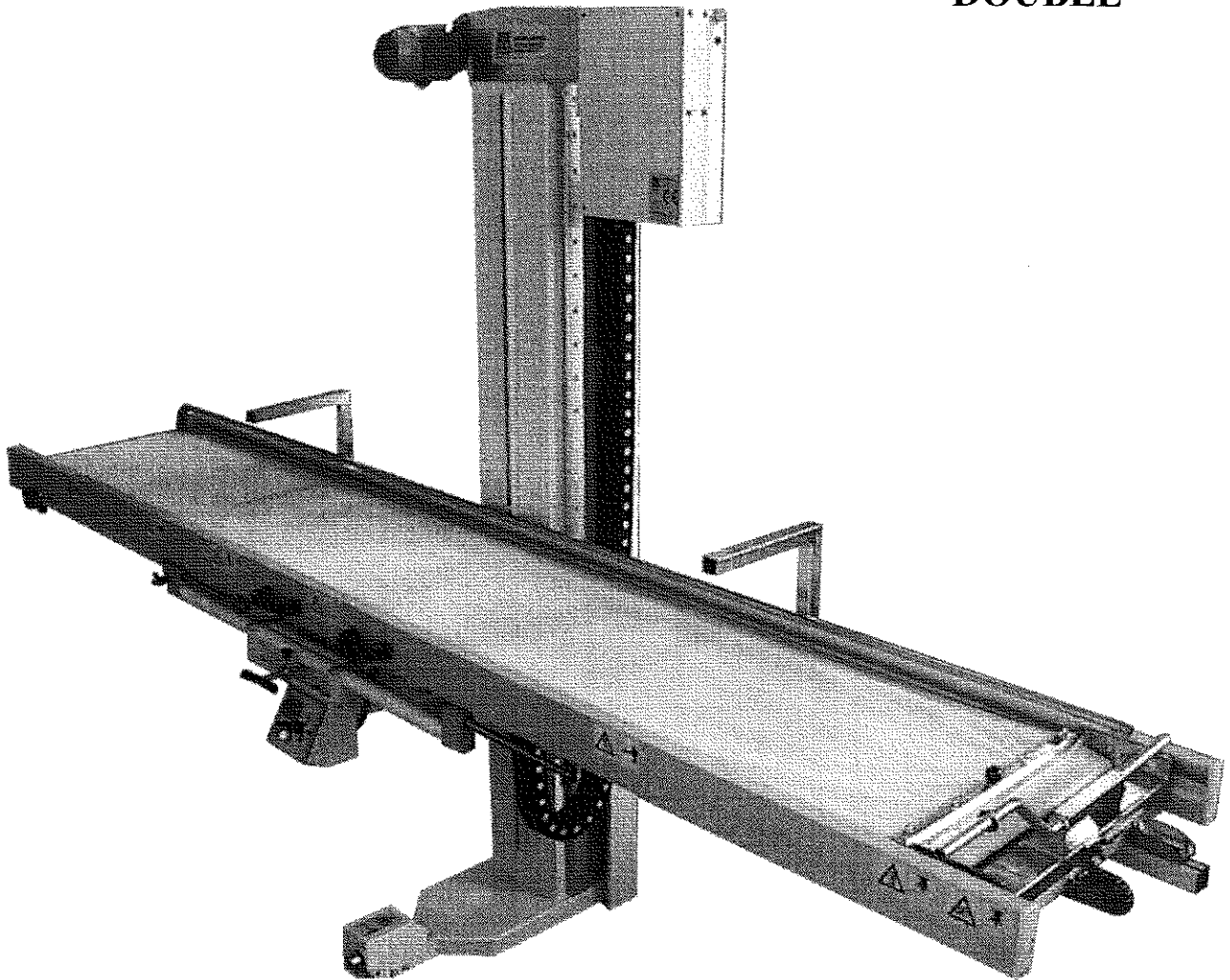


# USE AND MAINTENANCE MANUAL

**LOADER TYPE  
"DOUBLE"**



## CONTENTS

1 Introduction.....	4
1.1 <i>The model you have bought:</i> .....	4
1.2 <i>Identification</i> .....	4
1.2 <i>Position of the machine identification plate and of the use and maintenance booklet</i> .....	4
1.3 <i>Guarantee</i> .....	5
1.4 <i>Conditions and use:</i> .....	5
1.5 <i>Technical data</i> .....	5
1.6 <i>Storage conditions</i> .....	5
1.7 <i>Danger plates and warnings</i> .....	6
1.7.1 <i>List of symbols and description</i> .....	6
1.7.2 <i>Arrangement of symbols</i> .....	7
2 General safety and accident prevention rules.....	8
2.1 <i>Safety instructions</i> .....	8
2.2 <i>Clothing</i> .....	9
2.3 <i>Ecology and pollution</i> .....	9
2.4 <i>Safe maintenance</i> .....	9
3 Packing and transport.....	9
3.1 <i>Indicative dimensions of the packing and indications for loading and unloading the pallet</i> .....	10
4 Installation.....	10
5 Description of keyboard and button on the machine.....	11
5.1 <i>Keyboard</i> .....	11
5.2 <i>Keyboard description</i> .....	11
5.2.1 <i>Start button (Sst+H11)</i> .....	11
5.2.2 <i>Emergency button (Se)</i> .....	11
5.2.3 <i>Stop lamp (H12)</i> .....	11
5.2.4 <i>Ascent button (S1)</i> .....	11
5.2.5 <i>Descent button (S2)</i> .....	11
5.2.5 <i>Entrance button (S3)</i> .....	11
5.2.6 <i>Exit button (S4)</i> .....	11
5.2 <i>Position of the safety devices on the machine</i> .....	12
6 Instructions for use.....	12
6.1 <i>Starting work</i> .....	12
6.1.1 <i>Traverse to select the oven door</i> .....	12
6.2 <i>Electric mode</i> .....	13
6.2.1 <i>Descent to the loading level</i> .....	13
6.2.2 <i>Electric loading and unloading</i> .....	13
6.2.3 <i>Parking the machine</i> .....	13
6.3 <i>Mechanic mode</i> .....	14
6.4 <i>Stopping the machine</i> .....	15
6.5 <i>Verify the machine after a stop</i> .....	15
6.6 <i>Lack of power on the machine</i> .....	15
7 Names of some machine parts referred to in the manual.....	16
8 Maintenance.....	16
8.1 <i>Daily maintenance</i> .....	16
8.1.1 <i>Cleaning the carriage</i> .....	16
8.1.2 <i>Cleaning the sheet</i> .....	16
8.1.3 <i>Cleaning the guide on the floor</i> .....	16
8.1.5 <i>Checking the safety devices</i> .....	17
8.2 <i>Routine monthly maintenance</i> .....	17
8.2.1 <i>Cleaning, oiling and tightening the chains</i> .....	17
8.2.2 <i>Greasing the machine</i> .....	17
8.2.3 <i>General cleaning of the machine</i> .....	17
8.2.4 <i>Checking parts subject to periodic wear and lubrication</i> .....	17
8.3 <i>Yearly maintenance</i> .....	17
8.3.1 <i>Check the general state of the machine</i> .....	17
8.3.2 <i>Check the general state of the machine</i> .....	17

8.3.3 Checking of fixing bolt of structure and reduction unit .....	17
9 Changing the parts subject to periodic wear. ....	18
9.1 <i>Changing mechanical parts of the machine.</i> .....	18
9.2 <i>Changing the sheet.</i> .....	19
10 troubleshooting.....	20

MARDEN s.r.l. reserves the ownership of this document and forbids anyone to reproduce it and/or to reveal its contents to third parties without the owner's authorisation in writing

This manual is an integral part of the machine and must be kept in good condition so that it may be consulted repeatedly throughout the machine's working life

**1 Introduction.**

**1.1 The model you have bought:**

LOADER TYPE "DOUBLE" LOADING UNLOADING.

