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Morgana Systems Limited • United Kingdom • www.morgana.co.uk • Telephone: (01908) 608888 • Facsimile: (01908) 692399

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#### **INTRODUCTION** 1

## THE READING OF THIS OPERATOR AND MAINTE-NANCE MANUAL IS FUNDAMENTAL FOR THE SAFETY OF THE USER AND FOR THE PROPER USE OF THE EQUIPMENT.

We thank you to have bought our product. This machine has been designed specifically for your job and your applications, and provides a high quality production and a wide range of functions. This manual describes how to use the machine, starting from the configuration phase to the most important operations. This manual has been written in order to be easily understood also by user not trained about the use of this kind of machine. For the best use of the equipment, please read carefully this manual before to use the machine. After reading, we suggest saving the manual in a safety place and don't hesitate to read him when necessary.

#### **1.1 CE CONFORMITY**

#### DICHIARAZIONE DI CONFORMITÀ CE CE CONFORMITY DECLARATION DIRETTIVA CE PER MACCHINE 2006/42/CE, DIRECTIVE FOR MACHINES 2006/42/CE, E SEGUENTI DIRETTIVE EUROPEE (ALLEGATO IIA) AND FOLLOWING EUROPEAN DIRECTIVES (ANNEX IIA)

- COSTRUTTORE, MANUFACTURER: K.G.S.SRL Via Donizetti 5 20090 Assago (Mi) 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 : PERFECTBINDER MASTERBOOK 450
- MATRICOLA / SERIAL : MB450-XXXX
- ANNO DI COSTRUZIONE / MANUFACTURED IN 2013

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 2004/108/CE / EMC Directive 2004/108/CE
- Direttiva sulla Bassa tensione 2006/95/CE / Low Voltage Directive 2006/95/CE

## 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

Assago , (MI) Italy \_\_/\_/2013

Dott. Marco Alfredo Tumaini Amministratore unico

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

Via Donizetti 5 – 20090 Assago (Mi) C.F. / P. IVA n. 07011970964 – R.E.A MI - 1929278 – Capitale Sociale € 10.000,00 i.v.

#### SAFETY

### **1.2 SAFETY SYMBOLS**

In the manual some symbols are used to inform about dangerous situations for people and/or things

The following symbols mean dangerous situations for people and/or things

If you don't follow carefully the appropriate procedures, damages can occur to people and/or things, and in extreme situations also fatal accidents. Together with the symbols it is written also what to do.

$\underline{\bigwedge}$	Attention – General danger!
Â	Attention – Electrical voltage! Risk of electric shock.
	Attention – Sharp blades! Risk of cut.
	Attention – Hot surfaces! Risk of burn.
<b>Nor</b>	Attention – Risk of rolling parts! Risk of crushing.
	Attention – Risk of chain on the go! Risk of crushing.
	Attention – Risk of parts on the go. Risk of crushing and cutting

In case of not warning of the symbols damages, also great, can happen to the machine and to the accessories.

### **1.3 SYMBOLS OF PROHIBITION AND OBLIGATORINESS**

$\bigcirc$	This symbol means a prohibition.
$\bigcirc$	This symbol means an imperative.
	This symbol means that it is mandatory to read in this manual information re- garding specific topics (for ex. related to the specifications of the electric and pneumatic connection).

### 1.4 THE SAFETY DURING THE USE OF THE MACHINE

#### 1.4.1 GENERAL

The manufacturer guarantees that the contents of this manual are in specification with the procedures required by the machine. The manufacturer therefore will be not responsible if the machine will be used in a different way from what indicated in this manual.

#### 1.4.2 SAFETY WARNINGS

Before the use of the machine, please read carefully the manual. Save the manual for further needs.

By apply different procedures, and not the specific procedures described in the manual, can produce operational problems.

Please, read carefully the following safety rules.

	<ul> <li>It is forbidden to use the machine when occurs one of the following situations:</li> <li>in explosive environment;</li> <li>in flammable atmosphere;</li> <li>in excessive durst environments.</li> </ul>
Ŵ	Danger! Failure to comply with some or all the instructions listed in this manual could cause damage to the machine and / or personal injury. The manufacturer is not re- sponsible for an arbitrary and improper use of the machine such as: Using the machine by untrained personnel; Use contrary to law; Incorrect installation; Defects in electrical power and / or pneumatic; Partial or total failure to comply with the instructions; Lack of maintenance and / or use of aftermarket parts; Changes or other actions not authorized by the Manufacturer;

### **1.5 SAFETY CLOTHING**

Clothing to use during the cleaning and /or maintenance operations

Eye protection against any spray of PUR glue or high temperature cleaner
Respiratory mask suitable for the glue you are using Protective gloves

Tight clothing, to avoid that they remain engaged with protruding parts.

Long hair must be covered or otherwise collected by using e. g. a protective screen.

Do not wear watches or jewels.

#### Safety clothing

17A	The safety clothing IS NOT INCLUDED in the machine and must be pro- cured by the machine user.
	The operator should wear clothing appropriate to the situation and special- ly during the following operations: -Maintenance -Replacing of the PUR glue -Cleaning of the PUR system
I was in was Dimmen	<ul><li>a) Eye protection against any spray of PUR glue or high temperature cleaner</li><li>b) Respiratory mask suitable for the glue you are using</li></ul>
	c) Protective gloves for high temperature

### **1.6 INSTALLATION OF ELECTRICAL CABLES AND HOSES**

Cables and hoses must be put inside of special cable channels to avoid the people to stumble and get hurt.

### **1.7 SAFETY EQUIPMENTS IN THE PERFECT BINDER**



**DANGER!** It is forbidden to remove or disable the safety guards for the safety of persons, and to tamper and / or modify, even partially, safety devices installed on the machine. In case of alarm signals due to the intervention of the safety, the operator must request the immediate intervention of technical people trained on the maintenance. The manufacturer is not responsible of any damage to persons or animals caused by tampering with the guards.

#### **1.7.1 Emergency Button**

It is located on the front, easily accessible from the operator's position.



#### 1.7.2 GREEN BUTTON FOR START CYCLE



The green button accomplishes the command to start the cycle; that means that the cover feeder (if enabled) draws the cover and lay it down on the nipping station, the clamp closes and moves rightwards. The milling station (if enabled) will make the cut, the glue will be applied and the nipping station (if enabled) will apply the cover on the book. The release will automatically lay down the book on the exit belt. All this if I have put the book in the clamp.

#### 1.7.3 OPTICAL BARRIERS AND SAFETY PROTECTIONS

There are two safety optical barriers at the end of the binder.

In case of occupation of the work place during the production cycle, the machine stops instantly in a state of emergency, preventing and avoiding of shocking or crushing objects or hands or arms of the operator



There are two sliding barriers on the right end of the binder.

In case of opening, they block the nipping station operation avoiding and preventing shocks and crushing for hands and arms of the operator.



