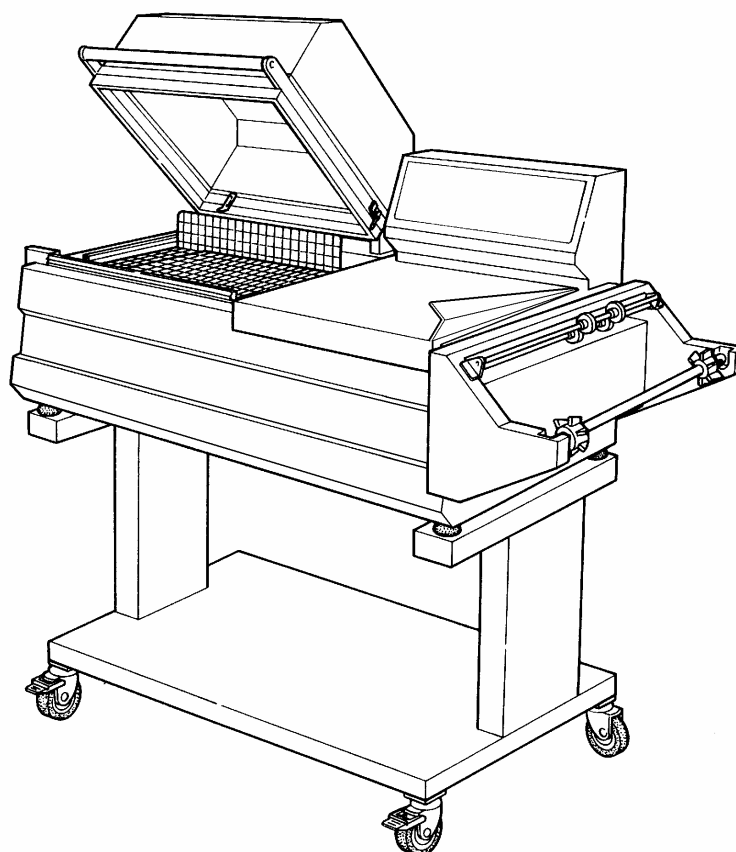




FM75/76 Digit

Instruction manual



Before using the machine please carefully read the instructions



DOC. N. FM111021
REV. 0
ED. 01.2001

Index

Chapter 1. Foreword	
1.1. Introduction.....	1-1
1.2. Performances of packaging machine.....	1-1
1.3. Machine identification.....	1-1
1.4. Weight and dimensions of packed machine.....	1-3
1.5. Machine weight and dimensions.....	1-3
Chapter 2. Machine installation	
2.1. Transport and positioning.....	2-1
2.2. Environmental conditions.....	2-5
2.3. Electrical connections.....	2-7
Chapter 3. Machine adjustment and setting up	
3.1. Adjustment.....	3-1
3.2. Film roll insertion.....	3-9
3.3. Reticulated plate installation.....	3-9
3.4. Packaging plate adjustment.....	3-11
3.5. Execution of 1 st film sealing.....	3-11
3.6. Introducing the object to be wrapped.....	3-13
3.7. Making up.....	3-13
Chapter 4. Limits and conditions in the use of machine	
4.1. Max. packing sizes.....	4-1
4.2. Items which must not be packed.....	4-1
Chapter 5. Film features	
5.1. Films to be used.....	5-1
5.2. Band A calculation.....	5-1
Chapter 6. Safety standards	
6.1 Warnings.....	6-1
Chapter 7. Ordinary maintenance	
7.1. Precautions for ordinary maintenance interventions.....	7-1
7.2. Sealing blade cleaning.....	7-1
7.3. Plastic film and other scrap removal.....	7-3
7.4. Machine cleaning.....	7-3
7.5. Rubber and teflon replacement.....	7-5
7.6. Changing the sealing wire.....	7-7
7.7. Wiring diagram.....	7-9
7.8. Spare parts.....	7-11
7.9. Disassembling, demolition and elimination of residuals..	7-13
Chapter 8. Guarantee	
8.1. Certificate of guarantee.....	8-1
8.2. Guarantee conditions.....	8-1
9.1. EC declaration of conformity.....	9-1

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 unique in its kind and has achieved worldwide success with more than 50000 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 underlining 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 300 packages/hour.

1.3. Machine identification

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.



