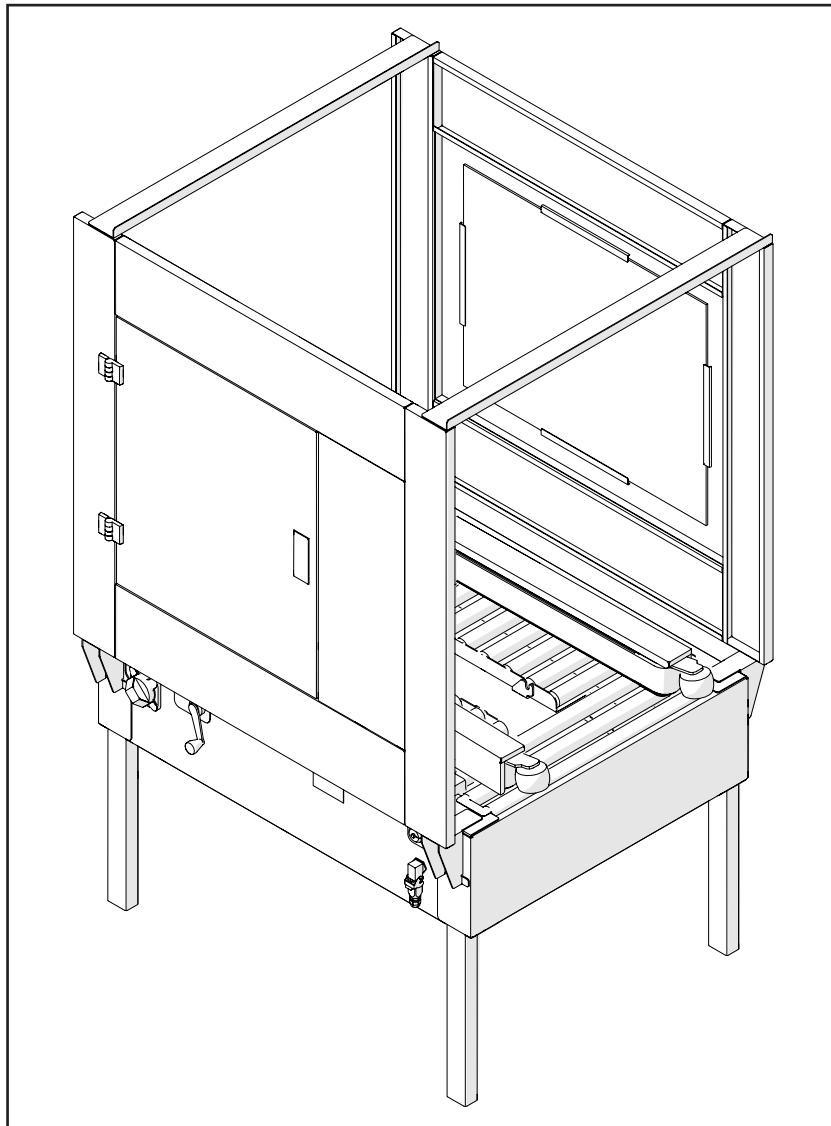


GEM B670-820

EN

USE AND MAINTENANCE MANUAL SEALER mod. GEM B670-820



Code
MANT-10096-02

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CE



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Dichiarazione di Conformità CE – Tipo A

EC Declaration of Conformity – Declaration “CE” de conformité - EWG - Konformitätserklärung

Declaracion CE de conformidad - CE Gelijkvormigheidsattest

Noi Costruttori - *We manufacturers* - Nous fabricants - *Wir Hersteller* - Nosotros fabricantes - *Wij* :

COMARME S.r.l. a socio unico
Via Torriane, 58
47824 Poggio Torriana (RN) - Italy

Dichiariamo sotto la sola nostra responsabilità che la macchina / l'impianto :
Declare under our sole responsibility that the following machinery / equipment :
Déclarons sous notre seule responsabilité que la machine / équipement suivante :
Erklären in alleiniger Verantwortung, dass die Maschine / Anlage :
Declaramos bajo nuestra unica responsabilidad que la siguiente maquinaria / instalacion :
Verklaren dat de volgende machine:

Tipo - *Type* - Type - *Typ* - Tipo - *Type* :

Modello - *Model* - Modèl - *Modell* - Modelo - *Model* :

N° di serie - *Serial N°* - N° de série - *Serien N°* - N° de serie - *Seriennummer* :

Anno di costruzione - *Year of construction* - Année de fabrication - *Baujahr* - Año de construcción - *Bouwjaar* :

- come descritta nella documentazione allegata è in conformità con le Direttive del Parlamento Europeo e del Consiglio 2006/42/CE e successive modifiche, 2014/30/UE e successive modifiche, 2014/35/UE e successive modifiche, e riporta la apposita targhetta con marcatura CE. Inoltre dichiara il Sig. Angelo Forni, in qualità di legale rappresentante della stessa, persona autorizzata a costituire il fascicolo tecnico.

- *as described in the documentation hereby enclosed, complies with the Directives of the European Parliament and of the Council 2006/42/EC and amendments, 2014/30/UE and amendments, 2014/35/UE and amendments, and is provided with the appropriate plate with the CE mark. And furthermore declares Mr. Angelo Forni, as the company legal representative, to be the person authorised to compile the technical file.*

- décrite dans la documentation annexe, est conforme aux Directive du Parlement Européen et du Conseil 2006/42/CE et de ses modifications ultérieures, 2014/30/UE et de ses modifications ultérieures, 2014/35/UE et de ses modifications ultérieures, et est équipée avec la plaquette de identification marqué CE. De plus, le fabricant déclare que M. Angelo Forni, en qualité de Représentant légal de ladite société, est autorisé à constituer le dossier technique.

- *wie in den hier beigefügten Unterlagen beschrieben, mit den Richtlinien des Europäischen Parlaments und des Rates 2006/42/EG und ihrer nachfolgenden Änderungen, 2014/30/UE und ihrer nachfolgenden Änderungen, 2014/35/UE und ihrer nachfolgenden Änderungen, und ist mit dem vorgeschriebenen CE-Zeichen vorgesehen. Herr Angelo Forni ist in seiner Eigenschaft als gesetzlicher Vertreter des Herstellers berechtigt, die technische Dokumentation zu erstellen.*

- como es descrita en la documentacion aqui adjuntada, cumple con las Directivas del Parlamento Europeo y del Consejo 2006/42/CE y sus modificaciones sucesivas, 2014/30/UE y sus modificaciones sucesivas, 2014/35/UE y sus modificaciones sucesivas, ademas es suministrada con la marca apropiada de la CE. Además, declara el Sr. Angelo Forni, en calidad de representante legal de la misma, persona autorizada a redactar el libro técnico.

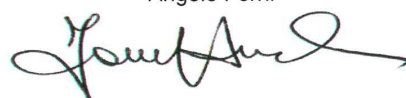
- *in overeenstemming is met de Richtlijnen van het Europees Parlement en de Raad 2006/42/EG en de daarin aangebrachte wijzigingen, 2014/30/UE en de daarin aangebrachte wijzigingen, 2014/35/UE en de daarin aangebrachte wijzigingen, en is uitgerust met het CE-identificatieplaatje. En verklaart dat dhr. Angelo Forni als wettelijk vertegenwoordiger geautoriseerd is het technisch dossier op te stellen.*

Abbiategrasso, li

COMARME S.r.l.

Il legale rappresentante

Angelo Forni



Dichiarazione di conformità CE (rev.04 del 20/02/2019)

USE OF THE MANUAL

The use and maintenance manual is the document accompanying the machine from its manufacture to its dismantling. Therefore it is an integral part of the machine itself. The manual must be read before starting ANY ACTIVITY involving the machine, including its handling. For a better consultation the instruction manual is divided into the following sections:

Section 1

Transport, packing, handling and inspection on the purchased product.

Section 2

Description of the machine and of its field of application.

The technical features of the machine are also listed.

Section 3

Installation of the machine.

Section 4

Description of the controls to use the machine: general safety prescriptions, first start up, calibrations, normal use and stop.

Section 5

Ordinary and extraordinary maintenance.

Section 6

Dismantling.

SYMBOLS USED




It is advisable to train the staff in charge of the machine and to check that what is envisaged is understood and carried out.

To ensure the user’s safety, the manual contains the following safety messages.

As to the "**DANGER**", "**WARNING**" and "**CAUTION**" messages, the safety message is a symbol (a triangle containing an exclamation mark) followed by the text indicating the risk level. Its purpose is to warn the user of the potential personal damage that may result from an incorrect use of the machine or from the non-compliance with the use and maintenance instructions.

In case the user does not respect these safety messages, the product and its accessories could be totally or partially damaged/destroyed and people could be harmed.

As to the "**NOTICE**" message, the safety message is just a text (without any symbol) and it does not indicate precisely a risk, it is only for information.

 DANGER	It indicates an imminent risk situation that can lead to death or serious damage, if it not prevented (ex. amputations, severe burns, loss of vision or hearing or visual or auditory sensorial impairment).
 WARNING	It indicates a potential risk situation that can lead to death or serious damage, if it not prevented (ex. amputations, severe burns, loss of vision or hearing loss or visual or auditory sensorial impairment).
 CAUTION	It indicates a potential risk situation that could cause less severe or minor damage, if not prevented (ex. cuts, scratches, irritation).
NOTICE	It is used for non-physical injuries.

OPERATIONAL ROLE IDENTIFICATION

COMARME machines are assembled with the utmost care and precision to meet continuously the market quality and safety standards.

The achievement of these targets, as essential priorities of the production process, ensures the manufacturing of unique and special machines, whose potential will be fully exploited by the end users.

That is why a clear identification of the roles of all the **operators using the machines is essential**. They are the ones who must be given technical and professional skills as well as behavioural information and a more and more precise sense of responsibility.

As a consequence, the main professional roles operating on the machines have been described in this manual. Each of them has been identified with a graphic symbol which will be used in the various sections of the manual. This will make it quicker and more immediate to identify the specific recipients of the information and the instructions contained in each paragraph.

The table on the following page contains a description of the operational roles identified. Each of them is accompanied by a list of the **main corresponding tasks**. This is general and non-exhaustive information, since the specific role definition depends on each company varying according to the number of operators, the internal organization and the precise definition of the tasks. Anyway, the information supplied can be a useful organizing tool improving the work process, and especially the safety protection of workers and of the place where they work.

We remind you that all the tasks described need **specific training** inside the company. This can be obtained by making some more experienced staff assist the different operators. Moreover, we recommend organizing special courses increasing the **workers' skills** to enhance their expertise about each machine, as well as the principles behind the interaction of more machines in a line.

Organizing some corporate training days means offering the workers not only the opportunity to extend their technical skills, but also to be able to develop their organizational autonomy and skills, thus increasing the willingness to mutual role coordination.

In many cases, the operations carried out by the various job titles are linked together or the most complex assembly/disassembly or maintenance operations can involve the **overlapping of more tasks**. In these cases, the description of the operations to carry out will be accompanied in the manual by several icons, so that the recipients of the instructions are well identified graphically, too.

The operational roles identified also include **Comarme customer service advisor**. Once the plant has been installed, Comarme technicians will be at the Customer's disposal to train operators as completely as possible. They will give them technical information, and instruct them on the possible residual risks or the dangers in the line. A suitable staff training form is available at the end of the line manual. It can be used to record the courses attended by the operators.

FINAL USER

The machine was designed for professional use. It is the final user's responsibility to prohibit access to the machine to non-qualified staff.

THE OPERATOR

A generic operator is a non-specialised person who must at least:

- know the technology of the machine and have sufficient experience in the related work field;
- have a basic general and technical culture sufficient to read and understand the manual, including a correct interpretation of the drawings;
- know the safety regulations of the country where the machine is installed:
 - general regulations (workplace hygiene and safety, prevention of workplace injuries);
 - specific rules (for the specific type of machine).

THE MAINTENANCE TECHNICIAN






The selection of the maintenance technicians must follow the same principles described for the operator. Moreover, maintainers must have specific and specialized knowledge (mechanical, electrical and pneumatic knowledge) in order to carry out safely the maintenance operations, as described in the manual, using suitable tools or devices.

The maintainer can carry out the ordinary maintenance interventions.

The maintenance technicians can be divided into:

- 1. MECHANICAL TECHNICIAN**, a qualified person able to:
 - carry out the revision of the machine acting on its essential parts;
 - identify the faults and their causes;
 - using technical drawings, dismount parts and groups and then mount them again carrying out various tasks such as calibration, control, games and regulations.
- 2. ELECTRICAL TECHNICIAN**, a qualified person able to:
 - search for and repair faults, replacing damaged parts on electrical equipment, interpreting the wiring diagrams.

The table on the following page shows the main tasks of the above-mentioned professional figures.

