

SMU 185	185xxxxxxx	200x
model	Serial N°	Year of construction

INSTRUCTION MANUAL

MU_1852e



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2. MACHINE FEATURES

2.1 CONVENTIONS

In this manual the following references have been used:

- The term “manufacturer” refers to the company I.M.E.C.A. srl with legal address in Via Montebello, 49 - Vigevano (PV) - ITALY.
- The term “user” refers to the company which has acquired the machine.
- The term “operator” refers to the person who uses the machine.
- The term “maintenance personnel” refers to the qualified personnel authorised by the user for standard maintenance operations.
- The term “repairs personnel” refers to specialised personnel trained by the manufacturer for carrying out repairs on the machine.

2.2 MACHINE DESCRIPTION

The SMU 185 machine is designed to skive the edges of continuous leather or synthetic strips. It is also equipped with a continual skiving speed variation system (between 0.1 and 1.8 meters per second).

The machine is equipped with the following:

- Blade holder, plus synthetic diamond grindstone and sharpener
- Centrifuge extraction system
- Sensors to signal strip breaking or end of material
- System for elimination of static electricity
- Programmable total counter

The work position for loading and machine start-up is shown in Fig. 1 - Operator position.

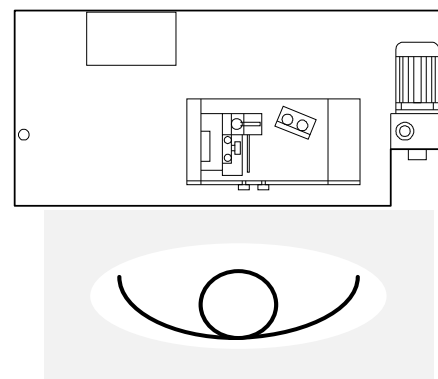


Fig. 1 - Operator position

2.3 CORRECT AND INCORRECT MACHINE USE

The machine has been designed and built to guarantee maximum safety protection for the operator while working on the machine during the functions for which this machine was designed.

It is strictly forbidden for the customer to use the machine for work other than that for which the machine has been designed, and where there may be any doubt, the user must contact the manufacturer for advice.

2.3.1 CORRECT USE

The SMU 185 model has been designed for use as a skiving machine for leather or synthetic strips.

The operator must always follow the work procedure described in the chapter “MACHINE USE”

2.3.2 INCORRECT USE

The machine must not be used in environments where there is danger of fire hazard or explosion, nor must it be used outside.

The manufacturer will not be held responsible for any damage on the machine due to:

- any use other than that for which the machine has been designed, and especially the use of easily inflammable or explosive materials which could provoke damage to the machine and a serious danger for the operator
- any changes made to the working speed, obtained through modification of machine setting already carried out by the manufacturer, or through modification to transmission parts
- any modification to mechanical or electrical parts on the machine or equipment, unless explicitly authorised by the manufacturer.

2.4 SAFETY PRECAUTIONS

All necessary protection systems have been installed on the machine to guarantee maximum safety conditions for the operator during standard work operations and maintenance.

2.4.1 PRECAUTIONS TO BE OBSERVED FOR MACHINE SAFETY

The manufacturer has equipped the machine with the following safety protections:

- Fixed protection guard over the blade holder
- Fixed protection guard over the control pulleys for blade and sharpener.

2.4.2 SAFETY WARNINGS

Even though the machine is equipped with safety protections, the operator must pay careful attention to the following standard safety behaviour:

- during all maintenance and repairs, the start key switch must be turned to -0- position, and the key must be removed to ensure that machine cannot be switched on accidentally, causing serious danger
- the protection guards must be removed only for the time that is strictly necessary for the repairs and maintenance
- take the greatest care possible when working in the proximity of the blade that has a very sharp edge
- always wear adequate protection gloves when working anywhere near the blade
- always wear protective eye goggles when working near the blade, especially during sharpening operations: the metal removed during grindstone abrasion at high speed can cause serious eye injury

2.5 TECHNICAL DATA

2.5.1 ENVIRONMENTAL WORK CONDITIONS

Humidity rates without condensation : 30 – 90%

Temperatures between +5 and 40 °C.

Maximum height 1000 m. s.l.m.

2.5.2 ELECTRICITY DATA

Supply voltage: single phase 220 volt ± 10%

Frequency: between 48 and 52 Hz. (on request: between 58 and 62 Hz)

Total installed power 1KW

Motor power 1.33 Hp.

Circuit voltage for control and regulating: 24 V.

2.5.3 MECHANICAL DATA

Skiving speed can be set between 6 and 110 meters per minute.