1.4. Weight and dimensions of packed machine

FM75

a = mm 1500

b = mm 770

c = mm 750

Weight = Kg 115

Gewicht = Kg 115

Poids = Kg 115

Peso = Kg 115

FM76

a = mm 1250

b = mm 950

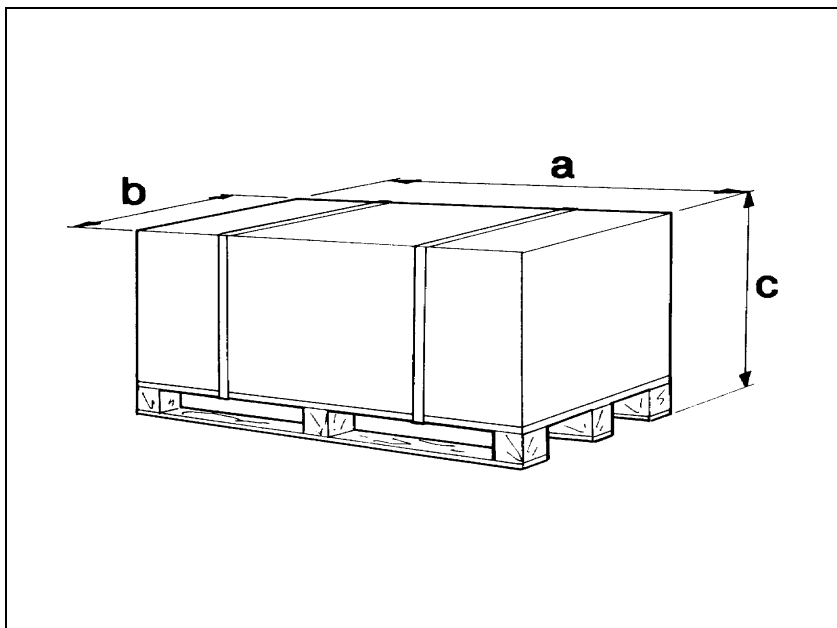
c = mm 820

Weight = Kg 148

Gewicht = Kg 148

Poids = Kg 148

Peso = Kg 148



1.5. Machine weight and dimensions

FM75

a = mm 1210

b = mm 680

c = mm 1360

Weight = Kg 93

Gewicht = Kg 93

Poids = Kg 93

Peso = Kg 93

FM76

a = mm 1390

b = mm 800

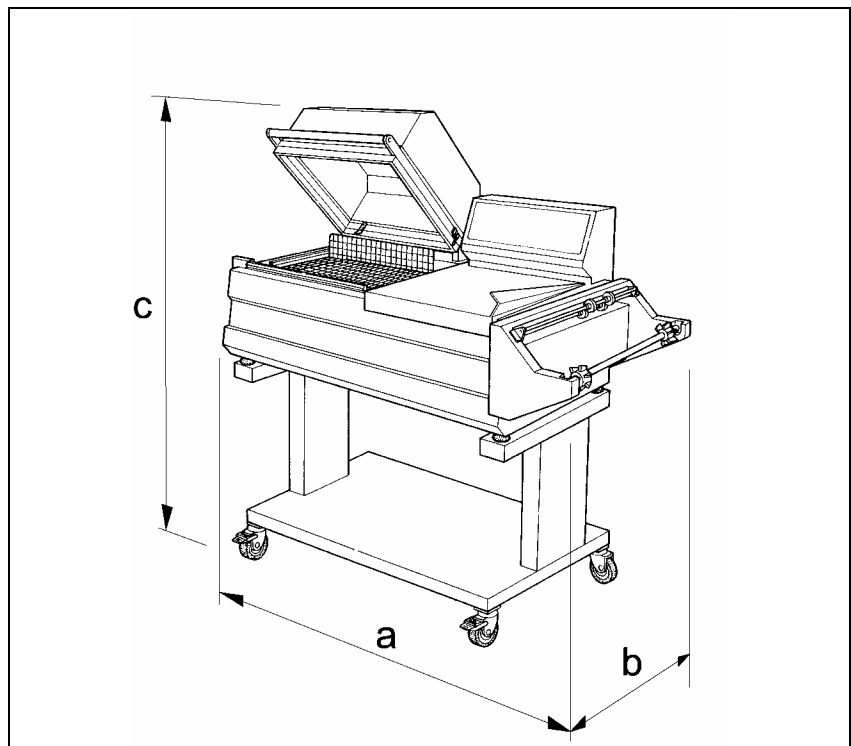
c = mm 1460

Weight = Kg 116

Gewicht = Kg 116

Poids = Kg 116

Peso = Kg 116

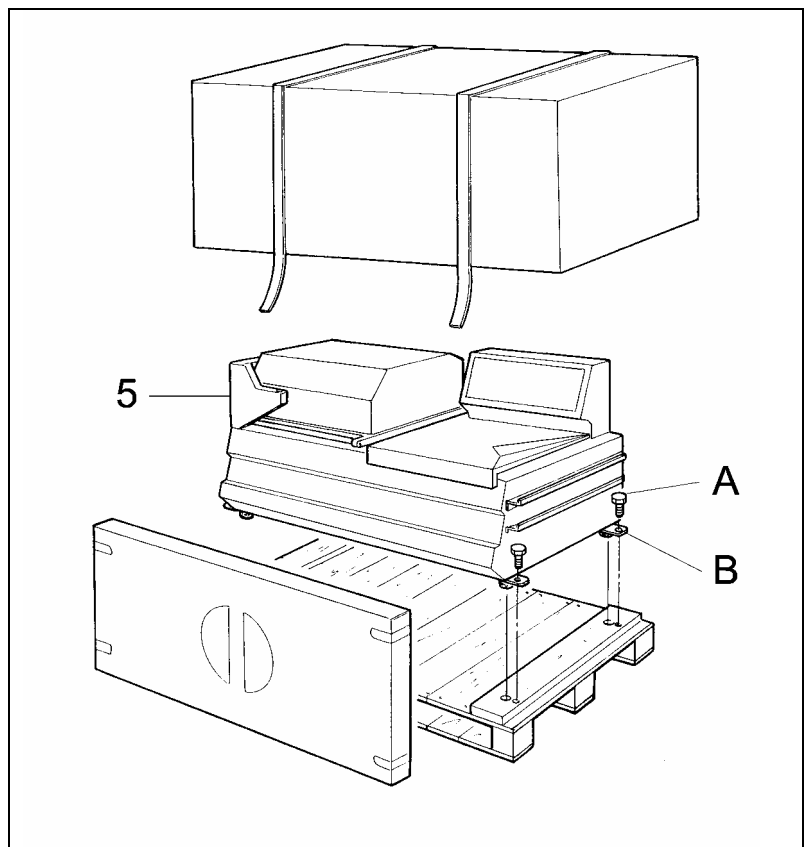
**Chapter2. Machine installation****2.1. Transport and positioning**

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

Cut strap with scissors and remove the cardboard.

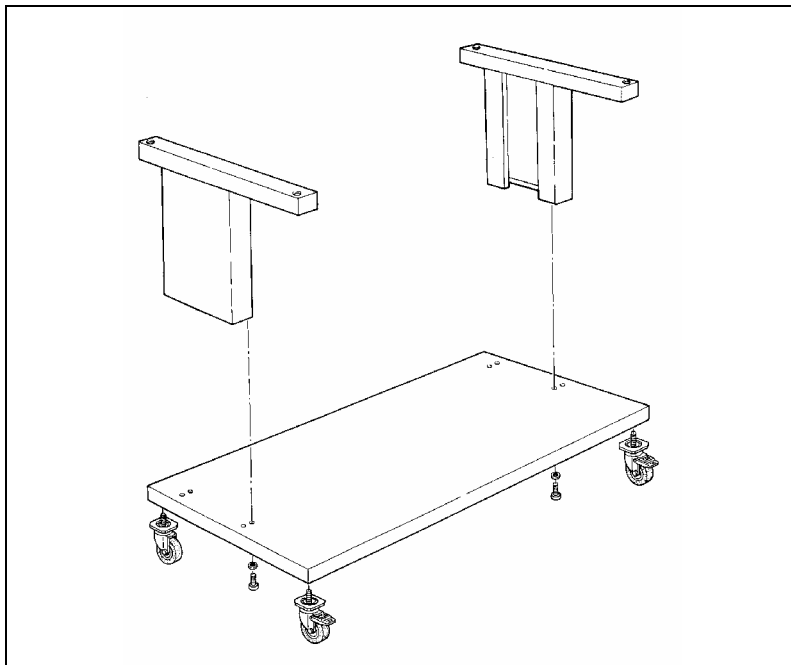
Remove the cardboard containing the trolley.

*Take away the bobbin support (5).
Unscrew the 4 fastening screws (A) of the pallet, putting the 4 plates back inside the machine (B).*



Assemble the trolley

Lift the machine and place it on its trolley, paying attention that the 4 supports are properly inserted in their housings. Remove the upper hood by cutting the strings.

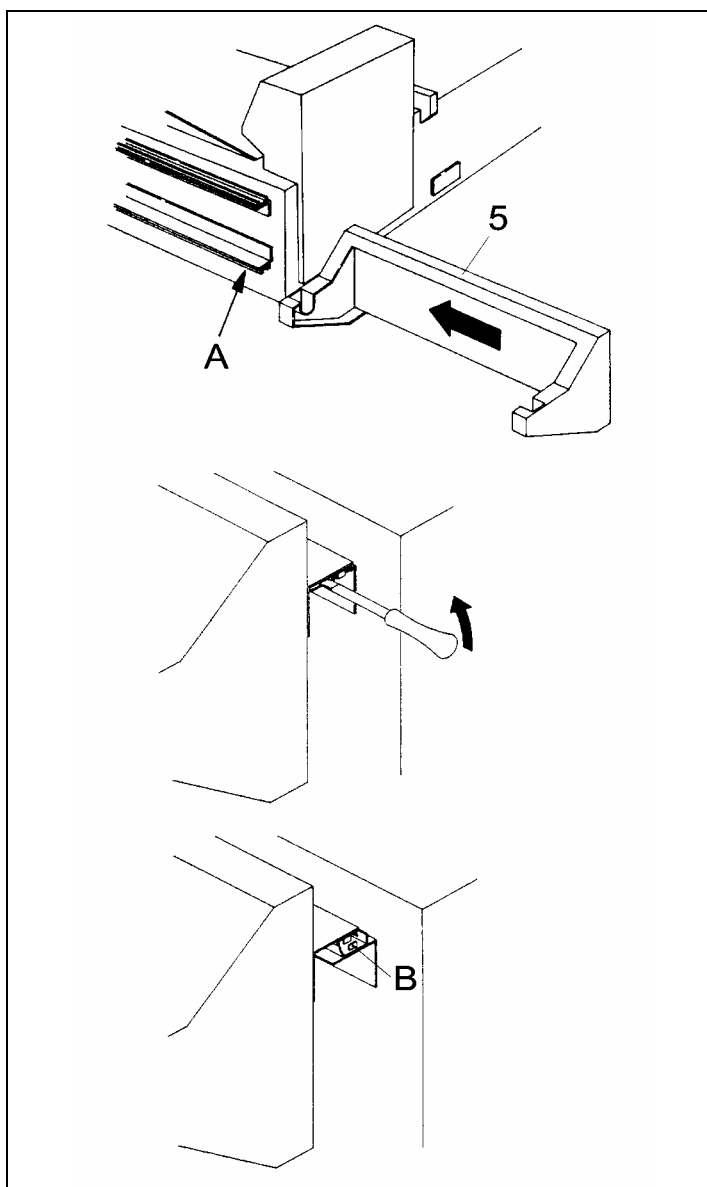


2.1. Transport and positioning

To place the roll support (5) follow the instructions below:

Remove the adhesive tape (A) fixing the guides trolley.

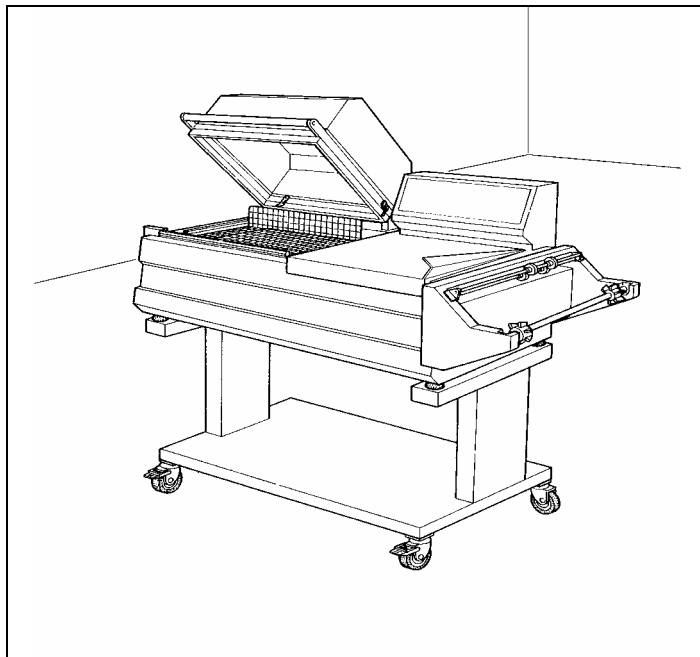
Place the roll support (5) on the proper guides.



