

**AUTOMATIC DOUGH SHEETER**  
**MANUAL FOR USE AND MAINTENANCE**  
**TRANSLATION OF THE ORIGINAL INSTRUCTIONS**



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**FLAMIC SRL** Via dell'Artigianato, 5 36035 MARANO VICENTINO (VICENZA) – Italy  
Vat No. and Tax Code 03198710240 e-mail: [info@flamic.it](mailto:info@flamic.it) Web: [www.flamic.it](http://www.flamic.it)  
Tel. +39 0445 576659 Fax +39 0445 277203

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Chapter 1 - General information**1. Chapter 1 GENERAL INFORMATION****1.1. Documentation supplied**

- Instruction manual (this booklet)

**Other documentation**

- Wiring diagrams
- Touch-Screen use
- EC declaration of conformity

**1.2. This manual****Details about manual**

- Instruction manual: AUTOMATIC DOUGH SHEETER
- Model:
- Edition: 4.0
- Year and month of printing: 07/2018

**Addressees**

- Carrier
- Installer
- End user
- Maintenance engineer.

**1.3. Information property rights**

This manual contains copyright information. All rights are reserved.

No part of this manual can be reproduced or photocopied without the prior written permission of the manufacturer. Permission to use this document must only be given to the customer to whom the manual has been supplied as part of the machine's equipment and only for the purpose of installation, operation and maintenance of the machine to which the manual refers.

The manufacturer declares that all the information contained herein is in accordance with the technical and safety specifications of the machine to which the manual refers. The manufacturer will not be held responsible for direct or indirect damage or injury to persons, objects or animals resulting from the use of this documentation or the machine in non-standard conditions.

The manufacturer reserves the right to introduce technical modifications or improvements both to the documentation and to the machines without prior notice. Modifications and improvements may also concern other machines of the same model described in this manual, but which have a different serial number. The information contained herein refers in particular to the machine specified in 1.6 "Machine identification details".

Chapter 1 - General information**1.4. Conventions****Linguistic conventions**

- **On the left, on the right:** when speaking of such, we refer to the operator's position when facing the control panel.
- **Qualified workers:** all those persons who thanks to their training, experience, education as well as their knowledge of standards, regulations, safety precautions and operation conditions, have been authorised by the person in charge of plant safety to carry out any necessary action and are capable of identifying and avoiding possible danger.

**Printing conventions**

Text in *italics*: this indicates the title of a chapter, a section, a subsection, a paragraph, a table or a drawing in this manual or other reference document.

**PSE:** Personal Safety Equipment.

**N:** where N represents a generic number (e.g.3): symbolic representation of a control or warning device (e.g. buttons, selectors and indicator lights).

**L:** where L represents a generic letter (e.g.B ): symbolic representation of a part of the machine.

**NOTE** Notes contain important information and are highlighted separately from the text to which they refer.

**BEWARE** Beware indications describe the procedures the partial or total non-observance of which can cause damage to the machine or to devices connected to it.

**DANGER** Danger indications describe the procedures the partial or total non-observance of which can injure or harm the operator's health.

Chapter 1 - General information**1.5. Manufacturer identification details**

.....  
.....  
.....  
.....  
.....

**1.6. Machine identification details**

**Type:** AUTOMATIC DOUGH SHEETER

**Model:** \_\_\_\_\_

**Serial no.:** \_\_\_\_\_

**Year of manufacture:** \_\_\_\_\_

Voltage ☐ 230  $\pm$ 10% V single phase

Frequency ☐ 50  $\pm$ 1% Hz

Frequency ☐ 60  $\pm$ 1% Hz

Power of Electrical motor :Laminating cylinders traction: 1.1Kw – Up and down laminating cylinder : 0.55Kw  
Conveyor belts traction : 0.18 Kw X 2= 0,36 Kw – Flour duster : 0.09 Kw

**1.7. EC declaration of conformity**

See enclosure 1 EC declaration of conformity.

Chapter 1 - General information**1.8. Guarantee****General conditions**

1. This machine (with appropriate serial number) is guaranteed for 12 months after the date of actual delivery. This guarantee is, however, subject to the claim being made by means of registered letter, within 8 days after discovery of any faults or defects providing that prior confirmation and acknowledgement is obtained from the manufacturer.
2. The guarantee covers the replacement or repair of the faulty part (component, machine or part of the machine) but does not cover the cost of disassembly, re-assembly or shipping.
3. The replacement of any part does not bring about the renewal of the guarantee period for the entire machine, unless the entire machine is replaced.
4. Therefore, in no circumstances shall the manufacturer be liable for compensation of whatever type and the purchaser shall relinquish any claim for damage, loss or expense, even to third parties, arising from machine stoppage.
5. This guarantee does not cover the electrical parts and the parts subject to normal wear and tear or deterioration due to external atmospheric or environmental agents nor does it cover any defects arising from the failure to carry out maintenance or insufficient or incorrect maintenance, nor does it cover use by unqualified personnel, misuse, abuse or improper use, unauthorised alterations or repairs or tampering of any kind.
6. The validity of the guarantee is subject to the performance of correct maintenance as described in Chapter 6 Maintenance of the instruction manual supplied with the machine.
7. The guarantee is not valid if payment conditions have not been observed.
8. As far as parts supplied by other manufacturers are concerned, said parts are guaranteed in accordance with the terms of the said manufacturer's warranty.
9. Any controversy shall be governed directly by the court of Competent Jurisdiction.

**NOTE** In the event of repairs performed at the place of machine installation, the machine guarantee certificate must be presented to the service engineer and the guarantee is valid only if fully completed.

Special guarantee conditions will be explicitly stated in the sales contract.

**The guarantee will expire in the following cases:**

- Improper machine use (see *Improper use* section 1.10).
- Use of equipment different from the equipment specified in *Chapter 6 Maintenance*.
- Assembly of the machine in conditions different from those specified in *Chapter 4 Installation*.
- Connections which fail to comply with the specifications given in *Chapter 4 Installation*.
- Use of non-original spare parts or parts not specified by the manufacturer.

## Chapter 1 - General information

### **Claiming under guarantee**

#### **Method**

Requests for spare parts or service visits under guarantee must be made to the manufacturer or to your authorised dealer as soon as possible after having encountered the defect which is covered by the *General conditions* on section 1.2.

**BEWARE** We recommend the use of original spare parts.

Always state the type, model and serial number of the machine when requesting spare parts under guarantee. This information can be found on the name plate of the machine.

**NOTE** Failure to comply with the instructions contained herein will release the manufacturer from any liability in the event of accidents to persons and/or objects, or machine malfunctioning.

#### **Requests for spare parts**

When requesting spare parts please state the following information:

- Type of machine.
- No. of production order marked on the relevant label.
- Year of manufacture.

If necessary please contact:

.....  
 .....  
 .....  
 .....  
 .....  
 .....

### **1.9. Use of the manual**

Read the following chapters carefully: *Chapter 1 General information.*, *Fig. 1.1 Overall view of machine*, *Chapter 2 Machine Specifications*, *Chapter 3 Operator Interface*.

Consult the relevant chapter before attempting installation, operation, maintenance or dismantlement.

**NOTE** This manual should be kept in good condition for the whole of the life of the machine and should be stored where it can be easily found when required. The manual should be handed over to the purchaser of the machine if this is sold to someone else.



Chapter 1 - General information**1.10. Description of the machine****Intended use****Intended operations**

The machine has been built and designed to sheet dough to the thickness required by the operator.

**Conditions of intended use**

The machine has been designed and built to operate in a closed environment, protected from atmospheric agents.

**Intended use of power**

The machine is driven by electric energy, which is converted into mechanical energy for the intended operations.

**Improper use**

Improper use means any operation not expressly stated in the *Intended use* on page 6 , in particular:

- Operating the machine in an explosive environment.
- Operating the machine in a flammable environment.
- Washing the machine control area with jets of water.

## Chapter 1 - General information

### Machine structure

This section describes the main machine components and their function within the production cycle.

### Main machine components

The machine is composed of the following principal components:

1. Base structure
2. Control Panel
3. Conveyor Belts
4. Sheeting cylinders
5. Scrapers for cylinder lamination
6. Pastry tray
7. Conveyor belt support
8. Flour duster
9. Automatic dough reeler

