

# **LUNA WOOD WORKING MACHINES**

**Instruction manual**

**W69**

**W59**

**W49**

**L 39**

**L 38**

**L 28**

**L 18**

**Luna**



# INSTRUCTION MANUAL

## LUNA L- and W-series

We congratulate you on your choice of machine and equipment.

To use the machine in the most efficient and safe way it is absolutely necessary to read the whole instruction manual and particularly to note the 10 safety procedures below.

Good Luck!

**Luna**International

---

## IMPORTANT!

### Instructions for safe operations

1. Check that the machine stands firmly on the floor.
2. Position the machine in such a way that adequate feed and takeoff areas are available for the operation in hand.
3. Electrical installation should be carried out by an expert. Check that plugs are kept out of children's reach.
4. Only work with sound and properly sharpened tools.  
In combination machines it is forbidden to use several tools at the same time or to use tooling not designed to operate at the selected spindle speed.
5. Use the guards provided for every operation.
6. Follow the operational instructions for every machine unit as per the instruction manual.
7. When adjusting the machine:
  - a) always ensure that the selector switch is in the off position.
  - b) Check that all screws are tightened
  - c) Rotate the tool manually a few times before starting to be sure that it has clearance.
8. Check that the material to be machined is free from foreign matter (nails, gravel etc.) and that the tool is suitable for the material in question.
9. Keep the machine inaccessible to unauthorized persons.
10. Pull out the plug when you leave the machine.

# INDEX

<b>TECHNICAL DATA</b> .....	side 4
<b>GENERAL INFORMATION — ASSEMBLY</b> .....	7
<b>INSTALLATION</b> .....	8
Assembly and electrical connections .....	8
Assembly of the Mortiser .....	9
Space needed W69 .....	10
Space needed W59 .....	10
Space needed W49 .....	11
Space needed L28 .....	11
Space needed L39 .....	12
Space needed L38 .....	12
Space needed L18 .....	13
Control Panel and Starting instructions .....	14
<b>SAFETY</b> .....	15
<b>CIRCULAR SAW</b> .....	16
Feed stick for circular saw and table moulder .....	16
<b>MAINTENANCE</b> .....	
Removal and fitting of the saw blade .....	18
Change of belt .....	18
Adjustment of sliding table .....	19
Adjustment of riving knife .....	20
<b>OPERATING INSTRUCTIONS</b> .....	
Height adjustment .....	21
Inclination adjustment .....	21
Auxiliary fence .....	22
Sliding table .....	22
Connection of chip extractor .....	23
Mounting of SUVA guard and ceiling fitting .....	23
<b>TROUBLE SHOOTING</b> .....	24
<b>SAFETY REGULATIONS AND IMPORTANT ADVICE</b> .....	25
<b>PLANER AND SURFACE</b> .....	
<b>MAINTENANCE</b> .....	
Adjustment of knives .....	26
Adjustment of in- and outfeed table .....	27
Change of V-belt to the cutter .....	27
<b>OPERATING INSTRUCTIONS</b> .....	
Adjustment of cutting depth .....	28
Mounting of canopy for dust extraction .....	28
Planing .....	29
Rebating .....	30
Adjustment of fence .....	30
Adjustment outfeed table W69, L39 .....	31
<b>SAFETY REGULATIONS</b> .....	31
<b>TROUBLE SHOOTING</b> .....	32
<b>THICKNESSER</b> .....	
<b>MAINTENANCE</b> .....	
Adjustment of thicknesser table .....	33
Adjustment of slide .....	33
Adjustment of feeding rolls .....	34
Change of V-belt to the gear box .....	34
<b>OPERATING INSTRUCTIONS</b> .....	
Mounting of dust canopy .....	35
Planing .....	35
<b>SAFETY REGULATIONS</b> .....	36
<b>TROUBLE SHOOTING</b> .....	36
<b>VERTICAL SPINDLE MOULDER</b> .....	
<b>MAINTENANCE</b> .....	
Adjustment of spindle cylinder .....	37
<b>OPERATING INSTRUCTIONS</b> .....	
Edge moulding .....	38
Copy moulding with template and insert rings .....	39
Center moulding .....	39
Spindle speeds .....	39
Operating instructions .....	40
<b>TROUBLE SHOOTING</b> .....	41
<b>SAFETY REGULATIONS</b> .....	41
<b>HORIZONTAL MORTISER AND DRILL</b> .....	
<b>MAINTENANCE</b> .....	
Adjustment of the guides on the mortising table .....	42
<b>OPERATING INSTRUCTIONS</b> .....	
Drilling .....	43
<b>SAFETY REGULATIONS</b> .....	45
<b>TROUBLE SHOOTING</b> .....	45
<b>HOLLOW CHISEL DEVICE</b> .....	
<b>MAINTENANCE</b> .....	
Replacement of ball bearings .....	47
<b>GUARANTEE</b> .....	49
<b>ACCESSORIES</b> .....	50

# TECHNICAL DATA

	W69	W59	W49	L39	L38	L28	L18
Circular Saw .....	x	x	x				x
Surface Planer .....	x	x		x	x		
Thickneser .....	x	x		x	x		
Vertical Spindle Moulder .....	x	x	x			x	
Mortiser (x) as optional .....	x	x		(x)	(x)		
Hollow Chisel Device (x) as optional .....	x	(x)		(x)	(x)		
Two parts, to be screwed together .....	x	x					
<b>SWITCHES</b>							
Lockable motor protection with no volt release ..	x	x					
Motor protection with no volt release .....			x	x	x	x	x
<b>EMERGENCY STOP</b> .....	x	x					
<b>EXTRACTION CONNECTION Ø 100 mm</b>							
Circular Saw .....	x	x	x				x
Surface Planer .....	x	x		x	x		
Thickneser .....	x	x		x	x		
Spindle Moulder .....	x	x	x			x	
<b>CAST IRON TABLE</b> .....	x	x	x	x	x	x	x
<b>FRAME — welded square sections</b>							
with bolted steel panels .....	x	x	x	x	x	x	x
<b>TOOLS Included in the standard execution</b>							
Spanner 13 mm ..... pce	1	1		1	1		
Spanner 17 mm ..... pce	1	1					
Spanner 19 mm ..... pce	1	1		1	1		
Spanner 24 mm ..... pce	1	1	1			1	1
Hexagon key 3 mm ..... pce	1	1	1			1	1
Hexagon key 5 mm ..... pce	1	1	1				1
Hexagon key 6 mm ..... pce	1	1	1			1	1
Locking pin Ø 10x300 mm ..... pce	1	1	1			1	1
Screw driver ..... pce	1	1		1	1		
Feeding handle ..... pcs	2	2	2			1	2
Saw blade TCT Ø 300 mm, 48 teeth ..... pce	1	1	1				1
Cutter blade HSS 410x30x3 ..... pcs	2			2			
Cutter blade HSS 250x25x3 ..... pcs		2			2		
Drill chuck 0—13 mm ..... pce	1	1					
Chuck key ..... pce	1	1					
Cutter spindle top screw with security plate . pce	1	1	1			1	

## FOR COMBINATION MACHINES

Only one machine head can be operated at a time. Changing function is to be carried out via the selector switch which isolates the previous function. The new function selected is brought into operation by means of the main switch.

To improve the working environment and machine performance as well as safety a dust/chip extractor should be connected. The machine should also be placed on machine pads or the optional castor frame. The machine should always be levelled, otherwise the table adjustment can be jeopardized. If necessary use supports.



# TECHNICAL DATA

	W69	W59 1,8 (2) 2,2 (3)*	W49	L39	L38	L28	L18
MOTOR RATING .....kW(HP)	2,2 (3)		2,2 (3)	2,2 (3)	1,5 (2)	2,2 (3)	2,2 (3)
MOTORS .....pcs	3	3	2	1	1	1	1
NET WEIGHT .....kg	710	530	290	460	280	140	150
<b>CIRCULAR SAW</b>							
Table size .....mm	930x570	730x570	730x570				730x570
Working height .....mm	870	870	870				870
Saw blad max diameter x spindle diameter .....mm	300x30	300x30	300x30				300x30
Spindle speed .....rpm	3000	3000	3000				3000
Saw blade max angle	45° w/lt	45° with	45° with				45° with
Please note 45° inclination not possible when the sawblade is in max height	0-90 mm Cutting depth	0-90 mm Cutting depth	0-90 mm Cutting depth				0-90 mm Cutting depth
Max depth cut (300 mm blade) ...mm	102	102	102				102
Height and angle adjustment by screw spindle and handle	Yes	Yes	Yes				Yes
Sliding table — support width ...mm	1000	1000	1000				1000
Sliding table — surface size ...mm	1000x200	1000x200	1000x200				1000x200
Sliding table — cutting width at 30 mm saw height .....mm	620	620	620				620
Guard	Yes	Yes	Yes				Yes
Number of guide slots in the table pce	1	1	1				1
<b>SURFACE PLANER</b>							
Table size .....mm	1500x425	1300x270		1500x425	1300x270		
Max planing widthxrebating size .mm	410	250		410	250		
Max rebating size .....mm	6	6		6	6		
Working height .....mm	867	867		867	867		
Cutter speed .....rpm	5500	5500		5500	5500		
Cutter block diameter .....mm	80	80		80	80		
Number of cutter blades .....pcs	2	2		2	2		
Max cut per pass .....mm	6	6		6	6		
FENCE — Adjustable over the whole table width with fixed 90° and 45° stops. (Can also be reversed as panel fence for the circular saw in W59 and W69) .....	1	1		1	1		
CUTTER GUARD type Suva	Yes	Yes		Yes	Yes		
EMERGENCY STOP .....	Yes	Yes		—	—		
<b>THICKNESSER</b>							
Table size .....mm	680x410	665x250		680x410	665x250		
Table adjustment by crank and screw spindle .....	Yes	Yes		Yes	Yes		
Max work width .....mm	410	250		410	250		
Max work thickness .....mm	235	235		235	235		
Table mounting — Slide with cylinder guide	Yes	Yes		Yes	Yes		
Kick-back protection with multiple finger stops (at 90°)	Yes	Yes		Yes	Yes		
Feed rollers — adjustable and spring loaded	Yes	Yes		Yes	Yes		

\* AS OPTIONAL

# TECHNICAL DATA

	W69	W59	W49	L39	L38	L28	L18
Cog-wheel gearing .....	Yes	Yes		Yes	Yes		
Cutter diameter .....mm	80	80		80	80		
Number of cutter blades .....pcs	2	2		2	2		
Cutter speed .....rpm	5500	5500		5500	5500		
Feed speed .....m/min	6	6		6	6		
Max cut per pass .....mm	5	5		5	5		
GUARD — Dust/Chip Canopy with extraction flange Ø 100 mm over the cutter .....	Yes	Yes		Yes	Yes		
<b>VERTICAL SPINDLE MOULDER</b>							
Table size .....mm	930x530	730x530	730x530			730x530	
Spindle speeds .....rpm	3.500 6.000 8.000	3.500 6.000 8.000	3.500 6.000 8.000			3.500 6.000 8.000	
Direction of rotation .....	counter clockwise	counter clockwise	counter clockwise			counter clockwise	
Speed adjustment — Belt re- positioning between cam ten- sioned pulley system	Yes	Yes	Yes			Yes	
Working height .....mm	870	870	870			870	
Hole size for table insert rings ...mm	150	150	150			150	
Ring fences (3) reversible step type Ø 150/125/100 .....	Yes	Yes	Yes			Yes	
Spindle vertical adjustment .....mm	120	120	120			120	
Spindle diameter .....mm	30	30	30			30	
Max cutter fastening height .....mm	115	115	115			115	
GUARD — protective hood type SUVA with separately adjustable fences.	Yes	Yes	Yes			Yes	
Max diam. of tool. (With cover ring) ...mm	300	300	300			300	
<b>HORIZONTAL MORTISER AND DRILL</b>							
Table size .....mm	400x200	400x200		400x 200*	400 x 200*		
Table vertical adjustment .....mm	235	235		235*	235*		
Horizontal traverse .....mm	210	210		210*	210*		
Fore-and-aft movement .....mm	130	130		130*	130*		
Drill chuck diameter .....Ø mm	13	13		13*	13*		
Speed .....rpm	5500	5500		5500*	5500*		
Number of lever controls .....pce	1	1		1	1		
Clamping device eccentric clamp	Yes	Yes		Yes	Yes		
<b>HOLLOW CHISEL DEVICE</b>							
Table size .....mm	400x200	400x200*		400x200*	400x200*		
Table vertical adjustment .....mm	235	235*		235*	235*		
Horizontal traverse .....mm	210	210*		210*	210*		
Fore-and-aft movement .....mm	130	130*		130*	130*		
Drill chuck diameter .....Ø mm	13	13*		13*	13*		
Speed .....rpm	5500	5500*		5500*	5500*		
Hollow chisel fixing diameter Ø mm .....	19	19*		19*	19*		
Clamping device eccentric clamp	Yes	Yes		Yes	Yes		
Hollow chisel max size .....mm	15	15*		15*	15*		

\* AS OPTIONAL

# GENERAL INFORMATION - ASSEMBLY

The machine is delivered in a box and placed on a pallet.

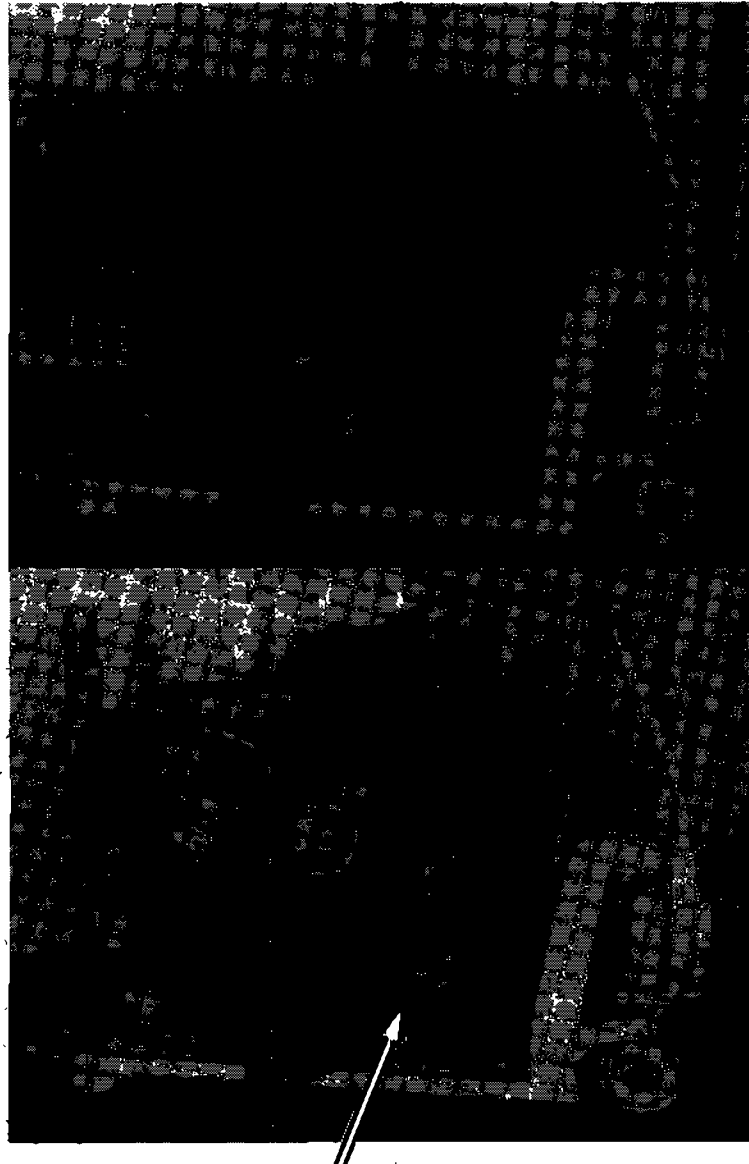
## NOTE!

When lifting the machine from the pallet it is **IMPORTANT** to follow the instructions below.

**MACHINES WITH SPINDLE MOULDER** The cutter spindle must never be in a downward position. The motor can then be damaged by the transport truck or the fork. When you get your machine the spindle is in bottom position and **MUST BE RAISED**

**PLANER and THICKNESSER.** The tables must not be used for lifting purposes. The table setting can be out of order.

Suitable handling of the machine when transporting by fork truck.



**PLEASE NOTE!!!** When you get the machine the motor is in bottom position.

**RAISE THE SPINDLE ASSEMBLY BEFORE TRANSPORTING BY TRUCK.**

# INSTALLATION

To prevent corrosion the machines are protected by a rust preventive which should be removed by means of photogen or white spirit. **DO NOT USE A SOLVENT WHICH WILL DAMAGE THE PAINTED SURFACE.** After the cleaning it is good policy to apply wax polish e.g. Vaxelit. (ref. no. 5432-1005)

## ASSEMBLY AND ELECTRICAL CONNECTIONS

The Luna Master W59 and W69 are delivered in two sections to be assembled on site.

Place the two sections together and connect the two connectors, fasten by the lock clamp.

### W59

Place the connection block into the circular saw/spindle moulder section to avoid crushing. Place the two loose spacers between the two sections in the following way:

1. Mount the screws from the inside of the thicknesser/planer
2. Apply and fasten the spacers
3. Put the sections together and enter the set screws fit into the holes of the circular saw/spindle moulder
4. Apply the nuts from the inside of section 1.

