

УПАКОВОЧНОЕ ОБОРУДОВАНИЕ



ПРОИЗВОДСТВО И ПОСТАВКА СЕРВИСНЫЙ РЕМОНТ ЗАПАСНЫЕ ЧАСТИ РАСХОДНЫЕ МАТЕРИАЛЫ

Диагностика, ремонт, сервисное обслуживание.

Запасные части и расходный материал: резина, тефлоновая лента, термонож (лезвие), гель для смазки.

Плёнка термоусадочная полиолефиновая.

Система «Trade-In» – замена Вашего оборудования на новое и более производительное.



	INDEX	
Cha	oter1. Foreword	
1.1.	Introduction	1-1
1.2.	Performances of packaging machine	1-1
	Machine identification	1-1
1.4.	Weight and dimensions of packed machine	1-3
	Weight and dimensions of machine	1-3
	oter2. Installation of the machine	
	Transport and positioning	2-1
	Environmental conditions	2-7
2.3.	Electrical connections	2-9
	ter3. Machine adjustment and preparation	-
	Control of direction of rotation	3-1
	Adjustment	3-5
	Manual and automatic cycle	3-15
	Insertion of film bobbins	3-17
	Conveyor belt adjustment	3-19
	Bobbin support and packaging flat adjustment	3-19
	Execution of 1^ film welding	3-21
	Film coupler on wrapping machine (where expected)	3-23
	Connection and start of smoke exhauster (where	3-25
	pected)	0.20
	Introduction of the product to be packaged	3-27
	Packaging	3-29
	ter4. Limits and conditions of machine use	0-29
-	Max. packing sizes	4-1
	Machine operation conditions	4-1
	Items which must not be packaged	4-1
	· -	4 -1
•	ter5. Film characteristics Films to be used	5-1
	Calculation of band A	5-1
		0-1
-	ter6. Safety standards	6.1
	Warnings	6-1
-	ter7. Ordinary maintenance	7 4
	Precautions for ordinary maintenance interventions	7-1
	Cleaning of sealing blade	7-1
	Plastic film removal	7-3
	Machine cleaning	7-5
	Control of cooling liquid	7-7
	Rubber and Teflon replacement	7-9
	Adjustment of the cams	7-11
	Replacement of sealing blade	7-13
	Wiring diagram	7-15
	Key wiring diagram	7-17
	Spare parts	7-19
	Disassembling, Demolition and elimination of residuals	7-21
-	ter8. Guarantee	_ ·
	Certificate of Guarantee	8-1
8.2.	Guarantee conditions	8-1

1.1. Introduction

You have bought a machine with outstanding features and performance and we thank You very much for Your confidence in choosing it.

The MINIPACK System is the only one of its kind and has achieved worldwide succes with more than 60000 units operating in the field of packaging and wrapping. It is handy, low-priced and protected by patents at home and abroad. The technological concept underling its design, as well as the components and materials used in the manufacturing and testing process are the best assurance of proper operation and long-lasting liability.

1.2. Performances of packaging machine

Thanks to its particular operating circuit, it can be used both as a sealing and shrinking machine or as a plain sealing machine (sealing only) .In this case it is possible to pack the object in a soft bag without shrinkwrapping. Technical grade or food grade films with thickness in the range of 15-50 micron can be used. These products are manufactured and distributed by MINIPACK Torre S.p.A. The film used in centerfolded execution can be micropunched or not when running through the micropunches of machine itself. The machine can carry out up to 650

1.3. Machine identification

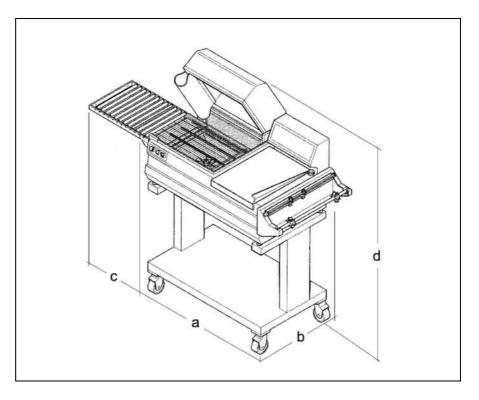
packages/hour.

In every communication with the manufacturer, always mention the model and the serial number specified on the plate on the rear part of the machine.

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1.4. Weight and dimensions of packed machine

a = mm 1415 b = mm 955 c = mm 830 Weight = Kg 192 a = mm 1570 b = mm 800 c = mm 500 d = mm 1450 Weight = Kg 152

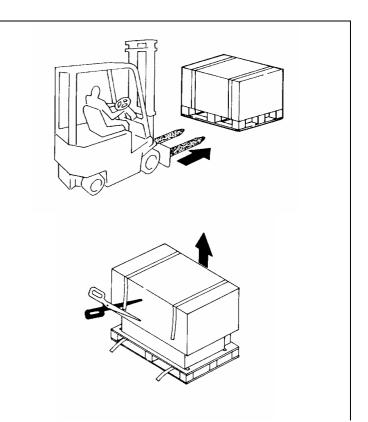


Chapter 2. Installation of the machine

2.1. Transport and positioning

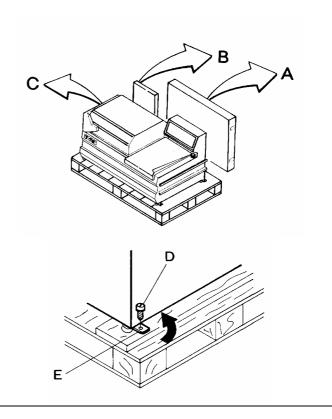
It is recommended to handle with great care during transport and positioning!

Cut the strap with scissors (make sure you protect your eyes by wearing glasses) and withdraw the cardboard.



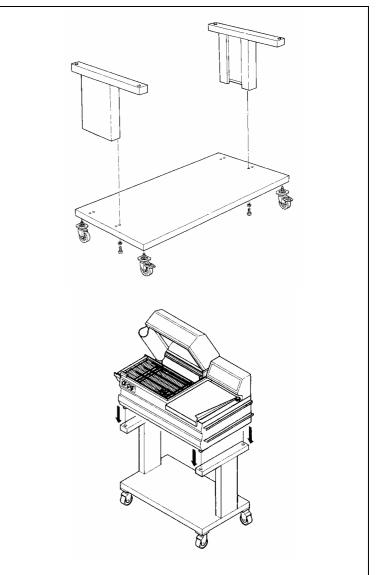
Take away the box (A) which contains the carriage. Take away the bobbin support (C). Take away the roller way (B)

Unscrew the 4 fastening screws of the pallet, putting the 4 plates back inside the machine.

