HEAT SEAL with minipack®- torre

OPERATING MANUAL

HDX-250 AUTOMATIC COMBINATION SHRINK SYSTEM

READ ALL INSTRUCTIONS CAREFULLY BEFORE OPERATING EQUIPMENT

P/N: MPT-FM111177A REV.0

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This manual gives instruction for the proper use of the machine. Keep it near the machine in place that is known to all users. The manual is essential for safety.

This machine is an automatic packaging machine designed to package a single item, or a group of items using center-folded shrink film. A few examples of products packaged are: food items, housewares, and toys. This machine can be operated in two modes, it can be fed manually by a qualified technician, or it can be in series with other machines in automatic mode. In automatic mode the machine is controlled by logic in its PLC.

It is extremely important to read this entire section as it contains important information regarding risks that personnel are subject to in the event of incorrect use of the machine. These basic standards must be observed as well as specific standards applicable in the country of installation.

- The machine must be installed by trained and authorised technicians.
- This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack experience and knowledge, unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety.
- Never use the machine for purposes other than as specified in the sales contract.
- Never allow unauthorized personnel to perform repairs or other operations on the machinery.
- The operator must be familiar with all warnings related to the tasks in hand and always be informed by the head of the site regarding risks.
- Ensure that all clothing is tight fitting, with particular reference to cuffs or other loose clothing.
- It is forbidden to wear bracelets and loose accessories that can get entangled in the belts.
- Ensure that all operating areas and transit zones are kept clear, clean and adequately lit at all times.
- Eliminate all safety hazard conditions before using the machine and always notify the head personnel of any malfunction.
- Never use the machine in the event of fault.
- Never tamper with safety devices or circuits.
- Never perform modifications on the machine without prior authorization from the manufacturer.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The electrical enclosure must remain closed during operation.
- The key to open the electrical enclosure must be kept by a specialized and authorized member of personnel.
- Smoking is forbidden while the machine is operating!
- Never performs maintenance and/or adjustments to the machine during operation. Guards may only be disassembled by suitably trained and qualified maintenance engineers.
- Never operate the machine without all guards fitted. Ensure correct position of all guards before resuming normal operation.
- The manufacturer declines all liability for damage or physical injury caused by failure to observe safety standards.

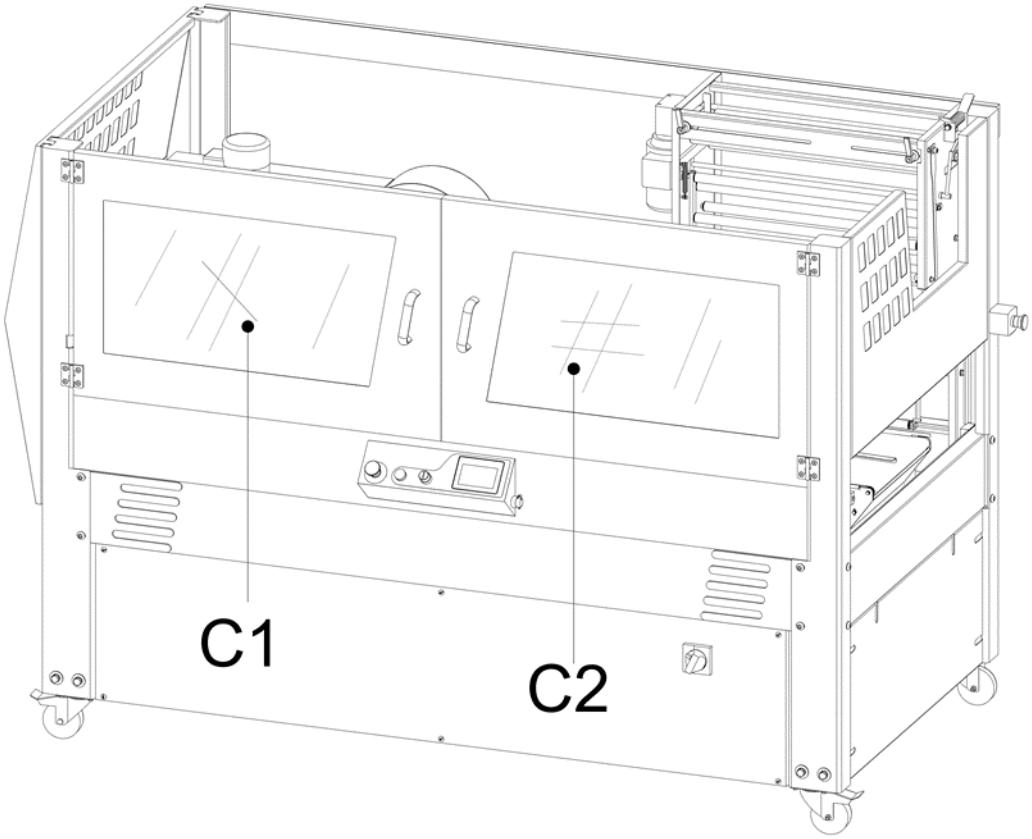
CAUTION!

This machine is NOT designed for explosion-proof applications; it is a standard model and therefore must never be installed or operated in zones subject to the risk of explosion.

DESCRIPTION OF SAFETY STICKERS:

	• On machine front panel. **Danger of electrocution!** Risk due to presence of electrical power in electrical system inside panel. When the panel is opened, the machine must be switched off and the plug must be pulled from the socket of the main circuit. **While the machine is running, the panel must be mounted properly.**
	• On the sealing bar frame. • At the shrink tunnel infeed and outfeed. **ATTENTION! Hot members. It shows the danger of burning, thus involving the risk of a serious accident for the exposed person.**
	• At the conveyor belt infeed and outfeed. **Dragging hazard!** Hazard generated by moving elements (conveyor belts, motor driven rollers) in the event of contact during operation phases.
	• In the product loading area on the infeed belt.

	Wear safety shoes that protect feet from impacts, crushing and compression while moving or handling the machine.
	Wear safety gloves that protect the hands from crushing and mechanical hazards and while moving or handling the machine.
	Wear safety gloves that protect the hands against the specific risks associated with the materials to be packed (mechanical, chemical) and against coming into contact with the high temperatures present on the seals and/or sealing blade (up to 200°C).
	Wear safety gloves that prevent the hands from coming into contact with foodstuffs when packaging them.

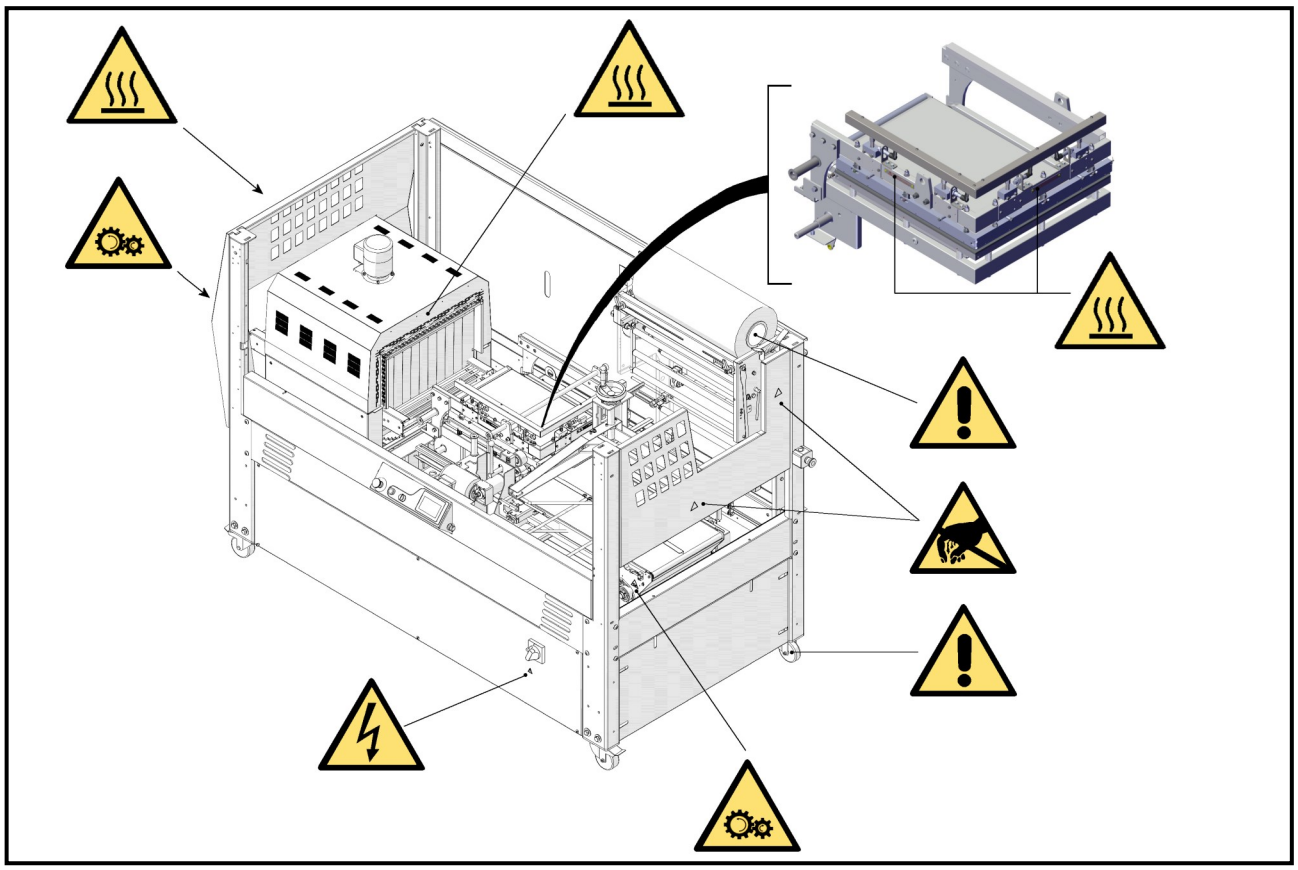


The machine is equipped with 2 front guard doors (C1) and (C2).

If one of the doors is opened, the machine stops and the “alarms” button on the display becomes red. To reset machine operation, close the door and press the RESET (S2) button. The “alarms” button becomes green.

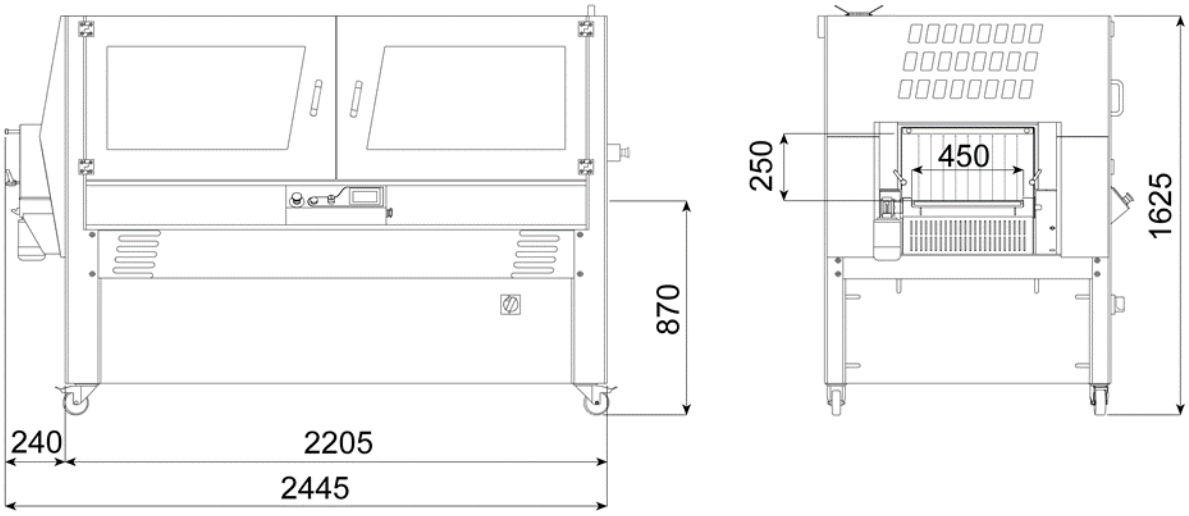
There are also 2 emergency stop buttons, see page 10.

