MARTIN

Instruction Manual

Sliding-Table Saw T60

Model: Basic Classic PreXision

Machine no.: V _____

Year of construction:

Basic

Classic

PreXision

CE

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Representations of the control elements and procedures do not always depict the standard machine.

SUBJECT TO TECHNICAL CHANGES

Cover image: T60 Basic, Classic, PreXision

EC Declaration of Conformity

The manufacturer: **Otto Martin**
Maschinenbau GmbH & Co. KG
Langenberger Str. 6
D-87724 Ottobeuren
Germany

hereby declares that the **sliding-table saw type T60**

complies with the safety and health regulations of the following EC directives:

EC Machinery Directive	98/37/EC in the version dated June 22, 1998
EC Low Voltage Directive	73/23/EEC as amended by 93/68/EEC
EC EMC Directive	89/336/EEC as amended by 93/68/EEC

Applied harmonised standards:

EN 12100 Part 1 Part 2	Safety of machinery; Basic concepts, general principles for design Technical principals and specifications
EN 294	Safety distance to prevent danger zones being reached by the upper limbs
EN 349	Safety of machinery; minimum gaps to avoid crushing of parts of the human body
EN 418	Safety of machinery; EMERGENCY STOP equipment
EN 847-1	Tools for woodworking Safety requirements Part 1: Milling tools and circular saw blades
EN 954-1	Safety-related parts of control systems Part 1: General principles for design
EN 1870-1	Safety of woodworking machines - Circular sawing machines Part 1: Circular saw benches (with and without sliding table) and dimension saws
EN 60 204 Part 1	Safety of machinery; electrical equipment of machines; general requirements

Notified body pursuant to Annex VII:
Fachausschuss Holz, Prüf- und Zertifizierungsstelle Vollmoellerstr. 11
D-70563 Stuttgart, Germany
EC type examination pursuant to EC Machinery Directive. certificate no.

Ottobeuren, January 24, 2006 — Signature
Date — Dipl. Ing. (FH) Peter Martin, Executive Director

TABLE OF CONTENTS

Introduction

Dear Customer,
Congratulations for purchasing the MARTIN sliding-table saw T60.
This instruction manual features information, warnings, and useful tips.
These details are intended to assist you in using the machine and warn you against potentially dangerous situations.
The instruction manual addresses the owner, the operating personnel, and the individuals responsible for the maintenance and care.

- Read this instruction manual carefully **before** you start using the saw.
- Observe the warnings for the safe operation of the machine.
- We do not assume any liability for bodily injury and material damage resulting from non-compliance with this instruction manual.
- Keep this instruction manual in a visible place close to the machine.
- The operators should always have access to the instruction manual.

1. Safety

1.1 Symbols

DANGER

This symbol indicates an imminent danger. If not avoided, the danger may result in death or major injury (permanent disability) .

WARNING

This symbol indicates a potentially dangerous situation. If not avoided, the situation may cause death or major injury (permanent disability).

CAUTION

This symbol indicates a potentially dangerous situation. If not avoided, the situation may cause slight or minor injuries.

ATTENTION

This symbol indicates a potentially hazardous situation. If not avoided, the product or other items around it may be damaged.

IMPORTANT

This symbol indicates usage tips and other particularly useful information.

1.2 General Safety Instructions

DANGER

Danger from rotating tools with blades (saw blade).
Limbs and fingers can be injured or severed.
Always use the needed safety equipment for every work process.

- READ AND UNDERSTAND INSTRUCTION MANUAL BEFORE OPERATING SAW.
- IF YOU ARE NOT thoroughly familiar with the operation of Circular Saws, obtain advice from your supervisor, instructor or other qualified person.
- MAKE SURE wiring codes and recommended electrical connections are followed and that machine is properly grounded.
- DO NOT operate while under the influence of drugs, alcohol, or medication.
- ALWAYS wear eye protection (safety glasses or a face shield).
- REMOVE tie, rings, watch and other jewelry, and roll up sleeves.
- BLADE GUARDS should be kept in place and used whenever the cutting operation permits.
- ALWAYS use saw blade guard, riving knife and anti-kickback fingers for "through sawing."
- KEEP hands out of the path of saw blade.
- STAND to one side, NOT in line with the saw cut when ripping.
- ALWAYS USE a "push stick" when ripping narrow work.
- KNOW how to avoid "kickbacks."
- DO NOT perform any operation "freehand."
  ALWAYS hold the work firmly against the miter gage or fence.
- NEVER use the fence when cross-cutting.
- NEVER use the fence as a cut-off gage when cross-cutting.
- WHEN USING a moulding cutterhead,
  NEVER run the stock between the fence and the moulding cutterhead.
- NEVER reach around the saw blade.
- KEEP saw blade sharp and free of all rust and pitch.
- MAKE all adjustments with the power off.
- SHUT OFF power and clean the saw before you leave it.
- The machine must be set up securely.
- All safety equipment of the machine must be installed correctly and must be functional; see chapter 1, 1.4 "Safety Equipment".
- Ensure that the workplace is well illuminated.
- The machine may only be operated and maintained by staff qualified and trained in the use of sliding-table saws.
- Keep unauthorised persons, especially children, away from the machine.
- Use the machine only if it is in a technically sound condition.

- Modifications to the machine as well as extensions or conversions are not permitted.
- In the event of malfunction, switch off the machine immediately.
- Examine and eliminate the malfunction.

1.3 Proper Utilisation

- The intended purpose of the sliding-table saw T60 is as follows:
  - — Processing of wood and plywood, light metal, and machinable plastic with a sufficient support for safe workpiece guidance.
  - — Not suitable for cutting firewood.
  - — The workpiece must only be processed in one feed direction.
  - — It may only be set, operated, and maintained by qualified staff that are aware of the dangers of the machine.
  - — Suitable for operation with tools that comply with EN 847-1.
  - — The machine is not suitable for outdoor operation or operation in potentially explosive environments.

IMPORTANT

Improper utilisation is prohibited and is considered as misuse of the machine.
The manufacturer does not accept any liability for damages resulting from improper utilisation.

1.4 Safety Equipment

- 1 riving knife (2 riving knives T60 Classic)
  - — USA version T60 Basic:
    - 1 riving knife with antikickback device
    - 1 riving knife for non-thru cuts
  - — USA version T60 Classic:
    - 1 riving knife with antikickback device
    - 2 riving knife for non-thru cuts
- 1 guard riving knife mounted (T60 Basic)
- 1 guard overarm mounted (height-adjustable T60 Classic)
- Movable rip fence with low and high workpiece guiding surface
- Lockable edging table
- 1 push stick
- 1 handle for push block
- 1 clamp sleigh
- 2 EMERGENCY STOP buttons
- 1 brake system

IMPORTANT

Inspect the safety equipment daily for completeness and operability.
The guard must remain installed.
It may be removed for special work. In this case, suitable measures must be taken for the respective work process, and the needed protective equipment must be installed; see chapter 7.

- The sliding-table saw must be fastened to the ground if the device for fastening the guard is fastened to the ceiling.

1.5 Residual Risks

- In addition to the dangers specified in the respective chapters, the following residual risks must be taken into consideration:
- Danger of injury due to breaking or jerking blades.
- Danger of injury in the unprotected area between the machine table and the guard (= workpiece thickness) during processing.
- The range that is closer than 120 mm to the saw blade is a danger zone.
  - — Heightened attention is required when working in this danger zone. Always use the respective protective equipment.
  - — The protective equipment minimises the danger, though it does not fully eliminate it.
  - — Examples for the right use are presented in chapter 7, "Work Safety".
- Foreign objects (e.g., loose branches) in workpieces can come off and kick back.
- Parts of workpieces can be grabbed and kicked back.
- When the machine is switched off, the saw blade continues to revolve for up to 10 seconds.
- Shear or crushing points when moving the edging table.
- Crushing of limbs or body parts between the tilted saw blade and the rip fence.
- Hazardous substances resulting from the processing of workpieces consisting of materials like plastic.

2. Product Description

2.1 Machine Data, Rating Plate

- The machine is designed for .....V operating voltage (measured between two phases).
- The machine number is located:
  - — On the cover page of the instruction manual
  - — On the cover page of the spare-part list
  - — On the rating plate
  - — Engraved on the machine table

2.2 Specifications

- Machine design pursuant to CE standards and directives.

2.2.1 T60 Basic

Motor power:	4 kW
Cutting height:	max. 80 mm
For blade diameter	315 mm
Saw-blade tilt adjustment:	0-46°
Saw-blade diameter:	250 - 315 mm
Saw-blade replacement:	SprintLock
Rotational speed:	5000 rpm
Blade thickness:	max. 15.5 mm
Cutting width:	850 mm
Optional:	1250 mm
Cutting length:	60-1700 mm
Extensible up to:	3200 mm
Edging-table length:	3.0 m
Optional:	1.9 m
	3.3 m
	3.7 m
Control:	PowerPC
User interface:	Touchscreen
	5.7" (145 mm)
	Controlled cutting angle/height
	Cutting width by scale
	0.1° or 0.1 mm
Suction - machine frame:	Ø 120 mm
Suction - guard:	Ø 60 mm
Weight:	c. 1050 kg*
Brake of the saw-blade arbour:	Electric DC brake
Saw-blade hole:	ø 30 mm
Driving holes - tools:	ø 2 x 10 mm
Guide pin for riving knife:	ø 13 mm
Maximum tool width:	15.5 mm.

* Machine with standard equipment without transport planks. Depending on the equipment, the machine may be heavier. See freight documents for gross weight.

2.2.2 T60 Classic

Motor power:	5.5 kW
Cutting height:	max. 130 mm
For blade diameter	400 mm
Saw-blade tilt adjustment:	0° to 46°
Saw-blade diameter:	250-400 mm
Saw blade replacement:	SprintLock
Rotational speed:	4000/4800/6000 rpm
Blade Thickness:	max. 15.5 mm
Cutting width:	850 mm
Optional:	1250 mm
Cutting length:	60-1700 mm
Extensible up to:	3200 mm
Edging-table length:	3.0 m
Optional:	1.9 m
	3.3 m
	3.7 m
Control:	PowerPC
User interface:	Touchscreen
	5.7" (145 mm)
	Controlled cutting angle/height
	Cutting width by scale
	0.1° or 0.1 mm
Suction - machine frame:	Ø 120 mm
Suction - guard	Ø 100 mm
Weight:	c. 1150 kg*
Brake of the saw-blade arbour:	Electric DC brake
Saw-blade hole:	ø 30 mm
Driving holes - tools:	ø 2 x 10 mm
Guide pin for riving knife:	ø 13 mm
Maximum tool width:	15.5 mm

* Machine with standard equipment without transport planks. Depending on the equipment, the machine may be heavier. See freight documents for gross weight.

2.2.3 T60 PreXision

Motor power:	4 kW
Cutting height:	max. 72 mm
For blade diameter	315 mm
Saw-blade tilt adjustment:	-46° to +46°
Saw-blade diameter:	300-315 mm
Saw-blade replacement:	V-lock
Rotational speed:	5000 rpm
Blade Thickness:	max. 5 mm
Cutting width:	850 mm
Optional:	1250 mm
Cutting length:	115-1700 mm
Extensible up to:	3200 mm
Edging-table length:	3.0 m
Optional:	1.9 m
	3.3 m
	3.7 m
Control:	PowerPC
User interface:	Touchscreen
	5.7" (145 mm)
	Controlled cutting angle/height
	Cutting width by scale
	0.1° or 0.1 mm
Suction - machine frame:	Ø 120 mm
Suction - guard	Ø 60 mm
Weight:	c. 1250 kg*
Brake of the saw-blade arbour:	Electric DC brake
Saw-blade hole:	ø 30 mm
Guide pin for riving knife:	ø 13 mm

* Machine with standard equipment without transport planks. Depending on the equipment, the machine may be heavier. See freight documents for gross weight.

2.3 Standard Accessories

2.3.1 T60 Basic, PreXision

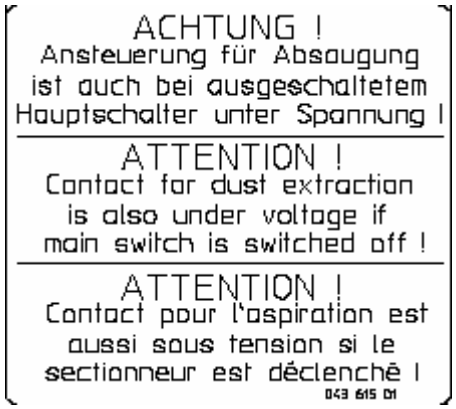
- 1 riving knife to which the guard is attached
- Clamping sleigh
- Reset grip
- 1 Allen wrench size 5
- 1 Allen wrench size 6
- 1 Allen wrench size 10
- 1 l hydraulic oil
- 1 push stick
- 1 handle for push block
- 1 guide plate for the cross-cut fence (for this, the bolt must be removed)

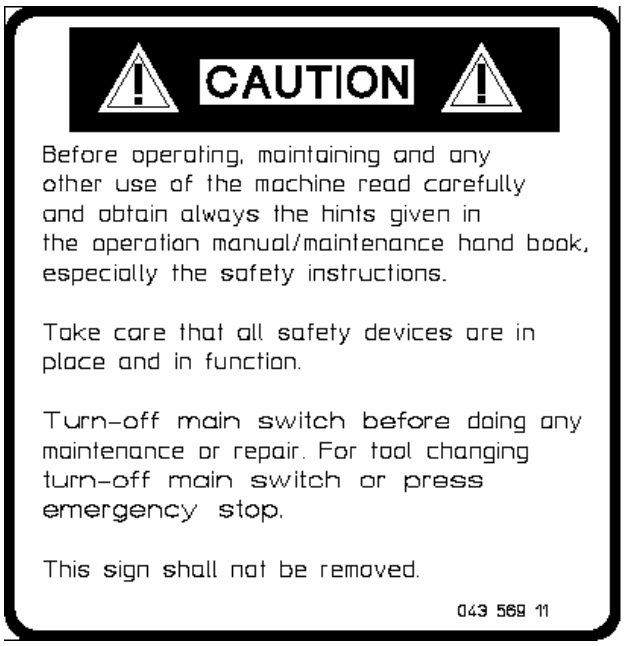
2.3.2 T60 Classic

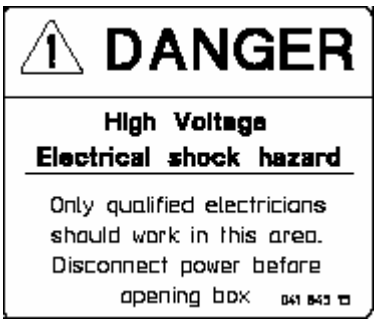
- 2 riving knives
- Clamping sleigh
- Reset grip
- 1 Allen wrench size 5
- 1 Allen wrench size 6
- 1 Allen wrench size 10
- 1 l hydraulic oil
- 1 push stick
- 1 handle for push block
- 1 guide plate for the cross-cut fence (for this, the pin must be removed)

2.4 Labels on the Machine

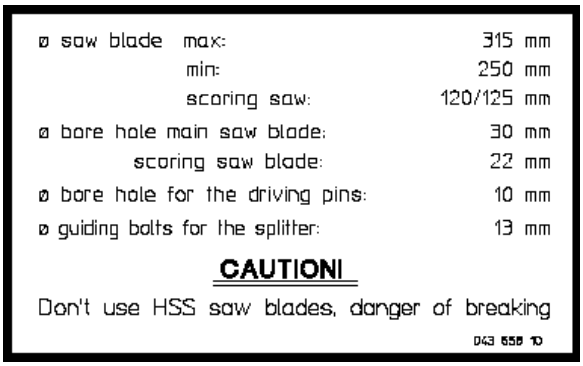
2.4.1 Labels on the Switch Cabinet

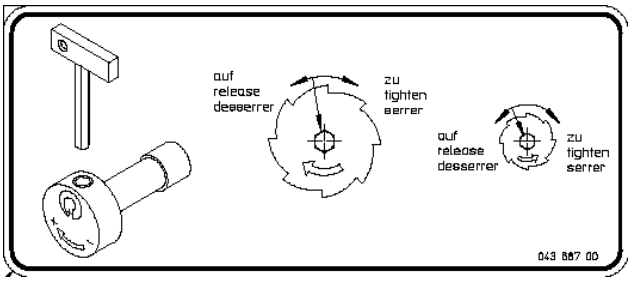


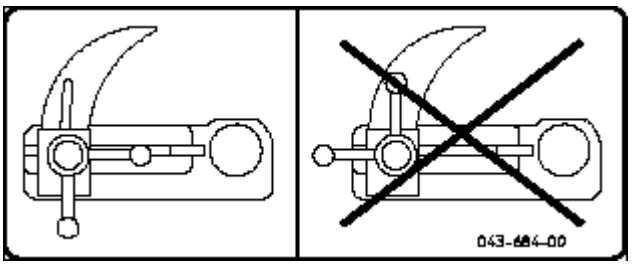


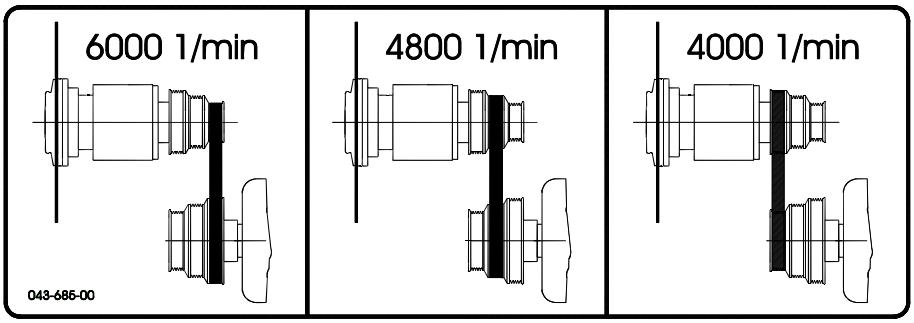


2.4.2 Labels on the Chip Flap



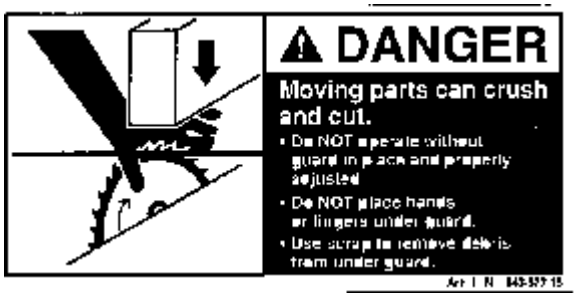






2.5 Labels on the guard

- USA version



2.6 Emission

CAUTION

Danger to hearing from noise.
Wear ear protection while the machine is running.

2.6.1 Noise Emission

- Measured pursuant to DIN EN ISO 3746:1995

	T60 Basic	T60 Classic
Idling	94.7 dB(A)	94.7 dB(A)
Processing	95.3 dB(A)	95.3 dB(A)

- Measurement uncertainty constant: K = 4 dB(A)
- The specified values are emission values and do not necessarily represent safe workplace values. Though there is a relationship between the emission and exposure levels, it does not reliably indicate whether or not additional precautionary measures are needed. Factors that influence the current exposure level at the workplace include the characteristics of the workspace and other noise sources such as the number of machines and neighbouring work procedures. Moreover, the permissible workplace values may vary from country to country. However, this information should assist the operator in assessing the hazard and risk more precisely.

2.6.2 Noise Emission at Workplace

- Measured pursuant to EN ISO 11202:1995.

