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# Hammer®

## User manual

(Translation)

## Edge sanders HS 950



Keep this manual handy and in good condition for continual reference!

**i** **Note: Year of construction**  
The machine number of this machine will be printed on the cover sheet of this operating manual. The final two digits of the machine number show the year of construction of this machine.  
e.g. XXX.XX.XXX.19 -> year of manufacture 2019

**i** **Attention!:** The machine must be inspected immediately upon arrival. If the machine has been damaged during transport, or if any parts are missing, a written record of the problems must be submitted to the forwarding agent and a damage report compiled. Also be sure to notify your supplier immediately.



For the safety of all personnel, it is necessary to study this manual thoroughly before assembly and operation. This manual must be kept in good condition and should be considered as part of the machine. Furthermore, the manual must be kept to hand and within the vicinity of the machine so that it is accessible to operators when using, maintaining or repairing the machine.

## Hammer | A product of the FELDER GROUP!

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Content

Content

<b>1 General.....</b>	<b>6</b>
1.1 Symbol legend.....	6
1.2 Information about the manual.....	6
1.3 Liability and warranty.....	7
1.4 Copyright.....	7
1.5 Warranty notice.....	7
1.6 Spare parts.....	7
1.7 Disposal.....	8
<b>2 Safety.....</b>	<b>9</b>
2.1 Intended use.....	9
2.2 Manual contents.....	9
2.3 Making changes and modifications to the machine.....	10
2.4 Responsibilities of the operator.....	10
2.5 Personnel requirements.....	10
2.6 Work safety.....	10
2.7 Personal protective equipment.....	11
2.8 Machine hazards.....	11
2.9 Other risks.....	12
<b>3 Declaration of Conformity.....</b>	<b>13</b>
<b>4 Technical specifications.....</b>	<b>14</b>
4.1 Dimensions and weight.....	14
4.2 Electrical connection.....	14
4.3 Drive motor.....	15
4.4 Noise emission.....	15
4.5 Particle emission.....	15
4.6 Chip extraction.....	16
4.7 Operation and storage conditions.....	16
4.8 Sanding unit.....	16
<b>5 Setting up the machine.....</b>	<b>18</b>
5.1 Overview.....	18
5.2 Data plate.....	19
5.3 Safety devices.....	19
5.3.1 Rear cover abrasive belt.....	19
5.3.2 Infeed fence.....	19
5.4 Operation and display elements.....	20
<b>6 Transport, packaging and storage.....</b>	<b>22</b>
6.1 Safety instructions.....	22
6.2 Transport.....	22
6.2.1 Transport locking device.....	23
6.2.2 Transport with a crane.....	23
6.2.3 Transport with a forklift truck.....	24
6.2.4 Transport with a pallet jack.....	24
6.3 Transport inspection.....	25
6.4 Packaging.....	25
6.5 Storage.....	25

## Content

<b>7 Setup and installation .....</b>	<b>26</b>
7.1 Safety instructions .....	26
7.2 Setup.....	26
7.3 Machine assembly .....	27
7.3.1 Assemble machine frame.....	27
7.3.2 Assembly - Adjustment handle / Oscillating range adjustment clamp .....	28
7.3.3 Assembly - Rear cover abrasive belt .....	29
7.3.4 Assembly - Infeed fence .....	29
7.3.5 Assembly / Setting - side working table .....	29
7.4 Chip extraction .....	31
7.5 Electrical connection .....	32
<b>8 Making adjustments and preparations.....</b>	<b>34</b>
8.1 Safety instructions .....	34
8.2 Sanding belt.....	34
8.2.1 Sanding belts .....	34
8.2.2 Storing the sanding belts.....	34
8.3 Fitting the sanding belt.....	35
8.3.1 Centering the sanding belt - Height adjustment .....	35
8.4 Height adjustment of the working table / additional table .....	36
8.5 Angle adjustment of the sanding unit .....	36
8.6 Sanding belt oscillation on/off.....	37
8.7 Extending the machining area (long workpieces).....	37
<b>9 Operation .....</b>	<b>38</b>
9.1 Safety instructions .....	38
9.2 Switching on the machine .....	39
9.3 Switching off the machine / Emergency-stop.....	39
9.4 Working techniques.....	40
9.4.1 Working position .....	40
9.4.2 Authorised working techniques .....	40
9.4.3 Prohibited working techniques .....	40
9.4.4 Grinding at the front of the machine.....	41
9.4.5 Sanding with tilted unit .....	41
9.4.6 Face grinding at 0° .....	42
9.4.7 Grinding of long workpieces .....	42
9.4.8 Grinding on the roller .....	42
<b>10 Service.....</b>	<b>44</b>
10.1 Safety instructions .....	44
10.2 Maintenance schedule.....	44
10.3 Maintenance work .....	45
10.3.1 Lubricating the height adjustment .....	45

## Content

---

<b>11 Faults .....</b>	<b>46</b>
11.1 Safety instructions .....	46
11.2 What to do if a fault develops .....	46
11.3 What to do after rectifying the fault .....	46
11.4 Faults, causes and repairs .....	47
11.4.1 Machine faults.....	47
11.4.2 Belt guidance faults.....	47
11.4.3 Sanding imperfections .....	48
11.5 Set the spring tension - belt tension .....	48
11.6 Adjusting the angle - Sanding module inclination .....	49
<b>12 Electrical circuit diagram .....</b>	<b>50</b>
<b>13 Spare parts .....</b>	<b>52</b>

## General

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## 1 General

### 1.1 Symbol legend

Important technical safety instructions in this manual are marked with symbols. These instructions for work safety must be followed.

In all these particular cases, special attention must be paid in order to avoid accidents, injury to persons or material damage.



**Warning!: Risk of injury or death!**

This symbol marks instructions that must be followed in order to avoid harm to one's health, injuries, permanent impairment or death!



**Warning!: Danger! Electric current!**

This symbol warns of potentially dangerous situations relating to electric current. Not observing the safety instructions increases the risk of serious injury or death. All electrical repairs must be carried out by a qualified electrician!



**Attention!: Risk of material damage!**

This symbol marks instructions which, if not observed, may lead to material damage, functional failures and/or machine breakdown!



**Note:**

This symbol marks tips and information which should be observed to ensure efficient and failure-free operation of the machine.

### 1.2 Information about the manual

This manual describes how to operate the machine properly and safely. Be sure to follow the safety tips and instructions stated here as well as any local accident prevention regulations and general safety regulations. Before beginning any work on the machine, ensure that the manual, in particular the chapter entitled "Safety" and the respective safety guidelines, has been read in its

entirety and fully understood. This manual is an integral part of the machine and must therefore be kept in the direct vicinity of the machine and be accessible at all times. If the machine is sold, rented, lent or otherwise transferred to another party, the manual must accompany the machine.

## General

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### 1.3 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. This manual must be read carefully before commencing any work on or with this machine. 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 delivery contents. The images and graphics are not depicted on

a 1:1 scale. The actual delivery contents are dependent on custom-build specifications, add-on options or recent technical modifications and may therefore deviate from the descriptions, instructions and images contained in the manual. Should any questions arise, please contact the manufacturer. We reserve the right to make technical modifications to the product in order to further improve user-friendliness and develop its functionality.

### 1.4 Copyright

This manual should be handled confidentially. It is designated solely for those persons who work on or with the machine. All descriptions, texts, drawings, photos and other depictions are protected by copyright and other commercial laws. Illegal use of the materials is punishable by law.

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 demand for compensation or other applicable claims. We reserve all rights in exercising commercial protection laws.

### 1.5 Warranty notice

The guarantee period is in accordance with national guidelines. Details may be found on our website, [www.felder-group.com](http://www.felder-group.com)

### 1.6 Spare parts



**Attention!: Non genuine, counterfeit or faulty spare parts may result in damage, cause malfunction or complete breakdown of the machine.**

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 shall be rejected.

Use only genuine spare parts supplied by the manufacturer.



**Note: A list of authorised genuine spare parts can be found at the end of this operating manual.**

## General

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### 1.7 Disposal

If the machine is to be disposed of, separate the components into the various materials groups in order to allow them to be reused or selectively disposed of. The whole structure is made of steel and can therefore be dismantled without problem.

This material is also easy to dispose of and does not pol-

lute the environment or jeopardise public health. International environmental regulations and local disposal laws must always be complied with.



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



## Safety

## 2 Safety

At the time of its development and production, the machine was built in accordance with prevailing technological regulations and therefore conforms to industry safety standards.

However, hazards may arise should the machine be operated by untrained personnel, used improperly or employed for purposes other than those it was designed for. The chapter entitled "Safety" offers an overview of all the important safety considerations necessary to optimise

safety and ensure the safe and trouble-free operation of the machine.

To further minimise risks, the other chapters of this manual contain specific safety instructions, all marked with symbols. Besides the various instructions, there are a number of pictograms, signs and labels affixed to the machine that must also be heeded. These must be kept visible and must not be removed.

### 2.1 Intended use



**Attention! Risk of material damage!**

**Machining materials other than wood is only permitted with the express written consent of the manufacturer. Operational safety is guaranteed only when the machine is used for the intended purposes.**

The machine described in this manual is intended solely for processing wood and similar machinable materials.

This includes all wood based panel material (e.g. Chip-board, OSB panels, MDF, Plywood etc.), even if they are laminated or edged with plastic or a light metal.

This information can be taken from the relevant safety sheets

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 original accessories from the manufacturer.



**Attention! Any use outside 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 shall be rejected. The operator shall be solely liable for any damage that results from improper use of the machine.**

### 2.2 Manual contents

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.

## Safety

### 2.3 Making changes and modifications to the machine

In order to minimise risks and to ensure optimal performance, it is strictly prohibited to alter, retrofit or modify the machine in any way without the express consent of 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.

### 2.4 Responsibilities of the operator

This manual must be kept in the immediate vicinity of the machine and be accessible at all times to all persons working on or with the machine. 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 controlled and the machine must be inspected for visible defects every time before it is switched on. All instructions in this manual must be strictly followed without reservation.

Besides the safety advice and instructions stated in this manual, it is necessary to consider and observe local

accident prevention regulations, general safety regulations as well as current environmental stipulations that apply to the operational range of the machine.

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.

Machines, tools and accessories must be kept out of the reach of children.

### 2.5 Personnel requirements

Only authorised and trained personnel may work on and with the machine. Personnel must be briefed about all functions and potential dangers of the machine. "Specialist staff" 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. If the personnel lack the necessary knowledge for working on or with the machine, they must first be trained. Responsibility for working with the machine (installation, service, maintenance, overhaul) must be clearly defined and strictly observed. Only those persons 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 user is also responsible for ensuring that unauthorised persons 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.

### 2.6 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 all compensation claims.

## Safety

### 2.7 Personal protective equipment

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



**Persons with long hair who are not wearing a hairnet are not permitted to work on or with the machine!**



**It is prohibited to wear gloves while working on or with the machine.**

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



#### **Protective clothes**

Sturdy, tight-fitting clothing (tear-resistant, no wide sleeves, no jewellery (rings, bracelets, necklaces, etc.)).



#### **Protective footwear**

To protect the feet from heavy falling objects and to prevent slipping on slippery surfaces.



#### **Hearing protection**

To avoid hearing damage.

### 2.8 Machine hazards

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.

Nevertheless, there are some remaining risks that must be considered.

The machine runs at high electrical voltage.



**Warning! Danger! Electric current!: Electrical energy can cause serious bodily injury. Damaged insulation materials or defective individual components can cause a life-threatening electrical shock.**

- Before carrying out any maintenance, cleaning and repair work, switch off the machine and ensure that it can not be accidentally switched on again.
- When carrying out any work on the electrical equipment, ensure that the voltage supply is completely isolated.
- Do not remove any safety devices or alter them to prevent them from functioning correctly.

## Safety

---

### 2.9 Other risks



**Warning! Risk of injury!:** Even if the safety measures are complied with, there are still certain associated risks that must be considered when working on the machine:

- Risk of injury from workpieces or other workpiece parts jamming in the machine or being ejected.
- Risk of injury due to crushing.
- Risk of injury from workpiece kickback.
- Hearing damage as a result of high noise levels.
- Health impairments due to the inhalation of airborne particles, especially when working with beech and oak wood.
- Accidental hand contact with the operating sanding belt.
- The workpiece tipping due to insufficient workpiece support.
- Danger of an accident resulting from the unprotected part of the running sanding belt.
- Risk of injury resulting from the upper sanding belt edge in the unprotected parts.

*Declaration of Conformity*

---

### 3 Declaration of Conformity



EG-Declaration of Conformity  
According to Machine Guidelines 2006/42/EG

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.

Manufacturer:	<b>FELDER KG KR-FELDER-STR.1 A-6060 Hall in Tirol</b>
Product designation:	<b>Edge sanders</b>
Make:	<b>Hammer</b>
Model designation:	<b>HS 950</b>
The following EC guidelines were applied:	<b>2006/42/EG 2014/30/EU</b>

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.

A handwritten signature in black ink that reads 'Johann Felder'.

Hall in Tirol, 01.01.2017

Johann Felder, Managing Director FELDER KG  
KR-FELDER-STR.1 A-6060 Hall in Tirol

## Technical specifications

### 4 Technical specifications

#### 4.1 Dimensions and weight

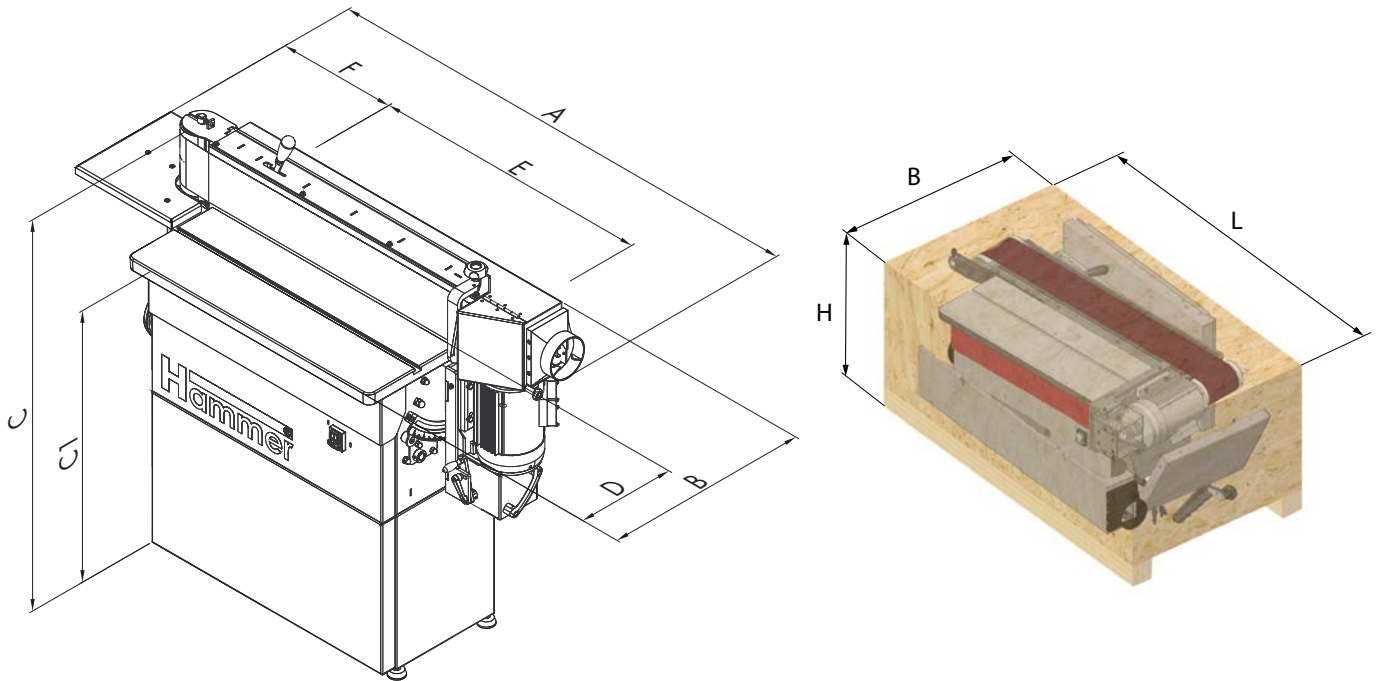


Fig. 4-1: Dimensions and weight

Machine	
Total length (A)	1540 mm
Overall width (B)	530 mm
Total height (C)	1235 mm
Working height (C1)	930 mm
Machine table width (D)	300 mm
Length: Machine table (E)	855 mm
Length - side working table (F)	337 mm
Weight	165 kg

Machine including packaging	
Length (L)	1430 mm
Width (B) *)	775 mm
Height (H)	636 mm
Weight	200 kg

\*)The transport width measures under 800 mm. This makes it possible to transport the machine through doorways.