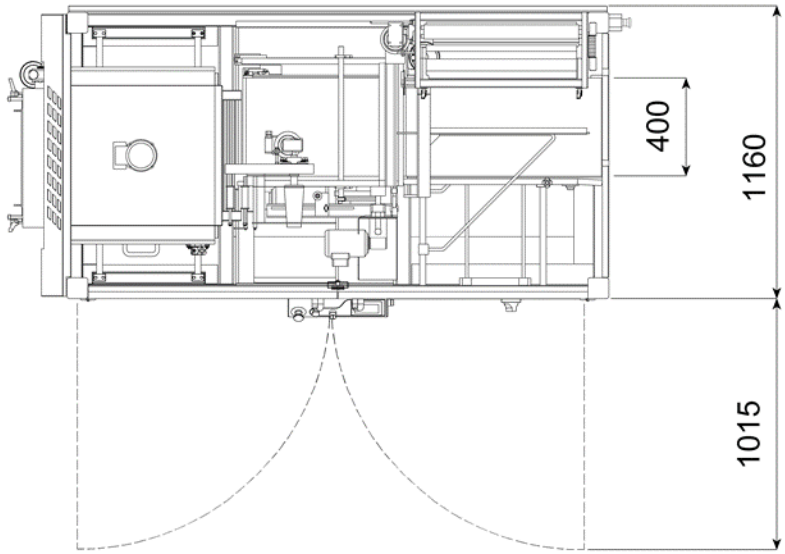
Comply with the following prohibitions and warnings.



	Dragging hazard! Hazard generated by moving elements (conveyor belts, motor driven rollers) in the event of contact during operation phases.
	Burn hazard! • *Risk due to high temperature of the sealing bar. Do not touch the bar.* • Risk due to high temperature inside the shrink tunnel. *Do not place your hands inside the tunnel.* Before performing operations in these zones, set the machine to “maintenance mode”, and wait for heaters to cool.
	Electric shock hazard! Electric control board: risk due to electric energy inside electrical control board (upstream from the main switch). Before performing maintenance: • *switch the machine off by rotating the main switch (Q1) to “0” (OFF)* • *remove the plug from the mains socket* • *WAIT 15 minutes to allow the capacitors to discharge.*
	The casters must be used only for moving the unit short distances across smooth, level floors. Make sure the film roll is properly seated in its place.
	Danger of placing hands inside! *Danger caused by placing hands in the product loading area on the infeed belt.*

Machine Layout





Technical data

Shipping size: 2940 x 1440 x 1985 mm (116 x 57 x 78 inches)

Shipping weight: 878 kg (1935 lbs)

Machine weight: 710 kg (1565 lbs)

Transport and positioning

	Wear safety shoes that protect feet from impacts, crushing and compression while moving or handling the machine.
	Wear safety gloves that protect the hands from crushing and mechanical hazards and while moving or handling the machine.
	Handle with great care during transport and positioning! Before any movement, make sure that the lifting means is suitable for the load to be lifted!

Cut the strap with scissors make sure you protect your eyes by wearing glasses and withdraw the cardboard. Remove the hardware intended to fasten the machine to the pallet.

Accessories

Check the following is present inside the packaging:

instructions

2 keys for the “SAFETY DEVICE EXCLUSION” (E) selector

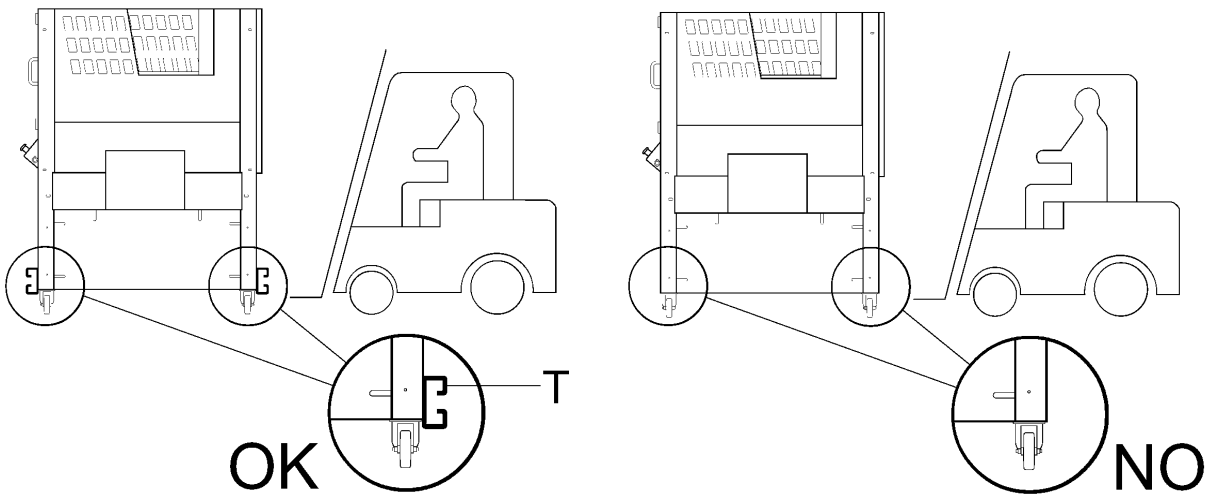
maintenance box

1 film support rod Ø6 – lg. 740 mm (triangle unit – pos. 1)

1 film support flap (triangle unit – pos. 2)

1 film opening rod Ø10 – lg.730mm (unwinder unit – pos. 3)

2 rollers (tunnel belt – pos. 4).



	CAUTION! The machine is shipped with 2 cross-beams (T) mounted at the front and rear. We recommend always using these cross-beams whenever the machine is lifted with a forklift.

Lift the machine from the pallet by using a fork lift truck.

For the machine lifting, place the lift truck forks up to the point stated on the specific label applied on the machine.

Environmental conditions

Place the machine level on the floor in a suitable environment free from humidity, gases, explosives, combustible materials. The machine may only be installed on smooth, flat non-inflammable surfaces.

Working environment conditions:

Temperature from + 5°C to + 40°C (41 to 104°F)

Relative humidity from 30% to 90%, without condensation.

The lighting of the operation room shall comply with the laws in force in the country where the machine is installed. However, it shall be uniform and allow good visibility in order to safeguard the operator's safety and health.

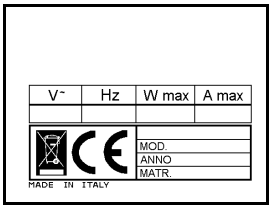
MACHINE PROTECTION FACTOR = IP20

THE AIRBORNE NOISE MADE BY THE MACHINE IS LOWER THAN 70 dB(A)

Electrical connections

Voltage (V): see data on plate
Frequency (Hz): see data on plate
Maximum absorbed power (W): see data on plate
Maximum absorbed current (A): see data on plate

Note: when contacting the Manufacturer, always indicate the model and the serial number specified on the plate on the rear part of the machine.



The power line must be protected with a type B residual current device with rated residual current equal to "IΔn", 30 mA.

As a result, the maximum resistance of the earth electrode must correspond to the values indicated in the following table

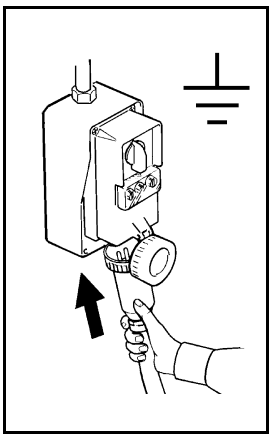
IΔn	Maximum resistance of the earth electrode	
	(50 V)	(25 V)
3 A	16 Ω	8 Ω
1 A	50 Ω	25 Ω
500 mA	100 Ω	50 Ω
300 mA	166 Ω	83 Ω
30 mA	1666 Ω	833 Ω

OBSERVE HEALTH AND SAFETY REGULATIONS!

If the machine is not equipped with the power supply plug, use a plug that is suitable for the voltage and amperage values described by the rating plate and that can comply with the rules in force in the installation country.
GROUNDING OF THE UNIT IS OBLIGATORY!

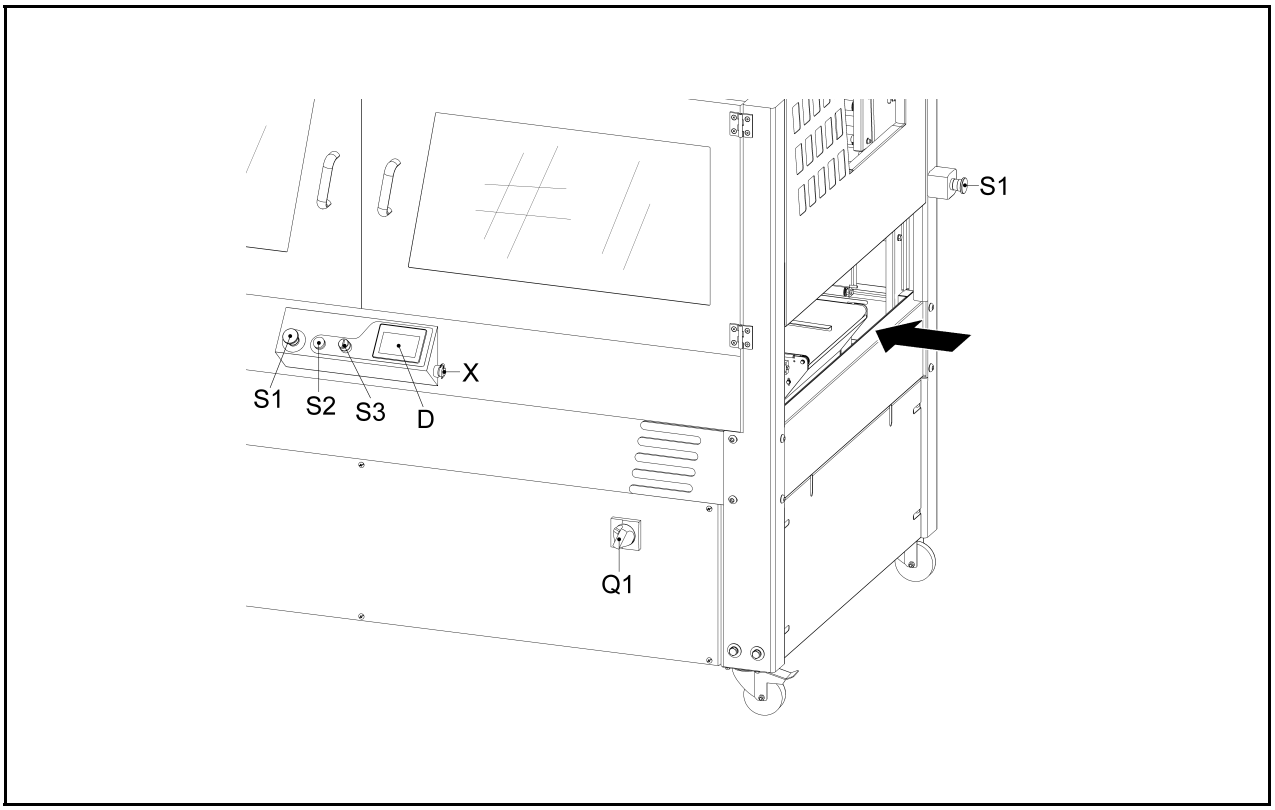
Before executing electrical connections, make sure the mains voltage matches the one on the plate on machine rear and that the ground contact complies with the safety rules in force. In case of doubts about the mains voltage, contact the local public supply Company.

Insert the plug on the cable from machine electrical cabinet in a mains power supply socket that can be reached easily by the operator.



Controlling the rotation direction

After electrically connecting the machine and before turning it on, make sure you follow these instructions to check the exact direction of rotation:

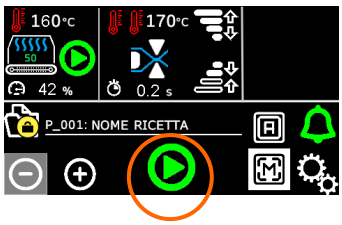


Turn the main switch (Q1) to position 1.

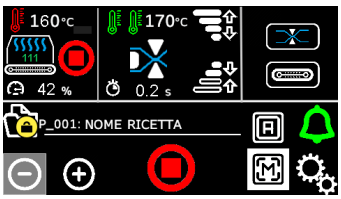
The display comes on and the screen with the "company" logo appears.

Press the “RESET” (S2) button, then the logo.

The home page will be displayed.



Press the start cycle key .

