



MAKSIWA®

CBC.PCR

Platinum Automatic Edgebander - Corner Rounding

INSTRUCTION MANUAL



Attention: Read this manual before using the machine.

1	INTRODUCTION	4
1.1	SCOPE AND OBJECTIVE OF THE MANUAL	4
1.2	PRESENTATION	4
1.3	REFERENCE REGULATIONS	4
1.4	GENERAL WARNINGS	4
2	TECHNICAL SPECIFICATIONS.....	5
2.1	POWER REQUIREMENTS.....	5
2.2	TECHNICAL DETAILS	5
2.3	DIMENSIONS (MACHINE LAYOUT)	6
2.4	MACHINE CONFIGURATION	7
3	INSTALLATION AND START UP	9
3.1	TRANSPORT	9
3.1.1	Level.....	9
3.2	OPERATORS WORKING AREA (SAFETY POSITION).....	10
3.1	UNITS RELEASE, EXTENSIBLE APRON AND COIL TRAY	10
3.1.1	Working units fixing elements for transport	11
3.2	ELECTRICAL INSTALLATION.....	14
3.3	PNEUMATIC INSTALLATION.....	15
3.4	START AND STOP (FIRST CHECK-UP)	15
4	MAINTENANCE AND CLEANING.....	16
4.1	DAILY PREVENTIVE MAINTENANCE.....	16
4.2	WEEKLY MAINTENANCE	16
5	SAFETY.....	17
5.1	GENERAL SAFETY RULES	17
5.2	INDIVIDUAL PROTECTION EQUIPMENT (IPE).....	17
5.3	ENVIRONMENTAL AND NOISE LIMITS	18
5.4	PROCEDURE IN CASE OF AN ACCIDENT OF FAILURE.....	18
6	COMMON ERRORS AND SOLUTIONS	19
7	ANEXEES.....	20

1 INTRODUCTION

1.1 Scope and objective of the manual

This manual is for the operator and all staff who have the responsibility of using the machine correctly, keeping optimum safety conditions at work at all times.

The manual includes machine technical specifications, as well as the information required for its correct installation, start up, maintenance and troubleshooting. It is highly recommended to read it carefully, especially the sections related to warnings and using options, and to keep it at hand, preferably close to the machine, so it is always available for any query.

1.2 Presentation

MAKSIWA CBC.PCR edgebanders are automatic machines specially designed to get the edge glued to the panel, leaving a perfect finish with the highest quality. To achieve this, these are equipped with different functional groups, which conduct each operation of the process individually.

1.3 Reference regulations

MAKSIWA CBC.PCR edgebanders are designed and built in accordance with current regulations and legislation:

- European regulations: 2006/95 / CE, 2004/108 / CE, 2006/42 / CE
- 2006/95 / CE Low Tension Regulation
- 2004/108 / CE CEM Regulation
- 2006/42 / CE Machinery Regulation
- Harmonized regulations: EN 14121: 2007, EN 60204-1: 1999, EN 13849-1: 2008, EN 953: 1998, EN 1088: 1996 and EN 13850: 2007

1.4 General warnings

The correct use of the machine implies precise knowledge of this manual and all the risks derived from its misuse. Only authorized personnel must use the machine.

The correct operation of the machine is guaranteed for the functions and materials specified in this manual. MAKSIWA assumes no responsibility when the machine is used for purposes not indicated and not in accordance with the manual.

MAKSIWA is not responsible for the security, reliability, and performance of the machine if the warnings and suggestions referred to in this manual are not respected, particularly regarding assembly, handling, preventive maintenance, and repair activities.

The electrical installation for the machine must be in accordance with European Regulations and Harmonized Regulations detailed in section 1.3 of this manual. The manufacturer refuses all kinds of responsibility in the event that the machine is not correctly connected to the equipotential ground installation and consequently the protection devices are not mounted behind the machine itself. Section 5.4 of this manual refers to the minimum requirements to be considered during the electrical installation of the machine.

For preventive maintenance and repair operations, use only original spare parts or those expressly authorized by MAKSIWA should be used.

For repairs, it is advisable to contact our technical assistance service. In the event that the machine has not been repaired or maintained by authorized MAKSIWA staff the responsibility for its perfect operation rests only on the staff in charge of its use and operation.

2 TECHNICAL SPECIFICATIONS

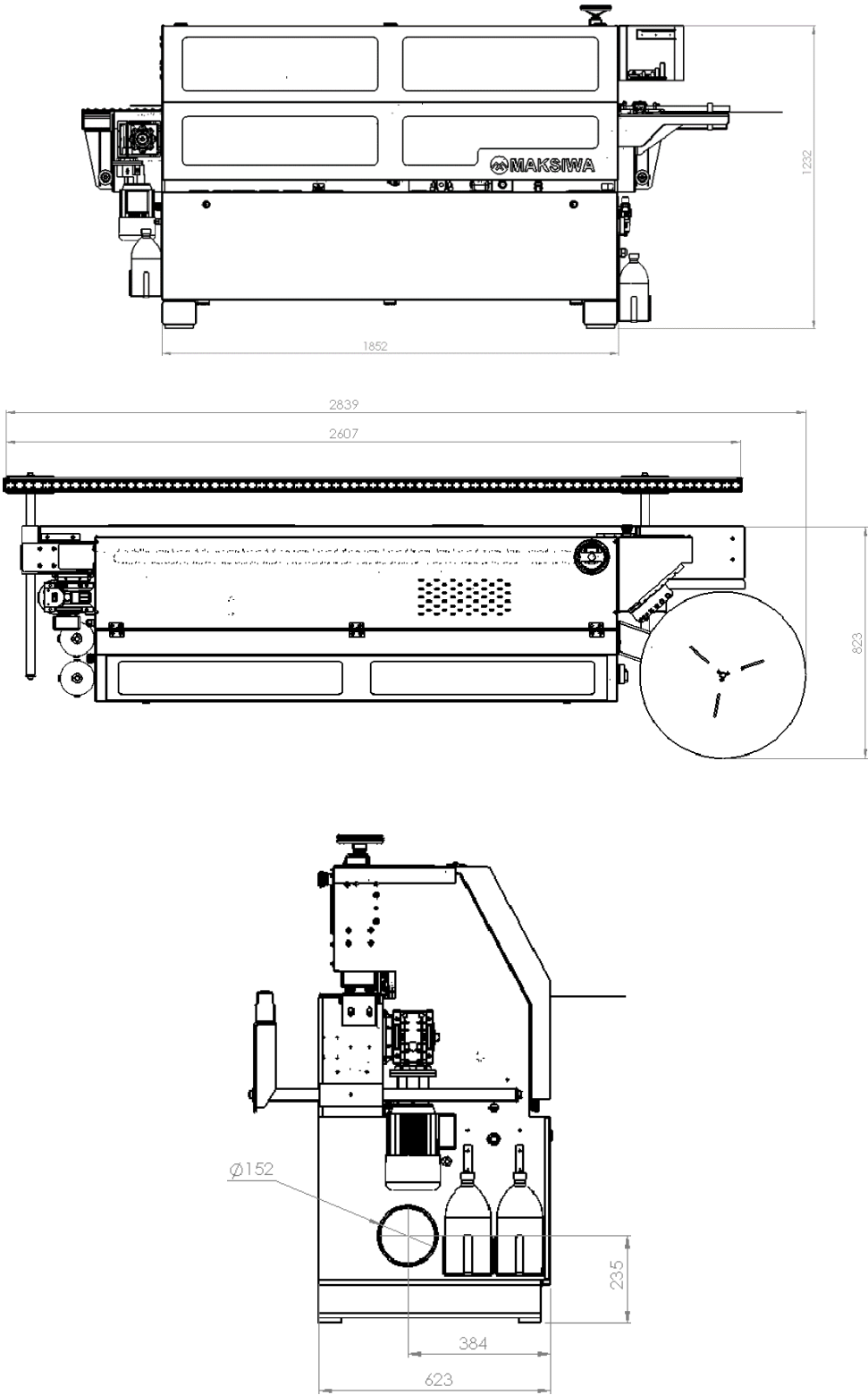
2.1 Power requirements

Model	VOLTAGE	PHASE	Total	Total	Total
			HP	kW	Amps
CBC.PCR	220	Single phase	12.00	8.90	40.00

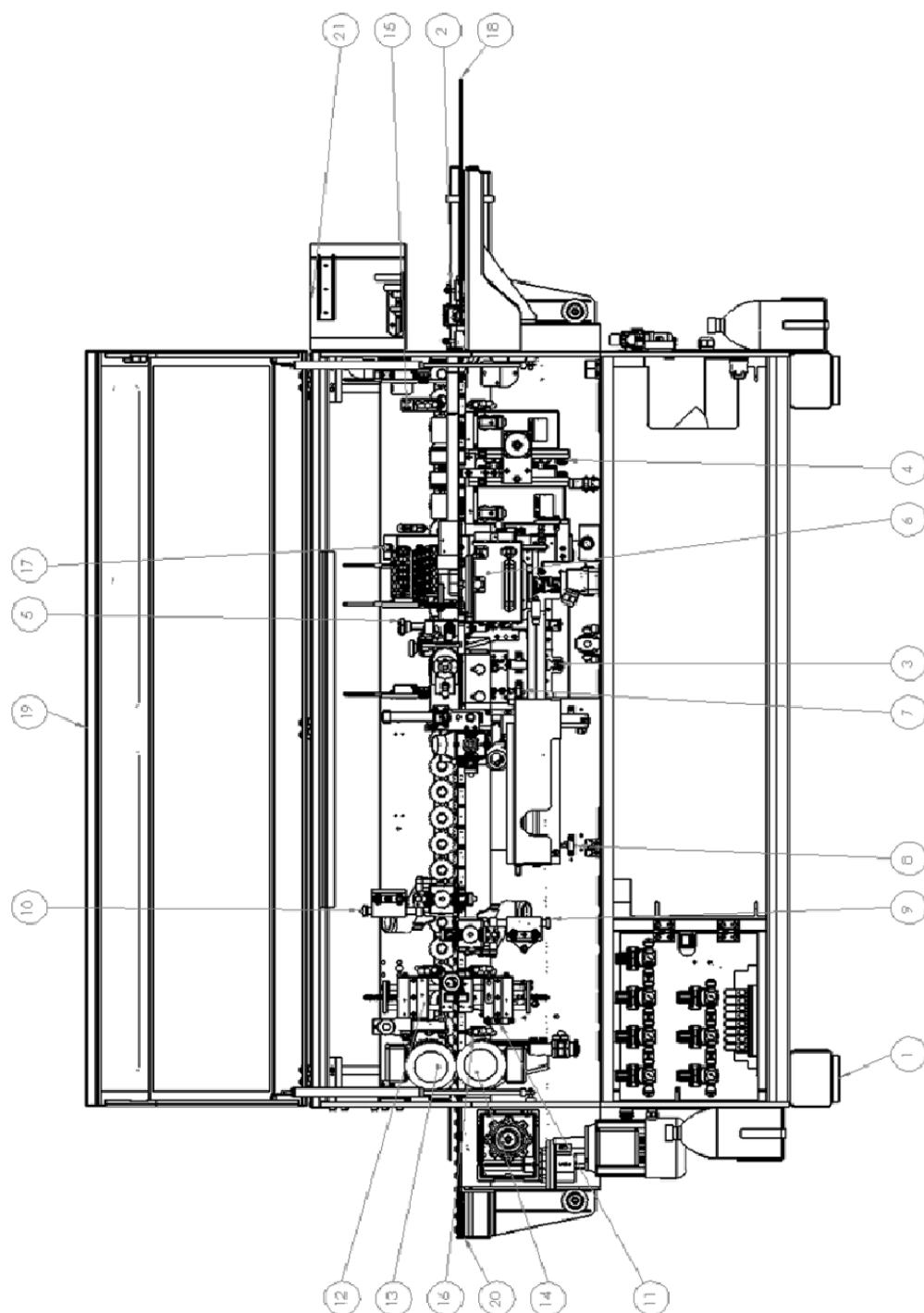
2.2 Technical details

Technical details	
MODEL	CBC.PCR
PANNEL THICKNESS (MIN/MAX, mm)	8-50
PANEL WIDTH (mm)	120
MINIMUM PANEL LENGTH	200
TAPE THICKNESS (MIN/MAX, mm)	0.4 – 3.0
DRAG CHAIN SPEED (m/min)	5.5
WORKING AIR PRESSURE (MPa)	0.6
DUST COLLECTOR POWER (m ³ /h)	2100
MAXIMUM AIR CONSUMPTION (l/min)	350-400
NET WEIGHT (Kg)	750

2.3 DIMENSIONS (MACHINE LAYOUT)



2.4 MACHINE CONFIGURATION

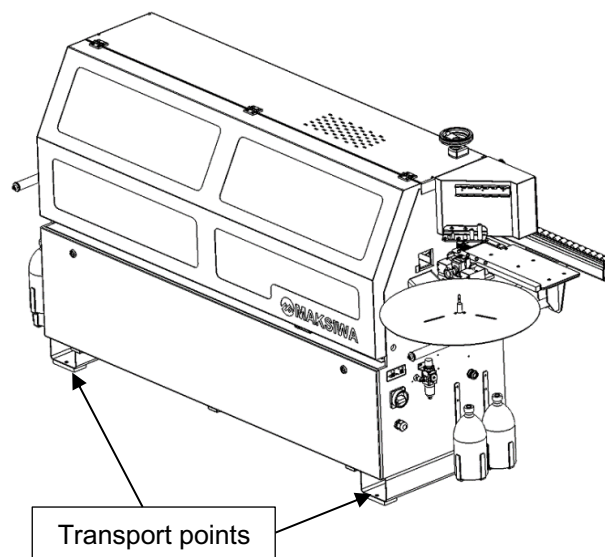


Working units list Maksiwa CBC.PCR 10170204			
#	Qty.	Unit model	Reference
1	1	Bench frame	100309
2	1	Infeeding fence XL	200100
3	1	Gearbox	300063
4	1	Premilling PF-2	400067
5	1	Feeding tray (feeding + guillotine)	500158
6	1	Gluepot	600091
7	1	Side pressure rollers	700128
8	1	End trim V-1L	800070
9	1	Trimmer bottom	900223
10	1	Trimmer top	900225
11	1	Glue scrapper RR8 bottom	1200011
12	1	Glue scrapper RR8 top	1200012
13	1	Buffing top	1300033
14	1	Buffing bottom	1300036
18	1	Coil tray	1800050
19	1	Cabin door	1900290
20	1	Extensible apron	2000259
21	1	Screen assembly	5005183

3 INSTALLATION AND START UP

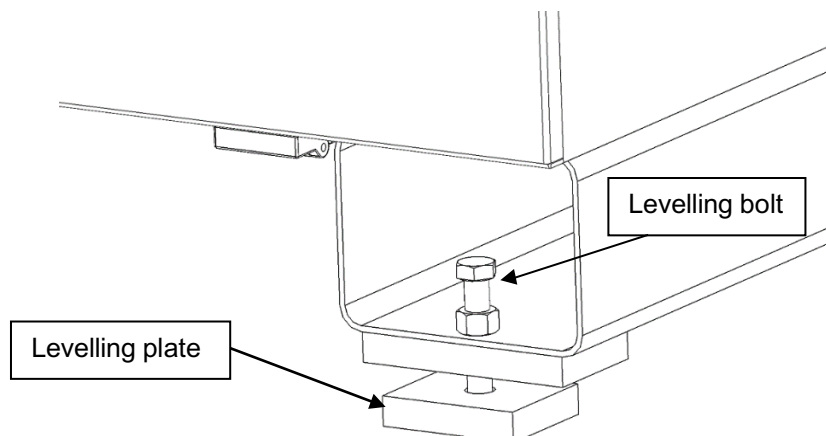
3.1 Transport

- Use adequate machinery for its transport (machine weight is 750 kg).
- Lift and transport the machine taking into account that the support points must be as close as possible to the transport bars.
- Be as cautious as possible when lifting and moving the machine in order to prevent eventual dangers provoked by unforeseen movements, which could cause damage to people or objects.



3.1.1 Level

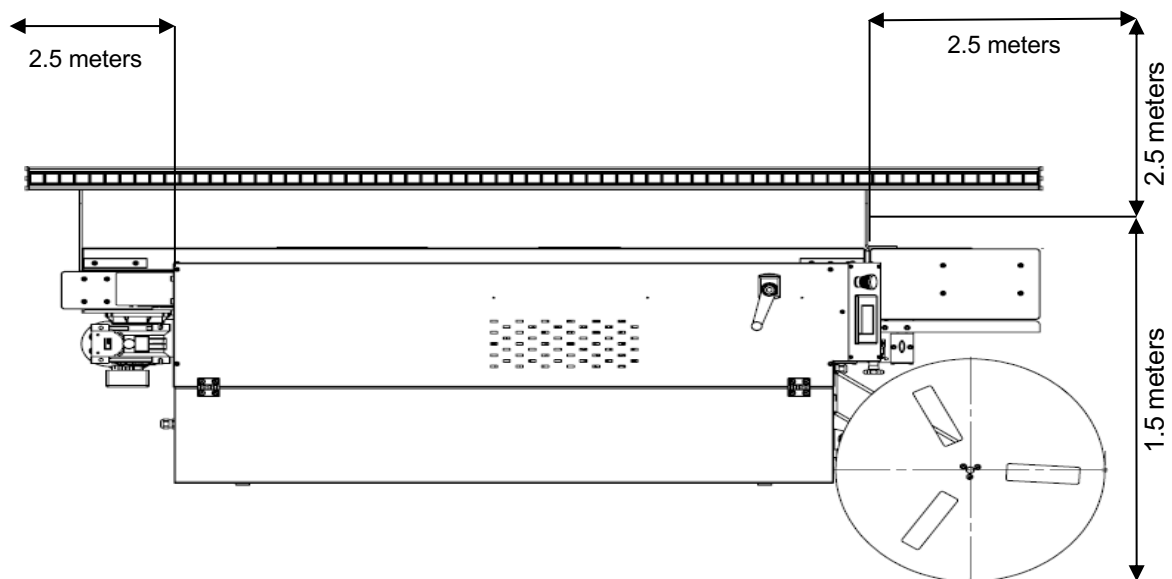
- Position the machine in a flat surface suitable to support the weight of the machine.
- Use the support plates for levelling the machine surface. Use the bolts supplied with the machine to jack and level. Check with a level on different parts of the machine.
- Do the final test of level stopping a panel inside and positioning the level on top of the panel.



3.2 Operators working area (safety position)

Place the machine in final position keeping in mind the following premises:

- A maximum of two operators are required to use the machine, one located at the entrance of the machine to introduce the raw panels and the other at the exit to collect the finished panels. Check safe working zones for the two operators are at the bottom of this page.
- The machine screen (HMI) is easily accessible to operators and is located outside any area that could be dangerous for them.
- There are no cables/hoses in the path of the machine workers that could cause any accident.
- Pay utmost attention to avoid objects that obstruct work in working zones.



3.1 Units release, extensible apron and coil tray

After positioning the machine, and before connecting compressed air and power supply, release all zip ties, or any other element mean for machine transport. Check the correct pneumatic and mechanical movement of the unit, ensuring that there is no damage after transport.

Proceed to install extensible apron and coil tray. Refer to the manual of each unit for more information.

3.1.1 Working units fixing elements for transport

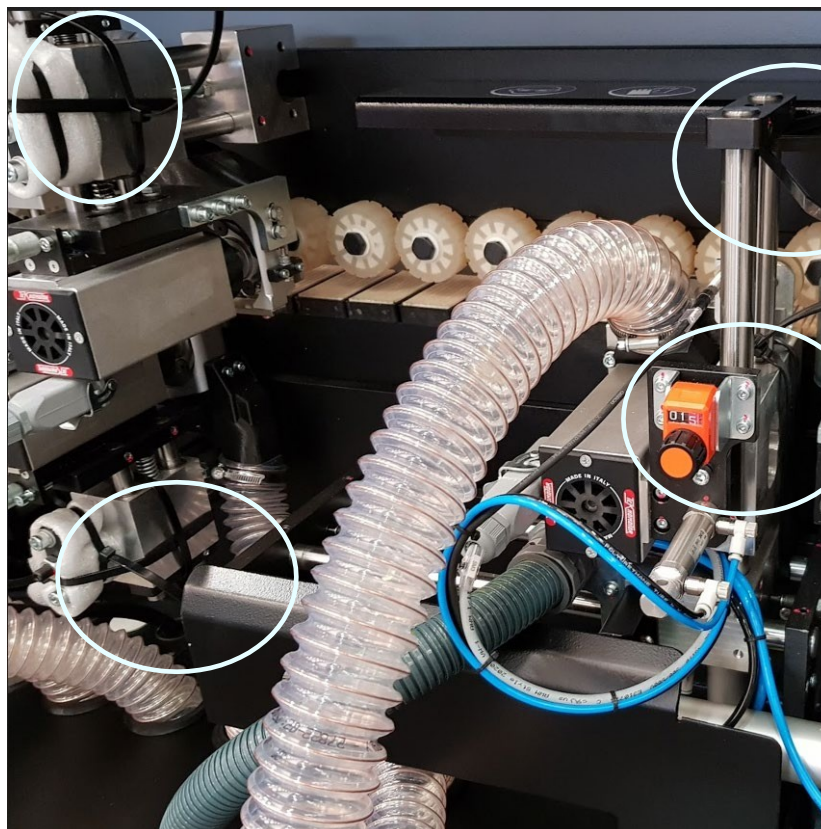
Gluepot

- Protection pad between gluepot and feeding tray.
- Fixing tie for gluepot cover



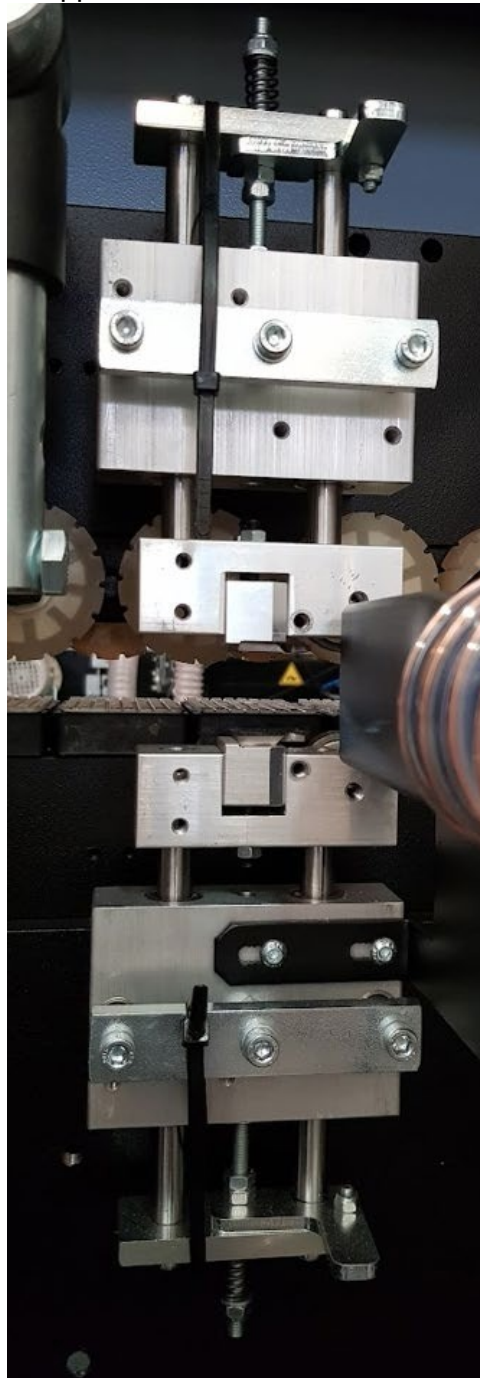
End trimmer and Flush trimmer

- Zip ties fixing top trimmer (x3).
- Zip ties fixing bottom trimmer (x2).
- Zip ties fixing end trimmer (x2).



Glue scrapper

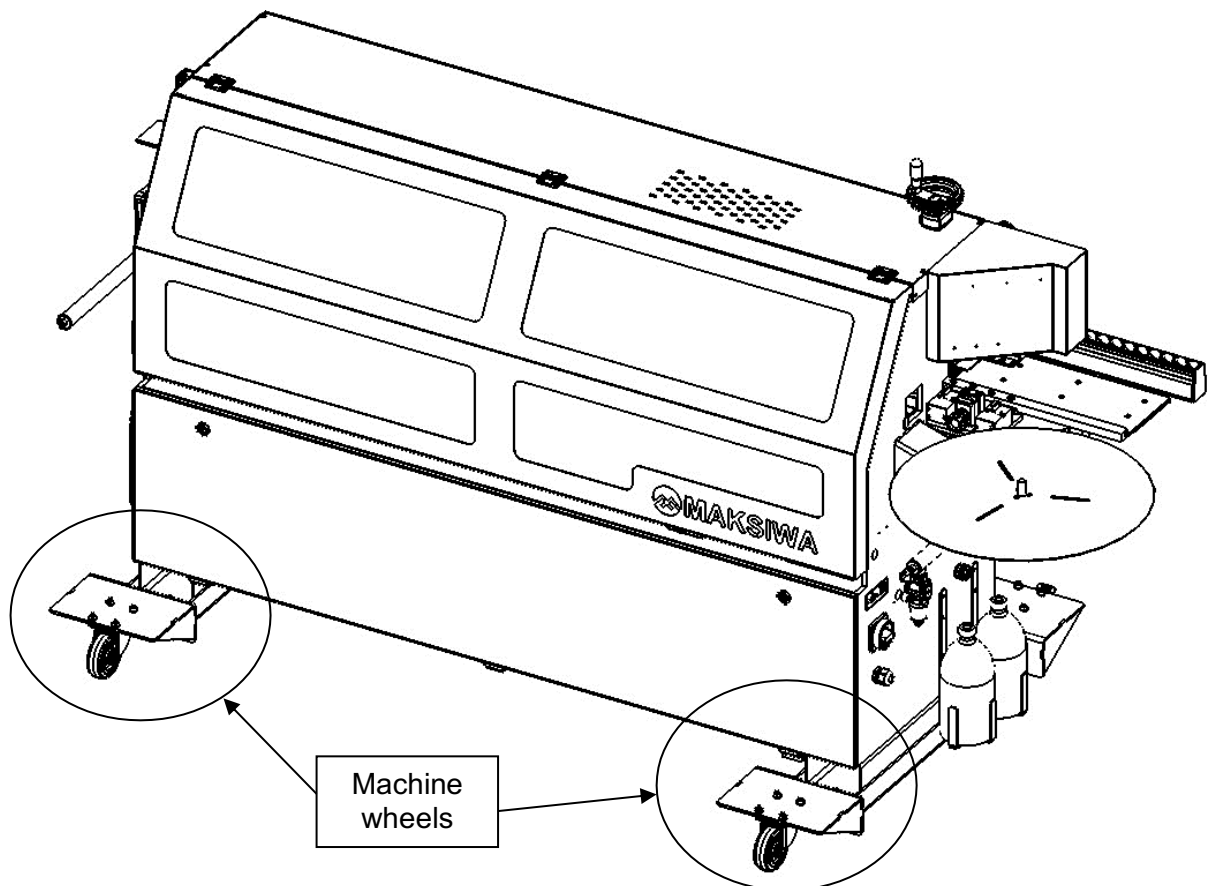
- Zip tie fixing top scrapper.
- Zip tie fixing bottom scrapper.



3.1.2 Wheels installation

Due to safety reasons, it is not possible to ship the machine with wheels installed, if you purchased the machine with wheels option, install them before machine electric/pneumatic connection.

- Use a pallet truck to raise the machine.
- Install all 4 wheels using provided tools.

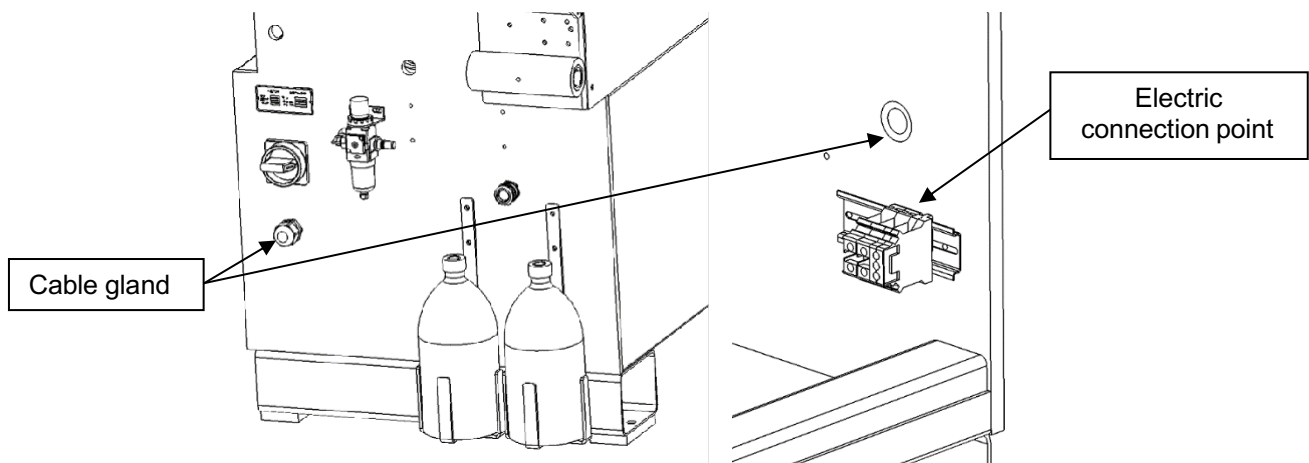


- Fix wheels using brake pedal all the time except when moving for storage purposes.
- Keep the machine on leveled floor during Edgebanding process.

3.2 Electrical installation

Proceed with electrical installation after leveling the machine, coil tray and apron installation. Follow these guidelines:

- Installation must be in accordance with European Regulations and Harmonized regulations.
- Availability of an equipotential ground installation.
- Availability of fuses or short-circuit and surge protection switches on each conductor wire excluding the ground wire.
- Use a **cable of 3 x 10 AWG (1 phase 120V + 1 phase 120V + ground = phase to phase 220V)**. Ensure that the cable will not interfere with the working zone causing any accident.



IMPORTANT: Before making the connection of the machine, check that the voltage among terminals **L0, N0** is **220V**, and Depending on your region, your electrical panel may have a high leg on one of the phases. Avoid using it, as doing so can cause irreparable damage to the machine's electronic converters and **VOID THE WARRANTY**.

This machine has a phase monitor that checks voltage, phase sequence and phase loss. This safety device is to avoid accidental voltage rises and falls, phase or neutral losses and phase synchronism; this is why it is located at the machine connection before the main switch (see details in annex "Electrical diagram").

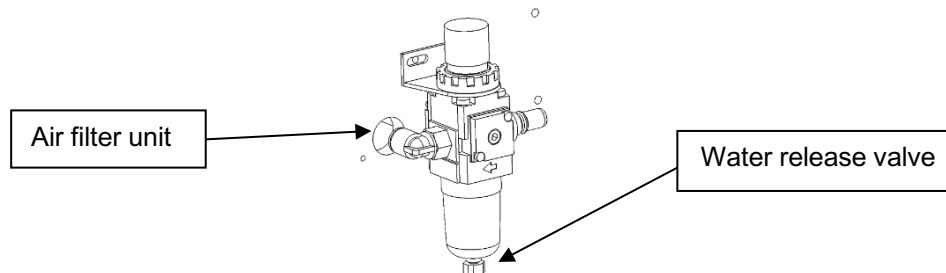
3.3 Pneumatic installation

For pneumatic connection:

Use a tube/hose with an internal diameter between 10 and 12mm and connect it to the air filter unit using with a minimum socket of 3/8" (make sure that this hose will not interfere with working zone causing any accident).

Set-up a minimum pressure of 0.7MPa and ensure a flow of 400 liters / minute. **(14 SCFM @ 90 PSI)**

Ensure a humidity free compressed air towards the machine and use the valve to release the water inside the filter periodically.



A poor pneumatic connection will cause incorrect movement of working units causing mechanical damage, and consequently **LOSS OF WARRANTY**.

3.4 Start and stop (first check-up)

Once the machine is in final position, connected correctly to the electricity and with pneumatic connection, now you can turn on the machine and check working units and safety systems:

- Ensure that the emergency button, cabin security and any other security system present in the machine is working.
- Check the correct height of pressure.
- Turn off all the units except the gluepot. When the glue pot reaches the programed temperature, you can start the machine using the ON / OFF button (Start / Stop).
- Turn on all the units one by one and check the correct functioning of all according to your work.



NEVE USE THE EMERGENCY STOP TO STOP THE MACHINE UNDER ORDINARY WORKING CONDITIONS. USE IT ONLY IN EXCEPTIONAL EMERGENCIES.



MAKSIWA FORBIDS REMOVING OR MODIFYING THE MAGNETIC SAFETY DETECTORS, WHICH CAUSE THE MACHINE TO STOP WHEN THE CABIN DOOR IS OPEN. IT IS ALSO FORBIDDEN TO START THE MACHINE WHEN ANY OF THE CONNECTORS IS NOT OPERATIONAL OR DISABLED.

4 MAINTENANCE AND CLEANING



BEFORE STARTING PREVENTIVE MAINTENANCE, DISCONNECT THE MACHINE ELECTRICALLY AND PNEUMATICALLY. INSTRUCTED STAFF MUST PERFORM THIS PROCESS.

4.1 Daily preventive maintenance

Daily, before starting using the machine, perform the following operations:

- Check that there are no elements obstructing the correct movement of units and motors since any obstruction could damage the groups or cause personal injuries.
- Verify that pressures are correct.

Daily, after using the machine, perform the following operations:

- In case you are using PUR in the DUOMELT glue pot, we recommend draining and cleaning the gluepot every day. In any case, follow glue manufacturer's strict recommendations.
- The working area should be cleaned using pressure air to remove chips and material residues that may settle over the working groups and jeopardize the machine proper operation. Pay special attention to cleaning the drag chain pads. An inadequate cleaning will cause the remains of material in the pads and thus prevent the proper sliding of panels, also generating irregularities on the surface that lead to further pressure beam adjustment.
- Check the condition of cutters and tracers.

4.2 Weekly Maintenance

Perform the following operations once a week:

- Conduct all the daily maintenance detailed previously.
- Cleaning of the glue pot to leave it empty and remove any trace of glue.
- Check the safety level of the electrical installation.
- Check the status of tools (premilling, end trim cutters, Flush trimmer cutters).
- Raise the pressure beam, clean the wheels, and drag chain pads with a mild thinner.
- Lubricate the chain slightly with synthetic fluid grease.
- Draining the filter group in order to remove water and impurities.

5 SAFETY

5.1 General safety rules

- Only a trained operator can use the machine to ensure the correct use of the machine as well as its protection devices and accessories. Read carefully this manual to learn about safety devices usefulness, limitations and potential dangers.
- Only a trained technician should connect the machine.
- Perform the machine adjustment and regulation according to this instruction manual.
- Conduct preventive maintenance processes as often as required.
- Before starting each job and before starting the machine verify that control and working devices are always free of chips from the previously edged material.
- Before performing any operation on the machine, make sure that there are no obstacles around the working.
- Do not place flammable substances near the machine since any spark could cause an explosion or fire.
- The operator must always keep in mind risks before approaching the most dangerous areas with his hands.
- Never remove the protections from the glue pot since they avoid any possible risk of burning for the operator.
- Always turn off the machine when not in use.
- Do not touch or manipulate areas that move without having switched off the machine and without making sure that there is no residual movement.

5.2 Individual Protection Equipment (IPE)

The following IPE will be required, depending on the work:

- Eye protection: during preparation work.
- Safety shoes.
- Dust protection mask when cleaning the machine.
- Protective gloves: when handling hot parts, glues or cutting tools.
- Acoustic protection.
- Working clothes: the operator should NOT wear loose clothing that could be an obstacle or snag. Do not wear either ties, bracelets, rings, etc.

5.3 Environmental and noise limits

The environmental and noise limits for safe operation are listed below:

Environmental and noise limits		
	MINIMUM	MAXIMUM
ENVIRONMENT	INDOOR USE ONLY	
WORKING TEMPERATURE	18° C	50° C
STORAGE TEMPERATURE	- 20° C	70° C
HUMIDITY	20% relative humidity without condensation	90% relative humidity without condensation
HEIGHT	Sea level	1.800 m
ISSUED FROM ALL MACHINE AREAS DURING USE IN A TYPICAL OPERATOR POSITION	70 dB	≥ 85 dB

5.4 Procedure in case of an accident of failure

In case of an emergency stop the machine with emergency button / buttons (red on a yellow background) located in every station where an operator can work. It has top priority over any other signal / status of the machine. Afterward, reset the machine as follows:

- Check and make sure that the dangerous situation has overcome and that all operators are in optimal conditions and in their respective safe areas to keep working.
- Reset the emergency button by rotating it until it returns to its original rest position.
- Reset the machine using the display screen. For more details, see the “Touchscreen Operation Manual”.
- Use the emergency stop button properly and never interrupt work replacing the start / stop function.
- The emergency stop interrupts all machine functions. Some groups, such as the glue pot, can be damaged as a result of downtime, which turns into serious trouble when working with PUR since it solidifies in the glue pot, becoming embedded and causing in most cases glue pot damage and replacement.



MAKSIWA IS NOT RESPONSIBLE FOR FAILURE CAUSED BY IMPROPER USE OF THE EMERGENCY STOP

6 COMMON ERRORS AND SOLUTIONS

Fault	Solutions
Machine won't start	Check if any alarm appears on the DISPLAY (for more details, read the annex "Touch screen operating manual"). Also, confirm all the exterior conditions (electricity, compressed air).
Chipping on board	The occurrence of chips may be due to the use of inadequate panel, which may even have nails inserted (for example, chipboard).
	Check the condition of cutters to verify that there are no broken blades. Proceed according to annex "Pre-milling Station Operating Manual" to carry out this operation.
Irregular edge feeding	First, check that air pressure at machine entrance is correct (between 6 and 7 Bar).
	Feed a panel and check that the pressure piston pressure is approximately 0.15MPa. To do this watch the MR5 manometer keeping in mind that it is always at zero and it only shows pressure at the exact moment it is feeding, that is, for 1.5 second approximately. Too much air pressure also can cause irregular feeding.
	Check the condition of the gearbox drive that moves the feeding roller.
	Check that the edge roll is not caught at any stage, which prevents its natural movement (it could be the case of small strips of adhesive tape stuck at the bottom of the roll and hardly visible at first sight).
Board moves at end trim	First, carefully read the annex "End Trim Operating Manual" and check that all pneumatic pressures are correct.
	Disconnect air pressure supply from the machine and manually check that the group performs all its movements smoothly.
	Clean the carriage guide bars and tracers with a cloth dampened in machine oil, wiping them dry afterwards so that dirt does not catch on again. Wheels and chain must be clean so that they do not lose adherence.
Less radius/milling at trimmers	First, carefully read the annex "Top and Bottom Trim Operating Manual" and check that all pneumatic pressures are correct.
	Check unit tracing: when feeding a panel the unit must trace 1mm frontally and vertically.
Board un-alignment	If it is evident that the board does not advance, maintaining parallelism and tracing throughout the process, check the correct pressure beam height along the condition of the chain pads and wheels. If necessary, clean with a mild, neutral solvent.
	In small pieces, it is possible to tighten the pressure beam 0.5 mm more than the panel measurement. Tightening more than 1mm would mean forcing the drag chain motor to work. This causes overheating and excessive wear of the wheels and tires of the pressure beam.
	Check the tracing of the pressure rollers, for more details, read the appendix "Operation manual of the roller base".
	Verify that the pressure of the guillotine according to the appendix "Operating Manual of the Feeding Tray". In some cases, the pressure is increased in order to process high edge thicknesses and is not restored when the edge is changed again, causing vibrations.
Irregular gluing	First, carefully read the annex "Gluepot user manual."
	Check gluepot quantity and status.
	Verify gluepot tracing and pressure and notice that the board is not moved by any of the working groups, and the gluepot maintains uniform tracing along the path of a long board.
	Observe the condition of the gluing roller. Contact a trained technician to perform the maintenance, if necessary.
	Check that the board cutting is 90 degrees.

7 ANEXEES

- Working unit's user manual.
- Electric diagram.
- Pneumatic diagram.

USER INTERFACE CBC.P



1	INTRODUCTION.....	3
1.1	SCOPE AND AIM OF THE PRESENT MANUAL.....	3
1.1	HMI DETAILS.....	3
1.2	GENERAL WARNINGS.....	3
2	USING TOUCH SCREENN	4
3	MAIN	5
3.1	MACHINE STATUS MESSAGES	6
3.2	GLUEPOT INFORMATION.....	6
3.3	WORKING UNITS.....	6
4	TEMPERATURE	7
4.1	GLUE CHANGE	7
4.1.1	<i>OVERRIDE GLUE.....</i>	<i>8</i>
5	TECHNICAL SERVICE.....	8
6	CABIN LIGHTS.....	8
7	ALARMS	9
7.1	ALARMS LIST	9
8	GROUPS PARAMETERS	11
8.1	CUTTER (GUILLotine)	12
8.2	FEEDING UNIT	12
9	COUNTERS	13
10	LANGUAGE	13

1 INTRODUCTION

1.1 Scope and aim of the present manual

The present manual is for the operators and all personnel in charge of the correct use of the machine, especially taking care of the security at the working place.

Through the programmable NB5Q -TW01B terminal you will have a detail Access to the function of all operative groups.



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1.1 HMI details

- Tactile LCD TFT screen with more than 65.000 colors.
- Long duration LED back light
- Serial communication, USB or Ethernet
- 128 MB memory
- Vectorial graphics and bits map

1.2 General warnings

The correct use of this machine requires the right knowledge of this operative manual, and all dangers arise from the incorrect use of the machine. This machine must be used only by authorized personnel.

Maksiwa guarantees the correct operations of the machine following the functions and parameters described in this manual. Maksiwa cannot be responsible when machines are used for other purposes not described in this manual.

Our technical assistance department will guide you on all maintenance work if needed. When the authorized technicians of Maksiwa have not repaired the machine all responsibility lays on the personnel in charge of the maintenance or the working activities.



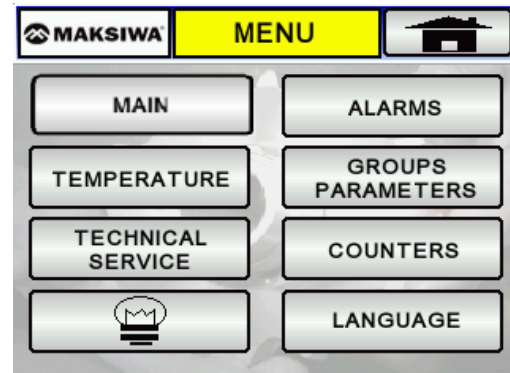
Maksiwa delivers all equipment accurately set to the machine can work in optimal conditions. Never modify the terminal program with software not supplied by Maksiwa.

2 USING TOUCH SCREEN

The first screen that we will see on the display once we supply power to the machine will be an initial screen with the MAKSIWA logo. This screen will stay for a few seconds, and you will immediately jump to the HOME menu.



MAKSIWA LOGO SCREEN



HOME MENU

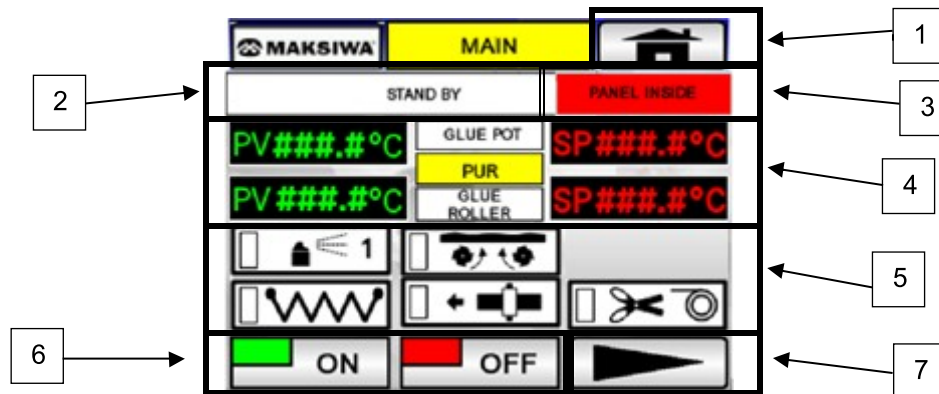
Through the HOME menu, we can access other control screens and parameter configuration. Here is a brief description of each object:

- **MAIN** – Main working menu.
- **TEMPERATURE** – Access to the EVA-PUR glue change (optional).
- **TECHNICAL SERVICE** – Allows advanced machine adjustment.
- **LIGHT** – Pressing the button turns on and off the LED lights installed in the cabin (optional).
- **ALARMS** – Access to active alarms.
- **GROUPS PARAMETERS** – Access to the unit settings.
- **COUNTERS** – Functional menu to know the operating hours.
- **LANGUAGE** – Change the language of the display.

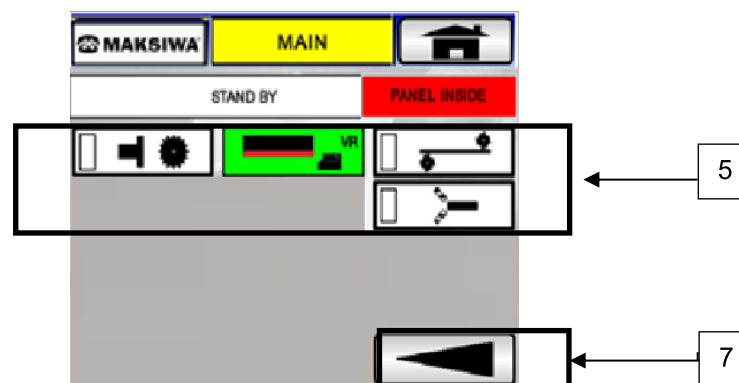
3 MAIN

The MAIN menu summarizes basic information of the machine, shows the status of the machine, set temperature / actual gluepot temperature, status of all units, and allows access to the main ON / OFF button to start the units.

MAIN screen 1st page



MAIN screen 2nd page

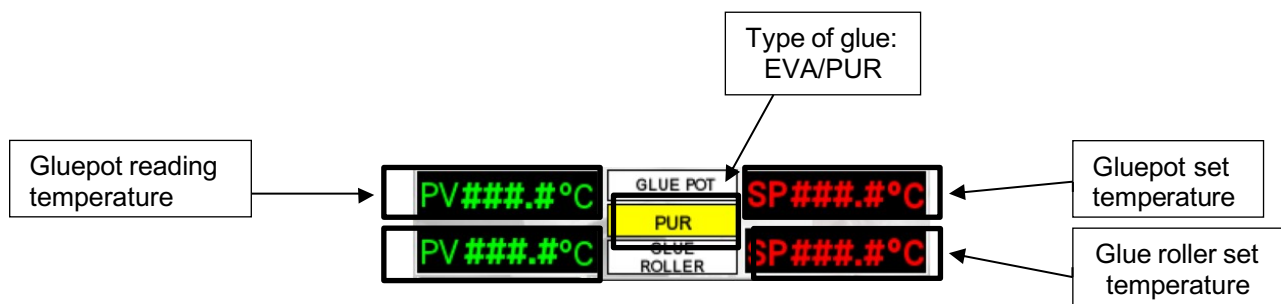


#	DESCRIPTION
1	HOME menu
2	Machine status
3	PANEL INSIDE status
4	Gluepot information
5	Working units
6	Machine ON OFF buttons
7	1 st & 2 nd page navigation button

3.1 Machine status messages

Message	DESCRIPTION
STANDBY	Gluepot off from screen. In this status, it is not possible to work with the machine.
WAITING WORKING TEMPERATURE	Gluepot heating up to reach working temperature.
TEMPERATURE OK	Correct glue temperature to be able to turn ON the machine and start the jobs.
PRODUCTION	Machine ON and in production.
INITIALIZING GROUPS	Since the ON button is pressed, it takes 5 seconds to initialize the entire set of groups and the chain, meanwhile machine displays message.
STOPPING GROUP	From the moment the OFF button is pressed, it takes 5 seconds to stop the units set and the drag chain, Meanwhile machine displays.
EMPTYING MACHINE	Warning that the machine is free of panels after emptying process.
WAITING FOR MACHINE EMPTY	Warning of the process of emptying the panels in the machine after an incorrect operation.
END OF EMPTYING	The machine has finished emptying process.

3.2 Gluepot information



- Values in green are machine readings and in red are set temperature by user.

3.3 Working units

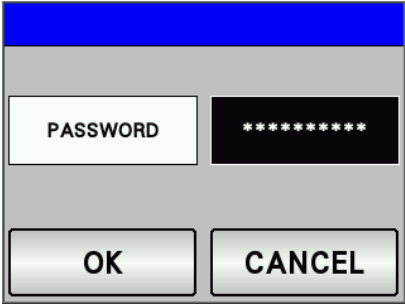
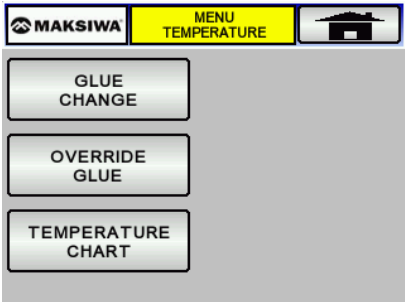
UNIT	OFF	ON
Non-stick spray		
Premilling		
Gluepot		

Feeding		
Guillotine		
End trim		
End trim (CONER ROUNDING ON/OFF)		
TOP / BOTTOM trimmers		
Buffing		

4 TEMPERATURE

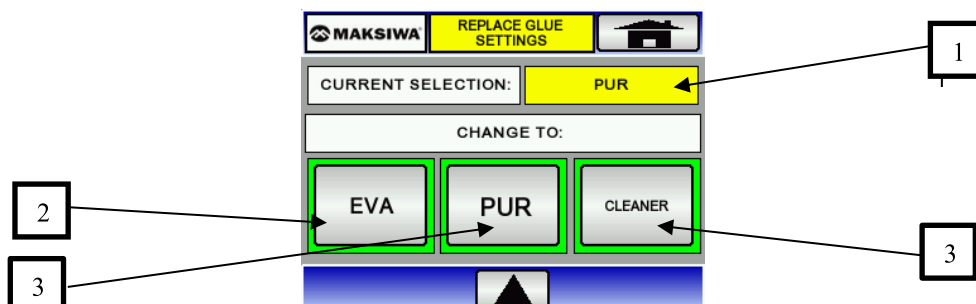


Follow strict recommendations of glue manufacturer for working with different type of glues.

	Access this menu with provided password during the training process.
	GLUE CHANGE – Glue change; EVA ↔ PUR. OVERRIDE GLUE – Glue change; EVA ↔ PUR. TEMPERATURE CHART – Temperature evolution

4.1 GLUE CHANGE

- 1 – Type of glue selected.
- 2 – Selection of EVA glue type.
- 3 – Selection of PUR glue type.
- 4 – Selection of cleaning agent, after flushing PUR glue.

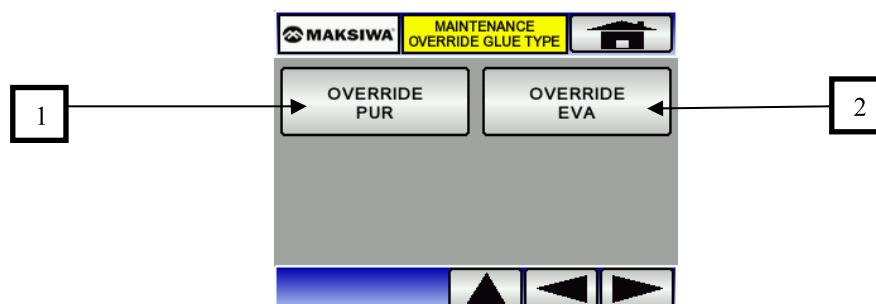


EVA→PUR/PUR→EVA	For those cases in which the machine will continue to work with another type of glue, once the current glue has finished.
PUR→Cleaning agent	Cleaning process after using PUR glue.
Cleaning agent→PUR / EVA	Front cleaning agent to work again with EVA or PUR GLUE.

