FROMM

SEMI – AUTOMATIC
Stretch Wrapping Machine
Series FS4xx
FS4.1893-V02_R1
ORIGINAL MANUAL

FS4.1893-Manual-30.18XX.02-EN-Version02_R1 / epennings/ ORIGINAL MANUAL © 06/13

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Dear Customer,

We would like to thank you for purchasing our machine. In this manual we would like to draw your attention to the technological quality of the machine you have purchased.

Our machines can be guaranteed to keep working at maximum efficiency only if original spare parts are used and only if work on the machines is carried out by our own specialist staff. We advise you, therefore, to entrust all maintenance work on the MANUFACTURER machines EXCLUSIVELY to our Technical Assistance and Spares Service. In fact, if any maintenance work on our machines is carried out by non-authorized personnel, or if any NON-ORIGINAL spares or replacement parts are used, then all the MANUFACTURER guarantee and technical assistance obligations will be nullified immediately. We're certain that you'll understand the importance of the condition stated above, from the technical point of view; its primary aim is to protect our Customers from negative experiences.

This INSTRUCTIONS MANUAL is your guide to the INSTALLATION/USE and MAINTENANCE of the machine you have purchased. We advise you to follow all the instructions and suggestions in the manual with great care, as the efficient operation and long life of the machine depends on its correct use and on the methodical application of the maintenance regulations described later on.

We point out that, if any difficulties arise, the CUSTOMER ASSISTANCE SERVICE is entirely at your service for explanations or call-outs. If needed you can reach us by sending an E-mail to: service@fromm-stretch.com

The MANUFACTURER therefore, declines all responsibility for any incorrect usage of the machine or inadequate maintenance work. The INSTRUCTIONS MANUAL is to be considered as an integral part of the product. Keep and look after this Manual throughout the whole life of the machine. The MANUFACTURER reserves the right to make modifications for the improvement of its machines, without giving prior notice.

Make sure that any amendments are added to the manual. Hand this Manual on to any other users or subsequent owners of the machine. When using the manual, take care not to damage its contents, either wholly or partial. On no account should any parts of this manual be removed, torn out or rewritten. Keep the manual in places that are protected from dampness and heat. Look at the cover to identify the model dealt with in the manual and the registration number of the machine in your possession. Look at the INDEX to find the CHAPTER or SECTION containing all the notes on a specific subject.

The intention of all the INSTRUCTIONS AND/OR NOTES ON THE PRODUCT is to point out the safety precautions, correct procedures and operational instructions required for the efficient operation of the machine. The SPAREPARTSLIST supplied with the delivery is an integral part of the manual, in contains technical information on the acquired components mounted on the machine.
Each page is marked with the Document code (On the inner side the top left and right side)

We wish you all the best results with our machine and we remain at your service.

We take this occasion to send you our best regards.

FROMM Wrapping Systems S.r.l.
Italy

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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.

B 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.

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

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

E 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.

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

GR Προσοχή!
Πρίν την εγκατάσταση, σύνδεοη καί αρχική λειτουργια της συσκευής διαβάστε προσεκτικά τίς οδηγιες χρήσης.
‘Ετσι προστατεύετε τον εαυτό σας και αποφεύγετε πιθανές βλάβες συσκευή.

I Attenzione!
Leggere assolutamente le instruzione d'uso prima di procedere a posizionatura – installa-tione - messa in funzione. In questo modo ci si protegge e si evitano danni all'apparecchio.

N NB!
De må lese bruksanvisningen før oppstillning, 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.

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

S OBS!
Läs bruksanvisningen noga före uppställning, installation och använding. Ni förebygger därmed olycks-risker och undviker skador på maskinen.

FIN Huomio!
Tutustukaa huolellisesti käyttöohjeeseen ennen laitteen asennusta jä käyttöönottoa.
Näin vältytte mahdollisilta vahingoilta käyttäes-sänne konetta.

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MACHINE MAKE – UP

Article number	30.18
Serial number	0 .00
Manufactured by	
Delivered by	
Delivery date	

OPERATING PANEL

OP - 4 / Operating panel 4	X

TURNTABLE

Turntable diameter Ø1.650mm / 2.000kg*	
Turntable diameter Ø1.800mm / 2.000kg*	
Turntable diameter Ø2.200mm / 2.000kg*	
Turntable horse shoe diameter Ø1.650mm / 1.250kg / right side loading*	
Turntable horse shoe diameter Ø1.650mm / 1.250kg / front side loading*	
Turntable horse shoe diameter Ø1.650mm / 1.250kg / left side loading*	

*NOTE!! KG refers to maximal loading capacity on the turntable

MAST

Mast 2.050mm / 1.950mm + 100mm (Overlap)	
Mast 2.200mm / 2.100mm + 100mm (Overlap)	
Mast 2.600mm / 2.500mm + 100mm (Overlap)	
Mast 2.800mm / 2.700mm + 100mm (Overlap)	
Mast 3.000mm / 2.900mm + 100mm (Overlap)	
Mast 3.200mm / 3.100mm + 100mm (Overlap)	
Mast 3.400mm / 3.300mm + 100mm (Overlap)	

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MACHINE MAKE – UP

CARRIAGE

Carriage 7 / Power Pre-Stretch TWO Motor System	X

VARIATION

Gearbox fixed position	X
Toppress unit Models F402 - FS403	

OPTIONS

16.8211	Ramp turntable Ø1.650mm, length 1.550mm, Height 71,5mm, 1.250kg*	
16.8212	Ramp turntable Ø1.650mm, length 1.550mm, height 71,5mm, 2.000kg*	
16.8214	Ramp turntable Ø1.800mm, length 1.550mm, height 71,5mm, 2.000kg*	
16.8216	Ramp turntable Ø1.650mm, length 1.850mm, height 71,5mm, 2.000kg*	
16.8218	Ramp turntable Ø1.800mm, length 1.850mm, height 71,5mm, 2.000kg*	
16.8221	Ramp turntable Ø2.200mm, length 1.850mm, height 71,5mm, 2.000kg*	
N5.2638	Standard photocell for black film	
N5.2651	Special photocell for black film	

*NOTE!!
Ramps KG refers to maximal loading capacity on the ramp

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GENERAL

The FS4xx machine is an semi-automatic pallet wrapping machine.
The operator has to place the pallet on top of the turntable and connect the film on the pallet.
The tension or stretch can be adjusted on the operating panel or carriage.
Depending on the functionality of the machine, the operator can start the wrapping process or initially he has to setup the wrapping cycle, speed of turntable and carriage.

The process will be activated by pressing the start button. After completing the cycle, the machine will stop in his original start position, the film can be disconnected and the operator can take away the pallet from the turntable.

- This manual is only intended for a semi-automatic pallet stretch wrapping machine, mentioned at page one, as delivered by FROMM Stretch Wrapping Division.
- FOR EVERYTHING IN THIS MANUAL IS VALID, IF APPLIED!
- THE ORIGINAL, SIGNED FACTORY MANUAL HAS TO REMAIN INSIDE THE ELECTRICAL BOX OF THE MACHINE, TOGETHER WITH THE MACHINE ELECTRICAL PLAN AND INVERTER MANUALS.
  A special bracket FS3.0250 can be purchase to keep this documentation together.
- This so-called turntable machine can be build into the floor.
  A support frame for building the machine in the floor can be supplied as an option.
- Pre- stretching (Stretching out) the film prior to application on the goods reduces the costs of packaging and is easier on the environment. (Available pre stretch depend on the model)
- Refer to chapter for the technical data, which describes the installation in detail and for the complete size of the installation.
- Read carefully at least the chapters **HANDELING AND TRANSPORT** and **INSTALLATION.**
- For safety reasons the entire instruction manual should be read before setting in operation the machine/installation, solving failures and executing maintenance.
- We particularly draw your attention to the chapters **SAFETY INSTRUCTIONS** and **WARNINGS** which point out the intended use and unsafe situations that could not be prevented in the design and manufacture of the wrapping machine.
- It is strictly prohibited to tamper with the machine It is prohibited to feed the machine with unforeseen, corrosive or inflammable products since the machine is not the explosion-proof type.
- The duration of guarantee is provided the following are observed: the use for which the machine was designed, built and protected, in addition to recommendations, information - including matters of general knowledge - details plus the safety and health technical limits notified to by the Manufacturer to the User by virtue of the operating use.
- We cannot accept any claim for warranty if non-original spare parts are utilized.
- If the machine is used beyond its operating limits and if the manufacturer's features are altered in any way, such use is considered **improper.** In this case **MANUFACTURER** is relieved of any liability for injury/damage caused to people/property due to failure to comply with these guidelines.
- For all the aforementioned reasons, we recommend that our customers always notify the Service Department.

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SAFETY INSTRUCTIONS

- This wrapping machine has been delivered by FROMM Stretch Wrapping Division and may only be applied for wrapping of pallets which meet the requirements as mentioned in the description of the machine in chapter TECHNICAL DATA.
  Any other use of the machine as for the described purpose may cause danger due to damage to the machine and/or the safety of the operator or other persons in the neighbourhood of the machine.

- Read this manual carefully before using the machine, and be aware of the residuals risks which could not be excluded during the development of this machine.

- The machine is not fit with components that involve special decommissioning problems except for the battery.

- In any case all the components must be disposed of by scrupulously complying with the corresponding laws in force in the country in which the machine is used, and only by qualified persons who are capable of assessing possible risks.

- Only personnel trained for the purpose may operate the machine

- Use the emergency stop to halt the machine immediately

- Only trained electricians may perform electrical work on the machine

- Don't find yourself close to the carriage when the machine is in operation. Be careful especially in the lowering phase of the carriage. (Use the emergency stop to halt the machine immediately).

- Don't find yourself near the turntable when the machine is in operation.
  (Use the emergency stop to halt the machine immediately).

- Don't touch the pallet when the machine is in operation.
  (Use the emergency stop to halt the machine immediately).

- Don't place or insert your hand and fingers between mast and carriage.
  (Use the emergency stop to halt the machine immediately).

- Don't put your hand or fingers in the mast.
  (Use the emergency stop to halt the machine immediately).

- Don't put your hand or fingers near the wheels for the carriage movement.
  (Use the emergency stop to halt the machine immediately).

- Don't put your hand or fingers in the electrical box.
  (Use the emergency stop to halt the machine immediately).

- Don't cross the space between the mast and turntable.
  (Use the emergency stop to halt the machine immediately).

- Don't put your finger in the space between the turntable and the base-unit.
  (Use the emergency stop to halt the machine immediately).

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SAFETY INSTRUCTIONS

- When installing the machine, as a precaution, always check that the controls and safety systems are correctly mounted and operating efficiently. If any malfunctions are noted, immediately stop the production cycle and ask the authorized technical service to intervene
- Examine the data-plates. If they are in poor condition, replace them with utmost urgency, strictly and directly contacting the authorized technical service or the Manufacturer
- The requirements, as mentioned in chapter **MAINTENANCE INSTRUCTIONS** should be satisfied during adjustment and maintenance activities
- People should not step on to means of transport, unless indicated clearly otherwise
- People should not find themselves above the means of transport
- Do not place tools and components on the machine
- Safety devices should not be bridged and put out of operation
- The manufacturer will only make the machine ready for operation, when the electrical main connection satisfies the standards applicable in the country of delivery
- The supplier will do the training of the operating personnel. If not, the training will have to be done properly by the company that takes care of the installation.
- The machines are designed and implemented conforming to the safety laws in force. Consequently, no intrinsic fire risks are envisaged when the machine is used normally
- As such, the equipment provided against the possibility of **fire outbreaks** inside the company are sufficient for any problems caused by the material used for the process
- In the event a fire breaks out and fire extinguishers are used, it is recommended that extinguishers filled only with CO2 be used, so as not to damage both the equipment on the machine and the wiring system
- In the event of **flooding**, it is compulsory that all the power supplies be disconnected before entering the room in which the machine is installed
- In the event the wrapping machine was subjected to a flooding, contact the Customer technical service of MANUFACTURER
- You are strictly recommended not to work in the machine while wearing unsuitable clothing (unbuttoned, ample garments) or personal objects (bracelets, watches, rings, etc.)

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SAFETY DEVICES

We urge on you again that all safety devices are installed for the safety of the operator etc. and should not be bridged and put out of operation.

Refer to the drawing below for the applied references.

Survey control panel

A = Acoustic signal

B = Emergency stop

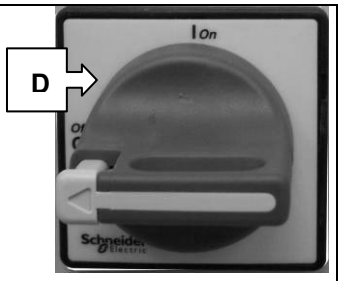
C = Display On, when the power is on

D = Main switch

E = Crush-proof guard

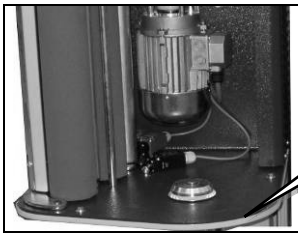
F = Crush-proof roll guard

G = Crush guard / security

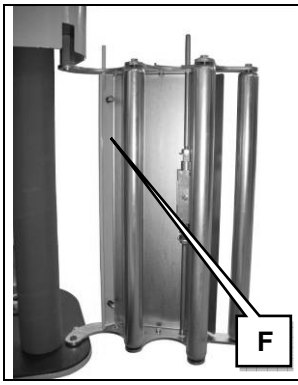


D = Lockable main switch

The main supply (1x230V) is switched on and off with the main switch. The supply voltage for the control part (24VAC) is thus equally switched on and off.



This is a mobile crush-proof guard, interlocked by means of a micro switch. Any time underlying foreign matter comes into contact with the guard, it inverts the film carriage's motion for approximately 3 seconds and causes the turntable to stop in phase



This is a mobile crush-proof guard, interlocked by means of a micro switch. Any time foreign matter comes into contact with the guard, it will cause the error **E8:SWITCH FILM ROLLES**, and the motors will stop. After the cause is reset, it's necessary to press the reset button to reset the normal machines operations, the control voltage becomes activated again

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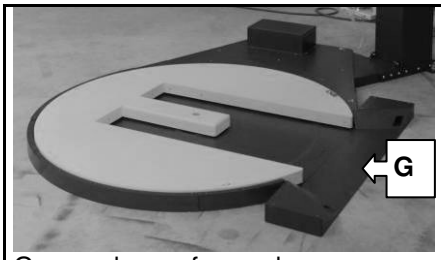
SAFETY DEVICES

 G = crush-proof guard	This is a entrance safety guard, interlocked by means of Photocell sensor and reflector. Any time underlying foreign matter comes between this guard, it inverts the film carriage's motion and causes the turntable to stop in emergency.

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WARNINGS

- The mean weighed noise level of the machine is less than 80 dBa. It is possible that, depending on the applied film, during wrapping of the pallets incidentally a noise level with a maximum of 80 dBa will be measured. Carrying of noise protecting devices is advised.

- One has to reckon with the possibility that the film (roll) contains an electrostatic charge.

- Utmost caution has to be taken with respect to the complete electrical installation. ONLY trained persons may carry out activities to it, after having taken the required safety measures as mentioned in the chapter **SAFETY INSTRUCTIONS**.

- One has to reckon with the European safety requirements and standards if the machine has to be adapted and thus safety measures or protection covers also have to be adapted.

- Touching the electrical equipment will hazard your personal safety.

- Persons who carry out changes in or adaptations (function, operation or principles) to the machine are fully responsible for those changes and/or adaptations.

- All relevant safety measures should be taken when carrying out any activity on the machine, especially during maintenance activities and solving failures.
  Take care that the main switch is switched off (position "0") and locked (If possible), or that the power cable is disconnected in order to prevent other persons in putting in action the machine during your activities.
  All the normally valid safety measures or customs with respect to safety should also be taken during those activities.

- Playing with or around the machine may cause dangerous situations with a machine in operation. This playing is never allowed!

- All other prescriptions and laws with respect to working conditions and safety on the working spot should be observed with this machine.

- An acoustic signal device has been installed in the control cabinet, which will be activated first during a short period, as a warning every time before the machine is starting.

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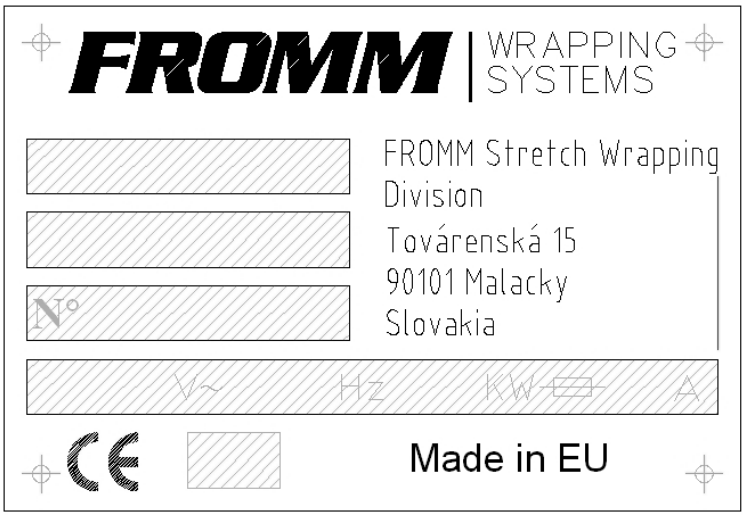
EXPLANATION IDENTIFICATION STICKER

An identification label with the following information has been mounted at the backside of mast.



