Instruction manual
Disbudding machine
BM8

IMPORTANT
DO NOT DESTROY

- Please read and understand the SAFETY GUIDELINES carefully before handling the machine.
- Keep this instruction manual in a suitable place where it can be accessed at all times.

Original manual

NI0-999-18-008-C-A-4-FR

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1. PREFACE

By choosing to purchase a BM EMBALLAGE BM8 machine, you have opted for one of the best machines for disbudding mother vines.

Especially developed for nurseries, this model has been designed to be reliable and easy to use, with little maintenance.

In addition, BM EMBALLAGE's machines provide great operational adaptability and long service life.

2. SAFETY INSTRUCTIONS AND RECOMMENDATIONS

2.1. FOR WORKING IN COMPLETE SAFETY

This instruction manual has been created to provide you with important information concerning the use, maintenance and safety of your machine. It is important that you read and understand this chapter carefully before using your machine.

	The danger symbol is used as a safety label.

Please read the messages with this symbol carefully and follow the instructions.

The safety label in this manual is defined as follows:

 **WARNING**	PERSONAL DANGER	Indicates a dangerous situation, which could result in death or serious damage, if not avoided.
 **CAUTION**	POTENTIAL EQUIPMENT DAMAGE	Indicates a dangerous situation which could result in minor or moderate damage, if not avoided.

The following warning signs are attached to the machine:

 BEWARE of electrical components	Extremely dangerous electrical voltage with risk of electrocution. - Switch off the power supply before removing the casing for maintenance work. - Do not touch the control cabinet, the heating transformer or the transformer of the electronic box when the machine is on.
 BEWARE of the knives	Do not put your fingers or any other part of your body into the knife openings due to the presence of moving blades.

2.2. RISK PREVENTION

It is highly recommended that personnel working on the BM8 machine wear:

- **Protective gloves** due to the moving knives.

- **Personal ear protection** to prevent hearing problems and for the user's comfort.

REMINDER OF GENERAL SAFETY INSTRUCTIONS

In general, personnel must wear Personal Protective Equipment adapted to the work to be carried out.

REMINDER:

	Protective gloves must be worn by workers handling sharp or hot objects.
	**Personal ear protections** must be worn when using noisy machines.
	**Protective shoes** must be worn by workers exposed to passing work vehicles or machinery.

2.3. SAFETY GUIDELINES

WARNING!
Carefully read all safety instructions and signs and ensure you fully understand them before attempting to operate the machine or perform maintenance work.
You must always follow all safety guidelines.

WARNING!
The safety guidelines are explained in the section entitled "Working in complete safety" in this instruction manual. Additional safety guidelines may be specified in this manual.
Hazard signs are attached to the machine.

WARNING!
Before carrying out maintenance work:

- Switch off the power supply to the machine.
- Remove the mains plug.
- Disconnect the compressed air supply.

WARNING!
The knives can cause cuts.
Do not touch the knives even when the machine is stopped.

CAUTION!
The **average sound level** recorded for the BM8 machine is **77 dB(A).** Users are advised to comply with the risk prevention recommendations listed on the previous page.

2.4. HAZARD SIGNS

Hazard signs are attached to the machine.
The location and meaning of these safety symbols are explained below. Read the instructions on the hazard signs carefully and follow them.
Replace any missing or damaged labels.

2.5. INSTALLATION PRECAUTIONS

WARNING!
Never place power cables on the ground, since there is a risk that material handling vehicles, such as forklifts or stackers, may run over them. Stripped or broken cables can cause electrocution.

WARNING!
Stripped or broken cables can cause electrocution. Replace stripped or broken cables immediately.

CAUTION!
Check that the earthing plug is properly connected.

CAUTION!
Use a suitable power cable.

WARNING!
Never connect or disconnect a plug with wet hands. This can cause electrocution.

CAUTION!
Never move the machine by pulling it by the power cable. The cable will become exposed and break.

CAUTION!
Before moving the machine, make sure the power cable and the compressed air hose are disconnected and stored away.

2.6. INSTRUCTIONS FOR USE

CAUTION!

Always check the machine before starting work:

- Condition of the brushes,
- Sharpness of the knife blades,
- Condition of the drive rollers,
- Reverse control operating correctly.

Also check that there are no pieces of wood jammed between the mechanical parts.

The quality of the work and the lifespan of the parts depend on these checks.

CAUTION!

Never use wet wood: this will stop the machine from functioning properly.

CAUTION!

This machine has been designed for disbudding stock nurseries with a diameter of between 6mm and 14mm.

We cannot guarantee the quality of work on wood with a larger or smaller diameter than these criteria.

2.7. WARNINGS/CAUTIONS

WARNING!
Never put your fingers in contact with the knives. Moving blades can cause cuts.

WARNING!
Never dismantle safety components such as the cover or outlet funnel. The rotating parts in the machine may cause injury.

WARNING!
Never put your hands in the electrical box while the machine is running. Contact with the speed variators and electrical components may cause electrocution.

CAUTION!
In case of an electrical flashover, stop the machine immediately. Electrical flashovers can cause the machine to break.

CAUTION!
Never splash water on or near the machine.
Splashing water can cause electrocution or machine failure.

2.8. MAINTENANCE

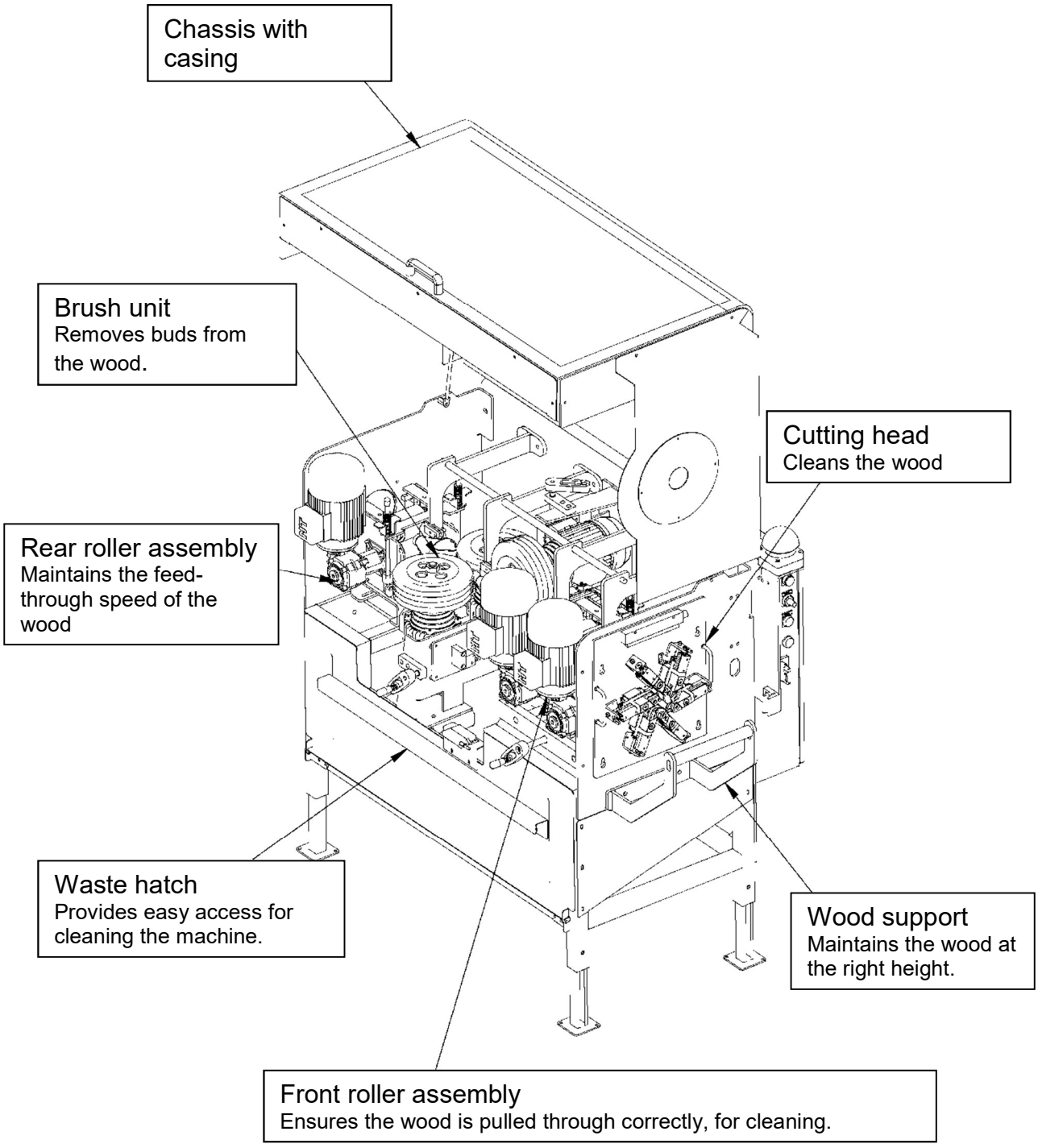
WARNING!
Removing and adjusting knife blades can cause cuts.
This must be carried out with care.
Gloves are required for this procedure.

WARNING!
Before carrying out maintenance work:
• Stop the machine.
• Remove the mains plug.
• Remove the compressed air supply hoses.
If the machine is not unplugged, electrocution and injuries may occur.

CAUTION!
Clean the machine with a blower or a clean fluff-free cloth.
Applying water or organic solvents may cause electrocution or burn out the electrical circuit.
Never use water or organic solvents.