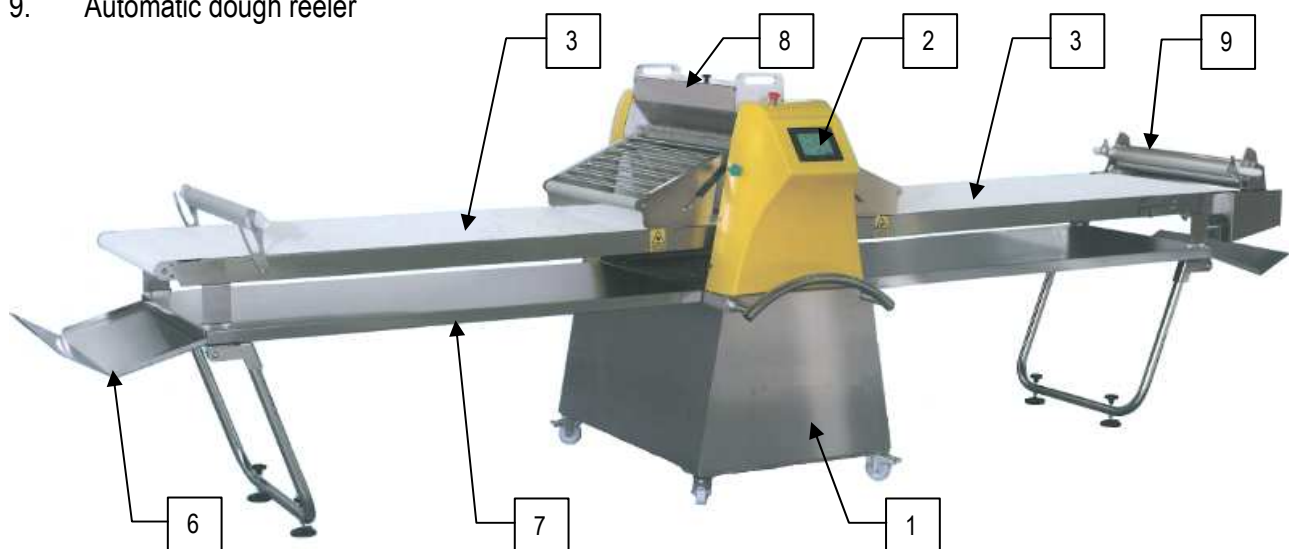


Fig.1.1

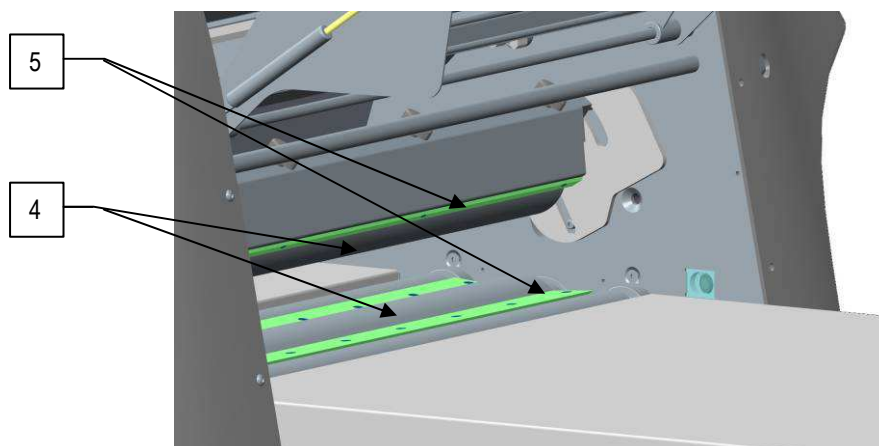


Fig. 1.2

## Chapter 1 - General information

During the design and construction of this machine the manufacturer has adopted the criteria and mechanisms needed to satisfy the essential safety requirements imposed by the Machinery Safety Directive 89/392/EEC and subsequent amendments, by the Low Voltage Directive 2006/42/EC and subsequent amendments and by the Electromagnetic Compatibility Directive 2014/30/EU.

The careful analysis of risks carried out by the manufacturer has eliminated most of the risks (predicted or reasonably predictable) linked to the machine operation conditions.

The complete documentation of safety measures taken is contained in the technical brochure of the machine kept at the manufacturer.

The manufacturer strongly recommends careful observation of the instructions, procedures and recommendations contained herein as well as strict observation of the current safety regulations regarding the work environment. This also applies to the use of both the correct personal safety equipment and machine protection devices.

The Machinery Safety Directive 2006/42/EC definitions :

**HAZARDOUS AREAS:** A hazardous area is any area inside or in the vicinity of the machine which would constitute a risk for the health and safety of a person.

**EXPOSURE TO DANGER:** Whoever is within or partially within a hazardous area.

Do not insert hands, tools or other objects into any moving parts of the machine.

It is forbidden to climb onto the machine.

Operators must avoid unsafe operations, in uncomfortable positions which can compromise their balance.

Operators must take care not to get trapped or entangled in any moving parts due to loose clothing, ties, watches, chains, bracelets, rings and long hair. The use of caps is recommended.

The employer must inform all operators about all accident risks, especially the risks due to noise, individual protection devices and general accident prevention standards prescribed by international or national (in force in the machine- manufacturing country) rules or regulation. All operators must comply with international and national (in force in the country of machine destination) accident prevention standards to avoid possible accidents.

**NOTE** The manufacturer will not be liable for any damage or injury to persons, animals or objects caused by non-observance of the safety rules and/or recommendations given in the documentation supplied.

Chapter 1 - General information**1.11. Qualifications of personnel**

**OPERATOR:** the person/people in charge of installing, operating, adjusting, carrying out maintenance, cleaning, repairing and transporting the machine.

**PERSON IN CHARGE OF MACHINE WORKING:** the people who use the machine. Their work must be limited to the correct control and adjustment operations shown in section 5. They are required to know all the procedures and instructions of the machine working perfectly. They must work within the area shown in Fig. 5.1 (workstation).

**PERSON IN CHARGE OF MAINTENANCE:** the person who is in charge of transporting, installing, starting, adjusting, cleaning, repairing, carrying out the machine maintenance. This task must be entrusted to skilled staff which has attended training, vocational and qualifying courses, etc, and has gained experience in transport, installation, starting and maintenance of machines as well as electrical, pneumatic and hydraulic systems.

There are three different types of workers who can carry out interventions on the machine:

**MECHANICAL MAINTENANCE**

**ENGINEER:** qualified engineer able to operate the machine in normal conditions and with the machine guards open. Able to carry out adjustments, maintenance and repairs on mechanical parts. This worker should not be assigned to electrical interventions on live parts.

**ELECTRICIAN:** qualified engineer able to operate the machine in normal conditions and with the machine guards open. Able to carry out electrical adjustments, maintenance and repairs. This worker can be assigned to electrical interventions on live parts inside the electric control box.

**MANUFACTURE'S ENGINEER:**

qualified engineer put at customer's disposal by the manufacturer to carry out complicated repairing in special conditions, according to the agreements taken with the customer.

**NOTE**

The manufacturer will not be liable for damage or injury to persons, animals or things resulting from the action of unqualified operators.

## Chapter 1 - General information

### 1.12. Safeguards

#### DEFINITION

Safeguards are any safety measures which involve the application of specific technical mechanisms (guards, safety devices) to protect people from dangers which cannot be made sufficiently harmless through the design of the machine.

#### Fixed and moveable guards

- All power transmission components are shielded by screw-fastened guards.
- All moving parts are protected by the metal safety grille "B".

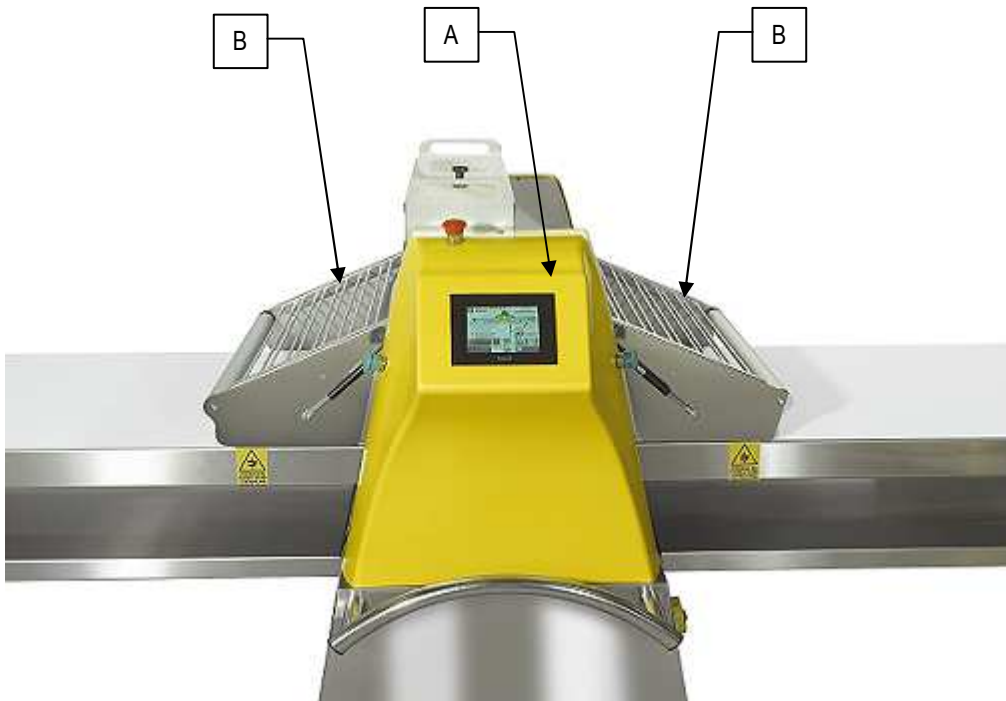


Fig.1.3

#### Passive safety devices

#### DEFINITION

Passive safety devices are those devices or safeguarding techniques which eliminate or reduce potential hazards for the operator without the operator having to actively intervene.  
Do not remove or tamper with the safety device.

## Chapter 1 - General information

### Limit switch devices



Fig.1.4

The machine is equipped with two limit switch micro switches, placed on the front side, their position is referred to as “A” (Fig. 1.4). These are energised by means of two cams “C” which are in turn fixed to the safety grille (Fig. 1.3 *Fixed and moveable guards* on page 14).

If the operator raises the protection grille the cams turn and energise the relevant microswitch which controls a Machine Stoppage.

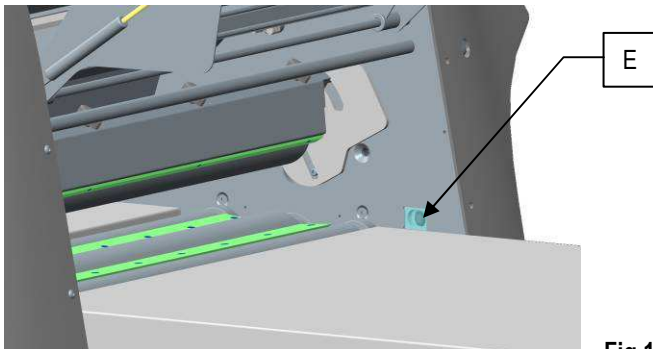


Fig.1.5

Two photocells “E” are present on the machine. The function of these photocells “E” is to invert the direction of the conveyor belts and cylinders.

### Active safety devices

#### **Definition**

Active safety devices are those devices or safeguarding techniques which eliminate or reduce potential hazards and which require active and conscious intervention by the operator in order to activate their accident preventative action.

Chapter 1 - General information**Emergency safety**

The emergency button is located on the main control panel of the machine and allows the operator to stop the machine in an emergency.



Fig. 1.6

**Tips**

- The electrical equipment offers protection against personal injury caused by electrical discharge due to direct and indirect contact.
- All the electrical power parts and those with dangerous voltage are contained in the electrical box protected to IP54. The control and power supply voltages for all the accessible parts are 12 and 24V; moreover both these lines are protected against short-circuiting and accidental contact to earth.

**DANGER** Tampering with safety devices creates hazards for the machine operators and other exposed persons.

**NOTE** The manufacturer will not be liable for injury or damage to people, animals or things caused by tampering with the machine's safety devices.



## Chapter 1 - General information

### **1.13. Hazardous areas and subsequent risks**

#### **DEFINITION**

A hazardous area is any area inside or in the vicinity of the machine which would constitute a risk for the health and safety of an exposed person.

