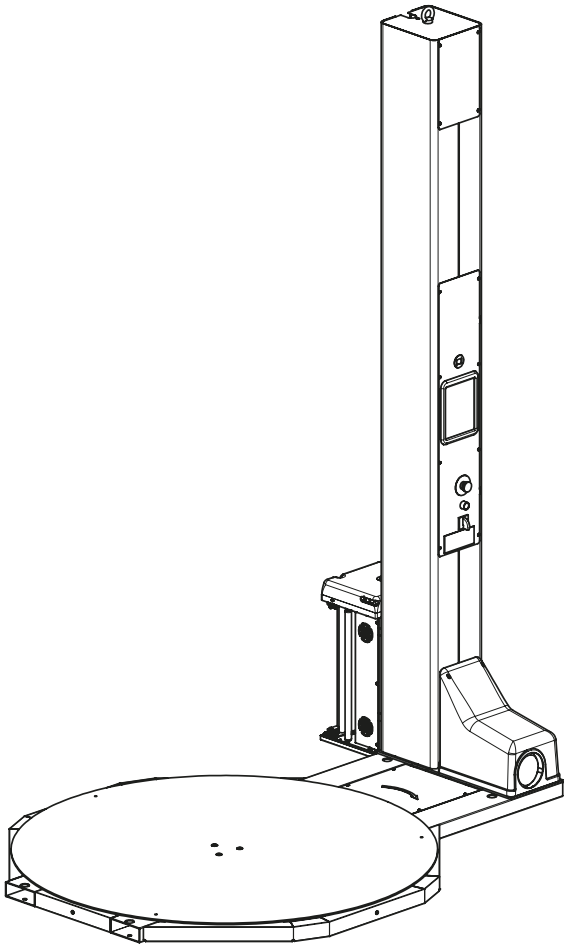
FROMM | WRAPPING SOLUTIONS

Turntable - Mast

FS325
FS335 / FS380
FS2000

Use and Maintenance Manual

Translation of the original



Fromm Holding AG

Hinterbergstrasse 26
6312 Steinhausen
Switzerland

CE

EN Rev.3 06/03/2024

IT DICHIARAZIONE CE DI CONFORMITA' **EN** EC DECLARATION OF CONFORMITY **DE** EG-KONFORMITÄTSERKLÄRUNG **FR** DECLARATION DE CONFORMITE CE **ES** DECLARACIÓN DE CONFORMIDAD CE	**RU** CE ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ **HU** EK MEGFELELÉSI NYILATKOZAT **PL** DEKLARACJA ZGODNOŚCI WE **DA** EF-OVERENSSTEMMELSESERKLÆRING	**SE** EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE **NL** EG-VERKLARING VAN OVEREENSTEMMING **CZ** ES PROHLÁŠENÍ O SHODĚ CONFORMIDADE **FI** EY-VAATIMUSTENMUKAISUUSVAKUUTUS **PT** DECLARAÇÃO CE DE CONFORMIDADE

IT IL FABBRICANTE E PERSONA AUTORIZZATA A COSTITUIRE IL FASCICOLO TECNICO: **EN** THE MANUFACTURER AND AUTHORISED PERSON TO COMPILE THE TECHNICAL FILE: **DE** DER HERSTELLER IST DIE ZUR ERSTELLUNG DER TECHNISCHEN UNTERLAGEN BEFUGTE PERSON: **FR** LE FABRICANT ET LA PERSONNE AUTORISÉE À CONSTITUER LE DOSSIER TECHNIQUE: **ES** EL FABRICANTE Y LA PERSONA AUTORIZADA PARA ELABORAR EL INFORME TÉCNICO:	**RU** ИЗГОТОВИТЕЛЬ И ЛИЦО, УПОЛНОМОЧЕННОЕ СОСТАВИТЬ ТЕХНИЧЕСКУЮ ДОКУМЕНТАЦИЮ: **HU** A MŰSZAKI DOKUMENTÁCIÓ ÖSSZEÁLLÍTÁSÁVAL MEGBÍZOTT SZEMÉLY: **PL** PRODUCENT I OSOBA UPOWAŻNIONA DO PRZYGOTOWANIA DOKUMENTACJI TECHNICZNEJ: **DK** PRODUCENTEN ER AUTORISERET TIL AT UDFØRE DEN TEKNISKE DOKUMENTATION:	**SE** TILLVERKAREN OCH PERSON SOM ÄR BEHÖRIG ATT SAMMANSTÄLLA DEN TEKNISKA DOKUMENTATIONEN: **NL** DE FABRIKANT EN PERSOON DIE GEAUTORISEERD IS OM HET TECHNISCH DOSSIER OP TE STELLEN: **CZ** VÝROBCE A OSOBA OPRÁVNĚNÁ K SESTAVENÍ TECHNICKÉHO SOUBORU: **FI** VALMISTAJA JA TEKNISEN TIEDOTTEEN LAADINTAAN VALTUUTETTU HENKILÖ: **PT** O FABRICANTE E PESSOA AUTORIZADA A CONSTITUIR FASCÍCULO TÉCNICO:
Fromm Holding AG, Hinterbergstrasse 26 - 6312 Steinhausen Switzerland		

IT DICHIARA SOTTO LA PROPRIA RESPONSABILITÀ CHE LA MACCHINA IDENTIFICATA **EN** DECLARES ON HIS OWN RESPONSIBILITY' THAT THE MACHINE IDENTIFIED AS FOLLOW **DE** ERKLÄRT UNTER EIGENER VERANTWORTUNG DASS DIE IDENTIFIZIERTE MASCHINE **FR** DECLARE SOUS SA RESPONSABILITE QUE LA MACHINE IDENTIFIEE **ES** DECLARA BAJO SU RESPONSABILIDAD QUE LA MÁQUINA IDENTIFICADA	**RU** ЗАЯВЛЯЕТ,ЧТО ОБМОТЧИК СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ **HU** SAJÁT FELELŐSSÉGÉRE KIJELENTI, HOGY AZ ALÁBBIAK SZERINT AZONOSÍTOTT **PL** OŚWIADCZA NA WŁASNĄ ODPOWIEDZIALNOŚĆ IŻ OZNACZONA MASZYNA GÉP **DK** ERKLÆRER PÅ EGET ANSVAR, AT MASKINEN IDENTIFICERET SOM	**SE** FÖRSÄKRAR HÄRMED ATT MASKINEN MED FÖLJANDE EGENSKAPER **NL** VERKLAART VOOR EIGEN VERANTWOORDELIJKHEID, DAT DE GEÏDENTIFICEERDE MACHINE **CZ** PROHLAŠUJI NA SVOU ZODPOVĚDNOST ŽE STROJ S NÁSLEDUJÍCÍM OZNAČENÍM **FI** VAKUUTTAA OMALLA VASTUULLAAN, ETTÄ ILMOITETTU LAITE **PT** DECLARA SOB SUA PRÓPRIA RESPONSABILIDADE' QUE A MÁQUINA IDENTIFICADA

IT TIPO: AVVOLGITORE **EN** TYPE: WRAPPING MACHINE **DE** TYP: WICKELMASCHINE **FR** TYPE: BANDEROLEUSE **ES** TIPO: ENFARDADORA	**RU** ТИП: ОБМОТЧИК **HU** TÍPUS:TEKERCSELŐ **PL** TYP: OWIJARKA **DK** TYPE: VIKLEMASKINE	**SE** TYP: STRÄCKFILMSMASKIN **NL** TYPE: BANDEROLEUSE **CZ** TYP: BALÍCÍ STROJ **FI** TYYPPI: LAVAKÄÄRINTÄLAITE **PT** TYPE: ENVOLVEDOR

IT MODELLO **EN** MODEL **DE** MODELL **FR** MODÈLE **ES** MODELO	**RU** МОДЕЛЬ **HU** MODELL **PL** MODEL **DK** MODEL	**SE** MODELL **NL** MODEL **CZ** MODEL **FI** MALLI **PT** MODELO

IT MATRICOLA **EN** SERIAL NUMBER **DE** SERIENNUMMER **FR** NUMÉRO DE SÉRIE **ES** N° SERIE	**RU** СЕРИЙНЫЙ НОМЕР **HU** SOROZATSZÁMA **PL** NUMER FABRYCZNY **DK** SERIENUMMER	**SE** SERIENUMMER **NL** SERIENUMMER **CZ** SÉRIOVÉ ČÍSLO **FI** SARJANUMERO **PT** Nº DE SÉRIE

IT E' CONFORME ALLE DIRETTIVE COMUNITARIE **EN** IN CONFORMITY WITH THE FOLLOWING DIRECTIVES **DE** IS DEN FOLGENDEN EU-RICHTLINIEN ENTSPRICHT **FR** EST CONFORME AUX DIRECTIVES COMMAUTAIRES RELATIVES AUX/A **ES** ES CONFORME A LAS DIRECTIVAS COMUNITARIAS SOBRE	**RU** СООТВЕТСТВУЕТ ДИРЕКТИВАМ ЕВРОПЕЙСКОГО СООБЩЕСТВА **HU** MEGFELEL A VONATKOZÓ EURÓPAI IRÁNYELVEKNEK **PL** JEST ZGODNA Z ODPOWIEDNIMI DYREKTYWAMI WSPÓLNOTOWYMI **DK** ER UDARBEJDET I OVERENSSTEMMELSE MED DE GÆLDENDE EU-DIREKTIVER	**SE** ÄR TILLVERKAD I ÖVERENSSTÄMMEISE MED GÄLLANDE EU-DIREKTIV **NL** CONFORM IS MET COMMUNAUTAIRE RICHTLIJNEN INZAKE **CZ** JE V SOULADU S NÁSLEDUJÍCÍ SMĚRNICÍ **FI** ON SEURAAVIEN YHTEISÖN DIREKTIIVIEN MUKAINEN **PT** ESTÁ EM CONFORMIDADE COM AS DIRETIVASOMUNITÁRIAS
2006/42/CE & 2014/30/UE		

IT E NORME **EN** AND STANDARDS **DE** UND NORMEN **FR** ET NORMES **ES** Y NORMAS	**RU** И НОРМЫ **HU** ÉS NORMÁK **PL** I NORMY **DK** OG STANDARDER	**SE** OCH STANDARDER **NL** EN NORMEN **CZ** A NORMY **FI** JA MÄÄRÄYKSET **PT** E NORMAS
EN ISO 12100:2010 & EN 60204-1:2006 + A1:2009		

IT DICHIARAZIONE ORIGINALE IN LINGUA ITALIANA. **EN** TRANSLATION OF ORIGINAL DECLARATION IN ITALIAN. **DE** ÜBERSETZUNG DER ORIGINALERKLÄRUNG AUF ITALIENISCH. **FR** TRADUCTION DES DÉCLARATION ORIGINALE EN LANGUE ITALIENNE. **ES** TRADUCCIÓN DE DECLARACIÓN ORIGINAL ENALIANO.	**RU** ПЕРЕВОД ОРИГИНАЛА ДЕКЛАРАЦИИ НА ИТАЛЬЯНСКОМ ЯЗЫКЕ. **HU** FORDÍTÁS AZ EREDETI NYILATKOZAT OLASZ NYELVŰ. **PL** TRANSLACJA ORYGINALNE OŚWIADCZENIE W JĘZYKU WŁOSKIM. **DK** OVERSÆTTELSE ORIGINAL ERKLÆRING PÅ ITALIENSK.	**SE** ÖVERSÄTTNING ORIGINALDEKLARATION PÅ ITALIENSKA. **NL** VERTALING VAN DE ORIGINELE VERKLARING IN HET ITALIAANS. **CZ** PŘEKLAD ORIGINÁLNÍ PROHLÁŠENÍ V ITALSKÉM JAZYKU. **FI** KÄÄNNÖS ALKUPERÄINEN ILMOITUS. **PT** TRADUÇÃO DECLARAÇÃO ORIGINAL EM ITALIANO.

IT LUOGO E DATA: **EN** PLACE AND DATE: **DE** ORT UND DATUM: **FR** LIEU ET DATE : **ES** LUGAR Y FECHA:	**RU** МЕСТО И ДАТА: **HU** KELT: **PL** MIEJSCE I DATA: **DK** DATO OG STED:	**SE** ORT OCH DATUM: **NL** PLAATS EN DATUM: **CZ** MÍSTO A DATUM: **FI** PAIKKA JA PÄIVÄYS: **PT** LOCAL E DATA:
Steinhausen		

IT IL LEGALE RAPPRESENTANTE (ANGELO FORNI) **EN** LEGAL REPRESENTATIVE (ANGELOFORNI) **DE** GESETZLICHER VERTRETER (ANGELO FORNI) **FR** LE REPRÉSENTANT LÉGAL (ANGELO FORNI) **ES** EL REPRESENTANTE LEGAL (ANGELO FORNI)	**RU** ЮРИДИЧЕСКИЙ ПРЕДСТАВИТЕЛЬ (ANGELO FORNI) **HU** A TÖRVÉNYES KÉPVISELŐ (ANGELOFORNI) **PL** PRZEDSTAWICIEL USTAWOWY (ANGELOFORNI) **DK** DEN ADMINISTRERENDE DIREKTØR (ANGELO FORNI)	**SE** JURIDISKT OMBUD (ANGELO FORNI) **NL** DE WETTELIJKE VERTEGENWOORDIGER(ANGELO FORNI) **CZ** PRÁVNÍ ZÁSTUPCE (ANGELO FORNI) **FI** LAILLINEN EDUSTAJA (ANGELO FORNI) **PT** O REPRESENTANTE LEGAL (ANGELO FORNI)
Fromm Holding AG		

FROMM | WRAPPING SOLUTIONS

UK Declaration of Conformity

II 1.A -2008 No. 1597

THE MANUFACTURER AND AUTHORISED PERSON TO COMPILE THE TECHNICAL FILE:

Fromm Holding AG, Hinterbergstrasse 26 - 6312 Steinhausen Switzerland

DECLARES ON HIS OWN RESPONSIBILITY' THAT THE MACHINE IDENTIFIED AS FOLLOW

TYPE: WRAPPING MACHINE

MODEL

SERIAL NUMBER

IN CONFORMITY WITH THE FOLLOWING LEGISLATIONS

The supply of Machinery (Safety) Regulation 2008 & Electromagnetic Compatibility Regulations 2016

AND DESIGNATED STANDARDS

EN ISO 12100:2010 & EN 60204-1:2018

TRANSLATION OF ORIGINAL DECLARATION IN ITALIAN

PLACE	DATE:
Steinhausen	

LEGAL REPRESENTATIVE (R.FROMM)

1 FOREWORD

1.1 HOW TO READ AND USE THE INSTRUCTIONS MANUAL

1.1.1 THE IMPORTANCE OF THE MANUAL

The instruction manual is to be considered as an integral part of the product; keep it and look after it throughout the lifetime of the machine and hand it on to any other users or subsequent owners.

All the instructions contained in the manual must be followed by both operators and qualified staff in order to correctly and safely install, start, use and service the machine.

In the event of doubts or problems, contact the technical service centres.

1.1.2 SAFE KEEPING THE MANUAL

Use the manual in such a way as not to damage all or part of the contents.

On no account should any parts of this manual be removed, torn out or rewritten.

Keep the manual in places protected from humidity and heat.

Keep this manual and all the related publications in an accessible place known to all the operators.

All use and maintenance operations concerning commercial machine components that are not indicated in this manual are contained in the relative publications attached to it.

1.1.3 CONSULTING THE MANUAL

This instruction manual is made up of:

- COVER WITH MACHINE IDENTIFICATION
- INSTALLATION AND ASSEMBLAGE
- INSTRUCTIONS AND/OR NOTES ON SAFETY USE OF THE PRODUCT
- ATTACHMENTS

1.1.4 COPYRIGHT

This manual contains confidential industrial information belonging to MANUFACTURER.

All rights are reserved and may be protected by copyright or other ownership laws and treaties.

No part of this manual may be reproduced in any form or by any means without explicit permission from MANUFACTURER.

1.1.5 INFORMATION ON THE IMAGES AND CONTENTS

The illustrations in this manual have been included solely by way of example for better understanding of what is described.

This document may be subject to change by Manufacturer without prior notice, but the information on safe use is still guaranteed.

1.1.6 UPDATE OF THE INSTRUCTION MANUAL

The essential features of the type of machine described being understood, Manufaturer reserves the right to make any modifications to the devices, details and accessories as it sees fit for product improvement or for construction or commercial requirements.

1.1.7 SYMBOLS – MEANING AND USE

Typographic messages and symbols are used in this manual to refer to particular procedures which, if not observed, could cause damage to people, animals, things and the environment.

DANGER

Indicates a hazard with the risk of mortal injury.
Failure to observe warnings marked by this symbol can lead to a situation of serious risk to the safety of the operator and/or exposed persons.

WARNING

Indicates a hazard with the risk of danger to the machine or the product being processed.
Failure to observe warnings marked by this symbol can lead to malfunction or damage to the machine.

INFORMATION

Indicates notes and advice for practical machine use in the different operating modes.

1.2 WHO THE MANUAL IS FOR

MACHINE OPERATOR:

Operator who, after an appropriate training course in the use of the machine, is able to make the simplest adjustments.

MECHANICAL MAINTENANCE TECHNICIAN:

Qualified technician able to operate the machine like the machine operator and work on the mechanical devices for adjustment, maintenance and repair. The mechanical maintenance technician is not qualified to perform operations on live electrical systems.

MAINTENANCE ELECTRICIAN:

Qualified technician able to operate the machine like the machine operator, make adjustments and work on electrical systems for maintenance and repair.

SPECIALISED TECHNICIAN OF THE MANUFACTURER:

Qualified technician of the manufacturer or his distributor able to operate the machine like the machine operator, work on the mechanical devices and on the electrical system for adjustments, maintenance, repairs and complex operations when agreed with the user.

EXPOSED PERSON:

Any person partially of fully in a hazardous zone.

2 SAFETY

2.1 GENERAL SAFETY INSTRUCTIONS

Before starting work, the operator must be perfectly familiar with the position and functioning of all the controls and machine features. Daily check all the safety devices on the machine.

- Before starting the working cycle, the operator must ensure that there are no EXPOSED PERSONS in the HAZARDOUS ZONES.
- The employer must provide and instigate the use of personal protective equipment conforming to the prescriptions of Directive 89/391/EEC (and subsequent revisions). While using and carrying out maintenance on the machine the use of personal protective equipment (PPE) such as safety footwear and overalls, approved for accident prevention, is obligatory.
- The areas where the operator stands must always be kept clear and free of oily residues.
- It is forbidden to approach the moving parts of the machine, such as the carriage and rotating parts, when the machine is in operation.
- It is strictly prohibited to operate the machine in automatic mode with the fixed and/or mobile safety guards removed.
- It is strictly prohibited to disable the safety devices installed on the machine.
- Any adjustment operations that need to be carried out with some of the safety devices disabled must be performed by one person only, and unauthorised persons may not access the machine during this time.
- The room in which the machine is housed must not have any shadow areas, annoying bright lights or hazardous stroboscopic effects caused by the lighting supplied.
- The machine can operate in clear air conditions at ambient temperatures of +5°C to +40°C.
- The machine must be used exclusively by qualified personnel.

DANGER

THE MACHINE MUST ONLY BE USED BY ONE OPERATOR AT A TIME, USE OF THE MACHINE BY 2 OR MORE OPERATORS AT THE SAME TIME IS FORBIDDEN.

DANGER

During all maintenance, repair or adjustment operations, IT IS OBLIGATORY TO TURN THE MAIN SWITCH TO (0-OFF).
If you need to conduct work inside the electrical panel, always turn off the voltage upstream the machine using the mains switch, as the terminal board is powered on even though the panel is open and the machine switch is set to "OFF".
It is advisable to post a warning sign on the control panel onboard the machine or on the main power switch (whatever applicable); this sign should read as follows:
WARNING! DO NOT TOUCH - MAINTENANCE STAFF AT WORK.

DANGER

DO NOT REMOVE THE FIXED GUARDS WHEN THE MACHINE IS RUNNING. ALWAYS REFIT THE FIXED GUARDS AFTER ANY MAINTENANCE OPERATION.

DANGER

IT IS PROHIBITED TO ATTEMPT TO COUNTERACT, SLOW DOWN OR STOP THE MACHINE DURING THE AUTOMATIC WRAPPING CYCLE. USE ONLY THE STOP BUTTON OR THE EMERGENCY BUTTON TO BRING IT TO A HALT.

As soon as possible after an operation that required disabling of some safety devices, the machine must be restored to a safe state by re-enabling all the safety devices.

Do not for any reason modify parts of the machine (e.g. attachments, holes, finishes, etc.) in order to adapt it to other devices. We therefore advise you to request any modifications directly from the Manufacturer.

2.2 SAFETY SIGNS

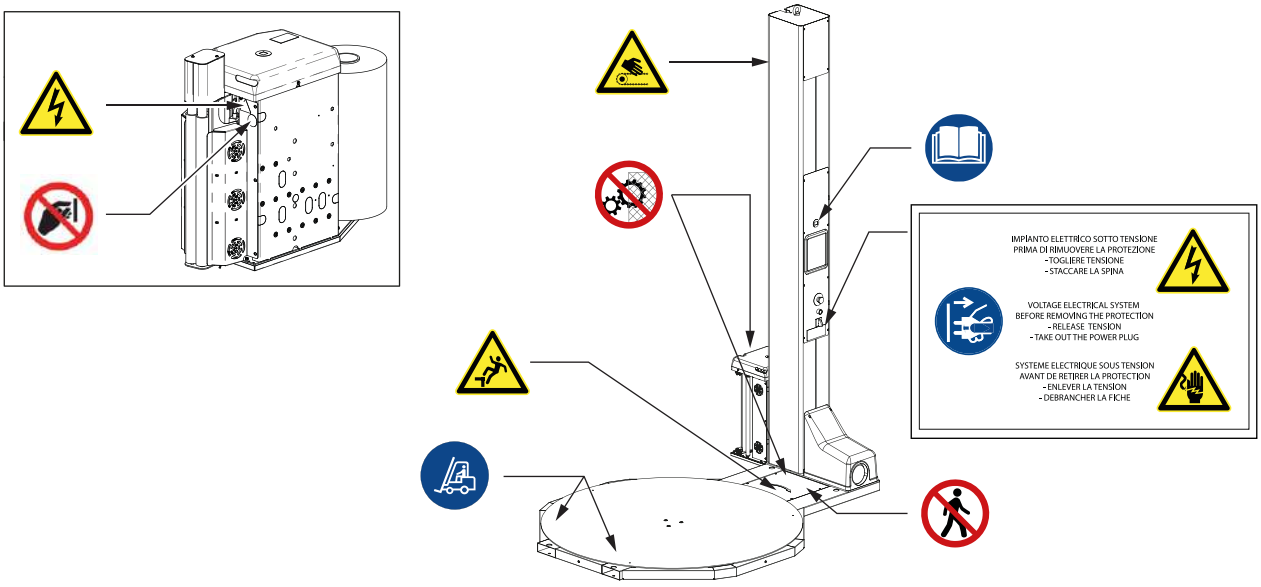
» **See Picture 1 - pag. 9**

The safety signs described in this manual, are located on the machine structure at suitable points and warn of the likelihood of danger due to residual risks.

The adhesive stickers, distinguished by yellow and black bands, warn of areas of risk for operators and so maximum care must be taken where these signs are located.

The adhesive stickers applied to the machine must always be kept clean and legible.

	- High voltage hazard.
	- Cut off power to the machine before opening the electrical panel.
	- It is forbidden to remove fixed safety guards.
	- It is forbidden to transit or remain in areas with moving parts.
	- It is forbidden to touch the electrostatic charge bar.
	- It is obligatory to read the instruction manual carefully before operating the machine.
	- Pick-up point for lifting and handling with a fork lift truck.
	- It is obligatory to switch off the machine and remove the plug before starting any maintenance operations or repairs.
	- Danger of falling from the turntable.
	- Finger crushing hazard due to moving parts.



Picture 1

2.3 WARNINGS OF RESIDUAL RISKS

» See Picture 2 - pag. 10

The machine has been designed and constructed in such a way as to allow the operator to use it safely, eliminating or cutting down to the minimum the possible residual risks by the adoption of safety devices. It has not been possible however to eliminate some risks, listed below, because these are inherent in the way the machine works:

DANGER

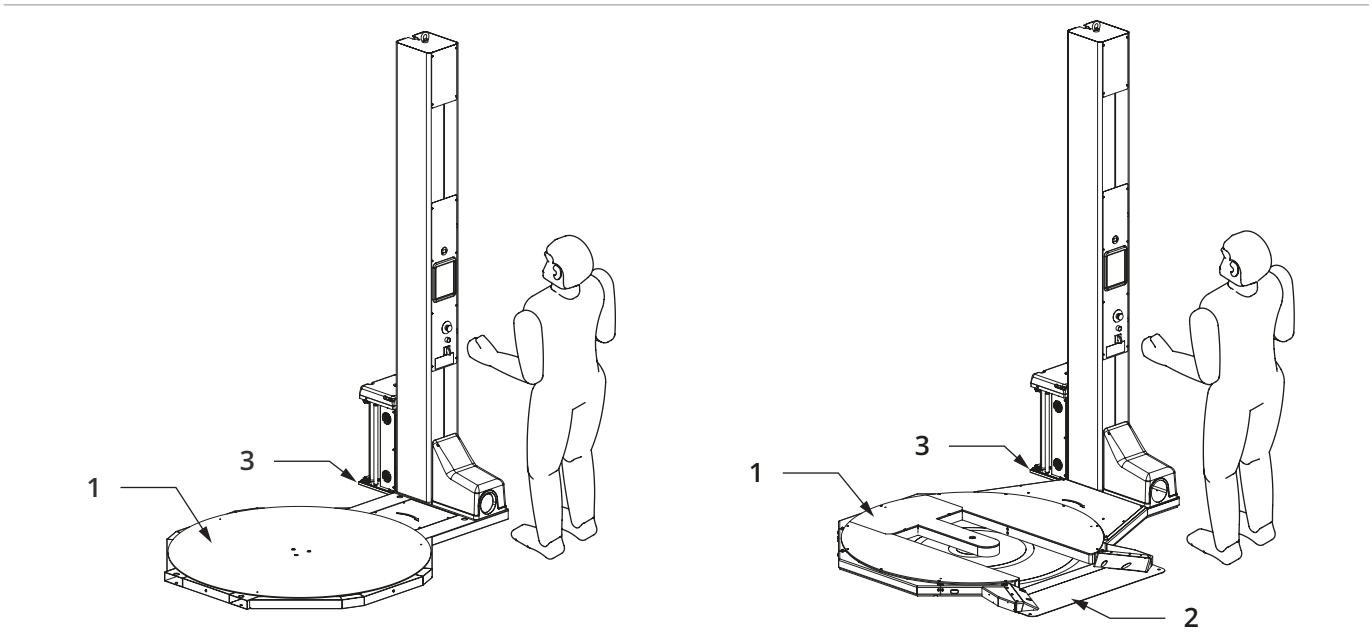
RISK OF GETTING TRAPPED
Never climb onto the turntable (1) while it is moving as you may fall or get caught up in the film winding zone.

DANGER

RISK OF GETTING CRUSHED
Do not stand in the area of rotation of the turntable with transpallet compartment as there is a risk of getting crushed. The operator would risk getting a foot caught between the turntable and the base at point (2).

DANGER

RISK OF GETTING CRUSHED
Do not remain in or pass through the carriage movement area. In the lowering phase there is the risk of impact and being crushed between the carriage safety plate (3) and the ground.



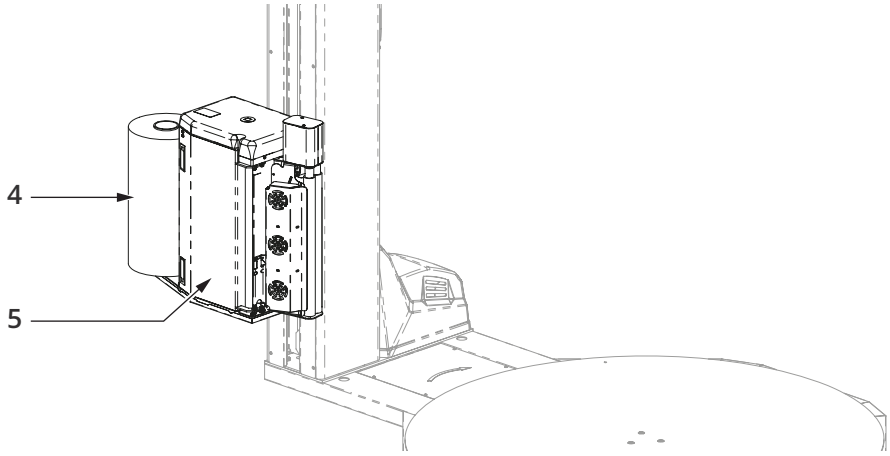
Picture 2

DANGER

RISK OF SHOCK FROM ELECTROSTATIC CHARGE
The film (4) used for packaging can be electrostatically charged during the work cycle, depending on the air humidity, the type of materials to be packaged and the type of flooring being worked on. To avoid dangerous shocks by touching the film, the operator must wear dielectric shoes or use antistatic film. The machine is not suitable for work in environments with an explosive atmosphere.

DANGER

RISK OF ELECTROSTATIC DISCHARGE
If the air film coupling system (5) is present, observe the following precautions:
IT IS FORBIDDEN to touch the electrostatic charging tips if the power supply is connected;
IT IS FORBIDDEN to operate the electrostatic charge bar with wet hands.



Picture 3

2.4 SAFETY DEVICES

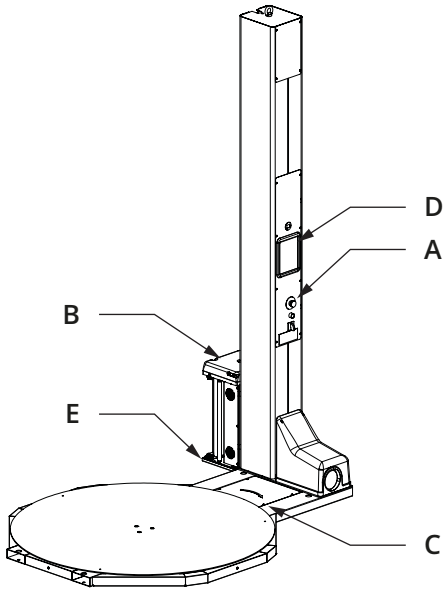
DANGER

The machine has been designed and constructed to allow safe use in all the conditions intended by the manufacturer, isolating the moving parts and live components by the use of SAFETY GUARDS and SAFETY devices to stop the machine.
The manufacturer declines all responsibility for damage or injury to persons, animals or objects caused by tampering with the safety devices.

» See Picture 4 - pag. 12

- Emergency button **(A)** on the electrical panel.
- The top area of the carriage, where the drive transmission gears are, is protected by fixed guard **(B)**.
- The moving parts of the turntable are protected by fixed guard **(C)**.
- The electrical panel is protected by fixed guard **(D)**.
- Under the carriage there is a mobile plate **(E)** interlocked by a safety switch which, if the plate comes into contact with a foreign object it stops the machine and sends the carriage back up for 2 seconds.

N.B: if the machine stops because devices **(E)** has been triggered, the carriage can be sent up to remove the foreign object that triggered it.



