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Originalfassung

DE BETRIEBSANLEITUNG **HOLZBANDSÄGE**

Übersetzung / Translation

EN USER MANUAL **WOOD BANDSAW**

HBS400

Edition: 23.03.2020 – Revision - 00 – RaR - DE/EN

2 SICHERHEITSZEICHEN / SAFETY SIGNS

DE *SICHERHEITSZEICHEN*
BEDEUTUNG DER SYMBOLE

EN *SAFETY SIGNS*
DEFINITION OF SYMBOLS

DE **CE-KONFORM** - Dieses Produkt entspricht den EG-Richtlinien.

EN **EC-CONFORM** - This product complies with the EC-directives.

DE Anleitung lesen und beachten!

EN Read and follow the instructions!

DE Benutzen von Handschuhen verboten

EN Use of gloves prohibited

DE Warnung vor Schnittverletzungen!

EN Warning of cutting injuries!

DE Maschine vor Wartung und Pausen ausschalten und Netzstecker ziehen

EN Switch off the machine before maintenance and breaks and pull out the mains plug.

DE Persönliche Schutzausrüstung tragen!

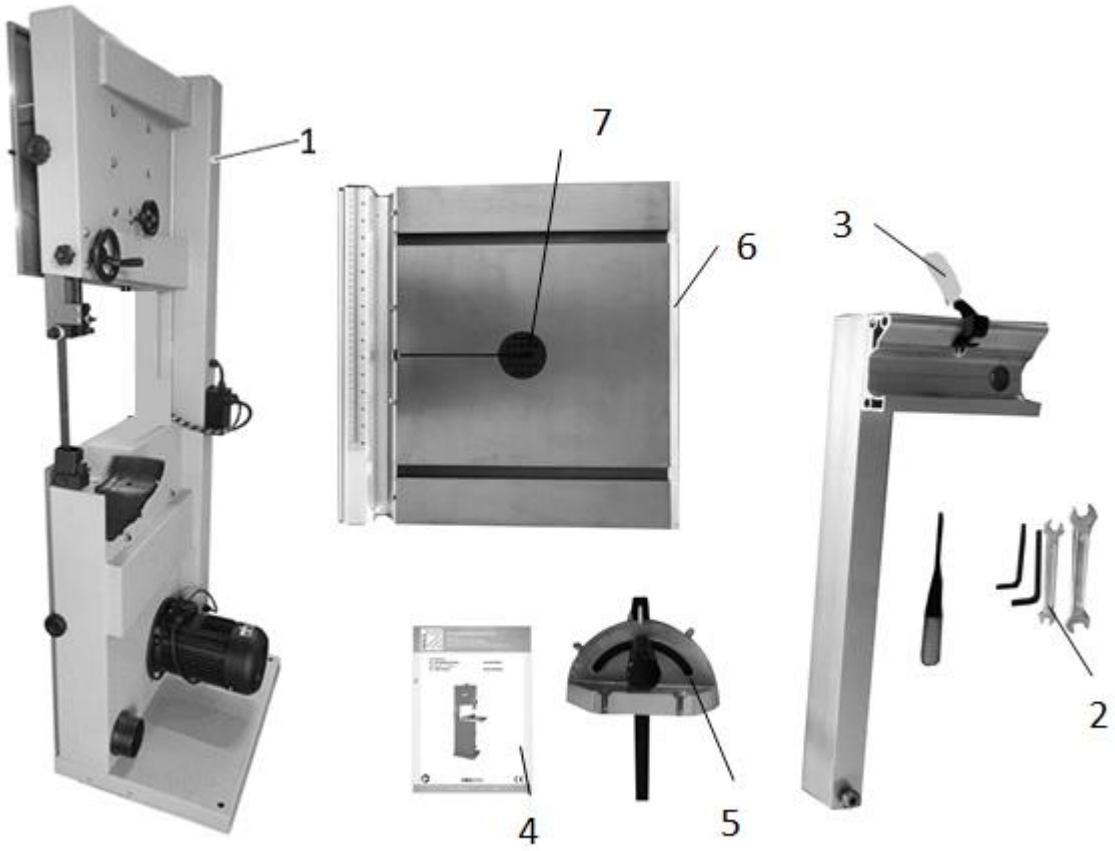
EN Wear personal protective equipment!

DE **Warnschilder und/oder Aufkleber an der Maschine, die unleserlich sind oder die entfernt wurden, sind umgehend zu erneuern!**

EN **Missing or non-readable safety stickers have to be replaced immediately!**

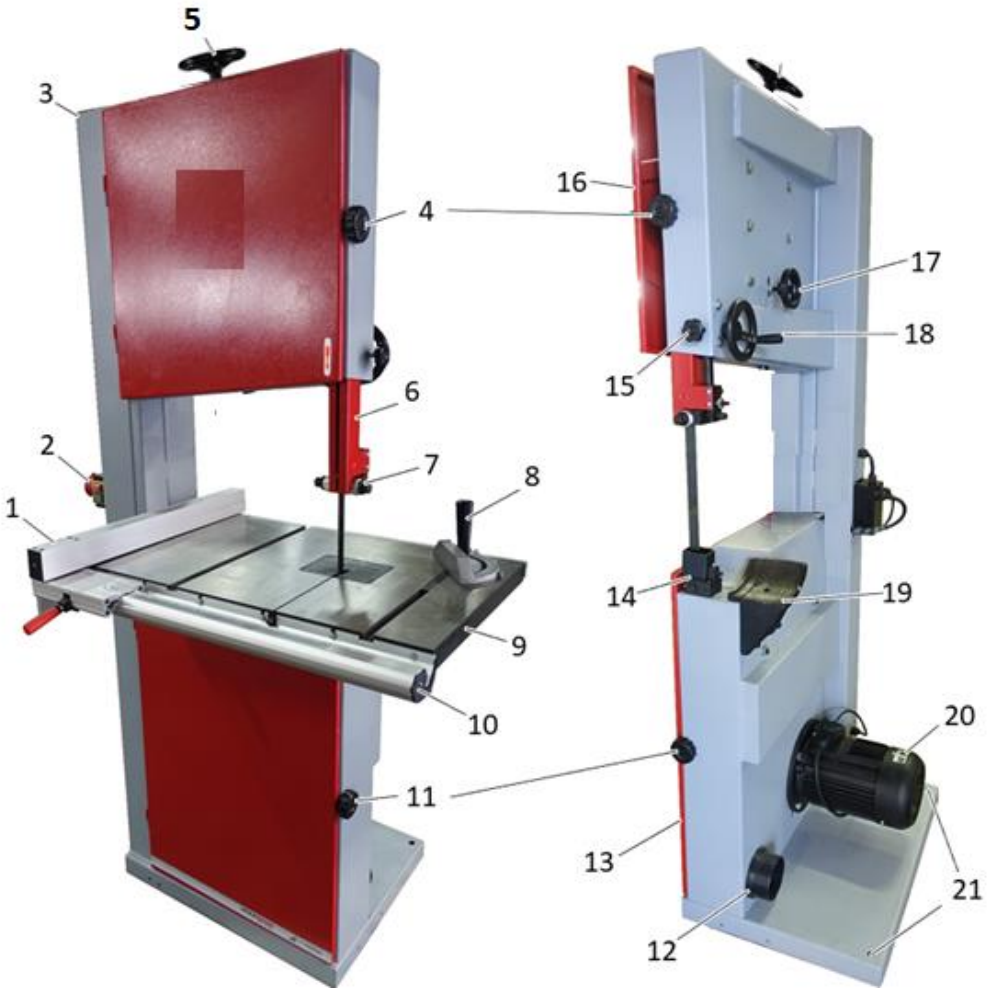
3 TECHNIK / TECHNICS

3.1 Lieferumfang / Delivery Content



N°	Bezeichnung / description	N°	Bezeichnung / description
1	Maschine / machine	5	Gehrungsanschlag / mitre gauge
2	Schrauben (f. Befestigung des Bedienelementes) / screws (for fixing the control element)	6	Graugusstisch mit Führungsanschlag und Lineal / cast iron table with guide stop and ruler
3	Parallelanschlag mit Exzenterhebel / rip fence with eccentric lever	7	Tischeinlage / table inlay
4	Bedienungsanleitung / operator's manual	8	

