# Morgana DigiBook 200 Automatic PUR Perfect Binding Machine

# **Instruction Manual**



Call Us at 1-800-944-4573



# Digibook 200

# OPERATOR MANUAL Translation of the original instructions



rev.0.1UL ID01460

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| REVISIONE | DATA       | MOTIVO                               |  |
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| 0.1       | 20/03/2017 | Tab. fusibili, avvertenze, indirizzo |  |



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# 1. INTRODUCTION

It is essential for operator safety and correct use of the machine reading this manual of use and maintenance.

This manual describes how to use the machine, the configuration of the basic operations work. This manual was written so as to be easily understandable even to those users who have never used this type of machine. To ensure that the machine provides maximum performance read this manual carefully before using it. After reading, keep this manual in a safe place and consult it as needed.

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# 1.1 DECLARATION OF CONFORMITY

# DICHIARAZIONE DI CONFORMITÀ CE DIRETTIVA CE PER MACCHINE 2006/42/CE, E SEGUENTI DIRETTIVE EUROPEE (ALLEGATO IIA)

CE CONFORMITY DECLARATION DIRECTIVE FOR MACHINES 2006/42/CE, AND FOLLOWING EUROPEAN DIRECTIVES (ANNEX IIA)

- COSTRUTTORE MANUFACTURER:
   K.G.S.SRL Via della Tecnica,37 35035 Mestrino (PD) Italy
- RESPONSABILE DELLA COSTRUZIONE DEL FASCICOLO TECNICO RESPONSIBLE FOR PREPARING THE TECHNICAL DOSSIER: RACCANELLO ROBERTO

**CON LA PRESENTE DICHIARIAMO CHE LA FABBRICAZIONE DEL** / WE HEREWITH DECLARE THAT THE MANUFACTURE OF:

- MODELLO TIPO / MODEL TYPE : 200-B (DIGIBOOK)
- MATRICOLA / SERIAL : MB200-XXXX
- ANNO DI COSTRUZIONE / MANUFACTURED IN: 2017

CORRISPONDE ALLE SEGUENTI DISPOSIZIONI NELLA VERSIONE ATTUALMENTE VALIDA / IS IN AC-CORDANCE WITH THE FOLLOWING DIRECTIVES AS IT IS :

- Direttiva CE per Macchine 2006/42/CE / Directive 2006/42/CE
- Direttiva EMC 2014/30/UE / EMC Directive 2014/30/UE
- Direttiva sulla Bassa tensione 2014/35/UE / Low Voltage Directive 2014/35/UE

# NORME ARMONIZZATE APPLICATE, IN PARTICOLARE

HARMONIZED STARDARDS, IN DETAIL:

- EN 1010
- EN 60 204-1
- EN 61 000-6-2, EN 61 000-6-3, EN 61 000-6-4
- EN 60950

Mestrino, (PD) Italy
\_\_/\_\_/2017

Dott. Marco Alfredo Tumaini

K.G.S. s.r.l. con socio unico

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# 1.2 CAUTION LABELS

During the manual and applied to the machine uses the following symbols to alert of any danger to persons and / or property damage.

In extreme cases of non-compliance can cause damage to persons or property.



**CAUTION!** You place before certain procedures. His failure to comply may result in injury to the operator, maintainer, installer or the machine.



**CAUTION!** Sharp blades! Cut Risk



**CAUTION!** Electrical voltage! Risk of electric shock



**CAUTION!** Hot surfaces! Risk of burns.



**CAUTION!** Risk from rotating parts! Risk of crushing.

CAUTION! Hazardous moving parts, do not attempt fingers and other body parts.



CAUTION! Risk from rotating parts! Risk of crushing

**CAUTION!** Hazardous moving parts, do not attempt fingers and other body parts.

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# 1.3 SAFE OPERATION

#### 1.3.1 GENERAL

The manufacturer guarantees that the contents of this manual are in accordance with the procedures required by the machine. The manufacturer shall not therefore be liable for any use of the machine in a manner inconsistent with the information contained in this manual.

#### 1.3.2 USER QUALIFICATION

# This machine is intended to be used by a single operator!

The operator must be fully trained on how to act in the occurrence of possible faults, malfunctions or hazards to themselves or others, and must meet the following requirements:

Immediately stop the machine in case of emergency by acting the emergency button (red button installed on board of the same). Do not attempt to go beyond the tasks and technical knowledge. Immediately inform their superior responsible in case of problems, and avoid taking personal initiatives.

It is assumed that the operator has at least the following requirements:

- General culture and specific enough to level, each for its expertise, to read and understand the
  contents of the manual in the parts that concern him, including the correct interpretation of the
  drawings and diagrams electrical, pneumatic and hydraulic systems;
- Ability to correctly interpret the symbols and video messages;
- overall knowledge of the machine and the plant in which it is inserted;
- Experience in the use of binding technology;
- Ability and knowledge to take action in case of an emergency and uses protective equipment.

# 1.3.3 MACHINE OPERATORS

**OPERATOR**: Standard use of the machine, with the possibility of parameter settings, load glue, aspirator emptying and final cleaning work.

**TECHNICAL OPERATOR**: glue emptying and machine cleaning.

TECHNICAL INSTALLATION: opening the electrical panel and interventions on electrical system

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#### 1.3.4 GUIDELINES FOR SAFE OPERATION

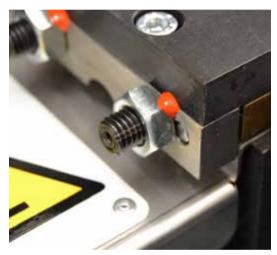
The application of procedures other than those specifically described in this manual may cause operational errors. Carefully read the safety instructions in this manual.

The manufacturer is relieved from any liability arising from an arbitrary and improper use of the machine, such as:

- Use of the machine by untrained personnel;
- Use contrary to the applicable law;
- Incorrect Installation:
- Defective power supply and / or pneumatic supply;
- Total or partial disregard of the instructions of use;
- Changes or other actions not authorized by the manufacturer;

It's forbidden to remove or render inoperative the guards provided for the safety of persons, as well as tampering with and / or modify, even partially, the safety devices installed on the machine. In case of alarm due to the intervention of the safety, the operator must request the immediate intervention of the qualified maintenance personnel.

It is forbidden to intervene on the screws marked with red or yellow tracer. The intervention on these screws leads to a malfunction of the machine.



The manufacturer declines all responsibility in case of any damage to persons, animals or property, caused by the tampering of the protections.

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### 1.3.5 PERSONAL PROTECTIVE EQUIPMENT

Safety clothing is not supplied with the machine and must be procured by the user.

In the various sections of the manual will be shown the symbols of personal protection equipment to be in the different operations to be carried out.



Tight clothing, to avoid that they not remain hooked to protruding parts. Long hair should be worn away from the moving machinery or in a net. Do not wear watches or jewellery.



Eye protection against possible splashes of glue or PUR Cleaner high temperature.



**Protective Gloves** 



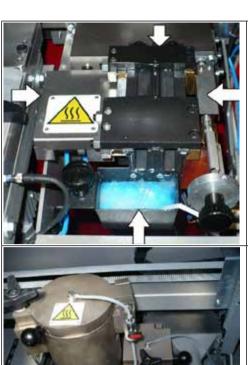
Respirator mask suitable for the use of removing used glue.

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#### **RESIDUAL RISKS** 1.4

These are the risks that cannot be completely eliminated either by protective devices or the design of the machine.





Glue Head.

# **CAUTION!** Hot surfaces! Risk of burns. Use protective gloves.





Glue tank.

# **CAUTION!** Hot surfaces! Risk of burns. Use protective gloves.





Milling Area.

# **CAUTION!**

The disc cutter contains several types of cutting tools.

Use protective gloves, in case you want to remove the roughening.





Press Area

**CAUTION!** Danger of crushing between the frame and the grip.

**CAUTION!** Danger of crushing on the press.

**CAUTION!** Hazardous moving parts, do not attempt fingers and other body parts.



# 1.5 INTENDED USE

The machine is designed to bind books using the following materials:

- Signatures or single sheets of paper (printed or not) for the book block
- Card as book cover

The machine must be used by one operator only to the extent and in the manner prescribed in this user manual.

# Any other use is forbidden, such as:

- Milling / notching of book spines already bound (e.g. bound with glue, staples, stitched, seal point);
- Use of materials other than those specified in the previous paragraph
- Operations outside of the specifications of the data Sheet.

The user is solely responsible for damage to persons or property that result from improper use, outside of the **intended use**.

It is forbidden to use the machine in explosive atmosphere conditions, of flammable atmosphere and where there is excessive dust.

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# TRANSPORT



**CAUTION!** For no reason the staff is authorized to pass under a suspended load during transport or in the vicinity of it.



CAUTION! The transport phase will have to be carried out by trained competent and authorized personnel, equipped with the necessary personal safety protections.

The binder must be moved by means of a forklift. It can only be lifted by forking the two long sides, the front and rear side.

For the final positioning or for small movements a trans-pallet can be used.

The machine can be only lifted with a trans-pallets in the 2 long sides, the front and rear side.



#### **IMPORTANT**

- Tools for clamping and lifting are not provided. a)
- The disposal of packaging materials is at the recipient's care and must be performed in b) accordance with the laws in the country where it will be carried out.
- Remove dust and external dirt accumulated during the transport phases. c)

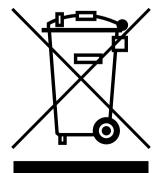
#### **DISPOSAL** 3.

If you decide to stop using the machine, or some part of it, the disposal and decommissioning of the same must be carried out.

The machine must be handed to designated wasted recycling centres and disposed of according to the country's current regulations. Electrical and electronic parts should be disposed of in accordance with Directive 2012/19 / EU.

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# 4. STORAGE

The information contained in this section shall be observed during periods of temporary storage of the machine that may occur, eg., In the following situations:

- Installation of the machine immediately after its delivery.
- Decommission of the machine.
- Machine in storage.