Blade rotation speed: 1.745 rpm

Grindstone rotation speed: 7.000 rpm

2.5.4 MACHINE MEASUREMENTS

Installed machine: 55 x 125 x 178 cm (height)

Machine ready for delivery: 55 x 125 x 125 cm (height)

Machine packed in wooden crate or case: 70 x 140 x 170 cm (height)

2.5.5 WEIGHT

Unpacked machine 125 Kg

Machine in open wooden crate 200 Kg

Machine in closed wooden case 250 Kg

2.6 NOISE LEVELS

The noise emission level measured at “A” equivalent rating, with an integrated noise meter in compliance with IEC , class 1 standards, on a constant rate of “SLOW”, was tested under the following conditions;

- reference standards: ISO 3746
- testing area volume: 3300 cubic meters
- operator present: no
- measuring distance from the machine : 1 meter
- measuring height: 1.6 meters

Tests carried out at the manufacturer’s plant on a completely assembled machine on maximum speed produced the following maximum results:

- Leq(a)= 64 dB(A) - Lpc<130 dB(C)

3. HANDLING

The machine must be handled using technical means and/or vehicles that are adequate for the machine size and weight and always driven by personnel who are suitably experienced for the job to ensure perfect safety.

The machine base is equipped with adjustable feet for levelling the machine.

3.1 RAISING

The machine is equipped with an eye bolt on the work bench for attaching the raising cables.

During all raising and handling operations, movements must be slow and regular to prevent any dangerous machine rocking.

When using a fork-lift equipped with blades for insertion under the machine, then the machine must be attached to a wooden pallet, screwed through the four holes drilled in the base for this purpose.

3.2 TRANSPORT

The barycentre of the machine is low, and this ensures correct stability during transport.

When the machine is loaded onto the transport vehicle, it must be correctly anchored to prevent any sliding or other movement during transport.

4. INSTALLATION AND ASSEMBLY

4.1 CONTROL CHECKS

When the machine reaches the customer's plant, it is advisable to run the following control checks to ensure that the machine has suffered no damage during transport.

Make sure that the waterproof plastic protection cover has not been torn and that no water or foreign matter entered the packing or the machine.

Once the protection cover has been removed control the following:

- that the work bench is correctly attached
- that the control panel and remote control keyboard are in correct condition.
- That the electrical supply cable and plug are in correct condition.

4.2 SPACE TO BE LEFT FREE AROUND THE MACHINE

The machine must be placed calculating enough free space around the machine to permit easy and safe work and maintenance operations.

The minimum height necessary for the machine installation is 2 meters, and it is recommended that a space of 1 meter be left around the machine.

4.3 MACHINE PREPARATION

Before starting up the machine, carry out the following preparation operations:

4.3.1 PRELIMINARY CLEANING OPERATIONS

Before using the machine it must be cleaned carefully of all dust and other matter that may have deposited during transport

When the machine is shipped by sea, all metal parts subject to rusting are coated with protective grease. Remove this oil using water soluble solvents.

4.3.2 TOOLS PROVIDED WITH THE MACHINE

The tool kit and start-up keys are placed in the tool drawer on the left hand side of the machine.

4.3.3 MACHINE PREPARATION

- Open the tool drawer and take out the rubber feet that are to be mounted under the machine in the marked positions.
- The filter bag is to be mounted on the exit opening of the suction vent.
- The machine does not need to be anchored to the flooring to function correctly; however it must be perfectly leveled by adjusting the height of the feet in the machine base.
- The machine is equipped with an eyebolt for raising the machine with a crane hook; remove the eyebolt, and its extension, using the spanners provided with the machine.
- Mount the pilot lamp support and sensor by inserting the tube into the existing support already attached to the machine surface; turn the tube so that the strip sensor hook is directed towards the operator, then block in position with its fixing screw.

4.4 ENERGY CONNECTIONS

Before connecting the machine to the external energy supplies, all the instructions and control checks described in the previous paragraphs must be carried out with care.

4.4.1 ELECTRICITY CONNECTION

It is strongly recommended that the main supply line be protected by installing a magnetothermal switch at the connection point.

The machine is delivered with the plug mounted on the cable according to IEC 309 16 A standards.

Before inserting the plug into the socket, the user must check the voltage and frequency printed on the machine plate to ensure that they are the same as those in the plant.

5. MACHINE USE

5.1 CONTROL PANEL

The control panel (see Fig. 2) is located on the front of the electrical box and is composed of all the controls necessary for machine function.



Fig. 2 - Control panel

5.1.1 POWER

Key switch (Fig. 2- A)

When the key switch is turned to position n° 1, the machine, the blade and exhaust system are connected to the electricity supply.

In position -0- the key can be removed to limit start-up possibility to authorised personnel, and to prevent accidental start-up during maintenance operations.

5.1.2 SPEED

Rotating knob (Fig. 2- B)

This controls the feeding speed of the strips through the machine, and can be adjusted according to the type of material.

Whatever speed has been programmed, when the machine starts, it begins at minimum speed, gradually increasing to programmed speed to prevent strip stretching and breaking.

