Hammer®

K2 M - Part 1/2

Circular saws

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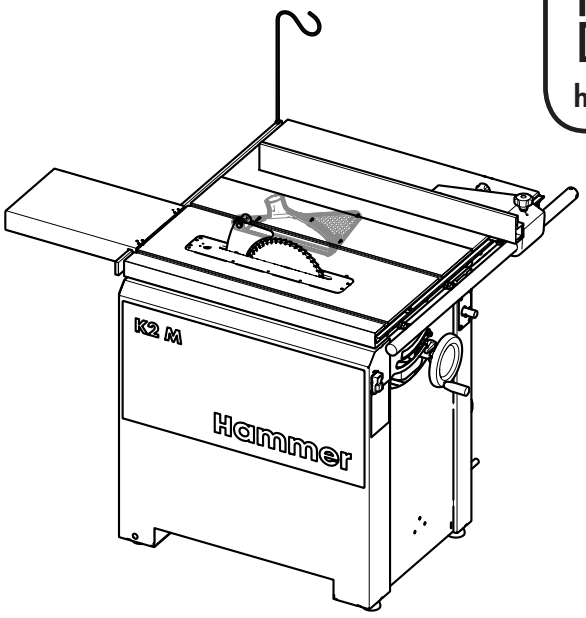

Keep this manual to hand and in good condition for future reference.
Please read this operating manual carefully before using the machine.

Translation of the original operating instructions

Operating instructions

510010-901-1, 1, en_GB

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1 Information about the manual

1.1 Symbol legend

Safety instructions

Safety instructions in this manual are indicated with symbols. The safety instructions are introduced by key words which state in words the extent of the hazard.

Comply with safety instructions under all circumstances, and act with care in order to avoid accidents, personal injury, or material damage.

DANGER

… indicates a situation of immediate danger which will result in death or severe injuries if it is not avoided.

WARNING

… indicates a situation of possible danger which can result in death or severe injuries if it is not avoided.

CAUTION

… indicates a situation of possible danger which can result in minor or slight injuries if it is not avoided.

NOTICE

… indicates a situation of possible danger which can result in material damages if it is not avoided.

Tips and recommendations

… emphasises useful tips and recommendations as well as information for efficient and trouble-free operation.

OK / NOK

Symbols	Explanation
OK	Result is okay.
NOK	Result is not okay. Procedure when troubleshooting.

1.2 Contents of the operating manual

- This operating manual describes the safe and proper use of the machine.
- All instructions in this manual must be strictly followed without exception.

- The operating manual is an integral part of the machine. It must therefore be kept in the direct vicinity of the machine and be accessible at all times.
- The operating manual must always accompany the machine.

1.3 Copyright

- This instruction manual is to be treated as confidential. It is intended solely for those people who are to work on or with the machine.
- All descriptions, texts, drawings, photos and other depictions are protected by copyright and other commercial laws.
- Any unauthorised use is prohibited.
- This manual, in its entirety or parts thereof, may not be transferred to third parties or copied in any way or form, and its contents may not be used or otherwise communicated without the express written consent of the manufacturer. Infringement of these rights may lead to a claim for compensation. The right to further claims is reserved.
- We reserve all rights in exercising commercial protection laws.

1.4 Liability and warranty

- The contents and instructions in this manual have been compiled in consideration of current regulations and state-of-the-art technology as well as based on our know-how and experience acquired over many years.
- The manufacturer shall not be liable for damage and/or faults resulting from the disregard of instructions in the manual.
- The text and images do not necessarily represent the exact product that has been delivered. The images and graphics are not depicted on a 1:1 scale. The product that has been delivered, may have custom-built specifications, add-on options or recent technical modifications and may therefore deviate from the descriptions, instructions and images contained in the manual.
- We reserve the right to make technical changes to the product in order to improve the properties of use and further product development.
- The guarantee period is in accordance with national guidelines. Details may be found on our website, www.felder-group.com.
- Should any questions arise, please contact the manufacturer.

1.5 Training

- All those appointed to work on or with the machine must have fully read and understood the manual before commencing any work. This requirement must be met even if the appointed person is familiar with the operation of such a machine or a similar one, or has been trained by the manufacturer.
- Knowledge about the contents of this manual is a prerequisite for protecting personnel from hazards and avoiding mistakes so that the machine may be operated in a safe and trouble free manner.
- It is recommended that the operator requests proof from the personnel that the contents of the manual have been read and understood.

2 Safety instructions

2.1 Intended use

- The machine described in this manual is intended solely for the processing of wood, synthetic materials, and similar machinable materials. Operational safety is only guaranteed when the machine is used for the intended purposes.
- Any use, other than that of the machine's intended purpose shall be considered improper and is therefore not permitted. All claims regarding damage resulting from improper use that are made against the manufacturer and its authorised representatives will be rejected.
- The operator is solely liable for any damage that results from improper use of the machine.
- The term "proper use" also refers to correctly observing the operating conditions as well as the specifications and instructions in this manual. The machine may only be operated with parts and accessories recommended by the manufacturer.

2.2 Making changes and modifications to the machine

- In order to avoid potential hazards and to ensure optimum performance, no modifications, alterations or changes may be made to the machine that have not been explicitly approved by the manufacturer.
- All the pictograms, signs and labels affixed to the machine must be kept visible, readable and may not be removed.
- Pictograms, signs and labels that have become damaged or unreadable must be replaced promptly.

2.3 Responsibilities of the operator

- The machine may only be operated if it is in proper working order and in safe condition.
- The general condition of the machine must be checked and the machine must be inspected for visible defects each time before it is switched on.
- Do not leave the machine running unattended.
- Secure the switched-off machine against unauthorised operation (padlock on the main switch, remove the key from the operating mode selector switch, block off the area around the machine, pull out the mains plug etc.).
- In addition to the safety advice and instructions specified in this operating manual, any local accident prevention regulations and general safety regulations applicable to the machine's area of use, as well as any applicable environmental protection regulations, must be observed and complied with.
- The operator and designated personnel are responsible for the trouble-free operation of the machine as well as for clearly establishing who is in charge of installing, servicing, maintaining and cleaning the machine. Keep children away from machines, tools and accessories.

2.4 Requirements of the personnel

- Only authorised and trained personnel may work on and with the machine. "Qualified personnel" is a term that refers to those who – due to their professional training, know-how, experience, and knowledge of relevant regulations – are in a position to assess delegated tasks and recognise potential risks.
- Personnel must be briefed about all functions and potential dangers of the machine.
- If the personnel lack the necessary knowledge for working on or with the machine, they must be trained. Responsibility for working with the machine (installation, service, maintenance, overhaul) must be clearly defined and strictly observed.
- Only those people who can be expected to carry out their work reliably may be given permission to work on or with the machine.
- Personnel must refrain from working in ways that could harm others, the environment or the machine itself.
- It is absolutely forbidden for anyone who is under the influence of drugs, alcohol or reaction-impairing medication to work on or with the machine.
- When appointing personnel to work on the machine, it is necessary to observe all local regulations regarding age and professional status.
- The machine may only be operated by an adult, that is without mental limitations or under the supervision of such a person.
- The user is also responsible for ensuring that unauthorised people remain at a safe distance from the machine.
- Personnel are obliged to immediately report any irregularities with the machine that might compromise safety to the operator.

2.5 Work safety

- Following the safety advice and instructions given in this manual can prevent bodily injury and material damage while working on and with the machine.
- Failure to observe these instructions can lead to bodily injury and damage to or destruction of the machine.
- Disregard of the safety advice and instructions given in this manual as well as the accident prevention regulations and general safety regulations applicable to the operative range of the machine shall release the manufacturer and their authorised representatives from any liability and from any compensation claims.

2.6 Personal protective equipment

2.6.1 Prohibitions

When working on or with the machine, the following must be strictly observed:

	Please note
	Long, loose hair is forbidden. With long hair and beards a hair net must be worn.

	Please note
	It is prohibited to wear gloves whilst working with the machine. It is only allowed to wear gloves whilst carrying out tool changes and maintenance work.

2.6.2 Mandatory safety equipment

When working on or with the machine, the following must always be worn by personnel:

	Please note
	Protective clothes: Sturdy, tight-fitting clothing (tear-resistant, no wide sleeves, no rings or other jewellery).
	Protective footwear: To protect feet from heavy falling objects and prevent from slipping on slippery floors.
	Ear protection: To protect against loss of hearing.
	Safety glasses: Protection to prevent damage to eyes.
	Respiratory mask: To protect against dust.

2.7 Residual risks

The machine has undergone a hazard analysis. The design and construction of the machine are based on the results of this analysis and correspond to state-of-the-art technology. The machine is considered operationally safe when used properly. Even if the safety measures are complied with, there are still certain associated risks that must be considered when working on the machine.

Generally applicable residual risks

- Crushing by being caught between moving parts.
  - Do not reach into the area of moving parts.
- Whilst processing, sparks can be created.
  - Carefully inspect workpieces for foreign matter (nails, screws) which might impair processing.
- Hearing damage caused by noise intensity. Hearing protection must always be worn.
- Risk of damage to health from dust especially when processing hard woods.
  - Connect the dust extraction system in accordance with the instructions and make sure that it is working properly.
- Injury from flying workpieces and parts of the workpieces.
- Cut or crush injuries, when changing the tools.

- Injury caused through being crushed, cut, caught or bumped into.
- Before switching on the machine, always check to make sure that there are no other persons in the immediate vicinity of the machine.
- In the event of power supply failure, the machine will coast to a stop without applying the brakes (no electric brake action).

  It takes longer than normal for tools to come to a stop.
  - Do not reach into the area of rotating tools.

Residual risks associated with the saw unit

- Injuries due to contact with the rotating circular saw blade and/or scoring blade.
- Injuries caused by ejected tool bits (e.g. cutting edges).
  - Never stand directly in the cutting line of the machine whilst it is operating (in machining or idle mode).

Disorder at the workplace

Loose objects or objects that are lying around can cause severe injuries.

- Ensure that there is sufficient space to work around the machine.
- Remove loose objects from the working area.
- Keep the work area orderly and clean.

Insufficient lighting of the installation site

Serious injuries

- Light installation site sufficiently.

Standing on the machine

The covers or projecting components of the machine are not suitable for standing on them. If the machine falls down, severe breaks can occur.

- It is forbidden to climb onto the machine.

Decommissioned safety devices

The machine is equipped with diverse protective devices with safety function. When protective devices are decommissioned, the safety function is no longer ensured. Decommissioned safety devices can cause severe injury.

- Do not deactivate or bypass protective devices.

Damage to electrical components or their insulation

Damaged electrical components or damage to their insulation cause deadly electric shocks.

- Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.
- Disconnect machine from power supply and secure against restarting before carrying out work at electrical devices.

2.7.1 Transport, setup, installation and disposal

Improper transport

Improper transport can cause the machine to tilt or fall. This can cause severe crushing.

- Carry out transport according to the specifications in this instruction.
- Transport the machine as carefully as possible. Avoid mechanical vibration.
- Keep enough distance to the machine during transport.
- Move unauthorised people out of the area.
- Always clean and tidy the work area and cordon it off.
- Ensure that there is room to escape should the machine fall.
- Only use suitable lifting gear that has a sufficient load-carrying capacity.
- Chains, belts, ropes or other hoisting devices must be equipped with safety hooks.
- Do not use any torn, frayed or knotted chains, belts or ropes.
- Ensure that chains, belts and ropes do not lie against sharp edges.
- Only attach lifting equipment to the attachment points provided. Never lift the machine by its protruding parts.
- Keep the machine's centre of gravity in consideration.
- Take measures to prevent the machine from slipping.
- Never lift loads over a person.
- Do not stand below suspended loads.

Incorrect setup and installation

Serious injuries

- Machine may only be set up by authorised, trained personnel who are familiar with how to operate the machine and are in strict observance of all safety instructions.
- Before assembling and installing the machine, check to make sure it is complete and in good condition.
- Only assemble and install the machine if the machine and all of the parts are complete and intact.
- Do not setup machine in areas with high electromagnetic fields.
- Keep the work area orderly and clean. Components and tools that are not put in their correct place or put away may cause accidents.
- Do not setup machine on escape routes.
- Only place machine within buildings.
- Place the machine on a level, sufficiently stable, non-slip and vibration-free surface.
- The foundation must comply with the norms stipulated in the technical layouts.
- Use safety equipment according to regulations and check proper functionality.
- The load bearing capacity, the coating and the surface of the floor must not be affected in the long term.
- The working area must be adequately lit.

Insufficient space - Approximation of a workpiece to a fixed object or building structure

The approximation of a workpiece to a fixed object or building structure can lead to severe crushing of limbs as well as the entire body.

- Observe minimum distances to spatial boundaries.
- Ensure that there is sufficient space to work around the machine.
- Keep enough distance to moving workpieces.
- Keep enough distance to adjacent machines.

Electrostatic charging of the extraction hoses

Burns or electric shock caused by unearthed, or low quality extraction hose.

- Always ensure continuous electrostatic earthing when connecting machines.
- Only use dust extraction hose approved by the manufacturer.

Indirect touch with residual currents

Deadly electric shocks

- Equip the machine's supply line with a fault-current circuit breaker.

2.7.2 Adjustments tool changes, operation

Improper adjustment and setup

Serious injuries

- Adjustment and setup may only be carried out by authorised, trained personnel who are familiar with how to operate the machine and are in strict observance of all safety instructions.
- Before beginning any maintenance work on the machine, switch it off and secure it against accidentally being switched on again.
- Adjustments to the machine or changing the tools may only be done once the machine has stopped.
- Before commencing any work with the machine, inspect it to ensure that it is complete and in technically good condition.
- Ensure that there is sufficient space to work around the machine.
- Keep the work area orderly and clean. Components and tools that are loose or not put in their correct place may cause accidents.
- Mount safety equipment according to regulations and check proper functionality.

Deactivated or defective protective devices

Serious injuries

- The safety equipment required for processing must be in good working conditions and properly maintained. Check all required safety devices to ensure good working condition.
- Do not switch off, circumvent or remove protective and safety devices during operation.

Large or small workpieces

Serious injuries

- Ensure that there is sufficient space to work around the machine.
  Drive fed workpieces could be a hazard when processing. Keep sufficient distance from walls, machines and fixed objects.
- Support long workpieces with additional supports (e.g. table extensions, roller supports).
- Use auxiliary equipment for machining short and narrow workpieces (e.g. push grip, pushing stick, workpiece holder).
- Only process workpieces that can be safely placed on the machine and guided.

During operation

Serious injuries

- Offcuts or other parts of the workpiece must not be removed from the working area whilst the machine is still running.
- Injury from flying workpieces and parts of the workpieces (e.g. knots, off-cuts).
- Do not lean over the working area.
- Only remove chips when the machine is at a standstill.

Improper selection of saw blades and grooving tools

Serious injuries and material damage.

Only use saw blades and grooving tools,

- that comply with EN 847-1 in the current version.
- which are marked with "MAN".
- that meet the requirements of these operating instructions.
- which are well sharpened and in good condition.

Only use grooving tools,

- which are suited to manual operation.
- that are suitable for woodworking.

Surpassing or falling below the allowed ambient temperature

Surpassing or falling below the allowed temperatures can cause malfunctions of the machine and unpredictable machine movements, which can lead to severe personal and material damage.

- Only operate machine within the listed temperature range.

Dust deposits

Dust build-ups can ignite when in contact with hot parts or cause an explosive atmosphere due to resuspension. Fire or explosion events can cause serious injuries.

- Clean production area as needed.
- Open fire, smoking and cleaning with compressed air forbidden.
- Only carry out spark-producing work and hot work after work release process.

2.7.3 Maintain and troubleshoot

Improper maintenance on the machine

Serious injuries

- Work on the machine may only be carried out by authorised, trained personnel who are familiar with how to operate the machine and are in strict observance of all safety instructions.
- If possible, only perform work when the machine is disconnected from all energy sources and an unintentional restart is prevented.
- The machine has to be switched off when carrying out any work on the machine.
- Disconnect machine from power supply before carrying out work at electrical devices.
- Disconnect the machine from the compressed air net before carrying out works at pneumatic devices.
- Do not deactivate or bypass protective devices.
- Maintenance personnel need to be fully aware of how the machine operates and moves, and they must be familiar with the exact operating sequence.
- Whilst maintenance work is being carried out, secure the area around the machine.
- Whilst maintenance work is being carried out, put up a sign that states "Machine under maintenance".
- To ensure quick and unmistakable communication, visual contact with the operators must be kept at all times.
- Operators should repeat and confirm instructions before they are carried out.
- Only start the machine when there is no one within the safety zone.
- Properly reinstall all components after the maintenance work and check for function.
- As part of the machine maintenance, the whole machine, including the safety devices, must be checked regularly for damage.
- Keep a record of all maintenance work.

Improper work at the electrical units

Deadly electric shocks

- Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.
- Disconnect machine from power supply and secure against restarting before carrying out work at electrical devices.

Exceeding the lifespan of protective devices that carry out a safety function

Serious injuries

The safety devices have a lifespan of 20 years. If safety devices are used exceeding their lifespan, the proper function of the safety devices can not be guaranteed. Deficiently maintained safety devices can cause severe injury.

- Safety devices have to be replaced by expert personnel from Felder Group before the end of the lifespan.

Improper replacement or reparation of safety devices with safety function

Serious injuries

- Only let safety devices be replaced or repaired by expert personnel of the Felder Group.

Improper correction of malfunctions

Serious injuries

- Wait for all parts to be still.
- Disconnect machine from all energy sources and secure against restarting.

2.8 Foreseeable misapplications

The examples given highlight possible dangers. This list makes no claim to completeness.

This information is intended to enable users to assess hazards and risks.

General misuse

- Disregarding operating instructions.
- Operating the machine, even if the operation manual is not complete or is not available in the language of the country it is being operated in.
- Placing objects or tools on the work surface.
- Use of tools or materials which are not intended for processing on the machine.
- Inserting tools that are either not allowed, or not authorised in the machine.
- Using modified tools.
- Using spare parts, accessories and equipment that have not been approved by the manufacturer.
- To change or modify the machine.
- To adapt, remove or bridge the safety equipment.
- Intentionally trigger safety equipment.
- Climbing on the machine.

Misuse during operation

- Operating the machine carelessly.
- Operating the machine without using the appropriate safety equipment.
  - Check the correct functioning of the safety equipment regularly.
- Processing of overly large or heavy workpieces.
- Processing very small workpieces without assistance.
  - Keep handling accessories at hand.
- Processing of unsuitable materials such as steel.
- Processing workpieces that are not fixed or insufficiently fixed.
- Processing of workpieces in the same direction as the rotation of the tool. Feed direction corresponds to the direction of movement of the cutting edge in the area of contact.

3 Declaration of Conformity

CE	EG-Declaration of Conformity according to Machine Guidelines 2006/42/EC **Note on the serial number:** The serial number is printed on the cover sheet of the operating manual.

We hereby declare that the machine indicated below, which corresponds to the design and construction of the model we placed on the market, conforms with the health and safety requirements as stated by the EC guidelines (see table).

Manufacturer	Felder KG KR-Felder-Straße 1, 6060 Hall in Tirol	
Product designation	Circular saws	
Intended use	Processing of wood and materials that are similar.	
Manufacturer	Hammer	
Model type	K2 M	
The following EC guidelines were applied	2006/42/EC 2014/30/EC	
The following harmonised norms were applied	EN ISO 19085-1 EN ISO 19085-9	
The prototype test was carried out by	TESTPLUS Teknik Kontrol ve Belgelendirme TİC. LTD. ŞTİ. Abdurrahmangazi Mh. Ebubekir Cd. No.34/15 34887 Sancaktepe/Istanbul, Turkey NB 2908	
Conformity with the EC Machine Guidelines certified by	Test protocol number 29082305045	

This EC Declaration of Conformity is valid only if the CE label has been affixed to the machine. Modifying or altering the machine without the express written agreement of the manufacturer shall render the warranty null and void. The signatory of this statement is the appointed agent for the compilation of the technical information.

Prof. h.c. Ing. Johann Georg Felder
CEO Felder KG
KR-Felder-Straße 1, A-6060 HALL in Tirol
Date: 17.5.2023

UKCA - Declaration of Conformity

UK CA	Declaration of Conformity according to UK Directive S.I. 2008/1597 **Note on the serial number:** The serial number is printed on the cover sheet of the operating manual.

We hereby declare that the machine indicated below, which corresponds to the design and construction of the model we placed on the market, conforms with the health and safety requirements as stated by the UK guidelines (see table).

Manufacturer	Felder KG KR-Felder-Straße 1, 6060 Hall in Tirol
Product designation	Circular saws
Manufacturer	Hammer
Model type	K2 M
Intended use	Processing of wood and materials that are similar.
The following UK guidelines were applied	S.I. 2008/1597 - Supply of Machinery (Safety) Regulations 2008 S.I. 2016/1091 - Electromagnetic Compatibility Regulations 2016
The following harmonised norms were applied	EN ISO 19085-1 EN ISO 19085-9

This EG Declaration of Conformity is only valid if the UKCA label is affixed to the machine. Modifying or altering the machine without the express written agreement of the manufacturer shall render the warranty null and void. The signatory of this statement is the appointed agent for the compilation of the technical information.

Prof. h.c. Ing. Johann Georg Felder
CEO Felder KG
KR-Felder-Straße 1, A-6060 HALL in Tirol
Date: 17.5.2023

4 Technical information

4.1 Dimensions and weight

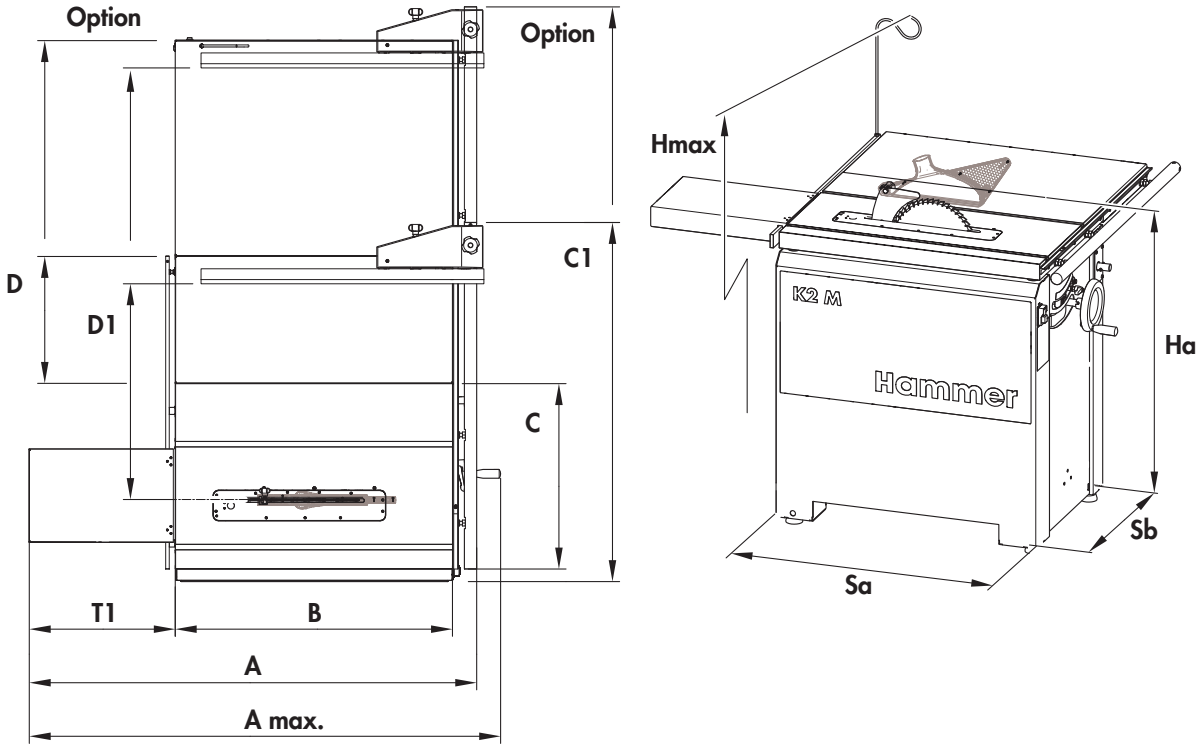

Fig. 1: Dimensions K 2 M

Machine table and cutting width

Data	Value	Unit
Total length A	1270	mm
Max. total length A	1330	mm
Machine table length B	785	mm
Machine table width C	525	mm
Table extension length T1	414	mm
Overall width C1	1016 / 1626 *)	mm
Cutting width max. D	360 / 970 *)	mm
Average cutting width max. D1	610 / 1220 *)	mm

*) optional cutting width 1220

Basic machine

Data	Value	Unit
Space requirement Sa x Sb	785 x 555	mm
Max. total height H	1240	mm
Working height Ha	880	mm
Net weight	145 *)	kg

*) with standard equipment

Packaging dimensions (incl. pallet)

Width = Open side of the pallet for the forklift

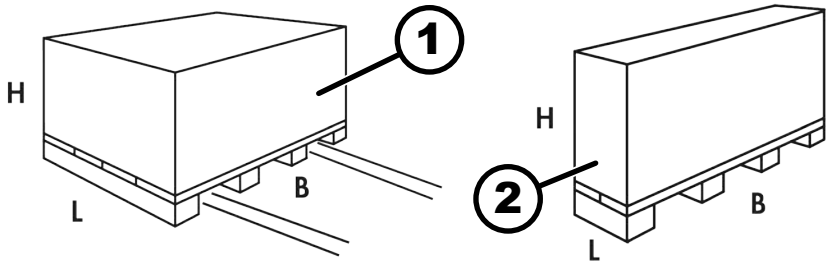

Fig. 2: Pallet info

1 Machine packaging
2 Packaging cutting width 1220 (option)

Data	Value	Unit
Length x width x height (var. 1)	875x600x1210	mm
Length x width x height (var. 2)	1070x730x130	mm
Net weight (var. 1)	150	kg
Net weight (var. 2)	35	kg

4.2 Operation and storage conditions

Data	Value	Unit
Operating/room temperature	+5 - +40	°C
Storage temperature	-10 - +50	°C
Humidity (non-wetting)	90	%

4.3 Electrical connection

Data	Value	Unit
Mains voltage according to specification plate	±10	%
Frequency	50 / 60	Hz
Power supply cable 1 x 230 V (H07 RN-F)	3 G 1.5	mm^2
Connection cable 2 x 110 V (SJT CSA)	3 G 1.5	mm^2
Fuse protection	see the wiring diagram	
Triggering characteristic	C (D*)	

*) if starting up is heavy, caused by large swinging masses

4.4 Drive motor

The actual values of the components can be found on the nameplate.

Data	Value	Unit
Motor voltage (standard)	1 x 230	V
Motor voltage (option)	2 x 110	V
Motor frequency (standard)	50	Hz
Motor frequency (optional)	60	Hz
Protection class	IP 54	
Saw aggregate motor power *)	1.9	kW

*) All data in the S6 operating mode = operation under load and idle, (relative operating duration = 40%).

4.5 Saw unit and tools

Saw unit

Data	Value	Unit
Saw arbour diameter (CE)	30	mm
Saw arbour diameter (US)	5/8	inch
Rotation speed	5000	min^{-1}
Tilt range	0° - 45°	
Saw table (length x width)	785 x 525	mm
Fence plate (length x height)	800 x 82	mm
Cutting height max. *)	80.5	mm

*) with a 254 mm saw blade diameter

Saw blades

Data	Value	Unit
Max. diameter (CE)	250 - 254	mm
Max. diameter (US)	5/8	inch
Bore (CE without pin *)	30	mm
Bore (US without pin *)	15.88	mm

*) The circular saw flange is secured against rotating through the pin in the centre of the saw arbour.

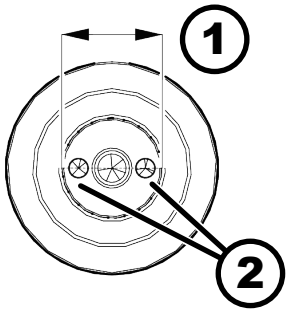

Fig. 3: Anti-rotation saw shaft

1 Saw shaft diameter
2 Anti-rotation saw flange

Adjustable grooving tool to use with the sliding table panel saw

Data	Value	Unit
Max. diameter	250	mm
Width	5 - 20	mm

Data	Value	Unit
Diameter Felder Group	180	mm
Adjustment range (Art. no. 500-03-019)	8.0 - 15.0	mm
Extension (Art. no. 500-03-020)	15.5 - 19.5	mm

4.6 Dust extraction

- The machine has 2 separate extraction connections.
- Extract from both of the extraction connections (aggregate and saw guard) with a single extraction hose (ø 120 mm). ➦ *Chapter 7.4 'Dust extraction' on page 52*

Saw blade extraction

Data	Value	Unit
Connection diameter	100	mm
Min. air speed	20	m/s
Min. vacuum	1250	Pa
Min. volume flow (at 20 m/s)	565	m^3/h

Overhead saw guard extraction

Data	Value	Unit
Extraction connection diameter	50	mm
Min. air speed	20	m/s
Min. vacuum	953	Pa
Min. volume flow (at 20 m/s)	141	m^3/h

4.7 Dust emission

The working areas of this machine are considered dust-minimised according to DGUV Information 209-044. The maximum concentration level of 2 mg/m^3 of inhalable dust in the air will not be exceeded. This only applies if the conditions that are specified in the section "Extraction" are adhered to.