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

2.2. Environmental conditions

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



- Temperature from + 5°C to + 40°C
- Relative humidity from 30% to 90%, without condensation

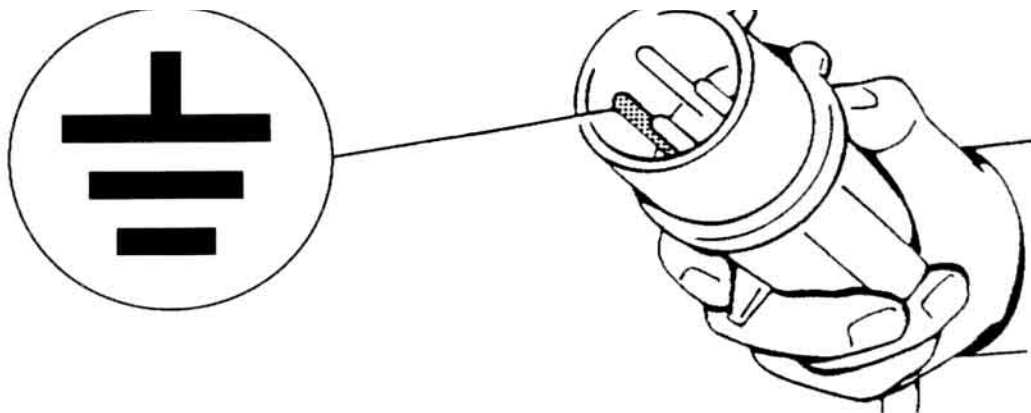
Machine safety factor = IP20

The aerial noise made by the machine is lower than 70 dB

2.3. Electrical connections

OBSERVE HEALTH AND SAFETY REGULATIONS!

GROUNDING OF THE UNIT IS OBLIGATORY!



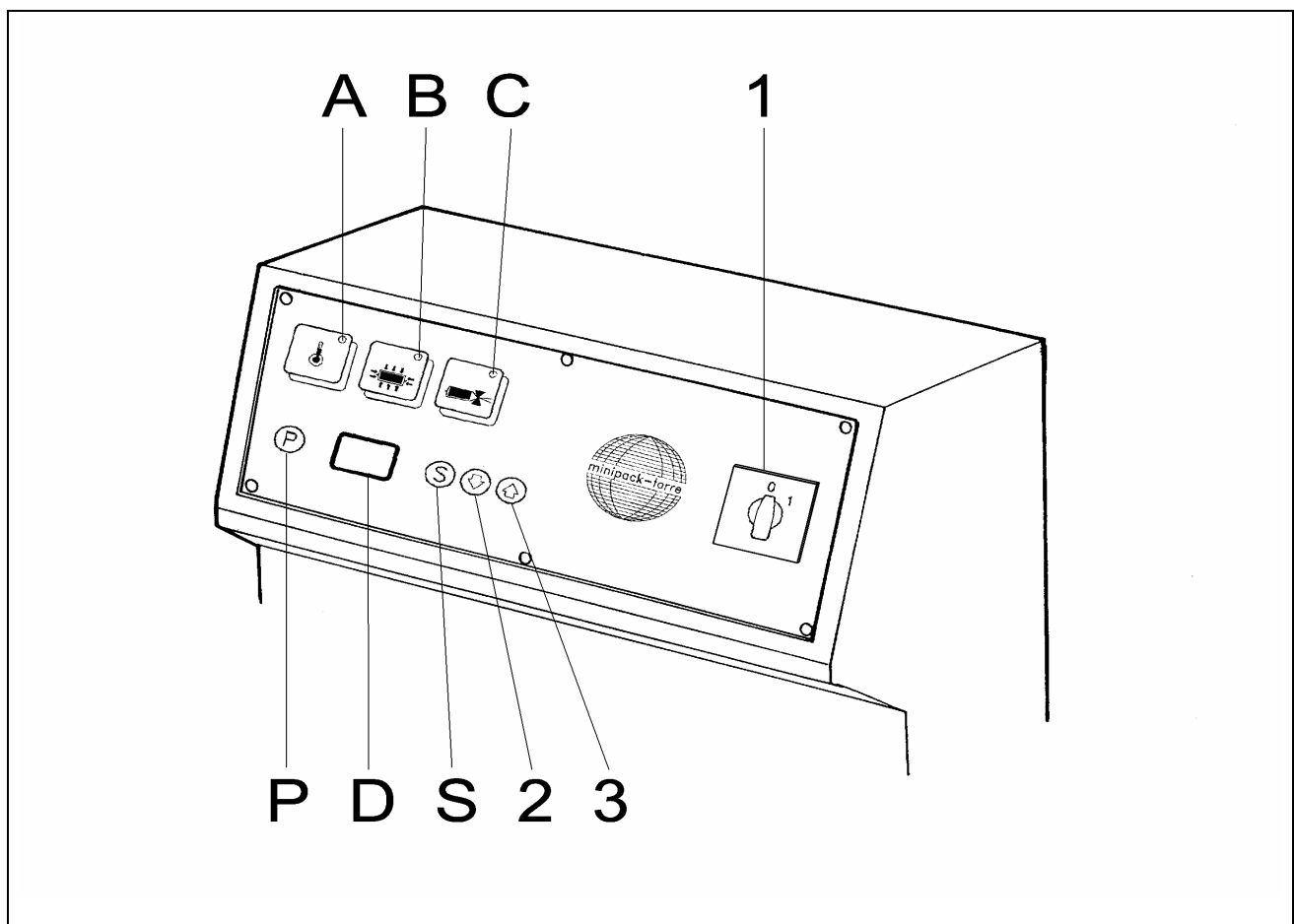
Before executing electrical connections, make sure the mains voltage matches the one on the plate on machine rear and that the earthing contact complies with the safety rules in force. In case of doubts about the mains voltage, contact the local public supply Company.



Chapter 3. Machine adjustment and setting up

3.1. Adjustment

- 1- Main switch
- 2- Adjusting button
- 3- Adjusting button
- A- Temperature warning light
- B- Shrinking warning light
- C- Sealing warning light
- P- Programs selection button
- D- Display
- S- Variables selection switch



3.1. Adjustment

ELECTRONIC BOARD FEATURES

The machine is equipped with 6 selectable 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 3 variables which can be modified:

Variable	Field	Field features
1. Temperature	00 ÷ 99	corresponds to 150.....348°C (2°C each point)-
2. Sealing	0 ÷ 2.2	(medium value 75)
3. Shrinking	0.0 ÷ 9.9	values expressed in seconds
4. Shrinking delay	0 ÷ 9	values expressed in seconds tenth-seconds values

PHASE NR. 1 = SWITCHING THE MACHINE ON

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

PHASE NR. 2 = PROGRAMS SELECTION

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

PHASE NR. 3 = VARIABLES PROGRAMMING

Through button (S) it is possible to look through the variables of the selected program, while through buttons (2) and (3) the memorized values can be modified. To validate modifications, press button (S) until the number of the program appears on the display. The fan delay time after sealing 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 1	Machine has been switched on when the hood was lowered. Lift the hood up.
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.

3.2. Film roll insertion

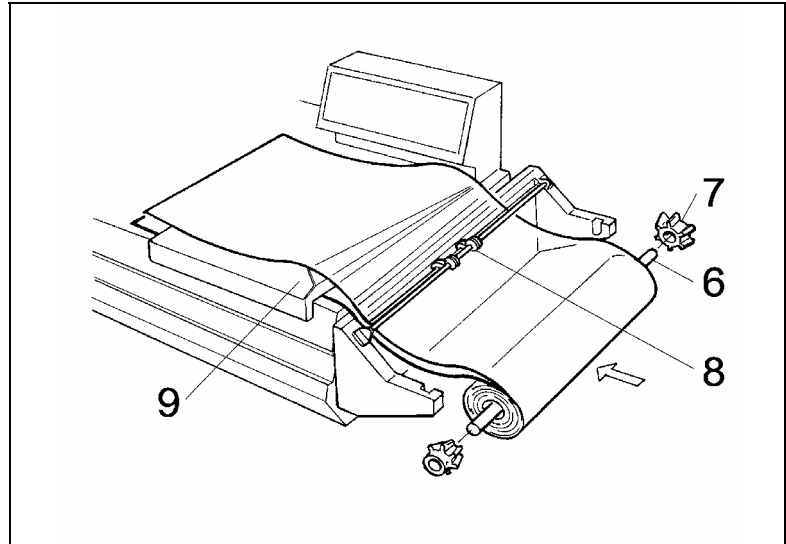
Insert the roll of film on the roller (6) and block it through the centering cones (7).