	T60 Basic	T60 Classic
Idling	82.9 dB(A)	82.9 dB(A)
Processing	84.0 dB(A)	84.0 dB(A)

2.6.3 Dust Emission at Workplace

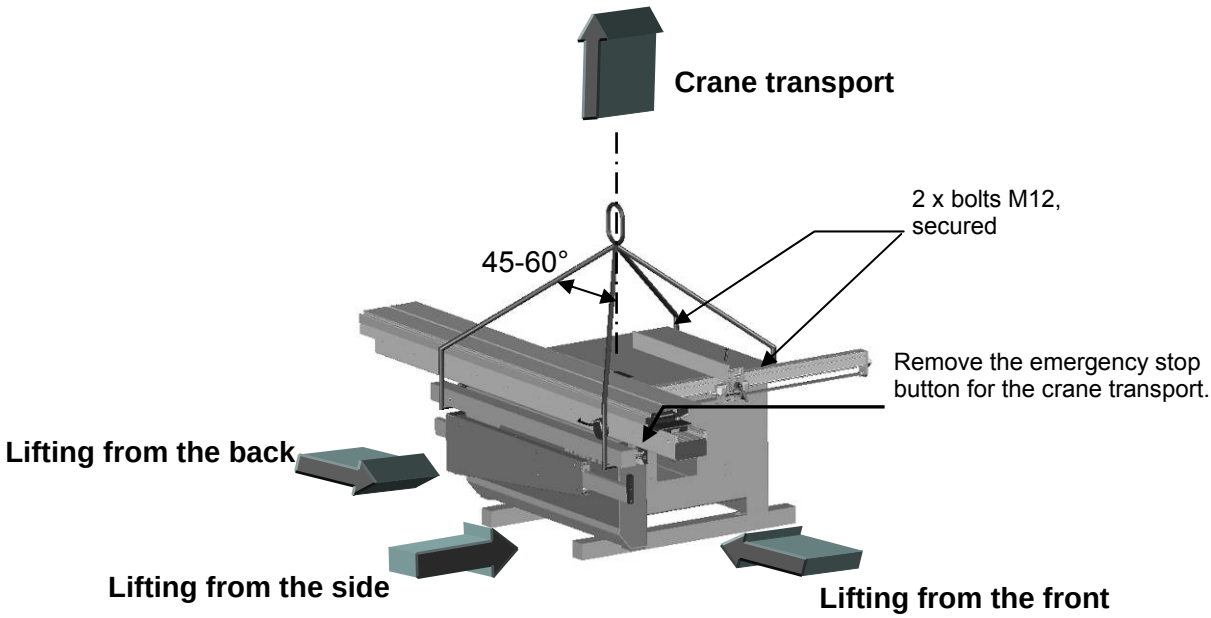
- Measured pursuant to E DIN 33893-2.

	T60 Basic	T60 Classic
Input side	Low dust emission pursuant to BGI 739, Annex 4	
Output side	Low dust emission pursuant to BGI 739, Annex 4	

3. Transport

3.1 Fork-Lift, Lift Trolley, or Crane Transport

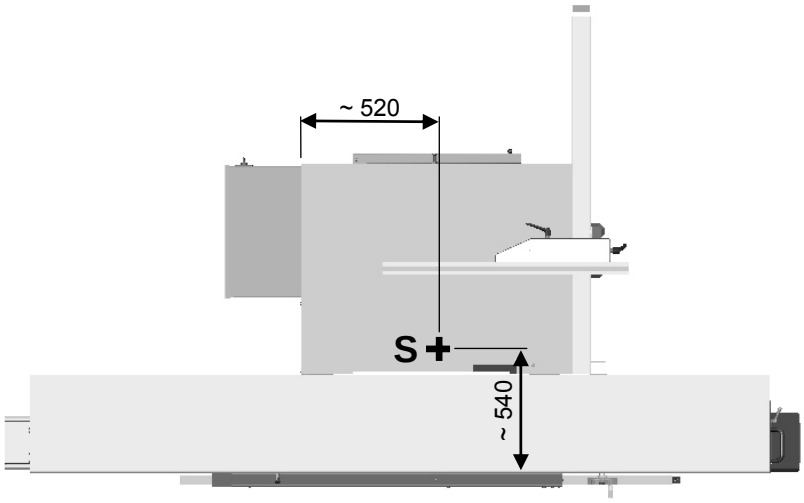
- For the crane transport, use a suitable 4-leg sling with a minimum load capacity of 20 kN, (2000 kg).
- Do not use chains in the edging-table and tabletop zones.
- The sling must not pass the edge of the edging table.
- Remove the emergency stop button for the crane transport.



DANGER

Danger to life from falling and heavy load.
Stay clear of the machine when it is being lifted.
The crane or fork-lift may be operated by authorised, qualified staff only.

3.1.1 Gravity Centre of the Machine(*



3.2 Removing the Transport Planks

- Remove the plastic film between the guard cantilever and the transport planks.
- Remove the four nuts (size 19 mm) at the machine feet.
- Lift the machine until the transport planks are released.
- Keep the planks and the nuts for a possible future transport of the machine.

CAUTION

Damage to the machine during transport due to missing transport locks and packaging.
Duly attach the transport locks and packaging before transporting the machine.

* Packaged and depending on the machine equipment

4. Commissioning

4.1 Installation

- There must be sufficient space to feed in and remove all workpieces and for maintenance work; see item 17.3 "Connection Layout".
- The base must be able to carry the weight of the machine.
- The power supply must comply with the connection values and applicable standards and guidelines.
- Compressed air must be available (PreXision only).
- The lighting must be adequate.
- Position the machine table horizontally.
- Place a vibration-reducing underlay under the machine feet.

4.2 Environmental Conditions

Store and operate the machine in a dry location.

Temperature ranges:

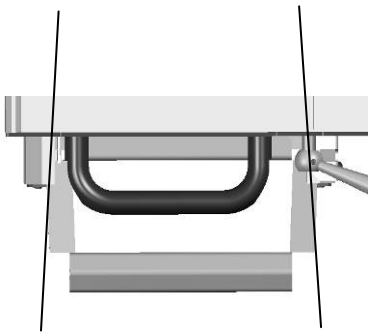
Storage:	0°C to + 50° C
Operation:	+5°C to +55° C

DANGER

Danger to life and body due to explosion.
The machine may not be operated in environments in which explosive gas mixtures exist or could form.

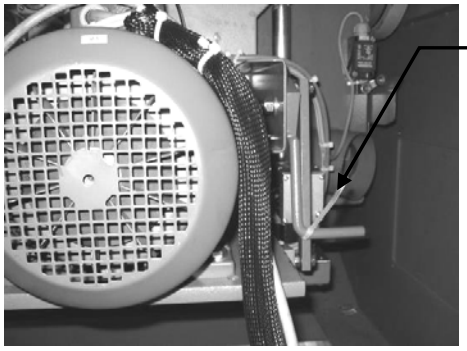
4.3 Unpacking

- Remove the packaging film.
- Remove the cross table from the machine.
- Remove the cross-cut fence from the machine.
- The guide pin is installed in the edging table.
- Alternatively, the guide plate can be installed; in this case, the guide pin must be removed.
- The accessories are located in the tool box on the machine.
- Check the accessories for completeness.
- The handle with felt pad for the sliding table is disassembled for the transport.
- The handle with felt pad is located in the tool box.
- Install this handle on the operator side.
- The felt pad has wedge form (observe felt direction; see figure).



4.4 Transport Locks

- Remove the following transport locks:
  - — Cable tie at belt tensioning lever (T60 Classic)
  - — Remove the edge protection and the supporting plank under the control console.
  - — Remove the wooden wedges on both sides of the sliding table.
  - — Remove the supporting plank under the control console (T60 Classic).
  - — Remove the distance plank on the tilting arm.
  - — Remove the wooden wedges at both sides of the edging table.
  - — Remove the plank over the tilting arm.



4.5 Cleaning

- Clean the anti-corrosive coated blank parts of the machine.
- 1:1 paraffin/oil mixture or
- Cleaning oil such as WD-40

IMPORTANT

**Do not use pure paraffin,
as this causes corrosion.**

DANGER

**Danger to life and body due to explosion.
Do not use easily flammable solvents such as petrol for cleaning the machine.
Only use special cleaning agents.**

4.6 Connections

CAUTION

**Risk of damage to electrical components due to incorrect power supply.
The electrical connections must be made by a qualified electrician.**

4.6.1 Power Supply

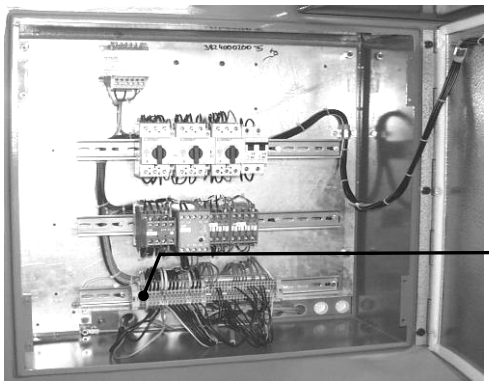
- The wiring diagram and the parts list are located in the switch cabinet.
- The power supply is connected to the terminal block in the machine's switch cabinet.

WARNING

**Danger to hands and body due to wrong rotational direction of the saw arbour when loading the workpiece.
After the installation, check the rotational direction of the saw arbour.**

4.6.2 Connection of the Chip Suction

- The suction must be controlled over the electrical systems of the T60 (automatic start-up).
- The wiring diagram is located in the switch cabinet.
- Connect the suction to the X1/84 and X1/85 terminals (orange).
- Contact over auxiliary connector.



DANGER

Danger to life from voltage.
Voltage may be present at the orange terminals and wires (external voltage) even when the main switch is switched off.
Check the terminals and switch the external voltage off.

IMPORTANT

If the suction is connected with flexible suction hoses, these must be made of flame-resistant material and grounded if necessary.

- The suction hose for the guard must be laid safely to prevent it from getting into the work area.

4.6.2.1 Model T60 Basic, PreXision

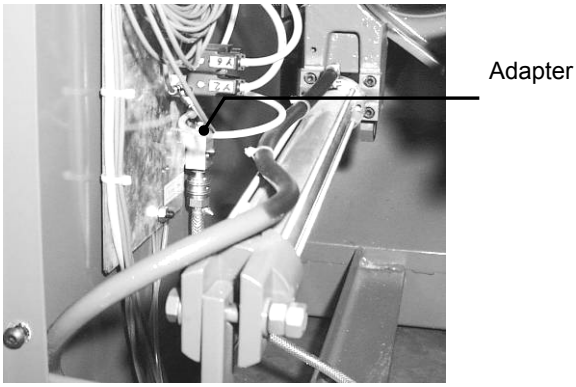
	Machine frame	Guard
Diameter	120 mm	60 mm
Minimum air suction capacity:	14 m³/min	3.5 m³/min
Negative pressure (at 20 m/sec):	620 Pa	2600 Pa
Air flow speed:	> 20 m/sec (dry chips) > 28 m/sec (> 18% WM)	

4.6.2.2 Model T60 Classic

	Machine frame	Guard
Diameter:	120 mm	100 mm
Minimum air suction capacity:	14 m³/min	7.5 m³/min
Negative pressure (at 20 m/sec):	620 Pa	1750 Pa
Air flow speed:	> 20 m/sec (dry chips) > 28 m/sec (> 18% WM)	

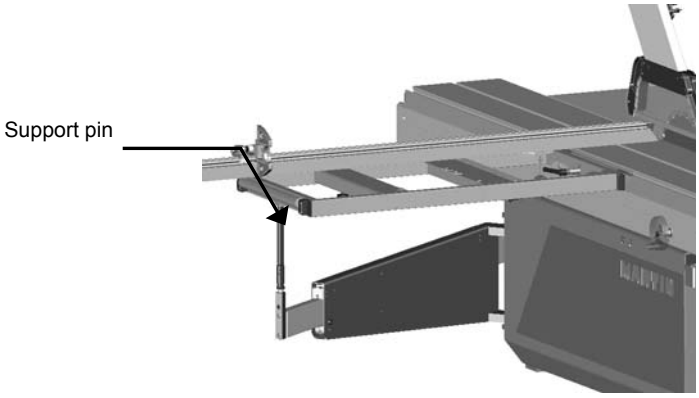
4.6.3 Pneumatic Connection (PreXision)

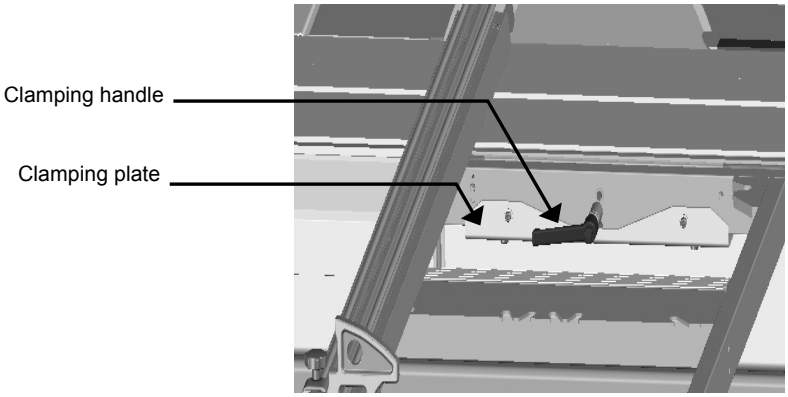
- The saw blade is tightened with a spring and opened pneumatically.
- For this, compressed air is needed.
- Pressure: 5 – 6 bar, max. 10 bar
- Air consumption: not measurable
- Hose inner diameter: 6 mm
- Open the rear cover.
- Lay the compressed-air hose under the machine into the interior.
- Connect the hose to the adapter on the connection terminal on the left interior side of the machine.



4.6.4 Installing the Cross Cut Table

- Before you attach the cross cut table, connect the support pin to the tilting arm.
- The cross cut table can be attached anywhere along the edging table.
- When attaching the cross cut table, make sure the surfaces are aligned properly.
- Fasten the cross cut table with the handle.
- To move the cross table, **slightly** loosen the clamping handle.
- To remove the cross cut table, open the clamping handle entirely.

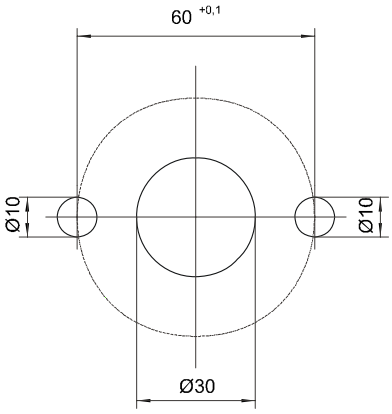




5. Tools

5.1 Tool Selection

- Only use EN 847-1-compliant tools with a hole of ø 30 mm and driving holes of ø 10 mm (see figure).



- The maximum permissible cutting width of the tool is 15.5 mm (not PreXision!).
- Only use tools approved for manual feed.

DANGER

Danger to life and body due to broken saw blades.
HSS saw blades can break during operation.
Do not use HSS saw blades.
Always inspect saw blades for damages during replacement.

- Select a cutting speed that is suitable for the workpiece and the feed speed.

Softwood	70 - 100 [m/sec]*
Hardwood	70 - 90 [m/sec]*
Chipboard	60 - 80 [m/sec]*
CLV board	60 - 80 [m/sec]*
Hardboard	60 - 80 [m/sec]*
Plastic-coated board	60 - 120 [m/sec]*

•

Holztechnik Fachkunde, 19th Edition, Europe no. 40117

- The cutting speed (which depends on the rotational speed and the saw-blade diameter) is displayed in the status bar of the control; see 6.6.2.

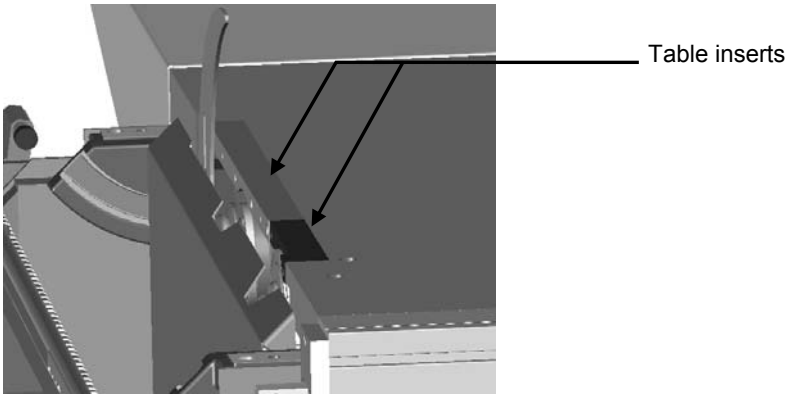
5.2 Mounting Tools

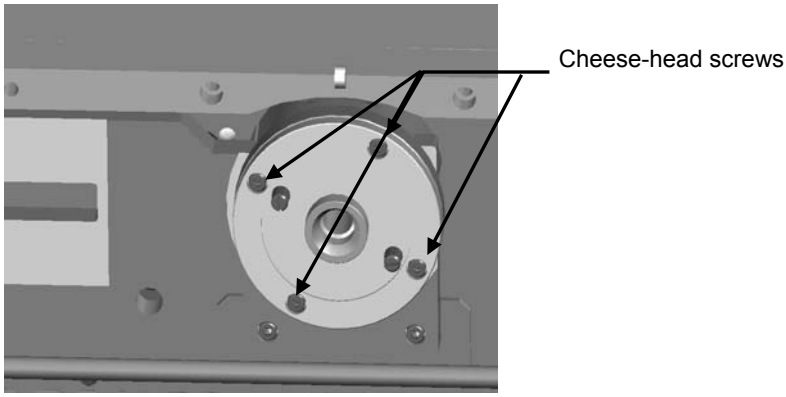
- Install a table insert that is suitable for the cutting width.
- Keep the distance between the edge of the table slot and the cutting circle as small as possible.
- Remove the riving knife in order to insert tools other than saw blades.
- Tighten the screw in the riving-knife unit.
- Remove the four Allen screws in the fixed flange of the saw arbour.
- Remove the distance ring to mount tools with a larger hole diameter.

IMPORTANT

Only use tools with a hole diameter of 30 mm.
The tools must have to holes for the driving pins.
The tools must be suitable for manual feed.

- Upon completion of any special work, immediately reset the machine to the normal state.





CAUTION

Danger to the machine from non-plane tool guidance.
Slightly lubricate the removed distance ring before reinserting it.
Make sure that all parts are absolutely clean and insert the two Allen screws.
Refasten the table insert.

- Damaged table inserts must be replaced.

6. Operation

6.1 Operator's position

- The machine is designed to be operated by a maximum of 2 persons for loading and extracting the material.
- Looking in the feed direction, at the
  - — front of the sliding table for the input
  - — rear of the machine for extracting the material

6.2 Setup

DANGER

Danger to life due to rotating saw blade.
Limbs and fingers can be severed.
Use the guard and adjust it correctly.

- The distance between the top surface of the workpiece and the bottom edge of the guard should be no more than 5 mm.

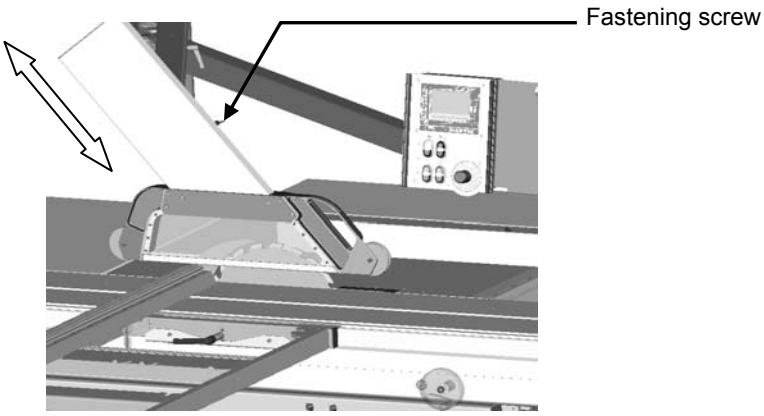
6.2.1 Adjusting the Guard

6.2.1.1 Model T60 Basic, PreXision

- The height of the guard at the riving knife is adjusted with the height of the saw blade.

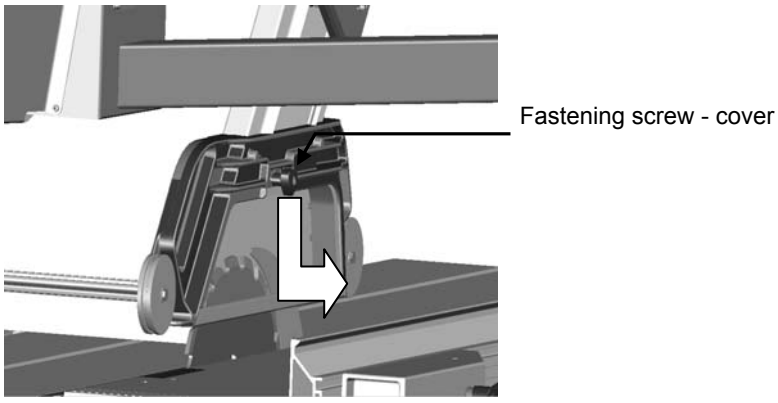
6.2.1.2 Model T60 Classic

- The height of the guard is set by moving it manually.
- Loosen and tighten the guard with the help of the fastening screw.
- Depending on the thickness of the workpiece, move the guard up or down.



