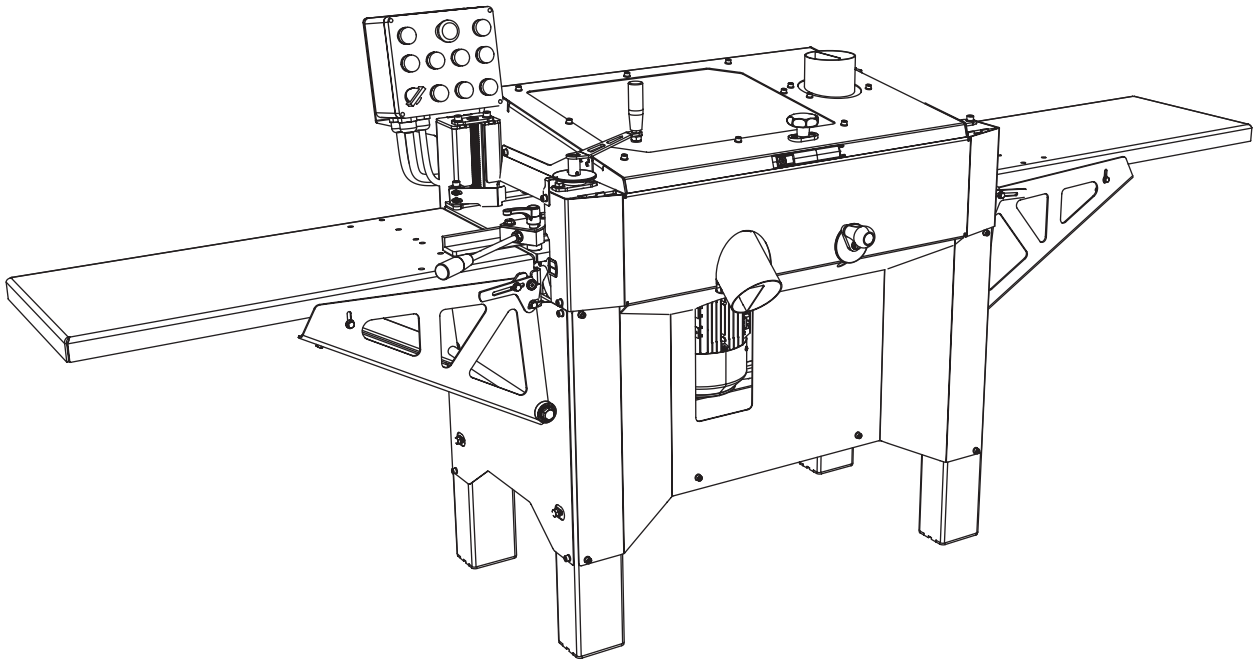
LOGOSOL

USER MANUAL

ORIGINAL USER MANUAL.

0458-395-5502

REV: 2



LOGOSOL CH3

Read through the user manual carefully and make sure you understand its contents before using the equipment.

EN

This user manual contains important safety instructions.

WARNING! Incorrect use can result in serious or fatal injuries to the operator or others.

LOGOSOL

THANKS FOR CHOOSING A LOGOSOL MACHINE!

We are very pleased that you have demonstrated your confidence in us by purchasing this machine and we will do our utmost to meet your expectations.

LOGOSOL has been manufacturing wood processing equipment since 1989, and during these years we have supplied approximately 100,000 machines to satisfied customers all around the world.

We are concerned with your safety and ensuring that you achieve the best possible results with your machine. We therefore recommend that you take the time to carefully read this user manual before using the machine. Remember that the machine itself is only a part of the value of the product. Much of the value is also to be found in the expertise we pass on to you in the user manual. It would be a pity if that was not utilised.

We hope you will be thoroughly satisfied with your new machine.

Bengt-Olov Byström
Founder,
Logosol in Härnösand

CE

LOGOSOL continuously develops its products.
For this reason, we must reserve the right to modify
the configuration and design of our products.
Document: LOGOSOL CH3 User Manual
Manual, part no.: 0458-395-5502
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Figures: Martin Söderberg, Anna Fossane
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GENERAL INFORMATION

This user manual and instructions for accessories must be considered as part of the machine and always be stored with the machine. They must also accompany the machine if the machine is sold.

The responsibility for ensuring that the machine is operated correctly and safely lies with the person who uses it.

MACHINE DESCRIPTION

The CH3 is a planer that in one step, processes a workpiece on three sides.

The machine is enclosed in a stable and durable chassis made of 4-mm steel plate. The planer table is made of laser-cut sheet metal, the slide for the movable cutter is made of machine steel.

The workpiece is fed, positioned horizontally on the planer table, through the machine by 3 feed rollers and an out-feed roller. The rollers are driven via a chain transmission with a separate motor. The workpiece is controlled laterally with adjustable guides.

The machining is conducted with an top cutter that is suspended at both ends, and two side cutters, which are fitted in the planer table.

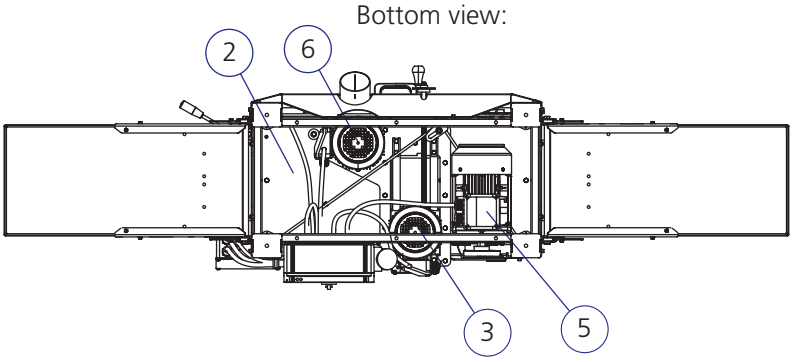
The cutters and feed rollers are covered by a hinged safety hatch with windows. The safety hatch is equipped with a safety switch. The switch is also connected to an in-feed guard on the in-feed side. Each of the three cutters has a 100-mm coupling for chip collection.

COMPONENTS

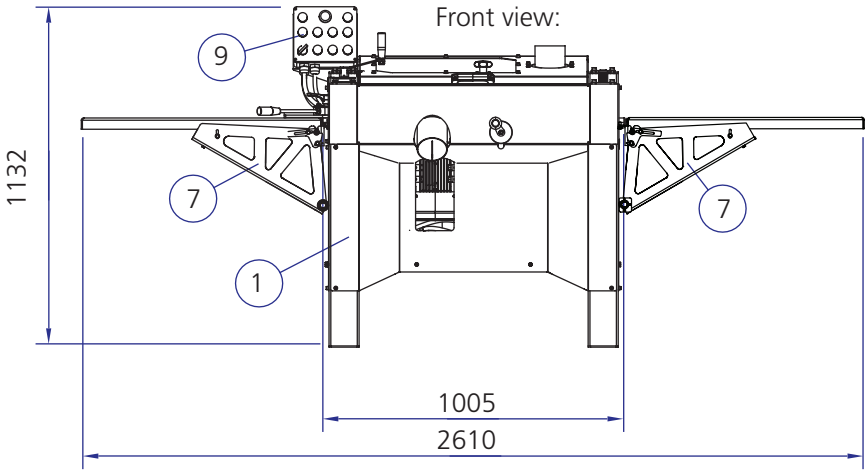
LOGOSOL CH3

1. Chassis
2. Planer table
3. Adjustable side cutter
4. Feed motor
5. Horizontal cutter
6. Fixed side cutter
7. Extension table
8. Junction box
9. Control box

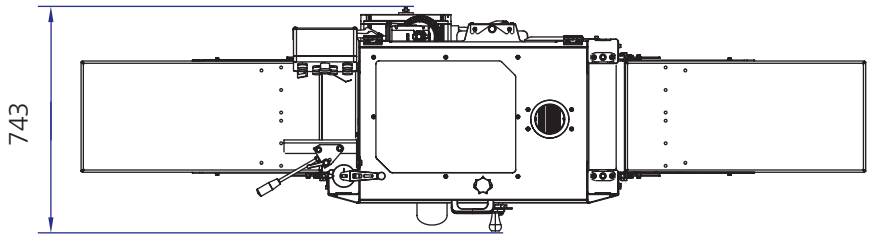
Bottom view:



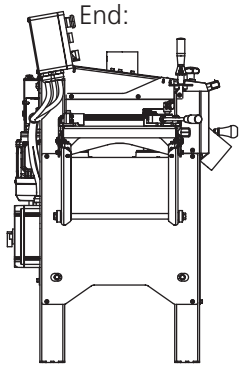
Front view:



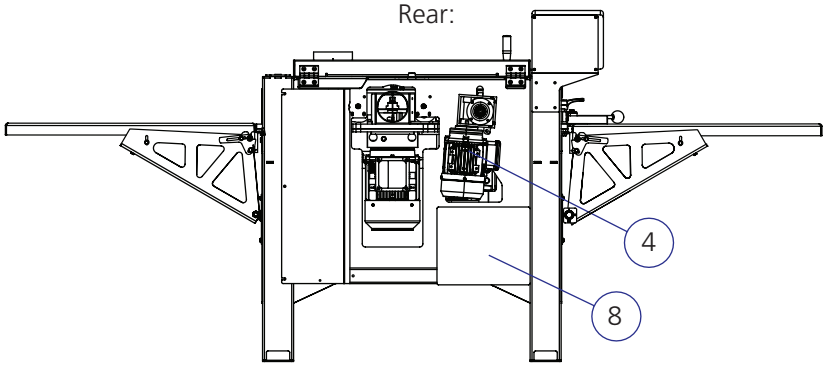
Top view:



End:



Rear:



LOGOSOL

SAFETY INSTRUCTIONS

KEY TO SYMBOLS

WARNING! This symbol means that you have to take particular care. It is always accompanied by information on the specific risk.

ATTENTION. A warning comes after this symbol. Pay particular attention where this symbol appears in the manual text.

For your own safety and the safety of others, do not use the machine without first reading and understanding the entire contents of this user manual.

WARNING! Cutting knives: Careless use of the machine can result in potentially fatal injuries. Planing knives are extremely sharp and dangerous.

Risk of cuts when handling planing knives. Planing knives and motor parts may be hot after cutting. Always wear protective gloves (class 1) when working with the planer or handling planing knives.

Always wear approved ear protection when working with the machine. Even brief exposure to high frequency noise can damage your hearing. Always use close-fitting protective eyewear when working with the machine.

Always wear approved safety shoes with saw protection, steel caps and non-slip soles when working with the machine.

Always wear full-length protective trousers when working with the machine or handling planing knives. Never wear loose-fitting clothing, scarves, necklaces, etc. that may get stuck in the machine when working. Tie back long hair before working with the machine.

PLANER SAFETY EQUIPMENT

WARNING! Never use the machine with defective safety equipment.

The safety equipment must be checked and maintained.

Here is a description of the planer's safety equipment, along with their functions.

Protection on planer hatches.
The planer hatches are equipped with safety switches. The hatches must be fully closed before using the machine.

OPERATOR

WARNING! When operating the machine, approved personal protective equipment must always be used.

Never use the machine if you are tired, have consumed alcohol or are taking medicine that might affect your sight, judgment or control over your body

SAFETY INSTRUCTIONS

USE

WARNING! Cutting knives: The planer can cause serious bodily injury if improperly used

WARNING! Cutting knives: Never insert hands or knives into the machine during operation.

WARNING! Risk of crushing. Never stand in the path of a board. The board can be thrown back out of the machine. Chips, knots and steel fragments can also be ejected at high speed.

WARNING! Never modify this machine so that it no longer conforms to the original configuration. Use only LOGOSOL manufactured products or those expressly approved by LOGOSOL for the purpose when adding extra equipment.

WARNING! Risk of ejection. Never stand in the path of a board. There is a risk of the board being thrown back out of the machine. Knots, splinters or pieces of metal can also be ejected at high speed.

Always stand to the side of the work table when operating.

The object fed into the machine must have a length of at least 600 mm to prevent the workpiece from twisting between the feed rollers and getting stuck in the machine.

Make sure that the machine has been properly assembled and maintained in line with the assembly instructions and maintenance instructions in this user manual.

Never work alone. Always make sure there is another adult within hearing distance in case you need to call for help.

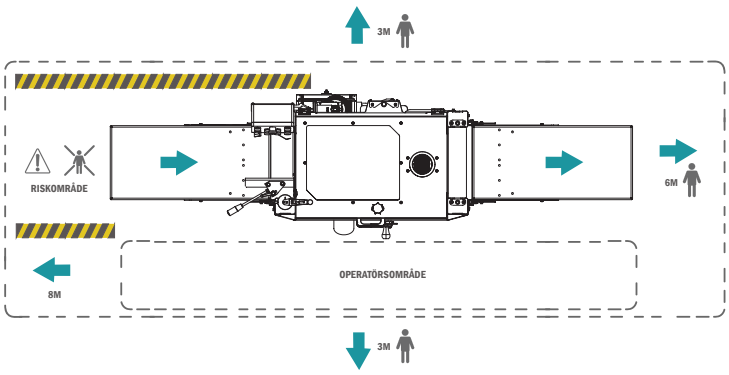
BEFORE EACH USE:

Check that:

- The operator is wearing the prescribed personal protective equipment.
- The prescribed maintenance has been carried out.
- The machine has been set up so that it is stable and has support along its entire length.
- Everything on the planer is properly tightened and is in proper working order.
- All the safety equipment on the machine is in place and in proper working order.

Before starting the machine:

- Make sure that no one other than the operator is in the risk zone.
- Check that the cutters can rotate freely and that no knives or unattached parts have been left in the machine.
- Check that all knobs, screws, nuts, bolts, guides, cutter wedges, cutters, knives, protective covers, in-feed and out-feed tables, etc. are properly tightened.
- Check that the feed rollers are turning in the right direction. If you stand in the front of the machine the feed rollers should turn anti-clock-wise so they want to move the material through the machine. If the feed rollers are turning the wrong direction, reverse the direction by turning the pins in the contact with a flat screwdriver.
- Check that the cover is properly closed, that all chip couplings are fitted and the chip extractor is switched on.



CHIP COLLECTION

The Logosol CH3 must be connected to a chip extractor with a capacity of at least 2500 m3/h. Remember that you must have an air outlet in your chip container (e.g. a fine net or filter if you have chip collection indoors). Poor suction is often due to poor airflow from the chip container. If you are working in a heated room, keep in mind that the collector will quickly cool the room if the air is not returned.
Fire risks and chip emissions associated with chip collection must be taken into consideration.

⚠ **Fire risk and chip emissions associated with chip collection.**

- Contact the local authorities for advice on the applicable local regulations.
- Connect the chip hoses and secure them with hose clamps to both the planer and the chip extractor. Use Flexi hose from Logosol for best results.
- If you want to transport the chips a longer distance: Place the extractor near the planer, so that the hoses are as short as possible. Collect the chips through a sheet metal pipe that has lower airflow resistance.
- Position the chip extractor so that its switch is easily accessible.