JOB TITLE	SYMBOL	MAIN TASKS
Mechanical maintenance technician		<ul style="list-style-type: none"> • Checks the machine operation and efficiency by carrying out periodical controls according to the timing defined in the technical documentation supplied with the machines • Checks the wear of each component assembled on the machine according to the timing defined in the spare parts manual • Carries out ordinary and extraordinary maintenance operations to prevent and limit faults • Carries out any mechanical repair in compliance with the safety standards in force • Identifies the anomalies and solves them, by carrying out test runs and by informing the supervisors of the problems detected • Records the technical data and the results of the repairs carried out
Electrical maintenance technician		<ul style="list-style-type: none"> • Arranges the electrical system components on the machine or in the electrical panels • Manages all the maintenance and repair operations on electrical components, sensors, motors, etc. • Carries out periodical checks on the electrical operation of the machine and solves quickly any anomaly detected in compliance with the safety standards
Toolmaker and programmer		<ul style="list-style-type: none"> • Carries out the machine tooling and size change operations • Through the operator panel, he inserts and modifies the parameters for the machine correct functioning according to the products to be processed • Collect history and statistics accessible from the software • Compiles statistics and develops production plans according to the data collected
Operator		<ul style="list-style-type: none"> • Loads the components to handle into the feeding units • Checks that all the automatic operations are carried out correctly by the machine. • Unloads the processed products and places them in the correct collecting areas
Supervisor		<ul style="list-style-type: none"> • Organizes and coordinates the different working phases, communicating effectively goals and timing • Checks the quality of work of maintenance men and toolmakers in case of interventions on the machine • Makes sure the operators carry out their tasks correctly and on time • Continuously monitors the progress of work • Makes sure the tasks are carried out only by the operators in charge in compliance with the safety standards • Checks the correct operation of the safety systems • Follows all the phases of the production process to make sure that all operations are carried out correctly and in compliance with the safety standards

INFORMATIVE LETTER

This instruction and maintenance manual is an integral part of the machine and must be easily available to the staff in charge of its installation and maintenance. The installer and the maintenance staff must know the content of this manual.

The descriptions and the pictures it contains are not to be considered as binding.

Although the main features of the machine described in this manual are not subject to change, COMARME S.r.l. reserves the right to change any part, detail and accessory it deems necessary to improve the machine or for manufacturing or commercial requirements, at any time and without being obliged to update this manual immediately.

CAUTION

To ensure the right working of the machine and of its safety devices, it must be installed only by qualified and authorized staff.

NOTICE

ALL RIGHTS ARE RESERVED ACCORDING TO THE INTERNATIONAL COPYRIGHT CONVENTIONS,
The reproduction of any part of this manual, in any form, is forbidden without the prior written authorization of COMARME S.r.l.
The content of this guide can be modified without prior notice.
Great care has been taken in collecting and checking the documentation contained in this manual to make it as complete and comprehensible as possible.
Nothing contained in this manual can be considered as a warranty, either expressed or implied - including, but not limiting the suitability warranty for any special purpose.
Nothing contained in this manual can be interpreted as a modification or confirmation of the terms of any purchase contract.

CUSTOMER CARE TECHNICAL SERVICE

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E-mail: info@comarmesrl.it** WARNING**

The original configuration of machine must not be changed at all.

 On receiving the machine make sure the supply corresponds to what has been ordered.

In case of non-conformity, please inform COMARME S.r.l. immediately.
Also make sure that the machine has not been damaged during transport.

1 TRANSPORT AND HANDLING

1.1 Warnings for transport

The packagings are prepared according to the dimensions, the weight, the degree of protection required, the lifting safety. Thanks to the methods used, the packagings ensure stability and the fastening of the elements they contain.

ALL THE MACHINE HANDLING OPERATIONS MUST BE CARRIED OUT ACCORDING TO THE FOLLOWING BASIC RULES:

- ☞ The handling operations will be carried out using a suitable system for the object to be moved with a rated load capacity higher than the weight to be lifted, which is indicated on the structure.
- ☞ While using or choosing auxiliary systems, such as ropes, lifting chains or belts pay special attention to their final geometry during the lifting and to their real load capacity.
- ☞ If the lifting chains touch some machine parts, use nylon belts or ropes or chains wrapped in jute or clean cloths. During the slinging and handling operations pay special attention to avoid damaging machines or painted surfaces.
- ☞ The handling operations must always take place gradually in order to prevent tearing, jerking and dangerous situations for people and things.
- ☞ The head of the department must always follow all the standards and the legal provisions concerning accidents and safety at work, that are in force nationally, locally and in business.
- ☞ Some areas where to deposit materials must be identified.

1.2 Transport

To transport the machine out of Italy, the machine itself is put into a barrier bag to ensure it is protected against bad weather. Then it is packed in a wooden case. To lift it use a forklift truck.

CAUTION

Before handling the machine and opening the package, follow the instructions on the package itself.

The transport on pallet is generally used to deliver the machine and its accessories on the national territory. Thanks to this system the machine is fastened to a pallet by means of straps and then it is covered with some cardboard to protect its parts during transport (see picture 1).

CAUTION

Do not load pallets with unprotected parts on open trucks. Always check the point where the forks rest under the pallet.

NOTICE

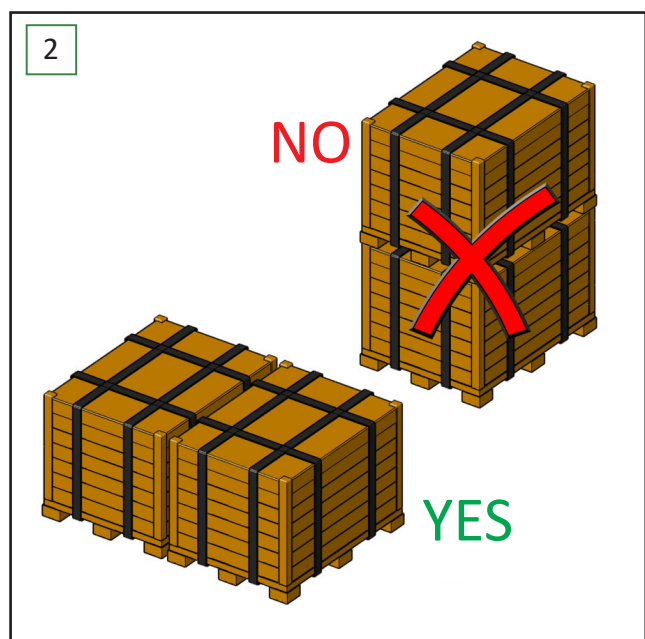
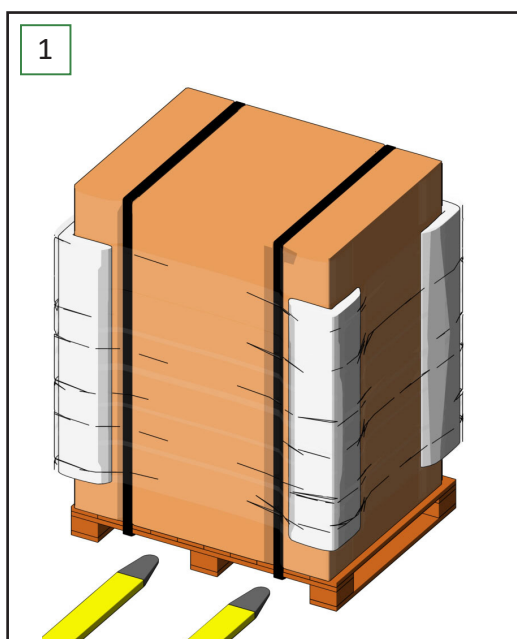
Any options ordered with the machine rest on additional pallets.

1.3 Storage

During transport and storage make sure the temperature is between -5 and 40°C.
If the machine is stored, make sure the relative humidity is between 30% and 95%.

CAUTION

During storage never overlap the cases containing the equipment (see picture 2).



1.4 Unpacking

If the machine is received in a wooden case, unpack it using a hammer with nail puller. Open the case starting from the upper covering then remove the side walls (see picture 5).

⚠ WARNING

Always protect your hands with gloves. Pay attention to any protruding nails (see picture 3).

NOTICE

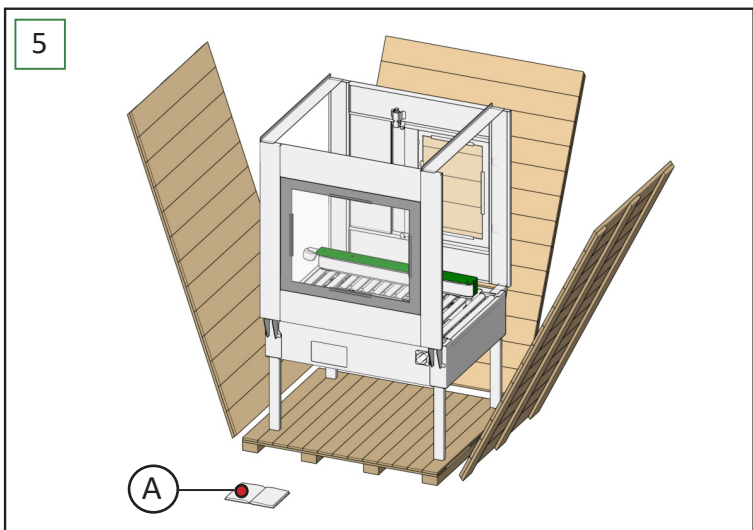
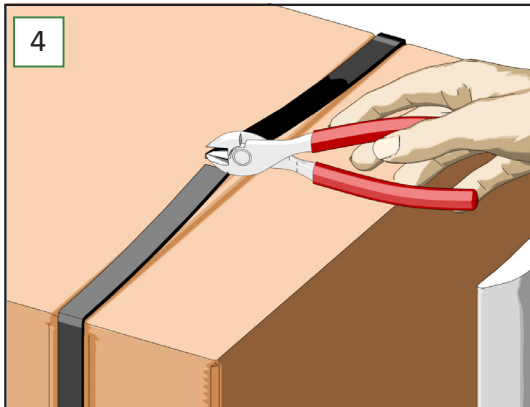
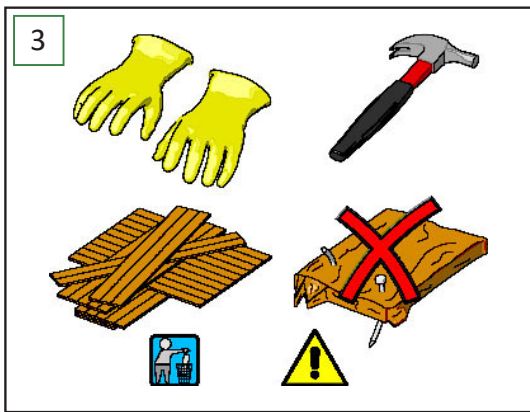
Follow the instructions on the packaging before handling and opening it. In order to unpack the machine remove the external protective film, then cut the straps and extract the cardboard towards the top (see picture 4).

⚠ WARNING

Place the forks on the long side of the machine so that it rests on the supporting structure. Then rest the machine on the ground.

NOTICE

Dispose of the packages properly delivering them to associations in charge of their elimination and recycling.



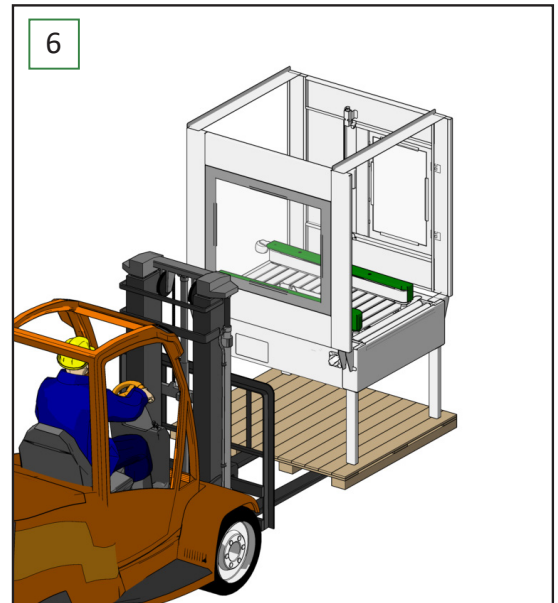
A - Use and maintenance manual with EC Declaration of Conformity.

1.5 Handling

A fork lift truck can be used to handle the machine through the departments (see picture 6). Lift the machine a few centimetres from the ground after positioning the forks near the supporting structure.

WARNING

During the handling always move very slowly. This operation must be assisted by an operator in charge of signalling.