Picture 4

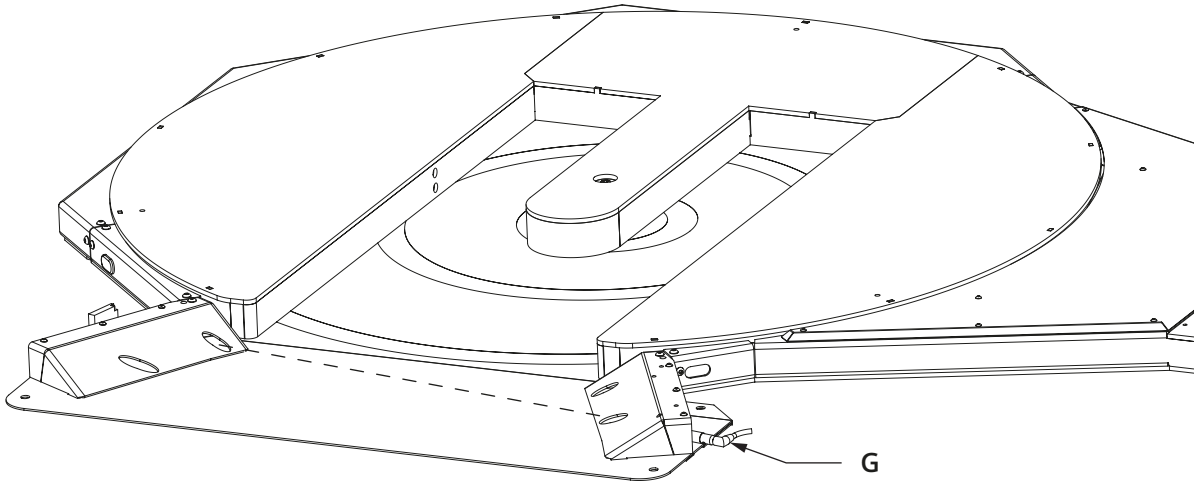
2.4.1 TURNTABLE VERSION WITH TRANSPALLET ACCESS

» See Picture 5 - pag. 13

A photocell **(G)** is located at the entrance to the transpallet access. If this is obscured it prevents the machine from starting or stops it immediately if it is working.

DANGER

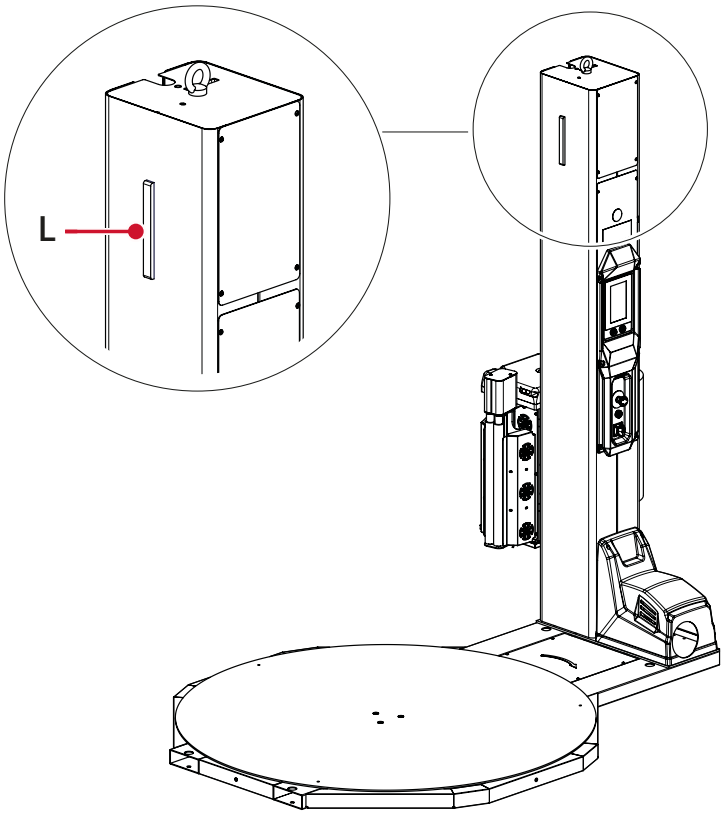
CHECK THE SAFETY PHOTOCELL BEFORE STARTING WORK.



Picture 5

2.4.2 LED (L) INDICATING THE STATUS OF THE MACHINE (IF PRESENT)

SIGNAL		DESCRIPTION
	STEADY GREEN	awaiting wrapping
	FLASHING GREEN	wrapping in progress
	FLASHING BLUE	wrapping paused (STOP pressure or waiting for restart after cover)
	STEADY YELLOW	film breakage detected, in alarm **E09**
	STEADY RED	in alarm



Picture 6

2.5 PERSONAL PROTECTIVE EQUIPMENT (PPE)

The following personal protective devices are necessary for handling, installation, use, maintenance, and dismantling.

	- Compulsory use of gloves.
	- Safety shoes required.
	- Protective clothing required.
	- Compulsory use of helmet.

2.6 TECHNICAL ASSISTANCE

For any orders, assistance or information, the user should contact the Manufacturer quoting the following details:

- Machine model
- Serial number
- Year of manufacture
- Purchase date
- Approximate number of service hours
- Detailed indications regarding a specific operation to be carried out or the fault found.

TECHNICAL ASSISTANCE

see COVER WITH MACHINE IDENTIFICATION

Best performance of our machines can only be maintained and guaranteed if original spare parts are used.

3 MACHINE DESCRIPTION

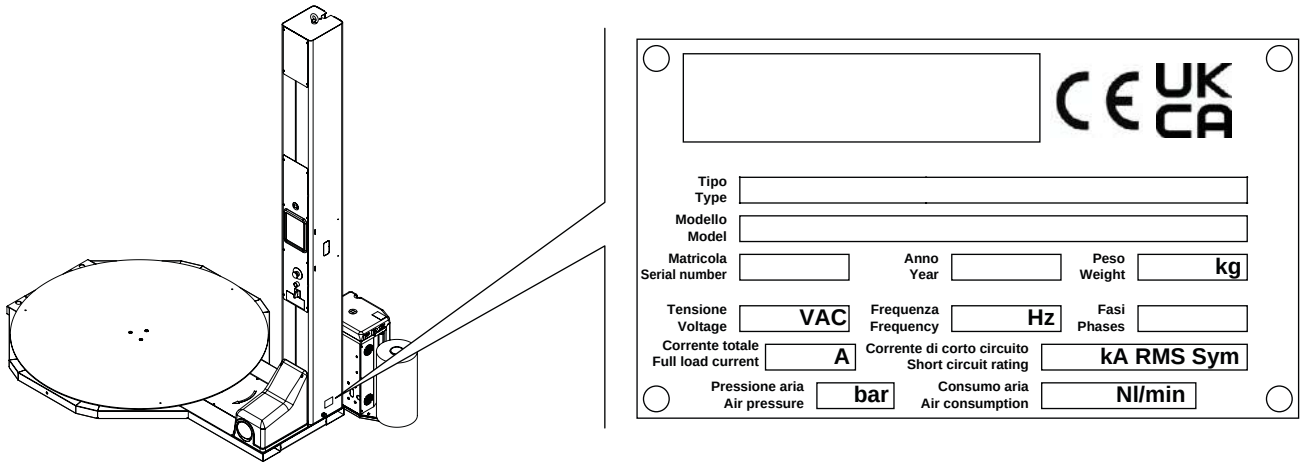
3.1 MANUFACTURER AND MACHINE IDENTIFICATION DATA

see COVER WITH MACHINE IDENTIFICATION

The Identification plate, fixed to the machine chassis, shows the following information:

- Manufacturer's name and address
- Machine type
- Machine model
- Serial number
- Year of manufacture
- Weight (kg)
- Nominal voltage (Un)
- Operating frequency (Hz)
- No. of phases
- Nominal current (In)
- Short circuit current (Icc)
- Air pressure (bar)
- Air consumption (Nl/cycle).

» See Picture 7 - pag. 16



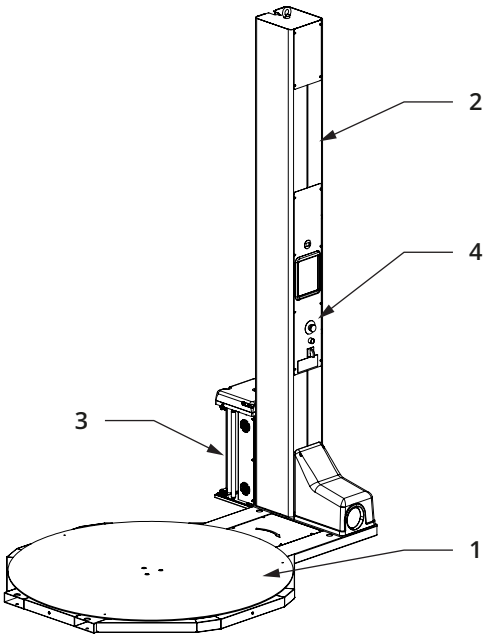
Picture 7

3.2 GENERAL DESCRIPTION

The wrapping machine is a semiautomatic designed to wrap and stabilize palletizable products by means of a stretch film. The **standard** machine is comprised of the following parts:

» See Picture 8 - pag. 17

1) **Turntable**: table on which the palletised product to be wrapped is placed.
2) **Column** along which a wrapping tool.
3) **Roll holder carriage** that moves vertically up and down; the vertical movement of the roll holder carriage, combined with the rotation of the table, wraps the product.
4) **Electric panel**, structure containing the main switch, the control pushbutton panel and the electrical components.



Picture 8

The **standard** machine must work in specific environmental conditions, as indicated in the par. “5.1 PERMITTED AMBIENT CONDITIONS” pag. 67.

For operation in special environmental conditions, the machine may be built with certain features:

Freezer

Machines built with special features for use in environments with low temperatures such as cold rooms (down to -30 ° C).

Stainless Steel

Machines built with special features for use in:

- oxidizing environments, i.e., those with high humidity or when the work areas and the machine itself will be washed;
- corrosive environments, e.g., those with a highly saline atmosphere.

The machine can be equipped with one of the following wrapping carriages:

CARRIAGE TYPE	MODEL NAME
Mechanical brake carriage	**CA2**
Electric brake carriage	**CA4**
Fixed pre-stretch carriage with two rollers (one motor)	**CA6E**
Fixed pre-stretch carriage with three rollers (one motor)	**CA6**
Variable pre-stretch carriage with three rollers (two motors)	**CA7**

Mechanical brake carriage: delivers film during winding and adjusts its application tension. Tension is governed by a roller fitted with a mechanical brake which can be manually adjusted with a knob located on the carriage.

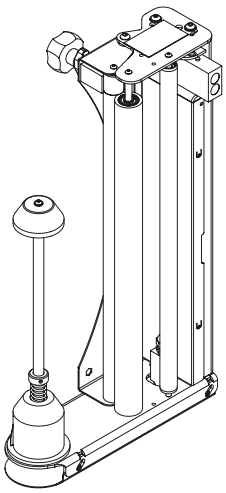
Electric brake carriage: delivers film during winding and adjusts its application tension. Tension is governed by a roller fitted with an electromagnetic brake which can be manually adjusted with a knob located on the carriage.

Fixed pre-stretch carriage with two rollers (one motor) / Fixed pre-stretch carriage with three rollers (one motor): delivers film during wrapping and adjusts its application tension to the load. The carriage can pre-stretch the film by means of a mechanical control generated by a pair of gears (fixed mechanical ratio). Application tension is controlled by a sensor which measures its value.

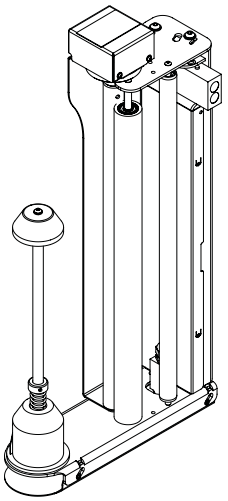
Variable pre-stretch carriage with three rollers (two motors): delivers film during winding and adjusts its application tension to the load. The carriage can pre-stretch the film at a variable ratio which is set from the operator's panel. Application tension is manually. Adjusted and controlled by a sensor which measures its value.

For specific information on the carriages, see par. "3.3 ROLL-HOLDER CARRIAGE" pag. 30.

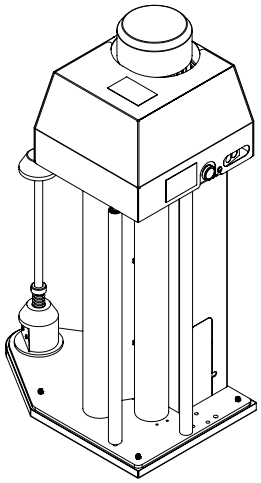
Mechanical brake carriage



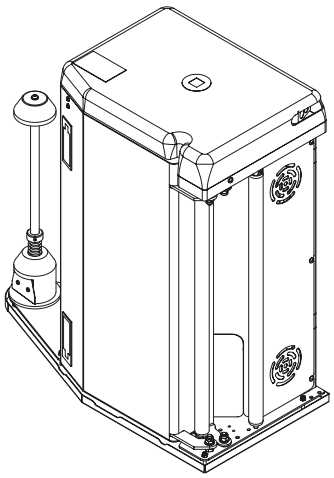
Electric brake carriage



Fixed pre-stretch carriage with two rollers (one motor)



Fixed pre-stretch carriage with three rollers (one motor) / Variable pre-stretch carriage with three rollers (two motors)

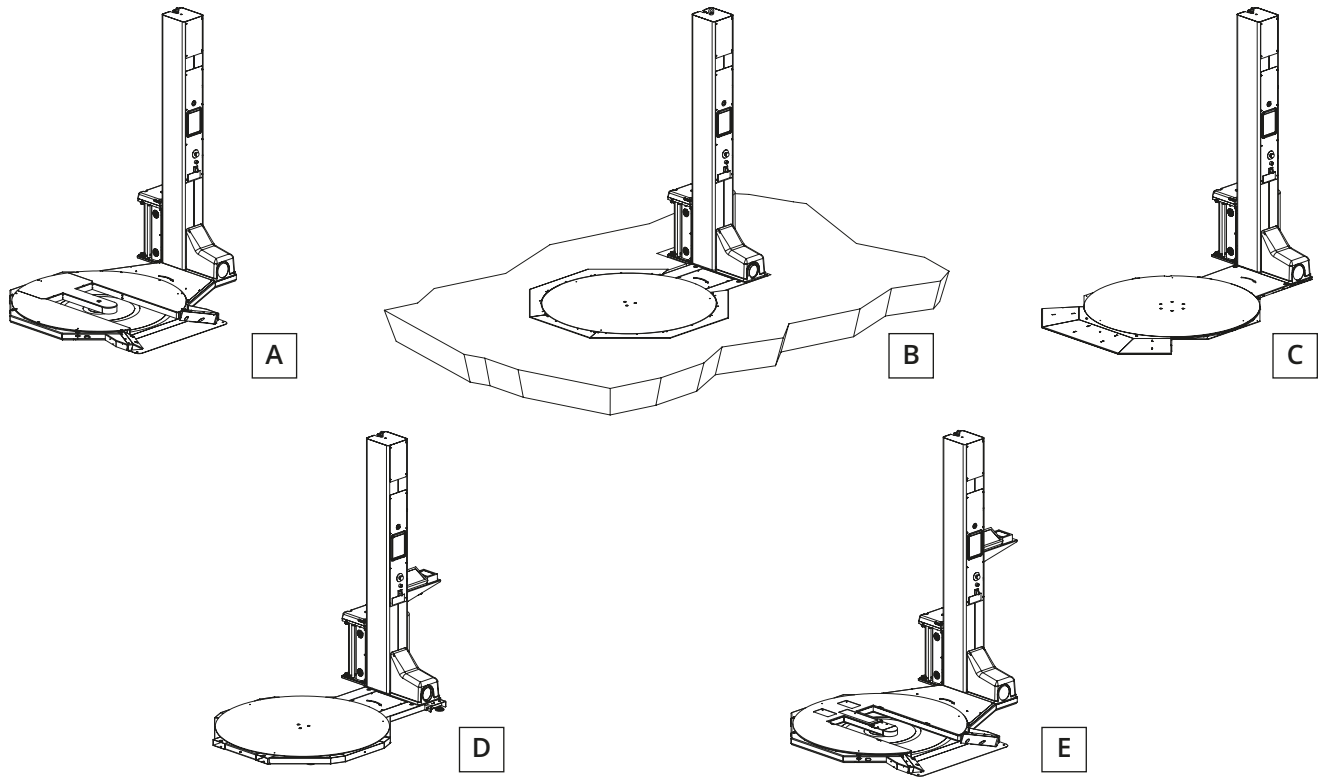


Picture 9 - Wrapping carriages available

» See Picture 10 - pag. 21

The machine may be supplied on request in the following versions:

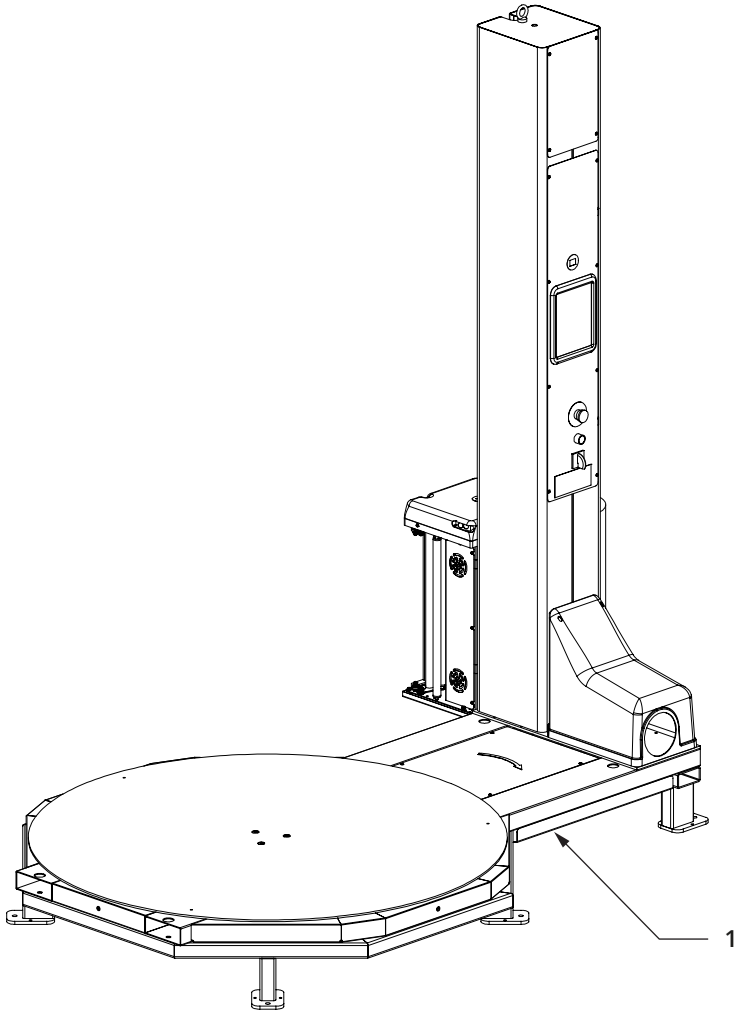
- Open base with low ramp **(A)** to allow a forklift truck (manual or electric transpallet) to enter and place pallets directly onto the turntable
- Recessed **(B)** for facilitating loading and unloading the pallets as the turntable lies flush with the floor. The customer must prepare a suitably sized hole in the floor for containing the machine in its recessed version.
- Low profile base **(C)** that facilitates the pallet loading and unloading procedure since the turntable is about 2.5 cm above the floor.
- Base with weighing **(D)** that allows the product on the plate to be weighed through the loading cells.
- Base with transpallet and weighing compartment **(E)** that allows loading using a forklift by entering the base compartment, climbing a small distance and weighing the products on the plate.



Picture 10

The following optional units can be supplied on request:

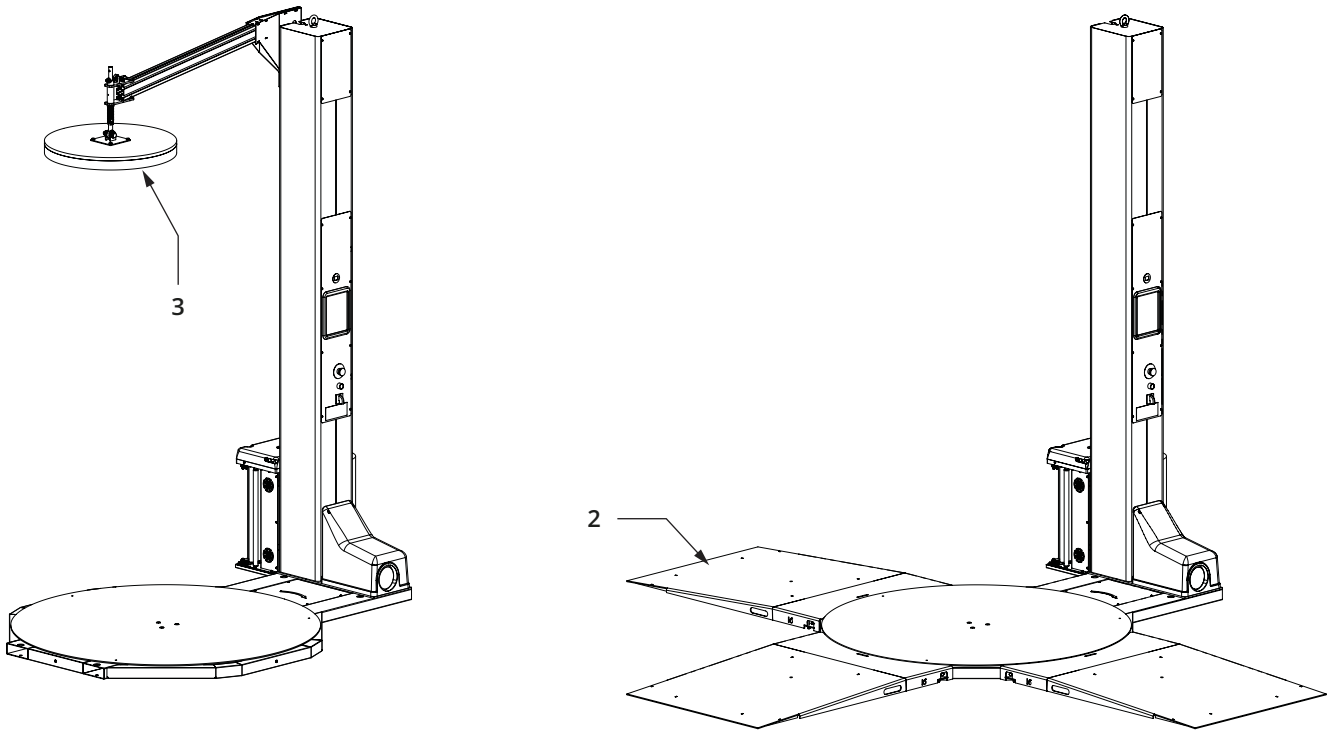
1) **Lifting frame** that raises the machine off the ground. Allows the table to be loaded using a forklift (electric transpallet) allowing the front wheels to enter under the machine.



Picture 11

2) **Access ramp**: to turntable (not for recessed version). This allows a forklift truck (manual or electric transpallet) to place pallets directly onto the turntable.

3) **Presser unit**: is a device that clamps the product on the pallet from above. This device is useful when the product on the pallet is unstable.



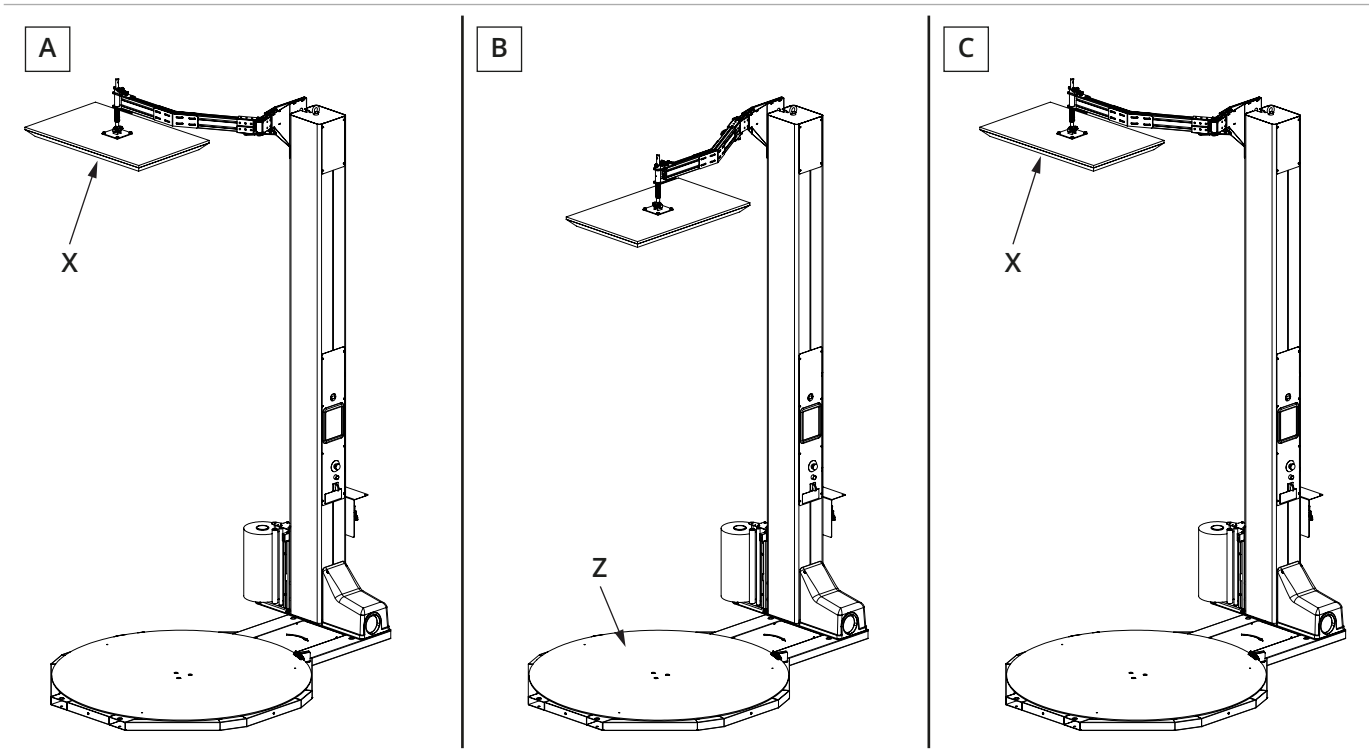
Picture 12

4) **The mobile presser** is a device that blocks the product to be palletised from above. It is useful when the product is unstable and very high so it does not interfere during the product loading phase.

A) Position the product when the presser **(X)** is rotated outside the dimensions of the table.

B) Before starting the wrapping cycled, the pressing plate **(X)** must be positioned in axis with the table **(Z)**.

C) After the wrapping cycle, the pressing plate **(X)** must be rotated outside the edge of the machine before removing the pallet from the turntable, to avoid impacts to the presser.



Picture 13

3.2.1 OPTIONAL COMBINATIONS AND CARRIAGE

	FS325	FS335 / FS380	FS2000
Mechanical brake carriage	X	X	X
Electric brake carriage		X	X
Fixed pre-stretch carriage with two rollers (one motor)		X	
Fixed pre-stretch carriage with three rollers (one motor)		X	X
Variable pre-stretch carriage with three rollers (two motors)		X	X
Cut		X	X
Strip cut		X	X
Strip tightener	X	X	X
Automatic strip tightener		X	X
Bubble wrap		X	X
Mesh roller	X	X	X
Film consumption count	X	X	X
Ramp	X	X	X
Lifting frame	X	X	X
Template	X	X	X
Carriage guide	X	X	X
Presser		X	X
Door window		X	X
Cut / Blow			X
LED signalling			X
Remote Control / Radio Remote Control		X	X

3.2.2 TABLE OPTIONAL EQUIPMENT

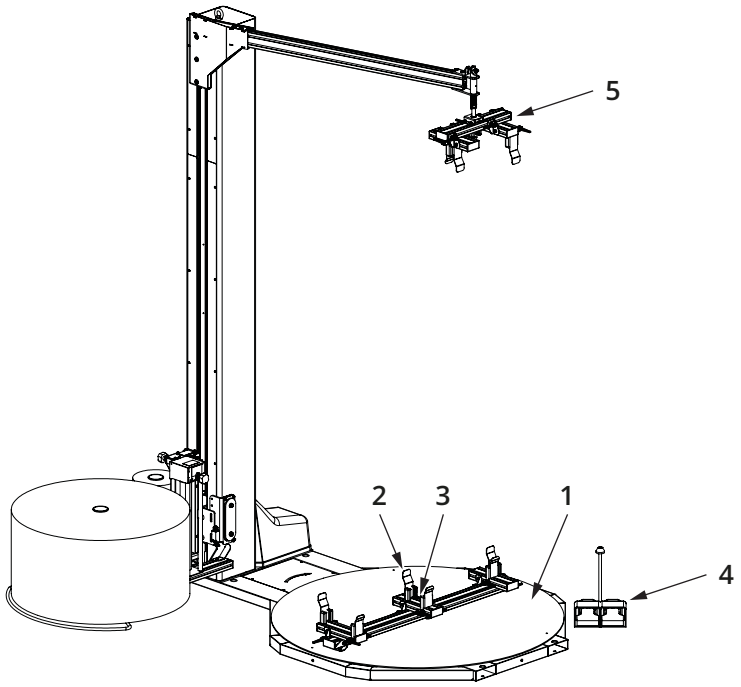
3.2.2.1 DOOR WINDOW APPLICATION

This optional device is for packaging doors, shutters, windows, all thin objects and those with low weight, manually loading the product in the containment grippers.

Version with grippers on the plate

Manually position the product to be wrapped above the profile located on the turntable **(1)**, after setting the width of the product to be wrapped, moving the grippers **(2)** using the levers **(3)**. The operator must keep the product still and press the pedal **(4)** to lower the upper grippers **(5)** and lock the product in place. Attach the stretch film and start the wrapping cycle.

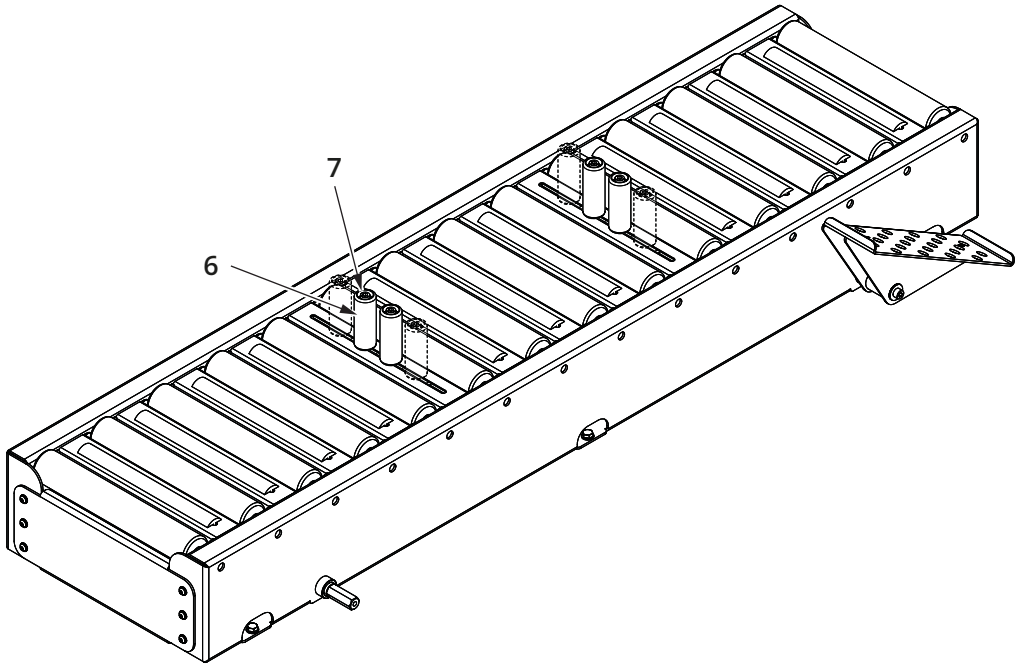
At the end of the cycle, the machine stops, maintaining the presser with the upper grippers **(5)** in position. The operator must cut the stretch film, hold the wrapped product, press the pedal **(4)** to lift the upper grippers **(5)** and remove the wrapped product.