4.1.1 OVERRIDE GLUE

1 – Change directly from EVA to PUR.

2 – Change directly from PUR to EVA.



5 TECHNICAL SERVICE

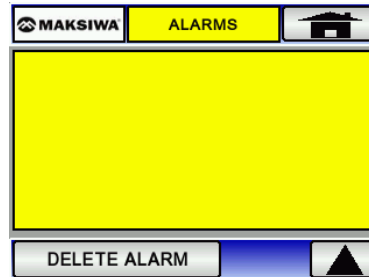
Advance menu only accessible for technicians.

6 CABIN LIGHTS

	Press on the cabin lights button to turn on / off the LED lights installed in the cabin.
---	--

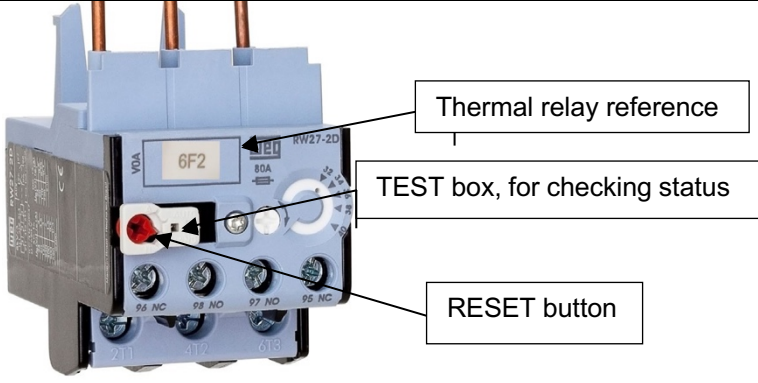
7 ALARMS

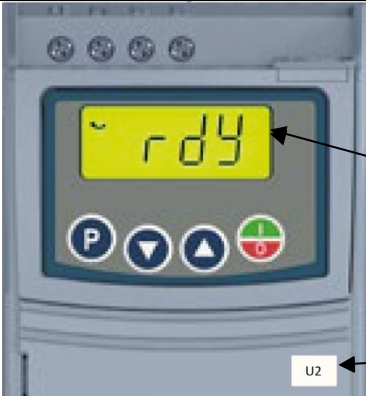
ALARMS menu shows all active alarms. You can press the DELETE ALARM button when the problem has been resolved.



7.1 Alarms list

Alarm	Possible cause	Solution
EMERGENCY STOP BUTTON	Emergency button pressed	Emergency button pressed. Release the emergency button and reset the alarm from screen. Don't use emergency button for stopping drag chain and unit, instead use "OFF" button from the MAIN menu.
	Emergency circuit damaged	Contact a Maksiwa authorized technician.
MAXIMUM TEMPERATURE	Temperature sensors plug disconnected	Check if the temperature sensor plug is correctly connected.
	Temperature sensor damaged	If the temperature plug is connected, and still screen shows asterisks instead of reading temperature, contact an authorized technician to replace the temperature sensor.
	SSR damaged	If the temperature keeps heating, above maximum temperature, disconnect the machine and contact technical service (solid state relay).
	PLC output failure	If the temperature keeps heating, above maximum temperature, disconnect the machine and contact technical service.
AIR PRESSURE	Not enough air pressure	Check if the air pressure is stable at 0.6MPa.
	Air pressure switch failure	Replace the air switch.
TOO CLOSE PANELS	Not enough distance when feeding panels	Empty the machine and keep the safe distance feeding panels.
	Limit switch 20S11 failing	Replace limit switch.

OPEN CABINS	Open cabins	Cabin open, make sure that door sensor and cabin sensor are in contact when closing.
SENSOR S30	Sensor 20S30 failing	Alarm due to S30 sensor malfunction. The fault appears because the PLC has not received the signal from the 20S30 sensor when the unit is down. To verify that, remove the compressed air from the machine, and check that the sensor turns on. You can loosen the sensor flange with a Phillips screwdriver and move the sensor, to verify that it has not moved out of position.
SENSOR S31	Sensor 20S31 failing	Check if sensor S31 is working properly, removing pneumatic pressure from the machine and moving the group manually.
		If the group fails at the front, because it is not able to go up, you can increase the pressure on the MR1.1 pressure gauge.
SENSOR S32	Sensor 20S32 failing	If the unit fails at the rear, because it does not go down, and advances horizontally, confirm that the inductive sensor S32, located at the top of the unit, correctly reads the entire plate when the unit is up. To do this, remove the pneumatic pressure from the machine, manually raise the end-trimming unit, and move the group horizontally and verify that the sensor reads the entire plate.
		Check if the S32 sensor is working properly. To do this, remove the pneumatic pressure from the machine, manually raise the retensioner group, and move the group horizontally and verify that the sensor reads the entire plate.
Thermic relay	Thermal relay alarm due to a motor malfunction	 Locate the thermal relays in the electrical panel. Check that the TEST box is yellow (usually green). Press the RESET button to clear the fault and you can reset the alarm. Contact the technical service to solve the fault. Meanwhile, work without the unit causing the failure. 2F1: Top buffing unit. 2F2: Bottom buffing unit. 4F1: Drag chain. 5F1: Top trimmer.

		5F2: Bottom trimmer. 5F3: End trimming unit. 6F1: Main premilling (fix). 6F2: Second premilling motor (with piston).
Inverter	Low input voltage	 Inverter display Inverter reference
	Motor failure	
	Inverter fault	
	Worn tools	
SELECT MODEL	Critical PLC damage	Contact technical service.

Locate the inverter causing the fault; you can reset it by turning off the machine for 60 seconds and turning on again. If the fault persists, contact the technical service indicating the inverter and the fault that appears on the display.

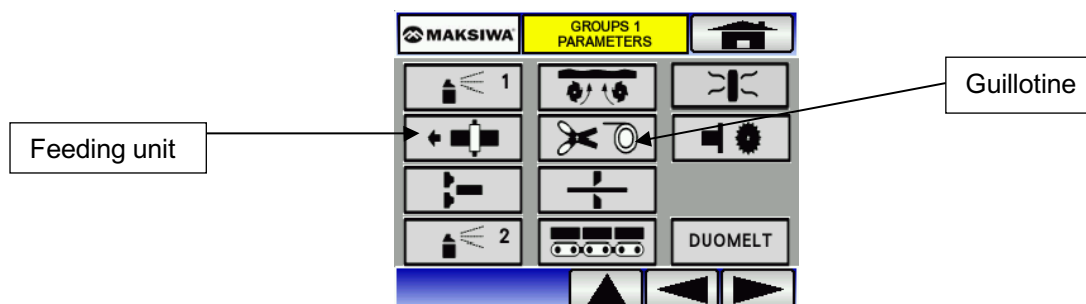
U1: Top & bottom trimmer, and end trimming.
 U2: Drag chain and buffing motors.
 U4: Main and second premilling.

8 GROUPS PARAMETERS

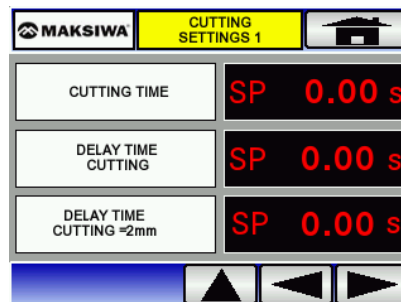


Maksiwa declines all responsibility associated with any alteration of the parameters of the different groups by unauthorized personnel.

It is only possible to adjust the cutter (guillotine) and feeding unit without the authorization of an expert technician in Maksiwa machinery.



8.1 Cutter (Guillotine)



CUTTING TIME– The time the guillotine remains active.

DELAY TIME CUTTING – Cut-off time for the overhang of PVC tape on rear side of panel.

8.2 Feeding unit



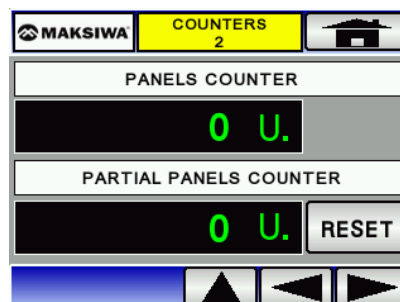
FEEDING TIME – Increasing the time, we will have more overhang of PVC tape at the front.

9 COUNTERS



WORKING TIME – Total hours machine working time.

PARTIAL WORKING TIME – Partial working time. Machine operator can reset this time with RESET button.



PANELS COUNTERS – Number of panels banded (counted single sided)

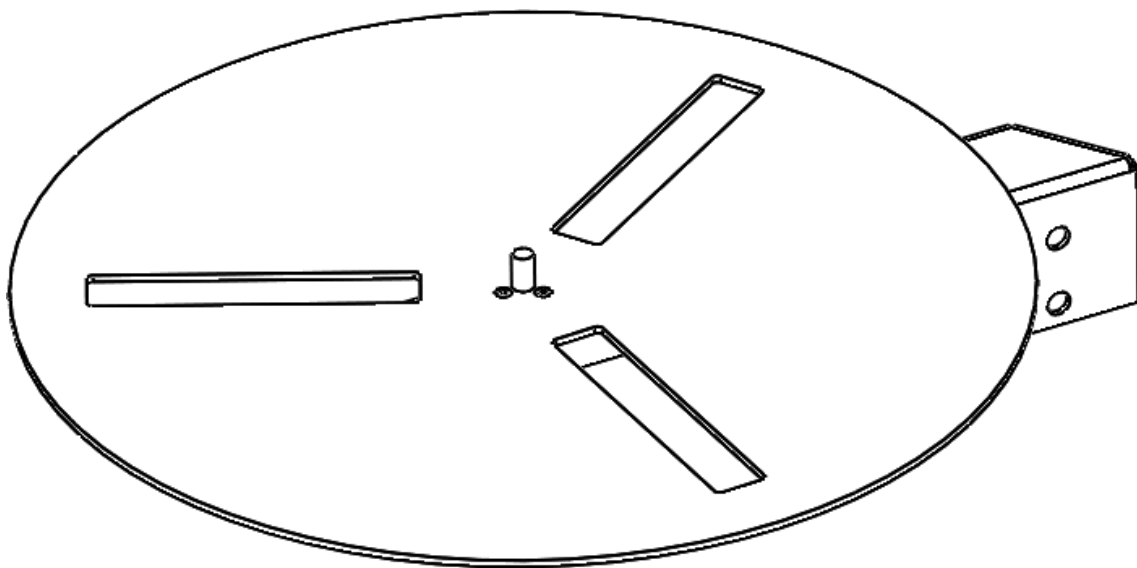
PARTIAL PANELS COUNTERS – Number of panels banded. Machine operators can reset this counter with RESET button.

10 LANGUAGE

Select the interface language from LANGUAGE menu.



MAKSIWA CBC.PCR COIL HOLDER



Unit: MAKSIWA CBC.PCR Coil Holder

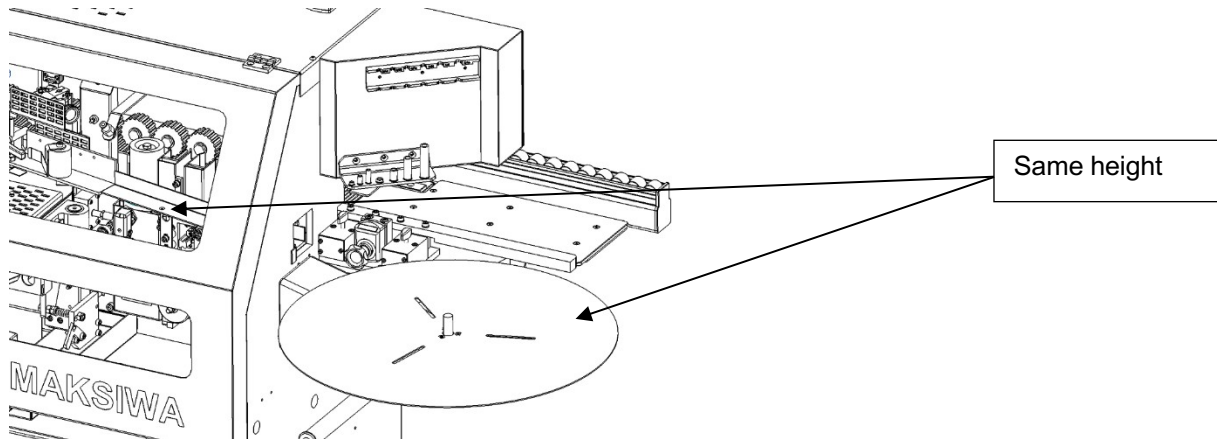
Revision: 00 05/2023

1	UNIT SCOPE AND DESCRIPTION	3
2	ADJUSTMENT	3
3	UNIT COMPOSITION	3

1 UNIT SCOPE AND DESCRIPTION

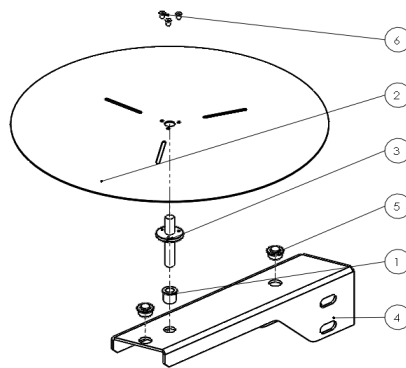
The coil holder supports edgebanding while working. This unit is attached at the input of the machine. For secure shipping, we disassemble this unit.

2 ADJUSTMENT



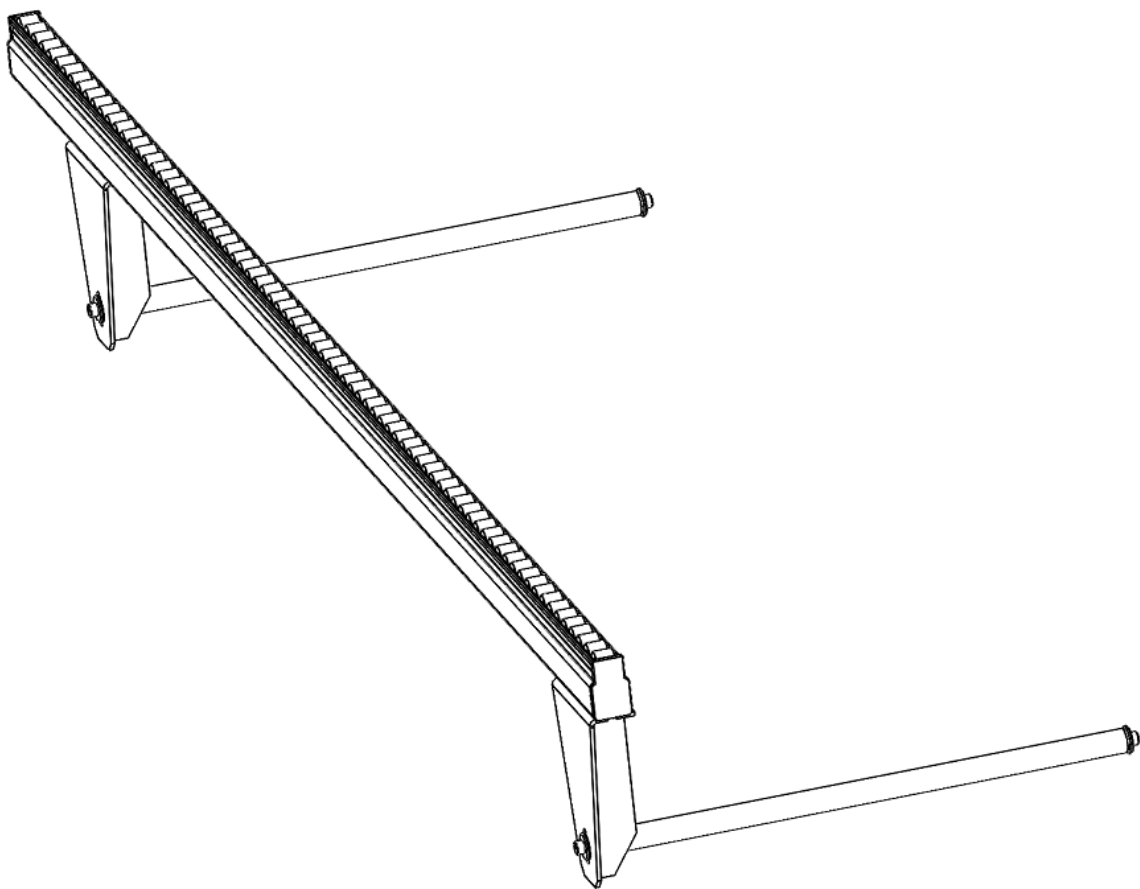
Loosen bolts attaching the coil holder and position it at the same height as feeding tray inside the machine cabin, to ensure a smooth movement of the edge tape.

3 UNIT COMPOSITION



1800050 Coil tray CBC.PCR			
#	Qty.	Description	Reference
1	1	Selfoil casket Tipo B 16-22-25,28-3	102000229
2	1	Disc D590	401006147
3	1	Coil tray shaft	404001187
4	1	Support	407000286
5	2	Sliding rollers SPS 15 B	5002820
6	3	Flathead bolt DIN7991, M6 X 12 Thread:12mm	6320601202

MAKSIWA CBC.PCR SUPPORT APRON EXTENSIBLE



Unit: MAKSIWA CBC.PCR Apron extensible

Revision: 00 05/2023

1	UNIT AIM AND DESCRIPTION	3
2	UNIT ADJUSTMENT	3
3	UNIT COMPOSITION	4

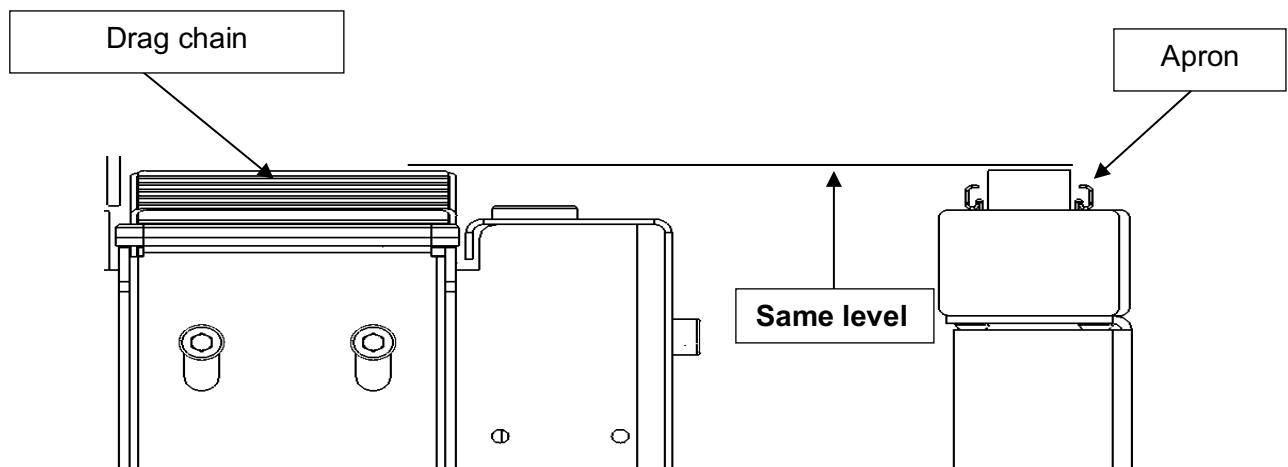
1 UNIT AIM AND DESCRIPTION

The function of the apron group is to help hold the panel correctly on the same level as the drag chain and slide it easily.

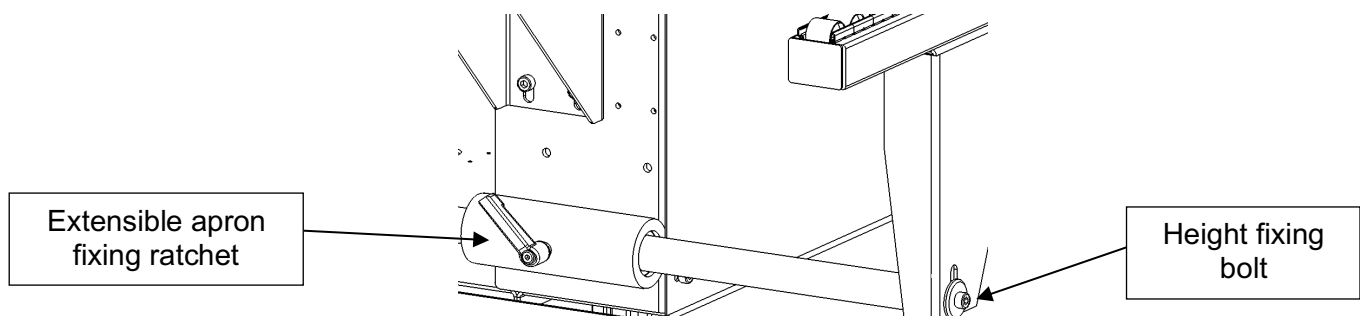
Due to the apron length and for and easy transport, we supply this unit disassembled.

2 UNIT ADJUSTMENT

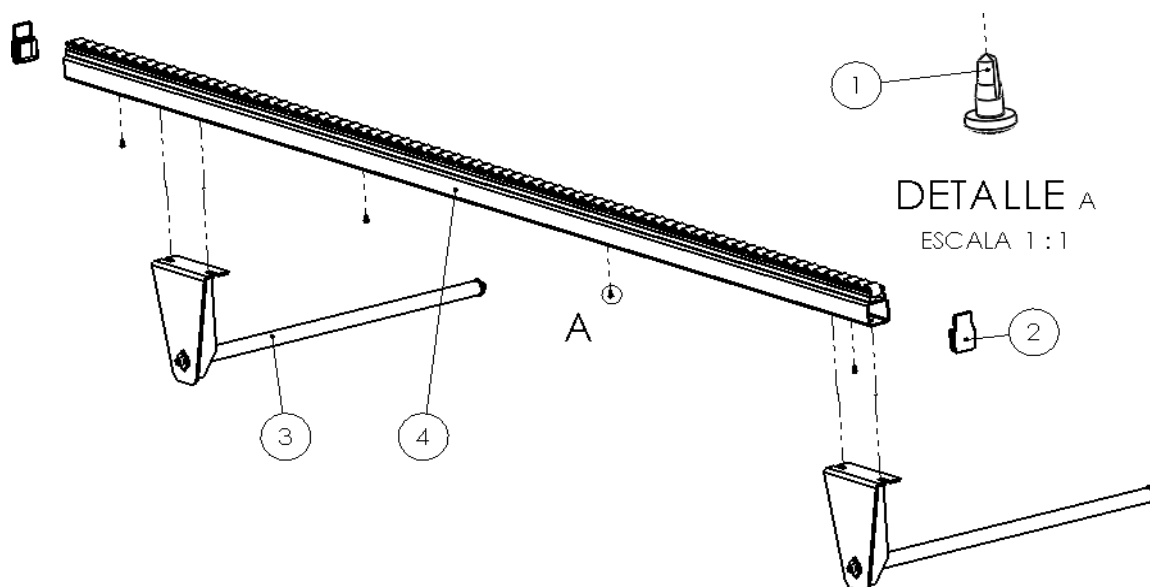
Before starting work, check that the apron is at the same height as the drag chain. On the contrary, the panel will enter tilted causing groups malfunction and obtaining an incorrect finish.



Adjust the height using height-fixing bolts on both sides of the apron arms. In addition, for adjusting the apron extension, lose apron-fixing ratchet.

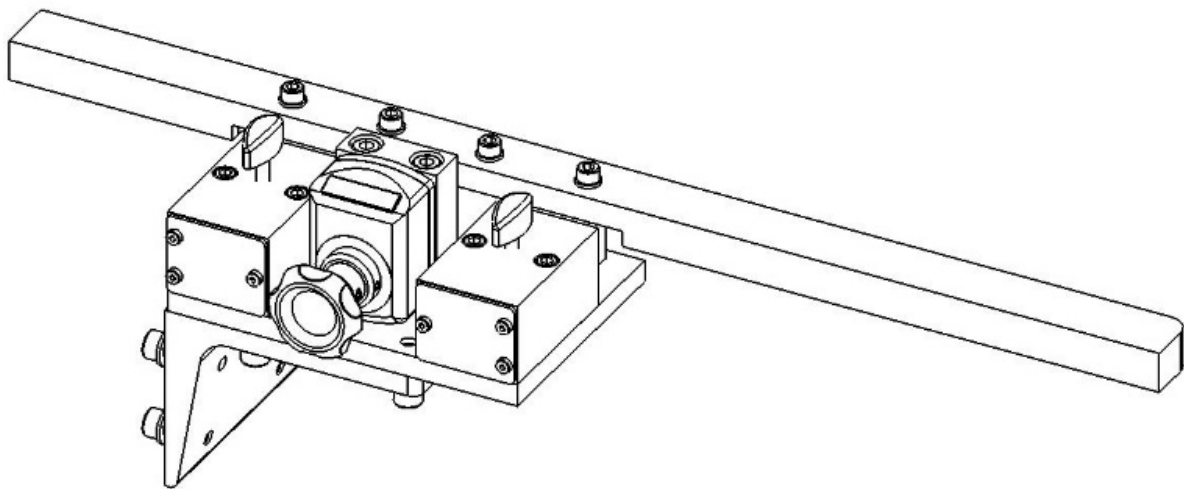


3 UNIT COMPOSITION



Adjustable apron 2000259			
#	Qty.	Description	Reference
1	4	DIN 7504 4,8X13CR3	102000658
2	2	Side cover	401006095
3	2	Support arm	5002728
4	1	Apron rail	5005185

MAKSIWA CBC.PCR INFEEEDING FENCE



Unit: MAKSIWA CBC.PCR Infeding fence

Revision: 00 05/2023

1	AIM AND UNIT DESCRIPTION	3
2	MAINTENANCE	3
3	UNIT COMPOSITION	4

1 AIM AND UNIT DESCRIPTION

The infeeding fence guides the panel into the machine and ensures that it maintains a uniform and parallel path with the unit of the machine throughout the edgebanding process.

In the case of the Maksiwa CBC.PCR machine, with mobile infeeding fence, you can adjust the depth of the unit by loosening the ratchets and adjusting SIKO dialer, in this way, the premilling unit will remove only the thickness set.

2 MAINTENANCE



Before starting preventive maintenance, disconnect the machine electrically and pneumatically. Perform the maintenance, only if you have received proper training from a qualified technician.

- Clean the fence daily with a mild cleaning agent.
- Daily remove (vacuum) wood chips and edge trim that may gather near the fence.
- Periodically check that the panel enters the machine without drifting.

When placing a panel at the machine entrance make sure that the panel rests fully on the fence.

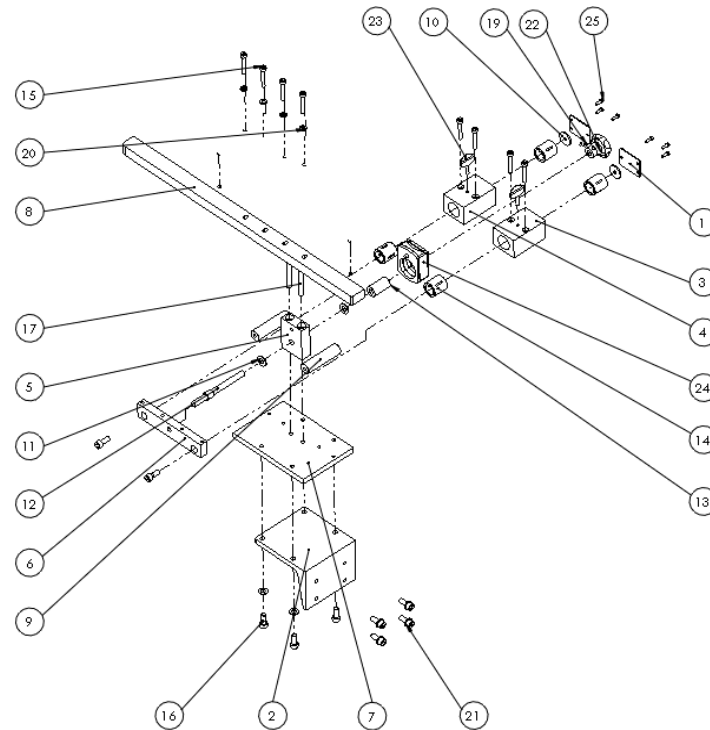
Whenever the panel advances through the machine going out of its way (separating from infeeding fence) this may indicate that there is a problem in the infeed fence.

Follow these steps to determine if fence alignment with the panel is correct:

- Deactivate all units, except for the gluepot, which you deactivate it manually with the cancellation lever.
- Clean chain pads and wheels.
- Make sure that the fence is 37mm away from the chain pad edge.
- Feed 3 long 300x500mm panels by their short side and stop the machine so that one panel stays at the beginning, another in the middle and the last one at the end of the machine; check that the pressure beam exerts a uniform pressure on the 3 panels.
- Feed a long panel. Make sure that this panel has a perfect cut, since if the panel suffers from “banana effect” you will not be able to determine if the infeed fence has a problem or not.
- Stop the long panel matching the end of the panel with the start of the infeed fence.
- If you notice a gap between the panel and the infeeding fence, it means that the fence is out of parallelism with the drag chain.

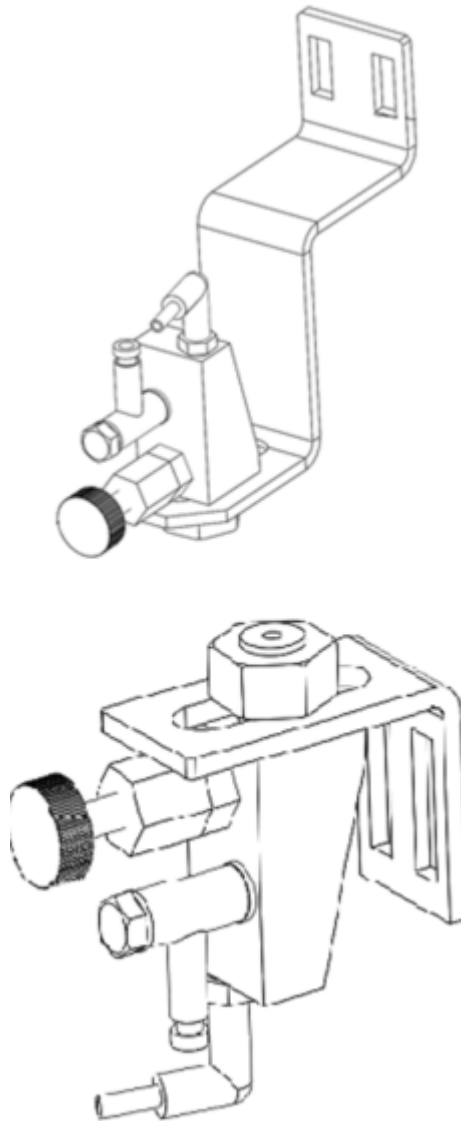
Only a trained technician should adjust the infeeding fence.

3 UNIT COMPOSITION



0200100 Infeeding fence Maksiwa CBC.P			
#	Qty.	Description	Reference
1	2	Guide block protection	401000517
2	1	Support bracket	402000193
3	1	Guide block	403000275
4	1	Guide block	403000275
5	1	Siko support infeeding fence	403000281
6	1	Siko support infeeding fence	403002225
7	1	Support block adjustment	403002226
8	1	Handrail Infeeding fence XL	403002327
9	2	COLUMNA GUIA	404000180
10	2	Washer top	404000181
11	2	Brass washer Ø20 x Ø10 x 2	404000182
12	1	SIKO shaft infeeding fence	404000183
13	1	SIKO indicator socket	404000184
14	4	linear ball bushing LBBR20	6172030011
15	8	Allen bolt DIN 912 M6 x 40 (thread 40mm)	6310604001
16	10	Allen bolt DIN 912 M8 x 20 (thread 20mm)	6310802001
17	2	Allen bolt DIN 912 M8 x 70 (thread 70mm)	6310807001
18	1	Grub screw flat DIN913 M5 X 10	6330501001
19	1	Grub screw flat DIN913 M6 X 6	6330600601
20	4	Grower DIN 125 M6	6610600001
21	8	Grower DIN 125 M8	6610800001
22	1	Ratchet 1132 D45	9250105901
23	2	Knob M6 x 25	9250476301
24	1	Positioner DA09	9350921051
25	6	DIN 7984 - M4 x 12 --- 9.9N	

MAKSIWA CBC.PCR SPRAY UNIT



Unit: MAKSIWA CBC.PCR Spray unit

Revision: 00 05/2023

1	DESCRIPTION AND AIM OF THE UNIT	3
2	SCREEN SELECTION AND ACTIVATION	3
3	UNIT ADJUSTMENT	3
4	MAINTENANCE.....	3
4.1	GENERAL MAINTENANCE	3
5	UNIT COMPOSITION	4

1 DESCRIPTION AND AIM OF THE UNIT

The application area is located before premilling unit and uses the LPZ / II release agent. The application on the top and bottom side of the panel prevents glue residues from adhering to the surface. This unit works with premilling.

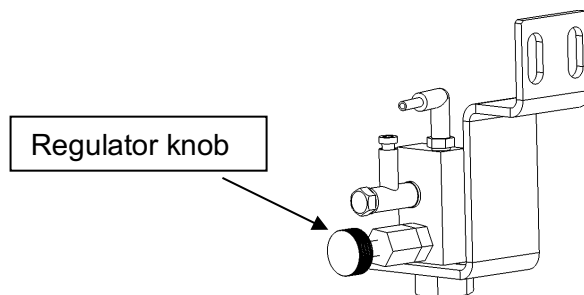
2 SCREEN SELECTION AND ACTIVATION

	Unit ON	Unit OFF
CBC.PCR		

3 UNIT ADJUSTMENT

The unit has pressure regulators to regulate the pressure of the spray liquid. "Pneumatic diagram" for necessary pressure for the unit

To regulate the output of the spray liquid, turn the regulating knob for more or less quantity depending on the needs of work.



4 MAINTENANCE

Before starting the Maintenance, turn off the machine (disconnect completely electrically) and disconnect compressed air.

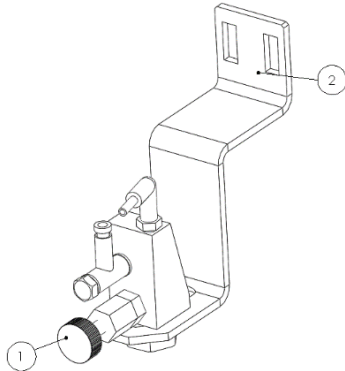
Only trained personnel can perform these Operations.

4.1 General maintenance

- Check that the condition of the air tubes is correct.
- Check the condition of the hoses, and in case of detecting any deterioration, replace them as soon as possible to avoid any loss of liquid or air.
- Check the correct orientation of the nozzles towards the wood.
- Check the liquid level in the bottle.

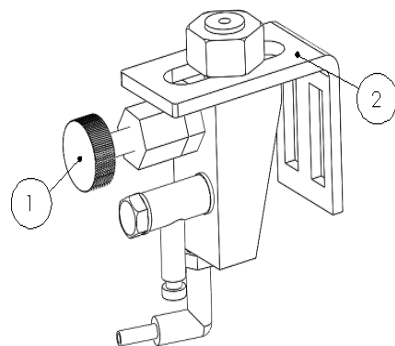
5 UNIT COMPOSITION

Top spray nozzle



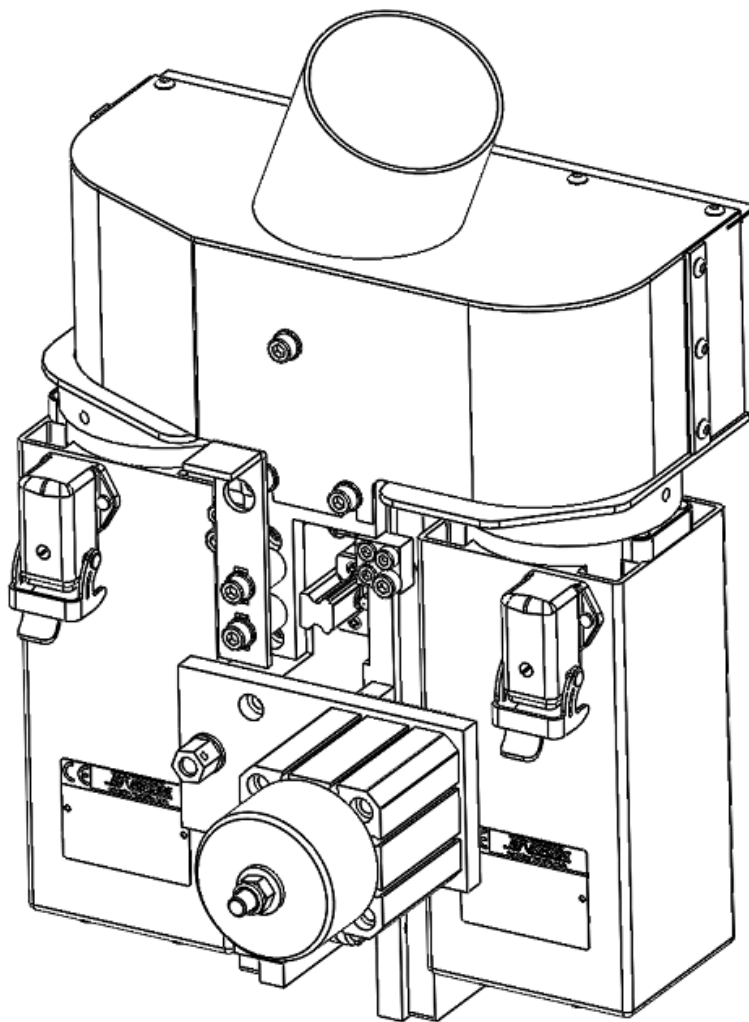
Top Spray Nozzle 1600006			
#	Qty.	Description	Reference
1	1	Riepe spray nozzle	100000019
2	1	Top support bracket	401001317

Bottom spray nozzle



Bottom Spray 1600007			
N°	Cant.	Description	Reference
1	1	Pistola spray Riepe	100000019
2	1	Lower support bracket	401001316

MAKSIWA CBC.PCR PREMILLING UNIT PF2



Unit: MAKSIWA CBC.PCR Premilling
unitRevision: 00 05/2023

1	DESCRIPTION AND AIM OF THE UNIT	3
2	WORK DESCRIPTION AND ADJUSTMENT	3
2.1	SCREEN SELECTION	3
2.2	WORK DESCRIPTION.....	3
2.3	SENSORS, ELECTRIC AND PNEUMATIC COMPOSITION.....	4
2.3.1	Sensors	4
2.3.2	Electric composition	4
2.3.3	Pneumatic composition	4
2.4	UNIT ADJUSTMENT	4
2.4.1	Depth adjustment	5
2.4.2	Tilt adjustment	6
3	MAINTENANCE	6
3.1	GENERAL MAINTENANCE	6
3.2	TOOL CHANGE.....	7
3.3	INSERTS CHANGE	8
4	ALARMS	9
5	ERRORS AND SOLUTIONS	10
6	UNIT COMPOSITION	11
6.1	COMPLETE UNIT	11
6.2	OUTPUT MOTOR ASSEMBLY	12
6.3	MAIN MOTOR ASSEMBLY	13
6.4	SUPPORT ASSEMBLY	14

1 DESCRIPTION AND AIM OF THE UNIT

The job of the premilling unit is to remove all the irregularities that the panel may present in the profile. It is composed of two high-frequency motors, which avoids chipping at both lead and trail of panel, rotates clockwise for the lead, and counter-clockwise for the rear side.

	Frequency (Hz)	Speed (rpm)	Main motor (kW)	2nd motor (kW)
PF-2	150	9000	0.75	0.55

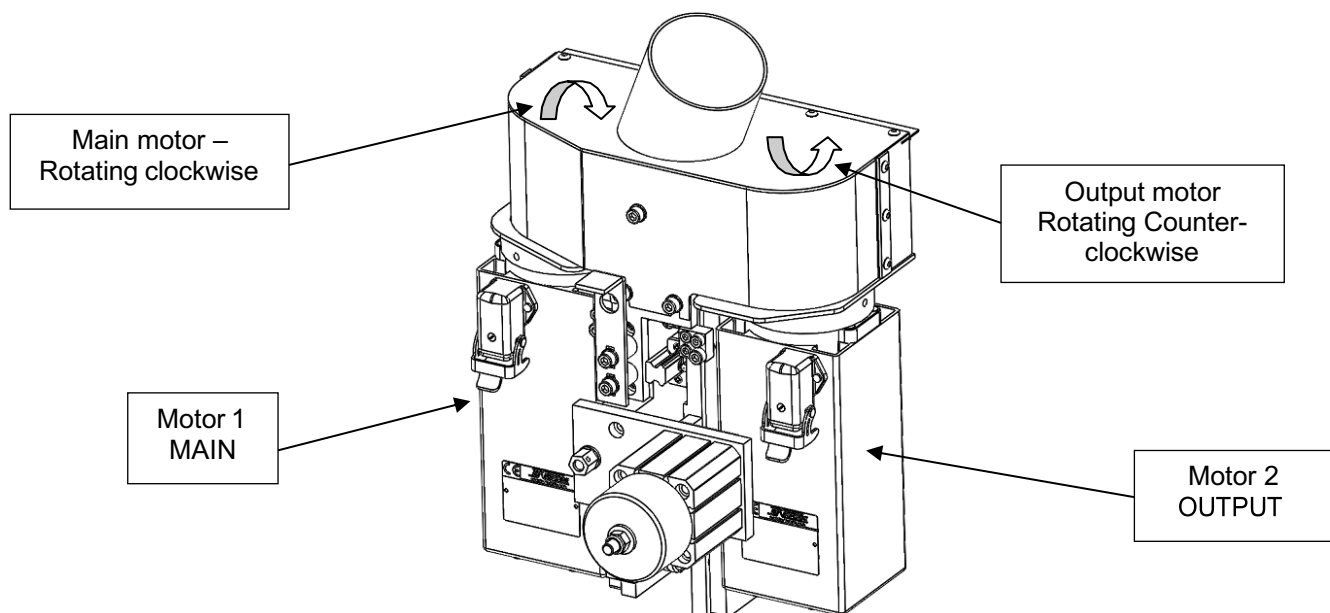
2 WORK DESCRIPTION AND ADJUSTMENT

2.1 Screen selection



2.2 Work description

The main motor, rotating clockwise, works from the beginning of the panel, almost, to the end. The output motor, rotating counter-clockwise, works on the final part of the panel, equaling the work done by the main motor. In this way, the unit works perfectly from the beginning to the end of panel, without any uneven finish.



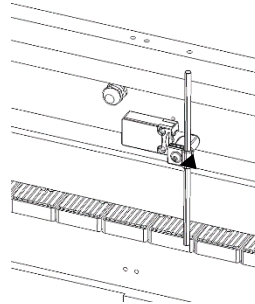
2.3 Sensors, electric and pneumatic composition



This configuration detailed below might change. Please check the update electric and pneumatic diagram to confirm the correct sensors, electric and pneumatic components.

2.3.1 Sensors

The unit only works with the limit switch 20S11 sensor located at the input of the machine, which gives the signal to act the output motor.



Limit switch 20S11

2.3.2 Electrical composition

	Motor	Inverter
Main motor	6M1	U4
Output motor	6M2	

2.3.3 Pneumatic composition

	Solenoid
Output motor	25Y7

The PLC activates the solenoid of the output motor (check the pneumatic diagram to know the nomenclature of the solenoid valve) when there are about 20mm left on backside of the panel. Thus, almost the entire board is premilled with the main motor and only a small part with the rear motor, thus achieving a perfect finish.

2.4 Unit adjustment

Security warning

A trained technician with special tools adjusts this unit. For this reason, MAKSIWA does not recommend handling without the support of an authorized technician.

The premilling unit has cutting blades that can cause serious damage under improper use of the unit.

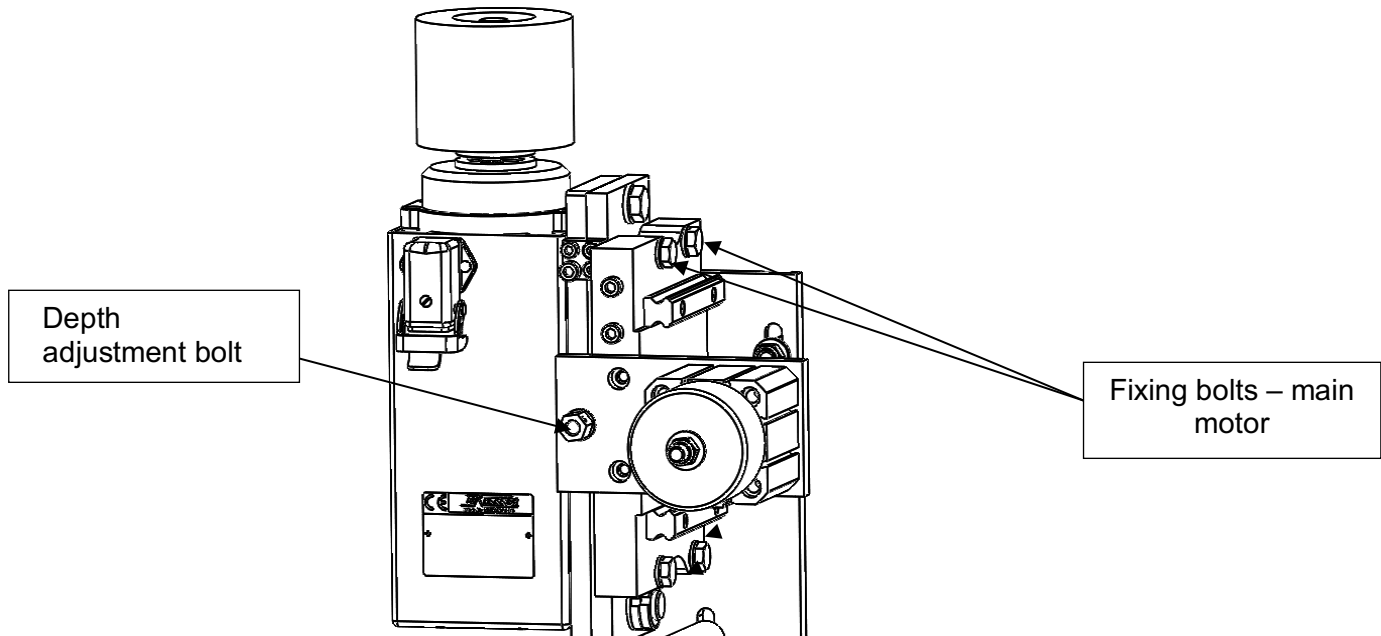
Do not adjust the unit while the machine is running to avoid enrollment with the chain. For proper handling, disconnection of the unit is essential.

Before making any adjustments, try to solve the problem with the appropriate preventive/corrective actions, and follow these steps detailed in the section on common errors and failures.

2.4.1 Depth adjustment

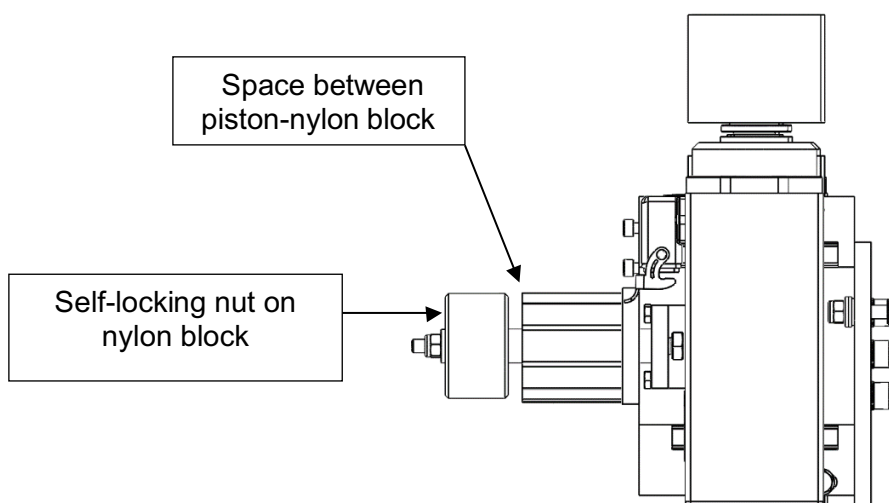
2.4.1.1 Main motor

In the premilling unit PF-2, main motor is the reference, thus is it set at 0 point (0mm).



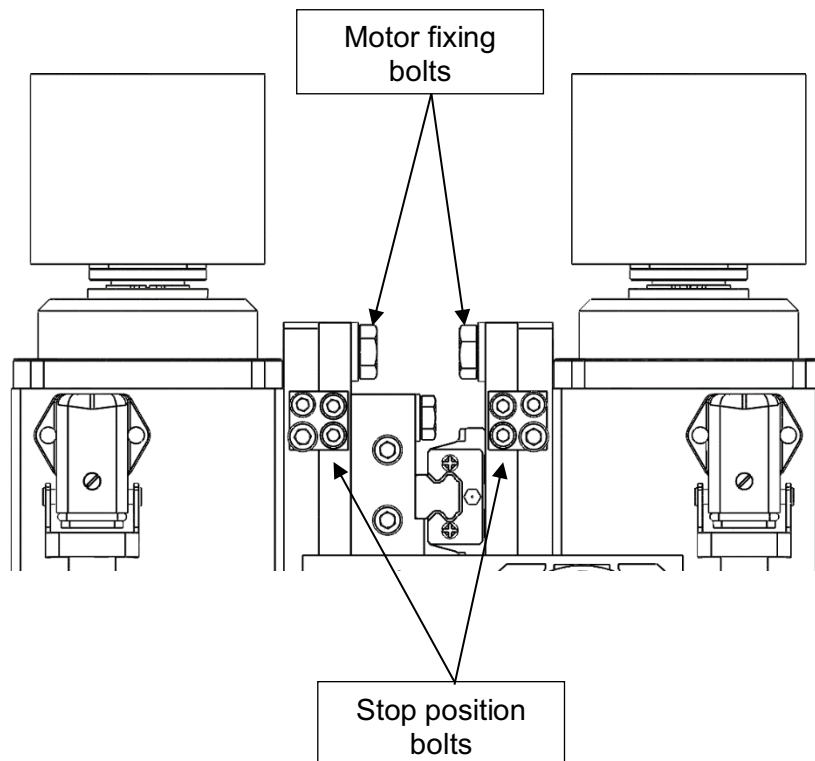
Adjust the motor losing the unit fixing bolts and acting accordingly on the depth adjustment.

2.4.1.2 Output motor



Loosen the self-locking nut and turn the knob counter-clockwise , increasing the piston separation with the nylon stop, so the unit will lower more.

2.4.2 Tilt adjustment



Adjust the unit angle, losing the motor fixing bolts and moving the unit with stop position bolts.

3 MAINTENANCE



Before starting the Maintenance, turn off the machine (disconnect completely electrically) and disconnect compressed air.

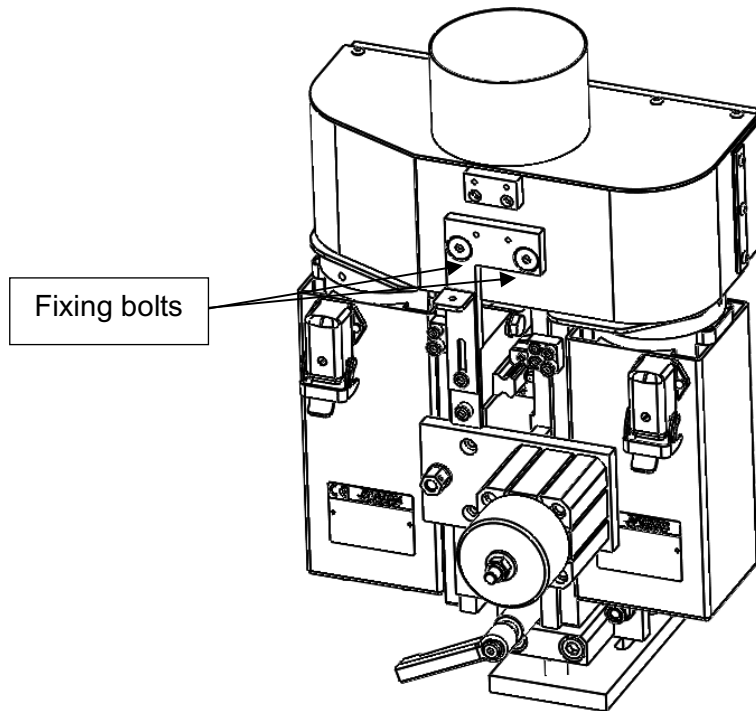
Only trained personnel can perform these operations.

