

INDEX

1	Preface
2	Technical files and Manufacturers
3	EC Declaration of Conformity
4	Identification plate
5	Machine data
6	General information
7	Machine dimensions
8	Safety instructions
9	Analysis of Residual risks
10	Warnings
11	Caution
12	Meaning of pictograms
13	Safety devices
14	Main components
15	Technical data
16	Handling and Transport
17	Installation Instructions
18	First check
19	Functions control
20	Assembly sequence and film feed / Cleaning the rubber rollers
21	Control panel and general information
22	Starting and stopping of the turntable wrapping cycle and Exhibition cycle
23	Errors during operation
24	Alarms (Error Codes and their meanings)
25	Maintenance Instructions
26	Machine decommissioning
27	Warranty conditions

BE Opgelet!

Leest U in elk geval de gebruiksaanwijzing, vooraleer de machine wordt opgesteld, geïnstalleerd en in gebruik genomen wordt. Daardoor zorgt U voor Uw eigen veiligheid en vermijdt U schade aan Uw machine.

DE Achtung!

Lesen Sie unbedingt die Gebrauchsanweisung vor Aufstellung-Installation-Inbetriebnahme. Dadurch schützen Sie sich und vermeiden Schäden an Ihrem Apparat.

DK OBS!

De bør absolut læse bruganvisningen, inden maskinen opstilles, installeres og tages i brug. Derved beskytter De Dem selv og undgår skader på maskinen.

ES Atención!

Resulta imprescindible leer las Instrucciones de manejo antes de proceder al Emplazamiento/ Instalacion/Puesta en servicio del aparato, con objeto de protegerse a si mismo y evitar el deterioro de la máquina debido a un manejo incorrecto.

FR Attention!

Lisez impérativement le mode d'emploi avant l'installation/la mise en service. Vous vous protégerez ainsi et éviterez des détériorations sur votre appareil.

GB Important!

Read the operating instructions carefully before installation and before using this machine for the first time.

You will avoid the risk of causing harm to yourself or to your machine in this way.

GR Προσοχή!

Πρίν την εγκατάσταση, σύνδεση και αρχική λειτουργία της συσκευής διαβάστε προσεκτικά τις οδηγίες χρήσης.

Έτσι προστατεύετε τον εαυτό σας και αποφεύγετε πιθανές βλάβες συσκευής.

IT Attenzione!

Leggere assolutamente le istruzioni d'uso prima di procedere a posizionamento – installazione - messa in funzione della macchina. In questo modo ci si protegge e si evitano danni all'apparecchio.

NO NB!

De må lese bruksanvisningen før oppstilling, installasjon og start av maskinen! Gjør det for å unngå skade på Dem selv og maskinen.

NL Let op!

Lees beslist de gebruiksaanwijzing voor het plaatsen, installeren en in gebruik nemen van uw machine. Dat is veiliger voor Uzelf en U voorkomt onnodige schade aan Uw machine.

PL Ważne!

Przed instalacją maszyny, bądź przed przystąpieniem do pracy z maszyną po raz pierwszy, należy dokładnie przeczytać i zapoznać się z niniejszą instrukcją obsługi.

W ten sposób uniknie się ryzyka mogącego spowodować uraz ciała bądź uszkodzenie maszyny.

PT Atenção!

Leia as instruções de utilização antes da montagem - instalação e - primeira utilização. Assim evita avarias no aparelho.

SE OBS!

Läs bruksanvisningen noga före uppställning, installation och användning. Ni förebygger därmed olycksrisker och undviker skador på maskinen.

FI Huomio!

Tutustukaa huolellisesti käyttöohjeeseen ennen laitteen asennusta ja käyttöönottoa.

Näin välttytte mahdollisilta vahingoilta käyttäes-sänne konetta.

MANDATORY

FROMM Wrapping Systems S.r.l.
Viale del Lavoro, 21
37013 Caprino Veronese (VR)
ITALY

Tel. +39 045 205 7300
Fax +39 045 205 7373

P.IVA IT 04146150232

www.fromm-stretch.com
info@fromm-stretch.com

MANUFACTURER

FROMM SLOVAKIA a.s.
Priemysel'ná 5885
SK-901 01 Malacky
(SLOVAK REPUBLIC)

VAT no. SK2022019109

DOCUMENTATION

For the spare parts, check the separately delivered spare-parts booklet.

Or download directly from our website:

<http://www.fromm-stretch.com>

Or contact your Fromm Distributor.

EC Declaration of Conformity

(EC machinery directive 2006/42/EC - Annex IIA)

The Supplier (manufacturer): **FROMM SLOVAKIA a.s.**
Priemysel'ná 5885
SK-901 01 Malacky
(SLOVAK REPUBLIC)

Agent: **FROMM Wrapping Systems S.r.l.**
Via del Lavoro 21
IT-37013 Caprino V.se (VR)
(ITALY)

Declares, under its responsibility, that the product:

Model: **FS390**

Machine type:

Serial no.:

Description: **Semi-automatic wrapping machine using stretch film**

has been manufactured in compliance with the following directives:

2006/42/EC (Directive)
2004/108/EC (Electromagnetic compatibility)
2006/95/EC (Low voltage)

and in compliance with the following harmonised and national standards as well as other standard documents:

UNI EN 12100:2010
ISO 13849-1:2008 + AC:2009
IEC EN 60204-1:2006
UNI EN 415-6:2013
UNI EN415-10:2014

01/01/2018

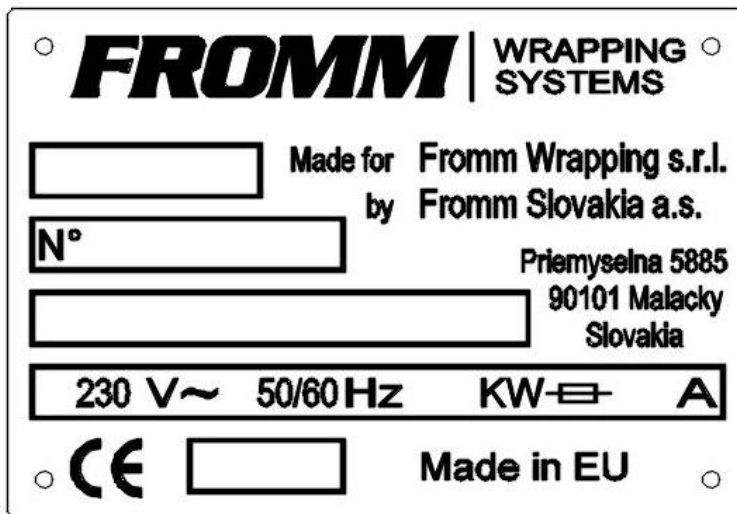
Name: **Mr. Reinhard Fromm**
Function: **Legal Representative**



A handwritten signature in blue ink, appearing to read 'R. Fromm', is positioned above a horizontal line.

IDENTIFICATION PLATE

The serial identification plate with the following information is affixed to the back of the column.



Name of manufacturer	: FROMM Slovakia a.s.
Type	: Machine Type.
Serial number	: Manufacturer's production number
Voltage	: Power supply voltage.
Power	: Power consumption
Fuse	: 10 Amp
Year of manufacture	: year in which the machine was built by the manufacturer

Furthermore, the identification plate shows the CE mark:

CE mark

The machine meets the applicable requirements as provided for in the EC machinery directives:

2006/42/EC	(Directive)
2004/108/EC	(Electromagnetic compatibility)
2006/95/EC	(Low voltage)

- It is strictly forbidden to remove the identification plate or to replace it with one that is similar or of a different type.
- If the identification plate should become damaged for any reason, immediately contact the MANUFACTURER.

MACHINE DATA

Machine item

34.1	2	1								
------	---	---	--	--	--	--	--	--	--	--

Serial number

		.					
--	--	---	--	--	--	--	--

Manufactured by

--

Distributed by

--

 Date

--

UNITS

Operating Panel

Turntable

Mast

Carriage

GENERAL INFORMATION

- This manual only covers the semi-automatic wrapping machine for pallets, shown on page one, as supplied by FROMM WRAPPING SYSTEMS.
- THAT DESCRIBED IN THIS MANUAL IS VALID IF APPLIED!
- This machine with turntable can be installed on the floor. As an optional, it can be equipped with a frame for floor positioning.
- Lay the film prior to application on the goods (stretching), reduces packaging costs and has a better impact on the environment (option available depending on the model).
- Refer to the technical data chapter that describes installation in detail and to the chapter on overall dimensions of the system.
- Carefully read at least the **HANDLING AND TRANSPORT** and **INSTALLATION** chapters.
- For safety reasons, we recommend you read the entire instruction manual before commissioning/installation of the machine, repairs and maintenance operations.
- Pay careful attention to the **SAFETY INSTRUCTIONS** and **WARNINGS** chapters that illustrate the intended uses and the dangerous situations that could not be avoided during designing and manufacturing of the wrapping machine.
- It is strictly forbidden to tamper with the machine. It is forbidden to feed the machine with non-intended, corrosive or flammable products as the machine is not protected against explosions.
- The warranty period is ensured if the following are respected: use for which the machine has been designed, manufactured and equipped with protection devices, the recommendations, information (including general issues), details and technical limits for health and safety provided by the Manufacturer to the User with the user instructions.
- We do not accept warranty claims if original spare parts have not been used.
- If the machine is used beyond the operating limits and if the manufacturer's features are in some way altered, this is considered as improper use. In this case, the MANUFACTURER is not liable for injuries/damage to people/things caused by failure to follow these guidelines.
- For the above-mentioned points, we recommend that customers always contact the Assistance Service.

ASSISTANCE SERVICE

For any problems, contact:

SPARE PARTS

The spare parts can be ordered from:

GENERAL INFORMATION / GUIDE LINES



CAUTION!

All operations indicated can be performed exclusively under the supervision of the manufacturer's trained personnel or of its agents!

Refer to the diagram in the **SAFETY DEVICES** paragraph for the numbers of the indicated positions.

General guidelines

Always check that the minimum conditions for placement and operation of the machine are met, especially: environmental conditions (suitable floor), temperature, humidity, lighting and suitability of the area chosen.

Installation is strictly forbidden in environments subject to a risk of flooding, explosion or fire.

The area required for installation of the wrapping machine corresponds to the dimensions of the machine and the space for its installation and operation.

The machine must be installed by trained personnel, coordinated directly with the authorised Technical Service, in total compliance with the following instructions, as well as with the health and safety laws in force.

As a precaution, always check for any damage that may have occurred during transport or during the handling operations.

If necessary, contact the Manufacturer directly.

Temperature

For safety reasons, make sure that the machine operates at an environmental temperature in the range of +5° / +30°C.

If different values are measured, urgently contact the Authorised Technical Service.

Work areas

It is strictly forbidden to place and/or use the machine if the environmental conditions constitute a potential risk of explosion or flammability.

Make sure there is no concentration of dusts, gas, fumes, or dangerous particles, electrostatic fields, excessive electromagnetic flux, or anything else that could be harmful to exposed people or to correct operation of the machine.

Always comply with the health and safety laws in force.

The machine must be positioned on a flat, rigid, concrete surface without vibrations.

Do not improperly access the top components of the machine.

Energy sources

The customer must provide a cable suitable for the power supply voltage requested for the control cabinet with wire diameter able to manage the total voltage requested, as indicated in the **TECHNICAL DATA** chapter.

The wrapping machine must be connected preferably to the customer's wall socket with a cable and standard EEC plug, with a 16A (slow) fuse.

For information on the correct plug, refer to the **TECHNICAL DATA** chapter.

If necessary, the customer must provide a network switch that precedes the plug.