Name of the manufacturer	:	FROMM Slovakia a.s.
Type	:	Machine type.
Serialnr.	:	Production number of manufacturer.
Voltage	:	Supply voltage.
Power	:	Used power
Fuse	:	16 Amp
Year of manufacture	:	Year in which the machine has been built by manufacturer.

Besides, the CE-mark has been placed on the identification plate:

CE-mark

Machine fulfils the applied requirements as mentioned in the CE - machine directives

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

- It is strictly prohibited to remove the identification label or to replace it with any other similar one of any type.
- Should the CE mark label be damaged for any reason, please notify the MANUFACTURER immediately.

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TECHNICAL DATA

Machine	**-** Maximum speed turntable		Adjustable by inverter.
	- Capacity		max. 20 pallets/hr.
	- Operational hours		8 hrs/day, 5 days/week
	- Operation / working advice		44.000 pallets per year
	- Sealing height FS 400		minimum 2.435mm
	- Sealing height FS 401		minimum 2.985mm
	- Sealing height FS 402		minimum 2.435mm
	- Sealing height FS 403		minimum 2.985mm
	- Sealing height FS 404		minimum 3.585mm
Weight FS400	- Total weight FS400	Ø 1.650 mm	approx. 540 Kg
	- Total weight FS400	Ø 1.800 mm	approx. 600 Kg
	- Total weight FS400	Ø 2.200 mm	approx. 800 Kg
	- Total weight FS400	Horse Shoe	approx. 640 Kg
Weight FS401	- Total weight FS401	Ø 1.650 mm	approx. 560 Kg
	- Total weight FS401	Ø 1.800 mm	approx. 650 Kg
	- Total weight FS401	Ø 2.200 mm	approx. 850 Kg
	- Total weight FS401	Horse Shoe	approx. 660 Kg
Weight FS402	- Total weight FS402	Ø 1.650 mm	approx. 620 Kg
	- Total weight FS402	Ø 1.800 mm	approx. 670 Kg
	- Total weight FS402	Ø 2.200 mm	approx. 870 Kg
	- Total weight FS402	Horse Shoe	approx. 710 Kg
Weight FS403	- Total weight FS403	Ø 1.650 mm	approx. 640 Kg
	- Total weight FS403	Ø 1.800 mm	approx. 690 Kg
	- Total weight FS403	Ø 2.200 mm	approx. 890 Kg
	- Total weight FS403	Horse Shoe	approx. 730 Kg
Weight FS404	- Total weight FS404	Ø 1.650 mm	approx. 670 Kg
	- Total weight FS404	Ø 1.800 mm	approx. 720 Kg
	- Total weight FS404	Ø 2.2200 mm	approx. 920 Kg
	- Total weight FS400	Horse Shoe	approx. 760 Kg
Conditions	- Environmental temperature		+ 5 to +30°C
	- Environment		clean, dry and non-aggressive
Electrical	- Power supply		1 x 230 V 50/60 Hz
	- Control voltage		24 VAC
	- Motor turntable		0.75 kW
	- Motor film carriage		0.37 kW
	- Motors Pre Stretch		0.37 kW
	- Installed power		1,5 kW
	- Protection class		IP 43
Pallet goods	**-** Pallet dimensions (Length x width)	Ø1.650mm	1.100 x 1.200 x 140 43,30" x 47,24" x 5,51"
	- Pallet dimensions (Length x width)	Ø1.800mm	1.200 x 1.300 x 140mm 47,24" x 51,18" x 5,51"
	- Pallet dimensions (Length x width)	Ø2.200mm	1.400 x 1.650 x 140mm 55,11" x 64,96" x 5,51"
	- Dimensions of load outside pallet		max. 10 mm / 0,39" per side
	- Top of load		flat
	- Maximal weight		2.000kg
	- Maximal weight HORSE SHOE		1.250Kg

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TECHNICAL DATA

Stretch film	- LLDPE Material	Max 35 µ / 0,000138”
	- Spool core diameter	76 mm / 3”
	- Outer diameter of spool	Max. 300 mm / 11,20”
	- Film width	500 mm / 19,70”
Colours	**-** Bottom unit, mast	: Blue, RAL 5010
	- Turntable disk, cover film carriage	: Yellow, RAL 1021
	- Chassis film carriage	: Blue, RAL 5010
	- Safety plate under film carriage	: Yellow, RAL 1021
	- Control cabinet	: Yellow, RAL 1021

- Should the need arise to work with products having a different nature than the above mentioned ones, it is essential that you contact the technical service of **MANUFACTURER** in order to receive written authorization.

	WARNING : do not use film thicker than 35 microns without consulting the Manufacturer

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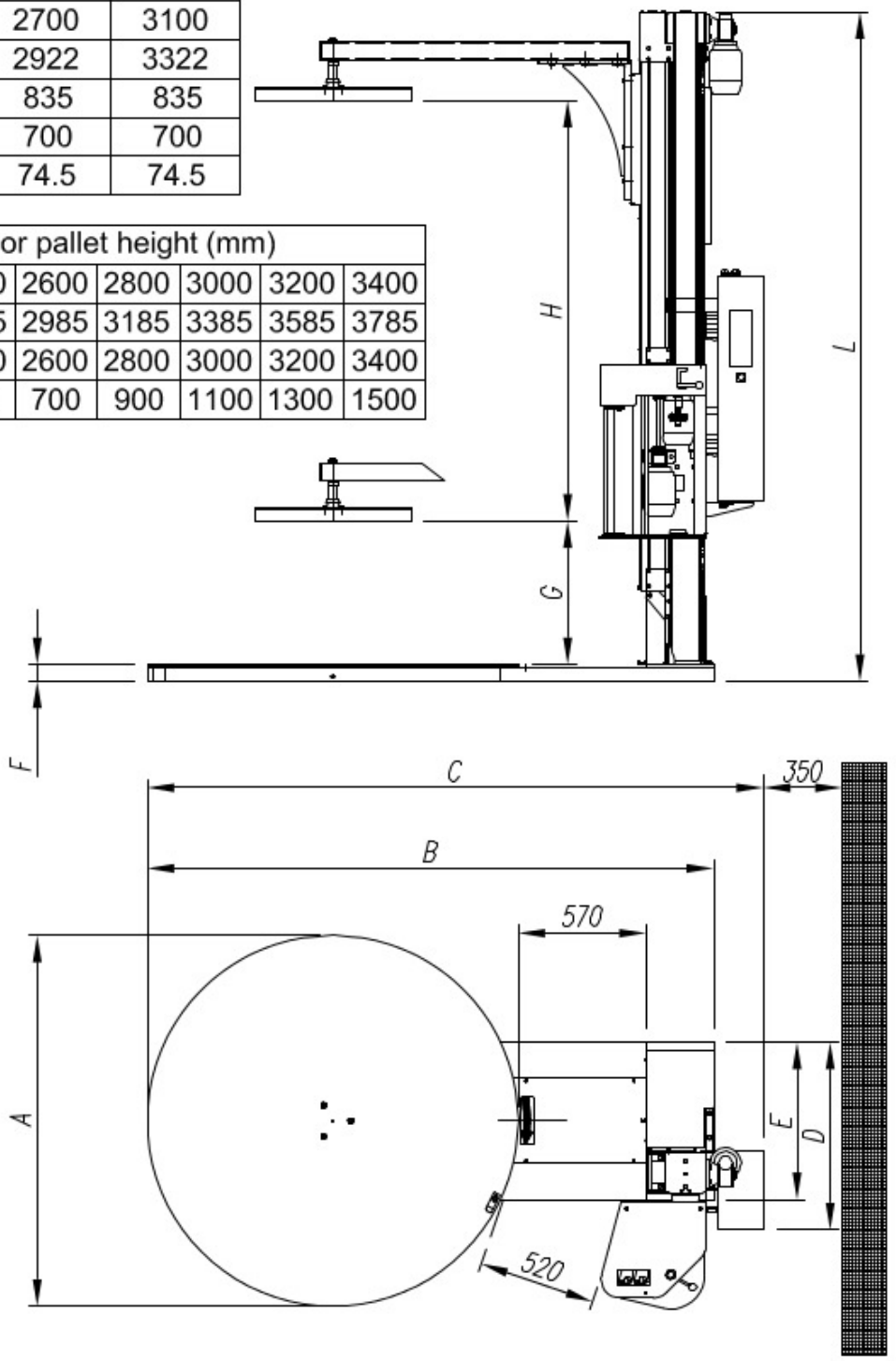
DIMENSIONS

Refer to the LAYOUT on this page for the dimensions.

A	Ø1650	Ø1800	Ø2200
B	2520	2700	3100
C	2742	2922	3322
D	835	835	835
E	700	700	700
F	74.5	74.5	74.5

For pallet height (mm)							
	2050	2200	2600	2800	3000	3200	3400
L	2435	2585	2985	3185	3385	3585	3785
H	2050	2200	2600	2800	3000	3200	3400
G	700	700	700	900	1100	1300	1500



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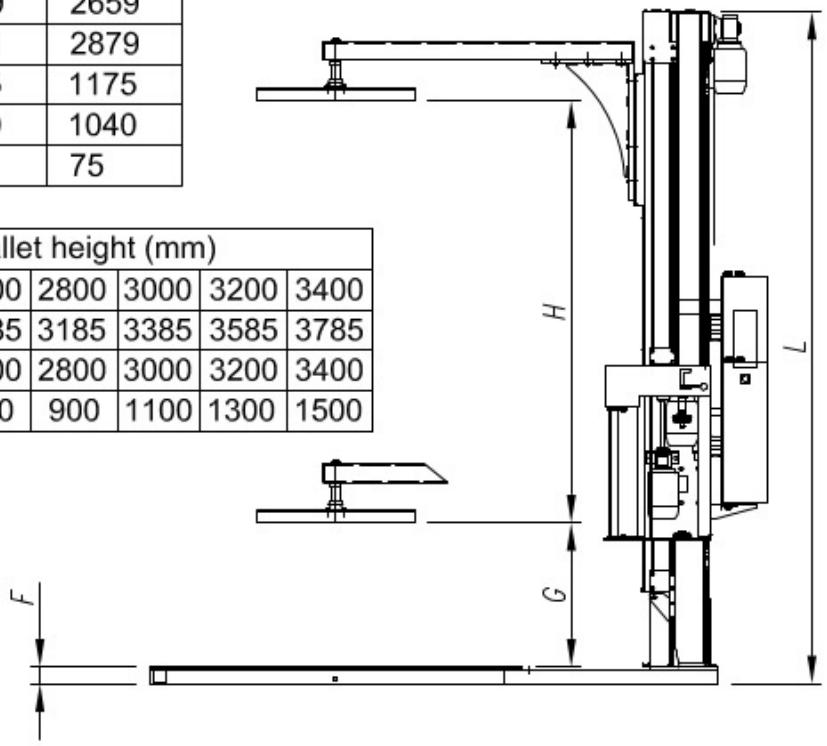
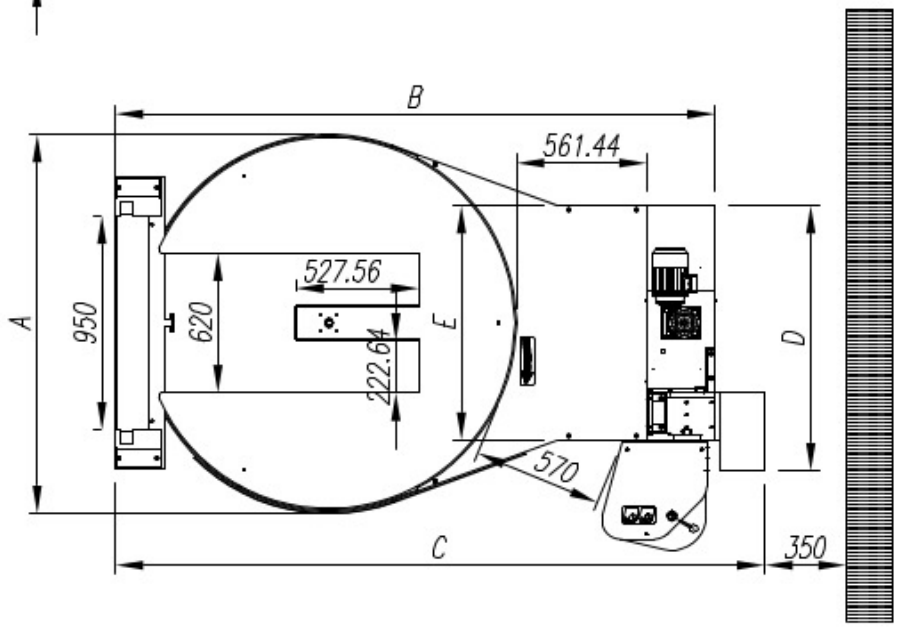
DIMENSIONS

Refer to the LAYOUT on this page for the dimensions.

A	HSR	HSF	HSL
A	Ø1650	Ø1800	Ø1650
B	2659	2539	2659
C	2879	2761	2879
D	1175	1175	1175
E	1040	1040	1040
F	75	75	75

For pallet height (mm)							
	2050	2200	2600	2800	3000	3200	3400
L	2435	2585	2985	3185	3385	3585	3785
H	2050	2200	2600	2800	3000	3200	3400
G	700	700	700	900	1100	1300	1500





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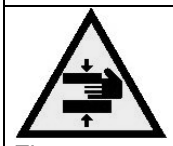
EXPLANATION OF PICTOGRAMS

ATTENTION!! (FOR EVERYTHING IS VALID, IF APPLIED!)

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.

WARNINGS

Fig. 1		Figure 1: DANGER High voltage present.
Fig. 2		Figure 2: Danger Sign
 Fig. 3		Figure 3: Risk of crushing one's hands
Fig. 4		Figure 4: Risk of crushing hands and feet
Fig. 5		Figure 5: Falling hazard
Fig. 6		Figure 6: Sharp objects

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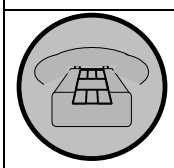
EXPLANATION OF PICTOGRAMS

COMMAND PLATES

Fig. 7		Figure 7: It is prohibited to pass by within the lifting equipment's ray of action
Fig. 8		Figure 8: Do not use bare flames and do not smoke
Fig. 9		Figure 9: Don't access the area while the machine is working
Fig. 10		Figure 10: Don't remove the SAFETY DEVICES
Fig. 11		Figure 11: Don't execute any work before taking off the voltage of the machine
Fig. 12		Figure 12: Truck insertions
Fig. 13		Figure 13: Lifting points
 Fig. 14		Figure 14: This identifies situations in which **THE SUPPLIER** must be contacted

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EXPLANATION OF PICTOGRAMS

Fig. 15		Figure 15: Very important guidelines that must strictly be complied with. Otherwise machine operators could be at risk, the consequence of which would be the voiding of any form of warranty and liability on behalf of **FROMM PACKAGING SYSTEMS.**
Fig. 16		Figure 16: Operations that must never be performed.

CE-MARK

Fig. 17		Figure 17: Machine fulfils the applied requirements as mentioned in the CE-machine directives.

