holzstar
Holzbearbeitungsmaschinen

Operating Instructions

Wood Band Saw

- HBS 405 230V
- HBS 405 400V
- HBS 600

HBS 405

HBS 600

HBS SERIES

Imprint

Product identification

Wood Band Saw	Item number
HBS 405 230V	5902441
HBS 405 400V	5902443
HBS 600	5902463

Manufacturer

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Information about the operating instructions

Genuine operating instructions
according to DIN EN ISO 20607:2019

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Copyright information

Content

1 Introduction

You have made an excellent choice in purchasing a HOLZSTAR Wood Band Saw.

Carefully read the operating instructions prior to commissioning.

They describe correct commissioning, intended use and safe as well as efficient operation and maintenance of your band saw.

The operating instructions form part of the wood band saw. Keep these operating instructions at the installation location of your band saw. Also observe the local accident prevention regulations and general safety regulations for the use of the band saw.

1.1 Copyright

1.2 Customer service

Please contact your specialist retailer if you have any questions regarding your band saw or require any technical information. Your specialist retailer will be happy to support you with specialist advice and information.

Germany:

Stürmer Maschinen GmbH
Dr.-Robert-Pfleger-Str. 26
D-96103 Hallstadt
Germany

Repair service:

Fax: 0049 (0) 951 96555-111
Email: service@stuermer-maschinen.de

Spare parts orders:
Fax: 0049 (0) 951 96555-119
Email: ersatzteile@stuermer-maschinen.de

We are always interested in valuable experience and knowledge gained from using the application, which then could be shared and be valuable to develop our products even further.

1.3 Limitation of liability

All data in these operating instructions has been compiled on the basis of the state-of-the-art, valid standards and guidelines as well as our many years of expertise and experience.

The manufacturer shall not be liable for damage in the following cases:

- Non-observance of these operating instructions
- Unintended use
- Deployment of untrained staff
- Conversions at one's own responsibility
- Technical modifications
- Use of unauthorised spare parts

The actual scope of delivery may deviate from the descriptions and illustrations in this document as a result of special variants, optional extras or recent, technical modifications.

The obligations defined in the supply contract shall apply in addition to the general terms and conditions and the manufacturer's general terms and conditions as well as the statutory regulations valid at the time of the conclusion of the contract.

2 Safety

This section provides an overview of all important safety packages for personal protection as well as safe and reliable operation. The sections on individual service life phases contain additional, specifically applicable safety information.

2.1 Legend of symbols

Safety Instructions

Safety instructions in these operating instructions have been highlighted with symbols. Safety instructions are indicated by signal terms that express the degree of risk involved.

DANGER!

This combination of symbol and signal word indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNiNG!

This combination of symbol and signal word indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.

CAUTION!

This combination of symbol and signal word indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

ATTENTION!

This combination of symbol and signal word indicates a possibly hazardous situation which, if not avoided, may result in damage to property and the environment.

NOTE!

This combination of symbol and signal term indicates a potentially dangerous situation which may cause material damage or harm the environment if it is not averted.

Tips and recommendations

Tips and recommendations

This symbol highlights useful tips and recommendations as well as information for efficient and reliable operation.

Observe the safety information in these operating instructions to minimise the risk of personal injury as well as material damage and prevent hazardous situations.

2.2 Operator responsibility

Operators are defined as the persons who operate the machine for commercial or profit-based purposes or provide the machine to third parties for use or application and bear the legal product responsibility in terms of the protection of users, staff or third parties during operation.

Obligations of the operator:

If the machine is used for commercial purposes, operators are subject to the legal stipulations in terms of occupational safety. For this reason, the safety instructions in these operating instructions as well as the safety, accident prevention and environmental protection regulations valid at the installation location must be complied with. In this process, the following shall apply in particular:

- Operators shall obtain information about valid occupational safety regulations and determine additional hazards as part of a risk assessment which result from the specific operating conditions at the machine's installation location. Said risk assessment shall be reflected in operating instructions for machine operation.
- During the entire machine operating time operators must check whether the operating instructions they created meet current standards and adapt the operating instructions where necessary.
- Operators shall clearly manage and specify the responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- Operators must make sure that all persons handling the machine have read and understood these operating instructions. Operators must also regularly train staff and notify of the hazards.
- Operators shall provide staff with the required protective equipment and wearing the required protective equipment shall be mandatory.

Operators shall also be responsible for maintaining the machine in a technically perfect condition. For this reason, the following shall apply:

- Operators shall make sure that the maintenance intervals described in these operating instructions are complied with.
- Operators shall regularly check that the safety equipment is fully functional and complete.

2.3 Operating staff qualification

The different tasks described in these operating instructions require different levels of skills in terms of the qualifications of operating staff working with the machine.

WARNING!

Risk from inadequately qualified persons!

Inadequately qualified persons are unable to assess the risks when handling the machine, thus putting themselves and others at risk of severe injuries.

- All work must be carried out by qualified persons only.
- Keep inadequately qualified persons and children away from the work area.

Exclusively persons of whom it can be expected that they reliably complete assigned tasks shall be authorised to carry out any tasks. Persons whose reactions have been impaired shall not be authorized, e.g. drug users, users under the influence of alcohol or medication.

These operating instructions specify the following personal qualifications for the different tasks:

Operating staff:

Operating staff has undergone an induction by the operator about the entrusted tasks and potential hazards resulting from improper behaviour. Tasks which go beyond normal operation may only be carried out by the operator if they are listed in the operation manual and the operator has made him/herself familiar with them.

Qualified electrician:

Due to the electrician's specialised training, know-how, experience and knowledge of pertinent standards and regulations the electrician is in a position to work on the electrical systems, and autonomously identify and avoid potential hazards.

Specialist staff:

As a result of specialist training, expertise, experience and skills in terms of the relevant standards and regulations, specialist staff is able to complete the tasks they are entrusted with and independently identify hazards and avert risks.

Manufacturer:

Certain work must be carried out by manufacturer specialist staff only. Other staff is not permitted to carry out this work. Contact our customer service to have the work carried out.

2.4 Personal protective equipment

Personal protective equipment is intended to protect the health and safety of persons at work. Staff must wear the personal protective equipment indicated in individual sections of these operating instructions when carrying out the different tasks on the machine.
The personal protective equipment is described in the following section:

Hearing protection

The hearing protection protects the ears against damages of hearing due to noise.

Eye protection

Protective glasses protect the eyes against projected parts and splashes of liquid.

Suitable protective gloves

The protective gloves provide protection for the hands against sharp-edged components, as well as against friction, abrasions or deeper injuries.

Safety boots

The safety boots protect the feet against crushes, falling parts and slipping over on slippery underground.

Protective clothes

Protective work clothing means tight-fitting clothing with low tear resistance.

Protective dust-mask

The dust protection mask protects the respiratory tract from wood chips and wood dust.

2.5 Safety data sheets

You can obtain safety data sheets on hazardous goods from your specialist dealer or by calling
+49 (0)951/96555-0.
Specialist dealers can find safety data sheets in the download area of the partner portal.

2.6 Safety devices

- Adjustable cover of the saw band.
- Door safety switch: One safety switch each on the inside of the cover of the upper and lower band saw roll.

2.7 General safety notes

- The machine is intended for operation by one person!
- The band saw may only be set up and operated by persons who are familiar with the band saw and are aware of the dangers involved in handling the band saw. Keep visitors and unauthorised personnel away from the band saw.
- All persons involved in installation, commissioning, operation and maintenance must have the required qualifications and carefully observe these operating instructions.
- Note that locally applicable laws and regulations determine the minimum age of the operator and may restrict the use of this machine!
- Always disconnect the band saw from the electrical power supply when carrying out carry out maintenance work. Secure the machine against unintentional restarting.
- The European standards must be observed when installing, operating, maintaining and repairing the band saw. For the European standards not yet transposed into the respective national law, the still valid country-specific regulations are to be applied.
- Operators of bandsaws outside the scope of the European standards are obliged to comply with the safety and accident prevention regulations valid in the country of operation. If necessary, appropriate measures must be taken to comply with the country-specific regulations before commissioning the band saw.

- Do not wear loose clothing or jewellery, they can get caught in moving parts.
- Wear a protective hair cover to protect long hair. Use safety glasses and hearing protection and a face or dust mask to be protected from toxic wood dust.
- Do not work on the machine if you are tired, unable to concentrate or under the influence of medication, alcohol or drugs!
- Keep the working area clean.
- Protect the machine from moisture (risk of short circuit!).
- Do not use the machine in areas where fumes from paints, solvents or flammable liquids are a potential hazard (risk of fire or explosion!).
- Only use saw bands recommended by the manufacturer and which correspond to the state of the art in your country. Always choose the right band saw blade for the material to be cut. Make sure that the choice of band saw blade and speed depends on the material to be cut.
- Do not cut metals such as nails and screws. Inspect all nails, screws and other foreign objects that form the workpiece before operation.
- Check the blade carefully for cracks or damage before use. Replace cracked or damaged blade immediately.
- Remove spanners, cut-off parts, etc. from the table before switching on the bandsaw.
- Maintain proper footing and balance at all times when working on the band saw.
- Watch the saw band during operation. DO NOT REACH INTO THE SAW BAND!
- Never remove sections or other parts of the workpiece from the cutting area while the machine is running.
- Make sure that the maximum speed indicated on the tools is not exceeded.
- Working with gloves on rotating parts is not permitted!
- Before cutting a workpiece with the band saw, let the machine run for some time. Check for vibrations, which may indicate poor installation or a badly balanced blade.
- Only operate the wood band saw when an extraction unit is connected and switched on.
- Do not clean the saw band during the cutting process.
- Make sure that the maximum speed indicated on the tools is not exceeded.
- Do not operate the machine when the protective bonnet is open to protect the saw band
- **The machine is not intended for outdoor operation!**
- Keep the work area well lit.
- Avoid body contact with earthed surfaces to prevent electric shock.
- When not in use, keep the tools and band saw in a dry, enclosed place out of the reach of children.
- Make a habit of checking that the tool and adjusting key have been removed before switching on the bandsaw.
- Never pull on the power cord to unplug it from the wall socket. Keep the cable away from heat, oil and sharp edges.
- Use a push stick to cut small workpieces on the band saw.
- Keep cutting tools sharp and clean for better and safer performance.
- Follow the instructions for lubricating and changing accessories.
- Check the cable regularly and if it is damaged, have it repaired by an authorised service centre.
- Check the extension cords regularly and replace them if they are damaged.
- Keep the handles dry, clean and free of oil and grease.
- Before continuing to use the tool, a damaged guard or part should be carefully inspected to ensure that it is functioning properly and performing its intended function.
- All conditions such as the alignment of moving parts, free running of moving parts, etc. that are to be properly repaired or replaced by an authorised service facility should be checked at the start of work unless otherwise stated in this manual.
- Have defective switches replaced by an authorised service facility. Do not use the bandsaw if the switch is not working properly.
- Only use original accessories and spare parts from HOLZSTAR.

