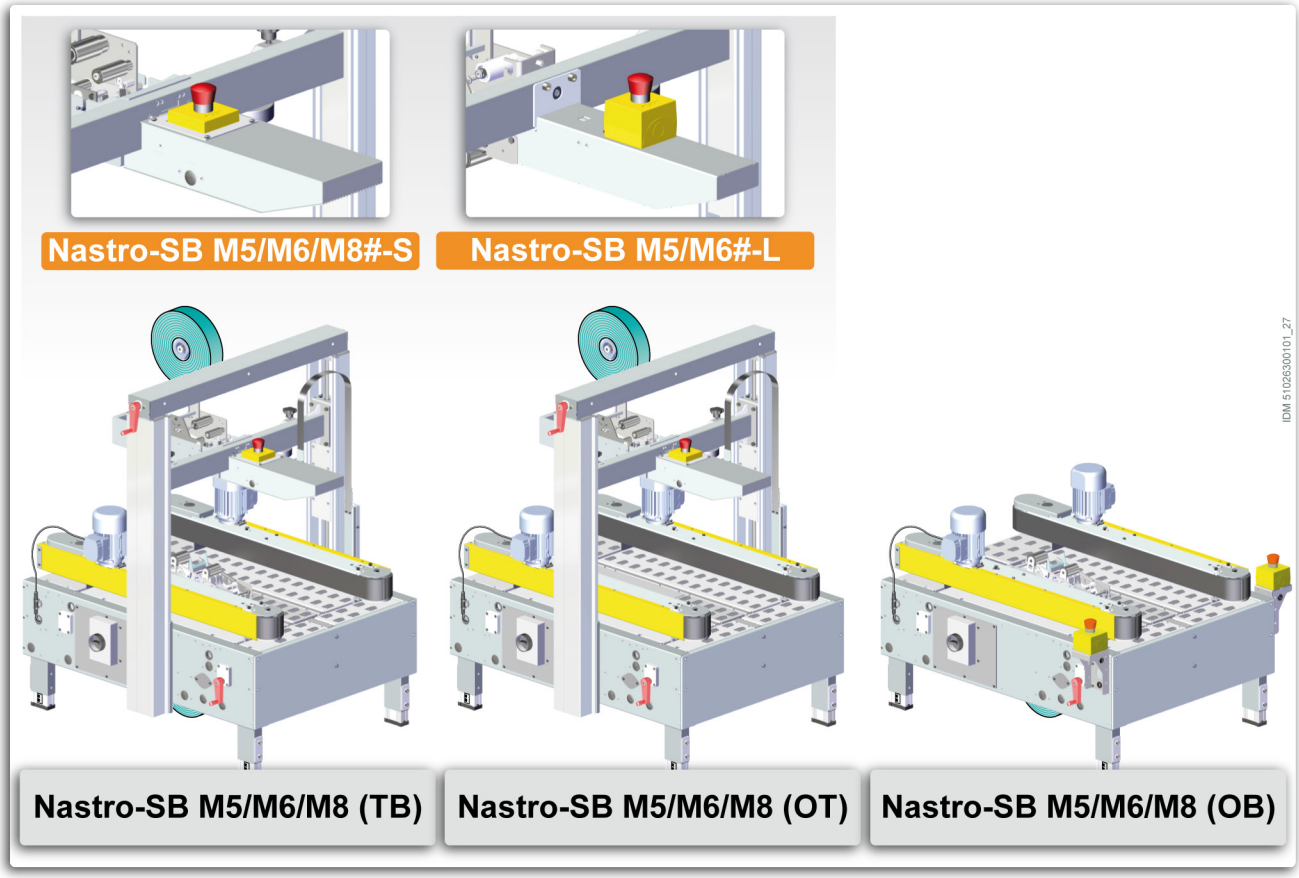
– The installation must ONLY be performed in environments that do not involve any risk of explosion and/or fire.

– On request, the machine may be equipped with accessories, either when it is ordered or later.
See ***Description of optional devices*** 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.

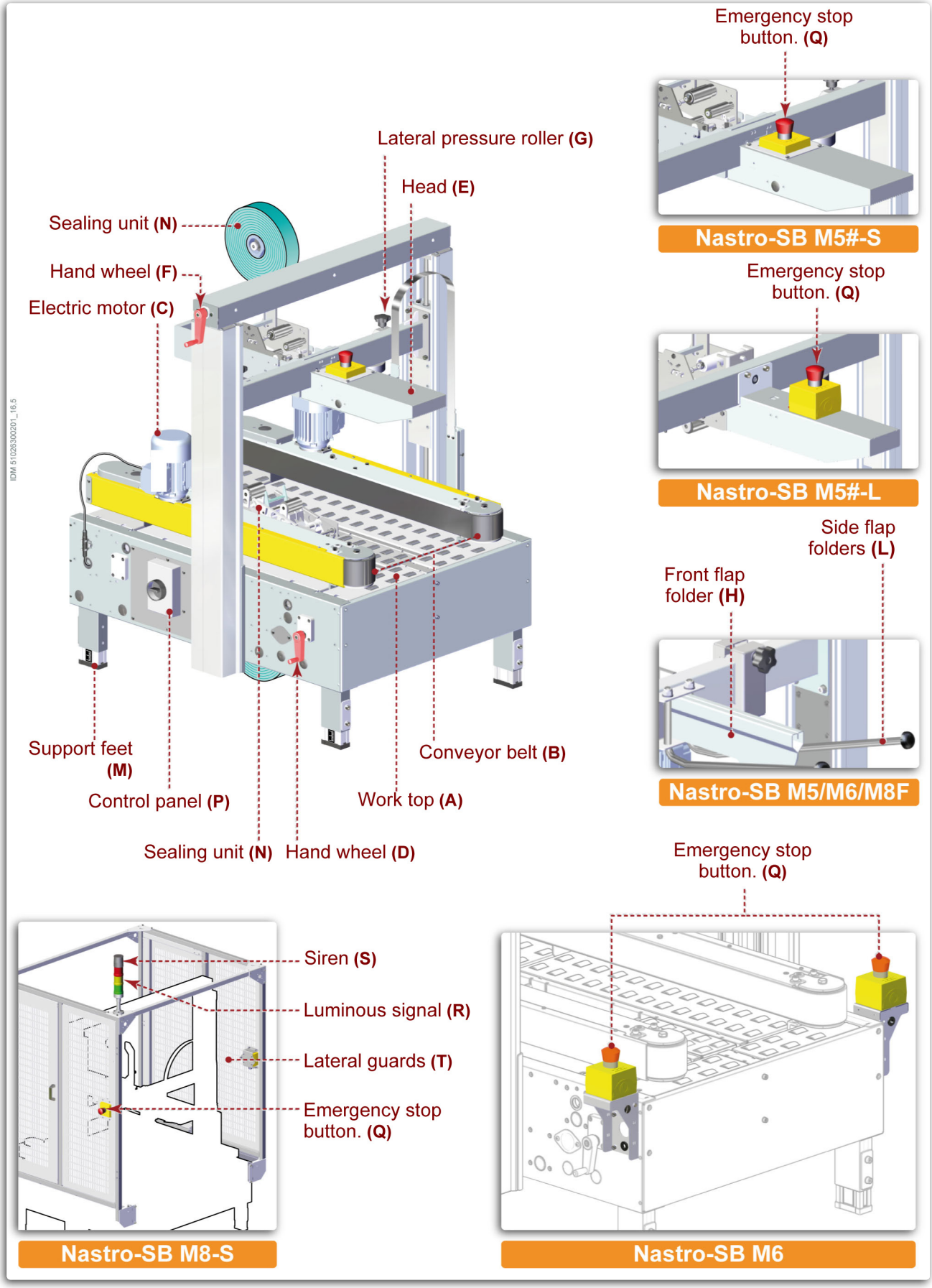
– After inserting the product, the case is transported for top and bottom sealing, while the operator holds the top flaps closed.

– The operator must also replace the adhesive tape and carry out routine maintenance.



Description of the main components Nastro-SB M5/M6/M8 (TB)

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



A) Work top: it is equipped with idle roller conveyors that enable case transfer.

B) Conveyor belts: they convey the case to the closing and sealing stations.

– Each conveyor belt is operated by an independent electric motor **C**, by means of a belt drive system.

C) Electric motors: activate drive system of corresponding conveyor belt **B**.

D) Hand wheel: it is used to separate conveyor belts according to the width of case.

– Conveyors belts **B** are operated opposite from each other.

E) Head: it can be adjusted to the height of case.

F) Hand wheel: control used to adjust the height of head **E**.

G) Lateral pressure rollers: they keep the upper flaps close to each other during the sealing operation.

– Pressure rollers can be adjusted to the width of the cases to be sealed.

H) Front flap folder: it folds the flap during the forward movement of the case.

L) Side flap folders: they fold the flaps during the forward movement of the case.

M) Support feet: they can be adjusted in order to move work top **A** to the required height.

N) Sealing units: they are fitted with an adhesive tape holder that seals the lower and upper part of the cardboard cases and/or cartons.

– Each sealing unit is equipped with devices that apply and cut the adhesive tape. For further details see section “Sealing unit”.

P) Electrical Panel: contains the electrical components for the power and control features of the machine.
See ***Control description*** for further details.

Q) Emergency stop button: safety control that, in case of an imminent risk, stops all parts whose function might constitute a risk.

R) Indicator light: safety device that signals the operating condition. (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

S) Audible warning device: safety device that signals, with indicator light **R**, an active alarm (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

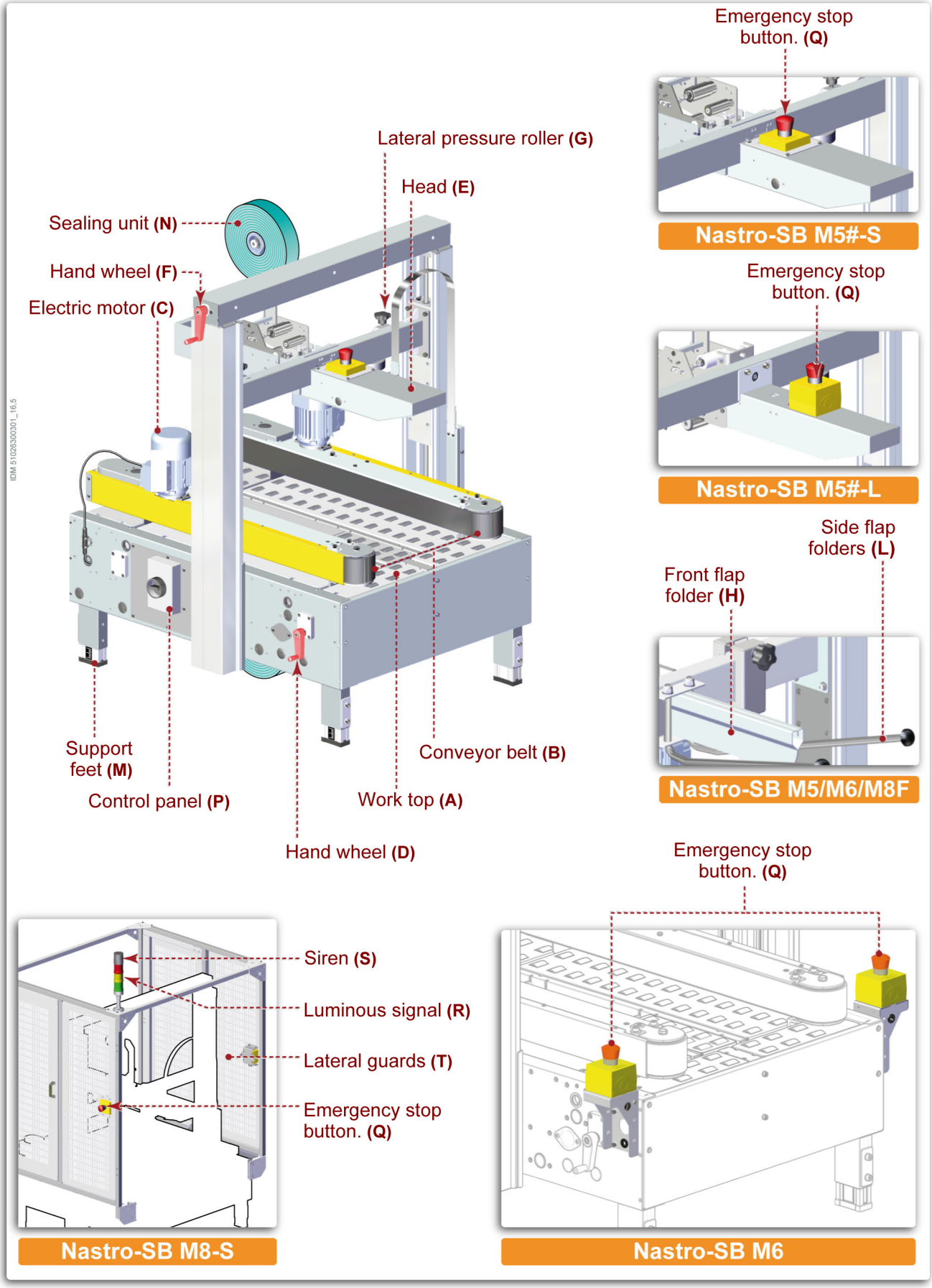
T) Lateral guards: safety devices preventing the access to parts the operation of which could imply safety risks (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

NOTE

The functionality and features of the (electrical, pneumatic, etc.) systems are indicated in the corresponding diagrams enclosed.

Description of the main components Nastro-SB M5/M6/M8 (OT)

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



A) Work top: it is equipped with idle roller conveyors that enable case transfer.

B) Conveyor belts: they convey the case to the closing and sealing stations.

– Each conveyor belt is operated by an independent electric motor **C**, by means of a belt drive system.

C) Electric motors: activate drive system of corresponding conveyor belt **B**.

D) Hand wheel: it is used to separate conveyor belts according to the width of case.

– Conveyors belts **B** are operated opposite from each other.

E) Head: it can be adjusted to the height of case.

F) Hand wheel: control used to adjust the height of head **E**.

G) Lateral pressure rollers: they keep the upper flaps close to each other during the sealing operation.

– Pressure rollers can be adjusted to the width of the cases to be sealed.

H) Front flap folder: it folds the flap during the forward movement of the case.

L) Side flap folders: they fold the flaps during the forward movement of the case.

M) Support feet: they can be adjusted in order to move work top **A** to the required height.

N) Sealing unit: it is fitted with an adhesive tape holder that seals the lower part of the cardboard cases and/or cartons.

– Sealing unit is equipped with devices that apply and cut the adhesive tape.
For further details see section “Sealing unit”.

P) Electrical Panel: contains the electrical components for the power and control features of the machine.
See ***Control description*** for further details.

Q) Emergency stop button: safety control that, in case of an imminent risk, stops all parts whose function might constitute a risk.

R) Indicator light: safety device that signals the operating condition. (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

S) Audible warning device: safety device that signals, with indicator light **R**, an active alarm (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

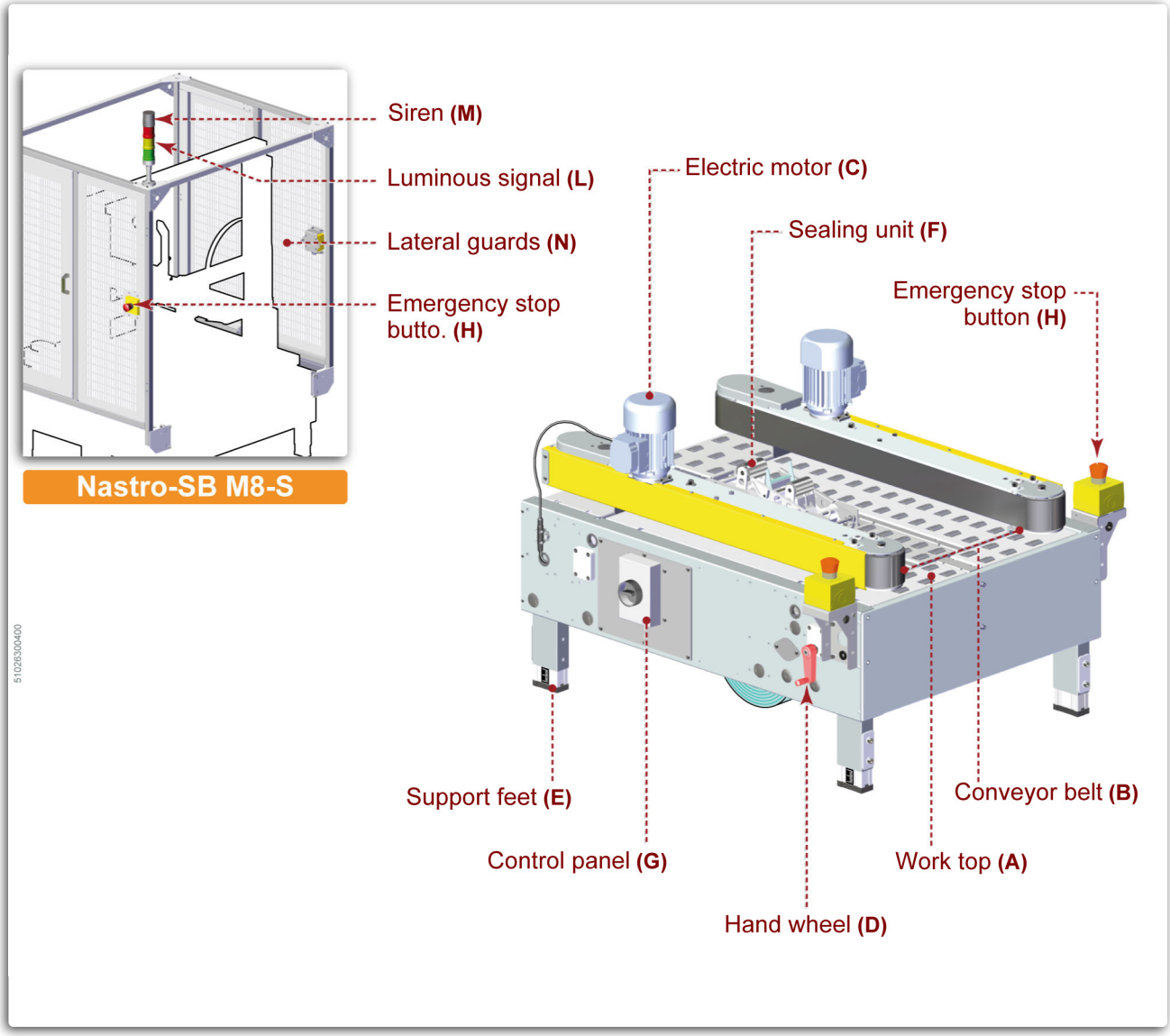
T) Lateral guards: safety devices preventing the access to parts the operation of which could imply safety risks (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

NOTE

The functionality and features of the (electrical, pneumatic, etc.) systems are indicated in the corresponding diagrams enclosed.

Description of the main components Nastro-SB M5/M6/M8 (OB)

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



A) Work top: it is equipped with idle roller conveyors that enable case transfer.

B) Conveyor belts: they convey the case to the closing and sealing stations.

– Each conveyor belt is operated by an independent electric motor **C**, by means of a belt drive system.

C) Electric motors: activate drive system of corresponding conveyor belt **B**.

D) Hand wheel: it is used to separate conveyor belts according to the width of case.

– Conveyors belts **B** are operated opposite from each other.

E) Support feet: they can be adjusted in order to move work top **A** to the required height.

F) Sealing unit: it is fitted with an adhesive tape holder that seals the lower part of the cardboard cases and/or cartons.

– Sealing unit is equipped with devices that apply and cut the adhesive tape. For further details see section “Sealing unit”.

G) Electrical Panel: contains the electrical components for the power and control features of the machine.
See ***Control description*** for further details.

H) Emergency stop button: safety control that, in case of an imminent risk, stops all parts whose function might constitute a risk.

L) Indicator light: safety device that signals the operating condition. (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

M) Audible warning device: safety device that signals, with indicator light **L**, an active alarm (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

N) Lateral guards: safety devices preventing the access to parts the operation of which could imply safety risks (Optional for Nastro-SB M5/M6 version).
See ***Description of the safety devices*** for further details.

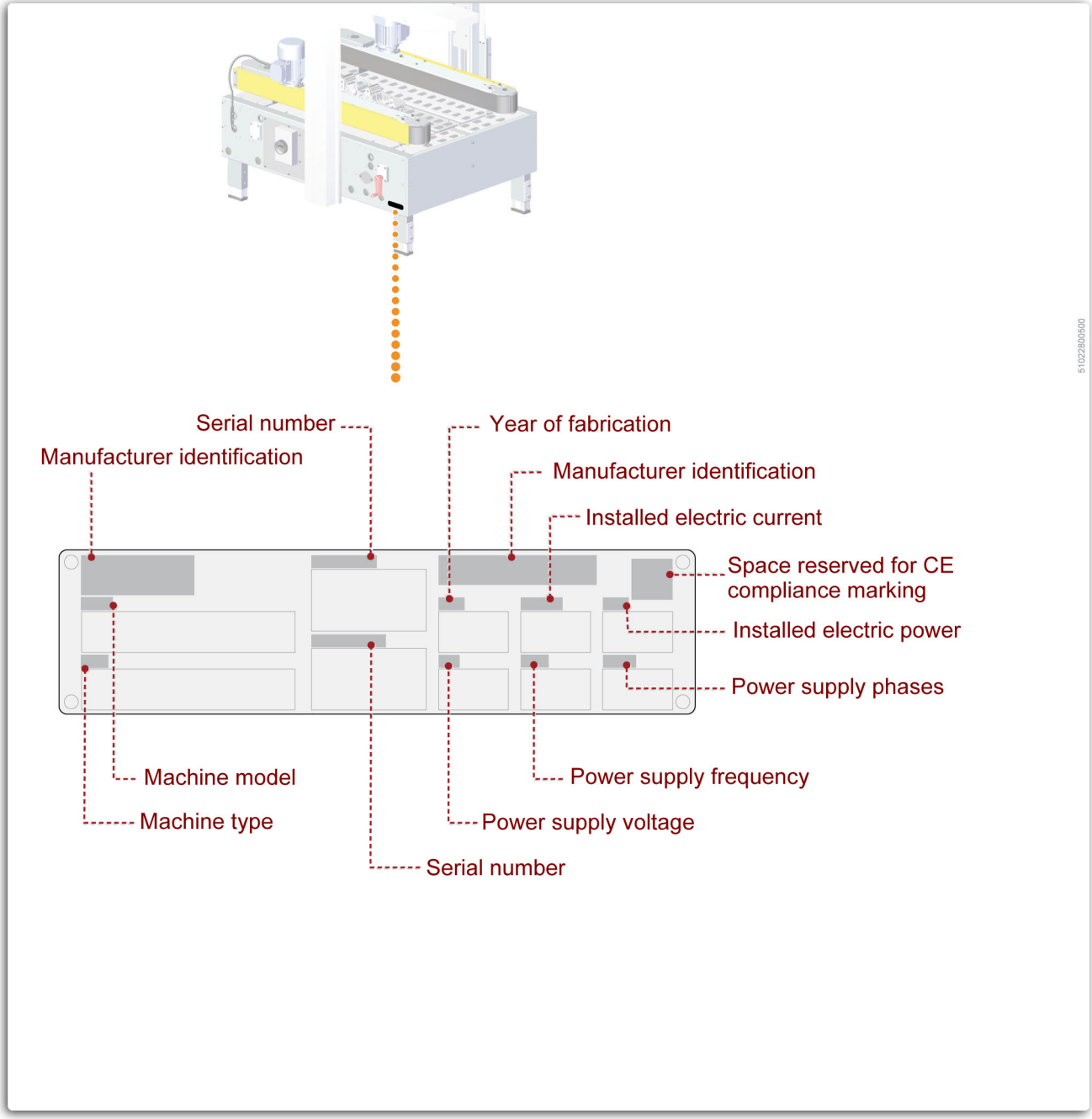
NOTE

The functionality and features of the (electrical, pneumatic, etc.) systems are indicated in the corresponding diagrams enclosed.

