DRYTAC®

DES-4 FOAM

Edge Finishing System

INSTRUCTION AND MAINTENANCE MANUAL

Edition:01/2009

INTRODUCTION

The Company reserves the right to modify technical charateristics or the conception of each part of the machine for its product development, declining all liability.

Only the description in our price list and order confirmation give a full specification of the agreed configuration and the accessories to be supplied on machine(s) ordered.

The drawings in this manual will enable you to understand better the text.

TRANSPORT:

-1) Goods always travel upon purchaser's risk.
-2) The purchaser must inform in due time (as foreseen by the law) the shipper and retailer of any goods damaged during transport, so that they may contact the Insurance Company for reimbursement.
Any replacement for damaged parts will be forwarded to the customer C.O.D. (cash on delivery) and the customer must present the relative invoice to the Insurance Company for reimbursement.

CONTENTS

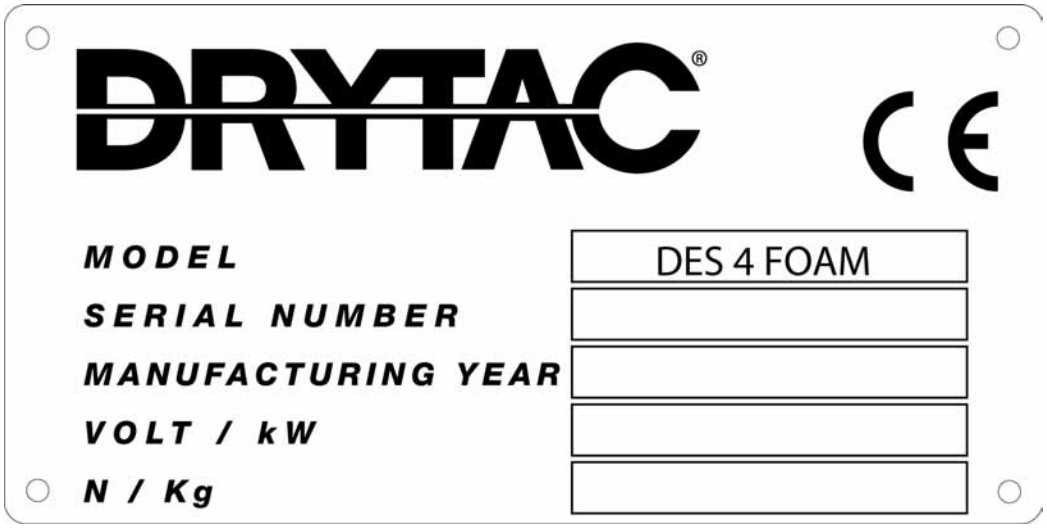


fig. 1.1.1

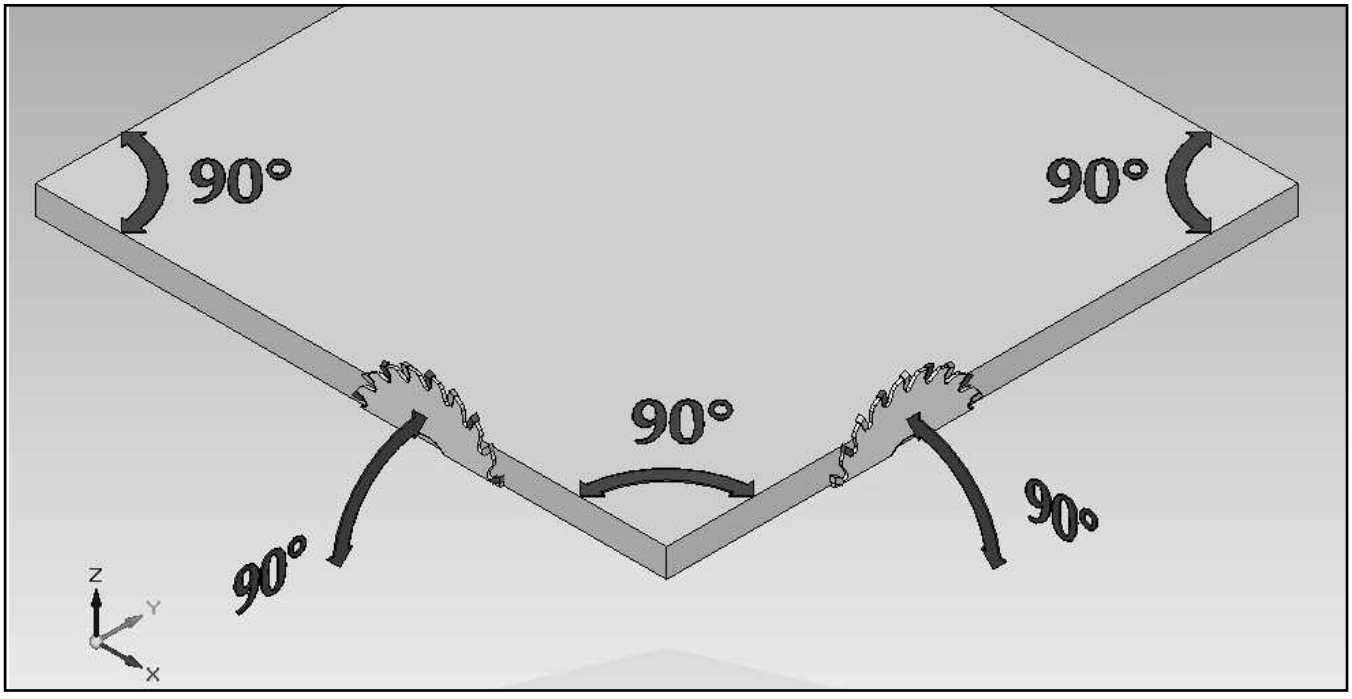


fig. 1.2.1

CHAPTER 1 GENERAL INFORMATION

1.1 MACHINE IDENTIFICATION

This instruction manual is relative to machine model DES-4 FOAM, Edge Finishing System.

Manufacturer:

DRYTAC

The address of the manufacturer and all other data relative to the machine can be found on the identification plate screwed on the machine frame (Fig. 1.1.1)

For any problems regarding the machine, the owner must contact his retailer or service assistance department, supplying the following information:

- Machine model

- Serial number

- Purchase date

- Approximate number of working hours

Effect only adjustments and maintenance operations on machine as indicated in this manual.
Interventions not described in said manual must be exclusively made by the manufacturer's authorized technical personnel.
All responsibilities are declined if machine is handled unproperly without authorization.

1.2 MACHINE PERFORMANCES

The DES-4 FOAM has the function to edge band straight light panels (different types) with automatic chain feeding and spread glue directly on panel with edges up to 2 mm thickness in coils. The thicnkess of the edge depends on the type of panel.

The following workmanship are also available:
-end trimming, flush trimming. As an option methacrylate scraping.

The machine is made to execute exclusively above functions within the dimensions of the technical charateristics specified.

It is forbidden to use the machine with any other material different from the one indicated at point 1.2.

The machine will not edge panels with edges cut at different angles than 90°.
The drawing fig. 1.2.1 shows the necessary features of the panels to be processed properly on the DES4FOAM.

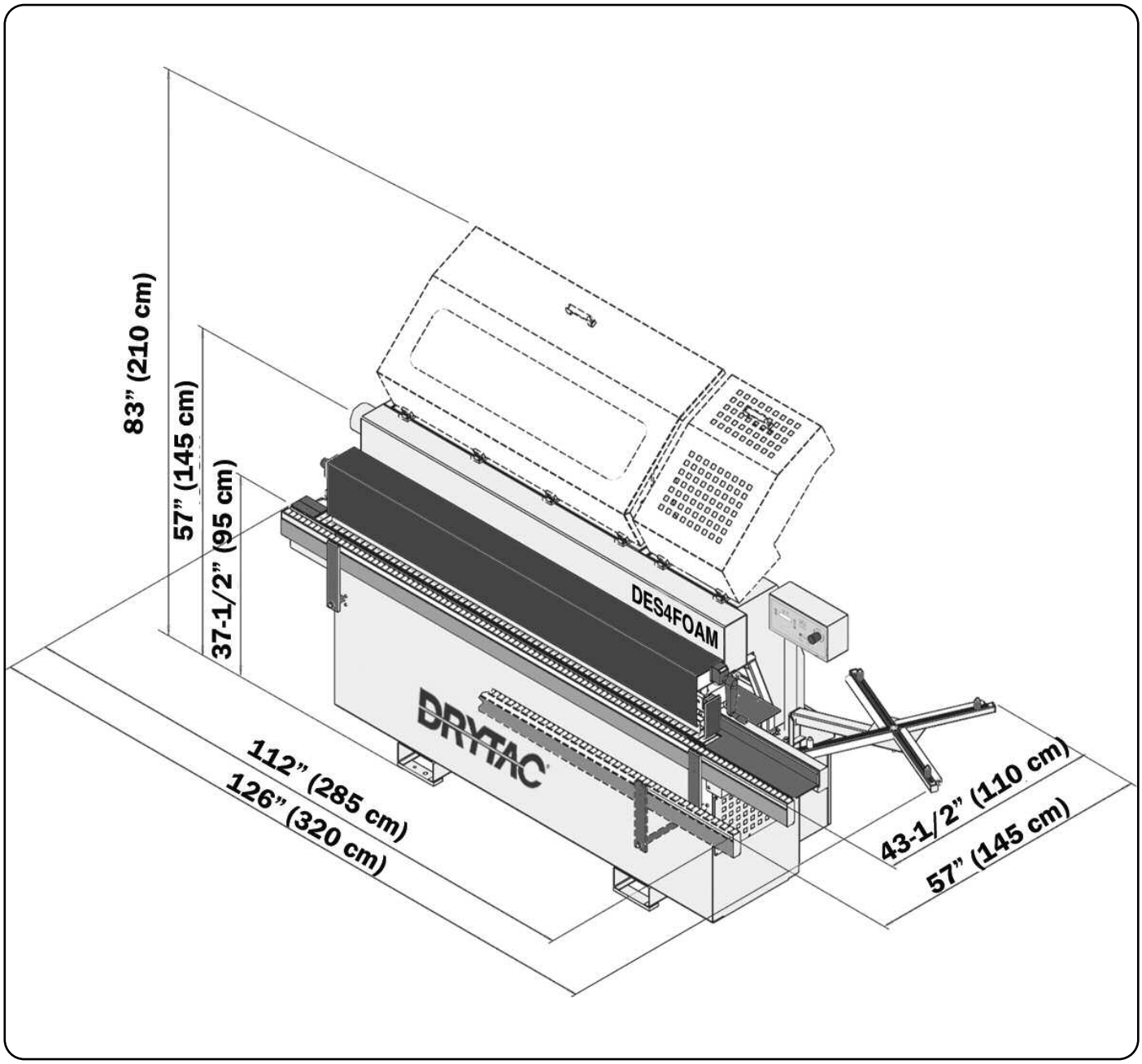

83" (210 cm)
57" (145 cm)
37-1/2" (95 cm)
DES4FOAM
DRYTAC
112" (285 cm)
126" (320 cm)
43-1/2" (110 cm)
57" (145 cm)

fig. 1.3.1

1.3 STANDARD AND OPTIONAL EQUIPMENT

Logic functioning controlled by PLC with integrated thermoregulator
Chain feeding system and top bar with double row of rubber rollers
Automatic edge feeder in coil
Automatic strip feeder
Pneumatic edge cutting shears from coil (max. 3 mm)
Pressure roller unit with numerical indicator for position of rollers
Front and follow up end trimming cut with two blades (straight 0°)
End trimming motor
2 Flush trimming motors Tiltable 0 ÷ 25° with combined cutters bevelled / radius
CE norms

OPTIONALS*:*
Flush trimming motors (more power)
Scraping unit (radius upon request 2 or 3 mm)
Buffing unit motors
Heatable infeed fence

1.4 TECHNICAL DATA (STANDARD EQUIPMENT)

-Min-Max panel thickness	10 - 45 mm (3/16" - 1-3/4")
-Panel feeder speed	9 mt/1' (30 feet/minute)
-Panel feeder motor	50/60 Hz. - 0,75 kW
-Electronic thermostat glue temperature	200 C°
-Heating elements power n°7	3050 W
-Flush trimming motors (each)	200 Hz. - 12'000 g/1' - 0,37 kW
-TCT combined cutters (bevelled/radius)	ø 75 mm Z 4 - hole Ø 16 mm- 30°
-Centralized dust collector outlet	ø 120 mm
-Total power installed	ca. 5000 W
-Weight approx.	650 Kg

OPTIONALS*:*

-End trimming motor	200 Hz. - 12'000 g/1' - 0,22 kW
-TCT sawblade (1+1)	Ø 100 mm Z=20 0°
-Scrapers for methacrylate edges at	45°

C A U T I O N

- Carefully read Instruction Manual before operating machine.
- Do not operate without all guards and covers in position.
- Be sure machine is connected to proper voltage and is grounded.
- Remove or fasten loose articles of clothing such as neckties, etc.
- Confine long hair.
- Remove jewerly such as finger rings, watches, bracelets, etc.
- Use safety face shield, goggles, or glasses to protect eyes and other personal safety equipment as required.
- Stop machine before making adjustments or cleaning chips from work area.
- Keep the floor around machine clean and free from scraps, sawdust, oil, or grease to minimize danger of slipping.
- Never place fingers, hands, arms, elbows, head, feet or other parts of the body near any moving part, especially cutting area.
- Machine must be disconnected from electrical supply before doing maintenance or set-up.

DO NOT REMOVE THIS SIGN

1.5 SAFETY PRECAUTIONS

Before using machine, carefully read the instruction manual supplied with each machine, taking note of all recommended safety precautions.

*This machine has been built to give the best possible results with the maximum safety.

*Your safety depends on you. Serious risks are involved when working with machinery , therefore always keep this in mind.

*Always keep your full attention on job being done.

*The machine operator must not be younger than the minimum age established by legislation and must also be fully qualified to work with this machine

*Many accidents are caused by inappropriate clothing and personal objects (i.e. bracelets, watches, necklaces etc); Make sure that buttons are securely fastened. Do not wear ties and tie back long hair.

*Always wear approved footwear and safety glasses for your eyes.

*The machine and working area around it must always be kept clean, free from obstacles and **well lighted.**

*Use the machine only for the type of workmanship it has been built for.

*The use of safety devices is obligatory and must never be removed, modified or damaged. The manufacturer declines all responsibility if safety devices are modified in any way.

*In exceptional working conditions the safety devices provided with the machine may be insufficient. It is therefore, your duty to make and fit the necessary additional safety devices.

*All work on electrical components must be carried out by a qualified electrician.

*All maintenance work must be carried out with the machine switched off
(main switch on 0) padlocked and the compressed air tube disconnected from the fast snap-on fitting. Make sure that the machine is switched on again by a qualified and authorized person.

*Make sure that the tools are well sharpened and are well balanced.

*Use only cutting tools in good conditions as per norms EN 847.1, in any case avoid
using a hammer.

*Screws, nuts and bolts must be tightened with a proportional strength, neither too slack nor too tight. Use only the tools given just as they are without altering their strength. Never use a hammer to unlock or block the tools.

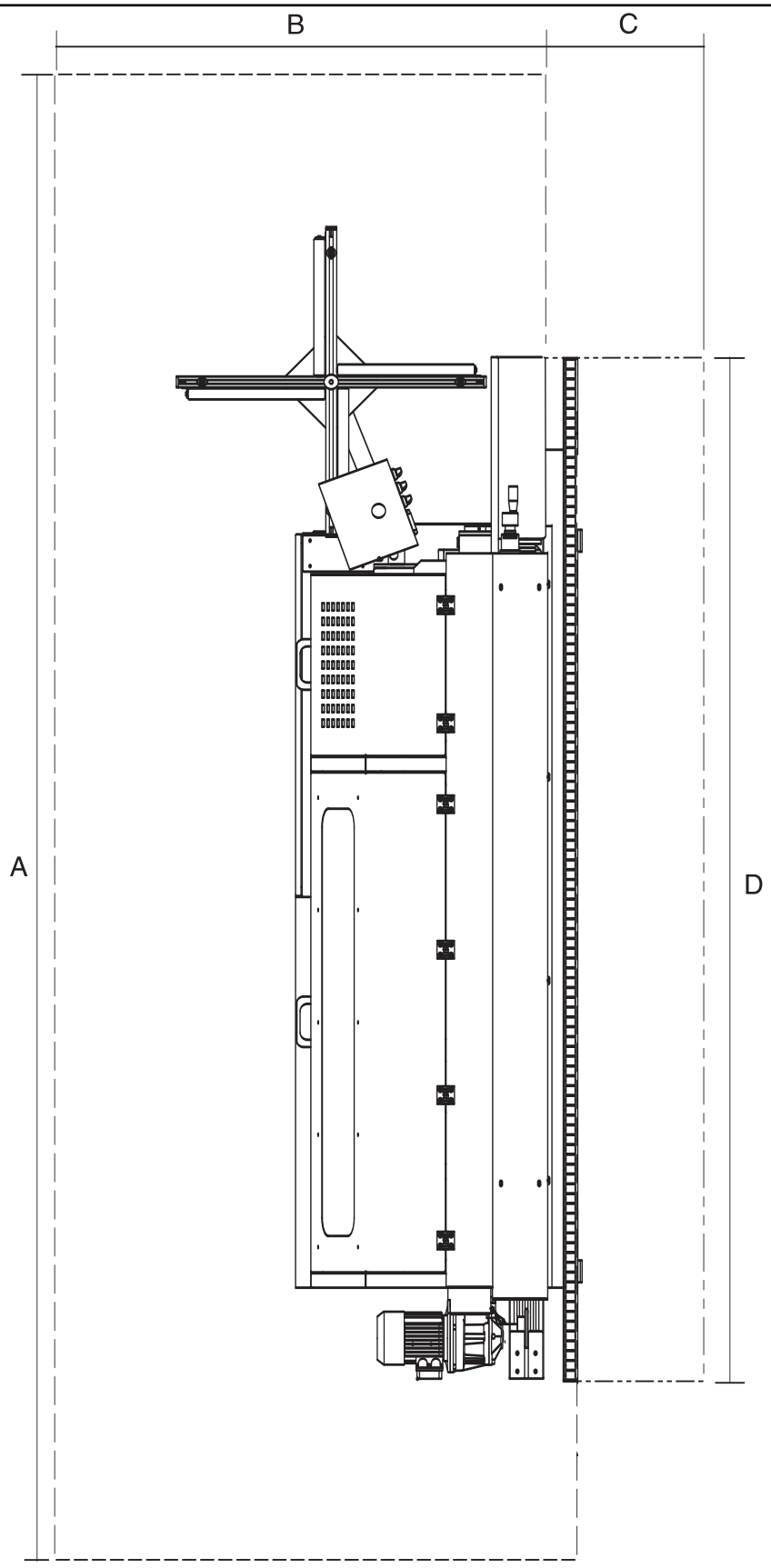


Fig. 1.8.1

LEGENDA FIG. 1.8.1

A:3000 mm + 2 volte lunghezza massima pezzo da bordare

B: 2000 mm

C:1000 mm + larghezza massima pezzo da bordare

D: 1750 mm

—— —— : Zona di rispetto

——— – : Zona di lavoro

1.6 NOISE LEVELS

As per ISO 3744/94 - ISO 7960/95 Annex norms:

Idle functioning without dust extractor:

AVG 78,6 [dB (A)7] OpE 77,7 [dB (A)] OpU 77,5 [dB (A)]

When working with dust extractor

AVG 79,7 [dB (A)] OpE 79,2 [dB (A)] OpU 79,8 [dB (A)]

Description of symbols:

AVG	Medium level of acoustic pressure
OpE	Level of acoustic pressure of operator’s entrance place
OpU	Level of acoustic presure of operator’s exit place

1.7 DUST EMISSION

Flush trimming is the only operation which gives dust emission. Connecting the machine to an efficient dust extractor system which guarantees to the suction outlet at least a 20 mt/1" speed, the value of the dust emission results to be below the limit of 2mg/mc as prescribed by current legislation.

1.8 OPERATOR'S POSITION

The operator's position, shown in Fig. 1.8.1, can reach all operating and emergency controls with the maximum easiness and practicality.

The caution area in fig. 1.8.1, indicates the space which must be left free around the machine for cleaning purposes, maintenance and normal use.

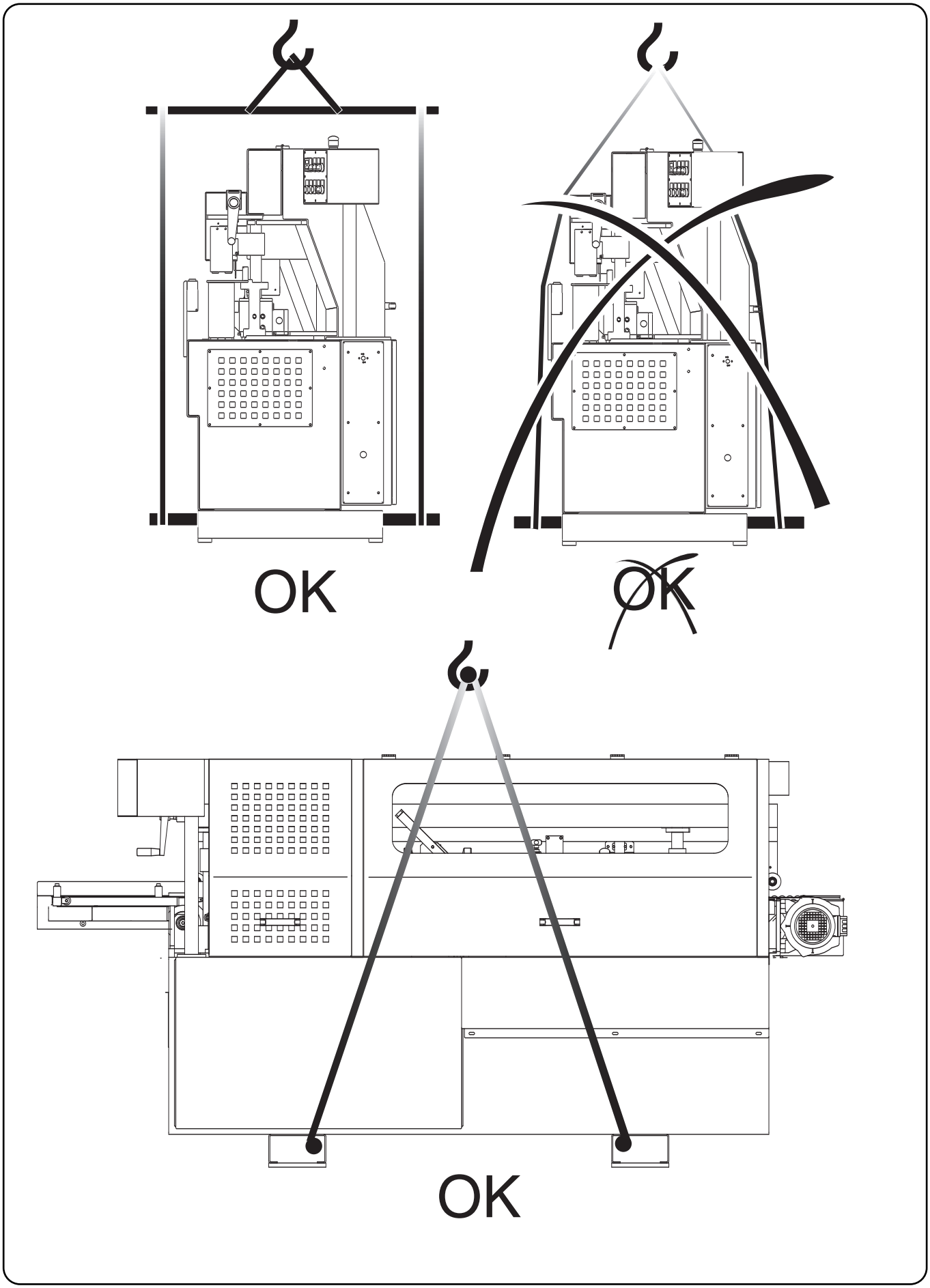


fig. 2.1.1

CHAPTER 2 - INSTALLATION

2.1 LIFTING AND TRANSPORT

When moving the machine it has to be done exclusively by specialized personnel.