The machine must be used by a single operator within the limits and in the manner provided in this manual.

| Conditions for Storage       |                                                                                                                                                                                             |  |  |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Temperature range            | -5/+55°C                                                                                                                                                                                    |  |  |
| Humidity range               | 30/90%                                                                                                                                                                                      |  |  |
| Lighting                     | Natural and / or adequate artificial lighting                                                                                                                                               |  |  |
| Weathering                   | Adequate protection                                                                                                                                                                         |  |  |
| Space required               | Sufficient to perform the operations of lifting and safe transport                                                                                                                          |  |  |
| Location                     | The bearing surface must have a capacity greater than the total mass of the machine                                                                                                         |  |  |
| Unused for less than 30 days | Never open the glue tank otherwise it accelerates deterioration creating serious permanent damage to the glue application. This failure to comply will void the warranty of the group glue. |  |  |
| Unused for more than 30 days | Empty the system of glue and insert inside the protective cleaner. This failure to comply will void the warranty of the group glue.                                                         |  |  |
|                              | Protect against corrosion of the parts subject to wear and work plans. See Maintenance section.                                                                                             |  |  |
| Note                         | Do not stand or place any object on top of the machine.                                                                                                                                     |  |  |

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# 5. GENERAL DESCRIPTION

# 5.1 TECHNICAL SPECIFICATIONS

#### Features of the machine:

Hour cycles 200 cycles / mechanical Length of processed spine from 120 to 380 mm

Height of processed book from 110 to 320 mm

Cover size Max 700x380 / 222x120 mm

Thickness of workable book from 2 to 50 mm

Cover weight Max from 120 to 400 g / m<sup>2</sup>

**Control panel** 

Touch-Screen Yes
Copy Count Yes
Glue change counter Yes
Work memory Yes
Diagnosis and controls Yes
Size setting, temperature control Yes
Speed Yes

**Book Loading** 

Vise adjustment Auto according to parameters entered by the operator

Vise unlocking Automatic electric
Vice Closure Automatic electric

**Spinw preparation** 

Milling disc Ø 120 mm Roughening (roughening devices) for processing 1 (double)

the spine

Brush for processing and cleaning the spine Yes

Excludable cutter Mechanical with position control

Milling thickness Variable

Woodchip vacuum Inside the machine

Glue application system

PUR glue tank / Hot-Melt 3 Kg hermetically sealed PUR extrusion plant/ Hot-melt Integrated and hermetic

Application head adjustment Automatic

Glue stop Touch-Screen settable

Cleaning / sealing Yes

**Press** 

Press Electric power- assisted

Adjustment Pressing time

Mechanical adjustment

Back hit cover adjustment Auto according to parameters inserted on Touch-Screen

Cover positioning Operator manual

**Dimensions weight** 

lenght x width x height 1770 x 910 x 1280 mm

Weight 250 Kg



# 5.2 ELECTRICAL SPECIFICATIONS

Power Supply  $220 - 230 \text{ V } 50/60 \text{ Hz}, 1 \sim + \text{ N} + \text{PE}$ 

Max Power Consumption 3,5 Kw

Fuse Protection By the customer, on the power supply line 16 A

Class differential protection A 300mA

# 5.3 PNEUMATIC SPECIFICATIONS

Ensure that the equipment and pneumatic circuits can operate reliably, efficiently and safely, it is necessary that the compressed air used to power the pneumatic system has the following quality requirements in accordance with DIN ISO 8573-1:

Quality of the supplied air CLASS 3

Dust: 5 micron - 5 mg/m³
 Water: -20°C - 0,88 g/m³

• Oil: 1 mg/m3

The compression system air upstream of the binding machine must be of the type with dryer. Periodically check the quality of the compressed air supplied to the machine and operating values.

# Supply pressure

The pneumatic air supply of the user must ensure, to the inlet fitting of the compressed air in the binder, the following values:

- 7 bar:
- ensure a consumption of air equal to 160 NI/min
- Air Quality: Class 3

#### Pneumatic features:

Air consumption 100 NI/min Gauge input 6 bar Minimum pressure 5.5 bar Input gauge 6 mm

The connecting pipe to the compressor diameter of 6 mm is not supplied with the machine.

We recommend a compressor with automatic condensate drain. To avoid the weekly check of the presence of water inside the tank of the compressor.

If the compressor is placed within the company we recommend the purchase of a silent compressor.

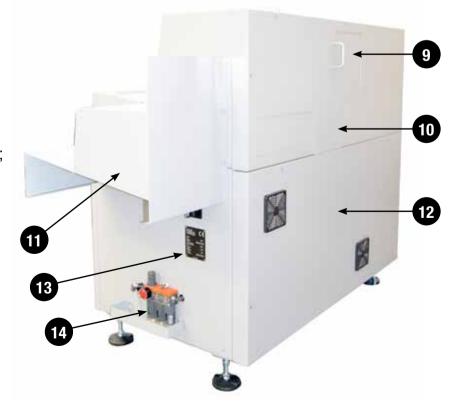
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# 5.4 PARTS IDENTIFICATION

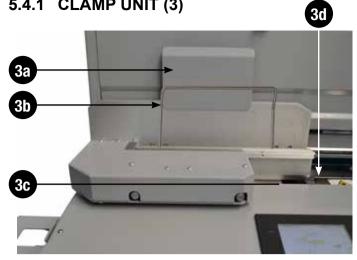


- 1. Glue tank compartment access;
- 2. Milling unit;
- 3. Clamp unit;
- 4. Table of measurement;
- 5. Front left cover;
- 6. Press unit;
- 7. Glue unit;
- 8. Front right cover;
- 9. Cleaner tank compartment access;
- 10. Fixed empty glue cover;
- 11. Book holder;
- 12. Rear cover;
- 13. Serial plate;
- 14. Pneumatic unit.





# 5.4.1 CLAMP UNIT (3)



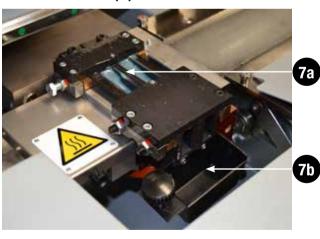
- Rear book support 3a.
- 3b. Front book support
- 3c. Moveable clamp
- Stop glue sensor 3d.

# 5.4.2 MILLING UNIT (2)



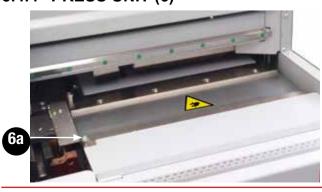
- Milling guard 2a.
- 2b. Milling tool
- Notching & roughening

5.4.3 GLUE UNIT (7)



- Glue head
- 7b. Waste collector

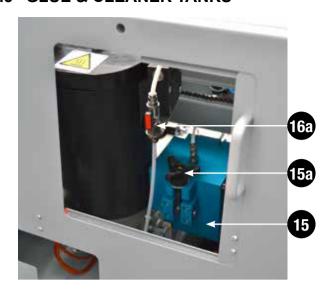
5.4.4 PRESS UNIT (6)



6a. Square Adjusters

# morgana

#### **5.4.5 GLUE & CLEANER TANKS**



15. Cleaner tank;

15a. Opening/Closing knob;

16a. Air valve tap (glue);



16. Cleaner tank;

16b. Opening/Closing knob;

16c. Handgrip;

16d. Serial label.

# 5.4.6 WASTE VACUUM



The extractor is contained in the left side of the binder and is electrically connected to it. Upon delivery of the binder, the extractor is ready, and connected both electrically and mechanically (suction tube), turns on and off simultaneously with the cutter.

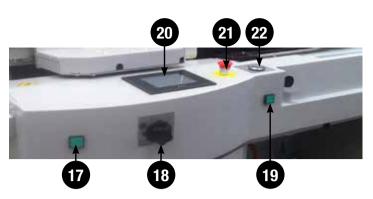


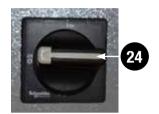
**CAUTION!** Max power absorbable by the socket 1,2 Kw.

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#### 5.4.7 CONTROLS AND INDICATORS





- 17. Control button left;
- 18. Milling height adjuster;
- 19. Control button right;
- 20. Display;
- 21. Emergency stop button;
- 22. Air pressue gauge;
- 24. On/Off switch.

#### 5.4.8 ACCESSORIES



- A. Cleaner:
- B. Waste collector (2x);
- C. Glue protection;
- D. Extra-soft hook (double hole) for the normal cleaning of extruder (2x);
  Soft hook (single hole) for the cleaning of the extruder if there are persistent residues (1x);
- E. Cleaning spatula (2x);

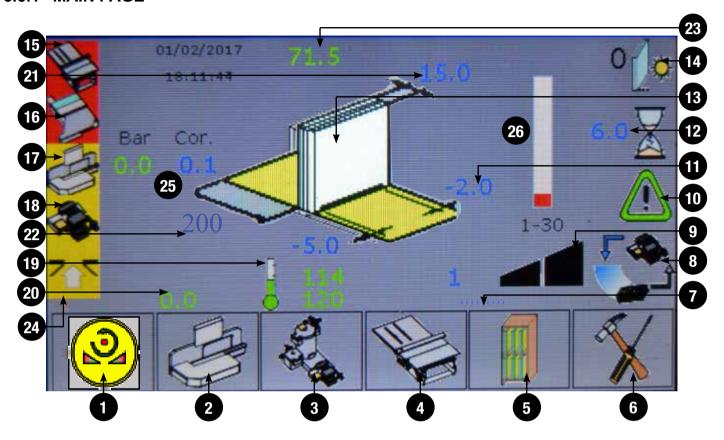
- F. Cleaning wire 0.5mm;
- G. Allen screw:
- H Extraction screw (M6 x 30 mm);
- I. Protective gloves;
- J. Low book support;
- K. High book support;
- L. Maintenance oil;
- M. Allen key set.



# 5.5 OPERATOR PANEL

The operator panel contains the configuration of the machine parameters and allows editing and the choice of processing mode.