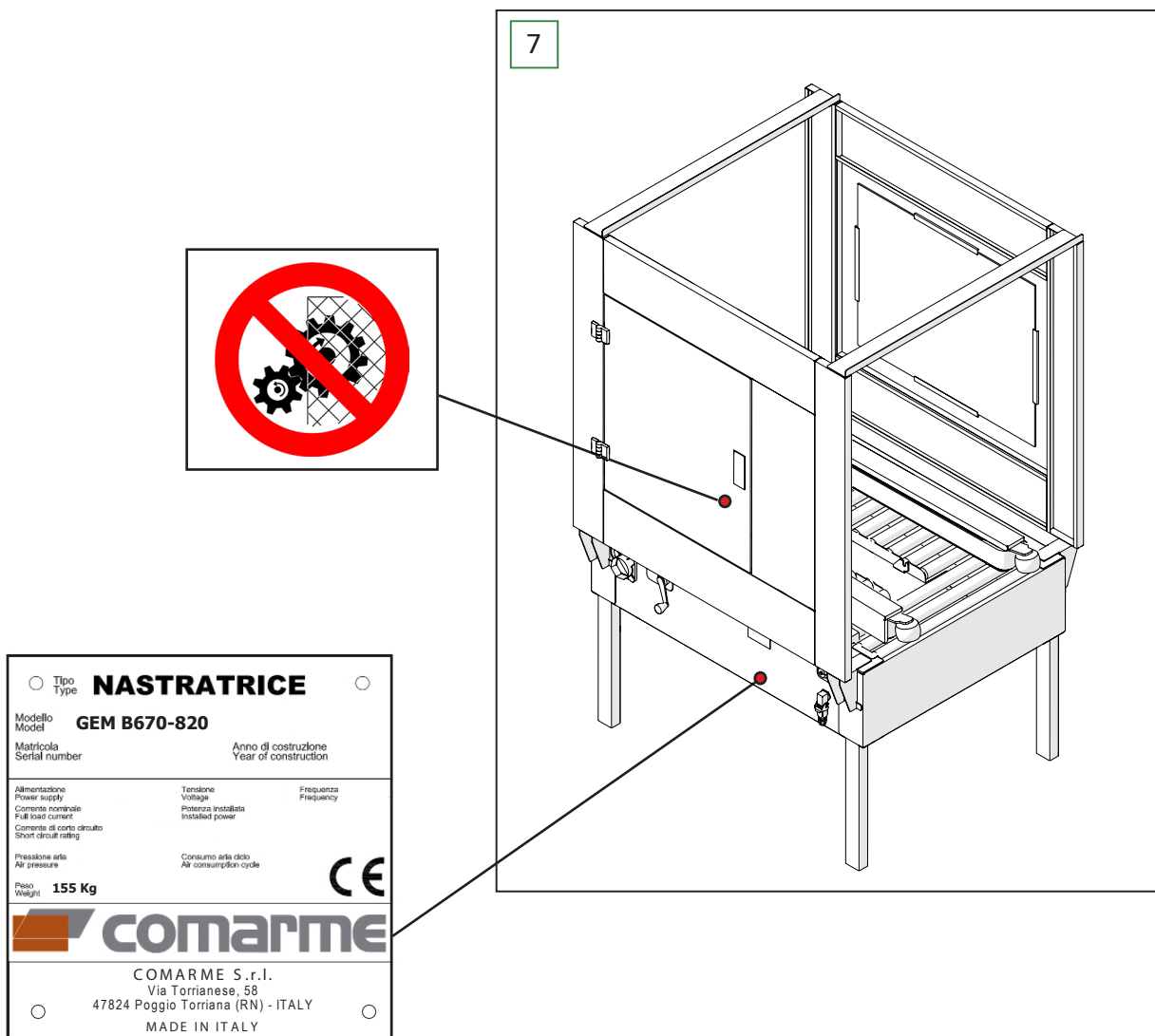
2 DESCRIPTION OF THE MACHINE

2.1 Plate and labelling data

The manufacturer identification plate in compliance with standards 2006/42/EC is applied on the machine. The plate must not be removed for any reason, even if the machine is resold.

Always refer to the serial number (written on the plate itself) when contacting the manufacturer. Some pictograms with safety warnings are also placed on the machine; they must be strictly followed by everyone dealing with the machine.

The company is not to be held responsible for damage to property or accidents to people, which might occur if the above-mentioned warnings are not observed. In such a case, the operator is the only person responsible towards the relevant authorities.



2.2 Description of the machine

The machine described in this manual is an automatic machine for closing and upper sealing cardboard boxes with adhesive tape.

The boxes coming from the line (normally from a carton erector) are guided by two side power-driven belts towards the taping heads. The latter put the adhesive tape on the lower part of the boxes. The guides are adjusted according to box size by a handle that can be easily reached by the operator.

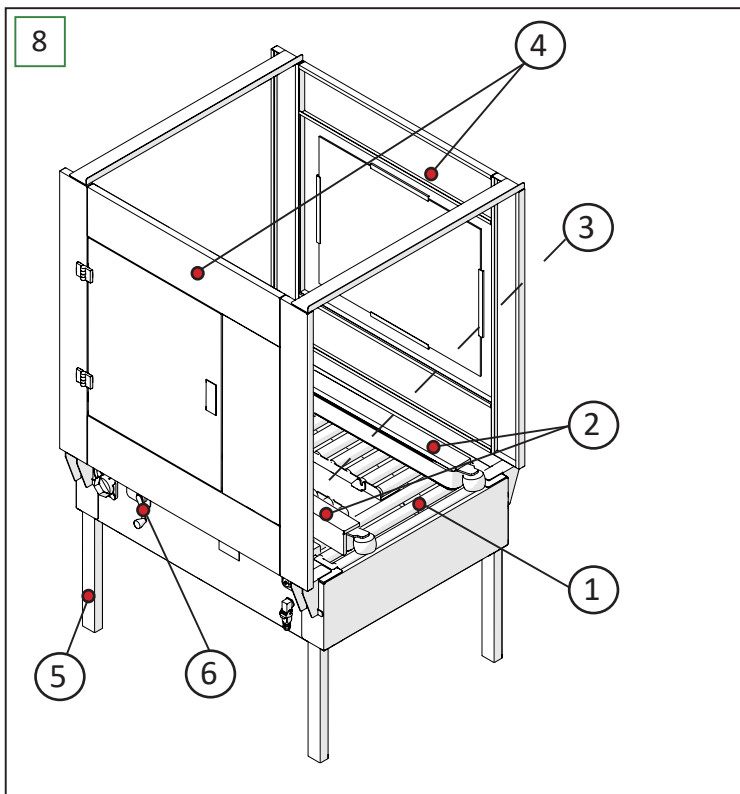
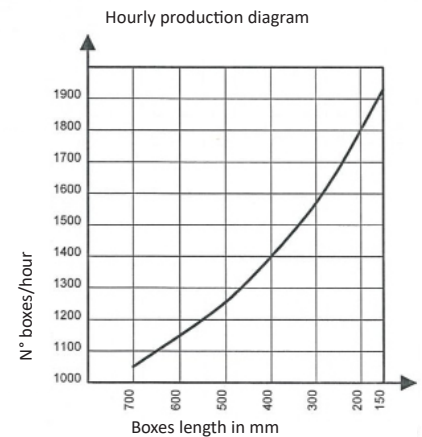
At the end of the taping machine, the boxes are pushed towards the outlet roller conveyor.

On request, the taping machine can be equipped with legs with swivelling wheels. This allows easy machine handling inside the department.

Different types of taping heads can be mounted on the machine according to the user needs (see technical features par. 2.3).

The GEM series is based on a modular construction philosophy, ensuring uniformity and versatility of the spare parts.

Hourly production may vary depending on box length and weight.



Pos.	Description
1	Roller conveyor
2	Box feed side belts
3	Lower taping head
4	Lateral guards
5	Support legs
6	Side belt adjustment knob (box width)

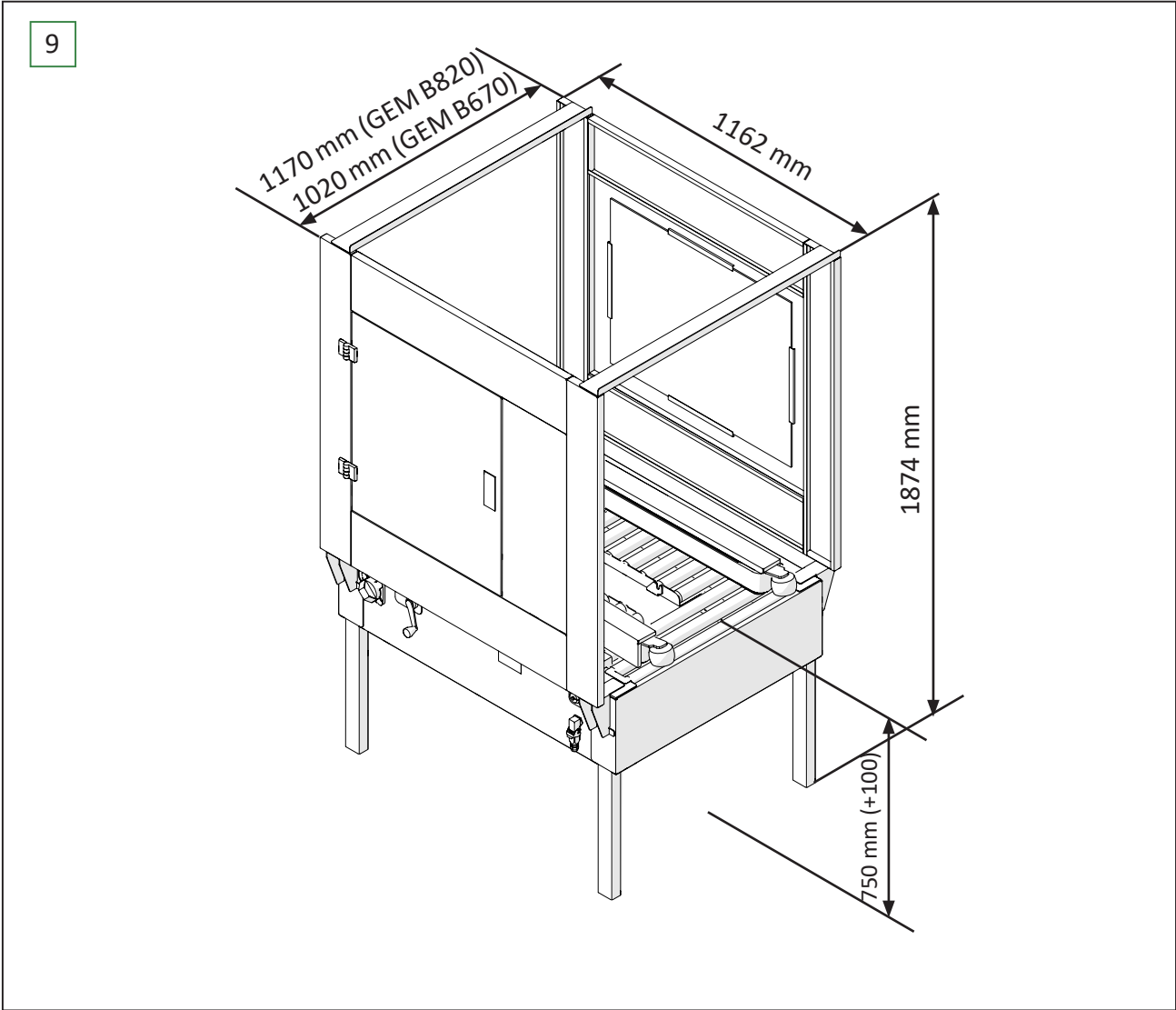
2.3 Technical features

The table below shows the main technical features of the machine.

Technical features	GEM B670	GEM B820
Machine weight	approx. 160 Kg	approx. 190 Kg
Phases	3 with neutral and earth	3 with neutral and earth
Power installed	0.22 kW	0.22 kW
Electrical protection	IP54	IP54
Temperature of use	Min. + 5 °C / + 41 °F Max. +35°C / + 95°F	Min. + 5 °C / + 41 °F Max. +35°C / + 95°F
Box transfer speed	ca. 866 in./min.	ca. 866 in./min.
Taping head models	T21-T21,5-T22-T23 T32-T33 TB22-TB23	T21-T21,5-T22-T23 T32-T33 TB22-TB23
Belt and box dimensions	See par. "Field of application"	See par. "Field of application"

2.4 Dimensions

The machine measures in mm are indicated below.



2.5 Field of application

The machine has been conceived and manufactured as a taping machine for cardboard boxes with the dimensions indicated below. Some taping heads mod. T21-T21,5-T22-T23, T32-T33, TB22-TB23 using rolls of tape with the dimensions indicated below can be assembled on the machine.

CAUTION

The boxes must be correctly centred, with suitable distances between them when they are loaded onto the machine.

COMARME S.r.l. machines are NOT conceived for working in areas at risk of explosion.

In any case we recommend following the legal requirements of the country where the machine is to be installed also as regards the waste disposal.

COMARME S.r.l. declines all responsibility in case of accidents due to the use of the machines by UNAUTHORIZED and unqualified staff, or who use them for purposes different from the above-mentioned ones, WITHOUT THE WRITTEN AUTHORIZATION OF THE MANUFACTURER AND THE ADAPTATION OF THE TECHNICAL FEATURES.

COMARME S.r.l. also declines all responsibility in case the machine installation is non-compliant with the legal requirements and the instructions of this manual.

DANGER

Once the machine has been positioned inside the production line, the user must eliminate any risks present in the inlet and outlet area of the boxes, depending on the features of the handling line.

2.6 Products that can be processed

The machine can form boxes with the dimensions shown in the picture.

CAUTION

To have a good functioning of the machine, the proportion between length, height and weight of the box must be respected. In general, the length divided by height ratio must be equal to or greater than 0.6.

In the event of particular dimensions, a check must be carried out with a sampling of boxes to be taped.

MACHINE WEIGHT

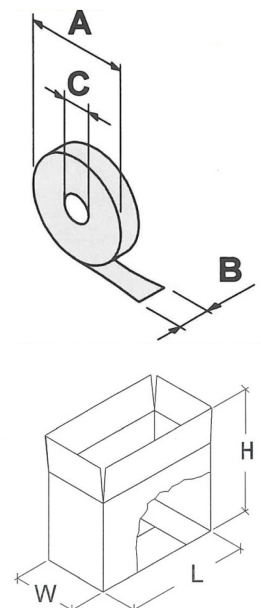
Minimum: Even empty boxes with good quality cardboard can be taped.

Maximum: approx. 6 kg for each 100 mm length of the box.

BELTS	A	B	C
measures	approx. 355 mm (14")	approx. 51 mm (2") or ca. 76 mm (3")	76 mm (3")

BOXES	GEM B670	GEM B820	GEM B670	GEM B820
	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)
W	150	150	650	800
L	150	150	∞	∞
H*	100	120	650	800

*Formed box with upper flaps open



2.7 Safety protections

The machine is equipped with many safety systems to protect the operator during the work phases.

INSPECTION DOORS MICROSWITCH (1)

Every inspection door is equipped with a safety microswitch which instantly stops the the machine when a door is opened.

