

Instruction Manual

— Edge milling machine

— KSO 850 230 V

— KSO 850 400 V



KSO 850

KSO 850

Imprint

Product identification

Edge milling machine	Item number
KSO 850 400V	5900850
KSO 850 230V	5900851

Manufacturer

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Indications regarding the operating instructions

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Indications regarding the copyright

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1 Introduction

You have made a good choice by purchasing the HOLZ-STAR edge sanding machine.

Read the operating instructions carefully before commissioning.

These are an important part and must be kept near the machine and accessible to every user.

The operating instructions inform you about the proper commissioning, the intended use as well as the safe and efficient operation and maintenance of the edge grinding machine.

In addition, observe the local accident prevention regulations and general safety regulations for the area of application of the edge grinding machine.

1.1 Copyright

The contents of these instructions are protected by copyright and are the sole property of Stürmer Maschinen GmbH. Their use is permitted within the scope of use of the edge grinding machine. Any other use is not permitted without the written consent of the manufacturer.

Passing on as well as duplication of this document, utilization and communication of its contents are prohibited, unless expressly permitted. Violations will result in liability for damages. We register trademark, patent and design rights to protect our products, insofar as this is possible in individual cases. We emphatically oppose any infringement of our intellectual property.

1.2 Customer service

Please contact your dealer if you have questions on the machine or if you need technical advice. They will help you with specialist information and expert advice.

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

Repair service:

Fax: 0951 96 555 - 55
E-Mail: service@stuermer-maschinen.de
Internet: www.holzstar.de

Spare part orders:

Fax: 0951 96555-119
E-Mail: 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 information and notes in these operating instructions were summarised taking the applicable standards and rules, the state-of-the-art and our long-term knowledge and experiences into consideration.

In the following cases the manufacturer is not liable for damages:

- Non-observance of the operating instructions,
- Inappropriate use
- Use of personnel who are not knowledgeable and skilled in the field
- Unauthorised modifications
- Technical changes,
- Use of not allowed spare parts.

The actual scope of delivery may deviate from the explanations and presentations described here in case of special models, when using additional ordering options or due to latest technical modifications.

The obligations agreed in the delivery contract, the general terms and conditions as well as the delivery conditions of the manufacturer and the legal regulations at the time of the conclusion of the contract are applicable.

2 Safety

This paragraph will give you an overview of all important safety packages for the protection of the people using it well as for a safe and undisturbed operation. Other task-based safety notes are included in the individual chapters.

2.1 Symbol explanation

Safety instructions

The safety notes in these operating instructions are highlighted by symbols. The safety notes are introduced by signal words which express the concern of the risk.



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 words indicates a possibly dangerous situation which may lead to property and environmental damages if they are not avoided.

Tips and recommendations



Tips and recommendations

This symbol highlights useful tips and recommendations as well as information for an efficient and trouble-free operation.

It is necessary to observe the safety notes quoted in these operating instructions in order to reduce the risks for personal injuries and damages to property.

2.2 Obligations of the operating company

The operating company is the person who operates the machine for business reasons by herself, or leaves it to a third party for use or application, and who bears the legal product responsibility for the protection of the user, the staff or for third parties.

Obligations of the operating company:

If the machine is used for commercial purposes, the operating company must comply with the legal working safety regulations. Therefore, the safety notes in this operating manual, as well as the safety, accident prevention and environment protection regulations applying for the area of application of the machine must be met. The following applies in particular:

- The operating company must be informed about the applying industrial safety regulations and further analyse hazards resulting from the special working conditions at the place of use machine. She must implement these in form of operating manuals for the operation machine.
- During the entire lifetime of machine, the operating company must verify whether the operating manuals prepared by her correspond to the current status of the regulations, and must adapt these if necessary.
- The operating company must unambiguously regulate and determine the responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- The operating company must ensure that all persons who work with machine, have read and understood this manual. Furthermore she must instruct the staff in regular intervals and inform them about the hazards.
- The operator must provide the personnel with the necessary protective equipment and bind the wearing of necessary protective equipment.

Furthermore the operating company is responsible to keep the Machine always in a technically flawless state. Thus, the following applies:

- The operator must ensure that the maintenance intervals described in this manual are kept.
- The operator must have all safety devices checked regularly for their good working order and their integrity.

2.3 Qualification of personnel

The different tasks described in this manual represent different requirements to the qualification of the persons entrusted with these tasks.



WARNING!

Danger in case of insufficient qualification of the staff!

Insufficiently qualified persons cannot estimate the risks while using machine and expose themselves and others to the danger of severe injuries.

- Have all works only performed by qualified persons.
- Keep insufficiently qualified persons and children out of the working area.

Only persons reliable working procedures can be expected from, are allowed to perform all works. Persons the responsiveness of which is affected by e. g. drugs, alcohol or medication, are not allowed to work with the machine.

The qualifications of the personnel for the different tasks are mentioned below:

Operator:

The operator is instructed by the operating company about the assigned tasks and possible risks in case of improper behaviour. Any tasks which need to be performed beyond the operation in the standard mode must only be performed by the operator if it is indicated in these instructions and if the operating company expressly commissioned the operator.

Electrical specialist:

Due to his professional training, knowledge and experience as well as his knowledge of respective standards and regulations the electrical specialist is able to perform works on the electrical system and to recognise and avoid any possible dangers himself.

Specialist staff:

Due to their professional training, knowledge and experience as well as their knowledge of relevant regulations the specialist staff is able to perform the assigned tasks and to recognise and avoid any possible dangers themselves.

Manufacturer:

Certain works may only be performed by specialist personnel of the manufacturer. Other personnel is not authorized to perform these works. Please contact our customer service for the execution of all arising work.

2.4 Personal protective equipment

The personal protective equipment serves to protect persons against impairments of safety and health while working. The staff has to wear personal protective equipment while performing different works on and with grinding system which are indicated in the individual paragraphs of these instructions.