### W69

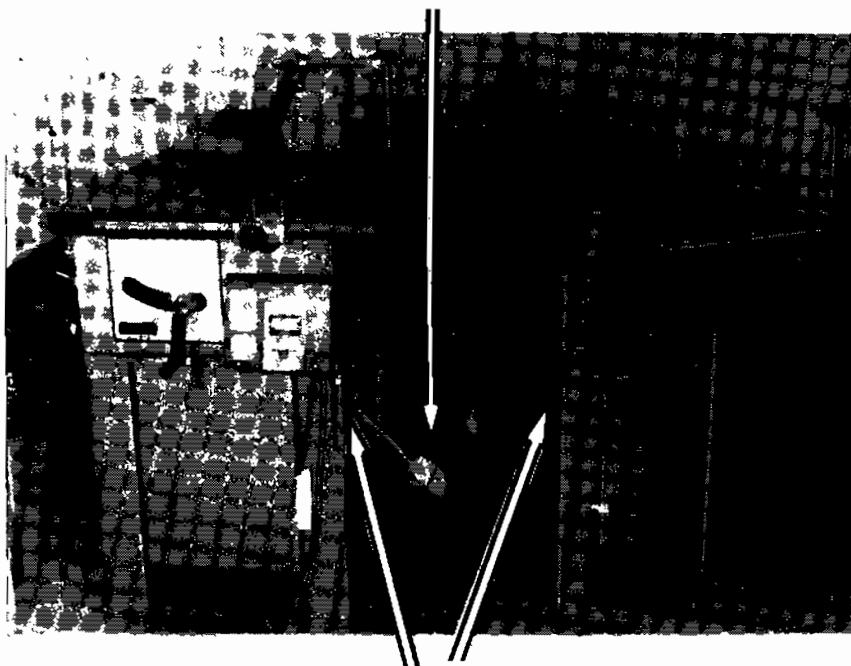
Place the connection block in the round hole in the circular saw/spindle moulder section to avoid crushing.

Place the two loose spacers between the two sections in the following way:

1. Mount the two loose spacers on the circular saw/spindle moulder and tighten up.
2. Put the machine halves together and make the holes fit.
3. Apply the other screws from the inside of the thicknesser/planer

### NOTE!!!

**ALWAYS EMPLOY A QUALIFIED ELECTRICIAN TO CONNECT THE MACHINE ELECTRICAL CONNECTORS AND LOCK CLAMP**



Locating hole for assembling the sections

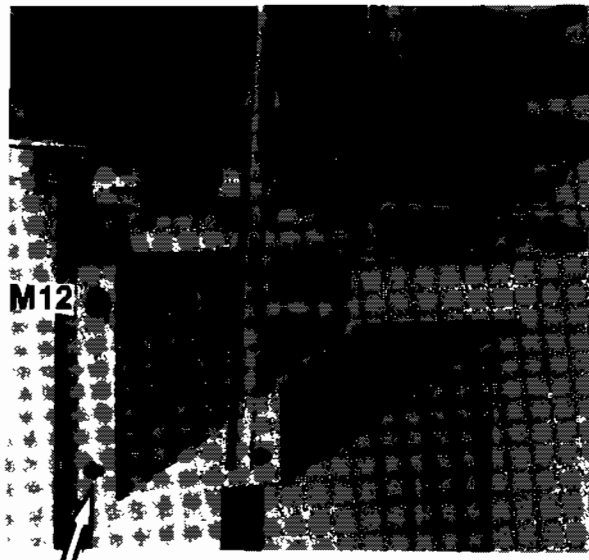
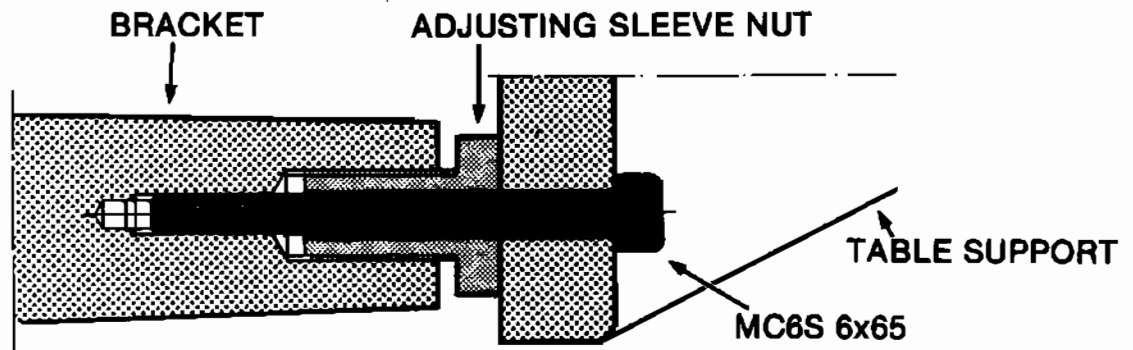


# INSTALLATION

## ASSEMBLY OF THE MORTISER

The mortiser is packed separately on the pallet

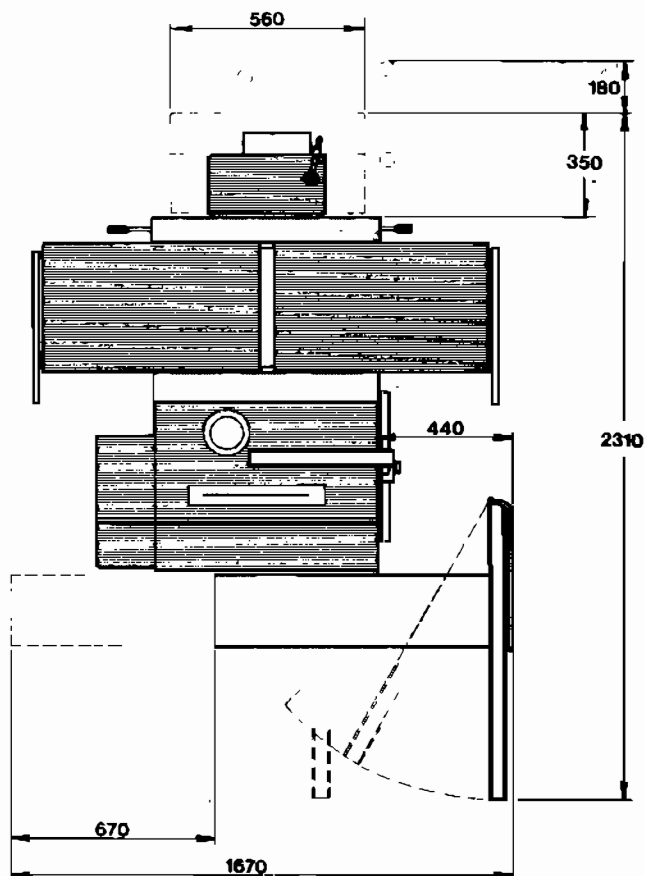
- Assembly:**
1. Enter the upper M12 screws without tightening them. Let the table hang loose
  2. Mount the M6 screws in the two adjusting sleeve nuts on the lower brackets
  3. Position the mortiser table parallel to the planer table
  4. Adjust the mortiser table parallel to the chuck by means of the adjusting sleeve nuts. Place a cylindrical straight pin in the chuck, (e.g. the locking pin enclosed in the delivery).
  5. Adjust the mortiser table parallel to the locking pin by means of the adjusting sleeve nuts. Use a gauge block.
  6. Tighten up all screws



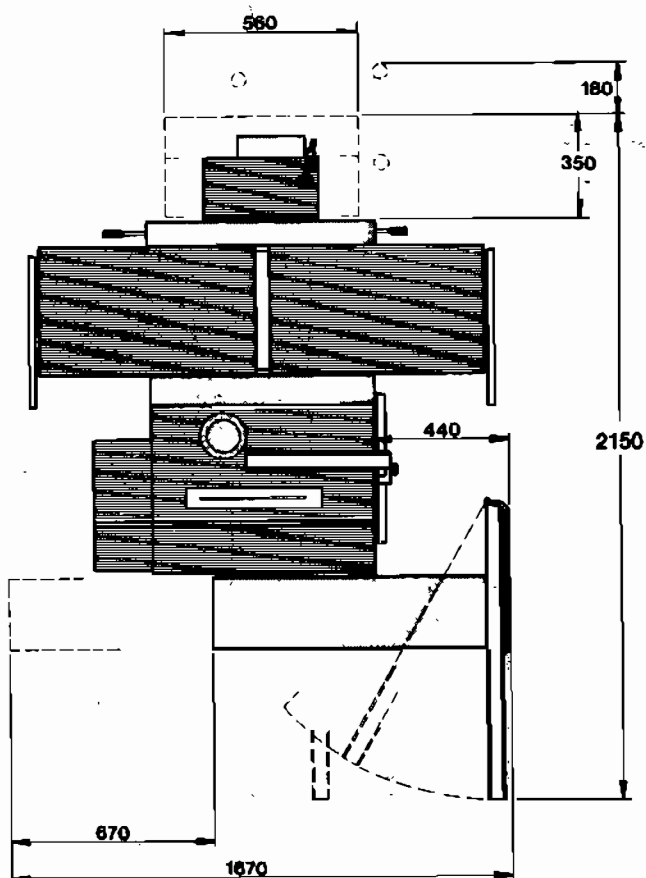
M 6 and ADJUSTING SLEEVE NUT (See above)