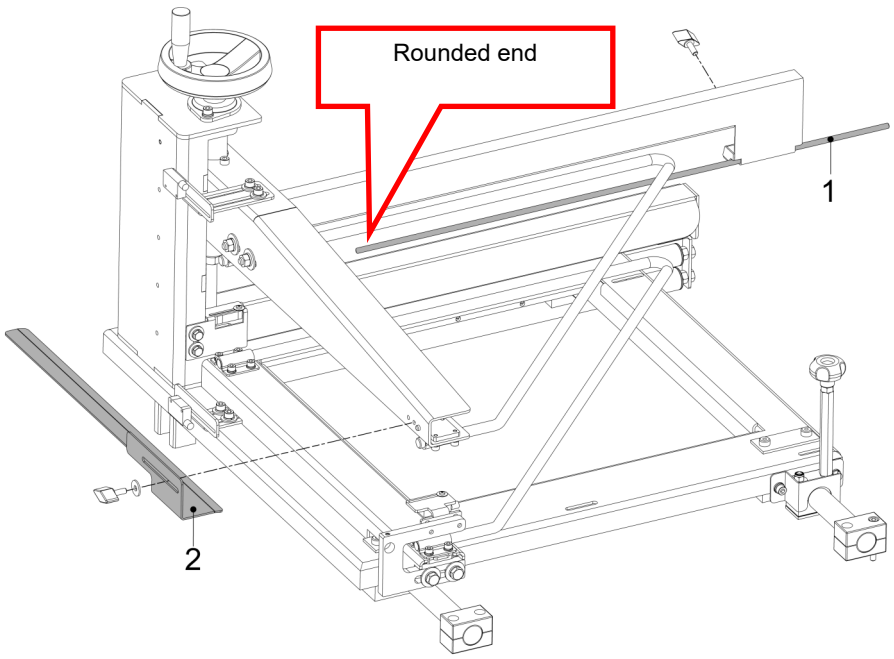


Press and check that the conveyor belts rotate in the direction shown in the figure (from right to left).

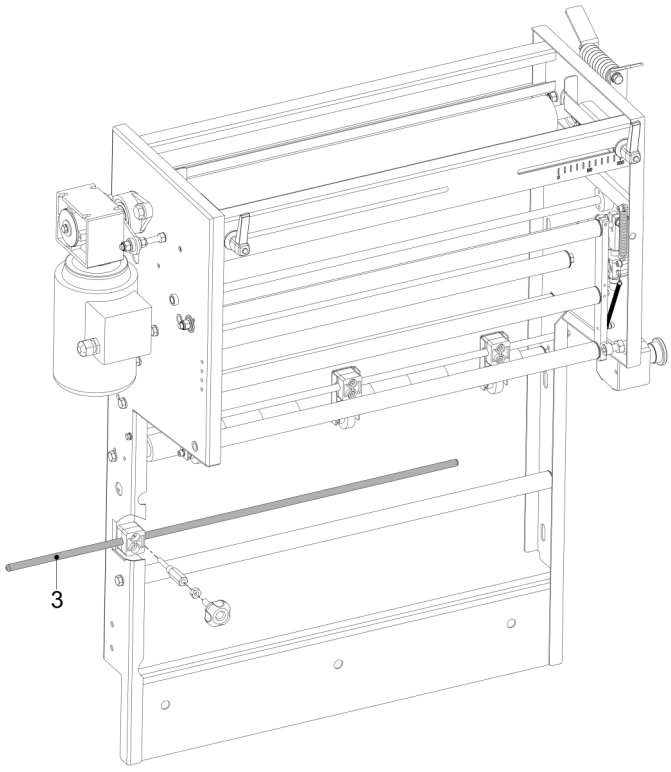
Otherwise, invert two of the three phases in the plug (Attention: do not invert the neutral wire!).

The rotation direction must be checked every time the power socket is changed!

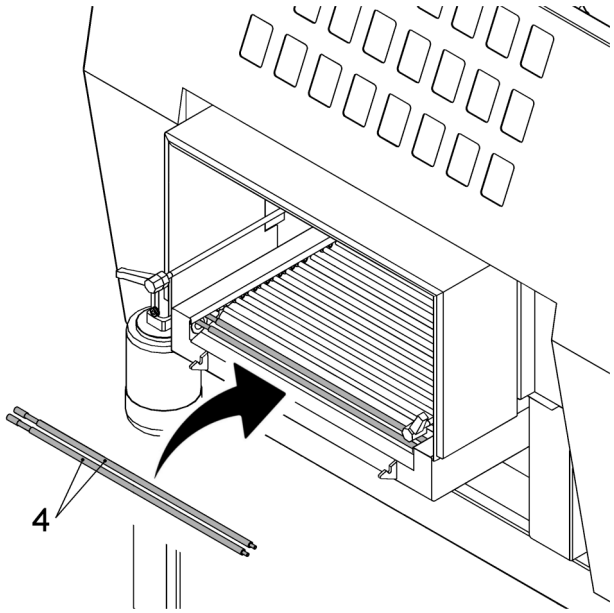
Positioning the accessories



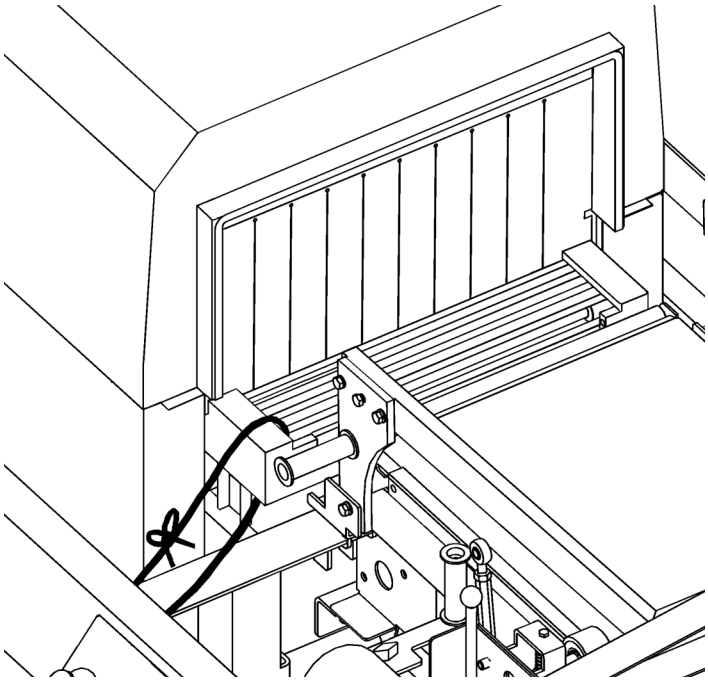
Put the film support rod (1) and the film support flap (2) on the triangle unit.



Position the film opening rod (3) on the unwinder unit.



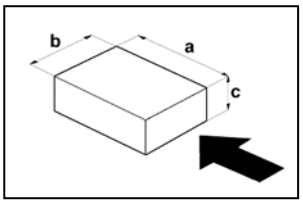
Place the 2 rollers (4) at the exit of the tunnel belt.



Remove the wire blocking the tunnel belt.

Max product size:

a = 16.54 in (420mm) b = 15.75 in (400mm) c = 4.73 in (120mm)



This machine is capable of packaging a wide variety of products. It is used successfully in these production environments: food, marketing, graphics and mailing, high volume industry, and fabrics.

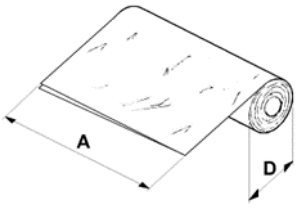
The products listed below must absolutely not be wrapped to avoid permanent damage to the machine and serious injuries to the operator:

- Wet and unstable products
- Liquids of any kind and density in fragile containers
- Flammable and explosive materials
- Pressurized gas cylinder of any kind
- Loose and volatile powders
- Any materials and products not listed but which might harm operator and damage the machine.

Film:

This machine is designed to use polyolefin shrink film between 40 Ga (9 micron) and 150 Ga (38 micron).

Consult the MSDS of the films in use and follow the corresponding instructions.

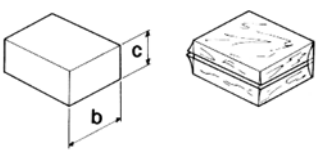


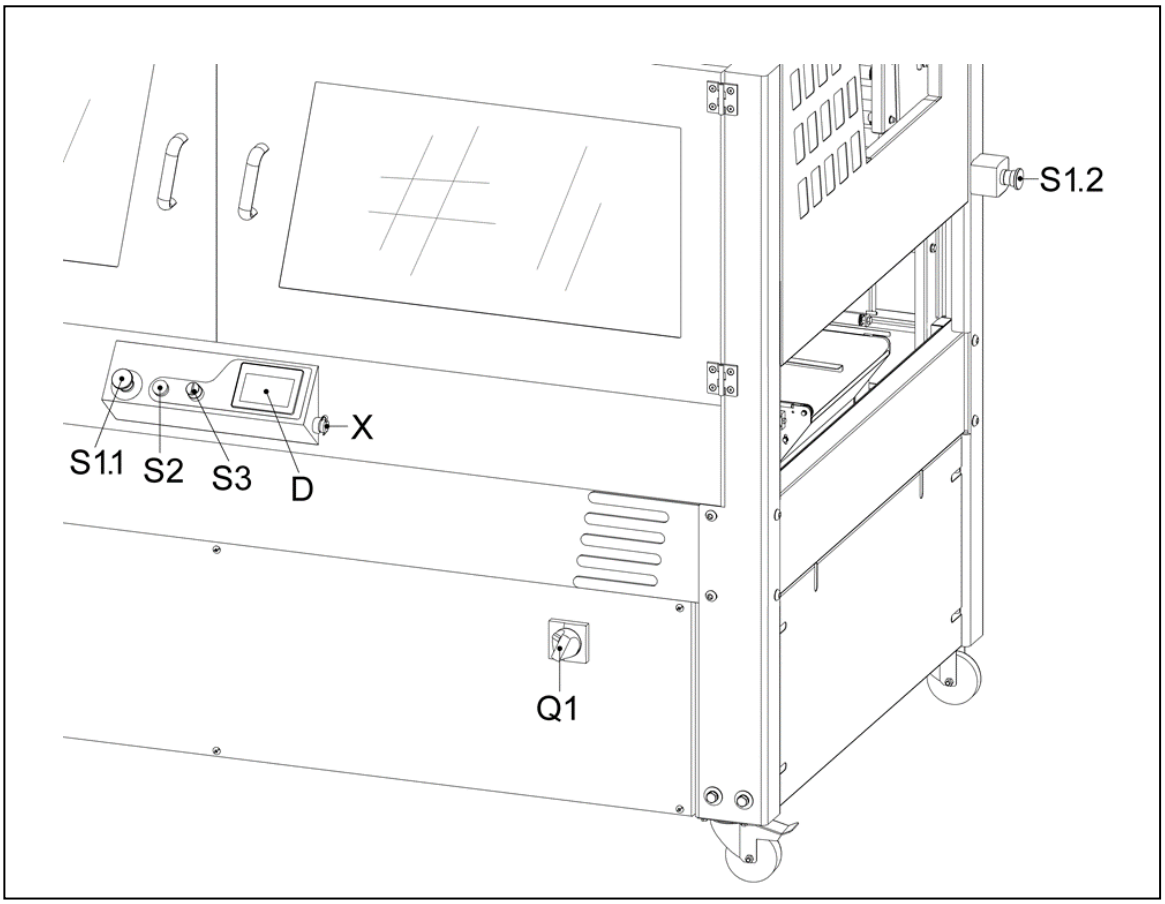
A = 27.56 in (700mm) MAX
D = 9.85 in (250mm) MAX

Film width calculation:

A = b +c +3.94 in (100mm)

Note: it may be necessary to add more than 3.94 in for tall products, or products of complex shape.





Q1 **Main switch**

Turns the machine on and off.

D **Touchscreen Display**

Displays selected functions and settings.

Only use one finger to navigate the touchscreen. If two or more points are pressed at the same time you may select an unintended item.

S1.1 **Emergency Stop Buttons**

S1.2 These 2 buttons stop the machine in case of immediate danger. If they are pressed, they need to be turned clockwise to release them.

S2 **Reset button**

Press the reset button to clear an emergency stop.

S3 **"Bypass Safety Protections" selector**

If this is set to OFF, the machine will only run an automatic program if the guard doors are closed.

If this is set to ON, the machine may be operated with the guard doors open. This condition is necessary only during setup and loading the film.