SETTING UP

⚠ **WARNING!** The layout of the workplace is important for safety. Please note the following:

- Choose a location for the machine with a hard and flat surface. Set up the machine on a flat surface with at least 5 m of free space around the machine without obstacles.
- Operation of the planer requires proper work lighting.
- Keep the workplace free of debris, pets, children, obstacles and anything else that may distract the operator.
- Always have a hand-held, ABC type (min. 3 kg) fire extinguisher readily accessible at the workplace.
- Always have a complete first aid kid accessible at the workplace.

SETTING UP

- If the wheel set is not used, secure the machine with bolts through the chassis holes.
- Make sure that there is sufficient free space on the in-feed and out-feed sides for the longest boards to be planed and that there is space for servicing and wood storage.
- Connect the chip hoses (3 pcs) and fasten them with hose clamps on both the machine and the chip extractor.
- Suspend the power cable to the planer from the ceiling or protect it in another way. Never step on the cable. The machine should be connected via an earth leakage circuit breaker.
- Make sure that there is good lighting. There must be good general lighting. Install a powerful light just above the machine. Make sure that there is no risk of being blinded by the glare.

If the wheel set is mounted on the machine:

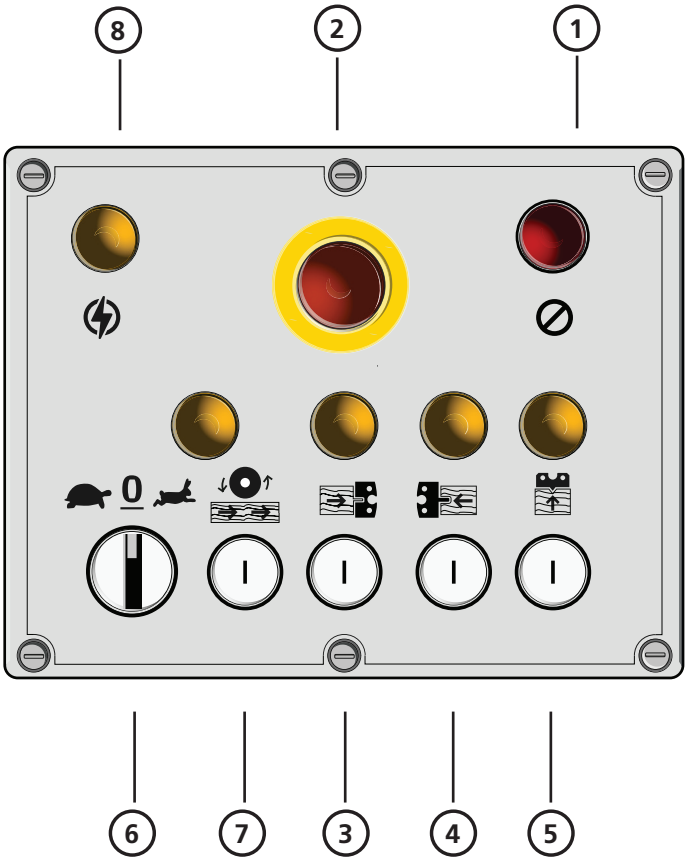
- Make sure the underlying surface is smooth and flat. Take measures to counteract level differences or sloping floor surfaces to prevent unpredictable machine movement due to gravity.
- The machine must not be used at temperatures below 0 ° C.
- The machine's warning markings are there for your own and other's safety. Damaged or illegible labels must be replaced.

Moving the machine:

- The machine can be transported with a forklift or pallet mover. It must be placed and secured on a EUR-pallet.
- A wheel set that is mounted under the machine is available as an accessory from Logosol for moving the machine on flat and level surfaces.

CONTROL PANEL

Below is an explanation of the function of various buttons on the control panel.



1: Red: Stop

2: Red: Emergency stop.

3: Black: Start, right side cutter.

4: Black: Start, left side cutter.

5: Black: Start, top cutter.

6: Black: Speed, feed rollers.

7: Black: Start, feed rollers.

8: Control indicator: Power on

The red button **(1)** is the power switch for all motors. The red button **(2)** is the emergency stop, and it stops all motors. When the emergency stop is activated, the button must be turned a quarter turn for the machine to restart. Next to the emergency stop is a light that indicates that the power is on. The lower row of buttons starts the planer motors. Above each button is a light, indicating that the respective motor is running.

UPON DELIVERY

The machine comes with a knife and shim kit, as well as two infeed/outfeed tables with the following parts.

00-00081-div Box of tools CH3 NEU

7502-001-0701	2 x	Shims 30x42x0.1
7502-001-0702	2 x	Shims 30x42x0.2
7502-001-0703	2 x	Shims 30x42x0,3
7502-001-0705	2 x	Shims 30x42x0.5
7502-001-0710	2 x	Shims 30x42x1
7502-001-0720	4 x	Shims 30x42x2
03-03119	1 x	Adj. block
7202-001-0062	1 x	Allen key 4mm
9999-000-8506	1 x	Allen key 6mm
7202-001-0064	1 x	Open-end spanner 10mm
7202-001-0013	1 x	Open-end spanner 13mm
7502-001-0234	1 x	Open-end spanner 30mm
03-03064	1 x	Spacer ring 5mm

SCREWS/BOLTS/NUTS/WASHERS

Definition of fasteners.

Guide pin

Cross-head screw

Slotted screw

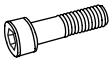
Locking screw

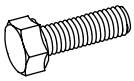
Hex nut

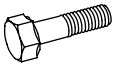
Flange nut

Flat washer

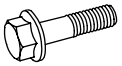
Allen head screw

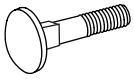

Allen screw (partially threaded)


Hex bolt


Hex bolt (partially threaded)

Flange screw


Flange screw (partially threaded)


Carriage bolt

ADDITIONAL SYMBOLS

The following symbols are used in addition to those shown above to describe part design.

Low

Tensilock

Lock

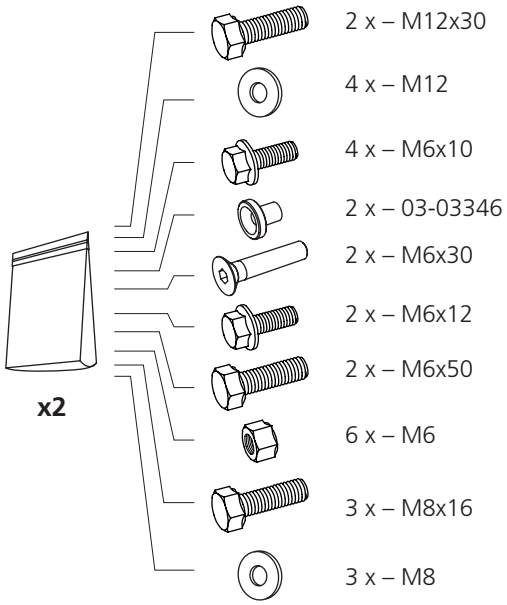
Recessed

DIMENSIONS/LENGTH

The dimensions of the fasteners are printed as a diameter dimension **(M)** ISO 68-1. This is followed by a length dimensions for bolts/screws; the dimension of a bolt/screw is the part of the bolt/screw that disappears into the material in which it is mounted.

(Diameter)		**(Length)**
M8	x	20

01-00734



x2

2 x – M12x30

4 x – M12

4 x – M6x10

2 x – 03-03346

2 x – M6x30

2 x – M6x12

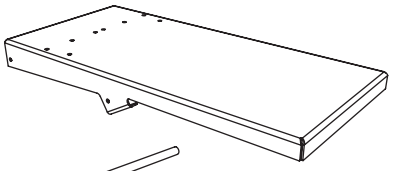
2 x – M6x50

6 x – M6

3 x – M8x16

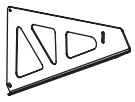
3 x – M8

02-00459 — 2 x

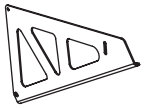


03-03264 — 2 x

03-02769 — 2 x



03-02770 — 2 x

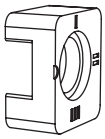


03-03266 — 2 x

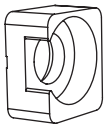
03-03341 — 4 x

04-00425 — 4 x

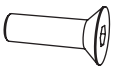
01-00786



1 x – 03-03332



1 x – 03-03356



2 x – M12x40 MF6S

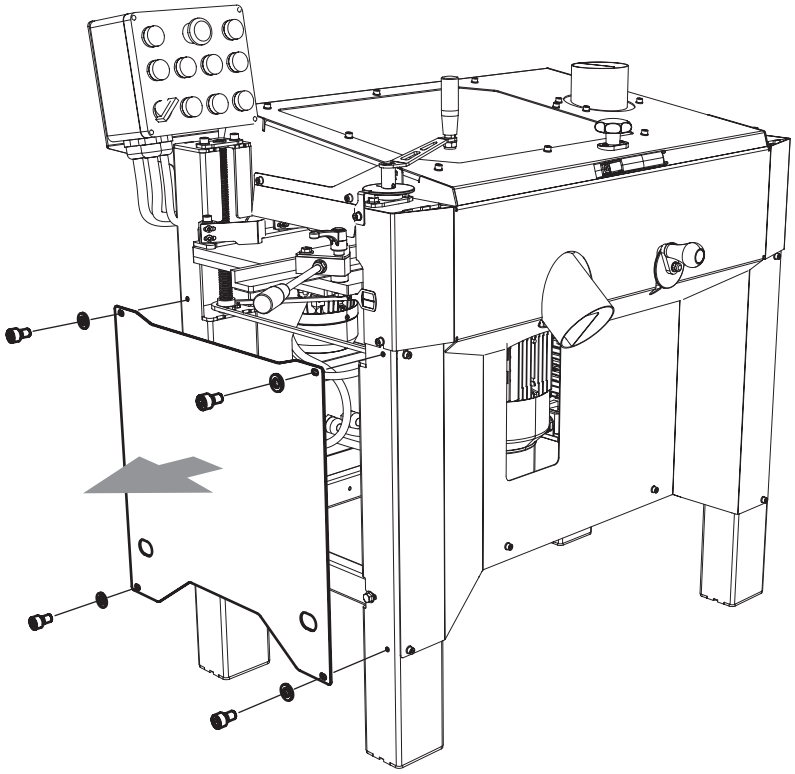
2 x – 03-03326

UPON DELIVERY

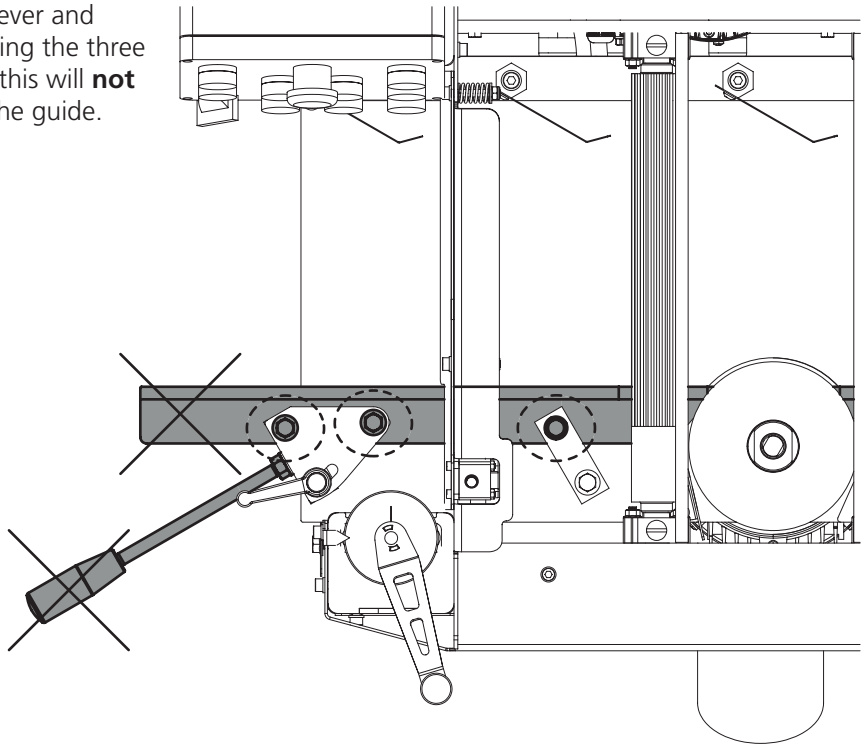
The extension tables and the adjustment lever of the primary guide are not mounted upon delivery.

ASSEMBLY

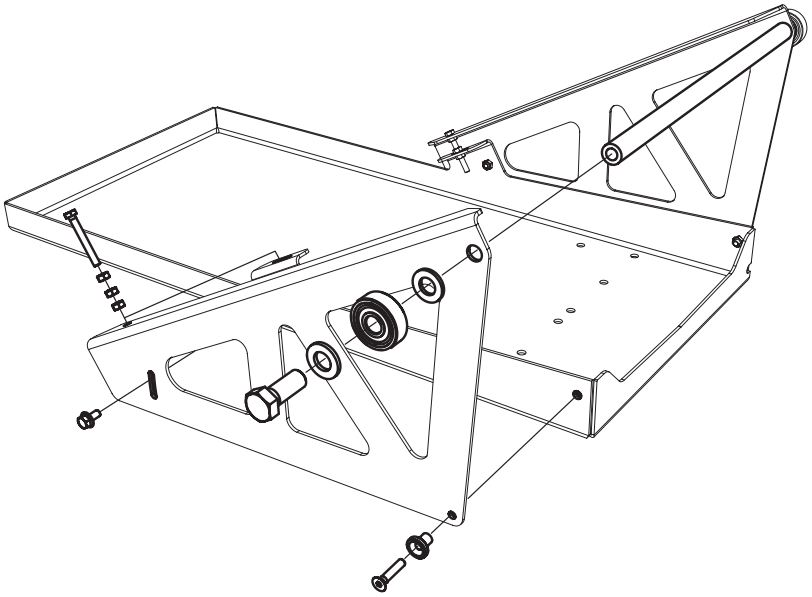
1. Remove both sides gable cover plates.

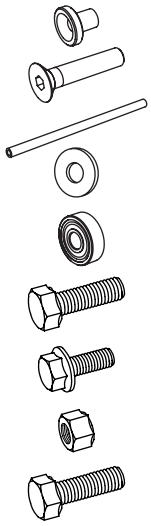


2. Remove the adjustment lever and in-feed fence by unscrewing the three circled screws. Note that this will **not** affect the calibration of the guide.