Picture 14

Version with roller unit on the plate

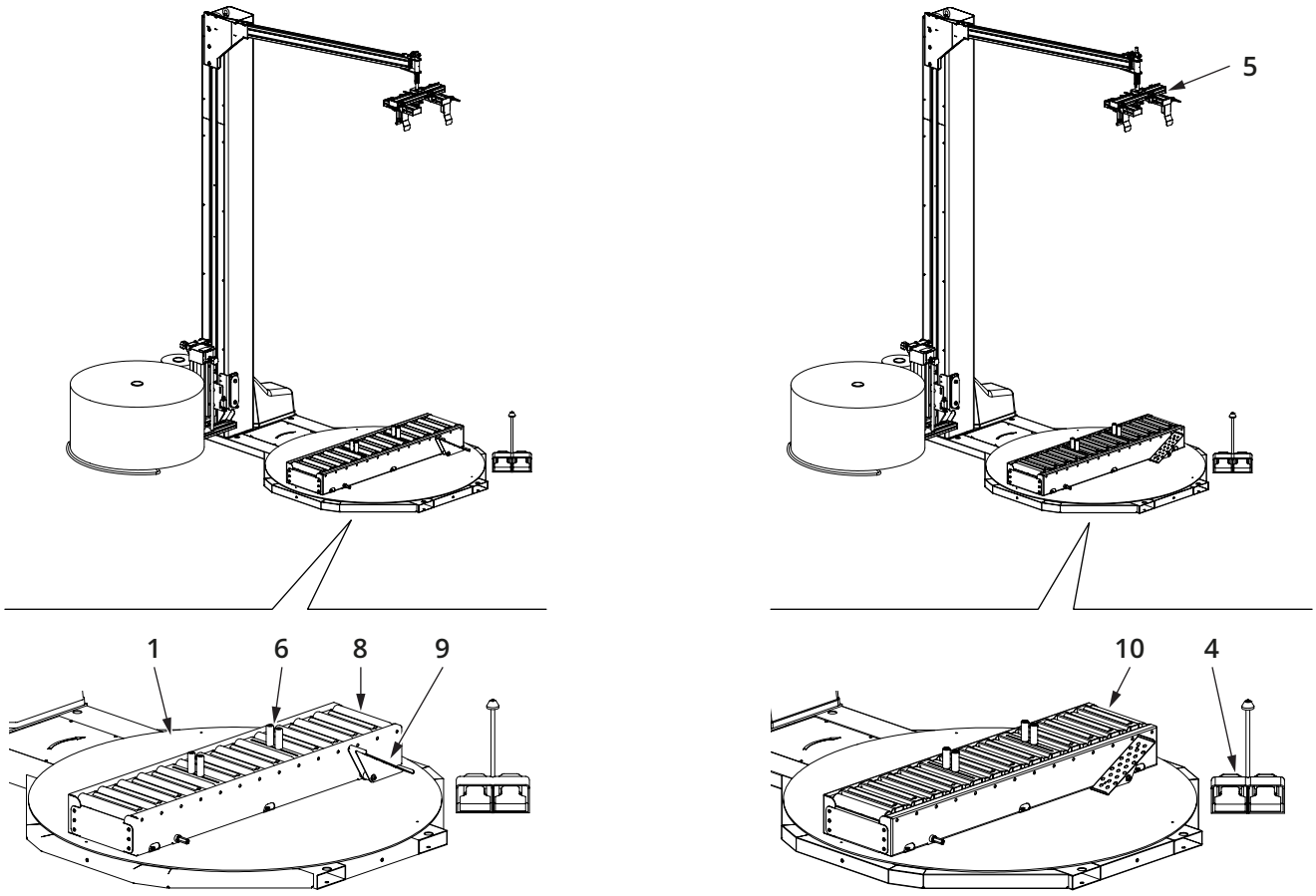
Before starting, check the position of the support pins **(6)** based on the dimensions of the product to be wrapped. If necessary, move them, loosening the screw **(7)** and then tighten it in the desired position.



Picture 15

Slide the product to be wrapped above the roller **(8)** located on the turntable **(1)** and position it in the middle of the pins **(6)**. The operator must keep the product still and press the pedal **(9)** to raise the lifter **(10)**, then press the pedal **(4)** and to lower the upper grippers **(5)** and lock the product in place. Attach the stretch film to the product and start the wrapping cycle.

At the end of the cycle, the machine stops, maintaining the presser with the upper grippers **(5)** in position. The operator must cut the stretch film, hold the wrapped product, press the pedal **(4)** to lift the upper grippers **(5)** and remove the wrapped product.



Picture 16

3.2.2.2 CARRIAGE GUIDE (ROLL CONTAINER)

This device helps guide and maintain position during "roll container" carriage wrapping **(1)**.

It is made up of two guides **(2)** attached to the plate that hold the carriage wheels on the side and a system **(3)** that blocks their exit during rotation of the turntable.

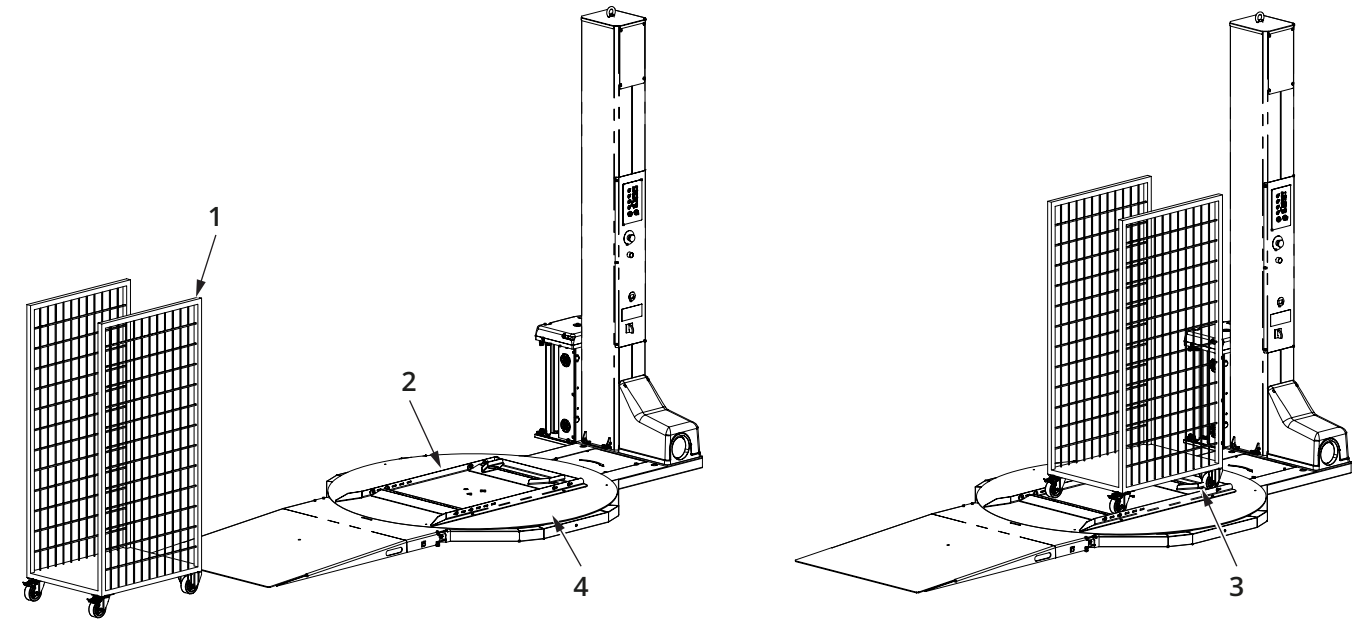
A) The operator pushing the carriage along the guides **(2)** until it reaches the system **(3)**.

B) Hook the stretch film and start the cycle.

C) Once the wrapping cycle is complete, cut the stretch film and remove the carriage from the guides **(2)**.

WARNING

Using this system requires a very low rotation speed of the turntable (4) and a very low film tension to prevent the carriage (1) from escaping from the guides (2).



Picture 17

3.3 ROLL-HOLDER CARRIAGE

Mechanical brake carriage

» See Picture 18 - pag. 30

With this carriage version, the application tension of the film on the pallet can be adjusted.

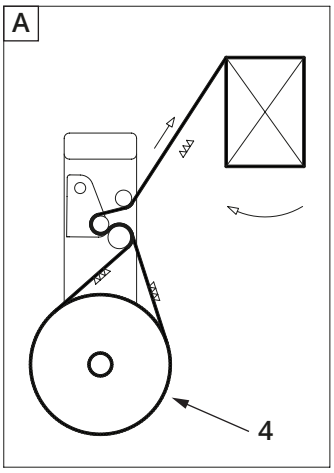
The mechanical brake carriage consists of an idle rubberised roller **(1)** and a roller **(2)**, equipped with a mechanical brake.

The knob **(3)** is used to adjust the action of the brake and, consequently, the tension of the film.

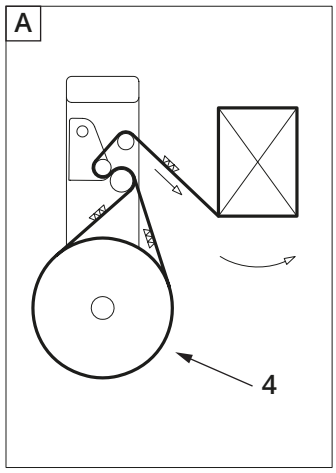
Upon starting, the film must be loaded onto the carriage as follows.

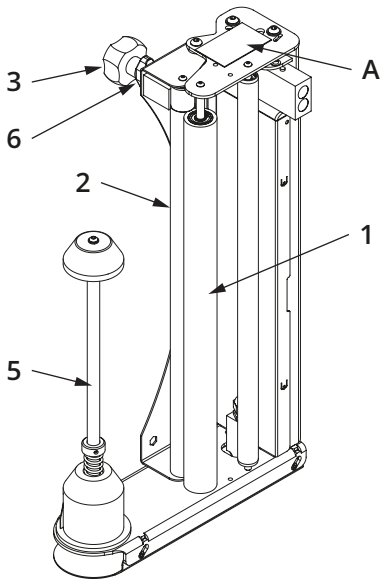
- Put the carriage into the down position to make fitting the roll easier.
- Press the emergency button to stop the machine.
- Push the roll **(4)** onto the centre pin **(5)**.
- Insert the film between the rollers following the path indicated in figure **(A)**, the symbol with the triangles identifies the side of the film to which the bonding agent (if present) is applied.
- Diagram **(A)** is an adhesive sticker also affixed to the carriage.
- Tightening the knob **(3)** increases the tension of the film, loosening decreases it. Once the proper adjustment has been found, the position of the knob **(3)** is set by tightening the lock nut **(6)**.
- Reset the alarm and re-enable the machine.

Clockwise plate rotation



Anti-clockwise plate rotation





Picture 18

Electric brake carriage

» See Picture 19 - pag. 31

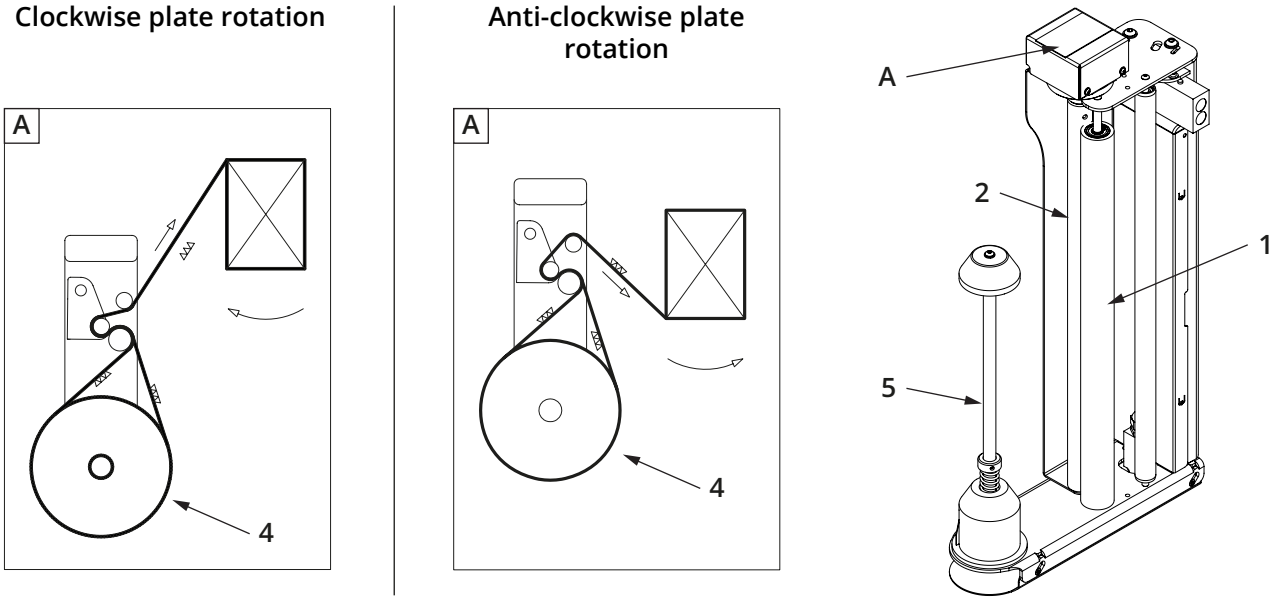
With this carriage version, the application tension of the film on the pallet can be adjusted.

The electric brake carriage consists of an idle rubberised roller **(1)** and a roller **(2)** equipped with an electromagnetic brake.

Setting **F13-16 (F32)** functions in the control panel is used to adjust the action of the brake and, consequently, the tension of the film.

Upon starting, the film must be loaded onto the carriage:

- Put the carriage into the Down position to make fitting the roll easier.
- Press the emergency button to stop the machine.
- Push the roll **(4)** onto the centre pin **(5)**.
- Insert the film between the rollers following the path indicated in figure **(A)**, the symbol with the triangles identifies the side of the film to which the bonding agent (if present) is applied.
- Diagram **(A)** is also attached to the carriage.
- Reset the alarm and re-enable the machine.



Picture 19

Fixed pre-stretch carriage with two rollers (one motor)

» See Picture 20 - pag. 33

With this carriage version, the application tension of the film on the pallet.

This carriage can pre-stretch the film according to fixed ratios determined by interchangeable gears.

The pre-stretch ratios are:

- **150%** (1 metre of film is pre-stretched to a length of 2.5 metres);
- **200%** (1 metre of film is pre-stretched to a length of 3.0 metres);
- **250%** (1 metre of film is pre-stretched to a length of 3.5 metres);
- **300%** (1 metre of film is pre-stretched to a length of 4.0 metres).

The carriage is fitted with a sensor **(4)**, connected to the outlet roller, which measures the tension of the film applied to the pallet.

A specific electronic card integrates the signal of the sensor **(4)** with the adjustment set with setting **F13-16 (F32)** functions in the control panel in order to dynamically control the speed of the pre-stretch roller drive motor and thus the film tension.

The carriage is fitted with a gearmotor which drives three rubber-surfaced rollers **(1)** and **(2)** by means of toothed gearing. The different transmission ratios generate different speeds of the rollers **(1)** and **(2)** creating the pre-stretch action. The carriage also features a set of idle rollers which are used to increase the winding angle of the film on the rubber-coated rollers.

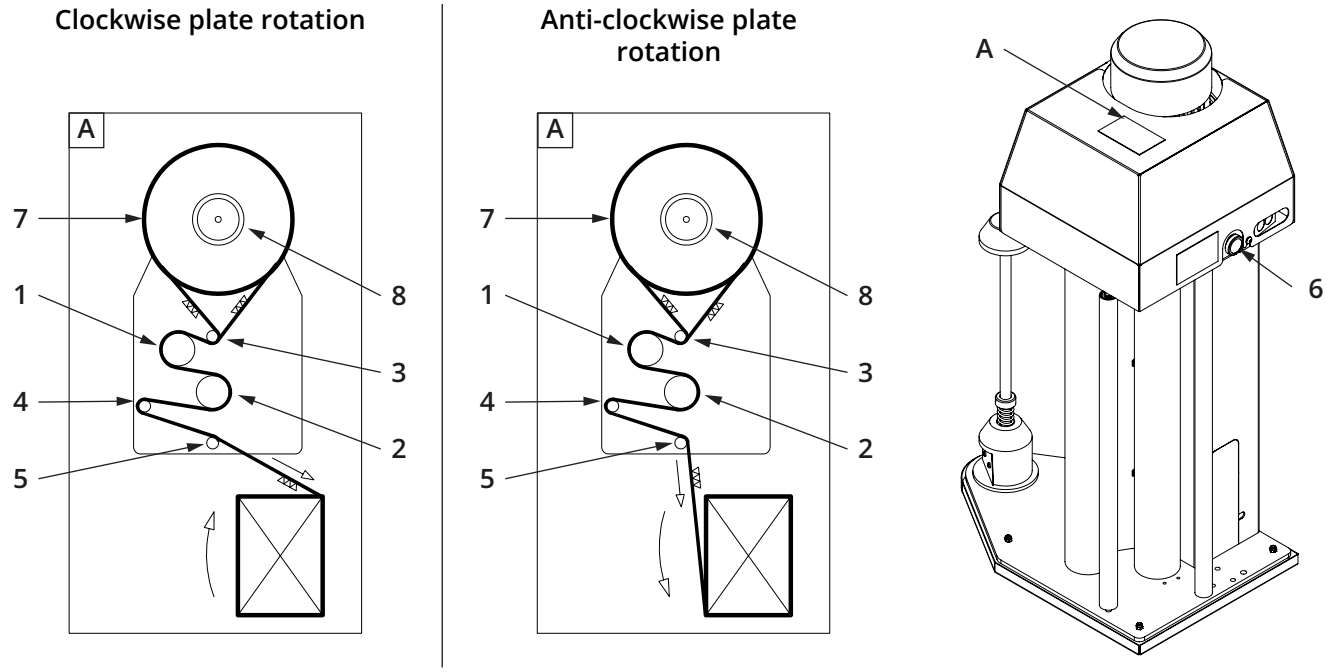
Upon starting, the film must be loaded onto the carriage.

- Put the carriage into the Down position to make fitting the roll easier.
- Press the emergency button to stop the machine.
- Push the roll **(7)** onto the centre pin **(8)**.
- Open the door and insert the film between the rollers following the path indicated in figure **(A)**, the symbol with the triangles identifies the side of the film to which the bonding agent (if present) is applied.
- Diagram **(A)** is also attached to the carriage.
- Reset the alarm and re-enable the machine.

To facilitate insertion between the rollers, we recommend squeezing the strip of film into the shape of a rope.

When the reel is in, thread the film behind the first idle roller **(3)** and pull it out at least 50 cm. Thread the rope between the rollers **(1)** and **(2)** at the top of the carriage (at the height of the reduced roller pin) and push it inwards until it comes out behind roller **(2)**; when it extends far enough out to be gripped, simply pull it outwards and arrange it along the last stretch of its route, around the dancer **(4)** and behind the last idle roller **(5)**.

Now, and in this order, use one hand to press the dispenser button **(6)** and your other hand to pull the film.



Picture 20

Fixed pre-stretch carriage with three rollers (one motor)

» See Picture 21 - pag. 35

With this carriage version, the application tension of the film on the pallet.

This carriage can pre-stretch the film according to fixed ratios determined by interchangeable gears.

The pre-stretch ratios are:

- **150%** (1 metre of film is pre-stretched to a length of 2.5 metres);
- **200%** (1 metre of film is pre-stretched to a length of 3.0 metres);
- **250%** (1 metre of film is pre-stretched to a length of 3.5 metres);
- **270%** (1 metre of film is pre-stretched to a length of 3.7 metres);
- **300%** (1 metre of film is pre-stretched to a length of 4.0 metres).

The carriage is fitted with a sensor **(4)**, connected to the outlet roller, which measures the tension of the film applied to the pallet.

A specific electronic card integrates the signal of the sensor **(4)** with the adjustment set with setting **F13-16 (F32)** functions in the control panel in order to dynamically control the speed of the pre-stretch roller drive motor and thus the film tension.

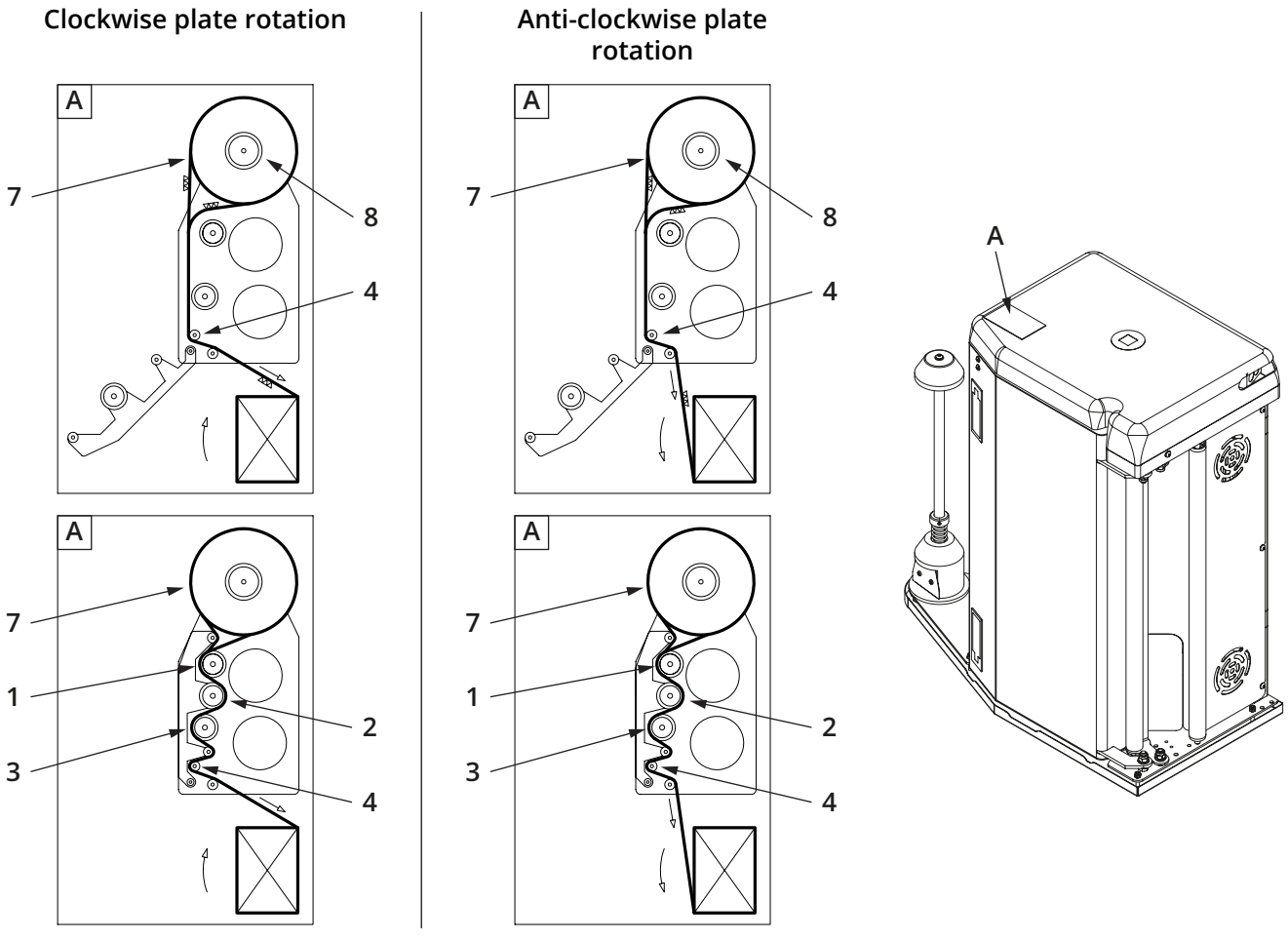
The carriage is fitted with a gearmotor which drives three rubber-surfaced rollers **(1)**, **(2)** and **(3)** by means of toothed gearing.

The different transmission ratios generate different speeds of the rollers **(1)**, **(2)** and **(3)** creating the pre-stretch action.

The carriage also features a set of 3 idle rollers which are used to increase the winding angle of the film on the rubber-coated rollers.

Upon starting, the film must be loaded onto the carriage.

- Put the carriage into the Down position to make fitting the roll easier.
- Push the roll **(7)** onto the centre pin **(8)**.
- Open the door, the machine stops safely, and insert the film between the rollers according to the path illustrated in diagram **(A)**. The symbol with the triangles identifies the side of the film on which the adhesive is applied (if present).
- Diagram **(A)** is also attached to the carriage.
- Close the door making sure it is correctly secured.
- Reset the alarm and re-enable the machine.



Picture 21

Variable pre-stretch carriage with three rollers (two motors)

» See Picture 22 - pag. 37

With this carriage version, the tension with which the filmis applied to the pallet.

This carriage allows pre-stretching the film. Pre-stretch value can be set between **120%** and **400%**.

The carriage is fitted with:

- a sensor **(4)**, connected to the outfeplied to the pallet;
- two gearmotors which drives the rubber-coated roller **(1)**, **(2)** and **(3)** by means of toothed gearing;
- three idle rollers which are used to increase the winding angle of the film on the rubber-coated rollers.

A specific electronic card integrates the signal of the sensor **(4)** with the adjustment set with setting **F13-16 (F32)** functions in the control panel in order to dynamically control the speed of the pre-stretch roller drive motor and thus the film tension.

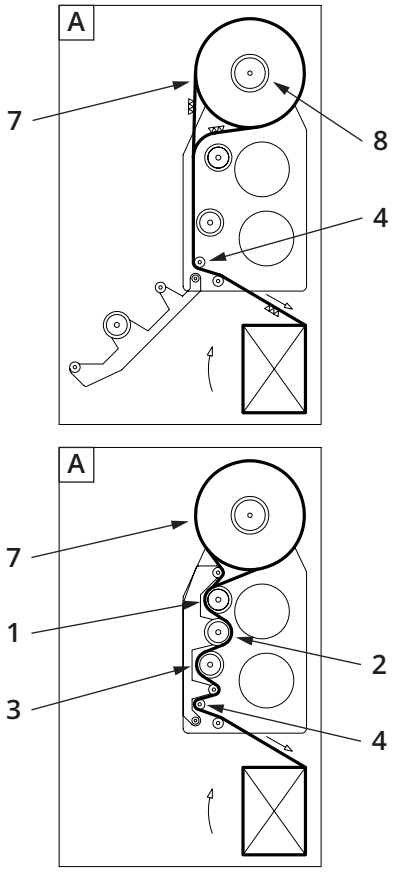
Can be adjusted using **F17-20 (F33)** functions in the control panel controls the rotation of the roller **(1)** and **(2)**.

The speed difference generated between the rubber-coated rollers **(1)**, **(2)** and **(3)** creats the pre-stretch action.

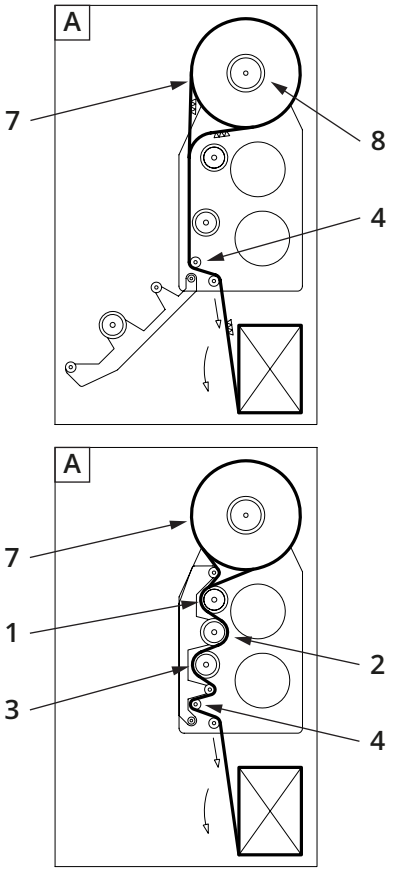
Upon starting, the film must be loaded onto the carriage.

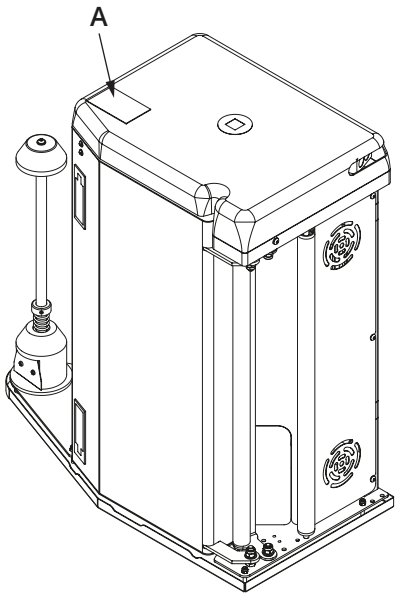
- Put the carriage into the down position to make fitting the roll easier.
- Push the roll **(7)** onto the centre pin **(8)**.
- Open the door, the machine stops safely, and insert the film between the rollers according to the path illustrated in diagram **(A)**. The symbol with the triangles identifies the side of the film on which the adhesive is applied (if present).
- Diagram **(A)** is also attached to the carriage.
- Close the door making sure it is correctly secured.
- Reset the alarm and re-enable the machine.

Clockwise plate rotation



Anti-clockwise plate rotation





Picture 22

3.3.1 OPTIONAL EQUIPMENT

3.3.1.1 MESH ROLLER

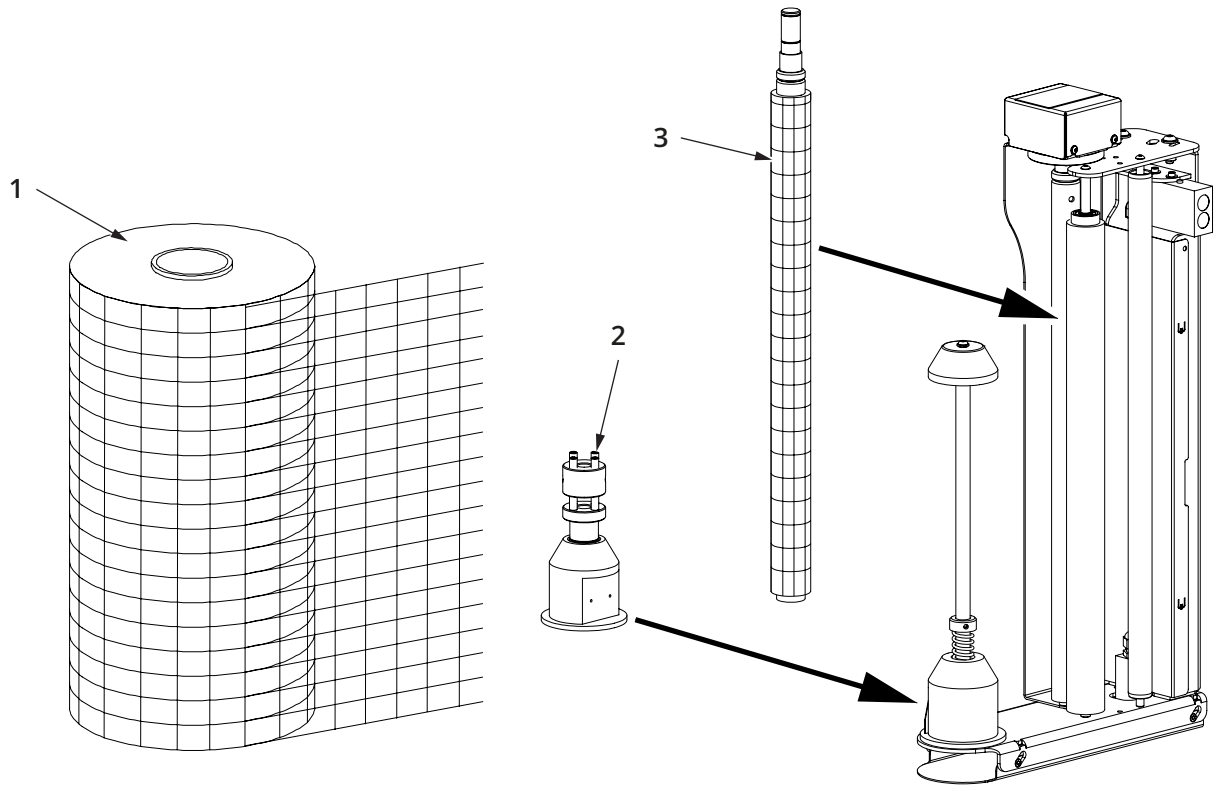
The mesh roller allows the products to be wrapped using rolls of polyethylene mesh **(1)**.