The mortiser is optional for L39 and L38

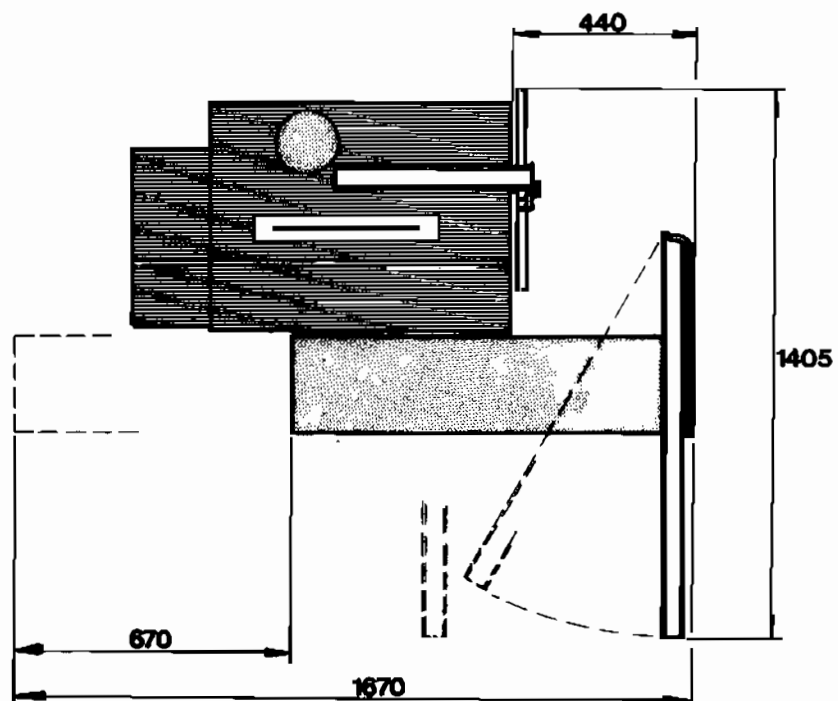
# SPACE NEEDED W69



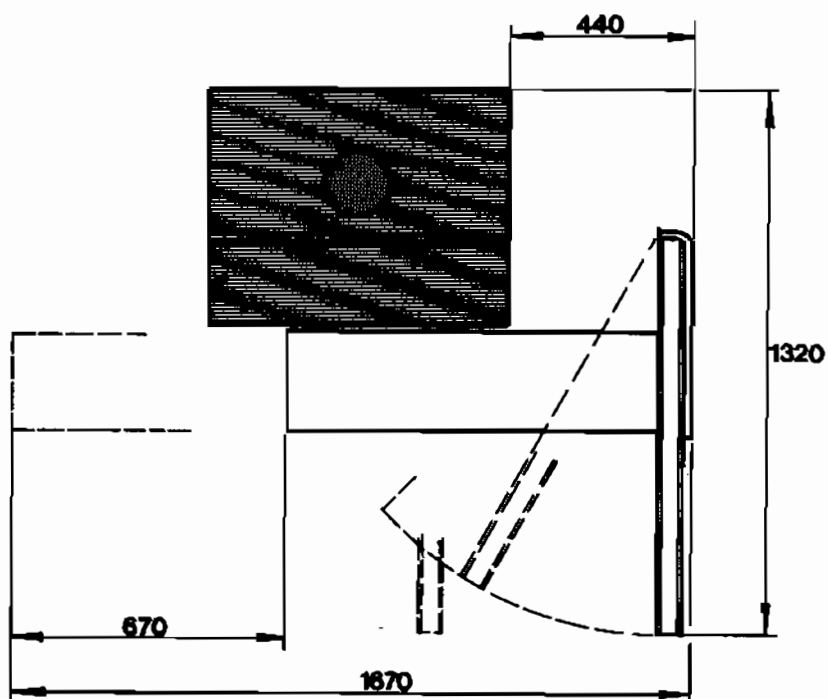
# SPACE NEEDED W59



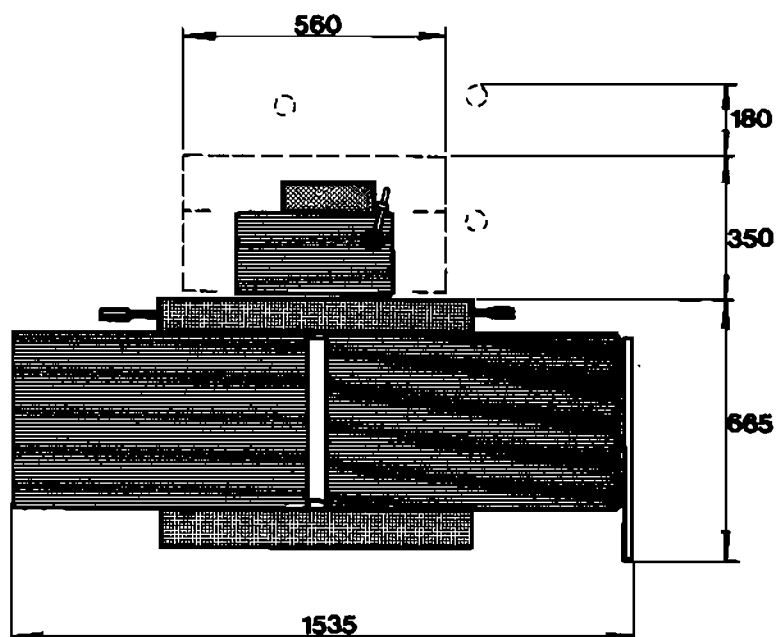
## SPACE NEEDED W49



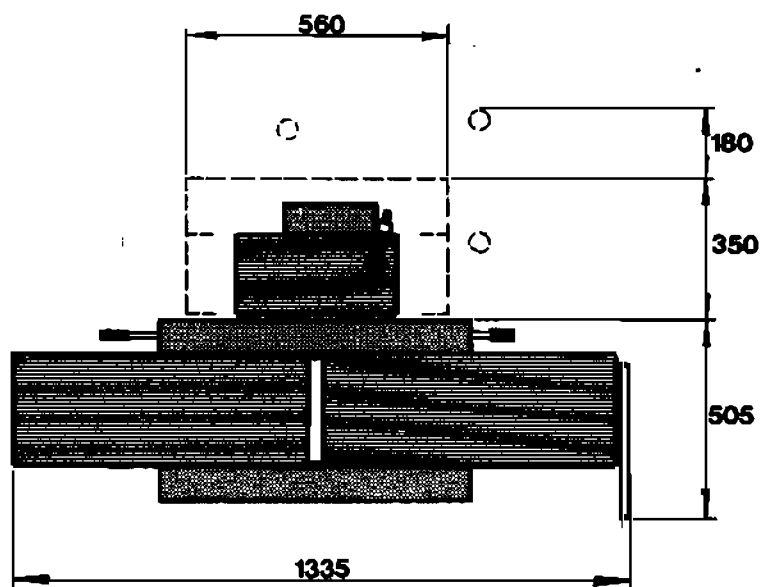
## SPACE NEEDED L28



# SPACE NEEDED L39

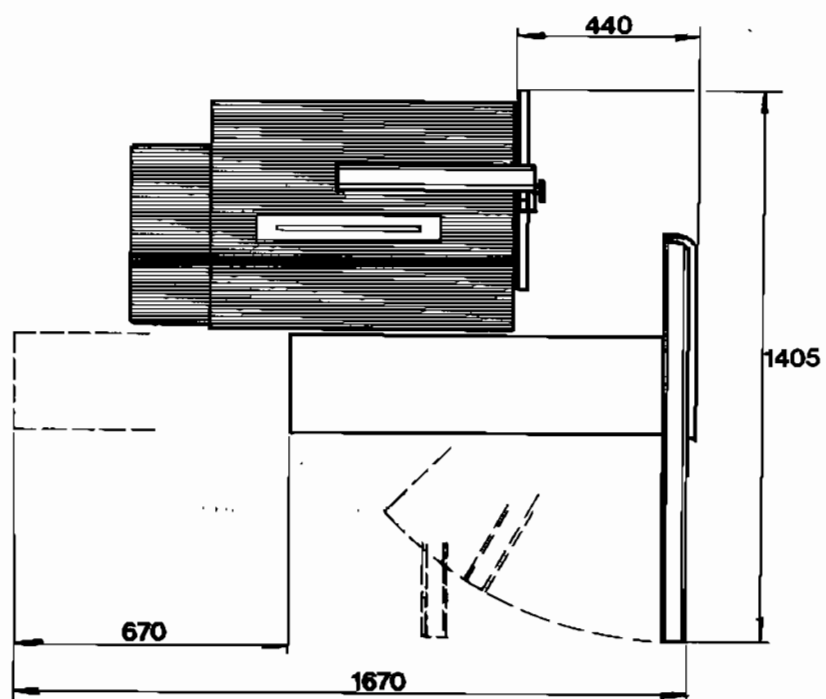


# SPACE NEEDED L38

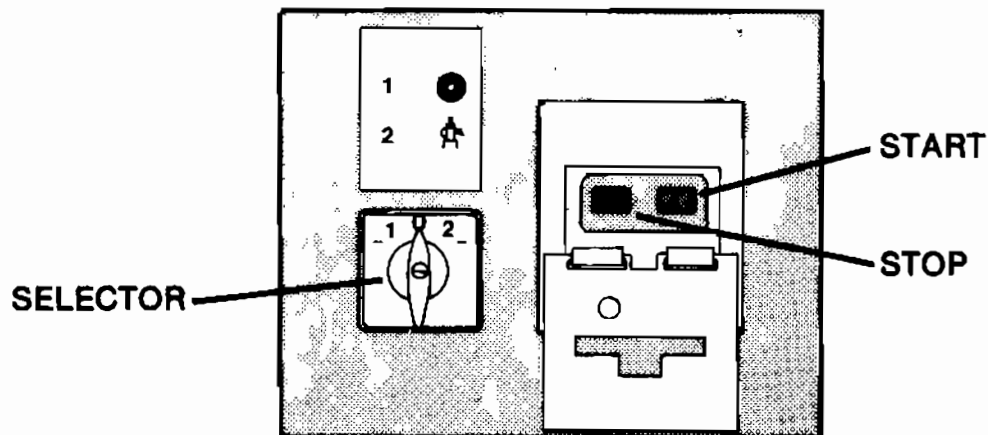




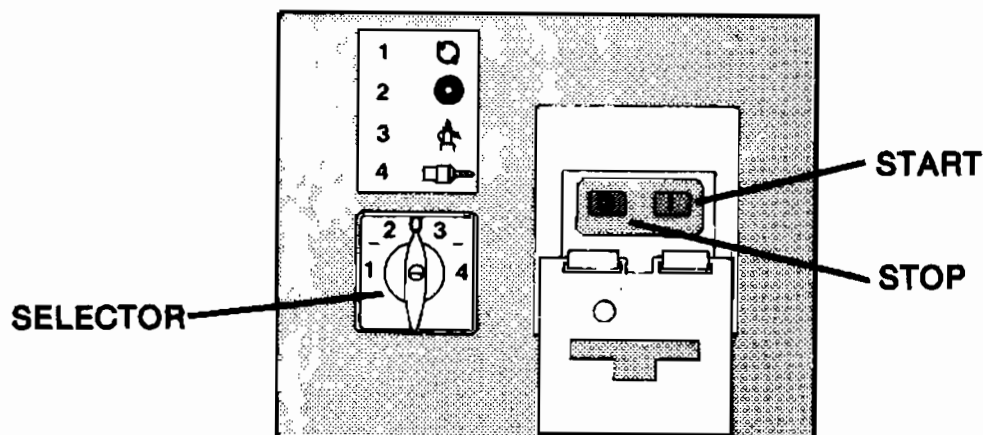
# SPACE NEEDED L18



**Control Panel W59/W69**



**Control Panel W49**



## **STARTING INSTRUCTIONS**

Check that the work spindles rotate freely and that the tools are firmly fixed.  
Select the desired operation on the panel.

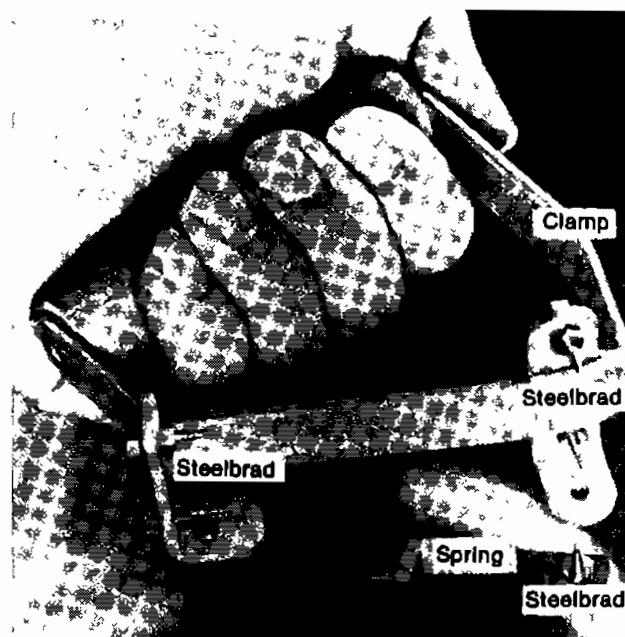
### **IF THE MACHINE DOES NOT START:**

- Check that the safety switch is not pushed
- Push the stop button to reset the mechanism and give a new starting impulse
- Check that the neutral wire (N) and earth wire ( $\oplus$ ) are correctly connected in the plug
- Check that the flexible lead connectors between the sections are connected (W69/59)
- Check the fuses for the mains connection
- If the machine still does not start contact an electrician or the supplier
- NOTE: For defects under warranty please contact the supplier before taking any measures.

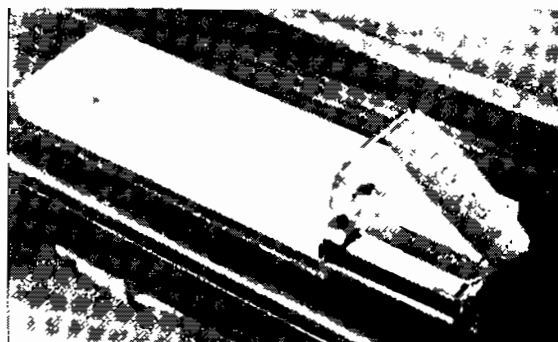
---

# **SAFETY**

- Luna L-W Series are controlled and approved by the National Swedish Board of Industrial Safety
- Wood working tools operate at high speeds and every precaution should be taken regarding correct operating procedure and use of guards
- Our intention has been to make the Luna L-W Series very safe machines. The different heads are equipped with suitable guards
- These guards should always be used. Their application is explained in the section covering operating procedures. The machine must be earthed by means of the earth circuit in the table. The machine should always be stopped when changing tools or when cleaned. Make it a rule to switch off the machine or to lock by the padlock
- Always use suitable clothes when working with the machine. Loose hanging clothes e.g. tie, unbottened cuffs etc, rings, wrist watches etc. can easily get hooked in the tools.
- Particular caution is necessary if the work piece is small. Do not hold by hand. Always use a push-stick or block (see next page)



The feed stick has been designed to reduce the number of hand and finger injuries when using the circular saws and spindle moulder. These machines should always be equipped with feed sticks particularly for use when machining small pieces of timber. The feed handle is mounted on a suitable piece of wood.



For general use (350x80x20 mm)



For moulding small workpieces. Can be introduced under the protective guard.



For guiding purposes when sawing thin workpieces. The broad front gives good control. Chips are removed by the tip of the wooden piece.



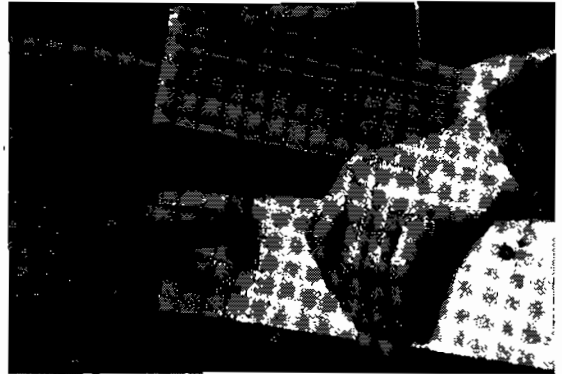
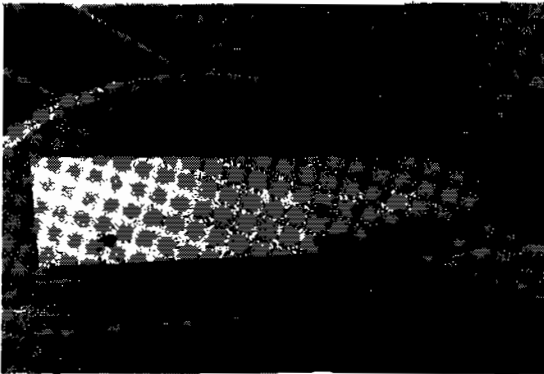
For the manufacture of keys.



## ASSEMBLY OF THE FEED HANDLE

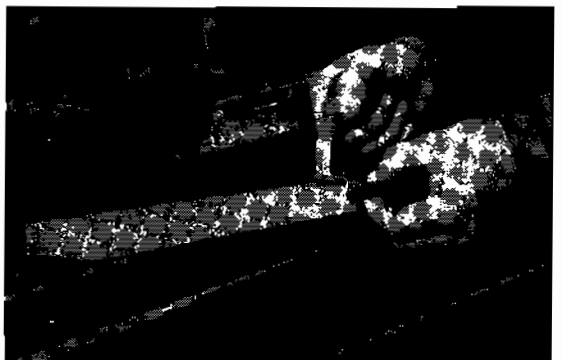
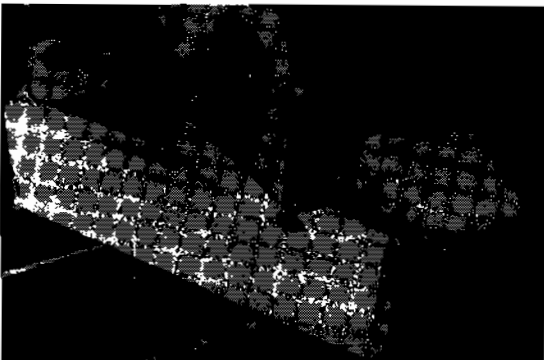


Select a wooden piece for the feed stick and shape it properly. Lean the rear part of the clamp against a solid frame. Knock the board so that the rear steel brads are introduced (left). Put down the board and knock the handle so that the front steel brads are introduced (right).



Turn the spring with the steel brads so that it is introduced into the hole of the clamp. Fasten the brad either with a knock against the worktable (left) or with a board.

## REMOVAL OF THE FEED HANDLE



Pry loose the brad in the spring by means of a board (left) or your fingers (right). Push the spring aside and pry loose the handle from the feed stick.

# MAINTENANCE Circular saw

## REMOVAL AND FITTING OF THE SAW BLADE

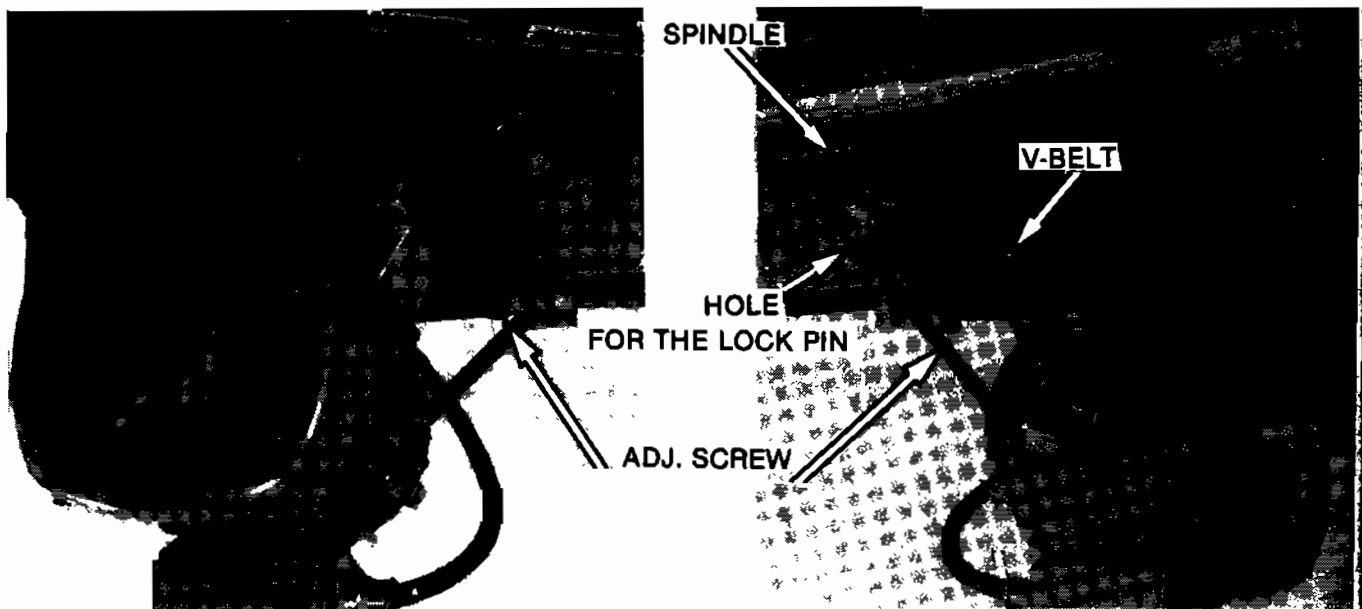


LOCK SCREW and  
COLLAR

GUARD  
for the saw blade

1. Lower the saw blade to its bottom position and remove the table insert
2. Open the cover under the sliding table and lock the spindle by means of the lock pin in the hole in the spindle behind the saw blade
3. Loosen the screw in the centre of the saw blade clockwise and remove the blade
4. To refit — reverse the procedures above

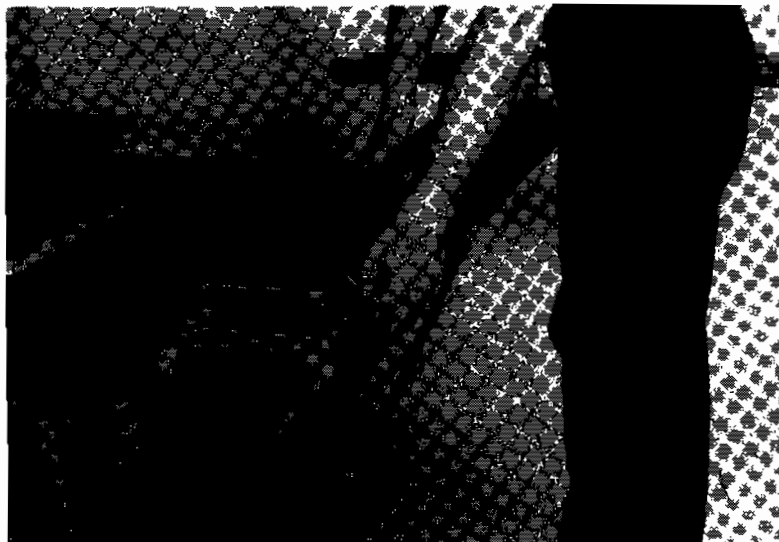
## CHANGE OF BELT



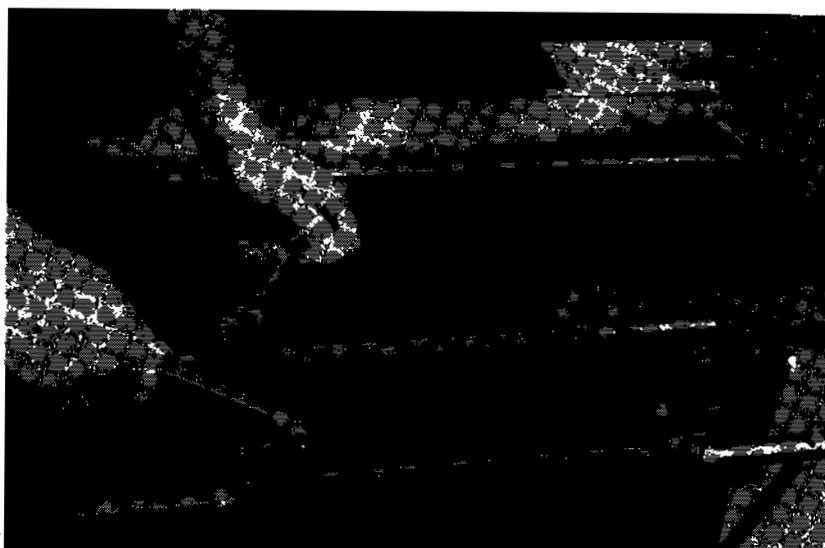
1. Remove the blade as above
2. Remove the saw guard
3. Slack the belt by loosening the adj. screw
4. Change belt. Tension the belt so that a push of a finger gives abt 5 mm movement. Refit the saw blade and the guard as described above.
5. Retensioning of the V-belt is made by the adj. screw that is easily found inside the opening on the spindle moulder. On the L18 you will find the adj. screw by dismounting the cover plate on the side.