3.1 General maintenance

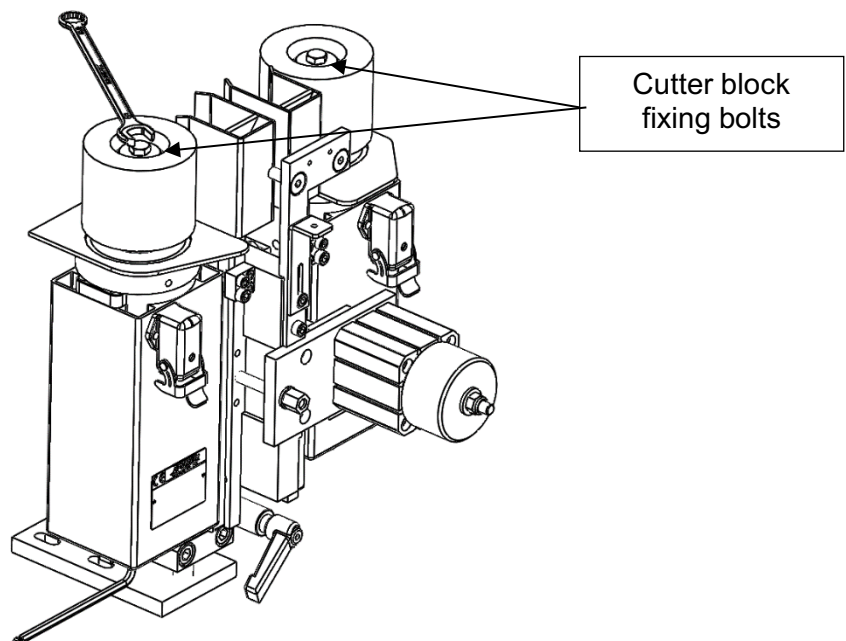
- Daily remove (vacuum) dust that may be near the unit.
- Grease the linear guides. Perform this operation every 3 months.
- Check manually daily, without pneumatic pressure, so that the motor moves correctly, without any obstruction.

3.2 Tool change

- Remove the tool cover by taking out the fixing bolts.

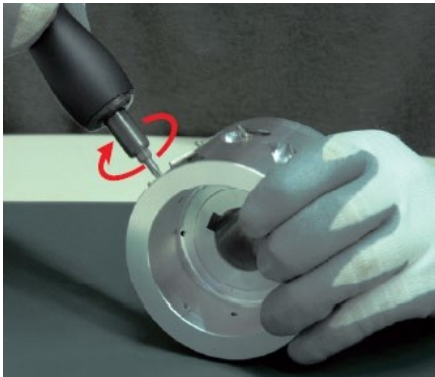
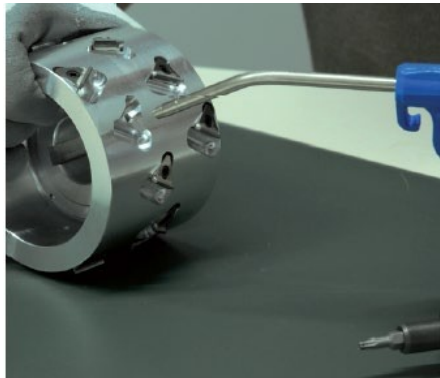
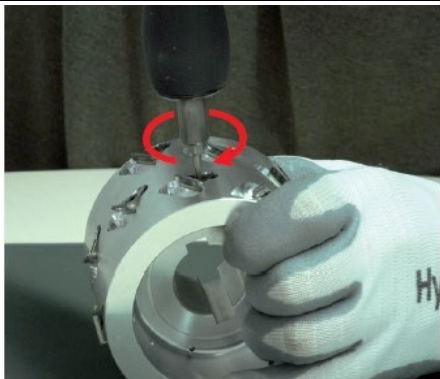


- Lock the motor rotation from bottom side with an Allen key of 6mm.
- Keep in mind that the main motor shaft has inverted thread due to its rotation.
- Use a 13mm spanner (or socket) to lose the tools fixing bolts.

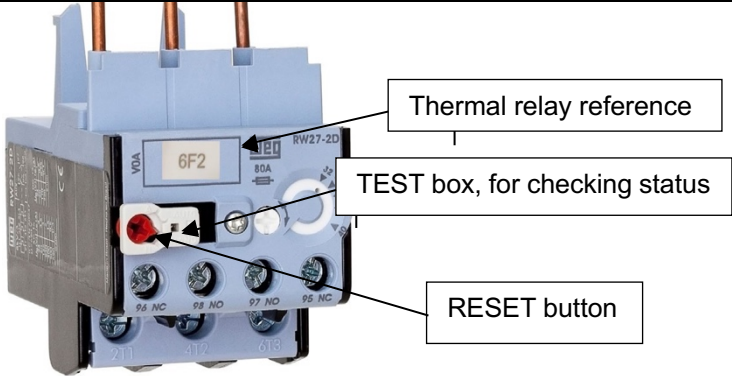
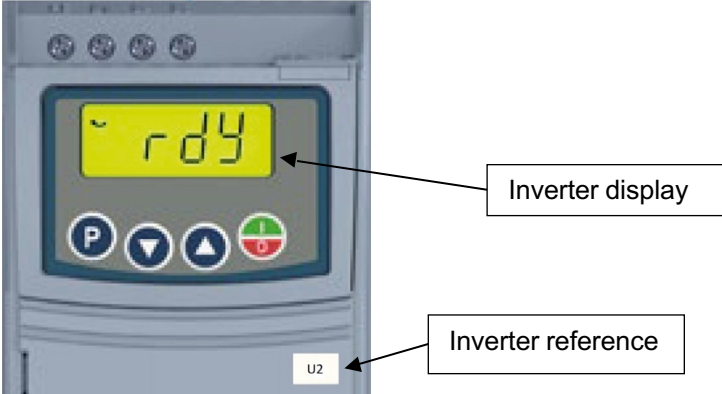


- Now you should be able to remove the tools and replace.

3.3 Inserts change

1	Clean the cutter block to remove any residue of glue or dust.	
2		Loosen and remove the screws on the blades you want to replace using a Torx 15 wrench. The screws may be too tight from use, never force or damage the screws and contact service.
3		Carefully clean the surface of the blade insert with compressed air.
4		Set the torque wrench to 5N·m.
5		Insert the blade ensuring the correct position and secure the screw with the torque wrench.

4 ALARMS

Alarm	Possible cause	Solution
Thermic relay	Thermal relay alarm due to a motor malfunction	 Locate the thermal relays in the electrical panel. Check that the TEST box is yellow (usually green). Press the RESET button to clear the fault and you can reset the alarm. Contact the technical service to solve the fault. Meanwhile, work without the unit causing the failure. 6F1: Main premilling (fix). 6F2: Second premilling motor (with piston).
Inverter	Low input voltage	 Locate the inverter causing the fault; you can reset it by turning off the machine for 60 seconds and turning on again. If the fault persists, contact the technical service indicating the inverter and the fault that appears on the display. U4: Main and second premilling.
	Motor failure	
	Inverter fault	
	Worn tools	

5 ERRORS AND SOLUTIONS

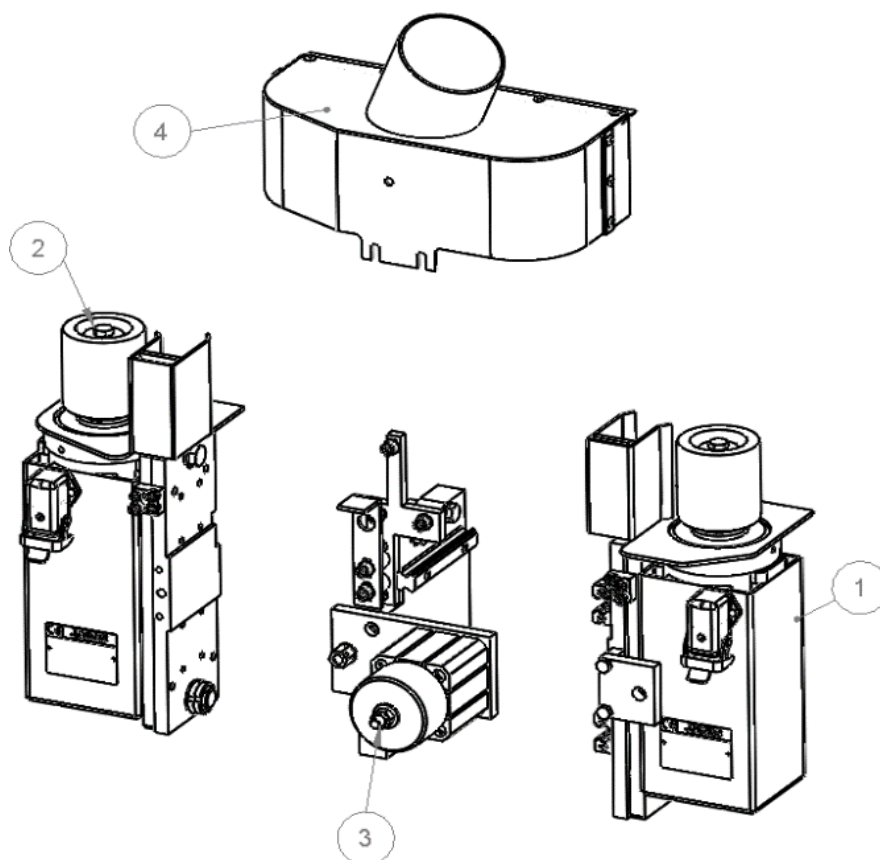
Before making any adjustments to improve the finish, check the following:

- Correct height of the pressure beam: Check that the pressure beam grips well the panel, and it does not move in its path.
- Correct guiding of the drag chain with a long panel (+ 1.50m): Check with a long panel that it follows its path with infeeding fence. If the board separates at the front, or back, it may result in an incorrect finish.
- Free movement: Remove the pneumatic pressure of the machine, and check the motor of the first premilling. It must move freely.
- Continuous pressure: Reconnect the pressure and check that it maintains at 0.6MPa during work.

Fault	Possible cause	Solution
Premilling in angle (different from 90°)	Incorrect apron height	If the apron is not on the same level as the drag chain, it may affect the finish of the premilling unit. To do this, check the correct height by consulting the attached manual.
	Motor tilted	Contact an authorized technician to verify and solve the fault.
Uneven finish	Linear bearing not clean	Without pneumatic pressure, check that the second motor moves freely. If necessary, clean and grease the linear bearings.
	Banana effect in panel cut	Check (especially on long panels) that cutting the board does not release the surface tension, causing a deflection called the banana effect. To fix it, you can double trim the panel.
	Unaligned infeeding fence	Check with a long panel that, when fed into the machine, it does not separate from infeeding fence. If so, consult the manual attached of the infeeding fence to solve the fault.
Chipping on top/bottom	Worn tools	Check, and if necessary, replace the cutting tools.

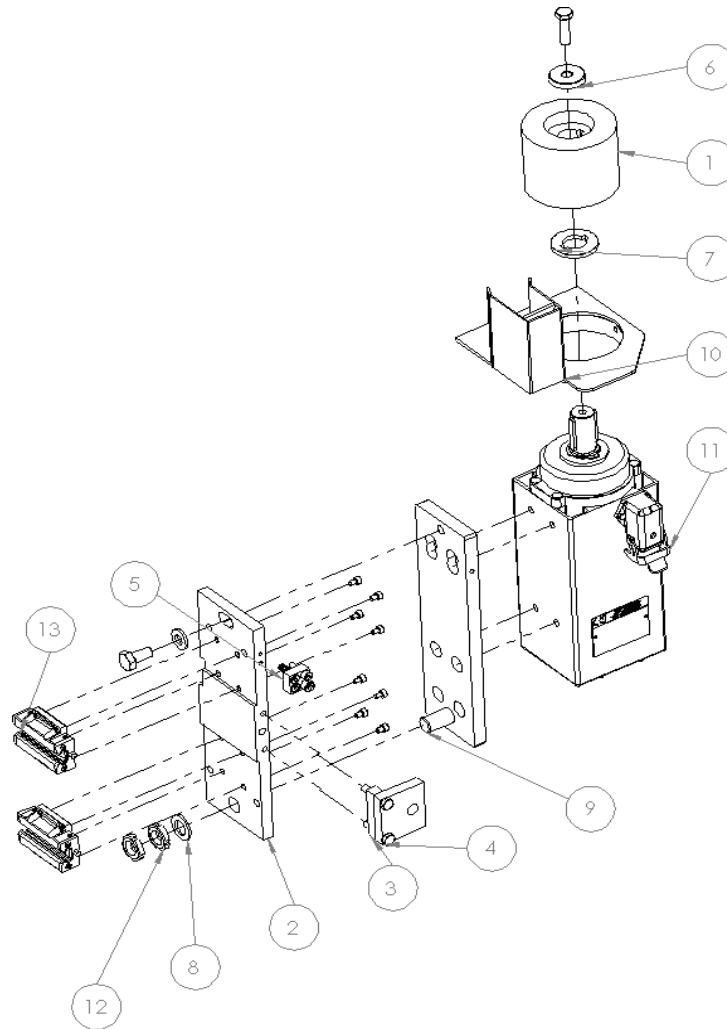
6 UNIT COMPOSITION

6.1 Complete unit



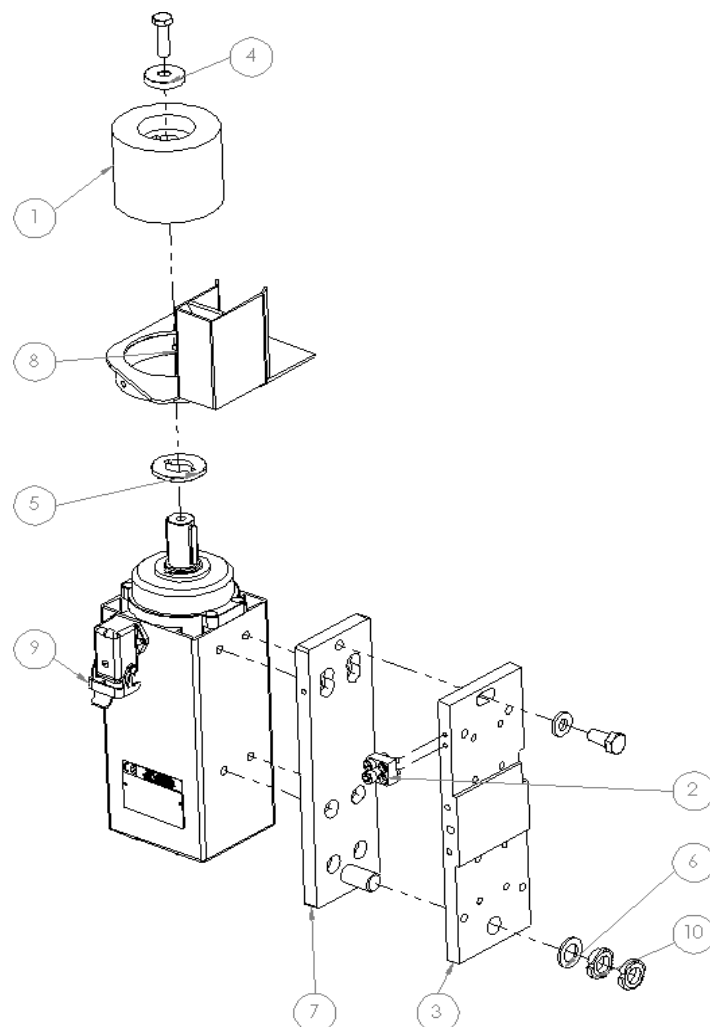
Premilling PF-2 0400067			
9k #	Qty.	Description	Reference
1	1	Output motor assembly	5003566
2	1	Main motor assembly	5003567
3	1	Support assembly	5005177
4	1	Dust collector	5005178

6.2 Output motor assembly



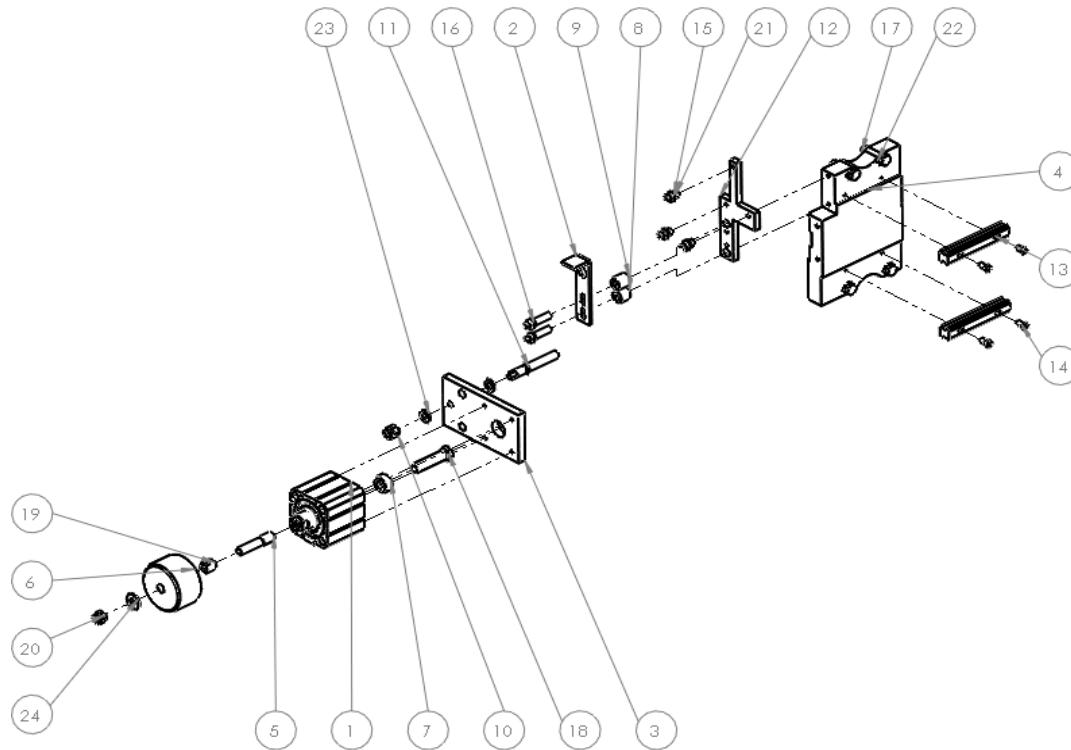
5003566 Back cut			
#	Qty.	Description	Reference
1	1	80x65xd20 Right Diamond tools	102000204
2	1	Guide Base	403000242
3	1	Link cylinder distancer	403000257
4	1	Cylinder link	403000260
5	1	Motor regulation top symmetry	403000308
6	1	Washer cutter	404000144
7	1	Bottom Spile	404000165
8	1	Brass Washer 25x15x2	404000195
9	1	Motor plate welding assembly	5000173
10	1	Aspiration base box Entry	5002567
11	1	Motor Tecknomotor 0.55 KW PN 41470307	5801501221
12	2	KM2 Nut	6151020001
13	2	Guideline 100mm skid	6170001001

6.3 Main motor assembly



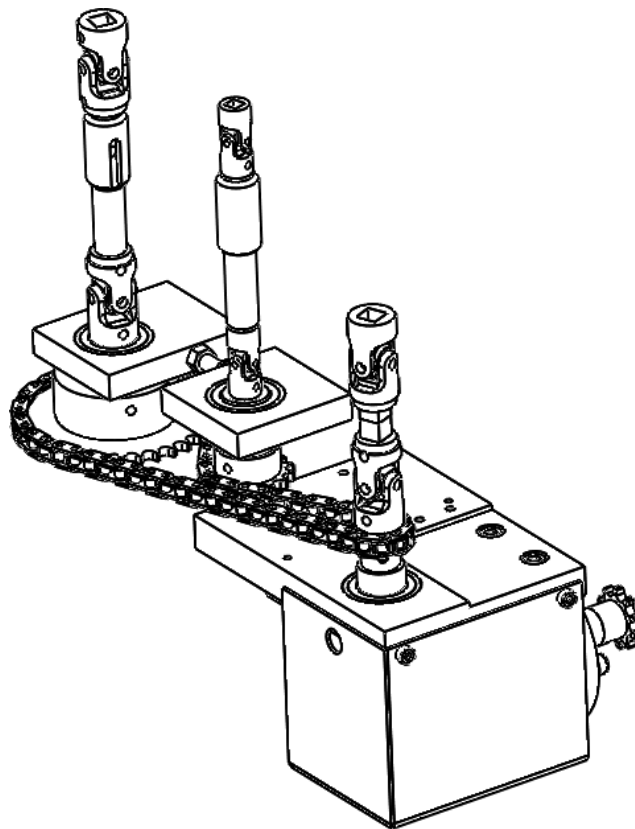
5003567 Front cut			
#	Qty.	Description	Reference
1	1	60x65xd20 Left Diamond tools	102000205
2	1	Motor regulation top	403000261
3	1		403002186
4	1	Washer cutter	404000144
5	1	Bottom Spile	404000165
6	1	Brass Washer 25x15x2	404000195
7	1	Motor plate welding assembly	5000173
8	1	Exit Aspiration base box	5002569
9	1	Motor Tecknomotor 0,75 Kw 41470305	5801501211
10	2	KM2 Nut	6151020001

6.4 Support assembly



Support set 5005177			
#	Qty.	Description	Reference
1	1	Pneumatic cylinder (Ref. SID 50x10)	101000044
2	1	Feeding tray support	401006073
3	1	Cylinder support plate	403000361
4	1	Unit support	403002805
5	1	Cylinder stroke adjustment pin	404000153
6	1	regulation knob	404000155
7	1	cylinder separator	404000159
8	1	Spacer	404000169
9	1	Spacer 19mm	404000403
10	1	hexagonal knob	404000583
11	1	Horizontal regulation axis	404001397
12	1	Dust collector support	407000342
13	2	Guide rail (Ref. HGR15R100C HIWIN)	6170001101
14	4	Allen bolt DIN 912 M4 x 10 (Thread 10mm)	6310401001
15	3	Allen bolt DIN 912 M6 x 10 (Thread 10mm)	6310601001
16	2	Allen bolt DIN 912 M6 x 30 (Thread 30mm)	6310603001
17	4	Hexagonal screw DIN933, M8 X 35	6360803501
18	1	Hexagonal screw DIN933, M10 X 50	6361005001
19	1	threaded insert helicoil M8	6393302081
20	1	SELF-LOCKING NUT DIN982, M8	6420800001
21	5	Washer DIN 125 M6	6610600001
22	5	Washer DIN 125 M8	6610800001
23	1	Washer Brass M8	6610800201
24	1	Washer DIN 6902 - A 9.3	

MAKSIWA CBC.PCR GEARBOX GENERAL MANUAL



Unit: MAKSIWA CBC.PCR Gearbox (gluepot, feeding and side pressure roller)

Revision: 00 05/2023

1	DESCRIPTION AND AIM OF THE UNIT	3
2	TRANSMISSION CHAIN ADJUSTMENT	3
3	UNIT COMPOSITION	4
3.1	COMPLETE ASSEMBLY	4
3.2	PRESSURE ROLLERS TRANSMISSION	4
3.3	FEEDING TRAY TRANSMISSION	5
3.4	GLUEPOT TRANSMISSION	5

1 DESCRIPTION AND AIM OF THE UNIT

The gearbox composed of all the elements located immediately below the gluepot. It is composed of three bearings, one for the gluepot, one for the feeding tray and one for the big pressure roller.

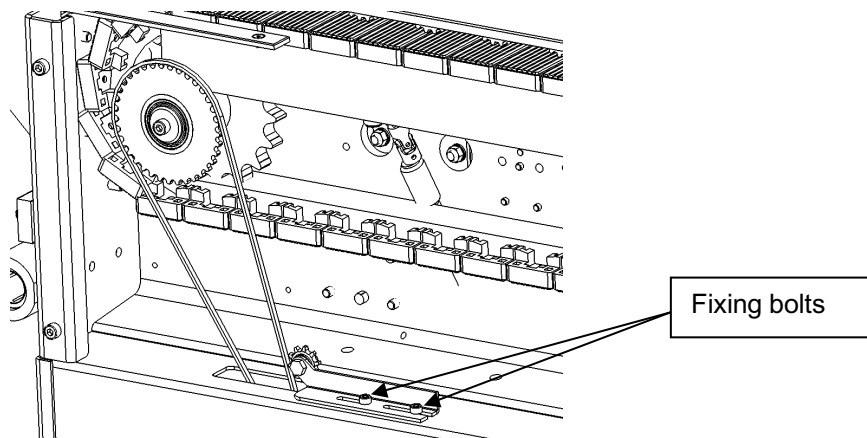
It has the function of transmitting in a synchronized way the movement of the drag chain to the gluing roller and to the tape feeding system and to the first pressure roller.

2 TRANSMISSION CHAIN ADJUSTMENT



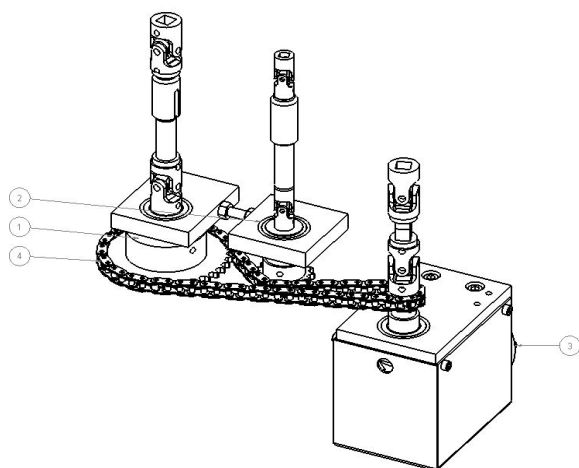
Before making any adjustments, try to solve the problem with the appropriate preventive/corrective actions

To tension the transmission chain, first remove the drag chain guard cover. Then, loosen the two fixing bolts in the optimal position to obtain a correct tension.



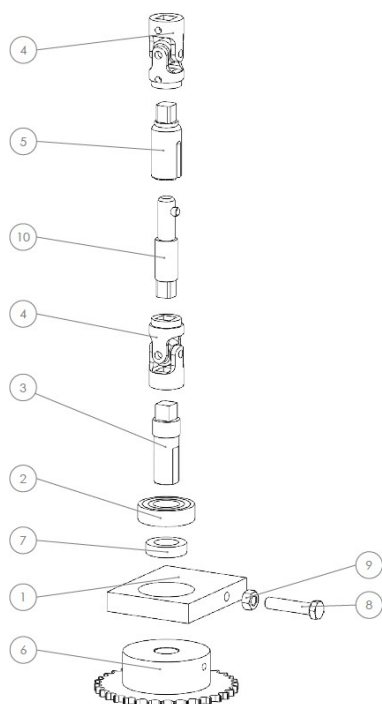
3 UNIT COMPOSITION

3.1 Complete assembly (03000074)



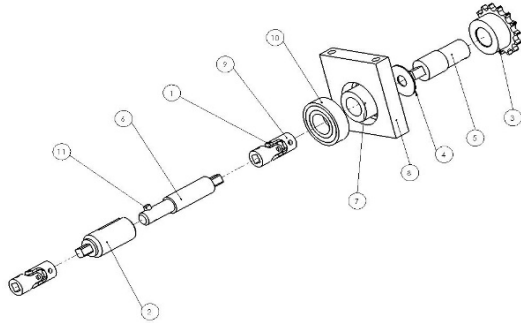
0300074 Gearbox			
#	Qty.	Description	Reference
1	1	Pressure roller transmission	5005585
2	1	Feeding tray transmission	5004031
3	1	Gluepot transmission	5000665
4	1	Gearbox chain (68 steps)	5004035

3.2 Pressure rollers transmission (5005585)



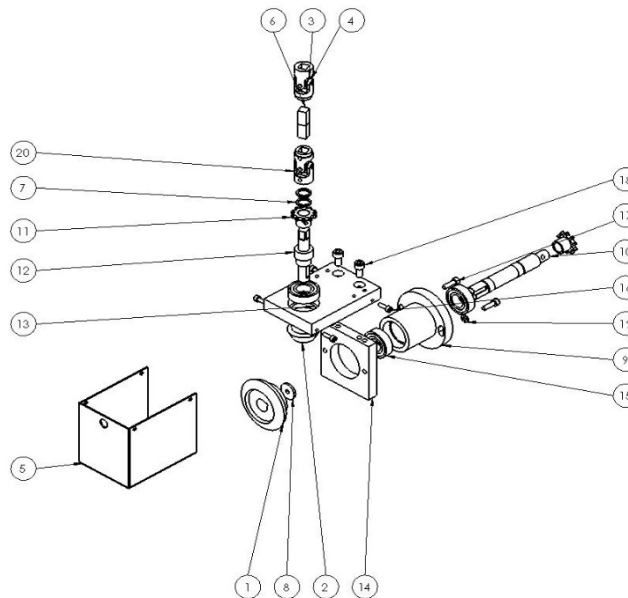
Pressure rollers transmission 5005585			
#	Qty.	Description	Reference
1	1	Holding plate	409000109
2	1	bearing 6004-2RS	6116004301
3	1	Roller shaft drive	404000254
4	2	Universal joint	5412221201
5	1	Slider	404000427
6	1	Sprocket 3/8 Z34	404000429
7	1	Interval washer	404000433
8	1	Hex nut DIN933, M8X 40	6360804001
9	1	Hex nut DIN934, M8	6410800001
10	1	Shaft	404000198

3.3 Feeding tray transmission (5004031)



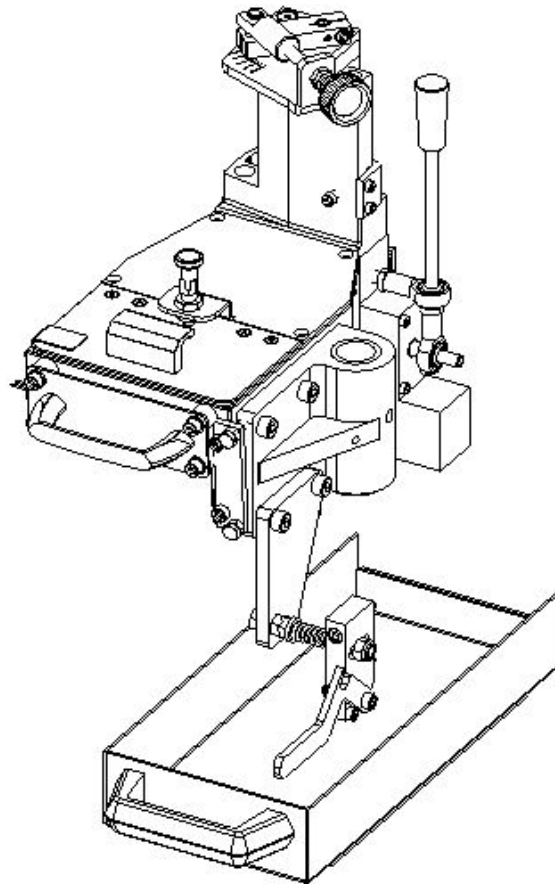
Transmission tray feed adaptation 5004031			
#	Qty.	Description	Reference
1	2	Universal joint F16	
2	1	Feeding slider	404000417
3	1	Sprocket 3/8 Z15	404000431
4	1	Washer bearing protection	404000434
5	1	Eje de alimentación adaptación	404001540
6	1	Feeding shaft	404001541
7	1	Spacer washer	404001542
8	1	Base plate	409000111
9	4	Universal joint	5411620801
10	1	Bearing 6004-2RS	6116004301
11	1	Splined pin DIN1472 6 x 16	6570601601

3.4 Gluepot transmission (500665)



Transmission boiler 5000665			
#	Qty.	Description	Reference
1	1	Angular transmission sprocket	1000107002
2	1	Angular transmission sprocket	1000111002
3	2	Universal joint 1000418dado25	
4	2	Universal joint 1000418pieza25A	
5	1	Gearbox protection box	401000952
6	1	Gluepot transmission shaft	403000531
7	2	Brass washer	404000365
8	1	Washer	404000419
9	1	Bearing supports	404000420
10	1	Chain transmission shaft	404000422
11	2	Sprocket Z-10	404000424
12	1	Gluepot transmission shaft	404000430
13	1	Base plate	409000107
14	1	End trim base plate	409000108
15	3	Bearing 6004-2RS	6116004301
16	6	Allen bolt DIN 912 M5 x 16 (Thread 16mm)	6310501601
17	2	Allen bolt DIN 912 M6 x 20 (Thread 20mm)	6310602001
18	2	Allen bolt DIN 912 M8 x 16 (Thread 16mm)	6310801601
19	2	Washer DIN 125 M6	6610600001
20	2	Universal joint	Cardan D25

MAKSIWA CBC.PCR GLUEPOT DUOMELT M2



Unit: MAKSIWA CBC.PCR Gluepot unit

Revision: 00 05/2023

1 DESCRIPTION AND AIM OF THE UNIT	3
2 SCREEN SELECTION AND ACTIVATION	3
2.1 SCREEN SELECTION	3
2.2 MANUAL ACTIVATION	3
3 OPERATION AND ADJUSTMENT	4
3.1 WORK DESCRIPTION.....	4
3.2 CHANGING GLUE EVA-PUR	4
3.3 TEMPERATURE SENSORS AND HEATING ELEMENTS	5
3.4 UNIT ADJUSTMENT	5
4 MAINTENANCE	7
4.1 GENERAL MAINTENANCE	7
4.2 CHANGING HEATING ELEMENTS	7
5 ALARMS	7
6 TROUBLESHOOTING	8
7 UNIT COMPOSITION	9
7.1 COMPLETE GLUEPOT DUOMELT.....	9
7.2 GLUEPOT.....	10
7.3 SUPPORT ASSEMBLY	11
7.4 GLUEPOT.....	12
7.5 GLUE ROLLER HOUSING ASSEMBLY	14

1 DESCRIPTION AND AIM OF THE UNIT

The DuoMelt gluepot is a glue applicator unit for Maksiwa CBC.PCR edgebander. It can work with EVA glue and PUR glue. It has a capacity of 1.2 Kg and a power of 3 KW. It consists of:

- Deposit for melting the glue.
- Six heating elements to melt glue quickly.
- Mechanism that allows the emptying of the gluepot.
- Software that manages and reports on the operations for changing the glue.
- Different mechanical and electrical safety elements.
- Advance roller-housing assembly, capable of applying the glue on different thickness.
- Easy glue quantity adjustment.

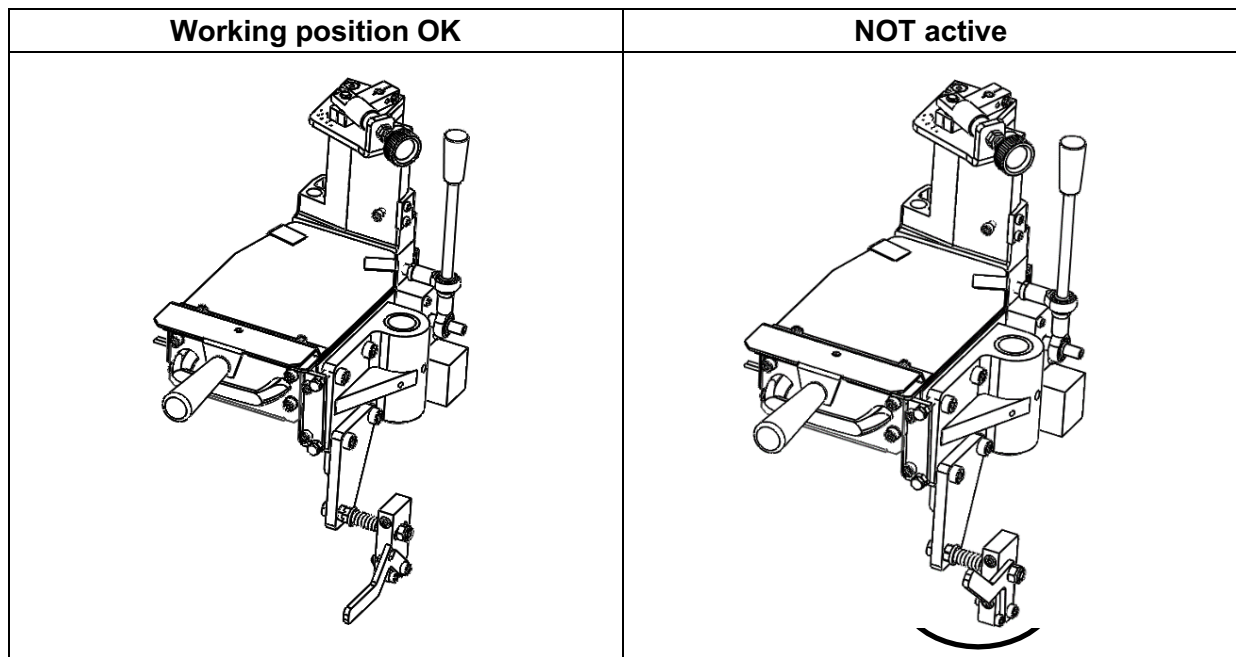
2 SCREEN SELECTION AND ACTIVATION

2.1 Screen selection



2.2 Manual activation

Ensure that the lever is out of tracing nut and the group is in the working position.



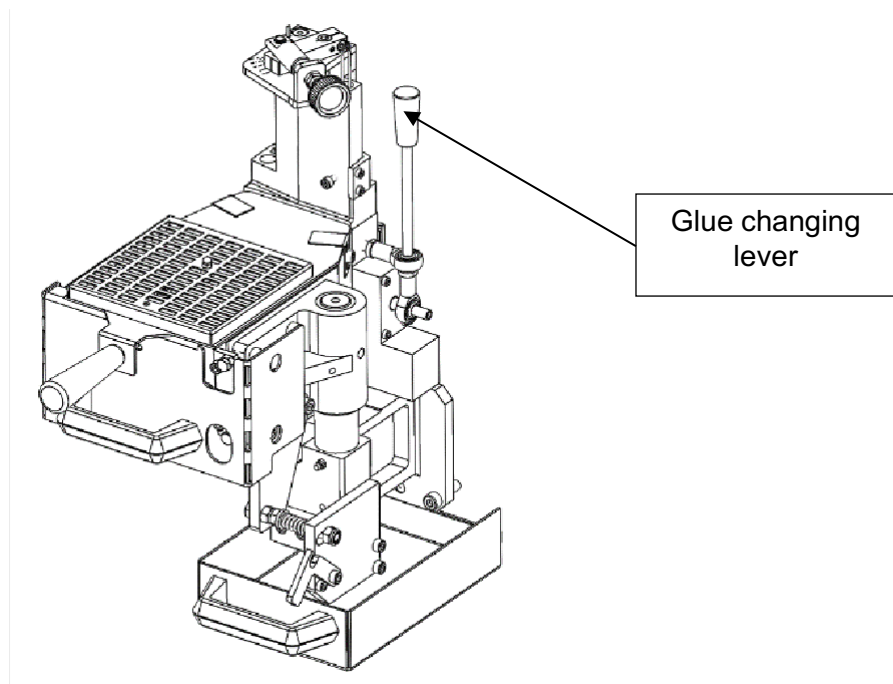
3 OPERATION AND ADJUSTMENT

3.1 Work description

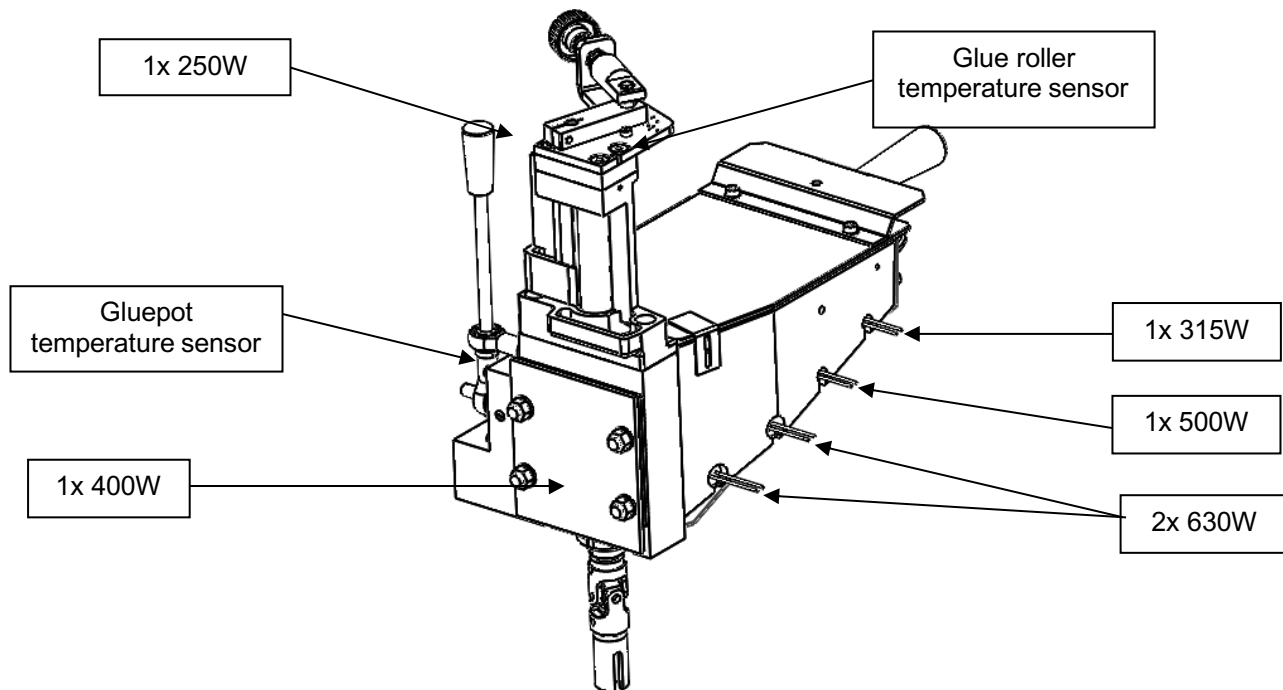
- It takes around 12 minute to reach the working temperature with EVA glue (this time may vary depending on the ambient temperature and the type of glue).
- HMI screen displays accurate temperature of gluepot and glue roller, even it is possible to adjust a different temperature, depending on glue manufacturer specifications.
- When starting the machine, the glue goes up the endless roller, and when a work piece passes, it distributes the glue evenly along the entire side of the board.
- With the correct setting of the amount of glue, no additional adjustment is necessary to work with different board thicknesses. Only change the glue quantity when working with different kind of panels (for example, MDF panel requires less glue than chipboard).

3.2 Changing glue EVA-PUR

To change the glue or to empty the gluepot, use integrated software in HMI. In this case, you will need to change the lever when appears the message on screen (left = working mode, right = emptying mode).



3.3 Temperature sensors and heating elements



060082 Gluepot duomelt			
#	Qty.	Description	Reference
1	1	Tubular heater D10x60 250w	3542100541
2	1	Frontal heater 400w. 115x105x4mm	3535140001
3	1	Heater D.16 x 130 630W	3542161361
4	1	Heater D.16 x 100 630W	3542161111
5	1	Heater D.10 x 120 500W	3542101221
6	1	Heater D.10 x 100 315W	3542101001
7	1	Gluepot temp sensor type J #25 D6x75	3482280031
8	1	Glue roller temp sensor type J # 25 D3x30	3482280061

3.4 Unit adjustment

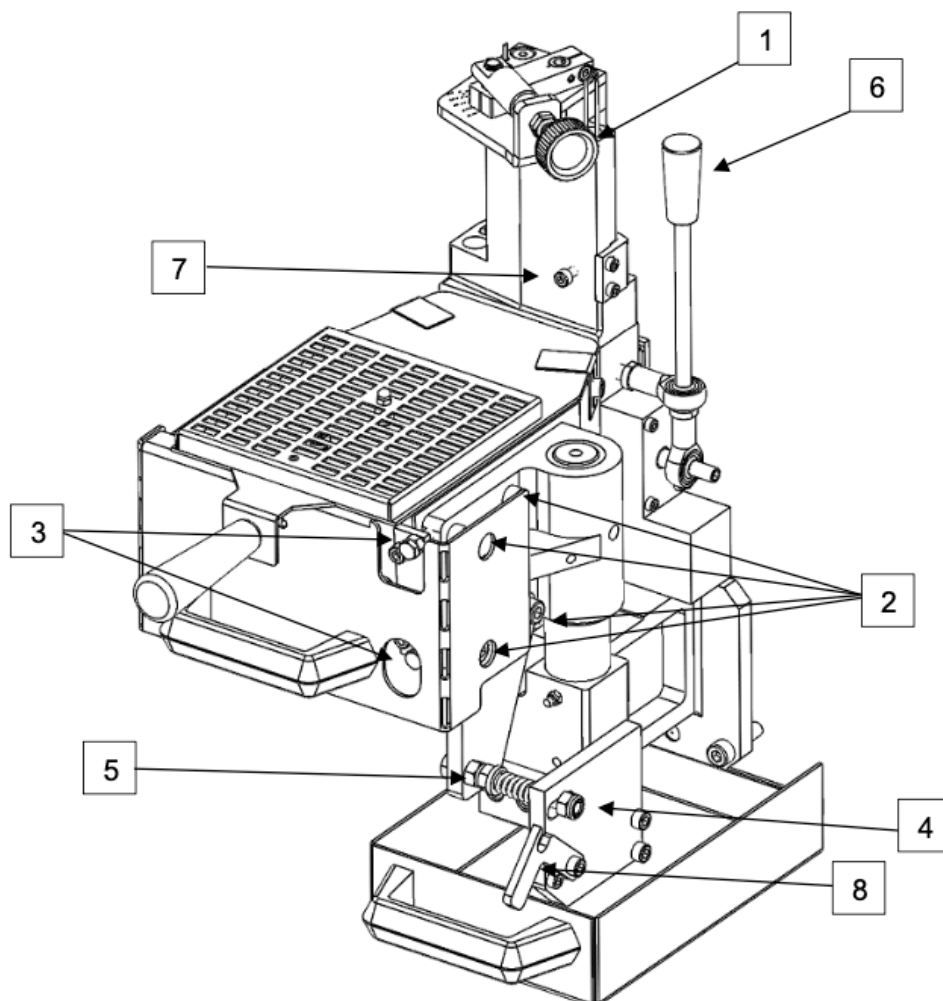
Security warning

A trained technician with special tools adjusts this unit. For this reason, MAKSIWA does not recommend handling without the support of an authorized technician.

The gluepot unit works at 200 degrees (EVA glue). Use all necessary precautions handling the gluepot to avoid any kind of injury (gloves).

Do not adjust the unit while the machine is running to avoid enrollment with the chain. For proper handling.

Before making any adjustments, try to solve the problem with the appropriate preventive/corrective actions, and follow these steps detailed in the section on common errors and failures.



***Adjustments only for technicians**

#	Element	Function
1	Glue regulator knob	Turning clockwise reduces the glue quantity and counter-clockwise increases.
2	Unit fixing bolts*	Fixing the unit to the base and fixing the angle of the roller.
3	Roller inclination stopper bolts*	
4	Self-locking nut: tracing	Tracing the unit (1mm set).
5	Self-locking nut: tension	Increase or reduce the tension of tracing.
6	Glue changing lever	Emptying the gluepot.
7	Roller tracing plate bolt*	Pusher to make a gap of 0.05 mm between roller and panel.
8	Gluepot deactivation lever	Retreats the gluepot, in case of working only with premilling, or testing any other unit, without applying the glue on panel.

4 MAINTENANCE



Before starting the Maintenance, turn off the machine (disconnect completely electrically) and disconnect compressed air.

Only trained personnel can perform these operations.

4.1 General maintenance

- Clean the gluepot daily with compressed air, with glue at low temperature, and avoiding dirt from entering into the unit.
- Check that the glue return hole is not blocked, and the excess glue is correctly returning to the gluepot.
- To remove burnt glue, use silicone or wooden spatulas to avoid damaging the Teflon coating.
- Drain the gluepot using Duomelt system once a week.

4.2 Changing heating elements

Proceed as follows:

- To replace the heating element, turn off the machine completely; remove the air and feeding tray.
- Disconnect the 6-pin quick connector that powers the heating elements and disconnect the 4-pin quick connector from the temperature sensor.
- Remove the gluepot and place it on a workbench.
- Disconnect the heating elements from the quick connector, remove them from their housing and replace them with new ones.

5 ALARMS

Alarm	Possible cause	Solutions
Maximum temperature	Temperature sensor fault	Verify correct reading on temperature display. If asterisks appear instead of current temperature, it is due to sensor failure. Check if it is well connected.
	Solid state relay fail	In this case, a qualified technician must replace said item

6 TROUBLESHOOTING

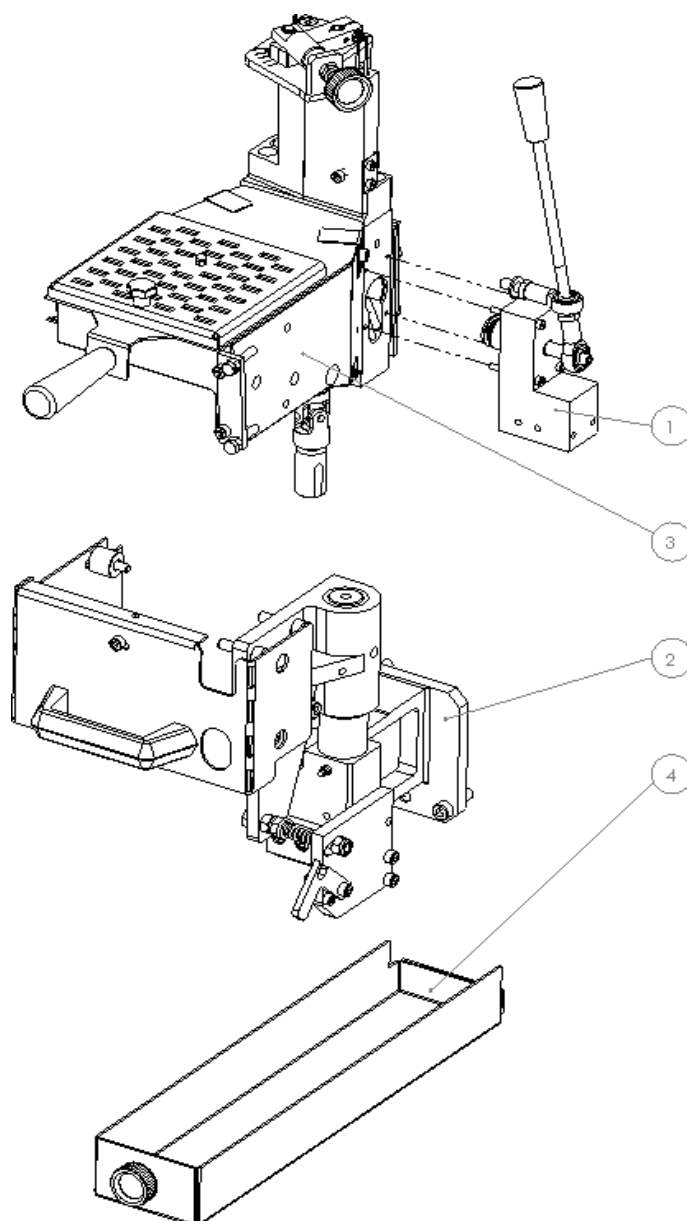
Before making any adjustments to improve the finish, do the following:

- Correct height of the pressure beam: Check that the pressure beam grips the panel well, and it does not move in its path.
- Correct guiding of the drag chain with a long board (+ 1.50m): Check with a long panel that it follows its path with the infedding fence. If the board separates at the front, or back, it may result in an incorrect finish.

Error	Possible cause	Solutions
Glueing only half of the panel	Panel cutting	Verify if the panel is at 90°.
	Glue roller tilted	Follow the instructions described in this manual on how to adjust the unit inclination and consult a trained Maksiwa technician
Uneven glueing	Not enough tracing	Increase the tracing
	Fault in glue roller housing assembly	Contact the technical service.