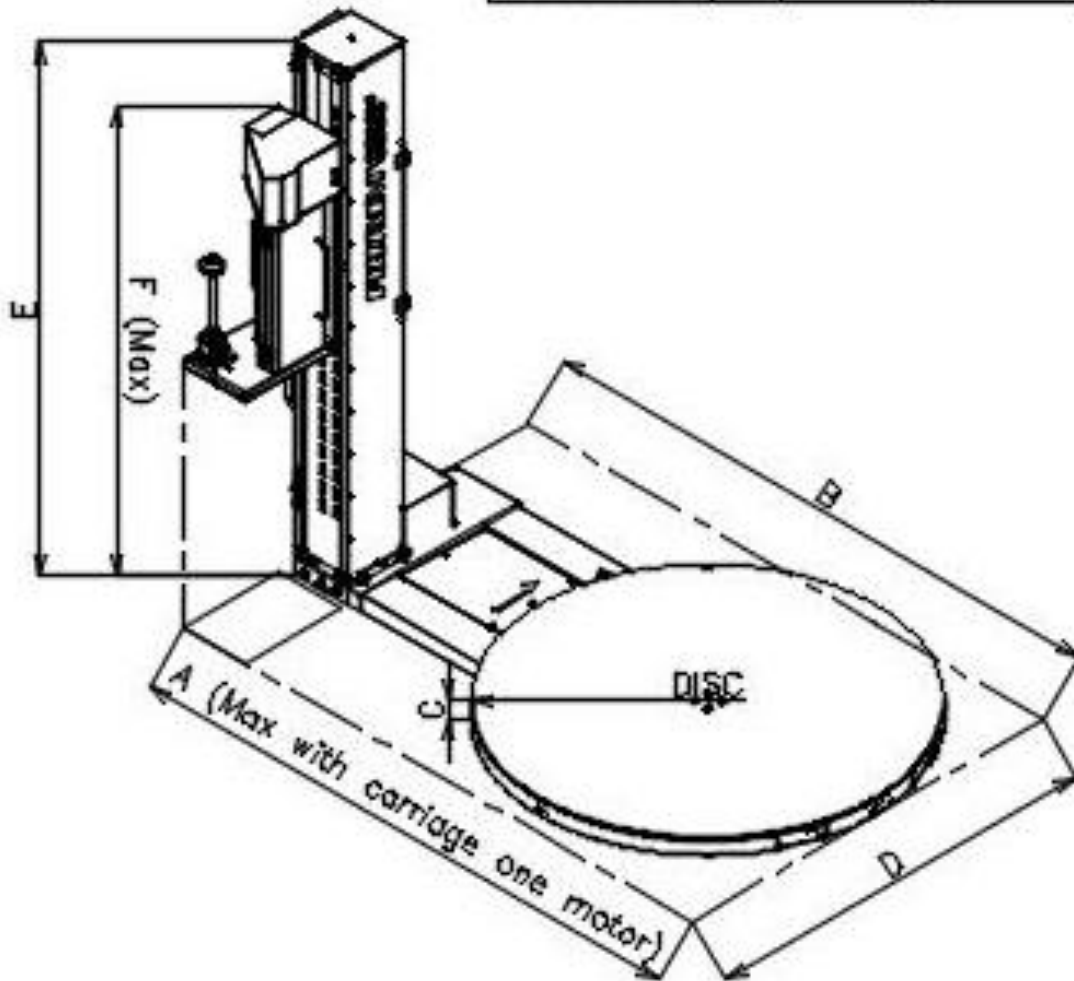
The power supply must comply with the applicable standards in terms of voltage variations allowed, voltage fluctuation, generation of waves, reduction of high harmonics, etc.

DIMENSIONS / DIAGRAM

Refer to the following diagram for the dimensions:

DISC	Ø1500	Ø1650
A	2265	2265
B	2280	2280
C	73	75
D	1565	1645

H Max Film	2100	2500
E	2060	2460
F (carriage roll core brake)	2270	2670
F (carriage one roll brake)	2350	2750
F (carriage one motor)	2460	2860



SAFETY INSTRUCTIONS



The following conditions must always be met unless otherwise indicated in other instructions in this manual.

- This wrapping machine has been supplied by FROMM WRAPPING SYSTEMS and can be used only to wrap pallets that meet the requirements indicated in the description of the machine in the TECHNICAL DATA chapter.
Any other uses of the machine, other than those described, can constitute a damage risk for the machine and/or danger to the safety of the operator and anyone else near the machine.
- Carefully read this manual before using the machine and understand the residual risks that cannot be excluded during development of this machine.
- The machine can be used only by suitably trained personnel.
- The electrical interventions on the machine must be carried out only by suitably trained electricians.
- During installation of the machine, as a precaution, always check that the controls and the safety systems are mounted correctly and operate efficiently. If any malfunctions are detected, immediately stop the production cycle and request the intervention of an authorised technical assistance service.
- Check the nameplates. If they are extremely damaged, replace them with the utmost urgency and directly and only contact the authorised technical assistance service or the Manufacturer.
- During adjustment and maintenance operations, all requirements described in the **MAINTENANCE INSTRUCTIONS** chapter must be met.
- The manufacturer will commission the machine only when connection to the electrical network meets the standards applicable in the country of delivery.
- The supplier will provide training for the assigned personnel, otherwise training must be duly performed by the installation company.
- The machines are designed and manufactured in compliance with the safety laws in force, therefore, if the machine is used correctly, no fire risks are foreseen.
- To prevent any **fire** risk, the equipment within the machine's user company is sufficient to deal with any problems caused by the material used for the process.
- In the event of fire, we recommend you use extinguishers containing CO₂ to avoid damaging the equipment and the electrical system.
- In the event of **flooding**, it is essential to disconnect the electrical power supply before entering the room where the machine is installed.
- In the event of flooding, contact the MANUFACTURER'S customers technical assistance service.
- We recommend you avoid wearing unsuitable clothing (with buttons, flaps) or accessories (bracelets, watches, rings, etc.) during use of the machine.

SAFETY INSTRUCTIONS



MACHINE USES NOT ALLOWED

The following conditions must always be met unless otherwise indicated in other instructions in this manual.

- The machine is not equipped with components that have special disposal problems.
- Do not stand near the turntable when the machine is in operation. (Use the emergency stop button to immediately stop the machine.)
- Do not touch the pallet when the machine is in operation. (Use the emergency stop button to immediately stop the machine.)
- Do not put your hand or fingers between the column and the carriage when the machine is in operation. (Use the emergency stop button to immediately stop the machine.)
- Do not put your hand or fingers in the column. (Use the emergency stop button to immediately stop the machine.)
- Do not put your hand or fingers near the wheels that move the carriage. (Use the emergency stop button to immediately stop the machine.)
- Do not put your hand or fingers in the electrical panel. (Use the emergency stop button to immediately stop the machine.)
- Do not cross the space between the column and the turntable. (Use the emergency stop button to immediately stop the machine.)
- Do not put your fingers in the space between the turntable and the disk. (Use the emergency stop button to immediately stop the machine.)
- People must not climb on the transport vehicles, unless otherwise indicated.
- People must not be above the transport vehicles.
- Do not put tools or components on the machine.
- The safety devices must not be bypassed or turned off.

WARNINGS

- The machine's average noise level is less than 80 dB. Depending on the film applied, during the pallet wrapping phase a maximum noise level of 80 dB may be recorded. We recommend using noise protection safety devices.
- We would like to remind you that the film (roll) can contain an electrostatic charge.
- Pay close attention to the electrical installation. Only suitably trained personnel can perform these interventions only after having taken all necessary safety measures described in the **SAFETY INSTRUCTIONS** chapter.
- It is necessary to consider all European safety requirements and standards should the machine require adjusting; the safety measures and protective covers should also be adjusted.
- Touching the electrical system constitutes a danger to personnel safety.
- The people who modify or adjust the machine (functions, operation, principles) are entirely responsible for these modifications or adjustments.
- Take all necessary safety measures when intervening on the machine, especially during maintenance operations and resolution of faults.
Ensure that the main switch is off (0) and padlocked (if possible) or that the power cable is disconnected to prevent other personnel from using the machine during the interventions. Furthermore, all safety measures and standards in force must be taken and complied with during these activities.
- Handling or approaching the machine can create dangerous situations if the machine is in operation. These actions are forbidden!



- Comply with all recommendations and laws relating to working conditions and safety in the workplace.
- There is an acoustic signal device installed in the control cabinet that activates briefly, as a warning, before the machine is operated.

ANALYSIS OF RESIDUAL RISKS

The residual risks, divided by the centre of danger, are as follows:

Reel, film press and film feed installation: the residual risk is associated with film installation and replacement.

Carefully follow the instructions in the user and maintenance manual.

Cutting devices: the residual risk is associated with maintenance.

Carefully follow the instructions in the user and maintenance manual.

Turntable: the residual risk is associated with contact with lower limbs, impact with the product and crushing between the product and the carriage.

Slipping, tripping and falling: Pay attention to the product loading operations.

Carefully follow the operating procedures in the user and maintenance manual.

Maintenance operations: the maintenance operations must be performed only by FROMM ASSISTANCE SERVICE specialists.

Keep device pressed (optional): the residual risk is associated with the risk of being crushed between the turntable and the product and between the carriage and the bottom part of the machine.

Carefully follow the operating procedures in the user and maintenance manual.

Dangerous voltages and currents inside the electrical cabinets and boxes.

Maintenance is forbidden to technicians not working for FROMM.

The residual risk is associated with product wrapping.

Consider the possible solutions, depending on the product packaged, as indicated in UNI EN ISO 415-6: 2010.

PREVENTIVE AND TOTAL SAFETY MEASURES

1. Appropriate installation of the machine;
2. Lighting suitable for work;
3. Protection / isolation of all moving parts against accidental contacts;
4. Creation of protective shields to prevent material from being thrown out of the machine;
5. Absorption and/or localised suction systems for dusts or various emissions;
6. Adequate and activated mechanical and electrical protection in the machine;
7. Start-up devices to be activated only deliberately;
8. Emergency button that is easily accessible, recognisable, operable, etc.;
9. Correct and efficient power supply connection, isolation of cables and of live parts;
10. Use of suitable safety and protective signs with indications of danger and any DPI in use;
11. Evident prohibition of cleaning and maintenance operations when the machine is in motion;
12. Evident prohibition of removal of protective and safety devices;
13. Information, instruction and training of personnel;
14. Use of appropriate work instructions, practices and procedures;
15. Tests, use, checks, inspections and frequent maintenance as specified in the user and maintenance instructions.

INSTRUCTIONS FOR SAFE USE:

Use the DPI foreseen in the work area before starting DPI work (ear plugs, gloves, safety glasses, shoes).

1. Check that the space around the machine is not obstructed;
2. Check escape methods and that the escape routes are free;
3. Clean and tidy up your work area;
4. Use work equipment correctly;
5. In the event of danger, immediately notify the supervisor;
6. Check that the protective devices are enabled.

CAUTION!

After first installation:

follow this procedure before working with the machine:

- Check that the emergency button is released;
- Switch on the machine;

After machine installation or maintenance, follow this procedure to check the efficiency of the safety devices such as, for example:

- ✓ **Interconnection of the operator's anti-crushing protective guard**
- ✓ **Interconnection of the anti-crushing horseshoe entrance safety sensor**
- ✓ **Emergency button**

Check the efficiency of the carriage's anti-crushing protective guard:

- Start the machine
- Trigger the operator's protective guard

Check that the machine stops within a few fractions of a second.

Check the efficiency of the anti-crushing horseshoe entrance safety sensor:

- Start the machine
- Place a mechanical block at the horseshoe entrance (between the blue guards)

Check that the machine stops within a few fractions of a second.

Check the functionality of the safety device of the base (Only for 1.650mm Turntables):

- Start the machine
- Press yellow carter

Check that the machine stops within a few fractions of a second.






Check efficiency of the mushroom button (Emergency stop):

- Start the machine
- Press the mushroom emergency button




Check that the machine stops within a few fractions of a second.

MEANING OF PICTOGRAMS


DANGER SIGNS

 Fig 1	Figure 1: DANGER High voltage.
 Fig 2	Figure 2: General warning sign.
 Fig 3	Figure 3: Hands crushing risk.
 Fig 4	Figure 4: Hands and feet crushing risks.
 Fig 5	Figure 5: Falling hazard.

PROHIBITION SIGNS

 Fig 6	Figure 6: Identifies situations in which the SUPPLIER must be contacted.
 Fig 7	Figure 7: It is important that the guidelines are carefully observed. Machine operators could otherwise be at risk, the consequence of which could make the warranty null and void with no chance of claiming from FROMM WRAPPING SYSTEMS .
 Fig 8	Figure 8: Operations that must not be performed.

CE-MARK

 Fig 9	Figure 9: The machine complies with the applicable requirements, as stated in the EC machinery directives.
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SAFETY DEVICES



We would like to again highlight how all safety devices have been installed for operator safety, etc. and must not be manipulated or excluded from the operations.

Refer to the drawings below and to the notes applied.
Observe the control panel

	<p>A = Acoustic signal</p> <p>B = Emergency stop button</p> <p>C = Main switch</p> <p>R = Reactivation button</p>	<p><u>Main switch:</u> The power (1x230V) is supplied by turning on the main switch. The voltage for the various control parts (24Vdc) is also supplied by turning on the machine.</p> <p>D= Anti-crushing device E = Parachute system</p>
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SAFETY DEVICES



We would like to again highlight how all safety devices have been installed for operator safety, etc. and must not be manipulated or excluded from the operations.