The personal protective equipment is explained in the following paragraph:



Ear protection

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



Eye protection

The protective goggles protect the eyes against parts flying off and splashes of liquids.



Breathing protection

The breathing protection serves for protecting the respiratory passages and the lung against the intake of dust particles.



Protective gloves

The protective gloves serve to protect the hands against sharp components as well as against friction, abrasions or deep injuries.



Safety boots

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



Protective clothes

The protective clothes are tight clothes of little tensile strength.

2.5 Safety signs on the Machine

The following safety signs and notes are applied on the grinding system (fig. 1), which need to be observed and followed. . .



Fig. 1: Safety labels

Damaged or missing safety symbols at the machine may lead to errors with personal and material damages. The safety symbols which are applied on the machine must not be removed. Damaged safety symbols must be replaced immediately.

The machine must be put out of operation from the moment when the labels are unable to be recognized and understood at first glance, until new labels are attached.

2.6 Safety data sheets

Safety data sheets for hazardous materials can be obtained from your specialist dealer or by phone: +49 (0)951/96555-0. Specialist dealers can find safety data sheets in the download area of the partner portal.

2.7 Safety devices

Emergency stop button

The machine is stopped by pressing the emergency stop button. After the emergency stop button has been pressed, it must be unlocked by pulling it out so that it can be switched on again.

Motor protection switch

The engine of the Edge milling machine has a thermal protection switch that automatically shuts off the engine in case of thermal overload

After eliminating the cause of the overload and waiting for the engine to cool down completely, the engine can be restarted.

2.8 Danger zones

Noise: The noise level of the machine is moving in the Range of approx. <80 dB.

Persons under the age of 16 are strictly prohibited from operating the machine (EC Directive). The operator must have read these operating instructions and understood the dangers he is exposed to in case of misuse of the machine. For illegible or unrecognizable passages of this manual contact the manufacturer or dealer.

The machine owner is responsible for staffing the machine with qualified operators.



Fig. 2: Danger area

1 Danger area

2.9 Work space



DANGER!

Before using for the first time, the following points should be carefully checked:

- Is the work area around the machine free?
- Are the switches on the control panel functional?

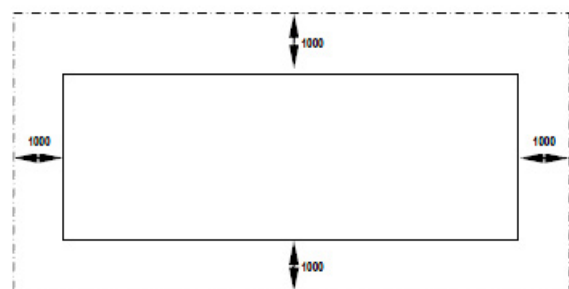


Fig. 3: Work space

Personal protection

During operation safety glasses, gloves and head protection should be worn.



DANGER!

- Caution is advised for people who are in the work area.
- Switch off the machine if it is not immediately continued.



Tips and recommendations

In case of missing or illegible Signs are to be contacted for the purpose of subsequent delivery manufacturer or dealer.

2.10 General safety instructions

- The edge grinding machine may only be operated and maintained by persons who have read and understood these operating instructions. The operator must be sufficiently trained in application, setting and operation.
- Do not switch on the edge grinding machine until immediately before starting processing. Do not leave the running machine unattended.
- Never open the protective covers while the edge grinding machine is in operation.
- Keep the workplace and the floor in the vicinity of the edge grinding machine free of any objects that could endanger your stability or pose a tripping hazard. Keep the workplace tidy. Disorder can result in accidents.
- Check the danger area before and during work to ensure that no unauthorized persons are present.
- When laying the power cable, make sure that it is not crushed, bent or wet.
- If the power cord is damaged, stop the machine immediately and have it replaced by a qualified electrician.
- Protect the machine from wetness and moisture to avoid a risk of short circuit or electric shock.
- Do not use the edge grinding machine in the vicinity of flammable gases, liquids and solids. There is a risk of explosion or fire due to possible flying sparks..
- Only use the edge grinding machine in dry rooms or in a dry environment and ensure that the working area is sufficiently illuminated.
- Ensure that a suction hose is connected to the suction system and the machine before starting it up..

- Operate the machine only with safety devices fully and correctly attached and do not modify anything on the machine.
- Hearing protection must always be worn when working with the edge grinder. Wearing loose clothing (ties, scarves, open jackets and clothing that is not tight-fitting) is prohibited. A hair net must be worn when working with long hair.
- Only use original spare parts.
- Before operation, inspect all workpieces for foreign objects, e.g. nails and screws.
- When handling heavy or bulky workpieces, use suitable supports, e.g. roller blocks (optional equipment).
- Do not use grinding belts that are cracked or have changed shape.
- Wear suitable gloves when changing the grinding belts.
- Before switching on, check that all repair and adjustment tools have been removed.
- Before any maintenance or repair work, the edge grinding machine must be secured against start-up.
- Do not use compressed air to clean the machine or remove chips.
- All protective and safety devices must be refitted immediately after repair or maintenance has been completed.

3 Intended Use

The KSO 850 edge milling machine is designed exclusively for sanding wood and wood-like materials (fiberboard, particleboard, plywood, laminated and non-laminated boards, etc.).

The Edge milling machine has been designed and built for handcraft applications and for use in non-hazardous environments.

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

3.1 Reasonably foreseeable misapplication

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

Possible misapplications may include:

- Use of the edge sanding machine for materials other than wood (e.g. processing of metal, plastic).
- Use of the edge sanding machine with parameters that are not permitted for processing wood.
- Operation of the edge sanding machine without the functioning, intended protective devices.
- Bypassing or modifying the safety devices.
- Failure to observe the maintenance instructions.
- Non-observance of wear and damage marks.
- Service work by untrained or unauthorized personnel.
- Maintenance work on an unsecured machine.
- Processing of materials that are not or insufficiently fixed.
- Careless handling of the edge grinding machine during operation.
- Installation of spare parts and use of accessories and equipment not approved by the manufacturer.
- Machining of several workpieces simultaneously in one operation.
- Machining of oversized workpieces.
- Modifications to the machine or the use of modified tool systems.