To prevent the machine from unexpectedly starting again, it is necessary to press the reset button after closing the inspection door.

EMERGENCY PUSH BUTTON (see carton erector manual)

An emergency button is located on the control panel near the molder (see the relevant operating and maintenance manual).

By pressing this button, the equipment stops immediately.

FIXED PROTECTIONS (2)

The equipment is equipped with fixed protections to protect the moving parts and/or live parts.

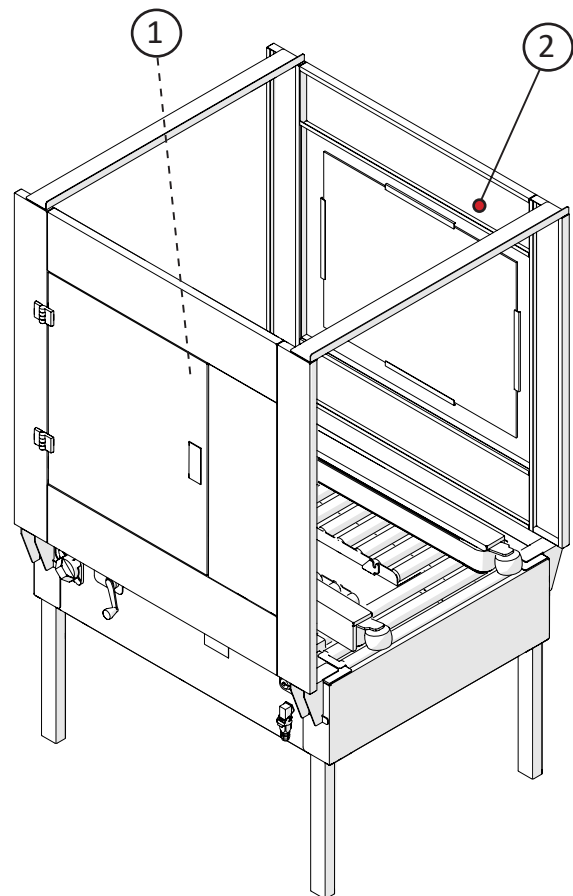
Such protections are fixed to the structure through screws which can be removed only with an intentional intervention and using specific tools.

DANGER

PLEASE NOTE THAT SUCH PROTECTED AREAS ARE ACCESSIBLE ONLY WHEN THE MACHINE IS NOT WORKING.

COMPLIANCE WITH THE STANDARDS

The electric system was built in compliance with the European standard UNI EN ISO 13849-1:2016. All the components installed on the the machine are supplied by primary companies which provide certifications and comply with the workplace safety standards.



3 INSTALLATION



3.1 Check on the purchased product

Before using the machine, check it has not been damaged during transport or storage. Also make sure that all options ordered and all standard components are inside the package. In case of damage, inform immediately the forwarding agent and the manufacturer.

NOTICE

Some machine components are disassembled and put into it or into additional packages in order to facilitate its transport.

To assemble the components follow the instructions given in the corresponding chapter.

3.2 Conditions for installation



The machine must be installed by specialized staff following the instructions below.

Do not place the machine near heat or water sources or other free liquids.

Do not install the machine without the suitable protections.

COMARME S.r.l. machines are NOT conceived for working in places at risk of explosion and/or at high risk of fire.

The machine installation in a plant requires special precautions: areas equipped with precise energy sources to feed the plant, some specialized and qualified staff to carry out this work and with the necessary equipment to position and install the machine. Use protective clothes such as overalls, gloves, safety goggles and shoes. COMARME S.r.l. specialized personnel assemble and install the machine, unless otherwise agreed.

OBLIGATIONS OF THE CUSTOMER:

COMARME S.r.l. declines all responsibility for damage to people, objects or animals due to the failure to install protection systems or to their disassembly. The manufacturer is not to be held responsible if the plant user does not follow the instructions below.

- Position along the machine edges near sharp or protruding corners or parts some yellow and black strips indicating that those points are dangerous.
- Put around the machine some panels indicating the warnings and the rules to follow during the machine use as required by law.
- Put around the machine all the emergency panels required by law as well as the arrows indicating the paths to follow to reach the emergency exits.
- Put around the machine the equipment to use in case of emergency (fire extinguishers and fire-fighting systems).
- Train the staff in charge of using the machine so that they know how to use it normally and what to do in case of emergency or danger and keep the documentation proving that this instruction has been carried out.
- Authorized personnel only in the area where the machine is installed through the application of prohibition signs or using some security staff.

- ☞ Observe the free spaces required and indicated in this manual.
- ☞ The electrical systems must be as much as possible protected from dust, noxious vapours and humidity.
- ☞ The room temperature of the place where the machine is installed must be kept between 5 and 35 °C (41°F and 95 °F).

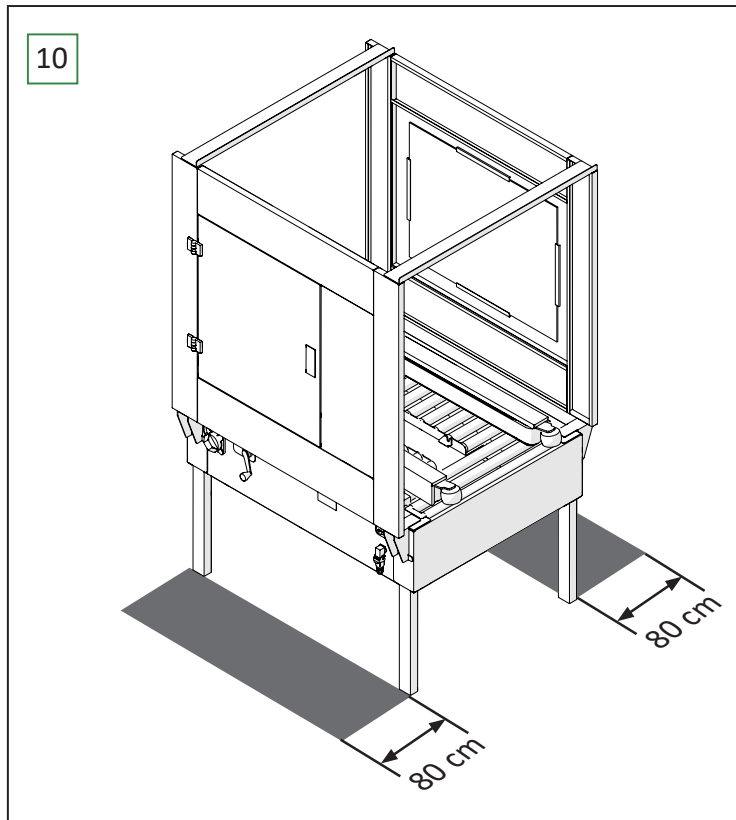
3.3 Free spaces



To work freely on the machine and carry out the tooling or maintenance operations, it is necessary that the minimum distance from the walls is the one indicated in picture 10.

NOTICE

We recommend leaving a suitable space for the box loading and unloading system to allow their movement. Also arrange some free areas to put any empty containers.



3.4 Positioning on the ground

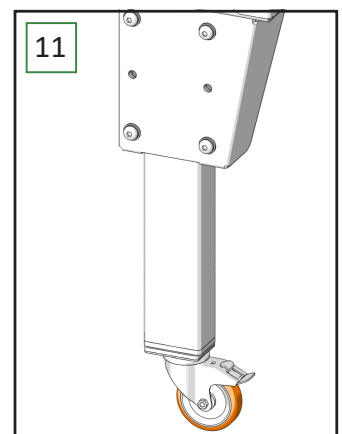


Before positioning the machine on the ground or on a base, it is necessary to check the perfect floor levelling using a level.

The version with swivelling wheels (optional) can be positioned in the desired place and locked using the suitable brakes (see picture 11). We recommend checking the suitability to carry loads near the supports.

NOTICE

WARRANTY AND RESPONSIBILITY DECAY IN CASE the machine is not installed according to the indications provided for by the manufacturer.



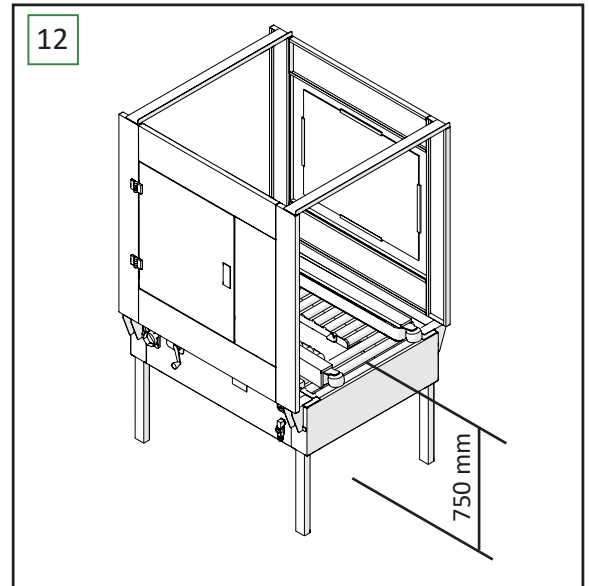
3.5 Component assembly



WORKING SURFACE HEIGHT ADJUSTMENT

The roller table of the machine is 750 mm from the ground (see picture 12).

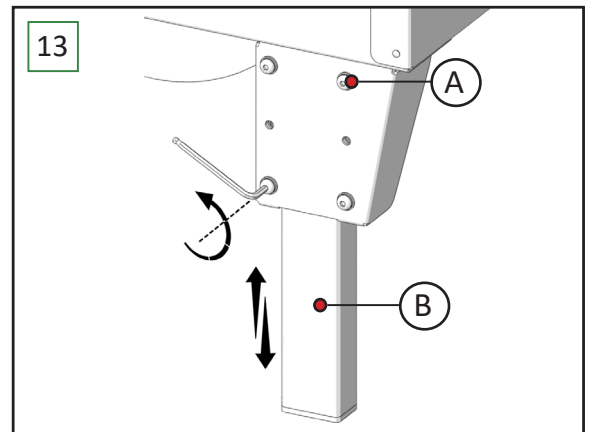
This height can be increased up to 850 mm.



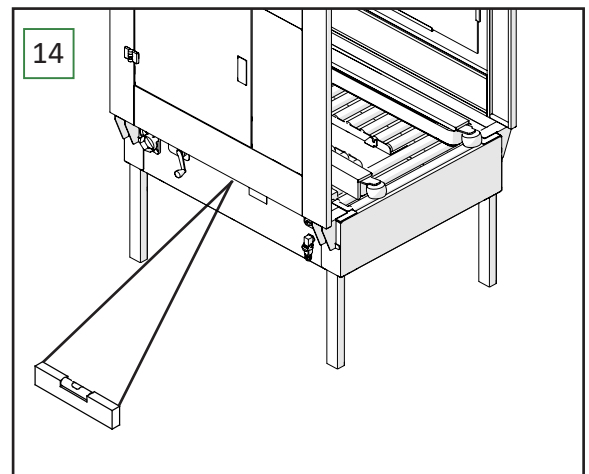
⚠ CAUTION

To carry out this operation, insert the forks under the machine structure as indicated in par. 1.5, lift the machine and operate on the two legs of each end as indicated below and referring to picture 13:

- loosen the 4 socket head screws "A" of each leg
- pull out legs "B" to the required length (max. 100 mm) and tighten screws "A" .

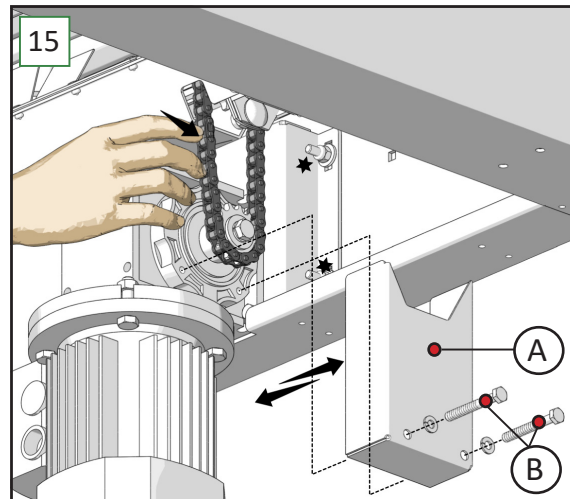


Make sure that at the end of these operations the machine is on a level in both directions, lengthwise and crosswise (see picture 14).



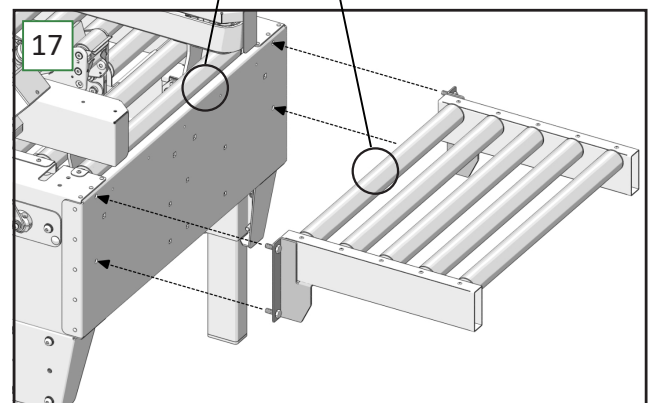
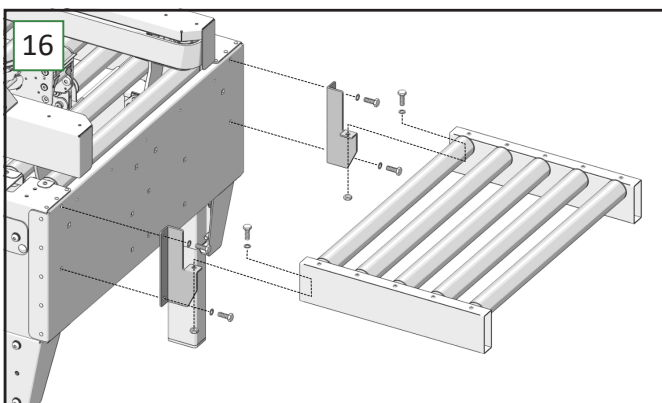
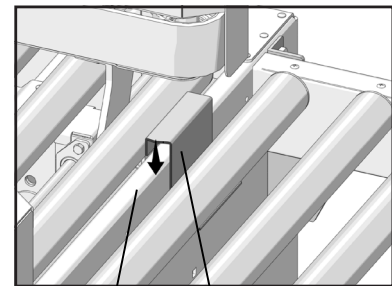
INSTALLATION OF THE DRIVE CHAIN PROTECTION

Place the drive chain protection cover "A" of the drive belts and fix it using screws "B" (see picture 15).