**1.2 Identification**

Description of the contents of the machine identification plate

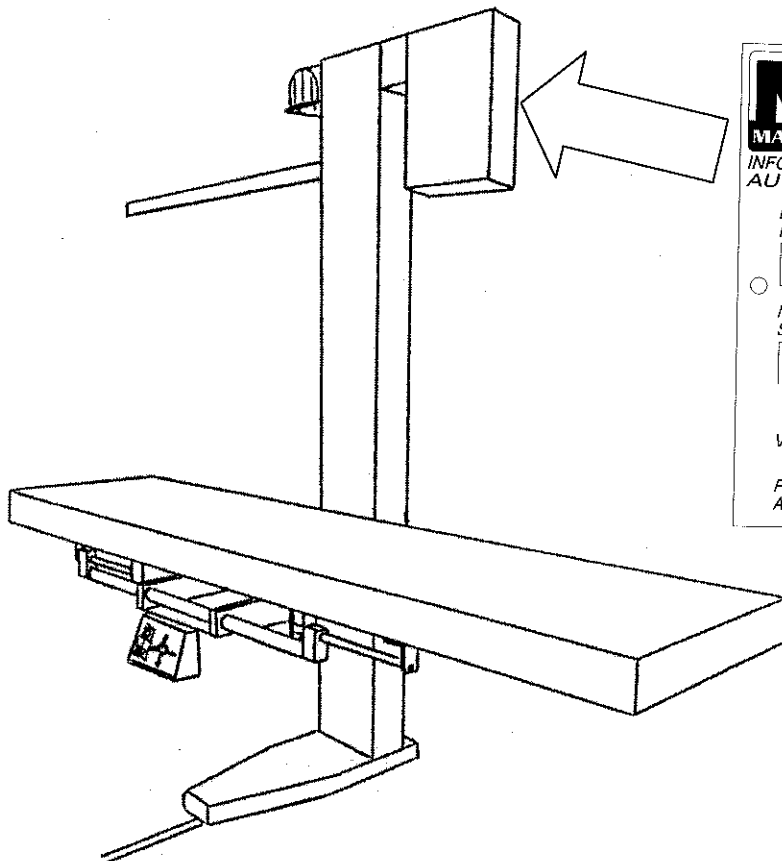
**Company** : MARDEN s.r.l.  
**Address** : Viale del Lavoro, 4 - 37050 Belfiore (Verona) - ITALY  
**Description** : Loader type "Double"  
**Serial N°** : **1597/0905**  
**Year of manufacture** : **2005**


For information and technical assistance call **MARDEN** at these numbers:

TEL. +39 45 6149036  
 FAX +39 45 6149031

**NOTE:** For anything that is not clear or for information not included in this manual, contact **MARDEN** and ask for the explanations you need. Clearly indicate the serial number of the machine

**1.2 Position of the machine identification plate and of the use and maintenance booklet.**



	<b>MARDEN S.r.l.</b> Viale del Lavoro, 4 BELFIORE 37050 VERONA ITALIA Tel. 0456149036 Tel. 0456148259 Fax 0456149031		
	INFORMAZIONI SFRONAMENTO AUTOMATICO AUTOMATIC LOADING UNLOADING		
DENOMINAZIONE NAME <input style="width: 100%; height: 20px;" type="text"/>			
NUMERO MATRICOLA SERIAL NUMBER <input style="width: 100%; height: 20px;" type="text"/>		ANNO YEAR <input style="width: 100%; height: 20px;" type="text"/>	
Volt <input style="width: 50px; height: 20px;" type="text"/>		Hz <input style="width: 50px; height: 20px;" type="text"/>	
POTENZA ASSORBITA ABSORBED POWER <input style="width: 100%; height: 20px;" type="text"/>		kW <input style="width: 50px; height: 20px;" type="text"/>	

### 1.3 Guarantee

The machine is guaranteed for a period of 6 months from the date of purchase. This date is certified by the delivery note.

The guarantee covers the replacement or repair, free of charge, of the machine parts that are recognised as being of faulty origin or having manufacturing defects.

**The guarantee is void if:**

- ✓ The Company is not notified in writing concerning missing or faulty parts, or breakages due to transport, within 8 days of the date of delivery.
- ✓ Parts are replaced without informing the Company and this replacement results in damage to the machine.
- ✓ The parts have become faulty due to negligence or careless use, installation by personnel not approved by the Company, transport without due care, or all circumstances that cannot be ascribed to manufacturing defects.

All the electrical connections to the mains supply systems are excluded from the guarantee.

After six months from purchase, the buyer loses all right to the guarantee and assistance will be carried out against payment of labour expenses plus the cost of the parts replaced and the transport costs.

### 1.4 Conditions and use:

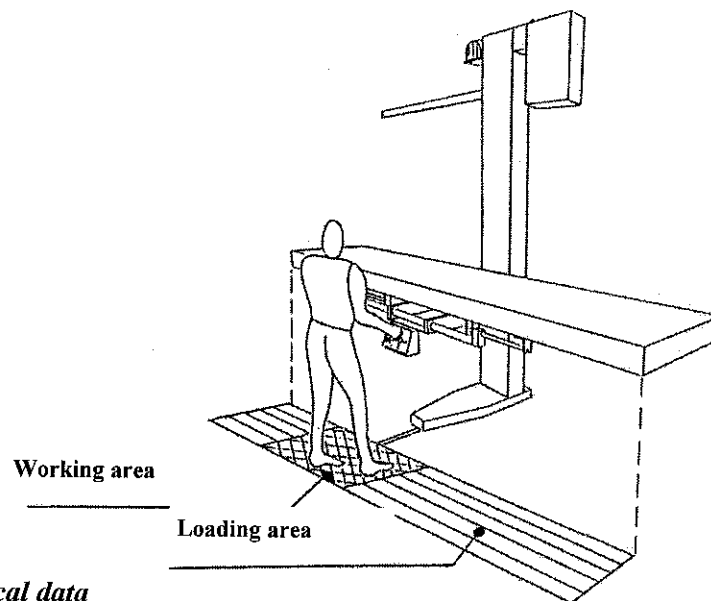
The machine is made **ONLY** for getting bread into and out of an oven.

The machine is made for working on ovens with stacked chambers or for ovens with a single chamber.

The machine cannot load or unload containers, baking trays or other supports, but **ONLY** the bread laid directly on the sheet or loaded by means of a table with a belt.

The machine cannot lift loads heavier than **30 Kg**.

The operator's position for loading the machine and controlling it is shown in Fig. 2.



### 1.5 Technical data

Machine type	: Double	Lifting and lowering speed Y axis	: adjustable
<b>WORKING CONDITIONS</b>		Oven entry speed Z axis	: adjustable
Voltage	: 220 V	Net weight	: 350 kg (max)
Frequency	: 50 Hz	Weight including packaging	: 430 kg (max)
Maximum single-phase power	: 0,5 kW	<b>NOISE LEVEL</b>	
Minimum power cable section.	: 3x1,5mm <sup>2</sup>	Continuous acoustic pressure	: 64,2 dB (A)
Environment air temperature	: +5/+40 °C	Instantaneous acoustic power	: 79,9 dB (A)
Relative humidity	: 30/95 %		
Traverse speed X axis	: manual		

### 1.6 Storage conditions

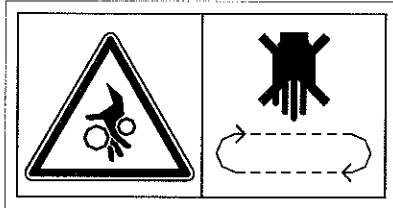
If the machine is to be stored, it is absolutely indispensable to abide by the following instructions so as to avoid possible damage to the electronic parts and to the bread conveying sheet.

TEMPERATURE : -25/+55 °C

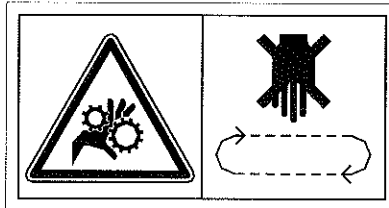
RELATIVE HUMIDITY : 20/70 %

1.7 Danger plates and warnings

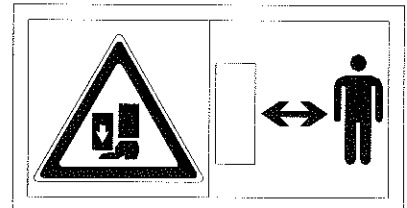
1.7.1 List of symbols and description.