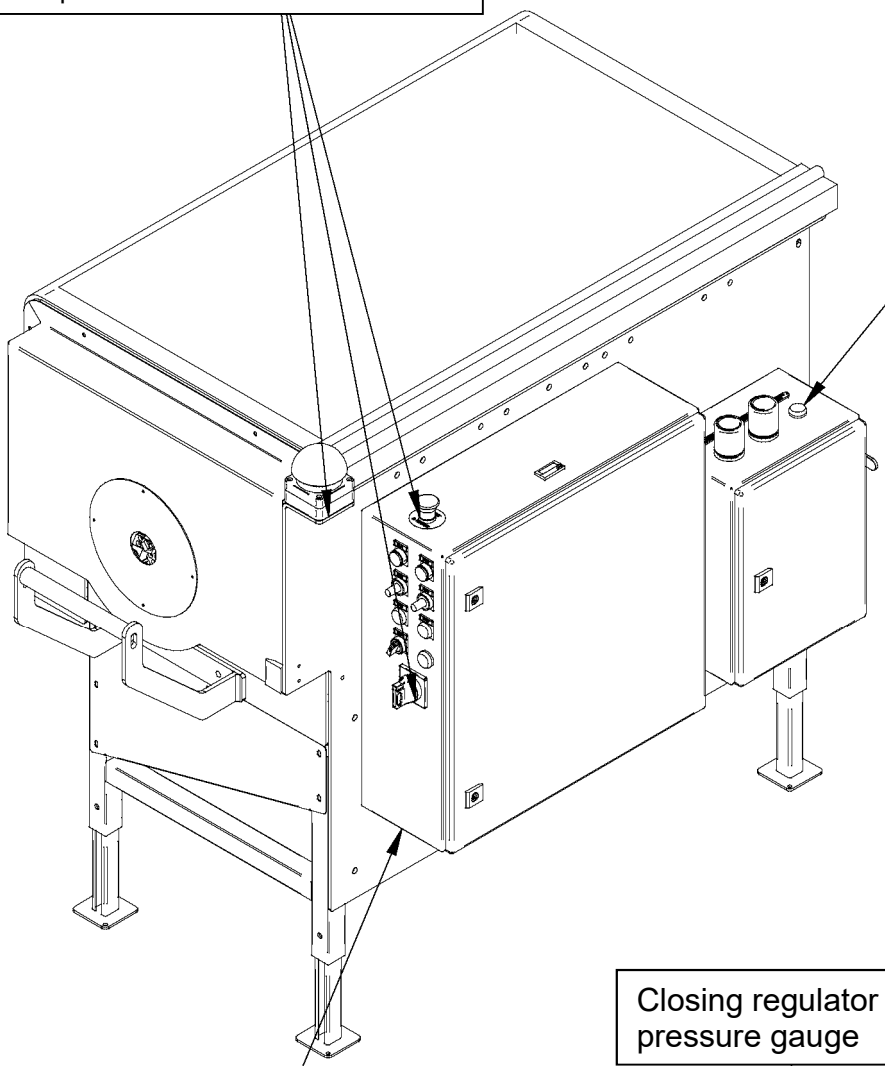
3. DESCRIPTION OF THE CONTROLS AND SETTINGS

3.1. GENERAL LAYOUT OF THE MACHINE

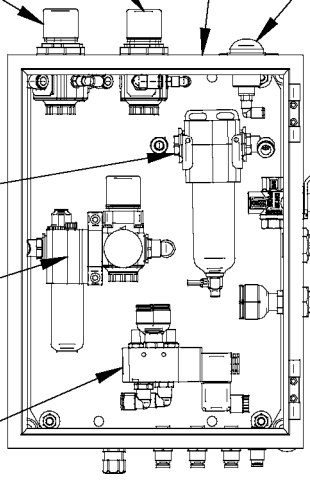


Control unit (panel)
Includes the main switch, the control buttons and the machine settings needed by the operator.

Pneumatic unit
Groups together the knife pressure controls, the slide-rail lubrication system and the air treatment.



Electrical box
Groups together all the electrical supplies and protections.



3.2. CONTROL PANEL

WARNING

There is a safety switch located on the cover of the machine. When the cover is open, the machine cannot be operated even if the start button is activated.

Power supply switch (1)
This is the machine's main switch.
When it is on "1", power is supplied to the machine.

Power indicator (2)
When this light is on, the machine is receiving electrical power.

Stop switch (3)
Use in an emergency or whenever the operation must be interrupted. Once pressed, the button is locked.
It stops the machine completely. However, unlike the main switch, the stop switch does not turn the power to the machine off completely. To resume work, the stop switch must be unlocked. When the machine is not in use, press this switch as a safety precaution.

WARNING

If the STOP button is not locked, the machine can resume operating at any time.

Start switch (4)
This push-button starts the motors and activates the wood detection system.

Stop switch (5)
This push-button stops the motors and deactivates the wood detection system.

Brush speed adjustment (6)
The speed of the brushes is controlled with this setting. The speed can be adjusted according to the result obtained.

Adjusting the speed of the drive rollers (7)
The speed of the rollers is controlled with this setting. The speed can be adjusted according to the type of wood being processed: the straighter the wood, the faster the speed.

Brush failure indicator (8)
This light indicates that one of the brush motors is overloading. When this light comes on, the machine stops automatically.

Roller defect indicator (9)
This light indicates that one of the drive roller motors is overloading. When this light comes on, the machine stops automatically.

Selector switch 0-1 (10)

This button allows you to activate or deactivate the mechanical cleaning of the knives

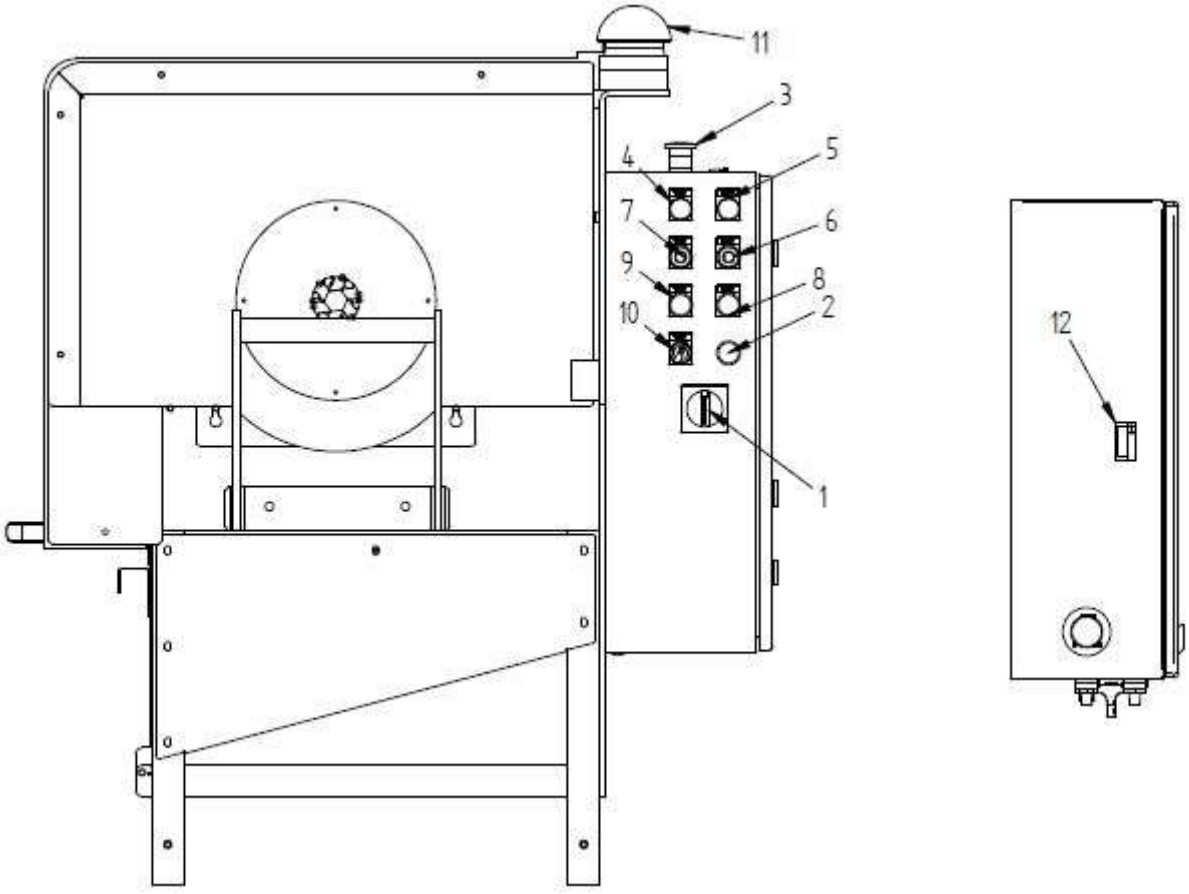
- When the button is set to 0 the cleaning function is deactivated.
- When the button is set to 1 the cleaning process by successive opening and closing of the knives is activated automatically when 3 pieces of wood have gone through the machine. Or by manual operation using the manual switch (11).

Manual switch (11)

When the wood has not been inserted, this control closes the knives and activates the blowers simultaneously (to clean the heads).
When the wood has been inserted, a quick push on this control opens the knives for 0.5sec without stopping the wood from being drawn through (to be used when the wood is blocked).
When the wood has been inserted keeping this control pressed down will open the knives, stop the brushes and activate the reverse movement of the drive rollers (to be used when branches get into the knives). The forward movement of the wood will resume as soon as the control is released.

Counter (12)

Counts the number of pieces of wood longer than 1 metre that have passed through the machine. The counter has an integrated reset button.



3.3. DISBUDDING BRUSHES

WARNING
Before adjusting the brushes:

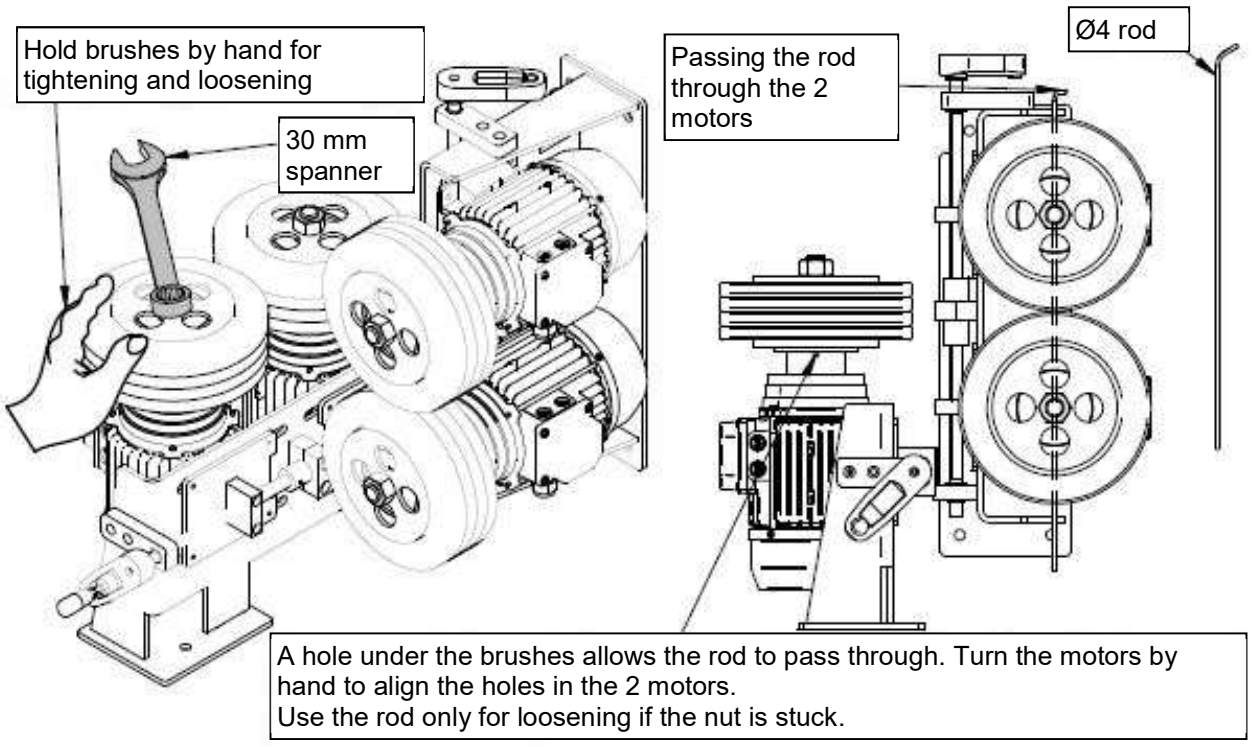
- Lock out the stop switch (1)
- Turn off the machine (2)

WARNING
When the cover is open, the safety cut-off switch prevents the machine from starting.