# **MAINTENANCE Circular saw**

## **ADJUSTMENT OF SLIDING TABLE**



**Raise the bar on the rear side of the sliding table.  
Draw out the table from the ball bearings.**



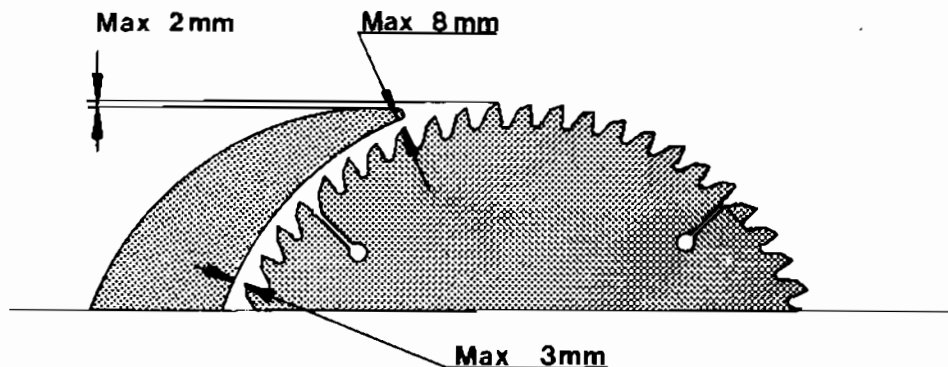
**A play in the sliding table should be corrected by adjusting the ball bearings. Loosen the exterior ball bearing holder and withdraw the hexagonal set screw. Then lock the ball bearing holder again. NOTE — please see to it that both set screws are equally adjusted.**

**If the sliding table is changing vertically compared to the sawing table — adjust the set screws under the sliding table. If the inner part of the sliding table is too high loosen the upper set screws and adjust by the lower set screws. If the outer part of the sliding table needs adjustment — loosen the set screws on the support legs and raise or lower the legs. Lock the set screw again.**

**If the sliding table is not needed it can be taken away.**

# MAINTENANCE Circular saw

## ADJUSTMENT OF RIVING KNIFE



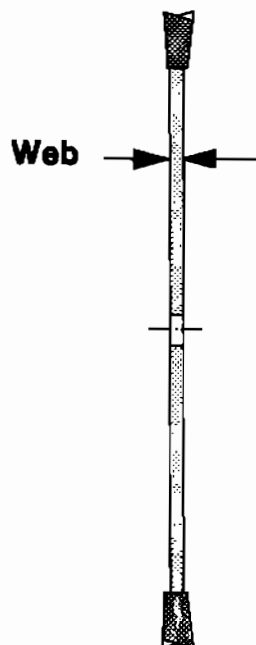
The riving knife is an important safety feature of the circular saw. It stops the saw cut from closing behind the blade, thus preventing rejection of the workpiece.

**Adjustment:** The riving knife is correctly adjusted when its distance from the teeth point of the saw blade amounts to max. 3 mm at the lower edge and max. 8 mm at the upper edge and the point of the riving knife is not more than 2 mm under the highest point of the saw blade.

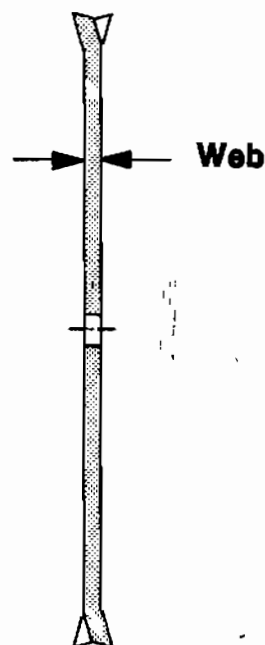
When the riving knife is set it automatically follows the vertical movement of the saw blade. When changing to a blade of different diameter the knife must be re-set.

**NOTE THAT THE RIVING KNIFE MUST BE APT 0.3 MM THICKER THAN THE WEB OF THE SAW BLADE TO PREVENT KICK-BACK PROJECTION OF THE WORK PIECE.**

**TCT SAW BLADE**



**CIRCULAR SAW BLADE OF STEEL**





# OPERATING INSTRUCTIONS Circular saw

## HEIGHT ADJUSTMENT

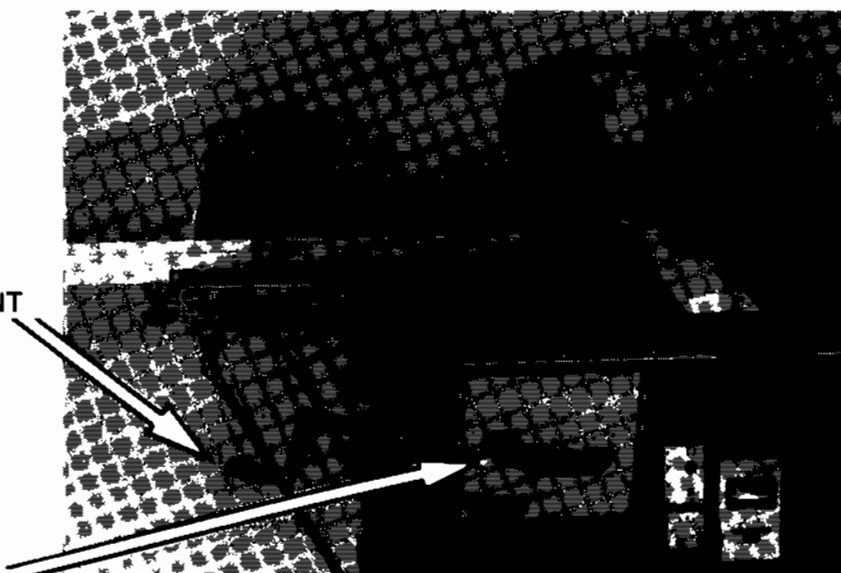


HEIGHT ADJUSTMENT

Adjustment of the cutting height is carried out by means of a crank via the screw spindle. The height should always clear the work piece by abt 10 mm. Always adapt the height of the saw blade to the thickness of the work piece so that a max number of teeth are working. Thus the surface friction and the consequent heating of the saw blade will be the lowest possible.

## INCLINATION ADJUSTMENT

INCLINATION ADJUSTMENT



ADJUSTABLE SCALE

Inclination of the saw blade sidewise up to  $45^\circ$  (within 0-90 mm) by a crank. Inclination angle to be seen on the reading scale.

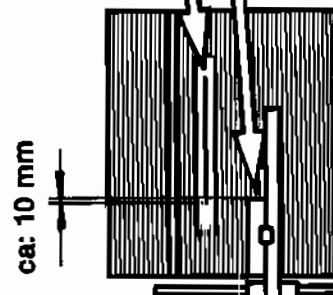
NOTE:  $45^\circ$  inclination is not possible when the saw blade is at its maximum projection.

# OPERATING INSTRUCTIONS Circular saw

## AUXILIARY FENCE

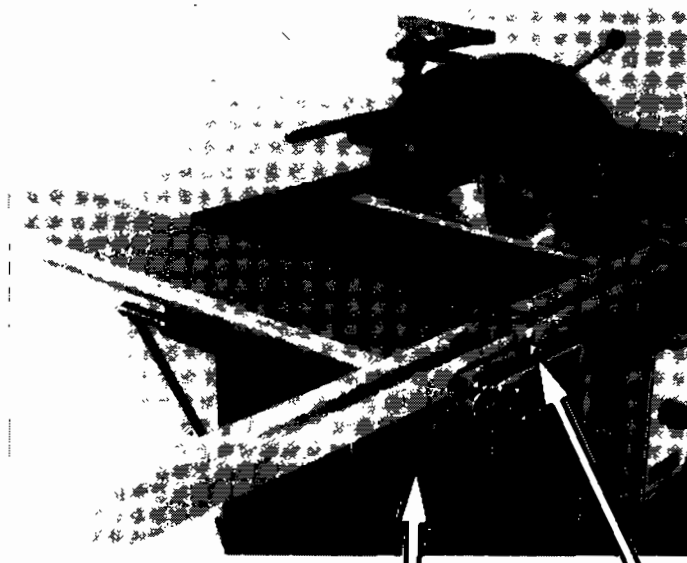


AUXILIARY FENCE  
SAW BLADE

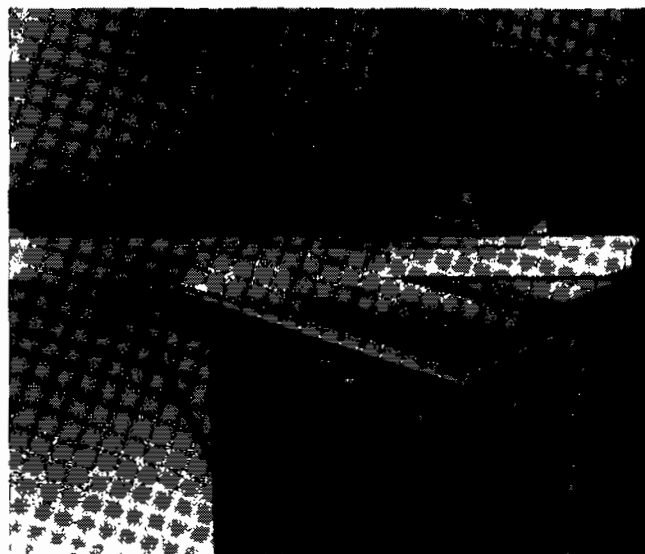


When crosscutting and ripping small pieces use the auxiliary fence. Adjust it in such a way that the crosscut (or ripped) parts can move away from the blade after cutting

## SLIDING TABLE



LOCKING LENGTH STOP



The sliding table is used for crosscutting, sizing and trimming. Mitre sawing is also possible. By loosening the hand wheel under the sliding table the fence assembly can be set at an angle to the saw blade. Adjustable end stops are fitted for accurate setting at 0° and 45°.

When sizing and crosscutting long workpieces we recommend you to use a roller table as an extra support.

Trimming is easily carried out by means of the longitudinal stops, the distance to the saw blade can be read on the scale in the U-channel of the sliding table. The sliding table is hinged down when not in use by lifting its outer edge so that the two support bars clear their locating sockets.

**NOTE** — the planer fence can be reversed by mounting it on the planer outfeed table — thus serving as panel fence for the circular saw.

# OPERATING INSTRUCTION

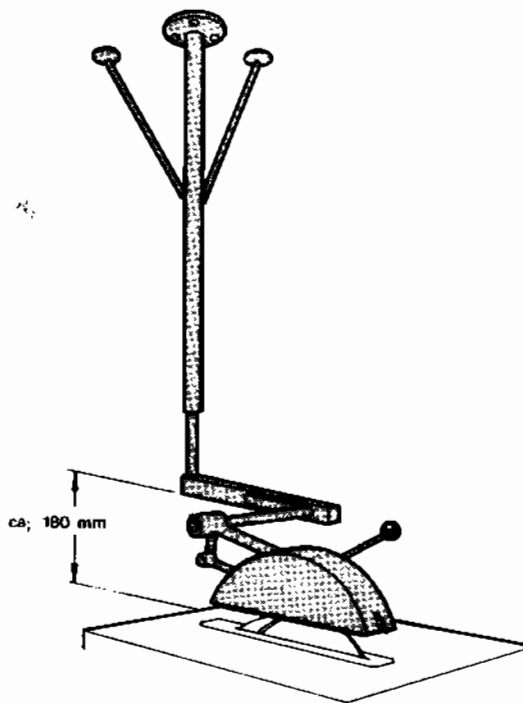
## Circular saw

### CONNECTION OF CHIP EXTRACTOR

A chip extractor or an extracting hose can be connected to the existing extraction flange (Ø 100 mm) on the rear of the circular saw

### MOUNTING OF SUVA GUARD AND CEILING FITTING

The ceiling fitting is used when the existing attachment is blocking the handling of big boards etc.



The mounting plate is screwed into the ceiling

Mount the shaft of the SUVA crown guard in the ceiling fitting. Adjust the position of the guard by means of the slot in the ceiling fitting and check that the sawblade runs freely

**NOTE** — the distance between the lower part of the ceiling fitting and the saw table should be abt 180 mm. The ceiling mount is adjustable for heights between 2 and 3 meters. The ceiling mount is an extra outfit and is not included in the standard delivery

# **TROUBLE SHOOTING Circular saw**

## **RIPPING**

**TROUBLE:** THE WORKPIECE STICKS BETWEEN THE RIVING KNIFE AND THE SAWBLADE OR PULLS SIDWAYS

**CAUSE:**

- a) Faulty setting of fence
- b) Faulty guiding of work piece
- c) Uneven edge of the workpiece

**REMEDY:**

- a) Adjust the fence to run parallel to saw the blade
- b) Check that the whole workpiece is in close contact with the fence during the whole ripping operation
- c) First true the side of the workpiece sliding against the fence

**TROUBLE:** THE WORKPIECE IS 2-3 MM TOO THIN

**CAUSE:** Measured from the wrong side of the saw blade

**REMEDY:** Observe the cutting width. The distance between the fence and the saw blade should be measured from a saw tooth set against the fence

**TROUBLE:** THE SECTION SURFACE IS NOT AT RIGHT ANGLES

**CAUSE:** The saw blade is not at right angles to the table surface

**REMEDY:** Adjust the angle of the saw blade

**TROUBLE:** THE SECTION SURFACES ARE STEPPED OR RIDGED

**CAUSE:** Chatter of blade

**REMEDY:** Feed more slowly. Check the sharpness

**TROUBLE:** THE SAW BLADE STOPS DURING THE OPERATION

**CAUSE:**

- a) Bluntness
- b) Hard material
- c) Coating on the saw blade, resin etc.
- d) Feeding too fast

**REMEDY:**

- a) Sharpen the saw blade
- b) Feed more slowly
- c) Clean the sawblade with turpentine or similar
- d) Feed more slowly

**TROUBLE:** THE SECTION SURFACES ARE BURNT

**TROUBLE:**

- a) Wrong cutting height
- b) Bluntness

**REMEDY:**

- a) Adjust the cutting height
- b) Sharpen the saw blade

**TROUBLE:** THE SAW BLADE GETS STUCK WHEN SAWING

**CAUSE:**

- a) The saw cut closes behind the saw blade
- b) Insufficient set of teeth (steel plate saws only)

**REMEDY:**

- a) Moist material. Check that correct riving knife is used
- b) Set the saw blade (steel saws only)

## **CROSS CUTTING — by mitre guide and sliding table**

**TROUBLE:** THE CUT IS NOT AT RIGHT ANGLES

**CAUSE:** The mitre guide or the sliding table is not at right angles with the saw blades

**REMEDY:** Adjust the mitre guide or the sliding table

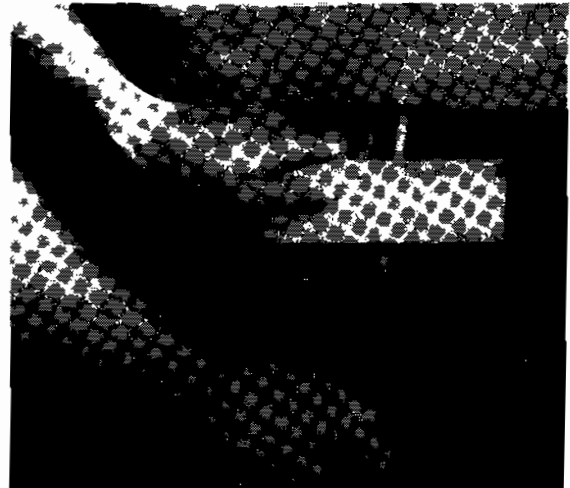
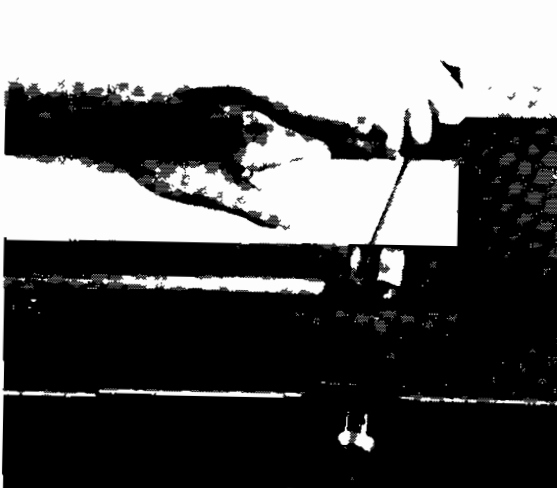


# **SAFETY REGULATIONS AND IMPORTANT ADVICE Circular saw**

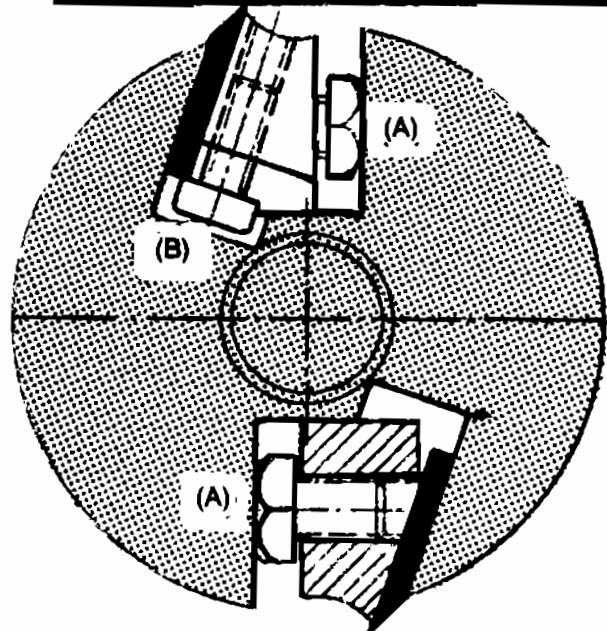
- **ONLY** use properly set and sharpened saw blades  
Remember that when using steel sawblades these must be correctly set
- **ALWAYS** set blade projection correctly relative to the thickness of the workpiece
- The riving knife must always be used and never removed
- The saw guard should be set as low as possible
- The feeding speed must be adapted to the hardness, moistness etc. of the workpiece
- Loose knots must be removed before sawing
- The saw blade must always be firmly fixed between the saw flanges
- When sawing teak and particle boards saw blades with carbide teeth should be used
- When ripping small workpieces against fence the pusher must be used
- Ensure that there is clearance for small offcuts to move away from the blade after ripping.  
An auxiliary fence is delivered with the machine and will allow small pieces to be ripped safely
- **ALWAYS** use fence when sawing long, heavy and broad work pieces
- Use a dust extractor to keep the working environment clean. This has health and safety benefits as well as improving the quality of the work

# MAINTENANCE Planer and Surface

## ADJUSTMENT OF KNIVES



1. Loosen the screws (A) until the planer knives and chip breaker wedges still press slightly against the cutter block.
2. Hold a straight rule along the outfeed table (rear table) so that it projects over the cutter block. Rotate the block by hand until one of the knives is at its highest point. Adjust the height of the knife by turning the adjusting screw until the knife touches the straight edge.
3. If the edge is too low it must be raised by turning the screw counter clock-wise.
4. If the edge is too high the screw is turned clock-wise and the knife is set by adjustment up to the correct height. Both sides of each knife are adjusted in this way.
5. When the knives are correctly adjusted tighten the screws (A) beginning at the outer edges and then in the middle. Repeat this procedure step by step.
6. Put the infeed table into lowest position and turn the cutter by hand to check that the knives operate freely.