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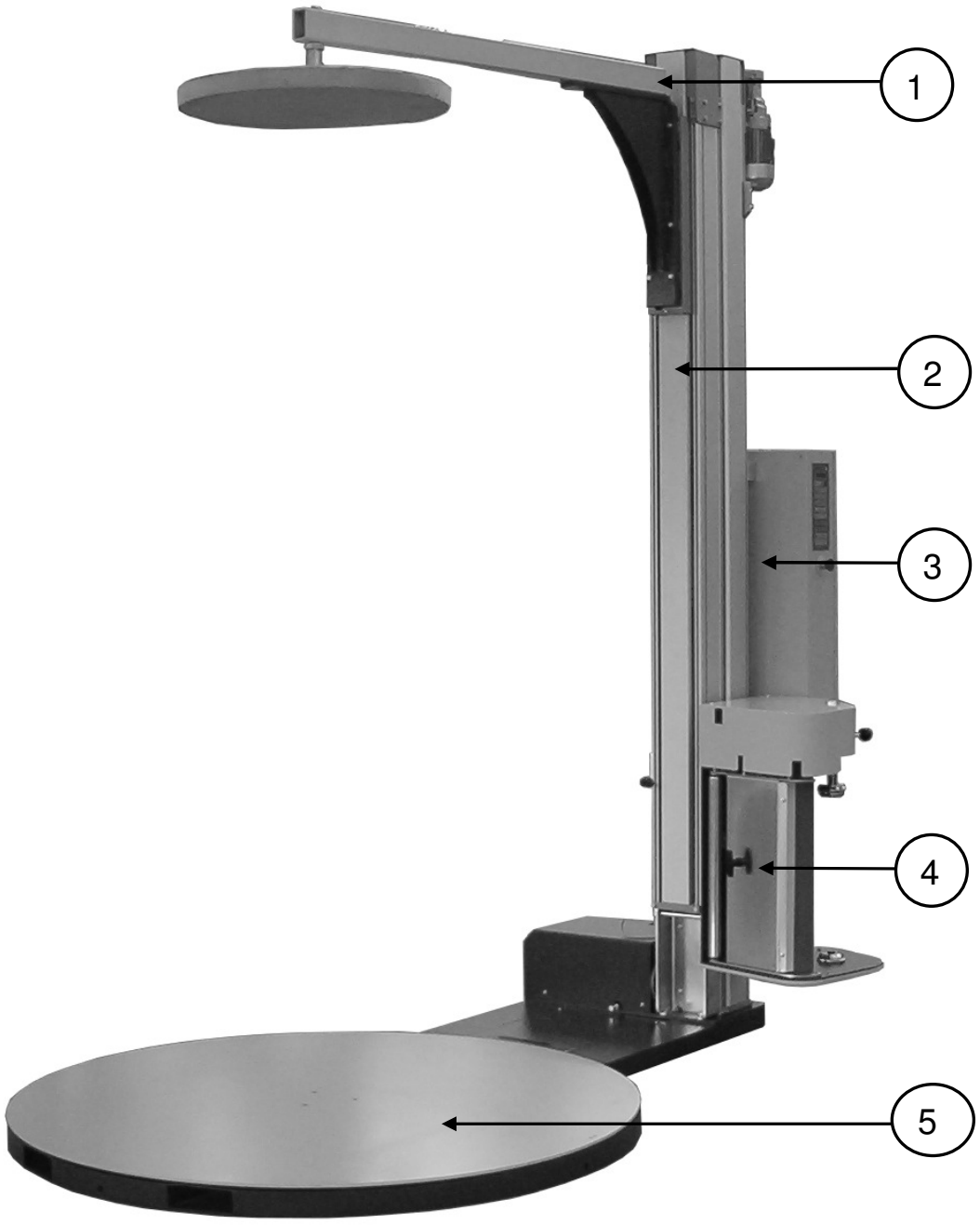
MAIN COMPONENTS

The installation as delivered consists of the following parts:

1- Top-press unit
2- Mast
3- CE - Label
4- Control cabinet with control panel
5- Film carriage
6- Turntable



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HANDLING & TRANSPORT

ATTENTION!

All mentioned activities may only be executed under supervision of qualified personnel from the manufacturer or his representatives!

Pay attention that proper hoisting and lifting tools are used for handling of the machine.

The machine is supplied in a wooden crate insulated by plastic air bubble film.
It is advisable that two another operators be in attendance on the ground when the machine is moved by means of the mechanical equipment driven by the operator in charge since the size of the machine may prevent a clear view during the various phases of the handling operations.

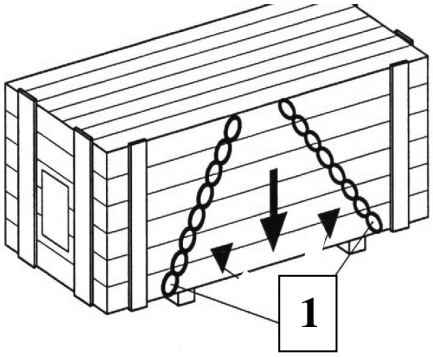
Depending on weight, dimensions, location of machine on the vehicle, available installation space lifting methods and points suitable for the operations described below must be used, fully observing the current safety and health laws and the Manufacturer's recommendations**.**

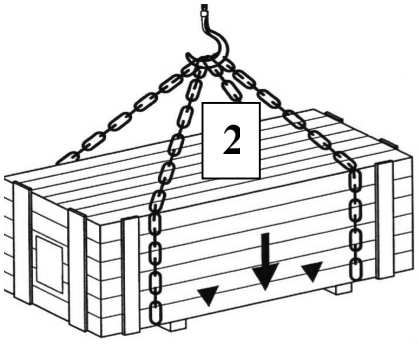
Lifting and handling of packing in a wooden crate by crane

- use a crane and sling of sufficient strength

- bring the vehicle near to the lifting pallet

- pass the sling (and/or ropes - chains) around the case in the positions indicated by the external markings (**1**);
First check that the case - sling/hook (**2**) are well secured, then carefully lift the case and place it in the designated area, moving it gently.





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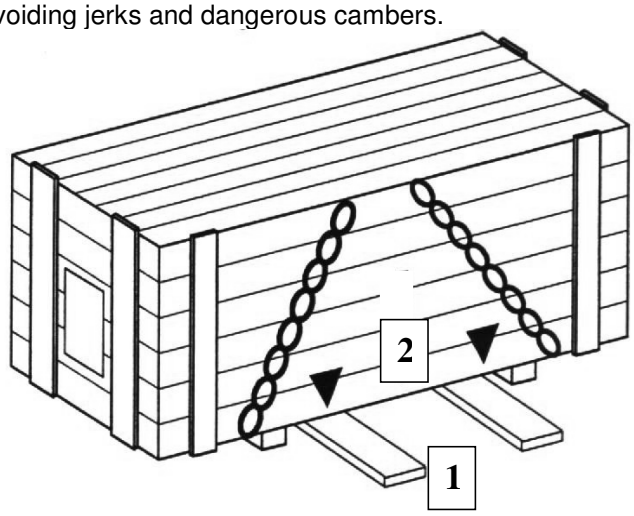
Lifting and handling of packing in a wooden crate by fork-lift truck

Lifting and transport must be affected by a fork-lift truck suitable to bear the weight of the machine, its accessories and packing.
Always check in advance that sufficient space is available for the operations.

- slide the forks (**1**) of the truck under the casels support base, in line with the indicator-marks printed (**2**).
- lift the load after ensuring it is stable, and transport it to the area in which packing is to be removed, avoiding jerks and dangerous cambers.

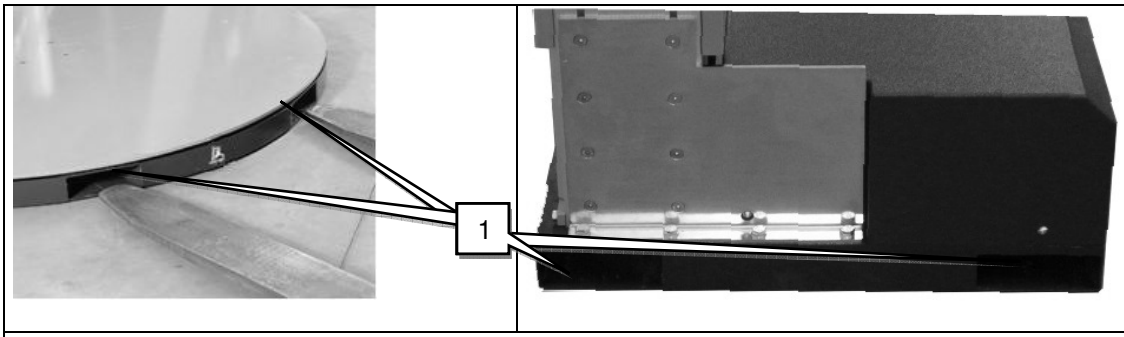


Following measures have to be taken for transport and storage of the machine:
- One has to take care for a suitable storage environment respectively packaging during long-term storage.

Drag bands etc., if used, in order to attach several parts may never be tightened over vulnerable parts, such as control panel, ventilation grills, etc.).

Handling the unpacked machine

Should any machine components be shipped together with the machine, handle them adopting all safety precautions



insert the forks of the suitable lifting equipment within the specific guides (**1**)

Machine storage

The machine and any components packed together with it are protected by a plastic covering that does not guarantee long storage times.
The machine must never be stacked nor is it capable of supporting external loads.

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INSTALLATION INSTRUCTION

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Refer to layout in **SAFETY DEVICES** for mentioned position numbers.

General guideline

Always check in advance that the minimum conditions for machine placing and operation are observed, in particular: ambient conditions (suitable floor), temperature, humidity, lighting and suitability of the designated area.
Installation in rooms subject to the risks of flooding, explosion and fire is strictly forbidden.

The area necessary for installation of the wrapping machine is the area according to the dimensions on the layout plus enough space for installing and working on the machine.
Installation must be executed by qualified personnel, directly coordinated by the authorized Technical Service, fully observing the instructions that follow, in addition to current safety and health laws.

As a precaution, always check for any damage caused during transport and handling work.
If necessary, contact the Manufacturer directly.

Temperature

For safety make sure the machine is operating at ambient temperature in the range +5°C to +30°C.
If other values are measured, contact the Authorized Technical Service with utmost urgency.

Work areas

It is strictly forbidden to locate and/or use the machine if the ambient conditions are liable to cause risks of explosion or inflammability.
Ensure that the following are not present: dust concentration, gas, dangerous fumes and particles, electrostatic fields, excessive electro-magnetic flow, or anything else that might be harmful to persons so exposed or to the efficient running of the machine.

In any event, observe the current safety and health laws.

The machine should be placed on a flat, rigid, vibration-free concrete floor

Never access the high parts of the machine improperly.

Energy sources

The client must provide a cable suited for the required supply voltage up to the control cabinet, of which the diameter of the conductors can manage the total of the required power as mentioned in chapter **TECHNICAL DATA**

The wrapping machine should preferably be connected to the customer's supply voltage wall socket with a connecting cable with a standard CEE-plug, being fused with a 16A-fuse (slow).
For the correct plug check chapter **TECHNICAL DATA**

A main switch preceding the plug has to be provided by the customer, if necessary.

The mains supply must satisfy the applicable standards, such as permitted voltage fluctuations, ripple-generation, reduction of high harmonics, etc.

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INSTALLATION INSTRUCTION

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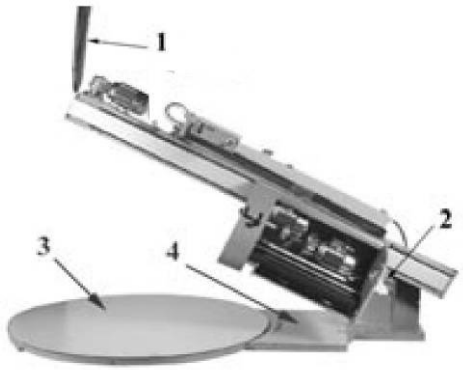
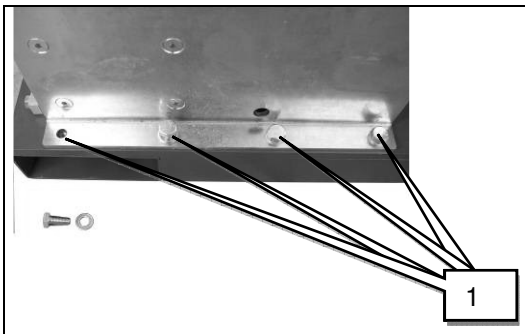
FOR EVERYTHING IS VALID: IF APPLIED!

Due to shipping requirements, the shaft is usually shipped horizontally and bears on a support that has been specifically set up for it. Consequently the shaft must be re-positioned when the machine is installed.

- Upon having located the machine, lift the shaft (**Fig. 1**) by turning it around the fulcrum shaft that has been specifically setup and then locate the shaft upright as compared to the turntable

- Secure the shaft vertically to the relative plate with the four screws (3) (**Fig. 2**)

- Tighten the four stabilizing screws (3) (Figure 2)

 Fig. 1	Erect the mast using an overhead gantry or a truck. Screw an M12 eyebolts on top of the mast (1) (**Fig. 1**), where is located the M12 hole treaded. Attach a strong hoisting (1) (**Fig. 1**) Strap (1) to the gantry and lift it slightly so that mast just leaves its support (4) on the turntable (3).
 Fig. 2	Tighten the four screws (1) (**Fig.2**) Equipment: Standard tool size 17 (Bolt M10)

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INSTALLATION INSTRUCTION

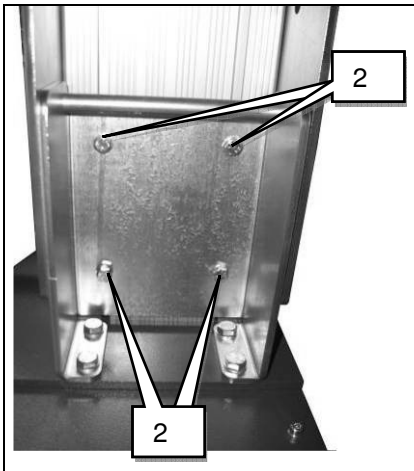


Fig. 3

Tighten the four screws (2) (**Fig. 3**)

Equipment:
Standard tool size 13 (Bolt M8)

Due to transport, it could be that the corresponding holes (1) (**Fig. 1**), are slightly disorientated from the base unit corresponding threads. We advise you to release approx 2mm, the front column screws (2) (**Fig. 4**) connecting the hinge bracket (3) (**Fig. 5**) mounted on the base unit.

Equipment:
Standard tool size 13 (Bolt M8)

Those 4 bolts must never be released unless the column has been placed in transport position stacked on suitable brackets which can bear the weight. (Horizontally)

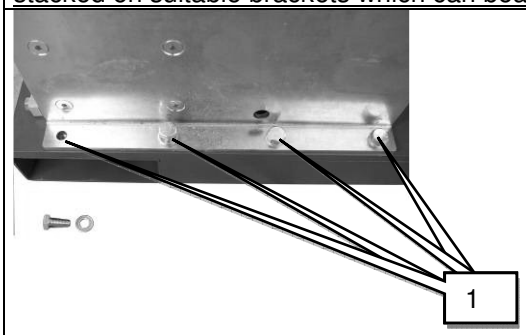


Fig. 4

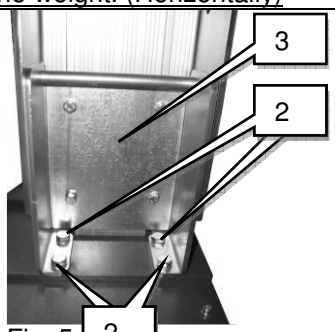
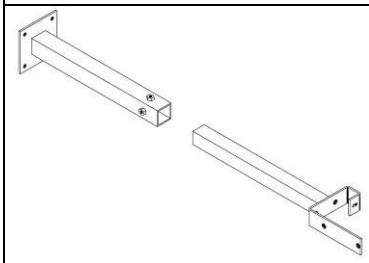


Fig. 5

Install bracket **16.8267** for masts higher than 2.600mm



We strongly recommend, to install this bracket in case you are utilizing a mast higher than 2.600mm.

This bracket ensures the stability of the machine during the wrapping process.

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INSTALLATION INSTRUCTION

Machines suitable for pallets heights higher than 2.800mm are highly recommended to be fixed on the floor. There are no PRE-DRILLED holes in the machine base. Holes have to be drilled by an responsible installation engineer.

Installation materials have to be ordered separately. Or sourced in a local market.

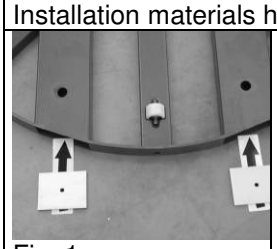
Fig. 1

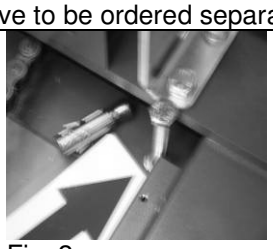
Fig. 2

Release the carriage which has been mechanically blocked to prevent damages on the cover during the transportation of the machine.

- Release the bracket (1) connected with two bolts M8 at the mast;
  (Standard tool size 13)(**Nr 2 in Figures 1** / **2 & 3**).
  A warning label (3) has been mounted on the mast.
- Ones released, the two nuts will slide down in the corresponding profile of the mast (4) (**Fig.3**).
  At the below position of the mast they will be kept / stocked for future use.
  The bracket (1) must be stored in the electrical box, for eventual future use.

- Should the need arise to transport the machine with the colon hinged in the horizontal way, we strongly advice to remount the bracket (1) (**Fig. 2 & 3**);
- Prior to hinge the column, remount the bracket (1) (**Fig. 3**) at an height of 1015mm. (Top) (Fig.4)
- Move the carriage (5) (**Fig. 3**) with the manual ARROW up button, until it mechanically blocks against the bottom of the bracket (1) (**Fig. 2 & 3**)
- Disconnect the power supply and start dismantling the machine;
- Following above recommendations, prevents damages on turntable and carriage cover during transport.

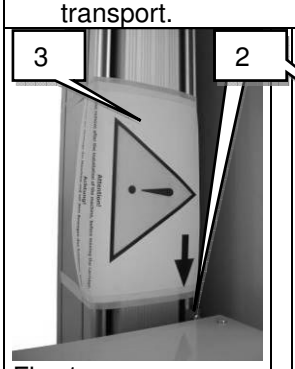

Fig. 1

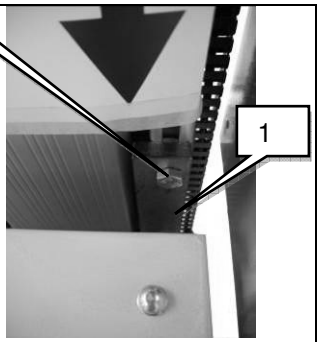

Fig. 2

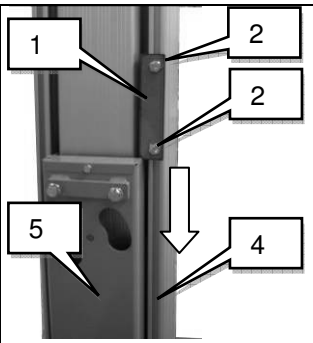

Fig.3

Fig. 4

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INSTALLATION INSTRUCTION

FS4.0128 TOPSHEET DISPENSER

A holder for top-film can be mounted on the machine. (Code FS4.0128). The holder consists of a bottom and top-plate which are holding firmly the PE film tight.