1) Removing the brushes

To remove the brushes, use the 30mm spanner supplied with the machine.

- Grip the brush unit by hand and loosen the M20 nut with the 30mm spanner. If the nut is too tight, use the Ø4 rod which allows you to block 2 motors simultaneously.
- Remove the M20 nut and the locking washer, then the brush.



2) Mounting the brushes

- Put the washer back in place with the nut and tighten with the 30mm spanner, while holding the brush stable with your hand.

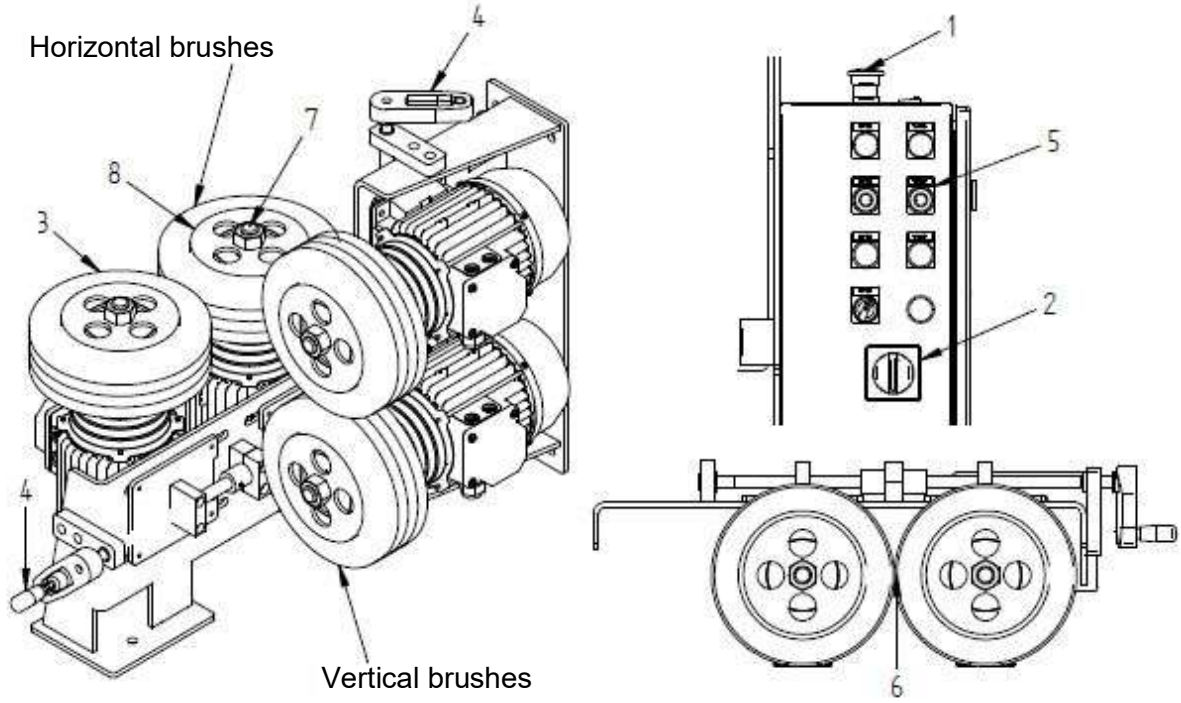
Do not use the Ø4 rod to tighten the nut.

3) Adjusting the brushes

- The brush spacing setting (3) should be adjusted according to the result obtained.

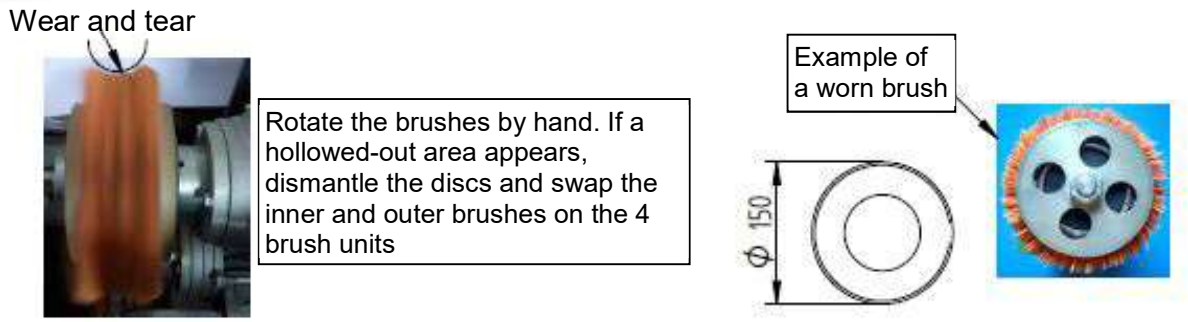
- If you do not know the appropriate settings for your wood, set the brush spacing (6) to 5mm and your speed button (5) to 7.
- If the surface of the wood is damaged by the brushing, move the brushes further apart using the cranks (4) and/or slow down the speed using the button (5).
- If the buds are not brushed properly, the speed should be increased using the speed button (5) and/or the brushes should be moved closer together using the cranks (4).

The range of the brush-spacing adjustment (6) is 5 to 10mm.
The horizontal and vertical brushes must be set identically.



4) <u>Wear and tear</u>

- With use, the brushes will experience wear and tear in the form of a hollowed-out area (this hollowed-out area can be seen by turning the brushes manually). In this case, you need to replace the brushes.
- The maximum brush wear is reached when the diameter is 150mm.



3.4. DRIVE ROLLERS

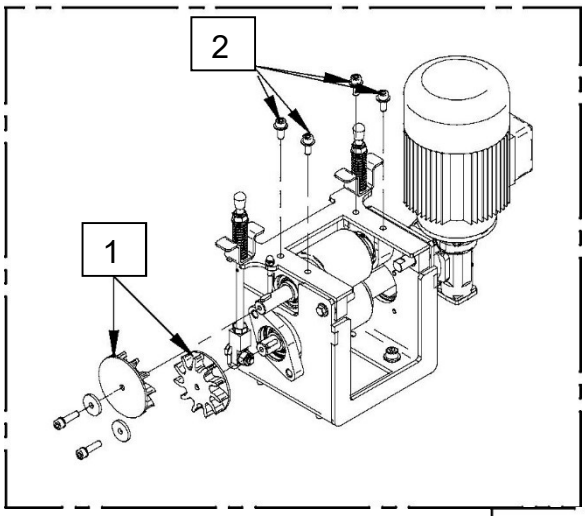
WARNING
Before adjusting the rollers:

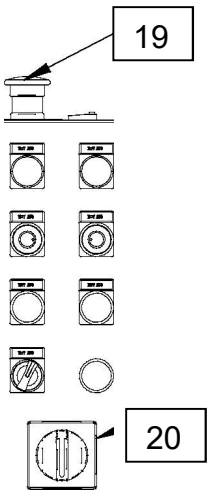
- Lock out the stop switch (19)
- Turn off the machine (20)

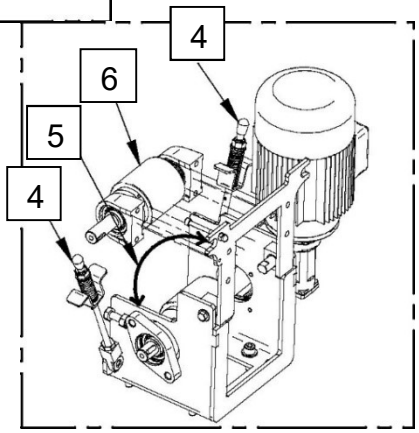
WARNING
When the cover is open, the safety cut-off switch prevents the machine from starting.

1) <u>Dismantling the rollers</u>

- Remove the 2 gears (1).
- Unscrew the 4 screws that hold the upper roller (2) in place.
- Unhook the springs (4), lift up the hinged part (5), and remove the upper roller (6).
- Unscrew the M10 screw at the end of the gear reducer (7) and slide the whole pin backward (8).
- On the top roller, loosen the 2 locking screws on the bearing (9) on the gear side and slide the bearing cage (10) off the pin.
- Loosen the 3 screws (11) holding the washer (12).
- Take the roller (13) in two hands and strike the steel pin on a soft surface (14) to make the rubber roller and the washer slide off.
- Proceed in the same way for the bottom roller, always take the roller out via the gear side.







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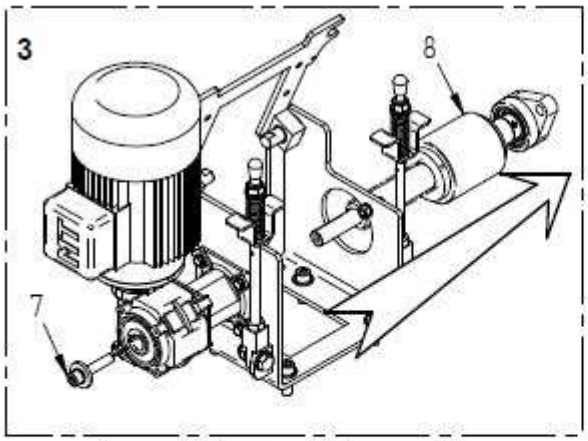
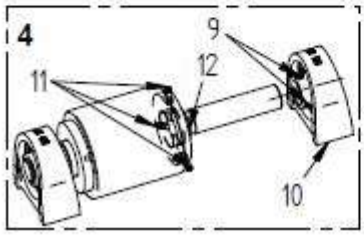
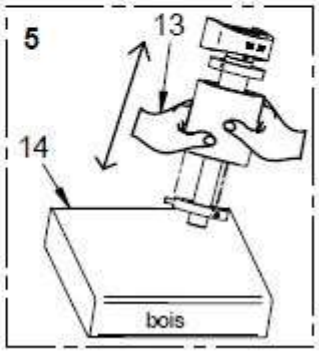
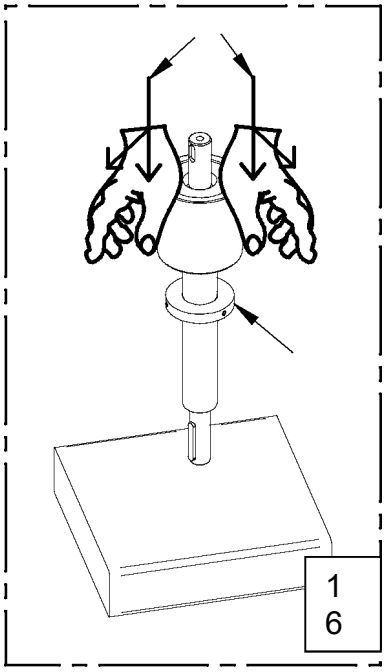