3.2 Komponenten / Components



N°	Bezeichnung / description	N°	Bezeichnung / description
1	Parallelanschlag / rip fence	12	Absaugstutzen / dust collector port
2	EIN-AUS-Schalter / ON-OFF switch	13	Untere Fronttür / lower front door
3	Rahmen / machine frame	14	Untere Sägeblattführung / lower saw blade guide
4	Klemmrad – Laufradabdecktür / clamping wheel – wheel cover door	15	Klemmrad Bandführungshöhenverstellung / Clamping wheel for belt guide height adjustment
5	Bandspann-Handrad / belt tensioning handwheel	16	Obere Fronttür / upper front door
6	Verstellbare Abdeckung des Sägeblattes / adjustable saw blade guard	17	Sägebandlauf – Einstellrad und Klemmhebel / saw blade run - setting wheel and clamping lever
7	Obere Sägeblattführung / upper saw blade guide	18	Bandführungshöhenverstellung / belt guide height adjustment
8	Gehrungsanschlag / mitre gauge	19	Tischwippe / table rocker
9	Graugusstisch / cast iron table	20	Motor / motor
10	Führung Parallelanschlag mit Skala / guide rip fence with scale	21	Befestigungspunkte / fastening points
11	Klemmrad – Laufradabdecktür / clamping wheel – wheel cover door		

3.3 Technische Daten / Technical Details

	HBS400_230V	HBS400_400V
Spannung / Voltage	230 V / 1~/50Hz	400 V / 3~/50Hz
Motorleistung S1 motor power S1	1,5 kW	←
Ausladung - max. Schnittbreite / Throat - max. cutting width	375 mm	←
Schnittbreite am Längsanschlag / Max. cutting width at rip fence	240 mm	←
Schnitthöhe bei 90° / Cutting Height at 90°	200 mm	←
Gesamthöhe / Total Height	1750 mm	←
Dimension Standfläche / dimension base	550 x 440 mm	←
Dimensionen des Arbeitstisches / Worktable Dimensions	500 x 400 mm	←
Schwenk Arbeitstisch / Worktable Tilt Angle	0 – 45°	←
Tischhöhe / Height from ground	990 mm	←
Sägebandbreite / Sawband width	6-20 mm	←
Sägebandlänge / Sawband length	2950 mm	←
Bandsägerollen Ø / Band Saw Roll Ø	400 mm	←
Absaug-Anschluss Ø / Dust collector port Ø	Ø 100 mm	←
notwendiger Absaug Luft-Volumenstrom / necessary air-flow-rate (dust collector)	565 mm³/h	←
Notwendiger Unterdruck (Absauganlage)/ necessary vaccum pressure (dust collector)	1000 Pa	←
Bandgeschwindigkeit / Belt Speed	600 m/min	←
Nettogewicht ca. / Net weight	127 kg	←
Bruttogewicht / Gross weight	137 kg	←
Verpackungsmaße / Packaging dimensions	600 x 480 x 1760 mm	←
Schalldruckpegel L_{PA} / Sound Pressure Level L_{PA}*	No load: 66,3dB(A) k=3dB With load: 84,7dB(A) k= 3dB(A)	←
Schallleistungspegel L_{WA} / Sound Power Level L_{WA}*	No load: 82,1dB(A) k=3dB With load: 100,5B(A) k= 3dB(A	←

* **(DE)** Die angegebenen Werte sind Emissionswerte und müssen damit nicht zugleich auch sichere Arbeitsplatzwerte darstellen. Obwohl es eine Korrelation zwischen Emissions- und Immissionspegeln gibt, kann daraus nicht zuverlässig abgeleitet werden, ob zusätzliche Vorsichtsmaßnahmen notwendig sind oder nicht. Faktoren, welche den aktuellen am Arbeitsplatz tatsächlich vorhandenen Immissionspegel beeinflussen, beinhalten die Eigenart des Arbeitsraumes und andere Geräuschquellen, d.h. die Zahl der Maschinen und anderer benachbarter Arbeitsvorgänge. Die zulässigen Arbeitsplatzwerte können ebenso von Land zu Land variieren. Diese Information soll jedoch den Anwender befähigen, eine bessere Abschätzung von Gefährdung und Risiko vorzunehmen.

* **(EN)** The values given are emission values and do not necessarily represent safe workplace values. Although there is a correlation between emission and immission levels, it cannot be reliably deduced whether additional precautions are necessary or not. Factors influencing the actual immission level at the workplace include the nature of the workspace and other noise sources, i.e. the number of machines and other adjacent operations. The permissible workplace values can also vary from country to country. However, this information should enable the user to make a better assessment of hazard and risk.

12 Preface (EN)

Dear Customer!

This user manual contains information and important notes for safe start-up and handling of the Wood Bandsaw models HBS400, for simplification purposes hereinafter referred to as "machine".

The manual is part of the machine and must not be removed. Keep it for later use in a suitable place, easily accessible to users (operators), protected from dust and moisture, and enclose it with the machine if it is passed on to third parties!

Pay special attention to the chapter Safety!

Due to the constant further development of our products, illustrations and contents may differ slightly. If you notice any errors, please inform us.

Technical changes reserved!

Check the goods immediately after receipt and make a note of any complaints on the consignment note when the delivery person takes them over!

Transport damage must be reported separately to us within 24 hours.

HOLZMANN MASCHINEN does not assume any warranty for unnoticed transport damage.

Copyright

Court of jurisdiction is the regional court Linz or the competent court for 4170 Haslach, Austria!

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13 SAFETY

This section contains information and important notes on safe start-up and handling of the machine.

For your safety, read the operating instructions carefully before start-up. This will enable you to handle the machines safely and prevent misunderstandings as well as personal injury and damage to property. Also observe the symbols and pictograms used on the machines as well as the safety and danger information!

13.1 Intended Use of the Machine

The machinery is intended exclusively for the following activities: Sawing wood and material with similar physical characteristics than wood within the specified technical limits.

HOLZMANN MASCHINEN accepts no responsibility or warranty for any other use or use beyond this and for any damage to property or injury resulting therefrom.

13.1.1 Technical Restrictions

The machine is intended for use under the following ambient conditions:

Rel. Humidity:	max. 70 %
Temperature (Operation)	+5° C bis +50° C

The machine is not intended for outdoor use!

13.1.2 Prohibited Applications / Hazardous Misapplications

- Operating the machine without adequate physical and mental aptitude
- Operating the machine without knowledge of the operating instructions
- Changes in the design of the machine
- Operating the machine in a potentially explosive environment
- Operating the machine outside the specified ambient conditions
- Operating the machine in closed rooms without chip and dust extraction device (a normal household vacuum cleaner is not suitable as an extraction device).
- Remove the safety markings attached to the machine.
- Modify, circumvent or disable the safety devices of the machine.
- Machining of materials with dimensions outside the limits specified in this manual.
- Cleaning the machine with water, neither with the power switched on nor with the power switched off.

The improper use or disregard of the versions and instructions described in this manual will result in the voiding of all warranty and compensation claims against Holzmann Maschinen GmbH.

13.2 User Requirements

The machine is designed to be operated by one person! The physical and mental suitability as well as knowledge and understanding of the operating instructions are prerequisites for operating the machine.

Please note that local laws and regulations may determine the minimum age of the operator and restrict the use of this machine!

Before working on the machine, remove rings, bracelets, watches, chains etc., tie long hair together if necessary, always wear close-fitting clothing when working on the machine and always fold long sleeves inwards only.

Work on electrical components or equipment may only be carried out by a qualified electrician or under the instruction and supervision of a qualified electrician.

13.3 Safety Devices

The machine is equipped with the following safety devices:

	• Adjustable saw blade cover
	• Door safety switch: one safety switch each on the inside of the covering of the upper and lower band saw roll.