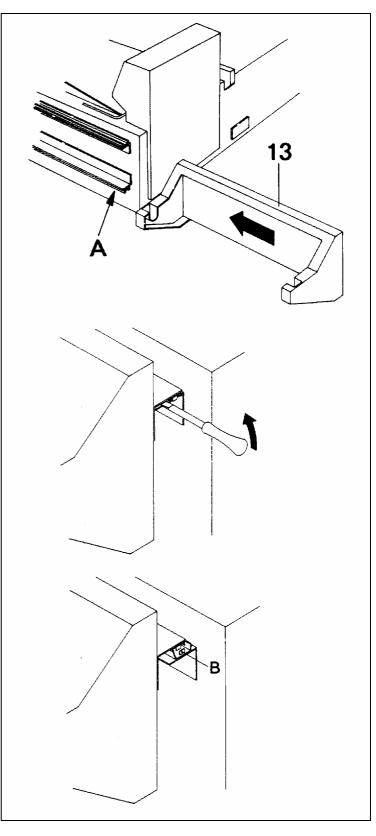


Assembly the carriage.

Lift the machine and position it on the carriage, paying attention that the 4 foots are properly inserted in their housings.



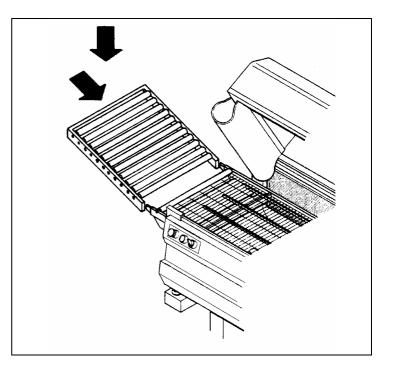
To place the roll support (13) follow the instructions below:



Remove the adhesive tape (A) fixing the guides trolley. Place the roll support (13) on the proper guides.

Stride over the blocking device (B) through a working tool (for example a screw driver).

Position the roller way, coupling it to the conveyor belt.



2.2. Environmental conditions

Place the machine in a suitable environment free from humidity, gases, explosives, combustible materials.

Woring environmental conditions:

- Temperature from $+ 5^{\circ}C$ to $+ 40^{\circ}C$
- Relative humidity from 30% to 90%, without condensation

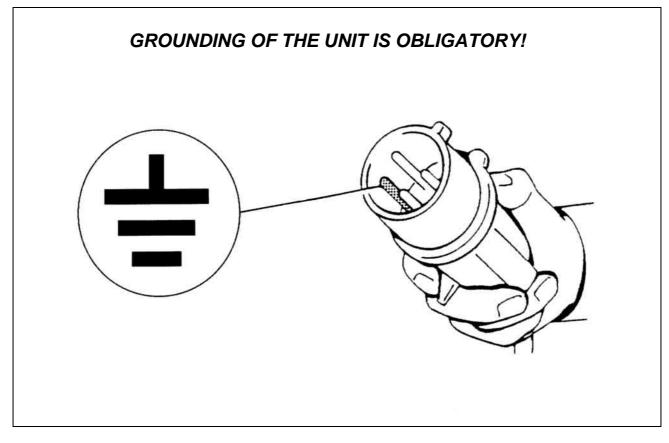
<u>Machine safety factor = IP20</u> <u>The aerial noise made by the machine is lower than 70dB</u>

2.3. Electrical connections

OBSERVE HEALTH AND SAFETY REGULATIONS!

Before executing the electrical connections, make sur that the mains voltage matches the ono on the plate on the

rear of machine and that the earthing contact complies with the safety rules in force. In case of doubts about the mains voltage, contact the local public supply company.



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

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Chapter 3. Machine adjustment and preparation

3.1. Control of direction of rotation

Partially extract (about 20 cm) the switch box after having removed the four fastening screws (A).

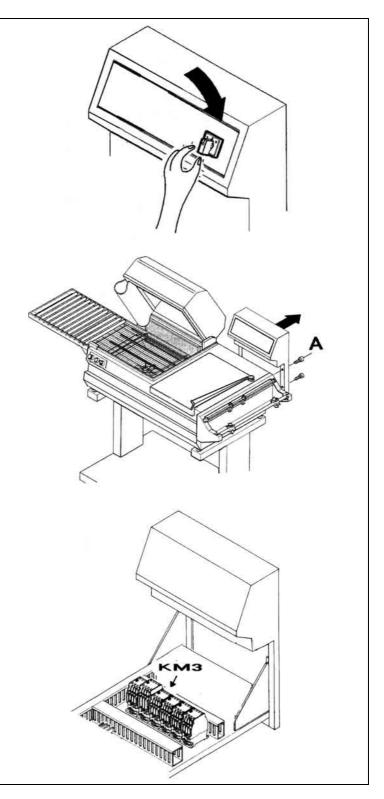
Press the push button of contactor KM3 manually and check that the fan rotates clockwise. Otherwise invert two of the three phases of the electrical plug. Before starting the machine operation check the right direction of rotation following these instructions:

Rotate the general selection switch on 1-position

Partially extract (about 20 cm) the switch box after having removed the four fastening screws (A).

Press the push button of contactor KM3 manually and check that the fan rotates clockwise.

Otherwise invert two of the three phases of the electrical plug.



3.1. Control of direction of rotation

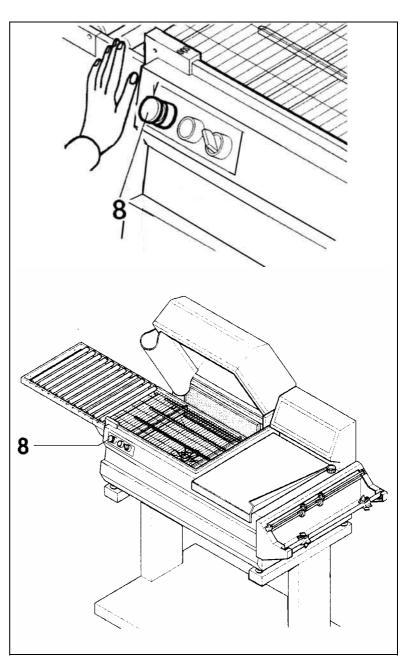
Push the emergency button (8) to get the machine into START position.

Close the switch block again and unlock the emergency button (8) by turning it towards right.

N.B.: THE CONTROL OF DIRECTION OF ROTATION SHOULD BE CARRIED OUT EACH TIME YOU CHANGE THE ELECTRICAL PLUG.

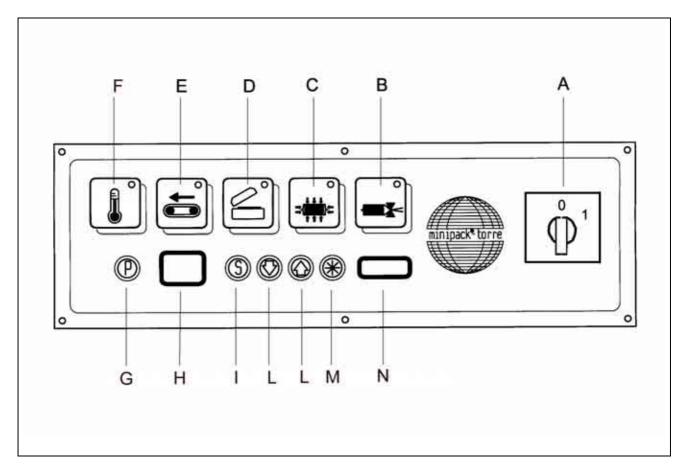
Push the emergency button (8) to get the machine into START position.