To avoid any accidents during transport make sure that the machine is firmly secured to the forklift with ropes or other suitable systems.

The machine can be lifted with ropes, belts or slings, which hold a minimum of 1500 Kg each and hook them on as shown in Fig. 2.1.1. The lifting hook must also hold a minimum weight of 1500 Kg.

2.2 LOCATION OF MACHINE

The machine is delivered with a thermal shrinked nylon protection or carton; in both cases, for transport necessities, some parts of the machine are detached. To assemble and adjust said parts see par. 2.3.
Locate the machine in a suitable place, considering the overall dimensions of the machine, space needed for stacking, loading and offloading workpieces, leaving sufficient space for the operator to move freely. (see Fig. 1.8.1).

The machine base must be layed on a solid surface, uniform and well levelled.

Make sure, by using a water level or any other equivalent good quality level, that the working table is levelled in both directions. Tollerance ± 0,25 mm in longitudinal direction.

It is possible to fix the machine to the floor by screwing the 4 holes made on the bottom of the base.

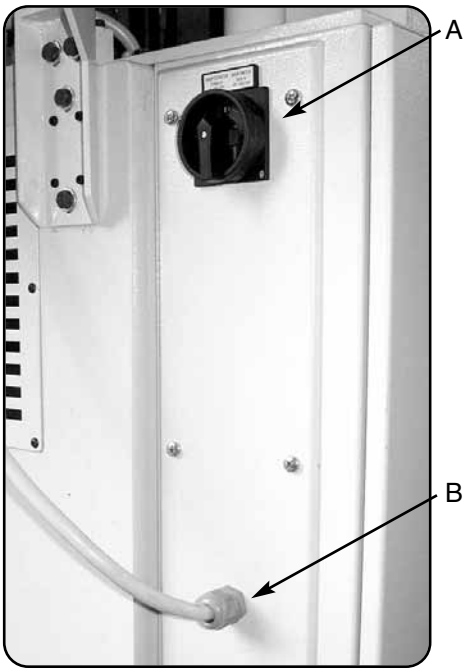


fig. 2.4.1

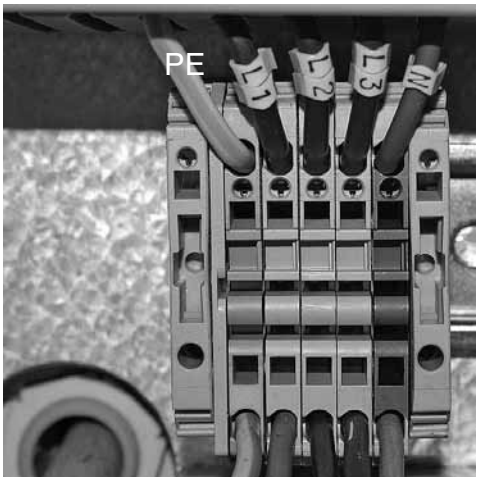


fig. 2.4.2

TRIFASE, THREEPHASE, TRIFASICO

L1,L2,L3	FASI, PHASES, FASES
N	NEUTRO, NEUTRAL, NEUTRO
PE	TERRA, GROUND TIERRA

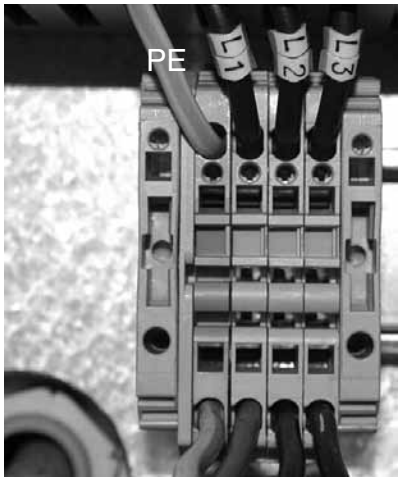


fig. 2.4.3

220 / TRIFASE, THREEPHASE, TRIFASICO

L1,L2,L3	FASI, PHASES, FASES
PE	TERRA, GROUND TIERRA

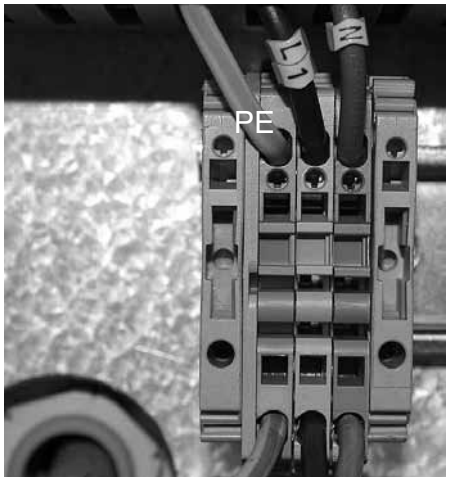


fig. 2.4.4

220 MONOFASE, SINGLEPHASE, MONOFASICO

L1	FASE, PHASE, FASE
N	NEUTRO, NEUTRAL, NEUTRO
PE	TERRA, GROUND TIERRA

2.4 ELECTRICAL CONNECTIONS

The connections must be carried out by a qualified electrician.
Check that the voltage and the power frequency available, correspond to those of the machine which are shown on the identification plate fixed on the machine frame.

To connect the machine at 380-415-440 Volts, use a cable with 5 wires (3 phases+neural+ earth). The three phases must be connected to L1,L2,L3, the neutral to the N and earth to the connections PE (or 4 for the USA version).
To connect use a 5 x 2,5 cable adequate for the total power installed.

To connect the machine at 220 - 240 Volts, use a cable with 4 wires (3 phasesl+earth). The three phases must be connected to L1,L2,L3, the earth to the connections PE.

To connect the machine at 220 - 240 Volts, use a cable with 3 wires (1 phasesl+neutral+earth). The phase must be connected to L1, the neutral to N and the earth to the connections PE.

It is forbidden to connect the neutral to the earth

WARNING: a wrong connection (for instance inverting a phase with the neutral or not connecting the neutral) DAMAGE IRREPARABLY : frequency converter, PLC, heating elements, motors.

The main power system must be provided with neutral and an efficient earth line.
Open the control panel. Insert the main cable line inside the cable grip D fig. 2.4.1.
Connect the main cable with the relative joint clamps of the main switch (fig. 2.4.2).
Close the electrical panel.

Check the **correct direction of rotation** by activating the start-up procedure (**only for three phase version**):

Start up the chain feeding system, **with a short impulse** with button 6 fig. 3.1.1 Chap. 3.1.
Attention: the glue spreading roller is powered by the chain feeding system.
Therefore when testing the correct sense of rotation of the chain feeder it is necessary to wait until the temperature of the glue pot reaches 190°C.

DO NOT ACTION MANUALLY THE SWITCH OF THE CHAIN FEED IF THE GLUE IS NOT FLUID (SEE CHAP. 3.11)

The chain feeder must turn in the sense of the panel feeding.
On the contrary switch over two of the three phases (L1,L2,L3 fig. 2.4.2- **Only for threephase machines**).

For any intervention regarding fuses you must reach the electrical box near the base, by opening the electrical box 11 fig. 3.0.1 with relative key supplied.

Maximum safety precautions must be taken before carrying out these operations, therefore main power supply must be switched off.

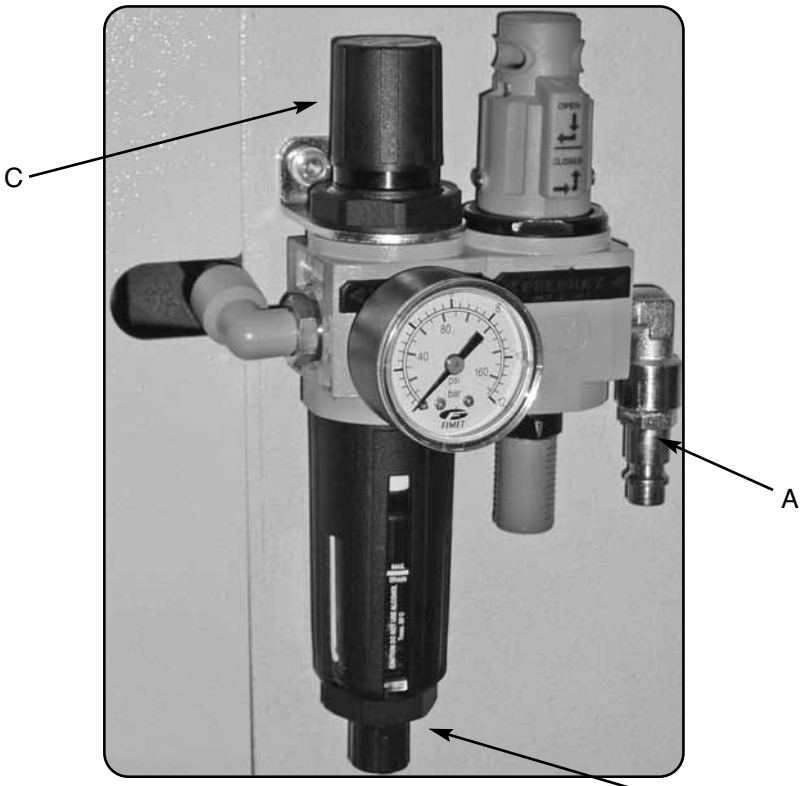


fig. 2.5.1

fig. 2.6.1

2.5 PNEUMATIC CONNECTION

Situated on the right hand side of the machine is the filter/pressure regulator with outflow of condensation together with quick fitting (A fig. 2.5.1)
Ensure that the compressed air reaches the connecting area at least 7-8 bars and that the pressure is free from humidity and has been suitably filtered.

-ALWAYS CONNECT THE MACHINE TO THE COMPRESSED AIR UNIT

Adjust the air pressure to 6,5 bars;
Before proceeding to any maintenance operation, it is necessary to switch off machine, padlock it and also disconnect the compressed air system by taking off the fast snap-on fitting.

The pneumatic plant does not need any type of lubrication!
The use of lubricant oils can damage some of the pneumatic components

Therefore the lubrication, in particular with some types of oils, can seriously damage and compromise the functioning of the machine.

Never add lubricant oils in the condensation collecting cup

To outflow the condensation it is sufficient to push upwards the tap B fig. 2.5.1 with the filter/ regulator under pressure.

The length and the inside diameter of the pneumatic hoses must be proportioned for a correct functioning of the DES-4 FOAM.

NEVER supply the DES-4 FOAM with a pneumatic hose with 4 mm of internal diameter.

2.6 DUST EXTRACTION CONNECTION

Connect to an efficient dust extraction system the 120 mm A fig. 2.6.1.

For a correct functioning it is necessary that the air speed of the dust outlets is not below 20 mt/1".
When working with machine with flush trimming in function, the dust extraction system must be in use.

The quality of edgebanding work, the good conditions of the machine and its longlasting depends on the quality of the dust extracion system.

Start-up Procedure

With this machine it is supplied an Instruction Manual and also a “Start-up Procedure”.

This Procedure DOESN’T TAKE THE PLACE of the Instruction Manual but it is useful for a fast check list of things-to-do for a **CORRECT** start-up and use of the machine.

A **CORRECT** start-up and use of the machine avoids to waste time and to damage the machine

A copy of the Start-up Procedure shown by the arrows can be found on the Instruction Manual’s box.

The copy has been plastified and it is useful attach it in a place where can be read by any user of the machine.

START UP PROCEDURE Mod DES-4 FOAM

BEFORE EFFECTING ANY OPERATION ON THE MACHINE

we suggest to read carefully chap. **2.4 2.5 2.6** of the instruction and maintenance manual, particularly the Chap. on compressed air and dust extraction

1 position on ON the main switch.

Wait till the temperature of the glue pot exceeds 190°C.

In the meantime:

2 position the edge or the strips by following the instructions in chap. 3.2

3 measure the panel and adjust the height of the top pressure bar chap. 3.10

4 adjust the units depending upon the edge thickness (pressure rollers and flush trimmers)
With thin edges and wooden strips it is necessary to exclude the scrapers

5 when the glue pot has exceeded the temperature of 190°C it is possible to start up the panel chain feeding system with button 6 fig 3.1.1.
Also the edge feeding roller, glue spreading roller and pressure roller start up.
Let the chain feeder run for at least 5-10 min. to allow the temperature of the glue to become uniform.

6 check the selectors 4,3,2 fig 3.1.1 depending upon the type of edging to be carried out

7 make sure that the dust extraction is functioning and that the glue pot is not excluded

8 start up the end trim and flush trim motors with button 7 fig 3.1.1.
If necessary also startup the buffing motors with button 8 fig 3.1.1

9 lay the panel near the entrance table and throughfeed it till it reaches the chain feeder

10 once you have finished edging, stop the units with buttons 5 "OFF" fig 3.1.1
DO NOT STOP THE UNITS OF THE MACHINE WITH THE EMERGENCY BUTTON THE FREQUENCY INVERTER COULD BLOCK UP

11 when there are pauses of less than 3 hours between one job and another, leave the machine on but stop the chain feeder.
After 10 min. the thermoregulator automatically sets the temperature to 160°C.
For pauses over 3 hours, turn off the machine with the main switch.

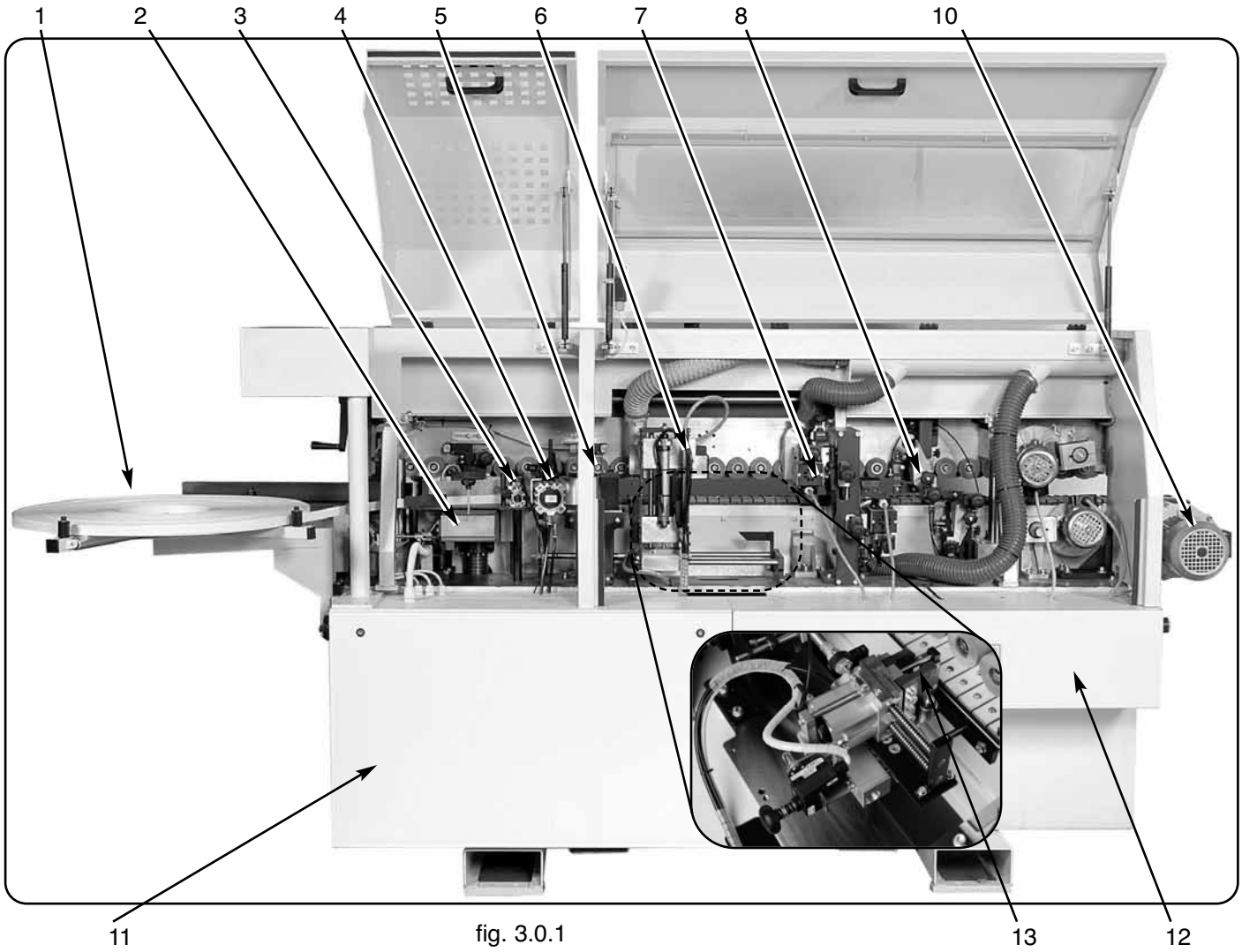


fig. 3.0.1

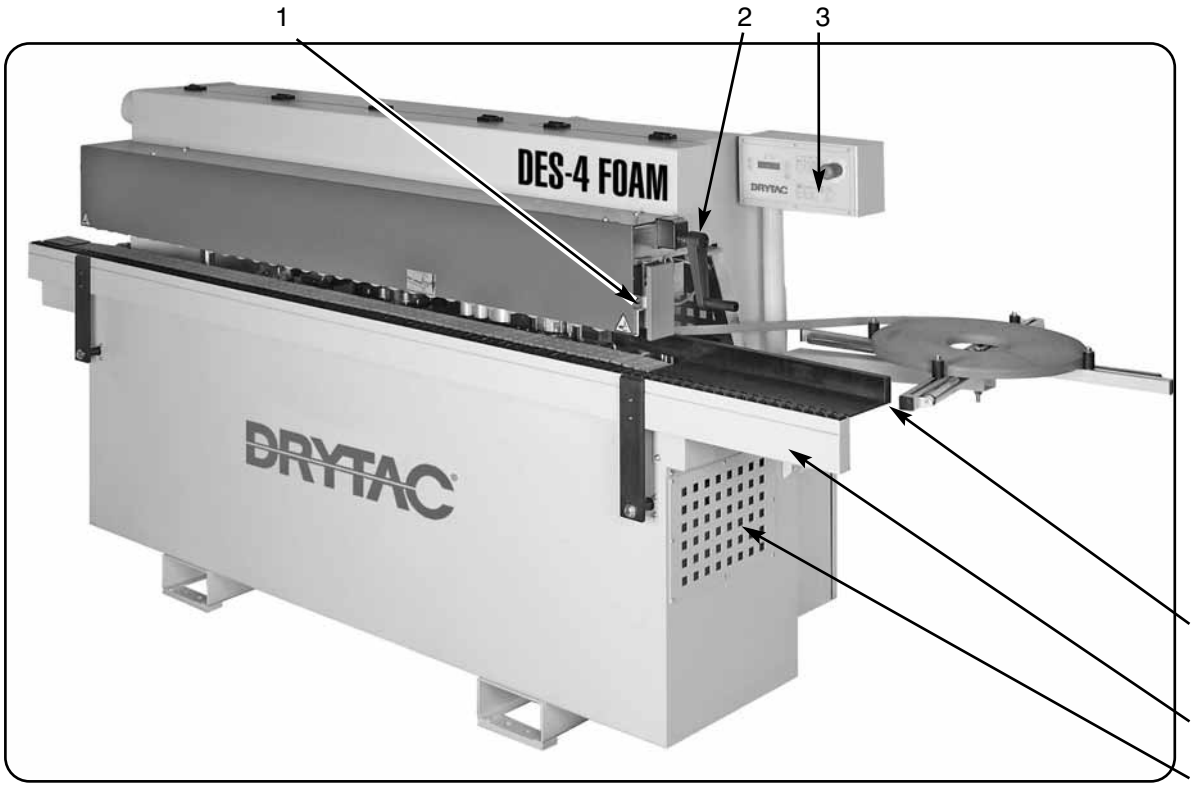


fig. 3.0.2

CAP 3 MACHINE FUNCTIONING

GENERAL VIEW

Fig. 3.0.1

1 Coil support
2 Glue pot
3 Edge feeding unit
4 Cutting shear from the coil
5 Pressure rolers unit
6 Automatic front/rear end trimming (Optional)
7 Flush trimming unit
8 Edge scrapers (Optional)
10 Belt feeder motor (chain feeding)
11 Electrical box
12 Pneumatic box hood
13 Automatic front/rear end trimming with guillotine

fig. 3.0.2

1 Limit micro switch panel thickness
2 Pressure bar height adjustment
3 Control panel
4 Infeed fence
5 Front extension support
6 Maintenance acces

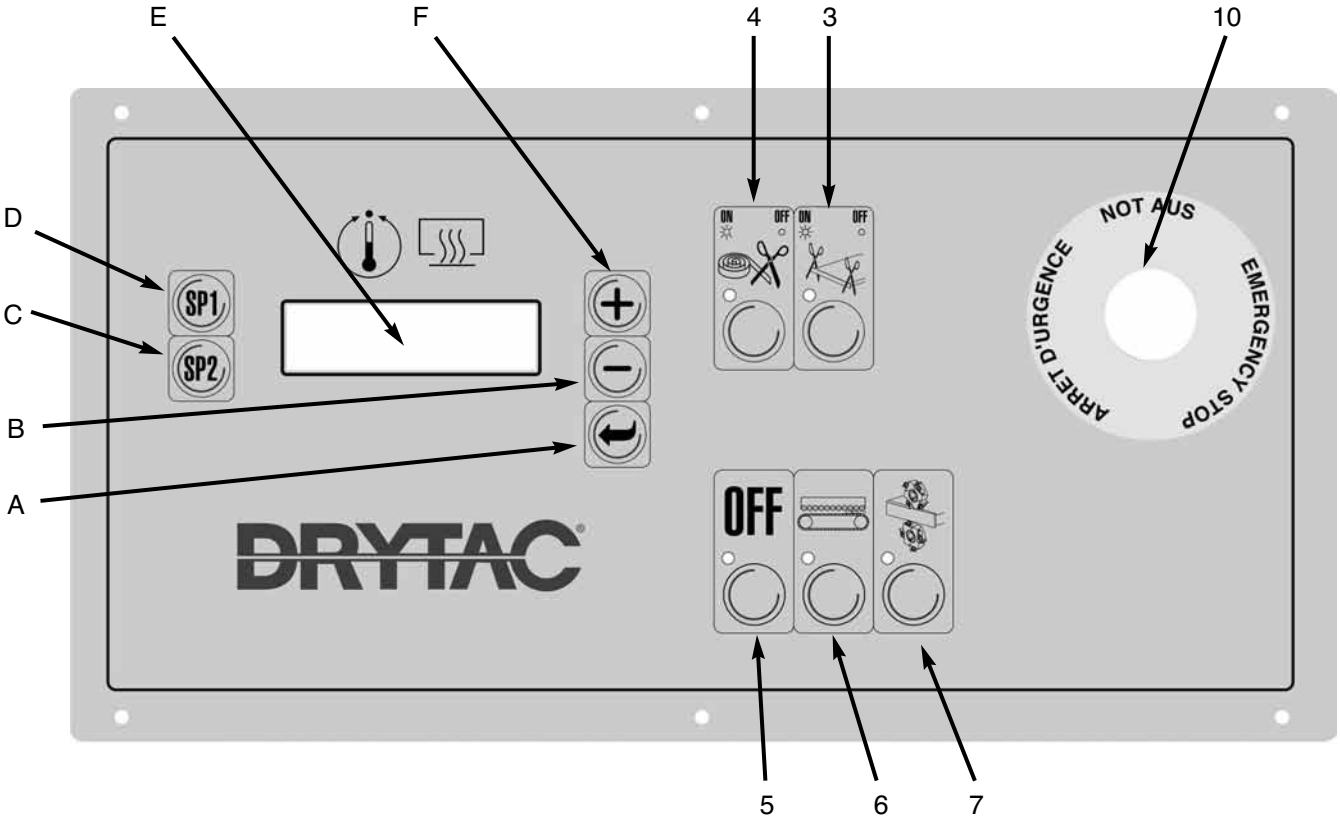

E
F
4
3
10
D
C
B
A
SP1
SP2
ON
OFF
ON
OFF
NOT AUS
ARRET D'URGENCE
EMERGENCY STOP
DRYTAC
OFF
5
6
7

fig. 3.1.1

3.1 – ELECTRICAL CONTROL PANEL

1 - Thermoregulator to control the temperature of the glue pot with double display

A "Enter" confirms the value selected with F and B

C "SP2" STAND-BY temperature (set at 160° C)

D "SP1" working temperature (set at 200° C)

E Thermoregulator display. it shows the temp. of the glue, the values SP1-SP2, "AL" and "LUB", and various messages.