Misuse of the Edge milling machine can lead to dangerous situations.

Stürmer Maschinen GmbH accepts no liability for design and technical modifications to the Edge milling machine.

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.

- Impairment of hearing during prolonged work without hearing protection or if this is defective.
- Electrical hazard due to contact with parts and high voltage (direct contact) or with parts under high voltage due to a defect of the device (indirect contact).
- Heat generation on components can lead to burns and other injuries.
- Risk of injury to fingers and hands from the grinding belt or workpiece, e.g. when changing the grinding belt.
- Risk of injury to the eye from flying parts, even with protective goggles.

4 Technical Data

Type	KSO 850
Motor output 230 V / 50Hz	2,2 kW
Motor output 400 V / 50Hz	2,2 kW
Sanding belt dimensions	2515 x 150 mm
Circumferential belt speed	16 m/sek.
Table height min./max.	950/1030 mm
Table height adjustment	80 mm
Longitudinal table dimensions	840 x 300 mm
Transverse table dimensions	300 x 250 mm
Grinding surface (graphite surface)	940 x 180 x 1,5 mm
Sand roller diameter	110 mm
Extraction port-Ø	100 mm
Inclination of the grinding unit	0° - 90°
Workpiece stop	700 x 60 mm
Dimensions (LxBxH)	1430 x 600 x 1250 mm
Weight	148 kg

4.1 Type plate



Fig. 4: Type plate KSO 850 / 230V

5 Transport, Packaging, Storage

5.1 Delivery and Transport

Delivery

Check the Edge milling machine for visible transport damage after delivery. If you discover any damage to the Edge milling machine, immediately report it to the transport company or the 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 disturbances 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.

Transport with a forklift / pallet truck:

The edge sanding machine can be transported with a forklift or pallet truck if it is firmly mounted on a pallet.

Transport with a crane:

Step 1: Attach 2 ropes with sufficient carrying capacity to the crane hook and to the points of the edge grinding machine suitable for transport.

Step 2: Carefully lift and transport the edge sanding machine with the crane.

5.2 Packaging

All packaging materials and packaging aids used by the Edge milling machine are recyclable and must always be recycled. Packing components made of cardboard are crushed to waste paper collection.

The foils are made of polyethylene (PE) and the upholstery parts made of polystyrene (PS). You can hand over these substances to a recycling center or to the disposal company responsible for you.

The packaging material must not get into the hands of children, as some plastic packaging may present a suffocation hazard when used as a toy.

5.3 Storage

Thoroughly clean the Edge milling machine in a dry, clean and frost-free environment. Cover the machine with a protective tarpaulin.

6 Description

Illustrations in this manual may differ from the original.

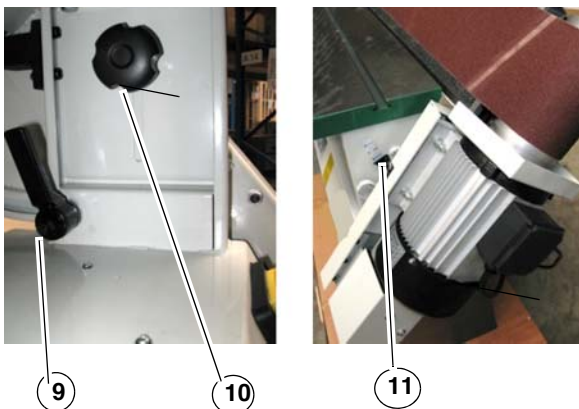
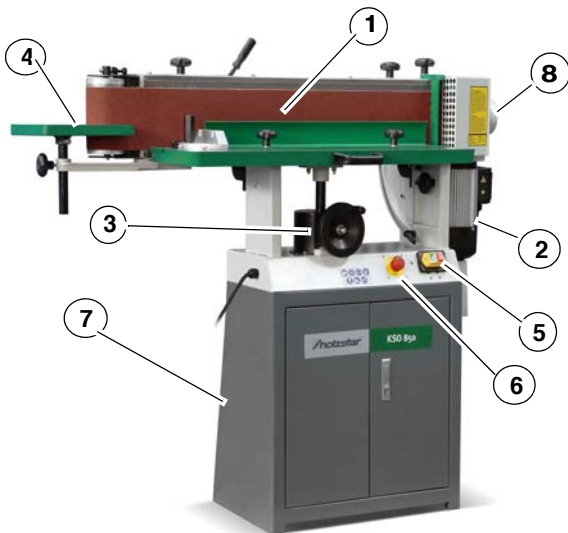


Fig. 5: Edge milling machine

- 1 Sanding belt
- 2 Engine
- 3 Hand wheel for height adjustment of the work table
- 4 Outrigger table
- 5 ON and OFF switch
- 6 EMERGENCY STOP button
- 7 Substructure with frame
- 8 Suction connection
- 9 Clamping lever
- 10 Clamping screw
- 11 Degree scale

7 Setting up and connection

7.1 Requirements for the installation site

The site should meet the following criteria:

- The substrate must be level, firm and vibration-free.
- The substrate must not let any lubricant through.
- The installation or work area must be dry and well ventilated.
- Do not operate machines that cause dust and chips near the machine.
- There must be sufficient space for the operating personnel, for material transport as well as for adjustment and maintenance work.
- The installation site must have adequate lighting (see workplace regulations and DIN EN 12464).
- There must be a suction device with min. 1800 m³ / h extraction capacity, min. 25 m / s flow velocity at the suction connection; Hose diameter 100 mm, max. Hose length 4 m.

7.2 Set up the Edge milling machine



CAUTION!

Pay attention to the weight of the machine! The machine may only be set up by two persons. Check the aid accordingly for sufficient dimensioning and load capacity.



DANGER!

