FORMAX®

Cut-True 31H

Hydraulic Guillotine Cutters

Serial # 0841 and up

12/2025

OPERATOR MANUAL
Revision 4

Contents

1. GENERAL INFORMATION

- This operator’s manual introduces the machine to the user and explains its intended purpose to ensure safe and comfortable operation.
- It contains specific safety requirements that must be followed when using the machine.
- The manual must be stored near the machine and protected from loss or damage.
- The operator must read the manual before operating the machine, with particular attention to the chapter titled “Safety Rules.”
- The manual must be accessible to the operator at all times and read carefully by all machine operators.
- This manual covers:
    - Operation and initial installation
    - Troubleshooting of workflow
    - Maintenance (service, repairs) and transportation
- In addition to the instructions contained in this manual, the operator must comply with general safety standards and local/national health and safety regulations. The employer is responsible for ensuring that all staff receive proper training to operate the machine in accordance with this manual.

Identification

Single knife paper cutter is marked with nameplate sticker located on the right side of the base (figure. 1)

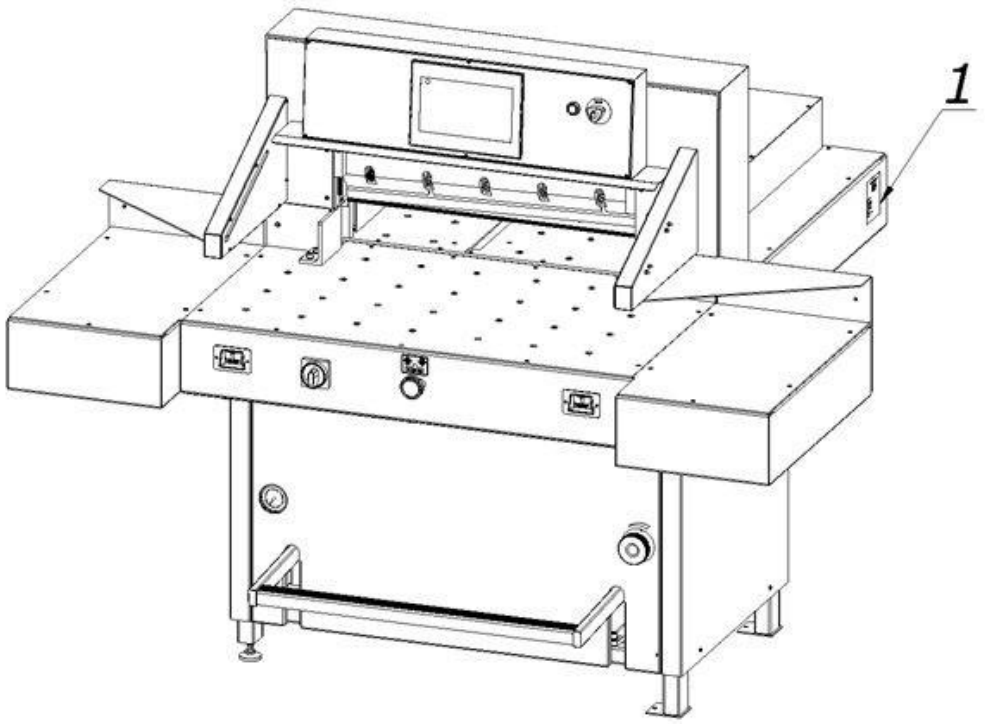


Figure 1

Purpose of use

This is a single-knife cutter designed to cut reams of paper, cardboard, and other materials such as PVC, plastics, fiber, foil, laminated stock, rubber, and more to a requested dimension. It is primarily used by printing houses, print-finishing specialists, copy shops, and offices.
For certain materials (such as plastics), it is recommended to use a smaller ream than the maximum capacity—this should be confirmed with the manufacturer.
The machine must be operated in accordance with the instructions provided in the operator's manual, and all procedures regarding assembly, disassembly, reassembly, installation, control, and maintenance must be followed.

Risk of Damage Due to Improper Use

- The operator is fully responsible for any damage resulting from incorrect use of the machine.
- The machine is designed **only** for the purposes specified in this manual by the manufacturer.

Documentation

- This operator's manual is supplied with the machine.
- This operator's manual is not a service manual.
- Only original spare parts supplied by the manufacturer or an authorized agent must be used.
- The drawings in this manual are examples and may differ slightly from the actual machine delivered.
- Maintenance materials such as oils and greases listed in this manual are examples based on availability in the manufacturer's region at the time of publication. It is permissible to use equivalent materials with similar properties available on the local market.
- The manual should always be stored near the machine and easily accessible.
- The user's staff must be familiar with the manual before operating the machine.

Introduction

This manual contains important information regarding the safety features of the guillotine. It must be stored near the machine and protected from loss or damage. The machine must be operated in accordance with this manual as well as any applicable local and general safety regulations.
The employer is responsible for properly training all machine operators based on the contents of this manual.

2. SAFETY GUIDELINES

The mechanical and electronic components of the guillotine are designed using the latest technology and industry standards to ensure operator safety, even in the event of a failure. The built-in safety mechanisms provide an adequate level of protection for the operator.

If the user intends to install **additional or non-standard accessories** that were not originally supplied by the manufacturer, it is **mandatory** to consult the manufacturer beforehand.

Otherwise:

- The **factory warranty will be void**, and
- The manufacturer will **not be responsible** for any resulting damage or malfunction.

This requirement **also applies to spare parts** used during repairs. Only **original spare parts** approved by the manufacturer may be used.

All repairs must be performed **exclusively by service personnel trained by the manufacturer**. Repairs conducted by unauthorized personnel will immediately void the warranty, and the manufacturer will no longer be liable for any damage.

Warranty Terms

- The warranty is void if the machine is modified by the user without prior written approval from the manufacturer.
- Any unauthorized modification releases the manufacturer from responsibility for further damages or accidents.

Despite all built-in safety measures, operating the machine **without proper training** or with **insufficient training** can result in serious risk.

Every person involved in the **installation, maintenance, and operation** of the machine must be fully familiar with this manual — especially the **Safety of Use** chapter.
Training and review of safety procedures must be conducted **before operating the machine** and should be **repeated regularly**.

Possible Consequences of Incorrect Use

- Personal injury
- Damage to the machine

Symbols: meaning and application

Table 1. Symbols meaning

	**Read operator manual** **Refer to operator manual** **INFORMATION**
	**WARNING!** **Risk of machine damage** **Risk of deterioration of technical condition of machine**
	**CAUTION! DANGER!** **Danger to life** **Danger of body damage**
	**Dangerous electrical voltage!**
	**Children must not operate the device!**
	**Do not put hands underneath the knife!**
	**Do not leave knives unattended** **Do not remove or transport knives without covers!** **Risk of injury!**
	**Do not cut hard materials or materials, which may be splattered**

Operator qualifications

- The guillotine may only be operated by qualified personnel who have received proper training from the manufacturer. For the purposes of this manual, a qualified employee is defined as an individual authorized to set machines and operate electrical circuits in compliance with established safety technology standards.
- The guillotine cutter must be operated only by employees who have been trained and formally authorized by the employer. All operators must be of legal working age.
- This requirement is especially critical for the chapter titled “Safety of Use.”The

INFO

Before operating the cutter the operator must read the operating instructions.

- Every employee assigned to tasks related to **assembly, disassembly, reassembly, commissioning, servicing, or maintenance** (including technical inspections and repairs) of the cutter must read the entire operator’s manual, **with particular attention to the chapter titled “Safety of Use.”**

Any employee authorized to perform installation, start-up, operation, maintenance, or repair **of the cutter must read the entire operating manual—especially the** “Safety Rules” **chapter.**

Safety systems used in the cutter

The machine is equipped with multiple safety systems designed to protect the operator and prevent hazardous situations. These include:

- **Two-Handed Safety Control**
  Cutting operation is initiated only through a dual-hand activation system, ensuring the operator’s hands are safely positioned during the cut.
- **Non-Contact Safety Device (Optoelectronic Curtain)**
  A light-based safety curtain detects any intrusion into the cutting area. If the safety zone is breached, the cutting process is immediately interrupted.
- **Cam Safety Device**
  This mechanism ensures that the blade remains safely locked in the upper position when not in operation.

Safety Features

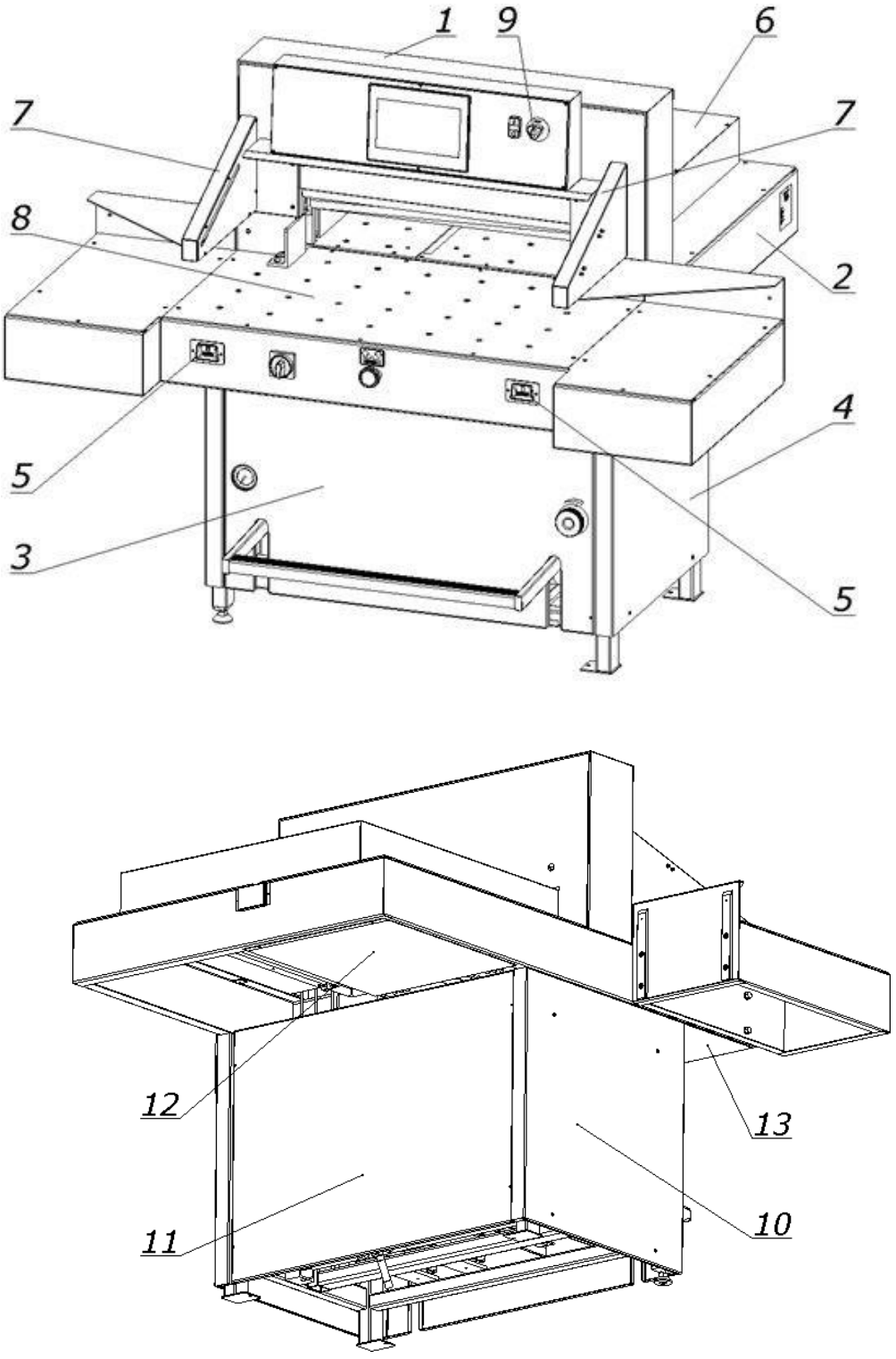


Figure 3. Arrangement of covers and protective elements

Table 3. Safety Features used to eliminate hazards (according to Figure 3)

I	MECHANICAL HAZARDS	Safety Features	Identification
1.	The lever assembly mechanism of the pressure beam drive	• fixed cover • Emergency stop	1,3,4 10
2.	Motor, belt drive mechanism of the pressure beam drive	• fixed cover • Emergency stop	3,4 10
3.	The belt drive for the drive mechanism of the back gauge beam	• fixed cover • front table • emergency switch	3,4, 2 10
4.	The screw mechanism of the back gauge drive	• cutter body • fixed cover	2 6
5.	Motor, lever mechanism of the knife drive mechanism	• fixed cover • front table • Emergency stop	3,4,1 2 10
6.	Movement the clamping beam	• fixed cover • electro sensitive protective device • two-handed device • Emergency stop	1 7 5 10
7.	Movement of the back gauge	• fixed cover • Emergency stop	6 10
8.	Cutting zone	• two-handed device • electro sensitive protective device • cam device that monitors the knife stop at the upper turning point • Emergency switch	5 7 8 10

9.	Knife / blade replacement	• transport handles • special protective packaging	
10.	Sharp edges and corners of the cutter elements	• refraction, dullness, rounding	
11.	Uneven or rough surfaces	• precise workpiece machining • paint coatings	
II	**ELECTRICAL**		
1.	Direct contact of active elements	• closed housing partially reduced voltage supply to the control system up to 24V AC/DC.	3,4
2	Indirect touch	• protection against indirect contact according to PN-EN 60204-1 • continuity of the protective conductor	

TRANSPORT AND ASSEMBLY

Transport

The box with the machine should be transported in accordance with the markings on it (fig.4). When using a forklift (Fig. 5a), make sure that the fork length is suitable so that you can hold the entire depth of the box.

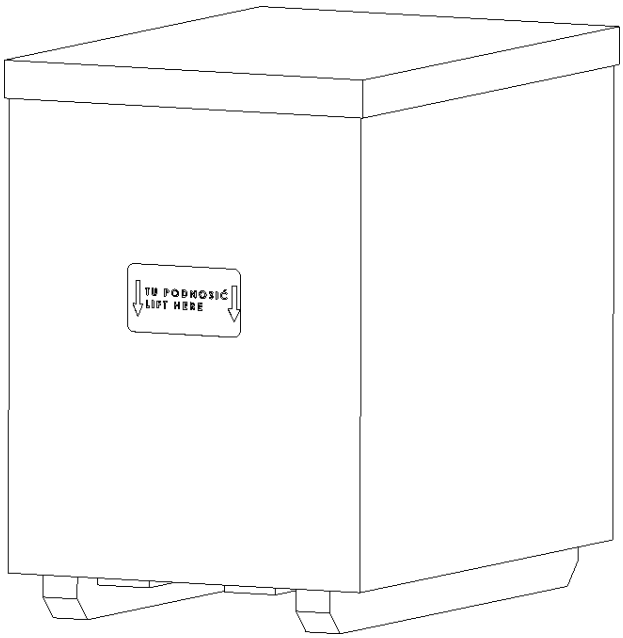


Figure 4. Cutter in a transport crate.

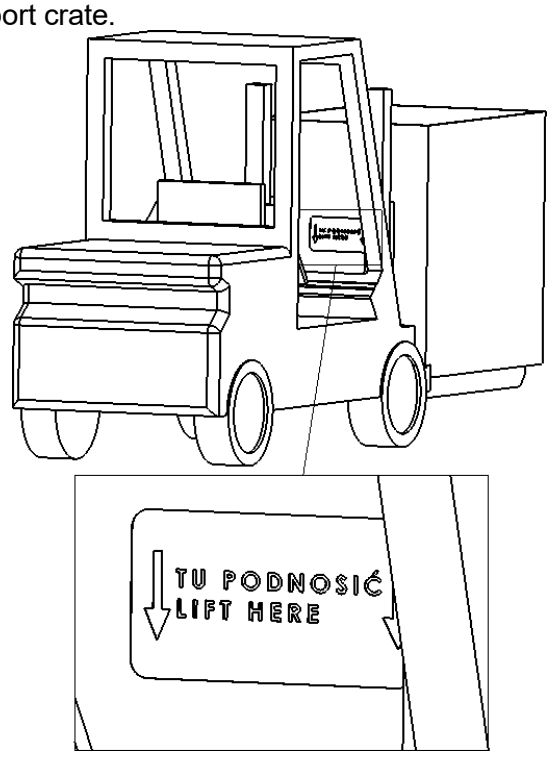


Figure 5a. Transporting the cutter in the crate using a forklift.