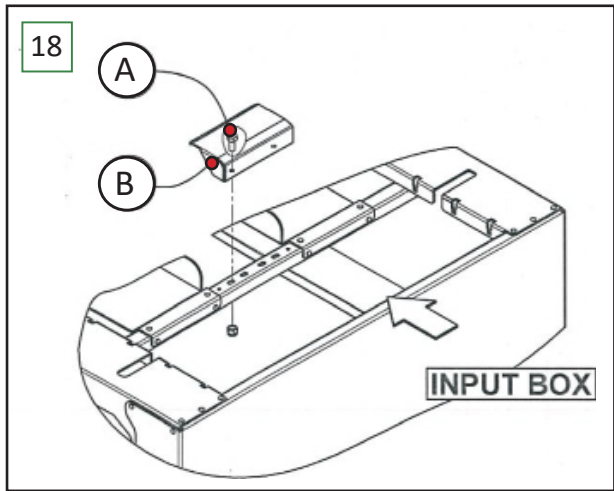
CONNECTIONS WITH THE LINE ELEMENTS

The machine can be connected mechanically with other elements of the line (ex. box spacing units, roller tables, etc.). For the mechanical connection use the proper connection kit part number 801-09-868 (see picture 16). See picture 17 for the 375x500mm roller table extension.



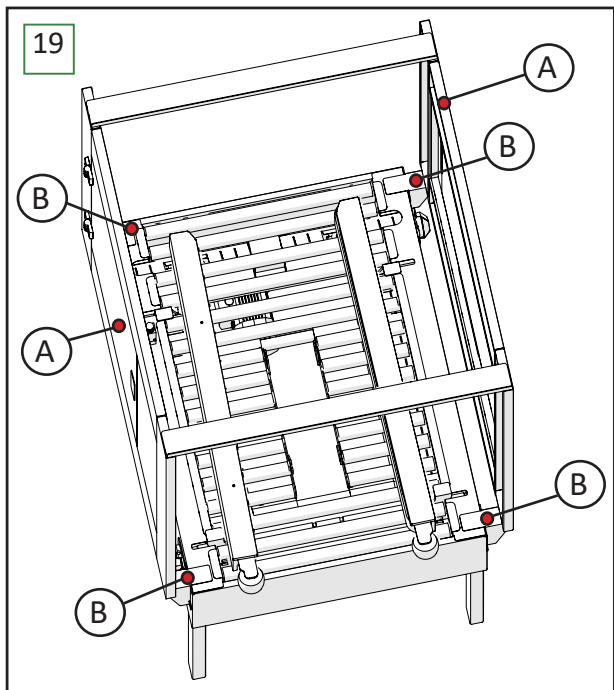
LOWER HEAD CLOSING GUARD ASSEMBLY

Place the lower head protective guard "A" and fix it using appropriate screws "B" (see picture 18).



INSTALLATION OF LATERAL GUARDS

If a taping machine is used coming out of a carton erector, it is necessary to install the lateral guards "A" using the brackets "B" (see picture 19).

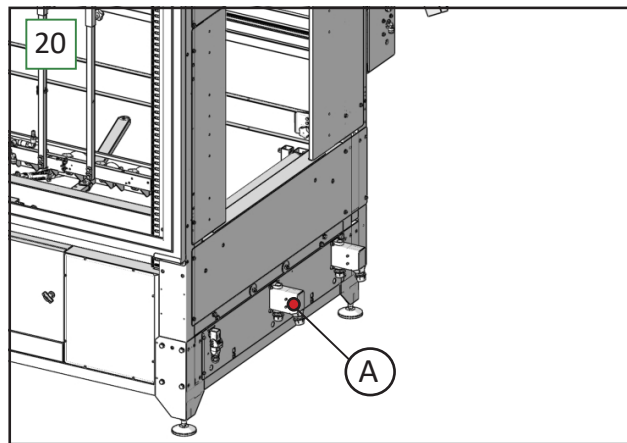


CARTON ERECTOR CONNECTION

- Insert the taping machine connector in the relative central connection "A" of the carton erector (see picture 20);
- place the taping machine in contact with the front side of the carton erector, so that the screw holes are aligned with the holes of the fixing brackets;
- insert the screws and tighten;

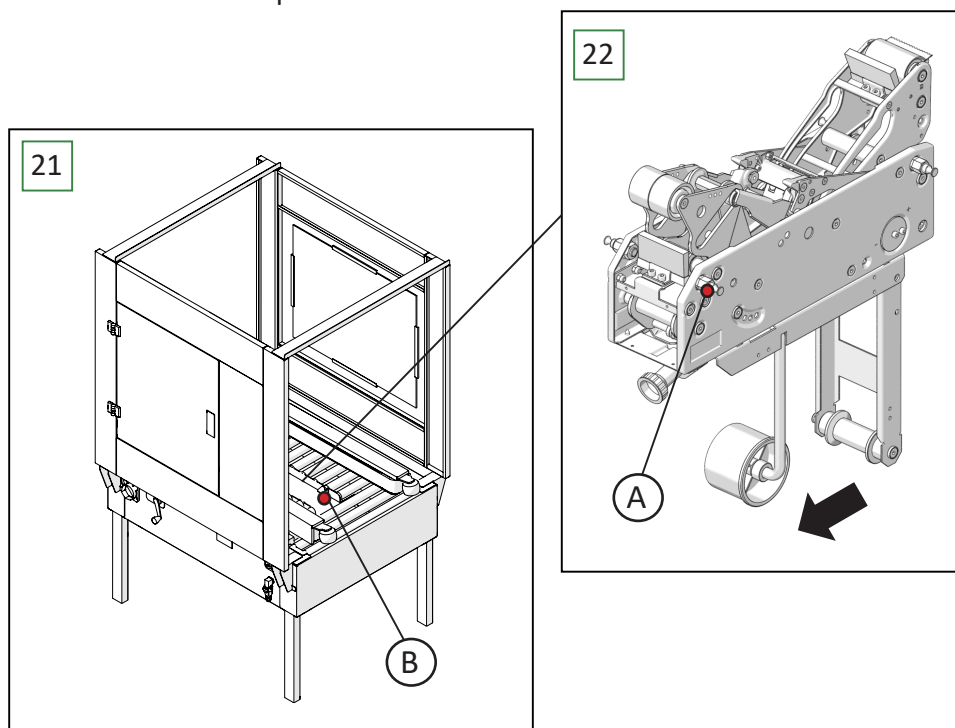
NOTE

With the electrical connection described above, the drive belts of the taping machine will be set in motion when the vacuum circuit of the carton erector is activated. The two machines together will function as if they were one unit.

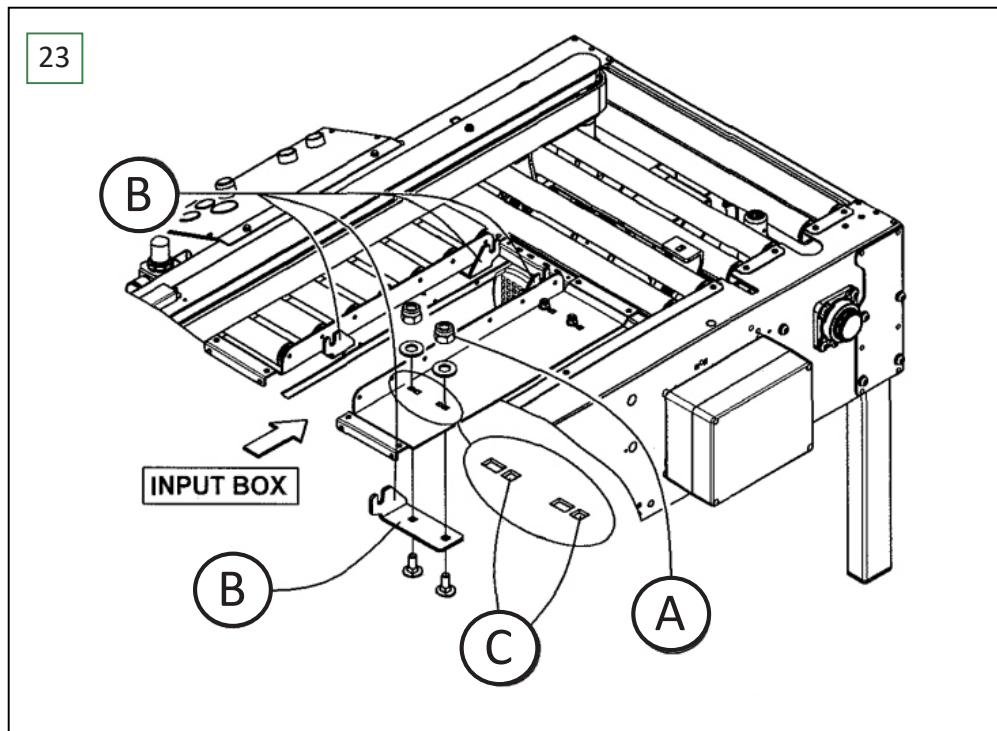
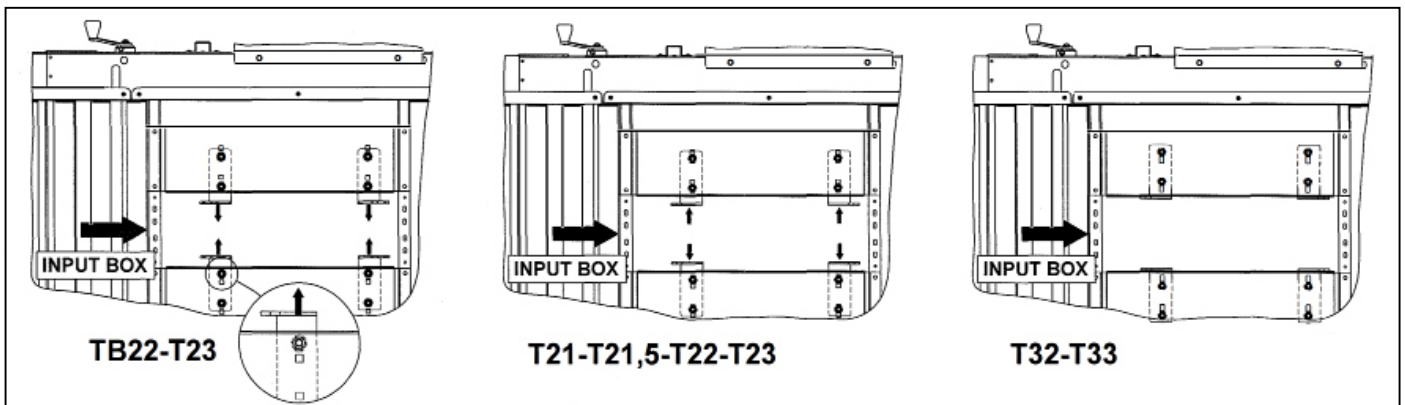


LOWER TAPING HEAD POSITIONING

After setting up the taping head, insert it into the suitable compartment of the roller table, making sure that the supporting pins "A" (see picture 22) are correctly inserted into the slots "B" on the frame (see picture 21) and that the direction is as indicated in picture 22.



- To place the lower taping head **TB22-TB23** proceed as follows:
 - loosen the nuts "A";
 - adjust the unit supports "B" by sliding them towards the inside of the machine, as shown in figure 23;
 - tighten the nuts "A".
- To place the lower taping head **T21-T21,5-T22-T23** proceed as follows:
 - loosen the nuts "A";
 - adjust the unit supports "B" by sliding them towards the outside of the machine, as shown in figure 23;
 - tighten the nuts "A".
- To place the lower taping head **T32-T33** proceed as follows:
 - remove the supports "B";
 - reassemble the supports by using the square holes "C";
 - tighten the nut "A".



3.6 Electrical connection



⚠ DANGER

The machine electrical connection must be carried out only by qualified electricians, in compliance with the safety standards in force.

⚠ DANGER

Before carrying out any operation on the electrical equipment, make sure that all the conductors, connecting parts and terminals are not energised.

⚠ WARNING

Install before the electrical panel a thermal-magnetic circuit breaker and check that the earthing circuit is efficient.