- Mount the unit on the left side of the colon. Opposite to the carriage side. (**Fig. 1**)
- Bolts have been pre-inserted in the guides (2 & 3) of the mast. (**Fig. 2**)
- We advice for the assembly also the insert nut N7.6241 (4x) (**4 – Fig. 3**)

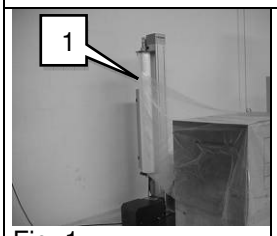

Fig. 1

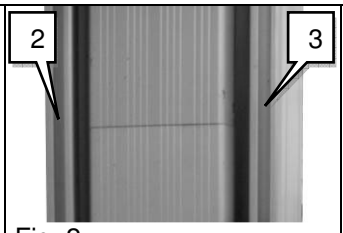

Fig. 2

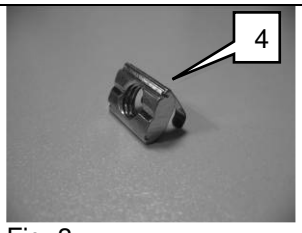

Fig. 3

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ASSEMBLY SEQUENCE

1. Check the functionality of the MAIN SWITCH (**Fig. 1**)

Fig. 1

2. Check the functionality of the EMERGENCY SWITCH (**Fig. 1**)

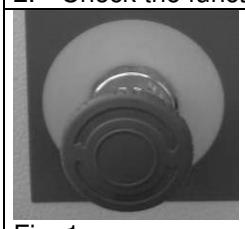
Fig. 1

3. Check the functionality of the SAFETY PROTECTION of the carriage (**Fig. 1** / **2 & 3**)

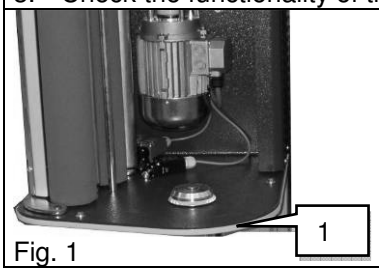

Fig. 1

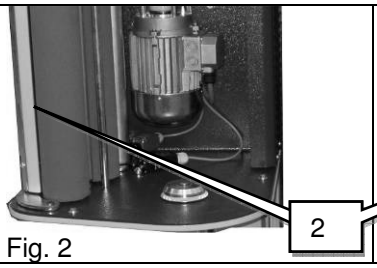

Fig. 2

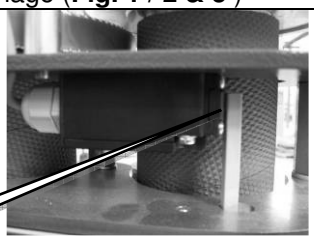
Fig. 3

4. Check the functionality of the safety device horse shoe - (**Fig. 1** / **Fig. 2**)

Fig. 1

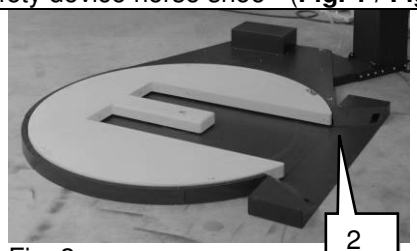

Fig. 2

- Place a product or mechanical block in front of the photocell (1). **Fig 1**. (The machine should not start.
- Start the machine and while rotating place mechanical block at position 2. (**Fig 2**)
  The machine schould stop in emergency, and stops rotating.

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

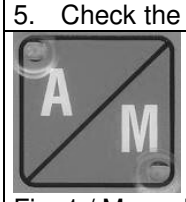

Fig. 1 / Manual movement

Fig. 2 / Movement UP

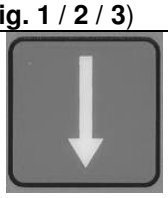
Fig. 3 / Movement DOWN

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ASSEMBLY SEQUENCE

6. Check the functionality of the PROXIMITY SWITCHES of the LOW and TOP position of the carriage (**Fig. 1** / **2 & 3**). One sensor controls the both positions.
   Sensor UP = BOTTOM position of the carriage
   Sensor DOWN = TOP position of the carriage

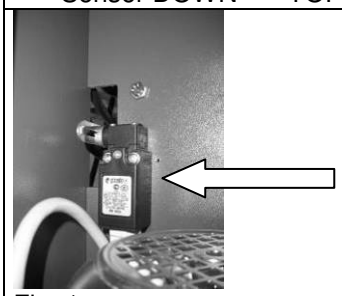


Fig. 1

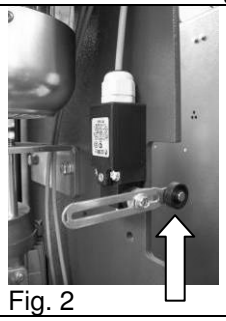
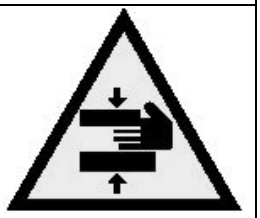


Fig. 2

Fig. 3



7. Check the functionality of the PHOTOCELL (Fig. 1 / 2 & 3)

Fig. 1 N5.2635 / N5.2638

Fig. 2 N5.2651

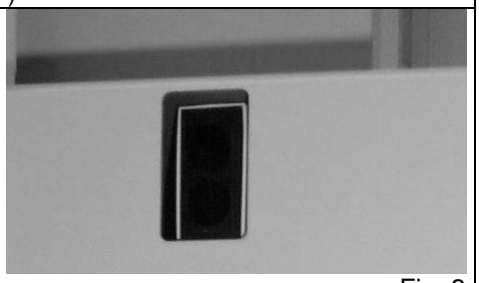


Fig. 3

8. Check the functionality of the FILM FEEDING SYSTEM. (**Fig. 1** / **2 & 3**)
- On top of the carriage button (1) (**Fig. 2**) has been installed. (<u>Release out-feed film before start</u>)
- Button (2) (**Fig. 3**) executes the same function

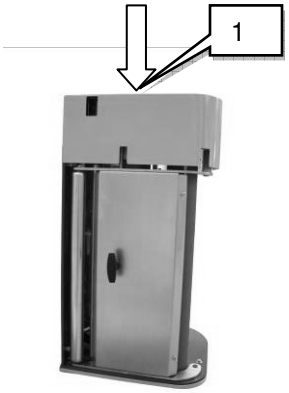


Fig. 1 (Arrow ref. Fig.2)

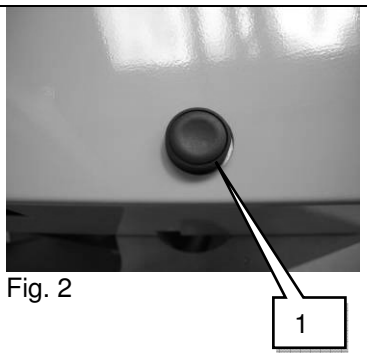


Fig. 2

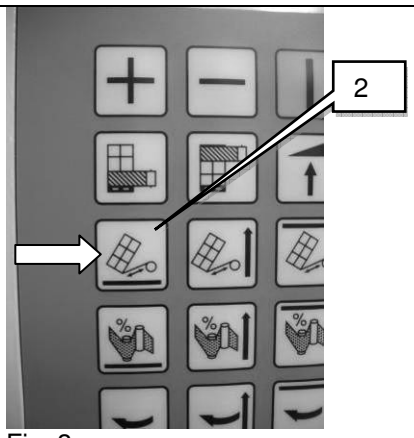


Fig. 3

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ASSEMBLY SEQUENCE

9. Check the functionality of the FILM CUTTING SYSTEM. (**Fig. 1 & 2**)
- If you make a bridge between terminals 20 & 21 the knife will be placed in forward position.

Make this bridge manually and keep the contact not longer to 0,5 Seconds. Otherwise the transformer will burn. (24Volts) (Advised only for FROMM engineers)

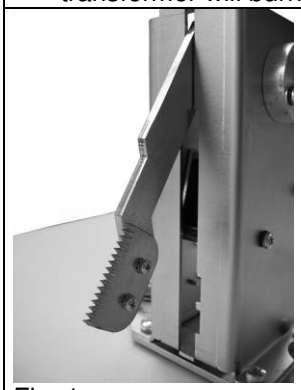


Fig. 1

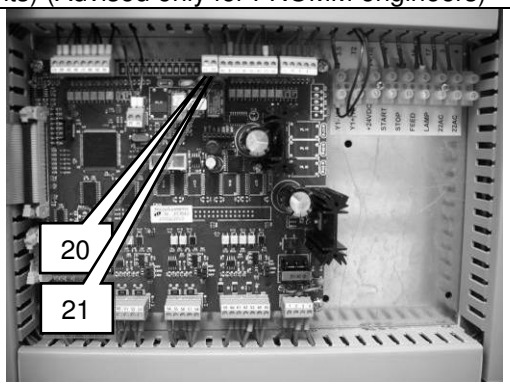


Fig. 2

10. Check the functionality of the TOP PRESS (**Fig. 1** / **2** / **3 & 4**)
- Change to manual mode (**Fig. 2**)
- Movement UP (**Fig. 3**)
- Movement DOWN (**Fig. 4**)

Movements can only be made when the pressure plate (1 / 2 & 3) has been mechanically installed. (**Fig. 1**)

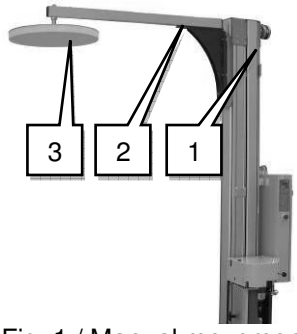


Fig. 1 / Manual movement

Fig. 2

Fig. 3

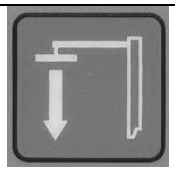


Fig. 4

11. Check the functionality of PROXIMITY SWITCHES for the LOW and TOP position of the TOPPRESS (**Fig. 1 & 2**)

Fig. 1

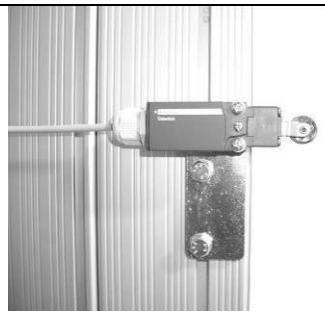
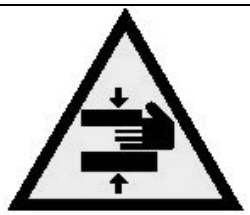


Fig. 2



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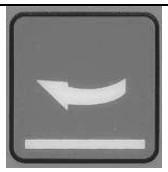
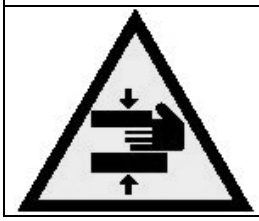
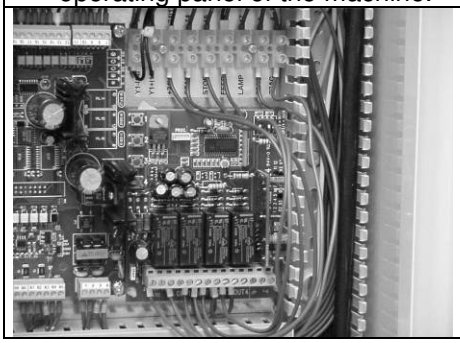
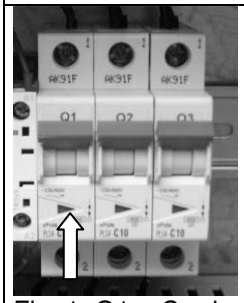
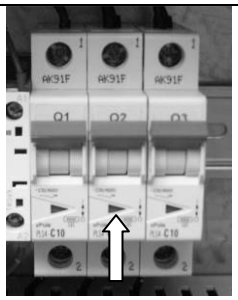
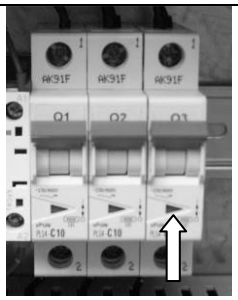
ASSEMBLY SEQUENCE

12. Check the functionality of the MOVEMENT of the TURNTABLE (**Fig. 1 & 2**)				
Fig. 1 / Manual movement		 Fig. 2 / Movement JOG		

13. Check the functionality of the PROXIMITY SENSOR (1) for turntable zero position				
				

14. Check the functionality of the RESET of the MACHINE (Fig. 1)				
Fig. 1 / Reset function				

15. Check the functionality of the REMOTE Control (Code FS4.0147) - The remote control can be used to activate the machine from a distance. The machine will always be activated in the pre-selected program. Program change has still to be executed on the operating panel of the machine.				
				

16. Check the functionality of the TERMINAL / OVERCURRENT / CIRCUIT / BRAKERS (Fig. 1 & 2)						
 Fig. 1 Q1 = Carriage		 Fig. 2 Q2 = Pre-Stretch		 Fig. 3 Q3 = Turntable		

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ATTENTION!

After the fist installation
Follow procedure below before starting the machine
- Control if the emergency button is free;
- Turn on the machine;
- Press the reset button;
- Wait 5 seconds and than make the first rotation in manual mode;
- If the turntable rotates, follow procedure below.

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

- ✓ **Interlocking of the crush-proof interlocked operator guards**
- ✓ **Emergency button**

- Start the machine
- Trigger all the interlocked operator guards

Check that the carriage inverts its running direction for approximately 3 seconds and that the turntable starts slowing down and stops within a few seconds.

Check for the efficiency of the mushroom-head button (Emergency stop)

- Start the machine
- Press the emergency mushroom-head button

Check that the machine stops within a few seconds.

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CONTROL PANEL

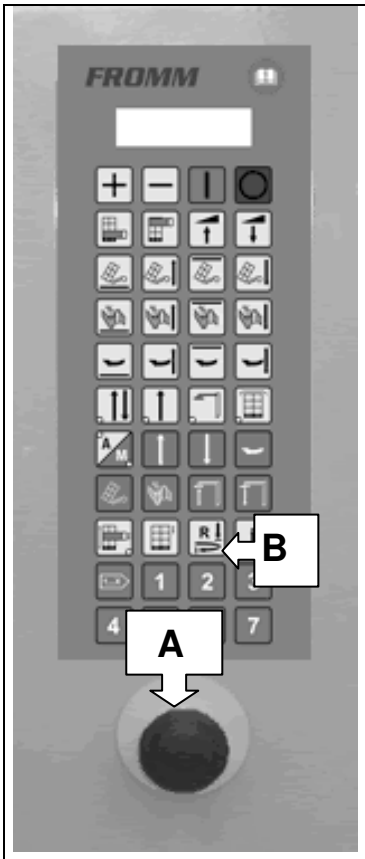

Figure 1: Console FS4xx Generation 02

A = Emergency stop
B = Reset button

Function

- Press «+» or «–» for changing the parameters
- The function setting is stored immediately for all programs. You can insert different settings to different programs.
- You may change all parameters even while the machine is operating.

Errors

E1:INVERTER ERROR
E2:FILM FINISHED OR BROKEN
E3:EMERGENCY SWITCH
E4:DOOR OPEN
E5:CLAMP PROTECTION
E6:TABLE INVERTER ERROR
E7:NO PALLET DETECTED
E8:SWITCH FILM ROLLES
E9:TABLE SAFETY DEVICE

ALARM RESET

Clear the fault, push **RESET** button if necessary restarting the cycle. During the failure the machine will repeatedly beep three times. Beep Beep Beep pause repeat until the fault is cleared. During this the relays inside the cabinet will make a clicking noise.

Three time's beep than pause ten seconds

Main operating mode selection automatic mode (the led on, indicated the selected function)

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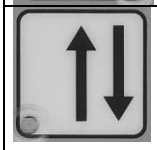
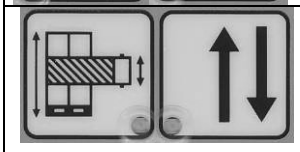
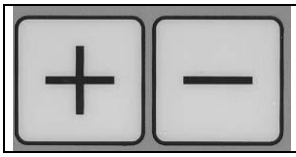
CONTROL PANEL

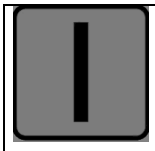
	Auto/manual mode		**Single wrapping** wrapping, ascent only
	**Double wrapping** wrapping ascent / descent		**Single wrapping + TS** wrapping, ascent with cover sheet positioned
	Double wrapping + TS ascent/descend with cover sheet		**Single wrapping at pre set height** Wrapping, ascent at set height
	**Double wrapping at pre set height** wrapping, ascent/descend at set height		**For all programs** Extra bottom wraps at pre set height. In combination with start button

MACHINE DEMO / EXHIBITION PROGRAM:

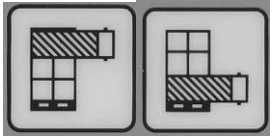
1	2	3		
			<u>Within 2 seconds for each button</u> <u>Exhibition program</u> Keep button 1 pressed down. Following by pressing button 2 one time. than followed by button 3 one time *The machine will start continuously running, in the speed which has been set in the manual program*	MACHINE DEMO

BLOCKING OF THE PARAMETERS AND PROGRAMS:

	To block the machine, to prevent changing of the parameters for the programs. Push these 2 buttons together for 3 seconds.