ATTENTION!

Before starting work, make sure that the prescribed personal protective equipment is available at the workplace.

2.8 Safety labels on the wood band saw

The following safety labels identifications are attached to the band saw (Fig. 1) and must be observed.

Fig. 1: Safety labels

The safety labels attached to the machine must not be removed. Damaged or missing safety labels can lead to incorrect actions, personal injury and damage to property. They must be replaced immediately.

If the safety labels are not recognisable and comprehensible at first glance, the machine must be taken out of operation until new safety labels have been attached.

3 Intended use

The Wood Band Saw is designed exclusively for sawing wood or wood-like materials. The band saw is designed and built for use in a non-hazardous environment.

Intended use also includes compliance with all the information in these instructions.

3.1 Reasonably foreseeable misuse

Any use beyond the intended use or any other use is considered misuse.

Possible misapplications may include:

- Use of the wood band saw for materials other than wood (e.g. the processing of metal).
- Machining of non-fixed or insufficiently fixed workpieces.
- Operating the machine without functioning, intended protective devices.
- Bridging or changing the safety devices.
- Non-observance of the maintenance instructions.
- Non-observance of wear and damage marks.
- Service work by untrained or unauthorized personnel.
- Maintenance work on an unsecured machine.
- Deliberate or careless handling of the wood band saw during operation.
- Installation of spare parts and use of accessories and operating equipment not approved by the manufacturer.
- Machining of oversized or undersized workpieces so that safe working can no longer be guaranteed.
- Modifications to the machine or the use of modified tool systems.

Misuse of the wood band saw can lead to dangerous situations.

Stürmer Maschinen GmbH accepts no liability for constructive and technical modifications to the wood band saw.

Claims of any kind for damage due to improper use are excluded.

3.2 Residual risks

Even if all safety regulations are observed and the machine is used in accordance with the regulations, there are still residual risks, which are listed below:

- Risk of injury to the upper limbs (e.g. hands, fingers).
- Danger from workpieces falling or being thrown around.
- Danger from inhaling wood dust from chemically treated workpieces.
- Breakage/cracking of the tool
- Fire hazard in case of insufficient ventilation of the motor.
- Impairment of hearing during prolonged work without hearing protection.
- Risk of injury to the eye from flying parts, even with protective goggles.
- Risk of injury from kickback of the cut material, ejection of the cut material or parts of it.
- Touching rotating parts or tools.
- Touching live parts.

4 Technical Data

Model	HBS 405 230V	HBS 405 400V	HBS 600
Length	760 mm		1150 mm
Width / Depth	760 mm		930 mm
Height	1740 mm		2000 mm
Weight	136 kg		280 kg
Supply voltage	230 V	400 V	400 V
Phase(s)	1	3	3
Mains frequency	AC	AC	AC
Type of current	50 Hz	50 Hz	50 Hz
Worktable length	500 mm		860 mm
Worktable width	395 mm		550 mm
Worktable height	32 mm		35 mm
Worktable inclination	0-45°		0-20°
Cutting height max. 90°	200 mm		310 mm
Cutting width max. without stop	375 mm		580 mm
Cutting width max. with stop	250 mm		540 mm
Saw band speed(s)	600 m/mim		
Ø Flywheel	400 mm		600 mm
Saw band length	2950 mm		4080 mm
Saw band width	16 mm		32 mm
Max. saw band widt	20 mm		40 mm
Saw band thickness	0,52 mm		0,65 mm
Ø Suction nozzle	100 mm		100 mm
Slide length	200 mm		200 mm
Slide width	100 mm		100 mm
Input power	1,5 kW	1,5 kW	3,6 kW
Output power	1,0 kW	1,0 kW	3,0 kW

4.1 Type plate

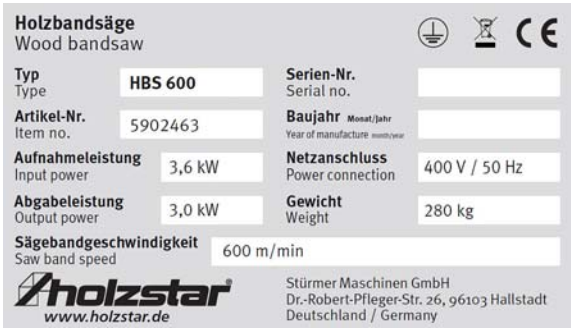


Fig. 2: Type plate

4.2 Scope of delivery

- Tools
- Angle stop
- Rip fence

4.3 Accessories

Tips and recommendations

We recommend using only high-quality original Holzstar accessories. Faultless operation and optimum working results can only be guaranteed with original accessories.

HBS 405

Designation [length x width x thickness]	Item number
Saw band 2950x6x0,6 mm I 6 ZpZ	5160410
Saw band 2950x10x0,5mm I 4 ZpZ	5160411
Saw band 2950x16x0,5mm I 4 ZpZ	5160412
Saw band 2950x20x0,5mm I 4 ZpZ	5160413
Saw band 2950x25x0,5mm I 4 ZpZ	5160414

HBS 600

Designation [length x width x thickness]	Item number
Saw band 4080x10x0,6mm I 4 ZpZ	5163910
Saw band 4080x16x0,6mm I ZpZ	5163916
Saw band 4080x20x0,7mm I 3 ZpZ	5163920
Saw band 4080x25x0,65mm I 3 ZpZ	5163925

5 TTransport, packaging, storage

Delivery

After delivery, check the band saw for visible transport damage. If you discover any damage to the cross-cut and mitre saw, report it immediately to the transport company or dealer.

Transport

Improper transport is accident-prone and can cause damage or malfunctions for which we do not grant any liability or guarantee.

Transport the scope of delivery secured against shifting or tilting with a sufficiently dimensioned industrial truck to the installation site.

WARNING!

Severe or fatal injuries may occur if parts of the machine tumble or fall down from the forklift truck, pallet truck or from the transport vehicle.
Follow the instructions and information on the transport box.

Note the total weight of the machine. The weight of the machine is indicated in the "Technical data" of the machine. When the machine is unpacked, the weight of the machine can also be read on the rating plate.

Only use transport devices and load suspension gear that can hold the total weight of the machine.

WARNING!

The use of unstable lifting and load suspension equipment that might break under load can cause severe injuries or even death. Check that the lifting and load suspension gear has sufficient load-bearing capacity and that it is in perfect condition.

Observe the accident prevention regulations issued by your Employers Liability Insurance Association or other competent supervisory authority, responsible for your company.

Fasten the loads properly.

General risks during internal transport

WARNING: DANGER OF TIPPING

The device may be lifted unsecured by a maximum of 2cm.

Employees must be outside the danger zone, the reach of loads.
Warn employees and, if necessary, advise employees of the hazard.

Devices may only be transported by authorized and qualified persons. Act responsibly during transport and always consider the consequences. Refrain from daring and risky actions.

Gradients and descents (e.g. driveways, ramps and the like) are particularly dangerous. If such passages are unavoidable, special caution is required.

Before starting the transport check the transport route for possible danger points, unevenness and disturban-ces as well as for sufficient strength and load capacity.

Danger points, unevenness and disturbance points must be inspected before transport. The removal of danger spots, disturbances and unevenness at the time of transport by other employees leads to considerable dangers.

Careful planning of internal transport is therefore essential.

WARNING!

Before unpacking, transport the product to the desired installation site using a pallet truck or forklift.

Observe the instructions and information on the transport packaging regarding centre of gravity, attachment points, weight, means of transport to be used and prescribed transport position, etc.

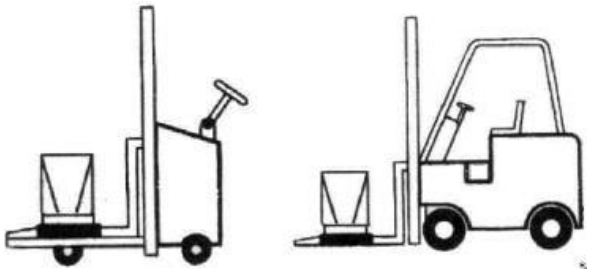


Fig. 3: Transport

CAUTION!

The machine is heavy. At least two people are needed for transport and installation..

Never lift the machine by the worktable or the handwheels.

Always lift the machine by the frame or by the base where the holes for fixing it to the ground are located.

If the machine is transported in a vehicle, make sure that it is adequately protected against slipping, shocks and vibrations!

5.1 Packaging

All of the machine‘s packaging materials and packing aids are suitable for recycling and must always be disposed of using material-based recycling systems.

Packaging materials made of cardboard must be shredded and disposed of as part of waste paper recycling.

The foils are made of polyethylene (PE), padding is made of polystyrene (PS). Dispose of these substances at a recycling centre or hand them over to the relevant waste disposal company.

5.2 Storage

Store the wood band saw thoroughly cleaned in a dry, clean place protected from frost and other weather influences out of the reach of children!

Cover the machine with a protective tarpaulin.

6 Description of device

6.1 Machine

Illustrations in these operating instructions may deviate from the original.

Front view

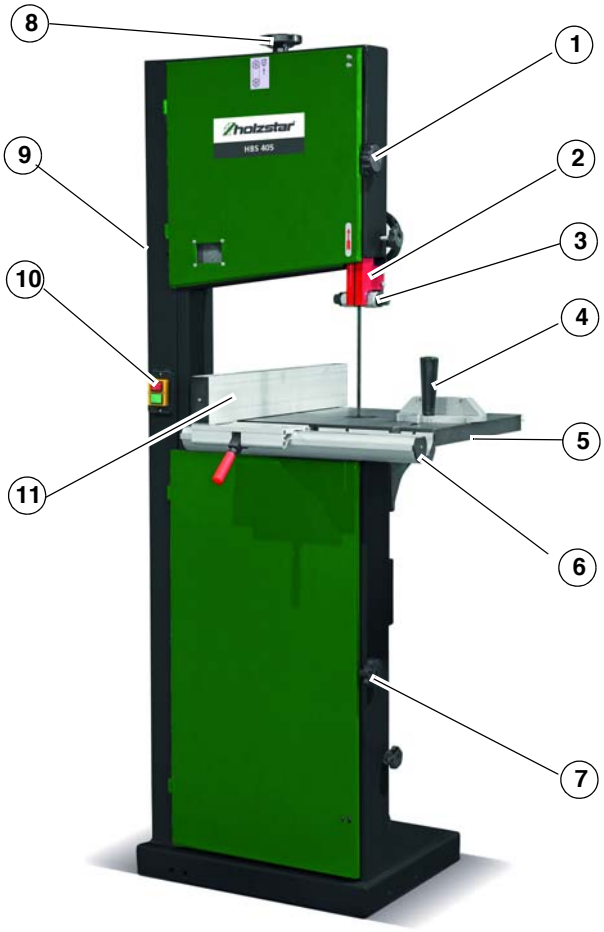


Fig. 4: Wood Band Saw HBS 405, Front view

1 Clamping wheel - impeller cover door
2 Adjustable saw band cover
3 Upper saw band guide
4 Mitre fence
5 Cast iron table
6 Rip fence guide with scale
7 Clamping wheel - impeller cover door
8 Belt tensioning handwheel
9 Frame
10 ON-OFF switch
11 Rip fence