5.1.3 L=m.

Measuring system: calculates the quantity completed. (Fig. 2- C)

The figures indicate the quantity of meters that have been produced.

It's possible to set the quantity of material you need to skive. By programming the maximum value (99999.9), it is possible to use the measurer to show the total skived meters.

To modify any data, proceed as follows:

- Press at the same time the keys E+1 to enter in programming mode; the display shows P1 and PRG
- Press a key from 1 to 6 to increase the numbers; at each pressure the corresponding number increases of one unity
- Press the key E to leave the programming mode.

When P1 appears on the left hand size, the programmed quantity has been reached, and the machine is switched off and locked. To continue zero set the quantity pressing at the same time the keys 6+4.

The measurer has also a function of totalizer. To access to the totalizer data you must press at the same time the keys E+4 (the display shows P1 and P2):

- to zero set the totalizer press the keys 6+4
- to return to the measurer press the key E.

5.1.4 STOP LAMP

Red luminous lamp (Fig. 2- D)

When this lamp lights up, it indicates that the machine is arrested and that the 'START' button must be pressed to set the machine working.

5.1.5 START LAMP

Green luminous lamp (Fig. 2- E)

When this lamp lights up it shows that the machine is ready to start. When the strip activates the sensor on the travel conveyor, skiving will begin.

5.2 EXTERNAL COMMANDS

5.2.1 EXTERNAL STOP SIGNAL LAMP

Red luminous lamp.

This is located on the top of the support tube of the strip entry sensor. When the lamp is off, this means the machine is in correct function.

When the lamp is lit up, this shows the machine is stopped, and the various arrest situations are shown by the lamp status on the control panel: lamps "STOP" and "START".

- if no other lamps are lit up, this either means that the machine has stopped work because the programmed total has been reached (the message -OP- will appear on the measurer), or because the strip on the machine is finished or broken.
- If the "STOP" lamp is lit up, the machine is in arrest condition. Press 'START' to set the machine ready for work.
- If the "START" lamp is also lit up, the machine is ready for work, and as soon as the sensor is triggered by the strip entering the machine, skiving will begin (Fig. 4- C).

5.2.2 STOP BUTTON

Red hand button on the mobile keyboard.

When this is pressed, all work is arrested.

5.2.3 START BUTTON

Green button on the mobile keyboard.

When the 'START' button is pressed, the machine is made ready for work, or will start up skiving operations according to the position of the various sensors.

If this is pressed when the "STOP" lamp is lit up, the "START" lamp will light up, and the machine will be ready for work which will begin as soon as the sensor is triggered by the strip entering the machine.

When both the lamps "START" and "STOP" are off, the 'START' button will not activate the machine, because this means that the strip sensor at the machine entry has been triggered, or that the measuring counter has reached the programmed total. Reset the sensor in correct position, or zero set the measuring counter to light up the "STOP" lamp, in order to be able to start work again.

5.2.4 STRIP SENSOR AT MACHINE ENTRY

This sensor picks up the presence of the strip as it enters.

When the sensor is not triggered, this is because the strip is finished or broken, the machine is in arrest condition, and that work cannot be started.

5.2.5 STRIP SENSOR ON CONVEYOR

This points out any strip breakage between the blade and the transport rollers (Fig. 4- C)

If the machine is already programmed to start, with the "START" lamp lit up, push the small lever of the sensor upwards to start work, and to activate the transport conveyor.

5.3 WORK CYCLE

The work procedure is as follows :

- Activate the strip sensor to start up the skiving operations.

- Skiving can be stopped by pressing 'STOP'
- Skiving is interrupted if the strip breaks or when the programmed total on the counter has been reached.
- When the skiving is completed, the conveyor will stop.

5.4 GUIDE FOOT

This foot is an exchangeable accessory and is used to guide the strip close to the blade. In normal work position the guide foot is lowered. To lower the foot, press the lever (Fig. 3 - B) down, and push upwards to raise the foot.

The operations using the guide foot are as follows:

5.4.1 GUIDE FOOT REMOVAL

To remove the foot for maintenance or for replacement, raise the foot using the lever and loosen the blocking knob (Fig. 3 - H) slide the foot downwards to extract it from the support.

ATTENTION - When the foot is removed, the blade remains partially exposed and it is very dangerous.

5.4.2 MATERIAL WIDTH SETTING

A cursor on the guide foot controls the guide opening for adaption to strip width.

Raise the foot and loosen the block screw, and move the cursor upwards. Press on the small lever to insert the strip into the channel and place the cursor in contact, blocking the screw in this position. Check that the strip runs smoothly through the channel.

5.4.3 GUIDE FOOT ANGLE

The foot support oscillates to allow angle setting. When the knob (Fig. 3 - F) is screwed tighter the skiving is shortened, and lengthened when the knob (Fig. 3 - E) is screwed.