## CHANGING OF KNIVES

1. Loosen the screws (A) and remove the knives. Clean the slot in the cutter as well as the chip breakers (cellulose thinner is a suitable solvent) before the new reground knives are inserted. Then adjust the knives as per above.
2. The knives can be ground to not less than 19 mm (W59) and 22 mm (W69).  
NOTE: Both knives must have the same weight to avoid unbalance in the cutter block.

KNIVES — When changing to new knives — check that this edge is not sharp.



# MAINTENANCE Planer and Surfacers

## ADJUSTMENT OF IN- AND OUTFEED TABLE

Sometimes there might be trouble with the parallelism of the infeed table in relation to the cutter block and the outfeed table, owing to shocks, too heavy load or for some other reason

It is then possible to adjust the table

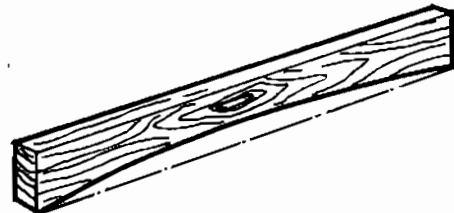
NOTE: Only adjust if it is absolutely necessary

### POSSIBLE FAULTS IN THE TABLE ADJUSTMENT

#### THE WORKING PIECE TURNS OUT CONCAVE



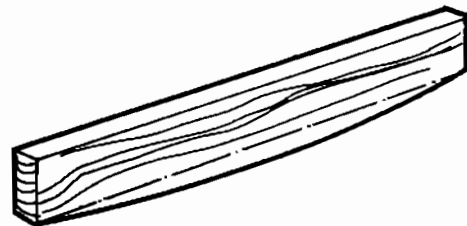
The tables meet each other in a ceiling-form



#### THE WORKING PIECE TURNS OUT CONVEX

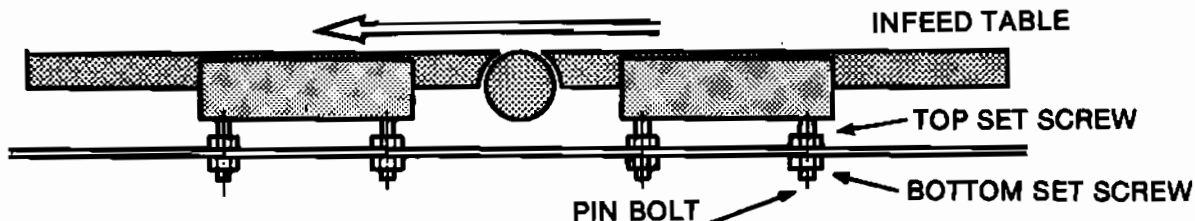


The tables meet each other in a V-form



As a rule all adjustments should be made on the infeed table

Drawing showing table adjustment



Lower the planer table to get free working space

The infeed table is mounted on four set screws, independently adjustable.

The set screws are locked to the frame by two nuts, one above and one under the frame plate. If the table must be lowered at the outer edge loosen the upper screw a little and take up the adjustment on the lower screws. Check the adjustment.

If the outfeed table is adjusted the faucet for table locking needs adjustment to get correct locking

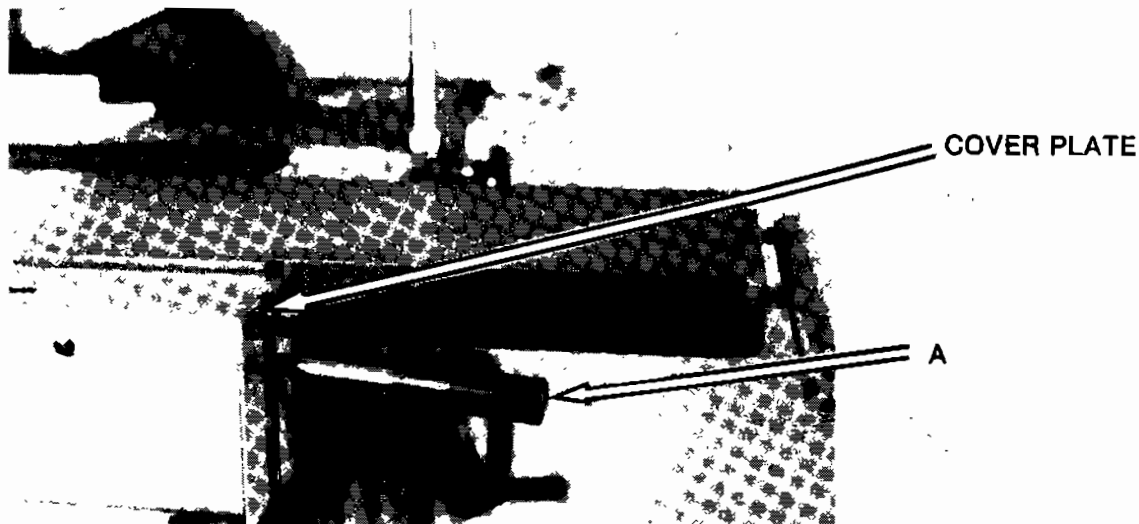
### CHANGE OF V-BELT OF THE CUTTER (A 52)

Separate the two machine sections and demount the upper cover plate. The V-belt can be changed without loosening the motor.

# OPERATING INSTRUCTIONS

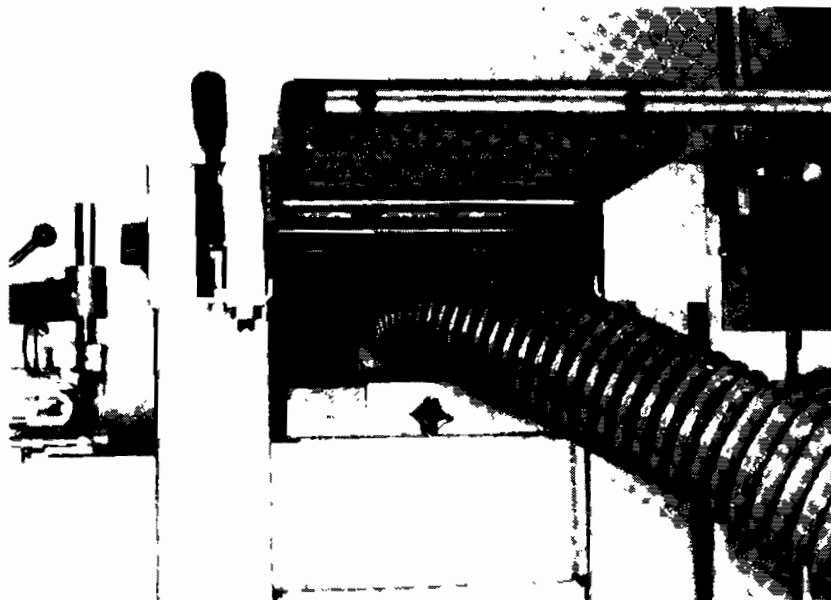
## Planer and Surfacer

### ADJUSTMENT OF CUTTING DEPTH



The infeed table is raised and lowered by means of a lever (A) to set the cutting depth (max 6 mm). Each line of the scale corresponds to abt 1 mm. The scale is adjustable. When adjusting the scale the cover plate is raised.

### MOUNTING OF CANOPY FOR DUST EXTRACTION



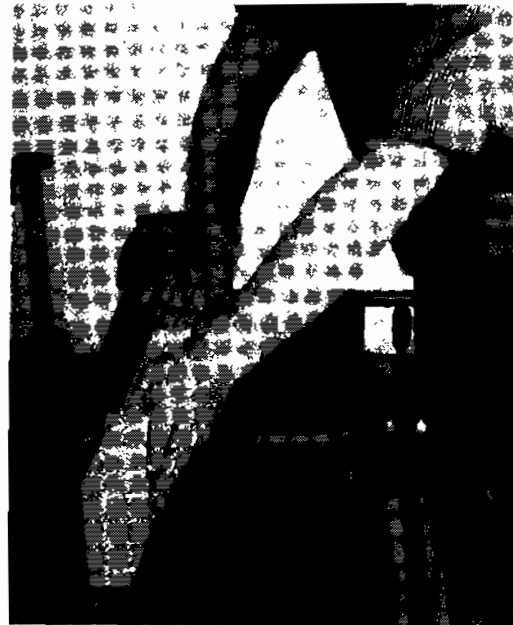
When planing the dust canopy is mounted on the thickening bed under the infeed table, and then the bed is raised. Check that the dust canopy is not touching the outfeed rollers.

If dust extraction is not used lower the planer table to give room for the accumulation of chips.

# OPERATING INSTRUCTION

## Planer and Surfacer

### PLANING



To avoid damage of the knives check that the work piece is free from foreign matter (nails, stones, etc.)

Adjust the cutting depth and put the work piece with the concave side in the infeed table in such a way that any grain bias runs down in the infeed table. (This avoids tearing of the fibres)

When planing the broad face of a workpiece, it is passed *under* the cutter guard using steady and even feed pressure. The work always be held firmly using both hands. As the work passes under the guard first one hand then the other should be transferred *over* the cutter guard to continue the feeding process from the outfeed table. The work should always lie flat on both tables.

Where feasible, work should be passed *under* the cutter guard as described in the previous section.

When planing or bevelling the narrower edge of a board the work should be passed *between* the fence and the guard. The workpiece must always be sufficiently large to be gripped firmly with both hands with ample clearance for the finger which should never have to pass directly over an unguarded cutter.

**Avoid planing any workpiece too small to be held firmly with both hands**

Where this is unavoidable always use a flat push block over the workpiece.

Application of a wax polish to the tables reduces surface friction and aids smooth feeding.

# OPERATING INSTRUCTIONS

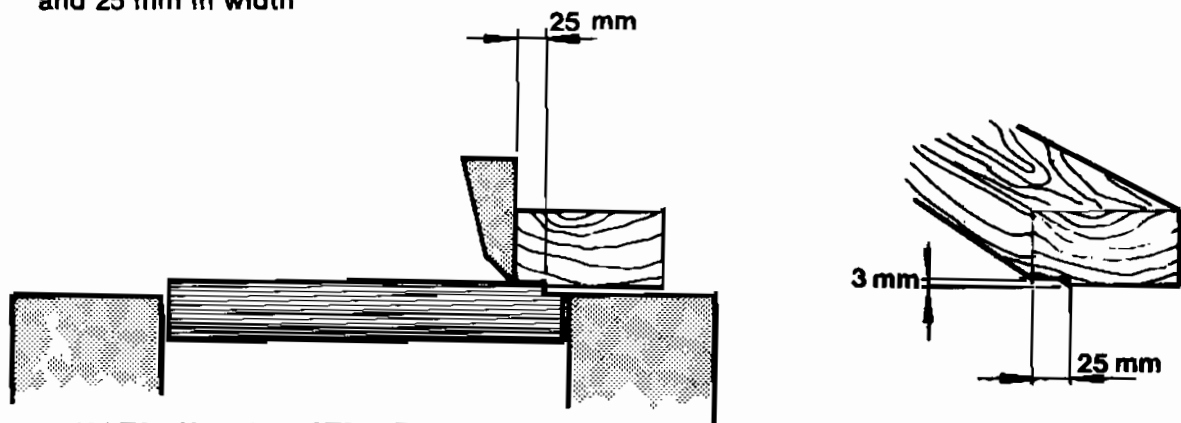
## Planer and Surfacer

### REBATING

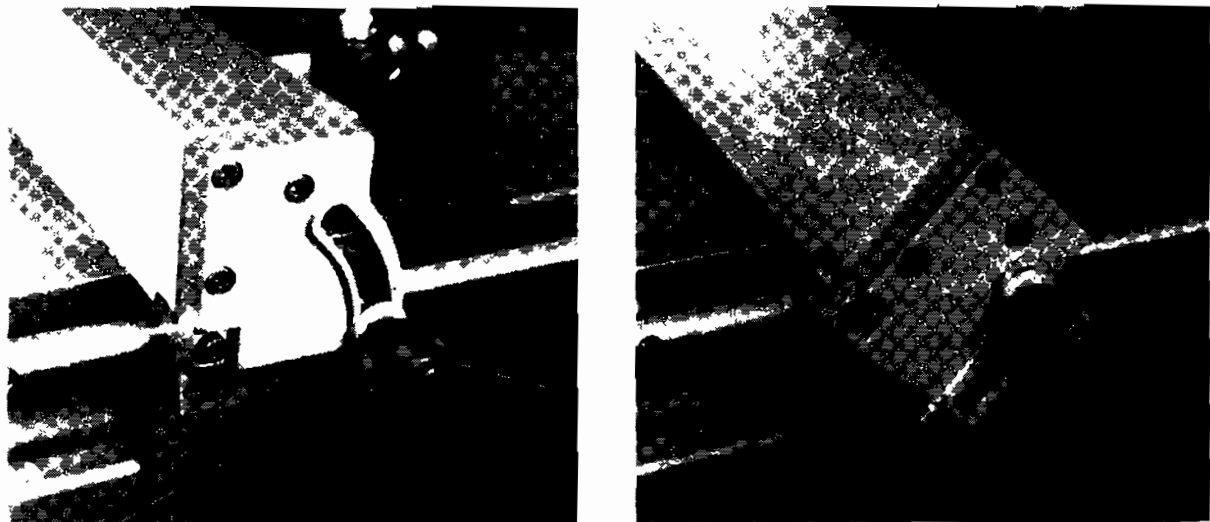
Rebating up to 250/410 mm width and 6 mm depth is possible. When rebating the knives must be carefully adjusted sideways to make them cut exactly against the side surface of the rebating slot in the outfeed table.

Procedure:

1. Adjust the fence to the required rebating width, measured from the inner edge of the rebating edge to the fence (In this case 25 mm)
2. Adjust the infeed table to the desired rebate depth (in this case 3 mm)
3. Plane the work piece so that it rests against the fence. The cutter now removes 3 mm depth and 25 mm in width



### ADJUSTMENT OF FENCE



By means of the fence the work piece can be planed at any desired angle between 90° and 45°.

Setting of the desired angle is carried out by slackening the handle. After the setting the handle is locked again. Fixed adjustable stops for 90° and 45° are built in. If a great many work pieces are to be machines successively, the fence should be moved progressively across the planer tables to give more even wear on the knives.



# OPERATING INSTRUCTIONS

## Planer and Surfacer

### ADJUSTABLE OUTFEED TABLE W69 L39

Insert planing of a work piece e.g. cupboard doors or table legs.