Refer to the drawings below and to the notes applied.



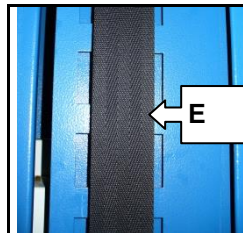
D = Anti-crushing device

This mobile anti-crushing device works with the aid of mechanical sensors.
Each time a foreign body touches the underside of the carriage, carriage stop immediately and simultaneously sends a signal to the turntable to stop in phase.



D = Anti-crushing device

This safety device works with the aid of a photocell and a reflector.
Each time a foreign body gets between the photocell and the reflector, a signal is sent to the turntable to immediately stop.



E = Parachute system

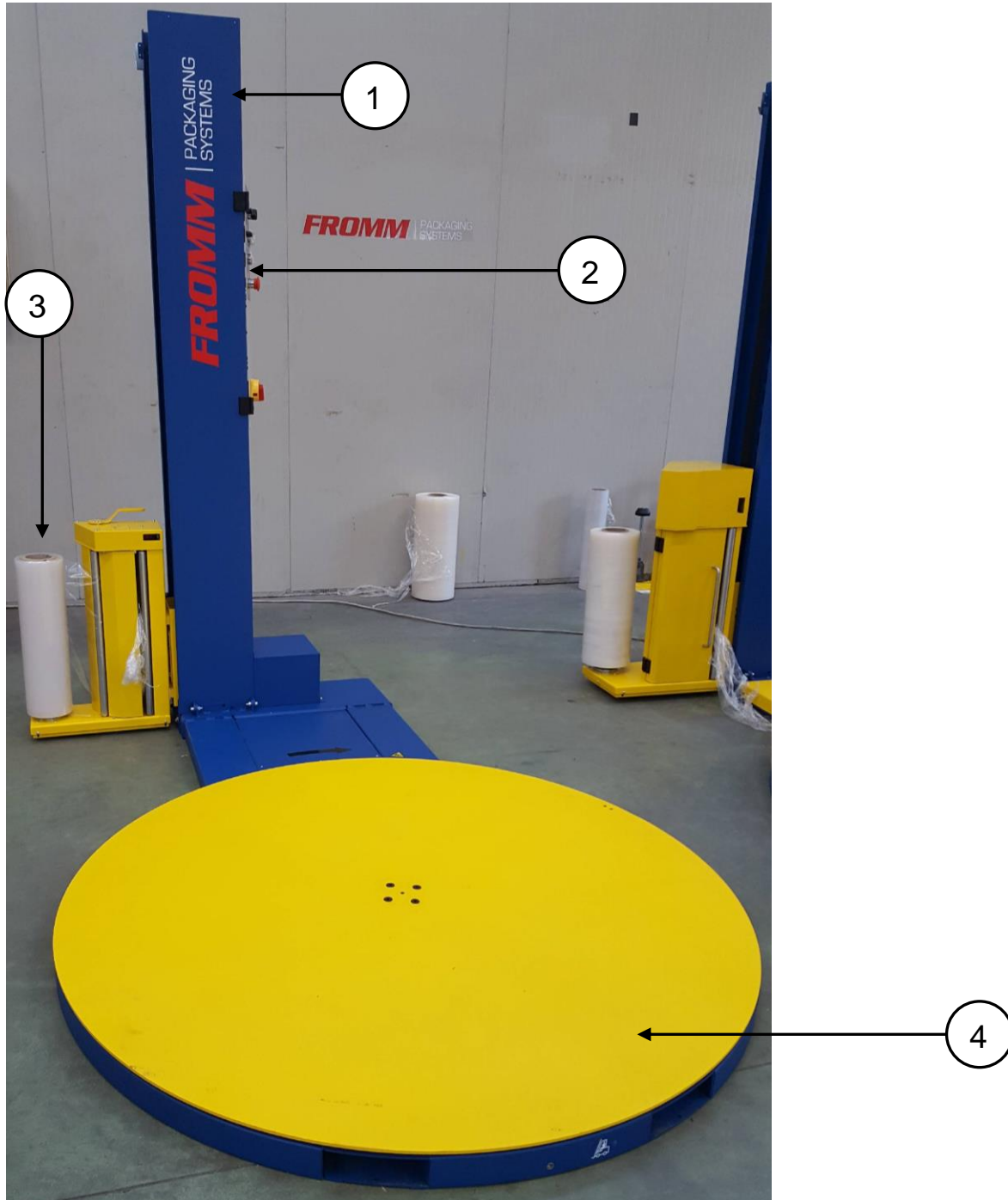
This mechanical safety device, parachute system, functions whenever the belt is not tensioned, in other words it stops the carriage from falling.

MAIN COMPONENTS

The machine, when supplied by the factory, consists of the following components in general form for our FS360 series:

- 1- Column
- 2- Operating panel
- 3- Film holder carriage
- 4- Turntable

The machine's function is to wrap pallets with stretch film, which is through rotation of the disk and movement of the carriage up and down the column



TECHNICAL DATA

Machine	- Turntable speed	from 6 to 12 rpm
	- Carriage speed	from 2 to 4 meters/minute
	- Capacity of pallets per day	depends on high/low rpm, pallet height and wrapping mode
	- Hours of operation	8 h/day, 5 days/week
	- FS360 Sealing height	maximum of 2100mm / 82.67"
		maximum of 2500mm / 98.42"
	- Max . load capacity in Ø1500mm	1500kg
	- Max . load capacity in Ø1650mm	2000kg
	- Max . load capacity in Ø1500mm	Open turntable 1250kg
Conditions	- Environmental temperature	+ 5 to +45°C
	- Environment	clean, dry and not corrosive
Electrical System	- Power supply	1 x 230 V 50/60Hz
	- Control voltage	24 Vdc
	- Turntable motor	0.55kW
	- Mast motor	0.18kW
	- Film carriage motor	0.37kW
	- Installed power	1.1kW
Goods on pallet		
	- Pallet dimensions (Length x width) Ø1500mm	800 x 1200 x 140 31.5" x 47.24" x 5.51"
	- Pallet dimensions (Length x width) Ø1650mm	1100 x 1200 x 140mm 43.30" x 47.24" x 5.51"
Colours	- Base	: Blue,finish sablè RAL5010
	- Turntable disk	: Yellow,antislip finish RAL1021
	- Mast	: Blue,finish sablè RAL5010
	- Bracket carriage	: Yellow,finish smooth RAL1021
	- Carriage frame	: Yellow,finish smooth RAL1021
	- Control station	: Light Grey,finish smooth RAL7035

If you have to work with products of a different type than previously indicated, contact the **MANUFACTURER'S** technical assistance service to receive written authorisation.

HANDLING AND TRANSPORT

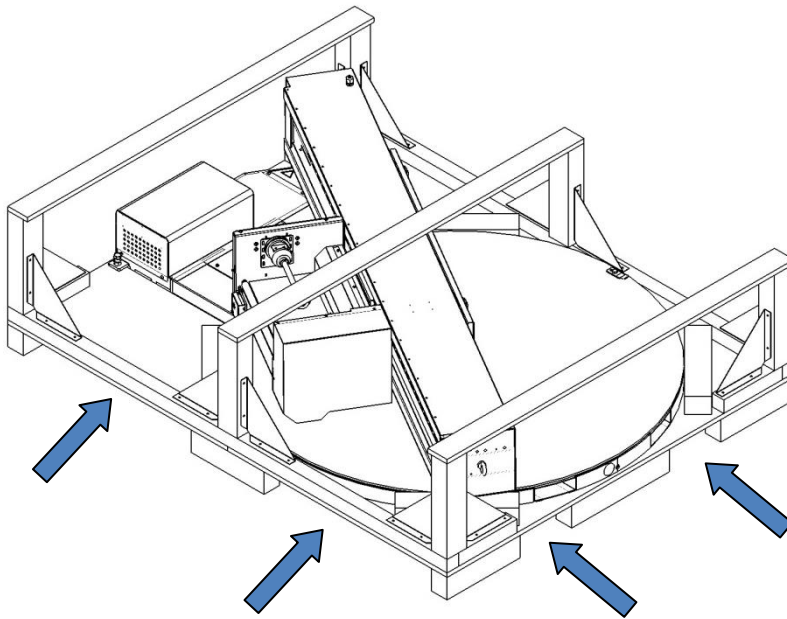


Lifting and handling the packaging in a wooden crate with forklift truck

Lifting and transport must be carried out with the aid of a forklift truck suitable for the weight of the machine, of the accessories and of the packaging.

Always check in advance that there is enough space for the operations.

- Insert the forks of the forklift truck under the base (arrows).
- Ascertain stability then lift the load and transport it to the packaging removal area, avoiding jerks and dangerous manoeuvres.



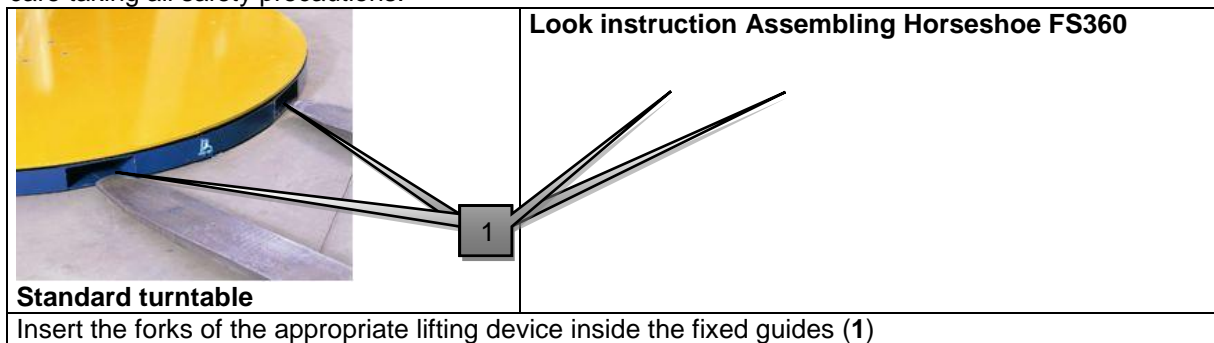
For transport and storage of the machine, the following measures must be taken:

- It is necessary to ensure a storage environment suitable for the packaging, in the event of long-term storage.

The reinforcement straps, if used to secure some components, must not be tightened on delicate components such as the control panel, the ventilation grilles, etc.

Handling the machine without the packaging

In the event some of the machine's components are shipped with the machine itself, handle them with care taking all safety precautions.



Storage of the machine

The machine and any components stored with it are protected by a plastic cover that does not guarantee long-term storage conditions.

The machine must never be stacked and does not support external loads.

INSTALLATION INSTRUCTIONS



CAUTION!

All operations indicated can be performed exclusively under the supervision of the manufacturer's trained personnel or of its agents!

Refer to the diagram in the **SAFETY DEVICES** paragraph for the numbers of the indicated positions.

General guidelines

Always check that the minimum conditions for placement and operation of the machine are met, especially: environmental conditions (suitable floor), temperature, humidity, lighting and suitability of the area chosen.

Installation is strictly forbidden in environments subject to a risk of flooding, explosion or fire.

The area required for installation of the wrapping machine corresponds to the dimensions of the machine and the space for its installation and operation.

The machine must be installed by trained personnel, coordinated directly with the authorised Technical Service, in total compliance with the following instructions, as well as with the health and safety laws in force.

As a precaution, always check for any damage that may have occurred during transport or during the handling operations.

If necessary, contact the Manufacturer directly.

Temperature

For safety reasons, make sure that the machine operates at an environmental temperature in the range of +5° / +30°C.

If different values are measured, urgently contact the Authorised Technical Service.

Work areas

It is strictly forbidden to place and/or use the machine if the environmental conditions constitute a potential risk of explosion or flammability.

Make sure there is no concentration of dusts, gas, fumes, or dangerous particles, electrostatic fields, excessive electromagnetic flux, or anything else that could be harmful to exposed people or to correct operation of the machine.

Always comply with the health and safety laws in force.

The machine must be positioned on a flat, rigid, concrete surface without vibrations.

Do not improperly access the top components of the machine.

Energy sources

The customer must provide a cable suitable for the power supply voltage requested for the control cabinet with wire diameter able to manage the total voltage requested, as indicated in the **TECHNICAL DATA** chapter.

The wrapping machine must be connected preferably to the customer's wall socket with a cable and standard EEC plug, with a 16A (slow) fuse.

For information on the correct plug, refer to the **TECHNICAL DATA** chapter.

If necessary, the customer must provide a network switch that precedes the plug.