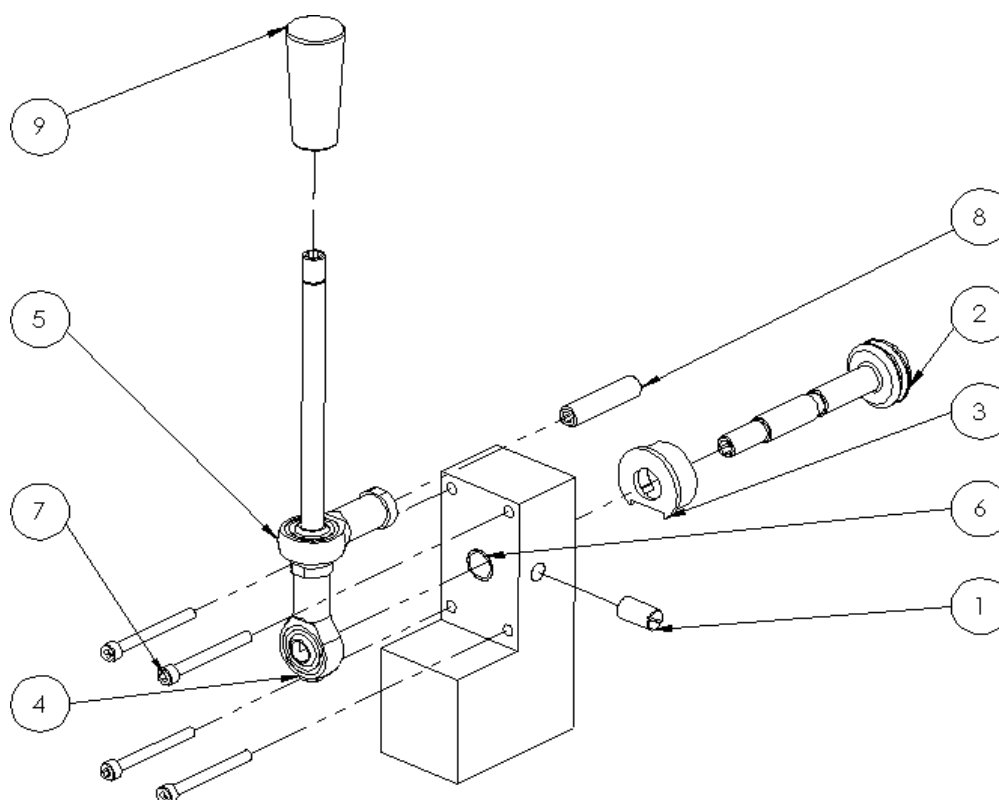
7 UNIT COMPOSITION

7.1 Complete gluepot Xmelt



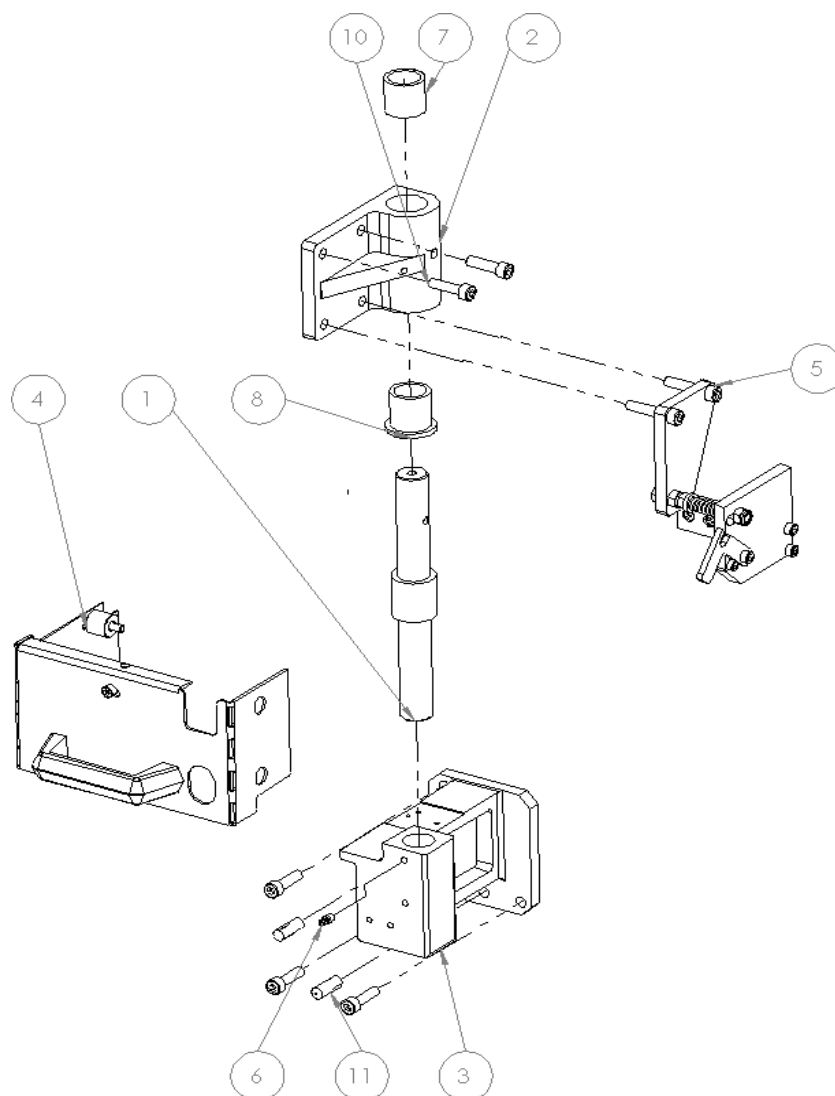
0600091 Gluepot M2			
#	Qty.	Description	Reference
1	1	Duomelt draining	5000246
2	1	Support assembly	5001899
3	1	Gluepot	5003521
4	1	Glue tray	5004346

7.2 Gluepot



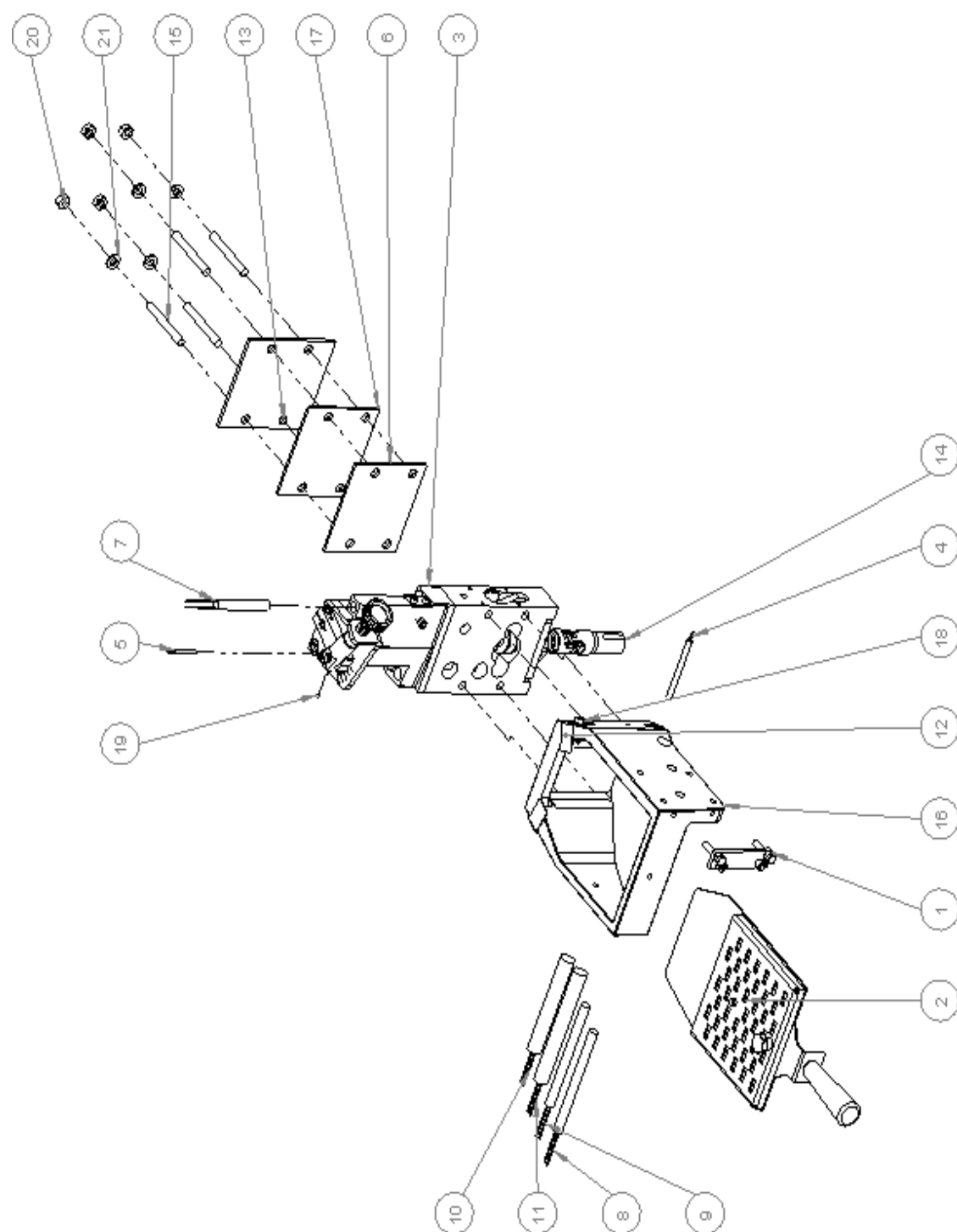
5000246 Drain Duomelt 60			
#	Qty.	Description	Reference
1	1	Grub screw M8x16 DIN913 W302-08	102000042
2	1	Cleaning opening valve	403000264
3	1	Sealing gasket	404000154
4	1	Opening shaft	404000157
5	2	Joint KJ080 GA-94-20-1	4133205091
6	1	Cover guide assembly	5000164
7	4	Allen bolt DIN 912 M4 x 40 (Thread 40mm)	6310404001
8	1	Grub screw DIN913 M8 X 35	6330803501
9	1	Handle M8 female	9252304081

7.3 Support assembly



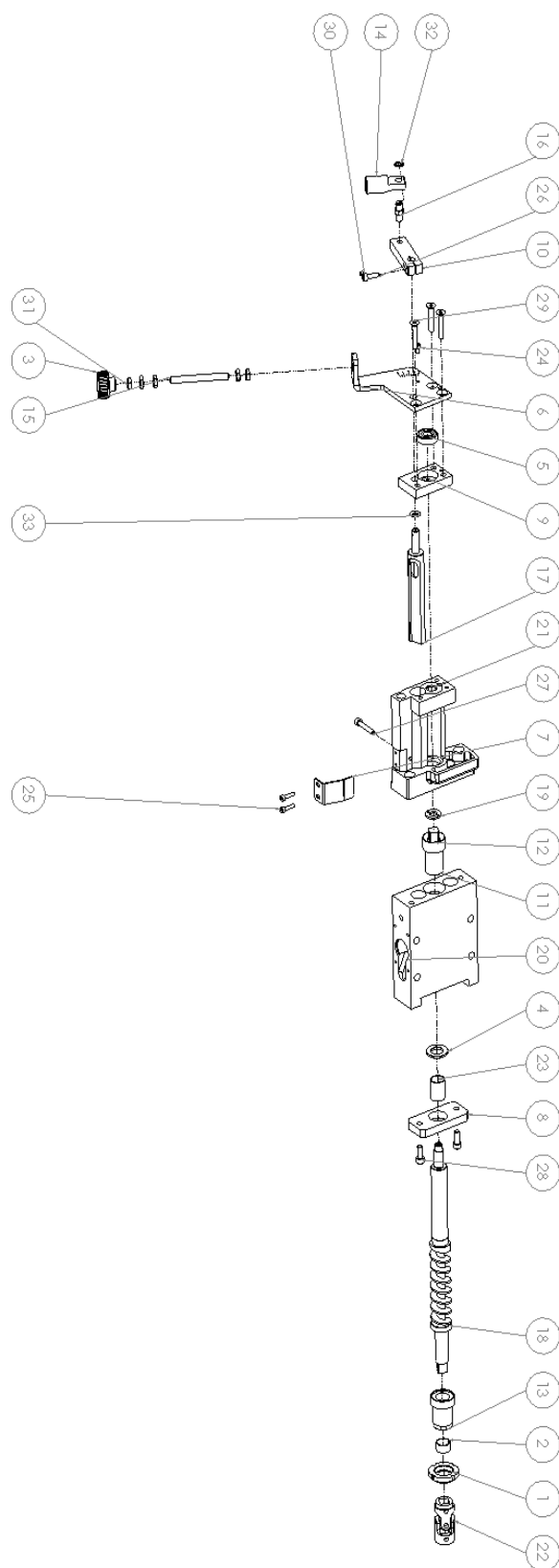
5001899 Support Assembly			
#	Qty.	Description	Reference
1	1	Column Glue pot	404000516
2	1	tilting support glue pot	408000060
3	1	Support Glue pot	5000248
4	1	Protection glue pot assembly	5000732
5	1	Tracer Assembly	5001897
6	1	Nipple M6	5341251721
7	1	Bushing 25x32x30 A	6212532301
8	1	Bushing 25x32x35 B	6222532351
9	1	Allen bolt DIN 912 M6 x 10 (Thread 10mm)	6310601001
10	5	Allen bolt DIN 912 M8 x 30 (Thread 30mm)	6310803001
11	2	Dented pin DIN1472 10 x 30	6571003001

7.4 Gluepot



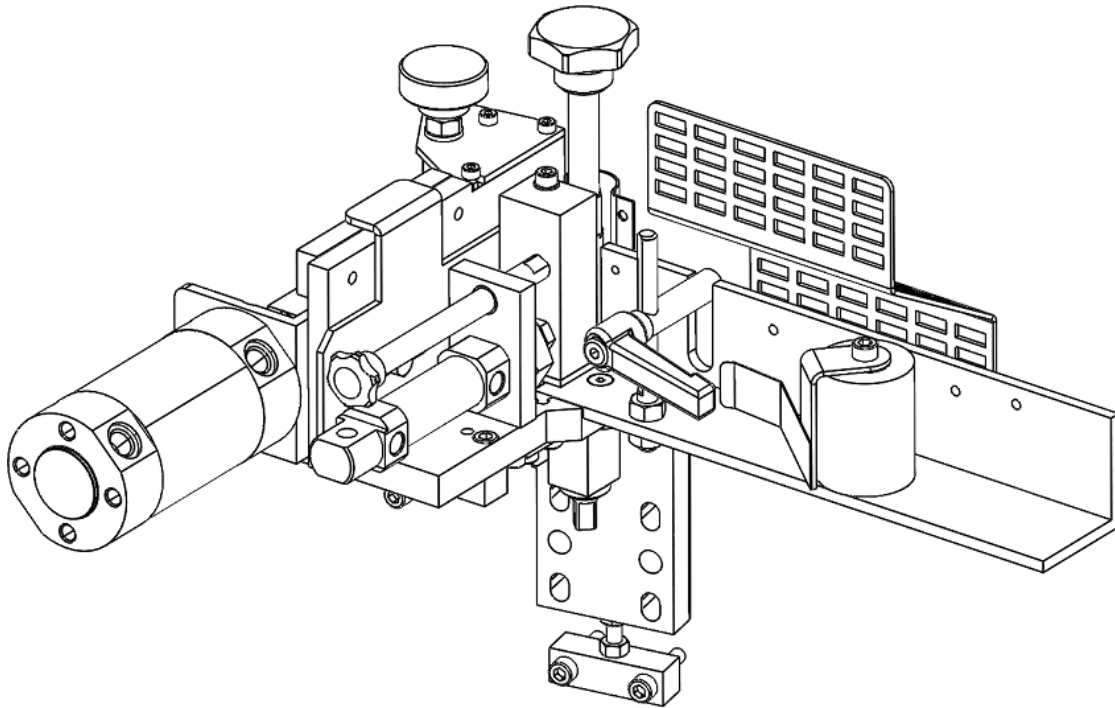
Calderin 60 5003521			
#	Qty.	Description	Reference
1	1	Gluepot tilting stop position	5000252
2	1	Gluepot cover assembly	5000660
3	1	Glue roller housing assembly	5003737
4	1	Gluepot temp sensor type J #25 D6x75	3482280031
5	1	Glue roller temp sensor type J # 25 D3x30	3482280061
6	1	Frontal heater 400w. 115x105x4mm	3535140001
7	1	Tubular heater D10x60 250w	3542100541
8	1	Heater D.10 x 100 315W	3542101001
9	1	Heater D.10 x 120 500W	3542101221
10	1	Heater D.16 x 100 630W	3542161111
11	1	Heater D.16 x 130 630W	3542161361
12	2	Guide bracket	401000484
13	1	Heater cover	401000772
14	1	Slider	404000427
15	4	Threaded shaft M8x70	404000514
16	1	Gluepot	408000114
17	1	Frontal insulation plate	409000122
18	2	Allen bolt DIN 912 M6 x 20 (Thread 20mm)	6310602001
19	1	Grub screw DIN913 M3 X 3	6330300301
20	4	Din 934 - Washer M8 copper	6410800201
21	4	Washer M8	6610800001

7.5 Glue roller housing assembly



Glue roller housing assembly 5003737			
#	Qty.	Description	Reference
1	1	Locking nut KMAT5 M25x1.5	102000173
2	1	MB1610DU	102000174
3	1	Knob ELESA+GANter BT.32 B-M8	102000175
4	1	Disk AXIAL GS81102 Machined	102000178
5	1	Bearing 6000-2RS ENC 330°C	102000278
6	1	Support plate - knob	401004795
7	1	Inner adjustment tracer	401005524
8	1	Threaded plate	403001569
9	1	Roller housing top cover	403002255
10	1	Opening lever	403002256
11	1	Slider	404000427
12	1	Housing gasket	404000721
13	1	Bottom guide gasket	404001168
14	1	Union nut	404001298
15	1	Threaded shaft M8 x 75	404001299
16	1	Adjustment pivot	404001300
17	1	Glue dosification gate	404001467
18	1	Glue roller	404001468
19	1	Glue roller washer	404001715
20	1	Roller housing (adjustable)	409000344
21	1	Top side roller housing	5003336
22	1	Universal joint	5412221201
23	1	Friction gasket MB1625DU	6240162501
24	1	Allen bolt DIN 912 M4 x 8 (Thread 8mm)	6310400801
25	2	Allen bolt DIN 912 M4 x 16 (Thread 16mm)	6310401601
26	1	Allen bolt DIN 912 M5 x 16 (Thread 16mm)	6310501601
27	1	Allen bolt DIN 912 M5 x 30 (Thread 22mm)	6310503001
28	2	Allen bolt DIN 912 M6 x 16 (Thread 16mm)	6310601601
29	3	Bolt DIN7991, M6 X 35 Thread:28.7mm	6320603501
30	1	Grub screw DIN914 M5 X 6	6330500621
31	5	Hex bolt DIN936, M8	6410800021
32	1	Seeger ring Ext. DIN471 8 X 0.8	6630800001
33	1	O-ring 8x2.65-A-ISO 3601-1	

MAKSIWA CBC.PCR FEEDING TRAY



Unit: MAKSIWA CBC.PCR Feeding tray

Revision: 00 05/2023

1	DESCRIPTION AND AIM OF THE UNIT	3
2	WORK DESCRIPTION AND ADJUSTMENT	3
2.1	SCREEN ACTIVATION	3
2.2	WORK DESCRIPTION.....	3
2.3	SENSORS AND PNEUMATIC COMPOSITION	4
2.3.1	Sensors	4
2.3.2	Pneumatic composition	4
2.4	UNIT ADJUSTMENT	4
2.4.1	Unit parameters	4
2.4.2	Edge height adjustment	5
3	MAINTENANCE	6
3.1	GENERAL MAINTENANCE	6
3.2	TOOL CHANGE.....	6
3.2.1	Guillotine cutter	6
3.2.2	Glue feeding roller	6
4	TROUBLESHOOTING	6
5	UNIT COMPOSITION	7
5.1	COMPLETE UNIT ASSEMBLY	7
5.2	BASE SUPPORT ASSEMBLY	7
5.3	FEEDING ROLLER ASSEMBLY	8
5.4	FEEDING TRAY ASSEMBLY	9
5.5	GUIDED FEEDING CYLINDER ASSEMBLY	10
5.6	GUILLOTINE ASSEMBLY	11

1 DESCRIPTION AND AIM OF THE UNIT

The feeding tray cuts the edge tape with a guillotine at the trail of each panel, and feeds it automatically, so the edge is ready to edgebanding with the next panel.

2 WORK DESCRIPTION AND ADJUSTMENT

2.1 Screen activation

	Active	NOT active
Cutter (guillotine)		
Feeding unit		

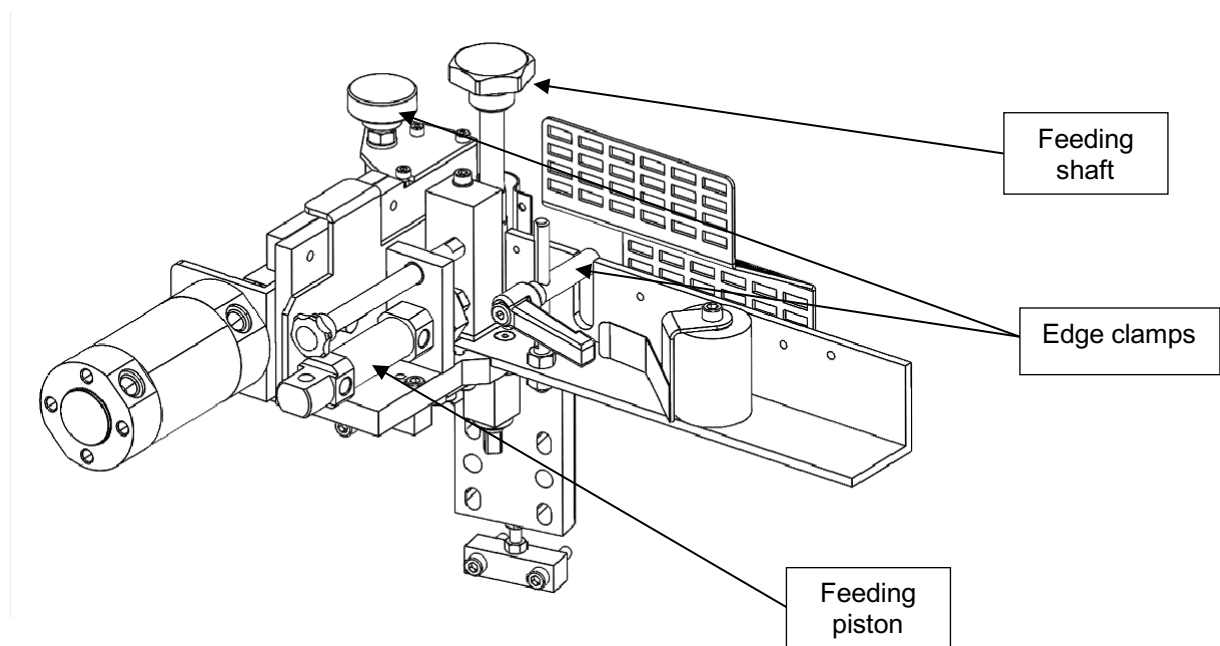
2.2 Work description

Guillotine

The group receives the signal from the limit switch 20S12 and after a delay (set in screen); it activates the cutter (the guillotine).

Feeding system

Since the feed shaft is rotating, the feeding piston activates when the panel is fed into the machine, so edge tape encounters with the panel at the middle of the first roller for edgebanding process.



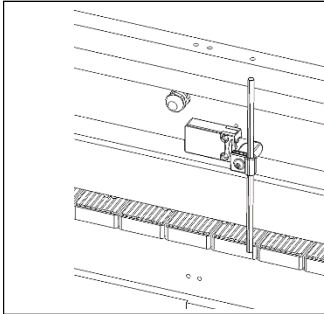
Before feeding first panel into the machine, feed the edge unto the cut line of guillotine, and adjust the height with edge clamps, so the edge can move freely without play.

2.3 Sensors and pneumatic composition



This configuration detailed below might change. Please check the update electric and pneumatic diagram to confirm the correct sensors, electric and pneumatic components.

2.3.1 Sensors



20S13: Limit switch; gives the input signal of panel, so the machine correctly feeds the tape on front side.

20S12: Limit switch; gives the output signal of panel, so the guillotine cuts the tape precisely on backside.

2.3.2 Pneumatic Composition

	Solenoid valve	Pressure regulator	Work pressure (MPa)
Guillotine	24Y4	MR4	0,20 – 0,40
Feeding	24Y5	MR5	0,20

2.4 Unit adjustment

Security warning



A trained technician with special tools adjusts this unit. For this reason, MAKSIWA does not recommend handling without the support of an authorized technician.

Do not adjust the unit while the machine is running to avoid enrollment with the chain. For proper handling, disconnection of the unit is essential.

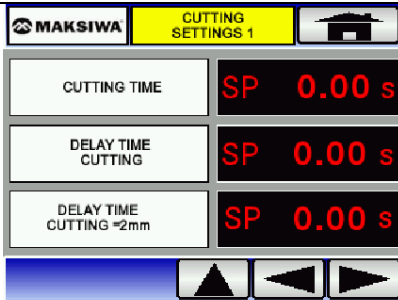
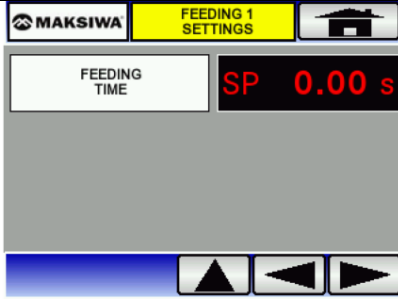


Before making any adjustments, try to solve the problem with the appropriate preventive/corrective actions, and follow these steps detailed in the section on common errors and failures.

2.4.1 Unit parameters

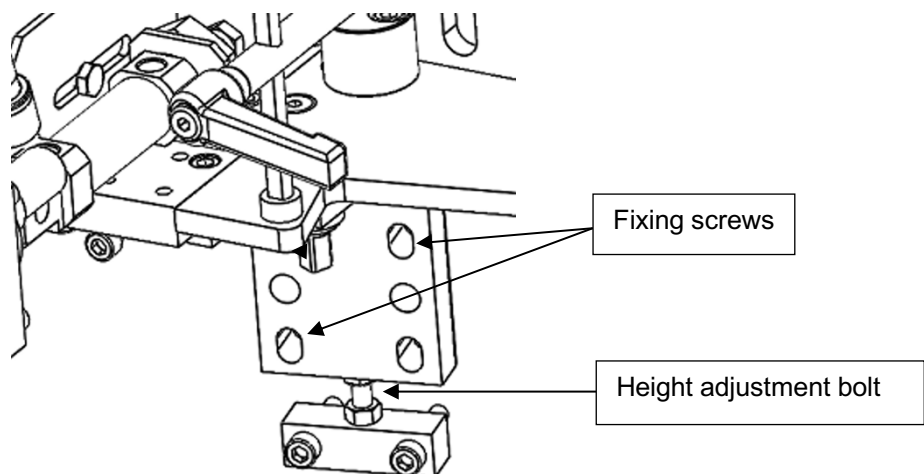
From screen (HMI), it is possible to access guillotine parameters and feeding parameters without any password. Depending on many external factors (air pressure, unit wearing, etc.) you might need to adjust these parameters. It is very important to keep in mind that an overhang larger than 5mm, will cause a problem end trimming.

In any case, contact with a Maksiwa trained technician, in order to determine the correct parameters.

Access	Screenshot	Description
HOME – GROUPS PARAMETERS – GUILLOTINE		CUTTING TIME: TOTAL ACTIVATION TIME FOR GUILLOTINE. DELAY TIME CUTTING: Adjusts the excess of the edge tape on rear side of the panel
HOME – GROUPS PARAMETERS – FEEDING		FEEDING TIME: Adjusts the excess of the edge tape on front side of the panel

2.4.2 Edge height adjustment

MAKSIWA adjusted the unit with an excess of 1.5-2.0mm edge in the lower part, and the rest of the excess edge remains in the upper part of the board. MAKSIWA do not recommend any other adjustment setting, as it could seriously damage the trimmer group motors. For this reason, the edge cannot be greater than 5mm with respect to the height of the panel. In other words, if the board is 18mm, the edge height cannot exceed 23mm.



If necessary, adjust the height of the unit with height adjustment bolt, loosening the fixing screws first.

3 MAINTENANCE



Before starting the Maintenance, turn off the machine (disconnect completely electrically) and disconnect compressed air.

Only trained personnel can perform these operations.

3.1 General maintenance

- Remove (vacuum) daily the remains of the chips and excess edge that may be near the group.
- Check that the rubber rollers rotate freely.

3.2 Tool change

3.2.1 Guillotine cutter

With a 5mm Allen key, you can loosen the two screws that hold the cutter piston with the guillotine, and thus easily remove it for replacement.

3.2.2 Glue feeding roller

Remove the feeding shaft easily by turning it clockwise (reverse thread).

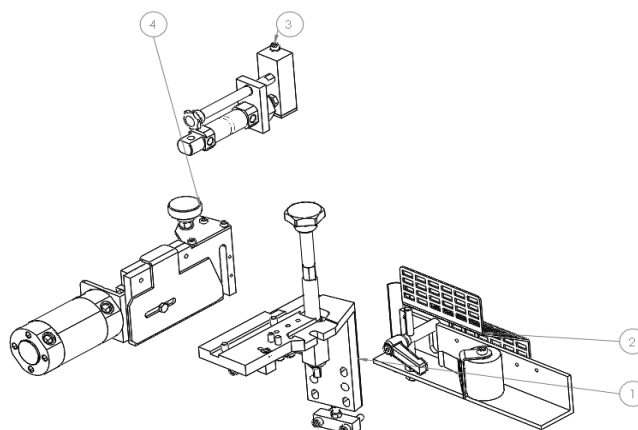
To change the rubber roller on the feed piston, disassemble it removing the bolts with a 5mm Allen key, and then remove the shaft with a 13mm spanner and a flat screwdriver.

4 TROUBLESHOOTING

Error	Possible cause	Solution
Guillotine not cutting	Guillotine status	Replace the guillotine cutter
	Mechanical obstruction	Disconnect pneumatic pressure, clean the area with compressed air and move by hand to ensure free movement.
	Not enough pressure	Check the pressure in the MR4 pressure gauge, and if necessary, raise it a little.
Edge not feeding	Feeding shaft mechanical obstruction	Check that the feeding shaft turns freely. If necessary, disassemble it for proper cleaning.
	Mechanical obstruction	Check that the piston goes in and out correctly.
	Loose feeding shaft	Check that the feed shaft is properly tightened, and the rubber roller does not rotate freely. Remember it is reverse thread.
	High pressure	If the feeding shaft pressure is too high, the machine will not feed properly. The correct pressure is determined in the attached pneumatic diagram.

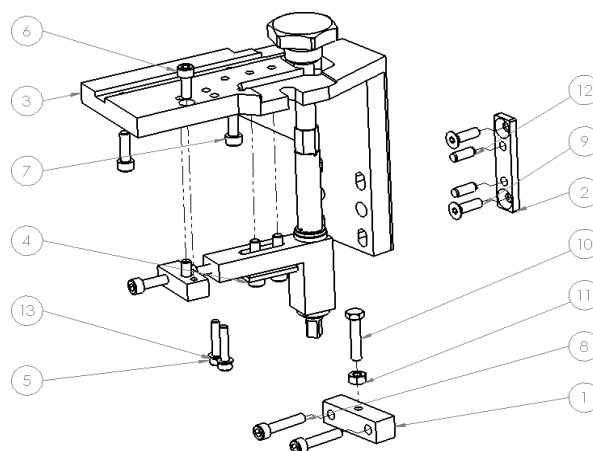
5 UNIT COMPOSITION

5.1 Complete unit assembly



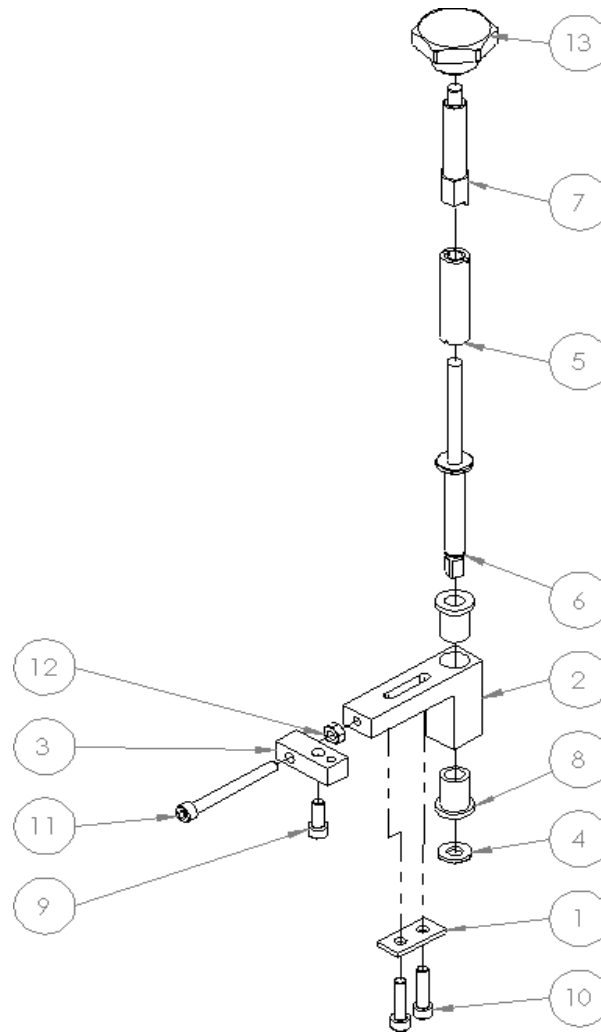
Feeding tray 0500172			
#	Qty.	Description	Reference
1	1	Base support assembly	5002803
2	1	Feeding tray assembly	5004140
3	1	Guided feeding cylinder assembly	5005057
4	1	Guillotine assembly	5005221

5.2 Base support assembly



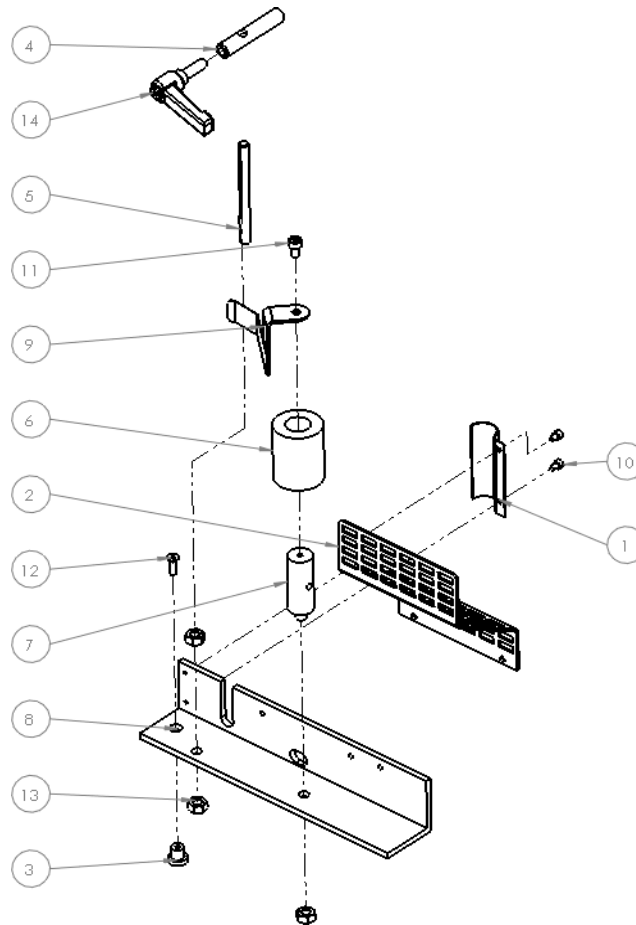
Base support assembly 5002803			
#	Qty.	Description	Reference
1	1	Height regulation block	403000536
2	1	Height regulation guide	403000537
3	1	Tray support	408000057
4	1	Feeding roller assembly	5000707
5	2	Allen bolt DIN 912 M5 x 25 (Thread 25mm)	6310502501
6	1	Allen bolt DIN 912 M6 x 16 (Thread 16mm)	6310601601
7	2	Allen bolt DIN 912 M6 x 20 (Thread 20mm)	6310602001
8	2	Allen bolt DIN 912 M6 x 30 (Thread 30mm)	6310603001
9	2	Bolt DIN7991, M6 X 20 Thread :20mm	6320602002
10	1	Bolt HEXAGONAL DIN933, M6 X 30	6360603001
11	1	Bolt DIN934, M6	6410600001
12	2	Parallel pin DIN6325, 6 X 16 - A - St	6520601601
13	2	Washer DIN 125 M5	6610500001

5.3 Feeding roller assembly



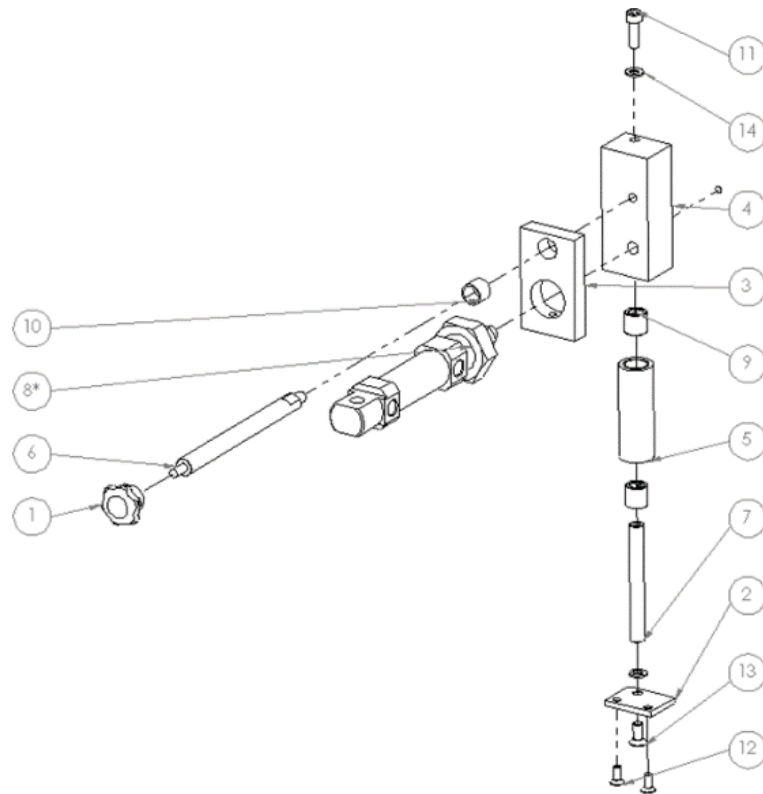
5000707 Feeding roller assembly			
#	Qty.	Description	Reference
1	1	Fixing bracket	401000988
2	1	Fixing bracket	403000360
3	1	Adjustment guide	403000549
4	1	Washer 8,25x17x2	404000485
5	1	Feeding roller	404000493
6	1	Feeding shaft	404001211
7	1	Feeding shaft fixing hex	404001212
8	2	Gasket B101520-203	6221015201
9	1	Allen bolt 912 M6 x 16 (Thread 16mm)	6310601601
10	2	Allen bolt DIN 912 M6 x 25 (Thread 25mm)	6310602501
11	1	Allen bolt DIN 912 M6 x 60 (Thread 24mm)	6310606001
12	1	Nut M6 - DIN 934	6410600001
13	1	Knob 1122	9250112201

5.4 Feeding tray assembly



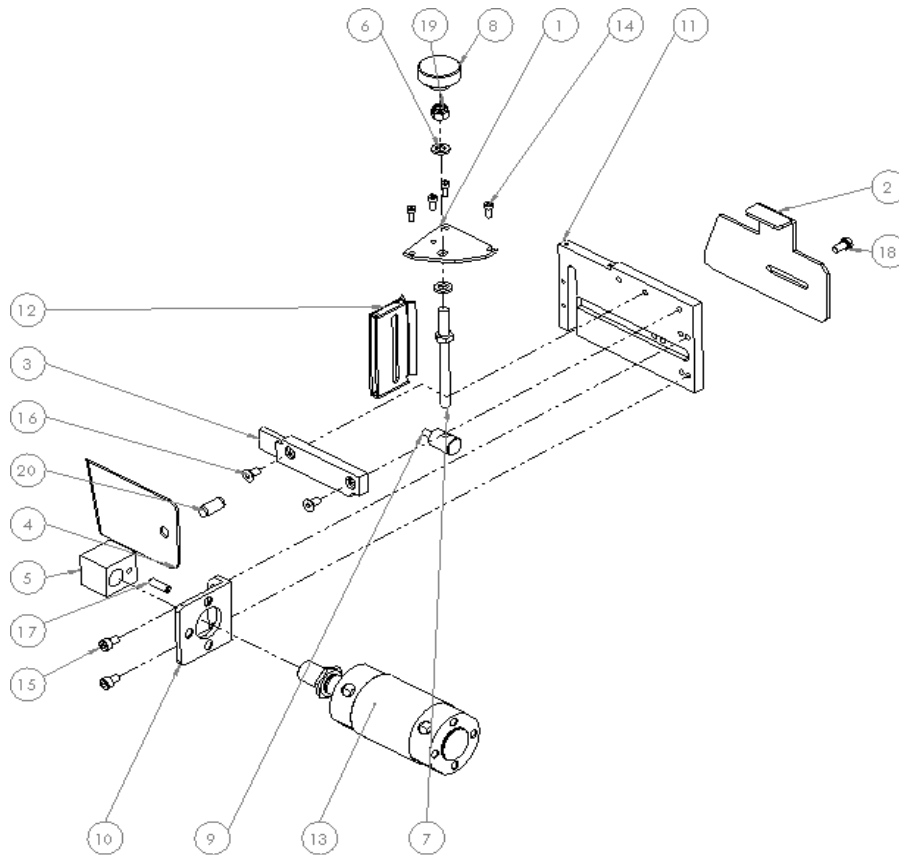
Feeding tray assembly 5004140			
#	Qty.	Description	Reference
1	1	Feeding roller protection cover	401000996
2	1	Gluepot protection cover	401005110
3	1	Aluminum tray fix positioner	404000494
4	1	Top edge positioner	404000497
5	1	Edge level guide	404000498
6	1	Nylon roll	404000499
7	1	Guide shaft	404000500
8	1	Aluminum tray	406000094
9	1	Front clamp	5000725
10	2	Allen bolt DIN 912 M4 x 6 (Thread 6mm)	6310400601
11	1	Allen bolt DIN 912 M6 x 10 (Thread 10mm)	6310601001
12	1	Bolt DIN7991, M5 X 16 Thread :16mm	6320501602
13	3	Hex bolt DIN934, M8	6410800001

5.5 Guided feeding cylinder assembly



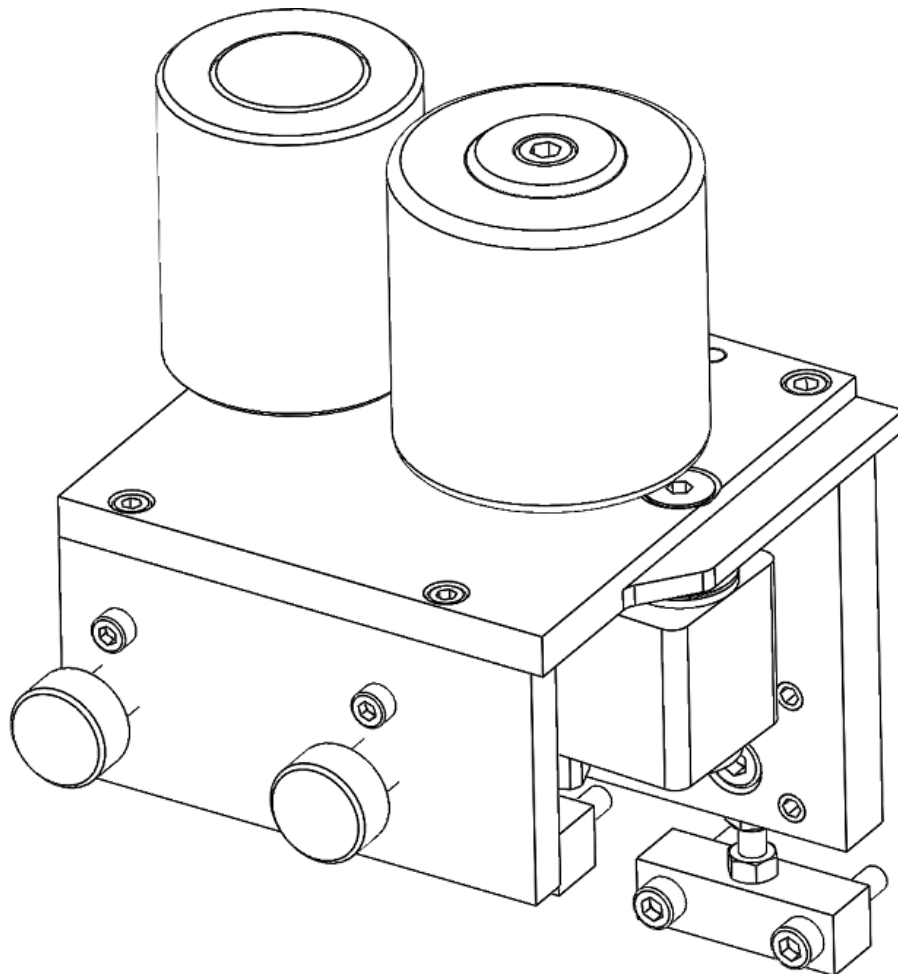
5005057 guided cylinder assembly			
#	Qty.	Description	Reference
1	1	Elesa vh 153-25	102000275
2	1	Bottom plate feeding cylinder	401005965
3	1	Support cylinder guided feeding	403002290
4	1	Feeding roller capsule	403002368
5	1	Feeding roller Ø19 X55	404001144
6	1	Pushing piston guided shaft (Front)	404001506
7	1	Pushing piston guided shaft	404001768
8	1	Cylinder SID 50x10	5003543
9	2	Gasket INA-HF0812	6170812001
10	1	Gasket 1010DU	6240101001
11	1	Allen bolt DIN 912 M5 x 16 (Thread 16mm)	6310501601
12	2	Bolt DIN7991, M4 X 10 Thread :5.6mm	6320401001
13	1	Bolt DIN7991, M5 X 12 Thread :12mm	6320501202
14	2	Washer DIN 125 M5	6610500001

5.6 Guillotine assembly



Cutter cylinder assembly 5005221			
#	Qty.	Description	Reference
1	1	Nozzle support	1000213
2	1	Edge thickness spacer	401000990
3	1	Guillotine guide	403000544
4	1	Guillotine	403000547
5	1	Guillotine pusher	403002819
6	2	Washer 8,5x15x2	404000485
7	1	Height adjustment threaded rod	404000487
8	1	Adjustment knob	404000490
9	1	Tray adjustment shaft	404001544
10	1	Guillotine bracket E-MG	406000119
11	1	Guillotine base plate	409000119
12	1	Edge feeding nozzle	5004656
13	1	Cylinder EG5025_M 0	5005222
14	4	Allen bolt DIN 912 M4 x 10 (Thread 10mm)	6310401001
15	2	Allen bolt DIN 912 M6 x 10 (Thread 10mm)	6310601001
16	2	Bolt DIN7991, M6 X 12 Thread :12mm	6320601202
17	1	Grub screw DIN913 M6 X 20	6330602001
18	1	Hex bolt DIN933, M6 X 12	6360601201
19	1	Self-locking nut DIN982, M8	6420800001
20	1	Parallel pin DIN6325, 10 X 22 - A - St	6521002201

MAKSIWA CBC.PCR SIDE PRESSURE ROLLERS



Unit: MAKSIWA CBC.PCR Side pressure rollers

Revision: 00 05/2023

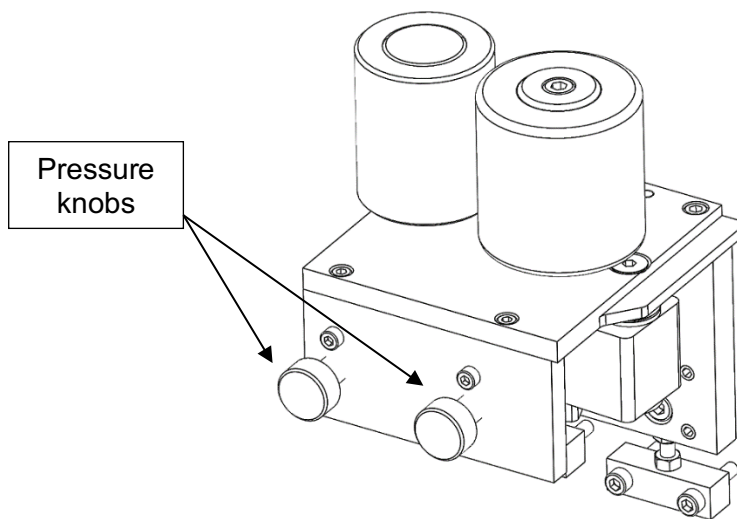
1	DESCRIPTION AND AIM OF THE UNIT	3
2	WORK DESCRIPTION AND ADJUSTMENT	3
3	MAINTENANCE	3
4	TROUBLESHOOTING	4
5	UNIT COMPOSITION	5
5.1	COMPLETE UNIT ASSEMBLY	5
5.2	DRIVEN PRESSURE ROLLER ASSEMBLY (MAIN)	5
5.3	SECOND PRESSURE ROLLER	5
5.4	UNIT SUPPORT ASSEMBLY	6

1 DESCRIPTION AND AIM OF THE UNIT

Side pressure rollers unit consists of two pressure rollers, one big pressure roller driven by the gearbox located below gluepot, and a small pressure roller moving freely. The rollers applies a firm and even pressure on all the surface of the tape, and rotating at the same speed of panel, thus achieving a perfect bond of panel with edge.

2 WORK DESCRIPTION AND ADJUSTMENT

The unit traces (panel pushes back the rollers) 0.5 – 1.5mm depending on the thickness of the tape. From pressure knobs, it is possible to increase the pressure of the side rollers.



Turn the pressure knob clockwise to increase the pressure and anticlockwise to reduce it.



Before making any adjustments, try to solve the problem with the appropriate preventive/corrective actions, and follow these steps detailed in the section on common errors and failures.

3 MAINTENANCE



Before starting the Maintenance, turn off the machine (disconnect completely electrically) and disconnect compressed air.

Only trained personnel can perform these operations.

- Remove (vacuum) daily the remains of the chips and excess edge that may be near the group.
- Clean side pressure rollers with a mild thinner to remove any residues of glue.
- Check that the second pressure roller rotates freely.

4 TROUBLESHOOTING

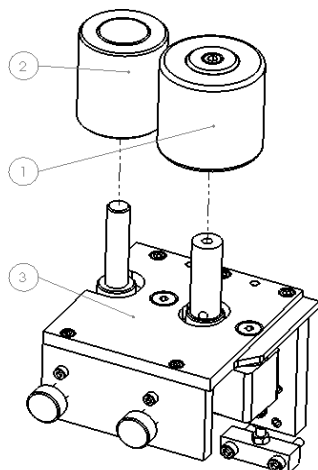
Check these common recommendations before starting any troubleshooting procedure with side pressure rollers:

- Pressure beam height: Check that the pressure beam grips firmly the panel.
- Correct adjustment of infeeding fence: Check with a long panel and confirm that the infeeding fence is guide the panel correctly. If the panel is separating from the fence, it might result in bad tracing from side pressure roller, which can cause edging issues.
- Clean any residue of glue on the pressure rollers.

In most of the cases, any problem with the side pressure rollers is related with a different unit.