13.4 General Safety Instructions

To avoid malfunctions, damage and health hazards when working with the machine, in addition to the general rules for safe working, the following points must be observed:

- Before commissioning, check the machine for completeness and function. Only use the machine if the guards required for machining are fitted, in good operating condition and properly maintained.
- Choose a level, vibration-free, non-slip surface for the installation location.
- Ensure sufficient space around the machine!
- Ensure sufficient lighting conditions at the workplace to avoid stroboscopic effects!
- Only use perfect tools that are free of cracks and other defects (e.g. deformations).
- Remove setting tools from the machine before switching on.
- Keep the area around the machine free of obstacles (e.g. dust, chips, cut workpiece parts etc.).
- Check the strength of the machine connections before each use.
- Never leave the running machine unattended. If necessary, stop the machine before leaving.
- The machine may only be operated, serviced or repaired by persons who are familiar with it and who have been informed of the dangers arising in the course of this work.
- Ensure that unauthorised persons maintain an appropriate safety distance from the machine and, in particular, keep children away from the machine.
- Wear suitable protective equipment (eye protection, dust mask, respiratory protection, ear protection, gloves when handling tools) as well as close-fitting work protective clothing - never wear loose clothing, ties, jewellery, etc. - danger of being drawn in!
- Hide long hair under hair protection.
- Do not remove any sections or other parts of the workpiece from the cutting area while the machine is running!
- Do not remove splinters and chips by hand! Use a sliding stick for this purpose!
- Always work with care and the necessary caution and never use excessive force.
- Do not overload the machine!
- Do not work on the machine if you are tired, not concentrated or under the influence of medication, alcohol or drugs!
- Do not use the machine in areas where vapours from paints, solvents or flammable liquids represent a potential danger (danger of fire or explosion!).
- Do not smoke in the immediate vicinity of the machine (fire hazard)!
- Do not use the tool if it cannot be switched on and off with the ON/OFF switch.
- Always shut down the machine before carrying out any conversion, adjustment, measuring, cleaning, maintencance or repair work and always disconnect it from the power supply for maintenance or repair work. Before starting any work on the machine, wait until all tools or machine parts have come to a complete standstill and secure the machine against unintentional restarting.

13.5 Electrical Safety

- Make sure that the machine is earthed.

- Only use suitable extension cords.
- Proper plugs and sockets reduce the risk of electric shock.
- The machine may only be used in humid environments if the power source is protected by a residual current circuit breaker.

13.6 Special Safety Instructions for Woodworking Machines

- Work with gloves on rotating parts is not permitted!
- During operation of the machine wood dust is generated. Therefore, connect the machine to a suitable dust collection system during installation!
- Always switch on the dust collection system before you start machining the workpiece!
- Never remove parts of the workpiece from the cutting area while the machine is running.
- Excessive noise can cause hearing damage and temporary or permanent hearing loss. Wear hearing protection certified to health and safety regulations to limit noise exposure.
- Only use sharpened tools.
- Make sure that the maximum speed indicated on the tools is not exceeded.
- Replace torn and deformed saw blades immediately, they cannot be repaired.
- Use a push stick for cutting operations!
- Never clean the band saw blade or the band saw rollers of the machine while running with a brush or scraper held in the hand.

13.7 Hazard Warnings

Despite their intended use, certain residual risks remain. Due to the design and construction of the machine, hazardous situations may occur when handling the machines, which are identified as follows in these operating instructions:

DANGER
 A safety instruction designed in this way indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING
 Such a safety instruction indicates a potentially hazardous situation which, if not avoided, may result in serious injury or even death.

CAUTION
 A safety instruction designed in this way indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTE
 A safety notice designed in this way indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Irrespective of all safety regulations, your common sense and appropriate technical suitability/training are and will remain the most important safety factor for error-free operation of the machine. **Safe working depends primarily on you!**

14 TRANSPORT

WARNING	
	The machine is heavy! For longer transports, disassemble the machine and transport it in its original packaging if possible!

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

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

The machine is heavy. At least two persons are required for transport and installation.

Never lift the machine by the worktable or by the handwheels, but only by the frame or by the base where the holes for fixing the machine to the ground are located.

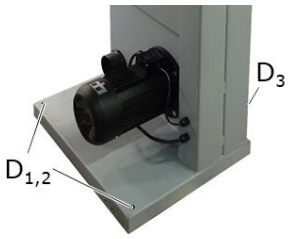
If you transport the machine with a vehicle, ensure that it is protected against slipping, shocks and vibration.

15 Assembly

The machine is delivered almost ready for operation. Prior to start-up, the machine must be secured against tipping over and the following components must be fitted or assembled:

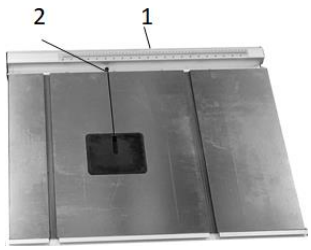
- On/Off switch
- work table with rip fence and mitre gauge

15.1 Secure bandsaw to the floor

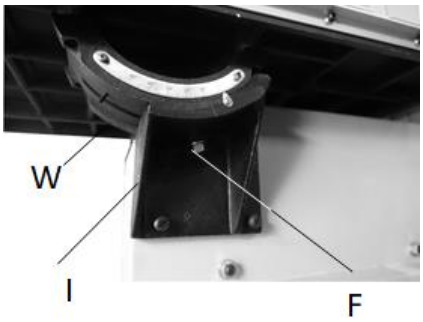


Secure the band saw to the floor at the place of installation using screws to prevent the machine from tipping over during operation. The machine base has a total of three through holes (D1,2,3) for this purpose - see illustration on the left.

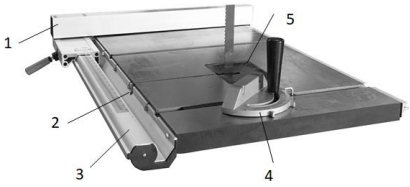
15.2 Assembly the worktable

	1. Remove the rip fence guide with scale (1) and the pin (2).

2. Lift the cast iron table into the mounting position with the aid of a second person or a technical lifting device, thread the work table (W) through the saw band and position the fixing screw in the swivel device.



3. Fasten the worktable (W) to the swivel device (I) using the fastening screw (F) and nut.



4. Insert the table inlay (5).

NOTICE

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

5. Mount the rip fence guide (3) on the worktable using the 6 screws and reattach the pin (2).
6. Assemble the rip-fence (1) and, if necessary, the mitre gauge (4).

15.3 Electrical Connection

WARNING

Dangerous electrical voltage! The machine may only be connected to the mains supply and the associated checks carried out by a qualified electrician or under the instruction and supervision of a qualified electrician!

NOTE

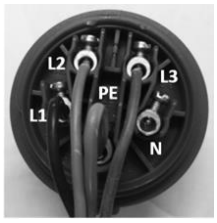
Immediately after making the electrical connection, check the running direction of the band saw rollers. Observe the direction arrow on the machine. The running direction is correct if the saw band runs from top to bottom. If this is not the case, swap two phases, e.g: L1 and L2, on the mains plug.

The wood band saw is operated either with 230 V (models HBS500 or HBS610) or with 400 V (only model HBS610). The electrical connection is made via a switch-plug combination. This device must be operated via a residual current circuit breaker. The electrical connection for the 400 V band saw must be 5-pin (see below).

15.3.1 Establishing a 400 V connection

To connect the machine to the electrical mains, proceed as follows:

- Use a suitable device to check the functionality of the zero connection and earthing.
- Check that supply voltage and current frequency correspond to the specifications on the machine nameplate. A deviation of ± 5 % from the value of the supply voltage is permissible. For example, a machine with a working voltage of 380 V can work in the voltage range from 370 to 400 V. The machine can be operated with a working voltage of 380 V in the voltage range from 370 to 400 V. The machine can also be operated with a working voltage of 380 V in the voltage range from 370 to 400 V. There must be a short-circuit fuse in the power supply of the machine!
- For the required cross-section of the supply cable please refer to the current-carrying capacity table.
- It is recommended to use a cable of type H07RN (WDE0282), which must be protected against mechanical damage.
- Connect the supply cable to the appropriate terminals in the input box (L1, L2, L3, N, PE) - see the figure below. If a CEE plug is present, the connection to the mains is made via an appropriately supplied CEE coupling (L1, L2, L3, N, PE).

Voltage		
Plug connection 400V:	5-wire: **with** N conductor 	4-wire: **without** N conductor 

15.4 Connecting to a dust collection system

NOTE

The machine must be connected to dust collection system. The system must start up at the same time as the motor of the band saw starts. For materials with a humidity <12 %, the air velocity at the dust collector port and in the hoses must be at least 20 m/s (for moist chips with a humidity >12 %, at least 28 m/s). The suction hoses used must be flame-retardant (DIN4102 B1), permanently antistatic (or grounded on both sides) and comply with the relevant safety regulations.

Information on the dust collection System	**HBS400**
Refer to technical data	

16 Necessary adjustments

WARNING

Dangerous electrical voltage! Always disconnect the machine from the power source before carrying out any adjustment work and secure it against unintentional restarting!