This manual indicates all the procedures during which residual risks for the operator are present. The residual risks can be eliminated by carefully following the procedures indicated in this manual and by using the recommended personal safety equipment.



Protective gloves must be worn.



Protective footwear must be worn.

#### **Handling area of the packed or unpacked machine.**

The following risks are present here:

- Impact hazard for operator.
- Crushing hazard.

The following PSE must be used by the operator:



- Protective footwear.
- Protective gloves.

**DANGER** The manufacturer will not be liable for damage or injury to persons, animals or things resulting from non-compliance with the safety rules or from the recommended PSE not being worn.



Chapter 2 - Machine Specifications

## 2. Chapter 2 MACHINE SPECIFICATIONS

### 2.1. Technical specifications

Descriptions	Technical data	
Work plan height (mm)	900	
Cylinder length (mm)	700	
Cylinder diameter (mm)	Ø85	
Cylinder range (mm)	Da 0,2 a 50 mm	
Installed total power (kW)	2.1	
Electric tension (Volt)	230 ± 10% single phase	
Frequency (Hz)	50 ± 1%	
Frequency (Hz)	60 ± 1%	
Power of transport electrical motor (kW)	1,1	
Power of cylinder electrical motor (kW)	0,55	
Power of flour duster electrical motor (kW)	0,09	
Conveyor belts electrical motor (kW)	0.18 x2 motors	
Belt dimensions (mm)	700x1500	700x2000
Machine weight (kg)	425	465

## Chapter 2 - Machine Specifications

### Machine dimensions



### Tolerances of the electrical power supply

#### **Voltage**

Running voltage:  $\pm 10\%$  of rated voltage.

#### **Frequency**

$\pm 1\%$  of rated frequency in continuous running  
 $\pm 2\%$  of rated frequency for a short working period.

#### **Harmonics**

The harmonic distortion, for the sum of harmonics from the second to the fifth, should not exceed 10% of the total voltage with effective value between live conductors. A further distortion of 2% for the sum of the harmonics from the sixth to the thirtieth on the total effective value between live conductors is tolerated.

#### **Single phase power supply voltage imbalance**

Neither the inverse sequence component, nor the zero sequence component should exceed 2% of the direct sequence component of the voltage.

#### **Voltage pulses**

These must not last longer than 1.5 ms with a rise/fall time between 500 ns and 500  $\mu$ s and a peak value not greater than 200% of the effective value of the rated power supply voltage.

#### **Breaks in voltage**

The power supply should not be broken or the voltage must not drop to zero for more than 3 ms, regardless of the instant of the supply wave. More than 1 s should elapse between two consecutive breaks.

#### **Voltage drops**

Voltage drops should not exceed 20% of the peak voltage of the power supply for more than 1 cycle. More than 1 s should elapse between two consecutive voltage drops.

#### **Liability**

**NOTE** The manufacturer will not be liable for defects, breakdowns or malfunctioning arising from the non-compliance with the power supply values stated.

Chapter 3 - Machine Specifications**3. Chapter 3 OPERATOR INTERFACE****3.1. Controls**

1. Emergency push-button, when pressed, this stops the machine completely by cutting off the voltage to the electric circuits
2. On / off Main switch
3. Start push-button
4. Touch-Screen.

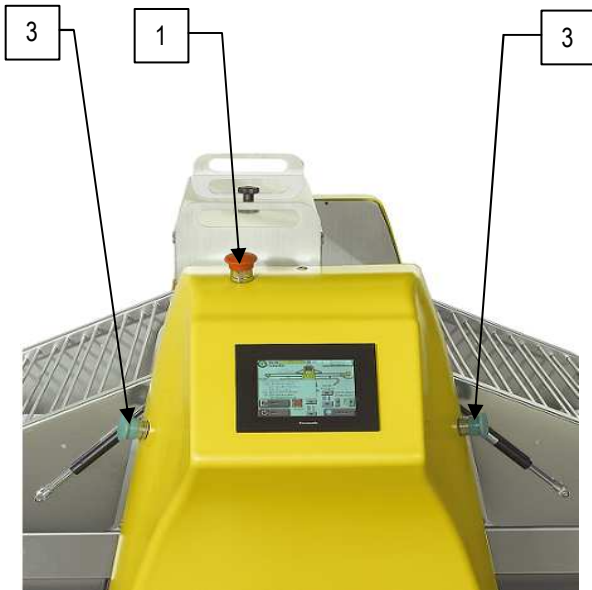


Fig.3.1



Fig.3.2

## 4. Chapter 4 INSTALLATION

The staff in charge of installing the machine must be qualified, have suitable technical training and have experience so as to be able to carry out the various operations competently.

### 4.1. Hazardous areas and other risks during installation



Protective gloves must be worn.



Protective footwear must be worn.

#### **Handling area of the packed or unpacked machine.**

The following risks are present here:

- Impact hazard for operator.
- Crushing hazard.

The following PSE must be used by the operator:



- Protective footwear.
- Protective gloves..

**DANGER** When unloading, hoisting and handling the machine, personnel must wear the appropriate PSE, such as gloves, boots, helmet and use the appropriate tools.

### 4.2. Qualifications of operator

The installation of the machine should only be carried out by trained, qualified and authorised personnel after having read and understood the information given in this manual.

### Chapter 4 – Installation

#### **4.3. Transport**

The instructions given in this section should be carefully followed when transporting the machine. This operation may include the following situations:

- Storage of the machine.
- Initial installation of the machine.
- Re-location of the machine.

#### **Transport conditions**

The machine and its equipment can be transported in the following ways, according to the customer's requirements:

- Carton on pallet.
- Wooden crate.
- Pallet.

In each of these cases, before transport or handling, the various accessories must be packed and fastened to the machine.

**NOTE** Follow standard precautions to avoid collisions and tipping over.

#### **Symbols on the machine packing**

The following symbols are shown on the machine packing:

- Handle with care.
- Centre of gravity.
- Hooking point.
- Store in a dry place.
- This side up.
- CE marking.

### Chapter 4 – Installation

**DANGER** It is forbidden to climb onto the machine and/or its packing or stop and/or pass under the machine during handling.

Access to the lifting and handling area is denied to all personnel except those directly involved in the operations.

All operators should remain at a safe distance in order to avoid being hit by the machine or any of its parts which may accidentally fall.

Before starting the lifting operations the whole of the machine handling area, including the parking area for the means of transport and the machine installation area, should be identified and inspected in order to detect any potentially hazardous areas.

Use a bridge crane, a crane or a forklift truck with adequate lifting capacity.

The use of inadequate lifting equipment may cause damage to the machine or injury to personnel.

Check that the hoisting cables or ropes are equipped with bell and have the label which contains all the manufacturer's details and that the lifting capacity is clearly stated.

Check the cables or ropes before each lifting operation.

Do not use these if they are damaged or worn or have broken strands or wires.

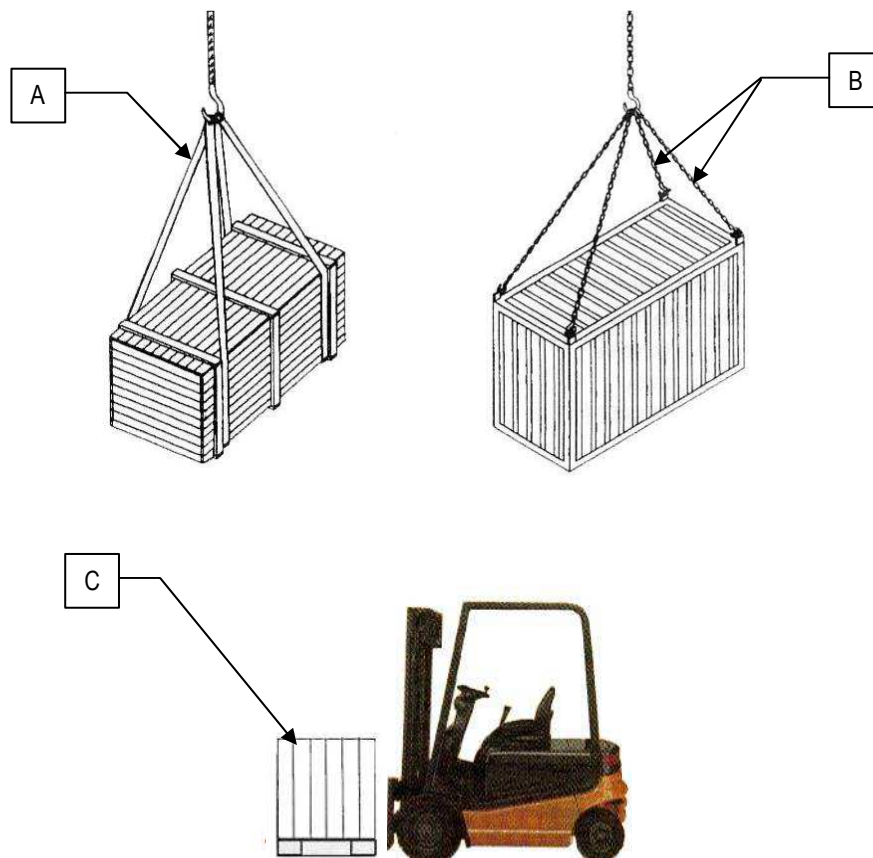
Never twist or knot ropes or cables.

Always follow the instructions supplied by the manufacturer.

Follow the same precautions when using chains or belts.

#### Lifting and handling the packed machine

Figure 4.1



### Chapter 4 – Installation

#### **Wooden crate on the vehicle platform**

The crate/container should be unloaded from the vehicle using a forklift truck “C” or using lifting equipment in the following way:

1. Insert the cables or ropes “A” under the box pallet and attach them to the hook of the crane/bridge crane. If the machine is packed in a container insert the hooks of the chains “B” into the appropriate brackets.
2. Lift the box pallet /container just enough to be able to unload it.
3. Position the box pallet /container in the planned position.

#### **Wooden crate on the ground**

The crate/container should be unloaded from the vehicle using a forklift truck “C” or using lifting equipment in the following way:

1. put the unloading forks in the pallet as usual for unloading by lift truck
2. Insert the cables or ropes “A” under the box pallet and attach them to the hook of the crane/bridge crane. If the machine is packed in a container insert the hooks of the chains “B” into the appropriate brackets.
3. Lift the box pallet/container just enough to be able to handle it.
4. Position the box pallet/container in the planned position for unpacking.