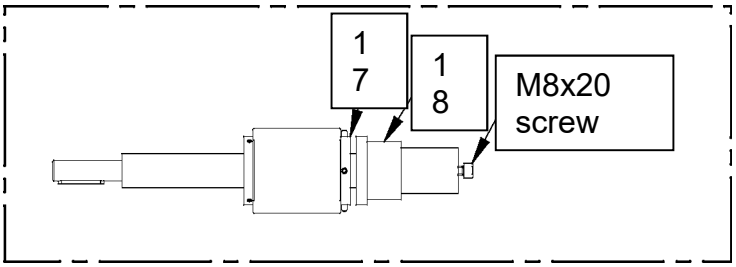




2) Mounting the rollers

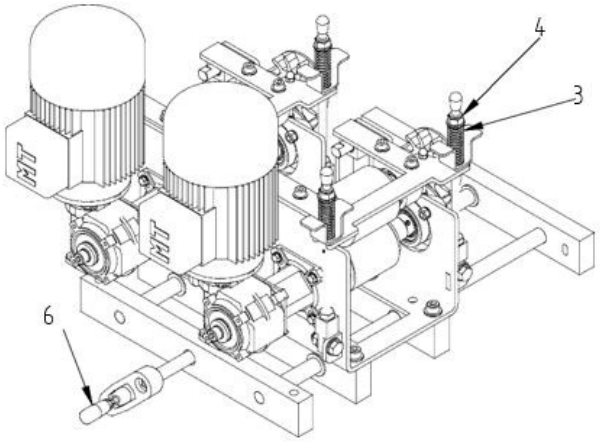
- Place the roller on the pin and apply pressure with the palms of your hands, spreading the rubber outwards (15), until it comes into contact with the washer (16).
- Proceed in the same way for the two pins.
- Position the washer (17) and put the compression tool (18) in. Using the M8x20 screw (one of the upper roller locking screws) compress the roller until the tool can go no further.
- Screw in the 3 washer locking screws (11) as far as they will go without tightening them.
- Remove the compression tool and lock the 3 washer locking screws.
- Proceed in the same way for the two pins. **There is a specific tool for each pin.**

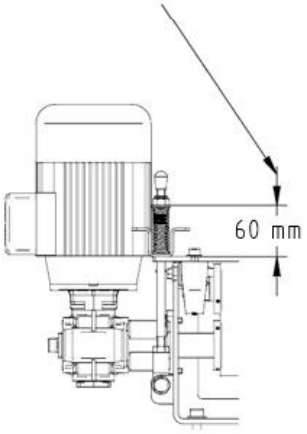




3) Adjusting the rollers

- Adjusting the pressure of the rollers should ensure that the wood is properly fed through. - If the wood slips, increase the pressure of the springs (3) using the nut (4) - If the wood is crushed, the pressure of the springs (3) should be decreased using the nut (4).
- Adjusting the speed according to the quality of the wood.
    - If the wood is straight with spread-out branches, you can increase the speed using the speed button (21- see page 16).
    - If the wood is twisted and the branches are close together, the speed should be reduced using the button (21- see page 16).
- To increase the lifespan of the rollers, the entire front roller assembly can be moved sideways with the crank (6). This should be done regularly once or twice a day.





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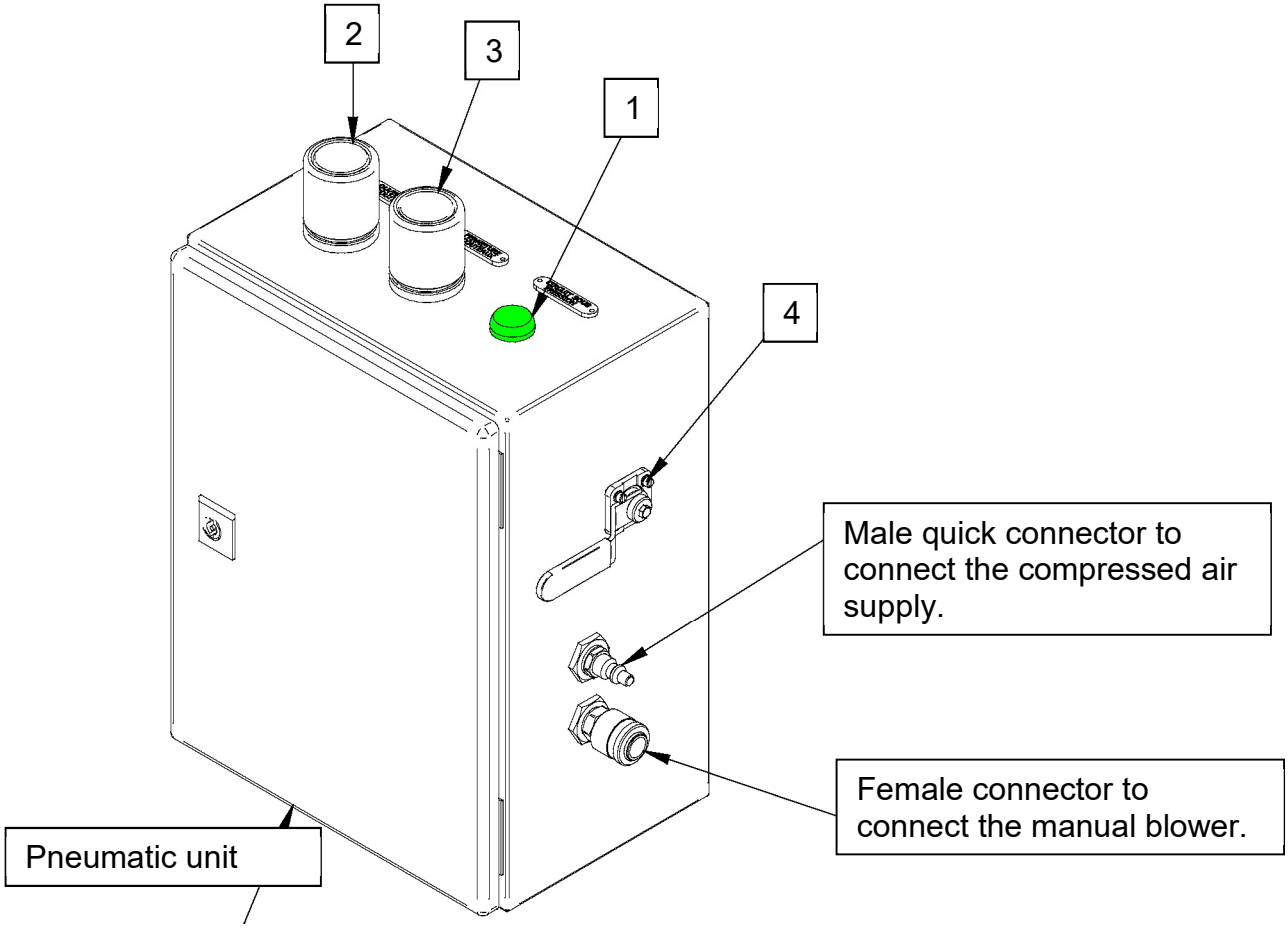
3.5. KNIVES

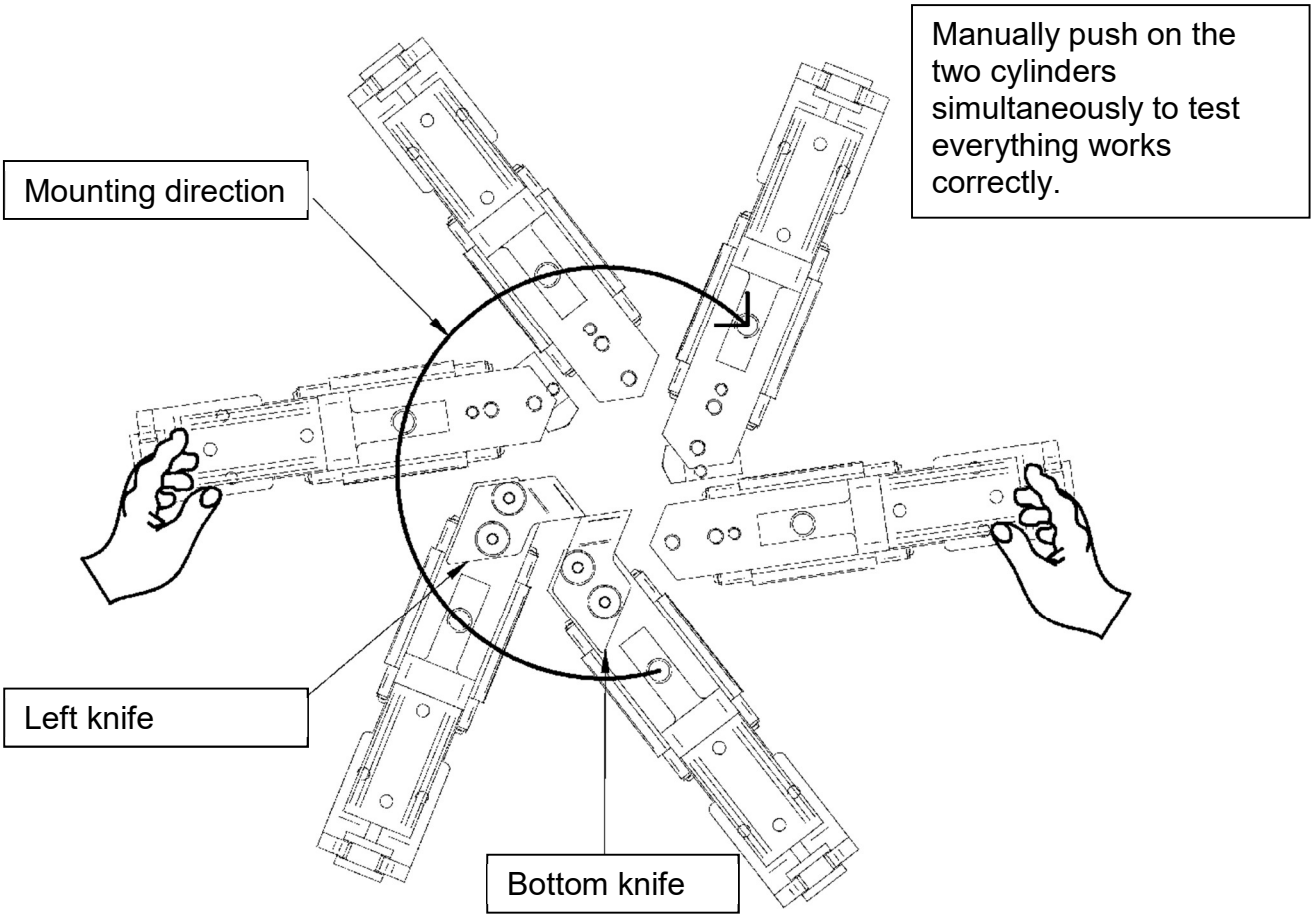
The quality of work performed by the knives depends on:
The pneumatic pressure (1),
The mounting (2-3),
The sharpness (4-5),
The closing delay (6),
The lubrication of the slide rails (7),
The blowing
The cleaning (8).