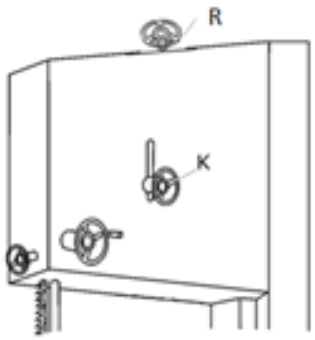
In order to ensure the desired precision of the machine, certain basic settings must be made before commissioning, which are described below.

16.1 Changing/tensioning the saw blade

CAUTION

If the tension is too high, the saw band may tear - risk of injury! If the tension is too low, the driven band saw roller may spin and the band saw blade may stop. Therefore check the saw band tension before each start-up!

Procedure:



1. Disconnect machine from the power supply.
2. Remove table inlay and fixing pin
3. Remove rip fence guide.
4. Open the wheel cover
5. Loosen the saw blade run setting wheel (K).
6. Reduce the tension of the saw band by turning on the handwheel (R).
7. Unthread the old band saw blade through the work table.
8. Thread in a new saw band and place it over the two wheels. (Observe cutting direction: The teeth must point downwards in the cutting direction.)
9. Tension the saw band with the handwheel (R). (The saw band tension is correct if you press against it with your finger laterally in the centre of the saw band and the saw band yields by a maximum of 1 to 2 millimetres.)
10. Check with a few manual turns that tracking of the sawblade is correct (the saw band should be in the middle of each wheel). If necessary readjust by means of the saw band adjusting wheel (K).
11. Fix the bandsaw blade tracking wheel.
12. Close wheel cover, mount stop guide and reattach table insert and fixing pin.
13. Adjust saw band guide.

16.2 Adjusting bandsaw blade tracking

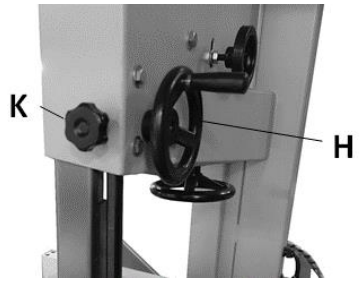
If the band saw blade tracking does not run properly (centred), the band saw blade tracking must be readjusted. Clamping screw K must be loosened and with the hand wheel (K) the upper wheel must be tilted either forwards or backwards, then the tracking must be checked again. This procedure may have to be repeated several times to ensure correct running.

16.3 Adjusting the saw band guide

NOTE

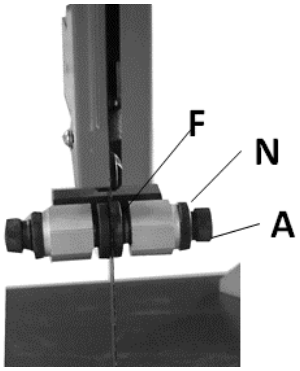
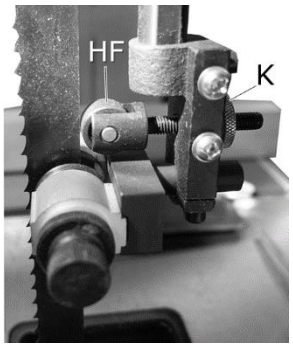
Adjust the saw band guide only after the blade tension and the running of the saw band have been adjusted and checked. Correct adjustment of the saw blade guide is important. The saw band becomes unusable if the teeth touch the guides while the saw band is running.

16.3.1 Height Adjusting protective device

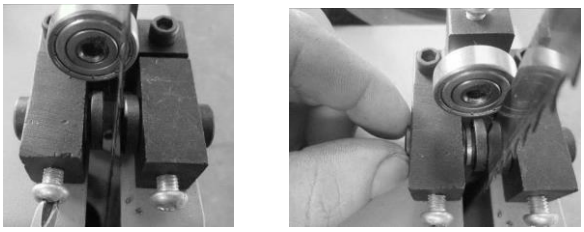
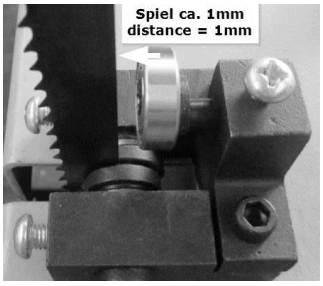


1. Always lower the upper saw band guide as close as possible (5 - 10 mm) to the workpiece.
2. To adjust the height, open the clamping screw (K) and turn the handwheel (H) until the desired height is reached.
3. Tighten the clamping screw (K) again afterwards.

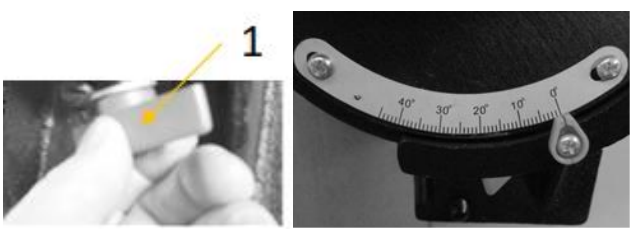
16.3.2 Adjusting upper saw band guide

	The lateral guide rollers should slightly strip the saw band to obtain a vibration-free and straight cut. • To adjust, loosen the clamping nuts (N) and bring the guide discs (F) up to 0.5 mm to the saw band by turning the screws (A). Then retighten the clamping nuts.
	The rear support roller (HF) prevents the saw blade from being pushed back strongly during the cut. • To adjust, loosen the clamping screw (K) and position the rear guide roller (HF) at a distance of about 0.5 mm from the saw band back. Then tighten the clamping screw again.

16.3.3 Adjusting lower saw band guide

	• Slightly loosen the screws on the left and right saw blade guidance bar • Push the guide bolts with approx. 0.5 mm clearance on both sides against the saw blade and screw them tight
	• Unscrew the screw for the rearside saw blade guide. • Push the guide to the saw blade with up to 1 mm clearance and fasten it.

16.4 Tilting the table

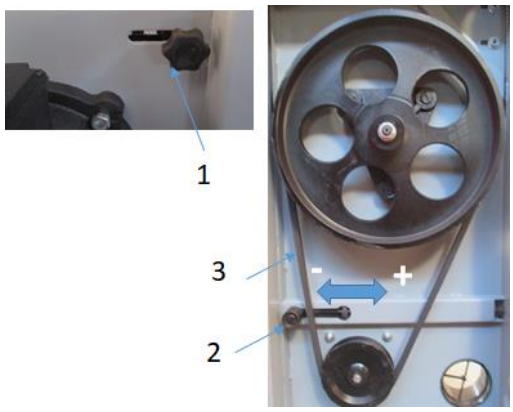
	1. open the clamping screw (1) 2. swivel the worktable to the desired position using the angle scale. 3. Tighten the clamping screw (1) again.

16.5 Tensioning the drive belt

NOTE

Always keep the drive belt correctly tensioned. A belt that is too loose weakens the power transmission (drive and braking effect), too much tension leads to excessive stress on the belt (heating).

To control the belt tension, press inwards at the centre 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.



Tension the drive belt:

The tension on the drive belt (3) can be adjusted by means of the tension roller position (2).

For tensioning:

- o Loosen clamping screw (1)
- o Move tensioner pulley in direction (+)
- o Fix the position of the tensioner pulley by tightening the clamping screw (1)

To loosen:

- o Unscrew the clamping screw (1)
- o Move the tensioner pulley in direction (-)
- o Fix the position of the tensioner pulley by tightening the clamping screw (1)

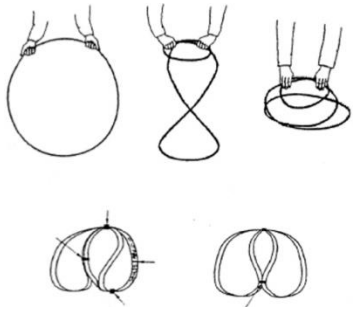
17 Operation

17.1 Selection of saw bands

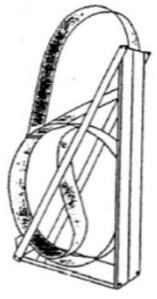
NOTE

Always wear gloves when handling band saw blades. Handle the band saw blades carefully to prevent damage. Unused, untensioned band saw blades should be folded and stored securely in a (child-)safe, dry place. Always check saw blades for damaged teeth and cracks before use!

Select the band saw blade according to the material to be cut. Narrow bandsaw blades are suitable for curved and circular cuts, wide bandsaw blades for straight cuts. For hard wood you need finer toothed bandsaw blades, for soft wood you should use coarser toothed bandsaw blades.