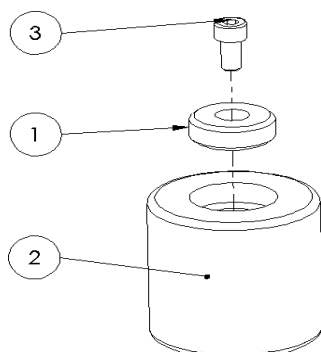
5 UNIT COMPOSITION

5.1 Complete unit assembly



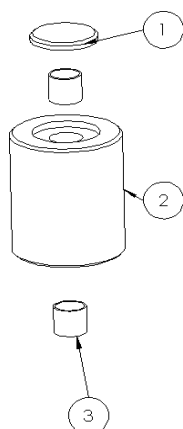
Side pressure rollers 0700128			
#	Qty.	Description	Reference
1	1	Driven pressure roller	5005181
2	1	Second pressure roller	5000393
3	1	Unit support assembly	5000392

5.2 Driven pressure roller assembly (main)



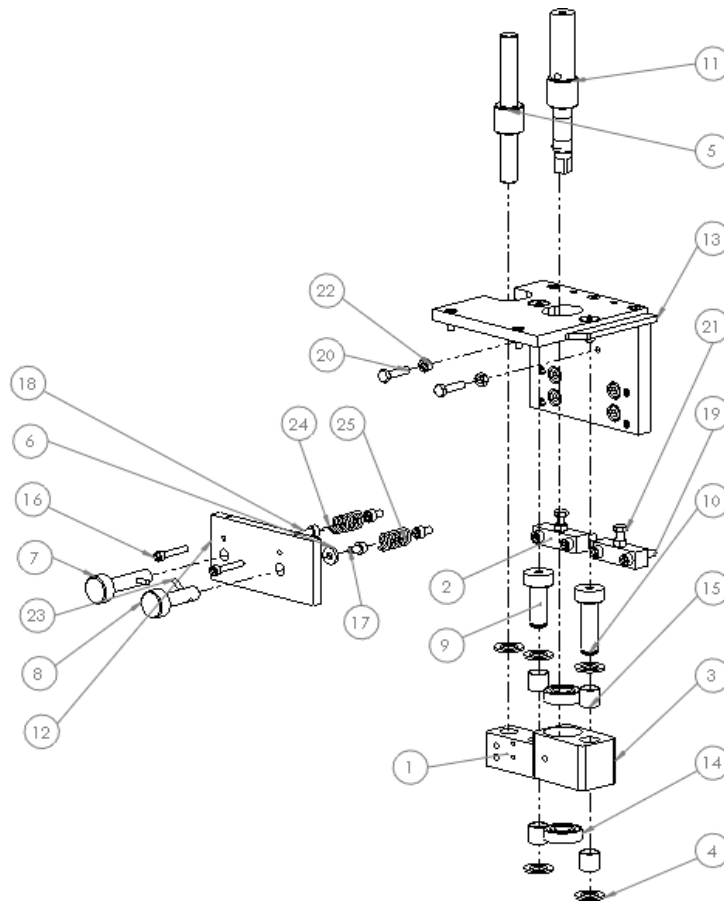
Driven pressure roller 5000392			
#	Qty.	Description	Reference
1	1	Fixing washer	404000371
2	1	Driven pressure roller	404000381
3	1	Allen bolt DIN 912 M8 x 16 (thread 16mm)	6310801601

5.3 Second pressure roller



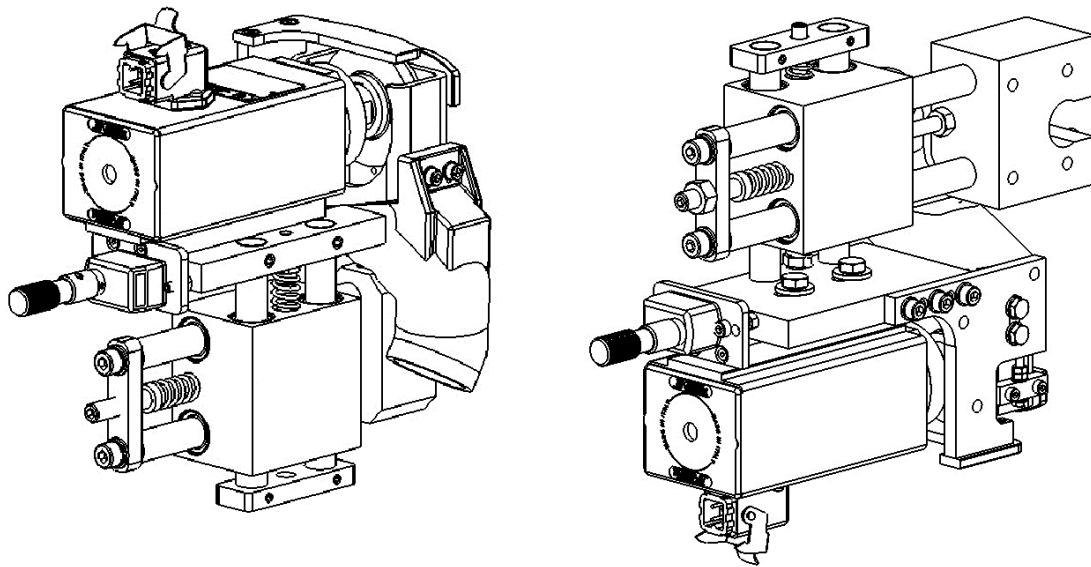
Second pressure roller			
#	Qty.	Description	Reference
1	1	Top cover	404000374
2	2	Second pressure roller	404000382
3	2	Gasket PAP1515 P10	6240151501

5.4 Unit support assembly



Unit support assembly 5005181			
#	Qty.	Description	Reference
1	1	Pivoting block	403000504
2	2	Adjustment handrail	403000536
3	1	Pivoting pressure roller	403002324
4	5	Friction washer	404000361
5	1	Guide shaft	404000362
6	2	Washer 15x3	404000367
7	1	Pressure adjustment knob	404000379
8	1	Pressure adjustment knob	404000380
9	1	Pivoting shaft	404001459
10	1	Pivoting shaft	404001807
11	1	Pressure roller shaft	404001808
12	1	Pressure rollers front plate	409000439
13	1	Support assembly	5003675
14	2	Bearing 6002-2RS	6116002301
15	4	Gasket PAP1515 P10	6240151501
16	2	Allen bolt DIN 912 M5 x 30 (ROSCA 30mm)	6310503001
17	3	Allen bolt DIN 912 M6 x 10 (ROSCA 10mm)	6310601001
18	1	Allen bolt DIN 912 M6 x 16 (ROSCA 16mm)	6310601601
19	4	Allen bolt DIN 912 M6 x 30 (ROSCA 30mm)	6310603001
20	2	Hex bolt DIN933, M6 X 25	6360602501
21	2	Hex bolt DIN933, M6 X 30	6360603001
22	4	Hex nut DIN934, M6	6410600001
23	2	Pin DIN1472 4 x 24	6570402401
24	1	Pressure spring	9294031501
25	1	Spring	9299903181

MAKSIWA CBC.PCR TRIMMING UNIT



Unit: MAKSIWA CBC.PCR Trimming
unitRevision: 01 05/2023

1	DESCRIPTION AND AIM OF THE UNIT	3
2	SCREEN SELECTION AND UNIT ACTIVATION	3
2.1	SCREEN SELECTION	3
3	UNIT ADJUSTMENT	3
3.1	ELECTRIC COMPOSITION	3
3.2	UNIT ADJUSTMENT POINTS	4
3.2.1	Radius adjustment	4
3.2.2	Vertical tracer adjustment (edge overhang)	4
4	MAINTENANCE	4
4.1	TOOL CHANGE	5
5	ALARMS	6
6	ERRORS AND SOLUTIONS	7
7	UNIT COMPOSITION	8
7.1	BOTTOM TRIMMER	8
7.2	TOP TRIMMER	8
7.3	TRACERS ASSEMBLY	9
7.4	BOTTOM TRIMMER SUPPORT ASSEMBLY	10
7.5	TOP TRIMMER SUPPORT ASSEMBLY	12
7.6	MOTOR ASSEMBLY	14

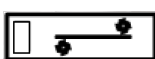
1 DESCRIPTION AND AIM OF THE UNIT

The trimming group has the function of cutting the excess edge at the top and bottom with total accuracy, and making a radius or flat finish with a simple adjustment.

	Frequency (Hz)	Speed (rpm)	Top motor (kW)	Bottom motor (kW)
PF-2	200	12,000	0.27	0.27

2 SCREEN SELECTION AND UNIT ACTIVATION

2.1 Screen selection

ON	OFF
	

3 UNIT ADJUSTMENT

Security warning

A trained technician with special tools adjusts this unit. For this reason, MAKSIWA does not recommend handling without the support of an authorized technician.

The trimming unit has cutting blades that can cause serious damage under improper use of the unit.

Do not adjust the unit while the machine is running to avoid enrollment with the chain. For proper handling, disconnection of the unit is essential.

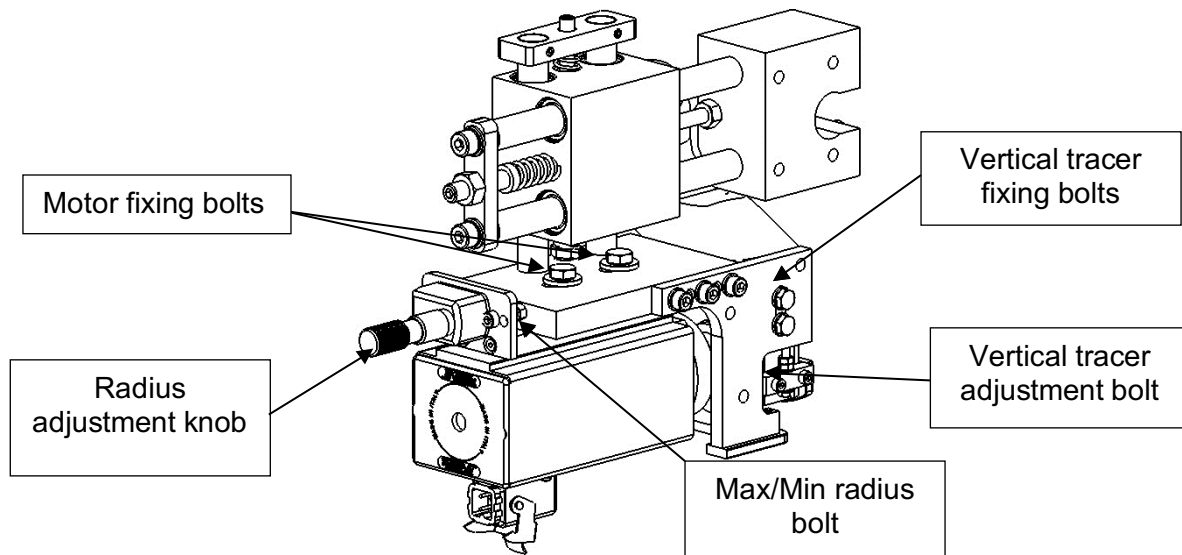
Before making any adjustments, try to solve the problem with the appropriate preventive/corrective actions, and follow these steps detailed in the section on common errors and failures.

3.1 Electric composition

This configuration detailed below might change. Please check the update electric diagram to confirm the correct electric components.

	Motor	Thermal relay	Inverter
Top motor	5M1	5F1	U1
Bottom motor	5M2	5F2	

3.2 Unit adjustment points



3.2.1 Radius adjustment

- Loose the frontal motor fixing bolts and turn the knob for changing the radius.
- Turn clockwise to decrease the radius and counter-clockwise to increase.
- Use the SIKO counter as reference, for example, if the unit is equipped with radius 2.0 mm knives, set SIKO counter at 020 for 2.0 mm tape and 004 for 0.4 mm tape.
- Trimmer without SIKO counter option, use Max/Min radius bolt as reference while adjusting the radius. Never alter the position of this bolt.
- You may need to adjust the top / bottom overhang when adjusting the radius.

3.2.2 Vertical tracer adjustment (edge overhang)

- Loose the vertical tracer fixing bolts and use a 7 mm spanner turn the vertical tracer for increasing or decreasing the overhang on top or bottom side of panel.
- Turn the bolt clockwise to leave less excess and counter-clockwise to leave more excess.

4 MAINTENANCE

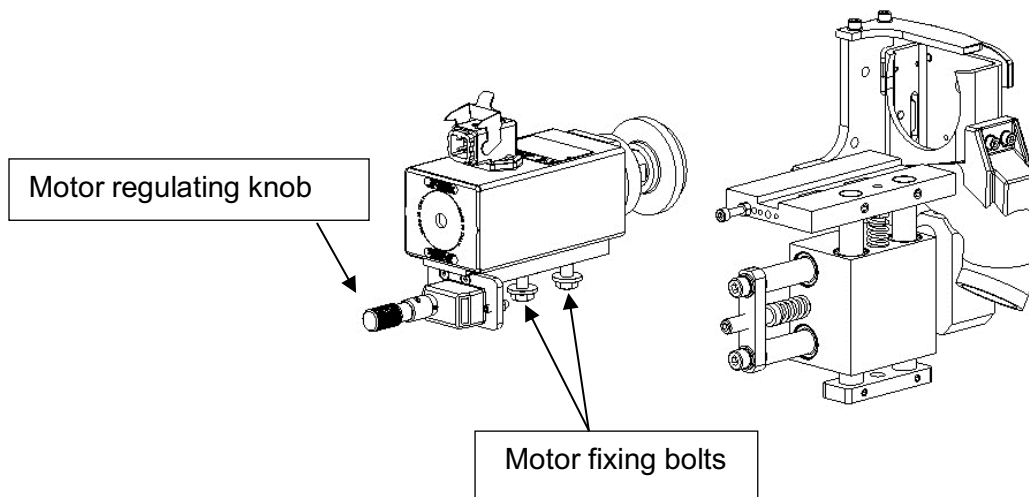


Before starting the Maintenance, turn off the machine (disconnect completely electrically) and disconnect compressed air. Only trained personnel can perform these operations.

General maintenance

- Clean daily unit tracers with a mild thinner.
- Remove (vacuum) any chips or debris near the unit.
- Grease the support bars (every 3 months).
- Check unit vertical and frontal tension.

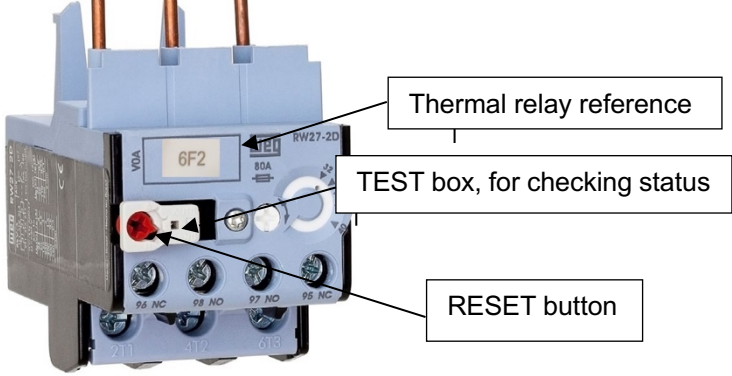
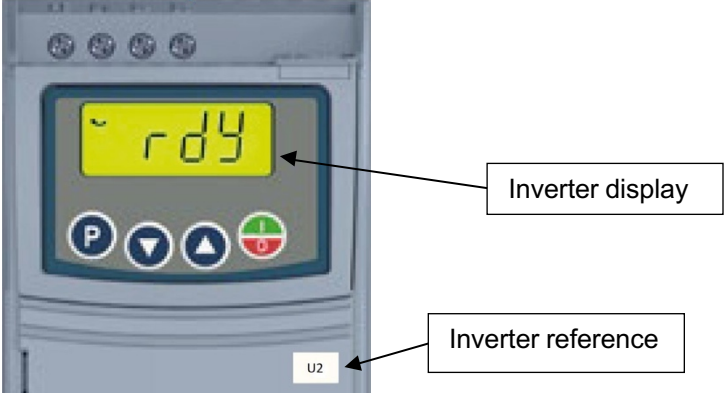
4.1 Tool change



To replace the cutter block, follow these steps:

- First, disconnect the machine electrically using the main switch.
- Remove the power connector plug from the machine unit.
- Hold the motor firmly with one hand and fully loosen the fixing bolts with the other.
- Without releasing the motor, loose the motor regulating knob completely. Now you can take out the motor.
- With motor out of the unit, replace the cutter block with a new one (or just the inserts).

5 ALARMS

Alarm	Possible cause	Solution
Thermic relay	Thermal relay alarm due to a motor malfunction	 Locate the thermal relays in the electrical panel. Check that the TEST box is yellow (usually green). Press the RESET button to clear the fault and you can reset the alarm. Contact the technical service to solve the fault. Meanwhile, work without the unit causing the failure. 5F1: Top trimming. 5F2: Bottom trimming.
Inverter	Low input voltage	 Locate the inverter causing the fault; you can reset it by turning off the machine for 60 seconds and turning on again. If the fault persists, contact the technical service indicating the inverter and the fault that appears on the display. U1: Top bottom trimming & end trimming.
	Motor failure	
	Inverter fault	
	Worn tools	

6 ERRORS AND SOLUTIONS

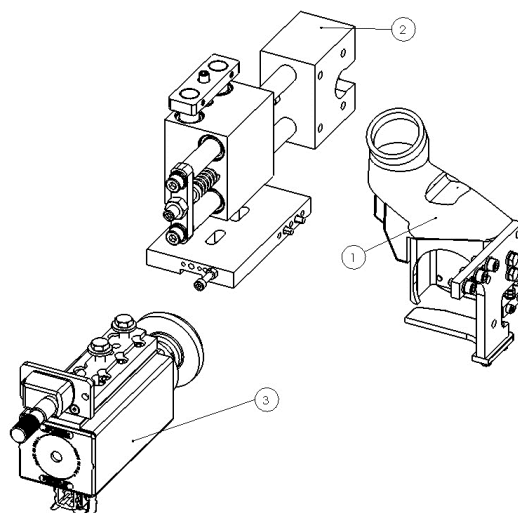
Before making any adjustments to improve the finish, do the following:

- Correct height of the pressure beam: Check that the pressure beam grips the panel well, and it does not move in its path.
- Correct guiding of the drag chain with a long board (+ 1.50m): Check with a long board that it follows its path with the infeeding fence. If the board separates at the front, or back, it may result in an incorrect radius.
- Cleaning the tracers (front and top / bottom): Check that the tracers are free of glue residue or other elements that may cause false tracing.
- Free movement: Manually check the unit withdrawing by hand, it turns correctly and has a uniform pressure (horizontal and vertical tracing).
- Horizontal / vertical tracing: Check that the unit when working moves (traces) from 0.5 -- 1.5mm (maximum) front and 1.5mm vertically.

Fault	Possible cause	Solutions
Incorrect radius	Incorrect pressure beam height	Adjust the pressure beam height according to the panel.
	Radius adjustment	Following the adjustment instructions, increase/decrease the radius.
Watermarks	Tracer with glue residue	Clean the tracers with a mild thinner.
	Cutters damages	Replace the cutters

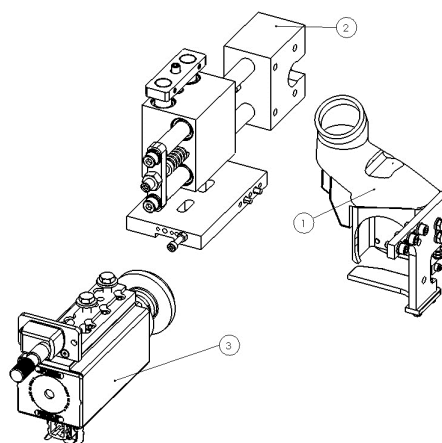
7 UNIT COMPOSITION

7.1 Bottom trimmer



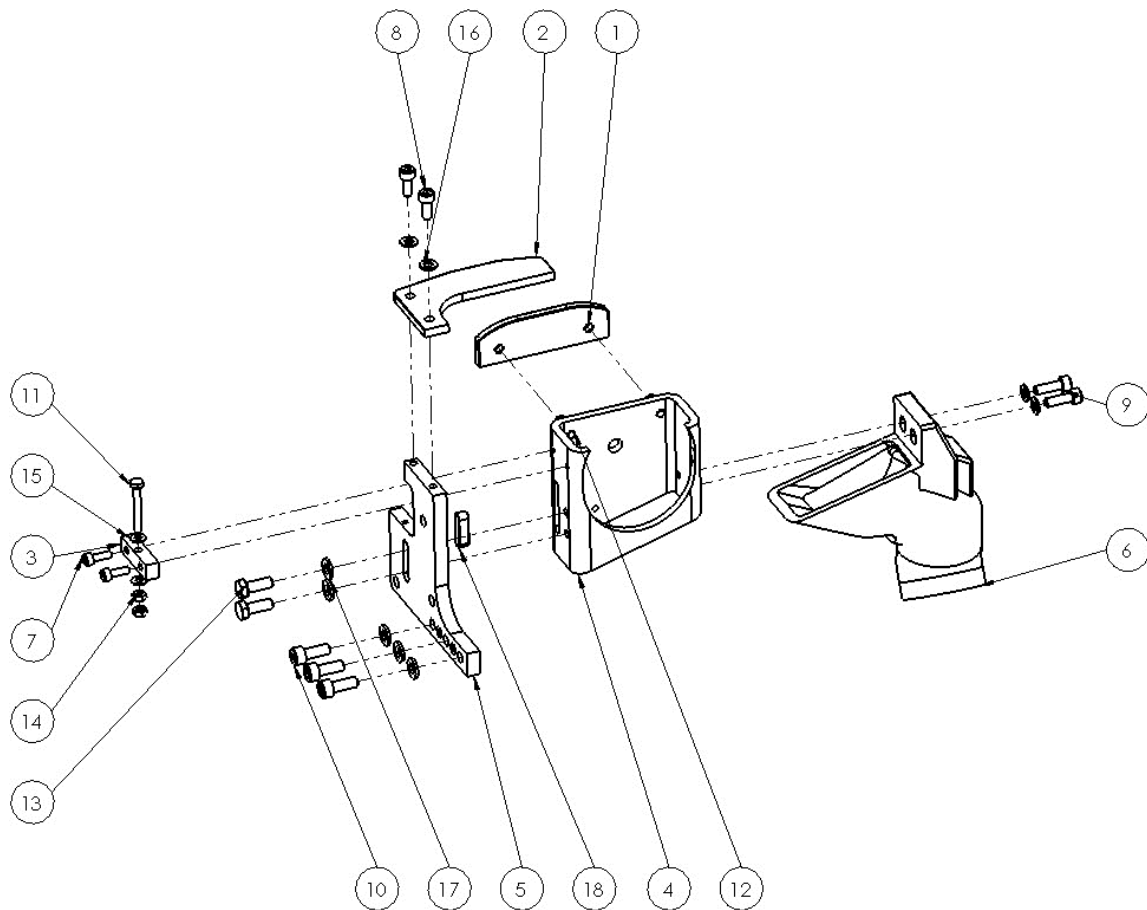
0900248 Bottom trimmer			
#	Qty.	Description	Reference
1	1	Tracers assembly	5005444
2	1	Bottom trimmer support assembly	5003859
3	1	Motor assembly	5005443

7.2 Top trimmer



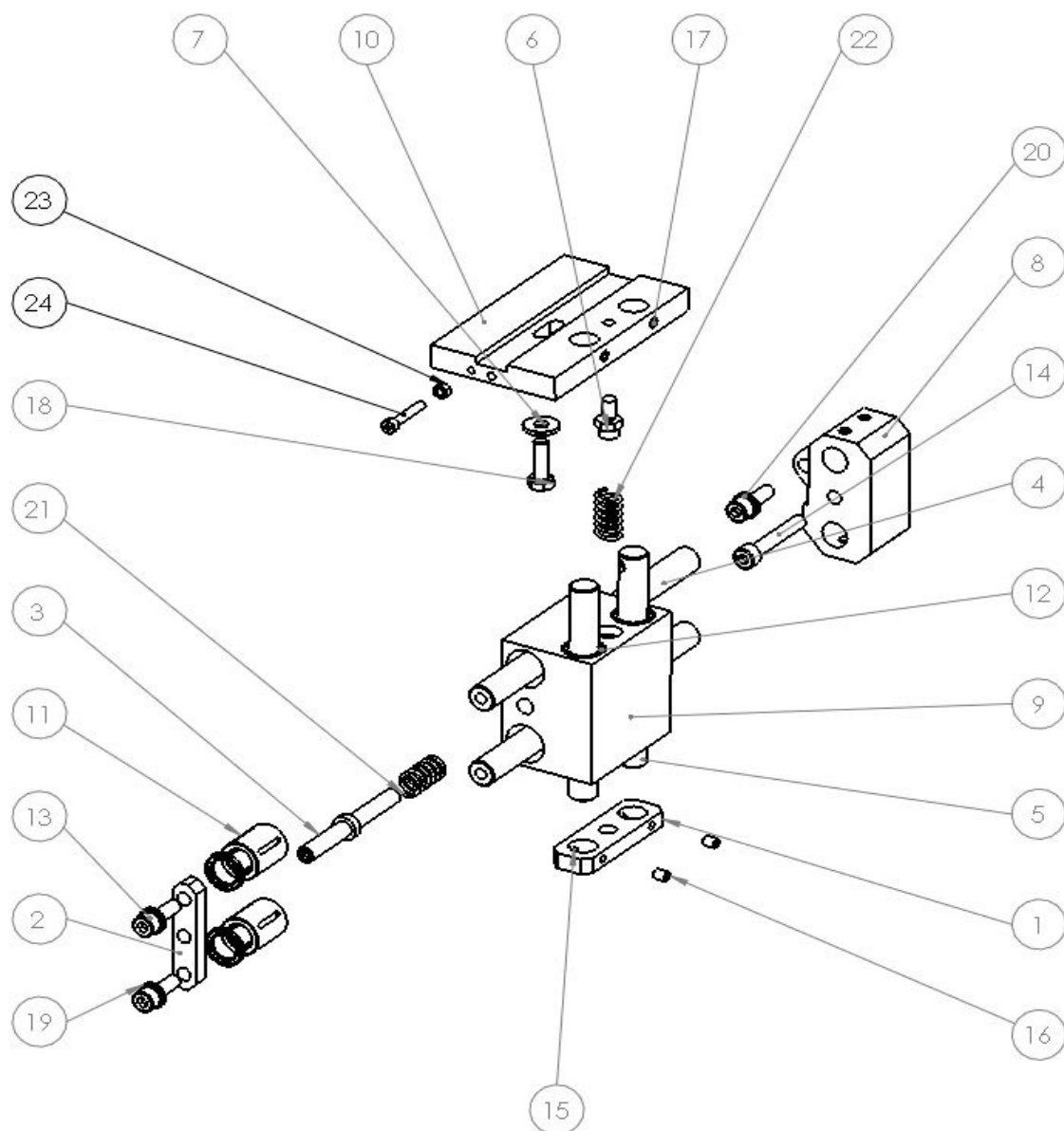
0900248 Top trimmer assembly			
N°	Qty.	Description	Reference
1	1	Tracers assembly	5005444
2	1	Top trimmer support assembly	5003883
3	1	Motor assembly	5005443

7.3 Tracers assembly



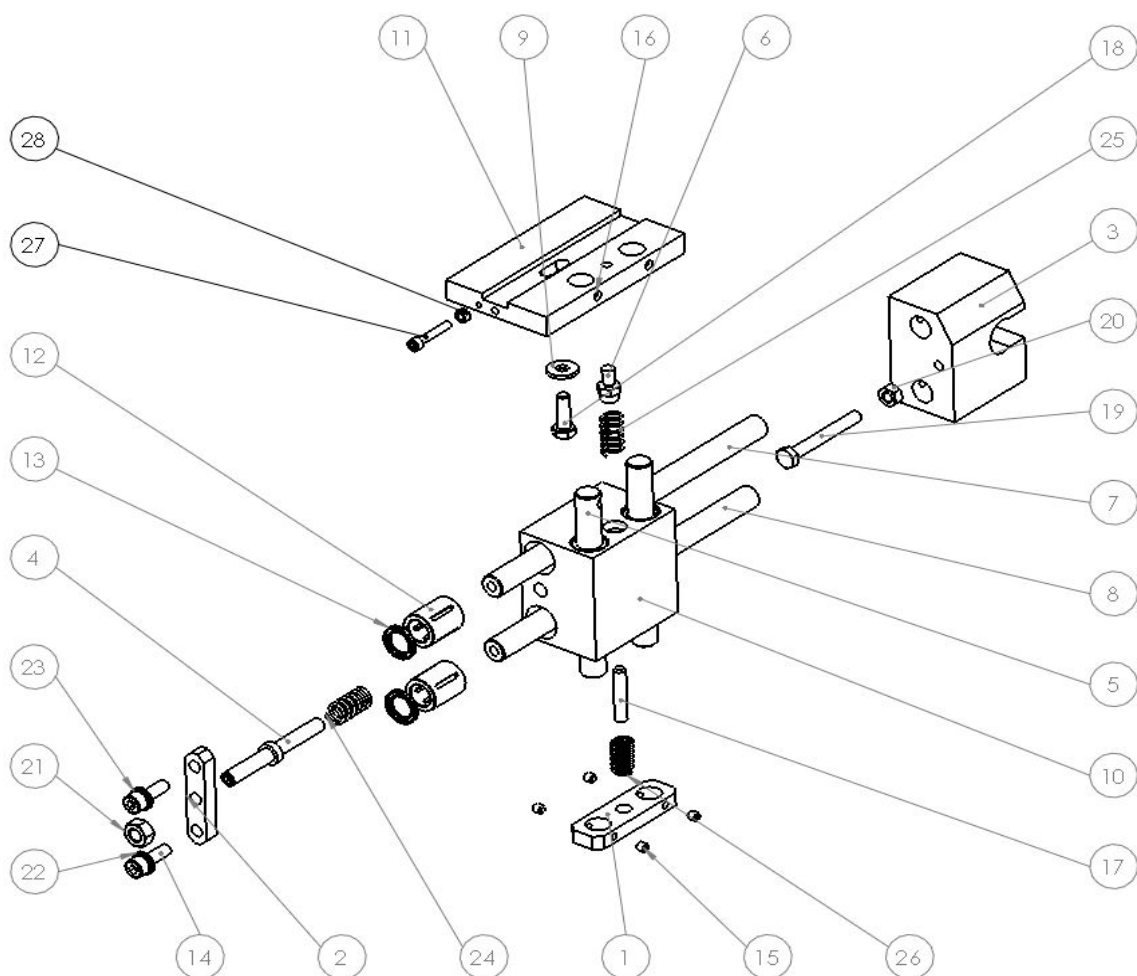
Tracers assembly 5005444			
#	Qty.	Description	Reference
1	1	Tracer	403002180
2	1	Frontal tracer	403002347
3	1	Vertical tracer handrail	403002925
4	1	Vertical tracer holder	405000511
5	1	Vertical tracer adjustment	407000356
6	1	Dust collector hose	408000191
7	2	Allen bolt DIN 912 M4 x 12 (Thread 12mm)	6310401201
8	2	Allen bolt DIN 912 M5 x 12 (Thread 12mm)	6310501201
9	2	Allen bolt DIN 912 M5 x 16 (Thread 16mm)	6310501601
10	3	Allen bolt DIN 912 M6 x 16 (Thread 16mm)	6310601601
11	1	Hex bolt DIN933, M4 X 30	6360403001
12	2	Hex bolt DIN933, M5 X 12	6360501201
13	2	Hex bolt DIN933, M6 X 16	6360601601
14	2	Hex nut DIN934 M4	6410400001
15	2	Washer DIN 125 M4	6610400001
16	4	Washer DIN 125 M5	6610500001
17	5	Washer DIN 125 M6	6610600001
18	1	Pin A6x6x22 DIN 6885	6410500001

7.4 Bottom trimmer Support assembly



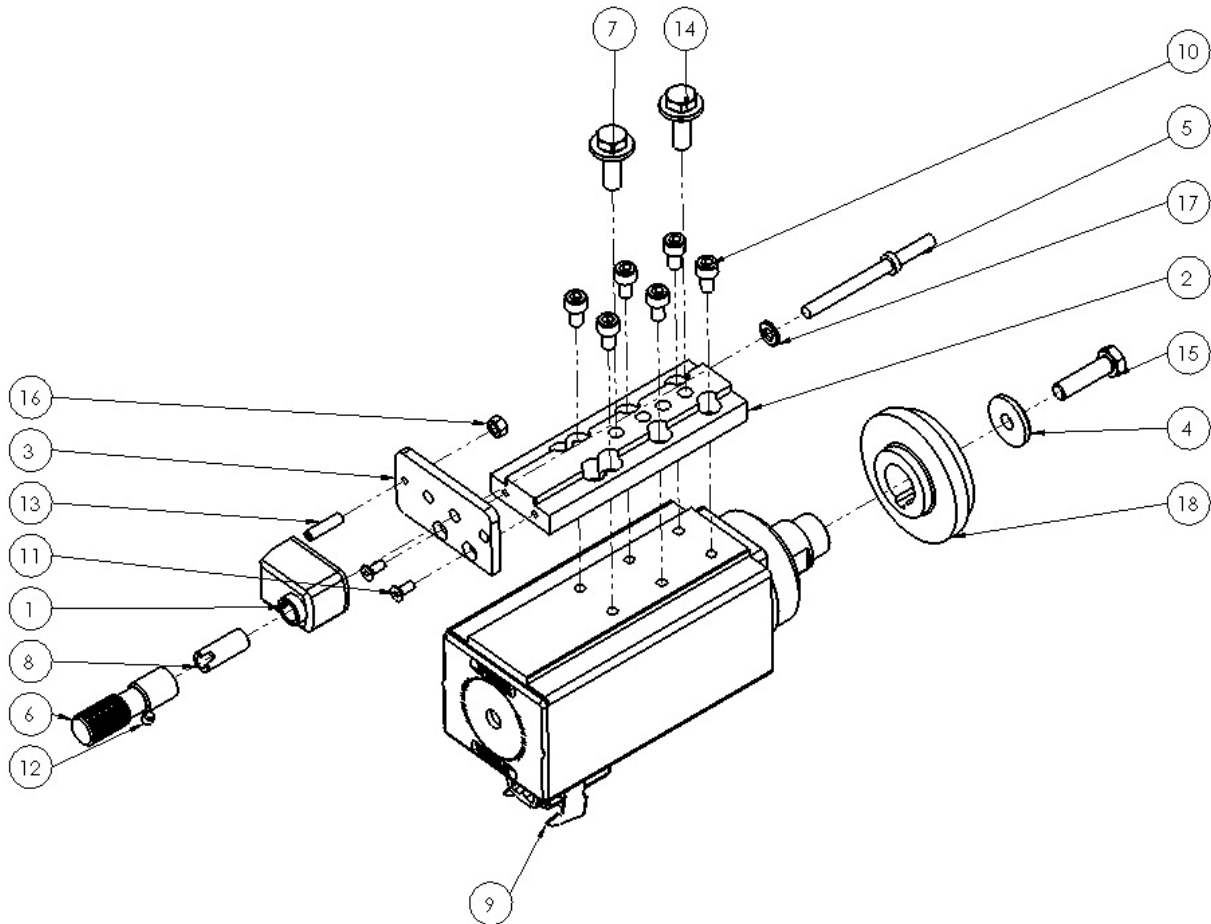
Bottom trimmer support assembly 5003859			
#	Qty.	Description	Reference
1	1	Vertical flange	403000388
2	1	Frontal flange	403000389
3	1	Frontal tracer adjustment	404000138
4	2	Frontal support rod bottom block	404000270
5	2	Vertical support rod	404000271
6	1	vertical spring shaft	404000274
7	1	Washer 20 x 8.25 x 2.5	404000804
8	1	Bottom unit support	408000036
9	1	Main holding block	409000078
10	1	Motor support plate	409000467
11	8	Bearing KH 1630	6171630001
12	8	Bearing lock 16x24x3	6191624031
13	3	Allen bolt DIN 912 M8 x 25 (ROSCA 25mm)	6310802501
14	1	Allen bolt DIN 912 M8 x 50 (ROSCA 50mm)	6310805001
15	2	Grub screw DIN913 M5 X 8	6330500801
16	2	Grub screw DIN913 M6 X 8	6330600801
17	6	DIN 913 - M8 x 8-N	
18	1	Hex bolt DIN933, M8 X 25	6360802501
19	3	Washer Din 125 M8	6610800001
20	3	DIN 6905-7.4-FSt	
21	1	Tension spring	9294031501
22	1	Tension spring	9294031501
23	1	Hex bolt DIN934, M5	6410500001
24	1	Allen bolt DIN 912 M5 x 30 (ROSCA 22mm)	6310503001

7.5 Top trimmer support assembly



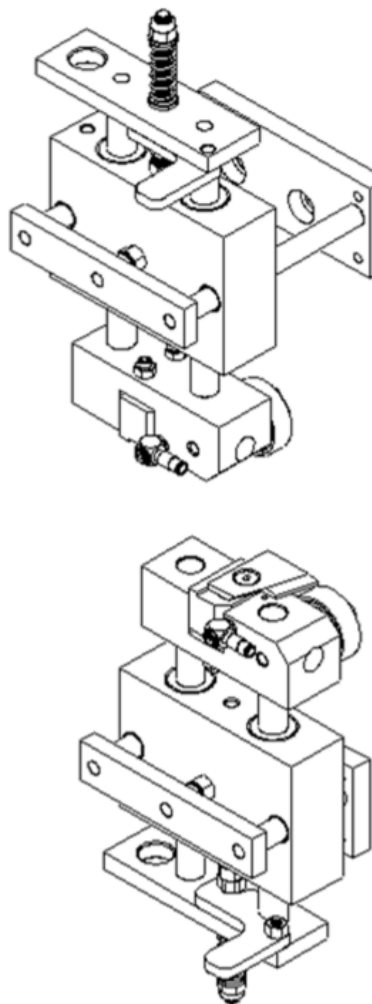
Top trimmer support assembly 5003883			
N°	Qty.	Description	Reference
1	1	Vertical flange	403000388
2	1	Frontal flange	403000389
3	1	Top trimmer support	403000695
4	1	Frontal tracer adjustment	404000138
5	2	Vertical support rod	404000271
6	1	Vertical spring shaft	404000274
7	1	Top frontal support rod	404000301
8	1	Top frontal support rod (short)	404000303
9	1	Washer 20 x 8.25 x 2.5	404000804
10	1	Main block	409000078
11	1	Motor plate	409000467
12	8	Bearing KH 1630	6171630001
13	8	Bearing ratiner 16x24x3	6191624031
14	2	Allen bolt DIN 912 M8 x 25 (Thread 25mm)	6310802501
15	4	Bolt DIN913 M6 X 6	6330600601
16	2	DIN 913 - M8 x 8-N	
17	1	Grub screw DIN913 M8 X 40	6330804001
18	1	Hex bolt DIN933, M8 X 25	6360802501
19	1	Hex bolt DIN933, M8 X 65	6360806501
20	1	Hex nut DIN934, M8	6410800001
21	1	Hex nut DIN934, M10	6411000001
22	2	Washer DIN 125 M8	6610800001
23	2	DIN 6905-7.4-FSt	
24	1	Tension spring	9294031501
25	1	Tension spring 24000315A- 2400336	9294031511
26	1	Tension spring 24000315A- 2400336	9294031511
27	1	Allen bolt DIN 912 M5 x 30 (ROSCA 22mm)	6310503001
28	1	Hex bolt DIN934, M5	6410500001

7.6 Motor assembly



Motor assembly 5005443			
#	Qty.	Description	Reference
1	1	D D50-AN-01 0-D-C3	102000713
2	1	Motor plate	403000392
3	1	Counter indicator support	403002924
4	1	Motor adjustment knob	404000161
5	1	Frontal tracer regulation adjustment	404000240
6	1	Frontal tracer tensioner adjustment	404000273
7	2	Washer 20 x 8.25 x 2.5	404000804
8	1	Siko counter bushing	405000067
9	1	Motor Teknomotor JC-2	5800550721
10	6	Allen bolt DIN 912 M6 x 10 (Thread 10mm)	6310601001
11	2	Bolt DIN7991, M4 X 12 Thread:7.6mm	6320401002
12	1	Grub screw DIN913 M5 X 5	6330500501
13	1	Grub screw DIN913 M5 X 20	6330502001
14	2	Hex bolt DIN933, M8 X 30	6360802501
15	1	Hex nut DIN933 M8x30	6360803001
16	1	Hex nut DIN934, M5	6410500001
17	1	Copper washer M6	6610600201
18	1	Tool head 65x20 R2	9316520211

MAKSIWA CBC.PCRGLUE SCRAPPER RR-8



Unit: MAKSIWA CBC.PCR Glue scrapper unit

Revision: 00 05/2023

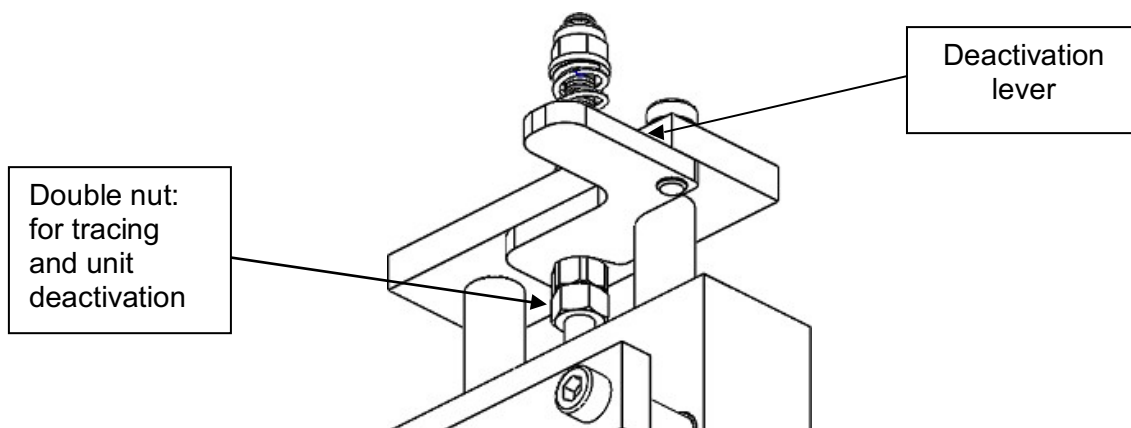
1	DESCRIPTION AND AIM OF THE UNIT.....	3
2	OPERATION AND ADJUSTMENT	3
2.1	MANUAL ACTIVATION	3
2.2	UNIT ADJUSTMENT	3
2.2.1	Tracing adjustment.....	5
2.2.2	Tension adjustment.....	5
2.2.3	Tracing Wheel alignment.....	5
2.2.4	Cutter block adjustment.....	5
2.2.5	Depth adjustment	5
3	MAINTENANCE.....	6
3.1	GENERAL MAINTENANCE	6
3.2	TOOL CHANGE.....	6
4	TROUBLESHOOTING.....	6
5	UNIT COMPOSITION	7
5.1	TOP GLUE SCRAPER.....	7
5.2	BOTTOM GLUE SCRAPER.....	9

1 DESCRIPTION AND AIM OF THE UNIT

The glue scraper removes excesses of glue that may have remained in the gluing process and leave a better finish. It consists of a vertical bearing tracer that acts on the panel and a blade that attacks the edge to eliminate excess glue.

2 OPERATION AND ADJUSTMENT

2.1 Manual activation



To activate the unit, you must remove the deactivation lever from the copying nuts. To deactivate the unit again, lift the group slightly, and insert the deactivation lever.

2.2 Unit adjustment

Security warning

A trained technician with special tools adjusts this unit. For this reason, MAKSIWA does not recommend handling without the support of an authorized technician.

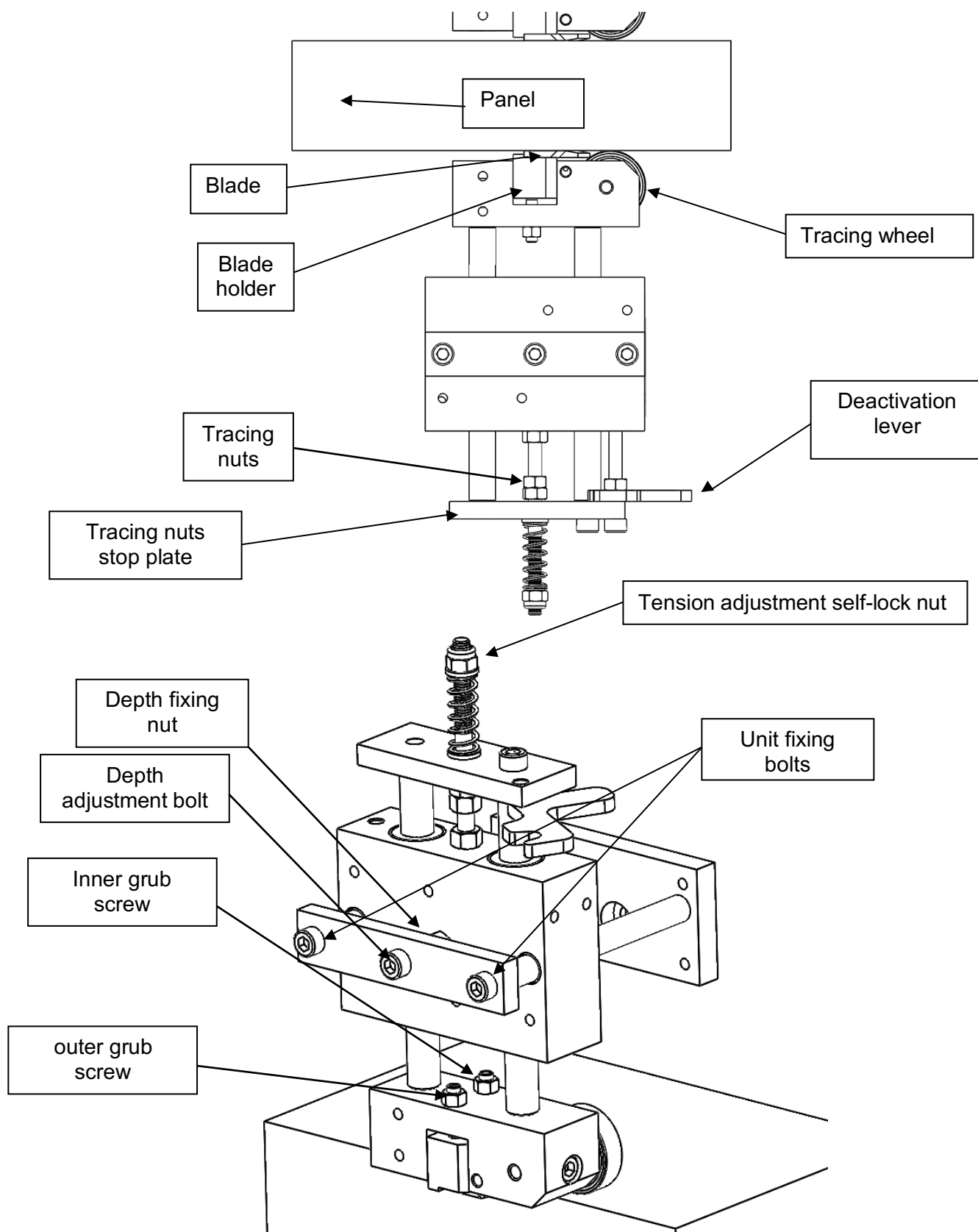
The premilling unit has cutting blades that can cause serious damage under improper use of the unit.

Do not adjust the unit while the machine is running to avoid enrolment with the chain. For proper handling, disconnection of the unit is essential.

Before making any adjustments, try to solve the problem with the appropriate preventive/corrective actions, and follow these steps detailed in the section on common errors and failures.

Please observe the next page, in order to understand the following adjustment points:

- Tracing adjustment
- Tracer wheel adjustment
- Tracer wheel adjustment
- Cutter block adjustment



2.2.1 Tracing adjustment

Stop the machine with the unit working on a panel, and confirm that the distance between tracing nuts and tracing nuts stop plate is 1 mm.

2.2.2 Tension adjustment

Tension adjustment self-lock nut, if necessary, to increase the pressure on spring, so the unit works firmly on panel.

2.2.3 Tracing Wheel alignment

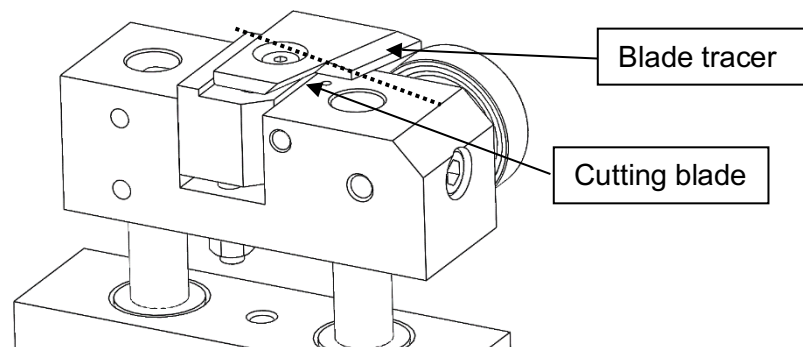
Adjust the bearing (if necessary). When the unit is working, the distance between the panel and bearing is minimum (0.05 mm). If the distance is bigger, the blade might dent the panel from front side.

Tracer wheel is an eccentric bearing. Use 10 mm spanner to release it and 19 mm spanner to adjust the height.

2.2.4 Cutter block adjustment

- Lose outer grub screw fixing nut and turn it clockwise to remove more overhang. This operation will expose more blade. If it not possible, lose the screw from inner grub screw.
- The blade holder can remain with a little bit a play (movement), this is normal. This movement will help to the blade to absorb any small bumps on panel and avoid marking it, thanks to the design of blade.

2.2.5 Depth adjustment



Lose depth fixing nut and use depth adjustment bolt for use minimum cutting blade on panel.

3 MAINTENANCE



Before starting the Maintenance, turn off the machine (disconnect completely electrically) and disconnect compressed air.

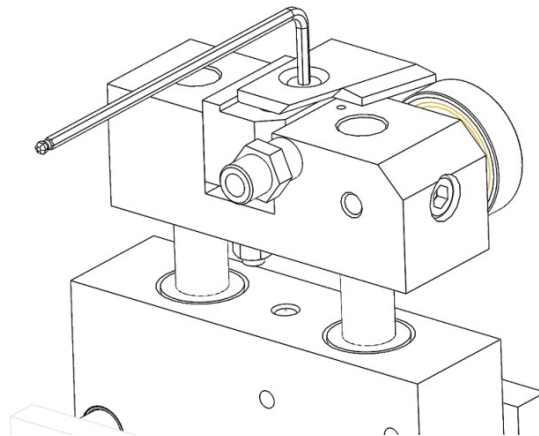
Only trained personnel can perform these operations.

3.1 General maintenance

- Clean the tracer of the unit daily with a mild cleaning agent.
- Clean the blades daily with a mild cleaning agent.
- Remove (vacuum) any chip debris and edge excess that may be near the unit.

3.2 Tool change

- Use a 3mm Allen key to remove the screw holding the blade.
- Clean the blade holder and before installing the new blade.