The power supply must comply with the applicable standards in terms of voltage variations allowed, voltage fluctuation, generation of waves, reduction of high harmonics, etc.

INSTALLATION INSTRUCTIONS



CAUTION!

All operations indicated can be performed exclusively under the supervision of the manufacturer's trained personnel or of its agents!

THAT INDICATED IS VALID IF APPLIED!

For shipping requirements, the column and the carriage (Fig. 1) are usually shipped in the following way: the column in horizontal position and the carriage assembled on the column. Consequently, the column and the carriage must be repositioned during installation of the machine.

Column positioning:

- After having positioned the machine, lift the column (possibly with the aid of a forklift truck or bridge crane and using the eyelet above the column) by rotating it around the hubs (Fig.2) that have been specially adjusted, then position the column perpendicular to the turntable;
- Fasten the column upright, with respect to the relative surface, using the provided screws and tighten them (Fig.3/4/5/6);

Photo of FS360 standard wrapping machine (Fig. 1):

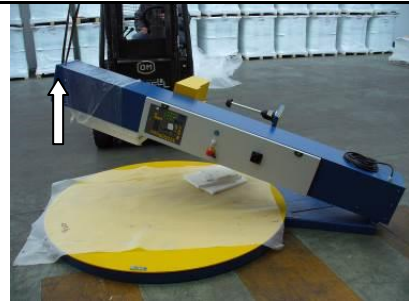
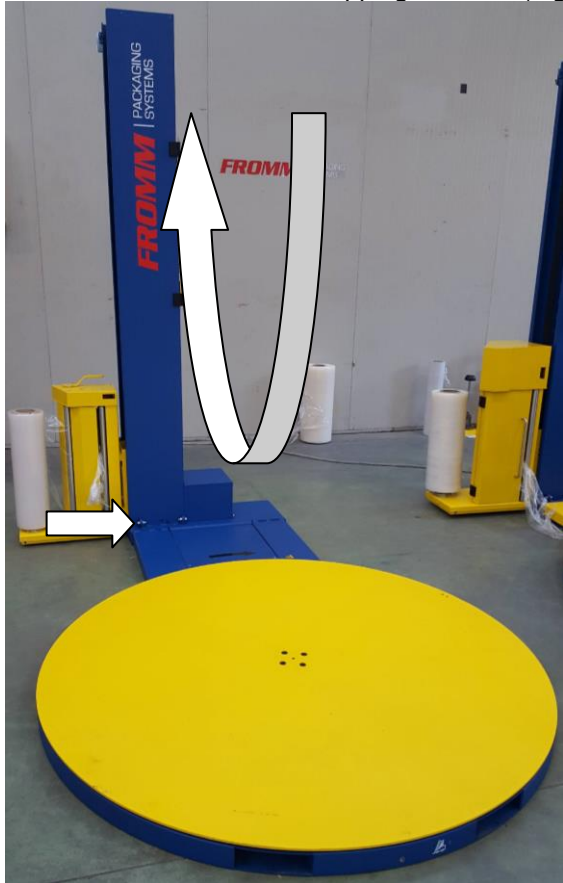


Fig.2 (Example FS machine)

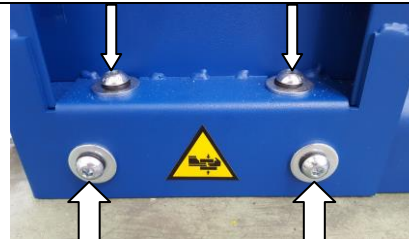


Fig.3



Fig.4

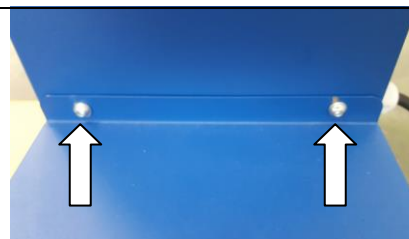


Fig.5



Fig.6 Adjustment (on the floor)

INSTALLATION INSTRUCTIONS

ATTENTION:

If the machine make immediately **7 beeps (acoustic signal) and 7 warning light**, then it is present **E7 = Belt tension** (safety belt).



This situation happens if the belt of the carriage is not tensioned. In the first installation, it can be caused by the oscillations during the transport of the machine.

To solve the error:



Step 1

Keep the belt under tension manually (pulling it towards you).



Step 2

While holding the belt in tension, press one time the reactivation button (R).



Step 3

While holding the belt in tension, choose:

- selector manual movement;
- manual movement up.

INSTALLATION INSTRUCTIONS

FIRST CHECK



Switch on the machine



An acoustic signal device has been installed in the electrical panel. This signal acoustic activates when switch on the machine (it make an long acoustic signal and at the same time the buzzer lights up).

Information

	<p>Reactivation button. Reactivation power in the wrapping machine.</p> <p>When an error involving a Stop occurs, once it has been removed the cause that has generated the error, it is necessary press the Reactivation button to restore the power in the panel.</p> <p>Pressing Reactivation button one time, the machine will do an continue beep simultaneously with an continue flash on the buzzer.</p>
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Alarms to check their functionality:

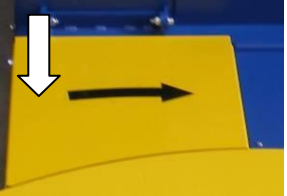


<p>1. Check the functionality of the EMERGENCY button (Fig.2) and Reactivation button (Fig.2)</p>		
<p>Fig.1</p>	<p>Fig.2</p>	

<p>2. Check the functionality of the SAFETY DEVICE for the horseshoe (Fig.1 / 2)</p>		
<p>Fig. 1</p>	<p>Fig. 2</p>	
<ul style="list-style-type: none"> - If you place an obstacle between the photocell and the reflector, the machine must not start (1). (Fig.1). - Start the machine and, during rotation, place a mechanical block in position 2. (Fig.2). The machine must stop in emergency. 		




FIRST CHECK



- 3. Check the functionality of the safety device of the base (Only for 1.650mm Turntables) (Fig.1)
- 4. Check the functionality of the machine's SAFETY PROTECTIONS (Fig.2)

 <p>Fig.1</p>	 <p>Fig.2 / Carriage: Anti-crushing device</p>	 <p>Fig.2 / Column: Parachute system / Anti-crushing</p>
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- 5. Check the functionality of the safety device and the protections on the Carriages

 <p>Fig.1 Carriage with roll core brake. Press the bracket.</p>	 <p>Fig.2 Carriage with one roll brake. Open the door.</p>	 <p>Fig.3 Carriage with one motor pre-stretch. Open the doors.</p>
--	---	---

- 6. Check the functionality of the microswitch (Fig.1) in the top position of the of the mast (Fig.2) and in the bottom position of the mast (Fig.3)

 <p>Fig.1</p>	 <p>Fig.2</p>	 <p>Fig.3</p>
--	--	--

- 7. Check operation of the switches for mast/carriage/turntable inverter and (Fig.1 / 2 / 3)

 <p>Fig.1</p> <p>(Q1) Switch Inverter If you close this switch, power at all inverter is closed (look EIs).</p>	 <p>Fig.2</p> <p>(Q2) Switch Inverter If you close this switch, power at all inverter is closed (look EIs).</p>	 <p>Fig.3 (K0)</p> <p>Contactor When the machine is switch on, the contactor it is in "I". When the machine is switch off or alarms (safety) occurred the contactor it is in "O".</p>
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FUNCTIONS CONTROL



8. Check the functionality of the Photocell (Fig.1)



Fig. 1

9. Check the functionality of CARRIAGE MOVEMENT (Fig.1 / 2 / 3)

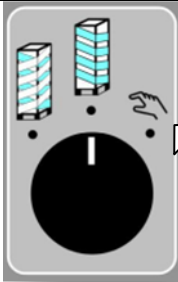


Fig.1 / Manual movement

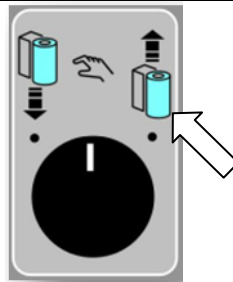


Fig.2 / Movement UP

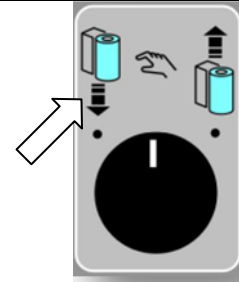


Fig.3 / Movement DOWN

10. Check the functionality of Potentiometers (Fig.1 / 2 / 3)



Fig.1



Fig.2



Fig.3

11. Check the functionality of Potentiometers (Fig. 1) and selectors (Fig. 2 / 3)

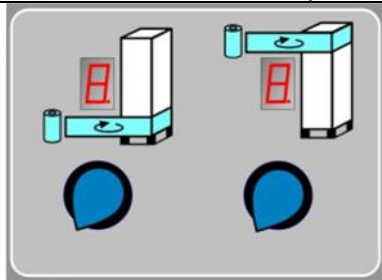


Fig.1

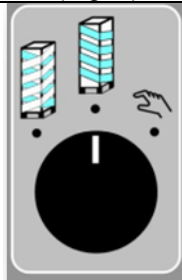


Fig.2



Fig.3

FUNCTIONS CONTROL



BRAKE SYSTEM

BRAKE SYSTEM in "Carriage with roll core brake" (Fig. 1 / 2)

- Position 1 - Brake open, spool holder runs free
- Position 2 - Brake closed, spool holder is blocked
- Rotate black wheel (3) to increase / decrease the friction

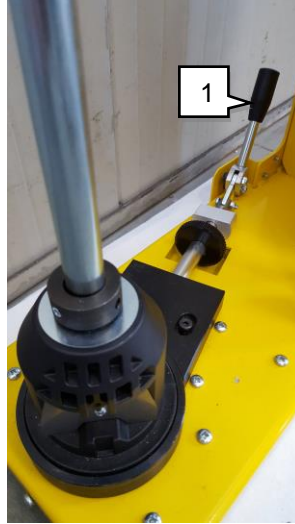


Fig. 1

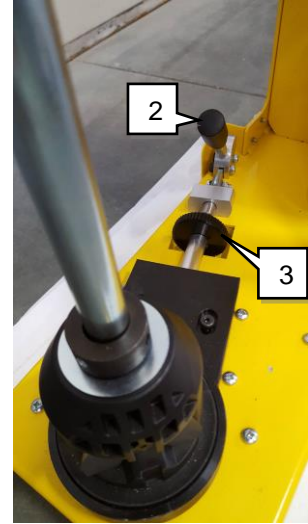


Fig.2

BRAKE SYSTEM in "Carriage with one roll brake" (Fig. 1 / 2)

- Position 1 – Brake open, black roll inside runs free
- Position 2 – Brake closed, black roll inside is blocked
- Rotate black wheel (3) to increase / decrease the friction

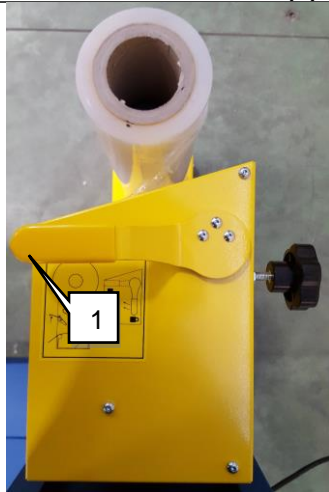


Fig. 1

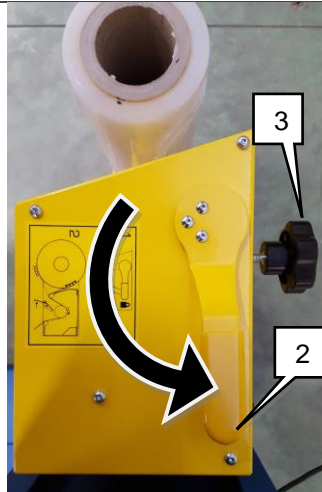


Fig. 2



Stretch film carriage (available only with carriage pre-stretch).

Potentiometer for adjusting tension film carriage.