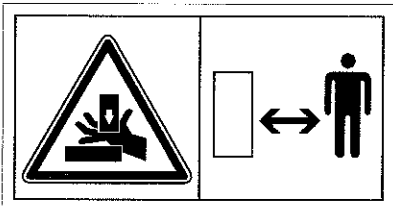
**Picture 3.** Danger of crushing the hand in the belt movement rollers



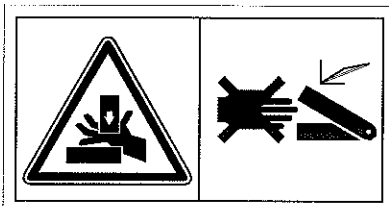
**Picture 4.** Danger of crushing the hand in the gears of the belt movement assembly.



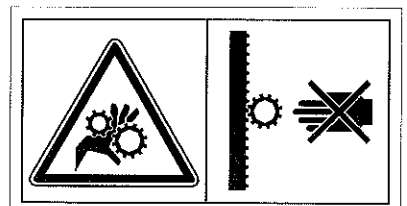
**Picture 5.** Danger of crushing the foot.



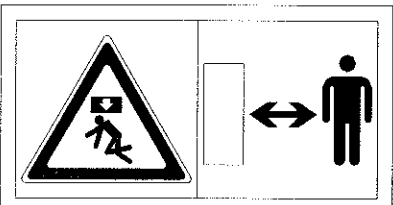
**Picture 6.** Danger of crushing the hand



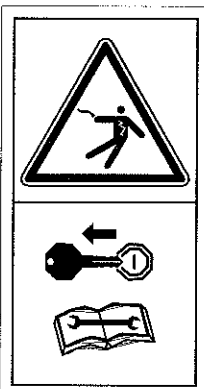
**Picture 7.** Danger of cutting the hand.



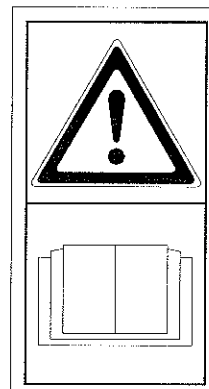
**Picture 8.** Danger of crushing the hands in the gears of lifting



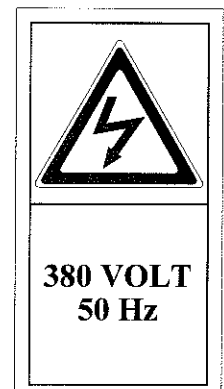
**Picture 9.** Danger of crushing the body



**Picture 11.** Danger of fulguration

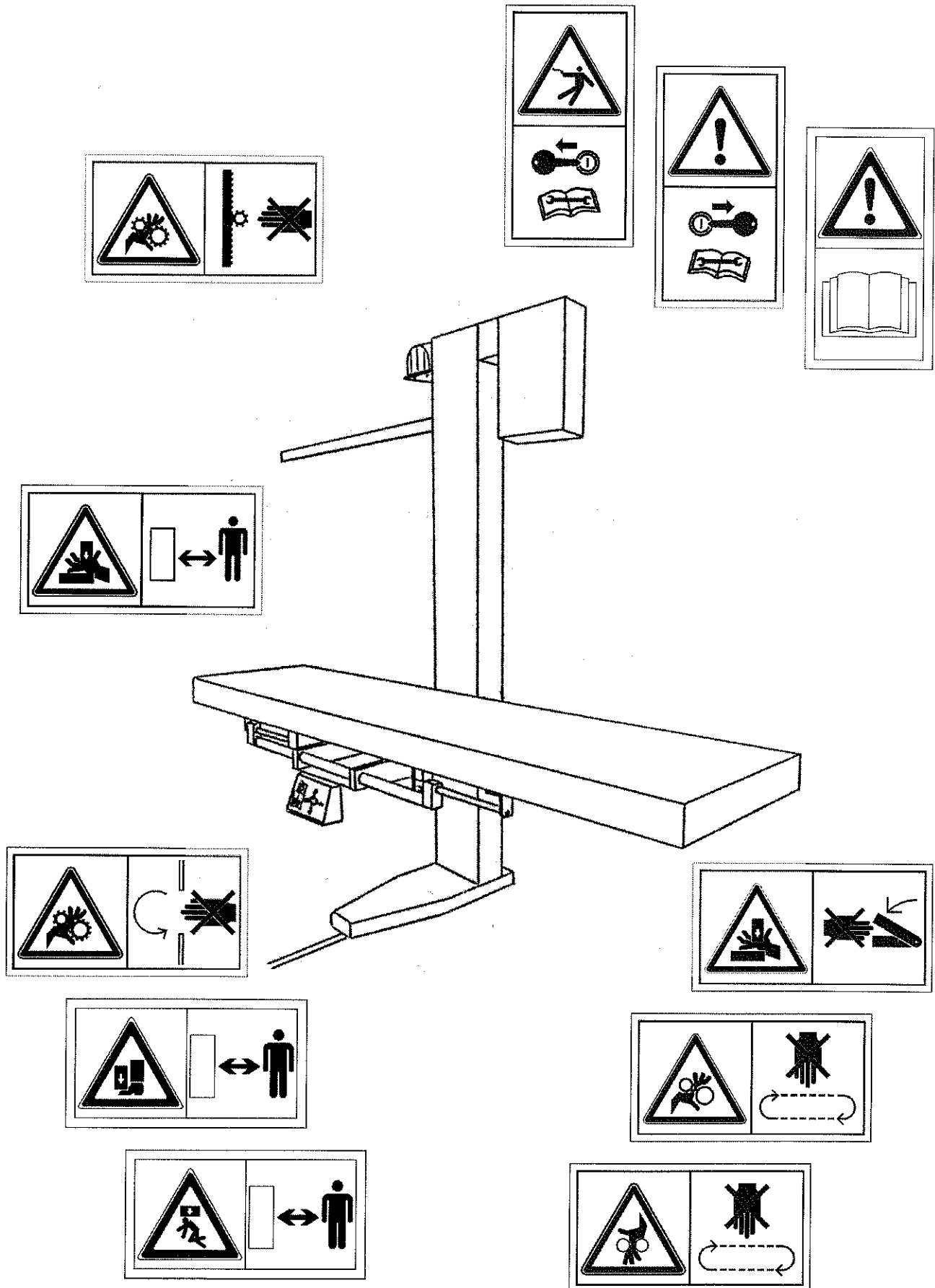


**Picture 12.** Read the use and maintenance manual carefully before operating the machine.



**Picture 13.** Indicate the tension and the Frequency of working of the machine

1.7.2 Arrangement of symbols.



## 2 General safety and accident prevention rules.



### Warning.

Read the following rules carefully. Anyone who fails to apply the rules described in this manual may suffer irreparable damage or cause damage to persons, animals and things. MARDEN s.r.l. declines all responsibility for damage caused by the failure to observe the safety and accident-prevention rules described below. MARDEN s.r.l. also declines all responsibility for damage caused by improper use of the machine and/or as a result of modifications carried out without the written approval of the manufacturer.

**There are three levels of danger signals depending on the degree of risk.**

### Danger.

Failure to observe the instructions given in this manual may cause severe injury, death or long-term risks for your health.

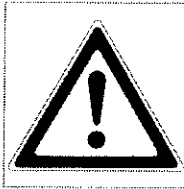
### Attention.

Failure to observe the instructions given in this manual may cause severe injury, death or long-term risks for your health.

### Caution.

Failure to observe the instructions given in this manual may cause damage to the machine.