Correct winding of saw bands



Band saw blade transport device

Dimensions of the saw bands	HBS500	HBS610
Refer to technical data		

17.2 Important Operating Instructions

17.2.1 Before you start working

- Check the workpiece for foreign objects, cracks and loose knots.
- Use only sharp, crack-free and sufficiently set saw blades.
- Check that the saw blade on the band saw roll is correctly tensioned and aligned.
- Check the saw blade guide for correct adjustment.
- Adjust the height-adjustable guard to the height of the workpiece.
- Have any necessary aids (e.g.: rip fence, push stick, etc.) ready.
- If gloves are required for workpiece handling, they must be finger-free.

17.2.2 During work

- Move the adjustable guard for the band 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 constant speed and constant pressure.
- Use aids for safe workpiece guidance:
  - When cutting workpieces standing on edge, secure them against tilting (e.g. by means of contact angle, rip fence, sliding shutter).
  - Secure round workpieces against twisting with a wedge support.
  - When cutting round discs, use a circular cutting device.
  - For long or wide workpieces, ensure good workpiece support (e.g. by widening or lengthening the table).
- Never remove splinters or chips by hand while the saw blade is running.

17.2.3 After work

- - Switch machine off, wait for standstill.
- - Remove wood chips and splinters from cutting area and table insert.
- - Lower the saw blade cover onto the machine table.
- - To protect the running surfaces of the wheels, remove the band saw blade tension and attach a warning sign to the machine reminding you that the saw blade tension must be reset before the next use.

17.3 Switching On and Off

WARNING

Keine Bremsfunktion bei Ausfall der Energieversorgung! Die Maschine ist mit einer elektrischen Bremse ausgestattet. Bei einem Ausfall der Energieversorgung ist die Bremsfunktion nicht gegeben. Warten Sie in einem solchen Fall den vollständigen Stillstand der Maschine ab, bevor Sie die trennenden Schutzeinrichtungen öffnen!

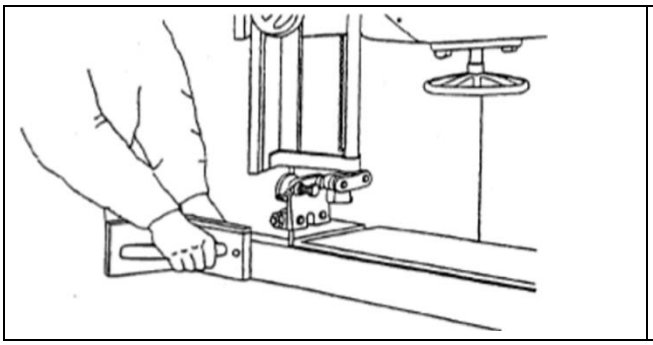
To switch on, press the green push button (I).
To switch off press the red push button (0).

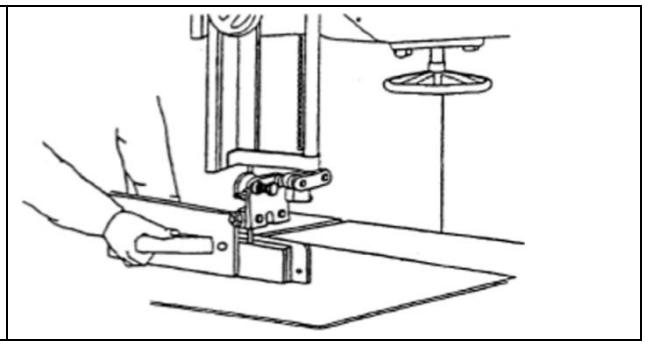
17.4 Working techniques

CAUTION

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)!

17.4.1 Longitudinal cutting of narrow (thin) workpieces

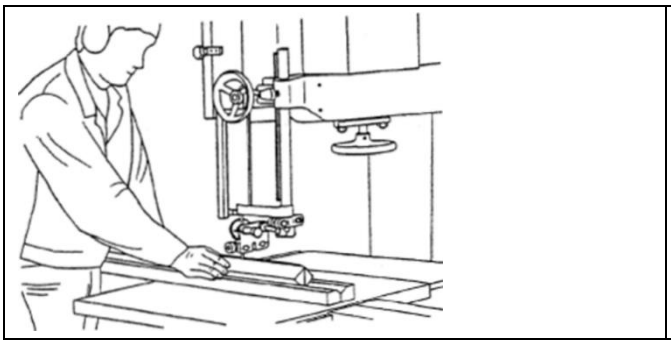


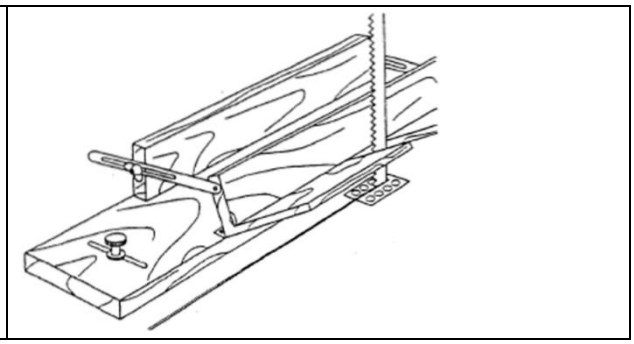


Longitudinal cutting is sawing parallel to the wood fibre. For rectangular cuts (table at right angles to the saw blade), place the rip fence to the left of the saw blade to guide the workpiece safely along the fence with your right hand. For longitudinal mitre cuts with an inclined table, attach the 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!

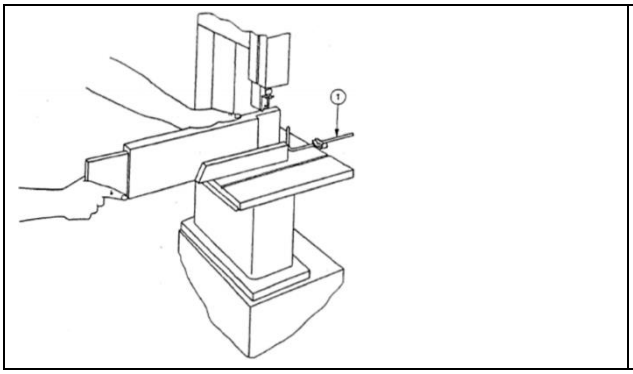
17.4.2 Diagonal cut





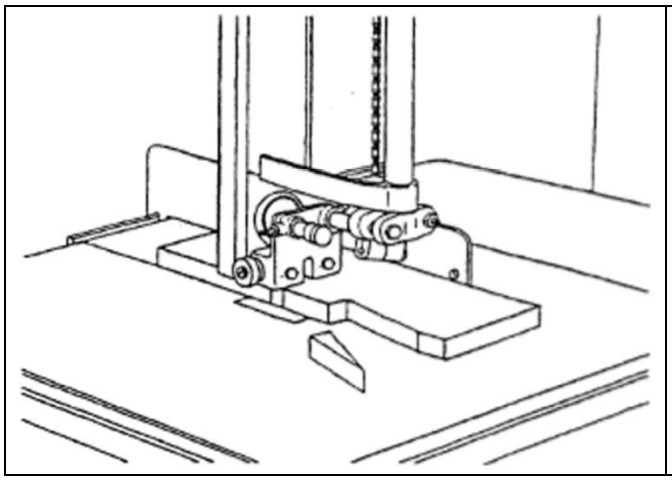
For diagonal cuts, use auxiliary devices as shown in the illustrations above.