Setting the pneumatic pressure
The green **circuit-pressure light** (1) indicates that the air circuit is pressured up.
The circuit can be cleared by pushing the lever (4).
The **knife opening** pressure gauge (2) indicates the pressure required to open the knives. It should be between 3 and 4 bars and does not require any further adjustment.
The **knife closing** pressure gauge (3) indicates the pressure required to close the knives. The pressure setting range is 1 bar to 2.5 bars.
If the wood is damaged by the knives, the pressure should be lowered using the adjustable pressure gauge (3).
If the buds are not sufficiently shaved off, the pressure should be increased using the adjustable pressure gauge (3).
To increase the lifespan and ensure consistent work, the knives should be sharpened every week.



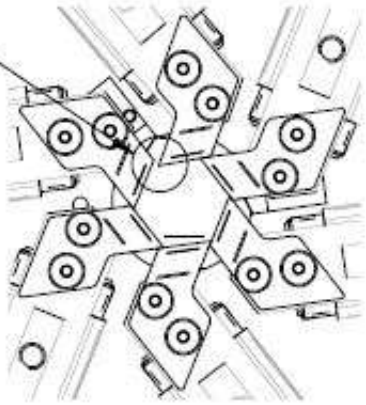
Mounting the rear knives

Turn on the air pressure (the green light on the unit should be lit up).
Start by installing the bottom knife and tighten the screws, then install the left one. Before tightening the screws, make sure that the left knife makes slight contact with the bottom one and then continue in the same way a clockwise direction.
"If you cannot get two knives to make contact, follow the instructions on page 18."
Then, release the compressed air using the lever on the pneumatic unit (the green light on the unit should no longer be lit up). Move the knives manually by pushing on 2 opposite cylinders to check that there is no sticking point on the knife assembly. Adjust if necessary. Then, put air pressure back in the machine.

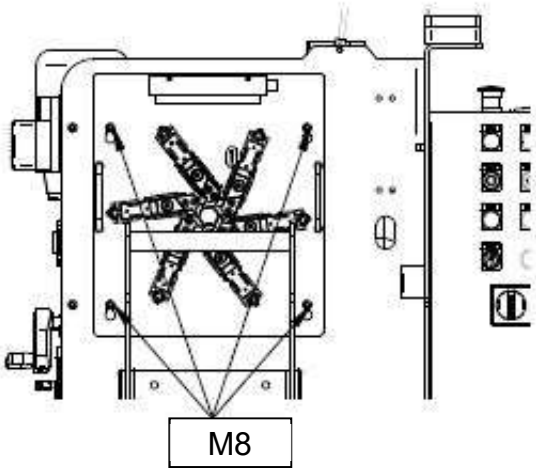


If you cannot get two knives to make contact, follow the instructions below.

Poor contact



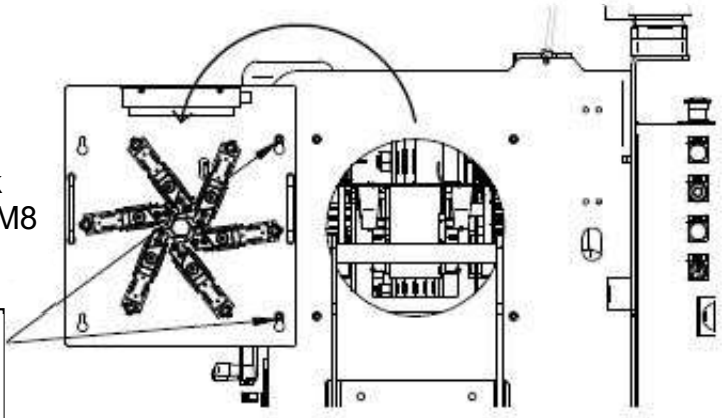
"This configuration can occur when a knife and a branch collide and cause the slide to move."



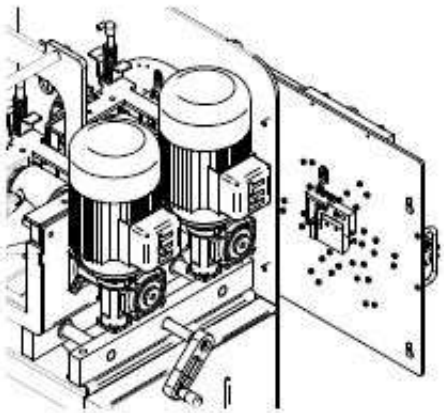
M8

- Loosen the 4 M8 screws holding the head, disconnect the 4 air hoses and unscrew the sensor connector.

- Using the handles, lift and unhook the head. Then position it on the 2 M8 screws located on the left.



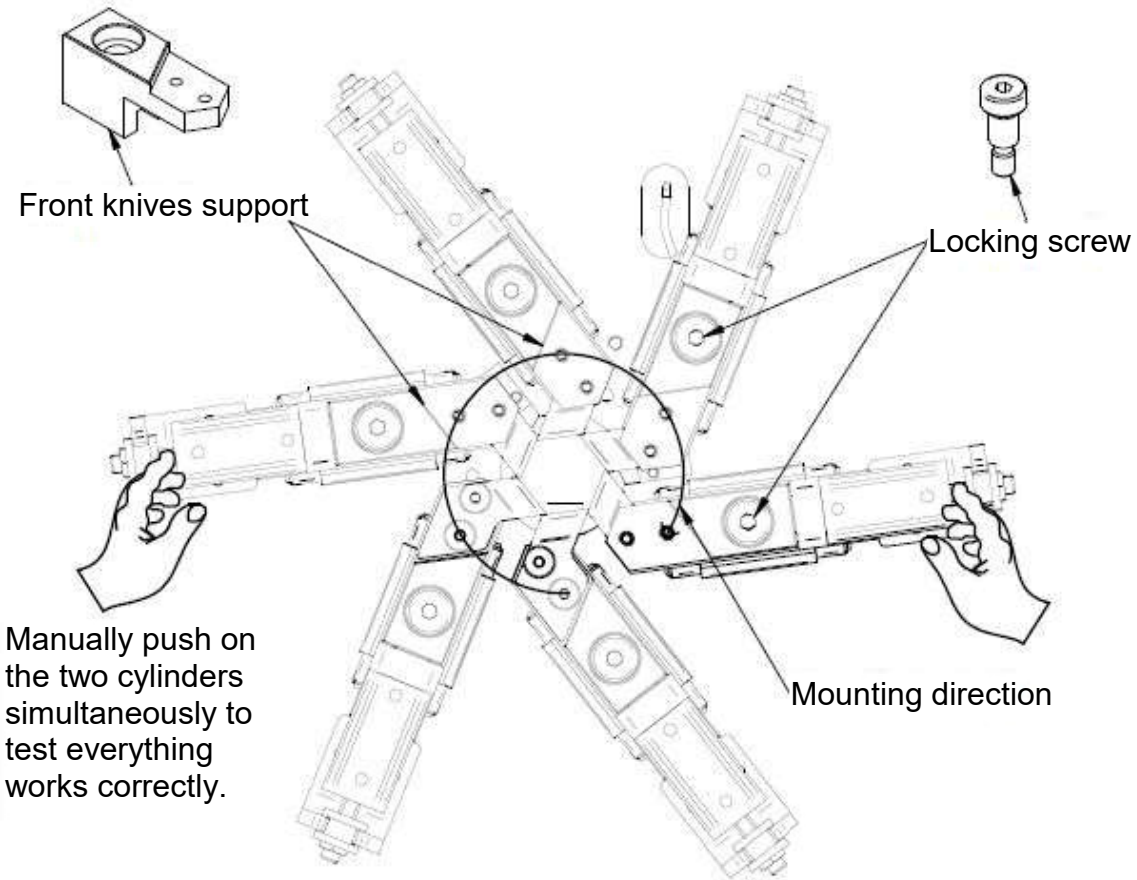
M8 screw used as a hook to put the head in the maintenance position



-This position gives you access to the screw fixing the slides at the back of the head.
-loosen the 4 screws that hold the slide in question, manipulate the slide so that the knife makes slight contact and, while maintaining contact, retighten the screws.
-Put the head back in the working position.
-Then carry out the manual check as described on page 20.

Mounting the front knives

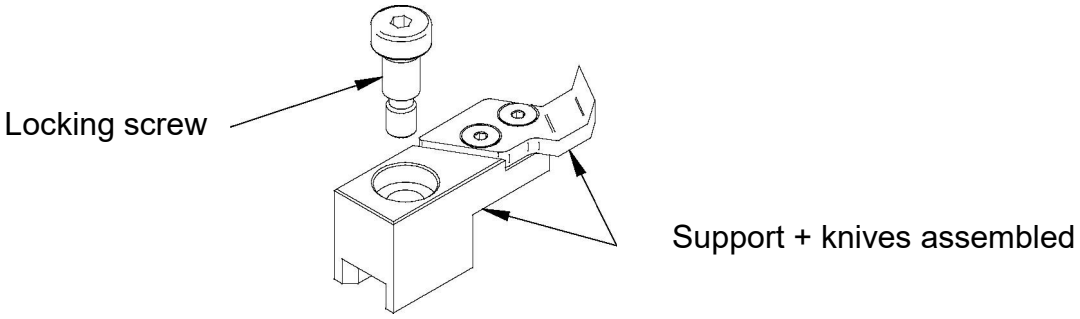
Turn on the air pressure (the green light on the unit should be lit up).
Mount the 6 front knife supports with the locking screws **- do not tighten the locking screws at first.**
Start by mounting the bottom knife and tighten the screws, then the left knife and continue in the same way clockwise, tightening the screws as you go along without letting the knives come into contact with each other.
Next, tighten the lower knife support locking screw, then the left one. Before tightening the screw, make sure that the knife makes slight contact with the bottom one. Continue in the same way in a clockwise direction.
Release the compressed air using the lever on the pneumatic unit (the green light on the unit should no longer be lit up). Move the knives manually by pushing on 2 opposite cylinders to check that there is no sticking point on the knife assembly. Adjust if necessary. Then, put air pressure back in the machine.