### 2.1 Safety instructions



- Read this manual carefully before starting to operate.
- It is forbidden to allow the machine to be used by people who are unskilled, insufficiently trained or not in good health.
- The machine must be used by only one operator.
- The operator must be familiar with the contents of this manual and pay the greatest attention to all the danger, attention and caution notices applied on the critical points of the machine.
- The operator must keep the area in which the machine moves absolutely free and at the same time he must respect the work areas imposed, both for the bread loading or unloading operations and for control of the machine.
- The personnel using the machine may carry out only routine maintenance, while special maintenance must be performed exclusively by the personnel of MARDEN s.r.l.
- During use of the machinery, unauthorised personnel must not be allowed to approach the operator.
- It is forbidden to carry out maintenance or to regulate the machine while it is moving.
- It is forbidden to remove or evade the guards, casings and protections applied on the machine.
- It is forbidden to open the electric panels or the terminal boards of the motor or of the electric system while the machine is live.
- It is forbidden to get in between the machine and the oven when the machine is operating.
- It is forbidden to leave the sheet inside the oven for more than one minute as it would suffer irremediable damage.
- It is forbidden to put your hands near the machine during operation.
- It is forbidden to put your feet near the machine during operation.
- It is forbidden to put your hands under the bread conveying sheet.
- It is forbidden to touch the electrical equipment or the positioning or limit switch devices.
- It is forbidden to leave the product that has just been removed from the oven on top of the sheet.
- It is obligatory to check that the voltage and frequency of the supply system correspond to the values indicated on the plate on the electric panel.
- It is obligatory to switch off the electric power when the machine is not being used and at the end of the job.
- It is obligatory to padlock the main switch before performing any maintenance.
- It is obligatory to open and close the glass doors of the oven when the machine is at a standstill.
- In order to avoid possible machine malfunctions, it is obligatory to have the required maintenance and inspection operations carried out regularly by trained personnel.
- In order to avoid damage to the electric panel due to possible flooding of the premises, at the end of work it is obligatory to park the machine in a high position.



- In the event of variation of normal functioning, for example increased power absorption, excessive motor temperatures, vibrations, noise or signals from the protection devices, immediately notify the personnel in charge or the manufacturer. If you are in doubt, put the machine out of action immediately.
- If the machine has been disconnected from the power line, after the new connection check the direction of rotation, comparing the action of the control with the movement of the machine.

### **2.2 Clothing.**

Do not wear flapping clothing or hanging ties, do not work with hair hanging loose.  
Comply with all the other provisions and laws in force in the Country in which the is installed.

### **2.3 Ecology and pollution.**

Dispose of the nylon packaging in suitable containers.  
Cleaning of the machine does not require detergents or solvents; if you find it necessary to use them, ensure that the material used is disposed of in accordance with the requirements of the laws in force in the Country in which the machine is installed.

### **2.4 Safe maintenance.**

**To guarantee safe maintenance of the machine it is indispensable to comply with the following requirements:**

- The safety wires that connect the counterbalance to the horizontal structure of the shovel must be checked and greased; if the wires are damaged, provide to the substitution immediately to prevent sudden break-ups with consequent reduction of the safety of the shovel.
- In case of substitution of the inverter, attend at least five minutes before touching the clamp strip.
- From time to time check that all the screws, pins and couplings are firmly tightened and secure.
- Ensure that the recommended types of oil and grease are used,
- From time to time check that the safety devices are unbroken and are in good working order.
- It is absolutely forbidden to remove or tamper with the safety devices.
- Machine maintenance must be performed only by qualified personnel, following the instructions given in this manual.
- Disconnect the electric power supply when you have to work on the machine for repairs or maintenance.
- Maintenance must be performed scrupulously, following the instructions given in this manual and having any damaged or worn parts replaced.
- Traces of oil or grease on the floor are very dangerous and must be removed as soon as they are noticed.
- Do not perform welds, cutting with a flame or tool, or make holes in the machine structure.
- Machine removal operations, to allow oven maintenance, must be performed with suitable procedures and using slinging and lifting accessories in accordance with the regulations in force in the country in which the machine is installed.
- The symbols applied on the machine give the required indications in an essential form to avoid accidents. These symbols must always be kept clean and replaced immediately when they are even partly removed or damaged. It is absolutely forbidden to use the machine even when only one of these symbols is missing from the point on which it was applied by the manufacturer.
- For repairs and maintenance, always use original spare parts.

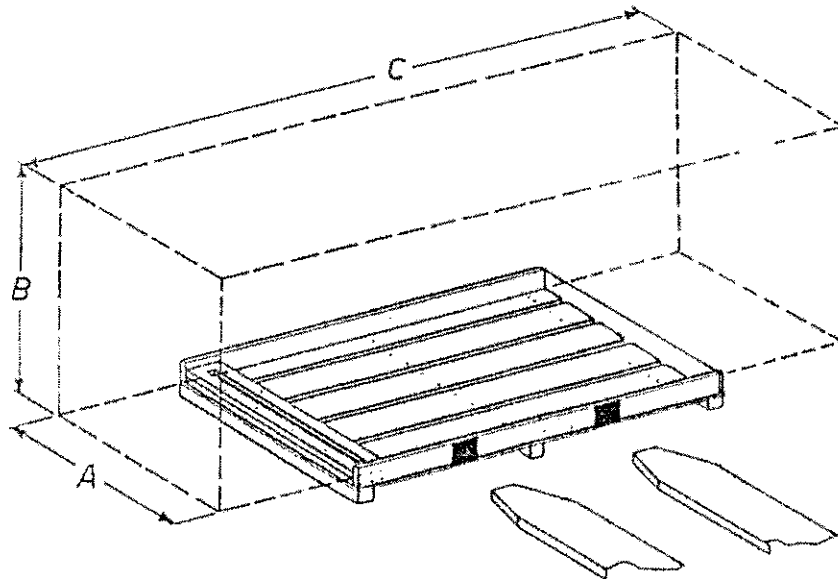
## **3 Packing and transport**

The machine is packed on a single pallet. When lifting it, ensure that the forks of the fork-lift truck or of the transpallet are facing in the direction of the mark imprinted on the packing.



The length of the forks must absolutely be at least the same as the width of the packing.

*3.1 Indicative dimensions of the packing and indications for loading and unloading the pallet.*



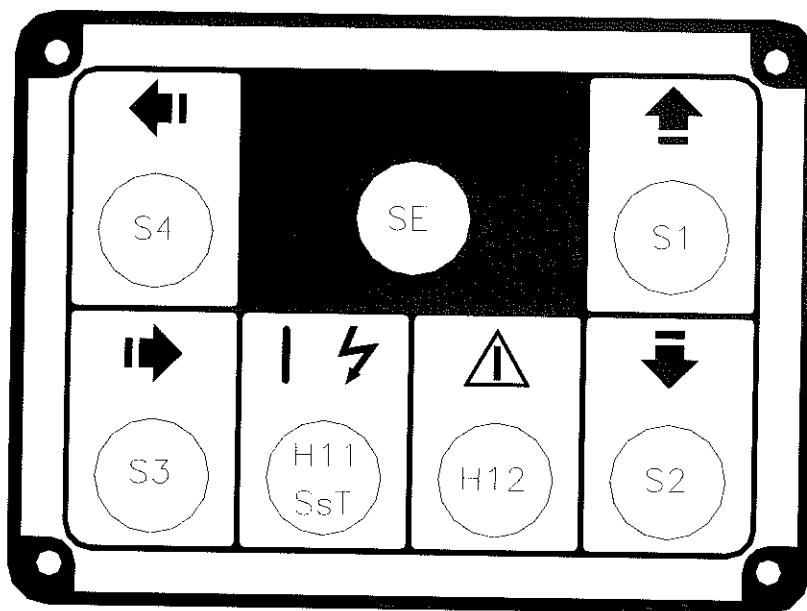
#### **4 Installation**

Installation must be performed by personnel of **MARDEN** s.r.l. or by persons authorised in writing by the Company.

For consultations or explanations, read the installation and regulation manual which the company supplies only to trained and competent persons.

## 5 Description of keyboard and button on the machine

### 5.1 Keyboard



### 5.2 Keyboard description

#### 5.2.1 Start button (Sst+H11)

The green start button has the purpose to give power to the main control switch of the machine, and then to the hole machine. After it has been pushed its light come on and it remain on until the emergency button is pushed or the power fall.

In the machine mod. "Loading with automatic return of the belt", it also has the purpose to permit to the joint of the belt to come back automatically.