#### 5.5.1 MAIN PAGE



- 1. Machine pre-set button icon;
- 2. Carriage parameter page access button icon:
- 3. Glue group page access button icon;
- 4. Press button icon, to access the press operation page;
- 5. Processing recipes access button icon;
- 6. Parameters setting access button icon;
- 7. Displays the name and the recipe number currently loaded;
- 8. Cleaner or glue cycle button Icon;
- 9. Icon, machine speed set button;
- 10. Icon, button to access the alarm page (red with active alarms);
- 11. View setting of the glue stop values left and right.
- 12. Value to set pressing time;
- 13. Book parameters setting and type of processing button icon;

- Icon, button to access the book counter page;
- 15. Displaying disabled press;
- 16. Viewing disabled cutter;
- 17. Displaying that a correction value was applied to the vise;
- 18. Displaying that a correction value was applied to the extruder;
- 19. They indicate the current temperatures of the pre-melting and head;
- 20. Indicates the position of the book block with respect to the cover;
- 21. Viewing thickness of the set book;
- 22. back cover hit value:
- 23. Current value measurement table;
- 24. If yellow it indicates that compensations values were applied to the pressure of the tank:

If red it indicates that the machine is in manual tank pressure mode;



- 25. When the machine is in automatic pressure mode it displays on the left the measured pressure value and on the right allows you to apply a corrective value ± 1.5 bar; with the machine in manual mode it allows to set the desired value on the right and display the actual reading on the left;
- 26. Button icon, by pressing it the glue level is detected: the indicator is green when the glue is more than 30%. Below this threshold it is yellow. When the indicator is flashing red the machine is no longer able to ensure the execution of bindings.

# 5.5.2 MACHINE PRE-SET ICON (1)



This icon / button indicates that you need to run a machine pre-set.

In order to carry out the pre-set it is necessary to press the icon, this will begin to flash, press and hold the left safety dual control of the machine until the end of the operation.

This operation will be complete when all the axes are zeroed. If the glue unit is not at the right temperature, resetting of this axis will not be carried out. **The operation will then have to be controlled once it reaches the set temperature.** 

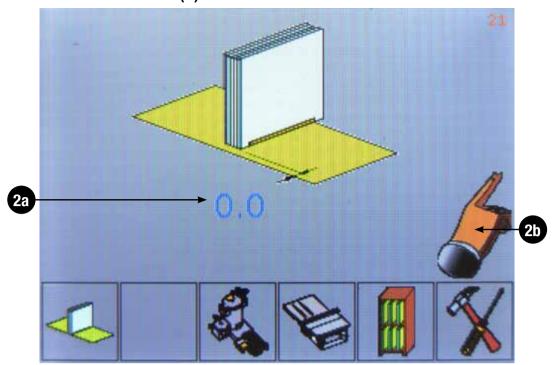
At the end of the pre-set, the icon it is replaced by this one that indicates that all axes are reset but are not in the working position. In order to bring the machine into the working position it is necessary to press the left safety dual control.

When all the axes are in the working position, the icon disappears.

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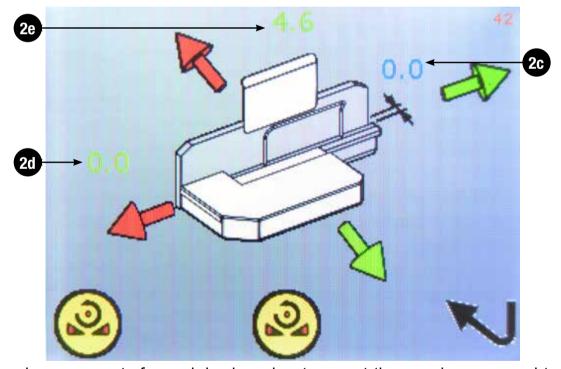


## **5.5.3 CARRIAGE PARAMETERS (2)**



The value (2a) is editable from -10 mm to +10 mm, this makes the clamp move forward (positive sign) with respect to the cover or backward (negative sign) during the machine cycle. The result is that the cover may protrude or fall compared to the book block.

Pressing on the hand (2b) will go to the page for the manual movements.



In order to make movements forward, backward or to preset the carraige you need to select the direction (a checkmark will appear) and press the left dual control of security to the desired position. The value (2d) indicates the current position of the clamp. The preset of the clamp can also be

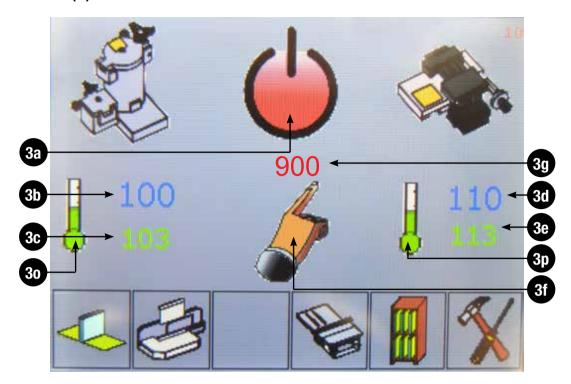
performed from this page by selecting the left hand icon and press the left dual control security until the end of the operation. Pressing the icon to the right of the preset will reset the axis of the vise.

The value (2c) sets a correction value to the opening of the clamp (0 – 5 mm).

The value (2e) displays the present value of opening clamp.



## 5.5.4 GLUE UNIT (3)



The figures **3b** and **3d** are the values attributable to temperature for the tank and glue to the extruder. The numbers **3c** and **3e** are the values of the actual temperature. The indicators **3o** and **3p** will be red if the temperature is outside the tolerance threshold, greens are within the threshold. Threshold temperature currently set  $(-2^{\circ}C + 5^{\circ}C)$ .

The temperature should be set according to the type of glue that is used, refer to the temperature recommended by the adhesive manufacturer.

The temperature of the pre-melting unit to be kept from 5 ° to 15 ° less than that of extrusion. During the heating phase, the indicators appear in red and the machine will highlight the message "Temperatures not OK".

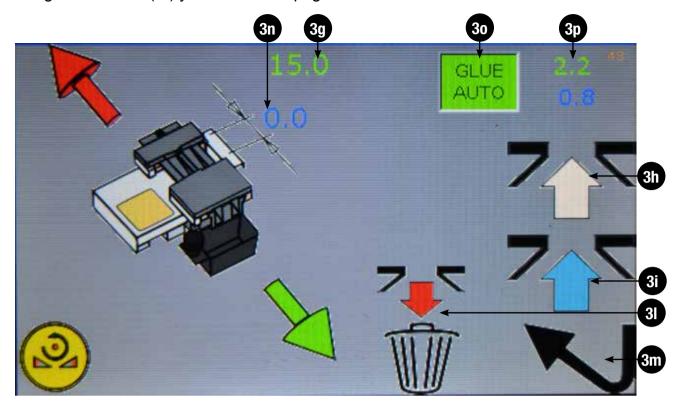
When the measured temperatures correspond to those set indicators appear in green; the machine at this point will wait for a timer to stabilize of the temperature (**3g**), at the end of this process the machine will be ready for use.

The icon **3a** when pressed for more than 1 second puts the car in a state of stand-by.

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By pressing on the hand (3f) you access the page of the manual movements of the extruder.



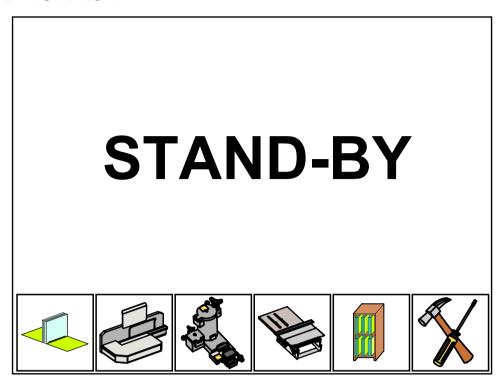
- 3g. Current shares (green) and settable (blue);
- 3h. Glue leak button icon.
  - Hold down the button for less than one second to open and close the valve of the glue.
  - By holding down the button for less than two seconds but more than one:
    - I open and close the glue valve;
    - I put into pressure the glue tank. This pressure is maintained for Max 10 sec.
  - By holding down the button for more than two seconds:
    - I open and close the glue valve;
    - I put into pressure the glue tank;
    - I open the valve of the glue until the release of the button. This command causes the glue to leak from the coating head;
- 3i. Button icon with blue arrow: controls the opening of the cleaner until the button is released;
- 3I. Glue discharge button icon;
- 3m. Previous page icon:
- 3n. Corrective value for the coating head (- 0.5mm 1mm);
- 3o. Set automatic glue or manual mode;
- 3p. The value in green is that of the pressure within the pre-melting unit, the one in blue is the one that the tank will reach by holding the button 3h.

The extruder pre-set can run even from this page by selecting the icon



Note: All movements can be performed only when the machine is at temperature.

#### 5.5.5 STAND-BY FUNCTION



The stand by decreases the temperatures of 30°, and if possible it closes the coating head. 30 min from the production of the last book, the machine automatically goes into standby in order to protect the adhesive from unnecessary prolonged heating.

When the machine is in STAND-BY you can browse the display using the icons below. If you do not browse the pages for more than 15 seconds, the machine goes back to the STAND-BY screen.

The STAND-BY mode can be activated from the glue group page (3) by holding the icon / button (3a) for more than one second.

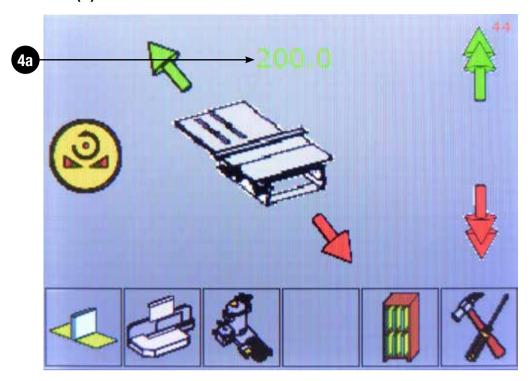
To return to the normal condition hold the display for more than one second, after which one must wait until the glue unit reaches the set temperature.

Upon reaching the set temperature it will be possible to make an axis positioning of the coating head and proceed to produce books.

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# 5.5.6 PRESS UNIT (4)



# 4a. Indicates the current position of the back cover stop.

# MANUAL OPERATION OF PRESS

Select the direction of movement of the press by selecting the double arrow (under the selection made will appear checkmark) and press the left dual control of security to the desired position.

# MANUAL OPERATION OF BACK STOP

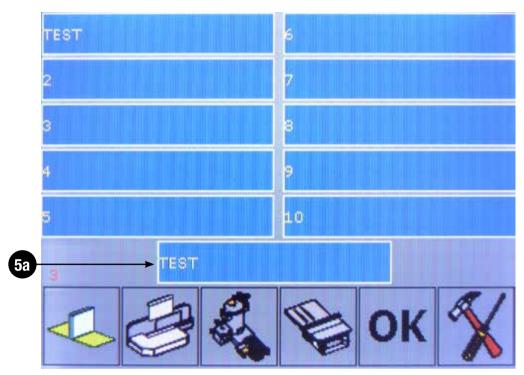
Select the direction of displacement of the cover stop by selecting the arrow.