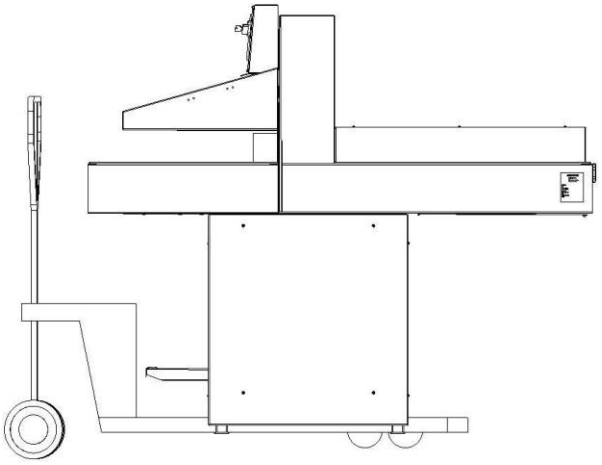


Figure 5b. Transporting cutters with a pallet truck

ASSEMBLY

The side tables ship unmounted, mount the side tables according to Figure 6.

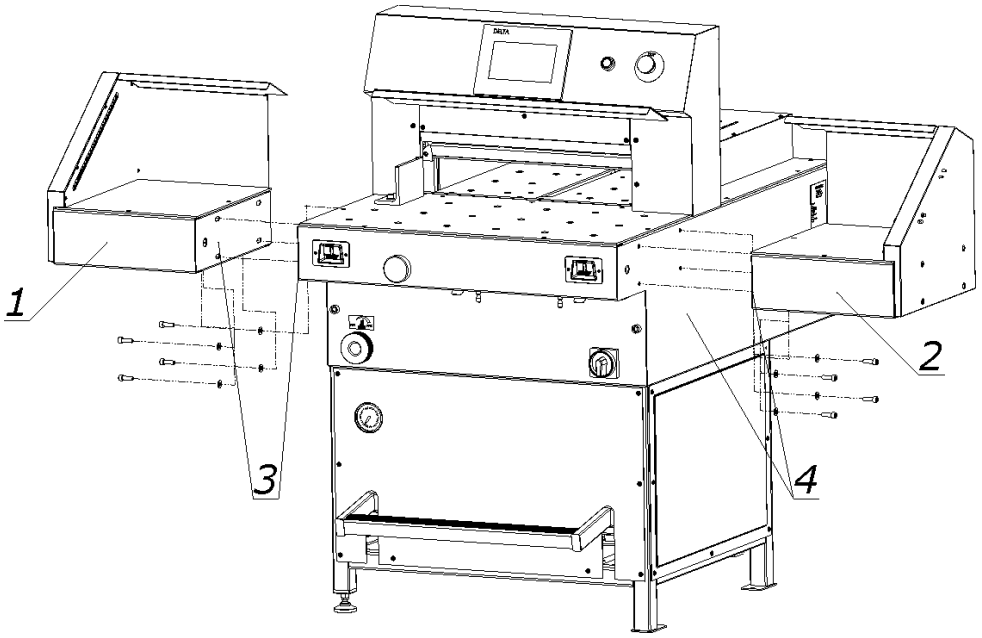


Figure 6. Tightening of the side tables

1. Left side table + M10x20 screw (4 pcs) + #8 washer (4 pcs)
2. Right side table + M10x20 screw (4 pcs) + #8 washer (4 pcs

Setting the cutter

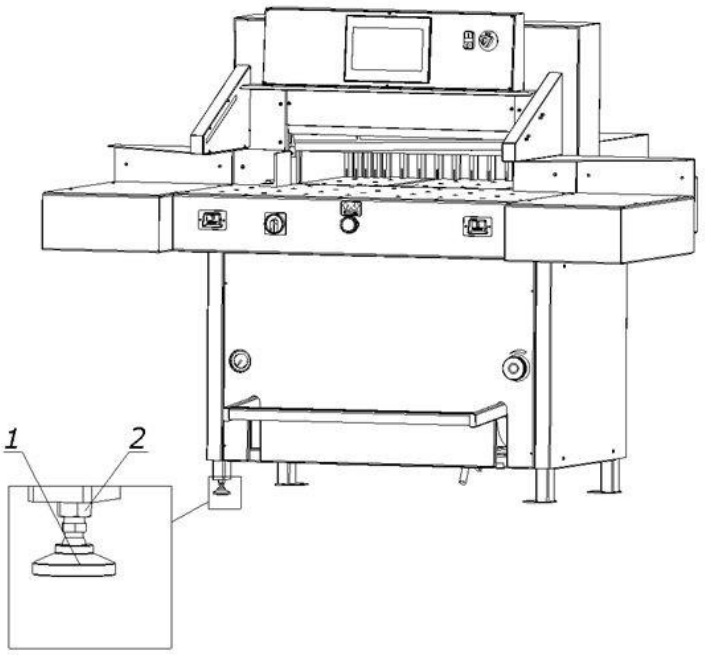


Figure 7. Adjusting the cutter setting.

The slicer does not need to be attached to the ground. The correct and safe setting of the machine is achieved by twisting the adjusting foot 1, as shown in Figure 7.

Work area

In order to easily access the cutter's mechanisms during adjustment, maintenance or servicing activities, it is recommended to keep a free space of about 0.5 m around the device. (Fig.8)

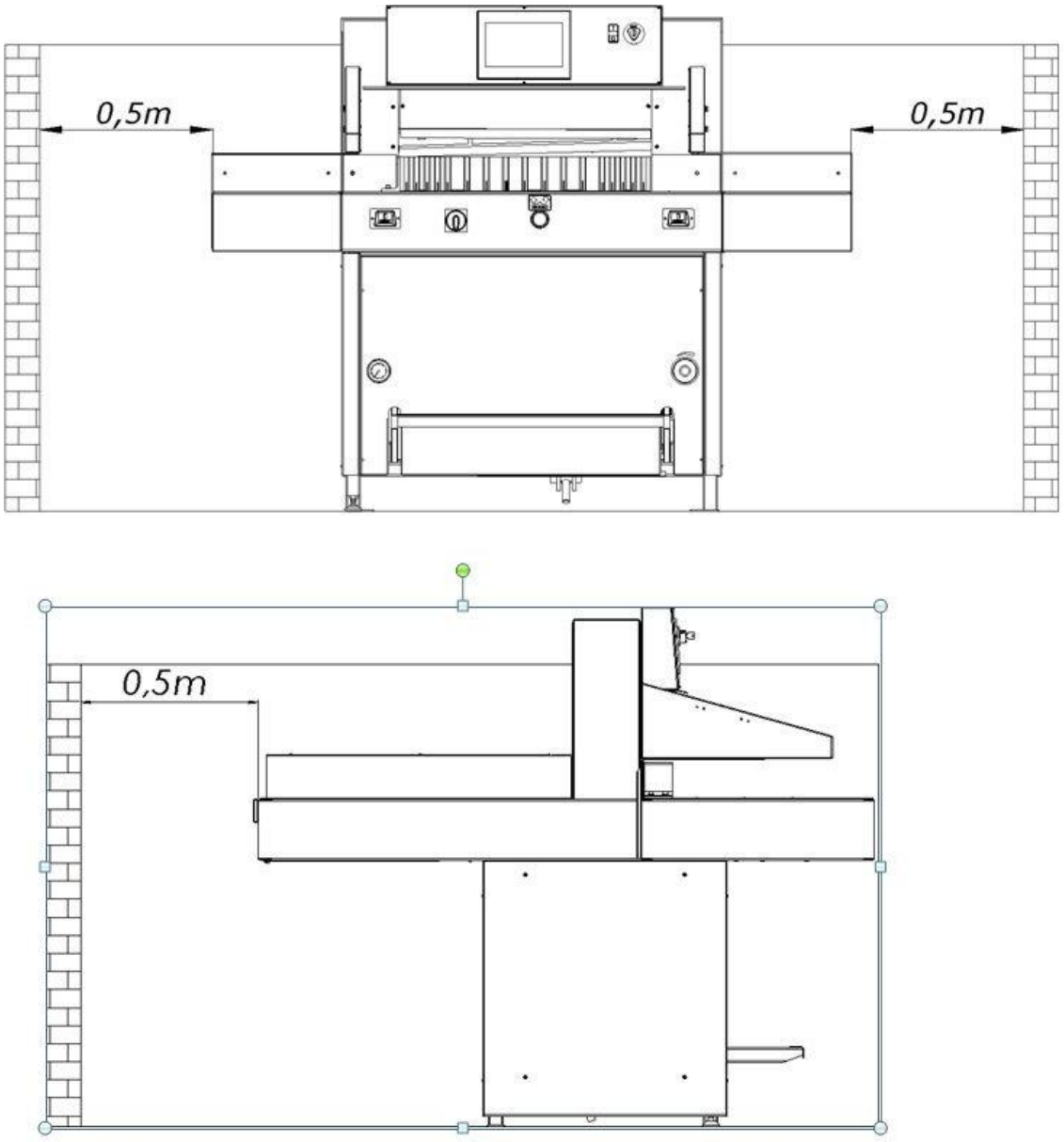


Figure. 8

4. TECHNICAL CHARACTERISTICS OF THE GUILLOTINE

Technical data

Table 4.

PARAMETER		**Cut-True 31H**
Maximum stack width (		**28.74 in / 730mm**
Maximum stack height (	Without false clamp	**3.93 in / 100mm**
	With false clamp	**2.78 in / 96mm**
Cutting depth		**28.34in / 720mm**
Front table length		**25.19 in / 640mm**
Narrow cut	Without false clamp	**.98 in / 25mm**
	With false clamp	**1.9683 in / 50mm**
Sound power level (dB)		**74,6**
Back gauge speed per second		**3.26 in / 83mm**
Side table load		**44 lbs / 20kg**
Weight		**1345 lbs / 610kg**
Static load substrates (daN / m2)		**271**

Technical data - hydraulic system

Technical data - hydraulic power supply Table

Table 6.

Parameter	
Motor (kW)	**2,2**
Voltage / frequency (V/Hz)	**3x400/50**
	2x220/50
Control of executive elements (VDC)	**24**
Tank capacity (l)	**12**

Technical data - hydraulic oil Table

7.

Parameter	
Oil type	**HV 46**
Quality norm	**ISO 11158 - HV**
Viscosity	**ISO VG 46**
DIN norm	**51524, 46 mm2 (cST).**
Kinematic viscosity temp. (40°C)	**47,2 mm²**

External dimensions

The dimensions of cutters in different equipment versions are shown in figure 9 and table 8.

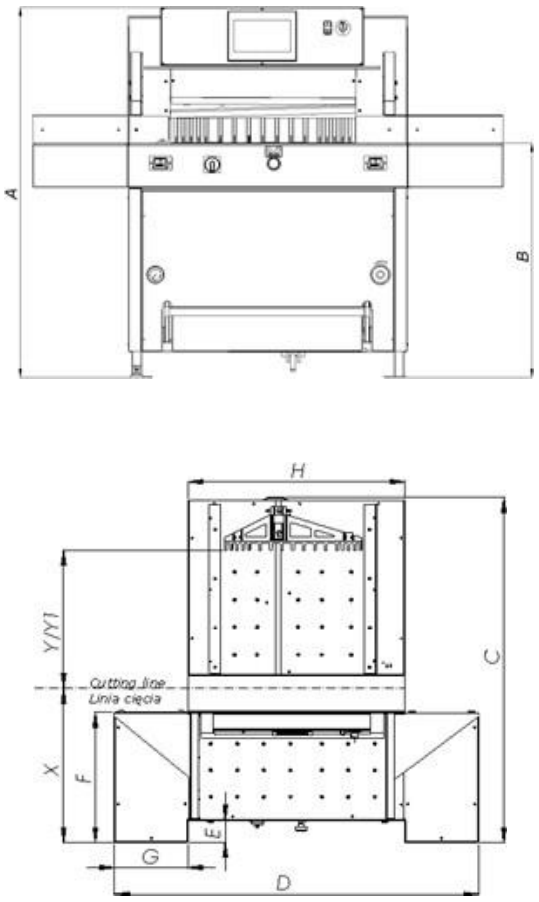


Figure 9. External dimensions of the cutter

Table 8.

DIMENSION	**VALUE**(in/mm)
A	57 / 1445
B	37 / 924
C	69 / 1754
D	74 / 1857
E	4.5 /114
F	26 / 658
G	15 / 376
H	44 / 1105
X	26 / 640
Y program	28 / 710
Y1manual	29 /730

5. OPERATION

Operating safety

Safety instructions

Before each start-up of the cutter, the operator must verify that all safety components are present and functioning correctly. Operation is permitted only when all protective devices are installed and fully operational, including but not limited to:

- Detachable safety covers
- Emergency stop switches
- Non-contact safety devices
- Two-hand operation controls

If any malfunction or damage is detected, the cutter must be stopped immediately and secured against further use. All defects must be removed without delay before resuming operation.

Warning about special hazards

To prevent serious injury, the following actions are strictly prohibited:

- Putting hands into the cutting area near the knife or pressure zone
- Placing hands between the clamping bar and infeed bar
- Handling the knife without extreme caution
- Using damaged, dull, or worn knives
- Allowing untrained personnel to change or install knives
- Leaving any objects (e.g., keys, tools, screwdrivers) on the work table during cutting

When handling the knife:

- Always use designated transport handles for installation, removal, or transport
- Knife changes must be performed only by trained and authorized personnel

Control system

Danger!

The cutter cannot be operated with defective photocells forming the safety curtain!

Danger

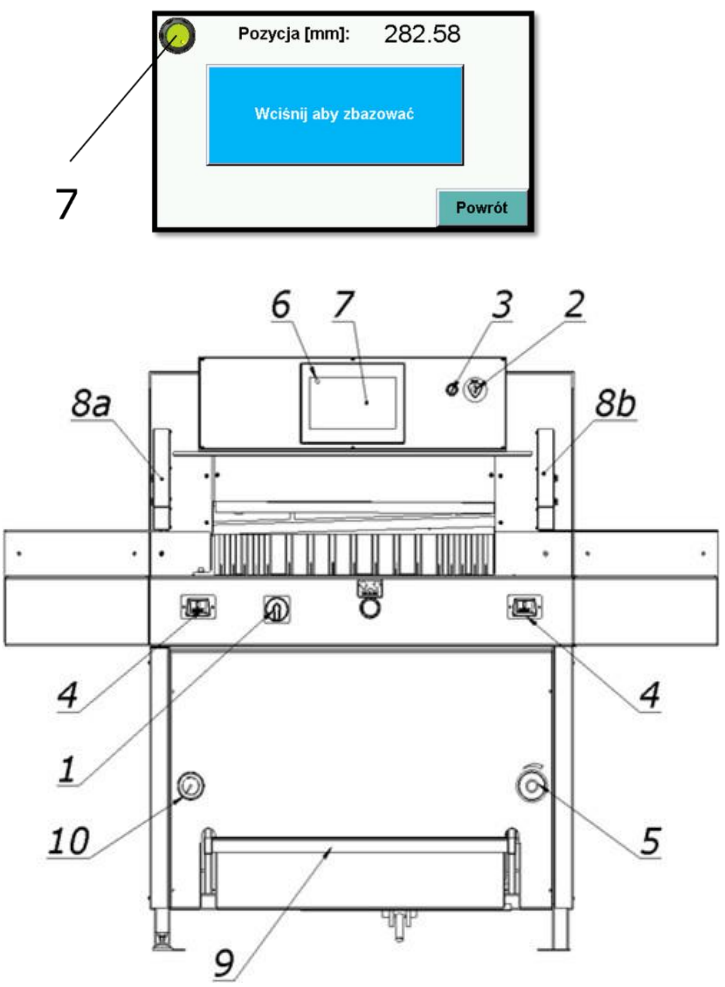


Figure 10. Elements of cutting machine operation and signaling

1. Main switch
2. Palm button, (emergency stop)
3. Button that activates the control system.
4. Buttons enabling the cutting cycle (two-hand cutting system)
5. A knob that changes the clamping force

- turning to the right - increasing the pressure
- turning to the left - reducing the clamping force

6. program unit
7. Two-color signal lamp, displayed on the programmer screen.