#### 5.2.2 Emergency button (Se)

The emergency button has the purpose to completely stop the machine after it has been pushed tripping the power to the main control switch of the machine. After it has been pushed, the button remain pushed until the operator turn it in clock wise direction so to permit to the button to unblock itself.

#### 5.2.3 Stop lamp (H12)

The stop lamp has only the purpose to signal to the operator that there is no power to the main control switch of the machine and so it is necessary to push the start button to give power to it.

#### 5.2.4 Ascent button (S1)

The ascent button permit to the horizontal structure to liftering itself.

If the operator push the button and immediately release it, the horizontal structure move until the next deck and it stop itself. If the operator push the button and keep pushed the machine lift itself until the cam reached after the operator has released the button.

#### 5.2.5 Descent button (S2)

The descent button has the purpose to bring the horizontal structure down. To move the horizontal structure in down sense, it is necessary to keep pushed the button.

It is necessary this because the machine has no protection under the horizontal structure.

#### 5.2.6 Entrance button.(S3).

The entrance button bring the carriage of the machine inside the oven when the horizontal structure has reached the deck height. It is necessary to keep the button pushed to permit to the carriage to enter in the oven. The keyboard at the top of the page show a keyboard for a right command machine.

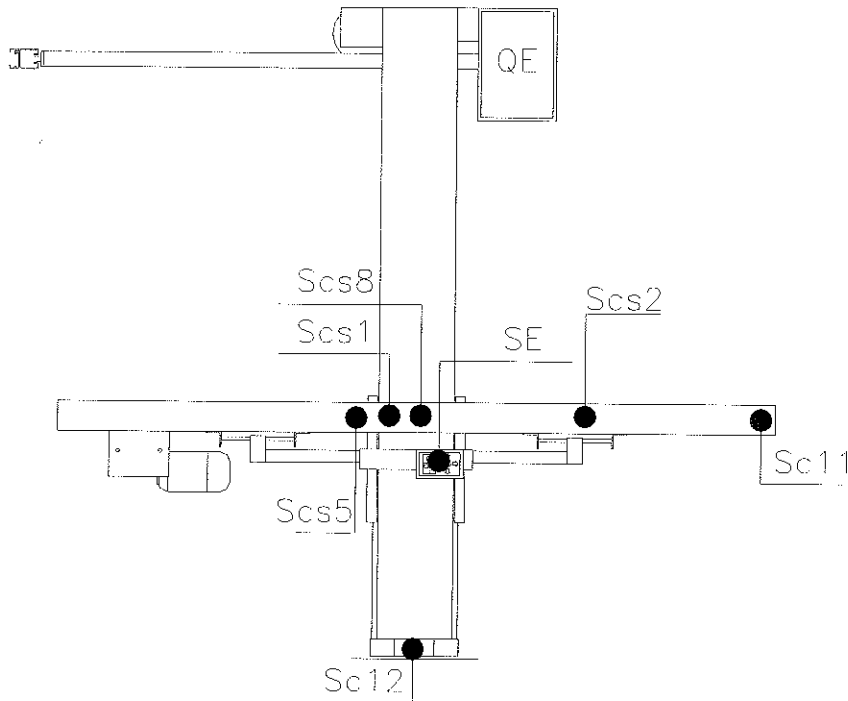
If the machine has the left command, the button S3 is inverted with button S4.

#### 5.2.7 Exit button (S4)

The entrance button bring the carriage of the machine out from the oven when the horizontal structure has reached the deck height. It is necessary to keep the button pushed to permit to the carriage to enter in the oven. The keyboard at the top of the page show a keyboard for a right command machine.

If the machine has the left command, the button S4 is inverted with button S3.

**5.2 Position of the safety devices on the machine.**



Symbol	Description
Sc11	Limit switch carriage re-entered
ScS2	Limit switch table holder turned
Sc12	Limit switch door direction
ScS8	Limit switch save cope
Sc5	Limit switch latch on during lifting
Sc1	Limit switch carriage to the rear for stand-by position
Se	Emergency button on the keyboard

**6 Instructions for use.**

Before starting to work with the machine it is obligatory to read and perfectly understand the instructions given below.



Read the indications in the chapter "GENERAL SAFETY AND ACCIDENT PREVENTION RULES"

**6.1 Starting work**

**6.1.1 Traverse to select the oven door**



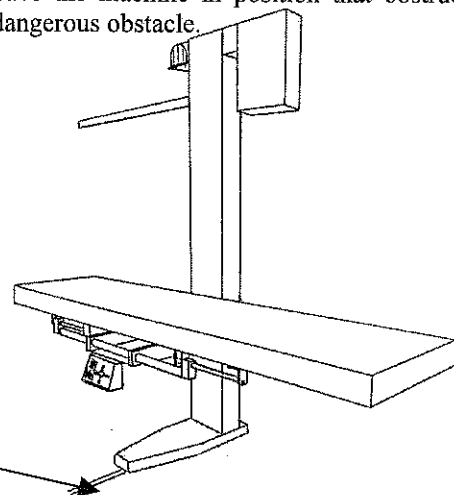
- The operator must respect the area assigned to the control of machine
- The operator do not must leave the machine in position that obstruct the passage of person or cause a dangerous obstacle.

Unlock the lever (LV) that lift the latch, then move the machine manually.

Hold pressed the lever to come near the new notch then leave it.

The latch insertion is automatic by a spring.

LV



## 6.2 Electric mode

### 6.2.1 Descent to the loading level



- Before bringing the machine down into working position, ensure that there are no persons, animals or things in the operating area.
- The operator must scrupulously respect the area assigned for control of the machine.

#### Procedure:

Turn on the main switch (Q0), check if the position of horizontal structure is not dangerous during the descent

Ensure that the emergency button is unlocked. Press the general button (Sst), the green lamp (H11) switch on, the red lamp (H10) switch off. Press the descent button (S7v) and hold pressed until the horizontal structure is in the loading level. The stop is automatic when the max descent limit switch (Sc0) is pressed.

**Note.** The release of button during the descent stop the machine

### 6.2.2 Electric loading and unloading



- Before start the cycle open the glass of the oven and ensure that there are no persons, animals or things in the operating area.
- The operator must scrupulously respect the area assigned for control of the machine.



- Do not touch the positioning devices of the machine, example limit switch
- Do not leave the sheet inside the oven for more than one minute as it would suffer irremediable damage.

#### Loading cycle

1. Load the belt to the indicate measure, equal to the oven useful and ensure that the lever in the head of carriage is in position of loading.
2. Move the machine sideways to position in direction of the oven door to load.
3. Ensure that the latch is entered into the notch.
4. Ensure that the carriage is all re-entered into the horizontal structure (SMO).
5. Press the lift button (S6^) and release it, the machine lift to the first chamber height. If you want to choose another chamber press the lift button another time.
6. When you are at the selected chamber press the entrance button (S3) and hold pressed it to the passage of the glass and then release it. The carriage go inside automatically until it reach the max entrance limit switch (Sc9) where the belt's joint hook automatically in the head of horizontal structure. After some seconds the carriage start to come out automatically until it reach the max exit limit switch (Sc11). Reverse the movement to unloading the bread from the oven. Before the complete re-enter of the carriage, the sheet release the joint to facilitate the movement into initial position.
7. Press the descent button (S7v) and hold pressed it to move the machine into the loading level.

#### Unloading cycle (only for loading and unloading model)

8. Move the joint to the head of carriage and turn the lever in position of unloading.
9. Repeat the operation at the point 2-3-4-5-6.
10. When you are at the selected chamber press the entrance button (S3) and hold pressed it to the stop of carriage with the limit switch (Sc9). The bread is over the sheet, press the exit button (S4) and hold pressed it to the stop of carriage with the limit switch (Sc11).
11. Press the descent button (S7v) and hold pressed it to move the machine into the unloading level.

### 6.2.3 Parking the machine

The needed operation are:

1. Ensure that aren't table with bread in the table holder
2. Move the horizontal structure into the rear position to move the SMO over the cope
3. Press the lift button (S6^) and hold pressed it to pass the last chamber, then release it. The horizontal structure stop automatically at the maximum height (limit switch Sc13).