This material is highly indicated for wrapping products that need ventilation. Ventilation is ensured even with a high number of layers necessary to ensure product stability.

The mesh roller keeps the mesh tight between the product and the roll, without stretching it.

The optional mesh roller is comprised of a roll holder shaft **(2)** with a braking system plus a roller **(3)** with a special external finish, both of which are mounted in place of the standard ones.

The roll holder shaft **(2)** brakes the rotation of the roll **(1)** to ensure greater grip of the roller **(3)** on the mesh. The braked roller, grips the links of the mesh and tightens it towards the product.



Picture 23

3.3.1.2 AUTOMATIC CUT

The automatic cycle can be used when the machine is equipped with the cutting unit, for cutting the film at the end of the cycle.

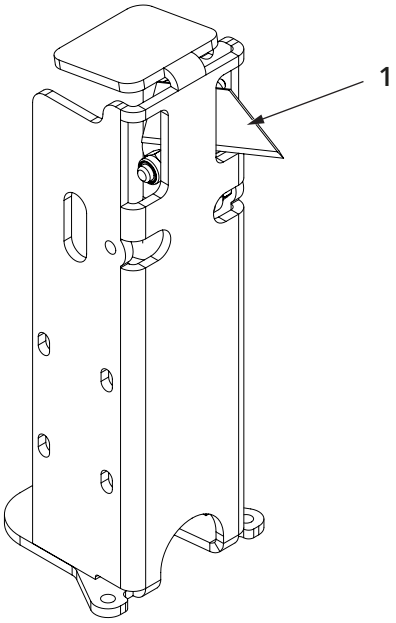
The cutting unit, with the blade **(1)**, includes the film coming out of the carriage and can also be installed after purchase of the machine.

During the last rotation, the roll holder carriage blocks the rollers and after the time set with **F27**, the machine stops, tightening the film, which is cut by the blade the number of times set with **F26**.

After cutting, the machine starts again, the carriage freely dispenses the film for a time set with **F28**, after which is blocks the rollers again, causing the film to break.

WARNING

The optional AUTOMATIC CUTTER and STRIP CUTTER cannot be installed on the machine at the same time; one installation excludes the other.

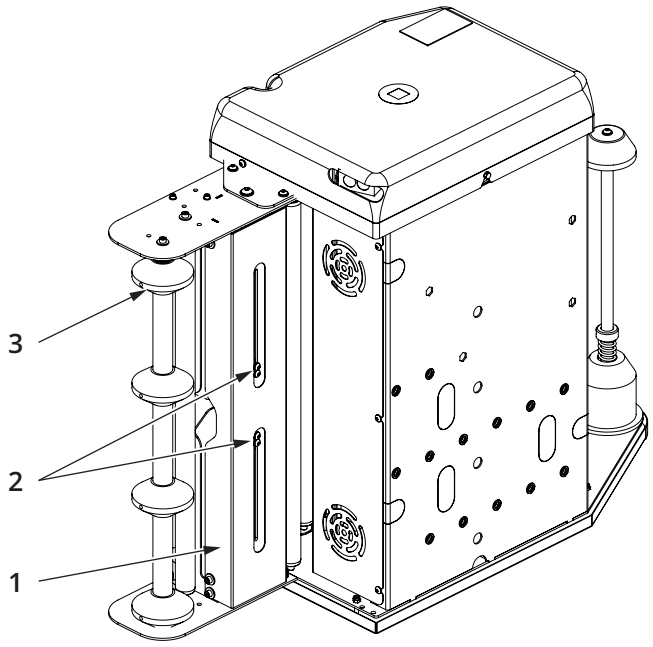


Picture 24

3.3.1.3 STRIP CUT

The strip cutting device can cut the film in 3, 4, or 5 strips, used to stabilize products that need air (e.g., flowers, fruit, etc.) using a common stretch film.

The frame **(1)** has 2, 3, or 4 blades **(2)** that cut the film in the position of the convex wheels **(3)** that keep the stretch film strips separated.



Picture 25

Using the functions that can be set from the control panel, it is possible to configure the wrapping cycle as follows:

F65 = enable band cutting in ascent/descent (note: cutting is normally only performed if the photocell “sees” the product or, in case of photocell exclusion, until the carriage height is less than **F12**).

F66 = enabling of band film cutting even in the high turns: it is used to extend the cut even when the photocell does not “see” the product, that is, when it is performing **F6** high turns. In this case, the overrun of the film **(F09)** should preferably be adjusted to 0.

F67 = blade activation delay (commencing from the start of the platform), in seconds.

F68 = blade activation delay in descent (starting from starting of the carriage descent), in seconds.

F69 = blade deactivation delay (in any condition, ascent or descent), in seconds.

- ascending, an amount of time (**F69** = X seconds) after reaching the top of the product, cutting is disabled to move on to the entire strip.
- during shutdown, an amount of time (**F69** = X seconds) after the rotation starts to slow down, cutting is disabled, allowing the last segment of stretch film to exit unsectioned from the pre-stretch carriage for easier control.

If you want to wrap the top part of the product by overflowing the film beyond the top of the product itself, it is recommended to do so with the stretch film not cut into strips, the stretch film must be one entire strip; so, set **F66** = **0**.

If, on the other hand, you do not want to overflow the top (**F09** = **0**), it is also possible to cut the film into strips during the reinforcement rotations at the top, including cutting during this phase (**F66** = **1**).

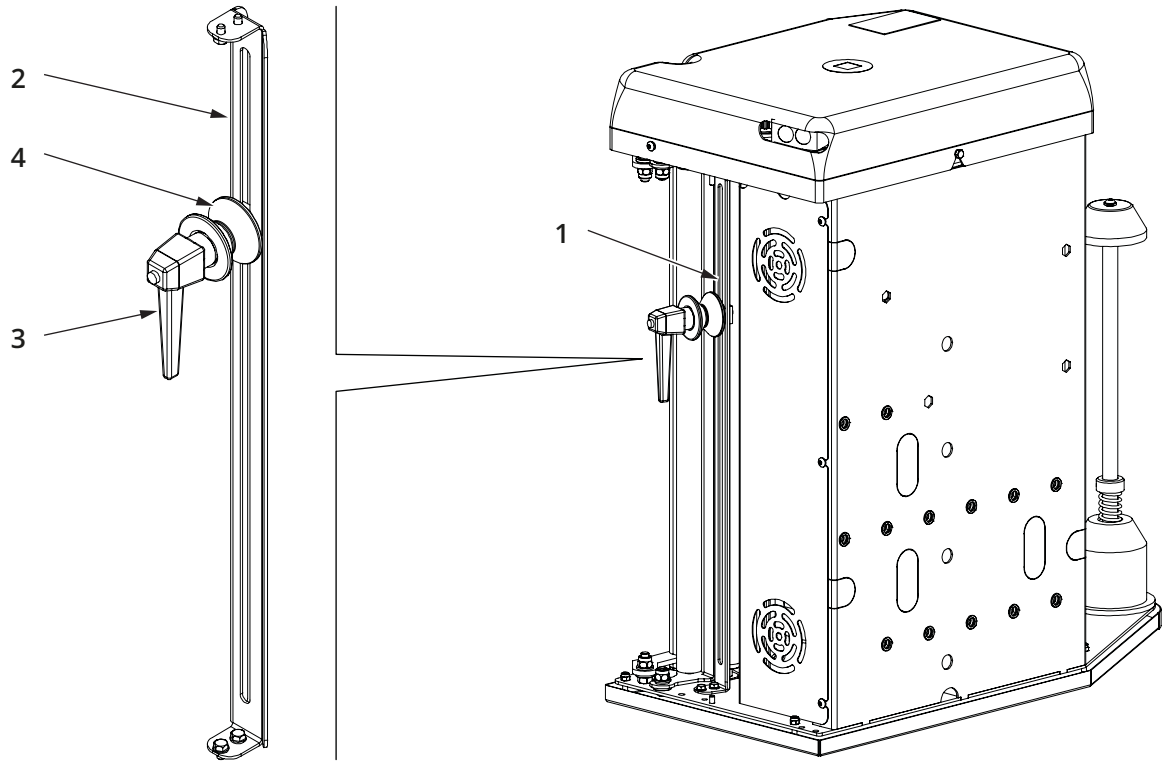
WARNING

The optional AUTOMATIC CUTTER and STRIP CUTTER cannot be installed on the machine at the same time; one installation excludes the other.

3.3.1.4 STRIP TIGHTENER (MANUAL VERSION)

The manual strip tightener **(1)** reduces the width of the film to one string and reinforces binding of the product. It can also be installed later, attaching it as in the image below.

The device is comprised of a frame **(2)** in which the grooved wheel **(4)** slides, with the help of a lever **(3)**, reducing the width of the stretch film.

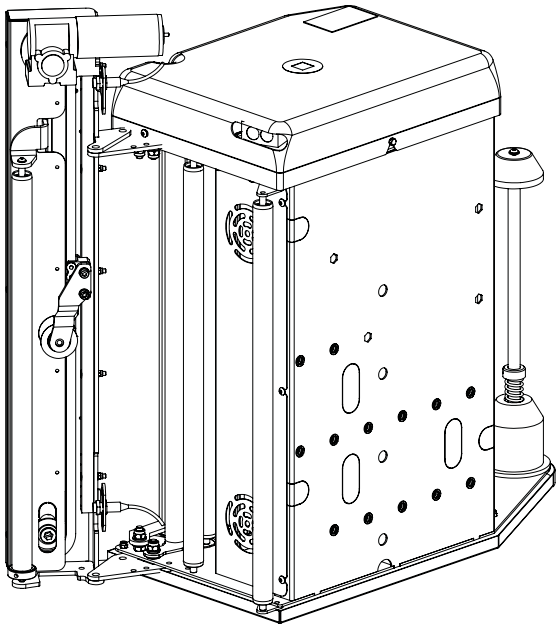


Picture 26

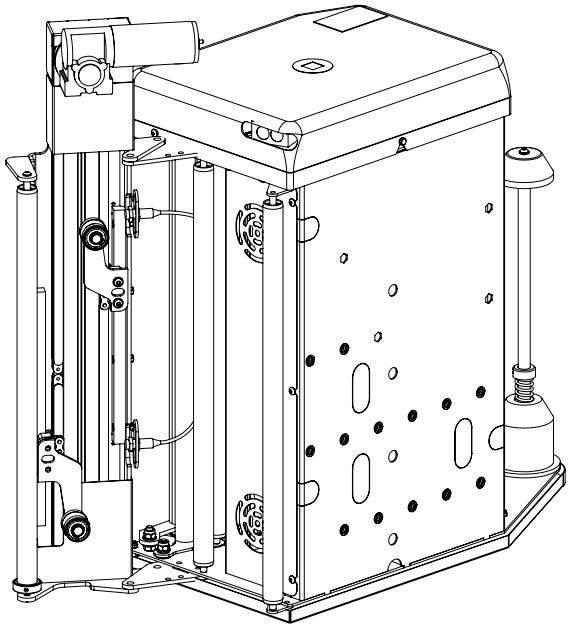
3.3.1.5 STRIP TIGHTENER (AUTOMATIC VERSION)

The automatic strip tightener reduces the width of the film to one string and reinforces binding of the product.

SINGLE AUTOMATIC STRIP TIGHTENER



DOUBLE AUTOMATIC STRIP TIGHTENER



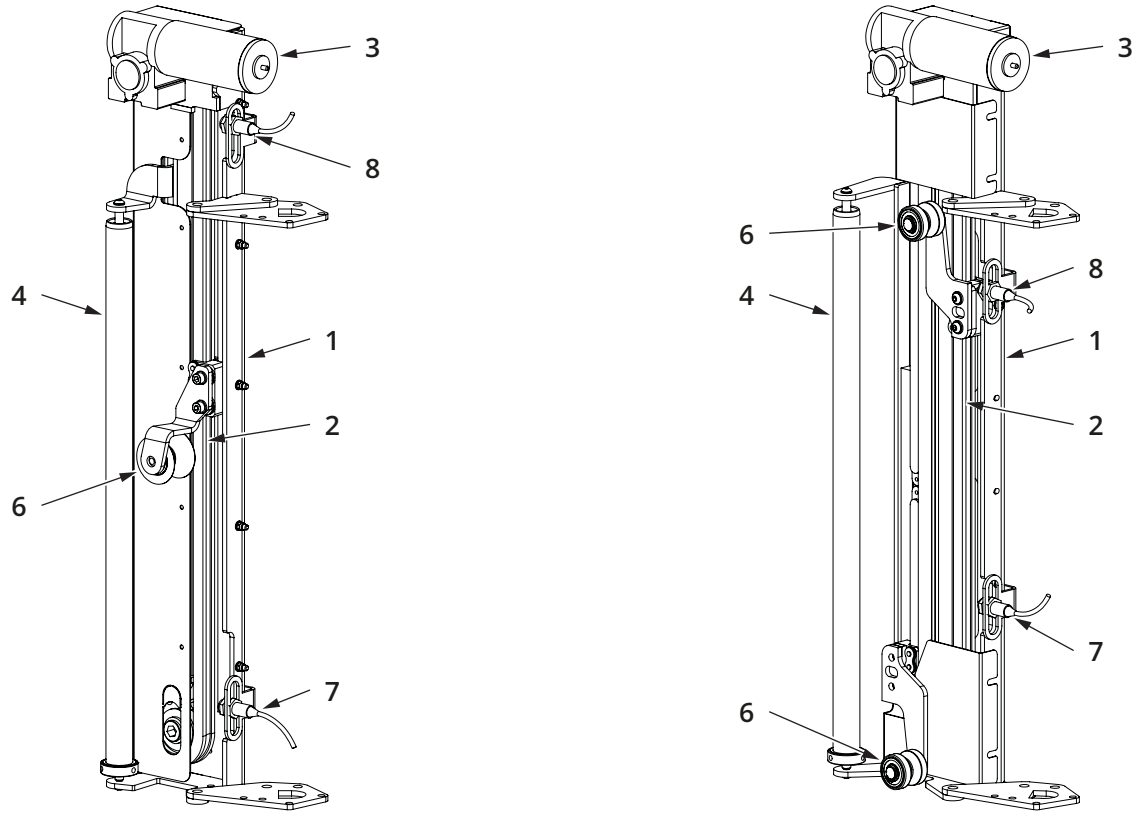
Picture 27

The device is made up of a frame **(1)** with a chain ring **(2)** controlled by a gear motor **(3)**. The same frame has an idle roller **(4)** that forces the film to follow a certain path; see diagram **(A)**. Attached to the chain **(2)** is a grooved idle wheel **(6)** (or two in the case of a double strip tightener).

Operating the gear motor **(3)**, the chain **(2)** moves the grooved idle wheel **(6)** (or the two wheels in the case of the double strip tightener) vertically. When it encounters the strip of stretch film, it reduces the film width to a string.

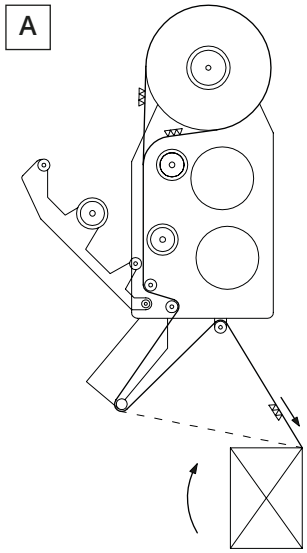
The frame **(1)** has two sensors:

- sensor **(7)** stops the grooved wheel **(6)** in the bottom position that corresponds to the strip of stretch film reduced to a string.
- sensor **(8)** stops the grooved wheel **(6)** in the top position that corresponds to the extended strip of stretch film.



Picture 28

Open the door andinsert the film between the rollers following the path indicated in figure **(A)**, the symbol with the triangles identifies the side of the film to which the bonding agent (if present) is applied.



Picture 29

Through the functions that can be set from the control panel it is possible to:

- Exclude **(F34=0)** or include the device at the beginning of the cycle and choose the number of turns **X** at the base of the product **(F34=X)**.
- Exclude **(F35=0)** or include the device for the entire ascent of the carriage **(F35=1)**;

depending on the model, the following additional options may be available:

F35=2: up to reinforcement* excluded, **F35=3**: from the reinforcement* to the high turns, **F35=4**: only during the reinforcement turns*, **F35=5**: only during the step turns**.

- Exclude **(F36=0)** or include the device and choose the number of turns X at the top of the product **(F36=X)**.
- Exclude **(F37=0)** or include the device for the entire descent of the carriage **(F37=1)**;

depending on the model, the following additional options may be available:

F37=**2**: include the device only during the reinforcement turns*, **F35**=**3**: include the device throughout the descent excluding the reinforcement turns* during which the film remains ope.

- Exclude (**F38**=**0**) or include the device at the end of the cycle and choose the number of turns **X** at the base of the product (**F38**=**X**).
- Exclude (**F39**=**0**) or by adjusting the height of the film band by setting the closing carriage movement time **X** (**F39**=**X**), in seconds.
- After performing the high turns with the film open (**F6**), enable the further ascent (setting **F63**=**X** cm) of the carriage with the device activated to position the cord near the top of the product.

There are no specific parameters that alter the tension and pre-stretch of the film.

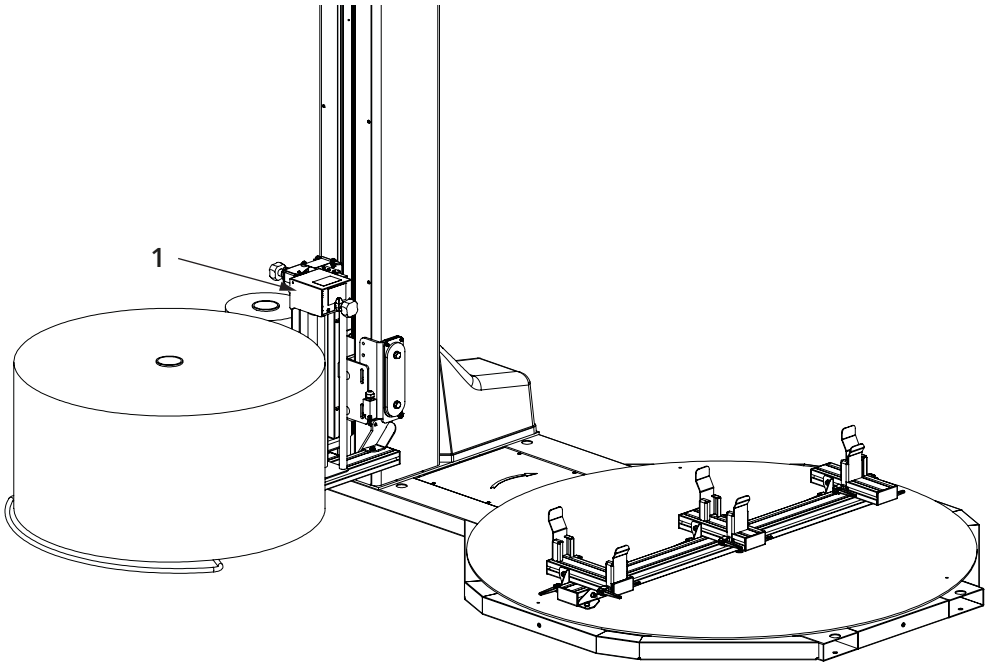
***(*)** reinforcement set with **F7** and **F8**, option available depending on the model purchased.*

***(**)** step set with **F30** and **F32**, option available depending on the model purchased.*

3.3.1.6 BUBBLE WRAP

This option is used to ensure greater protection of the product.

A carriage **(1)** is added that holds the roll of bubble wrap that is applied between the product and the stretch film.



Picture 30

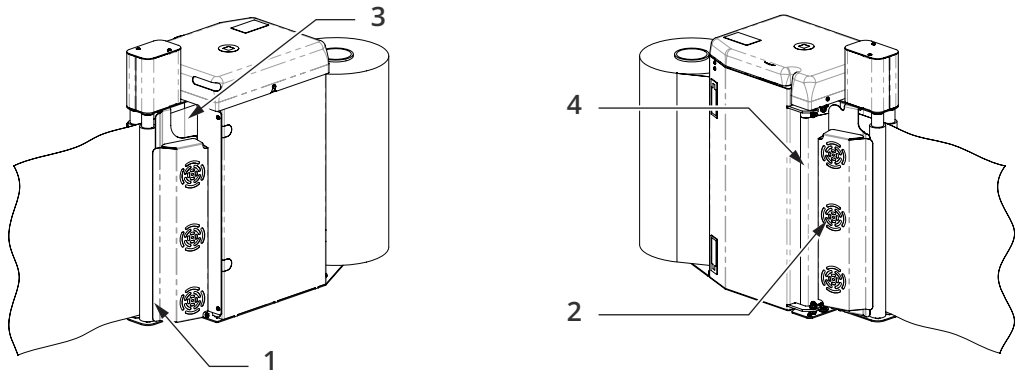
AEOLUS

3.3.1.7 FILM COUPLING SYSTEM

Through the use of this accessory, the initial fixing phases of the stretch film and final cutting are performed by the machine.

The accessory, supplied already assembled on the pre-stretch carriage, includes:

- A pair of extractor rollers **(1)**.
- A pair of fans **(2)**.
- An electrostatic charging system **(3)**.
- A film cutting system **(4)**.



Picture 31

If the optional is installed on the machine, it is activated by the **F40** function from the control panel.

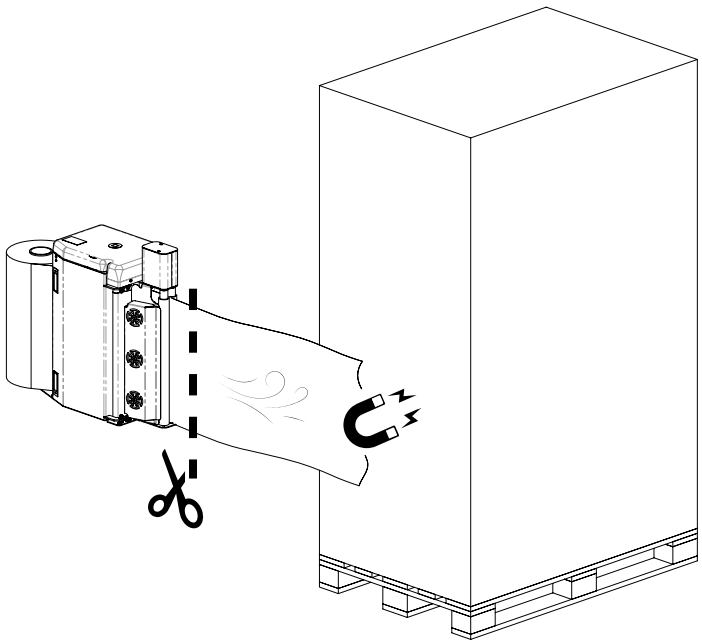
At the beginning of the wrapping cycle, the reel carriage, to which the system is attached, is positioned at the predetermined height by the control panel **(F41)**.

Once the set height is reached, the pair of fans comes into operation creating two air blades on the sides of the film flap, approximately 10 cm long, which exits the system. After a few seconds, the two extractor rollers begin to rotate, extracting the stretch film from the pre-stretch carriage. Once the rollers are left, the stretch film is supported and pushed forward towards the product to be wrapped by the air blades.

During this extraction phase, even before reaching the extraction rollers, the stretch film is electrostatically charged inside the pre-stretch carriage.

This procedure allows the head of the stretch film to be pushed in the direction of the product. Once the product is reached, the film adheres and attaches to it due to the attraction generated by the electrostatic charge.

This fixing method, together with a low tension film delivery system, ensures a stable seal. When the rotation to start the wrapping starts, at least one turn of film is deposited on the product. Continuing the wrapping, this new layer overlays the first one, improving its adhesion and overall tightness.



Picture 32

During this phase, to optimise the system, it is possible to adjust the duration, extraction speed, and duration of the air blow through the **F41-F46** functions, which must in any case persist during the first rotation phase.

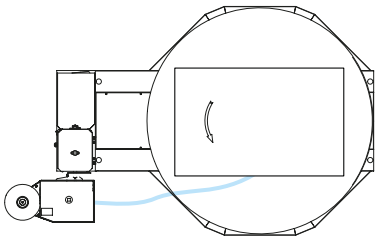
Once the stretch film is firmly attached to the product due to the attractive force and the fact that part of the product has been wrapped, the system stops all electrostatic charging, ventilation and extraction operations by means of the rollers. From this moment on, the rollers will spin idly as the stretch film will be pulled by the product as it exits the pre-stretch carriage.

At the end of the wrapping, during the last rotation phase, the electrostatic charge is reactivated to give the last stretch of stretch film the same initial attraction force. The rotation and dispensing of the stretch film is momentarily suspended to allow a cutting system to score a small portion of the film itself. After the incision, the rotation and simultaneously the delivery of the stretch film are restarted until the incision exits the system by approximately 10 cm. At this point, the dispensing is blocked again but the rotation is maintained to start the total cutting of the film band by tearing. The film edge, the last section of the wrapping, due to the effect of the return caused by the tear and to the effect of the electrostatic charge with which it was charged, sticks and fixes itself to the product just wrapped, minimising the inconvenience of the end of the film falling at the end of the wrapping.

WARNING

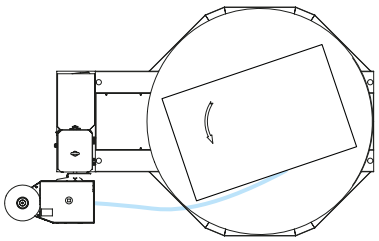
This film coupling system is exclusively intended for use in industrial environments. It is strictly forbidden to use the product in places where there is a risk of dust explosions or where flammable or explosive gases are present, as this could cause explosions and/or fires.

ROTATION SEQUENCE



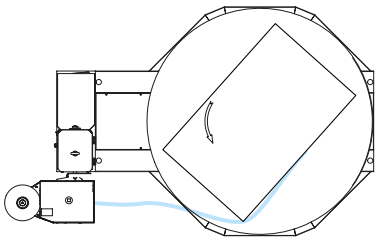
PHASE 1

The machine starts dispensing the film, pushing it against the side of the product; once the film reaches the side of the product, a mutual attraction is created that fixes the film in place.

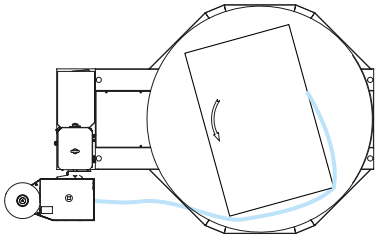


PHASE 2

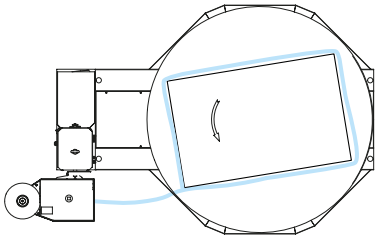
The machine rotates the product and simultaneously dispenses the film, which rests along the edge of the product. The quantity of film dispensed has a length that is slightly less than the edge, thus keeping the film taut and adhering to the product.



PHASE 3 = PHASE 2



PHASE 4 = PHASE 3



PHASE 5

At this point, the machine has completed one revolution around the product and, continuing with the rotation, overlays the film it is currently dispensing on the first turn previously deposited. This operation fixes the two film edges more solidly. Subsequently, the wrapping cycle can proceed according to the programmed parameters.

FILM REEL LOADING

The following procedure is specific to machines with optional film coupling system.

The detailed and specific operation for a particular carriage is described in the reel carriage manual.

A) Move the carriage to the low position to facilitate insertion of the reel;

B) press the emergency button in order to operate safely;

C) open the carriage door (depending on the carriage model);

D) insert the reel into the reel holder shaft;

» See Picture 33 - pag. 53

E) insert the stretch film by proceeding as follows:

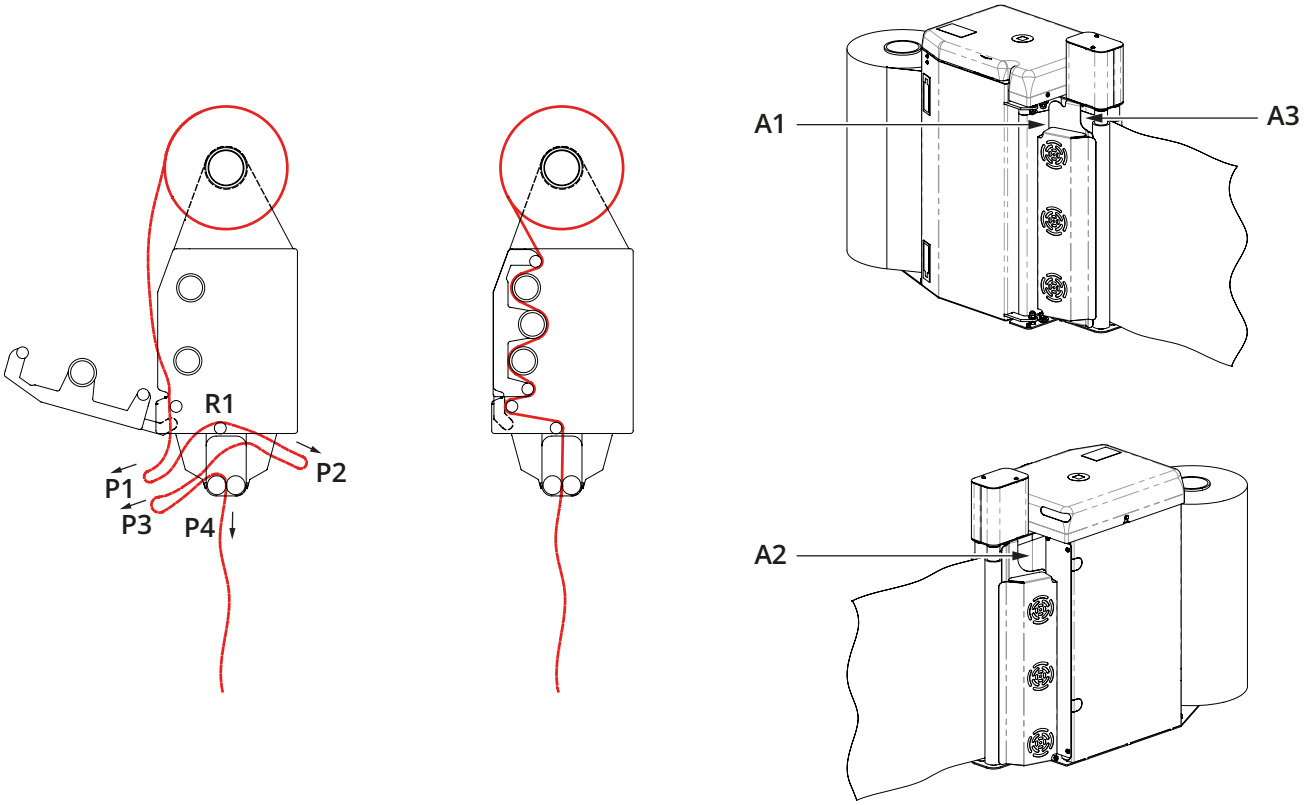
- Take the initial stretch of the stretch film from the reel.
- Unwind the film, passing it inside the hatch.
- Exit the film from the opposite side of the hatch for at least 50 cm, until reaching point **P1** indicated in the drawing.
- Close the hatch and gather up the 50 cm of protruding stretch film.
- Insert the end of the rope from position **P1** on the opposite side to point **P2**, passing through opening **A1**, behind roller **R1** and exiting opening **A2**; be sure to tension the film rope.
- Reinsert the end of the rope from position **P2** to the opposite side until point **P3**, passing through opening **A2** and exiting opening **A3**; be sure to tension the film rope.
- Finally, insert the end of the rope from position **P3** to point **P4**, entering through the opening **A3** and inserting the film rope between the two rubberised rollers; be sure to tension the film rope.