Position the roller on the film roll support.

Run through the micropunches (8).

Run the film lower layer under the packaging plate (9).

Run the film upper layer over the packaging plate (9).



3.3. Reticulated plate installation

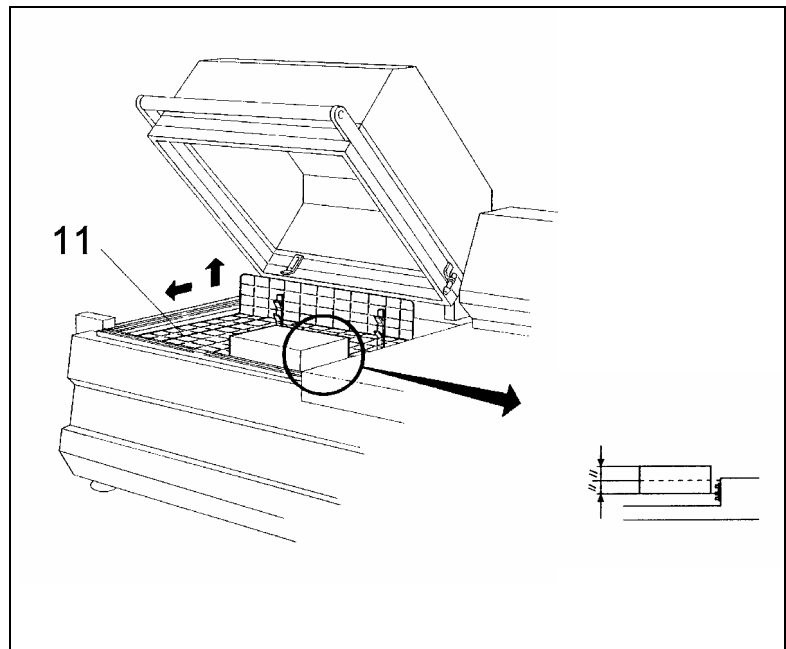
The reticulated plate (11) can be placed according to the height of the product to pack. To position it follow this procedure:

Pull the reticulated plate in direction of the arrows

Remove it from the stops

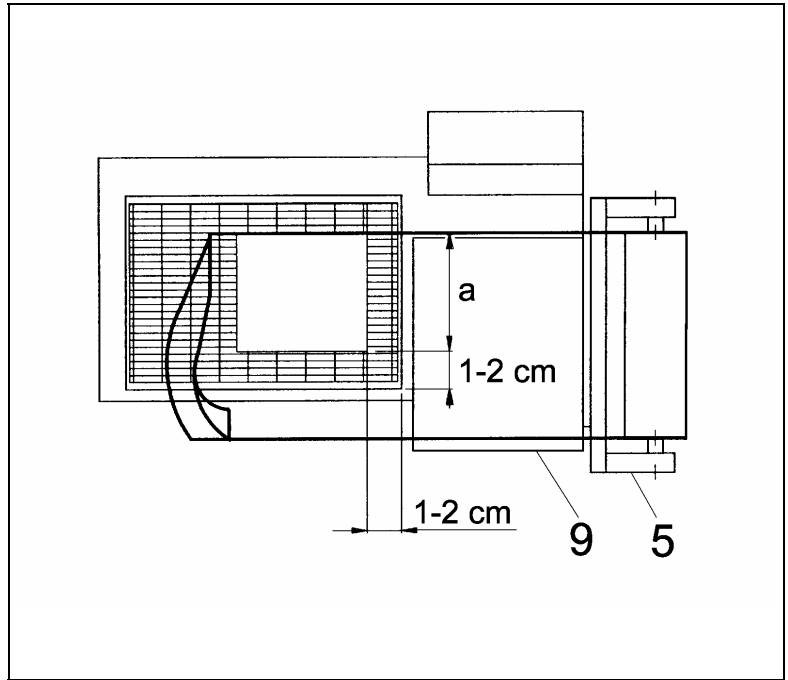
Position the plate on the stops at the required height

N.B.: For a proper packaging the reticulated plate must be positioned so that film sealing is at the half of the package height.



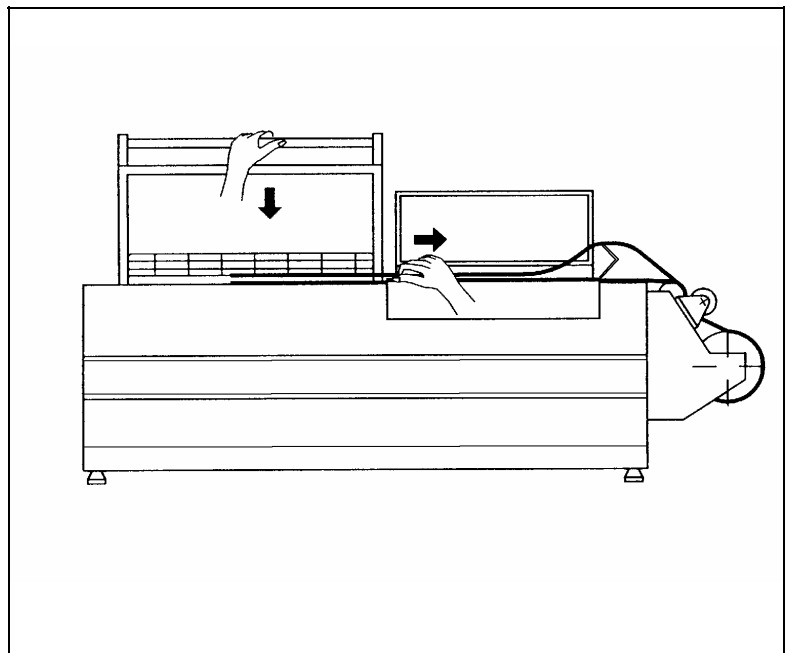
3.4. Bobbins support and packaging plate adjustment

The bobbin support (5) and the packaging plate (9) 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.



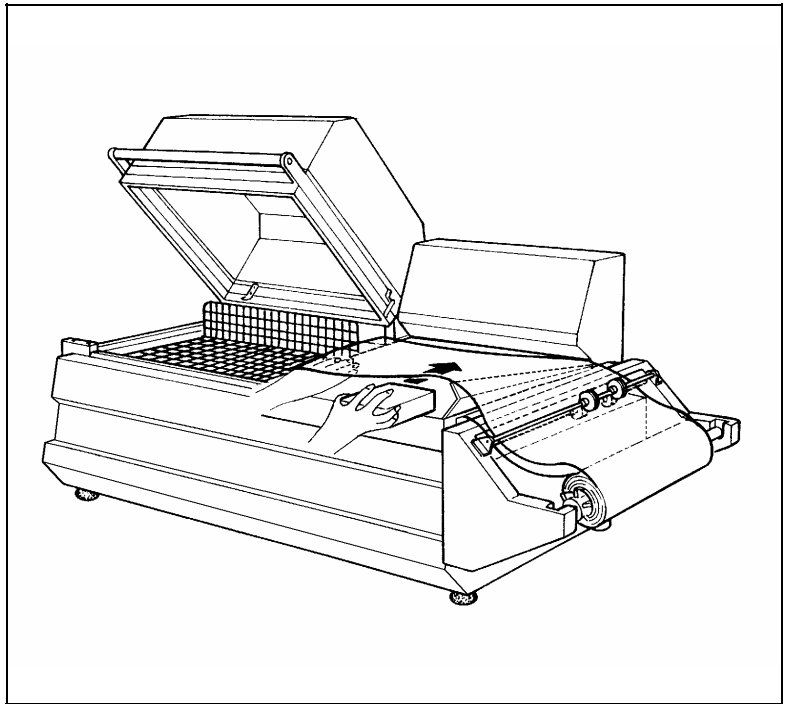
3.5. Execution of 1st film sealing

Place film as shown in the picture to carry out the first seal.
Lower the handle of the cover with your left hand and make a pressure of 10-15 Kg. Machine will automatically operate and the first seal will be carried out on the side of the film. With the right hand detach the film from the sealing blade. Film is now ready to carry out wrapping.