4.8 Noise emission

Measurement in accordance with EN ISO 19085-1:2021 appendix E:

- Measurement according to ÖNORM EN ISO 19085-15, annexure E,
- with ISO 11202 for the emission noise pressure with accuracy level 3
- and ISO 3744 for the acoustic power with accuracy level 3

If the stated noise emission values are to be checked, then the measurements must be taken following the same procedure and in the same operating and installation conditions as described.

WARNING: The noise emission values stated are only valid, when the same operating- and installation conditions apply. Other operation and installation conditions, e.g. a different work process, can lead to higher noise emission values with the danger of underestimation.

WARNING: The noise emission values stated are not exposure level values. Although there is a correlation between emission and exposure levels, the emission values can not be used to reliably determine whether increased safety measures are required. Factors that influence the actual degree of exposure are the actual work process, the exposure time, the characteristics of the workplace and other neighbouring noise sources in the workshop.

Indication of the noise emission values two numbers according to ISO 4871:1996

	Idle	**Working**
A-weighted sound power level L_{WA} in dB	99	102
A-weighted emission sound pressure level L_{pA} in dB at workplace B	87	90
Uncertainty K_{WA} / K_{pA} in dB	4	

5 Machine overview

5.1 Overview

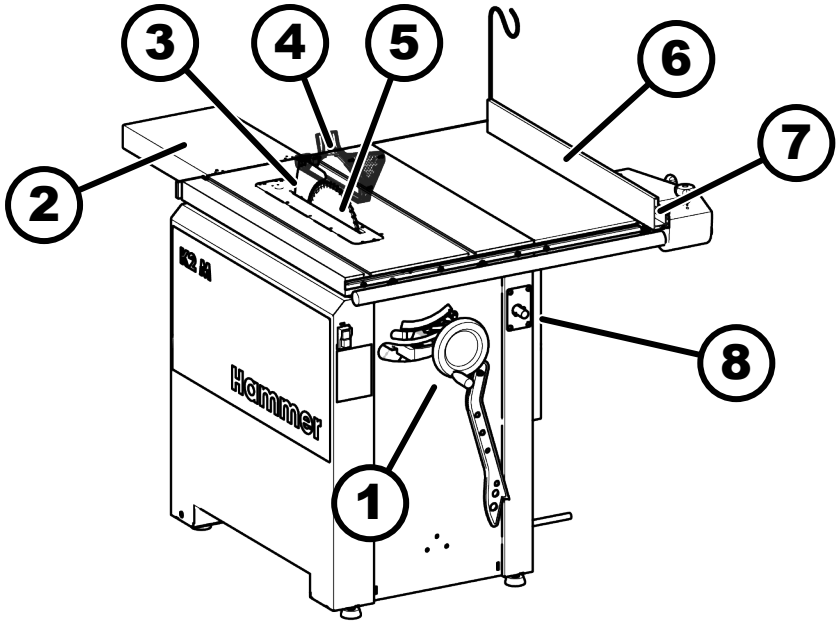

Fig. 4: Overview front side

1 Saw aggregate - height adjustment
2 Table extension
3 Riving knife
4 Saw guard
5 Saw blade
6 Fence plate (guide)
7 Rip fence
8 Saw aggregate - angle adjustment

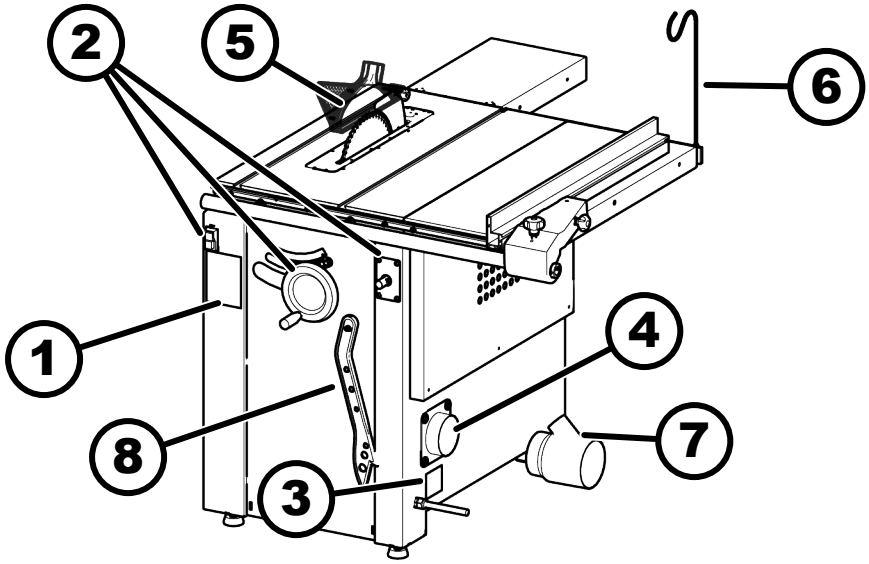

Fig. 5: Overview rear side

1 Pictogram - Operating elements
2 Saw aggregate operating elements
3 Machine data plate
4 Dust extraction connection (Ø 100 mm)
5 Dust extraction connection (Ø 50 mm)
6 Extraction hose holding spring
7 Extraction distributor accessories (Art. no. 500-07-211)
8 Push stick

5.2 Pictograms, signs and labels

All the pictograms, signs and labels affixed to the machine must be kept visible, readable and must not be removed.

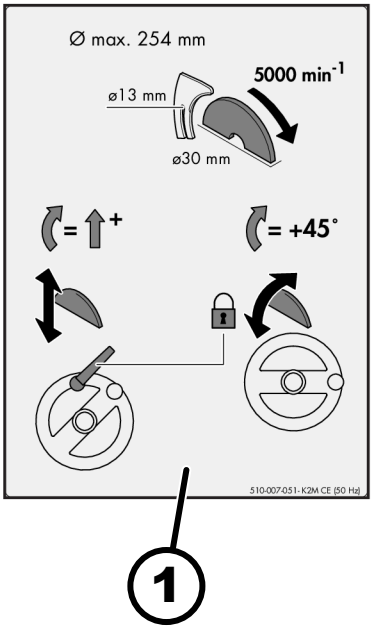

Fig. 6: Pictograms overview

1 Pictogram - Operating elements

5.3 Machine data plate

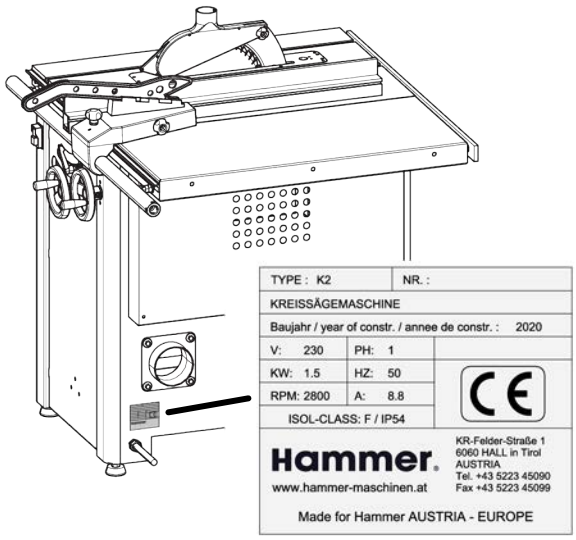

Fig. 7: Layout of the data plate

The data plate is mounted to the back of the machine.

5.3.1 Information on the machine data plate

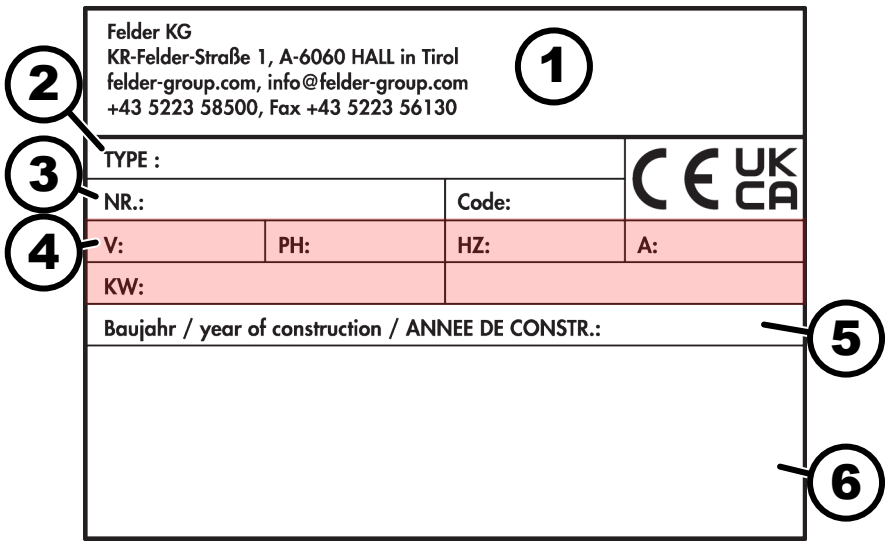

Fig. 8: Machine data plate

1 Manufacturer information
2 Model type
3 Machine number
4 Electrical connection
5 Year of construction
6 Additional information (optional)

5.4 Accessories

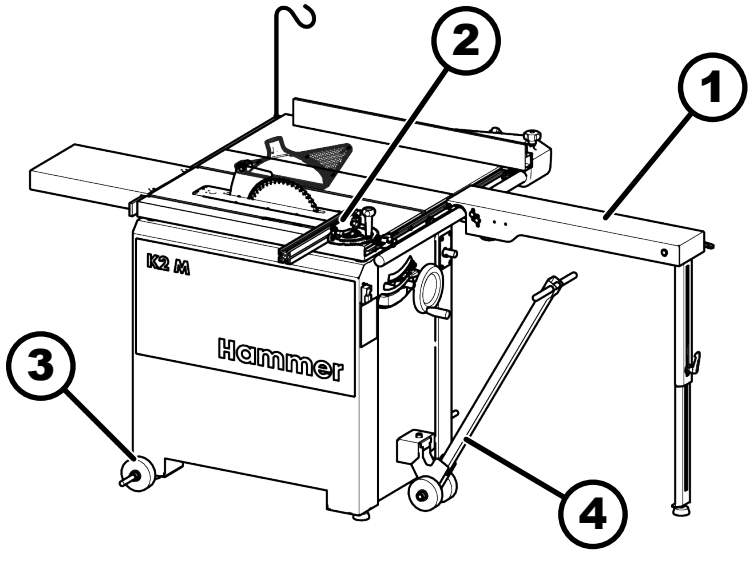

Fig. 9: Accessories overview

1 Table extension with support leg (Art.-No. 503-156)
2 Mitre fence with mitre guide (Art.-no. 423-043)
3 Rolling carriage (Art no. 503-134)
4 Lifting bar (Art.-N+no. 500-149)

Note

For further accessories and dust extraction equipment see the tools and accessories catalogue / Online-shop: www.felder-shop.com.

Additional table extensions

- For exact parallel cuts, in particular for long workpieces.

Mitre fence

- Mitre fence with precision mitre guide for table grooves.
- Thanks to the pins, a wide variety of polygons can be produced.

Rolling carriage

- The rolling carriage facilitates the task of positioning the machine.
- The lifting bar makes manoeuvring of the machine easy, even in the smallest of spaces.

5.5 Operation and display elements

5.5.1 Operating element saw aggregate and rip fence

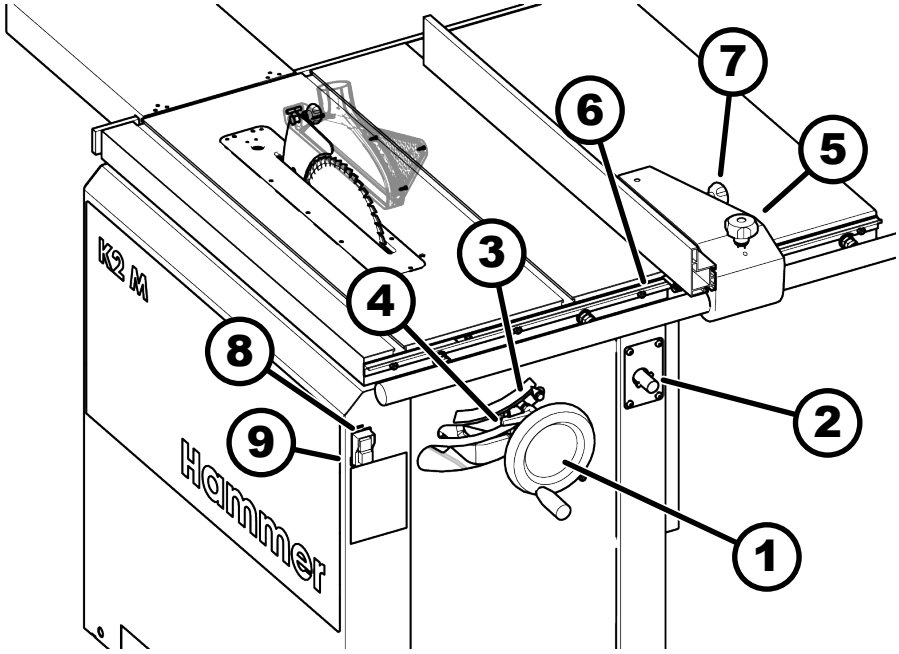

Fig. 10: Overview control elements

1 Saw aggregate - height adjustment
2 Saw aggregate - angle adjustment
3 Scale - Saw angle specification
4 Clamping lever - Angle adjustment
5 Rip fence clamping
6 Scale - Cutting width specification
7 Fence plate clamp (guide)
8 Green start button - Saw blade ON
9 Red stop button - Saw blade OFF

5.6 Safety devices

5.6.1 Safety limit switch

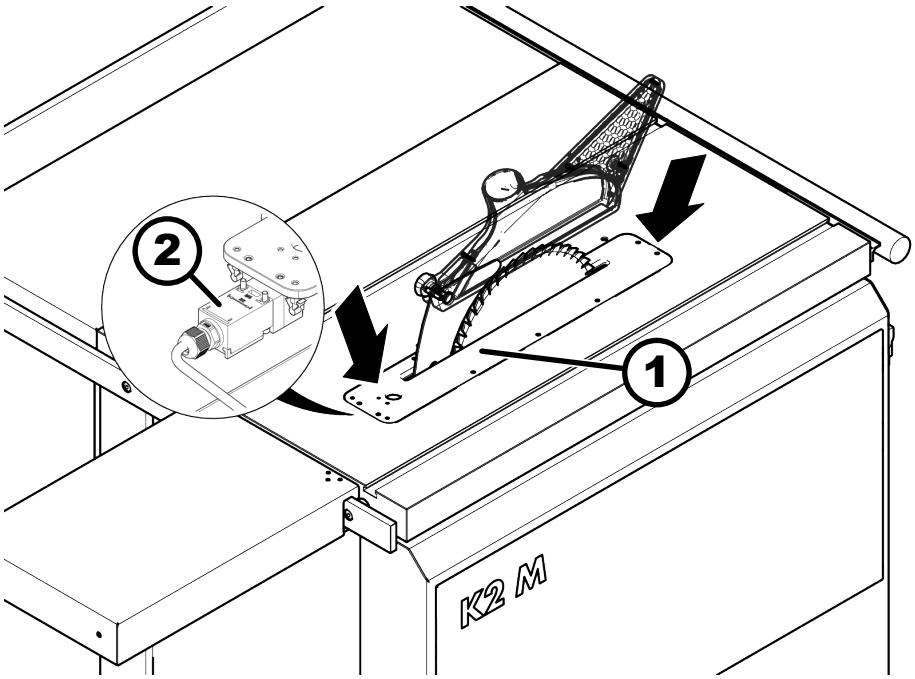

Fig. 11: Safety limit switch - Insert board

1 Insert board
2 Limit switch

The machine is equipped with a safety end-switch. The saw blade only operates if the limit switch inside the machine frame has not been actuated (insert board must be inserted).

Ensure that the insert board locks in place correctly on the right and the left side.

5.6.2 Circular saw guards

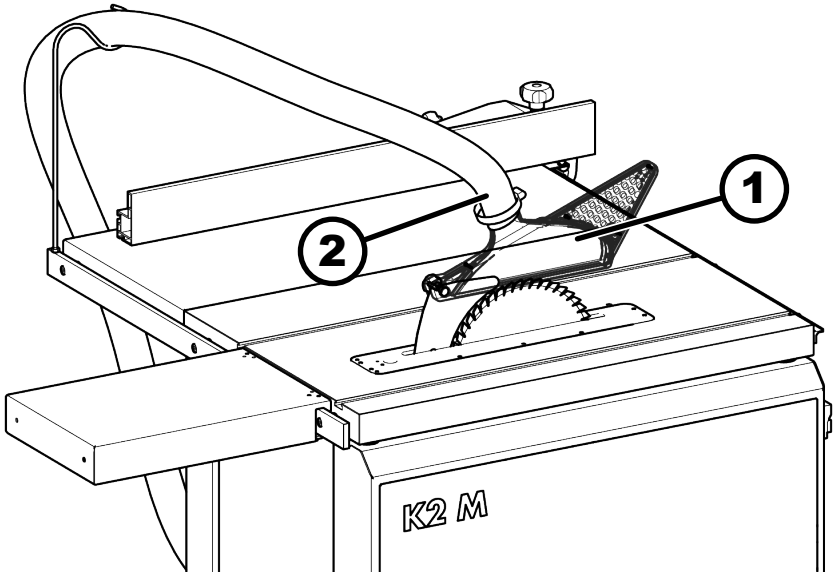

Fig. 12: Saw guard

1 Circular saw guards
2 Dust extraction connection (Ø 50 mm)

The saw guard has to be installed and adjusted correctly.

Extraction must be connected to the saw guard.

Extraction connection diameter = 50 mm

6 Transporting, packing, storing

6.1 Transport inspection

1. Upon arrival, inspect the shipment to ensure that it is complete and has not suffered any damage.
2. If any transport damage is visible from the outside, do not accept the delivery or only accept it with reservation.
3. Record the scope of the damage on the transport documents/hauliers delivery note.
4. Initiate the complaint process.
5. Any defects that are not discovered upon delivery, must be reported as soon as they are identified as damage claims are only valid if claimed within the valid complaint period.

6.2 Packaging

If no agreement has been made with the supplier to take back the packaging materials, help to protect the environment by reusing the materials or separating them according to type and size for recycling.

When using overseas transport the machine must be tightly packed and protected from corrosion. Use desiccant.

Environmental protection

Packaging materials are valuable raw materials and in many cases they can be used again, reprocessed or recycled.

ENVIRONMENT

Dispose of the packaging in an environmentally friendly manner

- Dispose of packaging materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.
- Contract a recycling company.

6.3 Storage

Keep items sealed in their packaging until they are assembled/installed and be sure to observe the stacking and storage symbols on the outside of the packaging.

Storage conditions

- Do not store outdoors.
- Store in a dry and dust-free environment. Use desiccant if necessary.
- Pay attention to the storage conditions. ➦ *Chapter 4.2 'Operation and storage conditions' on page 19*
- Protect from direct sunlight.
- Avoid mechanical vibration.
- Avoid extreme temperature fluctuations (condensation build-up).
- Apply a coat of oil to all exposed machine parts (corrosion protection).
- Regularly check the general condition of all parts and the packaging during longer storage (> 3 months). If necessary, refresh or re-apply the coat of anti-corrosive agent.

6.4 Transport bracket

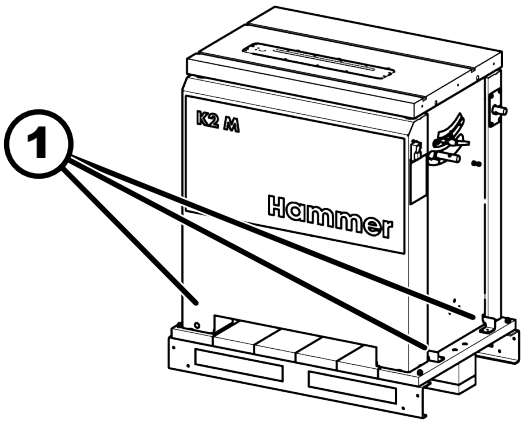

Fig. 13: Remove the transport bracket

1 Transport bracket

The machine is delivered partially assembled on a pallet.

The machine is attached to the pallet with several transport brackets. Only remove the transport bracket when the machine is to be lifted from the pallet.

6.5 Information relating to transportation and unloading

NOTICE

Material damage

Damage and possible complete write-off of the machine.

- Only lift the machine using the positions marked.
- Do not lift the machine using the machine table or by using the hand grips.
- Only transport the machine using a forklift or a pallet truck.

Remove machine attachments

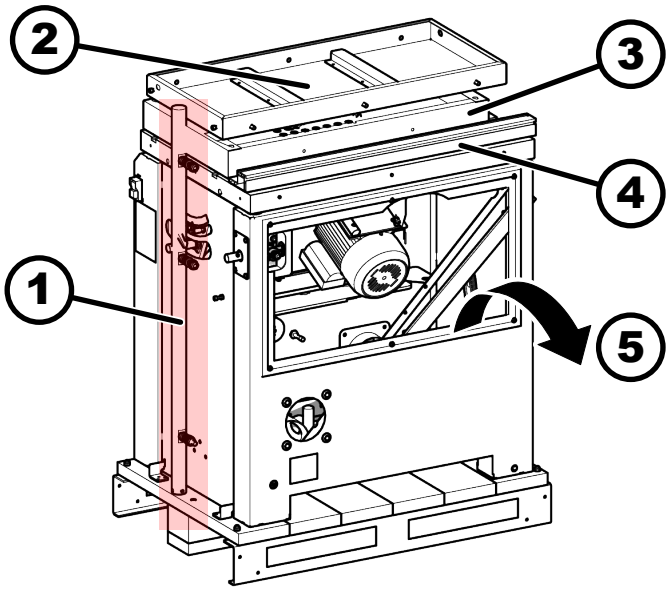

Fig. 14: Remove attachments

1 Fence support bar
2 Cutting extension
3 Back cover
4 Guide (fence plate)
5 Additional attachments and accessories

Remove all of the machine attachments from the machine and pallet before assembly.

1. Remove the fence support bar and table extension.
2. Remove the rear side cover and fence (fence plate).
3. Remove all of the rest of the accessories and other machine components from the inside of the machine.

Prepare to offload and setup the machine

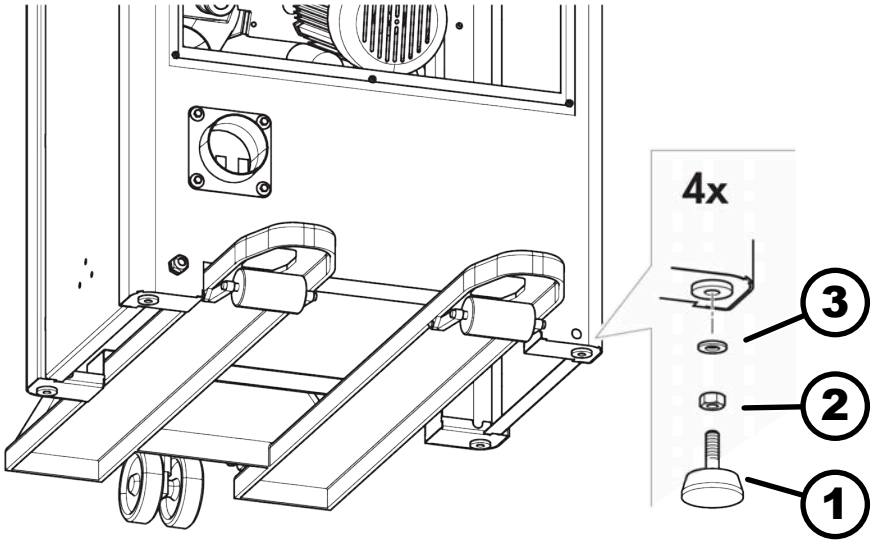

Fig. 15: Preparation for transporting with a pallet truck

1 Adjusting screw
2 Locking nut
3 Serrated washers

WARNING

Tipping over of the machine

Serious injury due to the high machine weight.

- Consider the machine weight and centre of gravity of the machine.
- Ensure that several additional assistants are on hand.

1. Remove all transport brackets from the machine.
2. Prepare the adjustment screws for installation (4x):
   - Open the nut for the adjustment screw fully.
   - Thread on the serrated washers.
3. Carefully tilt the machine forward and keep it kipped.
4. Mount the adjustment screw from below on the rear side of the machine.
   - Screw in the adjusting screws with lock nuts and washers by hand as far as they will go.
   - Secure the adjustable feet with locking nuts.
5. Tilt the machine the other way.
6. Tighten the adjusting screws with lock nuts and washers at the front side of the machine.

6.6 Means of transportation

6.6.1 Transporting with a forklift

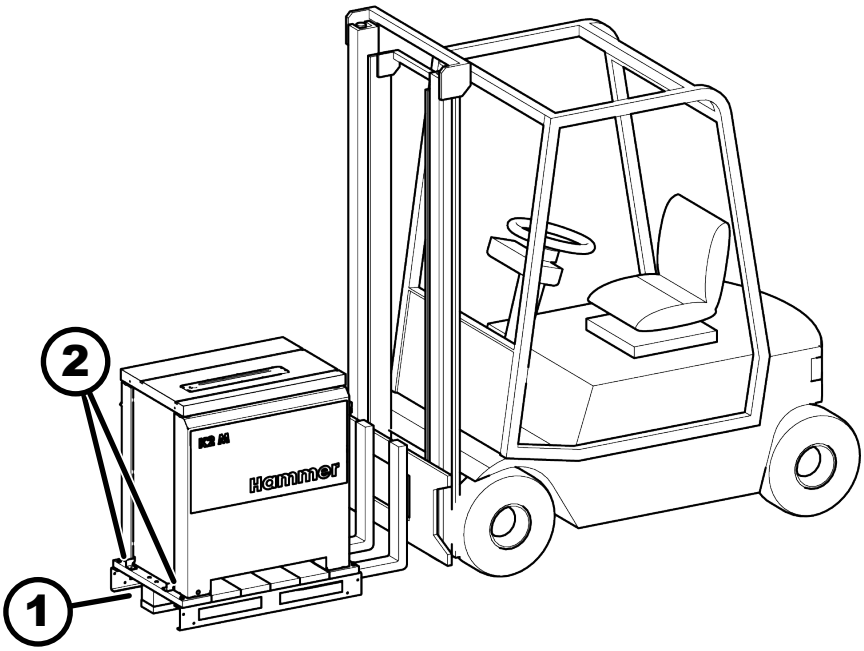

Fig. 16: Transport with a forklift truck

1 Recesses in the pallet
2 Do not remove the transport brackets

⚠ WARNING

Tipping over of the machine

Serious injury due to the high machine weight.

- Consider the centre of gravity of the machine.
- Depending on the equipment, two or three additional helpers are required when unloading.
- Lifting material (straps, chains and fork lifts) must be positioned as far apart away from the centre of gravity as possible.

Personnel:

- Forklift truck driver

1. Only remove the transport bracket when the machine is to be lifted from the pallet.
2. Move the forks of the forklift truck so they fit into the machine frame or pallet recesses.

6.6.2 Unloading with a pallet truck

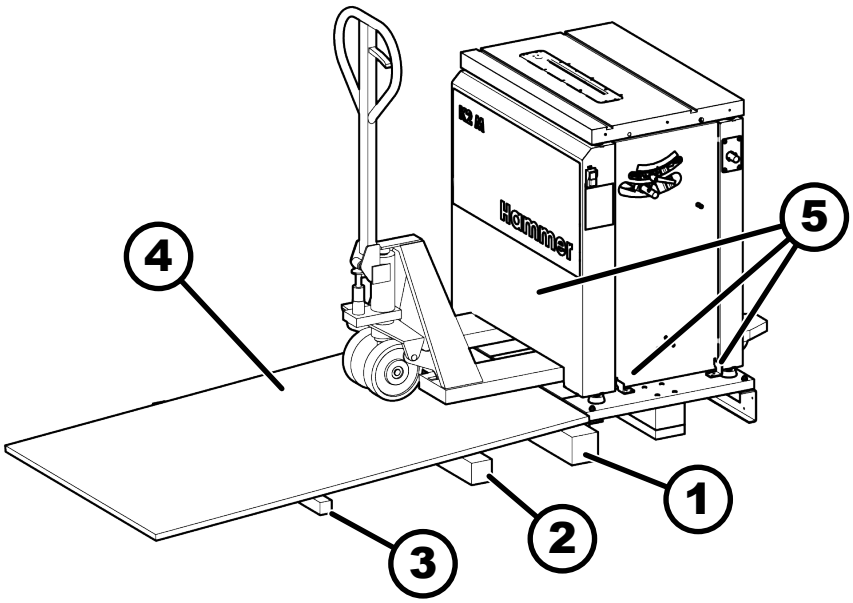

Fig. 17: Unloading with a pallet truck

1 Squared timber 90 x 90 mm
2 Squared timber 70 x 70 mm
3 Squared timber 40 x 40 mm
4 Panel 1500x900x20 mm
5 Transport bracket

⚠ WARNING

Tipping over of the machine

Serious injury due to the high machine weight.