	Now in the display is shown BLOCKING PARAMETERS Push the start button and the machine is blocked. Only the different pre installed programs can be chosen, but not changed.

Unblocking the machine

	Press both buttons together until the message “UNLOCK” will be displayed. Insert the first digit of the password and press followed by the second digit etc. Etc.

Ask the responsible manager in your company for the code to unblock the machine!

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INDICATIONS

START-UP CYCLE ACTIVE

An acoustic signal device has been installed in the control cabinet, which will be activated first during some seconds as a warning every time before the AUTOMATIC PROGRAM is executed.
The operator will thus be able to leave the danger zone before the machine starts to operate.
The machine will only start to operate after this period has been elapsed.

RESET MACHINE

The automatic program of the wrapping machine is interrupted and a failure indication will be displayed on the console, when the emergency stop is activated or any other failure is detected.
Wrapping can only be started again after pushing reset on the control panel. Thus, the failure is reset and the control voltage is activated again, assuming that the mains switch still has been switched on. The cause of the failure has to be solved first, of cause.

By holding down the reset button for 3 seconds the wrapping machine can be brought back to the start conditions.

The turntable returns back to the zero position of the machine.
The film carriage returns back to the zero position of the mast

The film carriage has to be brought back to zero position, by pushing the manual downwards button.

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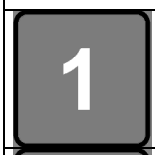
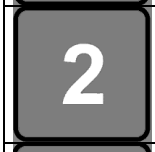
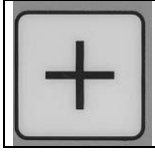
BASIC OPERATING INSTRUCTIONS

Button	Explanation	Displayed message (where applicable)
	Automatic or manual mode selection. By pressing the key, the machine will set in automatic or manual mode, the red led will indicate the selected mode	PROG.YY XXXXXXXX USED FILM 0000m Or MANUAL MODE
 Or main Screen	Program selection: (YY: from 1 up to 30) (this button will not function while the machine is operating) By pushing this button it will be possible to select a set program. On the display the actual program flashes. By pushing + or- the program displayed increases or decreases. After a few seconds, or by pressing another key, the program will be set. Each program can be personalised.	PROG.YY XXXXXXXX USED FILM 0000m YY = actual program XXXXXXX= displays type of cycle U-D =Up down U =Up only U-D-S=Up down top sheet U-S =Up top sheet
	Direct selection Program 1	
	Direct selection Program 2	
	Direct selection Program 3	
	Direct selection Program 4	
	Direct selection Program 5	
	Direct selection Program 6	
	Direct selection Program 7	
	Push for increasing the displayed parameters	

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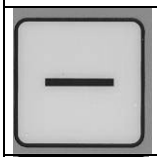
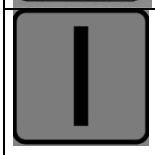
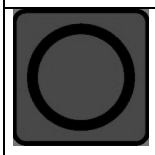
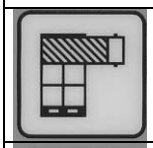
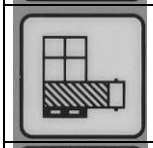
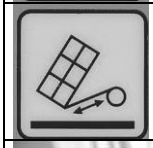
BASIC OPERATING INSTRUCTIONS

Button	Explanation	Displayed message (where applicable)
	Push for decreasing the displayed parameters	
	START button **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. In manual mode, the turntable starts	
	Stop button For stopping the machine so that it can restart from the operation point in which it stopped. Pressing two times consecutively the operation point is resetted and the next start will be from the beginning of the work cycle. After pressing this button in the manual program the turntable will return to home “ZERO”position.	
	Digital setting for adjustment of number top wraps (adjustment 0 to 10 step 1)	NUMBER OF BOTTOM WRAPS X
	1. *Digital setting for adjustment of number bottom wraps (adjustment 0 to 10 step 1)* 2. Extra bottom wraps at pre set height. In combination with start button	NUMBER OF BOTTOM WRAPS X PALLET FOOT STRENGTHEN XX Cm
	Digital setting for adjusting carriage ascent speed (adjustment 15 to 60 step 5)	CARRIAGE SPEED UP XX
	Digital setting for adjusting carriage descent speed (adjustment 15 to 60 step 5)	CARRIAGE SPEED DOWN XX
	Digital setting for adjusting film tension during bottom wraps (adjustment 1 to15 step 1) Feeder button to feed the film before start	FILM TENSION AT BOTTOM WRAPS XX
	Feeder button mounted on the carriage, to feed the film towards the pallet before starting the program. **Software 1.9 or lower.** Pre-stretch during film feed fixed at 100% **Software 2.0 or higher.** Pre-stretch during film feed variable adjustable.	

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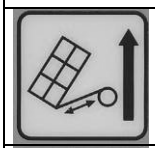
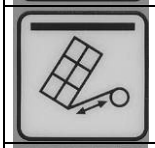
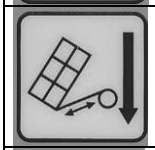
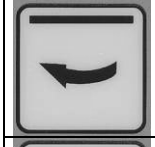
BASIC OPERATING INSTRUCTIONS

Button	Explanation	Displayed message (where applicable)
	Digital setting for adjusting film tension during carriage ascent (adjustment 1 to15 step 1)	FILM TENSION ASCENT WR. XX
	Digital setting for adjusting film tension during top wraps (adjustment 1 to15 step 1)	FILM TENSION AT TOP WRAPS X
	Digital setting for adjusting film tension carriage descent (adjustment 1 to15 step 1)	FILM TENSION DESCENT WR. XX
	Digital setting for adjusting film pre-stretch during bottom wraps (adjustment 10 to 400 step 10)	PRE-STRETCH AT BOTTOM WR. XXX%
	Digital setting for adjusting film pre-stretch during carriage ascent (adjustment 10 to 400 step 10)	PRE-STRETCH ASCENT WR. XXX%
	Digital setting for adjusting film pre-stretch during top wraps (adjustment 10 to 400 step 10)	PRE-STRETCH AT TOP WR. XXX%
	Digital setting for adjusting film pre-stretch during carriage descent (adjustment 10 to 400 step 10)	PRE-STRETCH DESCENT WR. XXX%
	Digital setting for adjusting turntable speed during bottom wraps (adjustment 15 to 60 step 5)	TABLE SPEED AT BOTTOM WR. XX
	Digital setting for adjusting turntable speed during carriage ascent (adjustment 15 to 60 step 5)	TABLE SPEED ACENT WR. XX
	Digital setting for adjusting turntable speed during top wraps (adjustment 15 to 60 step 5)	TABLE SPEED AT TOP WR. XX
	Digital setting for adjusting turntable speed during carriage descent (adjustment 15 to 60 step 5)	TABLE SPEED DECENT WR. XX

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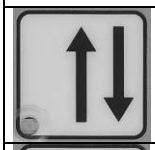
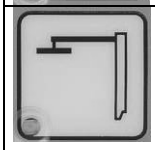
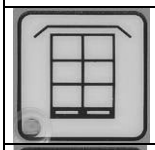
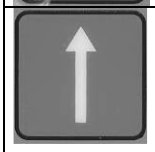
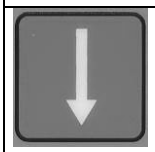
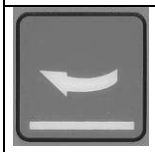
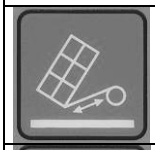
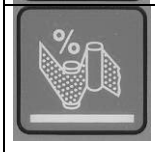
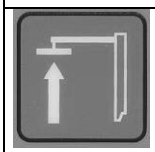
BASIC OPERATING INSTRUCTIONS

Button	Explanation	Displayed message (where applicable)
	Double wrapping digital setting (ascent / descent). The led is on if the function is selected.	
	Single wrapping (ascent). The led is on if the function is selected. If function 6 is selected, the led will flash quickly	
	Not active in FS400/FS401 Models FS402/ FS403 Are models with top-press If this selection had been activated the top-press application will be active in the selected program.	FS400 / FS401= TOP PLATE NOT INSTALLED FS402 / FS403= TOPPRESS ACTIVE
	Cover sheet active / not active. The led is on if the function is selected.	
	Carriage movement jog button. Press once to raise the carriage. Press again to stop the movement. Using the +/- buttons it's possible to increase decrease the speed.	UPWARD SPEED MANUAL MODE XX
	Carriage movement jog button. Press once to lower the carriage. Press again to stop the movement. Using the +/- buttons it's possible to increase decrease the speed.	DOWNWARD SPEED MANUAL MODE XX
	Digital setting turntable speed. (adjustment 15 to 60 step 5) By keeping this button pressed the turntable will rotate slowly. Max 15Hz JOG FUNCTION	TURNTABLE SPEED MANUAL MODE XX
	Digital setting for adjusting film tension during manual movement (adjustment 1 to15 step 1)	TENSION IN MANUAL MODE XX
	Digital setting for adjusting film pre-stretch during manual movement (adjustment 10 to 400 step 10) **Software: 2.0 or Higher** Pre-Set value of pre-stretch during film feed before program start. (Feeder button carriage)	PRESTRECH IN MANUAL MODE XXX%
	Not active in FS400/FS401 For FS402/FS403 (FS4xx models with top-press) Manual upwards movement top-press Maximal standard height conform machine model	FS400 / FS401= TOP PLATE NOT INSTALLED FS402 / FS403= MANUAL MOVEMENT UP

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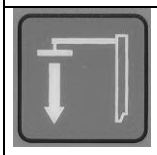
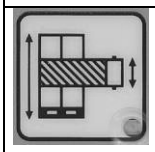
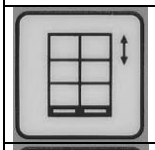
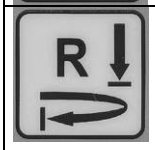
BASIC OPERATING INSTRUCTIONS

Button	Explanation	Displayed message (where applicable)
	Not active in FS400/FS401 For FS402/FS403 (FS4xx models with top-press) Manual upwards movement top-press Minimal standard height 700mm	FS400 / FS401= TOP PLATE NOT INSTALLED FS402 / FS403= MANUAL MOVEMENT DOWN
	1. Pre set pallet height. The photocell is disabled. The height of the film carriage can be adjusted from 0 to 300cm (steps 5 cm). If the set height is 0, the function is not active. 2. Stiffed function. Holding this button during ascent or descent carriage movement, the carriage stops, releasing the button the carriage starts again executing the normal function	PRE SET PALLET HEIGHT XXX Cm PALLET FOOT STRENGTHEN XX Cm
	Film overlap at top wraps. The overlap at the top wraps can be adjusted form 0 to 40cm.	FILM OVERLAP AT TOPWRAPS XX Cm
	1. Reset button. Reset the machine to home position. 2. After having cleared error E03 (emergency switch) or E8 (switch film roller) the control voltage is activated again.	
	Information button, displays various information parameters.	

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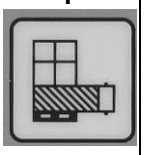
COMBINATION BUTTONS:

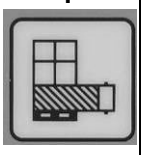
Function 1

1	2			
			<u>Within 2 seconds for each button</u> Press button 1 Increase the value Press button 2 Decrease the value For all hereunder described functions.	EXTRA PALLETFOOT WRAPS 1 AT XXXcm

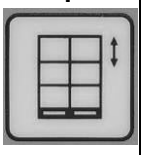
Function 2

1	2			
			<u>Within 2 seconds for each button</u> <u>Fix goods at the pallet 1</u> Press button 1 than press button 2. Select the pallet foot program 1 The bottom wraps are repeated at the pre-set height *Different parameters selectable per program.*	EXTRA PALLETFOOT WRAPS 1 AT XXXcm

Function 3

1	2	3		
			<u>Within 2 seconds for each button</u> <u>Fix goods at the pallet 2</u> Press button 1 than press button 2, followed by button 3. Select the pallet foot program 2 The bottom wraps are repeated at the pre-set height *Different parameters selectable per program.*	EXTRA PALLETFOOT WRAPS 2 AT XXXcm

Function 4

1	2			
			<u>Within 2 seconds for each button</u> <u>Top-sheet dimension</u> Press button 1 than press button 2, Change the height of descend the carriage during the TOP-SHEET program. With value 40 the carriage will go down approx 40cm. *Different parameters selectable per program.*	DESCENT DISTANCE TOPSHEET XXXcm

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COMBINATION BUTTONS:

Function 5

1	2			
			Within 2 seconds for each button Start at pre-set height Press button 1 than press button 2, The carriage will start wrapping the pallet at the pre set height. Max selectable height 1800mm *Different parameters selectable per program*.	START WRAP HEIGHT XXXcm

Function 6

1	2			
			Within 2 seconds for each button Automatic carriage return to ZERO in ONLY UP PROGRAM Press button 1 than press button 2, When using the only up program the carriage will return automatically to the ZERO position after the pre-set time has elapsed. During this movement the machine will beep. *Different parameters selectable per program.*	PAUSE BEFORE DOWNWARD XXsec

Function 7

1	2	3		
			Within 2 seconds for each button Press button 1 than press button 2, followed by button 3 Select the function by choosing YES or NO Standard = NO If function 6 is set at a value 000 the carriage will keep the original function. After pressing start the carriage returns to the ZERO position. If function 6 is set at a value > 0 The machine will follow the timer in function 6 If selected Yes the carriage will remain at the original height where it has stopped. After pressing start again the turntable starts to rotate again. Wrapping an only down program. *Different parameters selectable per program.*	DESCENT CYCLE XXX

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COMBINATION BUTTONS:

Function 8

1	2			
			Within 2 seconds for each button Press button 1 than press button 2, Banderol program. The value selected will create a step for the carriage. First bottom wraps than ascend carriage for example 20cm. Pre selected wraps in function 9 Ascend 20cm Pre selected wraps in function 9 Repeat until the photocell detects the max height of the pallet *Different parameters selectable per program.*	BANDEROLPROGRAM XXcm

Function 9

1	2	3		
			Within 2 seconds for each button Press button 1 than press button 2, Amount of wraps function 8 Increase this value an the machine will make more turns in combination with function 8. Banderol program. Settings 1-9 *Different parameters selectable per program.*	EXTRA WRAPS XX

Function 10

1	2			
			Press button 1 together with button 2 for 5 seconds, Double stroke program Increase this value an the machine will restart automatically the selected program. Max 9 times selectable *Different parameters selectable per program.*	REPEAT ACTIVE PROGRAM XX

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COMBINATION BUTTONS:

Function 11

1	2			
			Within 2 seconds for each button Timer for cutting knife The higher this value the longer the knife of the film cutting system remains in forward position. This timer can be changer in case of thicker film or problems during the cutting process. *Different parameters selectable per program.*	CUTTING IMPULSE XX sec

Function 12

1	2	3		
			Within 2 seconds for each button Film length after cutting The higher this value the longer the film-tail will be before the machine will start to release the film between carriage and pallet. To be changed in case of extreme long or small pallets. *Different parameters selectable per program.*	FILM LENGTH XXX

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INFORMATION BUTTON:

	Information button, displays various information parameters.	

Displays several information as below, to pass trough the displayed information, push + or – buttons.

TOTAL PRODUCED PALLETS XXXXX	XXXXX are the total number of produced pallets in lifetime of the machine. "TOTAL"
PRODUCED PALLET PROG XXXXXXXXXX	Are the produced pallets for the, at that moment selected program. "SUBTOTAL"
TOTAL CONSUMED FILM XXXXXXXXM	Total consumed film in lifetime of the machine. "TOTAL"
TOTAL CONSUMED PROG XXXXXXXXXXm	Is the used film for the, at that moment selected program. "SUBTOTAL"
LANGUAGE	Select the language: "LINGUA:(0-11)" ITALIANO LANGUAGE LANGUE DANISCH SPRACHE TAAL IDIOMA SPRAK KIELI LINGUA SPRAK After the language is displayed press start for the selection of the language.
CARRIAGE RETURN IN LOWEST LEVEL	After an automatic cycle, the carriage stops on the bottom limit switch without moving upward. This function is selectable by pressing the stat button. Selection YES/NO
CHANGE USER PASSWORD	Change user password.
STOP POSITION XXX	THE TABLE STOPS AT 0° (DEFAULT) ,OR 90° ,OR 180° OR 270° FROM THE ORIGINAL HOME POSITION.
CUTTING DEVICE XXX	CUTTING DEVICE ENABLED/DISABLED Selection YES/NO

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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. The acoustic signal is active during approximately 3 seconds before the automatic wrapping cycle will be executed. 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 1 - 30 should be selected;
- 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
- by pressure exerted on the crush-proof guard
- by the presence of an alarm that commands the immediate stop.