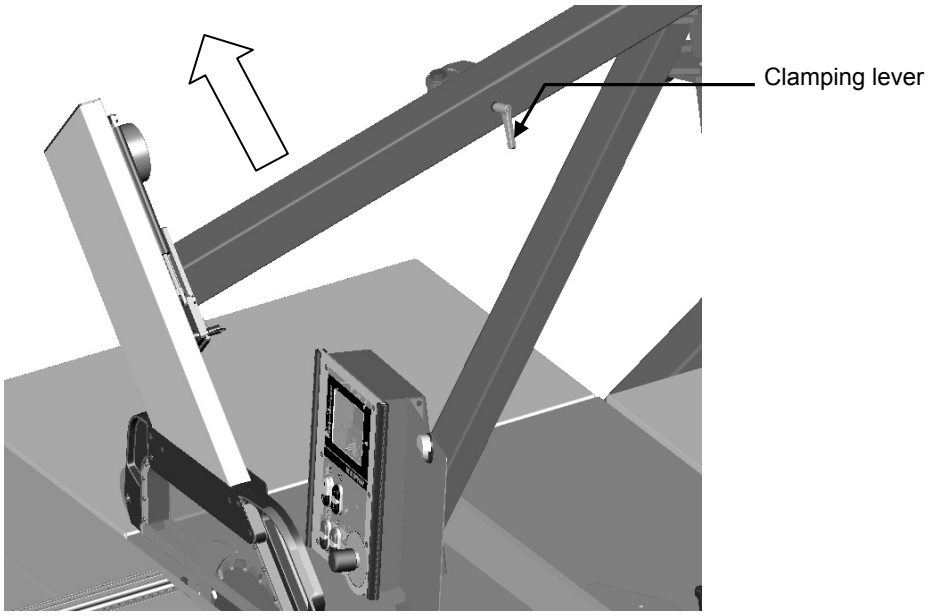
6.2.1.3 Guard for 0° and 46° Position of the Saw Blade

- The right cover of the guard can be removed.
- The right cover can be fastened and removed by means of a fastening screw.
- Use the flat cover of the guard for a saw-blade position of 0°.
- Use the wide cover of the guard for saw-blade positions of up to 46°.



6.2.1.4 Tilting Away the Guard Arm

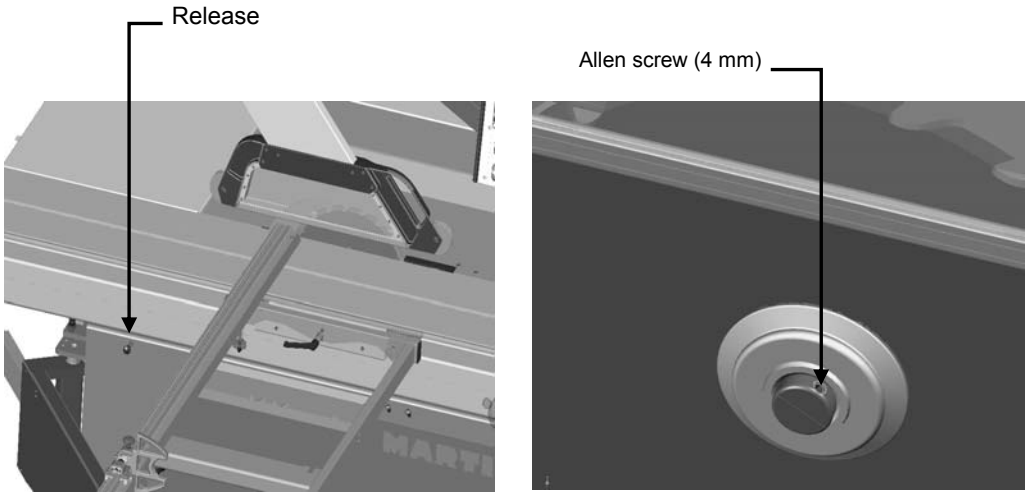
- For special work, the guard arm can be tilted away.
- Loosen the clamping lever.
- Tilt the guard arm away to the back.
- After completing the special work, immediately return the guard arm to the correct position and refasten it.



6.2.2 Replacing the Saw Blade

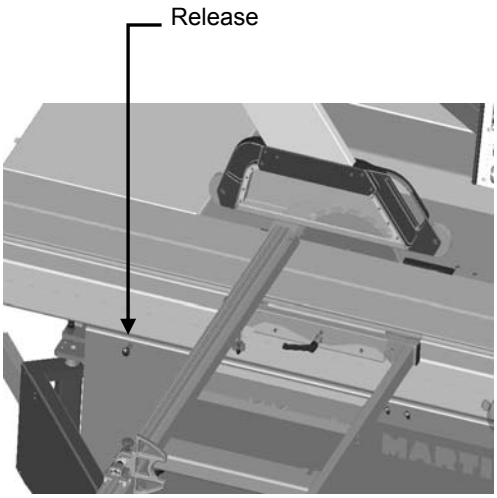
6.2.2.1 Model T60 Basic, Classic

- To replace the saw blade, the saw-blade arbour does not need to be blocked.
- The saw-blade flange is equipped with the SprintLock system for quick replacement.
- Proceed as follows to replace the saw blade:
  - — Move the saw-blade arbour up.
  - — Move the edging table to the front.
  - — After the first stop of the edging table, pull the release (see figure) and continue to move the table slowly up to the next stop.
  - — Open the chip flap.
  - — The machine cannot be started in this position.
  - — Slightly loosen the Allen screw (4 mm).
  - — The knurled screw can now be loosened to the left by hand, and the flange can be removed.
  - — Replace the saw blade.
  - — **Pay attention to the rotational direction of the saw-blade arbour.**
  - — Put the flange and the knurled screw back on the arbour.
  - — Tighten the knurled screw by hand.
  - — Fasten the Allen screw (4 mm) hand-tight.
  - — Close the chip flap and move the edging table to the working position.
  - — Done.



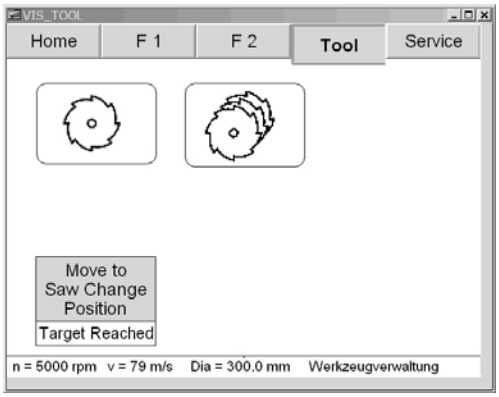
6.2.2.2 Model T60 PreXision

- To replace the saw blade, the saw-blade arbour does not need to be blocked.
- No tools are required to replace the saw blade.
- Proceed as follows to replace the saw blade:
  - — Move the edging table to the front.
  - — After the first stop of the edging table, pull the release (see figure) and continue to move the table slowly up to the next stop.

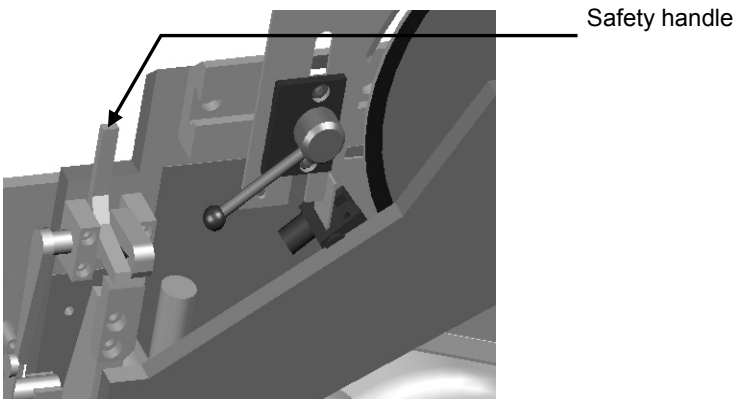


  - — Select the *TOOL* menu.
  - — Press 

  - — Press the *START AUTOMATIC* button.
  - — The saw-blade arbour is automatically moved to the replacement position.

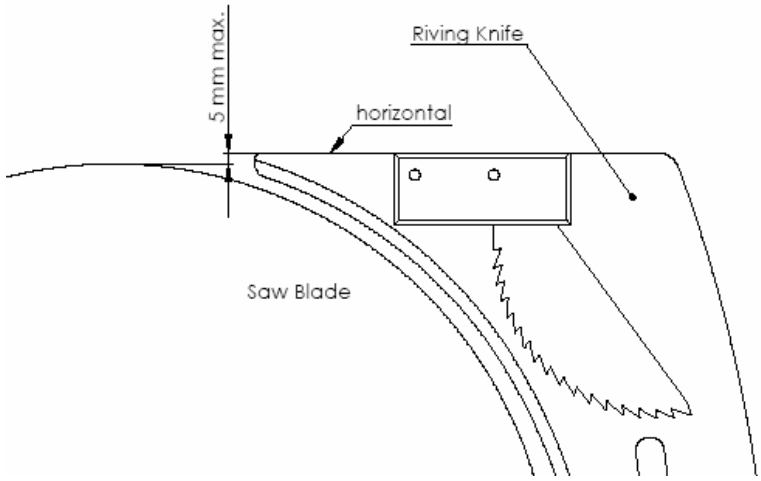


— The machine cannot be started in this position.
— Select .....
— The clamping plate is opened pneumatically.
— Replace the saw blade.
— Use both hands to mount the saw blade.
— With one hand, press the safety handle to the back.
— With the other hand, select .....
— The clamping plate is closed pneumatically.
— The saw blade is mounted.
— Close the chip flap and move the edging table to the working position.
— Done.



6.2.3 Adjusting the Riving Knife

- Refer to the information under 7.4, Fig. *Riving knife adjustment for concealed cuts.*
- Distance riving knife ↔ saw blade: min. 3 mm
  max. 8 mm
- USA version T60 Classic (guard overarm mounted)
  — Top edge distance riving knife ↔ cutting circle of the saw blade: max. 5 mm (see Fig.)
  — Top edge of the riving knife has to be parallel to the machine table (see Fig.)



DANGER

Danger to hands and body.
Kickback of stuck workpieces.
Use a suitable riving knife.
Always use and adjust the riving knife.

IMPORTANT

The riving knife must not be thicker than the cutting-slot width of the saw blade and not thinner than the saw-blade body (tool body).
The riving knife must be suitable for the diameter of the mounted main saw blade.

- The contact surface of the riving knife is 0.2 mm further to the right than the fixed flange of the saw-blade arbour.
- The utilised riving knives must be at least 0.2 mm thicker than the saw-blade body.
- Only use original MARTIN riving knives.
- The riving knife is loosed and fastened with clamping lever.

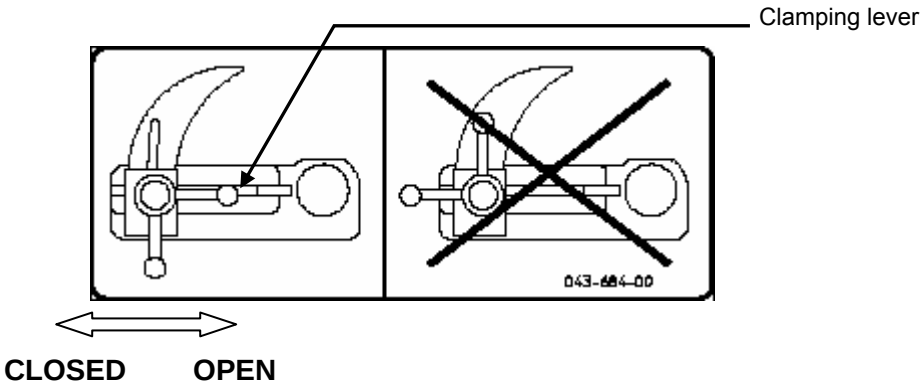
CAUTION

Danger of damage to the riving knife and the saw blade.
The riving knife must be fastened in the correct position with the clamping lever.

- Close the chip flap.
- Move the edging table back to the working position.
- Adjust the guard.

IMPORTANT

The clamping lever must face downwards.
Otherwise the chip flap cannot be closed.

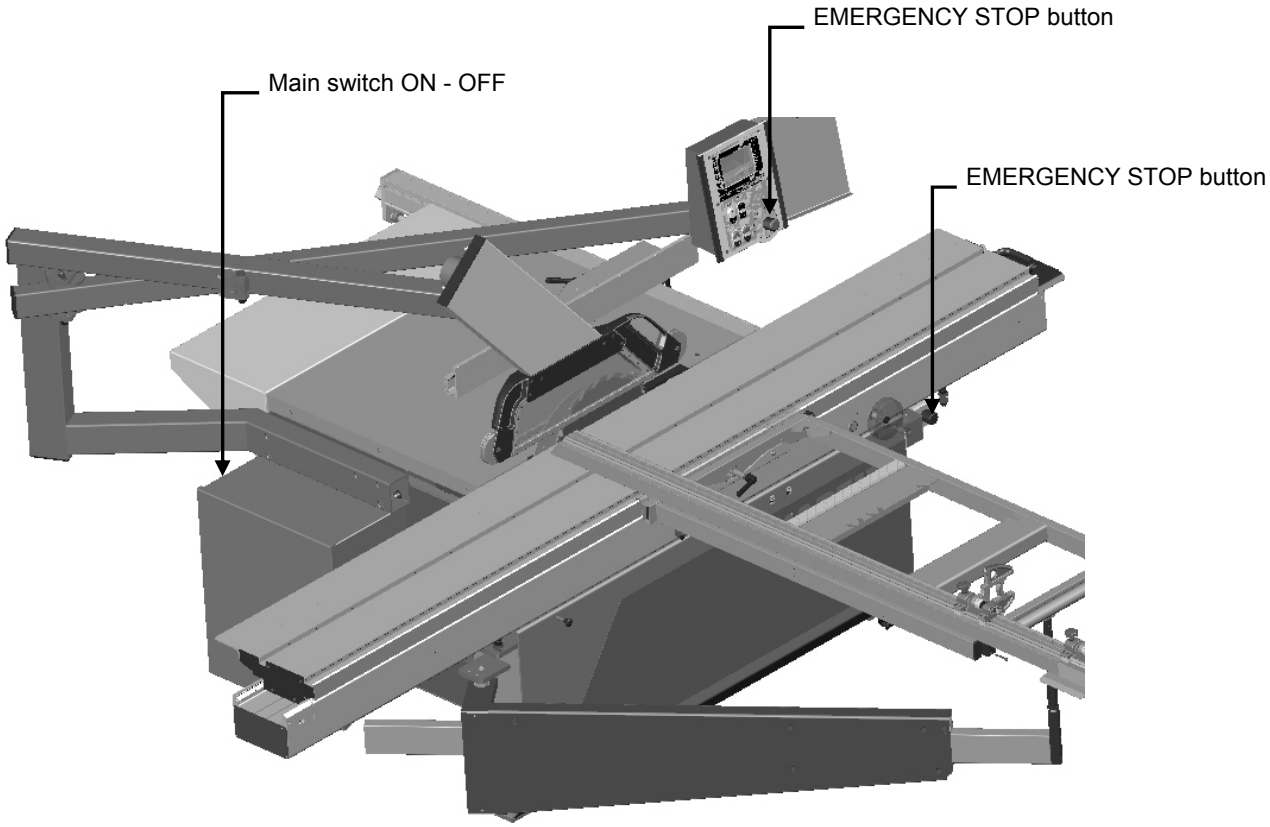


6.2.3.1 Table: Saw Blade ∅ - Riving Knife

Model	Ø saw blade [mm]	Riving knife thickness [mm]	Number of riving knives [units]
Basic, PreXision	**250-315**	2.8	1 (with guard, antikickback device)
	250-350	2.8	1 (for concealed cuts)
Classic	**350-400**	2.7	1 (antikickback device)
	250-350	2.8	1 (for concealed cuts)
	350-450	3.2	1 (for concealed cuts)

6.3 Main Switch and EMERGENCY STOP Button

- On all models, the main switch is located at the switch cabinet on the workpiece extraction side (rear) of the machine.
- Position main switch ON: |
- Position main switch off: **0**
- A red EMERGENCY STOP button is located on the control panel.
- Another EMERGENCY STOP button is located on the left side of the edging beam (see figure).
- The buttons can be reached easily from the operating position and can be used to switch the machine off in an emergency or dangerous situation.
- Actuate EMERGENCY STOP: press button
- Disable EMERGENCY STOP: pull button



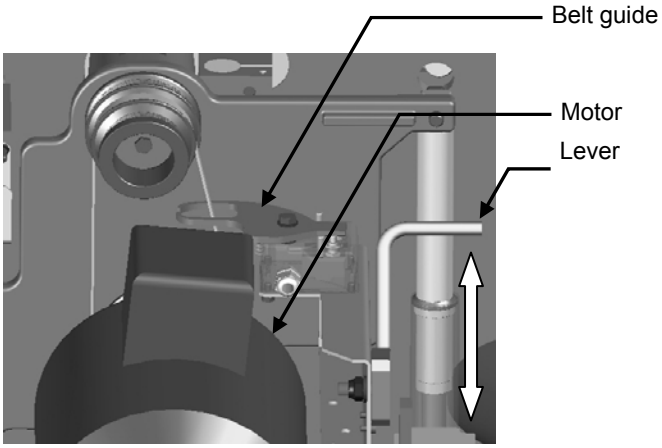
6.4 Setting the Rotational Speed

6.4.1 T60 Basic, PreXision

- The rotational speed is 5000 rpm.
- The rotational speed cannot be changed.

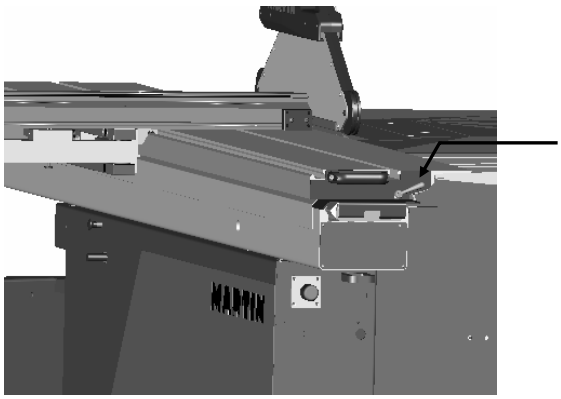
6.4.2 T60 Classic

- The rotational speed is 4000, 4800, or 6000 rpm.
- The rotational speed is determined by the position of the drive belt.
- Proceed as follows to change the position of the drive belt:
  - — Open the rear cover.
  - — Press the lever down to the stop position.
  - — In this way, the drive belt is loosened.
  - — Manually place the drive belt on the required belt pulley pair.
  - — Do not squeeze the drive belt.
  - — The drive belt must be placed in a straight line on a belt pulley pair.
  - — Press the lever up to the stop position.
  - — The drive belt is tensioned.
  - — Check the position of the belt guide.
  - — The rotational speed is displayed in the control.