Rear side

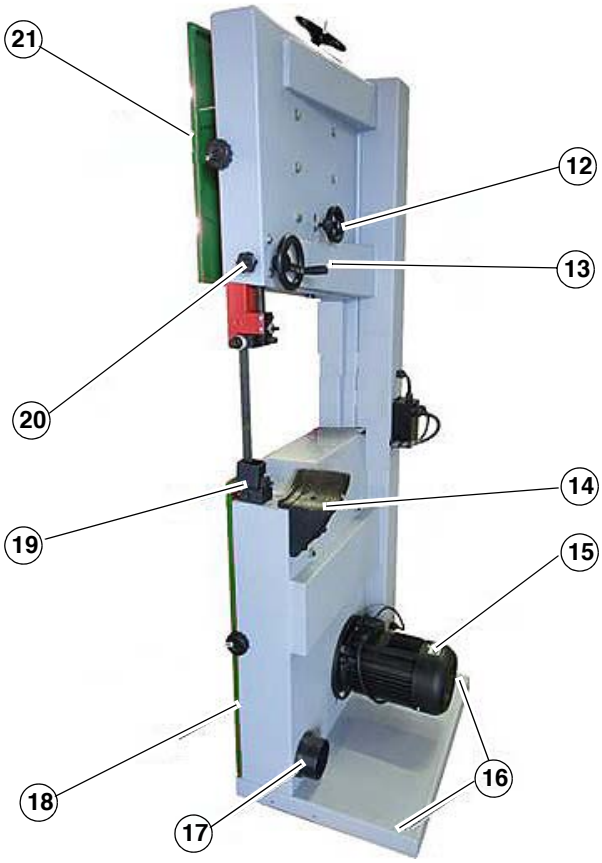


Fig. 5: Wood Band Saw HBS 405, Rear side

12 Saw band guide - adjusting wheel and clamping lever
13 Handwheel for adjusting the height of the band guide
14 Table rocker
15 Motor
16 Mounting points
17 Suction socket
18 Lower front door
19 Lower saw band guide
20 Band guide height adjustment clamping wheel
21 Upper front door

7 Setting up and connection

7.1 Requirements for the place of operation

Remove the wood band saw from its packaging and remove all protective film. Do not install or operate the machine in a damp or wet environment. The air humidity should not exceed 70% and the measured room temperature should be between 5°C and 50°C.

The installation or work room must be dry and well ventilated.

7.2 Setting up the wood band saw

ATTENTION!

Before unpacking, transport the delivered product to the desired installation site with a pallet truck or forklift.

ATTENTION!

The machine is heavy. At least two people are needed to transport and set up the machine.

Never lift the machine by the work table or the hand wheels, but always by the frame or the base where the holes for fixing it to the ground are located.

ATTENTION!

Risk of injury from a machine that is not set up in a stable manner!

- Check the stability of the machine after setting it up on a stable surface.
- To ensure sufficient stability of the machine, it should be bolted to the ground. For this purpose there are 3 holes (Pos. D1, 2 and 3, Fig. 6) at the bottom of the machine housing.
- Do not overtighten the fastening screws of the base plate. The base plate must not be distorted..

Fig. 6: Fixing points

Wear suitable protective gloves!

Wear protective clothes!

Wear safety boots!

The wood band saw is delivered already assembled for the most part. Only a few parts, such as the ON/OFF switch, the work table with rip fence and the mitre fence, still have to be assembled after delivery.

ATTENTION!

The power supply must be disconnected before any maintenance or modification work is carried out on the wood band saw.

7.2.1 Assembly of the worktable

Step 1: Remove the stop guide (Pos. 1, Fig. 7) and the fixing pin (Pos. 2, Fig. 7).

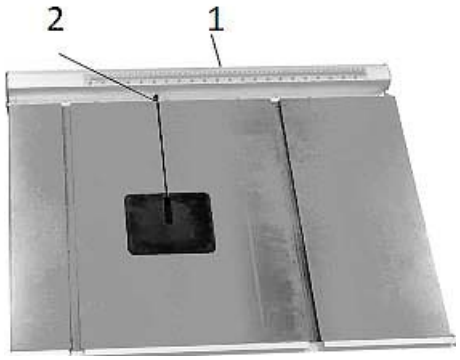


Fig. 7: Assembly of the worktable

Step 2: Lift the cast iron table into the assembly position with the help of a second person or a technical lifting device, guide the saw band through the work table (Pos. W, Fig. 8) and position the fastening screw for the work table in the swivel device.

Fig. 8: Assembly of the worktable

Step 3: Attach the work table (Pos. W, Fig. 9) using the fastening screw (Pos. F, Fig. 9) and nut to the swivel device (Pos. I, Fig. 9).

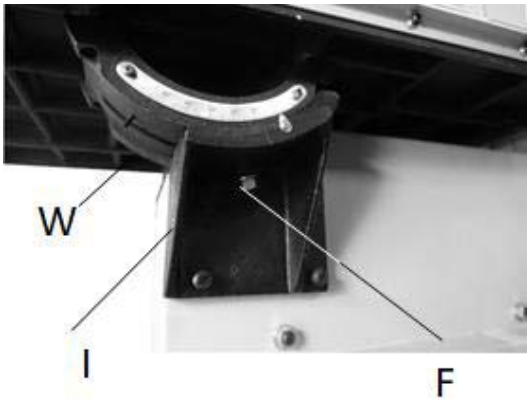


Fig. 9: Assembly of the worktable

Step 4: Insert the table insert (Pos. 5, Fig. 10).

ATTENTION!

Check that the table insert is at the same height as the machine table.

Step 5: Mount the fence guide (Pos. 3, Fig. 10) to the worktable by means of the 6 screws and reattach the locating pin (Pos. 2, Fig. 10) back into place.

Step 6: Place the parallel fence (Pos. 1, Fig. 10) and, if necessary, also the mitre fence (Pos. 4, Fig. 10).

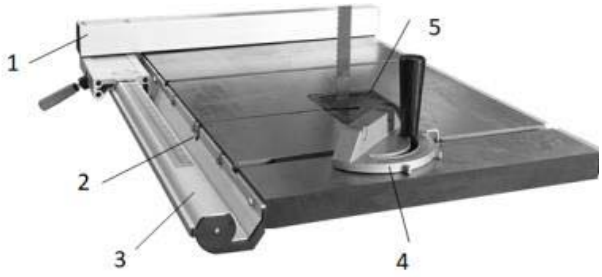


Fig. 10: Assembly of the worktable

7.3 Electrical connection

DANGER!

Risk of fatal injury due to electric shock!

Contact with live components may result in fatal injury. Switched-on electrical components can make uncontrolled movements and lead to serious injuries.

Always disconnect the machine from the power source before carrying out any adjustment work and secure it against unintentional reconnection!

ATTENTION!

All work on the electrical installation may only be carried out by a qualified electrician.

When connecting to the power supply, make sure that the characteristics (voltage, mains frequency) correspond to the information on the type plate.

ATTENTION!

Use appropriate circuit protection to avoid electrical hazards, fire hazards or damage to the tool. Use a separate circuit for your tools. Have the power cord replaced immediately if it is damaged..

NOTE!

Check the running direction of the band saw rolls immediately after making the electrical connection. Observe the direction arrow on the machine. The running direction is correct if the band saw blade runs from top to bottom. If this is not the case, have an electrician connect two phases, e.g.: L1 and L2, reversed at the mains connection plug.

Only use the band saw in a dry environment. Only operate the band saw on an electrical supply that meets the following requirements:

- The mains plug must be freely accessible.
- Fuse protection with a residual current circuit breaker (residual current circuit breaker), with a residual current of 30 mA.
- The electrical connection must be made by means of a switch-plug combination.
- Lay the mains cable so that it does not interfere with work and cannot be damaged.
- Protect the mains cable from heat, aggressive liquids and sharp edges.

ATTENTION!

This machine must be earthed during operation to protect the operator from electric shock.

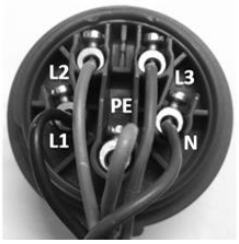
In the event of a malfunction or an interruption, earthing leads to a path with the least resistance to electric current and reduces the risk of electric shock.

Establish 400 V connection (HBS 405 400V and HBS 600)

ATTENTION!

The electrical connection for the band saw with 400 V must always be 5-pole!

5-wire:
with N conductor



4-wire:
without N conductor

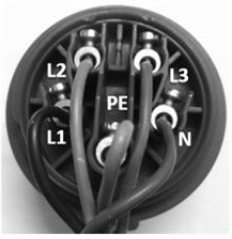


Fig. 11: Plug 400V

To connect the machine to the electrical mains, the following steps are required:

Step 1: Using a suitable device, check the functionality of the neutral connection and the earthing.

Step 2: Ensure that the supply voltage and the current frequency correspond to the specifications on the type plate. A deviation from the supply voltage value of ± 5 % is permissible. A short-circuit fuse must be installed in the machine's supply network! For the required cross-section of the supply cable, please refer to the current carrying capacity table. It is recommended to use a H07RN (WDE0282) type cable, taking measures to protect it from mechanical damage.

Step 3: Connect the supply cable to the appropriate terminals in the input box (L1, L2, L3, N, PE) (Pos. 11). If a CEE-plug is available, the connection to the mains is made via a suitably powered CEE-coupling (L1, L2, L3, N, PE).

Guideline for the use of extension cables

Use suitable extension cables. Make sure your extension cord is in good condition. When using an extension cord, make sure to use a cord that is strong enough to conduct the current your machine needs. If the cord is too small, the mains voltage will drop, causing power failure and overheating.

Make sure your extension cord is properly connected and in good condition.

Always replace a damaged extension cord. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

ATTENTION!

This machine is intended for indoor use only. Do not expose the machine to rain or store it in damp places.

7.4 Chip and dust extraction system connection

WARNING!

Some types of sawdust can cause cancer if inhaled.

The machine must be connected to an extraction device for dust and chips. The extraction device must start at the same time as the machine's motor. The air speed at the extracting connection piece and in the exhaust air lines must be at least 20 m/s for materials with a moisture <12 % (at least 28 m/s for moist chips with a moisture >12 %). The extraction hoses used must be flame-retardant (DIN4102 B1) and permanently antistatic (or earthed on both sides) and comply with the respective safety regulations.