#### 4.2 Electrical connection

mains voltage according to specification plate	±10%
Safeguarding	see circuit plan
Power supply cord (H07RN-F)	3 x 2,5 mm <sup>2</sup> / 5 x 2,5 mm <sup>2</sup>
Triggering characteristic	C

## Technical specifications

### 4.3 Drive motor

The actual values can be found on the data plate.

	Alternating-current motor	Three-phase current motor
Motor voltage	1x 230 V	3x 400 V
motor frequency	50/60 Hz	50 Hz
Motor power S6-40 % <sup>*)</sup>	2,2 kW	2,2 kW
System of protection	IP 55	IP 55

<sup>\*)</sup> S6 = 10 minute operation under load and intermittent service; 40% relative operating factor  
i.e. the motor may be run at the nominal capacity for 4 minutes and afterwards must run idle for 6 minutes.

### 4.4 Noise emission

The specified values are emission values and therefore do not represent safe workplace values. Even though a relationship exists between particle emission and noise emission levels, an inference cannot be made about whether additional safety measures need to be implemented. Factors which can significantly affect the emission level that presently exists at the workplace include duration of the effect, characteristics of the workspace, and other ambient influences.

The permissible workplace values may also differ from country to country. Nevertheless, this information is provided to help the operator better assess hazards and risks. Depending on the location of the machine and other

specific conditions, the actual noise emission values may deviate significantly from the specified values.

It is recommended to use protective ear equipment, this is however not a substitute for properly sharpened tools or the correct operating speed.

Emission values at the workplace according to EN ISO 11202	
Idle	83,1 db
Working	82,8 db

An allowance must be made to compensate for tolerances with the specified emission values  $K = 4 \text{ dB (A)}$ .

### 4.5 Particle emission

The working areas of this machine comply to BGI 739-1 and are classed as dust reduced.

The maximum concentration level of  $2 \text{ mg/m}^3$  of inhalable dust in the air will not be exceeded.

This is certified by the blue label "BG Wood Particle Tested".

This only applies if the conditions that are specified in the section >Extraction< are adhered to.

See chapter entitled >Setup and installation<

## Technical specifications

### 4.6 Chip extraction

Extraction connection	
Diameter	120 mm
Vacuum, min.	1310 Pa
Volume flow, min.	814 m <sup>3</sup> /h

### 4.7 Operation and storage conditions

Operating/room temperature	+10 bis +40 °C
Storage temperature	-10 bis +50 °C

### 4.8 Sanding unit

Sanding	
sanding roller Ø	110 mm
Sanding belt	2515 x 150 mm
Sanding belt inclination	0-90°
Sanding belt speed	17 m/s (50 Hz)
	10 m/s (60 Hz)
Vertical traversing distance	0-150 mm
Oscillating range	5 mm
Oscillating frequency	90 /min (60 Hz)
	75 /min (50 Hz)



*Technical specifications*

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## Setting up the machine

### 5 Setting up the machine

#### 5.1 Overview

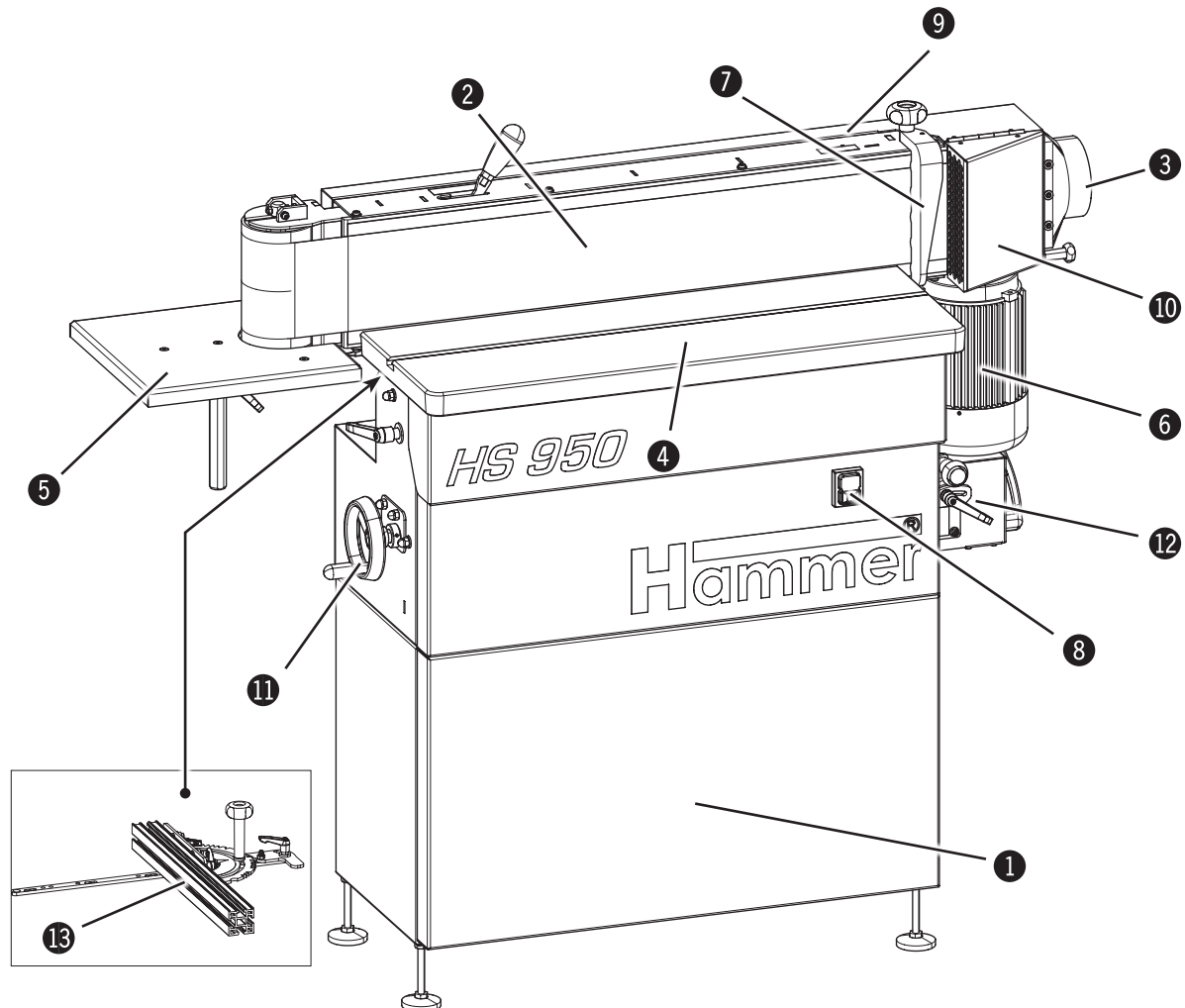


Fig. 5-1: Overview

- ① Machine frame
- ② Sanding unit (tiltable from)
- ③ Vacuum connector
- ④ Machine table
- ⑤ side working table
- ⑥ Drive motor
- ⑦ Infeed fence
- ⑧ On/Off switch
- ⑨ Rear cover abrasive belt
- ⑩ extraction flap (tiltable from)
- ⑪ Handwheel - Height adjustment
- ⑫ sanding belt oscillation
- ⑬ mitre fence (Accessories)

## Setting up the machine

### 5.2 Data plate


KR-FELDER-STR.1 A - 6060 HALL in Tirol AUSTRIA Tel.: 0043 (0)5223 / 45 0 90 Fax.: 0043 (0)5223 / 45 0 99		 info@hammer.at / www.hammer.at	
TYPE :			
NR. :			
V:	PH:	HZ:	
KW:		A:	
Baujahr / year of constr. / annee de constr. :			
Motordaten:			

Fig. 5-2: Data plate

The data plate displays the following specifications:

- Manufacturer information
- Model designation
- Machine number
- Voltage
- Phases
- Frequency
- Motor power
- Power supply
- Year of construction
- Motor specifications

### 5.3 Safety devices

#### 5.3.1 Rear cover abrasive belt

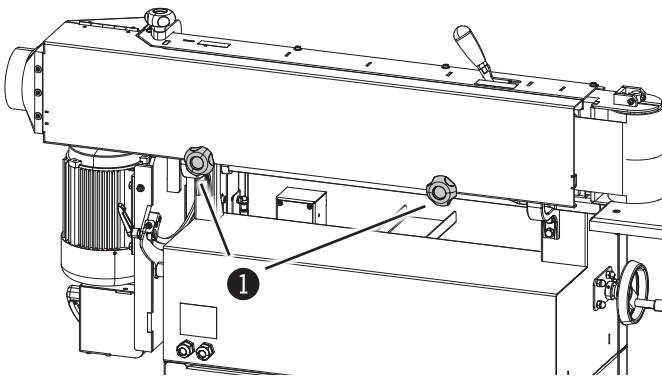


Fig. 5-3: Rear cover abrasive belt

The back cover prevents contact with the rotating abrasive belt.  
The back cover is fixed to the machine with clamping screws.

- ① Clamping screw

#### 5.3.2 Infeed fence

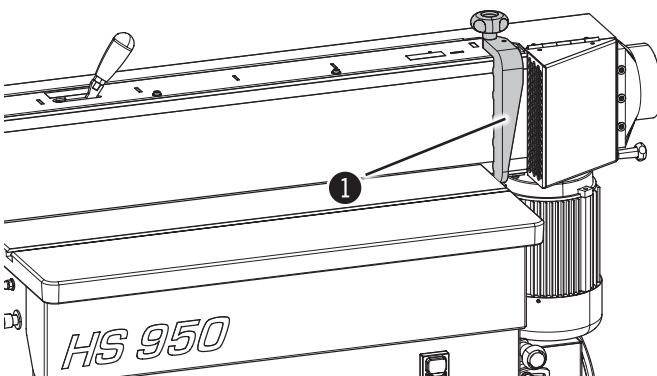


Fig. 5-4: Infeed fence

The workpiece stop prevents workpieces from being thrown backwards.

- ① Infeed fence

## Setting up the machine

### 5.4 Operation and display elements

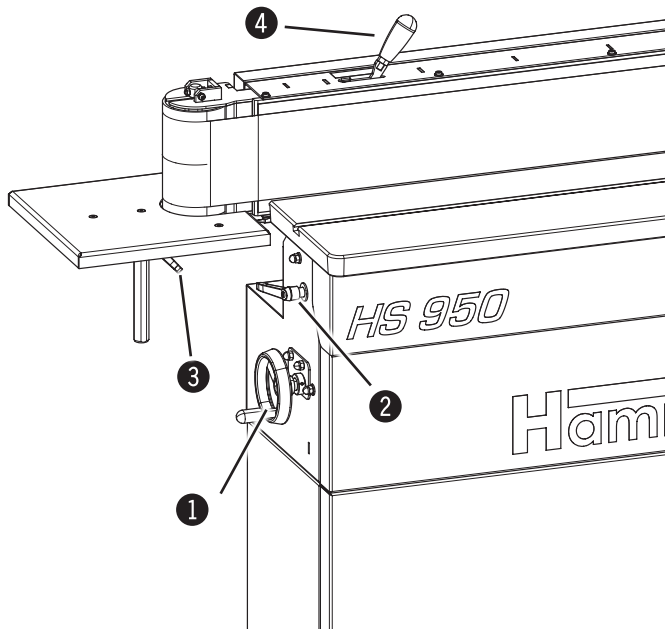


Fig. 5-5: Operation and display elements

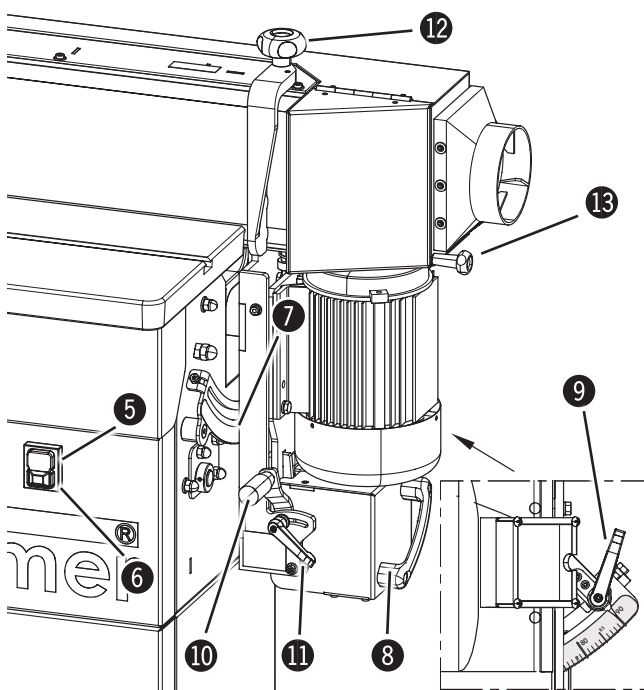


Fig. 5-6: Operation and display elements

- ① **Handwheel - Height adjustment**  
Height adjustment (Work bench)
- ② **Clamping lever**  
Clamp - Height adjustment (Work bench)
- ③ **Clamping lever**  
Clamp - Height adjustment (side working table)
- ④ **Chuck lever - Changing the sanding belt**  
Tool free handling when changing the sanding belt
- ⑤ **Green push button**  
Switching on the machine
- ⑥ **Red push button**  
Emergency stop and switching off the machine
- ⑦ **Scale - Sanding module inclination**  
Angle display 0°-90°
- ⑧ **Hand grip**  
Sanding module inclination
- ⑨ **Clamping lever - Sanding module inclination**  
angle adjustment clamp
- ⑩ **Adjustment handle - Oscillating sanding**  
Adjustment - Oscillating range
- ⑪ **Clamping lever - Oscillating sanding**  
Oscillating range adjustment clamp
- ⑫ **Clamping lever - Infeed fence**  
End stop clamping
- ⑬ **Clamping lever - extraction flap**  
Extending the machining area (long workpieces)

*Setting up the machine*

---

## 6 Transport, packaging and storage

### 6.1 Safety instructions



**Warning! Risk of injury!:** There is a risk of injury as a result of falling parts while transporting, loading or unloading the machine.



**Attention! Risk of material damage!:** The machine can be damaged or destroyed if it is subjected to improper handling during transport.

For this reason the following safety instructions must be observed:

- Never lift loads over a person.
- Always move the machine with the utmost care and caution.
- Only use suitable lifting accessories and hoisting devices that have a sufficient load-carrying capacity.
- Consider the machine's centre of gravity when transporting it (minimise the risk of it tipping over).
- Take measures to prevent the machine from slipping sideways.
- Ropes, belts or other hoisting devices must be equipped with safety hooks.
- Do not use torn or worn ropes.
- Do not use knotted ropes or belts.
- Ensure that ropes and belts do not lie against sharp edges.
- Transport the machine as carefully as possible in order to prevent damage.
- Avoid subjecting the machine to shocks.
- When transporting the machine overseas, ensure that the packaging is airtight and that a desiccant is added to protect the metal parts against corrosion.

### 6.2 Transport



**Attention! Transport the machine according to the enclosed transport and assembly instructions!**

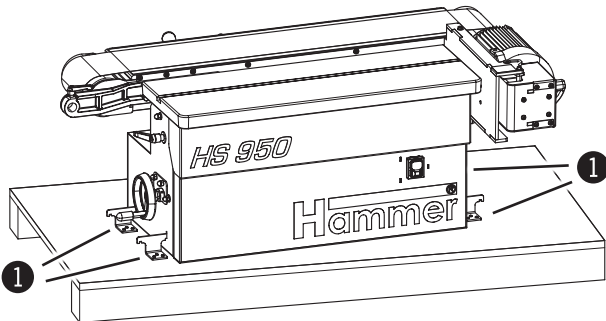


**Attention! Risk of material damage!:** Do not lift the machine by its work table, extension frames or handwheels.

Due to technical reasons, the machine is delivered in a partly dismantled state.  
The machine may be transported using a crane, pallet truck or forklift truck.

*Transport, packaging and storage*

### 6.2.1 Transport locking device



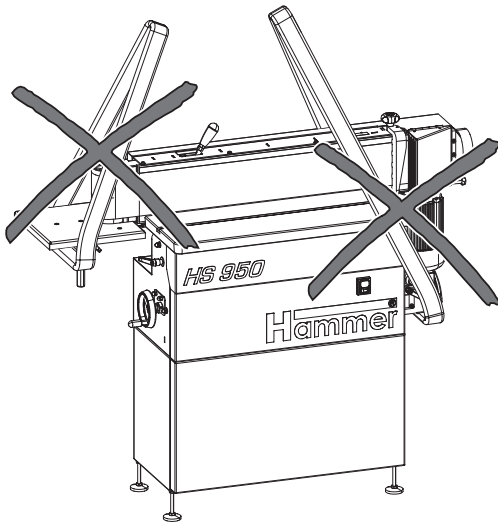
The machine is mounted to the pallet with transport brackets.

Remove the transport brackets before moving the machine to the installation location.