Lower the outfeed table as much as you want to have hollowed out in the work piece (max 6 mm)

Lower the infeed table just as much

Hold the work piece above the cutter at the starting point of the planing

Plane and stop by lifting straight up

You can also use the setting to adjust the knives up or down

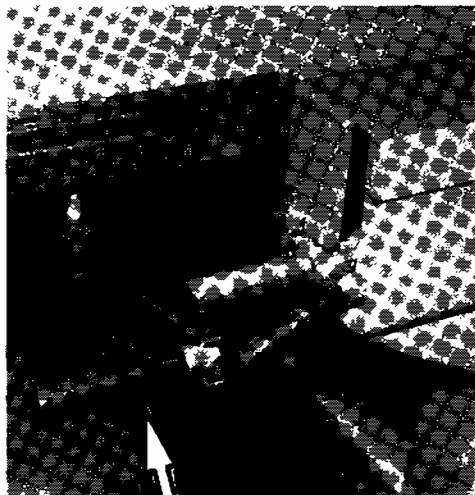
It is also possible to hone or grind the knives in the cutter without loosening them

The table can be adjusted afterwards

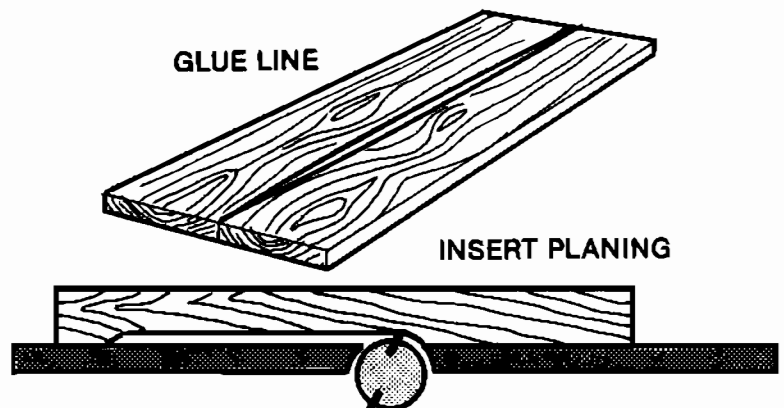
The adjustment possibility can also be used to get a glue line which means that the work piece is planed somewhat concave

The outfeed table is then lowered a bit under the range of the knives

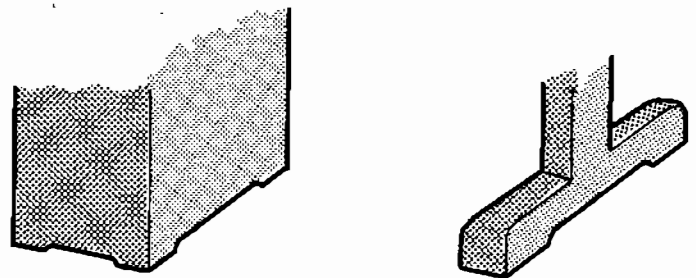
When half the work piece is planed — change from infeed table to outfeed table and you will get a concave surface



CRANK FOR ADJUSTMENT  
OF THE OUTFEED TABLE



SOME EXAMPLES OF INSERT PLANING



### SAFETY REGULATIONS

1. ALWAYS use the cutter guard
2. Do not work with too large cutting depth
3. Only use perfect and sharp cutter blades
4. Adjust the feeding speed to the type of work piece
5. Always lock the cutter blades firmly
6. When planing teak and particle boards, hard and knotty woods etc., carbide cutter blades should be used
7. When planing extremely short work pieces ALWAYS use push blocks which covers the work and applies forwards and downwards pressure
8. Remove any loose knots

# **TROUBLE SHOOTING**

## **Planer and Surfacers**

**TROUBLE:** CUTTER BLOCKS SLOWS EXCESSIVELY WHEN PLANING

**CAUSE:** a) The drive belt is not sufficiently tensioned  
b) The knives are not sharp or are ineffective due to resin build-up

**REMEDY:** a) Tighten the drive belt by lowering the motor  
b) Sharpen and/or clean the knives

**TROUBLE:** VIBRATION IN THE MACHINE

**CAUSE:** The knives have different weight which causes unbalance

**REMEDY:** See to it that the knives have the same weight

**TROUBLE:** A STEP IN THE END OF THE PLANED SURFACE

**CAUSE:** The planer knives are set too high in relation to the outfeed table

**REMEDY:** Adjust the knives as described

**TROUBLE:** THE PLANED SURFACE IS ASKEW

**CAUSE:** a) The tables are not parallel to the cutter block  
b) The tables are not parallel to each other  
c) The knives are set higher or lower at one side

**REMEDY:** a) Adjust the tables as described  
b) Adjust the tables as described  
c) Re-set the knives as described

**TROUBLE:** THE PLANER SURFACE IS CONCAVE

**CAUSE:** a) The planer knives are set too high in relation to the outfeed table  
b) The tables are not parallel to each other (one or both ends too low)

**REMEDY:** a) Adjust the knives as described  
b) Adjust the tables as described and re-set knives

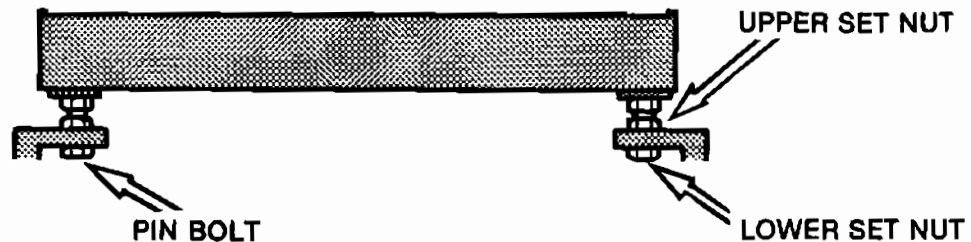
**TROUBLE:** THE PLANED SURFACE IS CONVEX

**CAUSE:** The tables are not parallel to each other (one or both outer ends too high)

**REMEDY:** Adjust the tables as described and re-set knives

# MAINTENANCE Thicknesser

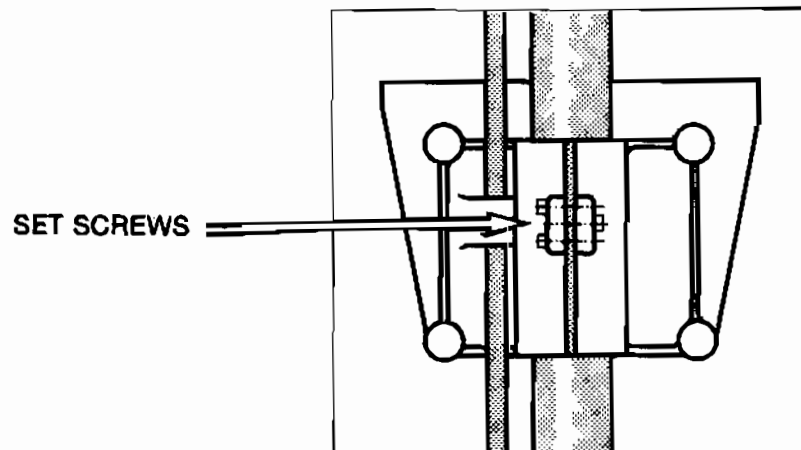
## ADJUSTMENT OF THICKNESSER TABLE



A possible fault in the position of the thicknesser table, in relation to the cutter can be adjusted as follows:

1. Raise the table to its upper position
2. Remove the guard cover mounted under the lower edge of the table. Under the table there are four pin bolts on which the table rests. They are individually adjustable
3. E.g. if you have to raise the right part of the table, loosen carefully the lower set screws on the front and back pin bolts and adjust correspondingly by the upper set nut. In this way the table can be adjusted in every direction
4. Check by planing a piece of timber at each extremity of thickening bed (one piece at a time) and measure the thickness

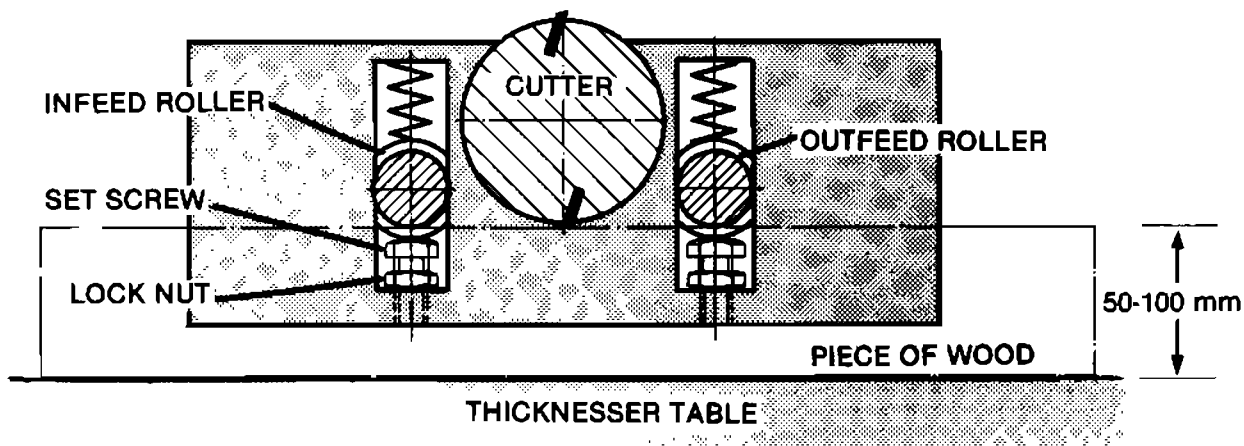
## ADJUSTMENT OF SLIDE



If there should be a play in the cylindrical slide this can be adjusted by loosening the two set screws which keep the slide apart and tighten the other set screw. NOTE — Do not tighten the slide too firmly as this makes the crank slow. To reach the set screws it is necessary to remove the guard covers mounted under the table

# MAINTENANCE Thicknesser

## ADJUSTMENT OF FEEDING ROLLS



Take two straight work piece of exactly the same thickness and place them on the thicknesser bed. Raise the bed so that when turning the cutter by hand the knives touch the work pieces. Then adjust the set screws regulating the fall height of the roller so that the front grooved rollers (in-feed roller) can fall 1-½ mm and the rear roller (outfeed roller) abt 0,5 mm, when the work piece is taken away. Secure the adjusting nuts.

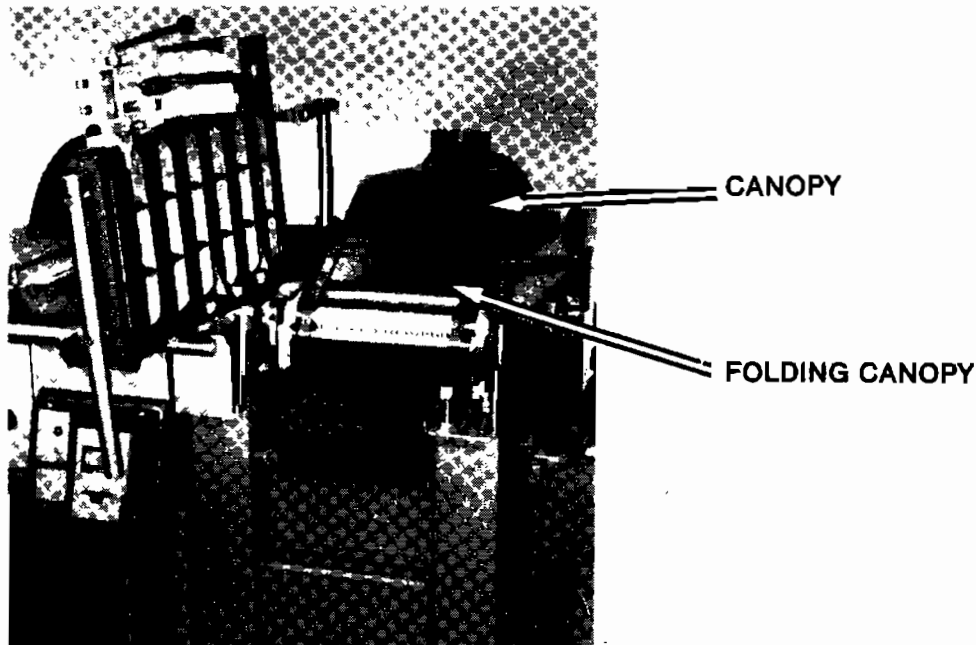
## CHANGE OF V-BELT TO THE GEAR BOX (Z30)

Remove the V-belt from the cutter block pulley as described on page 27. Lower the table to its lowest position. Loosen the two screws (1 pce countersunk and 1 pce hexagon bolt) supporting the gear box so that it can be hinged out and the V-belt removed.

Apply the new V-belt and tighten the srews.

# OPERATING INSTRUCTION Thicknesser

## MOUNTING OF DUST CANOPY



When thicknessing raise and lock the outfeed table of the surface planer. Raise the folding protection canopy. If dust extraction is used, apply the enclosed dust canopy over the protection canopy to get efficient extraction

## PLANING

Always surface plane the workpiece on one side before thicknessing. Measure the thickness of the work piece, and reduce this measurement by the cut depth (max 5 mm)  
Set the scale accordingly  
Place the planed surface face down on the bed and feed

**NOTE** — Begin feeding with the thickest part of the workpiece. This prevents too big a depth of cut and possible damage to the machine.

- The thicknessing scale indicator needle can be adjusted to correspond with the actual thickness of work produced
- To get the best results — begin working with rough cuts and continue with finer cuts
- When planing long workpieces use a roller stand

# **SAFETY REGULATIONS Thicknesser**

1. Only use sharp and perfect cutter knives
2. When planing teak and particle boards, hard and knotty woods etc. carbide cutter blades should be used
3. Always lock the cutter blades firmly
4. Remove loose knots before planing

## **TROUBLE SHOOTING Thicknesser**

### **TROUBLE: DIFFERENT THICKNESS ON THE WORKPIECE**

**CAUSE:** a) The knives are incorrectly mounted in the cutter block  
b) The bed is not parallel to the cutter block

**REMEDY:** a) Adjust the knives as described on page 26  
b) Adjust the bed as described on page 33

### **TROUBLE: IRREGULAR FEEDING**

**CAUSE:** a) Resin and other impurities on bed, workpiece or rollers  
b) The driving belt slips  
c) The knives are blunt

**REMEDY:** a) Clean bed and rollers with spirit or thinners. Rub the bed with wax lubricant or polish  
b) Tension the belt  
c) Sharpen the knives

### **TROUBLE: OBLIQUE FEEDING**

**CAUSE:** a) The feed roller are not correctly adjusted  
b) Resin and other impurities on workpiece or rollers

**REMEDY:** a) Adjust the rollers as described on page 34  
b) Clean bed and rollers with white spirit or thinners. Rub the bed with wax lubricant or polish

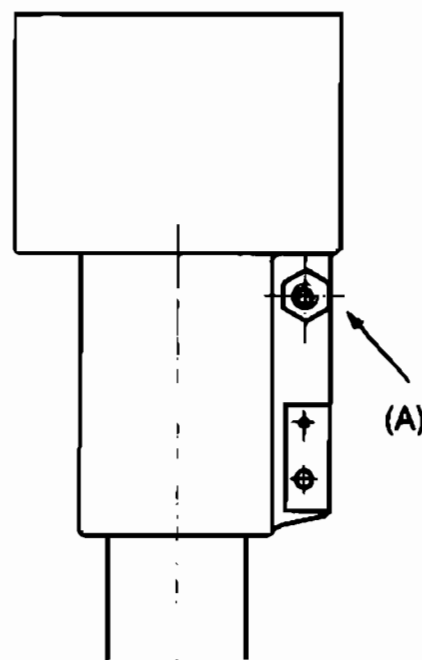


# MAINTENANCE

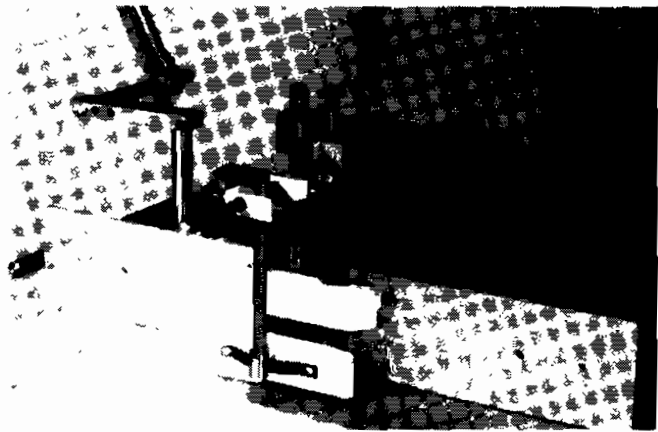
## Vertical Spindle Moulder

### ADJUSTMENT OF SPINDLE CYLINDER

After some time the wear of the spindle cylinder can cause a play in the outer bearing housing of the cylinder. Adjustment is made by tightening the nut A.



# **OPERATION INSTRUCTIONS Vertical Spindle Moulder**



## **EDGE MOULDING**

Lower the circular saw blade below the table level. The sliding table can be hinged down or used as an extra support for large workpieces. Remove the disc cover and necessary number of insert rings. Raise the cutter spindle. The moulding tool should be mounted as near the spindle bearing ring as possible in order to avoid necessary pressure. This is especially important when using heavy tools. Before mounting the tool — lock the spindle by the lock pin. Apply suitable number of insert rings and mount the tool.

Top screw with security plate for the spindle and insert rings are to be found in the tool bag

The moulding tools runs in counter clockwise direction. Before starting the moulding fence should be mounted over the tool

The fence slides back and forwards for easy setting of the tool projection. The complete moulding tool — except the cutting edge — must always be enclosed by the guard assembly. The guide fences are independantly adjustable so that where the complete face of work piece is removed the outfeed fence can be moved out to give support. Position the guides abt. 55 mm from the periphery of the moulding tool.