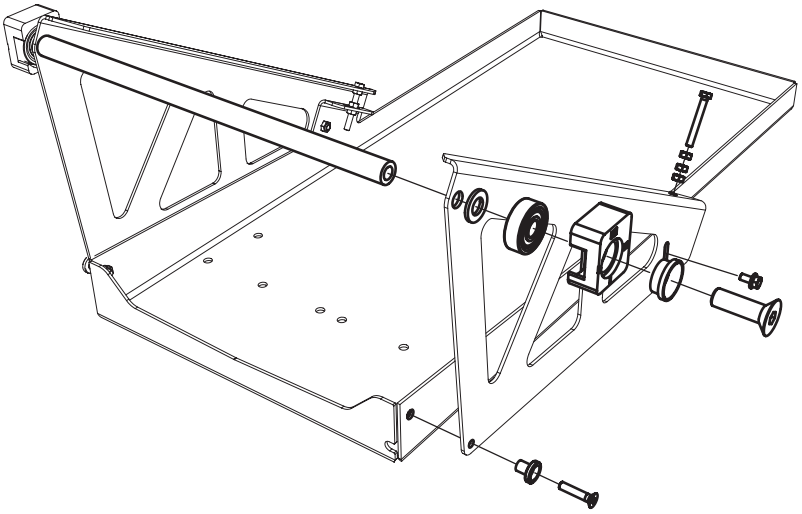
3 Assemble the infeed table brackets as shown. Both sides of the table are identical.

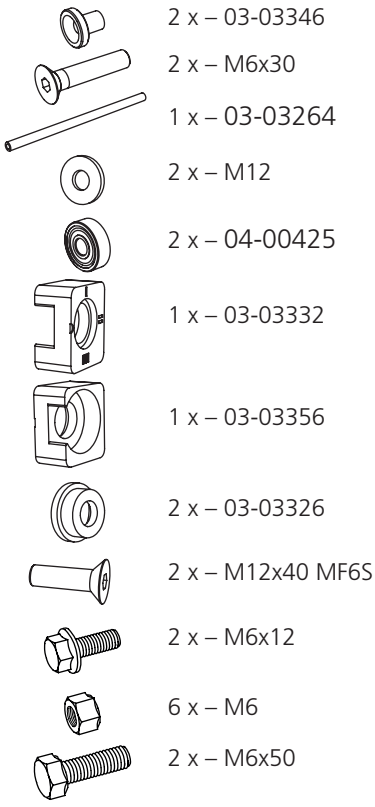




2 x – 03-03346
2 x – M6x30
1 x – 03-03264
4 x – M12
2 x – 04-00425
2 x – M12x30
2 x – M6x12
6 x – M6
2 x – M6x50

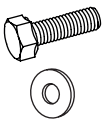
4 Assemble the outfeed table brackets and angle adjustment blocks as shown. Both sides of the table are identical, except for the angle adjustment blocks.





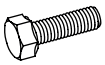
2 x – 03-03346
2 x – M6x30
1 x – 03-03264
2 x – M12
2 x – 04-00425
1 x – 03-03332
1 x – 03-03356
2 x – 03-03326
2 x – M12x40 MF6S
2 x – M6x12
6 x – M6
2 x – M6x50

If the angle adjustment blocks aren't used, the outfeed table is assembled in the same way as the infeed table according to section 3. Then the screws and washers below are also used, these will otherwise be left over.



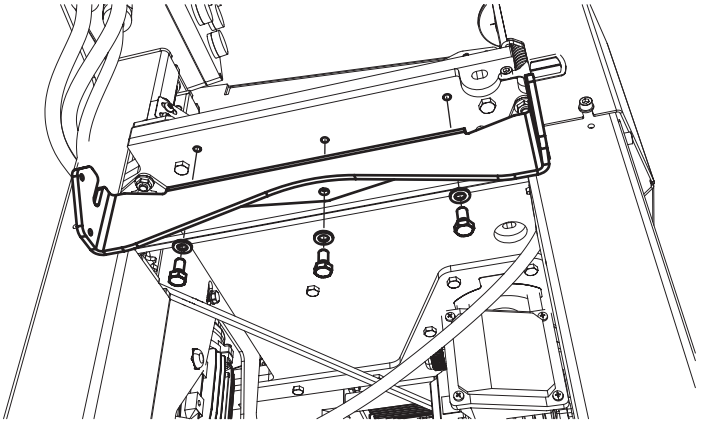
2 x – M12x30
2 x – M12

5 Mount the bracket for the extension tables on the underside of the planer table. Repeat on the other side of the planer table.



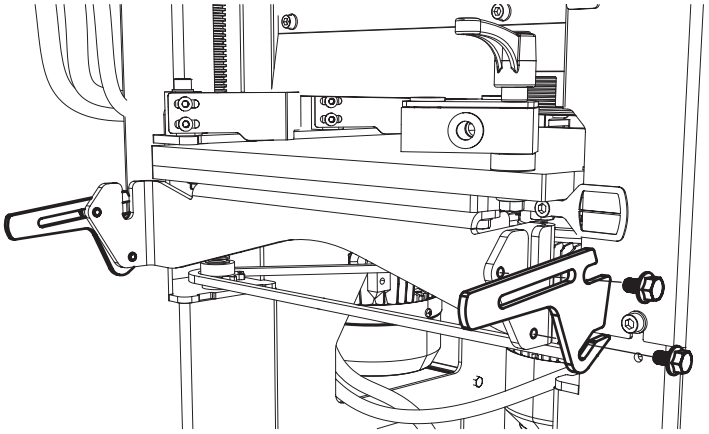
6 x – M8x16

6 x – M8

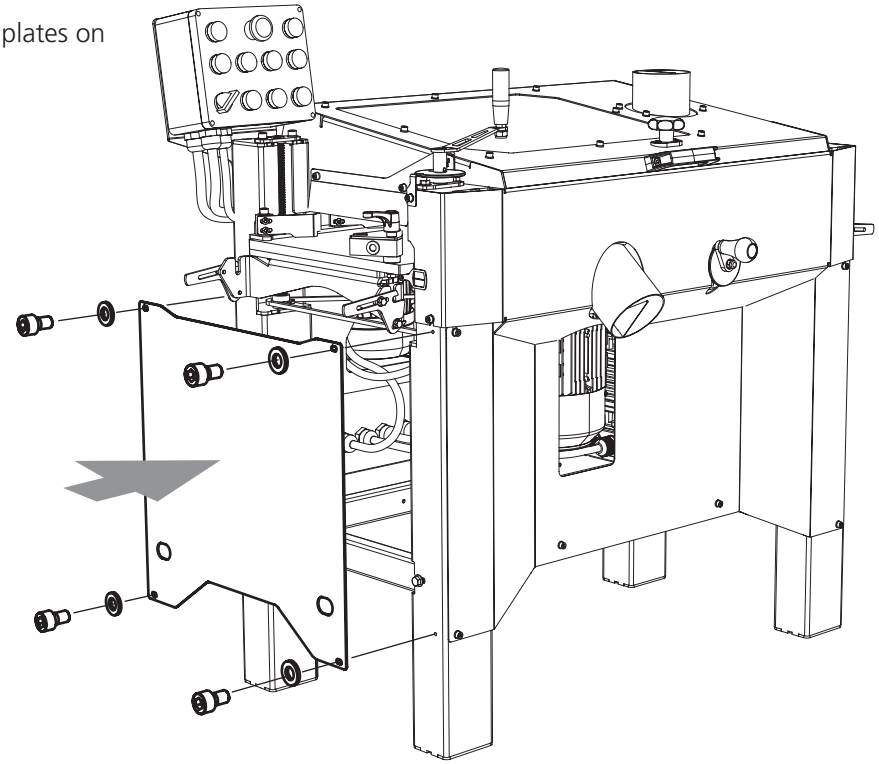


6 Install the height adjustment plates (4pcs). One on each side of each bracket. Do not tighten the screws.

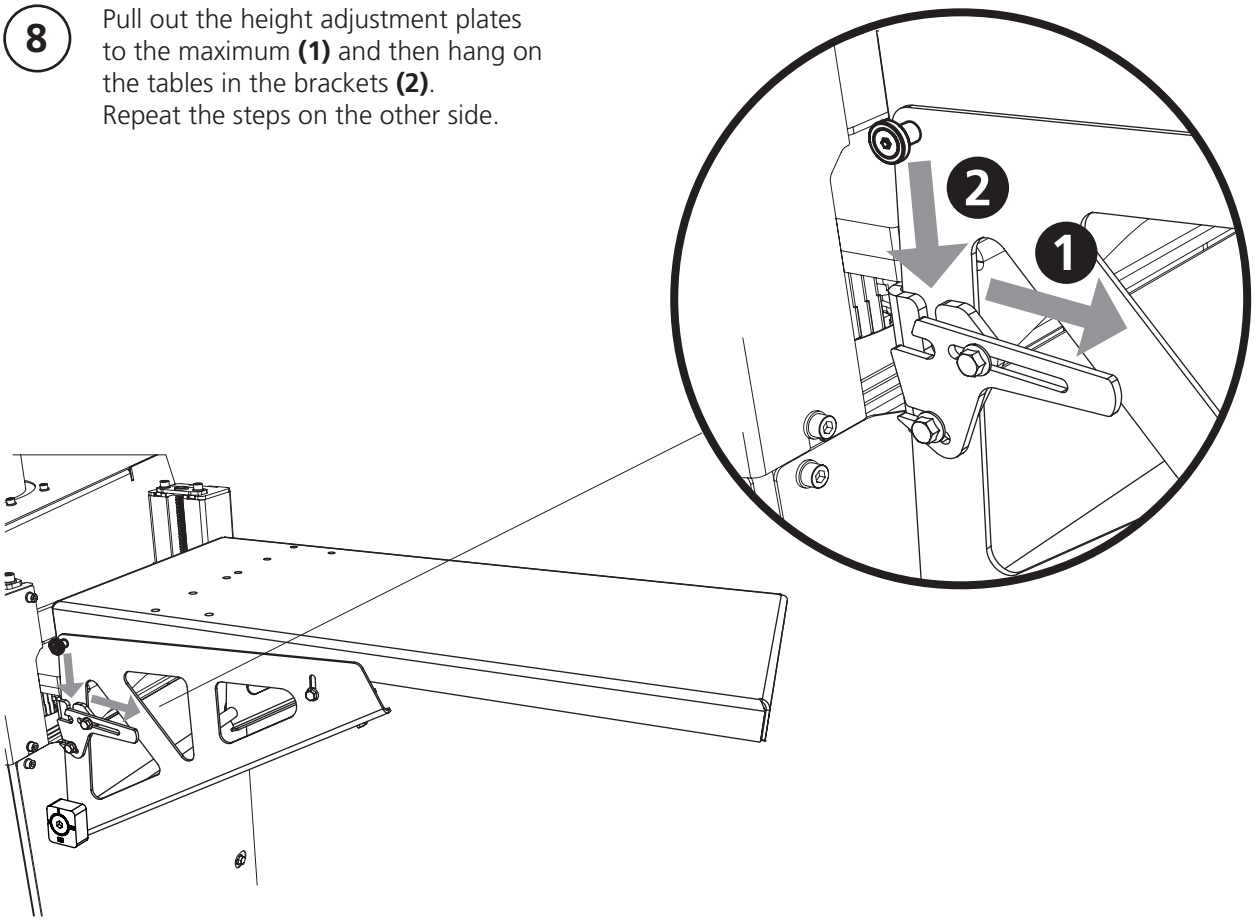
8 x – M6x10



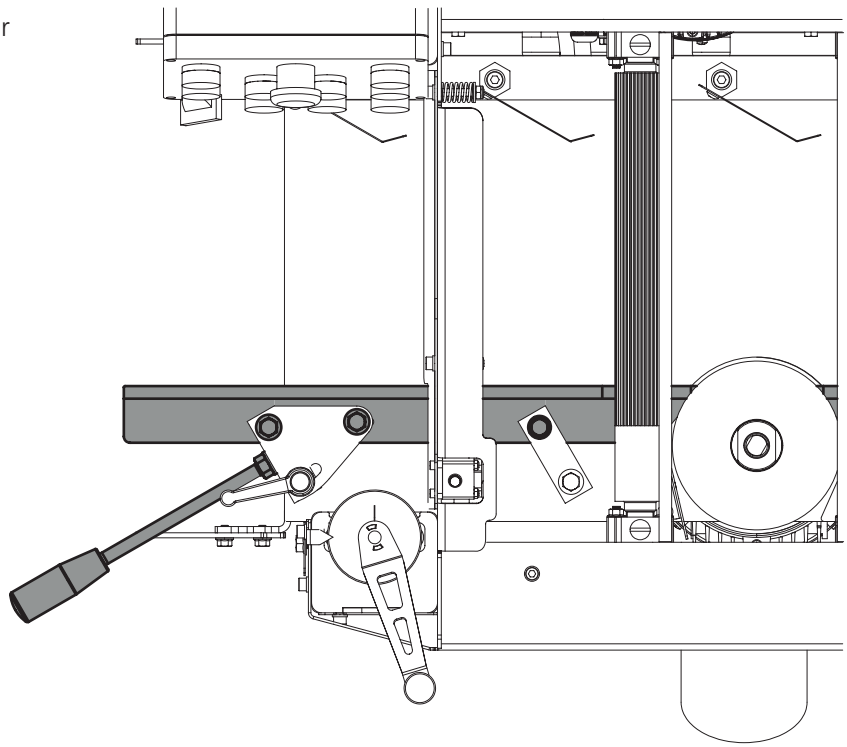
7 Refit the gable cover plates on both sides.



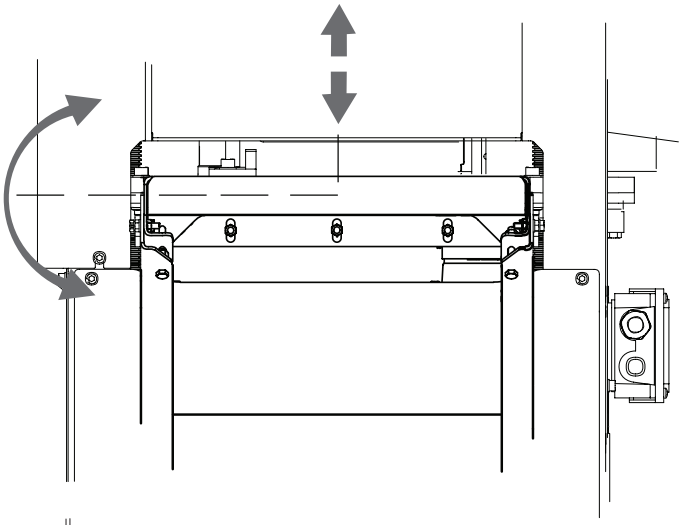
8 Pull out the height adjustment plates to the maximum **(1)** and then hang on the tables in the brackets **(2)**.
Repeat the steps on the other side.