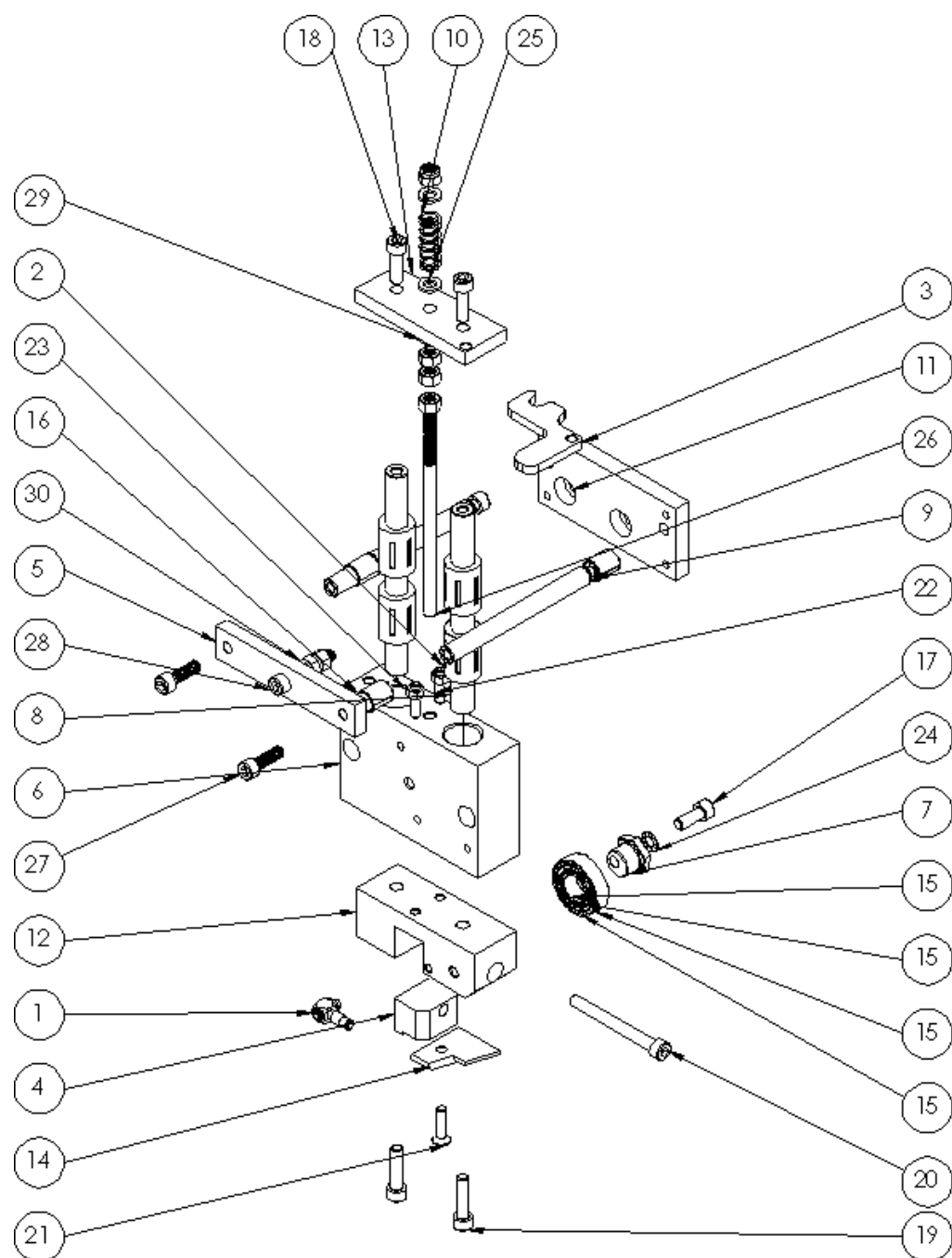


4 TROUBLESHOOTING

Fault	Possible cause	Solutions
Overhang	Blade is not clean	Clean the blade with a mild thinner.
	Incorrect unit tracing	Check if the unit is tracing 1mm.
	Blade damaged	Change the blade.
Panel with scratches	Irregular panel	Check with a freshly cut new panel to determine if the fault is coming from the board or the unit.
	Unit unaligned	Adjust the unit with the support of a trained technician.

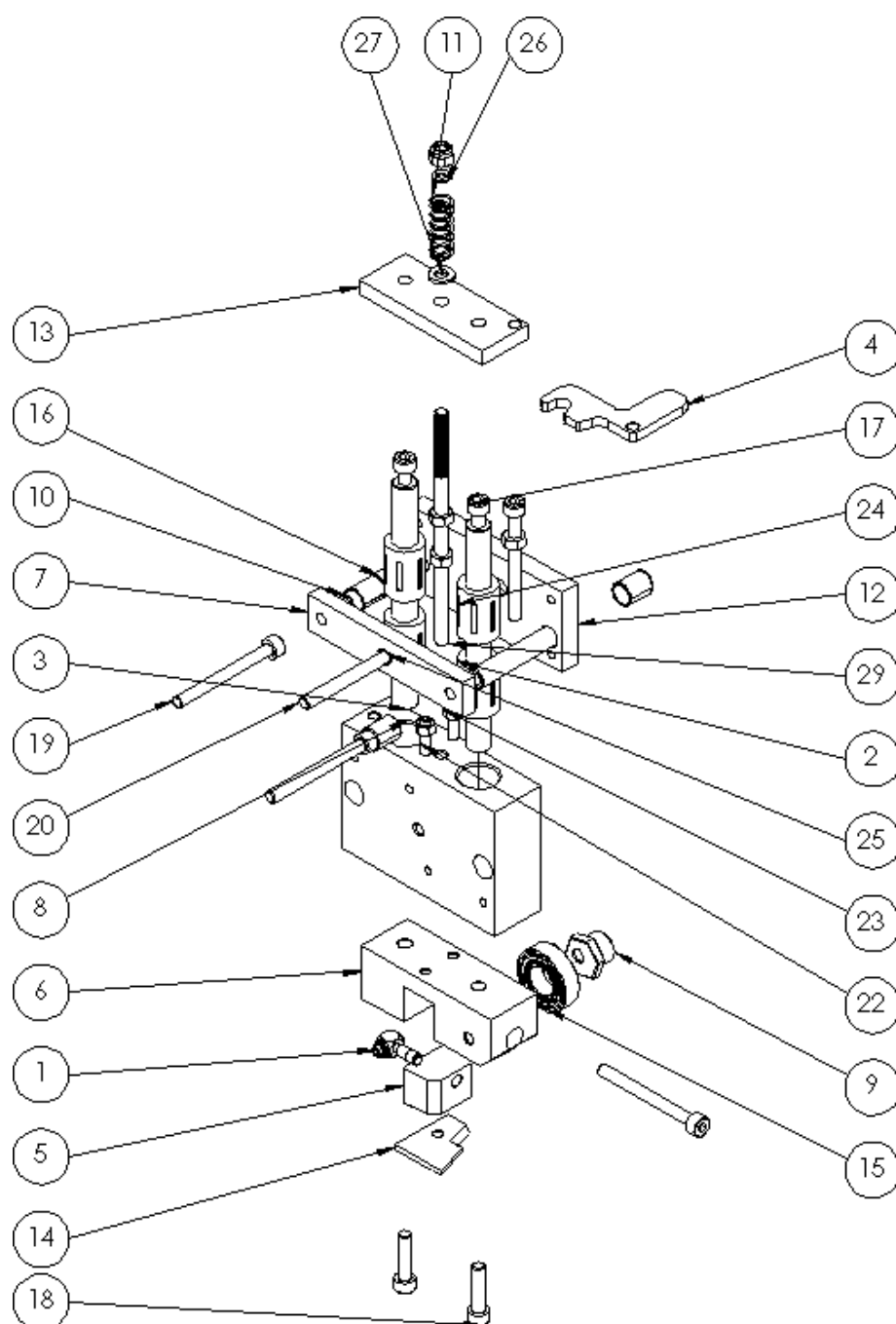
5 UNIT COMPOSITION

5.1 Top glue scrapper



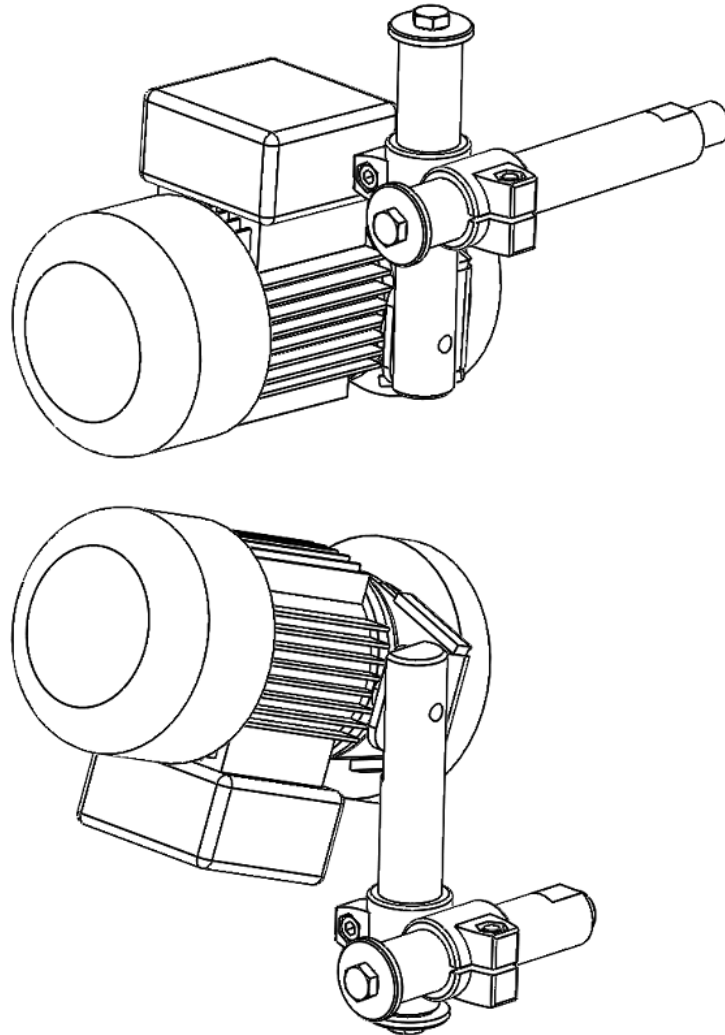
Top glue scrapper RR-8		
#	Description	Reference
2	Bearing KH12PP	102000028
3	Unit ON OFF lever	401000161
4	Blade holder	403000136
5	Support plate	403000138
6	Vertical block	403000140
7	Eccentric bearing. 6002	404000075
8	Sliding guide Ina W12h6 L:125	404000076
9	Sliding guide Lateral L:100	404000079
10	Tension spring RR8	405000080
11	Main support plate	409000026
12	Main body	409000028
13	Top plate	409000029
14	RR-8 top scrapper blade	409000033
15	Bearing 6002-2ZR	5000057
16	Bearing EGB1015-e40	5000058
17	Allen bolt DIN 912 M6 x 16	6310601601
18	Allen bolt DIN 912 M6 x 20	6310602001
19	Allen bolt DIN 912 M6 x 25	6310602501
20	Allen bolt DIN 912 M6 x 55	6310605501
21	Bolt DIN7991, M5 X 8	6320500801
22	Grub screw DIN913 M5 X 20	6330502001
23	Hex bolt DIN934, M5	6410500001
24	Dented washer DIN6798 M6	6660600001
25	Washer DIN 125 - A 6.4	
26	Grub screw DIN 525 - M6 x 130	
27	Hex bolt DIN 912 - M6x20	
28	Hex bolt DIN 912 - M6x35	
29	Hex bolt ISO 4034 - M6	
30	Hex bolt ISO 7040-M6	
31	Hex bolt ISO 7040-M6	

5.2 Bottom glue scrapper



Bottom glue scrapper RR-8		
#	Description	Reference
2	Bearing lineal KH12PP	102000028
3	Linear guide Ina w12 h6 L:125	102000029
4	Unit ON OFF lever	401000161
5	Blade holder	403000136
6	Main holding block	403000137
7	Support plate	403000138
8	Vertical body	403000140
9	Eccentric bearing rod. 6002	404000075
10	Horizontal spacer guide	404000077
11	Spring RR-8	405000081
12	Main supporting plate	409000026
13	Top plate	409000029
14	RR-8 bottom scrapper blade	409000030
15	Bearing 6002-2ZR	5000057
16	Sliding bearing EGB1015-e40	5000058
17	Allen bolt DIN 912 M6 x 20	6310602001
18	Allen bolt DIN 912 M6 x 25	6310602501
19	Allen bol DIN 912 M6 x 60	6310606001
20	Allen bolt DIN 912 M6 x 60	6310606001
21	Bolt DIN7991, M4 X 12	6320401202
22	Grub screw DIN913 M5 X 20	6330502001
23	Hex nut DIN934, M5	6410500001
24	Hex nut DIN934, M6	6410600001
25	Self-locking nut DIN982, M6	6420600001
26	Washer DIN 125 M4	6610400001
27	Washer DIN 125 M6	6610600001
28	Dented washer DIN6798 M6	6660600001
29	Grub screw DIN 525 - M6 x 130	

MAKSIWA CBC.PCR BUFFING UNIT PC-3



Unit: MAKSIWA CBC.PCR Buffing unit

Revision: 00 05/2023

1	DESCRIPTION AND AIM OF THE UNIT	3
2	SCREEN SELECTION AND UNIT ACTIVATION	3
3	OPERATION AND ADJUSTMENT	3
3.1	WORK DESCRIPTION	3
3.2	UNIT WORK POSITION	3
3.3	ELECTRIC COMPOSITION	4
3.4	UNIT ADJUSTMENT	4
4	MAINTENANCE.....	5
4.1	CHANGE POLISHING CLOTHES	5
5	ALARMS.....	6
6	TROUBLESHOOTING.....	6
7	UNIT COMPOSITION	7
7.1	TOP BUFFING UNIT	7
7.2	BOTTOM BUFFING UNIT	8
7.3	BUFFING DISK ASSEMBLY	9

1 DESCRIPTION AND AIM OF THE UNIT

The function of the group is to polish sharp edges and smooth the finish, also clean the remains of glue that have remained on the panel. It consists of two motors of 0.11 kW of power. It is possible to install a huge variety of polishing cloths.

2 SCREEN SELECTION AND UNIT ACTIVATION



3 OPERATION AND ADJUSTMENT

3.1 Work description

- The group is in charge of cleaning, polishing and smoothing the work of the trimmers, radius scraper and glue scraper.
- In the case of 0.4mm edge, after machining the group with a trimmers or the glue scraper, the group smooths the sharp edge.
- In the case of working with the cleaning agent, helps to remove the remains of glue.

3.2 Unit work position



- Approximately 3° tilt vertically.
- Approximately 3° tilt horizontally.
- No oscillation
- Rotation in the direction of the panel.

3.3 Electric composition



This configuration detailed below might change. Please check the update electric diagram to confirm the correct electric components.

	Motor	Thermal relay	Inverter
Top motor	2M1	2F1	U2
Bottom motor	2M2	2F2	

3.4 Unit adjustment

Security warning



A trained technician with special tools adjusts this unit. For this reason, MAKSIWA does not recommend handling without the support of an authorized technician.

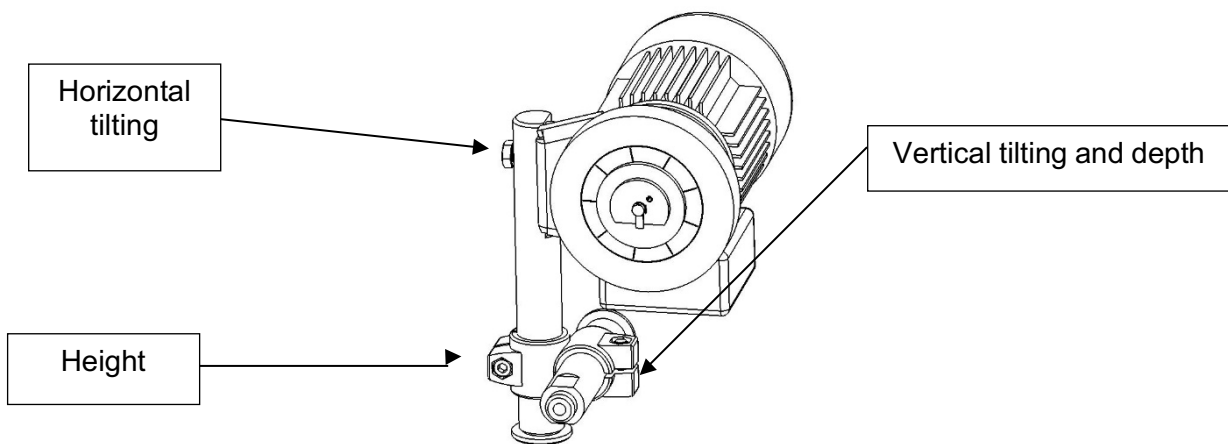
The premilling unit has cutting blades that can cause serious damage under improper use of the unit.

Do not adjust the unit while the machine is running to avoid enrollment with the chain. For proper handling, disconnection of the unit is essential.



Before making any adjustments, try to solve the problem with the appropriate preventive/corrective actions, and follow these steps detailed in the section on common errors and failures.

Move forward or backward, loosening the horizontal fixing nut, to move it vertically, loosen the vertical movement-fixing nut and manipulate the motor vertically to the necessary height. To rotate the motor position, loosen the rotation-locking nut (3).



4 MAINTENANCE



Before starting the Maintenance, turn off the machine (disconnect completely electrically) and disconnect compressed air.

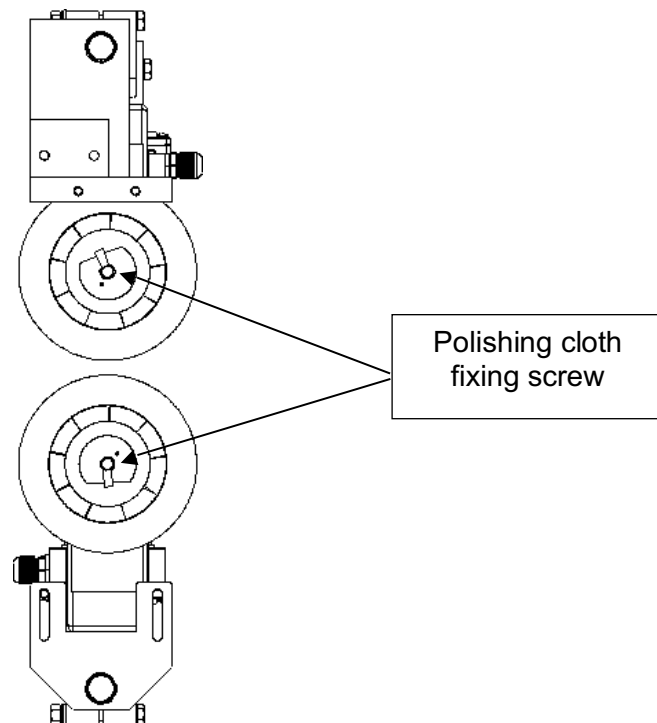
Only trained personnel can perform these operations.

General maintenance

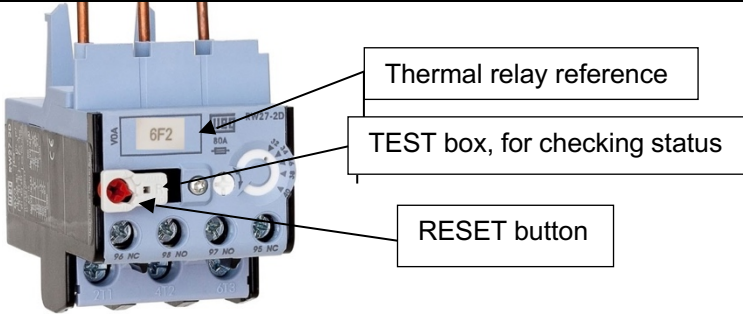
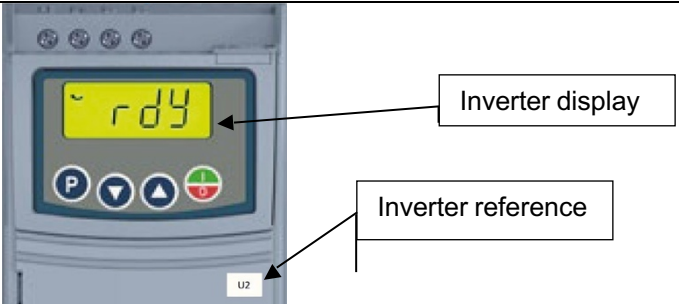
- Clean polishing clothes every day.
- Clean (vacuum) everyday chips and strings of PVC and glue from trimmers and scrappers.
- Check manually every day if the motor is moving freely.

4.1 Change polishing clothes

To replace the polishing cloth, loosen the fixing screw of the polishing cloth, leaving it free to be replaced. To block the rotation of the motor, insert the key from behind and at the same time loosen the screw.



5 ALARMS

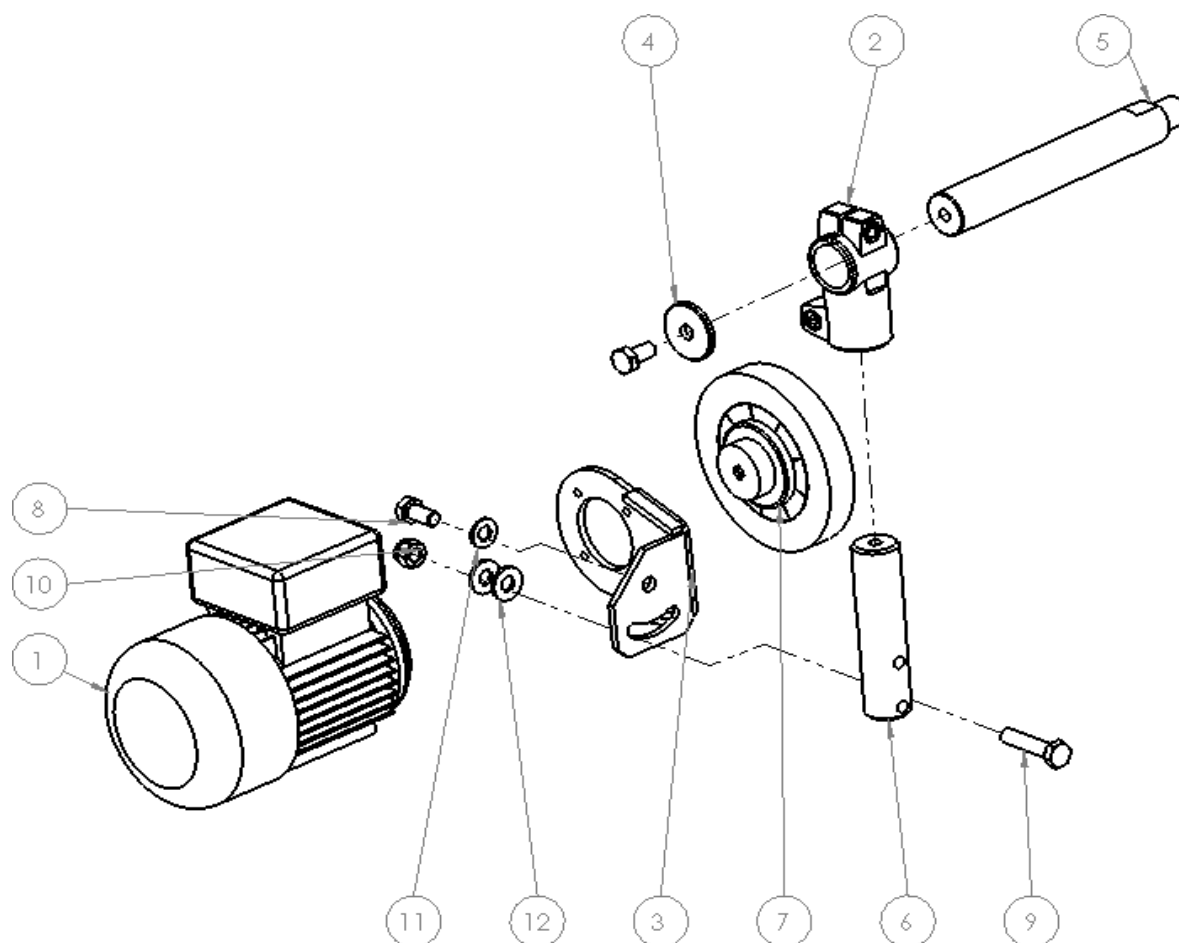
Alarm	Possible cause	Solution
Thermic relay	Thermal relay alarm due to a motor malfunction	 Locate the thermal relays in the electrical panel. Check that the TEST box is yellow (usually green). Press the RESET button to clear the fault and you can reset the alarm. Contact the technical service to solve the fault. Meanwhile, work without the unit causing the failure. 2F1: Top buffing unit 2F2: Bottom buffing unit
	Low input voltage Motor failure Inverter fault Worn tools	 Locate the inverter causing the fault; you can reset it by turning off the machine for 60 seconds and turning on again. If the fault persists, contact the technical service indicating the inverter and the fault that appears on the display. U2: Drag chain and buffing unit inverter

6 TROUBLESHOOTING

Fault	Possible cause	Solutions
Motor blocked /thermal relay alarm	Glue/edge strings from gluescrapper	Remove the excess of PVC/glue from motor.
Finish not clean	Dirty clothes	Change polishing clothes
Watermarks on panel	Too much pressure on panel	Reduce unit height to reduce pressure on panel.

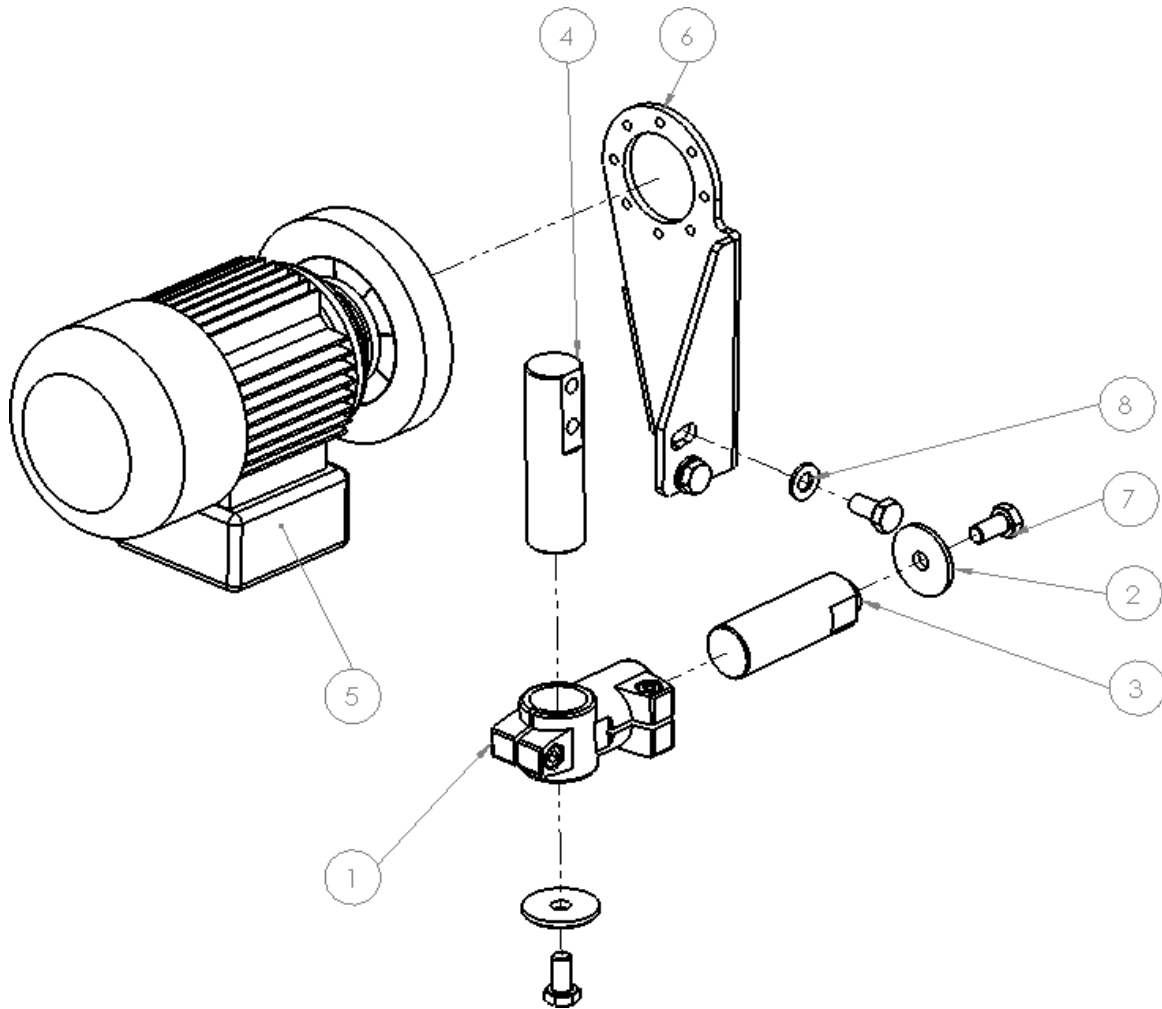
7 UNIT COMPOSITION

7.1 Top buffing unit



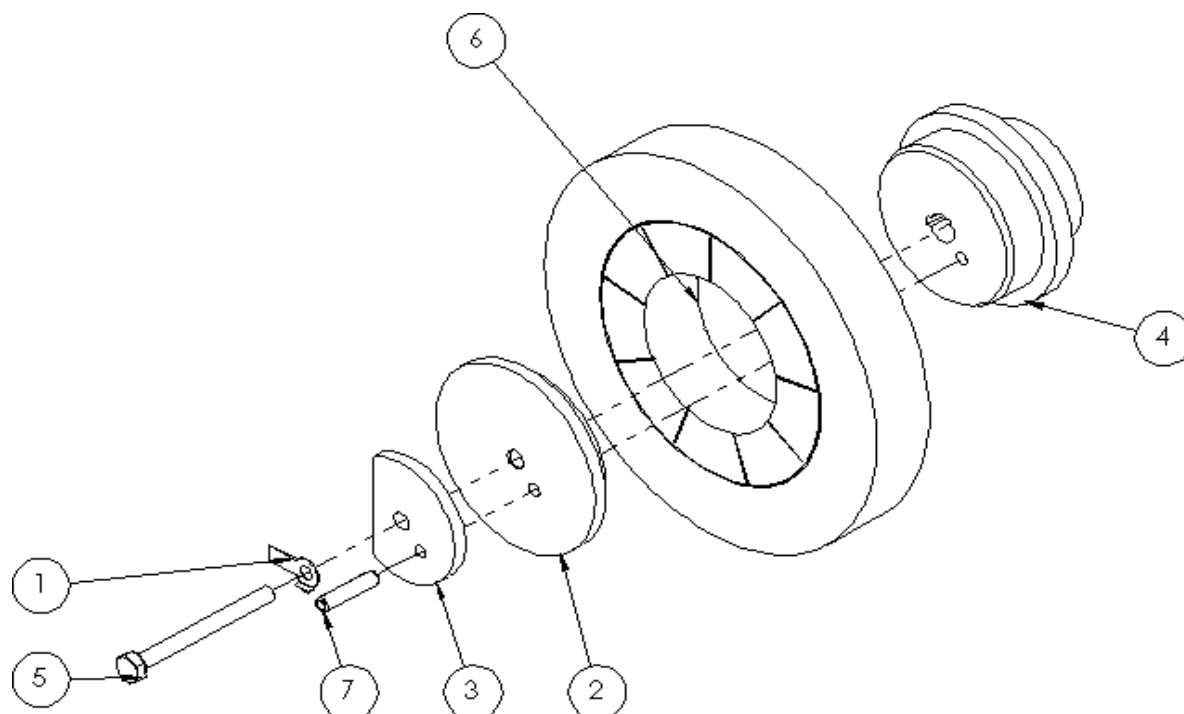
Top buffing unit 1300033			
#	Qty.	Description	Reference
1	1	Transtecno TS5624B14 - 0.09 kW - 1320rpm	100000013
2	1	T-angle connector clamp GN 192-B30-B30-40-2-SW	102000568
3	1	Motor support	401004789
4	1	Frontal adjustment stop washer	404000377
5	1	Top fix support	404001372
6	1	Pivoting clamp (top)	404001697
7	1	Buffing disk assembly	5002132
8	2	Hex bolt DIN933, M10 X 20	6361002001
9	1	Hex bolt DIN933, M10 X 45	6361004501
10	1	Self-locking nut DIN982, M10	6421000001
11	1	Washer DIN 125 M10	6611000001
12	2	Conic washer DIN 6796-10	6691000001

7.2 Bottom buffing unit



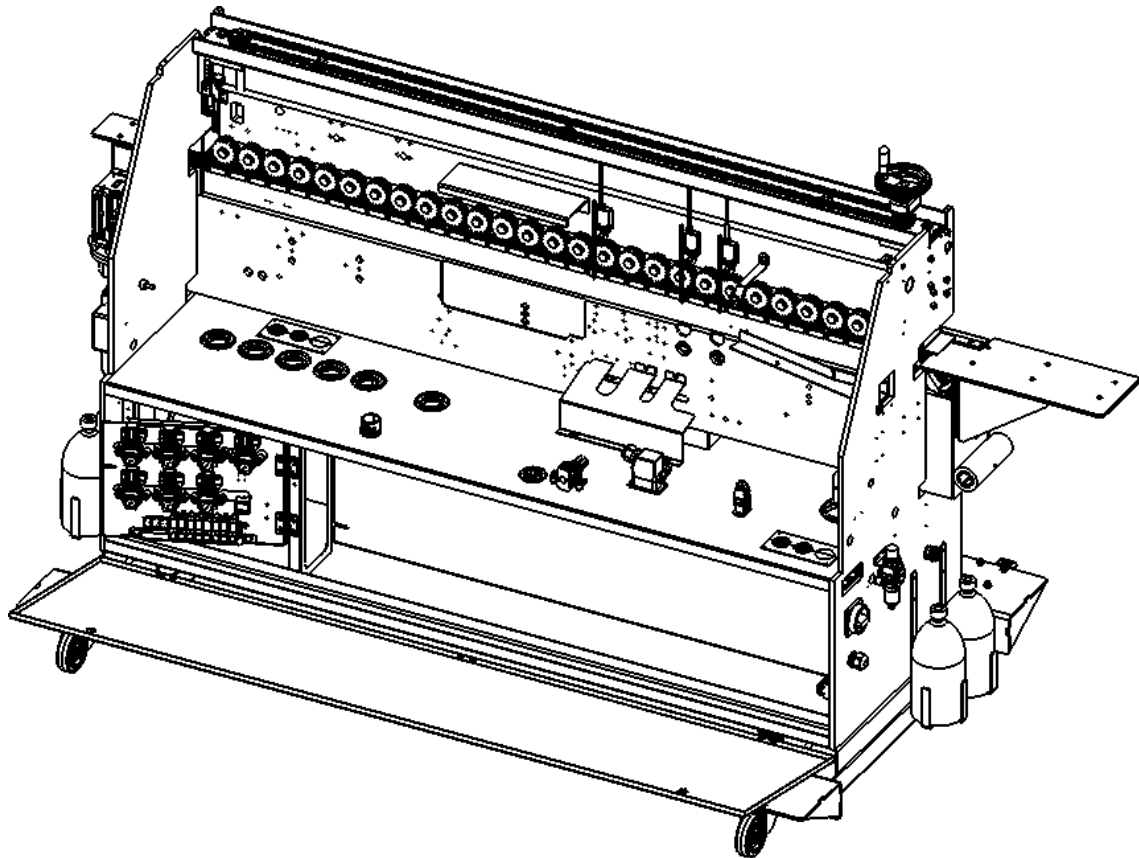
Bottom buffing unit 1300036			
#	Qty.	Description	Reference
1	1	T-angle connector clamp GN 192-B30-B30-40-2-SW	102000568
2	2	Frontal adjustment stop washer	404000377
3	1	Bottom fix support	404001704
4	1	Vertical support	404001706
5	1	Motor assembly	5004777
6	1	Motor support	5004779
7	4	Hex bolt DIN933, M10 X 20	6361002001
8	2	Washer DIN 125 M10	6611000001

7.3 Buffing disk assembly



5002132 Polishing Assembly			
#	Qty.	Description	Reference
1	1	Fixing washer D463 M4	102000176
2	1	Bolt fixing plate	404000754
3	1	Out gasket	404000971
4	1	Disk positioner	404000997
5	1	Hex bolt DIN933, M4 X50	6360405001
6	1	Buffing disk	9331251911
7	1	Elastic pin DIN 1481 D4 x 20	

MAKSIWA CBC.PCR BENCH FRAME



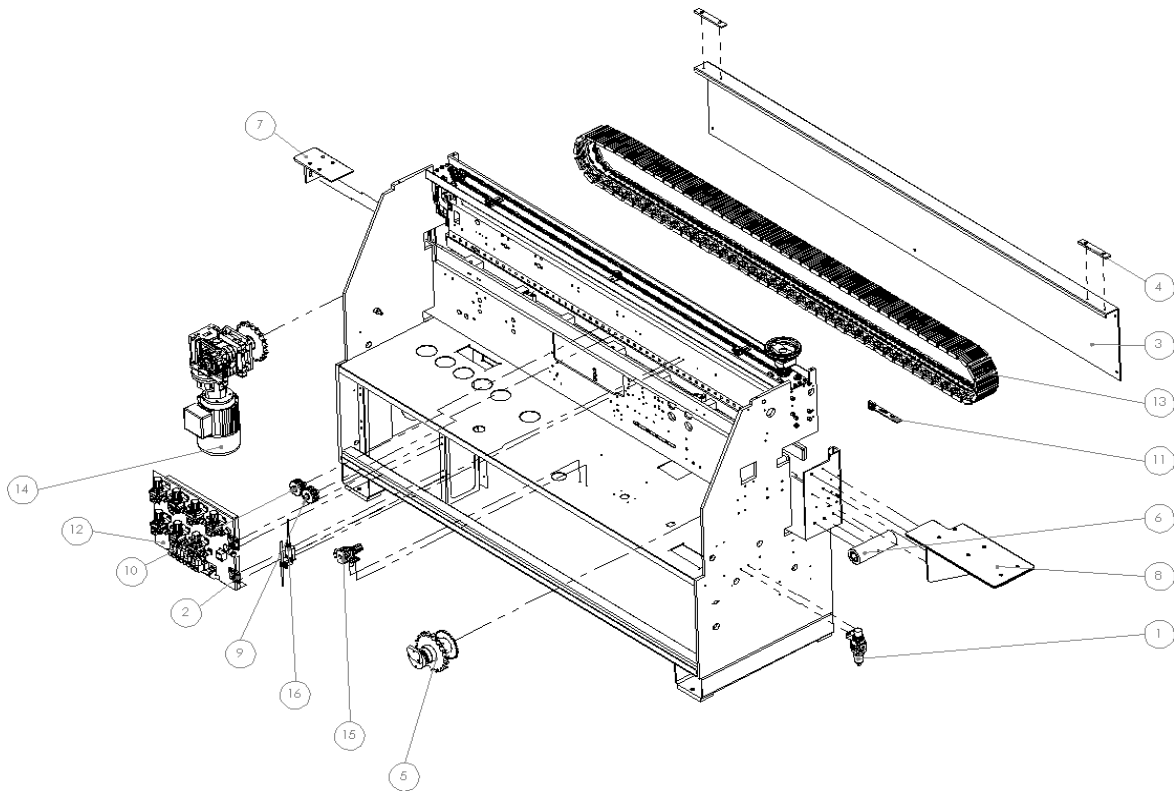
Unit: MAKSIWA CBC.PCR Bench frame

Revision: 00 05/2023

1.	BENCHFRAME COMPOSITION	3
1.1	CBC.PCR MAIN.....	3
1.2	PRESSURE BEAM.....	4
1.3	DRAGCHAIN SPROCKET	5
1.4	DRAGCHAIN MOTOR.....	5
1.5	TENSIONER ASSEMBLY (DRAG CHAIN)	6
1.6	STEP PAD ASSEMBLY.....	6
1.7	PRESSURE BEAM WHEEL	6
1.1	PRESSURE BEAM WHEEL THREADED (FOR PROTECTION COVER)	6
1.1	TENSIONER ASSEMBLY (PRESSURE BEAM)	7
1.2	CABIN DOOR.....	7
1.3	SCREEN ASSEMBLY	8

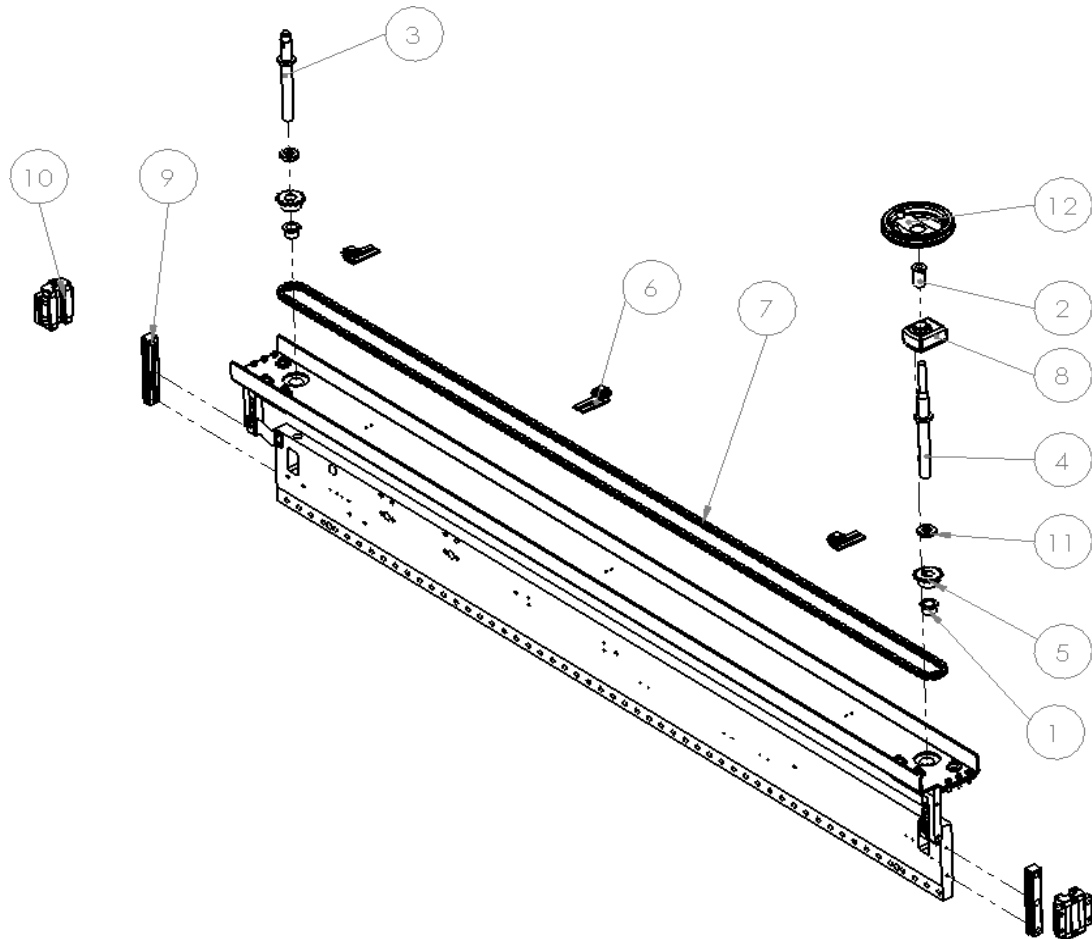
1. BENCHFRAME COMPOSITION

1.1 CBC.PCR Main



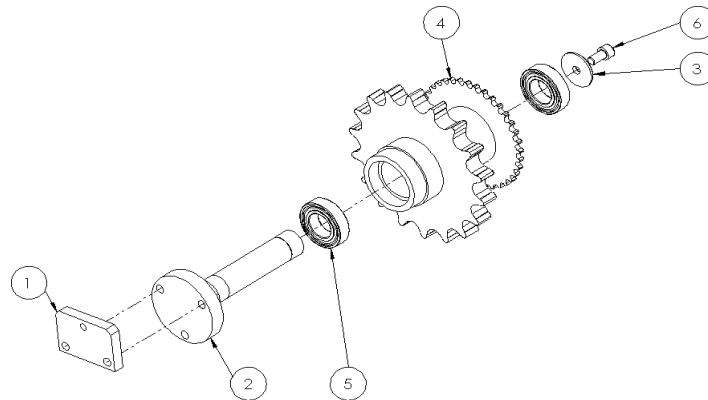
Maksiwa CBC.PCR Bench frame 0100309			
#	Qty.	Description	Reference
1	1	AW20-F02B-R-B(0)	101000052
2	2	CFM.50 SH-6-MD	102000682
3	1	Guide cover	401006040
4	2	Support	409000442
5	1	Drag chain sprocket assembly	5000442
6	1	Extensible apron support	5000443
7	1	HPL output	403001295
8	1	HPL Input	403002018
9	1	Pressure beam wheel assembly	5003400
10	1	Pressure beam wheel assembly for protection cover	5003564
11	1	Tensioner assembly	5004124
12	1	Pneumatic plate	5005140
13	1	Drag chain assembly	5005144
14	1	Drag chain motor	5005172
15	1	Pressure regulator EIR2000	5005251
16	1	Schmersal limit switch	

1.2 Pressure beam



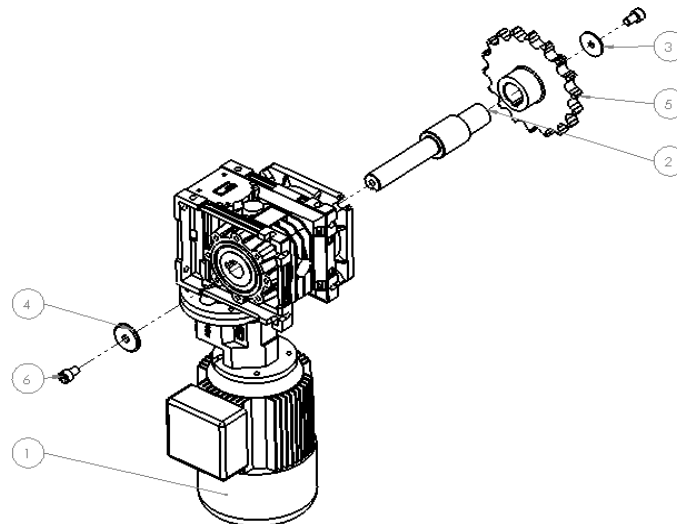
Maksiwa CBC.PCR Pressure beam 5005138			
#	Qty.	Description	Reference
1	2	Gasket 18 - 24 - 18	102000314
2	1	Gasket squillo siko stepper	404001492
3	1	Pressure beam adjustment shaft output	404001555
4	1	Pressure beam adjustment shaft input	404001556
5	2	Sprocket 3/8" Z15	404001557
6	3	Tensioner assembly	5003745
7	2	3/8 368 steps	5004116
8	1	Positioner DA09	9350921051
9	2	Guide Hiwin EGR25R140C	
10	2	Guide Hiwin EGW25CAZ0C ZZ	
11	2	Blocking nut GN1804-2 M16x1,5	
12	1	Spoked handwheels VRTP.125+I A-12	

1.3 Drag chain sprocket



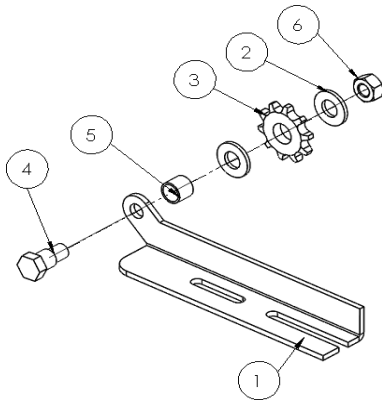
Dragchain guided sprocket 5000442			
#	Qty.	Description	Reference
1	1	Adjustment plate	403000045
2	1	Guide shaft for sprocket	404000014
3	1	Washer Ø35 x Ø8.5 x 4	404000017
4	1	Guide sprocket	404000398
5	2	Bearing 6005-2RS	6116005301
6	1	Allen bolt DIN 912 M8 x 16 (Thread 16mm)	6310801601
7	1	Allen bolt DIN 912 M8 x 25 (Thread 25mm)	6310802501

1.4 Drag chain motor



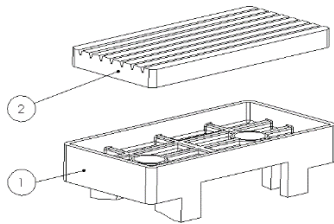
5005172 Drag gear motor			
#	Qty.	Description	Reference
1	1	Drag chain motor CMP071/063 TS71 3 4 B14 50Hz	102000654
2	1	Gearbox shaft	404000016
3	1	Washer Ø35 x Ø8.5 x 4	404000017
4	1	Washer Ø40x4xØ10.5	404000253
5	1	Sprocket Z18 P 1"	404000397
6	2	Allen bolt DIN 912 M10 x 16 (Thread 16mm)	6311001601

1.5 Tensioner assembly (drag chain)



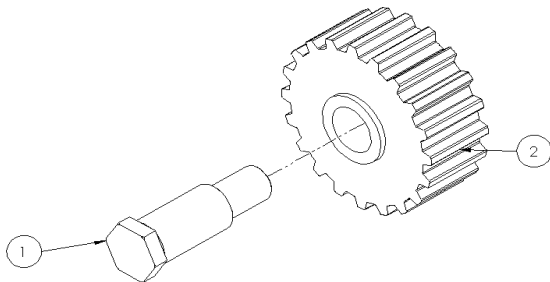
Tensioner assembly 5000444			
#	Qty.	Description	Reference
1	1	Gearbox chain tensioner	401001007
2	2	Copper washer	404000021
3	1	Tensioner sprocket	404000386
4	1	Sprocket shaft	404000387
5	1	Gasket 1010DU	6240101001
6	1	Hex nut DIN934, M8	6410800001

1.6 Step pad assembly



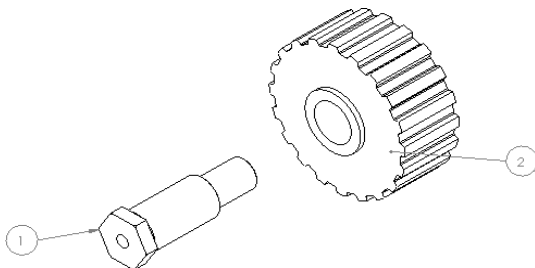
Drag chain step pads 300000001			
#	Qty.	Description	Reference
1	1	Step pad box	1000088
2	1	Rubber cover	1000089

1.7 Pressure beam wheel



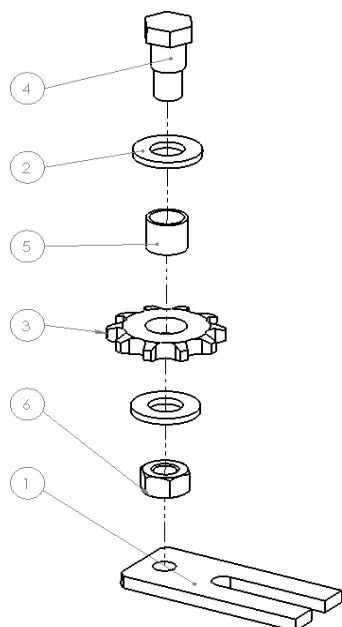
WHEEL ASSEMBLY 5003400			
#	Qty.	Description	Reference
1	1	Wheel shaft M12	404001360
2	1	Wheel	8880060601

1.1 Pressure beam wheel threaded (for protection cover)



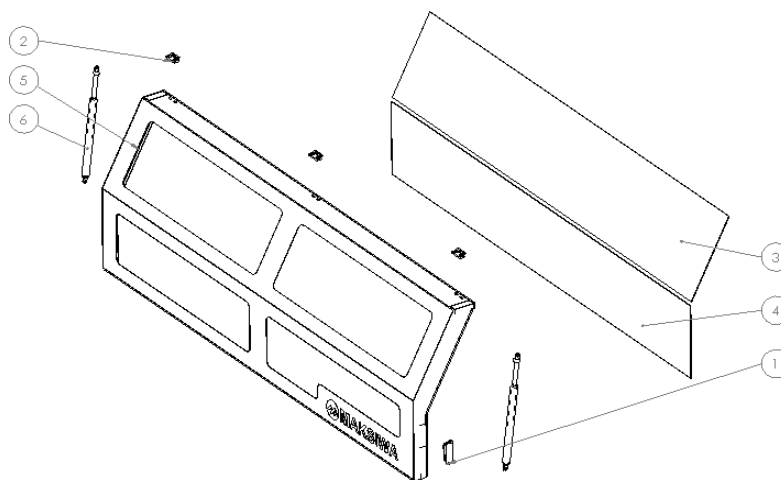
WHEEL ASSEMBLY 5003400			
#	Qty.	Description	Reference
1	1	Wheel shaft M12 M6	404001360
2	1	Wheel	8880060601