F-B "+" "-" They sets the value desired for SP1 and SP2

Selectors ON/OFF

4 "ON/OFF" Edge guillotine from the coil. **ON** for edge in coils and **OFF** for edges in strips

3 "ON/OFF" End trimmer. OFF = end trimmer exclusion.

Start/Stop buttons for the unit

7 Starts flush trimmers

6 Start the motor of the panel chain feeder

5 "OFF" Stops all the functions started by "8" "7" e "6"

Emergency button

10 This button immediately stops all machine functions. Once pushed it remains in locked position; to re-set it, please pull.

N.B: Do not use it just to switch off machine, even if it is possible, it is not advisable.

IMPORTANT:

Any maintenance or adjustment operations must be carried out with machine switched off, main switch on 0 (zero), padlocked: connection to the compressed air unit detached and the certainty that the machine can be switched on only by a qualified person.

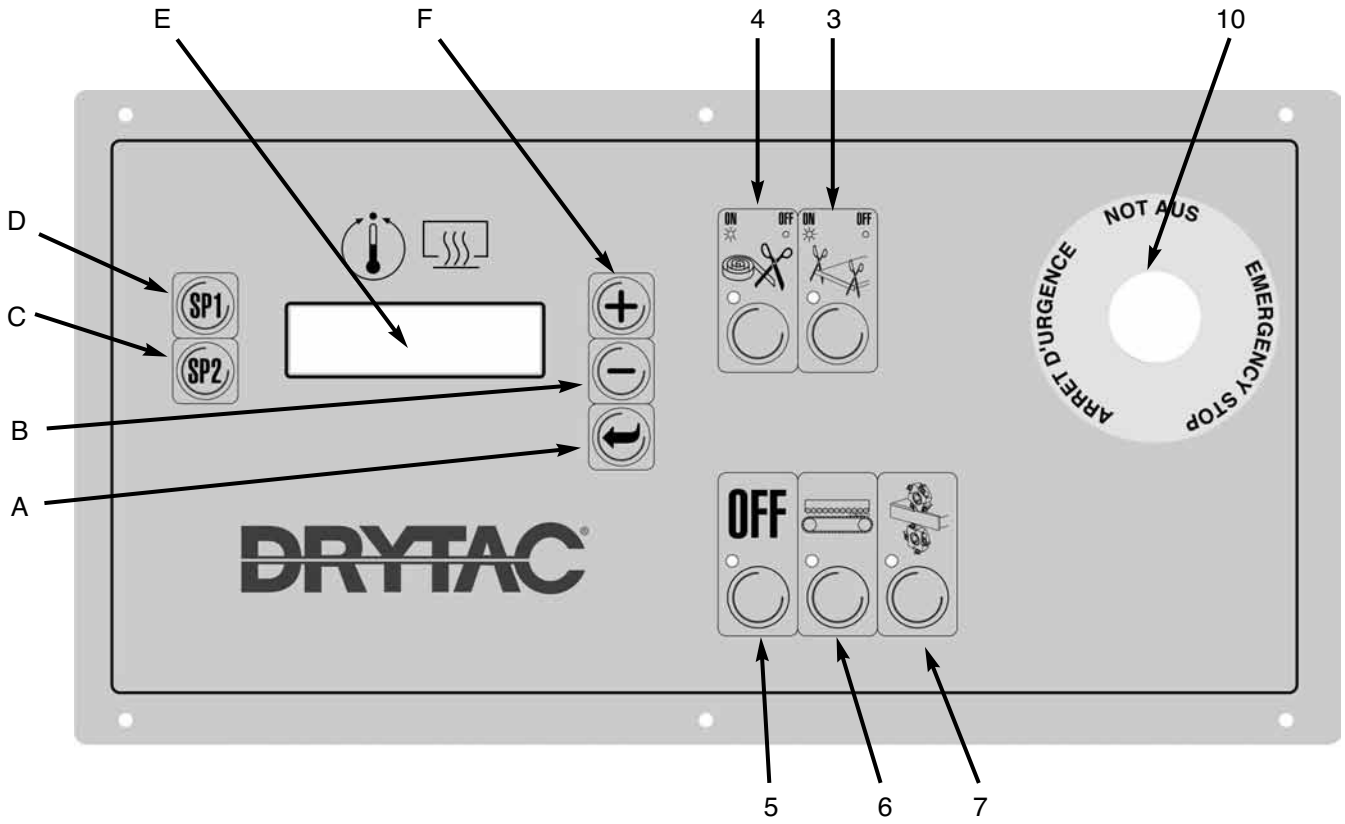

E
F
4
3
10
D
C
B
A
SP1
SP2
ON
OFF
ON
OFF
NOT AUS
EMERGENCY STOP
ARRET D'URGENCE
DRYTAC
OFF
5
6
7

fig. 3.1.1

Ordinary maintenance

EVERY 30 WORKING HOURS, THE PLC STOPS ALL MACHINE FUNCTIONS AND DISPLAY SHOWS "LUB"

To reset, **firstly do all the maintenance and lubrification operations Chapter 3.3.E**, then push button **OFF** (5 fig. 3.1.1) for 10 seconds.

Pneumatic electrovalve

The PLC control has a set programme, optimized at factory, which allows you to use the tape coil guillotine and end trim unit by activating the pneumatic electrovalves when necessary.
It is not possible to change the function parameters. The pneumatic adjustments regarding the end trim unit can be seen in chap. 3.6

Safety electric emergencies

The machine is equipped with 4 electrical emergency contacts. If one of these is opened then motors on all units are stopped and pneumatic system is emptied.
The glue temperature remains unvaried.

The emergencies are:
-red safety button on control panel
-opening of panel feeder
-opening of rear covering to reach the units
-pressure regulator for compessed air (set at 4 atm)

THE PLC DOES NOT CONTROL THE EMERGENCIES

Software version and Serial number visualization

Holding pressed the Enter Key (**A** fig. 3.1.1) for 7 seconds, the display indicates the page with the Software version and the machine's serial number. Press any key to exit.

Visualization of the parameters TA,TB,TC,TD, TE

Holding pressed the SP1 key (**D** fig. 3.1.1) for 7 seconds, the display indicates the pages with TA, TB, TC, TD, TE parameters. With the "**+**" and "**-**" key (**F** and **B** fig. 3.1.1), is possible to change page. Press the Enter key (**A** fig. 3.1.1) to exit.
- **TA:** Times remainders to visualize the message LUB.
- **TB:** Number of the times of the message LUB has been visualized.
- **TC:** Total working's hours of the machine
- **TD:** Total meters of edge used
- **TE:** Partial meters of edge used (resettable)

To reset the **TE** value, press the SP1 key for 5 seconds.

Language selection chosen temperature Celsius-Fahrenheit and chosen Metric-Imperial

Holding pressed the SP2 key (**C** fig. 3.1.1) for 7 seconds, the display indicates the page which to select the language, the temperature (Celsius or Fahrenheit) and the misuration system (Metric or Imperial).
With the "**+**" and "**-**" key (**F** and **B** fig. 3.1.1) is possible to change page, while with the Enter key (**A** fig. 3.1.1) is possible to set the page's parameter. Pressing the **OFF** key for Save and exit.

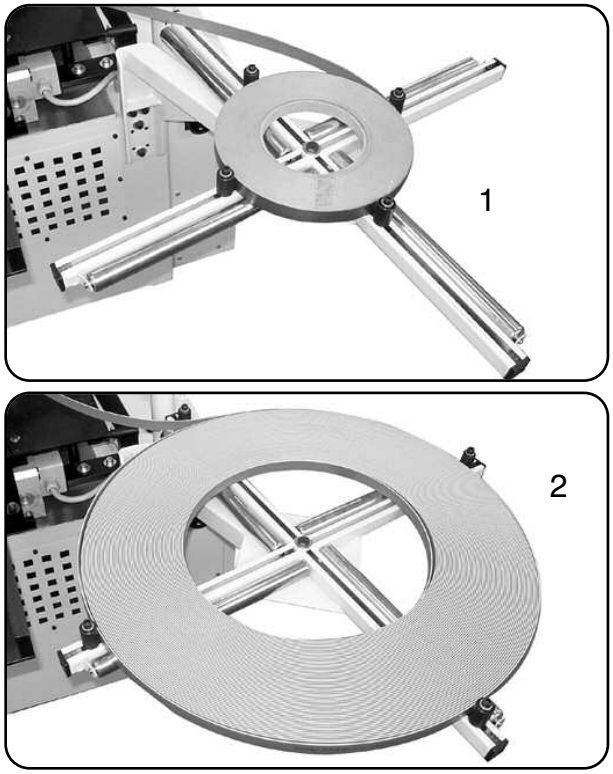


fig. 3.2.1

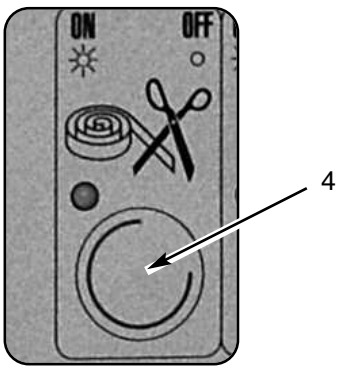
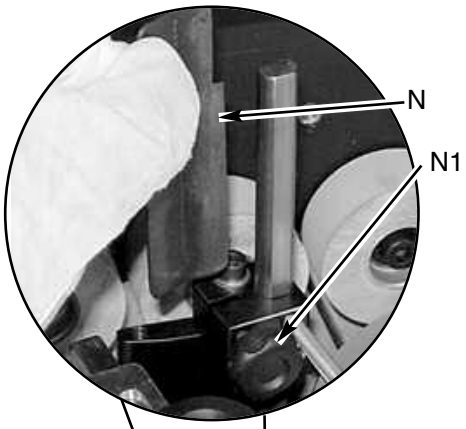


fig. 3.2.2



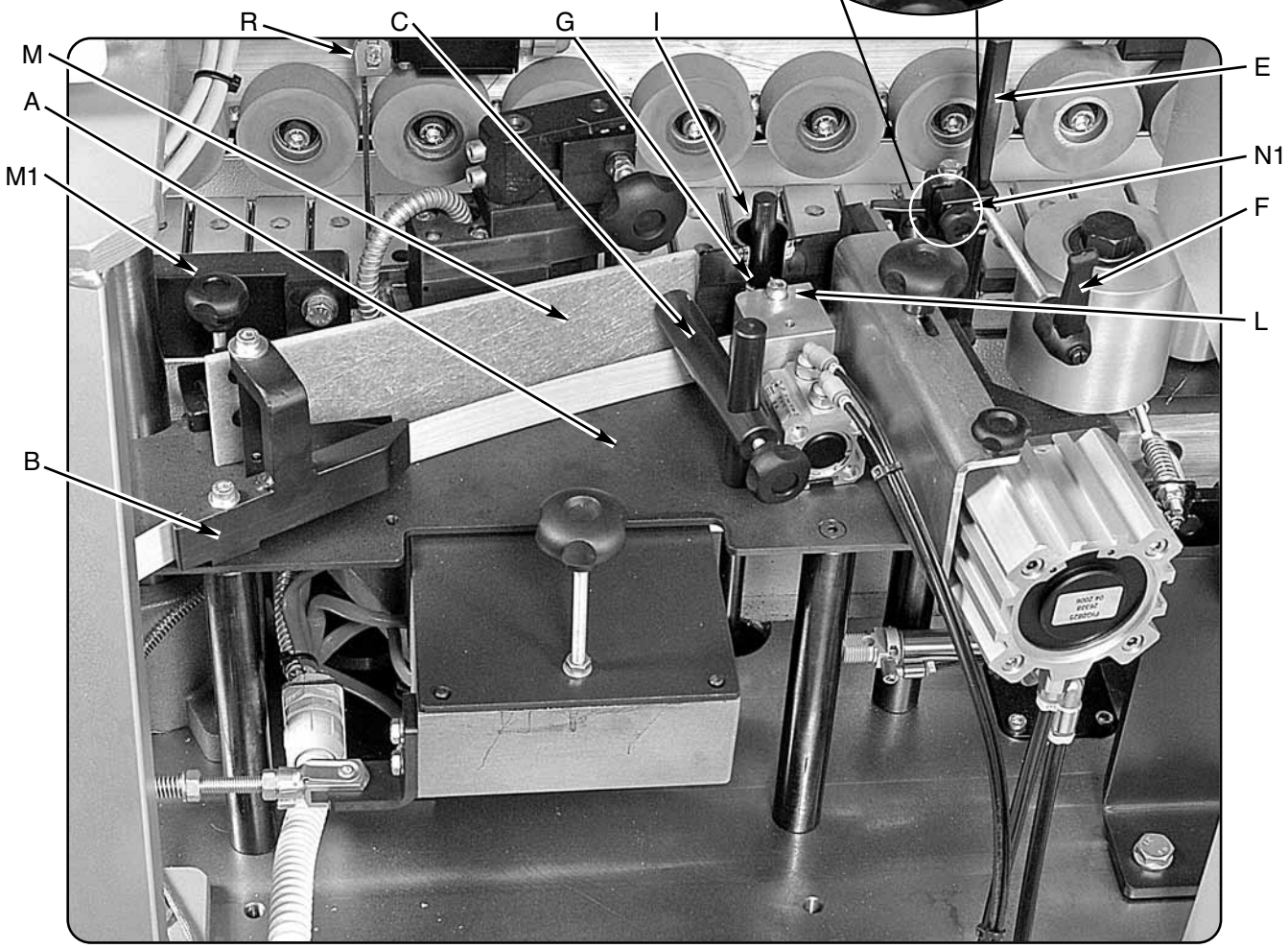
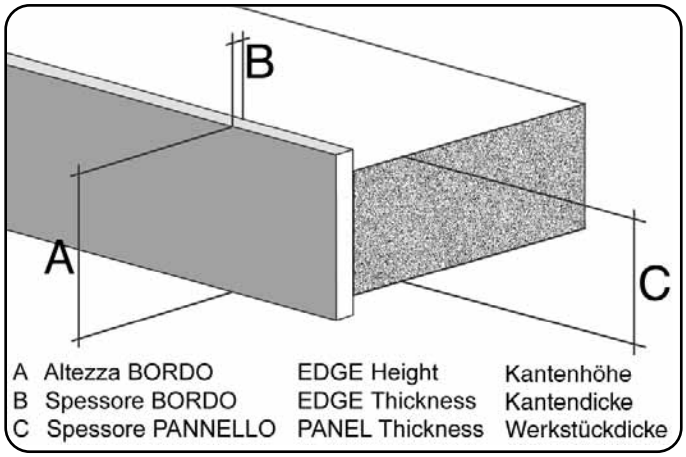


fig. 3.2.4

3.2 POSITIONING OF TAPE COIL OR STRIPS

Contents



**** The value of the edge thickness is meant for edges which exceed in height max. 4 mm in regards to the panel thickness.***
It is possible that with certain kind of wood it would be necessary to have the machine with more powerful motors

3.2.A Tape coil edge from 1 mm up to 2 mm thickness
THE THICKNESS OF THE EDGE MUST DEPEND ON THE FRAGILITY OF THE BOARD.
The following operations must be effected each time a tape coil edge is used or if of different height, thickness.

Mount the tape coil on the cross bar, by positioning the rollers as indicated in fig. 3.2.1;
- position 1 for the thin tape coils which do not unwind by themselves;
- position 2 for thick tape coils which tend to expand;
The tape coil turns with less friction due to the small rollers and horizontal rollers which form the working table.

Press the button 4 fig. 3.2.2. Verify that the LED is lit so then the edge guillotine can work.

Forward the edge on table A fig. 3.2.4, put it through the edge fence B fig. 3.2.4 making sure that the anti-kickback spring of the edge fence works properly.

Lift the vertical edge clearance bar E fig. 3.2.4/3.2.5 by loosening the jacquard handle F fig. 3.2.4, manually feed the edge until it reaches the middle of the 1st pressure roller.

Lower the bar E fig. 3.2.4, check that the edges runs freely and then tighten the jacquard handle.

The worked part A fig. 3.2.5 it is necessary for the vertical containing of the edge.

It is advisable to leave a 0,5 mm play in regards to edge.

Position the edge on the cutting line of the shears D fig. 3.2.5

Position the horizontal edge clearance bar C, fig. 3.2.4, leaving a 0,5 mm play in regards to the edge and then lock in position.

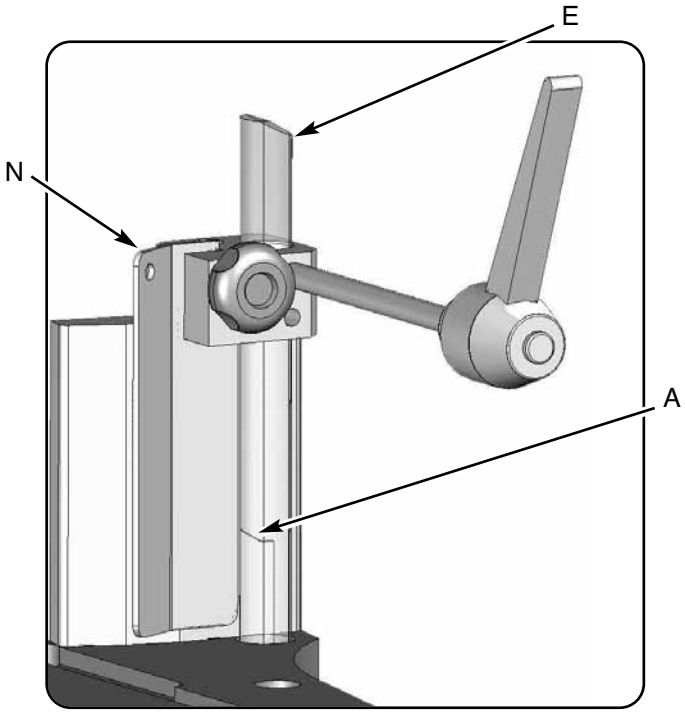


fig. 3.2.3

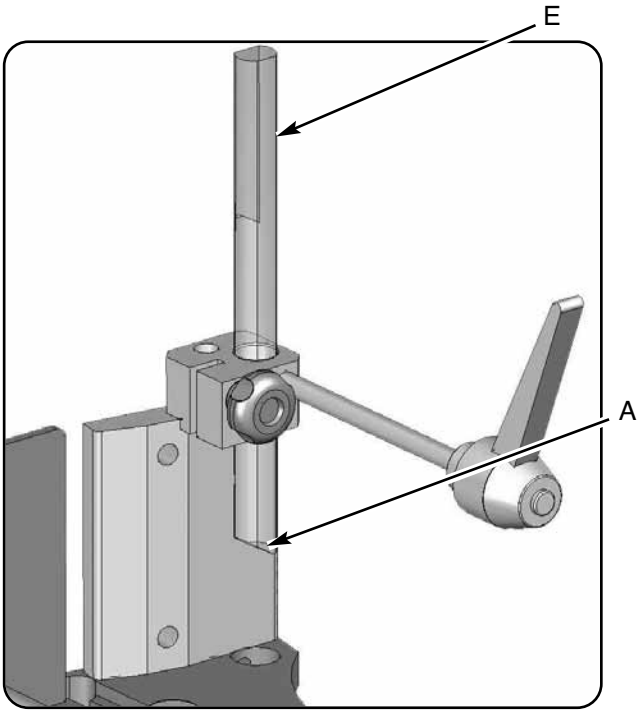


fig. 3.2.5

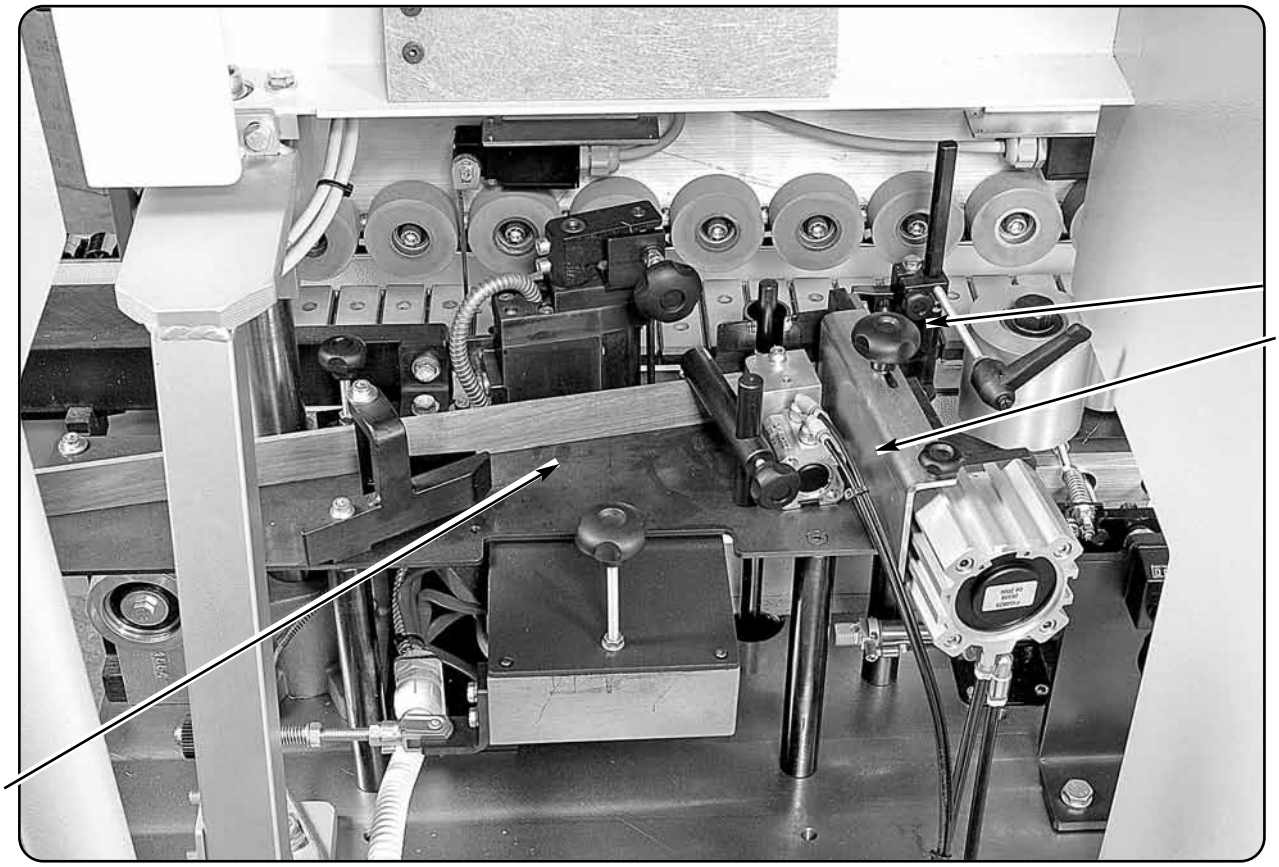


fig. 3.2.6

3.2 B Edging with thin tape coils 0,4 – 1 mm

same instructions as Chap. 3.2 A with following variation:

-verify that the vertical edge clearance bar E fig. 3.2.3, is set as shown in the figure.