7.5 Before commissioning

- Check all parts for tight fit.
- Check the band guide bearings on the saw band guide for a correctly adjusted distance to the saw band.
- Align the saw band.

8 Settings

ATTENTION!

Before carrying out any adjustment, set-up or maintenance work on the machine, always disconnect the machine from the power source and secure it against accidental reconnection.

8.1 Change/tension saw blade

ATTENTION!

Check the saw band tension before each cutting process!

- If the tension is too high, the saw blade may tear. Risk of injury!
- If the tension is too low, the driven saw blade roller can spin and the saw blade stops.

Step 1: Disconnect the machine from the power supply.

Step 2: Remove the table insert and locating pin.

Step 3: Dismantle the fence guide.

Step 4: Open the cover of the running wheel.

Step 5: Loosen the saw band run adjusting wheel (Pos. K, Fig. 12).

Step 6: Reduce the tension of the saw band by turning the band tensioning handwheel (Pos. R, Fig. 12).

Step 7: Unthread the old saw band through the machine table.

Step 8: Thread in the new saw band and place it over the two wheels. Note the cutting direction! The teeth must point downwards in the cutting direction.

Step 9: Tension the saw band with the band tensioning handwheel (Pos. R, Fig. 12).
The saw blade tension is correct when you press against the side in the middle of the saw blade with a finger and the saw blade gives way by a maximum of 1 to 2 millimetres.

Step 10: Check with a few manual turns whether the running surface is correctly seated (the saw band should be in the centre of each of the two running wheels). If necessary, readjust by means of the saw blade run adjusting wheel (Pos. K, Fig. 12).

Step 11: Fix the saw blade run adjusting wheel.

Step 12: Close the impeller cover, fit the stop guide and refit the table insert and locating pin.

Step 13: Adjust the saw blade guide.

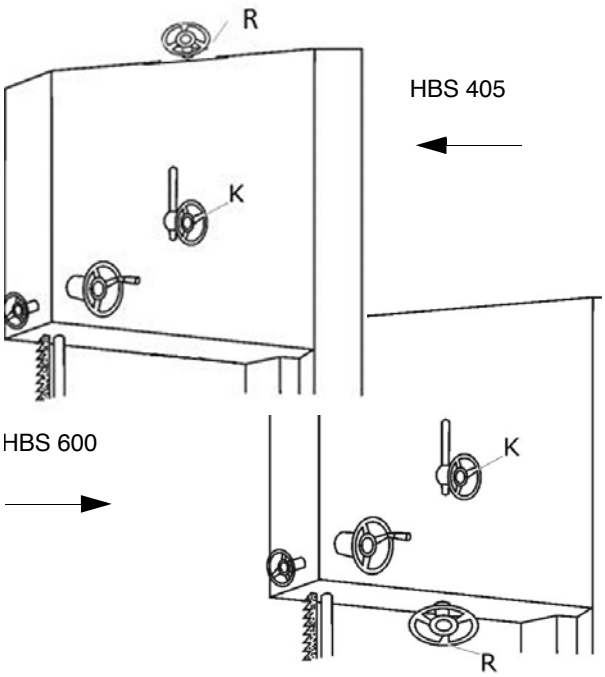


Fig. 12: Adjustment wheels for blade run and blade tension

8.2 Adjusting the saw blade run

If the saw blade does not run centrally on the rollers, the saw blade must be readjusted. To do this, loosen the clamping screw (Pos.K, Fig. 13) and tilt the upper roller with the hand wheel (item H, Pos. 13) either forwards or backwards, then check the running again. To obtain correct running, this procedure may have to be repeated several times.

8.3 Adjusting the saw blade guide

NOTE!

The saw blade guide must only be adjusted after the saw blade tension and the saw blade run have been set and checked. Correct adjustment of the saw blade guide is important. The saw blade becomes unusable if the teeth touch the guides when the saw blade is running.

Height adjusting protective device

Step 1: Always lower the upper saw blade guide as close as possible (5 - 10 mm) to the workpiece.

Step 2: To adjust the height, open the clamping screw (K) and turn the handwheel (Pos. H, Fig. 13) until the desired height is reached.
Then tighten the clamping screw (Pos. K, Fig. 13) again..

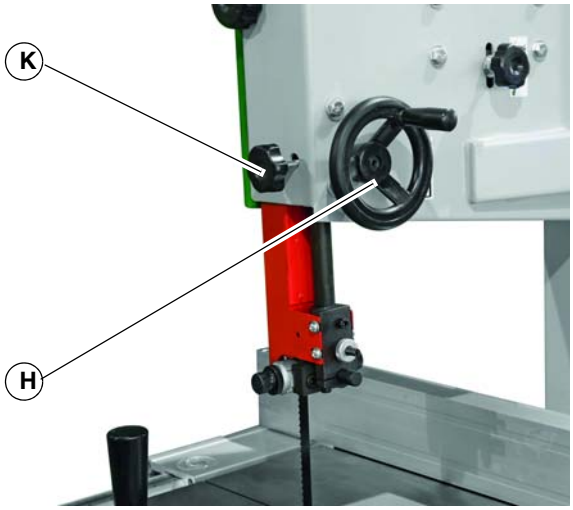


Fig. 13: Protective device

Adjusting upper saw band guide

The side guide rollers should lightly graze the saw band to obtain a vibration-free and straight cut.

Step 1: To adjust, loosen the clamping nuts (Pos. N, Fig. 14) and bring the guide discs (Pos. F, Fig. 14) up to 0.5 mm onto the saw blade by turning the screws (Pos. A, Fig. 14). Then tighten the clamping nuts again.

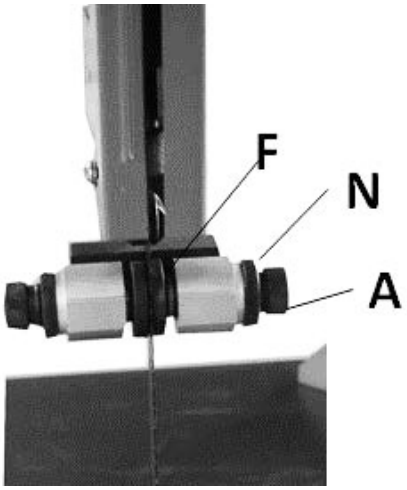


Fig. 14: Upper saw band guide

The rear support roller (Pos. HF, Fig. 15) prevents the saw band from being pushed back strongly during the cut.

Step 2: To adjust, loosen the clamping screw (Pos. K, Fig. 15) and position the rear guide roller (Pos. HF, Fig. 15) at a distance of approx. 0.5 mm from the back of the saw band. Then tighten the clamping screw again.

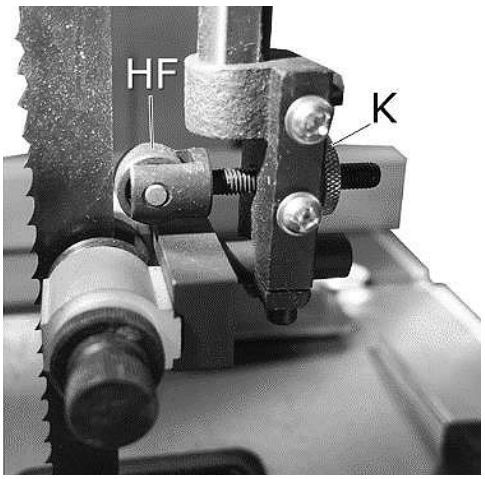


Fig. 15: Rear support roller

Lower saw band guide

HBS 405

Step 1: Slightly unscrew the screws on the left and right saw blade guide rails.

Step 2: Push the guide bolts to the saw band with approx. 0.5 mm play on both sides and screw them tight.

Step 3: Screw on the screw for the rear saw blade guide.

Step 4: Push the guide up to 1 mm play on the saw band and screw it tight.

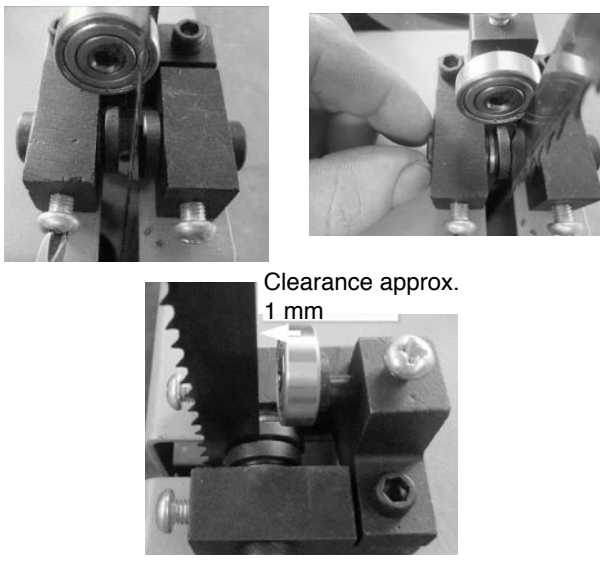


Fig. 16: Lower saw band guide

HBS 600

The lower saw band guide is attached to the lower impeller cover with two screws. To adjust the lower saw band guide, proceed in the same way as for the upper saw band guide. The exploded view in the chapter "Spare parts" should serve as a guide.

8.4 Tilting the table

HBS 405

Step 1: Open the fastening screw (Pos. 1, Fig. 17).

Step 2: Using the angle scale, swivel the worktable to the desired position.

Step 3: Tighten the fastening screw (Pos. 1, Fig. 17) again.

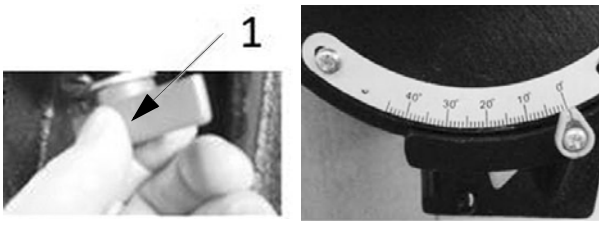


Fig. 17: Tilting the table

HBS 600

Step 1: Remove the table insert.

Step 2: Open the nut on the fastening screw (Pos. F, Fig. 18).

Step 3: Swivel the worktable (Pos. W, Fig. 18) to the desired position using the angle scale.

Step 4: Tighten the fastening screw (Pos. F, Fig. 18) again.

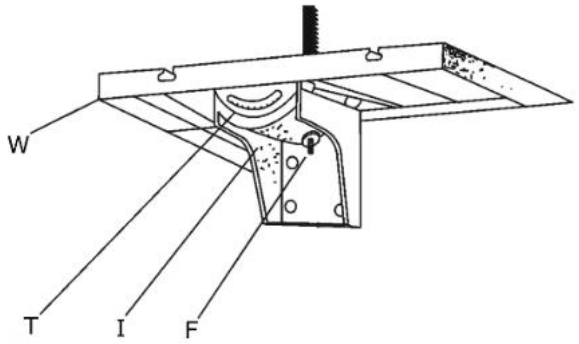


Fig. 18: Tilting the table

8.5 Tensioning the drive belt

NOTE!