9 Attach the adjustment lever and refit the in-feed fence.



ADJUSTMENT



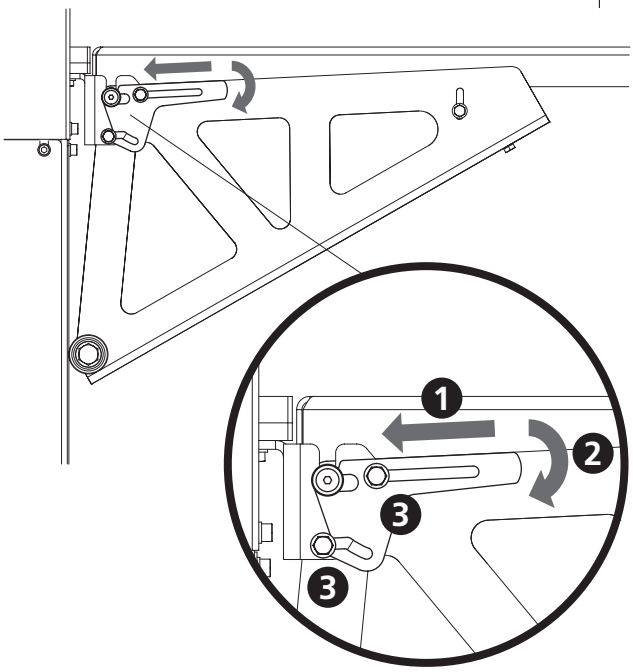
Attachment side adjustment

For optimal precision of the planed workpiece, the infeed table must be adjusted before use. Start by adjusting the height of the table so that it matches the lateral and vertical angles of the planer table.

Height adjustment

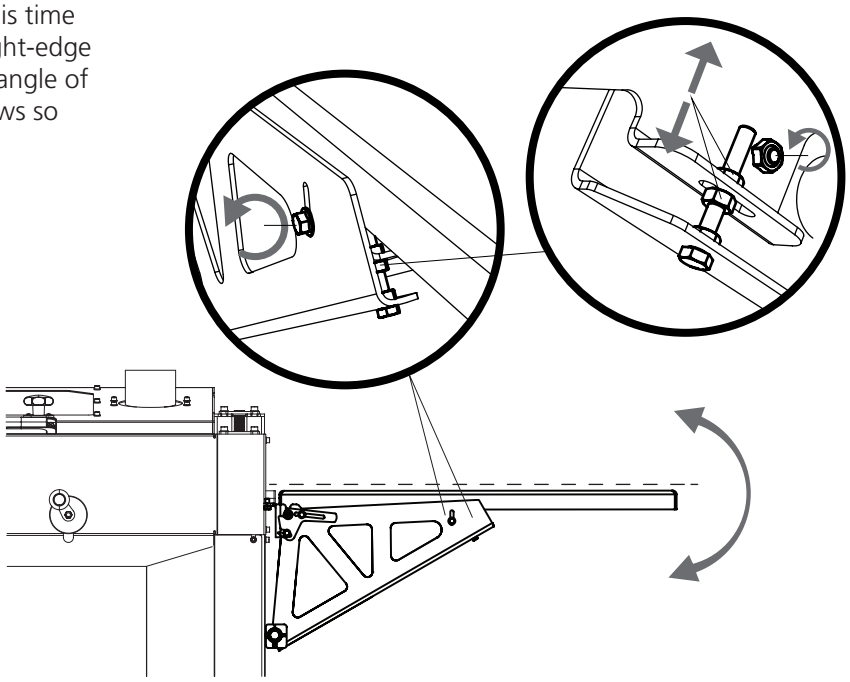
Slide in the height adjustment plates (1) and then turn it (2) until the correct height is reached. Then tighten the two flange screws (3). Repeat the same steps on both sides of the extension table.

Use a straight-edge placed on the planer table and use this as a reference in adjusting the height of the table.



Angle adjustment

Once the table height has been adjusted, it is time to adjust the angle of the table. Use a straight-edge placed on the planer table, then adjust the angle of the extension tables with the adjusting screws so that the angle matches the straight-edge.

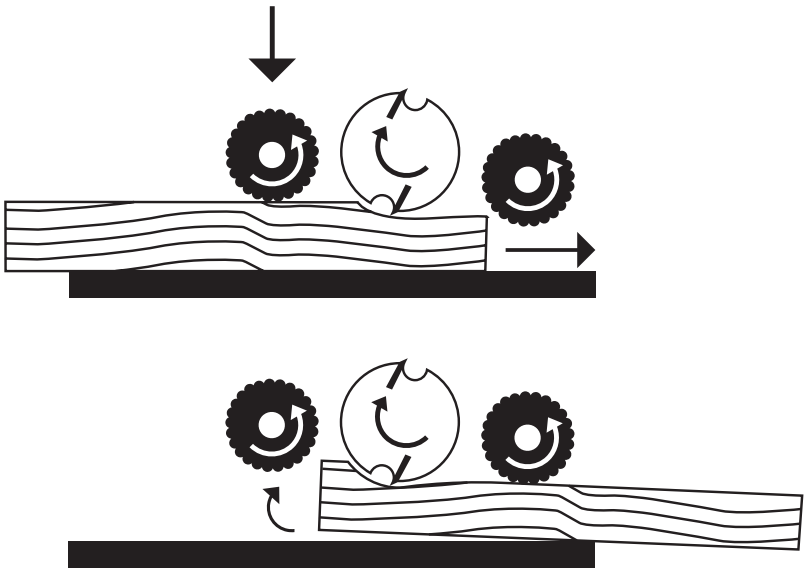


ANGLE ADJUSTMENT BLOCKS

Risk of planer snipe

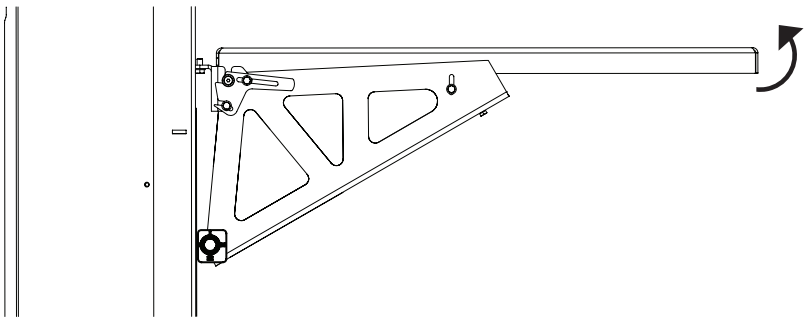
When the end of the workpiece leaves the last feed roller (before the horizontal cutter), there is a risk that it will rotate up towards the cutter, which may result in planer snipe. This is especially true when working with thin or soft workpieces.

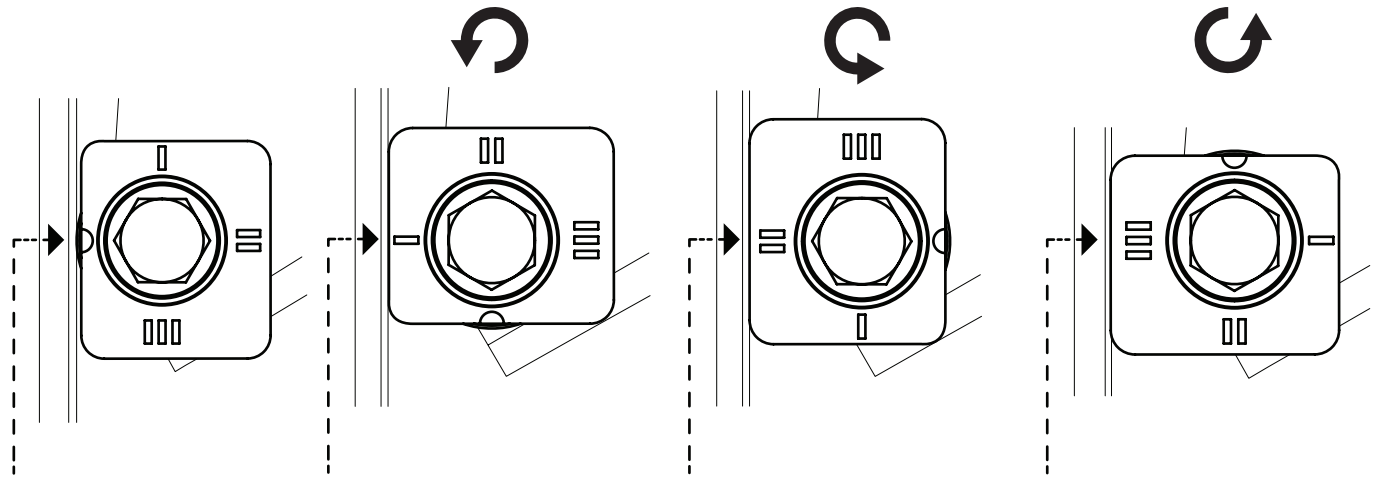
To counteract this phenomenon, you can use the angle adjustment blocks on the outfeed table as shown below.



Use of angle adjustment blocks

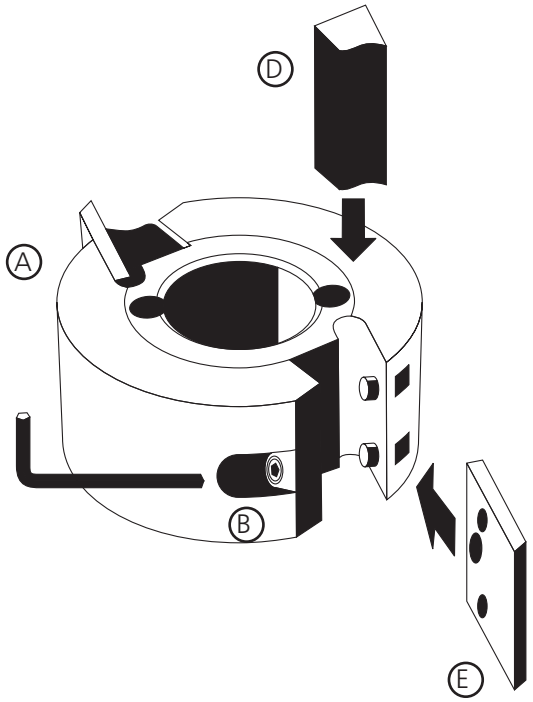
The angle adjustment blocks are used to angle the outfeed table upwards. By rotating the blocks in four different positions, the angular position of the feeding table is adjusted to the desired position. Be sure to place both blocks in the same position on both sides of the table.





Normal position (flat) **I: Small positive angle** **II: Larger positive angle** **III: Maximum positive angle**

SIDE CUTTERS



Before opening the safety hatch on the planer, make sure that the power is off and that the cutters are not rotating. Wear protective gloves, especially when loosening tight-fitting bolts/screws or when tightening bolts/screws (see Warning precautions). Pay special attention to the planer knives. It is very easy to cut yourself even with a light touch.

The spindles are 30 mm in diameter, which is a standard dimension. On delivery, the planer is equipped with two universal cutters with planing knives, which can easily be replaced with moulding knives. For safety reasons, the cutters work with counter-planing (the workpiece is fed against the cutting movement of the planer). This entails that the locking nut and the spindle on the movable side cutter must be left-threaded.

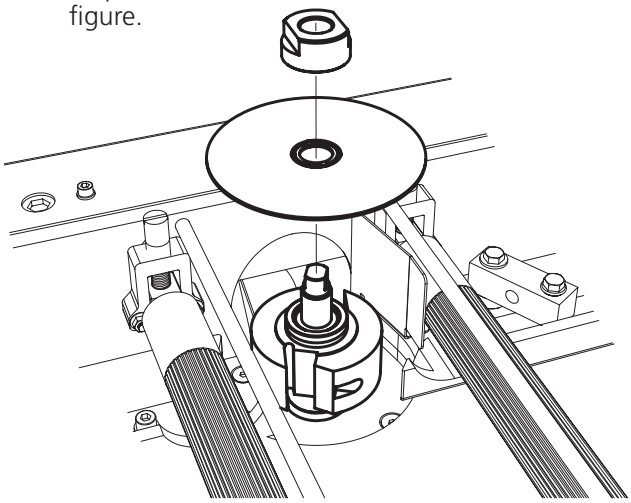
After mounting the side cutters:

- Check that no knives have been left in the machine.
- Check that all screws/bolts are securely tightened.
- Check that the cutters can rotate freely before closing the safety hatch.
- Keep in mind the warning precautions on pages 4–5.

Knife replacement

Loosen the locking screw **(B)** with a 4 mm Allen key and remove the chip breaker **(D)**. Now remove the knife **(E)**. Insert a new knife and securely tighten the locking screws.

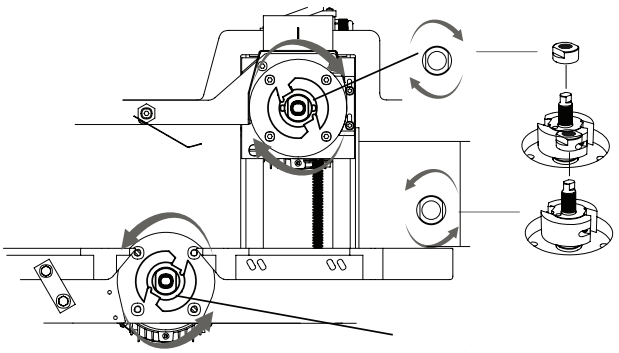
- Make sure you turn the knives in the right direction when mounting them in the cutter. The edge must face the chip breaker.
- Check that there is no risk of the chip plates before the movable cutter being bent in towards the cutter of the unplaned edge of the workpiece. Pay special attention with workpieces of varying widths.
- Make sure that the cutter can rotate freely.
- When mounting the side cutter, shims must be placed on top of the cutter to reach a height so that the nut can compress the joint. The protective plate must be positioned above the shims; see the figure.



DISASSEMBLY

Loosen the nut on the spindle with a 30 mm spanner and an adjustable spanner. Unscrew the nut and lift off the cutter and any spacer rings under the cutter.

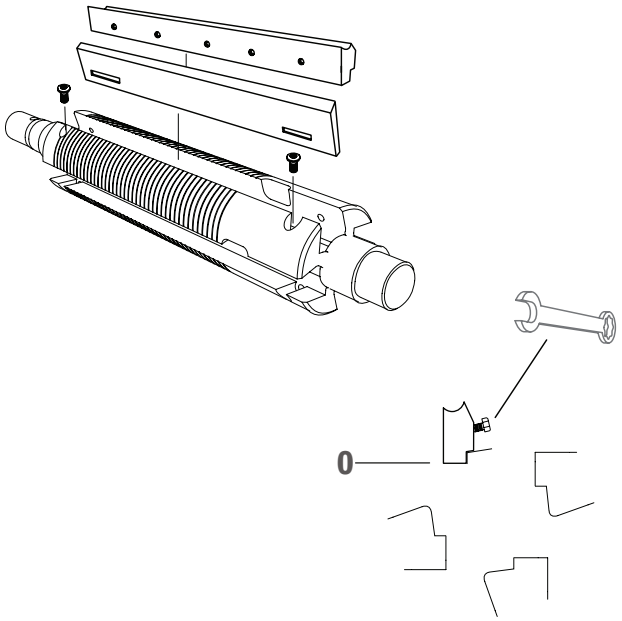
Tip: The side cutter nuts are loosened by turning in the same direction that their cutters rotate.