NOTE: These two knobs work in contrasting mode: to tighten one knob, the other must be loosened first.

5.4.4 GUIDE FOOT HEIGHT

The height of the guide foot determines the depth of the skiving. The height is set with the foot in work position.

Loosen the block knob (Fig. 3 - D) and set the height using the setting knob (Fig. 3 - C). When turned in a clockwise direction, the foot is lowered, and the skiving depth is increased.

When the setting is completed, tighten the block knob.

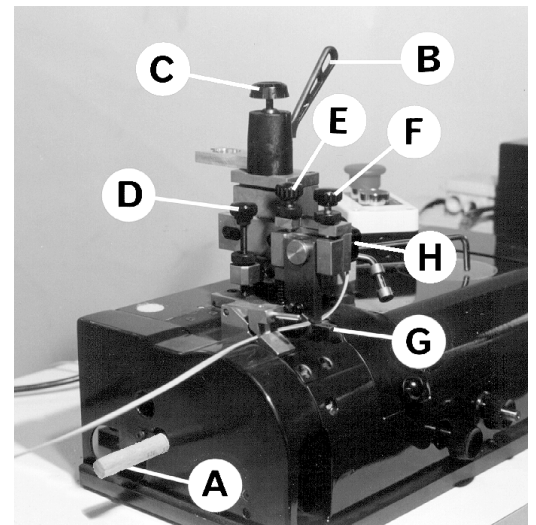


Fig. 3 - Guide foot setting

5.5 SKIVING OPERATIONS

The various work stages are described as follows:

5.5.1 START-UP

Turn the 'POWER' switch to position 1.

Each time the machine is switched on, the operator must control that the luminous lamps are working correctly.

5.5.2 PRELIMINARY SETTING OPERATIONS

When one skiving operation is completed, it may be necessary to reset the machine before starting a new job.

- set the foot in correct position
- set the length to be cut on the measuring counter L=m

5.5.3 STRIP PASSAGE

The strip to be skived must enter on the left hand side of the machine, and must follow the passage through the machine as described below:

- pass over the strip sensor hook (under the red lamp)
- pass through the return eyelet on the support tube
- raise the mobile part of the brake (Fig. 4 - A) and insert the strip
- raise the foot using the lever (Fig. 4 - G) pressing the small lever (Fig. 4 - G), open the foot and insert the strip in the slot, then release the lever and lower the guide foot.
- Pass the strip over the first stem and under the second (Fig. 4 - B)
- Press the 'START' button to set the machine ready for work.
- Raise the small lever (Fig. 4 - C) of the strip sensor to start up the conveyor rollers
- Insert the strip between the rollers to start the work cycle
- The scrapers (Fig. 4 - D) are equipped with special antistatic brushes to eliminate the electrostatic charge that is created with this type of leather, and that can cause problems with skiving.
- Raise the lever (Fig. 4 - F) to open the transport rollers manually, while the knob (Fig. 4 - E) sets the pressure between the two rollers. When turned in a clockwise direction the pressure is increased, and vice versa.
- To stop work, press the 'STOP' button, and press 'START' to begin work again.
- If the strip is finished or broken, the conveyor will stop and the strip must be joined before work can start again. Press 'START' again and activate the conveyor strip sensor.
- The operator can adjust the skiving speed according to requirements, by using the 'SPEED' knob.

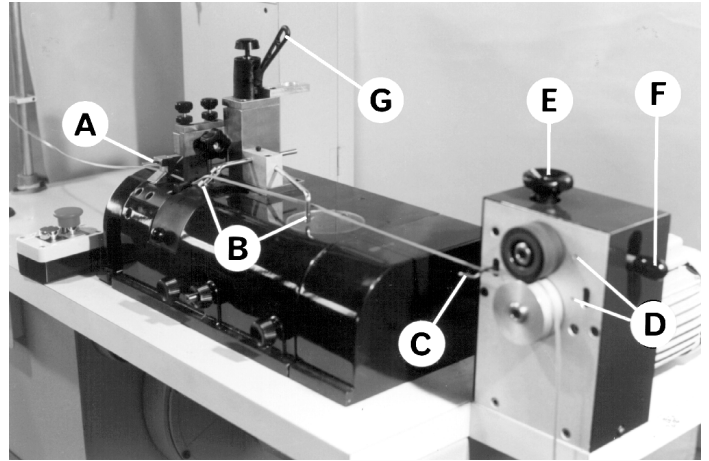


Fig. 4 - Strip passage

5.5.4 STRIP LUBRICATION

To make strip passage easier, for materials that do not slide well (for example: painted leather), the strip surface can be lubricated to improve the passage through the guide foot.

To lubricate the strips, fill the container attached to the foot support with a silicone oil. A felt pad on the brake (Fig. 4 - A) will spread a thin coat of oil on the strip on the machine.

5.5.5 MACHINE ARREST

When the 'STOP' button is pressed the skiving action can be stopped at any moment.