#### **Equipment for lifting and handling the packed machine**

The following equipment is required to hoist the machine :

- Crane / bridge crane with adequate lifting capacity.
- Forklift truck with adequate lifting capacity.

**BEWARE** If the machine has been damaged during transport, inform the manufacturer immediately. The manufacturer should also be informed if there are differences between the "Packing list" and the goods actually delivered.

**BEWARE** The machine and its equipment should be protected from external atmospheric agents. In particular water and damp can cause certain machine components to rust, causing irreversible damage.

## Chapter 4 – Installation

### **4.4. Preliminary operations**

#### **Check if the machine has been damaged during transport**

Check the condition of the machine taking a close look at the outside and the inside.

Any deformation of the visible parts indicates that the machine has been hit by something during transport.

This could lead to malfunctioning. Check the tightening of screws, bolts and fittings.

#### **If damage has occurred:**

Damage caused by transport should be attributed to the carrier and the manufacturer or its agent should be informed immediately of the situation.

#### **Cleaning the machine**

- Remove the dust and dirt deposited on the surface during transport.
- Carefully clean and dry each part (varnished or unvarnished) using soft, clean, dry cloths.

**BEWARE** It is strictly forbidden to climb onto the box pallets and/or to stow them one on top of the other.

Should the box pallets remain outdoors for some time, waiting to be transported inside the building, these box pallets should be covered with adequately-sized waterproof tarpaulins.

If storage exceeds 3 months the box pallets should be stored inside, sheltered from bad weather and protected from excessively high or low temperatures.

If the machine is unpacked, it should be covered in order to prevent the build-up of dust and dirt.

### **4.5. Installation**

#### **Features of the installation site**

A suitable installation site should be chosen considering the overall dimensions of the machine supplied in 2.1 *Technical specifications*, and in compliance with the following rules:

- The power supply source, in compliance with the *Power Supply Details* section 2.1, should be near the installation site.
- Nothing should hinder the free movement of the operator around the machine. The machine should be situated at least 1 metre from the nearest wall or object.
- Cabinets should be accessible at all times and the doors should open wide without obstacle.
- Make sure there is sufficient space for machine operation and maintenance and also for any other additional equipment.

#### **Protection against external atmospheric agents**

The machine should be installed in a covered building, shielded from direct contact with atmospheric agents.



### Chapter 4 – Installation

#### **Positioning of sliding tables belts**

To perform the operations of assembly and disassembly of sliding tables conveyors belts, is necessary to operate in two persons.

To mount tables supports and sliding tables belts on the machine, carry out the following steps:

Tables supports "5" are the first parts to be positioned by inserting them into the appropriate holes "2" located in the base unit "1".

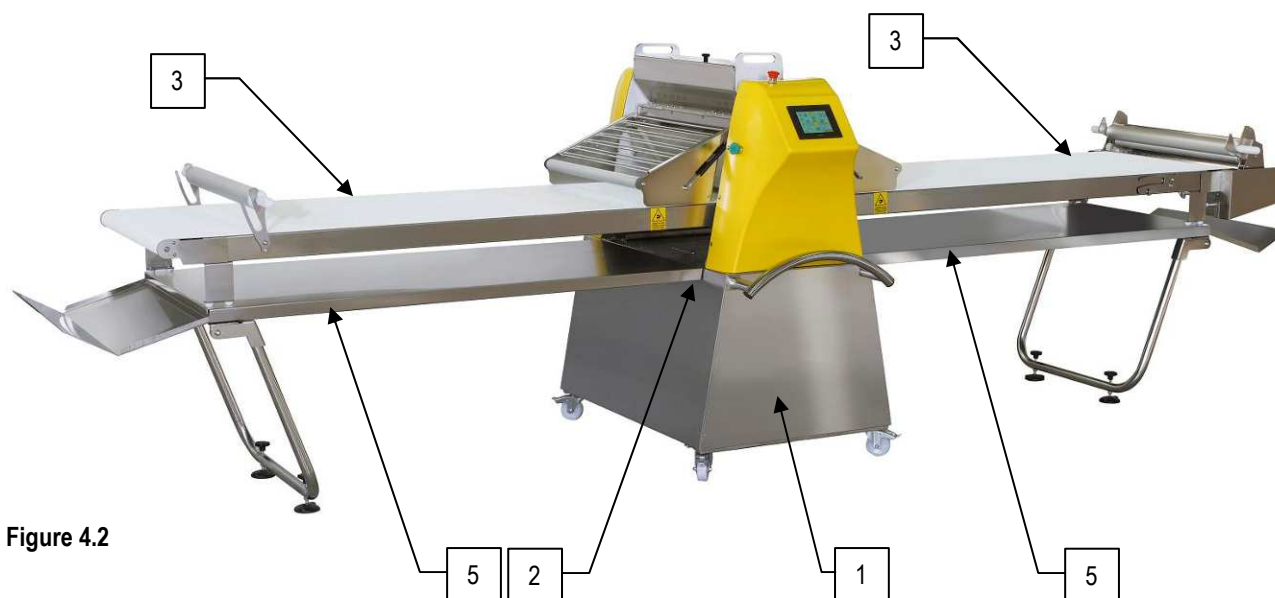
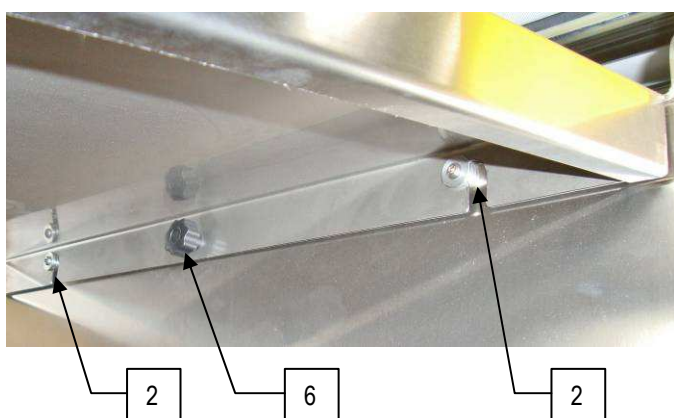


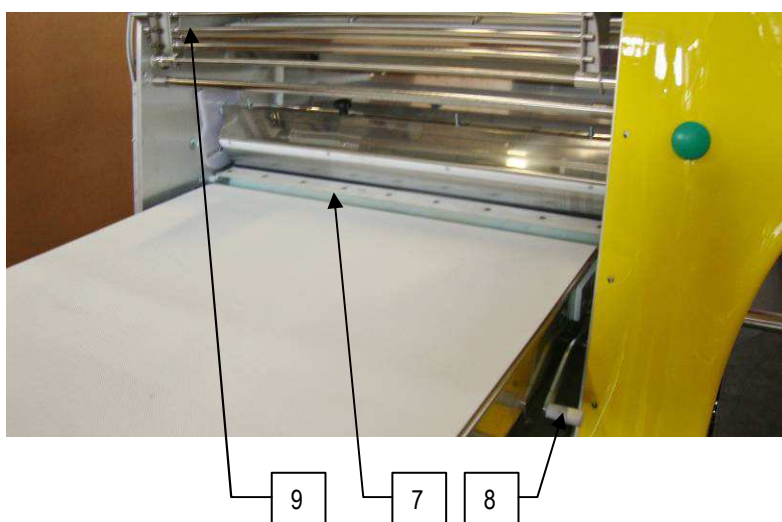
Figure 4.2



Fix table support "5" at the base unit "1" by the handwheel , as shown in figure 4.3.

Figure 4.3

Proceed now to the positioning of the sliding table belt as follows:



Raise the scraper "7" by lowering the lever sideways "8" and lift the safety grille "9"

Figure 4.4

Chapter 4 – Installation



Bring obliquely the table toward the left side of the machine (the side without control panel)

Figure 4.5

engage the pin "A" in his seat "B"



A

Figure 4.6



B

Figure 4.7



Bring the opposite side of the table towards the machine

Figure 4.8

insert the hub "C" in his seat "D"

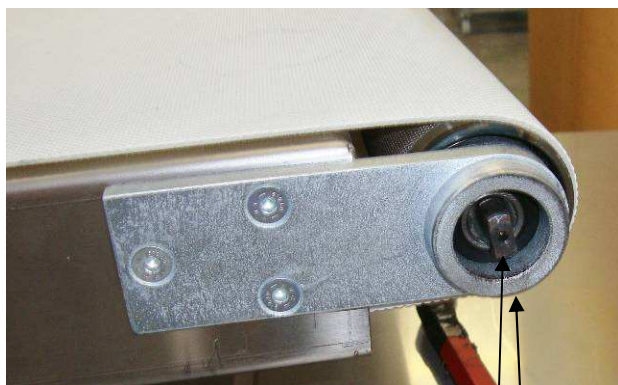


Figure 4.9

E

C



Figure 4.10

D

F

### Chapter 4 – Installation

**WARNING:** Treat carefully the correspondence insert "E" with the notch "F". To do this, once the hub "C" is inserted in his seat "D", with hands slide the carpet back and forth until the 'insert "E" will be perfectly placed in the notch "F" (you will hear a click).



Connect the plug to the socket "4" as shown in figure.