Close the switch block again and unlock the emergency button (8) by turning it towards right.



N.B.: THE CONTROL OF DIRECTION OF ROTATION SHOULD BE CARRIED OUT EACH TIME YOU CHANGE THE ELECTRICAL PLUG.

3.2. Adjustment



- A- Main switch
- **B-** Sealing warning light
- **C-** Shrinking warning light
- **D-** Pause warning light
- E- Belt advancing light
- F- Temperature warning light
- G- Programs selection button
- H- Display
- I- Variables selection switch
- L- Adjusting button
- M- Reset button
- N- Piece counter display

ELECTRONIC BOARD FEATURES

The machine is equipped with 6 selectionable programs:

Program nr.	Program features
P1	Sealing only
P2	Sealing + shrinking
P3	Sealing + delayed shrinking to sealing end
P4 - P5 - P6	Sealing + shrinking

Each program is composed by 6 variables which can be modified (in case it is not possible to set one of them, such a variable will obviously not appear on the display) :

Variable Field		Field features
 Sealing Fan delay after sealing Shrinking Belt advancing time Automatic cycle pause time Temperature 	$\begin{array}{c} 0 \neq \\ 2.7 \\ 0 \neq 9 \\ 0.0 \neq \\ 9.9 \\ 0.0 \neq \\ 3.0 \\ 0.0 \neq \\ 9.9 \\ 00 \neq \\ 99 \end{array}$	values expressed in seconds tenth-seconds values values expressed in seconds values expressed in seconds values expressed in seconds corresponds to 150348°C (2°C each point)- (medium value 75)

The machine is equipped with a piece counter to show on display (N) the number of sealings.

Such a value can be put to zero at any time through reset button (M).

PHASE NR. 1 = SWITCHING THE MACHINE ON

Turn the main switch (A) into pos. 1. Before using the machine, wait until the adjusting temperature is reached. This is signalled by the extinction of the warning light (F). The display (H) turns on and the number of the currently selected program will appear.

PHASE NR. 2 = PROGRAMS

SELECTION

Push button (G) to select the number of the program.

PHASE NR. 3 = VARIABLES

PROGRAMMING

Through button (I) it is possible to look through the variables of the selected program, while through buttons (L) the memorized values can be modified. Once the value has been set, push the S button and then release it; the LED of the next function will light up. Set the value of the variables as previously described. To validate modifications, presso button (I) until the number of the program appears on the display. The <u>fan delay time after sealing</u> can be modified; there is not a LED indicating this variable which is shown with an "**r**" on the left display, while the right one shows the time which has been set. At the end of all variables to be adjusted, the display will show the code of the program just chosen (for example P1). N.B.: In case during programming the FC limit switch is being pressed, the unit quits the

scheduling, the selected program is executed and the display shows the number of the program.

PHASE NR. 4 = PERFORMANCE

Once all adjustments have been made, the machine is ready to start working.

In case of "ANOMALY" the display will show as follows:

E 2	Machine has been switched on when the (S) button was pressed. Release the button. In case the error signalling still persists, check the correct functioning of the button.
E 3	Working temperature hasn't been reached in the set time (10 min.). Check the correct positioning of the feeler. Check heater and fuses. Reset through (P) button.
E 4	Temperature is higher than 400°C or feeler has been interrupted. Switch the machine on to reset.
E 6	The limit switch to cut out security is broken (it is always closed). Check the correct functioning of the limit switch to cut out security, then switch the machine off and on again.
	Hood not in proper position when switching machine on. Press emergency button to lift hood. Once it has been lifted, signalling will disappear.

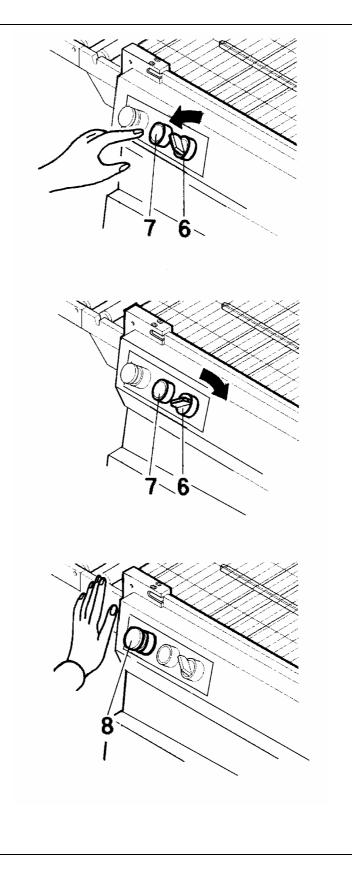
The machine can be operated with a manual as well as with an automatic cycles.

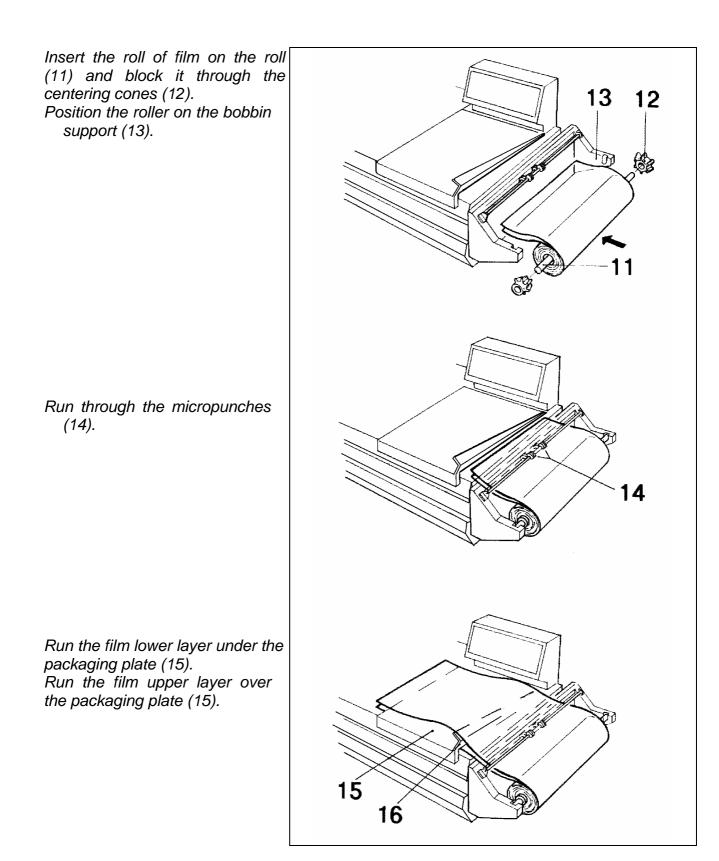
To carry out only one operating cycle rotate the selector (6) to the MANUAL-position and press the start button (7).

To operate the automatic cycle rotate the selector (6) to the AUTOMATIC position and press the start button (7).

The machine is equipped with an <u>EMERGENCY BUTTON (8)</u> which blocks it immediately when pressed, bringing the sealing frame into start position.