- Consider the machine weight and centre of gravity of the machine.
- Ensure that several additional assistants are on hand.

Use a ramp similar to the one depicted in the illustration to unload from the pallet.

- Screw the ramp panel on to the squared timber.
- Attach the ramp to the machine pallet and ensure that it cannot slip.

1. Remove all transport brackets from the machine.
2. Prepare to transport the machine with a pallet truck or fork-lift truck. ➦ *'Prepare to offload and setup the machine' on page 32*
3. Push the forks under the recess in the machine frame.
4. Unload the machine from the pallet with the pallet truck.

6.6.3 Transport with a rolling carriage

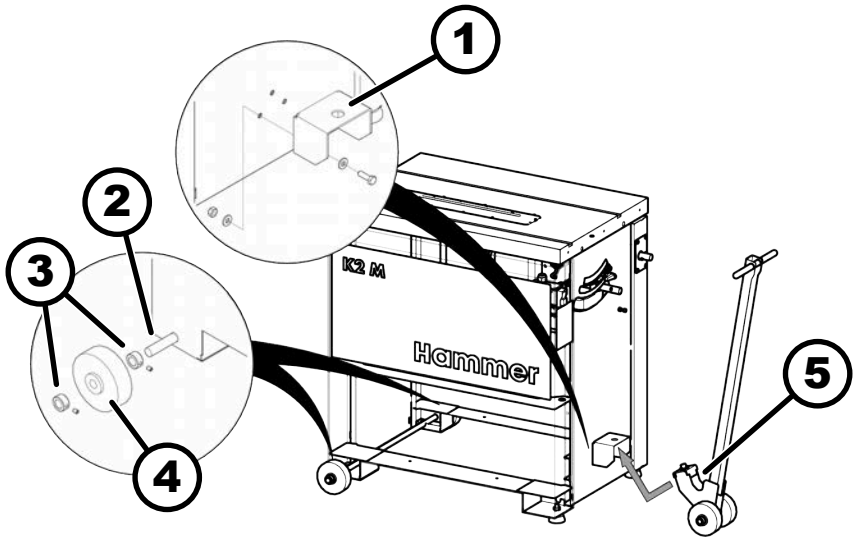

Fig. 18: Unloading with rolling carriage

1 Lifting bar resting plate
2 Wheel axle
3 Set collars
4 Wheel
5 Lifting bar

The rolling carriage can be attached with ease to the machine.

1. Screw on the lifting bar resting plate with M8x25 screws, washers and nuts to the front side of the machine.
2. Slide the wheel axle through the machine chassis.
3. Position the set collars and wheels on the wheel axle.
4. Clamp the set collars using the grub screws.
   ➡ The wheels must be able to rotate easily.
5. Tilt the lifting drawbar and hook it in to the lifting bar resting plate.

7 Setup and installation

7.1 Floor space requirement

In order to maintain and operate the machine properly, it must be set up at least 500 mm away from the wall, parallel to the work direction (measurement X).

There must be enough space for the processing of workpieces (Y dimension).

To operate and maintain the machine, leave a min. of 2000 mm space all around the machine.

When installing the machine, ensure that there is sufficient space for the machine operator, also taking into account the necessary space for moving the workpieces (loading, processing, stacking).

The machine may only be used in dry rooms, free from frost and not outside.

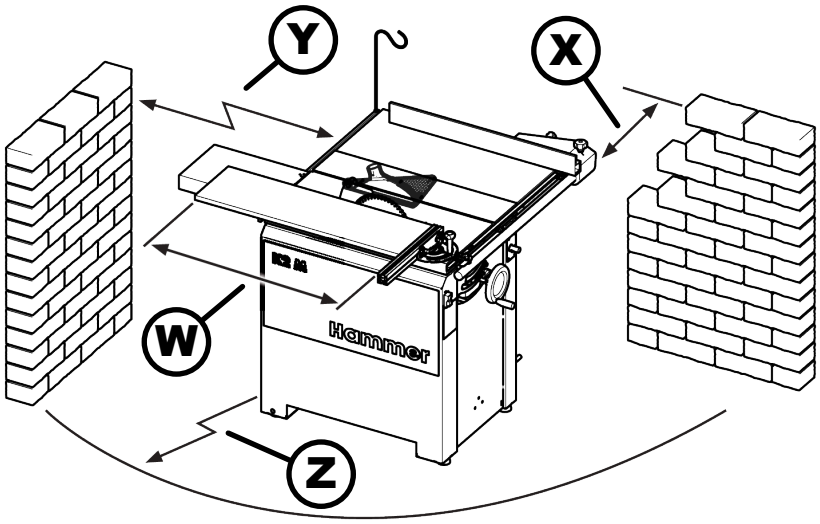

Fig. 19: Space requirement K2 M

W Workpiece length
X Distance from the wall
Y Workpiece length + 500 mm
Z Free space for operation

7.2 Setup and aligning the machine (levelling)

Note

If necessary, the machine can be bolted down to the floor using the transport brackets.

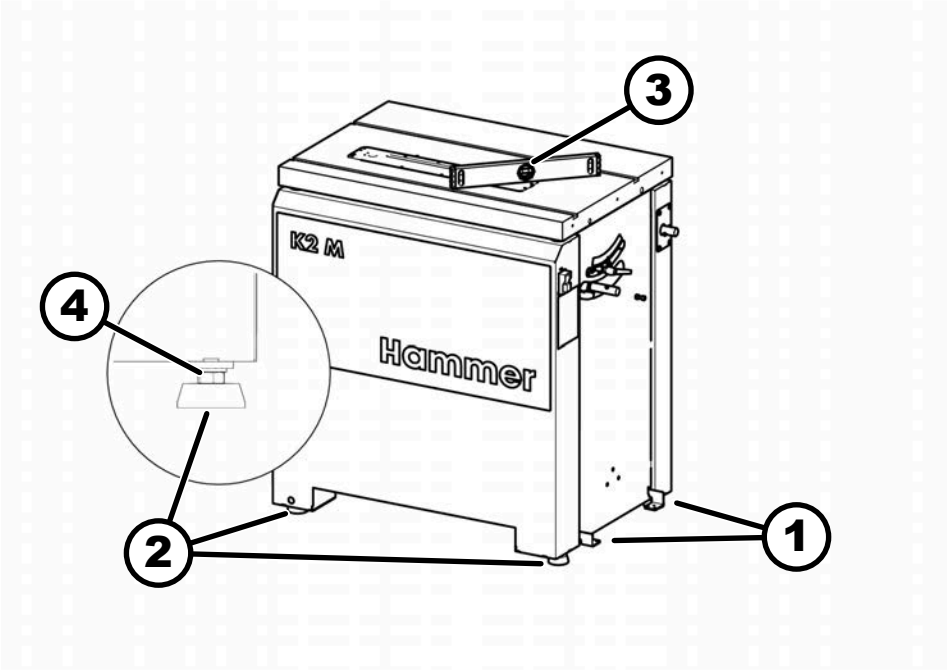

Fig. 20: Levelling the machine

1 Transport bracket
2 Adjusting screws
3 Spirit level
4 Locking nut

Position the machine with the aid of a spirit level to ensure that the machine functions precisely and operates smoothly.

1. Transport the machine to the installation location according to the specifications stated in the "Transport" chapter and in the enclosed transport and assembly instructions.

2. Compensate for uneven floors with the adjusting screws.

- Loosen locking nut.
- Turn the adjustment screw.
- Tighten locking nut.

3. If necessary, the machine can be bolted down to the floor with the transport brackets.

4. Remove anti-corrosion agent from all exposed machine parts.

7.3 Install

7.3.1 Saw aggregate transport safety locks and extraction

Remove the saw aggregate transport brackets

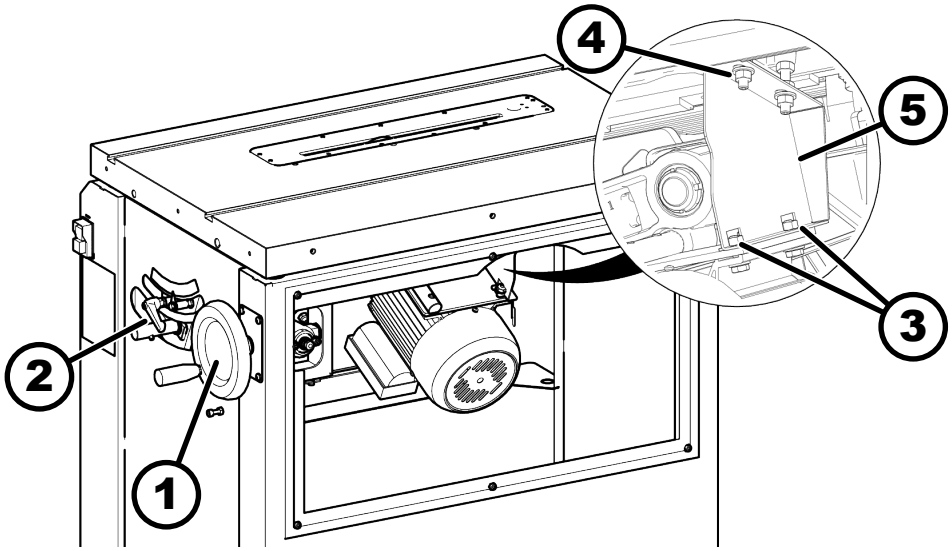

Fig. 21: Remove aggregate transport bracket

1 Handwheel angle adjustment
2 Clamping lever cutting angle adjustment
3 Rocker motor nut
4 Washers and nuts transport bolts (2x)
5 Transport bracket

Tool:

- Combination wrench 13 mm

The saw aggregate is secured for transport to avoid misalignment.

The transport bracket must be removed before the aggregate is adjusted.

1. Insert the handwheel on to the tilt arbour.
2. Release the cutting angle adjustment clamping lever.
3. Release the nuts on the rocker motor.
4. Release the nuts on the transport bolts and remove them together with the washers.
5. Tilt the saw aggregate towards 45°.
6. Remove transport bracket and upper washers.
7. Loosen transport bolt locking nuts.
8. Remove the transport bolts.
9. Tighten the nuts on the rocker motor.
10. Keep all of the parts for any future transportation of the machine.

Mount the saw aggregate extraction connection

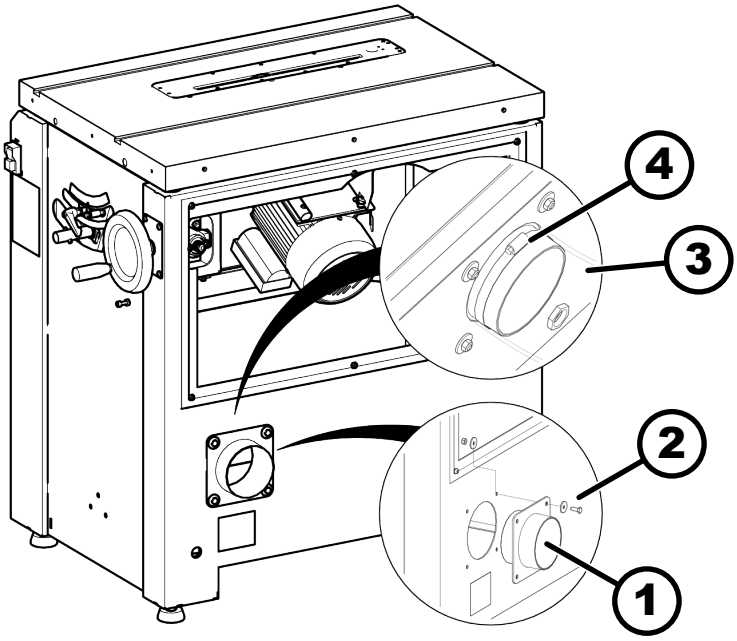

Fig. 22: Mount the extraction connection

1 Extraction connection
2 Screws M8 x 16 (4x)
3 Saw aggregate extraction pipe
4 D90-110 hose clamp

Tool:

- Combination wrench 10 mm
- Socket wrench 7 mm

1. Position the extraction connection on the machine chassis from the outside using M8x16 screws and washers.

2. Attach the extraction connections from the inside with washers and nuts.

3. Attach the extraction hose inside the machine to the extraction connection with a hose clamp.

7.3.2 Mounting the scale track

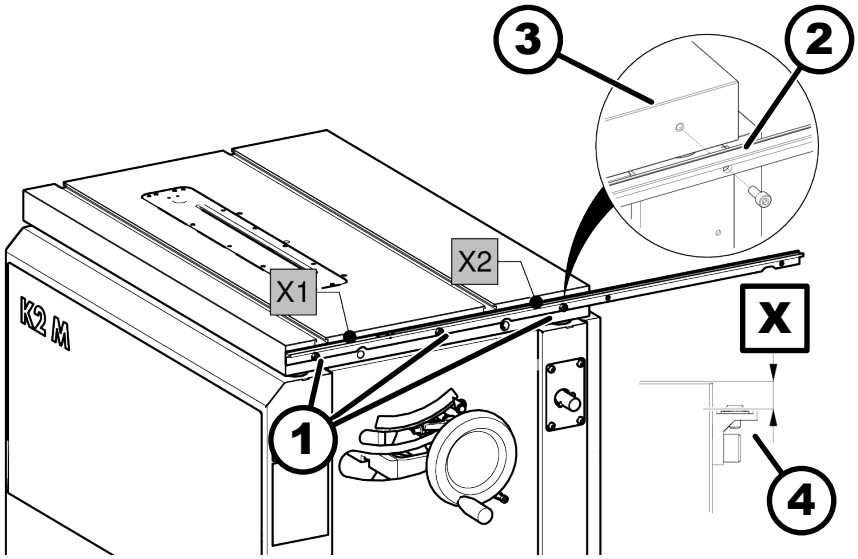

Fig. 23: Mounting the scale track

1 Scale track screws (3x)
2 Scale track
3 Machine table
4 Take note of the assembling position
X Distance scale track to the table level

Tool:

- Hex key 5 mm

1. Position the scale track on the machine table.

   Note the installation position: The scale must be mounted rising from left to right.

2. Screw the M6 x14 socket head cap screws into the machine table slightly.
3. Adjust the distance to the table level exactly: X1 = X2 = 10.0 mm
4. Tighten screw using an Allen key (5 mm).

7.3.3 Mounting the fence support bar

Mount the fence support bar to the machine table

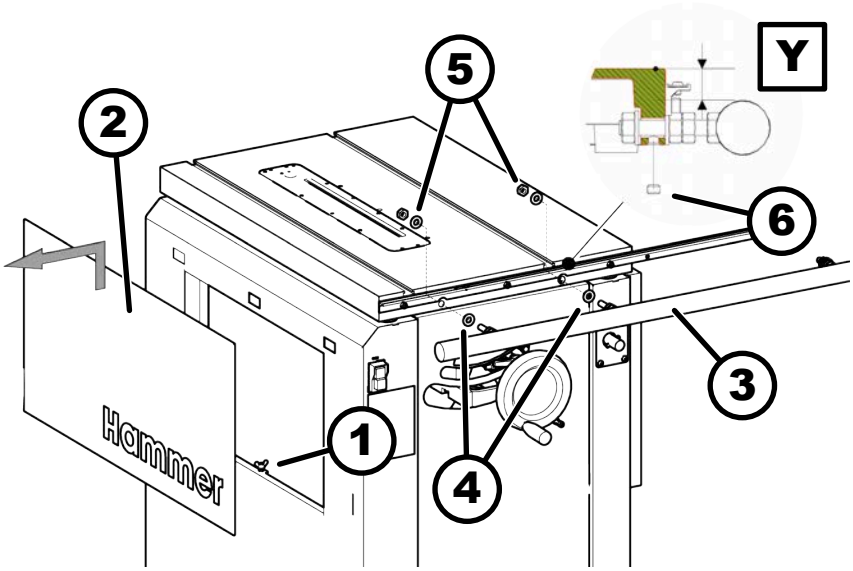

Fig. 24: Mounting the fence support bar

1 Wing nut
2 Cover plate
3 Fence support bar
4 Washers
5 Locking nuts and washers
6 Adjusting screw
Y Distance fence support bar to the table level

To mount the fence support bar, the front cover must be removed.

1. Loosen the wing nut inside the machine.

The wing nut can be reached from the rear side of the machine.

2. Pull the cover upwards and remove it from the front.

3. Remove the loose lock nuts and washers from the grub screws.

The rear special nuts are preset and must not be readjusted.

4. Position bar on machine table using the threaded screws.

5. Loosely secure the bar with washers and locking nuts on the rear side of the machine.

➡ Adjust the distance to the table level exactly: Y1 = Y2 = 20.0 mm.

Check distance from fence support bar to machine table

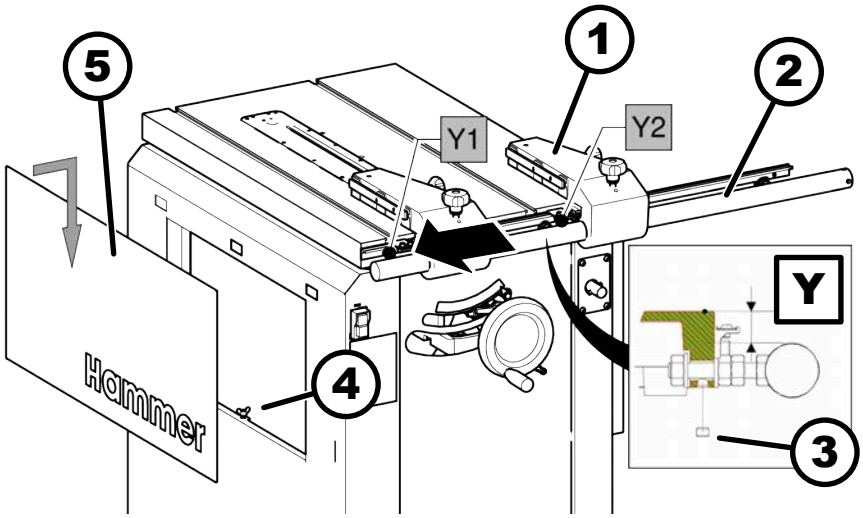

Fig. 25: Fence support bar - check distance

1 Rip fence
2 Fence support bar
3 Adjusting screw
4 Wing nut
5 Cover plate
Y Distance fence support bar to the table level

Tool:

- Allen key 4 mm
- Combination wrench 17 mm

1. Push the rip fence onto the bar from behind.

2. Adjusting the distance at the front of the bar to the table:

- Move the rip fence to the front.
- Adjust the distance to the table level exactly.

  ➡ Y1 dimension = 20.0 mm.
- Lightly tighten the front locking nut.

3. Adjusting the distance at the rear of the bar to the table:

- Move the rip fence back.
- Adjust the distance to the table level exactly using the adjusting screw.

  ➡ Y2 dimension = 20.0 mm
- Lightly tighten the rear locking nut.

4. Check the setting in several positions and readjust if necessary.

➡ Distance to the table level Y1 = Y2 = 20.0 mm.

5. Tighten both of the locking nuts tightly.

7.3.4 Mount table extension

Mounting table extension variant 610 (standard)

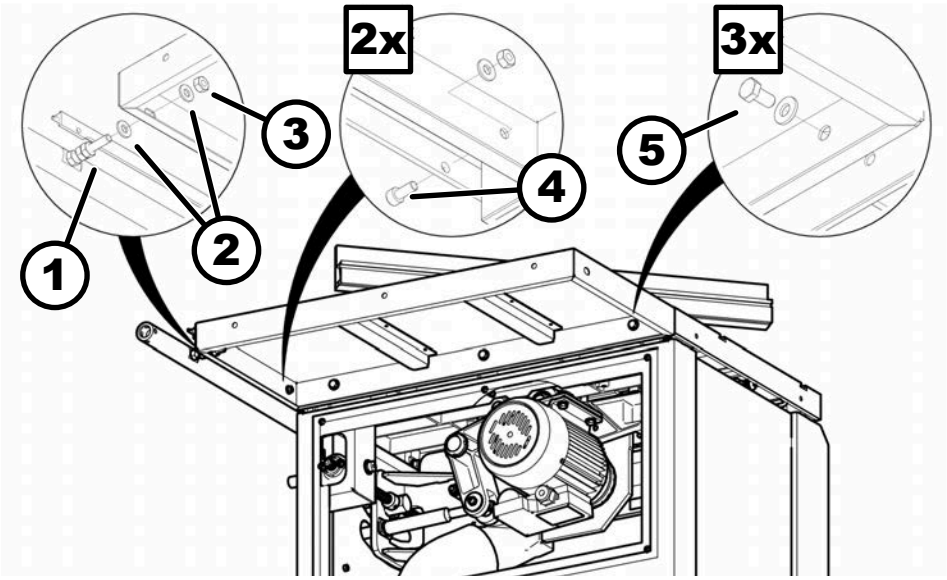

Fig. 26: Mounting table extension - variant 610

1 Grub screws fence support bar
2 Washers
3 Locking nut
4 Scale track screw M6x14 (2x)
5 Screws / washers M8x16 (3x)

Tool:

- Hex key 5 mm
- Combination wrench 10 mm
- Combination wrench 17 mm

The 610 table extension is mounted to the rear side of the machine.

1. Remove the loose locking nuts and washers from the grub screws on the fence support bar.

2. Position a washer on the grub screws (fence support bar).

3. Position the table extension on the grub screws (fence support bar) and on the machine table.

4. Loosely tighten the table extension on to the machine table using M8x16 screws and washers (3x).

5. Adjust the vertical position of the table extension:

- Lay the guide (fence plate) on the machine table.
- Slide the table extension upwards to the fence plate.
- Tighten screws.

➡ The upper edge of the table extension must be at the same level as the machine table.

6. Screw the table extension to the grub screws of the fence support bar using the washers and nuts.

7. Screw the scale track to the table extension using the screws, washers and nuts (2x).

Mount the cover plate at the rear

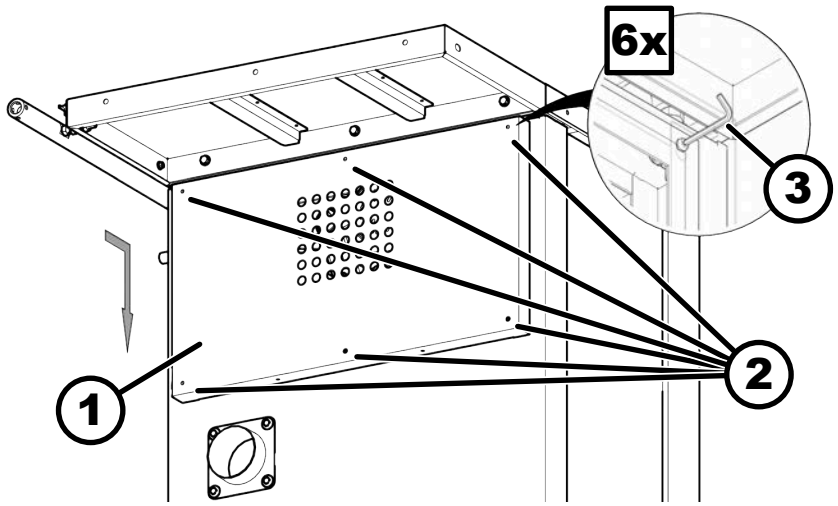

Fig. 27: Mount the cover plate

1 Cover plate
2 Hex screws M6 x 30
3 Allen key 4 mm

Tool:

- Allen key 4 mm

1. Release the hex screws (6x).

2. Place the cover plate in position and hang it on the screws.

The cover plate must be in contact with the machine chassis on all sides.

3. Tighten screws (6x).

7.3.5 Mount the 1220 table extension - option

Mounting the 1220 variant fence support bar

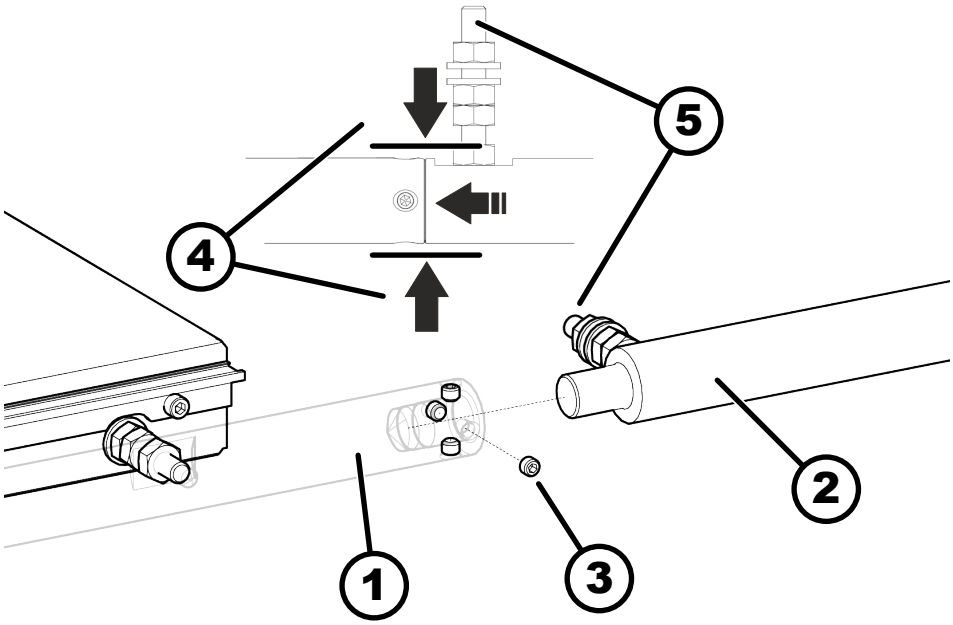

Fig. 28: Mount the 1220 extension bar

1 Fence support bar
2 Extension bar
3 Clamping screws (M8x6)
4 Extension bar central
5 Grub screws horizontally downwards

Tool:

- Allen key 4 mm

1. Slide the 1220 extension bar into the already mounted support bar until it reaches the stop.

2. Rotate the 1220 extension bar until the grub screws face horizontally downwards.

3. Screw the M8x6 clamping screws into the already mounted support bar (4x).

4. Adjust the clamping screws in such a way, that the 1220 extension bar is positioned centrally to the already mounted support bar.

5. Tighten all of the clamping screws.

6. Support the end of the extension bar, so that it doesn't tilt over.

7. Finally, mount the 1220 table extension immediately.

Mounting table extension variant 1220 (option)

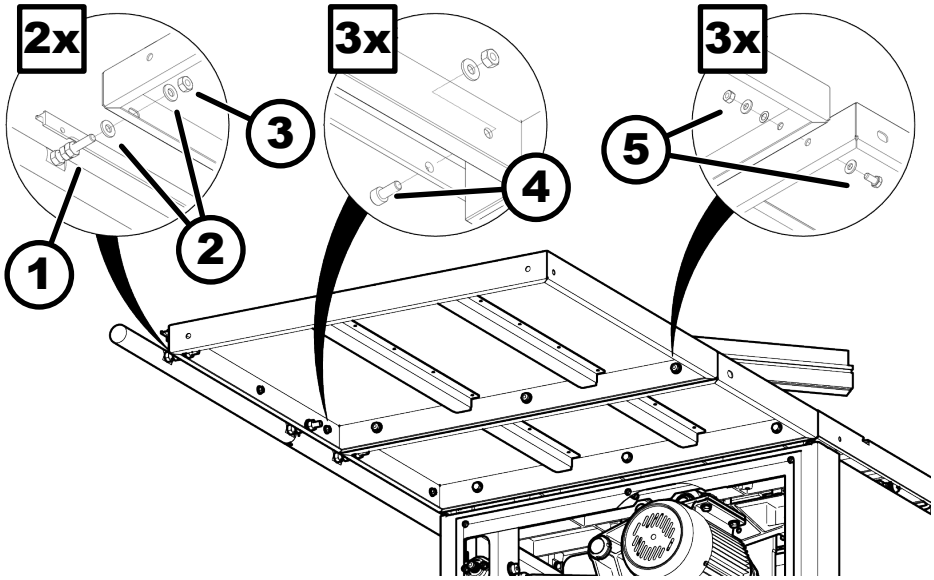

Fig. 29: Mounting table extension - variant 1220

Tool:

- Hex key 5 mm
- Combination wrench 10 mm
- Combination wrench 17 mm

The 1220 table extension is mounted to the rear side of the 610 table extension.

1. Remove the loose locking nuts and washers from the grub screws on the fence support bar (2x).
2. Position a washer on the grub screws (fence support bar) (2x).
3. Position the table extension on the grub screws (fence support bar) and on the machine table.
4. Loosely tighten the table extension on to the machine table using M8x16 screws, washers and nuts on to the 610 table extension (3x).
5. Adjust the vertical position of the table extension:
   - Lay the guide (fence plate) on the machine table.
   - Slide the table extension upwards to the fence plate.
   - Tighten screws.