Always keep the belts properly tensioned. If the belts are too loose, the power transmission (drive and braking effect) is reduced; too much tension leads to increased belt wear due to excessive heating.

To check the belt tension, press inwards in the middle of the belt with a force of three to four kilograms. The tension is OK if the belt does not yield by more than five to six millimetres.

HBS 405

The tension on the drive belt (Pos. 3, Fig. 19) can be changed by means of the tensioning pulley position (Pos. 2, Fig. 19).

To tighten:

- Loosen the clamping screw (Pos. 1, Fig. 19).
- Move the tensioning pulley in the direction of (+)
- Fix the position of the tensioning pulley by tightening the clamping screw (Pos. 1, Fig. 19).

To loosen:

- Loosen the clamping screw (Pos. 1, Fig. 19).
- Move the tensioning pulley in the direction of (-).
- Fix the position of the tensioning pulley by tightening the clamping screw (Pos. 1, Fig. 19).

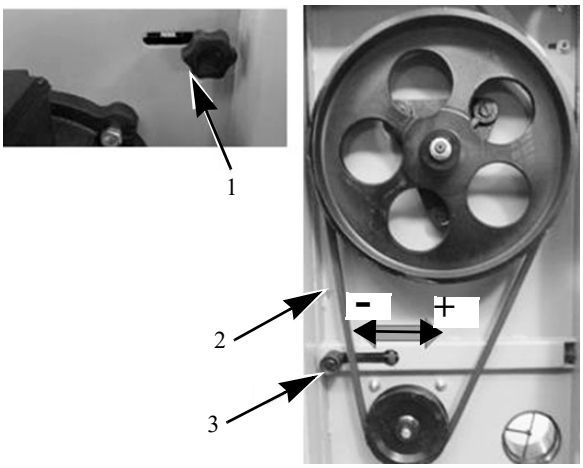


Fig. 19: Tensioning the drive belt

HBS 600

Step 1: Loosen the four hexagonal bolts (Fig. 20A) securing the motor to the outside of the housing.

Step 2: Tension the belt by sliding the motor or the motor support plate downwards (Fig. 20B).

Step 3: Once the belt has the desired tension, retighten the previously loosened hexagonal bolts.

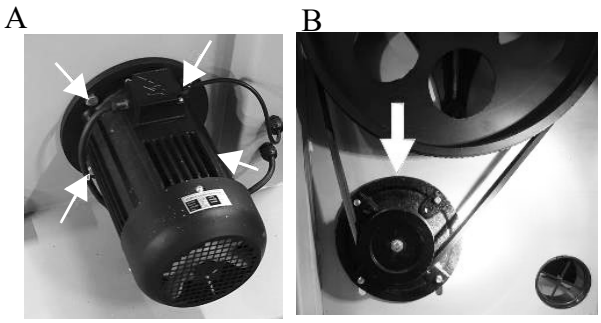


Fig. 20: Tensioning the drive belt

9 Operation of the wood band saw

DANGER!

Risk of fatal injury due to electric shock!

Contact with live components may result in fatal injury. Switched-on electrical components can make uncontrolled movements and lead to serious injuries.

- Disconnect the mains plug before making any adjustments to the machine.

ATTENTION

- Do not overload the machine! You will work better and safer in the specified power range.
- Never use blunt or damaged saw bands. Check that the correct saw blade is used.

ATTENTION!

Risk of crushing!

In case of unintended work on the device, there is a risk of injury to the upper limbs.

Wear hearing protection!

Wear protective goggles!

Wear respiratory protection!

Wear safety boots!

Wear protective clothes!

DANGER!

No braking function in case of power supply failure!

The machine is equipped with an electric brake, but if the power supply fails, the brake function is not given.

In this case, wait for the machine to come to a complete standstill to open the guards!

9.1 Selection of saw bands

NOTE!

Always wear gloves when handling band saw blades!
Handle bandsaw blades carefully to avoid damage. Fold up unused, untensioned bandsaw blades and store them in a (child) safe, dry place. Check saw blades for damaged teeth and cracks before use!

Select the saw blade according to the material to be cut. Small bandsaw blades are suitable for curved and circular cuts, wide bandsaw blades for straight cuts. Fine-toothed bandsaw blades are used for hardwood, large-toothed blades should be used for softwood.

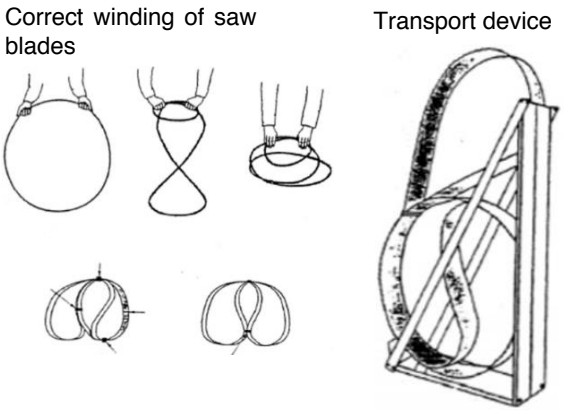


Fig. 21: Saw band storage

9.2 Important operating notes

Before starting work

- Check the workpiece for foreign bodies, cracks and loose knots.
- Only use sharp, crack-free and sufficiently set saw blades.
- Make sure that the saw blade is correctly tensioned and aligned on the saw blade roller.
- Check saw blade guide for correct adjustment.
- Adjust the height-adjustable guard to the height of the workpiece.
- Have any necessary aids (rip fence, push stick, etc.) ready.
- If gloves are required when handling the workpiece, they must be fingerless.

During work

- Place the adjustable separating guard for the saw blade as close as possible to the workpiece.
- When feeding the workpiece, do not place your hands on the workpiece in the area of the cutting plane.
- Feed the workpiece at a steady speed and constant pressure.
- Do not try to slow down or stop the saw blade by pressing the workpiece against the saw blade from the side.
- Never remove splinters and chips by hand when the saw blade is running.
- Use aids to guide the workpiece safely:
  - When cutting upright workpieces, secure them against tilting (e.g. by using a contact angle, rip fence, sliding load).
  - Secure round workpieces against twisting with wedge supports.
  - When cutting round workpieces, use a circular cutting device.
  - Ensure good workpiece support for long or wide workpieces (e.g. by widening/extending the table).

WARNING!

If the saw blade or belt is broken, the rollers may continue to run. It is necessary to wait for the machine to come to a complete stop before opening the guards.

After work

- Switch off the machine and wait for it to stop.
- Remove wood chips and splinters from the cutting area and the and table insert.
- Lower the saw blade cover onto the machine table.
- Remove the saw blade tension to protect the running surfaces of the wheels and attach a notice to the machine reminding that the saw blade tension must be readjusted before the next use.

9.3 Switching the band saw on and off

To switch on, press the green push button (I).

To switch off, press the red push button (0).

9.4 Working techniques

WARNING!

When cross-cutting a round or irregularly shaped workpiece, it is necessary to secure the workpiece with a suitable template or holding device and to use a suitable band saw blade (for cross section)!

Longitudinal cutting of narrow (thin) workpieces

Longitudinal cutting is sawing parallel to the wood fibre. For rectangular cuts (table at right angles to the saw blade), place the rip fence to the left of the saw blade to guide the workpiece safely along the fence with your right hand. For longitudinal mitre cuts with an inclined table, attach the parallel stop to the right of the saw band on the downward side (if the width of the workpiece permits this) in order to secure the workpiece against slipping.

Use a sliding stick to prevent the hands from being too close to the band saw blade!

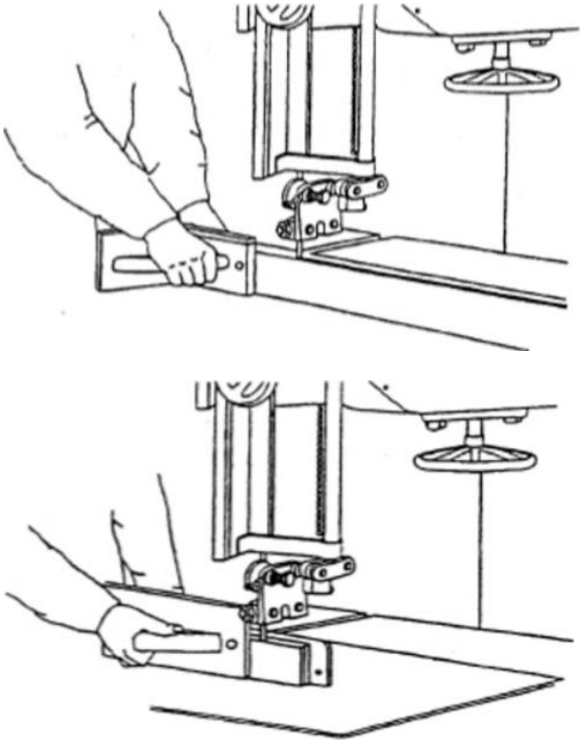


Fig. 22: Longitudinal cutting

Diagonal cut

For diagonal cuts, the templates are used as shown in figure 23.