To start up work again, simply press 'START'.

The machine will stop automatically for the following reasons :

- when the strip is slack or broken, the conveyor sensor will be triggered and will stop the machine
- when the strip material is finished
- when the programmed total has been completed (and the message -OP- will appear on the counter). As long as the message -OP- remains, all machine commands are blocked. The measurements must be reset to start work again.

5.6 BLADE

5.6.1 BLADE POSITION

In order to skive correctly, the blade must be positioned with the sharp cutting edge as close as possible to the guide foot.

To adjust the position, turn the knob (Fig. 5 - B) in an anticlockwise direction and the blade will approach the foot. If the blade is set too close to the foot this can lead to blade edge damage, and if it is too far, skiving results will not be even.

The dome is set 5 or 6 mm from the the blade edge. Each time the blade is worn after sharpening, the dome position must be reset.

5.6.2 BLADE SHARPENING

To sharpen the blade correctly, proceed as follows :

- make sure that the blade is in the correct position (see 'BLADE POSITION').
- Move in the grindstone towards the blade, turning the knob (Fig. 5 - A) in an anticlockwise direction, and stop turning when the grindstone is in slight contact with the blade. Excessive pressure on the grindstone can bend or overheat the blade and will wear out the grindstone control belt very rapidly.
- Sometimes because of the type of material to be skived, it may be necessary to leave the grindstone constantly in contact with the blade to sharpen it lightly during skiving.
- To arrest the sharpening action, turn the knob in an anticlockwise direction (Fig. 5 - A) to move the grindstone away from the blade.

Continuous sharpening wears out the blade, and therefore the blade position must be checked regularly as described in 'BLADE POSITION'.

If burring occurs during sharpening operations, this can be eliminated by inserting a small rod (Fig. 3 - A) in the hole for this purpose on the left hand guard on the head, as far as the reference ring marked on the handle, then by pulling it delicately towards the operator until it is in very slight contact with the blade for a couple of seconds.

Take great care not to touch the blade edge as the blade will need to be sharpened again.

5.6.3 NEW BLADE SHARPENING

When a blade has been replaced as described in 'BLADE REPLACEMENT' on page 14, the new blade must be sharpened as described in the procedure 'BLADE SHARPENING'.

While the blade is being sharpened, if the usual noise made by the grindstone on the blade is not heard, move the knob (Fig. 5 - B) to bring the blade into the correct position, and if necessary, move the knob (Fig. 5 - A) to move the grindstone so it is in contact with the blade.

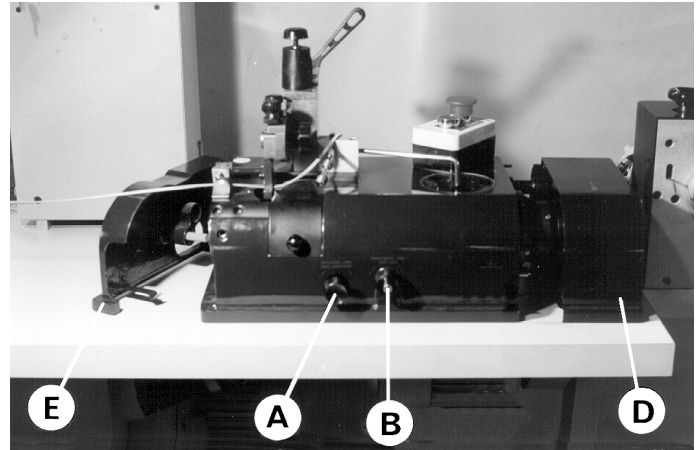


Fig. 5 - Knobs and protection guards

5.7 TROUBLESHOOTING

The following paragraphs describe certain problems that can arise on the machine and how to resolve them.

5.7.1 STRIP BREAKAGE

Frequent strip breakage during skiving can be due to various reasons.

- the strip is too thick or too wide.
- Holes or defects in the leather
- Excessive speed and /or strips that are not resistant enough
- Blade is not sharp
- The strip has a tendency to stretch
- Joins are not strong enough or are too thick.

5.7.2 INCORRECT SHARPENING.

When correct sharpening results are not obtained check the following:

- the abrasive surface of the grindstone: if necessary have the grindstone dressed
- setting of the blade position
- some play on the grindstone shaft or the blade.

5.7.3 GRINDSTONE ROTATION SPEED SLOWS DOWN

This may be due to slacking of the motor belt, or an accumulation of material waste between the blade and the protection guard.

5.7.4 MACHINE BLOCKED

When the machine will not respond to the commands, check the measuring counter display to see if the message -OP- is present, as this indicates that the programmed total has been reached.

5.7.5 UNUSUAL NOISE

The presence of unusual noise often indicates a simple problem that could lead to greater damage later on.

In the case where there is some unusual noise check the following :

- motor condition
- axial or radial play on the blade support shaft
- correct belt tension.