X **USB Connection–** for data transfer to the controller.

Turn the main switch (Q1) to position 1.

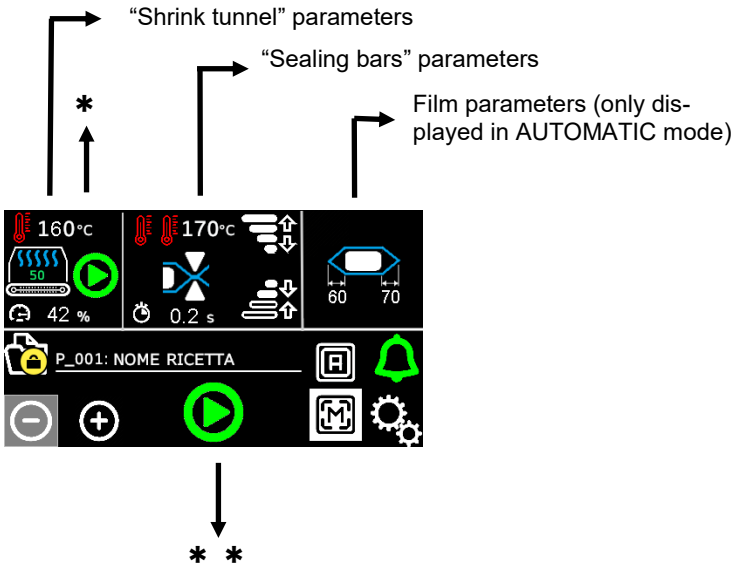
The display comes on and the screen with the company logo appears.

Press the logo, then press the “reset” (S2) button.

The home page will be displayed.

Home page

The home page displays information for important areas of the machine.



Settings page key

Programs quick load keys

* Shrink tunnel heater on/off keys

* * Cycle start/stop keys

Automatic Key

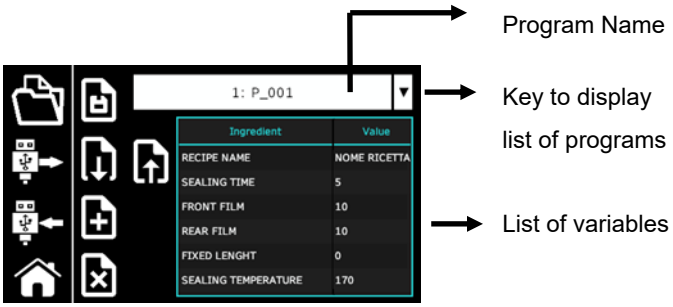
Manual Key

Alarms Key

Set-up Key

Settings page

Press  from the home page to access the settings page after having entered the password.



“Settings page” key

“Load program from USB” key

“Save program on USB” key

“Home page” key

“Save program” key

“Load program” key

“Save active parameters in the se-
lected program” key

“New program” key

“Delete program” key

Configurations page

The configurations page can be accessed from the home page by pressing  .

 “Default parameters” key

 “Optional” key

 “Manual controls” key

 “Service menu” key

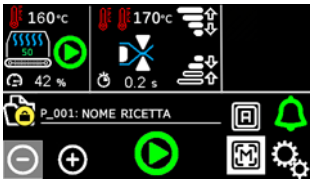
 Seal Jaw “Homing” key

 “Language settings” key

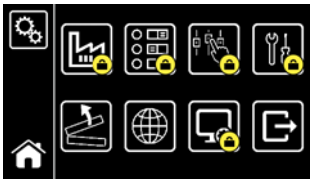
 “Touchscreen parameters” key

 “Logout” key

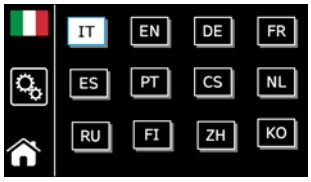
Choose the Language



Press 



Press 



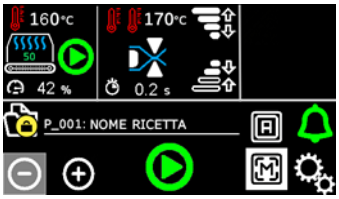
It displays the list of languages: Press the key of the desired language, then press 

Data Entry Keyboard

The keyboard is displayed when the value of a variable needs to be entered or changed.

Manual Mode

The machine is always in manual mode when started (powered on).



Press  to enable Manual mode.

To enable Manual program controls, press the start cycle  key.

The screen will display the “sealing” and “belt movement” controls.

Sealing

Pressing this key to performs a single seal cycle.

Belt movement

The following items move for as long at this key is pressed: infeed belt, sealing belt, film unwind and film rewind.

	The MANUAL mode is the condition required for the set-up and film loading and film unloading. In this mode, it is possible to open guards (C1) and (C2) by turning the key selector (S3) to an ON position. By turning the selector (S3) to the OFF position, the alarm is reset. With the guards open (after pressing the start cycle key ), only  is active.

Automatic Mode

This is the completely automatic machine operating condition.

Press  to enable Automatic mode.

Press the start cycle key  to start the automatic cycle.

Password

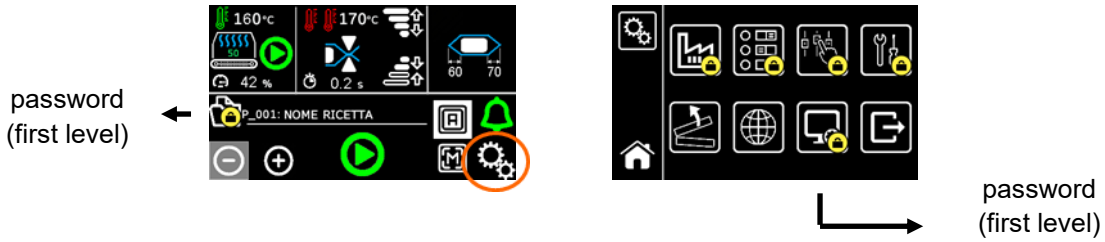
Some functions are password protected to ensure the operator does not erroneously modify the PLC program. There are 3 levels of password protection, each has a different user name and password.

- Operator (first level)
- Maintenance technician (second level)
- Manufacturer (third level)

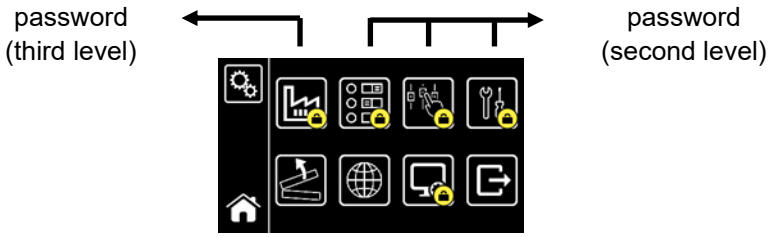
The padlock symbol next to a key indicates it is password protected.

Operator Password (first level)

With this password enabled, it is not possible to save changes to program variables.



Maintenance Technician and Manufacturer Password (second and third levels)



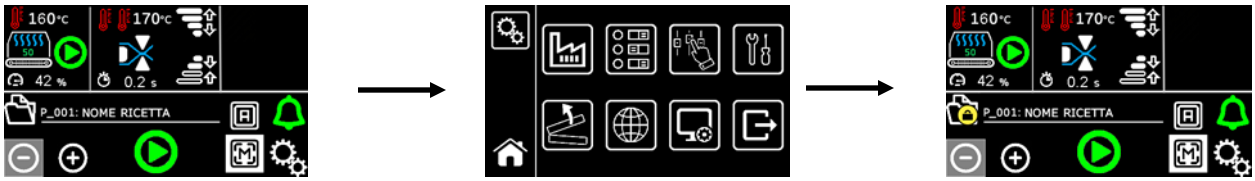
Operator Login

Press the password protected key

Enter the user name and password, press Login

Note: the padlock symbol disappears

Logging Out



From the home page screen, press 

Press 

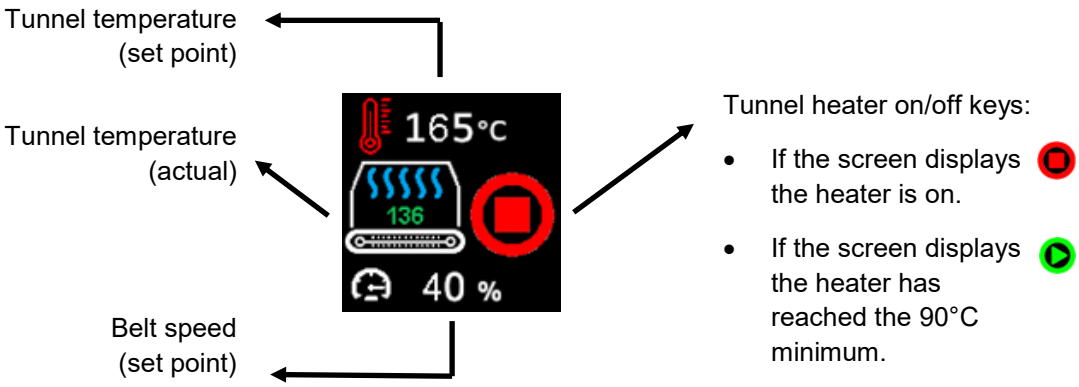
The padlock symbol reappears indicating the program is password protected.

Parameters

The parameters of a program can be adjusted from both the home page and the settings page.

Shrink Tunnel

The parameters that can be adjusted are the tunnel temperature and the conveyor belt speed. To modify a set point press the number (165°C or 40%)- the data entry keyboard (see p. 12) will appear, set the new value and press “Ent”.

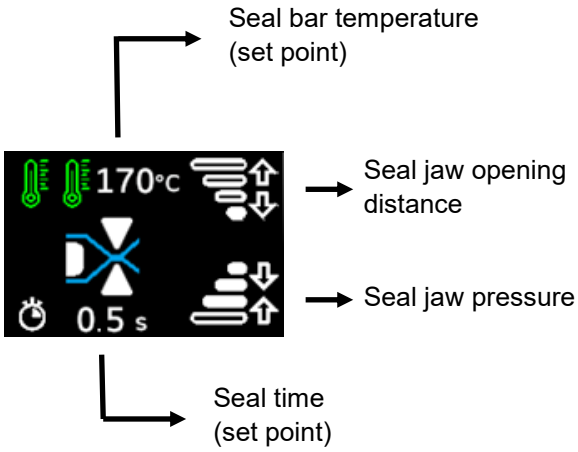


ⓘ	The color of the thermometer has meaning: red means the tunnel has yet to reach the set point, green means the tunnel is at the set point, blue means the tunnel is in a cooling phase.

Infeed and Sealing

The parameters that can be adjusted are:

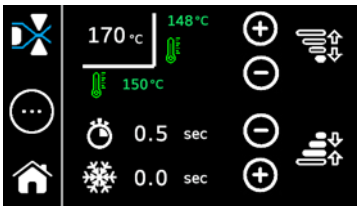
- Seal bar temperature
- Seal time
- Seal jaw opening distance
- Seal jaw pressure
- Seal cool time
- Infeed belt



To modify these values– press anywhere on the screen to access the settings page.

Parameters

Infeed and Sealing (continued)



Press on the number indicating the seal time and set the new value.

Press on the number indicating the seal cool time and set the new value (default: 0.0 sec). Then LET IT GO. The seal jaw opens, but film advancement is delayed by the set amount of time.

Some films (such as polyeth-ylene) require cool time to seal properly.

Press on the number indicating the temperature and set the new value.

Note: the 2 numbers next to the thermometers indicates the actual temperature of the 2 seal bars.

Set the seal jaw opening distance to have minimal clearance above the product to reduce closing/opening time and thus increase packaging speed.

Press ⊕ and ⊖ to increase or decrease the value.

Set the pressure of the seal jaw to optimize the film seal and cut.

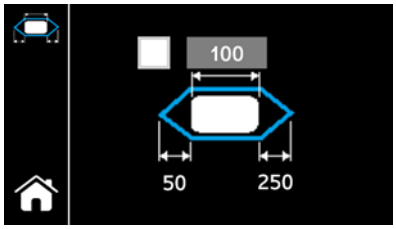
Press ⊕ and ⊖ to increase or decrease the value.

Press the key to set the infeed belt parameters.

Film (bag size)

These parameters can only be modified if the machine is in automatic mode: leading bag, trailing bag, and product length.