3.6. SHARPENING THE REAR KNIVES

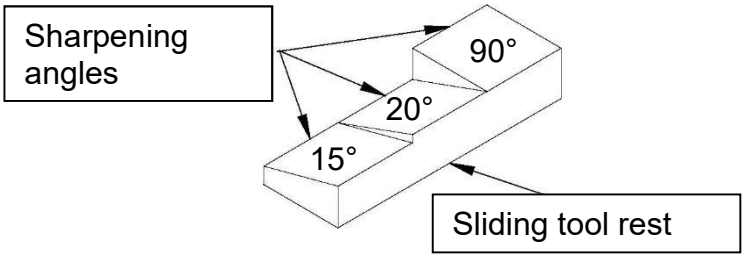
Turn on the air pressure (the green light on the unit should be lit up).

- Remove the front knife supports, leaving the knives assembled, and set them aside.

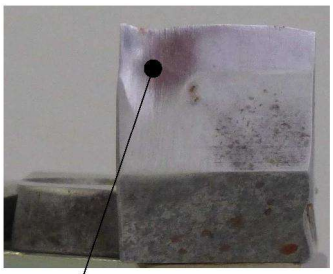


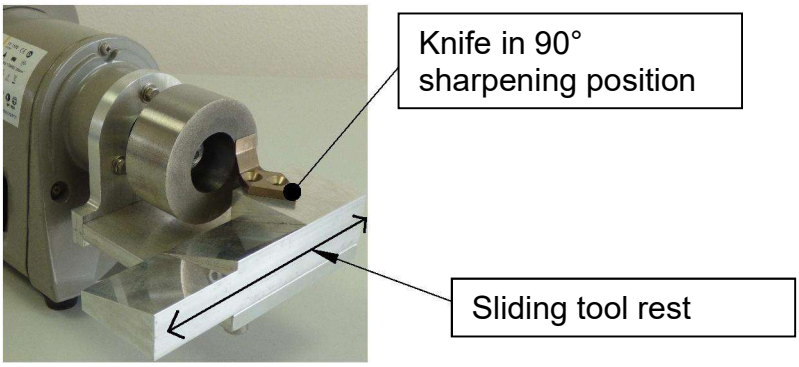
- Remove the rear knives and sharpen with the BM Emballage sharpening tool.


Sharpening tool

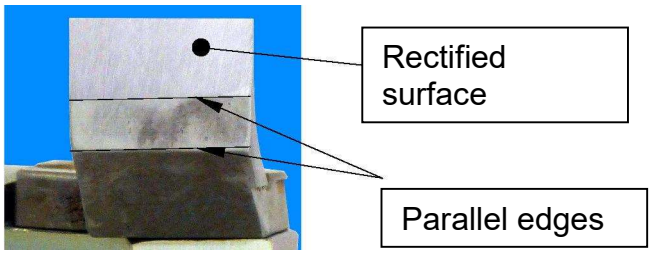


- When sharpening the rear knives, the wear on the front side of the knife must be rectified first.

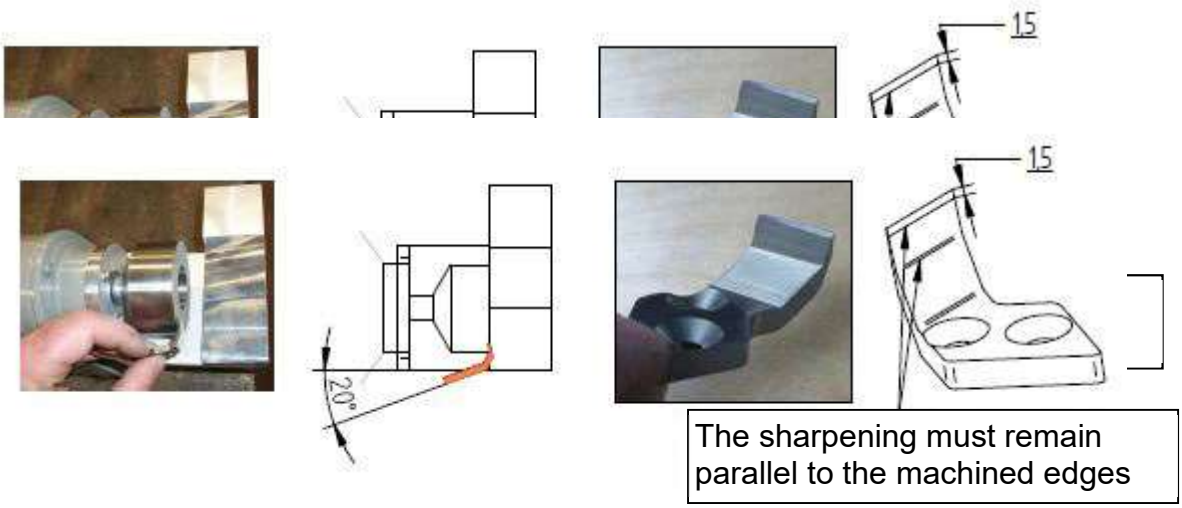

Wear to be rectified



- Slide the table so that the 90° plate is facing the grinding wheel. Then, pass the knife through several times, by sliding it on the 90° plate. The worn area should disappear completely. The rectified area should be parallel to the machined edge.



- The rear knife is sharpened on the back of the knife and by hand at an angle of about 20°.

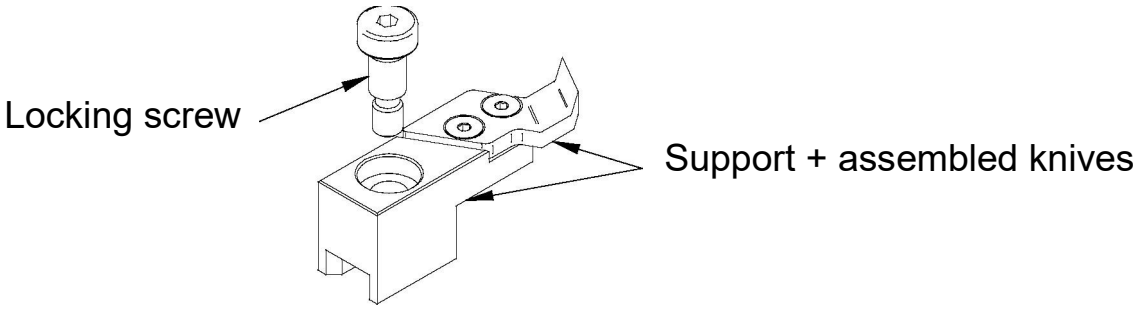


- Then, slide the table so that the 15° plate is in front of the grinding wheel. Then, slightly grind the front side, to reduce the aggressiveness of the knife on the wood.
- You can now reassemble your rear knives.

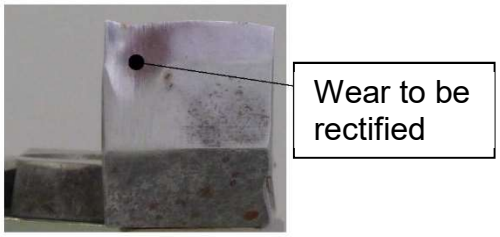
3.7. SHARPENING THE FRONT KNIVES

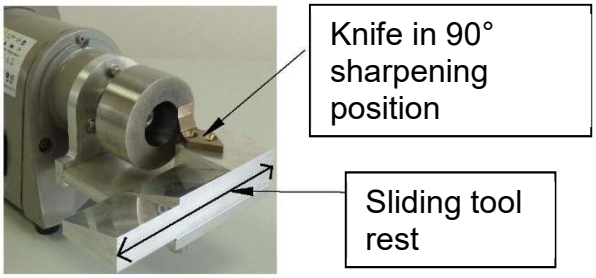
Turn on the air pressure (the green light on the unit should be lit up).

Reassemble the front knife holders without tightening the locking screws.

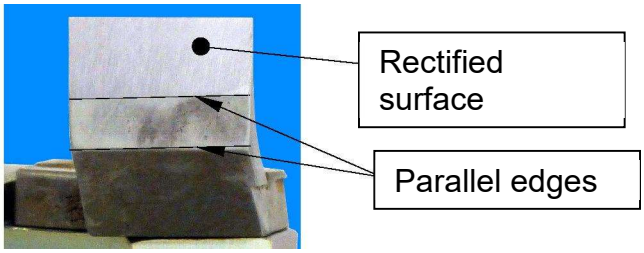


- When sharpening the front knives, the wear on the front side of the knife must be rectified first.





Slide the table so that the 90° plate is facing the grinding wheel. Then, pass the knife through several times, by sliding it on the 90° plate. The worn area should disappear completely. The rectified area should be parallel to the machined edge.

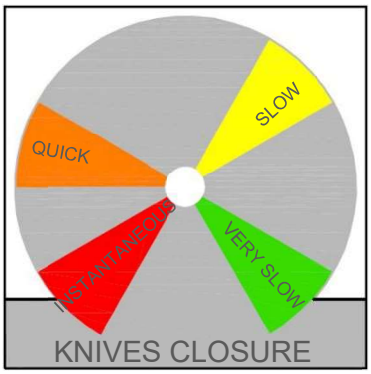


- The front knife is sharpened on the front of the knife at an angle of 15°.

Slide the table so that the 15° plate is facing the grinding wheel. Then, pass the knife through several times, by sliding it on the 15° plate, until you obtain a sharpened area that is 1.5mm wide.

3.8. SETTING THE CLOSING DELAY

The closing delay is the time between the moment the flap detects the presence of the wood and the knives closing. It directly affects the number of buds that need to be cut by hand.



The button should always be positioned in a coloured area.

Regardless of the coloured area used, the acceleration of the wood throughput will only be increased when it is taken up by both sets of rollers.

- **The red area: INSTANTANEOUS**
  - Instant knife closing (18cm), mainly used for already disbudded wood, mainly "metres" or "fractions".
  - In this area, only the first roller set is at work when the knives close.
  - The knives close very quickly; manual cleaning of only 1 or 2 buds.
  - This setting is not recommended for passing through raw wood.
- **The orange area: QUICK**
  - The knives close quickly; this setting is the most commonly used (23cm), and is best for straight, well dried wood with no large branches starting to grow on it.
  - In this area, only the first roller set is at work when the knives close.
  - The knives close quickly; manual cleaning of only 2 or 3 buds.
  - This setting is not recommended for passing through wood with large branches starting to grow on it or which is slightly damp.
- **The yellow area: SLOW**
  - Closing of the knives (27cm) mainly used for passing through raw wood with large-diameter branches that are not damp.
  - In this area, only one roller set is at work when the knives close.
  - Manual cleaning of only 3 or 4 buds.
  - This setting is not recommended when passing through damp wood.
- **The green area: VERY SLOW**
  - Closing of the knives (42 cm) mainly used for passing through raw wood that is difficult or slightly damp.
  - In this area, both roller sets are at work when the knives close.
  - Manual cleaning of 4 or 5 buds.