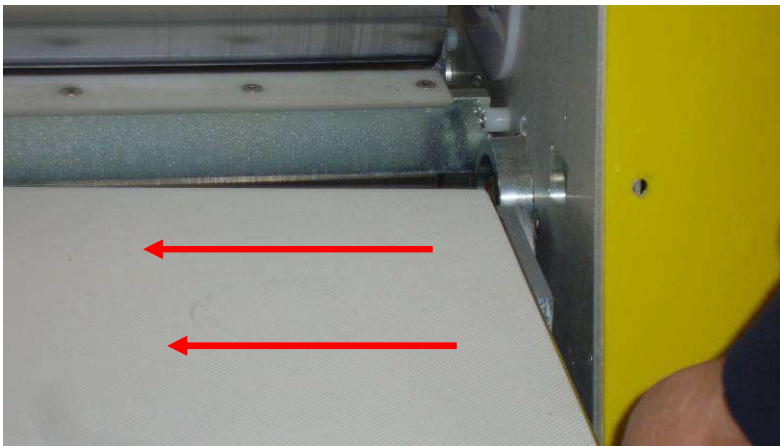
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Figure 4.11

#### **Sliding tables belts disassembly**

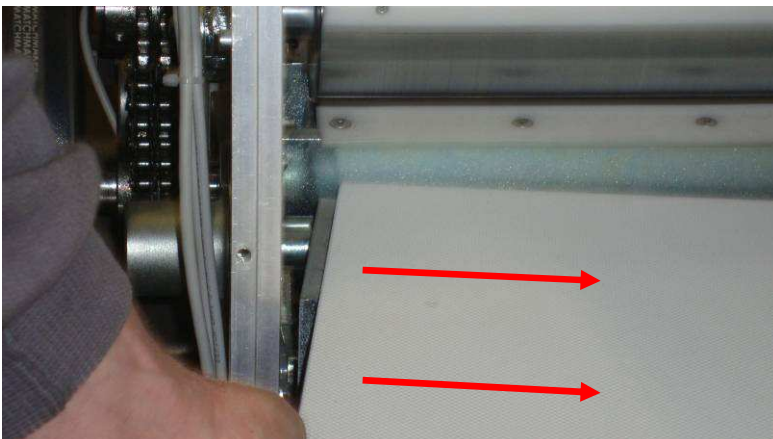
To remove the sliding tables belts, carry out the positioning operations in reverse order :

Disconnect the socket "4"



Place oneself on the control side machine, strongly push the table towards the opposite side, thus disconnecting the hub "C" from its seat "D" (Fig.4.12)

Figure 4.12



Pull the pin "A" (fig.4.13) from his seat "B".

At this point the table will be released from the machine.

At last release table supports "5".

Figure 4.13

### Chapter 4 – Installation

#### **Acceptable environmental conditions for the installation site:**

- **Temperature:** from 5° C to 40 °C with the average temperature not exceeding 35°C over a period of 24 hours.
- **Relative humidity:** from 50% at a temperature of 40°C up to 90 % at a temperature of 20°C.

#### **Lighting**

Adequate lighting is necessary to carry out both normal operation and servicing of the machine in a safe way.  
The machine has no built-in lighting system.  
A well-lit environment prevents hazards due to shadowed areas.

**NOTE** The temperature limits have been established taking into account the electrical equipment of the machine.



## Chapter 4 – Installation

### **Positioning**

The machine can be easily moved as it is equipped with wheels with a locking device, after positioning it in the agreed place, lock the wheels so that the machine does not move during the working cycles.



Fig.4.14

### **4.6. Preparation for start up**

#### **Connections**

##### **Electrical connections**

Make sure that the electrical system is in accordance with the safety provisions prescribed by current laws.

The installation must be suitable to withstand the maximum absorption provided for the machine.

The connecting cable must be of a suitable section for the installed power. Check that the characteristics of the supply mains are consistent with the ones of the machine; see the values on the plate of the electric panel. To carry out the electrical connections it is necessary to comply with the general rules concerning prevention and installation of electrical systems in compliance with current laws.

A thermal magnetic switch, or similar, powerful enough to deal with the current intensity of the machine is fitted to the machine.

Connect the mains cable to the terminals “R-S-T” of the terminal board, fit the grounding cable to the corresponding terminal.

For any further information see the electrical diagram.

The machine should be connected to a suitable grounding unit with the appropriate section cable in compliance with current laws for installation.

All items of power are equipped with fuses or thermal magnetic switches.

**WARNING:** To open the electrical panel move the cut-out switch to “O” position and insulate the machine from the electrical system by turning the thermal magnetic switch, located over the line, on OFF position.  
Only the person in charge of maintenance is allowed to carry out these operations.

### Chapter 4 – Installation

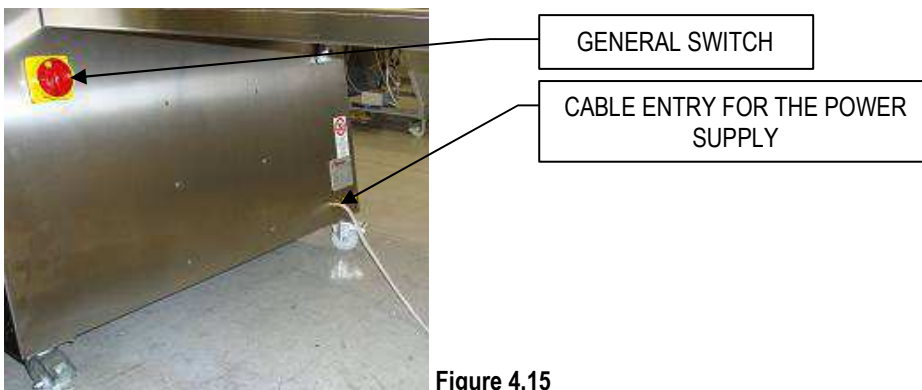


Figure 4.15

#### **4.7. Testing**

Before delivery the machine is tested by the manufacturer at the factory where the following operations are carried out:

- General setting of the machine, of the additional equipment and of the installed safety mechanisms.
- Testing to check all the adjustments (correct running of the motors, seal of the hydraulic system, effectiveness of safety devices and of limit switches).
- Performance of test cycles carried out in secure conditions.

#### **Checking the safety devices**

Before starting the machine, the safety devices should be checked according to the following procedure:

1. Correct functioning of the emergency stop button (Fig. 3.1 *Controls*); while the machine is operating, press the emergency buttons: the machine should stop immediately.
2. Functioning of the protection grille "B" (Fig. 1.3 *Fixed and moveable guards*); if the machine is working and the operator raises the protection grille the cams turn and energise the appropriate limit-switch which controls a machine stoppage.

**NOTE** If the machine does not stop immediately, the emergency buttons must be checked and/or replaced, if the devices connected to the grids do not stop the machine from working, check the exact position of the limit switch and, if necessary, replace them.

#### **Parameter checking**

Before starting the machine from the touch screen test the following parameters:

- Value input
- Automatic functioning page
- Program input page
- Flour duster regulation page
- Timing regulation page
- Speed regulation page
- Manual input page
- Set up regulation page

Should a problem arise, when the machine is running, for which no instructions are given in this manual, please contact the Technical After Sales Service (see 1.5 *Manufacturer identification details*).

Chapter 5 – Installation**5. Chapter 5 MACHINE OPERATION****5.1. Qualifications of operator**

The machine should be operated only by trained, qualified and authorised personnel who have read and understood the information contained in this manual.

**5.2. Work station**

Work station on Fig. 5.1 shows the working positions in which the operator can operate the machine safely. The control station of the machine is located in front of the control panel. From this position the operator controls all the working parameters.

**NOTE** While the machine is running, access to the working area of the machine is strictly forbidden.



Figure 5.1

**5.3. Touch screen use**

For the use and the programming of the touch screen refer to the enclosure "Manual of Touch screen."

## Chapter 6 - Maintenance

### 6. Chapter 6 MAINTENANCE

#### **General recommendations**

Before carrying out any operation read the instructions of this manual thoroughly. Behaviour not in accordance with the safety instructions can cause serious dangers for people and/or serious damages to objects and/or environment.

#### **Qualifications of operator**

To carry out routine maintenance safely, the user should first read carefully and understand the instructions and recommendations given in this section.

**DANGER:** Risk of electric shock and unexpected movements during maintenance.  
Isolate the machine from electric and hydraulic power sources.

#### **6.1. Routine maintenance**

Any operation that can be carried out by the user is considered routine maintenance. It includes operations of cleaning, inspection and prevention carried out to ensure safe operation of the machine.

**NOTE** In the event that the machine vibrates, the scrapers must be carefully checked to ensure that they have not become bent at a different angle. In the event that this should happen then the scrapers should be manually bent back to their original shape.

#### **Cleaning**

**DANGER:** Cleaning operations should only be carried out with the machine switched off and disconnected from the electric and hydraulic power supplies. Regular cleaning of your machine will ensure its good working order. We recommend the following:

- Clean the machine at the end of each shift.
- The cleaning of the machine keeps the most delicate parts in good working order and helps to identify any loosening of parts any abnormal wear and tear.



Figure 6.1



### Chapter 6 – Maintenance

**BEWARE:** Do not use jets of water to clean the control panels and the electric control

#### **Suitable cleaning tools and products**

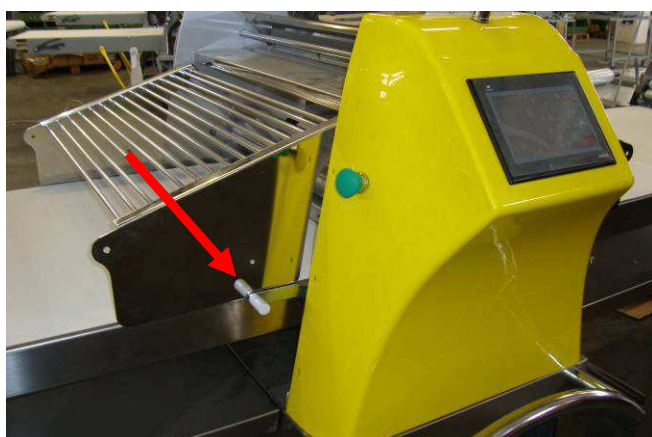
**BEWARE:** Do not use solvents which could damage the paint and the synthetic materials.  
Avoid especially petrol, nitro-perchlorate thinners and trichloroethane.