### **1.7.4 PROTECTIVE PLATE FOR MILLING STATION**

The plate consists of a mobile plate that, except when the book block is moving, covers the mill in all operating conditions, even at a standstill.	An elastic cord with a long excursion exerts constantly on the plate (F) a force (see arrows) that covers the mill disc. A sensor monitors and stops the cutter if the guard is closed, the motor of the cutter is also equipped with a brake.

#### 1.7.5 MAIN SWITCH

It is located on the left side of the machine



### **1.8 RESIDUAL RISKS**

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



### **1.9 PURPOSE**

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

a) Signatures, or sheet of paper (printed or not) for the block book

b) Cardboard as cover of the book

within the limits specified in the data sheet, included in this manual.

#### 1.9.1 USES NOT PROVIDED, USES PROHIBITED



The user has the total responsibility of the damages to people or things due to an improper use outside of their intended use.

### 2 TECHNICAL SHEET DigiBook 450

### 2.1 MECHANICAL SPECIFICATIONS

### Machine features:

Cycle/Hour	450 mechanical cycles
Spine length	39.370 – 177.17in
Workable height of the book	47.244 – 125.98in
Max. Cover size	275.59 x 177.17in/94.488 x 43.307in
Workable thickness of the book	from 0.78740 to 19.685in
Max. Cover Weight min./Max.	from 0.017lb to 0.057lb
Control Screen	
Touch - Screen	Yes
Copy Counter	Yes
Memory of the jobs	Yes
Diagnostic and Check	Yes
Setting size, temperature control	Yes
Speed	Yes
Book Loading	
Adjustment of the clamp	Automatic, according to parameters introduced by the user
Clamp opening	Automatic, electrically driven
Clamp closing	Adjustable air
Spine preparation	
Milling disks	Ø 62.992in
Notching	(4 optional)
Roughening for spine processing	8
Brush for spine processing and cleaning	1
Excludable mill	Mechanical (with position control)
Milling thickness	Variable from 0 to 0.090551in
Chips aspirator	Enclosed in the machine
Glue application system	
Tank PUR/Hot-Melt glue	6.6lb sealed
Extrusion system of PUR/Hot-melt	Integrated and sealed
Extrusion head adjustment	Automatic
Side adjustment (used for signatures or stitching book)	Mechanical
Glue Stop	Adjustable by Touch-Screen
Cleaning / sealing	Yes

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Nipping station	
Nipping station	Pneumatic
Adjustment	Force / pressure, nipping time
Mechanical Adjustment	Automatic/mechanical height adjustment
Mechanical Adjustment	automatic front and rear guide for the cover on
	the nipping station according to the parameters
	set on Touch-Screen
Positioning for the cover	automatic
Cover Feeder	
Positioning for the plane for cover	automatic

Adjustment for cover positioning	automatic/manual
Cover draw	automatic
Scoring system	(optional with rolls)
Check for presence of cover	yes
Check for cover misfire	yes
Cover perforation system	(optional with rolls)

### Dimensions, weight

Length	101.77in
Width	82.283in
Height	53.937in
Weight	1874lb

#### **Electrical absorption**

Installed Power	8,5 Kw
Absorbed Power	6 Kw
Power distribution network	400 V ±5%, 50 Hz, 3 ph + N + PE

#### 2.1.1 ELECTRICAL SPECIFICATION

#### Electrical power 400 V ±5%, 50 Hz, 3 ph + N + PE

Power of the machine	Protection fuses on the power network are duties of the customer
Distribution cabinet, customer side	16 A Differential protection class A 300mA

#### 2.1.2 PNEUMATICS SPECIFICATION

#### Supply pressure

The pneumatic system of the user must ensure, in the inlet connection of the compressed air in the perfect binder, the following values:

Min.: 101.5psi (7 bar)

Must guarantee an air consumption of 12.3 ft<sup>3</sup>/min (350 l/min)

air quality: Class 3

#### Pneumatic Characteristics of the machine

Compressed air consumption 7.06 ft/min (220 l/min) Calibration of input gauge 87 psi (6 bar) Min. working pressure 79.7 psi. (5.5 bar) If the pressure value falls below this value the machine enter in an "alarm" condition Diameter of air inlet 0.39in (10mm)

The 0.39in diameter hose for the connection to the compressor is not provided together with the machine. It is suggested the use of a compressor equipped with the automatic condensate drain, to avoid verify weekly if there is some water inside the compressor.

It is suggested to use a silenced compressor, if the compressor is located inside the working plant.



Air quality provided to the Perfect Binder CLASS 3, DIN ISO 8573-1 Durst: 5 micron - 5 mg/m3 Water: -20°C (-4F) - 0,88 g/m3 Oil: 1 mg/m3

	The compressed air system upstream of the machine must be equipped with a dryer.
•	Periodically check the quality of the compressed air supplied to the machine and the operating values .

#### AIR QUALITY PROVIDED TO THE PERFECT BINDER

To make work the pneumatic devices in an affordable, efficient and safe way, the compressed air supplied to the pneumatic device must have the following quality features: Pressure, Quantity, Water content, Solids content, Oil content.

#### DIN ISO 8573-1 – AIR QUALITY CLASS

The manufacturers of pneumatic components refer to the quality of compressed air to use on their products, referring to the table below.

Classe	Classe Corpi solidi		Contenuto d'acqua	Contenuto d'olio
	Max. dimensioni delle particelle [µm]	Max. densità delle particelle [mg/m <sup>3</sup> ]	Max. punto di rugiada [°C]	Max. concentrazione olio [mg/m <sup>3</sup> ]
1	0,1	0,1	-70	0,01
2	1	1	-40	0,1
3	5	5	-20	1
4	15	8	3	5
5	40	10	7	25
6	-	in the second se	10	-
7	-	-	non specificato	-

The compressed air used in the industry contains water, oil, dust and other impurities. The interaction of these elements produces an aggressive mixture that can damage the compressed air devices and also the PUR glue contained in the PUR tank, the results will be a low quality production and increased maintenance costs.

### **3 STANDARD ACCESSORIES**

The standard composition includes:

- Cleaning Kit
- Start- up Kit

**CLEANING KIT** 



#### **START-UP KIT**



### **4 TRANSPORTATION**

	The binder must be moved with a forklift. It can be forked frontally or from the back. On the bottom of the frame, the binder is pro- vided with channels for insertion of the forks. The machine can be moved <b>only</b> after removal of the exit belt.
	For final positioning or small transfers you can use a trans pallet. The machine can be moved <b>only</b> after removal of the exit belt.
988 for fork l	ift 164 164 164 164 164 164 164 164

The image shows the location and size of the channels for the brackets for the trans-pallet and the forklift.