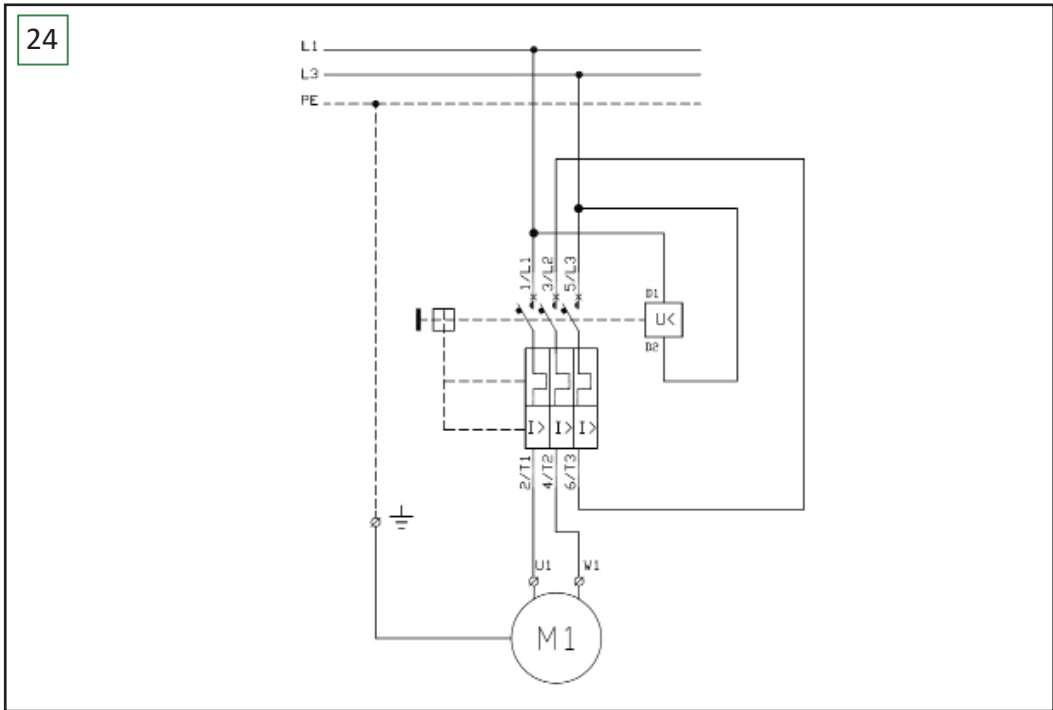
⚠ DANGER

First of all make sure the lines can feed the whole plant correctly, in compliance with the safety standards in force (for the required features see paragraph 2.3).

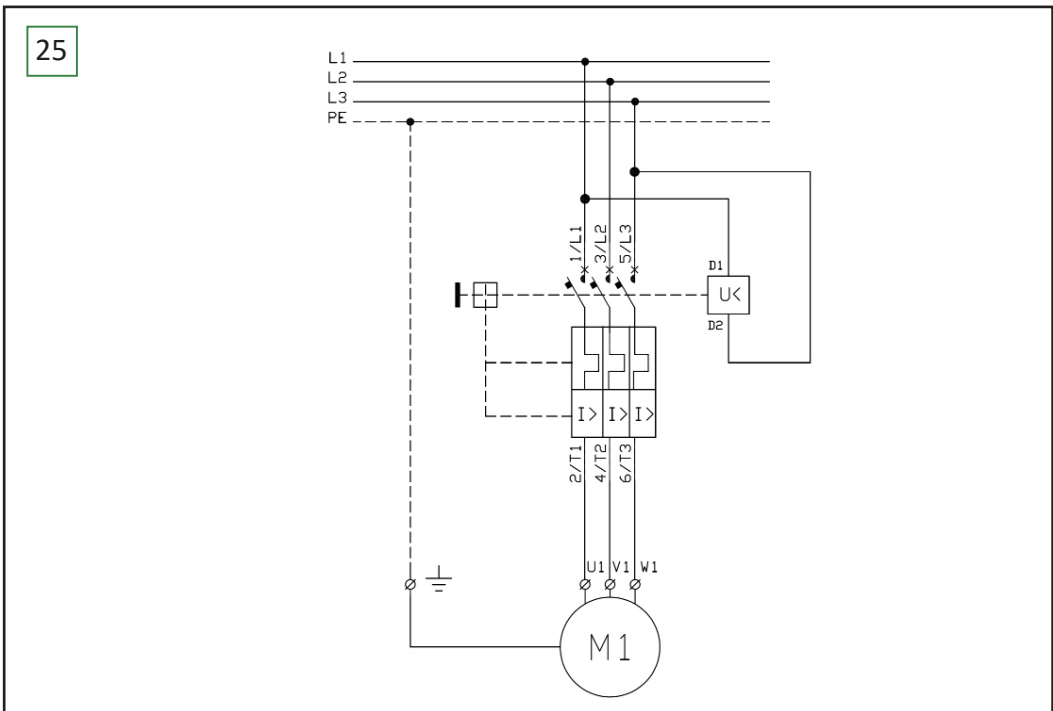
Before connecting the machine to the mains, make sure the main switch is in "0" position.

- The machine can be supplied with three phase motors and single phase motors, with different voltages and frequencies (see wiring diagrams in pictures 24 and 25).

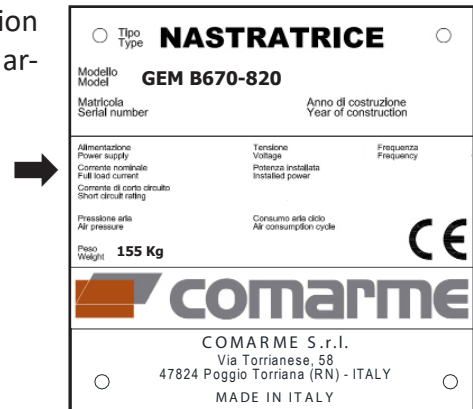
SINGLE PHASE MOTOR WIRING DIAGRAM



THREE PHASE MOTOR WIRING DIAGRAM

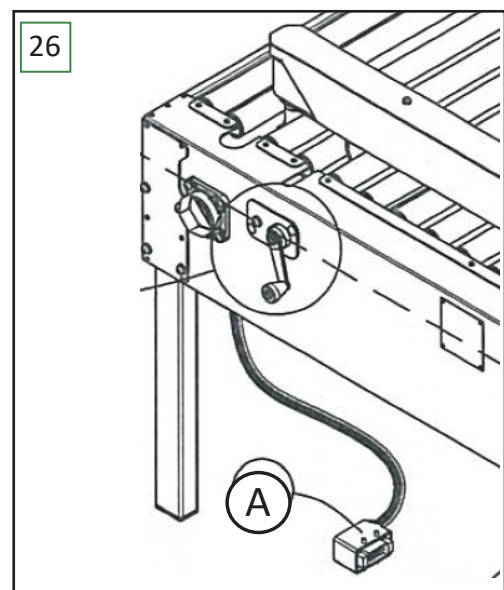


- Make sure the motor complies with the required voltage specification (the motor voltage is indicated on the identification plate - see the arrow aside).

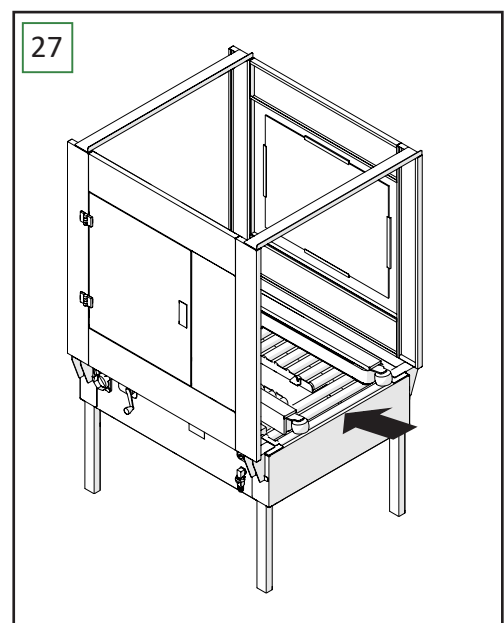


CAUTION

Only connect the machine by means of the connector "A" provided. Do not remove the connector from its cable.



- Check for the correct rotational direction of the belts (box feed) as indicated by the arrow in picture 27. If a three phase motor is installed, should the rotational direction be reversed, invert the two phase wire connectors on the plug.



4 NORMAL USE



4.1 Introduction

This section shows all the safety precautions to be followed for the proper use of the machine, as well as the operations to carry out during the first start up and during the normal use.

Please read this section very carefully.

4.2 Safety rules during use





WHILE USING the machine the following precautions and safety criteria **MUST BE STRICTLY FOLLOWED** .

The manufacturer declines all responsibility in case the user does not follow the safety precautions in compliance with the standards in force. Besides, the manufacturer is not to be held responsible in case of carelessness during the machine use.


DO NOT

- ✎ Remove the fixed guards.
- ✎ Disconnect or damage in any way the safety devices.
- ✎ Change or add any device to the electrical system without a prior written authorization or the technical intervention of the manufacturer confirming the change introduced in the description of the intervention.
- ✎ Use the machine for purposes that are different from the ones described in this use and maintenance manual.
- ✎ Allow unauthorized personnel to operate on the machine.
- ✎ Clean the machine while it is running.

WARNINGS

-  The person in charge of the facility and the operators who use the machine must follow all the standards and the legal provisions on accident prevention and safety at work. They must know the risks that can be found in the workplace and the emergency/safety plans arranged.
-  Make sure some efficient and approved portable fire extinguishers are available and easily accessible.
-  Also make sure the working area is illuminated to ensure a sufficient visibility and in any case in compliance with the safety standards so as to prevent any possibility of injury.
-  The safety systems must be only used as “safety stop” devices and not as machine stop control device.

DANGER

-  Before starting the machine, all its protections must be closed.

4.3 Operator position

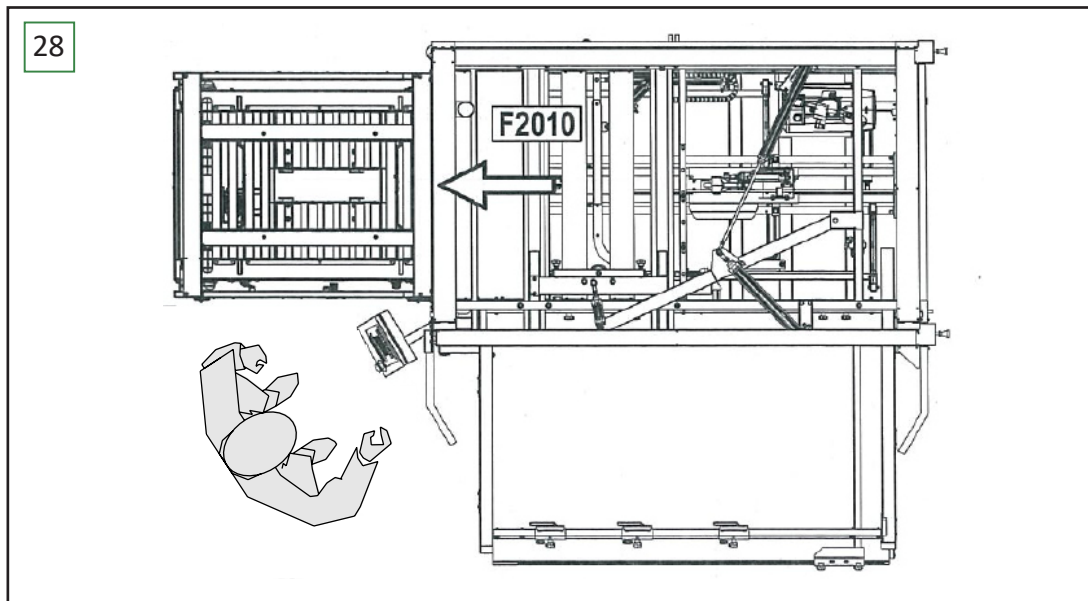


The taping machine works automatically, therefore the operator only has to supervise the correct operation of the system and, when necessary, replace the tape.

Picture 28 shows the area where the operator must be while using the machine.

NOTICE

One operator can work on the machine.



4.4 Controls

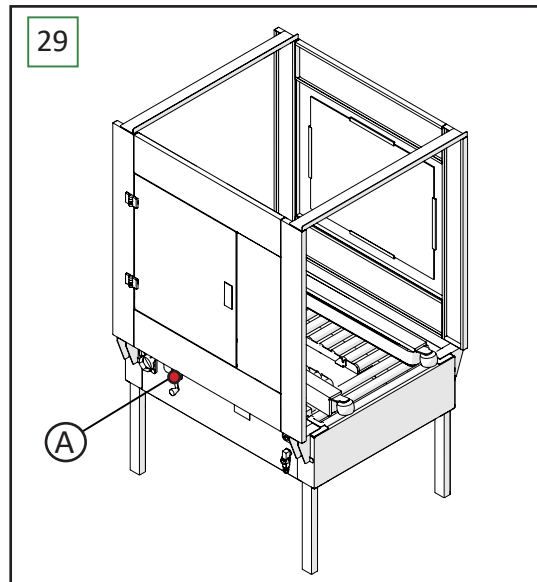
The operation of the taping machine is totally connected to the control logic of the carton erector.

4.5 Adjustments and first start up



PRELIMINARY OPERATIONS

With reference to picture 29, open the conveyor arms maximally using handle "A", then position the box to be taped on the roller table and start adjusting.