TOP CUTTER

Before opening the safety hatch on the planer, make sure that the power is off and that the cutters are not rotating. Wear protective gloves, especially when loosening tight-fitting bolts/screws or when tightening bolts/screws (see Safety precautions). Pay special attention to the planer knives. It is very easy to cut yourself even with a light touch.

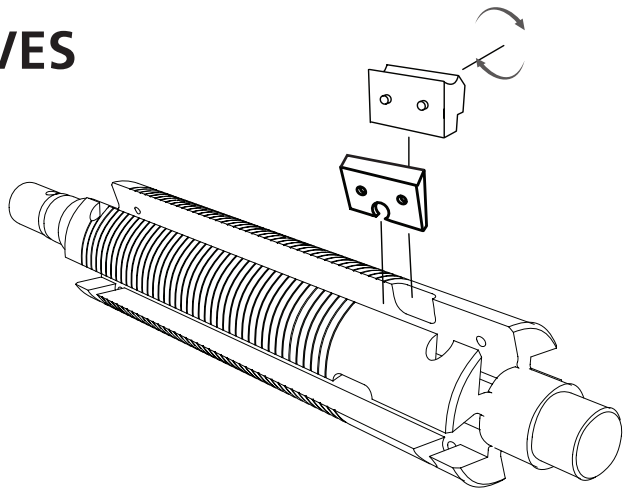
The top cutter is fitted in the chassis and suspended at both ends. Two planer knives are mounted in two of the top cutter's keyways on delivery. Two additional planer knives, or moulding knives, can be mounted in the two empty keyways.

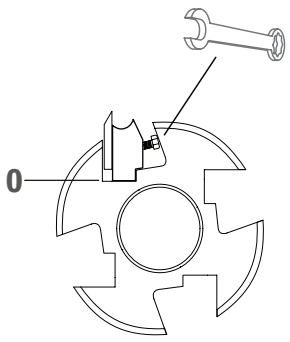


MOUNTING PLANING KNIVES

Mounting moulding knives in the top cutter

n the two keyways without planing knives, moulding knives of different sizes and shapes can be mounted. Wedge and moulding knife assembly: Insert the wedge and moulding knife into the cutter where the keyway widens. Check that the wedge is at the bottom of the milled slot in the cutter.





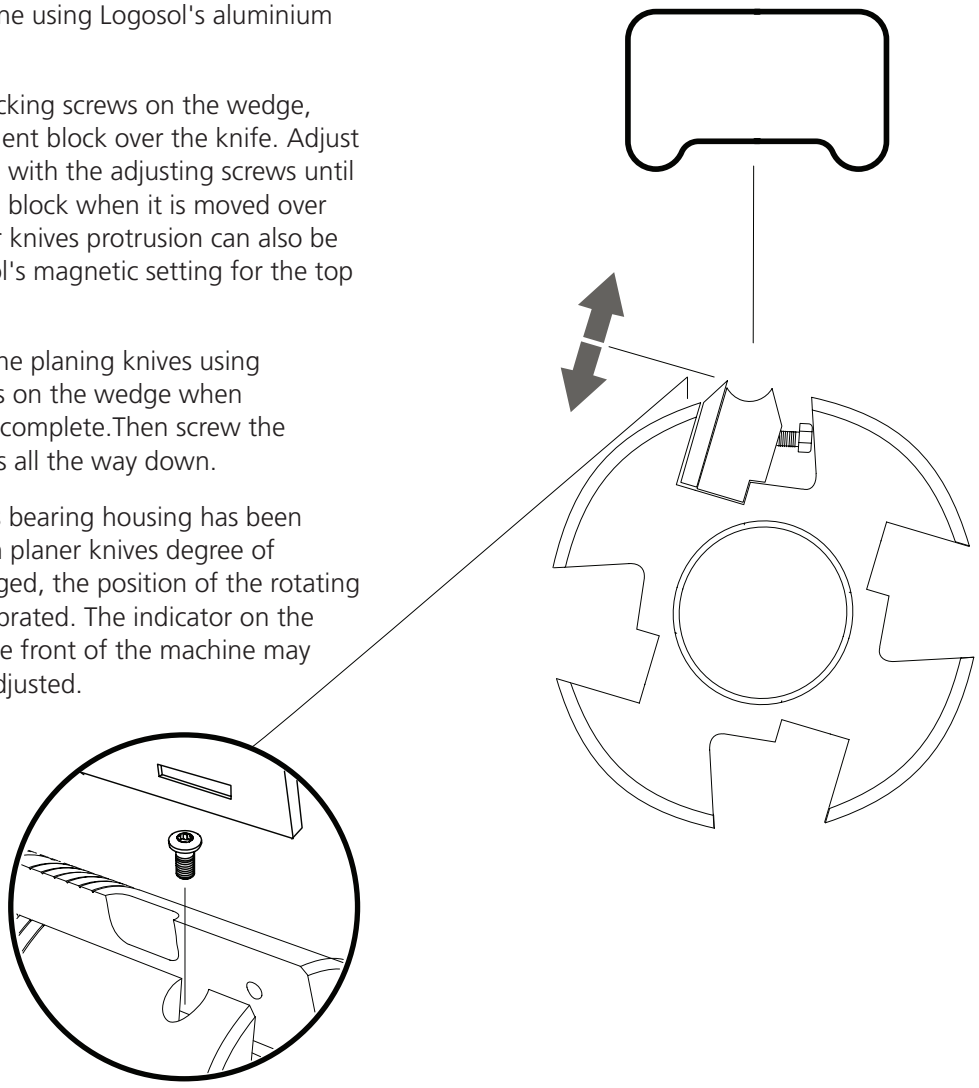
Secure the knife by firmly unscrewing the locking screw on the back of the wedge.

TOP CUTTER

Adjust the planing knives so that they reach the same level and have a one millimetre protrusion. This is most easily done using Logosol's aluminium adjustment block.

Slightly loosen the locking screws on the wedge, and slide the adjustment block over the knife. Adjust the knife up or down with the adjusting screws until the knife touches the block when it is moved over the knife. (The planer knives protrusion can also be adjusted with Logosol's magnetic setting for the top cutter.

- Securely tighten the planing knives using the locking screws on the wedge when the adjustment is complete.Then screw the adjustment screws all the way down.
- When the cutter's bearing housing has been adjusted, or when planer knives degree of removal has changed, the position of the rotating scale must be calibrated. The indicator on the height scale on the front of the machine may also need to be adjusted.



Planer knife adjustment screws

After adjusting or replacing planer knives:

- Check that no knives have been left in the machine.
- Check that all screws/bolts are securely tightened.
- Check that the cutters can rotate freely before closing the safety hatch.

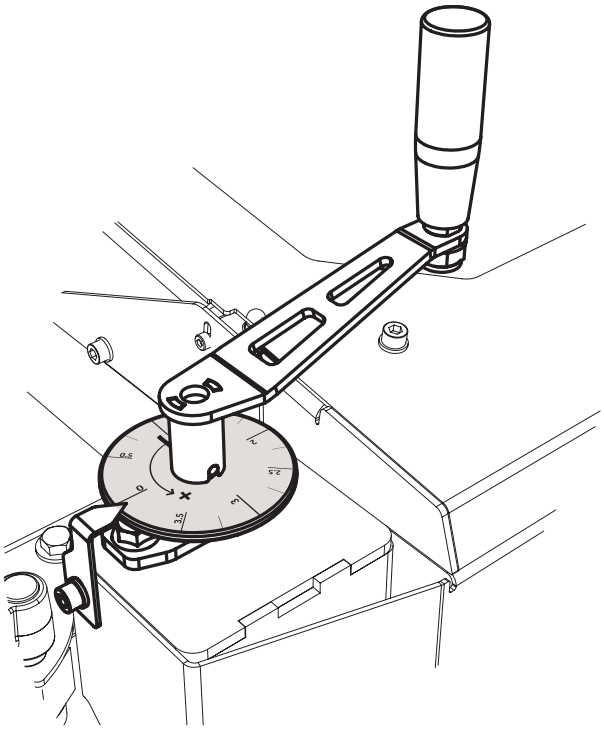
TOP CUTTER

Adjustment of top cutter depth of cut

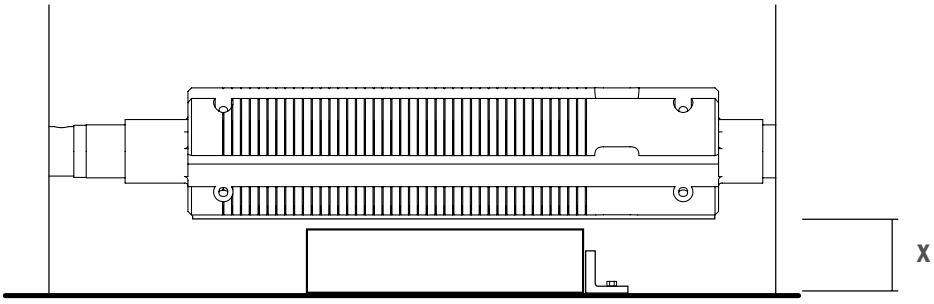
How much material the top cutter removes is set with the crank at the left corner of the planer. This crank raises or lowers the planer table in the machine via a chain transmission. A full turn on the circular scale is equal to 4 mm. Set the scale on the front of the machine, which shows the desired thickness of the workpiece. The scale can be calibrated based on the top cutter by sliding the magnetic scale. There is also a circular precision scale at the crank. This scale can also be calibrated. Loosen the allen screw slightly and turn it to the correct position. Lock it down again with the Allen screw.

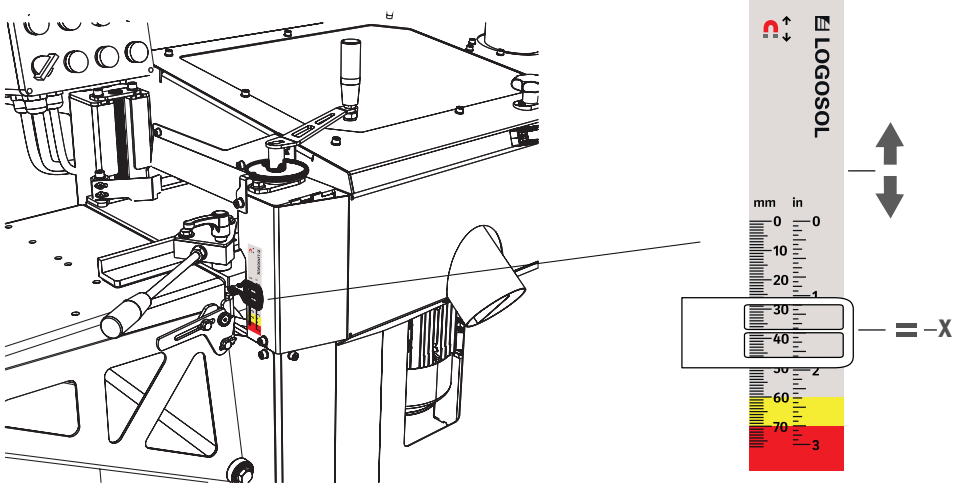
Always position the table upwards to reduce any play in threaded rods. If the table is to be lowered, lower half a turn too far and then raise to the correct position.

The lifting chain that raises and lower the planer table must be sufficently tight so that it does not misalign or pluck over. The mechanism is located under the planer table on the out-feed side. The tension is set with a nut in the chassis under the planer table on the out-feed side.



Do not adjust the chain tensioning while raising or lowering the planer table, as incorrect tensioning can cause the chain to disengage.





PLANER ADJUSTMENT

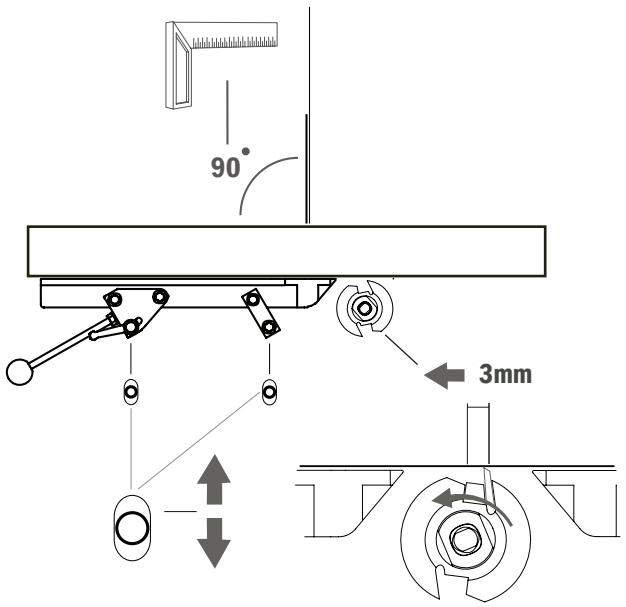
IMPORTANT!

To ensure good precision of the finished workpiece, it is important to adjust the guides before starting the machine to produce satisfactory results. Carefully follow the adjustment sequence!

IN-FEED FENCE ADJUSTMENT

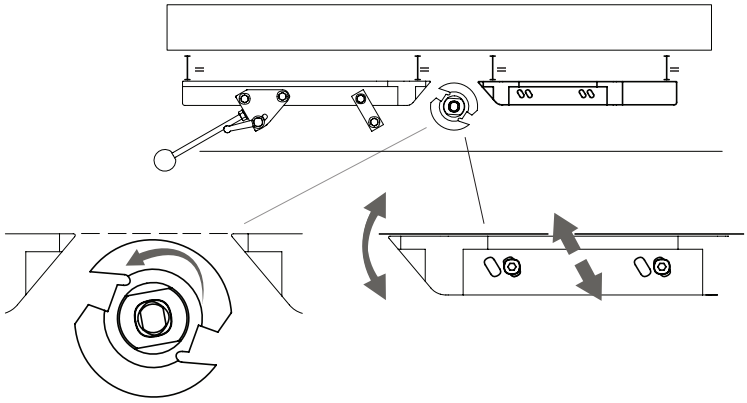
1

Start by adjusting the angle of the guide on the in-feed side, using a straight-edge placed against the guide. Now position the guide perpendicular to the opening of the movable side cutter in the planer table. The adjusting screw for the guide is located on the underside of the planer table. Now adjust the depth of the guide so that the movement of the straight edge when rotating the cutter corresponds to approximately 3 mm. When this position has been found, lock the guide position with the screws.



OUT-FEED FENCE ADJUSTMENT

Place the straight-edge against the guide on the in-feed side. Now rotate the fixed cutterhead so that nothing associated with the cutter touches the straight-edge. Now adjust the inner guide after the straight-edge so that it runs along the entire surface.