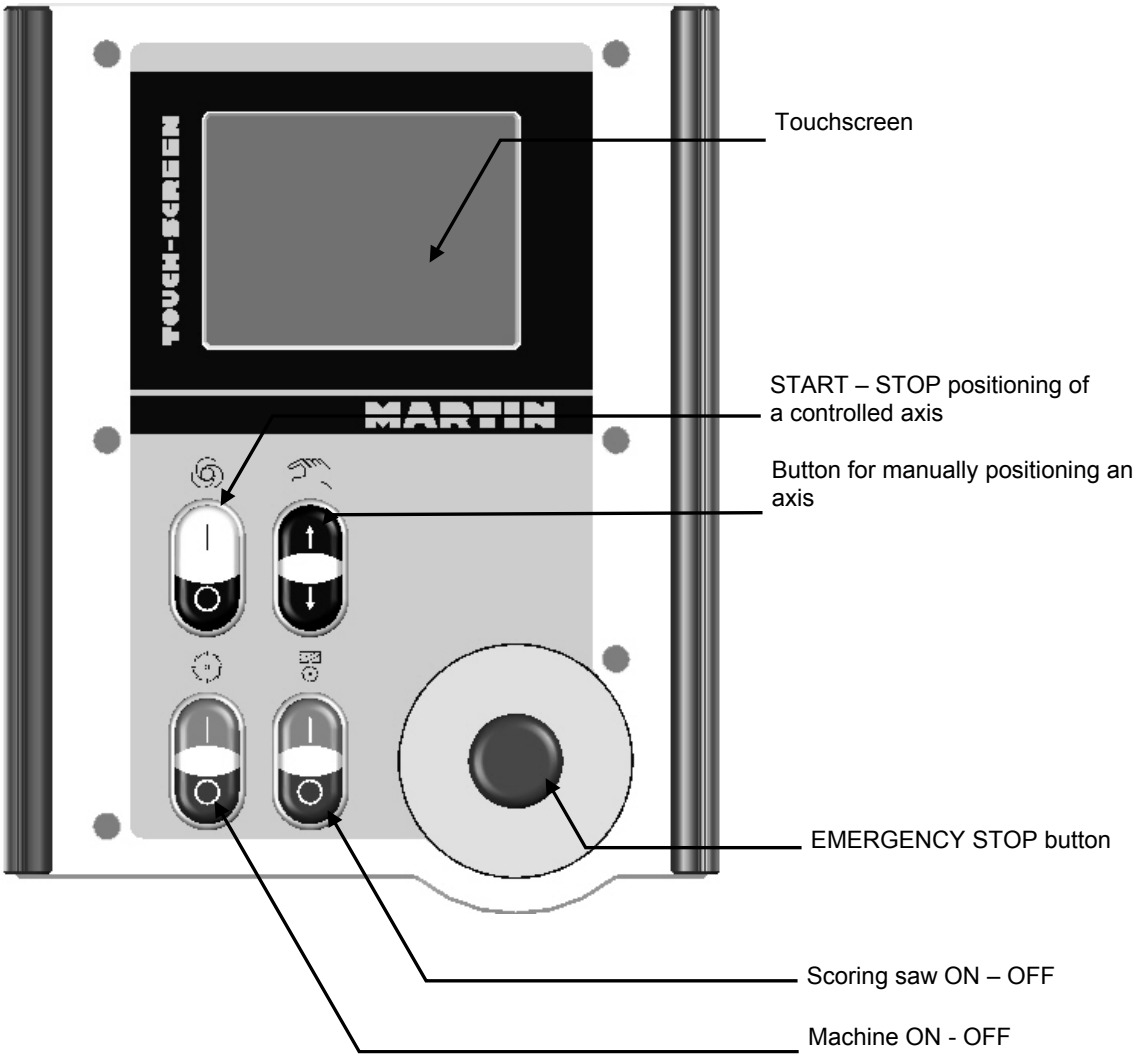
6.5 Edging-Table Operation

- Use the handles at the ends of the edging table to move it.
- The movement of the edging table is stopped by spring stops at the end positions.
- If many small movements are performed with the edging table, the ball cage in the guides may be slightly dislocated.
- If this happens, the table will encounter an obstacle even before the stop position is reached.
- In this case, move the edging table to the end position by means of short, moderate blows.
- In this way, the position of the ball cages is corrected.
- The edging table is equipped with a clamping sleigh.
- The workpiece to process is placed under the clamping sleigh from the front.
- Thus, it can no longer slide away to the side or be lifted by the saw blade.
- Also see chapter 7, "Equipment and handling for edging".
- The edging table can be locked in variable positions by fastening the locking lever.



6.6 Control

6.6.1 Control Panel - Control Elements



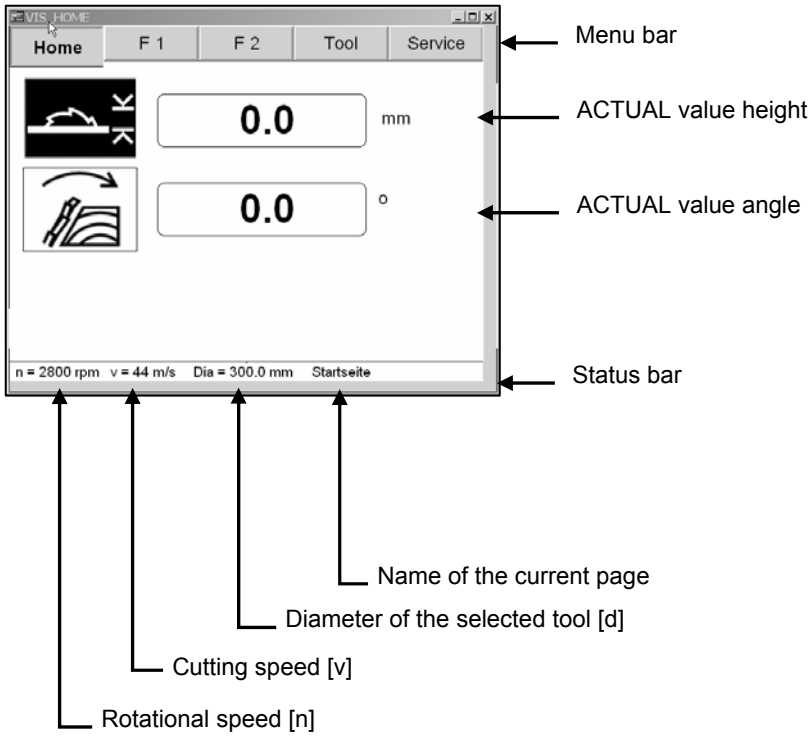
6.6.2 Touchscreen Control Elements

- To select and enter values, touch the respective screen area.

CAUTION

Danger of damage to the screen due to sharp metal objects.
Only operate the screen with your fingers.

- The status bar provides up-to-date information about the
  - — Rotational speed [n]
  - — Cutting speed [v]
  - — Diameter of the selected tool [d]
  - — Name of the current page [home page]

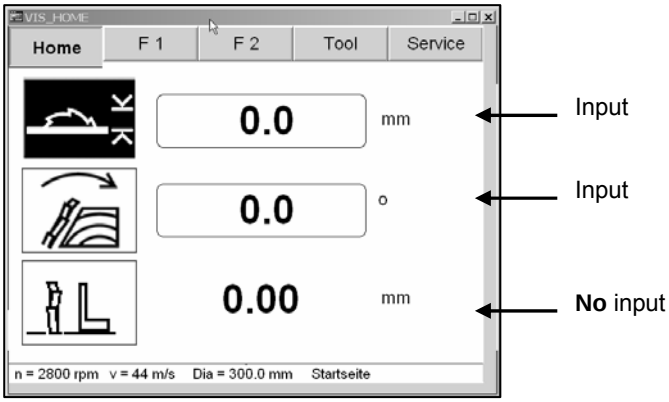


6.6.2.1 Entering Values

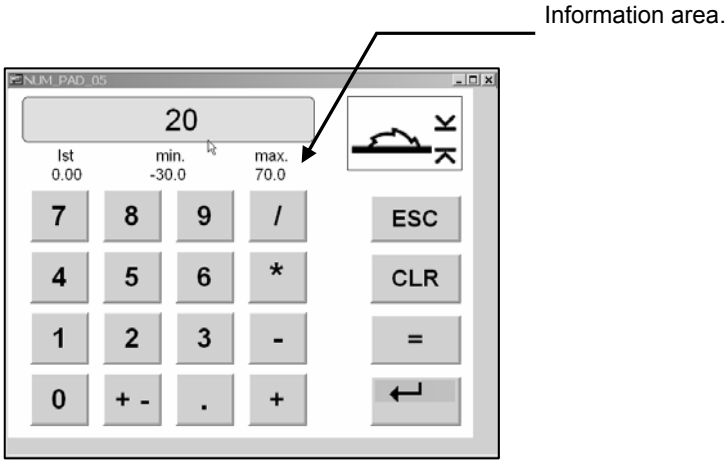
IMPORTANT

In all menus, the input takes place within framed boxes.
The values for the height and the angle can be entered.
After pressing the *START AUTOMATIC* button, both axes are positioned.

- Select the required field.
- A calculator appears, allowing you to enter values.



- The calculator provides information about the
  - — ACTUAL value
  - — MIN value
  - — MAX value of the selected axis
- Enter the TARGET value.
- Confirm the entry with ↵.
- Delete the entry with **CLR**.
- Press **ESC** to exit the current dialog without any changes.

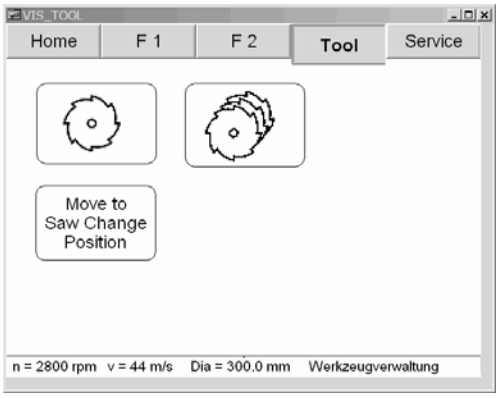


6.6.3 Adjusting the Axis

IMPORTANT

To position controlled axes, you must first enter the tool data.
Enter theses values in the *TOOL* menu.

6.6.3.1 Tool Menu



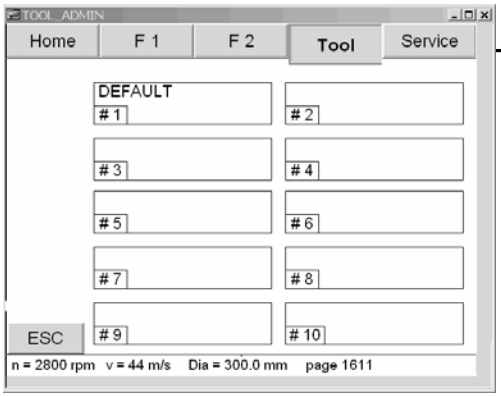
- Select the *TOOL* menu.

6.6.3.1.1 Tool Menu Item

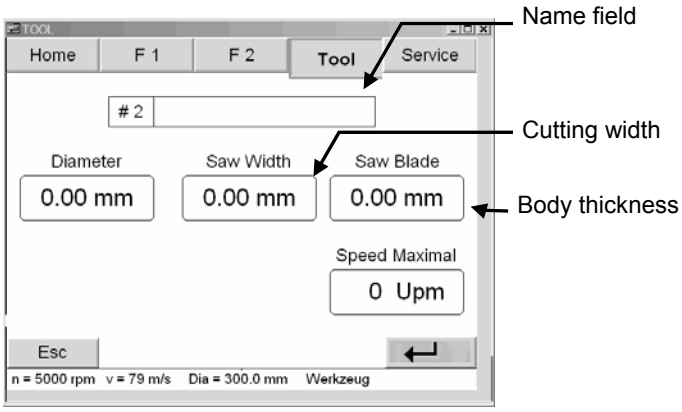
- Menu item for entering the data of the currently used tool.
  - — Name
  - — Diameter
  - — Cutting width
  - — Body thickness
  - — Max. permissible rotational speed

6.6.3.1.2 Tool Menu Item

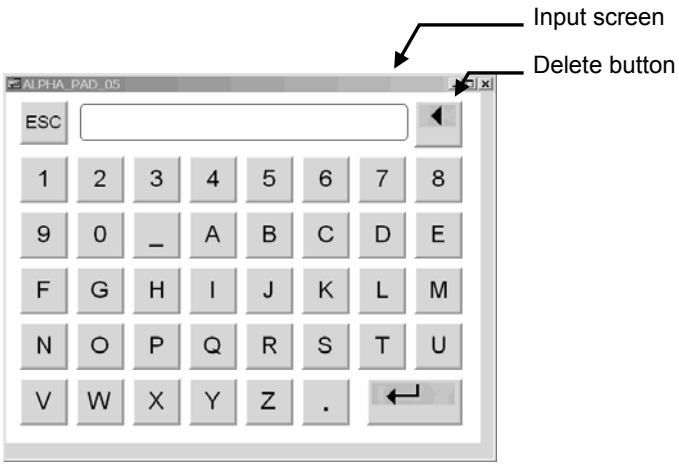
- Menu item for managing the tool database.
- You can store a maximum of 10 tools.
- Select a tool position.



- Enter the requested data.
- Select the name field.



- Enter a name in the input screen.
- The name can consist of up to 16 characters.



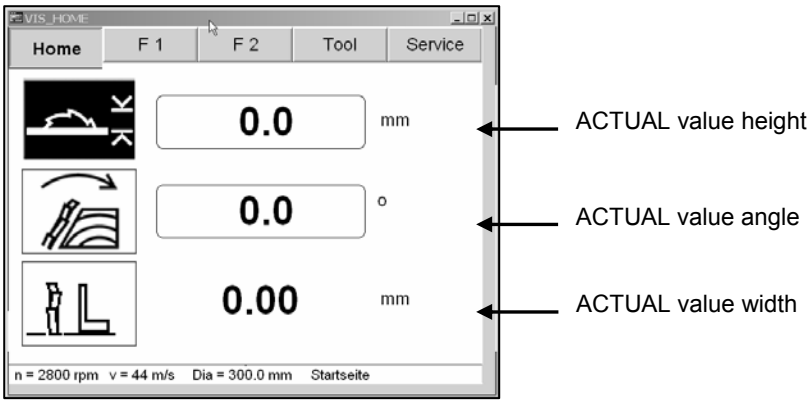
- Confirm the entry with ↵.
- Confirm the input screen with ↵.
- The tool is saved.

6.6.3.1.3 Tool Menu Item 

- Menu item for moving the tool to a comfortable replacement position.

6.6.3.2 Home Menu

- The *Home* menu is used to
  - — display the ACTUAL positions of the controlled axes and the position of the rip fence (T60 Classic, PreXision) in digital form on the screen;
  - — enter the TARGET values for controlled axes.
- The TARGET value appears in the display.
- Press the *START AUTOMATIC* button.
- The selected axis is positioned.



6.6.3.2.1 Setting the Cutting Height

- Select the *HOME* menu.
- Select the input field of the  axis.
- The calculator appears.
- Enter the TARGET value.
- Confirm the entry with ↵.
- The *HOME* menu appears again.
- Press the *START AUTOMATIC* button.
- The  axis is positioned.

6.6.3.2.2 Setting the Cutting Angle

CAUTION

Danger of damage to the guard when tilting the saw blade.
Install the wide cover before you tilt the saw blade (see 6.2.1.3, T60 Classic).

- Select the *HOME* menu.
- Select the input field of the  axis.
- The calculator appears.
- Enter the TARGET value.
- For T60 PreXision, you can enter a negative value.
- Confirm the entry with ↵.
- The *HOME* menu appears again.
- Press the *START AUTOMATIC* button (on the T60 Basic, keep the button pressed).
- The  axis is positioned.

IMPORTANT

On the T60 Classic, the position of the rip fence is computed during the tilting process. Before the saw blade collides with the rip fence, the tilting movement is stopped.
After moving the rip fence away from the collision zone, you can continue to tilt the saw blade to the target position (keep the *START AUTOMATIC* button pressed).

6.6.3.3 Adjusting the Cutting Width

IMPORTANT

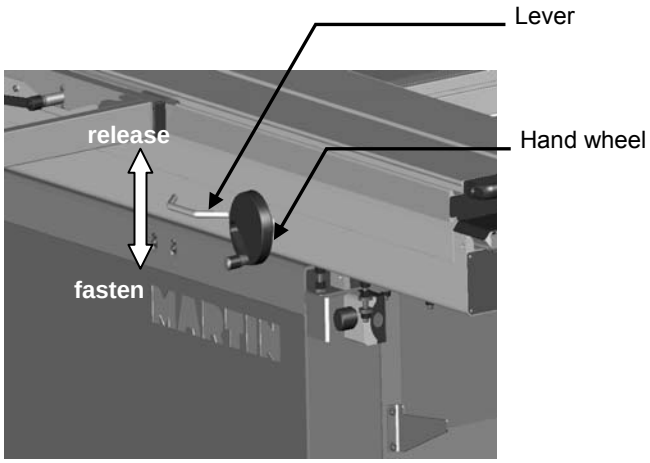
When making the adjustments, make sure no parts can get stuck between the saw blade and the rip fence!

6.6.3.3.1 T60 Basic

- The cutting width is adjusted manually with the rip fence according to the scale.
- The rip fence can be fastened and loosened manually with a lever on the rip fence.
- The rip fence is equipped with a manual fine-adjustment mechanism.

6.6.3.3.2 T60 Classic, PreXision

- The cutting width is adjusted manually with the hand wheel on the machine according to the digital display on the screen.
- The rip fence can be fastened and loosened manually with a lever on the machine.

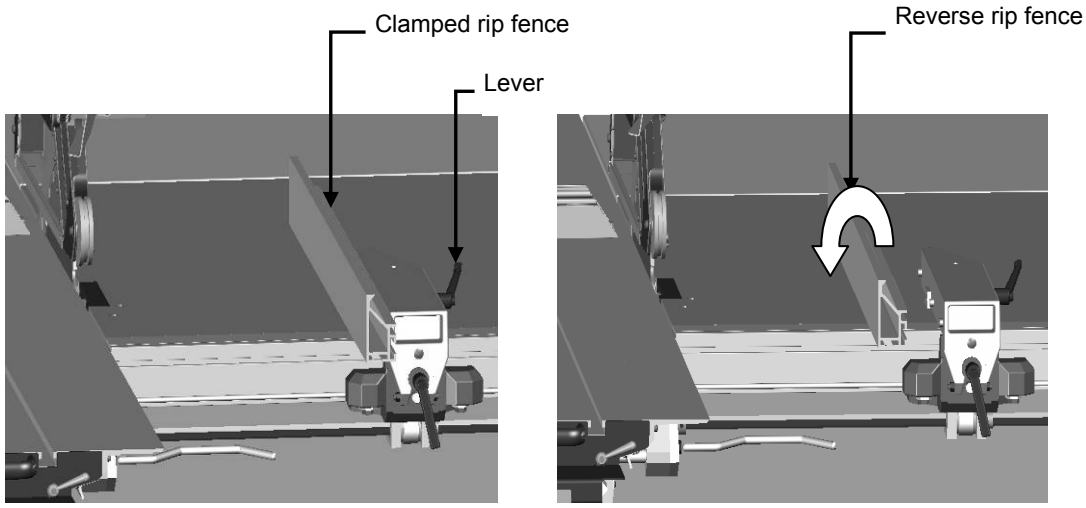


6.6.3.3.3 High and Low Workpiece Guiding Surface on the Rip Fence

- Release the lever in order to move the rip fence.
- Tighten the lever in order to fasten the rip fence.
- The rip fence can be pulled out entirely and reversed.
- Use the high workpiece guiding surface for thick workpieces.
- Use the low workpiece guiding surface for thin workpieces or angle cuts.

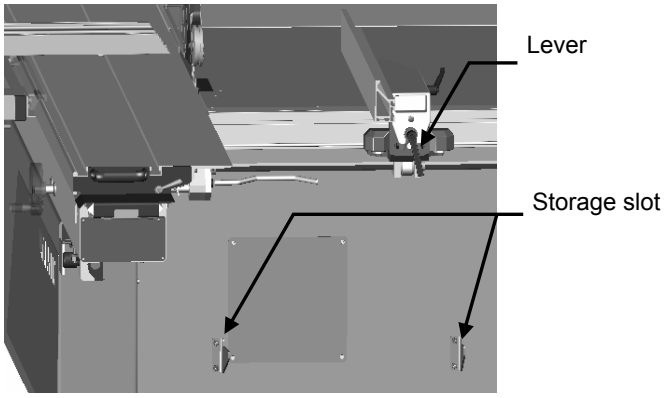
IMPORTANT

When using the low workpiece guiding surface, the width is reduced by 50 mm.
Select the position of the rip fence in the HOME menu (only T60 Classic, T60 PreXision).



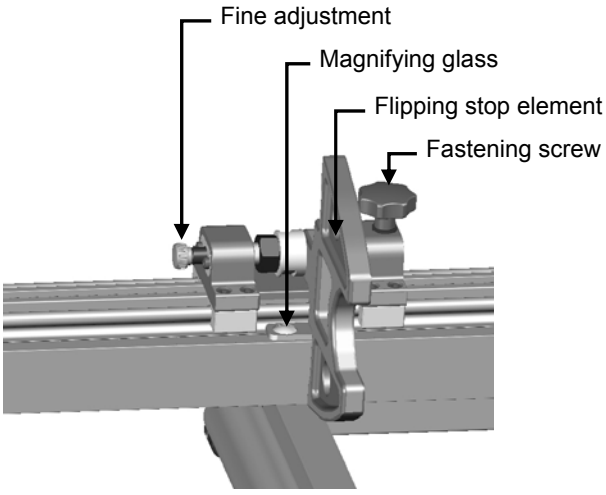
6.6.3.3.4 Removing the Rip Fence

- The rip fence can be removed entirely and stored in the machine.
- The rip fence can be fastened and loosened with a lever.
- Removing the rip fence:
  - — The ruler must be fastened safely.
  - — Release the lever.
  - — Remove the rip fence upwards.
  - — Place the rip fence in the storage slot.