You can run the preset of the bar of the cover also from this page by selecting the preset icon

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# 5.5.7 **JOB MEMORY (5)**

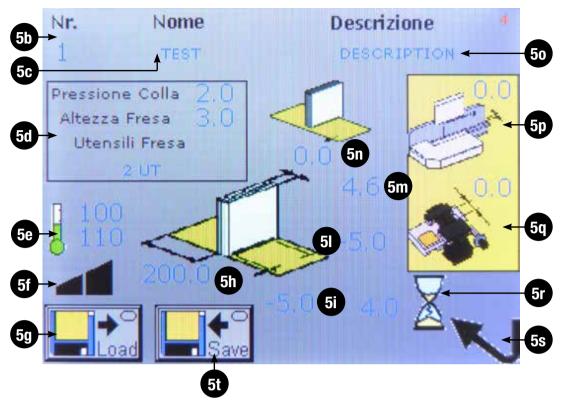


On this page you can store up to 10 working configurations. The field **5a** displays the selected recipe. To enter a tab you need to select it and press OK.

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The following page is displayed.



- 5b. Displays the ID of the recipe;
- 5c. Editable field for assigning the recipe name:
- 5d. Editable field to record the pressure of the glue, the height of the cutter and the number of installed tools.
- 5e.\* Display set temperatures;
- 5f.\* Display the work speed;
- 5g. Button icon to load the recipe settings on the machine;
- 5h.\* Displays the length of the cover;
- 5i.\* Displays the front glue stop:
- 5l.\* Displays the back glue stop;
- 5m.\* Displays the book thickness;
- 5n.\* View the displacement of the book in respect to the cover;
- 5o. Editable field for a brief description of the recipe:
- 5p. Displays the corrective value of the opening of the vise;
- 5q. Displays the corrective value of the opening of the extruder;
- 5r. View the pressing time;
- 5s. Previous page icon.
- 5t. Button icon to save the machine settings on the recipe.

#### \*Currently set

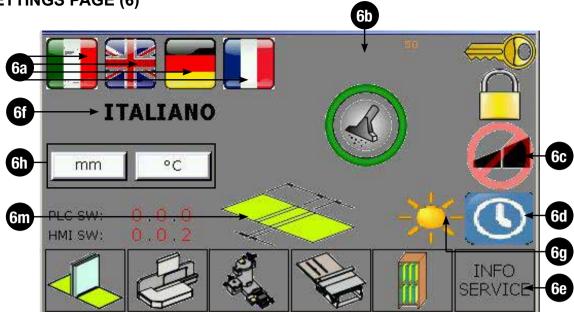
On this page the parameters currently set on the machine are displayed on the various configuration pages regardless of the selected recipe. To save them in the selected recipe, simply press on "SAVE" (5t).

The **change of a recipe** is carried out by changing the parameters in the settings pages and saving them with the button **5t** from the page explained above.

To load a recipe previously created simply load the data with the button icon 5g.

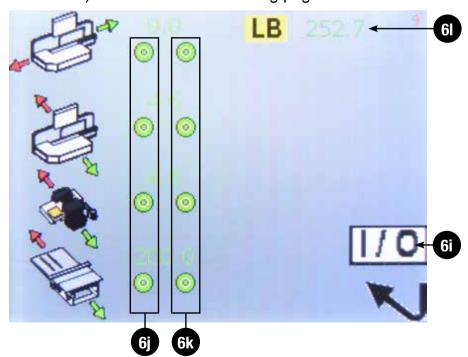


# 5.5.8 SETTINGS PAGE (6)



- 6a. Language selection;
- 6b. Vacuum cleaner manual activation;
- 6c. Deactivation notice speed too high / too low;
- 6d. Date and time setting;
- 6e. Resets verification and location axes page;
- 6f. Selected language;
- 6g. Display brightness adjustment;
- 6h. Units of measure settings;
- 6m. If enabled, it allows the application of corrective values to the values to be transferred to the creasing machine.

Press icon **6e** (INFO SERVICE) to access to the following page.

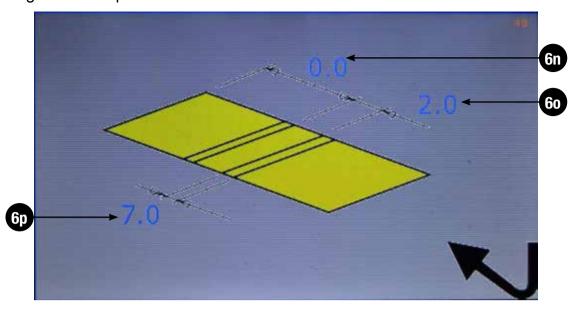


The column **6j** shows if the associated group has been reset. (GREEN = RESET)
Column **6k** shows whether the associated group is in the working position. (GREEN = POSITION)
Field **6l** shows the length of the last book executed.

By pressing field **6i** the inputs / outputs page opens, which is necessary for the technician for the diagnosis of the machine.



By pressing field **6m** the page in which to apply the correction values to the values to be transferred to the creasing machine opens.



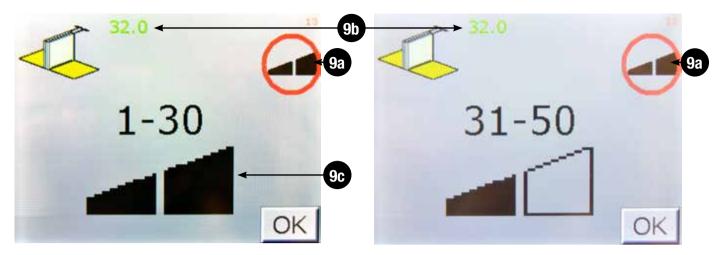
- 6n. Apply a correction value to the rear hit;
- 6o. Apply a corrective value to the thickness of the book;
- 6p. Set the height value for courtesy creasing of the cover.

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## 5.5.9 MACHINE SPEED CAUTION PAGE (9)



This page is opened when the working speed of the machine is not compatible with the thickness of the book that needs processing.

Value (9b) indicates the current thickness set in the machine.

For books between 1 and 30 mm the speed shown on the left screen is selected, while for books between 31 and 50 mm the speed shown on the right screen is selected.

By pressing on icon (**9c**) you can change the speed of the machine, once selected the desired speed, press OK.

You can disable the CAUTION message with the 6c button icon settings page or from the button icon (9a).

# **5.5.10 ALARMS SCREEN (10)**

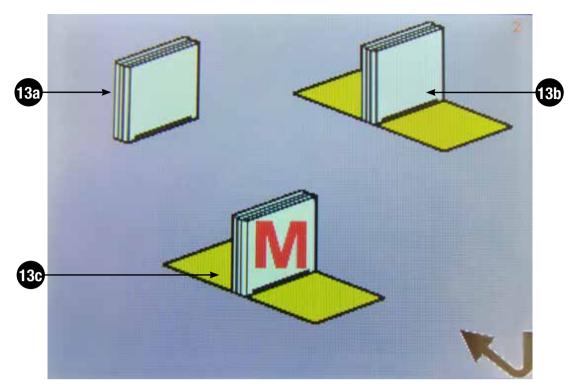
Here the machine alarms appear.



Press ALARM RESET to reset the resettable alarms. With the button icon 10a you can access the alarm history page.



### **5.5.11 PROCESSING TYPE PAGE (13)**



13a. In this configuration the machine excludes the operation of the press and of the table cover holder.

When simultaneously pressing the buttons the machine carries out the following operations:

- Load the glue tank for 10 seconds if empty;
- closes the vise:
- Activates the motor of the cutter and of the suction in the case they are enabled;
- the cart comes into position above the press. The operator releases the two buttons and by pressing the left dual control the vise opens;
- Press the left dual control again to return the cart to the loading position: during the return stroke the vise returns to the open vise position in order to load the following book (last done).
- 13b. In this configuration the machine performs a normal book processing with cover.

When simultaneously pressing the buttons the machine carries out the following operations:

- Load the glue tank for 10 seconds if empty;
- closes the vise:
- Activates the motor of the cutter and of the suction in the case they are enabled;
- operates the press;
- The grip opens to the open vise position;
- if the left dual control is pressed or held down, from the previous action, the cart goes back to the loading position;
- In the moment in which the cart starts its return movement, the press time set by the operator starts;
- the press goes down regardless of the pressure of the left dual control at the expiration of the timer of the press.

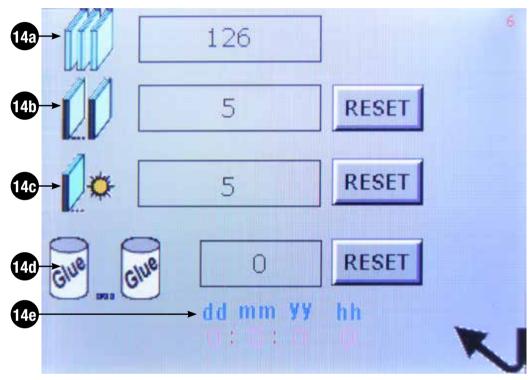


13c. In this configuration the machine performs a processing of a book with a delicate cover.

When simultaneously pressing the buttons the machine carries out the following operations:

- Load the glue tank for 10 seconds if empty;
- closes the vise:
- Activates the motor of the cutter and of the suction in the case they are enabled;
- the press rises and presses for the set time;
- once the pressing time expires the vise opens to the open vise extent and simultaneously the press comes down;
- once the opening of the vise has been reached, if the left dual control is pressed or is kept down by the previous action the cart goes back to the loading position.

# 5.5.12 BOOKS COUNTER PAGE (14)



- 14a. Displays books totals bound by the machine.
- 14b. Displays partial books bound by the machine;
- 14c. Displays daily book bound by the machine;
- 14d. Displays books bound after the last glue loading;
- 14e. Displays the date of the last glue loading.

The 14b and 14c counters are reset by pressing the associated RESET button.

The 14d and 14e counters are reset by pressing the associated RESET button for more than one second.

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# 6. INSTALLATION



**CAUTION!** The machine must be installed by K.G.S. technicians or by personnel authorized by K.G.S.

# 6.1 PHYSICAL CHARACTERISTICS OF THE POSITIONING AREA

In the vicinity of the area where the machine is positioned, power sources of electric and pneumatic power must be prepared in accordance with the requirements in the marking label. Provide sufficient space for normal use, for the maintenance of the machine, for any command and any attached equipment (see the positioning section diagram). The site chosen must not be next to flammable material deposits, nor to areas where processes that can create flammable or explosive atmospheres are carried out.