Check box ← → Product length



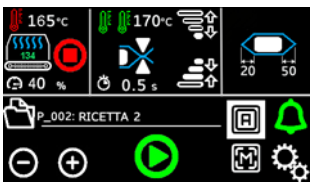
If the check box is empty, the machine will use a photo sensor to automatically detect the length of the product.

For irregular shaped products, or multi-pack items fill in the check box and manually enter the product length. This will disable the photo sensor.

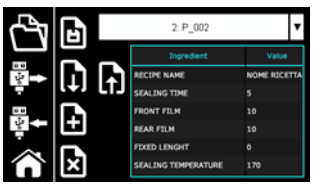
Trailing bag: the distance between the trailing edge of the product and film seal.

Leading bag: the distance between the first film seal and the leading edge of the product.

If you want to save parameters modified in the home page, follow the procedure below:



Press on the key

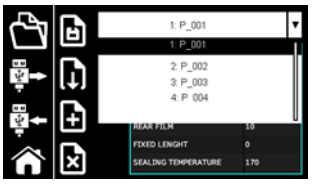


Press on the key

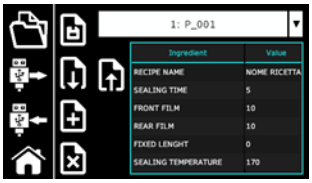
Parameters

Adjust Parameters From the Settings Page

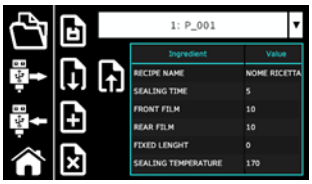
Press on the key 



Select a program



Press on the current value and enter the new one.



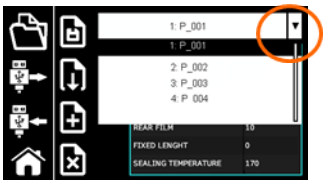
At this point, press key  to store the data in the program without loading it.

If, on the other hand, you wish to also load the program with the recently stored data, press the key  .

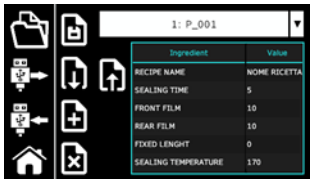
Load an Existing Recipe

The machine must be in Automatic mode in order to load a recipe.

Press 



Press the  arrow to view the list of saved recipes.

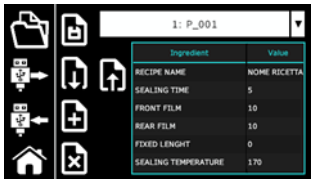


Select the recipe and press 

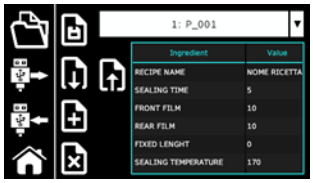
Create a New Recipe

The machine comes from the manufacturer with one in its memory (1: P_001). It will likely be beneficial to create a new recipe for each distinct product to be packaged.

Press 



Press 

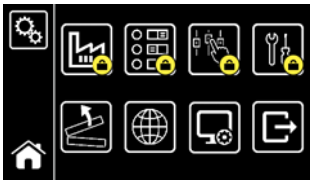


To rename the just copied new recipe, click on the name (NOME RICETTA) and type in the new name.

Press Enter then the Save key.

Parameters

Touchscreen Settings

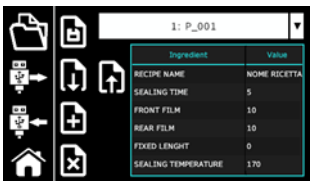


Press 

Press 

Set the parameters, then press the Back key– it will go back to the company logo screen.

Delete a Recipe

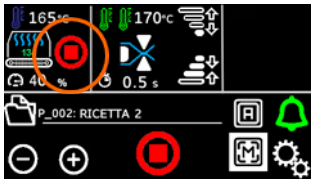


Press 

Select the recipe– press 

Switching Off the Machine

Following this procedure will put less stress on the shrink tunnel as compared to simply turning off the main switch.



Press the tunnel heater off key 

The tunnel will cool down to a minimum pre-heat temperature and the tunnel conveyor will stop.

After the belt stops, turn the main (Q1) to position 0.

The machine monitors for dangerous conditions and malfunctioning components. Each fault is labeled with a code. Below is a list of alarm codes.

NO.	ALARM	CAUSE	SOLUTION
A001	EMERGENCY ACTIVE	1 of the 2 “EMERGENCY” buttons (S1.1), (S1.2) has been pressed	Remove the cause of the alarm. Release the “EMERGENCY” button by turning it to the right. Press the RESET button (S2).
A002	OPEN GUARDS	1 of the 2 guards (C1), (C2) has been opened	Close the guard and press “RESET” (S2).
A004	NO PLC INPUTS VOLTAGE	Blown F13 fuse	Replace the fuse.
A005	NO PLC OUTPUTS VOLTAGE	Power drop	Restore the power.
		Blown F14 fuse	Replace the fuse.
A010	MACHINE HEATING	The machine is in the heating phase	Wait until the set temperature has been reached.
A024	CYCLE ERROR: START WITH PHOTOCELL ENGAGED	Product in front of the photocell	Remove the product.
		Horizontal/vertical photocell malfunction	Check the photocell electrical connection and that it is properly fixed to its support.
A026	REWINDER: FILM BREAK	Film break	Fix the film press RESET on the display on the alarm page. Note: Make sure the film on the triangles is not excessively stretched out. If so, this means that the film unwinder is not working.
A027	PHOTOCELL TIMEOUT	A product longer than the lateral sealing bar is being packaged	Package a product shorter than the lateral sealing bar.
A040	HOMING NOT POSSIBLE: MACHINE NOT IN STOP MODE OR IN MAINTENANCE	Machine not in STOP or in maintenance mode	Set the machine to STOP.
A041	HOMING: TIMEOUT	The sealing bar homing does not end within the set time	Contact the technical assistance service.
A042	HOMING: FAILED PROCEDURE	The machine receives the sealing bar homing command, but is not ready	Contact the technical assistance service.
A043	HOMING REQUIRED	The machine requests sealing bar homing	Run sealing bar homing.
A044	BELTS: MOTORS CIRCUIT BREAKER TRIPPED	The circuit breakers (FQ1) and (FQ2) have intervened on the infeed and outfeed belts.	Open the electric panel and press the reset key of the tripped circuit breaker press RESET on the display on the alarm page.
A045	START NOT POSSIBLE: MACHINE NOT IN STOP	The machine is not in STOP when the start cycle button is pressed	Wait for the machine to end the cycle or the sequence in progress.
A050	SEALING BAR: DRIVE ERROR	Drive error	Check the alarm code that appears on the TS1 brushless drive display and contact the technical assistance service.
A051	SEALING BAR: DRIVE NOT READY	Drive not ready	Check the alarm code that appears on the TS1 brushless drive display and contact the technical assistance service.

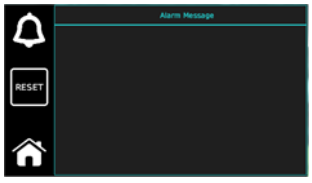
NO.	ALARM	CAUSE	SOLUTION
A052	FRONT SEALING BAR: MAXIMUM TEMPERATURE LIMIT REACHED	The sealing bar temperature has exceeded 300°C	Contact the technical assistance service.
A053	SIDE SEALING BAR: MAXIMUM TEMPERATURE LIMIT REACHED	The sealing bar temperature has exceeded 300°C	Contact the technical assistance service.
A054	SEALING BAR: MOVEMENT TIMEOUT	A problem occurred during the sealing phase	Contact the technical assistance service.
A055	SEALING BAR: OBSTACLE PRESENT	The sealing bar has encountered an obstacle during its movement.	Remove the obstacle press RESET on the display on the alarm page.
A056	SEALING BAR: AXIS ERROR	Sealing bar error	Contact the technical assistance service.
A060	TUNNEL BELT: INVERTER ERROR	Tunnel belt inverter error	Check the alarm code that appears on the TS1 inverter display and contact the technical assistance service.
A061	TUNNEL: MAXIMUM TEMPERATURE LIMIT REACHED	The temperature is greater than 250° C or lower than 2°C	Check thermocouple BT3 Check contactor QM1.
A062	TUNNEL: TRIPPED FAN MOTOR CIRCUIT BREAKER	The thermal protection (FM1) of the fan motor has tripped	Check the motor of fan M2.
A073	DOWNSTREAM LINE: NO LINE CONSENT	No downstream line consent for outfeed belt (additional belt at machine outfeed).	Go to the OPTIONAL menu and enable the downstream line consent (set to ON) press RESET on the display on the alarm page.
		In the “OPTIONAL” menu, the downstream line consent is enabled (ON), but the optional is not installed.	Install the unloading belt correctly.

If an alarm persists even after having carried out the operations and checks indicated for resetting the machine, contact the technical assistance service.

Alarm Reset

The emergency stop buttons and open guards are reset with the physical reset switch (S2). All other alarms are reset as follows:

Press 



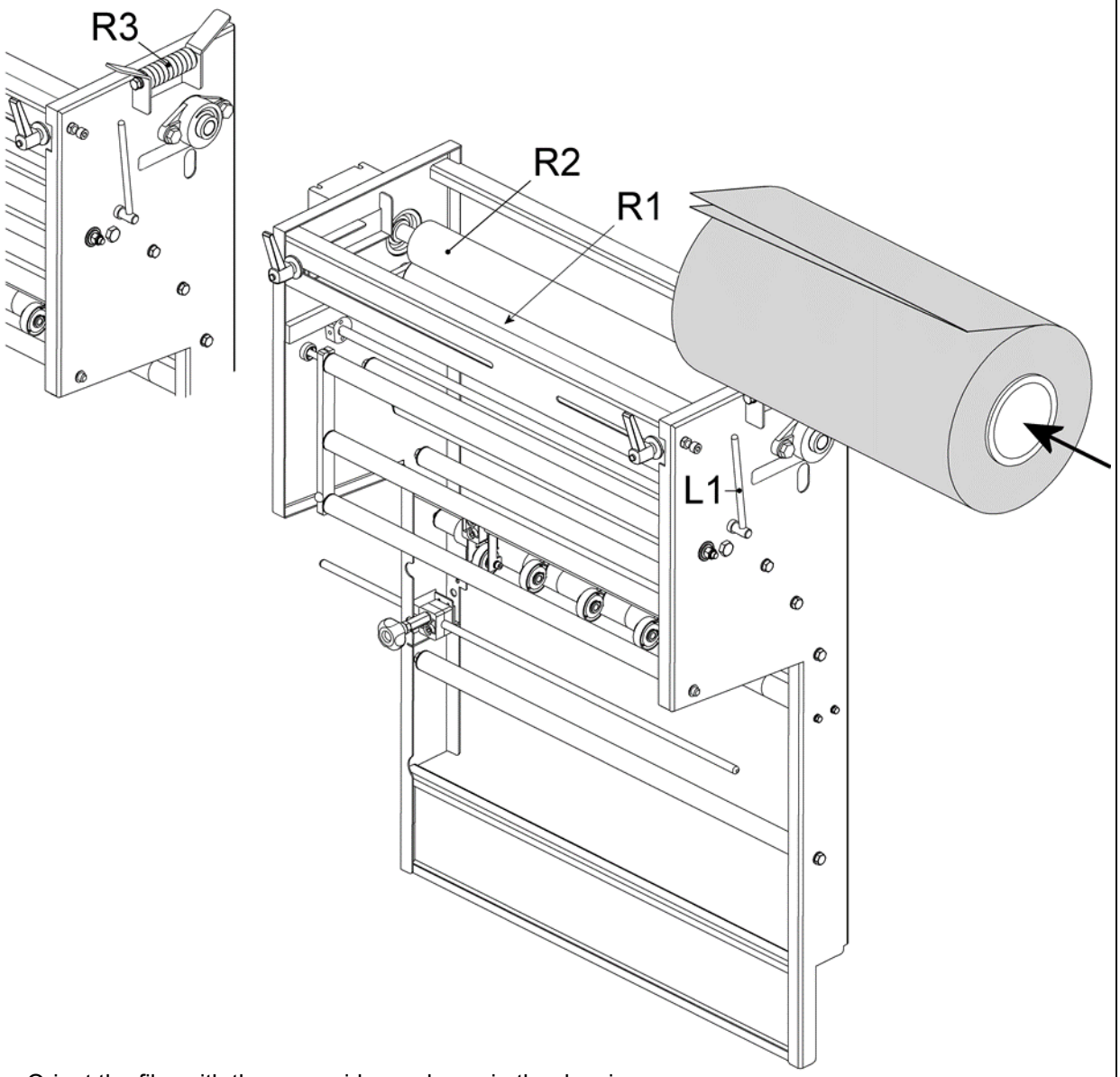
This display shows which alarm has been triggered.