   ➡ The upper edge of the table extension must be at the same level as the machine table.
6. Screw the table extension to the grub screws of the fence support bar using the washers and nuts (2x).
7. Screw the scale track to the table extension using the screws, washers and nuts (3x).

   ➡ Make sure that the two scale rails are perfectly aligned.

Mounting the 1220 table extension variant support leg

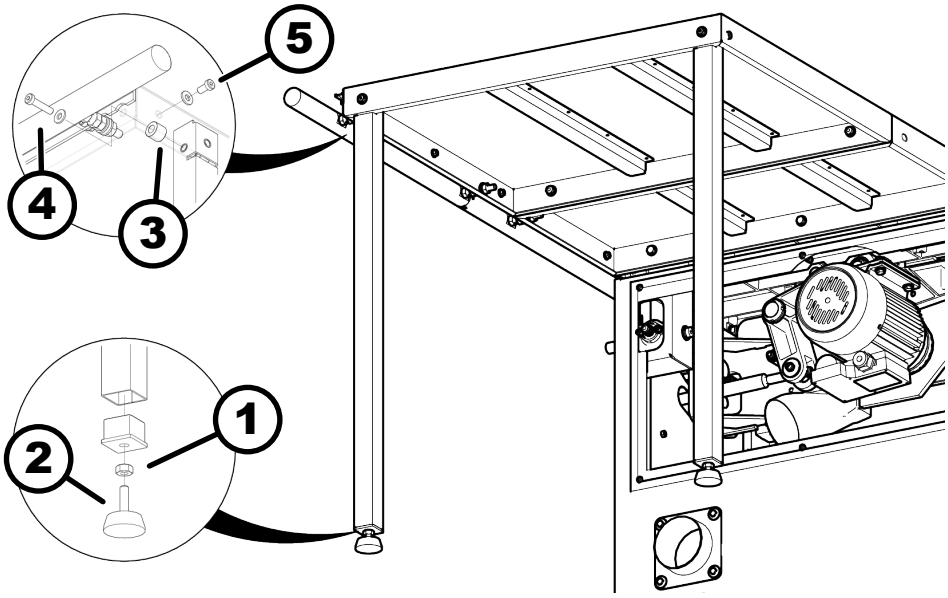

Fig. 30: Mount the support

1 Locking nut
2 Adjusting screw
3 Spacer sleeve
4 M8X35 screw
5 M8X16 screw

Tool:

- Hex key 5 mm

The 1220 table extension is supported by two support legs at the rear to stop it from tipping.

1. Open the adjustment screws fully (2x).
2. Screw the adjustment screw fully into the support leg (2x).
3. Mount the left support leg to the side of the table extension using the M8x35 screws, washers and spacer sleeves.
4. Screw the table extension from the rear to the support leg using the M8x16 screws.
5. Mount the right hand support leg in the same manner (mirrored).

Mount the 1220 table extension variant scale

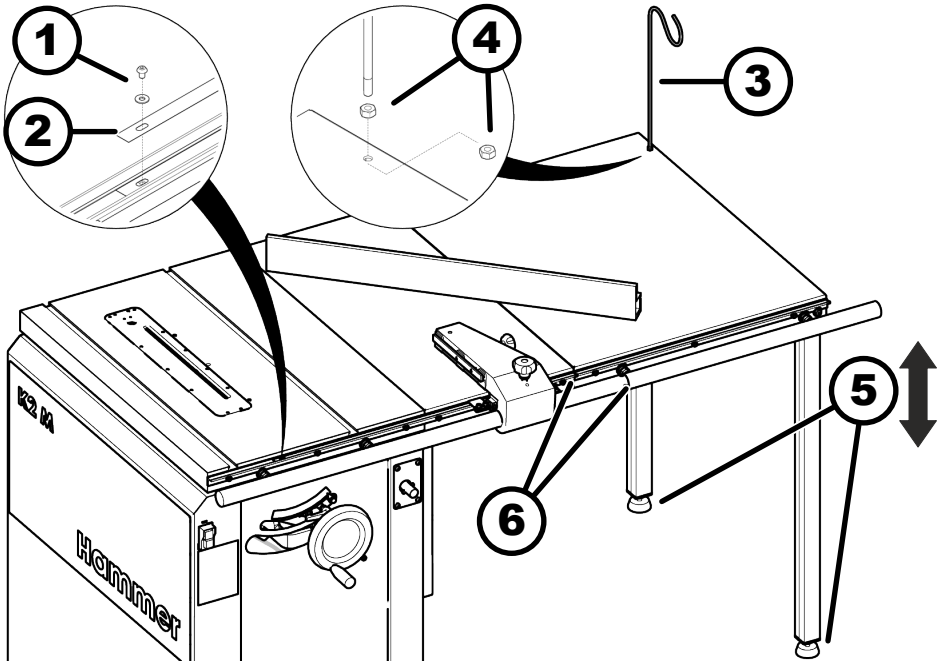

Fig. 31: Table extension 1220

1 Clamping screws / washers
2 1220 rip fence scale
3 Extraction hose holding spring
4 M6 nuts
5 Adjustable screws / locking nuts
6 Check the transition of the components

Tool:

- Hex key 2.5 mm
- Combination wrench set

1. Loosen the scale clamping screws and remove them.

2. Exchanging the scale:

- Remove the scale to the rear, out of the scale rail.
- Slide the 1220 scale into the scale rail.
- Slide the scale forward until the slotted hole is centred over the hole.

3. Screw in the scale clamping screws and washers.

4. If necessary, adjust the vertical position of the cutting extension with the adjusting screws.

- Loosen locking nut.
- Turn the adjustment screw.
- Tighten locking nut.

➡ The upper edge of the table extension must be at the same level as the machine table.

5. Mount the extraction hose holding spring to the rear side of the table extension using two M6 nuts.

7.3.6 Table extension

Mount the table extension coupling system to the machine table

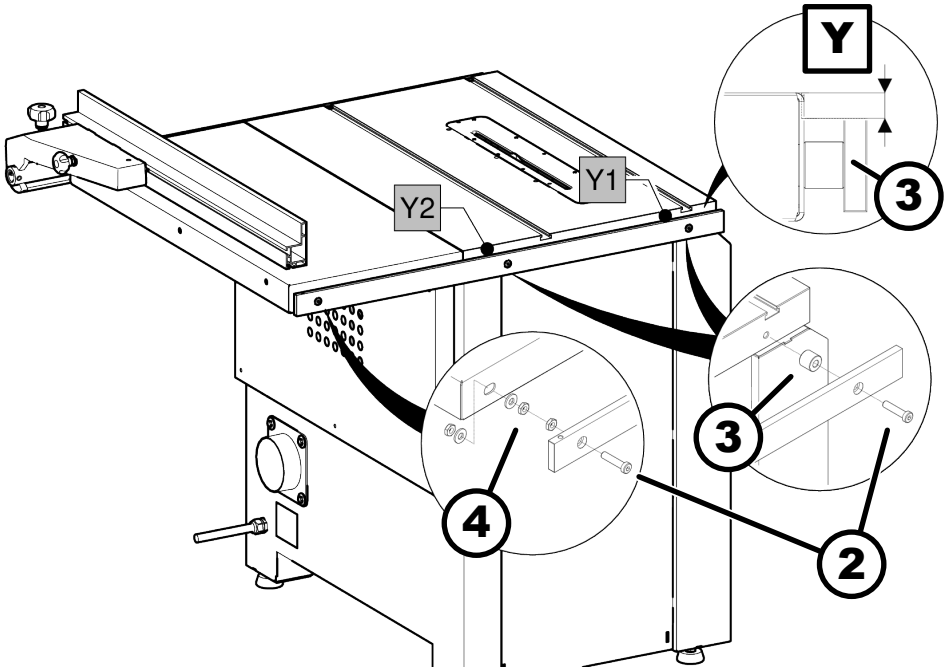

Fig. 32: Mount the coupling system

2 Screws (M8x35)
3 Spacer sleeve
3 Table rail
4 Nuts / washers
Y Distance rail to the table level

Tool:

- Hex key 5 mm
- Combination wrench 17 mm

1. Loosely tighten the table rail and spacer sleeves to the machine table using M8x35 screws.

2. Adjust the front and rear distance between the table rail and the machine table.

This setting has to be exact, check with the calliper gauge.

- Adjust the table rail with a soft-face hammer.
- Adjust the distance to the table level exactly.

  ➡ Y1 dimension = Y2 dimension = 11.0 mm.
- Tighten the screws.

3. Screw the table rail to the rear end of the table extension using the screws, washers and nuts.

4. Check the setting and readjust if necessary.

Attach the table extension to the coupling system and adjust

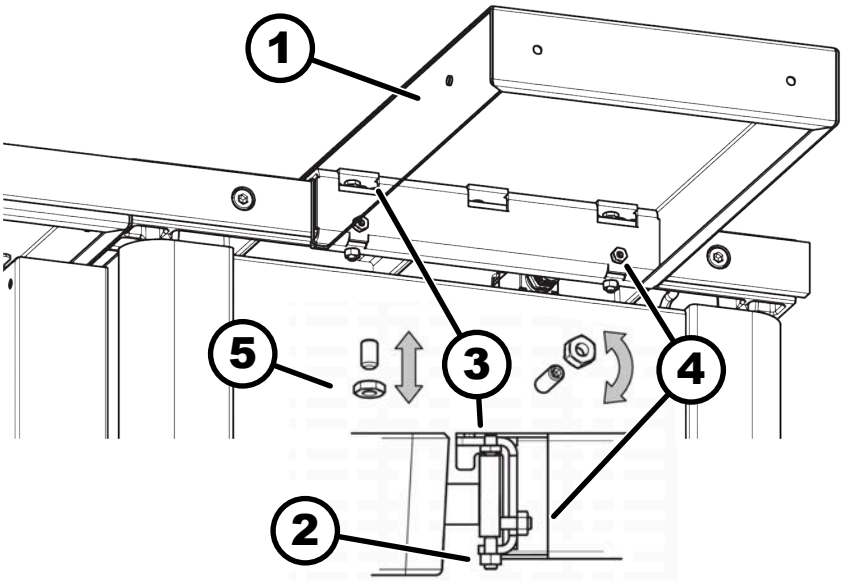

Fig. 33: Table extension

1 Table extension
2 Clamping screws / locking nuts
3 Adjustment screws (height adjustment)
4 Adjustment screws (angle adjustment)
5 Locking nut

Tool:

- Allen key 3 mm
- Combination wrench 10 mm

1. Release the locking nuts and clamping nuts on the underneath.

2. Attach the table extension to the coupling system as shown in the illustration.

3. Set the position of the table extension with the adjusting screws.

Adjust the left and right hand side adjustment screws.

- Loosen locking nut.
- Turn the adjustment screw.
- Tighten locking nut.

➡ The upper edge of the table extension must be at the same level as the machine table.

4. Tighten the clamping screws underneath, tighten the locking nuts.

5. Check the setting when clamped and readjust if necessary.

7.3.7 Mount the holding spring for the extraction pipe guide

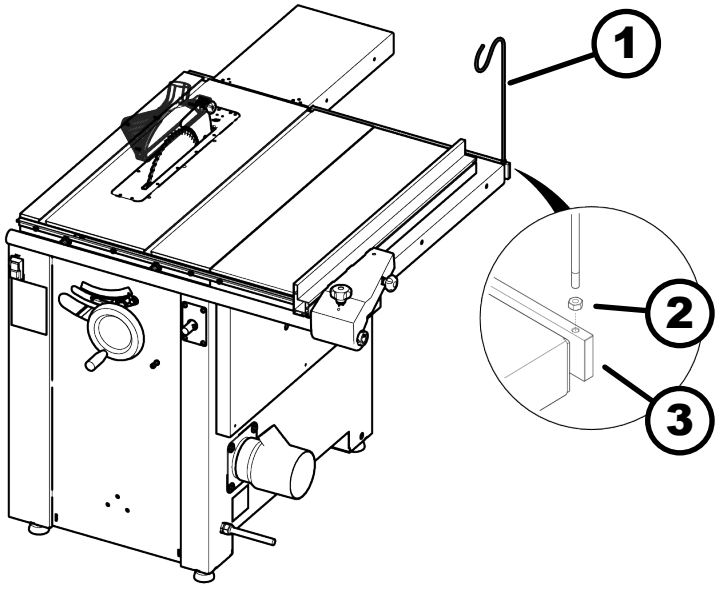

Fig. 34: Mount the extraction pipe holding spring

1 Extraction hose holding spring
2 Locking nut
3 Table rail

Tool:

- Combination wrench 10 mm

The holding spring acts as the extraction pipe guide.

The extraction hose is hung into the saw protective hood through the upper bend.

1. Unscrew the locking nut on the holding spring.

2. Screw in the holding spring at the end of the table rail.

3. Straighten up the holding spring and tighten the locking nut.

7.4 Dust extraction

Dust extraction system requirements

Every machine that uses an extraction system shall be extracted in accordance with EN 12779:2015 or EN 16770:2018.

- The extraction performance must be sufficient to achieve the negative pressure and air speed required at the connection point (see technical data or layout).
- Check extraction power before initial start-up and after significant changes (to the machine and / or extraction system).
- Before the machine is put into operation for the first time the dust extraction setup must be checked. Check for obvious defects on a daily basis and the efficiency on a monthly basis.
- Depending on the equipment, the dust extractor can be connected to the machine in such a way that it runs in unison with the machine (potential-free contact).
- On machines without extraction system control, switch on the extraction system before starting processing.
- The dust extraction hose must be electroconductive and grounded to prevent electrostatic build up.
- Only use flame-retardant extraction hoses.
- Use extraction with reduced dust emission to clean dust from the machine.

Connection to the extractor

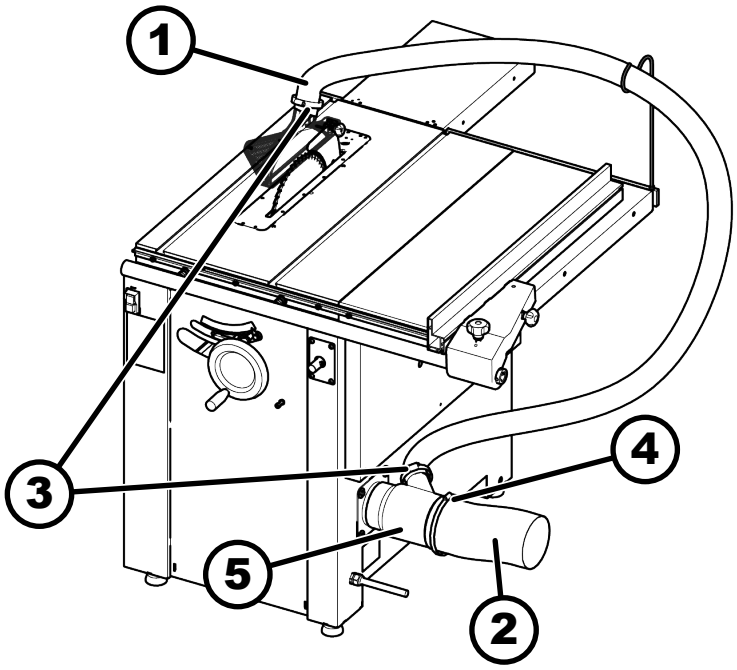

Fig. 35: Extraction connection

1 Saw guard Ø 50 mm
2 Total connection Ø 120 mm
3 D50-70 hose clamps
4 D120-140 hose clamp
5 Extraction distributor accessories (Art. no. 500-07-211)

CAUTION

Electrostatic charging

Burns or electric shock caused by unearthed, or poor quality extraction hose.

- Only use dust extraction hose approved by the manufacturer.
- Always ensure continuous electrostatic earthing when connecting machines.
- The dust extraction hose must be flame resistant and electroconductive. For this reason we recommend that you only use Felder Group dust extraction hose!

An extraction distributor is available as an accessory (Ø 100 mm + Ø 50 mm).

With this, both of the extraction connections (aggregate and saw guard) can be extracted using a single extraction hose (ø 120 mm).

1. Fix the extraction distributor to the extraction connections.
2. Attach the Ø 50 mm to the extraction distributor and to the saw guard using hose clamps.
3. Attach the Ø 120 mm to the extraction distributor with the hose clamps or quick connector.

7.5 Connect electrics

7.5.1 Safety instructions - Connect electrics

NOTICE

Electric current

Damages due to incorrect power supply

- Electrical connection of the machine must be carried out by a licensed electrician on the day of installation.
- Before connecting the machine to the power supply, compare the information on the nameplate with that of the power supply. Only connect the machine if the two sets of data correspond to each other.
- To protect against electric shock, the operator must ensure that the machine is equipped with a protective device (residual current circuit breaker).
- Checking the loop impedance and the suitability of the overcurrent protective device must take place at the location where the machine is to be commissioned.
- It is forbidden to open or to tamper with the electrical box on the machine without the express authorisation from the Felder Group Service Department. Violating this stipulation will invalidate any guarantee claims.

Electrical connection requirements:

- The machine must be earthed with electrical conductors.
- Pay attention to the technical data relating to the electrical components of the machine.
- The on-site electric cabinet must be fitted with a circuit breaker (DIN VDE 0641).

  There must be a separate switch contact for each live phase.
- The unit must only be used in TN-Systems (neutral connected to earth).
- For permissible voltage fluctuation, fuse protection and connection cable, see wiring diagram.
- The power supply cable must be protected against damage (e.g. armoured conduit).
- The power supply cable must be laid in such a way so that is does not bend or chafe and that there is no risk of tripping over it.
- Regularly inspect the power cable for signs of damage or ageing. The machine must not be used if the power cable is not in perfect condition.
- Only connect the power plug once the machine is positioned in its operating location. Connect to CEE outlet (e.g. wall outlet).

7.5.2 Connect the machine plug

Machine power supply cable

Configuration variant 50 Hz: The machine power cable is equipped with a European CEE plug.

Configuration variant 60 Hz: The machine power cable does not have a plug attached.

The customer is responsible for fitting the machine's power cable with a suitable plug in accordance with country specific regulations.

Check the rotation direction of the saw arbour

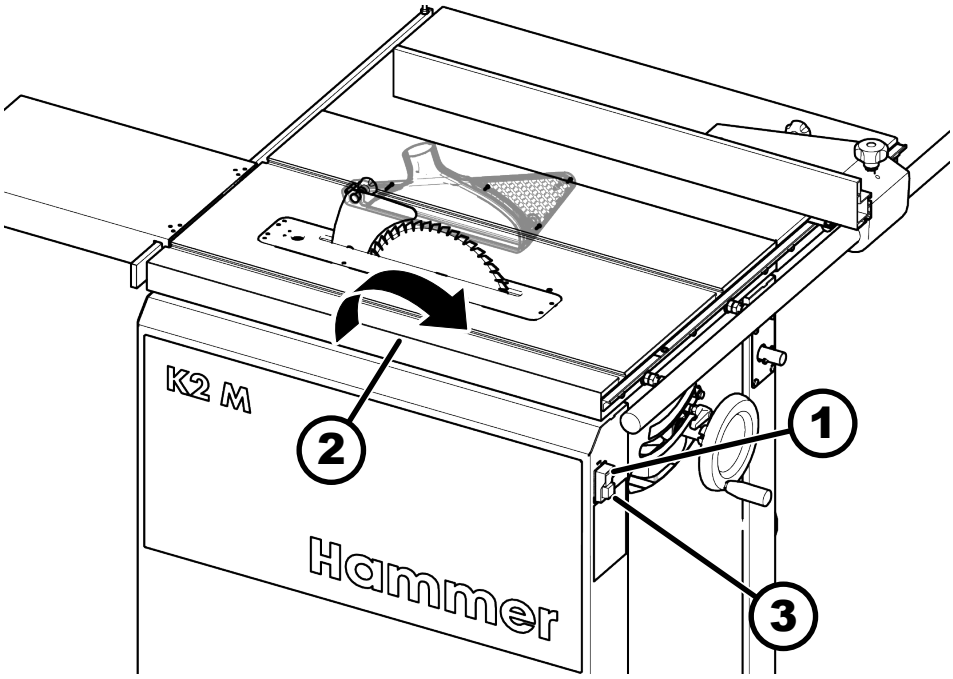

Fig. 36: Motor rotation direction

1 Green start button - Saw blade ON
2 Rotation direction of the saw arbour
3 Red stop button - Saw blade OFF

The correct rotation direction of the machine is set at the factory.

Should a change in the direction be necessary, then immediately contact a Felder-Group service centre.

1. Connect the plug to the power supply.
2. Press the green *[Start]*-button on the control panel and release.
3. Let the machine run briefly.
4. Press the red *[Stop]* button.
5. As the motor is slowing down, check the rotational direction of the saw arbour.

   OK The rotation direction of the saw arbour is in the opposite direction to the processing direction of the workpiece.

   NOK **The rotation direction of the saw arbour is in the same direction to the processing direction of the workpiece.**

   1. Contact Felder-Group service centre.
6. Disconnect the machine from the main power supply.

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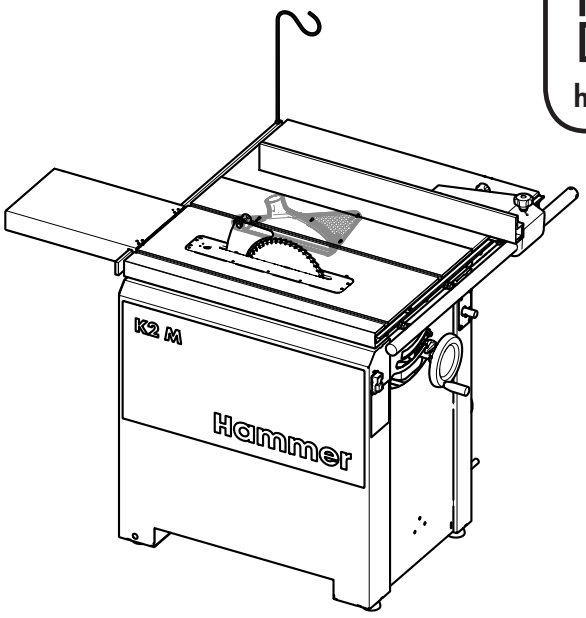

Keep this manual to hand and in good condition for future reference.
Please read this operating manual carefully before using the machine.

Translation of the original operating instructions

Operating instructions

510010-901-2, 1, en_GB

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1 Adjustments and tool changes

1.1 Rip fence

1.1.1 Positioning the rip fence

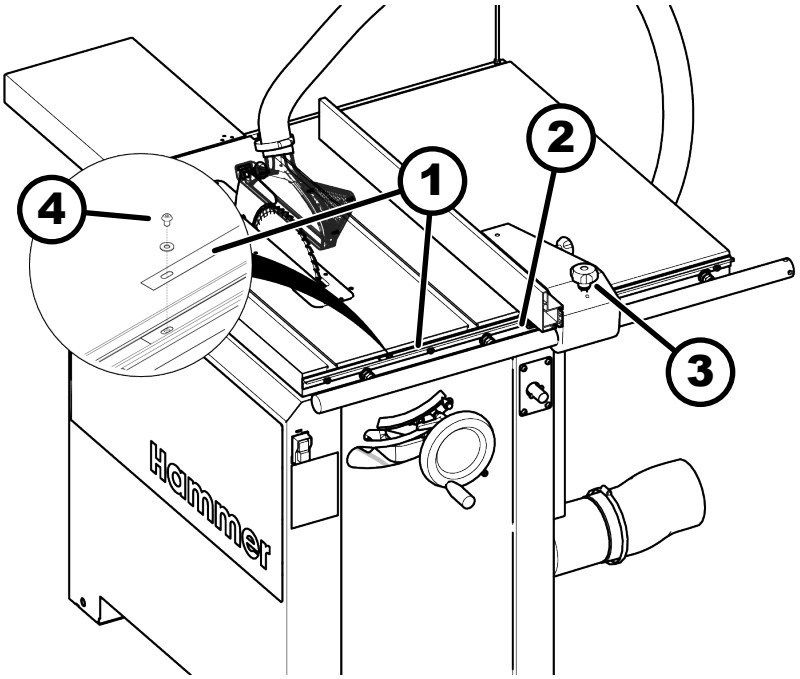


Fig. 1: Positioning the rip fence

1 Rip fence scale
2 Indicator
3 Thumb screw (clamping of the rip fence)
4 Scale clamping screw

1. Switch off the machine.

2. Loosen the thumb screw.

3. Read the measurement set using the scale.

➡ Read the measurement from the front edge of the indicator.

4. Adapting the scale to different saw blade thicknesses:

- Loosen the clamping screw.
- Move the scale by the missing dimension.
- Tighten the clamping screw.

5. Tighten the thumb screw.

1.1.2 Change the fence plate (guide) over

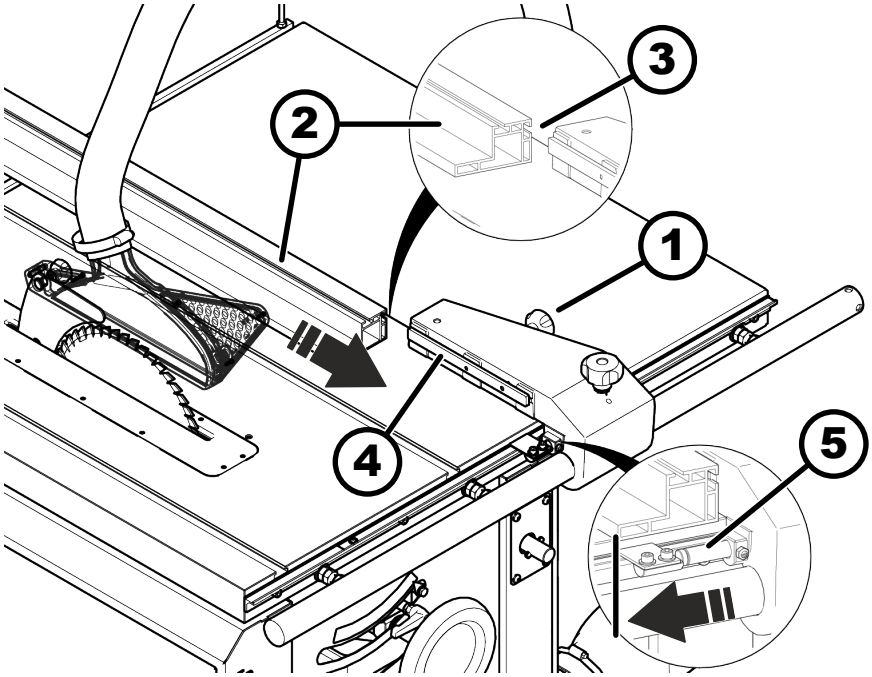


Fig. 2: Mount the guide in a flat position

1 Thumb screw (clamping of the fence plate)
2 Guide (fence plate)
3 Groove
4 Clamping rail
5 Scale indicator

When the fence plate is mounted flat, the distance to the saw blade changes. By moving the scale indicator, the change in the cutting width can be corrected.

1. Loosen the thumb screw.

2. Pull the fence plate (guide) out backwards.

3. Turn the fence plate (lay it flat on the table) and then slide it back on, using the respective groove.

4. Tighten the knurled thumb screw.

5. Slide the scale indicator in the direction of the saw blade until it reaches the locking point.

➡ Read the corrected measurement from the front edge of the indicator.

1.1.3 Remove the rip fence

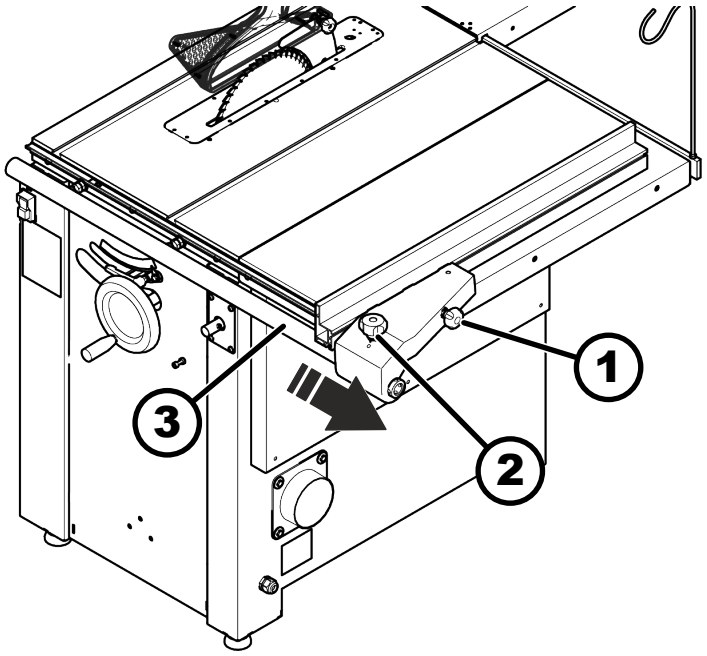


Fig. 3: Remove rip fence

1 Thumb screw 1 (clamping of the fence plate)
2 Clamping screw 2 (clamping the rip fence)
3 Fence support bar

When processing large panels or when carrying out maintenance work it may be necessary to remove the rip fence.