F) Enable the pre-stretch machine or carriage. Proceed with extraction of the stretch film until the film band is extended throughout its height. Next, make a cut of the stretch film approximately 10 cm outside the rollers.

WARNING

When inserting the reel into the reel holder shaft:

- ***do not let the reel drop;***
- ***guide it until it is fully inserted in the lower centring pin.***

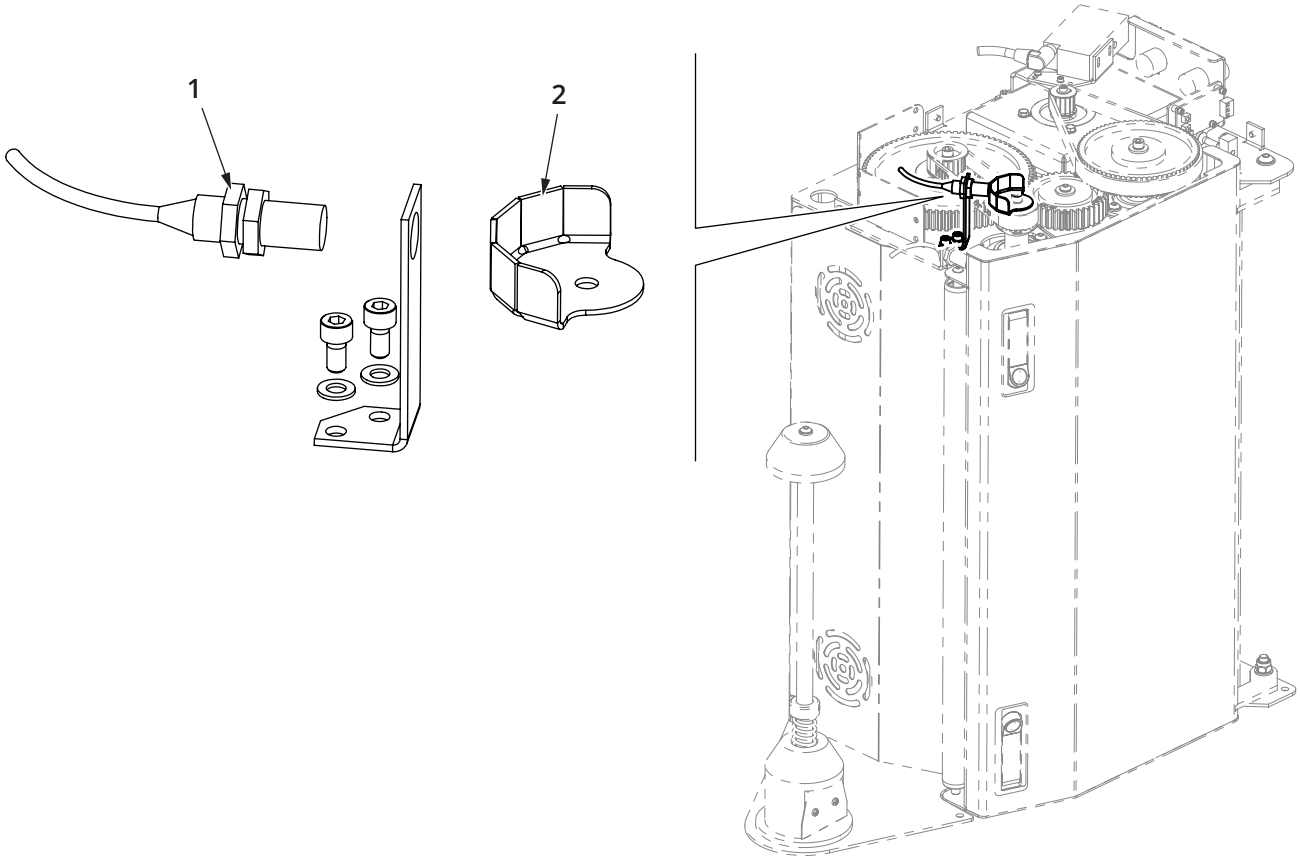


Picture 33

3.3.1.8 FILM CONSUMPTION COUNT

The count calculates the consumption of the stretch film that is used to wrap each product, expressed in grams or meters.

Depending on the carriage being used, it may be necessary to add the optional elements, installing a cam **(1)** and sensor **(2)** to count the rotations of the roller that is in contact with the film being processed by the carriage.



Picture 34

3.4 INTENDED USE - PROPER USE - PURPOSE

The wrapping machine, designed to be anchored to the ground, has been designed and constructed for wrapping various types of products stacked on pallets with stretch film, in order to stabilise the package and to protect it from damp and dust during transport and storage.

Using a lifting apparatus, the pallet with the products to be wrapped is placed on the turntable; the stretch film is applied by means of a dedicated carriage which moves on the vertical axis according to the height of the product to be wrapped.

Working limitations

For safety reasons suitable working limitations have been imposed, in keeping with the size of the machine and the relative turntable. The products to be wrapped must be within the working limits of the machine in your possession, specified in terms of maximum load and maximum dimensions, on the basis of the turntable diameter **(Ø)**, as indicated in the table.

Stretch film

Use a film of specification suitable for the type of carriage available and for the type of packaging application for which the machine was intended; always evaluate the choice of film in relation to its safety sheet.

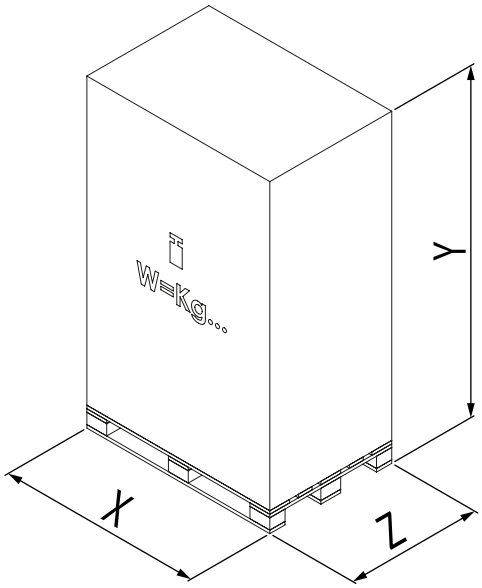
Use a perforated film if the wrapped products require ventilation otherwise they will generate condensation (fresh organic products: fruit, vegetables, plants, etc...).

Use a blackout film for the protection of light-sensitive products.

Use an antistatic film where electrostatic charges may be harmful to the product.

Max. dimension of the Product to be wrapped

Base version				STD 2200	STD 2450	OPT 2700	OPT 3200	OPT 3500	OPT 3900	
	Ø	X	Z	Y	Y	Y	Y	Y	Y	W (kg)
Standard	1500	1200	800	2200	2450	2700	3200	3500	3900	2000
	1650	1200	1000							
	1800	1200	1200							
		1400	1000							
	2200	1550	1550							
		1900	1000							
Transpallet	1650	1200	1000	2200	2450	2700	3200	3500	3900	1200
	1800	1200	1200							
Low profile	1650	1200	1000	2200	2450	2700	3200	3500	3900	1200



Picture 35

3.5 UNINTENDED AND UNAUTHORISED USE - FORESEEABLE AND UNFORESEEABLE IMPROPER USE

Use of the pallet wrapping machine for unauthorised purposes, its improper use and lack of maintenance can lead to the risk of serious danger to health and safety of operators and exposed persons, as well as affecting the working efficiency and safety of the machine.

The following is a list of some possible, reasonably more foreseeable, examples of “bad usage” of the machine.

- NEVER allow anyone to climb onto the turntable.
- NEVER start the work cycle when there is anyone in the immediate vicinity of the machine.
- NEVER allow the machine to be used by unauthorised persons or by minors under the age of 16.
- NEVER leave the control station during the working process.
- NEVER load onto the machine containers that have toxic, corrosive, explosive or flammable products.
- NEVER start the work cycle if the load is not centred properly on the turntable.
- NEVER start the work cycle if the product loaded is tied outside the machine.
- NEVER use the machine outdoors or under not permitted environmental conditions.

3.6 TECHNICAL DATA AND NOISE

- Overall dimensions	See Picture 36 - pag. 59
- Net weight of machine body	350 kg
- Supply voltage	230 Volt
- Frequency	50/60 Hz
- Phases	(single-phase + neutral + earth)
- Nominal current	10 A
- Leakage current	about 25mA
- Power installed	1 kW (std) 1.2 kW (variable pre-stretch trolley three rollers two motors)
- Stretch film	17/30 µm
- Roll-holder tube inside Ø	76 mm
- Roll height	500 mm
- Maximum roll weight	16 kg
- Carriage speed	1 ÷ 4 m/min
- Turntable speed min. ÷ max.	4 ÷ 12 rpm

Noise

In observance of annex 1 of machine directive 2006/42/EC, the manufacturer declares that the noise emitted by the machine in question falls within the limits established by the above mentioned regulations 70 dB(A).

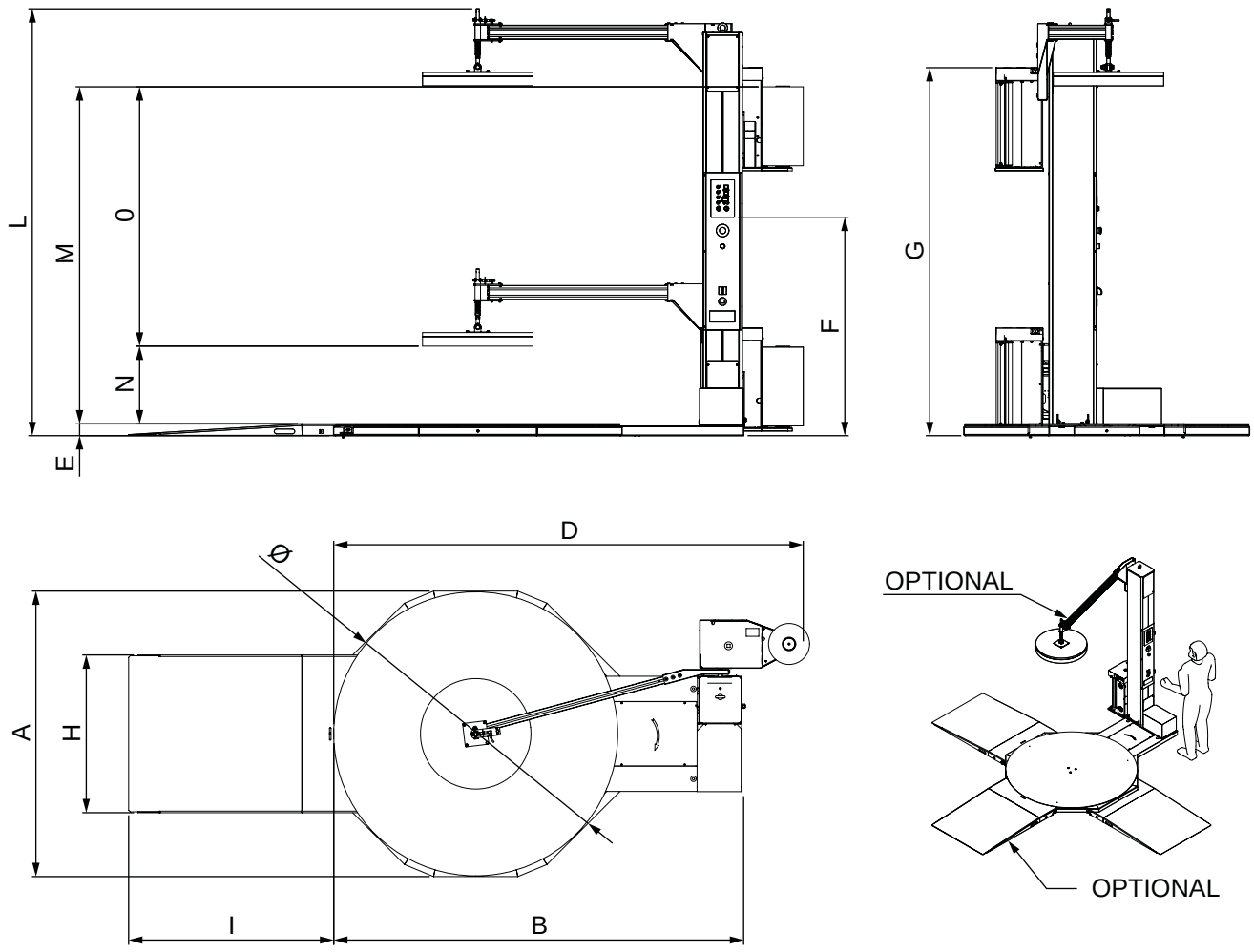
MACHINE DIMENSIONS

RAMP DIMENSIONS

						Std	Opt	Opt	Opt	Opt		
						2450	2700	3000	3300	3700		
Ø	A	B	D	E	F	G	G	G	G	G	H	I
1500	1510	2350	2700	75	1400	2750	3000	3300	3600	4000	1000	1500
1650	1660	2350	2700									
1800	1810	2650	3000									
2200	2230	3050	3400									

PRESSER DIMENSIONS

Std	Opt	Opt	Opt	Opt	Std	Opt	Opt	Opt	Opt		Std	Opt	Opt	Opt	Opt
2450	2700	3000	3300	3700	2450	2700	3000	3300	3700		2450	2700	3000	3300	3700
L	L	L	L	L	M	M	M	M	M	N	O	O	O	O	O
2650	2950	3250	3550	3950	2050	2300	2600	2900	3300	500	2050	2300	2600	2900	3300



Picture 36

3.7 WORK AND CONTROL STATIONS

» See Picture 37 - pag. 61
» See Picture 38 - pag. 61

STATION A - Control area

The operator must be at this station when the machine is carrying out a wrapping cycle.

It is the station from where the operator starts and stops the machine and changes the machine working modes. It also allows visual surveillance of the work cycle, so that the operator can activate the emergency stop device in the event of potentially dangerous situations.

STATION B - Work area

In the work area the operator carries out the following operations:

- attaches the film to a corner of the pallet to start the work cycle;
- cuts the film at the end of the work cycle.

DANGER

Attaching and cutting the film must be done with the machine cycle stopped and the turntable not moving.

STATION C - maintenance area

In the maintenance area the operator carries out the following operations:

- changes the film roll;
- adjusts the film tension, if mounted on the carriage.

WARNING

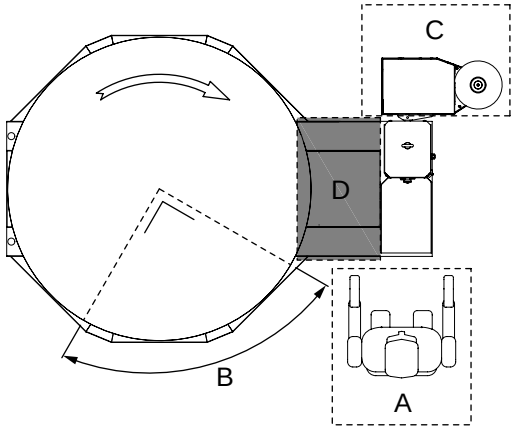
All operations that can be performed in station "C" must be carried out with the turntable fully down and the machine stopped.

DANGER

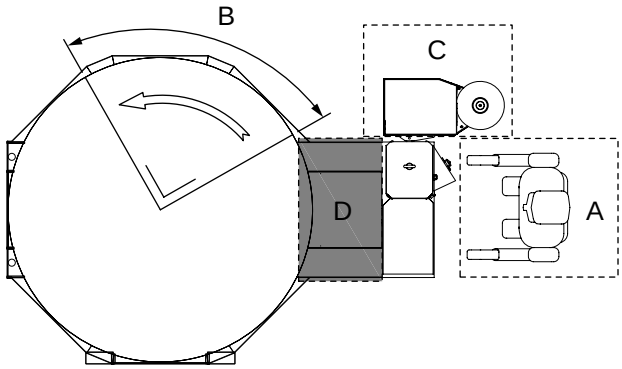
IT IS FORBIDDEN TO CROSS THE CENTRAL MACHINE AREA MARKED AS "D".

MACHINE "STANDARD" VERSION

Clockwise plate rotation



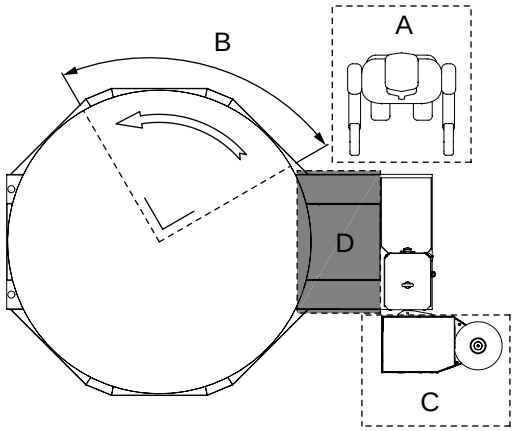
Anti-clockwise plate rotation



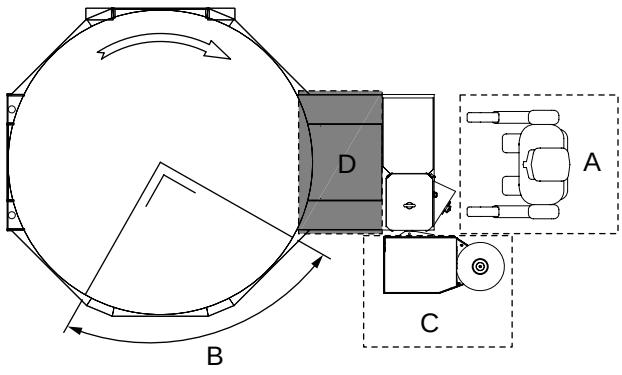
Picture 37

MACHINE "RIGHT" VERSION

Anti-clockwise plate rotation



Clockwise plate rotation



Picture 38

4 TRANSPORT-HANDLING-STORAGE

4.1 PACKING AND UNPACKING

The machine may be shipped in different ways depending on the transport requirements:

- Machine on a wooden pallet and protected by transparent plastic wrapping.
- Machine packed in a wooden crate of suitable dimensions.
- Machine on wooden base and protected by a cage of wooden crossbars.

Upon receipt, check that the packaging has not been damaged during transport or that it has not been tampered with and parts removed. Move the packed machine as close as possible to the place of installation and start unpacking, carefully checking that the supply corresponds to the order specifications.

DANGER

The lifting and transport means must be chosen based on the size, weight and shape of the machine and its components. The capacity of the lifting equipment must be greater (with a safety margin) than the weight of the components to be transported.

N.B.: If damaged or missing parts are found, immediately notify Customer Service and the carrier, providing photographic documentation.

Make sure that no small parts are left in the packaging.

Make a detailed examination of the general conditions of the machine.

The various packing materials must be disposed of in accordance with current environmental protection regulations.

WARNING

During unloading and handling operations, an assistant must be on hand to give any necessary directions during transport.

WARNING

THE MANUFACTURER declines all responsibility for damage caused by incorrect operations, unqualified personnel or the use of unsuitable means.

4.2 TRANSPORTINGANDHANDLINGTHEPACKED MACHINE

WARNING

EXCLUSIVELY use a forklift truck of adequate capacity to lift and transport the PACKED machine. USING ANY OTHER SYSTEM WILL NULLIFY THE WARRANTY FOR ANY DAMAGE CAUSED TO THE MACHINE.

INFORMATION

THE WEIGHT OF THE PACKAGING IS GENERALLY INDICATED ON THE OUTSIDE.

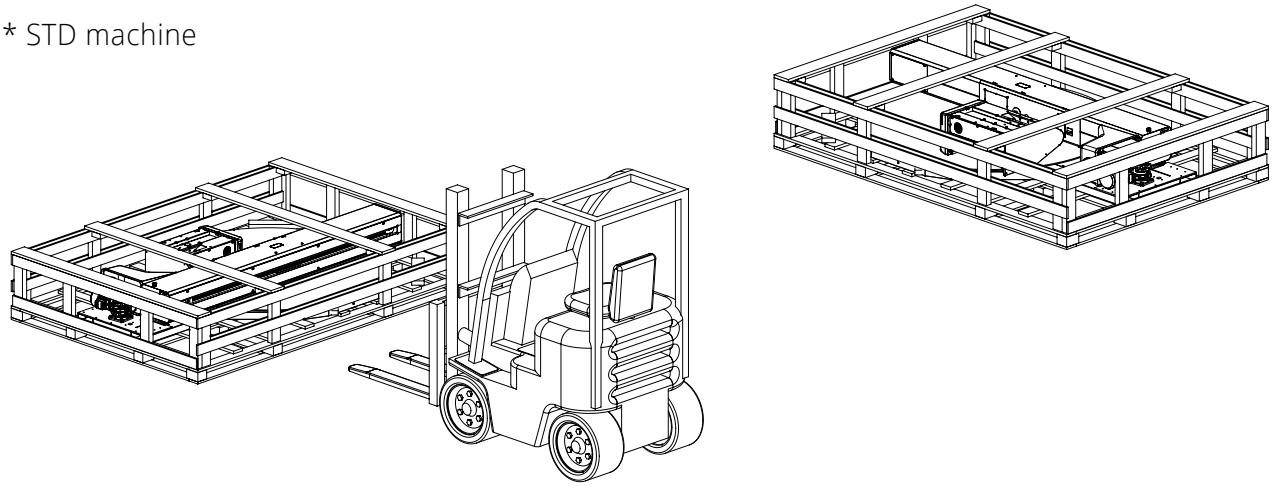
DANGER

ALWAYS CHECK BEFORE ANY OPERATION THAT THERE ARE NO EXPOSED PERSONS IN HAZARDOUS ZONES (IN THIS CASE THE ENTIRE ZONE AROUND THE MACHINE PARTS IS TO BE CONSIDERED A HAZARDOUS ZONE).

Package dimensions: 2900x2000x550 mm

Package weight: 600 kg

* STD machine



Picture 39

4.3 TRANSPORTING AND HANDLING THE UNPACKED MACHINE

» See Picture 40 - pag. 64

- Free the machine from the packaging as shown in the figure.
- Carefully insert the forks of the forklift into the rails **(A)**, marked with the pictogram **(B)**, to the maximum possible depth.
- Lift and transfer the machine to the installation location.

WARNING

EXCLUSIVELY USE A FORKLIFT TRUCK OF ADEQUATE CAPACITY TO LIFT AND TRANSPORT THE MACHINE. USING ANY OTHER SYSTEM WILL NULLIFY THE WARRANTY FOR ANY DAMAGE CAUSED TO THE MACHINE.

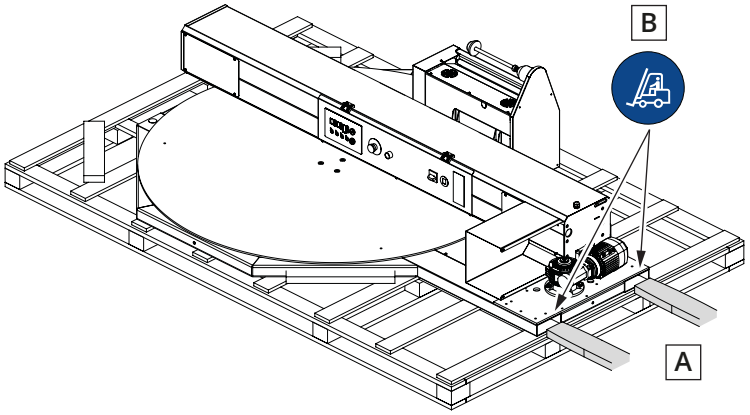
DANGER

THE RISK OF IMPACT IN ANY CASE REMAINS, CAUSED BY SUDDEN MOVEMENT DUE TO UNBALANCING OF THE MACHINE PARTS IN THE EVENT THAT THE BELTS SAG OR SLIP. LIFT THE MACHINE SLOWLY AND SMOOTHLY (WITHOUT JERKING OR PULSES).

DANGER

ALWAYS CHECK, BEFORE ANY OPERATION, THAT THERE ARE NO EXPOSED PERSONS IN HAZARDOUS ZONES (IN THIS CASE THE ENTIRE ZONE SURROUNDING THE PALLETS IS TO BE CONSIDERED AS A HAZARDOUS ZONE).

Net weight: 500 kg

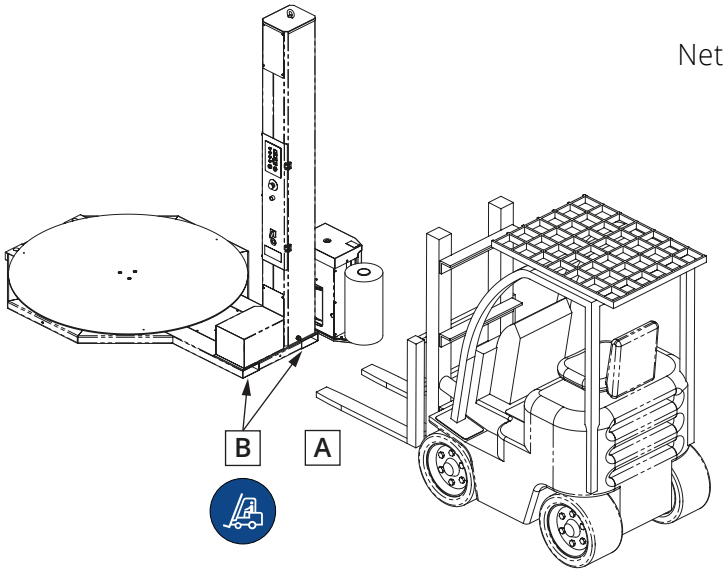


Picture 40

To lift the machine, proceed as follows:

» See Picture 41 - pag. 65

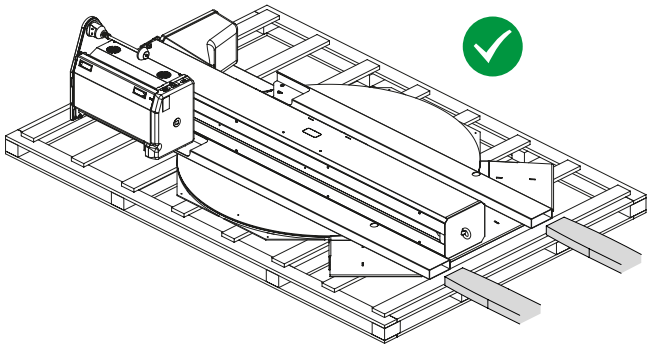
- Carefully insert the forks of the forklift into the rails **(A)**, marked with the pictogram **(B)**, to the maximum possible depth.
- Lift and transport the machine.



Picture 41

WARNING

The machine with low profile base cannot be moved when assembled.



Picture 42

4.4 STORAGEOFPACKEDANDUNPACKEDMACHINE

In the event of long periods of inactivity, the customer must check the place where the machine is positioned and depending on the type of packaging (crate, container, etc.), ensure that the storage conditions are suitable.

If the machine is not used and stored in a place according to the technical specifications, the sliding parts must be greased. In case of doubt, contact Customer Service.

The manufacturer declines all responsibility if the user does not specify or request the above information.

5 INSTALLATION

5.1 PERMITTED AMBIENT CONDITIONS

Temperature:

For regular operation of the machine, the ambient temperature must be between +5°C and +40°C.

Atmospheric conditions:

The electrical equipment is able to function correctly in atmospheric conditions with relative humidity not greater than 50% at a temperature of 40°C and 90% at a temperature not over 20°C (without condensation). If the atmospheric conditions are not suitable for machine operation, the Manufaturer can, on request, provide solutions to remedy the problem (e.g. air conditioners, thermostatic heating elements, etc.).

Altitude:

Useful altitude not exceeding 1000 meters above sea level.

Lighting:

Minimum necessary and indispensable illumination: 300-500 lux.

DANGER

The standard machine is not designed or set up for operation in places with an explosive atmosphere or risk of fire.

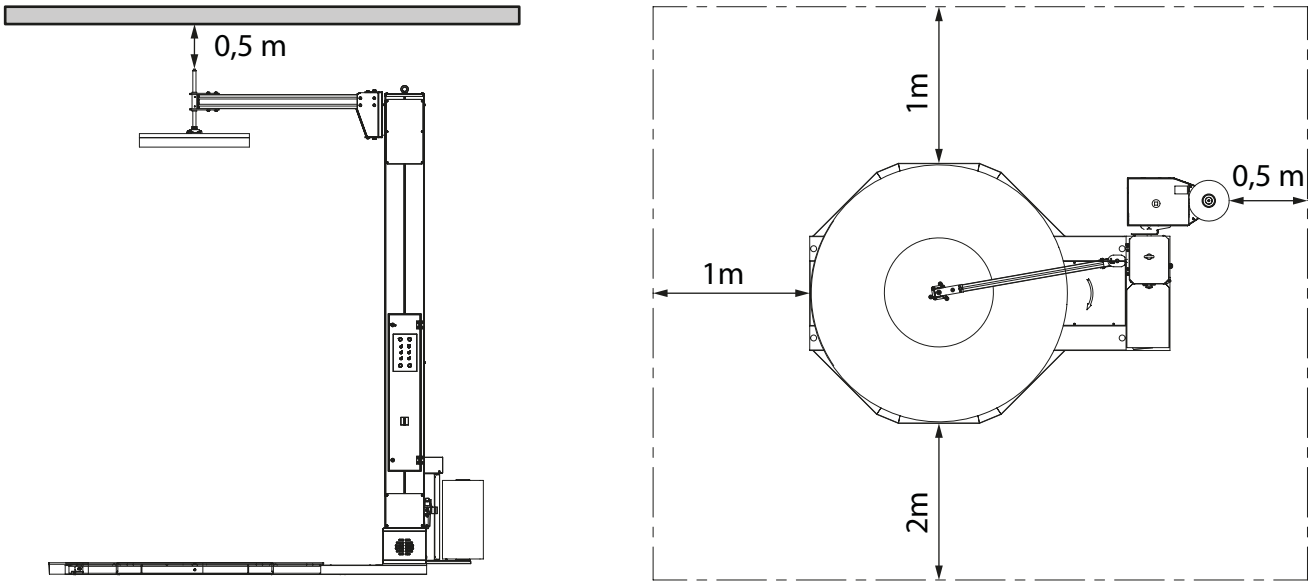
5.2 USE AND MAINTENANCE CLEARANCES

» See Picture 43 - pag. 68

The largest free space must be provided on the side of the turntable used for loading and unloading, there must also be sufficient space for movement of forklift trucks or other equipment necessary for maintenance work and for loading the rolls of film.

The remaining sides of the machine must be placed as far as possible up against side walls or fixed barriers, to prevent easy access.

Reference should always be made to the layout agreed with the manufacturer upon ordering.



Picture 43

5.3 POSITIONING THE MACHINE

5.3.1 STANDARD MACHINE

In its standard version, the machine is dispatched as follows:

- base column tipped over the turntable;
- presser unit (if supplied) dismounted.

No particular preparation is required for the surface on which the machine is to stand. The surface must be smooth and flat in all directions (maximum slope 1%) and solid enough to support the fully-laden weight of the machine.

Reposition the base column and assemble the parts removed.

» See Picture 44 - pag. 70

REPOSITIONING THE BASE COLUMN

A) Identify the supplied screws for fixing the base column.