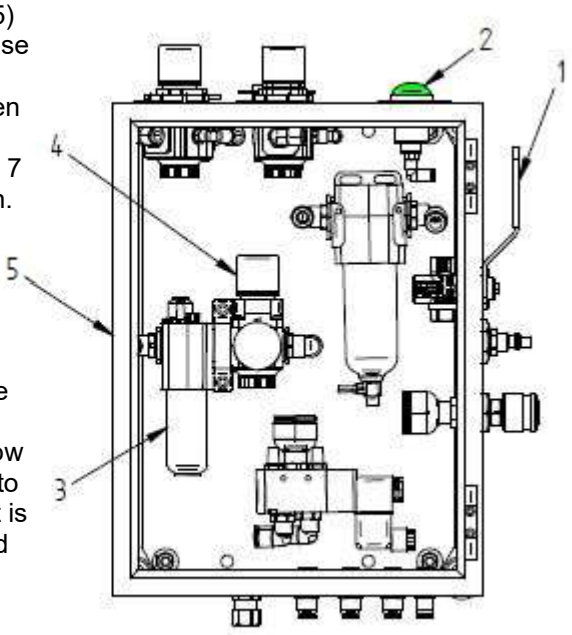
3.9. LUBRICATION OF THE SLIDE RAILS

The purpose of lubricating the slide rails is to ensure the knives move smoothly. If the oil tank is empty or the drip system is not properly adjusted, this will cause the knife movement to slow down and ultimately result in a blockage.

- The oil tank should be refilled every 5 days, and should be monitored daily.
- The drip system should be adjusted progressively; on a new machine, it may take several days to find the ideal setting, which represents 1/5 of the tank per day. The oil flow rate depends on the ambient temperature and the viscosity of the oil.
- To refill the oil, empty the air circuit using the lever (1). The green light (2) should not be lit. Unscrew the oil tank (3) clockwise by a quarter turn and pull it down. Fill the tank and put it back in place and pressurise the system again using the lever (1). The green light should be lit.
- The pressure setting is 3.5 bars and does not require adjustment. To adjust the pressure, pressurise the air circuit, lift the knob (4) and turn it clockwise to increase the pressure or anti-clockwise to decrease the pressure.
- The drip setting is approximately 1 drop every 20 seconds. To adjust the drip setting, turn on the machine and press the manual switch (11 - page 16) continuously for 20 seconds while checking the drip rate. If necessary, change the settings using the system provided, according to the model fitted on your machine (see illustration below).

Model 1: lift the black ring (5) and turn clockwise to increase the drip rate, counter-clockwise to decrease it, then lower the ring to lock the setting. The adjustment has 7 turns and 6 notches per turn.

Model 2: take a 4 mm Allen spanner and insert it into the green part (6) and turn clockwise to increase the flow rate and counter-clockwise to decrease it. The adjustment is done in one turn with an end stop.



3.10. BLOWER AND CLEANING

Every time a piece of wood passes through, an automatic blower is activated to remove branches and wood residues from the knives. The blowing time can be adjusted from 0 to 2 seconds.
The cleaning of the knives can be increased by activating the mechanical cleaning system (see **Selector switch 0-1** page 16).
Depending on the type of wood, it may be useful to supplement the automatic cleaning with manual cleaning using the blowgun.

Wear protective glasses for this operation.

Setting the blowing time:

- Switch off the machine and disconnect the power cable.
- Open the electrical cabinet.
- Adjust with potentiometer VR1. Turn clockwise to increase the time, and anti-clockwise to decrease it.

In the electrical box, open the access door to potentiometer VR1.

Potentiometer VR1

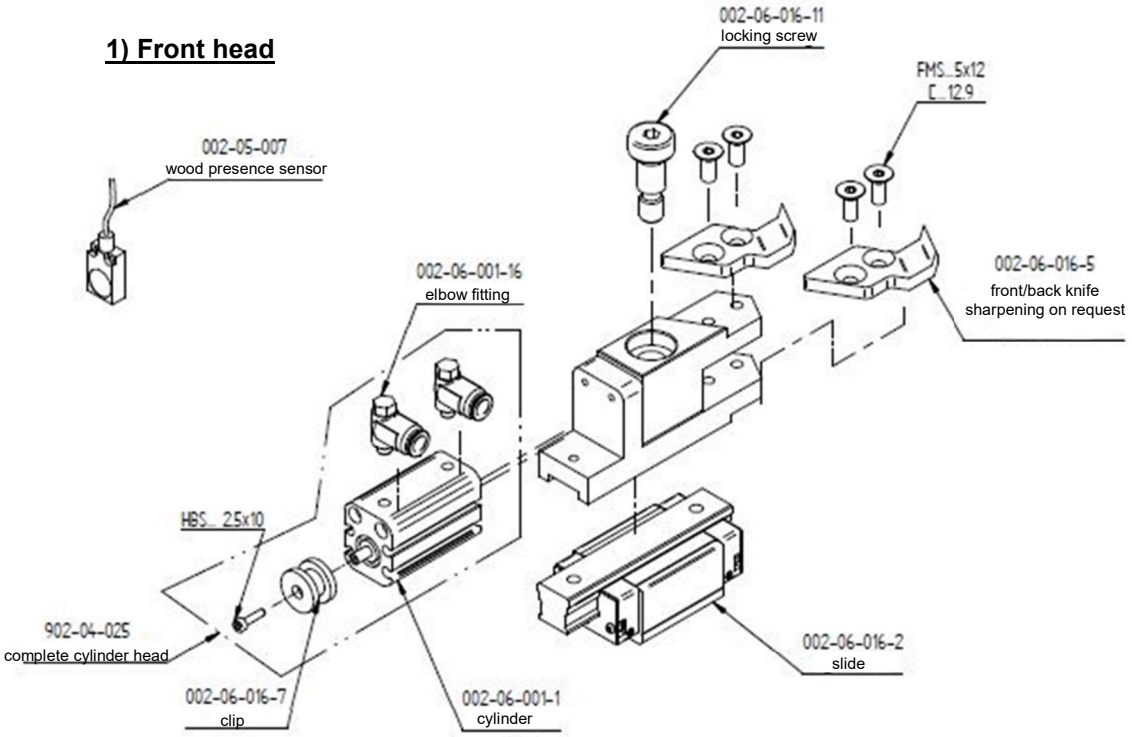
Open hatch

Using a screwdriver, turn the potentiometer to obtain your setting.

4. SPARE PARTS

4.1. EXPLODED VIEWS

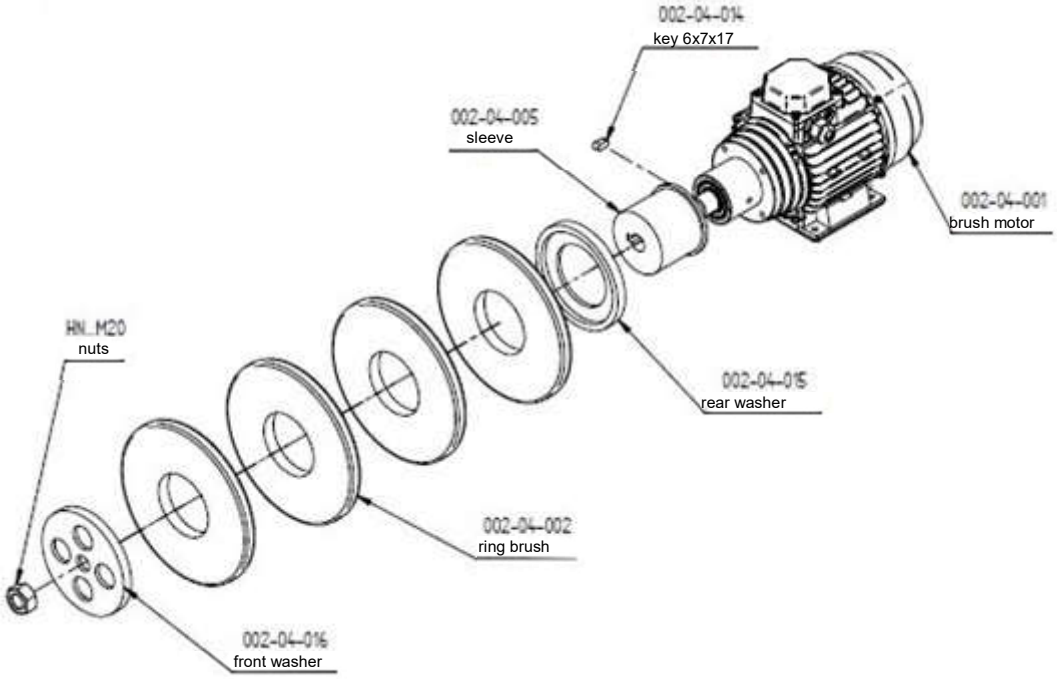
1) Front head



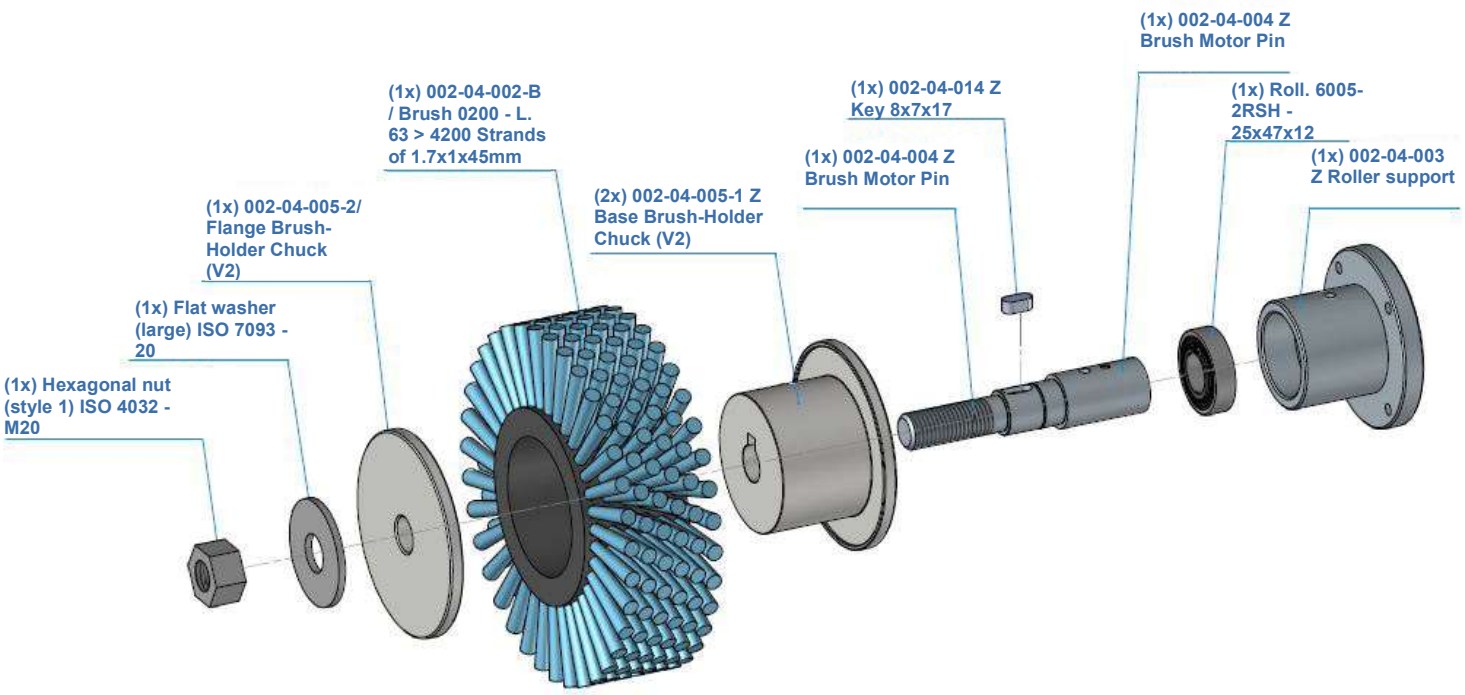
2) brush unit

There are two types of brush assembly, depending on the machine's year of production.