1. Tighten thumb screw 1.

2. Loosen thumb screw 2.

3. Push the rip fence right to the back.

4. Lift the rip fence slightly and pull it backwards off the fence support bar.

1.1.4 Mounting the "Sägeboy" auxiliary fence to the rip fence

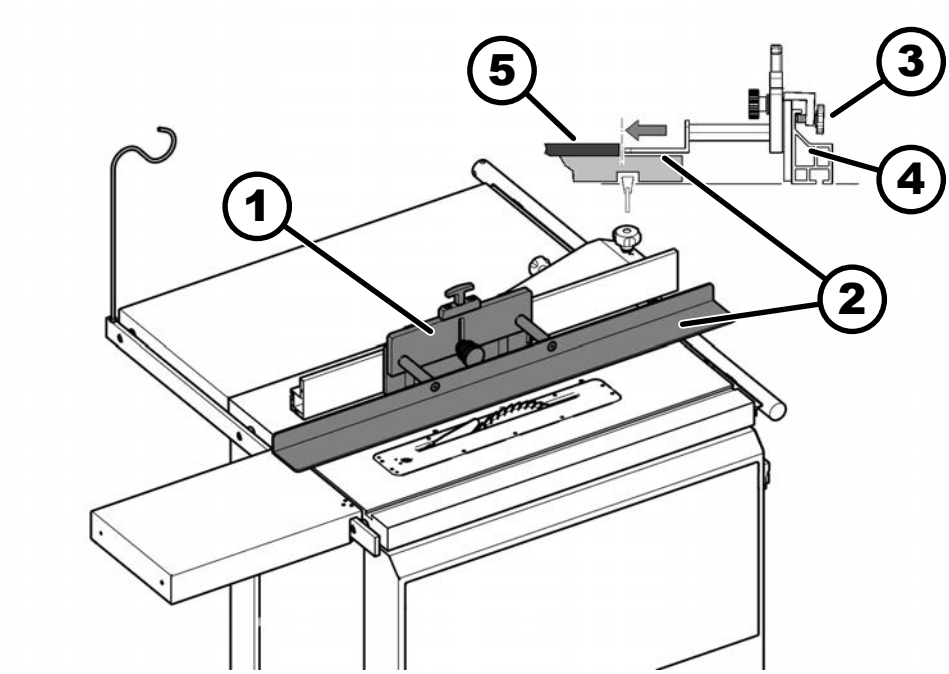


Fig. 4: Mount the "Sägeboy" auxiliary fence

1 Sägeboy auxiliary fence (Art.-No. 01.0.022)
2 Guide rail
3 Thumb screws
4 Fence plate
5 Template (mounted to the workpiece)

Tenoning hood and auxiliary fence "Sägeboy"

On machines without overhead saw guard, covered cuts and grooving work may be carried out if the "Sägeboy" is placed over the saw blade.

Assembly, operation and adjustment: See individual operating instructions

The "Sägeboy" is an additional, anodised aluminium fence and is mounted to the saw rip fence.

The Sägeboy guide rail also serves as a fence for sawing with templates.

1. Clamp the Sägeboy auxiliary fence to the fence plate with thumb screws.
2. Adjust the rip fence so that the tool is covered by the Sägeboy guide rail.
3. For settings on the Sägeboy auxiliary fence, see individual operation instructions.

1.2 Setting the height/angle of cut (standard configuration)

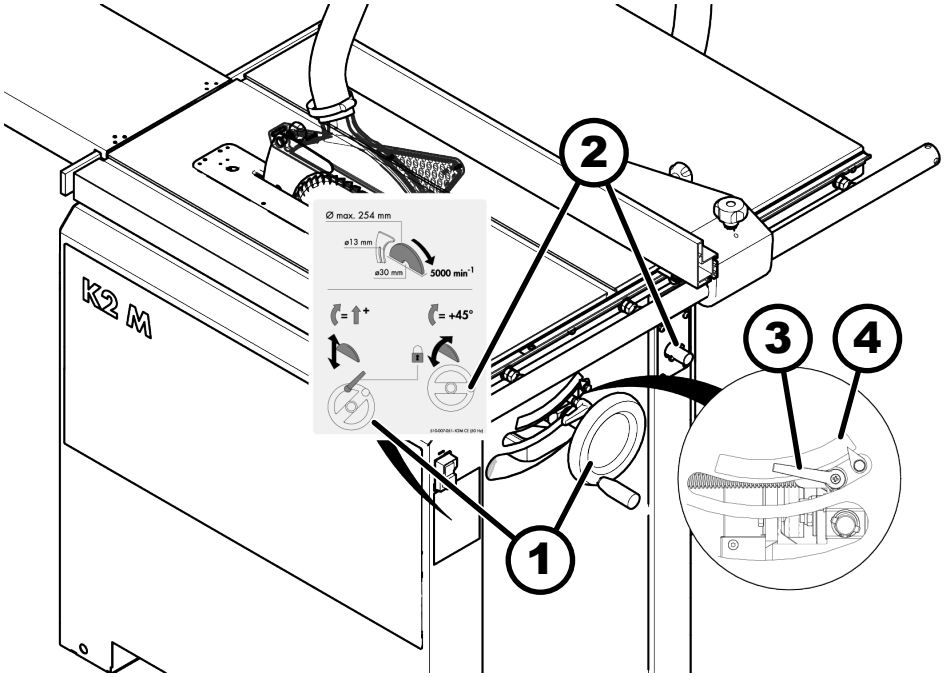


Fig. 5: Adjusting the cutting height / cutting angle

1 Handwheel height adjustment
2 Handwheel angle adjustment
3 Clamping lever cutting angle adjustment
4 Scale cutting angle

Adjusting the cutting height

Only set the cutting height to the height actually required.

1. Adjust the cutting height with the handwheel on the side.
   - Clockwise: higher
   - Anti-clockwise: lower
2. Check the set cutting height with a measuring device on the saw blade.

Adjusting the cutting angle

When tilting beware of any possible collisions between fences, workpieces etc.

1. Pull off the handwheel and put it on the tilt arbour.
2. Release the cutting angle adjustment clamping lever.
3. Adjust the cutting angle using the right handwheel.
   - Clockwise: towards 45°
   - Anti-clockwise: towards 0°
4. Read the cutting angle set on the scale.
5. Lock the clamping lever for cutting angle adjustment.

1.3 Tool change

1.3.1 General information relating to saw blades and grooving tools

NOTICE

Danger of collision when using grooving tools

Damage to the grooving tools and machine table.

- Do not adjust the 90° angle when working with grooving tooling.
- A spacer ring has to be placed onto the saw arbour before using grooving tooling with a width measuring less than 10 mm.

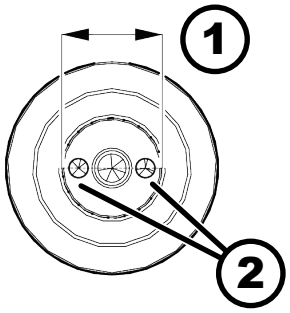


Fig. 6: Anti-rotation saw shaft

1 Saw shaft diameter
2 Anti-rotation saw flange

Only use saw blades and grooving tools,

- which have an authorised speed higher than the speed of the saw arbour
- and comply with the norm DIN EN 847-1
- which are marked with "MAN"

Only use grooving tools,

- which are suited to manual operation
- which are suitable to work with wood

Note

We recommend you use manufacturer original Felder Group tools exclusively.

The processing of workpieces at the maximum cutting height indicated is only possible under certain conditions. Whether it is possible is in direct relation to the following factors:

- Type of wood (hardwood or softwood)
- Wood dampness
- Feed speed
- Saw blades
- The motor power of your machine

1.3.2 Prepare to change tooling

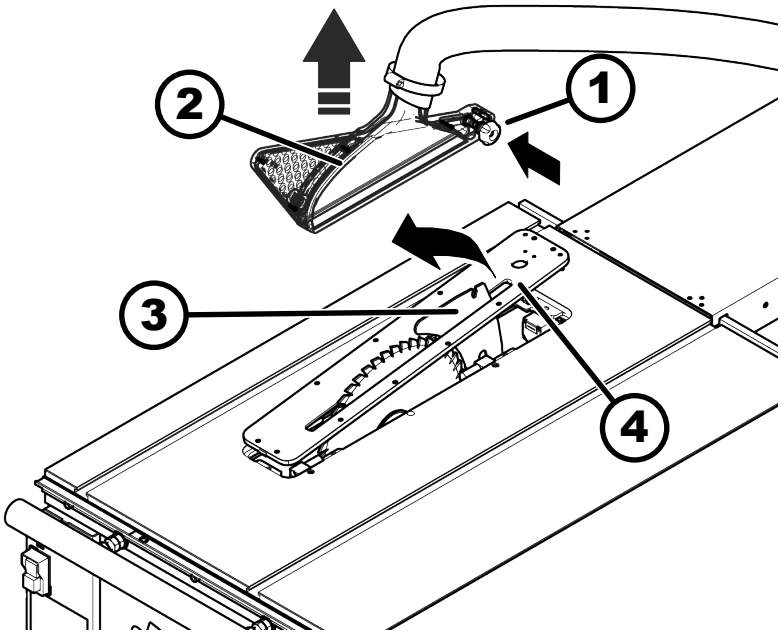


Fig. 7: Prepare to change tooling

1 Thumb screws
2 Saw guard
3 Riving knife
4 Insert board

1. Position the saw aggregate in the 90° position (cutting angle 0°) and move to the uppermost position.

2. Switch off the machine and secure it against being switched on again.

3. Loosen the thumb nut and push it in.

4. Pull the protective hood upwards off of the riving knife.

5. Remove insert board.

➡ Pull upwards over the riving knife.

1.3.3 Establish operational readiness

Operational readiness when using saw blades

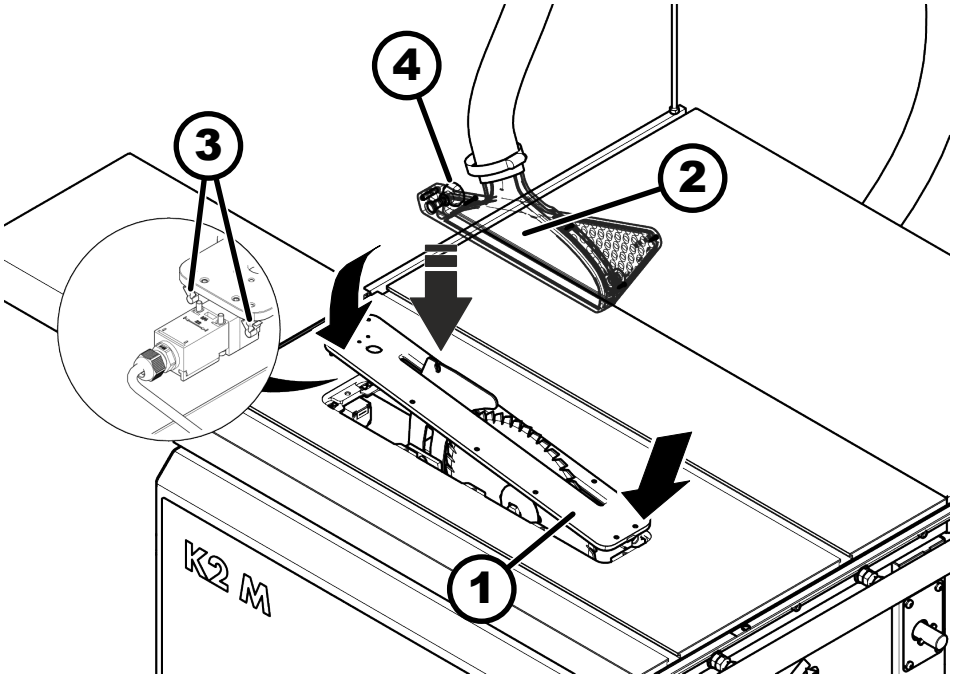


Fig. 8: Operational readiness - Saw blade work

1 Insert board
2 Saw guard
3 Spring catches
4 Thumb nut

Operational readiness

The saw blade only operates if the limit switch inside the machine frame has not been actuated by the locking system.

1. Inserting the insert board.

- Hook the insert board into the machine table on the right (front).
- Engage the insert board on the left (rear) in the snap springs.

➡ Ensure that the insert board locks in place correctly on the right and the left side.

2. Place the saw guard on the riving knife from above.

➡ The insert board must sit flush with the machine table.

3. Check settings of the protective hood. ➦ *Chapter 1.6 'Fitting and adjusting circular saw guard' on page 25*

4. Tighten thumb nut.

Operational readiness when using grooving tools

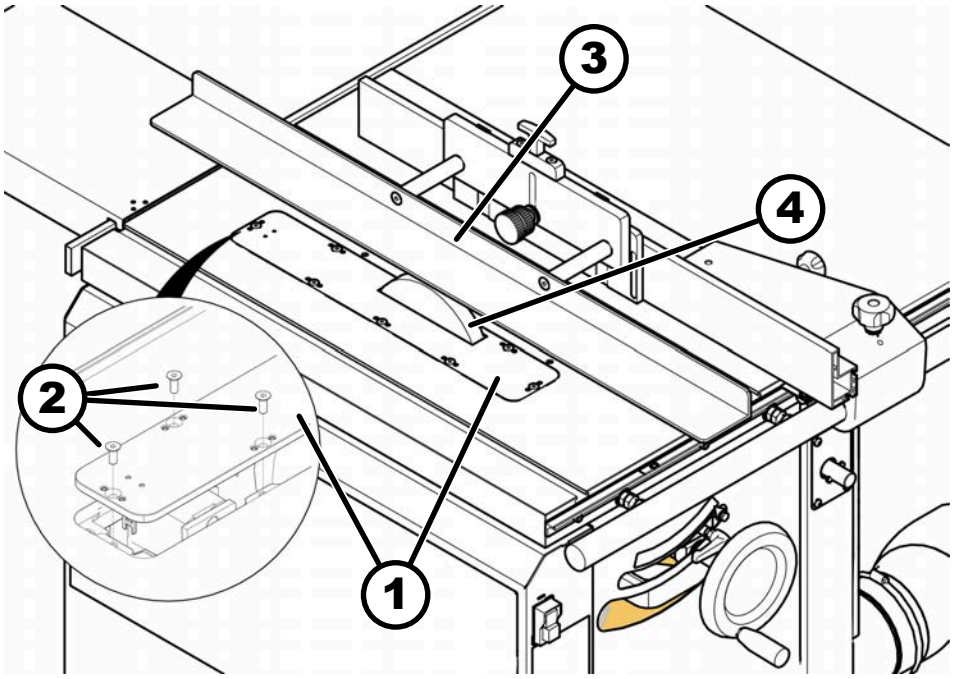


Fig. 9: Operational readiness - grooving tool

1 Insert board (Art.-no. 500-07-206)
2 Flat head screws M6x16
3 Tenoning hood "Sägeboy"
4 Grooving tool

Operational readiness

The saw blade only operates if the limit switch inside the machine frame has not been actuated by the locking system.

Tool:

- Allen key 4 mm

1. Inserting the insert board.

- Position the insert board in the machine table from above.
- Screw in 7 countersunk screws with an Allen key.

➡ The insert board must sit flush with the machine table.

2. Mount the tenoning hood and "Sägeboy" auxiliary fence to the rip fence.
➦ *Chapter 1.1.4 'Mounting the "Sägeboy" auxiliary fence to the rip fence' on page 7*

- Clamp the Sägeboy to the rip fence with thumb screws.
- Adjust the rip fence so that the tool is covered by the Sägeboy guide rail.

➡ Assembly, operation and adjustment: See own operating instructions.

1.4 Changing the saw blade

1.4.1 Installing the saw blade in the machine

Note

For precision cuts, we recommend you to use the smallest saw blade possible.

See technical data for authorised saw blades.

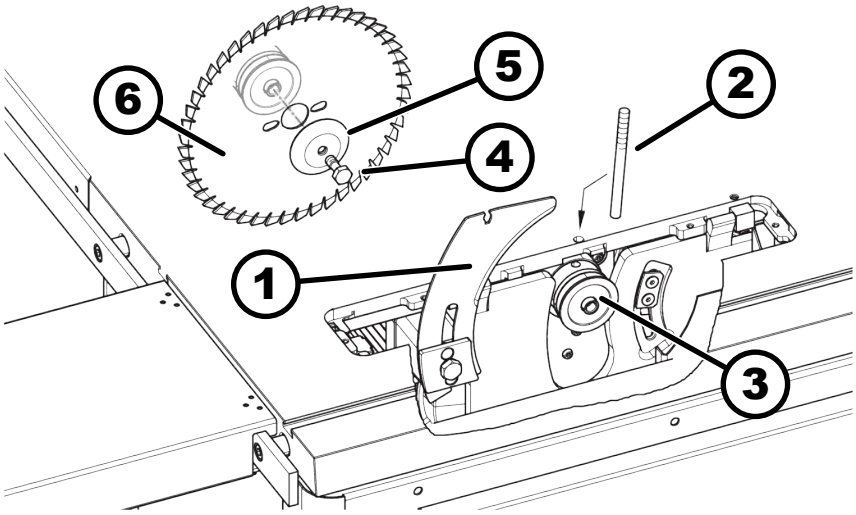


Fig. 10: Change the saw blade.eps

1 Riving knife
2 Locking pins
3 Saw arbour
4 Clamping screw (M10x27 L)
5 Flange
6 Saw blade

WARNING

Sharp and hot tool cutting edges

Cuts and burns due to sharp and hot tools.

- Wear protective gloves.
- Adjustments to the machine or changing the tools may only be done once the machine has stopped.

Tool:

- Spanner 17 mm
- Locking pins

1. Preparing the machine for a tool change. ➦ *Chapter 1.3.2 'Prepare to change tooling' on page 11*
2. To install a larger saw blade loosen the riving knife. ➦ *Chapter 1.4.2 'Loosen / adjust riving knife' on page 15*

3. Secure the saw arbour against rotation.
   - Insert the locking pin into the hole on the circular saw table.
   - Turn the circular saw shaft until the locking pin engages.
4. Loosen the clamping screw with a fork wrench.
   Left screw thread, loosen by turning clockwise.
5. Remove the clamping bolt and saw flange.
6. Remove the old saw blade and place the new saw blade on the arbour.
7. Replace the flange (take note of the assembling position).
   ➡ Insert the flange with the drivers into the holes of the saw arbour.
8. Hold the circular saw flange and fit the clamping screw.
9. **WARNING** Flying pieces
   Severe injuries and damage to property.
   - Minimum tightening torque of the clamping bolt: 20 Nm.

   Tighten the clamping screw with fork wrench.
   Left screw thread, tighten by turning counter clockwise.
10. Remove the locking pin from the hole.
11. Adjust the riving knife if a larger or smaller saw blade has been fitted.
12. Prepare the machine to operate. ➦ *Chapter 1.3.3 'Establish operational readiness' on page 12*

1.4.2 Loosen / adjust riving knife

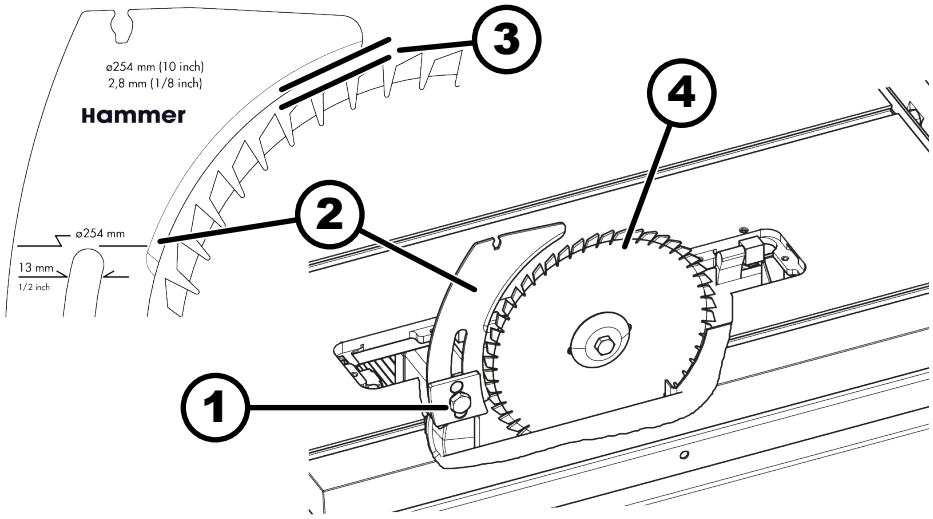


Fig. 11: Adjust the riving knife

1 Clamping screw
2 Riving knife / markings
3 Distance
4 Saw blade

NOTICE

Incorrectly adjusted distance between the saw blade and riving knife

Material damage and possible malfunction with covered cuts.

- The gap between the riving knife and saw blade must be between 3 and 8 mm.
- When carrying out covered cuts, the highest point of the riving knife must be 0-2 mm below the highest point of the saw blade.

Tool:

- Spanner 17 mm

1. Preparing the machine for a tool change. ➦ *Chapter 1.3.2 'Prepare to change tooling' on page 11*
2. Loosen the clamping screw.
3. Move the riving knife so that there is, at any given point, a distance of 3 to 8 mm between the saw blade and the riving knife.
4. The marking on the riving knife must match the top edge of the machine table at the max. cutting height (independently of the saw blade used).
5. When carrying out covered cuts, the highest point of the riving knife must be 0-2 mm below the highest point of the saw blade.
6. **WARNING** Flying pieces
   Severe injuries and damage to property.
   - Minimum tightening torque of the clamping bolt: 25 Nm.

   Tighten the clamping screw.

1.4.3 Fit /change the riving knife

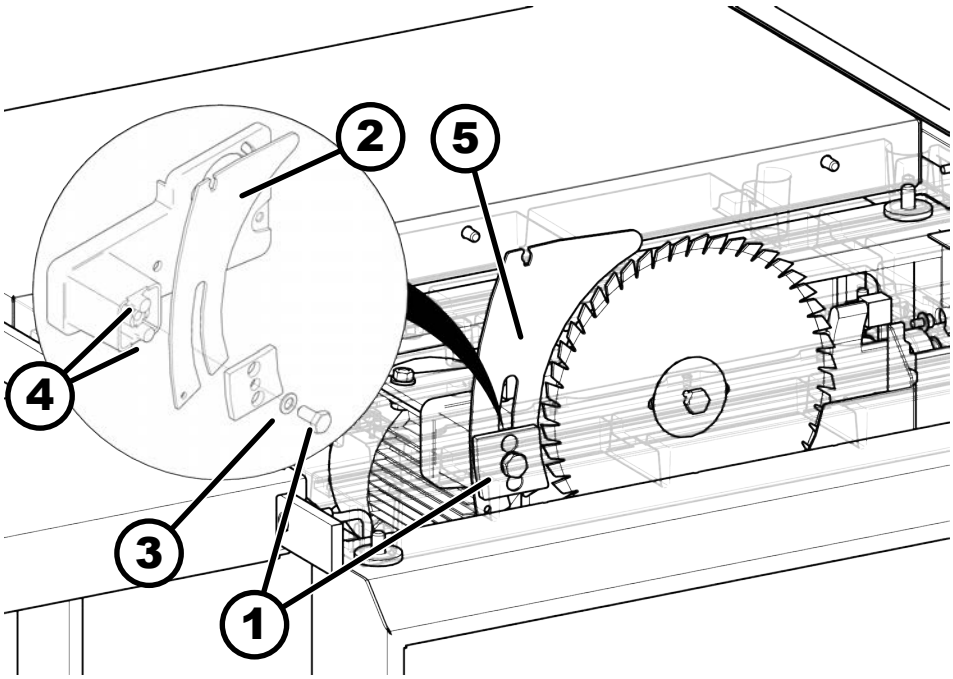


Fig. 12: Fitting the riving knife

1 Clamping screw
2 Riving knife
3 Serrated washers
4 Bolts
5 Saw blade

Tool:

- Combination wrench 17 mm

1. Loosen the clamping screw.

2. Remove the riving knife if required.

3. Insert the riving knife into the holder.

➡ The riving knife holder bolt must sit in the riving knife groove.

4. Move the riving knife into the correct position. ➦ *Chapter 1.4.2 'Loosen / adjust riving knife' on page 15*

5. **WARNING** Flying pieces
Severe injuries and damage to property.

- Minimum tightening torque of the clamping bolt: 25 Nm.

Tighten the clamping screw.

Correct selection of the riving knife

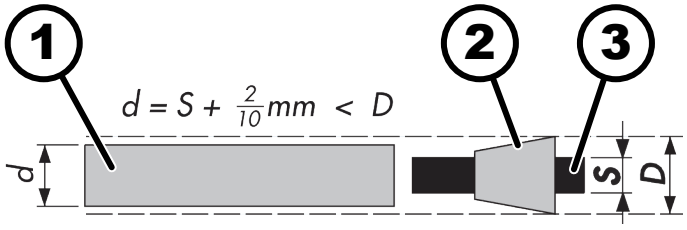


Fig. 13: Suitable riving knife for the saw blade

1 Riving knife thickness (d)
2 Saw tooth width (D)
3 Saw blade body (S)

The riving knife has to be adapted to the thickness of the saw blade. The thickness of the riving knife must be between that of the saw blade body and the width of the saw tooth.

The riving knife must be adapted to the saw blade diameter. Observe the markings on the riving knife.

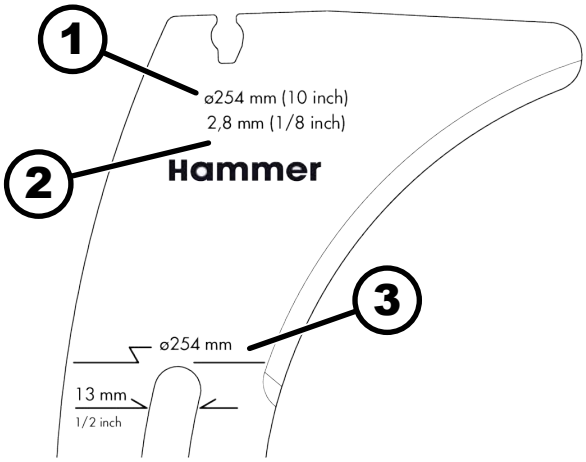


Fig. 14: Riving knife markings

1 Saw blade diameter
2 Riving knife thickness
3 Saw blade diameter markings

1.4.4 Remove the riving knife

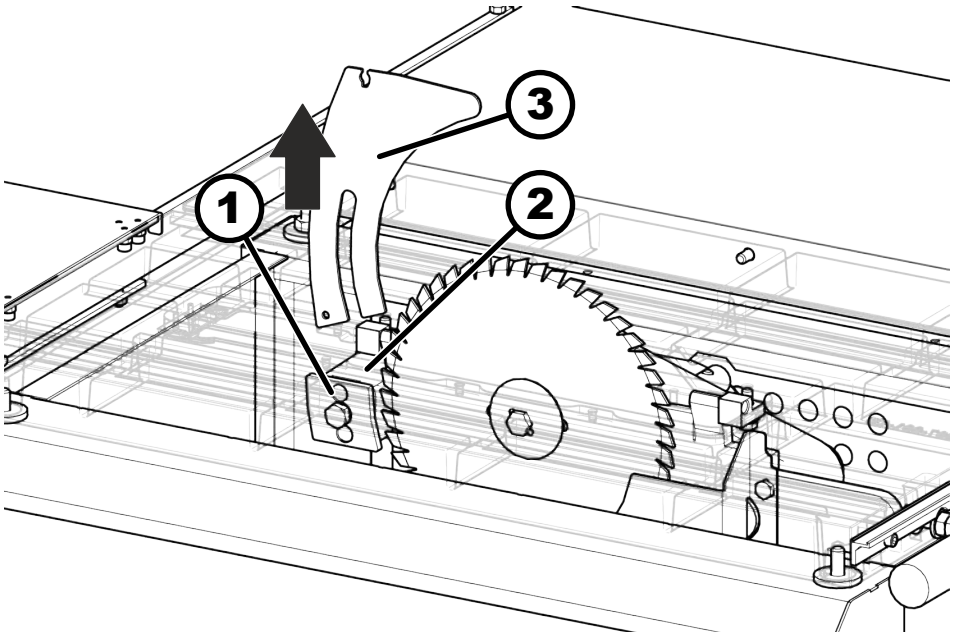


Fig. 15: Remove the riving knife

1 Clamping screw
2 Riving knife holder
3 Riving knife

WARNING

Serious injury arising from contact with the rotating saw blade

If working without a riving knife, the workpiece could become jammed after the saw blade.

- Operation without the riving knife is only allowed when using grooving tools.
- A riving knife is required when working with circular saw blades.

Remove the riving knife:

Tool:

- Combination wrench 17 mm

1. Preparing the machine for a tool change. ➥ *Chapter 1.3.2 'Prepare to change tooling' on page 11*
2. Loosen the clamping screw.
3. Pull the riving knife upwards out of the riving knife holder.
4. **WARNING** Flying pieces
   Severe injuries and damage to property.
   - Minimum tightening torque of the clamping bolt: 25 Nm.

   Tighten the clamping screw.