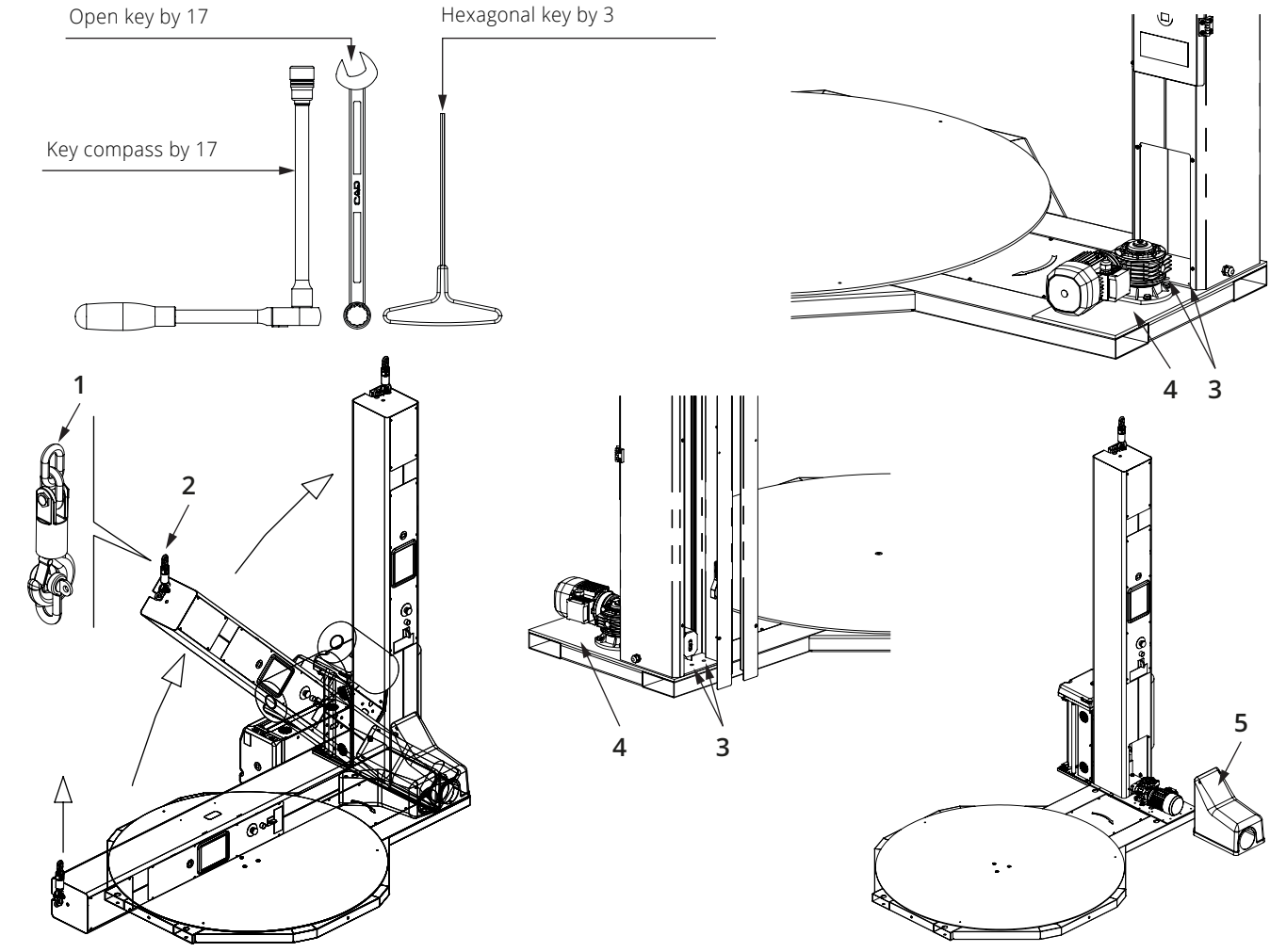
DANGER

The lifting of the column should be carried out using a suitable lifting device (1), fixed to the eyebolt on the column.

B) Lift the base column **(2)**.

C) Insert the screws **(3)** side and secure the base column of the machine **(4)**.

D) Fit the motor guard **(5)** and secure it with the screws.



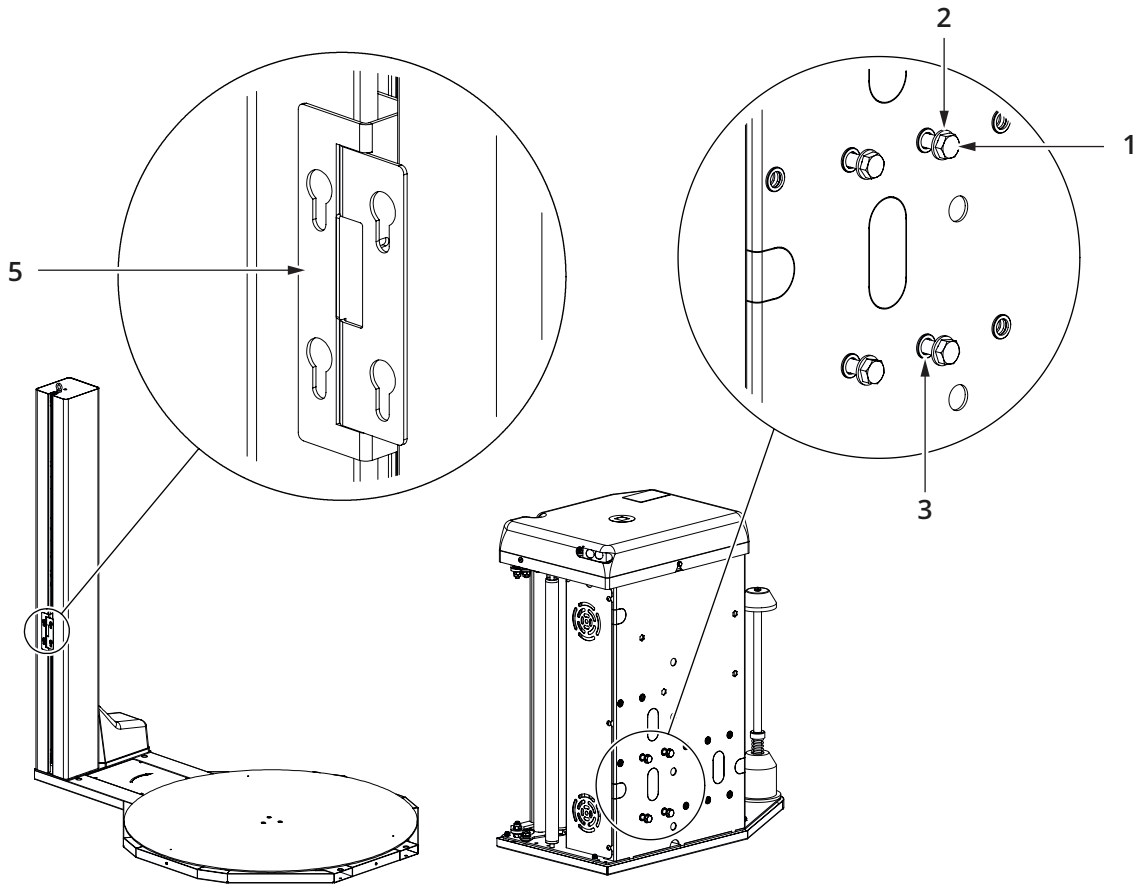
Picture 44

FORKLIFT INSTALLATION

» See Picture 45 - pag. 71

A) Obtain the screws supplied for fastening the carriage.

B) Partially tighten the screws **(1)** with the washers **(2)** in the holes/ inserts **(3)** leaving 5-10 mm of space between the washer and the insert.



Picture 45

DANGER

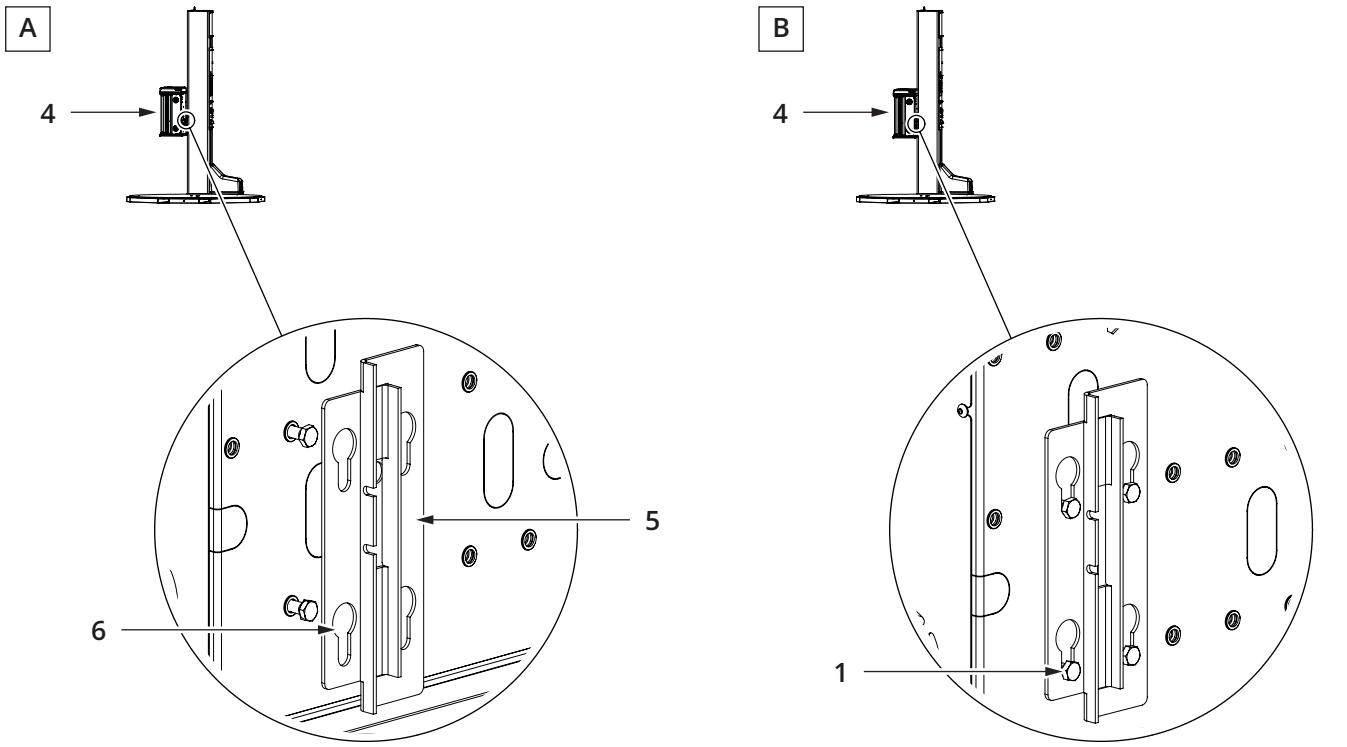
Two people are needed to lift the carriage if it weighs over 25 kg.

» See Picture 46 - pag. 72

C) Lift the carriage **(4)** and hook it to the support **(5)**, inserting the screws in the shaped holes **(6)** (figure **A**).

D) Lower the carriage to bring the screws to the end of the slot **(6)** (figure **B**).

E) Tighten the screws **(1)** to fasten the carriage **(4)** (figure **B**).



Picture 46

MOUNTING THE PRESSER UNIT (OPTIONAL)

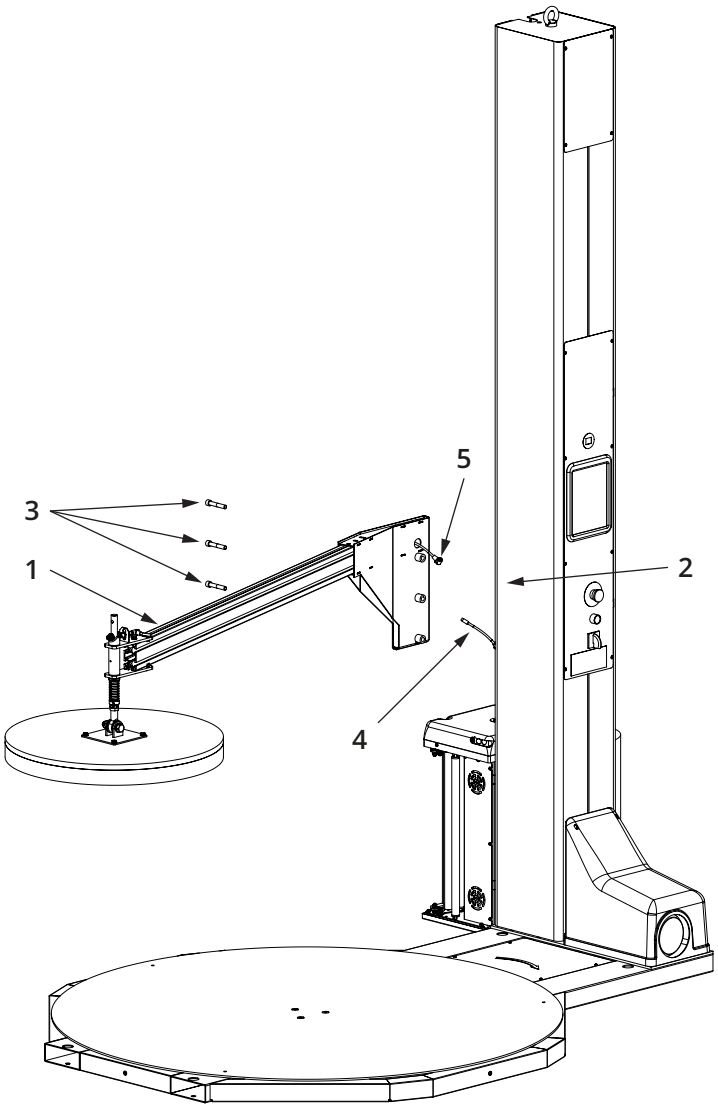
» See Picture 47 - pag. 73

After lifting and fixing the column, mount the pressing arm.

A) Get the provided screws.

B) Lift the complete arm **(1)** up to the attachment **(2)**, tighten and secure the screws **(3)**.

C) Connect the cable **(4)** to the connector **(5)**.



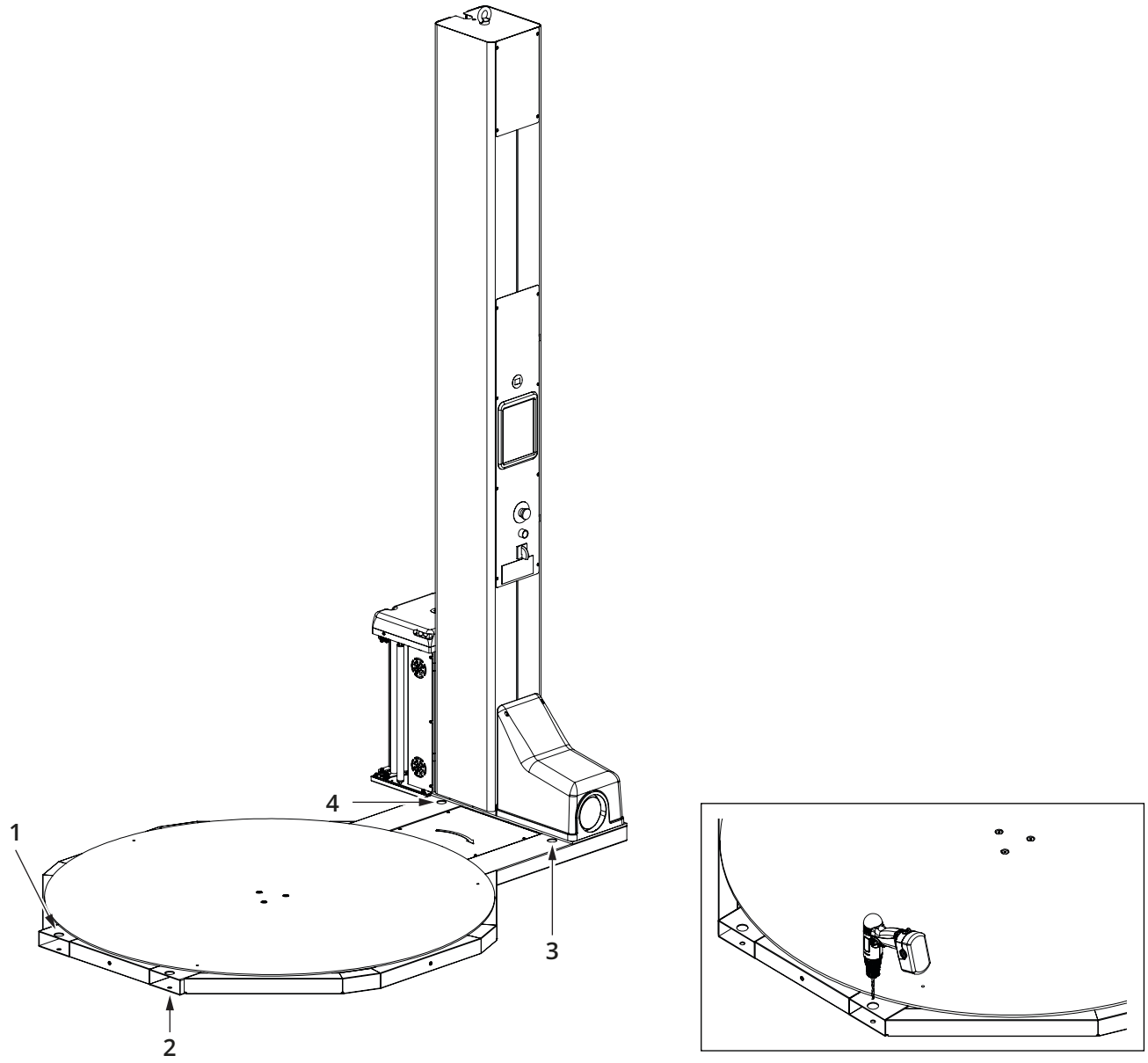
Picture 47

FIXING TO THE FLOOR

» See Picture 48 - pag. 74

A) Make holes in the floor at point **(1-2-3-4)**, drilling through the holes in the machine base.

B) Insert steel anchors and tighten.

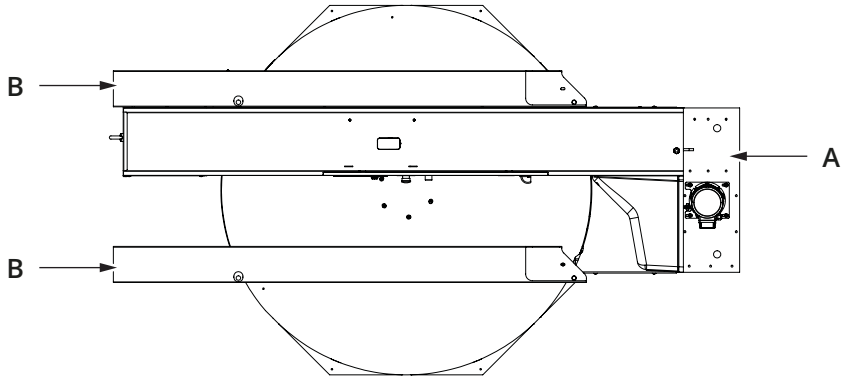


Picture 48

5.3.2 LOW PROFILE MACHINE

ATTACHING THE LOW PROFILE BASE TO THE GROUND

A) Position the machine in the desired location and remove the supports **(B)** for handling the machine **(A)**.

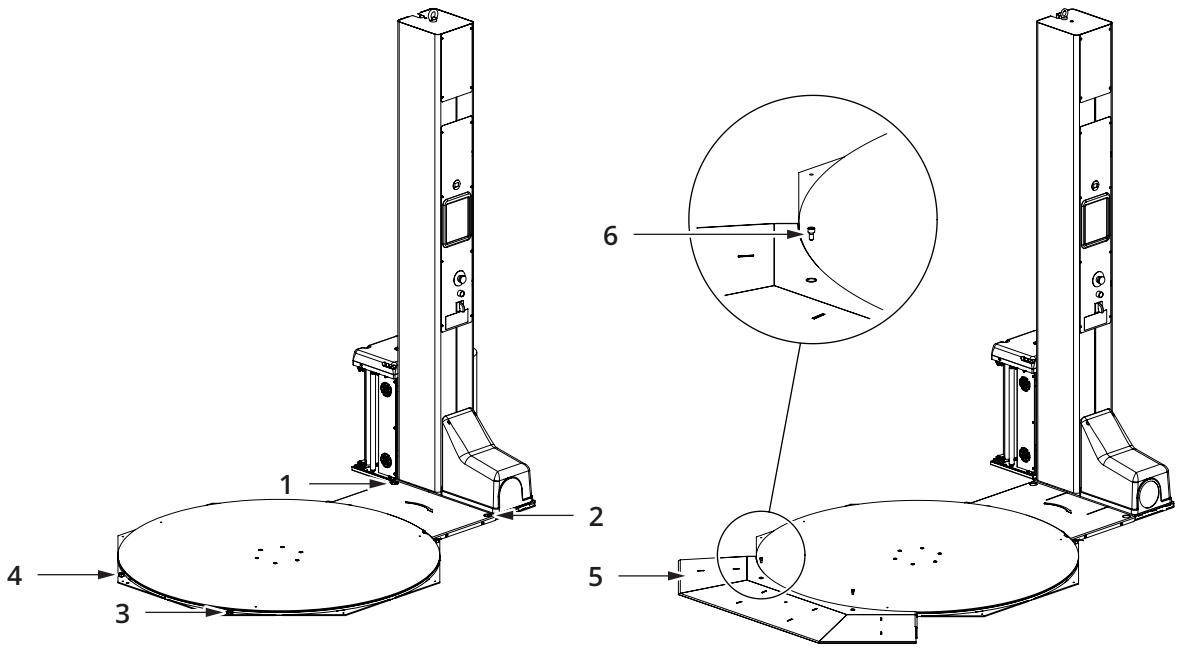


Picture 49

B) Make holes in the floor at point **(1-2-3-4)**, drilling through the holes in the machine base.

C) Insert the steel anchors and tighten.

D) Position the ramp **(5)** in correspondence with the holes and attach it using the screws **(6)**. If there are several ramps, repeat the operation for each one.



Picture 50

5.3.3 TRANSPALLET MACHINE

» See Picture 51 - pag. 76

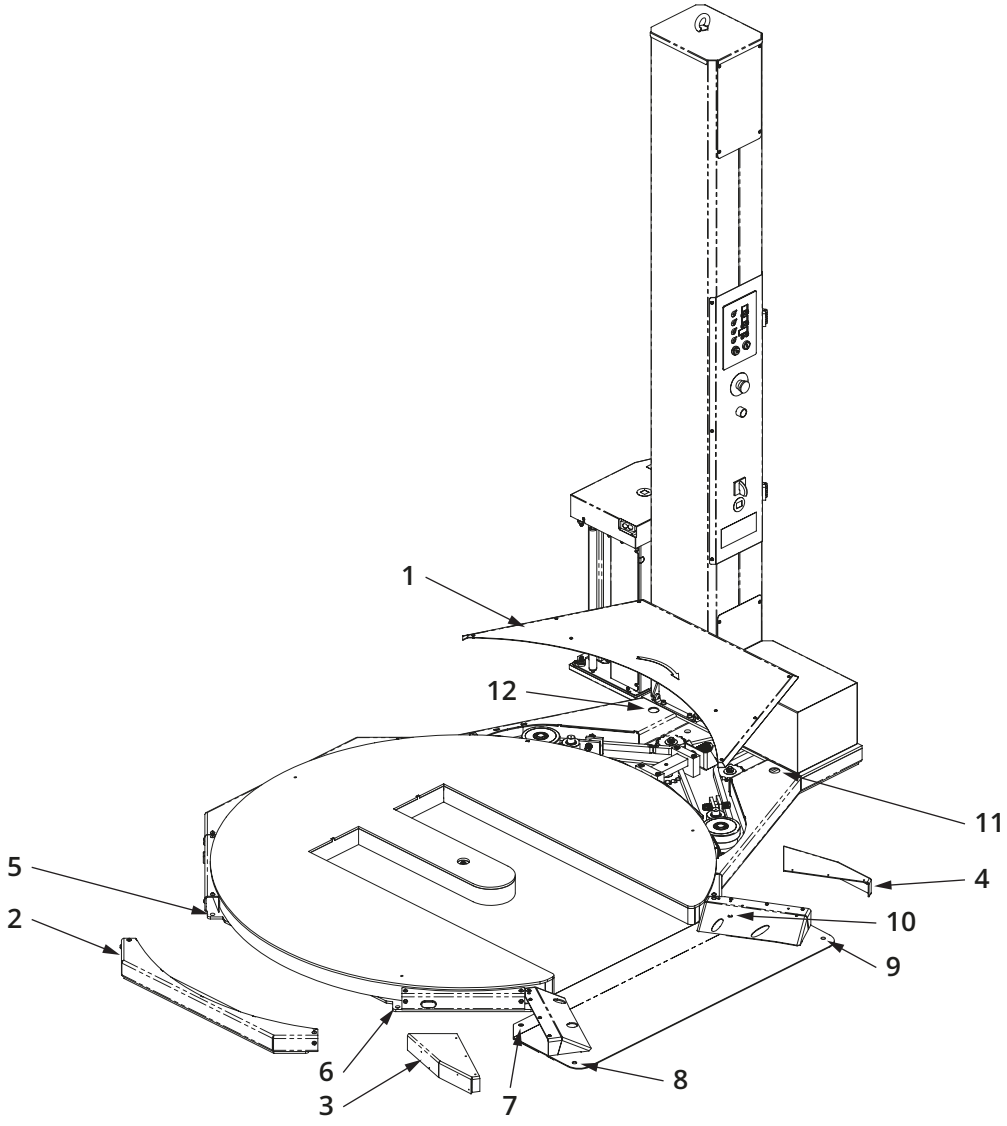
FIXING THE TRANSPALLET MACHINE TO THE GROUND

A) Dismantle the four safety covers **(1-2-3-4)**.

B) Make the holes in the floor at the points **(5-6-7-8-9-10-11-12)** drilling through the holes in the machine base.

C) Insert the steel anchors and tighten.

D) Assemble the four safety covers **(1-2-3-4)**.



Picture 51

POSITIONING RAMP FOR TP MACHINE ENTRY

» See Picture 52 - pag. 77

The machine may be delivered with the entry ramp already installed or not installed but ready to be installed on the side chosen during the order phase.

To install, proceed as follows:

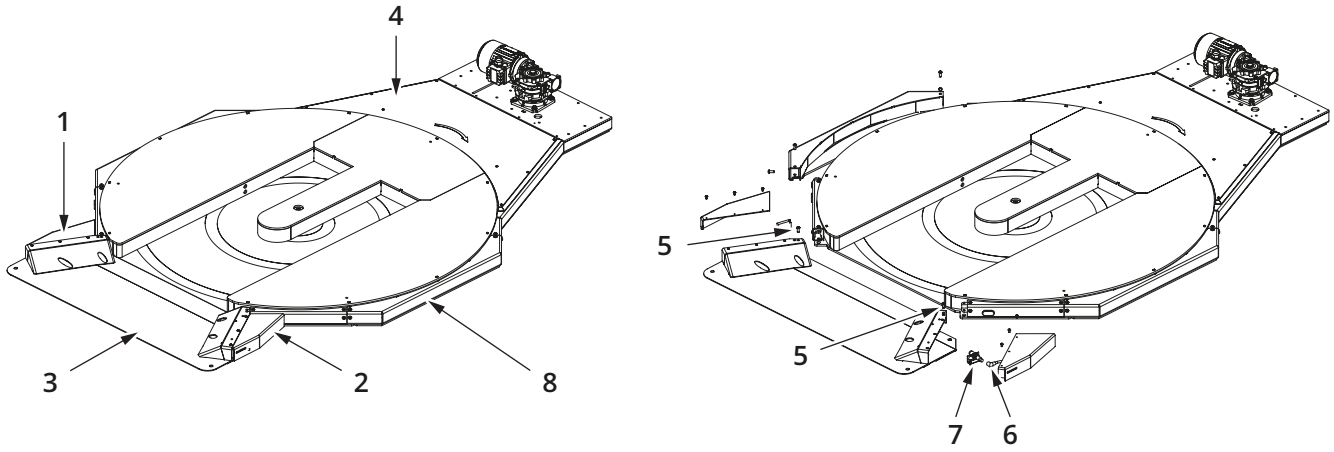
A) Remove the casings **(1)** and **(2)**.

B) Position the ramp **(3)** in the open side of the base **(4)**.

C) Tighten and lock the screws **(5)**.

D) Connect the connector **(6)** to the sensor **(7)**.

E) Replace the casings **(1)** and **(2)**.



Picture 52

To install the ramp on a different side or to move it, proceed as follows:

» See Picture 53 - pag. 78

A) Remove the casings **(1)** and **(2)**.

B) Disconnect the connector **(6)** from the sensor **(7)**.

C) Remove the screws **(5)** and detach the ramp **(3)** from the base **(4)**.

D) Once the side where the ramp **(3)** is to be installed is determined, remove the casing **(8)** by removing the screws **(9)**.

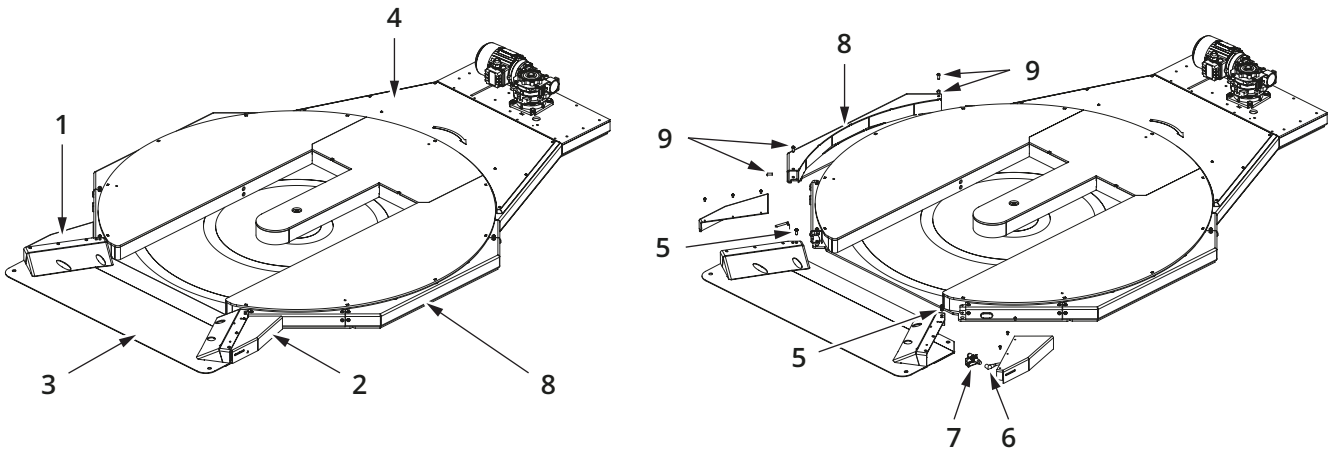
INFORMATION

Based on the rotation direction of the plate, the casings (8) contain the connector cable (6). If present, the cable must be removed before the casing, sliding it backward.

E) Re-install the ramp **(3)** and the casing **(8)** in the new positions, tighten and lock the screws **(5)** and **(9)**.

F) Using the path provided by the casings **(8)**, run the connector **(6)** back to the sensor **(7)** and connect them.