6. MAINTENANCE

Adequate and regular machine maintenance will guarantee long machine life.

In order to maintain the machine in perfect working conditions the maintenance personnel must follow the instructions in the following paragraphs.

ATTENTION all maintenance operations must be carried out **ONLY AFTER** the machine has been switched off and the switch key -POWER- has been removed to prevent any accidental start-up.

6.1 REGULAR CLEANING

It is advisable to keep the machine as clean as possible avoiding any accumulation of dust.

All leather dust must be cleaned away carefully with a vacuum cleaner from the skiving head and the conveyor system, because work operations can become difficult if there is an accumulation of dust and waste on the machine.

In particular, check that no waste accumulates between the blade and the upper protection guard (Fig. 6 - A). To remove any residue, raise the guard using the knob (Fig. 6 - B). A safety system permits an opening of 5 to 6 mm, that is sufficient to remove any dust. Use some tool (Fig. 6 - D) to press on the spring (Fig. 6 - C) to lever the guard a little higher and slide it outwards. To reassemble the guard, press on the spring and lower the guard as far as the spring catch.

ATTENTION – Never start up the machine until the guards have been reassembled.

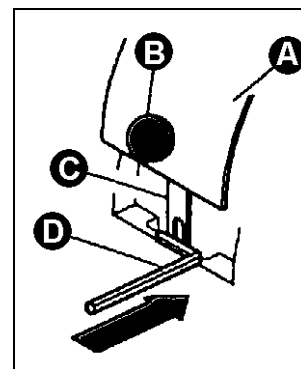


Fig. 6 - Blade protection guard

The container that collects the machine waste is located in the machine base. It must be emptied regularly, because when it is too full, the suction exhaust capacity is reduced, and the residue can accumulate inside the blade holder, creating overheating and blocking. To open the waste container, turn the two knobs inwards and pull the container out.

The table below describes the frequency necessary for cleaning interventions, in order to prevent accumulation that can lead to faulty machine function.

Part to be cleaned	Frequency
Motor area	Every day
Conveyor rollers	Every day
Control panel	Every day
Blade area	Every day
Container and filter	Every day
External surface	Every month

These are obviously purely indicative.

6.2 REGULAR CONTROL CHECKS

A regular control check schedule will guarantee perfect machine function, and will help prevent long periods of machine inactivity in the case where spare parts that must be replaced due to wear, are not available. Irregular and unusual wear of some part will help identify any problems that could lead to far greater damage.

Machine part	check	Frequency
Luminous lamps	Function	Each start-up
Transmission belts	Tension	Every month
Transmission belts	Wear	Every month

6.2.1 GRINDSTONE DRESSING

When the grindstone action is no longer efficient, and the usual noise produced by the stone is absent, the grindstone should be dressed. The operation is carried out as follows:

- switch on the machine
- insert the dressing bar in the hole for this purpose on the left hand guard on the head, above the rod hole.
- Maintain the bar under pressure against the grindstone surface for a few seconds, moving the bar vertically in slight oscillation motion.
- Check that the grindstone abrasive surface is a uniform colour; if the surface is still partially dirty, repeat the procedure.
- Remove the bar.

6.3 PARTS SUBJECT TO WEAR

The codes of all machine parts are listed in the section 'SPARE PART'.

The parts subject to wear are listed below.

Part n°	Part description
01.0597	Blade
02.0161	Z33 belt
02.2244	1020 x 8 belt
03.0035	Grindstone.

6.3.1 BLADE REPLACEMENT

The blades have a very dangerous sharp edge. Always wear suitable protective gloves and take great care when handling blades to avoid contact with the cutting edge.

Blunt the cutting edge of the worn blade with the appropriate abrasive rod before removal.

ATTENTION: Always disconnect the machine and remove the machine plug from the main line socket before you do these operations.

Open the small guard (Fig. 5 - E) towards the left and remove by pulling it upwards.

Remove the guard (Fig. 5 - D) by first unscrewing the block screw on the right hand side.

Remove the control belt that connects the motor, and flip back the machine head towards the rear.

To remove the dome (Fig. 7- A) screw the special extractor pin in the threaded hole and extract the dome, outwards.

The four screws that fix the blade onto the shaft in the centre are now visible. Unscrew, while holding the shaft pulley still (on the right side of the head).

Turn the knob (Fig. 5 - B) in a clockwise direction (using the handle for this purpose) until it is stopped to bring the blade support back to its initial position.

Oil the new blade and mount it, fixing it with the four screws.

Mount the dome and make sure it is correctly registered 5 to 6 mm from the edge of the blade in working position.

Remove the extraction pin from the dome.

Turn the control pulley by hand to check that the blade is fixed and perfectly centred, as if this is not the case, it will impede work operations.

Reassemble the side guards and start up the machine again.