To ensure sufficient stability of the machine, it should be screwed to the ground. There are 4 holes on the machine housing for this purpose

Follow these steps to get the machine up and running:

Mount side table

Step 1: Screw the side table support to the machine housing.

Step 2: Insert the side table into the carrier and clamp it to the desired height with the clamping levers (see Fig. 6).



Fig. 6: Mounting the side table

Mounting suction hoses



Tips and recommendations

The extraction device for chips and dust must have a capacity of at least 1800 m³ / h. at a flow rate of 25 - 30 m / s.

Step 1: Fasten the 100 mm suction hoses with hose clamps to the side suction connections on the machine housing. Attach the other ends of the suction hoses with hose clamps to the suction pipe of the sanding belt covers

Step 2: Attach the 100 mm suction hose with a hose clamp to the suction connection on the back of the machine housing. Attach the other end of the suction hose with a hose clamp to the intake manifold of the extraction system.



NOTE!

After setting, remove the grease from the bare metal parts, which has been applied for protection.

- Use usual solvents.
- No water, no nitrolic solvents or similar use!

7.3 Electrical connection



DANGER!

Danger to life due to electric shock!

There is a danger to life in case of contact with live components. Switched-on electrical components can perform uncontrolled movements and lead to serious injuries. All work on the electrical installation may only be carried out by a qualified electrician.

The edge grinding machine has a connection cable that must be connected to a socket in accordance with the regulations. Only operate the edge sanding machine with an electrical power supply that meets the following requirements:

- the mains voltage and the current frequency of the power supply must correspond to the specifications on the type plate.
- Fuse protection with a residual current circuit breaker (RCD circuit breaker).
- Use of an earthed socket (socket grounded in accordance with regulations).
- Lay the power cable so that it does not interfere with work and cannot be damaged.

7.4 Mount or change the sanding belt

Step 1: Disconnect the machine from the mains.

Step 2: Open or remove the sanding belt covers.

Step 3: Loosen the band tensioner to release the sanding belt.

Step 4: Insert or change the sanding belt. Then slowly tension the sanding belt.



DANGER!

Check the direction of the sanding belt! Corresponding markings (arrows) are located on the back of the sanding belt.

Step 5: Turn on the edge sanding machine for a short time and check the tape run. The sanding belt must run in the middle of the roll. If necessary, readjust the sanding belt with the adjusting screw for the roller.

Step 6: Close the covers.

7.5 Adjusting the table height

Step 1: Disconnect the machine from the mains.

Step 2: Loosen the handwheel clamping lever.



Fig. 7: Table height adjustment

Step 3: Bring the table to the desired height with the hand wheel (Fig. 7).

Step 4: Secure the set position with the clamping lever.

7.6 Adjustment and set-up work

Before adjustment and set-up work, the machine must be secured against commissioning. Pull out the mains plug!



WARNING!

DO NOT change safety device

7.6.1 Extraction connection

You can connect a suction device to the extraction connection. You can use the substructure as a storage option (see Fig. 8).



Fig. 8: Extraction connection

8 Operation of the Edge milling machine



DANGER!

Danger to life due to electric shock!

There is danger to life when in contact with live components. Switched on electrical components can cause uncontrolled movements and lead to serious injuries.

- Disconnect the power before starting adjustments to the machine.



ATTENTION!

Crushing!

Incorrect work on the machine can cause injury to the upper limbs.



WARNING!

Risk of death!

There is danger to life for the operator and other persons if they do not adhere to the following rules.

- The Edge milling machine may only be operated by a trained and experienced person.
- The operator may not work while under the influence of alcohol, drugs or medication.
- The operator must not work when he is tired or suffering from concentration-impairing illnesses.
- The Edge milling machine may only be operated by one person. Other persons must keep away from the work area during operation.



Wear head protection!



Wear safety glasses!



Wear safety gloves!



Wear safety shoes!



Wear protective clothing!

Step 1: Move the worktable to the desired position.

Step 2: Slowly tension the sanding belt.

Step 3: Turn on the edge sanding machine for a short time and check the tape run. The sanding belt must run in the middle of the roll. If necessary, readjust the sanding belt with the ribbon adjustment screws.

Step 4: Adjust the sanding belt and the stop to the desired position or angle. If necessary, readjust the position of the worktable.

Step 5: Switch on the machine and the extraction and carry out the grinding process.

Step 6: After completing the grinding process, press the red STOP button and switch off the extraction system. Disconnect the mains plug of the edge grinding machine.

8.1 Starting the machine

Follow these steps to start the machine and do the editing:

- Make sure the electrical connection is correct,
- Check that the EMERGENCY STOP button is unlocked,
- Press the green start button (Fig. 9).

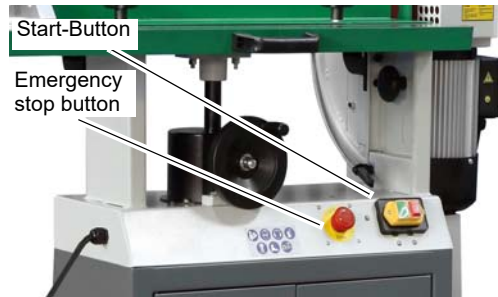


Fig. 9: Starting the machine

If an emergency situation arises during the grinding process, you can press the EMERGENCY STOP button and thus immediately switch off all machine functions. After the EMERGENCY STOP button has been unlocked by turning in the direction of the arrow, press the Start button.

8.2 Grinding

Rules for sanding with the edge sanding machine:

The grinding process may only be performed by qualified personnel experienced on these machines. The workpiece feed is done by hand. The edge grinding machine KSO 850 can be used for edge grinding, surface grinding and hollow grinding. The oscillation of the sanding belt ensures even sanding belt stress and prevents grinding grooves on the workpiece. Due to the infinitely tiltable sanding unit, the edge sanding machine for a variety of grinding operations such as B. vertical and horizontal grinding used.

Edge grinding

To do this, place the grinding unit vertically.