The machine has also an automatic safety system on the welding frame which intervenes in case the lowering of the frame is hindered, bringing the frame back in the start position.





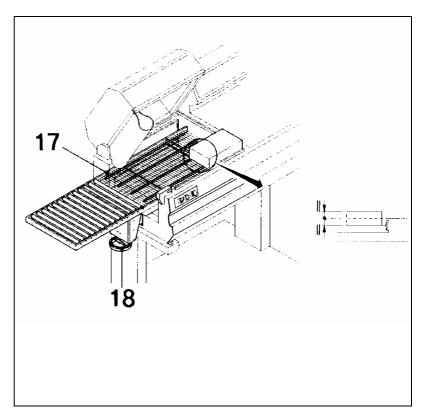
3.5. Conveyor belt adjustment

The bobbin support (13) and the packaging flat (15) must be adjusted according to the

width of the article

to be packaged, leaving a space of about 1-2 cm between the article and the welding edge.

Adjust the height of the conveyor belt (17) with the special handwheel (18).



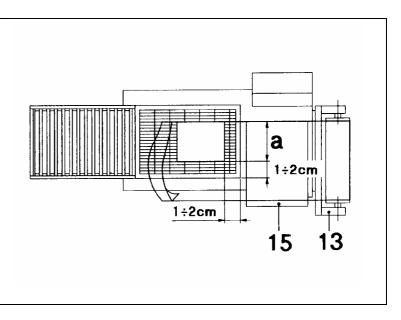
N.B.: In order to get a good packaging the conveyor belt should be positioned in such a way, that the film welding is made

at half the packaging height.

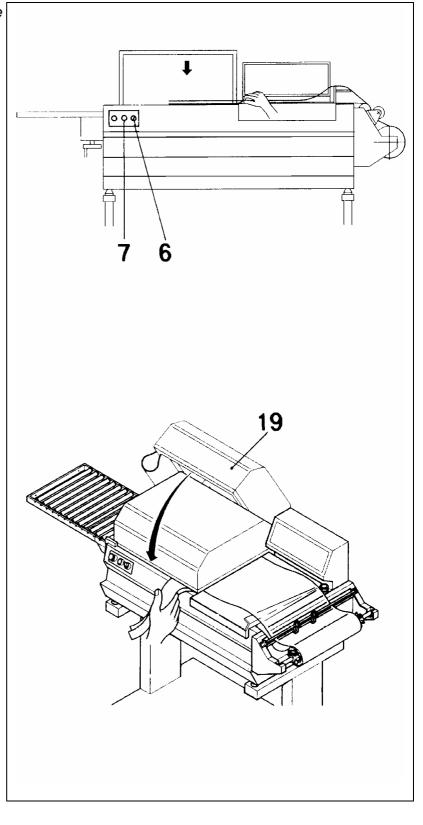
3.6. Bobbins support and packaging flat adjustment

The bobbin support (13) and the packaging flat (15) must be adjusted according to the width of the article

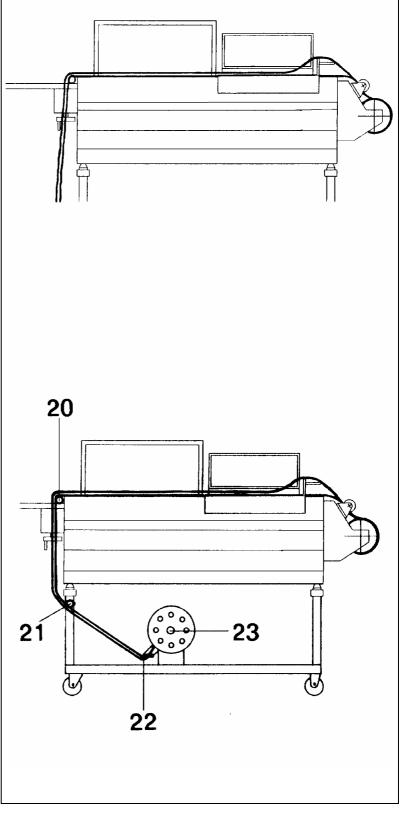
to be packaged, leaving a space of about 1-2 cm between the article and the welding edge.



To carry out the 1[^] welding move the film, as shown in the figure. Rotate the selector (6) to MANUAL-position and press the start button (7).



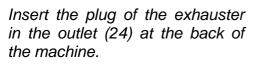
The transparent bell (19) will be lowered automatically and carry out the 1^ welding on the left side of the film. Carry out a number of cycles sufficient to make a strip of scrap film.

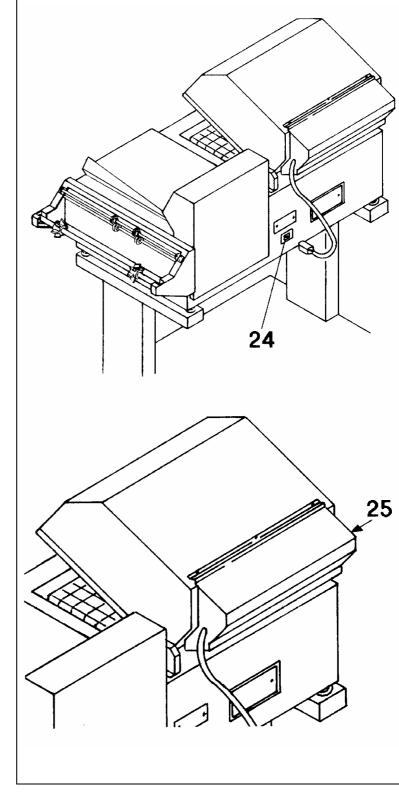


Guide this film strip around the transmission rolls and the driving rolls and couple it with the coiler (23).

The machine is now ready to start the packaging.

3.9. Connection and start of smoke exhauster (where expected)

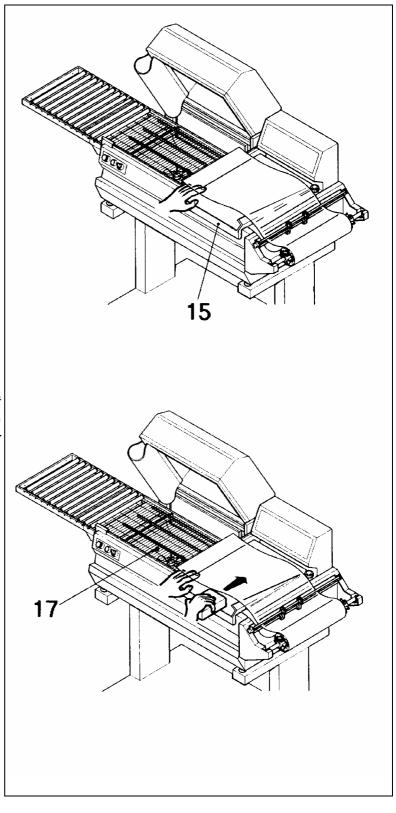




Press the button (25) at the back of the exhauster.

3.10. Introduction of the product to be packaged

Lift the film edge on the packaging flat (15) with your left hand.