•	<b>DANGER!</b> For no reason the staff is authorized to pass under a suspended load
	during transport or in the proximity of. The producer is not responsible for what
	happens during this operation, this operation must be carried out by qualified and
/ : \	authorized personnel, with the necessary individual safety protections (clothes,
	shoes, gloves, helmet, and glasses).
	Attention! The machine is balanced. In any case keep the forks low.
Λ	In case of unbalance use weights. It is forbidden to hold by the hands the project-
	ing parts. The machine and its parts must be protected from the weather outside.
	In particular, water, dust and moisture can oxidize certain elements of the ma-
$\sim$	chine, damaging them irreversibly. Follow the usual precautions to avoid falls and
	bumps.
	•

#### IMPORTANT

a) We do not provide tools for docking and lifting.

b) The disposal of packaging materials will be provided by the recipient and must be conducted in accordance with the local regulations.

c) Remove dust and dirt accumulated during the transportation.

### **5 STORAGE**

The information contained in this section must be observed in case of temporary storage of the machine that may occur in the following situations:

- Installation of the machine not immediately after its delivery.
- Uninstalling the machine.
- Storage awaiting a new location.

The machine must be stored and transported under conditions of SAFETY as shown in the table below.

Conditions of transportation and storage	
Temperature average	23/+131°F
Humidity average	30/90%
Lighting	Adequate natural and / or artificial
Weather	Adequate weather protection
Space required	Adequate to allow the operations of lifting and carrying in SAFETY.
Horizontal bolster	Horizontal bolster must have a capacity in
	excess of the total mass of the machine.
In the case of removal or unused for long peri-	The damage caused by this failure will
ods (over 30 days), it is necessary to drain the	void the warranty of the glue device.
glue system and to put inside the protection	
cleaner.	
During periods of downtime you should not	The damage caused by this failure will
open the tank containing the glue; otherwise it	void the warranty of the glue device.
accelerates the deterioration creating serious	
permanent damage to the glue device.	
Protect with anti-corrosive products the parts sub-	
ject to wear and work plans. Ref. to the section	
"maintenance".	
Do not climb or place any objects on top of the	
machine	

## 6 LAY-OUT



### 7 POSITIONING AND WORKSPACES

#### Positioning:

The Perfect Binder must be positioned so as to have a clear space around of at least 31in, and around the work area at least 59.055in.

The room where the machine is installed must be properly ventilated with air change as required by law.



#### Aree di lavoro

Glue Inspection Area	Glue loading area. The operator accesses to this area to load the glue	
	on the machine.	
	Access area for service, to reach the electrical and pneumatic panel.	
Transit Area	Transit area from workplace to glue loading area.	
Work Area for the Opera-	Working area for the operator for normal use of the machine	
tor	working area for the operator for normal use of the machine.	

### 8 INSTALLATION

### 8.1 TECHNICAL STAFF FOR THE INSTALLATION

The machine must be installed by people specifically trained and authorized by K.G.S. .

# 8.2 PHYSICAL CHARACTERISTICS OF THE AREA OF PLACEMENT

In addition to the overall dimensions of the machine given in the previous chapter, you must also meet the following conditions:

Near the area of placement of the machine should be arranged the sources of electric power and pneumatic following what is written in this manual.

Provide sufficient space for normal use, maintenance of machinery, for any command and for additional equipments to connect. Refer to the draft in the chapter of the positioning.

The chosen site should not be close to deposits of flammable materials, or to operational sites that may create flammable or explosive atmospheres.

For the installation you must choose an operational area depending on the size of the machine parts and lifting equipment selected, pay attention to the presence of any obstacles on the road (equipment's, walls, etc.).

### 8.3 BOLSTER

The machine requires no special foundations. It must be ensured the availability of an industrial floor.

The producer has no responsibility about construction of foundations (resistance calculation, thick reinforced concrete, etc.), which are under responsibility of the customer or company performing the design and construction of the foundations themselves.

The Perfect Binder lays on 4 feet (2 with 3.9in diameter and 2 with 1.6in diameter).

### 8.4 WEATHER PROTECTION

The machine must be placed indoor, protected from direct contact with atmospheric agents.

### 8.5 LIGHT

To use and maintain in a safety way the machine a good light is needed. The room lighting should have a value that should allow normal operations without causing risks due to the shadows.

### 8.6 ENVIRONMENTAL CONDITIONS

The values of temperature and humidity should be within the values in the table below.

In case of use of the system in corrosive environments it is important to intervene in the maintenance of the machine with adequate time to avoid excessive wear of components.

	MIN	MAX
Room temperature	41°F	104°F
Relative humidity	20%	80%

### 8.7 ELECTRICAL CONNECTION

Electrical cable

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



#### 8.7.1 GROUND CONNECTION

The Perfect Binder is equipped with an earth conductor (PE).



### **9 QUALIFICATION OF THE OPERATOR**

**DANGER!** The operator must be trained about the operations to perform during the occurrence of possible faults, malfunctions or conditions of danger to themselves or others, and anyway he must perform the following procedures:

Stop the machine quickly by pressing the emergency button (red button installed aboard of the machine itself);

Do not carry out operations that go beyond the specific knowledge and techniques;

Immediately inform their superior head, avoiding taking personal initiatives.

It is assumed that the operating and maintenance personnel possess the following minimum requirements:

- Culture in general and specific enough, each to his ability, to read and understand the contents of the manual including the correct interpretation of drawings and diagrams, pneumatic and hydraulic;
- Ability to understand correctly the symbols and video messages;
- Overall knowledge of the machine and the plant in which it is installed;
- Specific experience in the applied technology;
- Knowledge on what to do in an emergency, the availability of personal protection equipment and how to use them.

### **10 POWER ON**

- 1) Be sure that the machine is correctly fed by air and electrically..
- 2) Turn on the machine turning the general switch.
- 3) Open the valve on the premelter
- 4) Close the rear inspection panel.

On display you will see:

- machine in emergency
- machine with cleaner
- machine not in temperature
- The red light is on

5) Press once the green key,

green is blinking

orange is on

red is blinking

on display :

machine with cleaner

low temperature

- 6) Exit from the alarms page using the arrow, in case the machine is equipped with the table to measure thickness, you must press "OK" to set to zero the table.
- 7) When the temperature icon becomes green, press the green key. The machine sets to zero the axes.
- 8) Press the key "glue cleaner" to load the glue.
- 9) Set the values for the book and the cover you want to realize and press the green button. The orange light is on, the green one is blinking, the machine will position the axes.
- 10) Put the cover in the cover feeder, fix the lateral and the rear positioning devices. Close the safety cover.
- 11) Put the book in the clamp and press the green button. The machine will produce the book and it will release it on the plane for collection at the end of the release belt.