This stop mode envisages:
- the immediate stop of the film carriage
- the turnplate starts to slow down until it stops.

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

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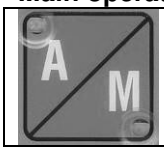
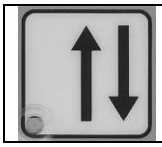
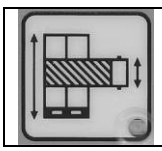
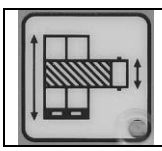
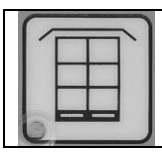
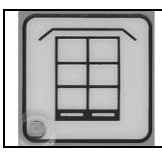
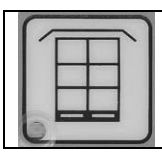
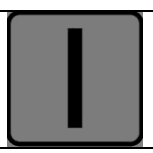
WRAPPING PROGRAMS

Main operating mode selection automatic mode (the led on, indicated the selected function)

		**Auto/manual mode**
		**Double wrapping** wrapping ascent / descent
		Single wrapping wrapping, ascent only, carriage manual return to ZERO position by pressing start.
		Single wrapping wrapping, ascent only with automatic carriage return to ZERO. GREEN LED = flashing ON – OFF – ON
		Single wrapping wrapping, decent only
		**Single wrapping at pre set height** Wrapping, ascent at set height
		**Double wrapping at pre set height** wrapping, ascent/descend at set height
		**Single wrapping + TS** wrapping, ascent with cover sheet positioned
		**Single wrapping + TS** ascent/descend with cover sheet
		**Descent Spacer top sheet** In combination with top sheet program (**TS**), set the descent Spacer from the top of the goods in a range from 0 to –50 cm. This function is to select before starting the cycle.

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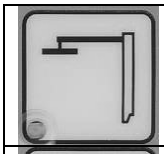
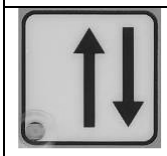
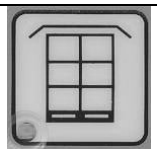
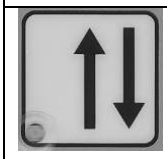
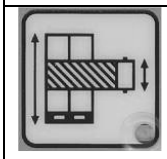
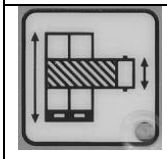
WRAPPING PROGRAMS

	**Led ON** = Toppress has been selected and will function in the requested program. This function can be selected per program. **Led OFF** = Toppress has not been selected and will not function in the requested program.	
		1. **Single wrapping.** After the pre-set number of bottom wraps has been completed, while the turntable is turning, the film carriage will go upwards. When the film carriage has arrived on top and the pre-set number of top wraps has been completed, the turntable will halt in phase. The film can be cut now on top. Now the film can be cut and the pallet can be transported the selected number of top wrap.
		2. **Double wrapping.** The complete (double) wrapping program will be executed with this function. After completing the pre-set number of bottom wraps the film carriage will go upwards, then it halts to lay the top selected top wraps, while the turntable keeps turning, and then it will go downwards again. After which the turntable will halt in phase. Now the film can be cut and the pallet can be transported.
		3. **Single wrapping + TS.** After the pre-set number of bottom wraps has been completed, while the turntable is turning, the film carriage will go upwards. When the film carriage has arrived on top it first, lays the selected number of top wrap, move downwards and wait until the topsheet has been laid, after puching start the film carriage will go upwards again and wrapping in the topsheet the selected number of top wrap, then the turntable will halt in phase. The film can be cut now on top. the selected number of top wrap
		4. **Double wrapping + TS.** After the pre-set number of bottom wraps has been completed, while the turntable is turning, the film carriage will go upwards. When the film carriage has arrived on top it first, lays the selected number of top wrap, move downwards for the selected descent Spacer and wait until the top sheet has been laid, after pushing start the film carriage will go upwards again another number of pre-set top wraps is laid, after this the film carriage will go downwards again while the turntable keeps turning. After which the turntable will halt in phase. The film can be cut and the pallet can be transported
		**5. Single wrapping at pre set height.** After the pre-set number of bottom wraps has been completed, while the turntable is turning, the film carriage will go upwards till the preset height. Then it halts to lay the top selected top wraps, while the turntable keeps turning, When the film carriage has arrived on top and the pre-set number of top wraps has been completed, the turntable will halt in phase. The film can be cut now on top. Now the film can be cut and the pallet can be transported the selected number of top wrap
		6. **Double wrapping at pre set height. .** After the pre-set number of bottom wraps has been completed, while the turntable is turning, the film carriage will go upwards till the preset height. Then it halts to lay the top selected top wraps, while the turntable keeps turning, after which the turntable will halt in phase. Now the film can be cut and the pallet can be transported.

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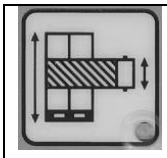
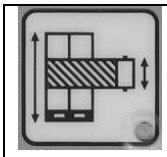
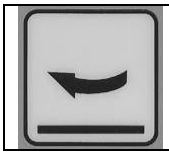
WRAPPING PROGRAMS

		7. **Pallet foot 1** (in combination with another program), At the pre set height the carriage will halt and repeat again the number of pre selected bottom wraps. This function is to select before starting the cycle. This function can be very useful when you have fix the goods onto the pallet, in the case that the products are stacked very wide within this pallet.
		8. **Pallet foot 2** (in combination with another program), At the pre set height the carriage will halt and repeat again the number of pre selected bottom wraps. This function is to select before starting the cycle. This function can be very useful when you have fix the goods onto the pallet, in the case that the products are stacked very wide within this pallet.
		9. **Banderol** The program will start and at every pre-selected distance the carriage will halt and wrap the pre-selected ammount of wraps. 1-9
		10. **Double stroke** The machine will start and will make the UP-Down program. After returning in Zero automaticly the machine will restart appling a double layer film on the already wrapped pallet. The ammoutn of restarts can be selected at the OP. Settings available from 1-9

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ERRORS DURING OPERATION

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

Problem suggestion	Possible solution
- Microswitch is not connected properly	- Check the wiring Carriage LOWEST Position lever (2) (**Fig. 2**) points UPWARD Carriage HIGHEST Position lever (2) (**Fig. 2**) points DOWNWARD - If the carriage is in ZERO position lever is horizontal (2) (**Fig.** Means carriage in not at lower or upper proximity.
- Carriage doesn't wrap at turntable level	- Check for the position of the TOP or LOWER cams by adjusting the respective 2x adjuster screws. (4) (**Fig.3**)

Fig. 1

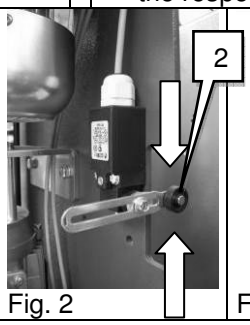

Fig. 2

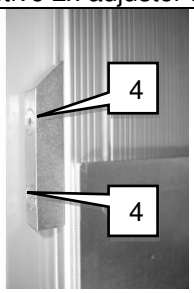

Fig. 3

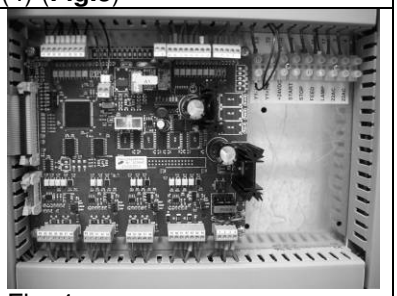
Fig. 4

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

THE FILM TENSION DOES NOT CHANGE / PALLET WRAPPED WITHOUT TENSION OR PRE-STRETCH.

Problem suggestion	Possible solution
- Motor shaft N5.1169 has broken.	- Open the carriage door (1a) (**Fig.2**) and remove the film (2) (**Fig. 1**) - Place a piece of carton (3) in front of the dancer roller (4) in order to run the machine "as if" film has been feeded in the carriage (**Fig. 1**) - Close and lock the door (1b) (**Fig.2**) - Change the machine to the manual program (5) (**Fig. 3**) - Set the pre-stretch in manual mode at 150% (6) (**Fig. 3**) - Press the machine start button (7) (**Fig. 3**) - Roll (8) (**Fig. 4**) is rotating? If YES check the next written advices. - Roll (8) (**Fig. 4**) is not rotating? Shaft of the "TOP" motor N5.1169 has been broken, due to lack or wrong maintenance. (Belt tension too high!!) Call technical assistance FROMM or order the carriage repair kit.

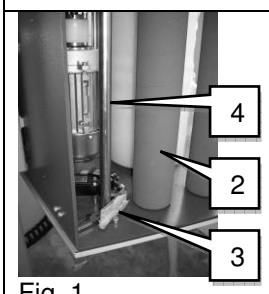

Fig. 1

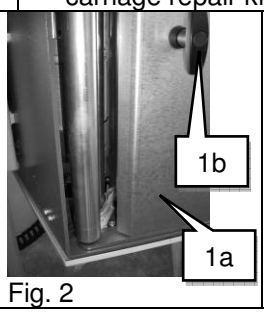

Fig. 2

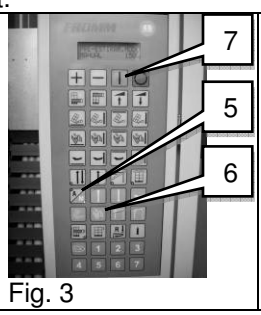

Fig. 3

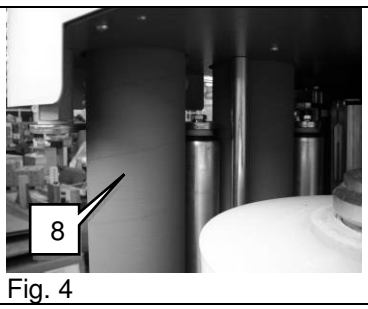

Fig. 4

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

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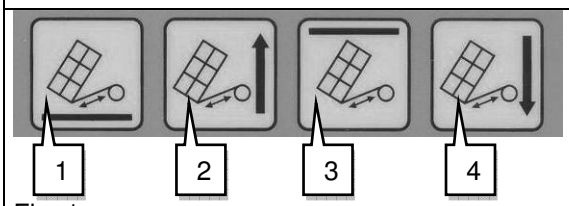
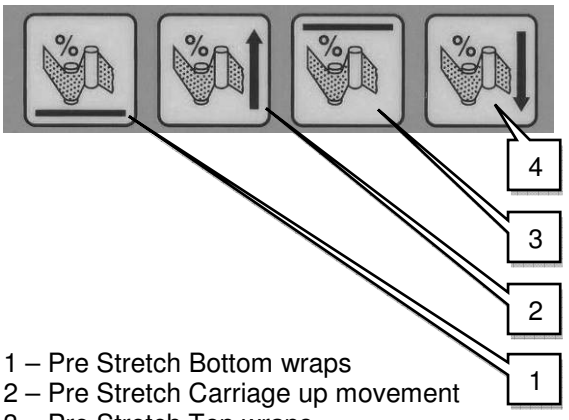
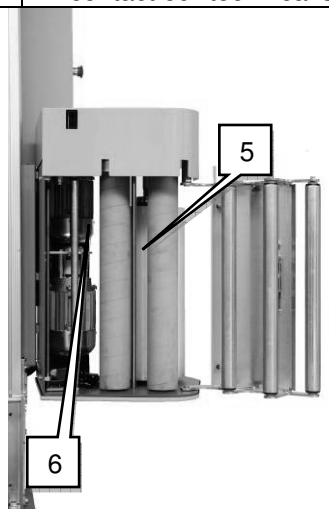
ERRORS DURING OPERATION

THE FILM TENSION DOES NOT CHANGE

Problem suggestion		Possible solution
- *Previous suggestion has been checked*		
- Parameters have been set up wrongly		- Change parameters during the movements bottom (1) – upwards (2) – top (3) – downwards (4) (**Fig. 1**)
- Parameters are OKAY		- An alarm will be displayed at the operating panel. We advice to check the alarm list, present in this manual
 Fig. 1		

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

THE MACHINE DOESN'T APPLY PRE-STRETCH

Problem suggestion		Possible solution
- *Previous suggestions have been checked*		
- The machine doesn't apply pre-stretch		- Check the machine parameters 1,2,3,4 (**Fig. 1**) - Check if the inverters are still powered - Check the resistance on ROLL 5 (**Fig. 2**) Low or no motor 6 resistance can mean two things. 1 – Driving belt broken due to lack or no maintenance 2 – Motor shaft 6 broken - In both situations 1 & 2 we advice you to contact our technical service.
 1 – Pre Stretch Bottom wraps 2 – Pre Stretch Carriage up movement 3 – Pre Stretch Top wraps 4 – Pre Stretch Carriage downwards movement Fig. 1		 Fig. 2.

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

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ERRORS DURING OPERATION

THE MACHINE DOESN'T STOP WHEN THE EMERGENCY MUSHROOM-HEAD BUTTON IS PRESSED

Problem suggestion		Possible solution
- Emergency circuit failure		- Check the circuit
- Reset not working		- Check if there are other errors or failures preventing an correct reset.
- Emergency mushroom-head button not working		- Replace the emergency mushroom-head button.

Fig. 1

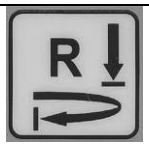

Fig. 2

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

THE TURNS AT THE BOTTOM AND AT THE TOP OF THE LOAD ARE NOT REGULATED PROPERLY

Problem suggestion		Possible solution
- Proximity sensor under the disk not connected properly		- Check the wiring - Check the sensor 1 (**Fig. 1**) With turntable in ZERO the light on the sensor is ON - Move the turntable in JOG function. the sensor should switch off. - During rotating, when the bolt / bracket passes the sensor, the sensor should blink shortly.
- Proximity sensor doesn't give a signal		- The distance sensor bracket has to be approx 3 to max 6mm.
- Shaft rotating bracket not connected properly		- Fixed the bracket in the correct position.
- Proximity sensor malfunction		- Replace the proximity sensor. (1) (**Fig. 1**)
- Control card (**Fig. 3**) not working properly		- Replace the faulty card 2 (**Fig. 3**) by carefully referring to the wiring diagram attached to the machine documentation. **ELS1030**

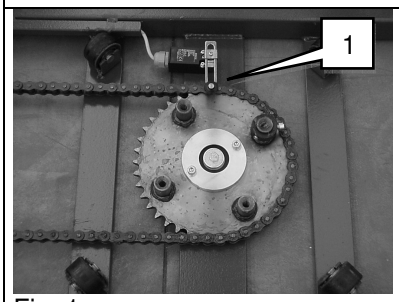

Fig. 1

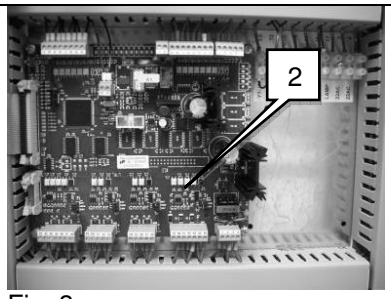

Fig. 3

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

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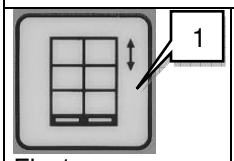
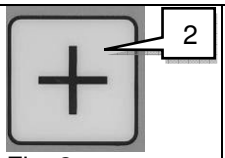
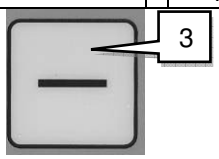
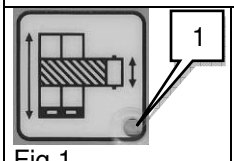
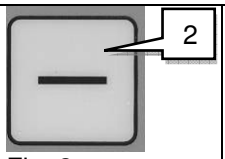
ERRORS DURING OPERATION

THE MACHINE DOESN'T WRAP THE COMPLETE PALLET

Problem suggestion	Possible solution
- Photocell is looking thru some holes in the pallet.	- Change photocell delay. - Press button (1) (**Fig. 1**) and increase the value with + (2) or decrease with the minus button. (3) (**Fig. 2 & 3**)
 Fig.1  Fig. 2  Fig. 3	
- Program Pre-set height has been selected	- LED = ON (1) (**Fig. 1**) - Press button (1) (**Fig. 1**) and within 2 seconds, press button (2) (**Fig. 2**) and decrease the value until the LED (1) (**Fig. 1**) will switch off.
 Fig.1  Fig. 2	

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

THE MACHINE DOESN'T START WRAPPING

Problem suggestion	Possible solution
- There is not pallet on the table error E7	- Place a pallet
- Photocell is looking over the product error E7	- The pallet is lower than 600mm. Change the program to the program with fixed height.
- The pallet is wrapped in black stretch-film	- Change the photocell to the type N5.2638
- The pallet contains black boxes or black products. (Dark products with LOW or NO refelction)	- Try to move by JOG function the table. After moving approx 20cm try to re-start the program. - If the machine starts and doesn't finish the complete cycle, try to change the delay time of the sensor as previously described. - Change the photocell to the type N3.2638 or N5.2651

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ERRORS DURING OPERATION

THE HORSESHOE TURNTABLE DOESN'T START ROTATING

Problem suggestion	Possible solution
- The machine doesn't start and generates an error on the display	- Check if something is blocking the safety-device of the table - Check the wiring according diagram.
- The machine doesn't start and doesn't generates an error on the display	- Remove the plate (3) covering the distance between mast and turntable. (**Fig. 3**) - Check that 2x rolls (1) are still pressed against the turtable (2). (**Fig. 1**) - If you discover a broken roll or excessive wearing we adivise to replace the rolls. - Clean the side surface (6) of the table. (**Fig. 1**) - Increase the tension on the rolls by adjusting the bolts (4) dont forget to contra block the bolt with nut (5). - Higher force on the rolls can give more wearing!!