The worked part A fig. 3.2.3 it is necessary for the vertical and side containing of the thin edge.

-mount the plate N fig. 3.2.3. This plate is one position only and it is necessary for the side containing.

Check the position of the bar E fig. 3.2.3 by feeding the thin edge until it reaches the first pressure roller, the edge must run freely.

It is advisable to leave a 0,5 mm play in regards to edge.

3.2 C Edge strips

same instructions as Chap. 3.2 A with following variation:

Press the button 4 fig. 3.2.2 on main electrical panel (for strips the LED must be not lighted)

Before positioning the strips it is necessary to:

1) dismantle the isolating plate M by unscrewing the knob M1 fig. 3.2.4

2) edge fence plate N by unscrewing the knob N1 fig. 3.2.4

Position the strips on the table A fig. 3.2.6 until they reach the edge through feed passage (adjustable)

Adjust the edge through feed passage by loosening the knob O1 fig. 3.2.6.

Adjust the vertical edge clearance bar E fig. 3.2.4/3.2.5, tighten the jacquard handle and check that the edge runs freely.

The worked part A fig. 3.2.5 it is necessary for the vertical containing of the strip.

It is advisable to leave a 0,5 mm play in regards to edge.

3.2 D Edge feeding

The edge feeding is effected when the panel during feeding, actions the 1st micro switch R fig. 3.2.4, starting the following sequence:

- the rubber roller for edge feeding G fig. 3.2.4 moves out towards the edge.
- at the same time the edge-pusher L fig. 3.2.5 pushes the edge against the small pin roller or rubber roller so that the edge starts moving.

The PLC (Programme Logic Control) which commands the working sequence is programmed to feed, tape coil edges and strips until the middle of the 1st pressure roller.

3.2. E How to substitute the small edge feeding roller

Completely unscrew the screw I fig. 3.2.4, take out the rubber roller E fig. 3.2.4 and insert the new rubber roller.

Make sure that the rubber roller is properly inserted on the pin of the shaft.

Tighten the screw I fig. 3.2.4.

3.2. F Cleaning and maintenance

Before starting a new edging cycle:

- remove any edge residue from the sliding table, from the fences and from the small edge feeding rollers.
- remove an glue residue from the edge fences
- check that the small pin roller and small rubber roller are in good condition and clean
- to remove any type of dirt we suggest the use of a spray without silicon (remove glue residue ONLY when machine is cold!)

3.2.G Trouble shooting

INCONVENIENCE	POSSIBLE CAUSES	SOLUTIONS
The edges do not feed through properly	Lack of compressed air	Connect compressed air
	Compressed air hose not adequate	Change with a bigger hose
	Edge fence E fig. 3.2.5 is not adjusted properly	Check the pressure adjust play of 0,5 mm
	Feeding rollers are dirty	Clean and substitute
	Edge filter 0 fig. 3.2.6 is closed	Adjust knob 01 fig. 3.2.6
	Bar C fig. 3.2.4 pushes the edge too much	Adjust with 0,5 mm play
Thick wooden strips do not feed through properly	Edge fence N fig. 3.2.4 is still mounted	Dismount N fig. 3.2.4 with knob N1
The edge does not cover the panel	Edge fence E fig. 3.2.3 is not adjust properly	Adjust with 0,5 mm play
	Edge must be higher than the panel	Change edge
Small rubber roller doesn't turn	The torque control is not correctly set	Set the torque adjustment (See Chap.3.3)

NOTES.:

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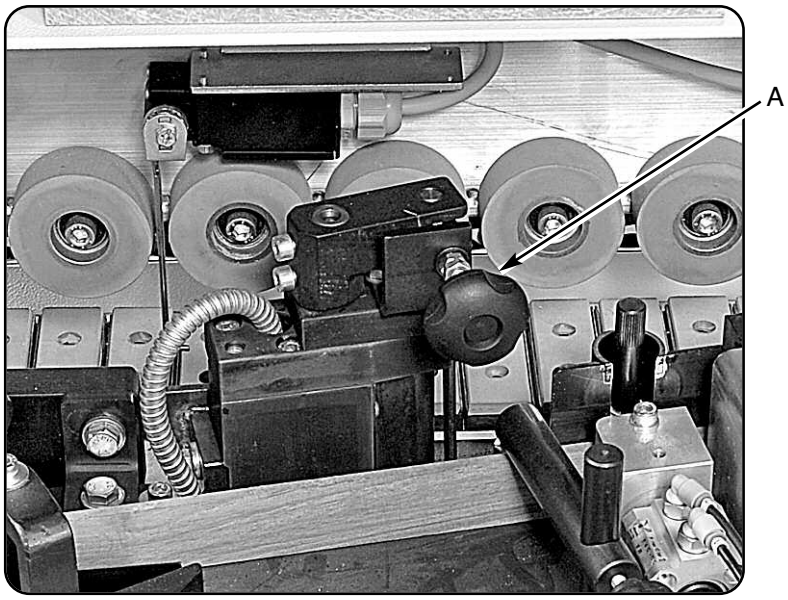

fig. 3.3.2

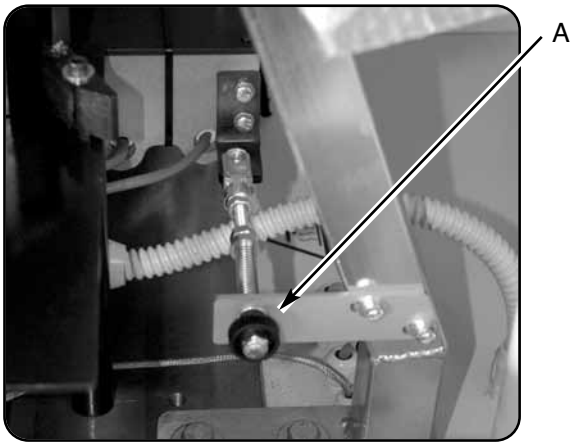

fig. 3.3.3

3.3 GLUE POT

Contents

3.3.A Technical charateristics:

Resistances	1x650W	4x500W	2x200W
Glue capacity	Approximately 2 Kg.		
Heating time	Approximately 5-8 min. (at approx 18-20°C / 64-68° F ambient temp.)		

3.3.B Function

The glue pot has the function to reach correct temperature to dissolve the hot-melt glue inside the glue pot, which is then spread on the panel.
When the machine is connected electrically, the main switch is on I/ON, the glue pot starts heating up.
The glue spreading roller is powered with the chain feeding system, therefore the rotation of the roller functions only when the temperature of the glue pot is over 190° and the button 6 fig. 3.1.1 has been pushed to start up the chain feeder.
When machine is under emergency (used push-button and rear closure open) the glue spreader stops turning but the heating of the glue continues.

Fill up the glue pot with granular hot-melt glue until approximately 1 cm under the edge of the pot.
N.B. Make sure that the type of glue used is compatible with types of glue indicated, conditions and technical characteristics of machine.

The electronic temperature adjuster must be positioned on temperature which is suggested by manufacturer (in factory normally adjusted at 200°C).
The quantity of glue to be spread can be adjusted. When edging check the glue level in the pot and if necessary fill up as indicated in point a.

3.3.C Adjustment of glue quantity on roller

To increase the quantity of glue it is necessary to turn anticlockwise the knob A fig. 3.3.2, to reduce turn the knob clockwise. When adjusting it is advisable to increase the glue gradually.

3.3.D Exclusion of glue pot

The glue pot can be excluded by acting on the knob A fig. 3.3.3. At the factory the glue pot is excluded to avoid any damages during transport. Always exclude the glue pot when machine is travelling.

3.3.E Maintenance: lubrication, adjustable torque control, substitution burnt glue, substitution of burnt glue,

Lubrication must be made only when machine is turned on and the glue spreader is turning.
Use grease gun supplied with service box fig. 3.3.4. by inserting it on the nozzle A fig. 3.3.5.
Use lubricating grease for hot bearings **Arexons GC 300**.

EVERY 30 WORKING HOURS, THE PLC STOPS ALL MACHINE FUNCTIONS AND DISPLAY SHOWS "LUB"

To reset, **firstly do all the maintenance and lubrification operations**, then push button **OFF** (5 fig. 3.1.1) for 10 seconds

To avoid damages to the transmission for the rotation of the glue spreader of the glue pot, the machine is equipped with an adjustable torque control.
When the chain feeding system is working, if the torque control skids, then the glue spreader roller, 1st pressure roller and edge feeding roller will stop.
To reach the adjustable torque control open door 6 fig. 3.0.2 situated on the right hand side of the machine basement.
The calibration has been made on machine under normal working conditions.

In case the torque skids slips, check that it is not one of the following causes:
- the rotation resistance for lack of lubrication on the glue spreader (see para. 3.3.E)

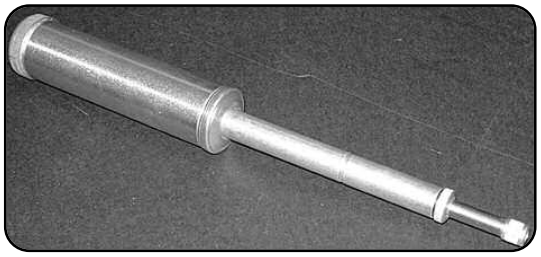

fig. 3.3.4

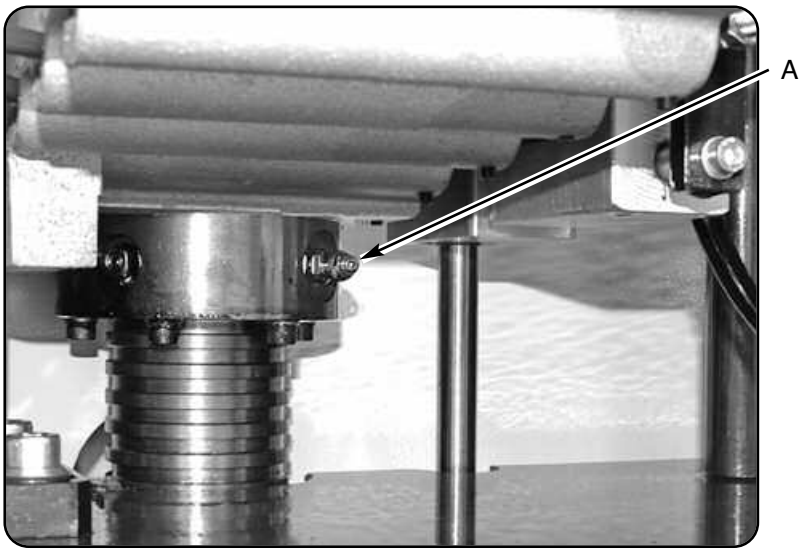

fig. 3.3.5

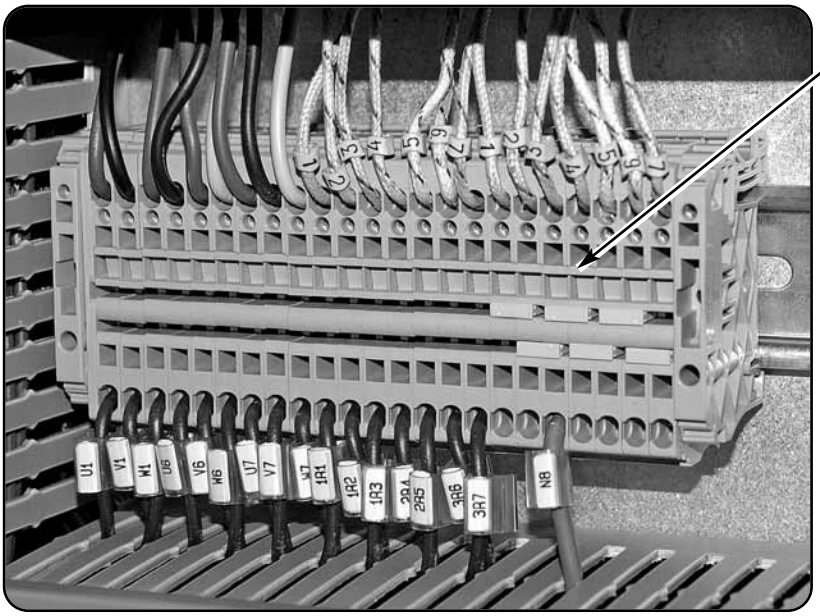

fig. 3.3.6

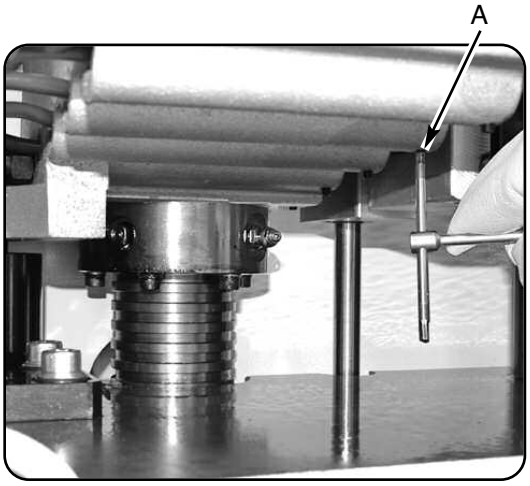

fig. 3.3.7

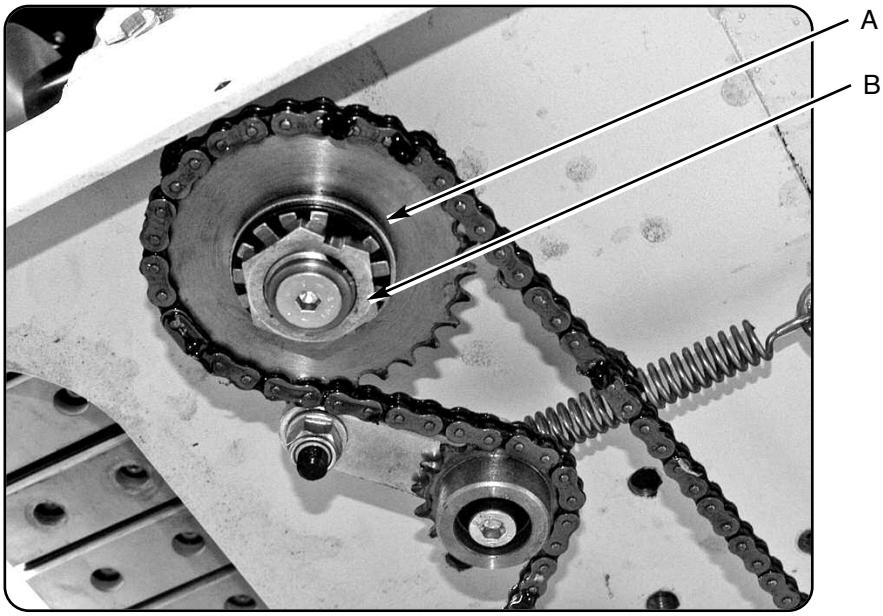

fig. 3.3.8

- accidental start-up of the chain feeder by means of its manual contactor.
- any reasons which cause the glue not to be fluid

DO NOT PROCEED TO INCREASE THE TORQUE IF THE CAUSES OF SKIDDING HAVE NOT BEEN SOLVED FIRST

In case none of the above causes have occurred, then it is possible to increase the torque.
To increase the torque, please follow these instructions:
- lift up the locking tonge
- tighten nut B fig. 3.3.8 until the rollers start to turn
- lower the tongue to lock the adjustment nut

To substitute burnt glue, insert two wooden sticks of approximately 10 x 25 x 400 mm inside the glue at 200°.
Let the glue cool down to environment temperature.
Adjust the thermal-regulator to approximately 70° C and heat the glue until it reaches this temperature. Take out the block of glue by pulling on the two wooden sticks.
Complete the cleaning, by taking away any burnt glue residue with a wooden stick.
NEVER USE METAL TOOLS, POINTED OR SHARP. THE GLUE POT IS TEFLON COATED.

To substitute the resistances, disconnect the wires from the connections A fig. 3.3.6 located on the electrical box 11 fig. 3.0.1.
Before taking out one of the lower resistances it is necessary to unscrew the locking bolts A fig. 3.3.7, then take it out and disconnect. Insert the new resistance and connect to joint. To substitute the upper resistance it is sufficient to pull it upwards.
Never connect the resistances until you have placed them in the correct position of glue pot.
Do not force the bolts too much so that damage is not made to outside of resistance.

3.3 F Types of glue

The DES-4 Foam has been fully tested with Drytac® Edge Secure™ Glue.
Other types of glue could not achieve the same results. Please referr to your dealer for info.

3.3G THERMOREGULATOR pagg. 37-38

3.3. H Troubleshooting

INCONVENIENCES	POSSIBLE CAUSES	SOLUTIONS
Glue does not heat up	Resistances burnt out Thermoregulator is in “standby temperature”	Substitute the resistances Press D or 6 fig. 3.1.1 Check the emergencies Check the closure of the rear door
Glues does not reach gluespreader	Temperature not correct Glue level too low	Adjust temperature Add glue
Glue not uniform	Chip residue on glue spreader	Clean glue spreader
End trim and flushtrim units are dirty with glue	Too much glue	Decrease quantity of glue
Spreading roller doesn’t turn	No lubrication The torque control is not correctly set	Lubricate glue pot Set the torque adjustment

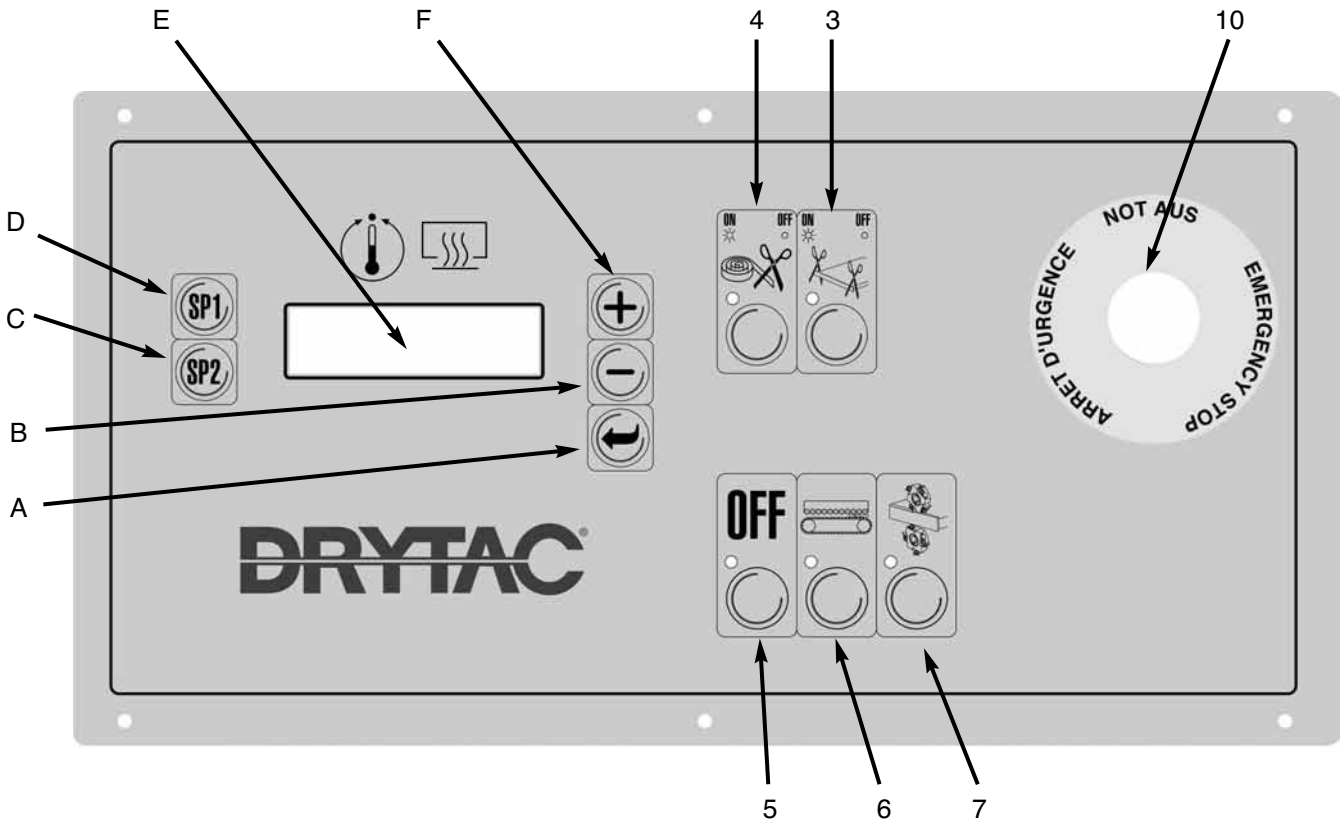
E
F
4
3
10
D
C
B
A
SP1
SP2
ON
OFF
ON
OFF
NOT AUS
EMERGENCY STOP
ARRET D'URGENCE
DRYTAC
OFF
5
6
7

fig. 3.1.1

3.3G THERMOREGULATOR

With the main switch on “ON” the thermoregulator commands the heating elements to heat the glue pot up to temperature SP1(generally 200°C).

Once you have reached the temperature of 190°C “AL” it is possible to start up the feeder and other units.

“AL” is automatically calculated by the PLC. At any value of “SP1” the PLC removes 10°C.
I.E.: Working temperature SP1=200°C, therefore Al=190°.
The LED G (fig. 3.1.1) flashes until 190°C and turns off between 191° C and 200°C.

We suggest to start the edging procedure only when the glue pot reaches the required temperature of 200°C.

If the chain feeder is not started up with button 6 fig. 3.1.1 between 190°C and 200°C (working temperature) the thermoregulator starts 10 min. count down to “standby temperature”.

After these 10 min. the thermoregulator sets itself on SP2 turns off the heating elements and the glue pot cools down to 160°C (Standby SP2 temperature).

This function is used to avoid that the glue deteriorates if it remains a long time at working temperature.

Attention: each time the machine is in emergency pag. 25, the thermoregulator passes on to "Stand-by SP2"

If the button 6 fig. 3.1.1 is pushed during these 10 min the count down is stopped and the temperature returns to the one required (generally 200°C SP1).
To reset working temperature press button “D” SP1 then press button “A” Enter.

DESCRIPTION OF ACCESS TO PARAMETERS
To set SP1-SP2, press “SP1” and “SP2”.
On the display will be shown SP1 or SP2 that temperature.
Now it is possible to set the temp. using the button “F” and “B”.
To confirm press the button “A” Enter.

EVERY 30 WORKING HOURS, THE PLC LOCKS THE MACHINE AND SHOWS IN DISPLAY "LUB".
To reset, firstly do all the maintenance and lubrification operations, then push button **OFF** (5 fig. 3.1.1) for 10 seconds.