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.



Residual risks

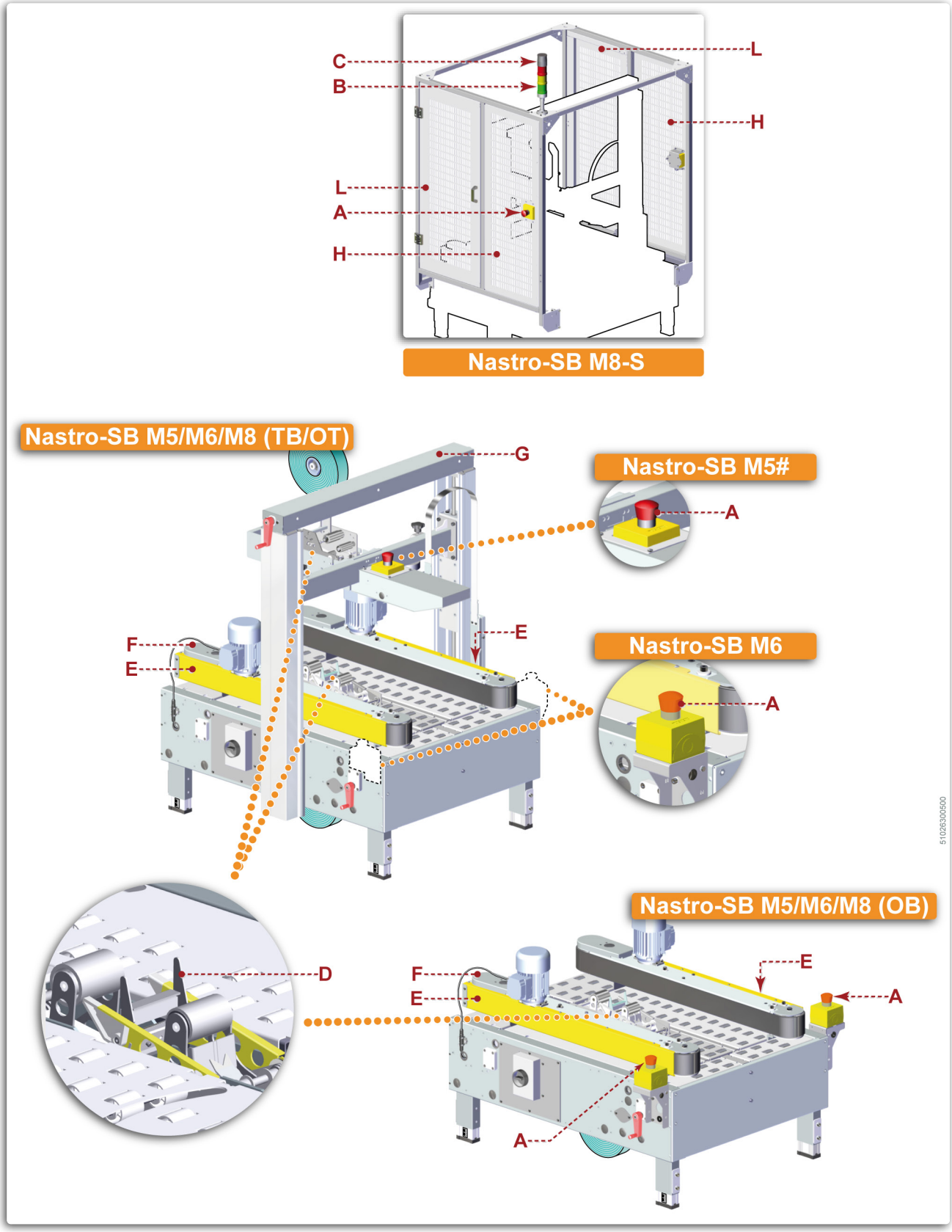
Residual risks are defined as: **“Any risk that remains notwithstanding the safety solutions adopted and integrated during the design phase”**.

– 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.
  - **Cutting hazard:** do not operate the cutting elements without wearing the suitable devices for the protection of your upper limbs.
  - **Risk of entanglement:** do not introduce or place upper limbs in/next to any moving components during operation.
  - **Risk of crushing upper limbs:** do not introduce or place upper limbs in/next to any machine moving parts during operation.
  - **Risk of electric shock or electrocution:** do not access live areas and/or elements without turning off the power supply.

Description of the safety devices

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



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A) Emergency stop button: safety control that, in case of an imminent risk, stops all parts whose function might constitute a risk.

B) Indicator light: safety device that signals the operating condition. (Optional for Nastro-SB M5/M6 version).

C) Audible warning device: safety device that signals, with indicator light **B**, an active alarm (Optional for Nastro-SB M5/M6 version).

NOTE

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

D) Mobile guard: safety device that covers the cutting blade (when not working), thus preventing contact with the upper limbs.

E) Fixed guard: safety device that prevents access to the parts whose operation may be dangerous.

– The guard is secured in such a way that it can be disassembled only by using tools.

– Guard can be removed only when the machine is stopped under safe conditions and must be installed before starting it.

F) Fixed guard: safety device that prevents access to the parts whose operation may be dangerous.

– The guard is secured in such a way that it can be disassembled only by using tools.

– Guard can be removed only when the machine is stopped under safe conditions and must be installed before starting it.

G) Fixed guard: safety device that prevents access to the parts whose operation may be dangerous.

– The guard is secured in such a way that it can be disassembled only by using tools.

– Guard can be removed only when the machine is stopped under safe conditions and must be installed before starting it.

H) Fixed guard: safety device that prevents access to the parts whose operation may be dangerous (Optional for Nastro-SB M5/M6 version).

– The guard is secured in such a way that it can be disassembled only by using tools.

– Guard can be removed only when the machine is stopped under safe conditions and must be installed before starting it.

L) Interlocked mobile guard: safety device to prevent access to the components whose operation may represent a risk (Optional for Nastro-SB M5/M6 version).

– Each interlocked mobile guard is linked to an electric device. If the guard is open, all dangerous parts will stop.

– The closing of guard (after its opening during the work cycle) does not start the operation in "automatic mode", but enables the start procedure.

– **Do NOT open any mobile guard to stop the operation of the moving parts.**

Important

The stop of the moving parts must be carried out ONLY voluntarily, by pressing emergency stop button.

Description of optional devices

On request, the machine may be equipped with accessories, either when it is ordered or later.

– Set of 400 / 600 mm high legs

NOTE

To assemble, refer to the Installation instructions.

– Set of wheels for feet (AS77)

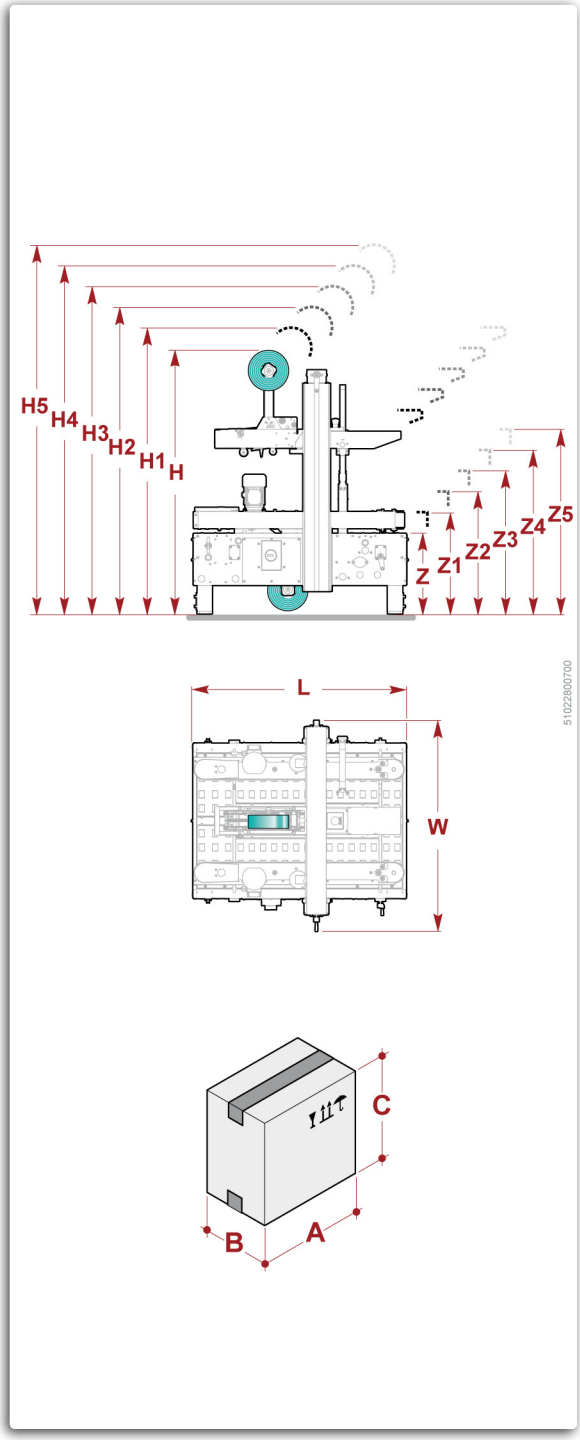
NOTE

To assemble, refer to the Installation instructions.

Technical data Nastro-SB M5/M6/M8 (TB/OT)

Table: Technical data of the machine

Description	*Unit of measure-ment*	*Value*
Electric supply		
The power supply specifications are those shown in the identification plate applied to the machine.	-	-
Electric protection class	-	IP 54
Machine dimensions		
Dimensions (LxW)	mm	1100x1085
Width of the work top	mm	500
Height **H** (standard legs)	mm	1440÷1700
Height **H1** (standard legs + set of wheels AS77)	mm	1550÷1810
Height **H2** (set of optional legs 1)	mm	1540÷1800
Height **H3** (set of optional legs 1 + set of wheels AS77)	mm	1650÷1910
Height **H4** (set of optional legs 2)	mm	1640÷1900
Height **H5** (set of optional legs 2 + set of wheels AS77)	mm	1750÷2010
Work surface height **Z** (standard legs)	mm	540÷800
Work surface height **Z1** (standard legs + set of wheels AS77)	mm	650÷910
Work surface height **Z2** (set of optional legs 1)	mm	640÷900
Work surface height **Z3** (set of optional legs 1 + set of wheels AS77)	mm	750÷1010
Work surface height **Z4** (set of optional legs 2)	mm	860÷1120
Work surface height **Z5** (set of optional legs 2 + set of wheels AS77)	mm	970÷1230
Weight	kg	190
Operation characteristics		
Maximum hourly production	packs/hour	-
Case type	-	RSC - HSC - FEFCO 0200/0201
Dimensions of case		
- Min dimensions (AxBxC)	mm	150x150x90
- Max dimensions (AxBxC)	mm	∞x500x500
Maximum case weight	kg	30
Dimensions of adhesive tape roller	-	See Sealing unit technical specifications
Environmental conditions		
Maximum operating height (asl)	m	1000
Relative humidity (detected at a temperature included between 20°C and 40°C)	-	30% - 80%



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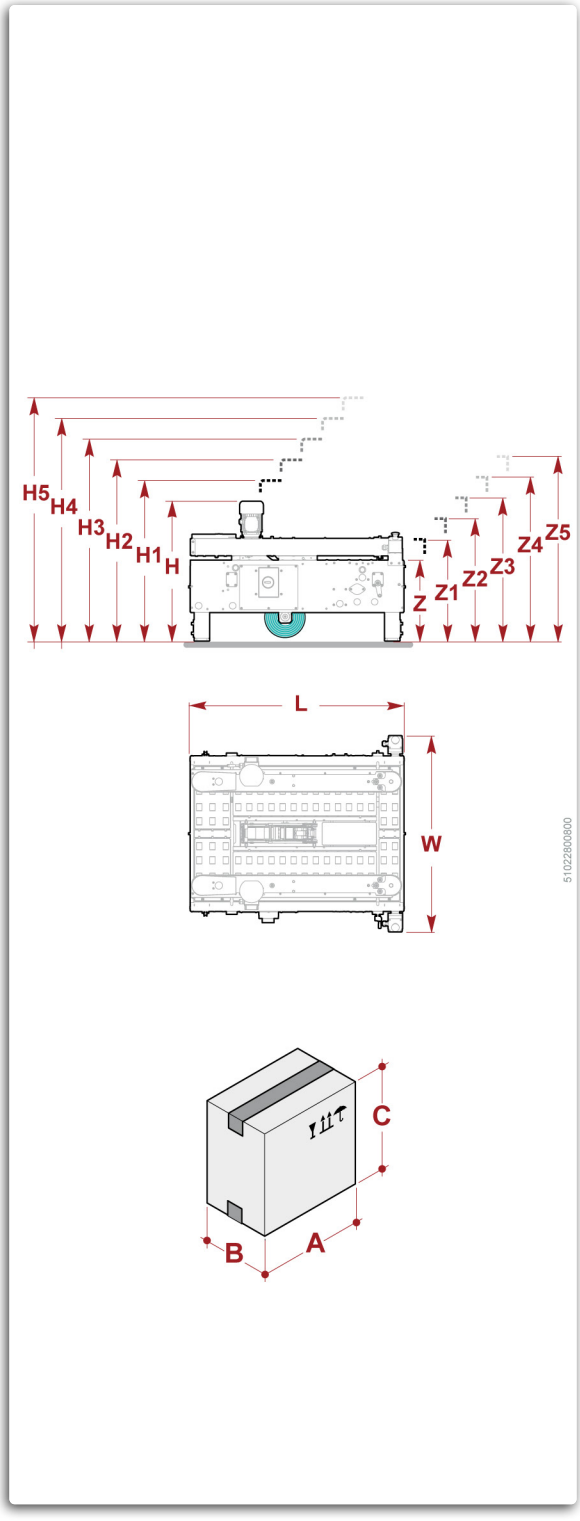
Description	Unit of measure-ment	Value
Ambient functioning temperature	°C	+5° / +40°
Environmental brightness	LUX	150
Maximum level of noise	dB	-

Technical data Nastro-SB M5/M6/M8 (OB)

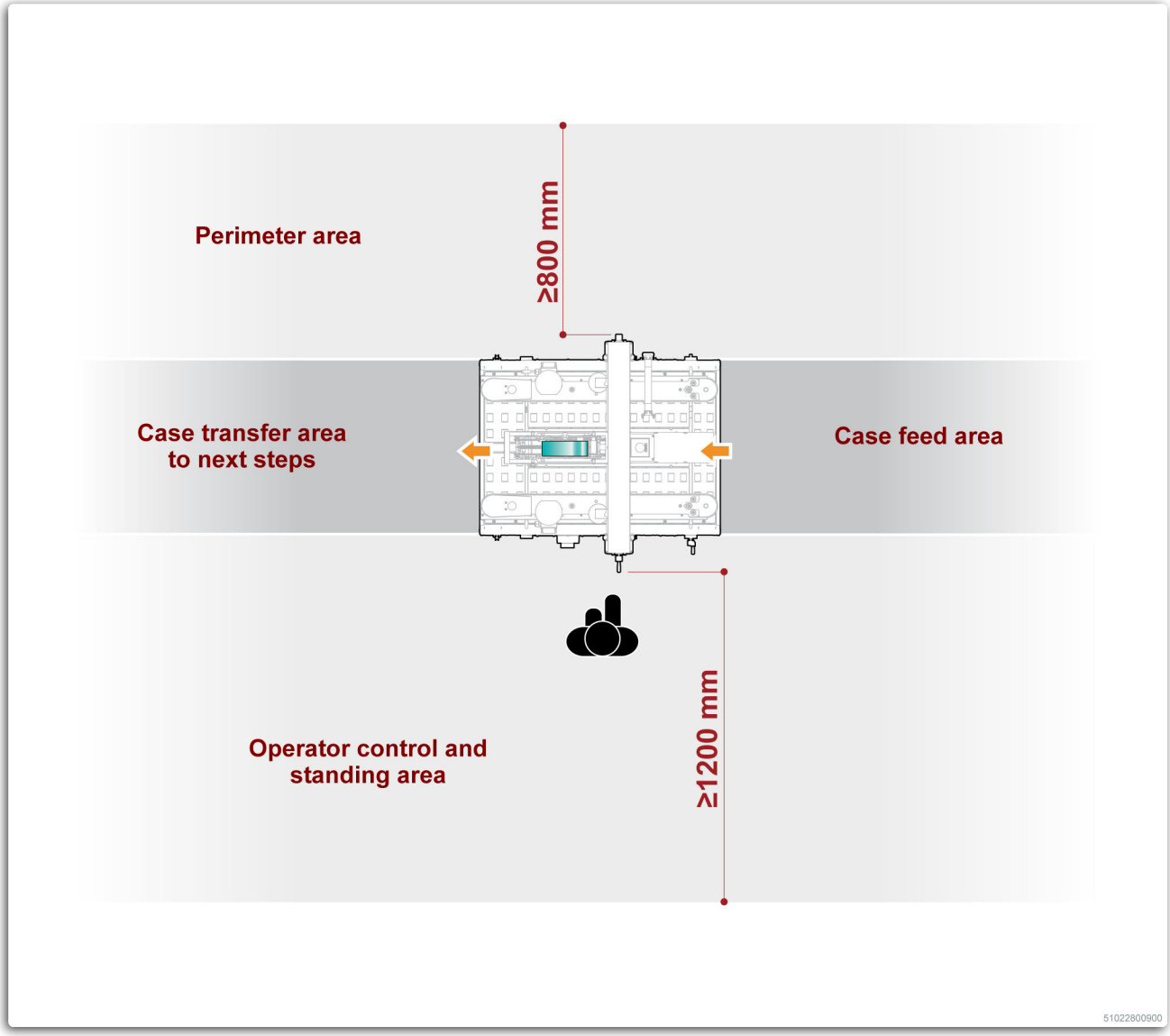
Table: Technical data of the machine

Description	Unit of measure-ment	Value
Electric supply		
The power supply specifications are those shown in the identification plate applied to the machine.	-	-
Electric protection class	-	IP 54
Machine dimensions		
Dimensions (LxW)	mm	1100x990
Width of the work top	mm	500
Height **H** (standard legs)	mm	860÷1120
Height **H1** (standard legs + set of wheels AS77)	mm	970÷1230
Height **H2** (set of optional legs 1)	mm	960÷1220
Height **H3** (set of optional legs 1 + set of wheels AS77)	mm	1070÷1330
Height **H4** (set of optional legs 2)	mm	1060÷1320
Height **H5** (set of optional legs 2 + set of wheels AS77)	mm	1170÷1430
Work surface height **Z** (standard legs)	mm	540÷800
Work surface height **Z1** (standard legs + set of wheels AS77)	mm	650÷910
Work surface height **Z2** (set of optional legs 1)	mm	640÷900
Work surface height **Z3** (set of optional legs 1 + set of wheels AS77)	mm	750÷1010
Work surface height **Z4** (set of optional legs 2)	mm	860÷1120
Work surface height **Z5** (set of optional legs 2 + set of wheels AS77)	mm	970÷1230
Weight	kg	138
Operation characteristics		
Maximum hourly production	packs/hour	-
Case type	-	RSC - HSC - FEFCO 0200/0201
Dimensions of case		
- Min dimensions (AxBxC)	mm	150x150x90
- Max dimensions (AxBxC)	mm	∞x500x∞
Maximum case weight	kg	30
Dimensions of adhesive tape roller	-	See Sealing unit technical specifications
Environmental conditions		
Maximum operating height (asl)	m	1000
Relative humidity (detected at a temperature included between 20°C and 40°C)	-	30% - 80%
Ambient functioning temperature	°C	+5° / +40°
Environmental brightness	LUX	150
Maximum level of noise	dB	-



Description of outer areas

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



Safety and information signals Nastro-SB M5/M6/M8 (TB/OT)

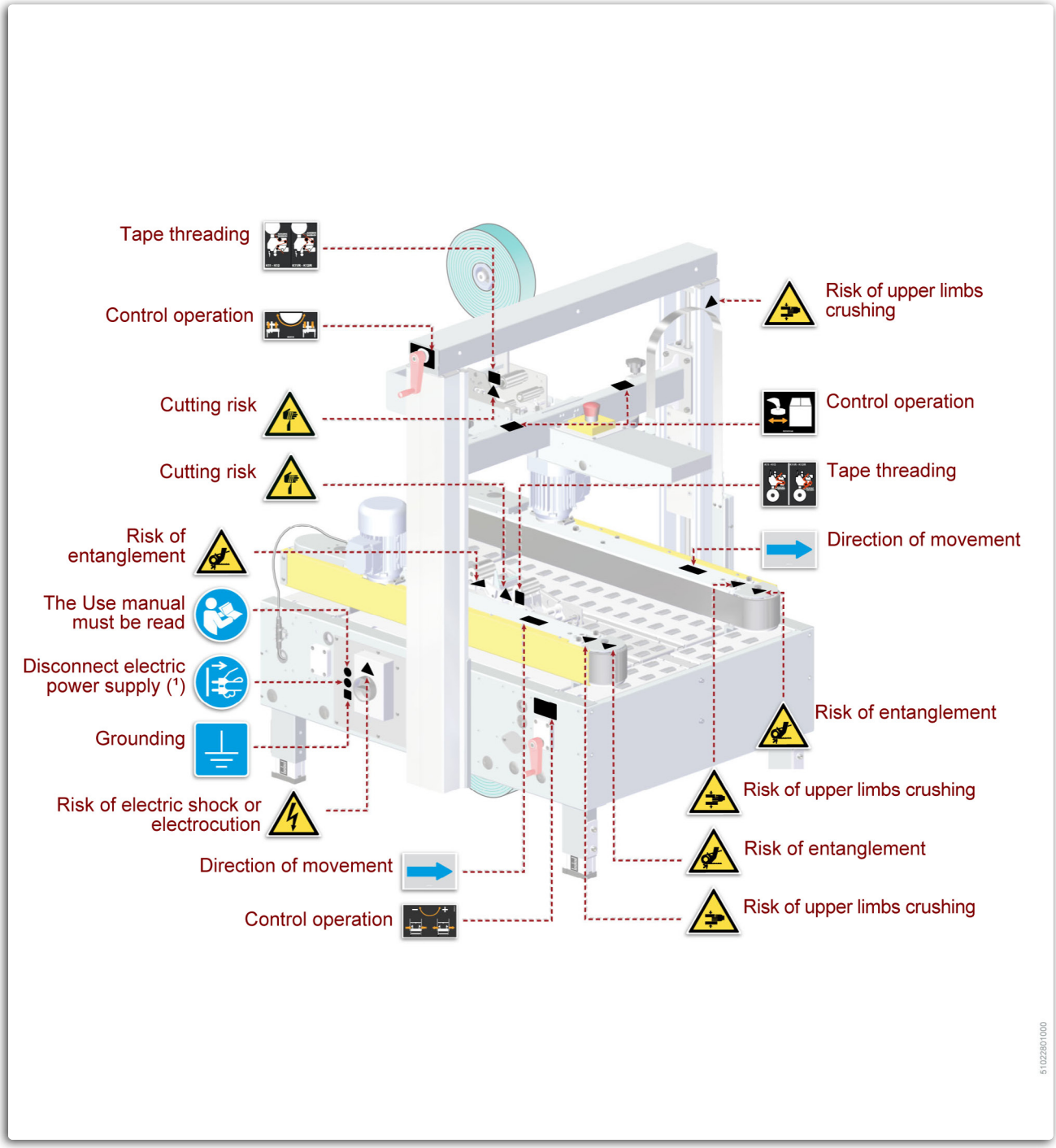
Please keep safety signs and information legible and follow the instructions.