Parts to be cleaned	Method and tools
Painted steel	Use warm water and food-friendly deagreaser. Dry with a clean cloth
Control panels	Clean with a soft dry cloth
Electrical parts	Clean using a vacuum cleaner

#### **Frequeny of cleaning**

Frequency	Parts to be cleaned
Every day	Photocells
Every day	Scrapers (lower and upper)
Every day	Sheeting cylinder
Every day	Flour duster
Weekly	Control panel
Monthly	Motors
Monthly	Electrical components
Monthly	Steel structural work parts

#### **Cleaning lower scrapers**



To clean the lower scrapers, proceed as follows:

Set the aperture to the maximum height rollers acting on the touch screen (see thickness parameter on section "Manual" on the annexed Touch screen manual )

Turn off the machine and disconnect the power supply to the electricity grid, to operate safely

Lower the lever on the side, so that the scraper will rise from its seat  
 (Fig.6.2 lever)

**Fig.6.2**

Chapter 6 – Maintenance



Figura 6.3

Remove the scraper (Fig.6.3)  
Clean it



Re-insert in its place the scraper (fig.6.4)

Figura 6.4



Lift the lever back into its original position,  
so that the scraper will drop back to its  
working position (Fig.6.5)

Figura 6.5

Chapter 6 – Maintenance**Cleaning upper scrapers**

To clean the upper scrapers, proceed as follows:

- Set the aperture to the minimum height rollers acting on the touch screen (see thickness parameter on section "Manual" on the annexed Touch screen manual )
- Turn off the machine and disconnect the power supply to the electricity grid, to operate safely
- Unscrew the knobs located above the scraper support
- Lift the scraper to remove it from the pivots of knobs and take out it
- Clean it
- Replace the scraper aligning the holes with the pins of the knobs
- Carefully screw the knobs

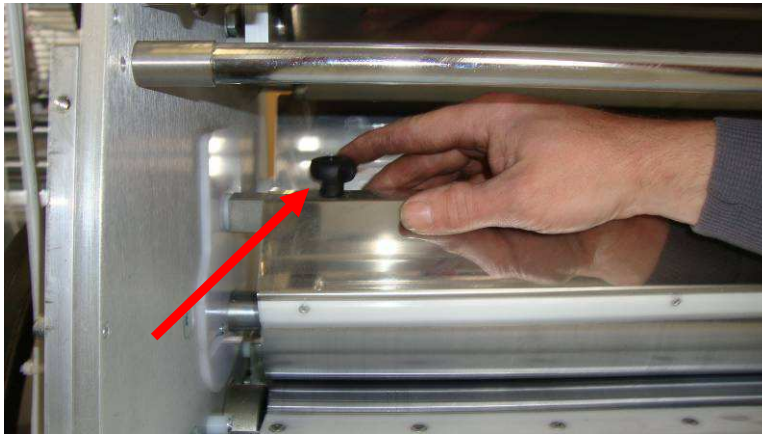


Figure 6.6

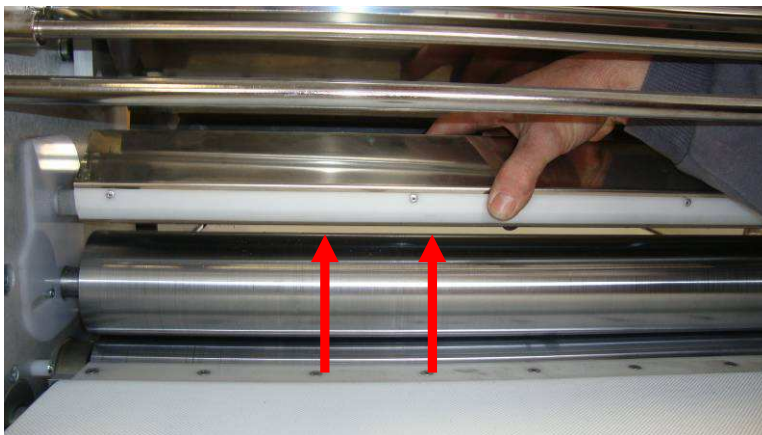


Figure 6.7

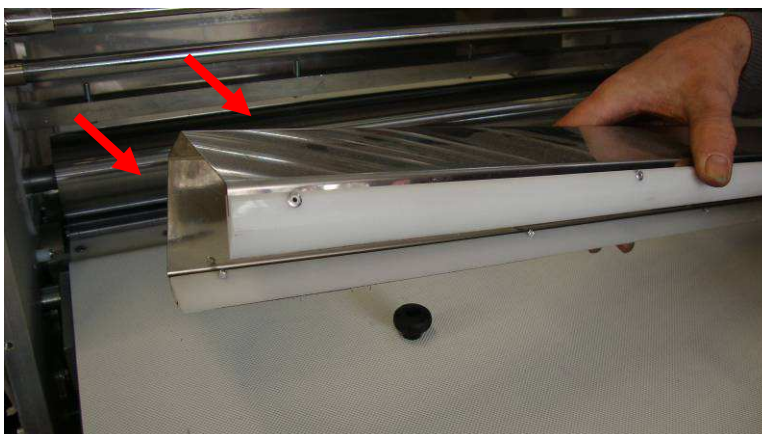


Figure 6.8

Chapter 6 – Maintenance

The photocell (fig.6.9) should be cleaned every day

**Figure 6.9**

## **6.2. Scheduled servicing**

Any operation which can only be carried out by authorised personnel is considered scheduled servicing. It includes regular and preventative inspections and machine interventions carried out to ensure safe operation of the machine.

### **Qualifications of operator**

Scheduled servicing can only be carried out safely by trained and qualified personnel who know how to operate, set-up and service the machine and who have carefully read and understood the instructions and recommendations given in this section.

### **Periodic frequency**

- Every 40 working hours check the correct operation with the emergency push-button
- Every 40 working hours check the correct operation of the safety devices which guarantee safe use of the machine by its immediate stoppage.



## **7. Chapter 7 MACHINE SCRAPPING**

### **7.1. Qualifications of the operator**

A qualified mechanic who has read and understood *Fig. 1.1 Overall view of machine* and *Chapter 7 Machine scrapping*.

### **7.2. Disconnecting the machine**

At the end of its technical and working life the machine has to be disconnected. Even though it is no longer used and the machine is no longer suited to the purpose for which it was designed and built, it must still be possible to re-cycle the raw materials from which the machine was built.

**NOTE** The manufacturer will not be liable for any damage or injury to persons, animals or things caused by the re-use of individual parts of the machine for operations or assemblies other than those for which they were originally designed.

### **7.3. Disconnection procedure**

**DANGER:** The machine disconnecting and scrapping operations must only be carried out by trained and appropriately equipped personnel.

1. Switch off the machine, using the main switch (refer to par.3.1)
2. Disconnect all the power supplies. The power connections and the instructions for carrying out the operation are the same as described in *Chapter 4 Installation*.
  - a. Electric power supply. Disconnect the power supply cable from the terminal board of the electric control box.
3. Remove the following parts:
  - a. Electrical and electronic components.
  - b. Non-metallic parts and components.
4. If the machine is moved to another location, refer to *4.3 Transport*.

### **7.4. Other risks after machine disconnection**

Provided the instructions given in *7.2 Disconnecting the machine*, have been followed carefully, there are no residual risks after the machine has been disconnected.

**BEWARE:** The materials used for building the machine are non-biodegradable. The machine must therefore be taken to an authorised scrap yard for disposal.

### Chapter 8 – Optional

## **8. Chapter 8 OPTIONAL**

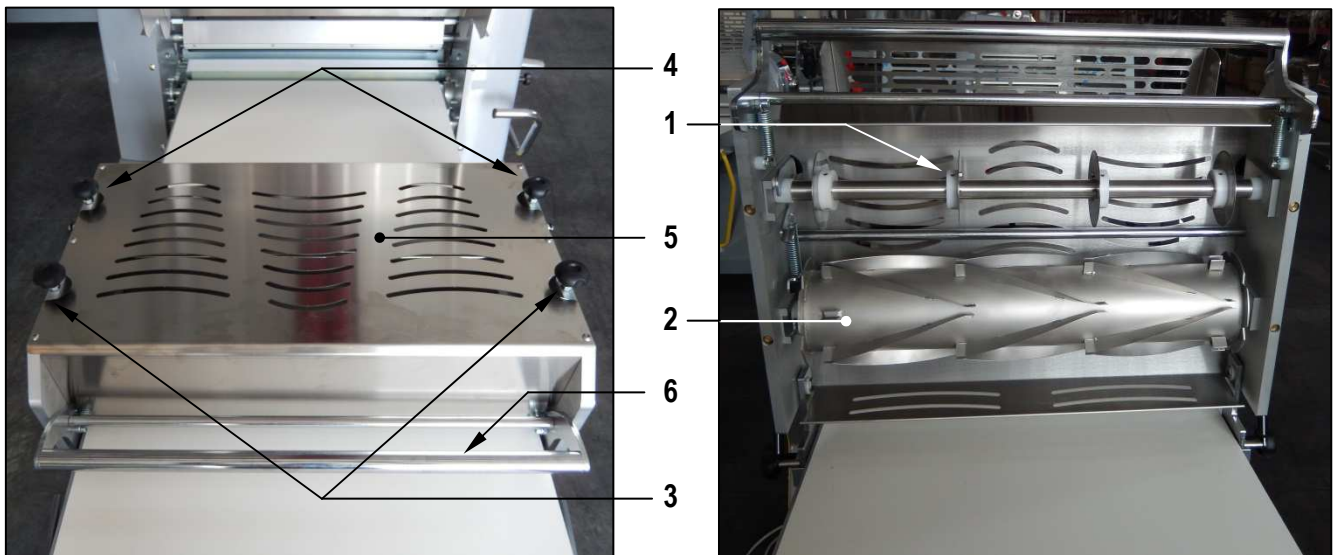
### **8.1. Cutting unit**

This device is shown in figure 8.1. This unit is used to make pieces of dough from the sheet produced by rolling, that are to be subsequently processed to make specific products. The most common of these are triangular pieces that are used to make croissants.

The unit can be installed only on the machines that have been prepared specifically for it and specifically requested by the customer at the time the order was placed. It is not possible to install the cutting unit on machines that were not originally designed for it without making considerable modifications to them.

The cutting unit consists essentially of:

- ref. 1 cutting discs mounted on a single shaft in the direction in which the sheet moves
- ref. 2 cutting roller (figure 8.1 shows a roller for cutting triangular shaped pieces of dough)
- ref. 3 manual device for regulating the cutting force of the discs ref. 1 against the bench.
- ref. 4 manual device for regulating the cutting force of the roller ref. 2 against the bench.
- ref. 5 disc ref. 1 and roller ref. 2 guard. This acts as a support structure for the discs ref. 1 and rollers ref. 2
- ref. 6 release lever to release the cutting unit from the bench so that it can be raised.



**Figure 8.1**

### Chapter 8 – Optional

#### 8.2. Installing and positioning the cutting unit

With reference to figure 8.2, both sides of the benches designed to be used with the cutting unit ref. 1 are fitted with the following devices (photo A - B):

- blocks ref. 7 with threaded knob ref. 2, in which to insert the side plates of the cutting unit,
- positioning plates ref. 9 for engaging and holding the cutting unit against the table.