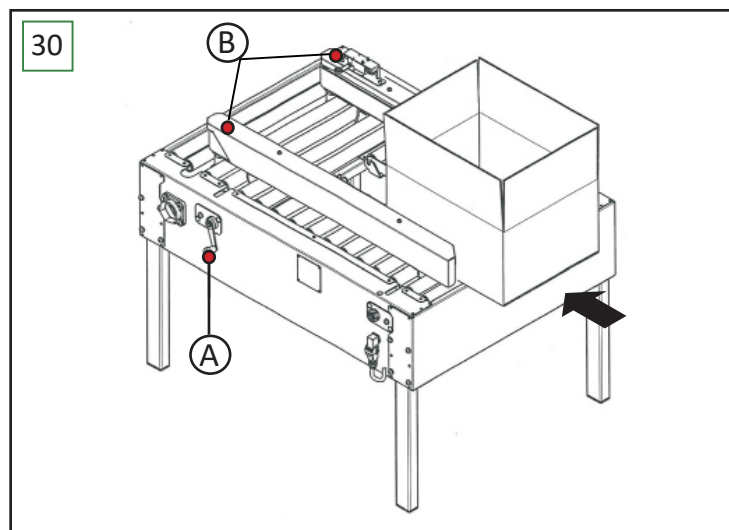


CONVEYOR ARM OPENING ADJUSTMENT

After positioning the box to be taped as shown in picture 30, pull the conveyor arms together by acting on handle "A" until the drive belts "B" come into contact (exerting a slight pressure) with the sides of the box to be taped.

NOTICE

Too much closing pressure of the arms will block the machine and damage it, especially when using thick boxes.

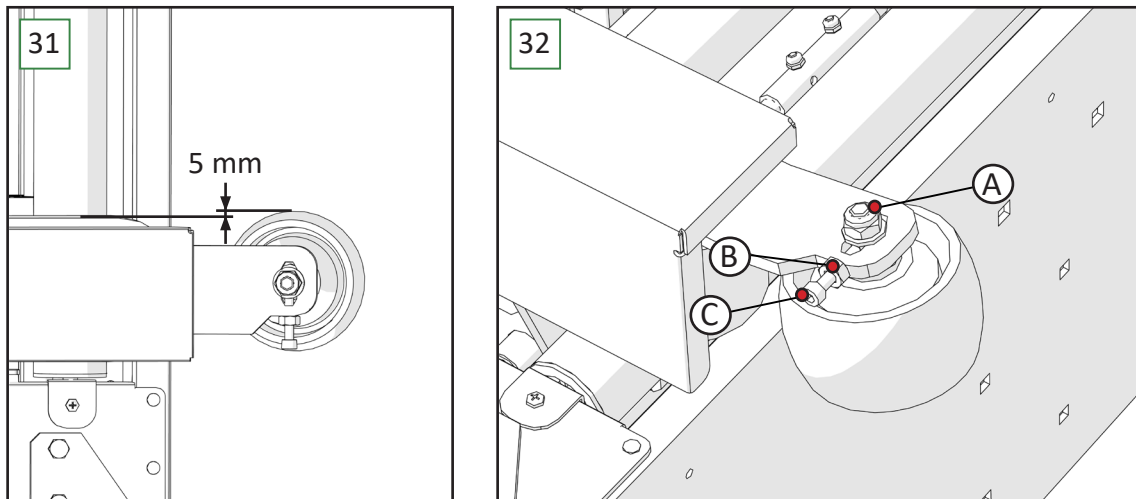


FRONT ROLLERS ADJUSTMENT

In the case of box taping with not perfectly rested lower flaps, adjust the front rollers so that the external profile of the roller projects from the plane of the driving belts by 5 mm (see pic. 31), so that the box is pushed downward, with consequent rest on the rollers.

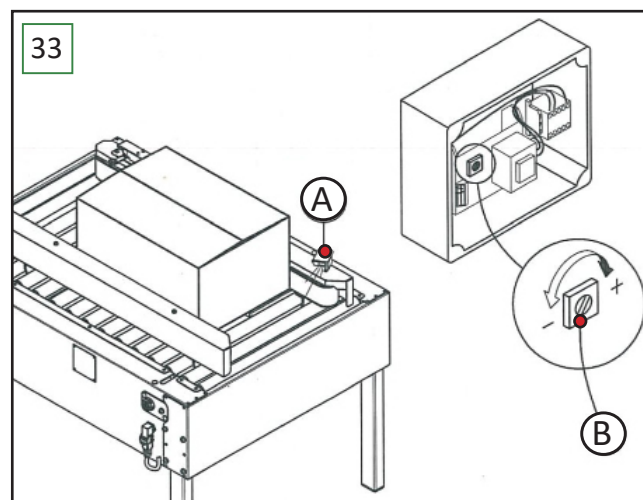
To adjust rollers:

- loosen the nuts "A" and "B" (see pic. 32);
- move the roller by tightening the screw "C" (see pic. 32) to the required measure;
- lock the nuts "A" and "B" (see pic. 32).



ADJUSTMENT OF THE BELT STOP TIMER CONTROL (OPTIONAL)

To adjust the stopping time of the belts after the box has disengaged photocell "A" adjust the appropriate trimmer "B" turning clockwise to increase the time and anticlockwise to decrease it (see pic 33).



FIRST START UP

Check the correct set-up of the taping machine by feeding either manually or automatically the machine, which will complete the working cycle by sealing the box in the lower part.

If the taping machine is paired with a carton erector, check the correct set-up of the latter.

NOTICE

The boxes must be correctly centred, with suitable distances between them when they are loaded onto the machine.

4.6 Residual risks

- ⊘ During the box handling on the roller conveyor some moving parts can be reached by the upper limbs. The affected areas cannot be isolated or blocked by some guards, since this would compromise the machine operating principle. Therefore, the staff who use the machine and who work in the department where the machine is installed must be suitably trained on these risks.

 **CAUTION**

If the taping machine is used inside a production line, the user will have to arrange and bear the cost of other safety systems to ensure the operator safety during the working phases.

- ⊘ At the end of the work, even after stopping the machine, some components such as the motors can keep high temperatures. Therefore, at the end of the operations, make sure that nobody touches these parts until the heat is dissipated below a temperature of about 40-50°C.

4.10 Wrong and dangerous uses

Using the machine for operations that are different from the ones indicated by the manufacturer can damage the equipment and be dangerous for the operator.

The manufacturer's written consent must be previously obtained to work special materials different from the one indicated in this manual.

DANGER

The voluntary action by which the operator does not follow the working rules indicated in this manual is an improper use.

4.11 Clothes

WARNING

During the machine working, inspection or maintenance phases **IT IS STRICTLY FORBIDDEN** to wear necklaces, bracelets or clothing such as scarves or wide sleeve shirts which may get entangled in the machine.



DO NOT WEAR TIES/
SCARVES/FOULARDS



DO NOT WEAR NECKLACES/
BRACELETS

The staff operating on the line must wear the following protective equipment:



MUST WEAR
GLOVES



MUST WEAR
SHOES
SAFETY



MUST WEAR
CLOTHES
SAFETY



MUST WEAR
HAIR CAP

4.12 Emergency situations



FIRE:

The working area of the machine must be provided with fire extinguishers and emergency exits as required BY LAW (Local law on safety at work). **DO NOT USE WATER.**

Staff members should be trained to deal with such accidents. The machine can NOT work in areas at high risk of fire.

DANGER

IN CASE OF FIRE TURN OFF IMMEDIATELY
THE POWER SUPPLY

5 MAINTENANCE



5.1 Maintenance

A suitable maintenance is very important for a longer duration of the machine and it ensures safety from a functional point of view.

We recommend making qualified and authorised staff carry out maintenance operations. The design and materials used reduce maintenance interventions to a minimum.

The staff must be provided with the individual protection means that are usually used for similar operations, and they must follow the safety standards described in the following chapter.

5.2 Safety standards during maintenance

The main precautions to adopt in case of maintenance operations on the machine are:

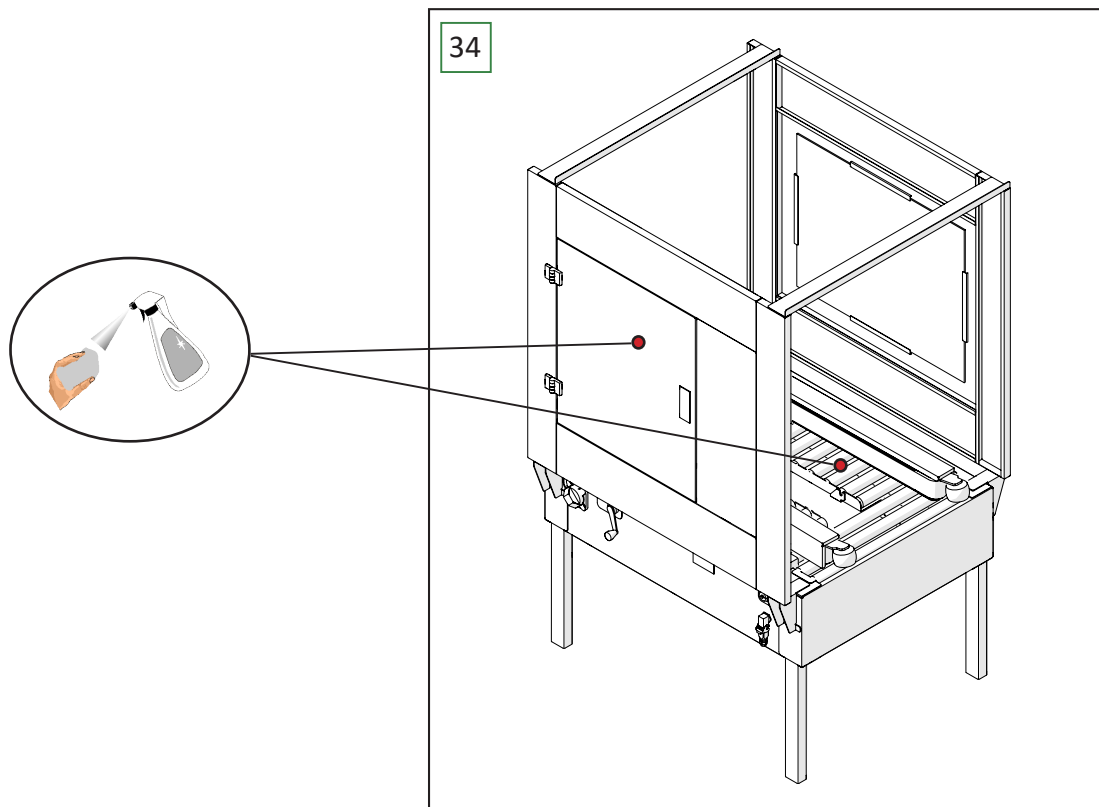
- ☞ No work can be started without the written authorization of the person in charge of maintenance.
- ☞ We recommend establishing some safety rules for each type of maintenance operations that must be followed by every maintenance man.
- ☞ Before operating on the machine, make sure it is in safety conditions.
- ☞ At the end of a maintenance operation, fill in the maintenance form, remove all the tools used and eliminate any grease or oil accumulation.
- ☞ For plants or mechanical parts that can require a total or partial disassembly, adopt the following precautions:
 - close the machine main switch
 - avoid putting your hands between the rotating parts
- ☞ Before carrying out any operation, disconnect the machine from the power supply to avoid any accidental enabling that could endanger both the operators and/or the tools used.
- ☞ Apply the following message on the machine: "WARNING. MAINTENANCE IN PROGRESS".
- ☞ Do not wear rings, watches, chains, bracelets, etc. during maintenance operations.
- ☞ Always wear individual protective devices (gloves, goggles, safety shoes, etc.).
- ☞ Do not use naked flames, pointed instruments or pins for cleaning operations.
- ☞ Do not smoke.

5.3 Ordinary cleaning



The ordinary cleaning of the machine must be carried out every day in compliance with the specific quality procedure and with the machine disabled. This allows keeping the machine in good working conditions.

Some tape or cardboard residues can be left near the machine or near the inlet and outlet roller conveyors. During the machine cleaning remove them.



5.4 General rules for maintenance

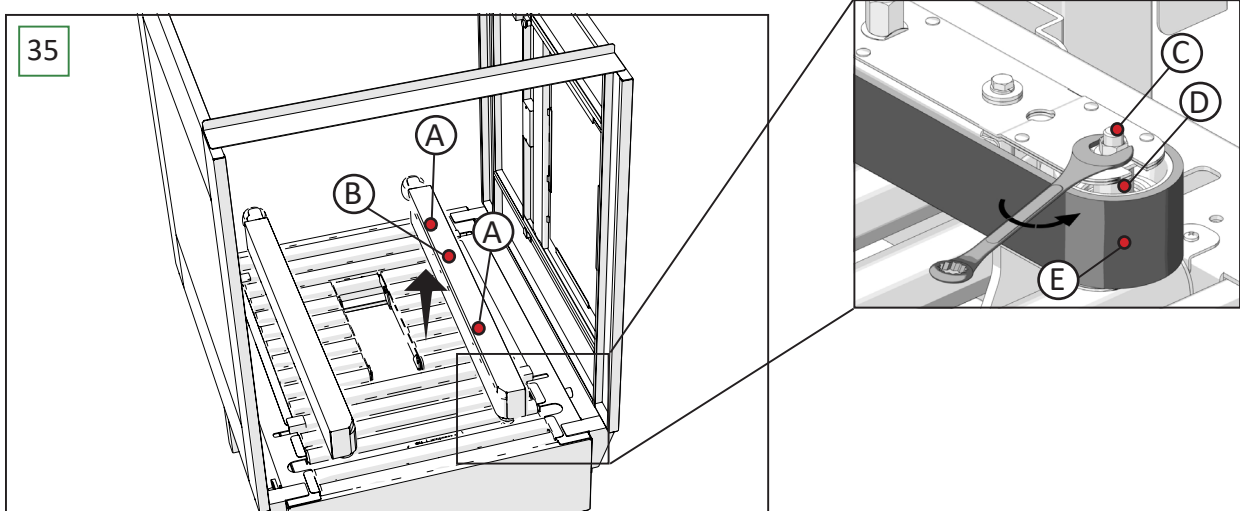
No special preventive maintenance operations are required. In any case, we recommend checking periodically that the screws are perfectly tightened in order to achieve the best result at all times.