SETUP

SETUP

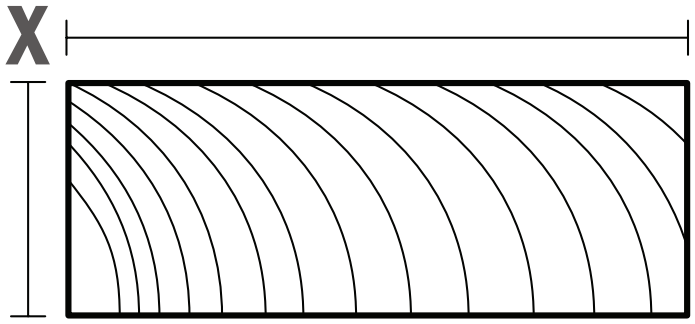
When using the CH3, you must setup the machine before starting it. This guide is general and describes the procedure for most setups.

IMPORTANT!

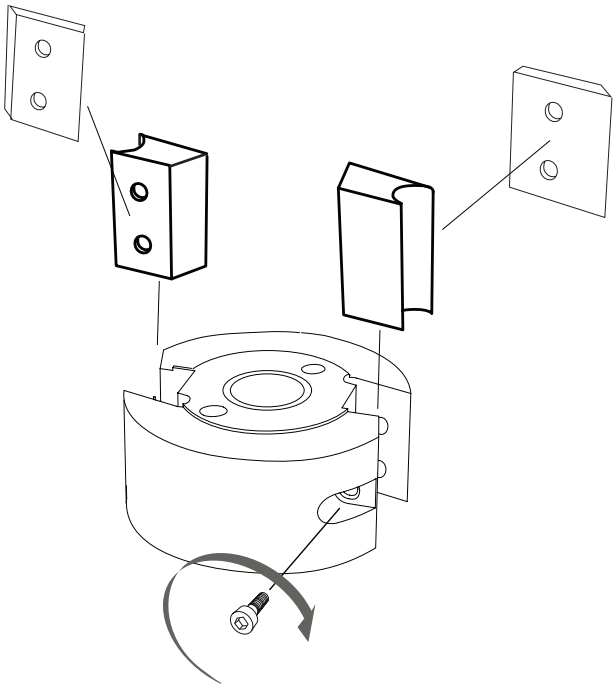
it is important to setup the machine accurately. Always run a test piece to make sure that the setup provides a satisfactory result or if you have to make any adjustments. Carefully follow the adjustment sequence!

DETERMINE THE SHAPE OF THE FINISHED WORKPIECE

Work is greatly facilitated if you have taken the time before starting to prepare a drawing of the finished workpiece that you intend to produce. This also facilitates communication with Logosol if you need to buy new moulding knives.



SETUP

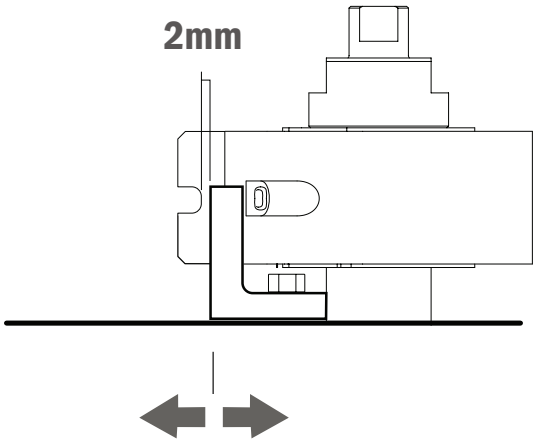


MOUNTING KNIVES IN SIDE CUTTERS

Install the moulding knife that matches the setup drawing in the side cutters; see section on side cutters.

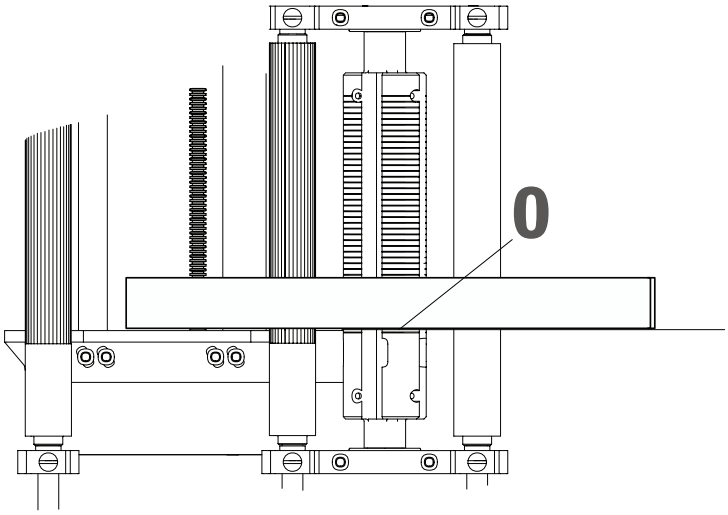
ADJUST HOW MUCH MATERIAL THAT IS REMOVED ON THE FIXED SIDE CUTTER

Set the depth with the in-feed fence; a good basic measurement for how much material that is removed by the fixed side cutter is 2 mm from the smallest outer diameter.

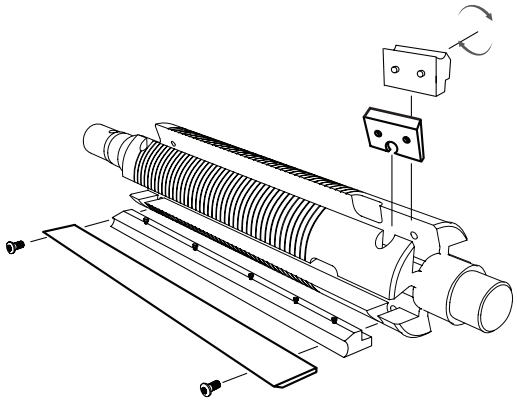


FIND THE "0" POSITION OF THE WORKPIECE IN THE TOP CUTTER

Use a straight-edge positioned from the out-feed fence up to the top cutter; this point where the straight-edge meets the top cutter is the inner edge of the finished workpiece

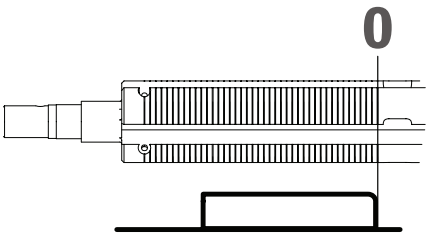


SETUP



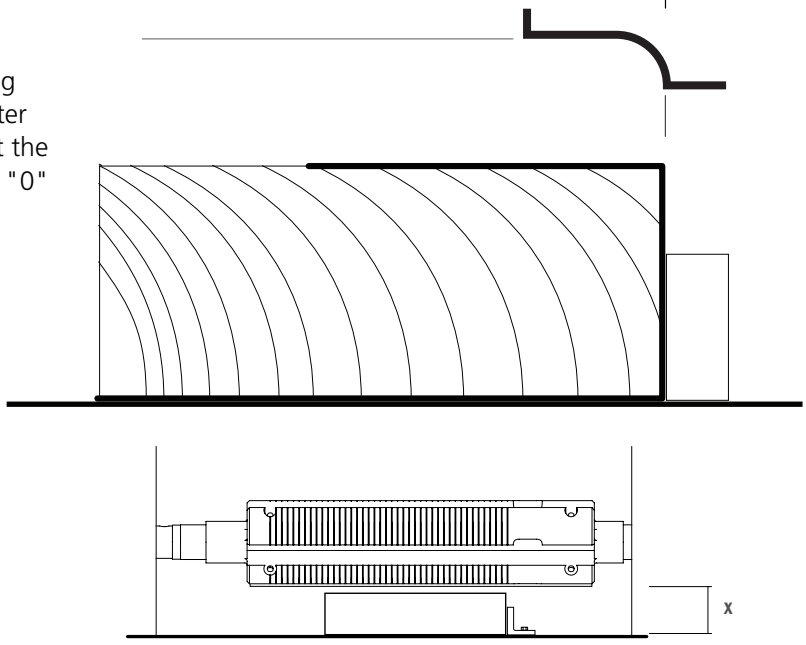
MOUNT PLANING KNIVES AND ANY MOULDING KNIVES IN THE TOP CUTTER

Mount planing knives and any moulding knives in the top cutter. Use the measured "0" to position the moulding knives in the top cutter.



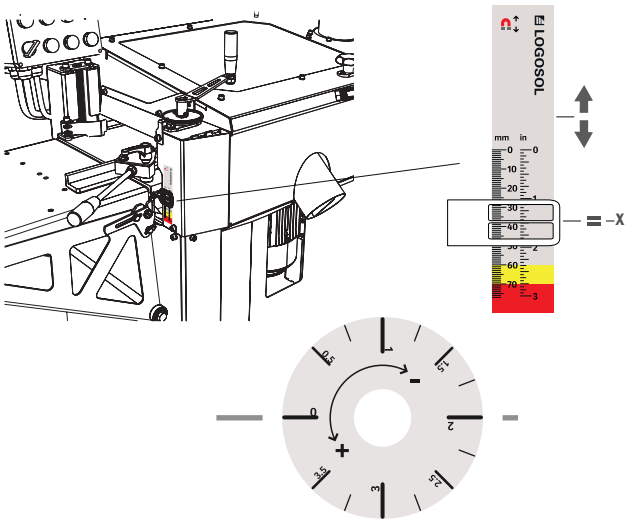
EXAMPLE:
This example shows the placement of moulding knife to produce a radius on the fixed side cutter side. The moulding knife is then placed so that the beginning of the radius touches the measured "0" point on the cutter.

SEE THE TOP CUTTER SECTION.



SETTING THE HEIGHT SCALE

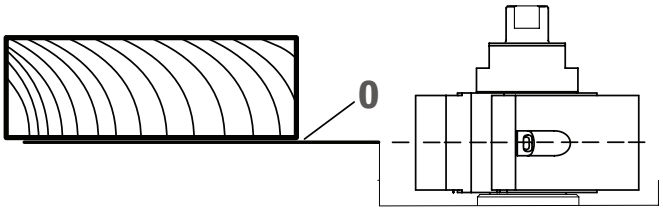
Adjust the height of the finished workpiece with the crank on the in-feed side. To attain good precision for the finished workpiece, it is advisable that the height adjustment on the table ends with an upward movement. Now run a test piece to double-check the measurement. If needed, recalibrate the scales.



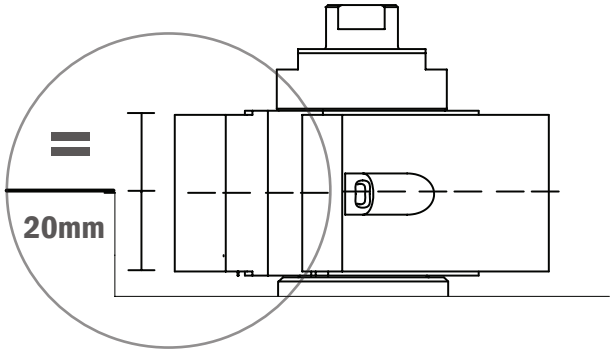
SETUP

SIDE CUTTER SETUP

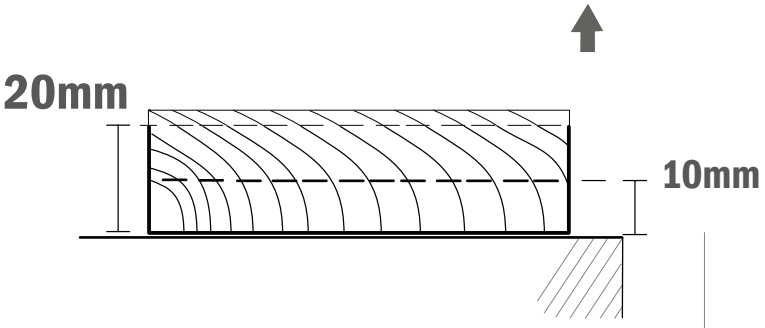
Once you know the final measurements of the workpiece, it's time to set up the side cutters. When the drawing is to be used for setting up the planer, the planer table is regarded as "0" for the finished workpiece.



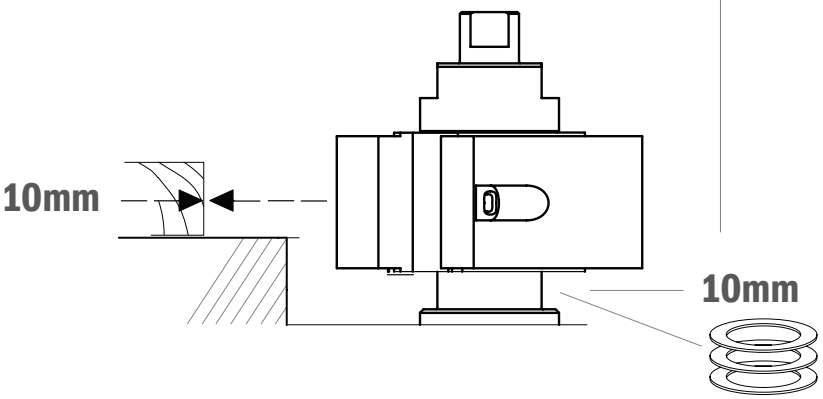
The spindles on which the side cutters are mounted are pre-set so that the distance to "0" is 20 mm. This means that the centre line of the mounted knife will be level with the planer table if no shims are mounted on the spindle.



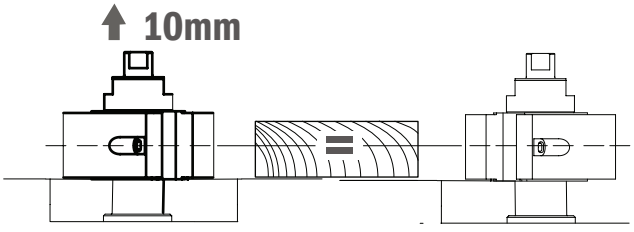
Based on the moulding drawing, the side cutters must be positioned according to the height of the finished workpiece. For most setups, you want to place the centre line of the planer knife at the middle of the finished workpiece.



To describe the vertical setup, we start from a finished workpiece that is to be 20 mm; the centre line of this is then half the measurement (10 mm). This means that the cutter body must be shimmed up 10 mm to place the centre line of the planer knife at the centre of the finished workpiece. This principle works with all setups where the centre of the knife is to be placed at the centre of the finished workpiece.