**This must be carried out with the machine switched off and with the main power switch in the O - OFF position.**

With reference to figure 8.2, to install the cutting unit ref. 1 proceed as follows:

- **wear safety footwear with reinforced toecaps and abrasion resistant gloves**
- unscrew and completely remove the knobs with threaded studs ref. 2
- even if the weight is not particularly high (max. 23 kg), **the following must be carried out by two people in order to minimize the risk of musculoskeletal injuries** and ergonomic injuries in general. In order to reduce the weight to be lifted as much as possible, remove the cutting rollers ref. 3 and ref. 4 (the weight is reduced to approximately 15 kg). This is particularly important where it is not possible to have the assistance of a second person. Raise the unit ref. 1 and place it like a bridge over the bench as shown in photos A - C. Then insert the plates ref. 5 into the seats ref. 6 in the blocks ref. 7 at the sides of the bench and lower the unit under its own weight as far as it will go (photo C).
- after having placed the studs of the knobs into the through hole ref. 10 in the blocks ref. 7, screw the knobs ref. 2 as far as they will go into the lateral threaded holes of the plates ref. 5 (photo B), but without tightening them excessively.
- when reinstalling the rollers, remember that the cutting roller ref. 3 must be positioned on the side from which the dough arrives, i.e. usually on the side of the thickening rollers (for removing and installing the cutting rollers see section. 8.5).
- lower the unit onto the bench, guiding it by hand (photo D). When it stops (photo E), push it firmly downwards until you hear a loud metallic click. This indicates that the hook ref. 8 has engaged with the positioning plate ref. 9 (photo F) and that the unit is secured to the bench, as shown in photo G (make sure that it has been properly engaged on both sides).

**In this configuration, the maximum thickness of the dough that can pass under the cutting unit is 7 mm.**

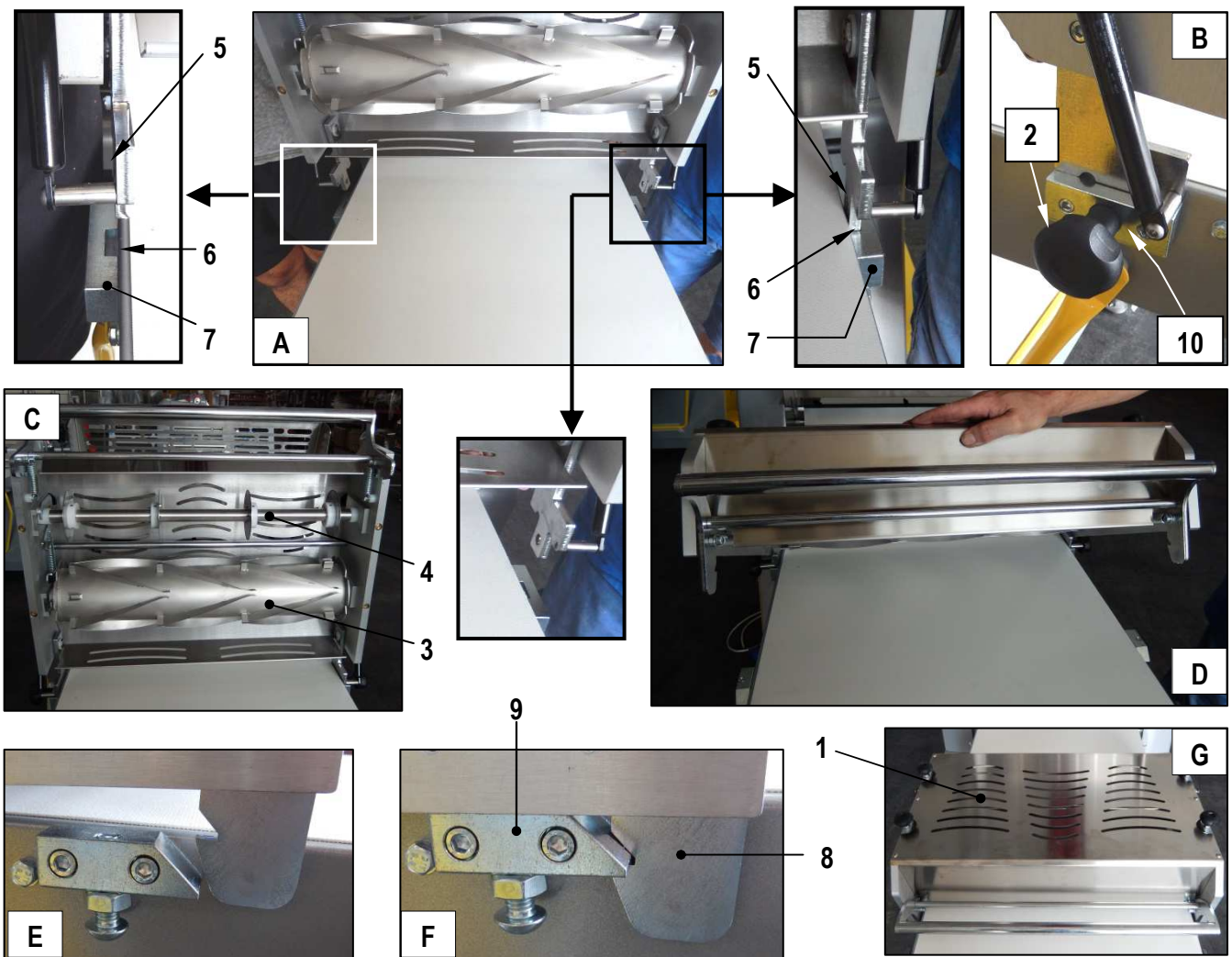


Figure 8.2

### Chapter 8 – Optional

#### 8.3. Disabling the cutting unit

With reference to figure 8.3, to use the machine as a sheeter whilst keeping the cutting unit mounted, simply release the cutting unit from the system that secures it to the table by lifting the release bar ref. 1 (to make this easier, push the unit down with one hand).

**WARNING! To prevent the unit from being raised too quickly** (pushed by the lateral gas springs ref. 2) **and risk being hit and bruised by it, guide it by hand as it is raised. In the event that the gas springs may be discharged, place the unit well back to prevent it from falling and subject persons to the risk of severe bruises and cuts and bruises.** If you notice that one or both gas springs no longer provide an adequate braking function, replace it/them immediately (simply remove the two screws ref. 3 at the ends). Only use original Flamic spare parts.

The maximum thickness of dough that can pass under the cutting unit is 55 mm.

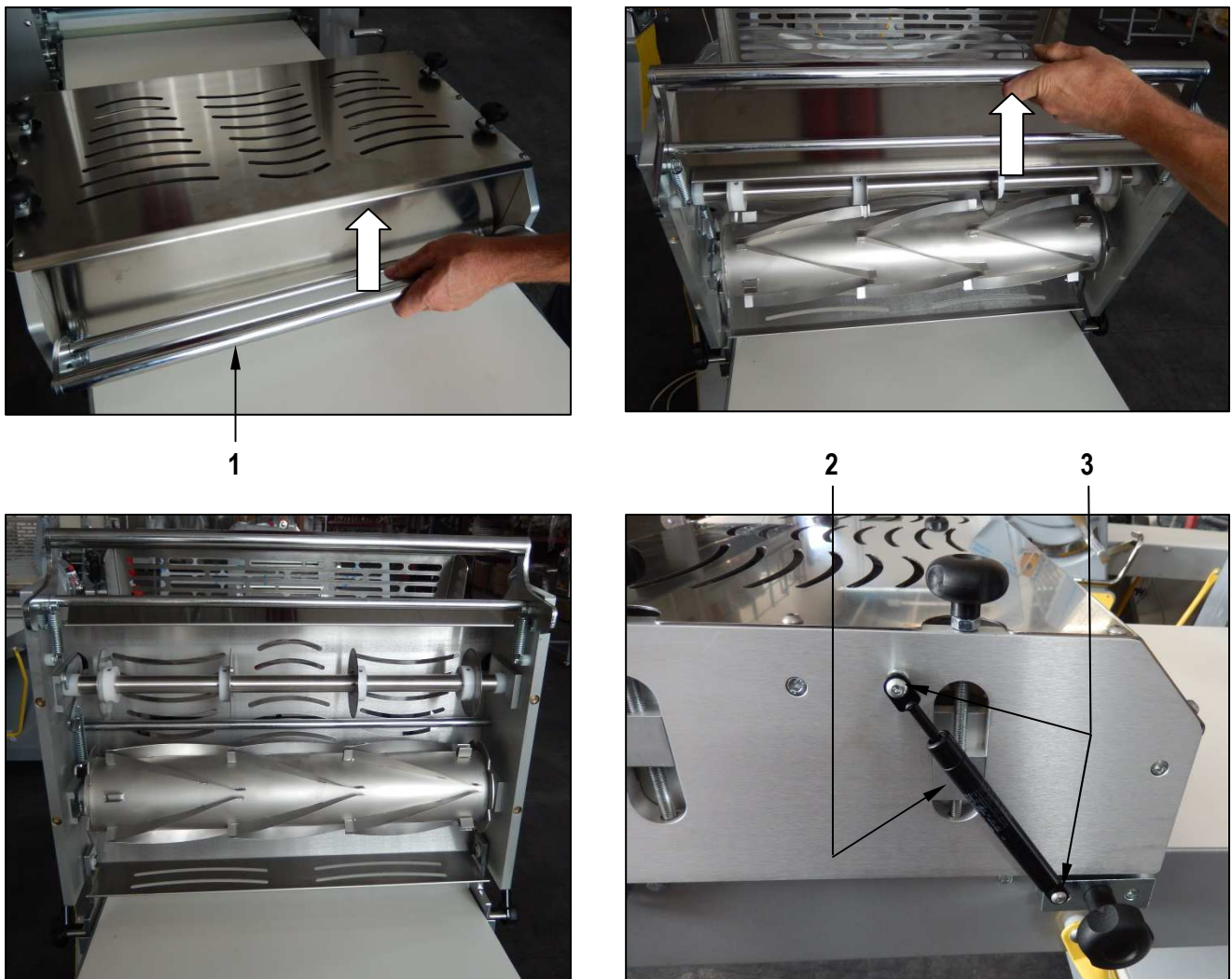


Figure 8.3



### Chapter 8 – Optional

#### **8.4. Adjusting the force exerted on the bench by the cutting rollers**

With reference to figure 8.4, to adjust the force exerted on the table by the cutting rollers:

- turn the knobs ref. 1 to adjust the roller fitted with the longitudinal cutting discs ref. 4
- turn the knobs ref. 2 to adjust the cutting roller ref. 3

Turn the knobs clockwise (as viewed from above) to increase the force and anticlockwise to decrease it.