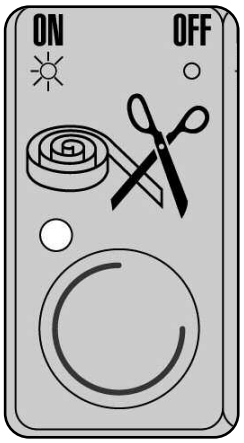

fig. 3.4.1

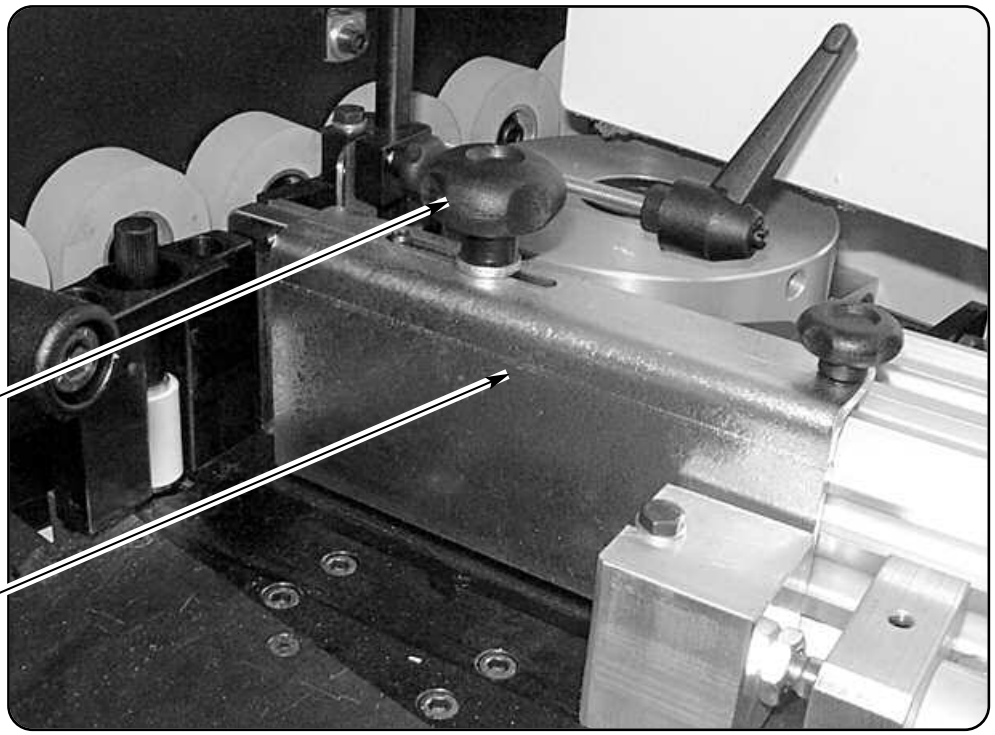

fig. 3.4.2

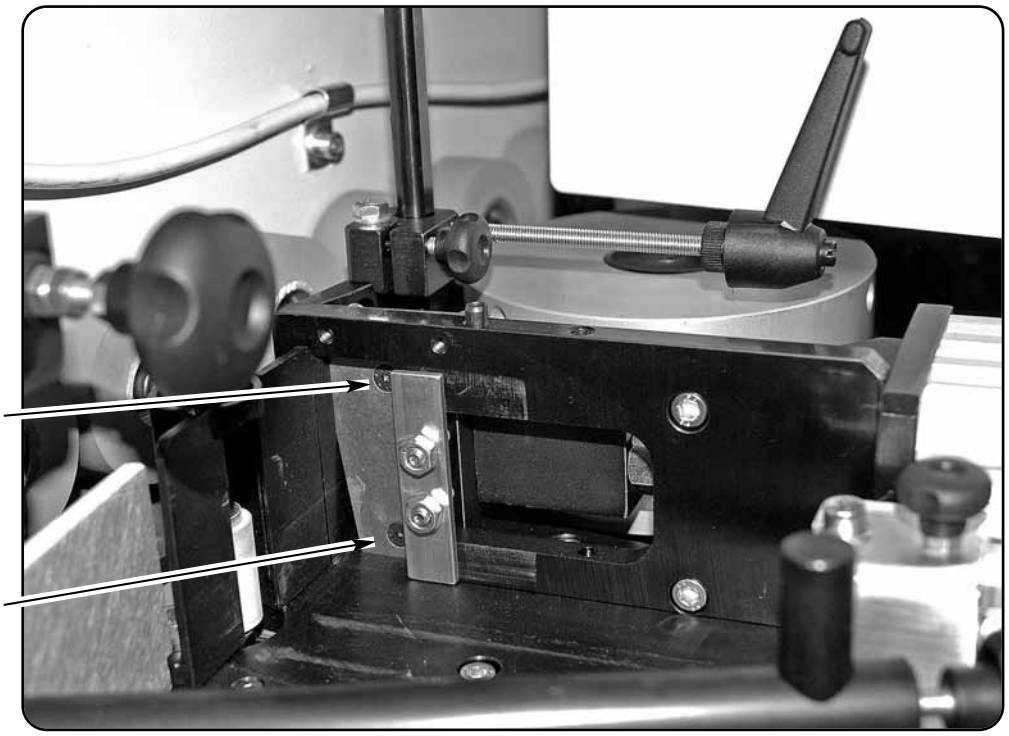

fig. 3.4.3

3.4 EDGE CUTTING SHEARS FROM COIL

Contents

3.4.A Function

This is needed to cut off automatically the edge in coils in regards to the length of the panel to be edged.
The shear acts pneumatically when the panel releases the first micro switch pushed when feeding.
When mounting machine at factory the length of the outgoing edge is adjusted and the exceeding edge shall then be cut off perfectly by the end trimming unit during follow-up phase.

When the LED fig. 3.4.1 is not lit then the cutting shears are excluded.

3.4.B Maintenance: knife substitution, sharpening and lubrication

Periodically clean with compressed air and lubricate, the knife, the counter-knife and the area of the counter-knife.
When lubricating with oils without silicon, then do not leave the cutting shears wet, but make sure to dry with a cloth.
Oils without silicon can lower the gluing adhesiveness.

To substitute or sharpen a cutting shear knife it is necessary:
- completely unscrew knob A fig. 3.4.2, take away the edge passage filter B fig. 3.4.2
- unscrew the two fixing screws of the knife C and D fig. 3.4.3
- substitute or sharpen knife
- re-mount as indicated in fig. 3.4.3
- re-mount the edge passage filter

N.B.: Only sharpen the oblique side of the knife

3.4.C Trouble shooting

INCONVENIENCES	POSSIBLE CAUSES	SOLUTIONS
The shears do not cut	Selector switch fig. 3.4.1 is on strip position	Check correct position of selector switch
	Compressed air hose not adequate	Change with a bigger hose
	Compressed air is not being used	Connect compressed air
Cuttings shears stays closed	Pieces of edges obstructing	Free the cutting shears and check the running

NOTE

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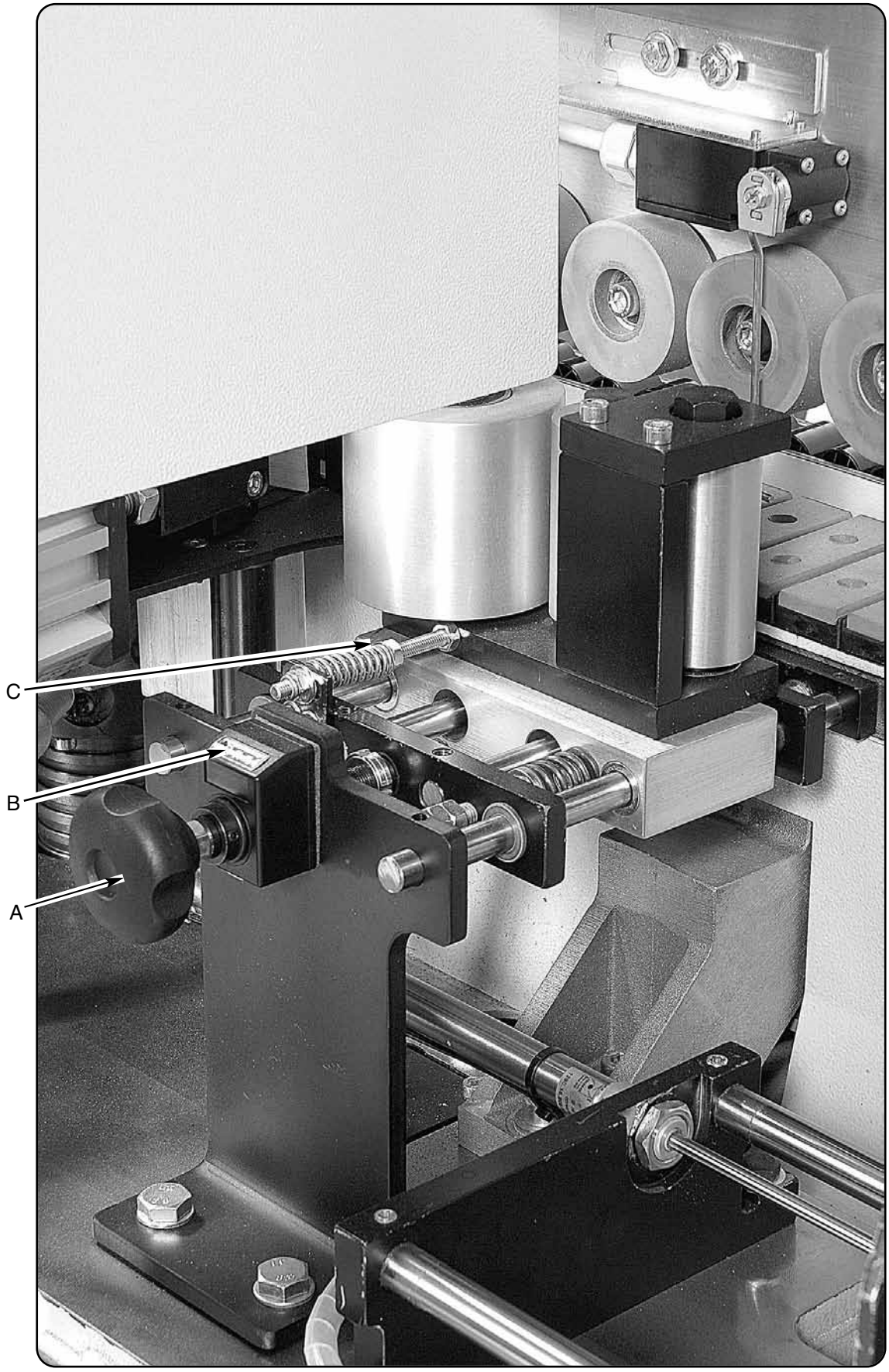

fig. 3.5.1

3.5 PRESSURE ROLLERS

Contents

3.5.A Function

The function of these 3 rollers is to assure and good edge gluing on the panel.
Their number, diameter and distance are calculated to obtain a sufficient cooling down of glue.
The rollers are made of metal and suitable to edge with very thin edges to avoid copying the roughness of the underneath panel.
The floating pressure rollers are used to facilitate the application of quite thick edges and tough (not very flexible) material.

3.5.B Position adjustment of rollers

The three rollers are mounted on a base that must be set depending on the thisckness of the edge.
Act on the knob A fig. 3.5.1 until the measure is reached on the numerical indicator B fig. 3.5.1.

3.5.C Pressure adjustment

The force of contrast (pressure) of the rollers is adjustable by acting on screw C fig. 3.5.1.
By tightening nut C fig. 3.5.1 the pressure decreases, by loosening it increases.

3.5.E Maintenance: cleaning, lubrication

It is advisable to clean machine periodically removing any glue residue. To clean only use wooden or plastic tools so that you do not damage the surface of the rollers. The bearings of the rollers are tin-plated and lubricated “for-life”.
Periodically clean with compressed air and lubricate the sliding bars and the push springs.

3.5.F Trouble shooting

INCONVENIENCES	POSSIBLE CAUSES	SOLUTIONS
Glue line not closed	Pressure of rollers not enough	Increase the pressure of rollers
	Position of rollers not correct	Adjust position of rollers as per edge thickness
In-feed edge damaged	Too much pressure on 1st roller	Decrease the pressure of 1st roller
	Position of rollers not correct	Adjust position of rollers as per edge thickness
No edge on the panel	Rollers adjusted for thin edges when edging thick edges	Adjust position of rollers as per edge thickness

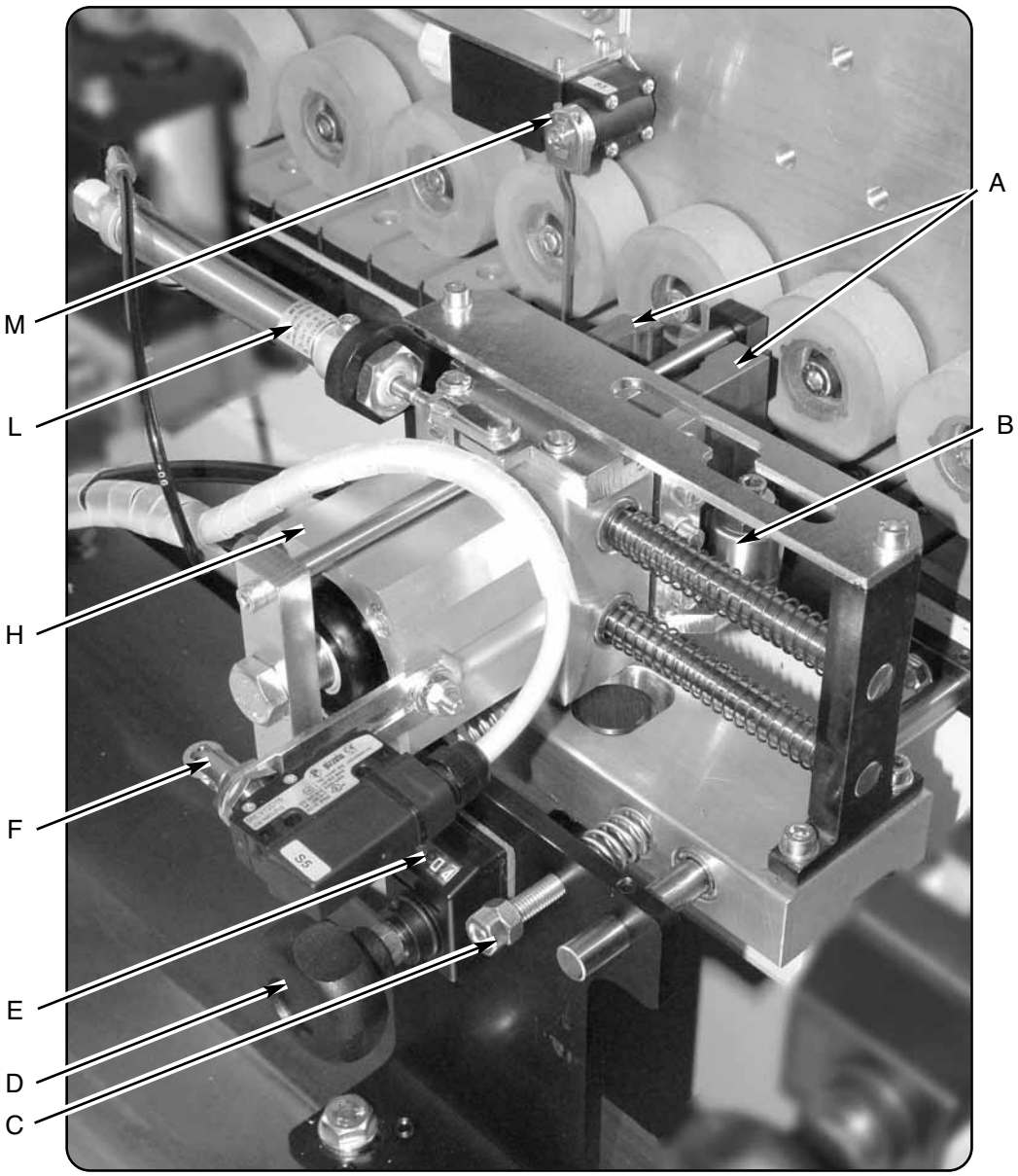

fig. 3.6.7

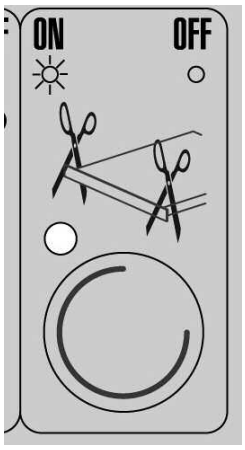

fig. 3.6.8

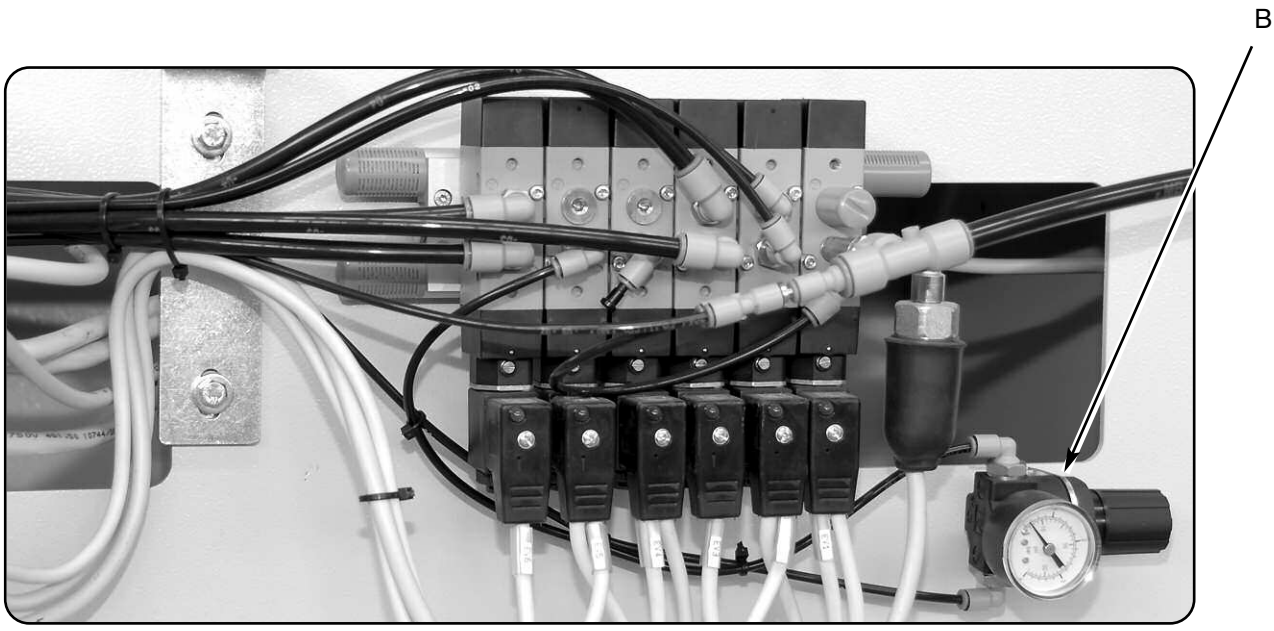

fig. 3.6.9

3.6 END TRIMMING UNIT WITH GUILLOTINE

Contents

3.6.A Technical characteristics

End trim clearance 45 mm - 1-3/4”

3.6.B Unit description

The end trim unit automatically trims front and rear ends of the edge.
The unit has a single carriage that moves in the same direction of the panel and carries the two rods where two cutters are mounted.
The two cutters, moved by the cylinder H fig. 3.6.7, slide between two counterknives A fig 3.6.7.
Since the two counterknives are mounted with a precise distance, the two cutters slide in with no resistance but with a perfect alignment.
The two cutters also copy the panel giving an exact trim during the cycle.
Two rollers (B fig. 3.6.7), before and after the two counterknives, are installed to trace the panel when it passes by.
The microswitch M fig 3.6.7 is moved by the panel and gives two signals to the PLC, when pressed and when released. This complete the cycle and the end trim is made.
The full cycle is managed by the PLC.
The microswitch F fig. 3.6.7 is only needed to confirm to PLC that the cutters moved all the way back.
The knob D fig. 3.6.7 adjusts the position of the unit. This position must be related to the edge thickness.
The read-out E fig. 3.6.7 must show the edge thickness to apply (red numbers are tenths of mm and blacks are mm).
The adjustment C fig. 3.6.7 can set the pressure of the unit when copying frontally.

3.6.C Function

The end trim unit functions when the main switch is positioned on ON, compressed air is activated and if the selector switch fig. 3.6.8 is on ON.

The end trimming unit works only when the track feed is on, button 6 fig. 3.1.1.
The unit remains with cutters in open position waiting for the panel to be end trimmed.
When the panel reaches the unit they move together and when the microswitch M fig. 3.6.8 is pressed, the unit closes the cutters and it trims off the front excess edge.
The unit keeps the cutters closed between the counterknife when the panel is passing by.
The cutters and counterknives are a little bit distant from the panel.
This distance is granted by the two tracing rollers before and after the two counterknives.
When the panel has passed by and the microswitch has been released, the unit opens the cutters and starts to follow the panel by the cylinder L fig. 3.6.8
The unit and the panel proceed together for a little while until the cutters close and the rear end trim is made.
The pressure regulator B fig. 3.6.9 adjusts the pressure against the panel during the rear end trimming (following).
The pressure regulator B fig. 3.6.9 can be reached by opening the rear hood 12 fig. 3.0.1.

It is advisable to intervene on the adjustment **only after any malfunction has been solved**.
Malfunction like: not lubricated unit, dirty saw blades, lack of compressed air, edge residues etc...

If the microswitch F fig. 3.6.7 is not pressed within a second after the microswitch M fig 3.6.7, the PLC will immediately stop the feeding system and will show a message: “EDGE TRIMMER EMERGENCY”.
Make sure everything is fine and nothing is impeding the movement of the cutters or if any other reason.
To reset the emergency message press OFF 5 fig 3.1.1 button for 10 sec.
If the problem occours again please contact your distributor for Technical Assistance.