1.1 Tensioner assembly (pressure beam)



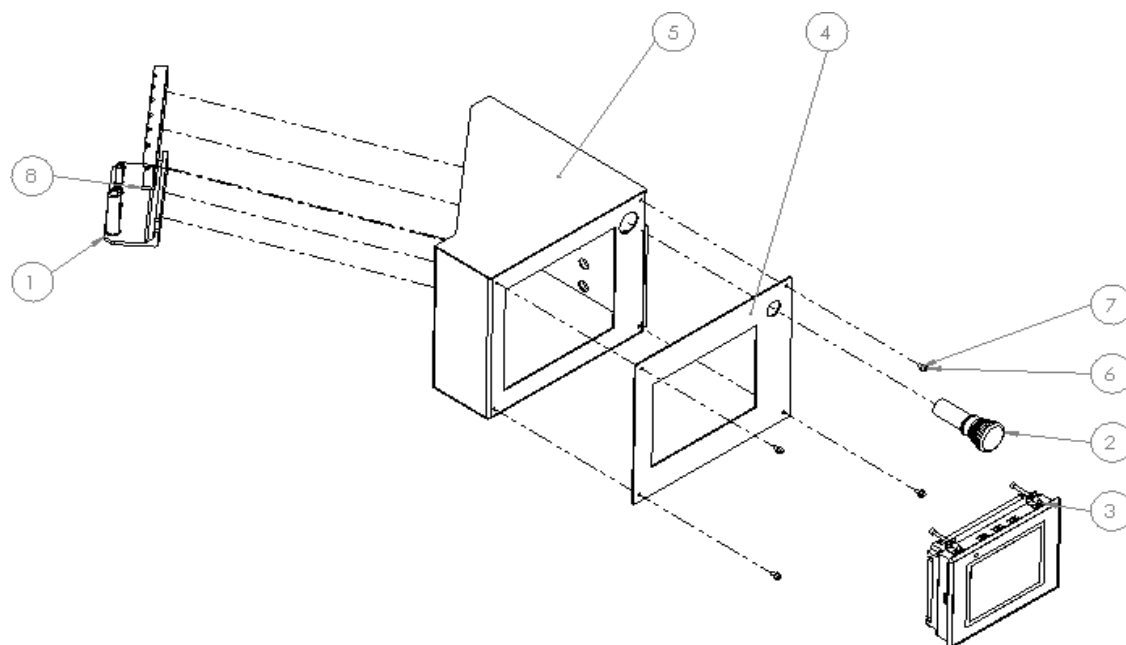
Pressure beam tensioner 5000444			
#	Qty.	Description	Reference
1	1	Pressure beam tensioner	401004798
2	2	Washer copper	404000021
3	1	Tensioner sprocket	404000386
4	1	Sprocket shaft	404000387
5	1	Gasket 1010DU	6240101001
6	1	Hex nut DIN934, M8	6410800001

1.2 Cabin door



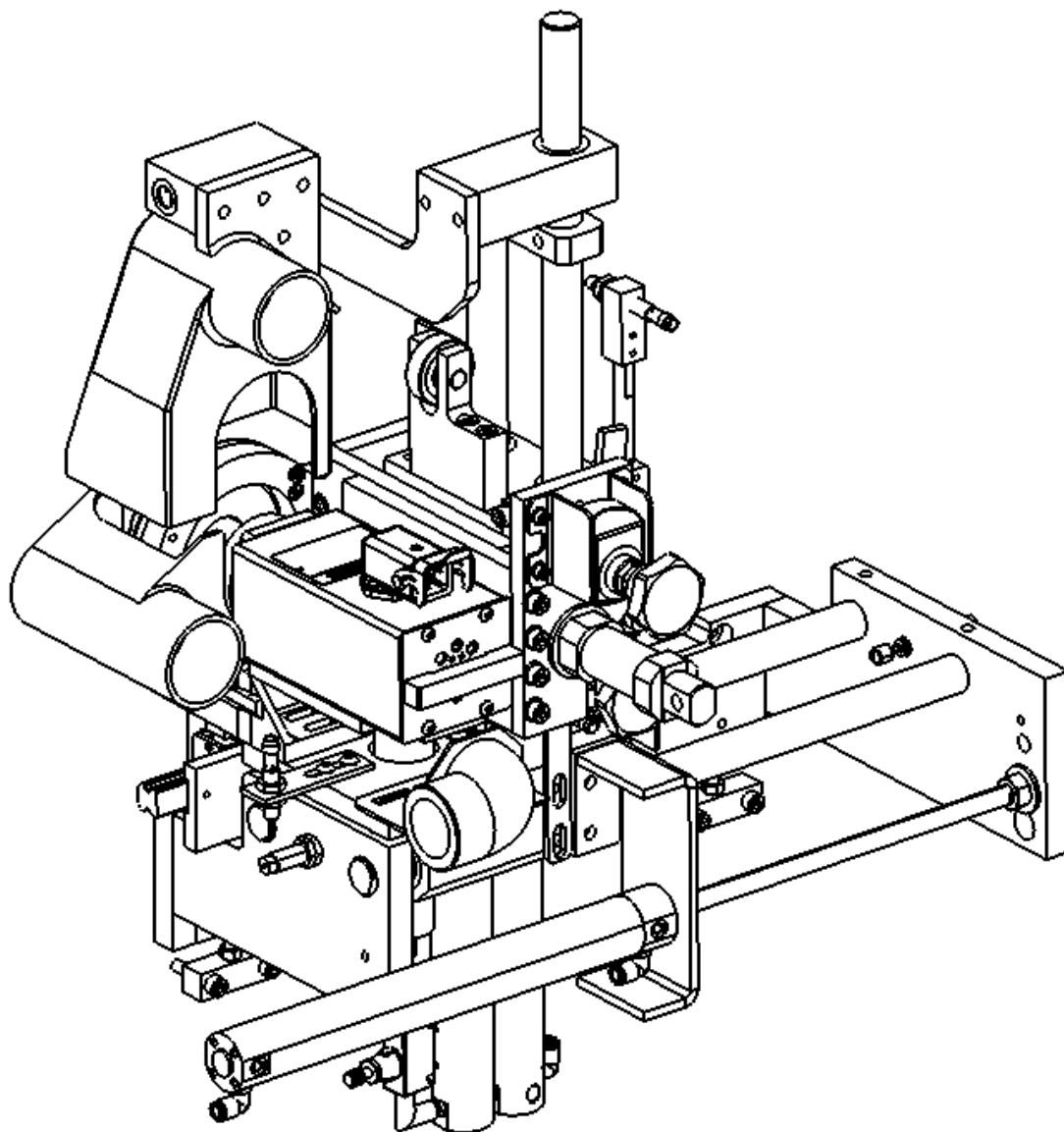
Cabin door 1900290			
#	Qty.	Description	Reference
1	1	Safety door magnetic	100000014
2	3	CFM.50 SH-6-MD	102000682
3	1	methacrylate cabin	401006083
4	1	methacrylate cabin	401006092
5	1	Door	5005254
6	2	Gas spring 08 585 350N	9200745001

1.3 Screen assembly



Screen assembly 5005183			
#	Qty.	Description	Reference
1	1	T-handle Hex Key Support	102000656
2	1	Emergency stop button	3621101101
3	1	Screen 5/6" OMRON	3995000321
4	1	Screen fitting	401006086
5	1	Screen holder assembly	5005184
6	4	Allen bolt DIN 912 M4 x 8 (Thread 8mm)	6310400801
7	4	Washer DIN 125 M4	6610400001
8	1	Allen Keys Holder Set01	

CORNER ROUNDING CR-2 CBC.PCR



Unit: Corner rounding unit CR2 with finger tracer

Revision: 00 11/2023

1	UNIT AIM AND DESCRIPTION	3
2	WORK AND ADJUSTMENT	3
2.1	SCREEN SELECTION.....	3
2.2	MANUAL ACTIVATION.....	3
2.3	WORK DESCRIPTION.....	4
2.4	UNIT ELECTRIC, PNEUMATIC COMPOSITION AND SENSORS.....	6
2.4.1	ELECTRIC COMPOSITION	6
2.4.2	PNEUMATIC COMPOSITION	6
2.4.3	SENSORS	6
2.5	UNIT ADJUSTMENT.....	7
2.5.1	RADIUS ADJUSTMENT – MANUAL POSITIONED MOTOR	7
2.5.2	RADIUS ADJUSTMENT – 2 PNEUMATIC POSITIONS	8
3	MAINTENANCE	9
3.1	GENERAL MAINTENANCE.....	9
3.2	TOOL CHANGE.....	9
4	ALARMS	10
5	TROUBLESHOOTING	11
6	UNIT COMPOSITION	12
6.1	COMPLETE UNIT.....	12
6.2	FINGER TRACER ASSEMBLY.....	13
6.3	2 PNEUMATIC POSITIONS + PNEUMATIC ON OFF.....	Error! Bookmark not defined.
6.4	PRESSURE REGULATORS SET.....	Error! Bookmark not defined.
6.5	SUPPORT ASSEMBLY.....	16

Unit Aim and Description

The unit is responsible for rounding the edges and creating a radius on the edge over the work done by the trimming group, leaving a smooth finish. The unit is equipped with a high-frequency motor (200Hz and 12,000 rpm) with a power of 0.27kW.

	Power	Frequency	Speed
Corner rounding unit CR-2	0.27 kW	200 Hz	12000 rpm

The unit features a front tracer for edge thickness and a bearing tracer for tracing the contour of the top, bottom, and vertical edge of the panel ends. The motor is mounted on a block that moves along two vertically and horizontally ground bars. This allows it to replicate any movement conveyed by the tracer upon contact with the panel.

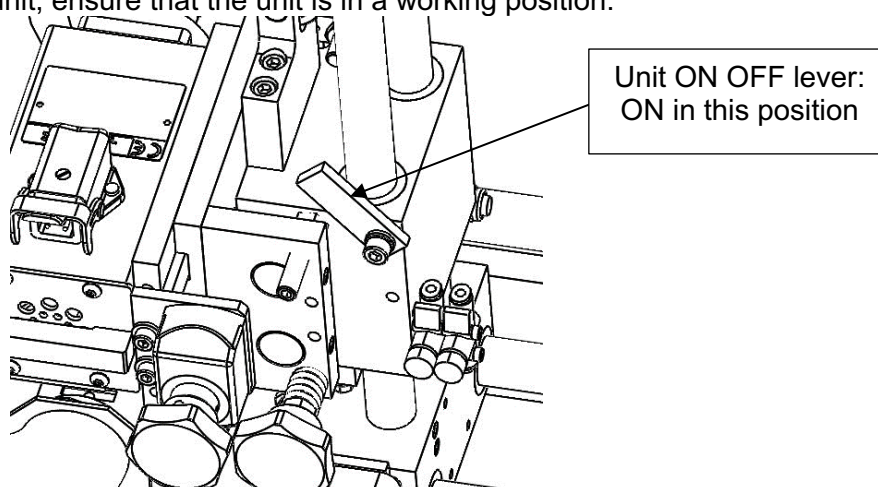
Work and adjustment

Screen selection

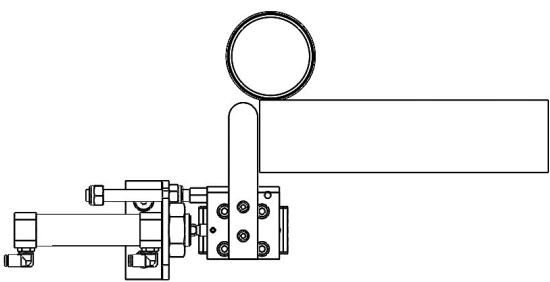
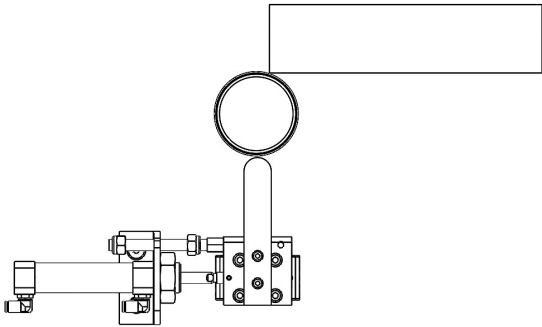
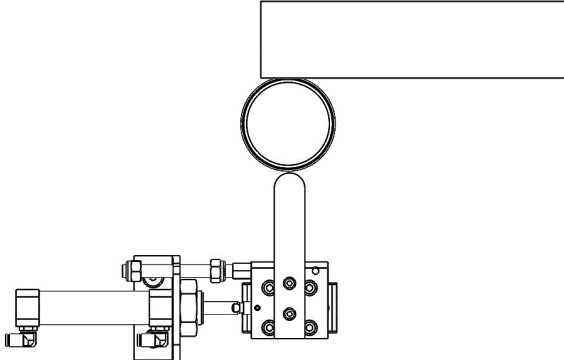
	ON	OFF
CBC.PCR		

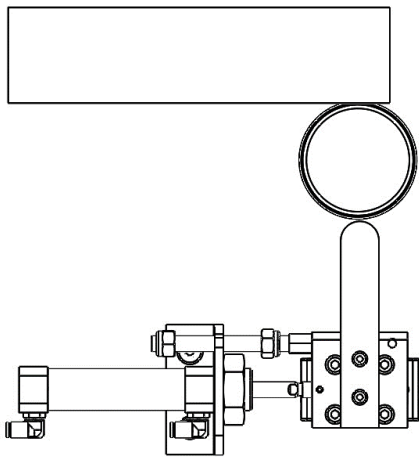
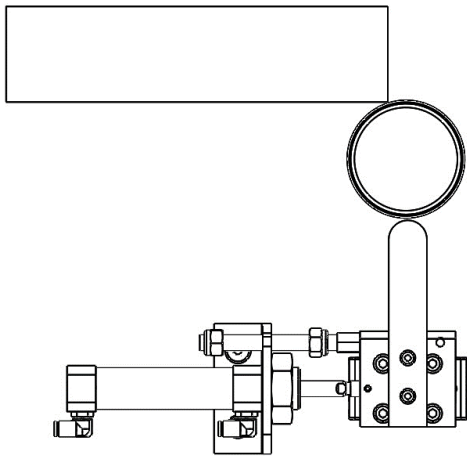
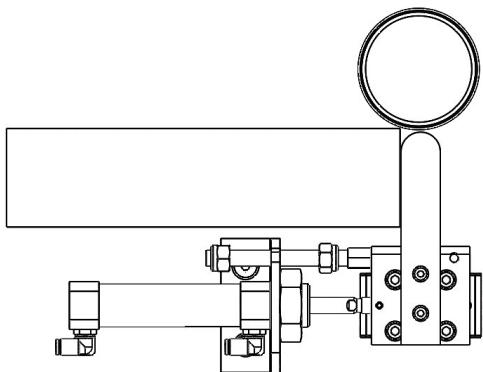
Manual activation

Before working with the unit, ensure that the unit is in a working position.



Work description

1	The panel gently impacts the finger tracer of the unit, the unit initiates the work sequence. Works start around 10 mm on top front corner of panel, finger tracer piston closes and units start coming down working on front side. Pneumatic changes: • UP RIGHT → DOWN RIGHT. • Finger tracer piston closes. Sensor signal: • 20S14	
2	The cutter block makes a smooth and continuous movement across the front of the panel, and bottom left corner. Pneumatic changes: • DOWN RIGHT → UP RIGHT. Sensor signal: • 20S18 to change direction from DOWN to UP, to achieve a perfect finish on front bottom corner.	
3	Unit work around 10 mm on the front bottom side and comes down. Pneumatic changes: • UP RIGHT → DOWN RIGHT. Sensor signal: • 20S18 + time set in PLC.	

4	Unit detects the end of the panel and performs the work on the rear bottom side (around 10 mm) Pneumatic changes: • DOWN RIGHT → UP RIGHT. Sensor signal: • 20S14+ time set in screen parameters.	
5	Since the unit is moving up and right, for achieving a perfect finish on bottom rear corner, starts moving from right to left with the sensor 21S20. By this way, it starts working on rear side of the panel. Pneumatic changes: • UP RIGHT → UP LEFT. Sensor signal: • 20S20	
6	Once the unit reaches the top right corner and works around 4 mm. Pneumatic changes: • UP LEFT → DOWN LEFT. Sensor signal: • 20S17	
7	Unit finishes working on the panel and goes back to waiting for the next panel position. Pneumatic changes: • UP LEFT → UP RIGHT. Sensor signal: • 20S17 + time set from screen.	

Unit electric, pneumatic composition and sensors



This configuration may vary depending on your machine's configuration. We recommend always consulting your machine's updated electrical schematic to determine the correct configuration.

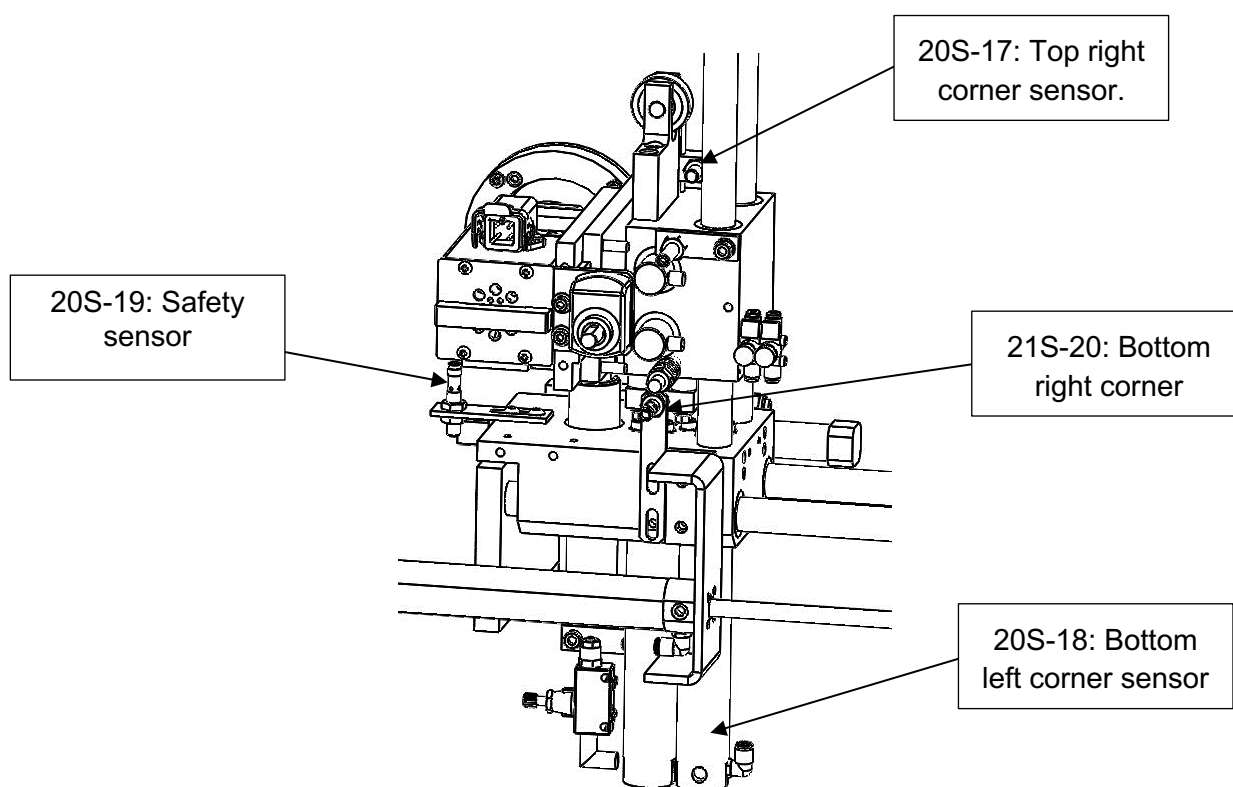
Electric composition

Motor	Inverter
5M3	U1

Pneumatic Composition

Function	Solenoid valve	Regulator	Working pressure (MPa)
Forward (left)	23Y38	MR38	0,19
Backwards (right)	23Y38.1	MR38.1	0,10
Up	24Y39	MR39	0,50
Down		MR39.1	0,30
Finger tracer	23Y37	--	--
2 positions pneumatics	23Y37	--	--

Sensors



- 20S13 or 20S16: Input sensor, which with encoder, gives signal to unit when to start.

Unit adjustment

Safety warning

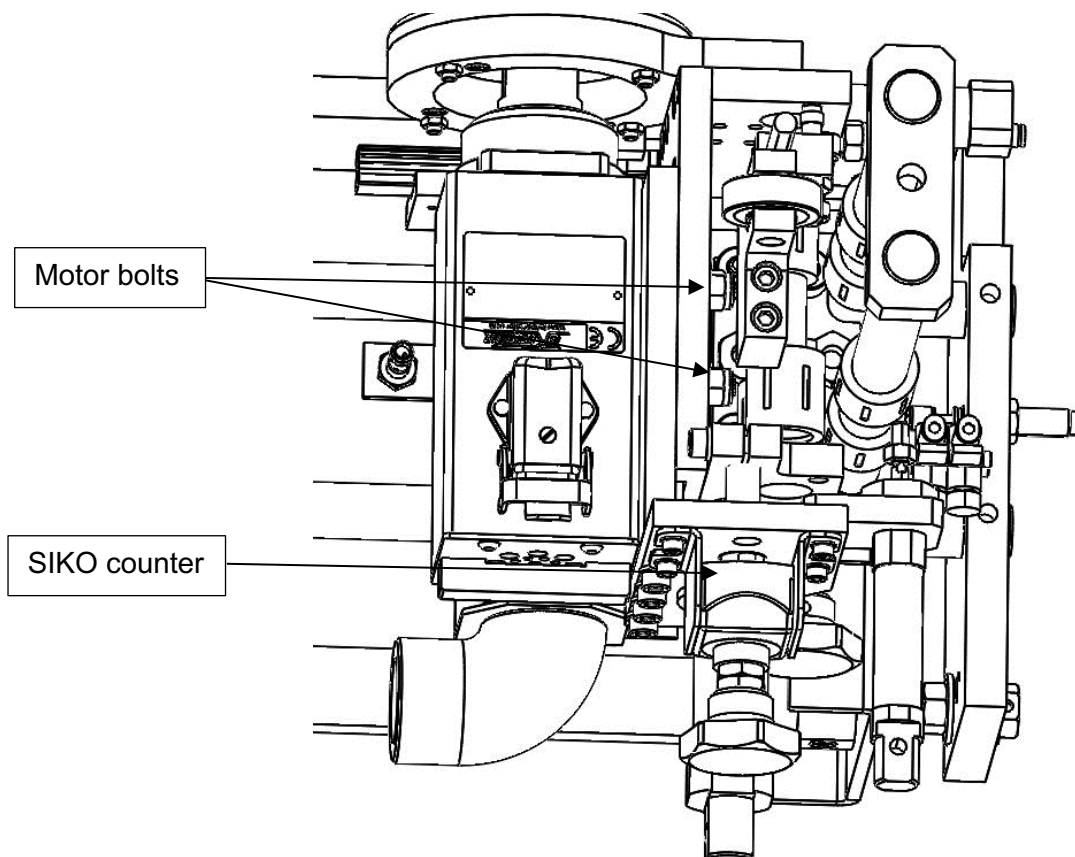


This unit has been factory-adjusted by a qualified technician. MAKSIWA does not recommend its manipulation without the support of an authorized technician.

The unit should not be adjusted while the machine is in operation to avoid contact with the cutters, which can cause serious damage. For proper handling, it is essential to disconnect the unit. It incorporates safety systems within its work program, which, under inappropriate working conditions, ensure the unit's cancellation or the machine's stop to prevent breakage.

Radius adjustment – manual positioned motor

The unit allows adjusting the lateral radius by moving the motor. To do this, loosen the plate-motor bolts with a 13mm fixed wrench and move the Siko counter. Turning the knob counterclockwise decreases the numbers, making the radius smaller, and turning the knob clockwise achieves a larger radius. It is important to make small adjustments and check the changes.

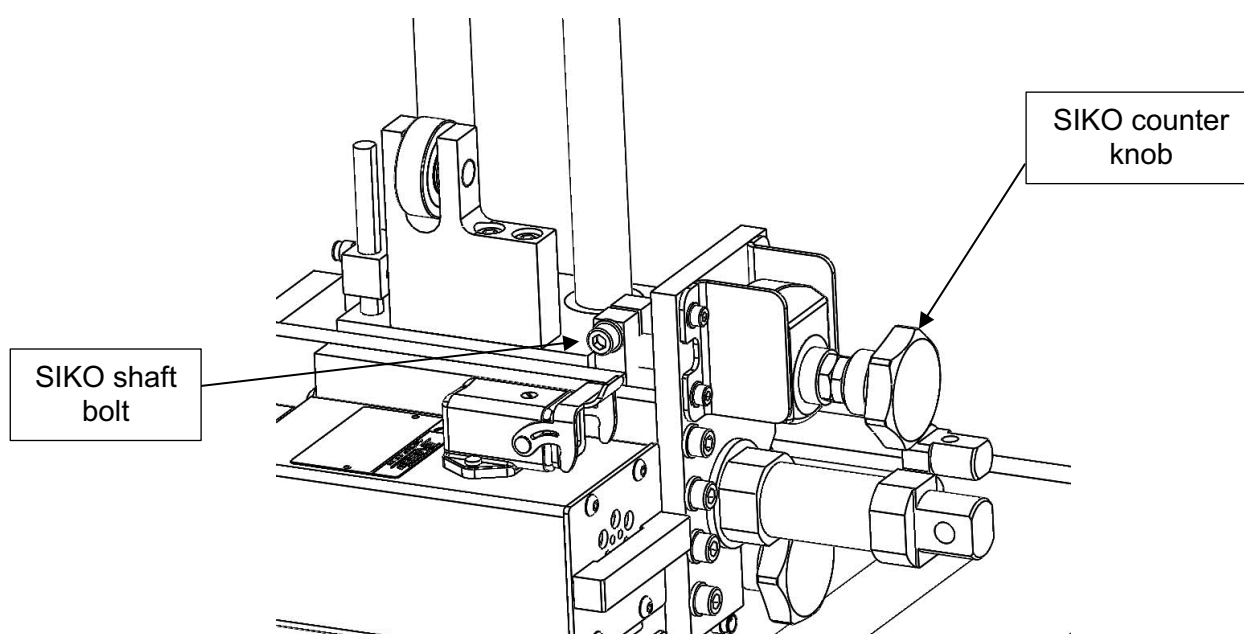


Radius adjustment – 2 pneumatic positions

The unit allows adjusting the lateral radius on position 2 only. Adjusting position 1 is done by trained technicians.

To adjust position 2:

- Set the unit on position 1.
- Loose the bolt holding SIKO shaft.
- Turn the knob counterclockwise to decrease the numbers, making the radius smaller, and turn the knob clockwise achieves a larger radius. It is important to make small adjustments and check the changes.
- Tight again the bolt holding SIKO shaft
- Set back the unit on position 2 and test with a panel.



Maintenance

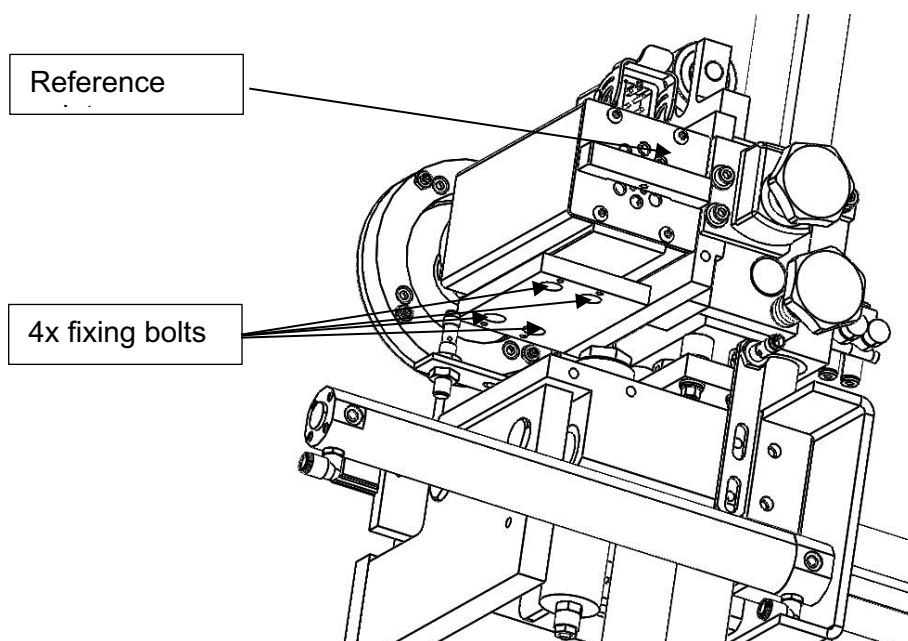


BEFORE STARTING THE PREVENTIVE MAINTENANCE OF THE MACHINE, IT MUST BE ELECTRICALLY AND PNEUMATICALLY DISCONNECTED.
THIS PROCESS MUST BE CARRIED OUT BY INSTRUCTED PERSONNEL

General maintenance

- Clean the tracers in the group daily with a mild cleaning agent.
- Remove (vacuum) daily the remains of the chip and excess edge that may be near the unit.
- Clean unit bars.

Tool change

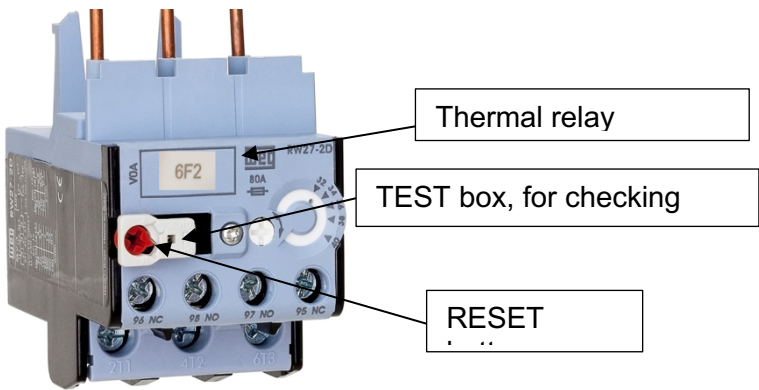
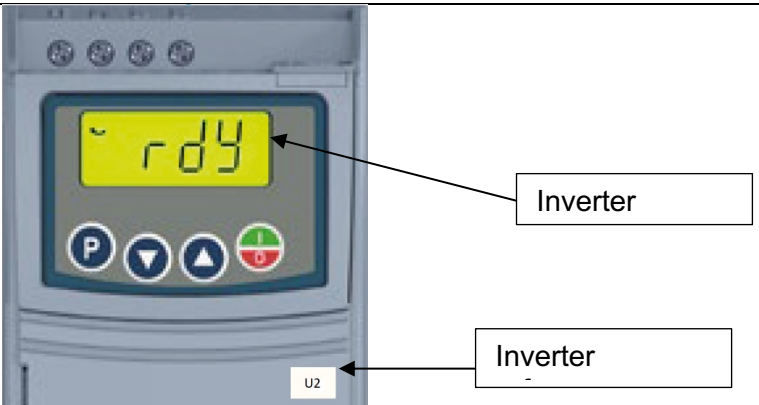


The group allows easy access for changing the tool, simply remove the fixing bolts and the motor can be easily removed. With the motor out, you have easy access to replace the inserts.

Keep in mind these precautions:

- Mark a reference point before removing the motor, so when placing back, the depth position will be the same.
- Next to the fixing bolt, the holding plate is equipped with grub screws. This is to align the motor with the panel. Don't alter these grub screws (fixed with nut) position.

alarms

Alarm	Possible cause	Solutions
Error 21S17/18/19/20	Low input pressure	Check and increase the input pressure if it remains stable at 0.6 MPa while machine is working continuously.
	Sensor fault	Check if the sensor is working fine.
Thermic relay protection error	Thermal relay. Due to a motor malfunction	 Locate the thermal relays in the electrical panel. Check that the TEST box is yellow (usually green). Press the RESET button to clear the fault and you can reset the alarm. Contact the technical service to solve the fault. Meanwhile, work without the unit that is causing the failure. 5F3: corner rounding unit.
Inverters Error	Low input voltage	 Locate the inverter causing the fault; you can reset it by turning off the machine for 60 seconds and turning it on again. If the fault persists, contact the technical service indicating the inverter and the fault that appears on the display. U1: Top & bottom trimmer, and corner rounding.
	Inverter damaged	
	Motor fault	

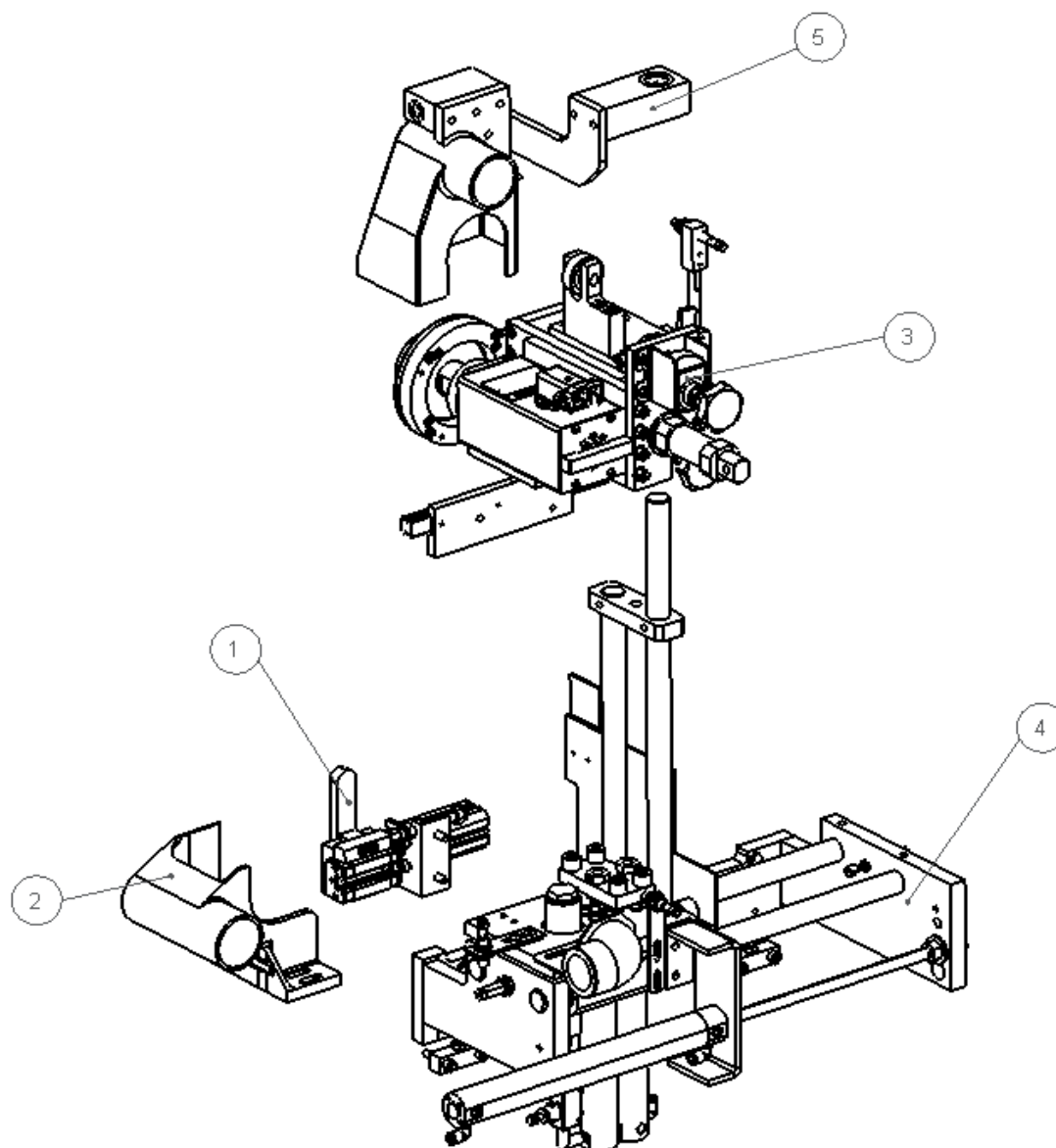
troubleshooting

Before making any adjustments to improve the finish, do the following:

- Correct height of the pressure beam: Check that the pressure beam grips the panel well, and it does not move in its path.
- Correct guiding of the drag chain with a long board (+ 1.50m): Check with a long board that it follows its path with the infedding fence. If the board separates at the front, or back, it may result in an incorrect finish.
- Cleaning the tracers (front and top / bottom): Check that the tracers are free of glue residue or other elements that could be attributed to false copying.
- Free movement: Manually check the unit withdrawing by hand, it turns correctly and has a uniform pressure (horizontal and vertical tracing). Take special care with the vertical cylinder movement, since sudden movements can damage the hydraulic piston.
- Continuous pressure: check the pressure is stable at 0.6MPa during work.

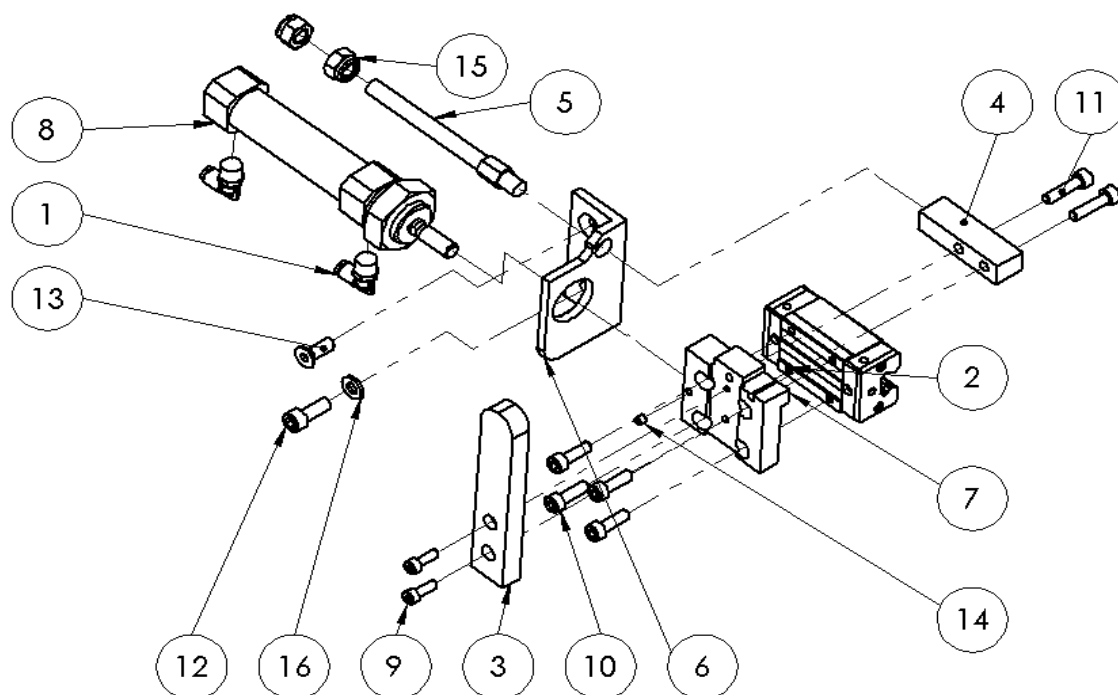
Error	Possible cause	Solution
Uneven finish	Incorrect air pressure	Check the pressures in the attached pneumatic diagram.
	Damage tool	Check if the radius of the tool corresponds to the profile worked.
	Mechanical adjustment needed	Contact an authorized technician to determine the cause of the failure.

Unit Composition

Complete unit

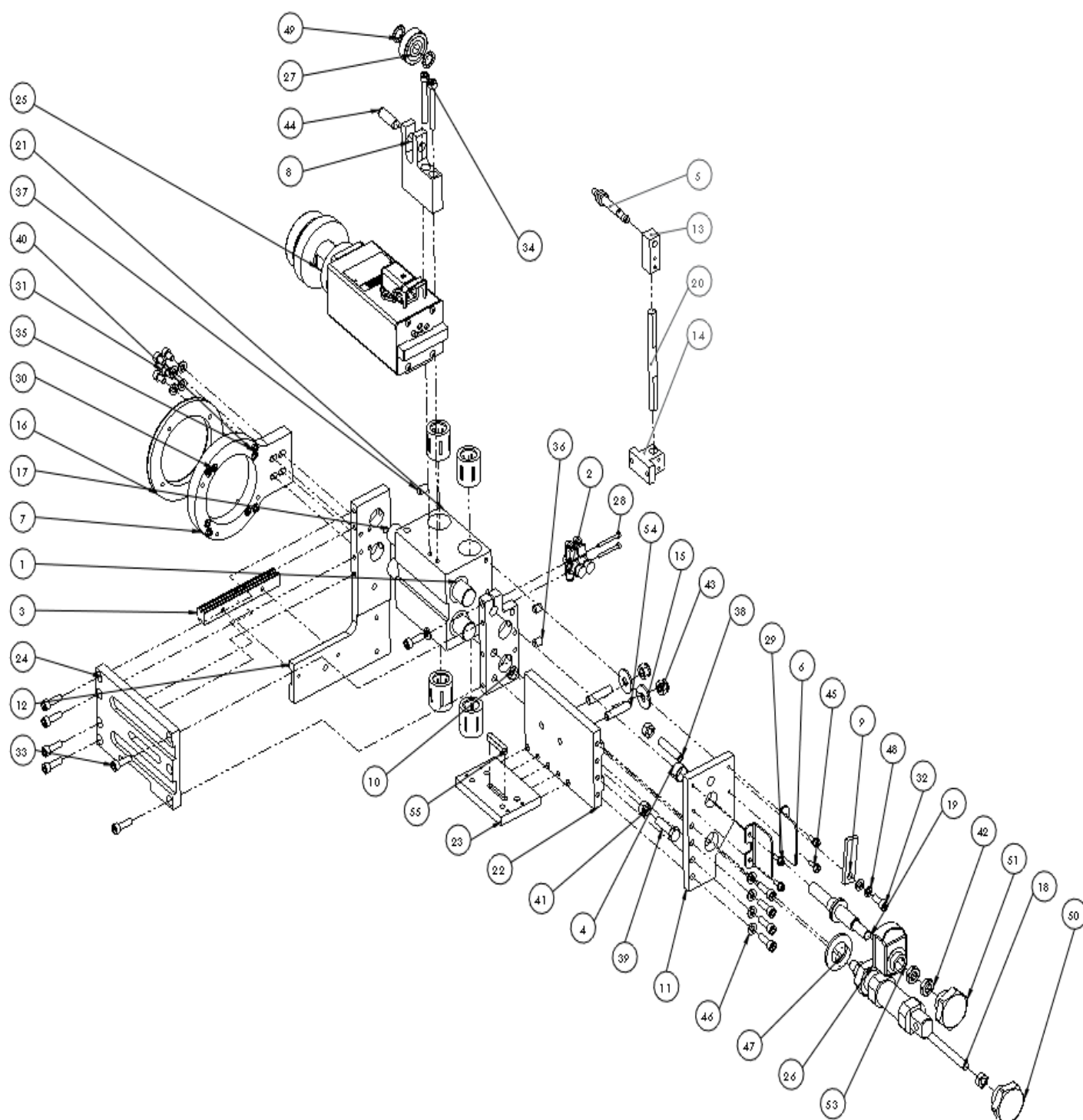
Corner rounding CR-2 1000087			
#	Qty.	Description	Reference
1	1	Finger tracer assembly	5005179
2	1	Bottom dust collector assembly	5005947
3	1	Finger tracer assembly	5005948
4	1	Base assembly	5005949
5	1	Top dust collector assembly	5006017

Finger tracer assembly



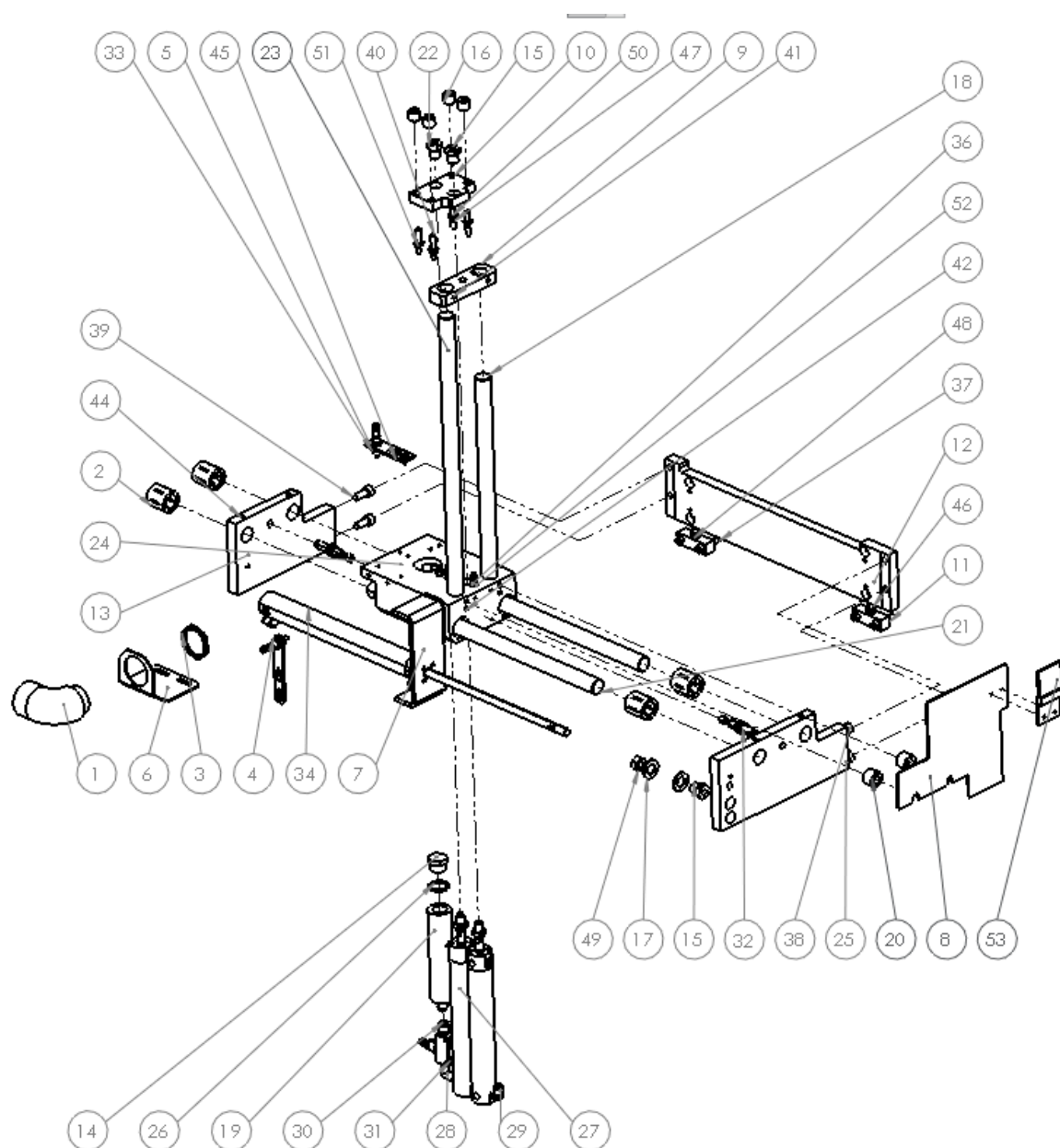
Finger tracer 5003740			
#	Qty.	Description	Reference
1	2	KQ2L04-01A	101000064
2	1	HGH15CAZ0H	102000136
3	1	Finger tracer	403002257
4	1	stop handrail	403002284
5	1	stop shaft	404001469
6	1	Cylinder angle	406000081
7	1	Rail support	409000453
8	1	C85F20-40	5003741
9	2	ALLEN SCREW DIN 912 M4 x 12 (12mm THREAD)	6310401201
10	4	ALLEN SCREW DIN 912 M5 x 16 (16mm THREAD)	6310501601
11	2	ALLEN SCREW DIN 912 M5 x 20 (20mm THREAD)	6310502001
12	1	ALLEN SCREW DIN 912 M6 x 16 (16mm THREAD)	6310601601
13	1	COUNTERSUNK SCREW DIN7991, M6 X 16 THREAD:16mm	6320601602
14	1	FLAT HEAD PRISONER DIN913 M4 X 4	6330400401
15	2	SELF LOCKING NUT DIN982, M8	6420800001
16	1	DIN 125 M6 WASHER	6610600001