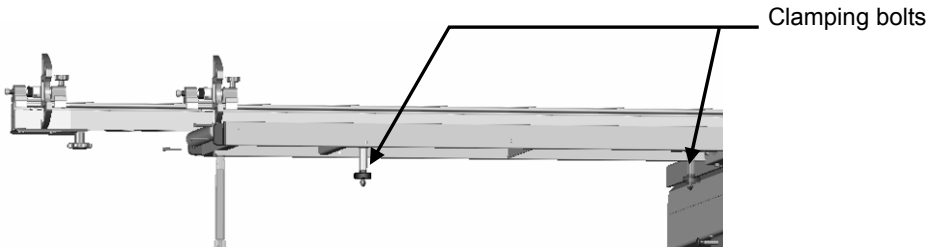
6.6.3.4 Adjusting the Cutting Length

- The cutting length is adjusted manually with the cross-cut fence according to the scale.
- The cross-cut fence is fastened and released manually with a fastening screw.
- The cross-cut fence is equipped with a manual fine-adjustment mechanism.

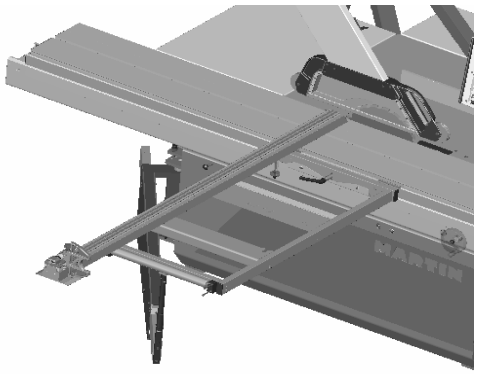


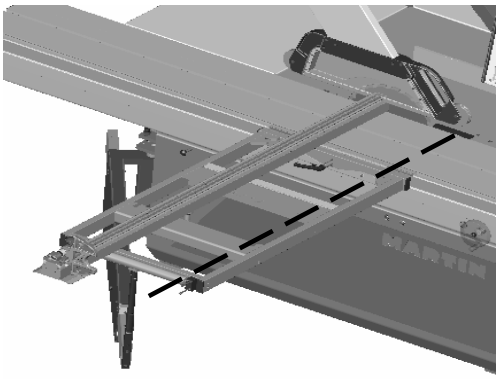
6.6.3.4.1 Repositioning the Cross-Cut Fence

- From position A) to B):
- Release the clamping bolts:
- Move the cross-cut fence across the cross table to position B).
- Refasten the cross-cut fence.
- In the 0° position, the cross-cut fence is adjusted for a saw blade with a cutting width of 3.2 mm.
- To recalibrate the cross-cut fence, see 9.1, "Calibrating the Cross-Cut Fence".



A **B**





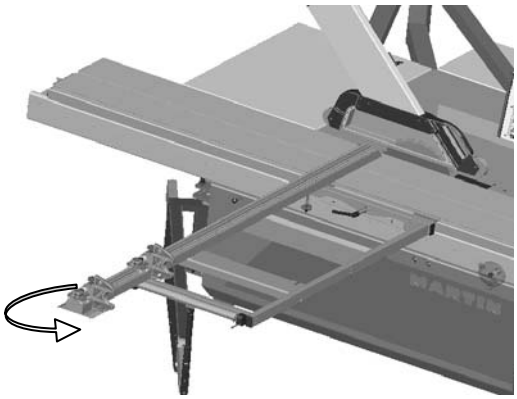
6.6.3.4.2 Adjusting the Cross-Cut Fence for Angle Cuts

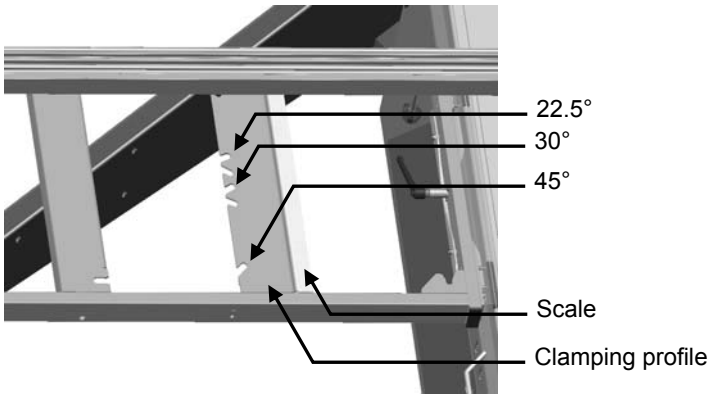
- For angle cuts, the cross-cut fence can be tilted on the cross table.
- The cross-cut fence is fastened to the frame of the cross table with two clamping bolts.
- To adjust the position of the cross-cut fence, loosen **both** clamping bolts.
- Turn the cross-cut fence to the required angle according to the scale.
- Angle range: 0° - 46°
- Adjust the cross-cut fence from the hatched side of the scale.
- Fixed degree settings are available at 22.5°, 30° and 45°.

IMPORTANT

The cross-cut fence is guided by a pin in the groove of the edging table.
The distance between the cross-cut fence and the saw blade remains unchanged regardless of the angle.

- Refasten the cross-cut fence with the clamping bolts.
- The left clamping bolt is fastened to the clamping profile.





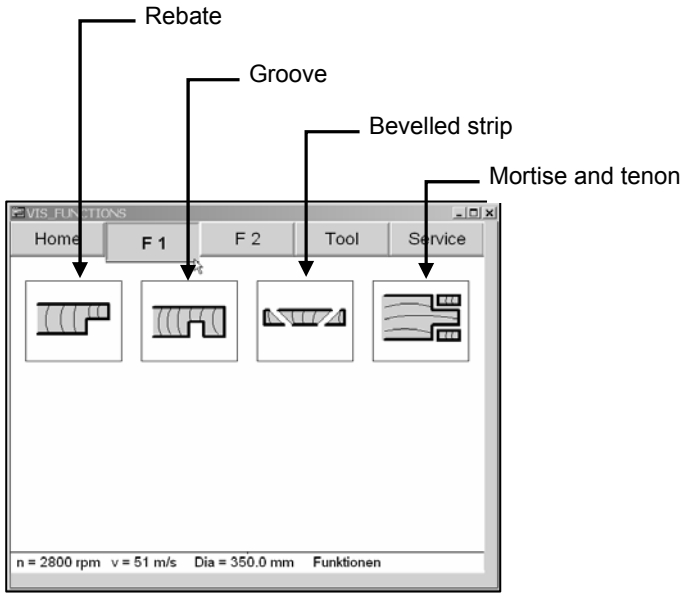
6.6.4 F1 Menu

- The *F1* menu displays cutting functions.
- Press the respective symbol in order to select a cutting function.
- For all cutting functions, information about the workpiece and cut values can be entered in the input fields.

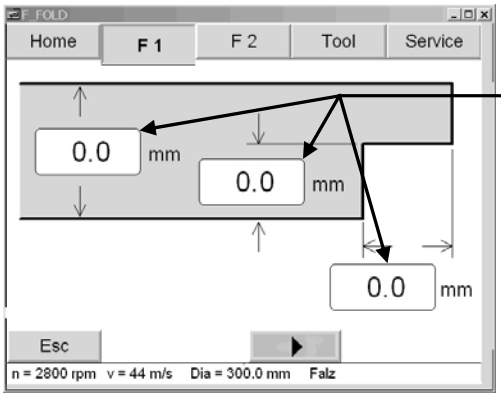
IMPORTANT

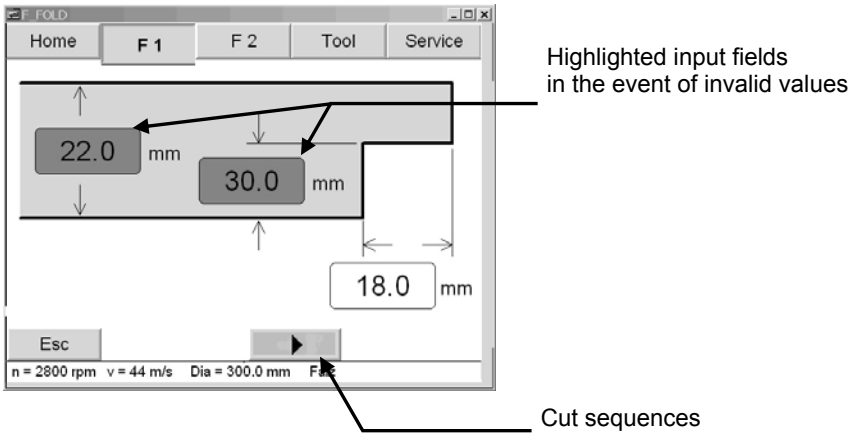
Press the ▸ button to proceed through the cut sequences in the control.
The *START AUTOMATIC* button lights up when an axis must be positioned.
If the entry is incomplete or invalid, you will be notified after pressing the ▸ button. The respective input field is highlighted.

6.6.4.1 Cutting Functions T60 Basic, Classic



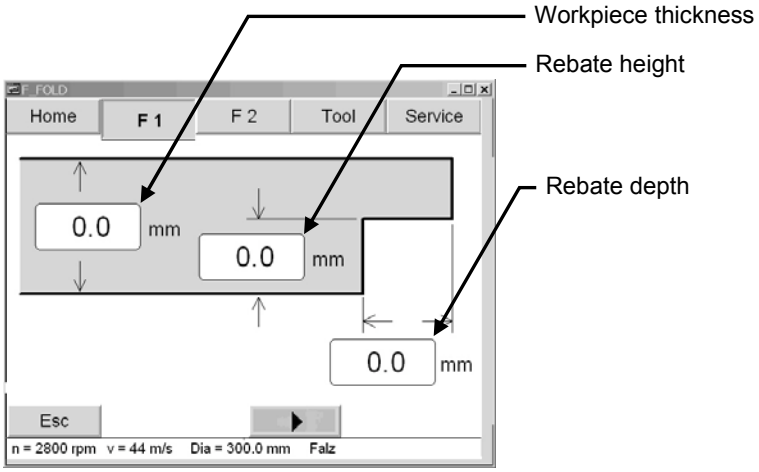
- Example - rebate:





6.6.4.1.1 Rebate Cutting Function

- The *START AUTOMATIC* button lights up when a controlled axis must be positioned.

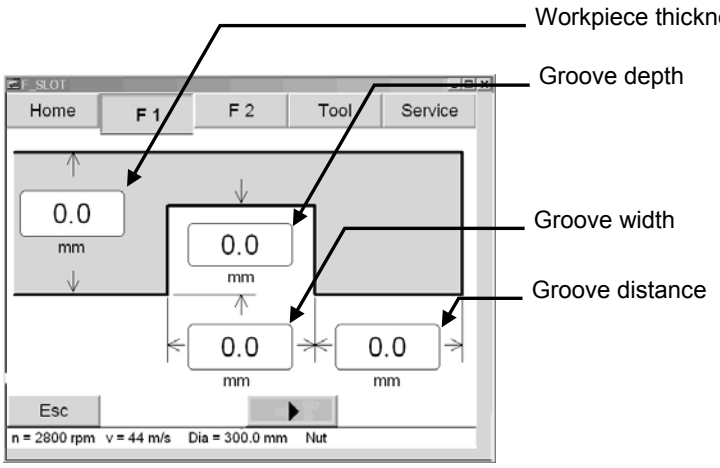


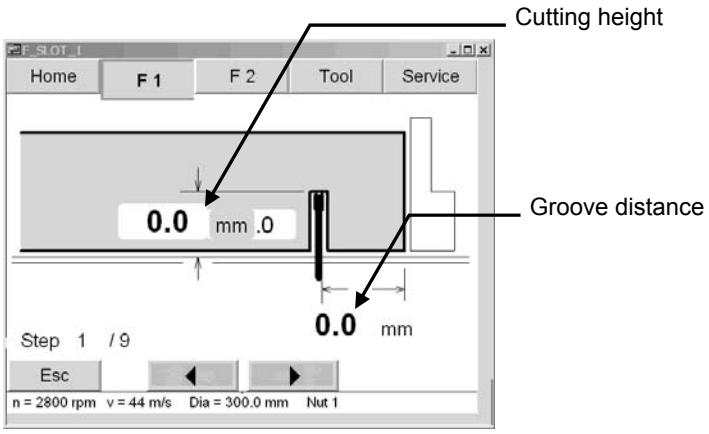
WARNING

Danger of kickback.
Select the cut sequence in such a way that the cut-out profile falls down on the left side of the saw blade.

6.6.4.1.2 Groove Cutting Function

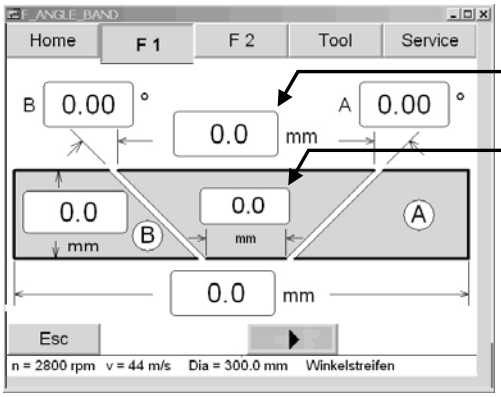
- The *START AUTOMATIC* button lights up when a controlled axis must be positioned.
- The groove distance must be set manually with the rip fence.





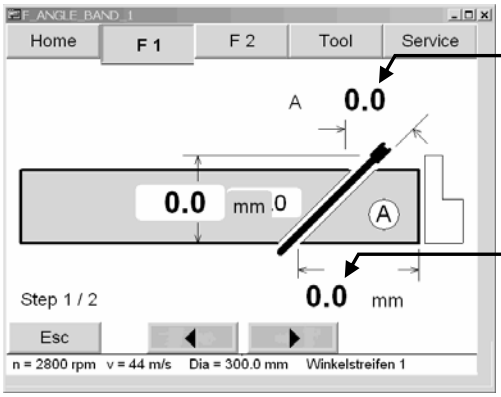
6.6.4.1.3 Bevelled Strip Cutting Function

- The control computes the top or bottom width of the bevelled strip according to the workpiece thickness and angle.
- The *START AUTOMATIC* button lights up when a controlled axis must be positioned.
- The cutting width must be adjusted manually with the rip fence.



Top width of the bevelled strip

Bottom width of the bevelled strip

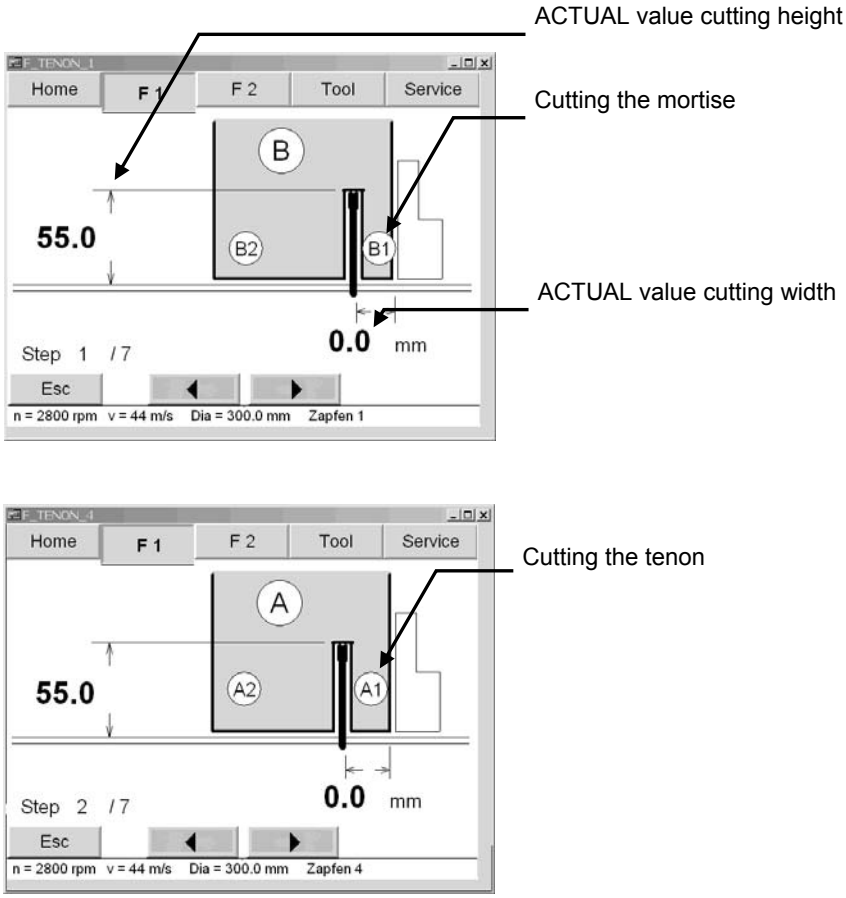


ACTUAL value cutting angle

ACTUAL value cutting width

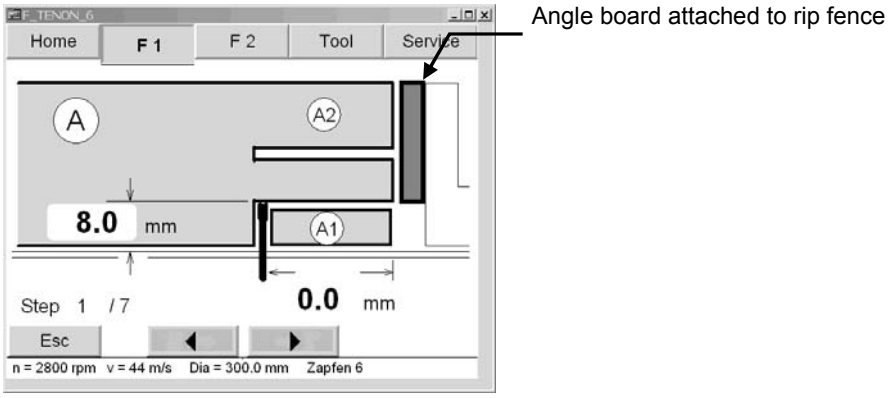
6.6.4.1.4 Mortise and Tenon Cutting Function

- The *START AUTOMATIC* button lights up when a controlled axis must be positioned.



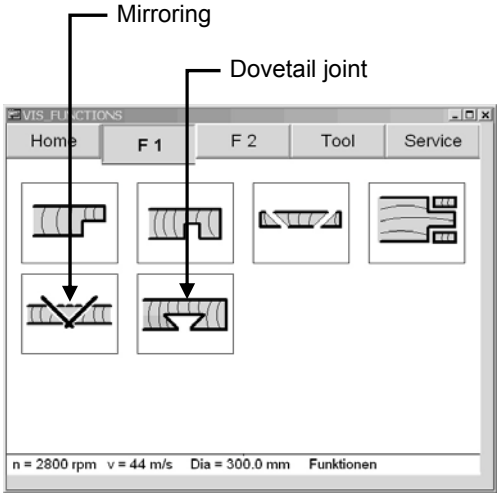
CAUTION

Danger of kickback of stuck workpiece sections. For cross-grain cuts, an angle board must be attached to the rip fence at a suitable height to prevent the cut piece from getting stuck underneath; also see 7.3.