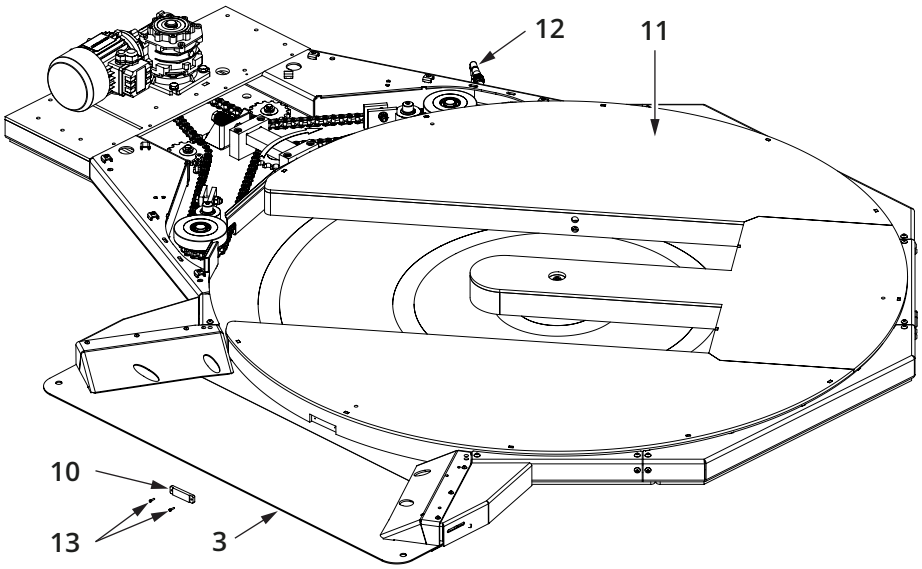
G) Replace the casings **(1)** and **(2)**.



Picture 53

» See Picture 54 - pag. 79

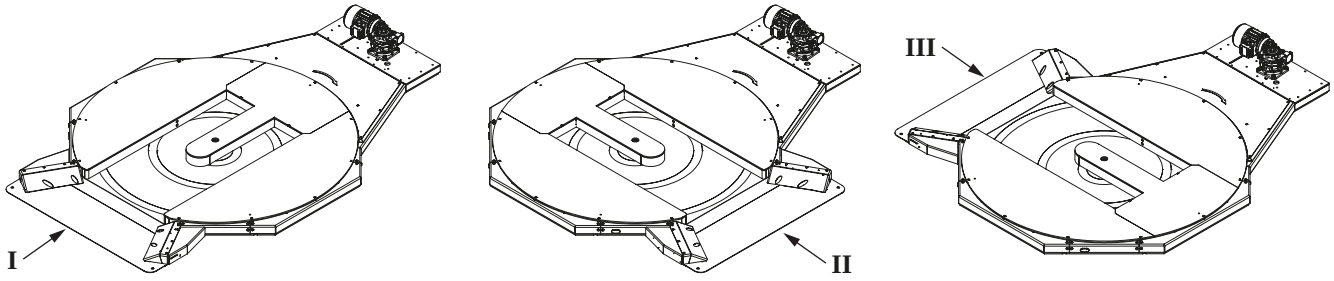
H) Move the reflector **(10)** in the proper position so when the turntable **(11)** opening corresponds to the ramp **(3)**, the reflector **(10)** corresponds to the sensor **(12)** and remains in that position regardless of the position of the ramp **(3)**. To facilitate the operation, manually turn the plate until the reflector **(10)** is in correspondence with the open side, remove it by unscrewing the screws **(13)**, turn the plate again until the open side is located in the new mounting position for the reflector **(10)**, and attach it using the same screws **(13)**.



Picture 54

» See Picture 55 - pag. 79

- **I** - for front position
- **II** - for right position
- **III** - for left position



Picture 55

MOUNTING THE RAMPS (OPTIONAL)

» See Picture 56 - pag. 80

The ramp can be mounted on three sides of the base.

To mount the ramp, proceed as follows:

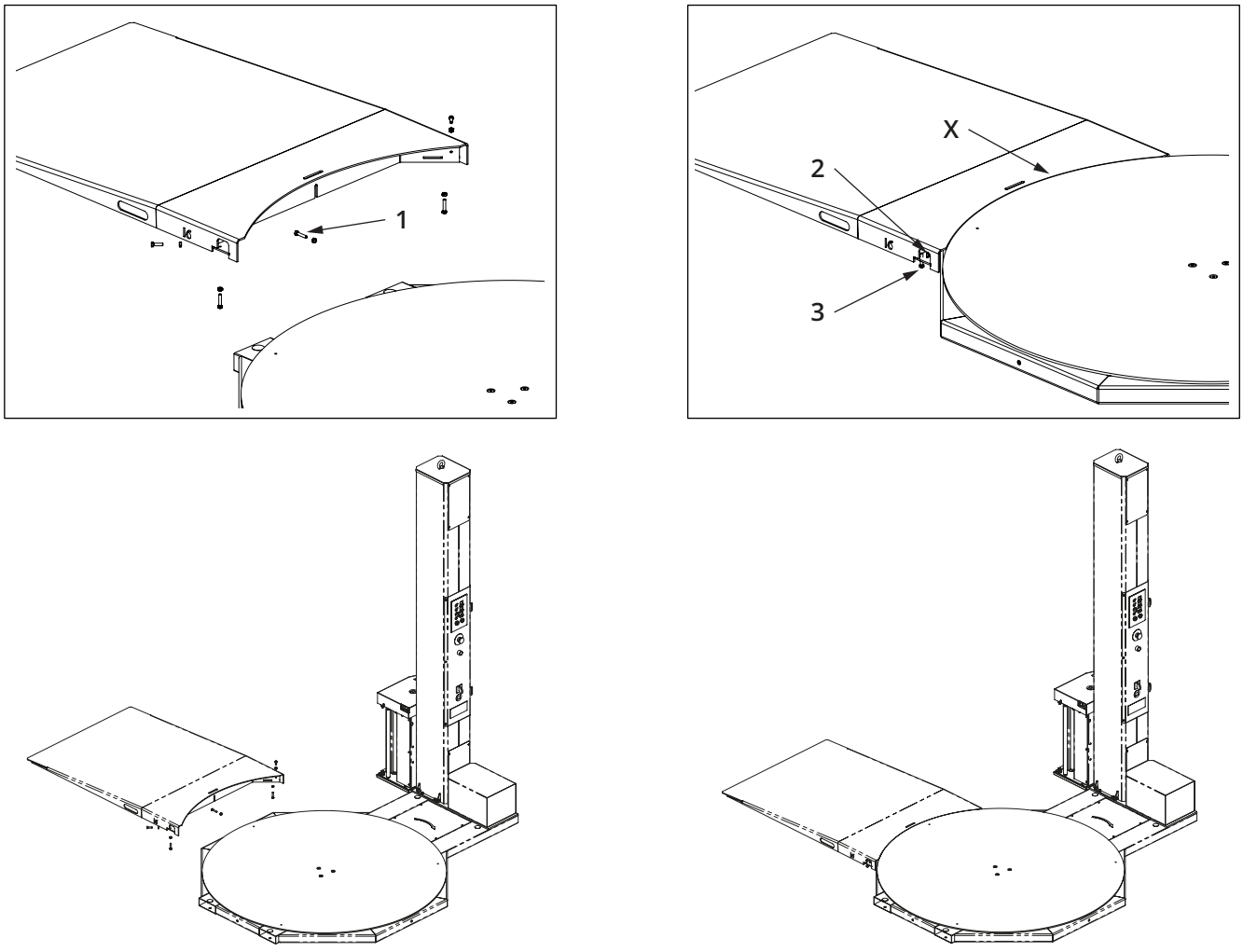
A) Partially tighten the screw **(1)** in the base and snap the ramp slot from the top to the bottom.

B) Adjust screw **(3)** to make the ramp flush with the base.

C) Adjust the distance **(X)** of the ramp from the turntable by tightening or loosening screws **(2)**, **the distance must be adjusted to 2 ÷ 5 mm (max)**.

D) Tighten the screw **(1)**.

E) Tighten the lock nuts.



Picture 56

5.3.4 MACHINE RECESSED INTO THE FLOOR (WITH FRAME)

» See Picture 57 - pag. 81

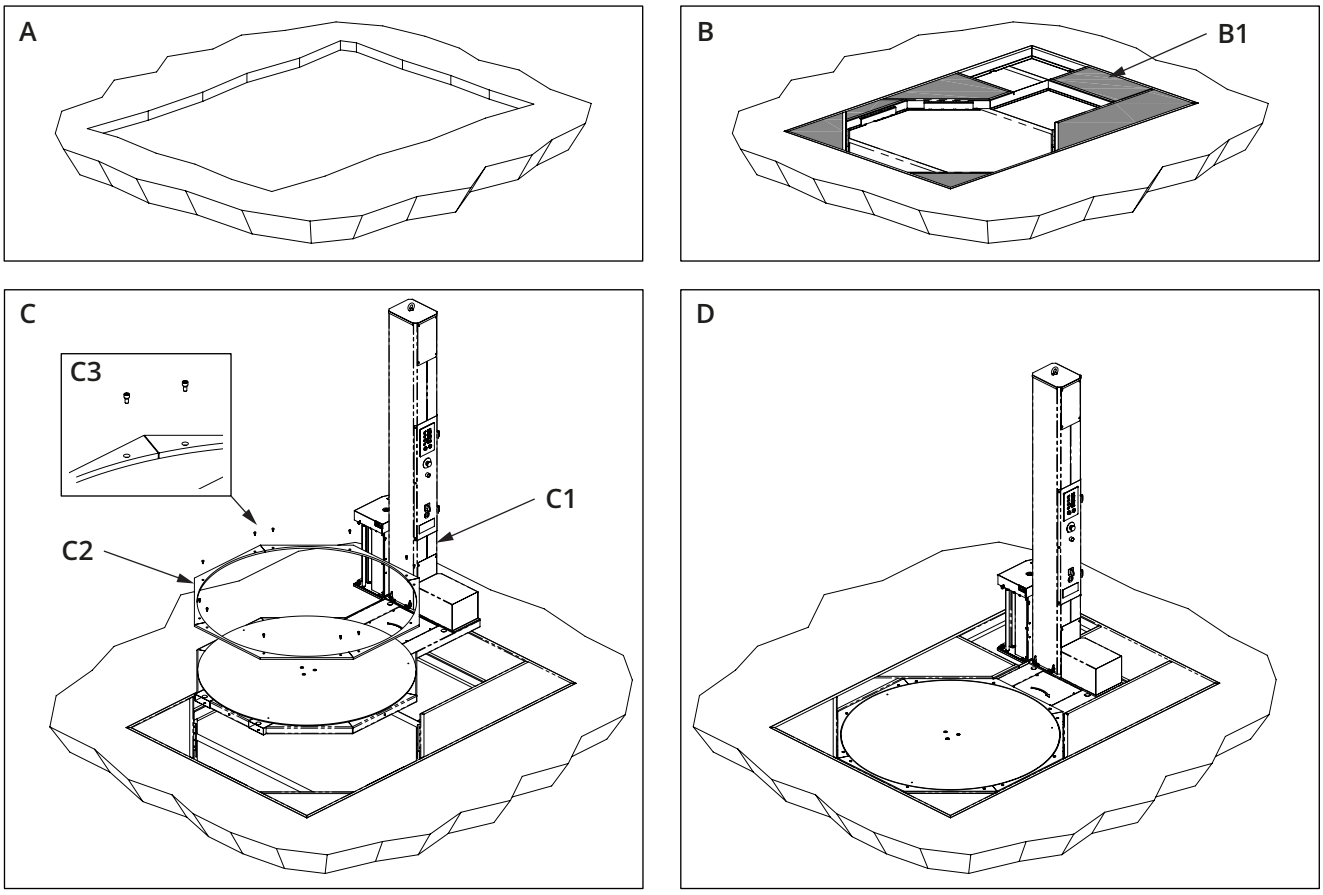
Before assembling the machine, create the recessed area following the diagram representing the reference hole **(A)**.

Make a hole at least 8 cm deep (see **A**).

Embed the template flush with the floor **(B)**, level the bottom of the hole and fill in any unused areas **(B1)** as stated in the template's technical specifications.

If present, remove the cross-pipes **(B2)**, Insert the machine **(C1)** and fix the sections **(C2)** around the plate, centring them and securing them with the screws **(C3)** in the free space between the round plate and the walled frame, **the distance between the turntable and sections must be adjusted to 2 ÷ 5 mm (max)**.

The completed assembly is shown in **(D)**.



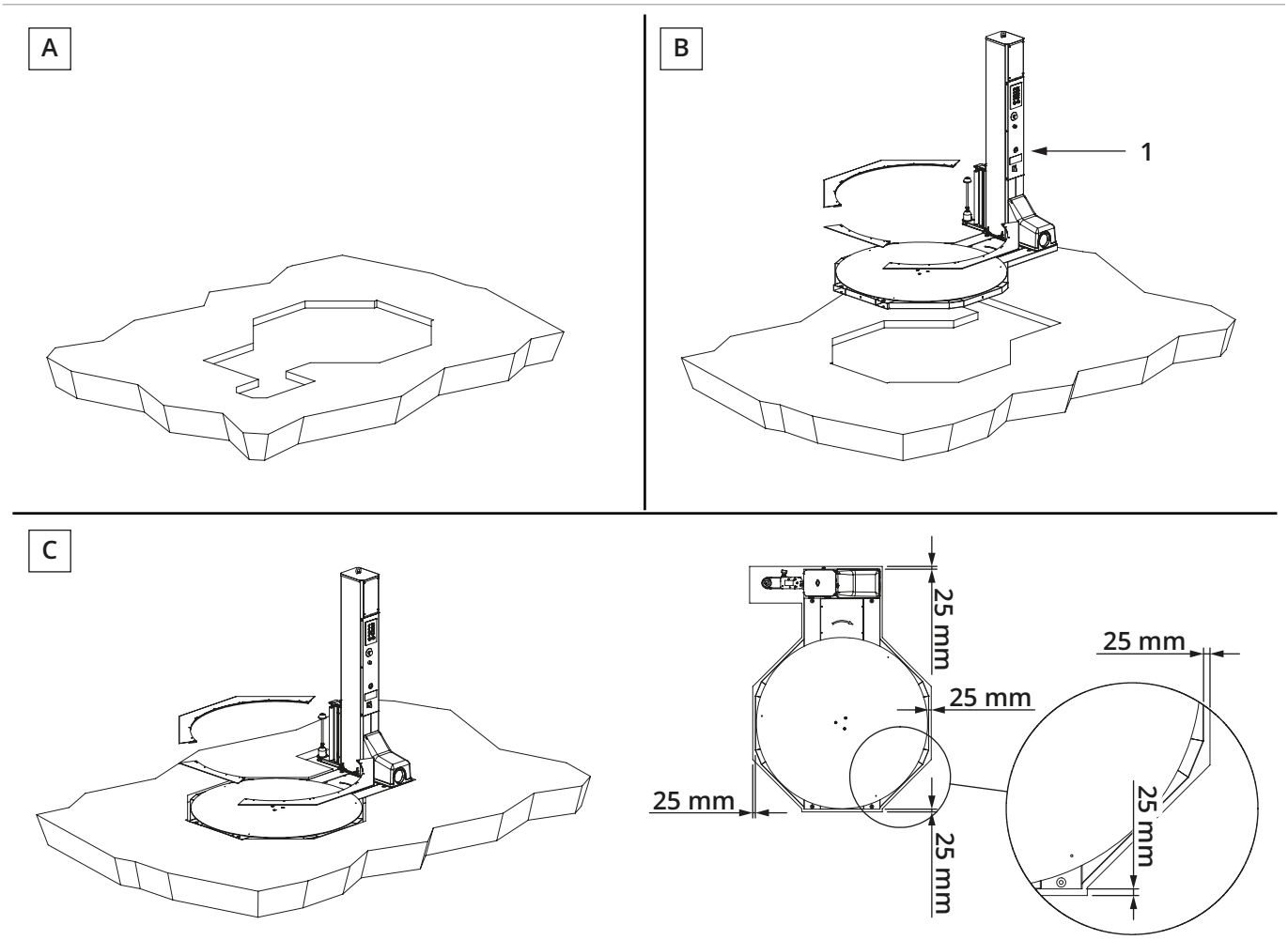
Picture 57

5.3.5 MACHINERECESSEDINTOTHEFLOOR(WITHOUTFRAME)

» See Picture 58 - pag. 82

Before assembling the machine, create the recessed area following the diagram representing the reference hole **(A)**.

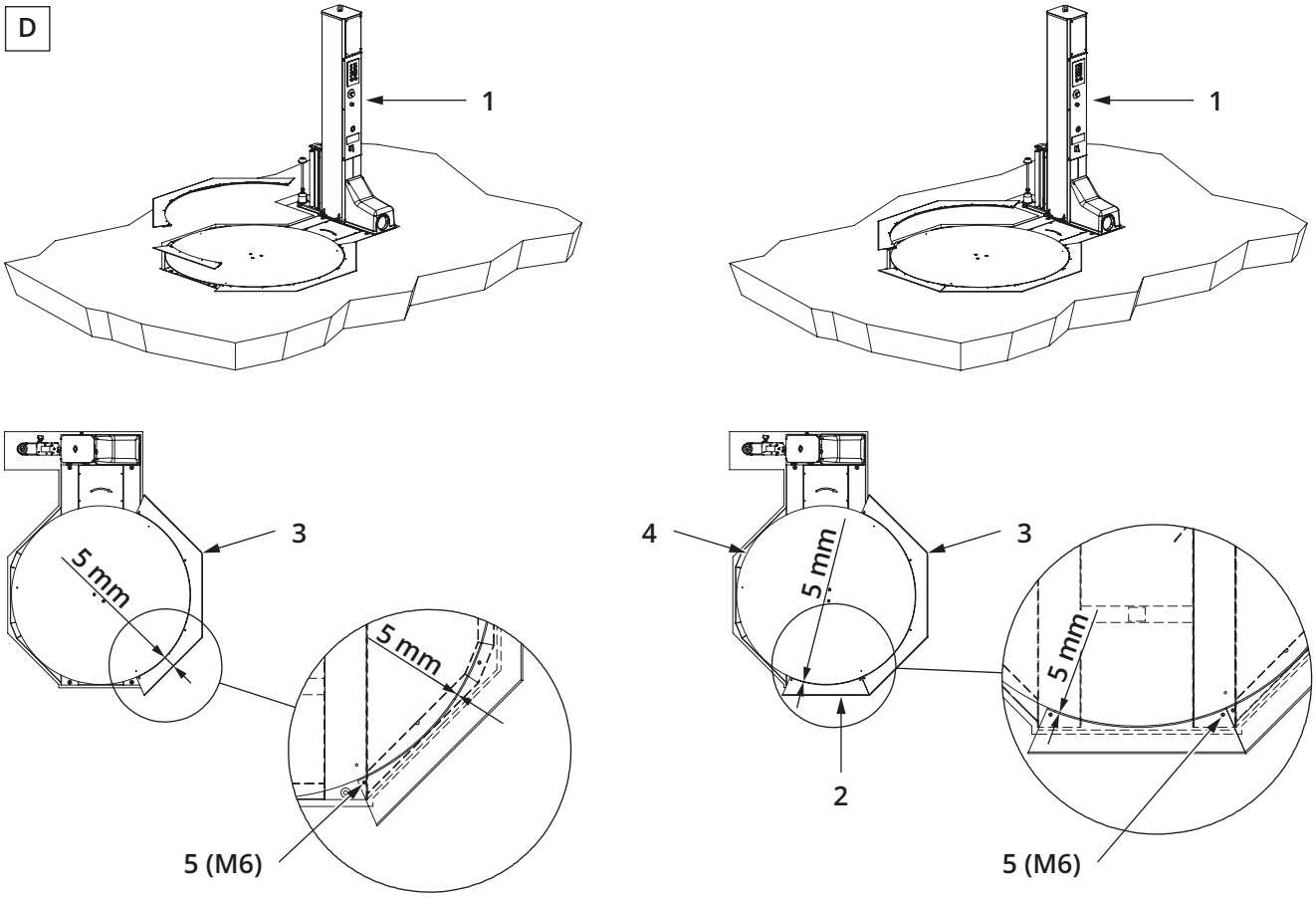
Position the machine **(1)** inside the hole (see **B**) and centre it, distributing the space in equal measure between the sides (25 mm) (see **C**).



Picture 58

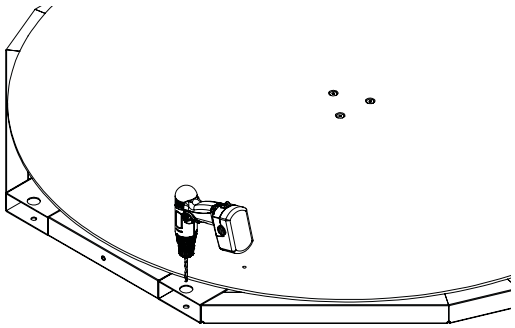
Check the proper position of the machine, resting the sections **(2)** and **(3)** around the plate **(4)** leaving a distance of ~5 mm from the plate itself.

If needed, correct the position of the machine **(1)** inside the hole to properly position the sections **(2)** and **(3)**.



Picture 59

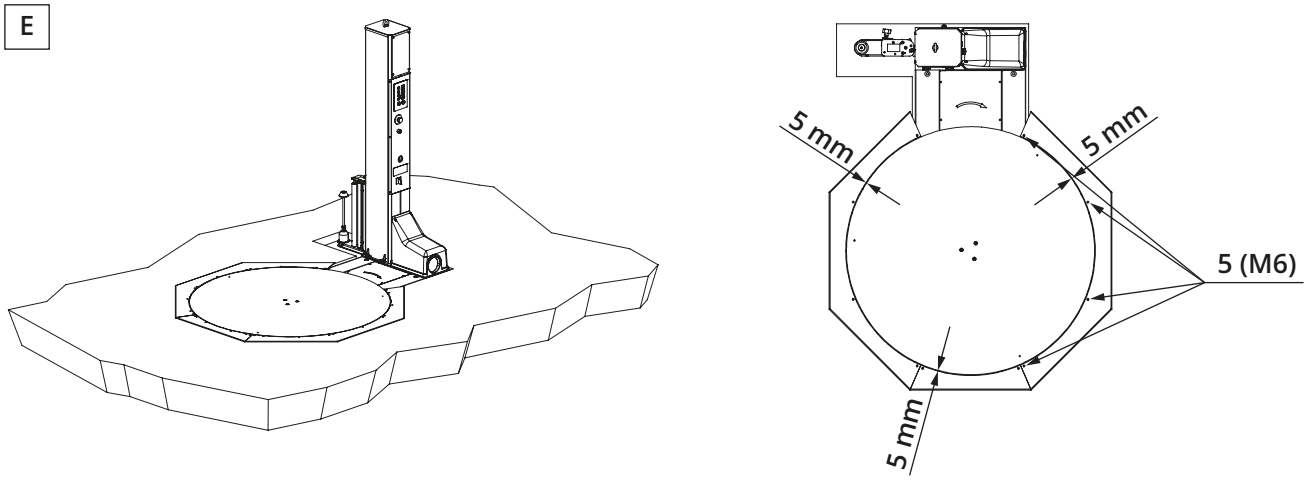
Remove the sections and attach the machine to the ground using the holes.



Picture 60

Replace the sections **(2)** and **(3)**, positioning them according to the previous instructions, 5 mm from the turntable; drill and M6 thread the base in correspondence of the holes **(5)** and attach the sections with a HSHC M6 screw. **(D)**

Check for proper mounting **(E)**.



Picture 61

5.3.6 MACHINE WITH WEIGHING BASE

Position the machine in the intended location; position the plates (**A** and **B**) as in the drawing so that the feet **(C)** fit in the specific seats **(D)**.

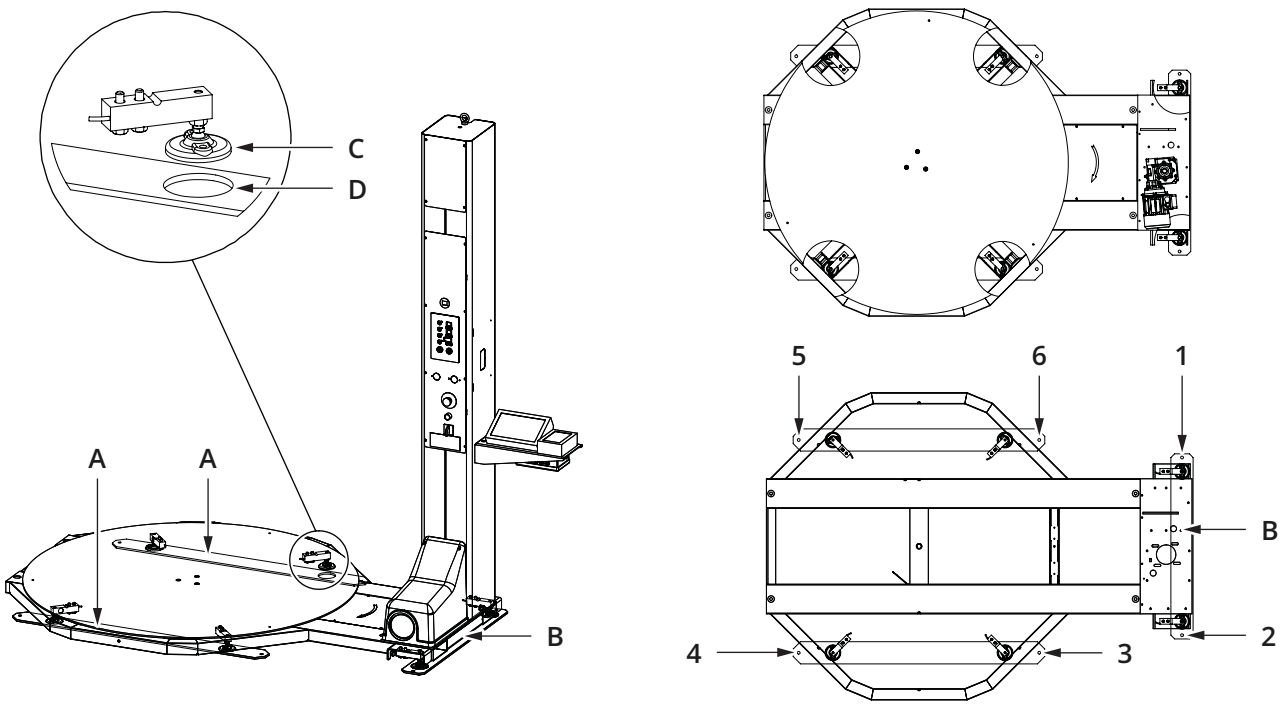
Level the machine by adjusting the height of each foot **(C)** until the work surface is perfectly horizontal.

WARNING

USE OF A SPIRIT LEVEL IS RECOMMENDED TO CORRECTLY LEVEL THE MACHINE.
ADJUST THE FEET SO THE WEIGHT IS DISTRIBUTED EQUALLY ON THEM. THE ACCURACY OF THIS OPERATION PREVENTS VIBRATIONS OR NOISES AND ENSURES GREATER RIGIDITY OF THE MACHINE AND ACCURATE WEIGHING.

Drill holes in the floor, at points (**1-2-3-4-5-6**), passing through the holes in the plates (**A** and **B**).

Insert the steel anchors and tighten.

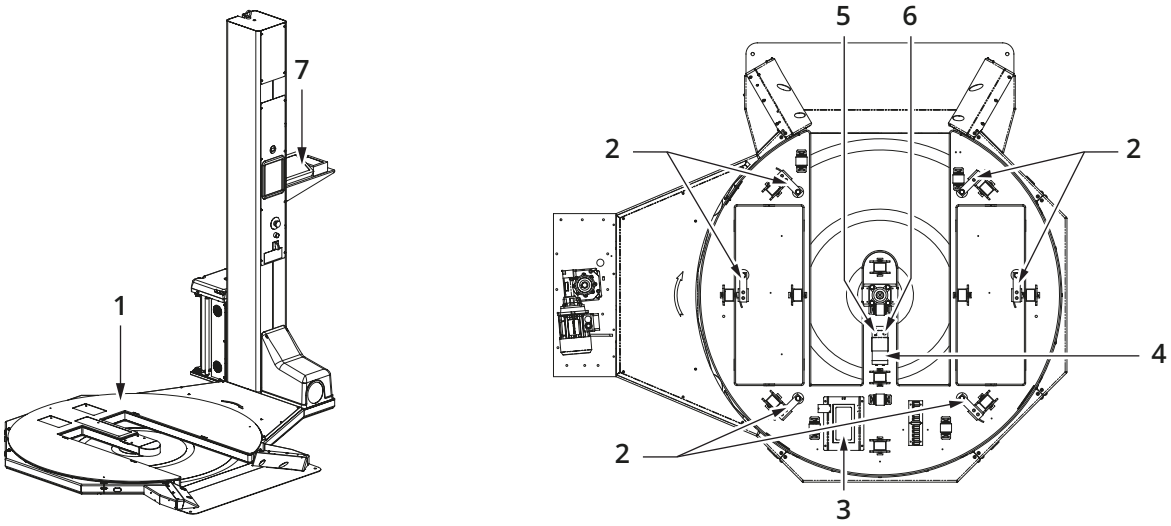


Picture 62

5.3.7 MACHINE WITH TRANSPALLET AND WEIGHING BASE

The turntable **(1)** on this machine is made up of a plate and a counter-plate with the following inside:

- loading cells **(2)**
- transmitter to the scale **(3)**
- batteries **(4)**
- switch to turn on the module **(5)**
- battery charger port **(6)**



Picture 63

The unit also has a display panel **(7)** with optional printer mounted on the machine column and powered by the machine itself.

Before using the scale for the first time, completely charge the battery (4) for at least 10 hours, using the supplied battery charger.

Plug the charger into the port **(6)** next to the on button **(5)** then plug it into the power.

INFORMATION

During normal use, this operation must be repeated every evening at the end of the work shift to prolong battery life.

DANGER

Do not wrap products while the batteries are charging.

5.4 ELECTRICAL CONNECTION

The machine is supplied with a cable **(1)** without a plug and already connected to the terminal board on the electric panel.

DANGER

IT IS MANDATORY TO CONNECT A PLUG TO THE SUPPLIED CABLE ; IT IS NOT PERMITTED TO CONNECT THE CABLE INSIDE AN ELECTRICAL PANEL.

DANGER

THE ELECTRICIAN MUST CORRECTLY FIT AN APPROPRIATE PLUG ACCORDING TO THE CURRENT REGULATIONS IN THE COUNTRY OF USE.

DANGER

THE ELECTRICAL POWER SYSTEM CONNECTED TO THIS PRODUCT MUST BE SET UP IN CONFORMITY WITH THE SAFETY STANDARDS CURRENTLY IN FORCE, EQUIPPED WITH A DIFFERENTIAL SWITCH AND AN EARTH CIRCUIT. THE VOLTAGE AND FREQUENCY MUST BE COMPATIBLE WITH THE REQUISITES GIVEN ON THE IDENTIFICATION PLATE. The differential must be type B or F and a maximum of 300 mA and not less than 100 mA.

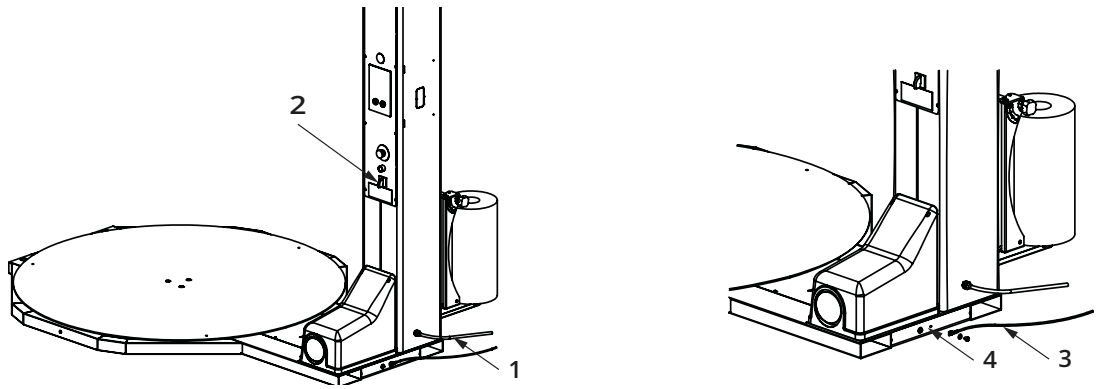
The plug must be wired as shown in the following colour scheme:

Brown: Phase - Blue: Neutral - Yellow - Green: Earth

Connect the earth cable **(3)** with 10mm² section (not supplied) in the relevant hole **(4)** in the machine base.