Press  followed by 

The alarm has been reset.

To load the film, the machine must be in Manual mode. Rotate the BYPASS SAFETY PROTECTIONS (S3) switch to ON, and open the front and rear guards.

Step 1

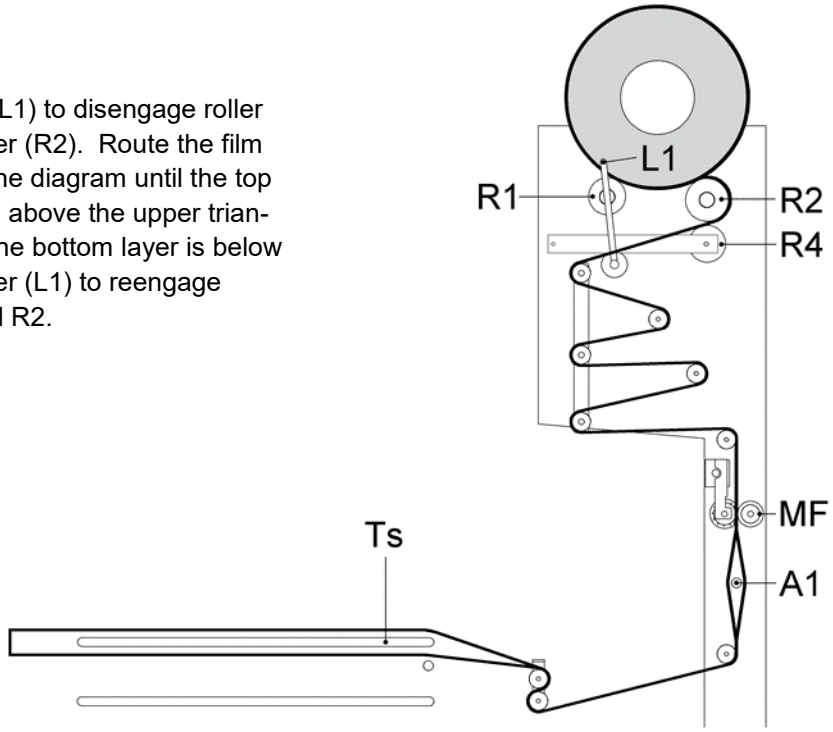


Orient the film with the open side as shown in the drawing. Set the film on roller (R3) and slide it in until it rests on rollers (R1) and (R2).

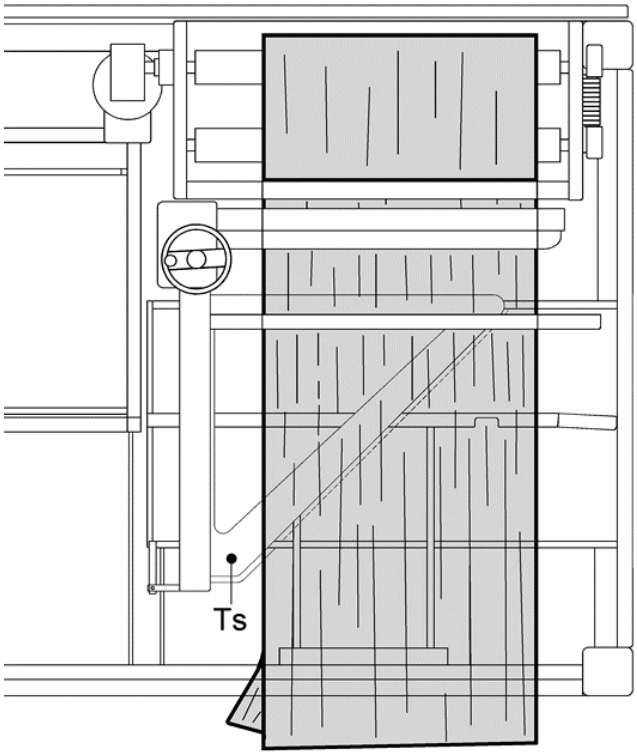
Note: the unwind direction of the film roll must be specified when ordering the film.

Step 2

Rotate lever (L1) to disengage roller (R4) from roller (R2). Route the film as shown in the diagram until the top layer of film is above the upper triangle (Ts) and the bottom layer is below it. Rotate lever (L1) to reengage rollers R4 and R2.

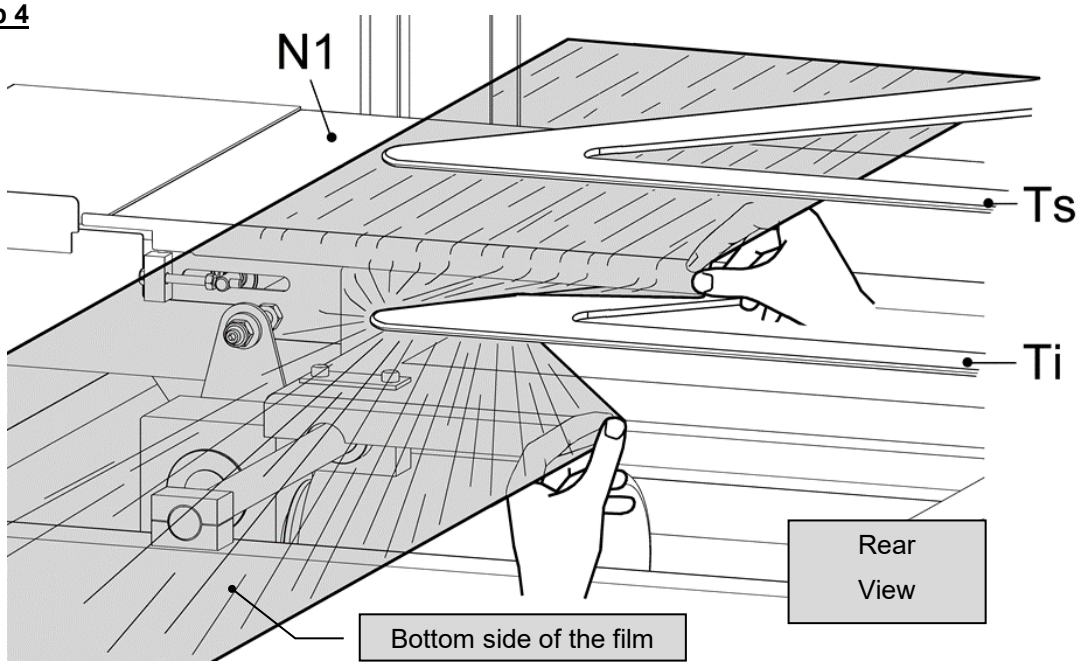


Step 3



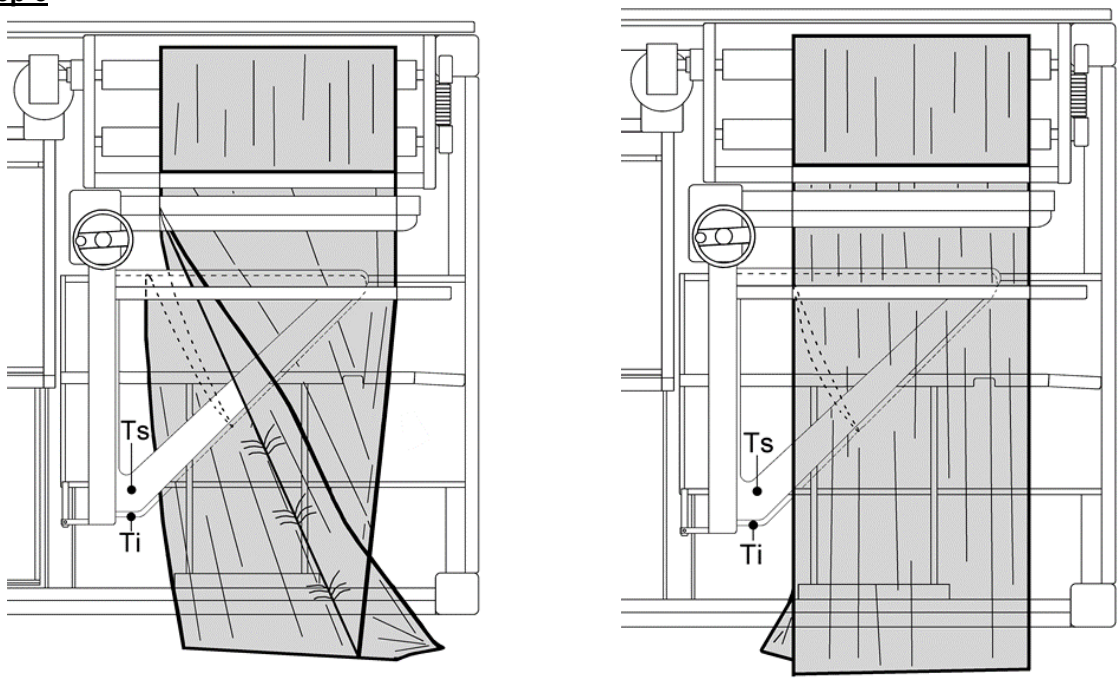
Unwind about 3 feet of film.

Step 4



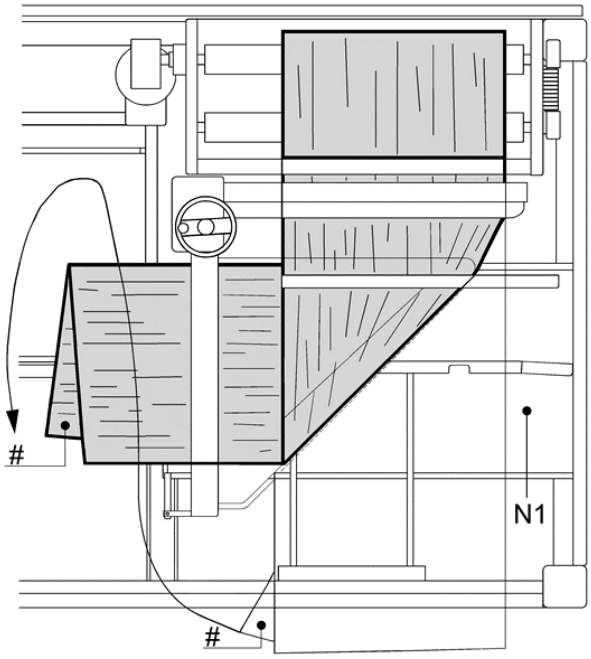
Route the lower layer of film under the lower triangle (Ti) and then it over the feeder belt (N1).

Step 5



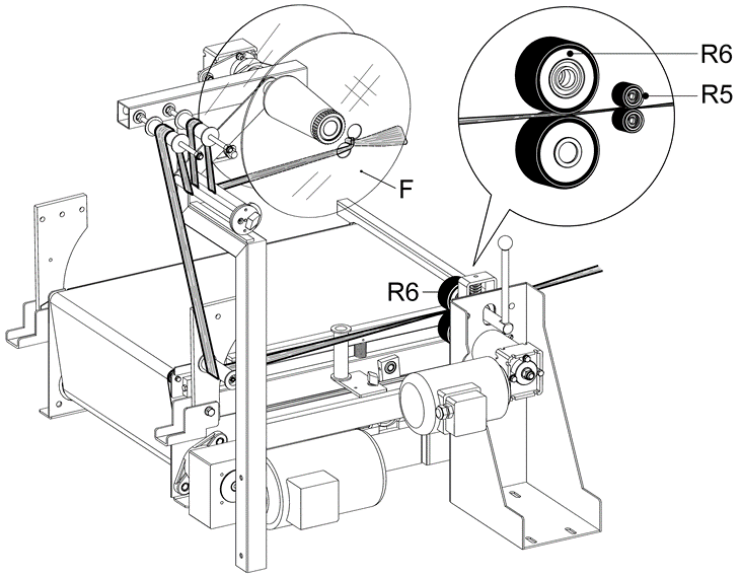
Now route the upper layer of film over the upper triangle (Ts).