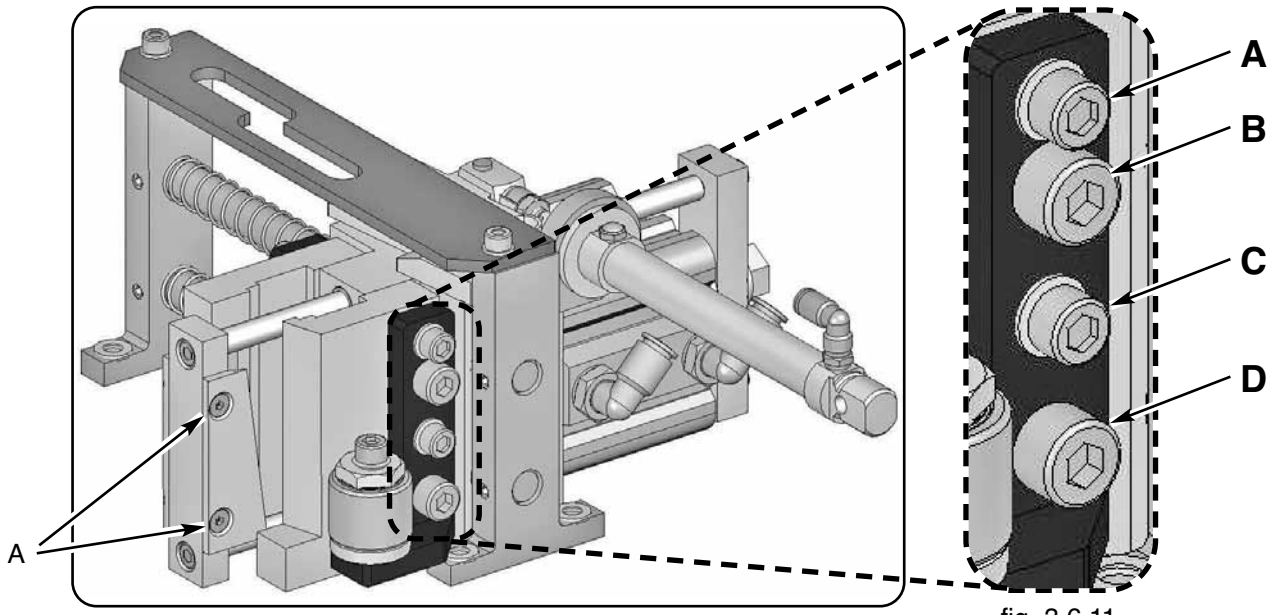

fig. 3.6.10

fig. 3.6.11

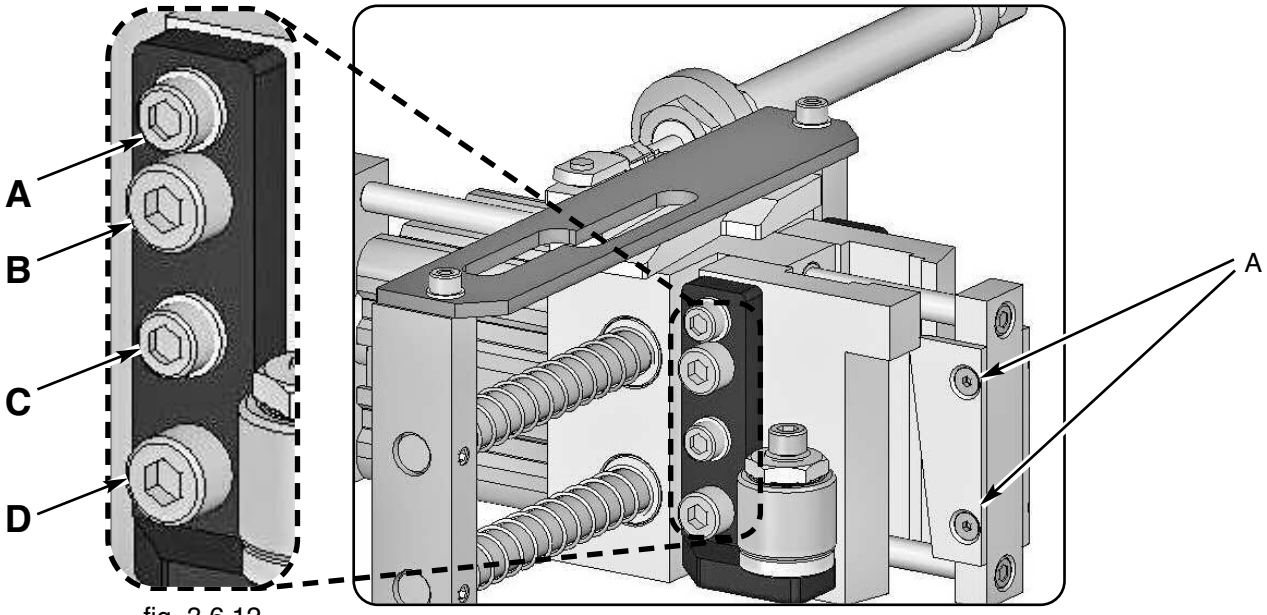

fig. 3.6.12

fig. 3.6.13

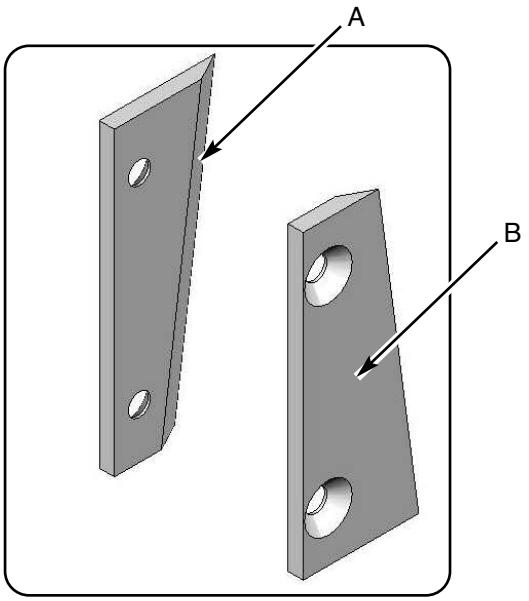

fig. 3.6.14

3.6.F Substitution and / or sharpening of knives

To substitute the blades it is necessary to position the main switch on OFF, disconnect the compressed air and open the rear door.
Before dismounting the knives mark them with paint to identify their position for a correct remounting procedure.
Use safety gloves, unscrew the screws A fig. 3.6.10 and 3.6.13. Take out the knife, sharpen or substitute it.
Always sharpen on the oblique side A fig. 3.6.14 of the knife.
NEVER SHARP ON THE STRAIGHT SIDE B FIG 3.6.14. If this happens the cutters must be requested as new.
When remounting please make sure that all parts are clean.

NEVER LOOSEN THE SCREWS A-B-C-D fig 3.6.11
NEVER LOOSEN THE SCREWS A-B-C-D fig 3.6.12

These parts of the unit are mounted and tested at the factory with special devices.
By dismounting the counterknives the machine will not work properly anymore.
If this happens then Drytac is not responsible for the bad results. Please ask to receive support or a complete new end trimming unit.

3.6.G Maintenance: cleaning, lubrication

Check constantly (even a few times per day) the end trim unit and take away any pieces of trimmed edges which could bother functions or movements.
Remove all glue residue from the knives and copying pads.
Spray products which melt the glue, i.e.: “WD 40” on the blade; in this manner the glue should come off the knives.
To clean the blades never use metal tools, such as screwdrivers or keys.

3.6.H Trouble shooting

INCONVENIENCES	POSSIBLE CAUSES	SOLUTIONS
Unit doesn’t work	Machine is not switched on	Position main switch on ON
	Not enough pressure	Check pressure compressed air
	Compressed air hose not adequate	Change with a bigger hose
	Button 3 fig. 3.6.1 on OFF	Position selector switch on ON
	Rear door open	Check closure of rear door
	Emergency push button inserted	Check and reset emergency push buttons
Unit doesn’t work and PLC emergency message	Stacked pieces of edge within cutters	Clean up the residues
	Microswith not working	Call Assistance
	Pneumatic is not working	Call Assistance
Cut not satisfactory	Sharpening not good enough	Sharpen/substitute blades
	Residue of glue on the blades	Clean blades

NOTE

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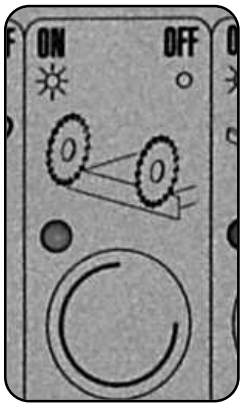

fig. 3.6.1

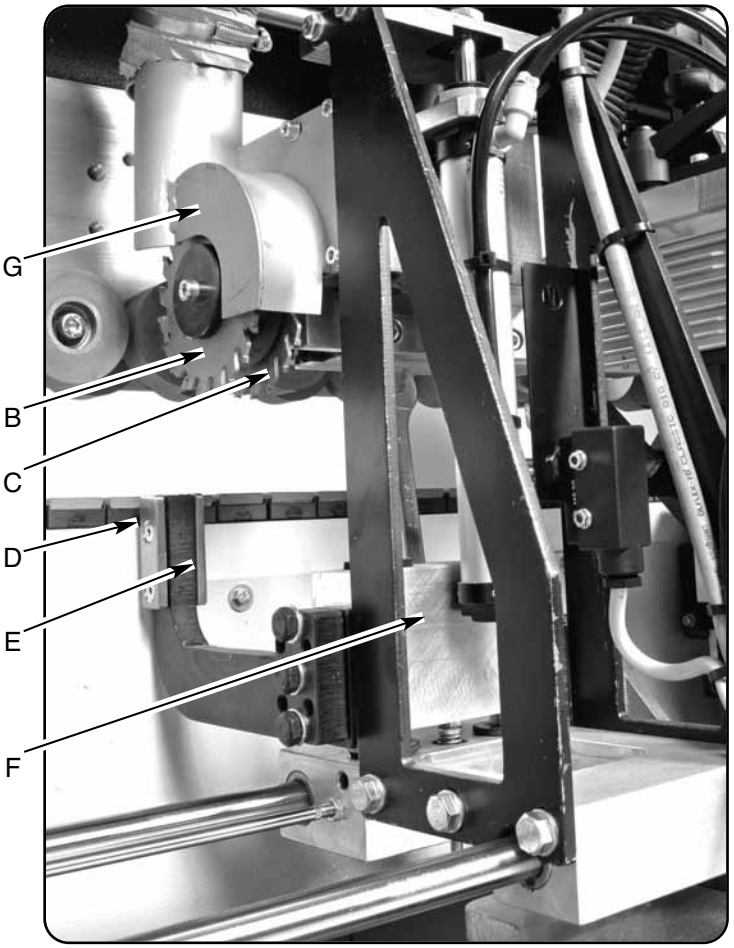

fig. 3.6.2

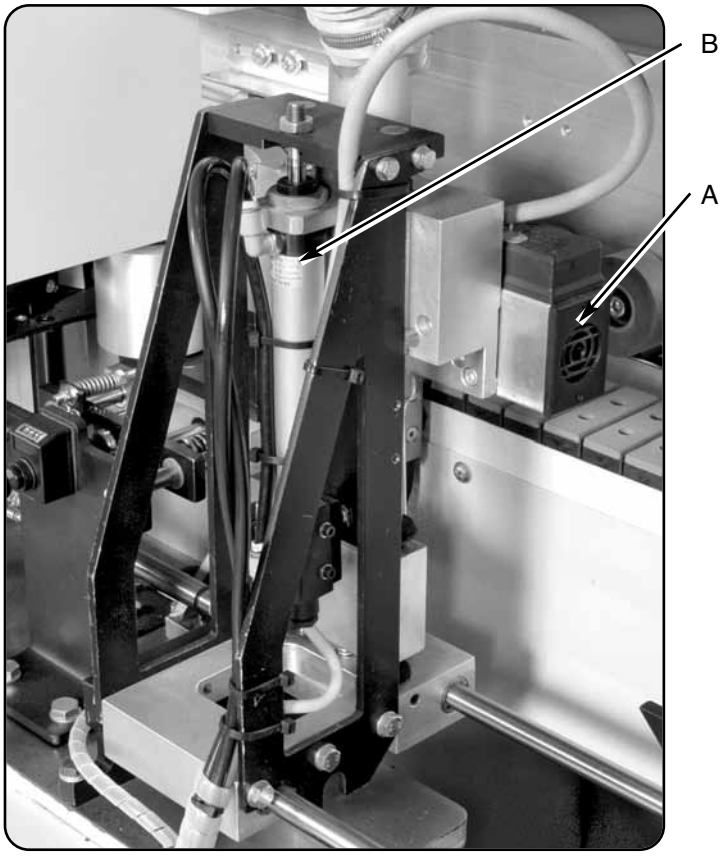

fig. 3.6.3

3.6 AUTOMATIC FRONT/REAR END TRIMMING WITH CIRCULAR SAW BLADE (OPT.)

Contents

3.6.A Technical characteristics

End trim motor	200 Hz. - 12'000 g/1' - 0,22 kW
Widia blades	Ø 100 mm Z=20 0°

3.6.B Unit description

The end trim unit automatically trims front and rear excess edge.
The unit is made of 1 High Frequency (HF) motor A fig. 3.6.3 with two blades Ø 100 mm B and C fig. 3.6.2.
The motor is installed on a support that slides on two vertical rods by the pneumatic cylinder B fig. 3.6.3.
On the same vertical rods there is a second support F fig. 3.6.2.
On this support are installed the copy pads D and E fig. 3.6.2.
After the end trim of the edge the support of the motor lowers completely, Consequently it also lowers the support of the copy pads. In this way the copy pads disappear so then the panel can proceed with feeding

3.6.C Function

The end trim unit functions when the main switch is positioned on ON, compressed air is activated and if the selector switch fig. 3.6.1 is on ON. Start up HF motors by pushing button 7 fig. 3.1.1.
The unit remains in upper position waiting for the panel to be edged.
When the panel reaches the unit they move together.
When the microswitch D fig. 3.5.1 is pressed the unit descends and it trims off the front excess edge.
The unit moves away from the panel, then the support of the motor continues to descend until it lowers also the support of the copy pads.
The unit moves back to the starting position waiting for the second part of the cycle.
When the microswitch is released the support of the motor raises, follows and reaches the panel.
The unit and the panel proceed together for a little while after that the unit descend trimming off the rear excess.
The lowering speed has been optimised in factory but if necessary can be changed by acting on the two adjustments B fig. 3.6.4
The pressure regulator A fig. 3.6.4 adjusts the counterpressure against the panel during the front end trimming.
It is advisable to intervene on the adjustment **only after any malfunction has been solved**.
Malfunction like: not lubricated unit, dirty saw blades, lack of compressed air, edge residues etc...

3.6.D Copying pads adjustment

The support of the copy pads has two stainless steel plates D e E fig. 3.6.2.
The two plates D e E fig. 3.6.2 are fixed with two conic screws and are laying on spring loaded washers.
By screwing the two screws the saw blade trims more, by unscrewing the saw blade trims less.
It is advisable to adjust the screws with the same numbers of turns to avoid misalignment.

3.6.F Substitution and / or sharpening of knives

To substitute the blades it is necessary to position the main switch on OFF, disconnect the compressed air and open the rear door.
Take off the collecting hood G fig. 3.6.2.
Use safety gloves, lock in position the motor spindle with a 21 mm key, loosen with a 10 mm open key the fixing screw (LEFT) of the blades (fig. 3.6.5). Take out the blades, sharpen or substitute them.
Replace the sharpened or new blades on the motor spindle following the sequences in fig. 3.6.6.
Attention: the screw which fixes the front cutting blades is LEFT HANDED.
Attention: please follow the scheme fig. 3.6.6 to remount the saw blades.
Attention: after remounting the collection hood verify that the saw blades can turn freely.

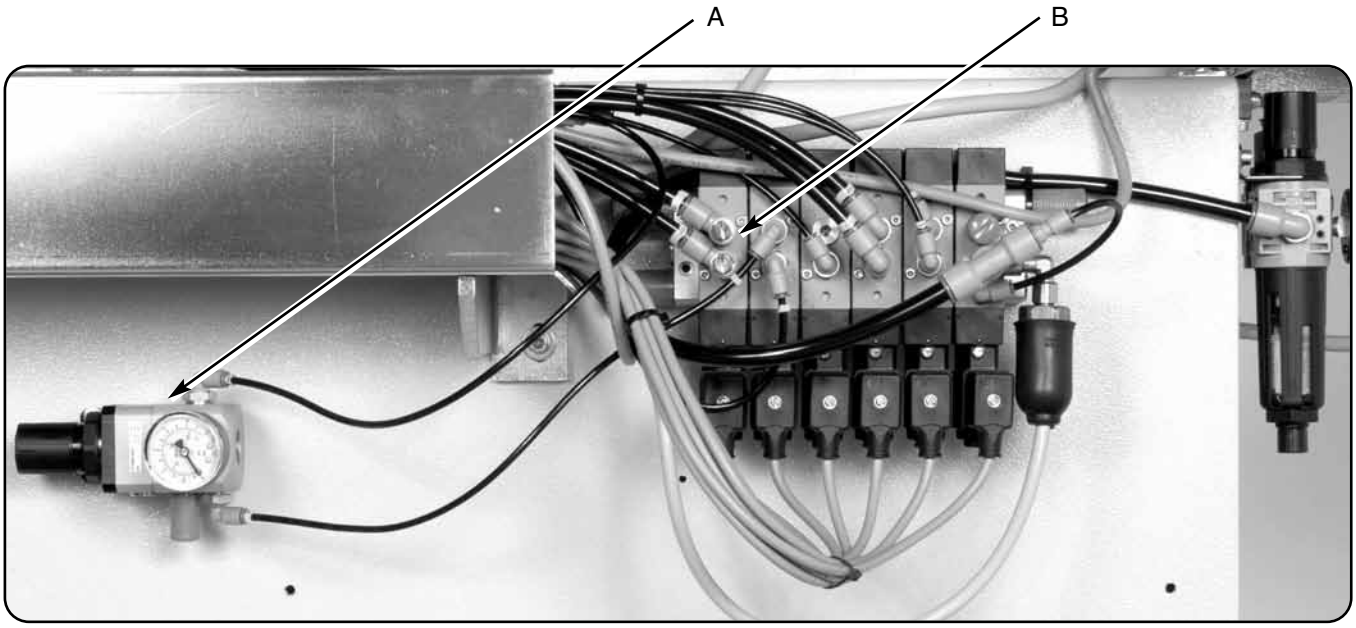

fig. 3.6.4

fig. 3.6.5

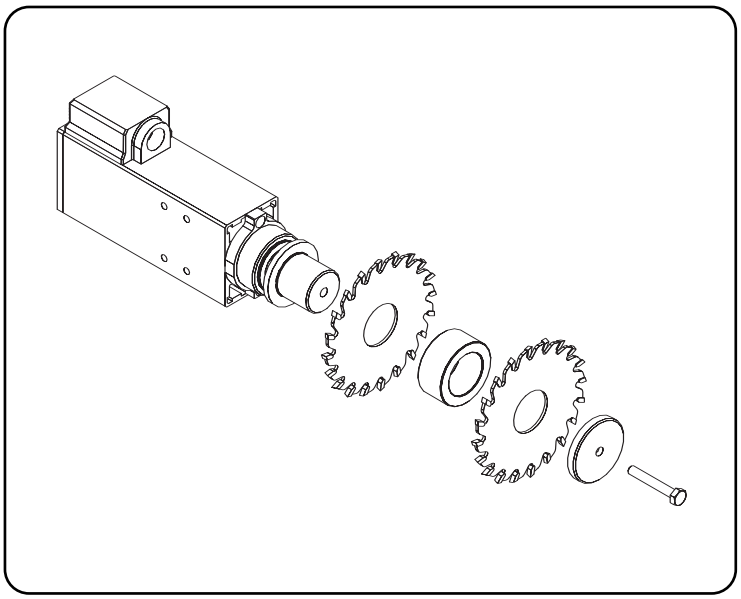

fig. 3.6.6

When remounting please make sure that all parts are clean.

3.6.G Maintenance: cleaning, lubrication

Check constantly (even a few times per day) the end trim unit and take away any pieces of trimmed edges which could bother functions or movements.
Remove all glue residue from the blades and copying pads.
Spray products which melt the glue, i.e.: “WD 40” or “CRC” on the blade, wait 5 to 10 minutes and then action the end trim motor; in this manner the glue should come off the knives.
To clean the blades never use metal tools, such as screwdrivers or keys.

3.6.H Trouble shooting

INCONVENIENCES	POSSIBLE CAUSES	SOLUTIONS
Motor does not turn	Machine is not switched on	Position main switch on ON
	Not enough pressure	Check pressure compressed air
	Compressed air hose not adequate	Change with a bigger hose
	Rear door open	Check closure of rear door
	Emergency push button inserted	Check and reset emergency push buttons
Motor turns but end trim unit does not complete cycle	Button 3 fig. 3.6.1 on OFF	Position selector switch on ON
Cut not satisfactory	Sharpening not good enough	Sharpen/substitute blades
	Residue of glue on the blades	Clean blades

NOTE

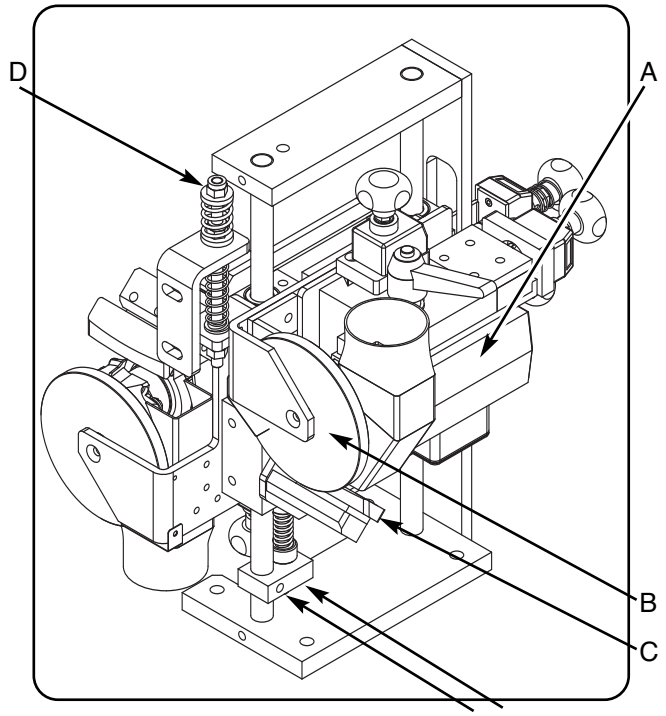

fig. 3.7.1

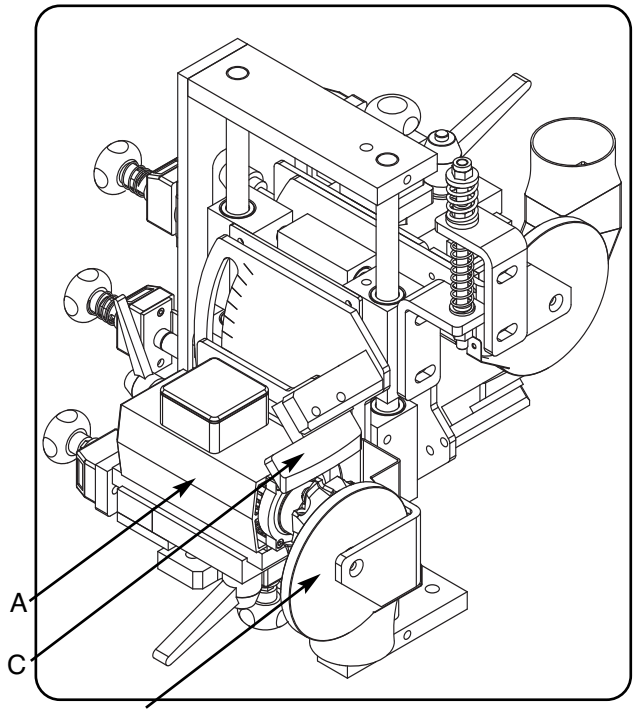

fig. 3.7.2

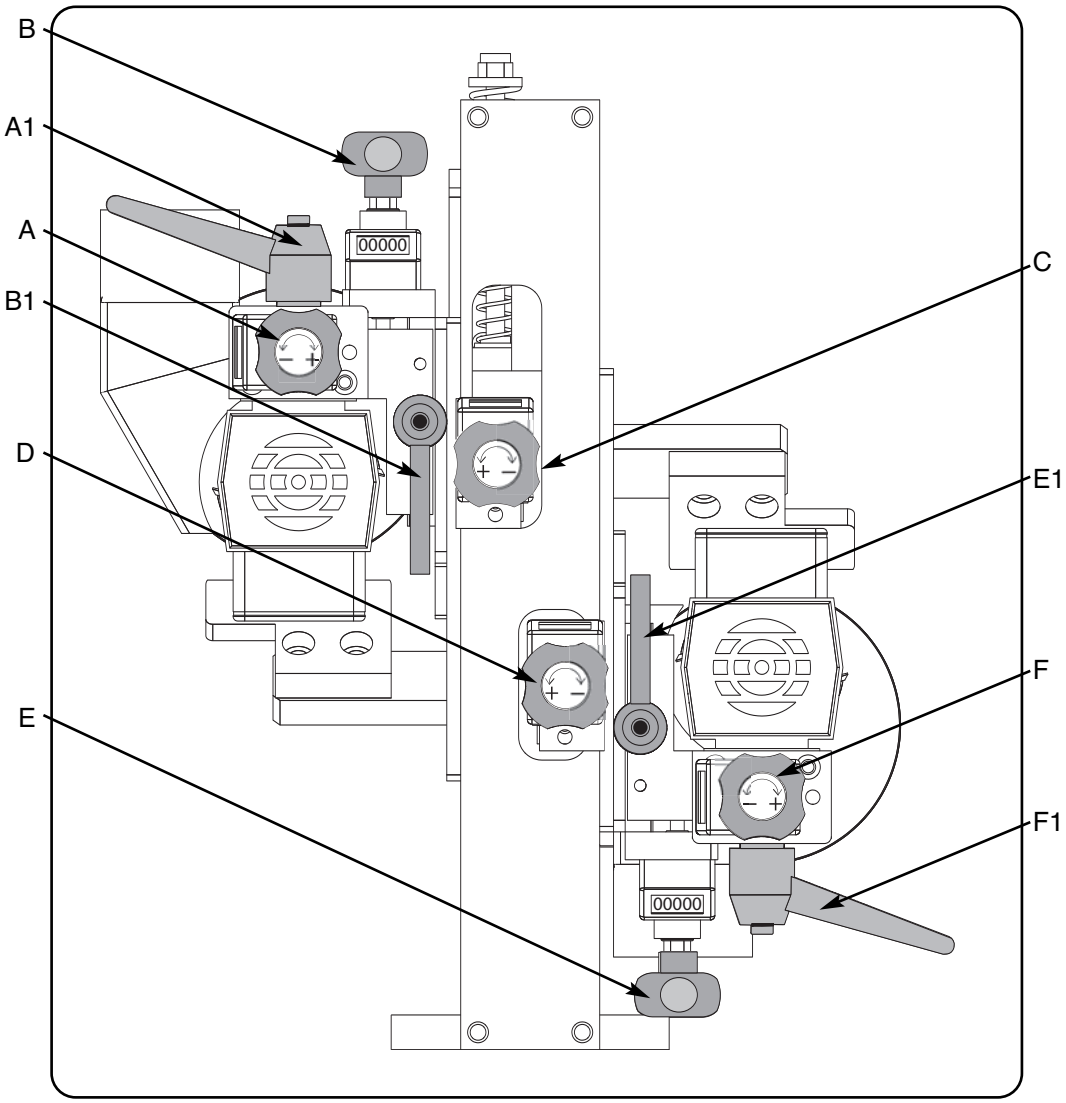

fig. 3.7.3

3.7 FLUSH TRIMMING UNIT

Contents

3.7.A Technical characteristics

Motor power

Following scale is to be respected when choosing cutters:

- Diameter allowed max 75 mm
- Spindle diameter 16 mm with key
- Maximum width of the milling cutter 20 mm
- Maximum weight for each cutter 250 gr
- Maximum number of 15000 RPM

3.7.B Description of the unit

The unit is made up of

fig. 3.7.1

A - Top flush trim motor
B - vertical copying roller of top flush trim
C - frontal copying pad of top flush trim

fig. 3.7.2

A - lower flush trim motor
B - vertical copying roller of bottom flush trim
C - frontal copying pad of bottom flush trim

fig. 3.7.3

B - top copying roller adjustment
B1- top copying roller locking adjustment
A - frontal adjustment top flush trim
A1- frontal locking adjustment top flush trim
C - position adjustment top flush trim in regards to edge thickness

E - bottom copying roller adjustment
E1- bottom copying roller locking adjustment
F - frontal adjustment bottom flush trim
F1 - frontal adjustment locking bottom flush trim
D - position adjustment bottom flush trim in regards to edge thickness

3.7.C Function

The motors of the flush trimming unit start when the button 7 fig. 3.1.1 is depressed.
The flush trim unit has the function flush trim the top and bottom excess edge. During edging the panel reaches the flush trim unit and is then copied by the copiers. Depending on types of cutters, copying rollers adjustments and tilt of motor, it is possible to obtain different cutting profiles (radius, bevelled or straight).
The standard equipment foresees 2 cutters, top and bottom (DX & SX), with R=3 mm and bevelled at 3°.

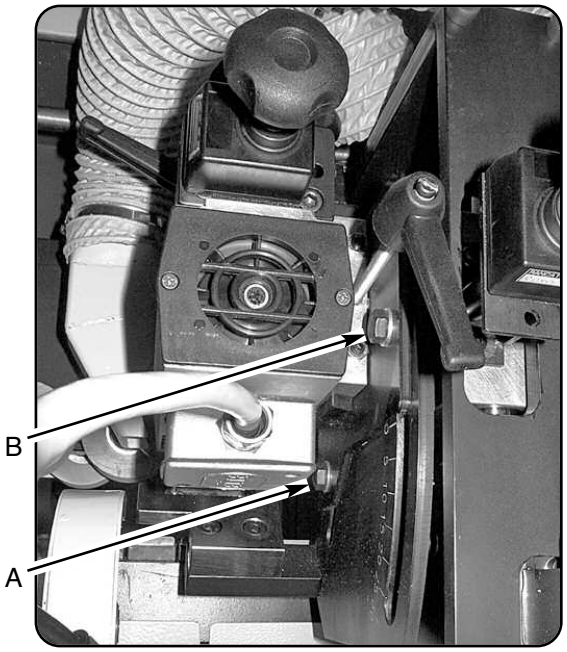

fig. 3.7.4

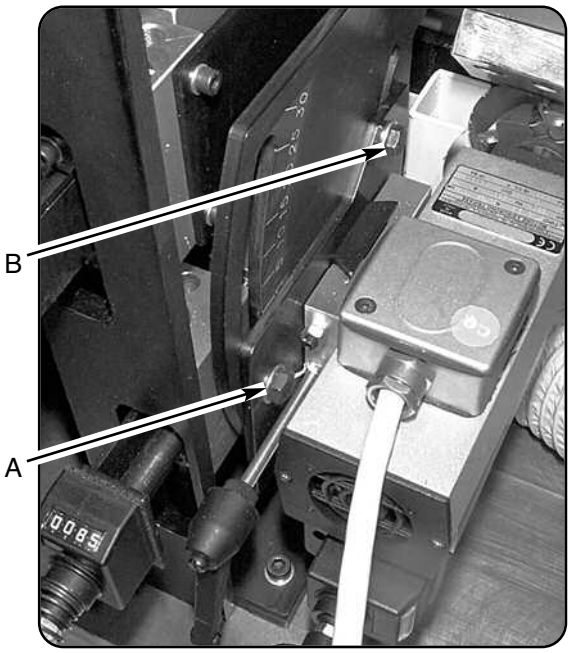

fig. 3.7.5

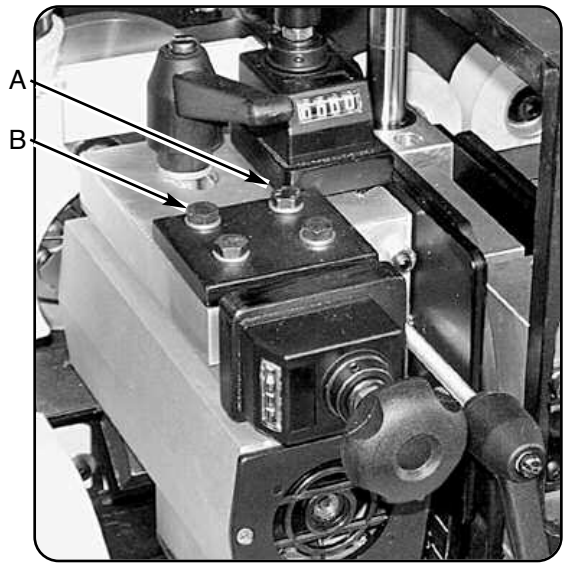

fig. 3.7.6

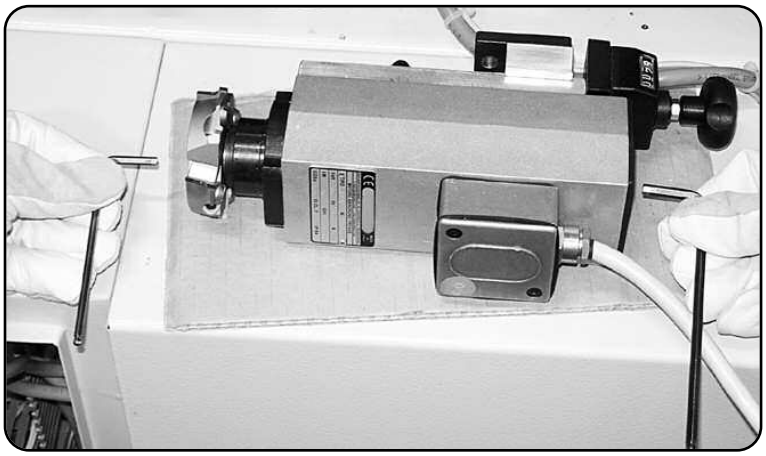

fig. 3.7.7

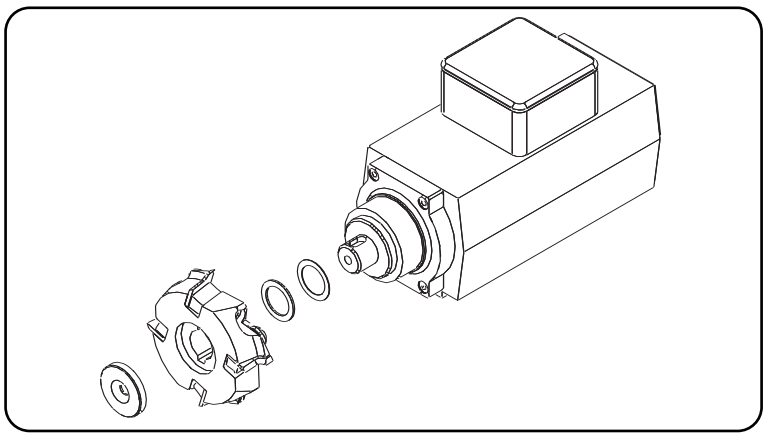

fig. 3.7.8

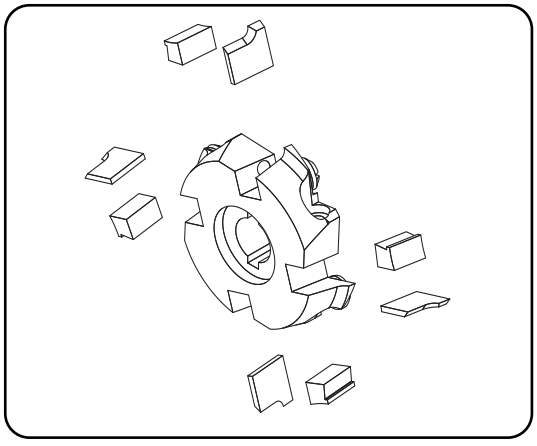

fig. 3.7.9

The flush trimmers are equipped with dust extraction hoods ø 60 mm, connected to the centralized dust collector A fig. 2.6.1.
The maximum edge to be cut off is 2 mm per side.
The cutters turn in opposite direction to the panel feeding.
The high frequency motors of the flush trim unit start up by pushing switch 7 fig. 3.1.1.

3.7.D Copying roller adjustments

Top flush trimmer

To adjust the vertical copying roller B fig. 3.7.1 in regards to the cutter, loosen the jacquard handle B1 and act on knob B fig. 3.7.3 to adjust. Once adjusted tighten the knob B1 fig. 3.7.3.

To adjust the position of the cutter in regards to the copier C fig. 3.7.1, loosen the jacquard handle A1 fig. 3.7.3, act on knob A fig. 3.7.3 to adjust. Once adjusted tighten the knob A1 fig. 3.7.3.

To position the flush trim in regards to the edge thickness, act on knob C and set on visualizer the edge thickness measurement.

To increase the pushing pressure of the vertical copying roller B fig. 3.7.1 it is sufficient enough to loosen nut D fig. 3.7.1, to decrease the pressure tighten nut D fig. 3.7.1.

Bottom flush trimmer

To adjust the vertical copying roller B fig. 3.7.2 in regards to the cutter, loosen the jacquard handle E1 and act on knob E fig. 3.7.3 to adjust. Once adjusted tighten the knob E1 fig. 3.7.3.

To adjust the position of the cutter in regards to the copier C fig. 3.7.2, loosen the jacquard handle F1 fig. 3.7.3, act on knob F fig. 3.7.3 to adjust. Once adjusted tighten the knob F1 fig. 3.7.3.

To position the flush trim in regards to the edge thickness, act on knob D and set on visualizer the edge thickness measurement.

To increase the pushing pressure of the vertical copying roller B fig. 3.7.2 it is sufficient enough to loosen nut E fig. 3.7.1 and lift up the plate F fig. 3.7.1, to decrease the pressure lower the plate F fig. 3.7.1 and tighten the nut.

3.7.E Flush trimming tilting adjustment

Top flush trim

To adjust the flush trim tilting slightly loosen the screws A and B fig. 3.7.4, tilt the motor to desired position and lock into position by tightening screws A and B fig. 3.7.4.
Adjust the copiers for a new working cycle.

Bottom flush trim

To adjust the flush trim tilting slightly loosen the screws A and B fig. 3.7.5, tilt the motor to desired position and lock into position by tightening screws A and B fig. 3.7.5.
Adjust the copiers for a new working cycle.

3.7.F Substitution and / or sharpening of knives

To substitute the whole cutter or knives it is necessary:

Top and bottom flush trimmers

- completely unscrew the jacquard handle A1 for the top trimmer and the jacquard handle F1 for the bottom trimmer fig. 3.7.3
- unscrew the due screws A and B fig. 3.7.6 for the top trimmer and the relative ones for the bottom trimmer which are not visible in the picture.
- pull out the motor pulling it backwards and lay it on the working table.
- to substitute the whole cutter loosen the fixing screw as indicated in fig. 3.7.7 with the Alan key supplied with standard equipment

- to remount please follow carefully mounting sequence fig. 3.7.8
- to substitute the knives use the key supplied with standard equipment and substitute the knives as indicated in fig. 3.7.9.
Mount back the motor fig. 3.7.7 keeping the motor pushed forward , then tight the screws A - B fig. 3.7.6

3.7.G Maintenance: cleaning, lubrication

Check constantly (even a few times per day) the flush trimming unit and take away any pieces of trimmed edges which could bother functions or movements
Remove all glue residue from the blades and copying pads
Spray products which melt the glue, i.e.: “WD 40” or “CRC” on the cutterheads, wait 5 to 10 minutes and then action the end trim motor; in this manner the glue should come off the knives.
To clean the cutterheads never use metal tools, such as screwdrivers or keys
Always check that the dust extraction tube is always clean.
Clean with compressed air and lubricate the sliding fences of the unit.

3.7.H Trouble shooting.

INCONVENIENCES	POSSIBLE CAUSES	SOLUTIONS
Motors do not turn	Machine not turned on	Position main switch on ON
	Not enough pressure	Check pressure compressed air
	Compressed air hose not adequate	Change with a bigger hose
	Rear door open	Check closure of rear door
	Emergency push button inserted	Check and reset emergency push buttons
Flush trim not satisfactory	Sharpening not good enough	Sharpen or substitute knives
	Glue residue on knives	Clean the knives
	Knives not mounted correctly	Check and remount them correctly
	Cutters not balanced	Check installation, balance them properly, they vibrate
	Dirty copiers	Adjust the scraping-copiers
	Not enough vertical pressure	Adjust vertical pressure
	Damaged panel	Adjust the vertical copying
	Damaged edge	Adjust the flush trimmers in regards to edge thickness.

NOTE

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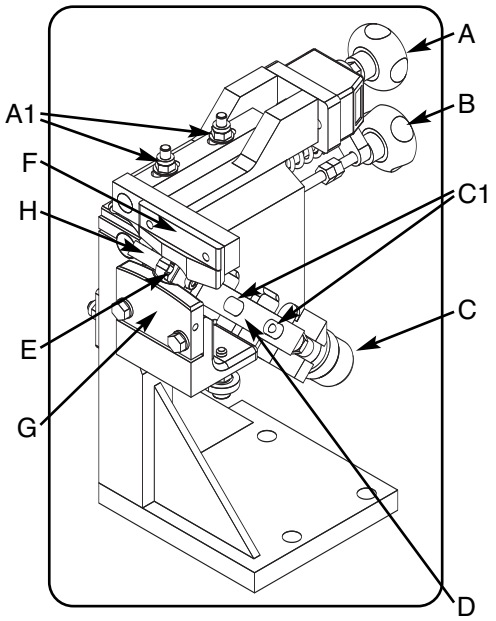

fig. 3.8.1

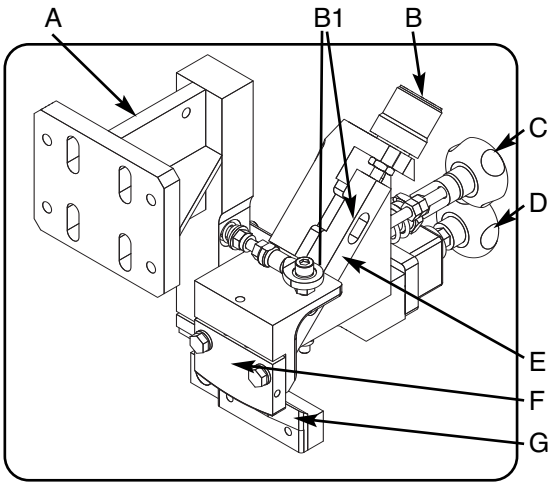

fig. 3.8.2

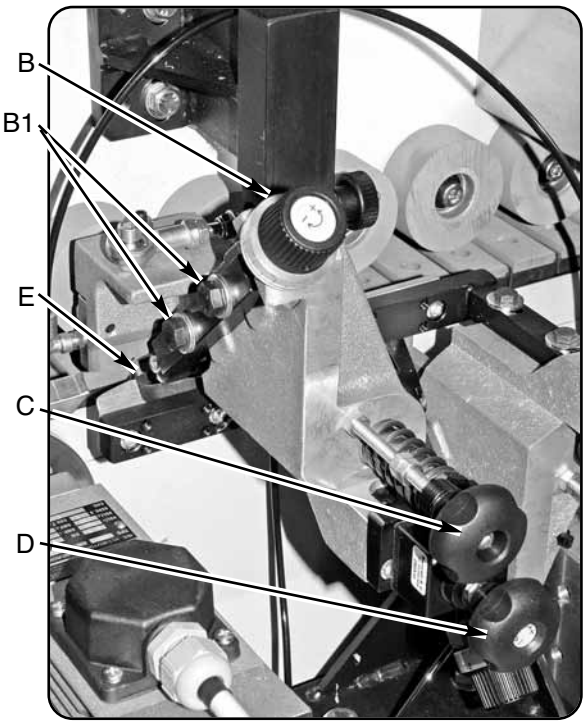

fig. 3.8.3

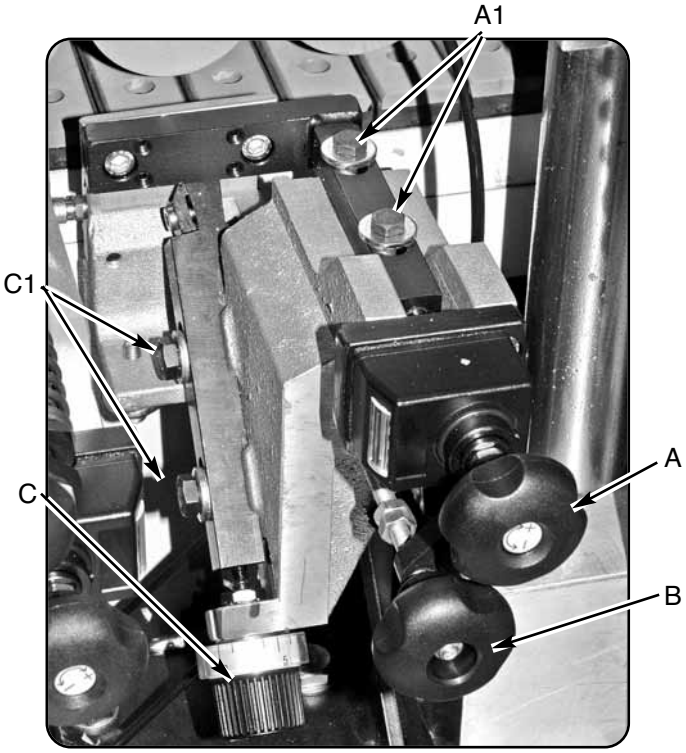

fig. 3.8.4

3.8 SCRAPERS FOR METHACRYLATE

Contents

3.8.A Description of unit

Bottom scraper fig. 3.8.1

A Copying pad adjustment F
A1 Locking of copier adjustment
B Knob to exclude scraper
C Scraper knife depth adjustment
D Knife holder
E Knife
F Vertical copier
G Side copier
H Chip breaker spring

Top scraper fig. 3.8.2

A Fixing bracket on pressure bar
B Knife depth adjustment
B1 Locking of knife depth adjustment
C Knob to exclude scraper
D Copying pad adjustment G
D1 Locking of pad adjustment (non visible in picture)
E Knife holder
F Vertical copier
G Side copier

3.8.B Function

The edge scraping unit allows to take off a thin layer of edge, rectifying the profile made by the flush trim cutters.
When the panel feeds through and reaches the scraping unit it is copied by the feelers (copiers).
The scraping unit slides and rotates on a pin; these movements can be frictioned and adjusted (by screwing nut C fig. 3.8.3 push increases, by unscrewing it decreases).
Depending upon knives and the copying adjustments it is possible to obtain different scraping profiles (radius 2 or 3 mm).

To exclude the top and bottom scraper act on knobs A and B fig. 3.8.7. In fig. 3.8.7 the scrapers are working, in fig. 3.8.8 the scrapers are escluded.

When finished scraping, the chip breaker spring A fig. 3.8.6 cuts off the chip to avoid that it is captured by the brushes.
The top scraping unit being fixed to the pressure bar is adjusted automatically when the panel thickness to be edged varies.