- red, signals the power supply to the control system
- green, signals the activation of the control system

8. Safety curtain (non-contact protection device)

8a. Transmitter

8b. Receiver

9. Foot clamp pedal (mechanical determination of the cutting line)

10. Manometer

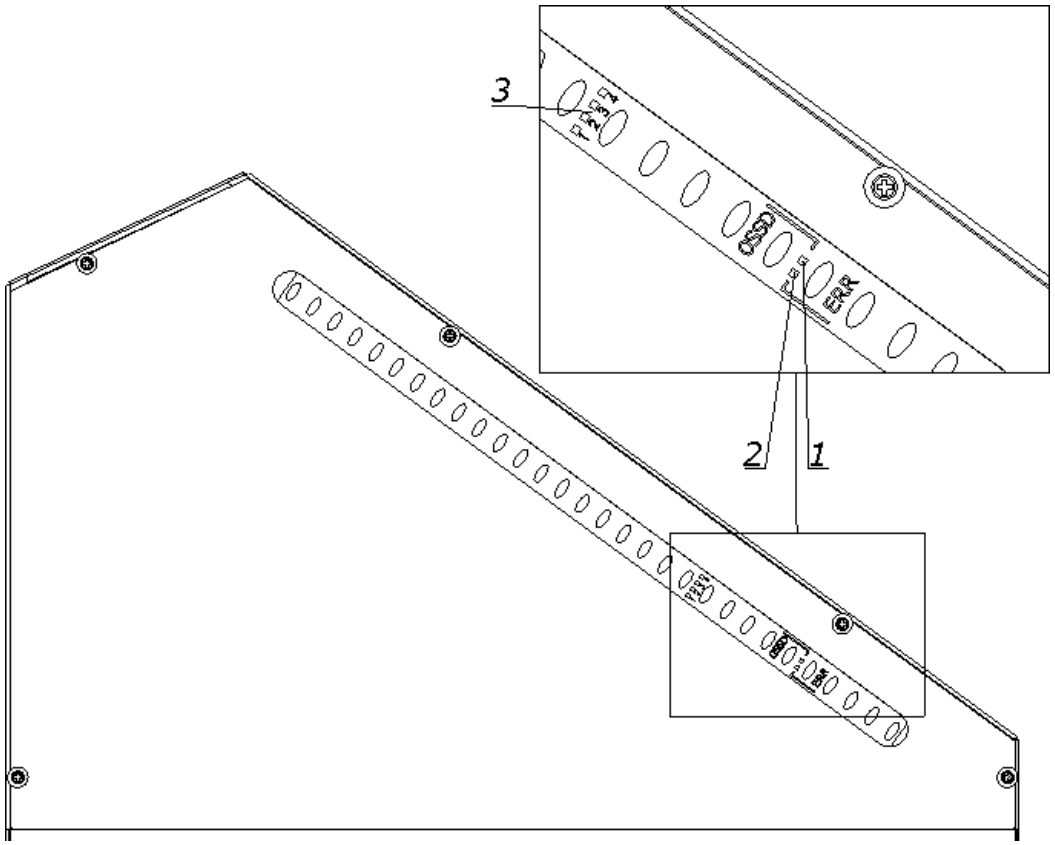


Figure 11. Indicators of the receiver

The receiver is equipped with six LEDs informing about the operating status:

Table 9.

Item	Color of the LED	Display	Text
1	Red/green	Status OSSD	OSSD
2	Red	Error indication	ERR
3	Blue	Quality of setting	1 2 3 4

Blue LEDs informing about the quality of the settings, in conjunction with the flashing red color LED ERR, also indicate errors.

Table 10. Blue LEDs informing about the quality of the settings

LEDs informing about quality settings	Diode LED OSSD	Meaning
It does not light up no LED	red	The setting is insufficient or the protective field is interrupted at least partially. The receiver can not synchronize with the transmitter.
It lights up 1 led	red	The setting is insufficient or the protective field is interrupted at least partially.
It lights up 2 led	red	The setting is insufficient or the protective field is interrupted at least partially.
It lights up 2 led	green	The setting is not yet sufficient to ensure stable availability.
It lights up 3 Led	green	The setting is good, stable availability.
It lights up 4 led	green	The setting is very good.

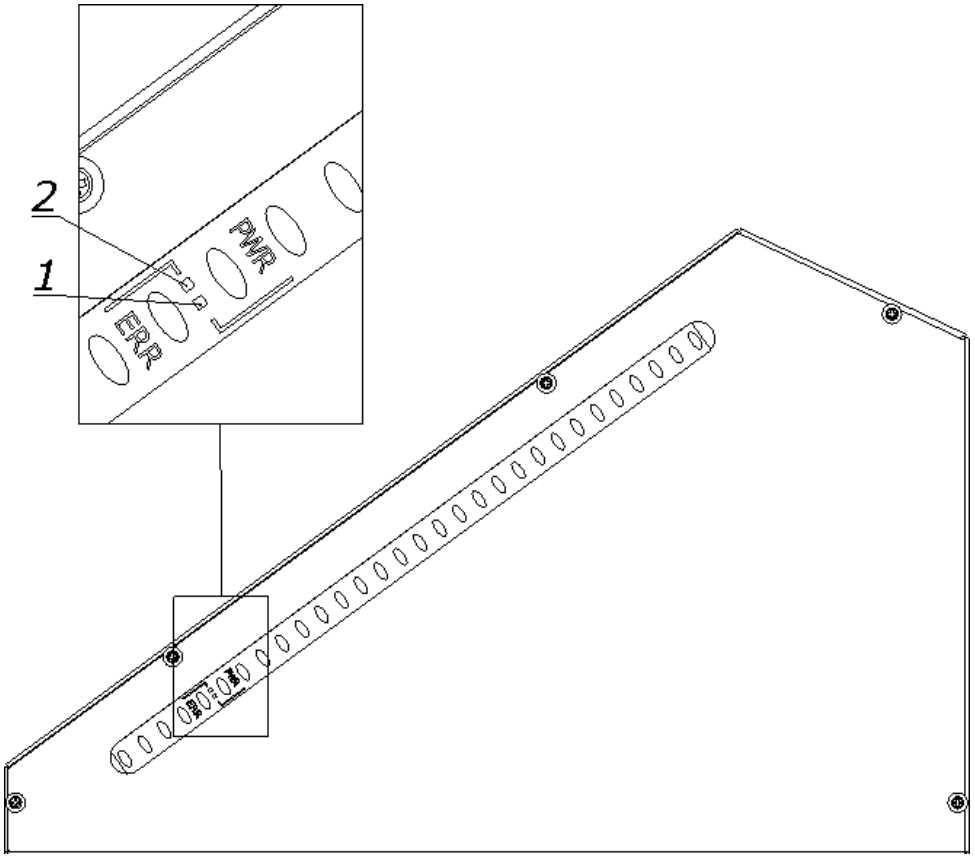


Figure 12. Indicators of the transmitter

The transmitter is equipped with two LEDs informing about the operating status:

Table 11.

Position	LED diode colour	Indication	Text
1	yellow	Work status indicator	PWR
2	red	Error indication	ERR

Electrical Access

Danger!

Dangerous electrical voltage!

Before opening the housing, switch off the main switch!

1. Hinged housing of electrical access panel (Fig. 13)
2. Nuts fixing the housing (Fig. 13)

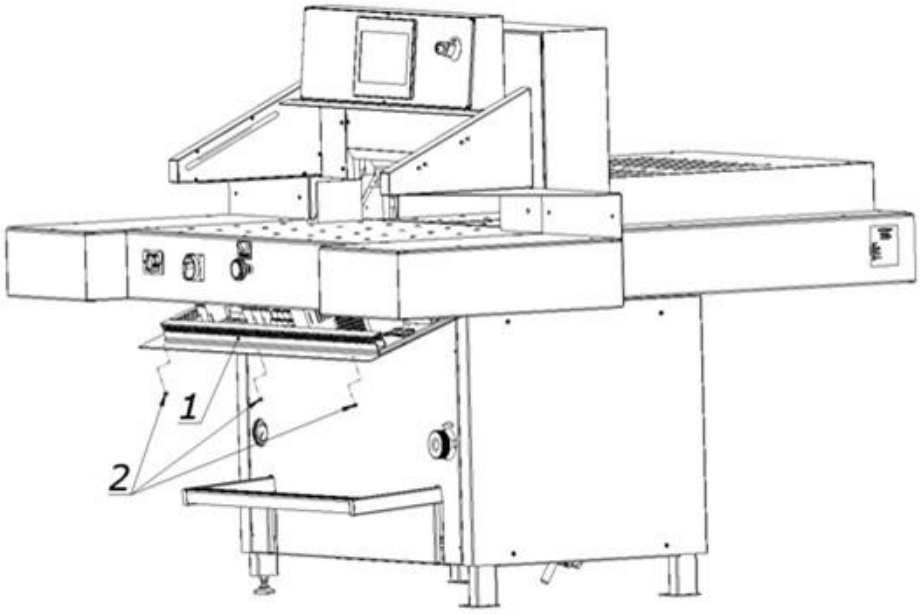


Figure 13. Location of electrical access panel

1. POWER SUPPLY

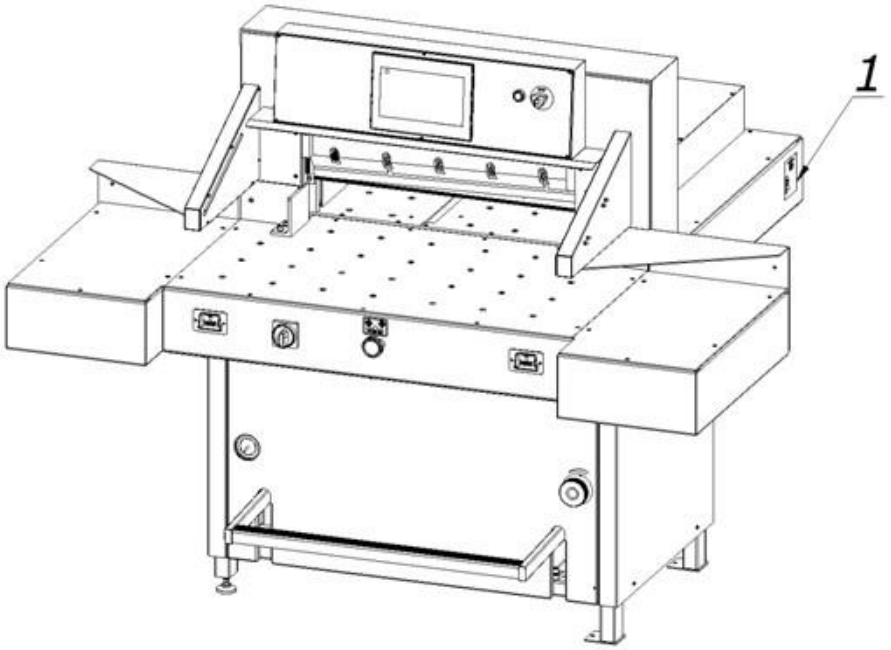


Figure 14. Location of the nameplate

Data on the plate:
- 400V power supply
- 50-60 Hz frequency
- 3 kW power
- 20 A protection

WARNING

The data on the plate must correspond to the current parameters in the mains!

Parameters of frequency converters (inverters) are set by the cutter manufacturer and can not be changed!

Cutter should be grounded.

7. USING THE CUTTER

Workplace Safety Conditions

The user must ensure that the cutter workstation is arranged to prevent any risk of slipping, tripping, or falling. Proper working conditions must be maintained at all times, including:

- Safe and stable flooring
- Correct routing of cables and wires
- Clear and unobstructed access to the machine

Failure to provide a safe working environment may pose serious hazards to the operator and is considered improper use of the machine.

Work area for operational staff

The working area is the front side of the (operational) cutter!

Danger zones in the cutter

- knife and clamp zone
- back side of the cutter frame (access to clamp zone and knife)
- back side of the cutter (access to the backguage)
- bottom side of the rear table access to the backguage zone (spindle and slider)

Starting the cutter

Commissioning

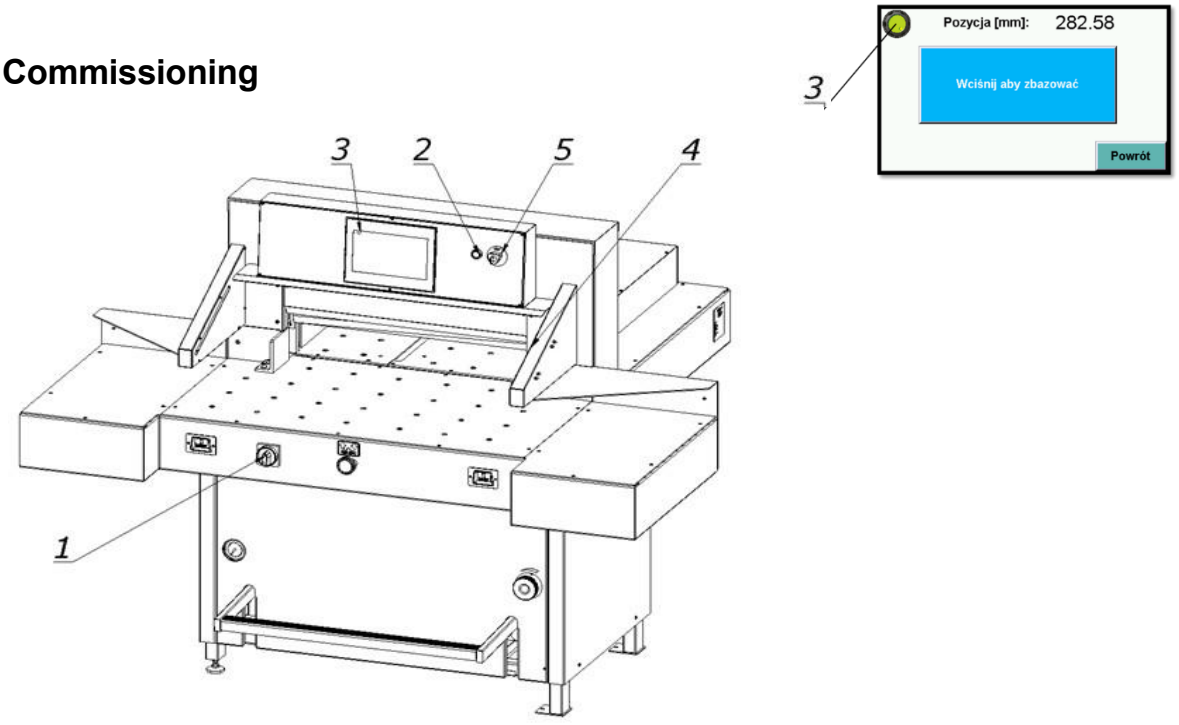


Figure 15. Elements used when switching the cutter on.

1. Set the main switch 1 to "ON" 1 position (Fig. 15)
2. Press the green button 2 (Fig.15)
   - green LED 3 on the program unit 6 display lights up (fig.15)
   - the green OSSD 1 LED lights up (Fig.11) in the receiver 4 (Fig.15)

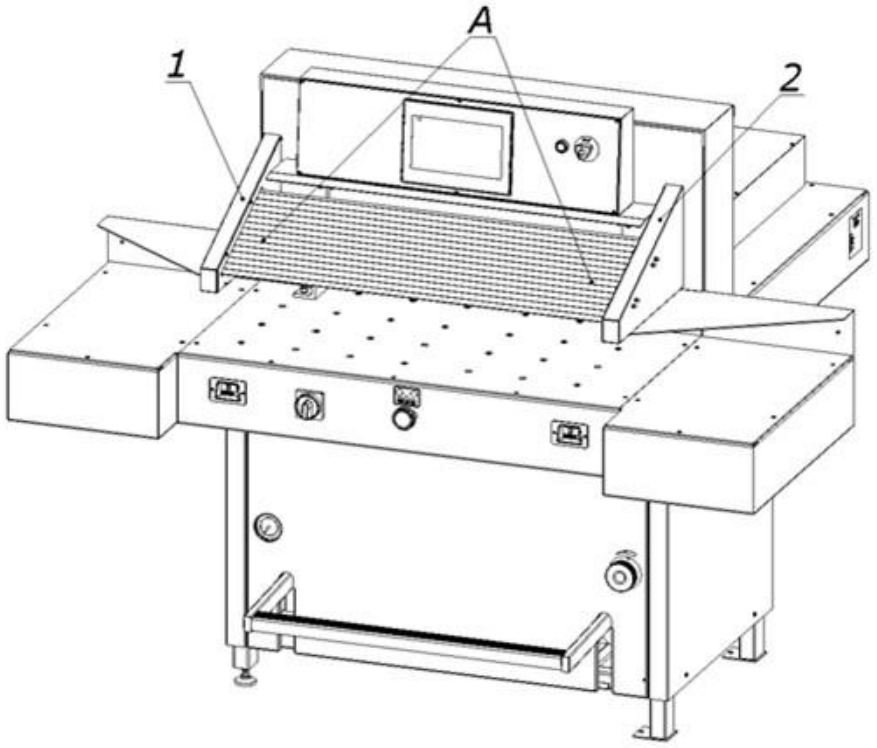


Figure 16. Safety curtain
1. Transmitter
2. Receiver
A - field of the security curtain

Diagnostics of the safety curtain after switching on the power supply.