### **10.1FUNDAMENTALS**

Λ	Pay Attention during the glue	
Ι.λ	loading because of the high tem-	
	perature, as indicated by the la-	
	bel, and use protective systems	
	such as gloves.	
	When you operate with PUR	
	glue or with glue that is harmful	
Λ	to health, you have to adopt all	
	the safety systems to handle	
	these kind of substances, espe-	
	cially when you open the glue	
	tank or when you replace the	
	glue or you do the cleaning pro-	
	cedure for the nozzle and the	
	premelter.	
	The tank has to be added with	Drain as much as possible the glue that
	the same type and model of glue.	you want to replace.
	You can use a different kind of	Enter in the tank a quantity of about
$\sim$	glue only when the system is	500g of Blue-Cleaner and make it pro-
	completely empty and cleaned	trude from the main slot and the channel
	by using the Blue-Cleaner.	of the glue; if at the end of this cleaning
		cycle you are not sure that from the
		valve 100% Blue-Cleaner exits, repeat
		the operation.
	Never open the tanks when they	Possibility to break the seal gasket. In
	are cold.	addition to that the air humidity will en-
( )		ter into the tank and will be trapped
		causing premature ageing of the glue
		(curing) with likely obstructions and
		need of maintenance.
	The machine can't stay with the	The glue in contact with moist air modi-
	glue tank opened more than 10	fies her composition, damaging the ma-
	minutes if there is PUR glue in-	<u>chine.</u>
	side.	

	The machin	ne can't stay with the	The PUR glue dries permanently: in this
	glue system empty for more than		case you risk permanent damage to the
	10 minutes		glue system. If you don't have a glue car-
	10 minutes		tridge available nut in the tank at least
			500 grams of Blue and wait to be malted
			before to gwitch off the machine
			before to switch off the machine.
	The machin	na cannat ha without	Without air compressed inside the ma-
	air compre	assod when the glue	ching the valve that handles the glue
	all compre	ill hot	spilling in the head could open demoging
	Station 15 St.	III IIUt <b>.</b>	spining in the near could open damaging
	Clean the r	nozzla of the alue sta-	Any failure to comply with these proce-
	tion and of	the tenk as described	dures will make void the guarantee of
	in the follow	ving chanters	the machine
	in the follow	ang enapters.	the machine.
	On premelt	ter and on glue nozzle	
	use the ter	nperatures suggested	
	by glue pro	ducer.	
•			
	Avoid opening the lid frequently,		
	the moisture in the air damages		
	the features and durability of the		
•	glue.		
	The depletion of the glue is		
	found in tw	o ways:	
	the lack of	glue on the book;	
•	ejection at	the glue extrusion	
	zone of air	and glue bubbles.	
	When you f	inish the glue and in-	
	sert a new cartridge you have to		
	wait about 20 min before the		
	new glue melts.		
	The machine does not operate		
	until the set temperature is not		
	reached.		
• Red light on	Dad light on Mashing in an and		y with auviliary turned off
Red light blinkir	ησ	Machine on cycle with	y with auxiliary turned on
Red light off	Number         Machine on cycle with a subscription of the subscriptine of the subscription of the subscription of the subscriptine of		v and without alarms on
Orange light on	Orongo light on Machine with fad away		iliarv
Orange light on		with itu dua	Julius J

Auxiliaries turned on or off in
Auxiliaries turned off
Machine on cycle
Machine not on cycle
Machine not ready

### **10.2ELECTRICAL CONNECTION**



Make sure that the cable of the Perfect Binder is connected to electricity network with the specified features.

Turn on the main switch located on the left side of the machine, turn right to achieve the position 1 = (ON).

### **10.3PNEUMATIC CONNECTION**

Connect the pneumatic power source following the procedure:





**Danger!** Risk of collision due to uncontrolled movements of the hoses subjected to passage of compressed air.

### **10.4 DESCRIPTION OF THE GROUPS**






A1	Intake pressure adjustment.
A2	Intake pressure manometer.
В	Adjustment lever for split blades

C D	Adjustment for flow rate of front air blows. Buttons to lower/raise the cover feeder sur- face.
A B1	Height adjustment for cover feeder surface. Depth adjustment for creasing. 1= does not crease
B2	Lever to raise the creasers. It is possible to insert between the tag and the knob a part of the cover you are working on, in this way you can crease several kinds of covers with the same depth only replacing the part of the cover.
С	Height adjustment of front air blows.
D	Knob to be removed in case of misfire.

А	Lateral rear edge (motorized)
В	Removable front-lateral hedge to facilitate cover insertion.
С	Lateral front hedge (manual) to containment the covers.
D	Sensor for cover presence.
In th not p	e two suckers indicated by white arrows it is possible to exclude vacuum.
For the other four, it is possible to eliminate vac- uum, rotating the correspondent valves (see en- largement), following the rotation indicated by red arrow you can close the valve.	
STD EXIT BELT	
AB	Frontal blowing system. It is magnetic, with possibility to adjust position and quantity of the air dispensed through the built-in valve. Lateral hedge, magnetic, with support function. Manual system to adjust height and depth
	A B C D In th not p For t uum large red a <b>STI</b> A B

	ST	ACKER EXIT BELT
A B B B B B B B B B B B B B B B B B B B	А	Frontal blowing system. It is magnetic, with possibility to adjust position and quantity of the air dispensed through the built-in valve. Support with depth adjust- ment.
	В	Lateral hedge, magnetic, with support function. Automatic system to adjust height and manual system to adjust depth
	A	Automatic system to adjust height, this is regulated by a lateral sensor. Once you have filled the stacker, the ma- chine send an alarm to the A62 (Books Stacker Full). To rise again the plane, wave fast your hand in front of the sensor "A"
	On t Gate The door	he back access to the tanks. machine makes movements only with the closed.



# **10.5 CHIPS ASPIRATOR**

The chips aspirator is located inside the cabinet of the Perfect Binder and is electrically connected to the binder herself. When the binder is delivered, the chips aspirator is ready, mechanically (aspiration tube) and electrically connected, he switches on and off together with the Milling Station.





Every day the chips aspirator must be emptied and cleaned to be ever efficient

# 10.6PUR TANK OPENING AND CLOSING AND GLUE LOADING.

#### **10.6.1 OPENING OF THE PUR TANK**

To access the glue tank it is necessary to open the sliding door provided with handle. The opening of this protection put the machine in a state of emergency and reduces the pressure of the glue tank while the Cleaner tank remains at a pressure of 2 Bar about. The machine can't work with the back door open.

#### WARNINGS ON THE OPENING OF PUR TANK

	Wear hand protection, all parts are at high temperatures.
$\triangle$	Wear protections for face, respiratory mask suitable for glue and protection glass- es
	Never open the tank when it is COLD.
	Possibility of breaking the seal gaskets and because of this The air moisture would
•	enter and remain trapped in the tank causing premature aging (curing) of the PUR
	glue with probable clogging and maintenance need.
!	Avoid to open the PUR tank with no reason.
	Limit the opening time.
	Close the tank as soon as possible

44

Please follow scrupulously the sequence below. Open the sliding door on the rear part using the handle. The machine goes to emergency state and reduces the pressure in the glue tank, while the cleaner tank is at 2 bar (29 PSI) about. 4) Loosen the block knob. Rotate it anticlockwise. Pay attention to high temperatures. Use protective gloves. 5) Recline the block knob until the rest position. In this way the cap can be opened. 6) Lift the cap to the maximum opening grabbing the lateral knob rel. 2.00-B

#### 10.6.2 PREPARATION AND PUR GLUE LOADING



# Operators Guide

	Close the cap.
	Lift the knob, paying attention to high temperature components. Turn the knob clockwise vigorous- ly to tighten the tank.
	Close the sliding door on the back of the machine with the handle.