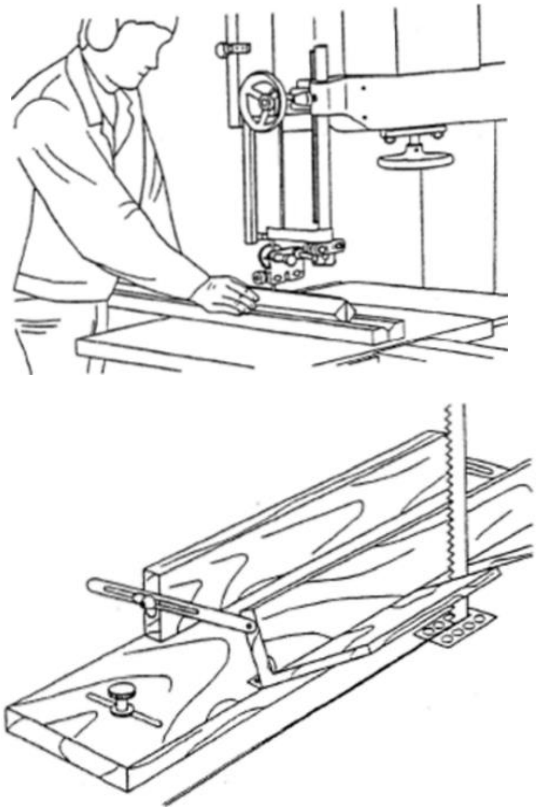
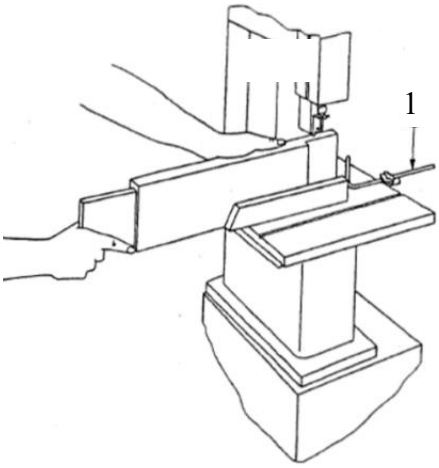


Fig. 23: Diagonal cut

Cutting tenons



1 - Stop attached to the table

Fig. 24: Cutting tenons

Cutting wedges

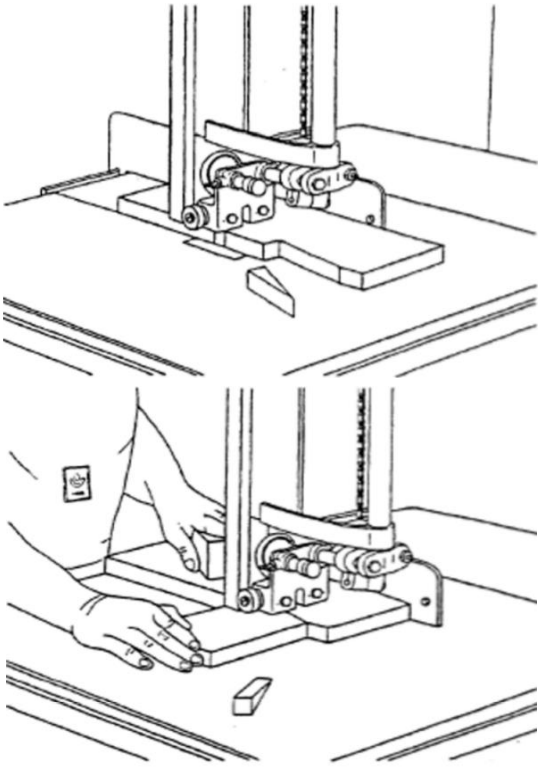


Fig. 25: Cutting wedges

Cutting curves

When cutting curves, pay special attention to the width of the saw blade. Choose a narrow saw blade that can cut even the smallest radii that occur in the workpiece.

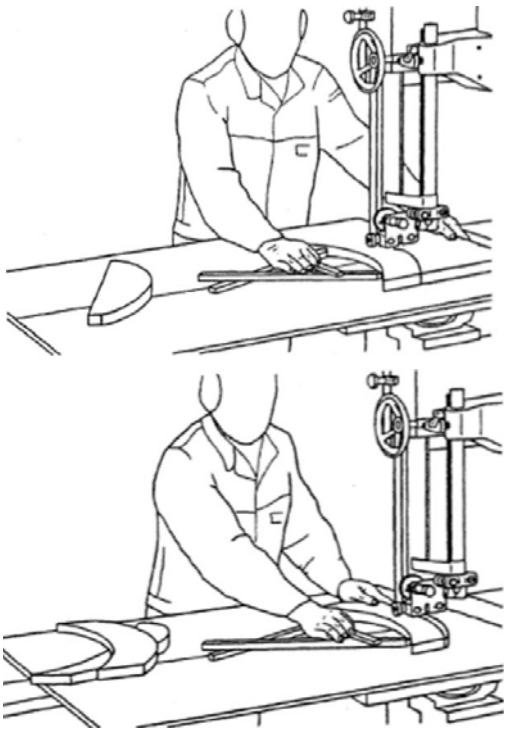


Fig. 26: Cutting curves

Cutting circular work

For cutting round discs use a circular cutting device (Fig. 27), if necessary also the holding device (Fig. 28) .

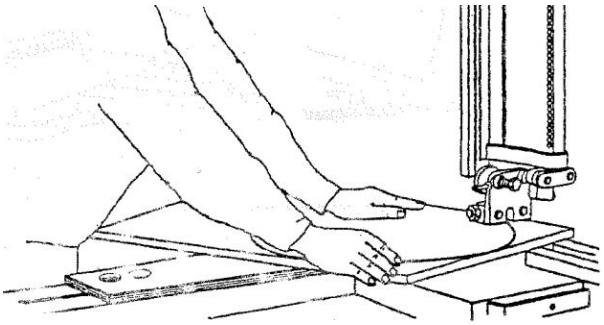
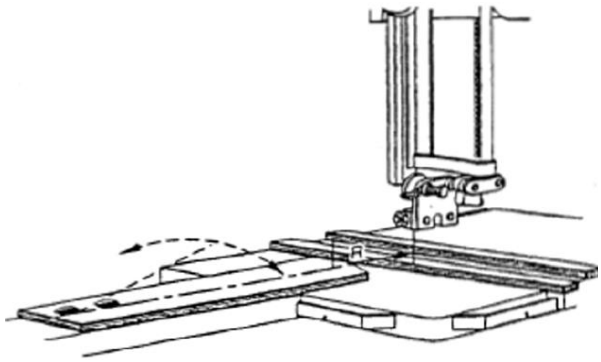
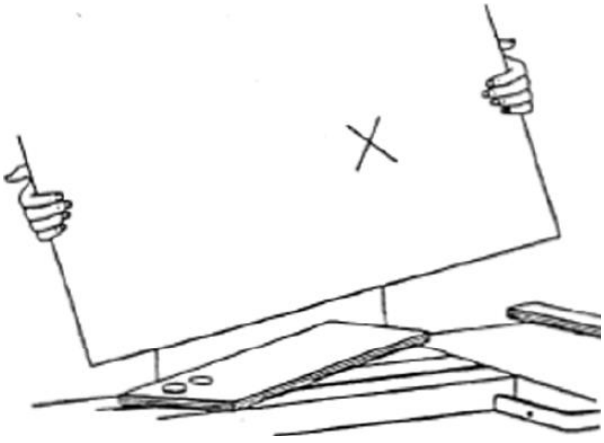


Fig. 27: Cutting circular work

Fixtures



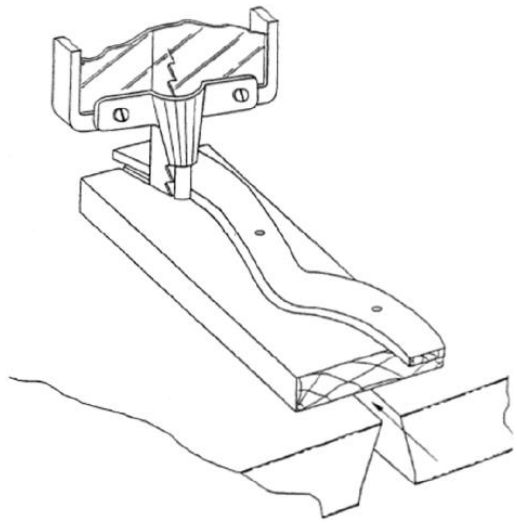
Fixture without workpiece



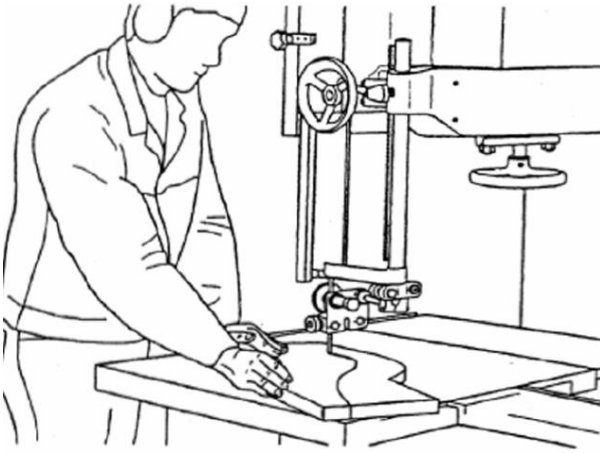
Operator placing workpiece fixture

Fig. 28: Fixtures

Templates / Molded parts



Working with a template



Correct handling of molded parts

Fig. 29: Templates / Molded parts

NOTES ABOUT SAWING!

- The band saw does not cut the workpiece automatically. The user allows cutting by guiding the workpiece into the moving saw blade.
- The teeth cut the workpiece in the direction of the worktable (down).
- The workpiece must be moved slowly into the saw blade.
- Every person who works with the band saw needs instruction.
- When cutting thicker workpieces, make sure that the band saw blade is not bent or twisted. This increases the service life of the saw blade.
- For all cutting operations, the upper band guide must be positioned as close as possible to the workpiece. This ensures the best possible operator safety.
- Always guide the workpiece with both hands and hold it flat on the band saw table to avoid jamming the band saw blade.
- Always use the rip fence or the mitre fence for all cutting operations for which they can be used. This prevents the saw blade from running out of the cutting line, especially when working with an inclined table.
- Plan the necessary steps in advance. An old craftsman's rule is "measure twice, saw once". It is better to make a cut in one operation rather than in several sections that may require retraction after the band saw blade has come to a standstill.
- Remember that the band saw blade causes a kerf and adjust the kerf width so that the kerf is in the section part of the workpiece. Add a little extra if the workpiece edge is to be machined later.

9.5 Rip fence

For linear longitudinal cuts, the workpiece is guided along the rip fence. The rip fence can be adjusted to the desired cutting width.

9.6 Mitre fence

To use the mitre fence, push it into the guide groove provided.

To adjust the angle of the mitre cut, loosen the lock, bring the mitre fence into the desired position and then fix it again.

9.7 Use of the sliding block

The slide block serves as an extension of the hand and protects against accidental contact with the saw blade.

Replace the push stick if it is damaged.

9.8 Cut types

Longitudinal cuts

The longitudinal cuts are sawing along the workpiece grain. It is possible to saw along a torn line without a rip fence or along the rip fence for a better result.

For right-angled cuts (the table is at right angles to the band saw blade), the rip fence is placed to the left of the band saw blade so that the workpiece can be guided safely along the fence with the right hand.

In the case of longitudinal mitre cuts with an inclined table, the rip fence must be fitted to the right of the blade on the downward side (if the width of the workpiece permits this) in order to secure the workpiece against slipping.

Cross sections

Cross-section is the sawing at right angles to the grain of the wood. This type of cut can also be carried out without a rip fence.

Freehand cuts

The ease with which curved cuts can be made is one of the outstanding features of a band saw. For curved cuts, choose a band saw blade with a width that can cut the smallest radii in your workpiece. For freehand cutting, you should work at a low feed rate so that the saw band can follow the desired line. Make sure that you do not push the workpiece sideways out of the cutting line. This will cause the saw band to run and jam in the cutting groove.

Tips and recommendations

It can often be useful to remove excess material about 10 mm from the cutting line. In the case of very tight radii, which the saw blade can no longer cut properly, cuts at right angles to the curve line and at a small distance from each other can help. When sawing the radius, the material falls off so that the saw band cannot jam.