When the cutter is powered on, the transmitter (1) and receiver (2) are automatically initialized (see Figure 16). During initialization, all LEDs on both units illuminate briefly. After initialization, the receiver displays the alignment quality using four blue LEDs (3) — see Figure 11 and Table 8 for reference. Once the safety light curtain is properly aligned, the setting indicator LEDs will turn off after a short period.At this point: The green LED of the output switching device (item 1 in Figure 11) will remain lit, and Only the PWR LED on the transmitter (Figure 12) and LED 1 on the receiver’s output device (Figure 11) will stay illuminated. This indicates that the safety light curtain is correctly aligned and ready for operation.In case of an error on the device, the red LED will light. On the side receiver red error LED - in combination with blue LEDs -indicates the cause of the error.

Danger!

In case of malfunction of photocells, immediately contact the service!

Emergency stop of the cutter

1. Press the button 5 (Fig.15)

The switch is used for emergency stopping of the machine.

After pressing it, the message "Disable safety button" will appear on the programmer. The pressure bar and knife will stop.

Starting the cutter after emergency stop

1. Unlock button 5 (turn it around) (Fig.15)
2. Press the green button 2

When the stop has been made during the cutting cycle, pressing the cutting buttons again will result in returning to the upper position of the clamping bar and the knife.

Determining the position of the back gauge

Danger!

Do not put your hands into the cutting area when backguage moves!

Determining the position of the back gauge is carried out using the touchscreen (1) and switch (2), figure 17a & 17b.

INFO

The method of determining the position of the back gauge as well as the operation of the programmer are described in the "Instruction for program unit".

Changing the position of the back gauge with the fine tune switch

Turn the switch to the right to move the back gauge out and turn the switch to the left to bring the back gauge forward as indicated on the switch. The position value is shown on the programmer screen.

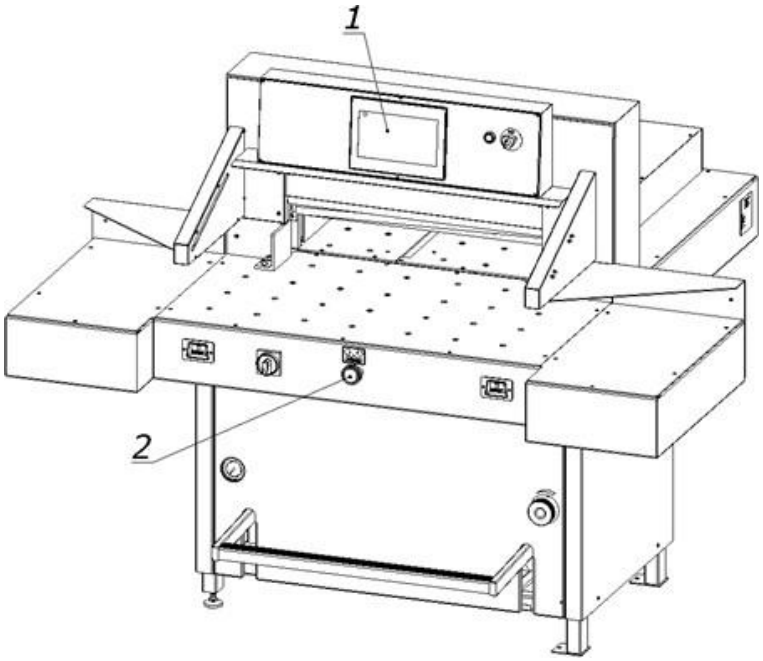


Figure 17a. The adjustment value is displayed on the screen (1) and the switch is used for fine tune adjustments (2)

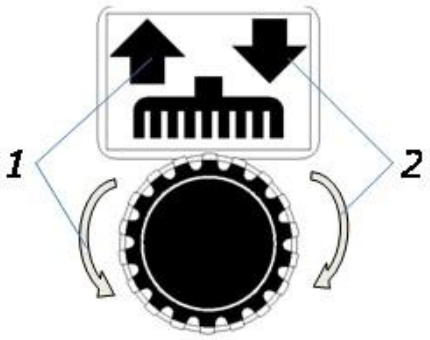


Figure 17b Back gauge fine tune adjustment switch

Clamping the material

Danger!

Do not put your hands into the cutting area when pressing!

Clamping the material without cutting (used to determine the cutting line)

Lower the clamp onto the stack by pressing the pedal 2 (Fig.18). The front edge of the clamping bar is the same as the cutting line. Therefore, it can be used as an indicator of the cutting line. The clamp can be stopped in any position.

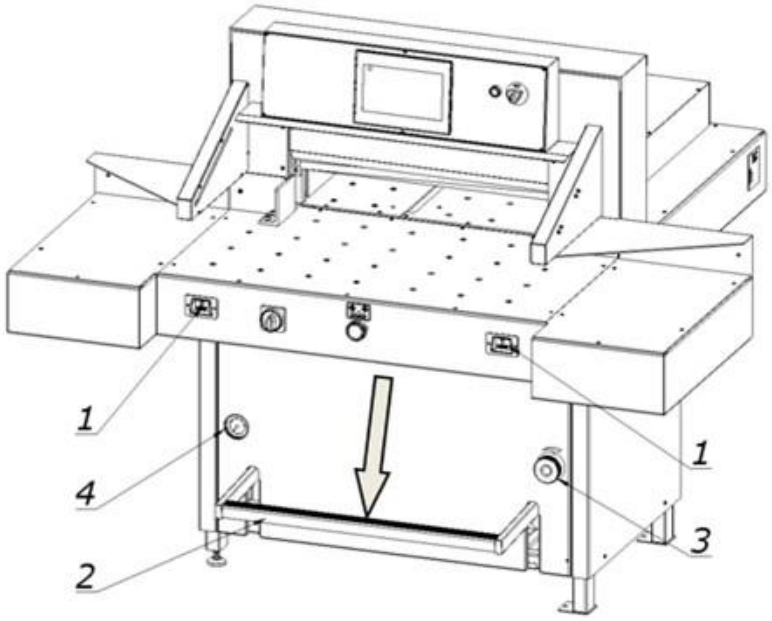


Figure 18. Operating elements during use during pressing.

Change of clamping force

Changes in the clamping force are made by the pressure gauge knob 1, using the pressure value on the gauge 4 to determine the clamping force (Fig.18)

- turning to the right - increases the clamping force
- turning to the left - reduces the clamping force

Approximate values of the clamping force read on the pressure gauge 4

- **25 bar ~ 200 daN**
- **40 bar ~ 400 daN**
- **55 bar ~ 600 daN**
- **70 bar ~ 800 daN**
- **90 bar ~ 1000 daN**
- **110 bar ~ 1200 daN**

Guidelines for adjusting the clamp pressure.

The value of the clamp force is selected experimentally, in relation to the type, width and height of the cut material.

The following guidelines should be considered:

- the higher the pile, the greater the downforce
- the greater the cutting width, the greater the downforce
- the harder the material, the greater the downforce

The value of pressing force is selected experimentally, in relation to the type, width and height of the cut material.

The following rules must be observed:

- the higher the pile, the greater the downforce
- the greater the cutting width, the greater the downforce
- the harder the material, the greater the downforce

Laser Cutting line indicator (optical)

The cutter is equipped with an optical laser cutting line indicator. A thin light line indicates the cutting line on the material to be cut.

Cutting (clamping and cutting)

Danger!

Do not put hands into cutting zone!

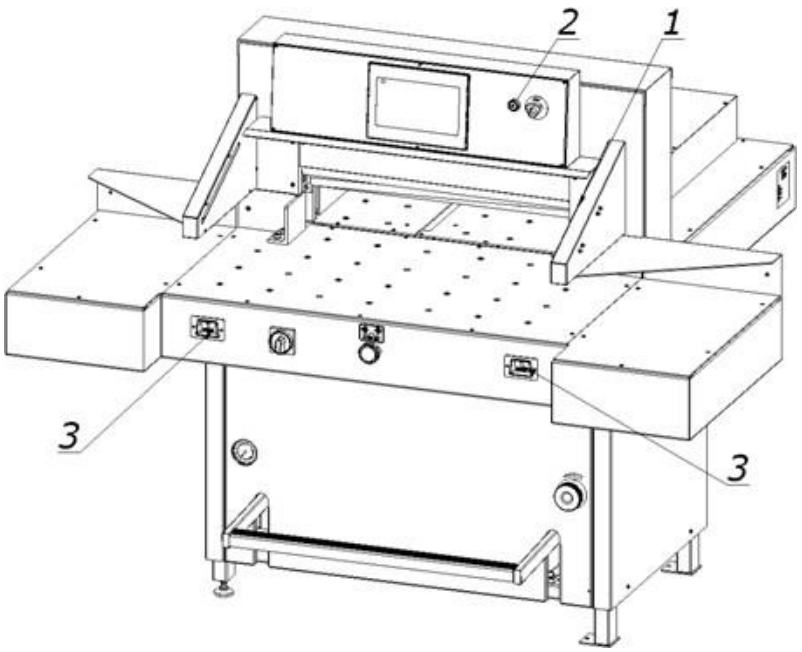


Fig. 19. Operating and signaling elements used during cutting.

Cutting may be performed only if all the following conditions are met:

- The safety light curtain is unobstructed – the green OSSD 1 LED on the receiver lights up (see Fig. 11 and Fig. 19).
- The green push-button switch (2) is pressed.
- Both **start buttons (3)** are pressed **simultaneously** and **held down** until the cutting operation is complete.

After the cut is complete:

- The knife automatically returns to its upper home position.
- The clamp rises automatically, preparing the machine for the next cut.

Interruption of Cutting Cycle

Interruption of Cutting Cycle

- If either of the two start buttons (3) is released during the downward movement, the cutting process is immediately interrupted.

- If an object enters the safety light curtain during cutting, the downward motion of both the pressure beam and the knife is canceled.

To resume cutting:

- Remove the obstructing item from the cutting area.
- Press both start buttons (3) simultaneously to restart the cycle.

WARNING! Paper clips or other hard objects can damage the blade!

Blower activation

The cutter is equipped with a blower system and ball deck for easier handling of large piles of material. To activate the blower, press the blower icon on the programmer screen (Figure 19b). To activate the blower air supply, see the programming manual.

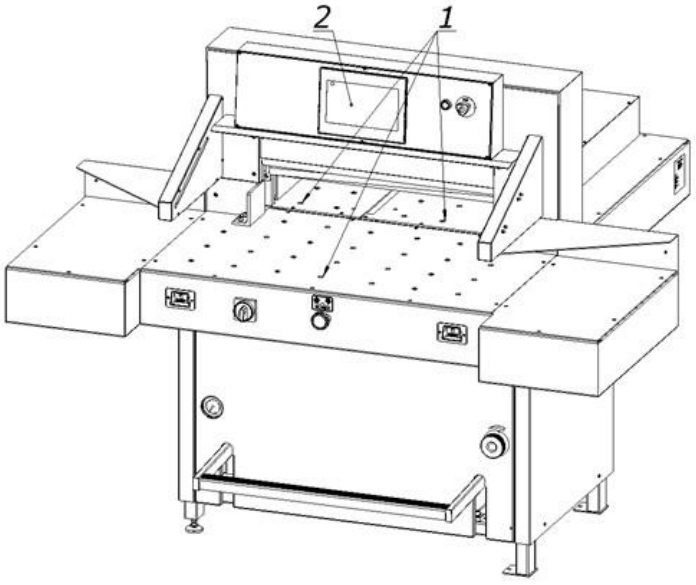


Figure 19b. To turn on the air supply press the blower button on the programmer screen (2).

8. OPERATIONAL ACTIVITIES

Replacing the knife(blade) in the cutter

It is recommended to change the knife or sharpen the knife after about 8 hours of effective, continuous work.

Danger!

Risk of injury!

- Danger of injury to the operator and auxiliary personnel
- Danger of injury to hands and hands in the knife area through cutting
- The edge of the knife is sharp - do not touch
- Do not handle the knife without the handle
- The blade may only be changed when the tools for replacing it are undamaged
- Blunt knives should be put in cassettes immediately
- Knives intended for scrapping must be deliberately blunted
- Worn and blunt knives should be sent to the scrap yard

Removing the knife

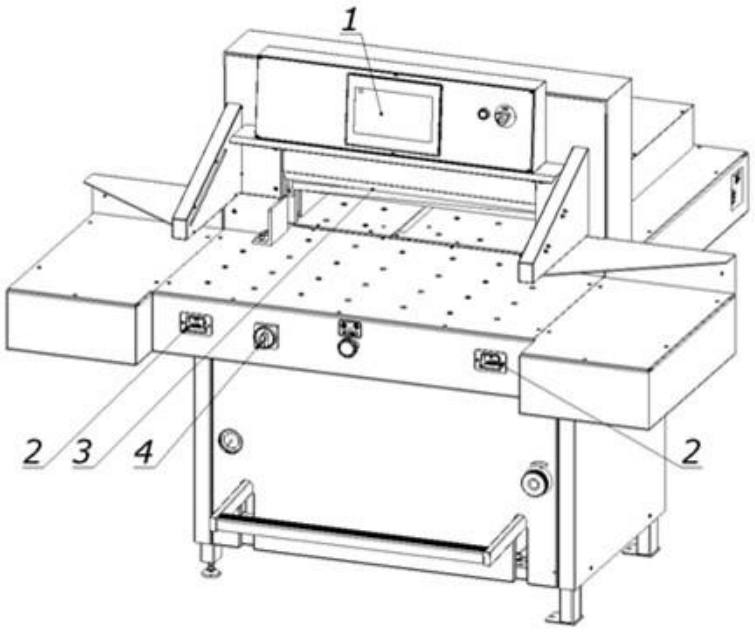


Figure 20.

1. Select the "Change knife" function on the programmer 1 screen (Fig.20) (Refer to the "Programming manual").

2. Pressing the push buttons 2  (fig.20) at the same time, start the cutting cycle. The knife 3 is held in the lower position.