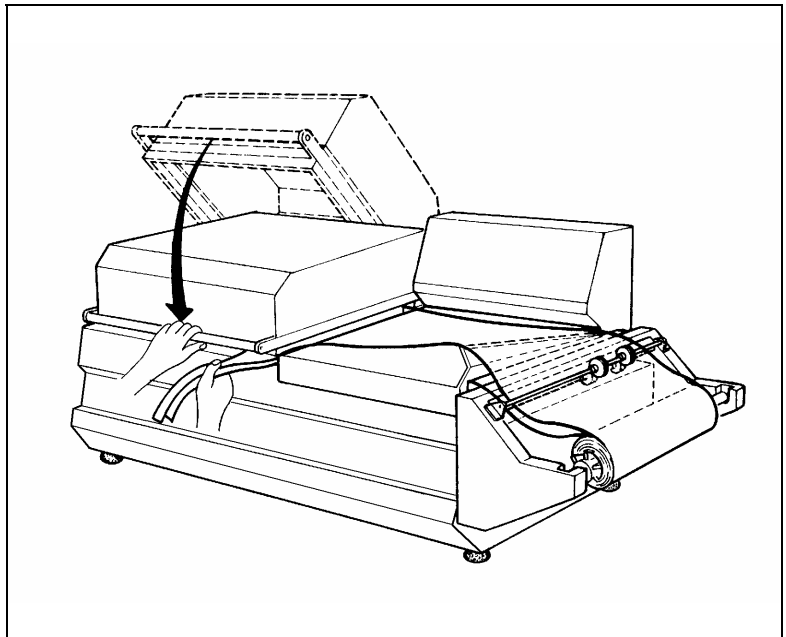
3.6. Introducing the object to be wrapped

With the left hand slide on the packaging plate the quantity of film necessary to contain the product to be packed. Introduce the product into the bag using the right hand and make it slide to the left until it is layed on the screen leaving a little space fo about 1-2 cm to allow the passage of air for shrinkwrapping.



3.7. Making up

By pushing the cover handle with a pressure of 10-15 Kg. the cover rests on the sealing blade; by pinching the film, it is automatically sealed on the open sides (right and front). In case you have selected the function "SEALING +SHRINKWRAPPING" you will see the film shrink onto the product. Slightly decrease the pressure on the cover handle to allow film detach from the sealing area on the inside. With the right and detach the film from the sealing blade towards the outside.



4.1. Max. packing sizes

FM75 Digit

a = mm 400

b = mm 250

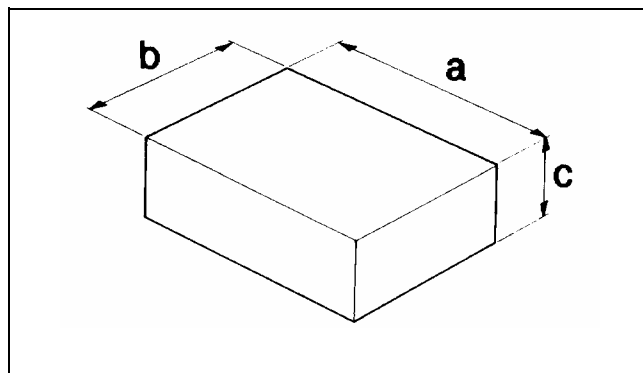
c = mm 200

FM76 Digit

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. Items which must not be packed

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



Wet and unstable products, liquids of any kind and density in fragile containers, flammable and 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.

FM75 Digit

A=mm 500 MAX

D=mm 300 MAX

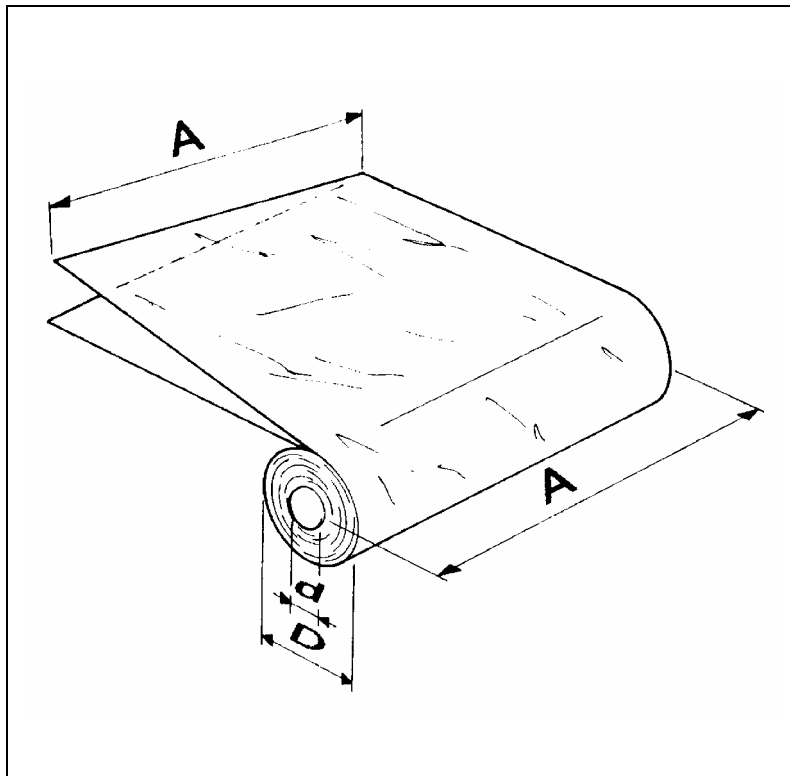
d=mm 77

FM76 Digit

A=mm 600 MAX

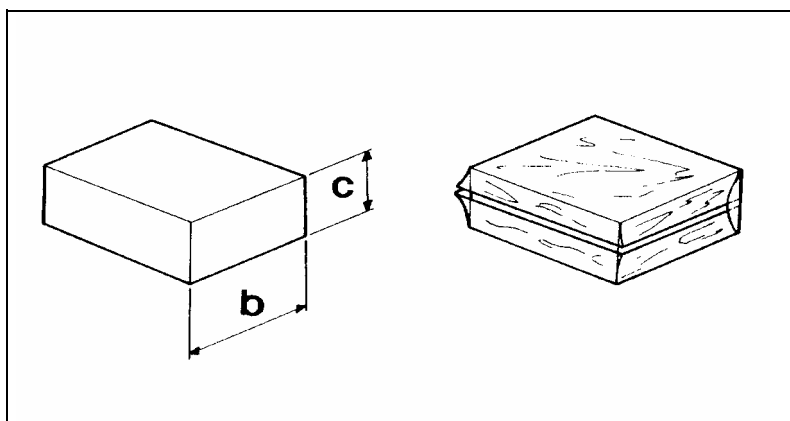
D=mm 300 MAX

d=mm 77



5.2. Band A calculation

Band A = b + c + 100mm



Chapter 6. Safety standards

6.1. Warnings



Do not touch the sealing blade (13) soon after sealing by reaching beyond the safety guard (12).

Danger of burns due to residual heat on the sealing blade.



Do not keep on sealing in case the sealing blade breaks (13).

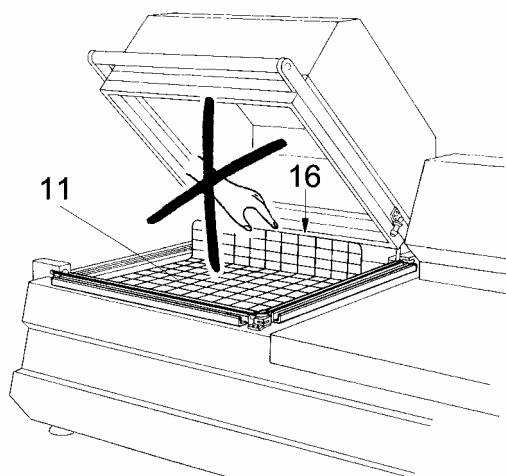
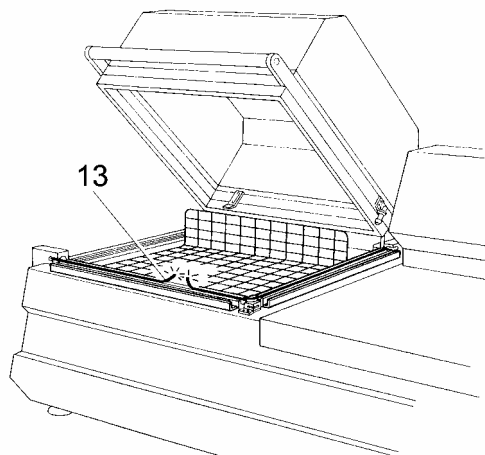
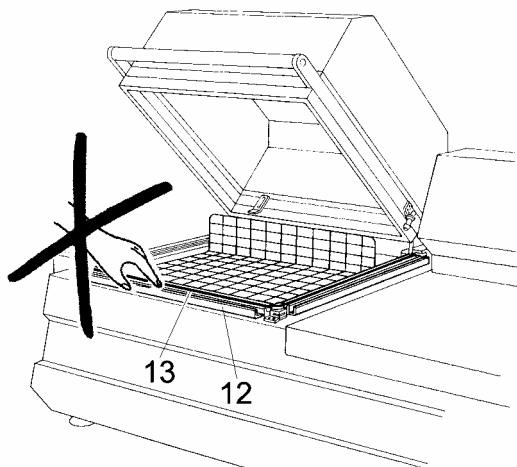
Replace it at once.