① Transport brackets

Fig. 6-1: Transport locking device

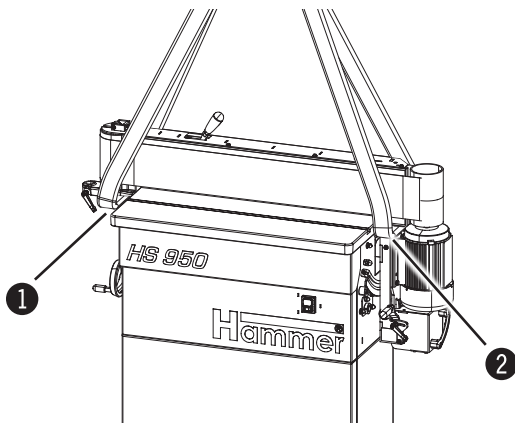
### 6.2.2 Transport with a crane



Only use belts or chains to transport the machine.

Fig. 6-2: Transport with a crane

**!** Attention! Risk of material damage!  
Do not lift the machine by its work table, extension frames or handwheels



To lift the machine with the crane, the following components must be removed:

- Rear cover abrasive belt
- Infeed fence
- side working table

Thread the belts or chains through the cutout holes in the machine frame. Position 1/2

- ① Position 1
- ② Position 2

Fig. 6-3: Transport with a crane

## Transport, packaging and storage

### 6.2.3 Transport with a forklift truck

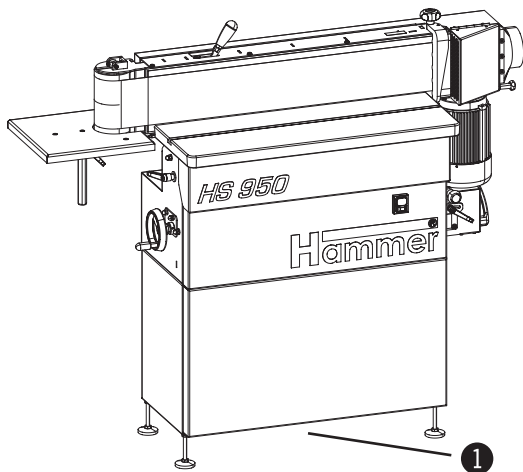


Fig. 6-4: Transport with a forklift truck

Move the truck's forks so that they fit into the holes in the machine frame.

- 1 Cutout hole in the machine frame

### 6.2.4 Transport with a pallet jack

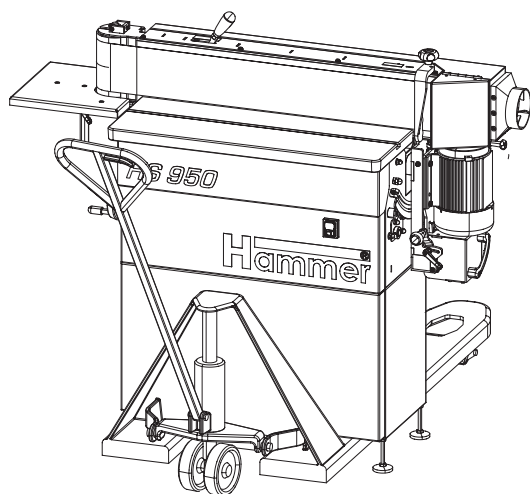


Fig. 6-5: Transport with a pallet jack

Push the forks under the gaps in the machine frame.

- 1 Cutout hole in the machine frame



## Transport, packaging and storage

### 6.3 Transport inspection

Upon arrival, inspect the shipment to ensure that it is complete and has not suffered any damage. If any transport damage is visible, do not accept the delivery or only accept it with reservation. Record the scope of the damage on the transport documents/delivery note. Initiate the complaint process.

For all defects that are not discovered upon delivery, be sure to report them as soon as they are recognised as damage claims must be filed within a certain period, as granted by law.

### 6.4 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.



**Attention! Dispose of the packaging materials in an environmentally friendly way and always in accordance with local waste disposal regulations. If applicable, contract a recycling firm to dispose of the packaging materials.**



**Note: Help preserve the environment! Packaging materials are valuable raw materials and in many cases they can be used again or expediently reprocessed or recycled.**

### 6.5 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.

#### Store packed items only under the following conditions:

- Do not store outdoors.
- Store in a dry and dust-free environment.
- Do not expose to aggressive substances.
- Protect from direct sunlight.
- Avoid subjecting the machine to shocks.
- Storage temperature:  $-10^{\circ}$  to  $+50^{\circ}$  °C
- Maximum humidity: 60 %
- Avoid extreme temperature fluctuations (to prevent build-up of condensation).
- Apply a coat of oil to all machine parts open to possible rusting (corrosion protection).
- When storing for a period longer than 3 months, apply a coat of oil to all machine parts open to rusting (corrosion protection). Regularly check the general condition of all parts and the packaging. If necessary, refresh or re-apply the coat of anti-corrosive agent.
- If the machine is to be stored in a damp environment, it must be sealed in airtight packaging and protected. (desiccant).

## Setup and installation

### 7 Setup and installation

#### 7.1 Safety instructions



**Warning! Risk of injury!: Improper assembly and installation can lead to serious physical injury or equipment damage. For this reason, this work may only be carried out by authorised, trained personnel who are familiar with how to operate the machine and in strict observance of all safety instructions.**

- Ensure that there is sufficient space to work around the machine. Ensure there is ample distance between the machine and other solid constructions such as a walls or other machines.
- Keep the work area orderly and clean. Components and tools that are not put in their correct place or put away may be the cause of accidents!
- Install the safety equipment according to the instructions and check that it functions properly.



**Warning! Danger! Electric current!: Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.**

Before assembling and installing the machine, check to make sure it is complete and in good condition.



**Warning! Risk of injury!: An incomplete, faulty or damaged machine can lead to serious physical injury or equipment damage. Only assemble and install the machine if the machine and its parts are complete and intact.**



**Attention! Risk of material damage!: Only operate the machine in ambient temperatures from +10°C to +40°C. If the instructions are not followed, damage may occur to bearings.**

#### 7.2 Setup

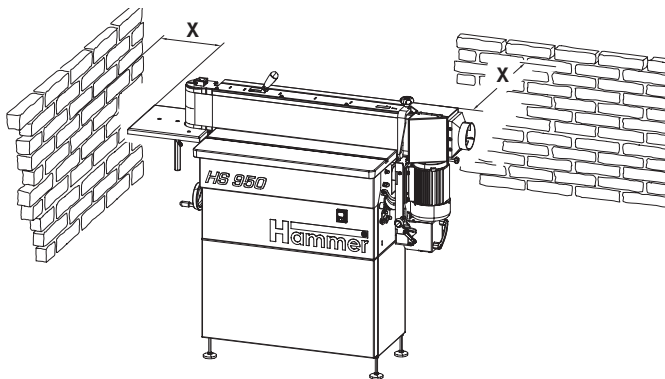


Fig. 7-1: Space requirements

##### Installation site requirements:

- Operating/room temperature: +10° to +40°C.
- Ensure that the work surface is sufficiently stable and has the proper load-bearing capacity.
- Provide sufficient light at the workstation.
- Ensure there is sufficient clearance for or from neighbouring workstations.

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).

## Setup and installation

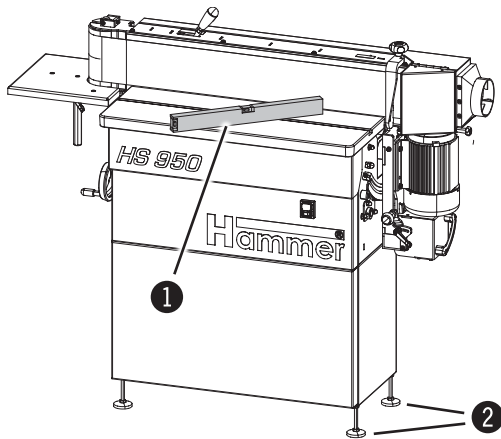


Fig. 7-2: Positioning the machine

1. Transport the machine to the installation site as instructed in the "Transport" chapter and the enclosed transport or installation instructions.
2. Position the machine with the aid of a spirit level to ensure that the machine functions precisely and operates smoothly.  
Even out uneven floors by setting the adjusting screw or by bolsterring the machine.

- ① Spirit levels
- ② Adjusting screws

## 7.3 Machine assembly

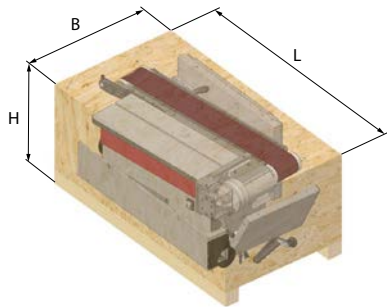


Fig. 7-3: Machine packaging

The machine is shipped mounted on a pallet.

Carefully remove the lid and side walls of the pallet. Store the loose components cleanly and safely.

Remove the transport brackets before moving the machine to the installation location

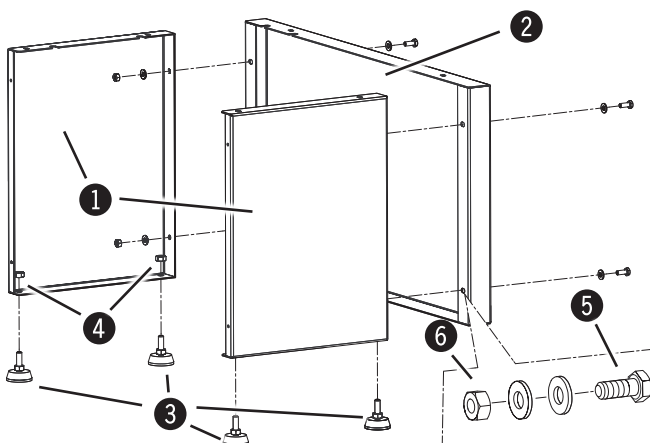
### 7.3.1 Assemble machine frame



**Warning! Heavy dead weights can easily cause an injury**  
To facilitate assembly, ensure the presence of a minimum of one additional people.  
Take measures to prevent the machine from slipping sideways.



**Note:**  
During the assembly of the machine frame, first loosely connect all parts.  
Finally, tighten all screws.



1. Fix the adjusting screws with the nut (4 x M10) to the side sheet metal parts.
2. Fasten the two side sheet metal parts onto the sheet metal front part using the screws and nuts (4 x M8).

- ① Side sheet metal
- ② sheet metal front
- ③ Adjusting screws
- ④ Nut (M10)
- ⑤ Screw (M8)
- ⑥ Nut (M8)

Fig. 7-4: Assemble machine frame

## Setup and installation

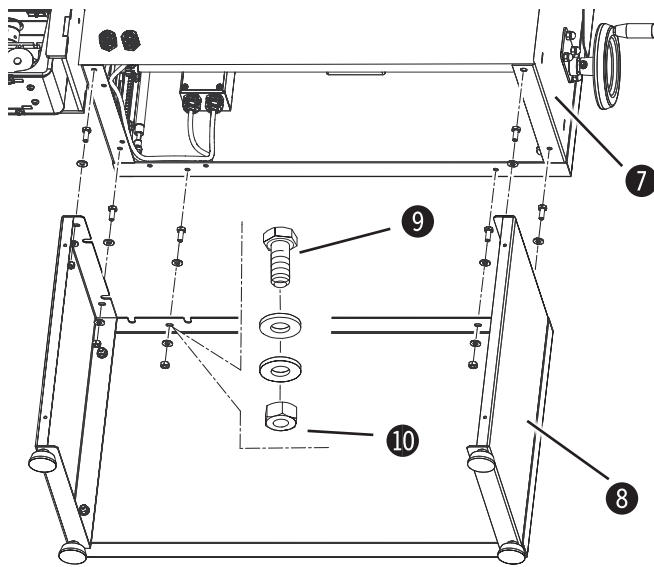


Fig. 7-5: Assemble machine frame

3. Place the machine stand on the machine frame. Take measures to prevent the machine from slipping sideways.
4. Thread the screws (6 x M8) through the holes of both stands and fasten with nuts.

- 7 Machine base-frame
- 8 Machine frame
- 9 Screw (M8)
- 10 Mutter (M8)

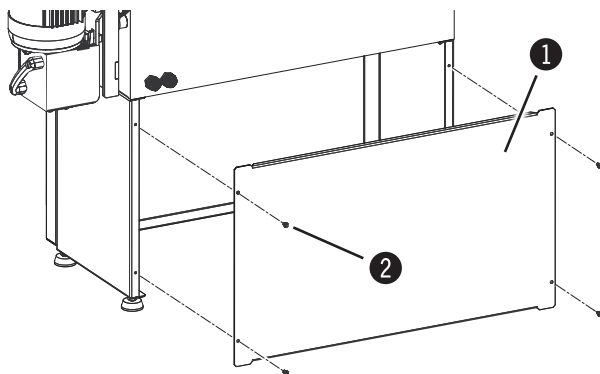


Fig. 7-6: Assemble machine frame

5. Tighten the cover plate with the hex screws (4 x M6).

- 1 Cover plate
- 2 Allen key (M6)

**i Note:**  
If the machine stand is not mounted on the machine frame, the machine must be placed on a stable and level surface at least 490 mm high.

### 7.3.2 Assembly - Adjustment handle / Oscillating range adjustment clamp

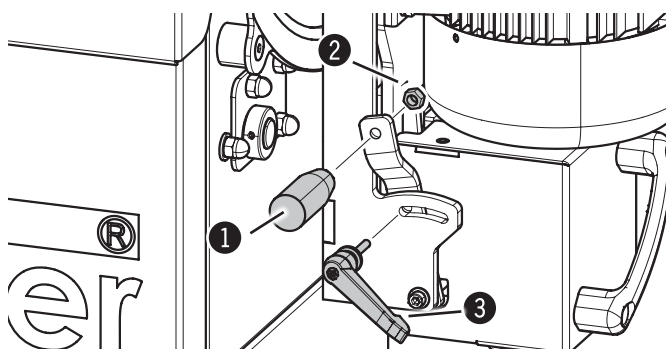


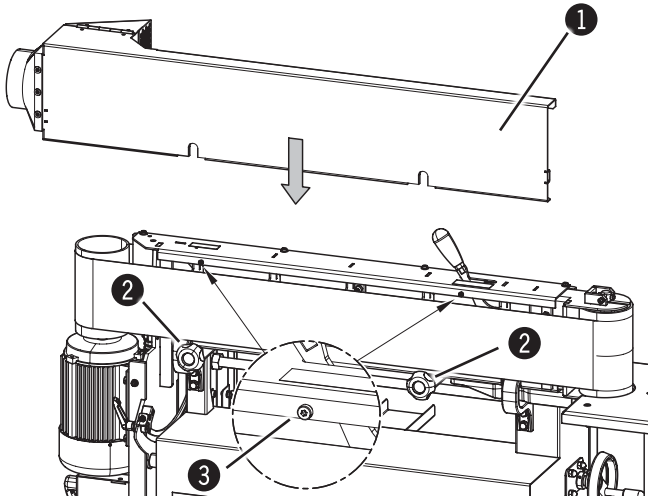
Fig. 7-7: Assembly - Adjustment handle

1. Thread the adjustment handle into the hole of the adjustment lever.
2. Lock the nut with a spanner. (M8)
3. Mount clamping lever /screw in

- 1 Adjustment handle
- 2 Nut (M8)
- 3 Clamping lever

## Setup and installation

### 7.3.3 Assembly - Rear cover abrasive belt

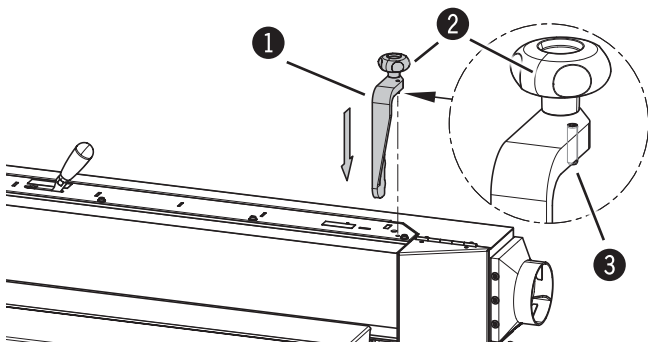


1. Hook the recesses of the rear abrasive belt cover onto the retaining screws. Tighten the clamping screws
2. To reassemble, follow the instructions in the reverse order.

- ① Rear cover abrasive belt
- ② Clamping screws
- ③ Retaining screws

Fig. 7-8: Assembly - Rear cover abrasive belt

### 7.3.4 Assembly - Infeed fence

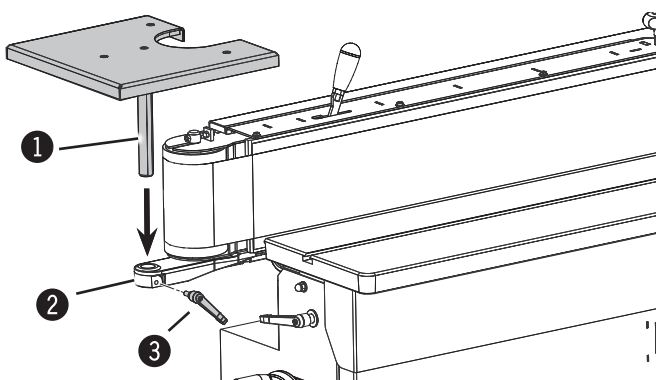


1. Thread the infeed fence with the positioning pin on the hole.
2. Tighten the clamping screw

- ① Infeed fence
- ② Clamping screw
- ③ Positioning pin

Fig. 7-9: Assembly - Infeed fence

### 7.3.5 Assembly / Setting - side working table



1. Insert the guiding shaft of the side work table into the hole. Place the worktable at the bottom.
2. Clamp the clamping lever.