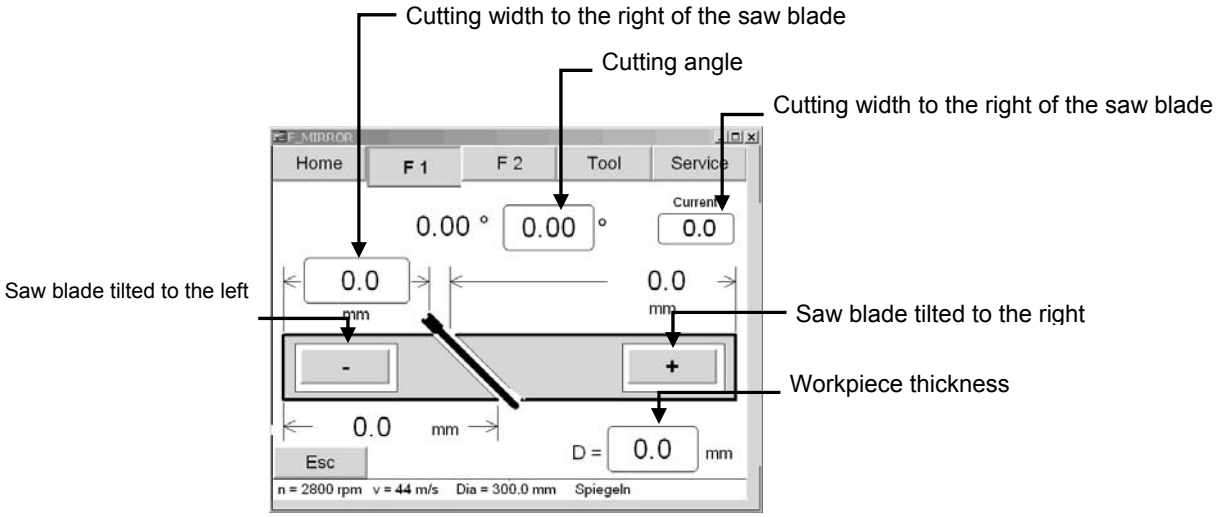


6.6.4.2 Cutting Functions T60 PreXision

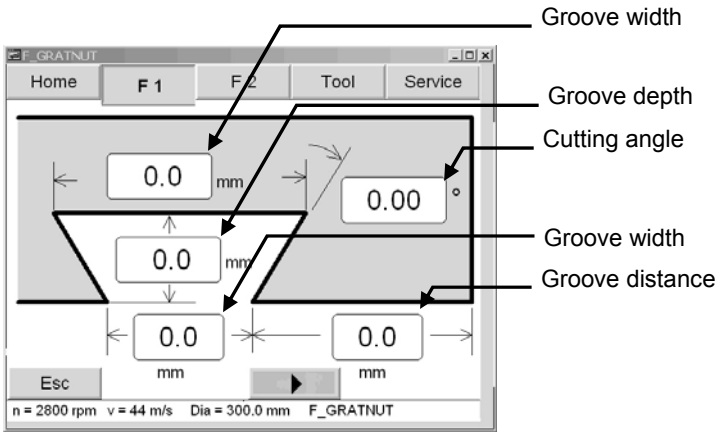
- For all cutting functions, information about the workpiece and cut values can be entered in the input fields.
- The T60 PreXision features the additional cutting functions *Mirroring* and *Dovetail Joint*.



6.6.4.2.1 Mirroring Cutting Function

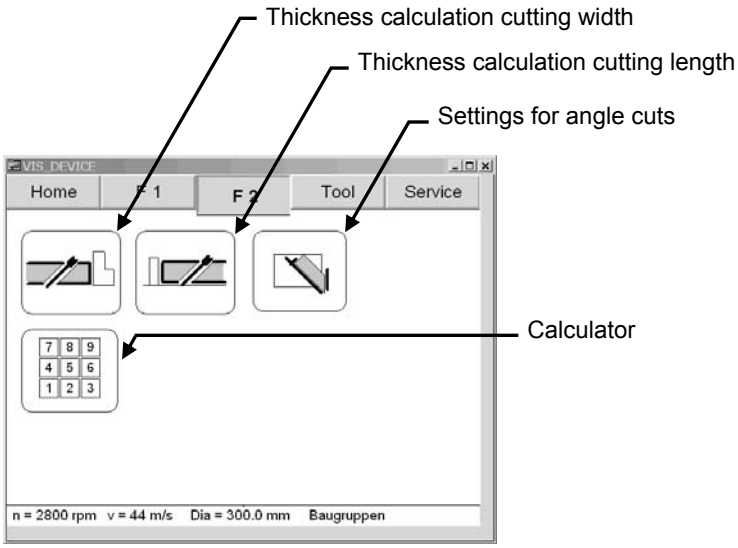


6.6.4.2.2 Dovetail Joint Cutting Function



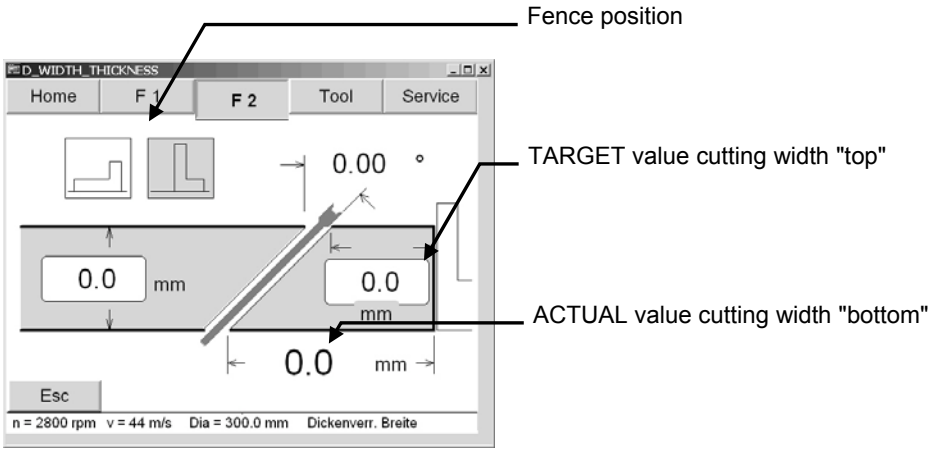
6.6.5 F2 Menu

- The F2 menu contains further functions providing support for special work with the machine.



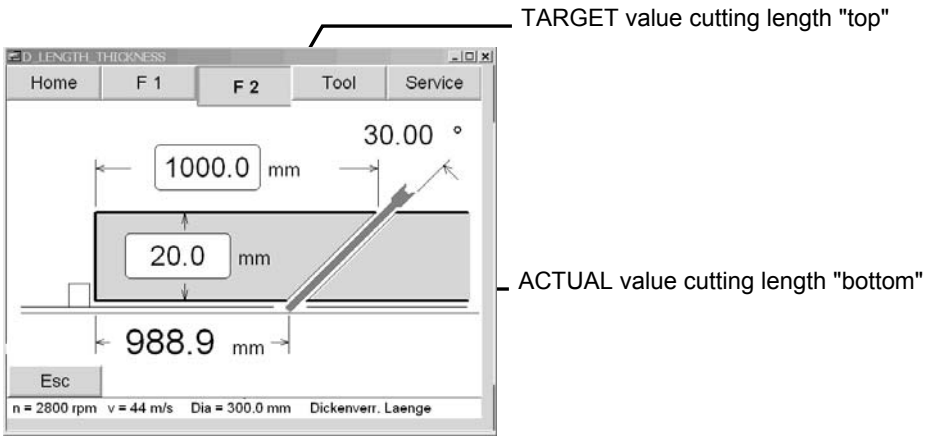
6.6.5.1 Thickness Calculation Cutting Width 

- After entering the TARGET value for the cutting width "top", the ACTUAL value for the cutting width "bottom" is calculating according to the workpiece thickness and the set angle.
- The *START AUTOMATIC* button lights up when a controlled axis must be positioned.
- The cutting width must be adjusted manually with the rip fence.



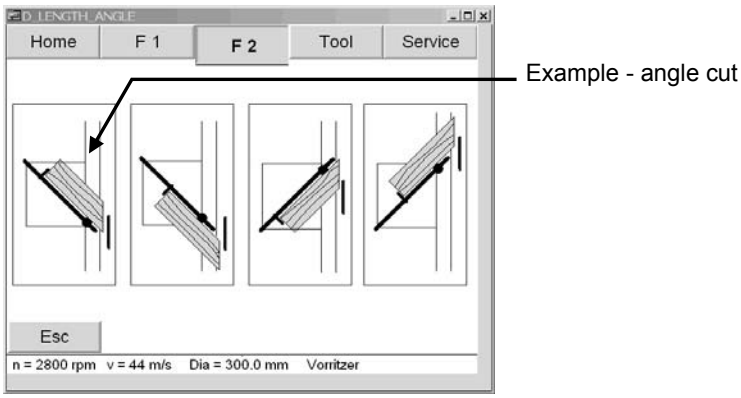
6.6.5.2 Thickness Calculation Cutting Length

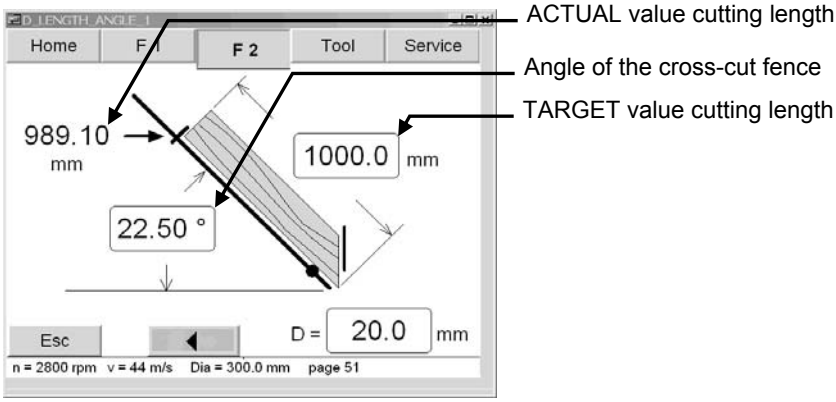
- After entering the TARGET value for the cutting length "top", the ACTUAL value for the cutting length "bottom" is calculating according to the workpiece thickness and the set angle.
- The *START AUTOMATIC* button lights up when a controlled axis must be positioned.
- The cutting length must be adjusted manually with the cross-cut fence.



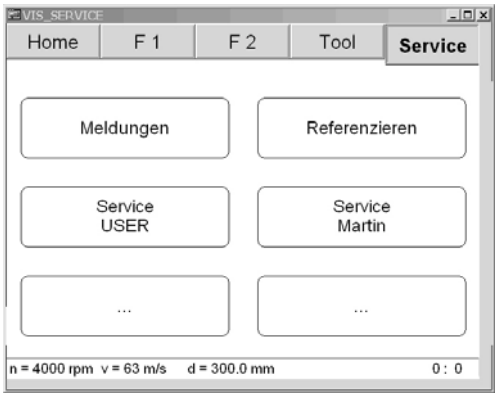
6.6.5.3 Angle Cuts at the Cross-Cut Fence

- Select the respective menu item.
- The angle of the cross-cut fence must be set manually.
- After entering the TARGET value for the cutting length, the ACTUAL value of the cutting length is computed according to the adjusted angle of the cross-cut fence.
- Manually set the calculated value at the cross-cut fence.





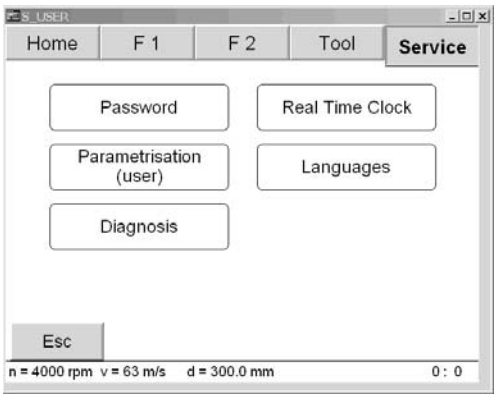
6.6.6 Service Menu



6.6.6.1 Messages

- Under this menu item, the last 4 errors or information messages are displayed, e.g. "EMERGENCY STOP pressed".
- The messages can be acknowledged with Quit All.

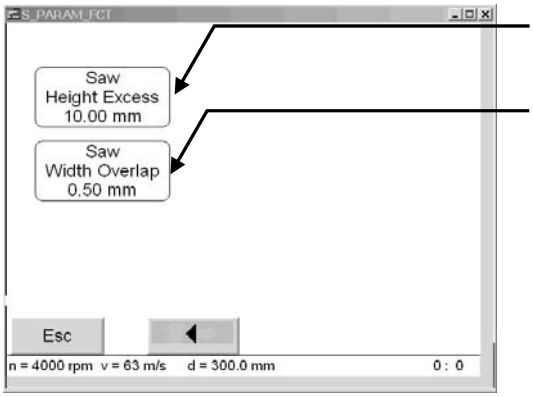
6.6.6.2 Service User



6.6.6.2.1 Diagnosis

- Diagnosis values are displayed under this menu item.
- In the event of malfunction of the machine, the manufacturer can use these values for a diagnosis.

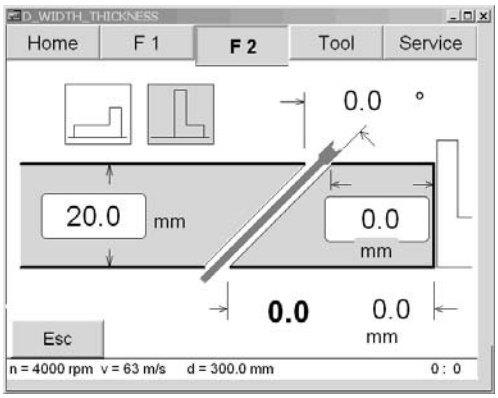
6.6.6.2.2 Parameterisation (User)



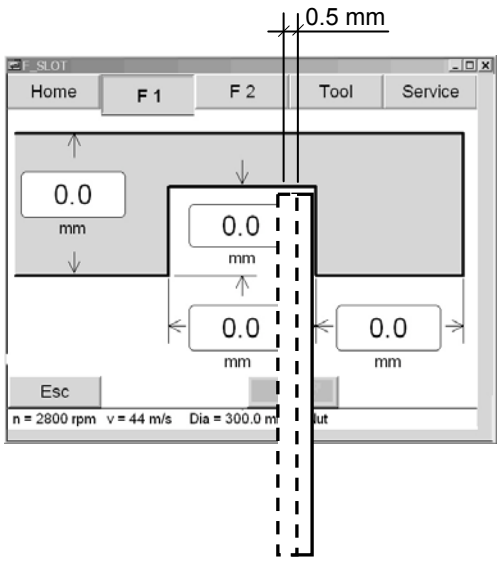
Height over workpiece thickness

Overlapping measurement from cut to cut

- This menu item can be used to determine
  - — The measurement by which the saw blade is to be set higher for cutting functions for which a workpiece thickness is specified.
  - — Example:
    You entered a workpiece thickness of 20 mm. After pressing the *START AUTOMATIC* button, the saw blade is positioned to a height of 20 mm + 10 mm.



— The measurement by which the saw blade overlaps from cut to cut when cutting a groove.
— Example:
When cutting a groove, the position of the saw blade overlaps by 0.50 mm; see figure.



7. Work Safety

7.1 General Information

- Prior to cleaning and maintenance work, make sure the machine cannot be switched on accidentally.
- Observe legal age requirements.
- Wear tight-fitting clothing.
- Wear safety shoes and ear protection.
- Switch the machine off when you leave the workplace.

7.2 Tools

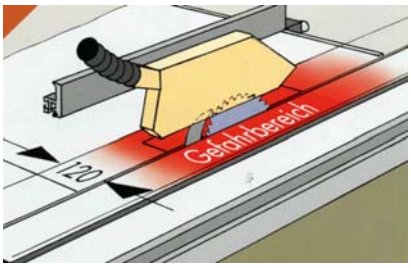
- Use a saw blade that is suitable for the material and the process.
- Only mount sharp, undamaged saw blades.
- Do not use HSS saw blades.

7.3 Settings

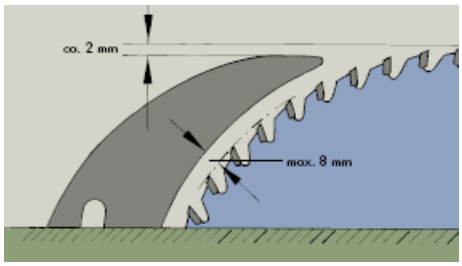
- Max. distance between the riving knife and the saw blade: 8 mm. Position the riving knife approximately 2 mm under the tip of the highest saw tooth.
- Make sure the riving knife is fastened securely.
- Adjust the guard to the workpiece thickness.
- For insert cutting, use the rip fence or a pressure element for kickback protection.
- Subsequently, reinstall the riving knife and the guard.

7.4 Operation

- Work position outside the danger zone.
- Use equipment even if only one workpiece is going to be processed.
- When loading the workpiece, place your hands flat on the workpiece with your fingers closed.
- Use a push stick
- Do not remove splinters, chips, and waste material with your hands.
- The machine must be connected to an effective suction unit.



Riving knife, guard, and table extension (/////// = danger zone)



Riving knife setting for concealed cuts

Adjust the guard to the workpiece thickness or lower it to the machine table

Equipment and handling for edging

Cut narrow workpieces with a push stick

Cut bars with a push stick

Cutting narrow workpieces to length with the cross fence

Protective equipment and handling for cutting rebates

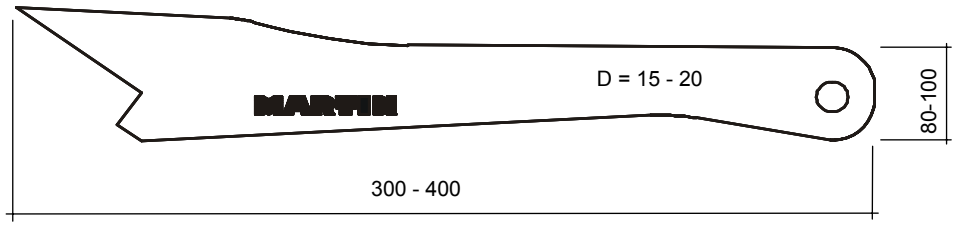
Safety equipment and handling for cross-grain cutting of pins

Safety equipment and handling for insert cutting

Pictures: Holz-Berufsgenossenschaft, D - 81236 München

7.5 Using a Push Stick

- These objects help you to prevent working close to the saw blade with your hands.
- A push stick should be used to cut narrow workpieces; see work examples.
- Promptly replace a damaged push stick with a new push stick.
- Example of a hardwoood push stick:



8. Special Accessories

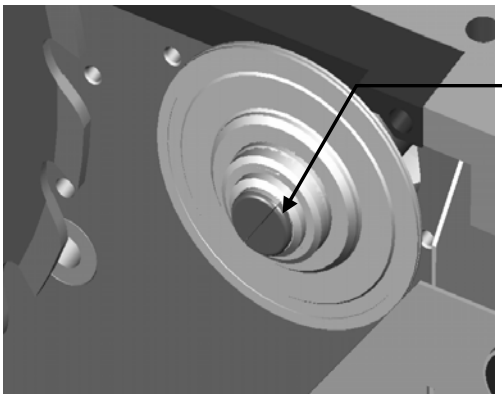
8.1 T6020-a 2-Axis Scoring-Saw Unit T60 Basic, Classic

8.1.1 Specifications

Motor power:	0.75 kW (1 HP)
Cutting height:	max. 3 mm
Saw-blade diameter:	125 mm
Saw-blade replacement:	SprintLock
Rotational speed:	11500 rpm
Cutting width:	min.: 2.8 mm max.: 3.8 mm

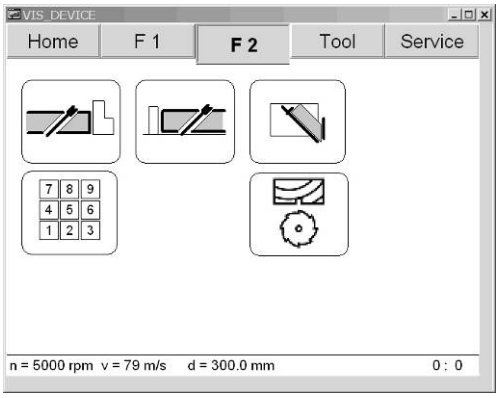
8.1.1.1 Releasing and Mounting Scoring Blades

- Move the edging table to the rear end position (replacement position).
- Open the chip flap.
- Loosen the Allen screw (4 mm).
- The knurled screw can now be loosened to the left by hand, and the flange can be removed.
- Assemble the right and the left (looking in the feed direction) saw blades with some distance rings.
- Mount the scoring saw blade package or the Ritzfix saw-blade system onto the arbour for the scoring saw.
  - **Pay attention to the rotational direction of the scoring saw unit!**
- Place the flange and the knurled screw on the arbour.
- Tighten the knurled screw by hand.
- Tighten the Allen screw (4 mm).
- Close the chip flap and move the edging table to the working position.
- The scoring saw blades or the Ritzfix saw-blade system are installed.

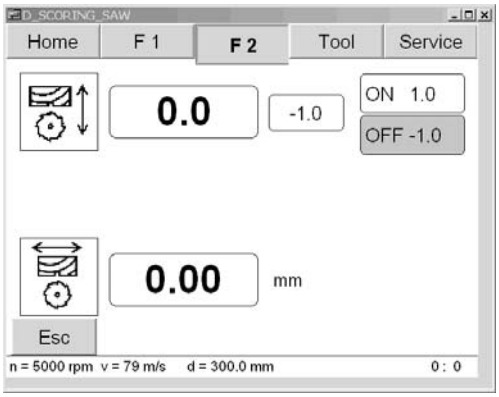


8.1.1.2 Calibrating the Scoring Height and Position

- The height and the lateral position are set with an electric motor.
- For every axis, a value can be entered or adjusted manually by means of buttons.
- Select the F2 menu.