#### **10.6.3** CLEANER LOADING



# Operators Guide

	Tighten the knob until the noise of escaping air disappears.
	Close the sliding door in the back of the machine with the handle.

# **11 FUNCTIONS OF THE PERFECT BINDER**

# **11.1START UP PAGE**

Sectioning



9.9	-Selector for book type
	-Front glue stop
9.9	-Rear glue stop
9.9	-Rear cover set
	-Height cover set
9.9 9.9	-Book thickness
	Optional:
	Thickness detection for the book.
	Position a book onto the measurement table and press the
	key, the machine will modify the clamp dimension and also
	the dimensions of the glue station and scoring tools.

Press the picture of the book. In the first page it will appear the dialog box for selecting the type of book work. See below.



Button for the production of books with cover.
Button for the production of book blocks to verify glue spread. In this case nipping station, cover feeder and discharge are disabled. To remove the book from the clamp you need to press the green button.
Button for the production of sewn books with cover. In this mode the machine works only if the milling cutter is switched off and the jogger is set to 0.

9999999	Meters display
999.9 🔀	Selector for book residence time in the nipping station.
	Management page for working JOB.
	Speed selector
	1-2-3
	Alarms
	Red blinks in case there are alarms or warnings.

#### Operators Guide



When this symbol appears and blinks it means that some axis is not in the right position. Pressing it, you open the dialog box below.



Grey icons indicate that the reset for the axes has not been done.
The icons changing color from yellow to green indicate that the axis has done the reset, but it is not in working position.
The green icons indicate that the axes has done the reset and it is in work position.
Open the dialog box for alarms presently in that moment.

999.9	Clamp set up
999	Glue station set up
999	

Nipping station set up
Cover feeder set up
Cleaning procedure with CLEANER or GLUE loading
Advanced set up

	٨	Indicate the arrival position for the book
B	Α	block compared to the cover.
A 999 C 9.99 999.9 999 C 9.99	B C	Current temperature for the premelter Current temperature for glue station
	D	Current position for nipping station height

Groups status bar
If red, turned off
If yellow, value modified in the advanced set up

### **11.1.1 DISPLAY FOR PRODUCTION METERS**



	<i>Meter of total production:</i> Meter showing all the items produced during the life of the machine. It is not possible to reset it. Pressing on the icon in the picture you will visualize the correspondent number.
	<i>Meter of partial production:</i> Meter showing the items produced. It is possible to reset it pressing the RESET button. Pressing on the icon in the picture you will visualize the correspondent number.
<b>*</b>	<i>Meter of produced items:</i> Meter showing the items produced in the day. It is possible to reset it pressing the RESET button. Pressing on the icon in the picture you will visualize the correspondent number.
3,2,1	Item to produce: Meter showing the items to produce. Press the blue number and insert the desired quantity. To remove this function, you need to set the number of books to produce = 0. Pressing on the icon in the picture you will visualize the correspondent number.

#### 11.1.2 ALARMS PAGE



List of Warnings and Messages :

$N^{o}$	Warnings	Description
4.01	Machina Emorganov	Verify that the emergency button is not pressed and press
A01	Machine Emergency	green button.
A02	Fault Drive Arm	Driver error for cover feeder arm.
A03	Fault Drive Carriage	Driver error for carriage engine control.
A04	Fault Drive Delivery Arm	Driver error for delivery arm.
A05	Trip Safety Light Curtain	The SAFETY barriers are occupied with the machine in move- ment.
A06	Inspection Door Open	Rear panel for loading/inspecting glue tank is open, close it and press START.
A07	Encoder Error Side Jogger	Encoder error for cover guide of cover feeder. Verify there are no obstructions for the movement, reset the alarm and press START
A08	Encoder Error Suctions Bar	Encoder error of the cover feeder arm. Verify there are no obstructions for the movement, reset the alarm and press START
A09	Error Carriage Encoder	Encoder error of the carriage. Verify there are no obstruc- tions for the movement, reset the alarm and press START
A10	Error Clamp Encoder	Encoder error for the clamp. Verify there are no obstruc- tions for the movement, reset the alarm and press START
A11	Error Glue Nozzle Encoder	Encoder error for the nozzle. Verify there are no obstruc- tions for the movement, reset the alarm and press START
A12	Error Press Encoder	Encoder error for the nipping station height adjustment. Verify there are no obstructions for the movement, reset the alarm and press START

A13	Error Cover Encoder	Encoder error for frontal guide for cover on the nipping sta- tion. Verify there are no obstructions for the movement, re- set the alarm and press START
A14	Error Table Encoder	Encoder for thickness survey. Make sure you have not left anything under thickness detection device and reset the alarm and press START.
A15	Encoder Error on Back Cover	Encoder error for the rear guide of cover on the nipping sta- tion. Verify there are no obstructions for the movement, re- set the alarm and press START
A16	Encoder Error Creasing	Encoder error on the creasing adjustment . Verify there are no obstructions for the movement, reset the alarm and press START
A17	Hight Temperature Glue Premelter PUR	The temperature measured on the premelter is 41 $^{\circ}$ C higher than the set one. Wait for system to cool.
A18	Low Temperature Glue Premelter PUR	The temperature measured on the premelter is 35.6 ° C lower than the set one. Wait for the system to heat.
A19	Hight Temperature Glue Nozzle	The temperature measured on the nozzle is 41 $^{\circ}$ C higher the set one. Wait for system to cool.
A20	Low Temperature Glue Nozzle	The temperature measured on the nozzle is $35.6 \degree C$ lower than the set one. Wait for the system to heat.
A21	Wait Heating in Progress	Heating in progress. This alarm occurs when the system is warming up or during the warm-up timer when the measured temperature and the set temperature differ by a delta greater than $104 \degree C$ .
A22	Machine with Cleaner	At shutdown of the machine the head cleaning has been made with the automatic cycle of the cleaner. Use the loading glue cy- cle, load the glue. The machine with this alarm does not work.
A23	Perform Maintenance of NEEDLES !!!	The nozzle valve is not working properly. Call technical support.
A24	Hight Temperature Glue Premelter EVA	The temperature measured on the premelter EVA is 41 ° C higher than the set one. Wait for system to cool. (OPTIONAL)
A25	Low Temperature Glue Premelter EVA	The temperature measured on the premelter EVA is 35.6 ° C lower than the set one. Wait for the system to heat. (OPTIONAL)
A26	Hight Temperature Glue Pipe EVA	The temperature measured on the glue pipe EVA. EVA is 41 $^{\circ}$ C higher than the set one. Wait for system to cool. (OPTIONAL)
A27	Low Temperature Glue Pipe EVA	The temperature measured on the glue pipe EVA is $35.6 \degree C$ lower than the set one. Wait for the system to heat. (OPTIONAL)
A28	Cover Press Protection not Closed	The front protections of the machine are not closed. Verify clo- sure of frontal protection.
A29	Cover Feeder Protection not Closed	The cover feeder protection is not closed. Verify closure of cover feeder protection.
A31	Book Tickness Out Range	The book thickness measured is less than 0.79 in or more than 2in. (OPTIONAL)
A32	Slave Module Comm Error	Error communicating with the slave PLC, reset the alarm, if it persists, call technical support.
A33	Remove Book from Clamp	The clamp needs to make a placement so reset alarm and press START.
A34	Insert Book in Clamp	START button is pressed without having placed the book in the clamp.
A35	Photoce.Book in Clamp Obstructed	Clean photocell and the reflector and remove obstructions.
A36	Photocellula Glue Obstructed	Clean photocell and the reflector and remove obstructions.