6.3.2 GRINDSTONE REPLACEMENT

Proceed according to the instructions in 'BLADE REPLACEMENT' for access to the grindstone.

ATTENTION: Always disconnect the machine and remove the machine plug from the main line socket before you do these operations.

- Insert the Allen spanner into the grindstone shaft (Fig. 7 - C).

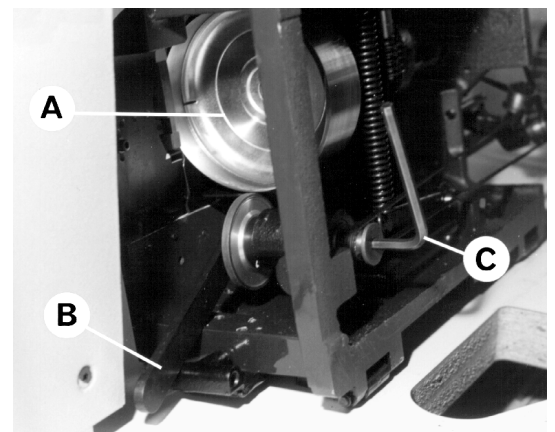


Fig. 7 - Blade and grindstone replacement

- Insert the spanner with two pins (Fig. 7 - B) to block the grindstone nut.
- Turn the spanner in an anticlockwise direction (Fig. 7 - C) holding the spanner still (Fig. 7 - B)
- Remove the fixing nut and remove the worn grindstone.
- Turn the knob (Fig. 5- A) towards the right, then mount a new stone.
- Repeat all procedure in reverse order.

6.3.3 BLADE MOTOR BELT REPLACEMENT

Remove the right hand protection guard from the head (Fig. 5 - D) and remove the worn belt (type Z33).

Replace with a new belt and reset the correct tension if necessary, using the oscillating motor support.

6.3.4 GRINDSTONE BELT REPLACEMENT

Remove the right hand protection guard from the head (Fig. 5 - D) and remove the worn motor belt .

Flip the head back and replace the belt (type 1020 x 8) following the assembly drawing in Fig. 8 - Grindstone belt.

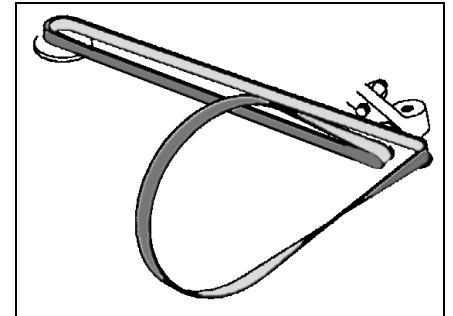


Fig. 8 - Grindstone belt

6.4 CONVEYOR TRANSPORT CONTROL

When conveyor does not start up, check that the meter counter is not in PRESET condition. If this is the case, press the 'RESET' key to start up normal function.

6.4.1 INVERTER CONTROL CHECK

The three phase motor that controls the rollers is activated by the inverter.

The inverter converts the single phase voltage to three phase voltage in variable frequency for machine function, and for the conveyor motor speed variation.

The inverter is equipped with two red leds:

- CHARGE must always be lit up if the machine is switched on. If the led is off, this means the card is not connected to the supply- in this case check all fuses on the entry line.
- ALARM must always remain switched off. It lights up and flashes when an overload occurs, or for motor breakdown. When the led lights up, to restart normal machine function, the machine must be switched off, and left off until the CHARGE led switches off, before switching on the machine again.

Check that all the inverter terminal wiring is connected correctly.

To check inverter function, independently from the rest of the machine, a temporary connection can be made with a piece of wire between terminal 19 and terminal 9. The motor should start up when these two terminals are connected. If this does not occur, use a voltmeter to check the continuous current between the cables 9(-) and 24(+). When the machine is switched on, the voltage should read between 0 and 9 volts, and should vary when the 'SPEED' knob is turned on the control panel.

If all previous control checks are positive, but the motor does not start, then it is probably certain that the problem lies with the inverter.

7. DISASSEMBLY AND DISMANTLING

7.1 DISASSEMBLY FOR TRANSPORT

When the machine needs to be transported, please proceed according to the following instructions:

- disassemble the extractor unit by carrying out in reverse order all the operations described in the paragraph 'ASSEMBLY'
- protect the machine with water-proof plastic wrapping film
- follow all the instructions provided in the chapter 'HANDLING' with extreme care.

7.2 DISMANTLING

When the machine has to be demolished and eliminated, there are certain basic rules which must be followed to protect the environment.

Certain rules to be followed are listed below:

- collect all waste oil and grease from the reducers, variators, and all machine tanks, in special containers, and deliver to a specialist in disposing of waste products of this kind.
- all mechanical, electrical, and pneumatic components must be dismantled and disposed of separately.
- all plastic components and parts must be dismantled and disposed of separately
- the machine body and other metal machine parts must be dismantled and grouped according to type of material to be sent for melting down and recycling.