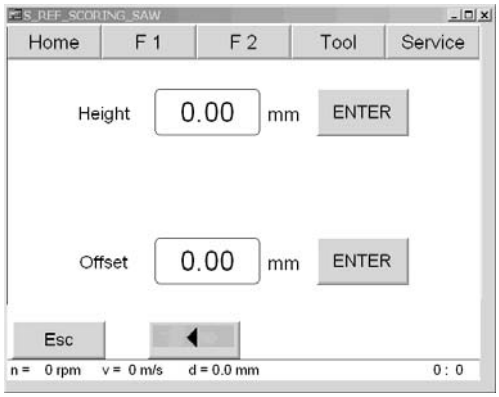
- Select the menu item  .



- Here, the  and  axes can be selected and positioned.
- The axes can be positioned by entering values or manually by means of buttons.

8.1.1.2.1 Calibrating the Scoring-Saw Height

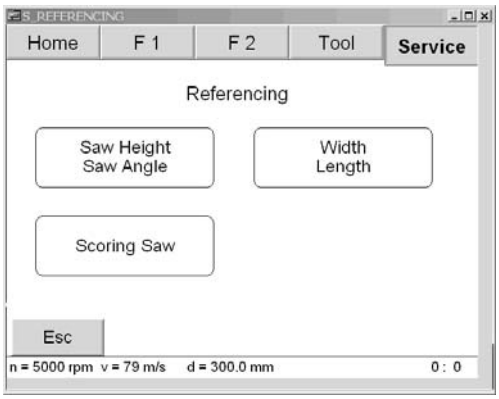
- Select the scoring height.
- Position the scoring saw to the height of the machine table (0 position).
- Check the setting with an alignment ruler.
- Select the menu item Scoring Saw.
- Enter the value 0 in the input field Height 0.00 mm.
- Confirm the entry with ENTER.
- The height of the scoring-saw blade is now calibrated to the machine table.

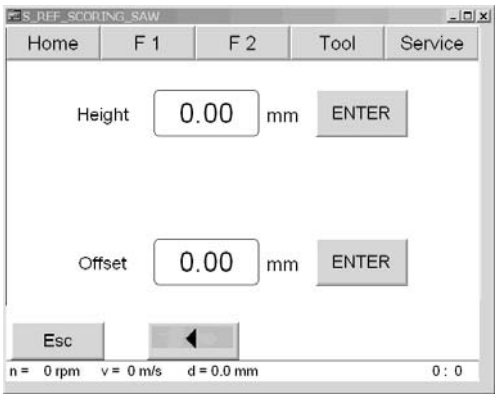


8.1.1.2.2 Calibrating the Scoring-Saw Position

- Perform an initial test cut in order to assess the original position.
- Based on the cut position, you can determine which settings are required.
- Use the material you are going to work with!
- The scoring position (left/right) and the scoring height can be adjusted while the machine is running.
- Align the right edge of the right scoring saw blade to the right edge of the main saw blade.
- Check the modified setting by performing another test cut.
- Repeat this procedure until the desired cutting result is achieved.
- Select the *SERVICE* menu.

- Select the menu item Scoring Saw.





- Enter the 0 value Offset 0.00 mm.
- Confirm the entry with ENTER.
- Thus, the right edge of the right scoring saw blade is calibrated to the right edge of the main saw blade.

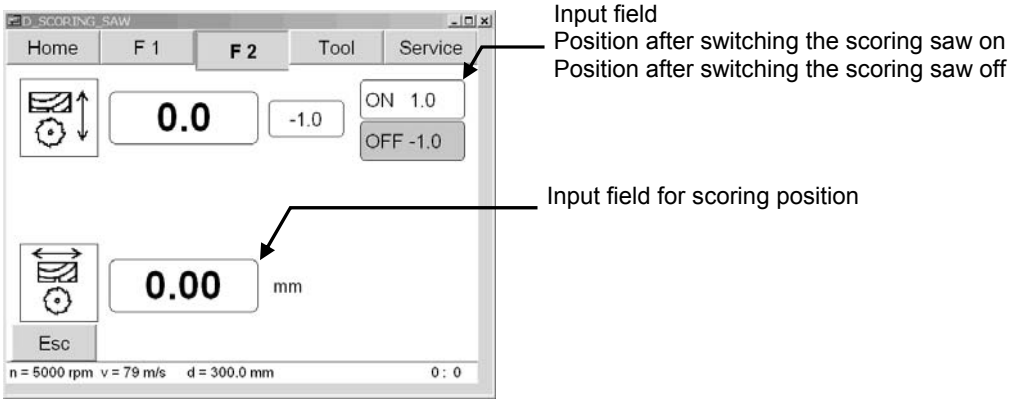
IMPORTANT

The scoring saw blade can be caked with chips and dust from the main saw blade.
To avoid this, remove the scoring saw blades if you are going to work without the scoring saw for an extended period.

- The use of conical saw blades is possible, but is not recommended.

8.1.1.3 Position of the Scoring Saw When Switched On or Off

- After the calibration, the position of the scoring saw after it is **stopped** OFF -1.0 and after it is **started** ON 1.0 can be set in the input field ON 1.0 / OFF -1.0.
- Enter the required value for the scoring saw height ON 1.0 (1.0 mm in this example).
- After the **start**, the scoring saw is positioned to a scoring height of 1.0 mm.



- Enter the required height for the position of the scoring saw after the **stop** OFF -1.0 (-1.0 mm in this example).
- After the **stop**, the scoring saw is positioned to a scoring height of -1.0 mm.

8.1.2 T6022-a Ritzfix Saw-Blade System

- The scoring width is adjusted manually by means of a slotted screw on the Ritzfix saw-blade system.
- Refer to the enclosed instruction manual:
  "Tool for Scoring Saw Unit RITZ-FIX for Martin Sliding-Table Saws".

8.1.3 T6024-a Scoring Saw Blade Set

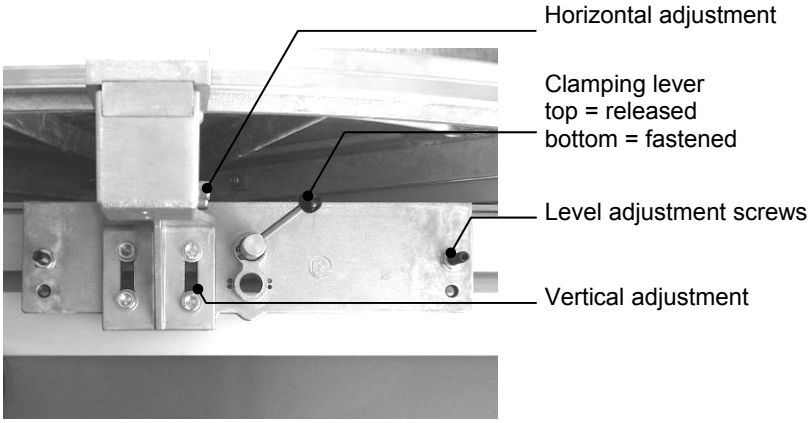
- The scoring saw-blade set consists of 2 scoring saw blades and distance rings for adjusting the scoring width.
- Make sure that the scoring saw blades, the distance rings, and the flange on the contact surfaces are always clean.
- The scoring saw blades can be released and fastened with the SprintLock quick lock system.

8.2 T6032a Double-Mitre Fence DGA 900 Top

- With the help of the double-mitre fence, angles of 0-45° can be cut with the saw.
- Using the table on the double-mitre fence, you can easily and precisely mitre workpieces with different cross-section measurements.
- Refer to the enclosed instruction manual.

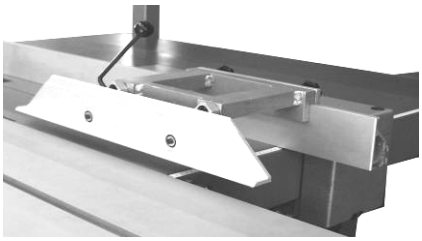
8.2.1 Installation on the Saw

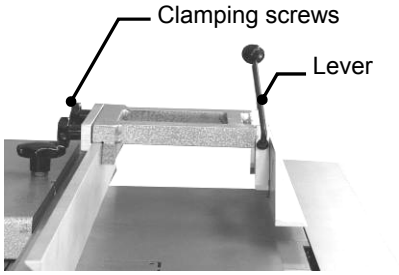
- Mount the double-mitre fence onto the edging table.
- When delivered with a new machine, the double-mitre fence is installed at the factory.
- If delivered at a later time, the double-mitre fence must be adjusted horizontally, vertically, and in relation to the saw blade.
- Fasten the double-mitre fence with the clamping lever.
- Pull the clamping lever to move it up/down.



8.3 T6072a Edging Device

- The edging device is an auxiliary guide element
  - — for cutting according to a mark
  - — for cutting excesses, e.g. veneered boards.
  - — for cutting with a stencil
- Slightly loosen the clamping screws.
- If necessary, mount the edging device onto the rip fence.
- Retighten the clamping screws by hand.
- Use the lever to adjust the height of the double-mitre fence.
- Adjust the position to the saw blade with the rip fence.





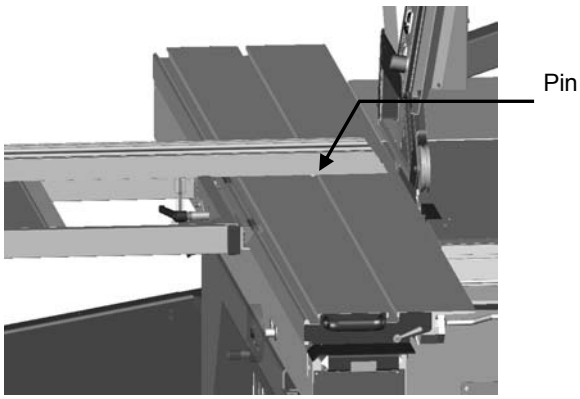
9. Calibration

IMPORTANT

All calibration work must be done while the machine is not in operation.

9.1 Calibrating the Cross-Cut Fence

- The position of the cross-cut fence to the saw blade is determined by a pin that is guided in the groove in the edging table.
- Alternatively, the position of the cross-cut fence to the saw blade can be determined by a guide plate underneath the cross-cut fence.

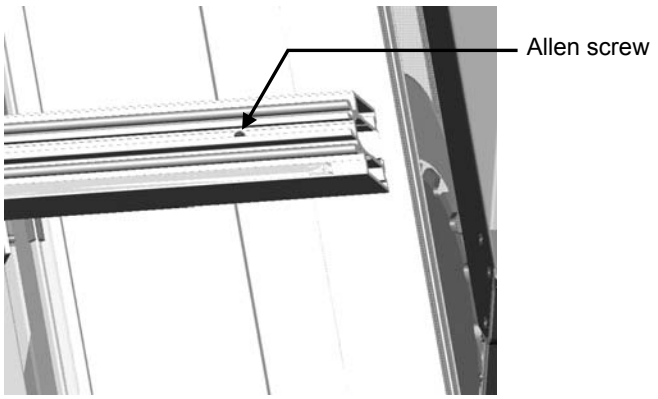


9.1.1 Calibrating the Cross-Cut Fence with the Pin

IMPORTANT

The pin, which is installed by default, represents the pivotal point for the tilted cross-cut fence.
In this case, the guide plate must not be installed.
Advantage: Almost the entire operating length of the cross-cut fence can be used, especially when cutting short workpieces.

- The cross-cut fence can be calibrated anew when using a saw blade with a different cutting width.
- Proceed as follows to calibrate the cross-cut fence:
  - The saw blade is mounted.
  - The cross-cut fence is in the normal position (90°).
  - Set a random length measurement.
  - Measure the distance to the installed saw blade or cut a test piece and measure the length of the cut workpiece.
  - If necessary, correct the cross-cut fence as follows:
  - To do this, loosen the Allen screw (6 mm) in the cross-cut fence from the top.
  - Reposition the cross-cut fence.
  - Retighten the Allen screw.
  - Reclamp the cross-cut fence.
  - Cut a test piece to check the setting.
  - Done.

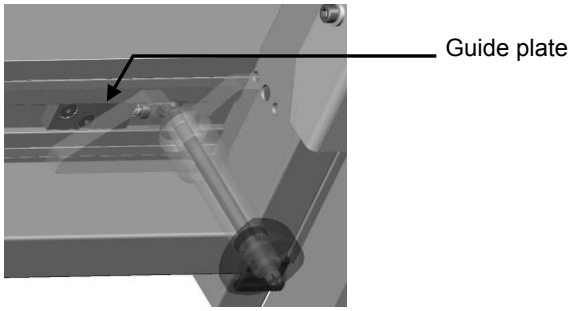


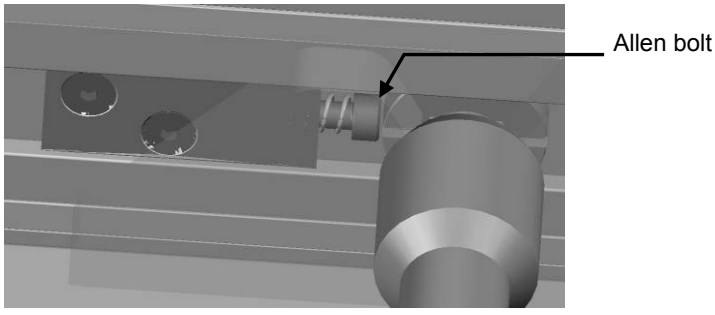
9.1.2 Calibrating the Cross-Cut Fence with the Guide Plate

IMPORTANT

Instead of the pin, the enclosed guide plate can be installed. The guide plate enables movements away from and toward the saw blade. Advantage: After releasing the clamping bolts, the cross-cut fence can be moved away from the saw blade.

- The cross-cut fence can be calibrated anew when using a saw blade with a different cutting width.
- Proceed as follows to calibrate the cross-cut fence:
  - The saw blade is mounted.
  - The cross-cut fence is in the normal position (90°).
  - Set a random length measurement.
  - Measure the distance to the installed saw blade or cut a test piece and measure the length of the cut workpiece.
  - If necessary, correct the cross-cut fence as follows:
  - Remove the cross-cut fence from the cross table.
  - Correct the deviation with the Allen screw of the guide plate.
  - Reinstall the cross-cut fence on the cross table.
  - To do this, move the cross-cut fence up to the guide plate toward the saw blade.
- After the correction, refasten the cross-cut fence on the cross table.
- Measure the distance to the saw blade.
- Done.





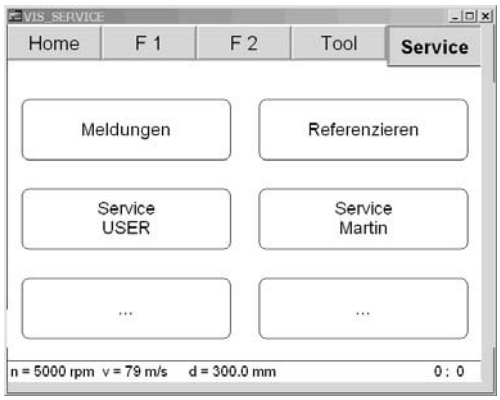
9.2 Calibrating the Rip Fence

9.2.1 T60 Basic

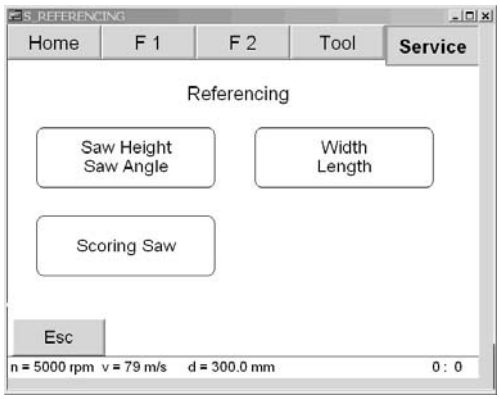
- By default, the measuring scale of the rip fence is set for a saw blade with a cutting width of 3.2 mm.
- The measuring scale cannot be adjusted.
- The rip fence cannot be calibrated.

9.2.2 T60 Classic, PreXision

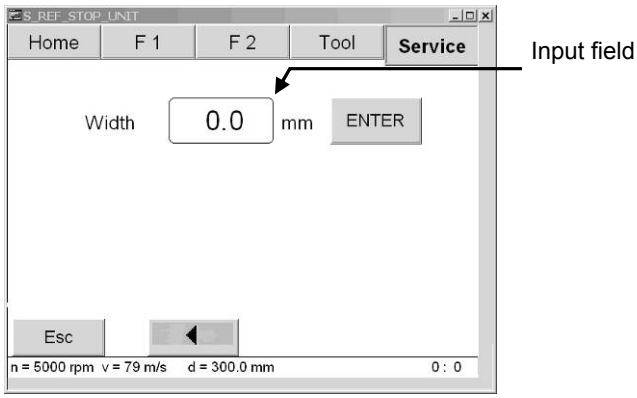
- By default, the rip fence is adjusted for a saw blade with 3.2 mm cutting width.
- The rip fence can be calibrated anew when using a saw blade with a different cutting width.
- Proceed as follows to calibrate the rip fence:
  - — The saw blade is mounted.
  - — The ruler of the rip fence is located in the normal position (high workpiece guiding surface).
  - — Set a random cut measurement.
  - — Measure the distance to the installed saw blade or cut a test piece and measure the width of the cut workpiece.
  - — Select the *SERVICE* menu.
  - — Select the menu item *REFERENCING*.



— Select Width Length.



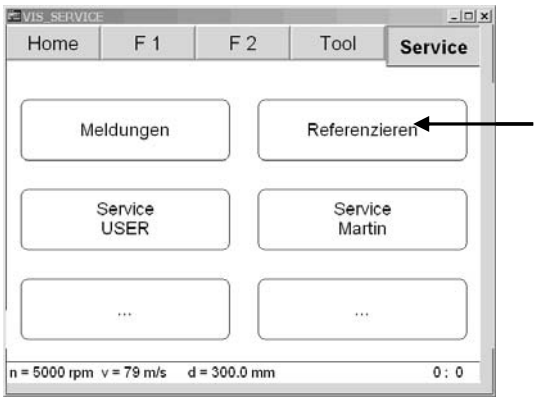
— Enter the reference value in the input field *WIDTH*.



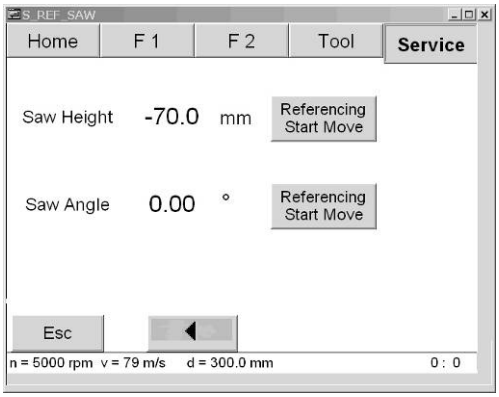
- Confirm the entry with ENTER.
- Done.

9.3 Calibrating the Cutting Height

- Select the *SERVICE* menu.
- Select the menu item *REFERENCING.*



- Select the input field Saw Height Saw Angle.
- Select Referencing Start Move in the *Saw Height* line.
- Press the *START AUTOMATIC* button.
- The height axis is calibrated automatically.