A37	Jogger Out of Position	Jogger not in position, the alarm occurs when the cutter is ex- cluded and the jogger is not put in the zero position. Set the jog- ger to zero position.
A38	Mill Door not Closed	Protection of the cutter is not closed. Verify that the cover closes and if necessary clean the guide.
A39	Mill Group Out of Position	Milling station is not in place, make sure that the lever is or ON or OFF position.
A40	Group Up/Down Press not in position	Height adjustment of the press is not in right position. Press START
A43	Thermal Switch QM13.01-02-03	Thermal overload of one of the following motors, milling, plane ascent covers, discharge conveyor. It is necessary to enable them by hand inside the electrical panel. Before doing this, verify everything and disconnect the power from the machine.
A44	Wrong Reading Glue Photocell	Photocell has read two pulses, do not insert two books or clean the clamp.
A45	TUTORIAL NOT COMPLETED	Complete the tutorial and continue.
A46	No Air Pressure	Air pressure fault to the machine. Verify that the manometer at the entry is at 6 bar (87psi) or that the compressor is suit- able.
A47	PLC Battery Low	
A48	End of Production	End of production appears when the copy counter has reached the predetermined number of books.
A49	Lack of cover on nipping station	
A61	Creasing Setpoint Out of Range	Check that the setpoint plus additional corrections is not less than 0.79in or more than 2in
A62	Books Stacker Full	Remove books from stacker (OTIONAL)
A64	Error Double Cover	Remove the covers in excess from the press. (OPTIONAL)
A65	Error on Cover Pick-up	Error in picking up covers. It appears at third time. Verify vacu- um pressure, split blades, power and front blows position.
A66	Cover Jam	Remove the cover from the transit area on creasers.
A67	Cover Front Setpoint too Small	Check the difference between the length of the cover and position of the rear guide is not less than 4.72in or more than 12.79in
A70	Please Remove Covers Pack	Necessary to allow the movement of the cover guide on the cover feeder plane.
A71	Photocell Discharge Book Obstructed	Verify the guide for releasing the book
A78	Timeout Press Opening/Closing	Up / down movement of the nipping station too slow or not made. Increase the pressing pressure.
A79	Timeout Contrast Opening/Closing	Movement of the plane spine book too slow or motion not com- pleted. Verify there are not obstructions or glue.
A80	Timeout Pick Place Rotation	Rotation of the delivery arm not completed Verify the release guide.

# **11.2PARAMETERS FOR SINGLE AXES (GROUPS)**

Standard symbols that you will find in the following pages.

	Access to manual movement page
	Axes preset
R	Group movement in the direction indicated by the green arrow. If you push the green arrow, the dimension increases.
>	Group movement in the direction indicated by the red arrow. If you push the red arrow, the dimension decreases.
99.9	The value in blue can be modified by the operator.
99.9	The value in green <b>cannot</b> be modified by the operator. It is the current position of the axes.
7	Back to the previous window.

#### 11.2.1 PARAMETERS FOR CLAMP/CARRIAGE





Offset for carriage position	+ 0.5in	Offset for the arrival position of the carriage onto
	- 0.5in	the nipping station. This allows to position the book
		rightmost (positive value) or leftmost (negative val-
		ue) compared to cover. Entering zero value (0) the
		book will be aligned to the cover.



59 rel. 2.00-B

#### **11.2.2** PARAMETERS FOR THE GLUE STATION HEAD





#### Management for working parameters of glue station head

1	Temperature control for premelter
2	Current temperature for premelter
3	Temperature control for the glue head
4	Current temperature for glue head
5	Stand by launch
6	Timer for homogenization the temperatures

The temperature must be set on the basis of the glue type you are going to use. Refer to temperatures suggested by glue producer.

The premelter temperature must be kept from  $41^{\circ}$  to 59  $^{\circ}$  less than that the extrusion temperature.

During the heating, the indicators will be red and the machine will show the message "Low Temperature Glue Premelter PUR" or "Low Temperature Glue Nozzle".

When the recorded temperatures correspond to the set temperatures, the indicators will be green.

60 rel. 2.00-В So the machine will start to move the glue station and the timer for homogenization will start. If the delta between the set temperatures and the recorder one is more than 104 °C, the following message will appear "Wait. Heating in Progress" Until the timer will not finish (15 min), it will not be possible to load the glue or to work. When the number indicated with "6" will go to 900 the procedure is finished. At the end of this process the machine will be ready to start.

The standby status will decrease the temperatures of 86°.

If the machine does not produce any book for more than 30 minutes, the machine automatically goes to standby

To go out from stand by status, hold for at least a second whatever point on display, but not on the icons.

- The head for the extrusion is closed
- The temperatures decrease of 86° in order to protect the glue from unnecessary prolonged heating.

After that, you have to wait for glue station to reach the set temperature.

When the temperature is correct, it will be possible to position the axes and proceed with book production.



rel. 2.00-B

#### **11.2.3** PARAMETERS FOR NIPPING STATION





#### Management of working parameters for nipping station

Nipping station height	From 0 mm	Tune the distance between the spine plate and the
	to 0.059in	book.





.

999.9			
1A-1B	With these buttons you can move the front and rear guide to support the cover on the		
	nipping station.		
2	With these buttons you can move the spine base plate.		
3	With these buttons can adjust the height of the nipping station		
4	With these buttons you raise or lower the nipping station, you can use it only when the		
	spine base plate is out.		
5	With these buttons you raise or lower the arm		
6	With this button you can rotate the gripping hand		
7	With this button you can close/open the fingers of the gripping hand		
8	With this button you can enable the rotation of the belt. It is necessary to release a book		
	not released in a proper way.		

Select the nipping station or the delivery arm.

# **11.2.4 PARAMETERS FOR COVER FEEDER**





	With this button you can pick up the cover and put it on the nipping station.
	With this button the arm returns in the loading position.
100	This button lowers the plane covers. If you open the protective cover the
	plane stops.





<b>7</b>	With this button you can enable the suction, on the sucker.
	With this button you can enable the frontal blower.

# 11.2.5 CLEANER AND GLUE LOADING



See the next chapters.