Close the roller cover, if necessary. The miter ruler can be used to guide the workpiece and as a grinding stop (Fig. 10).



Fig. 10: Edge grinding

Surface grinding

To do this, place the grinding unit horizontally. The grinding table now serves as a stop surface (Fig. 11).



Fig. 11: Surface grinding

Hollow grinding

Mount the outrigger table in working position. After completing the hollow grinding, remove the jib table (Fig. 12).



Fig. 12: Hollow grinding



DANGER!

It is very important that this manual be read and understood by operating personnel and other persons handling the machine before operating the machine. Always keep sufficient distance to the grinding drive. Never reach under the grinding drive.

8.2.1 Before operation

- Begin your work with a coarse sandpaper and gradually change to finer grits.
- The optimal inclination of the workpiece can be adjusted.
- Clean sandpaper regularly with a brush.
- Replace damaged and worn abrasive belts immediately

8.2.2 Sandpaper selection

Choosing the right abrasive grain is extremely important for optimizing the grinding performance. Always grind first with a coarse grain and then gradually switch to finer grits. Skip at most one grain level. Too fine grains and worn abrasive belts can cause burn marks on the workpiece.

- Grain 60: surface grinding
- Grain 80: surfaces and light calibration, most common grain size
- Grain 100 and 120: surfaces and fine sanding
- Korn150, 180 and 220: only fine sanding

8.2.3 Sandpaper Assembly

Move the grinding unit to vertical position. Open all tape covers. Release the belt tension with a lever. Loosen the two star handles (Item 1, Fig. 13) on the side cover and remove the two upper star handles (Item 2, Fig. 13) from the cover. Now you can lift the cover (Pos.3, Fig.13) upwards.

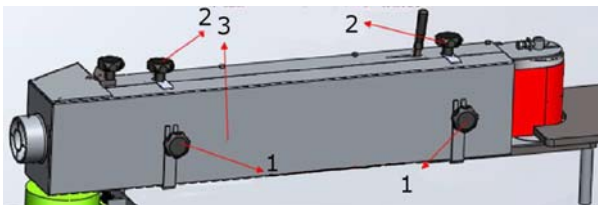


Fig. 13: Remove cover

Carefully remove the sanding belt. Put on a new sanding belt, paying attention to the specified belt running direction. Tighten the sanding belt. Close the belt cover and tighten the tightening grips again. Grinding belts will stretch during operation, a readjustment of the belt run may be necessary.

- Move sanding belt by hand in running direction. The sanding belt roll runs in the middle of the rollers.
- Loosen the clamping screw, the tape can now be corrected with the adjusting screw. If the tape runs to the right, move the adjustment screw to the left and vice versa. Clamp the clamping screw again.
- Check the free rotation of the sanding belt after each adjustment and set-up procedure. Briefly start the engine compartment and start the belt-check (Fig. 14).

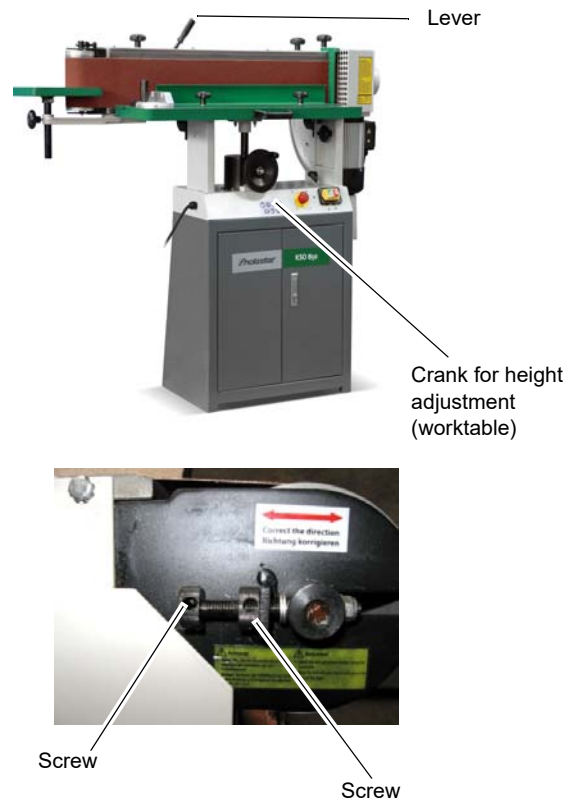


Fig. 14: Sandpaper Assembly

8.2.4 Grinding unit tilting

The grinding unit can be swiveled 90 ° from vertical to horizontal. To pivot, loosen the clamp lever and tighten again. The angle can be adjusted and read off the scale (Fig. 15).

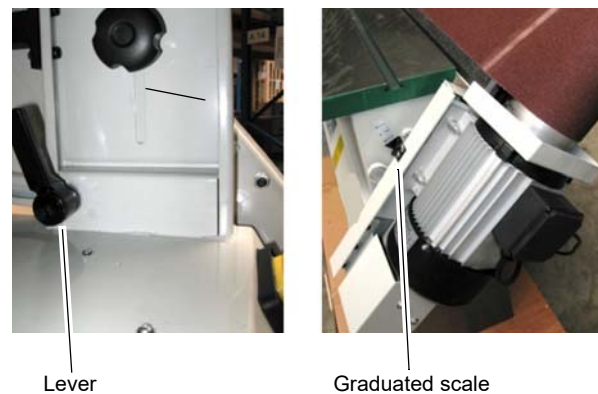


Fig. 15: Grinding unit tilting

Step 1: Disconnect the machine from the mains.

Step 2: Release the lock for the angle adjustment by loosening the clamping lever.

Step 3: Swivel the grinding unit with lever B at the desired angle (from 90 ° to 45 °) and lock it with lever A after reaching the desired angle.

Step 4: Adjust the table height to the appropriate position to the sanding belt

9 Care, maintenance and repair



DANGER!

Danger of electrocution!