Do not touch the chamber closing flap (16) during warm-up function.

Danger of burns.

Do not touch the fan while moving or using the machine without the reticulated plate (11).



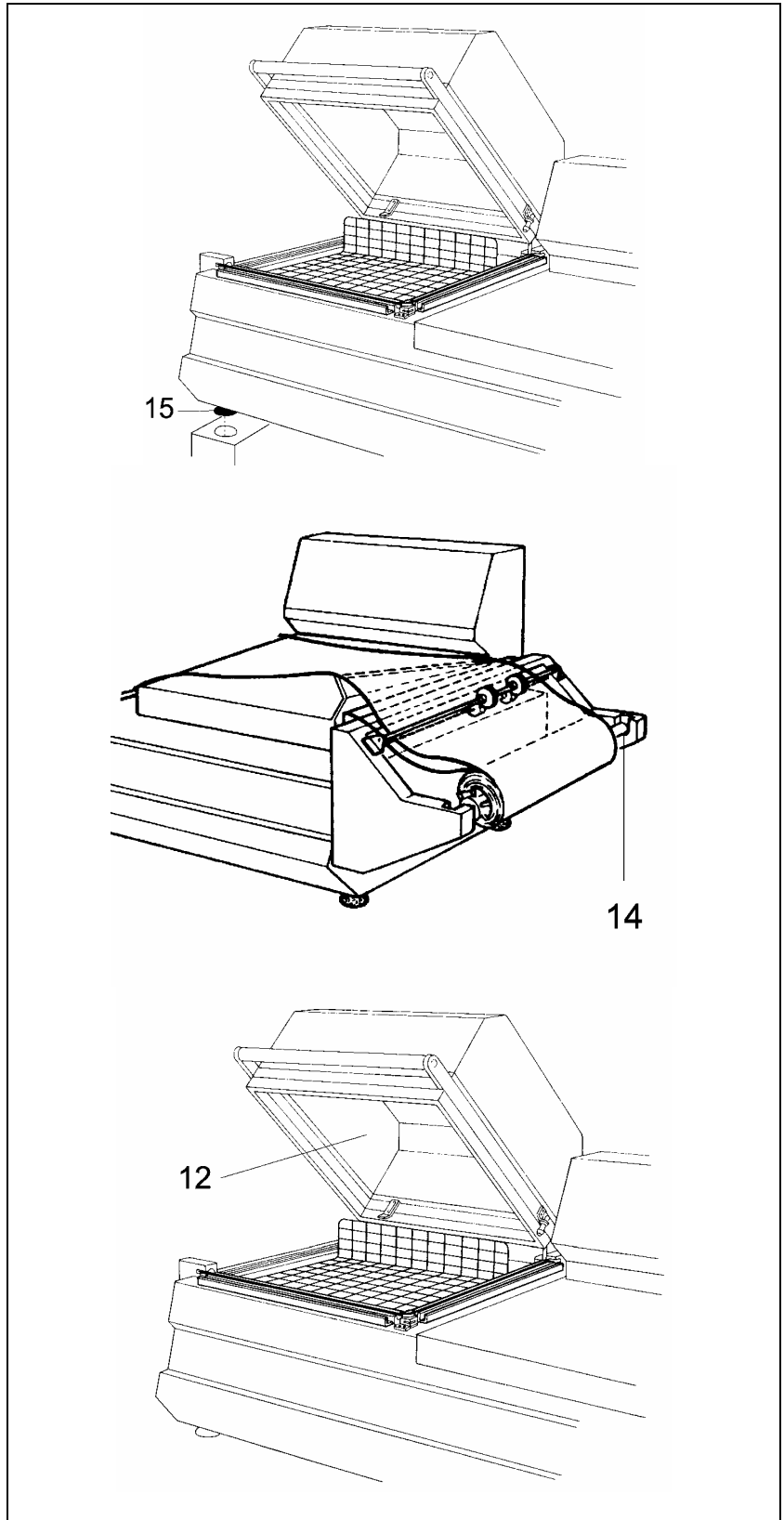
6.1. Warnings

Make sure the rubber feet (15) of machine are lodged in the holes of the wheeled stand.

Make sure the film roll is properly lodged (14).

ATTENTION !

Every time you turn the machine off, it is recommended to leave the upper hood open (as shown in the drawing).



Chapter 7. Ordinary maintenance

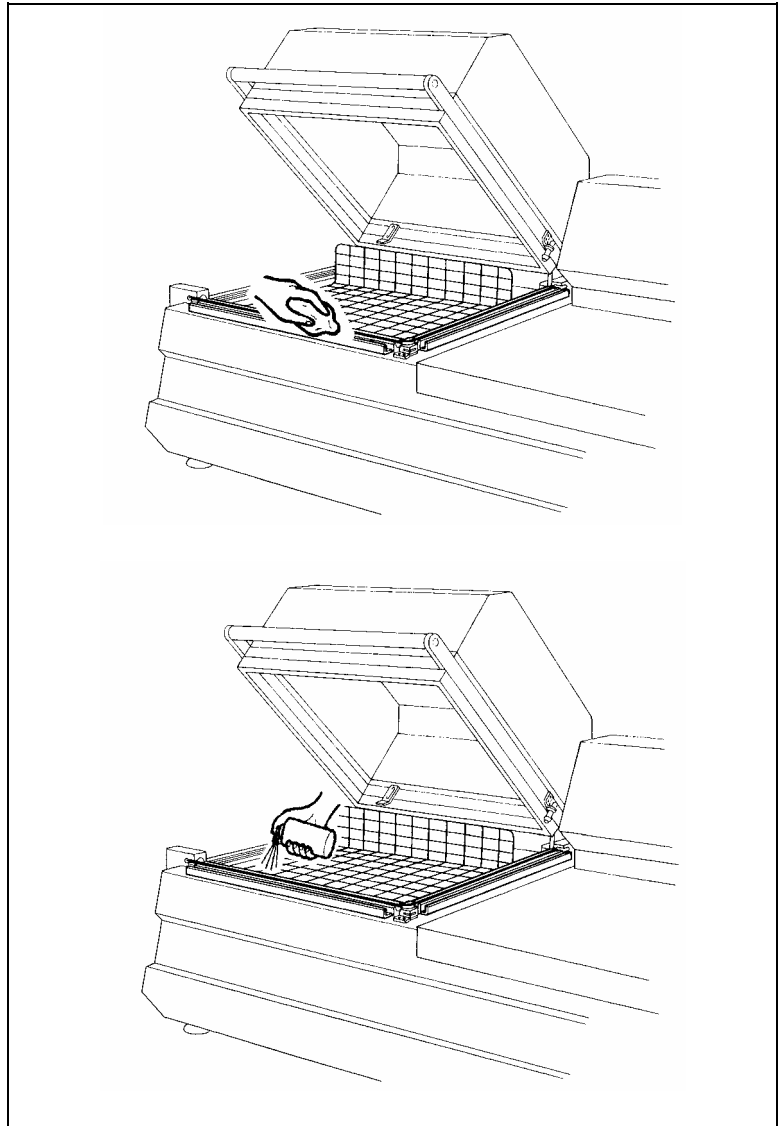
7.1. Precautions for ordinary maintenance interventions

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

7.2. Sealing blade cleaning

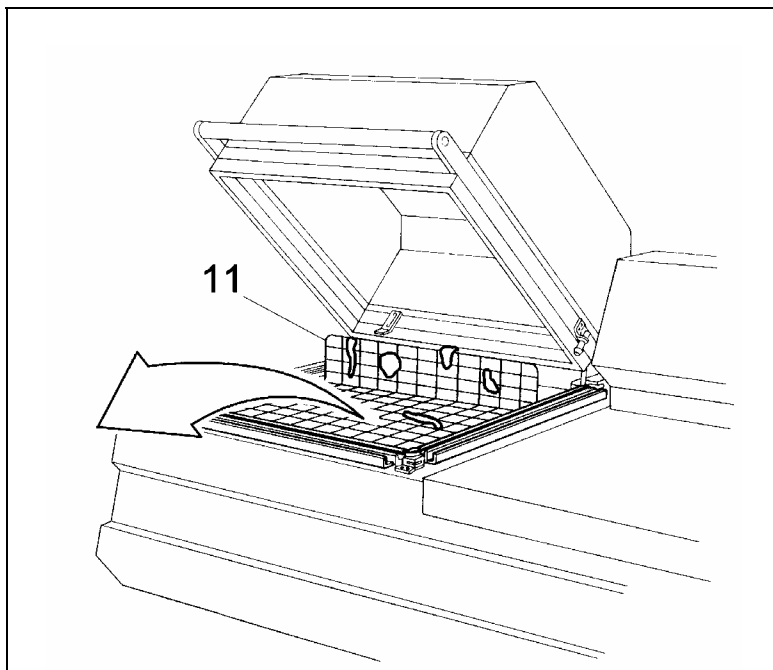
Using a dry cloth, wipe off the residues clinging to the sealing wire: do this at once after sealing since they are easier to remove when still warm.