# **11.3ACCES TO ADVANCED SET UP PAGES**





Area 1	Acces to advanced set up pages
Area 2	Buttons for language selection
Area 3	Buttons to adjust the display brightness and setting the date and time.
Area 4	Buttons to access technical area under password
Area 5	Buttons enabling and disabling tutorial
Button 6	Button to open windows of technical information
Button 7	With this button you can enable the rotation of the belt.



When this function is disabled, the machine does not ask anymore to verify the pressure of the glue when a book has a thickness, compared to the previous, with a difference greater than 10mm. When enabled the machine opens the window below as a reminder you have to adjust the pressure of the glue.



When you disable this function, the machine does not show anymore the tutorial when you change the type of book you want to produce. of work. When enabled, it opens the window below which helps the operator to set the machine.





When you push this button the window below appears.



1	If the icons are gray, it means you have not done the reset for the axis.
	If the icons change color from yellow to green, the axis has done the reset but it is not in
	working position.
	If the icons are green, the axis has done the reset and it is in working position.
	The green numbers on the side of icons indicate the current position of the axis.
2	Parameters to be reported to the technical service for remote maintenance.
1/0	Open the window input / output of the PLC to be used for remote maintenance.
	Open the alarm history window.
	Open the window of the alarms currently present.

# 11.3.1 Advanced Set Up For Clamp



	Clamp with a standard set up
	Clamp with a set up for a sewing book. This set up facilitates the insertion of the book inside the clamp.

# 11.3.2 Advanced Set Up For Milling Station



Power vacuum cleaner
Release of the engine brake on the nipping station NB it works <b>only</b> when the emergency button is pressed.

# 11.3.3 ADVANCED SET UP FOR GLUE HEAD



Manual operation for glue station:

	<ul> <li>If you press and release rapidly, it opens and close the nozzle of the glue head.</li> <li>If you hold it spills out the glue</li> <li>NB. First of all, set the glue pressure</li> </ul>
	With this key it is possible to activate cleaner spillage.
X ± 99	Offset value for opening the glue head compared to the default value.

#### **11.3.4 ADVANCED SET UP FOR NIPPING STATION**



	Nipping station disabled
	Nipping station enabled
999.9	Value to move back and forth the cover on the nipping station. Max. value ±0.059in

## 11.3.5 Advanced Set Up For Thickness Survey



#### **11.3.6 ADVANCED SET UP FOR COVER FEEDER**



Offset compared to the default value. Max. value  $\pm 0.5$  in **11.3.7 ADVANCED SET UP FOR DELIVERY ARM** 



		Delivery arm disabled
		Delivery arm enabled
T.Rotazione Nasi	tro 99	Rotation time of the belt.
		Activation for belt rotation.
## **11.4MANAGEMENT PAGE FOR WORKING JOB**



## **11.4.1 MANAGEMENT OF THE JOBS**



It is possible to save until 100 working JOBS.

$\uparrow$	To move from previous memory job to the next one
<b>†</b>	To move from ten previous memory job to the next ten
$\checkmark$	Selection of memory job

When you select the working JOB the window below appears.



The circled values are the current settings of the axes, they are not editable.

All other texts written in blue can be edited, they help the operator to set the machine in the correct way.

To load the values of memory job in the machine.
To save the current values in the memory job.

## 12 PREPARATION OF THE MACHINE TO PRODUCE A BOOK.

## **12.1 CHECKS TO BE DONE BEFORE STARTING THE JOB**

### Before to use the binder perform the following controls:

The operator must have read and understood this manual, including the important information concerning the SAFETY.
Make sure you have appropriate clothing to work and, if necessary, also safety clothing.
Ensure that the binder is properly powered and connected to ground (PE)
Ensure that the pneumatic system of the binder is properly fed and if the main switch oh the factory is open.
Verify that the chips aspirator is connected to the binder and its power switch is in position $1 = ON$ .
Check that in the tank there is a minimal amount of glue to allow to process several books, otherwise insert a new cartridge of glue inside the tank.
Tank for glue collection flushed.
Ensure that the binder is clean and without books or covers, especially: Clamp, Jogger, Milling Station, PUR head, Press.
Check that the settings for temperatures are correct for the used glue and that have been achieved the correct values to work. Refer to the technical sheets of the glue/cleaner manufacturer.
Verify that the values of temperatures have reached their work values. Both temperature indicators must be lit.
If necessary, remove the layer of Blue-Cleaner from the PUR head.

## **12.2SWITCHING ON THE MACHINE**

01		Switch on the machine using the main switch.
		Move the switch to ON position
02		Verify that the pressure indicated on manometer is cor-
03		Open the valve on premelter.
		The valve with the lever on vertical position means open.
04		Verify the chosen temperatures
05		Make a general reset, pressing START button
06		Position the axes, pressing START button
07	Press the button	Launch the procedure, the machine do a series of cycles
		opening and closing the glue valve.
		At a later stage, follow meticulously the procedure be-
		low.

00	
08	To produce a milled book, set the milling depth.
09	If you have to produce a not milled book, act on the lev-
	erage that allows to lower the milling station.
10	Key the parameters of the book thickness, cover, front
	and rear glue stop.
11	Set the required speed
12	Set the glue pressure
13	Set the nipping station pressure
14	Load the book block in the clamp as indicated by the arrows in the picture and press the START button.
15	The machine will draw the cover from the cover feeder, it will close the clamp, the clamp will start moving passing over the milling station and the glue station. When the clamp will reach the right position, the nipping station will apply the cover. During pressing time the clamp will remain on the nipping station, the nipping station lows, the delivery arm take the book and it will release it on the release belt. In the meantime the clamp will go back to loading position and another cover will be drawn

## **12.3GLUE REFURBISHMENT PROCEDURE**

The glue refurbishment procedure must be done every time the machine is switched off with the procedure END OF JOB.

In case the machine has been switched off with the END OF JOB procedure, it will be possible to start working only doing a glue refurbishment. An error message appears "**Machine with Cleaner**".







## **13 CLEANING THE MACHINE**

When the machine works using PUR glue, it is imperative and essential an accurate cleaning of the glue.

The dried glue is no more refusible.

Residue of glue during the drying process can cause blockages or an incorrect and not uniform extrusion of the glue.

The glue group must be kept clean with the deposits of glue, PUR glue residues harden over time and cause damages to the equipment.

Performing the "End of job cleaning" it is possible to save the machine turned off containing PUR glue for 2 weeks.

CLEANING IS COMPULSORY for proper operation of the machine.

"If the machine is **switched off or unused for more than 120 minutes** it is necessary to make the cycle of "End of job cleaning".