There is danger to life when in contact with live components. Switched on electrical components can cause uncontrolled movements and lead to serious injuries.

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

9.1 Care after the end of work



Wear suitable protective gloves!



Wear protective clothing!



NOTE!

Never use harsh cleaning agents for cleaning. This can lead to damage or destruction of the device.

Step 1: Disconnect the power plug from the power outlet.

Step 2: Empty and clean the suction device.

Step 3: Clean the machine from sawdust and sawdust.

Step 4: Spray all unpainted metal surfaces with some anti-rust spray.

Step 5: Check the machine for damage to the safety devices and the sanding belt. If necessary, carry out the repair or arrange for it, observing the safety instructions.

9.2 Maintenance and repair

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

If the Edge milling machine does not work properly, contact a dealer or our customer service. The contact details can be found in chapter 1.2 Customer Service.

All protection and safety equipment must be reinstalled immediately after completion of repair and maintenance work.



NOTE!

- Check the abrasive belt regularly for errors. Replace a damaged sanding belt immediately.
- Check the correct setting of the tape guide at regular intervals. Relax the sanding belt during longer work breaks. Clean the machine at regular intervals.
- Check the adequate function of the extraction daily. Replace damaged safety equipment immediately. Reinstall all protective equipment immediately.
- Connections and repairs of the electrical equipment may only be carried out by a qualified electrician

9.2.1 Functional test

The edge sanding machine is delivered ready to use.

Before each use, a functional test should be carried out.

The sanding belt has to be tensioned.

Step 1: Manually move the sanding belt, making sure it is centered on the roller. If necessary, readjust the sanding belt with the ribbon adjustment screw.

Step 2: Turn on the edge sanding machine for a short time and check the tape again.

Step 3: Switch off the edge sanding machine again.

The edge sanding machine is ready for operation.

9.2.2 Sanding belt

The sanding belt is a wearing part, which must be regularly checked for faults and replaced when worn.

Replace a damaged abrasive belt immediately!

The belt is equipped with an automatic tensioning mechanism. This eliminates a regular tensioning of the tape.

9.2.3 Tape guide

Check the tape guide at regular intervals for the correct setting.

If the edge sanding machine is not used for a long time, the sanding belt has to be relaxed.

9.2.4 Suction

Check the suction daily for its adequate function. If the extraction system does not work or only to a limited extent, it must be repaired again. Only then may be put into operation on the edge grinding machine.

9.2.5 Movable parts



Wear safety glasses!

All moving parts must be cleaned after 50 hours of operation with a soft brush. Clean the edge sanding machine with a strong stream of compressed air. Then apply a thin layer of oil or grease to the moving parts. Lubricate the slide rails with grease.

10 Disposal instructions / recycling facilities

Dispose of your device in an environmentally friendly, by not disposing of waste in the environment but professionally.

Please take the packaging and later the old appliance does not just go away, but discard them in accordance with the relevant of your city / municipality or by the waste disposal company established guidelines.

10.1 Decommission

Discarded appliances are immediately professionally de-commission, in order to avoid any later misuse and the threat to the environment or people.

Step 1: Remove all environmentally hazardous fluids from the old device.

Step 2: If necessary, dismantle the machine into manageable and usable assemblies and components.

Step 3: Guide the machine components and operating materials to the appropriate disposal routes.


10.2 Disposal of new equipment packaging

All used packaging materials and packaging aids of the machine are recyclable and must always be recycled. The packaging wood can be sent for disposal or recycling. Packaging components made of cardboard can be crushed for waste paper collection.

The foils are made of polyethylene (PE) or the upholstery parts made of polystyrene (PS). These substances can be reused after processing if they are passed on to a recycling center or to the disposal company responsible for them.

Only pass on the packaging material in such a way that it can be directly recycled.

10.3 Disposal of electrical equipment



NOTE!

Please wear in your and for the sake of
Ensure that all components of the machinist are disposed of in accordance with the intended and approved routes.

Please note that electrical appliances contain a variety of recyclable materials as well as environmentally harmful components.

Make sure that these components are disposed of separately and properly. In case of doubt, please contact your municipal waste disposal.

If necessary, the help of a specialized waste disposal company can be used for the treatment.

10.4 Disposal of electrical and electronic components

Please ensure that the electrical components are properly disposed of in accordance with legal regulations

The device contains electrical and electronic components and must not be disposed of as household waste. According to European Directive 2002/96 / EC on waste electrical and electronic equipment and its transposition into national law, used electric tools and electrical machines must be collected separately and recycled in an environmentally sound manner.

As a machine operator, you should obtain information about the authorized collection or disposal system that is valid for you.

Please ensure that the batteries and / or rechargeable batteries are properly disposed of in accordance with legal regulations. Please throw only discharged batteries into the collection boxes at retailers or municipal waste disposal companies.

10.5 Disposal of lubricants



DANGER!

Please pay attention to an environmentally friendly disposal of the used coolants and lubricants. Observe the disposal instructions of your municipal disposal companies.



INFORMATION!

Spent coolant lubricant emulsions and oils should not be mixed together, as only non-mixed waste oils without pretreatment are usable.

The disposal instructions for the lubricants used are provided by the lubricant manufacturer. If necessary, ask for the productspecific data sheets.

11 Troubleshooting

Fault	Possible causes	Disposal
The edge grinding machine stops during operation.	The on / off switch is damaged. The on / off switch line is damaged. The relay is damaged. The engine is defective. The fuses are defective. Backup has triggered.	Have the edge grinder checked by an electrician and replace the damaged parts. Wait for the engine to cool and remove the cause of the overload. Then switch on the fuse and restart.
The edge sanding machine does not start.	One or more power phases have failed.	Have qualified personnel check that all 3 phases are live.
The edge sanding machine slows down when sanding.	The workpiece is pressed too tightly against the grinding surface by the user.	Reduce the contact pressure.
The sanding belt runs off the rollers.	The sanding belt track is set incorrectly.	Set the sanding belt track correctly (see "Assembly and settings").
The wood gets dark or burns during processing.	1. The sanding belt is worn or added with sanding dust. 2. Excessive contact pressure is applied to the workpiece on the grinding surface.	1. Change the sanding belt. 2. Reduce the contact pressure.