– 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.



(1) Disconnect mains plug to avoid the risk of electric shock when performing the operations.

Safety and information signals Nastro-SB M5/M6/M8 (OB)

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

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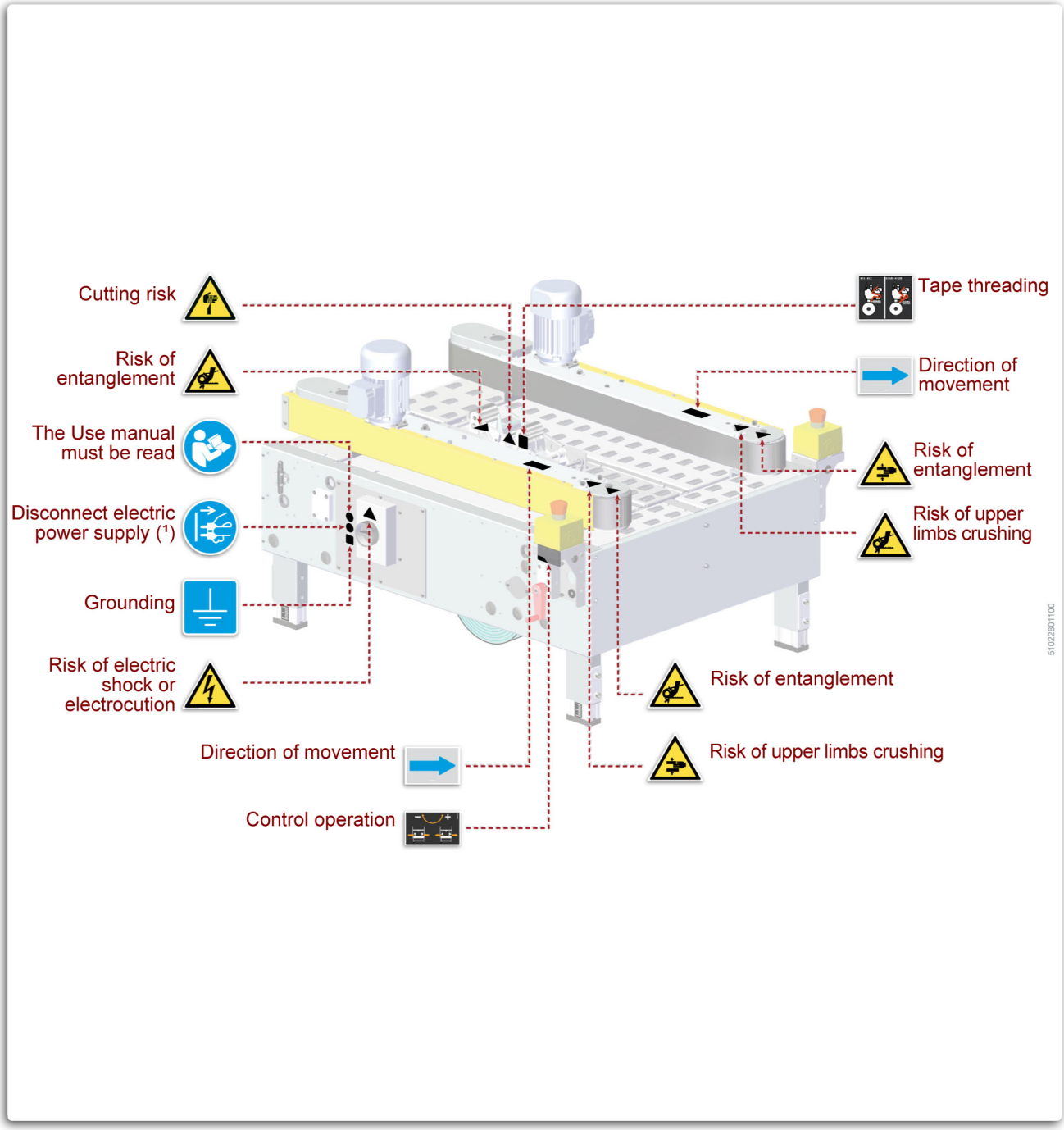

(1) Disconnect mains plug to avoid the risk of electric shock when performing the operations.

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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.

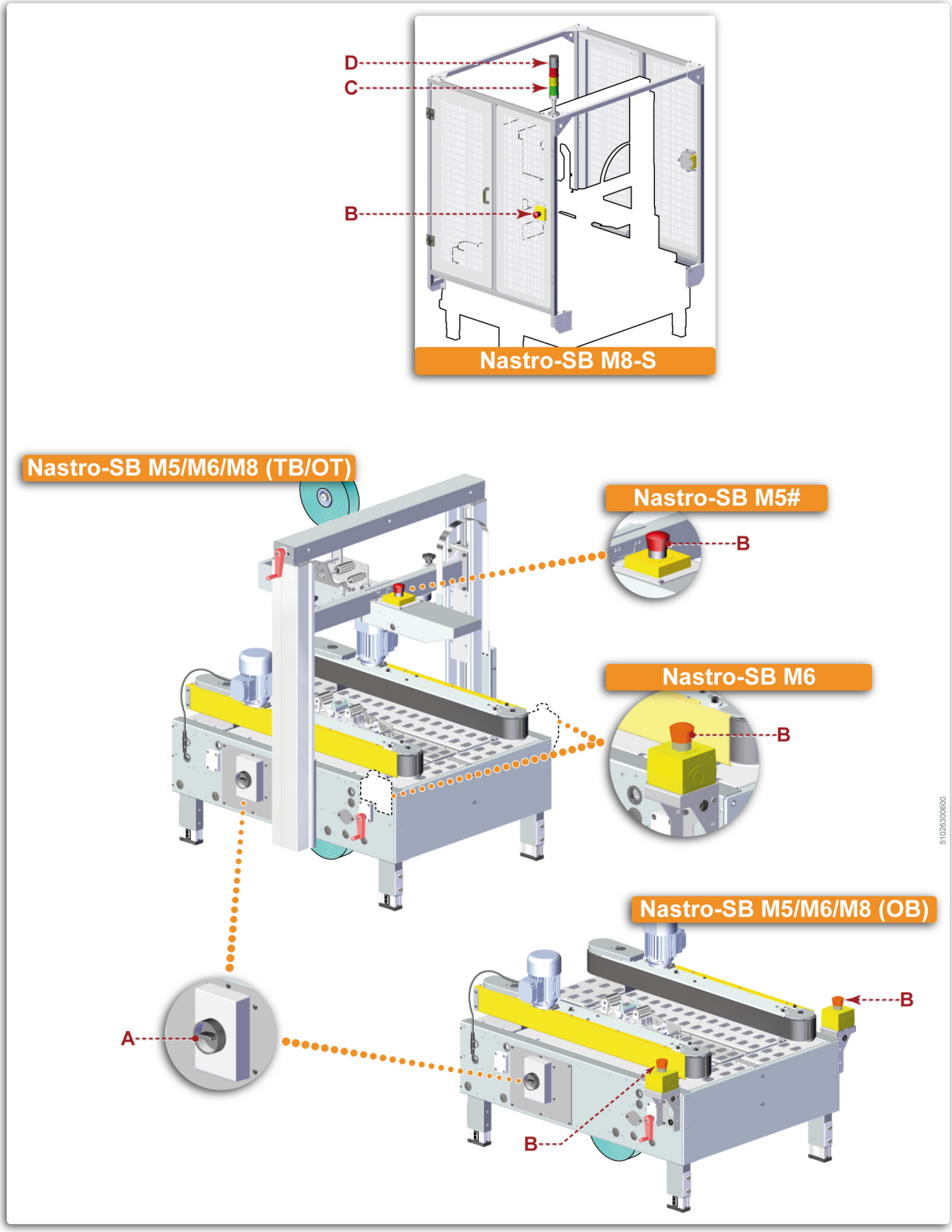
– Ensure the area around the machine, especially the control post, is ALWAYS unobstructed and in good condition to minimize the risks for the Operator.

– Check whether according to the “Instructions for use” the operators are obliged to wear Personal Protective Equipment during use and operation.

– Even if the “Instructions for use” do not prescribe the use of PPE, keep to the laws applicable to the workplace.

Control description

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



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A) Electric disconnector: safety control that powers the electric panel.

– "OFF" position: function deactivated.

– Position "TRIPPED": stop in emergency conditions.

– The conveyors stop and the machine remains electrically powered.

– The conveyors stop and the machine remains electrically powered even when the emergency stop button is pressed.

– "ON" position: function activated.

– Control can be padlocked in order to avoid operations by non-authorised personnel.

B) Emergency stop button: safety control that, in case of an imminent risk, stops all parts whose function might constitute a risk.

– The control must stay "locked" until all the normal operating conditions have been restored.

– After having normalised running conditions, unblock the button with a deliberate action to authorise restart.

C) Indicator light: safety device that signals the operating condition. (Optional for Nastro-SB M5/M6 version).

– Blue light on: electric supply deactivated.

– Solid green light: automatic mode operation.

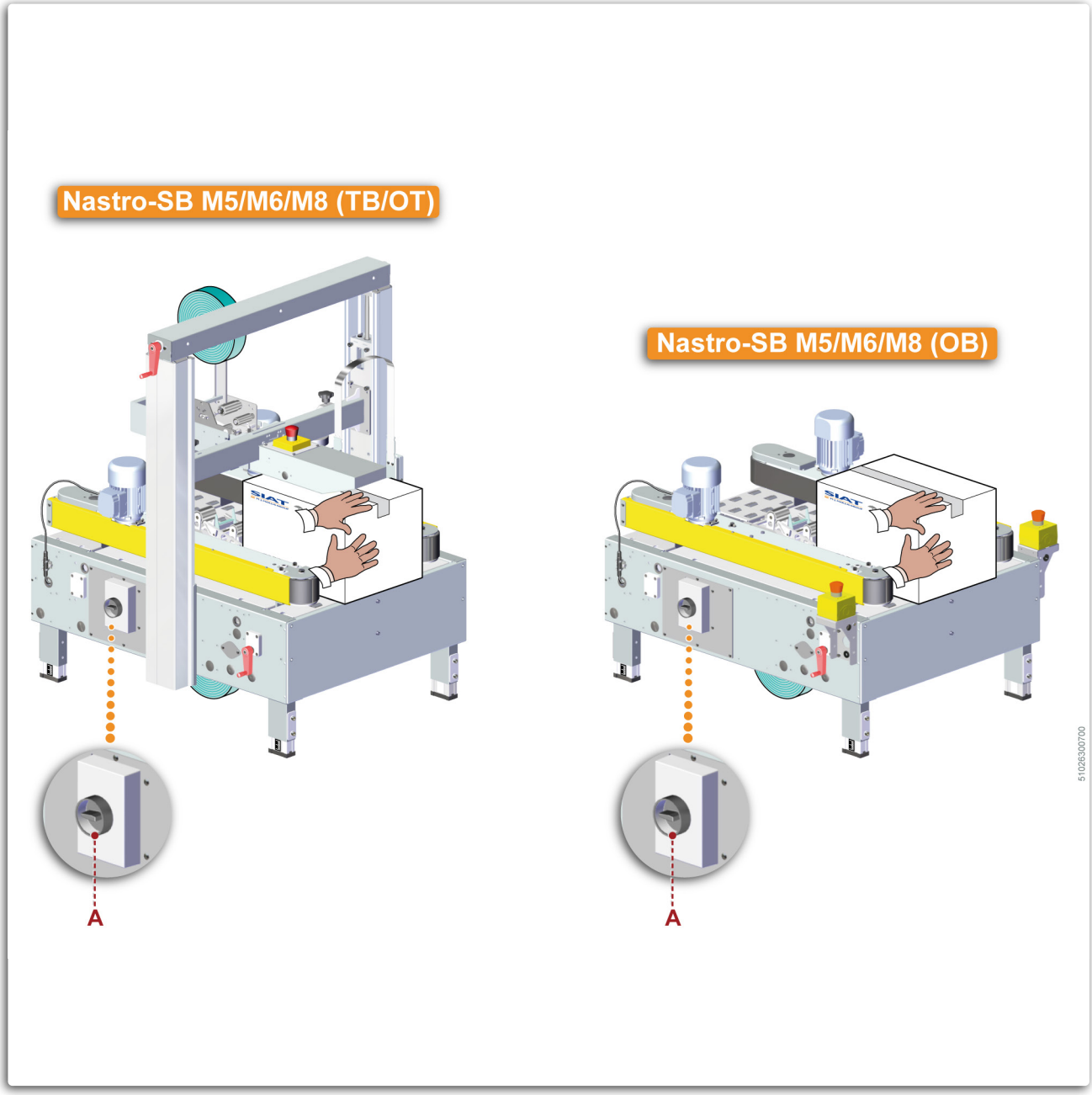
– Solid yellow light: adhesive tape end/broken adhesive tape.

– Solid red light: stop in alarm conditions.

D) Audible warning device: safety device that signals, with indicator light **C**, an active alarm (Optional for Nastro-SB M5/M6 version).

Start and stop

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



■ Start-up

1. Make sure that the machine has been adjusted to the dimensions of the cases to be sealed.
   See ***Preparing the machine for use*** for further details.
2. Turn the main disconnector **A** to position **"I"** (ON) to connect power supply.

– Conveyor belts start.

3. Close lower flaps and insert the product into case.
4. Feed on the case (during this operation upper flaps must be kept closed) until it is picked up by conveyor belts.

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Attention
Warning

To prevent the risk of abrasion, touch the rear of the case when handling it.

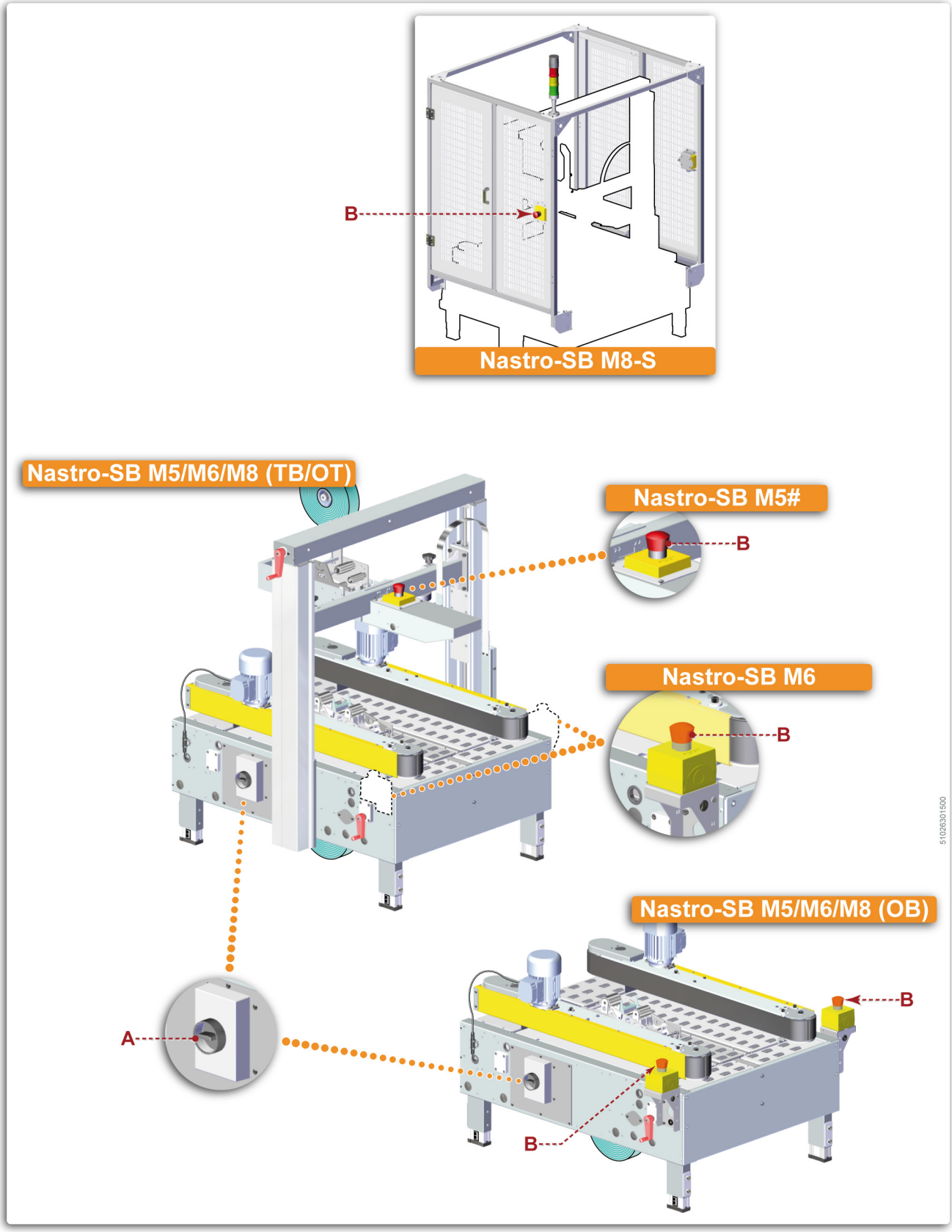
Stop

1. Complete the sealing operation in progress.
2. Rotate main disconnector **A** to position **"O"** (OFF) to deactivate the power supply.

– Conveyor belts stop.

Emergency stop and new start-up

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



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1. In the presence of an imminent risk press the emergency stop button **B**.

– All moving devices immediately stop.

– **Isolator switch A is automatically positioned on "TRIPPED".**

2. Rotate main disconnector **A** to position **"O"** (OFF) to deactivate the power supply.

3. Identify the causes that have caused the stop.

4. Solve the malfunctions with respect to the information shown in the manual.

Important

The recovery operations that do not fall within the competence of the operator must be carried out by skilled and authorised technicians.

5. Unlock the emergency stop button with a voluntary action.

6. Turn the main disconnector **A** to position **"I"** (ON) to connect power supply.

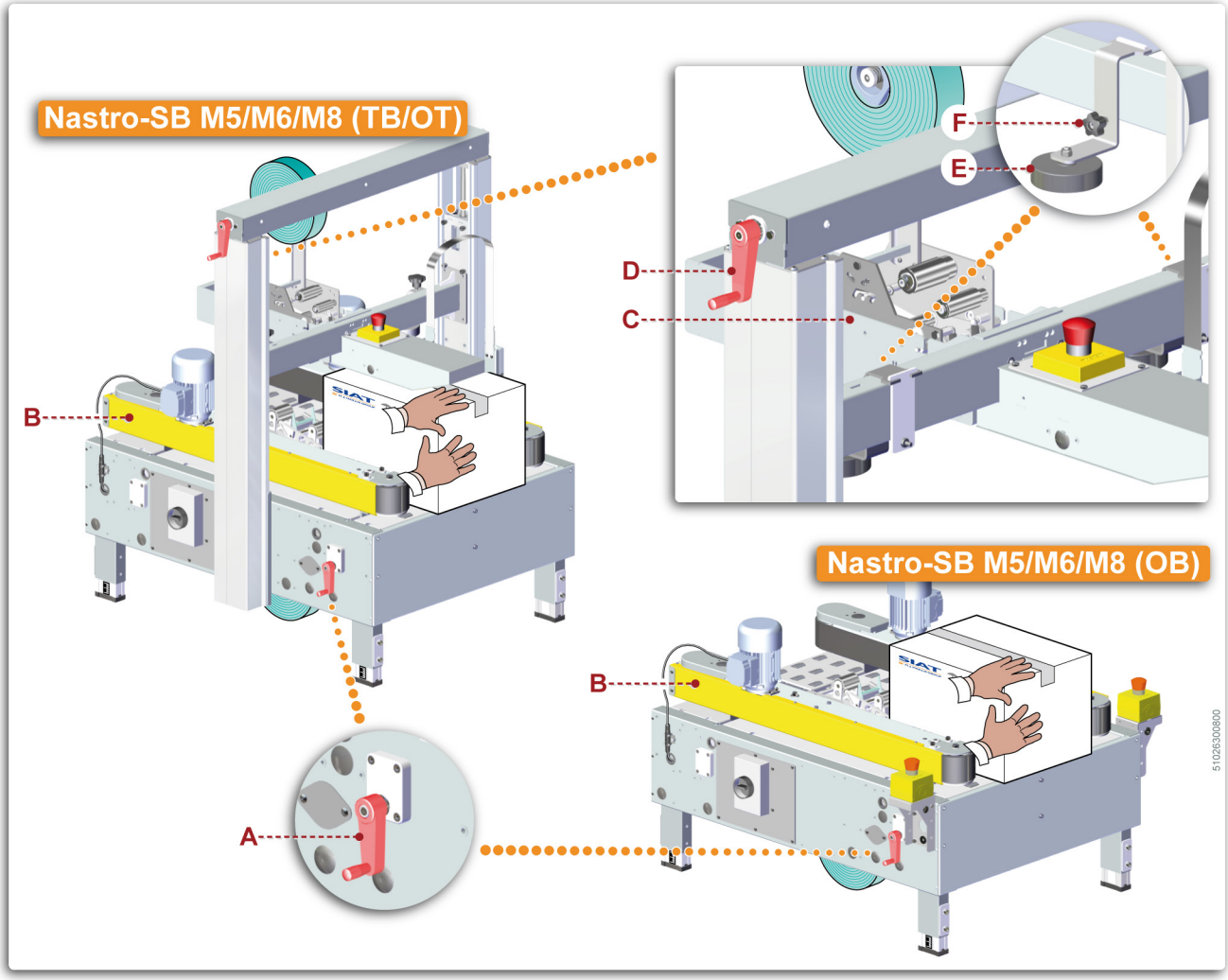
– Conveyor belts start.

Preparing the machine for use

The operations described are required to prepare the machine for sealing a batch of identical cases.

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

– **The operations must be carried out with with the machine stopped and in safe conditions.**



1. Prepare a case of the new format with the bottom and top flaps closed with adhesive tape.

■ Distance adjustment of conveyor belts

2. Regulate knob **A** to adjust the distance between conveyor belts **B**.

NOTE

Distance must be suitable to allow for the passage and drawing-in of the case.

■ Head height adjustment Nastro-SB M5/M6/M8 (TB/OT)

3. By means of hand wheel **D** move head **C** to a sufficient height for case transfer,

NOTE

Case must not impact head , but should access the area with a moderate pressure.

4. Push the case up to the pressure roller area **E**.

NOTE

To optimize the productivity of cases with various heights, we recommend grouping them into homogeneous batches.

■ Lateral pressure roller distance adjustment Nastro-SB M5/M6/ M8 (TB/OT)

5. Loosen knobs **F** and position pressure rollers **E** at the same distance from case.

NOTE

Adjust the pressure rollers so that they keep the top flaps closed and allow the case to pass.

6. Move the case along the path to check that it slides with moderate pressure.
7. Once this operation is completed, tighten knobs **F**.

Important

When production starts, make sure that the operation has been properly performed in order to avoid excessive waste.

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.

– 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.

– 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.**

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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.

Maintenance schedule

Every working day		
Component	*Operation required*	*Procedures to implement*
Machine	Check of safety devices	- Make sure that the listed devices are efficient.Emergency stop button. - Main electric disconnector - Cutting blade protection

Every 40 work hours (max 1 week)		
Component	*Operation required*	*Procedures to implement*
Sealing machine and unit	Cleaning	- Remove dirt and residues with the use of a suitable vacuum system. - Use a clean, dry (not abrasive) cloth. **Attention Warning** **DO NOT clean or wash the machine with water jets, vapour or aggressive products to prevent irreversible damage.**
Sealing units	Cutting blade cleaning	- Clean the cutting blade (See “Cleaning the cutting blade”). - Spread a thin layer of lubricant on blade in order to avoid the accumulation of glue residues and to preserve it from rust.