3. Turn off the power supply of the electrical system by turning the main switch knob 4 (fig.20) to the "0" position

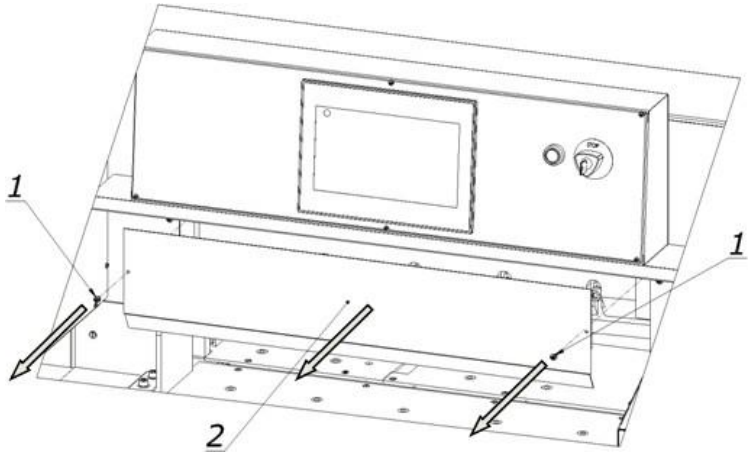


Figure.21

4. Remove the four screws 1 (fig.21) securing the cover 2 and remove the cover 2.

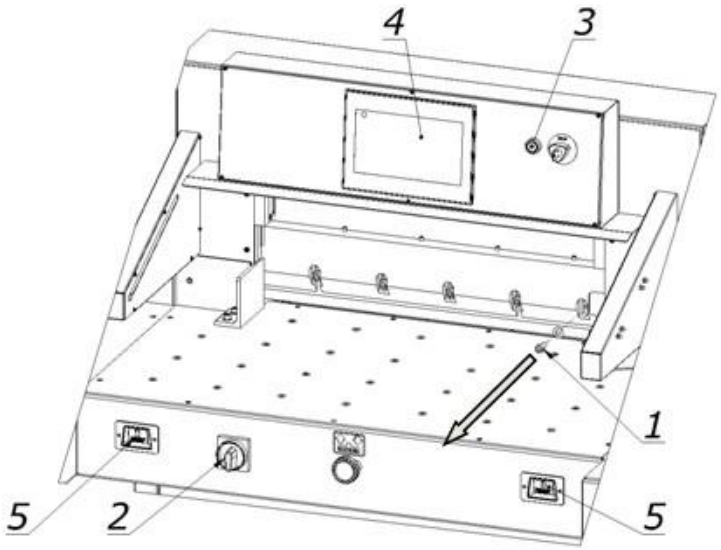


Figure.22

5. Unscrew and remove the first fastening screw 1 from the right side of the cutter bar (Fig. 22).

6. Switch on the power supply of the electrical system by turning the main switch knob 2 (fig.22) to position "I"

7. Turn on the power supply to the control system by pressing the green push button 3.

8. On the program screen 4 (fig.22), deactivate the "knife change" function

9. Press simultaneously on the push buttons 5. The knife will return to its upper position

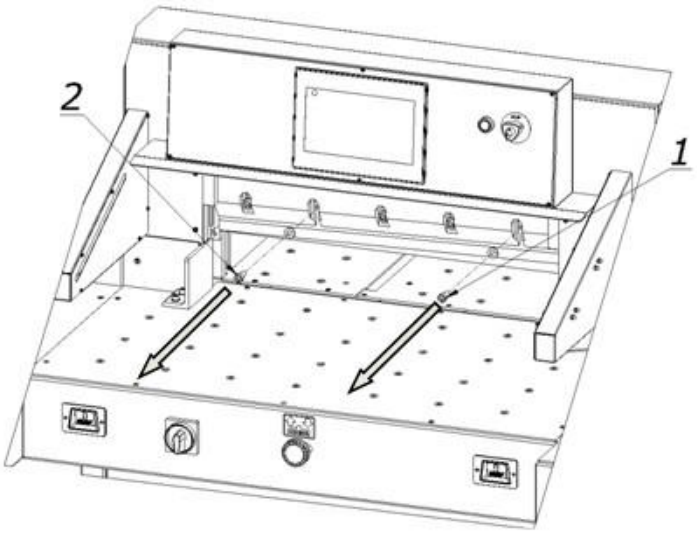


Figure 23.

10. Unscrew and remove the fastening screws 1 and 2 (Fig. 23).

11. In the place of screws 1 and 2 removed (fig.23), screw in the transport handle 1 (fig.24).

12. Unscrew and remove the screws 2 (fig.25)

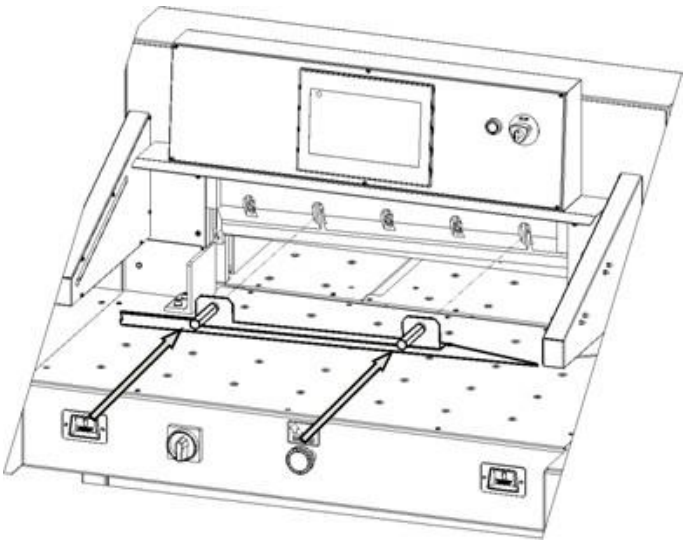


Figure 24.

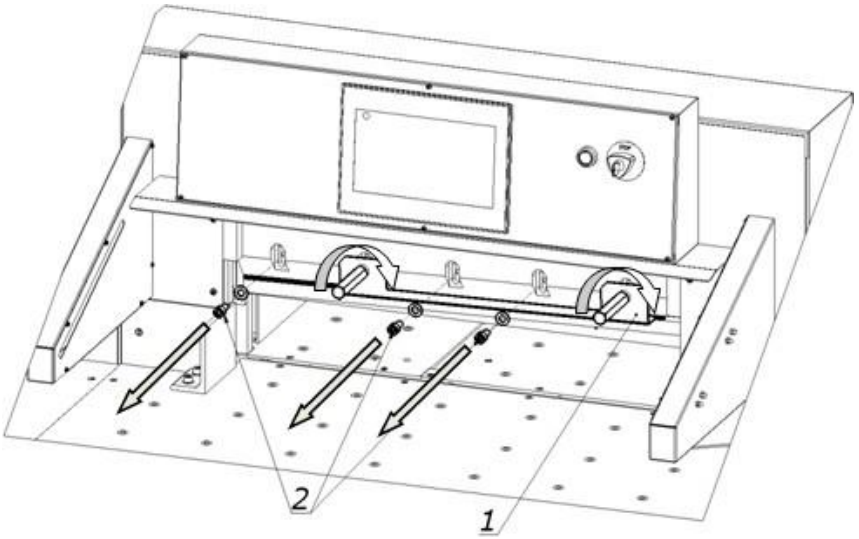


Figure 25.

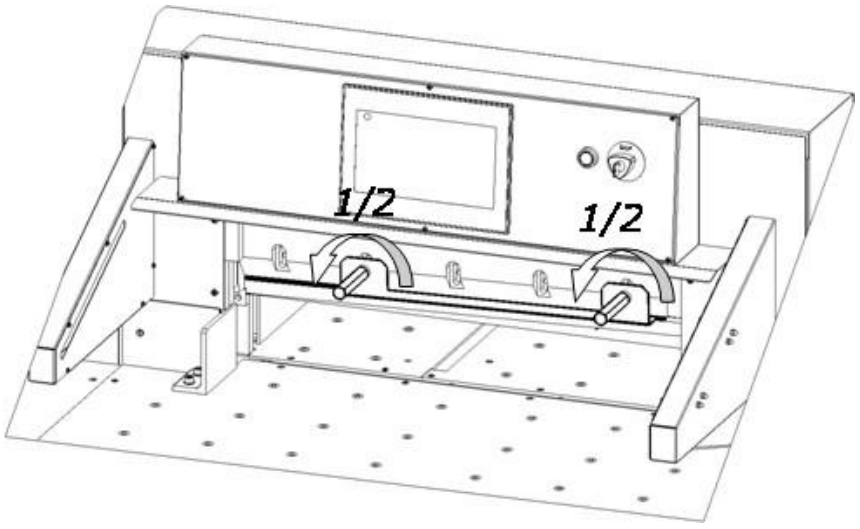


Figure 26.

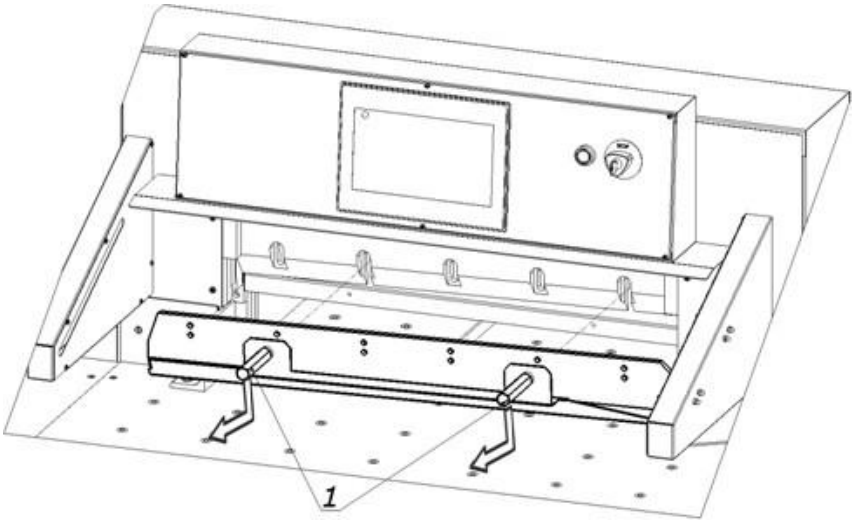


Figure 27.

13. Holding the transport handles release the clamp by turning them 1/2 turn at a time to the left (fig 26) and carefully pull the knife down (fig 27). Place the removed knife into the special protective packaging (Fig. 28a - 28d.) With the blade inwards and fasten it with two screws. To unscrew the bolts fixing the blade knife, use the RWTg 8 wrench provided on the cutter.

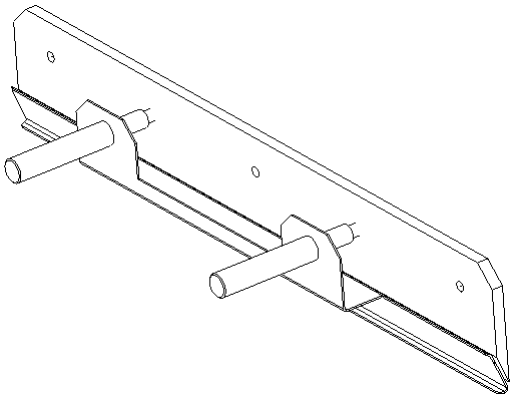


Figure. 28a. Knife in the transport handle

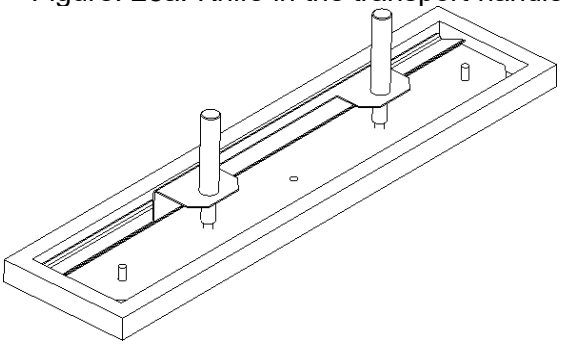


Figure 28b. Knife in the package

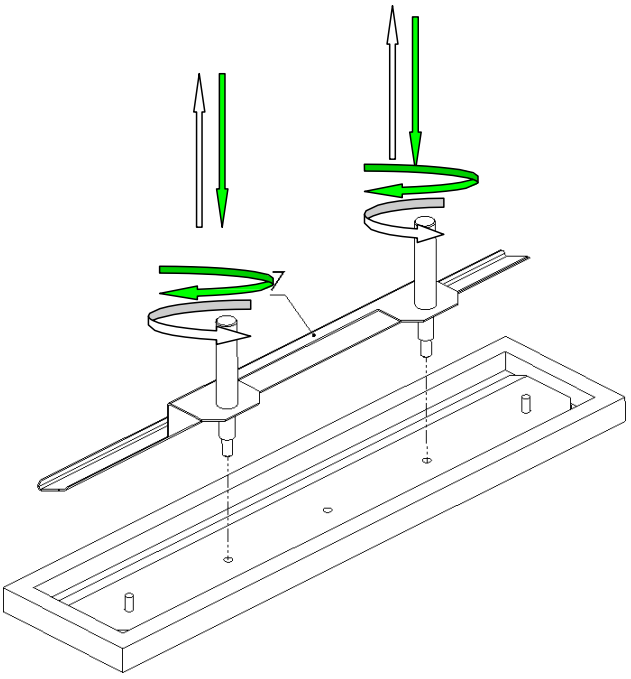


Figure 28 c. Unscrewing / securing the transport handles

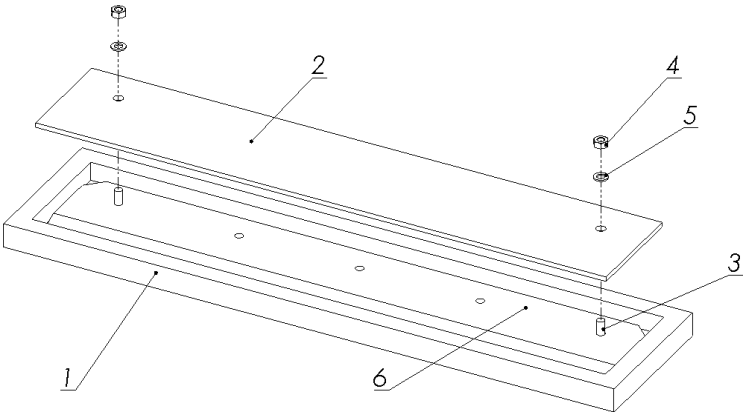


Figure 28d. Fixing the knife in the package

1. Packaging
2. Cover
3. Screw
4. Nut
5. Washer
6. Knife
7. Knife change holder

Installing the replacement knife (blade)

1. Set adjusting screws 1 (figure 29) so that their faces are sunk into the knife bar body.

Figure 29 B - the adjusting screw does not protrude below 2 the cutter bar - correct position.

Figure 29 A - the adjusting screw protrudes under 2 the cutter bar - **incorrect position, sink the screw into the knife body.**

WARNING

The assumed knife must be able to support its upper surface with the projection of the cutter bar. Failure to comply with this condition may result in a situation when the assumed knife is higher than removed, serious overloading and even damage to the machine.

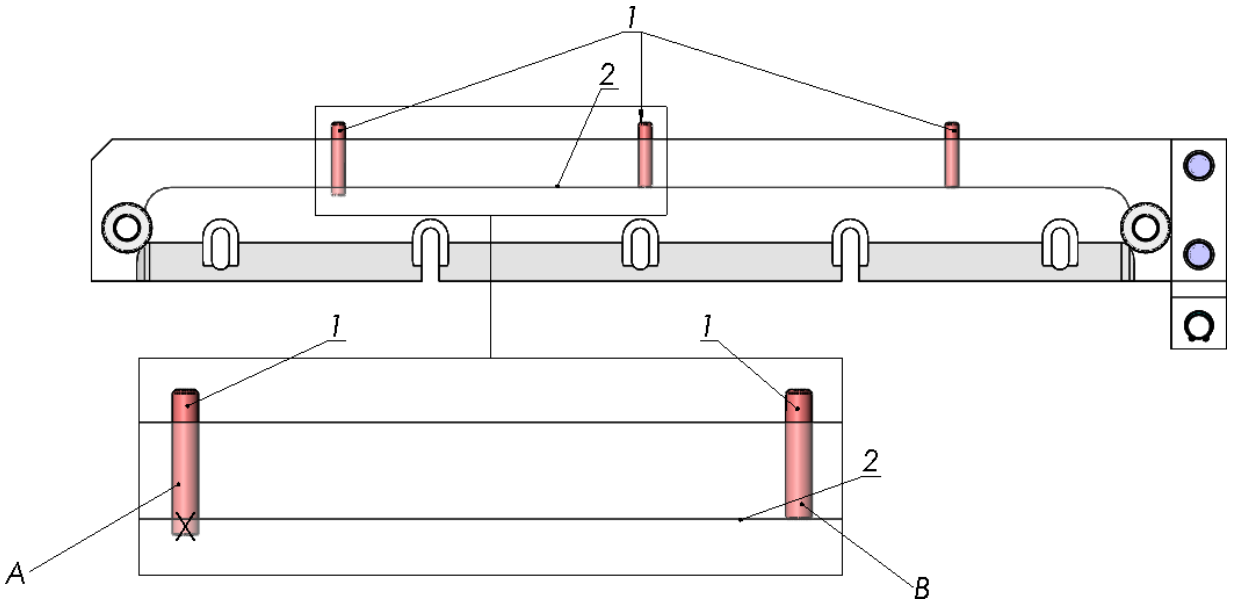


Figure 29. Position of adjustment screws.