1.5 Grooving tools

1.5.1 Retooling to an operation with grooving tools

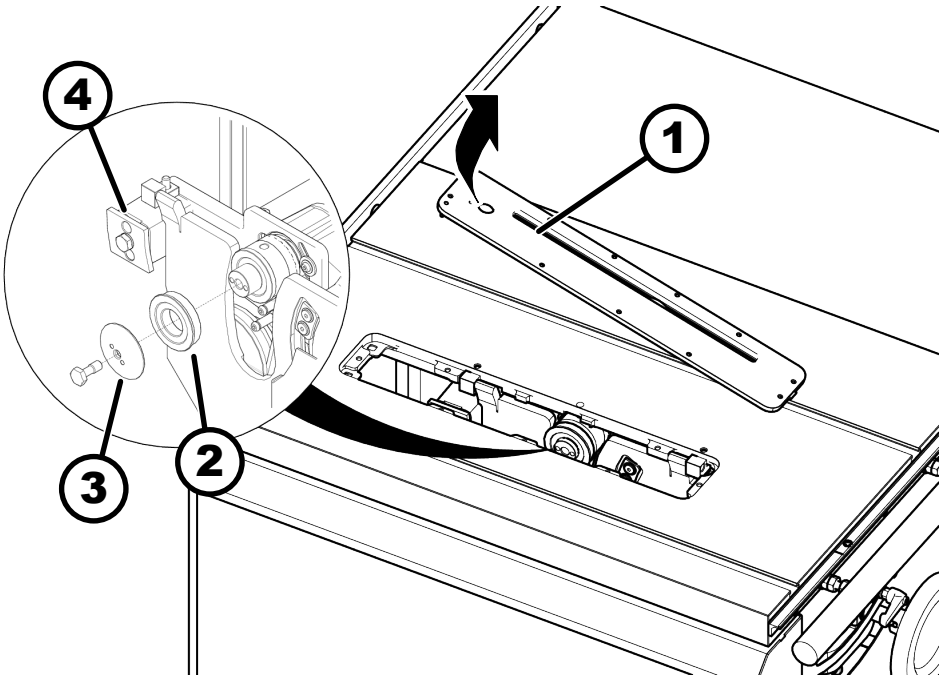


Fig. 16: Rear flange / riving knife holder / insert board

1 Insert board
2 Rear flange
3 Flange for circular saw blades
4 Riving knife removed

WARNING

Sharp and hot tool cutting edges

Cuts and burns due to sharp and hot tools.

- Wear protective gloves.
- Adjustments to the machine or changing the tools may only be done once the machine has stopped.

Tool:

- Spanner 17 mm

1. Preparing the machine for a tool change. ➦ *Chapter 1.3.2 'Prepare to change tooling' on page 11*
2. Remove insert board.
3. Remove the saw blade.
4. Remove the riving knife.
5. Remove the rear flange.
6. Position the saw aggregate in the 90° position (cutting angle 0°).

1.5.2 Clamping the grooving tool

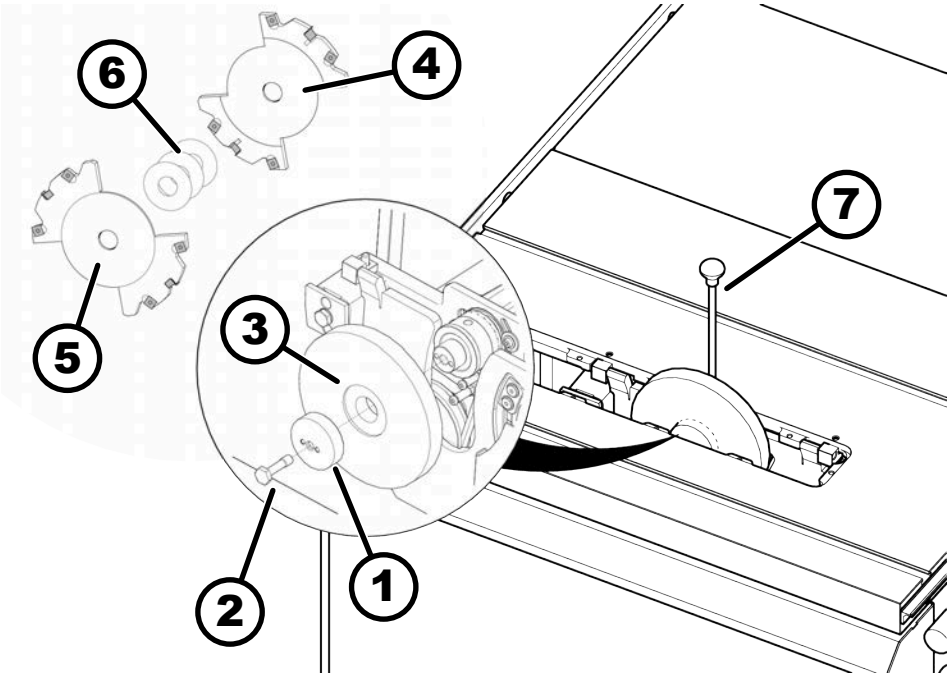


Fig. 17: Insert grooving tool

1 Flange for grooving tools
2 Clamping screw grooving tool (M10x40 L)
3 Grooving tool
4 Grooving tool Part 1
5 Grooving tool Part 2
6 Spacer washers
7 Locking pins

WARNING

Incorrect clamping of the grooving tool

Severe injuries caused by rotating or colliding tools.

- Do not use a tool-free clamping system.
- Always use the grooving tool flange.

Tool:

- Spanner 17 mm
- Locking pins

1. Machine preparation for working with grooving tooling. ➥ *Chapter 1.5.1 'Retooling to an operation with grooving tools' on page 20*
2. Position the saw aggregate in the 90° position (cutting angle 0°).
3. Place the first part of the grooving tool onto the saw arbour.
   ➡ Pay attention to ensure the correct rotation direction of the tool.
4. Adjust the grooving width with spacer washers.
5. Place the second part of the grooving tool onto the saw arbour.
   ➡ Both tool halves must engage with each other.
6. Attach the grooving tool flange.

7. Secure the saw arbour against rotation.
   - Insert the locking pin into the hole on the circular saw table.
   - Turn the circular saw shaft until the locking pin engages.
8. **WARNING** Flying pieces
   Severe injuries and damage to property.
   - Minimum tightening torque of the clamping bolt: 20 Nm.

   Tighten the clamping screw with fork wrench.
   Left screw thread, tighten by turning counter clockwise.
9. Remove the locking pin from the hole.

Insert the insert board to reduce the gap between the tool and machine table

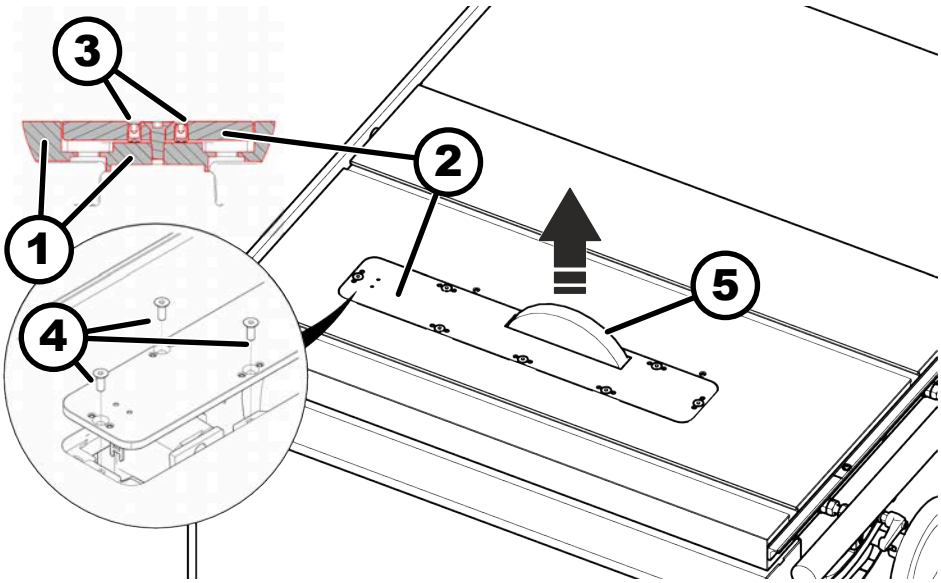


Fig. 18: Inserting the insert board for grooving tool

1 Machine table
2 Insert board (Art.-no. 500-07-206)
3 Grub screws
4 Flat head screws M6x16
5 Grooving tool

Tool:

- Allen key 4 mm
- Allen key 3 mm

1. Lower the circular saw unit down as far as it goes.

2. Inserting the insert board for grooving tool.
   - Position the insert board in the machine table from above.
   - If necessary, correct the position of the insert board with the grub screws.
   - Screw in 7 countersunk screws with an Allen key.

   ➡ The insert board must sit flush with the machine table.

   Under no circumstances should workpieces be allowed to stick to the insert board.
3. Switch machine on. ➥ *Chapter 2.2 'Switch on / switch off / shutdown due to an emergency stop' on page 26*
4. Slowly, move the grooving tool upwards and the insert board will as a result be milled out.

1.5.3 Removing the grooving tools - Retool to a saw blade operation

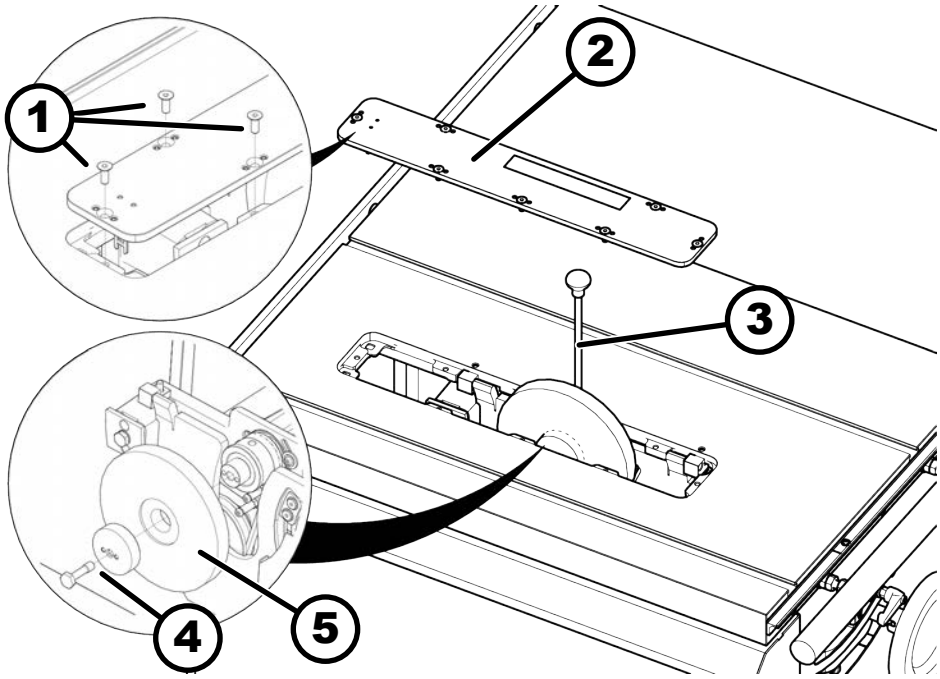


Fig. 19: Remove grooving tool

1 Flat head screws M6x16
2 Insert board (Art.-no. 500-07-206)
3 Locking pins
4 Flange for grooving tools and clamping screws
5 Clamping screw grooving tool (M10x40 L)

Tool:

- Allen key 4 mm
- Spanner 17 mm
- Locking pins

1. Inserting the insert board.
   - Unscrew in 7 countersunk screws with an Allen key.
   - Remove insert board from the machine table.

2. Secure the saw arbour against rotation.
   - Insert the locking pin into the hole on the circular saw table.
   - Turn the circular saw shaft until the locking pin engages.
3. Loosen the clamping screw with a fork wrench.
   Left screw thread, loosen by turning clockwise.
4. Remove the clamping bolt and grooving tool flange.
5. Remove the grooving tool.

Fit the saw insert board and saw blade

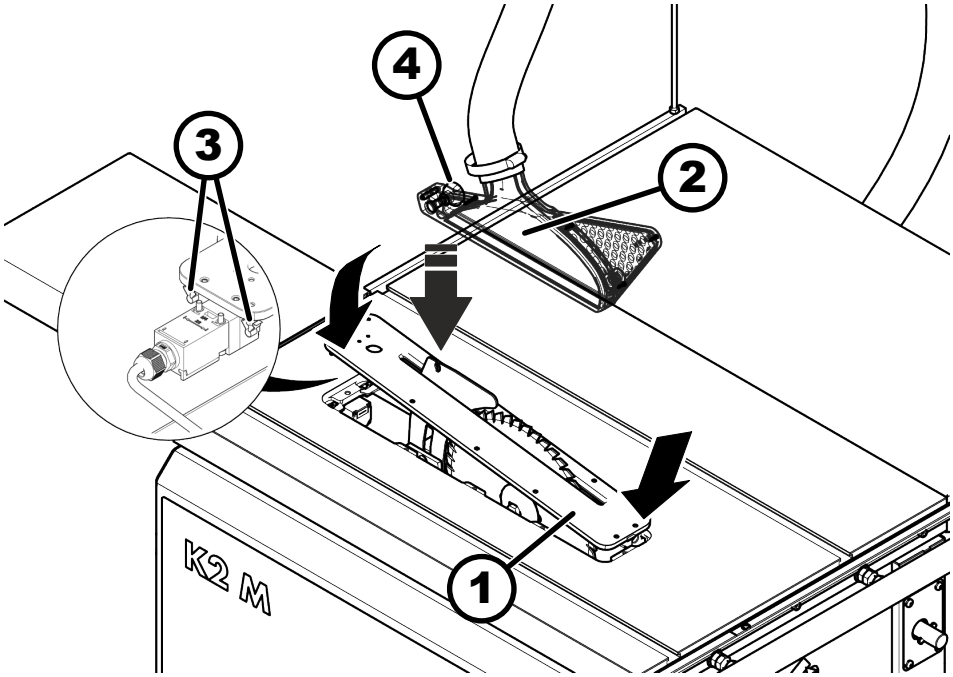


Fig. 20: Operational readiness - Saw blade work

1 Insert board
2 Saw guard
3 Spring catches
4 Thumb nut

1. Mount the rear flange.
2. Install the saw blade in the machine. ➥ *Chapter 1.4.1 'Installing the saw blade in the machine' on page 14*
3. Fit the riving knife. ➥ *Chapter 1.4.3 'Fit /change the riving knife' on page 17*
4. Inserting the insert board.
   - Hook the insert board into the machine table on the right (front).
   - Engage the insert board on the left (rear) in the snap springs.

   ➥ Ensure that the insert board locks in place correctly on the right and the left side.
5. Fitting and adjusting circular saw guard. ➥ *Chapter 1.6 'Fitting and adjusting circular saw guard' on page 25*

6. Prepare the machine to operate. ➦ *'Operational readiness when using saw blades' on page 12*

1.6 Fitting and adjusting circular saw guard

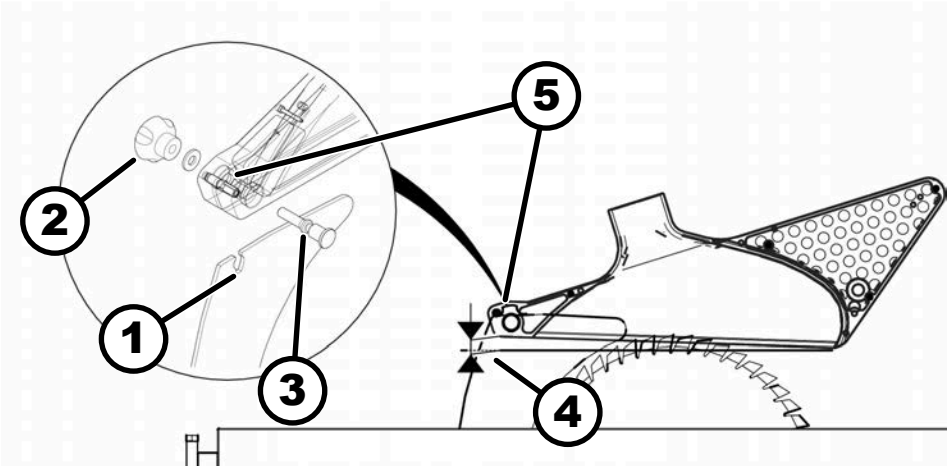


Fig. 21: Adjust circular saw guard

1 Riving knife (recess)
2 Thumb nut
3 Hood stud
4 Distance (inclination - min. 2 mm / max. 4 mm)
5 Adjustment screw (inclination)

To prevent injuries when using the circular saw, the machine must be equipped with a protective hood which is positioned over the saw blade.

Install circular saw guard

1. Loosen the thumb nut.
2. Press the hood stud forwards with the thumb nut.
3. Place the saw guard on the riving knife from above.
   ➡ Make sure that the cover bolts sit correctly in the slot of the splitter.
4. Secure the thumb nut.

Adjust the inclination of the circular saw guard:

Tool:

- Allen key 3 mm

1. Loosen the thumb nut.
2. Adjust the inclination of the saw guard with the adjusting screw.
   ➡ Pay attention to setting value of the distance in the graphic.
3. Secure the thumb nut.

2 Use

2.1 Auxiliary aids for safe operation

- Support long workpieces with additional supports (e.g. table extensions, roller supports).

- Keep tools for processing short and narrow workpieces close at hand (e.g. push grip, pushing stick, workpiece holder).

2.2 Switch on / switch off / shutdown due to an emergency stop

WARNING

Insufficient preparation

Severe injuries and damage to property

- Do not start the machine until all prerequisites have been met and all preparatory work has been completed.
- Read the instructions for setup, adjustment and operation before turning on the machine.

NOTICE

Operating/room temperature

Damages due to storage, material damage

- The machine may only be operated in dry and frost-free rooms at temperatures between +5 and +40 °C.

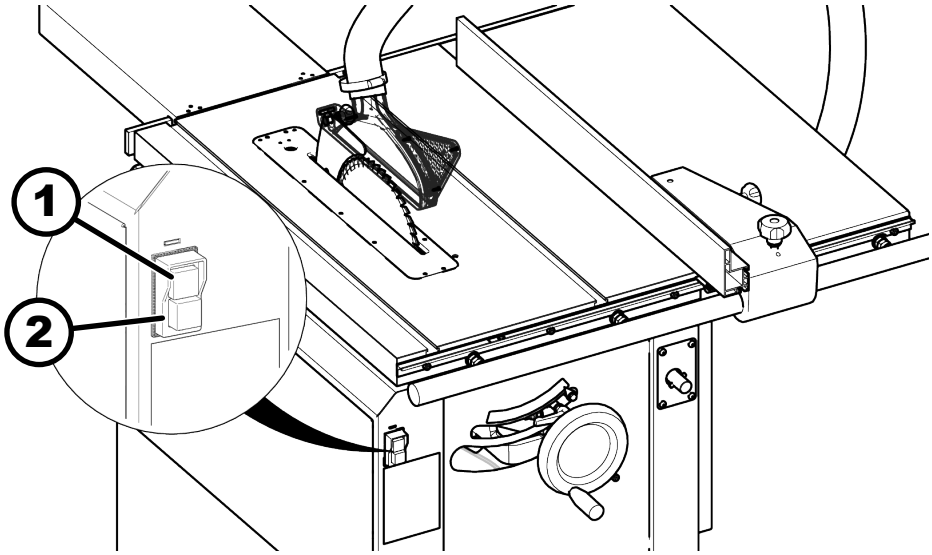


Fig. 22: Switch on / off

1 Green start button - Saw blade ON
2 Red stop button - Saw blade OFF

Switching on

1. Connect the plug to the power supply.
2. Press the green *[Start]*-button on the control panel and release.

Switch off / Emergency stop

1. Press the red *[Stop]* button.
   ➡ The machine stops immediately.
2. Disconnect the machine from the main power supply.

2.3 Working techniques

2.3.1 Working area

WARNING

Ejected workpieces / tool parts

Risk of injury due to ejected workpieces and workpiece parts (e.g. cutting tools, branches, trimmings).

Injury due to kickback from cut workpiece parts.

- Never stand directly in the cutting line of the saw blade whilst it is operating (when machining or in idle).
- Assume the correct working position.

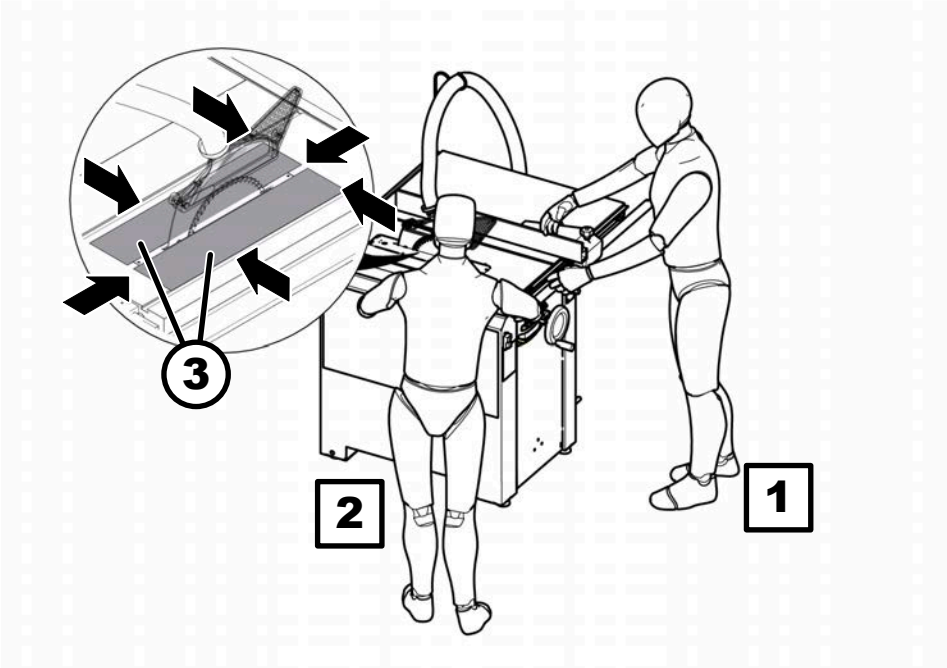


Fig. 23: Working positions

1 Work position when operating with the rip fence
2 Main work position for all other operations
3 Danger zone - 120 mm

The danger zone is the area 120 mm to the left, right, in front of and behind the saw blade.

Do not reach into the danger zone with your hand.

Never place your hands on the workpiece in the danger zone.

2.3.2 Authorised working methods

Only the following working techniques are allowed with the panel saw:

- Trimming only with the use of a trimming device.
- Crosscutting, with parallel or crosscut fence.
- Longitudinal cut 90° to 45°, with a parallel cutting fence.
- Splitting of larger sized panels.

- Covered cuts / rebate on the parallel cutting fence.
- Covered cuts / grooves on the parallel cutting fence with grooving tools.

2.3.3 Prohibited working methods

The following working processes are prohibited on this panel saw:

- All work techniques without the use of the parallel cutting fence, crosscut fence or trimming unit.
- Cutting of round workpieces (in the longitudinal direction).
- Removing the riving knife for insert cuts *).
- Covered cuts *).

*) The following deviations apply to the scope of the Holz-Berufsgenossenschaft (BG) in the Federal Republic of Germany: Insertion cuts and covered cuts are permitted if the operating regulations corresponding to the Employer's Liability Insurance Association (BG) are observed (BG No. 96.18).

2.3.4 General procedures for authorised working techniques

Note

When using appropriate auxiliary equipment and observing the safety distances to the surroundings, there are no limits to the workpiece dimensions.

CAUTION

Spinning of round workpieces

Injury from flying workpieces and parts of the workpieces.

- Secure round workpiece against turning by using a template or holding device.
- Work with the crosscut fence especially with round workpieces.
- Use a suitable saw blade for cross sections.

1. Switch the circular saw off prior to starting work.
2. Ensure that there are sufficient support surfaces (accessories).
3. Keep handling accessories at hand:
   - Push stick, push grip
   - Deflector with holding magnets
4. If required: Set the cutting height, cutting angle and if necessary scoring blade.
5. With machines that have an overhead saw guard:
   - For angle cuts, convert the circular saw top guard to the wide guard.
   - Lower the protective hood to the workpiece height.
6. Before cutting check the collision zone between crosscut fence and saw blade.

7. On machines without extraction system control, switch on the extraction system.
8. Only switch the machine on once the workpiece has been placed in the correct position.
9. Feed the workpiece evenly past the saw blade, keeping your fingers balled into a fist.
10. Use the push stick once you are at the end of the cut.
11. Once the cut is finished, switch the machine off.

2.3.5 Longitudinal cut / cutting of strips

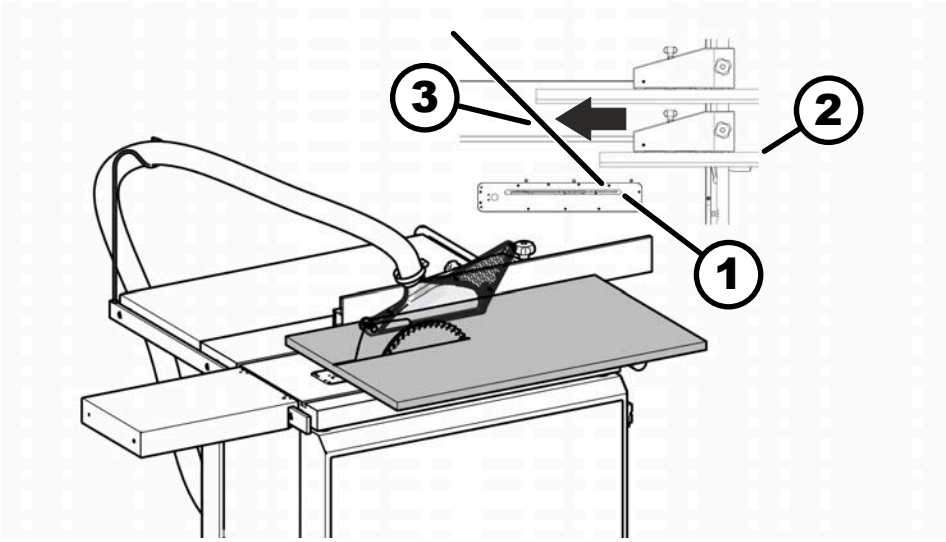


Fig. 24: Rip cut

1 Saw blade
2 Fence plate (guide)
3 imaginary 45° line

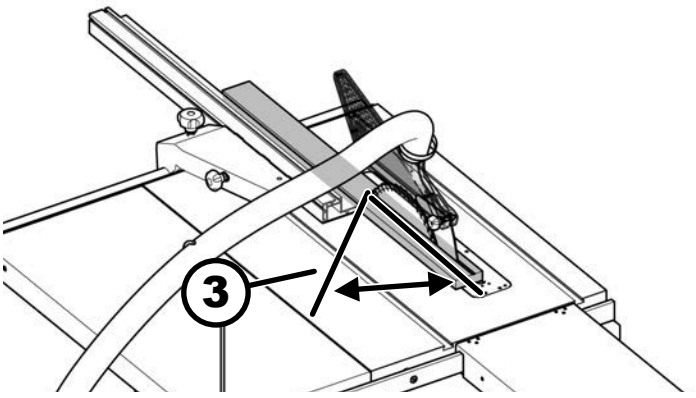


Fig. 25: Cutting strips

WARNING

Rotating saw blade

Severe injury caused by contact with a rotating saw blade.

- Never place your hands on the workpiece in the danger zone.
- Push the workpiece past the saw blade with the push stick.

1. Take note of general procedures for permitted working methods.
2. If required and only when cutting strips:

   Change the fence plate (guide) on the rip fence over on to the narrow guide edge.
3. Adjust the rip fence to the desired position.
4. Set the fence plate (guide):

   Push the fence plate (guide) forwards and clamp it (see illustration).

   The end of the fence plate (guide) rail comes up against a virtual line, which starts at the front edge of the saw blade and runs under to the rear at an angle of 45° across the machine table.

   ➡ The workpiece can not, as a result, become clamped in-between the fence and the saw blade.
5. On machines with sliding table:

   Lock the sliding table into the centre position.
6. Place the workpiece against the rip fence.
7. Switch the saw on.
8. Feed the workpiece evenly past the saw blade, keeping your fingers balled into a fist.