The machine must be placed in a covered area and protected from direct contact with atmospheric agents.

For the operations of installation it is necessary to provide a manoeuvring area adequate to the size of the machine parts and to the selected lifting means, by paying attention to the presence of any obstacles (other machines, walls or such) along the path to take.

# 6.2 FLOOR

The machine does not require special foundations. The availability of industrial flooring must be guaranteed. The binder rests on 4 feet diameter of 100 mm and its weight is 250 kg.

# 6.3 LIGHTING

Good lighting is required in order to carry out the processing and maintenance of the machine in a safe manner. The ambient lighting should have a normal value to allow working operations without causing hazards because of shaded areas.

# 6.4 ENVIRONMENTAL CONDITIONS

The values of temperature and humidity must be within the values indicated in the table below. In the case where the plant is used in corrosive atmosphere environments, it is important to intervene in the maintenance of the machine with appropriate timing so as to avoid excessive wear of the components.

|                   | MIN | MAX  |
|-------------------|-----|------|
| Room temperature  | 5°C | 40°C |
| Relative humidity | 20% | 80%  |

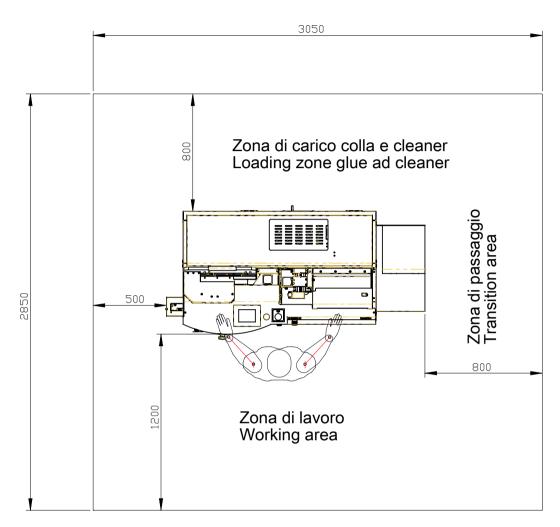
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### 6.5 POSITIONING AND WORKSPACES

The binder must be positioned so as to have a free space around of at least 80 cm and the working area at least 120 cm.

The room where the machine is installed must be properly ventilated and air exchange according to current legislation.



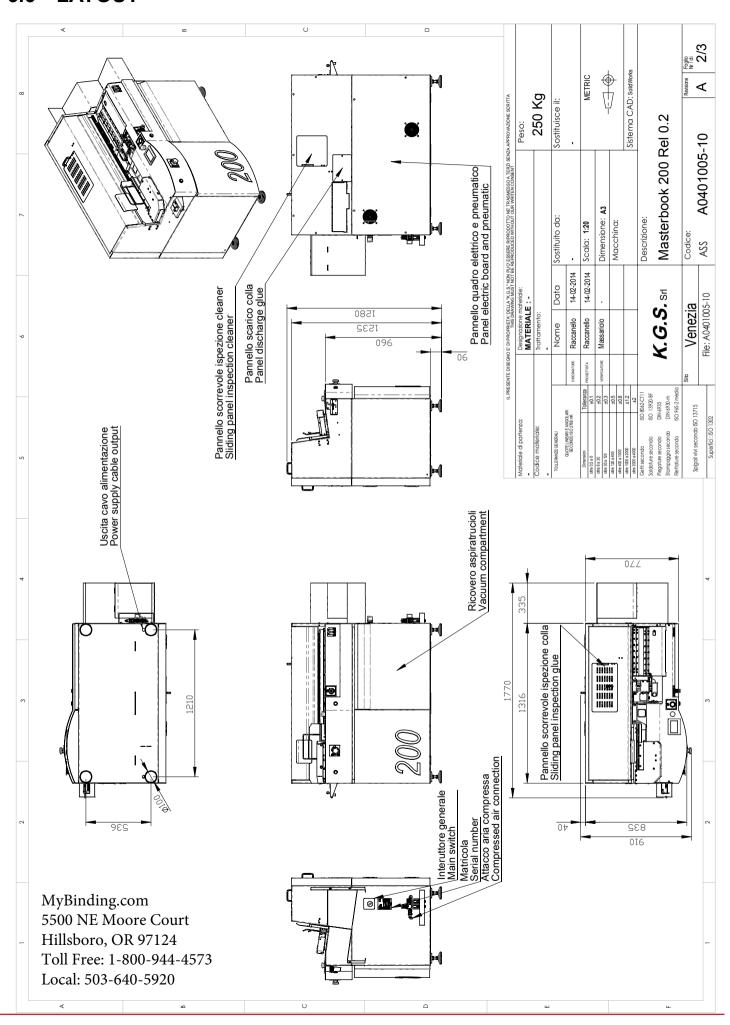
#### Work areas

| Glue loading area        | Glue and cleaner loading area. The operator has access to this area to load the glue and / or cleaner onto the machine.  Access area for the service to access the electrical and pneumatic panel. |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Passing area             | Transit area from the work area to the glue loading area.                                                                                                                                          |
| Operator Work Zone       | Operator's work area during normal use of the machine.                                                                                                                                             |
| Left side of the machine | It is not necessary to leave a useful space.                                                                                                                                                       |

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# 6.6 LAYOUT





### 6.7 POWER CONNECTION



**CAUTION!** Cables should be placed in special ducts in order to avoid tripping and / or falling.

#### Power cable

The end of the power cable is prepared according to the destination of the binder.

The cable is 3 meters long with sectioned end, with the Protective Earth (PE).

It will be the customer care to adjust the cable for connection on site in accordance with the applicable regulations.

#### 6.7.1 EARTH CONNECTION

The binder is provided with a Protective Earth (PE).



The installer must perform a ground connection according to regulations.

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# 6.8 PNEUMATIC CONNECTION

Connect the air supply according to the following procedure:



Connect the 6 mm hose outer diameter to the quick coupling of the binder.



Pneumatically feed the machine by moving the cursor to the right.

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# 7. OPERATION AND USE

#### 7.1 PREPARATION OF THE MACHINE

#### 7.1.1 GLUE TANK LOADING

The glue tank must be filled in the case in which the amount of glue is less than the minimum level imprinted on the tank.



**CAUTION!** Wear face, hand, protection, mask suitable for using glue and protective goggles.



**CAUTION!** Never open the tank when it is COLD. Possibility of breakage of the sealing gaskets and aging and premature (curing) of the glue with probable clogging and maintenance requirements.



**CAUTION!** Only glue of the same Type and Brand must be added to the tank. A new type of glue is only inserted when the glue unit is completely empty and cleaned with Blu-Cleaner.



**CAUTION!** With Polyurethane glue do not leave the tank open for more than 10 minutes.



**CAUTION!** Never fill the tank with more than 3kg of glue.

To access the glue tank (1) you have to open the sliding door provided with handle.

The opening of this protection sends the machine into a state of emergency and discharges the pressure of the glue tank while the Cleaner tank remains at a pressure of about 2 bar.

The machine cannot work with the back or upper door open.





In order to load the glue carefully follow the sequence below:

01



Turn on the machine by putting the switch to ON.

02



Check if the indicated pressure in the inlet pressure gauge is correct.

MIN 6 BAR

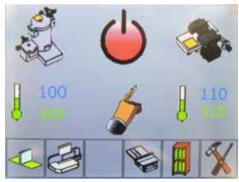
03



Open the tap on pre-melter:

The tap with the lever positioned vertically is open.

04



Set the temperature of the glue tank and glue unit from the glue unit page (3) according to the glue in the machine or the amount you want to use.

05



Wait for the heating and temperature stabilization phase. The timer placed under the stand-by icon will start. When the timer disappears, stabilization is completed and you can proceed to the following phase.





Open the top sliding door (1) of the machine, provided with a handle.

The machine goes into a state of emergency, and releases pressure to the glue reservoir, while the cleaner tank remains in pressure at 2 bar.

07



Loosen the locking knob turn it anti-clockwise.

80



Tilt the locking knob until its rest position. The lid is thus free to open.

09



Lift the lid up to its maximum opening capacity by holding its side knob.

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Carefully read the safety data sheets of the glue used, and follow all the instructions of the manufacturer of the glue.

Take a pack of glue and check the integrity of the aluminium coloured container also make sure that it has not passed the expiry date written on the packaging.

11



Cut the protective film.

12



Completely remove the film.

13



Insert the cartridge in the tank.





Replace the cover.

15



Lift the knob, paying attention to the high temperature of the components.

Turn the knob clockwise in order to vigorously seal the tank.

16



Close the rear sliding door of the machine, provided with handle.

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#### 7.1.2 CLEANER LOADING



CAUTION! Wear hand protection and protective goggles.



**CAUTION!** Carefully read the safety data sheets of the cleaner used, and follow all the instructions of the manufacturer of the glue.

To carry out the loading of the cleaner carefully follow the sequence below:

01



Turn on the machine by putting the switch to ON.

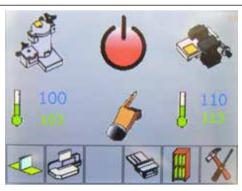
02



Check if the indicated pressure in the inlet pressure gauge is correct.

MIN 6 BAR

03



Set the temperature of the glue tank and glue unit from the **glue unit page (3)** according to the glue in the machine or the amount you want to use.

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Wait for the heating and temperature stabilization phase. The timer placed under the stand-by icon will start. When the timer disappears, stabilization is completed and you can proceed to the following phase.

05



Open the access compartment cleaner tank (9) provided with a handle.

06



Unscrew the cleaner tank knob. You will notice an air leak because the machine continues to provide air to fuel the tank.

07



Fill the tank up to about 3/4 of its volume with the cleaner by using a small container.

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Close the cover using the side knob and paying attention to the high temperature of the components.

Tighten the knob until the noise of the air disappears.

09



Close the cleaner tank access compartment (9) provided with a handle.

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### 7.1.3 MEASURING THE BOOK

The measuring of the book to be bound is necessary for an automatic set the opening of the vise and of the glue unit.