2. Remove the knife from the packaging (Fig.28a - 28d)

Holding the transport handles 1, insert the knife 2 into the cutter so that the transport handles screwed into the knife hit the cutouts in the cutter bar 3. (fig.30)

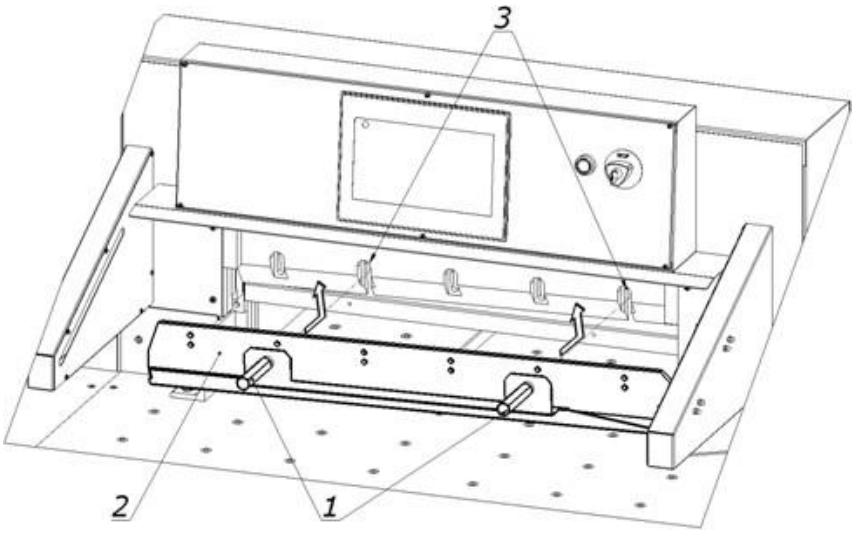


Figure 30.

3. Insert the knife so high that its upper surface will rest against the protrusion in the knife bar 2 (Fig. 29).

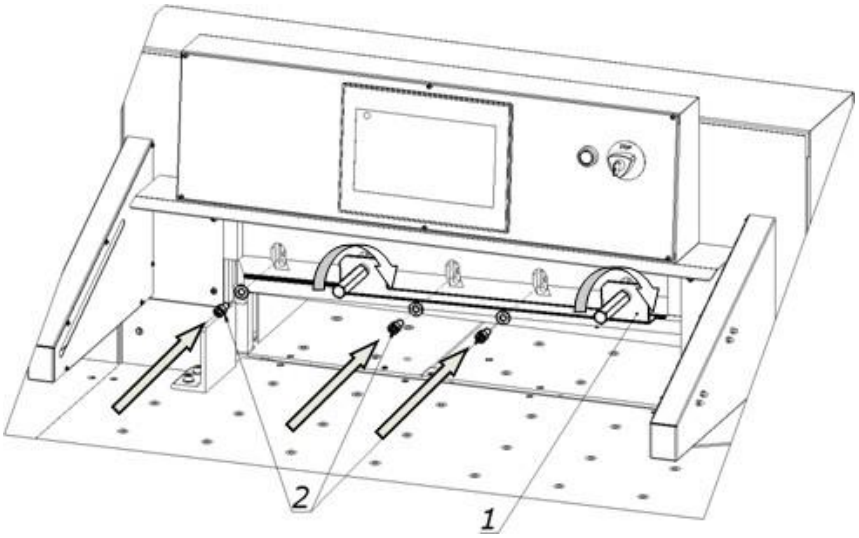


Figure 31.

4. Pre-attach the knife to the cutter bar by turning both transporting handles 1 to the right (fig. 31).

5. Install the fastening screws 2 (fig. 31).

6. Unscrew both transport lugs 1 (figure 31) and replace them with the mounting screws 1 and 2 (fig. 32).

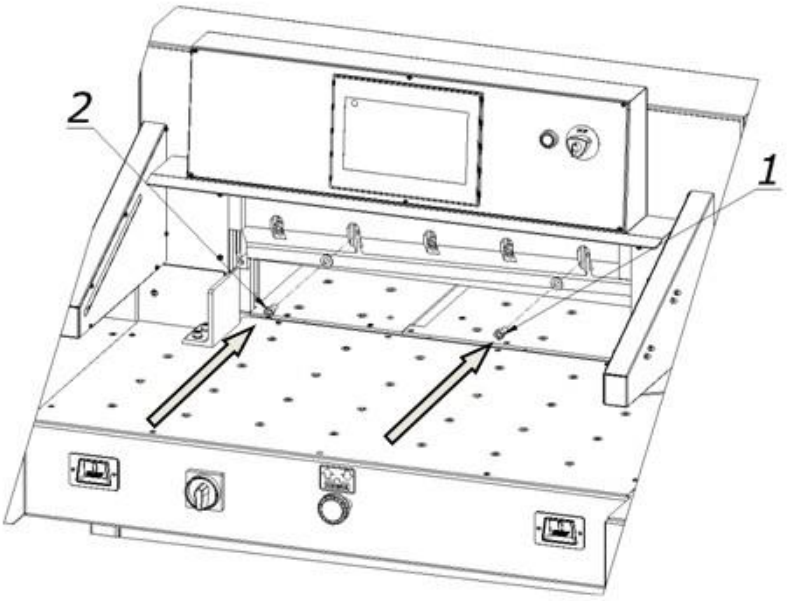


Figure 32.

7. Slightly unscrew the first screw on the left side of the clamping screw 2 (Fig. 31), taking care that the screw head does not protrude above the knife beam sliding plane.

8. Press the "Change knife" function on the programmer screen 4 (Fig.22)

9. Pressing the push buttons 2  (Fig. 33) at the same time, start the cutting cycle. The knife will stop in the lower position.

10. Switch off the power supply of the electrical system by turning the main switch knob 3 (fig. 33) to the "0" position

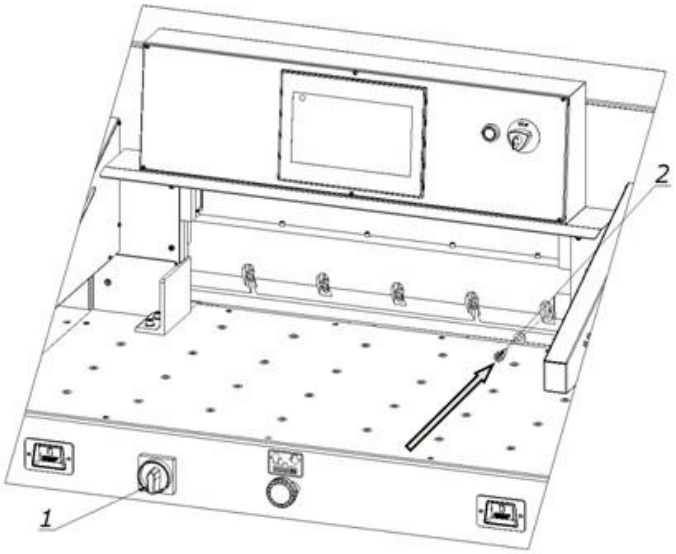


Figure 32a.

11. Screw in the bolt 2 lightly (fig.32a)

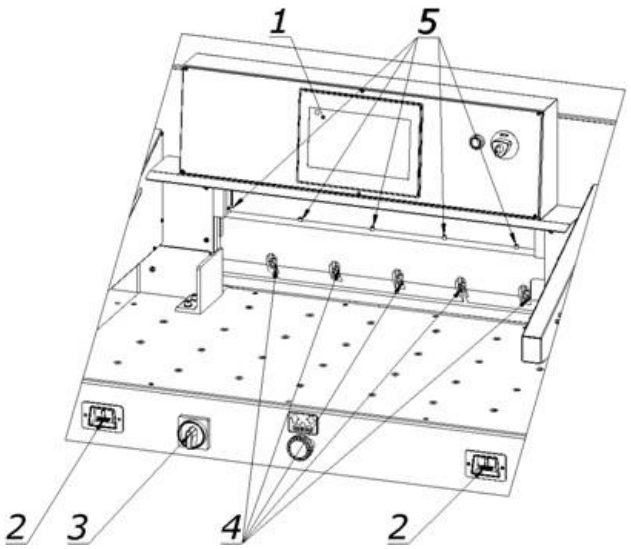


Figure 33.

12. Remove (loosen) the fixing screws 4 (fig.33) so that the knife falls under its own weight on the base bar with its entire length.

13. Tighten the adjustment screws 5 (fig. 33) as far as they will go, so that the blade of the knife is cut into the base bar, approx. 0.3 mm.

WARNING

Performing too deep cuts may result in shortened blade life!

14. Tighten the fixing screws 4 (figure 33)

15. Switch on the power supply of the electrical system by turning the main switch knob 3 (fig. 33) to position "I".

16. Turn off the "knife change" function on the programmer 1 (fig.33)

17. Press simultaneously the push buttons 2. The knife will return to its upper position.

18. Turn off the power supply of the electrical system by turning the main switch knob 3 (fig. 33) to the "0" position

19. Firmly tighten the first screw on the left side of the knife. 2 (Fig. 31).

20. Turn on the power supply of the electrical system by turning the knob of the main switch 3 (fig.33) to position "I"

21. Switch on the power supply to the control system by pressing the green push button 3 (fig.22).

22. Carry out a cutting test.

23. If the knife does not cut the pile to the last sheet, repeat steps 7.

24. Attach cover 2 with the screws 1 (fig.34)

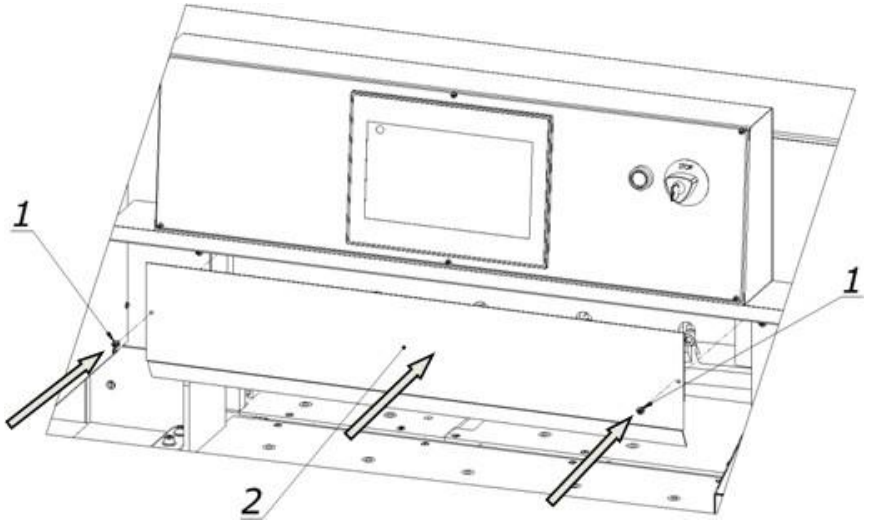


Figure 34

Rotating or replacing the cutter stick

Danger!

Risk of injury!

The cutting quality of the bottom sheets in a stack, and how quickly the blade dulls, depends on the cutting stick. Changing or rotating the stick is recommended after each change of the blade, or when bottom sheets are not completely cut.

WARNING

The channel between the tables into which the cutting stick is inserted must always be clean.

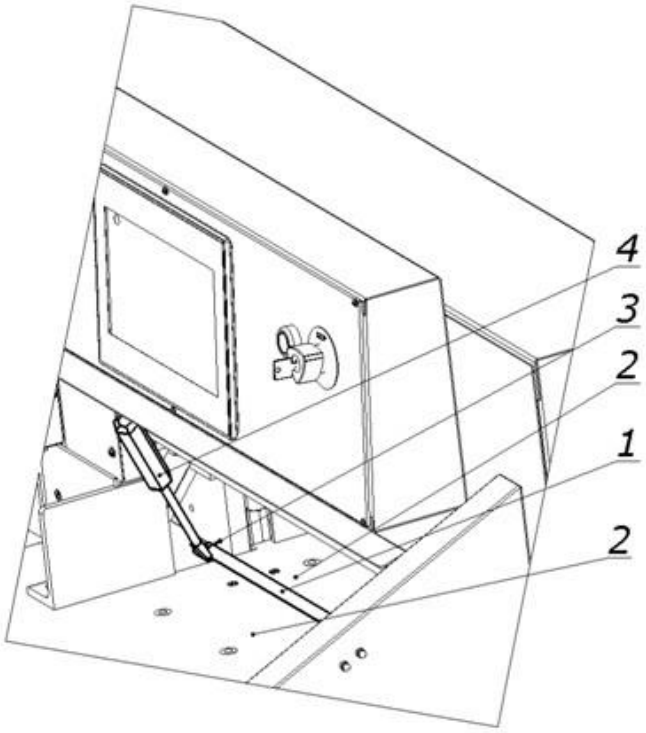


Figure 35. Removing the cutting stick

1. Cutting stick 1
2. Tables 2
3. Fixing pin
4. Screwdriver

Lift (lift) the cutting stick 1 with a screwdriver 4 (fig. 35) Rotate

or replace the cutting stick

8.2.3. Insert the replaced stick into the channel between the tables 2 and place it on the dowel 3 (Fig. 35)

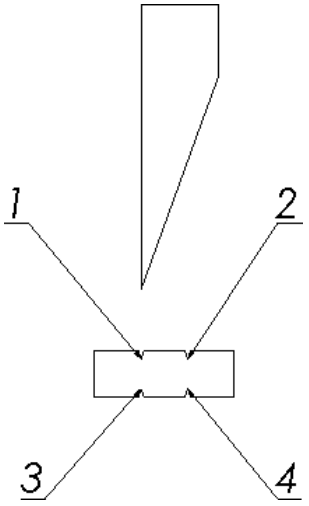


Figure 36. Diagram of using the cutting stick

Note: Rotation of the cutting stick in both planes gives the possibility of obtaining four lines of contact with the knife, marked in Figure 36 as I, 2, 3, 4.

False clamp

The false clamp can be installed in order to avoid creating marks by the clamp bar on sensitive material.

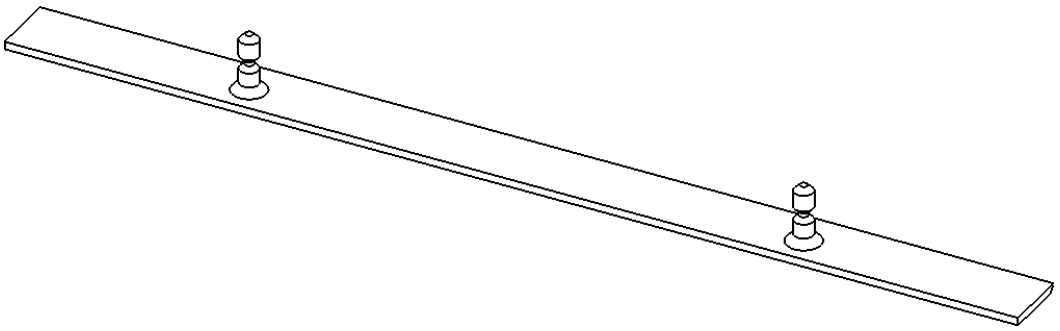


Figure 37. False clamp plate (insert)

The False Clamp insert (fig. 37) is attached under the front table in the position shown in figure 38.

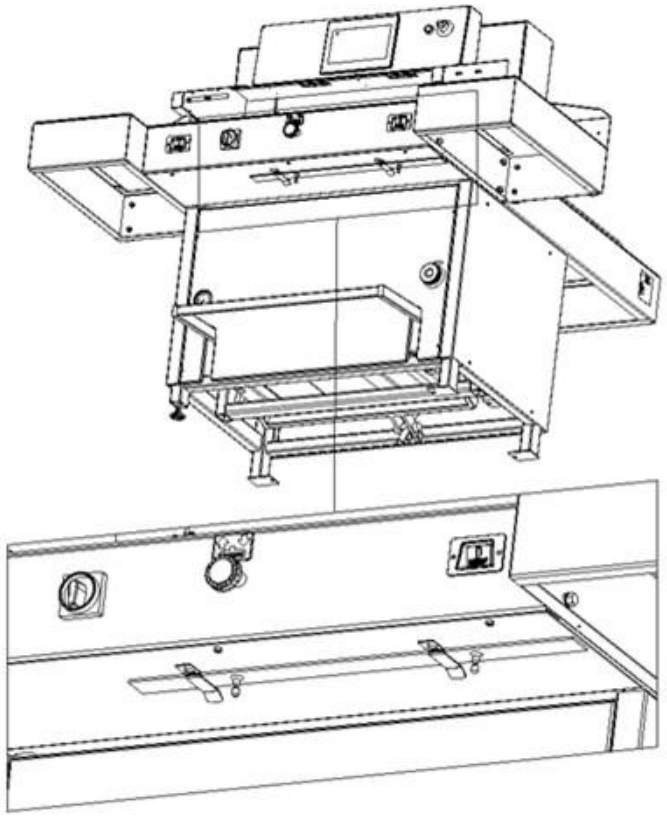


Figure 38. Placement of the insert before attachment in the pressure bar

Danger!