- ① guiding shaft - side working table
- ② Bore
- ③ Clamping lever

Fig. 7-10: Assembly - Infeed fence

## Setup and installation

**!** Attention! Risk of material damage!  
Set the working table with sufficient distance to the sanding belt! There is the risk of collision.

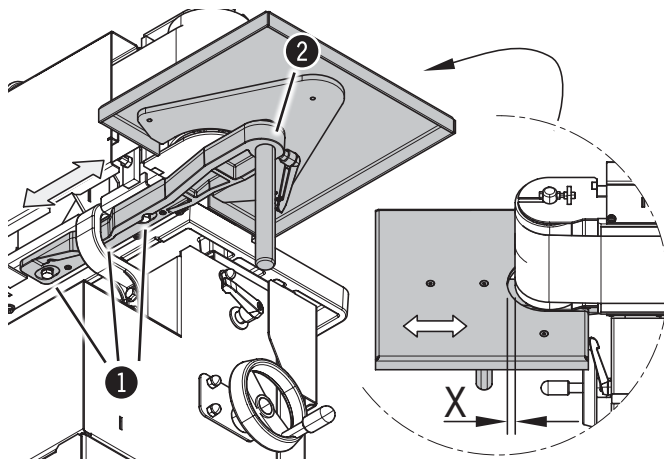


Fig. 7-11: Setting - side working table

### Setting: Distance of the roller to the side working table

1. Loosen the hexagonal screws.
2. Move the clamp along the slotted holes.
3. Tighten the hexagonal screws.

- ① Socket head cap screw
- ② clamp

### Setting: 90° angle of the roller to the side working table

#### Angle A:

1. Place a 90° angle between the roller and the side work table.
2. Measure the distance Y and X . The values X and Y must be equal.
3. Loosen the hexagonal screws.-  
Release the fixing screws

#### Setting - at $X > Y$ :

- Adjusting in the „-“ direction

#### Setting - at $X < Y$ :

- Adjusting in the „+“ direction

4. Tighten the hexagonal screws.  
Tighten the fixing screws

- ① Socket head cap screw
- ② Fixing screws
- ③ clamp

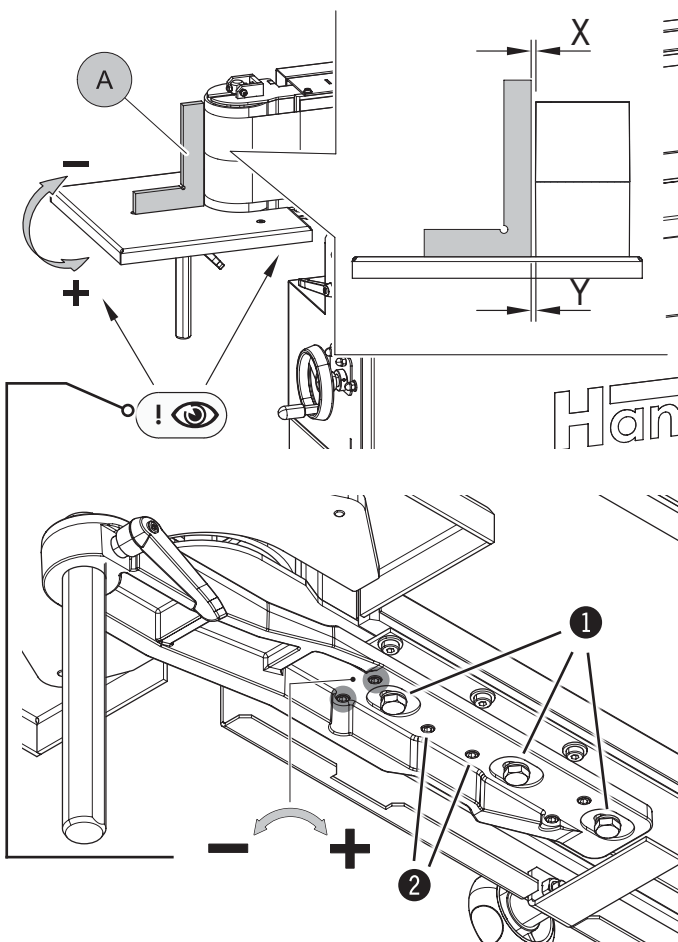


Fig. 7-12: Setting - Angle A

## Setup and installation

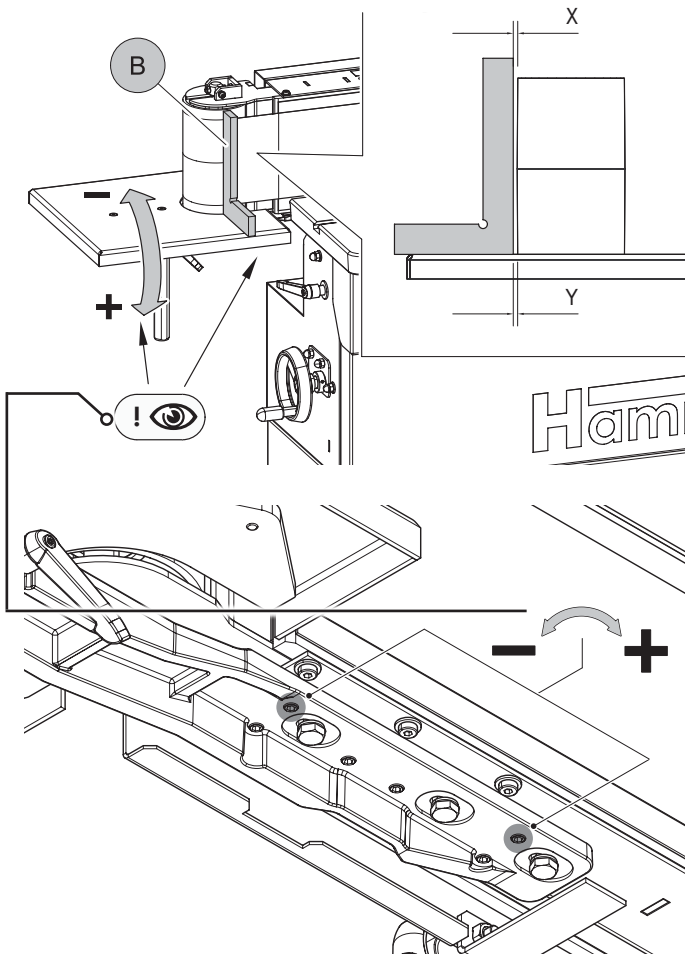


Fig. 7-13: Setting - Angle B

### Angle B:

1. Place a 90° angle between the roller and the side work table.
2. Measure the distance Y and X. The values X and Y must be equal.
3. Loosen the hexagonal screws. Release the fixing screws

### Setting - at X>Y:

- Adjusting in the „-“ direction

### Setting - at X<Y:

- Adjusting in the „+“ direction

4. Tighten the hexagonal screws. Tighten the fixing screws

- ① Socket head cap screw
- ② Fixing screws
- ③ clamp

## 7.4 Chip extraction



### Warning! Risk of injury!:

Vacuum hose must be flame-resistant and must conduct electricity! Be sure to use only genuine Hammer vacuum hoses!



Note: As a rule, all units must be vacuumed during use. A time delayed socket is available as an accessory.

- In addition, the vacuum performance must be sufficient to achieve the required negative pressures and an air speed of 20 m/s at the connector. (see "Technical data")
- Check the air speed before putting the machine into operation for the first time and after essential changes.
- The dust extractor setup must be controlled before the machine is put into operation for the first time. Check for obvious defects on a daily basis and the efficiency on a monthly basis.
- The dust extractor must be connected to the machine in such a manner that it runs in unison with the machine.
- The dust extraction hoses must be electrically conductive and grounded to prevent electrostatic build up.
- Use dust extractors with reduced dust emission to clean dust from the machine.

## Setup and installation

### 7.5 Electrical connection



**Warning! Danger! Electric current!**

Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.

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!



**Attention! Risk of material damage!**

Before hooking up the machine to the power supply, compare the specifications on the data plate with those of the electrical network. Only hook up the machine if the two sets of data correspond to each other. The electrical outlet must have the appropriate socket (for a three-phase alternating current motor, CEE).



**Note:** Do not open the machine's switch box unless you have the express consent of the Hammer service department. Violating this stipulation shall render the right to make claims under the warranty null and void.



**Attention! Risk of material damage!**

The machine must be secured with an automatic fuse.

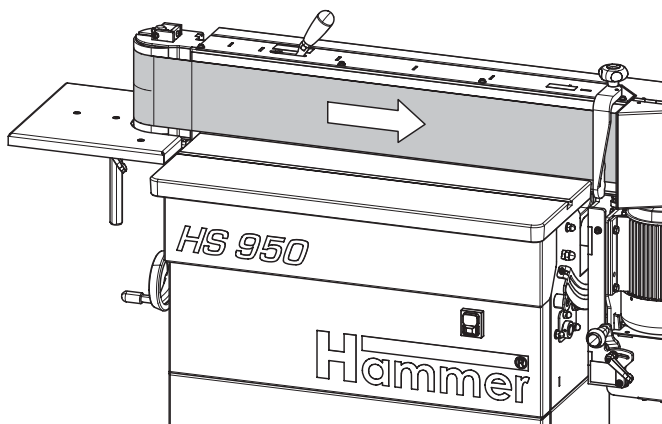


Fig. 7-14 :Direction of the Motor rotation

1. Connect the plug to the power supply.
2. Switch on and let the machine run briefly.
3. While the motor is running, check its direction of rotation.
4. Should a change in the direction of rotation be necessary, switch the two phases on the power cable.

#### Electrical connection requirements

- The machine must be earthed with electrical conductors.
- The voltage fluctuations in the mains supply may not exceed  $\pm 10\%$ .
- The switch cabinet must be fitted with a circuit breaker (DIN VDE 0641). Number of terminals: 3 (three phase current motors)
- The unit must only be used in TN-Systems (neutral connected to earth)! (only 3x400V)
- Power supply cable H07RN-F at least 5x 2,5 (rotary-current motor) or 3x 2,5 (alternating-current motor).
- Safeguarding/Power supply cord: see "Technical data"
- 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 it does not overbend or chafe and there is no risk of tripping over it.



**Note:** The machine's power cable is delivered with an open cable end, i.e. without a plug.

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



*Setup and installation*

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## Making adjustments and preparations

### 8 Making adjustments and preparations

#### 8.1 Safety instructions



**Warning! Risk of injury!:** Improper adjustment and setup work can lead to serious physical injury or material damage. For this reason, this work may only be carried out by authorised, trained personnel who are familiar with how to operate the machine and 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.
- 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 not put in their correct place or put away may be the cause of accidents!
- Install the safety equipment according to the instructions and check that it functions properly.



**Warning! Danger! Electric current!:** Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.

#### 8.2 Sanding belt



**Warning!:** Avoid all contact with rotating sanding belts! Never clean the sanding belts whilst they are still in the machine! Remove them beforehand and clean them outside the machine!



**Attention!:** Always loosen the tension of the sanding belts when the machine is not in use!

##### 8.2.1 Sanding belts

- Never use a torn sanding belt.
- Only use appropriate sanding belts.
- Ensure that the surfaces of the rollers are clean and free of dust before attaching a sanding belt.

**Only use appropriate sanding belts:**

14.2.0835	5 x Sanding belts	2515 x 150 mm K80
14.2.0845	5 x Sanding belts	2515 x 150 mm K100
14.2.0855	5 x Sanding belts	2515 x 150 mm K120
14.2.0865	5 x Sanding belts	2515 x 150 mm K150

##### 8.2.2 Storing the sanding belts



**Note:** Store the sanding belts carefully. Storage conditions with a temperature ranging between 16 and 25 degrees Celsius (60 to 80 degrees Fahrenheit) and a relative humidity of 40 % to 60 %.

## Making adjustments and preparations

### 8.3 Fitting the sanding belt



**Warning!:** Make sure that the sanding belt is running in the correct direction. The direction of rotation is indicated by an arrow on the back of the abrasive belt.

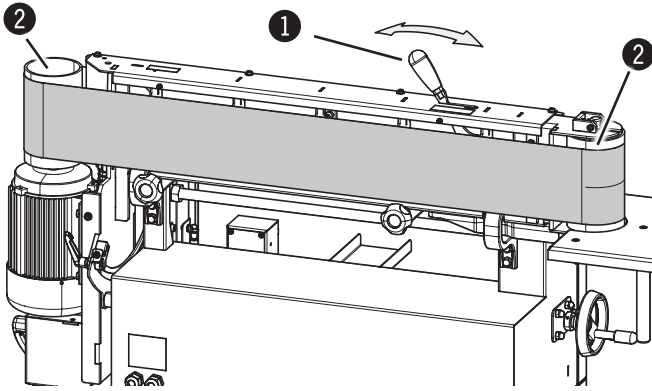


Fig. 8-1: Fitting the sanding belt

1. Remove the workpiece stop.
2. Remove the rear abrasive belt cover.
3. Tilt the lever until it snaps into place
4. Remove the sanding belt by twisting it slightly while pulling it out.
5. Hook a new sanding belt around.
6. Unlock the lever to tension the abrasive belt.
7. Ensure that the upper sanding edge always runs beneath the upper edge of the belt gliding surface or the drive rollers  
See > Centering the sanding belt <
8. Reassemble the rear abrasive belt cover and workpiece stop.

- ① Lever
- ② Rollers

#### 8.3.1 Centering the sanding belt - Height adjustment



**Warning!:** Risk of injury due to crushing  
This setting is made while the machine is switched on.  
Do not touch the rotating abrasive belt!



**Attention! Risk of material damage!**  
Ensure that the upper sanding edge always runs beneath the upper edge of the belt gliding surface or the drive rollers.  
The sanding belt is centered during the machine test in the factory. Proceed very cautiously with the settings described here.

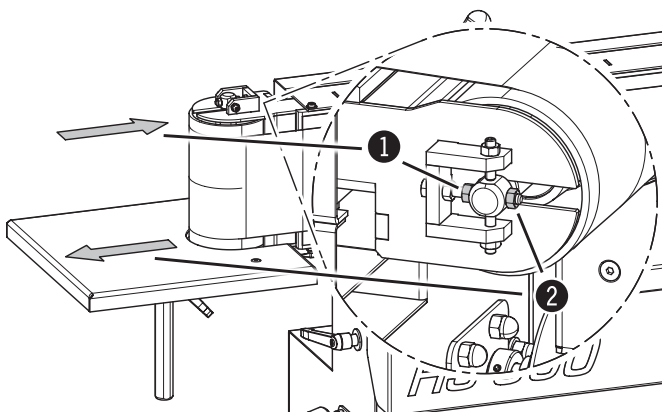


Fig. 8-2: Centering the sanding belt

#### Sanding belt - Height adjustment :

1. Start the machine.
2. Adjust the angle with adjusting nuts  
Depending on the direction of adjustment of the belt roller, loosen the adjusting nut on the corresponding side.  
When the belt runs along the center of the belt roller, fix the setting with the locking nut.
  - **Direction adjusting nut 1:** Increase belt run
  - **Direction adjusting nut 2:** Lower belt run

- ① Adjusting nut 1
- ② Adjusting nut 2

## Making adjustments and preparations

### 8.4 Height adjustment of the working table / additional table

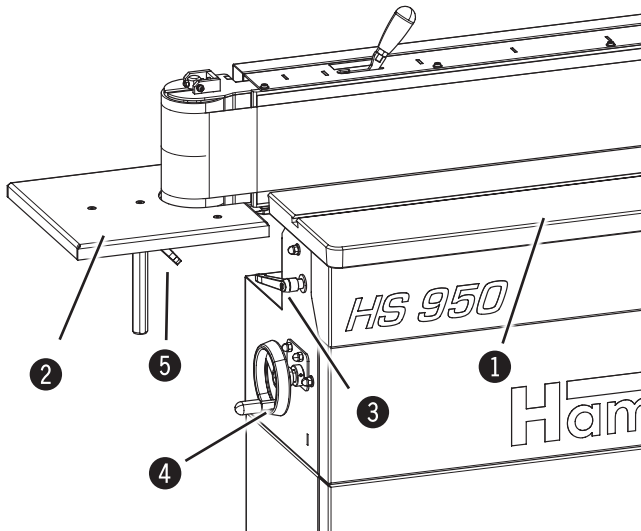


Fig. 8-3: Height adjustment of the working table

#### Work bench :

1. Release the clamping lever.
2. table height adjusted using the handwheel.
  - Clockwise: lower
  - Anti-clockwise: higher
3. Clamp the clamping lever.