Step 6



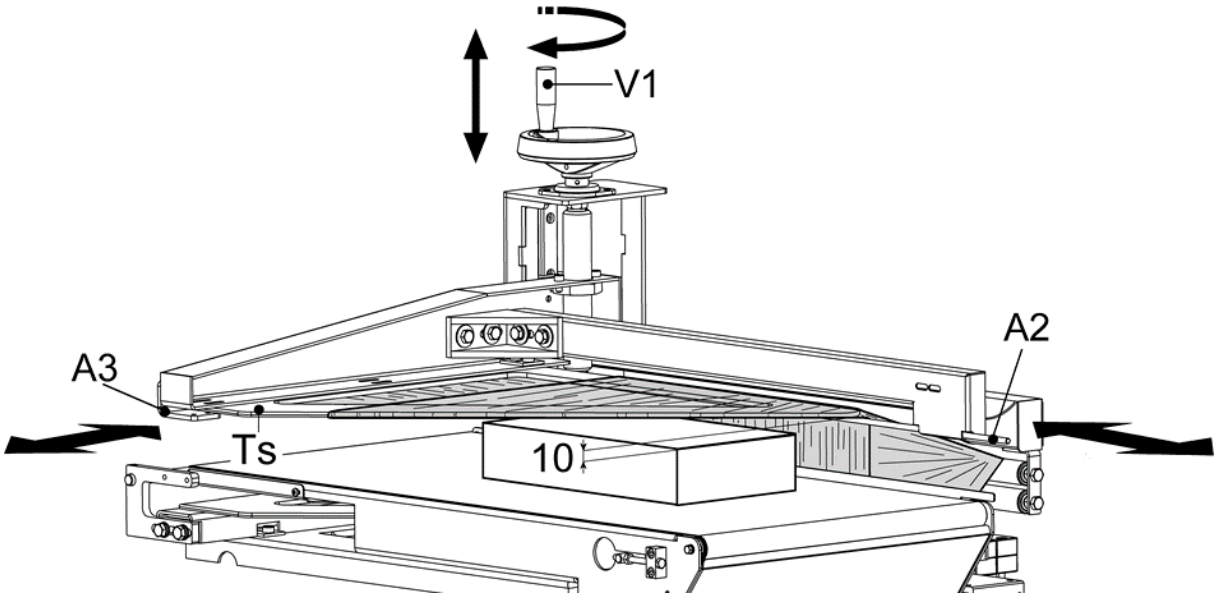
Move the end of the film (#) between the triangles and to the left, to be parallel with the feeder belt (N1). The top layer of film will be above the feeder belt and the lower layer will be below the conveyor.

Step 7



Feed the film between the sets of rollers (R5) and (R6). At this point it will be necessary to do a number of seal cycles (see page 13). Route the trim tail of the film as shown. Lastly, tie the film to the 2 holes in the front disc (F).

Film Opening Adjustment



Place the product on the infeed conveyor belt in the orientation that it will be packaged. Move the upper triangle (Ts) by turning handwheel (V1) until there is 3/8 inch (10 mm) of clearance between the top of the product and the bottom of the triangle.

Rod (A2) and plate (A3) are used to lift the film, adjust them to match the profile of the product until the best packaging result is achieved.

Film Roll Position

Figure 1

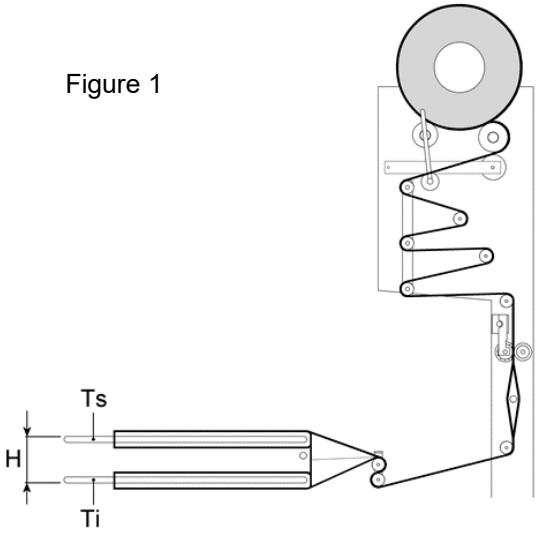
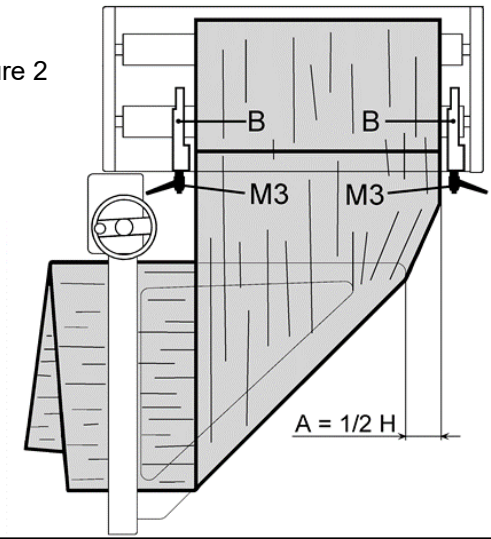


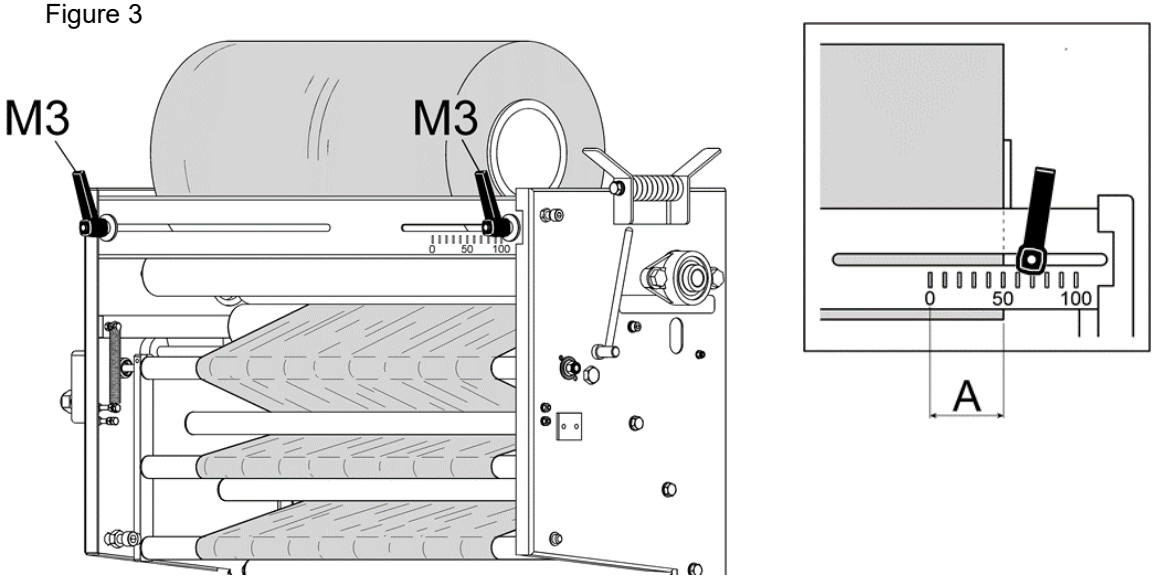
Figure 2



The position of the film roll is dictated by the opening “H” (Figure 1). The roll is in the correct position when the right side of the roll is at distance “A” (Figure 2), which is half the distance of “H”. Use the scale (in mm) on the support to align the film roll (see Figure 3 on the next page).

Film Roll Position (continued)

Figure 3

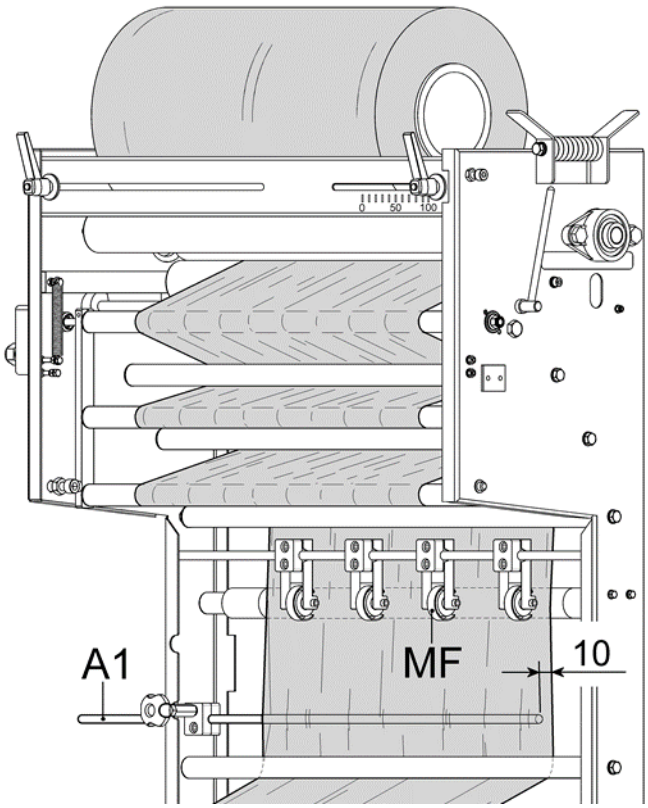


Once the film roll is positioned, move the guides (B) (see Figure 2) by using the knobs (M3) to lock the film roll position, leave 3/16 inch (5 mm) of clearance between each guide and the film roll.

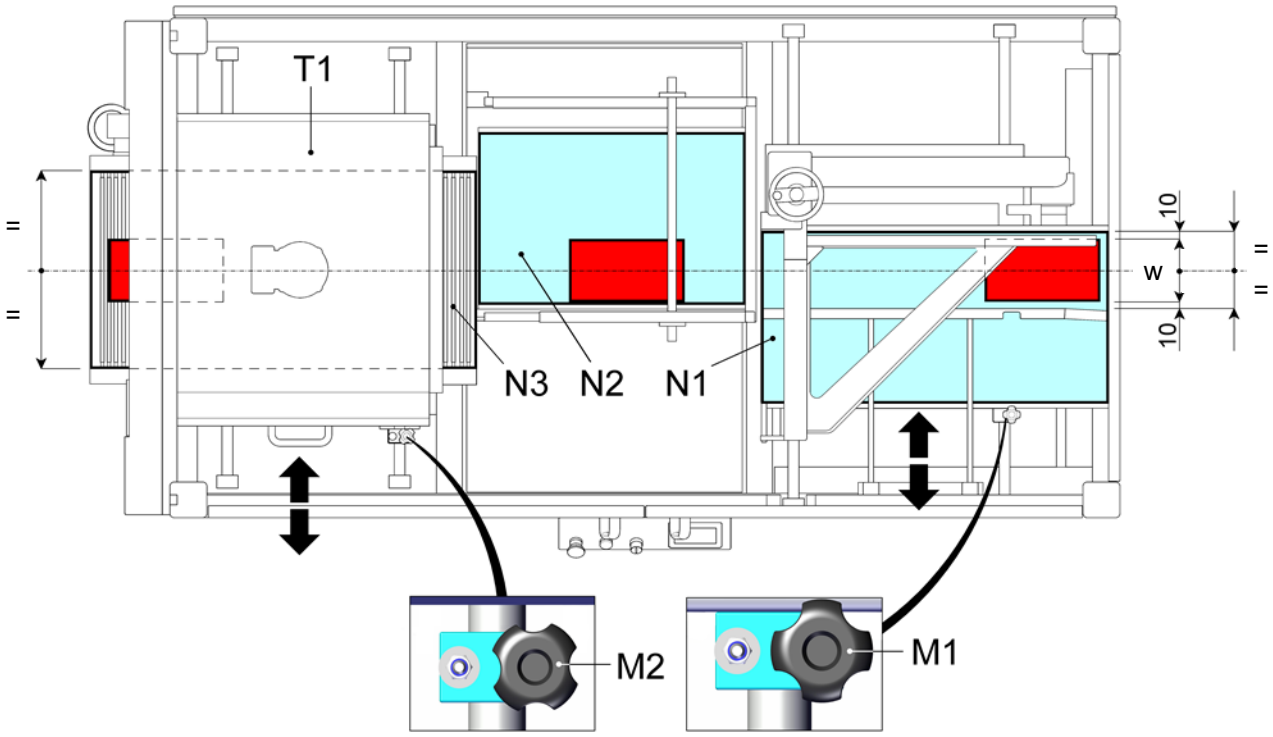
Film Perforation and Separator

Adjust the number and spacing of the perforators (MF) needed to achieve the optimum package result.