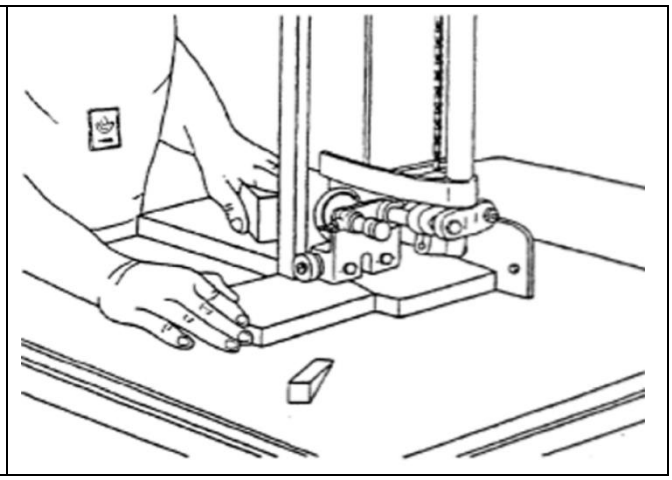
17.4.3 Cutting tenons



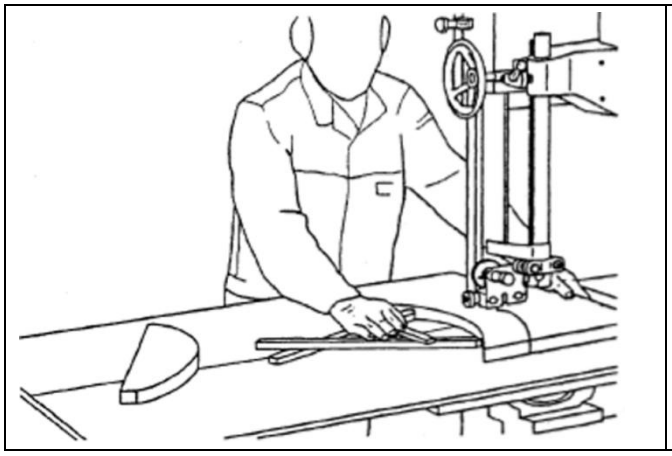
1. Stop, fixed to the table

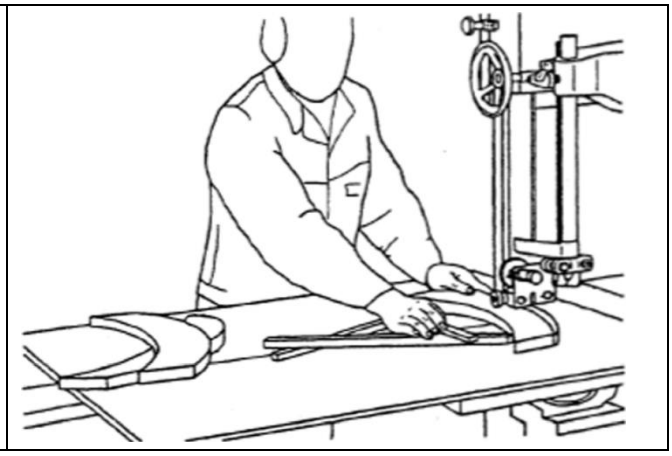
17.4.4 Cutting wedges





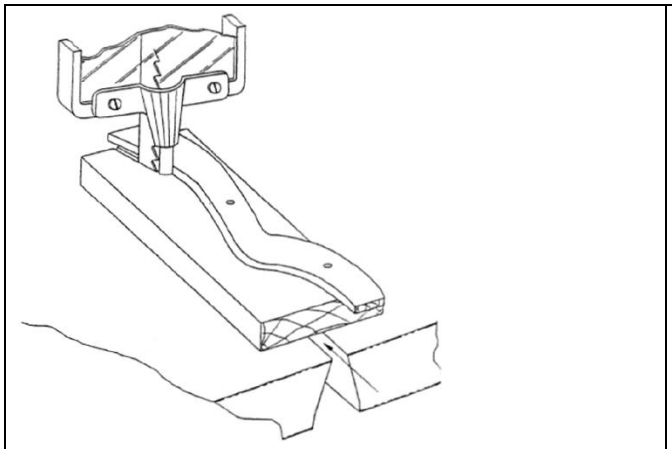
17.4.5 Cutting Curves



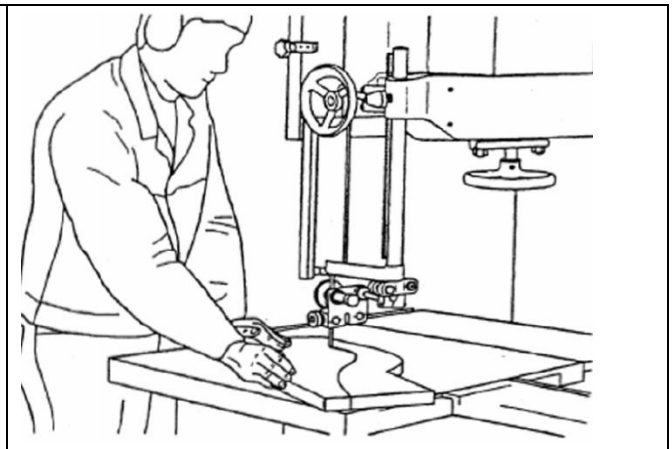


When cutting curves, pay particular attention to the width of the saw blade. Choose a narrow band saw blade with which you can cut even the smallest radii in your workpiece. Work at a low feed rate so that you do not push the workpiece sideways out of the cutting line.

17.4.6 Cutting with a template, handling shaped work

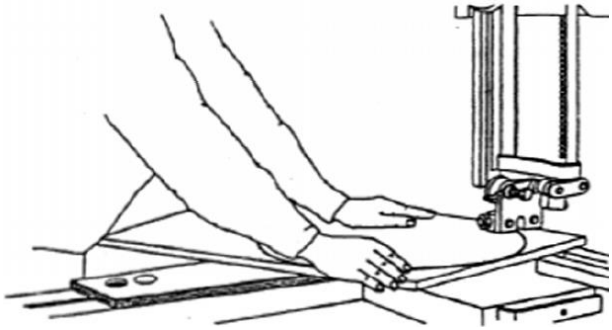


Working with a template

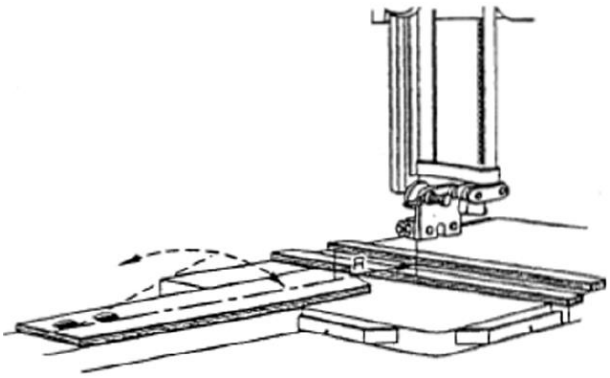
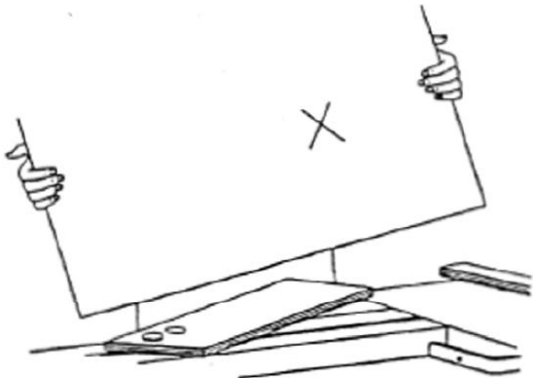


Correct handling of moulded parts

17.4.7 Cutting circular work

	• To cut round slices, use a circular cutting device as shown in the illustrations on the left and below!

17.4.8 Fixtures

	
Fixture without workpiece	Operator placing workpiece fixture

18 CLEANING, MAINTENANCE, STORGE, DISPOSAL

WARNING

Handling the machine with the power supply on, may lead to serious injuries or even death. Always disconnect the machine from the power supply before cleaning, servicing or maintenance work and secure it against unintentional reconnection!

18.1 Cleaning

CAUTION

Never clean the band saw blade or the band saw rollers with a brush held in the hand or with a scraper while the machine is running. Always wait until the machine has 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!

Regular cleaning is a prerequisite for the safe operation of the machine and its long service life.

- Therefore, clean the machine after each use and remove any sawdust with a brush, broom or vacuum cleaner.

18.2 Maintenance

WARNING

Handling the machine with the power supply up can lead to serious injuries or even death. Always disconnect the machine from the power supply before servicing or maintenance work and secure it against unintentional or unauthorised reconnection!

The machine is low-maintenance and only a few parts have to be serviced. Nevertheless, malfunctions or defects which could impair the safety of the user must be rectified immediately!

- Keep the bearing guides clean and free of deposits.
- Do not allow sawdust to accumulate in the impeller boxes. Vacuum sawdust and sawdust regularly.
- Connect the band saw to a dust extraction system.
- Clean and lubricate the lifting/lowering rod for the upper bearing guides if they are stiff.
- Clean and lubricate the tensioning mechanism if it is stiff.
- Check V-belt monthly for sufficient tension. If cracks or lateral tears are detected, the drive belt must be replaced!