FILM FEED

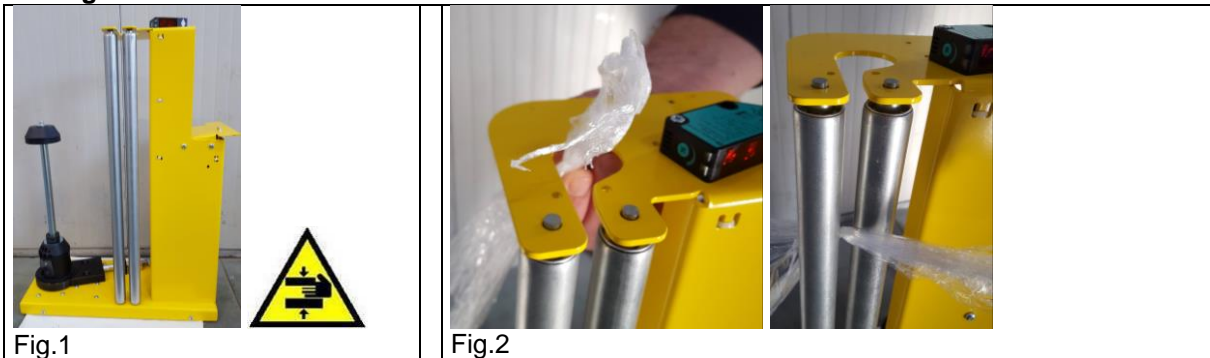
Film	- LLDPE material	Max. 35 μ / 0,000138"
	- Roll internal diameter	76.2 mm / 3"
	- Roll external diameter	Max. 250 mm / 11.20"
	- Film width	Max. 500 mm / 19.69"

IMPORTANT: CLEANING THE RUBBER ROLLERS

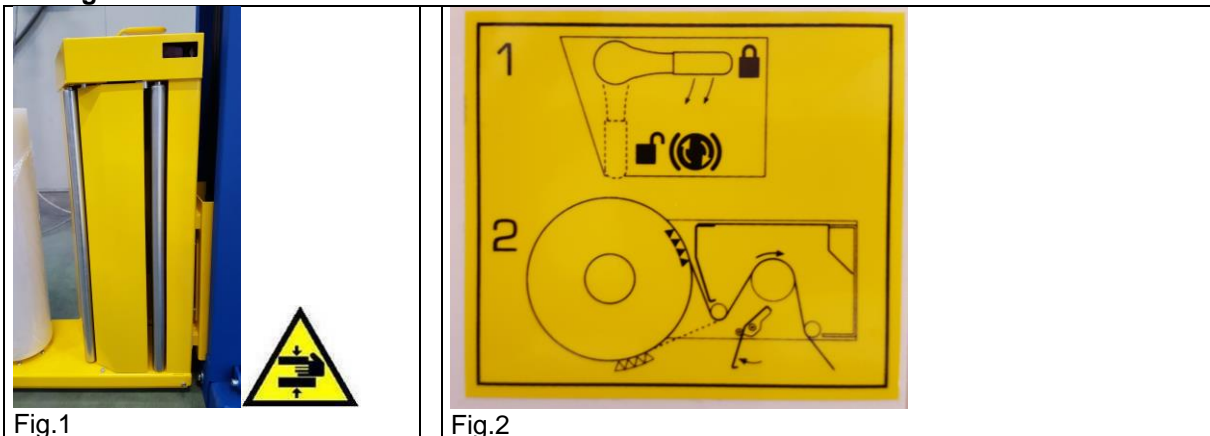
The stretchable film releases deposits of silicone on the rubber rollers (depending on the film used).

It is very important that the rubber rollers are cleaned periodically with alcohol, in this way the normal adhesiveness between the roll and the film will be restored.

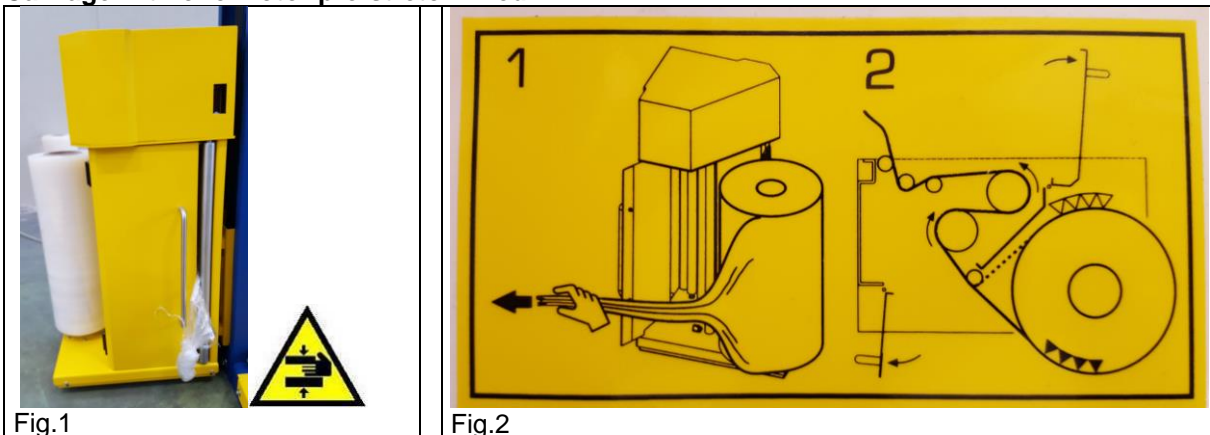
Carriage with roll core brake



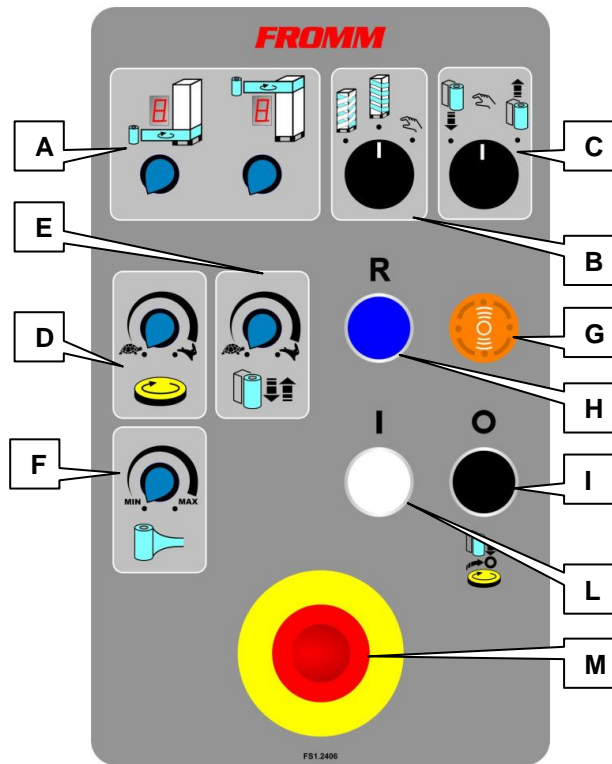
Carriage with one roll brake



Carriage with one motor pre-stretch fixed



CONTROL PANEL



FS360 Control panel

A= Bottom-Top wrapping;
 B= Double-Single-Manual wrapping.;
 C= Manual movement carriage down-up;
 D= Speed turntable;
 E= Speed carriage;
 F= Stretch
 (available only with Carriage pre-stretch);
 G= Buzzer/Warning light
 H= Reactivation;
 I= Stop;
 L= Start;
 M= Emergency button.

ERRORS

E1: Fault inverter
 E2: Film brake
 E3: Safety contact
 E4: No pallet detect
 E5: Safety horseshoe
 E6: Turntable time out
 E7: Belt tension



Emergency button, to push it **ONLY** in case of emergency, **NOT** use like STOP!

INDICATIONS

CYCLE ACTIVE, START ASCENT





An acoustic signal device has been installed in the electrical panel. This signal acoustic activates when switch on the machine (it makes a long acoustic signal and at the same time the buzzer lights up) and before cycle start (lasts a few seconds as a warning each time the automatic program is run). The operator will therefore be able to exit the danger zone before the machine starts operation. The machine will start operating only after the end of acoustic signal of the start.

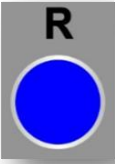

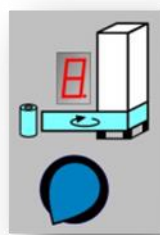
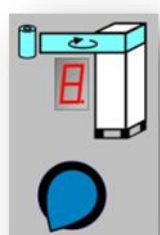
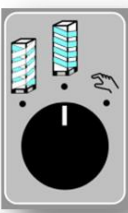



MACHINE ALARMS / RESET

If the emergency stop or any other safety device is triggered, the wrapping machine's automatic program will stop; this can be ascertained also listening and looking the flashing buzzer on the control panel. Wrapping can resume only after having removed the cause of the error and pressed the Reactivation button on the electrical cabinet. By doing this, the "fault" is reset and power is restored, obviously assuming that the emergency button has been released or that the cause of the "fault" that triggered the Error has been solved.

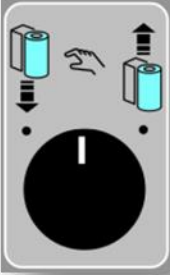
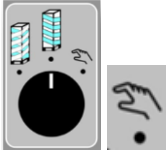



CONTROL PANEL

Key	Description
	<p><u>Start.</u> Start of wrapping cycle. Pressing this button, the machine first will do 3 beeps simultaneously with 3 flashes on the buzzer and then starts its wrapping cycle.</p> <p><u>Manual mode:</u></p> <ul style="list-style-type: none"> - <u>Pressing start for less than 3 seconds (one time):</u> the turntable rotates continuously until press stop. (The speed will be the same selected in the speed selector). - <u>Holding down start:</u> The turntable rotates until you release the button. (The speed will be really low, not settable). <p><u>Automatic mode:</u> Pressing start, the carriage reaches the bottom limit switch of the column and stops, the turntable starts rotating and performs the amount of rpms set in the bottom wrapping and later continue its cycle until the end.</p>
	<p><u>Stop.</u> Stop of wrapping machine.</p> <p><u>Manual mode:</u></p> <ul style="list-style-type: none"> - <u>Pressing stop for less than 3 seconds (one time):</u> the turntable will stop in zero position . (The turntable will start its stop phase only after the turntable has passed to the zero position). - <u>Pressing two times the stop:</u> the turntable will stop immediately. <p><u>Automatic mode:</u></p> <ul style="list-style-type: none"> - <u>Pressing stop for less than 3 seconds (one time):</u> the turntable and carriage will stop in zero position . (The turntable will start its stop phase only after the turntable has passed to the zero position). - <u>Pressing two times the stop:</u> the turntable and carriage will stop immediately. - <u>HOLDING DOWN STOP:</u> the machine will go in the ZERO POSITION (turntable and carriage). The machine first will do an continue beep simultaneously with an continue flash on the buzzer. (This condition will only happen when the machine will be completely stopped).

CONTROL PANEL

Key	Description
	<p>Reactivation button. Reactivation power in the wrapping machine.</p> <p>Pressing reactivation button one time, the machine will do an continue beep simultaneously with an continue flash on the buzzer.</p> <p>When an error involving a Stop occurs, once it has been removed the cause that has generated the error, it is necessary press the Reactivation button to restore the power in the panel.</p>
	<p>Warning light / Buzzer.</p> <p>This Warning Light / Buzzer signals the beginning of the execution of an automatic cycle, the start of the turntable in manual mode, the start of the procedure for resetting the positions and any errors.</p>
	<p>Bottom wraps.</p> <p>Potentiometer with display for adjustment of number bottom wraps. (Adjustment 0 to 5, step 1).</p>
	<p>Top wraps.</p> <p>Potentiometer with display for adjustment of number top wraps. (Adjustment 0 to 5, step 1).</p>
	<p>Automatic / Manual selector (explanation of the program in “Start Cycle”)</p> <ul style="list-style-type: none">  Automatic wrapping up/down;  Automatic wrapping only up with carriage auto return t the end of the cycle;  Manual wrapping.

CONTROL PANEL

Key	Description
	<p><u>Moving the carriage in Manual Operation Mode.</u></p> <p>Before of all choose manual wrapping </p> <p>Selector with return to the centre, in Manual mode, keeping the selector in the left position the carriage movement downwards is activated, while keeping the selector in position on the right, the upward movement is activated: leaving the selector, this returns to the centre, stopping any movement of the carriage.</p>
	<p><u>Speed turntable.</u></p> <p>Potentiometer for adjusting speed turntable. (Adjustment from 6 to 12 rpm).</p>
	<p><u>Speed carriage.</u></p> <p>Potentiometer for adjusting speed carriage. (Adjustment from 2 to 4 meter/minute).</p>
	<p><u>Stretch film carriage (available only with carriage pre-stretch).</u></p> <p>Potentiometer for adjusting stretch film carriage.</p>

STARTING AND STOPPING OF THE TURNTABLE WRAPPING CYCLE

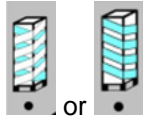




Automatic run mode with settable cycles

Activate this run mode, after the machine has been turned on and the safety conditions have been complied with, by pressing the START pushbutton provided that the corresponding work cycle has been set via the pushbutton panel.