### 6.3 *Mechanic mode*

**Note.** The mechanic mode is used only in emergency state to finish the operation when the power shut down. Is possible lift/descent the SMO or enter/exit the carriage independent. The operation to pass from electric to mechanic mode are:

#### **Vertical movement**

1. Release the rod (AS) removing the special split pin
2. Disengage the superior motor shaft connected to the chain
3. Move up and down the horizontal structure until the rod (AS) engage into the apposite notch (BO).
4. Attention because in mechanic mode some safety device aren't active. Move the horizontal structured when the carriage is completely re-entered.
5. If you want move the SMO in the stand-by position, ensure that the horizontal structure is completely in the rear position, to pass the cope.

#### **Horizontal movement**

1. Unscrew the wing nut in the rear of the carriage.
2. Move the SMO at the height of selected chamber and thrust the carriage into the oven manually
3. The joint of the sheet must be in front or to the rear of carriage in unloading/loading.
4. Attention because in mechanic mode some safety device aren't active. Move the horizontal structured when the carriage is completely re-entered, before the entrance of carriage into the oven ensure that the latch is into the notch.

#### **6.4 Stopping the machine**

The emergency button (Se) and the inverter protection (Q1-Q2) causes the immediately stopping of the machine, the switching off of green lamp (H11) and the red lamp (H10).

If the machine is stopped by the operator is necessary to unlock the emergency button and give start to the machine; if the machine is stopped by the inverter the operator must push the start button until the green lamp come on.

If the machine is stopped during the automatic entering of the carriage, is necessary to push the start button (Sst) and press the exit button (S4) so to begin again the current cycle.

#### **6.5 Verify the machine after a stop**

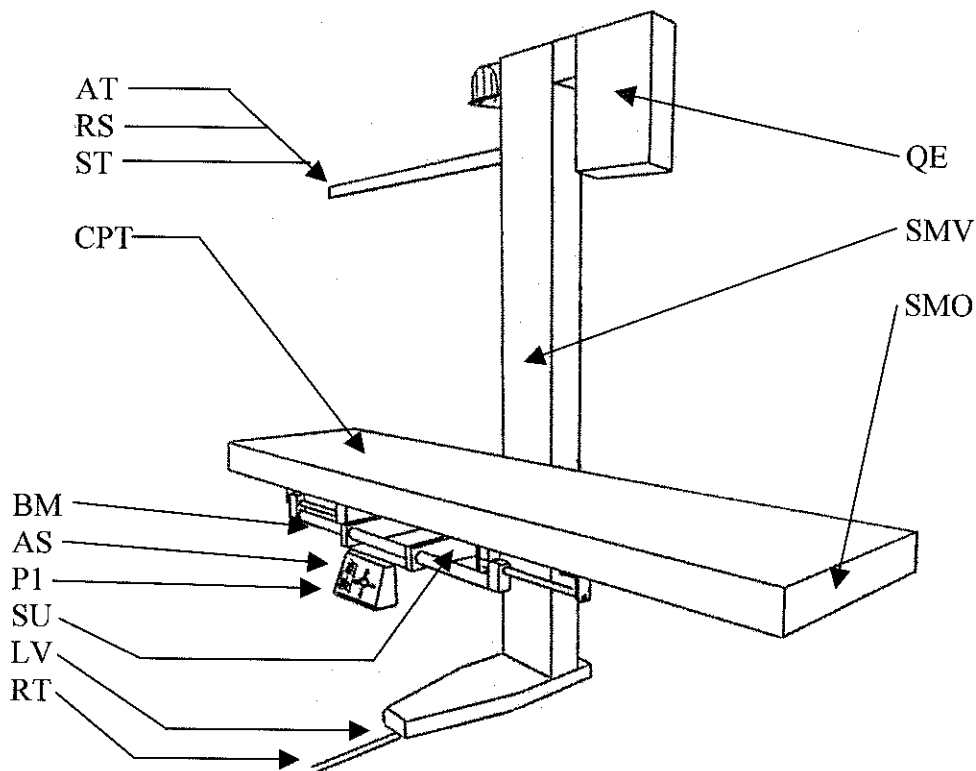
- Check the power voltage
- Check the protection fuses of inverter into the electric panel
- Check the fuses of 24V circuit into the electric panel
- See the chapter "troubleshooting"

#### **6.6 Lack of power on the machine**

**Do not leave the sheet inside the oven for more than one minute as it would suffer irremediable damage.**

The lack of electric power supply to the table causes immediate stopping of the machine, switching off of the green lamp (H11) and the main switch (QG).

## 7 Names of some machine parts referred to in the manual



SYMBOL	DESCRIPTION
SMV	VERTICAL MOVEMENTS STRUCTURE
SMO	HORIZONTAL MOVEMENTS STRUCTURE
BM	MOVABLE BARS
CPT	SHEET CARRIAGE
SU	HORIZONTAL STRUCTURE SUPPORT
RS	TOP RAIL
LV	LATCH LEVER
RT	RAIL ON THE FLOOR
AT	DRIVING ROPE ANTENNA
QE	ELECTRIC PANEL
ST	BRACKET FOR STAINLESS STEEL ROPE
P1	KEYBOARD
AS	ROD FOR MANUAL POSITION OF SMO TO THE CHAMBER HEIGHT

## 8 Maintenance

### 8.1 Daily maintenance.

#### 8.1.1 Cleaning the carriage.

The sheet carriage must be cleaned accurately so as to avoid the depositing of risen dough which may give rise to the formation of bacteria or mould which are harmful to health.

Use brushes to loosen the material and a vacuum cleaner to remove it.

#### 8.1.2 Cleaning the sheet.

It is absolutely indispensable to keep the sheet clean, since food products will be in direct contact with it.

It must therefore be brushed and then disinfected against any bacteria, putting it several times in the oven at a temperature of at least 100°C.

#### 8.1.3 Cleaning the guide on the floor.

The guide on the floor must be cleaned constantly so as to facilitate lateral traverse of the machine, especially for the models without an electric motor.

We advise using a vacuum cleaner to suck up dirt or flour, so as to prevent this material from depositing or getting into other equipment that is not protected to level IP55.



**8.1.4 Oiling and greasing.**

Lubricate the pin of the central wheels with vaseline oil.

Lubricate the pin of the rollers under the carriage (CPT) with vaseline oil.

Lubricate the pin of the wheels of carriage onto the top rail with vaseline oil (part. E Fig. 24).

**8.1.5 Checking the safety devices.**

It is important to ensure that all the safety devices are in good working order, especially the emergency button, the limit switch.

Check the junction of chain and the horizontal structure support.

**8.2 Routine monthly maintenance.****8.2.1 Cleaning, oiling and tightening the chains.**

The chains fitted on the machine are liable to become dirty with flour, so before starting oiling operations the dirt that has accumulated must be removed.

The lubricant used must be of the type for food applications; the most suitable is vaseline oil

The chain tension must also be checked so that stopping of the carriage will be precise and regular.

The two chains that move the SMO must be the same.

**8.2.2 Greasing the machine.**

The latch that stop the machine at the selected door must be cleaned and greased. Use vaseline grease or a type suitable for food applications (SKF LGFC 2/0.38).

**8.2.3 General cleaning of the machine.**

The machine must also be cleaned on the outside because it operates in an environment subject to the laws of public health and hygiene, where parts may accidentally come in contact with food products.

For good machine operation it is indispensable to clean all the electric devices with mechanical movements, such as limit switches or buttons, to remove any residue of dough or pieces of baked bread that may deposit there during processing.

**8.2.4 Checking parts subject to periodic wear and lubrication.**

Check the nylon central wheels, these must run smoothly. If a wheel is worn, replace it.

Check the iron and nylon rollers under the carriage (CPT) and their pins. These must always run smoothly so as to avoid fast wear of the oven loading sheet.

Check the wheels of the sheet carriage (CPT).

Check the state of the sheet and then the tension, so as to avoid rapid wear of the sheet due to rubbing between the end of the carriage (CPT) and the baking surface.