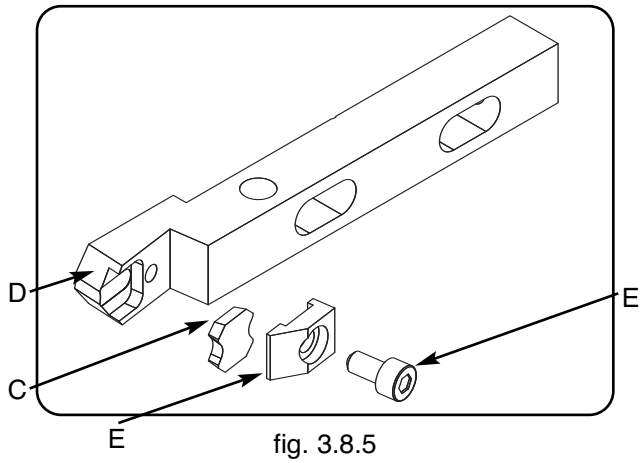

fig. 3.8.5

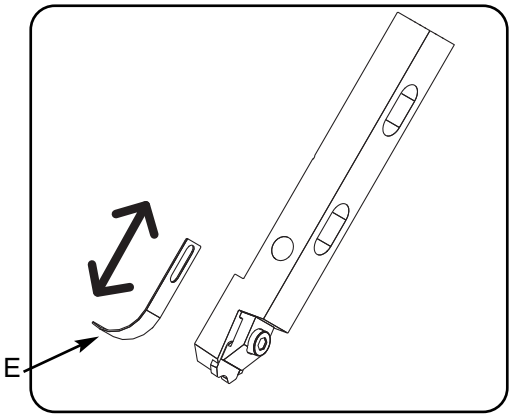

fig. 3.8.6

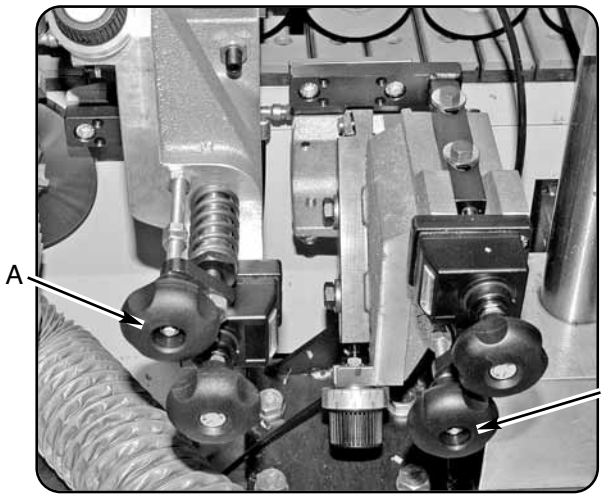

fig. 3.8.7

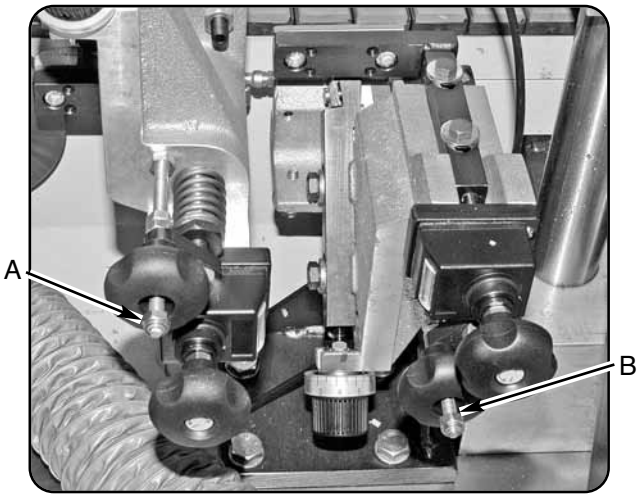

fig. 3.8.8

3.8.C ADJUSTMENT OF COPIERS

Top scraper

The vertical copier F fig. 3.8.2 is adjusted at factory and does not need adjustments.
The side copier G fig. 3.8.2 can be adjusted by knob A fig. 3.8.4 by loosening fixing screws A1 fig. 3.8.4.

Bottom scraper

The vertical copier G fig. 3.8.1 is adjusted at factory and does not need adjustments.
The side copier F fig. 3.8.1 can be adjusted by knob D fig. 3.8.3 by loosening the fixing screws D1.

3.8.D Substitution and / or sharpening of knives

To substitute the scraping knives, remove the locks B1 fig. 3.8.3 per the top scraper and the locks C1 fig. 3.8.4 for the bottom scraper.
Dismount the scraper knife by loosening screw D fig. 3.8.5. To remount the scraper knife follow the mounting sequence in fig. 3.8.5 keeping the knife pushed into place.

3.8.E Maintenance: cleaning, lubrication

Check constantly (even a few times per day) the scraping unit and take away any pieces of chips which could bother functions or movements
Remove all glue residue from knives and copiers using spray products which melt the glue, i.e.: “WD 40” or “CRC”.
To clean the knifes never use metal tools, such as screwdrivers or keys.
Check that the blowers of the chip exhaust are always efficient.
Clean with compressed air and lubricate the sliding fences of the unit.

3.8.F Trouble shooting

INCONVENIENCES	POSSIBLE CAUSES	SOLUTIONS
Edge not scraped properly	Dirty copiers	Clean copiers
	Knives not sharp enough	Substitute / sharpen knives
	Excess cut-off	Adjust excess cut-off
Chip is not cut-off	Chip breaker spring does not function	Adjust chip breaker cut-off
	The blowers do not function	Check compressed air tubes of blowers.

NOTE

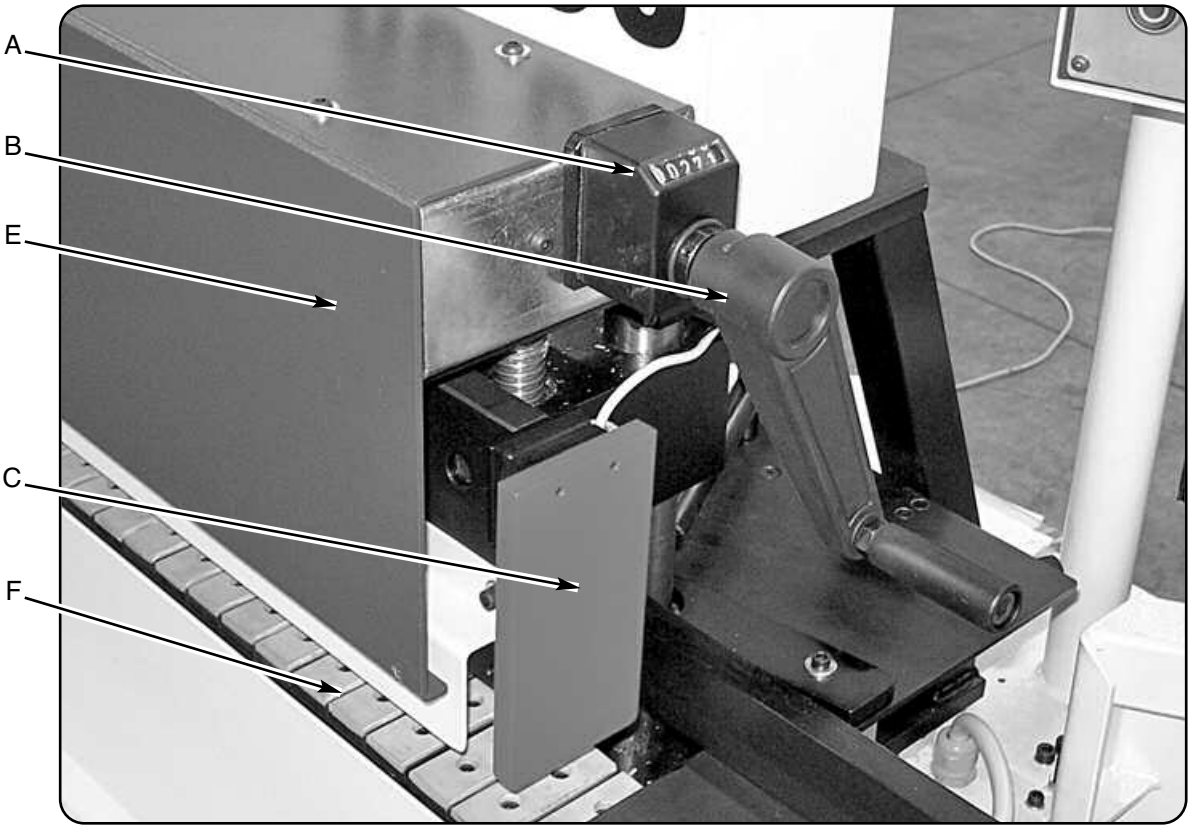

fig. 3.10.1

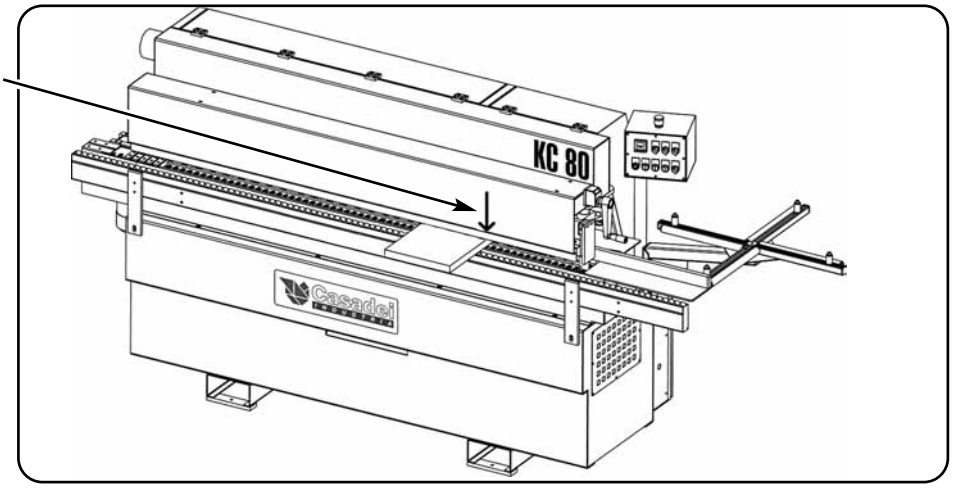

fig. 3.10.2

3.10 CHAIN FEEDING SYSTEM

3.10.A Description of unit
3.10.B Function
3.10.C Adjustment
3.10.D Maintenance: cleaning, lubrication

3.10.A Description of unit

The chain feeding unit is made up of:

A	Numerical indicator for panel height	B	Wheel handle to adjust panel height
C	Panel passage filter with emergency micro switch	F	Rubber insert
E	protection closure		

3.10.B Function

The feeding system of panel to be edged is made up by a chain with rubber inserts and a top adjustable pressure bar, equipped with a double line of rubber rollers.
The glue spreading roller, the small edge feeding roller and the pressure roller are powered by chain feeder, therefore the rotation of the rollers function only when the temperature of the glue pot is over 190°C and the button 6 fig. 3.1.1 has been pushed to start up chain feeder.
The rising system is made up by two worm screws, and sliding is effected by two rectified columns.
The feeding speed is 9 mt/1' and allows a good productivity and perfect gluing.

When the panel which is being edged passes the arrow A fig. 3.10.02 on the protection guard of the pressure bar, then the next panel to be worked can be put through.

If this measurement is not respected the working cycle is altered and the panels damaged!!

If this should occur it is necessary:
- immediately stop the machine with emergency push button N fig. 3.1.1
- lift the pressure bar with wheel handle B fig. 3.10.1
- take out the panel
- RESET the machine positioning the main switch A fig. 2.4.1 on OFF and then straight away on ON.

3.10.C Adjustment

Adjust the height of the pressure bar in regards to the panel thickness to be edged with the wheel handle B fig. 3.10.1 and read measurement on the numerical indicator A fig. 3.10.1.
Always adjust the height "upwards" to recuperate play.
The plastic plate C fig. 3.10.1 functions as a "thickness limit" of the panels to be edged.
If by mistake a panel of higher thickness is fed through the plate C activates an emergency micro switch which stops the panel feeding. To get the feeding working again just press the button of the panel feeding.
When varying the panel thickness height by moving the pressure bar, also the flush trim, scraper and top buffing unit are adjusted.

3.10.D Maintenance: cleaning, lubrication

Periodically clean the rollers and rubber inserts with compressed air, to avoid that any working residues or saw dust reduces the friction necessary for good panel through feed.
In case the surface of the rubber inserts and rollers no longer have a good adherence it is possible to use a solvent to clean them. Before doing so, put on protective gloves, wet a cloth with the solvent and one by one clean the rollers and rubber inserts.
To clean the rollers it is necessary to stop all machine functions, whilst for the rubber inserts, lift up to 45 mm the pressure bar, clean the inserts with feeding stopped, forward the inserts with button 6 fig. 3.1.1, stop the chain and then continue to clean.

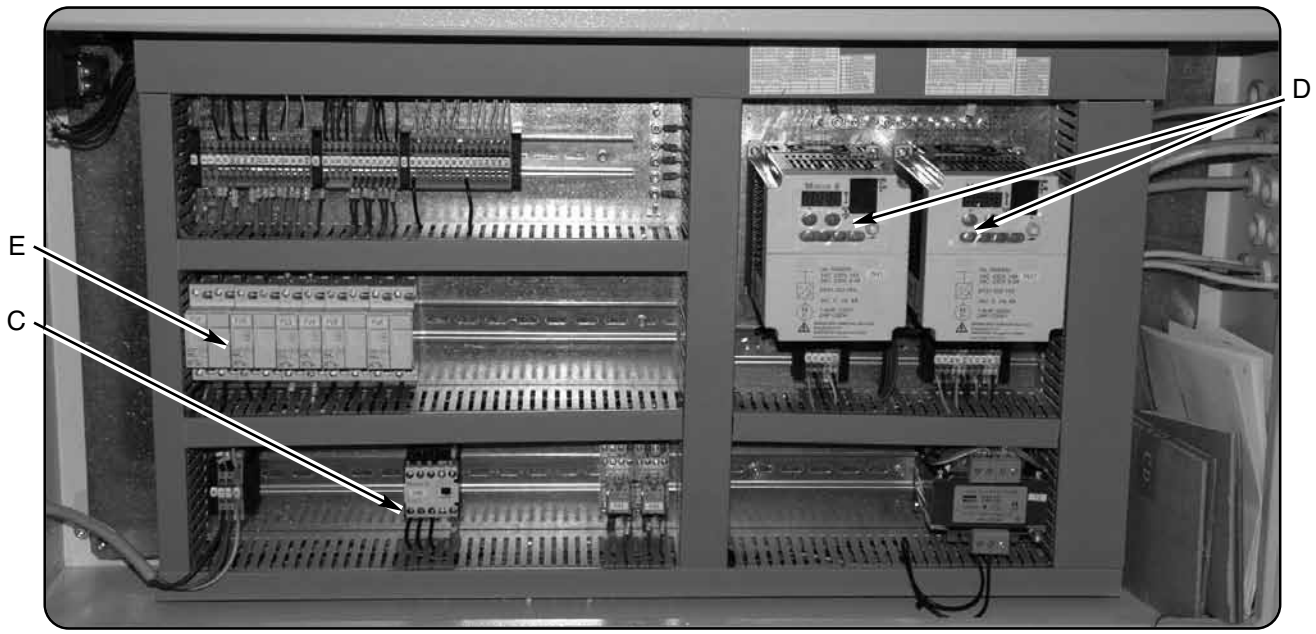

fig. 3.11.1 - 220 single phase

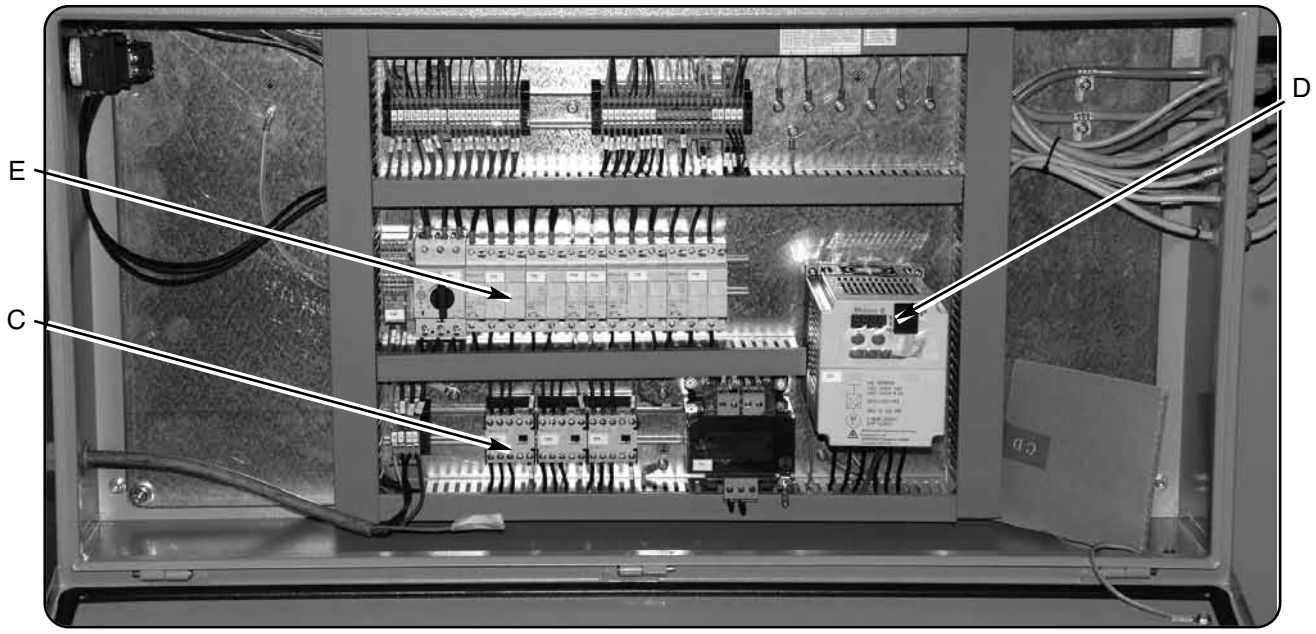

fig. 3.11.1 - 220 - 400 threephase

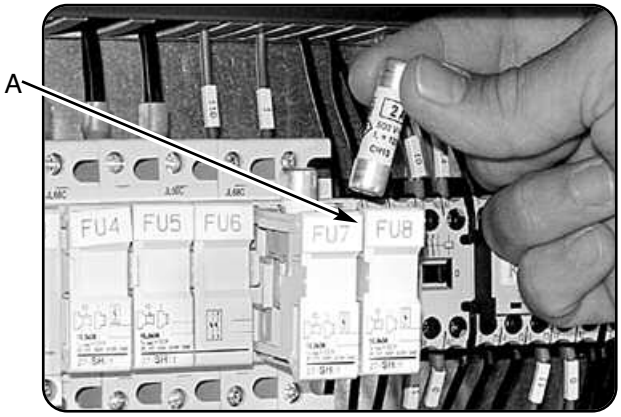

fig. 3.11.3

3.11 ELECTRICAL BOX

To reach the electrical panel it is necessary to open the door 11 fig. 3.11.1 with the key supplied with standard equipment.

Description of components:

C Overload protection

D Inverter for HF motors (High Frequency) Moeller instruction manual

E Fuses

Any operations, maintenance or adjustments must be done only with machine turned off, main switch on O (zero), padlocked; compressed air disconnected and make sure that the maintenance or adjustments are done only by qualified persons.

To substitute fuses proceed as follows:

- cut off main electric supply
- position main switch on O/OFF and padlock it;
- disconnect the compressed air tube;
- open the boxes A fig. 3.11.3;
- substitute the burnt fuses, and replace all into position following instructions backwards.

Anyhow if you should have to change often the fuses it is necessary to ask for assistance by a specialized electrician to eliminate problem.

N.B.: The access to the electrical box is not foreseen for other operations, other than exceptional maintenance, for which a specialized electrician or authorized manufacturer technician is necessary.

NOTE

CHAP. 4 PNEUMATIC DIAGRAM
CHAP 4 SCHEMAS PNEUMATIQUES
CAP 4 SCHEMI PNEUMATICI
CAP. 4 ESQUEMAS PNEUMATICOS
TEIL 4 PNEUMATIKE SCHEMEN

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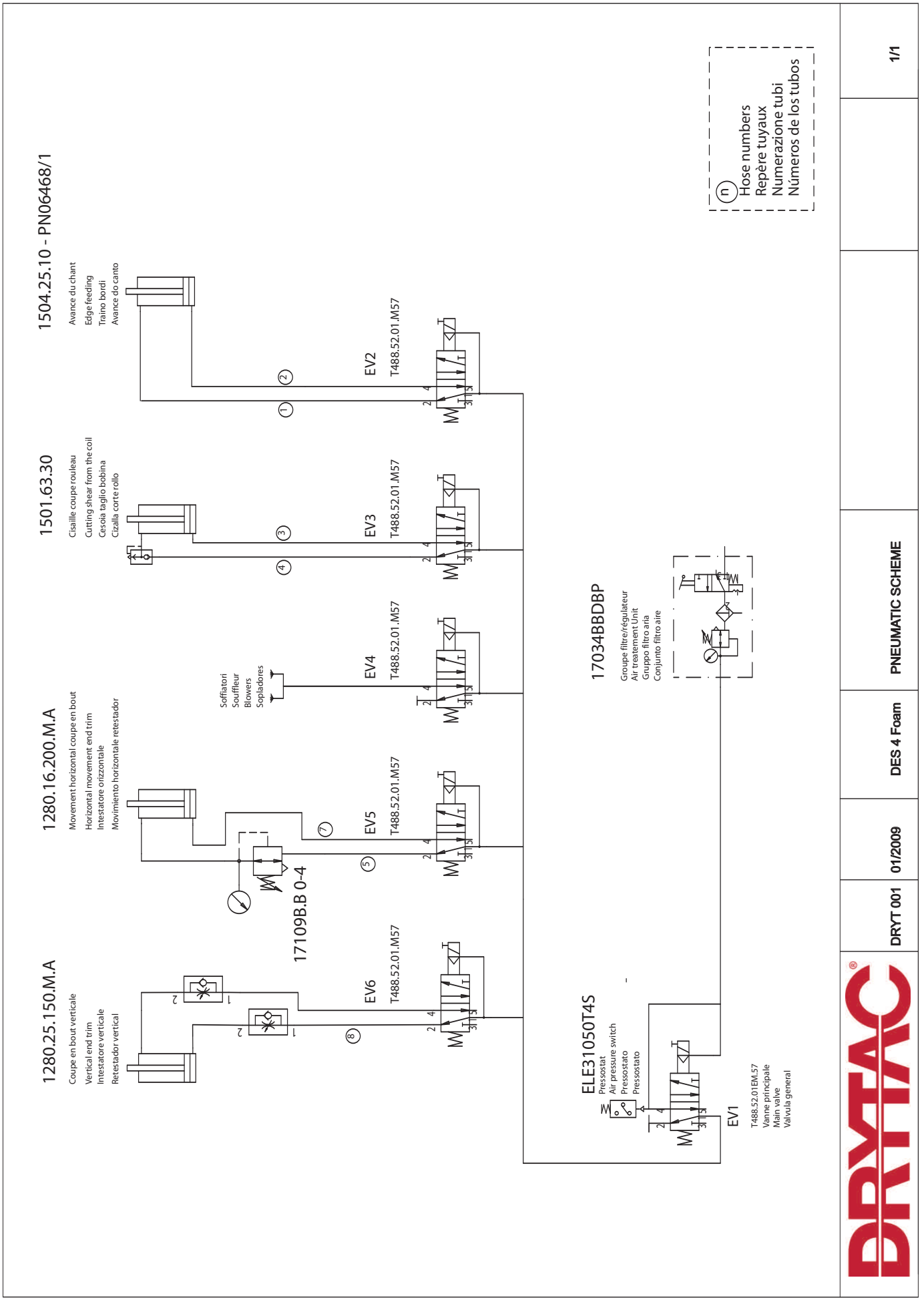
1504.25.10 - PN06468/1
Avance du chant
Edge feeding
Traino bordi
Avance do canto
1501.63.30
Cisaille coupe rouleau
Cutting shear from the coil
Cesoia taglio bobina
Cizalla corte rollo
1280.16.200.M.A
Movement horizontal coupe en bout
Horizontal movement end trim
Intestatore orizzontale
Movimiento horizontale retestador
1280.25.150.M.A
Coupe en bout verticale
Vertical end trim
Intestatore verticale
Retestador vertical
17109B.B 0-4
Soffiatori
Souffleur
Blowers
Sopladores
EV1
T488.52.01EM.57
Vanne principale
Main valve
Valvula general
EV2
T488.52.01.M57
EV3
T488.52.01.M57
EV4
T488.52.01.M57
EV5
T488.52.01.M57
EV6
T488.52.01.M57
17034BBDBP
Groupe filtre/régulateur
Air treatement Unit
Gruppo filtro aria
Conjunto filtro aire
ELE31050T4S
Pressostat
Air pressure switch
Pressostato
Pressostato
(n) Hose numbers
Repère tuyaux
Numerazione tubi
Números de los tubos
DRYT 001
01/2009
DES 4 Foam
PNEUMATIC SCHEME
1/1

CHAP. 4 ELECTRICAL DIAGRAM
CHAP 4 SCHEMAS ELECTRIQUES
CAP 4 SCHEMI ELETTRICI
CAP. 4 ESQUEMAS ELECTRICOS
TEIL 4 ELEKTROSCHEMEN

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