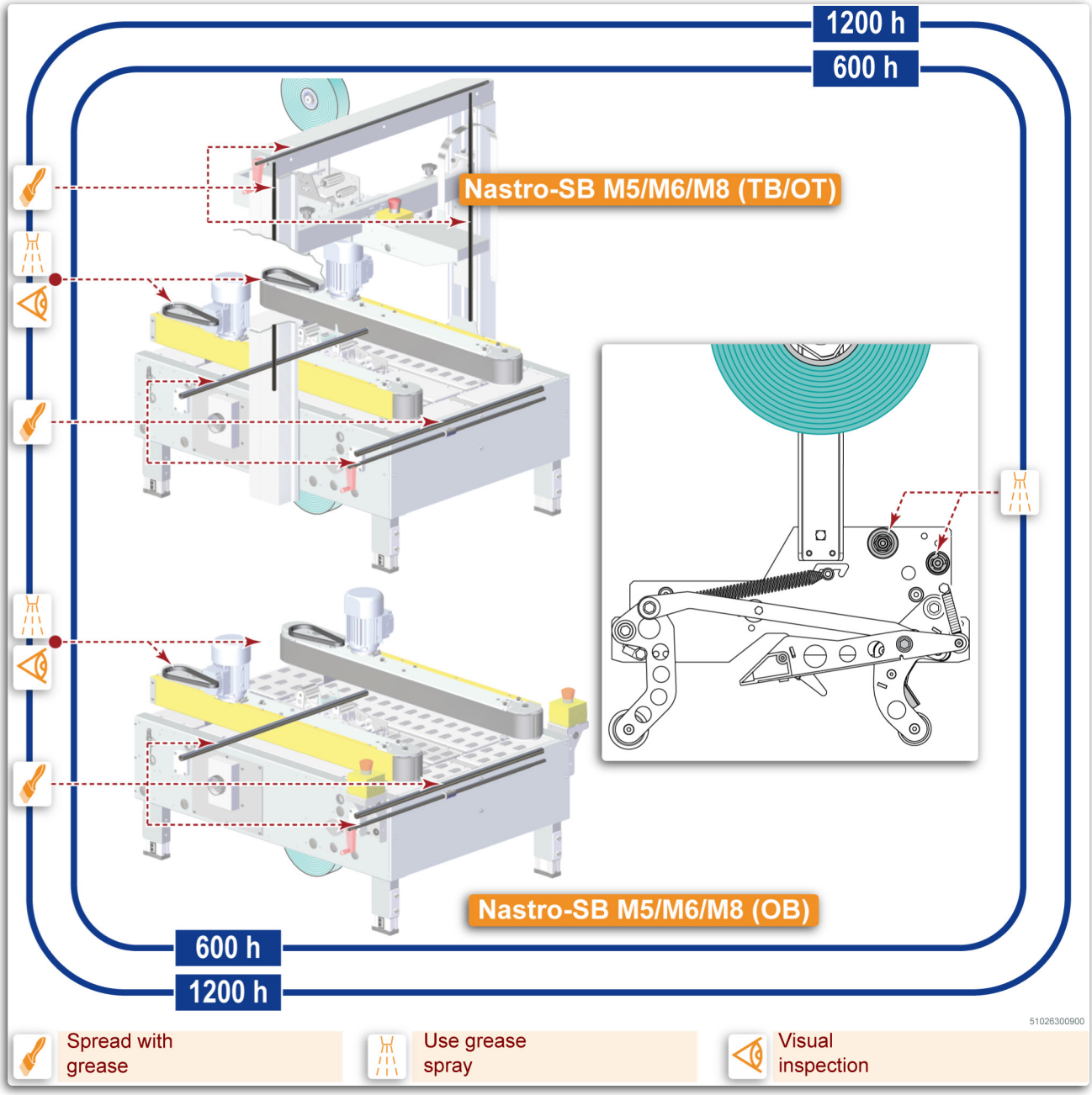
Every 600 work hours (max 3 months)		
Component	*Operation required*	*Procedures to implement*
Sealing units	Lubrication of rollers:	- Use grease spray (See ***Diagram of the points of lubrication***).

Every 1200 work hours (max 6 months)		
Component	*Operation required*	*Procedures to implement*
Conveyor belts	Check of conveyor belts	- Check the state of wear of the belts. - Replace the belts in case they are excessively worn. (See ***Replacement of conveyor belts***).
Conveyor belts	Check of conveyor belt driving pulley rings	- Check the rubber ring for wear. - Replace the component, if it is worn out
Lateral pressure rollers	Checking	- Make sure that the wheels are efficient and not worn. - Replace the component, if worn
Machine	Lubrication of conveyor belt pulley drive chain	- Check chains for wear. - Replace the chains , if worn - Lubricate all the greasing points (See ***Diagram of the points of lubrication***).
	Lubrication of head adjusting screw	- Lubricate all the greasing points (See ***Diagram of the points of lubrication***).
Sealing units	Check of cutting blade	- Check the state of wear of the blade. - Replace the component if there are signs of wear (See “Replacing the cutting blade”).

Every 1200 work hours (max 6 months)		
Component	*Operation required*	*Procedures to implement*
Sealing units	Check of springs	- Check the spring efficiency. - Replace the springs if the case inlet and outlet rollers do not return correctly to their position.
Sealing units	Check of rollers:	- Check the state of wear of the rollers. - Replace the component, if worn

Diagram of the points of lubrication

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



– Use the lubricants (oils and greases) recommended by the Manufacturer or lubricants of equivalent chemical and physical characteristics.

– Some components (reducers, bearings, etc.) do not request lubrication because they are self-lubricating or life lubricated.

Lubricant table

Use the lubricants (oils and greases) recommended by the Manufacturer or lubricants of equivalent chemical and physical characteristics.

Table: Recommended lubricants

Lubricant type	*make*	*Abbreviation*	*Component*
Synthetic grease	Tecnolube Seal	Rheolube 393	- Head adjusting screw - Conveyor belt pulley drive chains - Conveyor belt sliding bars
Oil	Standard lubricating oil		- Cutting blade - Sealing unit rollers

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*
When isolator switch is in position “ON”, operation will not start.	Emergency stop button pressed	- Unlock the emergency stop button with a voluntary action.
	Electric motor short circuit with activation of the circuit breaker	- Identify the cause of the fault.
The belts of the conveyor belts do not move forward evenly.	Belts not properly tensioned	- Adjust as required See ***Adjustment of conveyor belts***
	Worn driving pulley rings	- Replace the components.
The belts of the conveyors do not move the case evenly.	Conveyor belts worn	- Replace See ***Replacement of conveyor belts***
	The lateral pressure rollers exert an excessive pressure on the case	- Adjust as required See ***Lateral pressure roller distance adjustment Nastro-SB M5/M6/M8 (TB/OT)***
The case is jammed against head.	The head is not correctly positioned	- Adjust as required See ***Head height adjustment Nastro-SB M5/M6/M8 (TB/OT)***
The case is not picked up by conveyor belts	The conveyors belts are not correctly separated	- Adjust as required See ***Distance adjustment of conveyor belts***
The adhesive tape applied to the case is crinkled.	The head is not correctly positioned	- Adjust as required See ***Head height adjustment Nastro-SB M5/M6/M8 (TB/OT)***
	Sealing units not properly adjusted and positioned	- The component must be adjusted.
The adhesive tape is not applied in centred position with respect to the case flaps.	The roll of tape is not centred properly.	- Adjust as required See “Adhesive tape centring check”
The adhesive tape applied to the case is irregular.	Cutting blade with glue residues	- Clean the cutting blade See “Cleaning the cutting blade”
	Worn cutting blade	- Replace See “Replacing the cutting blade”
The adhesive tape applied to the case is folded.	Sealing unit rollers with glue or dirt residues	- Clean and remove the residues from the rollers.
	Worn sealing unit rollers	- Replace the components.

Adjustment of conveyor belts

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.

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

1. Mark the intervention area and prevent access to the devices that, if activated, may cause unexpected hazards and jeopardize the safety level.
2. Rotate main disconnector to position **"O"** (OFF) to deactivate the power supply.
3. Use the crank handle **A** to lift the head (Only for Nastro-SB M5/M6/M8 (TB/OT) version).

NOTE

This operation is necessary to assist the operations.

4. Slightly loosen screws **B**.
5. Loosen the screws **C** slightly.

– The operation must be carried on the upper and lower part.

6. Adjust the tension of belt by means of the adjusting system **D**.

– Turn clockwise to increase the tension and counter-clockwise to decrease it.

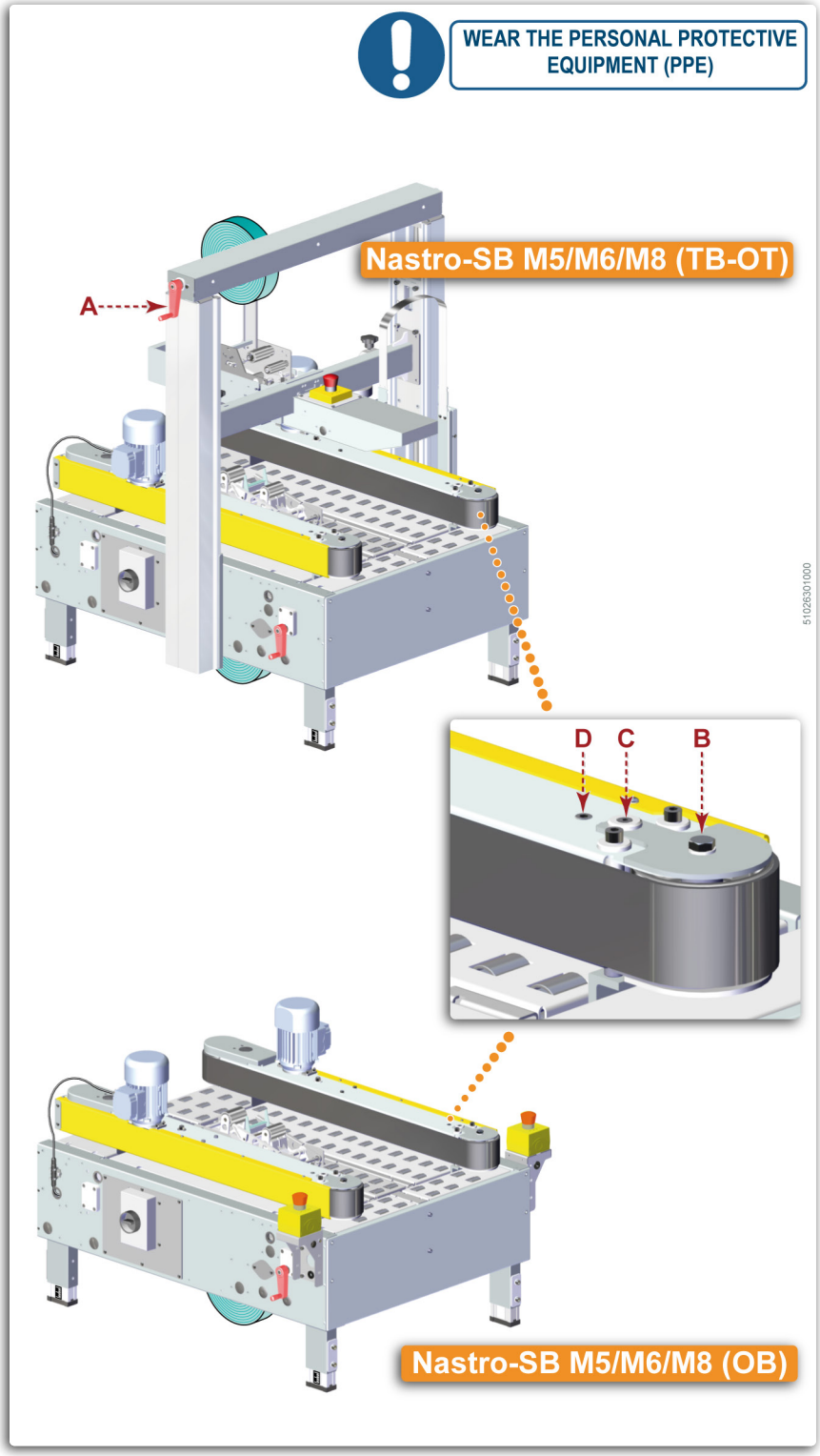
Important

Do not overtighten so as not to cause any malfunctioning.

7. Tighten the screws **C**.

– The operation must be carried on the upper and lower part.

8. Tighten the screw **B**.



9. Repeat the operations on other belt.

NOTE

Adjust the belts to the same tension.

10. Start the machine and make sure that the operation has been carried out properly.

– **At the end of operations, check that there are no tools or other material near the moving parts or in dangerous areas.**

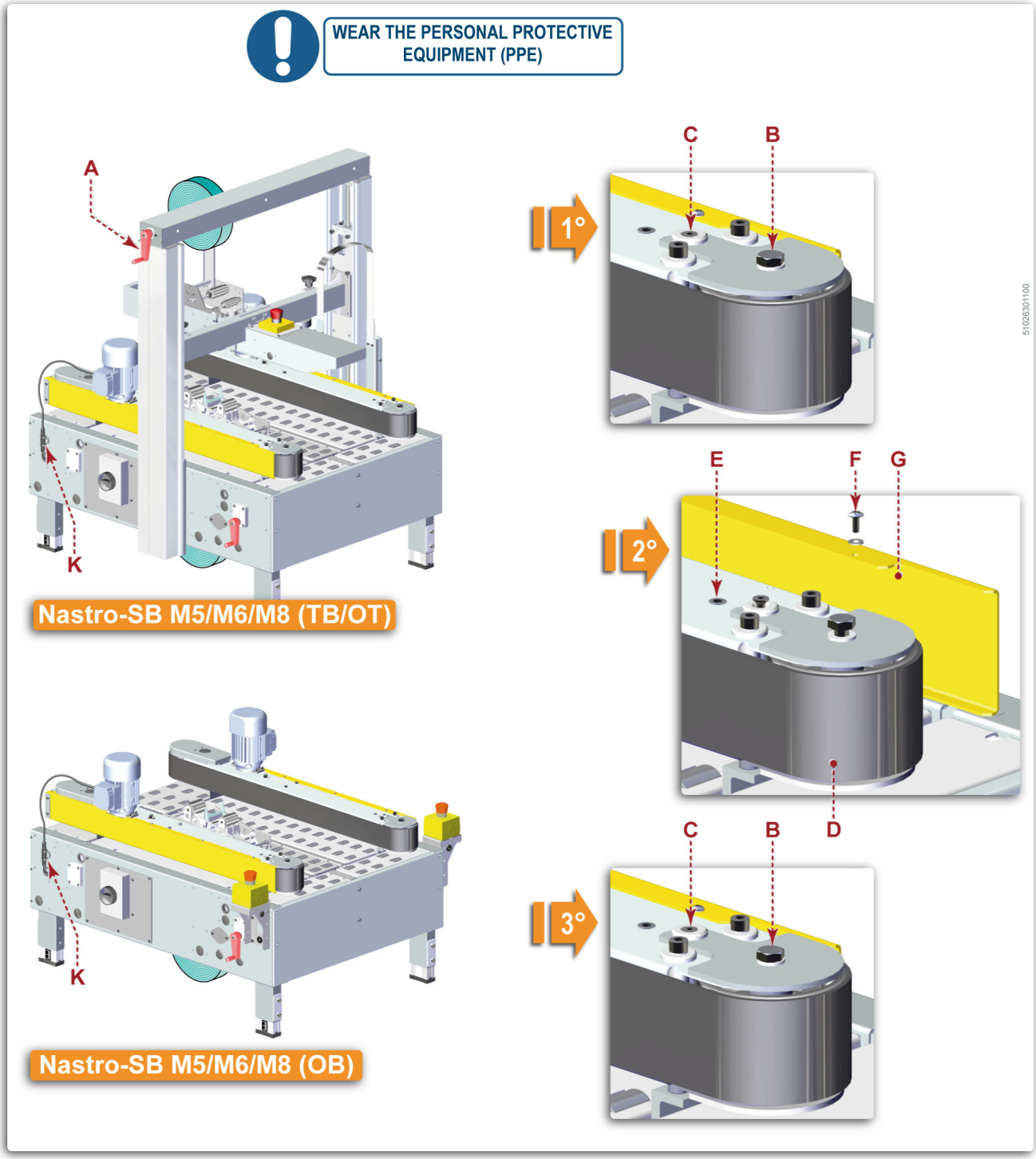
Replacement of conveyor belts

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.

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



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1. Mark the intervention area and prevent access to the devices that, if activated, may cause unexpected hazards and jeopardize the safety level.
2. Rotate main disconnector to position **"O"** (OFF) to deactivate the power supply.
3. Use the crank handle **A** to lift the head (Only for Nastro-SB M5/M6/M8 (TB/OT) version).

NOTE

This operation is necessary to assist the operations.

4. Disconnect connectors **K** from electric motors of conveyor belts.

1°

5. Slightly loosen screws **B**.
6. Loosen the screws **C** slightly.

– The operation must be carried on the upper and lower part.

2°

7. Loosen the belt **D** completely by means of the adjusting system **E**.
8. Loosen the screws **F**.
9. Disassemble the guard **G**.
10. Remove the belt **D**.
11. Replace belt with an original spare part.

NOTE

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

12. Adjust the tension of belt **D** by means of the adjusting system **E**.

Important

Do not overtighten so as not to cause any malfunctioning.

13. Reassemble the guard **G**.
14. Introduce and tighten the screws **F**.

3°

15. Tighten the screws **C**.

– The operation must be carried on the upper and lower part.

16. Tighten the screw **B**.
17. Connect connectors **K** to electric motors of conveyor belts.
18. Repeat the operations on other belt on the opposite side.

NOTE

Adjust the belts to the same tension.

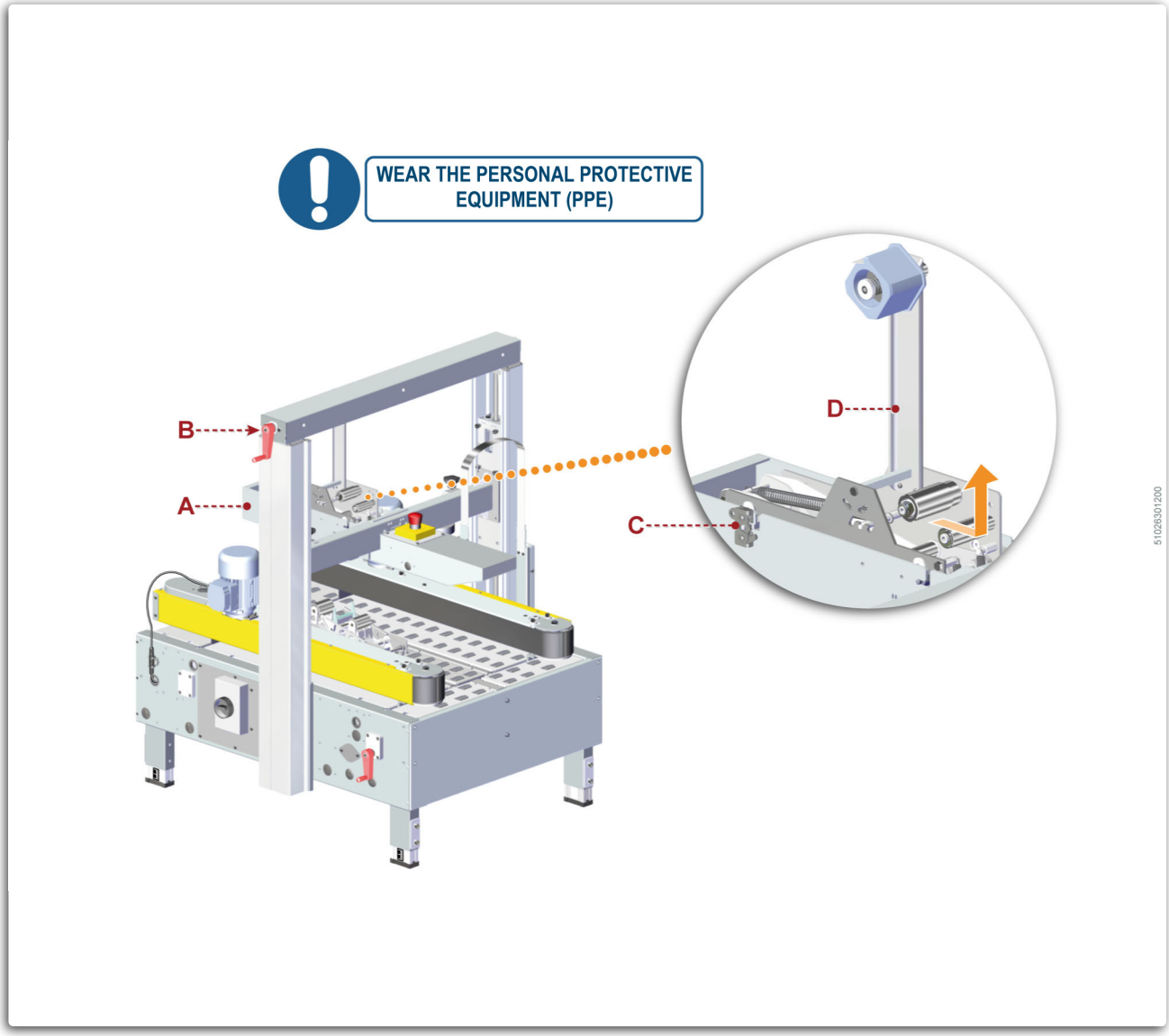
19. Start the machine and make sure that the operation has been carried out properly.

– **At the end of operations, check that there are no tools or other material near the moving parts or in dangerous areas.**

Disassembly and assembly of upper sealing unit Nastro-SB M5/M6/M8#-S (TB/OT)

The operation is necessary to carry out adjustment and maintenance operations.

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



1. Mark the intervention area and prevent access to the devices that, if activated, may cause unexpected hazards and jeopardize the safety level.
2. Disconnect the plug from the power socket.

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.

3. Lower head **A** by means of hand wheel **B**.

NOTE

This operation is necessary to assist the operations.

4. Check whether it is necessary to remove adhesive tape roll.

5. Disconnect the locking device **C**.
6. Extract upper sealing unit **D**
7. Carry out the recommended operations.
8. Insert roll and carry out the insertion of adhesive tape.

NOTE

For further details see section “Sealing unit”.

9. Insert upper sealing unit into its original position.

NOTE

The sealing unit D must connect with the locking device C.