The moulding tools runs at high speed (max 8000 rpm) and it is very dangerous to use a defective cutter or a knife that is not properly fixed. **ONLY USE FAULT-LESS TOOLS.** Always use push stick for small work pieces. Avoid moulding any workpiece too short to be held firmly by both hands on either side of the tool aperture

If a dust extractor is used the canopy should be mounted on the back of the guard assembly

Spindle speed is altered by belt changing

## **NOTE**

**The tool must not rotate faster than max speed indicated on it**

**ALWAYS CHECK BEFORE STARTING:**

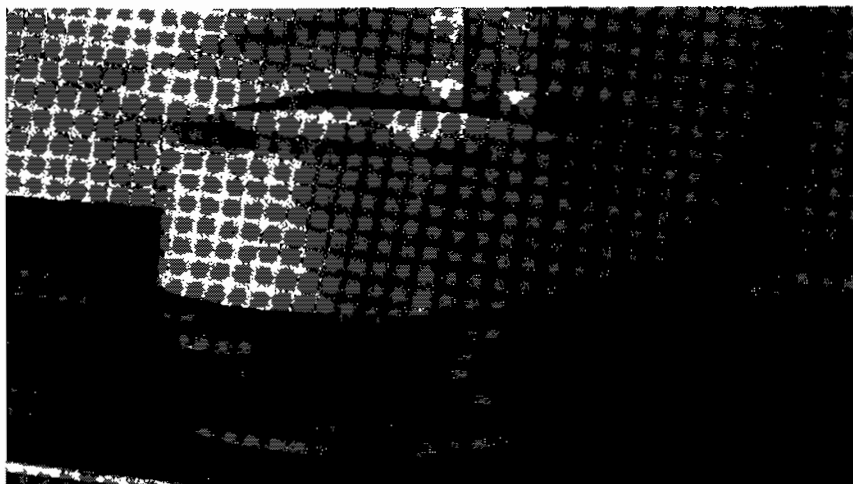
- that lock pin is not left in the spindle
- that the moulding tool is carefully fastened
- that the moulding tool rotates freely
- that loose profile cutter are carefully fastened

---

# **OPERATING INSTRUCTIONS**

## **Vertical Spindle Moulder**

### **COPY MOULDING WITH TEMPLATE AND INSERT RINGS**



Copy moulding is carried out by means of a template running against the flange of the insert rings (reversed in the table) or a bearing ring of suitable diameter fitted over the spindle. Choose such an insert/copying ring where the flange comes as close to the tool as possible. The template is made in advance and the workpiece is clamped to the template. The necessary safety device is mounted on the table to guard the cutterhead once the standard guard/fence assembly is removed.

**NOTE** — Check that the moulding tool is free to rotate within the guard. This is a simple way of producing curved workpieces with different profiles.

### **CENTER MOULDING**

— to machine perfectly round workpieces

The template is provided with centring dowel. Make the corresponding hole in the centre of the workpiece, press the workpiece on to the template and turn it around the centring dowel when moulding

### **SPINDLE SPEEDS**

The moulding spindle can be set to run at any of the three speeds by shifting the belt (3500, 6000 and 8000 rpm)

It is dangerous to run the spindle at a faster speed than that specified for the tool being used

On the inside of the cover there is a plate indicating which belt position is to be used for the different speeds

# OPERATING INSTRUCTIONS

## Vertical Spindle Moulder

### CUTTING SPEED

The distance in meters, which the tool (the blade) covers in one second, is called the cutting speed.

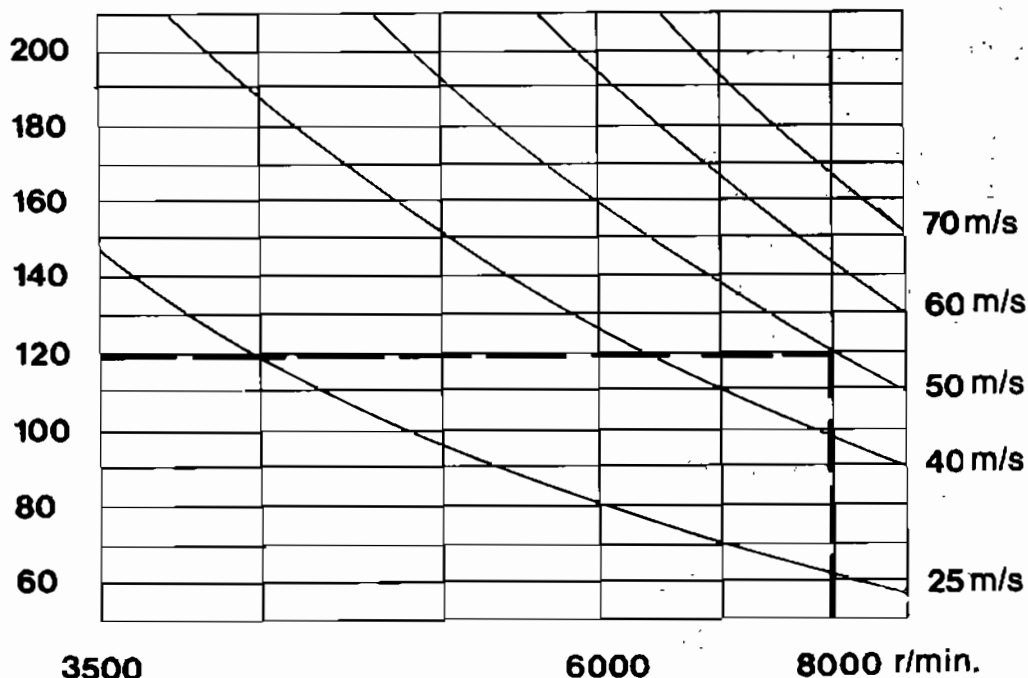
The cutting speed is expressed in meter/second and is dependant on the tool diameter and the rotation speed of the machine. Carbide tools normally need a higher cutting speed than tools made of HSS.

NOTE! The quality of moulding operations is finally determined by the relationship between cutting speed and feeding speed. Keep the cutting speed sufficiently high by reducing the feeding speed, this also increases safety. The feeding speed should be abt. 1/1000 of the rotation speed of the spindle (e.g. at 6000 r.p.m. the feeding speed is abt. 6 m/min)

### RECOMMENDED CUTTING SPEEDS:

Wood .....	40—50 m/s
Block board .....	35—40 m/s
Particle board .....	35—40 m/s
Wood fibre and plywood .....	25 m/s

Below you will find a diagram showing the different cutting speeds, tools diameters and rotation speed.



### EXAMPLE:

You would like to have a cutting speed of 50 m/sek. with a tool 120 mm. Follow the horizontal axes for a 120 mm tool to the right until it crosses the curve for the cutting speed 50 m/sek. Read the spindle speed, in this case 8000 r.p.m.

### CALCULATION FORMULA FOR CORRECT CUTTING SPEED:

$$V = \frac{D \times n \times \pi}{1000 \times 60}$$

V = Cutting speed, m/sek

D = tool diameter, mm

n = number of revolutions/min

# **TROUBLE SHOOTING**

## **Vertical Spindle Moulder**

### **TROUBLE: THE MOULDING TOOL VIBRATES**

- CAUSE:**
- a) Dirt between the spacing rings causes incorrect clamping of the tool
  - b) Cutterhead with two knives not equally balanced due to excessive projection of one knife
  - c) The knives do not have the same weight
  - d) Too high speed

- REMEDY:**
- a) Clean and reclamp the tool
  - b) Check and balance the knives correctly
  - c) Change to knives with the same weight
  - d) Reduce the speed

### **TROUBLE: THE MACHINE VIBRATES**

- CAUSE:** The floor is uneven

- REMEDY:** The machine must be placed on an even surface preferably concrete, or on suitable machine pads

### **TROUBLE: THE MOULDED SURFACE IS NOT SMOOTH**

- CAUSE:**
- a) The cutting speed too low
  - b) Too high feeding speed
  - c) The tool is dull
  - d) The relief angles of the tool are incorrectly ground

- REMEDY:**
- a-b) Adjust the cutting and feeding speed to the workpiece
  - c) Grind the tool
  - d) Adjust the relief angle by grinding. The angle should be 20-30°

# **SAFETY REGULATIONS**

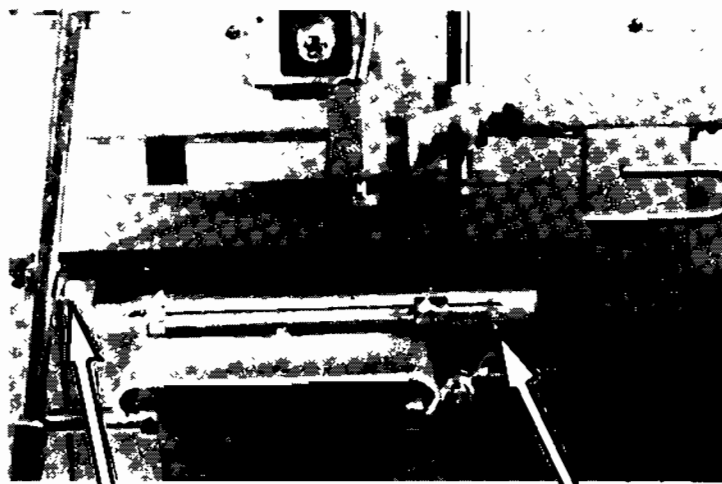
## **Vertical Spindle Moulder**

- Always use sharp and perfect tools
- Fix the tool firmly, check that it rotates freely
- Adjust the vertical and horizontal pressure guards to hold the workpiece firmly against the table and fences
- Do not use too large a cutting depth or too rapid a feeding speed
- When moulding small workpieces use a feed stick
- Do not attempt to machine any workpiece too small to be held firmly against both fences. (Machine in longer lengths) and cross cut to size
- Loose knots must first be removed
- Always feed against the direction of rotation (i.e. from right to left)

# MAINTENANCE

## Horizontal mortiser and drill

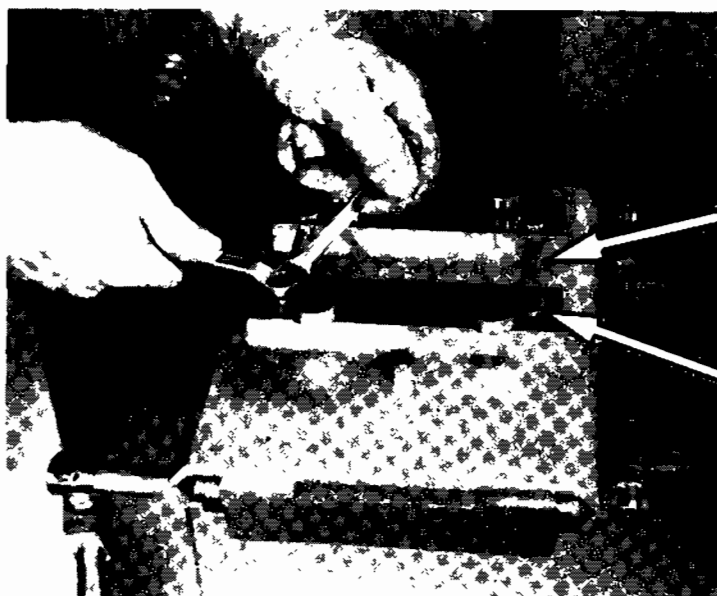
OPTIONAL FOR L39 AND L38



ADJUSTMENT OF THE GUIDES ON  
THE MORTISING TABLE

LOOSEN THE OPERATING BAR

LOOSEN ONE END OF THE STOP SHAFT



SET SCREW AND  
CHECK NUT

LOCK BOLT

Loosen the operating bar on the mortising table

Loosen one end of the stop shaft

Raise the stop shaft so that the stop can be passed and slide the mortising table off

Loosen the two front bolts holding the ball bearing mounting bracket nut

Tighten the bolts on the ball bearing bracket

If the table movement is too tight reduce the distance between the bearing brackets

If there is play increase the distance

Adjustment of the transverse movement is made by loosening the right ball bearing bracket.

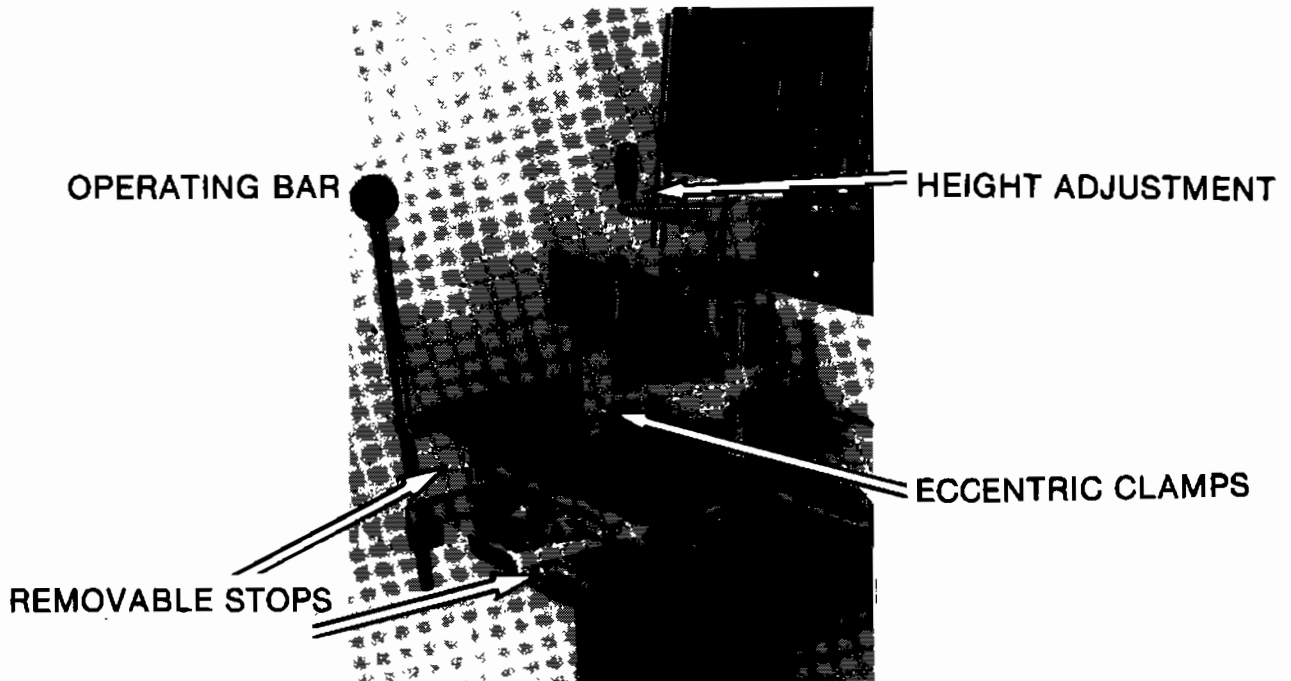


# OPERATING INSTRUCTIONS

## Horizontal Mortiser and Drill

### DRILLING

The mortising table can be operated by one hand and is equipped with movable stops for adjustment of depth and length



The workpiece should be clamped to the table by the eccentric clamp. The plunge and traverse actions are controlled by a single lever. The table height is adjusted by the handle which raises and lowers the thicknesser bed.

The mortise is made by drilling hole by hole and finally smoothing by longitudinal movement of the table

Please NOTE — different types of mortising bits are available which demand a different operational procedure and it is necessary to carefully follow the instructions supplied with each bit.

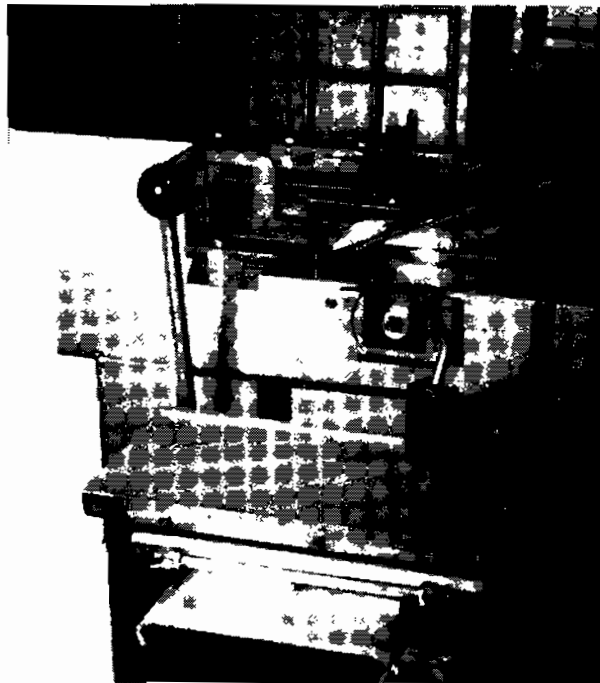
The mortise drills rotate clockwise and should be mounted in the drill chuck. Do not forget to remove the chuck key.

The drill chuck is mounted on the planer cutter block and so the SUVA-guard over the cutter block must be positioned to cover it.

If you want a trough mortise it is advisable to drill from both sides in order to avoid splinters. Alternatively use a scrap packing piece at the break out part of the bit.