If the sheet isn't tensioned, release the sheet joint and do the new holes in the sheet

**Note.** See chapter 9.

**8.3 Yearly maintenance.****8.3.1 Check the general state of the machine.**

Check the noise level generated by the machine; if it is too high, have the entire machine completely overhauled by qualified personnel.

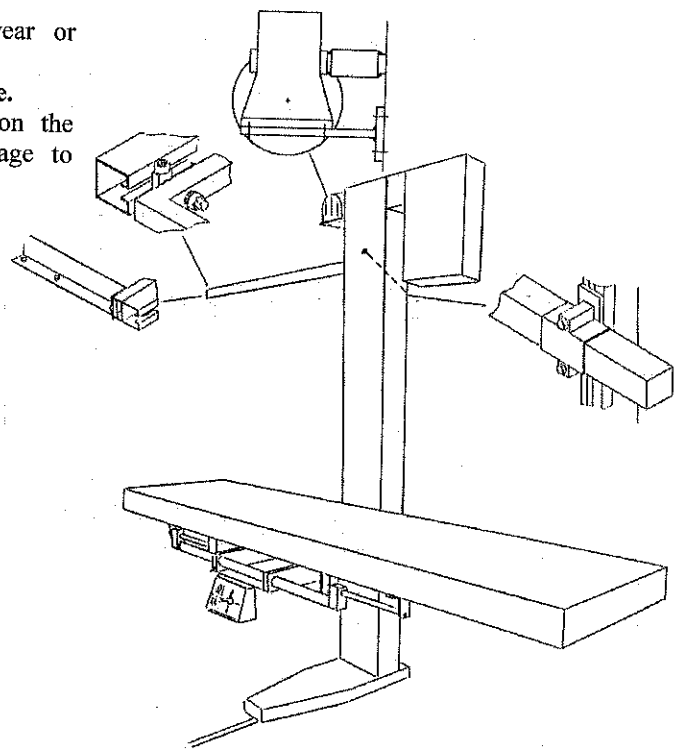
Change any parts that show signs of wear or malfunction to avoid greater damage.

**8.3.2 Check the general state of the machine.**

Check the chains state, the chains joint on the horizontal structure to avoid greater damage to persons.

**8.3.3 Checking of fixing bolt of structure and reduction unit**

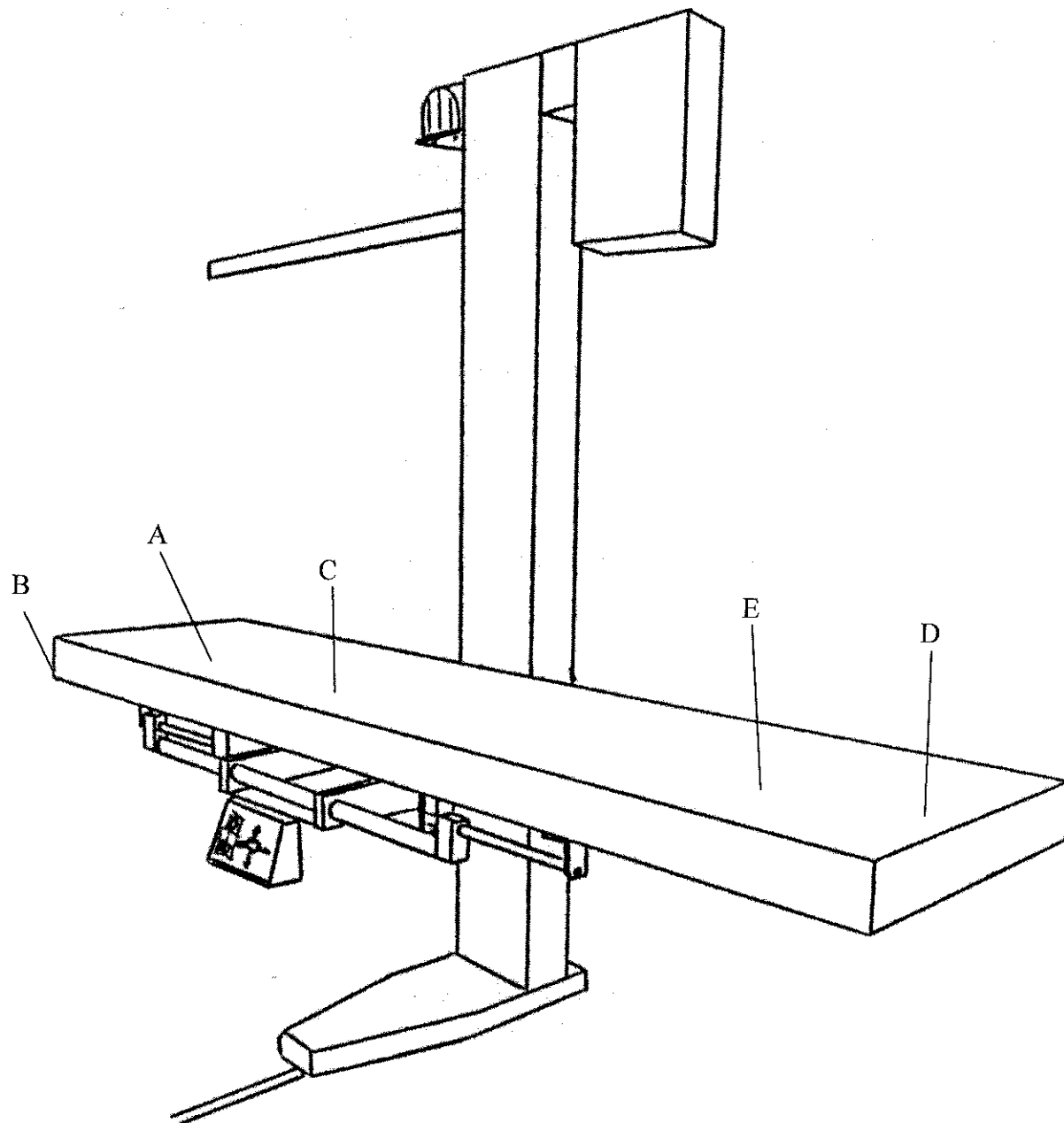
See the draw at the side.



**9 Changing the parts subject to periodic wear.**

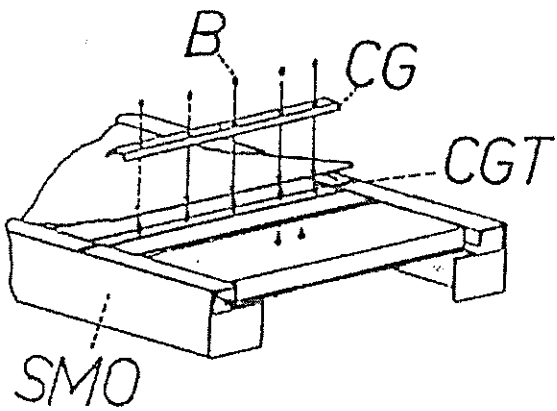
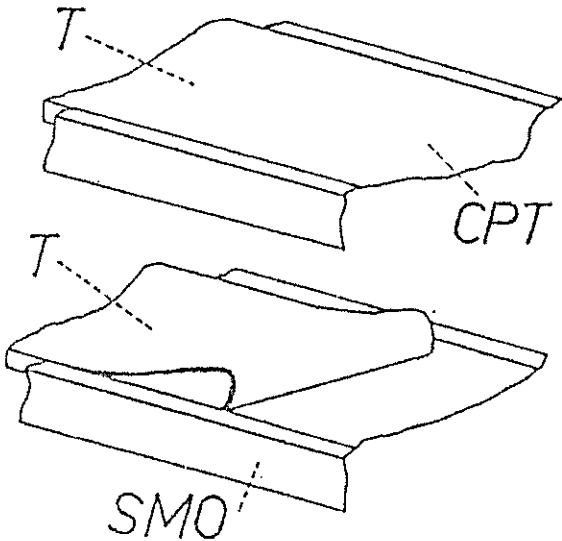
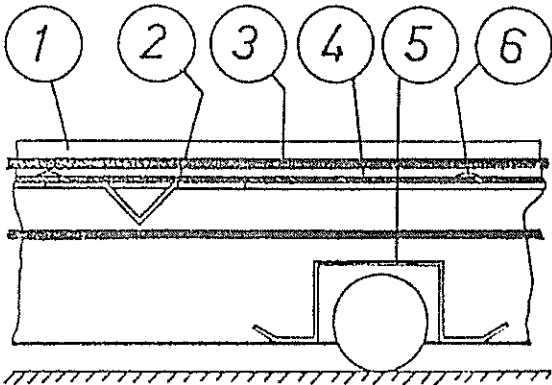
**9.1 Changing mechanical parts of the machine.**

The replacement of the parts listed below does not affect machine safety, so maintenance operations may be carried out by the buyer's personnel.