DANGER

ANY FAULTS OR ANOMALIES IN THE EARTH CIRCUIT CONNECTED TO THE MACHINE CAN, IN THE EVENT OF BREAKDOWN, LEAD TO THE OPERATOR SUFFERING ELECTRIC SHOCK WITH THE CONSEQUENT RISK OF DEATH OR SERIOUS INJURY TO THEIR HEALTH.



Picture 64

6 STARTING UP THE MACHINE

6.1 ELECTRICAL PANEL

1) **Main switch**

   Switches the machine on and off, cutting off the mains power supply.

2) **Reset button**

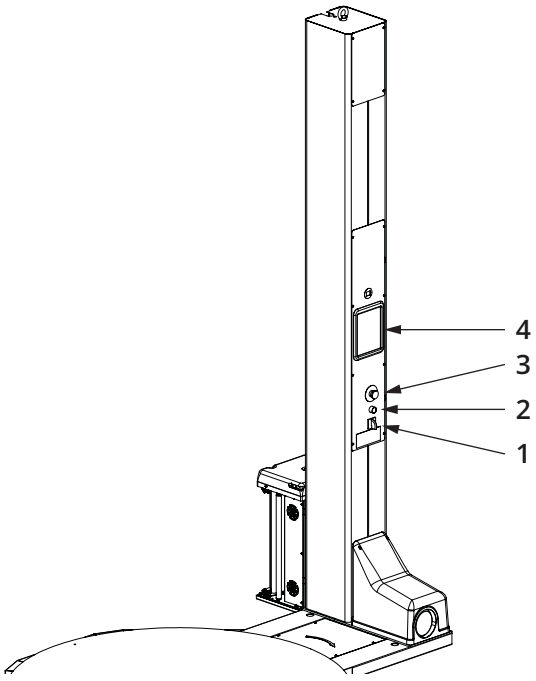
   Provides power to the auxiliary circuits, has to be pressed after switching on or after the emergency button has been pressed.

3) **Emergency button**

   Stop the machine and cuts off the main power supply in situations of emergency or imminent danger; to reset the button once it has been pressed, turn the top of the button clockwise.

4) **Control panel**

   Used to control the machine and the work cycle (for more information, consult the attached Operator Panel manual).



Picture 65

6.2 INSTRUCTIONS FOR USE

6.2.1 LOADING A ROLL OF FILM

» See Picture 67 - pag. 91

This is a general procedure.

Carriage-specific operations are described in the relative roll-holder carriage manual.

A) Lower the roll-holder carriage **(1)** to make it easier to load the roll;

B) turn the main switch **(2)** to **'O'-OFF**;

C) open the carriage door (depending on the carriage model);

D) push the roll **(3)** onto the carriage pin **(4)**;

E) unwrap the film and thread it between the rollers;

F) close the carriage door.

WARNING

When inserting the reel into the reel holder shaft:

- ***do not let the reel drop;***
- ***guide it until it is fully inserted in the lower centring pin.***

6.2.2 STARTING THE MACHINE

» See Picture 67 - pag. 91

A) Correctly place the pallet on the turntable **(5)**;

B) check that there is a roll of film **(3)** on the roll-holder shaft **(4)** and check that the film is correctly routed according to the diagram (see plate **(6)** indicated for the carriage **(1)** being used;

C) turn ON the panel using the main switch **(2)** and press the reset button **(7)** to enable the machine;

D) manually draw out the film protruding from the roll-holder carriage **(1)** and attach it to a corner of the pallet;

E) set the operating cycle from the control panel

F) press the START button **(A)** on the operator terminal;

G) After wrapping, manually cut the film and fix it to the pallet;

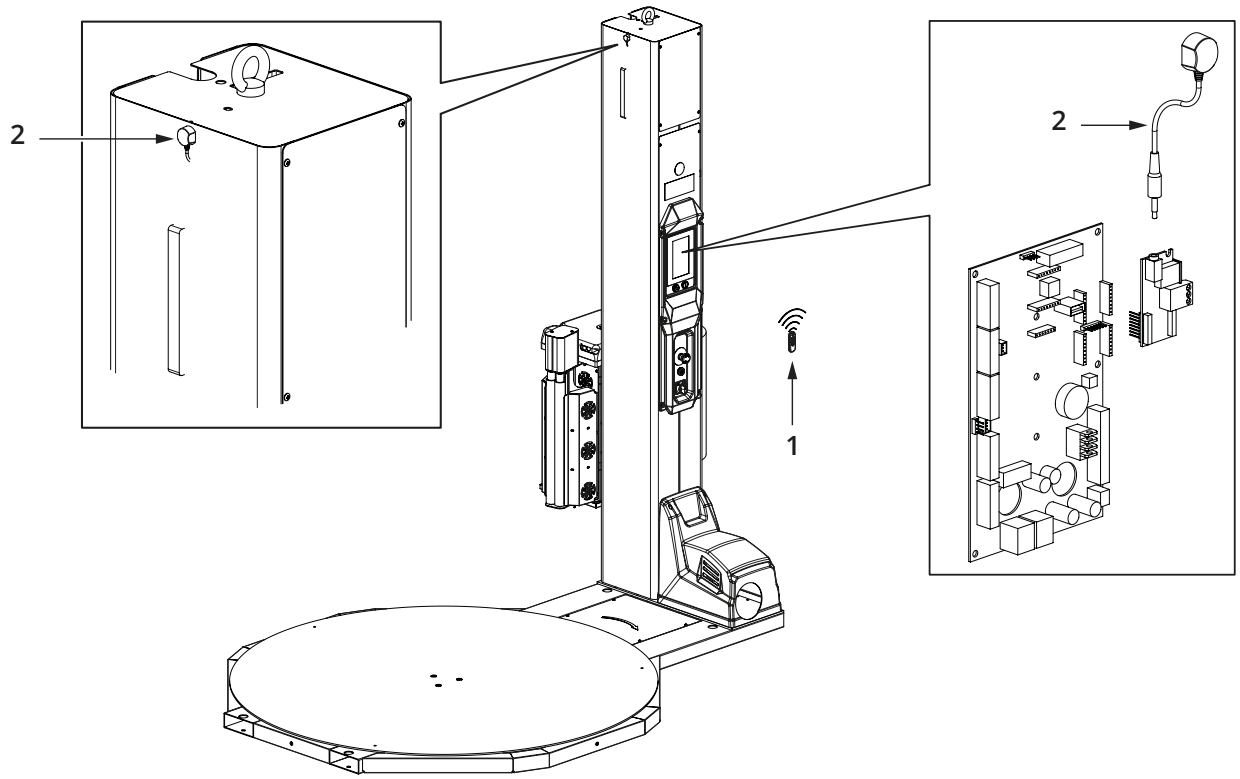
H) the pallet can now be unloaded.

6.2.3 MACHINE START-UP VIA REMOTE CONTROL/ RADIO REMOTE CONTROL (OPTIONAL)

The infra-red remote control or radio remote control **(1)** are used to start and stop the work cycle of the machine remotely.

In the case of the infra-red remote control, it must be pointed towards the machine for correct operation.

In the event that these options are purchased at a later date and are not required when ordering the machine, it will be necessary to install the expansion modules and for the remote control it will also be necessary to install the receiver **(2)**.



Picture 66

INFORMATION

The card can be installed both inside the machine body and behind the control panel, depending on the specific model of the machine.

6.3 MACHINE STOP

6.3.1 CYCLE STOP

Press STOP on the operator terminal to stop machine at the end of its current cycle.

6.3.2 STOPPING THE MACHINE AFTER USE

» See Picture 67 - pag. 91

After using the machine, even for short periods of inactivity, it must be put into the safe mode.

A) Lower the turntable down to the ground **(1)**.

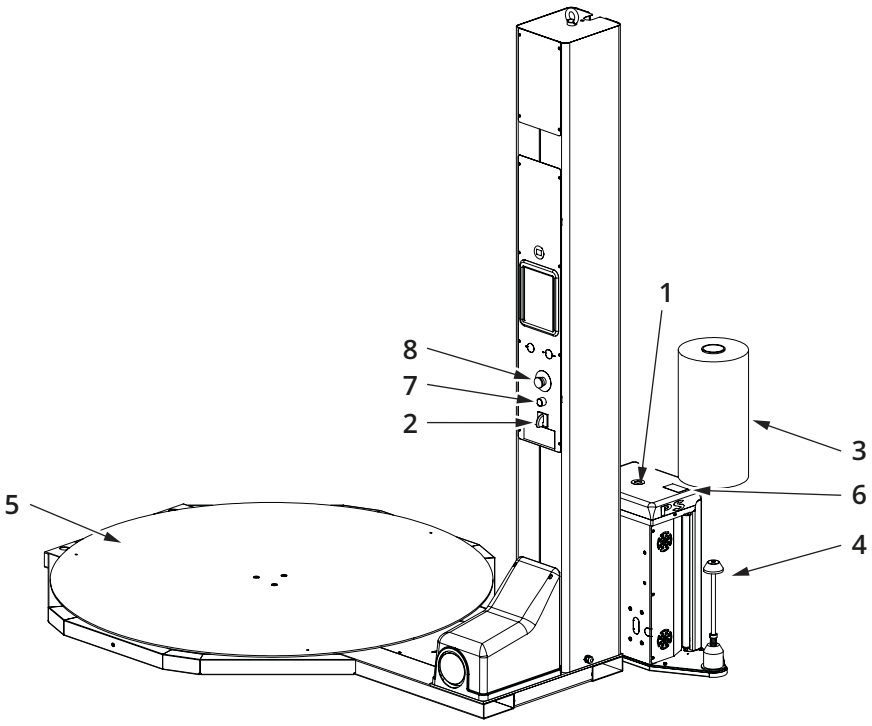
B) Switch off the machine by turning the main power switch **(2)** to **'O'-OFF** position.

C) Remove the pallet from the turntable **(5)**.

6.3.3 EMERGENCY STOP

» See Picture 67 - pag. 91

The machine is equipped with an emergency pushbutton **(8)**. Pressing the pushbutton, the machine will stop immediately. To restart the machine it is necessary to turn the pushbutton to rearm and press the button to reactivate the control panel.



Picture 67

6.3.4 SAFETY SYSTEMS EFFICIENCY CHECK

This section contains a description of the actions the operator must take to test the efficiency of the safety systems, before starting up production.

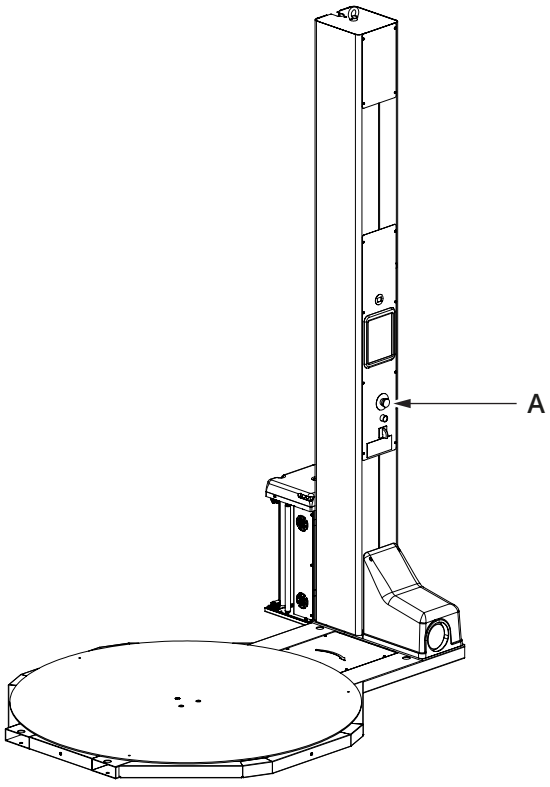
DANGER

THIS PROCEDURE CAN BE OPERATED ONLY BY A GRADE 2 QUALIFIED MAINTENANCE ENGINEER.

6.3.5 EMERGENCY BUTTONS OPERATIONAL CHECK

» See Picture 68 - pag. 92

With the machine running, press the emergency pushbutton **(A)**. Check that the machine comes to an immediate halt. Release the previously pressed emergency pushbutton and press the ENABLE MACHINE pushbutton. Press START to restart the machine.



Picture 68

7 MAINTENANCE

7.1 GENERAL PRECAUTIONS

DANGER

Maintenance personnel must act in accordance with the instructions contained in this document and strictly observing the accident prevention regulations set forth by international directives and by the legislation of the country where the machine will be installed.
Additionally, PPE suitable for all maintenance operations must be worn.

WARNING

Maintenance operations that require acting on mechanical parts and/or electrical components must be carried out by qualified technicians.
The operator can only clean and visually check the instruments of the machine.

INFORMATION

All maintenance information refers exclusively to routine maintenance procedures and to works aimed at ensuring that the machine operates correctly on a daily basis. Supplementary maintenance procedures must be carried out by the Manufacturer's specialised technicians.

- Provide sufficient lighting when servicing the machine. If maintenance involves areas that are poorly illuminated, portable lighting devices must be used. Make sure to avoid causing dark cones that prevent or reduce the visibility of the point on which you are going to work or of the surrounding areas.
- Use only original materials when repairing the machine in order to ensure the safety of the machine in any case. The tools available must be suitable for the task to be done. Never use any tool or equipment for a purpose other than that for which they were made.

7.1.1 SPECIAL PRECAUTIONS

When performing maintenance or repair operations, observe the following:

- Before starting work, post a sign “MACHINE UNDER MAINTENANCE” in a well visible position.
- Do not use solvents or flammable materials.
- Take care not to pollute the environment with cooling lubricants.
- Use suitable equipment to access the upper parts of the machine.
- Do not climb onto machine components or guards, as they have not been designed to support the weight of a person.
- After completing the maintenance operations, refit and properly secure all the protection devices and safety guards that have been removed or opened.

7.1.2 CLEANING

Periodically clean the safety guards, particularly the transparent material of the casing, using a damp cloth.

7.2 SCHEDULED MAINTENANCE

This paragraph describes the operations to be carried out periodically in order to ensure proper functioning of the machine.

WARNING

IT IS ESSENTIAL TO SCRUPULOUSLY OBSERVE THE MAINTENANCE OPERATIONS DESCRIBED BELOW IN ORDER TO MAKE THE MACHINE MORE EFFICIENT AND ENSURE A LONGER LIFE.

INFORMATION

IF MACHINE MAINTENANCE IS NOT CARRIED OUT IN COMPLIANCE WITH THE INSTRUCTIONS PROVIDED, THE MANUFATURER IS RELIEVED OF ALL RESPONSIBILITY FOR MALFUNCTIONING OF THE MACHINE.

7.2.1 ACTIVE SAFETY DEVICES MAINTENANCE

DANGER

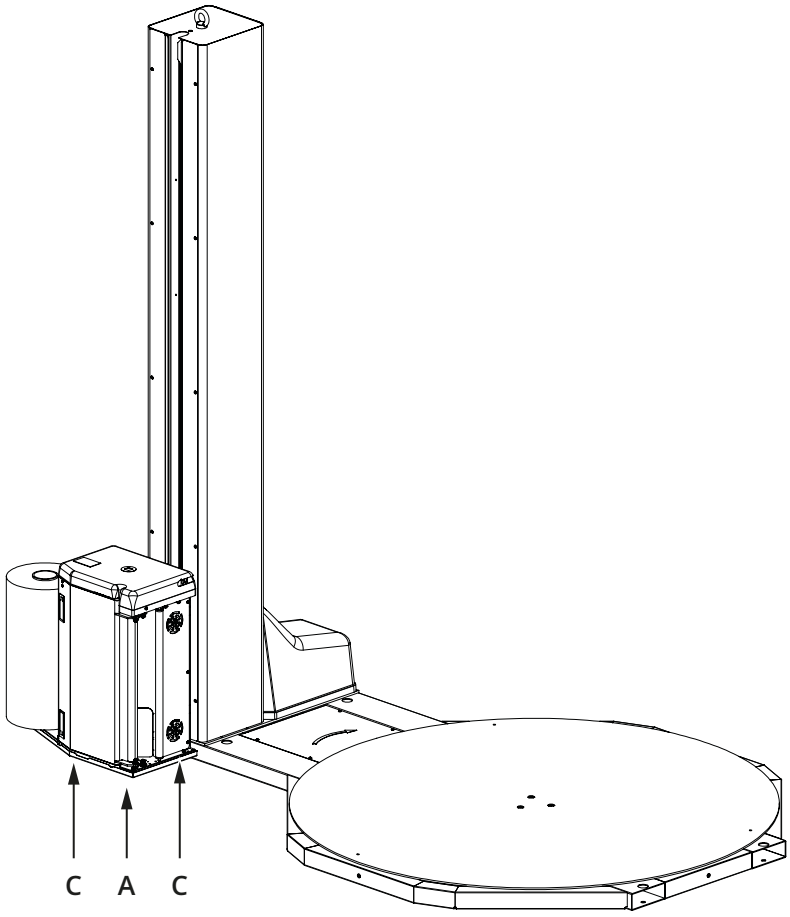
CHECK THE EFFICIENCY OF THE SAFETY DEVICES BEFORE STARTING WORK.

» See Picture 69 - pag. 95

DAILY OPERATIONS:

Clean out the crush-protection safety devices with a jet of dry air.

Check that the carriage bottom plate **(A)** are working properly. Make sure also that there are no foreign bodies in the crevices **(C)**.



Picture 69

7.2.2 DAILY MAINTENANCE

Cleaning. Carefully eliminate all traces of dirt on all the machine surfaces. Use a clean damp cloth.

Clean the photocells with a clean soft cloth.

7.2.3 QUARTERLY MAINTENANCE

» **See Picture 70 - pag. 96**

Check the tension of the chain driving the turntable as follows:

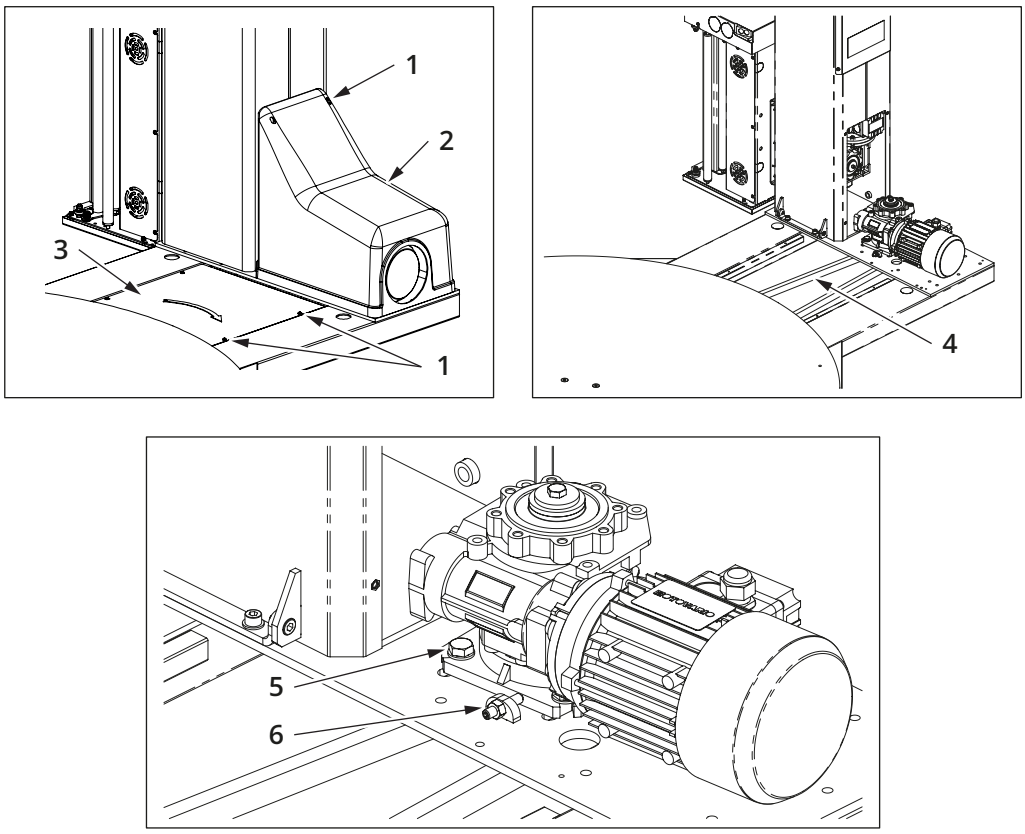
Standard turntable

A) Unscrew the screws **(1)**;

B) remove the guard **(2)** and **(3)**;

C) check the tension of the chain **(4)**. To tighten, loosen the screws **(5)**. tighten the screw **(6)** until the tension and tighten the screws **(5)**. Grease the chain;

D) put back the guard **(2)** and **(3)** and secure it with the screws **(1)**.



Picture 70

» See Picture 71 - pag. 97

Turntable with transpallet compartment

A) Unscrew the screws **(1)**;

B) remove the guard **(2)**;

C) grease the chain **(3)** and check the tension. To adjust the chain tension **(3)** proceed as follows:

D) Loosen the lock nut **(4)**;

E) loosen the preload screw **(5)** of the springs **(6)** until they are fully released;

F) tighten the screw **(5)** until the spring is compressed for about 15 mm;

G) tighten the nut **(4)**.
If adjustment of the screw **(5)** is not sufficient to tighten the chain:

H) loosen the nut **(4)**;

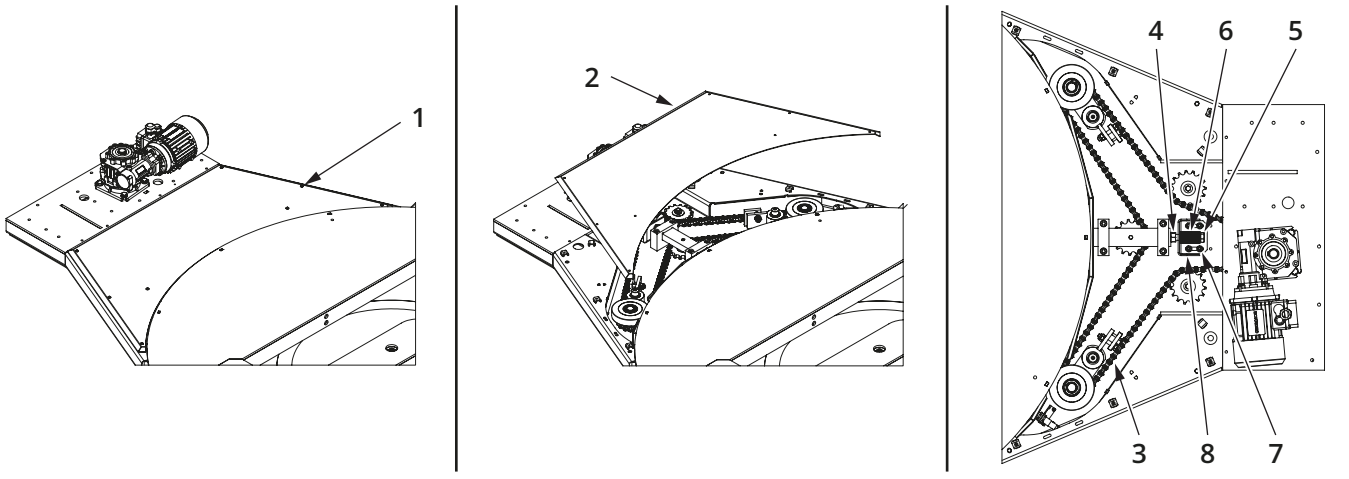
I) loosen the screw **(5)**;

J) loosen the four screws **(7)**;

K) slide the support **(8)** towards the machine column;

L) tighten the screws **(7)** and retension the chain as described in points f) and g);

M) refit the guard **(2)** and secure it with the screws **(1)**.



Picture 71

» See Picture 72 - pag. 98

Adjusting the friction wheels

To check and adjust the preload of the friction (driving) wheels **(5)**, proceed as follows:

A) Unscrew the screws **(1)**.

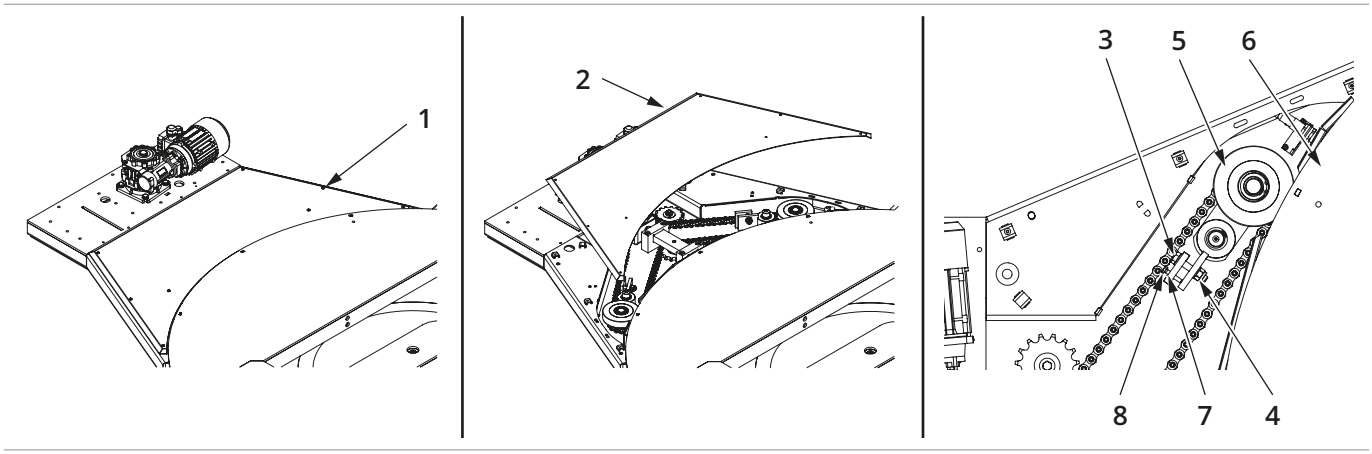
B) Remove the guard **(2)**.

C) Loosen the screw **(3)** and nut **(4)** until the friction wheel **(5)** pressure is released, remove the nut **(7)** and screw **(8)**.

D) Make sure the friction wheel **(5)** is in contact with the disk **(6)** and replace the screw **(3)** and nut (4, tightening until they press the wheel **(5)** 3 mm against the disk **(6)**.

E) Screw the screw **(8)** into place and lock the nut **(7)**.

F) Refit the guard **(2)** and secure it with the screws **(1)**.



Picture 72

7.2.4 SIX-MONTHLY MAINTENANCE

» See Picture 73 - pag. 99

Check the chains and transmission organs for wear and replace if necessary.

Tensioning the chain

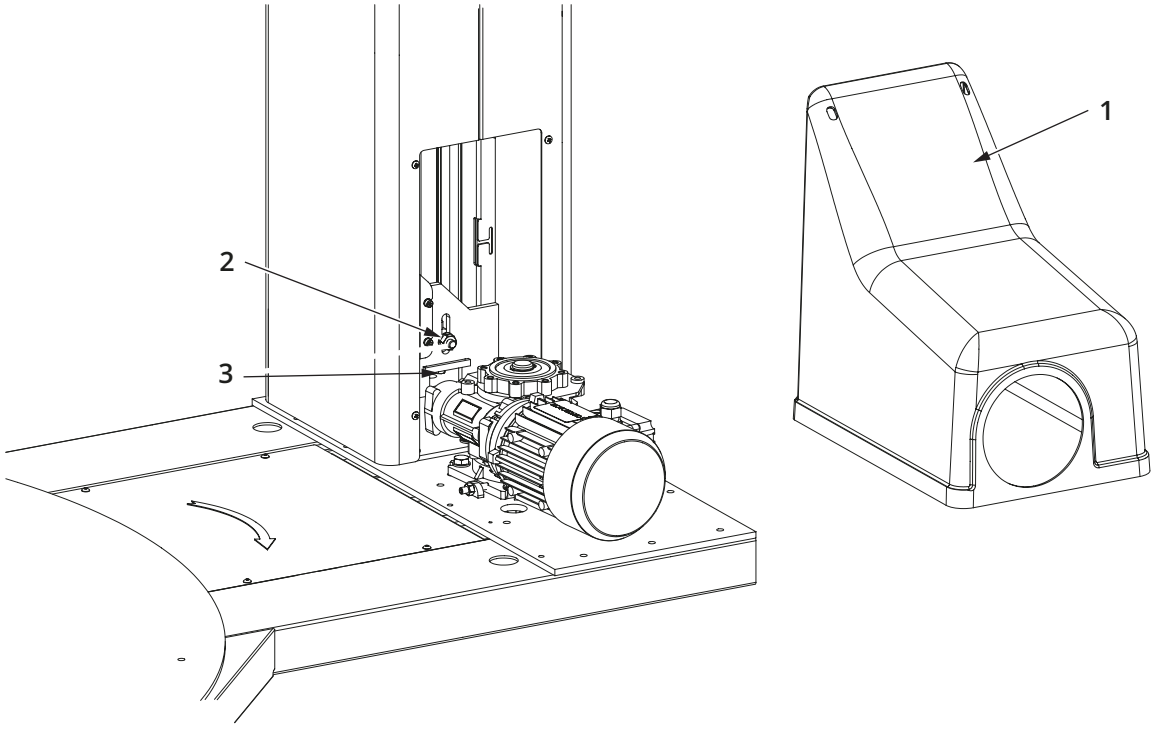
Check the tension of the chain of carriage movement after the first month of use the machine and then every six months.

A) Remove the screws securing the motor cover **(1)**, and remove the motor cover from place.

B) Loosen the nut **(2)** blocking the idler pulley. Turn the screw tension **(3)**, placed on the head of the column.

C) The pulley is then adjusted along the slot, once it reaches the correct chain tension, tighten the lock nut **(2)**.

D) Replace the motor cover **(1)** and secure with the screws.



Picture 73

8 OUT OF SERVICE

8.1 DISMANTLING, SCRAPPING AND DISPOSAL

DANGER

IF THE MACHINE OR ITS COMPONENTS ARE FOUND TO BE NO LONGER SERVICEABLE OR REPAIRABLE BECAUSE THEY ARE BROKEN, WORN OR HAVE COME TO THE END OF THEIR WORKING LIFE, THEY MUST BE DEMOLISHED.

- Demolition must be carried out using suitable equipment, chosen on the basis of the type of material in question.
- All components must be dismantled and scrapped after being broken down into smaller parts, so that none of them can reasonably be used again.
- When the machine is scrapped, its parts must be disposed of in a differentiated manner, taking into account their different types (metal, oil and lubricants, plastic, rubber, etc..) handing them over to collection centres authorised for such purposes and in any case conforming to the applicable laws in force governing the disposal of solid industrial waste.

DANGER

NEVER TRY TO RE-USE MACHINE PARTS OR COMPONENTS THAT MAY STILL APPEAR INTACT ONCE THEY HAVE BEEN DECLARED NO LONGER SERVICEABLE.

8.2 DISMANTLING ELECTRONIC PARTS (WEEE DIRECTIVE)

La direttiva comunitaria 2012/19/UE (RAEE), impone ai produttori e agli utilizzatori di apparecchiature elettriche ed elettroniche una serie di obblighi relativi alla raccolta, al trattamento, al recupero e allo smaltimento di tali rifiuti.

Si raccomanda di attenersi scrupolosamente a tali norme per lo smaltimento di tali rifiuti. Rammentare che lo smaltimento abusivo di tali rifiuti comporta l'applicazione delle sanzioni amministrative previste dalla normativa vigente.

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