01



Insert the book block to be measured. Automatically the probe will clamp the book in order to take the measurement. When the value read by the linear encoder will result stable, the measurement will be transferred to the machine.



02



After the measurement remove the book block and place the probe in the fully open position.

03

If you wish to perform continuous measurements, such as inserting or removing parts of the book block, once the correct measure is found just press the left button of the dual control to acquire the measurement.

Note: The measurement table does not work as long as the rear hit of the cover is moving. If it were necessary to reset the measuring table have the probe close against the vertical wall of the machine (minimal measure) then place the probe in the fully open position.

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### 7.2 START PROCESSING

#### 7.2.4 GLUE REACTIVATING PROCEDURE

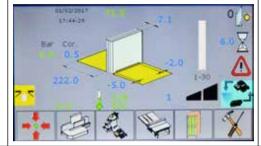


**CAUTION!** Wear face, hand, protection, mask suitable for using glue and protective goggles.

The glue reactivating procedure must be carried out every time the machine is turned off by using the END JOB procedure.

When the machine is switched on a Cleaner error appears in the glue unit. You will need to perform the RESET GLUE procedure

01



From the processing page, hold the button for a few seconds to initiate the RESET GLUE procedure.

02



In this phase, the head is opened to facilitate the output of the cleaner.

03



In this phase the machine starts the pin cleaning cycle if the machine has been switched on recently. After cleaning the pins the message "Wait pins cycle" disappears.

- Remove the grains from the glue head.

Press OK

The machine begins to expel the cleaner from the extruder and charge the glue.



Clean the extruder from the glue using the calibrated blade to clean the glue output nozzle.

Facilitate the flow of material in the tank by using the green palette.

Press the icon to release additional glue until the cleaner traces disappear.

If necessary, you can change the excess glue pressure by setting a correction value in the blue field.

Clean up all the excess leaked material very well using the shovel and paper towels.

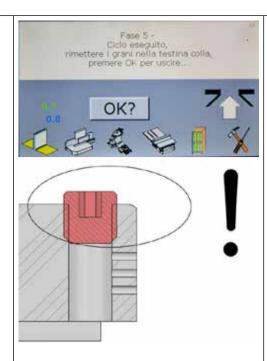
Press OK

05



Wait for the closing and opening of the extruder, and press OK.





Replace the grains using the Allen key supplied (pay attention to the temperature), press **OK**.

Caution the grains must protrude max. 1 mm

Press OK

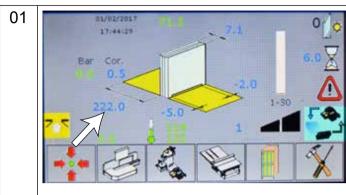
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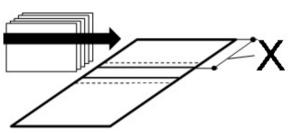
#### 7.2.5 COVER POSITIONING



**CAUTION!** Wear hand protection and proper clothing.



From the home page, set the value of the cover length in the field indicated by pressing on the value.

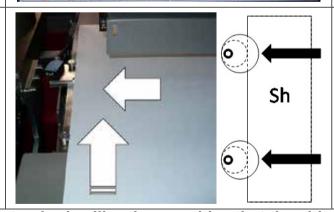


The indicator value is equal to size X.



Bring in the working position the cover hit by pressing the left dual control security.

The icon disappears when all axes are in position.



Manually place the cover as indicated by the arrows, both against the eccentrics mentioned on the side and against the log of the cover "B", see previous picture.

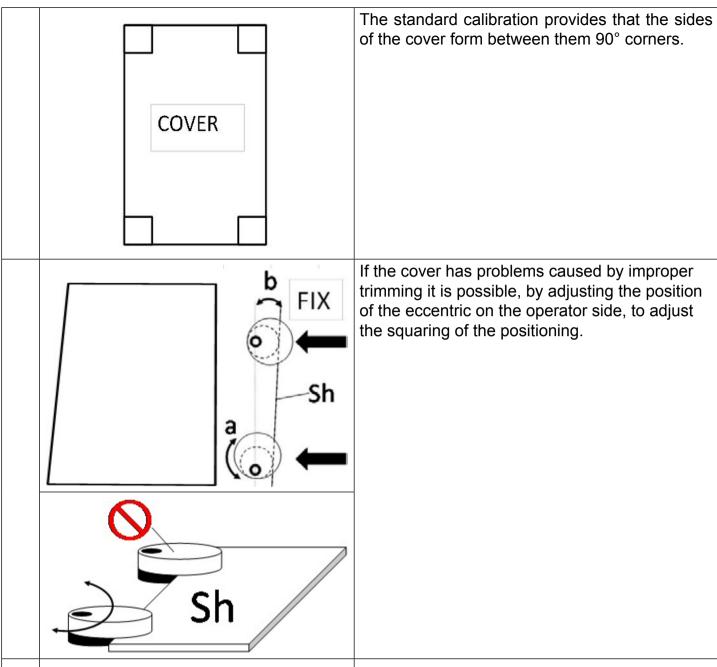
The standard calibration provides that the sides of the cover form between them 90° corners

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03





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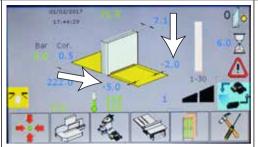
#### **7.2.6 LAUNCH**



**CAUTION!** Wear hand protection and proper clothing.

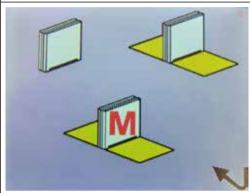


01



From the home page, type the parameters of the front and rear stop-glue in the field indicated by pressing on the value. Set the press time.

02



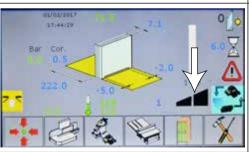
Select the type of processing.

03



Measure the thickness of the book to be bound with the appropriate measuring table.

04



According to the thickness detected select the appropriate working speed by pressing the speed icon.

05





Perform a pre-set if necessary and then position the axes.

06

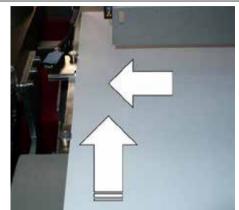
Adjust the pressure of the glue with the regulator (23).





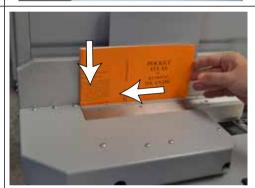
Adjust the working height of the cutter: Turn the knob clockwise to increase the removal of the material. Turn anti-clockwise to decrease the removal. **Turning the knob clockwise until it stops the cutter and the fan are turned off.** 

08



Place the cover above the press, leaning it to the left fixed reference and the adjustable one at the bottom of the press.

09



Load the file in the vise as shown by the arrows in the picture.

10



Start the process by pressing and holding the safety dual control until the machine reaches the extreme right position.

The machine closes the vise and it will begin processing the book, the cart will start moving passing on the cutter and the glue unit, when it comes to position the press will apply the cover (if selected).

If the buttons are released during the forward stroke, the cart locks immediately. With a pressure of the left dual control the vise opens up. With a further and continuous pressure the cart goes back to the loading position.

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Take the book.

12

Check the gluing of the book. If necessary, correct the values of the front stop and rear glue, the position of the cover and the pressing time.

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# 8. MACHINE CLEANING



**CAUTION!** Wear face, hand, protection, mask suitable for using glue and protective goggles.











**CAUTION!** If the machine is used for more than 120 minutes you need to carry out the "End of job cleaning" cycle.

When the machine is used with PUR glues a thorough cleaning of the glue unit becomes MANDATORY since the crosslinked adhesive is no longer refundable.

The residues of glue during curing may cause obstructions or in any case a not correct and uniform extrusion of the adhesive.

The glue unit must be kept clean from deposits of glue, PUR glue residues with time cannot be removed and damage the equipment.

Final cleaning work must be carried out within 120 minutes from the non-use of the machine. After making the final cleaning work the machine can remain switched off with inside PUR glue for 2 weeks.

**CLEANING PROGRAM:** 

**EVERYDAY:** END OF WORK CLEANING

EMPTY THE SHAVINGS EXTRACTOR

(See suction manual)

ONCE A WEEK: CLEANING SIDE EXTRUDERS

**CLEANING SPINE EXTRUDER** 

**CLEANING OF DETAILS** 

ONCE EVERY TWO WEEKS: PINS LUBRICATION

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#### **END OF WORK CLEANING**

01



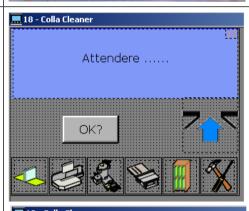
In order to turn off the machine at the end of the day you have to remove the glue from inside the extruder.

To do this you must activate the automatic procedure which will guide you to perform a safe shutdown.

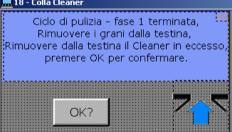
Press and hold the button start the procedure.

for a few seconds, to

02



During this stage, the glue unit prepares for daily cleaning, follow the instructions on the display step by step.



Replace the grains from the head and remove the excess cleaner.

until the traces of glue disappear, Press the button make use of the calibrated blade in this operation. Press OK.

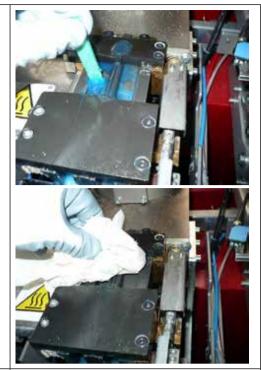


Use the green spatula provided and drain the glue to the collection tank. Try to remove as much as possible the spilled glue.

until you can make sure that only the cleaner is coming out of the extruder. Press OK









Once you have finished the cleaning procedure, close the rear tap.

The tap is closed when it is in a horizontal position.

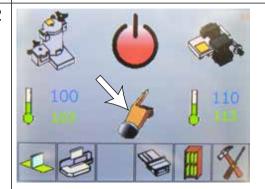
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# 8.2 SPINE GLUE EXTRUDER CLEANING PROCEDURE

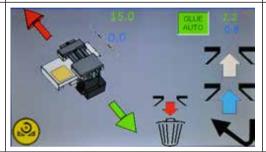
Press the button corresponding to the glue unit.

02



Press the button for manual movements.

03



Fully open the extruder by pressing on the green arrow.