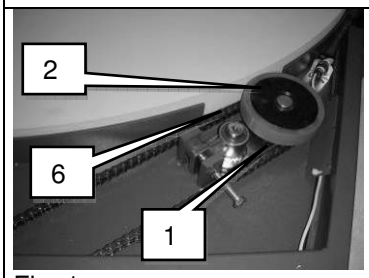


Fig. 1

Fig. 2

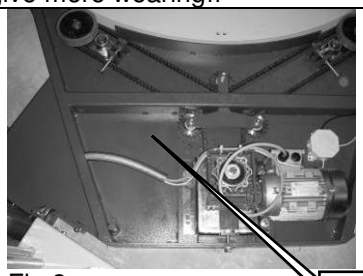
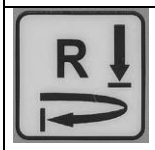


Fig.3

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

THE MACHINE DOESN'T STOP IN THE ZERO POSITION

Problem suggestion	Possible solution
- The machine stops in the wrong position	- The machines has been switched OFF, not being in the ZERO position. - Follow below sequence to RESET the ZERO position.



RE / FIND ZERO POSITON
Press stop and immediate after press reset and hold both buttons for 5 seconds.

The turntable starts to rotate and stops at the correct position

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

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ALARMS

E1 : INVERTER ERROR

Problem suggestion	Possible solution
- One of the inverters doesn't work.	- Check the inverters (**Fig. 1**) - Check the alarm on the display of the inverter referring to the inverter instruction manual which has been enclosed with the machine documentation.
- Q1,Q2, or Q3 terminal circuit breakers are tripped.	- Reset Q1,Q2,Q3 (**Fig. 2**) - Check the wiring
	- Check for the presence of mechanical motor locks, if any, and proceed as required
	- Turn off the machine. Wait 60 seconds and turn it on again.

Fig. 1

1 = U1 - Carriage UP/DOWN
2 = U2 – Pre-Stretch film
3 = U3 – Table
4 = U4 – Film break (Slave)

Fig. 2

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

E2 : FILM FINISHED OR BROKEN

Problem suggestion	Possible solution
- The film is broken or finished	- Check if the film has been broken; - Check the film coil and replace it for a new one; - Check if the film has been feed (1) inside the carriage in the correct way. (**Fig 1.)**
- The analog sensor is not properly adjusted	- Push the button film feed and tear the film out of the carriage. Film will be feed out; - Fix the correct position for the analogical sensor. Value analogue sensor should be 4.0 during standstill of the machine; - The sensor (2/3) (**Fig.2 & 3**) can be moved back and forwards. During pause of the machine the pre-stretch motors should stand perfectly still. A longer delay of the dancer roll during wrapping program, will consequently increase the tension on the pallet; - If this is not working, replace the analogue sensor
- The analog sensor is faulty	- Check the wiring - Replace the analogue sensor

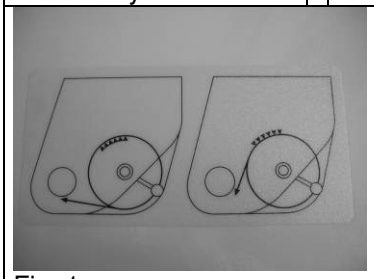
Fig. 1

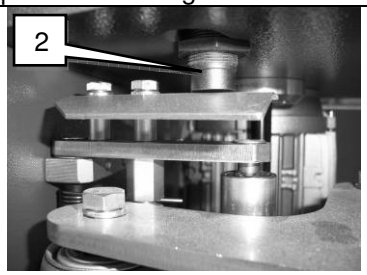

Fig. 2

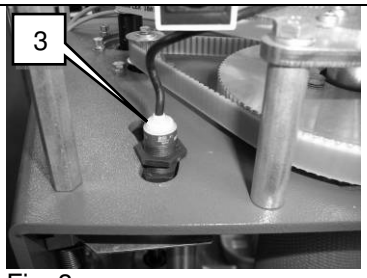

Fig. 3

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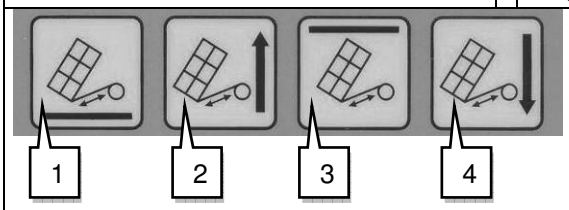
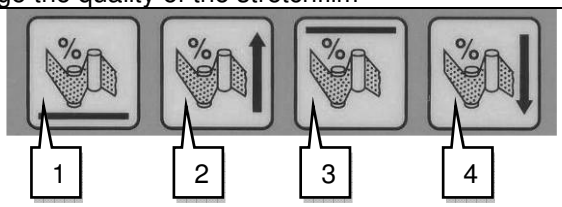
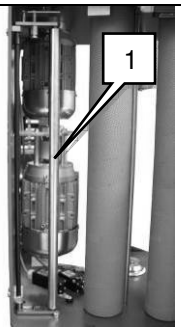
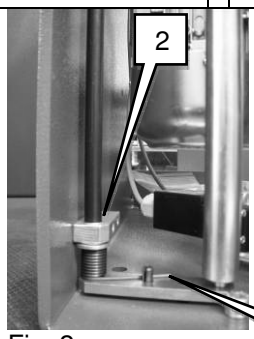
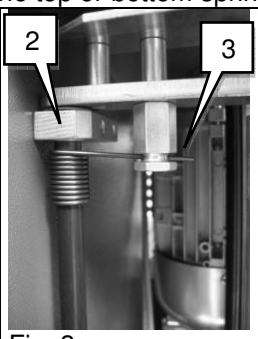
ALARMS

E2 : FILM FINISHED OR BROKEN

Problem suggestion	Possible solution
- Tension on the film to high	- Check tension by regulating the parameters during the movements bottom (1) – upwards (2) – top (3) – downwards (4) (**Fig. 1**) - If the film becomes to narrow , film tension is too High. (Max 10% reduction from 500mm) - Check the position of the analogue sensor and functioning of the dancer roller.
- Pre-Stretch on the film to high	- Check the pre-stretch by regulating the parameters during the movements bottom (1) – upwards (2) – top (3)– downwards (4) (**Fig. 1**) - Change the quality of the stretchfilm
 Fig. 1	
- The dancer roller is not moving or difficult to move backwards and forewards	- Clean the dancer roller (1) (**Fig.1**) - Remove dirt or film residuals - Grease the dancer roller shaft (2) (**Fig 2 & 3**) - Release the top or bottom spring (3) (**Fig 2 & 3**)
 Fig. 1	 Fig. 2
 Fig. 3	

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

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ALARMS

E3 : MAIN CONTACTOR / EMERGENCY SWITCH

Problem suggestion	Possible solution
- After switching on the machine E3 appears in the display	- Press the RESET button. Inverters are activated again.
- This alarm signals that the emergency button was pressed	- Check the situation and deactivate the mushroom-head button
- Emergency button not working or properly connected	- Replace the emergency button

Fig. 1

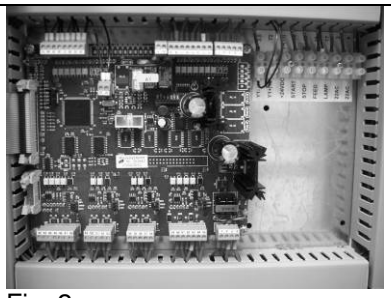
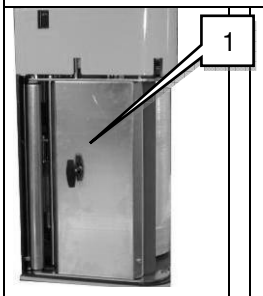


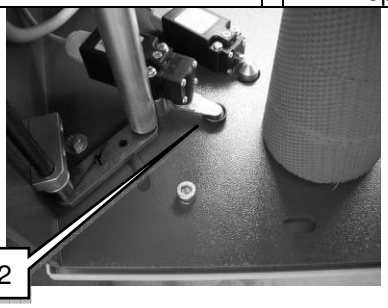
Fig. 2

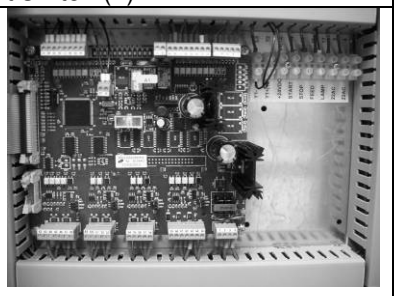
Should the problem persist, contact the Customer After-Sales Service of MANUFACTURER

E4 : DOOR OPEN

Problem suggestion	Possible solution
- The spool carriage door is open	- Check if the door (1) (**Fig. 1**) is closed in the correct way. - Check if the limit switch sensor (2) (**Fig.2**) is still positioned in the correct way.
- Limit switch spool carriage door faulty	- Check the wiring - Check the signal on the board. - Replace the limit switch (2)







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

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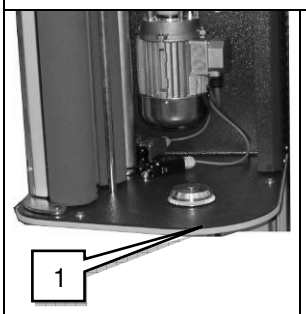
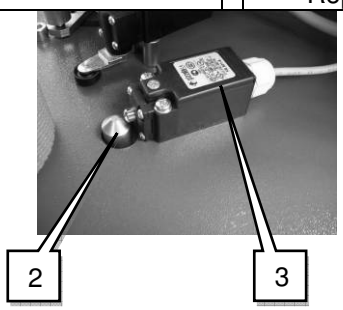
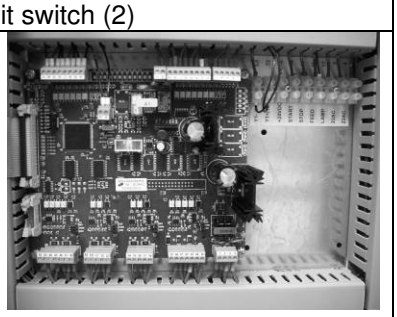
ALARMS

E5 : CLAMP PROTECTION

Problem suggestion	Possible solution
- The foot safety has been activated	- Check if something has been positioned under the carriage. And remove this item. - Check if film has been placed at the safety plate and lifting it up. - Check of the safety shaft (2) (Fig.2) has become lose. - Check if the limit switch sensor (3) (**Fig.2**) is still positioned in the correct way.
- Limit switch foot safety faulty	- Check the wiring - Check the signal on the board. - Replace the limit switch (2)



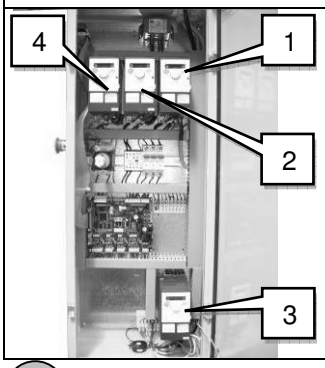




Should the problem persist, contact the Customer After-Sales Service of MANUFACTURER

E6 : TABLE INVERTER

Problem suggestion	Possible solution
- The table inverter doesn't work.	- Check the inverter (**Fig. 1**) - Check the alarm on the display of the inverter referring to the inverter instruction manual which has been enclosed with the machine documentation.
- Q3 terminal circuit breaker is tripped.	- Reset Q3 (**Fig. 2**) - Check the wiring
	- Check for the presence of mechanical motor locks, if any, and proceed as required
	- Turn off the machine. Wait 60 seconds and turn it on again.



1 = U1 - Carriage UP/DOWN
2 = U2 – Pre-Stretch film
3 = U3 – Table
4 = U4 – Film break (Slave)

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

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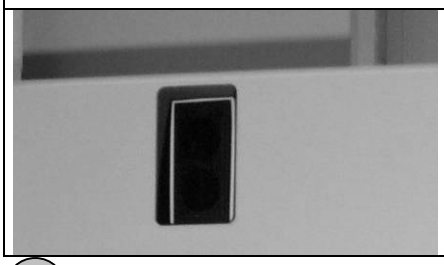
ALARMS

E7 : NO PALLET DETECTED

Problem suggestion	Possible solution
- The photocell on the film carriage doesn't detect any pallet on the turntable.	- Clean the photocell - Line up the photocell, thru the center of the table - Pallet contains dark goods, replace the sensor for a sensor N5.2638 or N5.2651 - Pallet contains odd goods or strange formed goods. Cover the photocell with a piece of carton and check if the machine will start - The photocell is faulty
	

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

E5 : SWITCH FILM ROLLES

Problem suggestion	Possible solution
- This alarm signals that exerted pressure on the film carriage flap has been detected by the micro switch that interlocks the crush-proof roll guard.	- Open the door and check for eventual film residuals. - Check if the sensor (2) (**Fig.2**) is still positioned in the correct way.
- Check if the sensor "with opened door" is pressed.	- Release the sensor (3) (**Fig. 3**)
- Limit switch faulty	- Check the wiring - Check the signal on the board. - Replace the limit switch (2) (Fig. 2)
- Press RESET	- Machine will receive the commando reset

Fig. 1

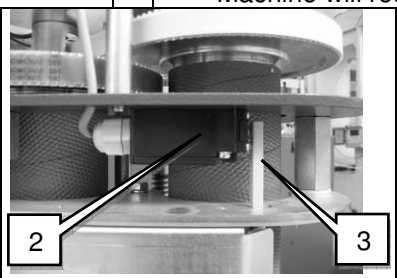


Fig. 2

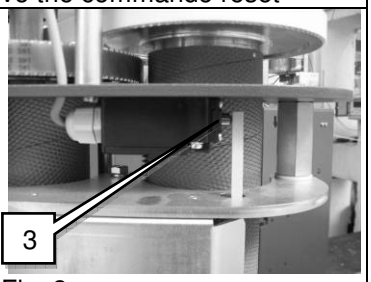


Fig. 3

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

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INSERTING THE FILM

Place the new film reel (direction of unwinding depends on the side on which the cling is found).

Insert a film spool by moving the lever (1) down, left, upward and then right. Insert the film reel and return the lever to the position shown by the figure. Open the door using the knob (2) and fully swing out the door .Draw out about 1 m of film between the cover and the nearest rubber roller as shown in Figure. Shut the door firmly.

Arrows on the inside of the roll means:
CI = CLING INSIDE
The film has to be guided through the brake system in this way when applying a "differential cling"-film with the cling on the inside of the film when unwinding the film from the film reel.

Arrows on the outside of the roll means:
CO = CLING OUTSIDE
The film has to be guided through the brake system in this way when applying a "differential cling"-film with the cling on the outside of the film when unwinding the film from the film reel.

The way of guiding the film through the brake system when applying a "double sided cling"-film is basically not relevant.

Stretch film	- LLDPE Material	Max 35 µ / 0,000138”
	- Spool core diameter	76,2 mm / 3”
	- Outer diameter of spool	Max. 300 mm
	- Film width	Max. 500 mm

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MAINTENANCE INSTRUCTIONS

SAFETY!

- First switch off the main switch and lock it before carrying out maintenance on the installation;
- Disconnect all sources of power from the machine;
- Ensure yourself about a safe an secured situation before starting any operation;
- Before cleaning the machine the operator must use means and measures suitable for his own personal safety;
- Take care, that other persons cannot put the installation in action;
- Take care, that the protection covers, etc. are remounted when putting the installation in action again.

The installation will have a long operational life due to preventive maintenance. This means, that the various parts of the installation have to be monitored on a weekly, monthly, semi-annually or annually schedule.

The operational lifetime is influenced by the environmental conditions. The indicated maintenance frequency is valid for normal operation conditions (8 hrs per day, 20° C, clean environment).
One is advised to increase the maintenance frequency under more severe conditions. Keep rotating parts free from dirt.

If the machine maintenance is not carried out in compliance with the instructions provided, the manufacturer is relieved of all responsibility for malfunctioning of the machine.

Special precautions:
When carrying out maintenance or repairs, it is advisable to strictly abide by the following rules:

- Before starting any jobs, expose a signboard indicating “SYSTEM BEING SERVICED” in a clearly visible position;
- Never use solvents and flammable materials;
- Be extremely careful not to dispose of cooling lubricants incorrectly;
- To reach the higher parts of the machine, use suitable means for the operation to be performed;
- Do not stand on the machine components or guards as these have not been designed to withstand the weight of people;
- When all operations are complete, correctly secure all the safety guards and other shields that have been removed or opened.

REMAINDER OF THE FILM
The machine has to be cleaned every day
Never use solvents to clean the machine. To remove dust or particles deposited during the size changeover operations, never use compressed air: only use rags and aspirators.
Check if any film and packaging remainder are present in the brake system and remove it.