Lubricate the welding blade periodically with the supplied non-adhesive spray.



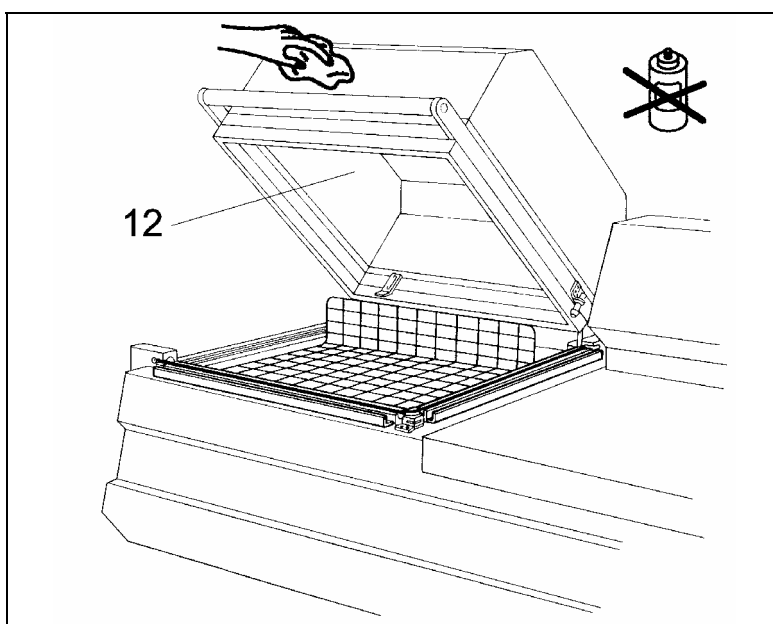
7.3. Plastic film and other scrap removal

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). If the lower cover requires cleaning (where the fan is installed), remove the reticulated plate and take out any pieces that may have fallen inside. For a more careful cleaning of the lower bell we recommend to use a vacuum cleaner.



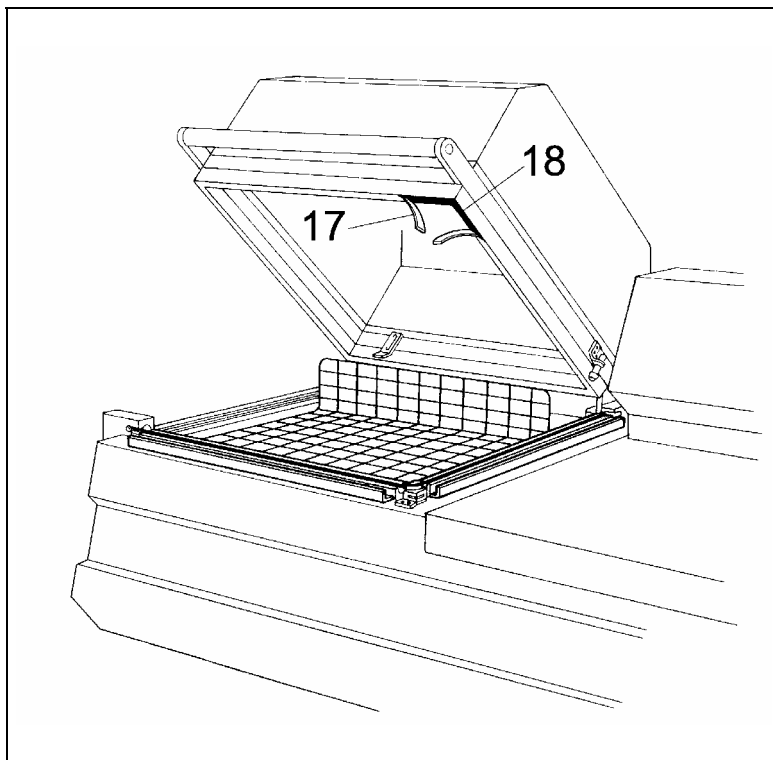
7.4. Machine cleaning

Use a cloth moistened with water for the cleaning of the machine. For cleaning the bell (12) inside and outside we recommend to use a normal detergent for glass cleaning. Do not use any detergents with solvents which could damage the bell (12) and reduce the transparency.