Introduce the product with your right hand in the film and move if to the left until it settles on the conveyor belt (17)

leaving about 1-2 cm space between the product and the outer edge of the welding frame in order to enable the air flow for the shrink-wrapping.

3.11. Packaging

Press the start button (7). The transparent bell (19) will be lowered automatically to make the cutting, the welding, and if selected the shrink-wrapping of the packaging.

When the bell opens again, the packaging will be shifted to the roller way (26), so that the welding area will be free another cycle. If the machine is in an automatic cycle-position, it will start a new packaging cycle at the end of the set time pause.

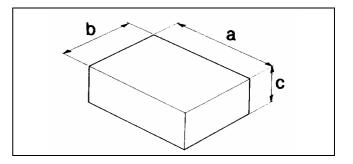
Press the start button (7). The transparent bell (19) will be lowered automatically to make 19 the cutting, the welding, and if selected the shrinkwrapping of the packaging. 26

When the bell opens again, the packaging will be shifted to the roller way (26), so that the welding area will be free for another cycle. If the machine is in an automatic cycle-position, it will start a new packaging cycle at the end of the set time pause.

4.1. Max. packing sizes

Do not carry out packaging with a surface which is the same as the inner size of the welding frame. Leave at least 1-2 cm compared with the inner perimeter of the bell. Do not carry out shrink-wrapping on light-weight products as the ventilation could lift them continuously inside the bell.

a = mm 500 b = mm 380 c = mm 250



N.B. : max. dimensions shown on above scheme are referring to the max. dimension of the single package.

Refer to chapter 5.2. to get max. dimension of package ($b \times c$); the addition of (b + c) is equal to film roll width 100 mm.

4.2. Machine operation conditions



The products listed below must absolutely not to be wrapped to avoid damages to the machine and seroius injuries to the operatorin charge:

Wet products, unstable products, liquids of any kind and density in fragile containers, flammable materials, explosive materials, pressurised gas cylinder of any kind, bulk and volatile powders, bulk materials with grain size smaller than the holes of the reticulated plate, any materials and products not listed but which might harm operator and cause damages to the machine.

4.3. Items which must not be packaged

The products listed below must absolutely not to be wrapped to avoid damages to the machine and seroius injuries to the operator in charge:



Wet products, unstable products, liquids of any kind and density in fragile containers, flammable materials, explosive materials, pressurised gas cylinder of any kind, bulk and volatile powders, bulk materials with grain size smaller than the holes of the reticulated plate, any materials and products not listed but which might harm operator and cause damages to the machine.

5.1. Films to be used

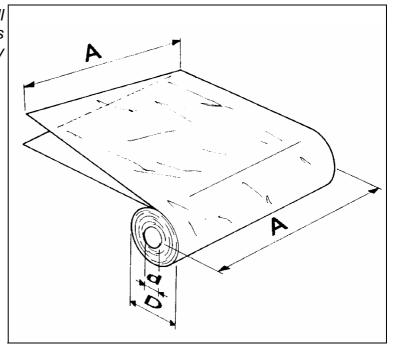
Machine can work with all shrinkwrapping films with thickness 15-50 micron manufactured by "MINIPACK-TORRE S.p.A.".

The special features of our films (which may be customized with drawings and text) assure their outstanding reliability, with regard both to compliance with laws in force and to an excellent machine performance.

A=mm 600 MAX D=mm 300 MAX d=mm 77

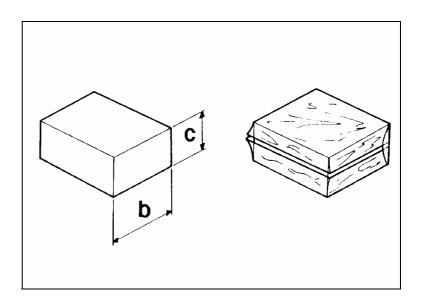
Machine can work with all shrinkwrapping films with thickness micron 15-50 manufactured by "MINIPACK-TORRE S.p.A.". The special features of our films (which may be customized with drawings and text) assure their outstanding reliability, with regard both to compliance with laws in force and to an excellent machine performance.

A=mm 600 MAX D=mm 300 MAX d=mm 77



5.2. Calculation of band A

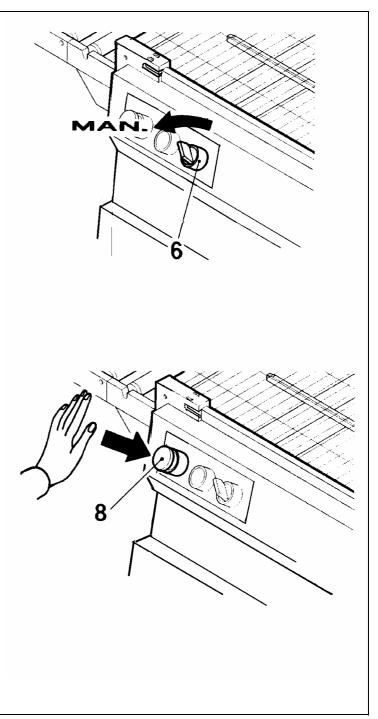
Band A = b + c + 100 mm



<u>THE MACHINE CAN NOT BE USED BY UNTRAINED PERSONNEL!</u> N.B. Before starting the automatic cycle, make sure that all necessary adjustments have been made.

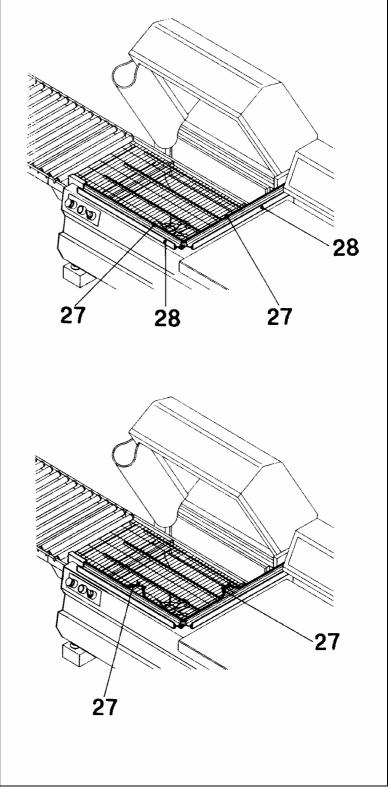
All adjustments of the machine will be made by the selector (6) in manual position.

In case of blocking of the machine or in order to stop it during the automatic cycle press the **EMERGENCY BUTTON (8)**.





Do not touch the sealing blade (27) soon after sealing by reaching beyond the safety guard (28). Danger of burns due to residual heat on the sealing blade.