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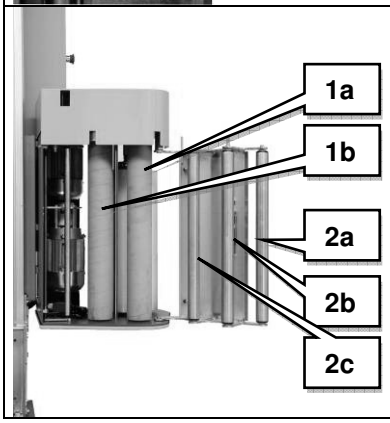
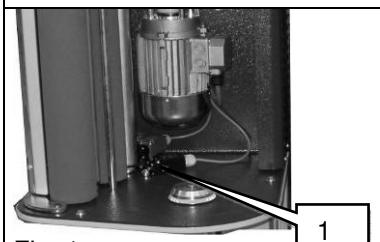
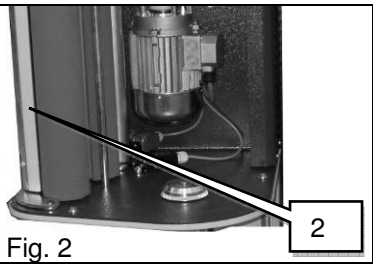
MAINTENANCE INSTRUCTIONS

OPERATORS

DAILY MAINTENANCE

	Daily cleaning of the photocell for pallet height detection. (**1**)
	Keeping PRE-STRETCH rolls (1a & 1b) free of film or residuals. Keeping guide rolls (2a / 2b & 2c) free of film or residuals.

Check the functionality limit switch (Fig. 1 & 2)			
 Fig. 1	 Fig. 2		

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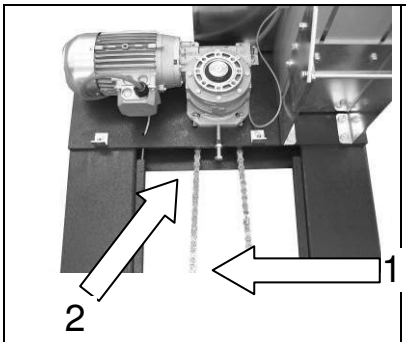
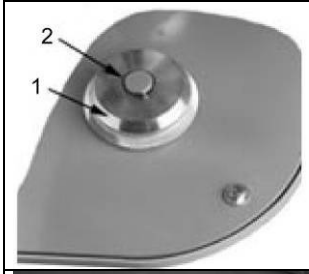
MAINTENANCE INSTRUCTIONS

ENGINEERS

MONTHLY MAINTENANCE

	Check the chain tension, without any goods on the turntable, by pushing the chain with your hand (1). If there is more than ± 8 mm space then you must tighten the chain. Release the motor housing on the base unit. Loosen the four screws on the gear box, one turn is normally enough. Tighten the chain by adjusting the large bolt located in front of the gearbox (2). Check that the space of the chain is about ± 3 mm (do not tighten too hard). Fasten all the bolts thoroughly.
	Check the brake disc located under the lower cone (1) of the file spool by first releasing the locking ring (2) and then lifting off the cone. If the thickness of the brake disc is less than 7 mm replace it.
	Check the two cogbelts on the prestretch unit. Start by moving the lever down, left and screw the lever free. Let the film spool remain in place. Release the housing (three screws). Check whether or not the cogbelts need to be replaced or tightened. Adjust the cogbelt tension by easing the four screws holding the motor and then slightly moving the motor. Apply the screws firmly again and check that the cogbelts are lightly tightened on both sides of the cogwheel.

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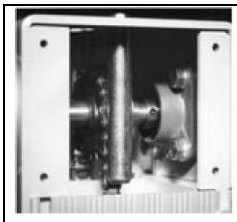
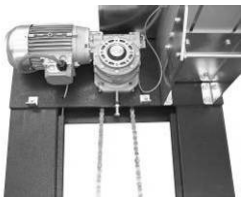
MAINTENANCE INSTRUCTIONS

6 MONTHS MAINTENANCE

	Release the housing located on the side of the mast top (four screws). Lubricate the film carriage chain with grease applied carefully with a brush. Using the manual program, move the carriage approx. 10 cm at a time and repeat until you have lubricated the entire chain. **Watch out for your fingers**! After adjusting switch off the machine accordingly SAFTEY precautions. Restart the machine again and again until the entire chain is lubricated.
	Release the cover, between the turntable and the mast, on the base unit. Roll back the film so that it does not touch the film rollers. Set manual program to the lowest turntable speed and then start the machine so that the turntable moves a little bit, then turn off the machine again, following safety instructions Lubricate the chain with grease applied carefully with a brush. **Watch out for your fingers**! After adjusting switch off the machine accordingly SAFTEY precautions. Restart the machine again and again until the entire chain is lubricated.
	Check the setting of the arm of the limit switch, which stops the travel of the carriage at the highest and lowest position. It is important that the arm is horizontal and that the distance between its roller and the aluminum mast is 1 – 1.5 mm.

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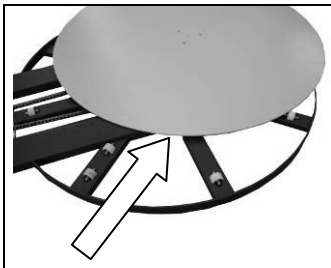
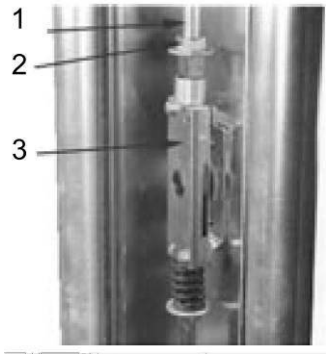
MAINTENANCE INSTRUCTIONS

YEARLY MAINTENANCE

	Check the wear condition of the sliding wheels of the turntable : Unscrew the 3 fixing bolts of the turntable. Move the disk aside. You may also move the turntable using a truck or overhead gantry by first screwing. Insert the lifting eyebolts into the specific threaded holes and release the turntable by unscrew the 3 fixing bolts of the turntable. Insert the hooks of the lifting ropes into the eyebolts. Lift the turntable using suitable load bearing lifting equipment. Lubricate the rolls with grease applied carefully with a brush. After checked all the rolls move the disk on on the center of the turntable and secure it screwing the 3 bolts.
	Check the wear condition of the wheels and replace them if required (insert them by pressing them in place).
	Check the function of the lock mechanism of the housing. On turning the handle, the axles (1) should easily move upward and downward. If there is resistance that may be due to the lock device (2) having loosened or been slightly twisted. Ensure that it sits vertically (not at an angle). Check the function again. If the lock mechanism moves smoothly but meets resistance when the housing is closed, it could be due to the housing being warped. In which case, twist it back by taking the upper and lower parts and twisting them carefully. To adjust the axles (1), first loosen the locking nuts (3) and then turn the axles. When extended to their maximum distance they must come plane to the other side of the apertures in the pre stretch unit chassis. No further!

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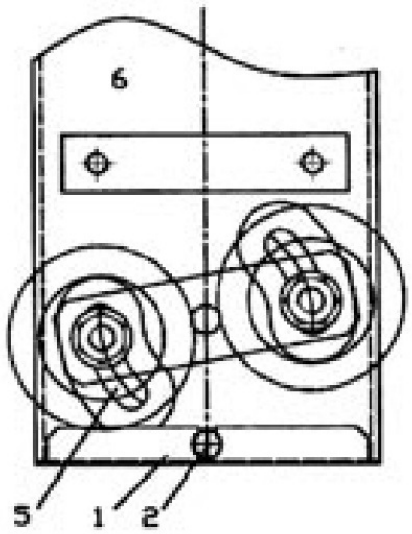
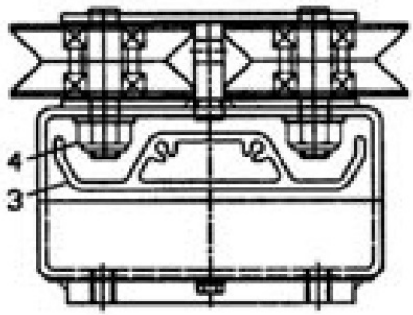
MAINTENANCE INSTRUCTIONS





Check the function of the rollers of the carriage unit as follows.
a) Select manual program.
b) Travel the carriage up 1 meter.
c) Loosen the limit switch at the bottom of the pre-stretch unit which detects the yellow plate under the limit switch.
d) Loosen the protection plates (1) by first easing their screws (2) that are located on the far top and bottom of the carriage unit that holds the pre stretch unit.
e) Place a sturdy stool under the pre-stretch unit.
f) Travel the pre-stretch unit slowly down and halt it when it rests on the stool.
g) Loosen the two screws on the top of the mast that hold the profile (3).
h) Loosen the profile (3) by drawing it out slightly farthest up and then drawing it upwards.
i) Release the profile (four screws) that holds the cable chain at the side of the pre-stretch unit.
j) Release the pre-stretch unit using the six screws that face the carriage.
k) Travel the carriage slowly upward and halt it above the pre-stretch unit.
l) Feel whether or not there is any play in the carriage.
m) Loosen the nuts (4) slightly.
n) Turn the wheel unit (5) counter-clockwise in the grooves.
o) You can now lift out the carriage to examine the rollers. If they are worn they must all be replaced, including their ball-bearings.

p) Assemble the carriage and turn the wheel-holders until there is no gap. Travel the carriage up and feel to ensure that there is no resistance.
q) Assemble the other parts in reverse order.

NOTE!
Watch out for your fingers!
After adjusting the height of the pre stretch unit, switch off the machine accordingly SAFTEY precautions.

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MAINTENANCE SCHEME

TURNTABLE

MAINTENANCE FREQUENCY							
	8 hr	40 hr	100 hr	200 hr	500 hr	1000 hr	2000 hr
Daily cleaning	X						
Cleaning eye of photocell			X				
Shaft chain				4			
Turnplate chain				4			
Gear wheels				4			
Bearings						X	
Friction discs						X	
Proximity and limit switches						X	
Electrical system							X
Sliding wheels							X
Support wheels							X

The numbers in the maintenance scheme refer to lubricants, which are to be applied in the table with lubricants (hereunder).

The symbol "X" in the maintenance scheme refers to remarks concerning the maintenance of or checking on the relevant part or system.

LUBRIFICANTS

No.	**LUBRIFICANT**					
	SHELL	**BP**	**ESSO**	**MOBIL OIL**	**TEXACO**	
1	OMALA 220	ENERGOL GR-XP 220	SPARTAN EP 220	MOBILGEAR 630	MEROPA 220	
2	OMALA 680	ENERGOL GR-XP 680	SPARTAN EP 680	MOBILGEAR 636	MEROPA 680	
3	TONNA T68	MACCURAT 68	FEBIS K 68 EP220	VACTA.4	WAX LUBRI-CANT X68	
4	ALVANIA R	ENERGREASE L2	BEACON 2	MOBILUX 2	MULTIFAK EP2	
5	TELLUS 46	HPL 46	NUTCO H46	DTE 26	RANDO HD46	
6	TORCULA 32	ENERGOL RD-E 80	AROX EP 56	ALMOBIL 1	ARIES 32	
7	TELLUS 15				RANDO HDZ 15	
8	RETINAX WB				STARPLEX PREMIUM 1 (depending on the application)	

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PARAMETERS SETTINGS FS4xx MACHINES

STEP	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Program	Bottom wraps	Top wraps	Speed up	Speed down	Tension bottom	Tension up	Tension top	Tension down	Pre stretch bottom-Wraps	Pre stretch carriage up	Pre stretch top-wraps	Pre stretch carriage down	RPM Table bottom-Wraps	RPM Table carriage up
1/14	0-9	0-9	15-60	15-60	1-15	1-15	1-15	1-15	10-400	10-400	10-400	10-400	20-65	20-65
User Manual														
Button sequence 1														
Followed by 2														
Followed by 3														

Programs 1 to 30 "Standard settings for Step 1 to 14"

STEP	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PROGRAM														
1.														
2.														
3.														
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PARAMETERS SETTINGS FS4xx MACHINES

STEP	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Program	**Speed Table top-wraps**	**Speed Table carriage down**	**Carriage Up/ down**	**Carriage Only up**	**Carriage Only up Auto Return**	**Carriage Only up Auto Return**	**Carriage Descent cycle**	**Carriage Descent cycle**	**Top sheet**	**Top-sheet negative height**	**Overlap at Pallet top**	**Pre set height Photo-cell off**	**Press Active**	**Pallet Foot Program 1**
15/28	20-65	20-65	X = Yes Led ON	X = Yes Led ON	X = Timer Led Blinking		X = Yes Led ON		X = Yes Led ON	-5 - - 50 step - 5	0-50 step 1	0-300 step 5	X = active LED ON	0 - 40 step 5
User Manual						Manual function **6**		Manual function **7**		Manual function **4**				User Manual function **2**
Button sequence 1														
Followed by 2														
Followed by 3														

Programs 1 to 30 "Standard settings for Step 15 to 28"

STEP	15	16	17	18	19	20	21	22	23	24	25	26	27	28
PROGRAM														
1.														
2.														
3.														
4.														
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PARAMETERS SETTINGS FS4xx MACHINES

STEP	29	30	31	32	33	34	35	36	37	38	39	40	41	
Program	**Pallet Foot Program 2**	**Start at Pre – set Height**	**Bande-roll Cycle**	**Bande-roll Cycle**	**Double Stroke**	**Cutting system**	**Cutting Timer Knife**	**Length film after cutting**	**Analogue value cutter**	**Language**	**Activated programs**	**Double cut**	**Photocell for black products**	
29/41	0 - 200 step 5	0 - 180 step 5	0- 100 step 5	wraps 0 - 15	Total 0 - 9	YES / NO	0,1 – 1,5	4 - 20						
User Manual	User Manual function **3**	User Manual function **5**	User Manual function **8**	User Manual function **9**	User Manual function **10**	User Manual function **11**	User Manual function **12**	User Manual function **13**						
Button sequence 1														
Followed by 2														
Followed by 3					Hold 5 sec. both									

Programs 1 to 30 "Standard settings for Step 29 to 41"

STEP	29	30	31	32	33	34	35	36	37	38	39	40	41	
PROGRAM														
1.														
2.														
3.														
4.														
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														
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18.														
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23.														
24.														
25.														
26.														
27.														
28.														
29.														
30.														

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MANDATORY

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

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

P.IVA IT 04146150232

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MANIFACTURER

FROMM SLOVAKIA a.s.
for FROMM Wrapping Systems S.r.l.
Továrenská, 15
SK-901 01 Malacky
(SLOVAK REPUBLIC)

VAT Number SK2022019109

DOCUMENTATION

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

Or download directly from our website:

http://www.fromm-stretch.com/Pages/Download.aspx?DownloadID=486

Or contact your Fromm Distributor.

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CE-Declaration of Conformity

(CE machine directive 2006/42/EC - Annex IIA)

The supplier **FROMM SLOVAKIA a.s.**
Tovarenska 15
SK-901 01 Malacky
(SLOVAK REPUBLIC)

Declare under our sole responsibility that the product

Model: **FS4XX**

Item number: **30.18xx**

Serial number: **05.XXXXX**

Production year **201X**

Type of machinery **Pallet Stretchwrapping machine**

Following the provisions of directive:

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

The following harmonised and national standards and other normative documents are applied:

UNI EN 12100-1/2:2005 + A 1:2009
ISO 13849-1:2008 + AC:2009
CEI EN 60204-1:2006
EN ISO 14121:2007

Technical file at: **FROMM Wrapping Systems S.r.l.**
Viale del Lavoro, 21
37013 Caprino Veronese (VR)
Italia

Written in: Malacky
Date: 1st January 2013

Name: S. Stigler
Function: C.E.O.

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WARRANTEE CONDITIONS

FROMM Distributor to End-user.

Warranty over a period of 24 months, using the machine in operation
8 hours a day, 40 hours a week. The warranty includes all deficiencies clearly resulting from poor manufacturing or faulty materials.

The warranty excludes:
a) wearing parts.
b) deficiencies resulting from improper stocking, incorrect handling and use as well as from using strapping / stretch film qualities not recommended by FROMM.
c) deficiencies resulting from improper repair work made by the customer.
d) deficiencies resulting from lack or improper maintenance work.

Warranty lapses as soon as the installation is not maintained according to supplied maintenance- and operating instructions.
The warranty concerns the parts to be replaced, inclusive the necessary repair hours.

Damage claims as a result of production shutdowns and claims for damage to persons and to property resulting from warranty deficiencies cannot be asserted by the customer.

Maintenance costs

Ask your local distributor / supplier for the maintenance cost per year / service period.
Service will be provided according FROMM service conditions / contracts.

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SERVICE LOGBOOK

Service / Maintenance executed	
Machine counter:	
Date:	
Engineer:	

Service / Maintenance executed	
Machine counter:	
Date:	
Engineer:	

Service / Maintenance executed	
Machine counter:	
Date:	
Engineer:	

Service / Maintenance executed	
Machine counter:	
Date:	
Engineer:	

Service / Maintenance executed	
Machine counter:	
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Service / Maintenance executed	
Machine counter:	
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Engineer:	

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