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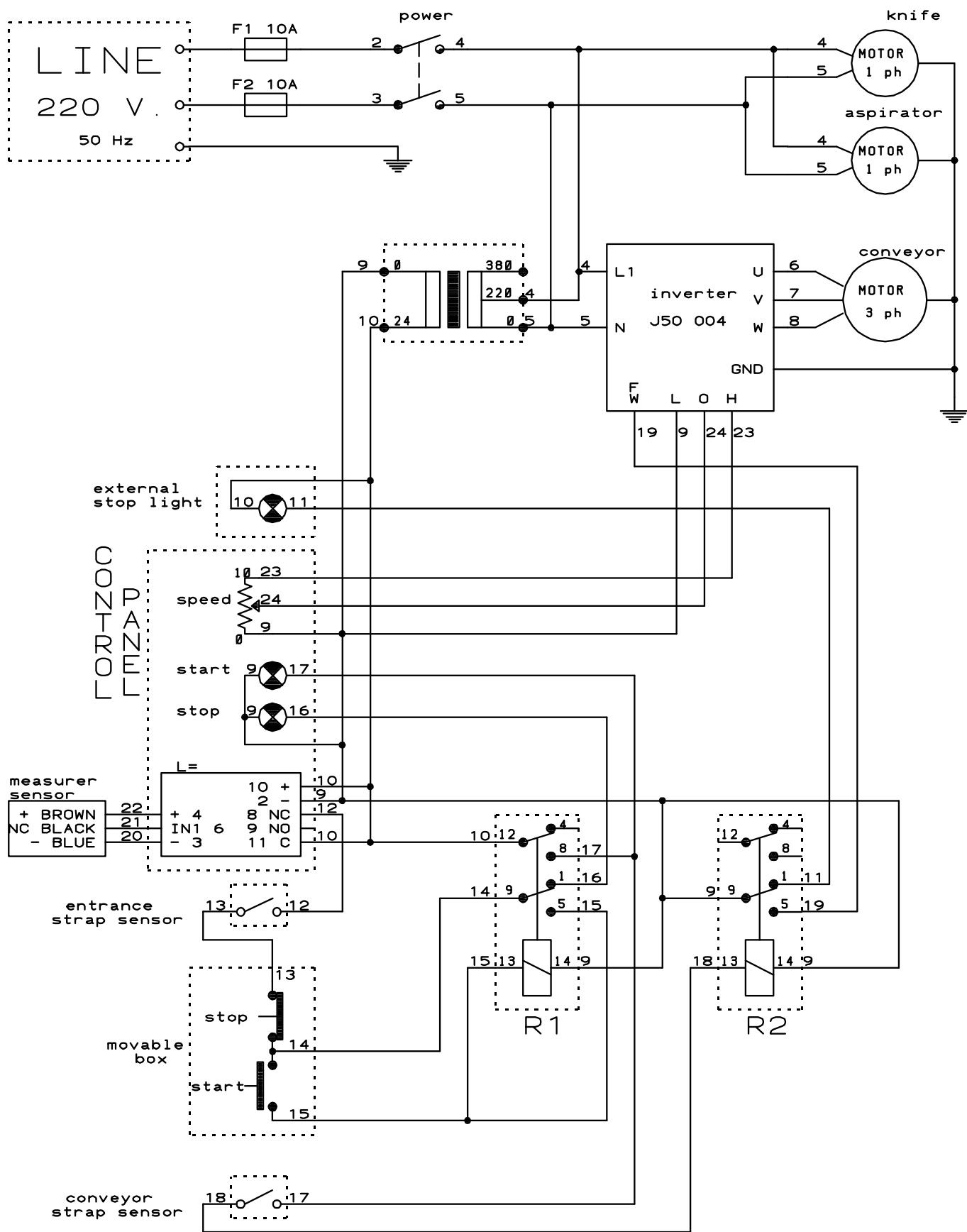
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10. WIRING DIAGRAM



11. SPARE PARTS

Nelle pagine seguenti sono riprodotte le tavole delle parti di ricambio della macchina.

Dopo ogni tavola è stata inserita la legenda per l'identificazione dei pezzi raffigurati sulla tavola.

In caso di ordini di pezzi di ricambio è indispensabile indicare sempre il **numero di matricola** della macchina sulla quale i pezzi andranno utilizzati.

Per ogni ricambio richiesto occorre indicare i seguenti dati:

TAV.N. - Riferimento numerico.	Descrizione	quantità
--------------------------------	-------------	----------

The following pages contain the blow-ups of all machine spare parts.

After each illustration is the list of the parts shown in the blow-up.

When ordering spare parts always give the **serial N° of the machine** the spare parts are destined for.

For each required spare part the following information is necessary:

TAV.No. - Reference number.	Description	quantity
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