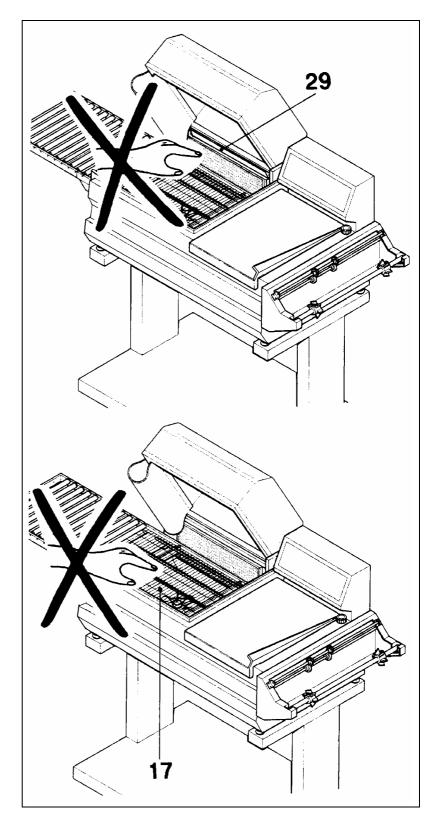
Do not keep on sealing in case the sealing blade breaks (27) but replace it at once.



Do not touch the chamber closing flap (29) during warmup function. Danger of burns.



Do not touch the conveyor belt (17) when it is in motion.



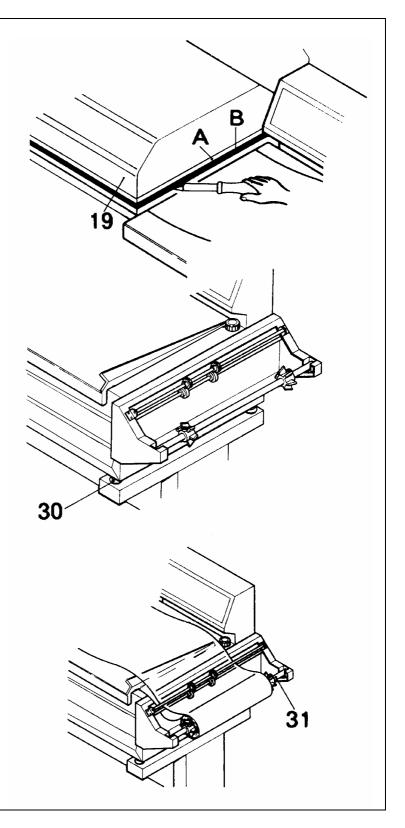
In case of interruption of the power supply when the machine is working and the bell (19) is closed, intervene immediately disassembling the bell, lever it between profile (A) and frame (B).

Make sure that the rubber feet (30) of machine are lodged in the holes of the wheeled stand.

In case of interruption of the power supply when the machine is working and the bell (19) is closed, intervene immediately disassembling the bell, lever it between profile (A) and frame (B).

Make sure that the rubber feet (30) of machine are lodged in the holes of the wheeled stand.

Make sure that the roll of film is properly lodget (31).



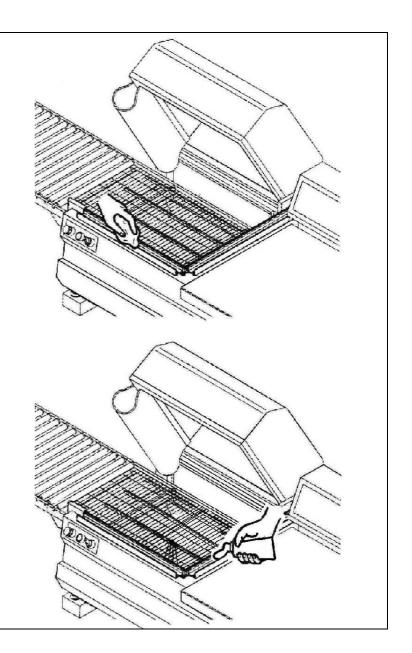
7.1. Precautions for ordinary maintenance interventions

BEFORE PROCEEDING TO MAINTENANCE, SWITCH OFF THE MACHINE AND DISCONNECT IT BY OPERATING THE MASTER SWITCH.

7.2. Cleaning of sealing blade

Using a dry cloth, wipe off the residues clinging to the sealing blade: do this at once after sealing since the residues are easier to remove when still warm.

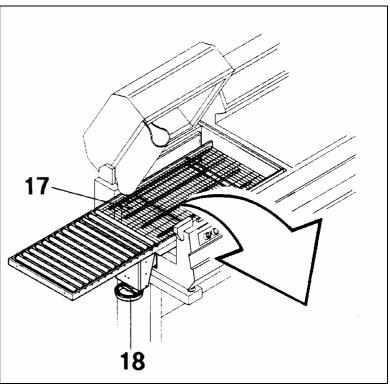
Periodically lubrificate the sealing blade with the grease supplied with the machine.



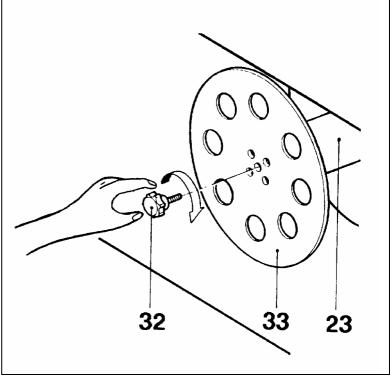
7.3. Plastic film removal

Wait for the machine to cool down completely before removing any scraps stuck to the hot parts of the machine (e.g., on the flaps of the heat chamber).

In case it is necessary to clean the lower bell (housing of the fan), remove the conveyor belt (17) turning the handwheel (18) and remove the pieces which are fallen inside the bell. For a more careful cleaning of the lower bell we recommend to use a vacuum cleaner.



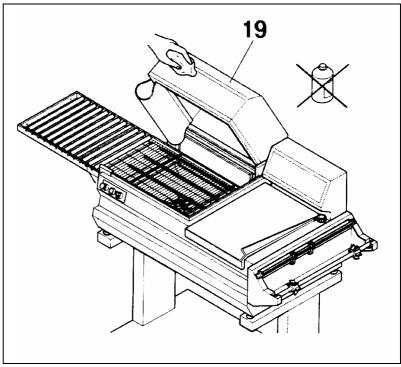
When the bobbin of the automatic coiler is full, remove the film by unscrewing the knob (32) and taking away the disk (33).



7.4. Machine cleaning

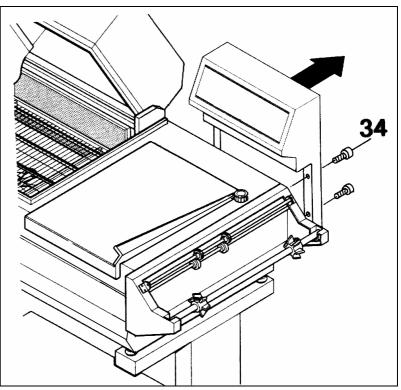
Use a cloth moistened with water for the cleaning of the machine. For cleaning the bell (19) nside and outside we recommend to use a normal detergent for glass cleaning.

Do not use any detergents with solvents which could damage the bell (19) and reduce the transparency.