Risk of injury!

To install the False Clamp onto the clamping bar:

1. Pressing buttons 1 (fig. 39) cause the clamp bar 5 to move down.

2. When the clap bar 5 lowers by approx. 2 cm, revealing the holes for the screws 4, release the right button 1 (left button 1 still pressed)

3. Press the green button 2 to deactivate the control.

4. Insert the insert into the pressure bar so that the insert pins hit the holes in the beam and the insert adheres the entire surface to the bottom surface of the beam.

5. Use a 3-mm hexagonal wrench to screw in the 4 threaded screws firmly holes in the pressure bar, causing the insert to be blocked in the clamping beam.

6. Press green button 2 to activate the control system

7. Press buttons 1 to bring the pressure bar back up

Note: The removable insert must be attached under the front table when not in use! (Fig. 38).

NOTE!

- **If the False Clamp is not in place when not in use, the cutter program will act as if it is mounted in the clamping bar and the narrow cut (waste) will be greater.**
- **Mounting the insert into the pressure bar causes; the minimum narrow cut (waste) is 40mm (without insert 22mm), maximum stack height is 76mm (without 80mm insert).**

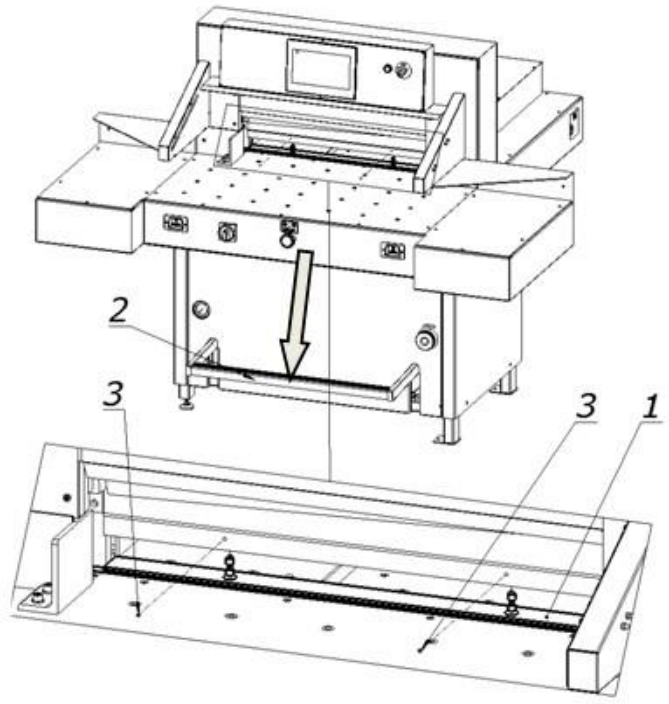
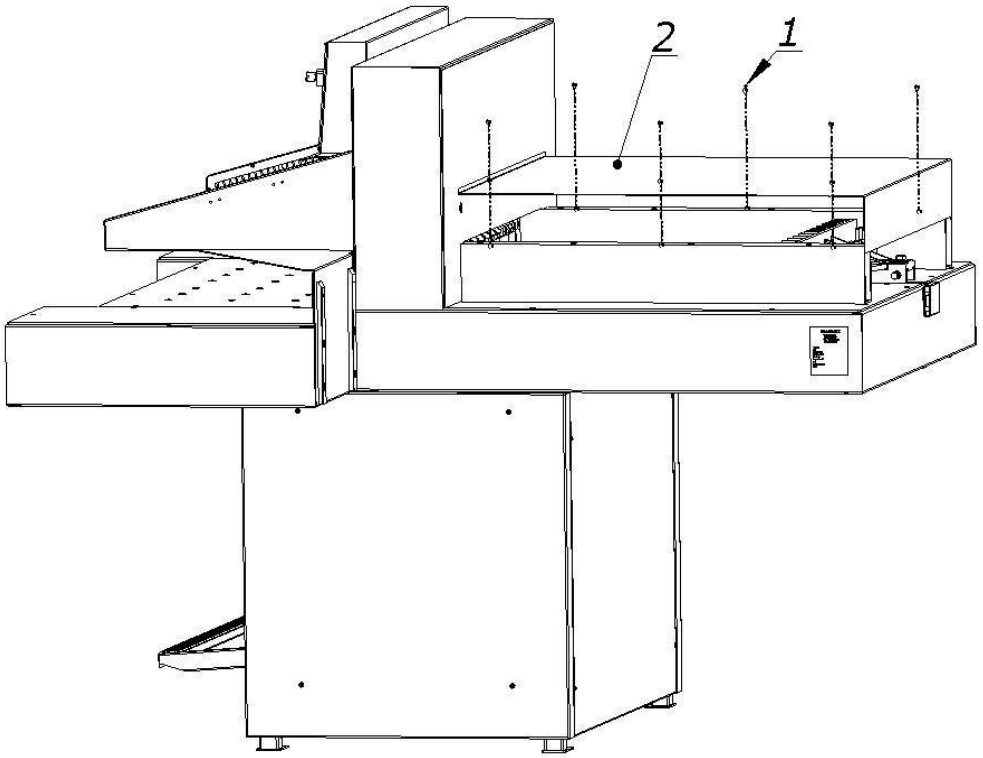


Figure 39. Operating elements used when mounting the insert into the pressure bar

Adjusting the parallelism of back gauge

To adjust the back gauge, use directions and drawings 40 and 41,



Drawing. 40 Method for removing the cover

To adjust back gauge:

unscrew the screws 1 (fig.40)

remove the cover 2 (fig.40) loosen

the screws 1 (fig.41) loosen the

nuts 2 (fig.41)

by turning the screws 3, place the approaching beam 4 (Fig. 41) at the right angle lock

the adjustment screws with 3 nuts 2 (fig.41)

firmly tighten the screws 1 (fig.41)

After the cutting attempt, repeat the adjustment until the parallel cutting is achieved.

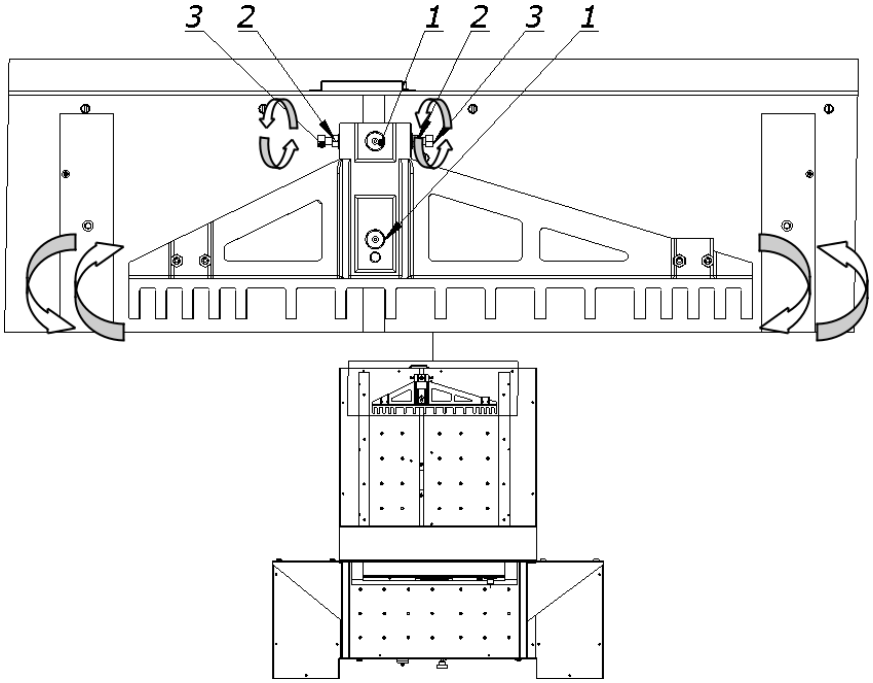


Figure 41. Adjusting elements of backguage

9. MAINTENANCE

Danger

Maintenance and lubrication work should be carried out after turning off the machine (main switch in position "0")

Daily maintenance

- Remove all waste from the cutter and the operator's working space.
- Regularly remove paper waste from the press and knife drive holes
- Air intakes for motors must be kept free of dust and debris.

Danger

Caution- fire hazard with insufficient ventilation.

the machine guards must be put back into place immediately after maintenance work has been completed!

Lubrication

The list of lubrication points is shown in Figures 44, 45, 46, 47, 48 and described in table 10. Access to lubrication points is possible after removing the covers shown in Figs. 42, 43, 46, 48. When lubricating the knife assembly, use the controls as when changing the knife (Chapter 8.1). In places requiring lubrication with grease, apply with a grease gun. It is enough to press the trigger of the lubricator 2-3 times.

The indicated points should be lubricated once a week!

Table 10. List of lubrication points of the cutter mechanisms

Mark	Cutter mechanism	Type of lubricant	Lubrication point	Figure
1	Knife	Grease	• Side surfaces of the guides (in contact with the knife body) • Internal surfaces of guides (in contact with rollers) • Side surfaces of the knife body	43,44
2	Backgu age	Oil	guide roller (apply a thin layer of oil.) • lead screw (apply a thin layer of grease)	44 45
3	Clamp	Grease	• the pressure beam slides • shaft bearings • the surface of the gears • tie rod - pin • gear bearings 2 (fig.47)	46 48 48 48 49

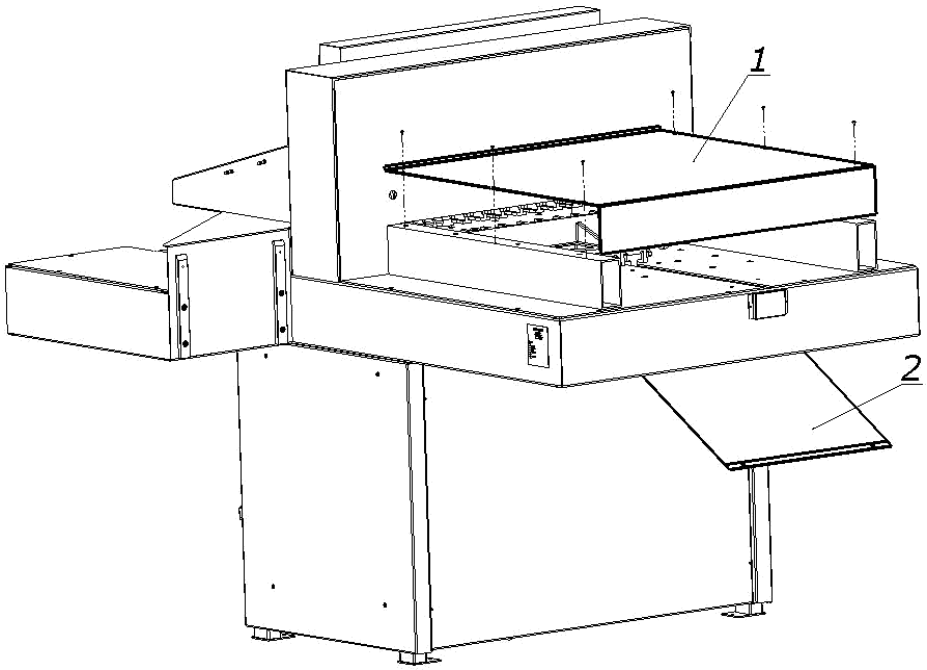


Figure 42b. Back gauge and lead screw cover

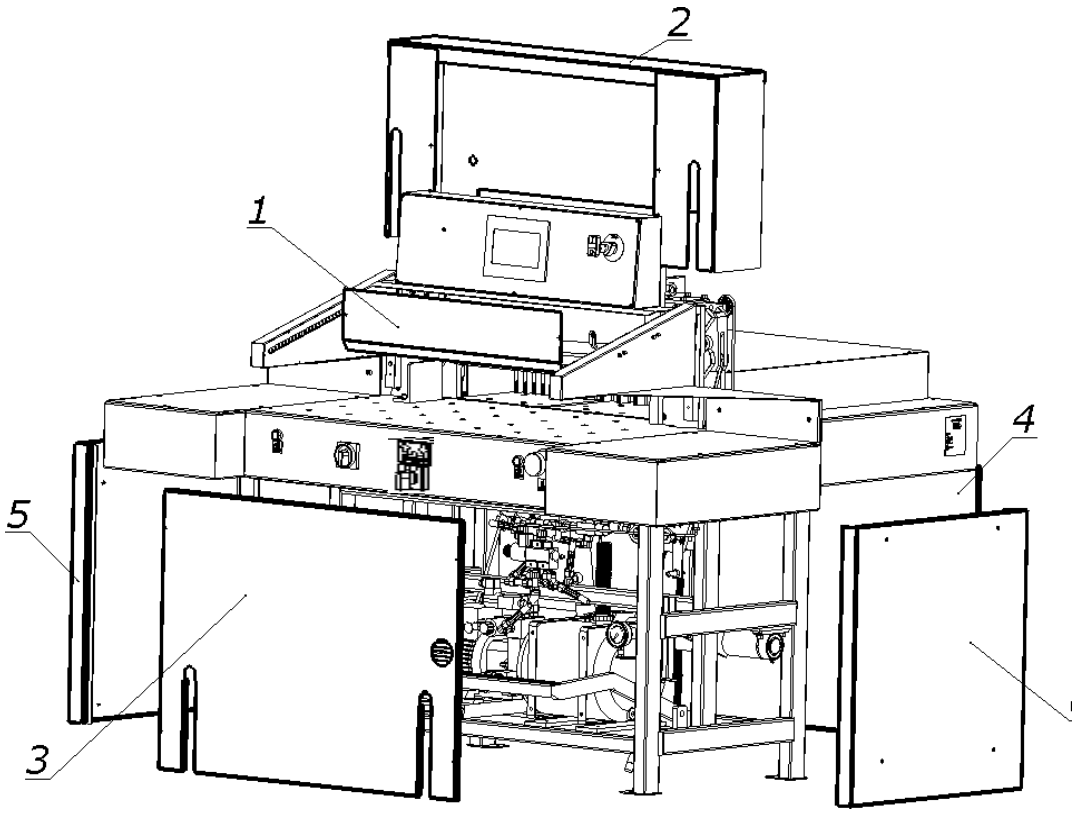


Figure 42b. Order of unscrewing the covers

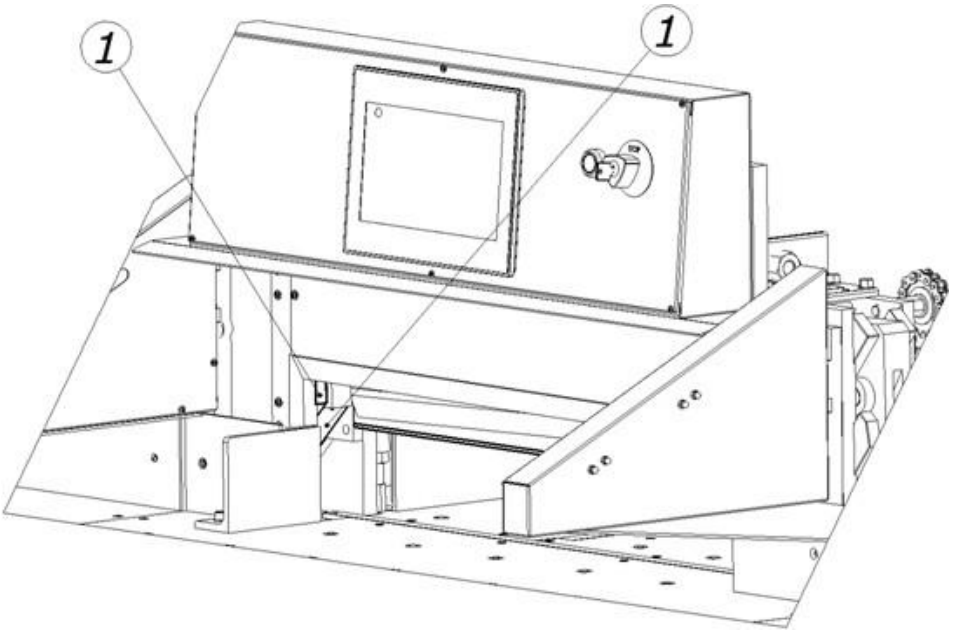


Figure 43 Lubrication locations of the knife assembly.