10 Care, maintenance and repair

In this chapter you will find important information about inspection, maintenance and repair of the band saw.

DANGER!

Risk of fatal injury due to electric shock!

Contact with live components may result in fatal injury. Switched-on electrical components can make uncontrolled movements and lead to serious injuries.

- Before starting cleaning and maintenance work, switch off the machine and disconnect the mains plug.
- Connections and repairs to the electrical equipment may only be carried out by a qualified electrician.

WARNING!

Read and observe the safety instructions in these operating instructions before starting inspection, maintenance or repair work.

Wear suitable protective gloves

Wear protective gloves. There is also a danger of cuts when the saw blade is not moving.

10.1 Cleaning

Regular cleaning is a precondition for the safe operation of the appliance and a long service life of the same. Clean the unit after each use and remove any sawdust with a brush, broom or hoover.

ATTENTION!

Never clean the saw blade or the band saw rollers with a brush held in your hand or with a scraper while the machine is running. Always wait for the machine to come to a complete standstill!

NOTE!

Wrong cleaning agents can attack the varnish of the machine. Do not use solvents, nitro thinners, or other cleaning agents that could damage the machine's paint. Observe the information and instructions of the cleaning agent manufacturer!

10.2 Maintenance and repair

Maintenance and repair work must only be carried out by qualified personnel.

The machine requires little maintenance and only a few parts need to be serviced. Irrespective of this, faults or defects that are likely to affect the safety of the user must be rectified immediately!

Before use, check the machine for external damage.

Keep the bearing guides clean and free of deposits.

No sawdust may accumulate in the impeller boxes. Vacuum chips and dust regularly.

Always connect the band saw to a dust extraction system.

Clean and lubricate the lifting/lowering rod for the upper bearing guides if they are sluggish.

Clean and lubricate the tensioning mechanism if it is stiff.

Check the saw band for damage and sharpness.

Check the V-belt monthly for sufficient tension. If cracks or lateral tears are detected, the drive belt must be replaced!

All protective and safety devices must be refitted immediately after repair and maintenance work has been completed.

Extraction

Check the extraction system daily to ensure that it is functioning properly. If the extraction system does not work or only works to a limited extent, it must be repaired. Only then may the wood band saw be put into operation.

NOTE!

Only a regularly maintained and well cared for machine can be a satisfactory tool. Lack of maintenance and care can lead to unforeseeable accidents and injuries.

Repairs requiring special expertise should only be carried out by authorised specialist personnel.

If the wood band saw does not work properly, contact a specialist dealer or our customer service. You will find the contact details in chapter 1.2 Customer service.

11 Troubleshooting

ATTENTION!

If one of the following errors occurs, stop working with the machine immediately. Serious injury could result.

All repairs and replacement work may only be carried out by qualified and trained personnel.

Fault	Possible cause	Solution
Saw does not start or stops	1. Overload switch tripped 2. Machine is not connected to the power supply 3. Blown or burnt fuse or circuit breaker 4. Cable damaged	1. Allow the motor to cool down and reset by pressing the off switch 2. Check plug connections 3. Rreplace fuse or switch disconnector 4. Replace cable
Saw does not make exact 45° or 90° cuts	1. Stop not exactly adjusted 2. Angle inaccurately adjusted 3. Mitre fence inaccurately applied	1. Set the remeasurement and stop correctly 2. Readjust the angle 3. Readjust mitre fence
Blade moves while cutting	1. Stop is not aligned 2. Unevenly thick wood 3. Feed rate too high 4. Wrong saw band 5. Saw blade tension irregular 6. Guide bearing incorrectly adjusted 7. Casting table incorrectly mounted	1. Check the stop and readjust it 2. If possible, select a different blank size 3. Reduce feed rate 4. Replace saw blade 5. Adjust the saw blade tension according to the saw blade size, see above 6. Readjust guide bearing 7. Set up or assemble the casting table see above
Unsatisfactory cuts	1. Blunt saw blade 2. Saw band incorrectly mounted 3. Wrong saw band 4. Table gummed up	1. Sharpen the saw blade 2. Teeth must look in cutting direction 3. Check whether the width or tooth pitch of the saw band corresponds to your work 4. Clean the table with a suitable detergent
Saw doesn't "get up to speed"	1. Extension cable with too small cable cross-section or too long 2. Voltage too low 3. Mechanical running problem of the saw blade	1. Use an adequate extension cable 2. Contact an electrician 3. Check the running of the saw blade for ease of movement
Saw vibrates unnaturally strong	1. Uneven ground 2. Worn V-belts, bad pulley 3. Motor not fixed properly	1. Realign on level surface 2. Replace V-belt 3. Replace the belt pulley 4. Tighten the screws securing the motor

12 Disposal, reusing used machines

In your own interest and to protect the environment make sure that all machine components are exclusively disposed of in as intended and permitted.

12.1 Decommissioning

Disused machines must be decommissioned immediately to prevent misuse at a later point and putting the environment or persons at risk.

Step 1: Remove all environmentally hazardous processing materials from the used machine.

Step 2: If necessary, disassemble the machine into assemblies and components that are easy to handle and suitable for recycling.

Step 3: The machine components and processing materials must be disposed of using the intended disposal methods.

12.2 Disposal of electrical equipment

Note that electrical equipment contains a variety of recycling-capable materials and also environmentally hazardous components. Please help to separate these components and dispose of them responsibly. In case of doubt, contact your local waste disposal authority. Consult a specialist disposal agent for recycling if needed.

12.3 Disposing of lubricants

Lubricant manufacturers provide disposal information for the lubricants used. If necessary, request product-specific data sheets.

12.4 Disposal via municipal collection points

Disposal of used electrical and electronic equipment (to be applied in the countries of the European Union and other European countries with a separate collection system for this equipment).

The symbol on the product or its packaging indicates that this product is not to be treated as normal household waste, but must be returned to a collection point for the recycling of electrical and electronic equipment. By contributing to the correct disposal of this product, you protect the environment and the health of your fellow human beings. Environment and health are endangered by incorrect disposal. Material recycling helps to reduce the consumption of raw materials. For more information about recycling this product, contact your local community, municipal waste management company or the store where you purchased the product.

13 Spare parts

DANGER!

Risk of injury caused by the use of incorrect spare parts!

The use of incorrect or faulty spare parts may cause risks for operating staff and damage as well as malfunctions.

- Exclusively genuine spare parts made by the manufacturer or spare parts authorised by the manufacturer shall be used.
- Always contact the manufacturer if you are unsure.

13.1 Spare parts order

Spare parts are available from authorised retailers.

The following key data is required for queries or spare parts orders:

- Device type
- Item number
- Position number
- Year of construction
- Quantity
- Desired shipping type (post, freight, sea, air, express)
- Shipping address

Spare parts orders without the aforementioned data cannot be taken into account. The supplier shall determine the shipping type if no relevant data was provided.

Data on the machine type, item number and year of manufacture is listed on the type plate attached to the device.

Example

The drive belt for the wood band saw HBS 405 must be ordered. The drive belt has the number 49 in the spare parts drawing.

When ordering the spare part, send a copy of the spare part drawing with the marked component (drive belt) and marked position number (49) to the authorised dealer and provide the following information:

- Type of device: **Wood Band Saw HBS 405**
- Item number: **5902441**
- Position number: **49**

The item number of your machine:

Wood Band Saw HBS 405 230V
Wood Band Saw HBS 405 400V
Wood Band Saw HBS 600

13.2 Spare parts drawings

Spare parts drawing HBS 405

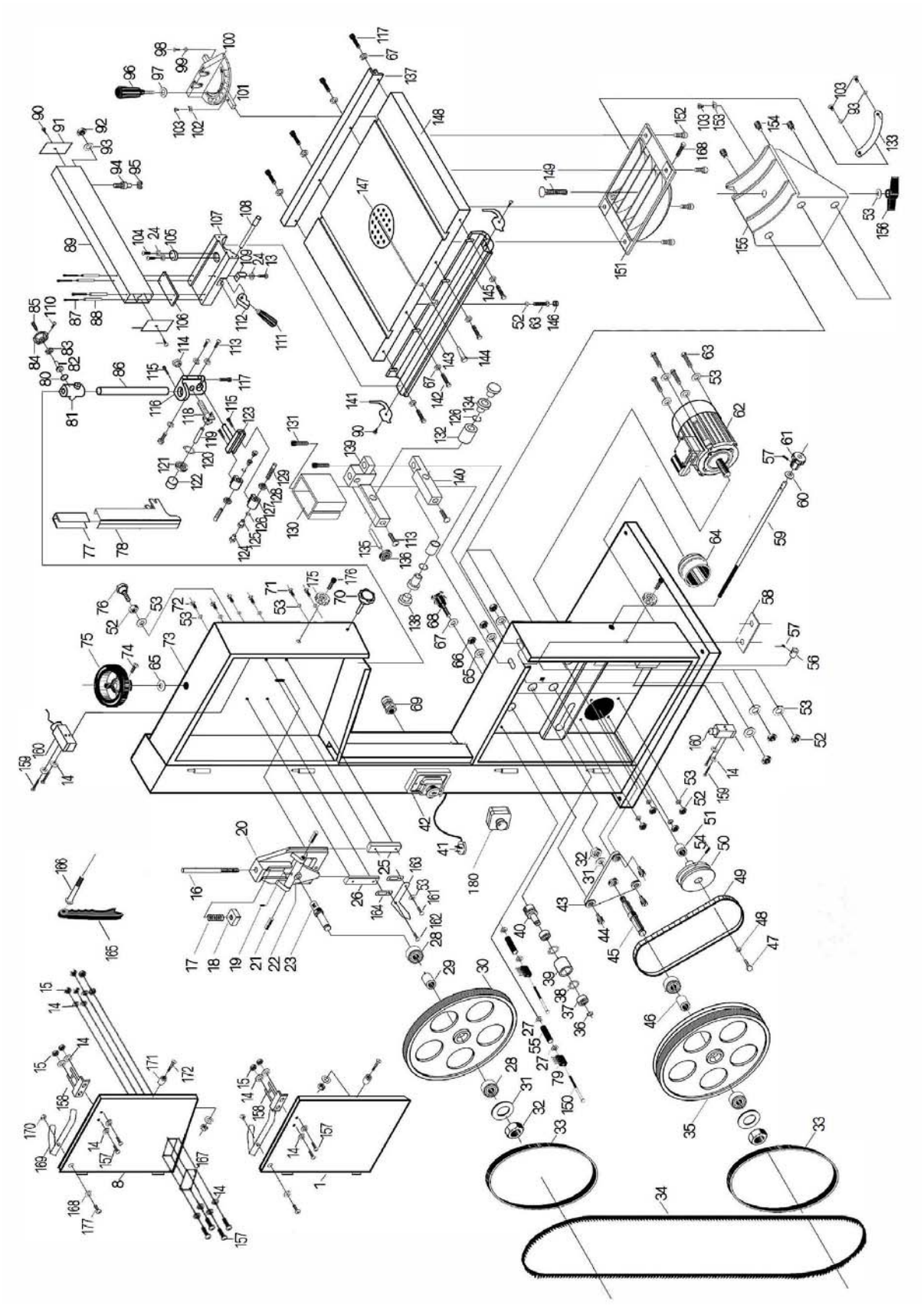


Fig. 30: Spare parts drawing - Wood Band Saw HBS 405

Spare parts drawing HBS 600

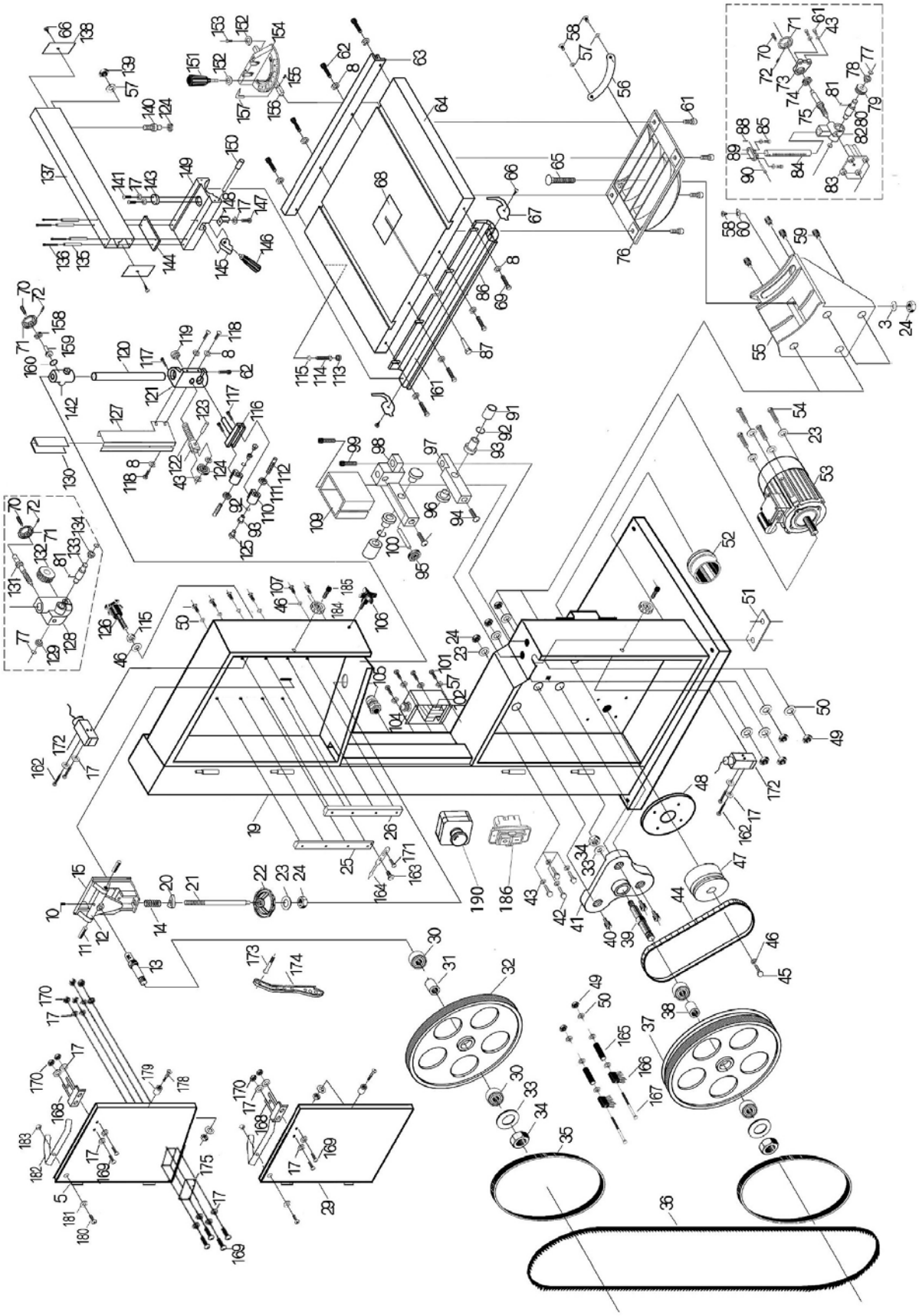


Fig. 31: Spare parts drawing HBS 600

14 Electrical circuit diagrams

14.1 Electrical circuit diagram HBS 405 - 230V

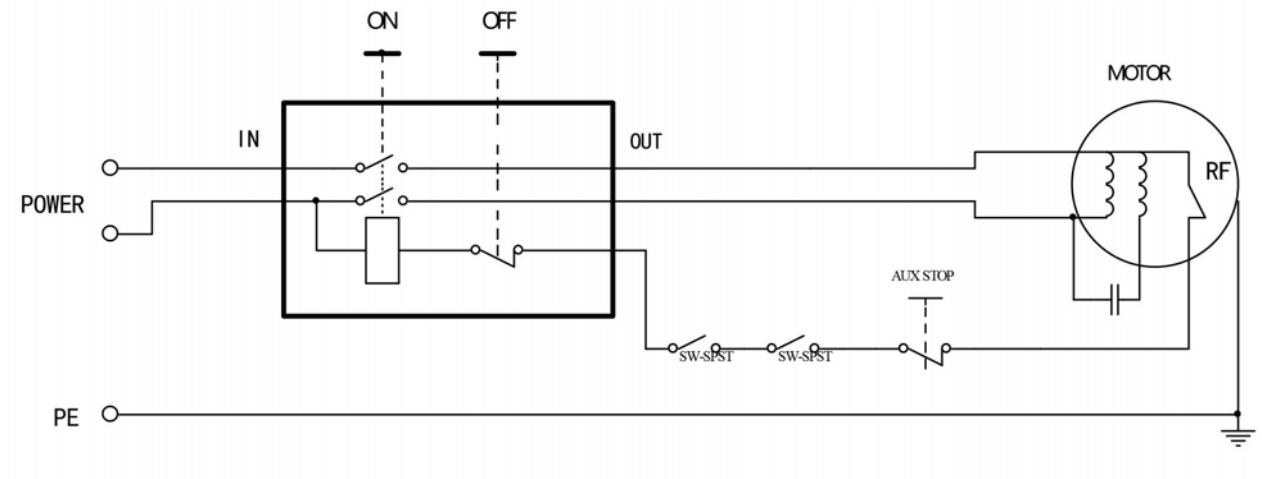


Fig. 32: Electrical circuit diagram HBS 405 - 230 V

14.2 Electrical circuit diagram HBS 405 - 400V and HBS 600

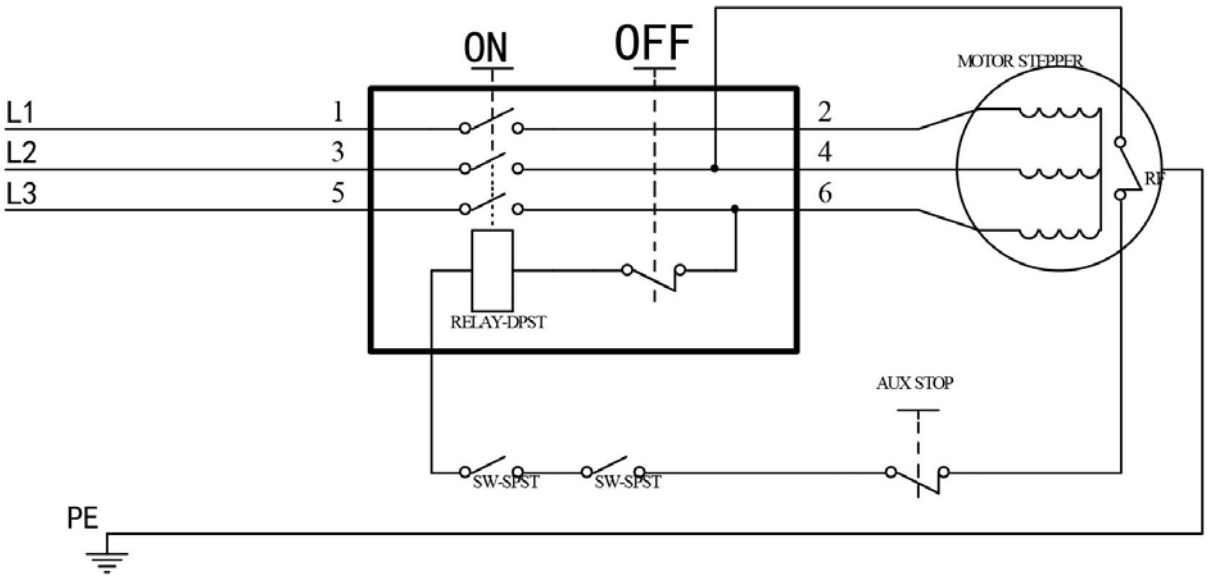


Fig. 33: Electrical circuit diagram HBS 405 - 400 V and HBS 600

15 EC Declaration of Conformity

According to Machinery Directive 2006/42 / EC Appendix II 1.A

Manufacturer/seller: Stürmer Maschinen GmbH
Dr.-Robert-Pfleger-Str. 26
D-96103 Hallstadt

hereby declares that the following product

Product group: Holzstar® Woodworking Machines

Type of machine: Wood Band Saw

Designation of the machine *:	**Item number:**
☐ HBS 405 230V	5902441
☐ HBS 405 400V	5902443
☐ HBS 600	5902463

Serial number*: _____

Year of manufacture*: 20____

*Please fill in according to the information on the type plate

complies with all relevant regulations of the above-mentioned directive as well as the further applied directives (hereinafter) - including their amendments in force at the time of the declaration.

Applicable EU directives: 2014/30/EU EMC Directive
2012/19/EU WEEE Directive

Applicable EU regulations: EGV 1907/2006 REACH Regulation

The following harmonized standards have been applied:

DIN EN 60204-1:2019-06	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
DIN EN 1807-1:2013-06	Safety of woodworking machines - Band sawing machines - Part 1: Table band saws and band re-saws
DIN EN 55014-1:2018-08	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
DIN EN 55014-2:2016-01	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard
DIN EN IEC 61000-3-2:2019-12	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
DIN EN 61000-3-3:2020-07	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

Person responsible for the documentation: Kilian Stürmer, Stürmer Maschinen GmbH,
Dr.-Robert-Pfleger-Str. 26, D-96103 Hallstadt

Hallstadt, 05.05.2021

Kilian Stürmer
Manager

CE


stürmer
OPTIMUM