18.3 Storage

NOTE

Improper storage can damage and destroy important machine parts. Store packed or unpacked parts only under the intended ambient conditions!

In case of a longer interruption of operation or shutdown, clean the machine and then store it out of the reach of children in a dry place protected from frost and other weather influences!

18.4 Disposal

Observe the national waste disposal regulations. Never dispose of the machine, machine components or equipment in residual waste. If necessary, contact your local authorities for information on the disposal options available.
If you buy a new machine or an equivalent device from your specialist retailer, he is obliged in certain countries to dispose of your old machine properly.

19 Troubleshooting

WARNING

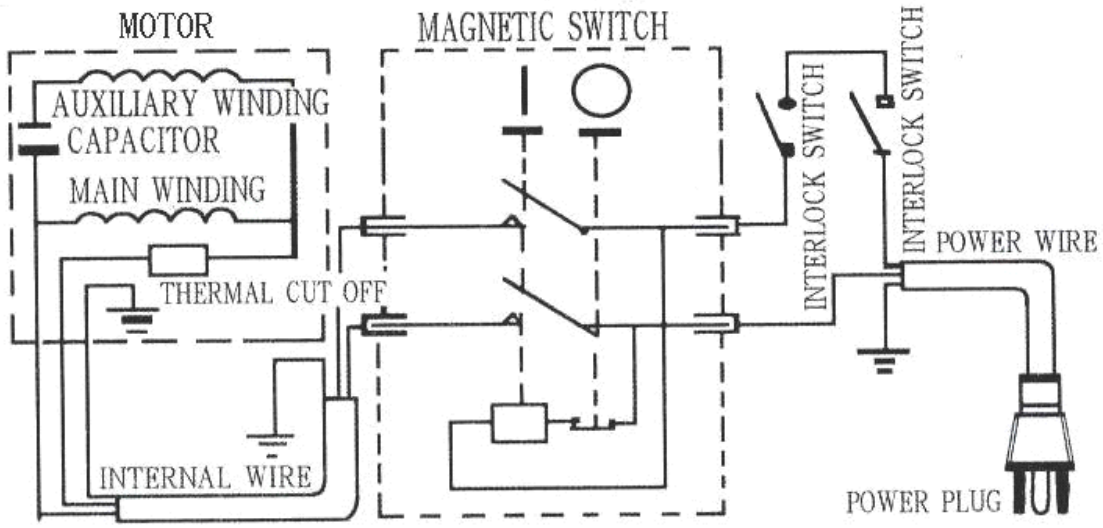
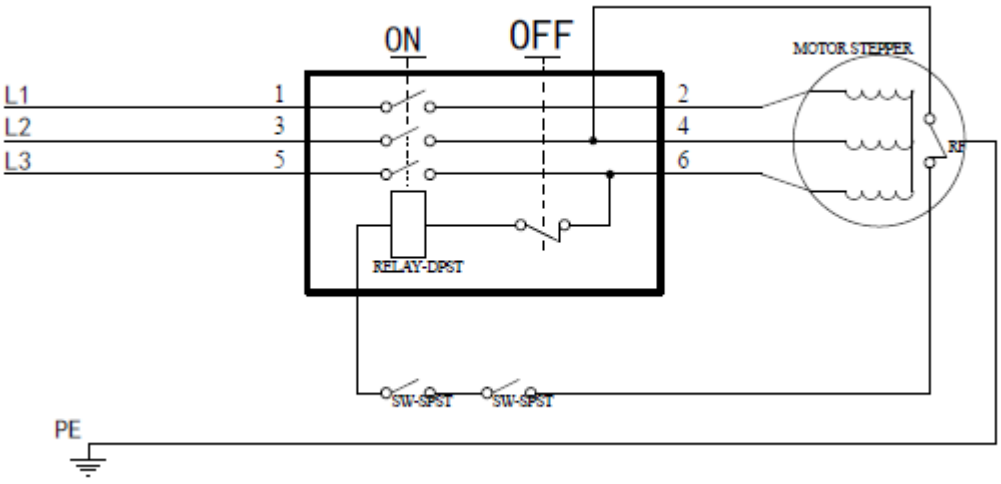
Handling the machine with the power supply up can lead to serious injuries or even death. Always disconnect the machine from the power supply before servicing or maintenance work and secure it against unintentional or unauthorised reconnection!

Many possible sources of error can be excluded in advance if the machine is properly connected to the mains.

If you are unable to carry out necessary repairs properly and/or do not have the required training, always consult a specialist to correct/solve the problem!

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.

20 SCHALTPLAN / WIRING DIAGRAM

Schaltplan, einphasig, mit Kontaktschalter / Wiring Diagram, single phase, with contactor	
Schaltplan, dreiphasig, mit Kontaktschalter / Wiring Diagram, three phase, with contactor	

21 ERSATZTEILE / SPARE PARTS

21.1 Ersatzteilbestellung / Spare Parts Order

(DE) Mit HOLZMANN-Ersatzteilen verwenden Sie Ersatzteile, die ideal aufeinander abgestimmt sind. Die optimale Passgenauigkeit der Teile verkürzen die Einbauzeiten und erhöhen die Lebensdauer.

HINWEIS

Der Einbau von anderen als Originalersatzteilen führt zum Verlust der Garantie!

Daher gilt: Beim Tausch von Komponenten/Teilen nur Originalersatzteile verwenden

Beim Bestellen von Ersatzteilen verwenden Sie bitte das Serviceformular, das Sie am Ende dieser Anleitung finden. Geben Sie stets Maschinentype, Ersatzteilnummer sowie Bezeichnung an. Um Missverständnissen vorzubeugen, empfehlen wir mit der Ersatzteilbestellung eine Kopie der Ersatzteilzeichnung beizulegen, auf der die benötigten Ersatzteile eindeutig markiert sind.

Bestelladresse sehen Sie unter Kundendienstadressen im Vorwort dieser Dokumentation.

(EN) With original HOLZMANN spare parts you use parts that are attuned to each other shorten the installation time and elongate your products lifespan.

IMPORTANT

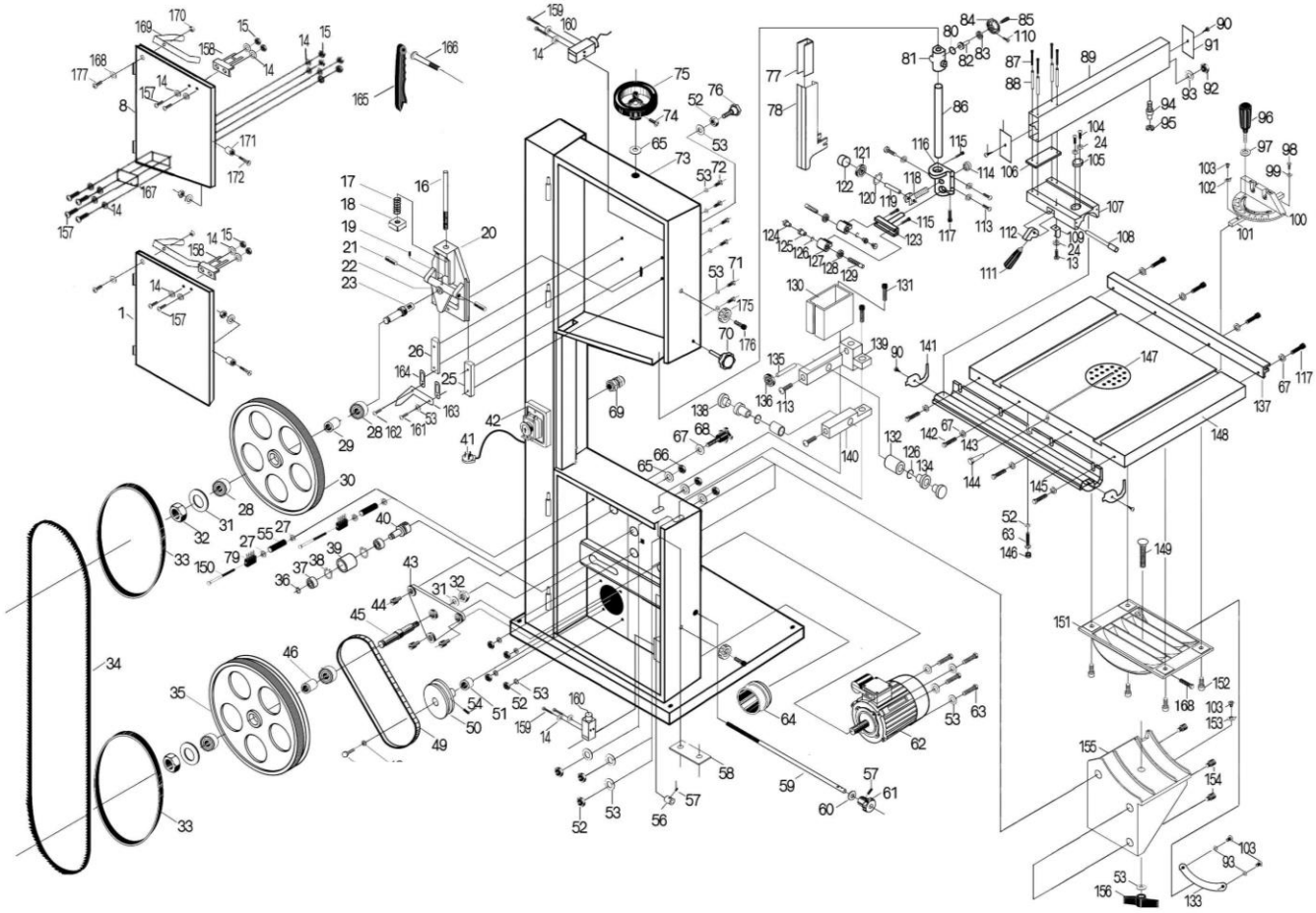
The installation of other than original spare parts voids the warranty!