#### additional table :

1. Release the clamping lever.
2. For height adjustment, move the additional table to the desired position.
3. Clamp the clamping lever.

- ① Work bench
- ② additional table
- ③ Clamping lever - Work bench
- ④ Handwheel - Work bench
- ⑤ Clamping lever - additional table

### 8.5 Angle adjustment of the sanding unit

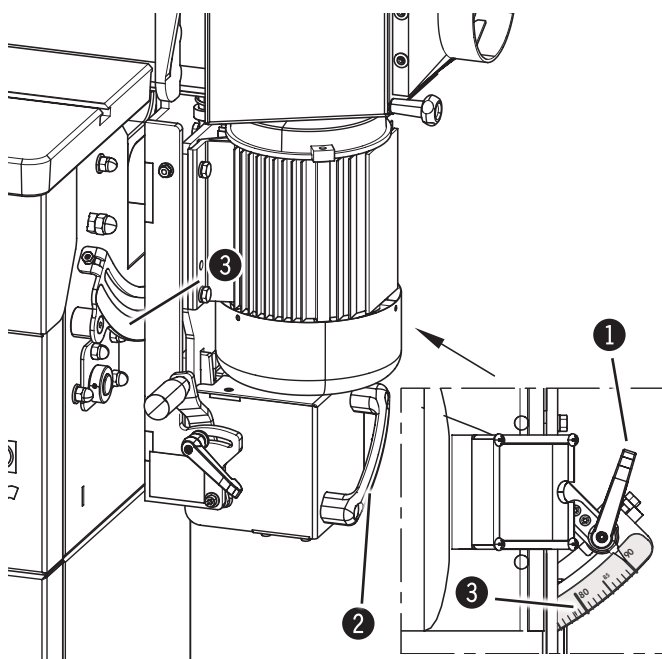


Fig. 8-4: Angle adjustment of the sanding unit

The sanding unit is continuously adjustable between 0 - 90°.

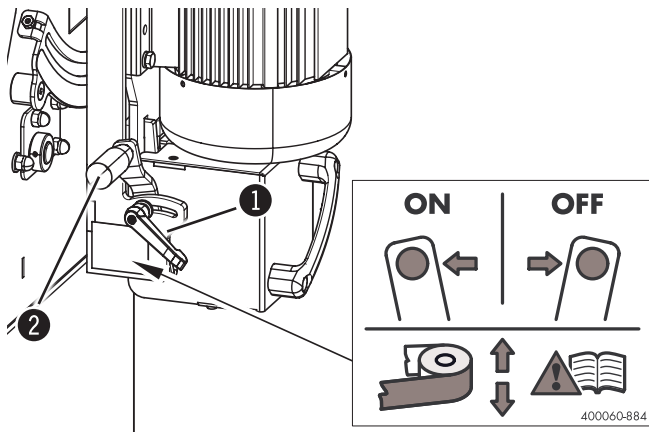
1. Release the clamping lever.  
Use the handgrip to swivel the unit.
2. Set the angle between 0° and 90° on the scale
3. Clamp the clamping lever.

- ① Clamping lever
- ② Hand grip
- ③ Scale

*Making adjustments and preparations*

## 8.6 Sanding belt oscillation on/off

**!** **Attention! Risk of material damage!**  
The oscillation of the grinding belt can be switched on or off to change the grinding pattern.  
To prevent one-sided wear of the abrasive belt, switch on the switched-off oscillation stroke again after use.

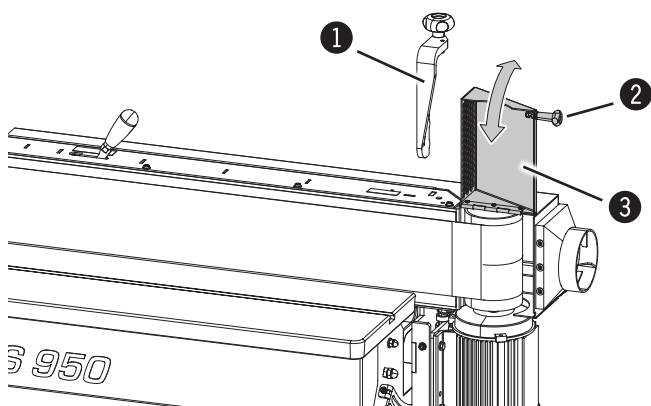


1. Release the clamping lever.
2. Use the lever to switch the oscillation of the grinding belt on and off.
  - **Switching on the machine:** Shift the lever to the back.
  - **Switching off the machine:** Shift the lever to the front.
3. Clamp the clamping lever.

- ① Clamping lever
- ② Lever

Fig. 8-5: Sanding belt oscillation on/off

## 8.7 Extending the machining area (long workpieces)



For longer workpieces the grinding surface can be enlarged.

1. Remove the workpiece stop.
2. Release the handle.
3. Swing the extraction flap upwards.
4. To reassemble, follow the instructions in the reverse order.

- ① Infeed fence
- ② Hand grip
- ③ extraction flap

Fig. 8-6: Extending the machining area (long workpieces)

## Operation

### 9 Operation

#### 9.1 Safety instructions



**Warning!: Risk of injury!: Improper operation may lead to severe physical injury or material damage. For this reason, this work may only be carried out by authorised, trained personnel who are familiar with how to operate the machine and in strict observance of all safety instructions.**

##### Before starting work:

- Before assembling and installing the machine, check to make sure it is complete and in 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 not put in their correct place or put away may be the cause of accidents!
- Ensure that all safety devices have been installed properly.
- Adjustments to the machine or tool replacement may only be conducted once the machine has stopped.
- Only clamp authorised tools to the machine.
- Install the dust extraction system according to the instructions and test its function.
- Only machine workpieces that can be safely placed on the machine and guided.
- Carefully inspect workpieces for foreign matter (nails, screws) which might impair processing.
- Support long workpieces with additional surface equipment (e.g. Table extensions, roll supports).
- Ensure that each unit is rotating in the proper direction.
- Keep tools for handling short and narrow workpieces close at hand.
- Before switching on the machine, always check to make sure that there are no other persons in the immediate vicinity of the machine.

##### During operation:

- When changing to another workpiece or if a

malfunction occurs, first switch off the machine and then secure it against being switched on again accidentally.

- Do not switch off, circumvent or decommission protective and safety devices during operation.
- Do not overload the machine! It is safer and performs better if operated within its power range.

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

- Persons with long hair who are not wearing a hairnet are not permitted to work on or with the machine!
- It is prohibited to wear gloves while working on or with the machine.

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

- Sturdy, tight-fitting clothing (tear-resistant, no wide sleeves, no jewellery (rings, bracelets, necklaces, etc.)).
- Protective footwear To protect the feet from heavy falling objects and prevent sliding on slippery floors.
- Hearing protection To protect against loss of hearing.



**Attention!: Risk of material damage!: Only operate the machine in ambient temperatures from +10°C to +40°C. If the instructions are not followed, damage may occur to bearings.**



**Warning!: Danger! Electric current!: Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.**



**Warning! Risk of injury!: Do not touch the rotating abrasive belt!**

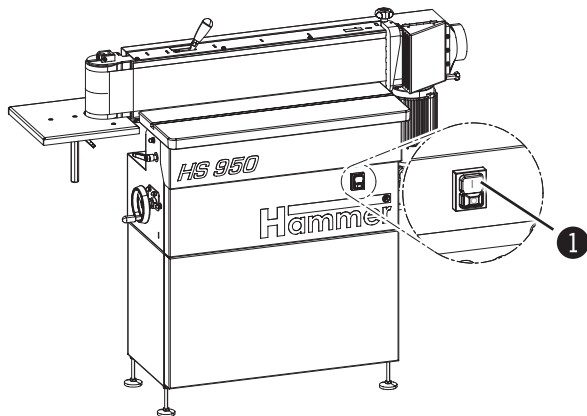
## Operation

### 9.2 Switching on the machine



**Warning!** Risk of injury due to insufficient preparation!

It is only permitted to switch on the machine if, for the work at hand, the required preconditions are fulfilled and any preliminary work is completed. Therefore, the adjusting, fitting and operating instructions (see the corresponding chapters) must be read before switching on the machine.

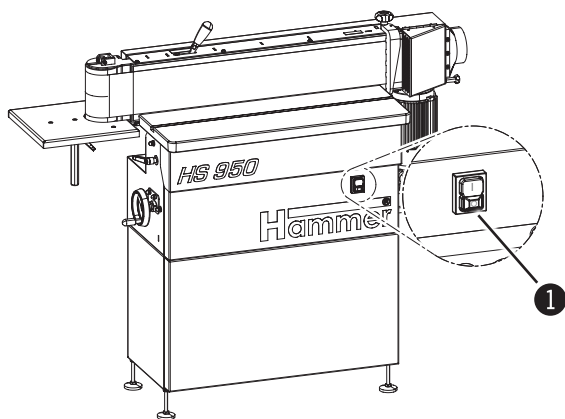


1. Connect the machine to the main power supply.
2. Press green push button on the control panel and release.

① Green push button - ON

Fig. 9-1: Switching on the machine

### 9.3 Switching off the machine / Emergency-stop



1. Press and release the red push button.  
The machine is stopped automatically.
2. Wait until the sanding belt has come to a complete stop.
3. Disconnect the machine from the main power supply.

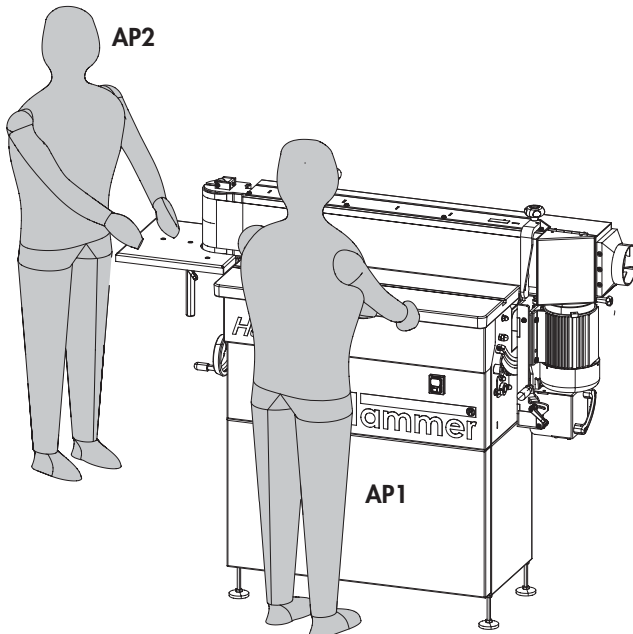
① Red push button - OFF

Fig. 9-2: Switching off the machine / Emergency-stop

## Operation

### 9.4 Working techniques

#### 9.4.1 Working position



Take up the position as shown in the opposite picture when working with the machine

**AP1:** Work area for grinding rectangular or square workpieces

**AP2:** Working area for curved workpieces

Fig. 9-3: Work place/work position

#### 9.4.2 Authorised working techniques

All other working techniques that deviate from the following uses are improper on this machine and therefore not permitted:

- Grinding of longitudinal sides on the longitudinal grinding side of the machine
- Grinding of longitudinal sides on the longitudinal grinding side of the machine with pivoted sanding unit
- Grinding of end faces by means of a swivelling stop fixed to the work table with swivelled or non-swivelled sanding unit
- Grinding on the roller

#### 9.4.3 Prohibited working techniques

Prohibited working techniques are those which must never be carried out on this machine!

- Grinding of metal parts e.g. planer knives
- Removing a standard cover



## Operation

### 9.4.4 Grinding at the front of the machine

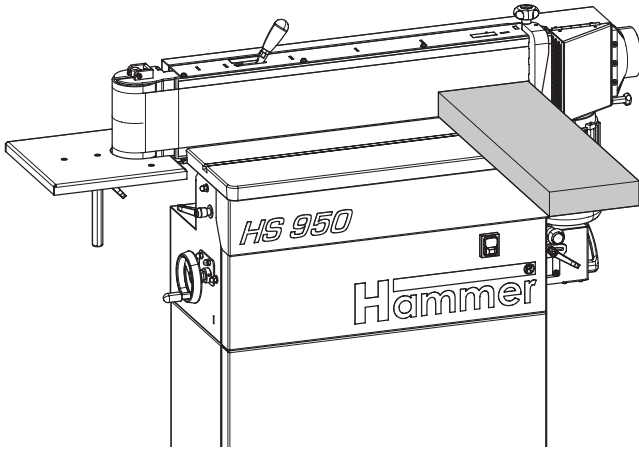


Fig. 9-4: Grinding at the front of the machine

The following operations can be carried out:

- Sanding of parts of drawers
- Straightening corners
- Correcting uneven areas (step between crosspiece and jamb of a window)
- Head sanding

1. Take note of general procedures for authorized working techniques.
2. Adjust the table height to the workpiece to be machined.
3. Check that all clamping levers are tightened firmly.
4. Switch machine on. First place the workpiece against the fence and then guide it to the abrasive belt. Carry out machining until the surface has been sanded cleanly.

### 9.4.5 Sanding with tilted unit



**Attention! Risk of material damage! Prior tilting: Remove tools and stops from the work bench**

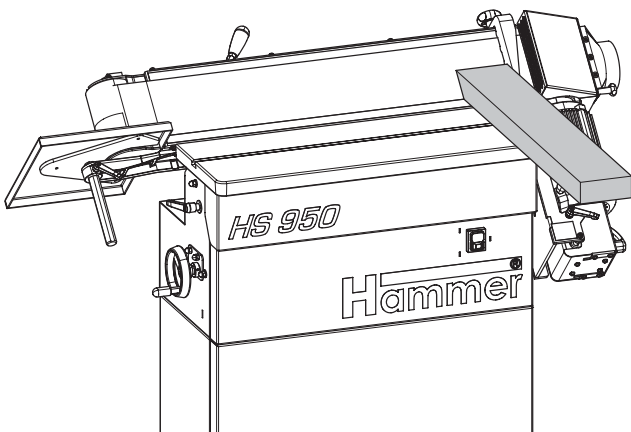


Fig. 9-5: Sanding with tilted unit

The tilting sanding unit can be swivelled from 0-90°.

- The sanding of mitered edges
- The chamfering of sharp edges
- The sanding of chamfered edges

1. Take note of general procedures for authorized working techniques.
2. Adjust the grinding angle by tilting the grinding unit. Adjust the table height to the workpiece to be machined.
3. Check that all clamping levers are tightened firmly.
4. Switch machine on. First place the workpiece against the fence and then guide it to the abrasive belt. Carry out machining until the surface has been sanded cleanly.

## Operation

### 9.4.6 Face grinding at 0°

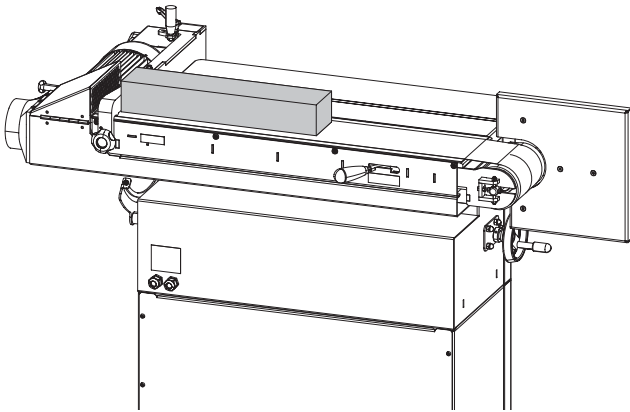


Fig. 9-6: Face grinding at 0°

This step enables you to face grind workpieces up to a width of 150 mm.

1. Take note of general procedures for authorized working techniques.
2. Adjust the table height to the workpiece to be machined. Swivel the sanding unit to the 0° position.
3. Check that all clamping levers are tightened firmly.
4. Switch machine on. First place the workpiece against the fence and then guide it to the abrasive belt. Carry out machining until the surface has been sanded cleanly.

### 9.4.7 Grinding of long workpieces

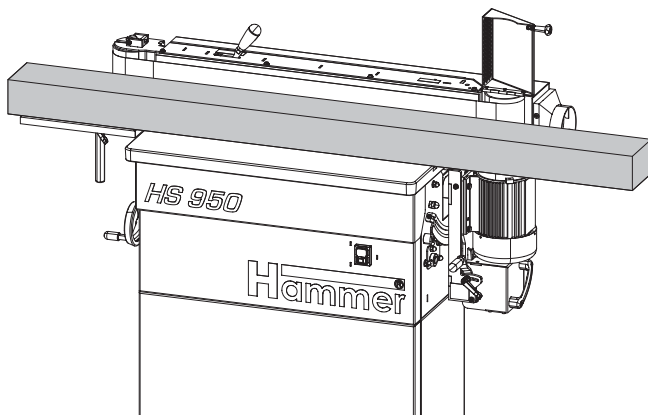


Fig. 9-7: Grinding of long workpieces

Extending the machining area (long workpieces)  
See chapter entitled 8.7

This makes it possible to easily sand extra long workpieces with ease.