9.4 Calibrating the Cutting Angle

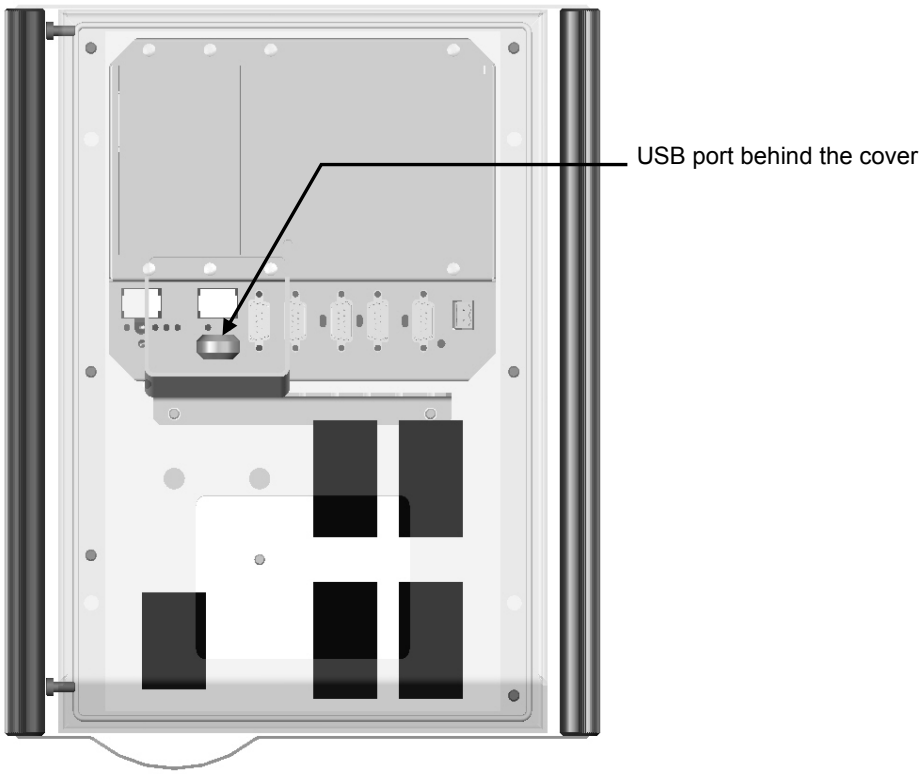
- The rip fence must first be positioned in such a way that the saw blade can move without colliding.
- Proceed in the same way as under 9.3, "Calibrating the Cutting Height"; however, select the *Saw Angle* line.

10. Updating the Control

- The control software can be updated.
- The new software version can be transferred to the control over the USB port.
- The new software version must be stored on a USB storage medium (USB stick).
- Update procedure:
  - The machine is switched off.
  - Connect the USB stick to the USB port at the back.
  - For this purpose, remove the cover.
  - Power the machine on.
  - The control scans the existing ports and detects the USB stick.
  - The update is performed automatically.
  - Upon completion of the update, you will be prompted to remove the USB stick.
  - The update of the control is finished.

IMPORTANT

If the control does not start although the USB stick is connected, the control does not recognise the USB stick. This may be due to the low transfer speed of the storage medium or a problem with the USB stick itself.



11. Maintenance

CAUTION

For all maintenance and troubleshooting work, the main switch of the machine must be switched off and secured against accidental re-activation.

11.1 Maintenance of the Safety Equipment

- Check the operability of all safety equipment (see 1.4) on a daily basis.
- The guard and its holder must be undamaged.
- It must be possible to adjust the guard to the workpiece thickness.
- Pressing an EMERGENCY STOP button must switch off the machine.
- The riving knife holder must enable the correct adjustment and fastening of the riving knife.
- The saw-blade arbour must be braked when the machine is stopped.

11.2 Servicing the Guides

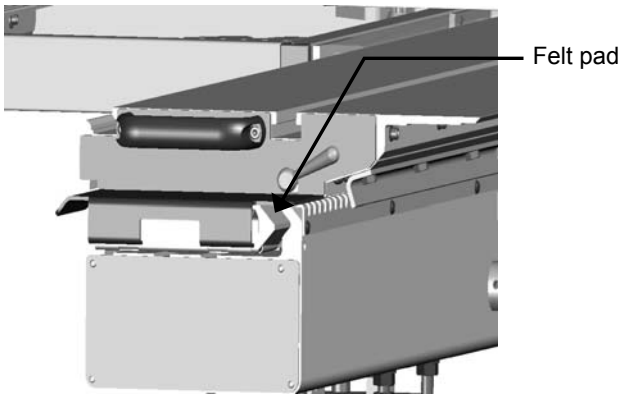
- The guides of the height adjustment of the saw unit (left and right) and of the tilting segment (left and right) are maintenance-free on all T60 models.

11.3 Saw-Blade Arbour Bearing

- The bearing of the saw-blade arbour is permanently lubricated.
- The bearings are maintenance-free.

11.3.1 Lubrication of the Edging Table

- The guides of the edging table are lubricated with an oil-saturated felt pad.
- The felt pad can be removed for maintenance.
- The felt pad is located in a bowl that is clipped to the sliding table from underneath.
- Removing the bowl:
  — Grip the handle opening with your hand and forcefully pull the bowl downwards diagonally.
- Apply hydraulic oil, item no. 101 140 00, to the felt pad.
- Clip the bowl with the felt pad back in place.



IMPORTANT

If the sliding surfaces of the sliding table are not covered with a red oil film, the felt pad must be saturated with oil.

11.4 Cleaning

- For all maintenance and troubleshooting work, the main switch of the machine must be switched off and secured against accidental reactivation.
- Clean the machine regularly.
- Suck chips and loose material while the machine is stopped, do not blow them away with compressed air.
- When replacing the saw blade, be sure to clean the contact surfaces of the saw blade and the two flanges.

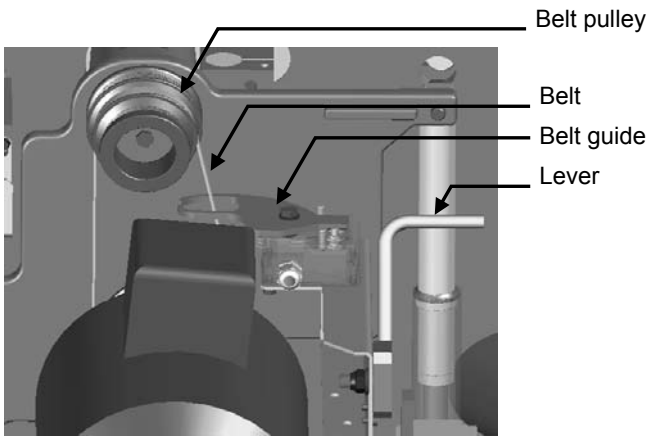
Cleaning agent:
Use a 1:1 paraffin/oil mixture. Do not use pure paraffin, as this causes corrosion.

IMPORTANT

- Regularly empty chips and other pieces from the chip box of the main saw blade.

11.5 Replacing the Drive Belt

- Open the rear cover.
- Press the lever down to the stop position.
- In this way, the drive belt is loosened.
- Remove the drive belt from one of the belt pulleys and take it off.
- Place the new drive belt first on the motor belt pulley, then on the arbour belt pulley; **do not squeeze**!
- The drive belt must be placed in a straight line on a belt pulley pair.
- Press the lever up to the stop position.
- The drive belt is tensioned.
- Make sure that the belt guide is in the correct position.
- The rotational speed is displayed in the control.



12. Troubleshooting

WARNING

For all maintenance and troubleshooting work, the main switch of the machine must be switched off and secured against accidental re-activation.

- For spare-part orders or inquiries, specify the machine number (see cover page, rating label, engraved number on the machine table).
- Information about the machine is available in the control; see 6.6.6.

12.1 Main Saw Does Not Work

The motor is switched off due to thermal overload.

- Wait a few minutes and restart the machine.
- Check the motor circuit breaker Q2.

12.2 Electric Brake Does Not Work

- Check the circuit breaker Q4 or Q5.

12.3 Machine Does Not Start

- Is the main switch switched on?
- Check the fuse of the power supply.
- Check whether the circuit breaker Q11 or the miniature 1 A fuse (control transformer protection) in the switch cabinet has been triggered.

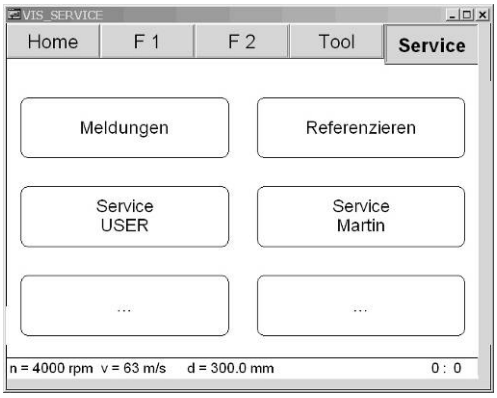
  If this is the case, reactive the circuit breaker or replace the miniature fuse.
- Has an EMERGENCY STOP button been pressed?
- Is the rear cover closed?
- Is the chip flap closed.
- Is the edging table in the working position?

13. Fire Extinguishers

- To extinguish fires in the machine's electrical equipment, use an extinguisher that is suitable for electrical fires (e.g., powder extinguisher).

14. Error Messages

- Select the *SERVICE* menu.
- Select the menu item Meldungen.



- Information and error messages are listed in a separate dialog.

- Acknowledge the messages with Quit All.

15. Shutdown

15.1 Disposal

15.1.1 Hydraulic Oil

Submit the machine's hydraulic oil to the waste-oil collection centre.

15.1.2 Electrical Equipment

Insulated cables and other electrical machine parts are hazardous waste and must be disposed of as such.

15.1.3 Disposal of Steel Parts

Steel and light metal parts must be disposed of as scrap.

16. Customer Service

- In the event of malfunction, contact your vendor or machine manufacturer.
- The manufacturer's Customer Service is available at the following times:

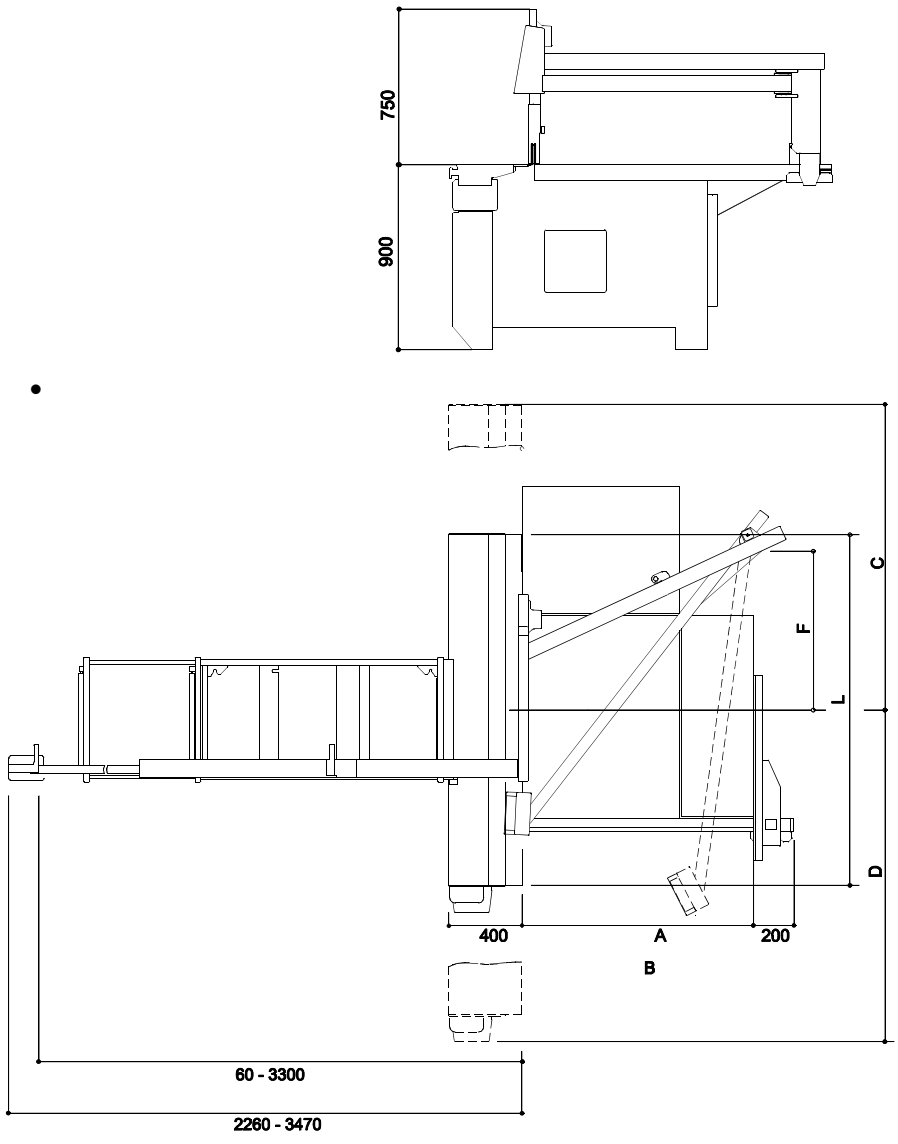
Monday to Thursday:		0800-1200 and 1300-1700 hours (CET)
Friday		0800-1300 hours (CET)
Phone:	+49 (0) 8332 911–0	Head Office
Phone:	+49 (0) 8332 911–115	Direct dial Customer Service
Phone:	+49 (0) 8332 911–116	Direct dial Customer Service
Phone:	+49 (0) 8332 911–117	Direct dial Customer Service
Phone:	+49 (0) 8332 911–118	Direct dial Customer Service
Fax:	+49 (0) 8332 911–187	Customer service fax
E-mail:	sales@martin.info	
Internet:	Internet: www.martin.info	

17. Dimensions

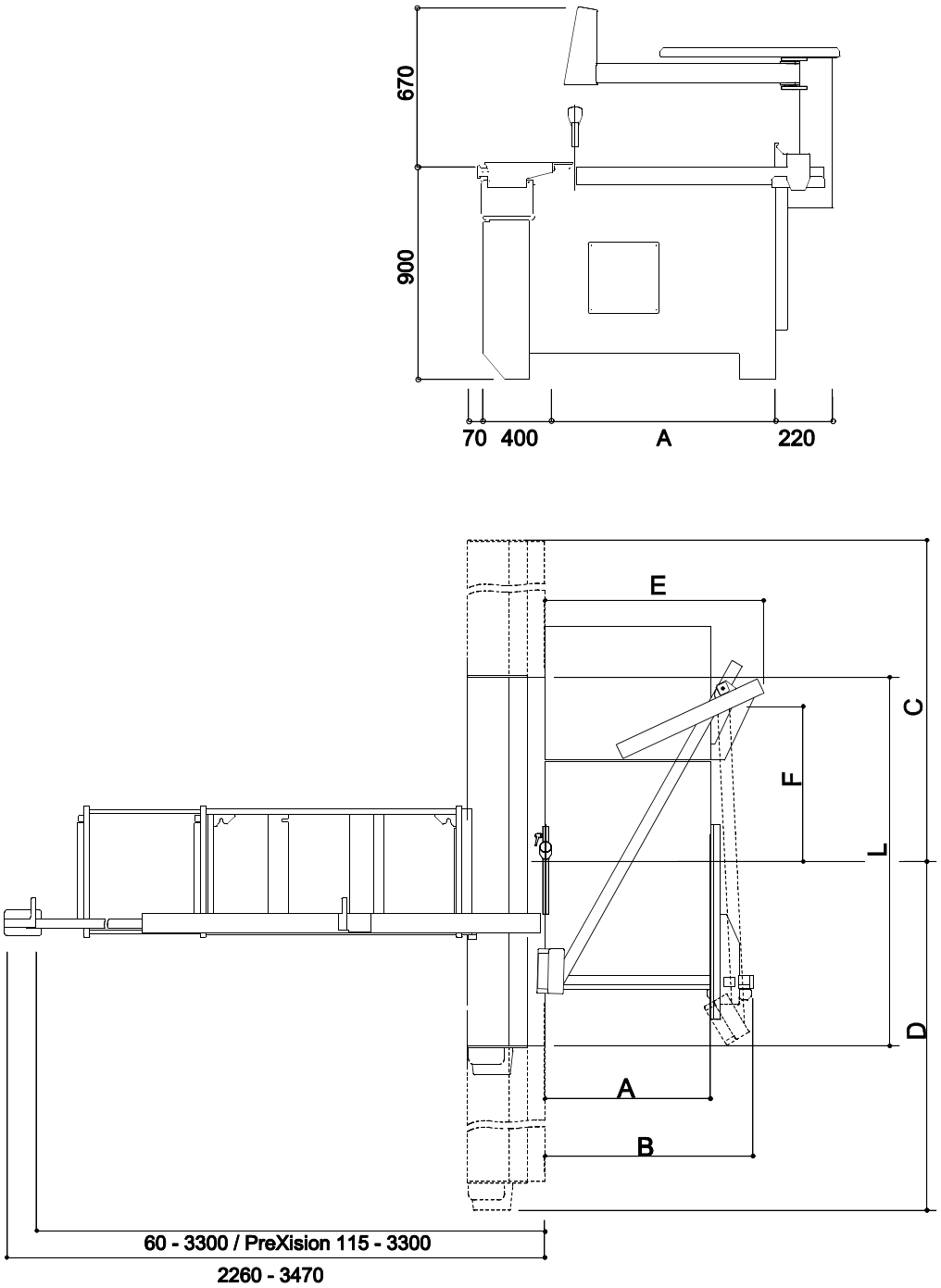
17.1 Model T60 Classic

A = cutting width	F = passage width
850	800
1250	800

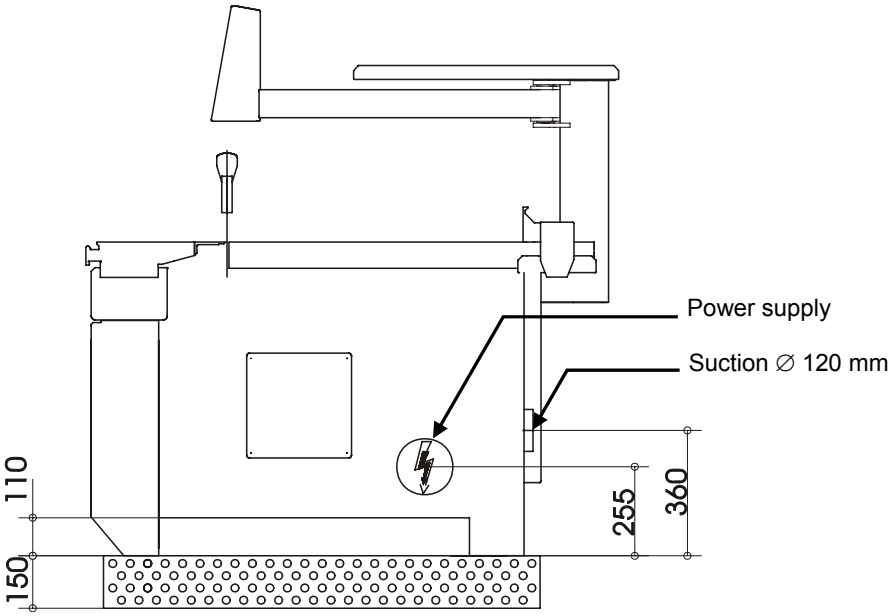
Edging-table length L	Format cut	Movement range C	Movement range D
1900	1900 x 1900	2500	2400
3000	3000 x 3000	3600	3500
3300	3300 x 3300	3900	3800
3700	3420 x 3700	4300	4200

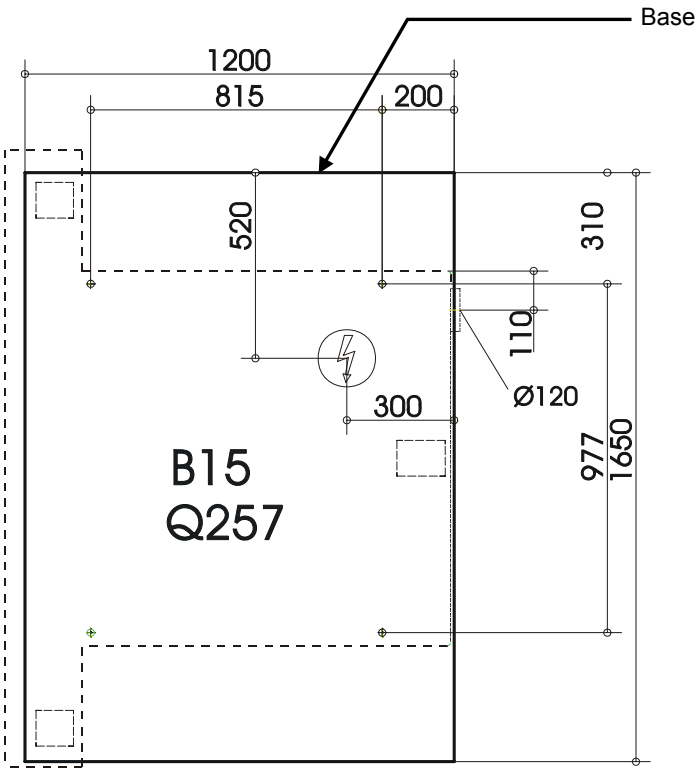


17.2 Model T60 Basic, PreXision



17.3 Connection Measurements





18. Index

MARTIN

Spare parts list

T60

Machine-No.: _____

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