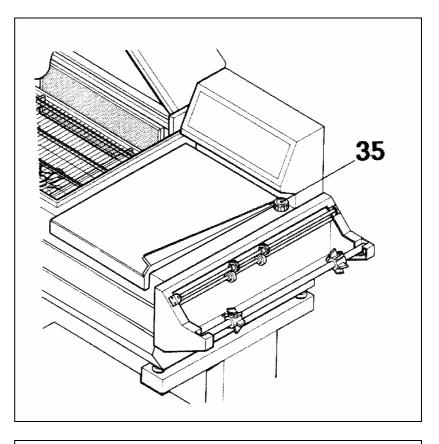
If the machine works in a dusty environment it is necessary to clean it more frequently inside as well as outside.

It is especially recommended to vacuum-clean the dust which settles on the interior electrical components. To open the switch box again remove the 4 fastening screws (34).

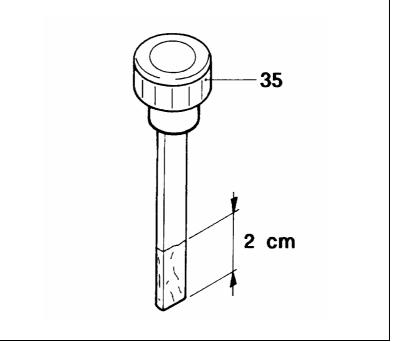


7.5. Control of cooling liquid

Check the level of the cooling liquid by unscrewing the cap (35).

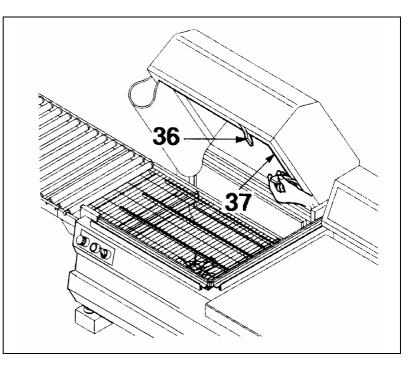


Check that the rod is wetted by the liquid at about 2 cm height, otherwise add a mixture of water and antifreeze liquid (10%).



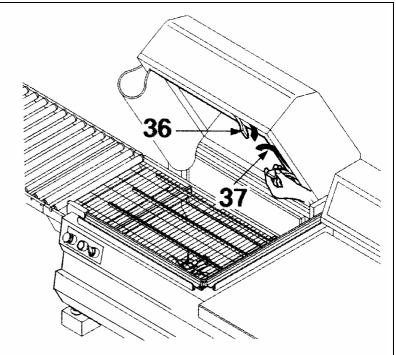
7.6. Rubber and Teflon replacement

When the Teflon-strikers are worn out, replace them with spare parts, paying attention that the application is linear and even. Before applying the Teflon self-adhesive strip clean the rubber part (37) with a detergent.



If also the rubber (37) is damaged, replace it as follows:

- 1. remove the old rubber
- 2. clean the housing of same
- 3. apply some drips of glue in the housing
- *4. insert the new rubber in a linear way*
- 5. clean the rubber with a detergent apply the selfadhesive Teflon-strip



7.7. Adjustment of the cams

It is necessary to disassemble the panel (38) at the back of the machine in order to get access to the cams.

There are 4 cams which control:

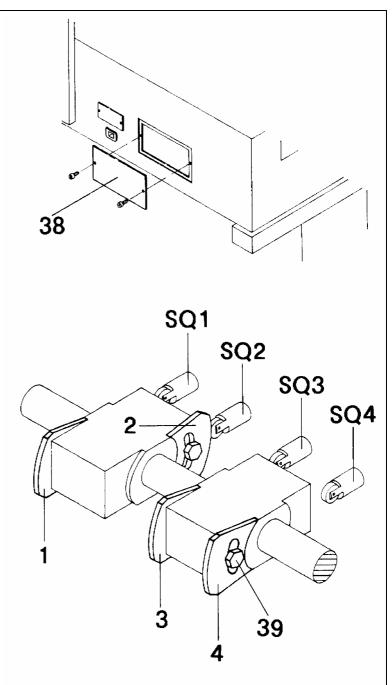
The lowering of the upper bell and thus the pressure of same on the welding blade.

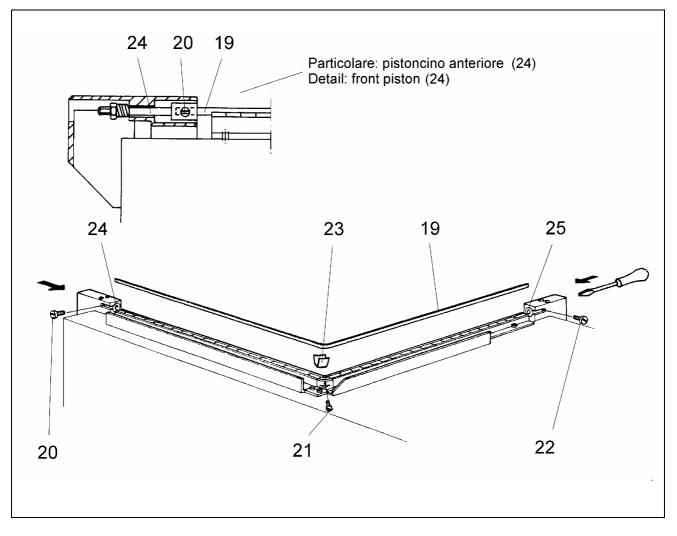
The maximum opening of the upper bell and the start of the conveyor belt.

Cutting out the operating of the safety device on the welding frame (~5 mm before the welding).

The disjunction of the upper bell immediately after welding.

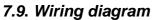
The adjustment is made by loosening the screw (39) and rotating the cam in the right position. Attention: For the adjustment of the cams, shift them gradually.