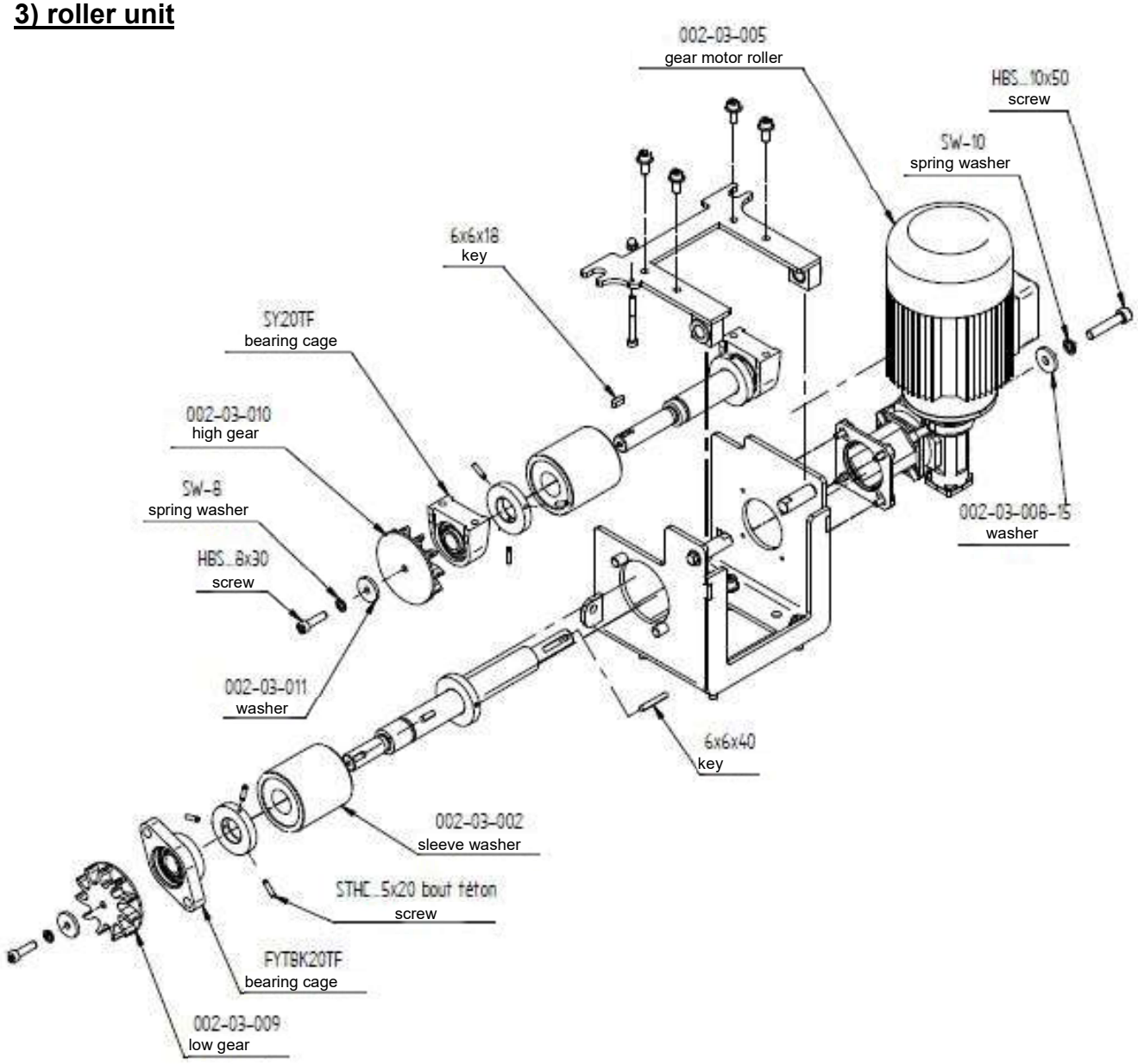
The first type of assembly is composed of 4 fine brushes, mounted one against the other:



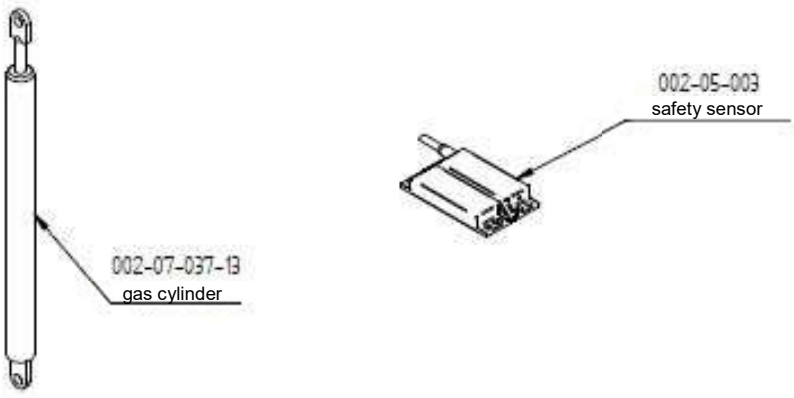
The second type of assembly consists of a single wide brush:



3) roller unit



4) chassis

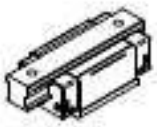


4.2. WEAR PARTS

BRUSH - REF.: 002-04-002

KNIFE - REF.: 002-06-016-5

ROLLER - REF.: 002-03-002



SLIDE - REF.: 002-06-016-2

CYLINDER - REF.: 002-06-001-1

LOW GEAR - REF.: 002-03-009

HIGH GEAR - REF.: 002-03-010

COMPLETE CYLINDER HEAD - REF.: 902-04-025
(assembled)

5. SETTING ASSISTANCE

The correct settings are obtained by adjusting the predefined settings below.
The quality of the work will depend on ensuring the machine is well maintained on the following points:

- Sharpness of the knife blades
- Knife assembly
- Lubrication
- Condition of the brushes
- Knife adjustment (pneumatic closing pressure)
- Adjustment of brush spacing
- Brush speed adjustment
- Adjustment of the speed of the rollers

1) Raw wood rootstock production

If you do not know the correct settings, start with the following parameters:

- Knife closing pressure set between 1 and 2 bars, always start with a low pressure - less than 1.5 bars.
- Brush spacing set to about 5mm, for small to medium-sized pieces of wood. Increase slightly for larger sized wood.
- Set the brush speed to 7 to start with. The harder the wood, the more the speed can be increased.
- Set the roller speed to 6 to start with. The straighter and smoother the wood, the more the speed can be increased.

Examine the first few pieces of wood that have been through the machine and adjust the 4 settings above, by referring to section *3 Description of the controls and settings*

Straight wood with strong bark, for example	
knife pressure	1bar - 1.5bar
brush spacing	5 to 8mm
brush speed	cursor on 9
roller speed	cursor on 8
Adjust the settings according to the result obtained on the first run-throughs	

Twisted wood with strong bark, for example	
knife pressure	1.5bar - 2bar
brush spacing	7 to 8mm
brush speed	cursor on 9
roller speed	cursor on 6
Adjust the settings according to the result obtained on the first run-throughs	

Straight wood with fragile bark, for example	
knife pressure	2bars-2.5bars
brush spacing	8 to 10 mm
brush speed	cursor on 6
roller speed	cursor on 8
Adjust the settings according to the result obtained on the first run-throughs	

Twisted wood with fragile bark, for example	
knife pressure	1.5bar - 2bar
brush spacing	8 to 10mm
brush speed	cursor on 6
roller speed	cursor on 6

Some types of wood have long, flexible branches (green wood - young seedlings, etc.) Branches may only get partially cut, bend and get under the knives. This will spread the knives apart and prevent the head from working. To avoid this, you will need to dismantle the rear knives and apply the following parameters:

Flexible wood	
knife pressure	2.5 bars - 3
brush spacing	7 to 8mm
brush speed	cursor on 8
roller speed	cursor on 6
Adjust the settings according to the result obtained on the first run-throughs	

2) Raw wood for metre production

Regarding metre production, the wood must not be disbudded, you also have to leave some space ahead of the piece of wood. To do this, the rear knives must be removed and the following parameters must be applied:

Metre production (leaving branch stump)	
Knife pressure	1bar
Brush spacing	10mm max
Brush speed	Cursor on 3
Roller speed	Cursor on 9
Adjust the settings according to the result obtained on the first run-throughs	

5.1. DAILY CHECK AND MAINTENANCE

- Check there is oil in the oil tank.
- Check the condition of the knives, sharpen them if necessary.
- Check that the knives are working properly using the manual switch.
- Check the condition of the rollers.
- Remove any blocked branches if necessary.
- Check the brushes for wear and tear and replace them if necessary.
- At the end of the day, clean the machine with the blower.

Wear protective glasses for this operation.

- After cleaning, empty the compressed air circuit, which will automatically empty the water filter tank. The green light should not be lit.

5.2. WEEKLY MAINTENANCE:

- Sharpen the knives.
- Fill the oil tank.

5.3. NOTES ON SPECIFIC SETTINGS

Wood	
knife pressure	bars
brush spacing	mm
brush speed	cursor on
roller speed	cursor on
Adjust the settings according to the result obtained on the first run-throughs	

Wood	
knife pressure	bars
brush spacing	mm
brush speed	cursor on
roller speed	cursor on
Adjust the settings according to the result obtained on the first run-throughs	

Wood	
knife pressure	bars
brush spacing	mm
brush speed	cursor on
roller speed	cursor on
Adjust the settings according to the result obtained on the first run-throughs	

Wood	
knife pressure	bars
brush spacing	mm
brush speed	cursor on
roller speed	cursor on
Adjust the settings according to the result obtained on the first run-throughs	