10.6 Disposal via municipal collection points

Disposal of used electrical and electronic equipment (Applicable in the countries of the European Union and other European countries with a separate collection system for these appliances).



The symbol on the product or its packaging indicates that this product should not be treated as normal household waste but must be returned to a collection point for the recycling of electrical and electronic equipment.

By helping to properly dispose of this product, you are protecting the environment and the health of others. Environment and health are at risk from improper disposal. Material recycling helps reduce the consumption of raw materials. For more information on recycling this product, contact your local community, municipal waste disposal, or the store where you purchased the product.

12 Spare parts



DANGER!

Danger of injury by the use of wrong spare parts!

Dangers may result for the user and damages as well as malfunctions may be caused by using wrong or damaged spare parts

- Only use original spare parts of the manufacturer or spare parts admitted by the manufacturer.
- Always contact the manufacturer in case of uncertainties.



Tips and recommendations

Using non-approved spare parts voids the manufacturer's warranty.

12.1 Ordering spare parts

The spare parts can be purchased with the authorised dealer.

Indicate the following basic information for spare part orders:

- Type of device
- Serial number
- Quantity
- Designation
- Required mode of dispatch (mail, freight, sea, air, express)
- Address of dispatch

Spare part orders which do not include the above indications may not be taken into consideration. If the indications regarding the mode of dispatch are missing, the product is dispatched at the discretion of the supplier.

Information on the device type, item number and year of manufacture can be found on the type plate, which is attached to the unit.

Example

The engine for the Edge milling machine KSO 850 400V must be ordered. The engine has the number 71 in the spare parts drawing 1.

By ordering spare parts, send a copy of the spare parts drawing (1) with the marked part (engine) and marked position number (71) to the dealer or spare parts department and provide the following information:

- Type of device: **Edge milling machine KSO 850 400V**
- Item number: **5900850**
- Drawing number: **1**
- Position number: **71**

12.2 Spare parts drawing KSO 850

The following drawing is intended to help in case of service, to identify necessary spare parts. To order send a copy of the parts drawing with marked components to your dealer.