ATT. An acoustic signal device has been installed in the electrical panel. This signal acoustic actives when switch on the machine (it make an long acoustic signal and at the same time the buzzer lights up). The machine will only start to operate after this period has been elapsed.

N.B. The automatic wrapping cycle is only started, if the start conditions are fulfilled. A failure indication is displayed, if not all start conditions are fulfilled. The start conditions for the automatic wrapping cycle are:



- One of the WRAPPING PROGRAMS  or  ;
- Photocell "pallet height" should be activated;
- Emergency stop not activated;
- No failure detected;

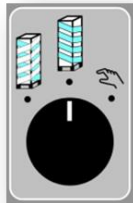
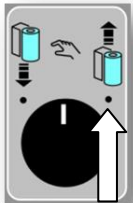
Stop with table deceleration

This stop is commanded as follows:
- by pressing the stop pushbutton.

NOTE: with this type of stop the machine can restart from the operating point in which it had stopped by pressing the start button.



“DEMONSTRATION FOR TRADE FAIRS” program

With the machine in Stop, select

	
<p>Automatic wrapping only up with carriage auto return t the end of the cycle;</p>	<p>Keep the selector in the right position (carriage movement upwards) for minimum 10 seconds</p>

ERRORS DURING OPERATION

THE CARRIAGE DOES NOT STOP AT THE LOWER OR UPPER LIMIT STOP MICROSWITCH

Problem suggestion	Possible solution
<ul style="list-style-type: none"> - Micro switches are not connected properly or it is malfunctioning 	<ul style="list-style-type: none"> - Check the wiring - Replace the micro switch (Fig 1)
<ul style="list-style-type: none"> - Carriage doesn't wrap at turntable level 	<ul style="list-style-type: none"> - Check the position of the lower bracket and eventually adjust in less position, it is enough unscrews two bolts to adjust it (Fig.2)
 <p>Fig.1</p>	 <p>Fig.2</p>



Should the problem persist, contact the Customer After-Sales Service of MANUFACTURER



THE FILM BREAKS

Problems detected	Possible solutions
<ul style="list-style-type: none"> - Film Stretch or Pre-stretch too high 	<ul style="list-style-type: none"> - Check the Stretch and Pre-stretch value. - Check the quality of the film.
<ul style="list-style-type: none"> - The film does not work correctly 	<ul style="list-style-type: none"> - Check whether the film has been fed correctly.



If the problem persists, contact the company's after-sales customer service

THE MACHINE DOES NOT STOP WHEN THE EMERGENCY BUTTON HAS BEEN PRESSED

Problems detected	Possible solutions
<ul style="list-style-type: none"> - The Emergency circuit does not work 	<ul style="list-style-type: none"> - Check the circuit
<ul style="list-style-type: none"> - The RESET button does not work 	<ul style="list-style-type: none"> - Check if there are other errors or faults that prevent correct reset (Fig.2) - Re-arm the emergency mushroom button
 <p>Fig.1</p>	 <p>Fig.2</p>



If the problem persists, contact the company's after-sales customer service

ERRORS DURING OPERATION

THE HORSESHOE DOES NOT START

Problems detected	Possible solutions
<ul style="list-style-type: none"> - The machine does not start and triggers any error on the display 	<ul style="list-style-type: none"> - Check whether something has activated the safety device on the turntable. - Check the wiring according to the diagram.
<ul style="list-style-type: none"> - The machine does not start and triggers any error on the display 	<ul style="list-style-type: none"> - Remove the guard (3) (Fig.3). - Check that the two wheels (1) touch the turntable's disk (2) (Fig.1). - Replace the two wheels if they are broken or worn. - Clean the side of the rotation disk (6) (Fig.1). - Increase the pressure of the roller on the turntable by adjusting the screws (4) and securing the locking nuts (5). - The higher the force created by the wheel on the disk, the quicker the wheel will wear!!

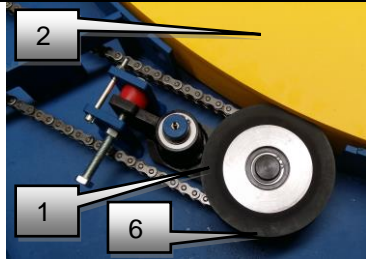


Fig. 1



Fig. 2



Fig.3



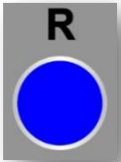
If the problem persists, contact the company's after-sales customer service





ALARMS



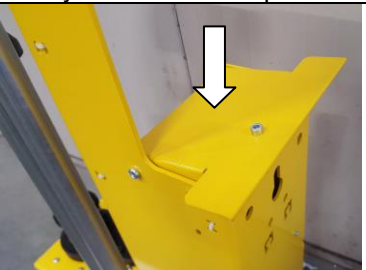


E1:	Fault inverter	1x long continue beep / warning light continue
E2:	Film brake	2x beep / warning light (repeated sequence)
E3:	Safety contact	3x beep / warning light (repeated sequence)
E4:	No pallet detect	4x beep / warning light (repeated sequence)
E5:	Safety horseshoe	5x beep / warning light (repeated sequence)
E6:	Turntable time out	6x beep / warning light (repeated sequence)
E7:	Belt tension	7x beep / warning light (repeated sequence)

Information

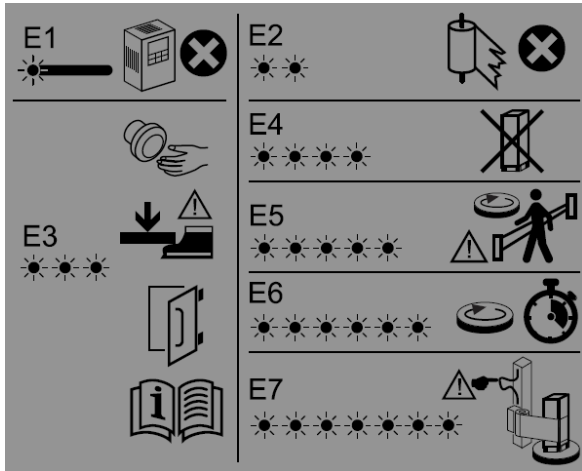
	<p>Reactivation button. Reactivation power in the wrapping machine.</p> <p>When an error involving a Stop occurs, once it has been removed the cause that has generated the error, it is necessary press the Reactivation button to restore the power in the panel.</p> <p>Pressing Reactivation button one time, the machine will do an continue beep simultaneously with an continue flash on the buzzer.</p>
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Film brake (Fig.1) / No pallet detect (Fig.2) / SAFETY DEVICE horseshoe (Fig.3) / Belt tension (Fig.4)			
 <p>Fig. 1 E2</p>	 <p>Fig. 2 E4</p>	 <p>Fig.3 E5 An obstacle between the photocell and the reflector</p>	 <p>Fig. 4 E7</p>

The safety device of the base (Only for 1.650mm Turntables) has been pressed (Fig.1). The Emergency button (Fig.2) and safety protections has been pressed (Fig.3).		
 <p>Fig.1 E3</p>	 <p>Fig.2 E3</p>	 <p>Fig.3 E3 / Carriage: Anti-crushing device</p>

Safety device and the protections on the Carriages are activated (Fig. 1 / 2 / 3)		
 <p>Fig.1 E3 Carriage with roll core brake. The bracket is pressed</p>	 <p>Fig.2 E3 Carriage with one roll brake. The door is open</p>	 <p>Front Back</p> <p>Fig.3 E3 Carriage with one motor pre-stretch. The doors are open</p>

ALARMS



Using in additional to spare part list and Electrical scheme

E1: Fault inverter 1x long continue beep / warning light continue

Problems detected	Possible solutions
<ul style="list-style-type: none"> - This alarm identifies the block of an inverter 	<ul style="list-style-type: none"> - Turn the machine off. Wait 20 seconds and turn it back on; - Check the situation of the inverter on the display, referring to the inverter's instruction manual located inside the machine; - Check the cables; - If the press is used, the Error is activated if the counter-package limit switch is exceeded; - Check the Error on the display of the Inverter.
<ul style="list-style-type: none"> - Check that the circuits' switch is ON (switch up) 	<ul style="list-style-type: none"> - ON inverter must operate - OFF inverter is OFF
<ul style="list-style-type: none"> - The inverter does not work properly 	<ul style="list-style-type: none"> - Replace the inverter



Fig.1

(Q1) Switch Inverter

If you close this switch, power at all inverter is closed (look EIs).



Fig.2

(Q2) Switch Inverter

If you close this switch, power at all inverter is closed (look EIs).



Fig.3

(K0) Contactor

When the machine is switch on, the contactor it is in "I".
When the machine is switch off or alarms (safety) occurred the contactor it is in "O".



If the problem persists, contact the company's after-sales customer service

ALARMS

**E2: Film brake** 2x beep / warning light (repeated sequence)

The film has finished or is broken, the cycle is stopped;

Problems detected	Possible solutions
- The film has finished or is broken	- Check whether the film reel has finished and replace if necessary; - Check that the film is not broken; - Check that the film has been fed correctly.
- Film stretch too high	- Check the film stretch during bottom wrapping, carriage ascent, top wrapping, carriage descent.
- Film pre-stretch too high	- Check the film pre-stretch during bottom wrapping, carriage ascent, top wrapping, carriage descent.
- The dancer roller does not move or moves forwards and backwards with difficulty	- Clean the dancer roller; - Remove dirty and any film residues.
- The analogue sensor is not correctly regulated	- The analogue sensor can be moved forwards and backwards; simply unscrew the two nuts and approach the proximity sensor to the dancer roller until it nearly touches it. During the carriage motors' stop, the dancer roller must be completely still. The more the delay of the dancer roller during the wrapping program, the more the pallet will be stretched.
- The analogue sensor does not work	- Check the cables - Replace the analogue sensor

E3: Safety contact 3x beep / warning light (repeated sequence)

The emergency mushroom button has been pressed

Problems detected	Possible solutions
- This alarm indicates that the emergency button has been pressed	- Check the situation and deactivate the emergency button. Then press the "Reactive" button.
- The emergency button does not work or is not properly connected	- Replace the emergency button

The anti-crushing device on the carriages

Problems detected	Possible solutions
- This alarm signal has found that pressure, detected by the microswitches for anti-crushing safety, has been exerted under the carriage	- Check the situation. Whether the protection has a mechanical block. If something has been put on the carriage, thus activating the alarm.
- Microswitches positioned incorrectly or disconnected	- Correctly position the micro switches on the top of the carriage with the pre-stretch or if is an mechanical carriage check the sensor on the base or under the carriage.
- Microswitches not working properly	- Check the voltage to the micro switches that normally work closed. - Replace the micro switches.

ALARMS



E3: Safety contact 3x beep / warning light (repeated sequence)
 The safety device on the base d.1650mm (yellow carter)

Problem suggestion	Possible solution
- This alarm signal has been activated by the limit switch of the base	- Check the situation, an object or person has been positioned between mast and turntable. (Fig. 1) - Re-move this object or person.
- Limit switch not working properly (or not connected)	- Replace the limit switch (2) (Fig. 2) .
- The spring is positioned incorrectly	- Position the spring (3) correctly (Fig. 3) .
- The plate have been blocked mechanically	- Release the plate.