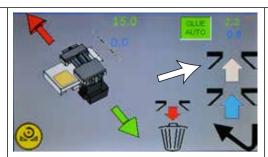
04



Insert the calibrated blade within the extrusion slit until the bottom is reached and move it along the slot to remove or unlock any possible occlusion.

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Press and hold the spill glue button, indicated by the arrow, for a few seconds until the glue can be seen leaking.

If necessary, you can change the excess glue pressure by setting a correction value in the blue field.

Check whether the extrusion of the glue is smooth and continuous.

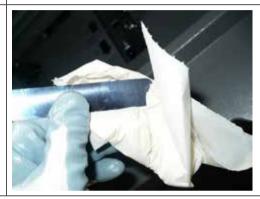
Otherwise, insert the calibrated blade and repeat the cleaning process.

The tank pressure will switch off after 10 sec. of non-use.

Wipe the blade carefully.

When the glue is completely crosslinked it will make the blade unusable.

06

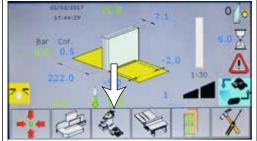


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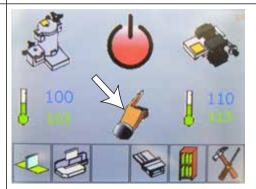
### 8.3 SIDE GLUE EXTRUDERS CLEANING PROCEDURE

01



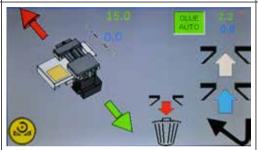
Press the button corresponding to the glue unit.

02



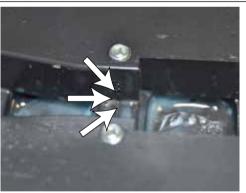
Press the button for manual movements.

03



Fully open the extruder by pressing on the green arrow.

04



The glue spread on the side of the book is extruded through 3 small channels placed on the plates containing the book.

05



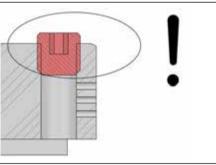
For proper lateral extrusion of the glue, it is necessary to remove the closing grain and insert in the 3 holes the supplied wire. Repeat this operation on both the holding plates of the book.





Pass the thread also in the main line in order to enter into the slit underneath.

07



Careful when refitting the grains, they must not protrude otherwise a collision with the vice could be caused. They may protrude max. 1 mm.

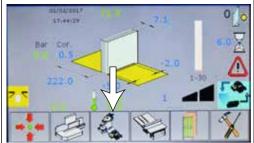
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rev.0.1UL ID01460



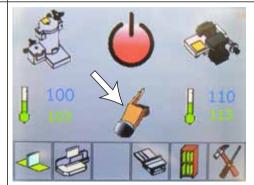
# 8.4 CLEANING DETAILS

01



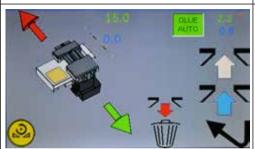
Press the button corresponding to the glue unit.

02



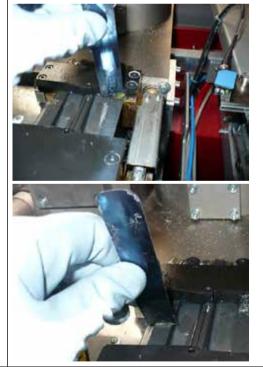
Press the button for manual movements.

03



Fully open the extruder by pressing on the green arrow.

04



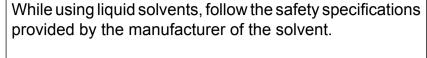
Use the blade to remove all visible traces of glue residues.

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If necessary use liquid solvents for a more complete surface cleaning.



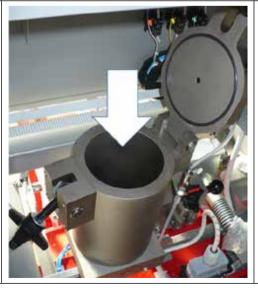


Thoroughly clean all the tools used, otherwise they will become unusable thereafter.



07

06



Periodically clean the glue tank, pay attention **HIGH TEMPERATURE**, use cloth that do not leave residues in the tank itself, use scraping tools that do not damage the inner surface of the pre-melting. Prevent cross-linked parts of glue from remaining within the pre-melter itself, the latter may occlude the coating head.

If the pre-melter were to be excessively dirty or encrusted call technical assistance to perform washing using special solvents.



### 8.5 GLUE SYSTEM DRAINAGE



**CAUTION!** Wear face, hand, protection, mask suitable for using glue and protective goggles.









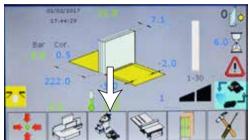


**CAUTION!** This must be carried out by a qualified maintenance expert.

The total emptying of the glue system must be run when you want to completely free up the machine from a certain type of glue.

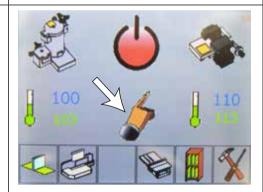
The machine must be in temperature and loaded in the glue extruder (see par. 6.2.6).

01



Press the button corresponding to the glue unit.

02



Press the button for manual movements.

03



Remove the right front carter by pulling it toward you.



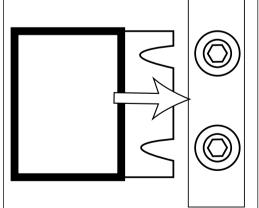


Remove the right screw that locks the carter placed under the coating head and remove it.





Install at the draining tap glue discharge the glue discharge protection by inserting the seats in the special screws partially screwed.



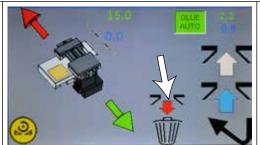
Place an empty container under the glue discharge protection to collect the material that is coming out;

07

06

Open the glue draining tap placed over the newly installed protection.





Press and hold on the indicated icon.

09



The reminder page is displayed for the setting of the maximum pressure at 1 bar.

If necessary, you can change the excess glue pressure by setting a correction value in the blue field.

10



Press and hold on the indicated icon until all the material flows from the tank. When the material is about to end the machine will expel air and material; when the machine expels only air release the icon.

11



Open the top sliding door (1) of the machine, provided with a handle.

The machine goes into a state of emergency, and releases pressure to the glue reservoir, while the cleaner tank remains in pressure at 2 bar.

12



Loosen the locking knob (turn it anti-clockwise).

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Tilt the locking knob until its rest position.

14



Open the glue emptying plate by loosening the two Allen screws.

15



Place one of the trays provided under the tap glue

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Open the tap and wait for the emptying of the tank. When finished, close the two glue draining taps, wipe off the taps to remove all traces of glue and lubricate valves with high temperature grease this prevents any valve lock.

Remove the exhaust protection glue, attach the two cover plates and place the right front cover.

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# 9. MAINTENANCE



**CAUTION!** Wear hand protection and protective goggles.







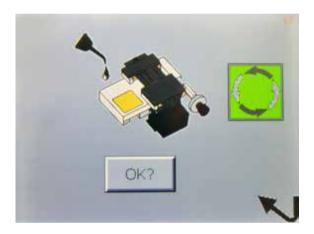




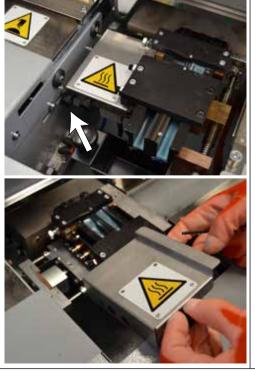
**CAUTION!** These operations must be performed by a qualified maintenance technician.

### 9.1 PINS LUBRICATION

Every 15 days the machine displays a screen when you try to run the glue load cycle or the cleaner load cycle. It is therefore necessary to carry out the lubrication of pins.

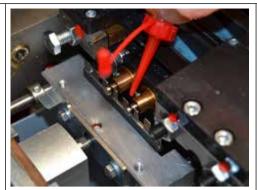


01



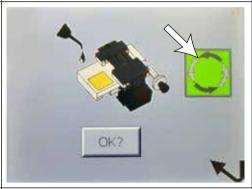
Remove the protective cover by unscrewing the knob that locks it.





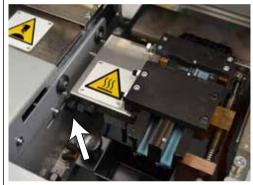
Oil the two pins using the oiler supplied.





Press on the indicated icon for moving the pins so as to distribute the oil. Press OK when finished.

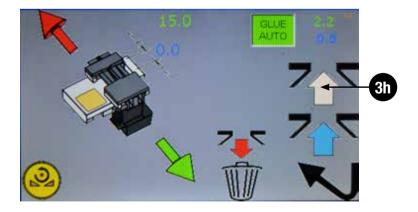




Fit the guard and tighten the knob that locks it.

NOTE: In order to prolong the life of the valves it is possible to lubricate them at the end of each day.

To carry out lubrication it is necessary to remove the cover as described in this chapter, oil location and move them by pressing the icon 3h repeatedly for less than 1 second.



After lubrication mount the previously removed carter.



# 9.2 DEEP CLEANING OF GLUE UNIT CLAMP

The cleaning of the glue unit clamp is necessary in case of heavy soiling.

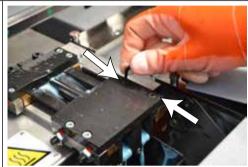
Cleaning should be performed with the machine at working temperature.

01



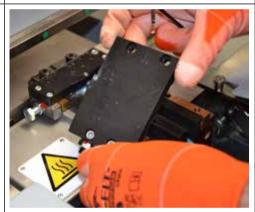
Press the emergency button.

02



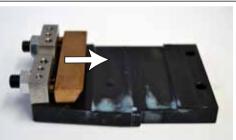
Remove the two screws indicated by the arrow with an allen key.

03



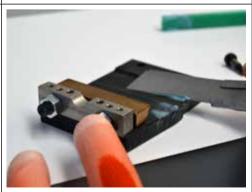
Lift the clamp and remove it.

04



Remove the brass runner supporting the clamp.

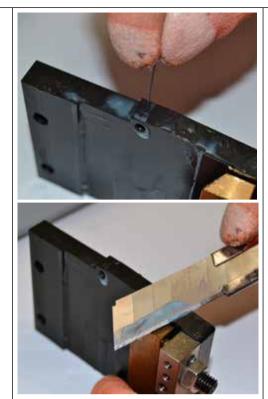
05



Thoroughly clean the clamp in all its points using a cutter, calibrated wire and paper.