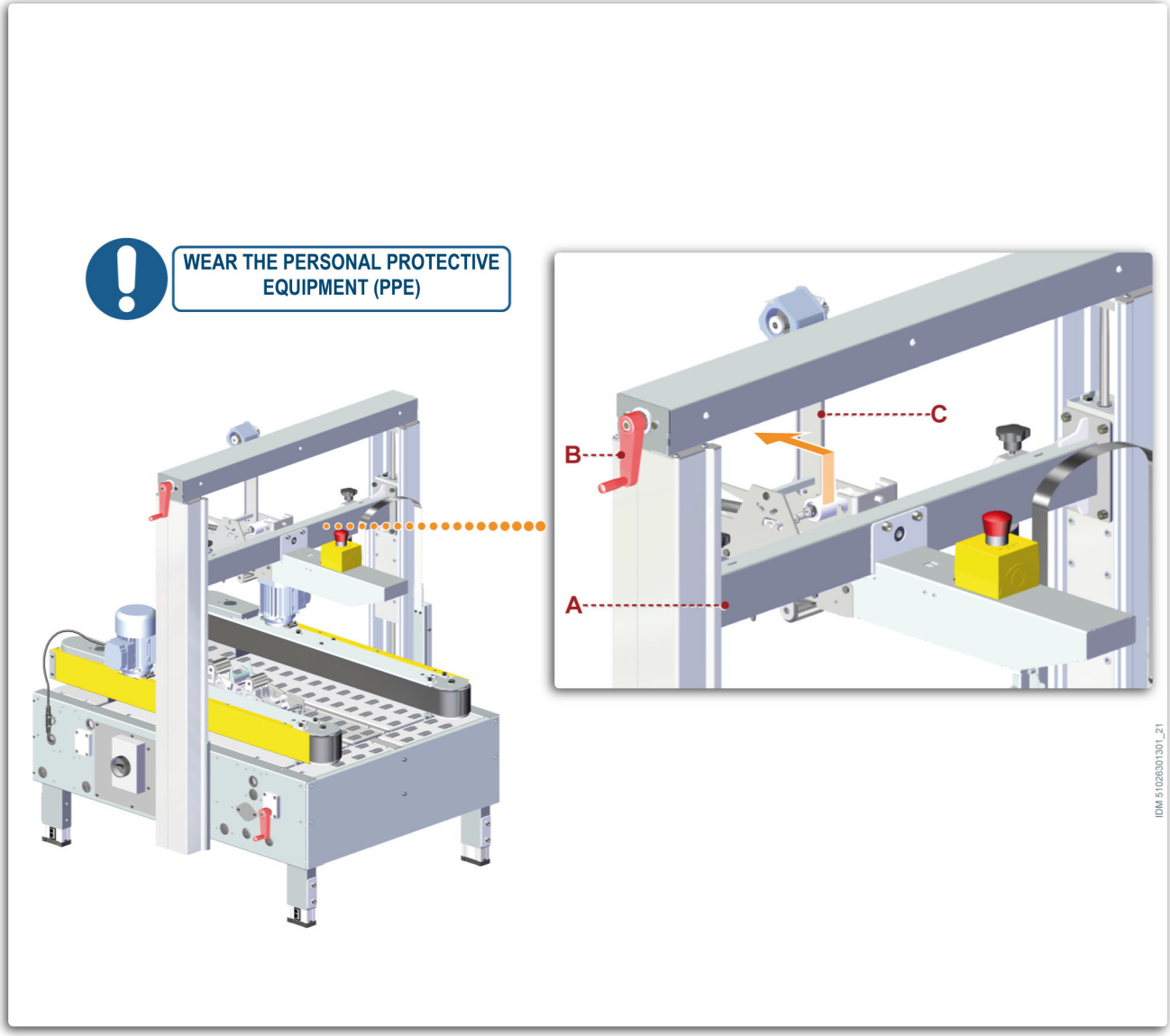
10. Use the crank handle **B** to lift the head **A**.
11. Plug the connector into the electrical power outlet.

– **At the end of operations, check that there are no tools or other material near the moving parts or in dangerous areas.**

Disassembly and assembly of upper sealing unit Nastro-SB M5/M6#-L (TB/OT)

The operation is necessary to carry out adjustment and maintenance operations.

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



1. Mark the intervention area and prevent access to the devices that, if activated, may cause unexpected hazards and jeopardize the safety level.
2. Disconnect the plug from the power socket.

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.

3. Lower head **A** by means of hand wheel **B**.

NOTE

This operation is necessary to assist the operations.

4. Check whether it is necessary to remove adhesive tape roll.

5. Extract upper sealing unit **C.**
6. Carry out the recommended operations.
7. Insert roll and carry out the insertion of adhesive tape.

NOTE

For further details see section “Sealing unit”.

8. Insert upper sealing unit into its original position.
9. Use the crank handle **B** to lift the head **A**.
10. Plug the connector into the electrical power outlet.

– **At the end of operations, check that there are no tools or other material near the moving parts or in dangerous areas.**

Disassembly and assembly of lower sealing unit

The operation is necessary to carry out adjustment and maintenance operations.

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

1. Mark the intervention area and prevent access to the devices that, if activated, may cause unexpected hazards and jeopardize the safety level.

2. Disconnect the plug from the power socket.

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.

3. Use the crank handle **B** to lift the head **A** (Only for Nastro-SB M5/M6/M8 (TB/OT) version).

NOTE

This operation is necessary to assist the operations.

4. Check whether it is necessary to remove adhesive tape roll.

5. Remove lower sealing unit **C**

6. Carry out the recommended operations.

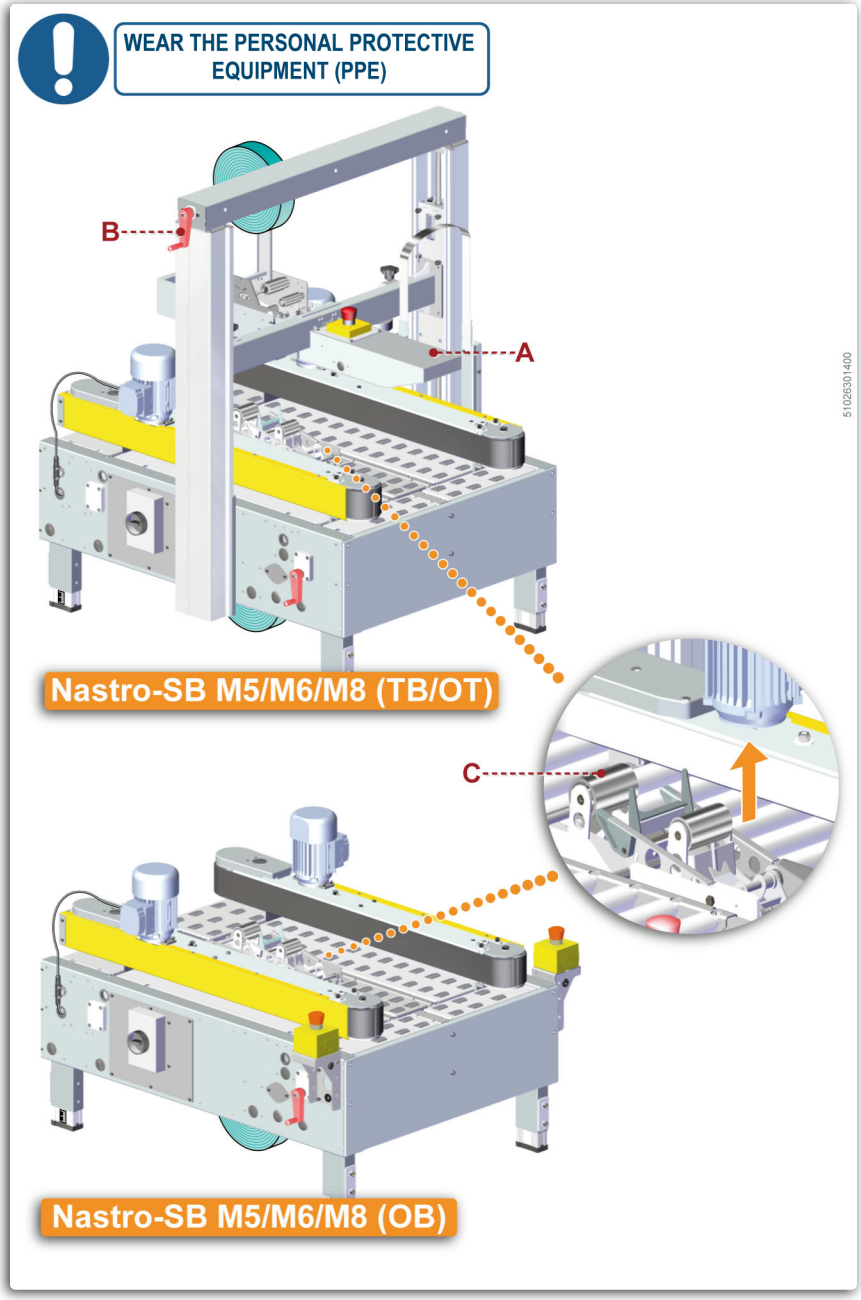
7. Insert roll and carry out the insertion of adhesive tape.

NOTE

For further details see section "Sealing unit".

8. Insert lower sealing unit into its original position.

9. Plug the connector into the electrical power outlet.



– **At the end of operations, check that there are no tools or other material near the moving parts or in dangerous areas.**

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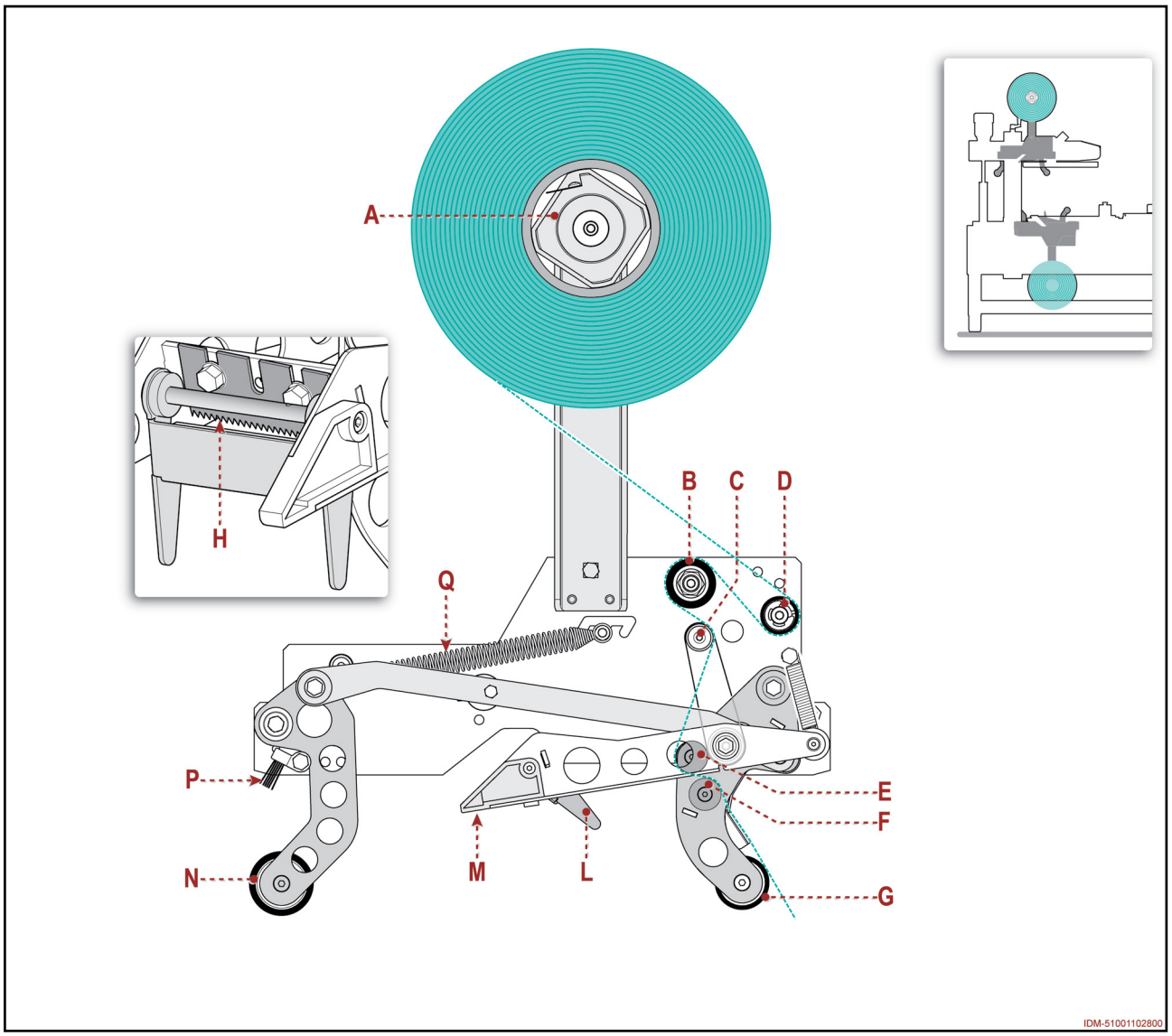
Description of sealing unit

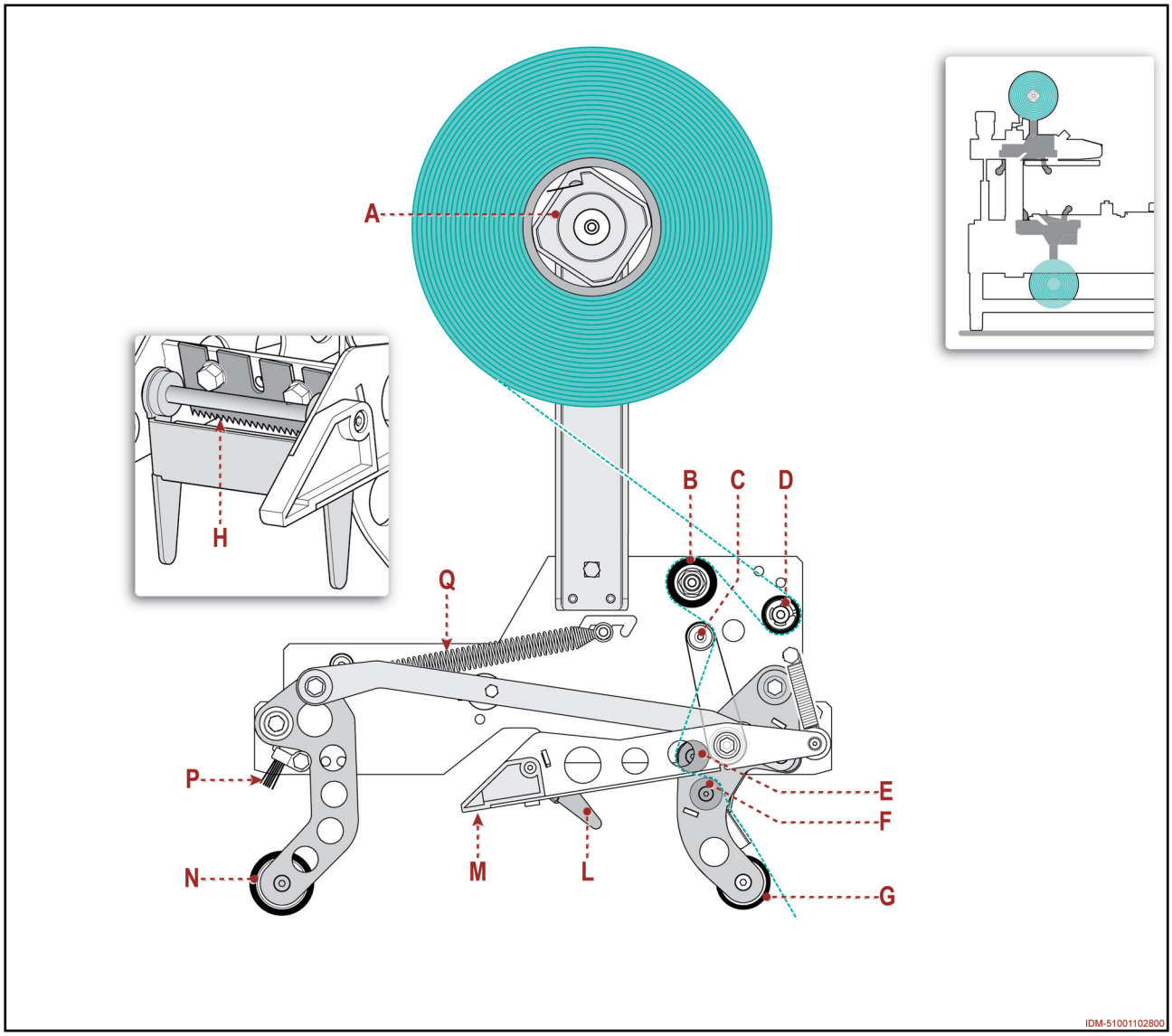
Sealing unit is fitted with an adhesive tape holder that seals the lower and upper part of the cardboard cases and/or cartons.
The K11 version is specifically for 2” adhesive tape.

NOTE
The versions are suitable for use with cut-resistant adhesive tape.

– Each sealing unit is equipped with devices that apply and cut the adhesive tape.
– The illustration shows the main components.



A) Tape holder
B) Roller with non-return device
C) Cutting lever transmission roller (optional)
D) Transmission roller
E) Idle roller (knurled surface)
F) Idle roller (smooth surface)
G) Case inlet roller



H) Cutting blade

L) Cutting blade protection

M) Cut adjustment sliding block

N) Case outlet roller

P) Adhesive tape roller smoothing brush

Q) Roller return spring

– **Tape stretcher is supplied; it is necessary to guide the adhesive tape for the first time.**

Sealing unit technical specifications

Table: Sealing unit technical specifications K11

Description	*Unit of measurement*	*K11*
Sealing unit size		
Length, width, height (LxWxH)	mm	400 x 98 x 480
Weight	kg	5,93
Dimensions of adhesive tape roller		
Flap length **(A)**	mm	70-50-30 [1])
Inside Diameter **(d)**	mm (inch)	76 (3”)
Maximum external diameter (D)	mm (inch)	410 (16”)
Height **(H)**	mm (inch)	50 (2”)
Type of adhesive tape	PVC - OPP (oriented polypropylene)	

[1]) Sealing unit can be requested for 70 mm or 50 mm flaps.

– For a 30 mm flap, request the components necessary to transform the version with 70 mm or 50 mm flaps.

– For more details, see “Flap length adjustment” heading.

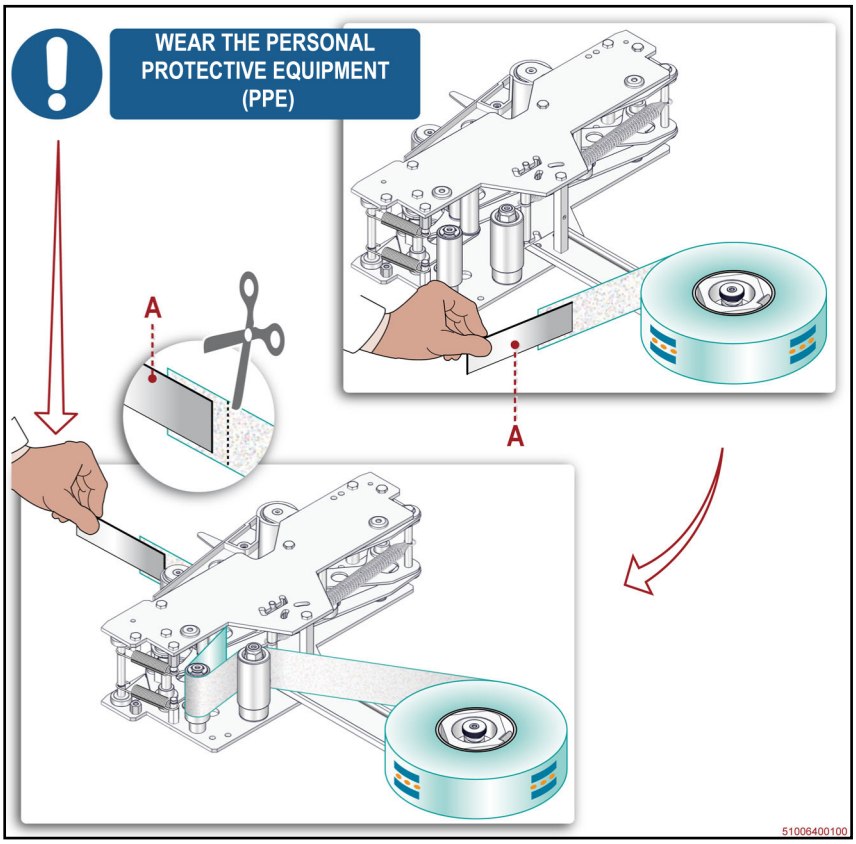
Supplying and guiding adhesive tape

The intervention must be carried out with the machine stopped in safety conditions.

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.

Lower sealing unit



1. Lift head completely.

NOTE

This operation is necessary to assist the operations.

2. Remove lower sealing unit
3. Remove the adhesive tape from the sealing unit.
4. Remove the cardboard core.
5. Insert new roller.
6. Apply tape stretcher **A** to the adhesive side of the tape.
7. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.
8. Cut the adhesive tape close to tape stretcher **A**.

NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

9. Insert sealing unit into its original housing.

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Upper sealing unit

10. Remove the adhesive tape from the sealing unit.

11. Remove the cardboard core.

12. Insert new roller.

13. Apply tape stretcher **B** to the adhesive side of the tape.

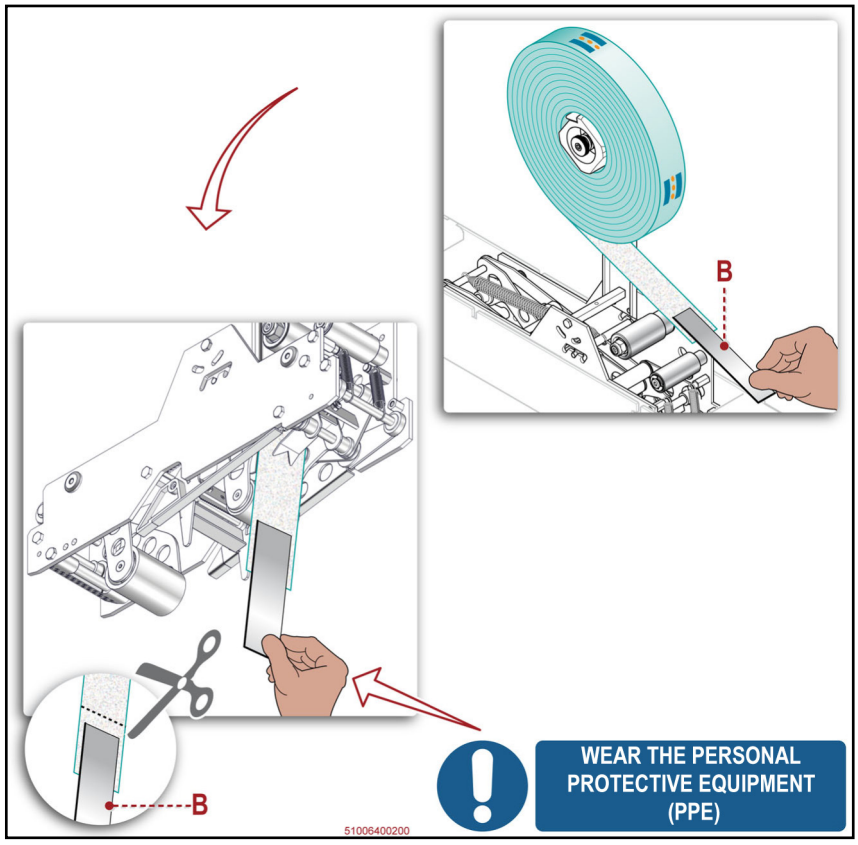
14. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.