2.3.6 Cutting short, narrower workpieces

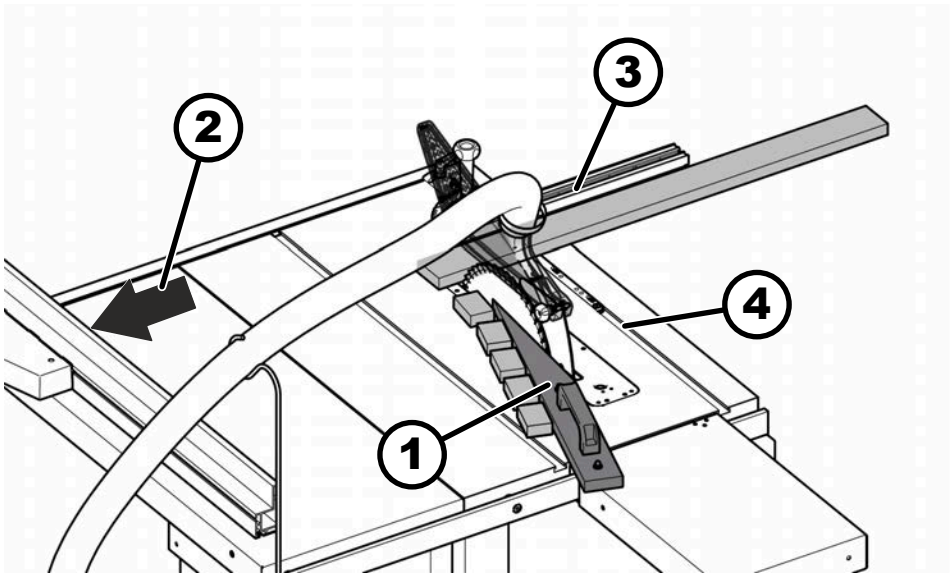


Fig. 26: Cutting short, narrow workpieces

1 Deflector wedge
2 Move the rip fence away

3 Crosscut fence
4 Slot in machine table

1. Take note of general procedures for permitted working methods.
2. Move the rip fence as far away as possible from the saw blade.
3. Attach the off-cut deflector to the machine in such a way that the sawed off pieces do not collide with the rising part of the saw blade.
4. Slide the crosscut fence into the slot in the machine table.
5. Place the workpiece against the crosscut fence.
6. Switch the saw on.
7. Press the workpiece hard against the crosscut stop using both hands.
8. Feed the workpiece evenly past the saw blade, keeping your fingers balled into a fist.
9. Pull the workpiece a few millimetres away from the saw blade and move the crosscut fence into the initial position.

2.3.7 Crosscutting with the crosscut and rip fence

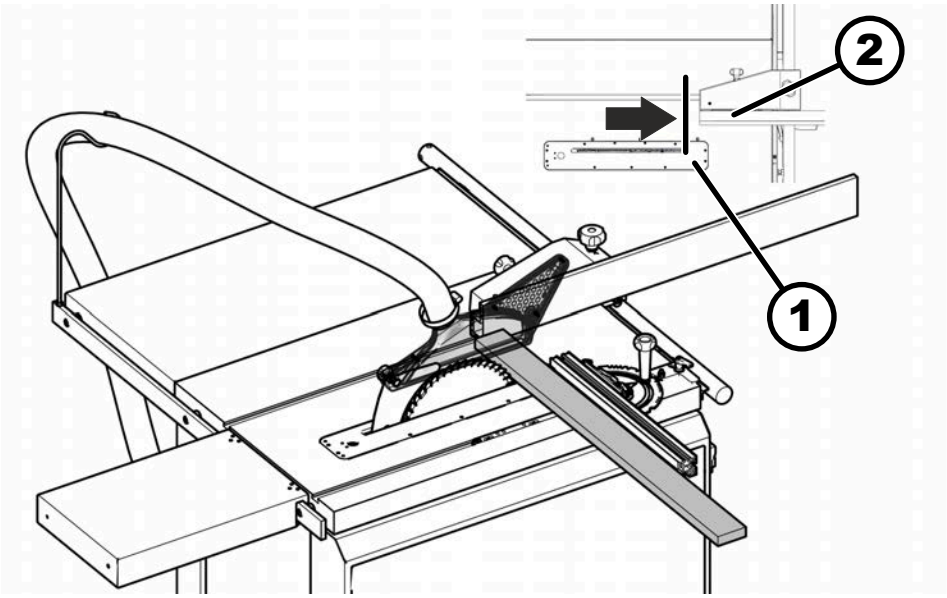


Fig. 27: Crosscutting using the rip fence

1 Saw blade front edge
2 Fence plate (guide)

1. Take note of general procedures for permitted working methods.
2. Adjust the rip fence to the desired position.
3. Set the fence plate (guide):

   Pull back the fence plate (guide) and clamp them (see illustration).

   ➡ The workpiece can not, as a result, become clamped in-between the fence and the saw blade.
4. Slide the crosscut fence into the slot in the machine table.
5. Place the workpiece against the crosscut fence.
6. Switch the saw on.

7. Feed the workpiece evenly past the saw blade, keeping your fingers balled into a fist.
8. Pull the workpiece a few millimetres away from the saw blade and pull the crosscut fence back into the starting position.

2.3.8 Covered cuts (Sägeboy auxiliary fence)

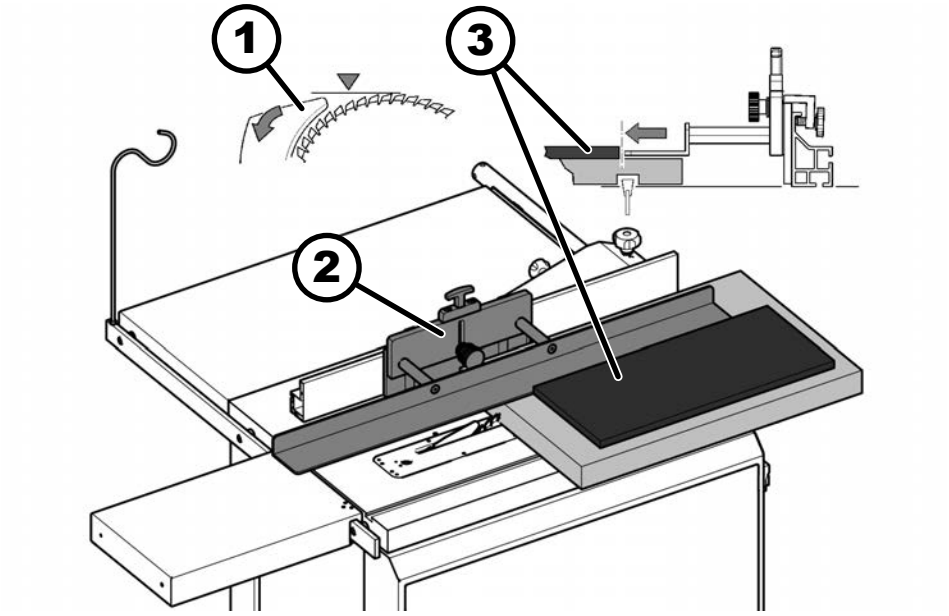


Fig. 28: Covered cuts

1 Riving knife
2 Sägeboy auxiliary fence (accessory)
3 Template (mounted to the workpiece)

WARNING

Lack of protection when performing covered cuts

Severe injury caused by contact with a rotating saw blade.

- Use overhead saw guard or "Sägeboy" auxiliary fence (accessory art. no. 01.0.022).
- Do not pull the rip fence plate (guide) back.
- Do not remove the riving knife.

The offcut strip falls off on the right side of the circular saw. Because of the high risk of kickback, use a push stick to push the workpiece forward.

1. Take note of general procedures for permitted working methods.
2. Remove circular saw guards.
3. Adjust riving knife: When carrying out covered cuts, the highest point of the riving knife must be 0-2 mm below the highest point of the saw blade.
4. Adjust the rip fence so that the edge of the saw blade is flush with the Sägeboy guide rail.

   ➡ The Sägeboy guide rail also serves as a fence for sawing with templates.
5. On machines with sliding table:

   Lock the sliding table into the centre position.

2.3.9 Working with grooving tools (Sägeboy auxiliary fence)

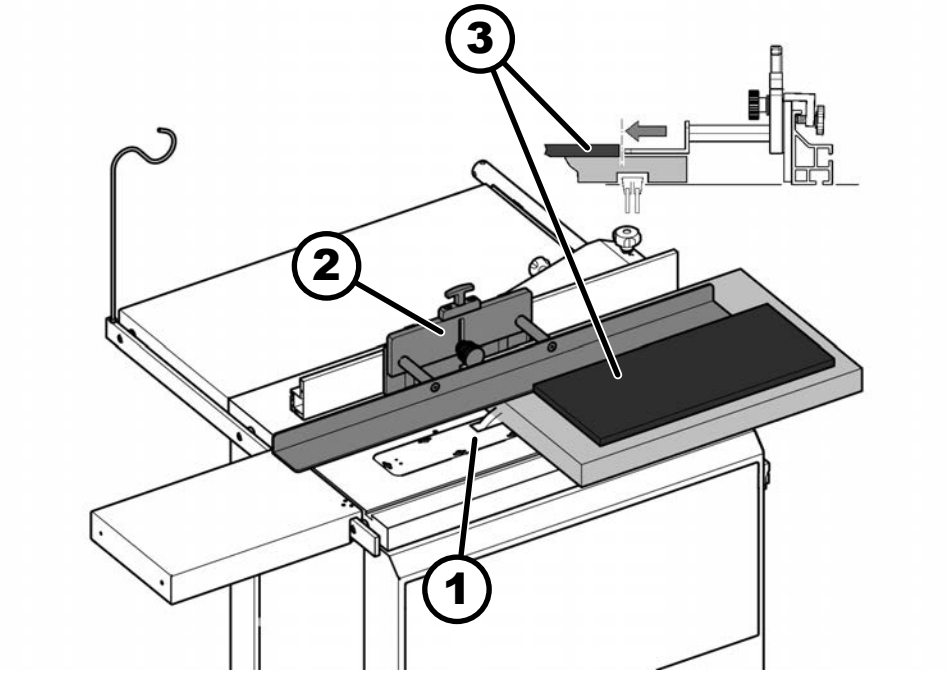


Fig. 29: Working with grooving tools

1 Grooving tool, no riving knife
2 Sägeboy auxiliary fence (accessory)
3 Template (mounted to the workpiece)

NOTICE

Collision between machine components

Material damage when swivelling the saw unit.

- Position the saw aggregate in the 90° position.
- Do not adjust the 90° angle when operating with grooving tooling.

WARNING

Inadequate protection when working with grooving tools

Severe injury caused by contact with a rotating grooving tool.

- Use overhead saw guard or "Sägeboy" auxiliary fence (accessory art. no. 01.0.022).
- Do not pull the rip fence plate (guide) back.
- Remove the riving knife.

Work with grooving tools may only be carried out with an overhead saw guard or Sägeboy auxiliary fence (accessory art. no. 01.0.022).

Do not, under any circumstances, use a saw blade guard (guard mounted onto riving knife).

1. Take note of general procedures for permitted working methods.
2. Convert machine to operation with grooving tools.

3. Adjust the rip fence so that the edge of the saw blade is flush with the Sägeboy guide rail.

   ➡ The Sägeboy guide rail also serves as a fence for sawing with templates.

4. On machines with sliding table:

   Lock the sliding table into the centre position.

   If an eccentric clamp is used, mill out the groove using the sliding table.

5. Always use the crosscut fence when making transverse grooves. ➦ *Chapter 2.3.7 'Crosscutting with the crosscut and rip fence' on page 31*

6. When feeding the workpiece forward, press it hard onto the machine or sliding table.

3 Maintenance

3.1 Maintenance schedule

The following maintenance work must be performed at the prescribed intervals.

Chap.	Task to execute	Every 8 operating hours	Every 160 operating hours	Monthly	Twice a year	Page
3.4.1	Clean the machine thoroughly	X				36
3.4.3	Lubricate the height guide of the circular saw unit				X	37
3.4.4	Check dust extractor for any damage	X				38
3.4.4	Check the effectiveness of the dust extractor		X			38
3.4.5	Check safety devices (emergency stop)				X	38
3.4.5	If the machine is equipped with an *[emergency stop]* button, test the functionality			X		38
3.4.5	Check the red *[stop]* button and the emergency stop on machines not equipped with an *[emergency stop]* button			X		39
3.4.6	Check effectiveness of safety devices (end switch)			X		40
3.4.7	Lubricating the circular saw height spindle and tilting spindle				X	41
3.5.1	Check belt tension and belt condition				X	42

3.2 Preparations for maintenance work / Removing the cover plate

Instructions to maintenance technicians

If the maintenance technician has to check whether they have carried out their work correctly or troubleshoot whilst the machine is running, the following instructions must be followed:

- To ensure quick and unmistakable communication, visual contact between the operators must be kept at all times.
- Operators should repeat and confirm instructions before they are carried out.
- Wait for all the moving parts to come to a standstill.
- Only start the machine when there is no one within the safety zone.
- Maintenance technicians need to be fully aware of how the machine operates and moves, and they must be familiar with the exact operating sequence.
- Keep a record of all maintenance work.

Remove the cover plate from the rear and front side

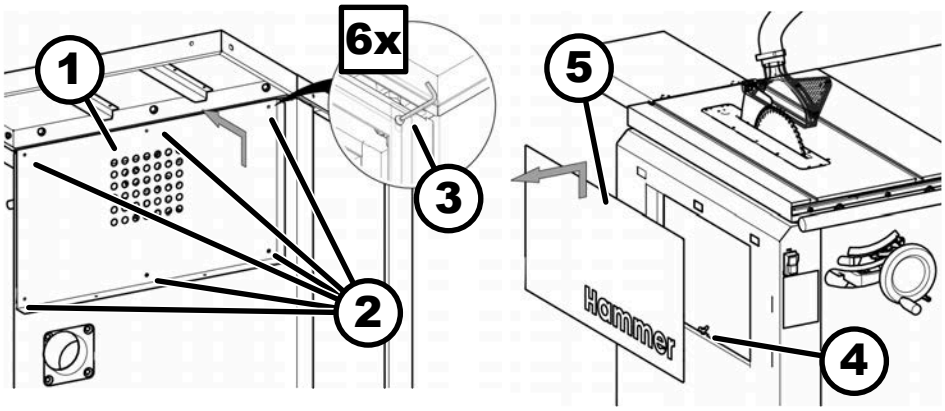


Fig. 30: Remove the cover plate

1 Cover plate (rear side)
2 Hex screws M6 x 30
3 Allen key 4 mm
4 Wing nut
5 Cover plate (front side)

Remove both cover plates for the following maintenance tasks.

Tool:

- Allen key 4 mm

1. Switch off the machine and secure it against being switched on again.

2. Disconnect the machine from the mains power supply.

3. Remove the cover plate from the rear side:

- Release the hex screws (6x).
- Push the cover plate upwards and remove it.

4. Remove the cover plate from the front side:
   - Loosen the wing nut inside the machine.
     The wing nut can be reached from the rear side of the machine.
   - Push the cover plate upwards and remove it from the front.
5. To reassemble, follow the instructions in the reverse order.
   ➡ The respective cover plate must be in contact with the machine chassis on all sides before tightening it.

3.3 Cleaning and lubricating

- Do not use compressed air to clean, as this will blow dust and shavings into the various ball bearings and guides.
- Only use low dust emission vacuum to remove dust deposits.
- Carry out cleaning when required, after each workday or at the very latest after 8 hours of operation.

NOTICE

Caustic or abrasive cleaning detergents

Damage to the surface of the machine

– Never use caustic or abrasive cleaning detergents.

Note

Cleaning and care products are available as accessories (see: Tools and accessories catalogue / Online shop: www.felder-shop.com).

3.4 General maintenance procedures

3.4.1 Clean the machine thoroughly

CAUTION

Sharp tools

Cut injuries

– Use tools carefully.
– Wear gloves.
– Use safety equipment.

Personnel:

- Trained machine operator

Protective equipment:

- Protective clothing

Tool:

- Cleaning cloths
- Vacuum cleaner

1. Switch off the machine and secure it against being switched on again.

2. Clean the machine of dust, shavings, waste material and other contaminants.
3. Cleaning the table surface and the guide tracks. Remove any resin residue.
4. Clean rip fence inc. guiding shaft and check that they work properly.
5. Carry out a visual check of all machine components.
   ➡ If any damage is identified on the machine or of the components, then these are to be fixed immediately.
6. Switch machine on.

3.4.2 Belt tension

The belt tension is factory set to the ideal value.

In time, the belt can stretch, causing the power transmissi-on to deteriorate. The belt tension must be corrected in such a case. ➦ *Chapter 3.5.3 'Re-tensioning the drive belt' on page 44*

If rips or tears are discovered during the monthly inspection, the belt must be replaced immediately.

3.4.3 Lubricate the height guide of the circular saw unit

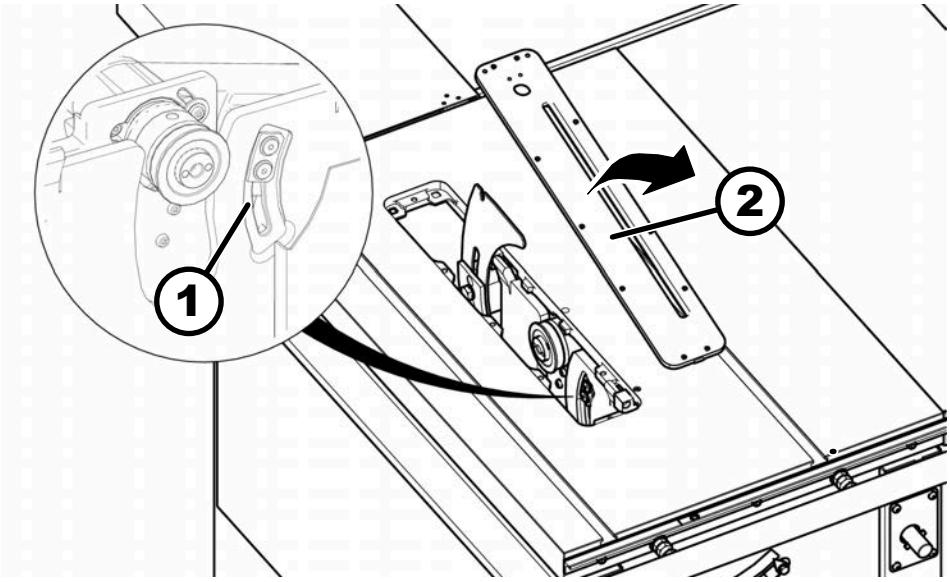


Fig. 31: Lubricate the height guide

1 Height guide
2 Insert board

Material:

- Machine Grease

1. Switch off the machine and secure it against being switched on again.
2. Preparing the machine for a tool change. ➦ *Chapter 1.3.2 'Prepare to change tooling' on page 11*
3. Remove insert board and saw blade.
4. Thoroughly clean the height guide from chips, dust and grease residues.

5. Lubricate height guides with normal machine grease.

   Spread the grease with a brush onto the guide.

6. Position the saw unit in the lowest and then the most uppermost position.

7. Prepare the machine to operate. ➥ *Chapter 1.3.3 'Establish operational readiness' on page 12*

3.4.4 Check dust extractor

Check dust extractor for any damage

1. Switch off machine and dust extractor.
2. Carry out a visual inspection of all extraction hoses.
3. Check the condition of the whole extraction system.
4. For machines with effectively connected potential-free contact to the extraction system control:
   - Switch machine on.
   - Check that the extraction system runs with the machine.
5. On machines without extraction system control:
   - Switch on dust extractor.
   - Switch machine on.
6. Perform a visual inspection of all machine parts.
   ➥ If any damage is identified on the machine or of the components, then these are to be fixed immediately.

Check the effectiveness of the dust extractor

1. Measure air flow and air speed.
2. The extraction performance must be sufficient to achieve the negative pressure and air speed required at the connection point (see technical data or layout).

3.4.5 Check safety devices (emergency stop)

Safety equipment must be checked every six months. The saw shaft with clamped saw blade must be brought to a complete stop within 10 seconds. In the event of any problems or malfunctions, please contact a member of Felder-Group service centre.

Alternatively, machines without a separate feed motor or scoring motor can be equipped with red *[Stop]* buttons instead of the *[Emergency Stop]* buttons.

If the machine is equipped with an *[emergency stop]* button, test the functionality

Carry out emergency stop test with all red *[Stop]* buttons on the machine.

1. Prepare the machine to operate.
2. Switch machine on.

3. Push the *[Emergency stop]*.

OK **Machine stops immediately.**

1. Continue with next step.

NOK **Machine does not stop immediately.**

1. If present: Switch off *[Main switch]* (position *"O" / "OFF"*).
2. Disconnect the machine from the mains power supply.
3. Contact Felder-Group service centre.

4. Switch the machine on using the green *[start]* button with the *[emergency stop]* button locked.

OK **Machine does not start.**

1. Unlock the *[Emergency stop]* button by turning it.
2. Repeat with all *[Emergency Stop]* buttons on the machine.

NOK **Machine can be started.**

1. Press the red *[Stop]* button.
2. If present: Turn the *[main switch]* off (position *"O" / OFF*) and secure it.
3. Contact Felder-Group service centre.

Check the red *[stop]* button and the emergency stop on machines not equipped with an *[emergency stop]* button

Carry out emergency stop test with all red *[Stop]* buttons on the machine.

1. Prepare the machine to operate.
2. Switch machine on.
3. Press the red *[Stop]* button.

OK **Machine stops immediately.**

1. Repeat the test on the next red *[Stop]* button.
2. Repeat with all red *[Stop]* buttons on the machine.

NOK **Machine does not stop immediately.**

1. If present: Switch off *[Main switch]* (position *"O" / "OFF"*).
2. Disconnect the machine from the mains power supply.
3. Contact Felder-Group service centre.

Check the time it takes for the machine to come to a stop

Configuration of the machine without a motor brake:

The machine is not equipped with a motor brake. The design of the machine guarantees that the saw arbour comes to a standstill within the legally applicable standstill time of 10 seconds.

1. Prepare the machine to operate.
2. Switch the machine on and briefly let it run.

3. Switch machine off with the red *[Stop]* button.

   The saw shaft with clamped saw blade must be brought to a complete stop within 10 seconds.

   OK **Machine comes to a standstill within 10 seconds.**

   1. Checking the time for the machine to come to a stop completed.

   NOK **Machine takes longer than 10 seconds to come to a standstill.**

   1. If present: Switch off *[Main switch]* (position *"O" / "OFF"*).
   2. Disconnect the machine from the mains power supply.
   3. Contact Felder-Group service centre.

3.4.6 Check effectiveness of safety devices (end switch)

Note

The saw blade only operates if the limit switch inside the machine frame has not been actuated (insert board must be inserted).

In the event of any problems or malfunctions, please contact a member of the Felder Group service centre.

Ensure that the safety break switch is working properly

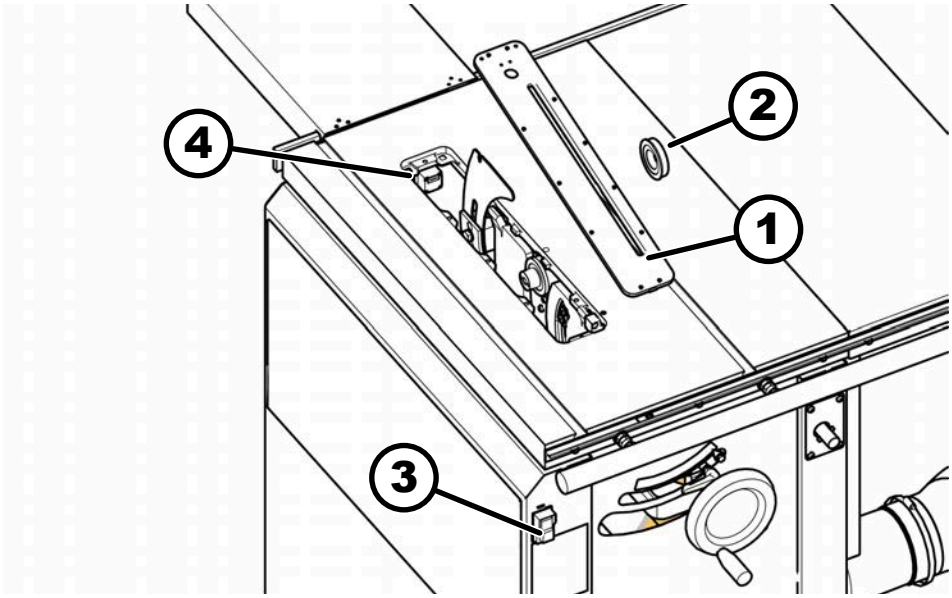


Fig. 32: Safety limit switches - Insert board

1 Insert board
2 Rear flange
3 Green start button - Saw blade ON
4 Limit switch

1. Switch off the machine and secure it against being switched on again.
2. Preparing the machine for a tool change. ➥ *Chapter 1.3.2 'Prepare to change tooling' on page 11*
3. Remove the insert board, saw blade and rear flange.

4. Press the green *[Start]*-button on the control panel.
   ➡ The machine will not switch on (insert board removed).
5. The saw blade only operates if the limit switch inside the machine frame has not been actuated (insert board must be inserted).

3.4.7 Lubricating the circular saw height spindle and tilting spindle

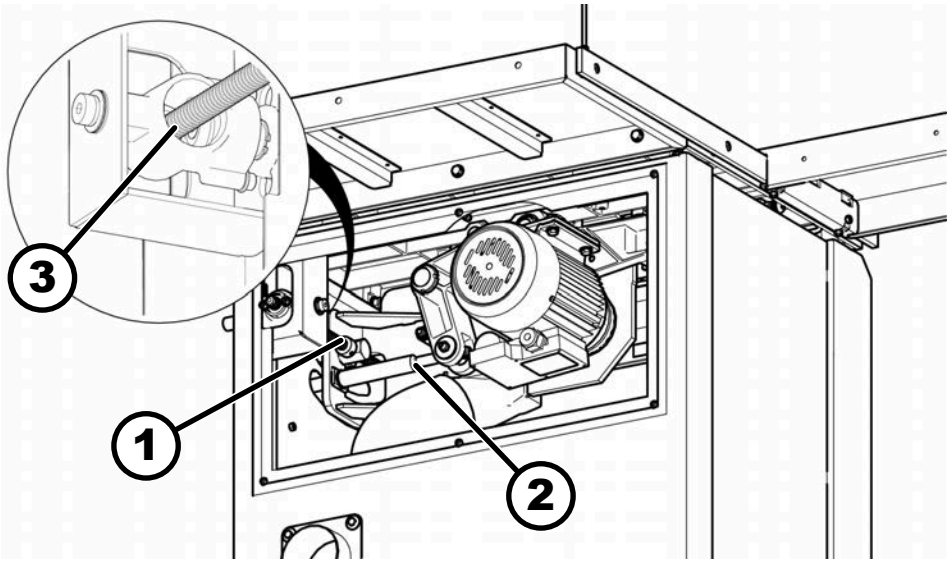


Fig. 33: Lubricate adjustment spindle

1 Tilting spindle
2 Height spindle
3 Bevel gearbox (angle adjustment)

Tool:

- Grease gun

Material:

- Machine Grease

1. Switch off the machine and secure it against being switched on again.
2. Disconnect the machine from the mains power supply.
3. Remove the rear cover plate. ➦ *Chapter 3.2 'Preparations for maintenance work / Removing the cover plate' on page 35*
4. Lubricating the height spindle:
   - Position the saw aggregate in the uppermost position.
   - Lubricate height spindle with normal machine grease.
5. Lubricating the tilting spindle:
   - Tilt the saw aggregate in the 90° position (cutting angle 0°).
   - Lubricate the swivel spindle with normal machine grease.
6. Lubricating the bevel gearbox:
   - Insert the flexible hose of a grease gun into the gearbox housing.
   - Lubricate the gearbox with a press stroke.

7. Tilt the saw unit to a 45° position and then back to a 90° position.
   Position the saw unit in the lowest and then the most uppermost position.
8. Place the cover plate in position and hang it on the screws.
   The cover plate must be in contact with the machine chassis on all sides.
9. Tighten screws (6x).

3.5 Checking/changing the circular saw drive belt

3.5.1 Check belt tension and belt condition

- The belt tension is factory set to the ideal value.
- The belt tension is specified as an oscillation frequency in hertz (Hz).
- The correct belt tension can only be checked with a measuring device.

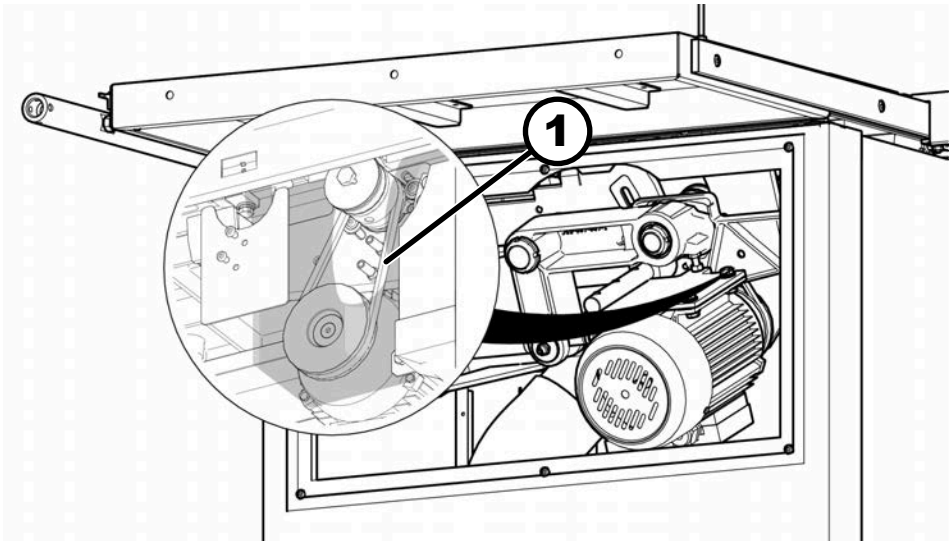


Fig. 34: Checking the drive belt

1 Drive belt tension 210 - 230 Hz

1. Tilt the saw to the approx. 30° position. Move the saw blade to the lowermost position.
2. Switch off the machine and secure it against being switched on again.
3. Disconnect the machine from the mains power supply.
4. Remove the rear cover plate. ➥ *Chapter 3.2 'Preparations for maintenance work / Removing the cover plate' on page 35*
5. Check belt tension and belt condition:
   - Check the condition of the entire belt with a few manual turns.
   - If any rips or tears are discovered, the belt must be changed.
6. Place the cover plate in position and hang it on the screws.
   The cover plate must be in contact with the machine chassis on all sides.
7. Tighten screws (6x).