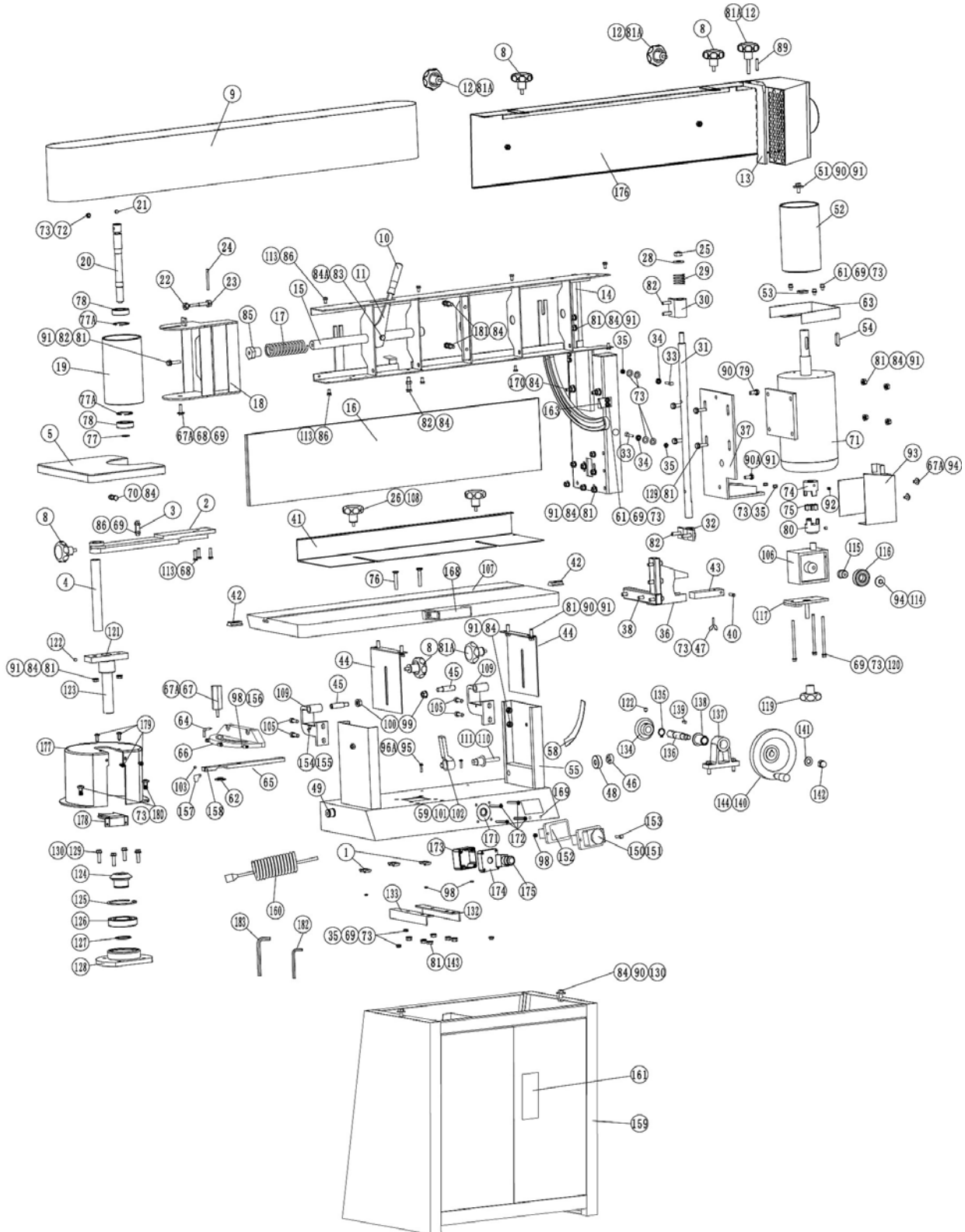


Fig. 16: Spare parts drawing

13 Electrical diagrams

400 V Model

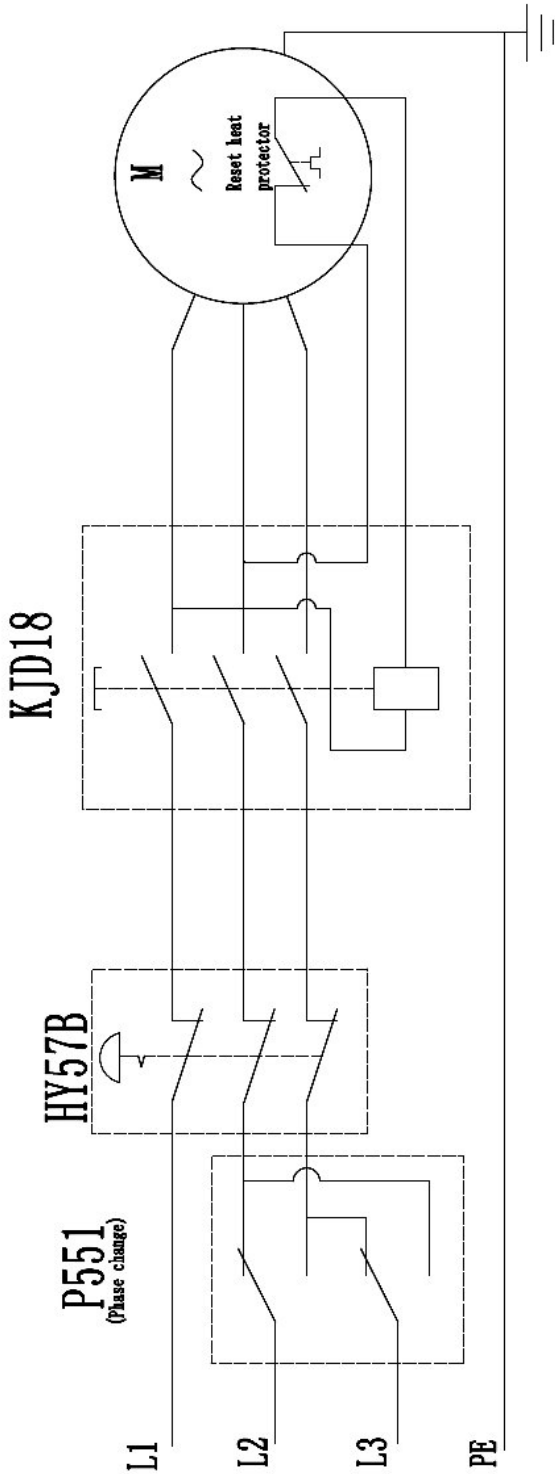


Fig. 17: Electrical diagram 400 V

230 V Model

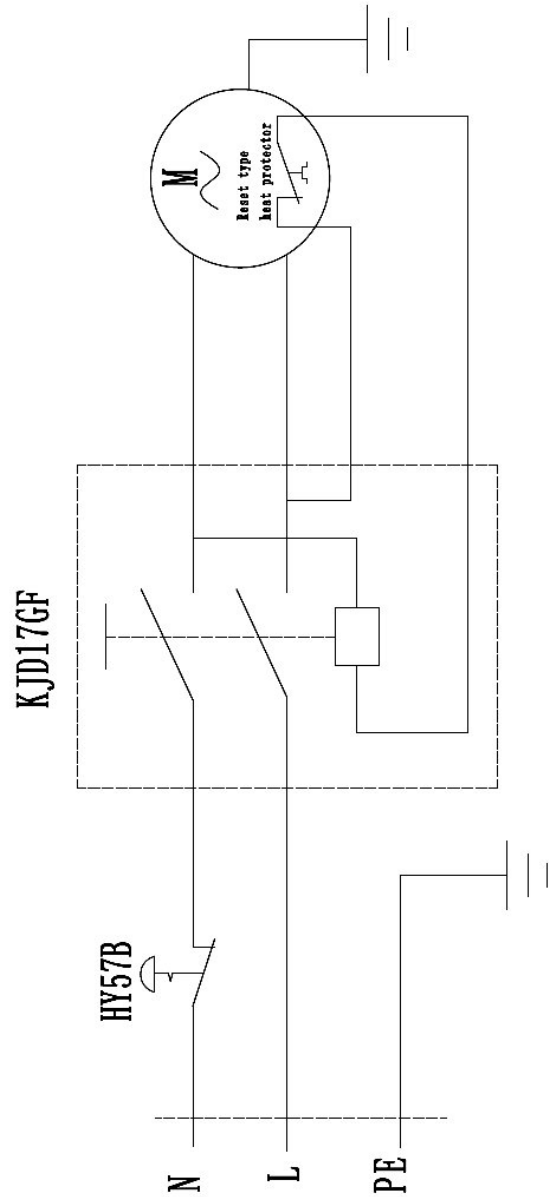


Fig. 18: Electrical diagram 230 V

14 EC-Declaration of Conformity

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

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

hereby declares that the following product

Product Group: Holzstar® Woodworking machines

Machine type: Edge milling machine

Designation of the machine *: KSO 850 / 400 V **Item number *:** 5900850
 KSO 850 / 230V 5900851

Serial number*: _____

Year of manufacture*: 20_____

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

corresponds to all the relevant provisions of the abovementioned Directive and other Directives applied (below) - including their amendments current at the time of the declaration.

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

The following harmonized standards were applied:

DIN EN ISO 12100:2011-03 Safety of machinery. General principles for design Risk assessment and risk reduction (ISO 12100:2010)

DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements

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

Hallstadt, 19.04.2021



Kilian Stürmer
Manager