15. Cut the adhesive tape close to tape stretcher **B**.

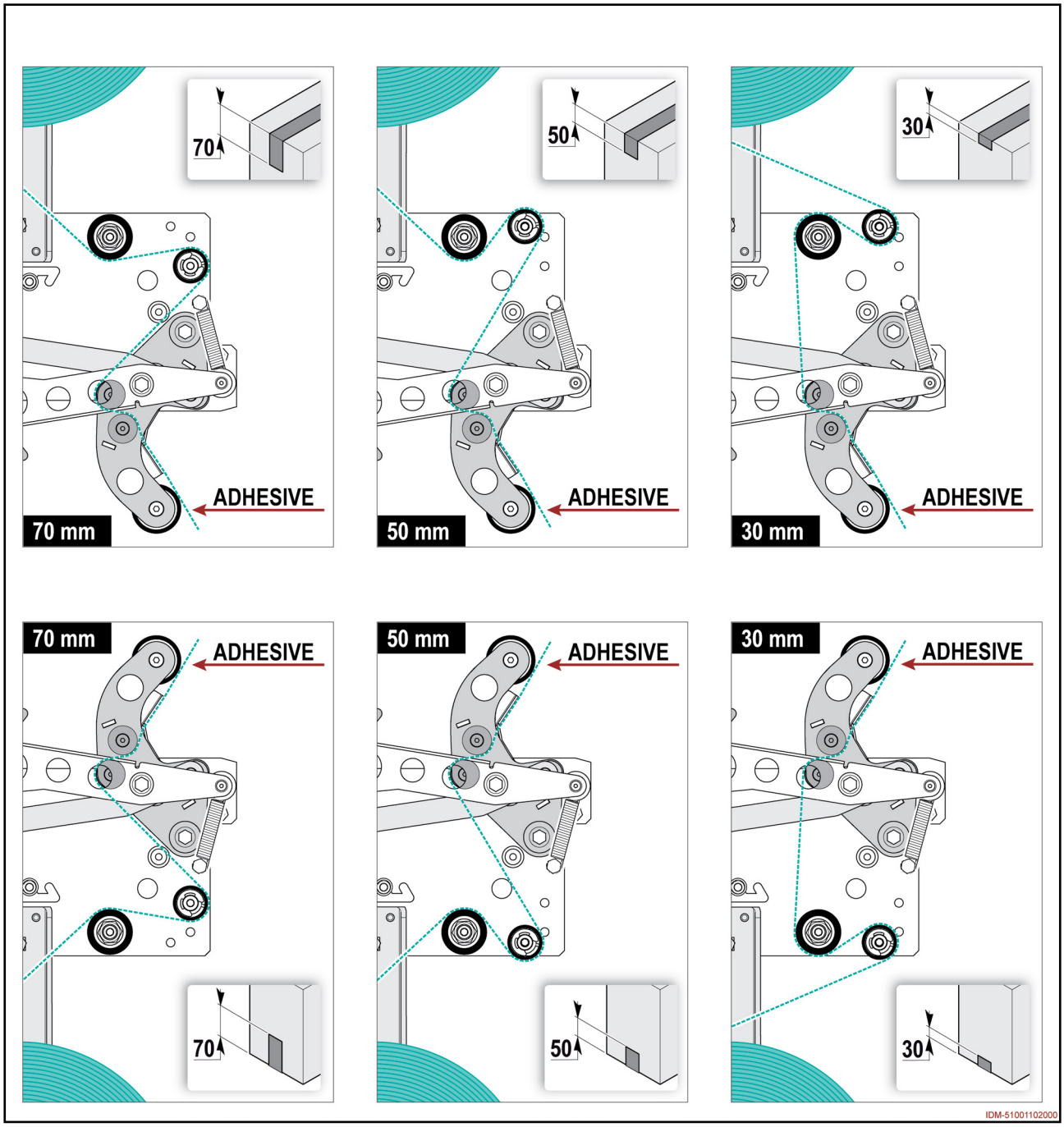
NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

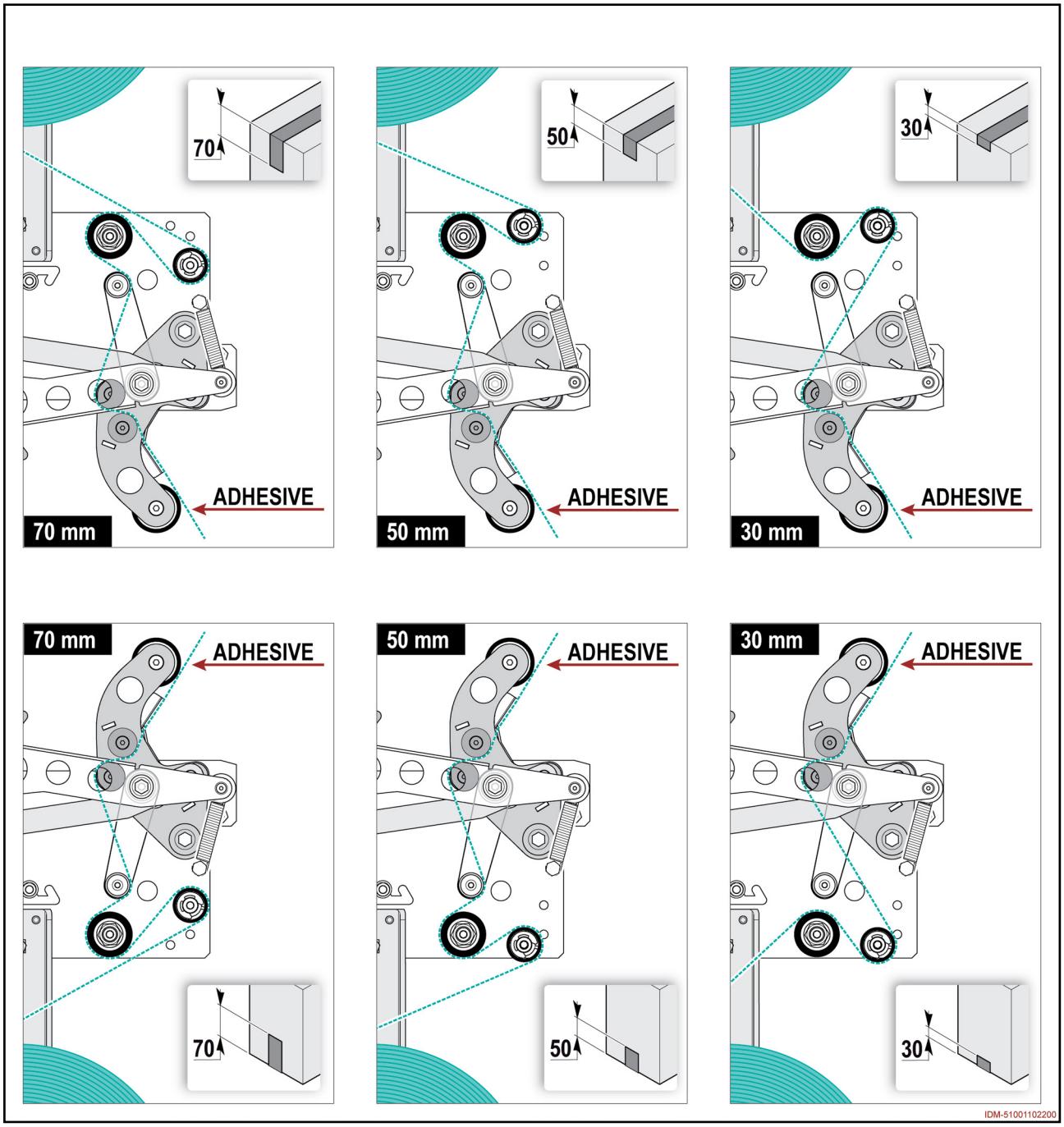
– **The figure shows the path of the adhesive tape according to the length of flap.**



Without cutting lever transmission roller



With cutting lever transmission roller



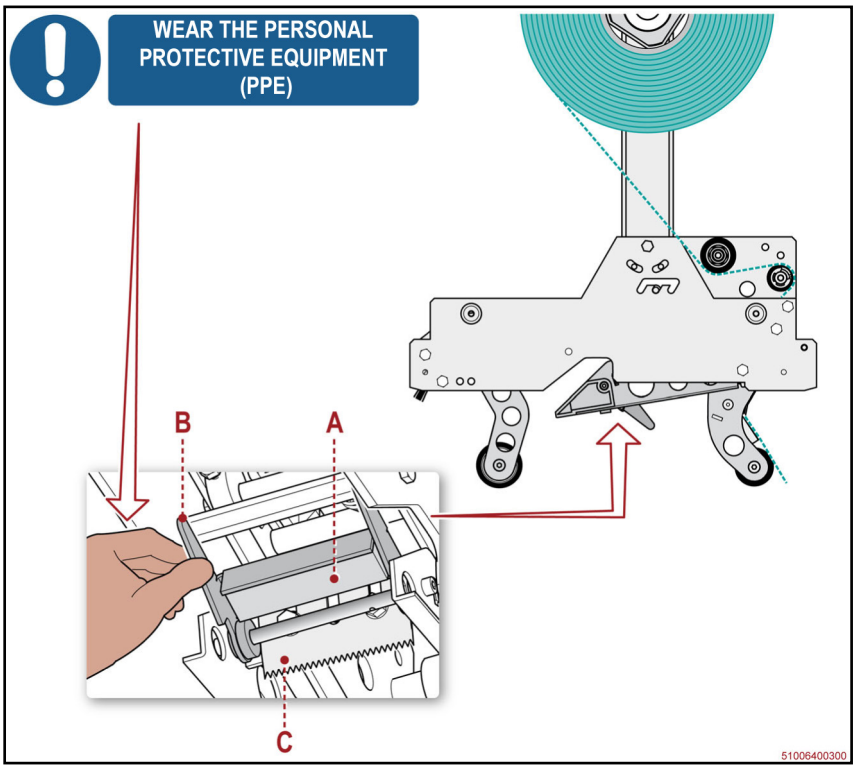
Cutting blade cleaning

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

– **The intervention must be carried out with the machine stopped in safety conditions.**

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.



1. Lift guard **A** and keep it in position by means of lever **B**.
2. Clean blade **C** from glue residues.

NOTE

We recommend the using solvent , to remove glue residue.

3. Spread a thin layer of lubricant on blade **C** in order to avoid the accumulation of glue residues.
4. Release lever **B**.

– Guard **A** returns to its position.

IDM 510-064-2

Adhesive tape parameter check

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

– This check is necessary to make sure that the adhesive tape is properly applied to the cases.

■ Adhesive tape centring check

– Make sure that the adhesive tape is centred on device **A**.

– Keep to the following instructions to adjust the centring.

– Insert Allen wrench into roll holder and loosen lock nut **B**.

– Turn Allen wrench with small movements in order to move the roller to the left or to the right.

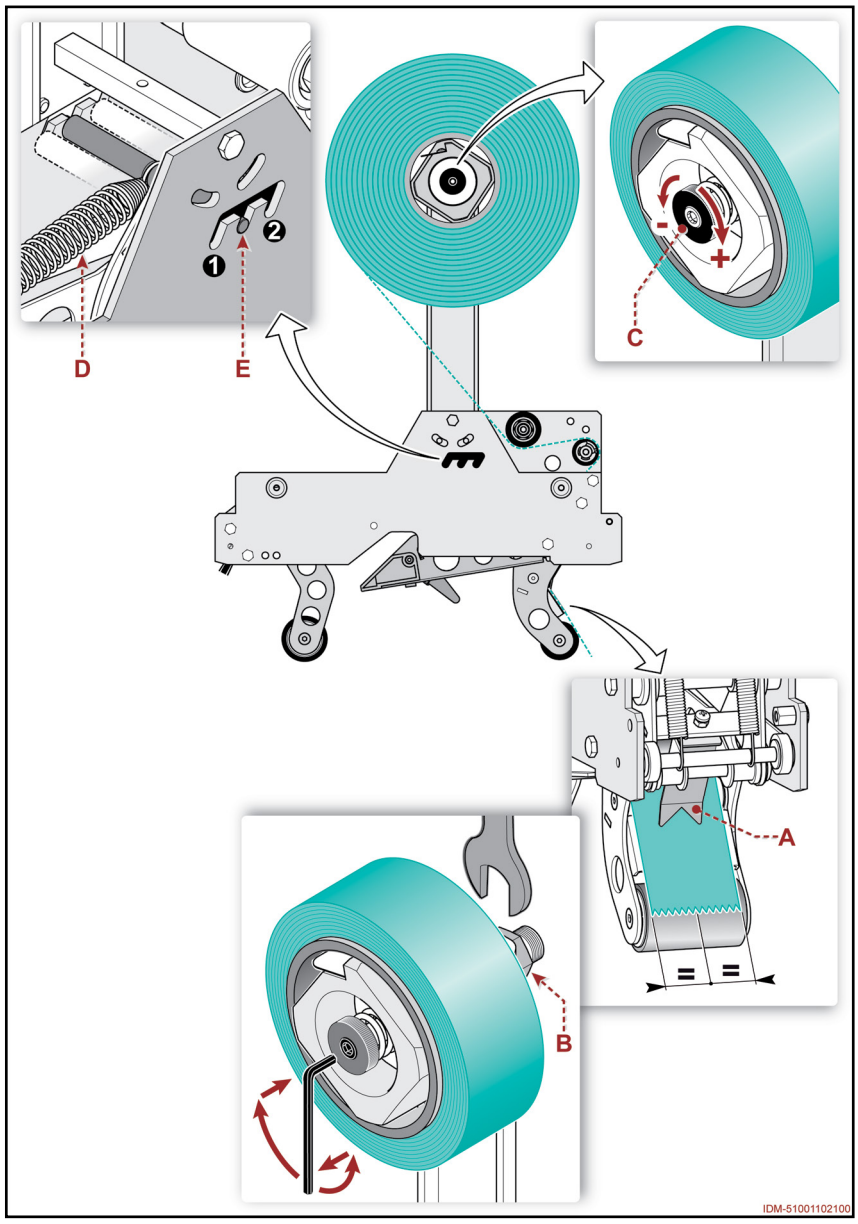
– Tighten lock nut **B**.

■ Adhesive tape tension check

– With PVC adhesive tape, roll holder must not be subject to any friction, but must able to rotate freely.

– With polypropylene (PP) adhesive tape, roll holder must be subject to a light friction.

– Turn ring **C** to adjust the friction.
  - Clockwise: to friction the roll holder.
  - Counter clockwise: to eliminate the friction of the roll holder.



■ Adhesive tape application pressure check

– Reduce the load of spring **D** for scarcely resistant cases and increase it for very resistant cases.

– To reduce the load, insert pin **E** into position **Ê**; to decrease the load, insert the pin into position **Ë**.

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Flap length adjustment

This action is necessary to adjust the length of the adhesive tape flap.

NOTE

The lower and upper flap can be set with different lengths according to the production requirements.

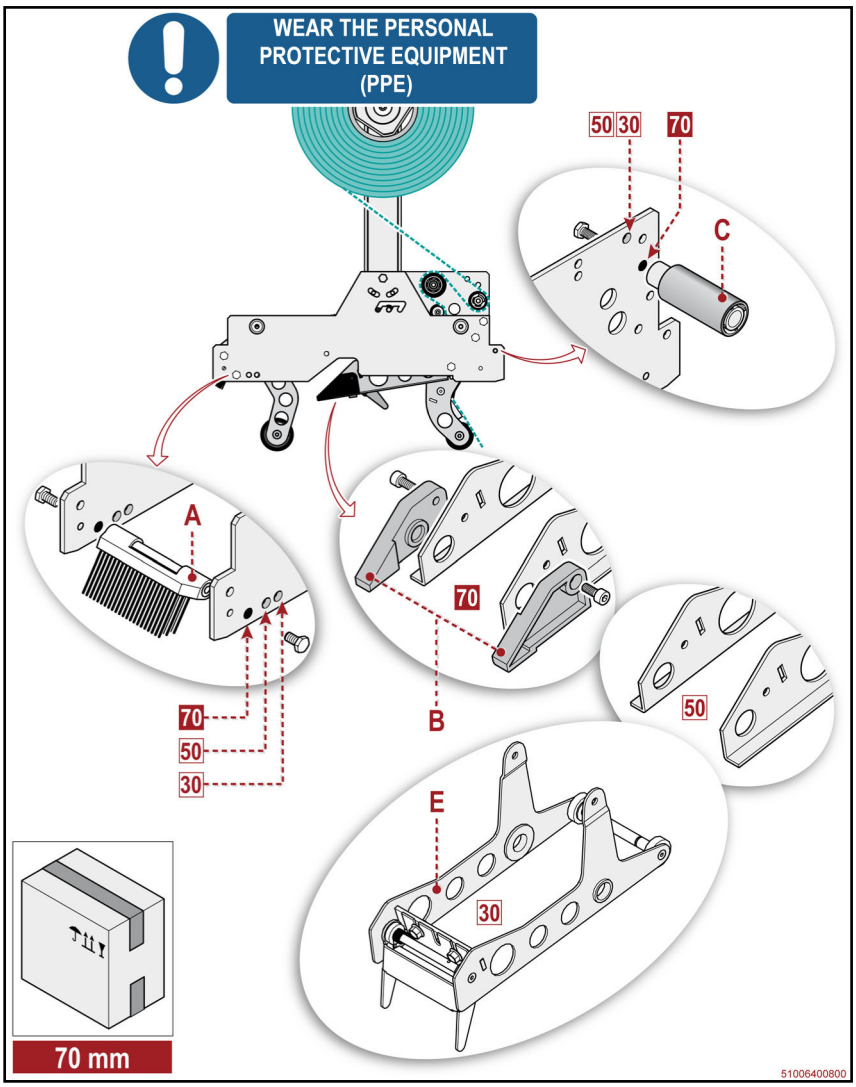
– **The intervention must be carried out with the machine stopped in safety conditions.**

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.

■ Upper sealing unit (flap 70 mm)

1. Remove the adhesive tape from the sealing unit.
2. Components **A-B-C** must be installed as shown in the figure.
3. Apply tape stretcher to the adhesive side of the tape.
4. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.
5. Cut the adhesive tape close to tape stretcher.



NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

– **Remove components 50 mm in order to obtain a 50 mm flap.**

– **To obtain a 30 mm flap, request component E and replace to the one installed.**

■ Lower sealing unit (flap 70 mm)

1. Lift head completely.

NOTE

This operation is necessary to assist the operations.

2. Remove lower sealing unit

– Repeat the operation according to the procedure described for upper sealing unit.

3. Insert sealing unit into its original housing.

IDM 510-064-2

Upper sealing unit (flap 50 mm)

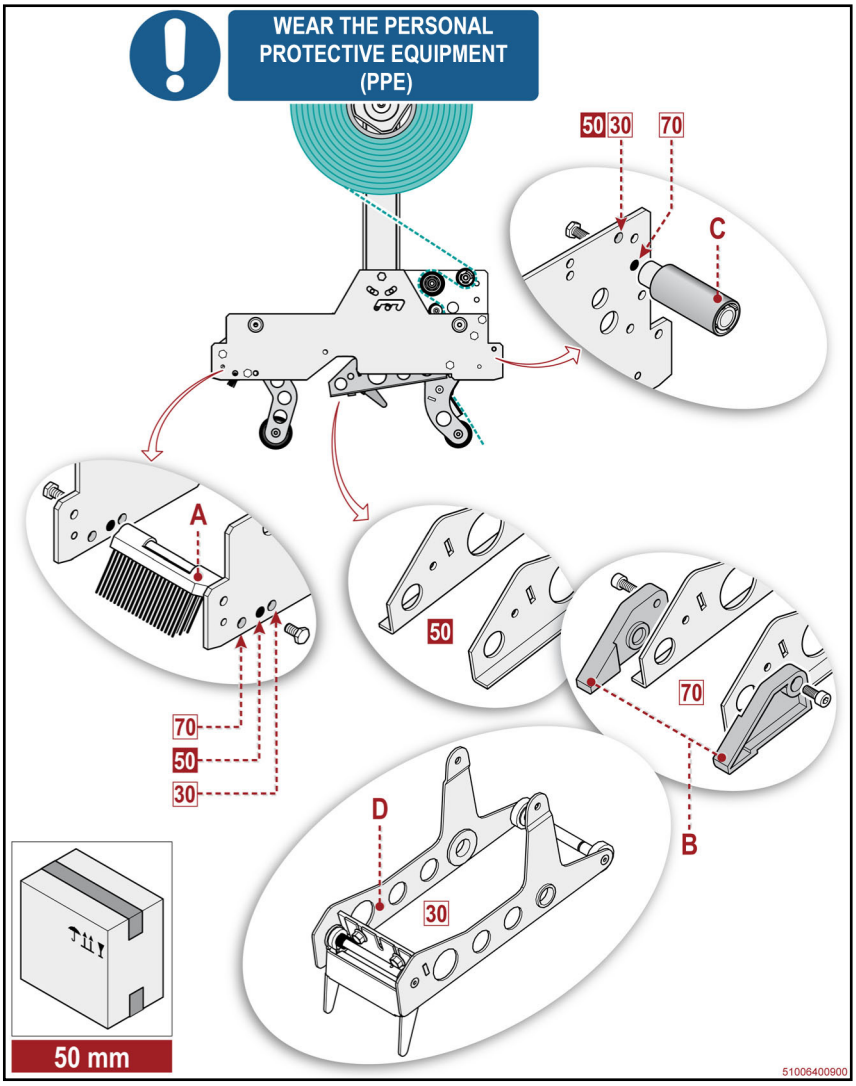
1. Remove the adhesive tape from the sealing unit.
2. Components **A-C** must be installed as shown in the figure.
3. Apply tape stretcher to the adhesive side of the tape.
4. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.
5. Cut the adhesive tape close to tape stretcher.

NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

– **Request components B in order to obtain a 70 mm flap.**

– **To obtain a 30 mm flap, request component D and replace to the one installed.**



Lower sealing unit (flap 50 mm)

1. Lift head completely.

NOTE

This operation is necessary to assist the operations.

2. Remove lower sealing unit

– Repeat the operation according to the procedure described for upper sealing unit.

3. Insert sealing unit into its original housing.

Upper sealing unit (flap 30 mm)

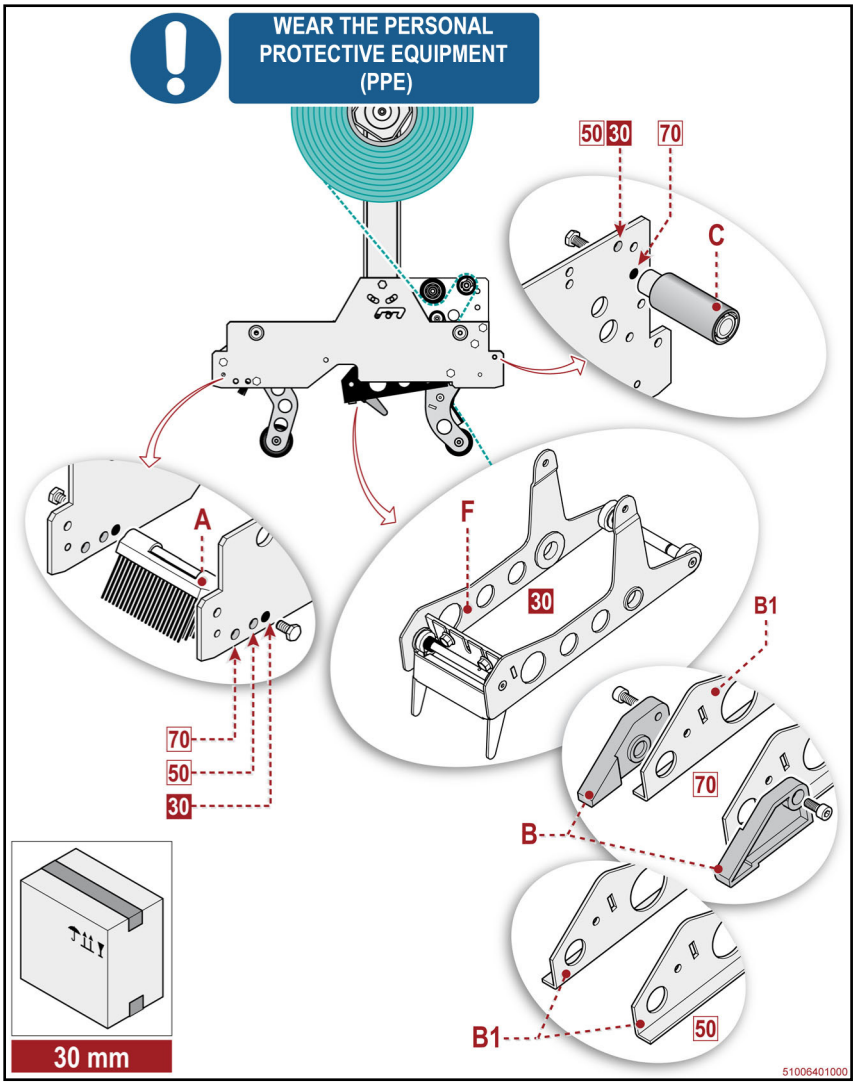
1. Remove the adhesive tape from the sealing unit.
2. Components **A-C-F** must be installed as shown in the figure.
3. Apply tape stretcher to the adhesive side of the tape.
4. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.
5. Cut the adhesive tape close to tape stretcher.

NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

– **Request components B-B1 in order to obtain a 70 mm flap.**

– **Request components B1 in order to obtain a 50 mm flap.**



Lower sealing unit (flap 30 mm)

1. Lift head completely.

NOTE

This operation is necessary to assist the operations.

2. Remove lower sealing unit

– Repeat the operation according to the procedure described for upper sealing unit.

3. Insert sealing unit into its original housing.

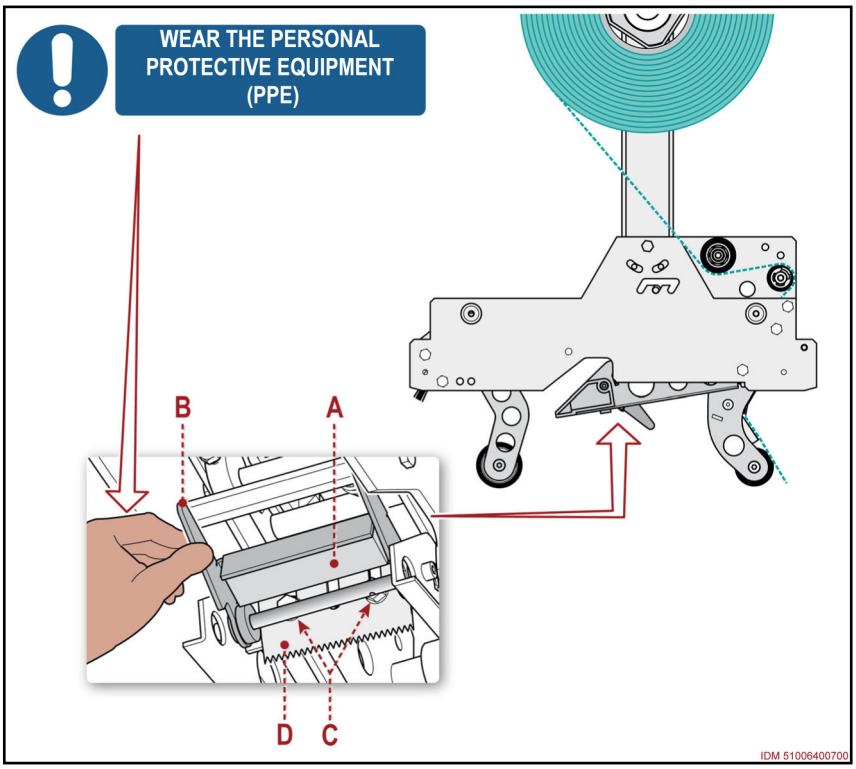
Replacement of the cutting blade

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

– **The intervention must be carried out with the machine stopped in safety conditions.**

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.



1. Lift guard **A** and keep it in position by means of lever **B**.
2. Slightly loosen screws **C**.
3. Extract blade **D**.
4. Install new blade and lock it with screws **C**.

NOTE

Upper sealing unit: sharp edge to the bottom.
Lower sealing unit: sharp edge to the top.

5. Spread a thin layer of lubricant on blade in order to avoid the accumulation of glue residues.
6. Release lever **B**.

– Guard **A** returns to its position.

Important

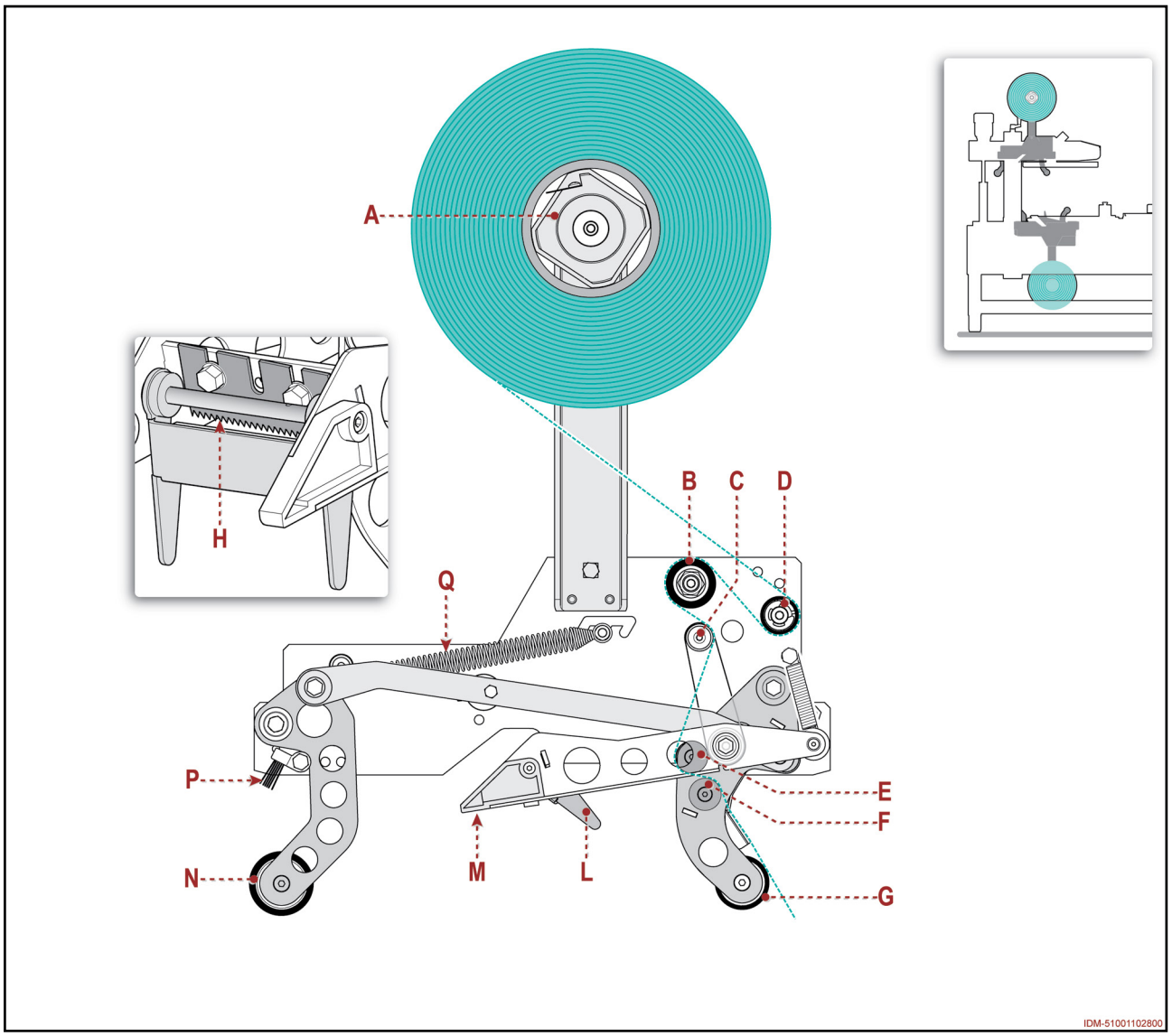
Replace the components ONLY with GENUINE SPARE PARTS or with other components of equivalent design and functional specifications.

Description of sealing unit

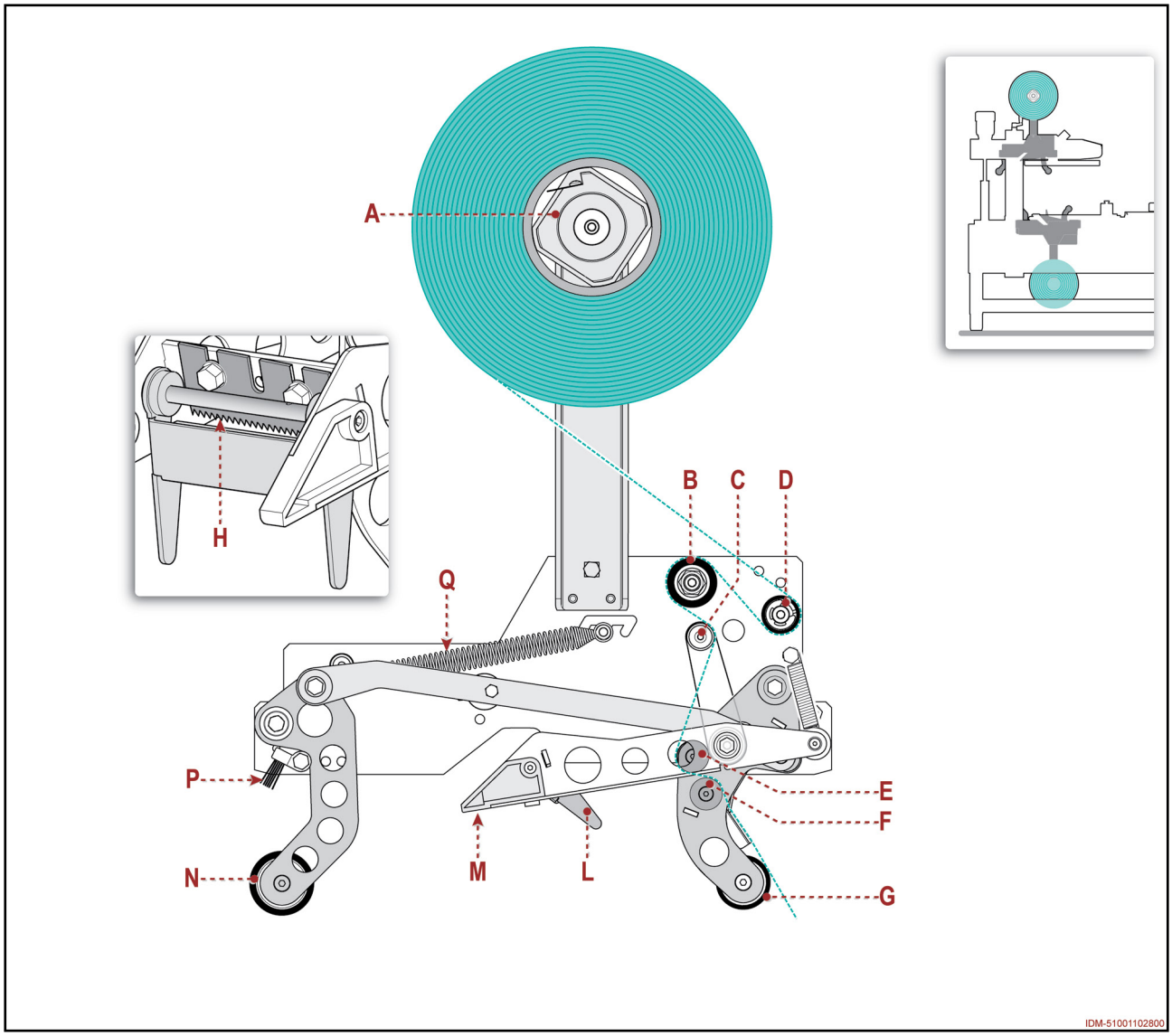
Sealing unit is fitted with an adhesive tape holder that seals the lower and upper part of the cardboard cases and/or cartons.
The K12 version is specifically for 3” adhesive tape.

NOTE
The versions are suitable for use with cut-resistant adhesive tape.

– Each sealing unit is equipped with devices that apply and cut the adhesive tape.
– The illustration shows the main components.



A) Tape holder
B) Roller with non-return device
C) Cutting lever transmission roller (optional)
D) Transmission roller
E) Idle roller (knurled surface)
F) Idle roller (smooth surface)
G) Case inlet roller



H) Cutting blade

L) Cutting blade protection

M) Cut adjustment sliding block

N) Case outlet roller

P) Adhesive tape roller smoothing brush

Q) Roller return spring

– **Tape stretcher is supplied; it is necessary to guide the adhesive tape for the first time.**

Sealing unit technical specifications

Table: Sealing unit technical specifications K12

Description	*Unit of measurement*	*K12*
Sealing unit size		
Length, width, height (LxWxH)	mm	400 x 123 x 480
Weight	kg	6,44
Dimensions of adhesive tape roller		
Flap length **(A)**	mm	70-50-30 [1])
Inside Diameter **(d)**	mm (inch)	76 (3”)
Maximum external diameter **(D)**	mm (inch)	410 (16”)
Height **(H)**	mm (inch)	76 (3”)
Type of adhesive tape	PVC - OPP (oriented polypropylene)	

[1]) Sealing unit can be requested for 70 mm or 50 mm flaps.

– For a 30 mm flap, request the components necessary to transform the version with 70 mm or 50 mm flaps.

– For more details, see “Flap length adjustment” heading.

Supplying and guiding adhesive tape

The intervention must be carried out with the machine stopped in safety conditions.

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.

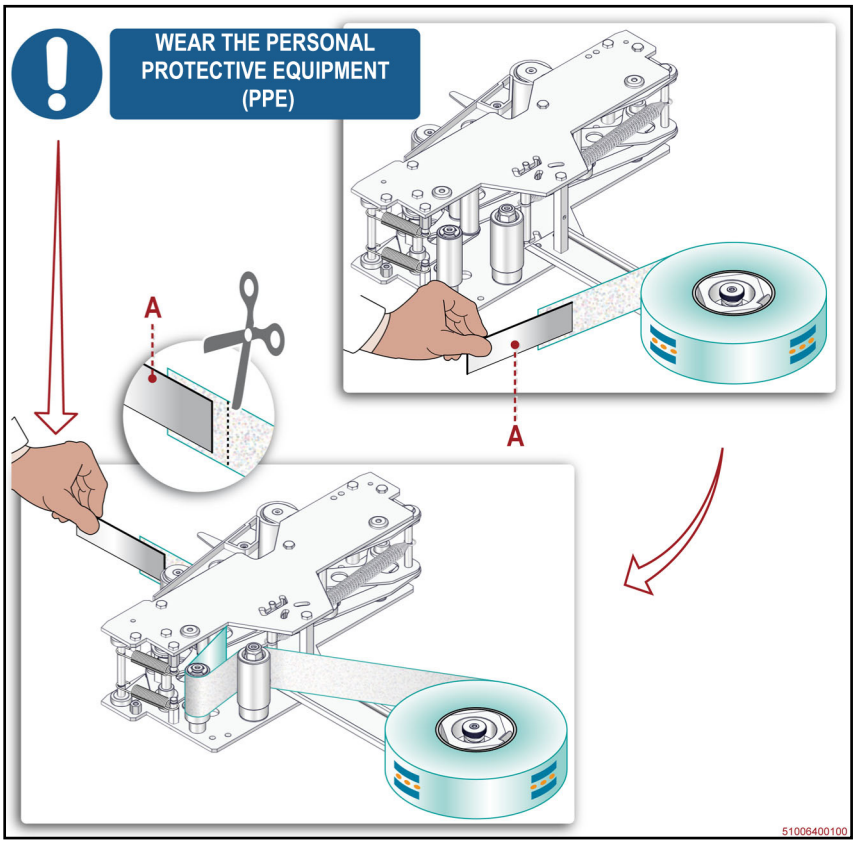
Lower sealing unit

1. Lift head completely.

NOTE

This operation is necessary to assist the operations.

2. Remove lower sealing unit
3. Remove the adhesive tape from the sealing unit.
4. Remove the cardboard core.
5. Insert new roller.
6. Apply tape stretcher **A** to the adhesive side of the tape.
7. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.
8. Cut the adhesive tape close to tape stretcher **A**.



NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

9. Insert sealing unit into its original housing.

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Upper sealing unit

10. Remove the adhesive tape from the sealing unit.

11. Remove the cardboard core.

12. Insert new roller.

13. Apply tape stretcher **B** to the adhesive side of the tape.

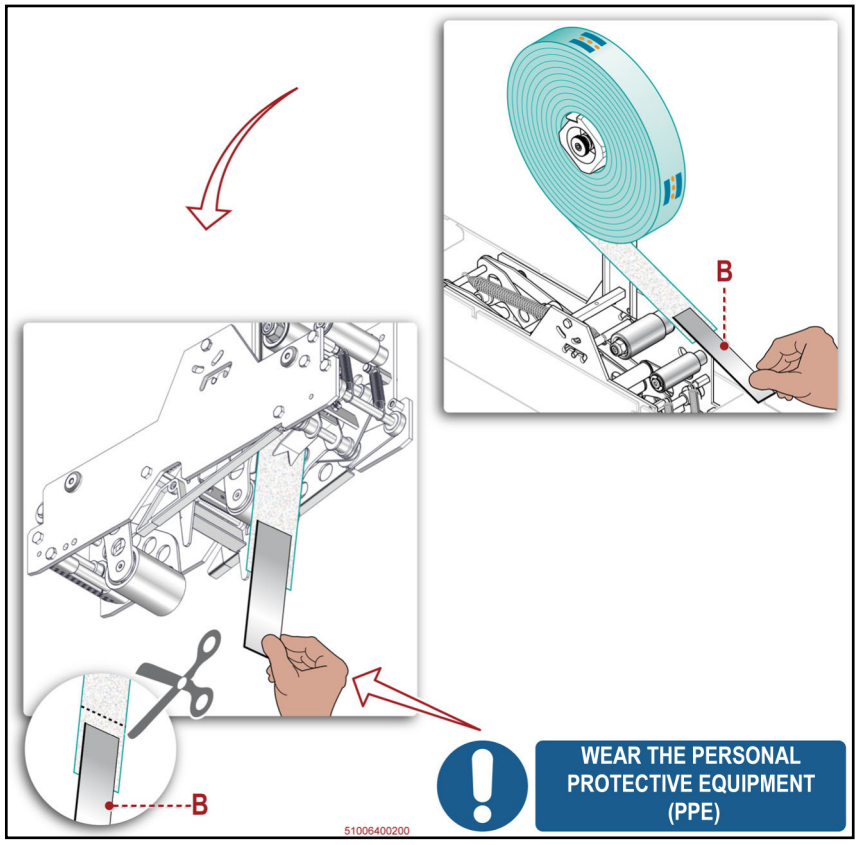
14. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.

15. Cut the adhesive tape close to tape stretcher **B**.

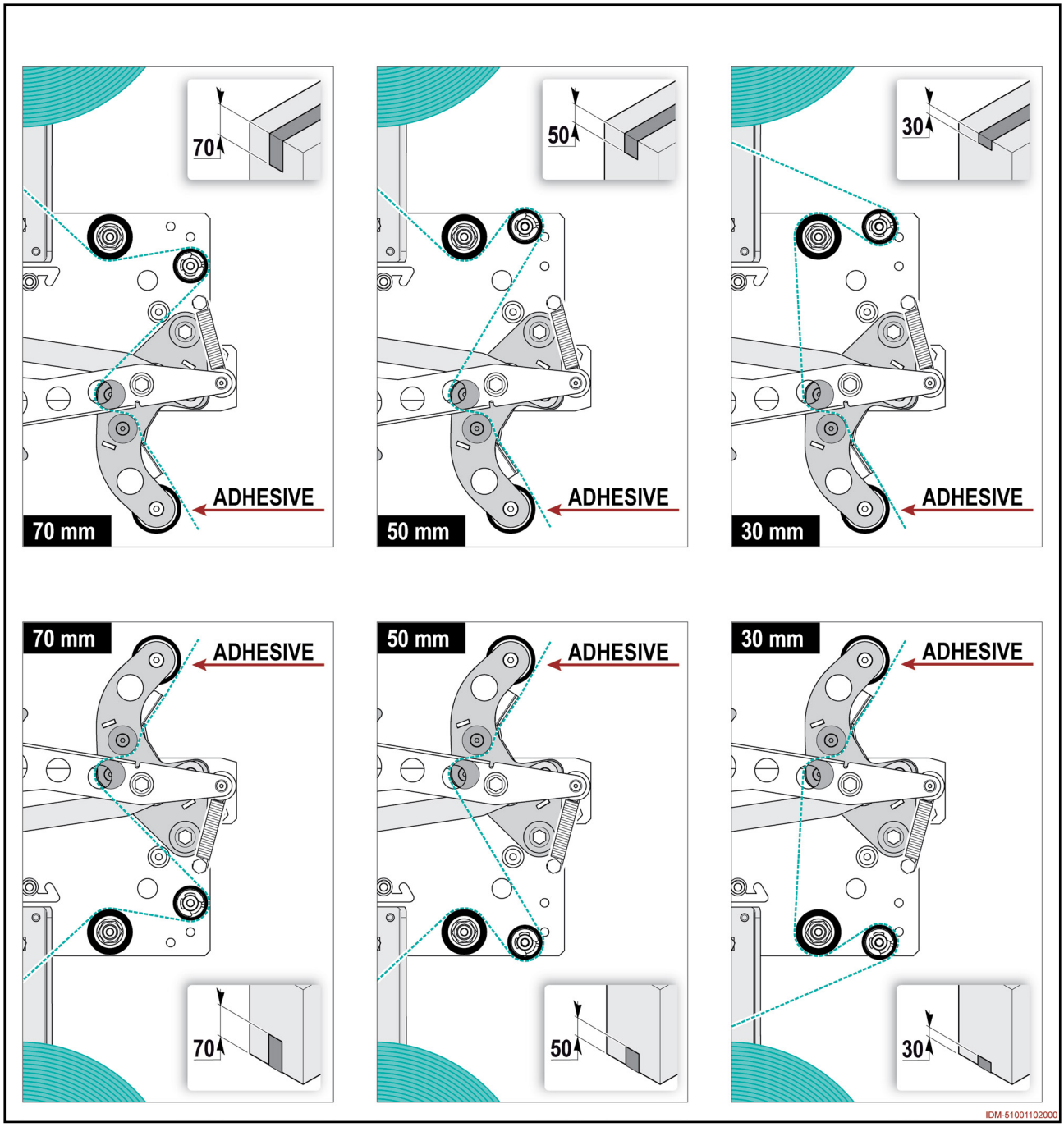
NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