3.5.2 Replacing the drive belt

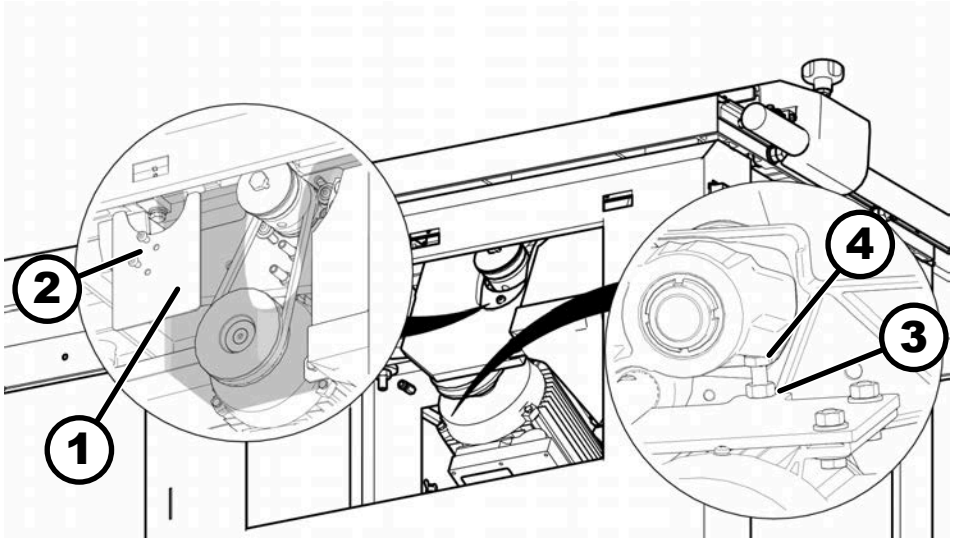


Fig. 35: Replacing the drive belt

1 Guard plate
2 Screws M6x10
3 Locking nut
4 Tightening screw

Tool:

- Spanner 13 mm
- Allen key 4 mm

1. Tilt the saw to the approx. 30° position. Move the saw blade to the lowermost position.

2. Switch off the machine and secure it against being switched on again. Remove the saw blade.

3. Disconnect the machine from the mains power supply.

4. Remove the front and rear cover plate. ➦ *Chapter 3.2 'Preparations for maintenance work / Removing the cover plate' on page 35*

5. Loosen the screw and remove the guard plate.

6. Loosen locking nut.

7. Loosen the tensioning screw and release the tension on the old drive belt.

8. Remove the old drive belt.

9. Hook the new drive belt into place:

- First hook onto the saw shaft.
- Pull the drive motor upwards.
- Hook the drive belt on the drive motor.

10. Tension drive belt. ➦ *Chapter 3.5.3 'Re-tensioning the drive belt' on page 44*

11. Place the guard plate and screw on.

12. Mount the front cover plate.

    Mount the rear cover plate.

    ➡ The respective cover plate must be in contact with the machine chassis on all sides before tightening it.

3.5.3 Re-tensioning the drive belt

NOTICE

Do not over-tension the drive belt

An over-tightened drive belt can tear or cause bearing damage.

– Stop turning the belt-tensioning screw once the drive belt is tensioned sufficiently, enabling it to transmit power effectively.

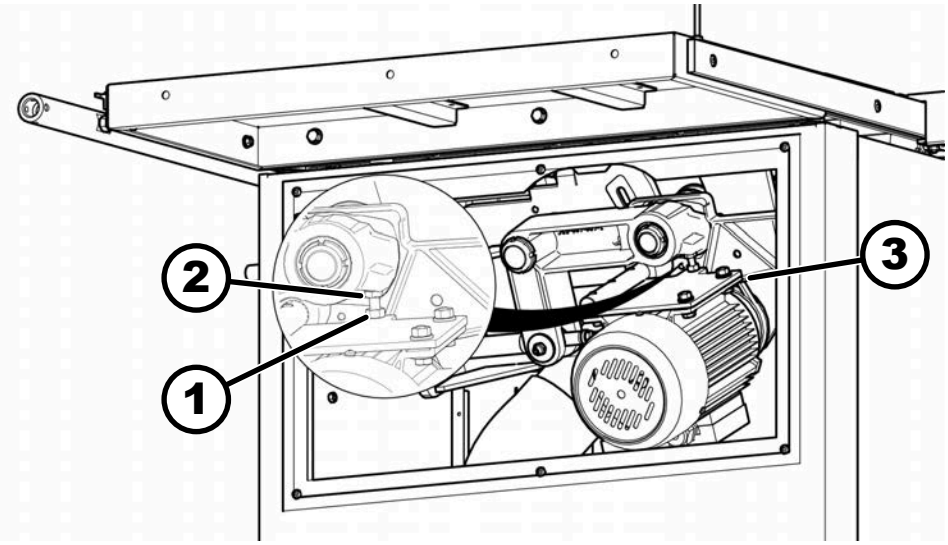


Fig. 36: Re-tensioning the drive belt

1 Locking nut
2 Tightening screw
3 Drive belt tension 210 - 230 Hz

Tool:

- Spanner 13 mm

1. Tilt the saw to the approx. 30° position. Move the saw blade to the lowermost position.
2. Switch off the machine and secure it against being switched on again.
3. Disconnect the machine from the mains power supply.
4. Remove the rear cover plate. ➦ *Chapter 3.2 'Preparations for maintenance work / Removing the cover plate' on page 35*
5. Loosen locking nut.
6. Use the belt-tensioning screw to tension the drive belt.
7. Tighten locking nut.
8. Place the cover plate in position and hang it on the screws.

   ➡ The cover plate must be in contact with the machine chassis on all sides.
9. Tighten screws (6x).

4 Troubleshooting

4.1 What to do in the event of a malfunction

WARNING

Improper troubleshooting

Severe injuries and damage to property

– Troubleshooting may only be carried out by authorised, trained personnel who are familiar with how to operate the machine and are in strict observance of all safety instructions.

In the event of malfunctions that pose an immediate threat to persons, equipment or operational safety:

1. Stop the machine immediately pressing either the *[Emergency Stop]* or the red *[Stop]* button.
2. Disconnect the machine from the mains and ensure it can not be switched on again.
3. Have an authorised specialist determine the cause and repair the malfunction.

4.2 What to do after rectifying the fault

Check,

1. if the malfunction and cause of the malfunction have been professionally remedied.
2. whether all safety equipment has been installed in accordance with regulations and are technically and functionally in perfect condition.
3. whether, there are no individuals located within the danger area of the machine.

4.3 Faults, causes and repairs

The following examples highlight possible undesired conditions of the machine. This list makes no claim to completeness.

This information is designed to help operators recognise faults when operating the machine and to rectify them.

Fault on the machine - saw unit

Fault description	Cause	Remedy
The red *[Stop]* button will not stop the machine immediately	Fault in the electrical system	1. Disconnect the machine from the mains power supply. 2. Contact Felder-Group service centre.
Safety limit switch without function	Fault in the electrical system	1. Disconnect the machine from the mains power supply.

Fault description	Cause	Remedy
Safety limit switch without function	Fault in the electrical system	**2.** Contact Felder-Group service centre.
Machine cannot be switched off	Fault in the electrical system / *[Emergency stop]* - command chain	**1.** Disconnect the machine from the mains power supply. **2.** Contact Felder-Group service centre.
Machine is not functioning	Error in the electrical connection	Check the electrical connection (power cable, fuses).
Circular saw shaft doesn't start	Safety limit switch not actuated (insert board removed)	Prepare the machine to operate.
	[Motor safety switch] has been triggered	Let the motor cool down, restart the machine.
The motor is running but the saw blade is not rotating	The drive belt is torn	Replacing the drive belt.
The belts squeal when switched on or started	The belt tension is too slack	Check belt tension, retighten if necessary.
	The drive belt is worn out	Replacing the drive belt.
Saw blade cannot be brought to a stop within 10 seconds	Fault in the electrical system / brake	Contact Felder-Group service centre.

Fault on the machine - mechanical

Fault description	Cause	Remedy
The height of the rip fence guide above the machine table is not correct	The height adjustment is misadjusted	Readjust the height of the guide.
The rip fence angle is not correct	The angle adjustment is misadjusted	Readjust/correct the rip fence angle.
Unsatisfactory cuts	Saw blade is blunt or incorrectly selected for the workpiece	Changing the saw blade.
	Cutting height is set too high	Only set the cutting height to the height actually required.

4.4 Adjust the height of the rip fence above the machine table

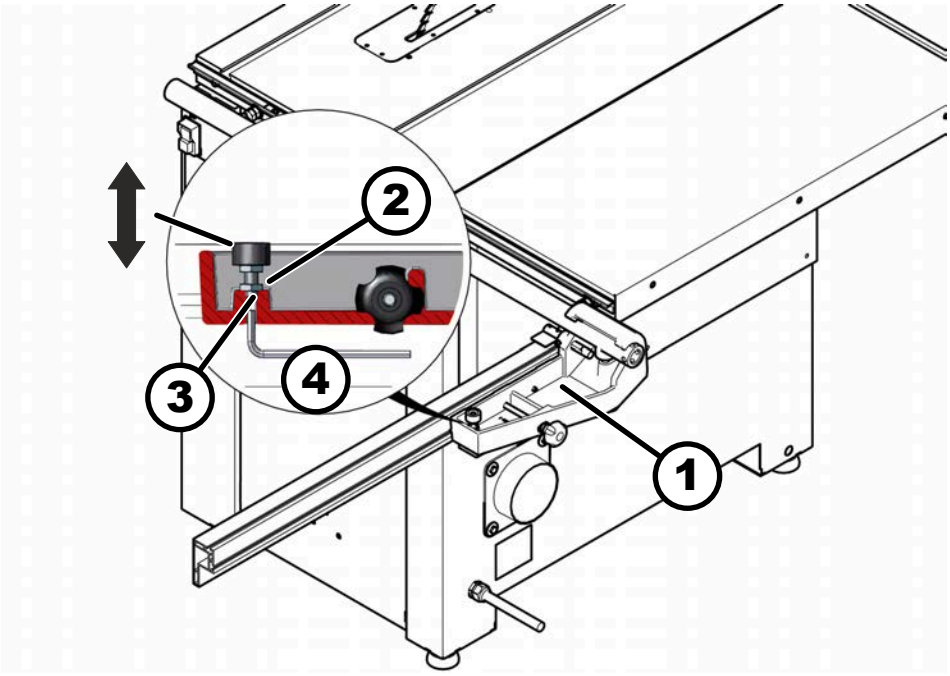


Fig. 37: Readjusting the rip fence height

1 Rip fence
2 Locking nut
3 Adjustment screw
4 Allen key 4 mm

Tool:

- Allen key 4 mm
- Spanner 13 mm

1. Switch off the machine and secure it against being switched on again.
2. Move the rip fence to the end of the bar and outwards.
3. Tighten the adjustment screws with an Allen key to prevent them from turning.
4. Loosen locking nut.
5. Adjust the height of the fence with the grub screws.
6. Tighten the lock nut again.
7. Flip the rip fence back.
8. Check the height adjustment and readjust if required.

4.5 Correcting the rip fence angle

The angle between the fence rail and the machine table is also called the free cut.

A correctly adjusted clearance cut is important so that the workpiece is not burnt or damaged by the rising part of the saw blade during rip cutting.

If the free cut is set correctly, very little dust is produced during processing.

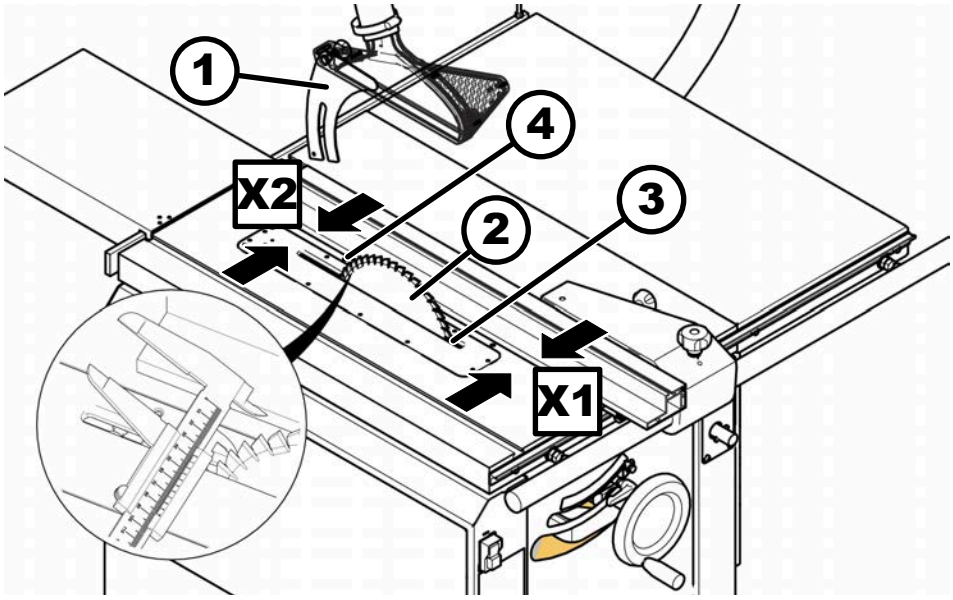


Fig. 38: Freecut preparation

1 Riving knife and saw guard
2 Saw blade ø253 mm
3 cutting saw teeth
4 high running saw teeth
X1 Rip fence setting
X2 Free cut adjustment

Prepare the machine for adjustment

1. Switch off the machine and secure it against being switched on again.
2. Disconnect the machine from the mains power supply.
3. Remove riving knife and saw guard.
4. Fit ø253mm saw blade.
5. Tilt the saw aggregate in the 90° position (cutting angle 0°) and move to the uppermost position.
6. Change the fence plate (guide) on the rip fence over on to the narrow guide edge.
7. Set the rip fence to an even measurement and fix in place.
   ➡ Check dimension X1 = 30.0 mm with digital calliper.

Correcting the rip fence angle (adjust free cut)

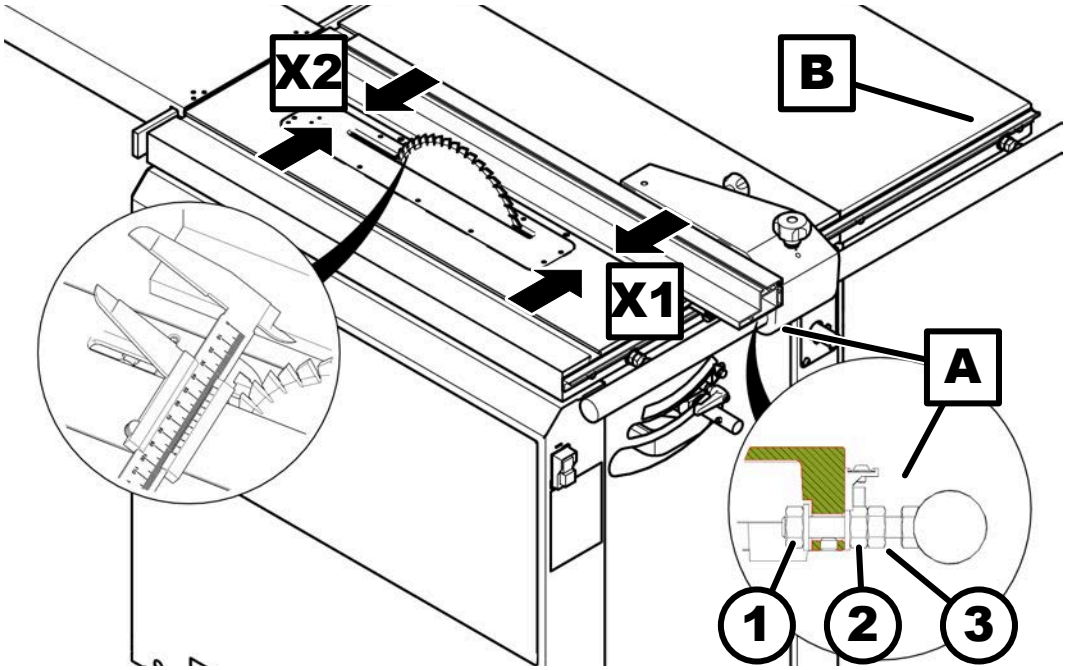


Fig. 39: Adjust free cut

1 Locking nut
2 front adjusting nut
3 rear locking nut
A Adjustment point (machine table)
B Adjustment point (table extension)
X1 Rip fence setting
X2 Free cut adjustment

Tool:

- Combination wrench 17 mm
- Callipers

The free cut dimension is measured between the saw blade tooth and the fence plate (guide) on the rip fence.

1. Loosen the lock nuts at the adjustment points "A" and "B".
2. On setting point "A" (machine table):
   - Loosen the rear locking nut.
   - Adjust the free cut accurately using the front adjustment nut.
     ➡ X2 dimension = X1 dimension + 0.07 mm.
   - Lightly tighten the fixing nut and the locking nut.
3. At set point "B" (cutting extension):
   - Loosen the rear locking nut.
   - Turn the adjusting nut by hand to the cutting extension.
   - Lightly tighten the fixing nut and the locking nut.
4. At adjustment points "A" and "B", tighten the lock nuts and fixing nuts firmly.
5. Prepare the machine to operate. ➦ *Chapter 1.3.3 'Establish operational readiness' on page 12*
6. Check settings with a sample cut using an MDF panel. ➦ *Chapter 2.3.5 'Longitudinal cut / cutting of strips' on page 29*

4.6 Correct crosscut fence settings

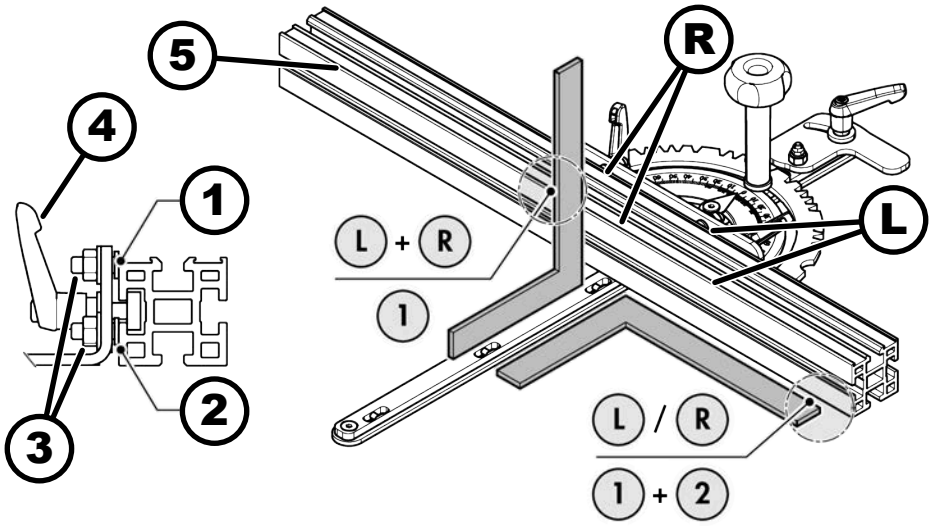


Fig. 40: Crosscut fence - Angle correction

1 Upper adjustment screw
2 Lower adjustment screw
3 Locking nut
4 Clamping lever
5 Fence plate
L Left adjustment screws
R Right adjustment screws

0°-angle adjustment (readjust)

Tool:

- Angle gauge
- Combination wrench 10 mm
- Allen key 3 mm

1. Loosen both clamping levers (left and right) and remove the fence plate.
2. In case of vertical angle misalignment, turn the upper and adjustment screws.

   ➡ Make correction left and right.
3. In case of horizontal angle misalignment, turn the upper and lower set adjustment screws.

   ➡ Make correction left or right.
4. Angle correction with adjustment screws:

   - Hold the set screws with an Allen key.
   - Loosen locking nut.
   - Rotate adjustment screw.
   - Tighten the lock nut.
5. Thread in the stop rail and clamp both clamping levers (left and right).

Check the setting by making a 2-sided sample cut

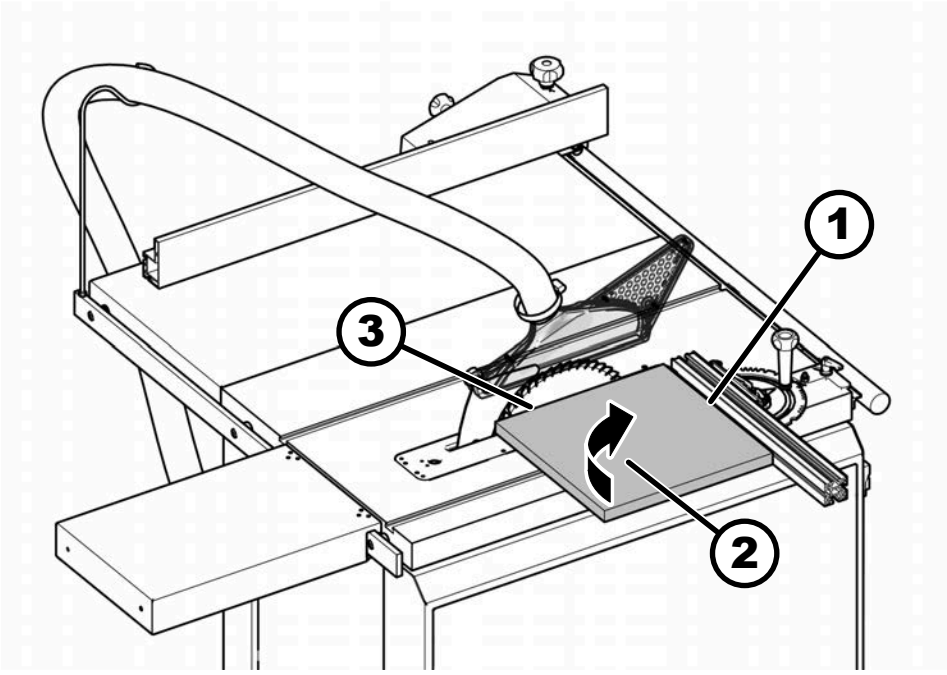


Fig. 41: Sample cut - Crosscut fence angle

1 First cut (reference cut)
2 Rotate the workpiece in a clockwise direction
3 Second cut (control cut)

Tool:

- Angle gauge
- Test workpiece (panel material)

1. Set saw cutting angle and crosscut fence to 0°.

2. Carry out sample cut (reference cut).

3. Turn the test workpiece 90° in a clockwise direction.

➡ Let the workpiece rest with the cut side against the stop.

4. Carry out a sample cut again (control cut).

5. Check the result with an angle gauge.

➡ Place the angle gauge on both of the cut surfaces.

Width adjustment of the guide rail

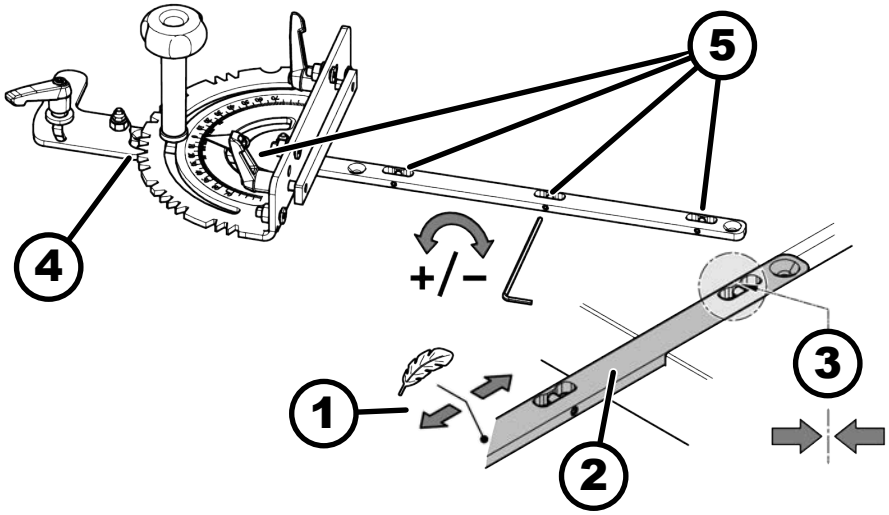


Fig. 42: Crosscut fence - Adjust the rail width

1 Ease of operation
2 Guide rail
3 Play (guide rail / machine table)
4 First grub screw
5 Grub screws two to five

Tool:

- Allen key 2 mm

The width of the guide rail can be adjusted to the width of the guiding groove using the 5 grub screws.

The fence should slide smooth but without side play in the guiding groove.

1. Check ease of movement by pushing back and forth.
2. Remove the crosscut fence from the guide slot in the machine table.
3. Adjust the play (movement) between the guide rail and machine table.

   Turn the first grub screw with a 2 mm Allen key:

   - clockwise: reduce ease of movement (less gap)
   - counterclockwise: set more clearance
4. Slide the crosscut fence into the guide slot in the machine table.
5. Check the setting and adjust if necessary.
6. Repeat the adjustment on the remaining grub screws.

5 Attachment

5.1 Information relating to spare parts

NOTICE

Wrong or faulty spare parts

Material damage, malfunction, machine failure

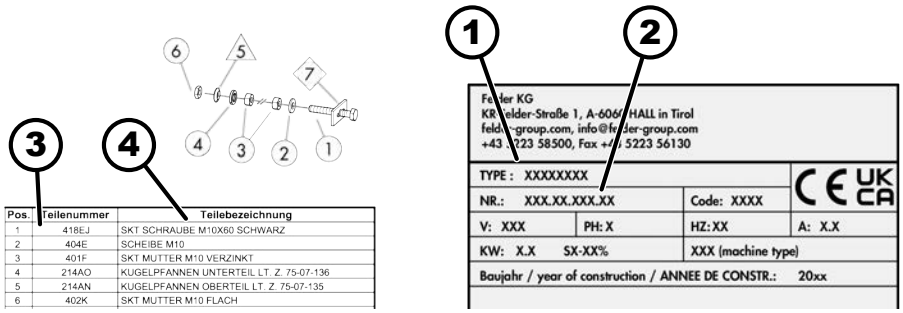
– Only use spare parts approved by the manufacturer (see spare parts list).

If unauthorised spare parts are fitted into the machine, all warranty, service, compensation and liability claims against the manufacturer and their contractors, dealers and representatives will be rejected.

Use genuine spare parts

The original spare parts that have been authorised for use are listed in a separate spare parts catalogue, enclosed in the documentation package supplied with the machine.

Spare part order



Pos.	Teilenummer	Teilebezeichnung
1	418EJ	SKT SCHRAUBE M10X60 SCHWARZ
2	404E	SCHEIBE M10
3	401F	SKT MUTTER M10 VERZINKT
4	214AO	KUGELPFANNEN UNTERTEIL LT. Z. 75-07-136
5	214AN	KUGELPFANNEN OBERTEIL LT. Z. 75-07-135
6	402K	SKT MUTTER M10 FLACH

Fig. 43: Spare parts - Order

1 Model type
2 Machine number
3 Article number
4 Article description

The following information is required when ordering spare parts:

- Type description and machine number according to the identification plate
- Article number, article description and required quantity
- Shipping address
- Shipping mode (mail, freight, sea, air, express)

Orders for spare parts, which do not include the required details, will not be processed. Unless specific dispatch instructions are given, the manufacturer / supplier standards shall apply.

5.2 Disposal

ENVIRONMENT

Disposal of machine components

Used electrical materials, electronic components, lubricants and other auxiliary substances must be treated as special waste and may only be disposed of by specialised, licensed firms.

The machine consists of many different materials for which different disposal conditions may apply depending on national legislation.

1. Separate all machine components into material groups.
2. When disposing, pay attention to international regulations, standards and environmental protection norms.

ENVIRONMENT

Disposing of batteries

Batteries are subject to special waste treatment regulations and must be disposed of in accordance with locally enforced regulations.

The improper handling of batteries, can due to their potentially dangerous substances, have a negative environmental effect and consequences for human health.

For this reason, follow the advice relating to batteries exactly:

- do not open or short circuit
- do not throw them into fire or expose them to high temperatures
- protect from getting wet and do not place them in water
- do not store them together with electroconductive items (e.g. chains, screws, metal waste etc.)

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