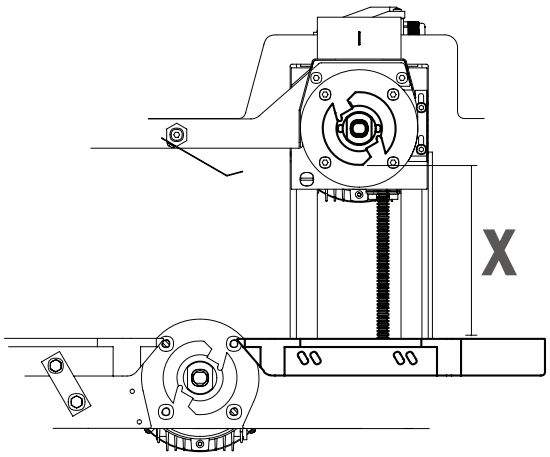
Once the fixed cutter is positioned, just place the same shims under the movable cutter so that they end up at the same height.

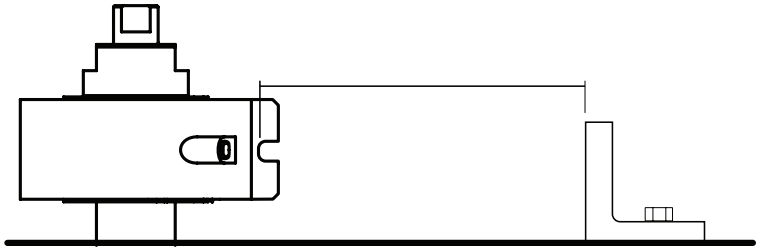


SETUP

SETTING THE FINISHED WIDTH WITH THE ADJUSTABLE SIDE CUTTER

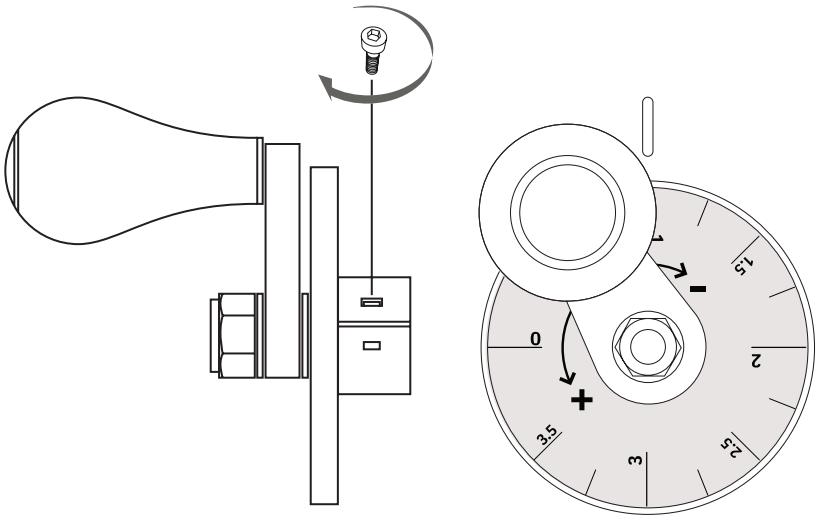
Carefully set how much material that is removed by the adjustable side cutter using the smallest outer diameter as a reference against the out-feed fence.





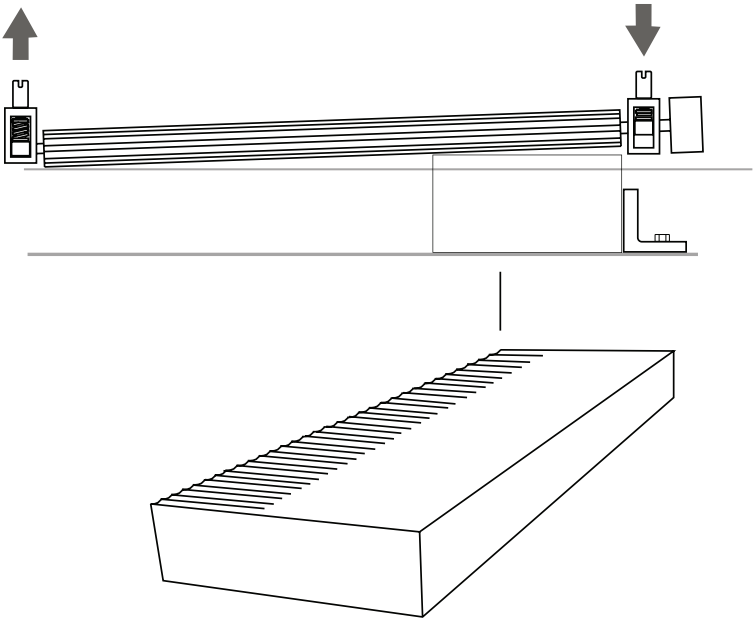
SETTING THE WIDTH SCALE

Movement of the side cutter is 4 mm per revolution; the scale is divided into 0.5 mm steps. Adjust the scale by running a test piece. If the test piece is, for example, 16.5 mm, the scale shall be set to 0.5. Once the scale is adjusted, it is locked with a locking screw as shown in the figure.



PRESSURE MARKS FROM FEED ROLLERS

In some situations, pressure marks can appear on the surface of the finished board. These are usually related to the pre-tensioning of the feed roller springs. If pressure marks appear on one side of the workpiece, try adjusting the spring tension as shown to correct the problem.



MAINTENANCE

MAINTENANCE

The periodic maintenace of the machine that is expected to be performed by the operator is described in this section. Be sure to follow the specified maintenance intervals, as this is the basis for good function of the planer.

WARNING! Risk of serious injury:

Before performing service and maintenance on the machine: Make sure that the powercord is disconnected from the machine.

WARNING! Lacerations:

Planer knives are extremely sharp and there is a risk of cuts even with a light touch; always use gloves when working inside the machine.

Risk of serious injury if maintenance is neglected.

The CH3 is easy to maintain, as it is largely rust protected. All cutter bearings and motors are completely maintenance-free. Required maintenance is specified below.

Make sure that the power is off before opening the planer's safety hatch or removing any protective cover.

Tip: It is advisable to use compressed air to blow the machine clean every time you open the safety hatch on the machine.

When using the machine:

Clean the machine from wood chips. In particular, check that wood chips have not accumulated under the machine.This can in that case prevent the motors from cooling and lead to motor failure or, in the worst case, fire. Check that all chip couplings are connected to the chip extractor.

Check that all feed rollers can move vertically.

The table should be regularly cleaned and treated with lubricant, e.g. low viscosity oil or wax. Logosol's lubricant is especially made for woodworking machines. Avoid getting lubricant on the feed rollers.

After each use:

Clean the machine from wood chips. Also check chip couplings and hoses. Remove chips that have accumulated under the machine.

Clean the cutter and feed rollers from resin and packed wood chips with mineral spirits.

Check that wood chips have not accumulated behind the top cutter´s right bearing housing. In this is the case, clean with a flat tool, e.g. a steel ruler.

Check that wood chips are not packed into the springs under the bearing housing of the feed rollers.

Clean the table and treat it with lubricant.

Clean and lubricate the three pressure rollers so that they move freely.

Check belt tensions.Check that all screws/bolts and bolted joints are secure.

Check that all cables and connections are in good condition.

Check the function of the lights by pressing the emergency stop and then the power start button.

Wood chips can be packed under the sprung bearings of the feed rollers, which would impair feed and increase the risk of ejections.

Make sure that the following parts are well lubricated. ISO VG 68 chain oil is recommended:

The feed rollers' bearings and spring function.

Trapezoidal threaded rods, chain and gears for height adjustment of the table. (Also check chain tension)

The slide for the movable cutter.

The chain transmission for the feed rollers.

Cutter knives, spacers, pressure rollers and side rollers.

MAINTENANCE

If the movable cutter is in the same position for an extended period (e.g., due to longer series of the same panel) it can rust. Set the cutter to its maximum position and minimum position at some point each month and lubricate the crank's threaded rod and the slot's rods.

If the machine is not used for a longer period of time:

Disconnect the power.

Carefully clean the entire machine and perform the same maintenance as after each work session.

Do not forget the lubrication points.

Remove cutter knives, cutter wedges and pressure rollers. Store these well-lubricated and at room temperature.

Other:

The out-feed roller, i.e. the rubber roller, wears and must be replaced when its function is affected by wear. Signs of wear may be increased presence of out-feed marks or boards not being fed out from the machine.

PLANING

Planing

A moulding planer does not straighten the board, it only sizes and moulds the workpiece. The processing part of the machine must therefore be built as short as possible to avoid truing action. Panels and mouldings are not normally straightened.
A surface planer makes the sides of the workpiece straight but does not size. A surface planer must have long tables that guide the workpiece directly over the cutter. The board must thereafter be run through a planer, sizing planer or moulding planer to get the right dimensions in width and height. Normally only shorter pieces are straightened for furniture joinery or window manufacturing, for example.
These two types of planers should not be confused. They each have a function that is important in itself.

Wood

Wood shrinks when it dries. Most shrinkage occurs when the wood dries from 25% humidity to 10%. To attain a good surface, you should not plane wood that has higher humidity than 20%, and that is about as dry as wood can become by outdoor drying. Ideally, the wood should therefore be stored indoors before planing.
Along the length of a board, along the fibres, wood shrinks very little. In most cases it is not something you need to take into account. Along the annual rings the wood shrinks by about 8%, and across the annual rings by about 5%. So it is better with vertical annual rings in the boards.
Boards buckle and crack over time. To avoid problems with this as much as possible, the wood should in most cases be turned so that the core side becomes the visible surface.

Results

Hard materials provide a better surface than soft ones. Small impressions, similar to light small flames, are due to wood chips that settle around the edge and are pressed into the wood. This phenomenon increases when the knives lose sharpness.
If the cutter marks are visible in the planed wood, it is usually either because the knives are not adjusted to the same height or because the workpiece is not pressed hard enough against the table or the guide during processing. An excessively high feed rate can also result in visible cutter marks.
Keep the feed rollers clean of wood chips. The out-feed roller is especially important because wood chips stuck to it can otherwise make marks in the planed surface.

How do you find out about the knife material?

If you want to test a knife, you can hold it for a moment against a rotating grinding wheel. If there are many white sparks, the steel is soft. If there are a few red sparks, the material is hard. Compare with a knife of a known material, such as a Logosol HSS knife.

Edge angle

Logosol's planer knives have a 38 degree angle on the knives and 20 degrees in the cutter. Some claim that a sharper angle is better suited to hardwoods. This cannot be considered as proven. A sharper edge angle, on the other hand, produces a poorer planing surface.

PLANING

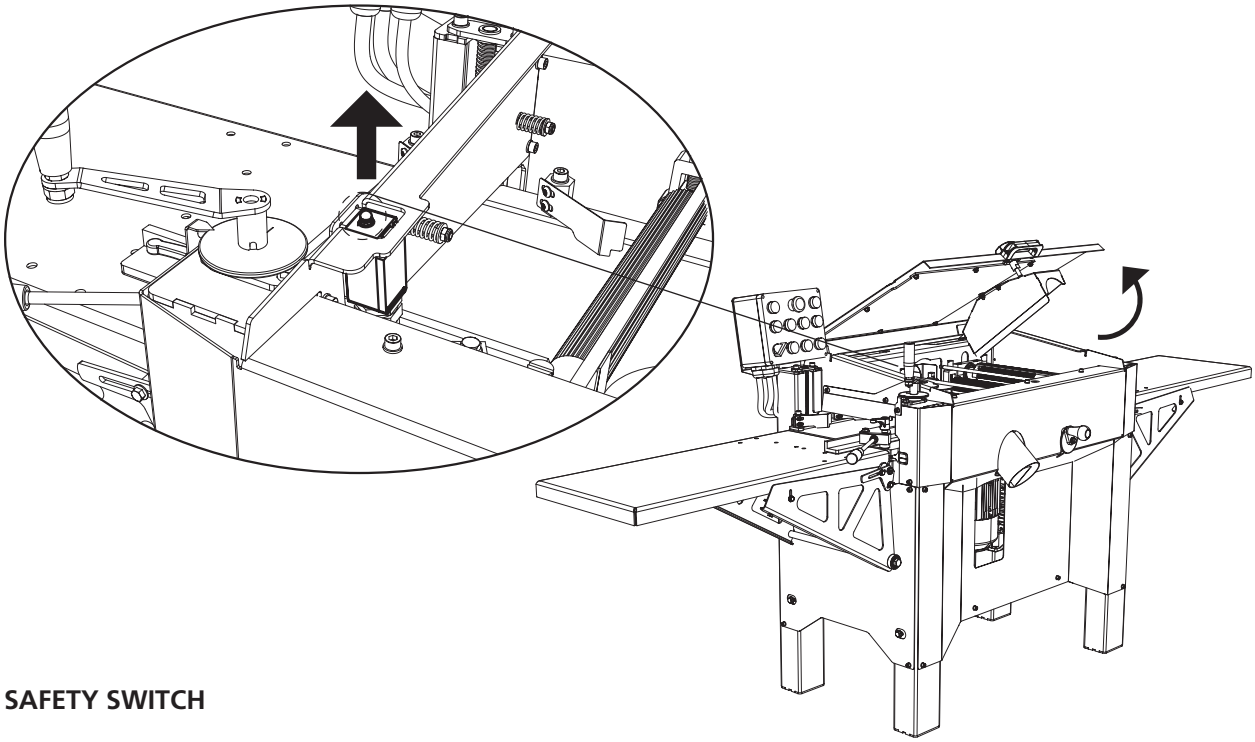
Planing tips

- You can experiment with adjusting the pressure on the feed rollers. If you lower the table, you can easily access the springs supporting the nuts. Note the default setting before you start turning so that you can easily find your way back to the default setting. Normally the springs should be tightened harder on the side of the fixed cutter, especially if narrow workpieces are planed. The feed roller must balance on, i.e. stand horizontally over, the workpiece and not apply more pressure on either side.

- Never run the planer without starting the chip extractor. Wood chips quickly clog couplings and hoses. Always adjust all chip transporters. Otherwise, the entire planer will be filled with wood chips, consequently producing poor results.

- If you have a board that is very incorrectly sawn, or if for some other reason you want to remove a lot of wood, adjust the planer so that it only takes as much as it can handle. Run the board through the planer several times until you can set the correct dimension. This technique cannot be used if moulding knives are mounted in the top cutter.

- Try to avoid overly warped wood; it does not get much straighter because you plane it. However, there are no major problems with planing warped or skewed wood.



SAFETY SWITCH

The planer is equipped with a safety switch, which is located at the front left corner of the lid. The safety switch cuts the power to all motors if the lid is opened during operation or if a work piece, which is thicker than the maximum depth of cut of the horizontal cutter, is inserted.

If the safety switch has engaged due to an attempt to feed in a workpiece that is too thick, the switch is "reset" by opening the safety hatch and removing the workpiece. The switch then automatically springs back to the original position and the machine can be restarted after the hatch has been properly closed again.

ATTENTION! Do not try to force the safety switch back to its original position while the hatch is still closed. You risk damaging the safety switch.