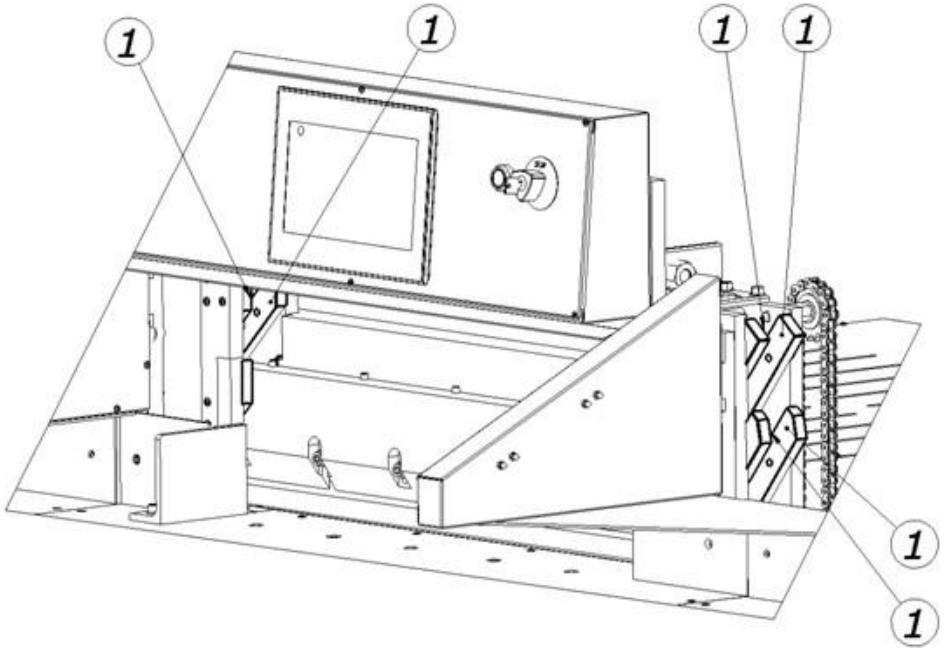


Figure 43 Lubrication locations of the knife assembly in lower position

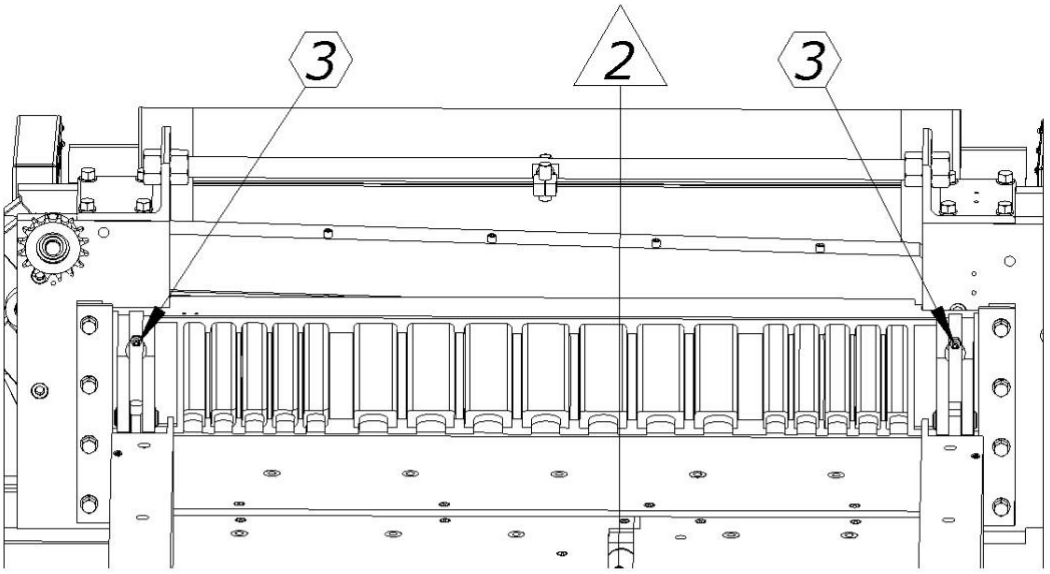


Figure 44. Lubrication space of the pressure beam (3), guide shaft of the backguage mechanism (2)

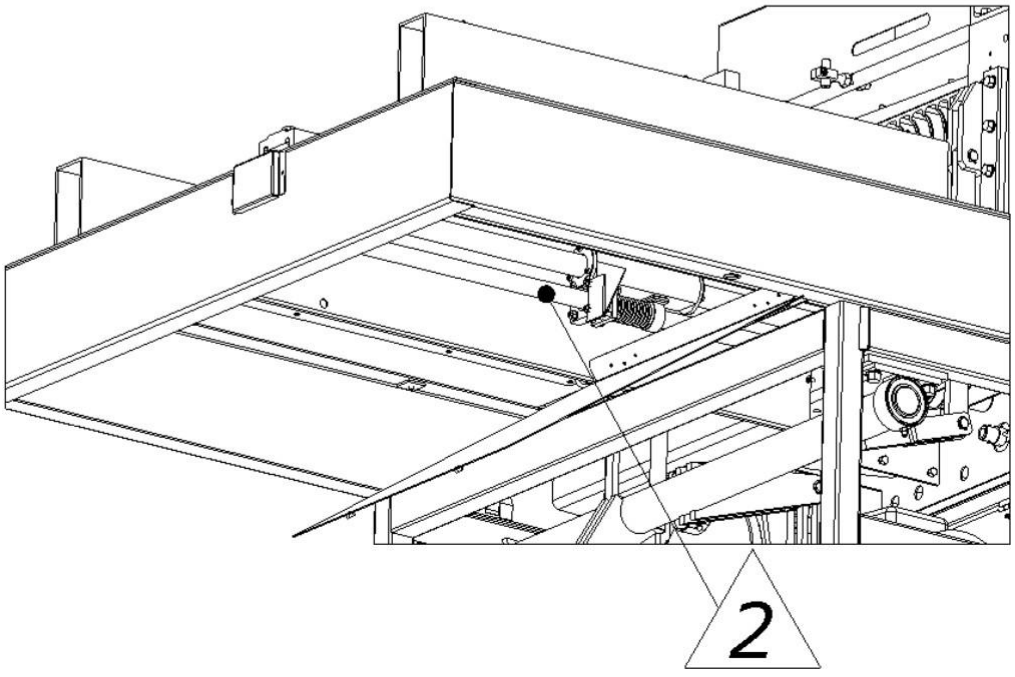
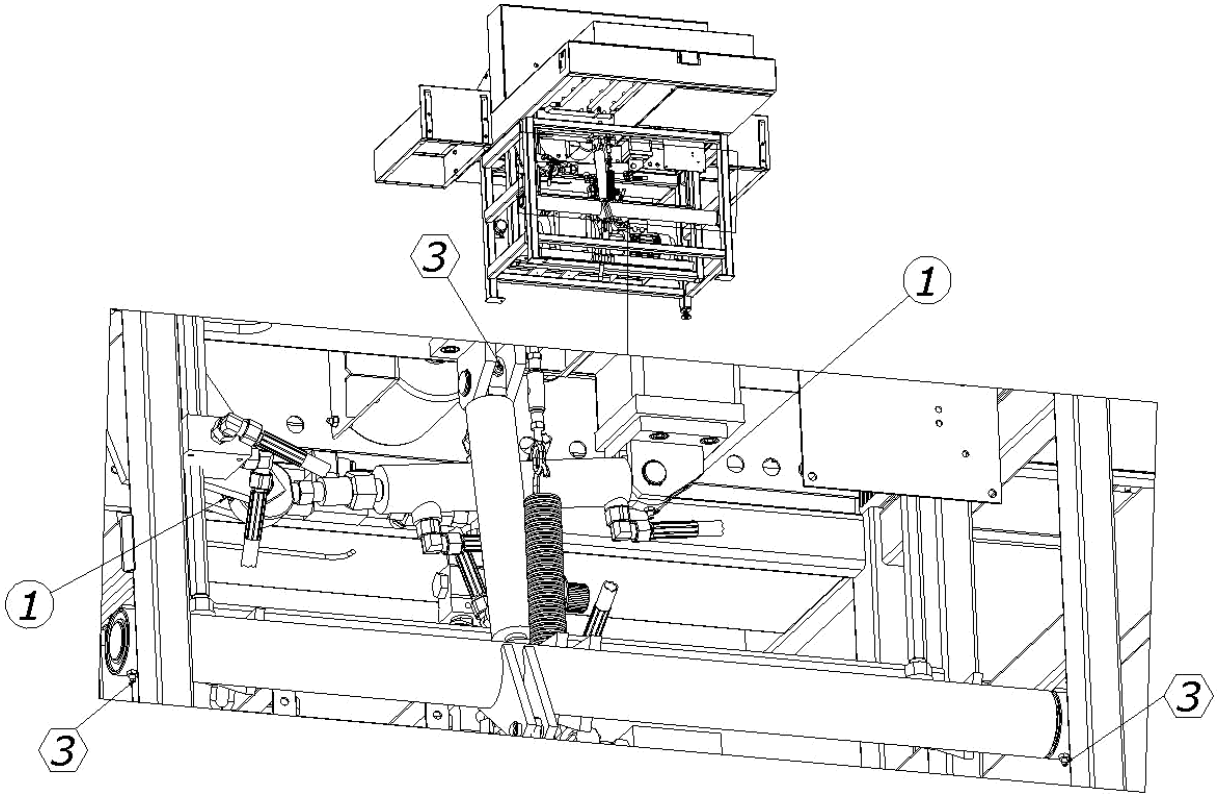


Figure 45. Grease location of the lead screw.



\Figure 46. Lubrication point of the knife actuator (1), pressure cylinder and shaft actuator (3)

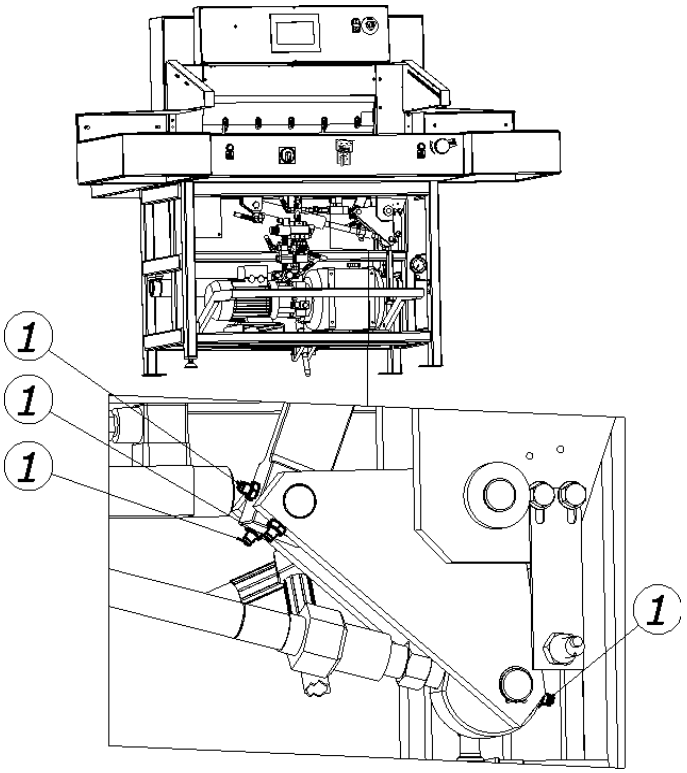


Figure.47. Grease location of clamp piston 3 and knife tie 1

Hydraulic system

The overflow valve is factory set to 110 bar and sealed.

This setting can be checked using a manometer (included in the aggregate) by connecting it to the manometer connection.

Unauthorized change of the pressure value is unacceptable and causes the warranty for the aggregate to be lost!

Working conditions of the aggregate

- ambient temperature of the unit from 5 degrees C to 30 degrees C,
- HV 46 hydraulic oil,
- dust free air,
- free air exchange for cooling,
- the hydraulic oil temperature must not exceed the specified value by the manufacturer of hydraulic oil,
- the aggregate is designed to work in a closed room, shielded against environmental influences, i.e. direct exposure to radiation solar, atmospheric precipitation,
- use in accordance with the principles of health and safety at work and fire regulations,
- the unit must be operated by a qualified and trained person staff

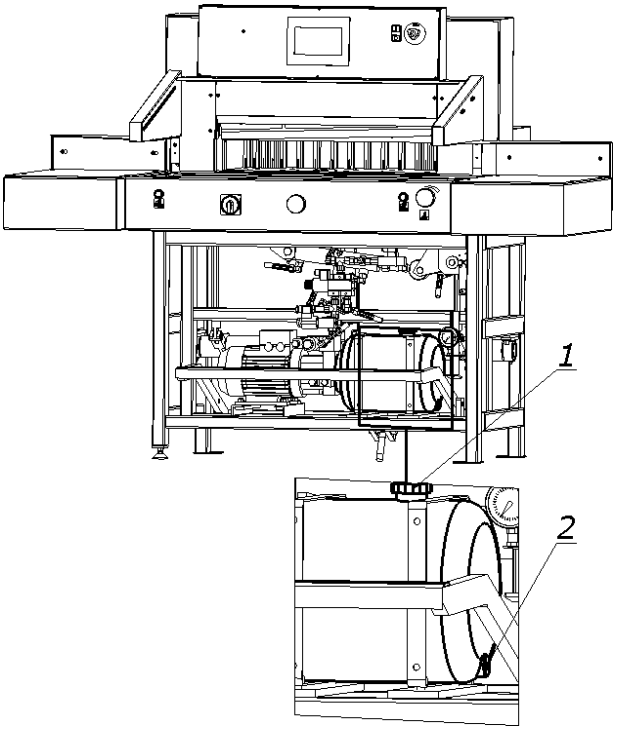


Figure 48. Oil change in hydraulic system

Danger!

Danger of burns due to hot oil!

Danger of splashing of hydraulic oil!

Note: According to the recommendations of the hydraulic power supply manufacturer, the oil in it should be replaced after a year of intensive work.
To change the oil, unscrew the drain plug 2 (fig. 48) located in the bottom of tank 1 (fig. 48).
Old oil should be drained while it is still warm.
Fresh oil should be poured after first screwing in the drain plug 2 through the filler opening 3. (Fig. 49)

Danger!

Risk of injury!

After lubrication: Using a cloth, completely remove any excess lubricant (grease, oil), in particular from the table surface on which the cutting material is laid and the work pieces in contact with the cut material, i.e the knife body and the pressure beam.

Inspections

General recommendations

- After each change, clean the machine (mainly from paper dust)
- Pay attention to the cleanliness of contacts of control elements (contactors, connectors)
- Check the screw connections of the cutter elements and if necessary, tighten the screws.

Checking hydraulic hoses

Check regularly that the hose is not damaged or frayed, and check the oil level.

Recommended test criteria for hydraulic hoses:

- Damage to the inner layer (scratches, cuts, cracks)
- Hose deformation
- Leaks (on the surface of the hose, fixing)

The condition of the hoses should be checked at least every 12 months.

Replacement of hoses is recommended at least every 6 years.

Knife degradation

The quality and accuracy of cutting depends primarily on the sharpness of the knife and the right angle of its blade.

Features of a blunt knife

- rough and uneven surface of the cut ream
- ticking the edge of the cut material
- inaccurate cutting
- increased formation of paper dust.

10. TROUBLE SHOOTING

Danger!

- Each fault carries a risk of injury to the operator or his assistant.
- If the cutter knife jams in the cut material during cutting, do not attempt to pull the material out from under the knife.
- Faults can be eliminated only by personnel with appropriate training.
- After completing the fault rectification, fit all covers and check that the individual protection devices are working properly.
- Performing repairs by unqualified training may result in the loss of the cutter warranty and releases the manufacturer and the machine supplier from liability for damage caused.

Determining the cause of the fault

Determine if the vulnerability affects the elements:

- electric,
- mechanical
- programmer

Basic procedures for correcting various types of faults

Electrical faults:

- check the compatibility of the direction the motor is turning
- check the fuses in the machine
- measure the voltage
- check that all connectors are tightened securely
- check if there are any failures at the same time in other machines in the plant.

Mechanical faults:

- look closely at all moving parts
- check if abnormal noises occur during operation
- check if the machine has been damaged, no cracks or iron filings appeared on it.
- check whether the machine does not produce unusual noises
- check the oil level
- check the oil for its condition and color
- make sure that there is no oil leak