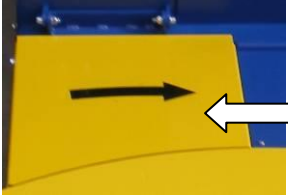


Fig. 1

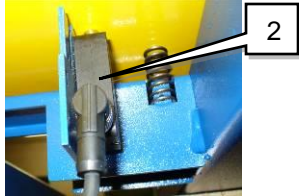


Fig. 2

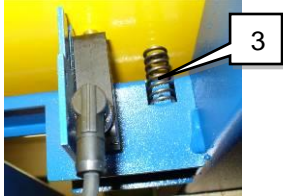


Fig. 3

The doors are open

Problems detected	Possible solutions
- The door is open	- Check whether the door has been closed properly.
- Door closure sensors do not work properly	- Check the cables;

E4: No pallet detect 4x beep / warning light (repeated sequence)
 There is no pallet on the turntable;

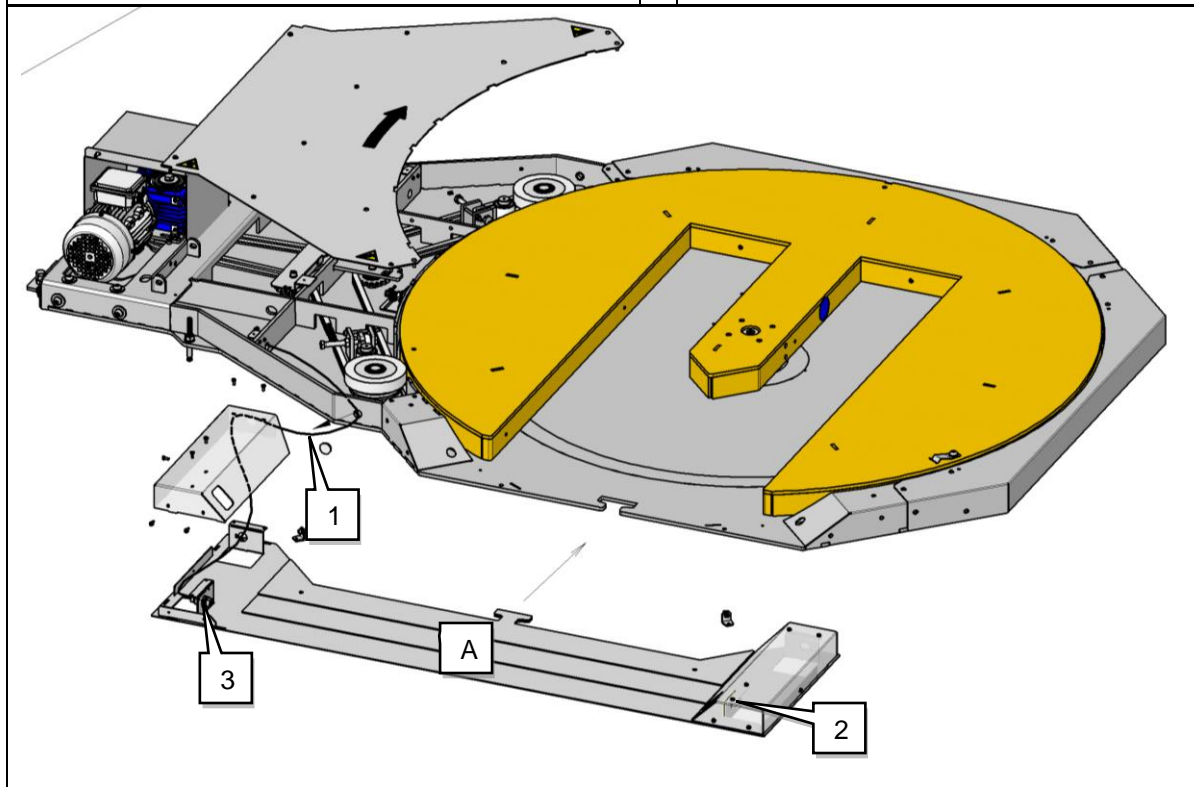
Problems detected	Possible solutions
- The pallet has not been detected by the photocell	- Dark goods? Dark film? Replace the photocell with laser photocell
- Photocell is not properly connected	- Check that the cables/connections arrive at the board.
- Photocell malfunction	- Replace the photocell

ALARMS



E5: Safety horseshoe 5x beep / warning light (repeated sequence)

Problem suggestion	Possible solution
- This alarm signals that the entrance of the horseshoe turntable is blocked for safety reasons.	- Check the situation, remove the mechanical block from the entrance (A)
- Photocell incorrectly positioned or connected.	- Check the wiring. (1) - Check the reflector. (2)
- Proximity sensor malfunction.	- Replace the proximity sensor (3)
- Mirror / Reflector incorrectly positioned or broken.	- Check the mirror / reflector.



E6: Turntable time out 6x beep / warning light (repeated sequence)

Occurs when, with the drive table inverter active signal, no rising edge of turntable proxy is detected (input X000 (Proximity turntable) of the PLC) for a time equal to the value indicated in D18 "TimeOutTable" (time >= 60 s). To reset the error, press Reactivation button.

ALARMS



E7: Belt tension 7x beep / warning light (repeated sequence)



This situation happens if the belt of the carriage is not tensioned. In the first installation, it can be caused by the oscillations during the transport of the machine.

To solve the error:



Step 1

Keep the belt under tension manually (pulling it towards you).



Step 2

While holding the belt in tension, press one time the reactivation button (R).



Step 3

While holding the belt in tension, choose:

- selector manual movement;
- manual movement up.

MAINTENANCE INSTRUCTIONS



CAUTION!
<ul style="list-style-type: none">- First of all, turn the network switch off and lock it before performing any maintenance operations on the machine.- Make sure that no other person starts the machine.- Make sure that the protective guards, etc. are reassembled when the machine is reactivated.

The system can last a long time with preventive maintenance operations. This means that the machine's various components must be regularly monitored every week, every month, every six months or every year.

The operating life of the machine is affected by the environmental conditions. The indicated frequency of maintenance operations is valid for normal operating conditions (8 hours a day, at 20°C, in a clean environment).

In harsher environmental conditions, we recommend you increase the frequency of the maintenance operations.

Keep all rotating components clean.

FILM RESIDUE

The machine must be cleaned every day.

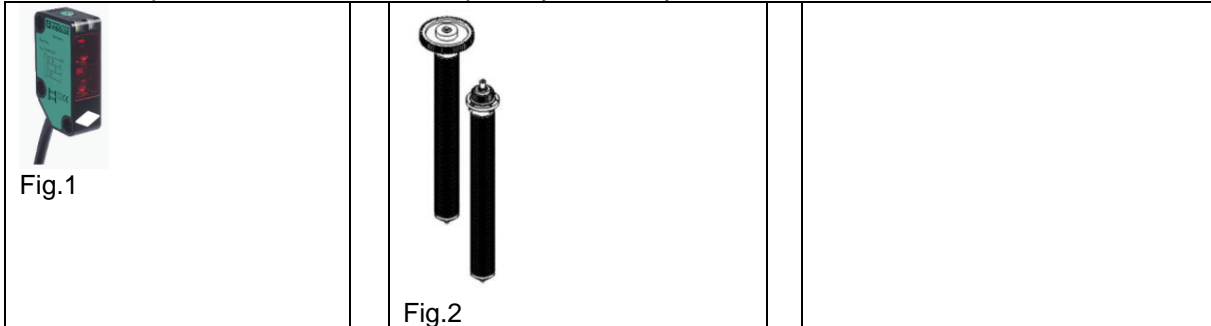
NEVER use solvents when cleaning the machine. To remove dust or particles that have deposited during the format change operations, do not use compressed air: use only rags and suction devices. Check there are no film or packaging residues in the brake system, if there are remove them.

MAINTENANCE INSTRUCTIONS



Daily maintenance operations

- Clean the carriage's photocell (Fig.1);
- Keep the Pre-stretch rollers clean (Fig.2);
- Check operation of the sensors, especially the safety ones;



IMPORTANT NOTE!

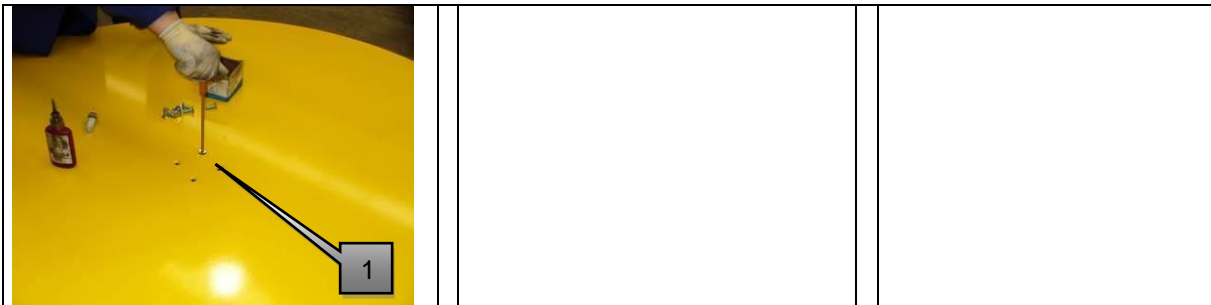
Maintenance and replacement of original spare parts must be documented in an maintenance booklet. The engineers in charge must fill an maintenance booklet.

Each additional special maintenance operation must also be documented.

The lack of maintenance or incorrect maintenance can affect the warranty conditions and machine safety.

Monthly maintenance operations / Check

- Check whether the central screws (1) of the turntable are still locked;
- Slowly move the disk with your feet;
- If the disk has clearance on the central bearing then the bolts must be locked;
- Carefully secure the disk with lock tide no. 243.

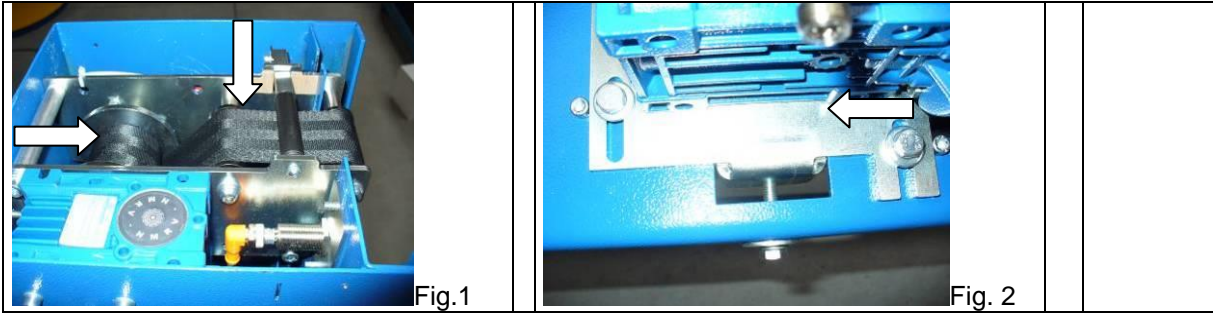


MAINTENANCE INSTRUCTIONS

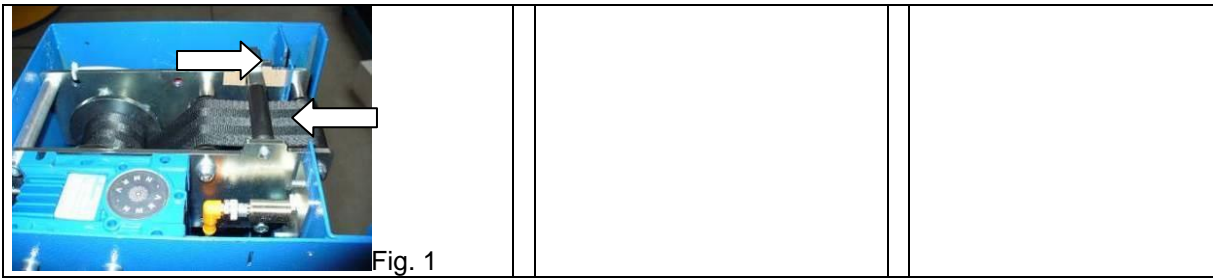


Twice-yearly maintenance operations

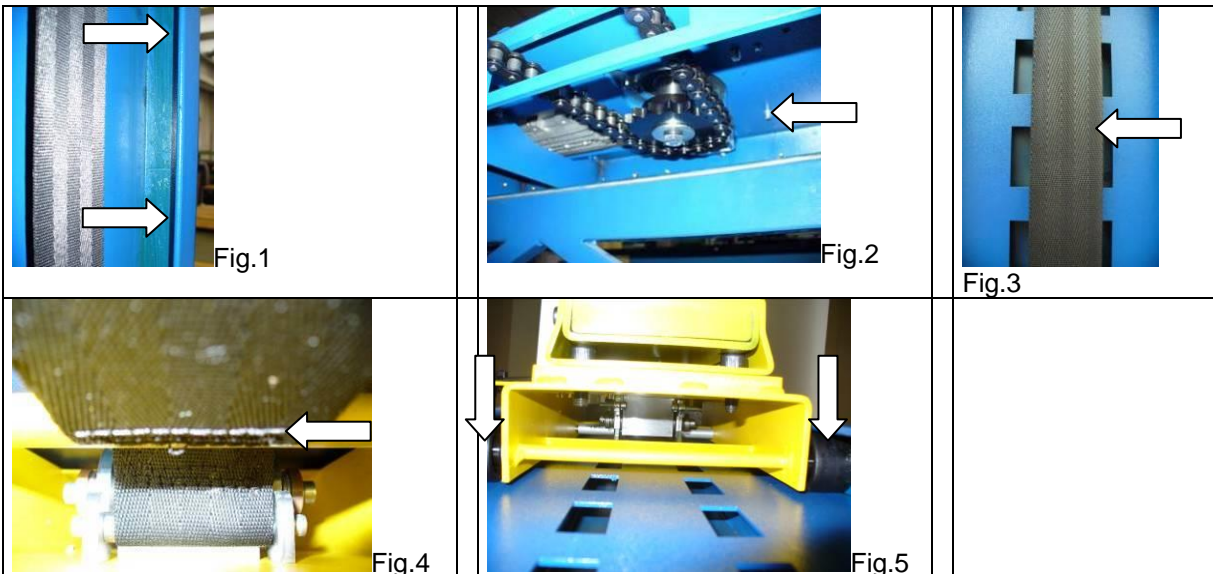
- Check the conditions of the motor-reducer-belt unit. (Fig.1)
- Check the tension of the chain that rotates the disk; adjust the tension by tightening or loosening the hex screws. (Fig.2)