5.5 Drive belt replacement

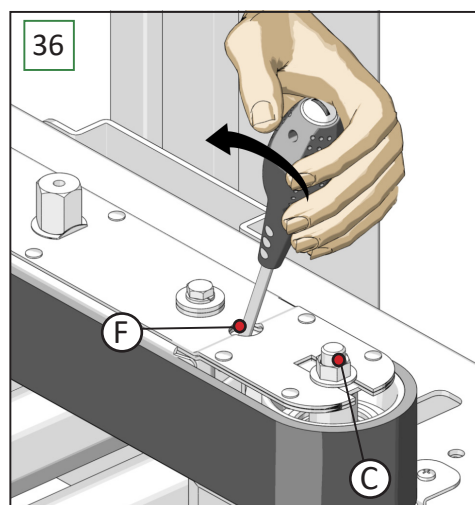


The drive belts of the boxes are subject to wear (according to the number of working hours). To replace them, do as follows (see picture 35):

- loosen screws "A" and remove belt safety guards "B";
- loosen nut "C" fixing the front pulley "D" so that the pulley can be moved inwards;
- replace belt "E";



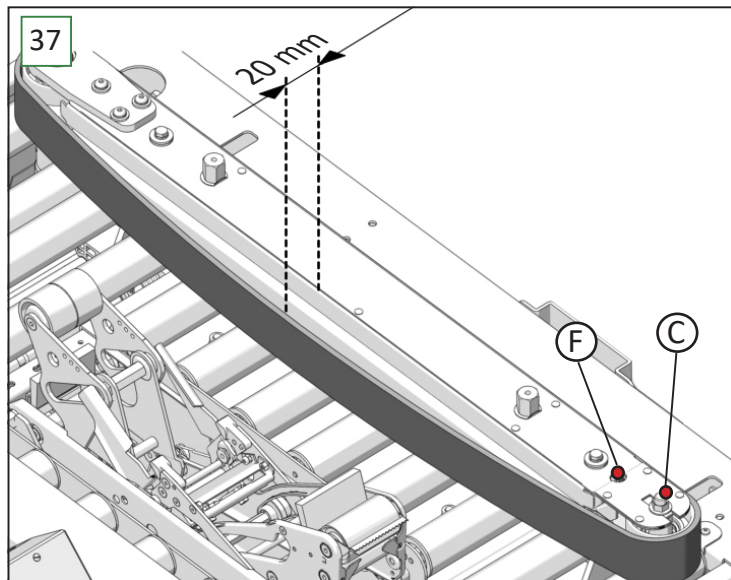
- insert a screwdriver into the suitable housing "F" by levering it so as to tighten the belt (see picture 36);
- tighten nut "C",



- check the correct tension of the belt by pulling it out slightly about half way along the arm (see picture 37). The displacement of the belt from the guide should be about 20 mm. If this is not the case, adjust the tension by loosening nut "C", insert the screwdriver into the suitable housing "F" shifting it forwards to tighten the belt and backwards to loosen it, as required. Then tighten nut "C";
- put the safety guard "B" back on and lock it with screws "A" (see the previous page).

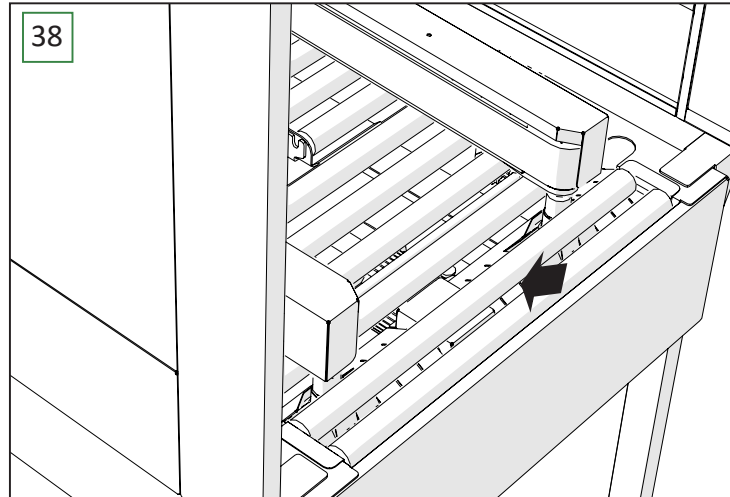
⚠ CAUTION

This operation should be performed by specialized mechanical maintenance technicians. In any case, it is advisable to replace the belts at least once a year.



5.6 Lubrication

We recommend greasing periodically the drive shaft. When the machine is at a standstill, use a spatula to spread the grease through the slits protected by plastic "flaps" (see the arrow in picture 38).

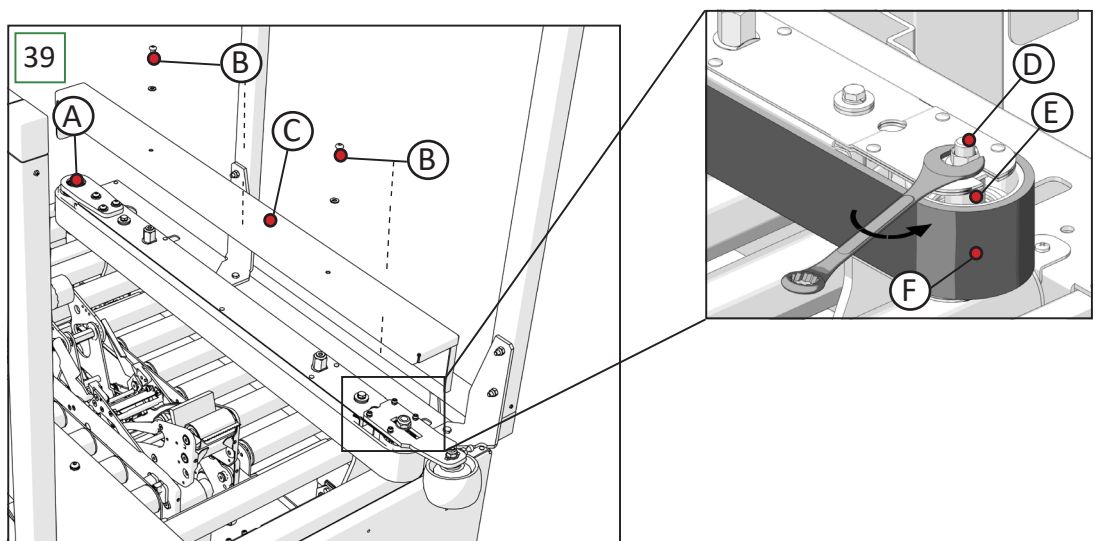


5.7 Check of the drive shaft locking screw tightening

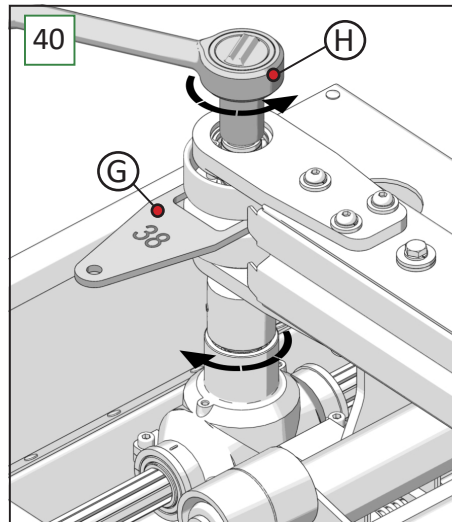
It is advisable to regularly check that the locking screw "A" on the drive shaft is tightened properly.

To carry out this operation do as follows (see picture 39):

- loosen screws "B" and remove the protective guards "C" on the belts,
- loosen stop nut "D" on the front pulley "E" so that it may be moved towards the inside of the machine,
- remove belt "F",



- insert the 38 mm wrench "G" supplied with the machine, so that the pulley is held in position while the screw is tightened (see picture 40),
- fasten the locking screw as tightly as possible using a 5 mm hexagon socket head cap screw wrench "H",
- reassemble the belt by checking its correct tension as indicated in par. 5.5.



5.8 Check of the drive chain tension and replacement

CHECK OF THE DRIVE CHAIN TENSION

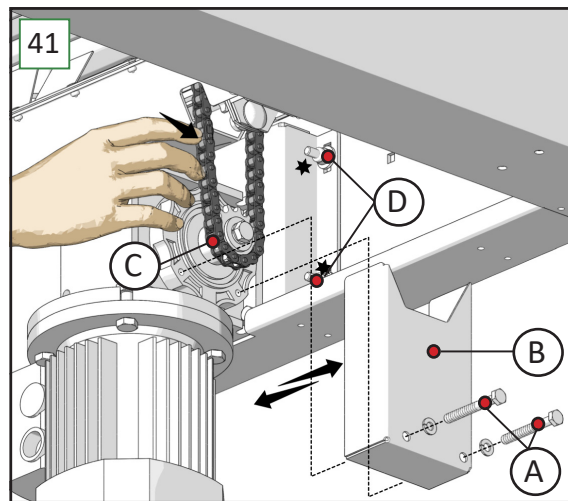
To check the drive chain tension, do as follows (see picture 41):

- loosen screws "A" and remove the belt guard "B";
- check the correct tension of belt "C" by pushing it gently with the fingers;
- if necessary, adjust the tension of the belt by loosening locking nuts "D" in order to allow the necessary movement, then retighten them in the right position;
- reassemble guard "B".

DRIVE BELT REPLACEMENT

To replace the drive belt, do as follows:

- loosen screws "A" and remove the belt guard "B";
- loosen locking nuts "D" and replace belt "C";
- readjust the belt tension by tightening locking nuts "D";
- reassemble guard "B".



5.9 Troubleshooting

This chapter describes how to solve the most common problems which may arise in the machine.

PROBLEM	SOLUTION
The machine does not start	<ul style="list-style-type: none"> • Check the power supply presence • Check that the carton erector connection cable is correctly plugged in. • Check that the main switch of the carton erector F2010 is in pos. "1" • Check that the emergency button of the carton erector F2010 is not pressed. • Check the thermal cut-out "FR2" in the electrical panel of the carton erector F2010. • Check that the safety doors are not opened.
The machine is in emergency	<ul style="list-style-type: none"> • Check that the emergency button of the carton erector F2010 is not pressed. • Check the thermal cut-out "FR2" in the electrical panel of the carton erector F2010. • Check that the safety doors are not opened.
The belts do not start	<ul style="list-style-type: none"> • Check the thermal cut-out "FR2" in the electrical panel of the carton erector F2010. • Check the drive chain • Check that the safety doors are not opened
The machine interrupts the automatic cycle	<ul style="list-style-type: none"> • Check the previous conditions and if necessary call the Technical Service Centre.

In case of malfunction contact the Technical Service Centre (see par. "Informative letter")

5.10 Recommended spare parts

GEM B670-B820			
NO.	CODE	RECOMMENDED Q.TY	DESCRIPTION
1	CNN-56100-190	2	BLACK DRIVE BELT sv.2055x50 WITH CENTRAL GUIDE K10
2	MSNA-85090-81	4	COMPLETE UPPER ARM END
3	MSNC-84011-82	2	ROLLER COMPLETE WITH BUSHES
4	MSNC-84017-81	2	ROLLER COMPLETE WITH BUSHES
5	MSNC-84011-84	1	ROLLER COMPLETE WITH BUSHES
6	MSNC-84017-82	1	ROLLER COMPLETE WITH BUSHES
7	CNE-13042-003	1	SCROLL REDUCTION GEAR UNIT NMRV040 1:10 PAM140/11
8	CNE-13084-002	1	THREE-PHASE MOTOR gr.63C 4 B5 Pn=0.25kW (0.33HP)
9	MSNC-50003-01	1	PINION 3/8"x7/32" Z=13 (GEAR MOTOR UNIT)
10	CNN-70033-153	1	CLOSED CHAIN P=3/8" No.40 PITCHES
11	MSNC-40005-01	1	PINION 3/8"x7/32" Z=17
12	MSNC-83637-81	2	DRIVING UNIT TRANSMISSION
13	CNN-54027-012	1	PLATE BEARING SUPPORT BPFT 5
14	CNN-54026-001	2	BEARING SUPPORT UCF202

6 PUTTING OUT OF SERVICE

6.1 Temporary putting out of service

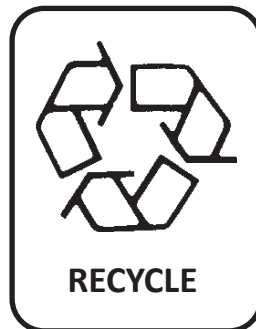
If the machine is not to be used for more than 3 months, we recommend carrying out the following operations:

- ✎ Disconnect the machine from the energy sources.
- ✎ Clean the machine.
- ✎ Cover the machine with a waterproof tarpaulin.

6.2 Dismantling

If the machine must be put out of service and dismantled, follow the standards to safeguard the environment as well as those on the recovery of recyclable materials.

The parts to dismantle must be given to specialized companies with the regular authorization to transport and dispose of them.



ANNEXES

A01 - WIRING DIAGRAM

A02 - SPARE PARTS LIST



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