Tracing assembly

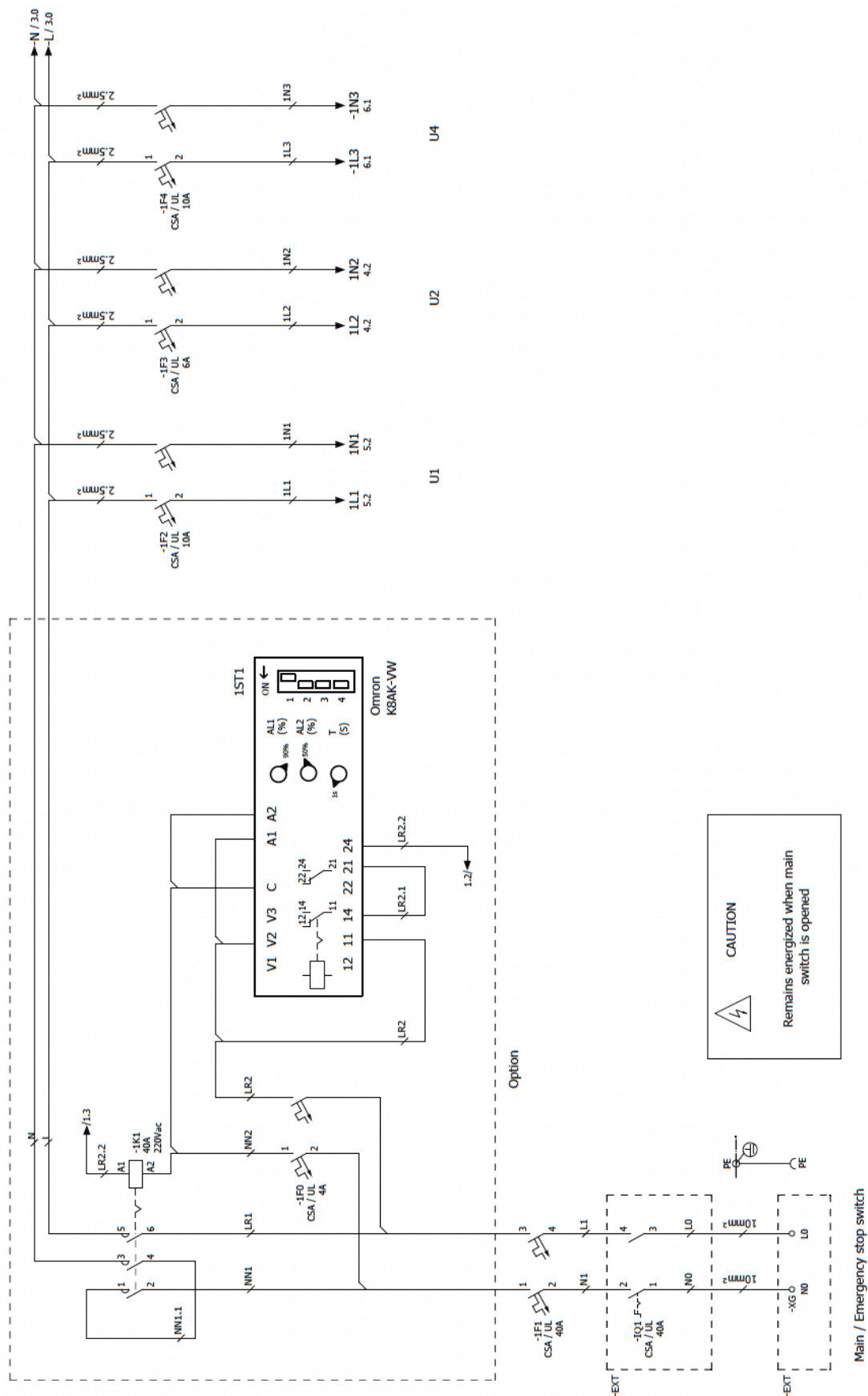


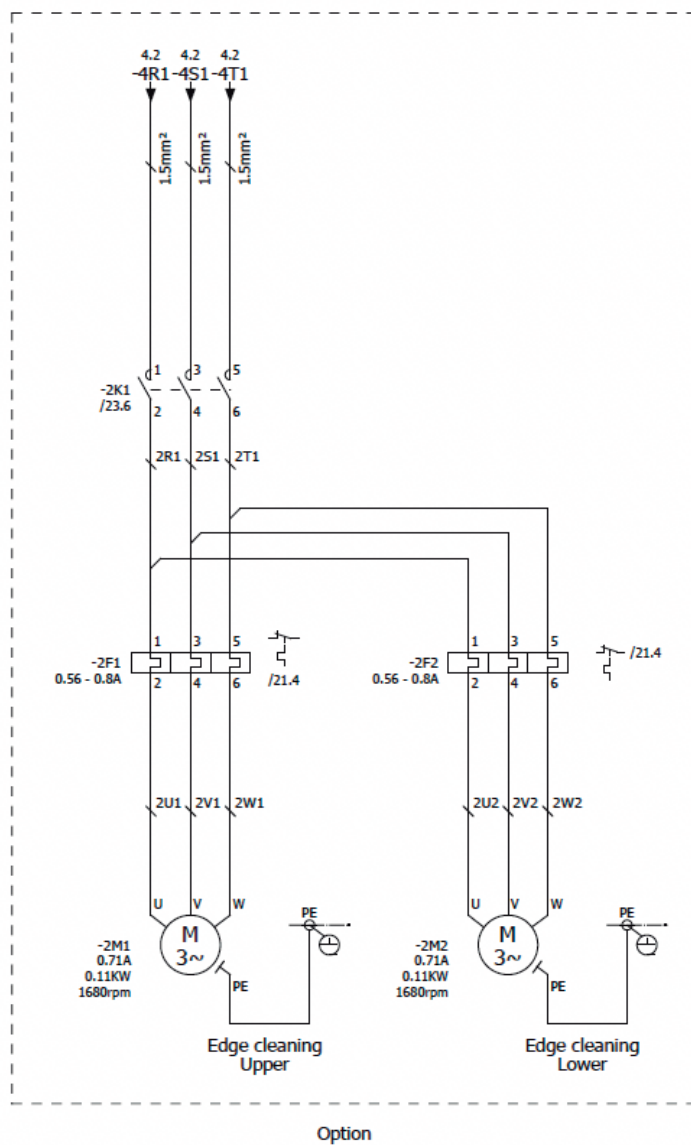
Complete tracing assembly 5005948			
#	Qty.	Description	Reference
1	8	Linear ball bearing KH2030- PP	102000161
2	2	SMC AS2002F-04A regulator	102000163
3	1	HGR15R114C	102000244
4	1	EGB1510E40 INA	102000245
5	1	E2A-S08LS02-M5-B1- PNP inductive sensor	3995000221
6	2	Siko pneumatic support plate	401003889
7	1	Horizontal copying support	403000424
8	1	Support roller	403000455
9	1	Handrail removed	403000460
10	1	Front plate	403002231
11	1	Siko support	403002232
12	1	Side plate support bracket	403002259
13	1	Sensor support	403003174
14	1	Sensor regulation support	403003176
15	2	Washer	404000145
16	1	Horizontal tracer	404000306
17	2	Upper horizontal bars	404000326
18	1	Threaded rod M8x70	404000333
19	1	Regulator shaft	404001461
20	1	Sensor regulation column	404001946
21	1	Central block	409000083
22	1	Regulation plate	409000444
23	1	Motor plate	409000445
24	1	Lower support plate	409000447
25	1	Motor assembly	5003673
26	1	C85N25-10	5003743
27	1	SKF 6300-ZZ bearing	6116300101
28	2	ALLEN SCREW DIN 912 M3 x 30 (THREAD 18mm)	6310303001
29	4	ALLEN SCREW DIN 912 M4 x 12 (THREAD 12mm)	6310401201
30	4	ALLEN SCREW DIN 912 M5 x 16 (THREAD 16mm)	6310501601
31	4	ALLEN SCREW DIN 912 M6 x 10 (THREAD 10mm)	6310601001
32	1	ALLEN SCREW DIN 912 M6 x 16 (THREAD 16mm)	6310601601
33	11	ALLEN SCREW DIN 912 M6 x 20 (THREAD 20mm)	6310602001
34	2	ALLEN SCREW DIN 912 M6 x 50 (THREAD 24mm)	6310605001
35	4	FLAT HEAD SET PIN DIN913 M5 X 20	6330502001
36	2	FLAT HEAD SET PIN DIN913 M8 X 10	6330801001
37	2	FLAT HEAD SET PIN DIN913 M8 X 12	6330801201
38	1	FLAT HEAD SET PIN DIN913 M8 X 40	6330804001
39	1	HEXAGON SCREW DIN933, M8 X 30	6360803001
40	4	RECESSED HEXAGON NUT DIN936, M5	6410500021
41	3	HEXAGON NUT DIN934, M8	6410800001
42	2	RECESSED HEXAGON NUT DIN936, M10	6411000021
43	2	SELF-LOCKING NUT DIN982, M8	6420800001
44	1	PARALLEL PIN DIN6325, 10 X 30 - A - St	6521003001
45	4	DIN 125 M4 WASHER	6610400001
46	10	DIN 125 M6 WASHER	6610600001
47	1	DIN 125 M22 WASHER GLOVER DIN127 M6	6612200001
48	1	DIRECT WASHER DIN6798 M10	6626000001
49	2	Plastic knob M8	6661000001
50	1	Knob 1122	9250111801
51	1	Pressure spring	9250112201
52	1	Numeric indicator DA04 SIKO 51	9294031501
53	1	DIN 976-2 -- MFS M8 x 35 --- N	9350920051
54	2	Parallel key A6 x 6 x 36 DIN 6885	
55	1	Linear ball bearing KH2030- PP	

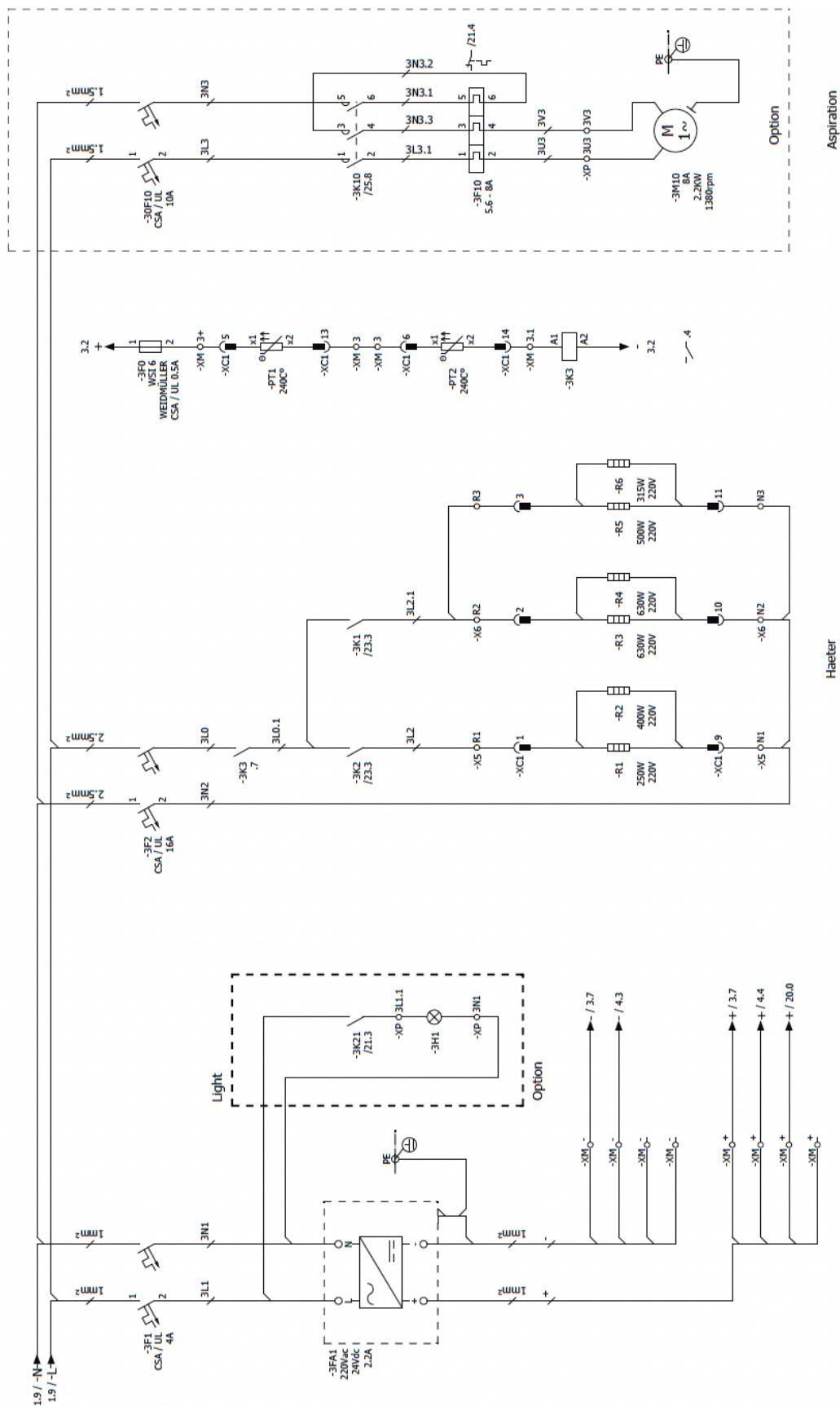
Support assembly

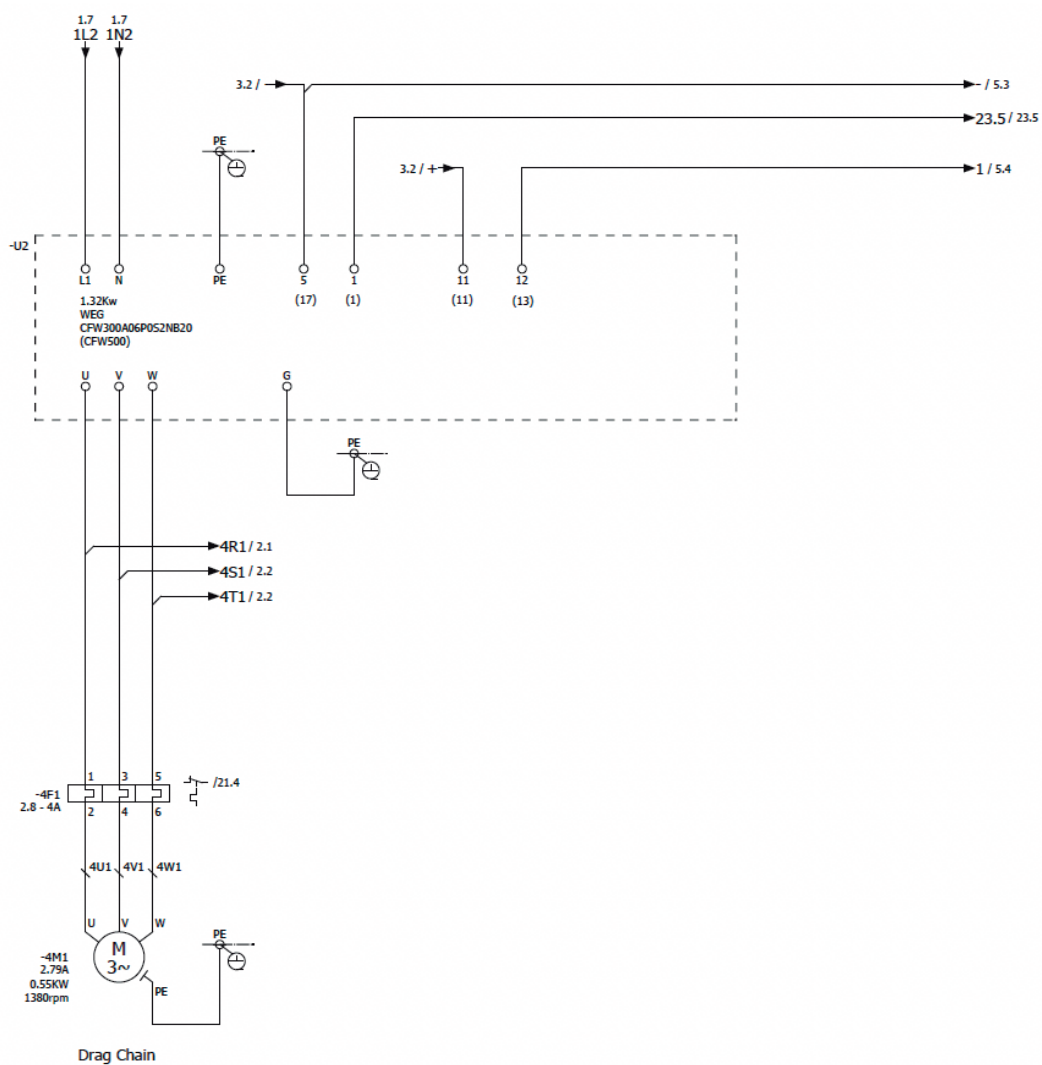


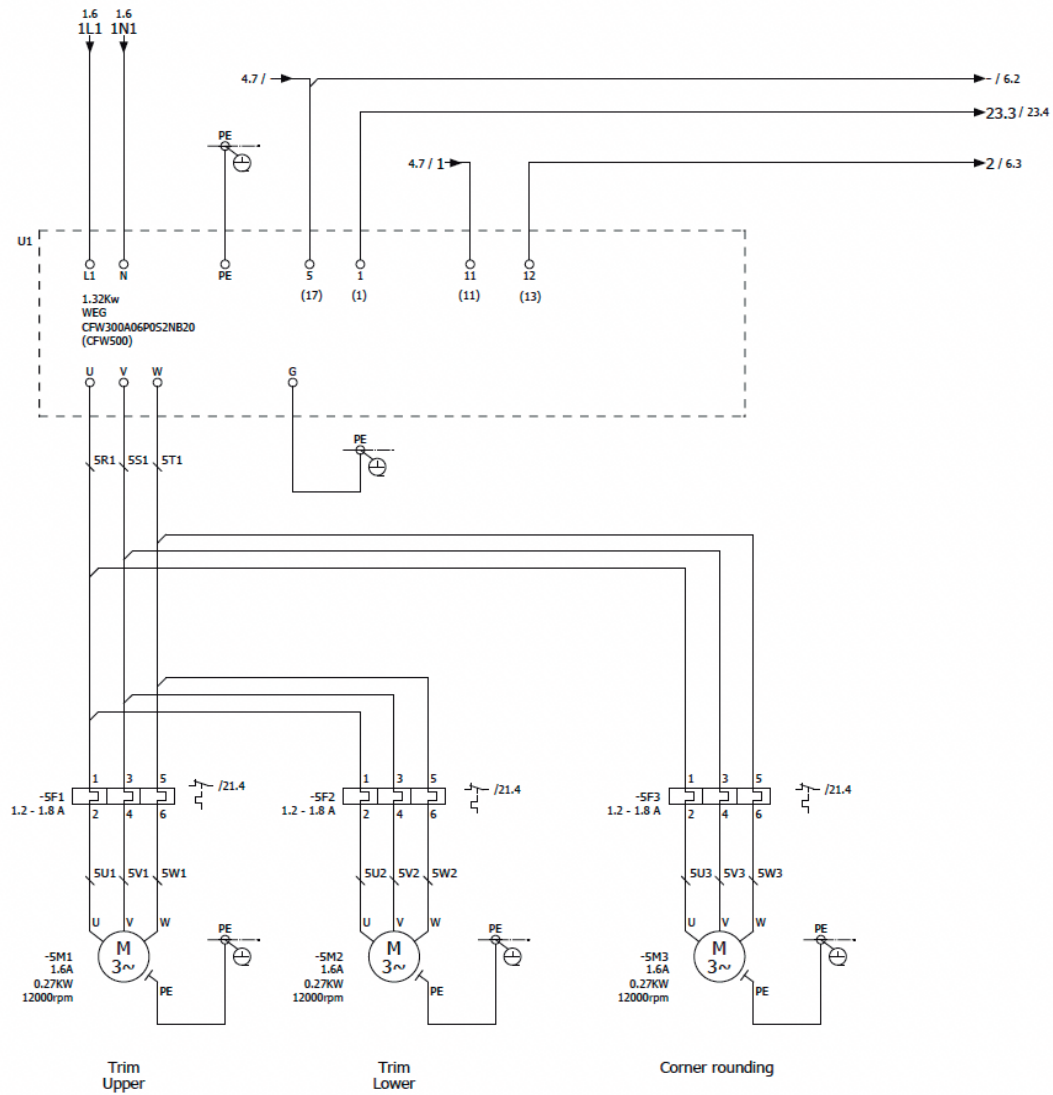
Support assembly 5004740			
#	Qty.	Description	Reference
1	1	DN29 90°	101000029
2	4	KH2030- PP linear ball bushing	102000161
3	1	PG29 nut	102000162
4	1	Vertical detector bracket	401004374
5	1	Horizontal detector support	401004375
6	1	DN29 support	401004877
7	1	Ø25 cylinder support plate	401005676
8	1	CR2 side	401007164
9	1	Vertical flange	403000362
10	1	Vertical cylinder fixing	403000449
11	2	Regulation handrail	403000536
12	1	CR2 group fixing with regulation	403001901
13	1	Lower outlet flange with regulation	403002258
14	1	Air purge plug	404000109
15	2	Cylinder fixing nut	404000296
16	4	Positioning bushing	404000334
17	2	Stop washer	404000335
18	1	Long vertical bar	404000698
19	1	Vertical Hydraulic Cylinder (SPECIAL 60)	404000710
20	2	Cylinder separator	404000760
21	2	Horizontal bar	404000949
22	1	Cylinder fixing nut	404001929
23	1	D20 L415 vertical guide	404001947
24	1	Bar block	408000158
25	1	Inlet side support	409000565
26	1	RNU 1/2" nylon gasket	4190270211
27	1	CG1BH25140Z cylinder	4250251411
28	1	90° fitting	4315210101
29	1	1/8 SMC KQ2L06-01AS ELBOW	4410906101
30	2	1/8 fitting tube connection	4413906101
31	1	PRESSURE REGULATOR SMC AS2000	4534821001
32	2	RBC1007	5003411
33	2	E2B S08KS02 MC B1	5003580
34	1	CG1BN25TF 210Z	5003742
35	1	CDG1BN25-140Z	5003972
36	8	ALLEN SCREW DIN 912 M5 x 12 (THREAD 12mm)	6310501201
37	4	ALLEN SCREW DIN 912 M6 x 30 (THREAD 30mm)	6310603001
38	1	ALLEN SCREW DIN 912 M8 x 12 (THREAD 12mm)	6310801201
39	3	ALLEN SCREW DIN 912 M8 x 20 (THREAD 20mm)	6310802001
40	4	FLAT HEAD SET PIN DIN913 M6 X 35	6330603501
41	2	FLAT HEAD SET PIN DIN913 M8 X 8	6330800801
42	4	FLAT HEAD SET PIN DIN913 M8 X 10	6330801001
43	2	FLAT HEAD SET PIN DIN913 M8 X 12	6330801201
44	2	FLAT HEAD SET PIN DIN913 M8 X 16	6330801601
45	2	PAN HEAD SCREW DIN7380 M5 X 10	6340501001
46	2	HEXAGON SCREW DIN933 M6 X 30	6360603001
47	4	HEXAGON NUT DIN934 M5	6410500001
48	2	HEXAGON NUT DIN934 M6	6410600001
49	1	HEXAGON NUT DIN934 M10	6411000001
50	4	WASHER DIN 125 M6	6610600001
51	4	GLOVER WASHER DIN127 M6	6626000001
52	8	TOOTHED WASHER DIN6798 M6	6660600001
53	1	CR2_102000311	

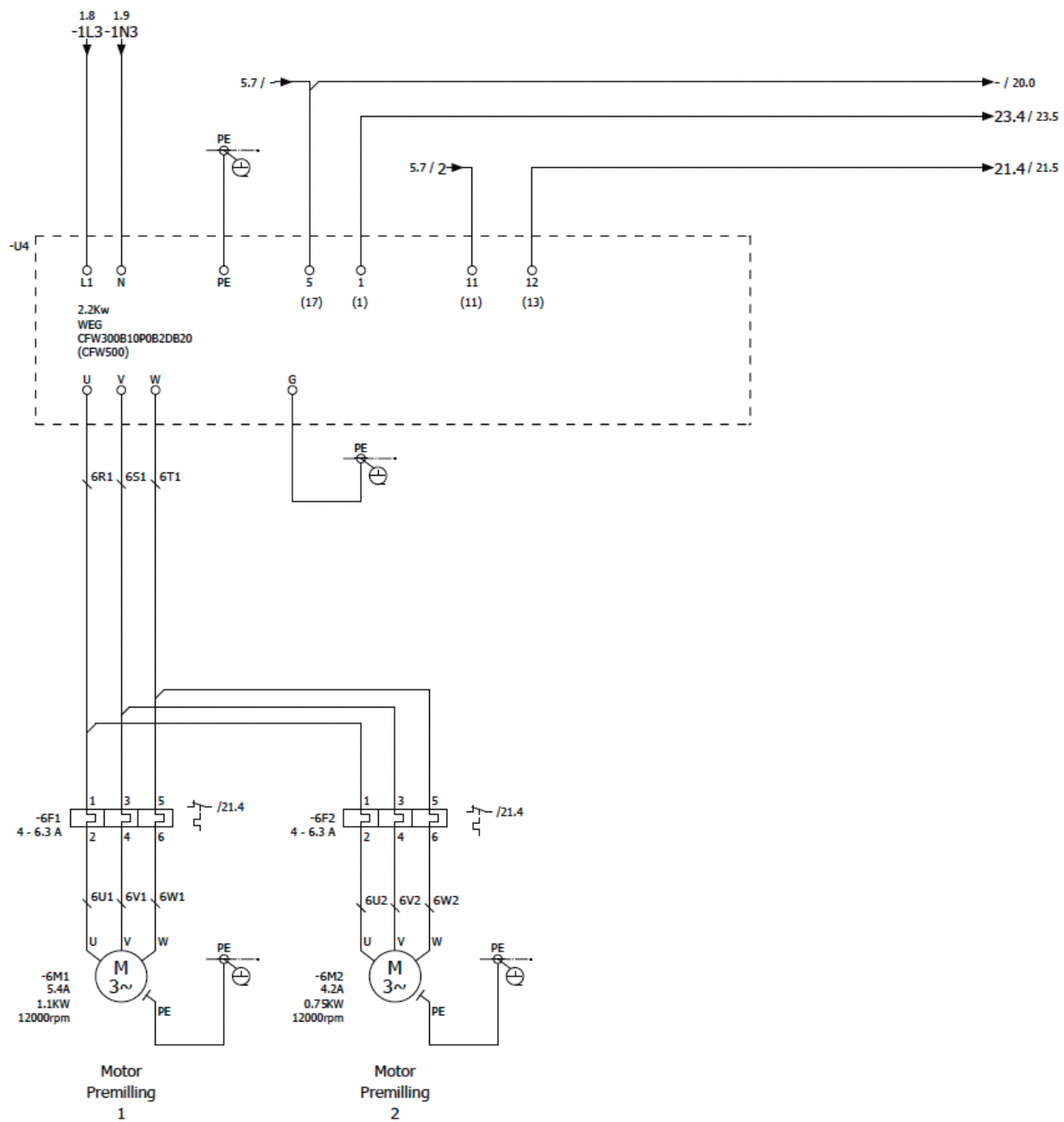


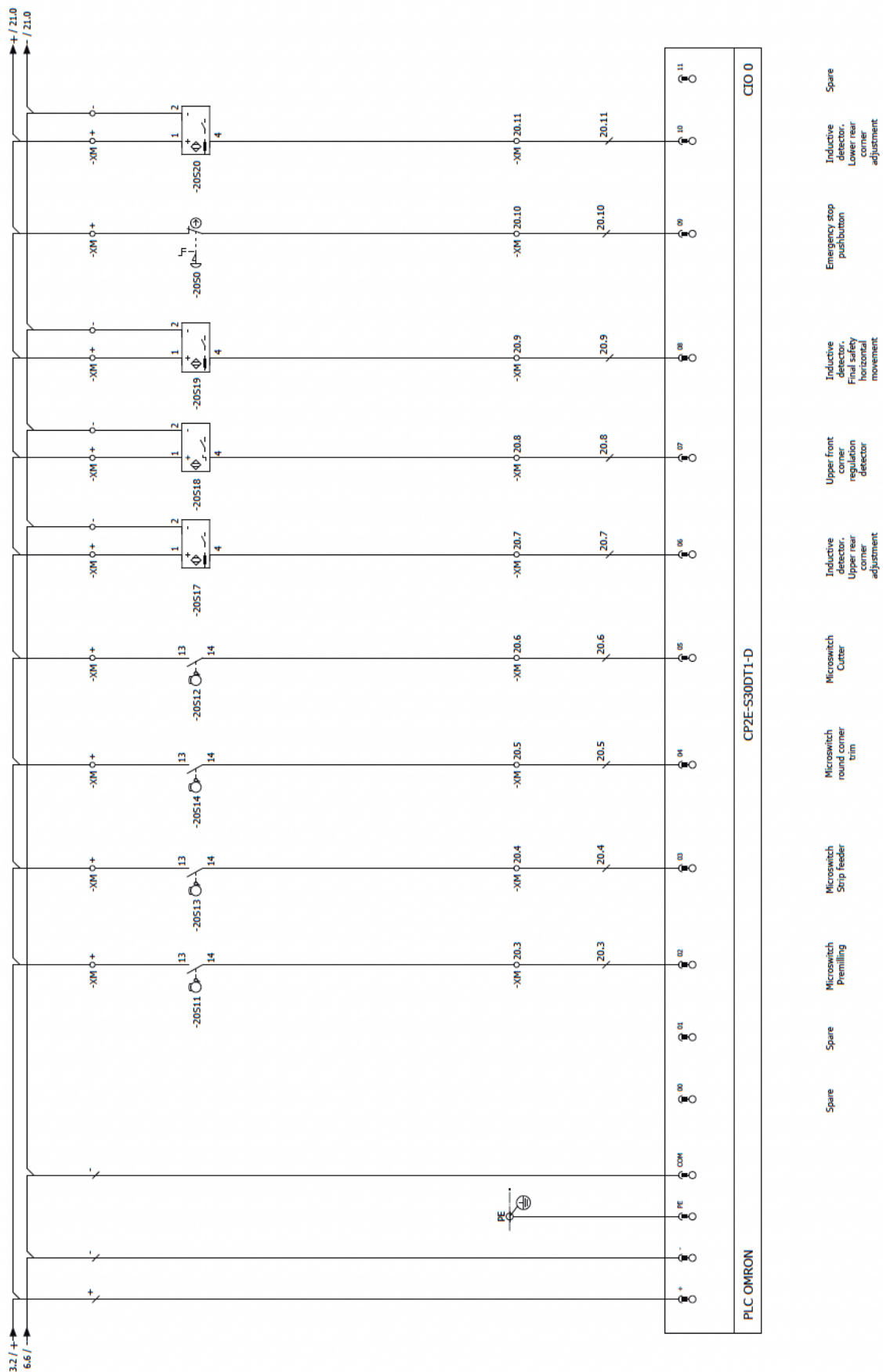


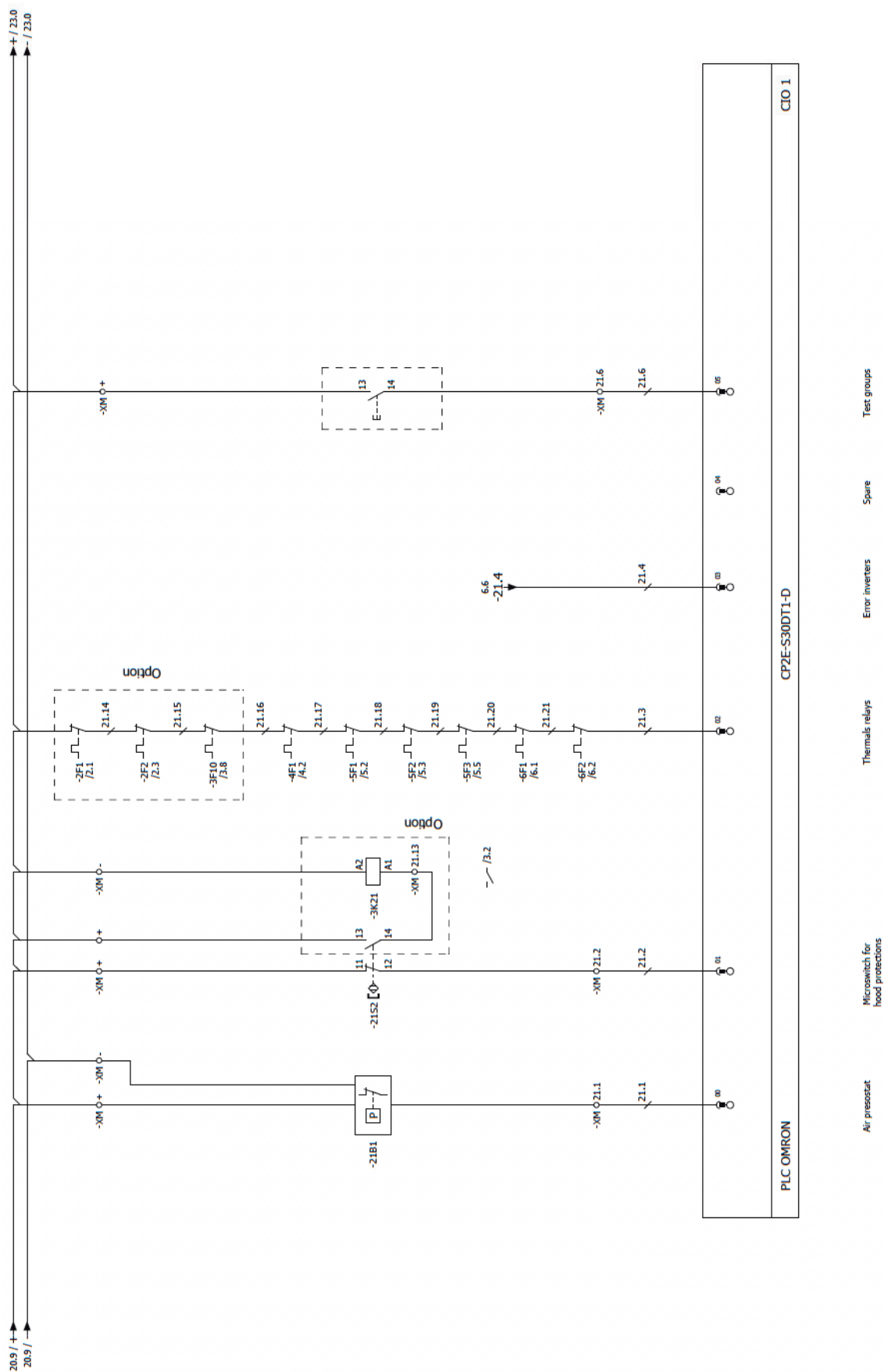


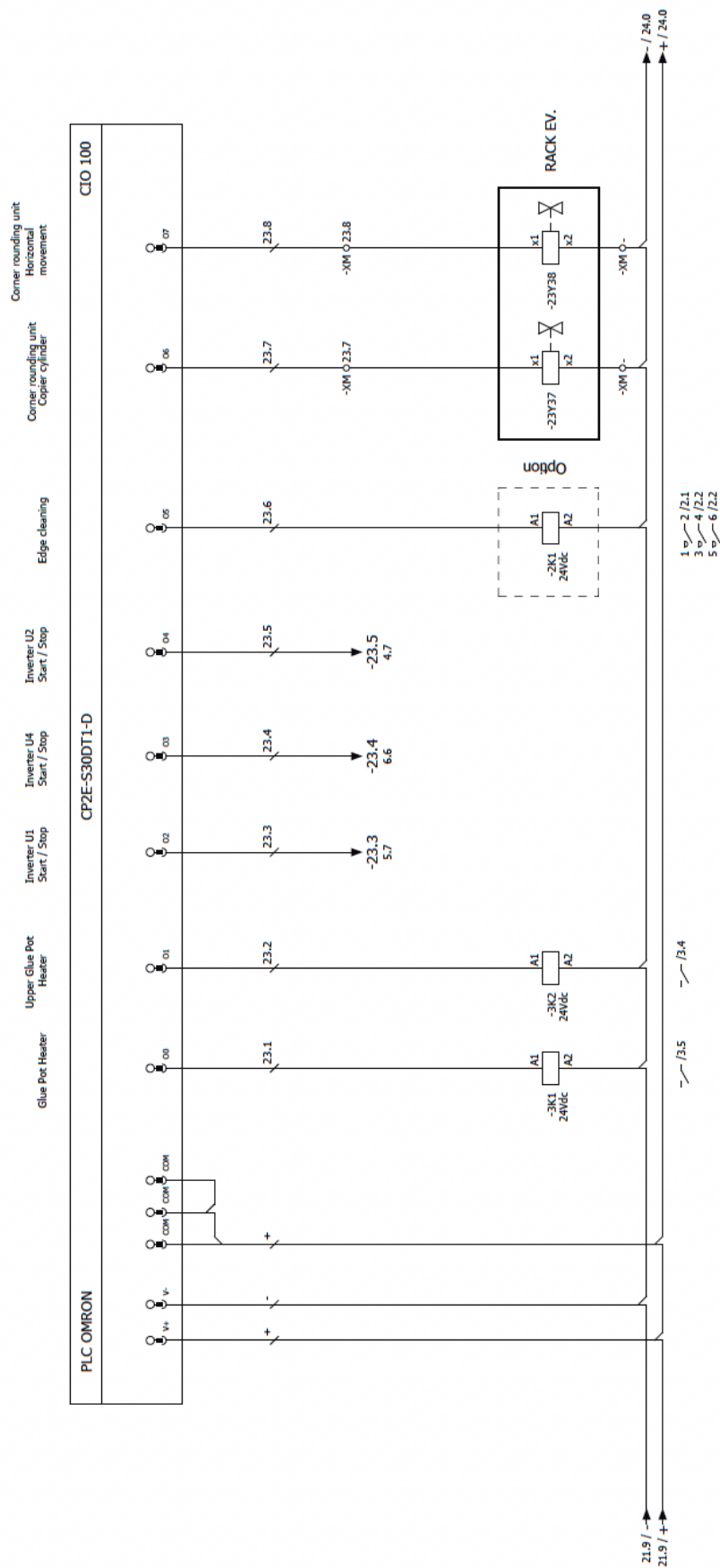




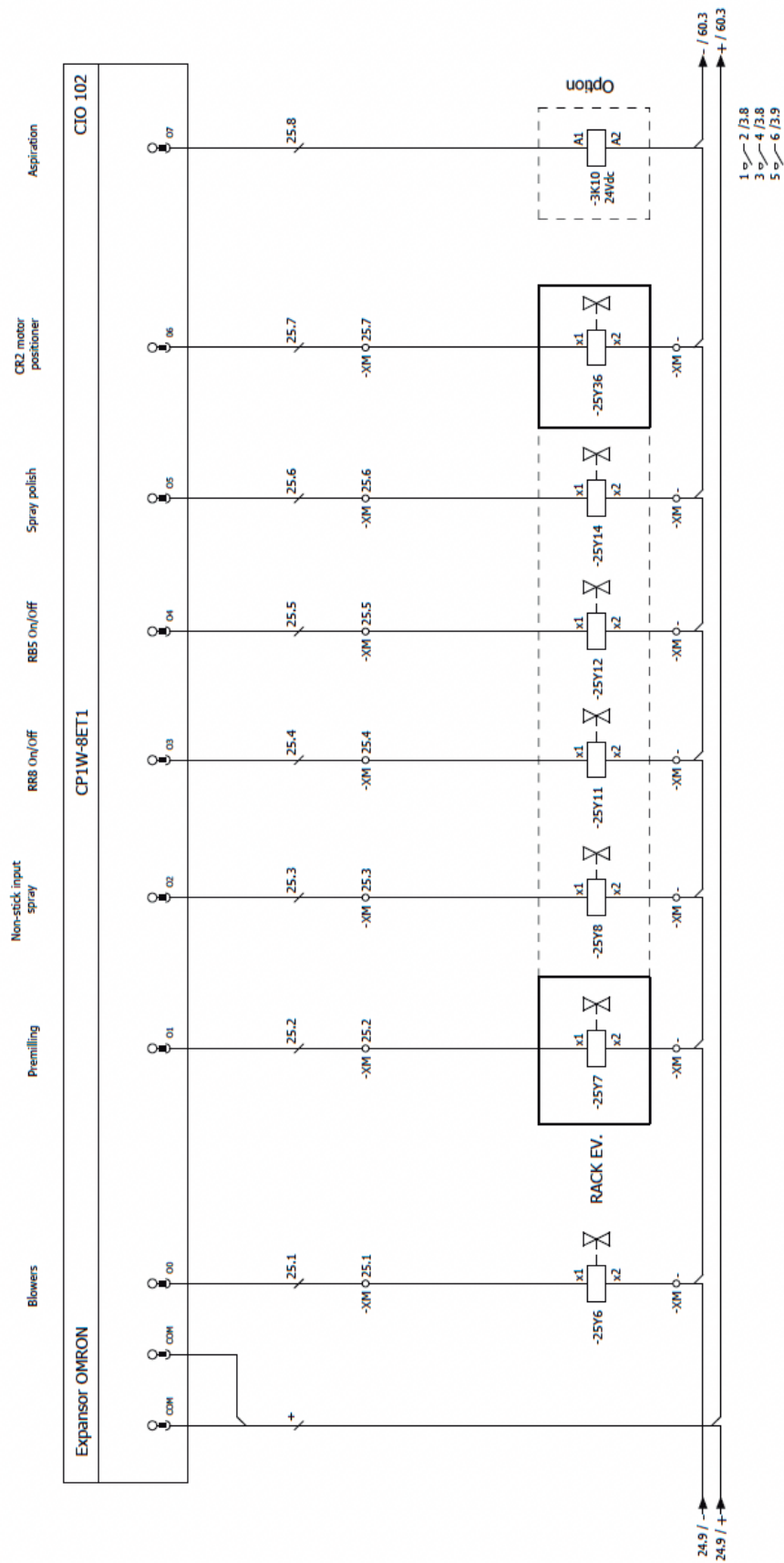


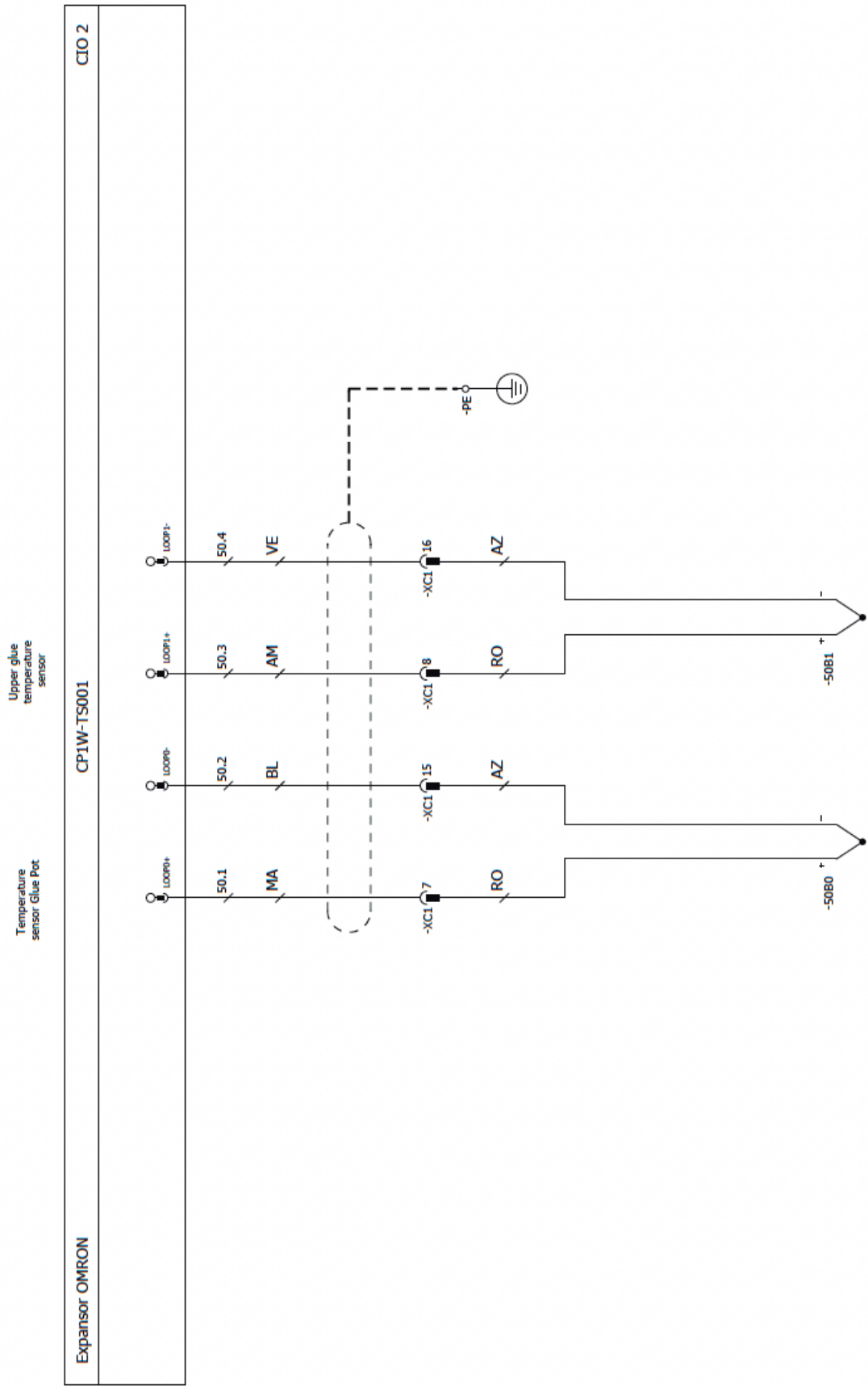


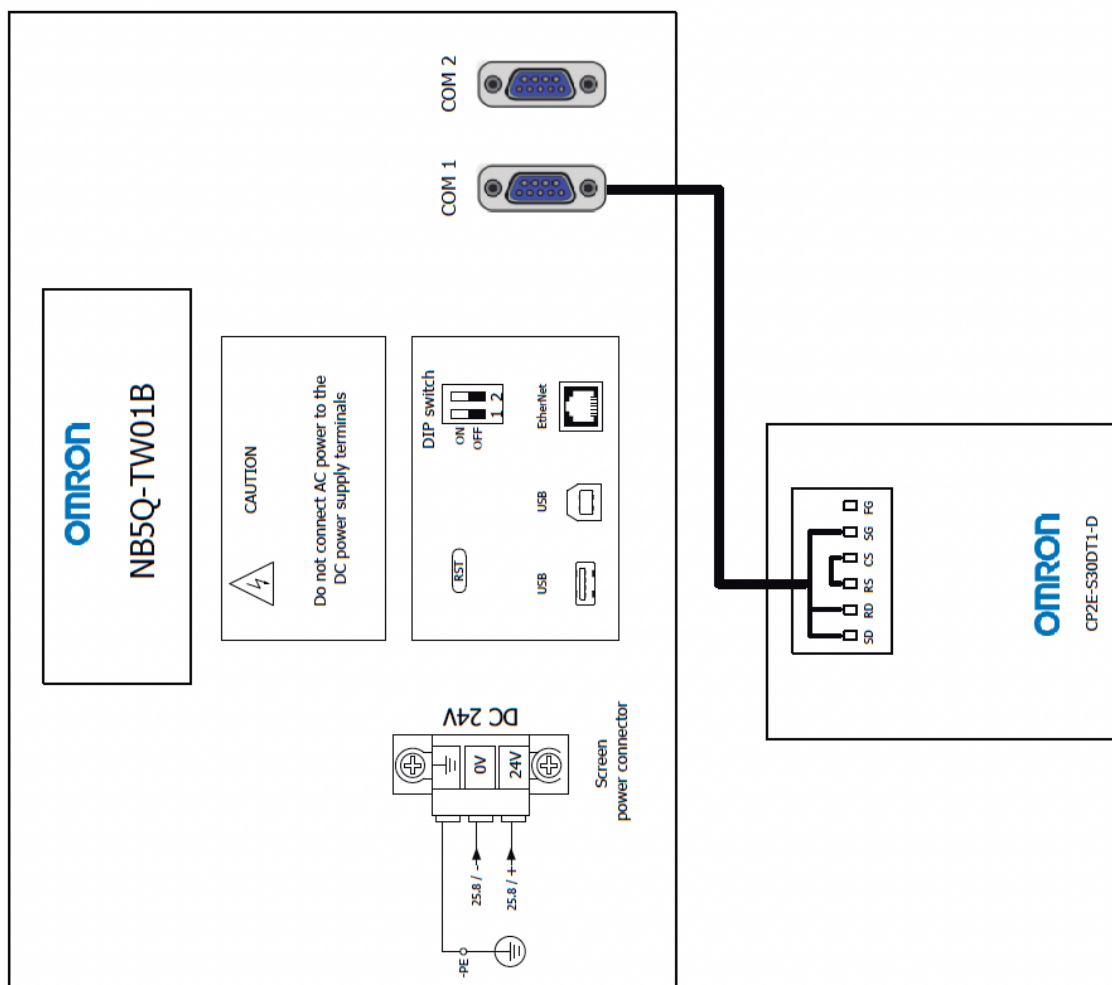




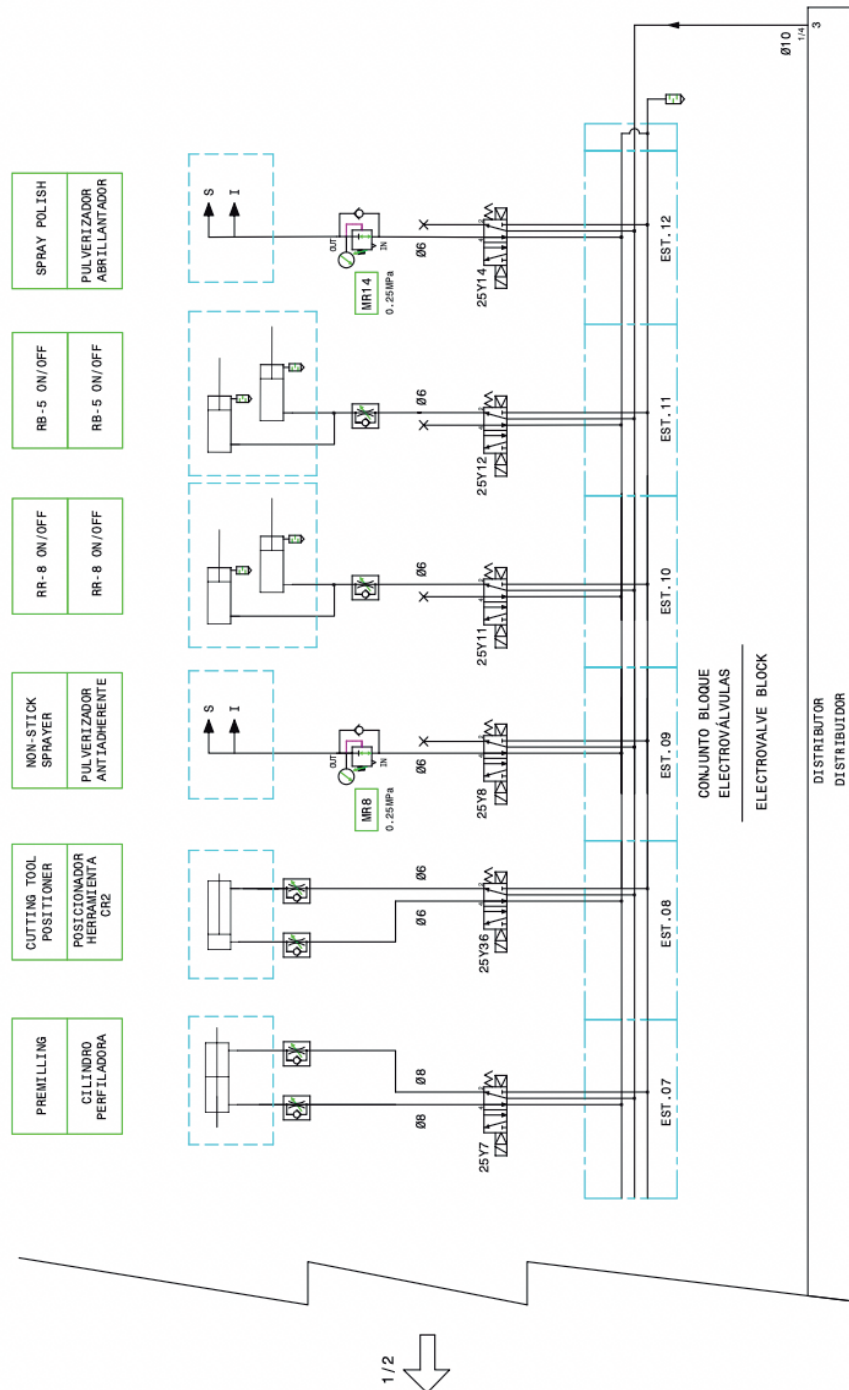












8 Terms of Warranty

MAKSIWA assures the owner that their equipment, identified by the Serial number issued on the Warranty Terms.

The equipment under warranty, for two (2) years, is as followed:

1. The warranty period begins on the date of the Warranty Terms below.
2. Within the warranty period, the manual labor and the components replaced by manufacturing defect will be provided for free if duly proved by Maksiwa Service.
3. Third-party manufacturing equipment that makes up the MAKSIWA equipment (such as motors, electrical equipment, belts etc.) are subject to the terms and conditions of warranty of their respective manufacturers.
4. In case an exchange of machine is needed, please return the defective part or machine to MAKSIWA.
5. All workplace adaptations for the equipment are under the responsibility of the machine owner.
6. If you notice any defect or malfunction when receiving the equipment, get in touch immediately with the manufacturer or Dealer. Do not turn it on.
7. Not included in this warranty is any technical visits aimed at cleaning or adjustments caused by wear, resulting from normal use of the equipment.
8. The warranty does not cover problems caused by mistreatment, carelessness, misuse or inappropriate use of the functions designed for this equipment in this manual, as well as poorly executed operations by untrained operators to operate it.
9. MAKSIWA is not responsible for lost productivity, direct or indirect damages caused to the owner of the equipment or to third parties, or any other expense, including lost profits.
10. This equipment requires the use of a dust collection system with a minimum of 2 hp.
11. Even under warranty, you may lose its validity as follows:
 - a) Application of non-original components;
 - b) Alteration of its original features;
 - c) Lack of proper maintenance;
 - d) Improper use of the equipment;
 - e) Change in equipment or electronic connections;
 - f) Damage caused by mechanical shock or exposure to unsuitable conditions (humidity, salt spray, corrosive agents, etc.);
 - g) Damage caused by bad weather (floods, flooding, lightning, power outages etc.);
 - h) Maksiwa is not responsible for damages to electrical components cause by power variation in your area.
 - i) Removable of safety equipment will void your warranty. (Riving Blade, Blade Cover, etc.).

For your added security, have the repairs, maintenance and adjustments (including inspection and replacement) be perform by a Maksiwa technician, assisted over the phone by a Maksiwa technician or by a Maksiwa recommended third-party, which will always use OEM spare parts and Genuine accessories, reassembling your machine identically to the original.

For your safety, trust the repairs, maintenance and adjustments (including inspection and replacement) for technical assistance recommended by MAKSIWA, always use genuine spare parts and accessories, reassembling to its original machine the same way.

MODEL:

SERIAL NUMBER:

DATE:

LOT NUMBER:

Imported by:

Maksiwa International Inc.

990 S Roger Circle, Suite 11

Boca Raton, Florida

ZIP Code: 33487

Telephone: +1 (754) 205-6717 | Call us free: +1 (844) 319-6594

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