1. Take note of general procedures for authorized working techniques.
2. Adjust the table height to the workpiece to be machined.
3. Check that all clamping levers are tightened firmly.
4. Switch machine on. Hold the workpiece to the abrasive belt until the surface is sanded cleanly.

### 9.4.8 Grinding on the roller

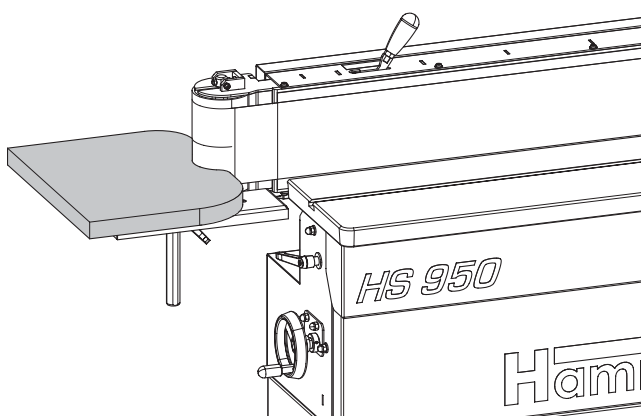


Fig. 9-8: Grinding on the roller

This operation is used for grinding curved workpieces with large bends.

Place the workpiece on the side working table.

1. Take note of general procedures for authorized working techniques.
2. Adjust the table height to the workpiece to be machined.
3. Check that all clamping levers are tightened firmly.
4. Switch machine on. Hold the workpiece to the abrasive belt until the surface is sanded cleanly.

*Operation*

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## Service

### 10 Service

#### 10.1 Safety instructions



**Warning! Risk of injury!: Improper maintenance can cause serious injury or damage. For this reason, this work may only be carried out by authorised, trained personnel who are familiar with how to operate the machine and 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.
- Ensure that there is sufficient space to work around the machine.
- Keep the work area orderly and clean. Components and tools that are not put in their correct place or put away may be the cause of accidents!
- Following the maintenance work, reinstall the guards and check that they are functioning properly.



**Warning! Danger! Electric current!: Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.**

#### 10.2 Maintenance schedule

Interval:	Component	Task to accomplish
Daily	Machine	Remove dust and shavings
	Table surfaces	Remove dust and shavings
	Infeed fence	Remove dust and shavings
	Dust extractor	Check for defects
	Sanding belt	Damage and function check; replace if necessary
	Drive wheels	Remove dust and shavings from the bearing tracks.
Every 40 operating hours, At least once a month	Dust extractor	Check efficiency
every 6 months	Height adjustment of the working table	Control and lubrication (if required)
	guiding shaft - side working table	Control and lubrication (if required)
	Tiltable table	Control and lubrication (if required)



**Note: Cleaning and care products are available as accessories (see: Tools and Accessories catalogue)**

## 10.3 Maintenance work

### 10.3.1 Lubricating the height adjustment

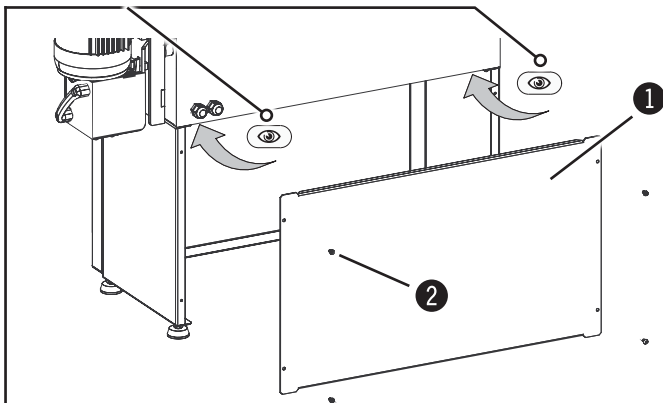


Fig. 10-1: Preparation - Lubricating the height adjustment

1. Vor Beginn der Arbeiten muss die Maschine ausgeschaltet und gegen Wiedereinschalten gesichert werden.
2. Loosen the screws to remove the cover plate. (4 x M6)

- ① Cover plate
- ② Screw (M6)

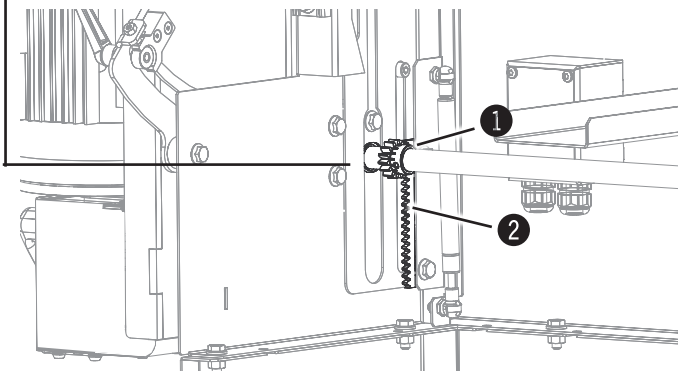


Fig. 10-2: Grinding on the roller

#### Lubricating the height adjustment

1. Release the clamping lever.
2. Move the worktable all the way to the lowest position with the handwheel.
3. Clean the gear rack and gear wheel on both sides and lubricate with normal machine grease.
4. Turn the worktable up to the highest position with the handwheel and turn it to the lowest position again.
5. Clamp the clamping lever.

- ① Gear rack
- ② Gear wheels

## Faults

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### 11 Faults

#### 11.1 Safety instructions



**Warning! Risk of injury!:** Repairing faults incorrectly can result in personal injury or damage to the machine. For this reason, this work may only be carried out by authorised, trained personnel who are familiar with how to operate the machine and in strict observance of all safety instructions.



**Warning! Danger! Electric current!:** Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.

#### 11.2 What to do if a fault develops

**In most cases:**

- In the event of a breakdown which creates danger for either personnel or equipment, the machine should be stopped immediately by activating the emergency stop.
- Also disconnect the machine from the mains and ensure it can not be switched on again.
- Inform those responsible for machine faults immediately.
- Type and extent of fault should be determined by an authorised professional, as well as the cause and repair.

#### 11.3 What to do after rectifying the fault



**Warning! Risk of injury!**

**Before switching the machine back on:**

- The fault and its cause are professionally repaired.
- All safety equipment has been assembled according to regulations and is working correctly.
- Individuals are not located within the danger area of the machine.

## Faults

### 11.4 Faults, causes and repairs

#### 11.4.1 Machine faults

Fault	Possible cause	Repair
The machine can not be switched on	Not enough tension	Check the power supply
	The main fuse in the supply pipe has blown	Replace the main fuse
The sanding motor will not start	The motor has failed thermally	Leave the machine to cool down / Start the machine again
	The fuses have blown	Replace the fuses

#### 11.4.2 Belt guidance faults

Fault	Possible cause	Repair
The sanding belt is slipping off the sanding unit	The sanding belt is not running in the centre	Adjusting sanding belt - Height
	The sanding belt is tilted	Hang another sanding belt around
	Belt tension too low	Set the spring tension
The sanding belt rattles	The joint (splice) is irregular	Hang another sanding belt around
	The sanding belt is damp	Leave the sanding belt to run for a few minutes to dry out. To ensure that the sanding belt does not rattle, store it in a dry place
	Sanding belt - The guides are dirty	Clean the appropriate part
	Abrasive belt support is not parallel	Contact service technician
The sanding belts rupture	Unfavorable sanding belt storage (too wet)	Hang a new sanding belt around; handle the sanding belts according to the instructions in the „Storage“ chapter
	Poor welds in the sanding belt or the sanding belt sides are damaged	Hang a new sanding belt around; take note of the correct welds and handle the sanding belts according to the instructions in the "Storage" chapter. Carefully install the sanding belts in the machine
	The sanding belt is overloaded	Use a sanding belt with a coarser grain size or, decrease the depth of cut
The angle on the workpiece deviates from the set angle	Angle setting misadjusted	Adjusting the angle

## Faults

### 11.4.3 Sanding imperfections

Fault	Possible cause	Repair
The workpieces are being sanded diagonally	Abrasive belt support is not parallel	Contact service technician
Lines are appearing in the workpiece length during the sanding process	The sanding belt grains are crushed or the sanding belt is damaged as a result of irregularities on the workpieces (e.g. due to protruding nails)	Hook a new sanding belt around and feed the workpieces over the whole width
	The sanding belt is covered with glue or dust from previously sanded workpieces	Hook a new sanding belt around. Ensure that the workpieces do not have any protruding nails or contain any undesired impediments
	Sanding belt - The guides are dirty	Clean the appropriate part
Cross lines have appeared in the workpiece width	The weld on the sanding belt has a difference in thickness which shows on the workpiece	Place another sanding belt around; take note of the correct welds
Burn traces have appeared on the workpiece and the sanding belt during the sanding process	The grain size employed is too fine to achieve the desired depth of cut	Use a sanding belt with a coarser grain size or, decrease the depth of cut
	The sanding belt is blunt or covered in a layer of fine dust	Hook a new sanding belt around

### 11.5 Set the spring tension - belt tension

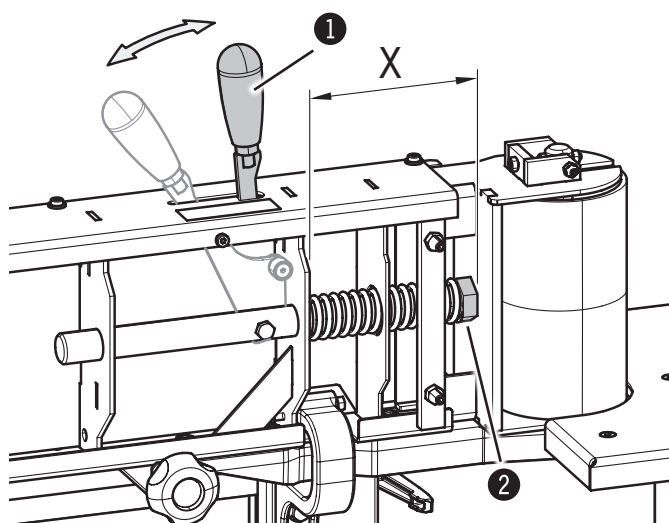


Fig. 11-1: Set the spring tension

1. Remove the workpiece stop.
2. Remove the rear abrasive belt cover.
3. Tilt the lever until it snaps into place
4. Remove the sanding belt by twisting it slightly while pulling it out.
5. Measure the distance X.
6. Adjust the distance: 128 mm
7. To adjust the distance, turn the nut.
8. To reassemble, follow the instructions in the reverse order.

- ① Lever
- ② Nut



Faults

### 11.6 Adjusting the angle - Sanding module inclination

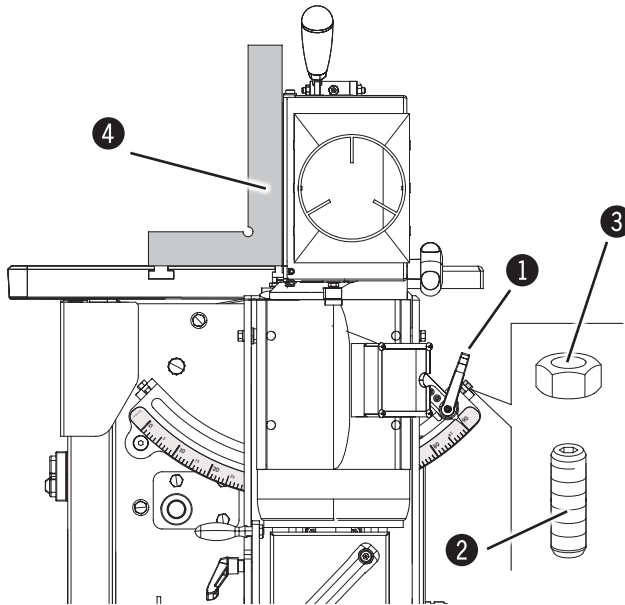


Fig. 11-2: Adjusting the angle - 90°

**90° - Angle :**

1. Before beginning any maintenance work on the machine, switch it off and secure it against accidentally being switched on again.
2. Release the clamping lever.
3. Loosen the locking nut.
4. tilt in 90 degrees direction
5. Place the test piece or 90° angle on the working table and the grinding belt support.
6. adjust the fence screws (set at 90°)
7. Tighten the lock nut again.
8. Test the adjustment and if required, readjust.

- ① Clamping lever
- ② 90° stopscrew
- ③ Locking nut
- ④ 90°- Angle

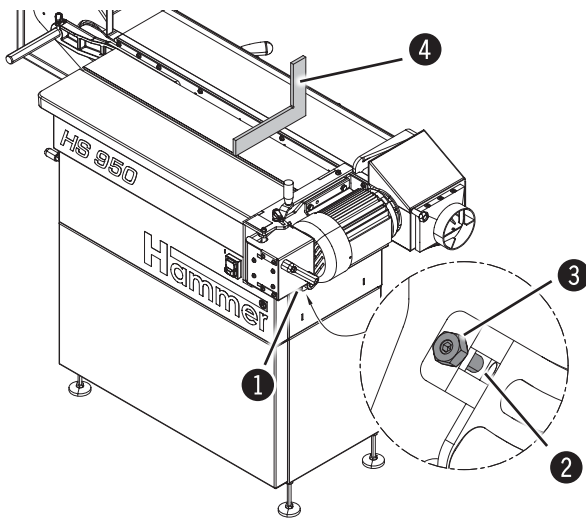


Fig. 11-3: Adjusting the angle - 0°

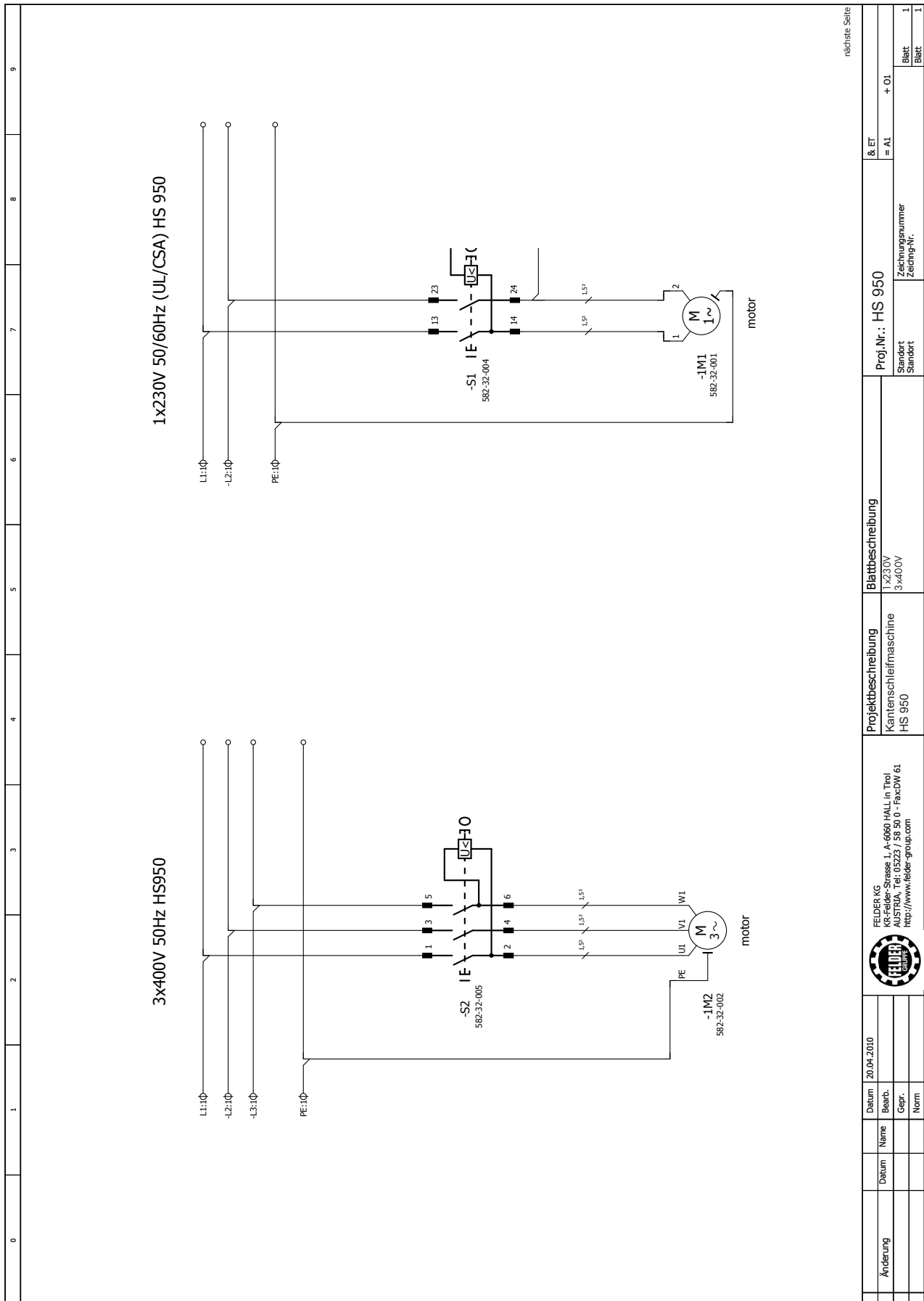
**0° - Angle :**

1. Before beginning any maintenance work on the machine, switch it off and secure it against accidentally being switched on again.
2. Release the clamping lever.
3. Loosen the locking nut.
4. tilt in 0 degrees direction
5. Place the test piece or 90° angle on the working table and the grinding belt support.
6. adjust the fence screws (set at 0°)
7. Tighten the lock nut again.
8. Test the adjustment and if required, readjust.