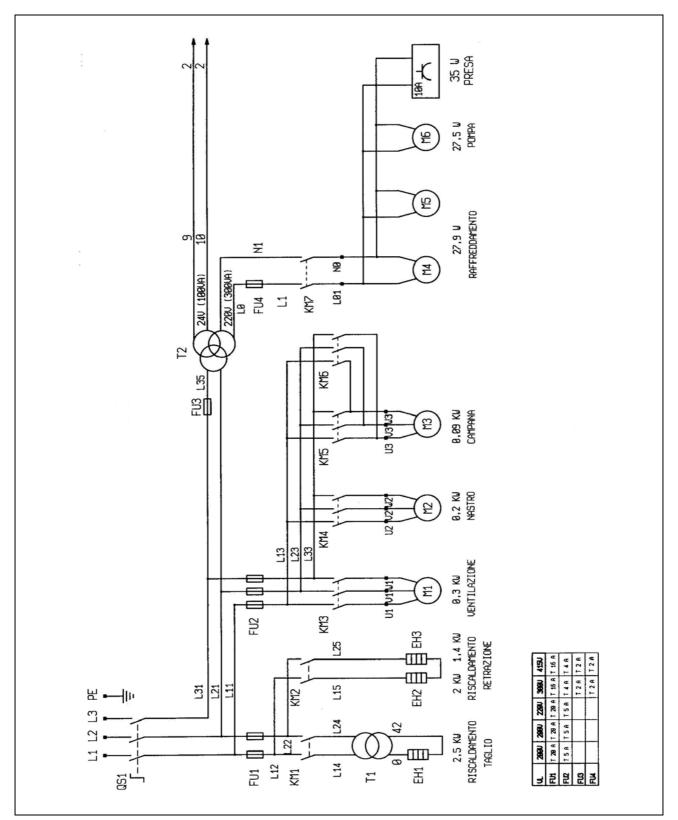


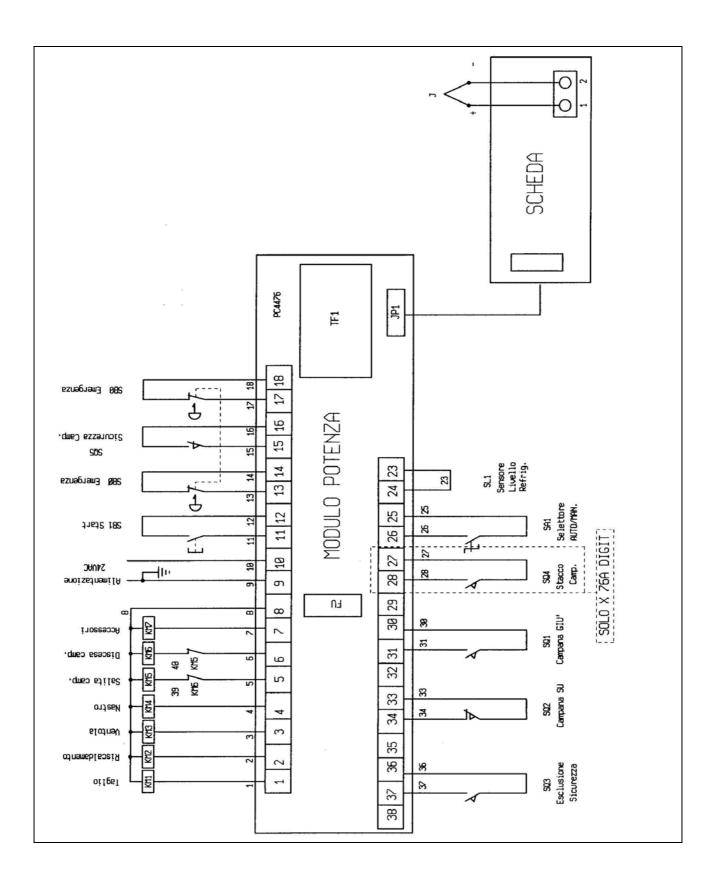


To replace the sealing blade (19) follow this procedure:

- Disconnect power to the machine
- Unscrew the three screws (20), (21), (22)
- Remove the old sealing blade
- Clean the housing and if necessary replace the insulating teflon (23) of the central clamp
- Insert the new sealing blade starting from the central clamp and tighten the screw (21)
- Trim the new sealing blade according to the holes of the pistons (24) and (25)
- Complete the insertion if the sealing blade in the whole housing
- Push the rear piston completely onwards (25) towards the sealing blade to make it enter the hole of the piston itself and then tighten screw (22)
- Push the front piston (24) completely onwards towards the sealing blade to make it enter the hole of the piston itself and then tighten screw (20)
- Trim the teflon projecting from the central clamp
- Make sure that the sealing blade (19) is well positioned and in tension







7.10. Key wiring diagram

- QS1 Main switch FU Fuse FU1 Fuse FU2 Fuse FU3 Fuse FU4 Fuse
- EH1 Cutting resistance
- EH2 Oven resistors
- EH3 Oven resistors
 - M1 Fan motor

- M5 Ventilator motor
- M6 Pump motor
- T1 Cut transformer
- T2 Auxiliary transformer
- SQ1 Bell descent limit switch
- SQ2 Bell rise limit switch
- SQ3 Safety device cutting out limit switch
- SQ4 Bell disjunction limit switch
- M2 Bell motor

M3 Belt motor

- SQ5 Safety limit switch KM1 Cutting contactor
 - KM2 Oven resistors' contactor
- M4 Ventilator motor

7.11. Spare parts

KM3 Fan contactor

- KM4 Belt contactor
- KM5 Bell descent contactor
- KM6 Bell rise contactor
- SBO Emergency button
- SB1 Start button
- SA1 Manual selector

	Code	Item description
01	S02A0404	Teflon liner
02	FE385602	Sealing blade
03	FM350009	Upper neoprene rubber
04	S0K00306	Complete central holdfast
05	FM080037	Upper hood
06	FM170002	Torsion bar
07	S0K00604	Complete slotted microperforator
<i>0</i> 8	S0K00605	Complete needles microperforator
09	S02A0602	Roll holder complete tube
10	FM830003	Fan
11	FM195012	Glass wool panel

7.12. Disassembling, demolition and elimination of residuals



ATTENTION!

All operations about disassembling and demolition must be done by qualified personnel with mechanical and electrical expertise required to work in security conditions.

Proceed as follows:

- disconnect machine from power mains 1.
- 2. disassemble components

All wastes must be treared, eliminated or recycled according to their classification and to the procedures in force established by the laws in force in the country the equipment has been installed.

8.1. Certificate of guarantee

Model and Serial Number:

Equipment manufactured by minipack-torre *is* warranted to be free of defects in parts and craftsmanship for a period of one (1) year from the date of installation, or 15 months from the invoice, whichever occurs first, minipack-america's exclusive obligation under this warranty is limited to repairing or, at its option, replacing any minipack-torre part that is determined by minipack-america to be defective. The warranty is for the original purchaser of new equipment.

Component subsystems manufactured by minipack-torre carry the warranty as stated herein. The warranty does not apply to subsystem component parts which are not manufactured by minipack-torre. Subsystem component parts not manufactured by minipack-torre shall be subject to any warranty of its manufacturer.

This warranty shall not apply to damage resulting from installation, modification, or repair by anyone other than a minipack-america authorized distributor/dealer. Nor shall it apply to any equipment which has been subject to accident, alterations, neglect, misuse or improper maintenance.

In the event of highly corrosive or high moisture applications, special protective coatings or stainless steel construction might be needed.

minipack-torre and minipack-america shall not be liable if minipack-torre equipment or components are used with accessory equipment not manufactured by minipack-torre.

Representations and/or warranties, by whomever made (even if made by minipack-america authorized distributors/dealers), which are inconsistent with the terms herein shall not constitute a term of the minipack-torre or minipack-america express warranty and shall not be binding on minipack-torre or minipack-america.

THE LIMITED WARRANTY SET FORTH ABOVE IS THE SOLE AND ENTIRE WARRANTY PERTAINING, TO THE PRODUCT AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES OF ANY NATURE WHATSOEVER, WHETHER EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY TYPE, MANNER OR DEGREE, AND ANY LIABILITY BY MINIPACK-TORRE OR MINIPACK-AMERICA FOR SUCH INCIDENTAL OR CONSEQUENTIAL DAMAGES IS HEREBY DISCLAIMED. Some states do not allow this exclusion or limitation of warranties and/or damages, so the above limitations and/or exclusions might not be applicable to you. This warranty gives you specific legal rights, and you might also have other rights that vary from state to state.