So you always have to use original spare parts

When you place a spare parts order please use the service form you can find in the last chapter of this manual. Always take a note of the machine type, spare parts number and part name. We recommend to copy the spare parts diagram and mark the spare part you need.

You find the order address in the preface of this operation manual.

21.2 Explosionszeichnung / Exploded View



21.3 Ersatzteilliste / Spare Parts List

NO.	Description	QTY	NO.	Description	QTY
1	Lower door	1	50	Motor pulley	1
8	Upper door	1	51	Bush	1
13	Screw	1	52	Hex nut M8	12
14	Washer 4	4	53	Washer 8	12
15	Nut M4	4	54	Set screw M6×16	1
16	Adjusting thread bar	1	55	Bush	2
17	Spring	1	56	Bush	1
18	Square nut	1	57	Set screw M5×6	1
19	Pin	1	58	Fixed plate	1
20	Upper wheel adjusting base	1	59	Jockey wheel pole	1
21	Adjusting shaft	2	60	Washer 10	1
22	Upper shaft bracket	1	61	Belt tension adjuster knob	1
23	Upper wheel shaft	1	62	Motor	1
24	Washer 4	3	63	Hex bolt M8×25	4
25	Right adjusting plate	1	64	Dust chute	1
26	Left adjusting plate	1	65	Washer 12	4
27	washer	2	66	Hex nut M12	4
28	Bearing 80104	4	67	Washer 12	4
29	Upper wheel shaft bush	1	68	Locking handle	1
30	Upper wheel	1	69	Retainer M20×1.5	1
31	Washer	2	70	Locking knob	1
32	Hex nut	2	71	Hex bolt M8×12	2
33	Rubber belt	2	72	Hex bolt M10×25	10
34	Saw blade	1	73	Saw body	1
35	Lower wheel	1	74	Set screw	1
36	C-ring 12	1	75	Hand wheel for tightening blade	1
37	Bearing 80101	2	76	Tracking control knob	1
38	Washer 12	1	77	Slide plate	1
39	Jockey wheel	1	78	Saw blade protection guard	1
40	Jockey wheel axel	1	79	Saw wheel brush	2
41	Power cord	1	80	Washer	1
42	Switch	1	81	Guide base	1
43	Lower shaft bracket	1	82	Gear	1
44	Adjusting screw	3	83	Bearing	1
45	Lower wheel shaft	1	84	Hand wheel for upper blade guide	1
46	Lower wheel shaft bush	1	85	Lock handle	1
47	Hex bolt M8×30	1	86	Guide bar	1
48	Washer 8	1	87	Cap screw	4
49	V-belt	1	88	Bush	4

NO.	Description	Q'TY	NO.	Description	Q'TY
89	Upper guide board	1	131	Screw M6×35	2
90	Screw ST2.9×9.5	2	132	Shaft	2
91	Guide fence plate insert	2	133	Scale	1
92	Hex nut M5	1	134	Bush	2
93	Washer 5	1	135	Eccentric bearing shaft	1
94	Bearing bar	1	136	Bearing 80101	1
95	Bearing 80027	1	137	Back rail	1
96	Handle	1	138	Lower guide wheel	2
97	Washer 6	1	139	Lower guide base	1
98	Screw	2	140	Lower guide base	1
99	Washer 6	2	141	End plate for side guide rail	2
100	Scale for miter gauge	1	142	Hex bolt M6×16	4
101	Guide plate for miter gauge	1	143	Side guide rail	1
102	Pointer	1	144	Pin	1
103	Screw	2	145	Scale for Side guide rail	1
104	Screw	2	146	Rubber plate	1
105	Pointer with magnifier	1	147	Saw mouth board	1
106	Connecting plate	1	148	Working table	1
107	Sliding base	1	149	Flange bolt	1
108	Shaft	1	150	Bolt	2
109	Spring sheet	1	151	Table support	1
110	Set screw M8×12	3	152	Screw M8×25	4
111	Locking handle	1	153	Pointer	1
112	Locking eccentric block	1	154	Adjusting screw	3
113	Screw M6×12	2	155	Swivel mounting base	1
114	Locking nut	1	156	Tilt butterfly nut	1
115	Screw M6×35	1	157	Screw M4×12	4
116	Guide bar base	1	158	Jiggle plug	1
117	Screw M6×16	5	159	Screw M4×30	4
118	Bearing parts for spacing	1	160	Safety switch	1
119	Shaft for bearing	1	161	Screw M6×12	1
120	C-ring	1	162	Bolt	1
121	Bearing 80016	1	163	Pointer	1
122	Blade guide wheel sleeve	1	164	Fixed plate	2
123	Blade guide bracket	1	165	Carpenter pushing hands	1
124	Guide wheel	2	166	screw	1
125	Bush	2	167	Perspective version	1
126	Ring	2	171	Knob sleeve	2
127	Socket for side guide wheel	2	172	Knob screw	2
128	Nut	2	175	knob	2
129	Adjusting bar	2	176	Knob axis	2
130	Lower protection guard	1			

22 EG-KONFORMITÄTSERKLÄRUNG/CE-CERTIFICATE OF CONFORMITY

CE

Inverkehrbringer / Distributor

HOLZMANN MASCHINEN® GmbH
4170 Haslach, Marktplatz 4, AUSTRIA
Tel.: +43/7289/71562-0; Fax.: +43/7289/71562-4
www.holzmann-maschinen.at

Bezeichnung / name
HOLZBANDSÄGE / WOOD BANDSAW
Typ / model
HBS 400
EG-Richtlinien / EC-directives
• 2006/42/EG • 2014/30/EG
Angewandte Normen / applicable standards
EN 60204, EN 1807-1:2013, EN 55014-1, EN 61000-3-2, EN 61000-3-11, EN 55014-2

(DE) Hiermit erklären wir, dass die oben genannten Maschinen aufgrund ihrer Bauart in der von uns in Verkehr gebrachten Version den grundlegenden Sicherheits- und Gesundheitsanforderungen der angeführten EG-Richtlinien entsprechen. Diese Erklärung verliert ihre Gültigkeit, wenn Veränderungen an der Maschine vorgenommen werden, die nicht mit uns abgestimmt wurden.

(EN) Hereby we declare that the above mentioned machines meet the essential safety and health requirements of the above stated EC directives. Any manipulation or change of the machine not being explicitly authorized by us in advance renders this document null and void.

Technische Dokumentation

HOLZMANN-MASCHINEN GmbH
4170 Haslach, Marktplatz 4

Haslach, 13.03.2020
Ort / Datum place/date

HOLZMANN MASCHINEN GmbH
Marktplatz 4, 4170 Haslach
weiterer Standort:
Gewerbepark 8, 4707 Schlüsselberg
www.holzmann-maschinen.at

DI (FH) Daniel Schörgenhuber
Geschäftsführer / Director