### **EVERY DAY:**

### **ONCE IN THE WHEEK:**

## END OF JOB CLEANING EMPTY THE CHIPS ASPIRATOR CLEANING LATERAL EXTRUDER CLEANING SPINE EXTRUDER CLEANING DETAILS

#### In case of:

Some pages are not glued	Perform the SPINE EXTRUDER CLEANING
The glue on the side is not uniform	Perform the LATERAL EXTRUDER CLEAN-
	ING

## **13.1"END OF JOB" CLEANING**

IJAI END OF JOD CLEANING		
99.9 999.9 999.9 999.9 999.9 999.9 999.9 1	To switch off the machine at the end of the day you must eject the remaining glue inside of the extruder. To do it you must activate the automatic procedure that allows executing a safe switching off. Hold for a few seconds the BUTTON to start the procedure.	
Wat	During this phase the glue group opens and the glue starts to spill.	
	Press until all the glue traces disappear. For this operation help yourself with the calibrated blade.	
Cleaning cycle- phase 1 finished, Remove grub screw from nozzle, Remove excess Cleaner from nozzle push OK to confirm.	Use the green spatula included and make the glue to flow in the collection tank. Try to remove as much as possible of the released cleaner.	
Screw the grub screws using the		
same included allen key (Pay		
attention to the temperature).		
Press <b>OK</b> .		

Wait	During this phase the machine closes the head automatically and
	clan the lateral passages of the glue. Once this operation is over,
	it opens again the head.
7.5	i opens uguin the neudi
( <b>9</b> , 7	
	Use the super motule included and make the slue to flow in the
Cleaning cycle - phase 2 finished, Remove excess Cleaner from nozzli	Use the green spatial included and make the grue to now in the
push OK to confirm.	collection tank. Try to remove as much as possible of the re-
	leased cleaner.
<b>7</b> 7	
🥠 🏹 🎼 🔍 🖉 🐛	
Wat	
745	During this phase the glue station closes
· • • •	
C#(7)	
<u>↓</u>	
Cycle done,	Replace the grub screws using the allen key you have (pay atten-
re-srew grub screw in nozzle, push OK to escape	tion to the temperature)
7	Press OK
🗸 🌠 🚳 🖉 🌄 🔨	
	Close the rear valve
	When the velve is herizontal, it is closed
	when the valve is norizontal, it is closed.
	Now the machine is ready to be switched off.
	If you do not complete this cycle the machine will emits on
	i you do not complete uns cycle die machine win enlits an
	acoustic warning signal.

# 13.2PROCEDURE TO CLEAN THE EXTRUDER FOR THE SPINE GLUE.

99.9	Press the Button "Manual movements".
999.9 × 999.9 × 999.9 999.9 ×	
	Press the key dedicated to the glue head
X ± 99.9 X ± 99.9 705 705 9999.9 20	Press reset to open the head until reset position.
	Insert the calibrated blade into the slot extrusion until you touch the bottom and move it along the slot to re- move or release any possible obstructions.

	Adjust the value of the glue extrusion pressure to 1 bar (14.5psi).
X ± 99.9 7 999.9 0 7 5 5 5 5 5 5 5 5 5 5 5 5 5	Hold the key for few seconds until you do not see the glue spilling. Verify that the glue extrusion is uniform and continu- ous; otherwise, insert the calibrated blade and repeat the cleaning operation.
	The tank pressure will go down after 10 seconds of in- activity.
	Clean the blade carefully. When the glue is fully cured the blade will useless.

# 13.3 PROCEDURE TO CLEAN THE GLUE LATERAL EXTRUDERS

99.9	Press the Button "Manual movements".
999.9 999.9 999.9 999.9 999.9 999.9 999.9 0 999.9 0 999.9 0 0 0 0	
	Press the key dedicated to the glue head
X ± 99.9 X ± 99.9 N S S S S S S S S S S S S S	Press reset to open the head until reset position.
	The glue spread on the side of the book is extruded
	through 3 small channels located on the plates con-
	taining the book.
	To have a correct extrusion of the lateral glue, you
	must remove the grub screw and insert in the 3 holes
<i></i>	the included wire. Repeat the same operation on both the retaining plates of the book.



## **13.4DETAILS CLEANING**

99.9 99.9	Press the Button "manual movements"
999.9 2 999.9 9 999.9 9 999.9 9 999.9 0 999.9 0 999.9 0 999.9 0 999.9 0 999.9 0 999.9 0 999.9 0 999.9 0 999.9 0 0 999.9 0 0 999.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Press the head key
× ± 99.9 ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Press reset to open the head to the reset po- sition
	Use the blade or a suitable tool to remove all the vis- ible traces of residual glue.

If necessary you can use liquid solvents to get a bet- ter cleaning of the surface. During the use of liquid solvents refer to the safety instructions provided by the solvent manufacturer.



## **14 Problems - Solutions**

### 14.1 CHIPS ASPIRATOR – LESS VACUUM:

- Verify that the Plexiglas inspection, located on the Milling Station, is free.
- Verify that the chips aspirator tank is empty.
- Verify that the chips aspirator tube is not full of chips.
- Verify that the aspirator filter is clean.
- Verify that the hose is connected.

### 14.2 CLAMP – IT DOES NOT START:

- Verify the presence of the book in the clamp.
- Verify that the emergency switch is disabled.
- Verify that the barriers are completely free.
- Verify that the photocell detecting the book and the related reflector are clean.
- Verify that the photocell or the reflector of the press is free from books, pieces of paper or durst.
- Verify that the clamp jaws are free from residual glue.
- Verify the air pressure in the machine
- Verify that clamp is in the right position.
- Verify that the carriage is in the right position.

### 14.3 IRREGULAR GLUE START / STOP:

• Clean the photocell and the reflector positioned between the jogger and the milling station.

### 14.4 MILLING STATION – IRREGULAR CUT AND NOTCHING:

• Verify that the Milling disk is not broken or damaged. This could happen by the management of books already bound with glue (FORBIDDEN). *IF K.G.S. FIND OUT THAT YOU HAVE MILLED BOOK ALREADY BOUND WITH GLUE, K.G.S. WILL VOID THE GUARANTEE.* 

### 14.5 COVER PLATE MILLING STATION – IT DOES'T OPEN / CLOSE CORRECTLY:

- Remove the 4 screws by using a allen key number 4. Remove the cover plate of the milling station releasing the elastic cord. Clean inside of the milling station box.
- Shorten the elastic cord by a node close to the interior of the Milling Station box, increasing the strength of the plate closure

### 14.6 HEAD - OUT OF TOO MUCH OR LITTLE GLUE:

- Verify the air pressure of the glue group.
- Verify that the head shutter is free, using the provided blade.
- Verify that the side holes are free, using the provided steel wire.
- Verify that the injectors are working properly (they must move back and forth 0.12-0.16in).

- Verify the presence of glue in the tank.
- Verify that the glue in the tank is not cured.
- Verify that the tank valve is open.
- Verify the position of the internal lateral jaw: it must be 0.10 tenths back from the edge of the clamp.
- Verify the head height: if it comes out a little glue lower the head and increase the air pressure of the glue group, if it comes out to much glue raise the head and lower the air pressure of the glue
- Verify that the glue is not deteriorate

#### 14.7 NIPPING STATION

- Press so much: lower the air pressure of the press group or the spine height.
- Round spine: increase the press height.
- Edge pinched: contact technical support.
- Not uniform spine: contact technical support.