Remove the closing grain to thoroughly clean the lateral extrusion channels. During assembly of the grain be careful not to extend more than 1 mm from the top surface.

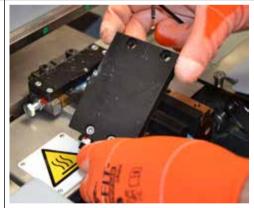






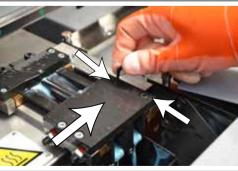
Lubricate the entire clamp with high temperature grease and in particular the slide pins of the brass runner. Reposition the runner to the clamp.

07



Mount the clean clamp by inserting the left side in the runner and lowering it until it makes contact.

80



Firmly push the clamp to the right and tighten the two screws with the allen key.



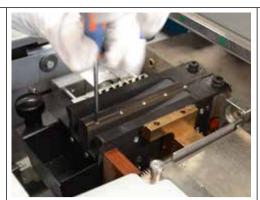
# 9.3 COATING HEAD DEEP CLEANING

The coating head cleaning is necessary in case of heavy soiling.

Cleaning should be performed with the machine at operating temperature after having carried out the final cleaning work.

01 Press the emergency button. 02 Remove the two screws indicated by the arrow with an Allen key. 03 Lift the clamp and remove it. 04 Loosen the lock nut and the relative screw of the stop clamp. Remove the two screws indicated by the arrow with an 05 Allen key and remove the stop clamp.





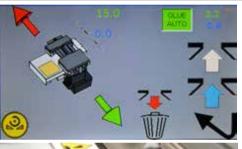
Using a Torx T9 key unscrew and remove the five screws holding the top strip.

07



Remove the top strip

80



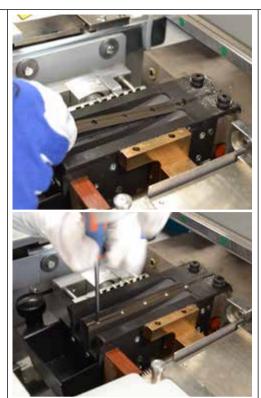
Press the button until the traces of glue disappear, make use of the calibrated blade in this operation.

Clean the head by pouring the cleaner into the collection tray and clean everything with paper.



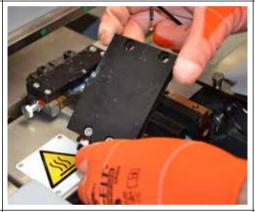






Replace the top strip and hold it pushed on the vertical surface on the left secure it with 5 Torx T9 screws.

10



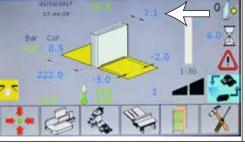
Mount the clean clamp by inserting the left side in the runner and lowering it until it makes contact.

11



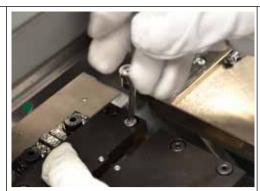
Firmly push the clamp to the right and tighten the two screws with the Allen key.

12



Set the opening of the coating head to 7.7mm pressing on the value. Press the left dual control to perform the movement.





Place the stop clamp and tighten the two screws to the brass runner previously removed.

14



Place a 8 mm Allen key between the movable clamp and the stop and holding the stop clamp thrust on key tighten the screw in the picture.

Then tighten the locknut.

#### **FUSE LIST** 9.4

In the table below we show you the list of fuses with the reference number in the wiring diagram.

| Reference number in the wiring diagram | Quantity | Model                     |
|----------------------------------------|----------|---------------------------|
| FU01.00                                | 2        | KTK-20 (Fast) 10x38       |
| FU01.01                                | 2        | FNQ-10 (Delay time) 10x38 |
| FU02.03                                | 2        | KTK-6 (Fast) 10x38        |
| FU02.01                                | 1        | Glass 4A 5x20             |
| FU02.02                                | 1        | Glass 8A 5x20             |
| FU10.01                                | 2        | KTK-6 (Fast) 10x38        |
| FU11.01                                | 2        | KTK-6 (Fast) 10x38        |
| FU13.01                                | 2        | FNQ-10 (Delay time) 10x38 |
| FU18.01                                | 2        | KTK-4 (Fast) 10x38        |
| FU18.02                                | 2        | KTK-10 (Fast) 10x38       |

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# 10. PROBLEMS - SOLUTIONS

| N° | Alarms                            | Description                                                                                                                                                                                                                                                                                                                                                                                                            |
|----|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Machine in Emergency              | The emergency stop button is pressed or one of the doors is open.                                                                                                                                                                                                                                                                                                                                                      |
| 2  | Press Fault drive                 | The press has not reached the position in the given time. Check the movement. Reset the alarm if it does not reset switch off and then back on the machine waiting 2min. If the problem persists, contact technical assistance.                                                                                                                                                                                        |
| 3  | Cart Fault drive                  | Verify that along the tracks of the cart there are no obstructions or that you have cut a very thick book at high speed.  Reset the alarm and run pre-set                                                                                                                                                                                                                                                              |
| 4  | Milling cutter motor thermal trip | Check and, if necessary, replace the fuse FU13.01                                                                                                                                                                                                                                                                                                                                                                      |
| 5  | Emergency button pressed          | Check that the EMERGENCY stop button has not been pressed                                                                                                                                                                                                                                                                                                                                                              |
| 6  | Open rear door                    | Close the back door                                                                                                                                                                                                                                                                                                                                                                                                    |
| 7  | Top door open                     | Close the top door                                                                                                                                                                                                                                                                                                                                                                                                     |
| 9  | Cart Encoder Error                | Cart Encoder Error. Check that there is nothing blocking the movement, reset the alarm and run pre-set.                                                                                                                                                                                                                                                                                                                |
| 10 | Vise encoder error                | Clamp encoder error. Check that there is nothing blocking the movement, reset the alarm and run pre-set.                                                                                                                                                                                                                                                                                                               |
| 11 | Glue head encoder error           | Glue Head encoder error.<br>Check that there is nothing blocking the movement, reset<br>the alarm and run pre-set.                                                                                                                                                                                                                                                                                                     |
| 12 | Cover encoder error               | Cover encoder error. Check that there is nothing blocking the movement, reset the alarm and run pre-set.                                                                                                                                                                                                                                                                                                               |
| 13 | Press Movement Error              | The press did not reached the highest or lowest point in the given time, possible causes: the press is blocked so it is necessary to unlock it manually, in order to do so turn off the machine and remove the fan hood on the motor, looking down on it and turning it clockwise the press descends, broken sensor (upper or lower), the press motor is broken or the inverter is broken or switched to alarm status. |
| 17 | High Temperature Glue Fuser       | The fuser is not within the set tolerance (max. +5°C)                                                                                                                                                                                                                                                                                                                                                                  |
| 18 | Low Temperature Glue Fuser        | The fuser is not within the set tolerance (min2°C)                                                                                                                                                                                                                                                                                                                                                                     |
| 19 | Glue Head High<br>Temperature     | The head is not within the set tolerance (max. +5°C)                                                                                                                                                                                                                                                                                                                                                                   |
| 20 | Glue Head Low<br>Temperature      | The head is not within the set tolerance (min2°C)                                                                                                                                                                                                                                                                                                                                                                      |



| 21 | Lack of Air             | Make sure the input pressure gauge is calibrated to 6 Bar or that the compressor is the right size.                                                                          |
|----|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22 | Cover Missing           | The cover is not in position                                                                                                                                                 |
| 23 | Missing manual          | The book is not in position                                                                                                                                                  |
| 24 | Blocked glue photocell  | Wipe the stop glue photocell and its reflector.                                                                                                                              |
| 25 | Glue photocell anomaly  | The photocell has detected two or more pulses. Do not insert two books or clean the clamp.                                                                                   |
| 26 | Book too thick detected |                                                                                                                                                                              |
| 33 | Wait Heating            |                                                                                                                                                                              |
| 34 | Machine with Cleaner    | When the machine is switched off the head is cleaned using the automatic cycle of the cleaner. Use the load cycle to load the glue.  The cart does not work with this alarm. |

#### SHAVINGS EXTRACTOR - VACUUMS LITTLE:

- Make sure that the shavings extractor bin is empty.
- Check that the inspection Plexiglas, located on the cutter is free.
- Make sure the vacuum hose is not full of shavings.
- Check that the suction filter is clean.
- Make sure the hose is connected...

#### **VISE - DOES NOT START:**

- Make sure that the emergency button is disabled.
- Check that all doors are closed.
- Check the air pressure of the machine.
- Check that the cart is in place
- Is the display on the main page?

## **IRREGULAR GLUE START STOP:**

- Clean the glue application group.
- Verify that the temperature of the glue unit is consonant with that of the used glue.
- Check the state of the glue. The glue must not be inserted in the machine for too long or kept at the working temperature. This increases the viscosity of the adhesive itself.

# **UNEVEN MILL - CUT AND RIBBING:**

 Make sure that the teeth and notching cutter parts are not cracked or damaged. This may be caused by books already bound with glue. IF WE NOTICE THAT BOOKS WITH GLUE WERE MILLED, THE WARRANTY IS VOID.

#### PLATE GUARD CUTTER - DOES NOT OPEN OR CLOSE CORRECTLY:

Thoroughly clean the contact surfaces of the guard.

#### **HEAD - EXIT OF TOO MUCH OR TOO LITTLE GLUE:**

- Check the air pressure of the glue unit.
- Make sure that the shutter of the head is free, passing the blade provided with the kit.
- Check that the lateral sizing holes are free, passing the steel wire supplied with the kit.
- Check that the injectors are working properly (must move back and forth with a 8-9 mm stroke).



- Verify that there is glue in the tank.
- Verify that the glue is not cured in the tank.
- Ensure that the fuel tap is open.
- Verify that the position of the inner side clamp is 0.15 tenths behind with respect to the thread
  of the vise.

## **PRESS**

- Book dented: clean the plates with suitable solvents and do not use abrasives.
- The edge is pinched: contact technical support.
- The book block is lined laterally: make sure you entered the correct thickness of the book.
- Clean the cutter rear contrast.

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