- Check operation of the “belt tension control system”. (Fig.1)



- Grease the column along which the carriage moves up and down; (Fig.1)
- Grease the chain that rotates the turntable; (Fig.2)
- Check the conditions of the column’s safety belt; (**Fig.3**)
- Check the belt’s mesh; (Fig.4)
- Check the conditions of wear of the carriage unit’s wheels; (Fig.5)



MAINTENANCE INSTRUCTIONS

Annual maintenance operations

- Release the disk by removing the screws (1) in the centre of the disk (Fig.1);
- Slowly slide the disk from the base unit;
- Check the wear status of the disk's sliding wheels (2) and, if necessary, replace them (Fig.2); (insert them by putting them in their place)
- Carefully secure the disk to the turntable with lock tide no. 243. (Fig.1)

Note! Make sure you place the machine in ZERO position before starting this operation



Fig. 1

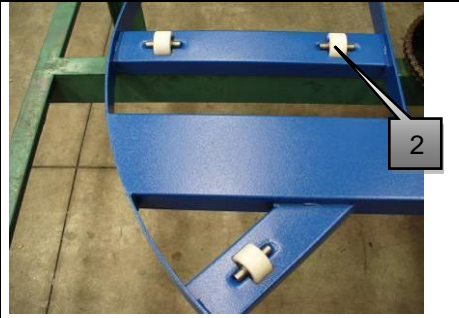


Fig. 2

Adjustment of bottom proximity sensors brackets:

In order to make any changes to the position of the limit switch, adjust the bracket using the corresponding adjustment screws

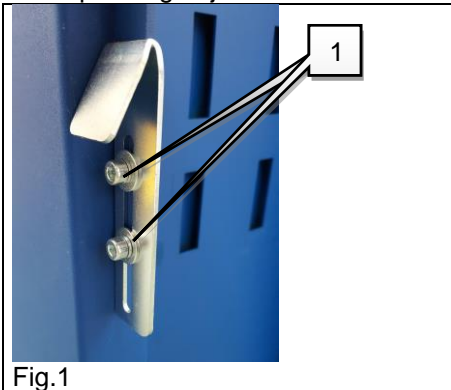


Fig.1

Horseshoe

- Check the status of wear of the disk's sliding wheels (1) (Fig.1); Replace if necessary (insert them using the spring);
- Release the disk by loosening the nut of the turntable's central bearing that is in the centre of the disk (1) (Fig.1/2/3);
- Lift the disk (2) from the base and rotate it head downwards (Fig.2);
- Remove the rollers, check them and then reassemble all using the specific tools (1) (Fig.1).

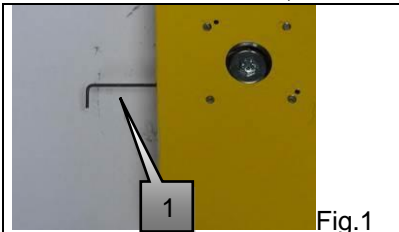


Fig.1

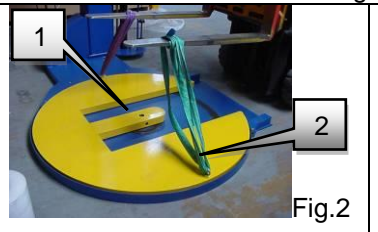


Fig.2

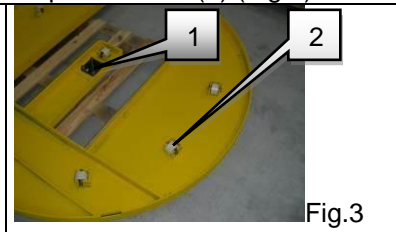


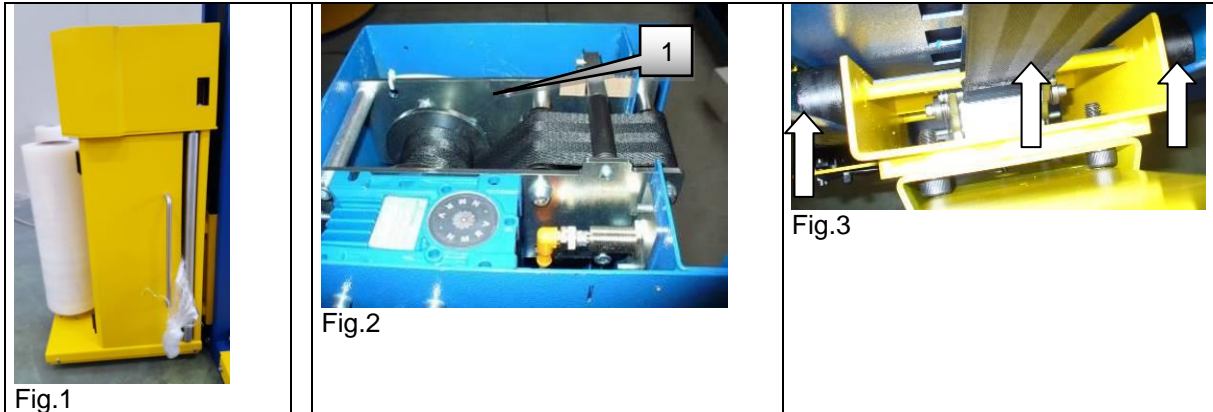
Fig.3

MAINTENANCE INSTRUCTIONS

SPECIAL MAINTENANCE

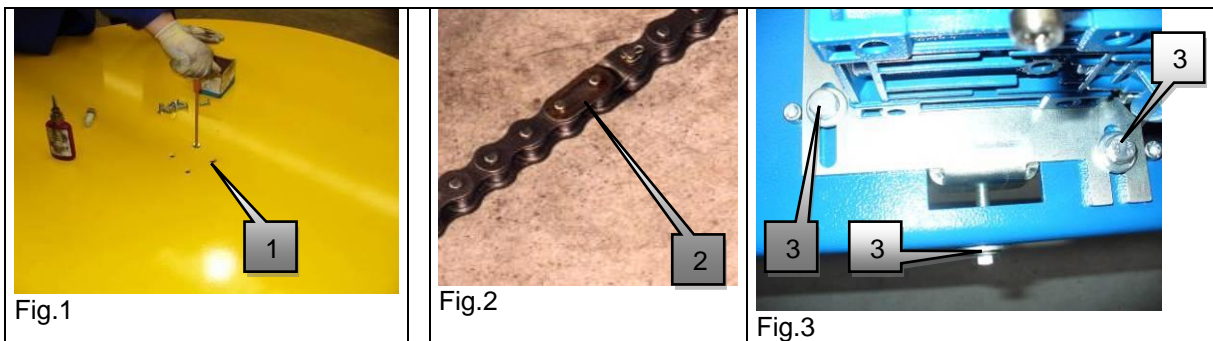
Replacement of tensioning belt and/or carriage wheels

- Remove the carriage (Fig.1);
Make sure you put something under the carriage so that it does not fall.
- Remove the motor-reducer-belt unit (1) (Fig.2);
- Replace the belt and/or the wheels (Fig.3).



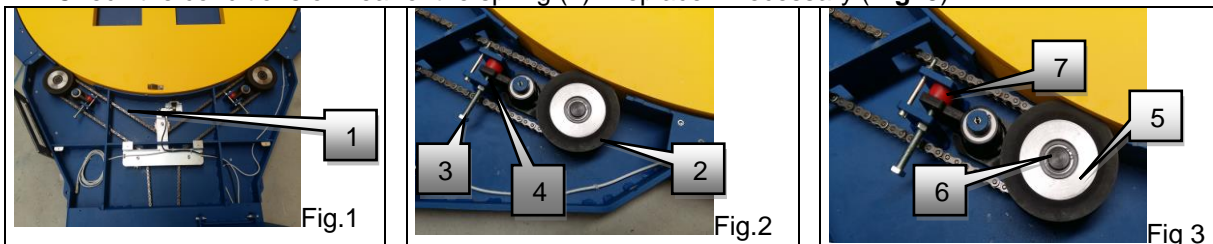
Replacement of base chain

- Remove the disk by removing the screws (1) in the centre of the disk (Fig.1);
- Slowly slide the disk from the base unit;
- Release the chain by removing the mesh (2) (Fig.2);
- You might have to remove the motor to completely remove the chain (Fig.3);
To do this loosen the screws (3) of the motor (Fig.3);
- Remove the chain (2) (Fig.2).



Replacement of guide rollers for the horseshoe

- Remove the cover between the shaft and base (1) (Fig. 1);
- Slacken the wheel (2) by adjusting the screw (3) and the nut (4) (Fig. 2);
- Release the spring that holds the roller in position (5) (Fig. 3);
- Check the conditions of wear of the bearing (6) in the roller;
If necessary, also replace the bearing (Fig. 3);
- Check the conditions of wear of the spring (7). Replace if necessary (Fig. 3).



MAINTENANCE DIAGRAM



Based on 20 pallets per 8-hour day

TURNTABLE

MAINTENANCE FREQUENCY								Wrapping machine Counter value
	8 hr	40 hr	100 hr	200 hr	500 hr	1000 hr	1800 hr	
Daily cleaning	X							375 Av.
Cleaning of photocell			X					5.000 Av.
Belt (Check)				X				7.500 Av.
Turntable chain				4				7.500 Av.
Gears				4				7.500 Av.
Bearing						X		32.000 Av.
Carriage wheels								126.000 Av.
Clutch disks Check						X		32.000 Av.
Clutch disks Replacement								126.000 Av.
Proximity and microswitches						X		32.000 Av.
Electrical system							X	63.000 Av.
Sliding wheels							X	63.000 Av.
Support wheels							X	63.000 Av.

The "X" symbol in the maintenance diagram indicates the notes regarding maintenance or check of the parts or of the system.

MACHINE DECOMMISSIONING



SYSTEM STOP

During machine decommissioning, before its dismantling, you must:

- Disconnect the machine from the electrical energy sources;

DISMANTLING AND DISPOSAL

During machine dismantling, carefully follow the provisions regarding lifting and handling described in the manuals of the single machines.

In particular:

- Do not use ropes or cables that are non-compliant or worn or with lifting capacity not suitable for the weight of the machine;
- Carefully move the machine and ensure that there are no people within the action range of the lifting equipment;
- Do not stand under suspended loads;
- Pay particular attention to suspended parts and any resulting risks.

DISPOSAL AND SCRAPPING

For disposal of the machines when they are decommissioned, there are no major problems regarding components or materials at risk. Once the single components have been dismantled, divide them according to their material.

Ferrous material: frame, guards, fittings, etc.

Aluminium: flanges, etc.

Plastic material: gaskets, cables, etc.

Electrical material: motors, panels, equipment.

During disposal, recover the components that can be recycled and reused.

ALL MACHINE COMPONENTS, AFTER HAVING BEEN DIVIDED ACCORDING TO THE MATERIAL, MUST BE DISPOSED OF BY SPECIALISED COMPANIES THAT OPERATE IN COMPLIANCE WITH THE LAWS IN FORCE IN THE USER'S COUNTRY.

WARRANTY CONDITIONS

FROMM distributor to the end customer.

The warranty is valid for a period of 24 months, with machine use of 8 hours per day, 40 hours per week. The warranty includes all materials or defects from FROMM.

The warranty excludes:

- a) consumable pieces;
- b) problems resulting from incorrect storage, improper machine use such as, for example, incorrect quality of the film (not recommended by FROMM);;
- c) problems resulting from incorrect repairs performed by the customer.
- d) deficiencies resulting from lack of or improper maintenance operations.

The warranty becomes null and void when the installation does not comply with the maintenance operations established by the supplier and by the machine instructions.

The warranty includes all spare parts, excluding the hours required to perform the repairs.

Damages resulting from abrupt interruption of production and damages to things and people resulting from the absence of the warranty cannot be claimed by the customer.

Maintenance costs

These are the costs of the local distributor or supplier for annual maintenance or periodic servicing.

The service will be carried out in compliance with the contractual conditions foreseen by the FROMM service.