- ① Clamping lever
- ② 90° stopscrew
- ③ Locking nut
- ④ 90°- Angle

## Electrical circuit diagram

### 12 Electrical circuit diagram



nächste Seite

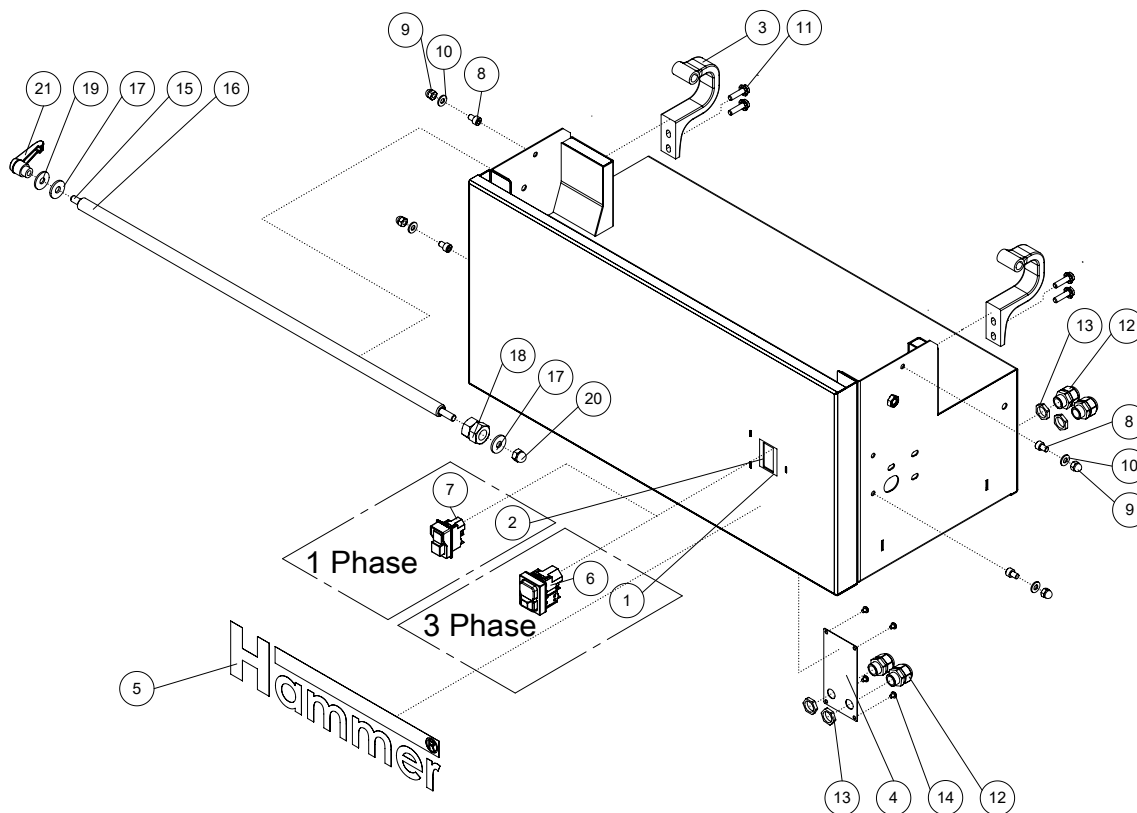
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Name:		+ O1	
Datum:		Standort:	
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:		Standort:	
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*Electrical circuit diagram*

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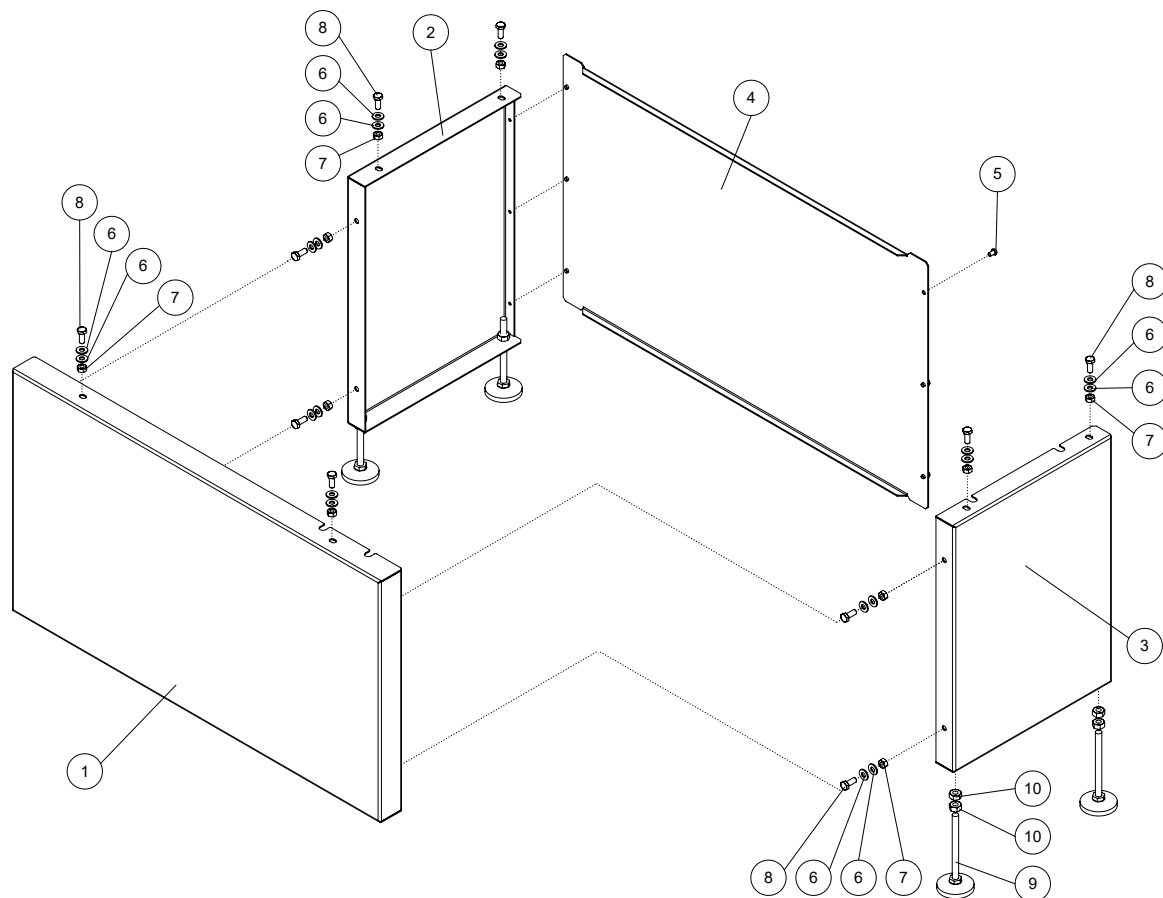
## Spare parts

### 13 Spare parts



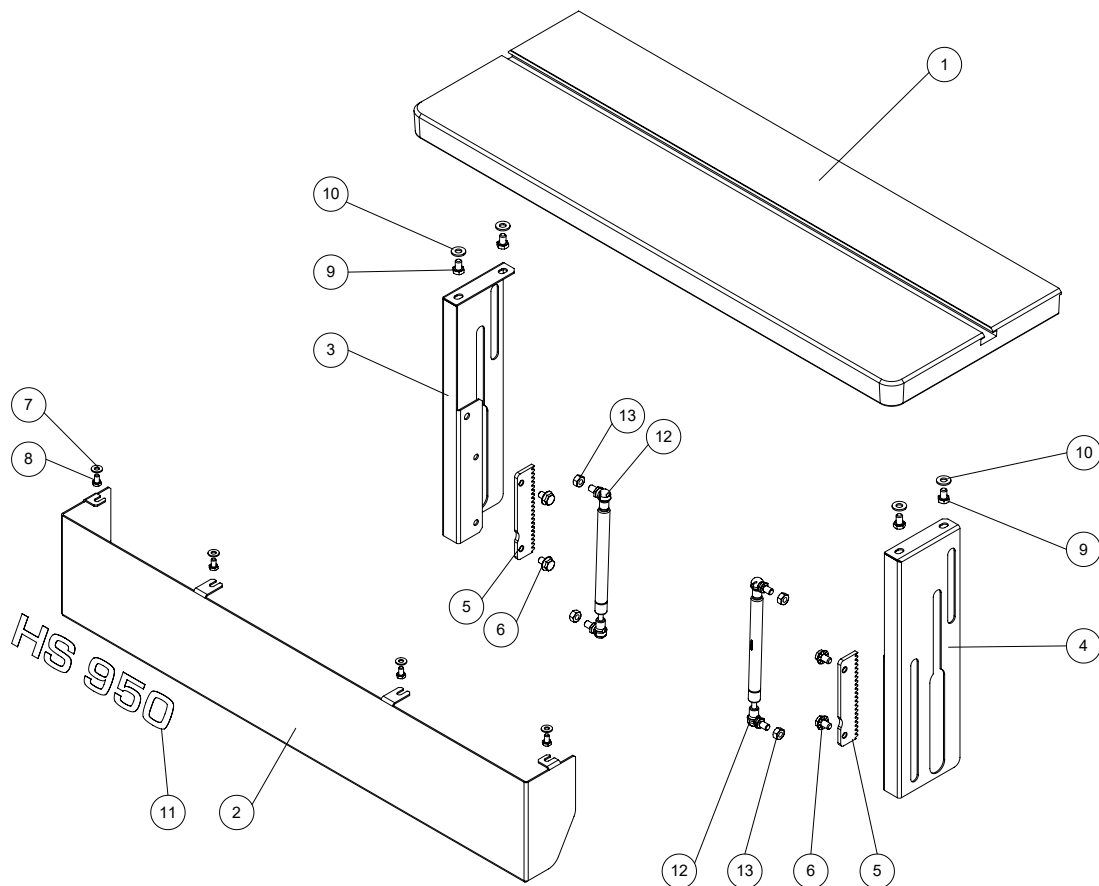
Pos.	Teilenummer	Teilebezeichnung	Pos.	Teilenummer	Teilebezeichnung
1	504032-001	machine socket welded 3Ph switch			
2	504032-015	machine socket welded 1Ph CSA switch			
3	504-032-017	main bracket			
4	504-032-256	cap for switchcover			
5	400050-012	Hammer Logo 460x102mm			
6	siehe E-Plan	Electromagnetic Switch KDJ18			
7	siehe E-Plan	Electromagnetic Switch KJD17F			
8	421CK	Inbusschraube M8x12DIN 912			
9	400AF	Skt. Hutmutter M8			
10	404D	Scheibe M8			
11	400GF	Skt. Rippenschraube M8x30 verzinkt			
12	222X	Anbauverschraubung M20 KB 7-14			
13	222EB	Gegenmutter M20			
14	400HNO	Gewindefurch. Linsensch. M5x6 mit Torx			
15	504-032-018	threaded rod M10			
16	504-032-019	threaded tube M20			
17	504-032-020	plastic washer			
18	401J	Skt. Mutter M20 verzinkt			
19	400CZB	Scheibe M10			
20	400GL	Skt. Hutmutter M10			
21	209GE	Klemmhebel mit Innengewinde M10-Gr3			

Spare parts



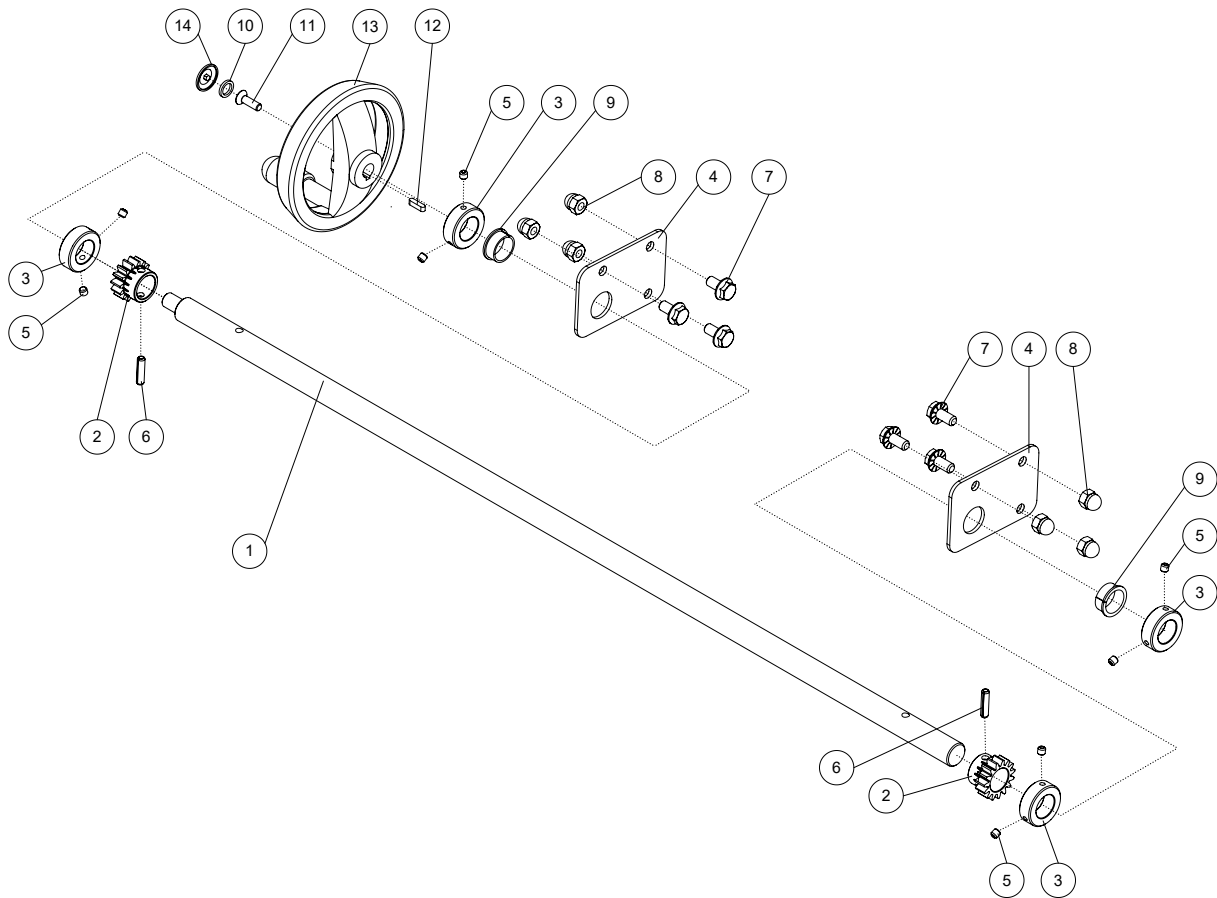
Pos.	Teilenummer	Teilebezeichnung	Pos.	Teilenummer	Teilebezeichnung
1	504-032-207	front sheet extension machine socket			
2	504-032-208	side sheet left extension machine socket			
3	504-032-209	side sheet right extension machine socket			
4	504-032-210	back sheet extension machine socket			
5	422DF	Linsenschraube mit ISK M6x10			
6	404D	Scheibe M8			
7	401E	Skt. Mutter M8 verzinkt			
8	418DC	Skt. Schraube M8x20			
9	207CT	JUSTIERFUSS JTB 58 M10x120			
10	401F	Skt. Mutter M10 verzinkt			