SYMBOL	DESCRIPTION	ARTICLE CODE
A	Rear roller under the carriage	
B	Unlock bracket of sheet joint	
C	Rollers and pins of the CPT carriage	
D	Sheet joint	
E	Looped heavy cotton sheet	

9.2 Changing the sheet.

	<ul style="list-style-type: none"> <li>• Unscrew the bolts (B) in the joint of sheet (CGT).</li> <li>• Remove the cover of the joint (CG) and the damaged sheet from eyelets.</li> </ul>
	<ul style="list-style-type: none"> <li>• Remove the carriage (CPT) from the horizontal structure (SMO) and put it into a plane.</li> <li>• Remove the damaged sheet (T) completely.</li> <li>• Clean the particular in contact with the sheet</li> </ul>
 <ol style="list-style-type: none"> <li>1) Carriage (CGT)</li> <li>2) Aluminium reinforcement</li> <li>3) Sheet</li> <li>4) Aluminium sheet</li> <li>5) Cover of roller</li> <li>6) Rivet</li> </ol>	<ul style="list-style-type: none"> <li>• Insert the new sheet (T) with the same path of the old sheet.</li> <li>• To drill use the cover of joint (CG) as mask, write with a pencil and cut with a scissors or a punch <math>\varnothing 4</math> mm.</li> </ul> <p>Note. The drilling must be overlapped and the sheet must be tighten.</p> <p>Screw all bolts and screws and put the carriage into the structure.</p>

10 troubleshooting

FAULT	PROBABLE CAUSE	REMEDY
<p>We press the lift button (S6^), but the loader don't move</p>	<ul style="list-style-type: none"> <li>• The emergency button is pressed or dirty.</li> <li>• The fuses of auxiliary circuit into the electric panel are broken.</li> <li>• The carriage isn't totally re-entered.</li> <li>• The main switch in the electric panel is in the zero position.</li> <li>• There is no power on the electric panel (QE).</li> <li>• The limit switch are pressed or broken.</li> <li>• The main switch (Qg) is defective.</li> <li>• The cope save limit switch is defective.</li> <li>• The max lift limit switch (Sc13) is defective.</li> <li>• The inverter (Qs/Qd) is blocked.</li> </ul>	<ul style="list-style-type: none"> <li>• Release the emergency button or change it.</li> <li>• Check and change the fuses</li> <li>• Check</li> <li>• Turn the main switch</li> <li>• Check the power line of loader</li> <li>• Free the limit switch or change it</li> <li>• Change</li> <li>• Change</li> <li>• Change</li> <li>• Check the display and compare with the manual information</li> </ul>
<p>We press the lift button (S7v), but the loader don't move</p>	<ul style="list-style-type: none"> <li>• The emergency button is pressed or dirty.</li> <li>• The fuses of auxiliary circuit into the electric panel are broken.</li> <li>• The main switch in the electric panel is in the zero position</li> <li>• There is no power on the electric panel (QE).</li> <li>• The main switch (Qg) is defective.</li> <li>• The carriage isn't totally re-entered.</li> <li>• The max descent limit switch (Sc0) is defective.</li> <li>• The inverter (Qs/Qd) is blocked.</li> </ul>	<ul style="list-style-type: none"> <li>• Release the emergency button or change it.</li> <li>• Check and change the fuses</li> <li>• Turn the main switch</li> <li>• Check the power line of loader</li> <li>• Change</li> <li>• Check</li> <li>• Change</li> <li>• Check the display and compare with the manual information</li> </ul>

FAULT	PROBABLE CAUSE	REMEDY
<p>We press the enter button (S3), but the loader don't move</p>	<ul style="list-style-type: none"> <li>• The emergency button is pressed or dirty.</li> <li>• The fuses of auxiliary circuit into the electric panel are broken.</li> <li>• The SMO isn't at the chamber height with (ScX) pressed</li> <li>• The main switch in the electric panel is in the zero position.</li> <li>• There is no power on the electric panel (QE).</li> <li>• The main switch (Qg) is defective.</li> <li>• The latch limit switch isn't inserted or is defective.</li> <li>• The max enter limit switch (Sc9) is defective.</li> <li>• The inverter (Qs/Qd) is blocked.</li> </ul>	<ul style="list-style-type: none"> <li>• Release the emergency button or change it.</li> <li>• Check and change the fuses</li> <li>• Check</li> <li>• Turn the main switch</li> <li>• Check the power line of loader</li> <li>• Change</li> <li>• Check or change</li> <li>• Change</li> <li>• Check the display and compare with the manual information</li> </ul>
<p>We press the exit button (S4), but the loader don't move</p>	<ul style="list-style-type: none"> <li>• The emergency button is pressed or dirty.</li> <li>• The fuses of auxiliary circuit into the electric panel are broken.</li> <li>• The main switch in the electric panel is in the zero position</li> <li>• There is no power on the electric panel (QE).</li> <li>• The main switch (Qg) is defective.</li> <li>• The latch limit switch isn't inserted or is defective.</li> <li>• The max exit limit switch (Sc11) is defective.</li> <li>• The inverter (Qs/Qd) is blocked.</li> </ul>	<ul style="list-style-type: none"> <li>• Release the emergency button or change it.</li> <li>• Check and change the fuses</li> <li>• Turn the main switch</li> <li>• Check the power line of loader</li> <li>• Change</li> <li>• Check or change</li> <li>• Change</li> <li>• Check the display and compare with the manual information</li> </ul>

FAULT	PROBABLE CAUSE	REMEDY
Tripping of inverter relay	<ul style="list-style-type: none"> <li>• The setting of the thermal relay of the inverter is inferior to that indicate on the plate of the motor</li> <li>• The electric tension is inferior to that suitable on the plate of the motor</li> <li>• The motors work overloaded (ex. broken bearings)</li> </ul>	<ul style="list-style-type: none"> <li>• Correct the setting. (See Inverter Manual)</li> <li>• Contact the firm that gives electric energy</li> <li>• Change</li> </ul>
The horizontal structure don't stop perfectly at the chamber height	<ul style="list-style-type: none"> <li>• The lift button has held too much</li> <li>• The column isn't perpendicular to the floor</li> <li>• The stop cam is moved</li> </ul>	<ul style="list-style-type: none"> <li>• Repeat the operation</li> <li>• Regulate the column</li> <li>• Regulate the cam</li> </ul>
The SMO is oscillating respect the column	<ul style="list-style-type: none"> <li>• The rollers on the horizontal structure support are loose or damaged</li> <li>• The bolt are loose</li> </ul>	<ul style="list-style-type: none"> <li>• Register the rollers or change</li> <li>• Screw the bolt the structure</li> </ul>
The glass fuse in the panel continues to melt.	<ul style="list-style-type: none"> <li>• Fuse amperage too low.</li> <li>• The coil of a remote control switch or of a relay has fused and is short circuiting. See fuse (F2).</li> <li>• The transformer has fused. See fuse (F1).</li> </ul>	<ul style="list-style-type: none"> <li>• Replace with a fuse with amperage as described in the wiring diagram.</li> <li>• Identify it by removing one appliance at a time and replace it.</li> <li>• Replace it.</li> </ul>
The carriage is fatiguing to move	<ul style="list-style-type: none"> <li>• The rollers of the carriage are blocked.</li> <li>• The sheet is too mach tight</li> </ul>	<ul style="list-style-type: none"> <li>• Oil or change</li> <li>• Remove the sheet joint and make new holes. See chapter 9</li> </ul>