PLANING

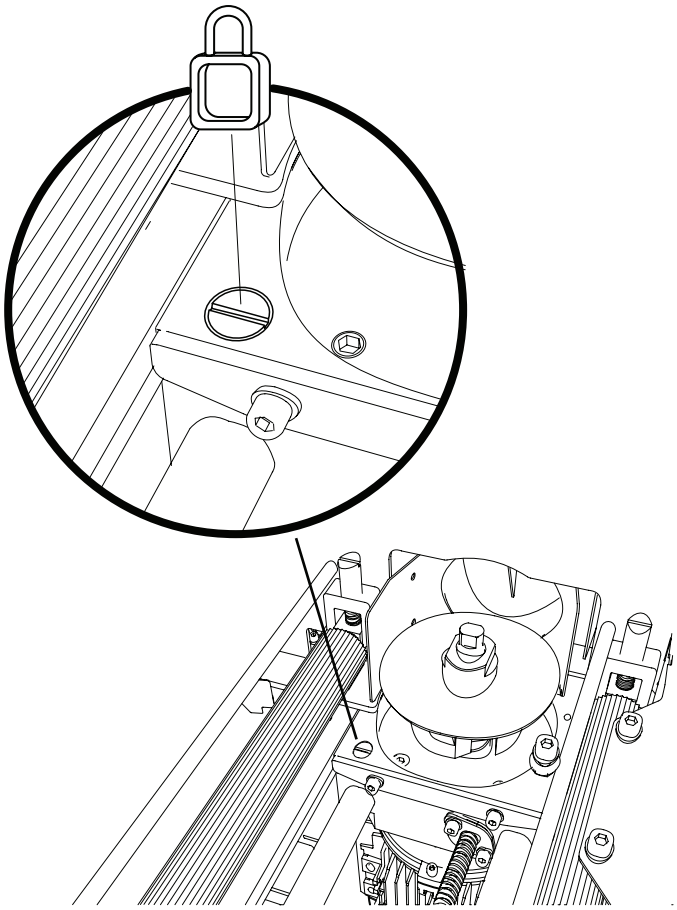
- Set the side fences precisely. The out-feed fence must be at the exact level of the fixed side cutter´s outer diameter. The in-feed and out-feed fence must be parallel and set so the boards are fed slightly obliquely (Towards the left approximately 5mm in total) This entails that boards will be pressed against the feed roller guides.

- If larger quantities of a moulding are to be planed, there is an extra locking screw to secure the movable cutter. The locking screw is countersunk in a hole at the top of the slide.

- In-feed and out-feed table. Make sure that they are mounted at exactly the same height and angle as the planer table.

- If you want to retain a rough-sawn surface on the board, for e.g. for cladding so it can be painted, this side is turned downwards against the planer table.

- The compression springs of the feed rollers must be adjusted so that the feed rollers balance on the workpiece. If the feed rollers are positioned obliquely over the workpiece, they can pull



- obliquely; moreover, there will be deeper marks caused by the roller grooves. Balancing the feed rollers is especially important when planing narrow workpieces.

- If the knives in the top cutter are adjusted outward too much, the last feed roller will not engage. Recommended protrusion is 1 mm.

- There will be lots of wood chips. If you want to blow the wood chips out of heated room, construct a chip chamber so that the warm air can be recovered. Otherwise the room will quickly cool down.

To save a setup

If you are making a moulding that you know you will be making again later, it can be wise to take a few steps before tearing down the setup so as to be able to quickly set up the machine to make the same moulding on a later occasion.

1. Save an approximately 0.5 m long piece of the planed moulding.
2. Store the spacers together with the knives for the right and left cutters.
3. Note the setting on the table height scale as well as the rotating scale on the height adjustment crank's position, i.e. note exactly at which height the planer table is set. Also measure the planed moulding. Note the dimensions of the saved moulding piece.

Quick setup:

1. Position the side cutters with the moulding knives and their associated spacers.
2. Set the in-feed and out-feed fences with a setting ruler.
3. Insert the saved moulding piece into the planer and align the side cutter with the moulding.
4. Make sure that the moulding piece rests against the out-feed fence and slide it under the top horizontal cutter. Raise the planer table so that the planer knife touches the moulding piece. Slide the moulding knives into the top cutter and place them laterally so that they fit into the moulding piece.
5. Fine-tune the height adjustment of the table with the rotating scale according to the notes on the moulding piece.

TROUBLESHOOTING

Problem	Possible cause	Action
Lines along the edges of the moulding knives.	1. The planer knives are set to remove to little material. 2. The moulding knives have been incorrectly sharpened.	1. Adjust planer knife removal with Logosol's adjustment block or with magnetic adjustment for the top cutter to 1 mm or, if necessary, a few tenths of a millimetre more. 2. Grind the moulding knives so that their edges are below the level of the planer knives, or use adjustable moulding knife wedges and position the moulding knives correctly against the planing knives.
The planer knife planes down the moulding's highest points.	1. The planer knives are set to remove to much material. 2. The moulding knives have been incorrectly sharpened.	1. Adjust planer knife removal with Logosol's adjustment block or with Logosol's magnetic setting for the top cutter to 1 mm or a few tenths of a millimetre less. 2. Use Logosol's adjustable moulding knife wedges and position the moulding knives correctly against the planer knives.
The width of the board changes during processing.	1. The workpiece moves away from either the in-feed or out-feed fence. 2. The locking screw of the movable cutter is not tightened. 3. Pressure plates, spring mechanism jams. 4. The workpiece is too small for the set planer dimensions. 5. Excessive removal at the fixed side cutter.	1. The outfeed fence are incorrectly set. Adjust the in/outfeed fences correctly. 2. Tighten the screw before planing. 3. Adjust the spring mechanism of the pressure plates. 4. Choose a wider workpiece or reduce the set width. 5. Reduce the feed speed or reduce removal of the fixed side cutters.
Poor surface along the left side of the workpiece.	1. The movable cutter's locking screw is not tightened.	1. Tighten the screw before planing.
Thin lines that are higher than the rest of the surface on the planed workpiece.	1. The planer knives have had small marks due to grains of sand, gravel, etc.	2. Move one of the planer knives approximately 1 mm and secure again. In this case, the planer knives slightly overlap each other and the lines can disappear. If the problem persists, the knives need to be sharpened.
Chips are ejected from the workpiece at the movable side cutter.	1. Too much removal.	1. Sizing plane the workpiece before final processing.

2. MECHANICAL OR ELECTRICAL PROBLEMS

Problem	Possible cause	Action
None of the machine's motors can be started.	1. The hatch is not properly closed. 2. The emergency stop button is pressed. 3. The machine is not receiving power. 4. A motor is overheated. 5. Fault in the machine's electrical system. 6. A fuse has tripped in the planer's junction box. 7. Chips have been packed into the safety hatch's safety switch.	1. Firmly tighten the hatch knob. A faint click can be heard when the safety switch engages. 2. Reset the emergency stop button by pulling it outwards. 3. Check the earth leakage circuit breaker, the fuses in the building and the power cord. 4. Wait until the motor overheating protection automatically resets. 5. The electrical system may only be opened by a qualified electrician: First check the locking circuit. This includes among other things, the emergency stop button and the overheating protection on the terminal block of each motor.
The workpiece is incorrectly fed through the planer or not at all.	1. Chips and resin have been packed into the grooves of the feed rollers and onto the out-feed roller. 2. The pressure from the feed rollers is too low. 3. The vertical movement of the feed rollers is hindered by wood chips that have been stuck in the bearing housing of the feed rollers or in the springs below them. 4. Wood chips have been packed around the top horizontal cutter. 5. There is resin or rust on the planer table. 6. One or more of the gears in the feed chain transmission have loosened from the shaft.	1. Clean the feed rollers. 2. Increase the feed pressure and check that the rollers balance horizontally over the workpiece. 3. Clean the bearing housings of the feed rollers, being sure to check the space under the movable part of the bearing housing. Remove wood chips stuck in the feed roller springs. 4. Remove wood chips and increase the air flow in the top cutter´s chip extractor. 5. Clean the table and lubricate it with Logosol's planing lubricant 6. Check the gear locking screws and tighten them against the flat surface of the shaft.

TECHNICAL DATA

DIMENSIONS/WEIGHT

Length	1100 mm (2610 mm with extension tables
Height	1132 mm
Width	743 mm
Weight	280 kg

DIMENSIONS

As planer	
Max. width	205 mm
Height	10 to 70 mm

CUTTER 1 HORIZONTAL CUTTER

Diameter	72 mm
Width	300 mm
Power	3 kW
RPM	7200 RPM

CUTTER 2/3 VERTICAL CUTTER

Spindle diameter	30 mm
Max. cutter height*	40 mm
Max. tool diameter	140 mm
Power	1.5 kW
RPM	3000 RPM
Max., moulding protrusion	23 mm

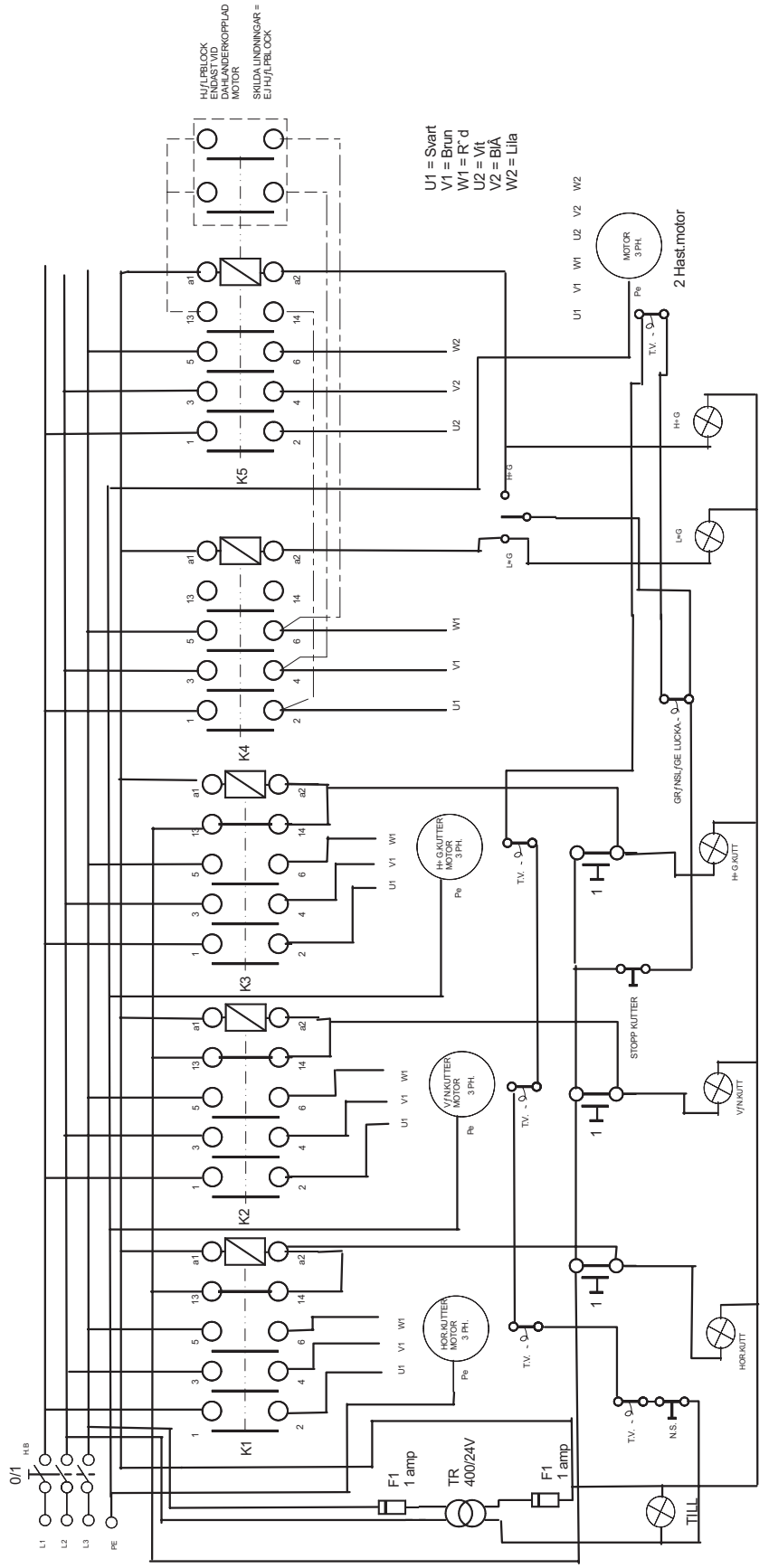
FEED

0.22/0.3 kW motor via a chain transmission with approx. 6 m/min.
Feed rate position 1: 3m/min
Feed rate position 2: 6m/min

ELECTRICAL SYSTEM

Electrical system CEE 16A 400V 50Hz three-phase (alt. 230V three-phase 16A)
Enclosure class IP54.

WIRING DIAGRAM



K1 - K3 TELEM. LC1K1210 M7 UC 230V	CONTRACT NO.	DATE 200307	COMPANY TRIPUS EL-MEK AB
K4 - K5 TELEM. LC1K0910M7 UC 230V	1 ST TRAFO OFS 25 400/230 VOLT TRAMO	DRAWN BY MM	
BLOCK TELEM. LA1KN20 2 SL.	F1 SÄKRINGSHÅLLARE + 1 AMP T.	CHECKED BY	TITLE ELDON KUTTER
N.S. TELEM. ZB5 AS54/ BLOCK AZ 102	START KUTTER ZB5AA131/ZB5AZ101	DESIGNED BY MM	
VRIDDON BACO L21MA03/ BLOCK 33E10	LED LAMPA XB7EV05MP 230 V	DESIGN ACTIVITY	SIZE A4 / FSCM NO. / DWG NO./ FILE NAME LOGOSOLKUTTER
KAPSLING TRIPUS 300 540	MK 7x1.5mm2	CUSTOMER LOGOSOL	SCALE / DATE 200307 / SHEET 1 of 1

Declaration of Conformity

In accordance with Directive 2006/42/EC, Annex 2A

Logosol AB,
Fiskaregatan 2,
S-871 33 Härnösand, Sweden
Tel. +46 611 18285,

hereby certifies that **Planer Logosol CH3**

has been manufactured in conformity with:
Machinery Directive 2006/42/EC,
EMC Directive 2014/30/EU

and has been manufactured in conformity with the following harmonised standards:
EN ISO 12100:2010, EN ISO 19085-1:2021,
EN 60204-1:2018

Härnösand 2022-12-07

CEO Fredrik Forsberg

Declaration of conformity

Logosol AB,
Fiskaregatan 2,
SE-871 33 Härnösand, Sweden

hereby declares that **Logosol CH3**

has been manufactured in conformity with:
Supply of Machinery (Safety) Regulations 2008

and has been manufactured in conformity with the following harmonised standards:
BS EN ISO 12100:2010,
BS EN ISO 19085-1:2021,
BS EN 60204-1:2018

Härnösand 2022-12-07

Fredrik Forssberg, CEO

LOGOSOL