## Spare parts



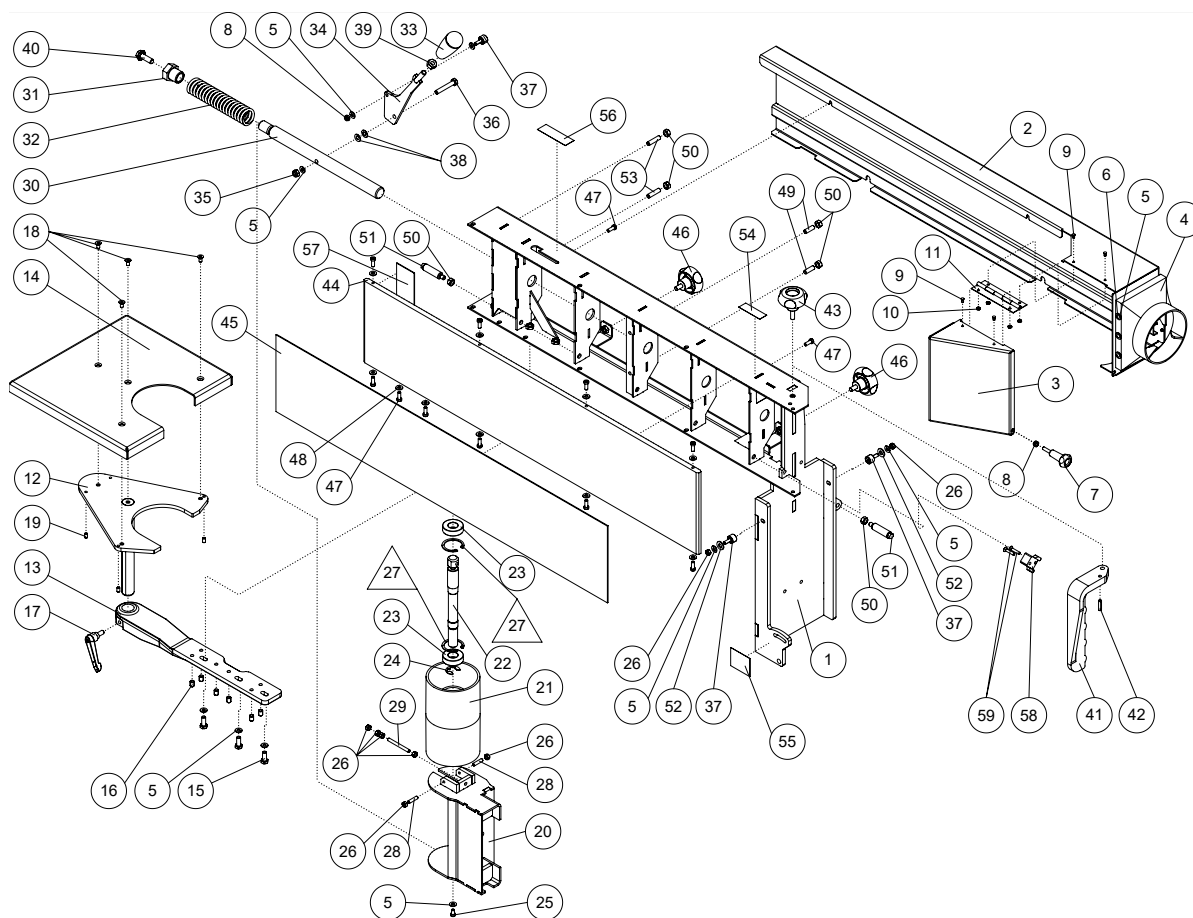
Pos.	Teilenummer	Teilebezeichnung	Pos.	Teilenummer	Teilebezeichnung
1	504-032-021	main table			
2	504-032-229	front cover			
3	504-032-230	guiding plate left			
4	504-032-231	guiding plate right			
5	504-032-233	toothed rack			
6	400GCA	Skt. Rippenschraube M8x12 schwarz			
7	404C	Scheibe M6			
8	418CF	Skt. Schraube M6x10			
9	418DU	Skt. Schraube M8x12			
10	404D	Scheibe M8			
11	400050-886	Typenkleber HS950			
12	582-32-003	Gasfeder M8 L 315/ gas pressure spring			
13	401E	Skt. Mutter M8 verzinkt			

Spare parts



Pos.	Teilenummer	Teilebezeichnung	Pos.	Teilenummer	Teilebezeichnung
1	504-032-014	height adjustment axle			
2	504-032-015	gearwheel			
3	504-032-016	Klemmring			
4	504-032-228	mounting plate hand wheel unit			
5	427DE	Gew. Stift M6x6			
6	428EF	Schwerspannstift 6x24			
7	400GE	Skt. Rippenschraube M8x16 schwarz			
8	400AF	Skt. Hutmutter M8			
9	582-32-007	Gleitlager			
10	400FP	Fischbandring D10verzinkt			
11	400CU	Senkschraube mit ISK M6x20			
12	400IK	Paßfeder A 4 x 4 x 16			
13	582-32-006	Handwheel HAMMER			
14	504-032-035	handwheel plug HAMMER grey			

## Spare parts



Pos.	Teilenummer	Teilebezeichnung	Pos.	Teilenummer	Teilebezeichnung
1	504032-002	Grinding Unit welded	36	417EJ	Skt. Schraube M8x50
2	504032-010	backcover main partwelded	37	582-32-011	Kurvenrolle
3	504-032-234	backcover flap	38	400RG	Tellerfeder 16x8,2x0,90
4	213CD	Absaugstutzen	39	401F	Skt. Mutter M10 verzinkt
5	404CB	Scheibe M6 Federstahl DIN 6796	40	400GN	Skt. Rippenschraube M10x30 schwarz
6	453BB	Blindniete luftdicht 4x9.5	41	504-032-008	stop collar bracket
7	582-32-008	knob with glued in screw	42	428EF	Schwerverspannstift 6x24
8	440A	Sicherheitsmutter M6	43	582-32-010	Griffschraube M8x26
9	582-32-014	press-in threaded studFH-M4-6	44	504-032-010	grinding plane
10	402IA	Skt. Mutter M4 flach	45	582-32-015	Graphit gliding layer
11	504032-011	Scharnier Schutzklappe Absaugung	46	582-32-009	Griffschraube M8x16
12	504032-013	support for additional table	47	423BA	Inbusschraube M6x16
13	504-032-013	beam for add. table	48	404C	Scheibe M6
14	504-032-254	additional table	49	424DB	Gew. Stift M8x25
15	418DC	Skt. Schraube M8x20	50	401E	Skt. Mutter M8 verzinkt
16	424DM	Gew. Stift M8x12	51	504-032-023	rotation pin
17	209DV	Klemmhebel mit Außengew. M8x17-Gr2	52	404D	Scheibe M8
18	400BD	Senkschraube mit ISK M6x12	53	424GL	Gew. Stift M8x32 mit Kunststoffspitze
19	424CJ	Gew. Stift M6x10	54	400060-874	Sticker "Sanding belt drive direction"
20	504032-003	spool holder welded	55	400060-884	Sticker "sanding belt oscillation on-off"
21	504-032-006	spool stretch side	56	400060-887	Sticker "Sanding belt tension"
22	504-032-007	spool axle	57	582-32-016	Graphit gliding layer short
23	432M	Rillenkugellager 6004 ZZ	58	504-032-033	end stop
24	408A	Sicherungsscheibe 15	59	400HR	Senkschraube mit ISK M5x25
25	423BB	Inbusschraube M6x10			
26	401D	Skt. Mutter M6 verzinkt			
27	582-32-020	42 x 1,50 circlip			
28	424CBA	Gew. Stift M6x25			
29	424CU	Gew. Stift M6x60			
30	504-032-011	tension rod			
31	504-032-012	adjusting nut			
32	582-32-013	Druckfeder			
33	582-32-012	Handgriff			
34	504032-005	stretch lever welded			
35	440B	Sicherheitsmutter M8			

504032\_E005\_01  
Stand 05/2019

Schleifeinheit mit Zusatztisch HS950

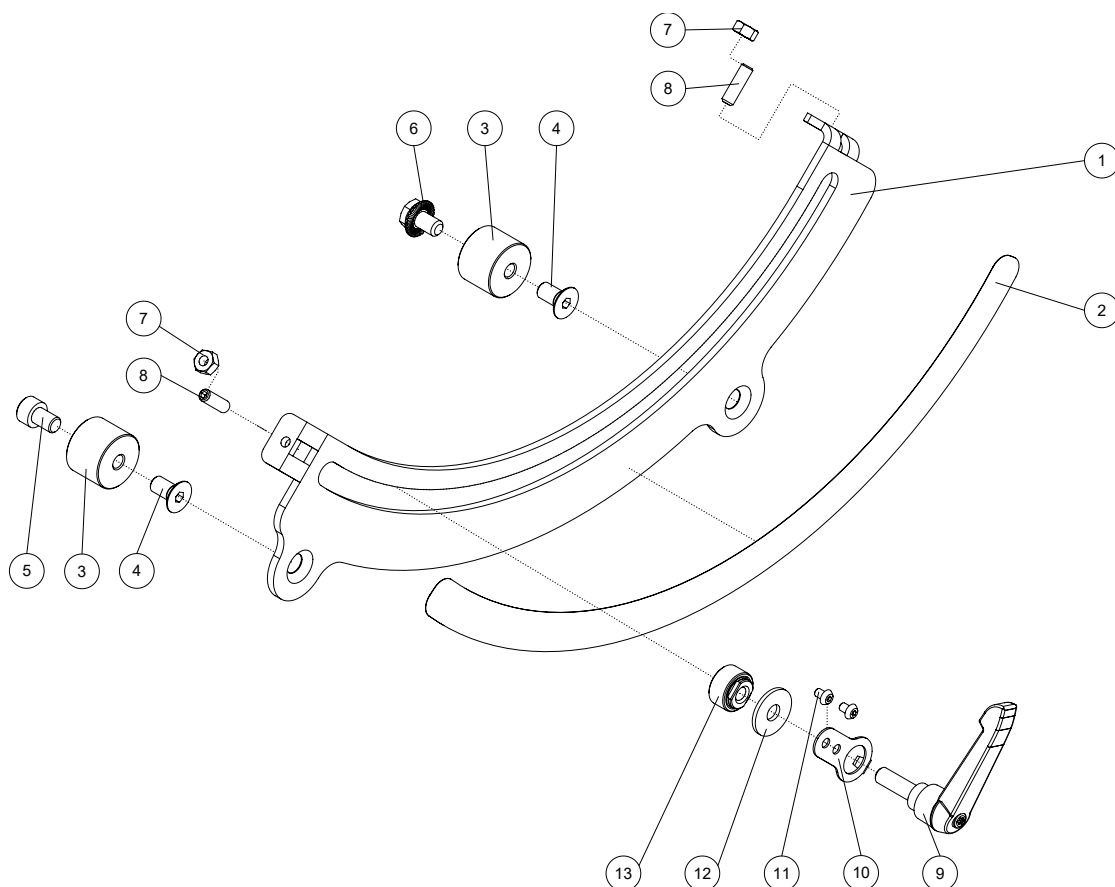
gültig ab  
05/2019



Eigentum der Firma Felder KG. Es darf ohne Erlaubnis weder veräußert, kopiert noch 3. Personen mitgeteilt werden.

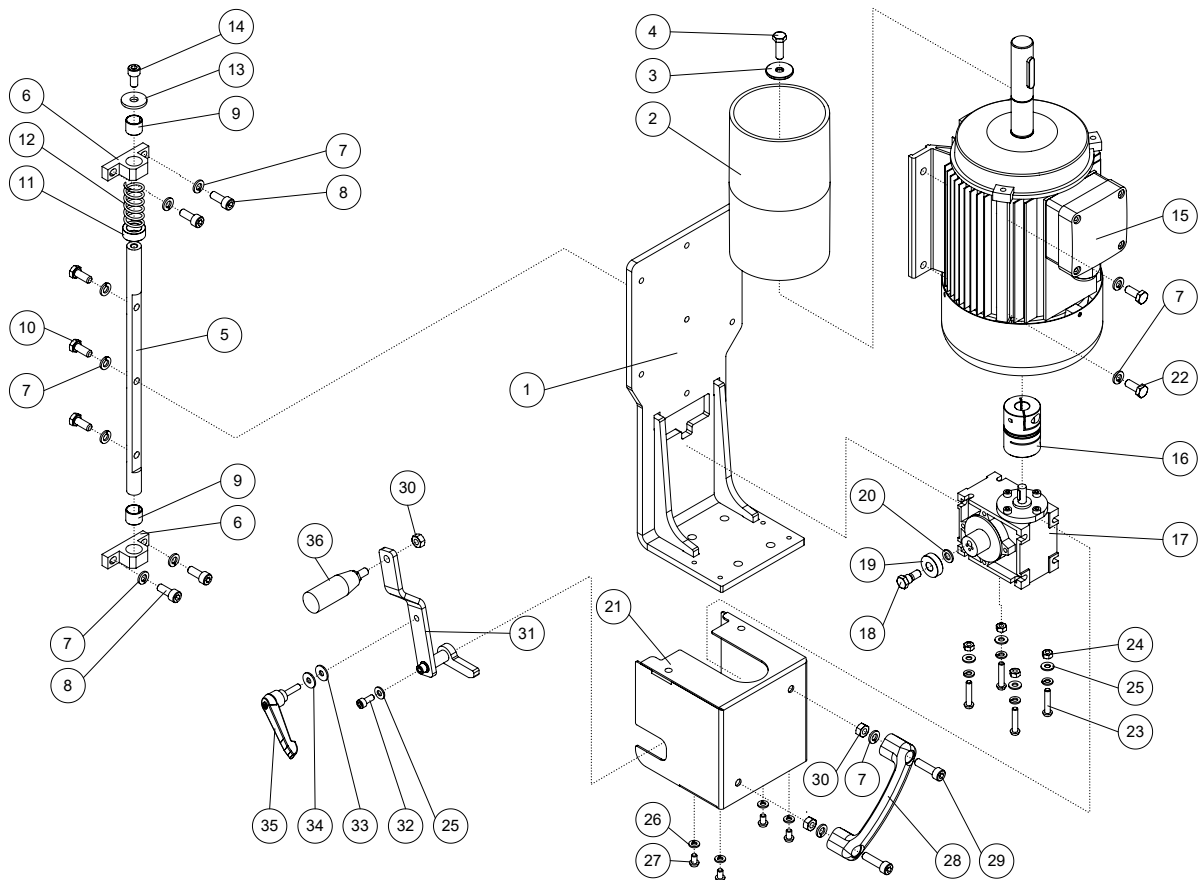


Spare parts



Pos.	Teilenummer	Teilebezeichnung	Pos.	Teilenummer	Teilebezeichnung
1	504-032-239	tilt bracket			
2	400060-885	Aufkleber Winkelskala			
3	504-032-022	distance pin			
4	400CB	Senkschraube mit ISK M8x16			
5	421CK	Inbusschraube M8x12			
6	400GCA	Skt. Rippenschraube M8x12 schwarz			
7	401D	Skt. Mutter M6 verzinkt			
8	424CB	Gew. Stift M6x20			
9	209DL	Klemmhebel mit Außengew. M8x25-Gr2			
10	504-032-232	indicator plate			
11	422DJ	Linsenschraube mit ISK M4x6			
12	400GZ	Scheibe M8 PA66			
13	504-008-010	Skalenanzeigegehülse M8 HAMMER AD 09			

## Spare parts



Pos.	Teilenummer	Teilebezeichnung	Pos.	Teilenummer	Teilebezeichnung
1	504032-007	motor & gearbox holderwelded	36	214AJ	Umleggriff M8-L70
2	504-032-009	spool motor side			
3	504-032-024	washer			
4	418DD	Skt. Schraube M8x25			
5	504-032-025	guide shaft			
6	504-032-026	pedestal bearing			
7	407A	Federring 8			
8	421CT	Inbusschraube M8x20			
9	433GHC	Zylinderbuchse mit Schlitz d10xD12x8			
10	418DCA	Skt. Schraube M8x20			
11	504-032-036	distance ring			
12	215KB	Druckfeder Da22,5 Lo54 d2,5 n5,5			
13	400A	Scheibe M8 verz.			
14	421CN	Inbusschraube M8x16			
15	siehe E-Plan	Motor			
16	582-32-017	Klauenkupplung			
17	582-32-018	Getriebe			
18	504-032-027	shoulder screw			
19	432Z	Rillenkugellager 6000 RS1			
20	403FB	Scheibe M8			
21	504032-009	gearbox coverriveted			
22	418DC	Skt. Schraube M8x20			
23	422DG	Linsenschraube mit ISK M6x30			
24	401D	Skt. Mutter M6 verzinkt			
25	404CB	Scheibe M6 Federstahl DIN 6796			
26	407D	Federring 6			
27	422DF	Linsenschraube mit ISK M6x10			
28	582-32-019	Handgriff			
29	421DF	Inbusschraube M8x30			
30	401E	Skt. Mutter M8 verzinkt			
31	504032-008	coupling handle welded			
32	421BE	Inbusschraube M6x14			
33	400CZ	Scheibe M6 PA66			
34	400CZH	Scheibe M6			
35	209CE	Klemmhebel mit Außengew. M6x25-Gr2			

504032\_E007\_01  
Stand 08/2018

Antriebseinheit HS950

gültig ab  
08/2018



Eigentum der Firma Felder KG. Es darf ohne Erlaubnis weder veräußert, kopiert noch 3. Personen mitgeteilt werden.



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