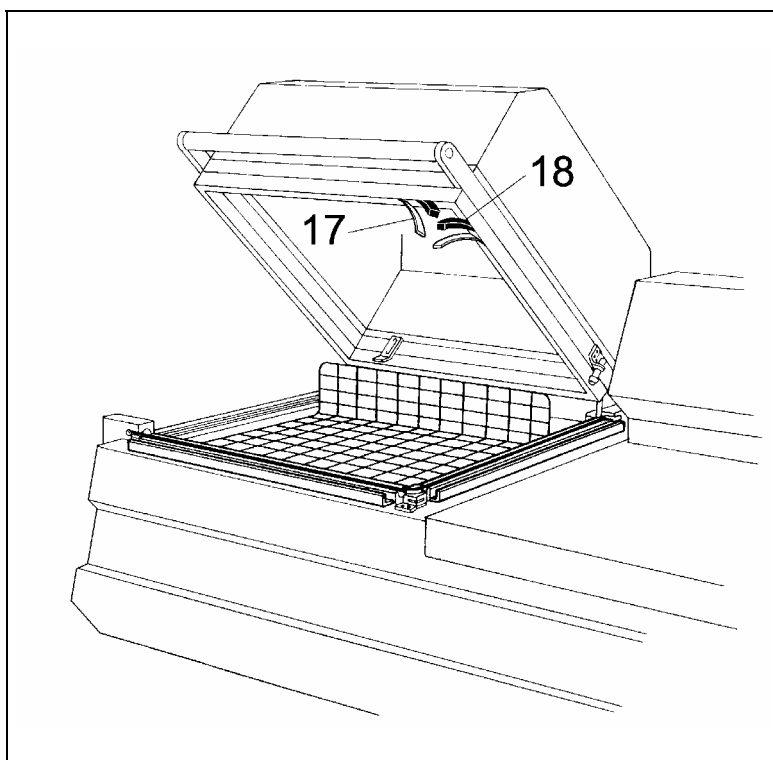


7.5. Rubber and teflon replacement

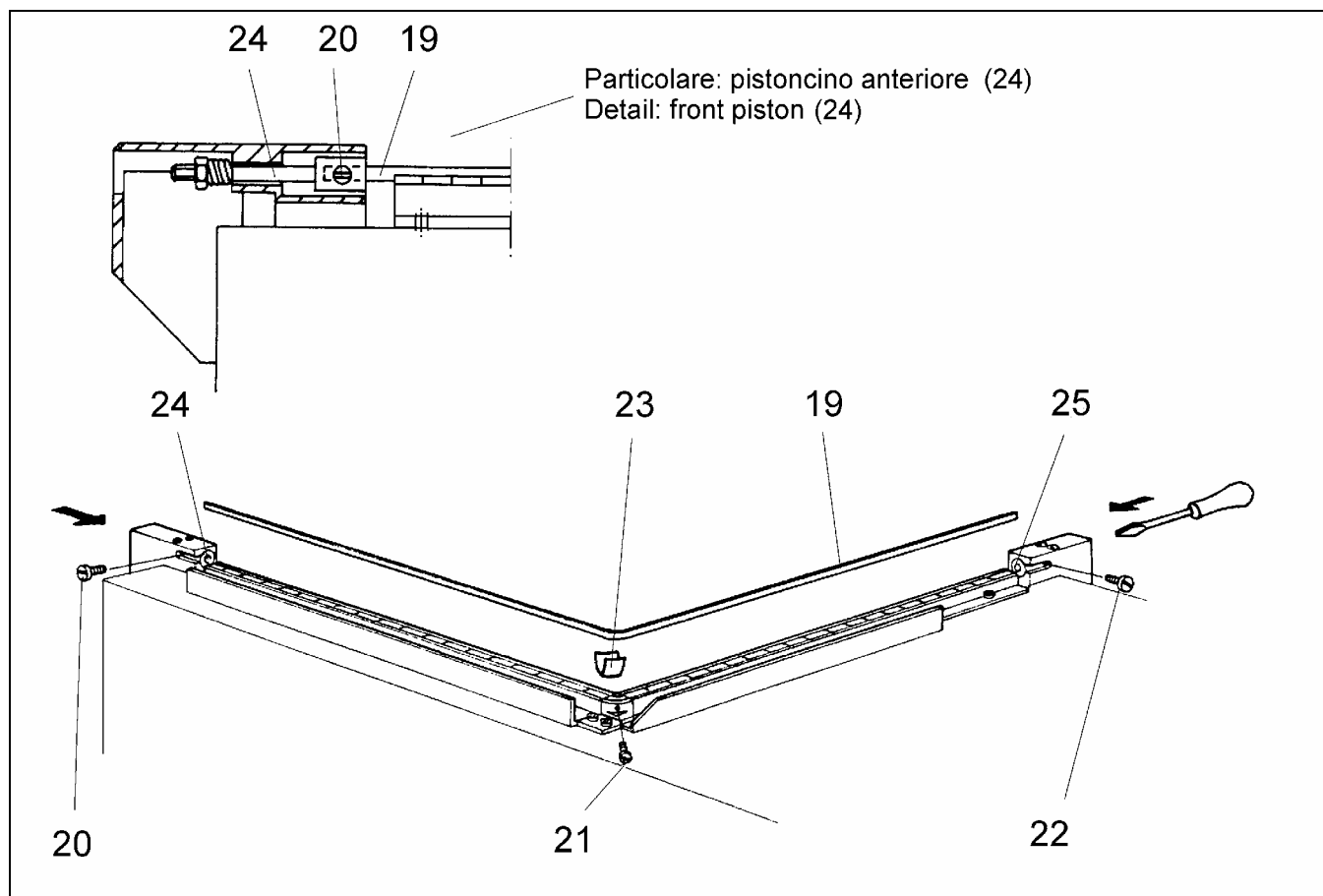
When the Teflon-strikers (17) are worn out, replace them with spare parts, paying attention that the application is linear and even. Before applying the Teflon self-adhesive strip clean the rubber part (18) with a detergent.



If also the rubber (18) is damaged, replace it as follows: Remove the old rubber, clean its housing, apply some drops of glue in the housing, insert the new rubber in a linear way, clean the rubber with a detergent, apply the self-adhesive Teflon-strip.



7.6. Changing the sealing wire



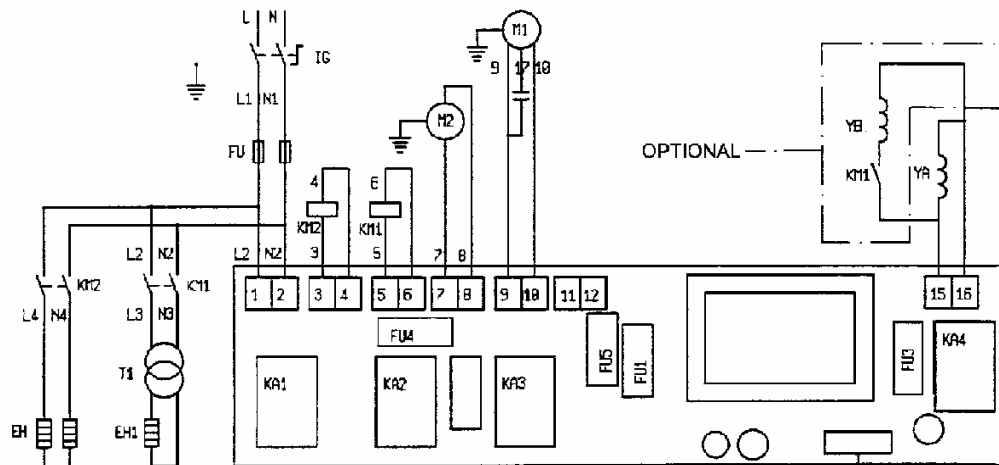
To replace the sealing blade (19) follow this procedure:

- 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 of 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

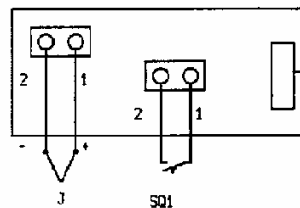
7.7. Wiring diagram

IG Main switch
 FU Line fuse 10.3X38
 FU1 Board fuse 5X20
 FU3 Magnet fuse 5X20
 FU4 Auxiliary plug fuse 5X20
 FU5 Motor fuse 5X20
 EH Oven resistors
 EH1 Sealing blade heater
 T1 Cutting transformer

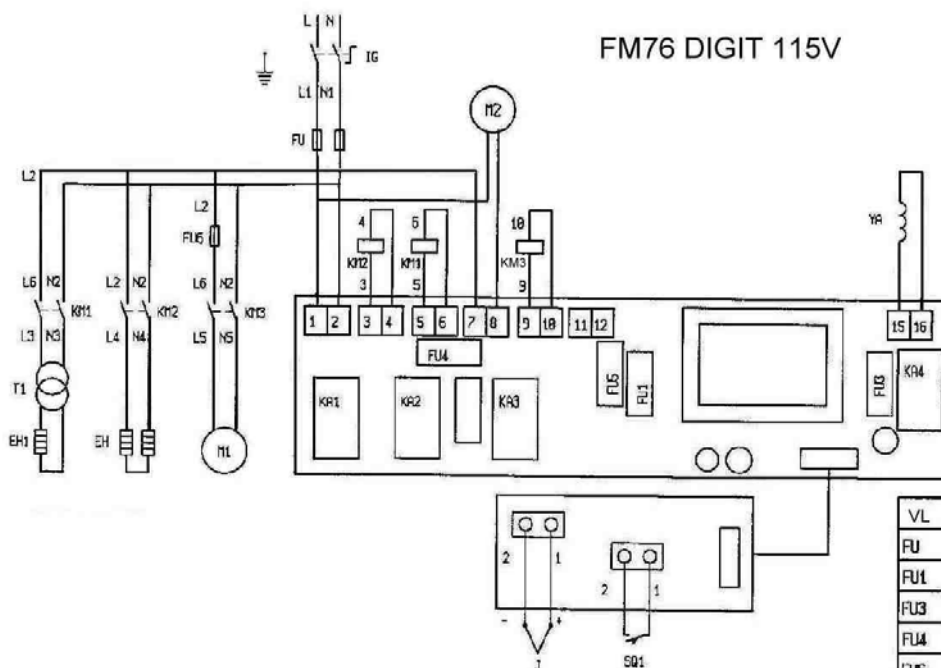
M1 Fan motor
 M2 Fan motor
 J Thermocouple
 SQ1 Machine cycle limit switch
 YA Shrinking magnet
 YB Sealing magnet
 KM1 Sealing blade contactor
 KM2 Heaters contactor
 KM3 Fan motor contactor



VL	115V	200V	230V
FU	AM 25A 450V	AM 16A 450V	AM 16A 450V
FU1	T 500mA 250V	T 315mA 250V	T 315mA 250V
FU3	T 500mA 250V	T 500mA 250V	T 500mA 250V
FU4	T 1A 250V	T 500mA 250V	T 500mA 250V
FU5	T 4A 250V	T 2A 250V	T 2A 250V



FM76 DIGIT 115V



VL	115V
FU	AM 32A 450V
FU1	T 500mA 250V
FU3	T 500mA 250V
FU4	T 1A 250V
FU5	T 4A 250V

7.8. Spare parts

Code FM75	Code FM76	Item description
S01A0404	S02A0404	Teflon liner
FE385601	FE385602	Sealing blade
FM350008	FM350009	Upper neoprene rubber
S0K00306	S0K00306	Blade holder complete clamp
FE241011 (230V) FE241012 (115V)	FE240019 (230V) FE240029 (115V) FE240023 (200V)	Motor
FM130001	FM130002	Reticulated plate
FM080038	FM080037	Upper hood
FM170001	FM170002	Torsion bar
S0K00604	S0K00604	Complete slotted microperforator
S0K00605	S0K00605	Complete needles microperforator
FE381001+FE381002 (230V) FE381003+FE381004 (115V)	FE381011+FE381012 (230V) FE381013+FE381014 (115V) FE381019+FE381020 (200V)	Resistors
S01A0602	S02A0602	Roll holder complete tube
S0K01111	S0K01110	Fan
FM195011	FM195012	Glass wool panel
FE440602 (230V) FE440601 (115V)	FE440612 (230V) FE440611 (115V) FE440612 (200V)	Transformer

7.9. 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:

1. disconnect machine from power mains
2. disassemble components

All wastes must be treated, 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.

Chapter 8. Guarantee

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.