# **OPERATING INSTRUCTIONS**

## **Horizontal Mortiser And Drill**



When drilling big work pieces the operating bar can be removed to the inside of the table

---

# **SAFETY REGULATIONS**

## **Horizontal Mortizer and Drill**

- Only use perfect and sharp drills and milling bits
- Do not use longer drill bits than necessary
- Remove the chuck key as soon as the drill bit has been clamped in the chuck
- Only adjust the stops when the machine is not in operation
- Clamp the workpiece firmly

## **TROUBLE SHOOTING**

**TROUBLE:** THE DRILL DOES NOT CENTRE

**CAUSE:** Dirt on the chuck jaws or the drill shaft

**REMEDY:** Clean

**TROUBLE:** THE SURFACE OF THE SLOT IS NOT SMOOTH

**CAUSE:** a) The milling bit is not sharp  
b) Too rapid feeding  
c) Too long drill bit

**REMEDY:** a) Grind or change the drill bit  
b) Feed more slowly  
c) Use a shorter drill bit

**TROUBLE:** THE SLOT DOES NOT RUN PARALLEL TO THE EDGE OF THE WORKPIECE

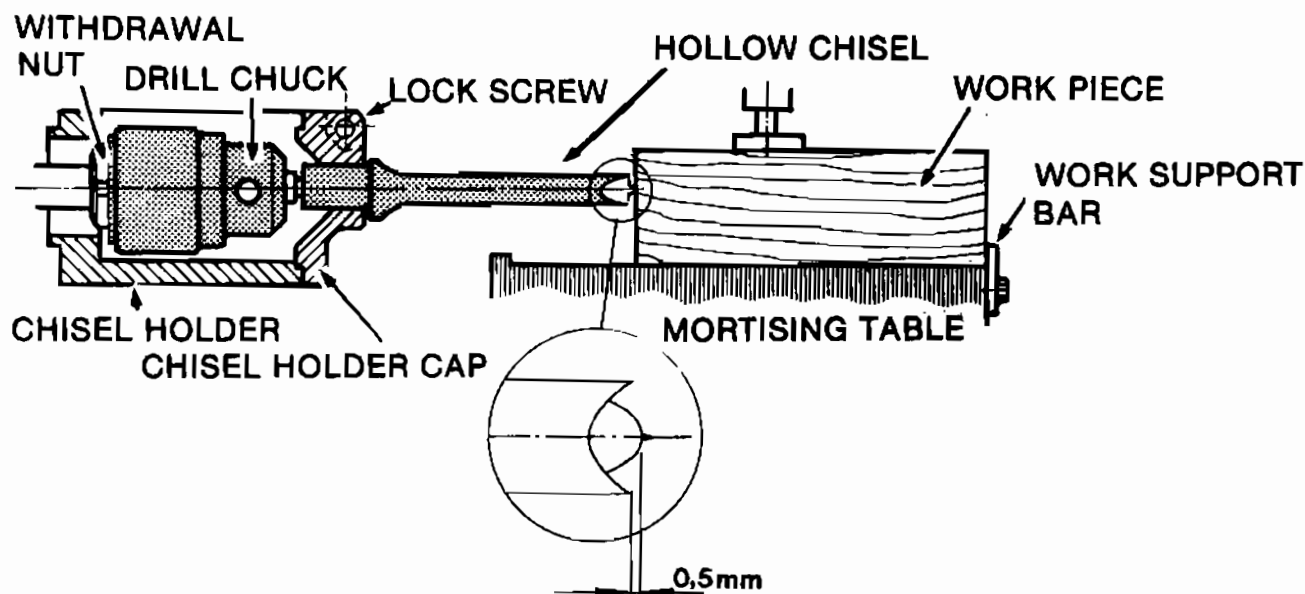
**CAUSE:** The drill table does not run parallel to the drill

**REMEDY:** Adjust the drill table as described earlier

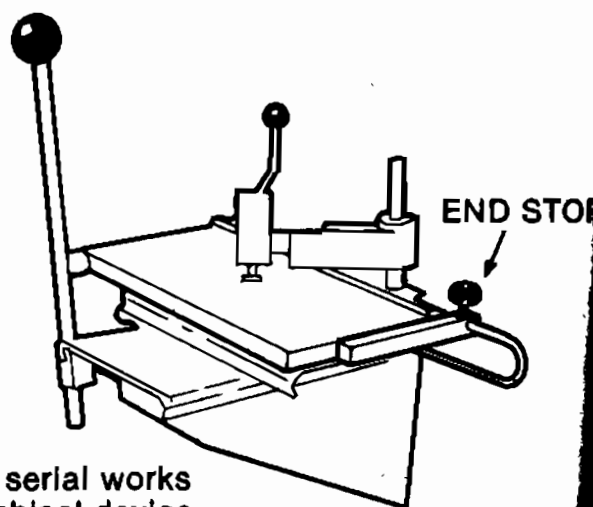
# OPERATING INSTRUCTIONS

## Hollow Chisel Device

OPTIONAL FOR W59, L39 AND L38



1. Take off the upper cover plate of the planer
2. Take off the drill chuck by removing the allen screw inside the chuck and tightening the withdrawal nut onto the chuck to break the taper
3. Mount the hollow chisel holder to the bearing housing of the chuck using the allen screw
4. Replace the drill chuck
5. Mount the chisel holder cap onto the chisel holder with the allen screws
6. Replace upper cover plate of the planer
7. Insert the hollow chisel into the chisel holder cap ensuring that it is parallel to the mortising table. The opening in the chisel should be placed to allow the chips to get away and keep the auger visible. Tighten the lock screw
8. Insert the auger so there is a small amount of play between the end of the auger and the chisel and tighten the drill chuck
9. Mount the work support back onto the mortising table



End stop for serial works with hollow chisel device.

---

# **MAINTENANCE Luna L- and W-series**

In order to increase the durability of your machine and to improve the working results we recommend you to use a dust extractor and to clean the machine when you have used it. It goes without saying that the maintenance instructions below must be carefully followed.

All ball bearings are dust proof and self-lubricating and need no maintenance.

Clean the tables regularly with for instance white spirit, photogen or similar. Polish the tables with wax e.g. Waxelit to prevent friction between table and workpiece.

Clean the screw spindles with white spirit, photogen etc. and lubricate after abt 25 hours of running with oil or grease — vertical feeding/planer, inclination sawblade/circular saw, raising and lowering/circular saw blade, raising and lowering/spindle moulder.

The cradle for inclination of the circular saw must be cleaned and lubricated 2-3 times a year. Also adjust when needed the sliding movement in the cradle, the nut under the cradle should be set in a way that a soft but tight movement is achieved.

The spindle cylinder on the spindle moulder should be cleaned and lubricated 2-4 times a year. Use a thin oil.

Keep always the feeding rollers clean — free from resin and similar. Clean with turpentine or similar. The driving chain on the feeding rollers should be cleaned and lubricated 2-4 times a year. Do not forget the chain for vertical feeding on the W69 — positioned between the screw spindles.

Clean the roller beds on the sliding table and the mortising table regularly and polish with oil.

If the machine should not be used during a long time, or if the machine is standing in a damp room we recommend you to protect all parts in steel or cast iron by rust preventive or thin oil. Also check the drive belt which can be destroyed if the damp is too high.

Your wood working machine produces a great deal of dust and chips. To improve working environment we recommend you to use our Dust Extractor Luna W 178.

# Replacement of Ball Bearings (See spare parts list)

## **CIRCULAR SAW**

Dismount saw blade, dust hood and driving belt.

Loosen the screw M6S 8 x 16 and replace it by one of abt 60 mm length. Knock carefully out the saw spindle (WL 3039).

Dismount the ball bearings and replace them.

Mount one ball bearing (SKF 6204 2RS1) on the saw spindle close to the pulley. Use a drift fitting the inner ring of the ball bearing.

Use a plastic club when knocking the spindle into the circular saw arm.

Apply the spacing sleeve (WL 122-9)

Apply the other ball bearing. Mount the screw and the plate. Press the ball bearing into the circular saw arm. Tighten to get correct position.

## **PLANING CUTTER**

Dismount the cutter unit.

Loosen the spacer shafts on one side.

Knock carefully with a plastic club on the bearing bracket until the cutter unit separates into two parts. The ball bearing usually remains on the spindle. Use a puller for demounting.

Apply the new ball bearing (SKF 6304 2RS1) on the bearing bracket. Use a puller fitting to the inner ring.

Mount the other side in the same way and apply the cutter unit on the machine.

## **SPINDLE MOULDER**

Dismount by loosening the screw (M6S 8 x 25). Remove the pulley (WL 195).

Place a wooden sprag under the motor and crank down the spindle until the motor rests on the sprag.

Loosen the holder WL 197 and draw the spindle cylinder upwards.

Drive the spindle out from the spindle cylinder on the pulley side (use a plastic club). The lower ball bearing (SKF 6206 2RS1) remains in the cylinder and the upper one follows the spindle.

Drive out the lower ball bearing from the cylinder.

Dismount the ball bearing by loosening the stop screw and removing the ring (WL 4182). Take also away the wedge. Remove the ball bearing by knocking on the spindle.

Apply the new ball bearing on the spindle by means of a drift fitting the inner ring. Apply the wedge and the ring.

Apply the spindle in the cylinder.

Apply the lower ball bearing by means of a drift fitting the inner ring. Press firmly against the upper side to prevent the spindle to slip out of the cylinder.

## **FEEDING GEAR BOX**

Send the gear box to the distributor for replacement or repair.

# GUARANTEE

1. This guarantee is valid for one LUNA Woodworking machine for wood working during one year from a date verified by the customer.
2. For the validity of the guarantee the counterfoil below must be returned to us within 14 days after the receipt of the machine.
3. This guarantee is valid for defects in material and manufacture of the delivered machine. After examination such parts are replaced or repaired. The defect part should be returned to:

.....

.....

together with a written complaint

4. All freight and transport charges in connection with the exchange or repair of parts will be covered by:

.....

.....

5. Defects originating from faulty handling, normal wear etc. or replacement of consumable items such as blades, belts, cutters etc. are not covered under the terms of this guarantee.

The counterfoil below sent to:

Machine Type: .....
Machine No: .....
Purchase date .....
Customer .....
.....
.....
Tel .....
Bought from .....
.....





# Accessories

	Ref.no.	W 69	W 59	W 49	L 39	L 38	L 28	L 11
<b>Castor frames</b>	<b>9241-0901</b>	X						
<b>Castor frames</b> For mobility in confined spaces. Using the castor frame your universal can be re-located without effort in accordance with feed and take-off necessity.	<b>9241-0802</b>		X					
<b>Power Feed (3 phase)</b>	<b>8230-1409</b>	X	X	X	X	X	X	X
<b>Power Feed (1 phase)</b> Convenient and safe feeding device for use with the saw, spindle moulder or surface planer. From its central location it can be swivelled and feed reversed to provide vertical or lateral pressure (when moulding a face for example). Standard rollers are 100 mm Ø giving two speeds: 1) 3.75 m/min 2) 7.50 m/min	<b>8230-1433</b>	X	X	X	X	X	X	X
<b>Additional feed rollers of 113 mm Ø</b> giving alternative rates of: Two speeds: 1) 4.5 m/min. 2) 9.0 m/min	<b>8230-1458</b>							
<b>Sliding carriage (standard)</b> 620 mm 24" crosscut	<b>9240-0506</b>	Incl.	Incl.	Incl.			X	Incl.
<b>Sliding carriage (extended)</b> 1300 mm 39" crosscut	<b>9240-0605</b>	X	X	X			X	
<b>Pillar clamp for sliding carriage (standard)</b>	<b>9241-1107</b>							
<b>Extra fittings</b> For mounting sliding carriage to L 28 vertical spindle moulder (standard)	<b>9216-0209</b>						X	
<b>Tenoning table</b> Runs in T-slot on saw/spindle table and provides close work support when tenoning and end grain moulding short pieces. Supplied with vertical cam clamp and 0-45° mitre facility.	<b>9241-0703</b>	X	X	X			X	
<b>Angled cam clamp</b> Provides face pressure when jointing	<b>8230-1508</b>							
<b>Slot mortising attachment</b> Heavyweight cast iron mortiser operated by single lever control. The table is mounted on quadruple heavy duty ball bearing tracks which are all adjustable for consistent accuracy. Its functions can include slot mortising, drilling and dowel joint preparation. Mortising chuck shank capacity is 13 mm accepting 19 mm Ø bits. (L 38 and L 39 planers are equipped with auto-reverse so that all types of milling bits can be used). The mortiser has adjustable stops and work positioning locator for repetition work.	<b>9239-0202</b>	Incl.			X	X		
<b>Hollow square chisel adaptor</b> Used in conjunction with the slot mortising unit for efficient rectangular mortising. Chisel/auger sets are available in different capacities.	<b>9239-0301</b>	Incl.	X		X	X		
<b>Grinding attachment for planer knives</b> <b>Cup grinding wheel for H.S.S. knives</b> <b>Cup grinding wheel for T.C.T. knives</b> This attachment is mounted on the mortising table. It can be used for 250 mm (10") or 410 mm (16") planer knives. Grinding cups for either T.C.T. or H.S.S. knives are mounted in the mortising chuck with the adaptor provided. Guards and micro-adjuster are included.	<b>9241-1305</b> <b>8230-0393</b> <b>8230-0427</b>	X	X		X	X		
<b>Grinding attachment for in-situ knife grinding</b>		X			X			
<b>Saw/spindle table extension</b> This attachment bolts directly to the take-off end of the table for added support with long or heavy work pieces. (NOTE: On the L 28 this extension can also be fitted to the feed edge).	<b>9241-1008</b>	Incl.	X	X			X	X
<b>Panel extension for L 18 saw</b> This attachment bolts to the right hand edge of the saw table and gives a 850 mm (34") rip capacity. An extended rip fence bar is included.	<b>4188-1251</b>			X				X
<b>Ceiling support for saw guard</b> Adjustable to heights between 2-3 m	<b>8230-0302</b>	X	X	X				X
<b>Spindle moulder router collets</b> For mounting 6/8 mm (1/4" - 3/8") shank router cutters on spindle top.	<b>8230-1807</b>	X	X	X			X	
<b>Ring guard 110 mm Ø</b> <b>Ring guard 315 mm Ø</b>		X	X	X			X	

	Ref.no.	W 69	W 59	W 49	L 39	L 38	L 28	L 18
<b>Mico-adjuster</b> For precise setting of circular saw rip fence.	8230-1102	X	X	X				X
<b>Wobble washers</b> Eccentric flanges to replace standard saw flanges and giving variable cut from 3-25 mm in width. For use with the standard T.C.T. blade. Delivered with wide-mouthed table insert. Used for tenoning, finger jointing etc.	4188-1103	X	X	X				X
<b>Finger jointing attachment (saw)</b> The slide runs in the T-slot and incorporates adjustable fence and stop pins for different width fingers. Especially suitable for jointing drawer frames and edges of unlimited width. (Used in conjunction with wobble washers mounted to saw arbor).	4188-1202	X	X	X				X
<b>Tenoning slide (saw)</b> Holds work vertically over saw and runs in T-slot. Equipped with cam clamp. (Used in conjunction with wobble washers mounted to saw arbor).	4188-0303	X	X	X				X

## SAWBLADES

300-Ø x 30 x 3.2 mm

**7075-0054**

T.C.T. 24 teeth  
for ripping.

**7075-0302**

T.C.T. 48 teeth

Combination blade for general ripping and crosscutting of timber and particle boards.

**7075-0401** T.C.T. 60 teeth

fine pitch blade. Especially suitable for laminates, plywood and non-ferrous metals.

**2394-0703** Carbon steel blade  
for ripping soft woods, especially red pine.

**9241-1206**

Riving knife for use with steel blades.  
(2 mm for 1.7 mm kerf blades)

## PLANER KNIVES

H.S.S. blades are recommended for most timbers. T.C.T. blades for abrasive timbers (e.g. teak) and for man-made boards.

**8230-0609** length 250 mm (10") H.S.S.

**8230-0708** length 250 mm (10") T.C.T.

**9241-0505** length 410 mm (16") H.S.S.

**9241-0604** length 410 mm (16") T.C.T.

## SLOT MORTISING BITS



Pendulum pattern — for slots where absolute precision is required. Lengths 45—75 mm.

**9062-0105** 6 mm Ø. **9062-0204** 8 mm Ø.

**9062-0303** 10 mm Ø. **9062-0402** 12 mm Ø.

Standard milling pattern. Lengths 45—90 mm Ø from 6—20 mm.



## Hollow square chisel/auger sets



Square sections from 6.4—15 mm lengths from 45—90 mm (see price list). For conventional rectangular mortises.

## SANDING DRUMS

Aluminium drums with vulcanized expanding sleeve holders provide for quick and simple change of sleeves.

**8230-1201** — 80 mm Ø for narrow radiuses

**8230-1250** — 145 mm Ø for edge sanding

straight and wide radius faces  
**Sanding sleeves for above**  
in 40—120 grits.

## SPINDLE TOOLING

We offer a very wide range

of production quality

tooling in H.S.S. or

T.C.T. for tenoning

profile moulding and

jointing, grooving,

rebating, holding etc.



## Router cutter collets

Available for cutters with 6 and 8 mm (1/4" or 3/8") shanks.

## WORK SUPPORT ROLLERS

To give additional support for long heavy or wide work pieces.

## Roller stand

**5300-4206**. Adjustable height roller which can serve the saw, spindle moulder, planer, thicknesser or mortiser.



## Roller track

**8230-0401**. Principally used to give lateral support to wide panels when sawing. (Length 1960 mm).



## MACHINE SHOES

**8886-0101**. For repositioning machines. Recommended in cases where the castor frame is not used.

## WAXELIT

**5432-1005**.

Table treatment to ensure smooth and even feed and prevent binding. Does not leave a deposit on the work piece. Single application lasts for many hours work.

## LUNA DUST EXTRACTORS

For general health, safety and efficiency in a busy workshop a suitable dust extractor is recommended. LUNA offer several models with differing suction and storage capacities. The W 178 is suitable for most independent machines and the W 49 and W 59 universals where continuous production is not envisaged. For professional workshop use we recommend the NF 259 or NF 558 which have larger suction and storage capacities. A range of adaptors are available for different size hoses and multiple extraction. The NF 558 can also be set up as a permanent static extraction installation.



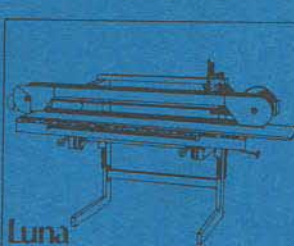
## SOME OTHER MACHINES IN THE LUNA WOODWORKING PROGRAM



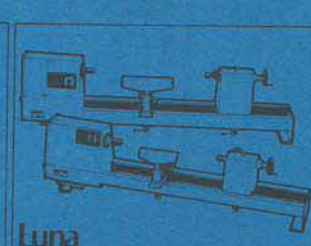
Bandsaws



Site saws



Overhead sanders



Woodturning lathes