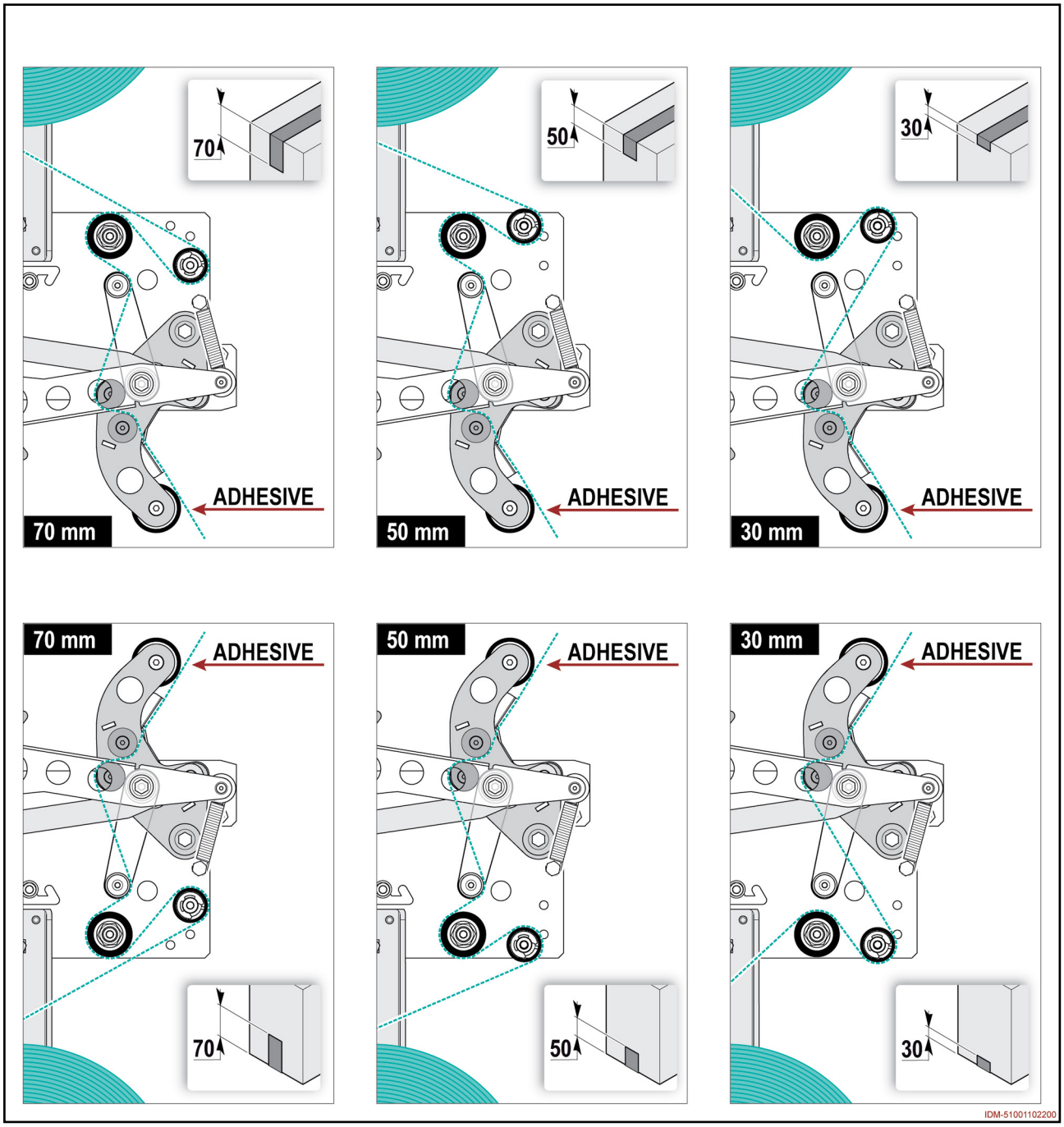
– **The figure shows the path of the adhesive tape according to the length of flap.**



Without cutting lever transmission roller



With cutting lever transmission roller



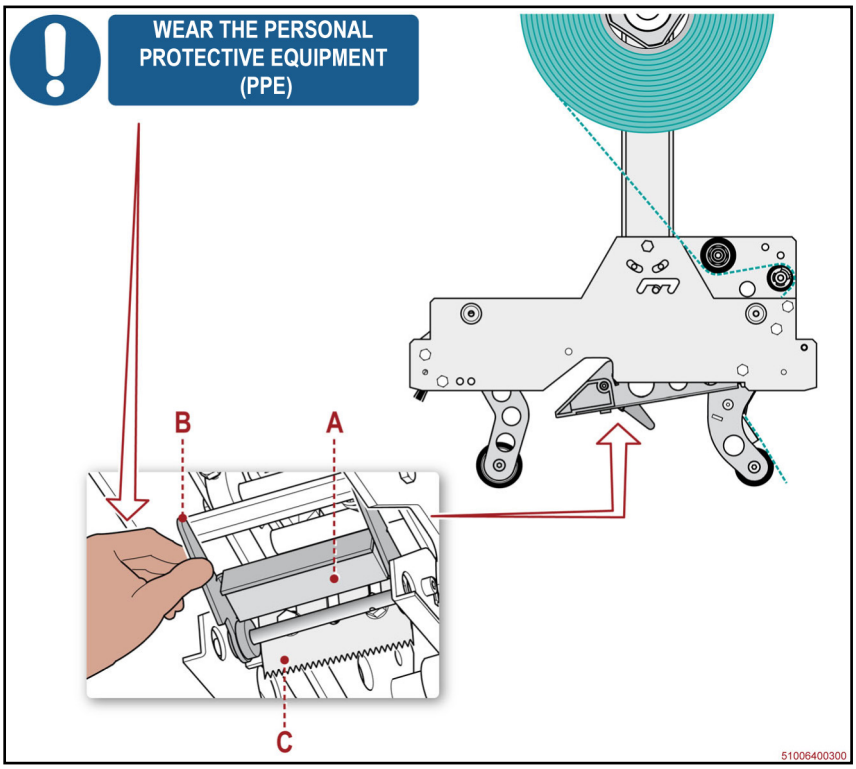
Cutting blade cleaning

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

– **The intervention must be carried out with the machine stopped in safety conditions.**

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.



1. Lift guard **A** and keep it in position by means of lever **B**.
2. Clean blade **C** from glue residues.

NOTE

We recommend the using solvent , to remove glue residue.

3. Spread a thin layer of lubricant on blade **C** in order to avoid the accumulation of glue residues.
4. Release lever **B**.

– Guard **A** returns to its position.

IDM 510-066-2

Adhesive tape parameter check

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

– This check is necessary to make sure that the adhesive tape is properly applied to the cases.

■ Adhesive tape centring check

– Make sure that the adhesive tape is centred on device **A**.

– Keep to the following instructions to adjust the centring.

– Insert Allen wrench into roll holder and loosen lock nut **B**.

– Turn Allen wrench with small movements in order to move the roller to the left or to the right.

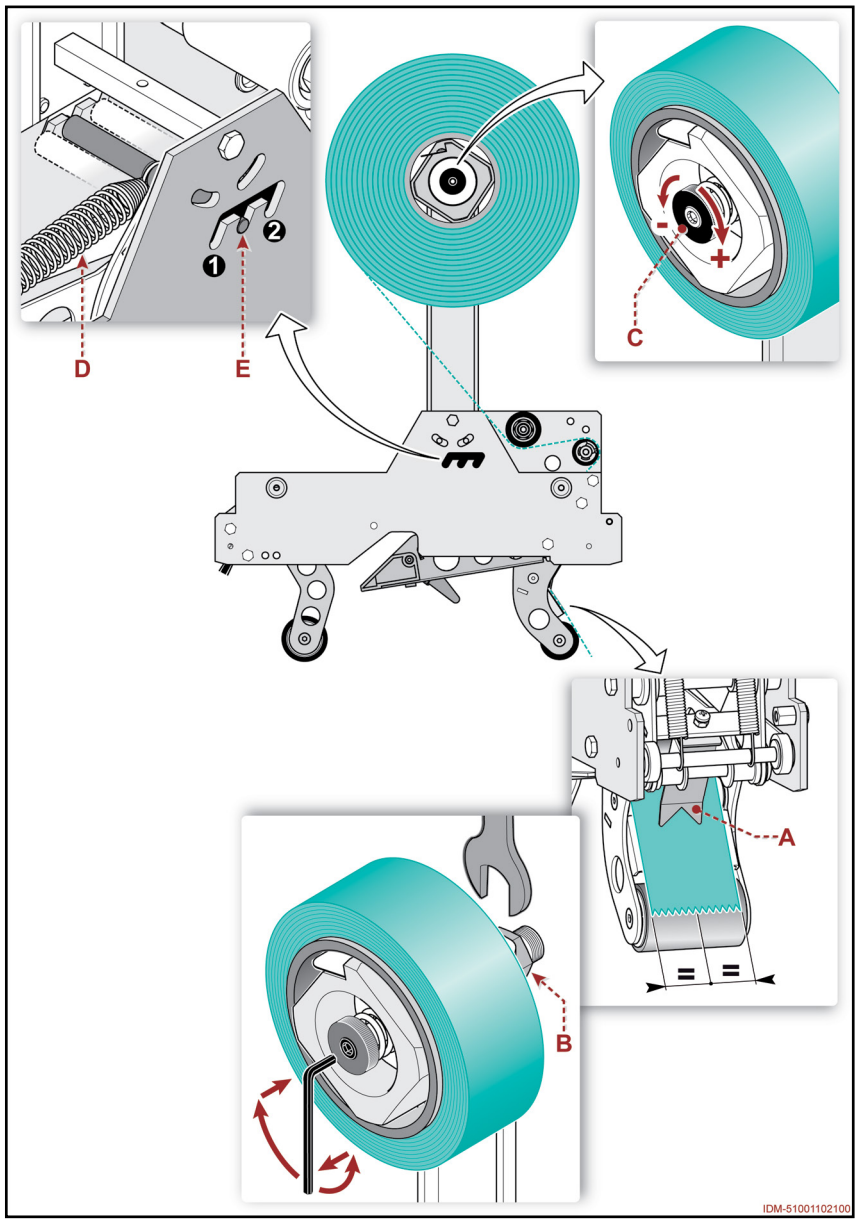
– Tighten lock nut **B**.

■ Adhesive tape tension check

– With PVC adhesive tape, roll holder must not be subject to any friction, but must able to rotate freely.

– With polypropylene (PP) adhesive tape, roll holder must be subject to a light friction.

– Turn ring **C** to adjust the friction.
  - Clockwise: to friction the roll holder.
  - Counter clockwise: to eliminate the friction of the roll holder.



■ Adhesive tape application pressure check

– Reduce the load of spring **D** for scarcely resistant cases and increase it for very resistant cases.

– To reduce the load, insert pin **E** into position **Ê**; to decrease the load, insert the pin into position **Ë**.

IDM 510-066-2

Flap length adjustment

This action is necessary to adjust the length of the adhesive tape flap.

NOTE

The lower and upper flap can be set with different lengths according to the production requirements.

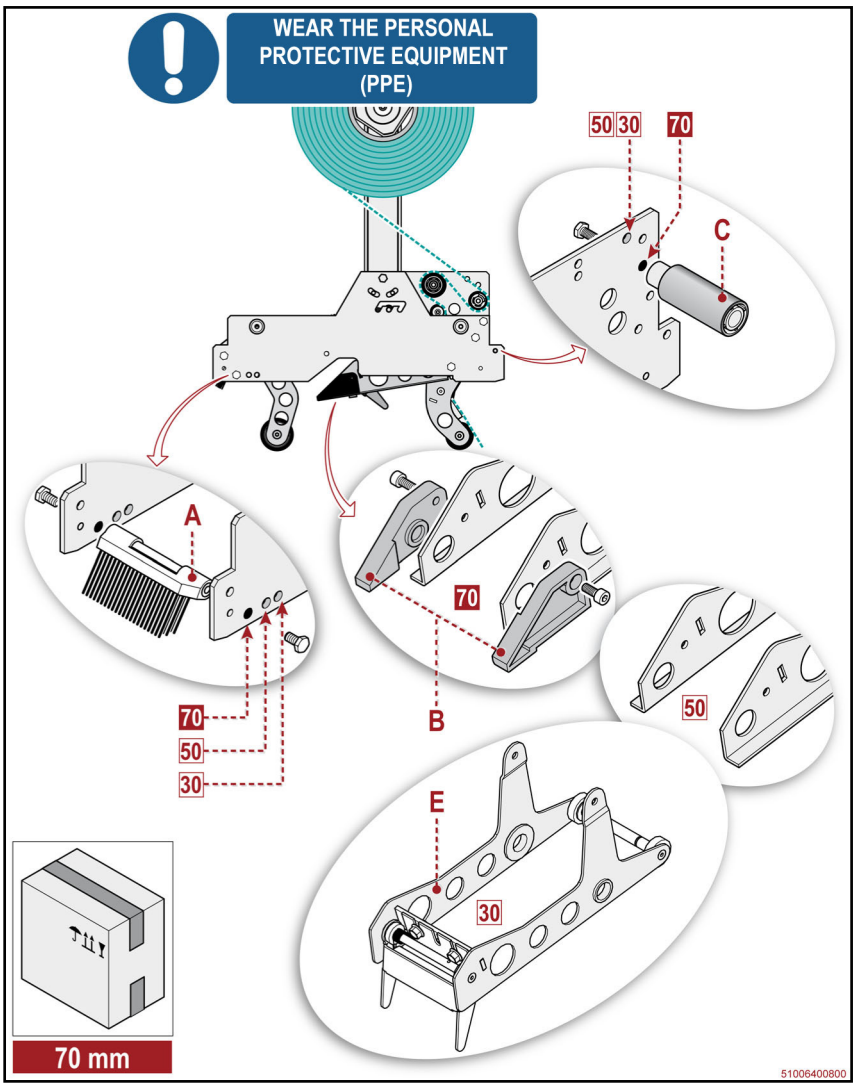
– **The intervention must be carried out with the machine stopped in safety conditions.**

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.

■ Upper sealing unit (flap 70 mm)

1. Remove the adhesive tape from the sealing unit.
2. Components **A-B-C** must be installed as shown in the figure.
3. Apply tape stretcher to the adhesive side of the tape.
4. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.
5. Cut the adhesive tape close to tape stretcher.



NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

– **Remove components 50 mm in order to obtain a 50 mm flap.**

– **To obtain a 30 mm flap, request component E and replace to the one installed.**

■ Lower sealing unit (flap 70 mm)

1. Lift head completely.

NOTE

This operation is necessary to assist the operations.

2. Remove lower sealing unit

– Repeat the operation according to the procedure described for upper sealing unit.

3. Insert sealing unit into its original housing.

Upper sealing unit (flap 50 mm)

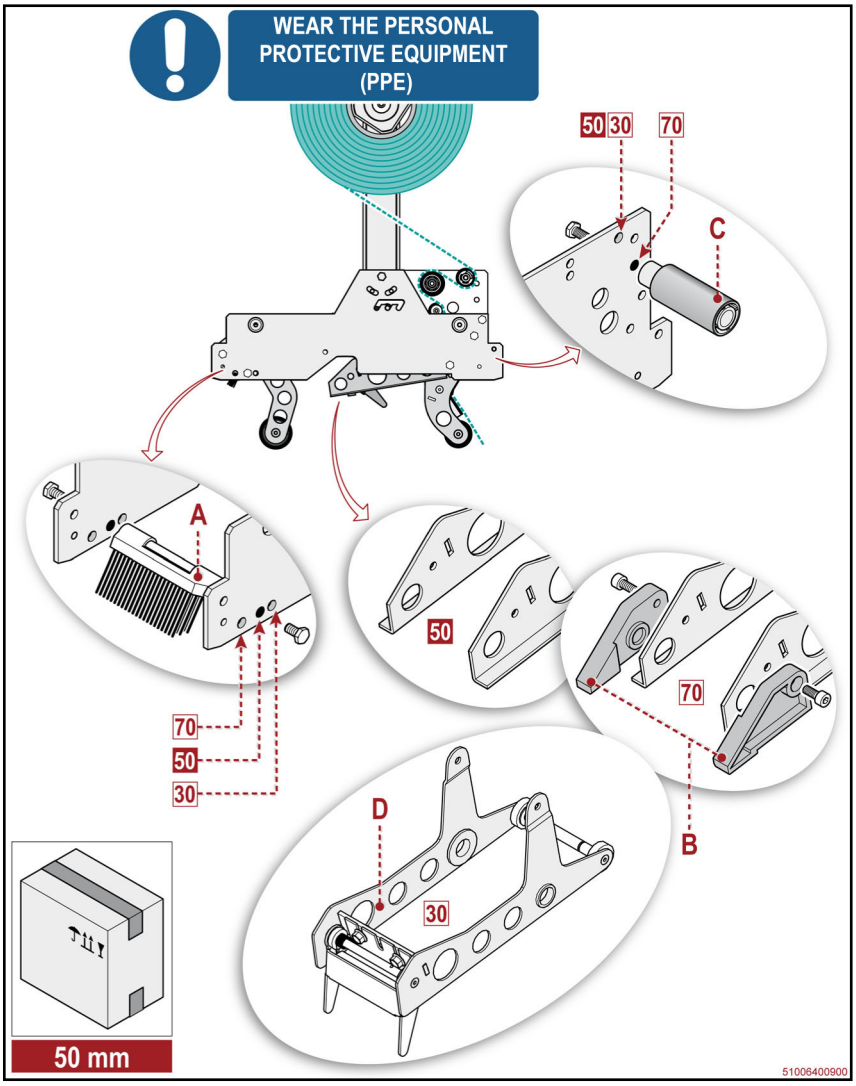
1. Remove the adhesive tape from the sealing unit.
2. Components **A-C** must be installed as shown in the figure.
3. Apply tape stretcher to the adhesive side of the tape.
4. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.
5. Cut the adhesive tape close to tape stretcher.

NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

– **Request components B in order to obtain a 70 mm flap.**

– **To obtain a 30 mm flap, request component D and replace to the one installed.**



Lower sealing unit (flap 50 mm)

1. Lift head completely.

NOTE

This operation is necessary to assist the operations.

2. Remove lower sealing unit

– Repeat the operation according to the procedure described for upper sealing unit.

3. Insert sealing unit into its original housing.

Upper sealing unit (flap 30 mm)

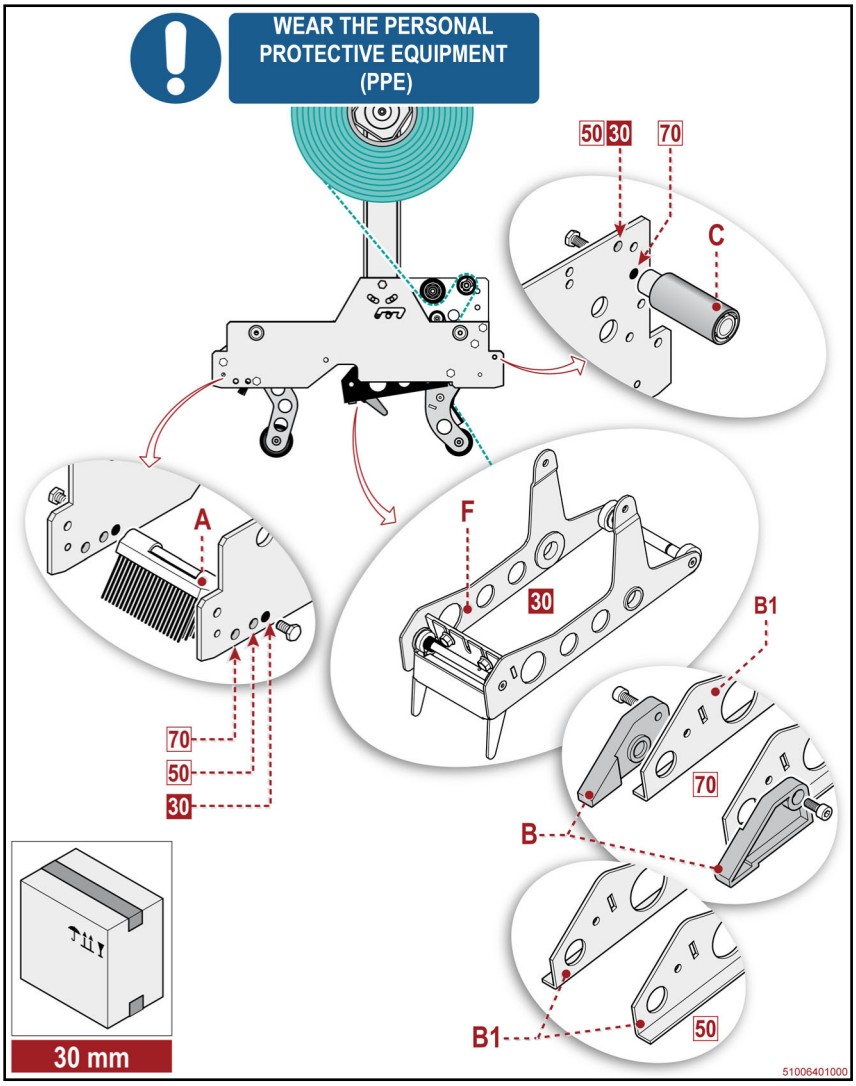
1. Remove the adhesive tape from the sealing unit.
2. Components **A-C-F** must be installed as shown in the figure.
3. Apply tape stretcher to the adhesive side of the tape.
4. Guide tape stretcher until the tape stretcher is beyond the point of tangency of case inlet roller.
5. Cut the adhesive tape close to tape stretcher.

NOTE

The part of exceeding adhesive tape must not be lower than the flap length.

– **Request components B-B1 in order to obtain a 70 mm flap.**

– **Request components B1 in order to obtain a 50 mm flap.**



Lower sealing unit (flap 30 mm)

1. Lift head completely.

NOTE

This operation is necessary to assist the operations.

2. Remove lower sealing unit

– Repeat the operation according to the procedure described for upper sealing unit.

3. Insert sealing unit into its original housing.

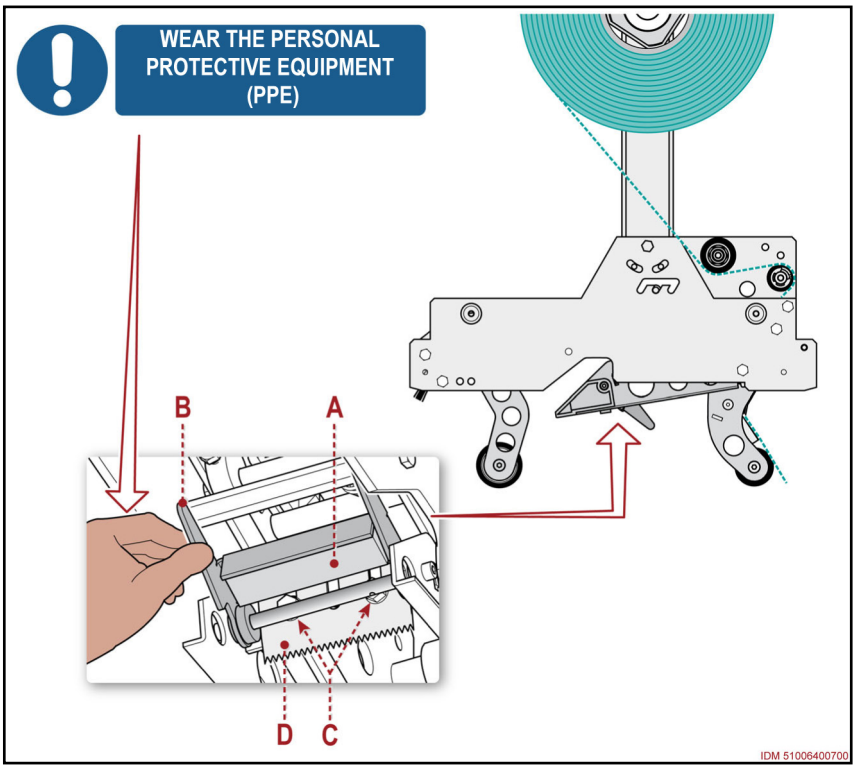
Replacement of the cutting blade

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

– **The intervention must be carried out with the machine stopped in safety conditions.**

Attention Warning

Wear the suitable personal protective equipment (gloves) to avoid any cutting hazard.



1. Lift guard **A** and keep it in position by means of lever **B**.
2. Slightly loosen screws **C**.
3. Extract blade **D**.
4. Install new blade and lock it with screws **C**.

NOTE

Upper sealing unit: sharp edge to the bottom.
Lower sealing unit: sharp edge to the top.

5. Spread a thin layer of lubricant on blade in order to avoid the accumulation of glue residues.
6. Release lever **B**.

– Guard **A** returns to its position.

Important

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

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.

Analytical index