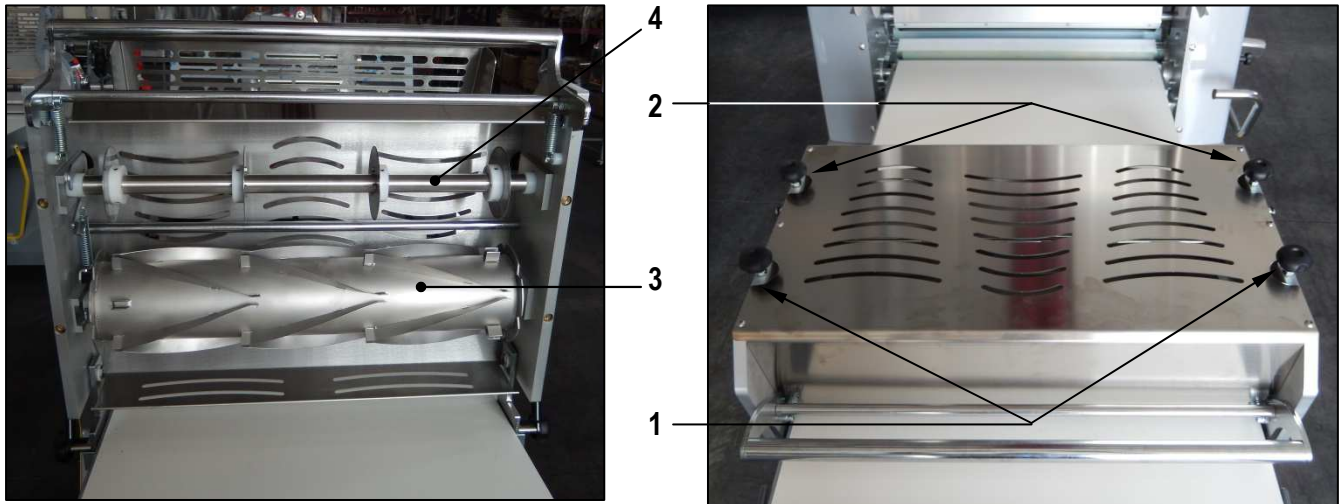


Figure 8.4

#### **8.5. Removing / installing the cutting rollers**

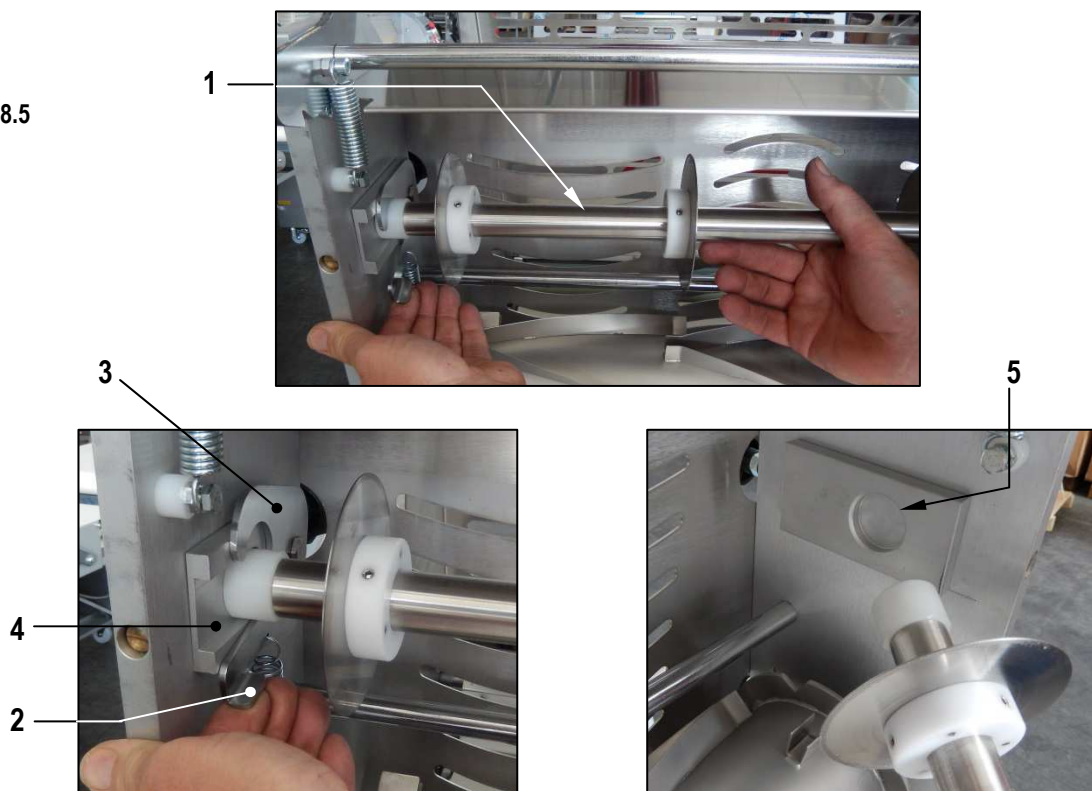
**This must be carried out with the machine switched off and with the main power switch in the O - OFF position.**

**Wear safety footwear with reinforced toecaps and abrasion resistant gloves.**

With reference to figure 8.5, place the unit in the raised position, as explained in section 8.3, then

- **to remove a cutting roller** ref. 1, using one hand, support it roughly in the centre and with the other hand move the lever ref. 2 to raise and open the seat ref. 3. Remove the roller from the guide ref. 4 and the seat ref. 5 on the opposite side.
- **to install a cutting roller** ref. 1, first insert the end into the seat ref. 5, then open the seat ref. 3 by moving the lever ref. 2. Insert the other end of the roller in to the guide ref. 4 and push it in as far as it will go and then release the lever ref. 2.

Figure 8.5



Chapter 8/9 – Optional / Attached documentation

### 8.6. Removing the cutting unit

**This must be carried out with the machine switched off and the main power switch in the O - OFF position.**

With reference to figure 8.6, to remove the cutting unit, proceed as follows:

- **wear safety footwear with reinforced toecaps and abrasion resistant gloves**
- release the cutting unit and place it into the raised position as shown in photo A (see section 8.3)
- unscrew and completely remove the knobs with the threaded stud ref.1 (photo B)
- even if the weight to be handled is not particularly high (max. 23 kg), **the following task must be carried out by two people** for the same reasons as indicated in section 8.2. Before starting, remove the cutting rollers (see section 8.5) in order to reduce the weight to be handled as much as possible (to about 15 kg). This is particularly important if it is not possible to be assisted by a second person.
- lift the unit, keeping it parallel to the surface of the bench until the plates ref. 2 (photo C) have been completely removed.
- place the unit in a safe place and take precautions to prevent it from tipping over, falling or being damaged.
- screw the threaded studs of the knobs ref. 1 into the relative threaded holes to avoid losing them.

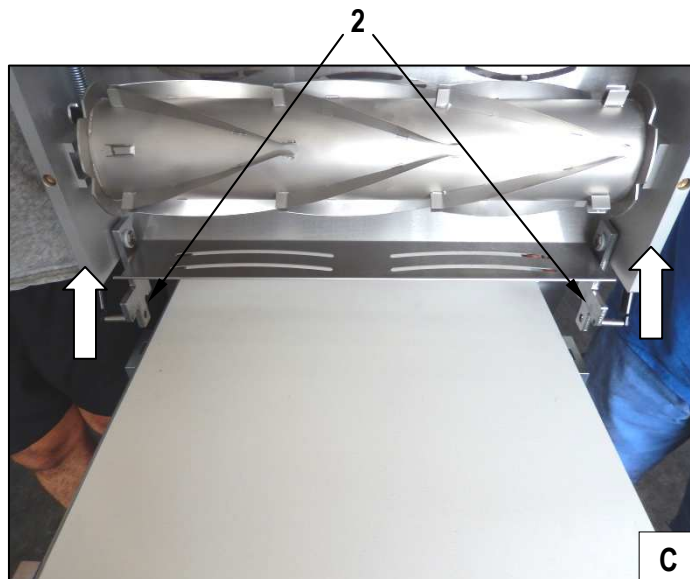
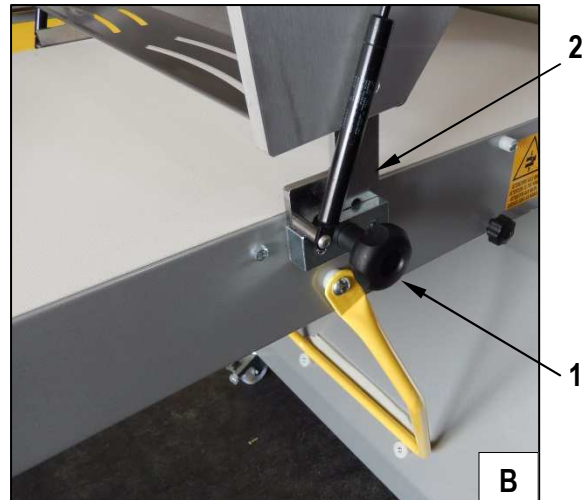
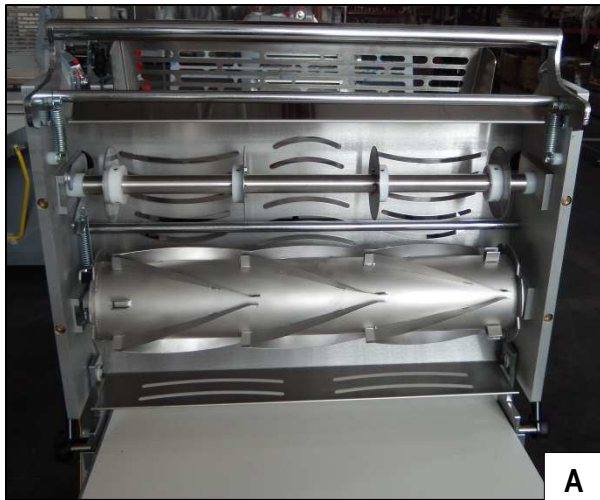


Figure 8.6

## 9. Chapter 9 LIST OF ATTACHED DOCUMENTATION

Enclosure 1 EC declaration of conformity

Enclosure 2 Wiring diagram

Enclosure 3 Touch screen manual