Position the film separator plate (A1) so that the end is approximately 4 inches (10 cm) from the crease of the film.



Infeed Conveyor and Tunnel Adjustment



Set the positions of the infeed conveyor (N1) and the tunnel (T1) to match the width (W) of the product as follows:

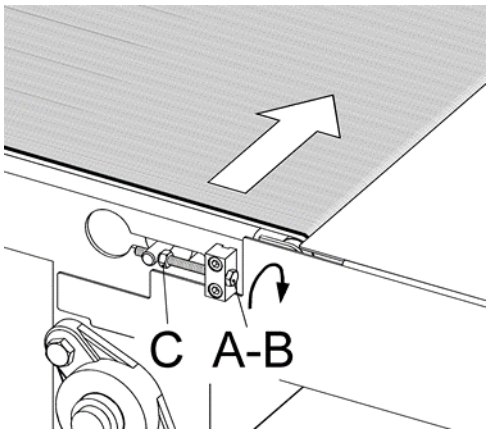
Loosen handle (M1), move the infeed (N1) until there is about 0.39 inch (10 mm) clearance between the rear edge of the belt and the rear face of the product and the same clearance between the product front face and the guide rod. Retighten handle (M1).

Loosen handle (M2), move the tunnel (T1) so that the product leaving the sealing conveyor (N2) is centered on the belt of the tunnel (N3). Retighten handle (M2).

Belt Tension and Tracking

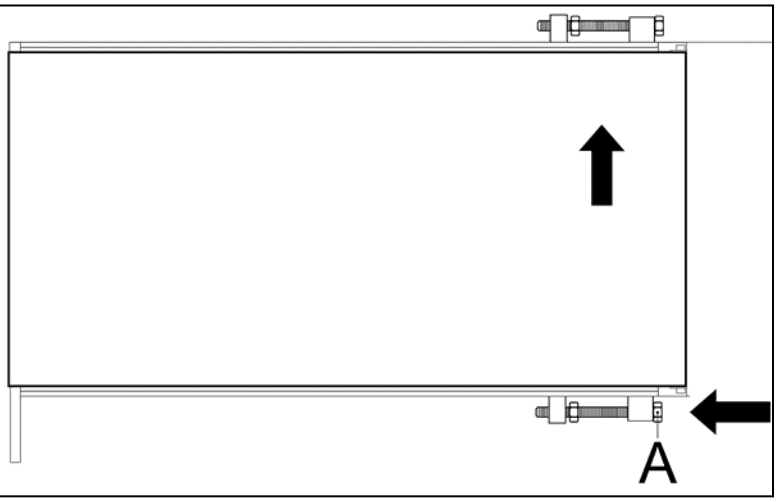
Check the belt tension and tracking during initial setup and at least once per month afterwards. You should be able to lift both the infeed belt and the sealing belt about 1.5 inches (40 mm), see figure on the next page labelled “BELT TENSION”.

- To simply increase belt tension, loosen locking nut (C) on both sides and tighten screws (A) and (B) the same number of rotations.
- If the belt position needs to be adjusted, see diagrams below.
- Retighten the locking nuts when finished adjusting the belt.

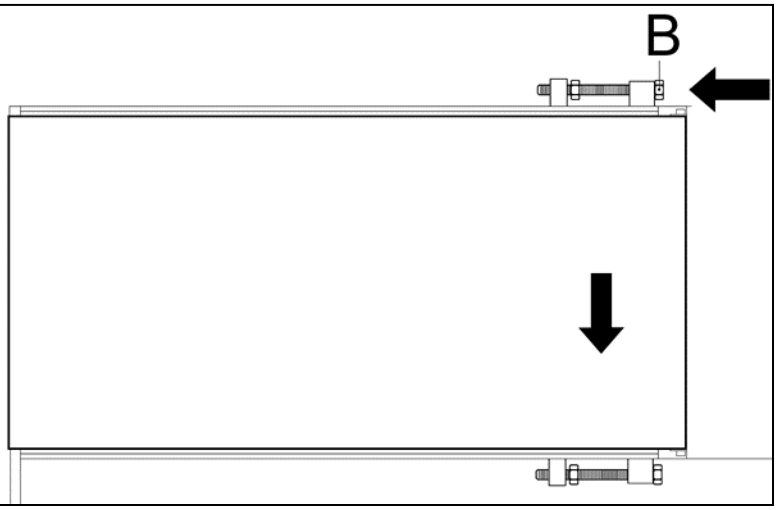


Infeed Belt

Turn screw (A) clockwise to move the belt toward the rear of the machine.

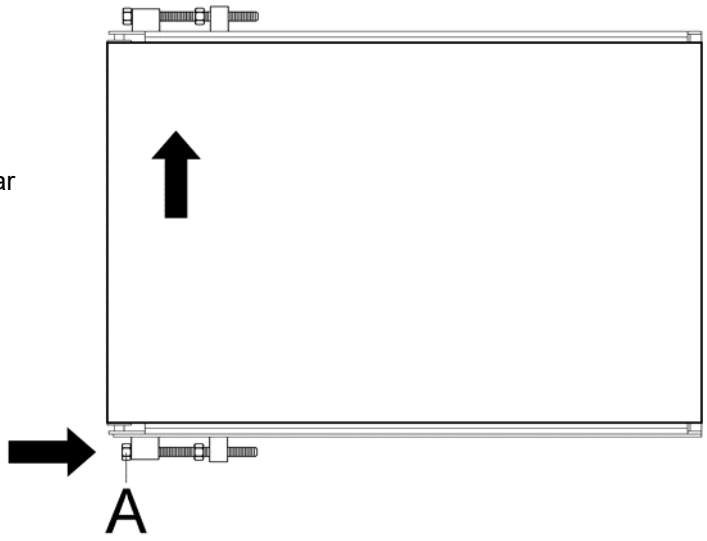


Turn screw (B) clockwise to move the belt toward the front of the machine.

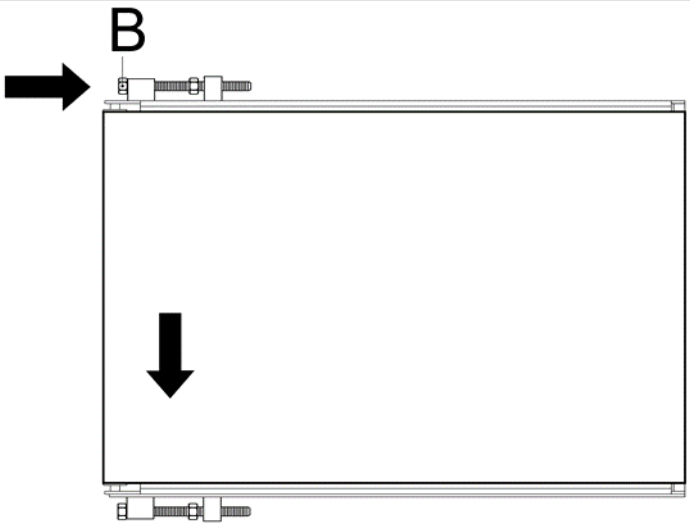


Sealing Belt

Turn screw (A) clockwise to move the belt toward the rear of the machine.

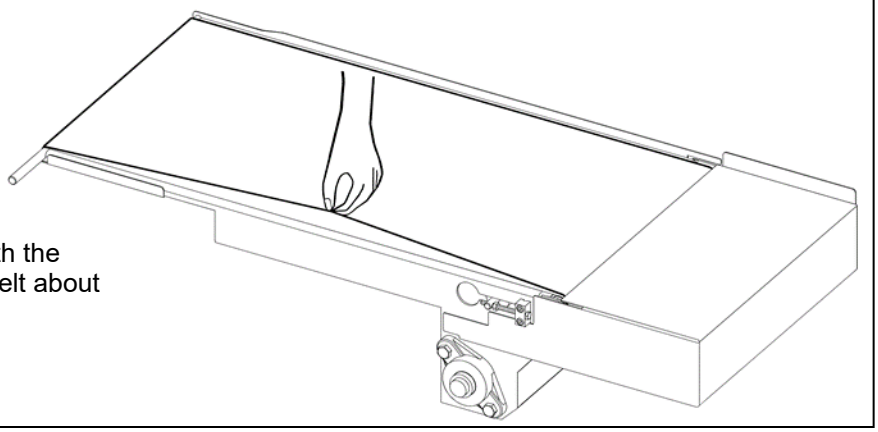


Turn screw (B) clockwise to move the belt toward the fro of the machine.



BELT TENSION

You should be able to lift both the infeed belt and the sealing belt about 1.5 inches (40 mm).

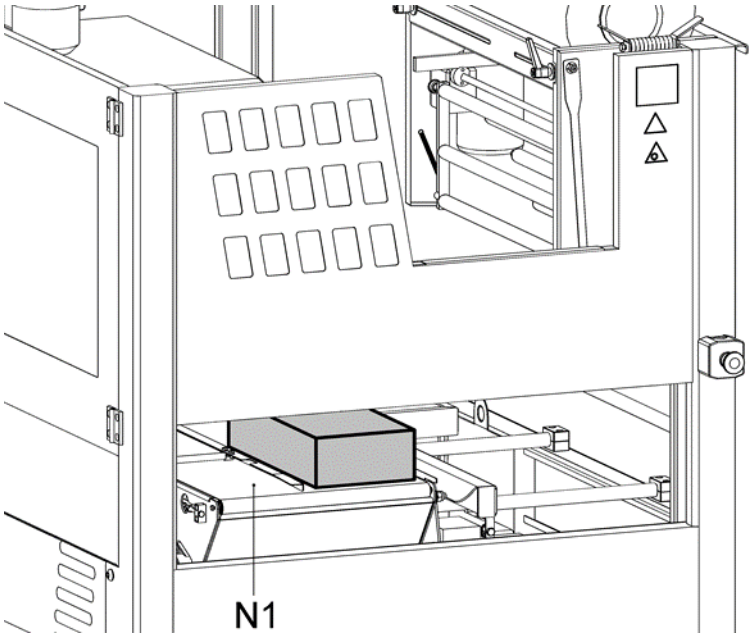


Packaging

Now that all necessary adjustments have been made, the machine is ready to package the product.

With the machine in “AUTOMATIC” mode, press the start cycle key

The conveyor belts will start moving, feed the product onto the infeed conveyor belt (N1). Upon reaching the seal conveyor, the seal bar will lower to seal the film. The packaged product will then move inside the tunnel to shrink the film.



⚠	**CAUTION!** • Maintenance must be performed exclusively by skilled personnel familiar with the machine. • Never carry out maintenance, lubrication, or repairs when the machine is in operation and/or connected to the power supply. • Never carry out maintenance on moving parts. • After each operation re-mount any guards that have been removed, and bring the machine back to its original state. • Always observe all safety standards as specified in this manual and those mandated in the country of installation.

Performing Maintenance

Prior to cleaning, performing routine maintenance, or special maintenance, do the following:

- Switch off the machine (as instructed on page 18).
- Remove the plug from the main socket.
- Wait 15 minutes to allow capacitors to discharge.

Recommended Schedule

Frequency	Component	Operation
Every day	Machine	Remove all residue for product processing which may impair correct machine operation. It is recommended to use compressed air.
Every day	Inside the tunnel	Clean inside the tunnel and conveyor belt on a daily basis to remove all film residues of packaged products. It is recommended to use compressed air.
Every day	Photocell, sensors and refletor	Clean with soft cloths.
Every day	Blades	Clean surfaces that come into contact with the film, using cloths or paper. Never use objects that may damage the surfaces.
Every month	Infeed and sealing belts	Check alignment and tension.
Every month	Blades and Seal pads	Check the condition of the adhesive teflon strips and silicon plate.
Every 12 months	Belts supports	Lubricate with high-viscosity grease for high temperatures (e.g..: SKF LGHB 2 or similar).
Every 12 months	Gear couplings	Ensure sufficient lubrication.

For Safety Devices (performed with power on)

Each month	Front guards (see page 6)	Opening the guards (both in manual and automatic mode) **Check the consequences:** display alarm, the machine blocks.
Each month	Pushbutton EMERGENCY	Activation of emergency button (manual and automatic mode) **Check the consequences:** display alarm, the machine blocks.

Keep a log of tests performed on the safety devices include: date, inspector, and results. Report all faults to Assistance Service.

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